KPMI®

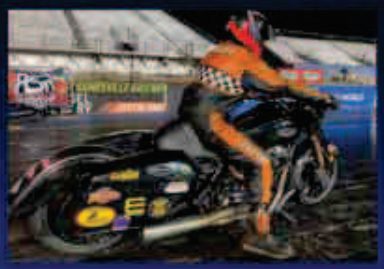
HIGH PERFORMANCE VALVETRAIN
2026 CATALOG

Designs and manufactures
longevity into valvetrain

Our primary focus is:
Engineering product
that exceeds expectations

At KPMI®
There are no exceptions
for quality

VALVETRAIN SPECIALIST KPMI® SPONSORS
NHRA TOP FUEL MOTORCYCLE CHAMPION
LARRY "SPIDERMAN" McBRIDE



WWW.KPMI.US

Follow us on

KPMI® ENGINEERING & MANUFACTURING VALVETRAIN FOR 85-YEARS & 2-GENERATIONS

KPMI®
Designs and manufactures longevity into valvetrain

Our Primar
Engineering product tha

Company

Kibblewhite Precision Machining, Inc. (KPMI®) is a 85 year old valvetrain manufacturing company supplying the Motorsport Industry and select OEM's. We stock and distribute over 3,000 items to customers around the world. No other company in the world has our product coverage for the motorsport industry. You will not find any other company with such an extensive product line solely dedicated to the motorsport industry.

KPMI® not only manufactures ready-made parts, we also provide contract manufacturing for OEM and other parties. Our expert services include engineering, prototyping, and limited or full production runs.

Legacy

Kibblewhite Precision Machining, Inc. was founded by James L. Kibblewhite in 1939. In 1989 the operation was taken over by William F. Kibblewhite, Jim's son. William Kibblewhite took the solid foundation created by his father and dramatically expanded the product line to provide the vast coverage that it offers today.

KPMI® is known by its trademark and registered marks: Black Diamond™, White Diamond®, Tensilite®, KPMI® Kibblewhite®, and Spin True®. Know that when you purchase products under these brands you are purchasing product that has been engineered by a company that's been doing so for 85 years and 2 generations. This wealth of knowledge can be seen in the product detail, fitment, material choices, processes and the uniqueness in which all systems and components are expected to achieve the mechanical work they will be asked to do.

Employees

Kibblewhite valvetrain and custom engineered components are second to none. KPMI® employs twenty six employees and fosters a work smart culture. The dedication of top notch employees (A-players) in Engineering and Customer Service is the reason why we are the industry leader in valvetrain development. Putting our customers first can be found in every element of product development and you will see that precision level of detail in every single package that is shipped out of our warehouses. This type of commitment is found in the class of employee, equipment, and investment in emerging technologies.

MADE IN USA

ALL RIGHTS RESERVED
PATENTED DESIGN
No. US 20170051809 A1

y Focus is :
at exceeds expectations

At KPMI®
There are no exceptions for quality

Facility

Kibblewhite encompasses five locations and over 20,000 square feet of Machine Shop, Office, Engineering, and Warehouse space. KPMI® has spent the past five years aggressively updating our operations. Our complete facility has eleven of the latest model CNC lathes (2010 & later), CAD, CAM, and custom machining equipment. Our Engineering Department and machinists are ready and waiting to assist you with your custom requirements and drive our ongoing production of high performance valvetrain systems for 4-stroke engines.

© Copyright 2025 Kibblewhite Precision Machining, Inc. All rights reserved. Copies distributed for personal internal use only. Any other use, reproduction, modification, public display, distribution or transmission of this catalog or its contents without the prior written consent of Kibblewhite Precision Machining, Inc. is strictly prohibited.

Quality Control

It is our sole intent to provide our customers with product that works right the first time and gives maximum value for the dollar in terms of reliability and performance. None of our product achieves final approval without first traveling through a grueling development flow process. Final reviews require three engineering signatures and a signature from production. What this means is that there are three independent reviews following each and every product through all phases of development before the final review and production signature can be granted. I am very proud of what we do and of every single employee that has been hand selected to contribute to the success of KPMI®.

We measure our success by our satisfied customers and for this we are truly grateful. Without our loyal customers and their continued demand for consistent, high quality valvetrain and engineering services, we would not be the company that we are today. Because of this we thank each and every one of our customers and future customers.

Sincerely,

William Kibblewhite

KPMI® ENGINEERING & MANUFACTURING VALVETRAIN FOR 85-YEARS & 2-GENERATIONS

KPMI®
Designs and manufactures longevity into valvetrain

Our Primary focus is:
Engineering product that exceeds expectation

At KPMI®
There are no exceptions for quality

World
Top Fuel Champion
Larry "Spiderman" McBride

European
SuperTwin Champion
Ton Pels

European
Top Fuel Champion
Ian King

Valvetrain That The Top Champions of The World Rely On

VALVES LIGHTWEIGHT HIGH FLOW

TRADEMARKS: BLACK DIAMOND™ WHITE DIAMOND® & TENSILITE® TITANIUM

- 220 Different Applications
- F.E.A Designed
- Titanium, Inconel, Ev8 SS, Bi-Metallic
- Crn Coated (Tensilite® Titanium)
- Black Nitride Coated (Black Diamond™)
- Hard Chrome stems (White Diamond®)
- Hollow stem and custom

Kibblewhite Precision Machining
Manufacturer of Valvetrain Components

www.kpmi.us

Follow us on

VALVE GUIDES

G2 CAST IRON • C630 BRONZE • MANGANESE BRONZE

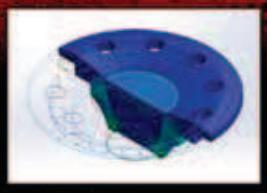
- *Over 200 Different Applications*
- *Undersized Bores*
- *Superior Surface Finish*
- *Excellent Heat Transfer*
- *100% Quality Controlled*

Kibblewhite Precision Machining
Manufacturer of Valvetrain Components

www.kpmi.us

Follow us on

SPRING KITS LARGEST SELECTION IN THE WORLD



- *Over 200 Different Applications*
- *Race & Direct O. E. M. Replacement*
- *Super Clean CrSi Wire*
- *Complete F. E. A. Design*
- *100% Quality Controlled*
- *Manufactured in the USA*

Kibblewhite Précision Machining Manufacturer of Valvetrain Components

www.kpmi.us

Follow us on

PISTON & VALVETRAIN SERVICE KITS

KPMI® INTRODUCES ALL IN ONE SYSTEM

Top End Service Kit Includes:

- Forged 2618-Alloy Piston
- Plus Total Seal® Rings, Pin and Clips
- Complete Top End Gasket Kit & Seals
- Full Set of KPMI® Std. Valves
- KPMI® High Performance Ti. Spring Kit

Cylinder Head Service Kit Includes:

- Complete Top End Gasket Kit
- Full Set of KPMI® Std. Valves
- KPMI® High Performance Ti. Spring Kit
- Complete Set of KPMI® Std. Bronze V/Guides
- Set of KPMI® Viton® Valve Stem Seals

Kibblewhite Précision Machining Manufacturer of Valvetrain Components

www.kpmi.us

Follow us on

BUSHINGS

CAM • CRANKSHAFT • FORK • ROCKER ARM • WRIST PIN

- Direct O.E.M. Replacement
- Superior Surface Finishes
- Improved Durability
- 100% Quality Controlled
- Manufactured in USA

Kibblewhite Precision Machining Manufacturer of Valvetrain Components

www.kpmi.us

Follow us on

CYLINDER STUD KITS

USED BY THE TOP RACERS IN THE WORLD

- *180,000 psi H.T. Steel*
- *Rolled Threads*
- *Interference Fit Case End*
- *OD Ground, Maximizing Strength*
- *Treated 100% with Black Oxide*

Kibblewhite Precision Machining Manufacturer of Valvetrain Components

www.kpmi.us

Follow us on

VALVE SEATS UNIVERSAL

USED IN ALL OUT RACING APPLICATIONS AND STOCK REPLACEMENT

- 24mm to 57mm
- 80 - Different part numbers
- Small I.D.
- Extra tall
- Call for Custom Seat Sizes

Kibblewhite Precision Machining Manufacturer of Valvetrain Components

www.kpmi.us

Follow us on

TAPPETS H.T. STEEL DLC COATED

- Billet Aircraft Alloy Steel
- F.E.A Designed
- H.T. Steel Coated
- H.T. Steel Plus DLC Coated

Kibblewhite Precision Machining Manufacturer of Valvetrain Components

www.kpmi.us

Follow us on

VALVE STEM SEALS

INSIST ON THE RED ONES!

- *Contact surfaces designed for improved sealing*
- *High temperature Viton® and Teflon® materials*
- *Improved tolerances over OEM*
- *100% Quality Controlled*
- *Available in a variety of sizes*

Kibblewhite Precision Machining Manufacturer of Valvetrain Components

www.kpmi.us

Follow us on

CLUTCH SPRINGS

FOR OVER 40-YEARS THESE HAVE BEEN THE SPRINGS OF CHOICE

Kibblewhite Precision Machining Manufacturer of Valvetrain Components

www.kpmi.us

Follow us on

TOOLS & COMPONENTS

KPMI® CAPABILITIES ARE NOT LIMITED TO VALVETRAIN

- Seal Installation Tools
- Exhaust Spigots
- Head Nuts
- Tappets
- Push Rods
- Tappet Blocks

- Lash Caps
- Ball Hones
- Reamers
- Shims
- Keepers
- Washers

Kibblewhite Precision Machining
Manufacturer of Valvetrain Components

www.kpmi.us

Follow us on

COMPRESSION RELEASE VALVES

VARIOUS HARLEY-DAVIDSON® APPLICATIONS

- Three models available - all with M10x1 threads and priced competitively
- Designed to reduce "hot start" issues and starter / battery loads
- 5-7 Newton's of closing force resistance, for high demand applications
- Custom molded knobs ensure a cool touch and easy operation
- Embossed with the KPMI® brand so you know you have purchased a quality product

Kibblewhite Precision Machining

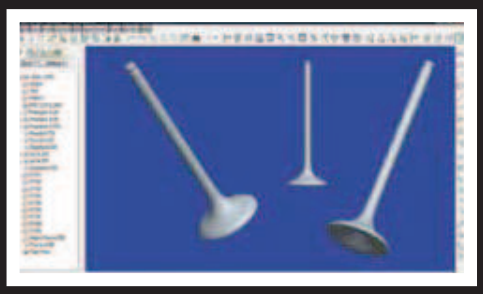
www.kpmi.us

Follow us on

ENGINEERING

FULL SERVICE, DESIGN-BUILD, MANUFACTURING CAPABILITIES

For 85 years KPMI® has continued to be at the forefront of innovation, manufacturing, and development of high performance valve train. KPMI® is constantly investing in new technologies in order to maintain our position as one of the foremost authorities in valve train development.



Software

Utilizing the advances in power, speed, and user interface of modern software, KPMI® employs an arsenal of software programs to plan, design, simulate, fabricate and test all aspects of development and production.

- 3D Modeling/FEA: Every KPMI® component is designed using the latest in 3D modeling technologies, allowing KPMI® engineers to assemble entire valve train systems virtually to verify fitment and clearances. Once assembled, each system is subject to a rigorous Finite Element Analysis (FEA) that allows KPMI® engineers to validate designs and isolate areas of stress concentration. This FEA analysis ensures that KPMI® parts are both light and strong enough to stand up to the rigorous environment inside a modern racing engine.
- Valve train Simulation: Once a KPMI design has been modeled and refined the entire system is simulated using valve train simulation software. This allows KPMI® engineers to "tune" each system to ensure that it will work harmoniously in the engine.
- Spring Design: Each of KPMI's valve springs are designed using advanced spring design software that allow KPMI® engineers to balance designs for the perfect blend of performance and longevity.

Prototyping

KPMI® has integrated the use of 3D rapid prototyping technologies into the many aspects of design process. This technology allows KPMI® engineers to almost instantaneously create working plastic prototypes of designs that can be used to check fitment, clearances and design validity.

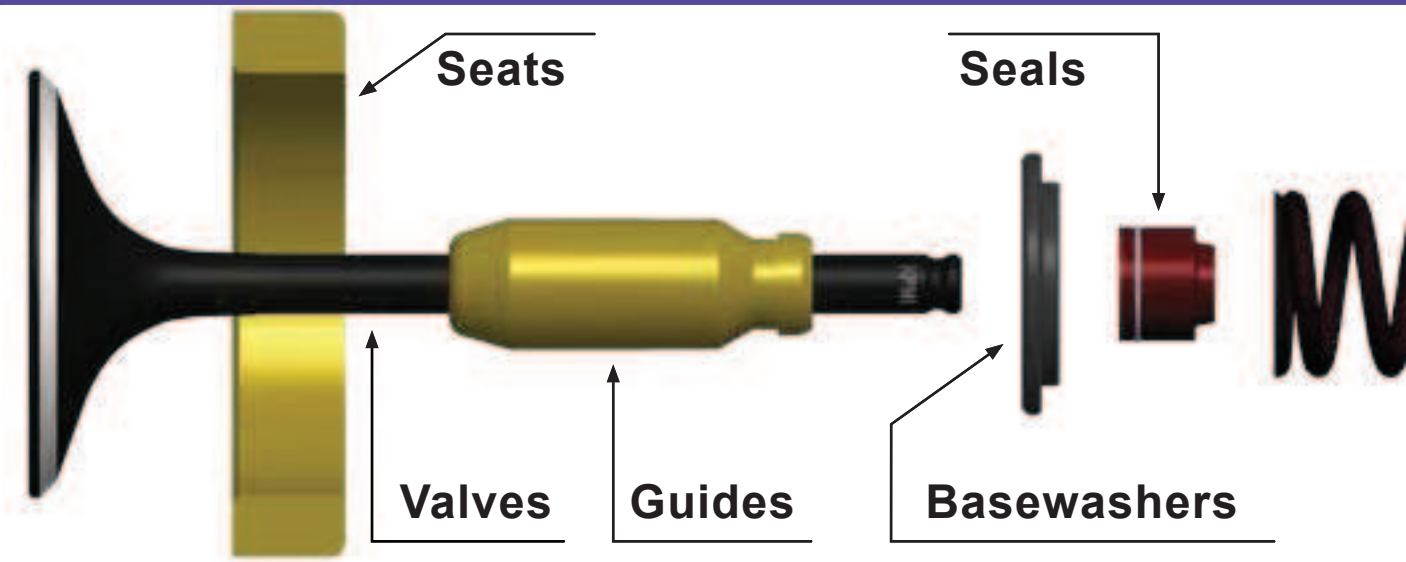
Flow Testing

Before a design is complete, test valves are made with different tulip profiles and each design is flow tested on our FlowData 700 computerized flow bench to optimize airflow characteristics for that application. This often leads to improvements not only in flow characteristics, but in weight reduction as well.

Testing

When it comes to testing our product, KPMI® does not hold back. We pride ourselves in supplying the consumer with a product that works right the first time, keeping this in mind when it comes time to test, KPMI® looks at every aspect of the design under several different criterion. The springs are brought to failure under fatigue testing and shake table dynamics, whereas the heat-treated materials are destructively tested to insure that they did not become brittle during the manufacturing process; we do not, however, stop there. When we are sure that our product lives up to the name, we go one step further and supply the product to our test riders to see how it performs under real world riding conditions. Only once all of this information has been compiled and we are sure that the product is ready for sale, is it released to our vast network of world-wide dealers and distributors.

THE KPMI® SYSTEM



Valves

Light and strong with optimum airflow
A combination of FEA stress analysis and flow bench testing of prototype valves allows KPMI® engineers to optimally balance valve mass, strength, and airflow characteristics. A unique tulip and dish are designed for each application.

Stellite tips for rocker applications
Stellite is welded to the valve tips in rocker actuated applications for resistance to the impact and abrasive wear common in rocker arm systems. This welded stellite can never come loose.

Black Diamond™ Valves
KPMI® Black Diamond™ one pieced forged stainless steel valves are impregnated by a special German process to improve wear properties and reduce friction. This process provides resistance to corrosion and wear that is superior to that of hard chromium and electrolysis nickel plating.

White Diamond® Valves
We fully CNC machine our White Diamond® valves from a one-piece forging of either EV8 Stainless Steel or Inconel-751. These materials have proven heat and corrosion resistance properties and are hard chromed with a 360 degree anode to produce the highest possible grade of hard chrome finish.

Tensilite® Valves
KPMI® Tensilite® titanium valves are one piece forgings made from 6AL4V or 6-2-4-2 titanium alloy. These are the latest developments in titanium valve alloys and have superior hardness, strength, and thermal characteristics when compared to other titanium valve alloys. Tensilite® valves are covered with a chromium nitride (CRN) PVD coating. This coating adheres exceptionally well to titanium, has a low coefficient of friction, and is impact, abrasion, and corrosion resistant.

Seats

Repair /Modify
Seats are tall, offered in several sizes, and have ample material on the ID for shaping, making them universal in application. They allow the builder to repair damaged seat bores, or to increase the seat size for larger racing valves.

Ease of installation
Seat ODs are ground for a smooth uniform surface finish to insure good contact with the cylinder head for optimal heat transfer and smooth installation. Seats also have a generous radius on the leading edge to prevent galling during installation.

Powdered metal seats
With the latest in powdered metal technology, KPMI's R&D team was able to create a high density seat with exceptional wear resistance, resistance to micro welding, and good thermal qualities. This material is compatible with all types of fuel blends, resists corrosion and burning, and is machinable with standard tooling.

Nickel aluminum bronze seats
The product of a two year KPMI® R&D effort, this proprietary high copper, beryllium free bronze alloy is designed specifically for use with titanium valves in high performance applications.

Guides

Superior airflow
Guide profiles are designed to have as little effect on the airstream as possible, while maintaining critical cross sectional thickness in high temperature areas. Promoting both high performance and endurance.

Oversize ODs
Multiple oversizes are available.

Guides cont.

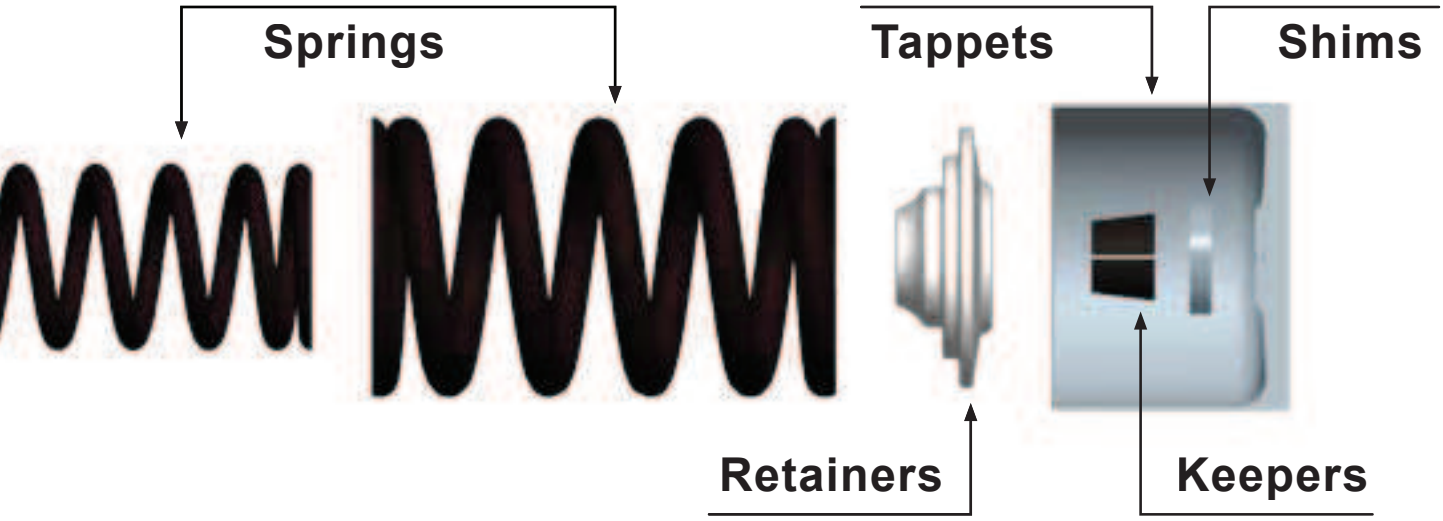
Tight tolerances
High concentricity tolerances are held to insure the best possible geometry between the seat and guide is maintained when the guides are replaced. This means minimal material removal from the seat, time savings, and consistent chamber volumes, when valve jobs are performed.

C630 bronze guides
C630 is a blend of copper, nickel, and aluminum. The high copper content gives excellent thermal qualities, the nickel makes the guide tough and wear resistant, and the aluminum brings work hardening characteristics. This bronze alloy allows for tighter clearances than other materials, creating better valve and seat sealing, as well as superior oil control. The expansion qualities of C630 bronze make it especially compatible with aluminum cylinder heads.

Cast iron guides
KPMI® R&D has produced a proprietary cast iron blend that thrives in the tough operating conditions of today's engine. KPMI's certified cast iron provides excellent wear resistance and a superior guide bore finish that is easy on valve stems.

Manganese guides
These Engine Builder valve guides have been designed with the price conscious builder in mind. Expect the same exacting KPMI® tolerances, but with a reduced toughness / wear-ability when compared to premium "C630" Nickel Aluminum Bronze valve guides. The softer Manganese guides are easily reamed, and then can be delicately finished with our high quality ball hones. Now, with any battery operated or electric drill you can ream and hone manganese valve guides in less time and in the absence of expensive honing equipment required to properly size "tough" Nickel Bronze guides.

THE KPMI® SYSTEM



Seals

High operating temperature
KPMI® Red Viton® seals operate at a higher temperature than other seal materials.

Chemical resistance
Viton® seals are resistant to petroleum products, and by-products of combustion. Retaining pliability in situations where other materials would become hard and lose their sealing capability.

Springs

Advanced spring design
Springs are engineered for each specific application using proprietary advanced spring design, simulation, and analysis software. Engineers pay special attention to cam and spring harmonics, stress, mass, and operating rpm.

Premium grade, super clean ground chrome silicon wire
X-Rayed at regular intervals to check for inclusions, heat treated, and shot peened. Insuring maximum spring life.

Retainers

Engineered with advanced computer software
FEA stress analysis allows engineers to lighten retainer without sacrificing strength.

Tight tolerance for precise fit
KPMI® Engineers specify tight tolerances that allow no excessive lateral movement. Correct fitment promotes longer component life and optimizes performance of the entire valve train.

Heat treated steel retainers
KPMI's proprietary heat treatment process creates a hard outer shell with a non-brittle core, resisting wear and maximizing toughness.

Titanium retainers
To further reduce reciprocating mass, KPMI® offers titanium retainers as an alternative to steel.

Custom retainers available
KPMI® is ready to design a custom retainer to your specifications.

Tappets

Machined from billet aircraft quality steel

Proprietary heat treatment process
Creates a hard outer shell with a non-brittle core, resisting wear and maximizing toughness.

Engineered with advanced computer software
FEA stress analysis allows engineers to lighten tappet without sacrificing strength.

Racing performance
KPMI® tappets are run in high performance automotive and motorcycle racing applications including Motocross, Flat track racing, Road racing, Drag racing, and land speed racing

Many stock sizes available
See **KPMI® Tappet Section** in back of catalog for full selection.

Custom tappets available
Send KPMI® your requirements so we can develop your next tappet.

Basewashers

Proprietary heat treatment process
Creates a hard outer shell with a non-brittle core, resisting wear and maximizing toughness.

Tight tolerance for precise fit
Manufactured to tolerances that allow no excessive lateral movement. Correct fitment promotes longer component life and optimizes performance of the entire valve train.

Keepers

Wide variety of styles
KPMI® offers radius bead, triple radius bead, and square bead steel keepers. See keeper section in back of catalog for full selection.

High tensile heat treated steel
Forged or single point machined.

Shims

Ground to a precise height
KPMI® offers valve adjustment shims in 7.5mm, 9.5mm, and 13mm diameters, with heights increasing in increments of 0.05 mm. See **KPMI® Shim Section** in back of catalog for full selection.

TABLE OF CONTENTS

MOTORCYCLE / ATV / UTV

ARCTIC CAT

H2 1000 V-Twin 2008-2018 1
Various 998cc Triples 2017-2025..... 1-3
Various 1056ccTwin 2008-2016 3-4

BMW

/5 /6 /7 R80/ R90/ R100 1970-1995 4
R27 1960-1966..... 5
R50/2, R50 US, R60/2, R60 US 1960-'69 5

BRP

Can Am DS 450 2008-2015..... 6
Can Am Outlander 300/400cc 2004-'15 7
Can Am Outlander 450 2016-'20 7-8
Can Am/ DS 650 2000-2007..... 8
Can Am Various 500-1000cc 2006-'20..... 8-9
NEW! **Can Am Maverick R** 2024-'25 9
Can Am Various 850-1000cc 2013-'20..... 10
Rotax ACE 900cc Triple Eng. 2014-'25..... 11-12
Air Cooled Singles 500/600 1982-'06..... 12
Seadoo GTX All models 2006-2016..... 13

BSA

A10 1950-1962..... 14
B25 1968-1971..... 14-15
Various B44 1967-1970..... 16
650 Twin..... 16
A50 1966-1970..... 17
B50 Goldstar 1971-1973..... 18-19
A65 1971-1972..... 19-20
Rocket III 1969-1972 21

DUCATI

GT 750 / 850 / 880 / 900 / 916 1978-1998 ... 22
800 / 900 2000-2007 23
696 / 796 / 1000 / 1100 2003-2010 23

GASGAS

NEW! **EX 250F** 2021-2023..... 24
NEW! **EX 300F/ 350F** 2021-2022 24

HARLEY-DAVIDSON

Flathead 1930-1973 25
Knucklehead 1936-1947 25-27
Panhead 1948-1965 27-30
Sportster 1957-1969 30-32
Sportster 1970-1983 33-35
Shovelhead 74” 1966-1977 35-39
Shovelhead 80” 1978-1983 40-43
Evolution 1984-1999..... 44-49
Sportster 883cc / 1200cc 1986-2003 49-54
Sportster 883cc / 1200cc 2004-2021 54-57
XL 1100cc 1986-1987..... 58-62
Sportster 1200cc 1988-2003 62-67
Sportster 1200cc 2004-2021 68-71
Twin Cam 88” 1999-2004..... 72-76
Twin Cam 88” / 103” 2005-2017 77-80
Buell XB9-XB12 2003-2010 80-83
V-Rod 2002-2017..... 83-84
NEW! **M8 (& CVO's)** 2017-2025 84-90
HD Tools & Components 91-93

HONDA

CRF/ XR75-100 1985-2013..... 94
CRF150R 2007-2025 95-96
CB160 1965-1969 96
CB175 1970-1975 97
Various 185-200 1980-2002 98
XR200R RFVC 1984-1985..... 99
CRF250X 2004-2017 99-101
CRF250R 2004-2007 99-101
CRF250R 2008-2009 102-103
CRF250R 2010-2015 103-105
CRF250R 2016-2017 105-106
NEW! **CRF250R/ RX/ RWE** 2022-2026 106
Various 250-300's 2011-2021 107
NEW! **CRF250R/ RX** 2018-2021..... 107-108
TRX250X 1987-1992..... 109
XR / XL250 RFVC 1984-1995..... 109-110
XR250R RFVC 1996-2004..... 110
XR250L 1991-1996 111
TRX300EX/X 1987-2009..... 111

ORDER 650-557-2046

TABLE OF CONTENTS

350 RFVC 1983-1985 112
CB / CL 350 Twin 1968-1973 112-113
CB / CL 350 Twin 1968-1973 113-114
(5.00mm Conversion)
ATC 350X 1985-1986 114
CB350F / 400F 1972-1977 114-115
XL 350 1974-1978 116
XR400R RFVC 1996-2004 116-117
TRX 400X/400EX 1999-2014 118-119
CB450/CB500 Twin 1965-1976 119
CB450/CB500 Twin 1965-1976 119-120
(5.00mm Conversion)
CRF450R 2002-2008 121-124
CRF450R 2009-2012 125-126
CRF450R 2013-2016 126-127
NEW! **CRF450R/RX/WE** 2017-2026 128-131
CRF450X 2005-2017 131-133
TRX 450R 2004-2005 134-135
NEW! **TRX 450 /ER** 2006-2014 136-138
CB500 / 4 1971-1978 139
CB550 / 4 1971-1978 139
CBR600 F2 / F3 1991-1996 140
CBR600 F4i 2001-2006 141
XR650R 2000-2007 141-142
Hawk NT 650 1988-1991 142
Various 500cc-650cc 1983-2024 142-143
TRX700XX 2008-2009 144
VFR750 49 STATE 1990-1997 144
CB750 SOHC 1977-1978 144-146
CB750 SOHC F2/3 1969-1977 146
CB750 DOHC 1979-1983 146-147
CBR900RR 1993-1999 147-148
Various 900cc-1100cc 1980-1983 148-149
VTR 1000 1998-2005 149
CBR1000 2004-2005 149-150
CRF 1000A/D 2017-2019 150-151
Pioneer 1000 2016-2021 150-151
Talon1000X/R 2019-2022 150-151
CBR1100XX 1997-2003 151
CBX 6-Cyl 1979-1982 151-152

HUSQVARNA

NEW! **Various 250cc Models** 2016-2022 153
NEW! **Various 350cc Models** 2016-2022 153
350 / 410 1991-2000 154
Various 510 - 610cc Models 1983-2001 154
Various 450's 2014-2018 154-155
Various 450 - 510cc Models 2006-2008 156

INDIAN

NEW! **Challengers(All) 2020-2024** 156
NEW! **Scout 4V 1200's 2015-2024** 157-158

KAWASAKI

Mojave 1987-2004 159
KX250F 2004-2016 159-161
KX250F 2017-2019 161-162
KX250F (&F/ X/ XC) 2020-2024 162-163
KLX300R / KLX250R / S / SF 1994-2014 164
KLX / KFX 400 2001-2006 165
KLX 450R 2008-2020 166
KX450F 2006-2008 167
KX450F 2009-2016 168-169
KFX450R 2008-2014 170-171
Ninja 500R 1987-2009 171
KLR600 / 650 1984-2010 171
Ninja 650R / Versys 2006-2016 172
KZ 650 / 750 1976-1985 173
Various 650/ 700/ 750 2005-2013
"KFX/ Brute Force/ Prairie/ Teryx" 173-174
KLX 650/650R 1993-1996 174-175
Various 650/ 750/ 800 2012-2020
"Brute Force/ Teryx/ Teryx4" 175
KZ / Z1 900 1973-1977 176-177
Ninja 900 1984-1986 177
KZ / Z1 Police 1000 1977-2005 178-179
Ninja 1000 1986-1987 180
GPZ 1100 1981-1982 180-181
ZX-7R 1991-1995 182
Vulcan 1500 1996-2008 182
Vulcan 1500 (Mean Streak) 2002-2003 182
ZX-7R 1996-2003 183
ZX-9R 1994-2003 183-184
ZX-10R 1988-1990 184
ZX-10R 2004-2007 184-185
ZX-10R 2008-2010 185-186
ZX-10R 2011-2015 187
ZX-11 / ZRX 1100 / 1200 1999-2005 188
ZX-12R 2000-2005 188
ZX-14R 2006-2011 188-189
PWC 2006-2019 190

TABLE OF CONTENTS

KTM

250 2005-2007 191
NEW! **Various 250cc** 2014-2019 191
250 2008-2011 192
250 2012-2013 193
SX-F / XC-F 250 2013-2015 194
NEW! **350cc SX-F & XC-F** 2016-2022 195
400cc-530cc 2008-2013 196
All RFS Engines 400cc-560cc 2000-2009 196-198
Various 450's 2013-2018 198-199

MOTO GUZZI

All 2 - Valve ' Big - Blocks' 1971-2012 199

NORTON

750 1968-1973 200
850 1973-1977 201

POLARIS

425-500, Series 10, 11 1996-2014 202
Predator / Outlaw 500 2003-2007 202-204
NEW! **Various 570's** 2014-2025 204-206
Sportsman 800 2006-2014 206-207
RZR 800 2008 -2010 207-208
RZR(&S/4) / Ranger 800 2011 -2017 208-209
RZR XP 900 2011-2012 209-212
RZR XP 900 2013-2014 212-215
Various 900/1000 2013-2025 215-219
RZR XP 1000 2014 218-221
Various 1000's 2015-2025 222-225
NEW! **Various** 1000's 2020-2025 226
NEW! **Various** 4-Cylinders's 2020-2025 226-227

SUZUKI

DR250 / 350 S / SE 1990-1999 228
RM-Z250 2004-2006 228-230
RM-Z250 2007-2025 230-232
DRZ / LTZ 400 2000-2024 232-233
NEW! **LTR 450 / 450Z** 2006-2009 234-235
RM-Z450 2005-2006 236
RM-Z450 2007 236-237
RM-Z450 2008-2025 237-239
GS 500E 1989-2009 239
SV 650 1999-2009 239
GSX-R 600 1997-2000 240
GSX-R 600 / 750 2004-2024 240
King Quad's 700-750's 2005-2024 241-242
GS 750 Pre-1980 242-243
DR 750 / 800 BIG 1988-1998 243
GS 750 E / ES / L / T 1980-1986 243-244
GSX-R 750 1986-1992 244-245
GSX-R 750 1993-1995 245-244
NEW! **GSX-R 750** 2004-2005 246
GSX-R 750 SRAD 1996-1999 247
GS 850 1979-1983 247
GS 1000 Pre-1981 248
GSX-R 1000 2001-2004 249
NEW! **GSX-R 1000** 2005-2008 250-252
NEW! **GSX-R 1000** 2009-2016 252-254
GS 1100 E / ES / S 1980-1986 254-255
GSX-R 1100 1986-1990 255-256
GSX-R 1100 1991-1992 256-257
GSX-R 1100 1993-1998 257
GS 1150 1984-1986 258
NEW! **GSX-1300R** 1999-2024 “Hayabusa” 259-262

TRIUMPH

500 Twin 1958-1973 263
Pre-Unit 500/ 650 1951-1962 264-266
650 / 750 1963-1983 266-267
(6mm Conversion)
650 / 750 1963-1983 267-271
Trident 1971-1976 271-272
865 2001-2010
“Bonneville / Scrambler / Thruxton” 272-273
Various 885cc-955cc 1997-2001 273

YAMAHA

Raptor 250 2008-2013 274
SR/ TT / XT 250 1976-1981 274
SRX 250 / XT 250/300 1984-2000 275
WR / YZ 250F 2001-2013 275-277
YZ 250F 2014-2018 277-279
WR250F / YZ 250FX 2014-2019 277-279

ORDER 650-557-2046

TABLE OF CONTENTS

YZ 250F 2019-2026 279-280
WR250F / YZ 250FX 2020-2026 279-280
YFM 350 - 450 1986-2021
"Bruin / Grizzly / Kodiak / Raptor / Warrior" 280
WR / YZ 400 / 426 1998-2002 281
Various 400-450 1998-2013 282
Various 450's 2003-2025 282-286
YZ 450F 2010-2013 287-288
Various **YZ/ WR 450's** 2014-2021 288-289
SR / TT / XT 500 1976-1981 290
SRX / TT / XT 550 / 600 1982-1995 290
XJ 650 / 700 1980-1984 290
XS 650 1970-1983 291
Various 660's 2001-2008
"Raptor / Grizzly / Rhino" 291-293
Various 700's 2006-2025
"Raptor / Grizzly / Rhino / Viking / Kodiak" 293-295
YXZ 1000R 2016-2025 295-297
FJ 1100 / 1200 1984-1993 297-298
XS 1100 1978-1981 298
V-Max 1985-2007 299
YZF R1 1998-2003 300
YZF R1 2004-2006 301
YZF R1 2007-2008 301
Various 1049cc Triples 2008-2015 302-303
Apex / RX-1 2003-2010 304
MR-1 Watercraft Eng. 2003-2013 305
1.8L 4V Watercraft 2008-2023 306

AUTOMOTIVE

BMW 307
Mitsubishi 307
Porsche 307

VALVETRAIN COMPONENTS

Dowels 308
NEW! **Keepers** 309-315
Lash Caps 315
Blank Mng. Guides 315
Seals 316-325
Compression Release Valves 325
Installation Protector 325
Installation Tool 326
Cam Tower bolts 326
Ball Hones 327
Nuts 327
High Speed Steel Reamers 328
Solid Carbide Reamers 328
High Perf. Blank Pushrods 329
Valve Guide Installation & Removal Tools 329
Black Diamond Valve Blanks 330
NEW! **Tensilite Titanium Valve Blanks** 331
White Diamond Valve Blanks 331
NEW! **Tappets** 332
Shims, Booster/Valve Spring 333-334
Shims, Adjustment 335-337
NEW! **Seats (High Chrome)** 338-339
Seats (Powdered Metal) 340
Seats (Nickel Aluminum Bronze) 341

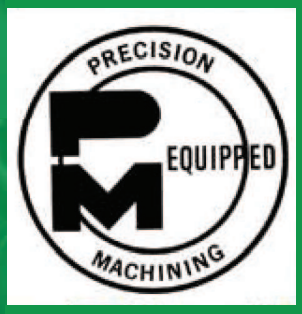
President's Letter ..... b-c
The KPMI System ..... l-m
Engineering ..... k
Table of Contents ..... n-q

KPMI Apparel 342-343
KPMI Racing Teams 344-345

TECH INFO / FORMS

Custom Valve Order Form 346
Custom Guide Order Form 347
Custom Seat Order Form 348
Custom Pushrod Order Form 349
Product Order Form 350
KPMI Dealer Application 351-352
Legal Notes 353

© Copyright 2025 Kibblewhite Precision Machining, Inc. All rights reserved.
Copies distributed for personal internal use only. Any other use, reproduction, modification, public display, distribution or transmission of this catalog or its contents without the prior written consent of Kibblewhite Precision Machining, Inc. is strictly prohibited.



Dealer Inquires: Contact Us at 650-557-2046

or

Visit Our Website www.kpmi.us

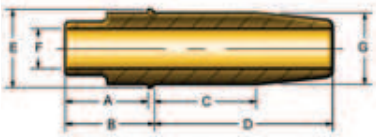
ARCTIC CAT® H2™ V-TWIN 2008-'18

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
88-88000	Intake	.450"	1.200"	49#	159#	.450"
	Exhaust					

Kit Includes	8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Basewashers

Valve Guides • C630 Bronze For H2 V-Twin 2008-2013



A	B	C	D	E	F	G	Intake	Exhaust
0.420"	0.445"	0.730"	1.110"	0.455"	0.1955"	0.4163" / Std	88-88020	
						+0.001"	88-88021	
						+0.002"	88-88022	
Use O.E.M. Seal						+0.010"	88-88029	

ARCTIC CAT® VARIOUS 998cc TRIPLES 2017-'25

- M 9000 KING CAT 2017-2019
- XF 9000 CROSS COUNTRY LTD 2017-2019
- XF 9000 CROSSTREK 2017-2018
- XF 9000 HIGH COUNTRY LTD 2017-2019
- ZR 9000 LTD 2017-2019
- ZR 9000 LXR 2017
- ZR 9000 RR 2017-2025
- ZR 9000 SNO PRO 2017-2019
- ZR 9000 THUNDERCAT 2017-2025
- XF 9000 CROSSTOUR 2018
- WILDCAT XX 2019-2024
- RIOT 9000 ATAC 2023-2025

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
88-88200	Intake	.445"	1.300"	53#	167#	.445"
	Exhaust					

Kit Includes	12	Titanium Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
88-88300	Intake	.445"	1.300"	53#	167#	.445"
	Exhaust					

Kit Includes	12	H. T. Steel Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

It may be necessary to use **KPMI® Shortened Valve Guides # 88-88220**, to achieve higher than stock lift.

Valve Spring Kit • "Shim in Tappet" Lightweight Racing

Shim In Tappet (SIT)

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
88-88250	Intake	.445"	1.300"	53#	167#	.445"
	Exhaust					

Kit Includes	12	Titanium Retainers	12	CrSi Valve Springs
	12	H. T. Steel Basewashers	12	H. T. Steel Tappets

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
88-88350	Intake	.445"	1.300"	53#	167#	.445"
	Exhaust					

Kit Includes	12	H.T. Steel Retainers	12	CrSi Valve Springs
	12	H. T. Steel Basewashers	12	H. T. Steel Tappets

KPMI® shim in tappet systems locate the adjustment shim in the hardened steel of the tappet body, where it is impervious to wearing (ovalling) and kicking the shim out. By designing the tappet and retainer together as a system, the shim counterbore depth in the tappet has been maximized. This allows for increased insurance against losing the shim even in the event of valvetrain separation during severe operating conditions, over-revs, or extreme boost pressures. It may be necessary to use **KPMI® Shortened Valve Guides # 88-88220**, to achieve higher than stock lift.

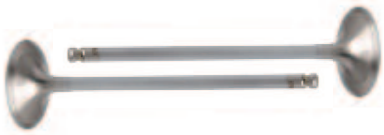
ARCTIC CAT® VARIOUS 998cc TRIPLES 2017-'25

- M 9000 KING CAT 2017-2019
- XF 9000 CROSS COUNTRY LTD 2017-2019
- XF 9000 CROSSTREK 2017-2018
- XF 9000 HIGH COUNTRY LTD 2017-2019
- ZR 9000 LTD 2017-2019
- ZR 9000 LXR 2017
- ZR 9000 RR 2017-2025
- ZR 9000 SNO PRO 2017-2019
- ZR 9000 THUNDERCAT 2017-2025
- XF 9000 CROSSTOUR 2018
- WILDCAT XX 2019-2024
- RIOT 9000 ATAC 2023-2025

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
88-88212	Intake	31.00mm	1.220"	0.1765"	15º	3.495"	Standard
88-88213	Intake	32.00mm	1.260"	0.1765"	15º	3.495"	Oversize
88-88216	Exhaust	26.00mm	1.024"	0.1760"	25º	3.470"	Standard
88-88217	Exhaust	27.00mm	1.063"	0.1760"	25º	3.470"	Oversize

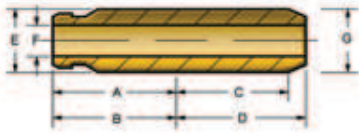
Valve • White Diamond® • Inconel® • Exhaust



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
88-88216K	Exhaust	26.00mm	1.024"	0.1760"	25º	3.465"	Standard

** Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

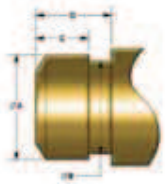
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.530"	0.530"	0.585"	0.750"	0.354"	0.1760"	0.3564" / Std.	88-88220	
						+0.001"	88-88221	
						+0.002"	88-88222	
						+0.010"	88-88229	

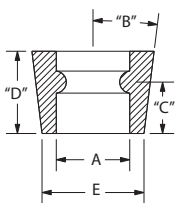
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-12	Pkg. of 12	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

Keeper Set • O.E.M. Replacement



KPMI P/N	Style	Type	A	B	C	D	E	Quantity	Rep. OEM P/N
88-88240	Single Radius Bead	Intake / Exhaust	0.177"	6.0°	0.186"	0.221"	0.212"	12 Pr.	1WG-12118-00-00 3SO-E2118-00-00

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

ORDER 650-557-2046

ARCTIC CAT® VARIOUS 998cc TRIPLES 2017-'25

Tappet • Shim In Tappet (SIT) • H.T. Steel

KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
600-100850	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.297"	0.120"	Pkg. of 1
	Exhaust								

Tappets • O.E.M. Replacement • H.T. Steel

KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
88-88245	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 12
	Exhaust								

KPMI® Engineers design our tappets using Finite Element Stress Analysis (FEA) software. This software allows our engineers to lighten the tappets without sacrificing strength so we can create the strongest, lightest tappets possible. These tappets are machined from aircraft quality solid steel bar stock. They undergo a proprietary heat treat process that creates a hard surface and a non brittle-core, maximizing toughness and wear resistance. Kibblewhite® tappets are run in high performance automotive and motorcycle applications including Motocross, Flat Track, Road Race, Drag Race, and Land Speed Racing at the Bonneville Salt Flats. Refer to **KPMI® Tappet Section,** in back of catalog or ***www.kpmi.us*** website, when selecting other size tappets.

ARCTIC CAT® VARIOUS 1056cc TWINS 2008-'16

- All 2014 5000 & 9000 C-TEC4 Engines
- Bearcat™ Z1 XT (Incl. Limited)
- TZ1™ (All Models Incl. Turbo)
- Z1™ (All Models Incl. Turbo)
- ProCross™ F & XF 1100 (All Models Incl. Turbo)
- ProClimb™ M 1100 (All Models Incl. Turbo)
- Jaguar™ Z1
- M / XF / ZR 9000's 2014-2015
- M 9000 2016

Valve Spring Kit • Turbo Racing • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
88-88050	Intake	.380"	1.440"	70#	184#	.380"
	Exhaust					

Kit Includes	8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Basewashers

Both our Turbo spring kit and "Shim in Tappet" Turbo spring kits are designed for applications with up to 35psi of boost.

Valve Spring Kit • Turbo Racing • "Shim in Tappet" High Performance

Shim In Tappet (SIT)

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
88-88100	Intake	.380"	1.440"	70#	184#	.380"
	Exhaust					

Kit Includes	8	CrSi Valve Springs	8	Titanium Retainers
	8	H. T. Steel Basewashers	8	H. T. Steel Tappets

"Shim in Tappet" valve spring kits provide a solution to the common ovaling of retainers and shim spitting in higher performance applications. By locating the shim in the heat treated steel tappet instead of the titanium retainer, wear is greatly reduced, and reliability is increased. These tappets were designed and analyzed using the same Finite Element Analysis software used in the development of our valves in order to maintain the same strength and mass as our high performance traditional tappet/retainer system.

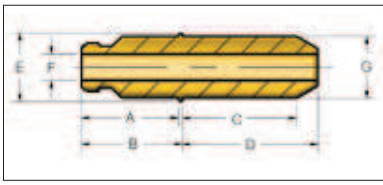
Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
88-88062	Intake	36.00mm	1.417"	0.2160"	10°	3.880"	Standard

ARCTIC CAT® VARIOUS 1056cc TWINS 2008-'16

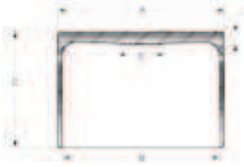
- All 2014 5000 & 9000 C-TEC4 Engines
- Bearcat™ Z1 XT (Incl. Limited)
- TZ1™ (All Models Incl. Turbo)
- Z1™ (All Models Incl. Turbo)
- ProCross™ F & XF 1100 (All Models Incl. Turbo)
- ProClimb™ M 1100 (All Models Incl. Turbo)
- Jaguar™ Z1
- M / XF / ZR 9000's 2014-2015
- M 9000 2016

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.620"	0.655"	0.645"	0.825"	0.460"	0.2155"	0.4167" / Std.	88-88070	
						+0.001"	88-88071	
						+0.002"	88-88072	
						+0.010"	88-88079	

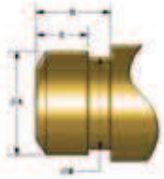
Tappets • O.E.M. Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
88-88057	Intake	H. T. Steel	28.00mm	1.1017"	1.038"	0.763"	--	0.098"	Pkg. of 8
	Exhaust								

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

BMW® 5/ 6/ 7/ R80™/ R90™/ R100™ 1970-1995

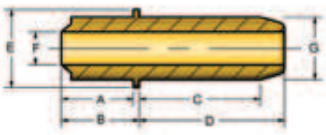
Valve Spring Kit • Lightweight • Performance Upgrade

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
90-9034	Intake / Exhaust	.500"	1.445"	104#	196#	.367"

Kit Includes	4	CrSi Valve Springs	4	H.T. Steel Retainers	4	H. T. Steel Basewashers

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance.

Valve Guides • Manganese Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.600"	0.650"	0.980"	1.400"	0.620"	0.3125"	0.554" / Std.	90-9000	
						+0.001"	90-9001	
						+0.002"	90-9002	
						+0.003"	90-9003	
						+0.004"	90-9004	
						+0.010"	90-9009	
0.600"	0.650"	0.980"	1.300"	0.620"	0.3125"	0.554" / Std.		90-9020
						+0.001"		90-9021
						+0.002"		90-9022
						+0.003"		90-9023
						+0.004"		90-9024
						+0.010"		90-9029

ORDER 650-557-2046

BMW® R27™ 1960-1966

Valve Spring Kit • O. E. M. Replacement • High Performance

KPMI P/N	Type	Kit Includes					
		H. T. Steel Retainers		CrSi Valve Springs		H. T. Steel Basewashers	
90-9092*	Intake / Exhaust	2	90-9094	2	90-9096	2	90-9097

Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
.450"	1.355"	58#	152#	.450"

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance. Parts in this kit can be purchased individually as OEM replacements.

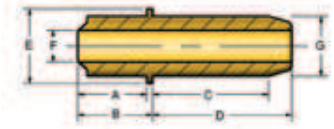
Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
90-9060*	Intake	34.00mm	1.339"	0.2730"	23°	3.425"	Standard
90-9062*	Exhaust	32.00mm	1.260"	0.2720"	29°	3.415"	Standard

Our valves are the quality you expect from Kibblewhite®, manufactured to exact O.E.M. specifications.

***SPRING KIT AND VALVE NOTE:** These components are for the DUAL RADIUS GROOVE systems. Some BMW® models may have come with SQUARE groove valves/keepers/retainers. These KPMI® parts can be used, but it is required to replace all the components in the system by using KPMI® Valves, KPMI® spring kit and OEM DUAL RADIUS GROOVE keepers.

Valve Guides • Manganese Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.600"	0.650"	1.000"	1.200"	0.620"	0.2730"	0.5140" / Std.	90-9070	
						+0.001"	90-9071	
						+0.002"	90-9072	
						+0.004"	90-9074	
						+0.010"	90-9080	
No seal required						+0.036"	90-908HS	

BMW® R50™/2, R50™ US, R60™/2, R60™ US 1960-1969

Valve Spring Kit • O. E. M. Replacement • High Performance

KPMI P/N	Type	Kit Includes					
		H. T. Steel Retainers		CrSi Valve Springs		H. T. Steel Basewashers	
90-9082*	Intake / Exhaust	4	90-9084	4	90-9086	4	90-9087

Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
.450"	1.355"	58#	152#	.450"

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance. Parts in this kit can be purchased individually as OEM replacements.

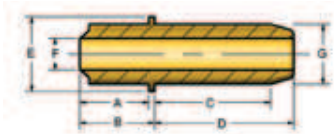
Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
90-9060*	Intake	34.00mm	1.339"	0.2730"	23°	3.425"	Standard
90-9062*	Exhaust	32.00mm	1.260"	0.2720"	29°	3.415"	Standard

Our valves are the quality you expect from Kibblewhite®, manufactured to exact O.E.M. specifications.

***SPRING KIT AND VALVE NOTE:** These components are for the DUAL RADIUS GROOVE systems. Some BMW® models may have come with SQUARE groove valves/keepers/retainers. These KPMI® parts can be used, but it is required to replace all the components in the system by using KPMI® Valves, KPMI® spring kit and OEM DUAL RADIUS GROOVE keepers.

Valve Guides • Manganese Bronze



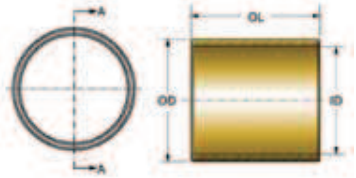
A	B	C	D	E	F	G	Intake	Exhaust
0.600"	0.650"	1.000"	1.200"	0.620"	0.2730"	0.5140" / Std.	90-9070	
						+0.001"	90-9071	
						+0.002"	90-9072	
						+0.004"	90-9074	
						+0.010"	90-9080	
No seal required						+0.036"	90-908HS	

BMW® 5/ 6/ 7/ R80™/ R90™/ R100™ 1970-1995

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
90-9035	Intake	42.00mm	1.654"	0.3130"	23º	3.885"	Standard
90-9054	Intake	44.00mm	1.732"	0.3130"	23º	3.885"	Standard
90-9037	Exhaust	34.00mm	1.339"	0.3125"	29º	3.885"	Standard
90-9036	Exhaust	38.00mm	1.496"	0.3125"	29º	3.885"	Standard
90-9045	Exhaust	40.00mm	1.575"	0.3125"	29º	3.885"	Standard

Wrist Pin Bushings • Nickel Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
90-9030	Bronze	0.9515"	0.8555"	0.9325"	Standard	Pkg. of 1

These wrist pin bushings have been machined from solid nickel bronze bar stock with a superior surface finish and are designed to be direct OEM replacements. The nickel content gives these bushings improved wearability when compared to the OEM bushing. All of these bushings are 100% quality controlled.

BRP® • CAN AM® DS 450™ 2008-2015

- 450X™
- 450XXC™
- 450XMX™
- 450 EFi™

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
91-91100	Intake	.450"	1.385"	75#	235#	.450"
	Exhaust					

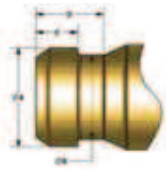
Kit Includes				
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Basewashers	4	H. T. Shims

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
91-91112	Intake	38.00mm	1.496"	0.2350"	20°	3.550"	Standard
91-91116	Exhaust	31.00mm	1.220"	0.2347"	29°	3.565"	Standard

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.315"	0.520"	5	0.435"±0.002"	0.395"	0.120"	0.210"	Exhaust



Part Number	Quantity	Quantity Discount
71029-4	Pkg. of 4	0%
71029-8	Pkg. of 8	0%
71029-16	Pkg. of 16	Less- 10%
71029-50	Pkg. of 50	Less- 15%
71029-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

BRP® • CAN AM® OUTLANDER™ 300/400cc SINGLES 2004-'15

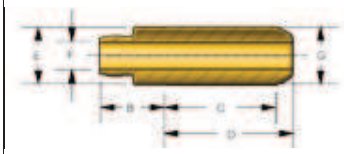
Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
91-91156	Intake	.445"	1.275"	58#	171#	.445"
	Exhaust					

Kit Includes	4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

It may be necessary to use KPMI® Shortened Valve Guides **(KPMI® # 91-91170 & # 91-91180)** to achieve higher than stock lift.

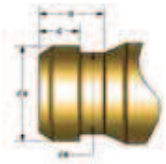
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
---	0.470"	0.780"	0.895"	0.433"	0.1958"	0.4362" / Std.	91-91170	
						+0.001"	91-91171	
						+0.002"	91-91172	
						+0.010"	91-91179	
---	0.470"	0.680"	0.895"	0.433"	0.1953"	0.4362" / Std.		91-91180
						+0.001"		91-91181
						+0.002"		91-91182
						+0.010"		91-91189

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.320"	0.435"	5	0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust



Part Number	Quantity	Quantity Discount
71041-4	Pkg. of 4	0%
71041-8	Pkg. of 8	0%
71041-16	Pkg. of 16	Less- 10%
71041-50	Pkg. of 50	Less- 15%
71041-100	Pkg. of 100	Less- 20%

BRP® • CAN AM® OUTLANDER™ 450 2016-2020

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
91-91250	Intake	.470"	1.370"	57#	177#	.470"
	Exhaust					

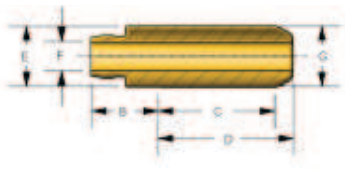
Kit Includes	4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

It may be necessary to use KPMI® Shortened Valve Guides **(KPMI® # 91-91220)** to achieve higher than stock lift.

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
91-91212	Intake	36.50mm	1.437"	0.2160"	14°	3.620"	Standard
91-91216	Exhaust	31.00mm	1.220"	0.2155"	25°	3.515"	Standard

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
---	0.515"	0.745"	0.935"	0.433"	0.2155"	0.4361"/ Std.	91-91220	
						+0.001"	91-91221	
						+0.002"	91-91222	
						+0.010"	91-91229	

BRP® • CAN AM® OUTLANDER™ 450 2016-2020

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.315"	0.455"	5	0.325"±0.002"	0.310"	0.110"	0.220"	Exhaust

Part Number	Quantity	Quantity Discount
71042-4	Pkg. of 4	0%
71042-8	Pkg. of 8	0%
71042-16	Pkg. of 16	Less- 10%
71042-50	Pkg. of 50	Less- 15%
71042-100	Pkg. of 100	Less- 20%

BRP® • CAN AM® DS™ 650 2000-2007

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
91-91010	Intake	.500"	1.390"	74#	252#	.500"
	Exhaust					

Kit Includes	4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

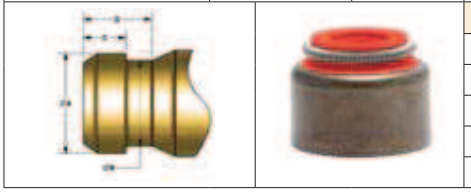
Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
91-91015	Intake	36.00mm	1.417"	0.2350"	23º	3.565"	Standard
*91-91017	Exhaust	31.00mm	1.220"	0.2347"	29º	3.565"	Standard

*Note: The factory supplied the exhaust valves for this application with 30° valve face angles. KPMI® designed their lightweight, one piece stainless steel valves for this application with standard 45° face angles. Any concerns of flow loss at low lift numbers can be overcome by maximizing the port throat area, an advantage provided by the 45° face.

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.400"	0.560"	5	0.435"±0.002"	0.400"	0.120"	0.280"	Exhaust



Part Number	Quantity	Quantity Discount
71025-4	Pkg. of 4	0%
71025-8	Pkg. of 8	0%
71025-16	Pkg. of 16	Less- 10%
71025-50	Pkg. of 50	Less- 15%
71025-100	Pkg. of 100	Less- 20%

BRP® • CAN AM® VARIOUS 500 - 1000cc TWINS* 2006-2020

***Applications OEM spec'd with 31.0mm Intake Valves and 27.0mm Exhaust Valves ONLY**
Including Commander/ Defender/ Maverick/ Outlander/ Renegade/ Traxter • 500/ 570/ 650/ 800/ 1000cc
Except 2020 Maverick Sport and 2020 Traxter HD10

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
91-91150	Intake	.445"	1.275"	58#	171#	.445"
	Exhaust					

Kit Includes	8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Basewashers

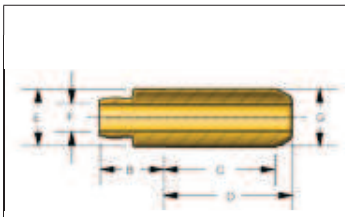
It may be necessary to use KPMI® Shortened Valve Guides **(KPMI® # 91-91170 & # 91-91180)** to achieve higher than stock lift.

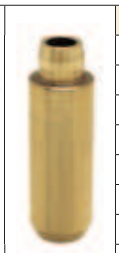
ORDER 650-557-2046

BRP® • CAN AM® VARIOUS 500 - 1000cc TWINS* 2006-'20

***Applications OEM spec'd with 31.0mm Intake Valves and 27.0mm Exhaust Valves ONLY**
Including Commander/ Defender/ Maverick/ Outlander/ Renegade/ Traxter • 500/ 570/ 650/ 800/ 1000cc
Except 2020 Maverick Sport and 2020 Traxter HD10

Valve Guides • C630 Bronze

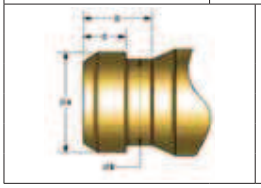




A	B	C	D	E	F	G	Intake	Exhaust
---	0.470"	0.780"	0.895"	0.433"	0.1958"	0.4362" / Std.	91-91170	
						+0.001"	91-91171	
						+0.002"	91-91172	
						+0.010"	91-91179	
---	0.470"	0.680"	0.895"	0.433"	0.1953"	0.4362" / Std.		91-91180
						+0.001"		91-91181
						+0.002"		91-91182
						+0.010"		91-91189

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.320"	0.435"	5	0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust



Part Number	Quantity	Quantity Discount
71041-4	Pkg. of 4	0%
71041-8	Pkg. of 8	0%
71041-16	Pkg. of 16	Less- 10%
71041-50	Pkg. of 50	Less- 15%
71041-100	Pkg. of 100	Less- 20%

BRP® • CAN AM® MAVERICK™ R 2024-2025

Valve Spring Kit • Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
91-91400	Intake	.410"	1.340"	86#	204#	.410"
	Exhaust	.425"	1.355"	81#	204#	.425"

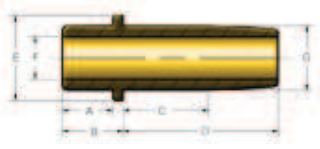
Kit Includes	12	CrSi Valve Springs	12	H. T. Steel Retainers	12	H. T. Steel Basewashers

Valves • White Diamond® • EV8 or Inconel®

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
91-91410H	Intake	30.00mm	1.181"	0.2350"	13°	3.655"	Stainless Standard
91-91411H	Intake	31.00mm	1.220"	0.2350"	13°	3.655"	Stainless Oversize
*91-91415K	Exhaust	26.00mm	1.024"	0.2345"	18°	3.625"	Inconel® Standard
*91-91416K	Exhaust	27.00mm	1.063"	0.2345"	18°	3.625"	Inconel® Oversize

*Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous. Also, It's recommended for Turbos.

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.400"	0.505"	0.885"	0.995"	0.465"	0.2154"	0.4349" / Std.	91-91420	
						+0.001"	91-91421	
						+0.002"	91-91422	
						+0.010"	91-91429	

BRP® • CAN AM® VARIOUS 850 - 1000cc TWINS* 2013-'20

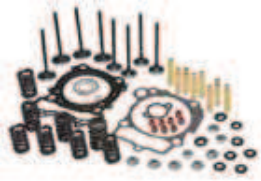
***Applications OEM spec'd with 36.5mm Intake Valves and 31.0mm Exhaust Valves ONLY**
Including Maverick/ Outlander/ Renegade • 850/ 1000cc

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
91-91200	Intake	.470"	1.370"	57#	177#	.470"
	Exhaust					

Kit Includes						
8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Basewashers	

Cylinder Head Service Kit



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
90-91400	Intake	.470"	1.370"	57#	177#	.470"
	Exhaust					

Kit Includes					
8	In / Ex Titanium Retainers	8	In / Ex CrSi Valve Springs	8	In / Ex H. T. Steel Basewashers
4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves		
8	In / Ex Std. C630 Valve Guides	1	Top End Gasket Kit		

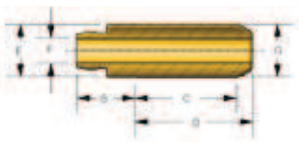
Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
91-91200	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
91-91212	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
91-91216	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
91-91220	Intake/ Exhaust Standard Valve Guide	Valve Guide • C630 Bronze
90-91401	Top End Gasket Kit	**Includes:** Head Gasket 92mm (2), Valve Stem Seal (8), Cam Chain Tensioner O-ring (1), Cam Adjuster O-ring Header Gasket (2)

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
91-91212	Intake	36.50mm	1.437"	0.2160"	14°	3.620"	Standard
91-91216	Exhaust	31.00mm	1.220"	0.2155"	25°	3.515"	Standard

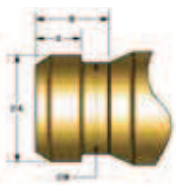
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
---	0.515"	0.745"	0.935"	0.433"	0.2155"	0.4361"/ Std.	91-91220	
						+0.001"	91-91221	
						+0.002"	91-91222	
						+0.010"	91-91229	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.315"	0.455"	5	A	B	C	D	Intake
				0.325"±0.002"	0.310"	0.110"	0.220"	Exhaust



Part Number	Quantity	Quantity Discount
71042-4	Pkg. of 4	0%
71042-8	Pkg. of 8	0%
71042-16	Pkg. of 16	Less- 10%
71042-50	Pkg. of 50	Less- 15%
71042-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

BRP® • ROTAX® ACE 900cc TRIPLE ENGINES 2014-'25

- Maverick X3™ (Max/ Turbo's) 2017-'18
- Maverick™ (Max / Turbo's) 2019-'25
- Spark™ (ACE / 60/ 90/ 900 / HO / TRIXX) 2014-'25
- GTI-GTR-GTS™ 2017
- GTI™ 90 2018-2022
- GTS™ 90 2018

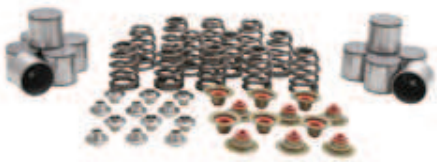
Valve Spring Kit • Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
91-91300	Intake	.350"	1.180"	51#	161#	.350"
	Exhaust					

Kit Includes						
12	CrSi Valve Springs	12	Titanium Retainers	12	Viton® Seals	

Note: KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution.

Valve Spring Kit • Beehive • Solid Tappet Conversion

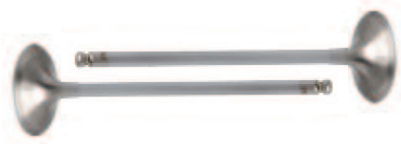


KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
91-91700	Intake	.385"	1.165"	56#	177#	.385"
	Exhaust					

Kit Includes			
12	CrSi Valve Springs	12	Titanium Retainers
12	Viton® Seals	12	H.T. Steel Tappets

1) Note: This kit is NOT compatible with OEM hydraulic tappet system. For lash adjustment, this kit is designed to use standard Ø7.5mm adjustment shims (not included). Shims are to be located in the retainer counterbore contacting the valve tip.
2) Note: KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution.

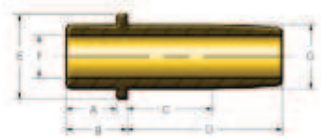
Valves • White Diamond® • Hard Chrome Stems • Inconel®



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Remarks
91-91312H	Intake	29.01mm	1.142"	0.1960"	15°	3.305"	Stainless	Standard
91-91313H	Intake	30.00mm	1.181"	0.1960"	15°	3.295"	Stainless	Oversize
*91-91316K	Exhaust	25.00mm	0.984"	0.1955"	15°	3.345"	Inconel®	Standard
*91-91317K	Exhaust	26.00mm	1.024"	0.1955"	15°	3.335"	Inconel®	Oversize

*Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous. Also, It's recommended for Turbos.

Valve Guides • Manganese Bronze for Maverick Models ONLY



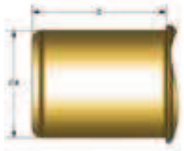
A	B	C	D	E	F	G	Intake	Exhaust
0.290"	0.340"	0.850"	1.010"	0.490"	0.1955"	0.3565" / Std.	91-91320M	
						+0.001"	91-91321M	
						+0.002"	91-91322M	
						+0.010"	91-91329M	

For all the applications available for Kibblewhite's BRP® line of products, please refer online to the BRP® section of the ***www.kpmi.us*** website, under ***ATV / UTV and PWC / Snowmobile***.

BRP® • ROTAX® ACE 900cc TRIPLE ENGINES 2014-'25

Valve Guide Seals • OEM Replacement • Tophat

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	Spring shoulder Ø	Intake
5.0mm	0.460"	0.975"	3	0.355 ± 0.005	---	0.290"	0.674"	Exhaust



Part Number	Quantity	Quantity Discount
71047-4	Pkg. of 4	0%
71047-8	Pkg. of 8	0%
71047-12	Pkg. of 12	0%
71047-16	Pkg. of 16	Less- 10%
71047-50	Pkg. of 50	Less- 15%
71047-100	Pkg. of 100	Less- 20%

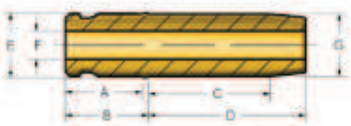
BRP® • ROTAX® AIR COOLED SINGLES 500/600 1982-'06

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
91-9400	Intake	.450"	1.305"	106#	266#	.450"
	Exhaust					

Kit Includes	4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

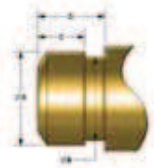
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752" / Std.	91-0478	
						+0.002"	91-0479	
						+0.004"	91-0480	
						+0.006"	91-0481	
						+0.015"	91-4036	
						+0.027"	91-0499	
0.440"	0.490"	---	1.240"	0.495"	0.2745"	0.4752" / Std.		91-0482
						+0.002"		91-0483
						+0.004"		91-0484
						+0.006"		91-0485
						+0.015"		91-4037

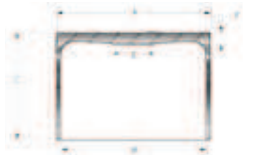
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.374"	0.560"	4	0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71019-4	Pkg. of 4	0%
71019-8	Pkg. of 8	0%
71019-16	Pkg. of 16	Less- 10%
71019-50	Pkg. of 50	Less- 15%
71019-100	Pkg. of 100	Less- 20%

Tappets • O.E.M. Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
91-9411	Intake	H. T. Steel	33.00mm	1.298"	1.235"	1.025"	0.340"	0.115"	Pkg. of 1
	Exhaust								

ORDER 650-557-2046

BRP® • SEADOO® "1503" 4-TEC ENGINES 2006-'16

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
91-91051	Intake	.390"	1.360"	75#	185#	.390"
	Exhaust					
Kit Includes		12	CrSi Valve Springs			

This spring kit is designed specifically for this supercharged application. This spring kit drops into the cylinder head, working with the O.E.M. components to provide the correct pressure and harmonic range for this high performance supercharged power plant

Retainer Set • O.E.M. Replacement • H. T. Steel

KPMI P/N	Type	Material	Quantity
91-91052	Intake	H. T. Steel	Pkg. of 12
	Exhaust		

By utilizing FEA software and a special blend of heat treated alloy steel, it was possible to reduce mass while maintaining strength and wear resistance. These retainers are intended as an OEM replacement and are completely compatible with the OEM springs, keepers, and basewashers. The spring shoulder diameter has been designed to match the OEM retainer and spring as well as KPMI's high performance spring (P/N 91-91051), making this retainer your high performance OEM alternative.

Valves • Black Diamond™ • Black Nitroneg Stems

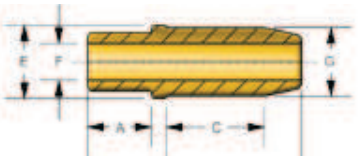
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
91-91062	Intake	38.00mm	1.496"	0.2350"	20º	3.555"	Standard
91-91066	Exhaust	31.00mm	1.220"	0.2345"	25º	3.565"	Standard

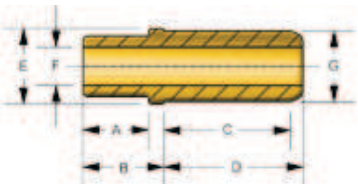
Valves • White Diamond® • Inconel®

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
91-91096K	Exhaust	31.00mm	1.220"	0.2345"	28º	3.555"	Standard

Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures, where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

Valve Guides • C630 Bronze

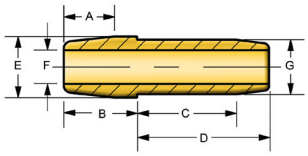




A	B	C	D	E	F	G	Intake	Exhaust
0.405"	0.500"	0.625"	0.860"	0.465"	0.2350"	0.4360" / Std.	91-91070	
						+0.001"	91-91071	
						+0.002"	91-91072	
						+0.004"	91-91074	
						+0.010"	91-91079	
0.405"	0.500"	0.785"	0.860"	0.465"	0.2345"	0.4360" / Std.		91-91080
						+0.001"		91-91081
						+0.002"		91-91082
						+0.004"		91-91084
						+0.010"		91-91089

BSA® A10™ 1950-1962

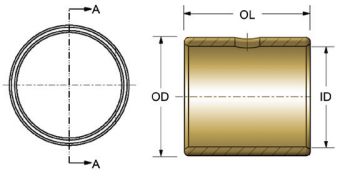
Valve Guides • Manganese Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.585”	0.765”	0.675”	1.335”	0.620”	0.3105”	0.5632” / Std.	10-4132	
						+0.002”	10-4133	
						+0.004”	10-4134	

No seal required.

Wrist Pin Bushings • Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
10-10350	SAE660 Bronze	0.8775"	0.7480"	0.950"	Standard	Pkg. of 1
10-10352	SAE660 Bronze	0.8795"	0.7480"	0.950"	+0.002”	Pkg. of 1

Designed and manufactured by Kibblewhite® to original OEM specifications with Kibblewhite® quality and precision.

BSA® B25™ 1968-1971

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
10-10300	Intake	.500”	1.375"	80#	258#	.500”
	Exhaust					

Kit Includes	2	CrSi Valve Springs	2	H. T. Steel Retainers	2	H. T. Steel Basewashers

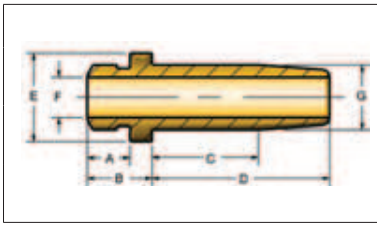
The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance.

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
10-10312	Intake	36.91mm	1.453”	0.3105”	27°	3.660”	Standard
10-10313	Intake	37.92mm	1.493”	0.3105”	27°	3.660”	Oversize
10-10316	Exhaust	33.40mm	1.315”	0.3100”	24°	3.645”	Standard
10-10317	Exhaust	34.39mm	1.354”	0.3100”	24°	3.645”	Oversize

BSA® B25™ 1968-1971

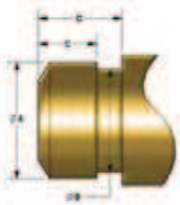
Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.330”	0.570”	0.630”	1.030”	0.560”	0.3095”	0.5010” / Std.	10-10320	
						+0.001”	10-10321	
						+0.010”	10-10329	

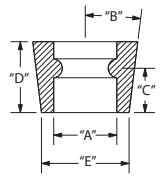
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16”	0.465”	0.550”	1	0.500”±0.010”	0.445”	0.230”	0.280”	Exhaust



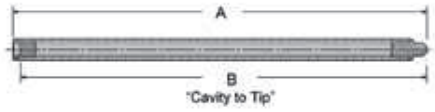
Part Number	Quantity	Quantity Discount
71012-2	Pkg. of 2	0%
71012-4	Pkg. of 4	0%
71012-8	Pkg. of 8	0%
71012-16	Pkg. of 16	Less- 10%
71012-50	Pkg. of 50	Less- 15%
71012-100	Pkg. of 100	Less- 20%

Keeper Set • H. T. Steel • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. BSA® OEM P/N
51023-2	Single Radius Bead	0.310"	10.0°	0.235”	0.285”	0.417”	2 Pr.	71-1166

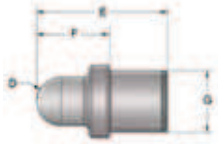
Pushrods • Steel • Chrome Moly Tube



KPMI P/N	Type	Material	A	B	Quantity
10-10410	Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	6.915"	6.775"	Pkg. of 2
	Exhaust		6.873"	6.733"	
Custom length push rods available upon request.					

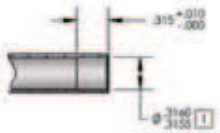
Blank Pushrods • Steel • Chrome Moly Tube

A	Ø.371” OD
B	9.120” Overall Length
C	Ø.305” ID Before Machining



D	E	F	G
R.124	0.675”	0.375”	0.310”

Machining Information:



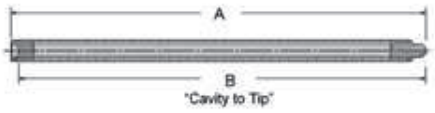
1. Break ID edge only at .015 x 45°

KPMI P/N	Model	Material	Kit Includes
90502-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Male Endpieces
90502-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Male Endpieces

Blank Pushrods Kits (sets of 2 and 4) can be machined to desired length and assembled by KPMI® for a flat fee of $120.00. Orders can be placed by using the Custom Pushrod Order Form found on our website at www.kpmi.us/forms.html.

BSA® VARIOUS B44™ 1967-1970

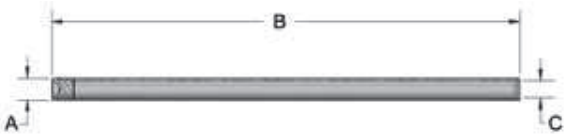
Push Rod • Steel • Chrome Moly Tube



KPMI P/N	Model	Type	Material	A	B	Quantity
10-10415	Round Barrel 1967- Earlier	Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	8.205"	8.065"	Pkg. of 2
		Exhaust				
10-10420	Square Barrel 1968-1970	Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	8.355"	8.215"	Pkg. of 2
		Exhaust				

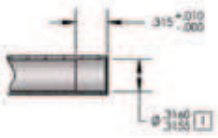
Custom length pushrods available upon request.

Blank Pushrods • Steel • Chrome Moly Tube

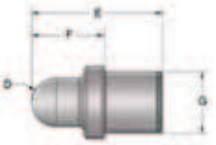


A	Ø.371" OD
B	9.120" Overall Length
C	Ø.305" ID Before Machining

Machining Information:



1. Break ID edge only at .015 x 45°



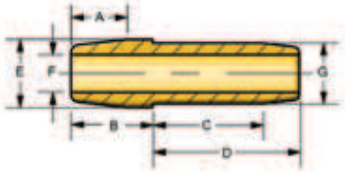
D	E	F	G
R.124	0.675"	0.375"	0.310"

KPMI P/N	Model	Material	Kit Includes
90502-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Male Endpieces
90502-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Male Endpieces

Blank Pushrods Kits (sets of 2 and 4) can be machined to desired length and assembled by KPMI® for a flat fee of $120.00. Orders can be placed by using the Custom Pushrod Order Form found on our website at **www.kpmi.us/forms.html**.

BSA® 650™ TWIN

Valve Guides • Manganese Bronze



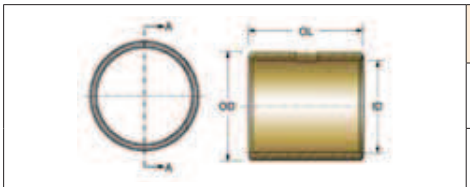
A	B	C	D	E	F	G	Intake	Exhaust
0.465"	0.675"	0.910"	1.215"	0.560"	0.3100"	0.5010" / Std	10-0347	
						+0.002"	10-0348	
						+0.004"	10-0349	
						+0.006"	10-0350	
						+0.050"	10-4055	

No seal required.

For all the applications available for Kibblewhite's BSA® line of products, please refer online to the BSA® section of the ***www.kpmi.us*** website, under ***Motorcycle Valvetrain Components***.

ORDER 650-557-2046

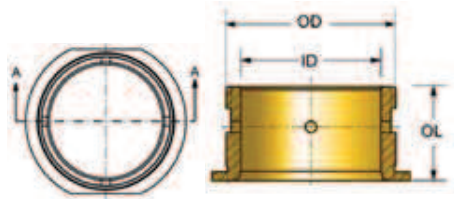
Wrist Pin Bushings • Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
10-10350	SAE660 Bronze	0.8775"	0.7480"	0.950"	Standard	Pkg. of 1
10-10352	SAE660 Bronze	0.8795"	0.7480"	0.950"	+0.002"	Pkg. of 1

Designed and manufactured by Kibblewhite® to original OEM specifications with Kibblewhite® quality and precision.

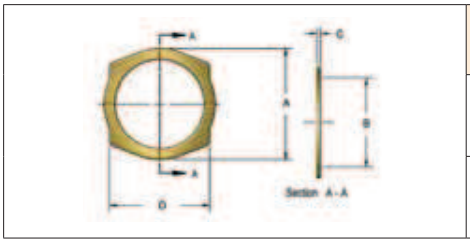
Crankshaft Bushings • Bearing Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
10-5010	SAE660 Bronze	1.815"	1.501"	1.005"	Standard	Pkg. of 1
10-5011	SAE660 Bronze	1.815"	1.491"	1.005"	-0.010"	Pkg. of 1
10-5012	SAE660 Bronze	1.815"	1.481"	1.005"	-0.020"	Pkg. of 1
10-5013	SAE660 Bronze	1.815"	1.471"	1.005"	-0.030"	Pkg. of 1
10-5014	SAE660 Bronze	1.815"	1.461"	1.005"	-0.040"	Pkg. of 1
10-5015	SAE660 Bronze	1.815"	1.451"	1.005"	-0.050"	Pkg. of 1
10-10000	SAE660 Bronze	1.835"	1.451"	1.005"	+0.020" OD	Pkg. of 1

Machined from high quality mill certified SAE660 Bearing Bronze (Custom sizes available).

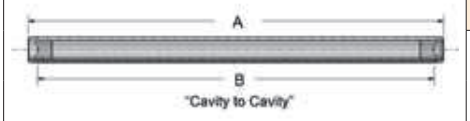
Crankshaft Thrust Washer • Bearing Bronze



KPMI P/N	Outside Diameter A	Inside Diameter B	Thickness C	Locating Flats D
10-1000	2.115"	1.690"	0.065"	1.900"

- Designed and manufactured by KPMI® specifically for use with various BSA® applications
- Improved from OEM parts to include KPMI® design standards and precision machining
- Manufactured from bearing bronze for increased wear resistance compared to OEM

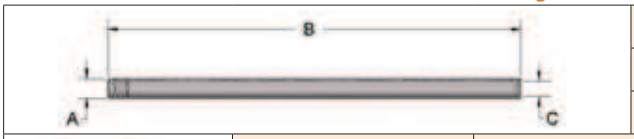
Pushrods • Steel • Chrome Moly Tube



KPMI P/N	Type	Material	A	B	Quantity
10-10400	Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	6.148"	5.868"	Pkg. of 4
	Exhaust		7.421"	7.141"	

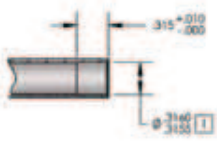
Custom length pushrods available upon request.

Blank Pushrods • Steel • Chrome Moly Tube

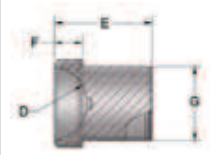


A	Ø.371" OD
B	9.120" Overall Length
C	Ø.305" ID Before Machining

Machining Information:



1. Break ID edge only at .015 x 45°



D	E	F	G
R.156	0.420"	0.120"	0.310"

KPMI P/N	Model	Material	Kit Includes
90512-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Female Endpieces
90512-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Female Endpieces

Blank Pushrods Kits (sets of 2 and 4) can be machined to desired length and assembled by KPMI® for a flat fee of $120.00. Orders can be placed by using the Custom Pushrod Order Form found on our website at www.kpmi.us/forms.html.

BSA® B50 GOLDSTAR™ 1971-1973

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
10-10050	Intake	.500"	1.375"	80#	258#	.500"
	Exhaust					

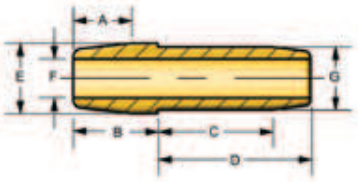
Kit Includes	2	CrSi Valve Springs	2	H. T. Steel Retainers	2	H. T. Steel Basewashers

The springs in these kits are wound from super clean chrome silicon wire that has been heat treated and shot peened. These components offer optimal fitment, keeping lateral movement to a minimum. They work together as a system, providing long life, and maximum performance.

Valves • Black Diamond™ • Black Nitroneg Stems

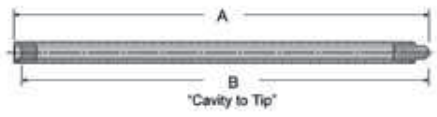
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
10-10062	Intake	44.45mm	1.750"	0.3105"	20°	4.080"	Standard
10-10066	Exhaust	38.86mm	1.530"	0.3100"	24°	4.025"	Standard

Valve Guides • Manganese Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.465"	0.675"	0.910"	1.215"	0.560"	0.3100"	0.5010" / Std.	10-10070	
						+0.002"	10-10072	
						+0.004"	10-10074	
						+0.006"	10-10076	
No seal required.						+0.050"	10-10079	

Push Rod • Steel • Chrome Moly Tube



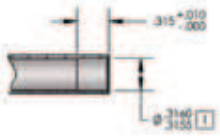
KPMI P/N	Type	Material	A	B	Quantity
10-10425	Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	8.642"	8.502"	Pkg. of 2
	Exhaust				

Custom length pushrods available upon request.

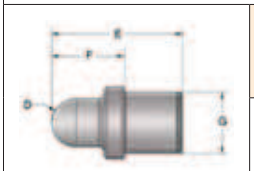
Blank Pushrods • Steel • Chrome Moly Tube

A	Ø.371" OD
B	9.120" Overall Length
C	Ø.305" ID Before Machining

Machining Information:



1. Break ID edge only at .015 x 45°



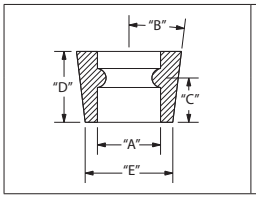
D	E	F	G
R.124	0.675"	0.375"	0.310"

KPMI P/N	Model	Material	Kit Includes
90502-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Male Endpieces
90502-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Male Endpieces

Blank Pushrods Kits (sets of 2 and 4) can be machined to desired length and assembled by KPMI® for a flat fee of $120.00. Orders can be placed by using the Custom Pushrod Order Form found on our website at www.kpmi.us/forms.html.

BSA® B50 GOLDSTAR™ 1971-1973

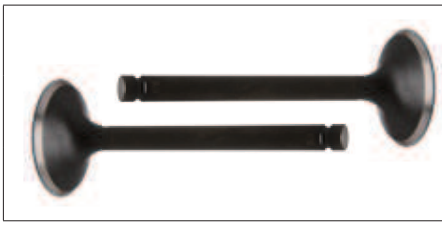
Keeper Set • H. T. Steel • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. BSA® OEM P/N
51023-2	Single Radius Bead	0.310"	10.0°	0.235"	0.285"	0.417"	2 Pr.	71-1166

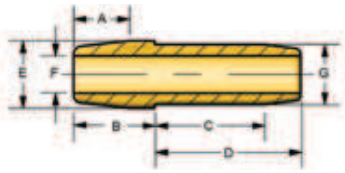
BSA® A65™ 1971-1972

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
10-4148	Intake	40.64mm	1.600"	0.3110"	R 1.500"	3.600"	Standard
10-4150	Exhaust	35.81mm	1.410"	0.3105"	25º	3.555"	Standard

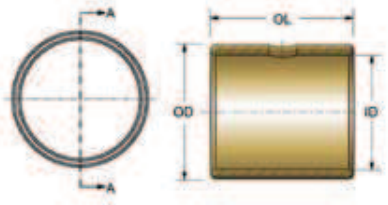
Valve Guides • Manganese Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.760"	0.840"	0.685"	1.135"	0.680"	0.3105"	0.5010" / Std.	10-4135	
						+0.002"	10-4136	
						+0.004"	10-4137	

No seal required.

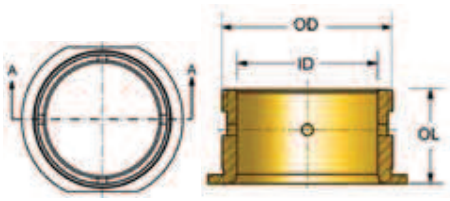
Wrist Pin Bushings • Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
10-10350	SAE660 Bronze	0.8775"	0.7480"	0.950"	Standard	Pkg. of 1
10-10352	SAE660 Bronze	0.8795"	0.7480"	0.950"	+0.002"	Pkg. of 1

Designed and manufactured by Kibblewhite® to original OEM specifications with Kibblewhite® quality and precision.

Crankshaft Bushings • Bearing Bronze

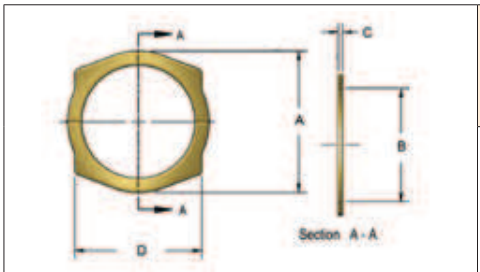


KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
10-5010	SAE660 Bronze	1.815"	1.501"	1.005"	Standard	Pkg. of 1
10-5011	SAE660 Bronze	1.815"	1.491"	1.005"	-0.010"	Pkg. of 1
10-5012	SAE660 Bronze	1.815"	1.481"	1.005"	-0.020"	Pkg. of 1
10-5013	SAE660 Bronze	1.815"	1.471"	1.005"	-0.030"	Pkg. of 1
10-5014	SAE660 Bronze	1.815"	1.461"	1.005"	-0.040"	Pkg. of 1
10-5015	SAE660 Bronze	1.815"	1.451"	1.005"	-0.050"	Pkg. of 1
10-10000	SAE660 Bronze	1.835"	1.451"	1.005"	+0.020" OD	Pkg. of 1

Machined from high quality mill certified SAE660 Bearing Bronze (Custom sizes available).

BSA® A65™ 1971-1972

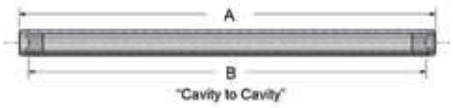
Crankshaft Thrust Washer • Bearing Bronze



KPMI P/N	Outside Diameter A	Inside Diameter B	Thickness C	Locating Flats D
10-1000	2.115"	1.690"	0.065"	1.900"

- Designed and manufactured by KPMI® specifically for use with various BSA® applications
- Improved from OEM parts to include KPMI® design standards and precision machining
- Manufactured from bearing bronze for increased wear resistance compared to OEM

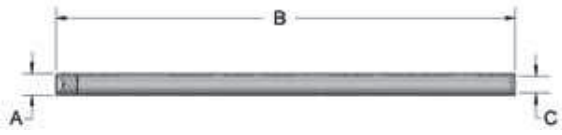
Push Rod • Steel • Chrome MolyTube



KPMI P/N	Type	Material	A	B	Quantity
10-10405	Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	6.391"	6.111"	Pkg. of 4
	Exhaust		7.667"	7.387"	

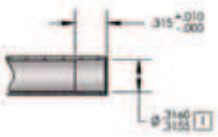
Custom length pushrods available upon request.

Blank Pushrods • Steel • Chrome Moly Tube

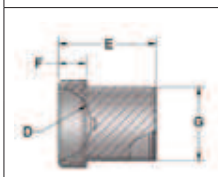


A	Ø.371" OD
B	9.120" Overall Length
C	Ø.305" ID Before Machining

Machining Information:



1. Break ID edge only at .015 x 45°

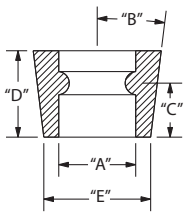


D	E	F	G
R.156	0.420"	0.120"	0.310"

KPMI P/N	Model	Material	Kit Includes
90512-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Female Endpieces
90512-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Female Endpieces

Blank Pushrods Kits (sets of 2 and 4) can be machined to desired length and assembled by KPMI® for a flat fee of $120.00. Orders can be placed by using the Custom Pushrod Order Form found on our website at www.kpmi.us/forms.html.

Keeper Set • H. T. Steel • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. BSA® OEM P/N
51023-4	Single Radius Bead	0.310"	10.0°	0.235"	0.285"	0.417"	4 Pr.	71-1166

ORDER 650-557-2046

BSA® ROCKET III™ 1968-1973

Valve Spring Kit • Lightweight Racing

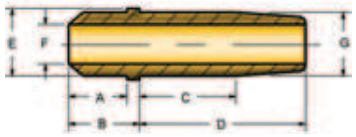
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
10-10200	Intake	.400"	1.350"	94#	240#	.400"
	Exhaust					

Kit Includes	6	CrSi Valve Springs	6	Titanium Retainers	6	H. T. Steel Basewashers

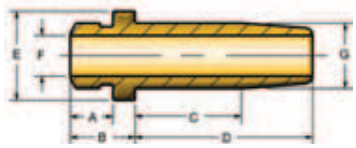
Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
10-10212	Intake	38.86mm	1.530"	0.3097"	R 1.500"	3.975"	Standard
10-10216	Exhaust	33.40mm	1.315"	0.3100"	25º	3.915"	Standard

Valve Guides • Manganese Bronze



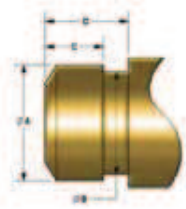
A	B	C	D	E	F	G	Intake	Exhaust
0.460"	0.560"	0.760"	1.310"	0.560"	0.3100"	0.5010" / Std.	10-10220	
						+0.002"	10-10222	
No seal required						+0.015"	10-10230	



A	B	C	D	E	F	G	Intake	Exhaust
0.330"	0.430"	0.765"	1.315"	0.560"	0.3100"	0.5010" / Std.	10-10240	
						+0.002"	10-10242	
						+0.004"	10-10244	
						+0.006"	10-10246	
Machined for seal. One seal supplied with each guide.						+0.015"	10-10250	

Valve Guide Seals • Viton®

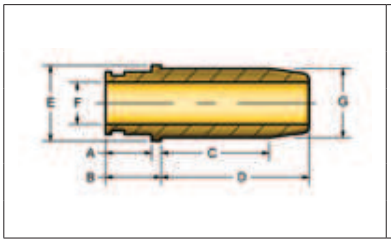
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.465"	0.550"	1	0.500"±0.010"	0.445"	0.230"	0.280"	Exhaust



Part Number	Quantity	Quantity Discount
71012-4	Pkg. of 4	0%
71012-6	Pkg. of 6	0%
71012-8	Pkg. of 8	0%
71012-16	Pkg. of 16	Less- 10%
71012-50	Pkg. of 50	Less- 15%
71012-100	Pkg. of 100	Less- 20%

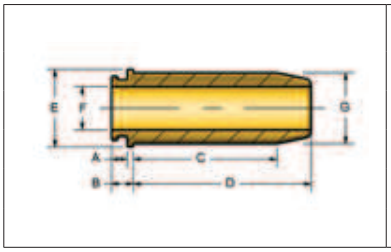
DUCATI® VARIOUS 750-916 1971-'98

Valve Guides • C630 Bronze For 750 GT 1971-1974



A	B	C	D	E	F	G	Intake	Exhaust
0.345”	0.415”	0.810”	1.110”	0.644”	0.3140”	0.5152” / Std.	92-9600	
						+0.001”	92-9601	
						+0.002”	92-9602	
						+0.004”	92-9604	
						+0.010”	92-9610	

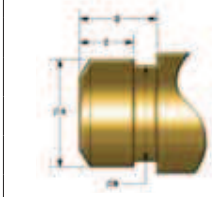
Valve Guides • C630 Bronze For 750 FI Special / Paso 1986-1988 / 906 Paso 1988-1990



A	B	C	D	E	F	G	Intake	Exhaust
0.115”	0.160”	1.050”	1.300”	0.560”	0.3140”	0.5152” / Std.	92-9640	
						+0.001”	92-9641	
						+0.002”	92-9642	
						+0.004”	92-9644	
						+0.010”	92-9650	

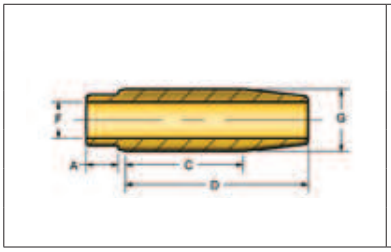
Valve Guide Seals • Viton® For 750 GT 1971-'74 / 750 FI Special / Paso 1986-'88 / 906 Paso 1988-'90

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
8.0mm	0.285”	0.555”	1	0.466”-0.475”	0.411”-0.430"	0.040”	0.135”	Exhaust



Part Number	Quantity	Quantity Discount
71043-4	Pkg. of 4	0%
71043-8	Pkg. of 8	0%
71043-16	Pkg. of 16	Less- 10%
71043-50	Pkg. of 50	Less- 15%
71043-100	Pkg. of 100	Less- 20%

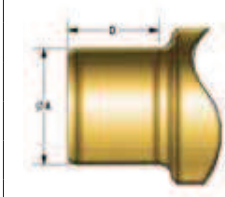
Valve Guides • Manganese Bronze For 851 SBK 1987-'92 / 888 SBK 1991-'93 / 916 SBK 1994-'98



A	B	C	D	E	F	G	Intake	Exhaust
0.245”	0.300”	0.900”	1.400”	--	0.2745”	0.4745” / Std.	92-9620	
						+0.001”	92-9621	
						+0.002”	92-9622	
						+0.004”	92-9624	
						+0.010”	92-9630	

Valve Guide Seals • Viton® For 851 SBK 1987-'92 / 888 SBK 1991-'93 / 916 SBK 1994-'98

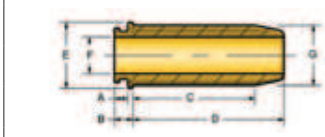
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.360”	0.520”	5	0.383”-0.389”	---	---	0.255”	Exhaust



Part Number	Quantity	Quantity Discount
71044-4	Pkg. of 4	0%
71044-8	Pkg. of 8	0%
71044-16	Pkg. of 16	Less- 10%
71044-50	Pkg. of 50	Less- 15%
71044-100	Pkg. of 100	Less- 20%

DUCATI® 800 / 900 2000-2007

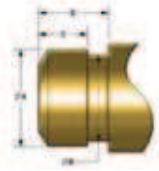
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.165”	0.205”	0.855”	1.290”	0.560”	0.3145”	0.5147” / Std.	92-92020	
						+0.001”	92-92021	
						+0.002”	92-92022	
						+0.010”	92-92029	
0.125”	0.165”	0.855”	1.250”	0.560”	0.3140”	0.5147” / Std.		92-92030
						+0.001”		92-92031
						+0.002”		92-92032
						+0.010”		92-92039

Valve Guide Seals • Viton®

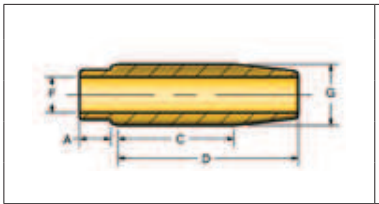
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
8.0mm	0.285”	0.555”	1	0.466”-0.475”	0.411”-0.430"	0.040”	0.135”	Exhaust



Part Number	Quantity	Quantity Discount
71043-4	Pkg. of 4	0%
71043-8	Pkg. of 8	0%
71043-16	Pkg. of 16	Less- 10%
71043-50	Pkg. of 50	Less- 15%
71043-100	Pkg. of 100	Less- 20%

DUCATI® 696 / 796 / 1000 / 1100 2003-'10

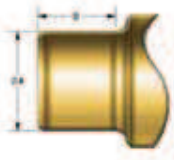
Valve Guides • C630 Bronze For Monster 1100 2010 / 1100S & Sport Classic GT 1000 Only



A	B	C	D	E	F	G	Intake	Exhaust
0.235”	---	1.010”	1.270”	---	0.2745”	0.4744” / Std.	92-92070	
						+0.001”	92-92071	
						+0.002”	92-92072	
						+0.010”	92-92079	
0.235”	---	---	1.280”	---	0.2740”	0.4744” / Std.		92-92080
						+0.001”		92-92081
						+0.002”		92-92082
						+0.010”		92-92089

Valve Guide Seals • Viton® For Monster 1100 2010 / 1100S & Sport Classic GT 1000 Only

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.360”	0.520”	5	0.383”-0.389”	---	---	0.255”	Exhaust

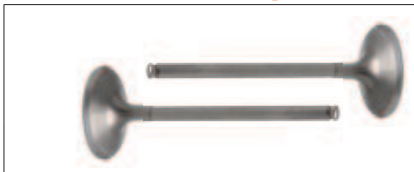


Part Number	Quantity	Quantity Discount
71044-4	Pkg. of 4	0%
71044-8	Pkg. of 8	0%
71044-16	Pkg. of 16	Less- 10%
71044-50	Pkg. of 50	Less- 15%
71044-100	Pkg. of 100	Less- 20%

VISIT US AT WWW.KPMI.US

GASGAS® EX™ 250F 2021-2023

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
96-96412T	Intake	32.51mm	1.280"	0.1960"	15º	3.770"	Titanium	77736030000
96-96416T	Exhaust	26.55mm	1.045"	0.1955"	30º	3.875"	Titanium	77736031000

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

GASGAS® EX™ 300F/ 350F 2021-2022

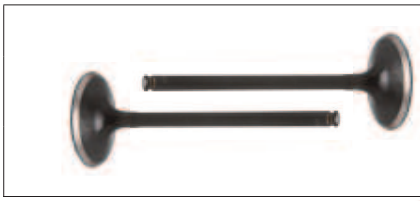
Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Setup For*	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96600	Titanium Valves	Intake	.470"	1.340"	55#	206#	.470"
		Exhaust					
	Stainless Valves	Intake	.455"	1.325"	60#	206#	.455"
		Exhaust					

Kit Includes				
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Basewashers	4	H. T. Steel Shims*

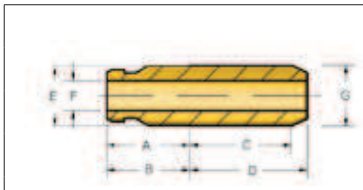
*Kit includes spring shims intended to be used when running Stainless Valves

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
96-96612	Intake	36.00mm	1.417"	0.2159"	14º	3.420"	Standard
96-96616	Exhaust	29.15mm	1.148"	0.2154"	28º	3.505"	Standard

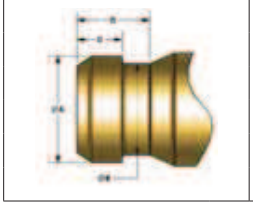
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.465"	0.465"	0.835"	1.035"	0.433"	0.2154"	0.4352" / Std.	96-96620	
						+0.001"	96-96621	
						+0.002"	96-96622	
						+0.010"	96-96629	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.315"	0.455"	5	0.325"±0.002"	0.310"	0.110"	0.220"	Exhaust



Part Number	Quantity	Quantity Discount
71042-4	Pkg. of 4	0%
71042-8	Pkg. of 8	0%
71042-16	Pkg. of 16	Less- 10%
71042-50	Pkg. of 50	Less- 15%
71042-100	Pkg. of 100	Less- 20%

HD® FLATHEAD™ 1930-1973

Valve Spring Kit • O. E. M. Replacement for 74" - 80" Flathead 1930-1948

KPMI P/N	Type	Kit Includes					
		H. T. Steel Retainers			H. T. Steel Keepers Pr.		
20-20480	Intake	4	20-20481		4	20-20489	
		CrSi Valve Springs		H. T. Steel Basewashers		H. T. Steel Shims	
	Exhaust	4	20-20483	4	20-20485	4	20-20487

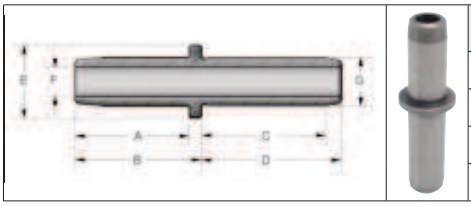
Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
.375"	2.125"	65#	130#	.375"

Some models may require shim# 20-20487 to achieve recommended installed height. All components are the quality you can expect from Kibblewhite®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

Valves • Black Diamond™ • Black Nitroneg Stems

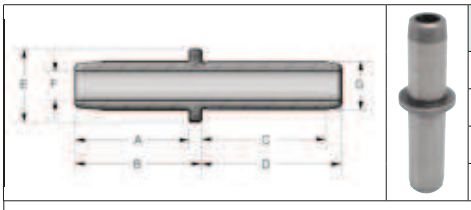
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip Radius	Tulip Angle	O. L.	Remarks
20-20740	Intake Exhaust	1.625"	41.28mm	0.3395"	R0.540	R 0.540	5.585"	45" Standard 1941-1973
20-20742	Intake Exhaust	1.930"	49.02mm	0.3715"	R0.325	7°	6.280"	UL 74"-80"
20-20743	Intake Exhaust	2.050"	52.07mm	0.3715"	R0.325	7°	6.280"	UL 74"-80"
20-20744	Intake Exhaust	1.930"	49.02mm	0.3715"	R0.325	7°	5.940"	VL 74"-80"
20-20745	Intake Exhaust	2.050"	52.07mm	0.3715"	R0.325	7°	5.940"	VL 74"-80"

Valve Guides • Cast Iron For 45" Flathead 1941-1973



A	B	C	D	E	F	G	Intake	Exhaust
1.200"	1.330"	1.310"	1.470"	0.855"	0.3395"	0.5647" / Std.	20-20750	
						+0.001"	20-20751	
						+0.002"	20-20752	
						+0.010"	20-20759	

Valve Guides • Cast Iron For 74"- 80" Flathead 1930-1948



A	B	C	D	E	F	G	Intake	Exhaust
1.120"	1.275"	1.630"	1.860"	0.935"	0.3715"	0.5952" / Std.	20-20760	
						+0.001"	20-20761	
						+0.002"	20-20762	
						+0.010"	20-20769	

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

HD® KNUCKLEHEAD™ 1936-1947

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20170	Intake Exhaust	.480"	1.310"	158#	340#	.480"

Kit Includes				
	4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.
	4	CrSi Valve Springs	4	H. T. Steel Shims

Spring kit must be used with Kibblewhite® guides, or the tops of your guides must be machined to use this kit. Retainers manufactured from heat treated, aircraft quality, steel billet. FEA stress analysis used to incorporate unique concave radius, and design equidistant holes to lighten retainer without sacrificing strength. Black Oxide treatment applied to resist corrosion. Machining Instructions included with kit, or check our website **www.kpmi.us** for current info.

HD® KNUCKLEHEAD™ 1936-1947

Valve Spring Kit • O. E. M. Replacement

KPMI P/N	Type	Kit Includes							
		H. T. Steel Retainers		H. T. Steel Keepers Pr.		CrSi Valve Springs		H. T. Steel Basewashers	
20-20425	Intake	4	20-20426	4	20-20429	4	20-20427	4	20-20428
	Exhaust								

Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
.415"	1.375"	127#	270#	.415"

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

Engine Kit with O. E. M. Replacement Spring Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-22050	Intake	.415"	1.375"	127#	270#	.415"
	Exhaust					

Kit Includes				
4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeprs Pr.
4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Components • Replacement • Engine Kit

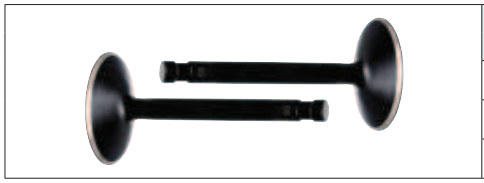
KPMI P/N	Description	Specification
20-20425	Spring Kit, OEM Replacement	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs
20-4101	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
20-4102	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

Valve Kit • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-22000	Intake	1.750"	44.45mm	0.3765"	R0.234	23°	3.590"	Standard
	Exhaust	1.750"	44.45mm	0.3760"	R0.236	27°	3.670"	Standard

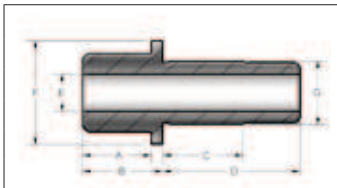
Kit Includes				
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-4101	Intake	1.750"	44.45mm	0.3765"	R0.234	23°	3.590"	Standard
20-20414	Intake	1.940"	49.28mm	0.3765"	R0.234	23°	3.590"	Oversize
20-4102	Exhaust	1.750"	44.45mm	0.3760"	R0.236	27°	3.670"	Standard

Valve Guides • Cast Iron



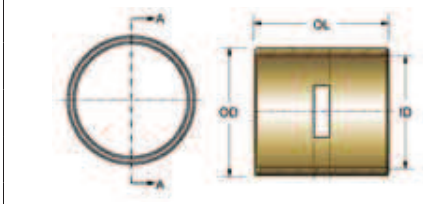
A	B	C	D	E	F	G	Intake	Exhaust
0.600"	0.700"	0.700"	1.200"	1.050"	0.3755"	0.6440" / Std.	20-4095C	
						+0.002"	20-4096C	
						+0.004"	20-4097C	
						+0.006"	20-4098C	
						+0.008"	20-4099C	
						+0.025"	20-4100C	

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

ORDER 650-557-2046

HD® KNUCKLEHEAD™ 1936-1947

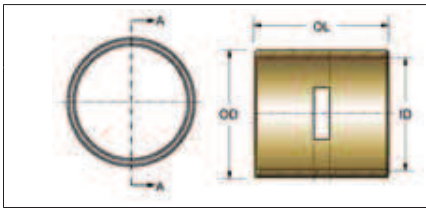
Wrist Pin Bushings • Engine Builder Series • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-20570	Manganese Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
20-20572	Manganese Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
20-20580	Manganese Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
20-20582	Manganese Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1

Made from Manganese Bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

Wrist Pin Bushings • High Performance • C630 Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-0645	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

HD® PANHEAD™ 1948-1965

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20445	Intake / Exhaust	.600"	1.500"	154#	389#	.600"

Kit Includes				
	4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.
	4	CrSi Valve Springs	4	H. T. Steel Basewashers

This lightweight Panhead® spring kit is designed to work with factory covers without interference. Further, the basewasher in this kit has been counter bored to allow the seal to fit inside the basewasher which increases the retainer to seal clearance for higher lift cams. The retainers in this kit are designed using the latest CAD software available. The retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

Valve Spring Kit • O. E. M. Replacement

KPMI P/N	Type	Kit Includes							
		H. T. Steel Retainers		H. T. Steel Keepers Pr.		CrSi Valve Springs		H. T. Steel Basewashers	
20-20430	Intake / Exhaust	4	20-20431	4	20-20434	4	20-20432	4	20-20433

Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
.415"	1.375"	129#	272#	.415"

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

HD® PANHEAD™ 1948-1965

Engine Kit with O. E. M. Replacement Spring Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-22150	Intake	.415"	1.375"	129#	272#	.415"
	Exhaust					

Kit Includes				
4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeprs Pr.
4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
4	In/ Ex Red Viton® Seals		
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Components • Replacement • Engine Kit

KPMI P/N	Description	Specification
20-20430	Spring Kit, OEM Replacement	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs
71011-4	Intake / Exhaust Seal	Seal • Red Viton®
20-4257	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
20-4195	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

Valve Kit • Black Diamond™ • Black Nitroneg Stems

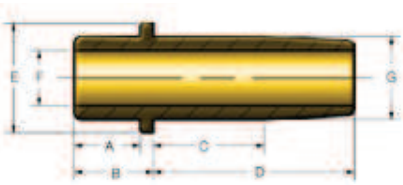
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-22100	Intake	1.750"	44.45mm	0.3765"	R0.234	23°	3.790"	Standard
	Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.820"	Standard

Kit Includes			
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-4257	Intake	1.750"	44.45mm	0.3765"	R0.234	23°	3.790"	OEM18071-48
20-4195	Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.820"	OEM18082-57

Valve Guides • C630 Bronze • Cast Iron



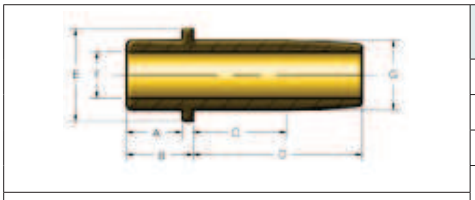
A	B	C	D	E	F	G	Intake	
							C630 Bronze	Cast Iron
0.450"	0.540"	0.810"	1.340"	0.745"	0.3760"	0.5650" / Std.	20-2020	20-2020C
						+0.001"	20-2021	20-2021C
						+0.002"	20-2022	20-2022C
						+0.003"	20-2023	20-2023C
						+0.004"	20-2024	20-2024C
						+0.006"	20-2026	20-2026C
						+0.008"	20-2028	20-2028C
						+0.010"	20-2029	20-2029C
						+0.025"	20-20HS	20-20HSC

A	B	C	D	E	F	G	Exhaust	
0.450"	0.540"	0.810"	1.340"	0.745"	0.3760"	0.5650" / Std.	20-2030	20-2030C
						+0.001"	20-2031	20-2031C
						+0.002"	20-2032	20-2032C
						+0.003"	20-2033	20-2033C
						+0.004"	20-2034	20-2034C
						+0.006"	20-2036	20-2036C
						+0.008"	20-2038	20-2038C
						+0.010"	20-2039	20-2039C
						+0.025"	20-30HS	20-30HSC

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

ORDER 650-557-2046

Valve Guides • Manganese Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.375”	0.465”	0.885”	1.435”	0.745”	0.3760”	0.5650” / Std.	20-2020M	20-2030M
						+0.001”	20-2021M	20-2031M
						+0.002”	20-2022M	20-2032M
						+0.003”	20-2023M	20-2033M
						+0.004”	20-2024M	20-2034M
						+0.006”	20-2026M	20-2036M
						+0.008”	20-2028M	20-2038M
						+0.010”	20-2029M	20-2039M
						+0.025”	20-20HSM	20-30HSM

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

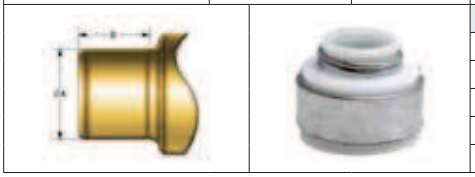
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
3/8"	0.516"	0.661"	5	0.562”±0.002”	---	---	0.375”	Exhaust

Part Number	Quantity	Quantity Discount
71011-4	Pkg. of 4	0%
71011-8	Pkg. of 8	0%
71011-16	Pkg. of 16	Less- 10%
71011-50	Pkg. of 50	Less- 15%
71011-100	Pkg. of 100	Less- 20%

Valve Guide Seals • PC Style

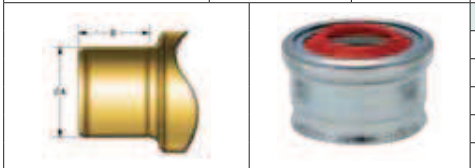
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
3/8"	0.518"	0.650"	6	0.562”±0.002”	---	---	0.375”	Exhaust



Part Number	Quantity	Quantity Discount
71002-4	Pkg. of 4	0%
71002-8	Pkg. of 8	0%
71002-16	Pkg. of 16	Less- 10%
71002-50	Pkg. of 50	Less- 15%
71002-100	Pkg. of 100	Less- 20%

Valve Guide Seals • O.E.M. Replacement

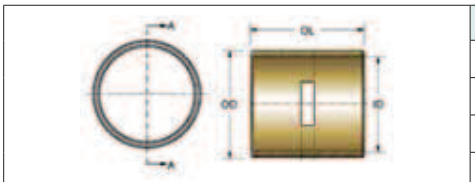
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
3/8"	0.375"	0.660"	7	0.562”±0.002”	---	---	0.315"	Exhaust



Part Number	Quantity	Quantity Discount
71035-4	Pkg. of 4	0%
71035-8	Pkg. of 8	0%
71035-16	Pkg. of 16	Less- 10%
71035-50	Pkg. of 50	Less- 15%
71035-100	Pkg. of 100	Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.90-93).

Wrist Pin Bushings • Engine Builder Series • Manganese Bronze

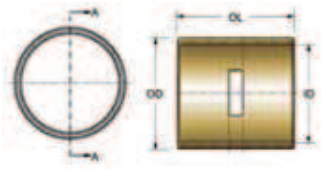


KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-20570	Manganese Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
20-20572	Manganese Bronze	0.899"	0.788"	1.065"	+0.002”	Pkg. of 2
20-20580	Manganese Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
20-20582	Manganese Bronze	0.899"	0.788"	1.065"	+0.002”	Pkg. of 1

Made from Manganese Bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

HD® PANHEAD™ 1948-1965

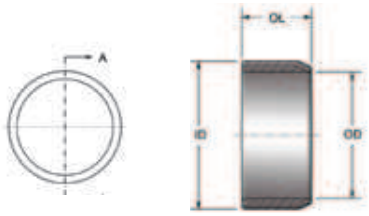
Wrist Pin Bushings • High Performance • C630 Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-0645	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

Spigot • Exhaust • 6061-T6 Aluminum



KPMI P/N	Type	Material	O. D.	I. D.	O. L.	Quantity
20-2104	Exhaust	6061-T6 aluminum	2.060"	1.765"	0.970"	Pkg. of 1

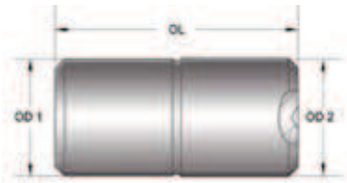
Kibblewhite®'s replacement exhaust spigot has been designed and machined from 6061-T6 aluminum extruded tubing. This spigot allows you to rebuild the exhaust attachment point on your classic Panhead engine.

Recommended Valve Seats • Powdered Metal

KPMI P/N	Type	O. D.		I. D.		Height		Quantity
10-SC510	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

Dowel • Cone • Oversize



KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)

HD® SPORTSTER™ 1957-1969

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-2210	Intake	.480"	1.310"	158#	340#	.480"
	Exhaust					

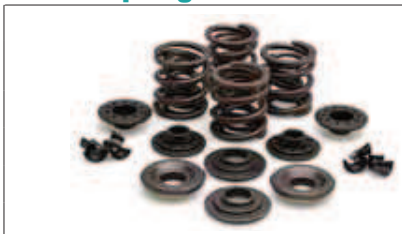
Kit Includes				
4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.	
4	CrSi Valve Springs	4	H. T. Steel Basewashers	

Longer KPMI 'R' model valves, 20-4167 (int.) and 20-4168(ex.) may be required to achieve correct installed height for this spring kit. Rockers should clear covers when kit is installed correctly.

ORDER 650-557-2046

HD® SPORTSTER™ 1957-1969

Valve Spring Kit • O. E. M. Replacement



KPMI P/N	Type	Kit Includes							
		H. T. Steel Retainers		H. T. Steel Keepers Pr.		CrSi Valve Springs		H. T. Steel Basewashers	
20-20440	Intake	4	20-20441	4	20-4275	4	20-2215	4	20-20085
	Exhaust								

Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
.400"	1.245"	95#	330#	.400"

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

Engine Kit with O. E. M. Replacement Spring Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-22250	Intake	.400"	1.245"	95#	330#	.400"
	Exhaust					

Kit Includes				
4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeprs Pr.
4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Components • Replacement • Engine Kit

KPMI P/N	Description	Specification
20-20440	Spring Kit, OEM Replacement	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs
20-4258	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
20-4197	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

Valve Kit • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-22200	Intake	1.825"	46.36mm	0.3090"	R0.375	23°	3.562"	Standard
	Exhaust	1.570"	39.88mm	0.3384"	R0.236	29°	3.512"	Standard

Kit Includes				
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-4258	Intake	1.825"	46.36mm	0.3090"	R0.375	23°	3.562"	OEM18071-58
20-4197	Exhaust	1.570"	39.88mm	0.3384"	R0.236	29°	3.512"	OEM18080-58R
20-4197-1	Exhaust	1.630"	41.40mm	0.3384"	R0.236	29°	3.512"	Oversize

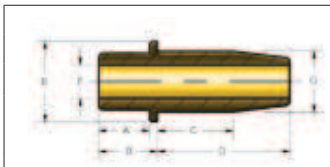
Valve Seats • Powdered Metal

KPMI P/N	Type	O. D.		I. D.		Height		Quantity
10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

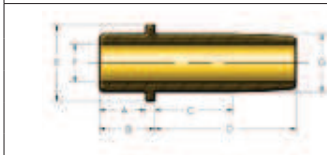
KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

HD® SPORTSTER™ 1957-1969

Valve Guides • C630 Bronze • Cast Iron



A	B	C	D	E	F	G	Intake	
							C630 Bronze	Cast Iron
0.470”	0.545”	0.700”	1.225”	0.745”	0.3085”	0.5650” / Std.	20-2320	20-2320C
						+0.001”	20-2321	20-2321C
						+0.002”	20-2322	20-2322C
						+0.010”	20-2329	20-2329C

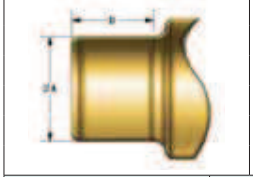


A	B	C	D	E	F	G	Exhaust	
0.470”	0.545”	0.600”	1.225”	0.745”	0.3375”	0.5650” / Std.	20-2330	20-2330C
						+0.001”	20-2331	20-2331C
						+0.002”	20-2332	20-2332C
						+0.010”	20-2339	20-2339C

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

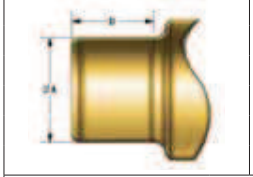
Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.375"	0.630"	7	0.530”±0.002”	---	---	0.295"	Intake
								Exhaust



Part Number	Quantity	Quantity Discount
71033-4	Pkg. of 4	0%
71033-8	Pkg. of 8	0%
71033-16	Pkg. of 16	Less- 10%
71033-50	Pkg. of 50	Less- 15%
71033-100	Pkg. of 100	Less- 20%

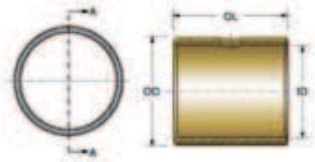
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
11/32"	0.375"	0.630"	7	0.530”±0.002”	---	---	0.295"	Intake
								Exhaust



Part Number	Quantity	Quantity Discount
71034-4	Pkg. of 4	0%
71034-8	Pkg. of 8	0%
71034-16	Pkg. of 16	Less- 10%
71034-50	Pkg. of 50	Less- 15%
71034-100	Pkg. of 100	Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.90-93).

Rocker Arm Bushings • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-2106	Manganese Bronze	0.6795”	0.548”	1.065”	Pkg. of 8

Wrist Pin Bushings • Engine Builder Series • Manganese Bronze

KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-20810	Manganese Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
20-20812	Manganese Bronze	0.899"	0.788"	0.945"	+0.002”	Pkg. of 1

Made from Manganese Bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

Wrist Pin Bushings • High Performance • C630 Bronze

KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-0644	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

ORDER 650-557-2046

HD® SPORTSTER™ 1970-1983

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-2210	Intake	.480”	1.310"	158#	340#	.480"
	Exhaust					

Kit Includes				
4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.
4	CrSi Valve Springs	4	H. T. Steel Basewashers

Longer KPMI ‘R’ model valves, 20-4167 (int.) and 20-4168(ex.) may be required to achieve correct installed height for this spring kit. Rockers should clear covers when kit is installed correctly. Retainers manufactured from heat treated, aircraft quality, steel billet. FEA stress analysis used to incorporate unique concave radius, and design equidistant holes to lighten retainer without sacrificing strength. Black Oxide treatment applied to resist corrosion.

Valve Spring Kit • O. E. M. Replacement

KPMI P/N	Type	Kit Includes							
		H. T. Steel Retainers		H. T. Steel Keepers Pr.		CrSi Valve Springs		H. T. Steel Basewashers	
20-20440	Intake	4	20-20441	4	20-4275	4	20-2215	4	20-20085
	Exhaust								

Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
.400”	1.245"	95#	330#	.400"

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

Engine Kit with O. E. M. Replacement Spring Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-22350	Intake	.400”	1.245"	95#	330#	.400"
	Exhaust					

Kit Includes			
4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeprs Pr.
4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Components • Replacement • Engine Kit

KPMI P/N	Description	Specification
20-20440	Spring Kit, OEM Replacement	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs
20-4196	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
20-4197	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

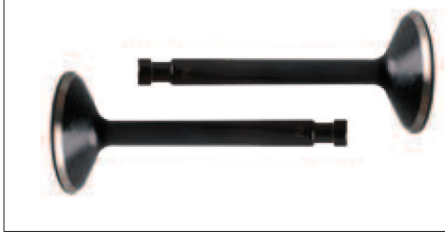
Valve Kit • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-22300	Intake	1.935”	49.15mm	0.3090"	R0.256	23°	3.620”	Standard
	Exhaust	1.570”	39.88mm	0.3384"	R0.236	29°	3.512"	Standard

Kit Includes				
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

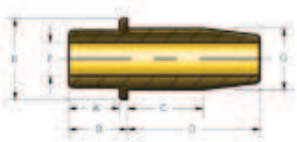
HD® SPORTSTER™ 1970-1983

Valves • Black Diamond™ • Black Nitroneg Stems

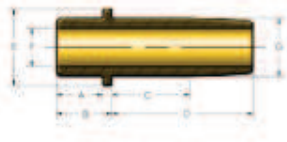


KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip Radius	Tulip Angle	O. L.	Remarks
20-4196	Intake	1.935"	49.15mm	0.3090"	R0.256	23°	3.620"	OEM18070-70
20-4167	Intake	1.950"	49.53mm	0.3090"	R0.256	23°	3.690"	OEM18069-65R
20-4196-1	Intake	2.000"	50.80mm	0.3090"	R0.256	23°	3.620"	Oversize
20-4197	Exhaust	1.570"	39.88mm	0.3384"	R0.236	29°	3.512"	OEM18080-58R
20-4197-1	Exhaust	1.630"	41.40mm	0.3384"	R0.236	29°	3.512"	Oversize
20-4168	Exhaust	1.750"	44.45mm	0.3384"	R0.236	29°	3.620"	OEM18080-70R

Valve Guides • C630 Bronze • Cast Iron



A	B	C	D	E	F	G	Intake C630 Bronze	Intake Cast Iron
0.470"	0.545"	0.700"	1.225"	0.745"	0.3085"	0.5650" / Std.	20-2320	20-2320C
						+0.001"	20-2321	20-2321C
						+0.002"	20-2322	20-2322C
						+0.010"	20-2329	20-2329C

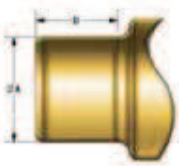


A	B	C	D	E	F	G	Exhaust	
0.470"	0.545"	0.600"	1.225"	0.745"	0.3375"	0.5650" / Std.	20-2330	20-2330C
						+0.001"	20-2331	20-2331C
						+0.002"	20-2332	20-2332C
						+0.010"	20-2339	20-2339C

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

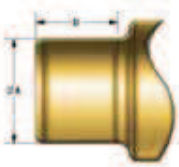
Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs A	B	C	D	Type
5/16"	0.375"	0.630"	7	0.530"±0.002"	---	---	0.295"	Intake / Exhaust



Part Number	Quantity	Quantity Discount
71033-4	Pkg. of 4	0%
71033-8	Pkg. of 8	0%
71033-16	Pkg. of 16	Less- 10%
71033-50	Pkg. of 50	Less- 15%
71033-100	Pkg. of 100	Less- 20%

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs A	B	C	D	Type
11/32"	0.375"	0.630"	7	0.530"±0.002"	---	---	0.295"	Intake / Exhaust



Part Number	Quantity	Quantity Discount
71034-4	Pkg. of 4	0%
71034-8	Pkg. of 8	0%
71034-16	Pkg. of 16	Less- 10%
71034-50	Pkg. of 50	Less- 15%
71034-100	Pkg. of 100	Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.90-93).

Valve Seats • Powdered Metal

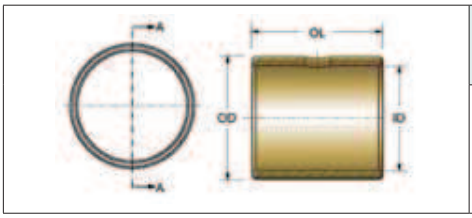
KPMI P/N	Type	O. D.		I. D.		Height		Quantity
10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

ORDER 650-557-2046

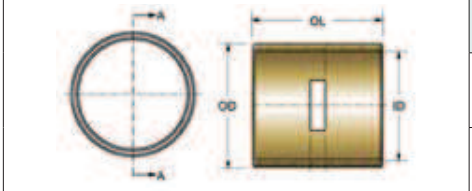
HD® SPORTSTER™ 1970-1983

Rocker Arm Bushings • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-2106	Manganese Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

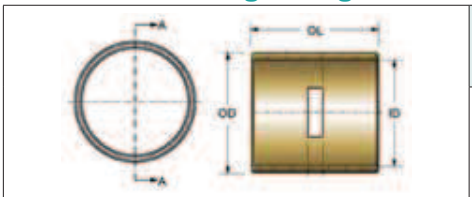
Wrist Pin Bushings • Engine Builder Series • Manganese Bronze For Sportster 1957-1983



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-20810	Manganese Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
20-20812	Manganese Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from Manganese Bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

Wrist Pin Bushings • High Performance • C630 Bronze For Ironhead Sportster 1957-1983



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-0644	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

HD® SHOVELHEAD™ 74" 1966-1977

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-2110	Intake / Exhaust	.600"	1.510"	152#	387#	.600"

Kit Includes				
4	H.A. 7075-T6 Retainers	4	H. T. Steel Keepers Pr.	
4	CrSi Valve Springs	4	H. T. Steel Basewashers	

Retainer offset 0.070" for taller installed height. Basewashers counter-bored to accept a 0.665" OD seal

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20450	Intake / Exhaust	.600"	1.510"	152#	387#	.600"

Kit Includes				
4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.	
4	CrSi Valve Springs	4	H. T. Steel Basewashers	

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

HD® SHOVELHEAD™ 74" 1966-1977

Valve Spring Kit • O. E. M. Replacement

KPMI P/N	Type	Kit Includes							
		H. T. Steel Retainers		H. T. Steel Keepers Pr.		CrSi Valve Springs		H. T. Steel Basewashers	
20-20435	Intake	4	20-20436	4	20-20439	4	20-20437	4	20-20438
	Exhaust								

Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
.415"	1.375"	129#	272#	.415"

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

Engine Kit with O. E. M. Replacement Spring Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-22450	Intake	.415"	1.375"	129#	272#	.415"
	Exhaust					

Kit Includes				
4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeprs Pr.	
4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
4	In/ Ex Red Viton® Seals			
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves	

Components • Replacement • Engine Kit

KPMI P/N	Description	Specification
20-20435	Spring Kit, OEM Replacement	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs
71011-4	Intake / Exhaust Seal	Seal • Red Viton®
20-4194	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
20-4195	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

Valve Kit • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-22400	Intake	1.950"	49.53mm	0.3765"	R0.234	23°	3.885"	Standard
	Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.810"	Standard

Kit Includes				
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves	

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-4194	Intake	1.950"	49.53mm	0.3765"	R0.234	23°	3.885"	OEM18078-80
20-4256	Intake	2.000"	50.80mm	0.3765"	R0.234	23°	3.885"	Oversize
20-4195	Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.810"	OEM18082-57
20-4195S	Exhaust	1.780"	45.21mm	0.3760"	R0.234	29°	3.820"	Oversize
20-4195-1	Exhaust	1.8120"	46.02mm	0.3760"	R0.234	29°	3.820"	Oversize

Black Diamond™ Valves • Fat Stem • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-4294	Intake	1.950"	49.53mm	0.3780"	R0.234	23°	3.885"	OEM18075-8
20-4295	Exhaust	1.750"	44.45mm	0.3775"	R0.234	29°	3.810"	Standard

ORDER 650-557-2046

HD® SHOVELHEAD™ 74" 1966-1977

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	Same as Sifton P/N
20-2000	Intake / Exhaust	.600"	1.510"	152#	387#	.600"	3030

Outer Spring ID	Inner Spring ID	Solid Height
1.249"	0.975"	0.850"

Kit Includes	4	CrSi Valve Springs

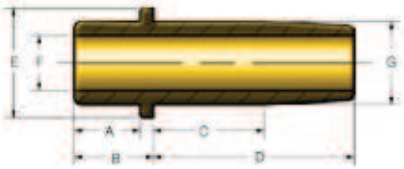
Achieving the recommended installation height may require **KPMI® retainer 20-4248**, which is offset 0.070" compared to OEM.

Retainer Set • H. A. Aluminium

KPMI P/N	Type	Material	I/ Spring Retainer Ø	O/ Spring Retainer Ø	Taper Angle	Quantity
20-4248	Intake / Exhaust	H. A. Aluminium	0.975"	1.255"	15°	Pkg. of 4

This retainer is offset 0.070" when compared to OEM.

Valve Guides • C630 Bronze • Cast Iron

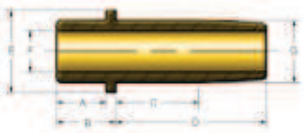


A	B	C	D	E	F	G	Intake C630 Bronze	Intake Cast Iron
0.450"	0.540"	0.810"	1.340"	0.745"	0.3760"	0.5650" / Std.	20-2020	20-2020C
						+0.001"	20-2021	20-2021C
						+0.002"	20-2022	20-2022C
						+0.003"	20-2023	20-2023C
						+0.004"	20-2024	20-2024C
						+0.006"	20-2026	20-2026C
						+0.008"	20-2028	20-2028C
						+0.010"	20-2029	20-2029C
						+0.025"	20-20HS	20-20HSC

A	B	C	D	E	F	G	Exhaust
0.450"	0.540"	0.810"	1.340"	0.745"	0.3760"	0.5650" / Std.	20-2030	20-2030C
						+0.001"	20-2031	20-2031C
						+0.002"	20-2032	20-2032C
						+0.003"	20-2033	20-2033C
						+0.004"	20-2034	20-2034C
						+0.006"	20-2036	20-2036C
						+0.008"	20-2038	20-2038C
						+0.010"	20-2039	20-2039C
						+0.025"	20-30HS	20-30HSC

For sizing KPMI® Cast Iron Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

Valve Guides • Manganese Bronze



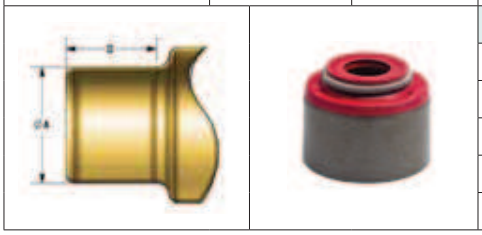
A	B	C	D	E	F	G	Intake	Exhaust
0.375"	0.465"	0.885"	1.435"	0.745"	0.3760"	0.5650" / Std.	20-2020M	20-2030M
						+0.001"	20-2021M	20-2031M
						+0.002"	20-2022M	20-2032M
						+0.003"	20-2023M	20-2033M
						+0.004"	20-2024M	20-2034M
						+0.006"	20-2026M	20-2036M
						+0.008"	20-2028M	20-2038M
						+0.010"	20-2029M	20-2039M
						+0.025"	20-20HSM	20-30HSM

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

HD® SHOVELHEAD™ 74" 1966-1977

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
3/8"	0.516"	0.661"	5	0.562"±0.002"	---	---	0.375"	Exhaust



Part Number	Quantity	Quantity Discount
71011-4	Pkg. of 4	0%
71011-8	Pkg. of 8	0%
71011-16	Pkg. of 16	Less- 10%
71011-50	Pkg. of 50	Less- 15%
71011-100	Pkg. of 100	Less- 20%

Valve Guide Seals • PC Style

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
3/8"	0.518"	0.650"	6	0.562"±0.002"	---	---	0.375"	Exhaust

Part Number	Quantity	Quantity Discount
71002-4	Pkg. of 4	0%
71002-8	Pkg. of 8	0%
71002-16	Pkg. of 16	Less- 10%
71002-50	Pkg. of 50	Less- 15%
71002-100	Pkg. of 100	Less- 20%

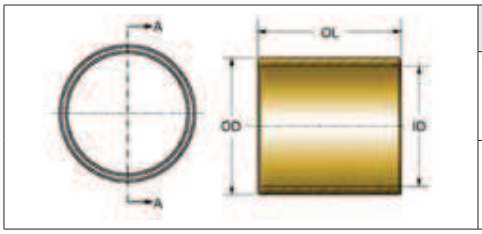
Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
3/8"	0.375"	0.660"	7	0.562"±0.002"	---	---	0.315"	Exhaust

Part Number	Quantity	Quantity Discount
71035-4	Pkg. of 4	0%
71035-8	Pkg. of 8	0%
71035-16	Pkg. of 16	Less- 10%
71035-50	Pkg. of 50	Less- 15%
71035-100	Pkg. of 100	Less- 20%

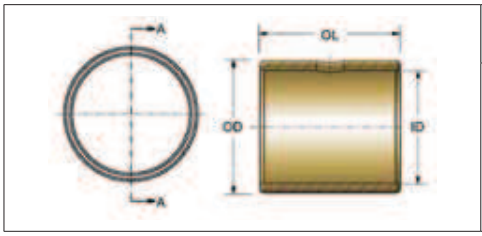
Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.90-93).

Kicker Shaft Bushings & Seal



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-2107	Bronze	0.9355"	0.741"	1.105"	Standard	2 Bushings & 1 O-Ring
20-2108	Bronze	0.9405"	0.741"	1.105"	+0.005"	2 Bushings & 1 O-Ring

Rocker Arm Bushings • Manganese Bronze

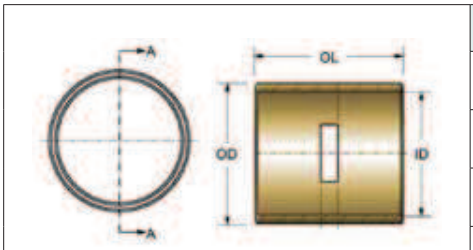


KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-2106	Manganese Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

ORDER 650-557-2046

HD® SHOVELHEAD™ 74" 1966-1977

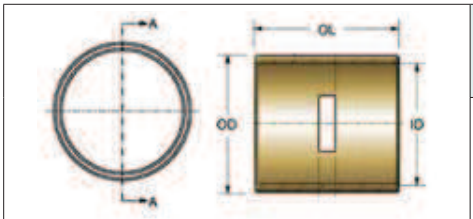
Wrist Pin Bushings • Engine Builder Series • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-20570	Manganese Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
20-20572	Manganese Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
20-20580	Manganese Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
20-20582	Manganese Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1

Made from Manganese Bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

Wrist Pin Bushings • High Performance • Nickel Bronze Alloy



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-0645	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

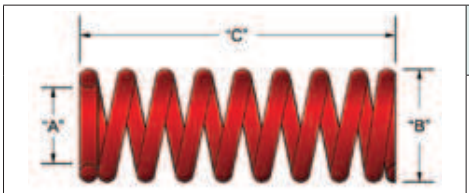
KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

Valve Seats • Powdered Metal

KPMI P/N	Type	O. D.		I. D.		Height		Quantity
10-SC550	Intake	54.97mm	2.164"	44.45mm	1.750"	11.43mm	0.450"	Pkg. of 1
10-SC523	Exhaust	52.32mm	2.060""	39.67mm	1.562"	11.43mm	0.450"	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

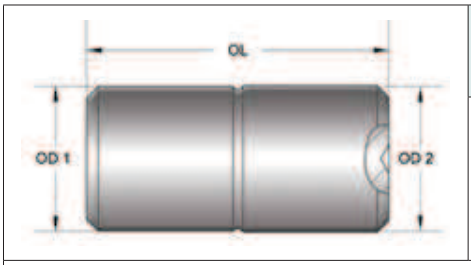
Clutch Springs



KPMI P/N	Description	A	B	C	Quantity
20-0789	Replace 38075-68	0.439"	0.629"	1.718"	Pkg. of 10

Manufactured from high quality chrome silicon wire, they are designed to supply 20% more plate load than stock springs.

Dowel • Cone • Oversize



KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)

HD® SHOVELHEAD™ 80" 1978-1983

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21100	Intake	.600"	1.510"	152#	387#	.600"
	Exhaust					

Kit Includes				
4	H.A. 7075-T6 Retainers	4	H. T. Steel Keepers Pr.
4	CrSi Valve Springs	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-21150	Intake	.600"	1.510"	152#	387#	.600"
	Exhaust					

Kit Includes				
4	H. T. Steel Retainers	4	H. T. Steel Keepers Pr.
4	CrSi Valve Springs	4	H. T. Steel Basewashers

*All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. Retainer offset 0.070" for taller installed height. Basewashers counter-bored to accept a 0.720" OD seal. Basewasher fits over 0.625" guide top.

Valve Spring Kit • O. E. M. Replacement

KPMI P/N	Type	Kit Includes							
		H. T. Steel Retainers		H. T. Steel Keepers Pr.		CrSi Valve Springs		H. T. Steel Basewashers	
20-20850	Intake	4	20-20851	4	20-20857	4	20-20853	4	20-20855
	Exhaust								

Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
.415"	1.375"	129#	272#	.415"

All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance. All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

Engine Kit with O. E. M. Replacement Spring Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-22550	Intake	.415"	1.375"	129#	272#	.415"
	Exhaust					

Kit Includes			
4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeprs Pr.
4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
4	In/ Ex OEM Replacement Seals		
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Components • Replacement • Engine Kit

KPMI P/N	Description	Specification
20-20850	Spring Kit, OEM Replacement	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs
71036-4	Intake / Exhaust Seal	Seal • OEM Replacement
20-4194	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
20-4195	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

Valve Kit • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-22500	Intake	1.950"	49.53mm	0.3765"	R0.234	23°	3.885"	Standard
	Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.810"	Standard

Kit Includes				
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

ORDER 650-557-2046

HD® SHOVELHEAD™ 80" 1978-1983

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-4194	Intake	1.950"	49.53mm	0.3765"	R0.234	23°	3.885"	OEM18078-80
20-4256	Intake	2.000"	50.80mm	0.3765"	R0.234	23°	3.885"	Oversize
20-4195	Exhaust	1.750"	44.45mm	0.3760"	R0.234	29°	3.810"	OEM18082-57
20-4195S	Exhaust	1.780"	45.21mm	0.3760"	R0.234	29°	3.820"	Oversize
20-4195-1	Exhaust	1.8120"	46.02mm	0.3760"	R0.234	29°	3.820"	Oversize

Valves • Black Diamond™ Valves • Fat Stem • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-4294	Intake	1.950"	49.53mm	0.3780"	R0.234	23°	3.885"	OEM18075-81
20-4295	Exhaust	1.750"	44.45mm	0.3775"	R0.234	29°	3.810"	Standard

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	Same as Sifton P/N
20-2000	Intake	.600"	1.510"	152#	387#	.600"	3030
	Exhaust						

Outer Spring ID	Inner Spring ID	Solid Height
1.249"	0.975"	0.850"

Kit Includes	4	CrSi Valve Springs

Achieving the recommended installation height may require **KPMI® retainer 20-4248**, which is offset 0.070" compared to OEM.

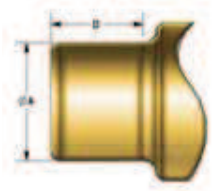
Retainer Set • H. A. Aluminium

KPMI P/N	Type	Material	I/ Spring Retainer Ø	O/ Spring Retainer Ø	Taper Angle	Quantity
20-4248	Intake	H. A. Aluminium	0.975"	1.255"	15°	Pkg. of 4
	Exhaust					

This retainer is offset 0.070" when compared to OEM.

Valve Guide Seals • PC Style

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
3/8"	0.518"	0.650"	6	0.562"±0.002"	---	---	0.375"	Exhaust

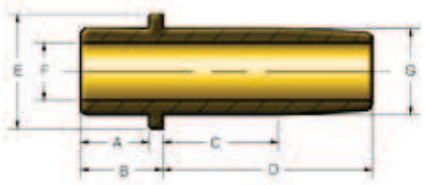


Part Number	Quantity	Quantity Discount
*71002-4	Pkg. of 4	0%
*71002-8	Pkg. of 8	0%
*71002-16	Pkg. of 16	Less- 10%
*71002-50	Pkg. of 50	Less- 15%
*71002-100	Pkg. of 100	Less- 20%

*To use the above seals in this application, it is required to modify the guides with a 0.562" Ø x 3/8" Pilot seal cutter. Please refer to Goodson part number VSC-562375. www.goodson.com

HD® SHOVELHEAD™ 80" 1978-1983

Valve Guides • C630 Bronze • Cast Iron • Manganese Bronze



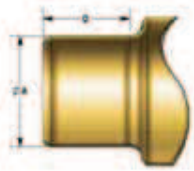
A	B	C	D	E	F	G	Intake		
							C630 Bronze	Cast Iron	Manganese
0.450"	0.540"	0.755"	1.370"	0.745"	0.3745"	0.625" / Std.	20-2050	20-2050C	20-2050M
						+0.001"	20-2051	20-2051C	20-2051M
						+0.002"	20-2052	20-2052C	20-2052M
						+0.003"	---	20-2053C	---
						+0.004"	20-2054	20-2054C	20-2054M
						+0.005"	---	20-2055C	---
						+0.006"	20-2056	20-2056C	20-2056M
						+0.008"	---	20-2058C	---
						+0.010"	---	20-2059C	---
						+0.025"	20-50HS	20-50HSC	20-50HSM

A	B	C	D	E	F	G	Exhaust		
0.450"	0.540"	0.755"	1.370"	0.745"	0.3745"	0.625" / Std.	20-2060	20-2060C	20-2060M
						+0.001"	20-2061	20-2061C	20-2061M
						+0.002"	20-2062	20-2062C	20-2062M
						+0.003"	---	20-2063C	---
						+0.004"	20-2064	20-2064C	20-2064M
						+0.005"	---	20-2065C	---
						+0.006"	20-2066	20-2066C	20-2066M
						+0.008"	---	20-2068C	---
						+0.010"	---	20-2069C	---
						+0.025"	20-60HS	20-60HSC	20-60HSM

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.400"	0.720"	7	0.625"±0.002"	---	---	0.310"	Intake
								Exhaust

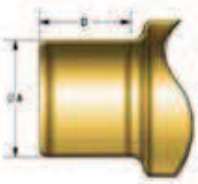


Part Number	Quantity	Quantity Discount
71036-4	Pkg. of 4	0%
71036-8	Pkg. of 8	0%
71036-16	Pkg. of 16	Less- 10%
71036-50	Pkg. of 50	Less- 15%
71036-100	Pkg. of 100	Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.90-93).

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
3/8"	0.516"	0.661"	5	0.562"±0.002"	---	---	0.375"	Intake
								Exhaust

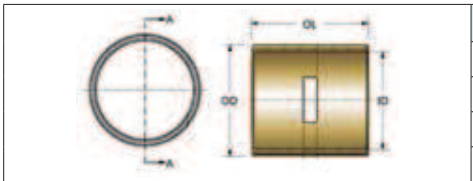


Part Number	Quantity	Quantity Discount
*71011-4	Pkg. of 4	0%
*71011-8	Pkg. of 8	0%
*71011-16	Pkg. of 16	Less- 10%
*71011-50	Pkg. of 50	Less- 15%
*71011-100	Pkg. of 100	Less- 20%

*To use the above seals in this application, it is required to modify the guides with a 0.562" Ø x 3/8" Pilot seal cutter. Please refer to Goodson part number VSC-562375. www.goodson.com

HD® SHOVELHEAD™ 80" 1978-1983

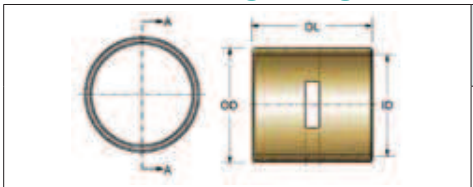
Wrist Pin Bushings • Engine Builder Series • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-20570	Manganese Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
20-20572	Manganese Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
20-20580	Manganese Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
20-20582	Manganese Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1

Made from Manganese Bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

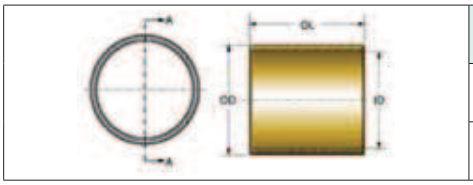
Wrist Pin Bushings • High Performance • C630 Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-0645	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

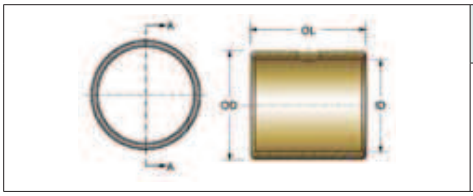
KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

Kicker Shaft Bushings & Seal



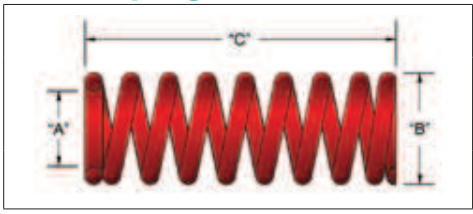
KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-2107	Bronze	0.9355"	0.741"	1.105"	Standard	2 Bushings & 1 O-Ring
20-2108	Bronze	0.9405"	0.741"	1.105"	+0.005"	2 Bushings & 1 O-Ring

Rocker Arm Bushings • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-2106	Manganese Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

Clutch Springs



KPMI P/N	Description	A	B	C	Quantity
20-0789	Replace 38075-68	0.439"	0.629"	1.718"	Pkg. of 10

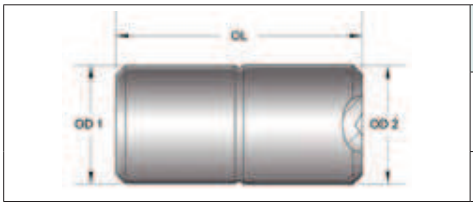
Manufactured from high quality chrome silicon wire, they are designed to supply 20% more plate load than stock springs.

Valve Seats • Powdered Metal

KPMI P/N	Type	O. D.		I. D.		Height		Quantity
10-SC550	Intake	2.164"	54.97mm	1.750"	44.45mm	0.450"	11.43mm	Pkg. of 1
10-SC523	Exhaust	2.060""	52.32mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

Dowel • Cone • Oversize



KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)

HD® EVOLUTION™ 1984-1999

Valve Spring Kit • "High Performance" Ovate Wire Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21300	Intake / Exhaust	.610"	1.860"	175#	400#	.610"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers	
		4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21500	Intake / Exhaust	.660"	1.860"	178#	371#	.660"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers	
		4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers	

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20122	Intake / Exhaust	.600"	1.810"	163#	361#	.600"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	Titanium Retainers	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20132	Intake / Exhaust	.600"	1.810"	163#	361#	.600"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	H. T. Steel Retainers	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20060	Intake / Exhaust	.655"	1.865"	190#	465#	.655"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	Titanium Retainers	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20081	Intake / Exhaust	.655"	1.860"	185#	450#	.655"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	H. T. Steel Retainers	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21650	Intake / Exhaust	.650"	1.860"	185#	440#	.650"	VSK650S
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21600	Intake / Exhaust	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21750	Intake / Exhaust	.650"	1.860"	185#	440#	.650"	VSK650T
Kit Includes		4	CrSi Valve Springs	4	Titanium Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21700	Intake / Exhaust	.675"	1.860"	185#	450#	.675"	VSK675T
Kit Includes		4	CrSi Valve Springs	4	Titanium Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers		

* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

ORDER 650-557-2046

HD® EVOLUTION™ 1984-1999

Engine Kit with Lightweight Racing Valve Spring Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-22650	Intake	.600"	1.810"	163#	361#	.600"
	Exhaust					

Kit Includes				
4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeprs Pr.
4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
4	In/ Ex Red Viton® Seals		
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Components • Replacement • Engine Kit

KPMI P/N	Description	Specification
20-20132	Spring Kit	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs
71010-4	Intake / Exhaust Seal	Seal • Red Viton®
20-4171	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
20-4170	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

Valve Kit • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-22600	Intake	1.840"	46.74mm	0.3100"	R0.236	23°	4.445"	Standard
	Exhaust	1.615"	41.02mm	0.3096"	R0.236	29°	4.525"	Standard

Kit Includes				
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-4171	Intake	1.840"	46.74mm	0.3100"	R0.236	23°	4.445"	OEM18074-83B
20-20900	Intake	2.150"	54.61mm	0.3108"	R0.550	24°	4.480"	AV&V# AV2150
20-20905	Intake	1.990"	50.55mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1990
20-20910	Intake	1.940"	49.28mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1940
20-20915	Intake	1.900"	48.26mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1900
20-20955	Intake	2.100"	53.34mm	0.3108"	R0.560	24°	4.475"	AV&V# AV2100
20-20990	Intake	2.020"	51.31mm	0.3108"	R0.670	25°	4.440"	AV&V# AV2020A
20-20965	Intake	2.020"	51.31mm	0.3108"	R0.645	25°	4.510"	AV&V# AV2020S
20-4170	Exhaust	1.615"	41.02mm	0.3096"	R0.236	29°	4.525"	OEM18082-83
20-20920	Exhaust	1.650"	41.91mm	0.3106"	R0.750	25°	4.515"	AV&V# AV1650
20-20925	Exhaust	1.610"	40.89mm	0.3106"	R0.750	25°	4.510"	AV&V# AV1610D
20-20930	Exhaust	1.585"	40.26mm	0.3106"	R0.750	25°	4.505"	AV&V# AV1585
20-20960	Exhaust	1.700"	43.18mm	0.3106"	R0.600	25°	4.535"	AV&V# AV1700A
20-20970	Exhaust	1.610"	40.89mm	0.3106"	R0.750	25°	4.565"	AV&V# AV1610S

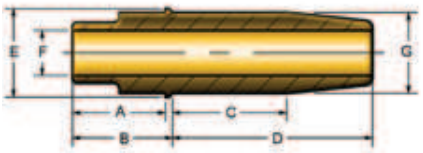
Valves • Black Diamond™ • Specially Designed for HD Racing Applications

KPMI P/N	Type		Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
20-4169	In	Black Diamond™	1.940"	49.28mm	0.3100"	R0.234	23°	4.400"	Branch Heads
20-20108	In	Black Diamond™	2.000"	50.80mm	0.3100"	R0.234	23°	4.445"	STD Heads
20-4171R	In	Black Diamond™	1.900"	48.26mm	0.3100"	R0.344	28°	4.420"	Racing Profile
20-B101	Ex	Black Diamond™	1.615"	41.02mm	0.3096"	R0.325	RO1.625	4.460"	Branch Heads
20-4170R	Ex	Black Diamond™	1.630"	41.40mm	0.3096"	R0.500	40°	4.525"	Racing Profile

* Custom sizes available, see **custom KPMI® Valve Order Form** at back of catalog. **Inconel®** is a high nickel content stainless steel classified as a "super alloy". It retains its mechanical properties at higher temps than other stainless materials. It also resists valve face pitting and recession in performance applications with unleaded and exotic fuels to a greater degree than other stainless materials. It is an excellent choice for turbocharged and nitrous applications.

HD® EVOLUTION™ 1984-1999

Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420″ Seal Ø • Shortened for .600″ Lift

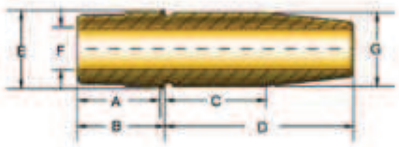


A	B	C	D	E	F	G	Intake		
							C630 Bronze	Cast Iron	Manganese
0.650”	0.700”	0.800”	1.400”	0.615”	0.3098”	0.5620” / Std.	20-2120	20-2120C	20-2120M
						+0.001”	20-2121	20-2121C	20-2121M
						+0.002”	20-2122	20-2122C	20-2122M
						+0.003”	20-2123	20-2123C	20-2123M
						+0.004”	20-2124	20-2124C	20-2124M
						+0.010”	20-2129	20-2129C	20-2129M

A	B	C	D	E	F	G	Exhaust		
0.650”	0.700”	1.150”	1.450”	0.615”	0.3098”	0.5620” / Std.	20-2130	20-2130C	20-2130M
						+0.001”	20-2131	20-2131C	20-2131M
						+0.002”	20-2132	20-2132C	20-2132M
						+0.003”	20-2133	20-2133C	20-2133M
						+0.004”	20-2134	20-2134C	20-2134M
						+0.010”	20-2139	20-2139C	20-2139M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

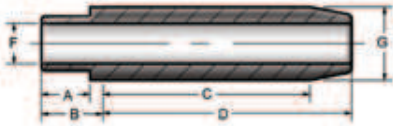
Valve Guides • Manganese Bronze • .530″ Seal Ø • Shortened for .655″ Lift



A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
0.620”	0.665”	0.737"	1.435”	0.615”	0.3075”	0.5625” / Std.	20-20860M		VG5600
						+0.001”	20-20861M		VG5601
						+0.002”	20-20862M		VG5602
						+0.003”	20-20863M		VG5603
						+0.010”	20-20869M		VG5610
						+0.025”	20-2086HSM		VG5625
0.620”	0.665”	1.135”	1.435”	0.615”	0.3075”	0.5625” / Std.		20-20870M	VG5700
						+0.001”		20-20871M	VG5701
						+0.002”		20-20872M	VG5702
						+0.003”		20-20873M	VG5703
						+0.010”		20-20879M	VG5710
						+0.025”		20-2087HSM	VG5725

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

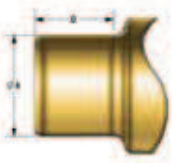
Valve Guides • O.E.M. Replacement • .420″ Seal Ø



A	B	C	D	E	F	G	Intake / Exhaust	
							C630 Bronze	Cast Iron
0.375”	0.375”	1.700”	2.025”	---	0.3095”	0.5620” / Std.	20-4320	20-4320C
						+0.001”	20-4321	20-4321C
						+0.002”	20-4322	20-4322C
						+0.003”	20-4323	20-4323C
						+0.004”	20-4324	20-4324C
						+0.010”	20-4329	20-4329C

Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.385”	0.565”	7	0.420”±0.002”	---	---	0.315”	Exhaust



Part Number	Quantity	Quantity Discount
71032-4	Pkg. of 4	0%
71032-8	Pkg. of 8	0%
71032-16	Pkg. of 16	Less- 10%
71032-50	Pkg. of 50	Less- 15%
71032-100	Pkg. of 100	Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.90-93).

ORDER 650-557-2046

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.412"	0.566"	5	0.420"±0.002"	---	---	0.275"	Exhaust

Part Number	Quantity	Quantity Discount
71010-4	Pkg. of 4	0%
71010-8	Pkg. of 8	0%
71010-16	Pkg. of 16	Less- 10%
71010-50	Pkg. of 50	Less- 15%
71010-100	Pkg. of 100	Less- 20%

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.514"	0.671"	5	0.530"±0.002"	---	---	0.330"	Exhaust

Part Number	Quantity	Quantity Discount
71045-4	Pkg. of 4	0%
71045-8	Pkg. of 8	0%
71045-16	Pkg. of 16	Less- 10%
71045-50	Pkg. of 50	Less- 15%
71045-100	Pkg. of 100	Less- 20%

Valve Guide Seals • PC Style

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.517"	0.510"	6	0.415"±0.005"	---	---	0.350"	Exhaust

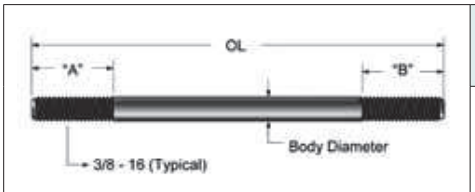
Part Number	Quantity	Quantity Discount
71008-4	Pkg. of 4	0%
71008-8	Pkg. of 8	0%
71008-16	Pkg. of 16	Less- 10%
71008-50	Pkg. of 50	Less- 15%
71008-100	Pkg. of 100	Less- 20%

Valve Seats • Powdered Metal

KPMI P/N	Type	O. D.		I. D.		Height		Quantity
10-SC500	Intake	1.969"	50.00mm	1.535"	39.00mm	0.453"	11.50mm	Pkg. of 1
10-SC510	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

Cylinder Studs • H. T. Steel



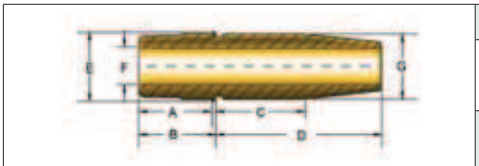
KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
20-2098	H. T. Steel	6.725"	0.370"	1.050"	1.100"	Pkg. of 8	16832-86C

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

HD® EVOLUTION™ 1984-1999

Valve Guide Kits • .530" Seal Diameter • Shortened for .655" Lift For 5/16" Stem Valves

NEW PRODUCTS



KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24550	Std.	Intake	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5625" / Std.
		Exhaust	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5625" / Std.
Kit Includes		2	In Std. Mng. Guides				2	Ex Std. Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24551	+0.001"	Intake	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5635" / O/S
		Exhaust	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5635" / O/S
Kit Includes		2	In O/S Mng. Guides				2	Ex O/S Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

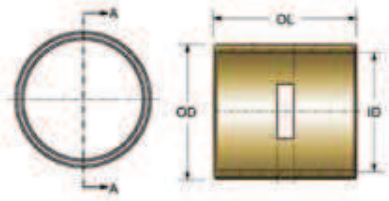
Valve Guide Kits • .420" Seal Diameter • Shortened for .600" Lift

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24560	Std.	Intake	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.
		Exhaust	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.
Kit Includes		2	In Std. Mng. Guides				2	Ex Std. Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24561	+0.001"	Intake	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5630" / O/S
		Exhaust	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5630" / O/S
Kit Includes		2	In O/S Mng. Guides				2	Ex O/S Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

Standard or +.001" Oversized manganese valve guides, kited with seals at a savings.

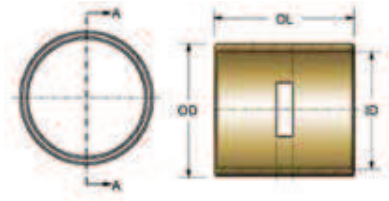
Wrist Pin Bushings • Engine Builder Series • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-20570	Manganese Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 2
20-20572	Manganese Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 2
20-20580	Manganese Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1
20-20582	Manganese Bronze	0.899"	0.788"	1.065"	+0.002"	Pkg. of 1

Made from Manganese Bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

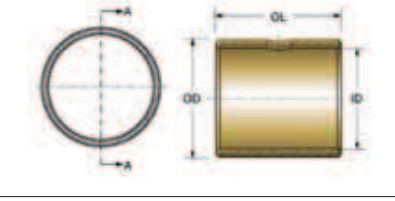
Wrist Pin Bushings • High Performance • C630 Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-0645	C630 Bronze	0.897"	0.788"	1.065"	Standard	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

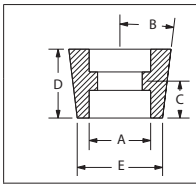
Rocker Arm Bushings • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-2106	Manganese Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

HD® EVOLUTION™ 1984-1999

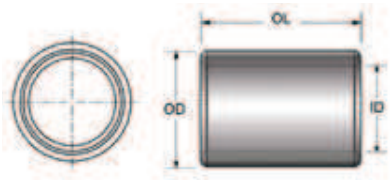
Keeper Set • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
51014-4	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"	4Pr.	18229-83

The bead height is referenced from the minor diameter of the keeper to the center of the bead.

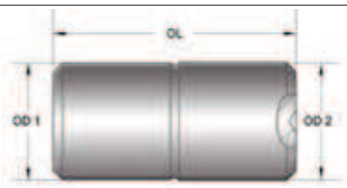
Cylinder Dowel • Steel



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
83070-4	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)

Dowel • Cone • Oversize



KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)

HD® EVO SPORTSTER™ 883cc 1986-'03

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20122	Intake / Exhaust	.600"	1.810"	163#	361#	.600"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	Titanium Retainers	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20132	Intake / Exhaust	.600"	1.810"	163#	361#	.600"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	H. T. Steel Retainers	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20060	Intake / Exhaust	.655"	1.865"	190#	465#	.655"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	Titanium Retainers	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20081	Intake / Exhaust	.655"	1.860"	185#	450#	.655"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	H. T. Steel Retainers	4	H. T. Steel Basewashers	

* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

HD® EVO SPORTSTER™ 883cc 1986-'03

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21650	Intake / Exhaust	.650"	1.860"	185#	440#	.650"	VSK650S
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers		
		4	H. T. Steel Keepers Pr.	4	H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21600	Intake / Exhaust	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21750	Intake / Exhaust	.650"	1.860"	185#	440#	.650"	VSK650T
Kit Includes		4	CrSi Valve Springs	4	Titanium Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21700	Intake / Exhaust	.675"	1.860"	185#	450#	.675"	VSK675T
Kit Includes		4	CrSi Valve Springs	4	Titanium Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers		

Valve Spring Kit • "High Performance" Ovate Wire Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21300	Intake / Exhaust	.610"	1.860"	175#	400#	.610"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers	
		4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21500	Intake / Exhaust	.660"	1.860"	178#	371#	.660"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers	
		4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers	

Engine Kit with Lightweight Racing Valve Spring Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-22750	Intake / Exhaust	.600"	1.810"	163#	361#	.600"
Kit Includes		4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeprs Pr.	
		4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
		4	In/ Ex Red Viton® Seals			
		2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves	

Components • Replacement • Engine Kit

KPMI P/N	Description	Specification
20-20132	Spring Kit	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs
71010-4	Intake / Exhaust Seal	Seal • Red Viton®
20-20090	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
20-20092	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

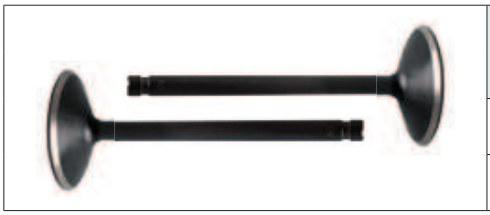
Valve Kit • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip Radius	Tulip Angle	O. L.	Remarks
20-22700	Intake	1.585"	40.26mm	0.3100"	R0.250	23°	4.550"	Standard
	Exhaust	1.350"	34.29mm	0.3095"	R0.250	17°	4.640	Standard
Kit Includes		2	In Std. Black Diamond™ Valves		2	Ex Std. Black Diamond™ Valves		

ORDER 650-557-2046

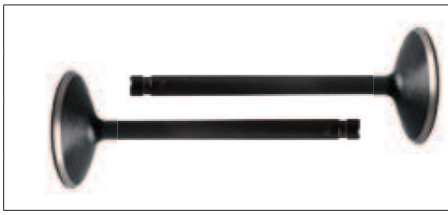
HD® EVO SPORTSTER™ 883cc 1986-'03

Valves • Black Diamond™ • Black Nitroneg Stems For 883cc 1986-2003 Model



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-20090	Intake	1.585"	40.26mm	0.3100"	R0.250	23°	4.550"	OEM18031-86
20-20092	Exhaust	1.350"	34.29mm	0.3095"	R0.250	17°	4.640	OEM18030-86

Valves • Black Diamond™ • Black Nitroneg Stems • Special Conversion Valves For 883cc / 1200cc 1986-'03 Model



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-2010	Intake	1.715"	43.56mm	0.3100"	R0.236	23°	4.550"	Conversion Valve
20-2012	Exhaust	1.480"	37.59mm	0.3096"	R0.500	40°	4.625"	Conversion Valve

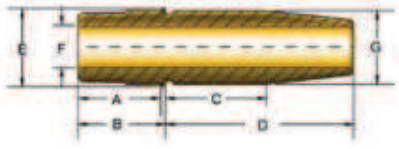
Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420″ Seal Ø • Shortened for .600″ Lift

A	B	C	D	E	F	G	Intake		
							C630 Bronze	Cast Iron	Manganese
0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.	20-2120	20-2120C	20-2120M
						+0.001"	20-2121	20-2121C	20-2121M
						+0.002"	20-2122	20-2122C	20-2122M
						+0.003"	20-2123	20-2123C	20-2123M
						+0.004"	20-2124	20-2124C	20-2124M
						+0.010"	20-2129	20-2129C	20-2129M

A	B	C	D	E	F	G	Exhaust		
0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.	20-2130	20-2130C	20-2130M
						+0.001"	20-2131	20-2131C	20-2131M
						+0.002"	20-2132	20-2132C	20-2132M
						+0.003"	20-2133	20-2133C	20-2133M
						+0.004"	20-2134	20-2134C	20-2134M
						+0.010"	20-2139	20-2139C	20-2139M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

Valve Guides • Manganese Bronze • .530″ Seal Ø • Shortened for .655″ Lift

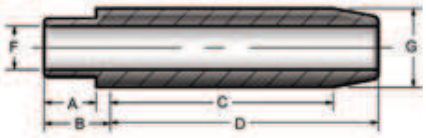


A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5625" / Std.	20-20860M		VG5600
						+0.001"	20-20861M		VG5601
						+0.002"	20-20862M		VG5602
						+0.003"	20-20863M		VG5603
						+0.010"	20-20869M		VG5610
						+0.025"	20-2086HSM		VG5625
0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5625" / Std.		20-20870M	VG5700
						+0.001"		20-20871M	VG5701
						+0.002"		20-20872M	VG5702
						+0.003"		20-20873M	VG5703
						+0.010"		20-20879M	VG5710
						+0.025"		20-2087HSM	VG5725

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

HD® EVO SPORTSTER™ 883cc 1986-'03

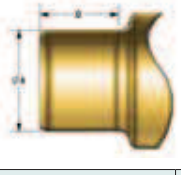
Valve Guides • O.E.M. Replacement • .420" Seal Ø



A	B	C	D	E	F	G	Intake / Exhaust	
							C630 Bronze	Cast Iron
0.375"	0.375"	1.700"	2.025"	---	0.3095"	0.5620" / Std.	20-4320	20-4320C
						+0.001"	20-4321	20-4321C
						+0.002"	20-4322	20-4322C
						+0.003"	20-4323	20-4323C
						+0.004"	20-4324	20-4324C
						+0.010"	20-4329	20-4329C

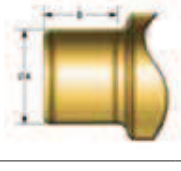
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.412"	0.566"	5	0.420"±0.002"	---	---	0.275"	Intake / Exhaust



Part Number	Quantity	Quantity Discount
71010-4	Pkg. of 4	0%
71010-8	Pkg. of 8	0%
71010-16	Pkg. of 16	Less- 10%
71010-50	Pkg. of 50	Less- 15%
71010-100	Pkg. of 100	Less- 20%

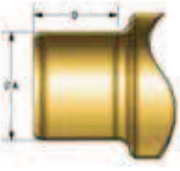
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.514"	0.671"	5	0.530"±0.002"	---	---	0.330"	Intake / Exhaust



Part Number	Quantity	Quantity Discount
71045-4	Pkg. of 4	0%
71045-8	Pkg. of 8	0%
71045-16	Pkg. of 16	Less- 10%
71045-50	Pkg. of 50	Less- 15%
71045-100	Pkg. of 100	Less- 20%

Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.385"	0.565"	7	0.420"±0.002"	---	---	0.315"	Intake / Exhaust

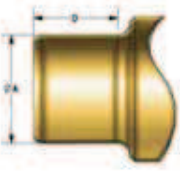


Part Number	Quantity	Quantity Discount
71032-4	Pkg. of 4	0%
71032-8	Pkg. of 8	0%
71032-16	Pkg. of 16	Less- 10%
71032-50	Pkg. of 50	Less- 15%
71032-100	Pkg. of 100	Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.90-93).

Valve Guide Seals • PC Style

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.517"	0.510"	6	0.415"±0.005"	---	---	0.350"	Intake / Exhaust

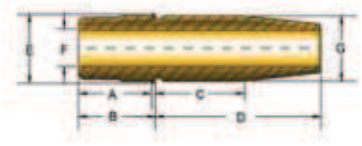


Part Number	Quantity	Quantity Discount
71008-4	Pkg. of 4	0%
71008-8	Pkg. of 8	0%
71008-16	Pkg. of 16	Less- 10%
71008-50	Pkg. of 50	Less- 15%
71008-100	Pkg. of 100	Less- 20%

HD® EVO SPORTSTER™ 883cc 1986-'03

Valve Guide Kits • .530" Seal Diameter • Shortened for .655" Lift For 5/16" Stem Valves

NEW PRODUCTS



KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24550	Std.	Intake	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5625" / Std.
		Exhaust	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5625" / Std.
Kit Includes		2	In Std. Mng. Guides				2	Ex Std. Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24551	+0.001"	Intake	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5635" / O/S
		Exhaust	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5635" / O/S
Kit Includes		2	In O/S Mng. Guides				2	Ex O/S Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

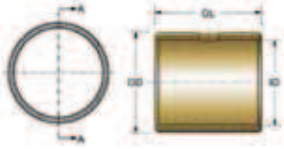
Valve Guide Kits • .420" Seal Diameter • Shortened for .600" Lift

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24560	Std.	Intake	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.
		Exhaust	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.
Kit Includes		2	In Std. Mng. Guides				2	Ex Std. Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24561	+0.001"	Intake	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5630" / O/S
		Exhaust	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5630" / O/S
Kit Includes		2	In O/S Mng. Guides				2	Ex O/S Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

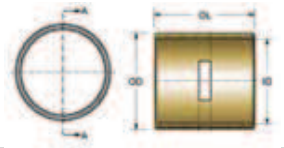
Standard or +.001" Oversized manganese valve guides, kited with seals at a savings.

Rocker Arm Bushings • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-2106	Manganese Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

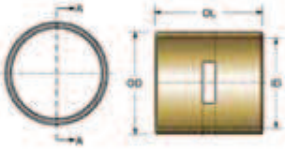
Wrist Pin Bushings • Engine Builder Series • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-20810	Manganese Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
20-20812	Manganese Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from Manganese Bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

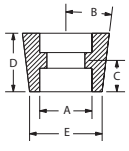
Wrist Pin Bushings • High Performance • C630 Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-0644	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

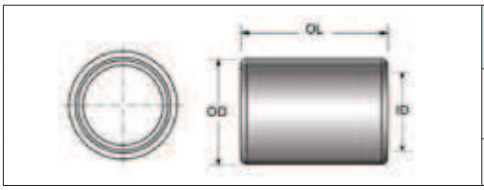
Keeper Set • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
51014-4	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"	4Pr.	18229-83
The bead height is referenced from the minor diameter of the keeper to the center of the bead.								

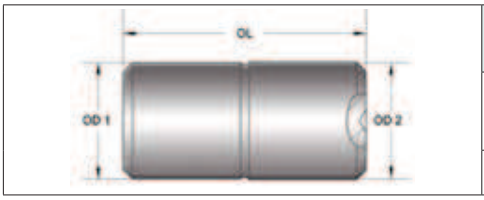
HD® EVO SPORTSTER™ 883cc 1986-'03

Cylinder Dowel • Steel



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
83070-4	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)						

Dowel • Cone • Oversize



KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)							

HD® EVO SPORTSTER™ 883cc 2004-'21

Valve Spring Kit • "High Performance" Ovate Wire Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21400	Intake / Exhaust	.610"	1.860"	175#	400#	.610"
Kit Includes	4 H. T. Steel Retainers	4 CrSi Valve Springs	4 Viton® Seals	4 H. T. Steel Keeper (OEM Style)	4 H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21550	Intake / Exhaust	.660"	1.860"	178#	371#	.660"
Kit Includes	4 H. T. Steel Retainers	4 CrSi Valve Springs	4 Viton® Seals	4 H. T. Steel Keepers (9° Degree Taper)	4 H. T. Steel Basewashers	

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20360	Intake / Exhaust	.600"	1.860"	148#	346#	.600"
Kit Includes	4 Titanium Retainers	4 CrSi Valve Springs	4 Viton® Seals	2 Ex H. T. Steel Basewashers	4 H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20364	Intake / Exhaust	.600"	1.860"	148#	346#	.600"
Kit Includes	4 H.T. Steel Retainers	4 CrSi Valve Springs	4 Viton® Seals	2 Ex H. T. Steel Basewashers	4 H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20350	Intake / Exhaust	.655"	1.860"	185#	450#	.655"
Kit Includes	4 Titanium Retainers	4 CrSi Valve Springs	4 Viton® Seals	2 Ex H. T. Steel Basewashers	4 H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20355	Intake / Exhaust	.655"	1.860"	185#	450#	.655"
Kit Includes	4 H.T. Steel Retainers	4 CrSi Valve Springs	4 Viton® Seals	2 Ex H. T. Steel Basewashers	4 H. T. Steel Basewashers	

Note: These kits are supplied with 2 supplemental exhaust basewashers for use with the OEM exhaust guides.
* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

HD® EVO SPORTSTER™ 883cc 2004-'21

Valve Spring Kit • Lightweight Racing

NEW PRODUCTS

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23500	Intake / Exhaust	.650"	1.860"	185#	440#	.650"
Kit Includes		4 CrSi Valve Springs	4 H. T. Steel Retainers	4 Viton® Seals		
		4 H. T. Steel Keepers Pr.	4 H. T. Steel Basewashers			

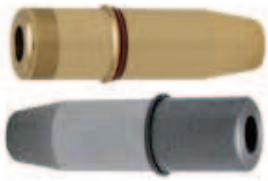
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23600	Intake / Exhaust	.675"	1.860"	185#	450#	.675"
Kit Includes		4 CrSi Valve Springs	4 H. T. Steel Retainers	4 Viton® Seals		
		4 H. T. Steel Keepers	4 H. T. Steel Basewashers			

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23550	Intake / Exhaust	.650"	1.860"	185#	440#	.650"
Kit Includes		4 CrSi Valve Springs	4 Titanium Retainers	4 Viton® Seals		
		4 H. T. Steel Keepers	4 H. T. Steel Basewashers			

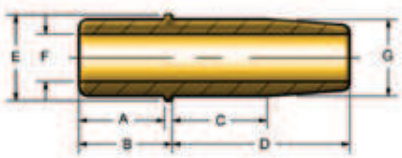
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23650	Intake / Exhaust	.675"	1.860"	185#	450#	.675"
Kit Includes		4 CrSi Valve Springs	4 Titanium Retainers	4 Viton® Seals		
		4 H. T. Steel Keepers	4 H. T. Steel Basewashers			

Valve Guides • Shouldered • Use O.E.M. Style or Kibblewhite® Seals • Shortened for 0.655" Lift

A	B	C	D	E	F	G	Intake	
							C630 Bronze	Cast Iron
0.690"	0.770"	0.800"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20690	20-20690C
						+0.001"	20-20691	20-20691C
						+0.002"	20-20692	20-20692C
						+0.010"	20-20699	20-20699C



A	B	C	D	E	F	G	Exhaust	
0.650"	0.770"	1.030"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20700	20-20700C
						+0.001"	20-20701	20-20701C
						+0.002"	20-20702	20-20702C
						+0.010"	20-20709	20-20709C



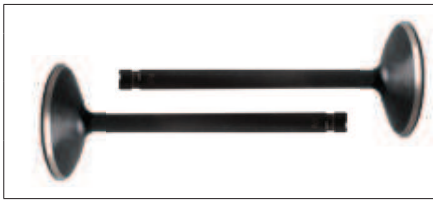
A	B	C	D	E	F	G	Intake	
							Manganese	Ref. AV&V
0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5625" / Std.	20-20690M	VG6600
						+0.001"	20-20691M	VG6601
						+0.002"	20-20692M	VG6602
						+0.010"	20-20699M	VG6610

A	B	C	D	E	F	G	Exhaust	
0.685"	0.735"	0.920"	1.305"	0.615"	0.2755"	0.5625" / Std.	20-20700M	VG6700
						+0.001"	20-20701M	VG6701
						+0.002"	20-20702M	VG6702
						+0.010"	20-20709M	VG6710

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

HD® EVO SPORTSTER™ 883cc 2004-'21

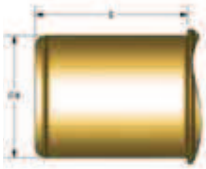
Valves • Black Diamond™ • Black Nitroneg Stems • Special Conversion Valves for 883cc to 1200cc 2004-'20



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-20550	Intake	1.715"	43.56mm	0.2760"	R0.236	23°	4.580"	Conversion Valve
20-20555	Exhaust	1.480"	37.59mm	0.2755"	R0.500	40°	4.660"	Conversion Valve

Valve Guide Seals • Tophat

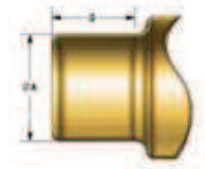
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.974"	1.457"	3	0.560"±0.005"	---	0.700"	---	Exhaust



Part Number	Quantity	Quantity Discount
71030-4	Pkg. of 4	0%
71030-8	Pkg. of 8	0%
71030-16	Pkg. of 16	Less- 10%
71030-50	Pkg. of 50	Less- 15%
71030-100	Pkg. of 100	Less- 20%

Valve Guide Seals • Viton®

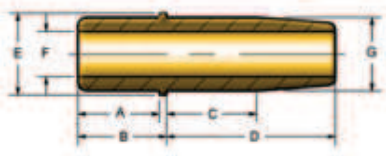
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.510"	0.665"	5	0.560"±0.002"	---	---	0.375"	Exhaust



Part Number	Quantity	Quantity Discount
71028-4	Pkg. of 4	0%
71028-8	Pkg. of 8	0%
71028-16	Pkg. of 16	Less- 10%
71028-50	Pkg. of 50	Less- 15%
71028-100	Pkg. of 100	Less- 20%

Use with Kibblewhite® Spring Kits on O.E.M. or Kibblewhite® Valve Guides

Valve Guides • Use O.E.M. Style or KPMI® Seals • Shortened for .655" Lift

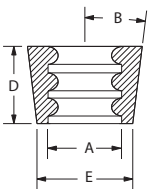


KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24570	Std.	Intake	0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5625" / Std.
		Exhaust	0.685"	0.735"	0.920"	1.305"	0.615"	0.2755"	0.5625" / Std.
Kit Includes		2	In Std. Mng. Guides				2	Ex Std. Mng. Guides	
		1	O.E.M. Style Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24571	+0.001"	Intake	0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5635" / O/S
		Exhaust	0.685"	0.735"	0.920"	1.305"	0.615"	0.2755"	0.5635" / O/S
Kit Includes		2	In O/S Mng. Guides				2	Ex O/S Mng. Guides	
		1	O.E.M. Style Seal (Pkg. of 4)						

Standard or +.001" Oversized manganese valve guides, kited with seals at a savings.

Keeper Set • O.E.M. Replacement



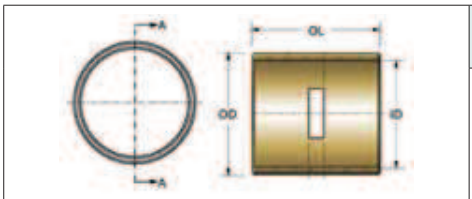
KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
51016-4	Triple Radius Bead	0.275	7.0°	---	0.345"	0.290"	4Pr.	18260-02

The bead height is referenced from the minor diameter of the keeper to the center of the bead.

ORDER 650-557-2046

HD® EVO SPORTSTER™ 883cc 2004-'21

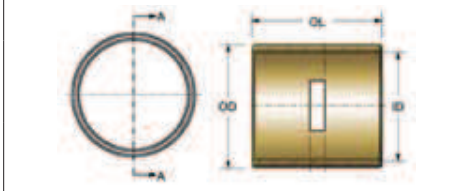
Wrist Pin Bushings • High Performance • Nickel Bronze Alloy



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-0644	Nickel Bronze Alloy	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

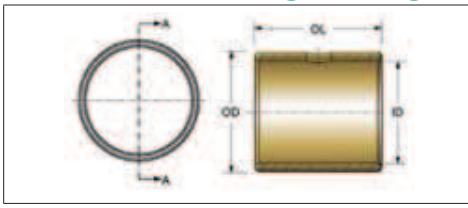
Wrist Pin Bushings • Engine Builder Series • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-20810	Manganese Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
20-20812	Manganese Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

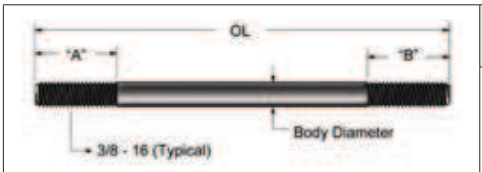
Made from Manganese Bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

Rocker Arm Bushings • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-2106	Manganese Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

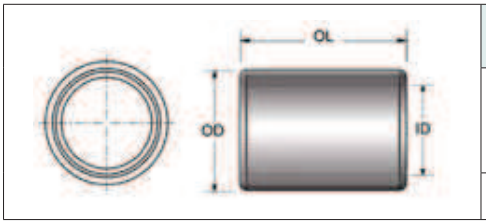
Cylinder Studs • H. T. Steel



KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
20-2097	H. T. Steel	5.760"	0.370"	1.050"	1.100"	Pkg. of 8	16837-83

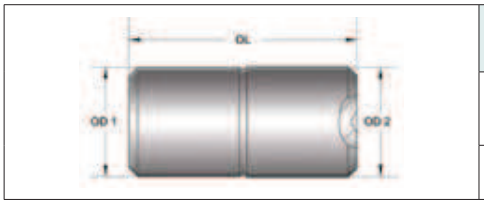
KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Dowel • Steel



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
83070-4	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)						

Dowel • Cone • Oversize



KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)							

HD® XL™ 1100cc 1986-1987

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20122	Intake / Exhaust	.600”	1.810”	163#	361#	.600”

Kit Includes				
4	CrSi Valve Springs	4	H. T. Steel Keepers
4	Titanium Retainers	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20132	Intake / Exhaust	.600”	1.810”	163#	361#	.600”

Kit Includes				
4	CrSi Valve Springs	4	H. T. Steel Keepers
4	H. T. Steel Retainers	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20060	Intake / Exhaust	.655”	1.865”	190#	465#	.655”

Kit Includes				
4	CrSi Valve Springs	4	H. T. Steel Keepers
4	Titanium Retainers	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20081	Intake / Exhaust	.655”	1.860”	185#	450#	.655”

Kit Includes				
4	CrSi Valve Springs	4	H. T. Steel Keepers
4	H. T. Steel Retainers	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21650	Intake / Exhaust	.650”	1.860"	185#	440#	.650”	VSK650S

Kit Includes				
4	CrSi Valve Springs	4	H. T. Steel Retainers
4	H. T. Steel Keepers Pr.	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21600	Intake / Exhaust	.675”	1.860”	185#	450#	.675”	Steel Retainer Version of VSK675T

Kit Includes				
4	CrSi Valve Springs	4	H. T. Steel Retainers
4	H. T. Steel Keepers	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21750	Intake / Exhaust	.650”	1.860"	185#	440#	.650”	VSK650T

Kit Includes				
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Keepers	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21700	Intake / Exhaust	.675”	1.860”	185#	450#	.675”	VSK675T

Kit Includes				
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Keepers	4	H. T. Steel Basewashers

* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

ORDER 650-557-2046

HD® XL™ 1100cc 1986-1987

Valve Spring Kit • "High Performance" Ovate Wire Beehive

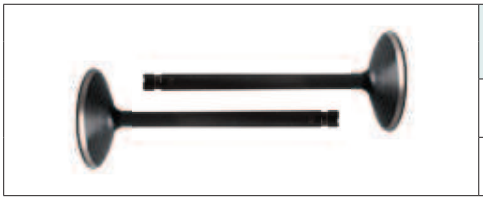
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21300	Intake / Exhaust	.610"	1.860"	175#	400#	.610"

Kit Includes				
4	CrSi Valve Springs	4	H. T. Steel Retainers
4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21500	Intake / Exhaust	.660"	1.860"	178#	371#	.660"

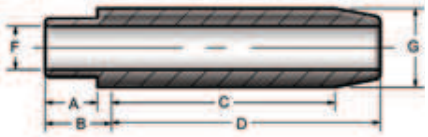
Kit Includes			
4	CrSi Valve Springs	4	H. T. Steel Retainers
4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems for 1100cc 1987 Model



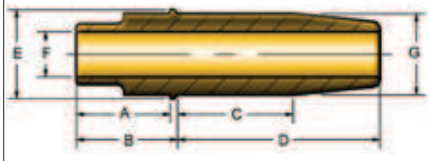
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-2013	Intake	1.715"	43.56mm	0.3100"	R0.236	23°	4.480"	OEM180823-87
20-2014	Exhaust	1.480"	37.59mm	0.3096"	R0.500	40°	4.560"	OEM18024-87

Valve Guides • O.E.M. Replacement • .420″ Seal Ø



A	B	C	D	E	F	G	Intake / Exhaust	
							C630 Bronze	Cast Iron
0.375"	0.375"	1.700"	2.025"	---	0.3095"	0.5620" / Std.	20-4320	20-4320C
						+0.001"	20-4321	20-4321C
						+0.002"	20-4322	20-4322C
						+0.003"	20-4323	20-4323C
						+0.004"	20-4324	20-4324C
						+0.010"	20-4329	20-4329C

Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420″ Seal Ø • Shortened for .600″ Lift



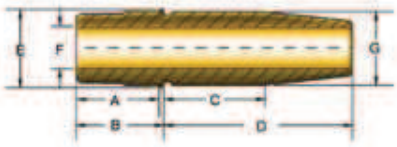
A	B	C	D	E	F	G	Intake		
							C630 Bronze	Cast Iron	Manganese
0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.	20-2120	20-2120C	20-2120M
						+0.001"	20-2121	20-2121C	20-2121M
						+0.002"	20-2122	20-2122C	20-2122M
						+0.003"	20-2123	20-2123C	20-2123M
						+0.004"	20-2124	20-2124C	20-2124M
						+0.010"	20-2129	20-2129C	20-2129M

A	B	C	D	E	F	G	Exhaust		
0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.	20-2130	20-2130C	20-2130M
						+0.001"	20-2131	20-2131C	20-2131M
						+0.002"	20-2132	20-2132C	20-2132M
						+0.003"	20-2133	20-2133C	20-2133M
						+0.004"	20-2134	20-2134C	20-2134M
						+0.010"	20-2139	20-2139C	20-2139M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

HD® XL™ 1100cc 1986-1987

Valve Guides • Manganese Bronze • .530″ Seal Ø • Shortened for .655″ Lift

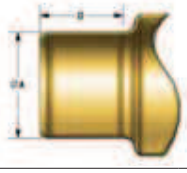


A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
0.620”	0.665”	0.737”	1.435”	0.615”	0.3075”	0.5625” / Std.	20-20860M		VG5600
						+0.001”	20-20861M		VG5601
						+0.002”	20-20862M		VG5602
						+0.003”	20-20863M		VG5603
						+0.010”	20-20869M		VG5610
						+0.025”	20-2086HSM		VG5625
0.620”	0.665”	1.135”	1.435”	0.615”	0.3075”	0.5625” / Std.		20-20870M	VG5700
						+0.001”		20-20871M	VG5701
						+0.002”		20-20872M	VG5702
						+0.003”		20-20873M	VG5703
						+0.010”		20-20879M	VG5710
						+0.025”		20-2087HSM	VG5725

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.385”	0.565”	7	0.420”±0.002”	---	---	0.315”	Exhaust



Part Number	Quantity	Quantity Discount
71032-4	Pkg. of 4	0%
71032-8	Pkg. of 8	0%
71032-16	Pkg. of 16	Less- 10%
71032-50	Pkg. of 50	Less- 15%
71032-100	Pkg. of 100	Less- 20%

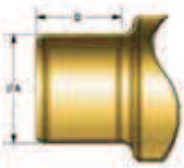
Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.90-93).

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.412"	0.566"	5	0.420”±0.002”	---	---	0.275”	Exhaust

Part Number	Quantity	Quantity Discount
71010-4	Pkg. of 4	0%
71010-8	Pkg. of 8	0%
71010-16	Pkg. of 16	Less- 10%
71010-50	Pkg. of 50	Less- 15%
71010-100	Pkg. of 100	Less- 20%

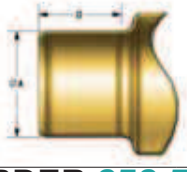
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.514"	0.671"	5	0.530”±0.002”	---	---	0.330"	Exhaust



Part Number	Quantity	Quantity Discount
71045-4	Pkg. of 4	0%
71045-8	Pkg. of 8	0%
71045-16	Pkg. of 16	Less- 10%
71045-50	Pkg. of 50	Less- 15%
71045-100	Pkg. of 100	Less- 20%

Valve Guide Seals • PC Style

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.517"	0.510"	6	0.415”±0.005”	---	---	0.350"	Exhaust

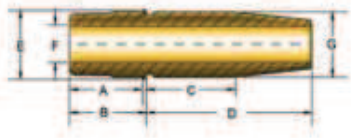


Part Number	Quantity	Quantity Discount
71008-4	Pkg. of 4	0%
71008-8	Pkg. of 8	0%
71008-16	Pkg. of 16	Less- 10%
71008-50	Pkg. of 50	Less- 15%
71008-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

HD® XL™ 1100cc 1986-1987

Valve Guide Kits • .530" Seal Diameter • Shortened for .655" Lift For 5/16" Stem Valves



KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24550	Std.	Intake	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5625" / Std.
		Exhaust	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5625" / Std.
Kit Includes		2	In Std. Mng. Guides				2	Ex Std. Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24551	+0.001"	Intake	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5635" / O/S
		Exhaust	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5635" / O/S
Kit Includes		2	In O/S Mng. Guides				2	Ex O/S Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

Valve Guide Kits • .420" Seal Diameter • Shortened for .600" Lift

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24560	Std.	Intake	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.
		Exhaust	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.
Kit Includes		2	In Std. Mng. Guides				2	Ex Std. Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24561	+0.001"	Intake	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5630" / O/S
		Exhaust	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5630" / O/S
Kit Includes		2	In O/S Mng. Guides				2	Ex O/S Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

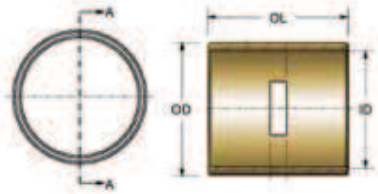
Standard or +.001" Oversized manganese valve guides, kited with seals at a savings.

Valve Seats • Powdered Metal

KPMI P/N	Type	O. D.		I. D.		Height		Quantity
10-SC500	Intake	1.969"	50.00mm	1.535"	39.00mm	0.453"	11.50mm	Pkg. of 1
10-SC510	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

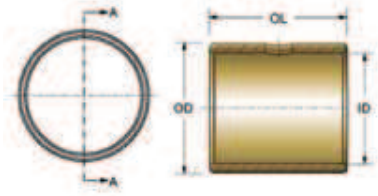
Wrist Pin Bushings • High Performance • C630 Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-0644	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

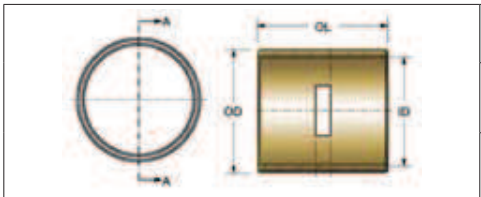
Rocker Arm Bushings • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-2106	Manganese Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

HD® XL™ 1100cc 1986-1987

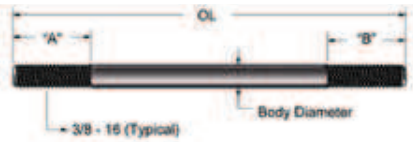
Wrist Pin Bushings • Engine Builder Series • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-20810	Manganese Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
20-20812	Manganese Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from Manganese Bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

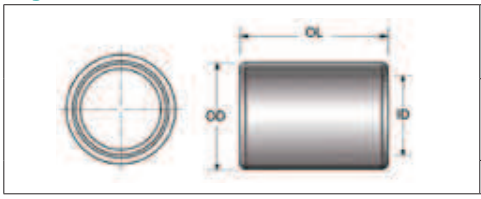
Cylinder Studs • H. T. Steel



KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
20-2097	H. T. Steel	5.760"	0.370"	1.050"	1.100"	Pkg. of 8	16837-83

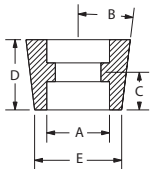
KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Dowel • Steel



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
83070-4	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)						

Keeper Set • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
51014-4	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"	4Pr.	18229-83
The bead height is referenced from the minor diameter of the keeper to the center of the bead.								

HD® EVO SPORTSTER™ 1200cc 1988-'03

Valve Spring Kit • "High Performance" Ovate Wire Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21300	Intake / Exhaust	.610"	1.860"	175#	400#	.610"
Kit Includes		4 CrSi Valve Springs		4 H. T. Steel Retainers		
		4 H. T. Steel Keeper (OEM Style)		4 H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21500	Intake / Exhaust	.660"	1.860"	178#	371#	.660"
Kit Includes		4 CrSi Valve Springs		4 H. T. Steel Retainers		
		4 H. T. Steel Keepers (9° Degree Taper)		4 H. T. Steel Basewashers		

HD® EVO SPORTSTER™ 1200cc 1988-'03

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20122	Intake / Exhaust	.600"	1.810"	163#	361#	.600"

Kit Includes			
4	CrSi Valve Springs	4	H. T. Steel Keepers
4	Titanium Retainers	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20132	Intake / Exhaust	.600"	1.810"	163#	361#	.600"

Kit Includes			
4	CrSi Valve Springs	4	H. T. Steel Keepers
4	H. T. Steel Retainers	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20060	Intake / Exhaust	.655"	1.865"	190#	465#	.655"

Kit Includes			
4	CrSi Valve Springs	4	H. T. Steel Keepers
4	Titanium Retainers	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20081	Intake / Exhaust	.655"	1.860"	185#	450#	.655"

Kit Includes			
4	CrSi Valve Springs	4	H. T. Steel Keepers
4	H. T. Steel Retainers	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21650	Intake / Exhaust	.650"	1.860"	185#	440#	.650"	VSK650S

Kit Includes			
4	CrSi Valve Springs	4	H. T. Steel Retainers
4	H. T. Steel Keepers Pr.	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21600	Intake / Exhaust	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T

Kit Includes			
4	CrSi Valve Springs	4	H. T. Steel Retainers
4	H. T. Steel Keepers	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21750	Intake / Exhaust	.650"	1.860"	185#	440#	.650"	VSK650T

Kit Includes			
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Keepers	4	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21700	Intake / Exhaust	.675"	1.860"	185#	450#	.675"	VSK675T

Kit Includes			
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Keepers	4	H. T. Steel Basewashers

* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

Engine Kit with Lightweight Racing Valve Spring Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-22850	Intake / Exhaust	.600"	1.810"	163#	361#	.600"

Kit Includes			
4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeprs Pr.
4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
4	In/ Ex Red Viton® Seals		
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

HD® EVO SPORTSTER™ 1200cc 1988-'03

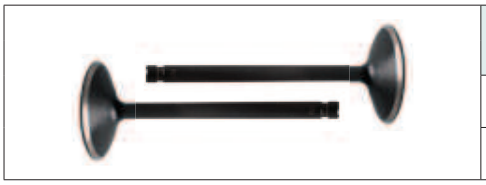
Components • Replacement • Engine Kit

KPMI P/N	Description	Specification
20-20132	Spring Kit	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs
71010-4	Intake / Exhaust Seal	Seal • Red Viton®
20-2013	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
20-2014	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

Valve Kit • Black Diamond™ • Black Nitroneg Stems

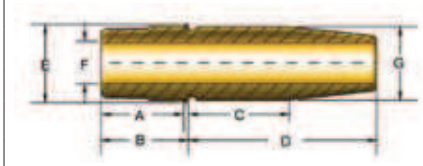
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-22800	Intake	1.715"	43.56mm	0.3100"	R0.236	23°	4.480"	Standard
	Exhaust	1.480"	37.59mm	0.3096"	R0.500	40°	4.560"	Standard
Kit Includes		2	In Std. Black Diamond™ Valves			2	Ex Std. Black Diamond™ Valves	

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-2013	Intake	1.715"	43.56mm	0.3100"	R0.236	23°	4.480"	OEM180823-87
20-2014	Exhaust	1.480"	37.59mm	0.3096"	R0.500	40°	4.560"	OEM18024-87

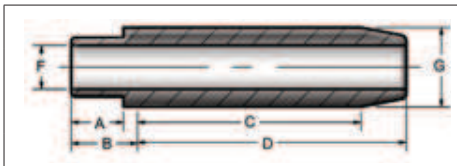
Valve Guides • Manganese Bronze • .530″ Seal Ø • Shortened for .655″ Lift



A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5625" / Std.	20-20860M		VG5600
						+0.001"	20-20861M		VG5601
						+0.002"	20-20862M		VG5602
						+0.003"	20-20863M		VG5603
						+0.010"	20-20869M		VG5610
						+0.025"	20-2086HSM		VG5625
0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5625" / Std.		20-20870M	VG5700
						+0.001"		20-20871M	VG5701
						+0.002"		20-20872M	VG5702
						+0.003"		20-20873M	VG5703
						+0.010"		20-20879M	VG5710
						+0.025"		20-2087HSM	VG5725

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

Valve Guides • O.E.M. Replacement • .420″ Seal Ø

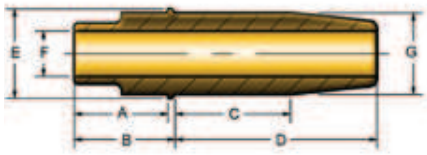


A	B	C	D	E	F	G	Intake / Exhaust	
							C630 Bronze	Cast Iron
0.375"	0.375"	1.700"	2.025"	---	0.3095"	0.5620" / Std.	20-4320	20-4320C
						+0.001"	20-4321	20-4321C
						+0.002"	20-4322	20-4322C
						+0.003"	20-4323	20-4323C
						+0.004"	20-4324	20-4324C
						+0.010"	20-4329	20-4329C

ORDER 650-557-2046

HD® EVO SPORTSTER™ 1200cc 1988-'03

Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420″ Seal Ø • Shortened for .600″ Lift



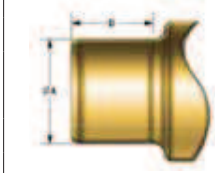
A	B	C	D	E	F	G	Intake		
							C630 Bronze	Cast Iron	*Manganese
0.650”	0.700”	0.800”	1.400”	0.615”	0.3098”	0.5620” / Std.	20-2120	20-2120C	20-2120M
						+0.001”	20-2121	20-2121C	20-2121M
						+0.002”	20-2122	20-2122C	20-2122M
						+0.003”	20-2123	20-2123C	20-2123M
						+0.004”	20-2124	20-2124C	20-2124M
						+0.010”	20-2129	20-2129C	20-2129M

A	B	C	D	E	F	G	Exhaust		
0.650”	0.700”	1.150”	1.450”	0.615”	0.3098”	0.5620” / Std.	20-2130	20-2130C	20-2130M
						+0.001”	20-2131	20-2131C	20-2131M
						+0.002”	20-2132	20-2132C	20-2132M
						+0.003”	20-2133	20-2133C	20-2133M
						+0.004”	20-2134	20-2134C	20-2134M
						+0.010”	20-2139	20-2139C	20-2139M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

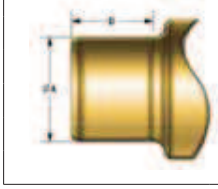
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.412"	0.566"	5	0.420”±0.002”	---	---	0.275”	Exhaust



Part Number	Quantity	Quantity Discount
71010-4	Pkg. of 4	0%
71010-8	Pkg. of 8	0%
71010-16	Pkg. of 16	Less- 10%
71010-50	Pkg. of 50	Less- 15%
71010-100	Pkg. of 100	Less- 20%

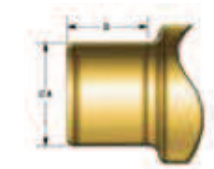
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.514"	0.671"	5	0.530”±0.002”	---	---	0.330"	Exhaust



Part Number	Quantity	Quantity Discount
71045-4	Pkg. of 4	0%
71045-8	Pkg. of 8	0%
71045-16	Pkg. of 16	Less- 10%
71045-50	Pkg. of 50	Less- 15%
71045-100	Pkg. of 100	Less- 20%

Valve Guide Seals • O.E.M. Replacement

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.385”	0.565”	7	0.420”±0.002”	---	---	0.315”	Exhaust



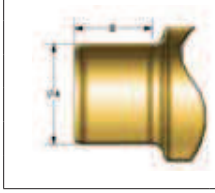
Part Number	Quantity	Quantity Discount
71032-4	Pkg. of 4	0%
71032-8	Pkg. of 8	0%
71032-16	Pkg. of 16	Less- 10%
71032-50	Pkg. of 50	Less- 15%
71032-100	Pkg. of 100	Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.90-93).

HD® EVO SPORTSTER™ 1200cc 1988-'03

Valve Guide Seals • PC Style

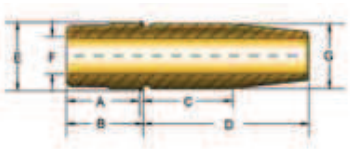
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.517"	0.510"	6	0.415"±0.005"	---	---	0.350"	Exhaust



Part Number	Quantity	Quantity Discount
71008-4	Pkg. of 4	0%
71008-8	Pkg. of 8	0%
71008-16	Pkg. of 16	Less- 10%
71008-50	Pkg. of 50	Less- 15%
71008-100	Pkg. of 100	Less- 20%

Valve Guide Kits • .530" Seal Diameter • Shortened for .655" Lift For 5/16" Stem Valves

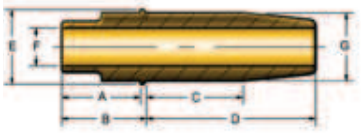
NEW PRODUCTS



KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24550	Std.	Intake	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5625" / Std.
		Exhaust	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5625" / Std.
Kit Includes		2	In Std. Mng. Guides				2	Ex Std. Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24551	+0.001"	Intake	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5635" / O/S
		Exhaust	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5635" / O/S
Kit Includes		2	In O/S Mng. Guides				2	Ex O/S Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

Valve Guide Kits • .420" Seal Diameter • Shortened for .600" Lift

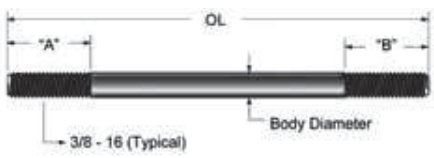


KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24560	Std.	Intake	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.
		Exhaust	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.
Kit Includes		2	In Std. Mng. Guides				2	Ex Std. Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24561	+0.001"	Intake	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5630" / O/S
		Exhaust	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5630" / O/S
Kit Includes		2	In O/S Mng. Guides				2	Ex O/S Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

Standard or +.001" Oversized manganese valve guides, kited with seals at a savings.

Cylinder Studs • H. T. Steel



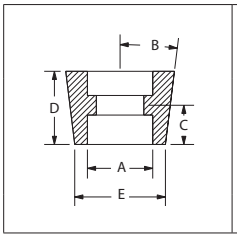
KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
20-2097	H. T. Steel	5.760"	0.370"	1.050"	1.100"	Pkg. of 8	16837-83

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

ORDER 650-557-2046

HD® EVO SPORTSTER™ 1200cc 1988-'03

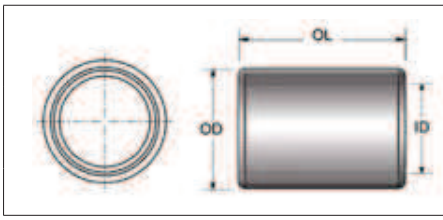
Keeper Set • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
51014-4	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"	4Pr.	18229-83

The bead height is referenced from the minor diameter of the keeper to the center of the bead.

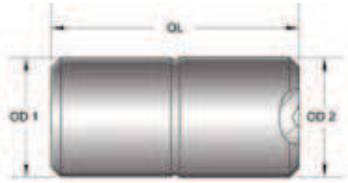
Cylinder Dowel • Steel



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
83070-4	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)

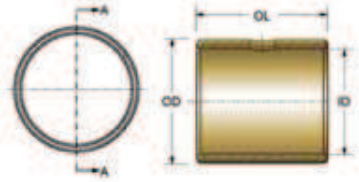
Dowel • Cone • Oversize



KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366

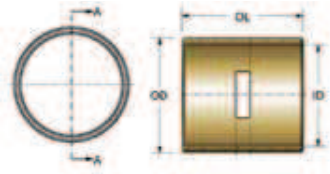
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)

Rocker Arm Bushings • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-2106	Manganese Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

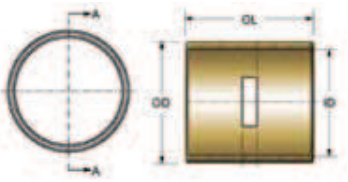
Wrist Pin Bushings • High Performance • Nickel Bronze Alloy



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-0644	Nickel Bronze Alloy	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

Wrist Pin Bushings • Engine Builder Series • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-20810	Manganese Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
20-20812	Manganese Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from Manganese Bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

HD® EVO SPORTSTER™ 1200cc 2004-'21

Valve Spring Kit • Lightweight Racing

NEW PRODUCTS

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23500	Intake / Exhaust	.650"	1.860"	185#	440#	.650"
Kit Includes		4 CrSi Valve Springs	4	H. T. Steel Retainers	4	Viton® Seals
		4 H. T. Steel Keepers Pr.		4 H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23600	Intake / Exhaust	.675"	1.860"	185#	450#	.675"
Kit Includes		4 CrSi Valve Springs	4	H. T. Steel Retainers	4	Viton® Seals
		4 H. T. Steel Keepers		4 H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23550	Intake / Exhaust	.650"	1.860"	185#	440#	.650"
Kit Includes		4 CrSi Valve Springs	4	Titanium Retainers	4	Viton® Seals
		4 H. T. Steel Keepers		4 H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23650	Intake / Exhaust	.675"	1.860"	185#	450#	.675"
Kit Includes		4 CrSi Valve Springs	4	Titanium Retainers	4	Viton® Seals
		4 H. T. Steel Keepers		4 H. T. Steel Basewashers		

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20360	Intake / Exhaust	.600"	1.860"	148#	346#	.600"
Kit Includes		4 Titanium Retainers	4	CrSi Valve Springs	4	Viton® Seals
		2 Ex H. T. Steel Basewashers		4		H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20364	Intake / Exhaust	.600"	1.860"	148#	346#	.600"
Kit Includes		4 H.T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals
		2 Ex H. T. Steel Basewashers		4		H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20350	Intake / Exhaust	.655"	1.860"	185#	450#	.655"
Kit Includes		4 Titanium Retainers	4	CrSi Valve Springs	4	Viton® Seals
		2 Ex H. T. Steel Basewashers		4		H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20355	Intake / Exhaust	.655"	1.860"	185#	450#	.655"
Kit Includes		4 H.T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals
		2 Ex H. T. Steel Basewashers		4		H. T. Steel Basewashers

Note: These kits are supplied with 2 supplemental exhaust basewashers for use with the OEM exhaust guides.
* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

Valve Spring Kit • "High Performance" Ovate Wire Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21400	Intake / Exhaust	.610"	1.860"	175#	400#	.610"
Kit Includes		4 H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals
		4 H. T. Steel Keeper (OEM Style)		4		H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21550	Intake / Exhaust	.660"	1.860"	178#	371#	.660"
Kit Includes		4 H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals
		4 H. T. Steel Keepers (9° Degree Taper)		4		H. T. Steel Basewashers

ORDER 650-557-2046

HD® EVO SPORTSTER™ 1200cc 2004-'21

Engine Kit with Lightweight Racing Valve Spring Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-22950	Intake / Exhaust	.610"	1.860"	175#	400#	.610"

Kit Includes					
4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeprs Pr.
4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
4	In/ Ex Red Viton® Seals		
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Components • Replacement • Engine Kit

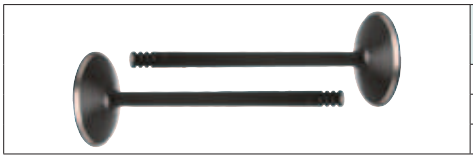
KPMI P/N	Description	Specification
20-21400	Spring Kit	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs, Red Viton® Seals
20-20260	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
20-20265	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

Valve Kit • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-22900	Intake	1.805"	45.85mm	0.2760"	R0.344	28°	4.525"	Standard
	Exhaust	1.575"	40.00mm	0.2755"	R0.500	34°	4.610"	Standard

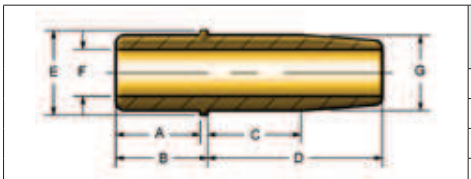
Kit Includes			
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Valves • Black Diamond™ • Black Nitroneg Stems



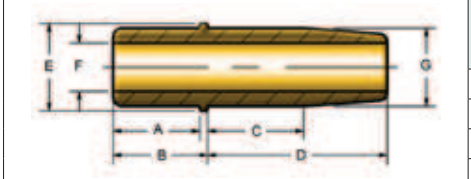
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-20260	Intake	1.805"	45.85mm	0.2760"	R0.344	28°	4.525"	OEM18690-02
20-20262	Intake	1.900"	48.26mm	0.2760"	R0.344	28°	4.500"	Oversize
20-20265	Exhaust	1.575"	40.00mm	0.2755"	R0.500	34°	4.610"	OEM18691-02

Valve Guides • Shouldered • Use O.E.M. Style or Kibblewhite® Seals • Shortened for 0.655" Lift



A	B	C	D	E	F	G	Intake	
							C630 Bronze	Cast Iron
0.690"	0.770"	0.800"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20690	20-20690C
						+0.001"	20-20691	20-20691C
						+0.002"	20-20692	20-20692C
						+0.010"	20-20699	20-20699C

A	B	C	D	E	F	G	Exhaust	
0.650"	0.770"	1.030"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20700	20-20700C
						+0.001"	20-20701	20-20701C
						+0.002"	20-20702	20-20702C
						+0.010"	20-20709	20-20709C



A	B	C	D	E	F	G	Intake	
							Manganese	Ref. AV&V
0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5625" / Std.	20-20690M	VG6600
						+0.001"	20-20691M	VG6601
						+0.002"	20-20692M	VG6602
						+0.010"	20-20699M	VG6610

A	B	C	D	E	F	G	Exhaust	
0.685"	0.735"	0.920"	1.305"	0.615"	0.2755"	0.5625" / Std.	20-20700M	VG6700
						+0.001"	20-20701M	VG6701
						+0.002"	20-20702M	VG6702
						+0.010"	20-20709M	VG6710

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

HD® EVO SPORTSTER™ 1200cc 2004-'21

Valve Guide Seals • Tophat

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.974"	1.457"	3	0.560"±0.005"	---	0.700"	---	Exhaust

Part Number	Quantity	Quantity Discount
71030-4	Pkg. of 4	0%
71030-8	Pkg. of 8	0%
71030-16	Pkg. of 16	Less- 10%
71030-50	Pkg. of 50	Less- 15%
71030-100	Pkg. of 100	Less- 20%

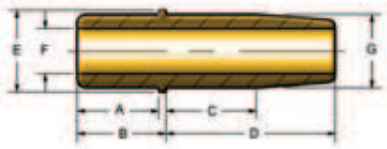
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.510"	0.665"	5	0.560"±0.002"	---	---	0.375"	Exhaust

Part Number	Quantity	Quantity Discount
71028-4	Pkg. of 4	0%
71028-8	Pkg. of 8	0%
71028-16	Pkg. of 16	Less- 10%
71028-50	Pkg. of 50	Less- 15%
71028-100	Pkg. of 100	Less- 20%

Use with Kibblewhite® Spring Kits on O.E.M. or Kibblewhite® Valve Guides

Valve Guides • Use O.E.M. Style or KPMI® Seals • Shortened for .655" Lift

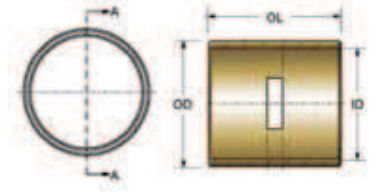


KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24570	Std.	Intake	0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5625" / Std.
		Exhaust	0.685"	0.735"	0.920"	1.305"	0.615"	0.2755"	0.5625" / Std.
Kit Includes		2	In Std. Mng. Guides			2	Ex Std. Mng. Guides		
		1	O.E.M. Style Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24571	+0.001"	Intake	0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5635" / O/S
		Exhaust	0.685"	0.735"	0.920"	1.305"	0.615"	0.2755"	0.5635" / O/S
Kit Includes		2	In O/S Mng. Guides			2	Ex O/S Mng. Guides		
		1	O.E.M. Style Seal (Pkg. of 4)						

Standard or +.001" Oversized manganese valve guides, kited with seals at a savings.

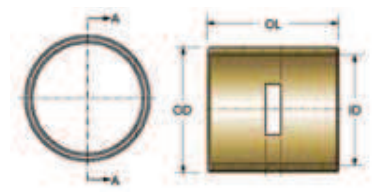
Wrist Pin Bushings • High Performance • C630 Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-0644	C630 Bronze	0.897"	0.788"	0.945"	Pkg. of 1

KPMI® has developed what we believe to be the highest quality wrist pin bushings available. Our wrist pin bushings are machined from a solid Nickel Bronze alloy, with an exceptional Rockwell hardness rating. These bushings are a must for high performance applications.

Wrist Pin Bushings • Engine Builder Series • Manganese Bronze



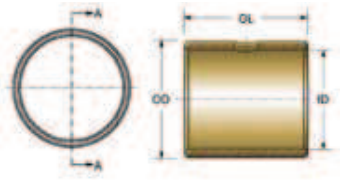
KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
20-20810	Manganese Bronze	0.897"	0.788"	0.945"	Standard	Pkg. of 1
20-20812	Manganese Bronze	0.899"	0.788"	0.945"	+0.002"	Pkg. of 1

Made from Manganese Bronze to exact tolerances, these bushings will meet or exceed fitment and wear ability of all other replacement style bushings available.

ORDER 650-557-2046

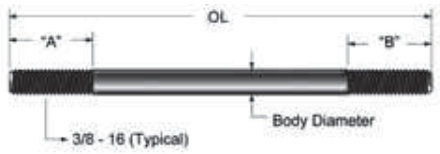
HD® EVO SPORTSTER™ 1200cc 2004-'21

Rocker Arm Bushings • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-2106	Manganese Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

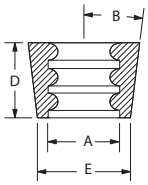
Cylinder Studs • H. T. Steel



KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
20-2097	H. T. Steel	5.760"	0.370"	1.050"	1.100"	Pkg. of 8	16837-83

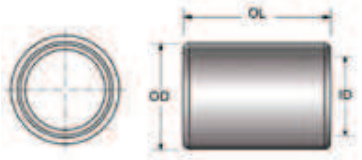
KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Keeper Set • O.E.M. Replacement



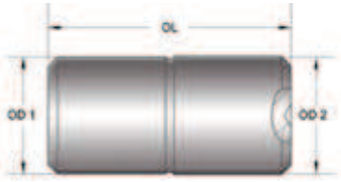
KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
51016-4	Triple Radius Bead	0.275	7.0º	---	0.345"	0.290"	4Pr.	18260-02
The bead height is referenced from the minor diameter of the keeper to the center of the bead.								

Cylinder Dowel • Steel



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
83070-4	Steel	0.5575"	0.375"	0.505"	Pkg. of 4	16573-83A
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)						

Dowel • Cone • Oversize



KPMI P/N	Material	OD 1	OD 2 O/S	O. L.	Quantity	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
83240-4	H.T. Steel	0.250"	0.252"	0.520"	Pkg. of 4	50-8022	366
Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)							

For all the applications available for Kibblewhite's Harley® line of products, please refer online to the Harley-Davidson® section of the ***www.kpmi.us*** website, under ***V-Twin / Cruzer.***

HD® TWIN CAM™ 88" 1999-2004

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20122	Intake / Exhaust	.600"	1.810"	163#	361#	.600"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	Titanium Retainers	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20132	Intake / Exhaust	.600"	1.810"	163#	361#	.600"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	H. T. Steel Retainers	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20060	Intake / Exhaust	.655"	1.865"	190#	465#	.655"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	Titanium Retainers	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20081	Intake / Exhaust	.655"	1.860"	185#	450#	.655"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	H. T. Steel Retainers	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21650	Intake / Exhaust	.650"	1.860"	185#	440#	.650"	VSK650S
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers		
		4	H. T. Steel Keepers Pr.	4	H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21600	Intake / Exhaust	.675"	1.860"	185#	450#	.675"	Steel Retainer Version of VSK675T
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21750	Intake / Exhaust	.650"	1.860"	185#	440#	.650"	VSK650T
Kit Includes		4	CrSi Valve Springs	4	Titanium Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	AV&V P/N
20-21700	Intake / Exhaust	.675"	1.860"	185#	450#	.675"	VSK675T
Kit Includes		4	CrSi Valve Springs	4	Titanium Retainers		
		4	H. T. Steel Keepers	4	H. T. Steel Basewashers		

* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

Valve Spring Kit • "High Performance" Ovate Wire Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21300	Intake / Exhaust	.610"	1.860"	175#	400#	.610"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers	
		4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21500	Intake / Exhaust	.660"	1.860"	178#	371#	.660"
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers	
		4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers	

ORDER 650-557-2046

HD® TWIN CAM™ 88" 1999-2004

Engine Kit with Lightweight Racing Valve Spring Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23050	Intake	.600"	1.810"	163#	361#	.600"
	Exhaust					

Kit Includes				
4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeprs Pr.
4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
4	In/ Ex Red Viton® Seals		
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Components • Replacement • Engine Kit

KPMI P/N	Description	Specification
20-20132	Spring Kit	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs
71010-4	Intake / Exhaust Seal	Seal • Red Viton®
20-20055	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
20-20057	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

Valve Kit • Black Diamond™ • Black Nitroneg Stems

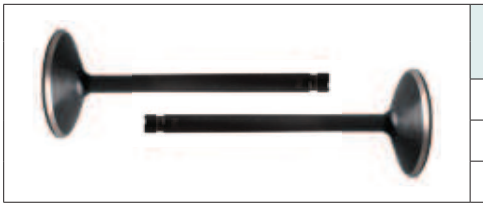
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-23000	Intake	1.840"	46.74mm	0.3100"	R0.234	23°	4.445"	Standard
	Exhaust	1.565"	39.75mm	0.3095"	R0.250	17°	4.505	Standard

Kit Includes			
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Valves • Black Diamond™ • Black Nitroneg Stems For All 5/16 Stem Valves

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-20055	Intake	1.840"	46.74mm	0.3100"	R0.234	23°	4.445"	OEM18074-83A
20-20056	Intake	1.900"	48.26mm	0.3100"	R0.344	28°	4.420"	Oversize
20-20108	Intake	2.000"	50.80mm	0.3100"	R0.234	23°	4.445"	Oversize
20-20900	Intake	2.150"	54.61mm	0.3108"	R0.550	24°	4.480"	AV&V# AV2150
20-20905	Intake	1.990"	50.55mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1990
20-20910	Intake	1.940"	49.28mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1940
20-20915	Intake	1.900"	48.26mm	0.3108"	R0.675	25°	4.440"	AV&V# AV1900
20-20955	Intake	2.100"	53.34mm	0.3108"	R0.560	24°	4.475"	AV&V# AV2100
20-20990	Intake	2.020"	51.31mm	0.3108"	R0.670	25°	4.440"	AV&V# AV2020A
20-20965	Intake	2.020"	51.31mm	0.3108"	R0.645	25°	4.510"	AV&V# AV2020S
20-20057	Exhaust	1.565"	39.75mm	0.3095"	R0.250	17°	4.505	OEM18085-991
20-20920	Exhaust	1.650"	41.91mm	0.3106"	R0.750	25°	4.515"	AV&V# AV1650
20-20925	Exhaust	1.610"	40.89mm	0.3106"	R0.750	25°	4.510"	AV&V# AV1610D
20-20930	Exhaust	1.585"	40.26mm	0.3106"	R0.750	25°	4.505"	AV&V# AV1585
20-20960	Exhaust	1.700"	43.18mm	0.3106"	R0.600	25°	4.535"	AV&V# AV1700A
20-20970	Exhaust	1.610"	40.89mm	0.3106"	R0.750	25°	4.565"	AV&V# AV1610S

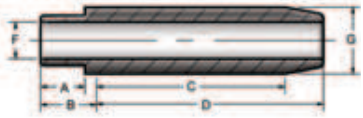
Valves • Black Diamond™ • Specially Designed For HD Racing Applications



KPMI P/N	Type		Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
						Radius	Angle		
20-4169	In	Black Diamond™	1.940"	49.28mm	0.3100"	R0.234	23°	4.400"	Branch Heads
20-B101	Ex	Black Diamond™	1.615"	41.02mm	0.3096"	R0.325	RO1.625	4.460"	Branch Heads
20-4170R	Ex	Black Diamond™	1.630"	41.40mm	0.3096"	R0.500	40°	4.525"	Oversize

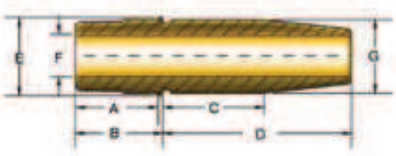
HD® TWIN CAM™ 88" 1999-2004

Valve Guides • C630 Bronze • Cast Iron • O.E.M. Replacement • .420″ Seal Ø



A	B	C	D	E	F	G	Intake / Exhaust	
							C630 Bronze	Cast Iron
0.375”	0.375”	1.700”	2.025”	---	0.309”	0.5620” / Std.	20-4320	20-4320C
						+0.001”	20-4321	20-4321C
						+0.002”	20-4322	20-4322C
						+0.003”	20-4323	20-4323C
						+0.004”	20-4324	20-4324C
						+0.010”	20-4329	20-4329C

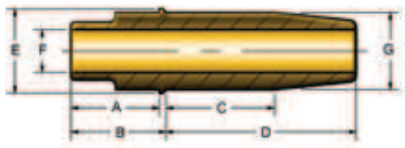
Valve Guides • Manganese Bronze • .530″ Seal Ø • Shortened for .655″ Lift



A	B	C	D	E	F	G	Intake	Exhaust	AV&V#
0.620”	0.665”	0.737”	1.435”	0.615”	0.3075”	0.5625” / Std.	20-20860M		VG5600
						+0.001”	20-20861M		VG5601
						+0.002”	20-20862M		VG5602
						+0.003”	20-20863M		VG5603
						+0.010”	20-20869M		VG5610
						+0.025”	20-2086HSM		VG5625
0.620”	0.665”	1.135”	1.435”	0.615”	0.3075”	0.5625” / Std.		20-20870M	VG5700
						+0.001”		20-20871M	VG5701
						+0.002”		20-20872M	VG5702
						+0.003”		20-20873M	VG5703
						+0.010”		20-20879M	VG5710
						+0.025”		20-2087HSM	VG5725

For sizing KPMI® Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

Valve Guides • C630 Bronze • Cast Iron • Manganese • Shouldered • .420″ Seal Ø • Shortened for .600″ Lift

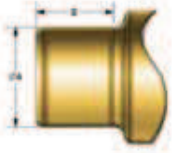


A	B	C	D	E	F	G	Intake		
							C630 Bronze	Cast Iron	Manganese
0.650”	0.700”	0.800”	1.400”	0.615”	0.3098”	0.5620” / Std.	20-2120	20-2120C	20-2120M
						+0.001”	20-2121	20-2121C	20-2121M
						+0.002”	20-2122	20-2122C	20-2122M
						+0.003”	20-2123	20-2123C	20-2123M
						+0.004”	20-2124	20-2124C	20-2124M
						+0.010”	20-2129	20-2129C	20-2129M
A	B	C	D	E	F	G	Exhaust		
0.650”	0.700”	1.150”	1.450”	0.615”	0.3098”	0.5620” / Std.	20-2130	20-2130C	20-2130M
						+0.001”	20-2131	20-2131C	20-2131M
						+0.002”	20-2132	20-2132C	20-2132M
						+0.003”	20-2133	20-2133C	20-2133M
						+0.004”	20-2134	20-2134C	20-2134M
						+0.010”	20-2139	20-2139C	20-2139M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

Valve Guide Seals • PC Style

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.517"	0.510"	6	0.415”±0.005”	---	---	0.350"	Intake
								Exhaust



Part Number	Quantity	Quantity Discount
71008-4	Pkg. of 4	0%
71008-8	Pkg. of 8	0%
71008-16	Pkg. of 16	Less- 10%
71008-50	Pkg. of 50	Less- 15%
71008-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

HD® TWIN CAM™ 88" 1999-2004

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.412"	0.566"	5	0.420"±0.002"	---	---	0.275"	Exhaust

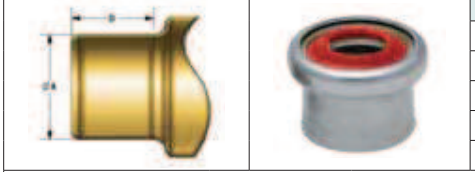
Part Number	Quantity	Quantity Discount
71010-4	Pkg. of 4	0%
71010-8	Pkg. of 8	0%
71010-16	Pkg. of 16	Less- 10%
71010-50	Pkg. of 50	Less- 15%
71010-100	Pkg. of 100	Less- 20%

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.514"	0.671"	5	0.530"±0.002"	---	---	0.330"	Exhaust

Part Number	Quantity	Quantity Discount
71045-4	Pkg. of 4	0%
71045-8	Pkg. of 8	0%
71045-16	Pkg. of 16	Less- 10%
71045-50	Pkg. of 50	Less- 15%
71045-100	Pkg. of 100	Less- 20%

Valve Guide Seals • O.E.M. Replacement

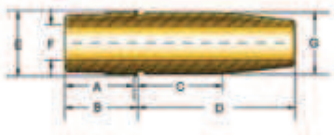
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.385"	0.565"	7	0.420"±0.002"	---	---	0.315"	Exhaust



Part Number	Quantity	Quantity Discount
71032-4	Pkg. of 4	0%
71032-8	Pkg. of 8	0%
71032-16	Pkg. of 16	Less- 10%
71032-50	Pkg. of 50	Less- 15%
71032-100	Pkg. of 100	Less- 20%

Please use KPMI® installation tools and protectors listed in HD® Tool section (Pg.90-93).

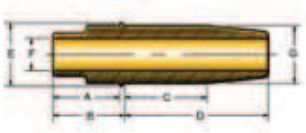
Valve Guide Kits • .530" Seal Diameter • Shortened for .655" Lift For 5/16" Stem Valves



KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24550	Std.	Intake	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5625" / Std.
		Exhaust	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5625" / Std.
Kit Includes		2	In Std. Mng. Guides				2	Ex Std. Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24551	+0.001"	Intake	0.620"	0.665"	0.737"	1.435"	0.615"	0.3075"	0.5635" / O/S
		Exhaust	0.620"	0.665"	1.135"	1.435"	0.615"	0.3075"	0.5635" / O/S
Kit Includes		2	In O/S Mng. Guides				2	Ex O/S Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

Valve Guide Kits • .420" Seal Diameter • Shortened for .600" Lift



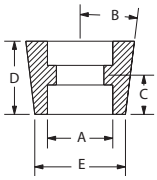
KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24560	Std.	Intake	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5620" / Std.
		Exhaust	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5620" / Std.
Kit Includes		2	In Std. Mng. Guides				2	Ex Std. Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24561	+0.001"	Intake	0.650"	0.700"	0.800"	1.400"	0.615"	0.3098"	0.5630" / O/S
		Exhaust	0.650"	0.700"	1.150"	1.450"	0.615"	0.3098"	0.5630" / O/S
Kit Includes		2	In O/S Mng. Guides				2	Ex O/S Mng. Guides	
		1	Red Viton® Seal (Pkg. of 4)						

Standard or +.001" Oversized manganese valve guides, kited with seals at a savings.

HD® TWIN CAM™ 88" 1999-2004

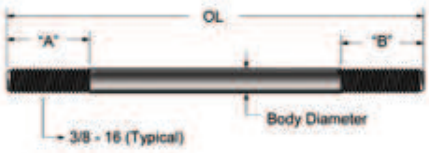
Keeper Set • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. OEM P/N
51014-4	Single Square Bead	0.310	7.0°	0.190"	0.380"	0.380"	4Pr.	18229-83

The bead height is referenced from the minor diameter of the keeper to the center of the bead.

Cylinder Studs • H. T. Steel



KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
20-20412	H. T. Steel	6.310"	0.370"	1.250"	1.250"	Pkg. of 8	16834-99A

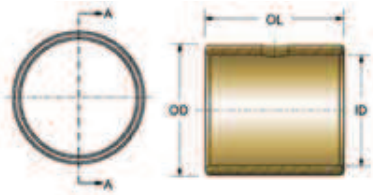
KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Valve Seats • Powdered Metal

KPMI P/N	Type	O. D.		I. D.		Height		Quantity
10-SC500	Intake	1.969"	50.00mm	1.535"	39.00mm	0.453"	11.50mm	Pkg. of 1
10-SC510	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

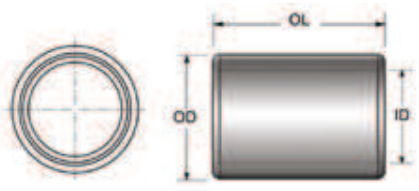
KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

Rocker Arm Bushings • Manganese Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-2106	Manganese Bronze	0.6795"	0.548"	1.065"	Pkg. of 8

Cylinder Dowel • Steel



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
83080-4	Steel	0.4365"	0.323"	0.610"	Pkg. of 4	16595-99A

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)

HD® TWIN CAM™ 88"-103" 2005-2017

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20360	Intake / Exhaust	.600"	1.860"	148#	346#	.600"
Kit Includes		4 Titanium Retainers	4 CrSi Valve Springs	4 Viton® Seals		
		2 Ex H. T. Steel Basewashers	4 H. T. Steel Basewashers			

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20364	Intake / Exhaust	.600"	1.860"	148#	346#	.600"
Kit Includes		4 H.T. Steel Retainers	4 CrSi Valve Springs	4 Viton® Seals		
		2 Ex H. T. Steel Basewashers	4 H. T. Steel Basewashers			

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20350	Intake / Exhaust	.655"	1.860"	185#	450#	.655"
Kit Includes		4 Titanium Retainers	4 CrSi Valve Springs	4 Viton® Seals		
		2 Ex H. T. Steel Basewashers	4 H. T. Steel Basewashers			

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20355	Intake / Exhaust	.655"	1.860"	185#	450#	.655"
Kit Includes		4 H.T. Steel Retainers	4 CrSi Valve Springs	4 Viton® Seals		
		2 Ex H. T. Steel Basewashers	4 H. T. Steel Basewashers			

Note: These kits are supplied with 2 supplemental exhaust basewashers for use with the OEM exhaust guides.
* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23500	Intake / Exhaust	.650"	1.860"	185#	440#	.650"
Kit Includes		4 CrSi Valve Springs	4 H. T. Steel Retainers	4 Viton® Seals		
		4 H. T. Steel Keepers Pr.	4 H. T. Steel Basewashers			

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23600	Intake / Exhaust	.675"	1.860"	185#	450#	.675"
Kit Includes		4 CrSi Valve Springs	4 H. T. Steel Retainers	4 Viton® Seals		
		4 H. T. Steel Keepers	4 H. T. Steel Basewashers			

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23550	Intake / Exhaust	.650"	1.860"	185#	440#	.650"
Kit Includes		4 CrSi Valve Springs	4 Titanium Retainers	4 Viton® Seals		
		4 H. T. Steel Keepers	4 H. T. Steel Basewashers			

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23650	Intake / Exhaust	.675"	1.860"	185#	450#	.675"
Kit Includes		4 CrSi Valve Springs	4 Titanium Retainers	4 Viton® Seals		
		4 H. T. Steel Keepers	4 H. T. Steel Basewashers			

Valve Spring Kit • "High Performance" Ovate Wire Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21400	Intake / Exhaust	.610"	1.860"	175#	400#	.610"
Kit Includes		4 H. T. Steel Retainers	4 CrSi Valve Springs	4 Viton® Seals		
		4 H. T. Steel Keeper (OEM Style)	4 H. T. Steel Basewashers			

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21550	Intake / Exhaust	.660"	1.860"	178#	371#	.660"
Kit Includes		4 H. T. Steel Retainers	4 CrSi Valve Springs	4 Viton® Seals		
		4 H. T. Steel Keepers (9° Degree Taper)	4 H. T. Steel Basewashers			

HD® TWIN CAM™ 88"-103" 2005-2017

Engine Kit with Lightweight Racing Valve Spring Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23150	Intake	.610"	1.860"	175#	400#	.610"
	Exhaust					

Kit Includes				
4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeprs Pr.
4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
4	In/ Ex Red Viton® Seals		
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Components • Replacement • Engine Kit

KPMI P/N	Description	Specification
20-21400	Spring Kit	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs
20-20322	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
20-20325	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

Valve Kit • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-23100	Intake	1.805"	45.85mm	0.2760"	R0.413	1.700"R	4.420"	Standard
	Exhaust	1.575"	40.00mm	0.2755"	R0.354	22°	4.520"	Standard

Kit Includes			
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-20322	Intake	1.805"	45.85mm	0.2760"	R0.413	1.700"R	4.420"	OEM18074-05
20-20323R	Intake	1.900"	48.26mm	0.2760"	R0.344	28°	4.420"	Oversize
20-20935	Intake	1.980"	50.29mm	0.2757"	R0.290	23°	4.455"	AV1980-7TGB
20-20940	Intake	1.900"	48.26mm	0.2757"	R0.475	24°	4.445"	AV1900-7TGB
20-20325	Exhaust	1.575"	40.00mm	0.2755"	R0.354	22°	4.520"	OEM18085-991
20-20326R	Exhaust	1.630"	41.40mm	0.2755"	R0.500	34°	4.520"	Oversize
20-20945	Exhaust	1.610"	40.89mm	0.2755"	R0.595	25°	4.545"	AV1610-7TGB
20-20950	Exhaust	1.575"	40.00mm	0.2755"	R0.595	25°	4.560"	AV1575-7TGB

Valves • Black Diamond™ • Fat Stem • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-20772	Intake	1.805"	45.85mm	0.2810"	R0.413	1.700"R	4.415"	Standard
20-20776	Exhaust	1.575"	40.00mm	0.2805"	R0.374	23°	4.510"	Standard

KPMI® Reamer GR-2820 should be used to size the OEM valve guides to accommodate these valves.

Valve Seats • Powdered Metal

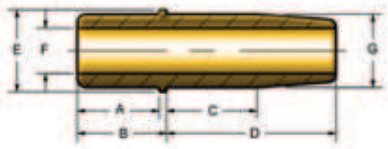
KPMI P/N	Type	O. D.		I. D.		Height		Quantity
10-SC500	Intake	1.969"	50.00mm	1.535"	39.00mm	0.453"	11.50mm	Pkg. of 1
10-SC510	Intake	2.007"	50.98mm	1.562"	39.67mm	0.450"	11.43mm	Pkg. of 1
10-SC541	Intake	2.132"	54.15mm	1.690"	42.93mm	0.450"	11.43mm	Pkg. of 1
10-SC446	Exhaust	1.757"	44.62mm	1.375"	35.00mm	0.450"	11.43mm	Pkg. of 1

KPMI's proprietary seat material is compatible with leaded and unleaded fuels including methanol and ethanol fuel blends. This material offers excellent thermal characteristics and resists microwelding that leads to seat and valve face recession. Leading edge has generous radius to ease installation.

ORDER 650-557-2046

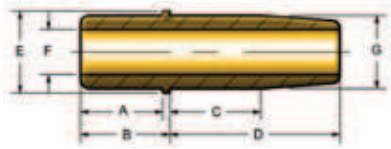
HD® TWIN CAM™ 88"-103" 2005-2017

Valve Guides • Shouldered • Use O.E.M. Style or Kibblewhite® Seals • Shortened for 0.655" Lift



A	B	C	D	E	F	G	Intake	
							C630 Bronze	Cast Iron
0.690”	0.770”	0.800”	1.280”	0.615”	0.2750”	0.5620” / Std.	20-20690	20-20690C
						+0.001”	20-20691	20-20691C
						+0.002”	20-20692	20-20692C
						+0.010”	20-20699	20-20699C

A	B	C	D	E	F	G	Exhaust	
0.650”	0.770”	1.030”	1.280”	0.615”	0.2750”	0.5620” / Std.	20-20700	20-20700C
						+0.001”	20-20701	20-20701C
						+0.002”	20-20702	20-20702C
						+0.010”	20-20709	20-20709C



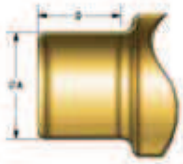
A	B	C	D	E	F	G	Intake	
							Manganese	Ref. AV&V
0.685”	0.735”	0.702”	1.305”	0.615”	0.2760”	0.5625” / Std.	20-20690M	VG6600
						+0.001”	20-20691M	VG6601
						+0.002”	20-20692M	VG6602
						+0.010”	20-20699M	VG6610

A	B	C	D	E	F	G	Exhaust	
0.685”	0.735”	0.920”	1.305”	0.615”	0.2755”	0.5625” / Std.	20-20700M	VG6700
						+0.001”	20-20701M	VG6701
						+0.002”	20-20702M	VG6702
						+0.010”	20-20709M	VG6710

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.510"	0.665"	5	0.560”±0.002”	---	---	0.375”	Exhaust

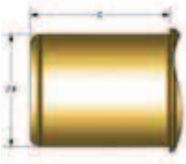


Part Number	Quantity	Quantity Discount
71028-4	Pkg. of 4	0%
71028-8	Pkg. of 8	0%
71028-16	Pkg. of 16	Less- 10%
71028-50	Pkg. of 50	Less- 15%
71028-100	Pkg. of 100	Less- 20%

Use with Kibblewhite® Spring Kits on O.E.M. or Kibblewhite® Valve Guides

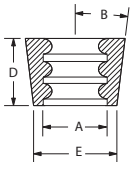
Valve Guide Seals • Tophat

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.974"	1.457"	3	0.560”±0.005”	---	0.700"	---	Exhaust



Part Number	Quantity	Quantity Discount
71030-4	Pkg. of 4	0%
71030-8	Pkg. of 8	0%
71030-16	Pkg. of 16	Less- 10%
71030-50	Pkg. of 50	Less- 15%
71030-100	Pkg. of 100	Less- 20%

Keeper Set • O.E.M. Replacement



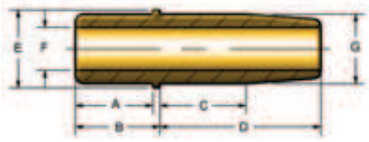
KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
51016-4	Triple Radius Bead	0.275	7.0º	---	0.345"	0.290”	4Pr.	18260-02

The bead height is referenced from the minor diameter of the keeper to the center of the bead.

HD® TWIN CAM™ 88"-103" 2005-2017

Valve Guides • Use O.E.M. Style or KPMI® Seals • Shortened for .655" Lift

NEW PRODUCT!

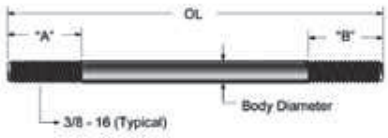


KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24570	Std.	Intake	0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5625" / Std.
		Exhaust	0.685"	0.735"	0.920"	1.305"	0.615"	0.2755"	0.5625" / Std.
Kit Includes		2	In Std. Mng. Guides				2	Ex Std. Mng. Guides	
		1	O.E.M. Style Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24571	+0.001"	Intake	0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5635" / O/S
		Exhaust	0.685"	0.735"	0.920"	1.305"	0.615"	0.2755"	0.5635" / O/S
Kit Includes		2	In O/S Mng. Guides				2	Ex O/S Mng. Guides	
		1	O.E.M. Style Seal (Pkg. of 4)						

Standard or +.001" Oversized manganese valve guides, kited with seals at a savings.

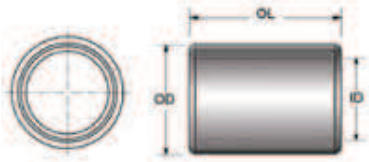
Cylinder Studs • H. T. Steel



KPMI P/N	Material	O.L.	Body Dia.	A	B	Quantity	Rep. HD® OEM P/N
20-20412	H. T. Steel	6.310"	0.370"	1.250"	1.250"	Pkg. of 8	16834-99A

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

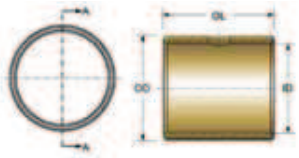
Cylinder Dowel • Steel



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
83080-4	Steel	0.4365"	0.323"	0.610"	Pkg. of 4	16595-99A

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)

Wrist Pin Bushings • 660 Bearing Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity
20-20780	660 Bearing Bronze	1.019"	0.925"	1.040"	Pkg. of 2
20-20790	660 Bearing Bronze	1.019"	0.925"	1.040"	Pkg. of 1

Note: Wrist Pins do not include oil hole(s). These must be drilled after installation.

HD® BUELL® XB9™ - XB12™ 2003-2010

Valve Spring Kit • "High Performance" Ovate Wire Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21400	Intake	.610"	1.860"	175#	400#	.610"
	Exhaust					

Kit Includes						
4	H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals	
4	H. T. Steel Keeper (OEM Style)	4	H. T. Steel Basewashers			

ORDER 650-557-2046

HD® BUELL® XB9™ - XB12™ 2003-2010

Valve Spring Kit • "High Performance" Ovate Wire Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21550	Intake / Exhaust	.660"	1.860"	178#	371#	.660"

Kit Includes							
4	H. T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals		
4	H. T. Steel Keepers (9° Degree Taper)	4	H. T. Steel Basewashers				

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20360	Intake / Exhaust	.600"	1.860"	148#	346#	.600"

Kit Includes							
4	Titanium Retainers	4	CrSi Valve Springs	4	Viton® Seals		
2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers				

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20364	Intake / Exhaust	.600"	1.860"	148#	346#	.600"

Kit Includes							
4	H.T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals		
2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers				

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20350	Intake / Exhaust	.655"	1.860"	185#	450#	.655"

Kit Includes							
4	Titanium Retainers	4	CrSi Valve Springs	4	Viton® Seals		
2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers				

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*20-20355	Intake / Exhaust	.655"	1.860"	185#	450#	.655"

Kit Includes							
4	H.T. Steel Retainers	4	CrSi Valve Springs	4	Viton® Seals		
2	Ex H. T. Steel Basewashers	4	H. T. Steel Basewashers				

Note: These kits are supplied with 2 supplemental exhaust basewashers for use with the OEM exhaust guides.
* All KPMI® retainers are designed using the latest CAD software available. Further, the retainers are tested using finite element analysis (FEA) to ensure the retainer can endure high stress levels during operation. By using billet aircraft alloy material, heat treating it, and then employing our high powered design software, KPMI® is able to maximize weight saving by incorporating a series of drilled holes in the retainers. These retainers are both strong and light, allowing significant reduction to overall valvetrain mass, which is known to improve performance.

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23500	Intake / Exhaust	.650"	1.860"	185#	440#	.650"

Kit Includes							
4	CrSi Valve Springs	4	H. T. Steel Retainers	4	Viton® Seals		
4	H. T. Steel Keepers Pr.	4	H. T. Steel Basewashers				

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23600	Intake / Exhaust	.675"	1.860"	185#	450#	.675"

Kit Includes							
4	CrSi Valve Springs	4	H. T. Steel Retainers	4	Viton® Seals		
4	H. T. Steel Keepers	4	H. T. Steel Basewashers				

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23550	Intake / Exhaust	.650"	1.860"	185#	440#	.650"

Kit Includes							
4	CrSi Valve Springs	4	Titanium Retainers	4	Viton® Seals		
4	H. T. Steel Keepers	4	H. T. Steel Basewashers				

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23650	Intake / Exhaust	.675"	1.860"	185#	450#	.675"

Kit Includes							
4	CrSi Valve Springs	4	Titanium Retainers	4	Viton® Seals		
4	H. T. Steel Keepers	4	H. T. Steel Basewashers				

HD® BUELL® XB9™ - XB12™ 2003-2010

Engine Kit with Lightweight Racing Valve Spring Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23250	Intake	.610"	1.860"	175#	400#	.610"
	Exhaust					

Kit Includes				
4	In / Ex H. T. Steel Retainers	4	In / Ex H.T. Steel Keeprs Pr.
4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
4	In/ Ex Red Viton® Seals		
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves

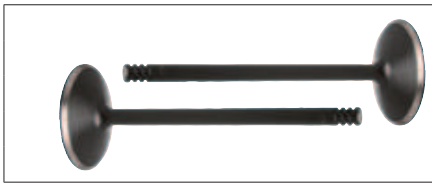
Components • Replacement • Engine Kit

KPMI P/N	Description	Specification
20-21400	Spring Kit	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs, Red Viton® Seals
20-20260	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
20-20265	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems

Valve Kit • Black Diamond™ • Black Nitroneg Stems

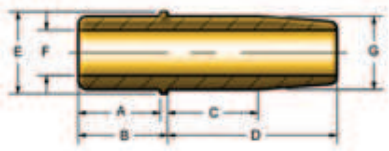
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-23200	Intake	1.805"	45.85mm	0.2760"	R0.344	28°	4.525"	Standard
	Exhaust	1.575"	40.00mm	0.2755"	R0.500	34°	4.610"	Standard
Kit Includes		2	In Std. Black Diamond™ Valves			2	Ex Std. Black Diamond™ Valves	

Valves • Black Diamond™ • Black Nitroneg Stems



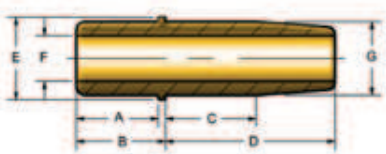
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks
					Radius	Angle		
20-20260	Intake	1.805"	45.85mm	0.2760"	R0.344	28°	4.525"	Standard
20-20262	Intake	1.900"	48.26mm	0.2760"	R0.344	28°	4.500"	Oversize
20-20265	Exhaust	1.575"	40.00mm	0.2755"	R0.500	34°	4.610"	Standard

Valve Guides • Shouldered • Use O.E.M. Style or Kibblewhite® Seals • Shortened for 0.655" Lift



A	B	C	D	E	F	G	Intake	
							C630 Bronze	Cast Iron
0.690"	0.770"	0.800"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20690	20-20690C
						+0.001"	20-20691	20-20691C
						+0.002"	20-20692	20-20692C
						+0.010"	20-20699	20-20699C

A	B	C	D	E	F	G	Exhaust	
0.650"	0.770"	1.030"	1.280"	0.615"	0.2750"	0.5620" / Std.	20-20700	20-20700C
						+0.001"	20-20701	20-20701C
						+0.002"	20-20702	20-20702C
						+0.010"	20-20709	20-20709C



A	B	C	D	E	F	G	Intake	
							Manganese	Ref. AV&V
0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5625" / Std.	20-20690M	VG6600
						+0.001"	20-20691M	VG6601
						+0.002"	20-20692M	VG6602
						+0.010"	20-20699M	VG6610

A	B	C	D	E	F	G	Exhaust	
0.685"	0.735"	0.920"	1.305"	0.615"	0.2755"	0.5625" / Std.	20-20700M	VG6700
						+0.001"	20-20701M	VG6701
						+0.002"	20-20702M	VG6702
						+0.010"	20-20709M	VG6710

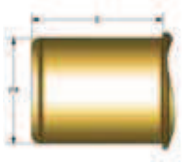
For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

ORDER 650-557-2046

HD® BUELL® XB9™ - XB12™ 2003-2010

Valve Guide Seals • Tophat

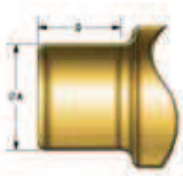
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.974"	1.457"	3	0.560"±0.005"	---	0.700"	---	Intake / Exhaust



Part Number	Quantity	Quantity Discount
71030-4	Pkg. of 4	0%
71030-8	Pkg. of 8	0%
71030-16	Pkg. of 16	Less- 10%
71030-50	Pkg. of 50	Less- 15%
71030-100	Pkg. of 100	Less- 20%

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
7.0mm	0.510"	0.665"	5	0.560"±0.002"	---	---	0.375"	Intake / Exhaust

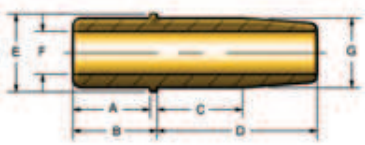


Part Number	Quantity	Quantity Discount
71028-4	Pkg. of 4	0%
71028-8	Pkg. of 8	0%
71028-16	Pkg. of 16	Less- 10%
71028-50	Pkg. of 50	Less- 15%
71028-100	Pkg. of 100	Less- 20%

Use with Kibblewhite® Spring Kits on O.E.M. or Kibblewhite® Valve Guides

Valve Guides • Use O.E.M. Style or KPMI® Seals • Shortened for .655" Lift

NEW PRODUCTS



KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24570	Std.	Intake	0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5625" / Std.
		Exhaust	0.685"	0.735"	0.920"	1.305"	0.615"	0.2755"	0.5625" / Std.
Kit Includes		2	In Std. Mng. Guides			2	Ex Std. Mng. Guides		
		1	O.E.M. Style Seal (Pkg. of 4)						

KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24571	+0.001"	Intake	0.685"	0.735"	0.702"	1.305"	0.615"	0.2760"	0.5635" / O/S
		Exhaust	0.685"	0.735"	0.920"	1.305"	0.615"	0.2755"	0.5635" / O/S
Kit Includes		2	In O/S Mng. Guides			2	Ex O/S Mng. Guides		
		1	O.E.M. Style Seal (Pkg. of 4)						

Standard or +.001" Oversized manganese valve guides, kited with seals at a savings.

HD® V-ROD™ 2002-2017

All Models Except VRXSE Destroyer

Valve Spring Kit • Lightweight Racing

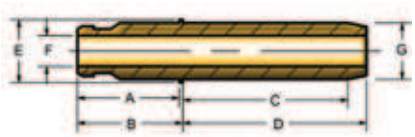
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-20140	Intake / Exhaust	.500"	1.360"	72#	230#	.500"

Kit Includes	8	Titanium Retainers	8	CrSi Valve Springs

HD® V-ROD™ 2002-2017

All Models Except VRXSE Destroyer

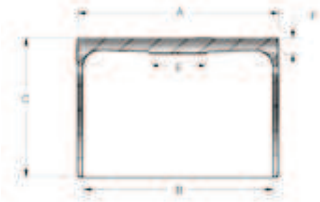
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.720"	0.745"	1.050"	1.180"	0.440"	0.2340"	0.3957" / Std.	20-20330	
						+0.001"	20-20331	
						+0.010"	20-20339	
0.720"	0.745"	1.170"	1.300"	0.440"	0.2340"	0.3957" / Std.		20-20340
						+0.001"		20-20341
						+0.010"		20-20349

Use O.E.M valve guide seals.

Tappets • O.E.M. Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
20-20157	Intake	None	31.00mm	1.2195"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

HD® M8™ (& CVO's) 2017-2025

2023-2025 CVO's check valve lift to determine compatibility with KPMI spring kits

Valve Spring Kit • Beehive Racing • High Lift

NEW PRODUCTS

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-24350	Intake	.640"	1.580"	83#	285#	.640"
	Exhaust					

Kit Includes				
8	Titanium Retainers	8	CrSi Valve Springs	
8	H. T. Steel Keeper (9º)	8	*Red Viton® Seals	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-24400	Intake	.640"	1.580"	83#	285#	.640"
	Exhaust					

Kit Includes				
8	H. T. Steel Retainers	8	CrSi Valve Springs	
8	H. T. Steel Keeper (9º)	8	*Red Viton® Seals	

- KPMI® designed and custom wound 0.640" lift springs manufactured by PSI.
- Lightweight Titanium or Heat Treated Steel Retainers and Beehive Springs reduce reciprocating mass while providing the spring forces required for highlift camshaft and sustained high rpm's
- Ultra strong high angle 9° HT Steel keepers resist "pull thru"

***Note** : KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution.
****Note :** These basewashers are designed to fit on top of either the OEM or KPMI® Tophat seals provided in this kit.

ORDER 650-557-2046

HD® M8™ (& CVO's) 2017-2025

2023-2025 CVO's check valve lift to determine compatibility with KPMI spring kits

Valve Spring Kit • Ovate Wire Beehive • High Lift

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21205	Intake	.550"	1.500"	85#	257#	.550"
	Exhaust					
Kit Includes		8	Titanium Retainers	8	CrSi Valve Springs	
		8	**H. T. Steel Basewashers	8	*Red Viton® Seals	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21215	Intake	.550"	1.500"	85#	257#	.550"
	Exhaust					
Kit Includes		8	H. T. Steel Retainers	8	CrSi Valve Springs	
		8	**H. T. Steel Basewashers	8	*Red Viton® Seals	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
***20-21800	Intake	.625"	1.500"	85#	280#	.625"
	Exhaust					
Kit Includes		8	Titanium Retainers	8	CrSi Valve Springs	
		8	**H. T. Steel Basewashers	8	*Red Viton® Seals	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
***20-21850	Intake	.625"	1.500"	85#	280#	.625"
	Exhaust					
Kit Includes		8	H. T. Steel Retainers	8	CrSi Valve Springs	
		8	**H. T. Steel Basewashers	8	*Red Viton® Seals	

*** **Compatibility Notice:** This spring Kit has not been designed for aftermarket rocker arms with increased mass and/or rocker ratio.

Valve Spring Kit • Ovate Wire Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21000	Intake	.465"	1.410"	80#	212#	.465"
	Exhaust					
Kit Includes		8	Titanium Retainers	8	CrSi Valve Springs	
		8	**H. T. Steel Basewashers	8	*Red Viton® Seals	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-21050	Intake	.465"	1.410"	80#	212#	.465"
	Exhaust					
Kit Includes		8	H. T. Steel Retainers	8	CrSi Valve Springs	
		8	**H. T. Steel Basewashers	8	*Red Viton® Seals	

Booster Shims • H.T. Steel

KPMI P/N	Outside Diameter	Inside Diameter	Thickness	Quantity
92034-8	1.100"	0.719"	0.015"	Pkg of 8
92019-8	1.100"	0.719"	0.030"	Pkg of 8
92012-8	1.100"	0.719"	0.060"	Pkg of 8

Note: Compatible with KPMI® Spring Kit #'s 20-21800 and 20-21850. All KPMI® shims are conveniently packaged in quantities of : 4, 8, 16, 50, and 100. For all the shims available, please refer online to the shim section of the **www.kpmi.us** website, under Precision Components.

***Note** : KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution.
****Note :** These basewashers are designed to fit on top of either the OEM or KPMI® Tophat seals provided in this kit.

HD® M8™ (& CVO's) 2017-2025

2023-2025 CVO's check valve lift to determine compatibility with KPMI spring kits

Valve Spring Kit • Rocker Shim Conversion System • Dual Spring

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure
20-23400	Intake	.675" Max	1.600"	86#	317#
		.660"	1.585"	91#	317#
		.645"	1.570"	96#	317#
	Exhaust	.630"	1.555"	101#	317#
		.615"	1.540"	107#	317#

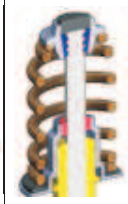
Kit Includes				
8	Titanium Retainers	8	CrSi Valve Springs
8	H. T. Steel Basewashers	8	*Red Viton® Seals
8	H. T. Steel Keeper (9º)	8	H. T. Steel Adj. Shim

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure
20-23450	Intake	.675" Max	1.600"	86#	317#
		.660"	1.585"	91#	317#
		.645"	1.570"	96#	317#
	Exhaust	.630"	1.555"	101#	317#
		.615"	1.540"	107#	317#

Kit Includes			
8	H. T. Steel Retainers	8	CrSi Valve Springs
8	H. T. Steel Basewashers	8	*Red Viton® Seals
8	H. T. Steel Keeper (9º)	8	H. T. Steel Adj. Shim

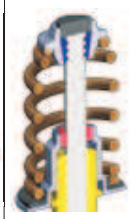
IMPORTANT NOTES:
Modification Necessary: To maximize shim contact in the retainer, KPMI recommends "tipping" (shortening the valve tip). See KPMI® installation instructions for more info.
Stem Protrusion: There is anticipated to be a rough 0.100" increase in effective stem protrusion with the use of the shim.
Valve Guide Compatibility: This system must be run with KPMI's newer style M8 valve guides, which are shortened for 0.675" valve lift. See KPMI® installation instructions for more info.

Valve Spring Kit • Rocker Shim Conversion System • Beehive Spring



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23900	Intake	.625"	1.500"	85#	280#	.625"
	Exhaust					

Kit Includes			
8	Titanium Retainers	8	CrSi Valve Springs
8	H. T. Steel Basewashers	8	*Red Viton® Seals
8	H. T. Steel Keeper (9º)	8	H. T. Steel Adj. Shim



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23950	Intake	.625"	1.500"	85#	280#	.625"
	Exhaust					

Kit Includes			
8	H. T. Steel Retainers	8	CrSi Valve Springs
8	H. T. Steel Basewashers	8	*Red Viton® Seals
8	H. T. Steel Keeper (9º)	8	H. T. Steel Adj. Shim

IMPORTANT NOTES:
Modification Necessary: To maximize shim contact in the retainer, KPMI recommends "tipping" (shortening the valve tip). See KPMI® installation instructions for more info.
Stem Protrusion: There is anticipated to be a rough 0.100" increase in effective stem protrusion with the use of the shim.

***Note** : KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution.
****Note :** These basewashers are designed to fit on top of either the OEM or KPMI® Tophat seals provided in this kit.

ORDER 650-557-2046

HD® M8™ (& CVO's) 2017-2025

2023-2025 CVO's check valve lift to determine compatibility with KPMI spring kits

Valve Spring Kit • Lightweight Racing

NEW PRODUCT!

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23800	Intake / Exhaust	.630"	1.555"	101#	317#	.630"

Kit Includes				
8	Titanium Retainers	8	CrSi Valve Springs
8	H. T. Steel Basewashers	8	*Red Viton® Seals
8	H. T. Steel Keeper (9º)		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23850	Intake / Exhaust	.630"	1.555"	101#	317#	.630"

Kit Includes				
8	H. T. Steel Retainers	8	CrSi Valve Springs
8	H. T. Steel Basewashers	8	*Red Viton® Seals
8	H. T. Steel Keeper (9º)		

IMPORTANT NOTES:
Shortened Guides: the system must be run with KPMI's new shortened Milwaukee-8 valves guides, or with modified stock guides (see installation instructions for more details)

Engine Kit with Lightweight Racing Valve Spring Kit

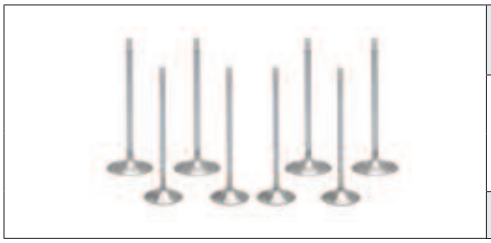
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
20-23350	Intake / Exhaust	.465"	1.410"	80#	212#	.465"

Kit Includes			
8	In / Ex H. T. Steel Retainers	8	In / Ex H.T. Steel Keeprs Pr.
8	In / Ex CrSi Valve Springs	8	In / Ex H. T. Steel Basewashers
8	In/ Ex Red Viton® Seals		
4	In Std. White Diamond® Valves	4	Ex Std. White Diamond® Valves

Components • Replacement • Engine Kit

KPMI P/N	Description	Specification
20-21050	Spring Kit	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H.T. Steel Keeprs, Red Viton® Seals
20-21012H	Intake, Standard Valve	Valve • White Diamond® • Hard Chrome
20-21016H	Exhaust, Standard Valve	Valve • White Diamond® • Hard Chrome

Valve Kit • White Diamond® • EV8



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip Radius	Tulip Angle	O. L.	Remarks
20-23300	Intake	1.571"	39.90mm	0.2347"	R0.235	10°	4.015"	Standard
	Exhaust	1.264"	32.11mm	0.2342"	R0.460	24°	4.050"	Standard

Kit Includes			
4	In Std. White Diamond® Valves	4	Ex Std. White Diamond® Valves

Blank Valves • Tensilite® • Titanium

NEW PRODUCT!

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip Radius	Tulip Angle	O. L.	Remarks	
20-21019T	Intake	1.732"	44.00mm	0.2347"	R.235	15°	5.000"	+4.00mm	O/S
20-21061T	Intake	1.654"	42.00mm	0.2347"	R.235	15°	4.750"	+2.00mm	O/S
20-21018T	Exhaust	1.417"	36.00mm	0.2342"	R.395	20°	5.000"	+4.00mm	O/S
20-21063T	Exhaust	1.339"	34.00mm	0.2342"	R.395	20°	4.750"	+2.00mm	O/S

Must use KPMI® Rocker-shim spring kits, lash caps or other hard tip solution for rocker-tip contact.

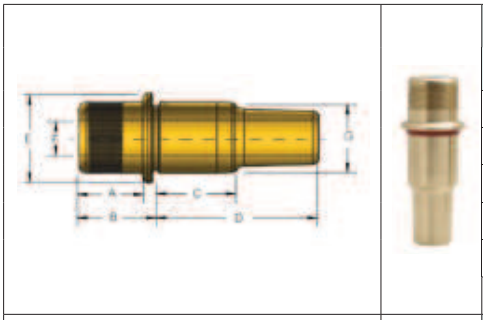
HD® M8™ (& CVO's) 2017-2025

Valve • White Diamond® • EV8 or Inconel®

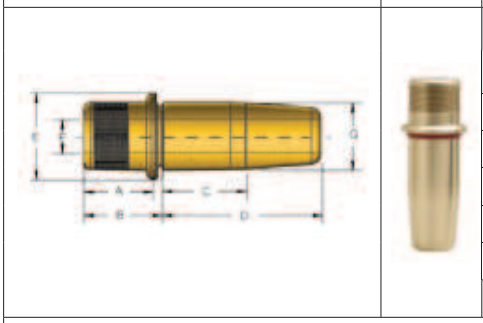
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip		O. L.	Remarks	
					Radius	Angle			
20-21012H	Intake	1.571"	39.90mm	0.2347"	R0.235	10°	4.015"	OEM	Std. Ev8
20-21009H	Intake	1.630"	41.40mm	0.2347"	R0.235	10°	4.055"	1.50mm	O/S Ev8
20-21060H	Intake	1.614"	41.00mm	0.2347"	R0.235	15°	4.035"	1.00mm	O/S Ev8
20-21061H	Intake	1.654"	42.00mm	0.2347"	R0.235	15°	4.035"	2.00mm	O/S Ev8
20-21063H	Intake	1.732"	44.00mm	0.2347"	R0.235	15°	4.035"	4.00mm	O/S Ev8
20-21016H	Exhaust	1.264"	32.11mm	0.2342"	R0.460	24°	4.050"	OEM	Std Ev16
20-21017H	Exhaust	1.284"	32.61mm	0.2342"	R0.460	24°	4.050"	0.50mm	O/S Ev16
20-21018K	Exhaust	1.284"	32.61mm	0.2342"	R0.460	24°	4.050"	0.50mm	O/S Inconel
20-21062K	Exhaust	1.299"	33.00mm	0.2342"	R0.395	20°	4.055"	1.00mm	O/S Inconel
20-21063K	Exhaust	1.339	34.00mm	0.2342"	R0.395	20°	4.055"	2.00mm	O/S Inconel
20-21065K	Exhaust	1.417	36.00mm	0.2342"	R0.395	20°	4.055"	4.00mm	O/S Inconel

KPMI® Black Diamond™ Blank Valve PN 20-21019 is available for M8 Application and please see Blank Valve section in back of catalog.

Valve Guides • C630 Bronze • Manganese Bronze



A	B	C	D	E	F	G	Intake	
							C630 Bronze	Manganese
0.425"	0.490"	0.540"	1.110"	0.600"	0.2347"	0.4750" / Std.	20-21020	20-21020M
						+0.001"	20-21021	20-21021M
						+0.002"	20-21022	20-21022M
						+0.010"	20-21029	20-21029M
						+0.021"	---	20-21071M
						+0.022"	---	20-21072M

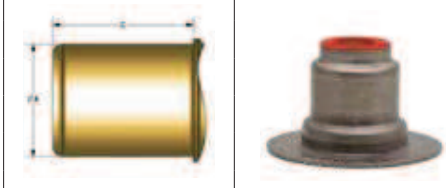


A	B	C	D	E	F	G	Exhaust	
							C630 Bronze	Manganese
0.425"	0.490"	0.600"	1.110"	0.600"	0.2342"	0.4750" / Std.	20-21030	20-21030M
						+0.001"	20-21031	20-21031M
						+0.002"	20-21032	20-21032M
						+0.010"	20-21039	20-21039M
						+0.021"	---	20-21081M
						+0.022"	---	20-21082M

For sizing KPMI® Cast Iron and Manganese Bronze Valve Guides please use Reamers and Ball Hones listed in HD® Tool section (Pg.90-93).

Valve Guide Seals • Tophat

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	Spring shoulder Ø	
6.0mm	0.712"	1.170"	3	0.475"±0.002"	---	0.545"	0.707	Intake
								Exhaust



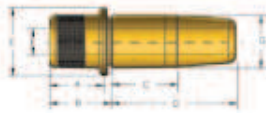
Part Number	Quantity	Quantity Discount
71046-4	Pkg. of 4	0%
71046-8	Pkg. of 8	0%
71046-16	Pkg. of 16	Less- 10%
71046-50	Pkg. of 50	Less- 15%
71046-100	Pkg. of 100	Less- 20%

Valve Guide Kits • Manganese Bronze

NEW PRODUCTS

Intake

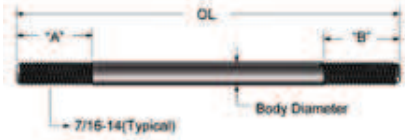
Exhaust



KPMI P/N	Size	Type	A	B	C	D	E	F	G
20-24580	Std.	Intake	0.425"	0.490"	0.540"	1.110"	0.600"	0.2347"	0.4750" / Std.
		Exhaust	0.425"	0.490"	0.600"	1.110"	0.600"	0.2342"	0.4750" / Std.
Kit Includes		4	In Std. Mng. Guides				4	Ex Std. Mng. Guides	
		1	O.E.M. Style Seal (Pkg. of 8)						
KPMI P/N	**Size**	**Type**	**A**	**B**	**C**	**D**	**E**	**F**	**G**
20-24581	+0.001"	Intake	0.425"	0.490"	0.540"	1.110"	0.600"	0.2347"	0.4760" / O/S
		Exhaust	0.425"	0.490"	0.600"	1.110"	0.600"	0.2342"	0.4760" / O/S
Kit Includes		4	In Std. Mng. Guides				4	Ex Std. Mng. Guides	
		1	O.E.M. Style Seal (Pkg. of 8)						

Standard or +.001" Oversized manganese valve guides, kited with seals at a savings.

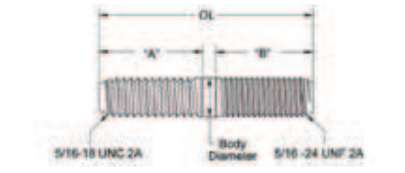
Cylinder Studs • H.T. Steel



KPMI P/N	Material	Body Dia.	O. L.	A	B	Quantity	Rep. HD® OEM P/N
20-21040	H. T. Steel	0.429"	6.240"	1.050"	1.200"	Pkg. of 8	16800063

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

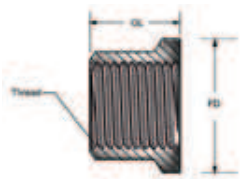
Rocker Arm Tower Stud Kit • H.T. Steel



KPMI P/N	Material	Body Dia.	O. L.	A	B
20-21045	H. T. Steel	0.308"	1.680"	0.810"	0.770"
Includes	8	H. T. Steel Studs		8	H. T. Steel Nuts

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Nuts • H.T. Steel



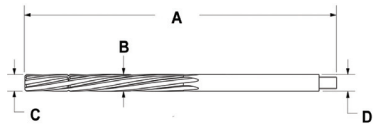
KPMI P/N	Material	F.D.	O.L.	Thread	Quantity
41007-4	H. T. Steel	0.520"	0.350"	5/16-24	Pkg. of 4

Replacement nuts for Rocker Arm Tower Stud Kit, #20-21045, but can be used for general purpose (see diagram for detail)

These nuts are single point machined from high tensile strength Aircraft Alloy Steel. During the machining process close tolerances and smooth surface finishes are maintained. Two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment provides excellent corrosion resistance and appearance.

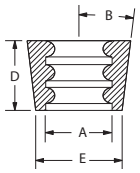
HD® M8™ (& CVO's) 2017-2025

Reamer



KPMI P/N	Description	A	B	C	D
GR-2357	0.2357" HSS valve guide reamer	7.125"	0.2357"	0.229"	0.228"

Keeper Set • O.E.M. Replacement

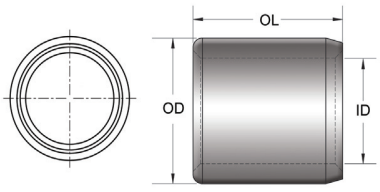


KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
51029-8	Triple Radius Bead	0.236"	7.0º	---	0.200"	0.282"	8Pr.	18100060
51034-8	Triple Radius Bead	0.236"	9.0º	---	0.240"	0.289"	8Pr.	---

Valve Seats • High Chrome

KPMI P/N	O. D.		I. D.		Height		Quantity
10-HC350	35.00mm	1.378"	26.00mm	1.024"	11.02mm	0.434"	Pkg. of 1
10-HC360	35.99mm	1.417"	25.98mm	1.023"	8.99mm	0.354"	Pkg. of 1
10-HC370	37.02mm	1.457"	27.99mm	1.102"	8.99mm	0.354"	Pkg. of 1
10-HC445	44.50mm	1.752"	35.99mm	1.417"	8.99mm	0.354"	Pkg. of 1
10-HC447	44.63mm	1.757"	35.81mm	1.410"	10.92mm	0.430"	Pkg. of 1

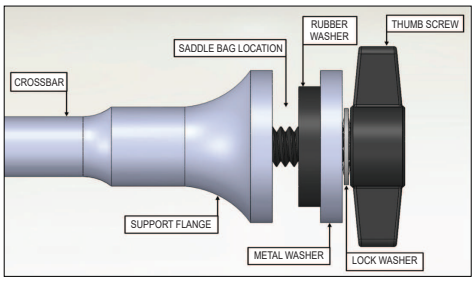
Cylinder Dowel • Steel



KPMI P/N	Material	O. D.	I. D.	O. L.	Quantity	Rep. HD® OEM P/N
83250-8	Steel	0.375"	0.272"	0.400"	Pkg. of 8	16589-99A

Please see new KPMI® Steel Cylinder Dowels listed in HD® Tool section (Pg.93)

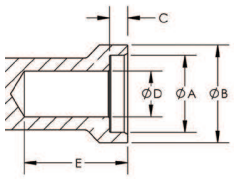
Saddlebag Stabilizer • 6061-T6 Aluminum • For Low Rider ST 2017-2024

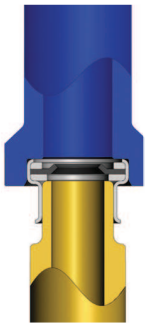


KPMI P/N	Kit Includes			
20-24450	1 Pc.	Crossbar	2 Pcs.	Support Flange
	2 Pcs.	Metal Washers	2 Pcs.	Thumb Screws
	2 Pcs.	Rubber Washers	2 Pcs.	Lock Washers
	1 Pc.	Transfer Punch Installation Tool		

KPMI® is proud to introduce a precision solution for Low Rider ST saddlebags. Due to a lack of mounting support, the OE saddlebags are susceptible to shaking and vibration, particularly at high speeds. The KPMI® saddlebag stabilizer creates a direct link between both bags and significantly strengthens the system, reducing the unwanted movement of the bags.
The stabilizer bar is CNC machined from 6061-T6 aluminum and Hard Anodized black for superior durability.
The included thumb screws allow for easy assembly and disassembly of the kit.

Installation Tools & Tool Kits





Tool Kit P/N	Description							
20-20835	Kit includes all 4 sizes of installations							
Tool P/N	**Fits**	**Color**	**ØA**	**ØB**	**C**	**ØD**	**E**	**Quantity**
20-20830	71032-4	Red	Ø0.575"	0.860"	0.160"	0.404"	0.910	Pkg. of 1
20-20831	71036-4	Blue	Ø0.728	0.860"	0.160"	0.404"	0.910	Pkg. of 1
20-20832	71033-4 71034-4	White	Ø0.638"	0.860"	0.160"	0.404"	0.910	Pkg. of 1
20-20833	71035-4	Black	Ø0.673"	0.860"	0.160"	0.404"	0.910	Pkg. of 1

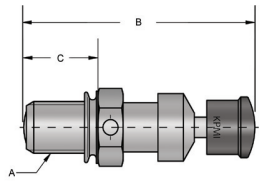
These installation tools for OE style seals are manufactured from high strength 6061-T6 Aluminum for increased durability when compared to plastic installers. The tools are designed for precision fitment onto the seal OD to help the builder center the seal over the valve guide so that a few light strikes from a hammer will set the seal. Radiused top striking surface reduces the likelihood of a burr forming from deformation. Each installation tool is color coded and laser marked for each seal size by guide diameter.

Installation Protector

KPMI P/N (2-pack)	KPMI P/N (1-pack)	Application	Stem Diameter	Fits		Color
20-20634	20-20637	Evolution Ironhead Sportster Intake	5/16"	71032-4	71033-4	Green
20-20635	20-20638	Ironhead Sportster Exhaust	11/32"	71034-4		Clear
20-20636	20-20639	Panhead Shovelhead 74" & Shovelhead 80"	3/8"	71035-4	71036-4	Red

The flexible thin wall protectors are designed to fit over the top of the valve stem, protecting the sealing element from any sharp edges that might damage it during installation.

Compression Release Valves



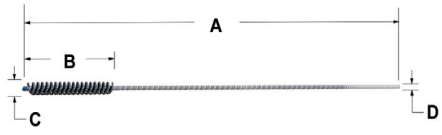
KPMI P/N	A	B	C	Quantity	Note
20-21250	M10 x 1	1.400"	0.350"	Pkg. of 2	Fits Evos, Shortened thread for ease of installation, 6N closing force
20-21265	M10 x 1	1.400"	0.350"	Pkg. of 20	
20-21255	M10 x 1	1.730"	0.350"	Pkg. of 2	Fits Twin Cams, Shortened thread for ease of installation, 6N closing force
20-21270	M10 x 1	1.730"	0.350"	Pkg. of 20	
20-21260	M10 x 1	1.750"	0.500"	Pkg. of 2	6N closing force
20-21275	M10 x 1	1.750"	0.500"	Pkg. of 20	

- KPMI® Compression Release valves are state of the art and priced competitively
- Designed to reduces "hot start" issues and starter / battery loads
- 5-7 Newtons of closing force resistance, for high demand applications
- Custom molded knobs ensure a cool touch and easy operation
- Embossed with the KPMI® brand to ensure product quality

For all the applications available for Kibblewhite's Harley-Davidson® Milwaukee-Eight line of products, please refer online to the Harley-Davidson® section of the ***www.kpmi.us*** website, under ***V-Twin / Cruzer.***

HD® TOOLS & COMPONENTS

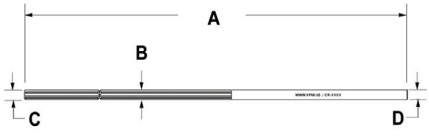
Ball Hones



KPMI P/N	Description	Overall Length A	Hone Head Length B	Hone Diameter C	Shank Diameter D
GH-2755	7.0mm valve guide hone	7.975"	2.075"	0.325"	0.130"
GH-3125	5/16 (.3125") valve guide hone	8.125"	2.225"	0.375"	0.145"
GH-3750	3/8 (.3750") valve guide hone	8.050"	2.190"	0.415"	0.145"

BC Series Flex-Hone are manufactured by Brush Research (BRM). The BC Series Flex-Hone tool is designed for use on any type or size of valve guide from 4mm up to 3/8" in diameter. This guide hone is designed for surface finishing and cross hole deburring. Although Ball Hones have many uses, KPMI® offers them primarily to be used after a guide has been reamed. Using a Ball Hone after reaming creates a uniform surface free of irregularitys, which improves surface contact and reduces the risk of galling or seizure. Please see our FAQ for recommended clearances.

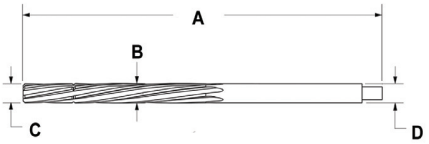
Reamers • Solid Carbide



KPMI P/N	Description	Overall Length A	Cutting Diameter B	Pilot Diameter C	Shank Diameter D
CR-2768	0.2768 carbide valve guide reamer	7.625"	0.2768"	0.271"	0.269"
CR-3110	0.3110 carbide valve guide reamer	7.625"	0.3110"	0.306"	0.304"
CR-3115	0.3115 carbide valve guide reamer	7.625"	0.3115"	0.306"	0.304"
CR-3120	0.3120 carbide valve guide reamer	7.625"	0.3120"	0.307"	0.305"
CR-3775	0.3775 carbide valve guide reamer	7.625"	0.3775"	0.372"	0.370"

KPMI® Carbide valve guide reamers are manufactured from Solid Carbide. All KPMI® reamers are ground to: +/- .0002". KPMI® carbide reamers are straight-flute and have a 6-flute design. The pilot portion of KPMI® reamers are 1.0" to 1.5" long. Insert the pilot into a guide that you intend to size. Using a hand held drill, apply honing oil or ATF before and during reaming a guide. KPMI® reamers have beaen specifically designed for Manganese Bronze valve guides and Cast Iron. **Do not attempt to use these reamers to size C630 Nickel Aluminum Bronze guides. Also, once a reamer is used on Cast Iron, it's not advisable to then use it on a bronze guide.**

Reamers • High Speed Steel

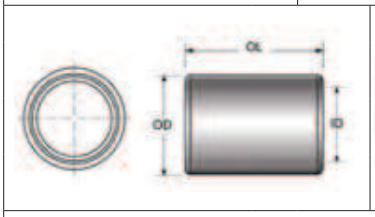


KPMI P/N	Description	Overall Length A	Cutting Diameter B	Pilot Diameter C	Shank Diameter D
GR-2357	0.2357 HSS valve guide reamer	7.125"	0.2357"	0.229"	0.228"
GR-2770	0.2770 HSS valve guide reamer	7.125"	0.2770"	0.271"	0.270"
GR-2820	0.2820 HSS valve guide reamer	7.125"	0.2820"	0.271"	0.270"
GR-3100	0.3100 HSS valve guide reamer	7.125"	0.3100"	0.304"	0.303"
GR-3110	0.3110 HSS valve guide reamer	7.125"	0.3110"	0.305"	0.304"
GR-3115	0.3115 HSS valve guide reamer	7.125"	0.3115"	0.305"	0.304"
GR-3120	0.3120 HSS valve guide reamer	7.125"	0.3120"	0.306"	0.305"
GR-3400	0.3400 HSS valve guide reamer	7.125"	0.3400"	0.334"	0.333"
GR-3410	0.3410 HSS valve guide reamer	7.125"	0.3410"	0.335"	0.334"
GR-3730	0.3730 HSS valve guide reamer	7.125"	0.3730"	0.367"	0.336"
GR-3775	0.3775 HSS valve guide reamer	7.125"	0.3775"	0.371"	0.370"
GR-3790	0.3790 HSS valve guide reamer	7.125"	0.3790"	0.373"	0.372"

KPMI® valve guide reamers are manufactured from premium hardened High Speed Steel. The advertised finished reamer diameters are ground to: +/- .0002". These spiral fluted reamers incorporate a 1.00" long pilot (reduced diameter) which gets inserted into an unfinished guide bore, to align the reamer to the valve guide centerline, during the sizing process. These reamers have been specifically designed for KPMI® Manganese Bronze and Cast Iron valve guides. **Do not attempt to use these reamers to size C630 Nickel Aluminum Bronze guides. Also, once a reamer is used on Cast Iron, it is not advisable to then use it on a bronze guide.**

Cone and Cylinder Dowel • Steel

Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.5575”	0.375”	0.505”	16573-83A

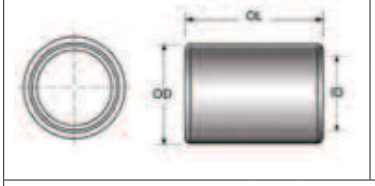


KPMI P/N	Quantity	Discount	Fits
83070-4	Pkg. of 4	0%	Evolution 1984-'99 XL 1100cc 1986-'87 Evo Sportster 883cc 1986-'21 Evo Sportster 1200cc 1988-'21
83070-8	Pkg. of 8	0%	
83070-20	Pkg. of 20	Less-5%	

- Black Oxide Coated for Corrosion Resistance
- Designed for HD® Evolution OEM Replacement
- Can Also Be Used as Multipurpose Dowel

- See Dimensions for Fitment
- Supersedes **part number 20-2099**

Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.4365”	0.323”	0.610”	16595-99A

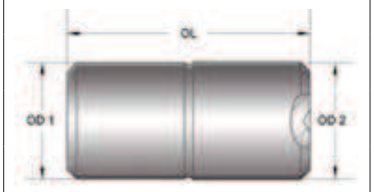


KPMI P/N	Quantity	Discount	Fits
83080-4	Pkg. of 4	0%	Twin Cam 88" 1999-'07 Twin Cam 88"-103" 2005-'17
83080-8	Pkg. of 8	0%	
83080-20	Pkg. of 20	Less-5%	

- Black Oxide Coated for Corrosion Resistance
- Designed for HD® Twin Cam OEM Replacement
- Can Also Be Used as Multipurpose Dowel

- See Dimensions for Fitment
- Supersedes **part number 20-20413**

Material	OD 1	OD 2 O/S	OL	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
H.T. Steel	0.250”	0.252”	0.520”	50-8022	366



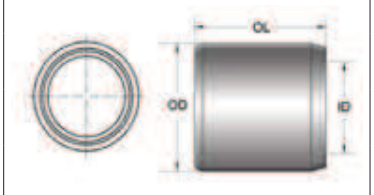
KPMI P/N	Quantity	Discount	Fits
83240-4	Pkg. of 4	0%	Panhead 1948-'65 Shovelhead 1966-'83 Evolution 1984-'99 Evo Sportster 883cc 1986-'21 Evo Sportster 1200cc 1988-'21
83240-8	Pkg. of 8	0%	
83240-20	Pkg. of 20	Less-5%	

- S&S “ Oversized” Dowel for 4" to 4-3/8" Cylinders
- Black Oxide Coated for Corrosion Resistance
- Heat Treated Steel

- Cone Dowel for 1948-’05 Various HD® Applications
- See Description Below for Special Design Features

This KPMI® dowel has been designed to replace the S&S .250” cylinder dowel, or to be used as desired. This dowel features a unique witness line in the center of the part which serves two purposes. First, this witness line serves as a marker for proper installation height and, second, to create two distinct halves of the part. One end of the dowel has a .252” diameter with a machined dimple on the end so you know to use that end in the case or cylinder. The other half incorporates a .250” diameter. This purpose-made change in diameter, and interference, ensures a snug fit on one end and a slip fit on the other as well as fret free use.

Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.375”	0.272”	0.400”	16589-99A



KPMI P/N	Quantity	Discount	Fits
83250-4	Pkg. of 4	0%	Milwaukee-Eight (& CVO's) 2017-'25
83250-8	Pkg. of 8	0%	
83250-20	Pkg. of 20	Less-5%	

- Black Oxide Coated for Corrosion Resistance
- Rounded End Installed in Cylinder or Case
- Tapered End Installed in Head or Cam-Support Cover

- Designed as HD® M8 OEM Replacement
- Can Also Be Used as Multipurpose Dowel
- See Dimensions for Fitment

Designed for the Harley Davidson® Milwaukee-Eight engine, this dowel can also serve as a multi-purpose alignment pin. Our dowel incorporates OEM elements while increasing ease of installation through the overall shape of the part. A radiused end allows for easy insertion into the cylinder or case, and a tapered end provides hassle-free location of the mating holes in the head or cam-support cover. This commonly-sized dowel will serve its purpose wherever you see fit.

HONDA® VARIOUS 75-100's 1973-2013

- XR80R™ 1985-2003
- XR80™ 1979-1984
- XR75™ 1973-1978
- XR100R™ 1985-2003
- XR100™ 1981-1984
- XL80S™ 1980-1985
- XL75™ 1977-1979
- XL100S™ 1979-1985
- CRF80F™ 2004-2013
- CRF100F™ 2004-2013

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30235	Intake	.360"	1.165"	47#	130#	.360"
	Exhaust					

Kit Includes	2	CrSi Valve Springs	2	Titanium Retainers	2	Spring Shims

Spring Only Kit • Replacement

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-4062	Intake	.400"	1.210"	54#	145#	.400"
	Exhaust					

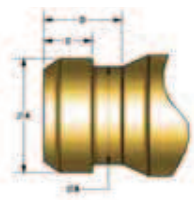
Kit Includes	2	CrSi Valve Springs

Valves • Black Diamond™ • Black Nitroneg Stems (Excludes XR75 1973-'76 Intake)

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30238	Intake	24.00mm	0.945"	0.2145"	20º	3.115"	Standard
30-30241	Exhaust	20.50mm	0.807	0.2140"	20º	3.100"	Standard

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.115"	0.225"	Exhaust



Part Number	Quantity	Quantity Discount
71016-2	Pkg. of 2	0%
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

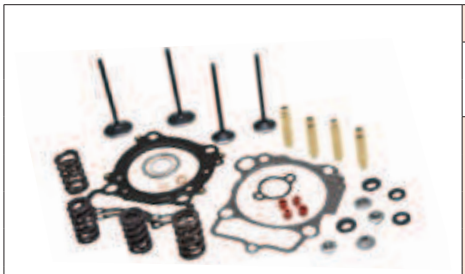
HONDA® CRF™ 150R 2007-2025

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30880	Intake	.350"	1.320"	45#	143#	.350"
	Exhaust					

Kit Includes						
2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

Cylinder Head Service Kit



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33430	Intake	.350"	1.320"	45#	143#	.350"
	Exhaust					

Kit Includes					
2	In, Titanium Retainers	2	In, CrSi Valve Springs	2	In, H. T. Steel Basewashers
2	Ex, Titanium Retainers	2	Ex, CrSi Valve Springs	2	Ex, H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
2	In Std. C630 Valve Guides	2	Ex Std. C630 Valve Guides		
4	* In / Ex Red Viton® Seals	1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit

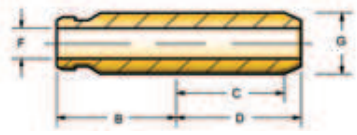
KPMI P/N	Description	Specification
30-30880	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30910	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-30913	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-30890	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-30900	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
*71014-4	Intake / Exhaust Seals	Seal • Red Viton®
30-33431	Gasket Kit	**Includes:** Head Gasket 66mm Bore (1), Valve Stem Seal (4), Base Gasket (1), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1)

*** NOTE:** It is important to use the valve stem seals included in the KPMI® labeled bags. These valve stem seals are designed for specific compatibility with the KPMI® spring kit. The COMETIC® gasket kit may contain additional valve stem seals, however these should NOT be used with the KPMI® spring kit and can be discarded.

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30910	Intake	26.00mm	1.024"	0.1765"	19º	3.065"	Standard
30-30913	Exhaust	22.50mm	0.886"	0.1760"	19º	3.145"	Standard

Valve Guides • C630 Bronze

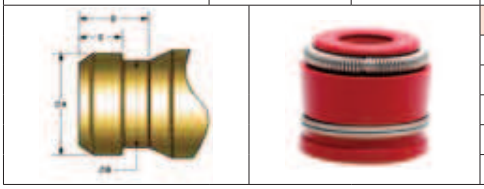


A	B	C	D	E	F	G	Intake	Exhaust
---	0.550"	0.570"	0.710"	---	0.1765	0.3566" / Std.	30-30890	
						+0.010"	30-30899	
---	0.790"	0.600"	0.710"	---	0.1760	0.3566" / Std.		30-30900
						+0.010"		30-30909

HONDA® CRF™ 150R 2007-2025

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

HONDA® CB™ 160 1965-1969

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30800	Intake	.354"	1.175"	48#	134 #	.354"
	Exhaust					

Kit Includes				
4	CrSi Valve Springs	4	* H. T. Steel Keepers Pr.	
4	Titanium Retainers	4	H. T. Steel Basewashers	

*Designed for use with Kibblewhite® valves only. KPMI® keepers which are supplied with this kit are designed to work with Kibblewhite® valves utilizing a radius groove keeper design.

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30830	Intake	25.00mm	0.984"	0.2157"	21º	2.980"	Standard
30-30833	Exhaust	22.00mm	0.866"	0.2152"	15º	2.975"	Standard

Not recommended for O.E.M. replacement. These valves have been designed to work with Kibblewhite® Radius Groove Keepers, which are supplied with Kibblewhite® Spring Kit #30-30800.

Valve Guides • C630 Bronze

A	B	C	D	E	F	G	Intake	Exhaust
0.415"	0.450"	0.650"	0.880"	0.440"	0.2155"	0.3975" / Std.	30-30810	
						+0.001"	30-30811	
						+0.002"	30-30812	
						+0.010"	30-30819	
0.415"	0.450"	0.790"	1.040"	0.440"	0.2152"	0.3975" / Std.		30-30820
						+0.001"		30-30821
						+0.002"		30-30822
						+0.010"		30-30829

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust

Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

HONDA® CB™ 175 1970-1975

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30840	Intake	.354"	1.175"	47#	133#	.354"
	Exhaust					

Kit Includes				
4	CrSi Valve Springs	4	* H. T. Steel Keepers Pr.
4	Titanium Retainers	4	H. T. Steel Basewashers

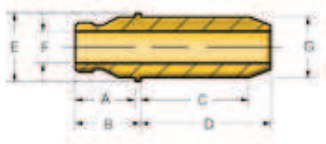
*Designed for use with Kibblewhite® valves only. KPMI® keepers which are supplied with this kit are designed to work with Kibblewhite® valves utilizing a radius groove keeper design.

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30870	Intake	28.00mm	1.102"	0.2157"	21º	2.920"	Standard
30-30873	Exhaust	24.00mm	0.945"	0.2152"	15º	2.895"	Standard

Not recommended for O.E.M. replacement. These valves have been designed to work with Kibblewhite® Radius Groove Keepers, which are supplied with Kibblewhite® Spring Kit #30-30840.

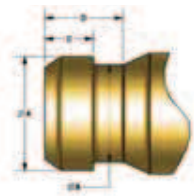
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.415"	0.450"	0.650"	0.880"	0.440"	0.2155"	0.3975" / Std.	30-30850	
						+0.001"	30-30851	
						+0.002"	30-30852	
						+0.010"	30-30859	
0.415"	0.450"	0.790"	1.040"	0.440"	0.2152"	0.3975" / Std.		30-30860
						+0.001"		30-30861
						+0.002"		30-30862
						+0.010"		30-30869

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-2	Pkg. of 2	0%
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

HONDA® VARIOUS 185-200 1980-2002

- ATC™ 185 / 200 1980-1986
- XL 200R / XR 200 / XR 200R (non-RFVC) 1980-2002

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-4021	Intake	.450"	1.345"	66#	202#	.450"
	Exhaust					

Kit Includes	2	CrSi Valve Springs	2	Titanium Retainers	2	H. T. Steel Basewashers

Spring Only Kit • High Performance

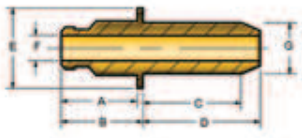
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-4016	Intake	.500"	1.390"	57#	145#	.290"
	Exhaust					

Kit Includes	2	CrSi Valve Springs	2	H. T. Steel Shims

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30120	Intake	30.00mm	1.181"	0.2145"	23º	3.605"	Standard
30-30122	Exhaust	25.00mm	0.984"	0.2140"	29º	3.595"	Standard

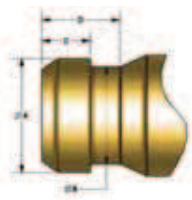
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.	30-4069	
						+0.004"	30-4159	
						+0.015"	30-4160	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-2	Pkg. of 2	0%
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

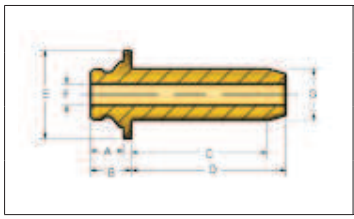
HONDA® XR™ 200R RFVC 1984-1985

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30077	Intake	.355"	1.205"	55#	150#	.355"
	Exhaust					

Kit Includes						
4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers	

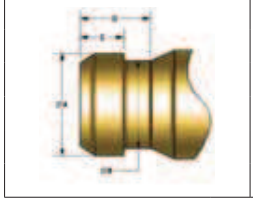
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.400"	0.495"	1.185"	1.300"	0.650"	0.2155"	0.4355" / Std.	30-3100	
						+0.002"	30-3102	
						+0.010"	30-3110	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

HONDA® CRF™ 250R 2004-'07 / 250X 2004-'17

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30590	Intake	.350"	1.320"	50#	145#	.350"
	Exhaust					

Kit Includes			
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Basewashers	4	Red Viton® Seals

Valve Spring Kit • High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31300	Intake	.385"	1.185"	50#	160#	.385"
	Exhaust					

Kit Includes			
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Basewashers	4	Red Viton® Seals

HONDA® CRF™ 250R 2004-'07 / 250X 2004-'17

Top End Service Kit

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33700	78.00mm	Intake Exhaust	.350"	1.320"	50#	145#	.350"

Kit Includes				
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs
4	In / Ex Red Viton® Seals	4	In / Ex H. T. Steel Basewashers
2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves
1	High Performance Piston Kit	1	Top End Gasket Kit

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

Components • Replacement • Top End Service Kit

KPMI P/N	Description	Specification
30-30590	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
30-30630	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-30633	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-33701	Gasket Kit	**Includes:** Head Gasket 78mm (1), Base Gasket (1), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Bolt Seal (1), Head Oil Drain Cap O-ring (1), Water Outlet O-ring (1), Air Recirculation Valve Seal (1)

*These components are intended for use with the **KPMI® Top End Kit** and are not intended for OEM compatibility.

Cylinder Head Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33300	Intake Exhaust	.350"	1.320"	50#	145#	.350"

Kit Includes					
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
2	In Std. C674 Valve Guides	2	Ex Std. C674 Valve Guides		
4	In / Ex Red Viton® Seals	1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
30-30590	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
30-30630	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-30633	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-30610	Intake, Standard Valve Guide	Valve Guide • C674 Bronze
30-30620	Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
30-33301	Gasket Kit	**Includes:** Head Gasket 78mm (1), Base Gasket (1), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Bolt Seal (1), Head Oil Drain Cap O-ring (1), Water Outlet O-ring (1), Air Recirculation Valve Seal (1)

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31200	Intake	.350"	1.320"	50#	145#	.350"

Kit Includes					
2	CrSi Valve Springs	2	Titanium Retainers	2	H. T. Steel Basewashers
2	Black Diamond™ Valves	2	Red Viton® Seals		

ORDER 650-557-2046

HONDA® CRF™ 250R 2004-'07 / 250X 2004-'17

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30630	Intake	31.00mm	1.220"	0.1961"	20º	3.280"	Standard
30-30633	Exhaust	26.00mm	1.024"	0.1956"	20º	3.235"	Standard

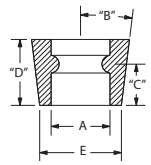
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

Valves • O.E.M. Replacement • Titanium • Stainless

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
30-30630T	Intake	31.00mm	1.220"	0.1960"	20º	3.275"	Titanium	14711-KRN-670
30-30633	Exhaust	26.00mm	1.024"	0.1956"	20º	3.235"	Stainless	14721-KRN-670

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

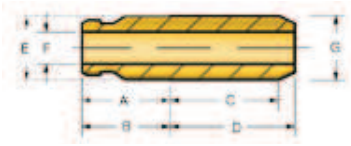
Keeper Set • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. OEM P/N
51025-4	Single Radius Bead	0.196"	7.0º	0.170"	0.205"	0.236"	4Pr.	14781-MAT-000

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

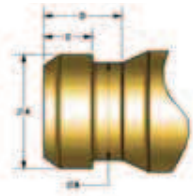
Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.540"	0.540"	0.710"	0.770"	0.394"	0.1961"	0.3965" / Std.	30-30610	
						+0.010"	30-30619	
0.740"	0.740"	0.675"	0.775"	0.394"	0.1956"	0.3965" / Std.		30-30620
						+0.010"		30-30629

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust

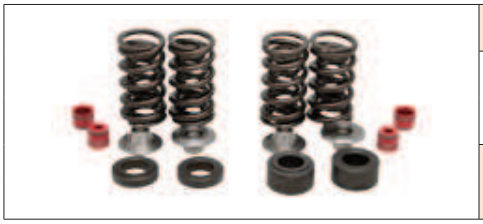


Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

VISIT US AT WWW.KPMI.US

HONDA® CRF™ 250R 2008-2009

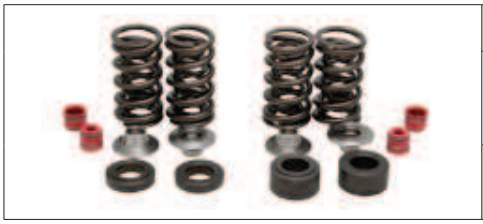
Valve Spring Kit • Lightweight Racing



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31150	Intake	.350"	1.320"	50#	145#	.350"
	Exhaust					

Kit Includes				
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Basewashers	4	Red Viton® Seals

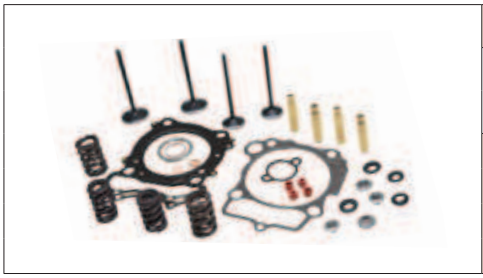
Valve Spring Kit • High-Lift Racing



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31310	Intake	.385"	1.185"	50#	160#	.385"
	Exhaust					

Kit Includes			
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Basewashers	4	Red Viton® Seals

Cylinder Head Service Kit



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33440	Intake	.350"	1.320"	50#	145#	.350"
	Exhaust					

Kit Includes					
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
2	In Std. C630 Valve Guides	2	Ex Std. C630 Valve Guides		
4	In / Ex Red Viton® Seals	1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
30-31150	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
30-31162	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-31166	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-31170	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-31180	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33441	Gasket Kit	**Includes:** Head Gasket 78mm Bore (1), Valve Stem Seals (4), Base Gasket (1), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Bolt Seal (1), Head Oil Drain Cap O-ring (1), Water Outlet O-ring (1), Air Recirculation Valve Seal (1)

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31200	Intake	.350"	1.320"	50#	145#	.350"

Kit Includes					
2	CrSi Valve Springs	2	Titanium Retainers	2	H. T. Steel Basewashers
2	Black Diamond™ Valves	2	Red Viton® Seals		

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-31162	Intake	31.00mm	1.220"	0.1961"	20º	3.280"	Standard
30-31166	Exhaust	26.00mm	1.024"	0.1760"	20º	3.235"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

ORDER 650-557-2046

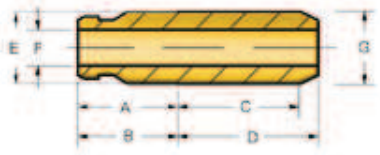
HONDA® CRF™ 250R 2008-2009

Valves • O.E.M. Replacement • Titanium • Stainless

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
30-31162T	Intake	31.00mm	1.220"	0.1960"	20º	3.275"	Titanium	14711-KRN-670
30-31166	Exhaust	26.00mm	1.024"	0.1768"	20º	3.235"	Stainless	14721-KRN-A10

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

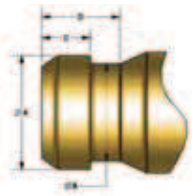
Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.540"	0.540"	0.710"	0.770"	0.394"	0.1960"	0.3965" / Std.	30-31170	
						+0.010"	30-31179	
0.740"	0.740"	0.750"	0.850"	0.394"	0.1760"	0.3965" / Std.		30-31180
						+0.010"		30-31189

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

HONDA® CRF™ 250R 2010-2015

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31450	Intake	.385"	1.185"	50#	160#	.385"
	Exhaust					

Kit Includes				
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Basewashers	4	Red Viton® Seals

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31500	Intake	.385"	1.185"	50#	160#	.385"

Kit Includes							
2	CrSi Valve Springs	2	Titanium Retainers	2	H. T. Steel Basewashers		
2	Black Diamond™ Valves	2	Red Viton® Seals				

HONDA® CRF™ 250R 2010-2015

Cylinder Head Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33310	Intake	.385"	1.185"	50#	160#	.385"
	Exhaust					

Kit Includes					
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
2	In Std. C630 Valve Guides	2	Ex Std. C630 Valve Guides		
4	Red Viton® Seals	1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
30-31450	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
30-31462	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-31466	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-31470	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-31480	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33311	Gasket Kit	**Includes:** Head Gasket 78mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Water Outlet O-ring (1)

Valves • Black Diamond™ • Black Nitroneg Stems

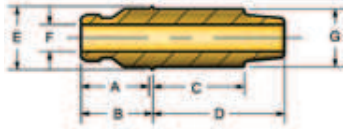
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-31462	Intake	30.50mm	1.201"	0.1961"	20º	3.500"	Standard
30-31466	Exhaust	25.00mm	0.984"	0.1760"	20º	3.310"	Standard

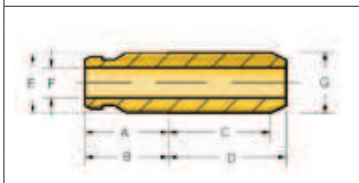
Valves • O.E.M. Replacement • Titanium • Stainless

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
30-31462T	Intake	30.50mm	1.221"	0.1960"	20º	3.500"	Titanium	14711-KRN-A40
30-31466	Exhaust	25.00mm	0.984"	0.1760"	20º	3.310"	Stainless	14721-KRN-A40

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

Valve Guides • C630 Bronze





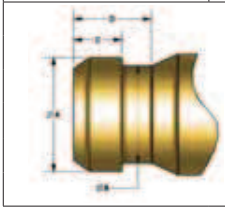
A	B	C	D	E	F	G	Intake	Exhaust
0.610"	0.610"	0.745"	0.965"	0.394"	0.1961'	0.3965" / Std.	30-31470	
						+0.001"	30-31471	
						+0.002"	30-31472	
						+0.010"	30-31479	
0.820"	0.820"	0.650"	0.770"	0.394"	0.1760"	0.3965" / Std.		30-31480
						+0.001"		30-31481
						+0.002"		30-31482
						+0.010"		30-31489

ORDER 650-557-2046

HONDA® CRF™ 250R 2010-2015

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

HONDA® CRF™ 250R 2016-2017

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-32400	Intake Exhaust	.380"	1.180"	51#	160#	.380"

Kit Includes							
4	CrSi Valve Springs	4	Titanium Retainers	4	*Red Viton® Seals		
2	In H. T. Steel Basewashers	2	Ex H. T. Steel Basewashers				

*KPMI® supplied Viton® seals must be used with this kit. **O.E.M. seals are NOT compatible.**

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-32440	Intake	.380"	1.180"	51#	160#	.380"

Kit Includes							
2	CrSi Valve Springs	2	Titanium Retainers	2	H. T. Steel Basewashers		
2	Black Diamond™ Valves	2	*Red Viton® Seals				

*KPMI® supplied Viton® seals must be used with this kit. **O.E.M. seals are NOT compatible.**

Cylinder Head Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33320	Intake Exhaust	.380"	1.180"	51#	160#	.380"

Kit Includes							
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers		
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers		
2	In Red Viton® Seals	2	Ex Red Viton® Seals				
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves				
2	In Std. C630 Valve Guides	2	Ex Std. C630 Valve Guides				
1	Top End Gasket Kit						

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
30-32400	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
30-32412	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-32416	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-32420	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-32430	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33321	Gasket Kit	**Includes:** Head Gasket 78mm, Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Water Outlet O-ring (1)

HONDA® CRF™ 250R 2016-2017

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-32412	Intake	30.50mm	1.201"	0.1961"	20º	3.500"	Standard
30-32416	Exhaust	25.00mm	0.984"	0.1956"	20º	3.310"	Standard

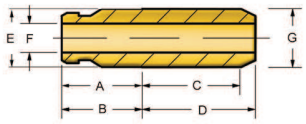
You must use **KPMI® Spring Kit 30-32400** When installing Black Diamond™ Valves

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
30-32412T	Intake	30.50mm	1.201"	0.1960"	20º	3.500"	Titanium	14711-KRN-A40
30-32416T	Exhaust	25.00mm	0.984"	0.1956"	20º	3.300"	Titanium	14721-KRN-B10

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits.
KPMI® Tensilite® titanium valves are one piece forgings made from 6-2-4-2 titanium alloy. These are the latest developments in titanium valve alloys and have superior hardness, strength, and thermal characteristics when compared to other titanium valve alloys. Tensilite® valves are covered with a chromium nitride (CRN) PVD coating. This coating adheres exceptionally well to titanium, has a low coefficient of friction, and is impact, abrasion, and corrosion resistant.

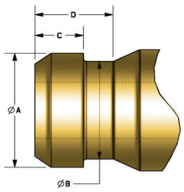
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.675"	0.675"	0.710"	0.815"	0.394"	0.1961'	0.3963" / Std.	30-32420	
						+0.001"	30-32421	
						+0.002"	30-32422	
						+0.010"	30-32429	
0.835"	0.835"	0.630"	0.735"	0.394"	0.1956"	0.3963" / Std.		30-32430
						+0.001"		30-32431
						+0.002"		30-32432
						+0.010"		30-32439

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
4.5mm	0.331"	0.370"	4	A	B	C	D	Intake
				0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

HONDA® CRF™ 250R / RX / RWE 2022-2026

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

NEW PRODUCTS

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
30-34062T	Intake	33.00mm	1.299"	0.1961"	16º	3.455"	Titanium	14711-K95-A20
30-34066T	Exhaust	26.00mm	1.024"	0.1956"	18º	3.170"	Titanium	14721-K95-A20

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits.
KPMI® Tensilite® titanium valves are one piece forgings made from 6-2-4-2 titanium alloy. These are the latest developments in titanium valve alloys and have superior hardness, strength, and thermal characteristics when compared to other titanium valve alloys. Tensilite® valves are covered with a chromium nitride (CRN) PVD coating. This coating adheres exceptionally well to titanium, has a low coefficient of friction, and is impact, abrasion, and corrosion resistant.

HONDA® VARIOUS 250-300'S 2011-2022

- CBF 300N 2019-'22
- CBR 250R 2011-'13
- CBR 300R 2015-'22
- CB 300F 2016-'18
- CB 300R 2019-'22
- CMX 300 2017-'22
- CRF 250L / RL 2013-'20

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift*	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33650	Intake	.390"	1.190"	49#	160#	.390"
	Exhaust					

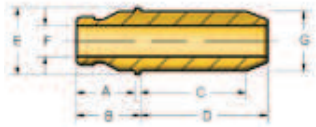
Kit Includes						
4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers	

* It may be necessary to use KPMI® Shortened Valve Guides # 30-3367X, to achieve higher than stock lift.

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-33662	Intake	30.00mm	1.181"	0.1766"	20°	3.280"	Standard
30-33664	Intake	32.00mm	1.260"	0.1766"	20°	3.280"	Oversize
30-33666	Exhaust	24.00mm	0.945"	0.1761"	20°	3.280"	Standard

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.505"	0.530"	0.640"	0.940"	0.390"	0.1761"	0.3566" / Std.	30-33670	
						+0.001"	30-33671	
						+0.002"	30-33672	
						+0.010"	30-33679	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust

Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

HONDA® CRF™ 250R / RX 2018-2021

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33600	Intake	.435"	1.295"	70#	209#	.435"
	Exhaust	.400"	1.290"	60#	162#	.400"

Kit Includes					
2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H. T. Steel Basewashers
2	Ex CrSi Valve Springs	2	Ex Titanium Retainers	2	Ex H. T. Steel Basewashers

HONDA® CRF™ 250R / RX 2018-2021

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-34000	Intake	.435"	1.295"	70#	209#	.435"

Kit Includes				
2	CrSi Valve Springs	2	Titanium Retainers
2	H. T. Steel Basewashers	2	Black Diamond™ Valves

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-33612	Intake	33.00mm	1.299"	0.1961"	16º	3.450"	Standard
30-33616	Exhaust	26.00mm	1.024"	0.1956"	18º	3.175"	Standard

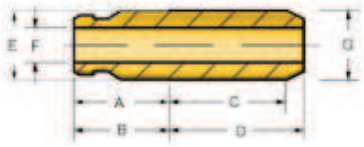
You must use KPMI® Spring Kit 30-33600 When installing Black Diamond™ Valves.

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
30-33612T	Intake	33.00mm	1.299"	0.1961"	16º	3.455"	Titanium	14711-K95-A20
30-33616T	Exhaust	26.00mm	1.024"	0.1956"	18º	3.170"	Titanium	14721-K95-A20

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits.
KPMI® Tensilite® titanium valves are one piece forgings made from 6-2-4-2 titanium alloy. These are the latest developments in titanium valve alloys and have superior hardness, strength, and thermal characteristics when compared to other titanium valve alloys. Tensilite® valves are covered with a chromium nitride (CRN) PVD coating. This coating adheres exceptionally well to titanium, has a low coefficient of friction, and is impact, abrasion, and corrosion resistant.

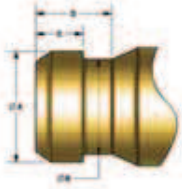
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.415"	0.415"	0.700"	0.995"	0.394"	0.1960"	0.3965" / Std.	30-33620	
						+0.010"	30-33629	
0.450"	0.450"	0.615"	0.700"	0.394"	0.1955"	0.3965" / Std.		30-33630
						+0.010"		30-33639

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

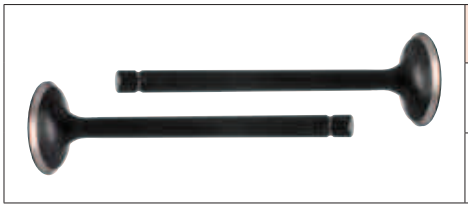
HONDA® TRX™ 250X 1987-1992

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-3041	Intake	.400"	1.215"	76#	192#	.400"
	Exhaust					

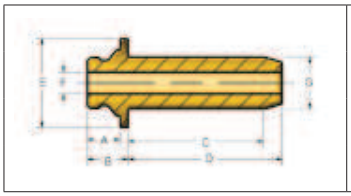
Kit Includes	4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Shims

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30088	Intake	25.50mm	1.004"	0.2155"	23º	3.680"	Standard
30-30090	Exhaust	22.50mm	0.886"	0.2150"	29º	3.650"	Standard

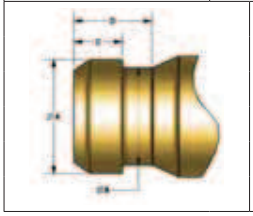
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.400"	0.495"	1.185"	1.300"	0.800"	0.2150"	0.4355" / Std.	30-3030	
						+0.002"	30-3032	
						+0.010"	30-3040	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

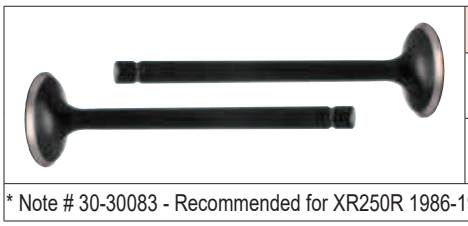
HONDA® XR™ / XL™ 250R RFVC 1984-'95

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30077	Intake	.355"	1.205"	55#	150#	.355"
	Exhaust					

Kit Includes	4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

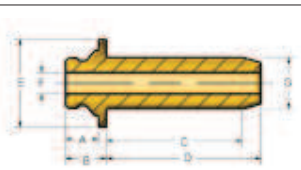


KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30081	Intake	28.50mm	1.122"	0.2160"	23º	3.805"	Standard
*30-30083	Exhaust	23.50mm	0.925"	0.2155"	29º	3.775"	Standard

* Note # 30-30083 - Recommended for XR250R 1986-1995 and XL250R 1991-1996 Model only

HONDA® XR™ / XL™ 250R RFVC 1984-'95

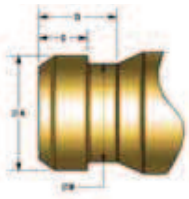
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.400"	0.495"	1.185"	1.300"	0.650"	0.2155"	0.4355" / Std.	30-3100	
						+0.002"	30-3102	
						+0.010"	30-3110	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

HONDA® XR™ 250R RFVC 1996-2004

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30070	Intake	.465"	1.455"	52#	143#	.300"
	Exhaust					

Kit Includes	4	CrSi Valve Springs	4	Titanium Retainers

Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-4154	Intake	.465"	1.205"	55#	140#	.300"
	Exhaust					

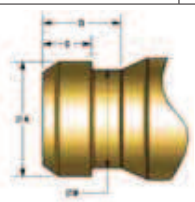
Kit Includes	4	CrSi Valve Springs	4	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30073	Intake	28.50mm	1.122"	0.1960"	23°	3.805"	Standard
30-30075	Exhaust	23.50mm	0.925"	0.1955"	29°	3.765"	Standard

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust

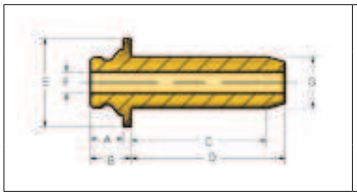


Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

HONDA® XR™ 250L 1991-1996

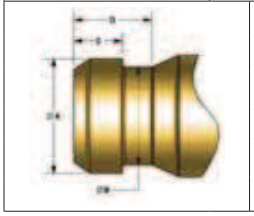
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.400"	0.495"	1.185"	1.300"	0.650"	0.2155"	0.4355" / Std.	30-3100	
						+0.002"	30-3102	
						+0.010"	30-3110	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

HONDA® TRX™ 300EX / X 1993-2009

Valve Spring Kit • Lightweight Racing

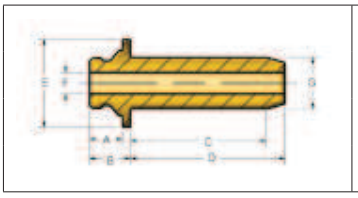
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-3041	Intake	.400"	1.215"	76#	192#	.400"
	Exhaust					

Kit Includes	4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Shims

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30088	Intake	25.50mm	1.004"	0.2155"	23°	3.680"	Standard
30-30090	Exhaust	22.50mm	0.886"	0.2150"	29°	3.650"	Standard

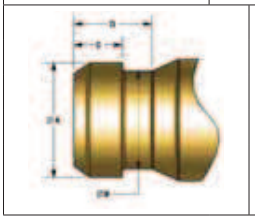
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.400"	0.495"	1.185"	1.300"	0.800"	0.2150"	0.4355" / Std.	30-3030	
						+0.002"	30-3032	
						+0.010"	30-3040	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

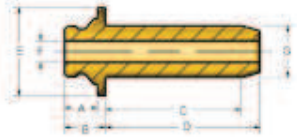
VISIT US AT WWW.KPMI.US

HONDA® 350 RFVC 1983-1985

Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-4083	Intake	.460"	1.390"	65#	204#	.460"
	Exhaust					
Kit Includes	4	CrSi Valve Springs				

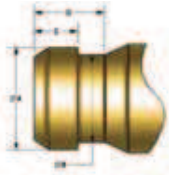
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.400"	0.495"	1.185"	1.300"	0.650"	0.2155"	0.4355" / Std.	30-3100	
						+0.002"	30-3102	
						+0.010"	30-3110	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

HONDA® CB™ / CL™ 350 TWIN 1968-'73

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30104	Intake	.465"	1.315"	101#	266#	.465"
	Exhaust					

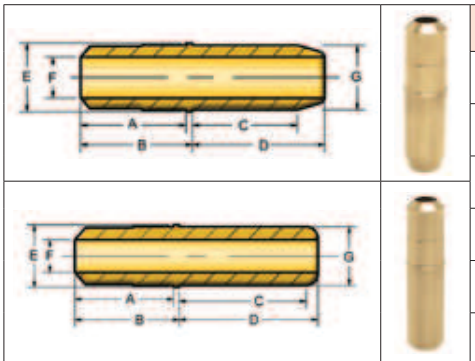
Kit Includes					
4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
4	Titanium Retainers	4	H. T. Steel Basewashers

If KPMI® customer has the original 1 piece guide and spring base, the guides will need to be changed to install the kit.

ORDER 650-557-2046

HONDA® CB™ / CL™ 350 TWIN 1968-'73

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.830"	0.880"	0.810"	1.020"	0.525"	0.2745"	0.4950" / Std.	30-0359	
						+0.002"	30-0360	
						+0.010"	30-0400	
0.830"	0.880"	1.070"	1.170"	0.525"	0.2740"	0.4950" / Std.		30-0363
						+0.002"		30-0364
						+0.010"		30-0401

No seal required.

HONDA® CB™ / CL™ 350 TWIN 1968-'73

- **Lightweight 5.00mm Conversion System**

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30320	Intake	.460"	1.370"	68#	207#	.460"
	Exhaust					

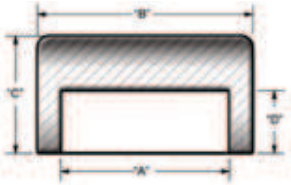
Kit Includes				
4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
4	Titanium Retainers	4	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30326	Intake	34.00mm	1.339"	0.1965"	20º	3.835"	Standard
30-30327	Intake	35.00mm	1.378"	0.1965"	20º	3.825"	Oversize
30-30328	Exhaust	28.00mm	1.102"	0.1960"	23º	3.775"	Standard
30-30329	Exhaust	29.00mm	1.142"	0.1960"	23º	3.765"	Oversize

Must use Kibblewhite® Lash Caps #94007-4 (Pkg. of 4). Valves have been shortened to fit lash caps.

Lash Caps • H.T. Steel

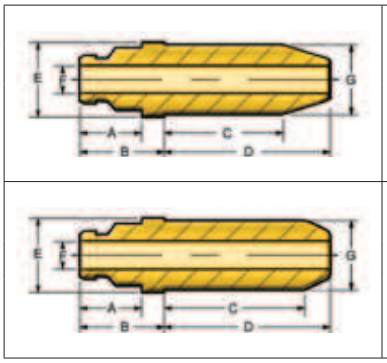


KPMI P/N	Material	"A"	"B"	"C"	"D"	"C"- "D"	Quantity
94007-4	H.T. Steel	5.00mm	0.277"	0.175"	0.100"	0.075"	Pkg. of 4
		0.1969"					

HONDA® CB™ / CL™ 350 TWIN 1968-'73

- **Lightweight 5.00mm Conversion System**

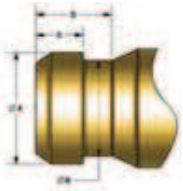
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.440"	0.600"	0.825"	1.165"	0.525"	0.1960"	0.4953" / Std.	30-30330	
						+0.001"	30-30331	
						+0.002"	30-30332	
						+0.010"	30-30339	
0.440"	0.600"	1.000"	1.180"	0.525"	0.1960"	0.4953" / Std.		30-30340
						+0.001"		30-30341
						+0.002"		30-30342
One seal supplied with each guide.						+0.010"		30-30349

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

HONDA® ATC™ 350X 1985-1986

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-3045	Intake	.415"	1.160"	90#	210#	.415"
	Exhaust					

Kit Includes	4	CrSi Valve Springs	4	Titanium Retainers

HONDA® CB™ 350F / 400F 1972-1977

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift*	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33500	Intake	.350"	1.175"	66#	156#	.350"
	Exhaust					

Kit Includes	8	CrSi Valve Springs	8	Titanium Retainers

*Note: It may be necessary to use KPMI® Shortened Valve Guides **#30-33520** and **#30-33530,** to achieve higher stock lift.
Must use OEM spring shims (Honda P/N 14775-107-000 & 14776-107-010)

HONDA® CB™ 350F / 400F 1972-1977

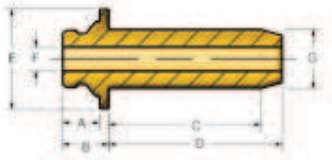
Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-1032	Intake	.350"	1.180"	60#	140#	.350"
	Exhaust					
Kit Includes	8	CrSi Valve Springs				

Valves • Black Diamond™ • Black Nitroneg Stems For CB 400F™ 1975-1977 ONLY

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-33512	Intake	26.50mm	1.043"	0.2160"	20°	3.055"	Standard
30-33516	Exhaust	23.00mm	0.906"	0.2155"	23°	3.030"	Standard

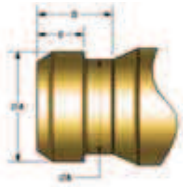
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.370"	0.485"	0.645"	0.915"	0.725"	0.2160'	0.4358" / Std.	30-33520	
						+0.001"	30-33521	
						+0.002"	30-33522	
						+0.010"	30-33529	
0.370"	0.485"	0.810"	1.025"	0.725"	0.2155'	0.4358" / Std.		30-33530
						+0.001"		30-33531
						+0.002"		30-33532
						+0.010"		30-33539

Valve Guide Seals • Viton®

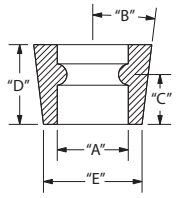
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.330"	0.455"	2	0.365"±0.002"	0.325"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71040-4	Pkg. of 4	0%
71040-8	Pkg. of 8	0%
71040-16	Pkg. of 16	Less- 10%
71040-50	Pkg. of 50	Less- 15%
71040-100	Pkg. of 100	Less- 20%

Keeper • H.T. Steel

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.215"	10.0°	0.076"	0.210"	0.285"	14781-107-003



Part Number	Quantity
51002-4	4 Pairs
51002-8	8 Pairs
51002-16	16 Pairs
51002-50	50 Pairs
51002-100	100 Pairs

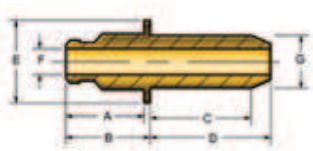
HONDA® XL™ 350 1974-1978

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30230	Intake	.440"	1.195"	59#	172#	.440"
	Exhaust					

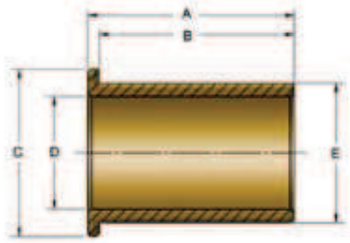
Kit Includes	4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.	30-0494	
						+0.004"	30-0496	
0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.		30-0498
						+0.004"		30-0500

Swing Arm Bushing • Manganese Bronze For XL™350 1976-1978



KPMI P/N	Material	A	B	C	D	E	Quantity
30-0477	Manganese Bronze	1.550"	1.465"	Ø 1.250"	Ø 0.8435"	Ø 1.045"	1 Pr.

- Replaces worn or damaged plastic OEM bushing
- High quality manganese bronze offers increased durability and better fitment than OEM component
- **OEM P/N: 52108-457-300 & 52108-422-3**00

HONDA® XR™ 400R RFVC 1996-2004

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30085	Intake	.430"	1.380"	71#	210#	.430"
	Exhaust					

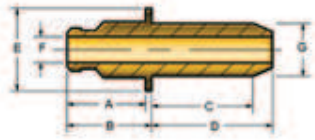
Kit Includes	4	CrSi Valve Springs	4	Titanium Retainers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-3115	Intake	33.00mm	1.300"	0.2156"	20º	4.040"	Standard
30-3116	Intake	34.00mm	1.340"	0.2156"	20º	4.020"	Oversize
30-3117	Exhaust	29.00mm	1.142"	0.2150"	29º	3.980"	Standard
30-3118	Exhaust	30.00mm	1.181"	0.2150"	29º	3.960"	Oversize

HONDA® XR™ 400R RFVC 1996-2004

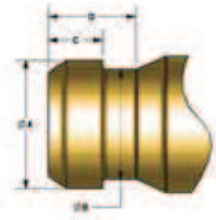
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.550"	0.645"	1.020"	1.300"	0.715"	0.2150"	0.4355" / Std.	30-3120	
						+0.001"	30-3121	
						+0.002"	30-3122	
						+0.010"	30-3130	

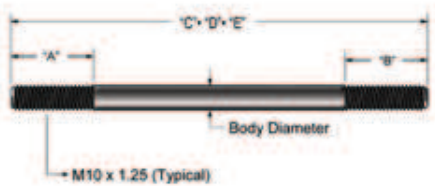
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Cylinder Stud Kit • H.T. Steel

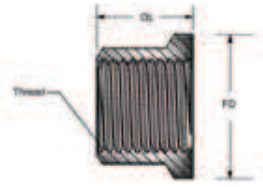


KPMI P/N	Quantity	Body Dia.	"C"	"A"	"B"
30-33750	1	0.358"	5.0"	.95"	.95"
	Quantity	Body Dia.	"D"	"A"	"B"
	1	0.358"	4.0"	.95"	.95"
	Quantity	Body Dia.	"E"	"A"	"B"
	2	0.358"	3.4"	.95"	.95"

Kit Includes	4	H. T. Steel Studs	4	H. T. Steel Nuts

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts



KPMI P/N	Hex Pattern	Material	O. L.	F. D.	Thread	Quantity
41010-4	12mm	H. T. Steel	0.400"	0.700"	M10 x 1.25	Pkg. of 4
Replacement nuts for Stud Kit, #30-33750, but can be used for general purpose (see diagram for detail)						

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

For all the applications available for Kibblewhite's Honda® line of products, please refer online to the Honda® section of the ***www.kpmi.us*** website, under ***Dirt Bike***.

VISIT US AT WWW.KPMI.US

HONDA® TRX™ 400X/ 400EX 1999-'14

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-3111	Intake	.465"	1.375"	70#	157#	.300"
	Exhaust					

Kit Includes				
4	CrSi Valve Springs	4	Titanium Retainers

Running cams with over .350" lift requires the use of shortened KPMI® guide, PN 30-3120

Cylinder Head Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33460	Intake	.465"	1.375"	70#	157#	.300"
	Exhaust					

Kit Includes			
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves
4	In/ Ex Std. C630 Valve Guides	1	Top End Gasket Kit

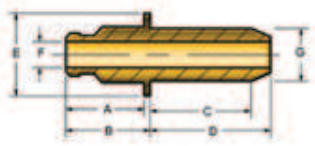
Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
30-3111	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs
30-3115	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-3117	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-3120	Intake / Exhaus, Standard Valve Guide	Valve Guide • C630 Bronze
30-33461	Gasket Kit	**Includes:** Head Gasket 86mm Bore (1), Base Gasket (1), Cylinder Base O-ring (1), Exhaust Gasket (2), Cam Chain Tensioner Gasket (1), Valve Guide O-Ring (1), Valve Seals (4), Cam Chain Tensioner O-ring (1), Valve Adj. Cap O-rings (4), Intake Manifold O-ring (1), Exhaust O-ring (1), Intake O-ring (1)

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-3115	Intake	33.00mm	1.300"	0.2156"	20º	4.040"	Standard
30-3116	Intake	34.00mm	1.340"	0.2156"	20º	4.020"	Oversize
30-3117	Exhaust	29.00mm	1.142"	0.2150"	29º	3.980"	Standard
30-3118	Exhaust	30.00mm	1.181"	0.2150"	29º	3.960"	Oversize

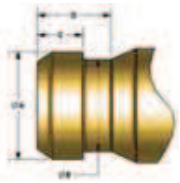
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.550"	0.645"	1.020"	1.300"	0.715"	0.2150"	0.4355" / Std.	30-3120	
						+0.001"	30-3121	
						+0.002"	30-3122	
						+0.010"	30-3130	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.115"	0.225"	Exhaust

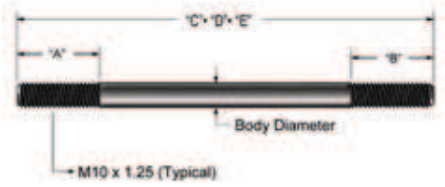


Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

HONDA® TRX™ 400X/ 400EX 1999-'14

Cylinder Stud Kit • H.T. Steel

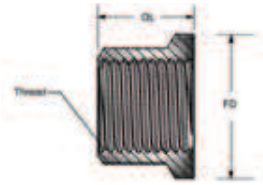


KPMI P/N	Quantity	Body Dia.	"C"	"A"	"B"
30-33750	1	0.358"	5.0"	.95"	.95"
	Quantity	**Body Dia.**	**"D"**	**"A"**	**"B"**
	1	0.358"	4.0"	.95"	.95"
	Quantity	**Body Dia.**	**"E"**	**"A"**	**"B"**
	2	0.358"	3.4"	.95"	.95"

Kit Includes	4	H. T. Steel Studs	4	H. T. Steel Nuts

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts

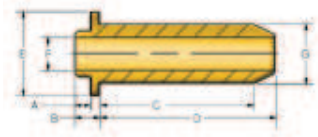


KPMI P/N	Hex Pattern	Material	O. L.	F. D.	Thread	Quantity
41010-4	12mm	H. T. Steel	0.400"	0.700"	M10 x 1.25	Pkg. of 4
Replacement nuts for Stud Kit, #30-33750, but can be used for general purpose (see diagram for detail)						

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

HONDA® CB™ 450 1965-'72 / CB™ 500 TWIN 1965-'76

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.130"	0.210"	1.293"	1.468"	0.702"	0.2750"	0.4955" / Std.	30-0367	
						+0.002"	30-0368	
						+0.004"	30-0369	
Use O.E.M. valve guide seals.						+0.006"	30-0370	

HONDA® CB™ 450 1965-'72 / CB™ 500 TWIN 1965-'76

- **Lightweight 5.00mm Conversion System**

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30300	Intake	.460"	1.180"	72#	188#	.460"
	Exhaust					

Kit Includes	4	CrSi Valve Springs	4	H. T. Steel Keepers Pr.
	4	Titanium Retainers	4	H. T. Steel Basewashers

HONDA® CB™ 450 1965-'72 / CB™ 500 TWIN 1965-'76

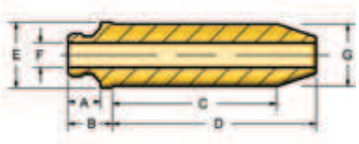
- **Lightweight 5.00mm Conversion System**

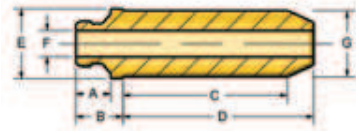
Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30306	Intake	38.00mm	1.496"	0.1960"	20º	3.855"	Standard
30-30307	Intake	39.00mm	1.535"	0.1960"	20º	3.845"	Oversize
30-30308	Exhaust	33.00mm	1.299"	0.1955"	18º	3.715"	Standard
30-30309	Exhaust	34.00mm	1.339"	0.1955"	18º	3.695"	Oversize

Valves shortened for lash caps. **Use Kibblewhite® Lash Caps #94007-4 (Pkg. of 4)**. Using these valves as O.E.M. replacements requires Kibblewhite® 5.0mm Conversion Guides and Keepers.

Valve Guides • C630 Bronze



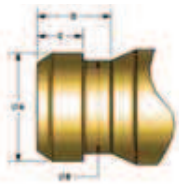


A	B	C	D	E	F	G	Intake	Exhaust
0.259"	0.354"	1.311"	1.621"	0.524"	0.1960"	0.4951" / Std.	30-30690	
						+0.001"	30-30691	
						+0.002"	30-30692	
						+0.010"	30-30699	
0.259"	0.354"	1.241"	1.436"	0.524"	0.1955"	0.4951" / Std.		30-30700
						+0.001"		30-30701
						+0.002"		30-30702
						+0.010"		30-30709

One seal supplied with each guide.

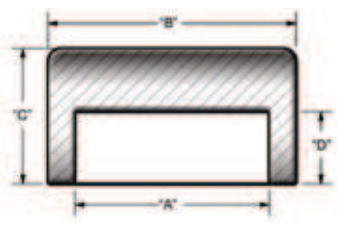
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

Lash Caps • H.T. Steel



KPMI P/N	Material	"A"	"B"	"C"	"D"	"C"- "D"	Quantity
94007-4	H.T. Steel	5.00mm / 0.1969"	0.277"	0.175"	0.100"	0.075"	Pkg. of 4

ORDER 650-557-2046

HONDA® CRF™ 450R 2002-2008

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30640	Intake	.440"	1.215"	40#	147#	.440"
	Exhaust	.440"	1.365"	70#	203#	.440"

Kit Includes						
2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H.T. Steel Basewashers
2	*Ex CrSi Valve Springs	2	Ex Titanium Retainers	2	Ex H.T. Steel Basewashers

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31210	Intake	.440"	1.215"	40#	147#	.440"

Kit Includes			
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

Top End Service Kit for CRF 450R 2002-2006

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-32700	96.00mm	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"

Kit Includes					
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves		
1	High Performance Piston Kit	1	Top End Gasket Kit		

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are NOT INTERCHANGEABLE with O.E.M. piston assembly components.

Components • Replacement • Top End Service Kit for CRF 450R 2002-2006

KPMI P/N	Description	Specification
30-30640	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30220	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroneg Stems
30-30223	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroneg Stems
30-32701	Gasket Kit	**Includes:** Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner O-ring (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Water Pipe O-ring (1), Cam Chain Tensioner O-Ring (1)

Cylinder Head Service Kit for CRF™ 450R 2002-2006

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33340	Intake	.440"	1.215"	40#	147#	.440"
	Exhaust	.440"	1.365"	70#	203#	.440"

Kit Includes					
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
2	In Std. C674 Valve Guides	2	Ex Std. C674 Valve Guides		
1	Top End Gasket Kit				

*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

HONDA® CRF™ 450R 2002-2008

Components • Replacement • Cylinder Head Service Kit for CRF 450R 2002-2006

KPMI P/N	Description	Specification
30-30640	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30220	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-30223	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-30200	Intake, Standard Valve Guide	Valve Guide • C674 Bronze
30-30210	Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
30-33341	Gasket Kit	**Includes:** Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner O-ring (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Water Pipe O-ring (1), Cam Chain Tensioner O-Ring (1)

Top End Service Kit for CRF 450R 2007-2008

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33100	96.00mm	Intake	.440”	1.215"	40#	147#	.440”
		Exhaust	.440”	1.365"	70#	203#	.440”

Kit Includes							
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers		
2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers		
2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves				
1	High Performance Piston Kit	1	Top End Gasket Kit				

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

Components • Replacement • Top End Service Kit for CRF 450R 2007-2008

KPMI P/N	Description	Specification
30-30640	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30220	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroneg Stems
30-30225	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroneg Stems
30-33101	Gasket Kit	**Includes:** Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner O-ring (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Water Pipe O-ring (1), Cam Chain Tensioner O-Ring (1)

Cylinder Head Service Kit for CRF 450R 2007-2008

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33350	Intake	.440”	1.215”	40#	147#	.440”
	Exhaust	.440"	1.365”	70#	203#	.440”

Kit Includes							
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers		
2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers		
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves				
2	In Std. C674 Valve Guides	2	Ex Std. C674 Valve Guides				
1	Top End Gasket Kit						

*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

ORDER 650-557-2046

HONDA® CRF™ 450R 2002-2008

Components • Replacement • Cylinder Head Service Kit for CRF 450R 2007-2008

KPMI P/N	Description	Specification
30-30640	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30220	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-30225	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-30200	Intake, Standard Valve Guide	Valve Guide • C674 Bronze
30-30210	Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
30-33351	Gasket Kit	**Includes:** Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner O-ring (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Water Pipe O-ring (1), Cam Chain Tensioner O-Ring (1)

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30220	Intake	36.00mm	1.417"	0.2158"	20º	3.315"	Standard
30-30221	Intake	37.00mm	1.457"	0.2158"	20º	3.325"	Oversize
30-30222	Intake	38.00mm	1.496"	0.2158"	20º	3.325"	Oversize
30-30223	Exhaust	31.00mm	1.220"	0.1957"	20º	3.310"	2002-'06 Std.
30-30224	Exhaust	32.00mm	1.260"	0.1957"	20º	3.320"	2002-'06 O/S
30-30225	Exhaust	30.00mm	1.181"	0.1957"	20º	3.310"	2007-'08 Std.

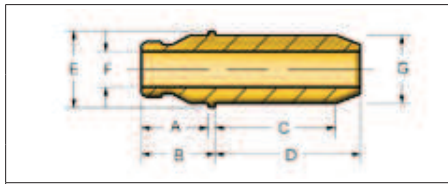
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

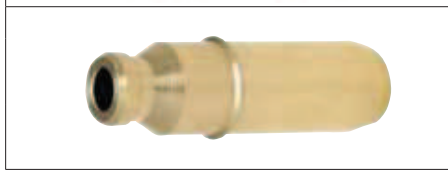
Valves • O.E.M. Replacement • Titanium • Stainless

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
30-30220T	Intake	36.00mm	1.417"	0.2158"	20º	3.325"	Titanium	14711-MEB-670
30-30223	Exhaust	31.00mm	1.220"	0.1957"	20º	3.310"	2002-'06 Stainless	14721-MEB-670
30-30225	Exhaust	30.00mm	1.181"	0.1957"	20º	3.310"	2007-'08 Stainless	14721-MEN-A00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

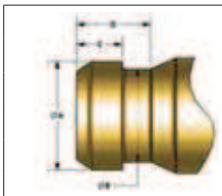
Valve Guides • C674 Bronze





A	B	C	D	E	F	G	Intake	Exhaust
0.495"	0.520"	0.650"	0.760"	0.480"	0.2155"	0.4360" / Std.	30-30200	
						+0.010"	30-30209	
0.580"	0.605"	0.740"	0.890"	0.480"	0.1955"	0.4360" Std.		30-30210
						+0.010"		30-30219

Valve Guide Seal Kits • High Performance



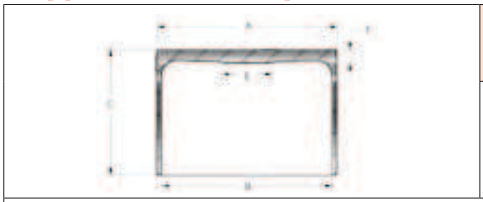
Intake Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			
				A	B	C	D
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.115"	0.225"
Exhaust Stem Diameter	**O.L**	**Seal O.D.**	**Seal Style**	**Designed for these guide specs**			
				A	**B**	**C**	**D**
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"

Part Number	30-30550	Kit Includes	2	Intake Viton® Seals	2	Exhaust Viton® Seals

VISIT US AT WWW.KPMI.US

HONDA® CRF™ 450R 2002-2008

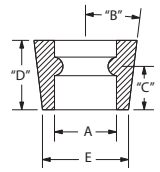
Tappets • O.E.M Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
30-30648	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 2

Refer to **KPMI® Tappet Section**, in back of catalog, when selecting oversize tappets.

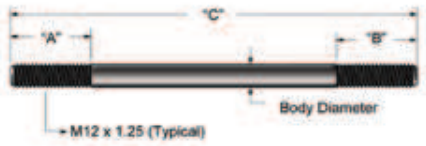
Keeper Set • O.E.M. Replacement



KPMI P/N	Style	Type	A	B	C	D	E	Quantity
30-30650	Single Radius Bead	Intake	0.215"	7.0°	0.179"	0.214"	0.262"	2 Pr.
		Exhaust	0.196"	7.0°	0.170"	0.205"	0.236"	2 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

Cylinder Head Stud Kit

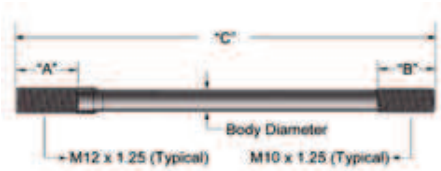


KPMI P/N	O. L. "C"	Body Dia.	A	B	Remarks
30-33850	7.25"	0.439"	1.00"	1.00"	12mm Oversize Diameters

Includes	4	H.T. Steel Studs	4	H.T. Steel Nuts	4	H.T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs! **IMPORTANT NOTE / CYLINDER HEAD MODIFICATION REQUIRED:** The OEM cylinder studs have a reduced diameter body and upper thread. This thin section stud can be inadequate when pushed to the limit in maximum performance applications. These KPMI® Black Diamond™ studs feature a 12mm diameter for the entire stud, providing maximum clamping force for extreme duty and peace of mind. A simple drilling operation with a 1/2" drill bit is required to modify the cylinder head.

Cylinder Head Stud Kit • No Head Mods Necessary



KPMI P/N	O. L. "C"	Body Dia.	A	B	Remarks
30-33950	6.90"	0.358"	1.00"	1.00"	Std. OEM 12mm & 10mm Diameters (No Cylinder Head Modification is required)

Includes	4	H.T. Steel Studs	4	H.T. Steel Nuts	4	H.T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts

KPMI P/N	Hex Pattern	Material	O. L.	F. D.	Thread	Quantity
41009-4	12mm	H. T. Steel	0.505"	0.750	M12 x 1.25	Pkg. of 4
41010-4	12mm	H. T. Steel	0.400"	0.700"	M10 x 1.25	Pkg. of 4

Replacement nuts for Stud Kits, #30-33850 & 30-33950, but can be used for general purpose (see diagram for detail)

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

ORDER 650-557-2046

HONDA® CRF™ 450R 2009-2012

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31250	Intake	.440"	1.215"	40#	147#	.440"
	Exhaust	.440"	1.365"	71#	203#	.440"

Kit Includes						
2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H.T. Steel Basewashers
2	*Ex CrSi Valve Springs	2	In Titanium Retainers	2	Ex H.T. Steel Basewashers

*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H.T. Steel Basewashers.

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31240	Intake	.440"	1.215"	40#	147#	.440"

Kit Includes			
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-31262	Intake	36.00mm	1.417"	0.1960"	20º	3.095"	Standard
30-31266	Exhaust	30.00mm	1.181"	0.1955"	20º	3.175"	Standard
30-31267	Exhaust	31.00mm	1.220"	0.1955"	20º	3.185"	Oversize

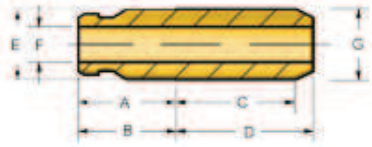
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

Valves • O.E.M. Replacement • Titanium • Stainless

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
30-31262T	Intake	36.00mm	1.417"	0.1960"	20º	3.095"	Titanium	14711-MEN-A30
30-31266	Exhaust	30.00mm	1.181"	0.1955"	20º	3.175"	Stainless	14721-MEN-A30

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

Valve Guides • C630 Bronze



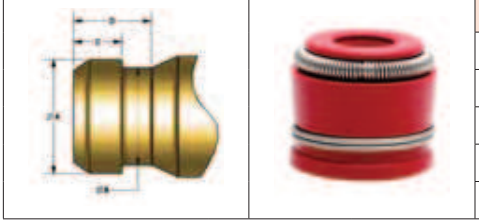
A	B	C	D	E	F	G	Intake	Exhaust
0.535"	0.535"	0.590"	0.670"	0.433"	0.1960'	0.4360" / Std.	30-31270	
						+0.001"	30-31271	
						+0.002"	30-31272	
						+0.010"	30-31279	
0.630"	0.630"	0.730"	0.870"	0.433"	0.1955"	0.4360" / Std.		30-31280
						+0.001"		30-31281
						+0.002"		30-31282
						+0.010"		30-31289

VISIT US AT WWW.KPMI.US

HONDA® CRF™ 450R 2009-2012

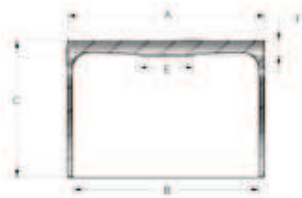
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

Tappets • H.T. Steel • High Performance



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
30-31292	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 2

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

HONDA® CRF™ 450R 2013-2016

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31600	Intake	.440"	1.215"	40#	147#	.440"
	Exhaust	.440"	1.365"	70#	203#	.440"

Kit Includes						
2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
2	*Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H.T. Steel Basewashers.

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31580	Intake	.440"	1.215"	40#	147#	.440"

Kit Includes				
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-31612	Intake	36.00mm	1.417"	0.1960"	20°	3.095"	Standard
30-31616	Exhaust	31.00mm	1.220"	0.1955"	20°	3.175"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

ORDER 650-557-2046

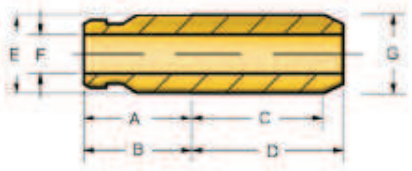
HONDA® CRF™ 450R 2013-2016

Valves • O.E.M. Replacement • Titanium • Stainless

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
30-31612T	Intake	36.00mm	1.417"	0.1960"	20º	3.095"	Titanium	14711-MEN-A30
30-31616	Exhaust	31.00mm	1.220"	0.1955"	20º	3.175"	Stainless	14721-MEN-A70

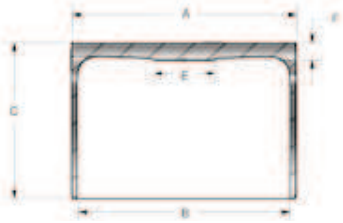
Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.535"	0.535"	0.590"	0.670"	0.433"	0.1960"	0.4360" / Std.	30-31620	
						+0.001"	30-31621	
						+0.002"	30-31622	
						+0.010"	30-31629	
0.630"	0.630"	0.730"	0.870"	0.433"	0.1955"	0.4360" / Std.		30-31630
						+0.001"		30-31631
						+0.002"		30-31632
						+0.010"		30-31639

Tappets • O.E.M Replacement • H.T. Steel

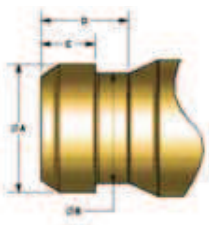


KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
30-31642	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 2

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

VISIT US AT WWW.KPMI.US

HONDA® CRF™ 450R/RX/WE 2017-2026

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-32800	Intake	.440"	1.340"	50#	162#	.440"
	Exhaust	.405"	1.360"	90#	220#	.405"

Kit Includes						
2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H. T. Steel Basewashers
2	*Ex CrSi Valve Springs	2	Ex Titanium Retainers	2	Ex H. T. Steel Basewashers

*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H.T. Steel Basewashers.

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-32780	Intake	.440"	1.340"	50#	162#	.440"

Kit Includes			
2	*CrSi Valve Springs	2	Titanium Retainers
2	H. T. Steel Basewashers	2	White Diamond® Valves

* The Intake springs in this kit include a progressively wound springs, which should be installed with the tightly wound end seated on the H.T. Steel Basewashers.

Top End Service Kit for CRF™ 450R/ RX/ WE 2017-2018 NEW PRODUCTS

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-34100	96.00mm	Intake	.440"	1.340"	50#	162#	.440"
		Exhaust	.405"	1.360"	90#	220#	.405"

Kit Includes						
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In White Diamond® Valves	2	Ex White Diamond® Valves		
1	High Performance Piston Kit	1	Top End Gasket Kit		

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

Components • Replacement • Top End Service Kit for CRF™ 450R/ RX/ WE 2017-2018

KPMI P/N	Description	Specification
30-32800	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-32812H	Intake, Standard Valve	Valve • White Diamond® • Stainless
30-32816K	Exhaust, Standard Valve	Valve • White Diamond® • Inconel®
30-34101	Gasket Kit	**Includes:** Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner O-ring (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Water Pipe O-ring (1), Cam Chain Tensioner O-Ring (1)

Top End Service Kit for CRF™ 450R/ RX/ WE 2019-2020 NEW PRODUCTS

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-34150	96.00mm	Intake	.440"	1.340"	50#	162#	.440"
		Exhaust	.405"	1.360"	90#	220#	.405"

Kit Includes						
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In White Diamond® Valves	2	Ex White Diamond® Valves		
1	High Performance Piston Kit	1	Top End Gasket Kit		

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

ORDER 650-557-2046

HONDA® CRF™ 450R/RX/WE 2017-2026

Components • Replacement • Top End Service Kit for CRF™ 450R/ RX/ WE 2019-2020

KPMI P/N	Description	Specification
30-32800	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-32812H	Intake, Standard Valve	Valve • White Diamond® • Stainless
30-32816K	Exhaust, Standard Valve	Valve • White Diamond® • Inconel®
30-34151	Gasket Kit	**Includes:** Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner O-ring (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Water Pipe O-ring (1), Cam Chain Tensioner O-Ring (1)

Top End Service Kit for CRF™ 450R/ RX/ WE 2021-2026

NEW PRODUCTS

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-34200	96.00mm	Intake	.440"	1.340"	50#	162#	.440"
		Exhaust	.405"	1.360"	90#	220#	.405"

Kit Includes								
	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers		
	2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers		
	2	In White Diamond® Valves	2	Ex White Diamond® Valves				
	1	High Performance Piston Kit	1	Top End Gasket Kit				

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

Components • Replacement • Top End Service Kit for CRF™ 450R/ RX/ WE 2021-2026

KPMI P/N	Description	Specification
30-32800	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-32812H	Intake, Standard Valve	Valve • White Diamond® • Stainless
30-32816K	Exhaust, Standard Valve	Valve • White Diamond® • Inconel®
30-34201	Gasket Kit	**Includes:** Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner O-ring (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Water Pipe O-ring (1), Cam Chain Tensioner O-Ring (1)

Cylinder Head Service Kit for CRF™ 450R/ RX/ WE 2017-2018

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33330	Intake	.440"	1.340"	50#	162#	.440"
	Exhaust	.405"	1.360"	90#	220#	.405"

Kit Includes								
	2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers		
	2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers		
	2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves (Inconel®)				
	2	In Std. C630 Valve Guides	2	Ex Std. C630 Valve Guides				
	1	Top End Gasket Kit						

Components • Replacement • Cylinder Head Service Kit for CRF™ 450R/ RX/ WE 2017-2018

KPMI P/N	Description	Specification
30-32800	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-32812H	Intake, Standard Valve	Valve • White Diamond® • Stainless
30-32816K	Exhaust, Standard Valve	Valve • White Diamond® • Inconel®
30-32820	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-32830	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33331	Gasket Kit	**Includes:** Head Gasket 96mm (1), Base Gasket (1), Case Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Bolt Seal (1), Valve Stem Seal (4)

HONDA® CRF™ 450R/RX/WE 2017-2026

Cylinder Head Service Kit for CRF™ 450R/ RX/ WE 2019-2020 NEW PRODUCTS

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33470	Intake	.440"	1.340"	50#	162#	.440"
	Exhaust	.405"	1.360"	90#	220#	.405"

Kit Includes						
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers	
2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves (Inconel®)			
2	In Std. C630 Valve Guides	2	Ex Std. C630 Valve Guides			
1	Top End Gasket Kit					

Components • Replacement • Cylinder Head Service Kit for CRF™ 450R/ RX/ WE 2019-2020

KPMI P/N	Description	Specification
30-32800	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-32812H	Intake, Standard Valve	Valve • White Diamond® • Stainless
30-32816K	Exhaust, Standard Valve	Valve • White Diamond® • Inconel®
30-32820	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
30-32830	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
30-33471	Gasket Kit	**Includes:** Head Gasket 96mm (1), Base Gasket (1), Case Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Bolt Seal (1), Valve Stem Seal (4)

Valves • White Diamond® • Stainless • Inconel®

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material
30-32812H	Intake	38.00mm	1.496"	0.1960"	20º	3.080"	Stainless
	Standard						
**30-32816K	Exhaust	31.00mm	1.220"	0.1955"	23º	3.165"	Inconel®
	Standard						

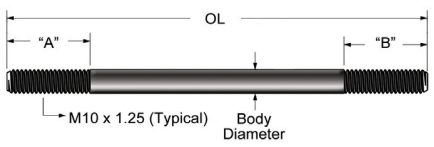
Valves • O.E.M. Replacement • Titanium • Inconel®

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Replaces OEM P/N
30-32812T	Intake	38.00mm	1.496"	0.1960"	20º	3.085"	Titanium	14711-MKE-A01
	Standard							
**30-32816K	Exhaust	31.00mm	1.220"	0.1955"	23º	3.165"	Inconel®	14721-MEN-A70
	Standard							

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits.
KPMI® Tensilite® titanium valves are one piece forgings made from 6-2-4-2 titanium alloy. These are the latest developments in titanium valve alloys and have superior hardness, strength, and thermal characteristics when compared to other titanium valve alloys. Tensilite® valves are covered with a chromium nitride (CRN) PVD coating. This coating adheres exceptionally well to titanium, has a low coefficient of friction, and is impact, abrasion, and corrosion resistant.

** Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

Cylinder Head Stud Kit • H.T. Steel NEW PRODUCTS



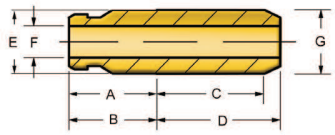
KPMI P/N	O. L. "C"	Body Dia.	A	B
30-34030	6.5"	0.358"	1.450"	1.450"

Includes						
4	H.T. Steel Studs	4	H.T. Steel Nuts	4	H.T. Steel Washers	

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

HONDA® CRF™ 450R/RX/WE 2017-2026

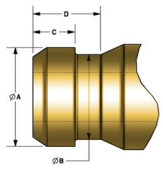
Valve Guides • C630 Bronze for CRF™ 450R/ RX/ WE 2017-2020



A	B	C	D	E	F	G	Intake	Exhaust
0.535"	0.535"	0.590"	0.670"	0.433"	0.1960"	0.4360" / Std.	30-32820	
						+0.001"	30-32821	
						+0.002"	30-32822	
						+0.010"	30-32829	
0.630"	0.630"	0.730"	0.870"	0.433"	0.1955"	0.4360" / Std.		30-32830
						+0.001"		30-32831
						+0.002"		30-32832
						+0.010"		30-32839

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

HONDA® CRF™ 450X 2005-2017

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31050	Intake	.440"	1.215"	40#	147#	.440"
	Exhaust	.440"	1.365"	70#	203#	.440"

Kit Includes						
2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
2	*Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31230	Intake	.440"	1.215"	40#	147#	.440"

Kit Includes			
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

Top End Service Kit

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-32900	96.00mm	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"

Kit Includes					
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves		
1	High Performance Piston Kit	1	Top End Gasket Kit		

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

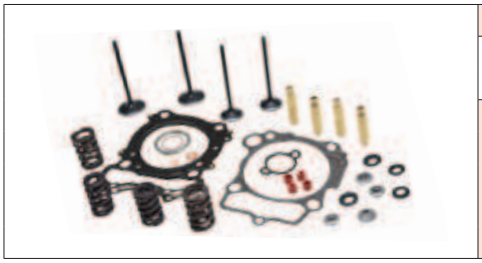
*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

HONDA® CRF™ 450X 2005-2017

Components • Replacement • Top End Service Kit

KPMI P/N	Description	Specification
30-31050	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-31062	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroneg Stems
30-31066	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroneg Stems
30-32901	Gasket Kit	Includes: Base gasket, Engine case gasket, Exhaust gasket, Head gasket, Washers, Valve stem seals

Cylinder Head Service Kit



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33450	Intake	.440"	1.215"	40#	147#	.440"
	Exhaust	.440"	1.365"	70#	203#	.440"

Kit Includes						
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers	
2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			
2	In Std. C674 Valve Guides	2	Ex Std. C674 Valve Guides			
1	Top End Gasket Kit					

Components • Replacement • Cylinder Head Service Kit

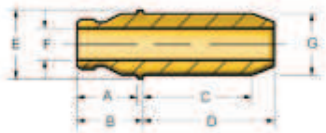
KPMI P/N	Description	Specification
30-31050	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-31062	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-31066	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-31070	Intake, Standard Valve Guide	Valve Guide • C674 Bronze
30-31080	Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
30-33451	Gasket Kit	**Includes:** Head Gasket 96mm Bore (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Base Gasket (1),Cam Chain Tensioner Gasket (1), Exhaust Gasket (1), Water Outlet O-ring (1)

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-31062	Intake	35.00mm	1.378"	0.2158"	20º	3.315"	Standard
30-31063	Intake	36.00mm	1.417"	0.2158"	20º	3.315"	Oversize
30-31066	Exhaust	30.00mm	1.181"	0.1957"	20º	3.310"	Standard
30-31067	Exhaust	31.00mm	1.220"	0.1957"	20º	3.310"	Oversize

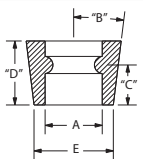
Must use **Kibblewhite® Lightweight Valve Spring Kits** when installing **Black Diamond™ Valves.**

Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.495"	0.520"	0.650"	0.760"	0.480"	0.2155"	0.4360" / Std.	30-31070	
						+0.010"	30-31079	
0.580"	0.605"	0.740"	0.890"	0.480"	0.1955"	0.4360" / Std.		30-31080
						+0.010"		30-31089

Keeper Set • O.E.M. Replacement



KPMI P/N	Style	Type	A	B	C	D	E	Quantity
30-31095	Single Radius Bead	Intake	0.215"	7.0°	0.179"	0.214"	0.262"	2 Pr.
		Exhaust	0.196"	7.0°	0.170"	0.205"	0.236"	2 Pr.

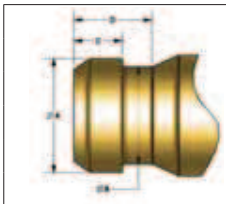
Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

ORDER 650-557-2046

HONDA® CRF™ 450X 2005-2017

Valve Guide Seal Kits • High Performance



Intake Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			
				A	B	C	D
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.115"	0.225"
Exhaust Stem Diameter	**O.L**	**Seal O.D.**	**Seal Style**	**Designed for these guide specs**			
				A	**B**	**C**	**D**
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"

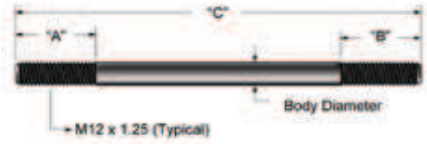
Part Number	30-31570	Kit Includes	2	Intake Viton® Seals	2	Exhaust Viton® Seals

Tappets • O.E.M Replacement • H.T. Steel

KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
30-31092	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 2

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

Cylinder Head Stud Kit



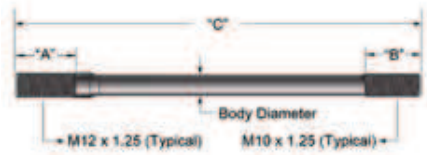
KPMI P/N	O. L. "C"	Body Dia.	A	B	Remarks
30-33850	7.25"	0.439"	1.00"	1.00"	12mm Oversize Diameters

Includes	4	H.T. Steel Studs	4	H.T. Steel Nuts	4	H.T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs! **IMPORTANT NOTE / CYLINDER HEAD MODIFICATION REQUIRED:** The OEM cylinder studs have a reduced diameter body and upper thread. This thin section stud can be inadequate when pushed to the limit in maximum performance applications. These KPMI® Black Diamond™ studs feature a 12mm diameter for the entire stud, providing maximum clamping force for extreme duty and peace of mind. A simple drilling operation with a 1/2" drill bit is required to modify the cylinder head.

Cylinder Head Stud Kit • No Head Mods Necessary

NEW PRODUCTS



KPMI P/N	O. L. "C"	Body Dia.	A	B	Remarks
30-33950	6.90"	0.358"	1.00"	1.00"	Std. OEM 12mm & 10mm Diameters (No Cylinder Head Modification is required)

Includes	4	H.T. Steel Studs	4	H.T. Steel Nuts	4	H.T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts

NEW PRODUCTS

KPMI P/N	Hex Pattern	Material	O. L.	F. D.	Thread	Quantity
41009-4	12mm	H. T. Steel	0.505"	0.750	M12 x 1.25	Pkg. of 4
41010-4	12mm	H. T. Steel	0.400"	0.700"	M10 x 1.25	Pkg. of 4

Replacement nuts for Stud Kits, #30-33850 & 30-33950, but can be used for general purpose (see diagram for detail)

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

VISIT US AT WWW.KPMI.US

HONDA® TRX™ 450R 2004-2005

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30720	Intake	.440"	1.215"	40#	147#	.440"
	Exhaust	.440"	1.365"	70#	203#	.440"

Kit Includes						
2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
2	*Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

Top End Service Kit

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-32500	94.00mm	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"

Kit Includes					
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves		
1	High Performance Piston Kit	1	Top End Gasket Kit		

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

Components • Replacement • Top End Service Kit

KPMI P/N	Description	Specification
30-30720	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30750	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroneg Stems
30-30753	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroneg Stems
30-32501	Gasket Kit	Includes: Base gasket, Engine case gasket, Exhaust gasket, Head gasket, Washers, Valve stem seals

Cylinder Head Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33480	Intake	.440"	1.215"	40#	147#	.440"
	Exhaust	.440"	1.365"	70#	203#	.440"

Kit Includes					
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
2	In Std. C674 Valve Guides	2	Ex Std. C674 Valve Guides		
1	Top End Gasket Kit				

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
30-30720	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30750	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-30753	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-30730	Intake, Standard Valve Guide	Valve Guide • C674 Bronze
30-30740	Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
30-33481	Gasket Kit	**Includes:** Head Gasket 94mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Tensioner Bolt Washer (1), Valve Stem Seals (4), Thermostat Cover O-ring (1)

*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

ORDER 650-557-2046

HONDA® TRX™ 450R 2004-2005

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33200	Intake	.440"	1.215"	40#	147#	.440"

Kit Includes				
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30750	Intake	36.00mm	1.417"	0.2158"	20º	3.315"	Standard
30-30751	Intake	37.00mm	1.457"	0.2158"	20º	3.325"	Oversize
30-30752	Intake	38.00mm	1.496"	0.2158"	20º	3.325"	Oversize
30-30753	Exhaust	30.00mm	1.181"	0.2151"	20º	3.315"	Standard
30-30754	Exhaust	31.00mm	1.220"	0.2151"	20º	3.325"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

Racing Valve Kit • Titanium • Stainless

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
30-30750T	Intake	36.00mm	1.417"	0.2158"	20º	3.325"	Titanium	14711-HP1-670
30-30753	Exhaust	30.00mm	1.181"	0.2151"	20º	3.315"	Stainless	14721-HP1-670

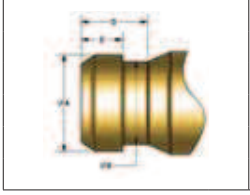
Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

Valve Guides • C674 Bronze

A	B	C	D	E	F	G	Intake	Exhaust
0.495"	0.520"	0.650"	0.760"	0.480"	0.2155"	0.4360" / Std.	30-30730	
						+0.010"	30-30739	
0.580"	0.605"	0.705"	0.830"	0.480"	0.2150"	0.4360" / Std.		30-30740
						+0.010"		30-30749

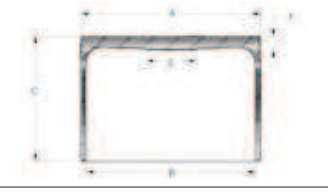
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Tappets • O.E.M Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
30-30728	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 2

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

HONDA® TRX™ 450R / ER 2006-2014

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30920	Intake	.440"	1.215"	40#	147#	.440"
	Exhaust	.440"	1.365"	70#	203#	.440"

Kit Includes						
2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
2	*Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

Top End Service Kit

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-32600	96.00mm	Intake	.440"	1.215"	40#	147#	.440"
		Exhaust	.440"	1.365"	70#	203#	.440"

Kit Includes					
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves		
1	High Performance Piston Kit	1	Top End Gasket Kit		

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

Components • Replacement • Top End Service Kit

KPMI P/N	Description	Specification
30-30920	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30950	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroneg Stems
30-30953	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroneg Stems
30-32601	Gasket Kit	Includes: Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner Gasket Early (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Cam Chain Tensioner Bolt Seal (1), Thermostat Housing Gasket (1)

Cylinder Head Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33360	Intake	.440"	1.215"	40#	147#	.440"
	Exhaust	.440"	1.365"	70#	203#	.440"

Kit Includes					
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	*Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
2	In Std. C674 Valve Guides	2	Ex Std. C674 Valve Guides		
1	Top End Gasket Kit				

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
30-30920	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
30-30950	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-30953	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-30930	Intake, Standard Valve Guide	Valve Guide • C674 Bronze
30-30940	Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
30-33361	Gasket Kit	Includes: Head Gasket 96mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner Gasket Early (1), Exhaust Valve Seals (2), Intake Valve Seals (2), Cam Chain Tensioner Bolt Seal (1), Thermostat Housing Gasket (1)

*The Exhaust springs for this kit include a progressively wound Inner Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

ORDER 650-557-2046

HONDA® TRX™ 450R / ER 2006-2014

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33250	Intake	.440"	1.215"	40#	147#	.440"

Kit Includes				
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30950	Intake	36.00mm	1.417"	0.2158"	20º	3.315"	Standard
30-30951	Intake	37.00mm	1.457"	0.2158"	20º	3.325"	Oversize
30-30952	Intake	38.00mm	1.496"	0.2158"	20º	3.325"	Oversize
30-30953	Exhaust	30.00mm	1.181"	0.1957"	20º	3.310"	Standard
30-30954	Exhaust	31.00mm	1.220"	0.1957"	20º	3.310"	Oversize
30-30955	Exhaust	32.00mm	1.260"	0.1957"	20º	3.320"	Oversize

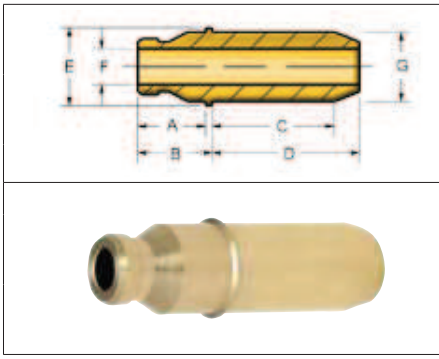
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

Racing Valve Kit • Titanium • Stainless

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
30-30950T	Intake	36.00mm	1.417"	0.2158"	20º	3.325"	Titanium	14711-MEB-670
30-30953	Exhaust	30.00mm	1.181"	0.1957"	20º	3.310"	Stainless	14721-MEY-670

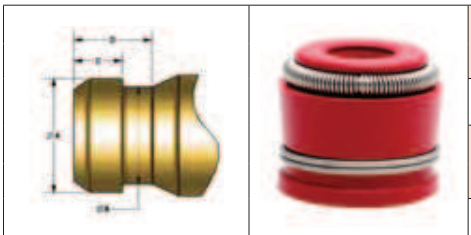
Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.495"	0.520"	0.650"	0.760"	0.480"	0.2155"	0.4360" / Std.	30-30930	
						+0.010"	30-30939	
0.580"	0.605"	0.740"	0.890"	0.480"	0.1955"	0.4360" / Std.		30-30940
						+0.010"		30-30949

Valve Guide Seal Kits • High Performance

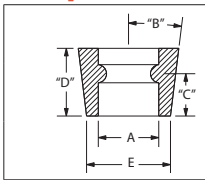


Intake Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			
				A	B	C	D
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.115"	0.225"
Exhaust Stem Diameter	**O.L**	**Seal O.D.**	**Seal Style**	**Designed for these guide specs**			
				A	**B**	**C**	**D**
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"

Part Number	30-30980	Kit Includes	2	Intake Viton® Seals	2	Exhaust Viton® Seals

HONDA® TRX™ 450R / ER 2006-2014

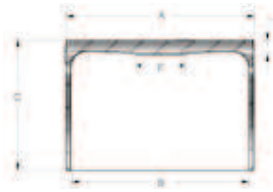
Keeper Set • O.E.M. Replacement



KPMI P/N	Style	Type	A	B	C	D	E	Quantity
30-30655	Single Radius Bead	Intake	0.215"	7.0°	0.179"	0.214"	0.262"	2 Pr.
		Exhaust	0.196"	7.0°	0.170"	0.205"	0.236"	2 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

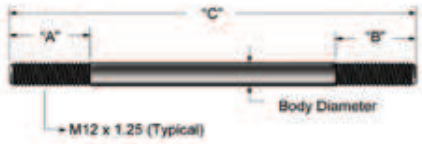
Tappets • O.E.M Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
30-30648	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 2

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

Cylinder Head Stud Kit



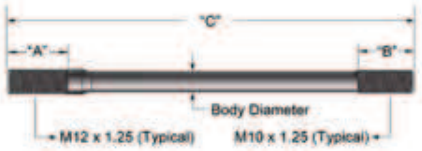
KPMI P/N	O. L. "C"	Body Dia.	A	B	Remarks
30-33850	7.25"	0.439"	1.00"	1.00"	12mm Oversize Diameters

Includes	4	H.T. Steel Studs	4	H.T. Steel Nuts	4	H.T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs! **IMPORTANT NOTE / CYLINDER HEAD MODIFICATION REQUIRED:** The OEM cylinder studs have a reduced diameter body and upper thread. This thin section stud can be inadequate when pushed to the limit in maximum performance applications. These KPMI® Black Diamond™ studs feature a 12mm diameter for the entire stud, providing maximum clamping force for extreme duty and peace of mind. A simple drilling operation with a 1/2" drill bit is required to modify the cylinder head.

Cylinder Head Stud Kit • No Head Mods Necessary

NEW PRODUCTS



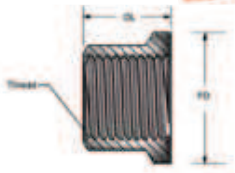
KPMI P/N	O. L. "C"	Body Dia.	A	B	Remarks
30-33950	6.90"	0.358"	1.00"	1.00"	Std. OEM 12mm & 10mm Diameters (No Cylinder Head Modification is required)

Includes	4	H.T. Steel Studs	4	H.T. Steel Nuts	4	H.T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts

NEW PRODUCTS



KPMI P/N	Nut - 12pt	Material	O. L.	F. D.	Thread	Quantity
41009-4	12mm	H. T. Steel	0.505"	0.750	M12 x 1.25	Pkg. of 4
41010-4	12mm	H. T. Steel	0.400"	0.700"	M10 x 1.25	Pkg. of 4

Replacement nuts for Stud Kits, #30-33850 & 30-33950, but can be used for general purpose (see diagram for detail)

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

HONDA® CB™ 500 / 4 - CB™ 550 / 4 1971-'78

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31550	Intake	.440"	1.385"	70#	203#	.440"
	Exhaust					

Kit Includes	8	CrSi Valve Springs	8	Titanium Retainers

Use O.E.M. Basewashers

Spring Only Kit • OEM Replacement

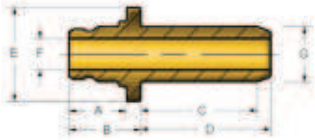
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-4045	Intake	.440"	1.390"	60#	195#	.440"
	Exhaust					

Kit Includes	8	CrSi Valve Springs

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-31330	Intake	27.50mm	1.083"	0.2150"	20°	3.680"	Standard
30-31331	Intake	28.50mm	1.122"	0.2150"	20°	3.680"	Oversize
30-31334	Exhaust	23.00mm	0.905"	0.2145"	30°	3.650"	Standard
30-31335	Exhaust	24.00mm	0.945"	0.2145"	30°	3.650"	Oversize

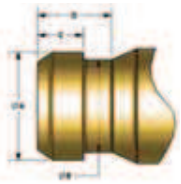
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.475"	0.595"	0.980"	1.230"	0.720"	0.2150"	0.4372" / Std.	30-3150	
						+0.001"	30-3151	
						+0.002"	30-3152	
						+0.004"	30-3154	
						+0.010"	30-3160	

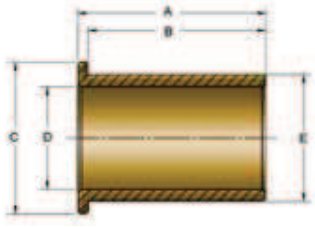
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Swing Arm Bushing • Manganese Bronze For CB™500 1975-1976 and CB™550 1975-1978



KPMI P/N	Material	A	B	C	D	E	Quantity
30-0477	Manganese Bronze	1.550"	1.465"	Ø 1.250"	Ø 0.8435"	Ø 1.045"	1 Pr.

- Replaces worn or damaged plastic OEM bushing
- High quality manganese bronze offers increased durability and better fitment than OEM component
- **OEM P/N: 52108-457-300 & 52108-422-300**

HONDA® CBR™ 600 F2 / F3 1991-1996

Spring Only Kit • OEM Replacement

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-3020	Intake	.420"	1.220"	50#	140#	.400"
	Exhaust					
Kit Includes	16	CrSi Valve Springs				

Retainer Set • Titanium

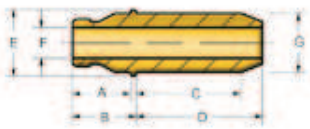
KPMI P/N	Type	Material	Quantity
30-3021	Intake	Titanium	Pkg. of 16
	Exhaust		

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-3024	Intake	25.50mm	1.004"	0.1566"	19º	3.115"	Standard
30-3025	Intake	26.50mm	1.043"	0.1566"	19º	3.115"	Oversize
30-3022	Exhaust	22.00mm	0.866"	0.1561"	20º	3.120"	Standard
30-3023	Exhaust	23.00mm	0.905"	0.1561"	20º	3.120"	Oversize

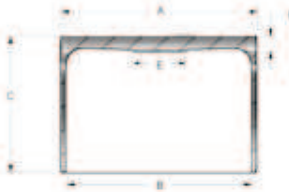
Intake valves made from special alloy to resist face recession common in these models

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.385"	0.410"	0.800"	0.900"	0.365"	0.1561"	0.3370" / Std.	30-3010	
						+0.002"	30-3012	
						+0.010"	30-3019	

Tappets • O.E.M Replacement • H.T. Steel

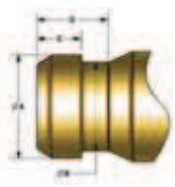


KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
30-30019	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 16
	Exhaust								

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

HONDA® CBR™ 600F4i 2001-2006

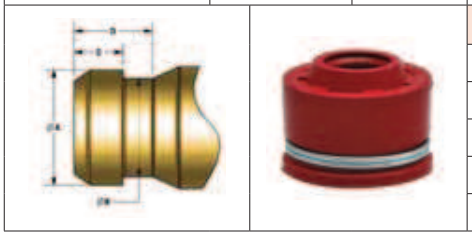
Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30290	Intake	.360"	1.230"	51#	139#	.360"
	Exhaust					

Kit Includes				
16	CrSi Valve Springs	16	Titanium Retainers	
8	In, H. T. Steel Basewashers	8	Ex, H. T. Steel Basewashers	

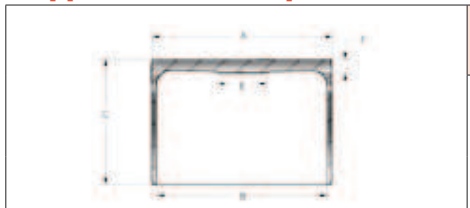
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

Tappets • O.E.M Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
30-30019	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 16
	Exhaust								

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

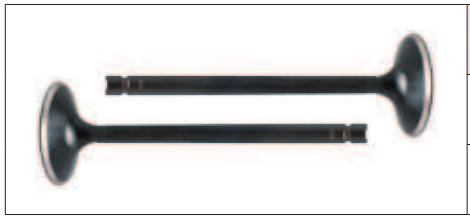
HONDA® XR™ 650R 2000-2007

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30161	Intake	.440"	1.225"	70#	195#	.440"
	Exhaust					

Kit Includes					
4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

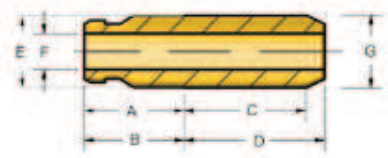


KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30166	Intake	37.00mm	1.457"	0.2590"	19º	4.025"	Standard
30-30168	Exhaust	32.00mm	1.260"	0.2585"	19º	4.065"	Standard

VISIT US AT WWW.KPMI.US

HONDA® XR™ 650R 2000-2007

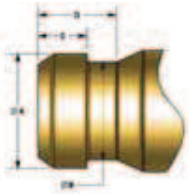
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.600"	0.600"	0.805"	1.075"	0.475"	0.2590"	0.4753" / Std.	30-30170	
						+0.001"	30-30171	
						+0.002"	30-30172	
						+0.010"	30-30179	
0.600"	0.600"	1.000"	1.230"	0.475"	0.2590"	0.4753" / Std.		30-30180
						+0.001"		30-30181
						+0.002"		30-30182
						+0.010"		30-30189

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.5mm	0.353"	0.560"	4	0.475"±0.005"	0.415"	0.115"	0.260"	Exhaust



Part Number	Quantity	Quantity Discount
71018-4	Pkg. of 4	0%
71018-8	Pkg. of 8	0%
71018-16	Pkg. of 16	Less- 10%
71018-50	Pkg. of 50	Less- 15%
71018-100	Pkg. of 100	Less- 20%

HONDA® HAWK NT™ 650 1988-1991

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-3070	Intake	.500"	1.460"	45#	196#	.500"
	Exhaust	.500"	1.420"	74#	252#	.500"

Kit Includes							
4	In, CrSi Valve Springs	4	In, Titanium Retainers	4	In, H. T. Steel Basewashers
2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	4	In, Spring Shims
2	Ex, Spring Shims	2	Ex, Spring Shims		

HONDA® VARIOUS 500cc-650cc 1983-'24

- GB™ 500 1989-1990
- XR™ 500R 1983-1984
- XL™ 600R 1983-1987
- XR™ 600R 1985-2000
- XR™ 650L 1993-2024

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30015	Intake	.465"	1.210"	70#	185#	.400"
	Exhaust					

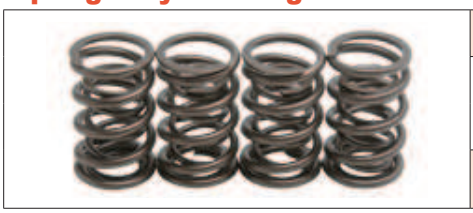
Kit Includes					
4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Shims

ORDER 650-557-2046

HONDA® VARIOUS 500cc-650cc 1983-'24

- GB™ 500 1989-1990
- XR™ 500R 1983-1984
- XL™ 600R 1983-1987
- XR™ 600R 1985-2000
- XR™ 650L 1993-2024

Spring Only Kit • High Performance



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-4081	Intake	.465"	1.210"	70#	210#	.465"
	Exhaust					

Kit Includes				
4	CrSi Valve Springs	4	H. T. Steel Shims

Cylinder Head Service Kit for XR™ 650L 1993-2024

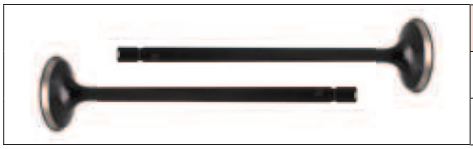
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33490	Intake	.465"	1.210"	70#	185#	.400"
	Exhaust					

Kit Includes					
4	In/ Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Shims
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
4	In / Ex Std. C630 Valve Guides	4	Intake / Exhaust Viton® Seals		
1	Top End Gasket Kit				

Components • Replacement • Cylinder Head Service Kit XR™ 650L 1993-2024

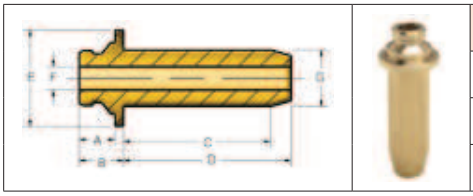
KPMI P/N	Description	Specification
30-30015	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
71018-4	Intake / Exhaust Seals	Valve Stem Seals • 6.5mm • Viton® (Pkg. of 4)
30-3003	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-3004	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
30-3050	Intake / Exhaust Standard Valve Guide	Valve Guide • C630 Bronze
30-33491	Gasket Kit	**Includes:** Head Gasket 103mm Bore (1), Base Gasket (1)

Valves • Black Diamond™ • Black Nitroneg Stems • Excluding XL™ 600R 1985-1987



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-3003	Intake	36.00mm	1.417"	0.2590"	23°	4.165"	Standard
30-3004	Exhaust	31.00mm	1.220"	0.2585"	29°	4.095"	Standard

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.300"	0.375"	1.240"	1.410"	0.808"	0.2585"	0.4755"/ Std.	30-3050	
						+0.002"	30-3052	
						+0.010"	30-3060	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.5mm	0.353"	0.560"	4	0.475"±0.005"	0.415"	0.115"	0.260"	Exhaust

Part Number	Quantity	Quantity Discount
71018-4	Pkg. of 4	0%
71018-8	Pkg. of 8	0%
71018-16	Pkg. of 16	Less- 10%
71018-50	Pkg. of 50	Less- 15%
71018-100	Pkg. of 100	Less- 20%

HONDA® TRX™ 700XX 2008-2009

Valve Spring Kit • Lightweight Racing

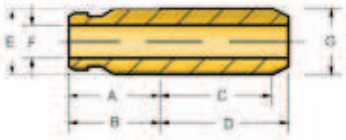
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-31350	Intake	.375"	1.220"	71#	180#	.375"
	Exhaust					

Kit Includes	4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-31362	Intake	36.00mm	1.417"	0.2590"	19º	4.025"	Standard
30-31363	Intake	37.00mm	1.457"	0.2590"	19º	4.025"	Oversize
30-31366	Exhaust	32.00mm	1.260"	0.2585"	19º	4.065"	Standard

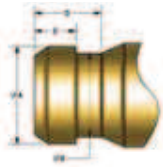
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.600"	0.600"	0.805"	1.075"	0.475"	0.2590"	0.4753"/ Std.	30-31370	
						+0.001"	30-31371	
						+0.002"	30-31372	
						+0.010"	30-31379	
0.600"	0.600"	1.000"	1.230"	0.475"	0.2590"	0.4753"/ Std.		30-31380
						+0.001"		30-31381
						+0.002"		30-31382
						+0.010"		30-31389

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.5mm	0.353"	0.560"	4	0.475"±0.005"	0.415"	0.115"	0.260"	Exhaust



Part Number	Quantity	Quantity Discount
71018-4	Pkg. of 4	0%
71018-8	Pkg. of 8	0%
71018-16	Pkg. of 16	Less- 10%
71018-50	Pkg. of 50	Less- 15%
71018-100	Pkg. of 100	Less- 20%

HONDA® VFR™ 750 49 STATE 1990-1997

Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-3075	Intake	.400"	1.290"	40#	137#	.400"
	Exhaust					

Kit Includes	16	CrSi Valve Springs	16	H. T. Steel Shims

HONDA® CB™ 750 SOHC 1969-1977

- Excluding F2/3™ Models

Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-0307	Intake	.485"	1.330"	95#	268#	.485"
	Exhaust					

Kit Includes	8	CrSi Valve Springs

ORDER 650-557-2046

HONDA® CB™ 750 SOHC 1969-1977

- Excluding F2/3™ Models

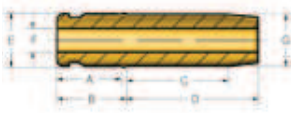
Retainer Set • Titanium

KPMI P/N	Type	Material	Quantity
30-0308	Intake	Titanium	Pkg. of 8
	Exhaust		

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-4186	Intake	32.00mm	1.260"	0.2590"	23°	4.020"	Standard
30-4188	Exhaust	28.00mm	1.102"	0.2585"	29°	4.020"	Standard

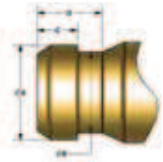
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.585"	0.635"	0.865"	1.135"	0.495"	0.2590"	0.4762" / Std.	30-0379	
						+0.002"	30-0380	
						+0.015"	30-4034	
0.585"	0.635"	0.925"	1.195"	0.495"	0.2585"	0.4762" / Std.		30-0383
						+0.002"		30-0384
						+0.015"		30-4035

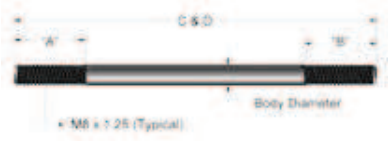
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.5mm	0.353"	0.560"	4	0.475"±0.005"	0.415"	0.115"	0.260"	Exhaust



Part Number	Quantity	Quantity Discount
71018-4	Pkg. of 4	0%
71018-8	Pkg. of 8	0%
71018-16	Pkg. of 16	Less- 10%
71018-50	Pkg. of 50	Less- 15%
71018-100	Pkg. of 100	Less- 20%

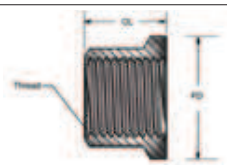
Cylinder Head Studs For CB™750 1969-1978



KPMI P/N	O. L. "C"	O. L. "D"	Body Dia.	A	B	Remarks
30-0800	6.299"	7.717"	0.309"	0.630"	0.787"	Standard
Includes	4	6.299" O.L. Studs		12	7.717" O.L. Studs	

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

12-Point Cylinder Head Nuts For CB™750 1969-1978

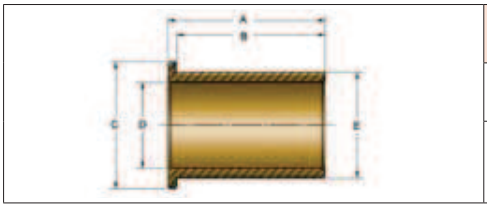


KPMI P/N	Material	O. L.	F. D.	Thread	Quantity
30-32300	H. T. Steel	0.385"	0.670"	M8 x 1.25	Pkg. of 16
41003-4	H. T. Steel	0.385"	0.670"	M8 x 1.25	Pkg. of 4
Designed for Honda CB750, but can be used for general purpose (see diagram for detail)					

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

HONDA® CB™ 750 SOHC 1969-1977

Swing Arm Bushing • Manganese Bronze For CB™750 1976-1979



KPMI P/N	Material	A	B	C	D	E	Quantity
30-0477	Manganese Bronze	1.550"	1.465"	Ø 1.250"	Ø 0.8435"	Ø 1.045"	1 Pr.

- Replaces worn or damaged plastic OEM bushing
- High quality manganese bronze offers increased durability and better fitment than OEM component
- **OEM P/N: 52108-457-300 & 52108-422-300**

HONDA® CB™ 750 SOHC F2/3 1977-'78

Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33000	Intake / Exhaust	.485"	1.460"	78#	248#	.485"
Kit Includes	8	CrSi Valve Springs				

Valves • Black Diamond™ • Black Nitroneg Stems

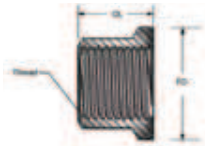
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-33012	Intake	34.00mm	1.339"	0.2590"	20º	3.960"	Standard
30-33016	Exhaust	31.00mm	1.220"	0.2585"	25º	3.935"	Standard

Cylinder Head Studs For CB™750 1969-1978

KPMI P/N	O. L. "C"	O. L. "D"	Body Dia.	A	B	Remarks
30-0800	6.299"	7.717"	0.309"	0.630"	0.787"	Standard
Includes	4	6.299" O.L. Studs		12	7.717" O.L. Studs	

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

12-Point Cylinder Head Nuts For CB™750 1969-1978



KPMI P/N	Material	O. L.	F. D.	Thread	Quantity
30-32300	H. T. Steel	0.385"	0.670"	M8 x 1.25	Pkg. of 16
41003-4	H. T. Steel	0.385"	0.670"	M8 x 1.25	Pkg. of 4
Designed for Honda CB750, but can be used for general purpose (see diagram for detail)					

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

HONDA® CB™ 750 DOHC 1979-1983

Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-1017	Intake / Exhaust `	.500"	1.390"	60#	185#	.400"
Kit Includes	16	CrSi Valve Springs				

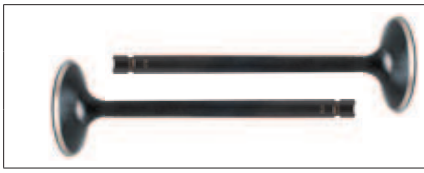
Retainer Set • Titanium

KPMI P/N	Type	Material	Quantity
30-1019	Intake / Exhaust	Titanium	Pkg. of 16
These retainers accept a 9.5mm OD shim and requires use of 30-1020 "Shim Under" style tappet. See adjustment shim section for available sizes.			

ORDER 650-557-2046

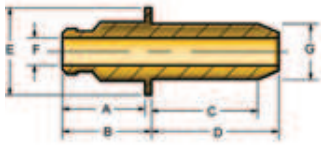
HONDA® CB™ 750 DOHC 1979-1983

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-4221	Intake	0.985"	25.02mm	0.2157"	23°	3.535"	Standard
30-4222	Exhaust	0.870"	22.10mm	0.2152"	29°	3.475"	Standard

Valve Guides • C630 Bronze



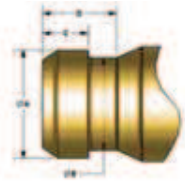
A	B	C	D	E	F	G	Intake	Exhaust
0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.	30-4071	
						+0.004"	30-4161	
						+0.015"	30-4162	

Tappets • Shim On Bottom Conv. • H.T. Steel

KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
30-1020	Intake	H. T. Steel	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 16
	Exhaust								
Requires use of Kibblewhite® "Shim Under" Style Retainer # 30-1019 (Pkg. of 16).									

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

HONDA® CBR™ 900RR 1993-1999

Spring Only Kit • High Performance

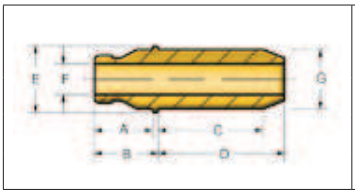
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-6068	Intake	.480"	1.270"	45#	135#	.400"
	Exhaust					
Kit Includes	16	CrSi Valve Springs				

Retainer Set • Titanium

KPMI P/N	Type	Material	Quantity
30-6067	Intake	Titanium	Pkg. of 16
	Exhaust		

HONDA® CBR™ 900RR 1993-1999

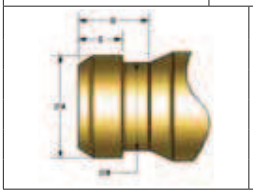
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.545"	0.570"	0.660"	0.780"	0.385"	0.1765"	0.3570" / Std.	30-30050	
						+0.001"	30-30051	
						+0.002"	30-30052	
						+0.010"	30-30059	

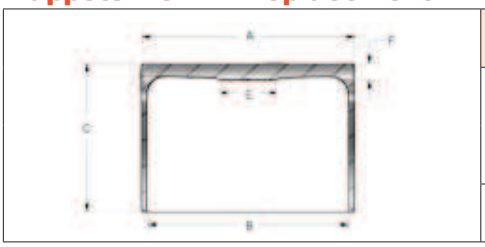
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

Tappets • O.E.M Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
30-30227	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 16
	Exhaust								
Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.									

HONDA® VARIOUS 900cc-1100cc 1980-'83

- CB™ 900/ 1000 / 1100F DOHC1980-1983

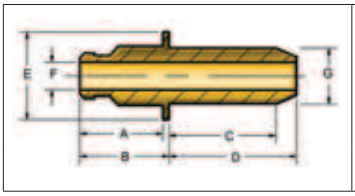
Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-1017	Intake	.500"	1.390"	60#	185#	.400"
	Exhaust					
Kit Includes	16	CrSi Valve Springs				

Retainer Set • Titanium

KPMI P/N	Type	Material	Quantity
30-1019	Intake	Titanium	Pkg. of 16
	Exhaust		
These retainers accept a 9.5mm OD shim and requires use of 30-1020 "Shim Under" style tappet. See adjustment shim section for available sizes.			

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.	30-4071	
						+0.004"	30-4161	
						+0.015"	30-4162	

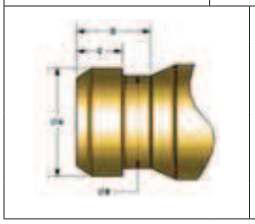
ORDER 650-557-2046

HONDA® VARIOUS 900cc-1100cc 1980-'83

- CB™ 900/ 1000 / 1100F DOHC1980-1983

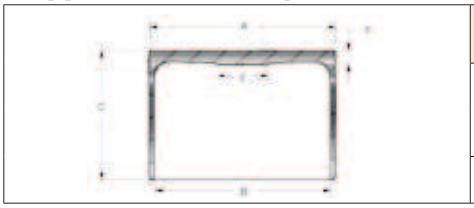
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Tappets • O.E.M Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
30-1020	Intake	H. T. Steel	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 16
	Exhaust								
Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.									

HONDA® VTR™ 1000 1998-2005

Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-4023	Intake	.520"	1.490"	55#	176#	.340"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			

HONDA® CBR™ 1000 2004-2005

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30760	Intake	.385"	1.320"	46#	140#	.385"
	Exhaust					

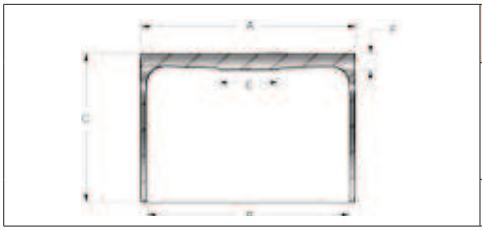
Kit Includes								
16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers			

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-30790	Intake	29.00mm	1.142"	0.1570"	10°	3.740"	Standard
30-30793	Exhaust	24.00mm	0.945"	0.1565"	20°	3.755"	Standard

HONDA® CBR™ 1000 2004-2005

Tappets • O.E.M Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
30-30766	Intake	H. T. Steel	26.00mm	1.0232"	0.970"	0.790"	0.255"	0.115"	Pkg. of 16
	Exhaust								
Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.									

HONDA® VARIOUS 1000's 2016-2022

- CRF™ 1000A/D 2017-2019
- Pioneer™ 1000 2016-2021
- Talon™ 1000X/R 2019-2022

Valve Spring Kit • Beehive Racing For CRF™ 1000A/D • Talon™ 1000X/R

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33800	Intake	.470"	1.425"	61#	196#	.470"
	Exhaust	.450"	1.405"	67#	196#	.450"

Kit Includes	8	CrSi Valve Springs	8	H. T. Steel Retainers	8	H. T. Steel Basewashers

Valve Spring Kit • High Performance " Turbo" Beehive Racing For CRF™ 1000A/D • Talon™ 1000X/R

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-33900	Intake	.430"	1.360"	80#	205#	.430"
	Exhaust					

Kit Includes	8	CrSi Valve Springs	8	H. T. Steel Retainers
	8	H. T. Steel Basewashers	4	H.T. Steel Shims

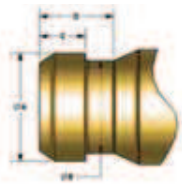
Valves • White Diamond® • Stainless • Inconel®

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material
30-33812H	Intake	36.50mm	1.437"	0.2158"	20º	3.675"	Stainless
	Standard						
30-33813H	Intake	37.50mm	1.476"	0.2158"	20º	3.675"	Stainless
	Oversize						
*30-33816K	Exhaust	31.00mm	1.220"	0.2153"	20°	3.775"	Inconel®
	Standard						
*30-33817K	Exhaust	32.00mm	1.260"	0.2153"	20°	3.775"	Inconel®
	Oversize						

*Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Intake
								Exhaust



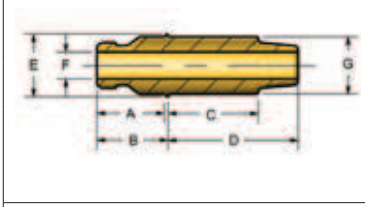
Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

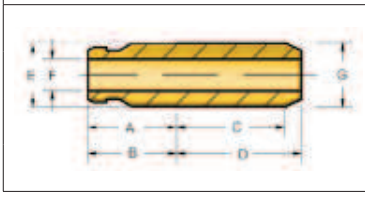
HONDA® VARIOUS 1000's 2016-2022

- CRF™ 1000A/D 2017-2019
- Pioneer™ 1000 2016-2021
- Talon™ 1000X/R 2019-2022

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.615"	0.615"	0.720"	1.040"	0.433"	0.2158"	0.4358"/ Std.	30-33820	
						+0.001"	30-33821	
						+0.002"	30-33822	
						+0.010"	30-33829	



A	B	C	D	E	F	G	Intake	Exhaust
0.615"	0.615"	0.845"	1.040"	0.433"	0.2153"	0.4358"/ Std.		30-33830
						+0.001"		30-33831
						+0.002"		30-33832
						+0.010"		30-33839

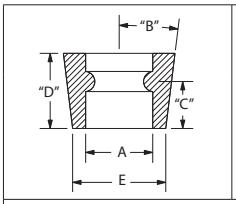
HONDA® CBR™ 1100XX-BLACKBIRD™ 1997-'03

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-30100	Intake	.405"	1.290"	66#	168#	.405"
	Exhaust					

Kit Includes	16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

Keeper Set • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
51025-16	Single Radius Bead	0.196"	7.0º	0.170"	0.205"	0.236"	16Pr.	14781-MAT-000

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

HONDA® CBX 6 CYLINDER 1979-1982

Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
30-1018	Intake	.500"	1.390"	60#	175	.400"
	Exhaust					

Kit Includes	24	CrSi Valve Springs

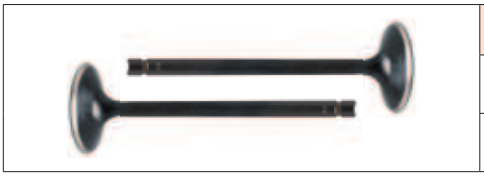
HONDA® CBX 6 CYLINDER 1979-1982

Retainer Set • Titanium

KPMI P/N	Type	Material	Quantity
30-1021	Intake	Titanium	Pkg. of 24
	Exhaust		

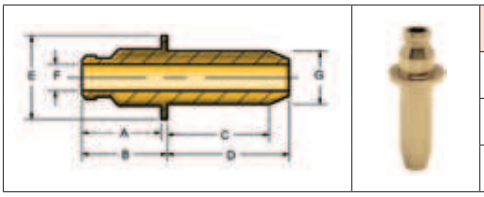
These retainers accept a 9.5mm OD shim and requires use of 30-1022 "Shim Under" style tappet. See adjustment shim section for available sizes.

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
30-4221	Intake	0.985"	25.02mm	0.2157"	23°	3.535"	Standard
30-4222	Exhaust	0.870"	22.10mm	0.2152"	29°	3.475"	Standard

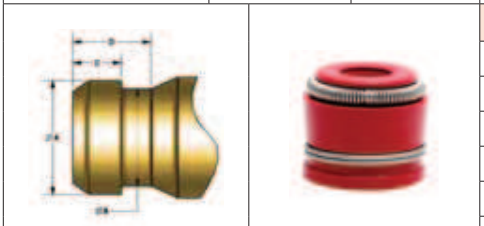
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.550"	0.650"	0.890"	1.050"	0.685"	0.2155"	0.4372" / Std.	30-4071	
						+0.004"	30-4161	
						+0.015"	30-4162	

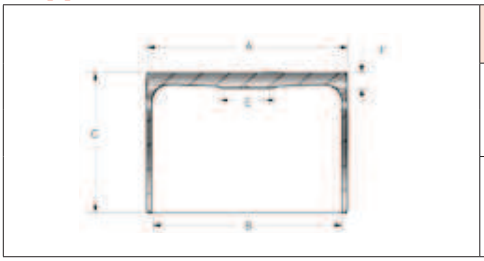
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-24	Pkg. of 24	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

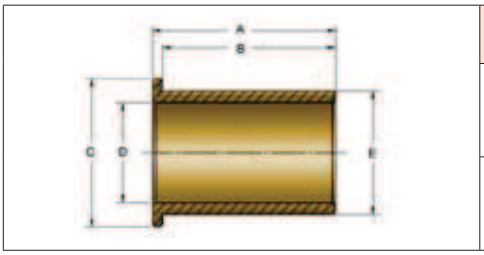
Tappets • Shim On Bottom Conv. • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
30-1022	Intake	H. T. Steel	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 24
	Exhaust								

Requires Shim on Bottom Retainers #30-1021 (Pkg. of 24). Retainers accept 9.5mm OD adjustment shim. See Kibblewhite® Adjustment Shim Section in back of catalog. See Kibblewhite® Adjustment Shim Section in back of catalog for more information.

Swing Arm Bushing • Manganese Bronze For CBX™ 1979



KPMI P/N	Material	A	B	C	D	E	Quantity
30-0477	Manganese Bronze	1.550"	1.465"	Ø 1.250"	Ø 0.8435"	Ø 1.045"	1 Pr.

- Replaces worn or damaged plastic OEM bushing
- High quality manganese bronze offers increased durability and better fitment than OEM component
- **OEM P/N: 52108-457 & 52108-422-300**

ORDER 650-557-2046

HUSQVARNA® VARIOUS 250cc 2014-2022

- FC™ 250 2014-2022
- FE™ 250 2014-2019

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
96-96412T	Intake	32.51mm	1.280"	0.1960"	15º	3.770"	Titanium	77736030000
96-96416T	Exhaust	26.55mm	1.045"	0.1955"	30º	3.875"	Titanium	77736031000

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

HUSQVARNA® VARIOUS 350cc 2016-2022

- FC™ 350 2016-2022
- FX™ 350 2017-2022

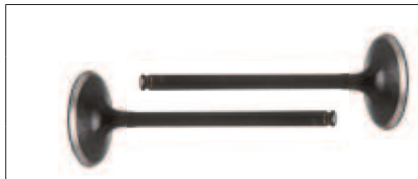
Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Setup For*	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96600	Titanium Valves	Intake	.470"	1.340"	55#	206#	.470"
		Exhaust					
	Stainless Valves	Intake	.455"	1.325"	60#	206#	.455"
		Exhaust					

Kit Includes				
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Basewashers	4	H. T. Steel Shims*

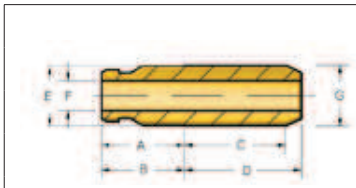
*Kit includes spring shims intended to be used when running Stainless Valves

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
96-96612	Intake	36.00mm	1.417"	0.2159"	14º	3.420"	Standard
96-96616	Exhaust	29.15mm	1.148"	0.2154"	28º	3.505"	Standard

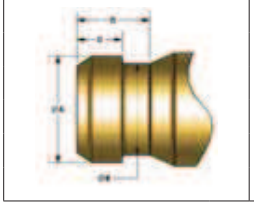
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.465"	0.465"	0.835"	1.035"	0.433"	0.2154"	0.4352" / Std.	96-96620	
						+0.001"	96-96621	
						+0.002"	96-96622	
						+0.010"	96-96629	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.315"	0.455"	5	0.325"±0.002"	0.310"	0.110"	0.220"	Exhaust



Part Number	Quantity	Quantity Discount
71042-4	Pkg. of 4	0%
71042-8	Pkg. of 8	0%
71042-16	Pkg. of 16	Less- 10%
71042-50	Pkg. of 50	Less- 15%
71042-100	Pkg. of 100	Less- 20%

HUSQVARNA® 350 / 410 1991-2000

Valve Spring Kit • Lightweight Racing

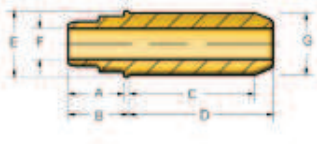
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
93-93020	Intake	.400"	1.210"	74#	189#	.400"
	Exhaust					

Kit Includes							
4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
93-93011	Exhaust	27.00mm	1.063"	0.2347"	29º	4.020"	Standard

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.430"	0.465"	0.970"	1.110"	0.510"	0.2350"	0.4750" / Std.	93-93000	
						+0.010"	93-93009	

Use O.E.M. valve guide seal.

HUSQVARNA® VARIOUS 510-610cc 1983-2001

- TX™ 510 1983-'88
- TE™ 510 1983-'90
- TC™ 510 1987-'90
- WXE™ 610 1991-'96
- WMX™ 610 1991
- TE™ 610 1992- '98
- TC™ 610 1992-'98
- WXC™ 610 1992-'96
- SM™ 610 R 2000-2001

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
93-93012	Intake	35.00mm	1.378"	0.2352"	23º	3.970"	Standard
93-93014	Exhaust	30.00mm	1.181"	0.2347"	29º	3.970"	Standard

Valve Guides • C630 Bronze

A	B	C	D	E	F	G	Intake	Exhaust
0.430"	0.465"	0.970"	1.110"	0.510"	0.2350"	0.4750" / Std.	93-93000	
						+0.010"	93-93009	

Use O.E.M. valve guide seal.

HUSQVARNA® VARIOUS 450'S 2014-2018

- FS 450 2017-2018
- FX 450 2017
- FC 450 2014-2018

Valve Spring Kit • Beehive Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96500	Intake	.435"	1.360"	80#	205#	.435"
	Exhaust					

Kit Includes							
2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H. T. Steel Basewashers	2	In H. T. Steel Shims
2	Ex CrSi Valve Springs	2	Ex Titanium Retainers	2	Ex H. T. Steel Basewashers	--	Ex H. T. Steel Shims

ORDER 650-557-2046

HUSQVARNA® VARIOUS 450'S 2014-2018

- FS 450 2017-2018
- FX 450 2017
- FC 450 2014-2018

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96540	Intake	.435"	1.360"	80#	205#	.435"

Kit Includes						
2	CrSi Valve Springs	2	Titanium Retainers	2	H. T. Steel Basewashers	
2	Black Diamond™ Valves	2	H.T. Steel Shims			

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
96-96512	Intake	39.93mm	1.572"	0.2358"	15º	3.675"	Standard
96-96516	Exhaust	33.15mm	1.305"	0.2353"	30º	3.645"	Standard

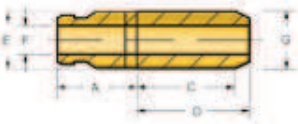
You must use **KPMI® Spring Kit 96-96500** when installing Black Diamond™ Valves

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
96-96512T	Intake	39.93mm	1.572"	0.2358"	15º	3.675"	Titanium	78936030100
96-96516T	Exhaust	33.15mm	1.305"	0.2353"	30º	3.645"	Titanium	78936031000

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

Valve Guides • C630 Bronze

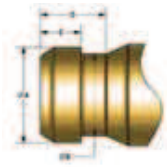


*A	*C	*D	E	F	G	Intake	Exhaust
0.555"	0.945"	1.140"	0.433"	0.2353"	0.4352" / Std.	96-96520	
					+0.001"	96-96521	
					+0.002"	96-96522	
					+0.010"	96-96529	
0.635"	0.865"	1.060"	0.433"	0.2353"	0.4352" / Std.		96-96520
					+0.001"		96-96521
					+0.002"		96-96522
					+0.010"		96-96529

*Note: One guide design installs at two different heights depending on Intake or Exhaust usage. You must install to lower line for exhaust and upper line for intake.

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.315"	0.520"	5	0.435"±0.002"	0.395"	0.120"	0.210"	Exhaust



Part Number	Quantity	Quantity Discount
71029-4	Pkg. of 4	0%
71029-8	Pkg. of 8	0%
71029-16	Pkg. of 16	Less- 10%
71029-50	Pkg. of 50	Less- 15%
71029-100	Pkg. of 100	Less- 20%

HUSQVARNA® VARIOUS 450-510cc 2006-'08

- TE/ TC/ TXC 450-510
- SM 450R-510R
- SM 450RR 2006

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
93-93050	Intake	.440"	1.350"	50#	160#	.440"
	Exhaust	.440"	1.390"	40#	150#	.440"

Kit Includes						
4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers	

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
93-93062	Intake	37.00mm	1.457"	0.2160"	20º	3.955"	Standard
93-93066	Exhaust	31.00mm	1.220"	0.1958"	20º	3.565"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

INDIAN® CHALLENGERS(ALL) 2020-2024

Valve Spring Kit • Lightweight Racing NEW PRODUCTS

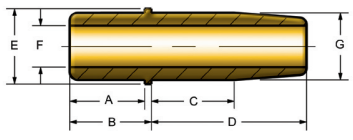
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-85000	Intake	.520"	1.465"	100#	231#	.520"
	Exhaust					

Kit Includes			
8	H.T. Steel Retainers	8	CrSi Valve Springs
8	H.T. Steel Basewashers	8	Red Viton® Seals

Valves • White Diamond® • EV8 or Inconel® NEW PRODUCTS

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-85012H	Intake	43.00mm	1.693"	0.2735"	16º	4.835"	Standard EV8
82-85016K	Exhaust	36.00mm	1.417"	0.2730"	20º	4.805"	Standard Inconel®

Valve Guides • Manganese Bronze NEW PRODUCTS



A	B	C	D	E	F	G	Intake	Exhaust
0.490"	0.590"	0.920"	1.225"	0.495"	0.2735"	0.4350" / Std.	82-85020M	
						+0.001"	82-85021M	
						+0.002"	82-85022M	
						+0.010"	82-85029M	
0.490"	0.590"	1.350"	1.460"	0.495"	0.2735"	0.4350" / Std.		82-85030M
						+0.001"		82-85031M
						+0.002"		82-85032M
						+0.010"		82-85039M

These Manganese guides are easily reamed, and then can be delicately finished with our high quality ball hones. Now, with any battery operated or electric drill you can ream and hone manganese valve guides in less time and in the absence of expensive honing equipment required to properly size “tough” Nickel Bronze guides.

ORDER 650-557-2046

INDIAN® SCOUT™ 4V 1200's 2015-2024

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83600	Intake	.450"	1.375"	65#	200#	.450"
	Exhaust					

Kit Includes				
8	Titanium Retainers	8	CrSi Valve Springs	
8	H.T. Steel Basewashers	8	Viton® Seals	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83650	Intake	.450"	1.375"	64#	181#	.450"
	Exhaust					

Kit Includes				
8	Titanium Retainers	8	CrSi Valve Springs	
8	H.T. Steel Basewashers	8	Viton® Seals	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83700	Intake	.450"	1.375"	65#	200#	.450"
	Exhaust					

Kit Includes				
8	H.T. Steel Retainers	8	CrSi Valve Springs	
8	H.T. Steel Basewashers	8	Viton® Seals	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83750	Intake	.450"	1.375"	64#	181#	.450"
	Exhaust					

Kit Includes				
8	H.T. Steel Retainers	8	CrSi Valve Springs	
8	H.T. Steel Basewashers	8	Viton® Seals	

1) These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below.
2) The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides.

Valve Spring Kit • Beehive Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83800	Intake	.435"	1.360"	80#	205#	.435"
	Exhaust					

Kit Includes						
8	H.T. Steel Retainers	8	CrSi Valve Springs	8	Viton® Seals	

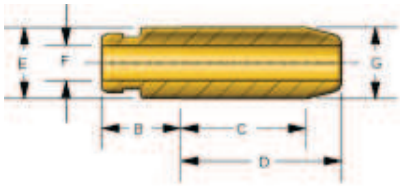
1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets
2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)
3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-83612	Intake	37.72mm	1.485"	0.2160"	17°	3.775"	Standard
82-83613	Intake	38.72mm	1.524"	0.2160"	17°	3.775"	Oversize
82-83616	Exhaust	32.44mm	1.277"	0.2155"	25°	3.815"	Standard
82-83617	Exhaust	33.44mm	1.317"	0.2155"	25°	3.815"	Oversize

INDIAN® SCOUT™ 4V 1200's 2015-2024

Valve Guides • Manganese Bronze

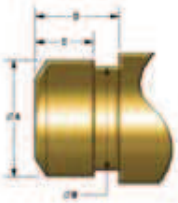


A	B	C	D	E	F	G	Intake	Exhaust
---	0.455"	0.755"	0.940"	0.433"	0.2160'	0.4353" / Std.	82-83620	
						+0.001"	82-83621	
						+0.002"	82-83622	
						+0.010"	82-83629	
---	0.455"	1.090"	1.190"	0.433"	0.2155'	0.4353" / Std.		82-83630
						+0.001"		82-83631
						+0.002"		82-83632
						+0.010"		82-83639

Note: These guides are compatible with both KPMI® Seal #71016-X and the OEM Replacement Tophat Seals #71048-XX

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust

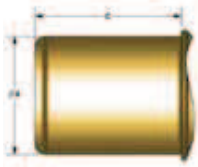


Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

These seals are not OEM replacement seals, they are designed to work with KPMI® valve guides **in conjunction** with KPMI® dual spring kits.

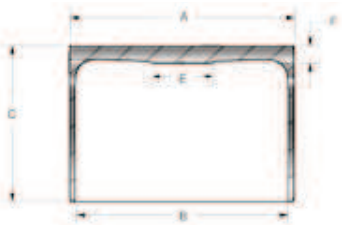
Valve Guide Seals • OEM Replacement • Tophat

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
				A	B	C		Intake	
5.5mm	0.630"	1.043"	3	0.435"±0.005"	---	0.480"	0.697"	Exhaust	3610212



Part Number	Quantity	Quantity Discount
71048-4	Pkg. of 4	0%
71048-8	Pkg. of 8	0%
71048-16	Pkg. of 16	Less- 10%
71048-50	Pkg. of 50	Less- 15%
71048-100	Pkg. of 100	Less- 20%

Tappets • Shim On Bottom Conv. • H.T. Steel



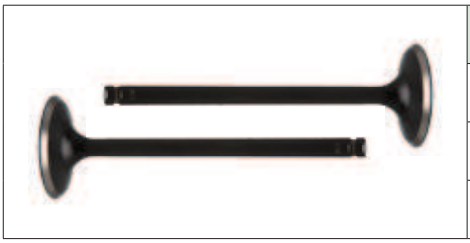
KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
82-83640	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								
*82-83645	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								

* Our tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system. DLC coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications. For complete shim range visit www.kpmi.us or Tappets section in back of catalog.

ORDER 650-557-2046

KAWASAKI® MOJAVE™ 1987-2004

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-4190	Intake	29.00mm	1.142"	0.2155"	20º	3.510"	Standard
40-4192	Exhaust	24.50mm	0.965"	0.2150"	25º	3.430"	Standard
40-4193	Exhaust	25.00mm	0.984"	0.2150"	25º	3.440"	Oversize

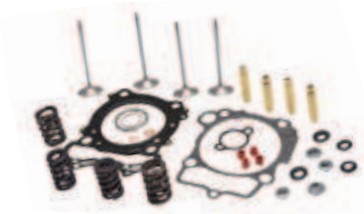
KAWASAKI® KX250F™ 2004-2016

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40100	Intake	.445"	1.320"	46#	155#	.445"
	Exhaust					

Kit Includes						
4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers	

Cylinder Head Service Kit for KX250F™ 2004-2006



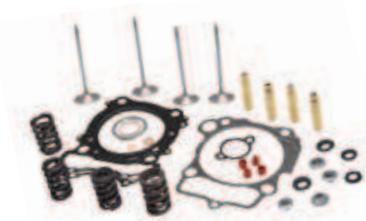
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-41500	Intake	.445"	1.320"	46#	155#	.445"
	Exhaust					

Kit Includes					
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves		
4	In/ Ex Std. C674 Valve Guides	1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit for KX250F™ 2004-2006

KPMI P/N	Description	Specification
40-40100	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40140H	Intake, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
40-40143H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
40-40120	Intake / Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
40-41501	Gasket Kit	**Includes:** Head Gasket 77mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seal (4)

Cylinder Head Service Kit for KX250F™ 2007-2008



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-41510	Intake	.445"	1.320"	46#	155#	.445"
	Exhaust					

Kit Includes					
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves		
2	In Std. C674 Valve Guides	2	Ex Std. C674 Valve Guides		
1	Top End Gasket Kit				

KAWASAKI® KX250F™ 2004-2016

Components • Replacement • Cylinder Head Service Kit for KX250F™ 2007-2008

KPMI P/N	Description	Specification
40-40100	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40140H	Intake, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
40-40143H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
40-40520	Intake, Standard Valve Guide	Valve Guide • C674 Bronze
40-40120	Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
40-41511	Gasket Kit	**Includes:** Head Gasket 77mm, Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seal (4)

Cylinder Head Service Kit for KX250F™ 2009-2016

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-41520	Intake / Exhaust	.445"	1.320"	46#	155#	.445"

Kit Includes						
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves			
2	In Std. C674 Valve Guides	2	Ex Std. C674 Valve Guides			
1	Top End Gasket Kit					

Components • Replacement • Cylinder Head Service Kit for KX250F™ 2009-2016

KPMI P/N	Description	Specification
40-40100	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40140H	Intake, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
40-40143H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
40-40520	Intake, Standard Valve Guide	Valve Guide • C674 Bronze
40-40120	Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
40-41521	Gasket Kit	**Includes:** Head Gasket 77mm, Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seal (4)

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40350	Intake	.445"	1.320"	46#	155#	.445"

Kit Includes				
2	CrSi Valve Springs	2	Titanium Retainers	
2	White Diamond® Valves	2	H. T. Steel Basewashers	

Valves • White Diamond® • Hard Chrome Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-40140H	Intake	31.00mm	1.220"	0.1765"	20º	3.120"	Standard
40-40143H	Exhaust	25.00mm	0.985"	0.1756"	25º	3.125"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing White Diamond® Valves.

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

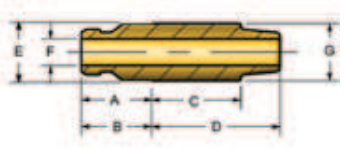
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
40-40140T	Intake	31.00mm	1.220"	0.1765"	20º	3.120"	Titanium	12004-0033
40-40143T	Exhaust	25.00mm	0.985"	0.1756"	25º	3.125"	Titanium	12005-0002

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

ORDER 650-557-2046

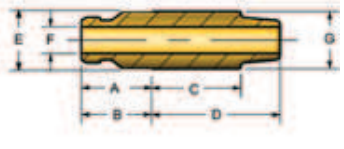
KAWASAKI® KX250F™ 2004-2016

Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.465"	0.465"	0.565"	0.870"	0.374"	0.1765"	0.3765" / Std.	40-40520	
						+0.010"	40-40529	

Note: **#40-40520** - Recommended for **2007-2016** model only

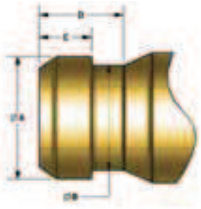


0.440"	0.465"	0.590"	0.850"	0.410"	0.1765"	0.3765" / Std.	40-40120
						+0.010"	40-40129

Note: #40-40120 - Recommended for Intake 2004-2006 model only and Exhaust 2004-2016 all model.

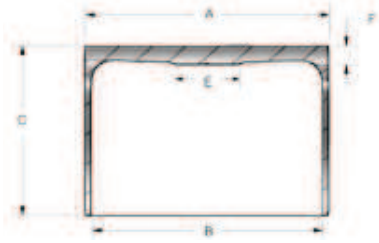
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

Tappets • O.E.M. Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
40-40106	Intake	H. T. Steel	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 2

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

KAWASAKI® KX250F™ 2017-2019

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-41400	Intake	.415"	1.315"	65#	181#	.415"
	Exhaust	.415"	1.310"	49#	155#	.415"

Kit Includes						
2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H. T. Steel Basewashers
2	Ex CrSi Valve Springs	2	Ex Titanium Retainers	2	Ex H. T. Steel Basewashers

KAWASAKI® KX250F™ 2017-2019

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-41450	Intake	.415"	1.315"	65#	181#	.415"

Kit Includes				
2	CrSi Valve Springs	2	Titanium Retainers
2	White Diamond® Valves	2	H. T. Steel Basewashers

Valves • White Diamond® • Hard Chrome Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-41412H	Intake	31.00mm	1.220"	0.1764"	20º	3.460"	Standard
40-41416H	Exhaust	25.00mm	0.984"	0.1759"	25º	3.170"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing White Diamond® Valves.

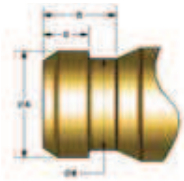
Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
40-41412T	Intake	31.00mm	1.220"	0.1764"	20º	3.465"	Titanium	12004-0741
40-41416T	Exhaust	25.00mm	0.984"	0.1759"	25º	3.165"	Titanium	12005-0761

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

KAWASAKI® KX250F (&F/ X/ XC)™ 2020-'24

Valve Spring Kit • Lightweight High-Lift Racing

NEW PRODUCTS

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-41600	Intake	.450"	1.325"	60#	204#	.450"
	Exhaust	.450"	1.340"	50#	165#	.450"

Kit Includes						
2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H.T. Steel Basewashers
2	Ex CrSi Valve Springs	2	Ex Titanium Retainers	2	Ex H.T. Steel Basewashers

ORDER 650-557-2046

KAWASAKI® KX250F (&F/ X/ XC)™ 2020-'24

Intake Only • Steel Valve Conversion Kit For KX250F (&F/X/ XC) 2020-'22 Only

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-41650	Intake	.450"	1.325"	60#	204#	.450"

Kit Includes				
2	CrSi Valve Springs	2	Titanium Retainers
2	White Diamond® Valves	2	H. T. Steel Basewashers

Valves • White Diamond® • Hard Chrome Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
*40-41612H	Intake	32.00mm	1.260"	0.1764"	10º	3.380"	Standard
40-41616H	Exhaust	26.50mm	1.043"	0.1759"	25º	3.195"	Standard

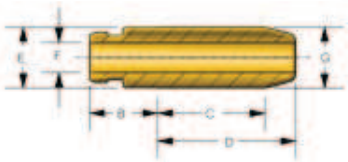
*Note : KX250F (&F/X/ XC) 2020-'22 Only
You must use KPMI® Spring Kit 40-41600 When installing White Diamondl® Valves

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
*40-41612T	Intake	32.00mm	1.260"	0.1764"	10º	3.380"	Titanium	12004-0768
40-41616T	Exhaust	26.50mm	1.043"	0.1759"	23º	3.195"	Titanium	12005-0794

*Note : KX250F (&F/X/ XC) 2020-'22 Only
These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

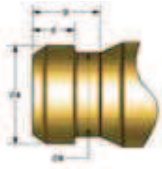
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
---	0.460"	0.655"	1.015"	0.374"	0.1764"	0.3765" / Std.	40-41620	
						+0.010"	40-41629	
---	0.495"	0.620"	0.790"	0.374"	0.1759"	0.3765" / Std.		40-41630
						+0.010"		40-41639

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

KAWASAKI® KLX™ 300R/ 250R/ S/ SF 1994-'14

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40008	Intake	.440"	1.245"	49#	156#	.440"
	Exhaust					

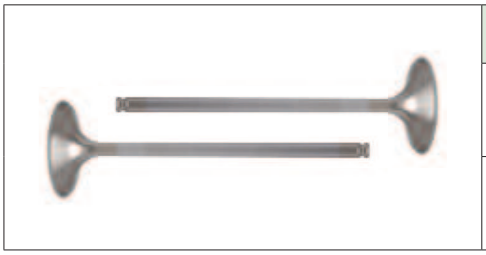
Kit Includes				
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Basewashers	4	H. T. Steel Shims

Valve Spring Kit • High Performance for O.E.M. Retainers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-4431	Intake	.430"	1.245"	51#	155#	.430"
	Exhaust					

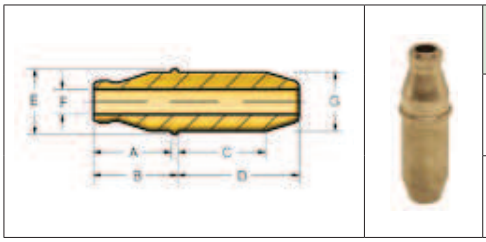
Kit Includes					
4	CrSi Valve Springs	4	H. T. Steel Basewashers	4	H. T. Steel Shims

Valves • White Diamond® • Hard Chrome Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-4372H	Intake	29.00mm	1.142"	0.1765"	20º	3.360"	Standard
40-4373H	Exhaust	25.00mm	0.895"	0.1760"	20º	3.375"	Standard

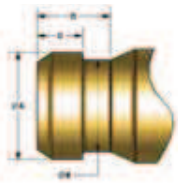
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.560"	0.595"	0.620"	0.855"	0.460"	0.1760'	0.4165" / Std.	40-4420	
						+0.010"	40-4430	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

KAWASAKI® KLX™/ KFX™ 400 2001-'06

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40148	Intake	.440"	1.205"	57#	171#	.440"
	Exhaust					

Kit Includes	4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers

Valves • White Diamond® • Hard Chrome Stems

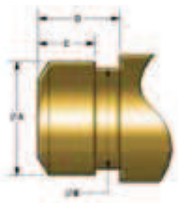
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-40188H	Intake	36.00mm	1.417"	0.1960"	20º	3.245"	Standard
40-40189H	Intake	37.00mm	1.457"	0.1960"	20º	3.245"	Oversize
40-40191H	Exhaust	29.00mm	1.142"	0.1953"	17º	3.210"	Standard
40-40192H	Exhaust	30.00mm	1.181"	0.1953"	17º	3.210"	Oversize

Valve Guides • C674 Bronze

A	B	C	D	E	F	G	Intake	Exhaust
0.390"	0.430"	0.570"	0.770"	0.466"	0.1960'	0.4167" / Std.	40-40170	
						+0.010"	40-40179	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.0mm	0.350"	0.405"	4	A	B	C	D	Intake
				0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

For all the applications available for Kibblewhite®'s Kawasaki® line of products, please refer online to the Kawasaki® section of the ***www.kpmi.us*** website, under ***ATV/ UTV and Dirt Bike***.

KAWASAKI® KLX 450R™ 2008-2020

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40700	Intake	.415"	1.325"	50#	155#	.415"
	Exhaust	.415"	1.215"	50#	144#	.415"

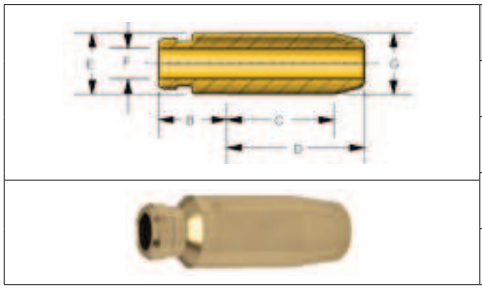
Kit Includes						
2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-40712	Intake	35.00mm	1.378"	0.2158"	20º	3.280"	Standard
40-40713	Intake	36.00mm	1.417"	0.2158"	20º	3.280"	Oversize
40-40716	Exhaust	30.00mm	1.181"	0.2150"	20º	3.230"	Standard
40-40717	Exhaust	31.00mm	1.221"	0.2150"	20º	3.230"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

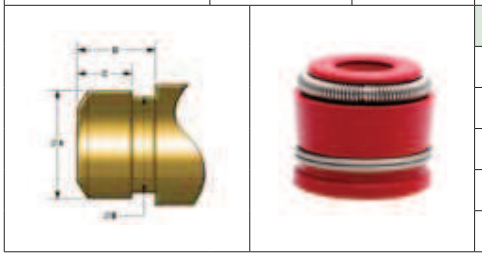
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
---	0.390"	0.550"	0.895"	0.434"	0.2150'	0.4365" / Std.	40-40720	
						+0.001"	40-40721	
						+0.002"	40-40722	
						+0.010"	40-40729	

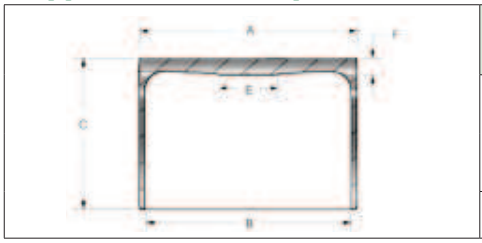
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Tappets • O.E.M. Replacement • H.T. Steel



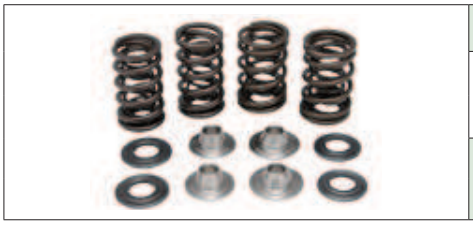
KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
40-40742	Intake	None	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4
	Exhaust								

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

ORDER 650-557-2046

KAWASAKI® KX 450F™ 2006-2008

Valve Spring Kit • Lightweight High-Lift Racing



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40300	Intake	.415"	1.325"	51#	155#	.415"
	Exhaust	.415"	1.215"	52#	146#	.415"

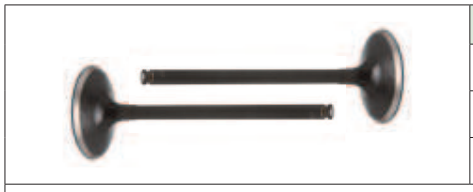
Kit Includes						
2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40360	Intake	.415"	1.325"	51#	155#	.415"

Kit Includes			
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

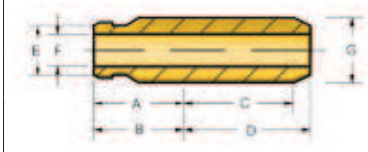
Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-40312	Intake	36.00mm	1.417"	0.2158"	20º	3.280"	Standard
40-40313	Intake	37.00mm	1.457"	0.2158"	20º	3.280"	Oversize
40-40316	Exhaust	31.00mm	1.220"	0.2150"	20º	3.230"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

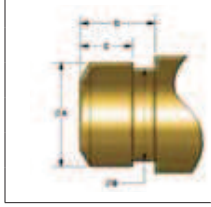
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.390"	0.390"	0.550"	0.895"	0.434"	0.2150'	0.4365" / Std.	40-40320	
						+0.001"	40-40321	
						+0.002"	40-40322	
						+0.010"	40-40329	

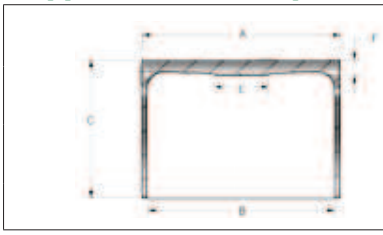
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Tappets • O.E.M. Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
40-40342	Intake	None	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4
	Exhaust								

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

KAWASAKI® KX 450F™ 2009-2016

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40660	Intake	.415"	1.290"	64#	169#	.415"
	Exhaust	.415"	1.240"	65#	170#	.415"

Kit Includes						
2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

Cylinder Head Service Kit for KX 450F™ 2009-2015

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-41470	Intake	.415"	1.290"	64#	169#	.415"
	Exhaust	.415"	1.240"	65#	170#	.415"

Kit Includes					
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
4	In / Ex Std. C630 Valve Guides	1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit for KX 450F™ 2009-2015

KPMI P/N	Description	Specification
40-40660	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40652	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
40-40656	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
40-40670	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
40-41471	Gasket Kit	**Includes:** Head Gasket 96.5mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Tensioner Gasket (1), Spark Plug O-Ring (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seals (4)

Cylinder Head Service Kit for KX 450F™ 2016

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-41480	Intake	.415"	1.290"	64#	169#	.415"
	Exhaust	.415"	1.240"	65#	170#	.415"

Kit Includes					
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
4	In / Ex Std. C630 Valve Guides	1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit for KX 450F™ 2016

KPMI P/N	Description	Specification
40-40660	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
40-40652	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
40-40656	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
40-40670	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
40-41481	Gasket Kit	**Includes:** Head Gasket 96.5mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Tensioner Gasket (1), Spark Plug O-Ring (1), Cam Chain Tensioner O-Ring (1), Valve Stem Seals (4)

ORDER 650-557-2046

KAWASAKI® KX 450F™ 2009-2016

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40380	Intake	.415"	1.290"	64#	169#	.415"

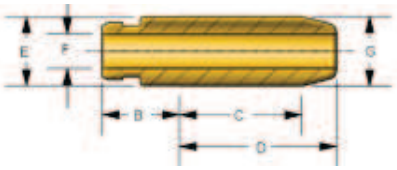
Kit Includes				
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-40652	Intake	35.99mm	1.417"	0.2155"	20º	3.080"	Standard
40-40656	Exhaust	31.01mm	1.221"	0.2150"	20º	3.030"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

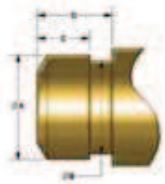
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
---	0.380"	0.525"	0.760"	0.434"	0.2150'	0.4365" / Std.	40-40670	
						+0.001"	40-40671	
						+0.002"	40-40672	
						+0.010"	40-40679	

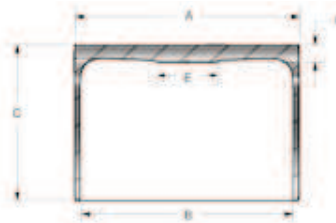
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Tappets • O.E.M. Replacement • H.T. Steel

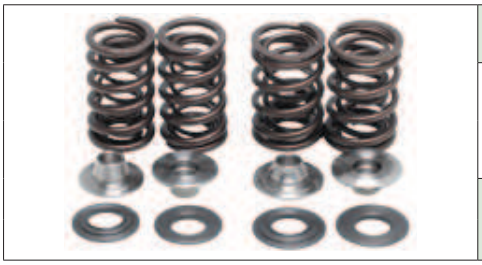


KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
40-40690	Intake	H. T. Steel	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4
	Exhaust								

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

KAWASAKI® KFX 450R™ 2008-2014

Valve Spring Kit • Lightweight High-Lift Racing



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40550	Intake	.415"	1.325"	51#	155#	.415"
	Exhaust	.415"	1.215"	52#	146#	.415"

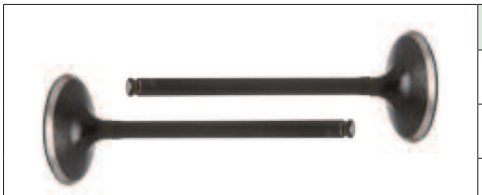
Kit Includes						
2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40950	Intake	.415"	1.325"	51#	155#	.415"

Kit Includes					
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

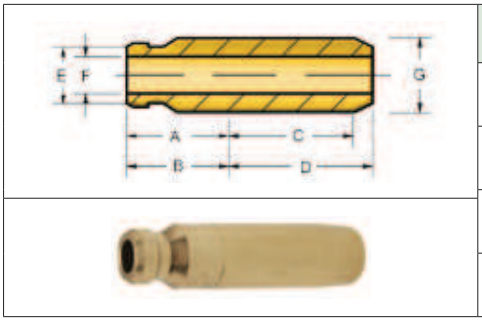
Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-40562	Intake	36.00mm	1.417"	0.2158"	20º	3.280"	Standard
40-40563	Intake	37.00mm	1.457"	0.2158"	20º	3.280"	Oversize
40-40566	Exhaust	31.00mm	1.221"	0.2150"	20º	3.230"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

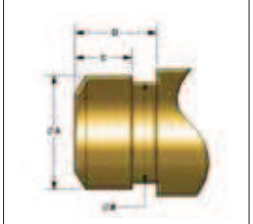
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.390"	0.390"	0.550"	0.895"	0.434"	0.2150'	0.4365" / Std.	40-40570	
						+0.001"	40-40571	
						+0.002"	40-40572	
						+0.010"	40-40579	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust

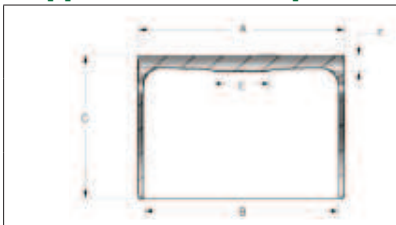


Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

KAWASAKI® KFX 450R™ 2008-2014

Tappets • O.E.M. Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
40-40592	Intake	None	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 4
	Exhaust								

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

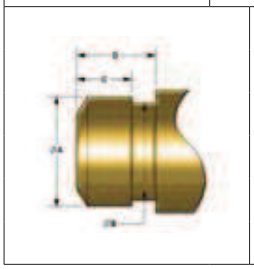
KAWASAKI® NINJA 500R™ 1987-2009

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-4190	Intake	29.00mm	1.142"	0.2155"	20º	3.510"	Standard
40-4192	Exhaust	24.50mm	0.965"	0.2150"	25º	3.430"	Standard
40-4193	Exhaust	25.00mm	0.984"	0.2150"	25º	3.440"	Oversize

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
5.5mm	0.320"	0.440"	4	A	B	C	D	Intake
				0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

KAWASAKI® KLR™ 600 / 650 1984-2010

Valve Spring Kit • High Performance for O.E.M. Retainers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-4350	Intake	.460"	1.205"	75#	175#	.460"
	Exhaust					

Kit Includes	4	CrSi Valve Springs	4	H. T. Steel Basewashers

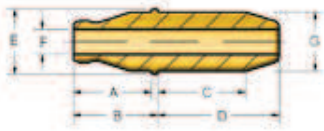
KAWASAKI® NINJA™ 650R / VERSYS 2006-'16

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40800	Intake	.400"	1.215"	39#	136#	.400"
	Exhaust					

Kit Includes	8	CrSi Valve Springs	8	Titanium Retainers	8	H. T. Steel Basewashers

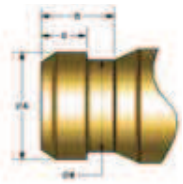
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-40820	
						+0.010"	40-40829	

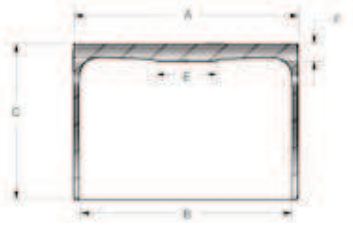
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

Tappets • O.E.M. Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
40-40807	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 8
	Exhaust								

NOTE: Shims of less than 1.90mm may cause clearance issues between tappet and retainer. Always check clearances before installing smaller than O.E.M. shims. Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

For all the applications available for Kibblewhite's Kawasaki® line of products,
please refer online to the Kawasaki® section of the ***www.kpmi.us*** website, under ***Sport Bike.***

ORDER 650-557-2046

KAWASAKI® KZ™ 650 / 750 1976-1985

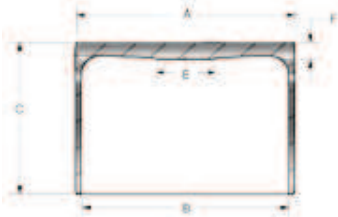
Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-0893	Intake	.500"	1.330"	90#	268#	.500"
	Exhaust					
Kit Includes	8	CrSi Valve Springs				

Retainer Set • O.E.M. Replacement • Titanium

KPMI P/N	Type	Material	Quantity
40-1008	Intake	Titanium	Pkg. of 8
	Exhaust		

Tappets • Shim On Bottom Conv. • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
40-1013	Intake	None	33.00mm	1.298"	1.235"	1.025"	0.340"	0.115"	Pkg. of 8
	Exhaust								
Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.									

KAWASAKI® VARIOUS 2005-2013

- KFX™ 700 • 2005-'09
- Brute Force™ 650 • 2005-'13
- Brute Force™ 650I • 2006-'12
- Prairie™ 700 • 2005-'06
- Brute Force™ 750I • 2005-'12
- Teryx™ 750 • 2008-'12 (Excluding Teryx 4)

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40400	Intake	.500"	1.400"	59#	210#	.500"
	Exhaust					

Kit Includes				
8	CrSi Valve Springs	8	Titanium Retainers	
8	H. T. Steel Basewashers	8	H. T. Steel Shims	

KPMI® Guides must be installed when using cams greater than .430" valve lift.

Valves • Black Diamond™ • Black Nitroneg Stems

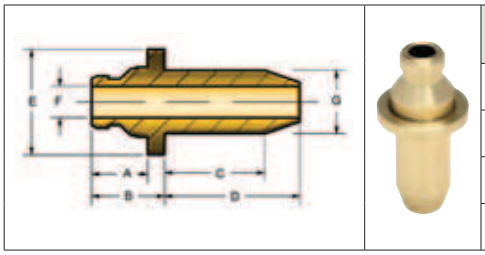
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-40412	Intake	30.00mm	1.181"	0.1960"	10°	3.610"	Standard
40-40413	Intake	31.00mm	1.220"	0.1960"	10°	3.610"	Oversize
40-40416	Exhaust	26.00mm	1.024"	0.1955"	10°	3.655"	Standard
40-40417	Exhaust	27.00mm	1.063"	0.1955"	10°	3.655"	Oversize

Custom oversize's available +3 and +4 mm, call for availability.

KAWASAKI® VARIOUS 2005-2013

- KFX™ 700 • 2005-'09
- Brute Force™ 650 • 2005-'13
- Brute Force™ 650I • 2006-'12
- Prairie™ 700 • 2005-'06
- Brute Force™ 750I • 2005-'12
- Teryx™ 750 • 2008-'12 (Excluding Teryx 4)

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.450"	0.550"	0.590"	0.790"	0.675"	0.1955"	0.4161" / Std.	40-40420	
						+ 0.001"	40-40421	
						+ 0.002"	40-40422	
						+0.010"	40-40429	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust

Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

KAWASAKI® KLX™ 650 / 650R 1993-'96

Valve Spring Kit with Shim Under Conversions • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40051	Intake	.450"	1.195"	77#	207#	.450"
	Exhaust					

Kit Includes							
4	CrSi Valve Springs	4	H. T. Steel Keepers	4	Titanium Retainers		
4	H. T. Steel Basewashers	4	H. T. Steel Tappets	4	Adj. Shims		

To prevent high lift cams from spitting shims, Kibblewhite® recommends using shim under tappets for cams with over 0.400" lift. See Kibblewhite® Tappet Section in back of catalog.

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-4349	Intake	.400"	1.200"	75#	191#	.400"
	Exhaust					

Kit Includes							
4	CrSi Valve Springs	4	Titanium Retainers	4	H. T. Steel Basewashers		

ORDER 650-557-2046

KAWASAKI® KLX™ 650 / 650R 1993-'96

Valve Spring Only Kit • High Performance for O.E.M. Retainers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-4089	Intake	.450"	1.380"	75#	175#	.450"
	Exhaust					
Kit Includes	4	CrSi Valve Springs				

KAWASAKI® VARIOUS 650 / 750 / 800 2012-'20

- Brute Force 650 4x4 / 4x4i • 2013
- Brute Force 750 4x4i • 2013-2018
- Teryx™ • 2013-2020
- Teryx 4™ • 2012-2020

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40900	Intake	.500"	1.400"	59#	210#	.500"
	Exhaust					

Kit Includes				
8	CrSi Valve Springs	8	Titanium Retainers
8	H. T. Steel Basewashers	8	H. T. Steel Shims

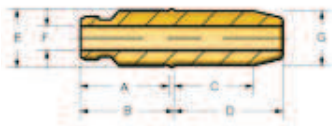
Note: KPMI® Guides must be installed when using cams greater than 0.430" valve lift.

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-40920	Intake	30.00mm	1.181"	0.1960"	10º	3.610"	Standard
40-40921	Intake	31.00mm	1.220"	0.1960"	10º	3.610"	Oversize
40-40924	Exhaust	26.00mm	1.024"	0.1955"	10º	3.655"	Standard
40-40925	Exhaust	27.00mm	1.063"	0.1955"	10º	3.655"	Oversize

If the above sizes are not what you need, we can make any size custom valve. Please call for more information.

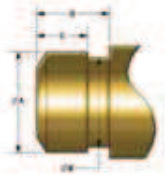
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.500"	0.550"	0.590"	0.790"	0.510"	0.1955"	0.4161" / Std.	40-40910	
						+ 0.001"	40-40911	
						+ 0.002"	40-40912	
						+0.010"	40-40919	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

KAWASAKI® KZ™ / Z1™ 900 1973-1977

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-0449	Intake	.425"	1.330"	90#	245#	.425"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			

Retainer Set • O.E.M. Replacement • Titanium for Valve Spring Only Kit 40-0449

KPMI P/N	Type	Material	Quantity	Remarks
40-1008M	Intake	Titanium	Pkg. of 8	O.E.M. Style
	Exhaust			

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-1016	Intake	.475"	1.330"	90#	265#	.475"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-1007	Intake	.490"	1.320"	95#	269#	.490"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-1014	Intake	.565"	1.405"	105#	305#	.565"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			

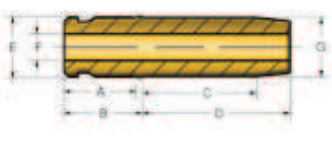
Retainer Set • Shim On Bottom • Titanium for Valve Spring Only Kits 40-1016, 40-1007, and 40-1014

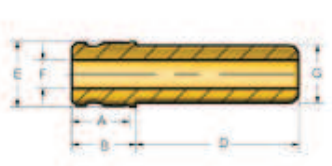
KPMI P/N	Type	Material	Quantity
40-1008	Intake	Titanium	Pkg. of 8
	Exhaust		
Use with Kibblewhite® **"Shim On Bottom" Style Tappets # 40-**1013 with this retainer.			

Valves • White Diamond® • Hard Chrome Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-4180H	Intake	36.00mm	1.417"	0.2745"	23º	3.615"	Standard
40-4181H	Intake	37.50mm	1.476"	0.2745"	23º	3.615"	Oversize (max w/ stock seat)
40-4183H	Exhaust	30.00mm	1.181"	0.2745"	29º	3.555"	Standard
40-4184H	Exhaust	31.00mm	1.220"	0.2745"	29º	3.555"	Oversize (max w/ stock seat)

Valve Guides • C630 Bronze





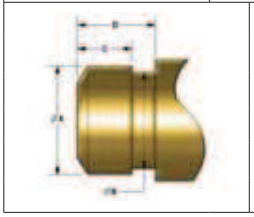
A	B	C	D	E	F	G	Intake	Exhaust
0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752" / Std.	40-0478	
						+0.002"	40-0479	
						+0.004"	40-0480	
						+0.006"	40-0481	
						+0.015"	40-4036	
						+0.027"	40-0499	
0.440"	0.490"	---	1.240"	0.495"	0.2745"	0.4752" / Std.		40-0482
						+0.002"		40-0483
						+0.004"		40-0484
						+0.006"		40-0485
						+0.015"		40-4037

ORDER 650-557-2046

KAWASAKI® KZ™ / Z1™ 900 1973-1977

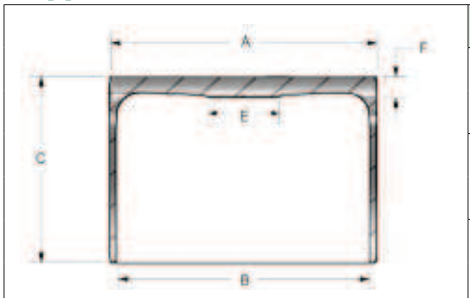
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.374"	0.560"	4	0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71019-4	Pkg. of 4	0%
71019-8	Pkg. of 8	0%
71019-16	Pkg. of 16	Less- 10%
71019-50	Pkg. of 50	Less- 15%
71019-100	Pkg. of 100	Less- 20%

Tappets • Shim On Bottom Conv. • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
40-1013	Intake	None	33.00mm	1.2980"	1.235"	1.025"	0.340"	0.115"	Pkg. of 8
	Exhaust								
40-4202	Intake	None	33.50mm	1.3184"	1.250"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
	Exhaust								
40-4203	Intake	None	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
	Exhaust								

Use Kibblewhite® Shim On Bottom Retainers # 40-1008 (Pkg. of 8). Large tappets available, see Kibblewhite® Tappet Section in back of catalog.

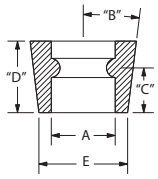
Retainer Set • Replacement • High Performance

KPMI P/N	Type	Material	Description
40-4006	Intake	Titanium	"Shim Under" Style supplied with 15º Jumbo Keepers for radius groove valves.
	Exhaust		

Set Includes	8	Titanium Retainers	8	H.T. Steel Keepers Pr.

15° Jumbo keepers are designed for high spring loads in racing application.

Keeper Set • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. OEM P/N
51008-8	Single Radius Bead	0.275"	7.0°	0.188"	0.323"	0.342"	8Pr.	12011-004 (Shortened to increase tip length)

KAWASAKI® NINJA™ 900 1984-1986

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-4190	Intake	29.00mm	1.142"	0.2155"	20º	3.510"	Standard
40-4192	Exhaust	24.50mm	0.965"	0.2150"	25º	3.430"	Standard
40-4193	Exhaust	25.00mm	0.984"	0.2150"	25º	3.440"	Oversize

VISIT US AT WWW.KPMI.US

KAWASAKI® KZ™ / Z1™ POLICE 1000 1977-'05

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-0449	Intake	.425"	1.330"	90#	245#	.425"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			

Retainer Set • O.E.M. Replacement • Titanium for Valve Spring Only Kit 40-0449

KPMI P/N	Type	Material	Quantity	Remarks
40-1008M	Intake	Titanium	Pkg. of 8	O.E.M. Style
	Exhaust			

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-1016	Intake	.475"	1.330"	90#	265#	.475"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			

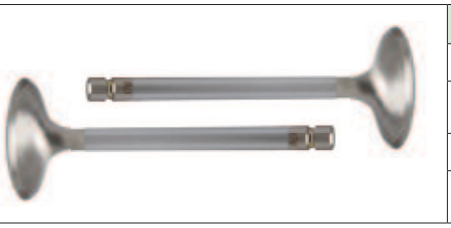
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-1007	Intake	.490"	1.320"	95#	269#	.490"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-1014	Intake	.565"	1.405"	105#	305#	.565"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			

Retainer Set • Shim On Bottom • Titanium for Valve Spring Only Kits 40-1016, 40-1007, and 40-1014

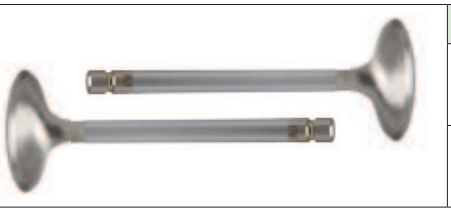
KPMI P/N	Type	Material	Quantity
40-1008	Intake	Titanium	Pkg. of 8
	Exhaust		
Use with Kibblewhite® **"Shim On Bottom" Style Tappets # 40-**1013 with this retainer.			

Valves • White Diamond® • Hard Chrome Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-4180H	Intake	36.00mm	1.417"	0.2745"	23º	3.615"	Standard
40-4181H	Intake	37.50mm	1.476"	0.2745"	23º	3.615"	Oversize (max w/ stock seat)
40-4183H	Exhaust	30.00mm	1.181"	0.2745"	29º	3.555"	Standard
40-4184H	Exhaust	31.00mm	1.220"	0.2745"	29º	3.555"	Oversize (max w/ stock seat)

Valves • White Diamond® • J Model Valves • Stainless

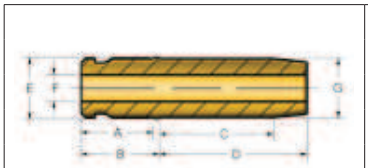


KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-4281H	Intake	38.50mm	1.516"	0.2745"	23º	3.565"	Standard
40-4285H	Exhaust	32.00mm	1.260"	0.2745"	29º	3.500"	Standard

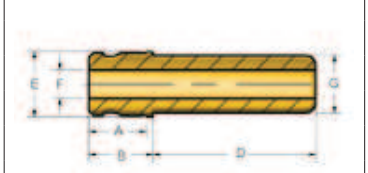
ORDER 650-557-2046

KAWASAKI® KZ™ / Z1™ POLICE 1000 1977-'05

Valve Guides • C630 Bronze

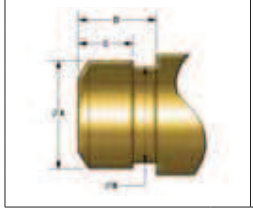


A	B	C	D	E	F	G	Intake	Exhaust
0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752" / Std.	40-0478	
						+0.002"	40-0479	
						+0.004"	40-0480	
						+0.006"	40-0481	
						+0.015"	40-4036	
						+0.027"	40-0499	
0.440"	0.490"	---	1.240"	0.495"	0.2745"	0.4752" / Std.		40-0482
						+0.002"		40-0483
						+0.004"		40-0484
						+0.006"		40-0485
						+0.015"		40-4037



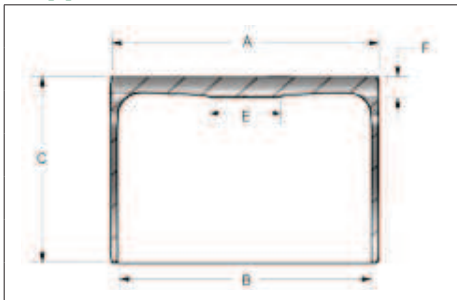
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.374"	0.560"	4	0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71019-4	Pkg. of 4	0%
71019-8	Pkg. of 8	0%
71019-16	Pkg. of 16	Less- 10%
71019-50	Pkg. of 50	Less- 15%
71019-100	Pkg. of 100	Less- 20%

Tappets • Shim On Bottom Conv. • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
40-1013	Intake	None	33.00mm	1.2980"	1.235"	1.025"	0.340"	0.115"	Pkg. of 8
	Exhaust								
40-4202	Intake	None	33.50mm	1.3184"	1.250"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
	Exhaust								
40-4203	Intake	None	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
	Exhaust								

Use Kibblewhite® Shim On Bottom Retainers # 40-1008 (Pkg. of 8). Large tappets available, see Kibblewhite® Tappet Section in back of catalog.

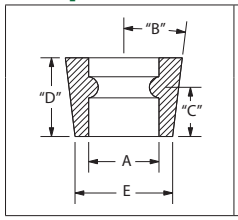
Retainer Set • Titanium

KPMI P/N	Type	Material	Description
40-4006	Intake	Titanium	"Shim Under" Style supplied with 15º Jumbo Keepers for radius groove valves.
	Exhaust		

Set Includes	8	Titanium Retainers	8	H.T. Steel Keepers Pr.

15° Jumbo keepers are designed for high spring loads in racing application.

Keeper Set • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. OEM P/N
51008-8	Single Radius Bead	0.275"	7.0°	0.188"	0.323"	0.342"	8Pr.	12011-004 (Shortened to increase tip length)

VISIT US AT WWW.KPMI.US

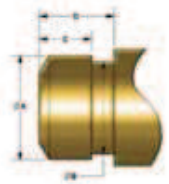
KAWASAKI® NINJA™ 1000R 1986-1987

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-4190	Intake	29.00mm	1.142"	0.2155"	20º	3.510"	Standard
40-4192	Exhaust	24.50mm	0.965"	0.2150"	25º	3.430"	Standard
40-4193	Exhaust	25.00mm	0.984"	0.2150"	25º	3.440"	Oversize

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

KAWASAKI® GPZ™ 1100 1981-1982

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-0449	Intake	.425"	1.330"	90#	245#	.425"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			

Retainer Set • O.E.M. Replacement • Titanium for Valve Spring Only Kit 40-0449

KPMI P/N	Type	Material	Quantity	Remarks
40-1008M	Intake	Titanium	Pkg. of 8	O.E.M. Style
	Exhaust			

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-1016	Intake	.475"	1.330"	90#	265#	.475"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-1007	Intake	.490"	1.320"	95#	269#	.490"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-1014	Intake	.565"	1.405"	105#	305#	.565"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			

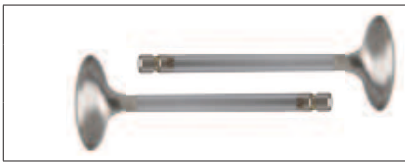
Retainer Set • Shim On Bottom • Titanium for Valve Spring Only Kits 40-1016, 40-1007, and 40-1014

KPMI P/N	Type	Material	Quantity
40-1008	Intake	Titanium	Pkg. of 8
	Exhaust		
Use with Kibblewhite® **"Shim On Bottom" Style Tappets # 40-**1013 with this retainer.			

ORDER 650-557-2046

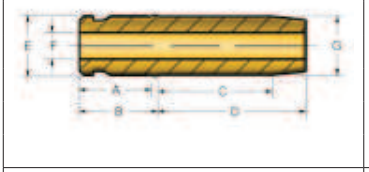
KAWASAKI® GPZ™ 1100 1981-1982

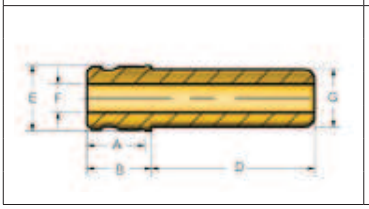
Valves • White Diamond® • J Model Valves • Stainless



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-4281H	Intake	38.50mm	1.516"	0.2745"	23º	3.565"	Standard
40-4285H	Exhaust	32.00mm	1.260"	0.2745"	29º	3.500"	Standard

Valve Guides • C630 Bronze

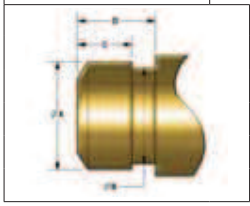




A	B	C	D	E	F	G	Intake	Exhaust
0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752" / Std.	40-0478	
						+0.002"	40-0479	
						+0.004"	40-0480	
						+0.006"	40-0481	
						+0.015"	40-4036	
						+0.027"	40-0499	
0.440"	0.490"	---	1.240"	0.495"	0.2745"	0.4752" / Std.		40-0482
						+0.002"		40-0483
						+0.004"		40-0484
						+0.006"		40-0485
						+0.015"		40-4037

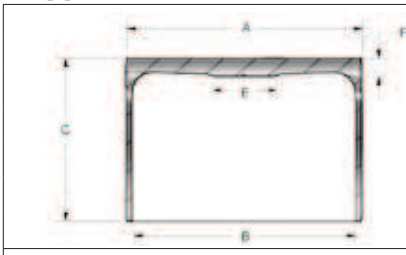
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.374"	0.560"	4	0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71019-4	Pkg. of 4	0%
71019-8	Pkg. of 8	0%
71019-16	Pkg. of 16	Less- 10%
71019-50	Pkg. of 50	Less- 15%
71019-100	Pkg. of 100	Less- 20%

Tappets • Shim On Bottom Conv. • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
40-1013	Intake Exhaust	None	33.00mm	1.2980"	1.235"	1.025"	0.340"	0.115"	Pkg. of 8
40-4202	Intake Exhaust	None	33.50mm	1.3184"	1.250"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)
40-4203	Intake Exhaust	None	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"	Pkg. of 1 (Oversize)

Use Kibblewhite® Shim On Bottom Retainers # 40-1008 (Pkg. of 8). Large tappets available, see Kibblewhite® Tappet Section in back of catalog.

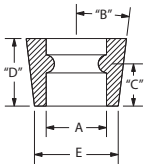
Retainer Set • Replacement • High Performance

KPMI P/N	Type	Material	Description
40-4006	Intake Exhaust	Titanium	"Shim Under" Style supplied with 15º Jumbo Keepers for radius groove valves.

Set Includes	8	Titanium Retainers	8	H.T. Steel Keepers Pr.

15° Jumbo keepers are designed for high spring loads in racing application.

Keeper Set • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. OEM P/N
51008-8	Single Radius Bead	0.275"	7.0°	0.188"	0.323"	0.342"	8Pr.	12011-004 (Shortened to increase tip length)

VISIT US AT WWW.KPMI.US

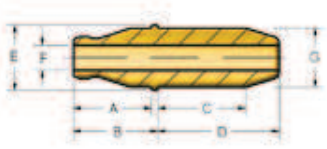
KAWASAKI® ZX-7R™ 1991-1995

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-4385	Intake	.425"	1.220"	55#	159#	.425"
	Exhaust					

Kit Includes	16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

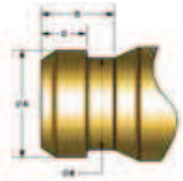
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-4400	
						+0.010"	40-4410	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

KAWASAKI® VULCAN™ 1500 1986-'08

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40004	Intake	.450"	1.450"	67#	227#	.450"
	Exhaust					

Kit Includes	8	CrSi Valve Springs	8	Titanium Retainers

KAWASAKI® VULCAN™ 1500 (Mean Streak) 2002-'03

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40060	Intake	.450"	1.450"	67#	227#	.450"
	Exhaust					

Kit Includes	8	CrSi Valve Springs	8	Titanium Retainers

ORDER 650-557-2046

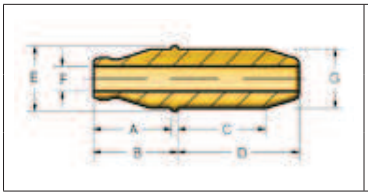
KAWASAKI® ZX-7R™ 1996-2003

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-4395	Intake	.460"	1.260"	45#	157#	.460"
	Exhaust					

Kit Includes	16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

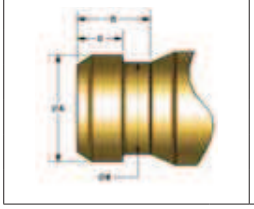
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-4400	
						+0.010"	40-4410	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

KAWASAKI® ZX-9R™ 1994-2003

Valve Spring Kit • Lightweight Racing For 1994-1997 Models

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-4385	Intake	.425"	1.220"	55#	159#	.425"
	Exhaust					

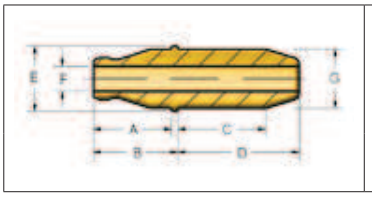
Kit Includes	16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

Valve Spring Kit • Lightweight Racing For 1998-2003 Models

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-4500	Intake	.470"	1.280"	40#	155#	.470"
	Exhaust					

Kit Includes	16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

Valve Guides • C630 Bronze

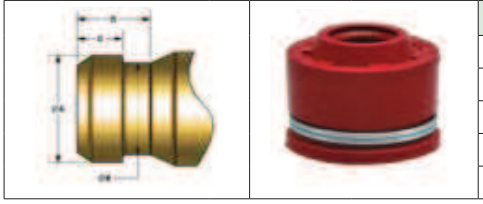


A	B	C	D	E	F	G	Intake	Exhaust
0.560"	0.595"	0.620"	0.855"	0.460"	0.1760"	0.4165" / Std.	40-4400	
						+0.010"	40-4410	

KAWASAKI® ZX-9R™ 1994-2003

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

KAWASAKI® ZX-10R™ 1988-1990

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-4611	Intake	.500"	1.400"	39#	160#	.400"
	Exhaust					
Kit Includes	16	CrSi Valve Springs				

Retainer Set • Titanium

KPMI P/N	Type	Material	Quantity
40-4612	Intake	Titanium	Pkg. of 16
	Exhaust		

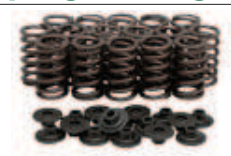
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust

Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

KAWASAKI® ZX-10R™ 2004-2007

Single Spring Kit • High Performance



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40500	Intake	.425"	1.320"	65#	182#	.425"
	Exhaust					
Kit Includes	16	CrSi Valve Springs	16	H. T. Steel Retainers		

* Springs are compatible with OEM Retainers & Basewashers and can be ordered individually, however KPMI® supplies this kit with the 40-40501 Retainers for increased durability over the OEM Aluminum Retainers.

Retainer Set • H. T. Steel

KPMI P/N	Type	Material	Quantity
40-40501	Intake	H. T. Steel	Pkg. of 16
	Exhaust		

ORDER 650-557-2046

KAWASAKI® ZX-10R™ 2004-2007

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40450	Intake	.445"	1.350"	50#	162#	.445"
	Exhaust	.445"	1.240"	44#	153#	.445"

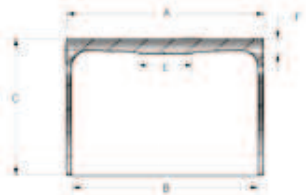
Kit Includes							
8	In, CrSi Valve Springs	8	In, Titanium Retainers	8	In, H. T. Steel Basewashers
8	Ex, CrSi Valve Springs	8	Ex, Titanium Retainers	8	Ex, H. T. Steel Basewashers

Valves • Tensilite® • Exhaust • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-40466T	Exhaust	25.50mm	1.004"	0.1762"	25º	3.595"	Standard

All titanium valves are 1 piece forged for superior strength over a 2 piece valve. The Tensilite PVD CrN coating is a state of the art process, which exceeds OEM specifications.

Tappets • O.E.M. Replacement • H.T. Steel

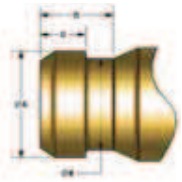


KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
40-40485	Intake	H. T. Steel	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 16
	Exhaust								

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

KAWASAKI® ZX-10R™ 2008-2010

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-41100	Intake	.445"	1.350"	50#	162#	.445"
	Exhaust	.445"	1.240"	44#	153#	.445"

Kit Includes							
8	In, CrSi Valve Springs	8	In, Titanium Retainers	8	In, H. T. Steel Basewashers
8	Ex, CrSi Valve Springs	8	Ex, Titanium Retainers	8	Ex, H. T. Steel Basewashers

KAWASAKI® ZX-10R™ 2008-2010

Single Spring Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-41120	Intake	.425"	1.320"	65#	182#	.425"
	Exhaust					

Kit Includes	16	CrSi Valve Springs	16	H. T. Steel Retainers

Springs are compatible with OEM Retainers & Basewashers and can be ordered individually, however KPMI® supplies this kit with the 40-41121 Retainers for increased durability over the OEM Aluminum Retainers.

Retainer Set • H. T. Steel

KPMI P/N	Type	Material	Quantity
40-41121	Intake	H. T. Steel	Pkg. of 16
	Exhaust		

Single Spring Set

NEW PRODUCTS

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift	Quantity
40-41122	Intake	.425"	1.320"	65#	182#	.425"	Pkg. of 16
	Exhaust						

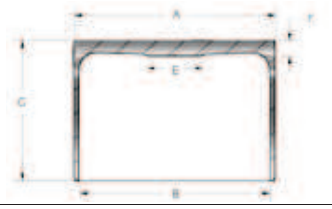
Springs are compatible with OEM Retainers & Basewashers and can be ordered individually, however KPMI® supplies this kit with the 40-41121 Retainers for increased durability over the OEM Aluminum Retainers.

Valves • Tensilite® • Exhaust • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-41117T	Exhaust	25.50mm	1.004"	0.1762"	25º	3.595"	Oversize

All titanium valves are 1 piece forged for superior strength over a 2 piece valve. The Tensilite PVD CrN coating is a state of the art process, which exceeds OEM specifications.

Tappets • O.E.M. Replacement • H.T. Steel

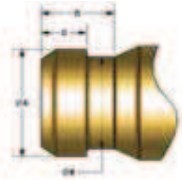


KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
40-41125	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 16
	Exhaust								

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

KAWASAKI® ZX-10R™ 2011-2015

Valve Spring Kit • Lightweight High-Lift Racing

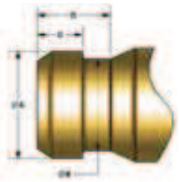
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40850	Intake	.445" *	1.350"	50#	162#	.445"
	Exhaust	.445"	1.240"	44#	153#	.445"

Kit Includes					
8	In, CrSi Valve Springs	8	In, Titanium Retainers		
8	In, H. T. Steel Basewashers	8	In, H. T. Steel Shims		
8	Ex, CrSi Valve Springs	8	Ex, Titanium Retainers	8	Ex, H. T. Steel Basewashers

* When converting to a stainless steel intake valve, it is recommend to not exceed the OEM cam lift. Stainless steel exhaust valve OK to 0.445" lift. Titanium IN&EX valves OK to 0.445"

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

KAWASAKI® ZX-11™/ ZRX™ 1100/ 1200 1999-'05

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-4611	Intake	.500"	1.400"	39#	160#	.400"
	Exhaust					

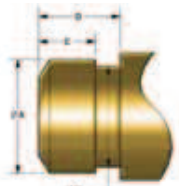
Kit Includes		
16	CrSi Valve Springs	

Retainer Set • Titanium

KPMI P/N	Type	Material	Quantity
40-4612	Intake	Titanium	Pkg. of 16
	Exhaust		

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

KAWASAKI® ZX-12R™ 2000-2005

Valve Spring Kit • Lightweight Racing

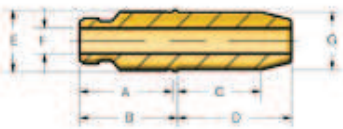
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40025	Intake	.435"	1.335"	63#	185#	.435"
	Exhaust					

Kit Includes				
16	CrSi Valve Springs	16	Titanium Retainers	
16	H. T. Steel Basewashers	16	H. T. Steel Shims	

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-40030	Intake	33.40mm	1.315"	0.1960"	10º	3.845"	Standard
40-40032	Exhaust	28.24mm	1.112"	0.1955"	10º	3.865"	Standard

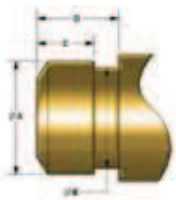
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.690"	0.730"	0.555"	0.855"	0.460"	0.1955'	0.4165" / Std.	40-40040	
						+0.001"	40-40041	
						+0.002"	40-40042	
						+0.010"	40-40050	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

KAWASAKI® ZX-14™ 2006-2011

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40267	Intake	.405"	1.285"	66#	168#	.405"
	Exhaust					

Kit Includes					
16	CrSi Valve Springs	16	Titanium Retainers	16	H. T. Steel Basewashers

ORDER 650-557-2046

KAWASAKI® ZX-14™ 2006-2011

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40292	Intake	.425"	1.320"	65#	182#	.425"
	Exhaust					
Kit Includes	16	CrSi Valve Springs				

Springs are compatible with OEM Retainers & Basewashers and can be ordered individually, however KPMI® recommends the 40-40291 Retainer for increased durability over the OEM .

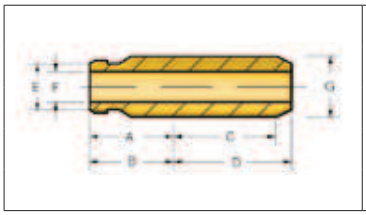
Retainer Set • O. E. M. Replacement • H. T. Steel

KPMI P/N	Type	Material	Quantity
40-40291	Intake	H. T. Steel	Pkg. of 16
	Exhaust		

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-40273	Intake	33.40mm	1.315"	0.1958"	10º	3.565"	Standard
40-40274	Intake	34.40mm	1.354"	0.1958"	10º	3.565"	Oversize
40-40276	Exhaust	28.25mm	1.112"	0.1953"	10º	3.575"	Standard

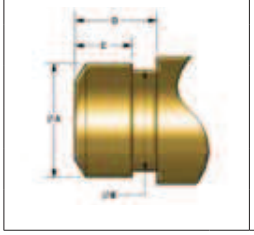
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.460"	0.460"	0.500"	0.780"	0.413"	0.1950'	0.4162" / Std.	40-40280	
						+0.001"	40-40281	
						+0.002"	40-40282	
						+0.010"	40-40289	

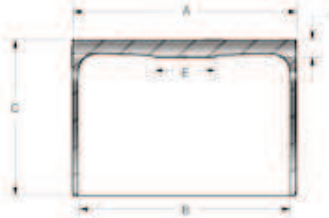
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

Tappets • O.E.M. Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
40-40271	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 16
	Exhaust								
Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.									

KAWASAKI® PWC™ 2006-2019

- STX ™ • 2009-2010
- STX-15F™ • 2006-2019
- SX-R ™ • 2017-2019
- Ultra 250X™ • 2007-2008
- Ultra LX™ • 2008-2019
- Ultra 260X™ • 2009-2010
- Ultra 260LX™ • 2009-2010

Valve Spring Kit • Lightweight Racing

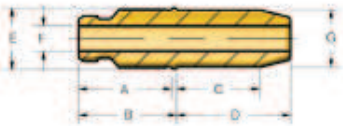
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
40-40750	Intake	.435"	1.335"	63#	185#	.435"
	Exhaust					

Kit Includes				
16	CrSi Valve Springs	16	Titanium Retainers
16	H. T. Steel Basewashers	8	In, H. T. Steel Shims

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
40-40762	Intake	33.40mm	1.315"	0.1960"	10º	3.845"	Standard
40-40766	Exhaust	28.24mm	1.112"	0.1955"	10º	3.865"	Standard

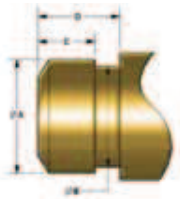
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.690"	0.730"	0.555"	0.855"	0.460"	0.1955"	0.4165" / Std.	40-40770	
						+0.001"	40-40771	
						+0.002"	40-40772	
						+0.010"	40-40779	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

For all the applications available for Kibblewhite's Kawasaki® line of products, please refer online to the Kawasaki® section of the ***www.kpmi.us*** website, under ***PWC / Snowmobile.***

ORDER 650-557-2046

KTM® 250 2005-2007

- For RC4 Engines

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96090	Intake	.425"	1.175"	60#	169#	.425"
	Exhaust	.425"	1.175"	60#	169#	.425"

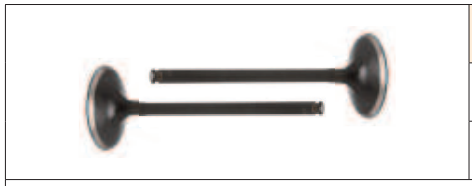
Kit Includes						
2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96130	Intake	.425"	1.175"	60#	169#	.425"

Kit Includes			
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

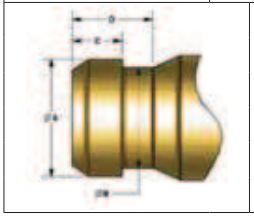


KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
96-96102	Intake	30.95mm	1.218"	0.1960"	15º	3.910"	Standard
96-96106	Exhaust	26.60mm	1.047"	0.1955"	30º	3.665"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.320"	0.435"	5	0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust



Part Number	Quantity	Quantity Discount
71041-4	Pkg. of 4	0%
71041-8	Pkg. of 8	0%
71041-16	Pkg. of 16	Less- 10%
71041-50	Pkg. of 50	Less- 15%
71041-100	Pkg. of 100	Less- 20%

KTM® VARIOUS 250cc 2014-2022

- 250 EXCF 2017-2019
- 250 XCFW 2014-2016
- 250 SX-F 2015-2022
- 250 XC-F 2015-2022

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
96-96412T	Intake	32.51mm	1.280"	0.1960"	15º	3.770"	Titanium	77736030000
96-96416T	Exhaust	26.55mm	1.045"	0.1955"	30º	3.875"	Titanium	77736031000

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

KTM® 250 2008-2011

- For RC4 Engines

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96250	Intake	.425"	1.175"	60#	169#	.425"
	Exhaust	.425"	1.175"	60#	169#	.425"

Kit Includes						
2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96450	Intake	.425"	1.175"	60#	169#	.425"

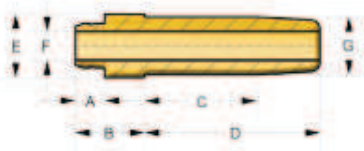
Kit Includes			
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
96-96262	Intake	30.95mm	1.218"	0.1960"	15º	3.910"	Standard
96-96266	Exhaust	26.60mm	1.047"	0.1955"	30º	3.665"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

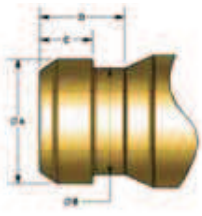
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.200"	0.475"	1.020"	1.335"	0.433"	0.1960"	0.3958" / Std.	96-96270	
						+0.001"	96-96271	
						+0.002"	96-96272	
						+0.010"	96-96279	
0.200"	0.475"	0.765"	1.200"	0.433"	0.1955"	0.3958" / Std.		96-96280
						+0.001"		96-96281
						+0.002"		96-96282
						+0.010"		96-96289

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.320"	0.435"	5	0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust



Part Number	Quantity	Quantity Discount
71041-4	Pkg. of 4	0%
71041-8	Pkg. of 8	0%
71041-16	Pkg. of 16	Less- 10%
71041-50	Pkg. of 50	Less- 15%
71041-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

KTM® 250 2012-2013

- For RC4 Engines
- XCF - W™ Only • 2013

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96250	Intake	.425"	1.175"	60#	169#	.425"
	Exhaust	.425"	1.175"	60#	169#	.425"

Kit Includes						
2	In, CrSi Valve Springs	2	In, Titanium Retainers	2	In, H. T. Steel Basewashers
2	Ex, CrSi Valve Springs	2	Ex, Titanium Retainers	2	Ex, H. T. Steel Basewashers

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96450	Intake	.425"	1.175"	60#	169#	.425"

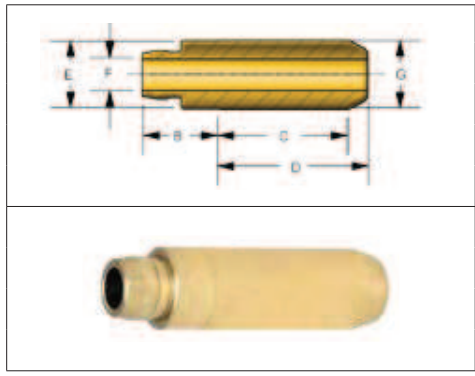
Kit Includes			
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
96-96262	Intake	30.95mm	1.218"	0.1960"	15º	3.910"	Standard
96-96266	Exhaust	26.60mm	1.047"	0.1955"	30º	3.665"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

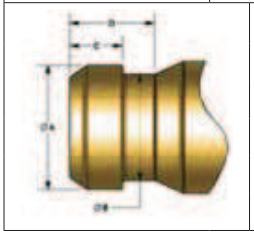
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
---	0.475"	1.020"	1.335"	---	0.1960"	0.4352" / Std.	96-96290	
						+0.001"	96-96291	
						+0.002"	96-96292	
						+0.010"	96-96299	
---	0.475"	0.765"	1.200"	---	0.1955"	0.4352" / Std.		96-96300
						+0.001"		96-96301
						+0.002"		96-96302
						+0.010"		96-96309

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.320"	0.435"	5	0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust



Part Number	Quantity	Quantity Discount
71041-4	Pkg. of 4	0%
71041-8	Pkg. of 8	0%
71041-16	Pkg. of 16	Less- 10%
71041-50	Pkg. of 50	Less- 15%
71041-100	Pkg. of 100	Less- 20%

KTM® SX-F / XC-F 250 2013-2022

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96400	Intake	.450"	1.340"	50#	165#	.450"
	Exhaust					

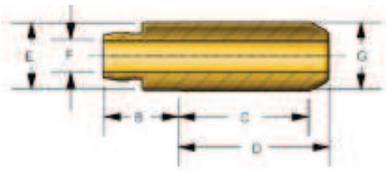
Kit Includes						
2	In, CrSi Valve Springs	2	In, H. T. Steel Retainers	2	In, H. T. Steel Basewashers
2	Ex, CrSi Valve Springs	2	In, H. T. Steel Retainers	2	Ex, H. T. Steel Basewashers

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
96-96412T*	Intake	32.51mm	1.280"	0.1960"	15º	3.770"	Titanium	77736030000
96-96416T	Exhaust	26.55mm	1.045"	0.1955"	30º	3.875"	Titanium	77736031000

***Intake valve also good for 250 SX-F/ XC-F™ 2023-2025**
Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

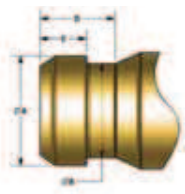
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
---	0.490"	0.715"	1.165"	---	0.1960"	0.4352" / Std.	96-96420	
						+0.001"	96-96421	
						+0.002"	96-96422	
						+0.010"	96-96429	
---	0.490"	0.885"	1.165"	---	0.1955"	0.4352" / Std.		96-96430
						+0.001"		96-96431
						+0.002"		96-96432
						+0.010"		96-96439

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.320"	0.435"	5	0.305"±0.002"	0.265"	0.100"	0.195"	Exhaust



Part Number	Quantity	Quantity Discount
71041-4	Pkg. of 4	0%
71041-8	Pkg. of 8	0%
71041-16	Pkg. of 16	Less- 10%
71041-50	Pkg. of 50	Less- 15%
71041-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

KTM® 350cc SX-F & XC-F 2016-2022

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Setup For*	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96600	Titanium Valves	Intake	.470”	1.340"	55#	206#	.470”
		Exhaust					
	Stainless Valves	Intake	.455”	1.325"	60#	206#	.455”
		Exhaust					

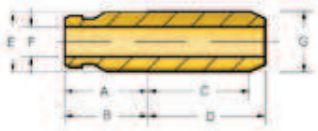
Kit Includes				
4	CrSi Valve Springs	4	Titanium Retainers
4	H. T. Steel Basewashers	4	H. T. Steel Shims*

*Kit includes spring shims intended to be used when running Stainless Valves

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
96-96612	Intake	36.00mm	1.417”	0.2159”	14º	3.420”	Standard
96-96616	Exhaust	29.15mm	1.148”	0.2154”	28º	3.505”	Standard

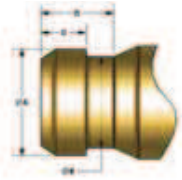
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.465”	0.465”	0.835”	1.035”	0.433”	0.2154”	0.4352” / Std.	96-96620	
						+0.001”	96-96621	
						+0.002”	96-96622	
						+0.010”	96-96629	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.315"	0.455"	5	0.325”±0.002”	0.310”	0.110”	0.220”	Exhaust



Part Number	Quantity	Quantity Discount
71042-4	Pkg. of 4	0%
71042-8	Pkg. of 8	0%
71042-16	Pkg. of 16	Less- 10%
71042-50	Pkg. of 50	Less- 15%
71042-100	Pkg. of 100	Less- 20%

For all the applications available for Kibblewhite's KTM® line of products, please refer online to the KTM® section of the ***www.kpmi.us*** website, under ***Dirt Bike.***

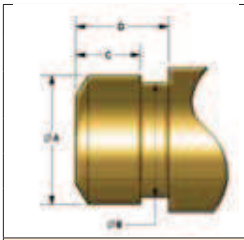
KTM® 400cc-530cc 2008-2013

Valves • O.E.M. Replacement • Titanium • Stainless

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
96-96212T	Intake	39.95mm	1.573"	0.2350"	15º	3.650"	Titanium	78036030000 78936030000
96-96216	Exhaust	33.10mm	1.303"	0.1955"	30º	3.620"	Stainless	78036031000 78936031000

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

High Performance Valve Guide Seal Kits



Intake Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs A	B	C	D
6.0mm	0.315"	0.520"	5	0.435"±0.002"	0.395"	0.120"	0.215"

Exhaust Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs A	B	C	D
5.0mm	0.320"	0.435"	5	0.305"±0.002"	0.265"	0.100"	0.195"

Part Number	96-96380	Kit Includes	2	Intake Viton® Seals	2	Exhaust Viton® Seals

KTM® ALL RFS ENGINES 400cc-560cc 2000-'09

- All RFS ATV Engines 450cc-525cc 2008-2009
- All RFS DIRT BIKE Engines 400cc-560cc 2000-2009

Valve Spring Kit • Lightweight High-Lift Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96000	Intake Exhaust	.435"	1.175"	75#	214#	.435"

Kit Includes						
2	In, CrSi Valve Springs	2	In Titanium Retainers	2	In, H. T. Steel Basewashers
2	Ex, CrSi Valve Springs	2	ex Titanium Retainers	2	Ex, H. T. Steel Basewashers
2	In, Spring Shims	2	Ex, Spring Shims		

Cylinder Head Service Kit • 89mm Bore

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96560	Intake Exhaust	.435"	1.175"	75#	214#	.435"

Kit Includes						
2	In, Titanium Retainers	2	In, CrSi Valve Springs	2	In, H. T. Steel Basewashers
2	Ex, Titanium Retainers	2	Ex, CrSi Valve Springs	2	Ex, H. T. Steel Basewashers
2	In H. T. Steel Spring Shims	2	Ex H. T. Steel Spring Shims		
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
2	In Std. C630 Valve Guides	2	Ex Std. C630 Valve Guides		
1	Top End Gasket Kit				

Components • Replacement • Cylinder Head Service Kit • 89mm Bore

KPMI P/N	Description	Specification
96-96000	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H. T. Steel Spring Shims
96-96004	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
96-96007	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
96-96010	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
96-96020	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
96-96561	Gasket Kit	**Includes:** Head Gasket 89mm Bore (1), Base Gasket (1), Valve Seals (4), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1), Rocker Arm O-ring (1), Oil Filter O-rings (2), Valve Cover Gasket (2), Crush Washers (4), Water Pump Gasket (1)

ORDER 650-557-2046

KTM® ALL RFS ENGINES 400cc-560cc 2000-'09

- All RFS ATV Engines 450cc-525cc 2008-2009
- All RFS DIRT BIKE Engines 400cc-560cc 2000-2009

Cylinder Head Service Kit • 95mm Bore

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96570	Intake Exhaust	.435"	1.175"	75#	214#	.435"

Kit Includes						
2	In, Titanium Retainers	2	In, CrSi Valve Springs	2	In, H. T. Steel Basewashers
2	Ex, Titanium Retainers	2	Ex, CrSi Valve Springs	2	Ex, H. T. Steel Basewashers
2	In H. T. Steel Spring Shims	2	Ex H. T. Steel Spring Shims		
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
2	In Std. C630 Valve Guides	2	Ex Std. C630 Valve Guides		
1	Top End Gasket Kit				

Components • Replacement • Cylinder Head Service Kit • 95mm Bore

KPMI P/N	Description	Specification
96-96000	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, H. T. Steel Spring Shims
96-96004	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
96-96007	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
96-96010	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
96-96020	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
96-96571	Gasket Kit	**Includes:** Head Gasket 95mm Bore (1), Base Gasket (1), Timing Chain Tens. Gasket (1), Exhaust Gasket (1), Oil Screen Plug O-ring (4), Oil Filter O-ring (2), Valve Cover Gasket (2), Crush Washers (4)

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96070	Intake	.435"	1.175"	75#	214#	.435"

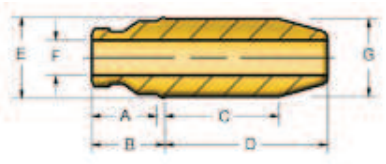
Kit Includes					
2	CrSi Valve Springs	2	In Titanium Retainers		
2	Black Diamond™ Valves	2	H. T. Steel Basewashers		

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
96-96004	Intake	35.00mm	1.378"	0.2352"	20º	3.815"	Standard
96-96005	Intake	36.00mm	1.417"	0.2352"	20º	3.815"	Oversize
96-96007	Exhaust	30.00mm	1.181"	0.2352"	24º	3.815"	Standard
96-96008	Exhaust	31.00mm	1.220"	0.2352"	24º	3.815"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

Valve Guides • C630 Bronze



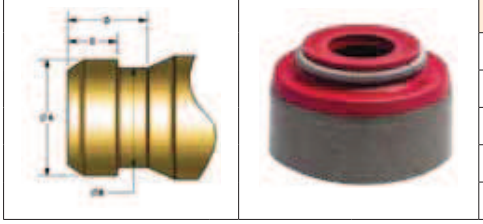
A	B	C	D	E	F	G	Intake	Exhaust
0.410"	0.450"	0.555"	0.945"	0.525"	0.2360"	0.4745" / Std.	96-96010	
						+0.001"	96-96011	
						+0.002"	96-96012	
						+0.010"	96-96019	
0.410"	0.450"	0.740"	1.100"	0.525"	0.2360"	0.4745" / Std.		96-96020
						+0.001"		96-96021
						+0.002"		96-96022
						+0.010"		96-96029

KTM® ALL RFS ENGINES 400cc-560cc 2000-'09

- All RFS ATV Engines 450cc-525cc 2008-2009
- All RFS DIRT BIKE Engines 400cc-560cc 2000-2009

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.315"	0.520"	5	0.435"±0.002"	0.395"	0.120"	0.210"	Exhaust



Part Number	Quantity	Quantity Discount
71029-4	Pkg. of 4	0%
71029-8	Pkg. of 8	0%
71029-16	Pkg. of 16	Less- 10%
71029-50	Pkg. of 50	Less- 15%
71029-100	Pkg. of 100	Less- 20%

KTM® VARIOUS 450'S 2013-2018

- 450 XC-F 2013-2017
- 450 SX-F 2013-2018

Valve Spring Kit • Beehive Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96500	Intake	.435"	1.360"	80#	205#	.435"
	Exhaust					

Kit Includes								
2	In CrSi Valve Springs	2	In Titanium Retainers	2	In H. T. Steel Basewashers	2	In H. T. Steel Shims
2	Ex CrSi Valve Springs	2	Ex Titanium Retainers	2	Ex H. T. Steel Basewashers	--	Ex H. T. Steel Shims

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
96-96540	Intake	.435"	1.360"	80#	205#	.435"

Kit Includes							
2	CrSi Valve Springs	2	Titanium Retainers	2	H. T. Steel Basewashers		
2	Black Diamond™ Valves	2	H.T. Steel Shims				

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
96-96512	Intake	39.93mm	1.572"	0.2358"	15º	3.675"	Standard
96-96516	Exhaust	33.15mm	1.305"	0.2353"	30º	3.645"	Standard

You must use **KPMI® Spring Kit 96-96500** when installing Black Diamond™ Valves

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
96-96512T	Intake	39.93mm	1.572"	0.2358"	15º	3.675"	Titanium	78936030100
96-96516T	Exhaust	33.15mm	1.305"	0.2353"	30º	3.645"	Titanium	78936031000

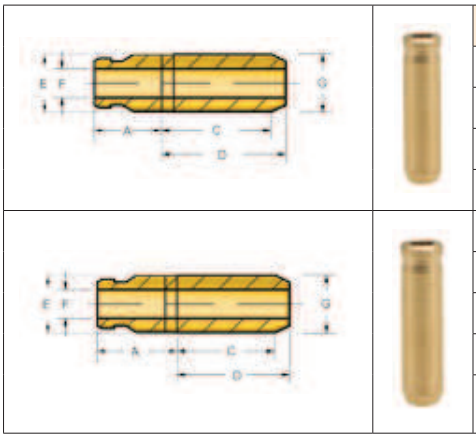
Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

ORDER 650-557-2046

KTM® VARIOUS 450'S 2013-2018

- 450 XC-F 2013-2017
- 450 SX-F 2013-2018

Valve Guides • C630 Bronze

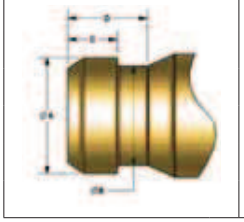


*A	*C	*D	E	F	G	Intake	Exhaust
0.555"	0.945"	1.140"	0.433"	0.2353"	0.4352" / Std.	96-96520	
					+0.001"	96-96521	
					+0.002"	96-96522	
					+0.010"	96-96529	
0.635"	0.865"	1.060"	0.433"	0.2353"	0.4352" / Std.		96-96520
					+0.001"		96-96521
					+0.002"		96-96522
					+0.010"		96-96529

*Note: One guide design installs at two different heights depending on Intake or Exhaust usage. You must install to lower line for exhaust and upper line for intake.

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.315"	0.520"	5	0.435"±0.002"	0.395"	0.120"	0.210"	Exhaust



Part Number	Quantity	Quantity Discount
71029-4	Pkg. of 4	0%
71029-8	Pkg. of 8	0%
71029-16	Pkg. of 16	Less- 10%
71029-50	Pkg. of 50	Less- 15%
71029-100	Pkg. of 100	Less- 20%

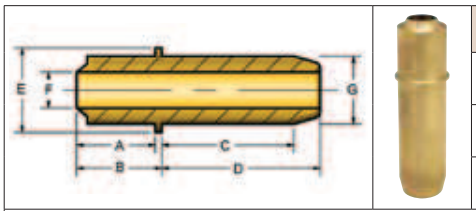
MOTO GUZZI® ALL 2-VALVE, BIG VALVE BIG BLOCKS 1971-'12

Valve Spring Kit • Lightweight High-Lift Racing for Big Blocks

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
90-90000	Intake	.575"	1.420"	111#	204#	.375"
	Exhaust					

Kit Includes	4	CrSi Valve Springs	4	H.T. Steel Retainers	4	H. T. Steel Basewashers

Valve Guides • C630 Bronze for Big Blocks



A	B	C	D	E	F	G	Intake	Exhaust
0.645"	0.695"	1.205"	1.405"	0.620"	0.3145"	0.5538" / Std.	90-4067	
						+0.002"	90-4068	
						+0.015"	90-4175	

Seal not required.

NORTON® 750 1968-1973

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	* Installed Height	Seat Pressure	Open Pressure	@ Lift
50-0460	Intake	.500"	1.420"	105#	185#	.320"
	Exhaust					

Kit Includes				
4	7075-T6 H. A. Retainers	4	H. T. Steel Keepers Pr.	
4	CrSi Valve Springs	4	H. T. Steel Basewashers	

*Important: In order to achieve the above installation height, it will be necessary to spot face the spring pad prior to guide installation.

Valve Spring Kit • O. E. M. Replacement

KPMI P/N	Type	Kit Includes					
50-50000	Intake	H. T. Steel Retainers		CrSi Valve Springs		H. T. Steel Basewashers	
	Exhaust	4	50-50001	4	50-50004	4	50-50003

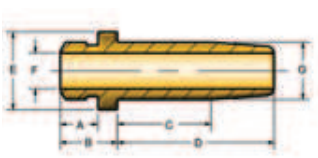
Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
.410"	1.280"	93#	170#	.320"

All components are the quality you can expect from Kibblewhite®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
50-4092	Intake	38.10mm	1.500"	0.3115"	1.5" R	4.065"	Standard
50-4091	Exhaust	33.02mm	1.300"	0.3110"	27°	4.015"	Standard

Valve Guides • C674 Bronze



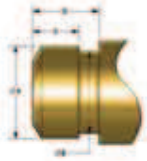
A	B	C	D	E	F	G	Intake	Exhaust
0.330"	0.430"	1.025"	1.525"	0.680"	0.3105"	0.5010" / Std.	50-0403	
						+0.002"	50-0404	
						+0.004"	50-0405	
						+0.006"	50-0406	
0.470"	0.655"	0.785"	1.345"	0.682"	0.3105"	0.5010" / Std.		50-0410
						+0.002"		50-0411
						+0.004"		50-0412
						+0.006"		50-0413

Push Rod • Chrome Moly Tube • H. T. Steel Endpieces

KPMI P/N	Type	Material	"A"	"B"	Quantity
50-50010	Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	8.150"	8.010"	Pkg. of 2
	Exhaust		7.300"	7.160"	Pkg. of 2

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.465"	0.550"	1	0500"±0.010"	0.445"	0.230"	0.280"	Exhaust



Part Number	Quantity	Quantity Discount
71012-4	Pkg. of 4	0%
71012-8	Pkg. of 8	0%
71012-16	Pkg. of 16	Less- 10%
71012-50	Pkg. of 50	Less- 15%
71012-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

NORTON® 850 1973-1977

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	* Installed Height	Seat Pressure	Open Pressure	@ Lift
50-0460	Intake	.500"	1.420"	105#	185#	.320"
	Exhaust					

Kit Includes				
4	7075-T6 H. A. Retainers	4	H. T. Steel Keepers Pr.
4	CrSi Valve Springs	4	H. T. Steel Basewashers

*Important: In order to achieve the above installation height, it will be necessary to spot face the spring pad prior to guide installation.

Valve Spring Kit • O. E. M. Replacement

KPMI P/N	Type	Kit Includes					
50-50000	Intake	H. T. Steel Retainers		CrSi Valve Springs		H. T. Steel Basewashers	
	Exhaust	4	50-50001	4	50-50004	4	50-50003

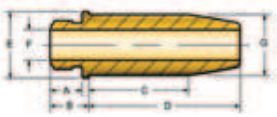
Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
.410"	1.280"	93#	170#	.320"

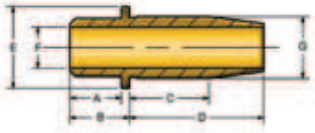
All components are the quality you can expect from Kibblewhite®, manufactured to exact O.E.M. dimensions. These O.E.M. replacements parts may be purchased separately using the above part numbers.

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
50-4092	Intake	38.10mm	1.500"	0.3115"	1.5" R	4.065"	Standard
50-4091	Exhaust	33.02mm	1.300"	0.3110"	27°	4.015"	Standard

Valve Guides • C674 Bronze





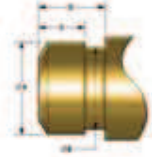
A	B	C	D	E	F	G	Intake	Exhaust
0.330"	0.400"	1.030"	1.560"	0.680"	0.3105'	0.6260" / Std.	50-0648	
						+0.002"	50-0649	
						+0.004"	50-0650	
						+0.006"	50-0651	
0.525"	0.580"	0.955'	1.420"	0.680"	0.3105'	0.6260" / Std.		50-0652
						+0.002"		50-0653
						+0.004"		50-0654
Note: Exhaust seals are not required.						+0.006"		50-0655

Push Rod • Chrome Moly Tube • H. T. Steel Endpieces

KPMI P/N	Type	Material	"A"	"B"	Quantity
50-50010	Intake	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	8.150"	8.010"	Pkg. of 2
	Exhaust		7.300"	7.160"	Pkg. of 2

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.465"	0.550"	1	0500"±0.010"	0.445"	0.230"	0.280"	Exhaust



Part Number	Quantity	Quantity Discount
71012-4	Pkg. of 4	0%
71012-8	Pkg. of 8	0%
71012-16	Pkg. of 16	Less- 10%
71012-50	Pkg. of 50	Less- 15%
71012-100	Pkg. of 100	Less- 20%

POLARIS® 400-500 1996-'14, Series 10, 11

- Ranger™ 400 2010-2014
- Sportsman™ 500 1996-2013
- Xpedition™ 425 2000-2002
- Scrambler™ 500 1997-2012
- Magnum™ 500 1996-2003
- Ranger™ 500 1999-'13, Series 10,11

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82000	Intake	.440"	1.285"	40#	140#	.440"
	Exhaust					

Kit Includes						
4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers	

For all the applications available for Kibblewhite's Polaris®
line of products, please refer online to the Polarisi® section of the
www.kpmi.us website, under ***ATV/ UTV.***

POLARIS® PREDATOR™ / OUTLAW™ 500 2003-'07

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82012	Intake	.440"	1.375"	66#	199#	.440"
	Exhaust					

Kit Includes			
4	Titanium Retainers	4	CrSi Valve Springs

Top End Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83250	Intake	.440"	1.375"	66#	199#	.440"
	Exhaust					

Kit Includes			
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves
1	High Performance Piston Kit	1	Top End Gasket Kit

ORDER 650-557-2046

POLARIS® PREDATOR™ / OUTLAW™ 500 2003-'07

Components • Replacement • Top End Service Kit

KPMI P/N	Description	Specification
82-82012	Spring Kit	**Includes:** Titanium Retainers, CrSi Valve Springs
82-82052	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82055	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-83201	Gasket Kit	**Includes:** Head Gasket 99mm Bore (1), Base Gasket (1), Cam Chain Tensioner (1), Exhaust Gasket (2), Oil Filter Copper Washer (6), Valve Stem Seals (4)

Cylinder Head Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83200	Intake	.440"	1.375"	66#	199#	.440"
	Exhaust					

Kit Includes				
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves
4	In / Ex Std. C674 Valve Guides	1	Top End Gasket Kit

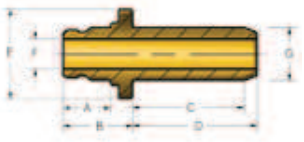
Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
82-82012	Spring Kit	**Includes:** Titanium Retainers, CrSi Valve Springs
82-82052	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82055	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82030	Intake / Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
82-83201	Gasket Kit	**Includes:** Head Gasket 99mm Bore (1), Base Gasket (1), Cam Chain Tensioner (1), Exhaust Gasket (2), Oil Filter Copper Washer (6), Valve Stem Seals (4)

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-82052	Intake	37.00mm	1.457"	0.2348"	20°	4.015"	Standard
82-82053	Intake	38.00mm	1.496"	0.2348"	20°	4.015"	Oversize
82-82055	Exhaust	32.00mm	1.260"	0.2343"	22°	4.050"	Standard
82-82056	Exhaust	33.00mm	1.300"	0.2343"	22°	4.050"	Oversize

Valve Guides • C674 Bronze

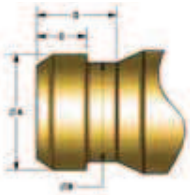


A	B	C	D	E	F	G	Intake	Exhaust
0.375"	0.545"	0.880"	0.980"	0.704"	0.2345"	0.4160" / Std.	82-82030	
						+0.001"	82-82031	
						+0.010"	82-82039	

POLARIS® PREDATOR™ / OUTLAW™ 500 2003-'07

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.371"	0.480"	5	0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust



Part Number	Quantity	Quantity Discount
71017-4	Pkg. of 4	0%
71017-8	Pkg. of 8	0%
71017-16	Pkg. of 16	Less- 10%
71017-50	Pkg. of 50	Less- 15%
71017-100	Pkg. of 100	Less- 20%

POLARIS® Various 570's 2014-2025

- Ranger™ / RZR™/ Sportsman™ 570's 2014-2025
- ACE™ 570's 2016-2019

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-86000	Intake	.450"	1.375"	57#	150#	.450"
	Exhaust					

Kit Includes				
4	Titanium Retainers	4	CrSi Valve Springs	
4	H.T. Steel Basewashers	4	Viton® Seals	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-86010	Intake	.450"	1.375"	57#	150#	.450"
	Exhaust					

Kit Includes				
4	H.T. Steel Retainers	4	CrSi Valve Springs	
4	H.T. Steel Basewashers	4	Viton® Seals	

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides.

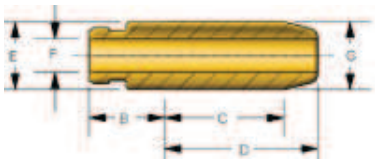
Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-86012	Intake	37.72mm	1.485"	0.2160"	17º	3.775"	Standard
82-86013	Intake	38.72mm	1.524"	0.2160"	17º	3.775"	Oversize
82-86016	Exhaust	32.44mm	1.277"	0.2155"	25º	3.815"	Standard
82-86017	Exhaust	33.44mm	1.317"	0.2155"	25º	3.815"	Oversize

POLARIS® Various 570's 2014-2025

- Ranger™ / RZR™/ Sportsman™ 570's 2014-2025
- ACE™ 570's 2016-2019

Valve Guides • C674 Bronze

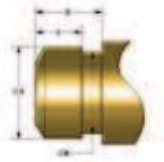


A	B	C	D	E	F	G	Intake	Exhaust
---	0.455"	0.755"	0.940"	0.433"	0.2160'	0.4353" / Std.	82-86020	
						+0.001"	82-86021	
						+0.002"	82-86022	
						+0.010"	82-86029	
---	0.455"	1.090"	1.190"	0.433"	0.2155'	0.4353" / Std.		82-86030
						+0.001"		82-86031
						+0.002"		82-86032
						+0.010"		82-86039

Note: These guides are compatible with both KPMI® seals #71016-X and the OEM Tophat Seal.

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust

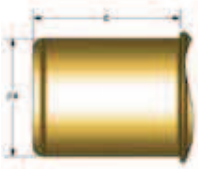


Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

These seals are not OEM replacement seals, they are designed to work with KPMI® valve guides **in conjunction** with KPMI® dual spring kits.

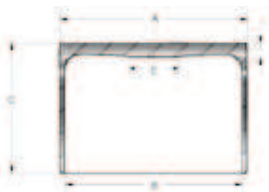
Valve Guide Seals • OEM Replacement • Tophat

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
				A	B	C		Intake	
5.5mm	0.630"	1.043"	3	0.435"±0.005"	---	0.480"	0.697"	Exhaust	3610212



Part Number	Quantity	Quantity Discount
71048-4	Pkg. of 4	0%
71048-8	Pkg. of 8	0%
71048-16	Pkg. of 16	Less- 10%
71048-50	Pkg. of 50	Less- 15%
71048-100	Pkg. of 100	Less- 20%

Tappets • Shim On Bottom Conv. • H.T. Steel



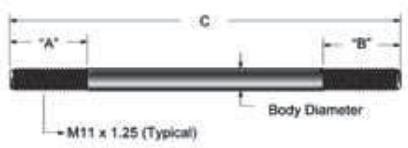
KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
82-86040	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 4
	Exhaust								
*82-86045	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 4
	Exhaust								

Note: These tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system.*Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications. For complete shim range visit **www.kpmi.us** or Tappets section in back of catalog.

POLARIS® Various 570's 2014-2025

- Ranger™ / RZR™/ Sportsman™ 570's 2014-2025
- ACE™ 570's 2016-2019

Cylinder Head Stud Kit (Also fits RZR 570's 2012-2013)

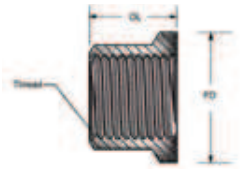


KPMI P/N	Body Dia.	O. L. "C"	A	B	Remarks
82-83500	0.358"	6.990"	1.60"	1.00"	Standard

Kit Includes	4	H.T. Steel Studs	4	H.T. Steel Nuts	4	H.T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts (Also fit RZR 570's 2012-2013)



KPMI P/N	Material	O. L.	F. D.	Thread	Quantity
41011-4	H. T. Steel	0.470""	0.800	M11 x 1.25	Pkg. of 4

Replacement nuts for Stud Kit, #82-83500, but can be used for general purpose (see diagram for detail)

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

POLARIS® SPORTSMAN™ 800 2006-'14

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82060	Intake	.500"	1.495"	65#	235#	.500"
	Exhaust					

Kit Includes	4	Titanium Retainers	4	CrSi Valve Springs	2	In, Viton® Seals
	2	In, H.T. Steel Basewashers	2	Ex, H.T. Steel Basewashers		

These seals are designed to work with the KPMI® Spring Kit and OEM intake Valve Guides. **Use the recommended #71017-4** seals when using KPMI® Valve Guides.

Valves • Black Diamond™ • Black Nitroneg Stems

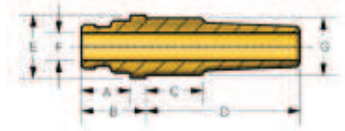
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-82065	Intake	35.00mm	1.378"	0.2357"	25º	4.510"	Standard
82-82068	Exhaust	30.00mm	1.181"	0.2352"	11º	4.555"	Standard

For all the applications available for Kibblewhite's Polaris® line of products, please refer online to the Polaris® section of the ***www.kpmi.us*** website, under ***ATV/ UTV Valvetrain Components***.

ORDER 650-557-2046

POLARIS® SPORTSMAN™ 800 2006-'14

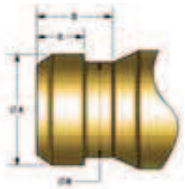
Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.470"	0.560"	0.495"	1.335"	0.544	0.2360'	0.4950" / Std.	82-82070	
						+0.001"	82-82071	
						+0.010"	82-82079	
0.525"	0.615"	0.520"	1.115"	0.544"	0.2355"	0.4531" / Std.		82-82080
						+0.001"		82-82081
						+0.010"		82-82089

Valve Guide Seals • Viton® for Use with KPMI® Guides Only

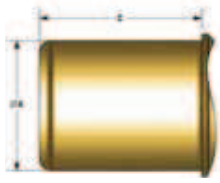
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.371"	0.480"	5	0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust



Part Number	Quantity	Quantity Discount
71017-4	Pkg. of 4	0%
71017-8	Pkg. of 8	0%
71017-16	Pkg. of 16	Less- 10%
71017-50	Pkg. of 50	Less- 15%
71017-100	Pkg. of 100	Less- 20%

Valve Guide Seals • Viton® for Use with O.E.M. Intake Guides Only

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.0mm	0.524"	0.615"	5	0.495"±0.002"	---	---	0.385"	Intake



Part Number	Quantity	Quantity Discount
71031-4	Pkg. of 4	0%
71031-8	Pkg. of 8	0%
71031-16	Pkg. of 16	Less- 10%
71031-50	Pkg. of 50	Less- 15%
71031-100	Pkg. of 100	Less- 20%

POLARIS® RZR™ 800 2008-2010

Valve Spring Kit • Lightweight Racing

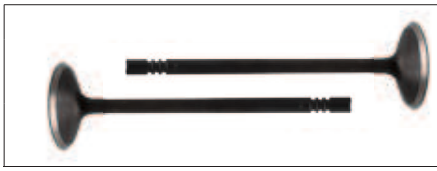
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82200	Intake	.500"	1.495"	65#	235#	.500"
	Exhaust					

Kit Includes						
4	Titanium Retainers	4	CrSi Valve Springs	2	In, Viton® Seals	
2	In, H. T. Steel Basewashers	2	Ex, H. T. Steel Basewashers			

These seals are designed to work with the KPMI® Spring Kit and OEM intake Valve Guides. **Use the recommended #71017-4** seals when using KPMI® Valve Guides.

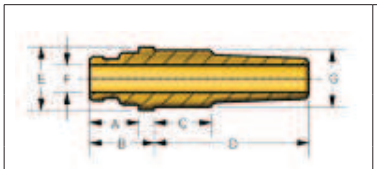
POLARIS® RZR™ 800 2008-2010

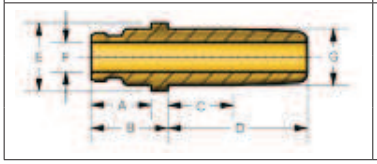
Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-82212	Intake	35.00mm	1.378"	0.2357"	25º	4.510"	Standard
82-82216	Exhaust	30.00mm	1.181"	0.2352"	11º	4.555"	Standard

Valve Guides • C674 Bronze

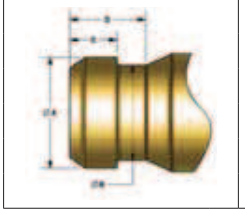




A	B	C	D	E	F	G	Intake	Exhaust
0.470"	0.560"	0.495"	1.335"	0.544	0.2360'	0.4950" / Std.	82-82220	
						+0.001"	82-82221	
						+0.010"	82-82229	
0.525"	0.615"	0.520"	1.115"	0.544"	0.2355"	0.4531" / Std.		82-82230
						+0.001"		82-82231
						+0.010"		82-82239

Valve Guide Seals • Viton® for Use with KPMI® Guides Only

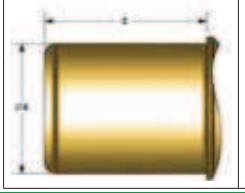
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.371"	0.480"	5	0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust



Part Number	Quantity	Quantity Discount
71017-4	Pkg. of 4	0%
71017-8	Pkg. of 8	0%
71017-16	Pkg. of 16	Less- 10%
71017-50	Pkg. of 50	Less- 15%
71017-100	Pkg. of 100	Less- 20%

Valve Guide Seals • Viton® for Use with O.E.M. Intake Guides Only

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.524"	0.615"	5	0.495"±0.002"	---	---	0.385"	



Part Number	Quantity	Quantity Discount
71031-4	Pkg. of 4	0%
71031-8	Pkg. of 8	0%
71031-16	Pkg. of 16	Less- 10%
71031-50	Pkg. of 50	Less- 15%
71031-100	Pkg. of 100	Less- 20%

POLARIS® RZR™ 800 (&S/4) / RANGER 800 2011-'17

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82300	Intake Exhaust	.500"	1.495"	65#	235#	.500"

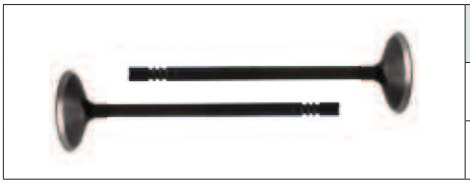
Kit Includes						
4	Titanium Retainers	4	CrSi Valve Springs	2	In, Viton® Seals	
2	In, H. T. Steel Basewashers	2	Ex, H. T. Steel Basewashers			

These seals are designed to work with the KPMI® Spring Kit and OEM intake Valve Guides. **Use the recommended #71017-4** seals when using KPMI® Valve Guides.

ORDER 650-557-2046

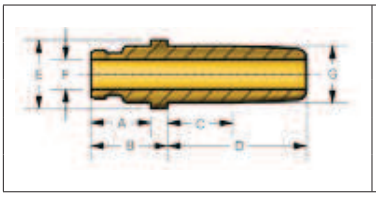
POLARIS® RZR™ 800 (&S/4) / RANGER 800 2011-'17

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-82312	Intake	35.00mm	1.378"	0.2357"	25º	4.510"	Standard
82-82316	Exhaust	30.00mm	1.181"	0.2352"	11º	4.555"	Standard

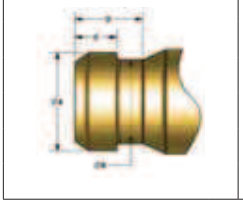
Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.490"	0.580"	1.385"	1.515"	0.552"	0.2352'	0.4531" / Std.	82-82320	
						+0.001"	82-82321	
						+0.002"	82-82322	
						+0.010"	82-82329	

Valve Guide Seals • Viton® for Use with KPMI® Guides Only

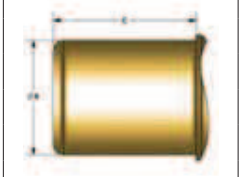
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.371"	0.480"	5	0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust



Part Number	Quantity	Quantity Discount
71017-4	Pkg. of 4	0%
71017-8	Pkg. of 8	0%
71017-16	Pkg. of 16	Less- 10%
71017-50	Pkg. of 50	Less- 15%
71017-100	Pkg. of 100	Less- 20%

Valve Guide Seals • Viton® for Use with O.E.M. Intake Guides Only

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
6.0mm	0.394"	0.480"	5	0.447"±0.002"	---	---	0.265"	Intake



Part Number	Quantity	Quantity Discount
71037-4	Pkg. of 4	0%
71037-8	Pkg. of 8	0%
71037-16	Pkg. of 16	Less- 10%
71037-50	Pkg. of 50	Less- 15%
71037-100	Pkg. of 100	Less- 20%

POLARIS® RZR™ XP900 2011-2012

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82160	Intake	.450"	1.375"	57#	150#	.450"
	Exhaust					

Kit Includes	8	Titanium Retainers	8	CrSi Valve Springs	8	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*82-82650	Intake	.450"	1.375"	57#	150#	.450"
	Exhaust					

Kit Includes	8	H. T. Steel Retainers	8	CrSi Valve Springs	8	H. T. Steel Basewashers

*KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.

VISIT US AT WWW.KPMI.US

POLARIS® RZR™ XP900 2011-2012

Valve Spring Kit • High Performance "Turbo" Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82190	Intake Exhaust	.450"	1.375"	65#	200#	.450"
Kit Includes	8	Titanium Retainers	8	CrSi Valve Springs	8	H.T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83300	Intake Exhaust	.450"	1.375"	64#	181#	.450"
Kit Includes	8	Titanium Retainers	8	CrSi Valve Springs	8	H.T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*82-82700	Intake Exhaust	.450"	1.375"	65#	200#	.450"
Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs	8	H.T. Steel Basewashers

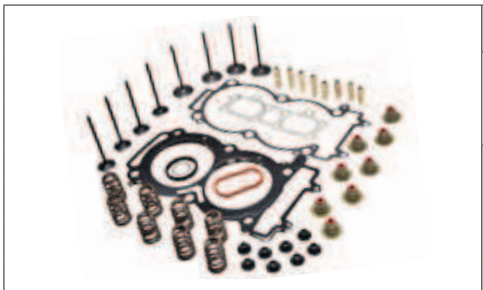
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*82-83350	Intake Exhaust	.450"	1.375"	64#	181#	.450"
Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs	8	H.T. Steel Basewashers

*KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.

Valve Spring Kit • Beehive Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82580	Intake Exhaust	.435"	1.360"	80#	205#	.435"
Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs	8	H.T. Steel Basewashers

Cylinder Head Service Kit



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83230	Intake Exhaust	.435"	1.360"	80#	205#	.435"

Kit Includes				
8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs
8	In / Ex H. T. Steel Basewashers**	8	Viton® Seals**
4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves
4	In / Ex Std. C674 Valves Guides	4	Top End Gasket Kit

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
82-82580	Beehive Spring Kit	**Includes:** H.T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers**
71015-8	Viton® Seals	Valve Stem Seals • 5.5mm • Viton® (Pkg. of 8)**
82-82155	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82158	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82170	Intake, Exhaust, Standard Valve Guide	Valve Guides • C674 Bronze
82-83231	Gasket Kit	**Includes:** Head Gasket 93.5mm Bore (1), Base Gasket (1), Cam Chain Tensioner (1), Water Inlet Gasket (1), Exhaust Gasket (2), Valve Stem Seals (8)

**Some early models came from the OEM with guides that included a seal detail. These guides require the use of seal P/N 71015-8 and the basewashers found in the Spring Kit. All others utilize the tophat style seal found in the Gasket Kit.

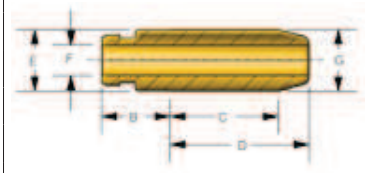
ORDER 650-557-2046

POLARIS® RZR™ XP900 2011-2012

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-82155	Intake	37.72mm	1.485"	0.2160"	17º	3.775"	Standard
82-82156	Intake	38.72mm	1.524"	0.2160"	17º	3.775"	Oversize
82-82158	Exhaust	32.44mm	1.277"	0.2155"	25º	3.815"	Standard
82-82159	Exhaust	33.44mm	1.317"	0.2155"	25º	3.815"	Oversize

Valve Guides • C674 Bronze

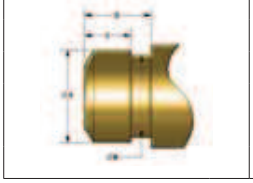


A	B	C	D	E	F	G	Intake	Exhaust
---	0.460"	0.815"	0.960"	0.433"	0.2155"	0.4353" / Std.	82-82170	
						+0.001"	82-82171	
						+0.002"	82-82172	
						+0.004"	82-82174	
						+0.010"	82-82179	

Note: These guides are compatible with both KPMI® Seal #71016-X and the OEM Replacement Tophat Seals #71048-XX

Valve Guide Seals • Viton®

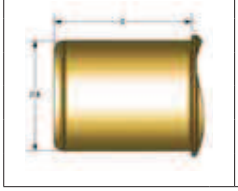
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

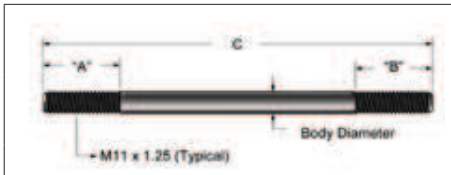
Valve Guide Seals • OEM Replacement • Tophat

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
				A	B	C		Intake	
5.5mm	0.630"	1.043"	3	0.435"±0.005"	---	0.480"	0.697"	Exhaust	3610212



Part Number	Quantity	Quantity Discount
71048-4	Pkg. of 4	0%
71048-8	Pkg. of 8	0%
71048-16	Pkg. of 16	Less- 10%
71048-50	Pkg. of 50	Less- 15%
71048-100	Pkg. of 100	Less- 20%

Cylinder Head Stud Kit for RZR/ Ranger/ ACE/ General 900 & 1000's (Except Diesel)



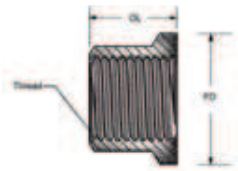
KPMI P/N	Body Dia.	O. L. "C"	A	B	Remarks
82-83550	0.358"	6.990"	1.60"	1.00"	Standard

Kit Includes	6	H.T. Steel Studs	6	H.T. Steel Nuts	6	H.T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

POLARIS® RZR™ XP900 2011-2012

Cylinder Head Nuts



KPMI P/N	Material	O. L.	F. D.	Thread	Quantity
41011-4	H. T. Steel	0.470""	0.800	M11 x 1.25	Pkg. of 4

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

Tappets • O.E.M. Replacement • H.T. Steel

KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
82-82185	Intake Exhaust	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
*82-82187	Intake Exhaust	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8

***Note:** Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications. For complete shim range visit www.kpmi.us or Tappets section in back of catalog.

POLARIS® RZR™ XP900 2013-2014

Valve Spring Kit • High Performance "Turbo" Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82350	Intake Exhaust	.450"	1.375"	65#	200#	.450"
Kit Includes	8	Titanium Retainers	8	CrSi Valve Springs		
	8	H.T. Steel Basewashers	8	Viton® Seals		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83400	Intake Exhaust	.450"	1.375"	64#	181#	.450"
Kit Includes	8	Titanium Retainers	8	CrSi Valve Springs		
	8	H.T. Steel Basewashers	8	Viton® Seals		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83000	Intake Exhaust	.450"	1.375"	65#	200#	.450"
Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs		
	8	H.T. Steel Basewashers	8	Viton® Seals		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83450	Intake Exhaust	.450"	1.375"	64#	181#	.450"
Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs		
	8	H.T. Steel Basewashers	8	Viton® Seals		

Our Turbo spring kits have been designed for applications with up to 15psi of boost.

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides. Some early 2013 models came from the OEM with guides that included a seal detail. These guides require the use of KPMI® sealP/N 71015-8.

ORDER 650-557-2046

POLARIS® RZR™ XP900 2013-2014

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82400	Intake / Exhaust	.450"	1.375"	57#	150#	.450"

Kit Includes				
8	Titanium Retainers	8	CrSi Valve Springs
8	H.T. Steel Basewashers	8	Viton® Seals

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82950	Intake / Exhaust	.450"	1.375"	57#	150#	.450"

Kit Includes				
8	H.T. Steel Retainers	8	CrSi Valve Springs
8	H.T. Steel Basewashers	8	Viton® Seals

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides. Some early 2013 models came from the OEM with guides that included a seal detail. These guides require the use of KPMI® sealP/N 71015-8.

Valve Spring Kit • Beehive Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82550	Intake / Exhaust	.435"	1.360"	80#	205#	.435"

Kit Includes							
8	H.T. Steel Retainers	8	CrSi Valve Springs	8	Viton® Seals		

1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets
2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)
3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution

Cylinder Head Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83210	Intake / Exhaust	.435"	1.360"	80#	205#	.435"

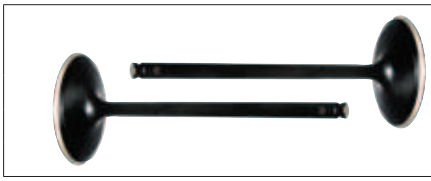
Kit Includes			
8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs
4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves
4	In Std. C674 Valves Guides	4	Ex Std. C674 Valves Guides
1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
82-82550	Beehive Spring Kit	**Includes:** H.T. Steel Retainers, CrSi Valve Springs
82-82462	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82466	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82480	Intake, Standard Valve Guide	Valve Guides • C674 Bronze
82-82470	Exhaust, Standard Valve Guide	Valve Guides • C674 Bronze
82-83211	Gasket Kit	**Includes:** Head Gasket 93.5mm Bore (1), Base Gasket (1), Cam Chain Tensioner (1), Water Inlet Gasket (1), Exhaust Gasket (2), Valve Stem Seals (8)

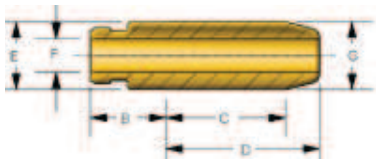
POLARIS® RZR™ XP900 2013-2014

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-82462	Intake	37.72mm	1.485"	0.2160"	17º	3.775"	Standard
82-82463	Intake	38.72mm	1.524"	0.2160"	17º	3.775"	Oversize
82-82466	Exhaust	32.44mm	1.277"	0.2155"	25º	3.815"	Standard
82-82467	Exhaust	33.44mm	1.317"	0.2155"	25º	3.815"	Oversize

Valve Guides • C674 Bronze

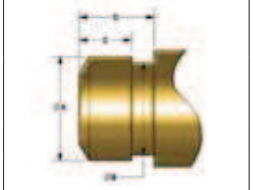


A	B	C	D	E	F	G	Intake	Exhaust
---	0.455"	0.755"	0.940"	0.433"	0.2160'	0.4353" / Std.	82-82480	
						+0.001"	82-82481	
						+0.002"	82-82482	
						+0.010"	82-82489	
---	0.455"	0.815"	0.940"	0.433"	0.2155'	0.4353" / Std.		82-82470
						+0.001"		82-82471
						+0.002"		82-82472
						+0.010"		82-82479

Note: These guides are compatible with both KPMI® Seal #71016-X and the OEM Replacement Tophat Seals #71048-XX

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust

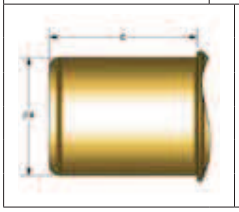


Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

These seals are not OEM replacement seals, they are designed to work with KPMI® valve guides **in conjunction** with KPMI® dual spring kits.

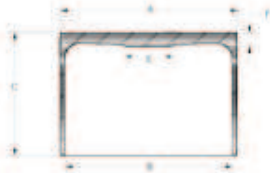
Valve Guide Seals • OEM Replacement • Tophat

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
				A	B	C		Intake	3610212
5.5mm	0.630"	1.043"	3	0.435"±0.005"	---	0.480"	0.697"	Exhaust	



Part Number	Quantity	Quantity Discount
71048-4	Pkg. of 4	0%
71048-8	Pkg. of 8	0%
71048-16	Pkg. of 16	Less- 10%
71048-50	Pkg. of 50	Less- 15%
71048-100	Pkg. of 100	Less- 20%

Tappets • Shim On Bottom • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
82-82459	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								
*82-82495	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								

Note: For 2014 models the OEM system does not use an adjustment shim, these tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system. *Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications. For complete shim range visit www.kpmi.us or Tappets section in back of catalog.

ORDER 650-557-2046

POLARIS® RZR™ XP900 2013-2014

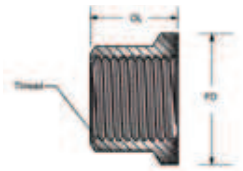
Cylinder Head Stud Kit for RZR/ Ranger/ ACE/ General 900 & 1000's (Except Diesel)

KPMI P/N	Body Dia.	O. L. "C"	A	B	Remarks
82-83550	0.358"	6.990"	1.60"	1.00"	Standard

Kit Includes	6	H.T. Steel Studs	6	H.T. Steel Nuts	6	H.T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts



KPMI P/N	Material	O. L.	F. D.	Thread	Quantity
41011-4	H. T. Steel	0.470""	0.800	M11 x 1.25	Pkg. of 4

Replacement nuts for Stud Kit, #82-83550, but can be used for general purpose (see diagram for detail)

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

POLARIS® VARIOUS 900 / 1000'S 2013-'25

• Ranger™ 900 (&XP) 2013-'19 • Ranger™ 1000 (&XP) 2017-'19 • Ranger™ XP 1000 2020-'25 • RZR™ 900 2015-'25

Valve Spring Kit • High Performance "Turbo" Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82350	Intake / Exhaust	.450"	1.375"	65#	200#	.450"

Kit Includes	8	Titanium Retainers	8	CrSi Valve Springs
	8	H.T. Steel Basewashers	8	Viton® Seals

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83400	Intake / Exhaust	.450"	1.375"	64#	181#	.450"

Kit Includes	8	Titanium Retainers	8	CrSi Valve Springs
	8	H.T. Steel Basewashers	8	Viton® Seals

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83000	Intake / Exhaust	.450"	1.375"	65#	200#	.450"

Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs
	8	H.T. Steel Basewashers	8	Viton® Seals

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83450	Intake / Exhaust	.450"	1.375"	64#	181#	.450"

Kit Includes	8	H.T. Steel Retainers	8	CrSi Valve Springs
	8	H.T. Steel Basewashers	8	Viton® Seals

Our Turbo spring kits have been designed for applications with up to 15psi of boost.

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides.

VISIT US AT WWW.KPMI.US

POLARIS® VARIOUS 900/ 1000'S 2013-'25

• Ranger™ 900 (&XP) 2013-'19 • Ranger™ 1000 (&XP) 2017-'19 • Ranger™ XP 1000 2020-'25 • RZR™ 900 2015-'25

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82400	Intake / Exhaust	.450"	1.375"	57#	150#	.450"

Kit Includes				
8	Titanium Retainers	8	H.T. Steel Basewashers	
8	CrSi Valve Springs	8	Viton® Seals	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82950	Intake / Exhaust	.450"	1.375"	57#	150#	.450"

Kit Includes				
8	H.T. Steel Retainers	8	H.T. Steel Basewashers	
8	CrSi Valve Springs	8	Viton® Seals	

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides.

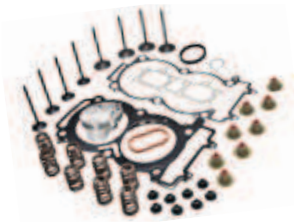
Valve Spring Kit • Beehive Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82550	Intake / Exhaust	.435"	1.360"	80#	205#	.435"

Kit Includes					
8	H.T. Steel Retainers	8	CrSi Valve Springs	8	Viton® Seals

1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets
2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)
3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution

Top End Service Kit for Ranger™ 900 (&XP) 2013-'19/ Ranger™ 1000 (&XP) 2017-'19/ Ranger™ XP 1000 2020-'22/ RZR™ 900 2015-'23



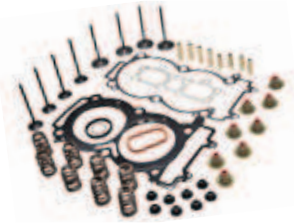
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83900	Intake / Exhaust	.435"	1.360"	80#	205#	.435"

Kit Includes				
8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs	
4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves	
1	High Performance Piston Kit	1	Top End Gasket Kit	

Components • Replacement • Top End Service Kit

KPMI P/N	Description	Specification
82-82550	Beehive Spring Kit	**Includes:** H.T. Steel Retainers, CrSi Valve Springs
82-82255	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82258	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-83901	Gasket Kit	**Includes:** Head Gasket 93.5mm Bore (1), Base Gasket (1), Cam Chain Tensioner (1), Water Inlet Gasket (1), Exhaust Gasket (2), Valve Stem Seals (8)

Cylinder Head Service Kit



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83240	Intake / Exhaust	.435"	1.360"	80#	205#	.435"

Kit Includes				
8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs	
4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves	
4	In Std. C674 Valves Guides	4	Ex Std. C674 Valves Guides	
1	Top End Gasket Kit			

ORDER 650-557-2046

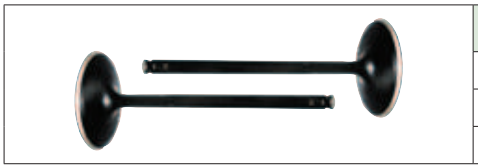
POLARIS® VARIOUS 900/ 1000'S 2013-'25

• Ranger™ 900 (&XP) 2013-'19 • Ranger™ 1000 (&XP) 2017-'19 • Ranger™ XP 1000 2020-'25 • RZR™ 900 2015-'25

Components • Replacement • Cylinder Head Service Kit

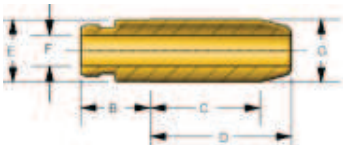
KPMI P/N	Description	Specification
82-82550	Beehive Spring Kit	**Includes:** H.T. Steel Retainers, CrSi Valve Springs
82-82255	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82258	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82270	Intake, Standard Valve Guide	Valve Guides • C674 Bronze
82-82420	Exhaust, Standard Valve Guide	Valve Guides • C674 Bronze
82-83241	Gasket Kit	**Includes:** Head Gasket 93.5mm Bore (1), Base Gasket (1), Cam Chain Tensioner (1), Water Inlet Gasket (1), Exhaust Gasket (2), Valve Stem Seals (8)

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-82255	Intake	34.42mm	1.355"	0.2160"	17º	3.765'	Standard
82-82258	Exhaust	29.21mm	1.150"	0.2155"	25º	3.805"	Standard
82-82259	Exhaust	30.21mm	1.189"	0.2155"	25º	3.805"	Oversize

Valve Guides • C674 Bronze

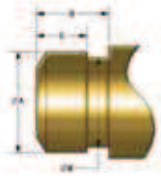


A	B	C	D	E	F	G	Intake	Exhaust
---	0.455"	0.815"	0.940"	0.433"	0.2155'	0.4353" / Std.	82-82270	
						+0.001"	82-82271	
						+0.002"	82-82272	
						+0.010"	82-82279	
---	0.455"	1.090"	1.190"	0.433"	0.2155'	0.4353" / Std.		82-82420
						+0.001"		82-82421
						+0.002"		82-82422
						+0.010"		82-82429

Note: These guides are compatible with both KPMI® Seal #71016-X and the OEM Replacement Tophat Seals #71048-XX

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust

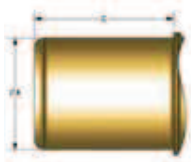


Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

These seals are not OEM replacement seals, they are designed to work with KPMI® valve guides **in conjunction** with KPMI® dual spring kits.

Valve Guide Seals • OEM Replacement • Tophat

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
				A	B	C		Intake	3610212
5.5mm	0.630"	1.043"	3	0.435"±0.005"	---	0.480"	0.697"	Exhaust	

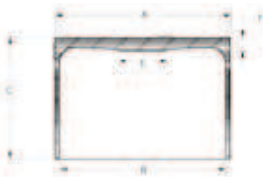


Part Number	Quantity	Quantity Discount
71048-4	Pkg. of 4	0%
71048-8	Pkg. of 8	0%
71048-16	Pkg. of 16	Less- 10%
71048-50	Pkg. of 50	Less- 15%
71048-100	Pkg. of 100	Less- 20%

POLARIS® VARIOUS 900/ 1000'S 2013-'25

• Ranger™ 900 (&XP) 2013-'19 • Ranger™ 1000 (&XP) 2017-'19 • Ranger™ XP 1000 2020-'25 • RZR™ 900 2015-'25

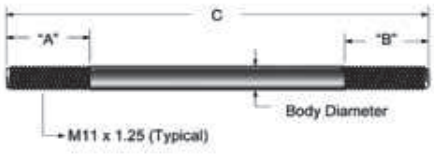
Tappets • Shim On Bottom Conv. • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
82-82285	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								
*82-82287	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								

***Note:** These tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system.*Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications. For complete shim range visit **www.kpmi.us** or Tappets section in back of catalog.

Cylinder Head Stud Kit for RZR/ Ranger/ ACE/ General 900 & 1000's (Except Diesel)

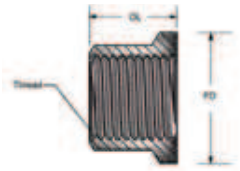


KPMI P/N	Body Dia.	O. L. "C"	A	B	Remarks
82-83550	0.358"	6.990"	1.60"	1.00"	Standard

Kit Includes	6	H.T. Steel Studs	6	H.T. Steel Nuts	6	H.T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts



KPMI P/N	Material	O. L.	F. D.	Thread	Quantity
41011-4	H. T. Steel	0.470""	0.800	M11 x 1.25	Pkg. of 4

Replacement nuts for Stud Kit, #82-83550, but can be used for general purpose (see diagram for detail)

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

POLARIS® RZR™ XP1000 2014

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82400	Intake	.450"	1.375"	57#	150#	.450"
	Exhaust					

Kit Includes	8	Titanium Retainers	8	H.T. Steel Basewashers
	8	CrSi Valve Springs	8	Viton® Seals

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82950	Intake	.450"	1.375"	57#	150#	.450"
	Exhaust					

Kit Includes	8	H.T. Steel Retainers	8	H.T. Steel Basewashers
	8	CrSi Valve Springs	8	Viton® Seals

The tappet must never contact the retainer for this application. To ensure this, the top surface of the shim must never fall below the top surface of the retainer.

ORDER 650-557-2046

POLARIS® RZR™ XP1000 2014

Valve Spring Kit • High Performance "Turbo" Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82350	Intake / Exhaust	.450"	1.375"	65#	200#	.450"
Kit Includes		8 Titanium Retainers		8 CrSi Valve Springs		
		8 H.T. Steel Basewashers		8 Viton® Seals		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83400	Intake / Exhaust	.450"	1.375"	64#	181#	.450"
Kit Includes		8 Titanium Retainers		8 CrSi Valve Springs		
		8 H.T. Steel Basewashers		8 Viton® Seals		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83000	Intake / Exhaust	.450"	1.375"	65#	200#	.450"
Kit Includes		8 H.T. Steel Retainers		8 CrSi Valve Springs		
		8 H.T. Steel Basewashers		8 Viton® Seals		

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83450	Intake / Exhaust	.450"	1.375"	64#	181#	.450"
Kit Includes		8 H.T. Steel Retainers		8 CrSi Valve Springs		
		8 H.T. Steel Basewashers		8 Viton® Seals		

Our Turbo spring kits have been designed for applications with up to 15psi of boost.\

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides.

Valve Spring Kit • Beehive Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82550	Intake / Exhaust	.435"	1.360"	80#	205#	.435"
Kit Includes		8 H.T. Steel Retainers	8 CrSi Valve Springs		8 Viton® Seals	

1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets
2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)
3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution

Top End Service Kit NEW PRODUCTS

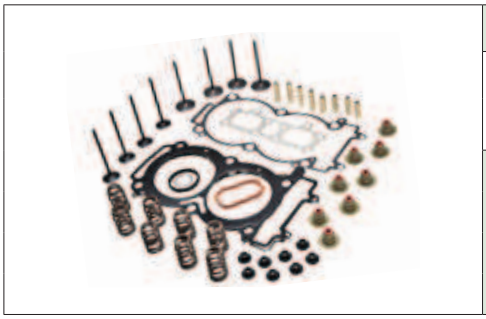
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83950	Intake / Exhaust	.435"	1.360"	80#	205#	.435"
Kit Includes		8 In / Ex H.T. Steel Retainers		8 In / Ex CrSi Valve Springs		
		4 In Std. Black Diamond™ Valves		4 Ex Std. Black Diamond™ Valves		
		1 High Performance Piston Kit		1 Top End Gasket Kit		

POLARIS® RZR™ XP1000 2014

Components • Replacement • Top End Service Kit

KPMI P/N	Description	Specification
82-82550	Beehive Spring Kit	**Includes:** H.T. Steel Retainers, CrSi Valve Springs
82-82612	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82616	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-83951	Gasket Kit	**Includes:** Head Gasket 94mm Bore (1), Base Gasket (1), Cam Chain Tensioner Gasket (1), Header Gasket (1), Valve Spring Seat with Seal (1), Thermostat Seal (1), Water Outlet O-ring (1)

Cylinder Head Service Kit



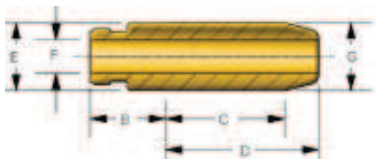
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83220	Intake	.435"	1.360"	80#	205#	.435"
	Exhaust					

Kit Includes				
8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs
4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves
4	In Std. C674 Valves Guides	4	Ex Std. C674 Valves Guides
1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
82-82550	Beehive Spring Kit	**Includes:** H.T. Steel Retainers, CrSi Valve Springs
82-82612	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82616	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82370	Intake, Standard Valve Guide	Valve Guides • C674 Bronze
82-82380	Exhaust, Standard Valve Guide	Valve Guides • C674 Bronze
82-83221	Gasket Kit	**Includes:** Head Gasket 94mm Bore (1), Base Gasket (1), Cam Chain Tensioner Gasket (1), Header Gasket (1), Valve Spring Seat with Seal (1), Thermostat Seal (1), Water Outlet O-ring (1)

Valve Guides • C674 Bronze

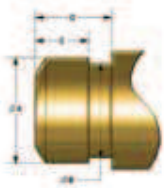


A	B	C	D	E	F	G	Intake	Exhaust
---	0.455"	0.750"	0.935"	0.433"	0.2160'	0.4353" / Std.	82-82370	
						+0.001"	82-82371	
						+0.002"	82-82372	
						+0.010"	82-82379	
---	0.455"	1.090"	1.190"	0.433"	0.2155'	0.4353" / Std.		82-82380
						+0.001"		82-82381
						+0.002"		82-82382
						+0.010"		82-82389

Note: These guides are compatible with both KPMI® Seal #71016-X and the OEM Replacement Tophat Seals #71048-XX

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

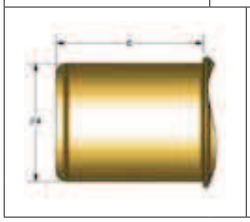
These seals are not OEM replacement seals, they are designed to work with KPMI® valve guides **in conjunction** with KPMI® dual spring kits.

ORDER 650-557-2046

POLARIS® RZR™ XP1000 2014

Valve Guide Seals • OEM Replacement • Tophat

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
				A	B	C			
5.5mm	0.630"	1.043"	3	0.435"±0.005"	---	0.480"	0.697"	Intake	3610212
								Exhaust	

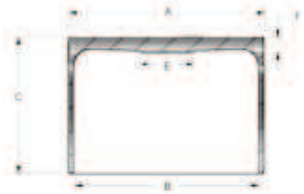


Part Number	Quantity	Quantity Discount
71048-4	Pkg. of 4	0%
71048-8	Pkg. of 8	0%
71048-16	Pkg. of 16	Less- 10%
71048-50	Pkg. of 50	Less- 15%
71048-100	Pkg. of 100	Less- 20%

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-82612	Intake	37.72mm	1.485"	0.2160"	17º	3.775"	Standard
82-82613	Intake	38.72mm	1.524"	0.2160"	17º	3.775"	Oversize
82-82616	Exhaust	29.21mm	1.150"	0.2155"	25º	3.805"	Standard
82-82617	Exhaust	30.21mm	1.189"	0.2155"	25º	3.805"	Oversize

Tappets • Shim On Bottom Conv. • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
82-82359	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								
*82-82395	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
	Exhaust								

***Note:** These tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system.*Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications. For complete shim range visit **www.kpmi.us** or Tappets section in back of catalog.

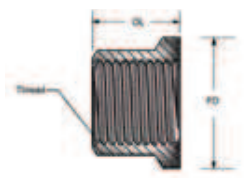
Cylinder Head Stud Kit for RZR/ Ranger/ ACE/ General 900 & 1000's 2011-'23 (Except Diesel)

KPMI P/N	Body Dia.	O. L. "C"	A	B	Remarks
82-83550	0.358"	6.990"	1.60"	1.00"	Standard

Kit Includes	6	H.T. Steel Studs	6	H.T. Steel Nuts	6	H.T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts



KPMI P/N	Material	O. L.	F. D.	Thread	Quantity
41011-4	H. T. Steel	0.470""	0.800	M11 x 1.25	Pkg. of 4

Replacement nuts for Stud Kit, #82-83550, but can be used for general purpose (see diagram for detail)

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

POLARIS® VARIOUS 1000'S 2015-'25

- RZR™ 1000 (&XP) 2015-'25
- RZR TURBO (&XP) 2016-'24
- RZR™ RS1 2018-'22
- GENERAL 1000 (&XP) 2016-'25
- RZR™ PRO XP 2020-'25

Valve Spring Kit • High Performance "Turbo" Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82350	Intake / Exhaust	.450"	1.375"	65#	200#	.450"

Kit Includes				
8	Titanium Retainers	8	CrSi Valve Springs	
8	H.T. Steel Basewashers	8	Viton® Seals	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83400	Intake / Exhaust	.450"	1.375"	64#	181#	.450"

Kit Includes				
8	Titanium Retainers	8	CrSi Valve Springs	
8	H.T. Steel Basewashers	8	Viton® Seals	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83000	Intake / Exhaust	.450"	1.375"	65#	200#	.450"

Kit Includes				
8	H.T. Steel Retainers	8	CrSi Valve Springs	
8	H.T. Steel Basewashers	8	Viton® Seals	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83450	Intake / Exhaust	.450"	1.375"	64#	181#	.450"

Kit Includes				
8	H.T. Steel Retainers	8	CrSi Valve Springs	
8	H.T. Steel Basewashers	8	Viton® Seals	

Our Turbo spring kits have been designed for applications with up to 15psi of boost.

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets listed below.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.
- The seals included in these kits are intended for use with OEM guides. Please use KPMI® P/N 71016-8 when installing KPMI® guides.

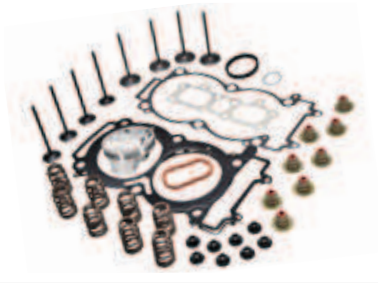
Valve Spring Kit • Beehive Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-82550	Intake / Exhaust	.435"	1.360"	80#	205#	.435"

Kit Includes						
8	H.T. Steel Retainers	8	CrSi Valve Springs	8	Viton® Seals	

1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets
2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)
3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution

Top End Service Kit For RZR™ 1000 (&XP) 2015-'21/ RZR™ RS1 2018-'22



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83950	Intake / Exhaust	.435"	1.360"	80#	205#	.435"

Kit Includes				
8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs	
4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves	
1	High Performance Piston Kit	1	Top End Gasket Kit	

ORDER 650-557-2046

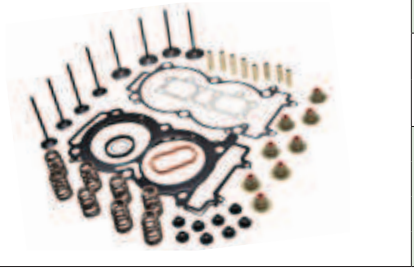
POLARIS® VARIOUS 1000'S 2015-'25

- RZR™ 1000 (&XP) 2015-'25
- RZR TURBO (&XP) 2016-'24
- RZR™ RS1 2018-'22
- GENERAL 1000 (&XP) 2016-'25
- RZR™ PRO XP 2020-'25

Components • Replacement • Top End Service Kit

KPMI P/N	Description	Specification
82-82550	Beehive Spring Kit	**Includes:** H.T. Steel Retainers, CrSi Valve Springs
82-82612	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82616	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-83951	Gasket Kit	**Includes:** Head Gasket 94mm (1), Base Gasket (1), Header Gasket (1), Valve Spring Seat w/ Seal (8), Thermostat Seal (1), Water Outlet O-ring (1)

Cylinder Head Service Kit (Excluding Turbo's)



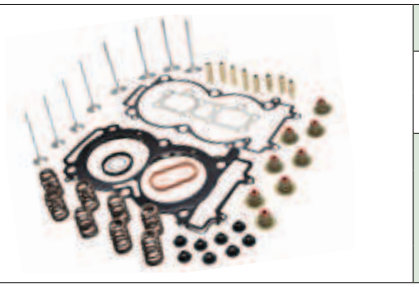
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83150	Intake	.435"	1.360"	80#	205#	.435"
	Exhaust					

Kit Includes				
8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs
4	In Std. Black Diamond™ Valves	4	Ex Std. Black Diamond™ Valves
4	In Std. C674 Valves Guides	4	Ex Std. C674 Valves Guides
1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit (Excluding Turbo's)

KPMI P/N	Description	Specification
82-82550	Beehive Spring Kit	**Includes:** H.T. Steel Retainers, CrSi Valve Springs
82-82612	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82616	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
82-82620	Intake, Standard Valve Guide	Valve Guides • C674 Bronze
82-82630	Exhaust, Standard Valve Guide	Valve Guides • C674 Bronze
82-83151	Gasket Kit	**Includes:** Head Gasket 94mm (1), Base Gasket (1), Header Gasket (1), Valve Spring Seat w/ Seal (8), Thermostat Seal (1), Water Outlet O-ring (1)

Cylinder Head Service Kit for RZR™ Turbo



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-83160	Intake	.435"	1.360"	80#	205#	.435"
	Exhaust					

Kit Includes			
8	In / Ex H.T. Steel Retainers	8	In / Ex CrSi Valve Springs
4	In Std. White Diamond® Valves	4	Ex Std. White Diamond® Valves
4	In Std. C674 Valves Guides	4	Ex Std. C674 Valves Guides
1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit for RZR™ Turbo

KPMI P/N	Description	Specification
82-82550	Beehive Spring Kit	**Includes:** H.T. Steel Retainers, CrSi Valve Springs
82-83112H	Intake, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
82-83116K	Exhaust, Standard Valve	Valve • White Diamond® • Inconel®
82-82620	Intake, Standard Valve Guide	Valve Guides • C674 Bronze
82-82630	Exhaust, Standard Valve Guide	Valve Guides • C674 Bronze
82-83161	Gasket Kit	**Includes:** Head Gasket 94mm (1), Base Gasket (1), Header Gasket (1), Valve Spring Seat w/ Seal (8), Thermostat Seal (1), Water Outlet O-ring (1)

POLARIS® VARIOUS 1000'S 2015-'25

- RZR™ 1000 (&XP) 2015-'25
- RZR TURBO (&XP) 2016-'24
- RZR™ RS1 2018-'22
- GENERAL 1000 (&XP) 2016-'25
- RZR™ PRO XP 2020-'25

Valves • Black Diamond™ • Black Nitroneg Stems (Excluding Turbo's)

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-82612	Intake	37.72mm	1.485"	0.2160"	17º	3.775"	Standard
82-82613	Intake	38.72mm	1.524"	0.2160"	17º	3.775"	Oversize
82-82614	Exhaust	32.44mm	1.277"	0.2155"	25º	3.815"	'24-'25 XP 1000 Only - Std.
82-82615	Exhaust	33.44mm	1.317"	0.2155"	25º	3.815"	'24-'25 XP 1000 Only - O/S
*82-82616	Exhaust	29.21mm	1.150"	0.2155"	25º	3.805"	Standard
*82-82617	Exhaust	30.21mm	1.189"	0.2155"	25º	3.805"	Oversize

Note: *Not recommended for Turbo applications (see KPMI® Turbo valve PN's 82-83100 & 82-83116)

Valve Kit • Turbo

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-83100	Intake	37.72mm	1.485"	0.2160"	17º	3.775"	Standard
	Exhaust	29.21mm	1.150"	0.2155"	25º	3.805"	Standard
Kit Includes		4	Intake White Diamond® Valves		4	Exhaust Inconel® Valves	

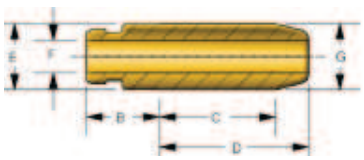
The Turbo Valve Kit is specifically designed for Turbo applications using our 1-Pc forged "Super Alloy" Inconel® 751 exhaust valve that retains mechanical properties and corrosion resistance at elevated temperatures. The exhaust valve is paired with a 1-Pc White Diamond® Stainless Intake for superior performance and longevity. Together this valve kit provides the performance for boosted applications at a competitive selling price.

Valves • White Diamond® • Inconel®

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-83112H	Intake	37.72mm	1.485"	0.2160"	17º	3.775"	Standard
**82-83116K	Exhaust	29.21mm	1.150"	0.2155"	25º	3.805"	Standard -Inconel® Recommended for Turbos

**Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
---	0.455"	0.755"	0.940"	0.433"	0.2160'	0.4353" / Std.	82-82620	
						+0.001"	82-82621	
						+0.002"	82-82622	
						+0.010"	82-82629	
---	0.455"	1.090"	1.190"	0.433"	0.2155'	0.4353" / Std.		82-82630
						+0.001"		82-82631
						+0.002"		82-82632
						+0.010"		82-82639

Note: These guides are compatible with both KPMI® Seal #71016-X and the OEM Replacement Tophat Seals #71048-XX

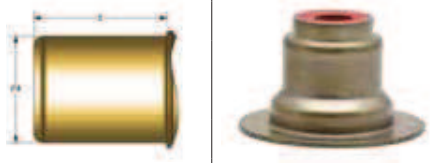
ORDER 650-557-2046

POLARIS® VARIOUS 1000'S 2015-'25

- RZR™ 1000 (&XP) 2015-'25
- RZR TURBO (&XP) 2016-'24
- RZR™ RS1 2018-'22
- GENERAL 1000 (&XP) 2016-'25
- RZR™ PRO XP 2020-'25

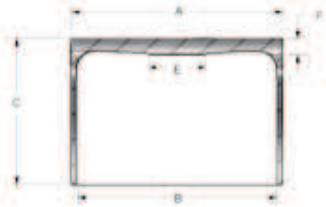
Valve Guide Seals • OEM Replacement • Tophat

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
				A	B	C			
5.5mm	0.630"	1.043"	3	0.435"±0.005"	---	0.480"	0.697"	Intake Exhaust	3610212



Part Number	Quantity	Quantity Discount
71048-4	Pkg. of 4	0%
71048-8	Pkg. of 8	0%
71048-16	Pkg. of 16	Less- 10%
71048-50	Pkg. of 50	Less- 15%
71048-100	Pkg. of 100	Less- 20%

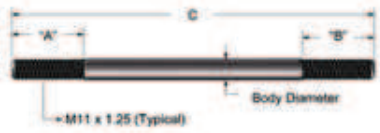
Tappets • Shim On Bottom Conv. • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
82-82607	Intake Exhaust	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8
***82-82609	Intake Exhaust	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 8

***Note:** These tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system.*Our coated tappets undergo a low temperature *PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications. For complete shim range visit **www.kpmi.us** or Tappets section in back of catalog.

Cylinder Head Stud Kit for RZR/ Ranger/ ACE/ General 900 & 1000's (Except Diesel)

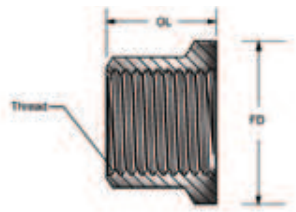


KPMI P/N	Body Dia.	O. L. "C"	A	B	Remarks
82-83550	0.358"	6.990"	1.60"	1.00"	Standard

Kit Includes	6	H.T. Steel Studs	6	H.T. Steel Nuts	6	H.T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts



KPMI P/N	Material	O. L.	F. D.	Thread	Quantity
41011-4	H. T. Steel	0.470""	0.800	M11 x 1.25	Pkg. of 4

Replacement nuts for Stud Kit, #82-83550, but can be used for general purpose (see diagram for detail)

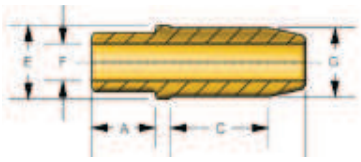
These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

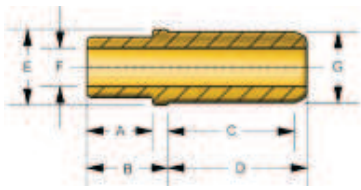
POLARIS® VARIOUS 1000'S 2020-2025

- RANGER™ 1000'S (NON XP) 2020-2025
- PRO XD'S 2000,4000 & FULL SIZE GAS 2020-'25

Valve Guides • C674 Bronze

NEW PRODUCT





A	B	C	D	E	F	G	Intake	Exhaust
0.530"	0.590"	0.700"	1.105"	0.495"	0.2735"	0.4353" / Std.	82-86120	
						+0.001"	82-86121	
						+0.002"	82-86122	
						+0.010"	82-86129	
0.530"	0.590"	0.925"	1.105"	0.495"	0.2730"	0.4353" / Std.		82-86130
						+0.001"		82-86131
						+0.002"		82-86132
						+0.010"		82-86139

POLARIS® VARIOUS 4-CYLINDERS'S 2020-'25

- Slingshot™ 2020-2024
- RZR™ Pro R 2022-2025

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-86050	Intake / Exhaust	.450"	1.375"	65#	200#	.450"
Kit Includes	16 Titanium Retainers	16 CrSi Valve Springs				
	16 H.T. Steel Basewashers	16 Viton® Seals				

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-86055	Intake / Exhaust	.450"	1.375"	64#	181#	.450"
Kit Includes	16 Titanium Retainers	16 CrSi Valve Springs				
	16 H.T. Steel Basewashers	16 Viton® Seals				

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-86060	Intake / Exhaust	.450"	1.375"	65#	200#	.450"
Kit Includes	16 H.T. Steel Retainers	16 CrSi Valve Springs				
	16 H.T. Steel Basewashers	16 Viton® Seals				

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-86065	Intake / Exhaust	.450"	1.375"	64#	181#	.450"
Kit Includes	16 H.T. Steel Retainers	16 CrSi Valve Springs				
	16 H.T. Steel Basewashers	16 Viton® Seals				

- These spring kits are compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets.
- KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With two different spring pressure option kits to choose from, these are the ultimate setup for any Polaris RZR/Ranger tuner.

POLARIS® VARIOUS 4-CYLINDERS'S 2020-'25

- Slingshot™ 2020-2024
- RZR™ Pro R 2022-2025

Valve Spring Kit • Beehive Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
82-86070	Intake	.435"	1.360"	80#	205#	.435"
	Exhaust					

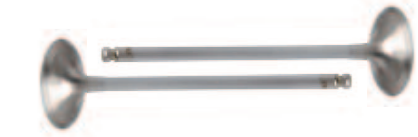
Kit Includes	16	H.T. Steel Retainers	16	CrSi Valve Springs	16	Viton® Seals

1) This kit is compatible with the OEM tappet lash adjustment system and the KPMI® shim conversion tappets
2) This kit is designed for compatibility with the OEM integrated Seal/Base (OE# 3610212) or KPMI#71048-8 (included in this kit)
3) KPMI® made OEM replacement seals are included for a more complete performance valvetrain solution

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-82612	Intake	37.72mm	1.485"	0.2160"	17º	3.775"	Standard
82-82613	Intake	38.72mm	1.524"	0.2160"	17º	3.775"	Oversize

Valves • White Diamond® • Inconel®

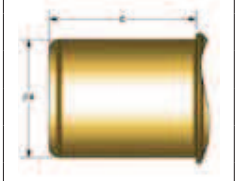


KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
82-83112H	Intake	37.72mm	1.485"	0.2160"	17º	3.775"	Standard
**82-83116K	Exhaust	29.21mm	1.150"	0.2155"	25º	3.805"	Standard -Inconel®

**Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

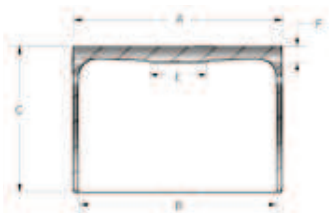
Valve Guide Seals • OEM Replacement • Tophat

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			Spring Shoulder Dia.	Type	Rep. OEM P/N
				A	B	C			
5.5mm	0.630"	1.043"	3	0.435"±0.005"	---	0.480"	0.697"	Intake	3610212
								Exhaust	



Part Number	Quantity	Quantity Discount
71048-4	Pkg. of 4	0%
71048-8	Pkg. of 8	0%
71048-16	Pkg. of 16	Less- 10%
71048-50	Pkg. of 50	Less- 15%
71048-100	Pkg. of 100	Less- 20%

Tappets • Shim On Bottom Conv. • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
82-86075	Intake	None	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 16
	Exhaust								
*82-86080	Intake	DLC Coated	31.15mm	1.2260"	1.156"	0.800"	0.325"	0.108"	Pkg. of 16
	Exhaust								

Note: These tappets must be used with KPMI® spring kit to convert to a 9.5mm shim adjustment system.*Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® recommends never running a camshaft off the edge of the tappet, this coating may help increase durability in these applications. For complete shim range visit **www.kpmi.us** or Tappets section in back of catalog.

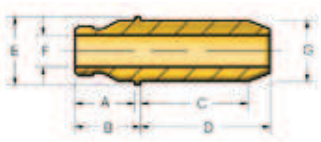
SUZUKI® DR™ 250/ 350S/ SE 1990-1999

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-6041	Intake	.350”	1.200"	61#	141#	.350"
	Exhaust					

Kit Includes	4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

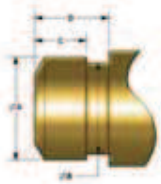
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.410"	0.450"	0.740”	0.890"	0.467"	0.1955"	0.4170" / Std.	60-6030	
						+0.001”	60-6031	
						+0.002”	60-6032	
						+0.003”	60-6033	
						+0.010”	60-6040	

Valve Guide Seals • Viton®

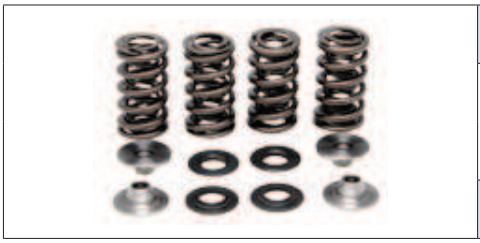
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340”±0.005”	0.303”	0.125”	0.230”	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

SUZUKI® RM-Z250™ 2004-2006

Valve Spring Kit • Lightweight Racing



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60170	Intake	.445”	1.320"	46#	155#	.445"
	Exhaust					

Kit Includes	4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

Intake Only • Steel Valve Conversion Kit

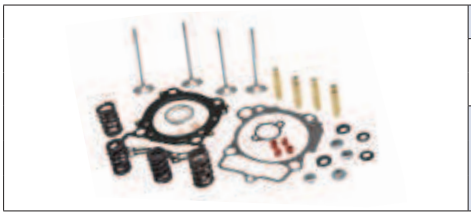
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60450	Intake	.445”	1.320"	46#	155#	.445"

Kit Includes	2	CrSi Valve Springs	2	Titanium Retainers
	2	White Diamond® Valves	2	H. T. Steel Basewashers

ORDER 650-557-2046

SUZUKI® RM-Z250™ 2004-2006

Cylinder Head Service Kit



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-61800	Intake	.445"	1.320"	46#	155#	.445"
	Exhaust					

Kit Includes						
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers	
2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves			
4	In / Ex Std. C674 Valve Guides	1	Top End Gasket Kit			

Components • Replacement • Cylinder Head Service Kit

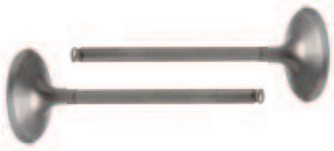
KPMI P/N	Description	Specification
60-60170	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
60-60210H	Intake, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
60-60213H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
60-60190	Intake / Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
60-61801	Gasket Kit	**Includes:** Head Gasket 77mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Camchain Tensioner O-Ring (1), Valve Stem Seal (4)

Valves • White Diamond® • Hard Chrome Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60210H	Intake	31.00mm	1.220"	0.1765"	20º	3.120"	Standard
60-60213H	Exhaust	25.00mm	0.984"	0.1756"	25º	3.125"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing White Diamond® Valves.

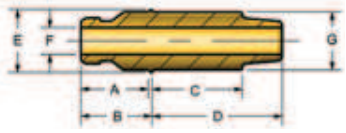
Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
60-60210T	Intake	31.00mm	1.220"	0.1765"	20º	3.110"	Titanium	K1200-40002
60-60213T	Exhaust	25.00mm	0.984"	0.1756"	25º	3.115"	Titanium	K1200-50002

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

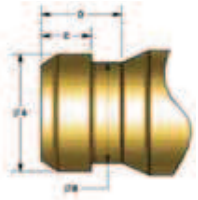
Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.440"	0.465"	0.590"	0.850"	0.410"	0.1765"	0.3765" / Std.	60-60190	
						+0.010"	60-60199	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust

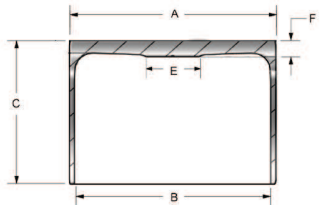


Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

VISIT US AT WWW.KPMI.US

SUZUKI® RM-Z250™ 2004-2006

Tappets • O.E.M. Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
60-60176	Intake	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 2

Refer to KPMI® Tappet Section, in back of catalog, when selecting oversize tappets.

SUZUKI® RM-Z250™ 2007-2025

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60500	Intake Exhaust	.445"	1.300"	51#	160#	.445"

Kit Includes					
4	Titanium Retainers	4	CrSi Valve Springs
4	H.T. Steel Basewashers	4	Red Viton® Seals

KPMI® Supplied Viton® Seals must be used with this kit. OEM seals are NOT compatible.

Cylinder Head Service Kit for RM-Z250™ 2007-2009

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-61810	Intake Exhaust	.445"	1.300"	51#	160#	.445"

Kit Includes							
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
4	Red Viton® Seals	2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves
4	In / Ex Std. C630 Valve Guides	1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit for RM-Z250™ 2007-2009

KPMI P/N	Description	Specification
60-60500	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
60-60512H	Intake, Standard Valve	Valve • White Diamond® • Stainless
60-60516H	Exhaust, Standard Valve	Valve • White Diamond® • Stainless
60-60520	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
60-61811	Gasket Kit	**Includes:** Head Gasket 77mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner Bolt (1), Valve Stem Seals (4)

Cylinder Head Service Kit for RM-Z250™ 2010-2025

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-61600	Intake Exhaust	.445"	1.300"	51#	160#	.445"

Kit Includes							
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
4	Red Viton® Seals	2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves
4	In / Ex Std. C630 Valve Guides	1	Top End Gasket Kit		

ORDER 650-557-2046

SUZUKI® RM-Z250™ 2007-2025

Components • Replacement • Cylinder Head Service Kit for RM-Z250™ 2010-2025

KPMI P/N	Description	Specification
60-60500	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Red Viton® Seals
60-60512H	Intake, Standard Valve	Valve • White Diamond® • Stainless
60-60516H	Exhaust, Standard Valve	Valve • White Diamond® • Stainless
60-60520	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
60-61601	Gasket Kit	**Includes:** Head Gasket 77mm (1), Valve Stem Seals (4), Base Gasket (1), Exhaust Gasket (1), Head Drain Seal (1), Water Temp Sensor O-ring (1), Cam Chain Tensioner O-ring (1), Cam Tower O-ring Seal (1)

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60470	Intake	.445"	1.300"	51#	160#	.445"

Kit Includes						
2	Titanium Retainers	2	CrSi Valve Springs	2	Red Viton® Seals	
2	White Diamond® Valves	2	H. T. Steel Basewashers			

KPMI® Supplied Viton® Seals must be used with this kit. OEM seals are NOT compatible.

Valves • White Diamond® • Hard Chrome Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60512H	Intake	31.00mm	1.220"	0.1765"	15º	3.175"	Standard
60-60516H	Exhaust	25.00mm	0.985"	0.1760"	25º	3.185"	Standard

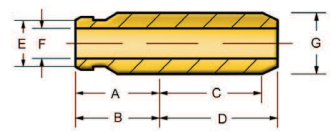
Must use Kibblewhite® Lightweight Valve Spring Kits when installing White Diamond® Valves.

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
60-60512T	Intake	31.00mm	1.220"	0.1765"	15º	3.165"	Titanium	12911-49H00
60-60516T	Exhaust	25.00mm	0.985"	0.1760"	25º	3.175"	Titanium	1212-10H00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

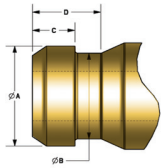
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.545"	0.545"	0.530"	0.700"	0.374"	0.1765	0.3778" / Std.	60-60520	
						+0.001"	60-60521	
						+0.002"	60-60522	
						+0.010"	60-60529	

Valve Guide Seals • Viton®

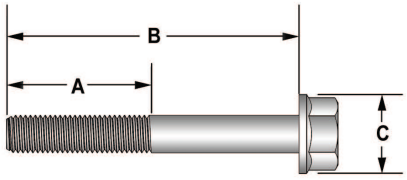
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.0mm	0.310"	0.380"	2	0.315"±0.005"	0.270"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

SUZUKI® RM-Z250™ 2007-2025

Cam Tower Bolt • H.T. Steel for Suzuki® RM-Z250 2010-2025



KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
60-61455	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 8	09103-06266
								09103-06026
	M6 x 1.0	10mm	18mm	45mm	0.495	4ea.		09103-06165
								09103-06293
41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266
					0.495"			09103-06026
41006-4	M6 x 1.0	10mm	18mm	45mm	12.57mm	4ea.	Pkg. of 4	09103-06165
					0.495"			09103-06293

Works with other applications (see dimensions for compatibility)

SUZUKI® LT-Z / D-RZ 400 2000-2024

- LT-Z ™ 400 2003-2014
- D-RZ ™ 400E/ S/ SM ™ 2000-2024

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60045	Intake	.440"	1.205"	57#	171#	.440"
	Exhaust					

Kit Includes						
4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

Cylinder Head Service Kit (Excludes DRZ's 2021-2024)

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-61790	Intake	.440"	1.205"	57#	171#	.440"
	Exhaust					

Kit Includes					
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves		
4	In / Ex Std. C674 Valve Guides	1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit (Excludes DRZ's 2021-2024)

KPMI P/N	Description	Specification
60-60045	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
60-60050H	Intake, Standard Valve	Valve • White Diamond® • Stainless
60-60053H	Exhaust, Standard Valve	Valve • White Diamond® • Stainless
60-60060	Intake / Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
60-61791	Gasket Kit	**Includes:** Head Gasket 92mm Bore (1), Base Gasket (1), Exhaust Gasket (2), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner Washer (1), Valve Stem Seals (4)

Top End Service Kit

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-61850	90.00mm	Intake	.440"	1.205"	57#	171#	.440"
		Exhaust					

Kit Includes					
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Std. White Diamond® Valves	2	Ex Std. White Diamond® Valves		
1	High Performance Piston Kit	1	Top End Gasket Kit		

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

ORDER 650-557-2046

SUZUKI® LT-Z / D-RZ 400 2000-2024

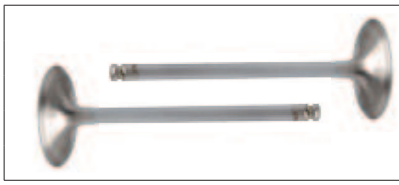
- LT-Z ™ 400 2003-2014
- D-RZ ™ 400E/ S/ SM ™ 2000-2024

Components • Replacement • Top End Service Kit

KPMI P/N	Description	Specification
60-60045	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
60-60050H	Intake, Standard (Outer) Valve	Valves • White Diamond® • Hard Chrome Stems
60-60053H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
60-61851	Gasket Kit	**Includes:** Head Gasket 92mm Bore (1), Base Gasket (1), Exhaust Gasket (2), Cam Chain Tensioner Gasket (1), Cam Chain Tensioner Washer (1), Valve Stem Seals (4)

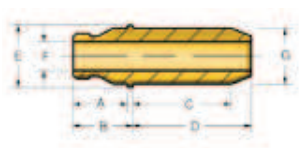
* These components are intended for use with the KPMI® Top End Kit and are not intended for OEM compatibility.

Valves • White Diamond® • Hard Chrome Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60050H	Intake	36.00mm	1.418"	0.1960"	20º	3.245"	Standard
60-60051H	Intake	37.00mm	1.457"	0.1960"	20º	3.245"	Oversize
60-60053H	Exhaust	29.00mm	1.142"	0.1953"	17º	3.210"	Standard
60-60054H	Exhaust	30.00mm	1.182"	0.1953"	17º	3.210"	Oversize

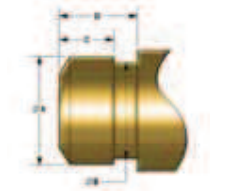
Valve Guides • C674 Bronze (Excludes DRZ's 2021-2024)



A	B	C	D	E	F	G	Intake	Exhaust
0.390"	0.430"	0.570"	0.770"	0.466"	0.1960"	0.4167" / Std.	60-60060	
						+0.010"	60-60069	

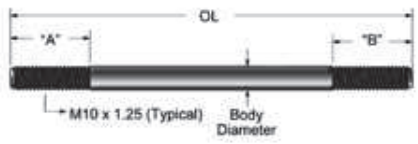
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

Cylinder Stud Kit (Excluding LT-Z ™ 400 2009 - up)

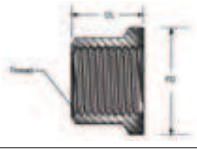


KPMI P/N	Quantity	Material	Body Dia.	O. L.	"A"	"B"
60-61960	4	H. T. Steel	0.358"	7.625"	1.050"	1.450"

Kit Includes	4	H. T. Steel Studs	4	H. T. Steel Nuts	4	H. T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts



KPMI P/N	Material	O. L.	F. D.	Thread	Quantity
41010-4	H. T. Steel	0.400"	0.700"	M10 x 1.25	Pkg. of 4

Replacement nuts for Stud Kit, #60-61960, but can be used for general purpose (see diagram for detail)

KPMI® nuts are single point machined from high tensile strength Aircraft Alloy Steel. During the machining process close tolerances and smooth surface finishes are maintained. Two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment provides excellent corrosion resistance and appearance.

SUZUKI® LTR™ 450 / 450Z 2006-2009

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60280	Intake	.415"	1.190"	61#	168#	.415"
	Exhaust	.415"	1.215"	56#	157#	.415"

Kit Includes						
4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers	

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60850	Intake	.415"	1.190"	61#	168#	.415"

Kit Includes					
2	CrSi Valve Springs	2	Titanium Retainers		
2	Black Diamond™ Valves	2	H. T. Steel Basewashers		

Top End Service Kit

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-61900	95.50mm	Intake	.415"	1.190"	61#	168#	.415"
		Exhaust	.415"	1.215"	56#	157#	.415"

Kit Includes					
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
1	Top End Gasket Kit	1	High Performance Piston Kit		

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

Components • Replacement • Top End Service Kit

KPMI P/N	Description	Specification
60-60280	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
60-60310	In Std. Black Diamond™ Valves	Valves • Black Diamond™ • Stainless
60-60313	Ex Std. Black Diamond™ Valves	Valves • Black Diamond™ • Stainless
60-61901	Gasket Kit	Includes: Head Base Gasket 96mm Bore(1), Base Gasket(1), Exhaust Gasket(1), Cam Chain Tensioner Gasket(1), Valve Stem Seals(4)

Cylinder Head Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-61780	Intake	.415"	1.190"	61#	168#	.415"
	Exhaust	.415"	1.215"	56#	157#	.415"

Kit Includes					
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
2	In Std. C674 Valve Guides	2	Ex Std. C674 Valve Guides		
1	Top End Gasket Kit				

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
60-60280	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
60-60310	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
60-60313	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
60-60290	Intake Standard Valve Guide	Valve Guide • C674 Bronze
60-60300	Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
60-61781	Gasket Kit	**Includes:** Head Gasket 96mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Valve Stem Seals (4)

ORDER 650-557-2046

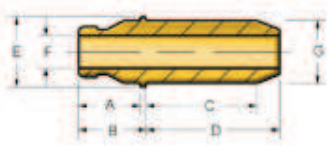
SUZUKI® LTR™ 450 / 450Z 2006-2009

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60310	Intake	36.00mm	1.418"	0.2155"	20º	3.210"	Standard
60-60311	Intake	37.00mm	1.457"	0.2155"	20º	3.210"	Oversize
60-60313	Exhaust	29.00mm	1.142"	0.2150"	20º	3.190"	Standard
60-60314	Exhaust	30.00mm	1.182"	0.2150"	20º	3.190"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

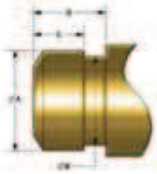
Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.375"	0.410"	0.600"	0.820"	0.460"	0.2155"	0.4170" / Std.	60-60290	
						+0.010"	60-60299	
0.375"	0.410"	0.600"	0.820"	0.460"	0.2155"	0.4170" / Std.		60-60300
						+0.010"		60-60309

Valve Guide Seals • Viton®

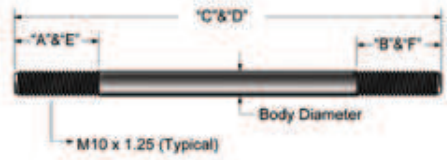
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Cylinder Stud Kits • H. T. Steel

NEW PRODUCTS

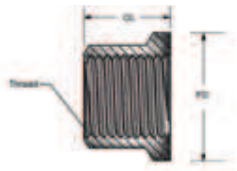


KPMI P/N	Quantity	Material	Body Dia.	"C"	"A"	"B"
60-61950	2	H. T. Steel	0.358"	6.5"	1.450"	1.450"
	Quantity	Material	Body Dia.	"D"	"E"	"F"
	2	H. T. Steel	0.358"	5.7"	1.00"	1.40"
Kit Includes	4	H. T. Steel Studs	4	H. T. Steel Nuts	4	H. T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts • H. T. Steel

NEW PRODUCTS



KPMI P/N	Nut - 12pt	Material	O.L.	F.D.	Thread	Quantity
41010-4	12mm	H.T. Steel	0.400"	0.700"	M10 x 1.25	Pkg. of 4

Replacement nuts for Stud Kits, #60-61950, but can be used for general purpose (see diagram for detail)

KPMI® nuts are single point machined from high tensile strength Aircraft Alloy Steel. During the machining process close tolerances and smooth surface finishes are maintained. Two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment provides excellent corrosion resistance and appearance.

SUZUKI® RM-Z450™ 2005-2006

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60240	Intake	.415"	1.190"	61#	168#	.415"
	Exhaust	.415"	1.220"	55#	156#	.415"

Kit Includes						
4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers	

Intake Only • Steel Valve Conversion Kit

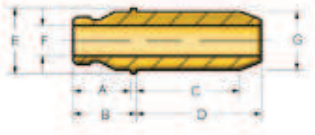
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60460	Intake	.415"	1.190"	61#	168#	.415"

Kit Includes				
2	CrSi Valve Springs	2	Titanium Retainers	
2	White Diamond® Valves	2	H. T. Steel Basewashers	

Valves • White Diamond® • Hard Chrome Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60270H	Intake	36.00mm	1.418"	0.1960"	20º	3.245"	Standard
60-60271H	Intake	37.00mm	1.456"	0.1960"	20º	3.245"	Oversize
60-60273H	Exhaust	29.00mm	1.142"	0.1953"	17º	3.210"	Standard
60-60274H	Exhaust	30.00mm	1.182"	0.1953"	17º	3.210"	Oversize

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.375"	0.410"	0.580"	0.800"	0.460"	0.1955"	0.4170" / Std.	60-60320	
						+0.001"	60-60321	
						+0.002"	60-60322	
						+0.010"	60-60329	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust

Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

SUZUKI® RM-Z450™ 2007

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60650	Intake	.415"	1.190"	61#	168#	.415"
	Exhaust	.415"	1.220"	55#	156#	.415"

Kit Includes					
4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

ORDER 650-557-2046

SUZUKI® RM-Z450™ 2007

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-61000	Intake	.415”	1.190"	61#	168#	.415"

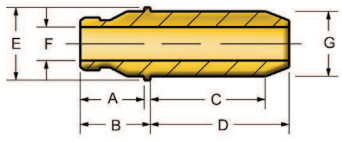
Kit Includes				
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60662	Intake	36.00mm	1.418"	0.2160”	20º	3.240"	Standard
60-60666	Exhaust	29.00mm	1.142"	0.2150”	20º	3.190"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

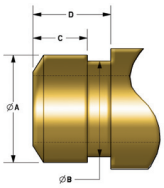
Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.375”	0.410”	0.600”	0.820”	0.460”	0.2155”	0.4170” / Std.	60-60670	
						+0.010”	60-60679	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358”±0.005”	0.320”	0.110”	0.200”	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

SUZUKI® RM-Z450™ 2008-2025

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60700	Intake	.415”	1.190"	61#	168#	.415"
	Exhaust	.415”	1.220"	56#	157#	.415"

Kit Includes						
4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

Cylinder Head Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-61610	Intake	.415”	1.190”	61#	168#	.415”
	Exhaust	.415”	1.220”	56#	157#	.415”

Kit Includes					
4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
4	In / Ex Std. C674 Valve Guides	1	Top End Gasket Kit		

VISIT US AT WWW.KPMI.US

SUZUKI® RM-Z450™ 2008-2025

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
60-60700	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
60-60712	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
60-60718	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
60-60730	Intake / Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
60-61611	Gasket Kit	**Includes:** Head Gasket 97mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Valve Seals (4)

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60720	Intake	.415"	1.190"	61#	168#	.415"

Kit Includes				
2	CrSi Valve Springs	2	Titanium Retainers
2	Black Diamond™ Valves	2	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60712	Intake	36.00mm	1.418"	0.2155"	20º	3.210"	Standard
60-60713	Intake	37.00mm	1.417"	0.2155"	20º	3.210"	Oversize
60-60718	Exhaust	31.00mm	1.220"	0.2150"	20º	3.195"	Standard

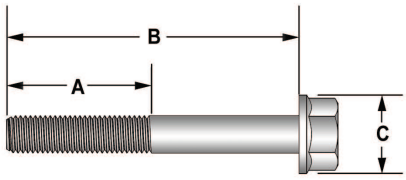
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
60-60712T	Intake	36.00mm	1.418"	0.2155"	20º	3.215"	Titanium	12911-28H00
60-60718T	Exhaust	31.00mm	1.220"	0.2150"	20º	3.180"	Titanium	12912-28H00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

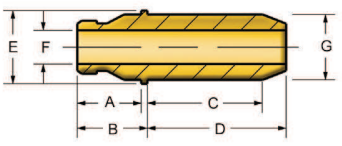
Cam Tower Bolt • H.T. Steel



KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
60-61460	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 8	09103-06266
								09103-06026
	M6 x 1.0	10mm	18mm	45mm	0.495	4ea.		09103-06165
								09103-06293
41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266
					0.495"			09103-06026
41006-4	M6 x 1.0	10mm	18mm	45mm	12.57mm	4ea.	Pkg. of 4	09103-06165
					0.495"			09103-06293

Works with other applications (see dimensions for compatibility)

Valve Guides • C674 Bronze



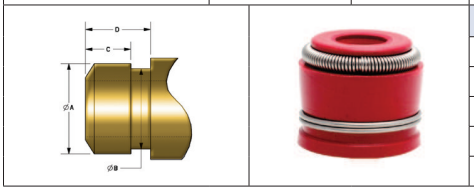
A	B	C	D	E	F	G	Intake	Exhaust
0.375"	0.410"	0.600"	0.820"	0.460"	0.2155"	0.4170" / Std.	60-60730	
						+0.010"	60-60739	

ORDER 650-557-2046

SUZUKI® RM-Z450™ 2008-2025

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

SUZUKI® GS 500E™ 1989-2009

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60120	Intake	.500"	1.345"	90#	268#	.500"
	Exhaust					

Kit Includes								
	4	Titanium Retainers	4	H.T. Steel Keepers Pr.	4	CrSi Valve Springs		
	4	H.T. Steel Basewashers			4	H.T. Steel Spring Shims		

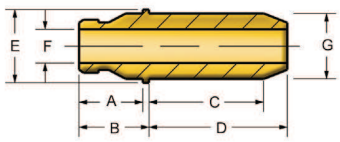
SUZUKI® SV™ 650 1999-2009

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60030	Intake	.405"	1.285"	66#	168#	.405"
	Exhaust					

Kit Includes					
	8	Titanium Retainers	8	CrSi Valve Springs	
	8	H.T. Steel Basewashers	8	H.T. Steel Spring Shims	

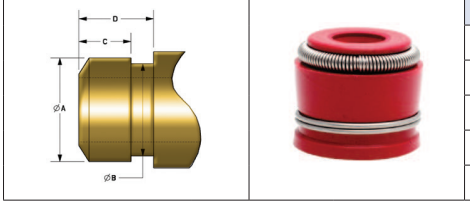
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.435"	0.460"	0.875"	1.020"	0.460"	0.1750"	0.4170" / Std.	60-60080	
						+0.001"	60-60081	
						+0.010"	60-60089	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

VISIT US AT WWW.KPMI.US

SUZUKI® GSX-R™ 600 1997-2000

Valve Spring Kit • Lightweight Racing

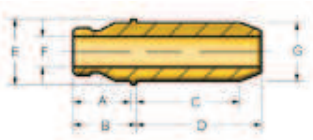
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-1006	Intake	.420"	1.225"	55#	157#	.420"
	Exhaust					

Kit Includes	16	Titanium Retainers	16	CrSi Valve Springs	16	H.T. Steel Basewashers

Retainer Set • O. E. M. Replacement • Titanium

KPMI P/N	Type	Material	Quantity
60-6156	Intake	Titanium	Pkg. of 16
	Exhaust		

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.435"	0.460"	0.875"	1.020"	0.460"	0.1750"	0.4170" / Std.	60-6130	
						+0.001"	60-6131	
						+0.010"	60-6140	

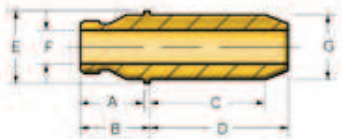
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust

Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

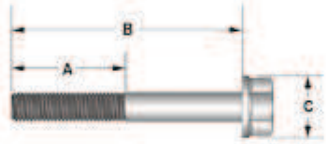
SUZUKI® GSX-R™ 600 / 750 2004-2024

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.425"	0.450"	0.750"	0.990"	0.385"	0.1570"	0.3573" / Std.	60-60370	
						+0.001"	60-60371	
						+0.002"	60-60372	
						+0.010"	60-60379	

Cam Tower Bolt • H.T. Steel



KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
60-61450	M6 x 1.0	10mm	18mm	40mm	12.57mm	20ea.	Pkg. of 20	09103-06266
								09103-06026
41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266
					0.495"			09103-06026

Works with other applications (see dimensions for compatibility)

ORDER 650-557-2046

SUZUKI® KING QUAD's 700-750 2005-'24

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-61500	Intake	.390”	1.440"	50#	148#	.390”
	Exhaust					

Kit Includes	4	Titanium Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

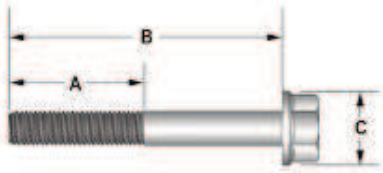
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-61550	Intake	.390”	1.440”	50#	148#	.390”
	Exhaust					

Kit Includes	4	H.T. Steel Retainers	4	CrSi Valve Springs	4	H.T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-61512	Intake	36.00mm	1.417"	0.2160"	20º	3.695"	Standard
60-61516	Exhaust	33.00mm	1.299"	0.2155”	20º	3.705"	Standard

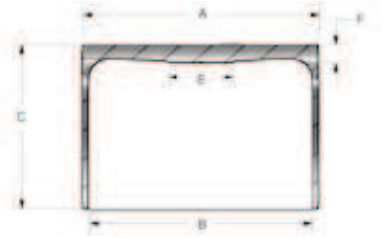
Cam Tower Bolt • H.T. Steel



KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
60-61545	M6 x 1.0	10mm	18mm	40mm	12.57mm	8ea.	Pkg. of 8	09103-06266
					0.495”			09103-06026
41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266
					0.495”			09103-06026

Works with other applications (see dimensions for compatibility)

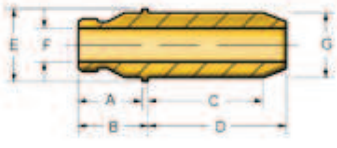
Tappets • O.E.M. Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
60-61530	Std.	None	28.00mm	1.1017”	1.038”	0.763”	0.320”	0.098”	Pkg. of 4
60-61540	Std.	DLC Coated	28.00mm	1.1017”	1.038”	0.763”	0.320”	0.098”	Pkg. of 4

Please refer to KPMI® Tappet Section at KPMI® online www.kpmi.us or in back of catalog, when selecting other size tappets.

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.620”	0.655”	0.645”	0.825”	0.460”	0.2155”	0.4167” / Std.	60-61520	
						+0.001”	60-61521	
						+0.002”	60-61522	
						+0.010”	60-61529	

SUZUKI® KING QUAD's 700-750 2005-'24

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust

Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

SUZUKI® GS™ 750 PRE-1980

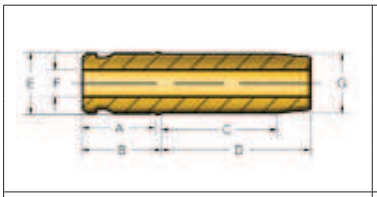
Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-0891	Intake	.480"	1.375"	78#	250#	.480"
	Exhaust					
Kit Includes	8	CrSi Valve Springs				

Retainer Set • Titanium

KPMI P/N	Type	Material		
60-6106	Intake	Titanium		
	Exhaust			
Set Includes	8	Titanium Retainers	8	H. T. Steel Keepers Pr.
Retainer uses 13.0mm OD adjustment shim. This kit must be used with KPMI 60-1026 shim on bottom tappet				

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.620"	0.670"	0.860"	1.115"	0.495"	0.2745"	0.4752" / Std.	60-0860	
						+0.002"	60-0861	
						+0.015"	60-4090	
0.620"	0.670"	---	1.115"	0.495"	0.2745"	0.4752" / Std.		60-0864
						+0.002"		60-0865
						+0.015"		60-4107

Valve Guide Seals • Viton®

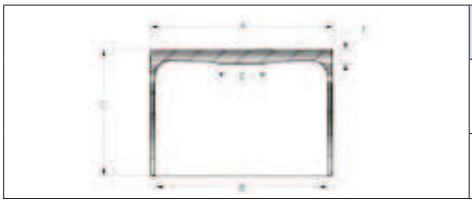
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.374"	0.560"	4	0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust

Part Number	Quantity	Quantity Discount
71019-4	Pkg. of 4	0%
71019-8	Pkg. of 8	0%
71019-16	Pkg. of 16	Less- 10%
71019-50	Pkg. of 50	Less- 15%
71019-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

SUZUKI® GS™ 750 PRE-1980

Tappets • Shim On Bottom Conv. • H.T. Steel

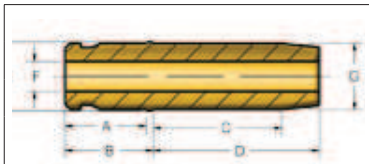


KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
60-1026	Std.	None	33.50mm	1.3184"	1.250"	1.025"	0.313"	0.115"	Pkg. of 8

Requires Kibblewhite® Shim On Bottom Retainers # 60-6106 (Pkg. of 8). Refer to KPMI® Tappet Section, in back of catalog, when selecting other size tappets.

SUZUKI® DR™ 750 / 800 BIG 1988-'98

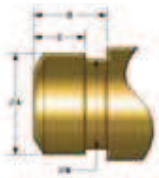
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.440"	0.490"	0.785"	1.165"	0.495"	0.2745"	0.4752"	60-60090	
						+0.002"	60-60092	
						+0.004"	60-60094	
						+0.015"	60-60099	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.374"	0.560"	4	0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71019-4	Pkg. of 4	0%
71019-8	Pkg. of 8	0%
71019-16	Pkg. of 16	Less- 10%
71019-50	Pkg. of 50	Less- 15%
71019-100	Pkg. of 100	Less- 20%

SUZUKI® GS™ 750 E/ ES/ L/ T 1980-1986

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-1028	Intake	.390"	1.215"	50#	138#	.390"
	Exhaust					
Kit Includes	16	CrSi Valve Springs				

Retainer Set • O. E. M. Replacement • Titanium

KPMI P/N	Type	Material	Quantity
60-1034T	Intake	Titanium	Pkg. of 16
	Exhaust		

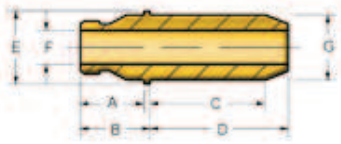
Note : Fits O.E.M. Springs

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60220	Intake	27.50mm	1.083"	0.2145"	27°	3.380"	Standard
60-4301	Intake	28.50mm	1.122"	0.2155"	23°	3.435"	Oversize
60-4311	Intake	29.50mm	1.161"	0.2155"	23°	3.435"	Oversize
60-4302	Intake	31.00mm	1.220"	0.2155"	23°	3.435"	Oversize
60-4304	Exhaust	24.50mm	0.965"	0.2145"	27°	3.415"	Oversize

SUZUKI® GS™ 750 E/ ES/ L/ T 1980-1986

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.465"	0.510"	0.780"	0.940"	0.488"	0.2160'	0.4365" / Std.	60-1029	
						+0.002"	60-1030	
						+0.015"	60-4030	
						+0.065"	60-1052	

Valve Guides • C630 Bronze • Special 5.0mm Conversion

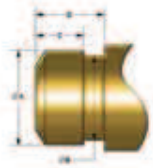
A	B	C	D	E	F	G	Intake	Exhaust
0.465"	0.510"	0.780"	0.940"	0.488"	0.1950"	0.4365"	60-4298	

Special Blank

A	B	C	D	E	F	G	Intake	Exhaust
0.465"	---	---	1.285"	0.435"	0.2145"	0.6250"±0.010	60-4031	

Valve Guide Seals • Viton®

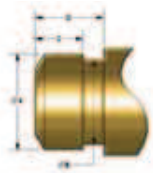
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Valve Guide Seals • Viton® For Special 5.0mm Conversion

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

SUZUKI® GSX-R™ 750 1986-1992

Valve Spring Only Kit • High Performance For 1986-1990 Models

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-1002	Intake	.440"	1.215"	55#	170#	.440"
	Exhaust					
Kit Includes	16	CrSi Valve Springs				

ORDER 650-557-2046

SUZUKI® GSX-R™ 750 1986-1992

Valve Spring Only Kit • High Performance For 1991-1992 Models

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-1003	Intake	.440"	1.255"	45#	158#	.440"
	Exhaust					

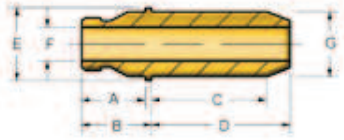
Kit Includes	16	CrSi Valve Springs	16	Spring Shim

Retainer Set • Titanium

KPMI P/N	Type	Material	Models	Quantity
60-6155	Intake	Titanium	1986-1990	Pkg. of 16
	Exhaust			

Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-1002

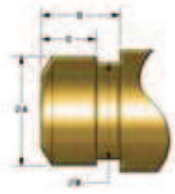
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.410"	0.450"	0.740"	0.890"	0.467"	0.1955"	0.4170" / Std.	60-4156-1	
						+0.002"	60-4157-1	
						+0.006"	60-4159-1	
						+0.085"	60-4160-1	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

SUZUKI® GSX-R™ 750 1993-1995

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60040	Intake	.440"	1.230"	50#	158#	.440"
	Exhaust					

Kit Includes	16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

Retainer Set • O. E. M. Replacement • Titanium

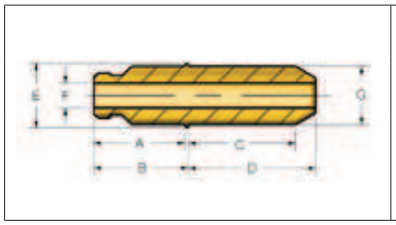
KPMI P/N	Type	Material	Quantity
60-6154	Intake	Titanium	Pkg. of 16
	Exhaust		

Note : Fits O.E.M. Springs

VISIT US AT WWW.KPMI.US

SUZUKI® GSX-R™ 750 1993-1995

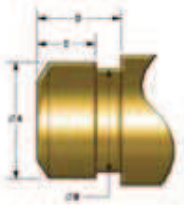
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.655"	0.680"	0.770"	0.915"	0.460"	0.1760'	0.4170" / Std.	60-6000	
						+0.002"	60-6002	
						+0.010"	60-6010	

Valve Guide Seals • Viton®

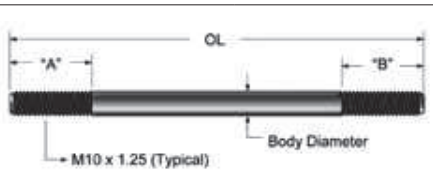
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



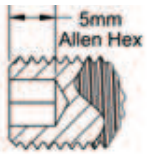
Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

SUZUKI® GSX-R™ 750 2004-2005

Cylinder Stud Kits • H. T. Steel • M10 x 1.25 Thread



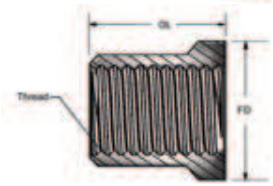
KPMI P/N	Material	O.L.	Body Dia.	A	B	Remarks
60-61250	H. T. Steel	5.225"	0.360"	1.225"	1.400"	Std. Length
Includes	10	H. T. Steel Studs	10	H. T. Steel Washers		



KPMI P/N	Nut - 12pt	Material	O.L.	Body Dia.	A	B	Remarks
60-61300	14mm	H. T. Steel	5.225"	0.360"	1.225"	1.400"	Std. Length
Includes	10	H. T. Steel Studs	10	H. T. Steel Nuts	10	H. T. Steel Washers	

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Nuts • Steel



KPMI P/N	Nut - 12pt	Material	F.D.	O.L.	Thread	Quantity
60-61302	14mm	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 10
41001-4	14mm	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 4
Replacement nuts for Stud Kits, #60-61300, but can be used for general purpose (see diagram for detail)						

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

ORDER 650-557-2046

SUZUKI® GSX-R™ 750 SRAD 1996-'99

Valve Spring Kit • Lightweight Racing

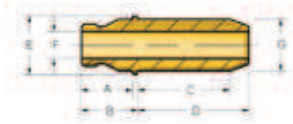
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-1005	Intake	.420"	1.220"	55#	157#	.420"
	Exhaust					

Kit Includes	16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

Retainer Set • O. E. M. Replacement • Titanium

KPMI P/N	Type	Material	Quantity
60-6155	Intake	Titanium	Pkg. of 16
	Exhaust		
Note : Fits O.E.M. Springs			

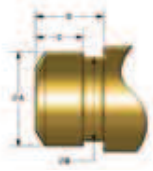
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.435"	0.460"	0.875"	1.020"	0.460"	0.1755"	0.4170" / Std.	60-6130	
						+0.002"	60-6131	
						+0.010"	60-6140	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

SUZUKI® GS™ 850 1979-1983

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-0891	Intake	.480"	1.375"	78#	250#	.480"
	Exhaust					

Kit Includes	8	CrSi Valve Springs

Retainer Set • Titanium

KPMI P/N	Type	Material
60-6106	Intake	Titanium
	Exhaust	

Set Includes	8	Titanium Retainers	8	H. T. Steel 15°Jumbo Keepers Pr.

SUZUKI® GS™ 1000 PRE-1981

Valve Spring Only Kit • High Performance

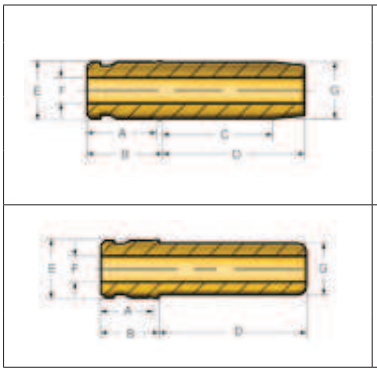
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-0891	Intake	.480"	1.375"	78#	250#	.480"
	Exhaust					
Kit Includes	8	CrSi Valve Springs				

Retainer Set • Titanium

KPMI P/N	Type	Material		
60-6106	Intake	Titanium		
	Exhaust			
Set Includes	8	Titanium Retainers	8	H. T. Steel Keepers Pr.

Retainer uses 13.0mm OD adjustment shim. This kit must be used with KPMI 60-1026 shim on bottom tappet

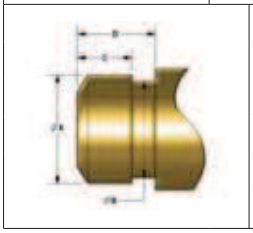
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.620"	0.670"	0.860"	1.115"	0.495"	0.2745"	0.4752" / Std.	60-0860	
						+0.002"	60-0861	
						+0.015"	60-4090	
0.620"	0.670"	---	1.115"	0.495"	0.2745"	0.4752" / Std.		60-0864
						+0.002"		60-0865
						+0.015"		60-4107

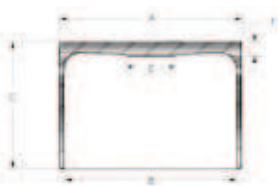
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
7.0mm	0.374"	0.560"	4	0.475"±0.005"	0.430"	0.115"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71019-4	Pkg. of 4	0%
71019-8	Pkg. of 8	0%
71019-16	Pkg. of 16	Less- 10%
71019-50	Pkg. of 50	Less- 15%
71019-100	Pkg. of 100	Less- 20%

Tappets • Shim On Bottom Conv. • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
60-1026	Std.	None	33.50mm	1.3184"	1.250"	1.025"	0.313"	0.115"	Pkg. of 8
60-4220	+0.020	None	34.00mm	1.3380"	1.258"	1.025"	0.313"	0.115"	Pkg. of 1

Requires Kibblewhite® Shim On Bottom Retainers # 60-6106 (Pkg. of 8). Refer to KPMI® Tappet Section, in back of catalog, when selecting other size tappets.

ORDER 650-557-2046

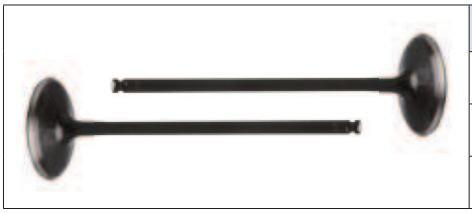
SUZUKI® GSX-R1000™ 2001-2004

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60146	Intake	.440"	1.320"	46#	154#	.440"
	Exhaust					

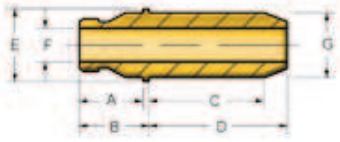
Kit Includes	16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60141	Intake	30.00mm	1.181"	0.1568"	20º	3.740"	Oversize
60-60143	Exhaust	24.00mm	0.945"	0.1563"	20º	3.755"	Standard
60-60144	Exhaust	25.00mm	0.984"	0.1563"	20º	3.755"	Oversize

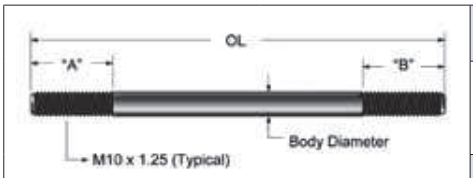
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.425"	0.450"	0.750"	0.990"	0.385"	0.1570"	0.3573" / Std.	60-60150	
						+0.001"	60-60151	
						+0.002"	60-60152	
						+0.010"	60-60159	

Cylinder Stud Kits • H. T. Steel • M10 x 1.25 Thread

NEW PRODUCTS



KPMI P/N	Material	O.L.	Body Dia.	A	B	Remarks
60-61250	H. T. Steel	5.225"	0.360"	1.225"	1.400"	Std. Length

Includes	10	H. T. Steel Studs	10	H. T. Steel Washers

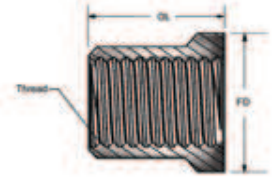
KPMI P/N	Nut - 12pt	Material	O.L.	Body Dia.	A	B	Remarks
60-61300	14mm	H. T. Steel	5.225"	0.360"	1.225"	1.400"	Std. Length

Includes	10	H. T. Steel Studs	10	H. T. Steel Nuts	10	H. T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Nuts • Steel

NEW PRODUCTS



KPMI P/N	Nut - 12pt	Material	F.D.	O.L.	Thread	Quantity
60-61302	14mm	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 10
41001-4	14mm	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 4

Replacement nuts for Stud Kits, #60-61300, but can be used for general purpose (see diagram for detail)

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

SUZUKI® GSX-R™ 1000 2005-2008

Valve Spring Only Kit • "Performance Rebuild" Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60950	Intake	.425"	1.335"	60#	181#	.425"
	Exhaust					

Kit Includes					
16	CrSi Valve Springs	16	H. T. Steel Basewashers		

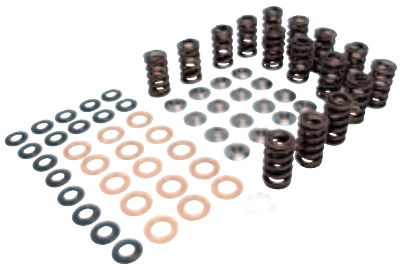
- These springs have been designed to provide pressures to control stainless steel valves. Experienced engine builders who are running aggressive camshafts or higher than factory RPM's may choose to run these elevated pressures with titanium valves as well
- These high quality replacement springs have been designed to exceed the OEM specifications by fitting precisely on the spring shoulder diameter of both the OEM retainers, and KPMI H.T. Steel retainers (P/N 60-60941)
- This kit also includes H.T. Steel basewashers in order to achieve a precision fitment on the large end of our beehive spring which, better controls the lateral motion of the spring, ensuring longer life and less wear on the spring, retainer, and basewasher.
- KPMI® has gone a step further and specified the latest in spring materials and processing, for an extremely robust design that will last longer than anything currently on the market
- Unique features of this spring include is beehive variable rate wind to reduce the chances of spring surge due to cam harmonics, Super-Clean Chrome Silicon wire with additional Vanadium and Nickel added for increased strenth, and a gas nitrided and double shot peened finish for greater fatigue life

Retainer Set • O. E. M. Replacement • H. T. Steel

KPMI P/N	Type	Material	Quantity
60-60941	Intake	H.T. Steel	Pkg. of 16
	Exhaust		

- By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer
- These retainers are intended as an OEM replacement and are completely compatible with the OEM springs, keepers, and shims
- The spring shoulder diameter has been designed to match the OEM retainer and spring as well as KPMI's beehive spring (P/N 60-60950), making this retainer your high performance OEM alternative

Valve Spring Kit • Lightweight Racing and Stainless Steel Conversion



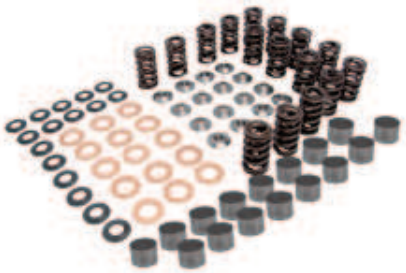
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60600	Intake	Titanium Valve Only				
	Exhaust	.445"	1.330"	43#	152#	.445"
	Intake	Stainless Steel Conversion				
	Exhaust	.370"	1.245"	65#	156#	.370"

Kit Includes							
16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers		
16	Spring Shims	16	Spring Shims				

To achieve the proper installed height when using the stainless valve conversion, it may be necessary to utilize the 0.030" & 0.060" shims provided with the kit.

Valve Spring Kit • "Shim in Tappet" and Stainless Steel Conversion

NEW PRODUCTS



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-62000	Intake	Titanium Valve Only				
	Exhaust	.445"	1.330"	43#	152#	.445"
	Intake	Stainless Steel Conversion				
	Exhaust	.370"	1.245"	65#	156#	.370"

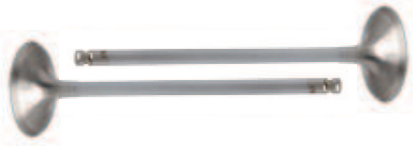
Kit Includes							
16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers		
16	Spring Shims	16	Spring Shims	16	H. T. Steel Tappets		

KPMI® "Shim in Tappet" tappets solve the issues of retainer counter-bore ovaling and adjustment shims becoming dislodged. It is especially recommended for use with reduced base circle cams. To achieve the proper installed height when using the stainless valve conversion, it may be necessary to utilize the 0.030" & 0.060" shims provided with the kit.

ORDER 650-557-2046

SUZUKI® GSX-R™ 1000 2005-2008

Valve • White Diamond® • Stainless



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60612H	Intake	30.00mm	1.181"	0.1765"	25º	3.760"	Standard
60-60616H	Exhaust	24.00mm	0.945"	0.1760"	14º	3.750"	Standard

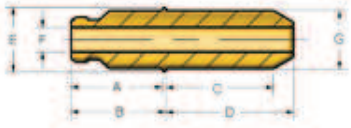
Must use Kibblewhite® Lightweight Valve Spring Kits when installing White Diamond® Valves.

Valve • White Diamond® • Inconel® • Exhaust

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60618K	Exhaust	24.00mm	0.945"	0.1760"	14º	3.750"	Standard

Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures, where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

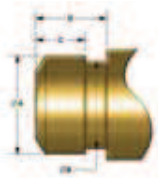
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.520"	0.545"	0.730"	0.945"	0.410"	0.1760"	0.3773" / Std.	60-60620	
						+0.001"	60-60621	
						+0.002"	60-60622	
						+0.010"	60-60629	

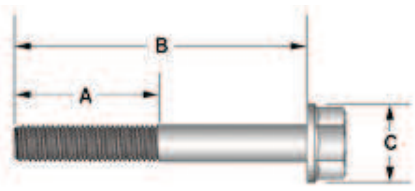
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

Cam Tower Bolt • H.T. Steel

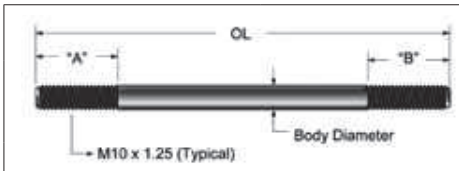


KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
60-61450	M6 x 1.0	10mm	18mm	40mm	12.57mm	20ea.	Pkg. of 20	09103-06266
								09103-06026
41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266
					0.495"			09103-06026

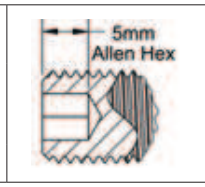
Works with other applications (see dimensions for compatibility)

SUZUKI® GSX-R™ 1000 2005-2008

Cylinder Stud Kits • H. T. Steel • M10 x 1.25 Thread



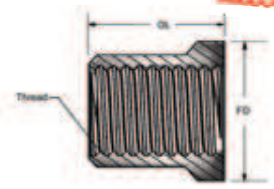
KPMI P/N	Material	O.L.	Body Dia.	A	B	Remarks
60-61250	H. T. Steel	5.225"	0.360"	1.225"	1.400"	Std. Length
Includes	10	H. T. Steel Studs	10	H. T. Steel Washers		



KPMI P/N	Nut - 12pt	Material	O.L.	Body Dia.	A	B	Remarks
60-61300	14mm	H. T. Steel	5.225"	0.360"	1.225"	1.400"	Std. Length
Includes	10	H. T. Steel Studs	10	H. T. Steel Nuts	10	H. T. Steel Washers	

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Nuts • Steel



KPMI P/N	Nut - 12pt	Material	F.D.	O.L.	Thread	Quantity
60-61302	14mm	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 10
41001-4	14mm	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 4
Replacement nuts for Stud Kits, #60-61300, but can be used for general purpose (see diagram for detail)						

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

SUZUKI® GSX-R™ 1000 2009-2016

Valve Spring Kit • Beehive

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-61710	Intake / Exhaust	.425	1.335"	60#	181#	.425"
Kit Includes	16	H.T. Steel Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

- By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer
- KPMI® has gone a step further and specified the latest in spring materials and processing, for an extremely robust design that will last longer than anything currently on the market
- Unique features of this spring include a beehive variable rate wind to reduce the chances of spring surge due to cam harmonics, Super-Clean Chrome Silicon wire with additional Vanadium and Nickel added for increased strenth, and a gas nitrided and double shot peened finish for greater fatigue life

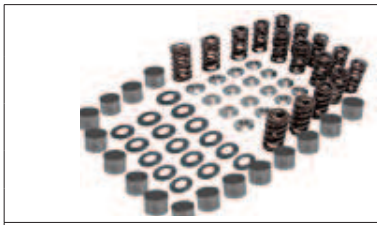
Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-61650	Intake / Exhaust	.445"	1.330"	43#	152#	.445"
Kit Includes	16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

ORDER 650-557-2046

SUZUKI® GSX-R™ 1000 2009-2016

Valve Spring Kit • "Shim in Tappet" Lightweight Racing

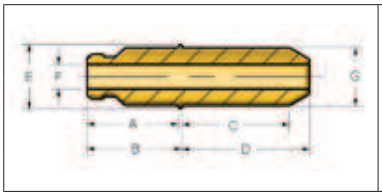


KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-62050	Intake	.445"	1.330"	43#	152#	.445"
	Exhaust					

Kit Includes					
16	Titanium Retainers	16	CrSi Valve Springs
16	H. T. Steel Basewashers	16	Kit Includes H. T. Steel Tappets

KPMI® "Shim in Tappet" tappets solve the issues of retainer counter-bore ovaling and adjustment shims becoming dislodged. It is especially recommended for use with reduced base circle cams.

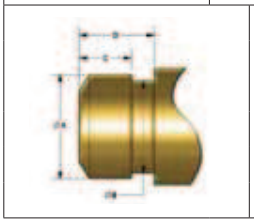
Valve Guides • C630 Bronze (Compatible with 2009-2024 Models)



A	B	C	D	E	F	G	Intake	Exhaust
0.520"	0.545"	0.730"	0.945"	0.410"	0.1760"	0.3773" / Std.	60-61670	
						+0.001"	60-61671	
						+0.002"	60-61672	
						+0.010"	60-61679	

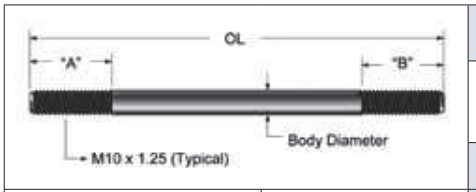
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



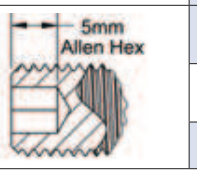
Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Cylinder Stud Kits • H. T. Steel • M10 x 1.25 Thread



KPMI P/N	Material	O.L.	Body Dia.	A	B	Remarks
60-61250	H. T. Steel	5.225"	0.360"	1.225"	1.400"	Std. Length

Includes				
10	H. T. Steel Studs	10	H. T. Steel Washers

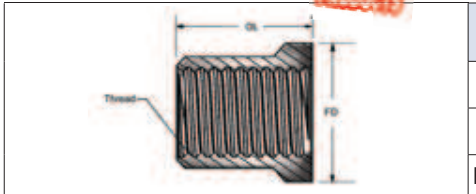


KPMI P/N	Nut - 12pt	Material	O.L.	Body Dia.	A	B	Remarks
60-61300	14mm	H. T. Steel	5.225"	0.360"	1.225"	1.400"	Std. Length

Includes						
10	H. T. Steel Studs	10	H. T. Steel Nuts	10	H. T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Nuts • Steel



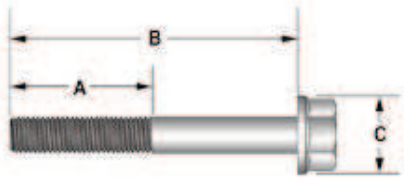
KPMI P/N	Nut - 12pt	Material	F.D.	O.L.	Thread	Quantity
60-61302	14mm	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 10
41001-4	14mm	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 4
Replacement nuts for Stud Kits, #60-61300, but can be used for general purpose (see diagram for detail)						

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.

VISIT US AT WWW.KPMI.US

SUZUKI® GSX-R™ 1000 2009-2016

Cam Tower Bolt • H.T. Steel



KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
60-61690	M6 x 1.0	10mm	18mm	40mm	12.57mm	20ea.	Pkg. of 20	09103-06266
					0.495"			09103-06026
41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266
					0.495"			09103-06026

Works with other applications (see dimensions for compatibility)

SUZUKI® GS™ 1100 E / ES / S 1980-1986

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-1028	Intake	.390"	1.215"	50#	138#	.390"
	Exhaust					
Kit Includes	16	CrSi Valve Springs				

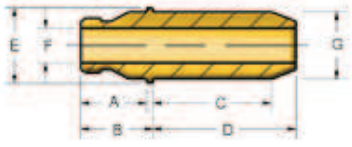
Retainer Set • O. E. M. Replacement • Titanium

KPMI P/N	Type	Material	Quantity
60-1034T	Intake	Titanium	Pkg. of 16
	Exhaust		
Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-1028			

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60220	Intake	27.50mm	1.083"	0.2145"	27º	3.380"	Standard
60-4301	Intake	28.50mm	1.122"	0.2155"	23º	3.435"	Oversize
60-4311	Intake	29.50mm	1.161"	0.2155"	23º	3.435"	Oversize
60-4302	Intake	31.00mm	1.220"	0.2155"	23º	3.435"	Oversize
60-4304	Exhaust	24.50mm	0.965"	0.2145"	27º	3.415"	Oversize

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.465"	0.510"	0.780"	0.940"	0.488"	0.2160'	0.4365" / Std.	60-1029	
						+0.002"	60-1030	
						+0.015"	60-4030	
						+0.065"	60-1052	

Valve Guides • C630 Bronze • Special 5.0mm Conversion

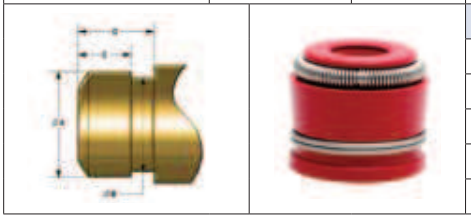
A	B	C	D	E	F	G	Intake	Exhaust
0.465"	0.510"	0.780"	0.940"	0.488"	0.1950"	0.4365"	60-4298	

ORDER 650-557-2046

SUZUKI® GS™ 1100 E / ES / S 1980-1986

Valve Guide Seals • Viton®

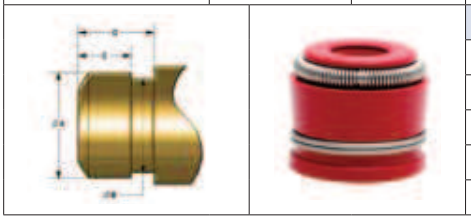
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Valve Guide Seals • Viton® For Special 5.0mm Conversion

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

SUZUKI® GSX-R™ 1100 1986-1990

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-1002	Intake	.440"	1.215"	55#	170#	.440"
	Exhaust					
Kit Includes	16	CrSi Valve Springs				

Retainer Set • Titanium

KPMI P/N	Type	Material	Quantity
60-4155	Intake	Titanium	Pkg. of 16
	Exhaust		
Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-1002			

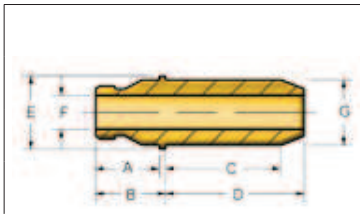
Valve • White Diamond® • Stainless

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-4218H	Intake	30.00mm	1.181"	0.1958"	19º	3.390"	Oversize
60-4217H	Exhaust	26.00mm	1.024"	0.1948"	17º	3.360"	Oversize

VISIT US AT WWW.KPMI.US

SUZUKI® GSX-R™ 1100 1986-1990

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.410"	0.450"	0.740"	0.890"	0.467"	0.1955"	0.4170" / Std.	60-4156-1	
						+0.002"	60-4157-1	
						+0.006"	60-4159-1	
						+0.085"	60-4160-1	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust

Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

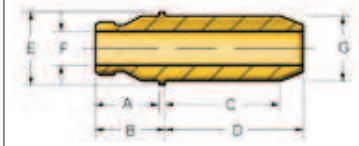
SUZUKI® GSX-R™ 1100 1991-1992

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-1003	Intake	.440"	1.255"	45#	158#	.440"
	Exhaust					

Kit Includes	16	CrSi Valve Springs	16	Spring Shim

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.410"	0.450"	0.740"	0.890"	0.467"	0.1955"	0.4170" / Std.	60-4156-1	
						+0.002"	60-4157-1	
						+0.006"	60-4159-1	
						+0.085"	60-4160-1	

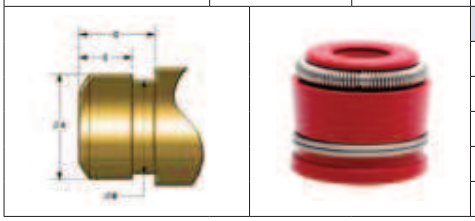
For all the applications available for Kibblewhite's Suzuki® line of products, please refer online to the Suzuki® section of the ***www.kpmi.us*** website, under ***Motorcycle Valvetrain Components***.

ORDER 650-557-2046

SUZUKI® GSX-R™ 1100 1991-1992

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

SUZUKI® GSX-R™ 1100 1993-1998

- Water Cooled

Valve Spring Kit • Lightweight Racing

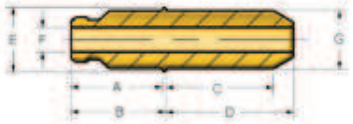
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60040	Intake	.440"	1.235"	50#	158#	.440"
	Exhaust					

Kit Includes	16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

Retainer Set • O. E. M. Replacement • Titanium

KPMI P/N	Type	Material	Quantity
60-6154	Intake	Titanium	Pkg. of 16
	Exhaust		
Note : Fits O.E.M. Springs			

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.520"	0.545"	0.730"	0.945"	0.410"	0.1760"	0.3773" / Std.	60-60620	
						+0.001"	60-60621	
						+0.002"	60-60622	
						+0.010"	60-60629	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust

Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

VISIT US AT WWW.KPMI.US

SUZUKI® GS™ 1150 1984-1986

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-1028	Intake	.390"	1.215"	50#	138#	.390"
	Exhaust					
Kit Includes	16	CrSi Valve Springs				

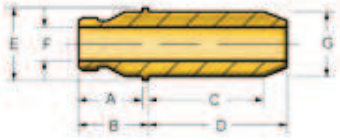
Retainer Set • O. E. M. Replacement • Titanium

KPMI P/N	Type	Material	Quantity
60-1034T	Intake	Titanium	Pkg. of 16
	Exhaust		
Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-1028			

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60220	Intake	27.50mm	1.083"	0.2145"	27º	3.380"	Standard
60-4301	Intake	28.50mm	1.122"	0.2155"	23º	3.435"	Oversize
60-4311	Intake	29.50mm	1.161"	0.2155"	23º	3.435"	Oversize
60-4302	Intake	31.00mm	1.220"	0.2155"	23º	3.435"	Oversize
60-4304	Exhaust	24.50mm	0.965"	0.2145"	27º	3.415"	Oversize

Valve Guides • C630 Bronze



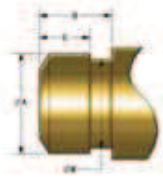
A	B	C	D	E	F	G	Intake	Exhaust
0.465"	0.510"	0.780"	0.940"	0.488"	0.2160'	0.4365" / Std.	60-1029	
						+0.002"	60-1030	
						+0.015"	60-4030	
						+0.065"	60-1052	

Valve Guides • C630 Bronze • Special 5.0mm Conversion

A	B	C	D	E	F	G	Intake	Exhaust
0.465"	0.510"	0.780"	0.940"	0.488"	0.1950"	0.4365"	60-4298	

Valve Guide Seals • Viton®

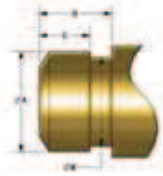
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Valve Guide Seals • Viton® For Special 5.0mm Conversion

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

Valve Spring Kit • "Shim in Tappet" Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60750	Intake	.490"	1.455"	65#	195#	.415"
	Exhaust					

Kit Includes				
16	Titanium Retainers	16	CrSi Valve Springs
16	H. T. Steel Basewashers	16	H. T. Steel Tappets

This high lift kit is designed for maximum performance applications. It includes KPMI® "Shim in Tappet" design tappets that solve the issues of retainer counter-bore ovaling and adjustment shims becoming dislodged. It is especially recommended for use with reduced base circle cams.

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60760	Intake	.490"	1.455"	65#	190#	.415"
	Exhaust					

Kit Includes					
16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

This high lift kit is designed for maximum performance applications, and includes lightweight titanium retainers as well as high lift, superclean chrome silicon wire dual valve springs.

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60900	Intake	.490"	1.455"	65#	190#	.415"
	Exhaust					

Kit Includes					
16	H. T. Steel Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

KPMI® performance valve spring kits are modeled using cam profile and simulation softwares. By utilizing FEA software, it was possible to take advantage of the increased strength and wear resistance of a heat treated steel retainer, while reducing its mass to within grams of a comparable titanium retainer. With 65lbs of seat pressure these kits are the ultimate setup for any Busa street/strip tuner.

Retainer Set • O. E. M. Replacement • H. T. Steel

KPMI P/N	Type	Material	Quantity
60-60901	Intake	H. T. Steel	Pkg. of 16
	Exhaust		

Note : Fits O.E.M. Springs and KPMI® Spring Kit PN 60-60900

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
60-60560	Intake	.490"	1.455"	65#	195#	.415"
	Exhaust					

Kit Includes		
16	CrSi Valve Springs	

This spring set fits the stock retainers and bases on all 1999-2024 Busa models. It is the street/strip tuner's answer for high performance valve springs.

SUZUKI® HAYABUSA™ 1999-2024

Valve Kit • High Performance Racing

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60910	Intake	34.00mm	1.339"	0.1962"	21º	3.745"	Oversize
	Exhaust	27.50mm	1.083"	0.1956"	17º	3.735"	Standard
Kit Includes		8	Intake Titanium Valves		8	Exhaust Inconel® Valves	

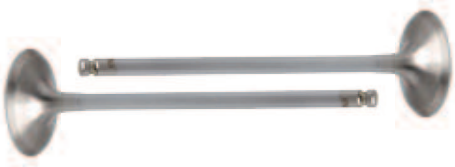
The High Performance Racing Valve Kit for the Suzuki Hayabusa is a specially formulated combination of valve materials and sizes, designed in conjunction with top racers, for maximum performance. The kit includes a +1mm oversize Tensilite Titanium Intake Valve and a White Diamond Inconel Exhaust Valve (standard head size). Components are designed for increased air flow and resistance to the high operating temperatures from applications running forced induction and/or exotic fuels. This combination has been offered as a kit to provide the greatest value for builders and racers looking for the ultimate valve setup.

Valve • Titanium • Tensilite® • Intake

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60412T	Intake	33.00mm	1.299"	0.1962"	21º	3.745"	Standard
60-60413T	Intake	34.00mm	1.339"	0.1962"	21º	3.745"	Oversize

All titanium valves are 1 piece forged for superior strength over a 2 piece valve. The Tensilite PVD CrN coating is a state of the art process, which is much tougher than the OEM oxiding process.

Valves • White Diamond® • Inconel® • Exhaust



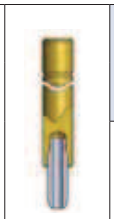
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60436K	Exhaust	27.50mm	1.083"	0.1956"	17º	3.735"	Standard
60-60437K	Exhaust	28.50mm	1.122"	0.1956"	17º	3.735"	Oversize

Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures, where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

Valves • White Diamond® • Hard Chrome Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
60-60008H	Intake	33.00mm	1.299"	0.1962"	18º	3.740"	Standard
60-60009H	Intake	34.00mm	1.339"	0.1962"	18º	3.750"	Oversize
60-60010H	Exhaust	27.50mm	1.083"	0.1956"	17º	3.735"	Standard
60-60011H	Exhaust	28.50mm	1.122"	0.1956"	17º	3.725"	Oversize

Valve Guide Installer



KPMI P/N	O.L	Body Ø	Inner Ø 1	Inner Ø 2	Depth 1	Depth 2	Quantity
	A	B	C	D	E	F	
60-61400	8.000"	0.615"	0.425"	0.348"	0.285"	0.650"	Pkg. of 1

Specifically designed for KPMI's Cast Iron, C630 and Manganese Bronze guides

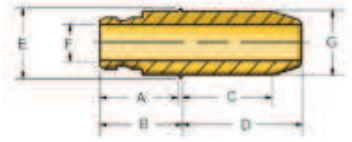
ORDER 650-557-2046

Valve Guide Remover

KPMI P/N	O.L	Body Ø	Ø 1	Ø 2	Length 1	Length 2	Quantity
	A	B	C	D	E	F	
60-61405	8.000″	0.615″	0.182″	0.397″	1.000″	4.000″	Pkg. of 1

Works with other applications (see dimensions for compatibility)

Valve Guides • C630 Bronze • Manganese Bronze



A	B	C	D	E	F	G	Intake / Exhaust	
							C630 Bronze	Manganese
0.560”	0.585”	0.650”	0.860”	0.460”	0.1962”	0.4170” / Std.	60-60020	60-60020-M
						+0.001”	60-60021	60-60021-M
						+0.002”	60-60022	60-60022-M
						+0.004”	60-60024	60-60024-M
						+0.010”	60-60029	60-60029-M

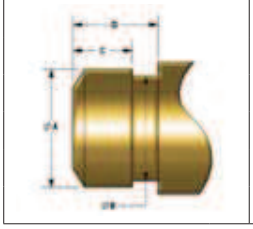
For sizing KPMI® Manganese Bronze Valve guides please use Reamer #GR-1970. For a complete listing of hones and reamers please see component section in back of catalog.

Valve Guides • Cast Iron

A	B	C	D	E	F	G	Intake / Exhaust
0.585”	----	0.650”	0.860”	0.415”	0.1931”	0.4170” / Std.	60-60020-C
						+0.001”	60-60021-C
						+0.002”	60-60022-C
						+0.004”	60-60024-C
						+0.010”	60-60029-C

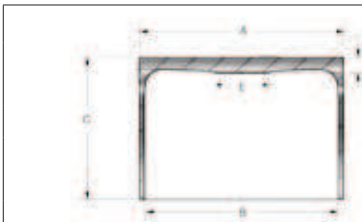
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.0mm	0.350"	0.405"	4	0.340”±0.005”	0.303”	0.125”	0.230”	Exhaust



Part Number	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

Tappets • O.E.M. Replacement • H.T. Steel

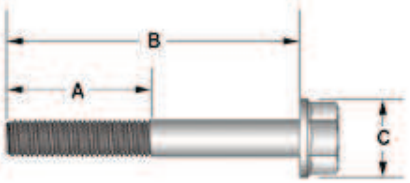


KPMI P/N	Type	Coating	A		B	C	E	F	Quantity	Remarks
60-60014	Intake	None	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 16	Standard
	Exhaust									
60-60035	Intake	None	28.50mm	1.1220"	1.058"	0.763"	0.320"	0.098"	Pkg. of 16	Oversize
	Exhaust									
60-60335	Intake	DLC Coated	28.00mm	1.1017"	1.038"	0.763"	0.320"	0.098"	Pkg. of 16	Standard
	Exhaust									

Refer to KPMI® Tappet Section, in back of catalog, when selecting other size tappets.

SUZUKI® HAYABUSA™ 1999-2024

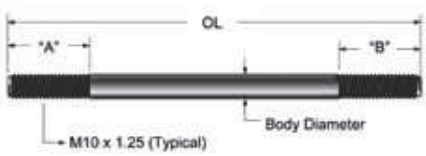
Cam Tower Bolt • H.T. Steel



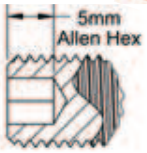
KPMI P/N	Thread	Hex	T. L. -A-	O. L. -B-	Flange Ø -C-	Quantity	Kit Quantity	Rep. OEM P/N
60-61465	M6 x 1.0	10mm	18mm	40mm	12.57mm	16ea.	Pkg. of 20	09103-06266
								09103-06026
	M6 x 1.0	10mm	18mm	45mm	0.495	4ea.		09103-06165
								09103-06293
41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm	4ea.	Pkg. of 4	09103-06266
					0.495"			09103-06026
41006-4	M6 x 1.0	10mm	18mm	45mm	12.57mm	4ea.	Pkg. of 4	09103-06165
					0.495"			09103-06293

Works with other applications (see dimensions for compatibility)

Cylinder Stud Kits • H. T. Steel • M10 x 1.25 Thread



KPMI P/N	Nut - 12pt	Material	O.L.	Body Dia.	A	B	Remarks
60-60825	14mm	H. T. Steel	8.010"	0.370"	1.155"	1.310"	Std. Length
Includes	10	H. T. Steel Studs		10	H. T. Steel Washers		

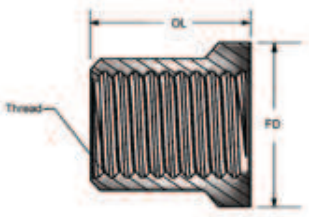


NEW PRODUCTS

KPMI P/N	Nut - 12pt	Material	O.L.	Body Dia.	A	B	Remarks
60-60815	14mm	H. T. Steel	8.010"	0.370"	1.155"	1.310"	Std. Length
Includes	10	H. T. Steel Studs	10	H. T. Steel Nuts	10	H. T. Steel Washers	

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Nuts • Steel

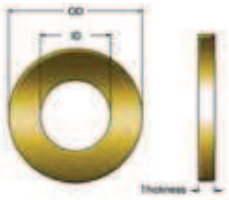


KPMI P/N	Nut - 12pt	Material	F.D.	O.L.	Thread	Quantity
60-60820	14mm	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 10
41001-4	14mm	H.T. Steel	0.740"	0.750"	M10 x 1.25	Pkg. of 4

Replacement nuts for Stud Kits, #60-61200, but can be used for general purpose (see diagram for detail)

- High quality CNC machined, heat treated steel nuts with rolled threads for maximum tensile strength
- Black Oxided for enhanced corrosion resistance

Washers • Spacers for 10M x 1.25 Thread



KPMI P/N	Material	Nut Size	O.D.	I.D.	Thickness	Quantity
60-60840	Stainless Steel	M10	0.785"	0.415"	0.080"	Pkg. of 10
60-60835	C630 Bronze	M10	0.740"	0.395"	0.100"	Pkg. of 10

Note: Washers may be needed with +0.200" Length Studs

ORDER 650-557-2046

TRIUMPH® 500 TWIN 1958-1973

Valve Spring Kit • Lightweight Racing

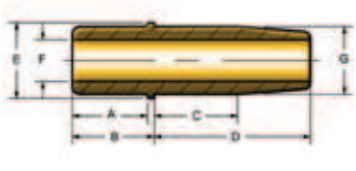
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
70-70030	Intake	.455"	1.205"	74#	206#	.455"
	Exhaust					

Kit Includes	4	Titanium Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems for 1967-1973

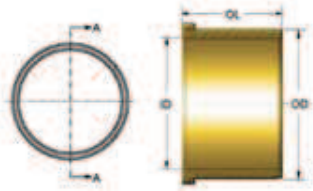
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
70-4290	Intake	39.12mm	1.540"	0.3105"	23º	3.480"	OEM# 70-6853 & E6853
70-4291	Exhaust	33.66mm	1.325"	0.3100"	27º	3.425"	OEM# 70-6854 & E6854

Valve Guides • Manganese Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.560"	0.610"	0.620"	1.160"	0.550"	0.3105"	0.5010" / Std.	70-0339	
						+0.002"	70-0340	
						+0.004"	70-0341	
						+0.006"	70-0342	
No seal required.						+0.015"	70-4031	

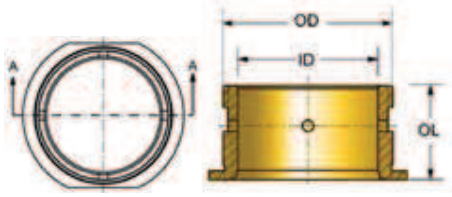
Fork Bushing • Nickel Bronze



KPMI P/N	Type	O.D.	I.D	O.L	Quantity
70-0646	Top	1.4990"	1.3075"	1.000"	Pkg. of 1
70-0647	Bottom	1.4945"	1.2495"	0.875"	Pkg. of 1

Note: Fits 1963-1970 Triumph 500 Twin's.

Crankshaft Bushings • Bearing Bronze



KPMI P/N	Material	O. D.	I. D.	O. L.	Remarks	Quantity
70-0817	Bronze	1.814"	1.439"	1.035"	Standard	Pkg. of 1
70-0818	Bronze	1.814"	1.429"	1.035"	-0.010"	Pkg. of 1
70-0819	Bronze	1.814"	1.419"	1.035"	-0.020"	Pkg. of 1
70-0820	Bronze	1.814"	1.409"	1.035"	-0.030"	Pkg. of 1

Machined from high quality mill certified SAE660 Bearing Bronze (custom sizes available).

For all the applications available for Kibblewhite's Triumph® line of products, please refer online to the Triumph® section of the **www.kpmi.us** website, under ***British Bike***.

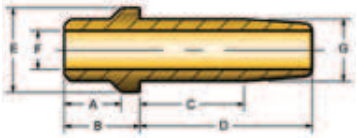
TRIUMPH® PRE-UNIT 500/ 650 1951-'62

Valves • Black Diamond™ • Black Nitroneg Stems • For Pre-Unit 650 1956-1962

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
70-70380	Intake	38.10mm	1.500"	0.3105"	R1.4	3.790"	Standard
70-70385	Exhaust	34.11mm	1.343"	0.3100"	15º	3.775"	Standard

Welded tips (no lash caps required).

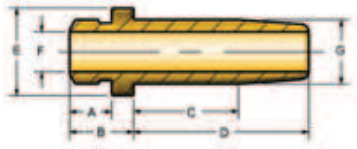
Valve Guides • C630 Bronze • Manganese Bronze



A	B	C	D	E	F	G	Intake / Exhaust	
							C630 Bronze	Manganese
0.460"	0.610"	0.840"	1.390"	0.680"	0.3105"	0.5010" / Std.	70-0331	70-0331-M
						+0.002"	70-0332	70-0332-M
						+0.004"	70-0333	70-0333-M
						+0.006"	70-0334	70-0334-M
						+0.015"	70-0840	70-0840-M
Note : No seal required.						+0.050"	70-4033	70-4033-M

For sizing **KPMI® Cast Iron and Manganese Bronze Valve guides** please use **Reamers #GR-3115**. For a complete listing of hones and reamers please see component section in back of catalog.

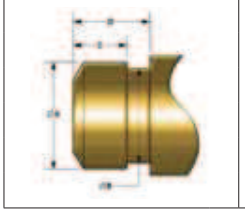
Valve Guides • Manganese Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.315"	0.405"	0.820"	1.370"	0.680"	0.3105"	0.5010" / Std.	70-0331S	
						+0.002"	70-0332S	
						+0.004"	70-0333S	
						+0.006"	70-0334S	
						+0.015"	70-0840S	
Machined for seal, seals sold separately.						+0.050"	70-4033S	

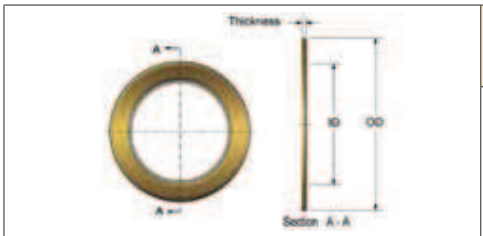
Valve Guide Seals • Viton® • 6.00mm Coversion Systems

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
5/16"	0.465"	0.550"	1	0.500"±0.010"	0.445"	0.230"	0.280"	Intake
								Exhaust



Part Number	Quantity	Quantity Discount
71012-4	Pkg. of 4	0%
71012-8	Pkg. of 8	0%
71012-16	Pkg. of 16	Less- 10%
71012-50	Pkg. of 50	Less- 15%
71012-100	Pkg. of 100	Less- 20%

Thrust Washer • Transmission • C674 Bronze • For Pre-Unit 650's 1960-1962



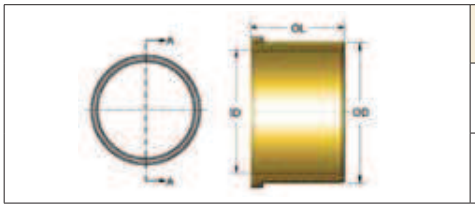
KPMI P/N	Material	O.D.	O.L	Thickness	Quantity
70-0474	Bronze	1.280"	0.880"	0.090"	Pkg. of 1

Note: Transmission thrust washer for needle bearing gearbox

ORDER 650-557-2046

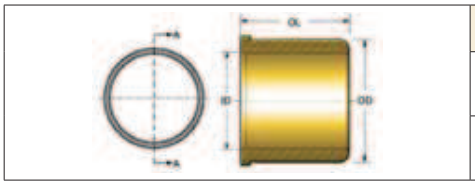
TRIUMPH® PRE-UNIT 500/ 650 1951-'62

Fork Bushing • Nickel Bronze



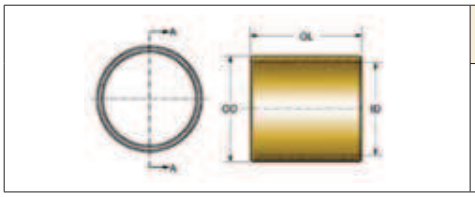
KPMI P/N	Type	O.D.	I.D	O.L	Quantity
70-0646	Top	1.4990"	1.3075"	1.000"	Pkg. of 1
70-0647	Bottom	1.4945"	1.2495"	0.875"	Pkg. of 1

Camshaft Bushings • Nickel Bronze



KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
70-0458	Outer (Timing Side)	1.270"	0.8740"	1.000"	Pkg. of 1
70-0467	Inner (Drive Side)	1.0015"	0.809"	0.937"	Pkg. of 1

Wrist Pin Bushings • Manganese Bronze



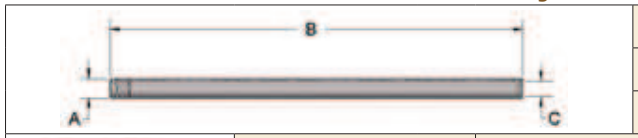
KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
70-0459	Rod (Small End)	0.815"	0.6885"	1.031"	Pkg. of 1

Push Rod • Chrome Moly Tube • H. T. Steel Endpieces For Pre-Unit 650's 1956-1962

KPMI P/N	Material	A	B	Quantity
70-0301	• Thin Wall Chrome Moly Tube • H.T. Steel Endpieces	6.302"	6.022"	Pkg. of 4

Made from light, strong, and tough, aircraft quality thin walled Chrome Moly Tube. These push rods are assembled with hardened steel ends that are held to exacting radius and surface finish tolerances. They are a perfect match for the rocker and tappet. After assembly, the OD of the entire push rod is precision ground to create a part that is first class in finish, fit, and function. This is the push rod of choice for Triumph racers, re-builders, and restorers around the world.

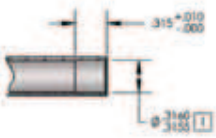
Blank Pushrods • Steel • Chrome Moly Tube



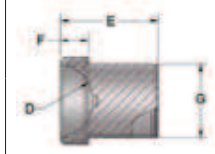
A	Ø.371" OD
B	9.120" Overall Length
C	Ø.305" ID Before Machining

Machining Information:

1.



Break ID edge only at .015 x 45°

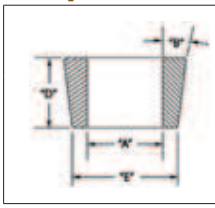


D	E	F	G
R.156	0.420"	0.120"	0.310"

KPMI P/N	Model	Material	Kit Includes
90512-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Female Endpieces
90512-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Female Endpieces

Blank Pushrods Kits (sets of 2 and 4) can be machined to desired length and assembled by KPMI® for a flat fee of $120.00. Orders can be placed by using the Custom Pushrod Order Form found on our website at www.kpmi.us/forms.html.

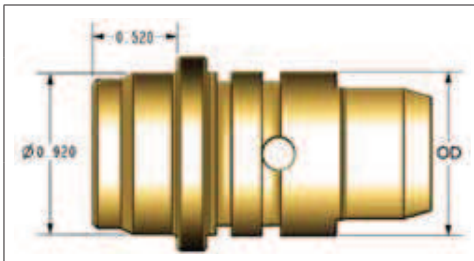
Keeper Set • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
51017-4	Square Bead	0.310	7.0°	---	0.245"	0.369"	4Pr.	40-0167, 71-3748, WE259, WE259A 99-0062/3

TRIUMPH® PRE-UNIT 500/ 650 1951-'62

Tappet Blocks • Racing For Pre-Unit 500 / 650 1946 -1968



KPMI P/N	Material	Camshaft Lift	O.D.	Quantity
70-70360	Bronze - 674	0.450"	1.0005"	Pkg. of 1
70-70362	Bronze - 674	0.450"	1.0005"	Pkg. of 2

Note : See **KPMI® P/N GR-3120/ CR-3120** for the piloted reamer and **P/N GH-3125** for the 5/16" ball hone suitable for this application. For a complete listing of hones and reamers please see component section in back of catalog.

TRIUMPH® 650 / 750 1963-1983

- **6.00mm Conversion System**

Valve Spring Kit • Beehive For Triumph 650

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
70-70510	Intake	.460"	1.375"	90#	220#	.460"
	Exhaust					

Kit Includes				
4	Titanium Retainers	4	H. T. Steel Keepers
4	CrSi Valve Springs	4	H. T. Steel Basewashers

Note: Must use 6.0mm Valves and Guides

Valve Spring Kit • Beehive For Triumph 750

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
70-70520	Intake	.460"	1.375"	90#	220#	.460"
	Exhaust					

Kit Includes			
4	Titanium Retainers	4	H. T. Steel Keepers
4	CrSi Valve Springs	4	H. T. Steel Basewashers

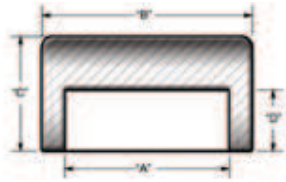
Note: Must use 6.0mm Valves and Guides

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
70-70550	Intake	40.64mm	1.600"	0.2355"	23º	3.850"	Standard
70-70551	Intake	42.16mm	1.660"	0.2355"	23º	3.830"	Oversize
70-70553	Exhaust	36.58mm	1.440"	0.2350"	29º	3.780"	Standard
70-70554	Exhaust	38.10mm	1.500"	0.2350"	29º	3.760"	Oversize

Note: Welded tips (no lash caps required). Titanium Valves Available Custom

Lash Caps • H.T. Steel



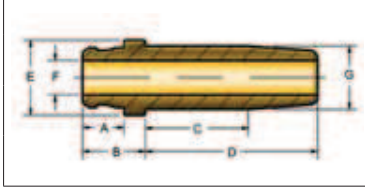
KPMI P/N	Material	"A"	"B"	"C"	"D"	"C"- "D"	Quantity
94008-4	H.T. Steel	6.00mm / 0.2362"	0.315"	0.120"	0.080"	0.040"	Pkg. of 4

ORDER 650-557-2046

TRIUMPH® 650 / 750 1963-1983

- 6.00mm Conversion System

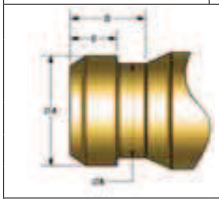
Valve Guides • C630 Bronze • 6.00mm Coversion Systems



A	B	C	D	E	F	G	Intake	Exhaust
0.330"	0.500"	0.820"	1.370"	0.685"	0.2350"	0.5010" / Std.	70-70530	
						+0.002"	70-70532	
One seal supplied with each guide.						+0.015"	70-70545	

Valve Guide Seals • Viton® • 6.00mm Coversion Systems

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.371"	0.480"	5	0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust



Part Number	Quantity	Quantity Discount
71017-4	Pkg. of 4	0%
71017-8	Pkg. of 8	0%
71017-16	Pkg. of 16	Less- 10%
71017-50	Pkg. of 50	Less- 15%
71017-100	Pkg. of 100	Less- 20%

These seals are designed to work with the **KPMI® Guides**.

TRIUMPH® 650 / 750 1963-1983

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
70-0300	Intake	.520"	1.420"	104#	234#	.520"
	Exhaust					
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	H.A. 7075-T6 Retainers	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
70-70170	Intake	.520"	1.420"	104#	234#	.520"
	Exhaust					
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Keepers	
		4	Titanium Retainers	4	H. T. Steel Basewashers	

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
*70-70400	Intake	.460"	1.310"	90#	220#	.460"
for 650cc	Exhaust					
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers	4 H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
70-70450	Intake	.460"	1.310"	90#	220#	.460"
for 750cc	Exhaust					
Kit Includes		4	CrSi Valve Springs	4	H. T. Steel Retainers	4 H. T. Steel Basewashers

*O.E.M. Replacement Keepers available in pairs **P/N 51017-4**

Valve Spring Kit • Beehive • For Triumph 650

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
70-70270	Intake	.460"	1.375"	90#	220#	.460"
	Exhaust					
Kit Includes		4	H. T. Steel Retainers	4	CrSi Valve Springs	4 H. T. Steel Basewashers

VISIT US AT WWW.KPMI.US

TRIUMPH® 650 / 750 1963-1983

Valve Spring Kit • Beehive • For Triumph 750

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
70-70280	Intake / Exhaust	.460"	1.375"	90#	220#	.460"

Kit Includes						
4	H. T. Steel Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers	

Valve Spring Kit • O. E. M. Replacement For Triumph 650

KPMI P/N	Type	Kit Includes							
		H. T. Steel Retainers		H. T. Steel Keepers		CrSi Valve Springs		H. T. Steel Basewashers	
70-70140	Intake / Exhaust	4	70-70141	Use O.E.M	4	70-70143	4	70-70145	

Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
.415"	1.250"	68#	145#	.348"

This kit is designed for stock valve lift and up to 0.415".
O.E.M. Replacement keepers available in pairs #51017-4.
1963-1965: Basewasher and springs are not direct O.E.M. replacements, all spring kit parts must be used together.
1966-1972: All components are direct O.E.M. replacements. These O.E.M. replacements parts may be purchased separately using the above part numbers.
It may be necessary to use KPMI® shortened valve guides (KPMI® #70-033X/M/S) to achieve higher than stock lift.

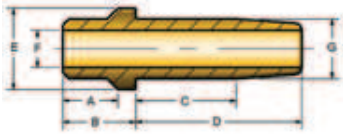
Valve Spring Kit • O. E. M. Replacement For Triumph 750

KPMI P/N	Type	Kit Includes							
		H. T. Steel Retainers		H. T. Steel Keepers		CrSi Valve Springs		H. T. Steel Basewashers	
70-70250	Intake / Exhaust	4	70-70251	Use O.E.M	4	70-70253	4	70-70255	

Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
.415"	1.250"	68#	145#	.348"

This kit is designed for stock valve lift and up to 0.415".
All components are the quality you can expect from KPMI®, manufactured to exact O.E.M. specifications. These O.E.M. replacements parts may be purchased separately using the above part numbers.
It may be necessary to use KPMI® shortened valve guides (KPMI® #70-033X/M/S) to achieve higher than stock lift.

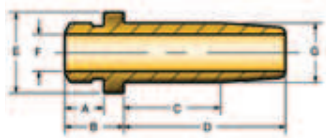
Valve Guides • C630 Bronze • Manganese Bronze



A	B	C	D	E	F	G	Intake / Exhaust	
							C630 Bronze	Manganese
0.460"	0.610"	0.840"	1.390"	0.680"	0.3105"	0.5010" / Std.	70-0331	70-0331-M
						+0.002"	70-0332	70-0332-M
						+0.004"	70-0333	70-0333-M
						+0.006"	70-0334	70-0334-M
						+0.015"	70-0840	70-0840-M
Note : No seal required.						+0.050"	70-4033	70-4033-M

For sizing **KPMI® Cast Iron and Manganese Bronze Valve guides** please use **Reamers #GR-3115**. For a complete listing of hones and reamers please see component section in back of catalog.

Valve Guides • Manganese Bronze

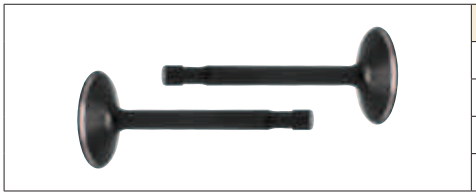


A	B	C	D	E	F	G	Intake	Exhaust
0.315"	0.405"	0.820"	1.370"	0.680"	0.3105"	0.5010" / Std.	70-0331S	
						+0.002"	70-0332S	
						+0.004"	70-0333S	
						+0.006"	70-0334S	
						+0.015"	70-0840S	
Machined for seal, seals sold separately.						+0.050"	70-4033S	

ORDER 650-557-2046

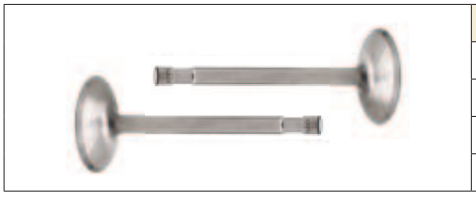
TRIUMPH® 650 / 750 1963-1983

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
70-4228	Intake	40.64mm	1.600"	0.3105"	1.5" R	3.850"	Standard
70-4229	Intake	42.16mm	1.660"	0.3105"	1.5" R	3.830"	Oversize
70-4230	Exhaust	36.58mm	1.440"	0.3100"	24º	3.780"	Standard
70-4231	Exhaust	38.10mm	1.500"	0.3100"	24º	3.760"	Oversize

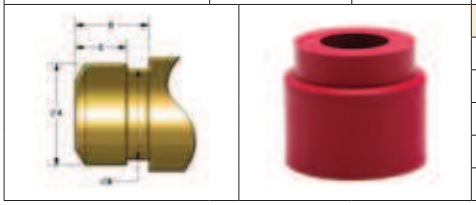
Valves • Untreated Stems • O.E.M. Replacement (RAW)



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
70-70500	Intake	40.64mm	1.600"	0.3105"	1.5" R	3.850"	Standard
70-70501	Intake	42.16mm	1.660"	0.3105"	1.5" R	3.830"	Oversize
70-70504	Exhaust	36.58mm	1.440"	0.3100"	24º	3.780"	Standard
70-70505	Exhaust	38.10mm	1.500"	0.3100"	24º	3.760"	Oversize

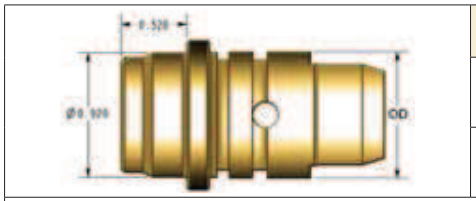
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.465"	0.550"	1	0.500"±0.010"	0.445"	0.230"	0.280"	Exhaust



Part Number	Quantity	Quantity Discount
71012-4	Pkg. of 4	0%
71012-8	Pkg. of 8	0%
71012-16	Pkg. of 16	Less- 10%
71012-50	Pkg. of 50	Less- 15%
71012-100	Pkg. of 100	Less- 20%

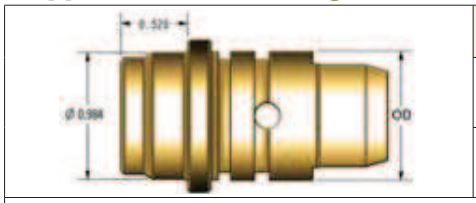
Tappet Blocks • Racing For Pre-Unit 500 / 650 1946 -1968



KPMI P/N	Material	Camshaft Lift	O.D.	Quantity
70-70360	Bronze - 674	0.450"	1.0005"	Pkg. of 1
70-70362	Bronze - 674	0.450"	1.0005"	Pkg. of 2

Note : See **KPMI® P/N GR-3120/ CR-3120** for the piloted reamer and **P/N GH-3125** for the 5/16" ball hone suitable for this application. For a complete listing of hones and reamers please see component section in back of catalog.

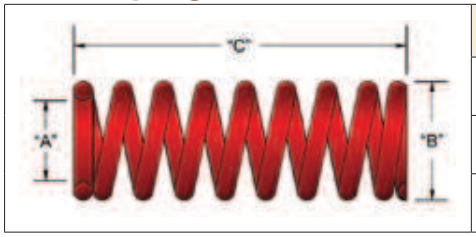
Tappet Blocks • Racing For 650 / 750 1969 -1983



KPMI P/N	Material	Camshaft Lift	O.D.	Quantity
70-0448	Bronze - 674	0.450"	1.0005"	Pkg. of 1
70-70332	Bronze - 674	0.450"	1.0005"	Pkg. of 2

Note : See **KPMI® P/N GR-3120/ CR-3120** for the piloted reamer and **P/N GH-3125** for the 5/16" ball hone suitable for this application. For a complete listing of hones and reamers please see component section in back of catalog.

Clutch Springs

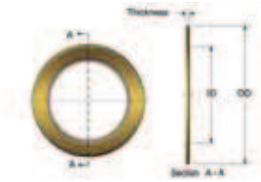


KPMI P/N	Description	A	B	C	Quantity
70-0124	3 Clutch Spring Models	0.452"	0.662"	1.858"	Pkg. of 3
70-0465	4 Clutch Spring Models	0.452"	0.662"	1.858"	Pkg. of 4

Manufactured from high quality chrome silicon wire, they are designed to supply 20% more plate load than stock springs.

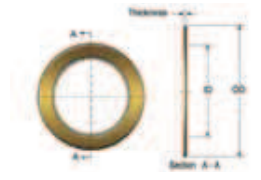
TRIUMPH® 650 / 750 1963-1983

Thrust Washer • Transmission • C674 Bronze



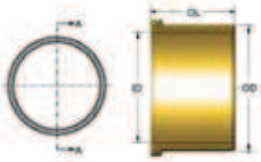
KPMI P/N	Material	O.D.	I.D	Thickness	Quantity
70-0474	Bronze	1.280”	0.880”	0.090"	Pkg. of 1
Note: Transmission thrust washer for needle bearing gearbox					

Thrust Washer • Clutch • C674 Bronze



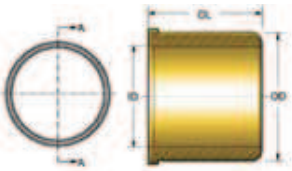
KPMI P/N	Material	O.D.	I.D	Thickness	Quantity
70-0476	Bronze	2.625”	2.020”	0.060"	Pkg. of 1
70-0477	Bronze	2.625”	1.837”	0.060"	Pkg. of 1

Fork Bushing • Nickel Bronze



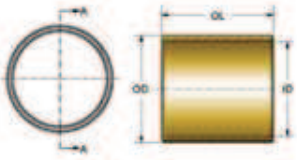
KPMI P/N	Type	O.D.	I.D	O.L	Quantity
70-0646	Top	1.4990”	1.3075”	1.000”	Pkg. of 1
70-0647	Bottom	1.4945”	1.2495”	0.875”	Pkg. of 1

Camshaft Bushings • Nickel Bronze



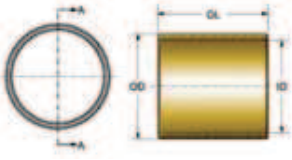
KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
70-0458	Outer (Timing Side)	1.270”	0.8740”	1.000”	Pkg. of 1
70-0467	Inner (Drive Side)	1.0015”	0.809”	0.937”	Pkg. of 1

Wrist Pin Bushings • Manganese Bronze



KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
70-0459	Rod (Small End)	0.815”	0.6885”	1.031”	Pkg. of 1

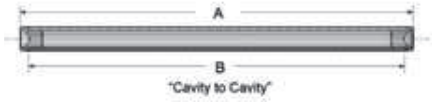
High Gear Bushings • Bronze • For 650 1963-1972 Models



KPMI P/N	Type	O.D.	I.D.	O.L.	Quantity
70-70160	4-Speed	0.910”	0.810”	1.100”	1 Pr.

These bushings are designed to replace the single OEM style bushing. They maintain the same bearing surface while the gap between each bushing provides a large cavity for oil to pool, aiding in lubrication of the shaft.

Push Rod • Chrome Moly Tube • H. T. Steel Endpieces



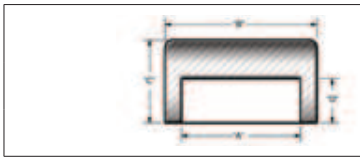
KPMI P/N	Material	A	B	Quantity
70-0301	• Thin Wall Chrome Moly Tube • H.T. Steel Endpieces (for 650)	6.302"	6.022"	Pkg. of 4
70-0447	• Thin Wall Chrome Moly Tube • H.T. Steel Endpieces (for 750)	5.905"	5.625"	Pkg. of 4

Made from light, strong, and tough, aircraft quality thin walled Chrome Moly Tube. These push rods are assembled with hardened steel ends that are held to exacting radius and surface finish tolerances. They are a perfect match for the rocker and tappet. After assembly, the OD of the entire push rod is precision ground to create a part that is first class in finish, fit, and function. This is the push rod of choice for Triumph racers, re-builders, and restorers around the world.

ORDER 650-557-2046

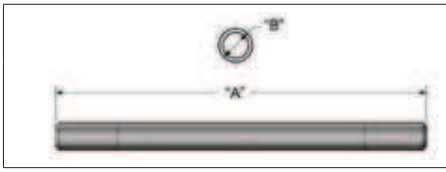
TRIUMPH® 650 / 750 1963-1983

Lash Caps • H.T. Steel



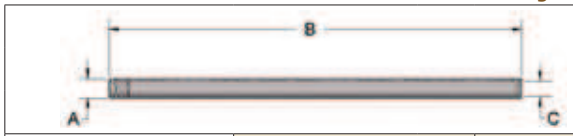
KPMI P/N	Material	"A"	"B"	"C"	"D"	"C"- "D"	Quantity
94001-4	H.T. Steel	7.94mm 0.3126"	0.395"	0.160"	0.080"	0.080"	Pkg. of 4

Clutch Push Rod • H.T. Steel

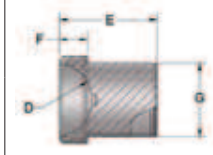


KPMI P/N	Material	Type	A	B	Quantity
70-0505	H.T. Steel	Drill Rod (H.T. tips)	11.812"	0.219"	Pkg. of 1

Blank Pushrods • Steel • Chrome Moly Tube



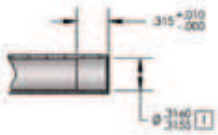
A	Ø.371" OD
B	9.120" Overall Length
C	Ø.305" ID Before Machining



D	E	F	G
R.156	0.420"	0.120"	0.310"

Machining Information:

1.

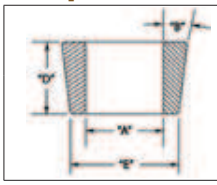


Break ID edge only at .015 x 45°

KPMI P/N	Model	Material	Kit Includes
90512-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Female Endpieces
90512-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Female Endpieces

Blank Pushrods Kits (sets of 2 and 4) can be machined to desired length and assembled by KPMI® for a flat fee of $120.00. Orders can be placed by using the Custom Pushrod Order Form found on our website at www.kpmi.us/forms.html.

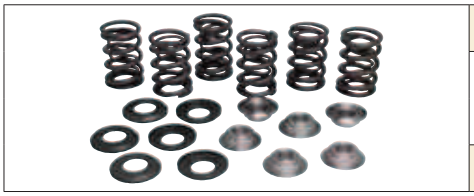
Keeper Set • O.E.M. Replacement



KPMI P/N	Style	A	B	C	D	E	Quantity	Rep. HD® OEM P/N
51017-4	Square Bead	0.310	7.0°	---	0.245"	0.369"	4Pr.	40-0167, 71-3748, WE259, WE259A 99-0062/3

TRIUMPH® TRIDENT™ 1971-1976

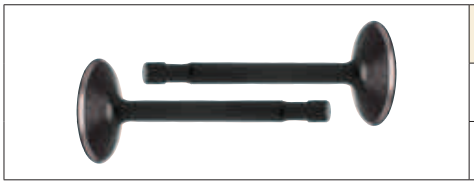
Valve Spring Kit • Lightweight Racing



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
70-70350	Intake Exhaust	.400"	1.350"	95#	242#	.400"

Kit Includes	6	Titanium Retainers	6	CrSi Valve Springs	6	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems • For 1971-1972 Models



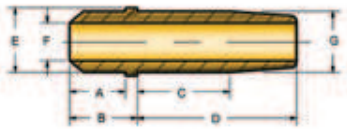
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
70-1009	Intake	38.86mm	1.530"	0.3105"	1.5" R	3.975"	Standard
70-1011	Exhaust	33.40mm	1.315"	0.3100"	25º	3.915"	Standard

TRIUMPH® TRIDENT™ 1971-1976

Valves • Black Diamond™ • Black Nitroneg Stems • For 1973-1976 Models

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
70-0885	Intake	38.86mm	1.530"	0.3105"	1.5" R	3.735"	Standard
70-0852	Intake	40.39mm	1.590"	0.3105"	1.5" R	3.710"	Oversize
70-0886	Exhaust	33.40mm	1.315"	0.3100"	25º	3.680"	Standard
70-0853	Exhaust	35.56mm	1.400"	0.3100"	25º	3.655"	Oversize

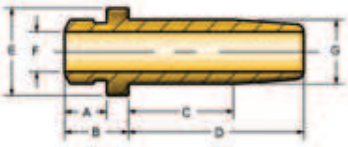
Valve Guides • Manganese Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.460"	0.560"	0.760"	1.310"	0.560"	0.3105"	0.5010" / Std.	70-0343	
						+0.002"	70-0344	
						+0.015"	70-4153	

No seal required

Valve Guides • Manganese Bronze

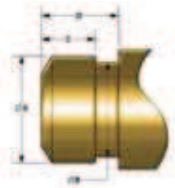


A	B	C	D	E	F	G	Intake	Exhaust
0.330"	0.430"	0.765"	1.315"	0.560"	0.3105"	0.5010" / Std.	70-0812	
						+0.002"	70-0813	
						+0.004"	70-0814	
						+0.006"	70-0815	
						+0.015"	70-4039	

One seal supplied with each guide.

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5/16"	0.465"	0.550"	1	0.500"±0.010"	0.445"	0.230"	0.280"	Exhaust



Part Number	Quantity	Quantity Discount
71012-4	Pkg. of 4	0%
71012-8	Pkg. of 8	0%
71012-16	Pkg. of 16	Less- 10%
71012-50	Pkg. of 50	Less- 15%
71012-100	Pkg. of 100	Less- 20%

TRIUMPH® 865 2001-2010

Valve Spring Kit • Lightweight Racing • Shim Under Conversion

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
70-70300	Intake	.450"	1.415"	55#	191#	.450"
	Exhaust					

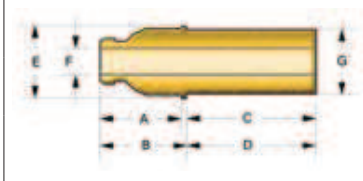
Kit Includes							
8	Titanium Retainers	8	H. T. Steel Keeper Pr.	8	CrSi Valve Springs
8	H. T. Steel Basewashers	8	H. T. Steel Tappets	8	Adj. Shims 9.5mm OD

Spring Kit requires 9.5mm adjustment shims. See Kibblewhite® Adjustment Shim Section in back of catalog for more information.

ORDER 650-557-2046

TRIUMPH® 865 2001-2010

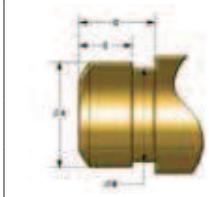
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.625"	0.670"	0.995"	0.995"	0.590"	0.2150'	0.5338" / Std.	70-70320	
						+0.001"	70-70321	
						+0.002"	70-70322	
						+0.010"	70-70329	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

TRIUMPH® VARIOUS 885cc-955cc 1997-2001

- T509 885cc 1997-1998
- T595 / 955I / 955cc 1997-2001

Valve Spring Kit • Lightweight Racing • Shim Under Conversion

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
70-70035	Intake	.440"	1.375"	68#	201#	.440"
	Exhaust					

Kit Includes						
12	Titanium Retainers	12	H. T. Steel Keeper Pr.	12	CrSi Valve Springs	
12	H. T. Steel Basewashers	12	H. T. Steel Tappets	12	Spacers	

Spring Kit requires 9.5mm adjustment shims. See Kibblewhite® Adjustment Shim Section in back of catalog for more information.

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
70-70026	Intake	.440"	1.375"	65#	204#	.440"
	Exhaust					

Kit Includes						
12	Titanium Retainers	12	H. T. Steel Keeper Pr.	12	CrSi Valve Springs	
12	H. T. Steel Basewashers	12	Spacers			

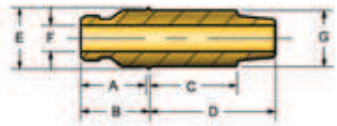
YAMAHA® RAPTOR™ 250 2008-2013

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80550	Intake	.440"	1.240"	65#	192#	.440"
	Exhaust					

Kit Includes	2	Titanium Retainers	2	CrSi Valve Springs	2	H. T. Steel Basewashers

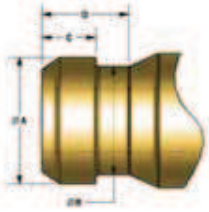
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.455"	0.490"	0.845"	1.245"	0.480"	0.2355'	0.4552" / Std.	80-80570	
						+0.002"	80-80572	
						+0.010"	80-80579	
0.455"	0.490"	0.975"	1.295"	0.480"	0.2350'	0.4552" / Std.		80-80580
						+0.002"		80-80582
						+0.010"		80-80589

Valve Guide Seals • Viton®

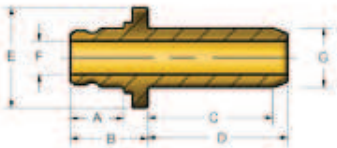
Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
6.0mm	0.371"	0.480"	5	A	B	C	D	Intake
				0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust



Part Number	Quantity	Quantity Discount
71017-2	Pkg. of 2	0%
71017-4	Pkg. of 4	0%
71017-8	Pkg. of 8	0%
71017-16	Pkg. of 16	Less- 10%
71017-50	Pkg. of 50	Less- 15%
71017-100	Pkg. of 100	Less- 20%

YAMAHA® SR™ / TT™ / XT™ 250 1976-1981

Valve Guides • C630 Bronze

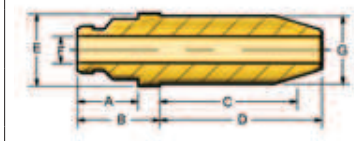


A	B	C	D	E	F	G	Intake	Exhaust
0.645"	0.765"	0.970"	1.200"	0.905"	0.3135"	0.5535" / Std.	80-8100	
						+0.001"	80-8101	
						+0.010"	80-8110	

ORDER 650-557-2046

YAMAHA® SRX™ 250 / XT™ 250 / 350 1984-2000

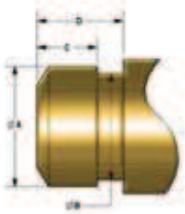
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.470"	0.610"	0.585"	0.850"	0.470"	0.2160"	0.4350" / Std.	80-8030	
						+0.002"	80-8032	
						+0.015"	80-8039	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

YAMAHA® WR™ / YZ™ 250F 2001-2013

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80066	Intake	.380"	1.105"	39#	86#	.380"
	Exhaust					

Kit Includes						
3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers	
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
3	In Viton® Seals	2	Ex Viton® Seals			

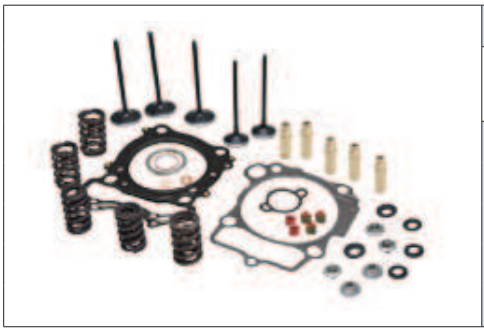
Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80850	Intake	.380"	1.105"	39#	86#	.380"

Kit Includes					
3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
2	Outer In Black Diamond™ Valves	1	Center In Black Diamond™ Valves		

YAMAHA® WR™ / YZ™ 250F 2001-2013

Cylinder Head Service Kit



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82400	Intake	.380"	1.105"	39#	86#	.380"
	Exhaust					

Kit Includes						
3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers	
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
3	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			
3	In Std. C674 Valves Guides	2	Ex Std. C674 Valve Guides			
1	Top End Gasket Kit					

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
80-80066	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80073	Intake (Outer), Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
80-80075	Intake (Center), Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
80-80077	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
80-80080	Intake, Standard Valve Guide	Valve Guide • C674 Bronze
80-80090	Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
80-82401	Gasket Kit	**Includes:** Head Gasket 77mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tens. Gasket (1), Ex. Valve Stem Seal (2), In. Valve Stem Seal (3)

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80073	Intake	23.00mm	0.906"	0.1568"	25º	3.150"	Standard
80-80075	Intake (Center)	23.00mm	0.906"	0.1568"	25º	3.095"	Standard
80-80077	Exhaust	24.50mm	0.965"	0.1758"	25º	3.070"	Standard

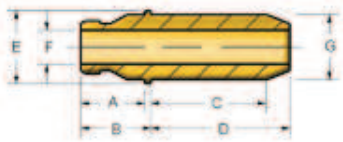
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
80-80073T	Intake	23.00mm	0.906"	0.1570"	25º	3.150"	Titanium	5NL-12112-30-00
80-80075T	Intake (Center)	23.00mm	0.906"	0.1570"	25º	3.090"	Titanium	5NL-12111-30-00
80-80077T	Exhaust	24.50mm	0.965"	0.1758"	25º	3.070"	Titanium	5NL-12121-10-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

Valve Guides • C674 Bronze

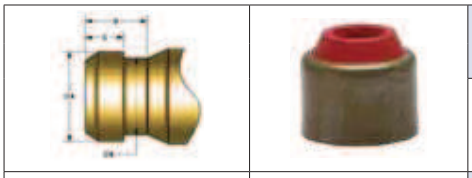


A	B	C	D	E	F	G	Intake	Exhaust
0.375"	.400"	0.520"	0.720"	.400"	0.1570"	0.3563" / Std.	80-80080	
						+0.010"	80-80089	
0.405"	.430"	0.590"	0.790"	.440"	0.1760"	0.3958" / Std.		80-80090
						+0.010"		80-80099

ORDER 650-557-2046

YAMAHA® WR™ / YZ™ 250F 2001-2013

Valve Guide Seal Kits • High Performance



Intake Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs A	B	C	D
4.0mm	0.320"	0.355"	5	0.285"±0.002"	0.245"	0.120"	0.215"

Exhaust Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs A	B	C	D
4.5mm	0.331"	0.370"	4	0.321"±0.002"	0.281"	0.120"	0.240"

Part Number	80-80440	Kit Includes	3	Intake Viton® Seals	2	Exhaust Viton® Seals

YAMAHA® YZ™ 250F 2014-'18 / WR™ 250F & YZ™ 250FX 2014-'19

Valve Spring Kit • Lightweight Racing for Titanium Valves

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80900	Intake	.425"	1.180"	48#	151#	.425"
	Exhaust	.400"	1.125"	40#	119#	.400"

Kit Includes						
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers

Valve Spring Kit • Lightweight Racing for Stainless Valves

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-81400	Intake	.395"	1.150"	55#	151#	.395"
	Exhaust	.370"	1.100"	46#	119#	.370"

Kit Includes						
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers

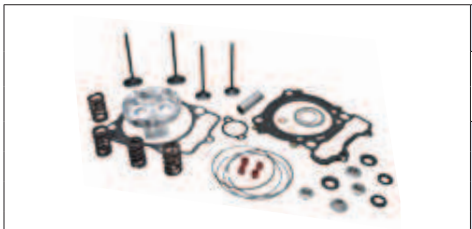
Intake Only • Titanium Valve Kit

KPMI P/N	Type	*Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80970	Intake	.425"	1.180"	48#	151#	.425"

Kit Includes				
2	Intake Titanium Retainers	2	Intake CrSi Valve Springs
2	Intake H. T. Steel Basewashers	2	Intake Tensilite® Titanium Valves

* It may be necessary to use KPMI shortened valve guides **(KPMI® #80-8092X & 80-8093X)** to achieve higher than stock lift.

Top End Service Kit for WR / YZ 250F 2014-2016



KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-81200	77.00mm	Intake	.395"	1.150"	55#	151#	.395"
		Exhaust	.370"	1.100"	46#	119#	.370"

Kit Includes						
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Black Diamond™ Valves	2	Ex Black Diamond™ Valves		
1	High Performance Piston Kit	1	Top End Gasket Kit		

IMPORTANT NOTE: The piston assembly (piston, rings, valves, pin and pin clips) in this kit are designed to work together as a system.When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. valves and piston assembly components.**

VISIT US AT WWW.KPMI.US

YAMAHA® YZ™ 250F 2014-'18 / WR™ 250F & YZ™ 250FX 2014-'19

Components • Replacement • Top End Service Kit for WR / YZ 250F 2014-2016

KPMI P/N	Description	Specification
80-81400	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80912	Intake, Standard Valve	Valves • Black Diamond™ • Black Nitroneg Stems
80-80916	Exhaust, Standard Valve	Valves • Black Diamond™ • Black Nitroneg Stems
80-81201	Gasket Kit	**Includes:** Head Gasket 77mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Ex. Valve Stem Seal (2), In. Valve Stem Seal (2), Cylinder Head Drain Seal (1), Cam Chain Tens. Crush Seal (1), TPS O-ring (1)
These components are intended for use with the KPMI® Top End Kit and are not intended for OEM compatibility.		

Cylinder Head Service Kit

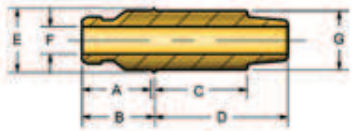
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82410	Intake	.395"	1.150"	55#	151#	.395"
	Exhaust	.370"	1.100"	46#	119#	.370"

Kit Includes						
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers	
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves			
2	In Std. C674 Valve Guides	2	Ex Std. C674 Valve Guides			
1	Top End Gasket Kit					

Components • Replacement • Cylinder Head Service Kit

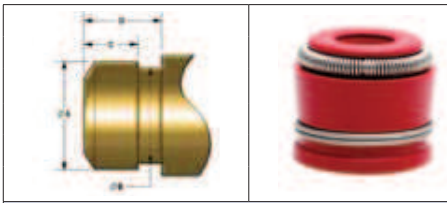
KPMI P/N	Description	Specification
80-81400	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80912	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
80-80916	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
80-80920	Intake, Standard Valve Guide	Valve Guide • C674 Bronze
80-80930	Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
80-82411	Gasket Kit	**Includes:** Head Gasket 77mm Bore (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Ex. Valve Stem Seal (2), In. Valve Stem Seal (2), Cylinder Head Drain Seal (1), Cam Chain Tens. Crush Seal (1), TPS O-ring (1)

Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.350"	0.360"	0.535"	0.905"	0.430"	0.1962"	0.3957" / Std.	80-80920	
						+0.010"	80-80929	
0.330"	0.340"	0.615"	1.015"	0.391"	0.1760"	0.3563" / Std.		80-80930
						+0.010"		80-80939

Valve Guide Seal Kits • High Performance



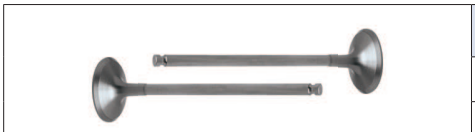
Intake Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			
				A	B	C	D
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"
Exhaust Stem Diameter	**O.L**	**Seal O.D.**	**Seal Style**	**Designed for these guide specs**			
				A	**B**	**C**	**D**
4.5mm	0.331"	0.370"	4	0.321"±0.002"	0.281"	0.120"	0.240"

Part Number	80-80990	Kit Includes	2	Intake Viton® Seals	2	Exhaust Viton® Seals

ORDER 650-557-2046

YAMAHA® YZ™ 250F 2014-'18 / WR™ 250F & YZ™ 250FX 2014-'19

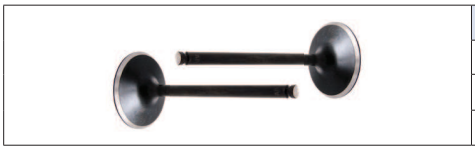
Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
80-80912T	Intake	31.00mm	1.220"	0.1962"	18º	3.280"	Titanium	1SM-12111-10-00
80-80916T	Exhaust	25.00mm	0.984"	0.1760'	30º	3.235"	Titanium	1SM-12121-10-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80912	Intake	31.00mm	1.220"	0.1962"	18º	3.265"	Standard
80-80916	Exhaust	25.00mm	0.984"	0.1760"	30º	3.235"	Standard
Must use KPMI® Spring Kit, #80-81400.							

YAMAHA® YZ™ 250F 2019-'26 / WR™ 250F & YZ™ 250FX 2020-'26

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82300	Intake	.420"	1.315"	69#	187#	.420"
	Exhaust	.400"	1.160"	52#	149#	.400"

Kit Includes						
2	In Titanium Retainers	2	*In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers

*The Intake springs for this kit include a progressively wound Outer Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

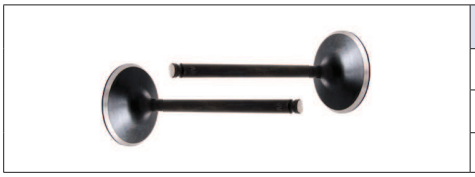
Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	**Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82350	Intake	.420"	1.315"	69#	187#	.420"

Kit Includes				
2	Intake Titanium Retainers	2	**Intake CrSi Valve Springs
2	Intake H. T. Steel Basewashers	2	Intake Black Diamond™ Valves

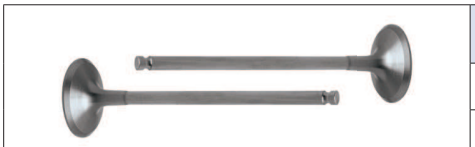
**The Intake springs for this kit include a progressively wound Outer Spring, which should be installed with the tightly wound end seated on the H. T. Steel Basewashers.

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-82312	Intake	31.00mm	1.220"	0.1962"	18º	3.245"	Standard
80-82316	Exhaust	25.00mm	0.984"	0.1760"	30º	3.240"	Standard
Must use KPMI® Spring Kit, #80-82300.							

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

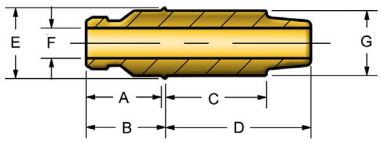


KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
80-82312T	Intake	31.00mm	1.220"	0.1962"	18º	3.250"	Titanium	B7B-12111-00-00
80-82316T	Exhaust	25.00mm	0.984"	0.1760"	30º	3.235"	Titanium	1SM-12121-10-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

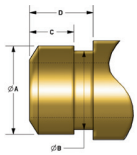
YAMAHA® YZ™ 250F 2019-'26 / WR™ 250F & YZ™ 250FX 2020-'26

Valve Guides • C674 Bronze • Intake Guide Excludes YZ 250F 2021-'26 & WR / FX 2022-'26



A	B	C	D	E	F	G	Intake	Exhaust
0.435"	0.470"	0.415"	0.745"	0.430"	0.1962"	0.3957" / Std.	80-82320	
						+0.010"	80-82329	
0.330"	0.365"	0.590"	0.815"	0.391"	0.1760"	0.3563" / Std.		80-82330
						+0.010"		80-82339

Valve Guide Seal Kits • High Performance



Intake Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs A	B	C	D
5.0mm	0.350"	0.405"	4	0.340"±0.005"	0.303"	0.125"	0.230"
Exhaust Stem Diameter	**O.L**	**Seal O.D.**	**Seal Style**	**Designed for these guide specs A**	**B**	**C**	**D**
4.5mm	0.331"	0.370"	4	0.321"±0.002"	0.281"	0.120"	0.240"

Part Number	80-82345	Kit Includes	2	Intake Viton® Seals	2	Exhaust Viton® Seals

YAMAHA® YFM™ 350-450 1987-2021

- BIG BEAR™ 350 1987-'99
- GRIZZLY™ 350 2007-'14
- RAPTOR™ 350 2004-'13
- WARRIOR™ 350 1987-'04
- WOLVERINE™ 350 1995-'09
- BIG BEAR™ 400 2000-'12
- KODIAK™ 400 1987-'06
- KODIAK™ 450 2018-'21

Valve Spring Kit • Lightweight Racing

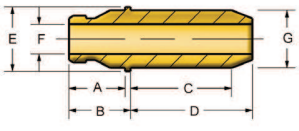
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-8000	Intake / Exhaust	.475"	1.325"	97#	266#	.475"

Kit Includes				
2	Titanium Retainers	2	H. T. Steel Keepers Pr.
2	CrSi Valve Springs	2	H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80012	Intake	40.00mm	1.575"	0.2750"	23º	4.020"	Standard
80-80014	Exhaust	34.00mm	1.339"	0.2745"	29º	3.945"	Standard

Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.475"	0.515"	1.100"	1.290"	0.520"	0.2750"	0.4942" / Std.	80-8010	
						+0.010"	80-8020	

Use O.E.M. valve guide seal.

ORDER 650-557-2046

YAMAHA® WR™ / YZ™ 400F / 426F 1998-'02

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80100	Intake	.375"	1.105"	39#	85#	.375"
	Exhaust	.375"	1.105"	39#	85#	.375"

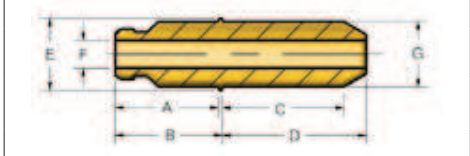
Kit Includes						
3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers	
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
3	In Viton® Seals	2	Ex Viton® Seals			

Valves • White Diamond® • Hard Chrome Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-8055H	Intake	27.00mm	1.063"	0.1765"	15º	3.320"	Standard
80-8056H	Intake (Center)	27.00mm	1.063"	0.1765"	15º	3.280"	Standard
80-8057H	Exhaust	28.00mm	1.102"	0.1955"	25º	3.220"	Standard

Must use Kibblewhite® Lightweight Valve Spring Kits when installing White Diamond™ Valves.

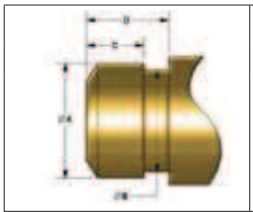
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.550"	0.580"	0.510"	0.640"	0.430"	0.1765"	0.3957" / Std.	80-80110	
						+0.002"	80-80112	
						+0.010"	80-80119	
0.580"	0.610"	0.580"	0.695"	0.420"	0.1955"	0.3957" / Std.		80-80120
						+0.002"		80-80122
						+0.010"		80-80129

Use O.E.M. vlave guide seal.

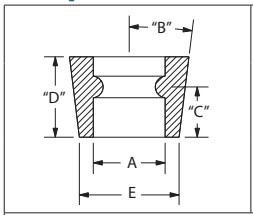
Valve Guide Seal Kits • High Performance

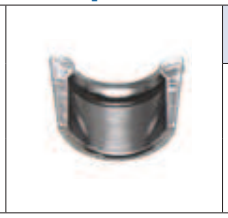


In / Ex Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			
				A	B	C	D
4.5mm	0.331"	0.370"	4	0.321"±0.002"	0.281"	0.120"	0.240"

Part Number	80-80106	Kit Includes	3	Intake Viton® Seals	2	Exhaust Viton® Seals

Keeper Set • O.E.M. Replacement





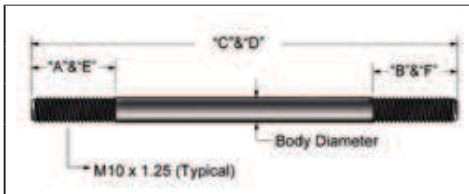
KPMI P/N	Style	Type	A	B	C	D	E	Quantity
80-80130	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221"	0.212"	3 Pr.
		Exhaust	0.196"	6.5°	0.181"	0.216"	0.270"	2 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

YAMAHA® VARIOUS 400-450cc 1998-'13

- WR™ 400F 1998-'00
- WR™ 426F 2001-'02
- WR™ 450F 2003-'06
- YFZ™ 450 2004-'13
- YZ™ 400F 1998-'99
- YZ™ 426F 2000-'02
- YZ™ 450F 2003-'05

Cylinder Stud Kit • H.T. Steel

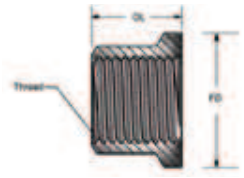


KPMI P/N	Quantity	Body Dia.	"C"	"A"	"B"
80-82650	2	0.358"	6.7"	1.42"	1.42"
	Quantity	Body Dia.	"D"	"E"	"F"
	2	0.358"	6.5"	1.42"	1.42"

Kit Includes	4	H. T. Steel Studs	4	H. T. Steel Nuts	4	H. T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts



KPMI P/N	Hex Pattern	Material	O. L.	F. D.	Thread	Quantity
41010-4	12mm	Material	0.400"	0.700"	M10 x 1.25	Pkg. of 4

Replacement nuts for Stud Kit, #80-82650, but can be used for general purpose (see diagram for detail)

KPMI® nuts are single point machined from high tensile strength Aircraft Alloy Steel. During the machining process close tolerances and smooth surface finishes are maintained. Two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment provides excellent corrosion resistance and appearance.

YAMAHA® VARIOUS 450cc 2003-'25

- WR™ 450 2003-'15
- YZ™ 450F 2003-'09
- YFZ™ 450 2004-'09
- YFZ™ 450X 2008-'11
- YFZ™ 450R & SE 2009-'25

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80206	Intake	.380"	1.105"	39#	86#	.380"
	Exhaust	.380"	1.105"	39#	86#	.380"

Kit Includes	3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
	2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
	3	In Viton® Seals	2	Ex Viton® Seals		

Top End Service Kit for YZ 450F 2003-'05 / WR 450 2003-'06

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-81900	95.00mm	Intake	.380"	1.105"	39#	86#	.380"
		Exhaust	.380"	1.105"	39#	86#	.380"

Kit Includes	3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
	2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
	2	In Std. (Outer) White Diamond® Valves	1	In Std. (Center) White Diamond® Valves	2	Ex Std. White Diamond® Valves
	3	In Viton® Seals	2	Ex Viton® Seals		
	1	High Performance Piston Kit	1	Top End Gasket Kit		

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

ORDER 650-557-2046

YAMAHA® VARIOUS 450cc 2003-'25

Components • Replacement • Top End Service Kit for YZ 450F 2003-'05 / WR 450 2003-'06

KPMI P/N	Description	Specification
80-80206	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Viton® Seals
80-80213H	Intake, Standard (Outer) Valve	Valves • White Diamond® • Hard Chrome Stems
80-80215H	Intake, Standard (Center) Valve	Valves • White Diamond® • Hard Chrome Stems
80-80217H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
80-81901	Gasket Kit	**Includes:** Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Head Drain Washers (1), Oil Line Washers 4 Req (1).

Top End Service Kit for YZ 450F 2006-'09 / WR 450 2007-'15

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82000	95.00mm	Intake	.380"	1.105"	39#	86#	.380"
		Exhaust	.380"	1.105"	39#	86#	.380"

Kit Includes						
3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers	
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
2	In Std. (Outer) White Diamond® Valves	1	In Std. (Center) White Diamond® Valves	2	Ex Std. White Diamond® Valves	
3	In Viton® Seals			2	Ex Viton® Seals	
1	High Performance Piston Kit			1	Top End Gasket Kit	

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

Components • Replacement • Top End Service Kit for YZ 450F 2006-'09 / WR 450 2007-'15

KPMI P/N	Description	Specification
80-80206	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Viton® Seals
80-80213H	Intake, Standard (Outer) Valve	Valves • White Diamond® • Hard Chrome Stems
80-80215H	Intake, Standard (Center) Valve	Valves • White Diamond® • Hard Chrome Stems
80-80217H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
80-82001	Gasket Kit	**Includes:** Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Head Drain Washers (1), Oil Line Washers 4 Req (1).

Top End Service Kit for YFZ 450 2004-'09

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82700	95.00mm	Intake	.380"	1.105"	39#	86#	.380"
		Exhaust	.380"	1.105"	39#	86#	.380"

Kit Includes						
3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers	
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
2	In Std. (Outer) White Diamond® Valves	1	In Std. (Center) White Diamond® Valves	2	Ex Std. White Diamond® Valves	
3	In Viton® Seals			2	Ex Viton® Seals	
1	High Performance Piston Kit			1	Top End Gasket Kit	

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

Components • Replacement • Top End Service Kit for YFZ 450 2004-'09

KPMI P/N	Description	Specification
80-80206	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Viton® Seals
80-80213H	Intake, Standard (Outer) Valve	Valves • White Diamond® • Hard Chrome Stems
80-80215H	Intake, Standard (Center) Valve	Valves • White Diamond® • Hard Chrome Stems
80-80217H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
80-82701	Gasket Kit	**Includes:** Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Head Drain Washers (1), Oil Line Washers 4 Req (1).

VISIT US AT WWW.KPMI.US

YAMAHA® VARIOUS 450cc 2003-'25

Top End Service Kit for YFZ 450R & SE 2009-'25

KPMI P/N	Piston Bore Size	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82750	95.00mm	Intake	.380"	1.105"	39#	86#	.380"
		Exhaust	.380"	1.105"	39#	86#	.380"

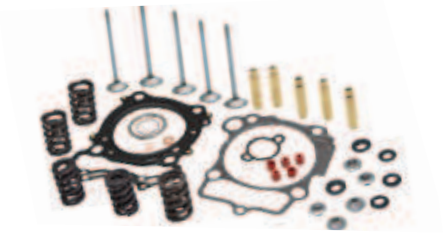
Kit Includes						
3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Std. (Outer) White Diamond® Valves	1	In Std. (Center) White Diamond® Valves	2	Ex Std. White Diamond® Valves
3	In Viton® Seals	2	Ex Viton® Seals		
1	High Performance Piston Kit	1	Top End Gasket Kit		

IMPORTANT NOTE: The piston assembly (piston, rings, pin and pin clips) in this kit are designed to work together as a system. When used complete, the piston assembly can be used as an OEM replacement. The individual components are **NOT INTERCHANGEABLE with O.E.M. piston assembly components.**

Components • Replacement • Top End Service Kit for YFZ 450R & SE 2009-'25

KPMI P/N	Description	Specification
80-80206	Spring Kit	Includes: Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Viton® Seals
80-80213H	Intake, Standard (Outer) Valve	Valves • White Diamond® • Hard Chrome Stems
80-80215H	Intake, Standard (Center) Valve	Valves • White Diamond® • Hard Chrome Stems
80-80217H	Exhaust, Standard Valve	Valves • White Diamond® • Hard Chrome Stems
80-82751	Gasket Kit	**Includes:** Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Head Drain Washers (1), Oil Line Washers 4 Req (1).

Cylinder Head Service Kit for YZ450F 2003-'05 / WR450 2003-'06



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82050	Intake	.380"	1.105"	39#	86#	.380"
	Exhaust	.380"	1.105"	39#	86#	.380"

Kit Includes						
3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Std. (Outer) White Diamond® Valves	1	In Std. (Center) White Diamond® Valves	2	Ex Std. White Diamond® Valves
3	In Std. C674 Valves Guides	2	Ex Std. C674 Valve Guides		
1	Top End Gasket Kit				

Components • Replacement • Cylinder Head Service Kit for YZ450F 2003-'05 / WR450 2003-'06

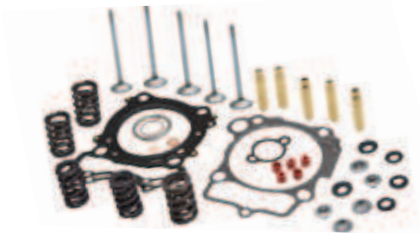
KPMI P/N	Description	Specification
80-80206	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers, Viton® Seals
80-80213H	Intake, Standard (Outer) Valve	Valve • White Diamond® • Stainless
80-80215H	Intake, Standard (Center) Valve	Valve • White Diamond® • Stainless
80-80217H	Exhaust, Standard Valve	Valve • White Diamond® • Stainless
80-80220	Intake, Standard Valve Guide	Valve Guide • C674 Bronze
80-80230	Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
80-82051	Gasket Kit	**Includes:** Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Head Drain Washers (1), Oil Line Washers 4 Req (1).

ORDER 650-557-2046

YAMAHA® VARIOUS 450cc 2003-'25

- WR™ 450 2003-'15
- YZ™ 450F 2003-'09
- YFZ™ 450 2004-'09
- YFZ™ 450X 2008-'11
- YFZ™ 450R & SE 2009-'25

Cylinder Head Service Kit for YZ450F 2006-'09 / WR450 2007-'15 / YFZ450R & SE 2009-'25



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82060	Intake	.380"	1.105"	39#	86#	.380"
	Exhaust	.380"	1.105"	39#	86#	.380"

Kit Includes						
3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers	
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers	
2	In Std. (Outer) White Diamond® Valves	1	In Std. (Center) White Diamond® Valves	2	Ex Std. White Diamond® Valves	
3	In Std. C674 Valves Guides	2	Ex Std. C674 Valve Guides			
1	Top End Gasket Kit					

Components • Replacement • Cylinder Head Service Kit for YZ450F 2006-'09 / WR450 2007-'15 / YFZ450R & SE 2009-'25

KPMI P/N	Description	Specification
80-80206	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers. Viton® Seals
80-80213H	Intake, Standard (Outer) Valve	Valve • White Diamond® • Stainless
80-80215H	Intake, Standard (Center) Valve	Valve • White Diamond® • Stainless
80-80217H	Exhaust, Standard Valve	Valve • White Diamond® • Stainless
80-80220	Intake, Standard Valve Guide	Valve Guide • C674 Bronze
80-80230	Exhaust, Standard Valve Guide	Valve Guide • C674 Bronze
80-82061	Gasket Kit	**Includes:** Head Gasket 95mm (1), Base Gasket (1), Exhaust Gasket (1), Cam Chain Tensioner Gasket (1), Oil Line Washers (2), Drain Plug Gasket (1), Oil Line Washers (4)

Intake Only • Stainless Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80950	Intake	.380"	1.105"	39#	86#	.380"

Kit Includes					
3	In Titanium Retainers	3	In CrSi Valve Springs	3	In H. T. Steel Basewashers
3	In Viton® Seals	3	In White Diamond® Valves		

Valves • White Diamond® • Hard Chrome Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80213H	Intake	27.00mm	1.063"	0.1765"	15º	3.040"	Standard
80-80214H	Intake	28.00mm	1.102"	0.1765"	15º	3.030"	Oversize
80-80215H	Intake	27.00mm	1.063"	0.1765"	15º	3.000"	Std.(Center)
80-80216H	Intake	28.00mm	1.102"	0.1765"	15º	2.990"	OS (Center)
80-80217H	Exhaust	28.00mm	1.102"	0.1956"	20º	2.955"	Standard
80-80218H	Exhaust	29.00mm	1.142"	0.1956"	20º	2.945"	Oversize

Must use Kibblewhite® Lightweight Valve Spring Kits when installing White Diamond® Valves.

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

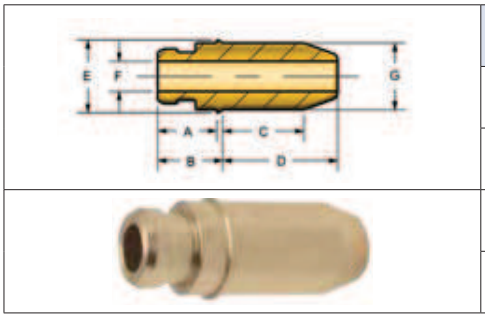
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
80-80213T	Intake	27.00mm	1.063"	0.1765"	15º	3.030"	Titanium	5TA-12112-00-00
80-80215T	Intake (Center)	27.00mm	1.063"	0.1765"	15º	2.995"	Titanium	5TA-12111-00-00
80-80217T	Exhaust	28.00mm	1.102"	0.1957"	20º	2.950"	Titanium	5TA-12121-00-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

YAMAHA® VARIOUS 450cc 2003-'25

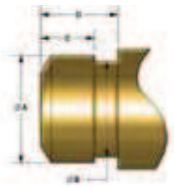
- WR™ 450 2003-'15
- YZ™ 450F 2003-'09
- YFZ™ 450 2004-'09
- YFZ™ 450X 2008-'11
- YFZ™ 450R & SE 2009-'25

Valve Guides • C674 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.350”	0.385"	0.480”	0.680"	0.430"	0.1768"	0.3957" / Std.	80-80220	
						+0.010”	80-80229	
0.350”	0.385"	0.510”	0.680"	0.430"	0.1961"	0.3957" / Std.		80-80230
						+0.010”		80-80239

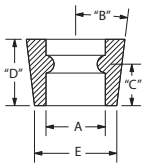
Valve Guide Seal Kits • High Performance



In / Ex Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs			
				A	B	C	D
4.5mm /	0.331"	0.370"	4	0.321”±0.002”	0.281”	0.120”	0.240”

Part Number	80-80710	Kit Includes	3	Intake Viton® Seals	2	Exhaust Viton® Seals

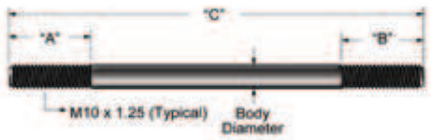
Keeper Set • O.E.M. Replacement



KPMI P/N	Style	Type	A	B	C	D	E	Quantity
80-80715	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221”	0.212”	3 Pr.
		Exhaust	0.196"	6.5°	0.181"	0.216”	0.270”	2 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

Cylinder Head Stud Kit for WR 450F 2007-'15 / YZ 450F 2006-'09 / YFZ450R & SE 2009-'23

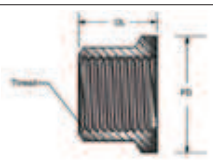


KPMI P/N	Body Dia.	O. L. "C"	A	B	Remarks
80-82800	0.358"	7.0”	1.45”	1.45”	Standard

Kit Includes	4	H.T. Steel Studs	4	H.T. Steel Nuts	4	H.T. Steel Washers

KPMI® Cylinder Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® “rolls” the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts for WR 450F 2007-'15 / YZ 450F 2006-'09 / YFZ450R & SE 2009-'23



KPMI P/N	Hex Pattern	Material	O. L.	F. D.	Thread	Quantity
41010-4	12mm	H. T. Steel	0.400”	0.700”	M10 x 1.25	Pkg. of 4

Replacement nuts for Stud Kits, #80-82800, but can be used for general purpose (see diagram for detail)

KPMI® nuts are single point machined from high tensile strength Aircraft Alloy Steel. During the machining process close tolerances and smooth surface finishes are maintained. Two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment provides excellent corrosion resistance and appearance.

ORDER 650-557-2046

YAMAHA® YZ™ 450F 2010-2013

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80750	Intake	.450"	1.185"	46#	155#	.450"
	Exhaust	.450"	1.185"	46#	155#	.450"

Kit Includes						
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers

The use of **KPMI® guides(#80-8077X and #80-8078X)** may be necessary when using higher than stock lift cams.

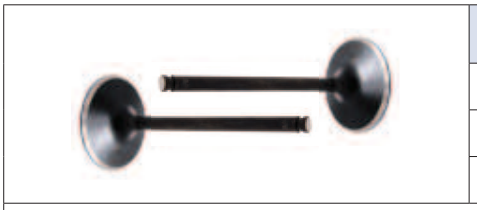
Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-81050	Intake	.450"	1.185"	46#	155#	.450"

Kit Includes			
2	Intake Titanium Retainers	2	Intake CrSi Valve Springs
2	Intake H. T. Steel Basewashers	2	Intake Black Diamond™ Valves

The use of **KPMI® guides(#80-8077X and #80-8078X)** may be necessary when using higher than stock lift cams.

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80762	Intake	36.00mm	1.417"	0.2158"	20°	3.280"	Standard
80-80763	Intake	37.00mm	1.457"	0.2158"	20°	3.280"	Oversize
80-80766	Exhaust	30.00mm	1.181"	0.2155"	20°	3.385"	Standard

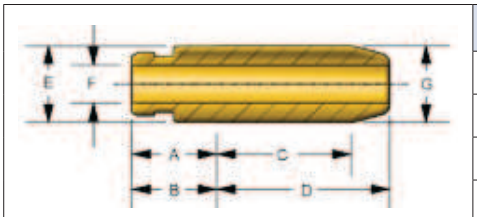
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
80-80762T	Intake	36.00mm	1.417"	0.2160"	20°	3.280"	Titanium	33D-12111-00-00
80-80766T	Exhaust	30.00mm	1.181"	0.2155"	20°	3.375"	Titanium	33D-12121-00-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

Valve Guides • C630 Bronze



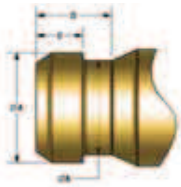
A	B	C	D	E	F	G	Intake	Exhaust
0.540"	0.540"	0.560"	0.775"	0.432"	0.2160"	0.4352" / Std.	80-80770	
						+0.001"	80-80771	
						+0.002"	80-80772	
						+0.010"	80-80779	

0.390"	0.390"	0.760"	1.030"	0.432"	0.2155"	0.4352" Std.		80-80780
						+0.001"		80-80781
						+0.002"		80-80782
						+0.010"		80-80789

YAMAHA® YZ™ 450F 2010-2013

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.333"	0.455"	2	0.365"±0.002"	0.325"	0.120"	0.235"	Exhaust



Part Number	Quantity	Quantity Discount
71040-4	Pkg. of 4	0%
71040-8	Pkg. of 8	0%
71040-16	Pkg. of 16	Less- 10%
71040-50	Pkg. of 50	Less- 15%
71040-100	Pkg. of 100	Less- 20%

YAMAHA® VARIOUS YZ™/ WR™ 450's 2014-'21

- YZ™ 450F 2014-'19
- YZ™ 450FX 2016-'20
- WR™ 450F 2016-'21

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80750	Intake	.450"	1.185"	46#	155#	.450"
	Exhaust	.450"	1.185"	46#	155#	.450"

Kit Includes							
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers

The use of **KPMI® guides(#80-8077X and #80-8078X)** may be necessary when using higher than stock lift cams.

Cylinder Head Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82070	Intake	.450"	1.185"	46#	155#	.450"
	Exhaust	.450"	1.185"	46#	155#	.450"

Kit Includes							
2	In Titanium Retainers	2	In CrSi Valve Springs	2	In H. T. Steel Basewashers
2	Ex Titanium Retainers	2	Ex CrSi Valve Springs	2	Ex H. T. Steel Basewashers
2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
2	In Std. C630 Valves Guides	2	Ex Std. C630 Valve Guides		
1	Top End Gasket Kit				

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
80-80750	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80872	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
80-80876	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
80-80770	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
80-80780	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-82071	Gasket Kit	**Includes:** Head Gasket 97mm (1), Valve Stem Seals (4), Base Gasket (1), Cam Chain Tensioner Gasket (1), Exhaust Gasket (1)

ORDER 650-557-2046

YAMAHA® VARIOUS YZ™/ WR™ 450's 2014-'21

- YZ™ 450F 2014-'19
- YZ™ 450FX 2016-'20
- WR™ 450F 2016-'21

Intake Only • Steel Valve Conversion Kit

KPMI P/N	Type	*Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-81100	Intake	.450"	1.185"	46#	155#	.450"

Kit Includes				
2	Intake Titanium Retainers	2	Intake CrSi Valve Springs
2	Intake H. T. Steel Basewashers	2	Intake Black Diamond™ Valves

The use of KPMI® guides(#80-8077X and #80-8078X) may be necessary when using higher than stock lift cams.

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80872	Intake	37.00mm	1.457"	0.2158"	20º	3.280"	Standard
80-80876	Exhaust	30.50mm	1.201"	0.2155"	28º	3.380"	Standard

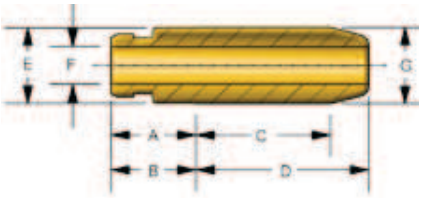
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

Valves • O.E.M. Replacement • Tensilite® • Chromium Nitride PVD Coated Titanium

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Material	Rep. OEM P/N
80-80872T	Intake	37.00mm	1.457"	0.2160"	18º	3.280"	Titanium	1SL-12111-00-00
80-80876T	Exhaust	30.50mm	1.201"	0.2155"	28º	3.375"	Titanium	1SL-12121-00-00

Note: These valves are intended as O.E.M. replacement valves and are completely compatible with the O.E.M. spring kits. However, experienced engine builders, who are running aggressive camshafts or higher than factory RPM's may find the combination of the O.E.M. Style Valve and KPMI's Lightweight Racing Spring Kits advisable. All titanium valves are (Tensilite®) PVD CrN coated, and all stainless valves are Black Diamond™ coated.

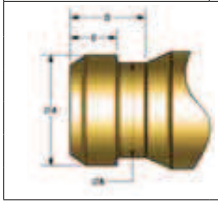
Valve Guides • C630 Bronze

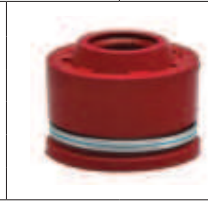


A	B	C	D	E	F	G	Intake	Exhaust
0.540"	0.540"	0.560"	0.775"	0.432"	0.2160"	0.4352" / Std.	80-80770	
						+0.001"	80-80771	
						+0.002"	80-80772	
						+0.010"	80-80779	
0.390"	0.390"	0.760"	1.030"	0.432"	0.2155"	0.4352" Std.		80-80780
						+0.001"		80-80781
						+0.002"		80-80782
						+0.010"		80-80789

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.333"	0.455"	2	0.365"±0.002"	0.325"	0.120"	0.235"	Exhaust





Part Number	Quantity	Quantity Discount
71040-4	Pkg. of 4	0%
71040-8	Pkg. of 8	0%
71040-16	Pkg. of 16	Less- 10%
71040-50	Pkg. of 50	Less- 15%
71040-100	Pkg. of 100	Less- 20%

YAMAHA® SR™ / TT™ / XT™ 500 1976-1981

Valve Spring Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-81500	Intake	.515"	1.690"	117#	254#	.515"
	Exhaust					

Kit Includes					
2	H.T. Steel Retainers	2	H.T. Steel Keeper Pr.
2	CrSi Valve Springs	2	H.T. Steel Spring Shims

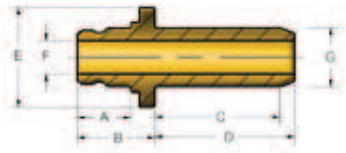
This kit supersedes KPMI® spring only kit **80-0514**, which is no longer available

Retainer Set • H. T. Steel

KPMI P/N	Type	Material
80-80350	Intake	H.T. Steel
	Exhaust	

Set Includes				
2	H.T. Steel Retainers	2	H. T. Steel Keepers Pr.

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.645"	0.765"	0.970"	1.200"	0.905"	0.3135"	0.5535" / Std.	80-8100	
						+0.001"	80-8101	
						+0.010"	80-8110	

Use O.E.M. valve guide seal

YAMAHA® SR™ / TT™ / XT™ 550 / 600 1982-1995

Valve Spring Kit • High Lift

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80241	Intake	.438"	1.220"	70#	197#	.438"
	Exhaust					

Kit Includes					
4	Titanium Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers

YAMAHA® XJ™ 650 / 700 1980-1984

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80200	Intake	.440"	1.335"	75#	200#	.440"
	Exhaust					

Kit Includes					
8	Titanium Retainers	8	CrSi Valve Springs	8	H. T. Steel Keeper Pr.

ORDER 650-557-2046

YAMAHA® XS™ 650 1970-1983

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80340	Intake	.515"	1.450"	100#	228#	.515"
	Exhaust					

Kit Includes				
4	H. T. Steel Retainers	4	H. T. Steel Keeper Pr.
4	CrSi Valve Springs	4	H. T. Steel Basewashers

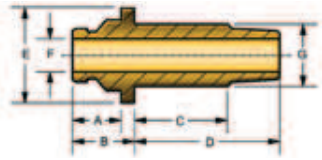
Must use Kibblewhite® Guides with high lift cams. This kit is supplied with radiused bead keepers and must be used with radius groove valves

Valves • Black Diamond™ • Black Nitroneg Stems

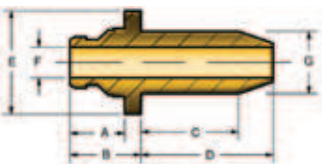
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80380	Intake	41.15mm	1.620"	0.3145"	25º	4.105"	Standard
80-80383	Exhaust	35.15mm	1.384"	0.3140"	29º	4.030"	Standard

These valves utilize a radiused keeper groove. To install in models prior to 1973, use with radius beaded keepers **#51012-4**

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.430"	0.550"	0.840"	1.290"	0.905"	0.3140"	0.5930" / Std.	80-80370	
						+0.001"	80-80371	
						+0.002"	80-80372	
						+0.010"	80-80379	



0.430"	0.550"	1.150"	1.550"	0.905"	0.3140"	0.5930" / Std.		80-80360
						+0.001"		80-80361
						+0.002"		80-80362
Use O.E.M. valve guide seal						+0.010"		80-80369

YAMAHA® VARIOUS 660'S 2001-2008

- GRIZZLY™ 2002-2008
- RAPTOR™ 2001-2005
- RHINO™ 2004-2007

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80030	Intake	.450"	1.205"	55#	145#	.345"
	Exhaust					

Kit Includes			
5	Titanium Retainers	5	CrSi Valve Springs
3	In H. T. Steel Basewashers	2	Ex H. T. Steel Basewashers

Cylinder Head Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82390	Intake	.450"	1.205"	55#	145#	.345"
	Exhaust					

Kit Includes			
5	In / Ex Titanium Retainers	5	In / Ex CrSi Valve Springs
3	In H. T. Steel Basewashers	2	Ex H. T. Steel Basewashers
3	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves
3	In Std. C630 Valves Guides	2	Ex Std. C630 Valve Guides
1	Top End Gasket Kit		

YAMAHA® VARIOUS 660'S 2001-2008

- GRIZZLY™ 2002-2008
- RAPTOR™ 2001-2005
- RHINO™ 2004-2007

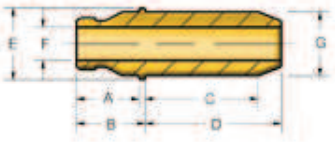
Components • Replacement • Cylinder Head Service Kit

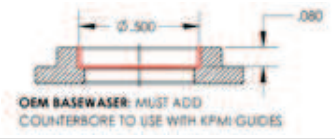
KPMI P/N	Description	Specification
80-80030	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80060	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
80-80063	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
80-80040	Intake, Standard Valve Guide	Valve Guide • C630 Bronze
80-80050	Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-82391	Gasket Kit	**Includes:** Head Gasket 100mm Bore (1), Base Gasket (1), Exhaust Gasket (2), Cam Chain Tensioner Gasket (1), Valve Stem Seal (5), Radiator Hose O-ring (1), Valve Cover Plug O-ring (1), Oil Tank O-ring (1), Cam Chain Tens. Cap O-ring (1), Dipstick O-ring (1), Tappet Cover O-ring (1), Cylinder Base O-ring (1), Intake Valve Adj. Cover O-ring (1), Oil Line Washers (8)

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80060	Intake	30.00mm	1.181"	0.2355"	15º	3.960"	Standard
80-80061	Intake	31.00mm	1.220"	0.2355"	15º	3.960"	Oversize
80-80063	Exhaust	32.00mm	1.260"	0.2348"	25º	3.650"	Standard
80-80064	Exhaust	33.00mm	1.299"	0.2348"	25º	3.650"	Oversize

Valve Guides • C630 Bronze



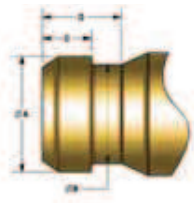


A	B	C	D	E	F	G	Intake	Exhaust
0.315"	0.350"	1.125"	1.255"	0.495"	0.2345"	0.4550" / Std.	80-80040	
						+0.001"	80-80041	
						+0.002"	80-80042	
						+0.010"	80-80049	
0.440"	0.475"	0.860"	0.990"	0.495"	0.2348"	0.4550" / Std.		80-80050
						+0.001"		80-80051
						+0.002"		80-80052
						+0.010"		80-80059

NOTE ON OEM SPRING KIT COMPATIBILITY: these valve guides have been shortened for maximum valve lift capability when used with KPMI spring kits. To use these guide with the OEM spring kit, the OEM basewasher will require modification by counterboring (Ø.50 x ↓.08") to allow the stem seal to fully seat on the guide.

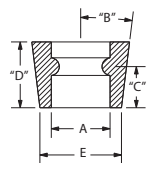
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.371"	0.480"	5	0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust



Part Number	Quantity	Quantity Discount
71017-4	Pkg. of 4	0%
71017-5	Pkg. of 5	0%
71017-8	Pkg. of 8	0%
71017-16	Pkg. of 16	Less- 10%
71017-50	Pkg. of 50	Less- 15%
71017-100	Pkg. of 100	Less- 20%

Keeper Set • O.E.M. Replacement



KPMI P/N	Style	Type	A	B	C	D	E	Quantity	Rep. OEM P/N
51028-5	Single Radius Bead	Intake / Exhaust	0.235"	7.0°	0.075"	0.238"	0.295"	4 Pr.	4G0-12118-00-00

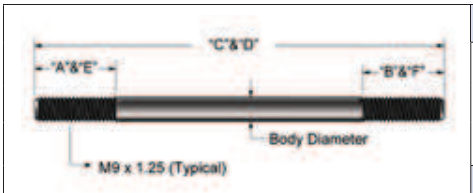
Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

ORDER 650-557-2046

YAMAHA® VARIOUS 660'S 2001-2008

- GRIZZLY™ 2002-2008
- RAPTOR™ 2001-2005
- RHINO™ 2004-2007

Cylinder Head Studs • H.T. Steel

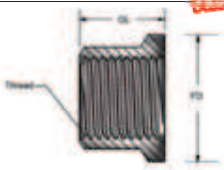


KPMI P/N	Quantity	Body Dia.	"C"	"A"	"B"
80-82600	4	0.319"	5.0"	1.65"	.95"
	Quantity	Body Dia.	"D"	"E"	"F"
	2	0.319"	2.2"	.70"	.70"

Kit Includes	6	H. T. Steel Studs	6	H. T. Steel Nuts	6	H. T. Steel Washers

KPMI® Cylinder Head Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

Cylinder Head Nuts



KPMI P/N	Hex Pattern	Material	O. L.	F. D.	Thread	Quantity
41008-4	11mm	Material	0.315"	0.615"	M9 x 1.25	Pkg. of 4
Replacement nuts for Stud Kit, #80-82600, but can be used for general purpose (see diagram for detail)						

KPMI® nuts are single point machined from high tensile strength Aircraft Alloy Steel. During the machining process close tolerances and smooth surface finishes are maintained. Two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment provides excellent corrosion resistance and appearance.

YAMAHA® VARIOUS 700'S 2006-2025

- GRIZZLY™ 2007-2015
- GRIZZLY™ 2019-2025
- RAPTOR™ 2006-2025
- RHINO™ 2008-2013
- VIKING™ 2014-2025
- KODIAK™ 2019-2025

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80410	Intake	.480"	1.420"	54#	195#	.480"
	Exhaust					

Kit Includes	4	Titanium Retainers	4	CrSi Valve Springs	4	H. T. Steel Basewashers

Cylinder Head Service Kit

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82080	Intake	.480"	1.420"	54#	195#	.480"
	Exhaust					

Kit Includes	4	In / Ex Titanium Retainers	4	In / Ex CrSi Valve Springs	4	In / Ex H. T. Steel Basewashers
	2	In Std. Black Diamond™ Valves	2	Ex Std. Black Diamond™ Valves		
	4	In / Ex Std. C630 Valve Guides	1	Top End Gasket Kit		

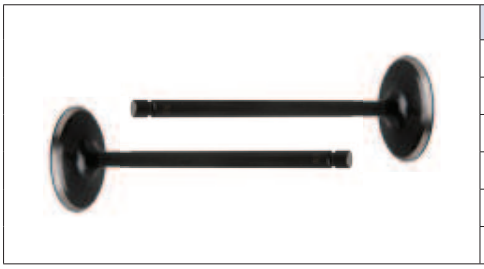
Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
80-80410	Spring Kit	**Includes:** Ti Retainers, CrSi Valve Springs, H.T. Steel Basewashers
80-80430	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
80-80433	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
80-80420	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-82081	Gasket Kit	**Includes:** Head Gasket 103mm Bore (1), Base Gasket, Exhaust Gasket (2), Throttle Body O-ring (1), Water Pump O-ring (1), Thermostat O-ring (1), Cam Cover O-ring (1), Valve Cover O-rings (2), Valve Seal (4), Cam Chain Tensioner Gasket (1)

YAMAHA® VARIOUS 700'S 2006-2025

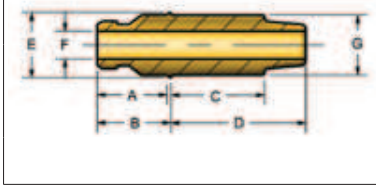
- GRIZZLY™ 2007-2015
- GRIZZLY™ 2019-2025
- RAPTOR™ 2006-2025
- RHINO™ 2008-2013
- VIKING™ 2014-2025
- KODIAK™ 2019-2025

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80430	Intake	38.00mm	1.496"	0.2355"	11°	4.025"	Standard
80-80431	Intake	39.00mm	1.535"	0.2355"	11°	4.010"	Oversize
80-80432	Intake	40.00mm	1.575"	0.2355"	11°	4.010"	Oversize (+2mm)
80-80433	Exhaust	32.00mm	1.260"	0.2350"	25°	3.785"	Standard
80-80434	Exhaust	33.00mm	1.299"	0.2350"	25°	3.770"	Oversize
80-80435	Exhaust	34.00mm	1.339"	0.2350"	25°	3.770"	Oversize (+2mm)

Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.485"	0.525"	0.790"	1.110"	0.495"	0.2350"	0.4550" / Std.	80-80420	
						+0.001"	80-80421	
						+0.002"	80-80422	
						+0.010"	80-80429	

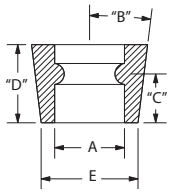
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
6.0mm	0.371"	0.480"	5	0.385"±0.002"	0.341"	0.120"	0.255"	Exhaust

Part Number	Quantity	Quantity Discount
71017-4	Pkg. of 4	0%
71017-8	Pkg. of 8	0%
71017-16	Pkg. of 16	Less- 10%
71017-50	Pkg. of 50	Less- 15%
71017-100	Pkg. of 100	Less- 20%

Keeper Set • O.E.M. Replacement

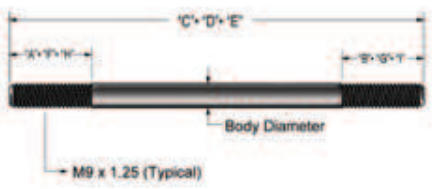
NEW PRODUCTS



KPMI P/N	Style	Type	A	B	C	D	E	Quantity	Rep. OEM P/N
51028-4	Single Radius Bead	Intake	0.235"	7.0°	0.075"	0.238"	0.295"	4 Pr.	4G0-12118-00-00
		Exhaust							

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

Cylinder Head Studs • H.T. Steel



KPMI P/N	Quantity	Body Dia.	"C"	"A"	"B"
80-82450	2	0.319"	6.2"	1.95"	.95"
	Quantity	Body Dia.	"D"	"F"	"G"
	2	0.319"	6.7"	1.45"	.95"
	Quantity	Body Dia.	"E"	"H"	"I"
	2	0.319"	2.2"	.70"	.70"

Kit Includes	6	H. T. Steel Studs	6	H. T. Steel Nuts	6	H. T. Steel Washers

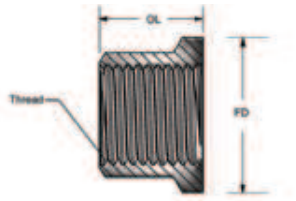
KPMI® Cylinder Head Studs are made from 180,000 psi yield strength, fine grain, heat treated, aircraft grade alloy steel. When you want a stud that meets proof-stress and maximizes clamping force, look no further. KPMI® "rolls" the threads, heat treats and then centerless grinds the entire body of the stud. Rolling the threads creates the toughest and strongest thread possible and centerless grinding removes notch sensitivity. The final process for all KPMI® Studs is to encase the entire stud with premium corrosion resistant treatment of Black Oxide. Congratulations on your choice to purchase a stud that meets and exceeds your stock-replacement of high-performance needs!

ORDER 650-557-2046

YAMAHA® VARIOUS 700'S 2006-2025

- GRIZZLY™ 2007-2015
- GRIZZLY™ 2019-2025
- RAPTOR™ 2006-2025
- RHINO™ 2008-2013
- VIKING™ 2014-2025
- KODIAK™ 2019-2025

Cylinder Head Nuts



KPMI P/N	Hex Pattern	Material	O. L.	F. D.	Thread	Quantity
41008-4	11mm	Material	0.315"	0.615"	M9 x 1.25	Pkg. of 4

Replacement nuts for Stud Kit, #80-82450, but can be used for general purpose (see diagram for detail)

KPMI® nuts are single point machined from high tensile strength Aircraft Alloy Steel. During the machining process close tolerances and smooth surface finishes are maintained. Two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment provides excellent corrosion resistance and appearance.

YAMAHA® YXZ 1000R 2016-2025

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82900	Intake	.430"	1.320"	55#	165#	.430"
	Exhaust					

Kit Includes	12	Titanium Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82950	Intake	.430"	1.320"	55#	165#	.430"
	Exhaust					

Kit Includes	12	H. T. Steel Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

It may be necessary to use **KPMI® Shortened Valve Guides # 80-81320**, to achieve higher than stock lift.

Valve Spring Kit • "Shim in Tappet" Lightweight Racing

Shim In Tappet (SIT)

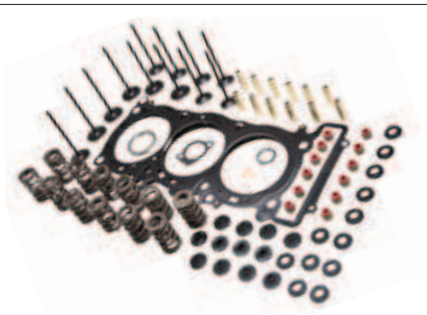
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82500	Intake	.430"	1.320"	55#	165#	.430"
	Exhaust					

Kit Includes	12	H.T. Steel Retainers	12	CrSi Valve Springs
	12	H. T. Steel Basewashers	12	H. T. Steel Tappets

KPMI® shim in tappet systems locate the adjustment shim in the hardened steel of the tappet body, where it is impervious to wearing (ovalling) and kicking the shim out. By designing the tappet and retainer together as a system, the shim counterbore depth in the tappet has been maximized. This allows for increased insurance against losing the shim even in the event of valvetrain separation during severe operating conditions, over-revs, or extreme boost pressures. It may be necessary to use **KPMI® Shortened Valve Guides # 80-81320**, to achieve higher than stock lift.

YAMAHA® YXZ 1000R 2016-2025

Cylinder Head Service Kit



KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-83000	Intake	.430"	1.320"	55#	165#	.430"
	Exhaust					

Kit Includes						
12	In / Ex H. T. Steel Retainers	12	In / Ex CrSi Valve Springs	12	In / Ex H. T. Steel Basewashers
6	In Std. Black Diamond™ Valves	6	Ex Std. Black Diamond™ Valves	12	In / Ex Valve Stem Seals
12	In / Ex Std. C630 Valve Guides	1	Top End Gasket Kit		

Components • Replacement • Cylinder Head Service Kit

KPMI P/N	Description	Specification
80-81700	Spring Kit	**Includes:** H. T. Steel Retainers, CrSi Valve Springs, H.T. Steel Basewashers
*71014-12	Valve Stem Seals	Seals • 4.5 mm • Red Viton®
80-81312	Intake, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
80-81316	Exhaust, Standard Valve	Valve • Black Diamond™ • Black Nitroneg Stems
80-81320	Intake / Exhaust, Standard Valve Guide	Valve Guide • C630 Bronze
80-83001	Gasket Kit	**Includes:** Head Gasket 82.5mm (1), Engine Case Gasket (1), Exhaust Gasket (3), O-ring (1), Copper Washer (1)

* NOTE: It is important to use the valve stem seals included in the KPMI® labeled bags. These valve stem seals are designed for specific compatibility with the KPMI® spring kit. The COMETIC® gasket kit may contain additional valve stem seals, however these should NOT be used with the KPMI® spring kit and can be discarded.

Valves • Black Diamond™ • Black Nitroneg Stems

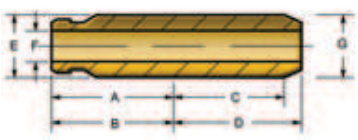
KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-81312	Intake	31.00mm	1.220"	0.1765"	15º	3.495"	Standard
80-81313	Intake	32.00mm	1.260"	0.1765"	15º	3.495"	Oversize
80-81316	Exhaust	26.00mm	1.024"	0.1760"	25º	3.470"	Standard
80-81317	Exhaust	27.00mm	1.063"	0.1760"	25º	3.470"	Oversize

Valve • White Diamond® • Inconel® • Exhaust

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-81316K	Exhaust	26.00mm	1.024"	0.1760"	25º	3.465"	Standard

** Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

Valve Guides • C630 Bronze



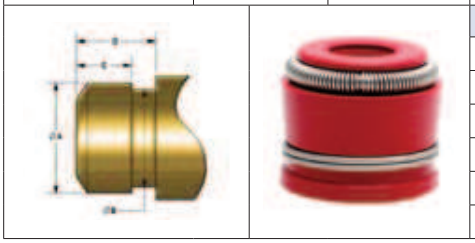
A	B	C	D	E	F	G	Intake	Exhaust
0.530"	0.530"	0.585"	0.750"	0.354"	0.1760"	0.3564" / Std.	80-81320	
						+0.001"	80-81321	
						+0.002"	80-81322	
						+0.004"	80-81324	
						+0.010"	80-81329	

ORDER 650-557-2046

YAMAHA® YXZ 1000R 2016-2025

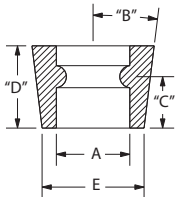
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-12	Pkg. of 12	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

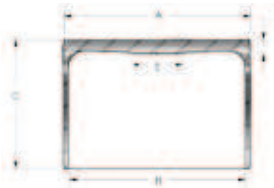
Keeper Set • O.E.M. Replacement



KPMI P/N	Style	Type	A	B	C	D	E	Quantity	Rep. OEM P/N
80-81330	Single Radius Bead	Intake / Exhaust	0.177"	6.0°	0.186"	0.221"	0.212"	12 Pr.	1WG-12118-00-00 3SO-E2118-00-00

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

Tappets • O.E.M. Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
80-81340	Intake / Exhaust	None	26.50mm	1.0420"	0.992"	0.748"	0.285"	0.106"	Pkg. of 12

Refer to **KPMI® Tappet Section,** in back of catalog, when selecting other size tappets.

YAMAHA® FJ™ 1100/ 1200 1984-1993

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-1017	Intake / Exhaust	.500"	1.390"	60#	210#	.500"

Kit Includes	16	CrSi Valve Springs

Retainer Set • Shim On Bottom Conversion • Titanium

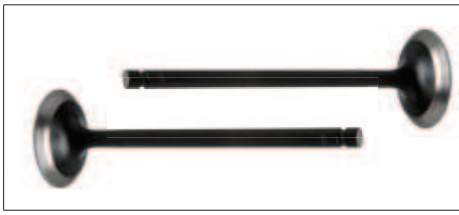
KPMI P/N	Type	Material
80-1019	Intake / Exhaust	Titanium

Set Includes	16	Titanium Retainers	16	H. T. Steel Keepers Pr.

Retainer may not be used separately as O.E.M. replacement. Use of Shim On Bottom conversion **Tappet, PN 80-1020**, is required when using these retainers. Retainers require the use of 9.5mm adjustment shim; see KPMI® Adjustment Shim Section in back of catalog for more information.

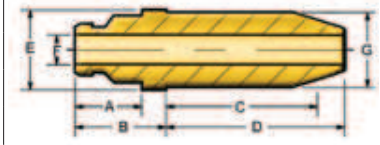
YAMAHA® FJ™ 1100/ 1200 1984-1993

Valves • Black Diamond™ • Black Nitroneg Stems



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-8120	Intake	29.00mm	1.142"	0.2160"	20º	3.700"	Standard
80-8122	Intake	30.50mm	1.201"	0.2160"	20º	3.690"	Oversize
80-8121	Exhaust	25.00mm	0.984"	0.2155"	20º	3.690"	Standard
80-8123	Exhaust	26.00mm	1.024"	0.2155"	20º	3.690"	Oversize

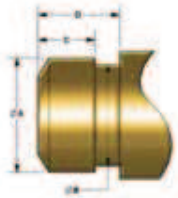
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.470"	0.610"	0.695"	0.960"	0.470"	0.2160"	0.4350" / Std.	80-4172	
						+0.002"	80-4173	
						+0.004"	80-4180	
						+0.006"	80-4181	
						+0.015"	80-4174	

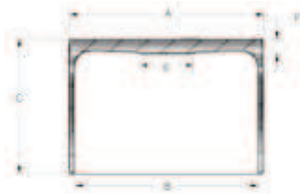
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Tappets • Shim On Bottom Conv. • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
80-1020	Intake	None	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 16
	Exhaust								

Use of Shim On Bottom conversion **Retainer Set, PN 80-1019**, is required when using these tappets. Refer to **KPMI® Tappet Section,** in back of catalog, when selecting other size tappets.

YAMAHA® XS™ 1100 1978-1981

Valve Spring Only Kit • High Performance

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-0449	Intake	.440"	1.275"	85#	215#	.440"
	Exhaust					
Kit Includes		8	CrSi Valve Springs			

Note: Use OEM Retainers.

ORDER 650-557-2046

YAMAHA® V-MAX™ 1985-2007

Valve Spring Only Kit • High Performance

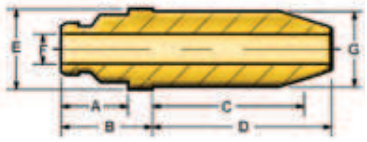
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-8021	Intake	.450"	1.375"	65#	198#	.450"
	Exhaust					
Kit Includes	16	CrSi Valve Springs				

Retainer Set • Shim On Bottom Conversion • Titanium

KPMI P/N	Type	Material		
80-8023	Intake	Titanium		
	Exhaust			
Set Includes	16	Titanium Retainers	16	H. T. Steel Keepers Pr.

Retainer may not be used separately as O.E.M. replacement. Use of Shim On Bottom conversion **Tappet, PN 80-1020**, is required when using these retainers. Retainers require the use of 9.5mm adjustment shim; see KPMI® Adjustment Shim Section in back of catalog for more information.

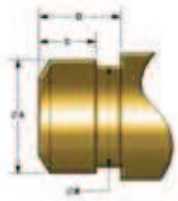
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.470"	0.610"	0.585"	0.850"	0.470"	0.2160"	0.4350" / Std.	80-8030	
						+0.002"	80-8032	
						+0.015"	80-8039	

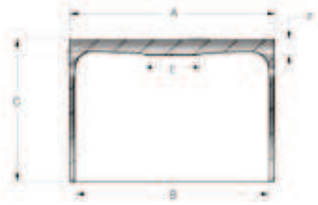
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.320"	0.440"	4	0.358"±0.005"	0.320"	0.110"	0.200"	Exhaust



Part Number	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Tappets • Shim On Bottom Conv. • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
80-1020	Intake	None	28.00mm	1.1016"	1.040"	0.860"	0.310"	0.135"	Pkg. of 16
	Exhaust								

Use of Shim On Bottom conversion **Retainer Set, PN 80-1023**, is required when using these tappets.
Refer to **KPMI® Tappet Section,** in back of catalog, when selecting other size tappets.

YAMAHA® YZF™ R1 1998-2003

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80250	Intake	.380"	1.200"	28#	74#	.380"
	Exhaust	.380"	1.120"	38#	84#	.380"

Kit Includes						
12	In Titanium Retainers	20	CrSi Valve Springs	12	In H. T. Steel Basewashers
8	Ex Titanium Retainers	8	Ex Viton® Seals	8	Ex H. T. Steel Basewashers

Valve Spring Only Kit • High Performance

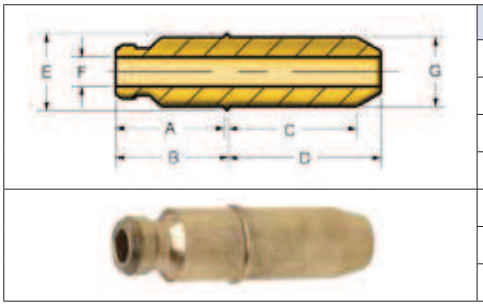
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80394	Intake	.350"	1.370"	30#	90#	.350"
	Exhaust	.315"	1.415"	44#	95#	.315"

Kit Includes					
12	In CrSi Valve Springs	8	Ex. CrSi Valve Springs	8	Ex H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80280	Intake	23.00mm	0.906"	0.1568"	15º	3.620"	Standard
80-80283	Intake	23.00mm	0.906"	0.1568"	15º	3.565"	Standard (Center)
80-80284	Intake	23.50mm	0.925"	0.1568"	15º	3.565"	Oversize (Center)
80-80286	Exhaust	24.50mm	0.965"	0.1757"	25º	3.505"	Standard
80-80287	Exhaust	25.00mm	0.984"	0.1757"	25º	3.505"	Oversize

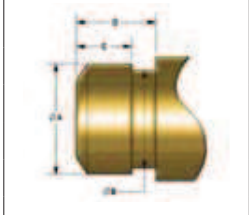
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.580"	0.610"	0.520"	0.710"	0.381"	0.1568"	0.3563" / Std	80-80190	
						+0.001"	80-80191	
						+0.010"	80-80199	
Intake - Use O.E.M valve guide seal								
0.580"	0.610"	0.510"	0.690"	0.420"	0.1757"	0.3955" / Std.		80-80180
						+0.001"		80-80181
						+0.010"		80-80189

Valve Guide Seals • Viton® • Exhaust

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-20	Pkg. of 20	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

YAMAHA® YZF™ R1 2004-2006

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80500	Intake	.340"	1.325"	48#	118#	.340"
	Exhaust					

Kit Includes						
12	In Titanium Retainers	20	CrSi Valve Springs	12	In H. T. Steel Basewashers	
8	Ex Titanium Retainers	8	Ex H. T. Steel Basewashers			

YAMAHA® YZF™ R1 2007-2008

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80650	Intake	.400"	1.410"	50#	188#	.400"
	Exhaust	.400"	1.280"	66#	167#	.400"

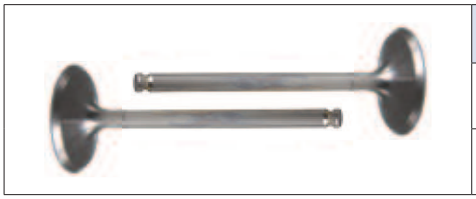
Kit Includes					
8	In Titanium Retainers	8	Ex Titanium Retainers	8	In CrSi Valve Springs
8	Ex CrSi Valve Springs	8	In H. T. Steel Basewashers		
8	In H. T. Steel Basewashers	8	Ex H. T. Steel Basewashers		

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80666	Exhaust	25.00mm	0.989"	0.1760"	15º	3.565"	Standard
80-80667	Exhaust	26.00mm	1.024"	0.1760"	15º	3.565"	Oversize

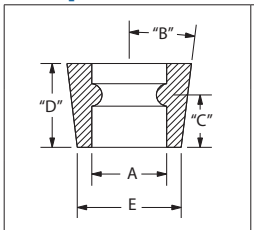
Must use Kibblewhite® Lightweight Valve Spring Kits when installing Black Diamond™ Valves.

Valves • Tensilite® • Chromium Nitride PVD Coated Titanium



KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80662T	Intake	31.00mm	1.220"	0.1960"	25º	3.590"	Standard
80-80663T	Intake	32.00mm	1.260"	0.1960"	25º	3.590"	Oversize

Keeper Set • O.E.M. Replacement



KPMI P/N	Style	Type	A	B	C	D	E	Quantity
80-80660	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221"	0.212"	8 Pr.
		Exhaust	0.196"	6.5°	0.181"	0.216"	0.270"	8 Pr.

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

VISIT US AT WWW.KPMI.US

YAMAHA® VARIOUS 1049cc TRIPLES 2008-'15

- FX NYTRO™ 2008-2014
- SRVIPER™ 2014-2015

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80450	Intake	.445"	1.300"	53#	167#	.445"
	Exhaust					

Kit Includes						
12	Titanium Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-81800	Intake	.445"	1.300"	53#	167#	.445"
	Exhaust					

Kit Includes						
12	H. T. Steel Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

It may be necessary to use **KPMI® Shortened Valve Guides # 80-80470**, to achieve higher than stock lift.

Valve Spring Kit • "Shim in Tappet" Lightweight Racing

Shim In Tappet (SIT)

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-81850	Intake	.445"	1.300"	53#	167#	.445"
	Exhaust					

Kit Includes			
12	Titanium Retainers	12	CrSi Valve Springs
12	H. T. Steel Basewashers	12	H. T. Steel Tappets

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-82550	Intake	.445"	1.300"	53#	167#	.445"
	Exhaust					

Kit Includes			
12	H.T. Steel Retainers	12	CrSi Valve Springs
12	H. T. Steel Basewashers	12	H. T. Steel Tappets

KPMI® shim in tappet systems locate the adjustment shim in the hardened steel of the tappet body, where it is impervious to wearing (ovalling) and kicking the shim out. By designing the tappet and retainer together as a system, the shim counterbore depth in the tappet has been maximized. This allows for increased insurance against losing the shim even in the event of valvetrain separation during severe operating conditions, over-revs, or extreme boost pressures. It may be necessary to use **KPMI® Shortened Valve Guides # 80-80470**, to achieve higher than stock lift.

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80462	Intake	31.00mm	1.220"	0.1765"	15º	3.495"	Standard
80-80463	Intake	32.00mm	1.260"	0.1765"	15º	3.495"	Oversize
80-80466	Exhaust	26.00mm	1.024"	0.1760"	25º	3.470"	Standard
80-80467	Exhaust	27.00mm	1.063"	0.1760"	25º	3.470"	Oversize

Valve • White Diamond® • Inconel® • Exhaust

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80466K	Exhaust	26.00mm	1.024"	0.1760"	25º	3.465"	Standard

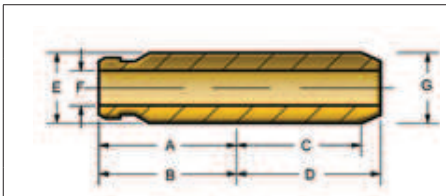
** Inconel® is classified as a "Super Alloy", meaning that it is designed to survive under the most extreme temperatures and pressures where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

ORDER 650-557-2046

YAMAHA® VARIOUS 1049cc TRIPLES 2008-'15

- FX NYTRO™ 2008-2014
- SRVIPER™ 2014-2015

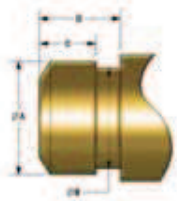
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.530”	0.530”	0.585"	0.750"	0.354"	0.1760"	0.3564" / Std.	80-80470	
						+0.001”	80-80471	
						+0.002”	80-80472	
						+0.004”	80-80474	
						+0.010”	80-80479	

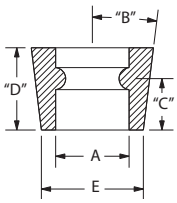
Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
4.5mm	0.331"	0.370"	4	0.321”±0.005”	0.281"	0.120"	0.240”	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-12	Pkg. of 12	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

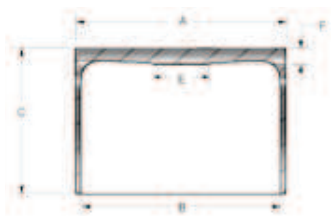
Keeper Set • O.E.M. Replacement



KPMI P/N	Style	Type	A	B	C	D	E	Quantity	Rep. OEM P/N
80-80495	Single Radius Bead	Intake	0.177"	6.0°	0.186"	0.221”	0.212”	12 Pr.	1WG-12118-00-00 3SO-E2118-00-00
		Exhaust							

Note : The bead height is referenced from the minor diameter of the keeper to the center of the bead.

Tappets • O.E.M. Replacement • H.T. Steel



KPMI P/N	Type	Coating	A		B	C	E	F	Quantity
80-80493	Intake	None	26.50mm	1.0420”	0.992”	0.748”	0.285”	0.106”	Pkg. of 12
	Exhaust								

Refer to **KPMI® Tappet Section,** in back of catalog, when selecting other size tappets.

For all the applications available for Kibblewhite's Yamaha® line of products, please refer online to the Yamaha® section of the **www.kpmi.us** website, under ***PWC / Snowmobile***.

YAMAHA® APEX™ / RX-1 (ALL MODELS) 2003-'10

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80600	Intake	.365”	1.100"	40#	85#	.365”
	Exhaust					

Kit Includes						
12	In Titanium Retainers	12	In CrSi Valve Springs	12	In H. T. Steel Basewashers
8	Ex Titanium Retainers	8	Ex CrSi Valve Springs	8	Ex H. T. Steel Basewashers
8	Ex Viton® Seals				

Valve Spring Only Kit • High Performance

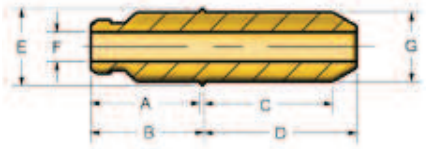
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-80394	Intake	.350”	1.370"	30#	90#	.350”
	Exhaust	.315”	1.415"	44#	95#	.315”

Kit Includes					
12	In CrSi Valve Springs	8	Ex. CrSi Valve Springs	8	Ex H. T. Steel Basewashers

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-80612	Intake	23.00mm	0.906"	0.1568"	15º	3.620"	Standard
80-80614	Intake	23.00mm	0.906"	0.1568"	15º	3.565"	Standard (Center)
80-80615	Intake	23.50mm	0.925"	0.1568"	15º	3.565"	Oversize (Center)
80-80616	Exhaust	24.50mm	0.965"	0.1757"	25º	3.505"	Standard
80-80617	Exhaust	25.00mm	0.984"	0.1757"	25º	3.505"	Oversize

Valve Guides • C630 Bronze

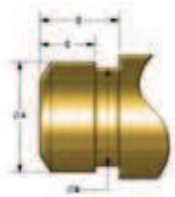


A	B	C	D	E	F	G	Intake	Exhaust
0.580”	0.610"	0.520"	0.710"	0.381"	0.1568"	0.3563" / Std	80-80620	
						+0.001”	80-80621	
						+0.010”	80-80629	
Intake - Use O.E.M valve guide seal								

0.580”	0.610"	0.510"	0.690"	0.420"	0.1757"	0.3955" / Std.		80-80630
						+0.001”		80-80631
						+0.010”		80-80639

Valve Guide Seals • Viton® • Exhaust

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	0.321”±0.005”	0.281"	0.120"	0.240”	Exhaust



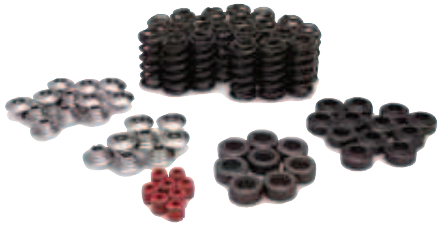
Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-20	Pkg. of 20	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

YAMAHA® MR-1™ WATERCRAFT ENG. 2002-'13

- FX1000™ 2002-2006
- FX140™ 2002-2004
- SR230™ 2003-2007
- AR230™ 2004-2009
- FX™ MODELS 2004-2006
- SX230™ 2004-2009
- AR210™ 2006-2013
- SR210™ 2006-2007
- SX210™ 2006-2013
- 212SS/ X™ 2008-2010
- 232 LIMITED 2008-2009
- VX CRUISER™ 2011-2013
- WAVE RUNNER™ FX's & VX's 2005-2013

Valve Spring Kit • Lightweight Racing



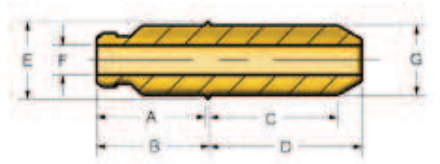
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-81150	Intake	.365"	1.100"	40#	85#	.365"
	Exhaust					

Kit Includes						
12	In Titanium Retainers	12	In CrSi Valve Springs	12	In H. T. Steel Basewashers
8	Ex Titanium Retainers	8	Ex CrSi Valve Springs	8	Ex H. T. Steel Basewashers
8	Ex Viton® Seals				

Valves • Black Diamond™ • Black Nitroneg Stems

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-81162	Intake	23.00mm	0.906"	0.1568"	15º	3.620"	Standard
80-81164	Intake	23.00mm	0.906"	0.1568"	15º	3.565"	Standard (Center)
80-81165	Intake	23.50mm	0.925"	0.1568"	15º	3.565"	Oversize (Center)
80-81166	Exhaust	24.50mm	0.965"	0.1757"	25º	3.505"	Standard
80-81167	Exhaust	25.00mm	0.984"	0.1757"	25º	3.505"	Oversize

Valve Guides • C630 Bronze

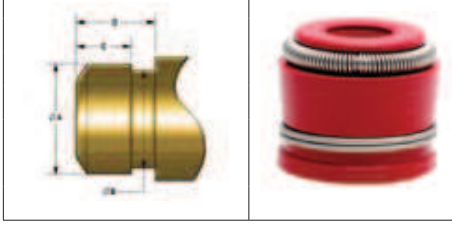


A	B	C	D	E	F	G	Intake	Exhaust
0.580"	0.610"	0.520"	0.710"	0.381"	0.1568"	0.3563" / Std	80-81170	
						+0.001"	80-81171	
						+0.010"	80-81179	
Intake - Use O.E.M valve guide seal								

0.580"	0.610"	0.510"	0.690"	0.420"	0.1757"	0.3955" / Std.		80-81180
						+0.001"		80-81181
						+0.010"		80-81189

Valve Guide Seals • Viton® • Exhaust

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	
4.5mm	0.331"	0.370"	4	0.321"±0.005"	0.281"	0.120"	0.240"	Exhaust



Part Number	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-20	Pkg. of 20	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

YAMAHA® 1.8L 4V WATERCRAFT 2008-'23

Valve Spring Kit • High Performance Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-81000	Intake	.425”	1.375"	85#	221#	.425”
	Exhaust					

Kit Includes	16	Titanium Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
80-81600	Intake	.425”	1.375"	85#	221#	.425”
	Exhaust					

Kit Includes	16	H.T. Steel Retainers	16	CrSi Valve Springs	16	H. T. Steel Basewashers

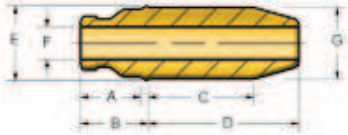
- Spring Kit is designed with increased spring rate and higher lift compatibility over the stock components
- Spring Kit is specifically designed for high boost / high RPM applications
- CNC'd Titanium or H.T. Steel Retainers and Cr-Si dual springs provide valvetrain control at high RPM with high performance camshaft compatibility

Valves • White Diamond® • Hard Chrome Stems • Inconel®

KPMI P/N	Type	Head Diameter		Stem Diameter	Tulip	O. L.	Remarks
80-81012H	Intake	34.00mm	1.339"	0.2159"	15º	3.560"	Standard (Stainless)
*80-81016K	Exhaust	29.00mm	1.142"	0.2154"	25º	3.535"	Standard (Inconel®)

*Inconel® is classified as a “Super Alloy”, meaning that it is designed to survive under the most extreme temperatures and pressures, where other valves will begin to burn, corrode, or completely fail. This is the material of choice for high output engines running turbos, superchargers, nitromethane, or nitrous.

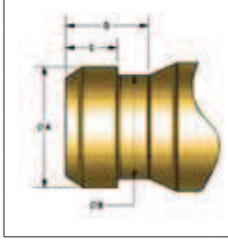
Valve Guides • C630 Bronze



A	B	C	D	E	F	G	Intake	Exhaust
0.435”	0.495”	0.730”	1.020”	0.475”	0.2154”	0.3774” / Std.	80-81020	
						+0.001”	80-81021	
						+0.002”	80-81022	
						+0.010”	80-81029	

Valve Guide Seals • Viton®

Stem Diameter	O.L	Seal O.D.	Seal Style	Designed for these guide specs				Type
				A	B	C	D	Intake
5.5mm	0.333"	0.455"	2	0.365”±0.002”	0.325”	0.120”	0.235”	Exhaust



Part Number	Quantity	Quantity Discount
71040-4	Pkg. of 4	0%
71040-8	Pkg. of 8	0%
71040-16	Pkg. of 16	Less- 10%
71040-50	Pkg. of 50	Less- 15%
71040-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

AUTOMOTIVE BMW™/ MITSUBISHI™ / PORSCHE™

BMW™ M3™ • E36

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
90-90010	Intake	.500”	1.430"	50#	191#	.500”
	Exhaust					

Kit Includes				
24	Titanium Retainers	24	CrSi Valve Springs
24	H. T. Steel Basewashers (Outer)	24	H. T. Steel Basewashers (Inner)

MITSUBISHI™ 3.0L 24V 6G72

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
97-97040	Intake	.465”	1.300"	88#	219#	.465”
	Exhaust					

Kit Includes					
24	Titanium Retainers	24	CrSi Valve Springs	24	H. T. Steel Basewashers

PORSCHE™ 911 / 930 / 964 / 2V

2.0L / 2.2L / 2.4L / 2.7L / 3.0L / 3.2L / 3.3L

Valve Spring Kit • Lightweight Racing

KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
98-98000	Intake	.540”	1.485"	91#	226#	.540”
	Exhaust					

Kit Includes					
12	Titanium Retainers	12	CrSi Valve Springs	12	H. T. Steel Basewashers

Valve Spring Kit • Turbocharged Lightweight Racing

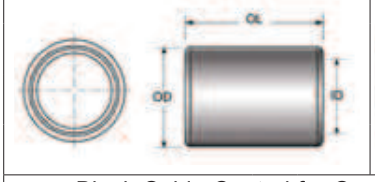
KPMI P/N	Type	Max Valve Lift	Installed Height	Seat Pressure	Open Pressure	@ Lift
98-98010	Intake	.540”	1.455"	100#	233#	.540”
	Exhaust					

Kit Includes			
12	Titanium Retainers	12	CrSi Valve Springs
12	H. T. Steel Basewashers (Outer)	12	H. T. Steel Shims

DOWELS

Here at KPMI®, we pay attention to the finest of details. We have created a set of multi-use steel dowels that aid in cylinder to head, cylinder to case, and cam support cover to case alignment. These dowels are designed to work in various applications dependent on need for a solid or hollow dowel. Ease of installation and serviceability, especially on faced heads and cylinders, were at the forefront when designing these dowels. Additionally, all KPMI® dowels are single-point machined and heat treated (where applicable) to create a lasting product. KPMI® dowels are conveniently packaged in quantities of: 4, 8, and 20. **A 5% value added savings has been built into the 20 quantity pack.**

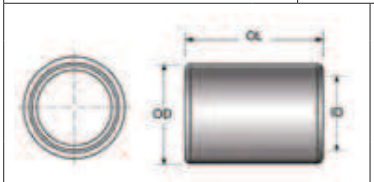
Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.5575”	0.375”	0.505”	16573-83A



KPMI P/N	Quantity	Discount	Fits
83070-4	Pkg. of 4	0%	Evolution 1984-'99 XL 1100cc 1986-'87 Evo Sportster 883cc 1986-'21 Evo Sportster 1200cc 1988-'21
83070-8	Pkg. of 8	0%	
83070-20	Pkg. of 20	Less-5%	

- Black Oxide Coated for Corrosion Resistance
- Designed for HD® Evolution OEM Replacement
- Can Also Be Used as Multipurpose Dowel
- See Dimensions for Fitment
- Supersedes **part number 20-2099**

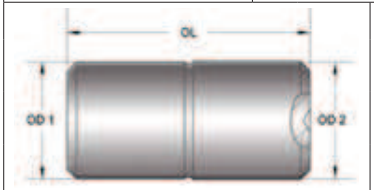
Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.4365”	0.323”	0.610”	16595-99A



KPMI P/N	Quantity	Discount	Fits
83080-4	Pkg. of 4	0%	Twin Cam 88" 1999-'07 Twin Cam 88"-103" 2005-'17
83080-8	Pkg. of 8	0%	
83080-20	Pkg. of 20	Less-5%	

- Black Oxide Coated for Corrosion Resistance
- Designed for HD® Twin Cam OEM Replacement
- Can Also Be Used as Multipurpose Dowel
- See Dimensions for Fitment
- Supersedes **part number 20-20413**

Material	OD 1	OD 2 O/S	OL	O/S-Rep. S&S PN	O/S-Rep. HD® OEM P/N
H.T. Steel	0.250”	0.252”	0.520”	50-8022	366

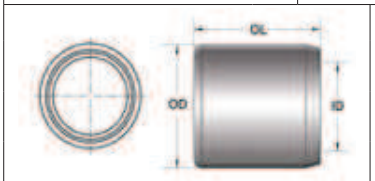


KPMI P/N	Quantity	Discount	Fits
83240-4	Pkg. of 4	0%	Panhead 1948-'65 Shovelhead 1966-'83 Evolution 1984-'99 Evo Sportster 883cc 1986-'21 Evo Sportster 1200cc 1988-'21
83240-8	Pkg. of 8	0%	
83240-20	Pkg. of 20	Less-5%	

- S&S “ Oversized” Dowel for 4" to 4-3/8" Cylinders
- Black Oxide Coated for Corrosion Resistance
- Heat Treated Steel
- Cone Dowel for 1948-’05 Various HD® Applications
- See Description Below for Special Design Features

This KPMI® dowel has been designed to replace the S&S .250” cylinder dowel, or to be used as desired. This dowel features a unique witness line in the center of the part which serves two purposes. First, this witness line serves as a marker for proper installation height and, second, to create two distinct halves of the part. One end of the dowel has a .252” diameter with a machined dimple on the end so you know to use that end in the case or cylinder. The other half incorporates a .250” diameter. This purpose-made change in diameter, and interference, ensures a snug fit on one end and a slip fit on the other as well as fret free use.

Material	OD	ID	OL	Rep. HD® OEM P/N
Steel	0.375”	0.272”	0.400”	16589-99A



KPMI P/N	Quantity	Discount	Fits
83250-4	Pkg. of 4	0%	Milwaukee-Eight (& CVO's) 2017-'25
83250-8	Pkg. of 8	0%	
83250-20	Pkg. of 20	Less-5%	

- Black Oxide Coated for Corrosion Resistance
- Rounded End Installed in Cylinder or Case
- Tapered End Installed in Head or Cam-Support Cover
- Designed as HD® M8 OEM Replacement
- Can Also Be Used as Multipurpose Dowel
- See Dimensions for Fitment

Designed for the Harley Davidson® Milwaukee-Eight engine, this dowel can also serve as a multi-purpose alignment pin. Our dowel incorporates OEM elements while increasing ease of installation through the overall shape of the part. A radiused end allows for easy insertion into the cylinder or case, and a tapered end provides hassle-free location of the mating holes in the head or cam-support cover. This commonly-sized dowel will serve its purpose wherever you see fit.

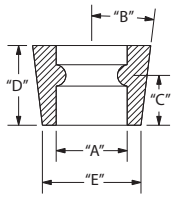
ORDER 650-557-2046

KEEPERS

All KPMI® keepers are single-point machined from high tensile strength billet material (with the exception of forged multi-bead styles). After machining, the keepers are split, tumbled and then heat treated. At KPMI® we pay close attention to the surface finish and tolerance of all diameters, taper angle, and bead location. This type of detail insures repeatability you can count on. All Kibblewhite® Keepers are sold in pairs of 4, 8, 16, 50, and 100. * The bead height is referenced from the minor diameter of the keeper to the center of the bead.

Single Radius Bead

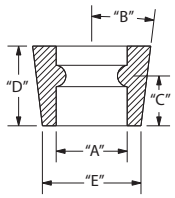
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.215"	10.0°	0.076"	0.210"	0.285"	---



Part Number	Quantity
51002-4	4 Pairs
51002-8	8 Pairs
51002-16	16 Pairs
51002-50	50 Pairs
51002-100	100 Pairs

Single Radius Bead

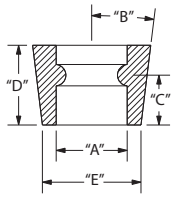
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.196"	7.0°	0.185"	0.225"	0.279"	---



Part Number	Quantity
51004-4	4 Pairs
51004-8	8 Pairs
51004-16	16 Pairs
51004-50	50 Pairs
51004-100	100 Pairs

Single Radius Bead

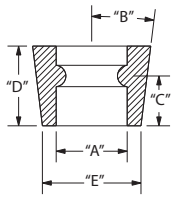
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.275"	15.0°	0.135"	0.300"	0.350"	---



Part Number	Quantity
51006-4	4 Pairs
51006-8	8 Pairs
51006-16	16 Pairs
51006-50	50 Pairs
51006-100	100 Pairs

Single Radius Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.275"	7.0°	0.188"	0.323"	0.342"	12011-004

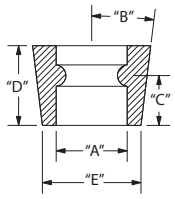


Part Number	Quantity
51008-4	4 Pairs
51008-8	8 Pairs
51008-16	16 Pairs
51008-50	50 Pairs
51008-100	100 Pairs

Note: Keeper, 51008 is shortened to increase tip length

Single Radius Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.215"	10.0°	0.199"	0.237"	0.288"	---



Part Number	Quantity
51010-4	4 Pairs
51010-8	8 Pairs
51010-16	16 Pairs
51010-50	50 Pairs
51010-100	100 Pairs

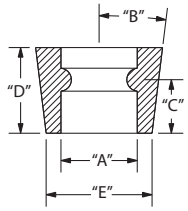
VISIT US AT WWW.KPMI.US

KEEPERS

All KPMI® keepers are single-point machined from high tensile strength billet material (with the exception of forged multi-bead styles). After machining, the keepers are split, tumbled and then heat treated. At KPMI® we pay close attention to the surface finish and tolerance of all diameters, taper angle, and bead location. This type of detail insures repeatability you can count on. All Kibblewhite® Keepers are sold in pairs of 4, 8, 16, 50, and 100. * The bead height is referenced from the minor diameter of the keeper to the center of the bead.

Single Radius Bead

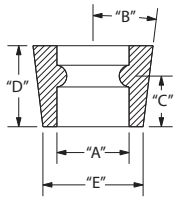
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.315"	15.0°	0.100"	0.300"	0.344"	---



Part Number	Quantity
51012-4	4 Pairs
51012-8	8 Pairs
51012-16	16 Pairs
51012-50	50 Pairs
51012-100	100 Pairs

Single Radius Bead NEW PRODUCT!

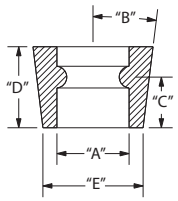
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.235"	7.0°	0.153"	0.250"	0.300"	---



Part Number	Quantity
51032-4	4 Pairs
51032-8	8 Pairs
51032-16	16 Pairs
51032-50	50 Pairs
51032-100	100 Pairs

Single Radius Bead NEW PRODUCT!

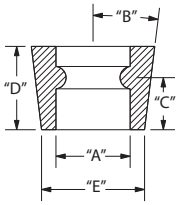
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.236"	9.0°	0.127"	0.230"	0.292"	---



Part Number	Quantity
51033-4	4 Pairs
51033-8	8 Pairs
51033-16	16 Pairs
51033-50	50 Pairs
51033-100	100 Pairs

Single Radius Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.310"	10.0°	0.235"	0.285"	0.417"	71-1166

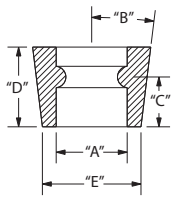


Part Number	Quantity
51023-4	4 Pairs
51023-8	8 Pairs
51023-16	16 Pairs
51023-50	50 Pairs
51023-100	100 Pairs

ORDER 650-557-2046

Single Radius Bead

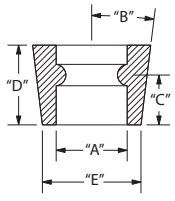
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.215"	7.0°	0.179"	0.214"	0.262"	14781-MEB-670



Part Number	Quantity
51024-4	4 Pairs
51024-8	8 Pairs
51024-16	16 Pairs
51024-50	50 Pairs
51024-100	100 Pairs

Single Radius Bead

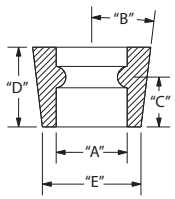
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.196"	7.0°	0.170"	0.205"	0.236"	14781-MAT-000



Part Number	Quantity
51025-4	4 Pairs
51025-8	8 Pairs
51025-16	16 Pairs
51025-50	50 Pairs
51025-100	100 Pairs

Single Radius Bead

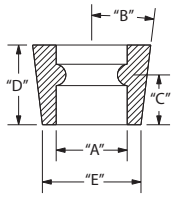
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.177"	6.0°	0.186"	0.221"	0.212"	1WG-12118-00-00 3S0-E2118-00-00



Part Number	Quantity
51026-4	4 Pairs
51026-8	8 Pairs
51026-16	16 Pairs
51026-50	50 Pairs
51026-100	100 Pairs

Single Radius Bead

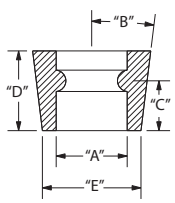
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.196"	6.5°	0.181"	0.216"	0.270"	1AA-12118-00-00



Part Number	Quantity
51027-4	4 Pairs
51027-8	8 Pairs
51027-16	16 Pairs
51027-50	50 Pairs
51027-100	100 Pairs

Single Radius Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.235"	7.0°	0.075"	0.238"	0.295"	4G0-12118-00-00



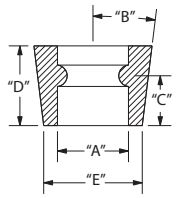
Part Number	Quantity
51028-4	4 Pairs
51028-8	8 Pairs
51028-16	16 Pairs
51028-50	50 Pairs
51028-100	100 Pairs

KEEPERS

All KPMI® keepers are single-point machined from high tensile strength billet material (with the exception of forged multi-bead styles). After machining, the keepers are split, tumbled and then heat treated. At KPMI® we pay close attention to the surface finish and tolerance of all diameters, taper angle, and bead location. This type of detail insures repeatability you can count on. All Kibblewhite® Keepers are sold in pairs of 4, 8, 16, 50, and 100. * The bead height is referenced from the minor diameter of the keeper to the center of the bead.

Single Radius Bead

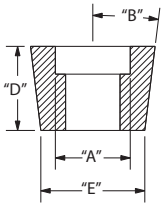
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.275"	9.0°	0.300"	0.345"	0.398"	---



Part Number	Quantity
51030-4	4 Pairs
51030-8	8 Pairs
51030-16	16 Pairs
51030-50	50 Pairs
51030-100	100 Pairs

Shouldered Square Bead

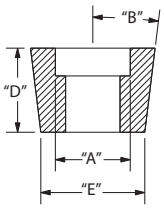
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-		Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.375"	15.0°		----	0.305"	0.403"	188228-36



Part Number	Quantity
51005-4	4 Pairs
51005-8	8 Pairs
51005-16	16 Pairs
51005-50	50 Pairs
51005-100	100 Pairs

Shouldered Square Bead

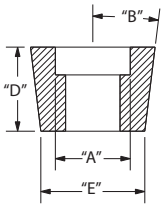
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.310"	15.0°	----	0.315"	0.381"	---



Part Number	Quantity
51007-4	4 Pairs
51007-8	8 Pairs
51007-16	16 Pairs
51007-50	50 Pairs
51007-100	100 Pairs

Shouldered Square Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.310"	15.0°	----	0.343"	0.375"	18228-30

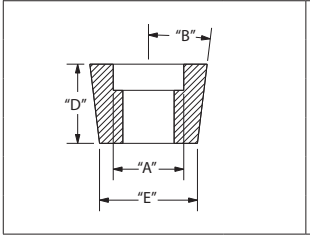


Part Number	Quantity
51009-4	4 Pairs
51009-8	8 Pairs
51009-16	16 Pairs
51009-50	50 Pairs
51009-100	100 Pairs

ORDER 650-557-2046

Shouldered Square Bead

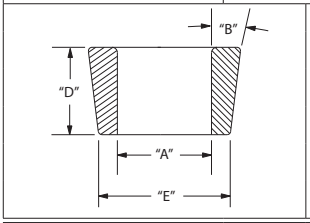
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.315”	15.0°	----	0.315”	0.379”	---



Part Number	Quantity
51018-4	4 Pairs
51018-8	8 Pairs
51018-16	16 Pairs
51018-50	50 Pairs
51018-100	100 Pairs

Square Bead

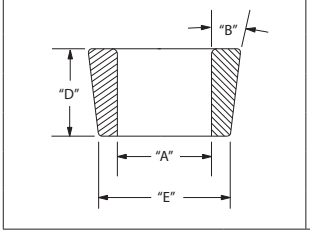
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.310”	7.0°	----	0.245”	0.369”	40-0167, 71-3748, WE259, WE259A, 99-0062/3



Part Number	Quantity
51017-4	4 Pairs
51017-8	8 Pairs
51017-16	16 Pairs
51017-50	50 Pairs
51017-100	100 Pairs

Square Bead

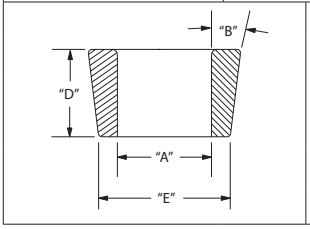
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.310”	7.0°	----	0.250”	0.371”	---



Part Number	Quantity
51020-4	4 Pairs
51020-8	8 Pairs
51020-16	16 Pairs
51020-50	50 Pairs
51020-100	100 Pairs

Square Bead

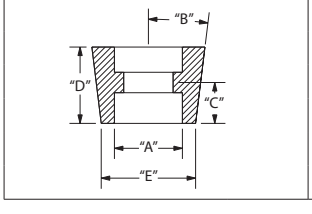
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.310”	15.0°	----	0.235”	0.380”	18228-30



Part Number	Quantity
51022-4	4 Pairs
51022-8	8 Pairs
51022-16	16 Pairs
51022-50	50 Pairs
51022-100	100 Pairs

Single Square Bead

Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.310”	15.0°	0.220”	0.365”	0.360”	---



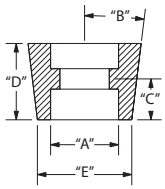
Part Number	Quantity
51003-4	4 Pairs
51003-8	8 Pairs
51003-16	16 Pairs
51003-50	50 Pairs
51003-100	100 Pairs

KEEPERS

All KPMI® keepers are single-point machined from high tensile strength billet material (with the exception of forged multi-bead styles). After machining, the keepers are split, tumbled and then heat treated. At KPMI® we pay close attention to the surface finish and tolerance of all diameters, taper angle, and bead location. This type of detail insures repeatability you can count on. All Kibblewhite® Keepers are sold in pairs of 4, 8, 16, 50, and 100. * The bead height is referenced from the minor diameter of the keeper to the center of the bead.

Single Square Bead

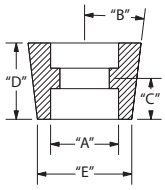
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.310"	7.0°	0.190"	0.380"	0.380"	18229-83



Part Number	Quantity
51014-4	4 Pairs
51014-8	8 Pairs
51014-16	16 Pairs
51014-50	50 Pairs
51014-100	100 Pairs

Single Square Bead

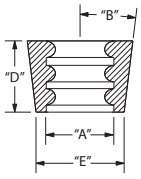
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.310"	9.0°	0.155"	0.345"	0.398"	---



Part Number	Quantity
51031-4	4 Pairs
51031-8	8 Pairs
51031-16	16 Pairs
51031-50	50 Pairs
51031-100	100 Pairs

Triple Radius Bead

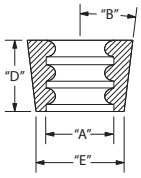
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.275"	7.0°	----	0.290"	0.345"	18260-02



Part Number	Quantity
51016-4	4 Pairs
51016-8	8 Pairs
51016-16	16 Pairs
51016-50	50 Pairs
51016-100	100 Pairs

Triple Radius Bead

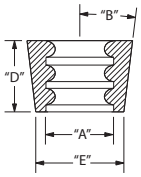
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.236"	7.0°	----	0.200"	0.282"	18100060



Part Number	Quantity
51029-4	4 Pairs
51029-8	8 Pairs
51029-16	16 Pairs
51029-50	50 Pairs
51029-100	100 Pairs

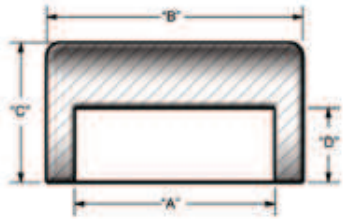
KEEPERS

Triple Radius Bead					
Stem Diameter - A -	Keeper Angle -B-	Bead Height -C-	Overall Length -D-	Minor Diameter -E-	Rep. OEM P/N
0.236"	9.0°	----	0.240"	0.289"	---



Part Number	Quantity
51034-4	4 Pairs
51034-8	8 Pairs
51034-16	16 Pairs
51034-50	50 Pairs
51034-100	100 Pairs

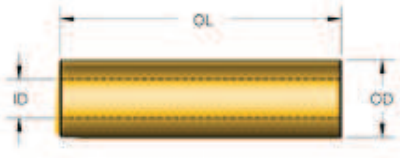
LASH CAPS



KPMI® lash caps are machined from a tough steel that is heat treated to a specific depth, creating a hard impact and wear resistant surface, with a ductile core so they do not crack.

Lash Caps										
Qty. 4 KPMI P/N	Qty. 8 KPMI P/N	Qty. 16 KPMI P/N	Qty. 50 KPMI P/N	Qty. 100 KPMI P/N	"A" Bore Diameter		"B" Outside Diameter	"C" Overall Length	"D" Counterbore Depth	("C"-"D") Roof Thickness
94001-4	94001-8	94001-16	94001-50	94001-100	7.94mm	0.3126"	0.395"	0.160"	0.080"	0.080"
94002-4	94002-8	94002-16	94002-50	94002-100	7.00mm	0.2756"	0.355"	0.160"	0.080"	0.080"
94003-4	94003-8	94003-16	94003-50	94003-100	6.50mm	0.2595"	0.335"	0.120"	0.080"	0.040"
94004-4	94004-8	94004-16	94004-50	94004-100	5.50mm	0.2165"	0.295"	0.090"	0.050"	0.040"
94005-4	94005-8	94005-16	94005-50	94005-100	5.00mm	0.1969"	0.277"	0.090"	0.050"	0.040"
94006-4	94006-8	94006-16	94006-50	94006-100	5.00mm	0.1969"	0.277"	0.230"	0.150"	0.080"
94007-4	94007-8	94007-16	94007-50	94007-100	5.00mm	0.1969"	0.277"	0.175"	0.100"	0.075"
94008-4	94008-8	94008-16	94008-50	94008-100	6.00mm	0.2362"	0.315"	0.120"	0.080"	0.040"

MANGANESE BLANK GUIDES



The Manganese blank guides are designed with large OD's and long lengths to allow maximum versatility and can be machined to fit a large variety of applications. The Manganese material is easily reamed, and then can be delicately finished with our high quality ball hones. These blank guides are a perfect choice for repair work or machining a custom guide for hard to find applications.

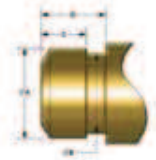
Manganese Blank Guides					
KPMI P/N	ID	OD	OL	Quantity	Fits
20-20380	7.0mm	0.740"	2.700"	Pkg. of 1	Universal
20-20381	0.308"	0.740"	2.700"	Pkg. of 1	Universal
20-20382	0.372"	0.740"	2.700"	Pkg. of 1	Universal
20-20383	0.341"	0.740"	2.700"	Pkg. of 1	Universal

VALVE GUIDE SEALS

All KPMI® seals are conveniently packaged in quantities of: 4, 8, 16, 50, and 100. Value added savings have been built into the 16, 50, and 100 quantity packs with 10, 15, and 20% savings respectively. Select your seal type and then use the diagram and specifications to ensure your valve guides share the same dimensions for a proper fit.

Seal Style 1 - Solid Viton®

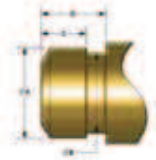
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
8.0mm	0.285"	0.455"	0.466"-0.475"	0.411"-0.430"	0.040"	0.135"	764.1.013.1A



KPMI P/N	Quantity	Quantity Discount
71043-4	Pkg. of 4	0%
71043-8	Pkg. of 8	0%
71043-16	Pkg. of 16	Less- 10%
71043-50	Pkg. of 50	Less- 15%
71043-100	Pkg. of 100	Less- 20%

Seal Style 1 - Solid Viton®

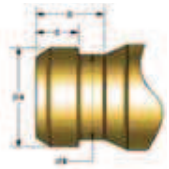
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.465"	0.550"	0.500"±0.010"	0.445"	0.230"	0.280"	---



KPMI P/N	Quantity	Quantity Discount
71012-4	Pkg. of 4	0%
71012-8	Pkg. of 8	0%
71012-16	Pkg. of 16	Less- 10%
71012-50	Pkg. of 50	Less- 15%
71012-100	Pkg. of 100	Less- 20%

Seal Style 2 - Solid Viton® w/ Tension Spring

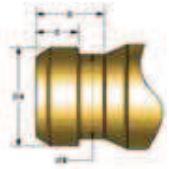
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
4.0mm	0.310"	0.380"	0.315"±0.005"	0.270"	0.120"	0.235"	12209-KT7-013



KPMI P/N	Quantity	Quantity Discount
71013-4	Pkg. of 4	0%
71013-8	Pkg. of 8	0%
71013-16	Pkg. of 16	Less- 10%
71013-50	Pkg. of 50	Less- 15%
71013-100	Pkg. of 100	Less- 20%

Seal Style 2 - Solid Viton® w/ Tension Spring

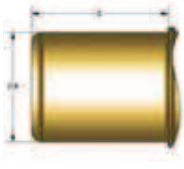
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5.5mm	0.330"	0.455"	0.365"±0.002"	0.325"	0.120"	0.235"	51Y-12119-00-00



KPMI P/N	Quantity	Quantity Discount
71040-4	Pkg. of 4	0%
71040-8	Pkg. of 8	0%
71040-16	Pkg. of 16	Less- 10%
71040-50	Pkg. of 50	Less- 15%
71040-100	Pkg. of 100	Less- 20%

Seal Style 3 - Solid Viton® w/ Metal Jacket & Integral Spring Base

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs			Spring Shoulder Dia.	Rep. OEM P/N
			A	B	C		
5.0mm	0.460"	0.975"	0.355"±0.005"	---	0.290"	0.674"	420431671



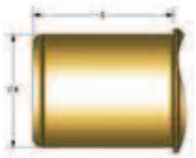
KPMI P/N	Quantity	Quantity Discount
71047-4	Pkg. of 4	0%
71047-8	Pkg. of 8	0%
71047-16	Pkg. of 16	Less- 10%
71047-50	Pkg. of 50	Less- 15%
71047-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

VALVE GUIDE SEALS

Seal Style 3 - Solid Viton® w/ Metal Jacket & Integral Spring Base

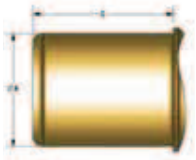
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs			Spring Shoulder Dia.	Rep. OEM P/N
			A	B	C		
5.5mm	0.630"	1.043"	0.435"±0.005"	---	0.480"	0.697"	3610212



KPMI P/N	Quantity	Quantity Discount
71048-4	Pkg. of 4	0%
71048-8	Pkg. of 8	0%
71048-16	Pkg. of 16	Less- 10%
71048-50	Pkg. of 50	Less- 15%
71048-100	Pkg. of 100	Less- 20%

Seal Style 3 - Solid Viton® w/ Metal Jacket & Integral Spring Base

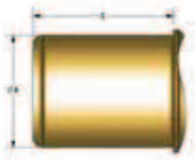
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs			Spring Shoulder Dia.	Rep. OEM P/N
			A	B	C		
6.0mm	0.712"	1.170"	0.475"±0.005"	---	0.545"	0.707"	18100044



KPMI P/N	Quantity	Quantity Discount
71046-4	Pkg. of 4	0%
71046-8	Pkg. of 8	0%
71046-16	Pkg. of 16	Less- 10%
71046-50	Pkg. of 50	Less- 15%
71046-100	Pkg. of 100	Less- 20%

Seal Style 3 - Solid Viton® w/ Metal Jacket & Integral Spring Base

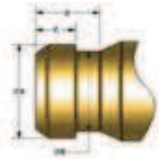
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs			Spring Shoulder Dia.	Rep. OEM P/N
			A	B	C		
7.0mm	0.974"	1.457"	0.560"±0.005"	---	0.700"	0.970"	18094-02A



KPMI P/N	Quantity	Quantity Discount
71030-4	Pkg. of 4	0%
71030-8	Pkg. of 8	0%
71030-16	Pkg. of 16	Less- 10%
71030-50	Pkg. of 50	Less- 15%
71030-100	Pkg. of 100	Less- 20%

Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

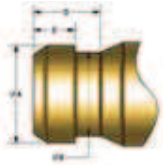
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
4.5mm	0.331"	0.370"	0.321"±0.005"	0.281"	0.120"	0.240"	12209-ML0-722



KPMI P/N	Quantity	Quantity Discount
71014-4	Pkg. of 4	0%
71014-8	Pkg. of 8	0%
71014-16	Pkg. of 16	Less- 10%
71014-50	Pkg. of 50	Less- 15%
71014-100	Pkg. of 100	Less- 20%

Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5.0mm	0.350"	0.405"	0.340"±0.005"	0.303"	0.125"	0.230"	09289-05011



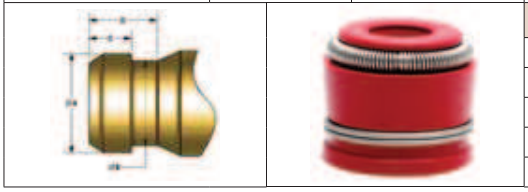
KPMI P/N	Quantity	Quantity Discount
71015-4	Pkg. of 4	0%
71015-8	Pkg. of 8	0%
71015-16	Pkg. of 16	Less- 10%
71015-50	Pkg. of 50	Less- 15%
71015-100	Pkg. of 100	Less- 20%

VALVE GUIDE SEALS

All KPMI® seals are conveniently packaged in quantities of: 4, 8, 16, 50, and 100. Value added savings have been built into the 16, 50, and 100 quantity packs with 10, 15, and 20% savings respectively. Select your seal type and then use the diagram and specifications to ensure your valve guides share the same dimensions for a proper fit.

Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5.5mm	0.320"	0.440"	0.358"±0.005"	0.320"	0.110"	0.200"	12206.502-005



KPMI P/N	Quantity	Quantity Discount
71016-4	Pkg. of 4	0%
71016-8	Pkg. of 8	0%
71016-16	Pkg. of 16	Less- 10%
71016-50	Pkg. of 50	Less- 15%
71016-100	Pkg. of 100	Less- 20%

Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
6.5mm	0.353"	0.560"	0.475"±0.005"	0.415"	0.115"	0.260"	12209-300-003

KPMI P/N	Quantity	Quantity Discount
71018-4	Pkg. of 4	0%
71018-8	Pkg. of 8	0%
71018-16	Pkg. of 16	Less- 10%
71018-50	Pkg. of 50	Less- 15%
71018-100	Pkg. of 100	Less- 20%

Seal Style 4 - Solid Viton® w/ Choker & Tension Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
7.0mm	0.374"	0.560"	0.475"±0.005"	0.430"	0.115"	0.240"	92049-016

KPMI P/N	Quantity	Quantity Discount
71019-4	Pkg. of 4	0%
71019-8	Pkg. of 8	0%
71019-16	Pkg. of 16	Less- 10%
71019-50	Pkg. of 50	Less- 15%
71019-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
4.0mm	0.320"	0.355"	0.285"±0.002"	0.245"	0.120"	0.215"	---

KPMI P/N	Quantity	Quantity Discount
71039-4	Pkg. of 4	0%
71039-8	Pkg. of 8	0%
71039-16	Pkg. of 16	Less- 10%
71039-50	Pkg. of 50	Less- 15%
71039-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5.0mm	0.320"	0.435"	0.305"±0.002"	0.265"	0.100"	0.195"	77036027000

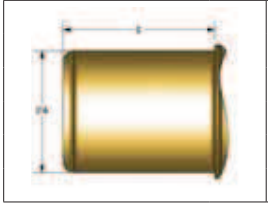
KPMI P/N	Quantity	Quantity Discount
71041-4	Pkg. of 4	0%
71041-8	Pkg. of 8	0%
71041-16	Pkg. of 16	Less- 10%
71041-50	Pkg. of 50	Less- 15%
71041-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

VALVE GUIDE SEALS

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

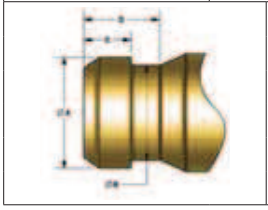
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5.5mm	0.540"	0.524"	0.435"±0.002"	---	---	0.410"	---



KPMI P/N	Quantity	Quantity Discount
71038-4	Pkg. of 4	0%
71038-8	Pkg. of 8	0%
71038-16	Pkg. of 16	Less- 10%
71038-50	Pkg. of 50	Less- 15%
71038-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

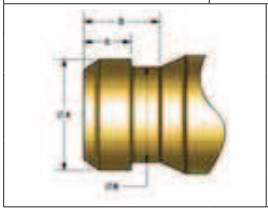
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5.5mm	0.315"	0.455"	0.325"±0.002"	0.310"	0.110"	0.220"	420430420



KPMI P/N	Quantity	Quantity Discount
71042-4	Pkg. of 4	0%
71042-8	Pkg. of 8	0%
71042-16	Pkg. of 16	Less- 10%
71042-50	Pkg. of 50	Less- 15%
71042-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

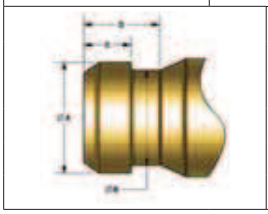
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
6.0mm	0.371"	0.480"	0.385"±0.002"	0.341"	0.120"	0.255"	5H0-12119-00-00



KPMI P/N	Quantity	Quantity Discount
71017-4	Pkg. of 4	0%
71017-8	Pkg. of 8	0%
71017-16	Pkg. of 16	Less- 10%
71017-50	Pkg. of 50	Less- 15%
71017-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

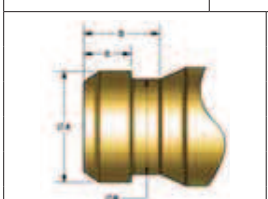
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
6.0mm	0.400"	0.560"	0.435"±0.002"	0.400"	0.120"	0.285"	711230510



KPMI P/N	Quantity	Quantity Discount
71025-4	Pkg. of 4	0%
71025-8	Pkg. of 8	0%
71025-16	Pkg. of 16	Less- 10%
71025-50	Pkg. of 50	Less- 15%
71025-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
6.5mm	0.315"	0.520"	0.435"±0.002"	0.395"	0.120"	0.210"	59036027000



KPMI P/N	Quantity	Quantity Discount
71029-4	Pkg. of 4	0%
71029-8	Pkg. of 8	0%
71029-16	Pkg. of 16	Less- 10%
71029-50	Pkg. of 50	Less- 15%
71029-100	Pkg. of 100	Less- 20%

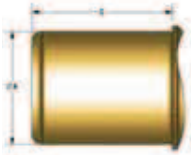
VALVE GUIDE SEALS

All KPMI® seals are conveniently packaged in quantities of: 4, 8, 16, 50, and 100. Value added savings have been built into the 16, 50, and 100 quantity packs with 10, 15, and 20% savings respectively. Select your seal type and then use the diagram and specifications to ensure your valve guides share the same dimensions for a proper fit.

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

NEW PRODUCT!

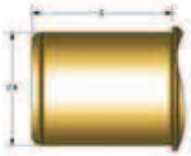
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
6.0mm	0.470"	0.590"	0.475"±0.002"	---	0.295"	---	---



KPMI P/N	Quantity	Quantity Discount
71049-4	Pkg. of 4	0%
71049-8	Pkg. of 8	0%
71049-16	Pkg. of 16	Less- 10%
71049-50	Pkg. of 50	Less- 15%
71049-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

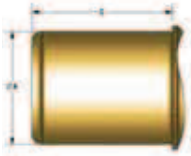
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
6.0mm	0.524"	0.615"	0.495"±0.002"	---	0.385"	---	---



KPMI P/N	Quantity	Quantity Discount
71031-4	Pkg. of 4	0%
71031-8	Pkg. of 8	0%
71031-16	Pkg. of 16	Less- 10%
71031-50	Pkg. of 50	Less- 15%
71031-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

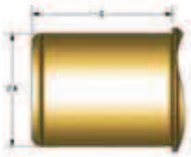
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
6.0mm	0.394"	0.555"	0.447"±0.002"	---	0.265"	---	---



KPMI P/N	Quantity	Quantity Discount
71037-4	Pkg. of 4	0%
71037-8	Pkg. of 8	0%
71037-16	Pkg. of 16	Less- 10%
71037-50	Pkg. of 50	Less- 15%
71037-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

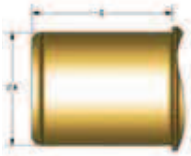
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
7.0mm	0.517"	0.550"	0.435"±0.002"	---	0.310"	---	022-1516



KPMI P/N	Quantity	Quantity Discount
71026-4	Pkg. of 4	0%
71026-8	Pkg. of 8	0%
71026-16	Pkg. of 16	Less- 10%
71026-50	Pkg. of 50	Less- 15%
71026-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
7.0mm	0.510"	0.665"	0.560"±0.002"	---	0.375"	---	---



KPMI P/N	Quantity	Quantity Discount
71028-4	Pkg. of 4	0%
71028-8	Pkg. of 8	0%
71028-16	Pkg. of 16	Less- 10%
71028-50	Pkg. of 50	Less- 15%
71028-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

VALVE GUIDE SEALS

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
7.0mm	0.360"	0.520"	0.383"-0.389"	---	0.255"	---	764.1.087.1A

KPMI P/N	Quantity	Quantity Discount
71044-4	Pkg. of 4	0%
71044-8	Pkg. of 8	0%
71044-16	Pkg. of 16	Less- 10%
71044-50	Pkg. of 50	Less- 15%
71044-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
8.0mm	0.374"	0.598"	0.427"±0.002"	---	0.265"	---	E6TZ6571A

KPMI P/N	Quantity	Quantity Discount
71027-4	Pkg. of 4	0%
71027-8	Pkg. of 8	0%
71027-16	Pkg. of 16	Less- 10%
71027-50	Pkg. of 50	Less- 15%
71027-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.412"	0.566"	0.420"±0.002"	---	0.275"	---	35178930

KPMI P/N	Quantity	Quantity Discount
71010-4	Pkg. of 4	0%
71010-8	Pkg. of 8	0%
71010-16	Pkg. of 16	Less- 10%
71010-50	Pkg. of 50	Less- 15%
71010-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.514"	0.671"	0.530"±0.002"	---	0.330"	---	---

KPMI P/N	Quantity	Quantity Discount
71045-4	Pkg. of 4	0%
71045-8	Pkg. of 8	0%
71045-16	Pkg. of 16	Less- 10%
71045-50	Pkg. of 50	Less- 15%
71045-100	Pkg. of 100	Less- 20%

Seal Style 5 - Solid Viton® w/ Metal Jacket & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
3/8"	0.516"	0.661"	0.562"±0.002"	---	---	0.210"	---

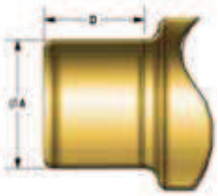
KPMI P/N	Quantity	Quantity Discount
71011-4	Pkg. of 4	0%
71011-8	Pkg. of 8	0%
71011-16	Pkg. of 16	Less- 10%
71011-50	Pkg. of 50	Less- 15%
71011-100	Pkg. of 100	Less- 20%

VALVE GUIDE SEALS

All KPMI® seals are conveniently packaged in quantities of: 4, 8, 16, 50, and 100. Value added savings have been built into the 16, 50, and 100 quantity packs with 10, 15, and 20% savings respectively. Select your seal type and then use the diagram and specifications to ensure your valve guides share the same dimensions for a proper fit.

Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

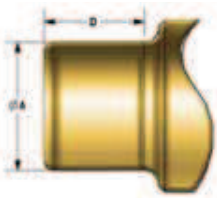
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.386"	0.512"	0.425"±0.002"	---	---	0.235"	5403212



KPMI P/N	Quantity	Quantity Discount
71003-4	Pkg. of 4	0%
71003-8	Pkg. of 8	0%
71003-16	Pkg. of 16	Less- 10%
71003-50	Pkg. of 50	Less- 15%
71003-100	Pkg. of 100	Less- 20%

Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

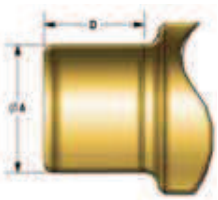
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.510"	0.600"	0.500"±0.002"	---	---	0.365"	---



KPMI P/N	Quantity	Quantity Discount
71006-4	Pkg. of 4	0%
71006-8	Pkg. of 8	0%
71006-16	Pkg. of 16	Less- 10%
71006-50	Pkg. of 50	Less- 15%
71006-100	Pkg. of 100	Less- 20%

Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

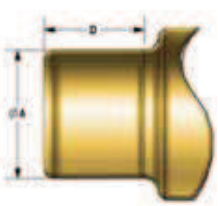
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.517"	0.510"	0.415"±0.002"	---	---	0.350"	8921209



KPMI P/N	Quantity	Quantity Discount
71008-4	Pkg. of 4	0%
71008-8	Pkg. of 8	0%
71008-16	Pkg. of 16	Less- 10%
71008-50	Pkg. of 50	Less- 15%
71008-100	Pkg. of 100	Less- 20%

Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.506"	0.632"	0.530"±0.002"	---	---	0.365"	---

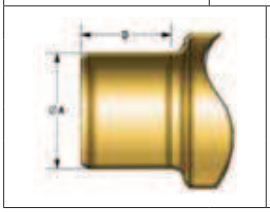


KPMI P/N	Quantity	Quantity Discount
71009-4	Pkg. of 4	0%
71009-8	Pkg. of 8	0%
71009-16	Pkg. of 16	Less- 10%
71009-50	Pkg. of 50	Less- 15%
71009-100	Pkg. of 100	Less- 20%

VALVE GUIDE SEALS

Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

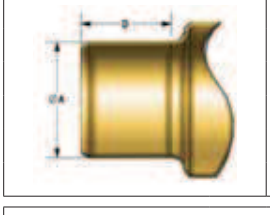
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
11/32”	0.510"	0.596"	0.500”±0.002”	---	---	0.360”	---



KPMI P/N	Quantity	Quantity Discount
71005-4	Pkg. of 4	0%
71005-8	Pkg. of 8	0%
71005-16	Pkg. of 16	Less- 10%
71005-50	Pkg. of 50	Less- 15%
71005-100	Pkg. of 100	Less- 20%

Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

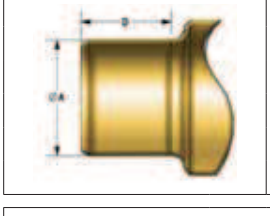
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
11/32”	0.514"	0.654"	0.562”±0.002”	---	---	0.345”	---



KPMI P/N	Quantity	Quantity Discount
71007-4	Pkg. of 4	0%
71007-8	Pkg. of 8	0%
71007-16	Pkg. of 16	Less- 10%
71007-50	Pkg. of 50	Less- 15%
71007-100	Pkg. of 100	Less- 20%

Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

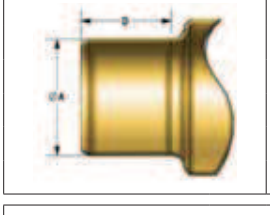
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
3/8”	0.502"	0.626"	0.530”±0.002”	---	---	0.350”	---



KPMI P/N	Quantity	Quantity Discount
71001-4	Pkg. of 4	0%
71001-8	Pkg. of 8	0%
71001-16	Pkg. of 16	Less- 10%
71001-50	Pkg. of 50	Less- 15%
71001-100	Pkg. of 100	Less- 20%

Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

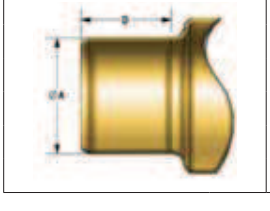
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
3/8”	0.518"	0.650"	0.562”±0.002”	---	---	0.365”	---



KPMI P/N	Quantity	Quantity Discount
71002-4	Pkg. of 4	0%
71002-8	Pkg. of 8	0%
71002-16	Pkg. of 16	Less- 10%
71002-50	Pkg. of 50	Less- 15%
71002-100	Pkg. of 100	Less- 20%

Seal Style 6 - Solid PC w/ Metal Band & Choker Spring

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
3/8”	0.507"	0.600"	0.500”±0.002”	---	---	0.355”	---



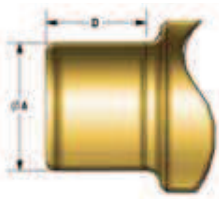
KPMI P/N	Quantity	Quantity Discount
71004-4	Pkg. of 4	0%
71004-8	Pkg. of 8	0%
71004-16	Pkg. of 16	Less- 10%
71004-50	Pkg. of 50	Less- 15%
71004-100	Pkg. of 100	Less- 20%

VALVE GUIDE SEALS

All KPMI® seals are conveniently packaged in quantities of: 4, 8, 16, 50, and 100. Value added savings have been built into the 16, 50, and 100 quantity packs with 10, 15, and 20% savings respectively. Select your seal type and then use the diagram and specifications to ensure your valve guides share the same dimensions for a proper fit.

Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

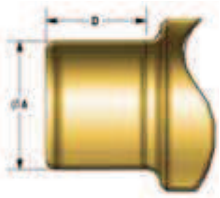
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.385"	0.565"	0.420"±0.002"	---	---	0.315"	18001-83B



KPMI P/N	Quantity	Quantity Discount
71032-4	Pkg. of 4	0%
71032-8	Pkg. of 8	0%
71032-16	Pkg. of 16	Less- 10%
71032-50	Pkg. of 50	Less- 15%
71032-100	Pkg. of 100	Less- 20%

Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

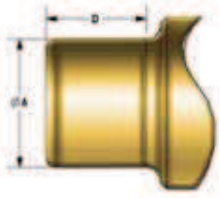
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
5/16"	0.375"	0.630"	0.530"±0.002"	---	---	0.295"	1804698



KPMI P/N	Quantity	Quantity Discount
71033-4	Pkg. of 4	0%
71033-8	Pkg. of 8	0%
71033-16	Pkg. of 16	Less- 10%
71033-50	Pkg. of 50	Less- 15%
71033-100	Pkg. of 100	Less- 20%

Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

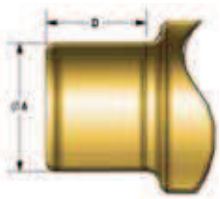
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
11/32"	0.375"	0.630"	0.530"±0.002"	---	---	0.365"	---



KPMI P/N	Quantity	Quantity Discount
71034-4	Pkg. of 4	0%
71034-8	Pkg. of 8	0%
71034-16	Pkg. of 16	Less- 10%
71034-50	Pkg. of 50	Less- 15%
71034-100	Pkg. of 100	Less- 20%

Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket

Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
3/8"	0.375"	0.660"	0.562"±0.002"	---	---	0.315"	---

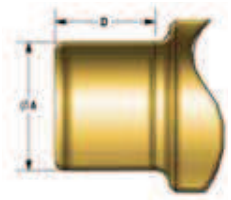


KPMI P/N	Quantity	Quantity Discount
71035-4	Pkg. of 4	0%
71035-8	Pkg. of 8	0%
71035-16	Pkg. of 16	Less- 10%
71035-50	Pkg. of 50	Less- 15%
71035-100	Pkg. of 100	Less- 20%

ORDER 650-557-2046

VALVE GUIDE SEALS

Seal Style 7 - H.D. OEM Style Solid Teflon w/ a Metal Jacket							
Stem Diameter	O.L	Seal O.D.	Designed for these guide specs				Rep. OEM P/N
			A	B	C	D	
3/8"	0.400"	0.720"	0.625"±0.002"	---	---	0.310"	1800081



KPMI P/N	Quantity	Quantity Discount
71036-4	Pkg. of 4	0%
71036-8	Pkg. of 8	0%
71036-16	Pkg. of 16	Less- 10%
71036-50	Pkg. of 50	Less- 15%
71036-100	Pkg. of 100	Less- 20%

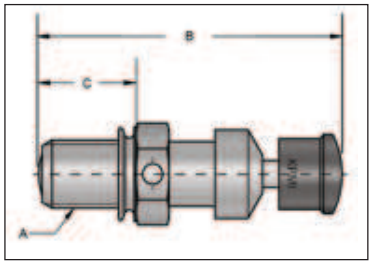
INSTALLATION PROTECTORS

20-20637 / 20-20638 / 20-20639

The flexible thin wall protectors are designed to fit over the top of the valve stem, protecting the sealing element from any sharp edges that might damage it during installation.

Installation Protector						
KPMI P/N (2-pack)	KPMI P/N (1-pack)	Application	Stem Diameter	Fits		Color
20-20634	20-20637	Evolution & Ironhead Sportster Intake	5/16"	71032-4	71033-4	Green
20-20635	20-20638	Ironhead Sportster Exhaust	11/32"	71034-4		Clear
20-20636	20-20639	Panhead & Shovelhead 74" & Shovelhead 80"	3/8"	71035-4	71036-4	Red

COMPRESSION RELEASE VALVES



- KPMI® Compression Release valves are state of the art and priced competitively
- Designed to reduces "hot start" issues and starter / battery loads
- 5-7 Newtons of closing force resistance, for high demand applications
- Custom molded knobs ensure a cool touch and easy operation
- Embossed with the KPMI® brand to ensure product quality

20-21260 / 20-21255 / 20-21250

Compression Release Valves					
KPMI P/N (2-pack)	KPMI P/N (20-pack)	A	B	C	Note
20-21250	20-21265	M10 x 1	1.400"	0.350"	Fits Evos, Shortened thread for ease of installation, 6N closing force
20-21255	20-21270	M10 x 1	1.730"	0.350"	Fits Twin Cams, Shortened thread for ease of installation, 6N closing force
20-21260	20-21275	M10 x 1	1.750"	0.500"	6N closing force

INSTALLATION TOOLS

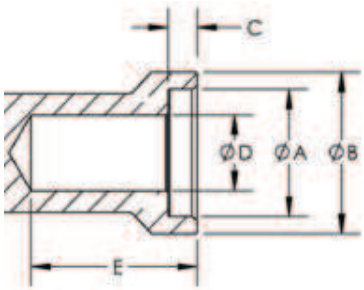
These installation tools for OE style seals are manufactured from high strength 6061-T6 Aluminum for increased durability when compared to plastic installers. The tools are designed for precision fitment onto the seal OD to help the builder center the seal over the valve guide so that a few light strikes from a hammer will set the seal. Radiused top striking surface reduces the likelihood of a burr forming from deformation. Each installation tool is color coded and laser marked for each seal size by guide diameter.

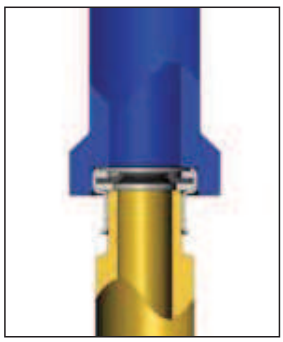
20-20830

20-20831

20-20832

20-20833

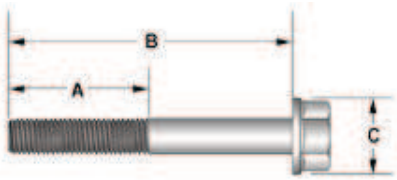




Installation Tools								
KPMI P/N (1-pack)	Application	ØA	ØB	C	ØD	E	Fits KPMI Seal P/N	Color
20-20830	Evolution 5/16" Stem	Ø0.575	0.860	0.160	0.404	0.910	71032-4	Red
20-20831	Shovelhead 80"	Ø0.728	0.860	0.160	0.404	0.910	71036-4	Blue
20-20832	Ironhead Sportster In/ Ex	Ø0.638	0.860	0.160	0.404	0.910	71033-4 / 71034-4	White
20-20833	Panhead & Shovelhead 74"	Ø0.673	0.860	0.160	0.404	0.910	71035-4	Black

Installation Tool Kit	
KPMI P/N	Description
20-20835	Kit includes all 4 sizes of installations

CAM TOWER BOLTS



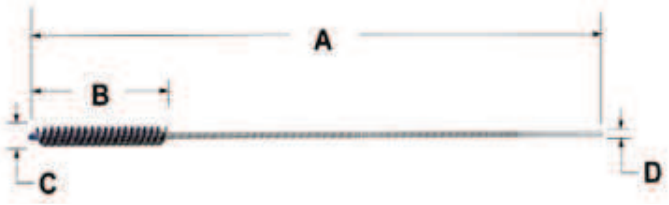
41005-4

- Manufactured from high tensile strength heat treated steel for superior strength over OEM bolts
- Strong enough for repeated removal and installation
- Black Oxide treatment for corrosion resistance
- Reduced flange diameters designed specifically with clearance for installation in cam tower braces
- Works with other applications (see dimensions for compatibility)

Cam Tower Bolt • Steel - Generic							
KPMI P/N	Thread	Hex Pattern	Thread Length -A-	Shank Length -B-	Flange Ø -C-	Quantity	Rep. OEM P/N
41005-4	M6 x 1.0	10mm	18mm	40mm	12.57mm 0.495"	Pkg. of 4	09103-06266 09103-06026
41006-4	M6 x 1.0	10mm	18mm	45mm	12.57mm 0.495"	Pkg. of 4	09103-06165 09103-06293

ORDER 650-557-2046

BALL HONES



- Silicon Carbide composite for Bronze or Cast Iron
- Ideal for finishing a reamed hole
- Cleaning up a used guide
- Minor sizing less than a thou

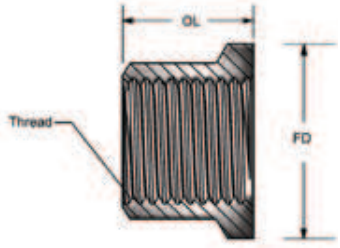
Ball Hones - Universal

KPMI P/N	Description	Overall Length "A"	Hone Head Length "B"	Hone Diameter "C"	Shank Diameter "D"
GH-1574	4.0mm valve guide hone	6.010"	0.925"	0.180"	0.055"
GH-1771	4.5mm valve guide hone	6.010"	0.975"	0.205"	0.060"
GH-1968	5.0mm valve guide hone	8.055"	1.775"	0.220"	0.085"
GH-2165	5.5mm valve guide hone	8.120"	1.790"	0.240"	0.085"
GH-2362	6.0mm valve guide hone	7.975"	1.590"	0.260"	0.110"
GH-2755	7.0mm valve guide hone	7.975"	2.075"	0.325"	0.130"
GH-3125	5/16 (.3125") valve guide hone	8.125"	2.225"	0.375"	0.145"
GH-3750	3/8 (.3750") valve guide hone	8.050"	2.190"	0.415"	0.145"

BC Series Flex-Hone are manufactured by Brush Research (BRM). The BC Series Flex-Hone tool is designed for use on any type or size of valve guide from 4mm up to 3/8" in diameter. This guide hone is designed for surface finishing and cross hole deburring. Although Ball Hones have many uses, KPMI® offers them primarily to be used after a guide has been reamed. Using a Ball Hone after reaming creates a uniform surface free of irregularitys, which improves surface contact and reduces the risk of galling or seizure. Please see our FAQ for recommended clearances.

H.T. BILLET STEEL 12PT NUTS

These nuts are manufactured from a high strength premium steel that promotes excellent surface finish and tight tolerances, two critical factors for achieving correct fit and torque. After machining, the nuts are heat treated to a specific depth. This creates hard, wear resistant working surfaces, while retaining a ductile core to prevent cracking under load. The premium black oxide treatment gives an excellent, corrosion resistant appearance.



41001-4

41002-4

41003-4

41004-4

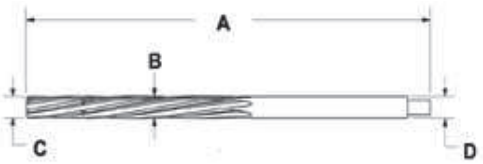
Nuts

KPMI P/N	Thread	Overall Length	Flange Diameter	Hex Pattern	Quantity
41001-4	M10 x 1.25	0.750"	0.740"	14mm	Pkg. of 4
41002-4	1/2-20 UNF	0.520"	0.786"	14mm	Pkg. of 4
41003-4	M8 x 1.25	0.385"	0.670"	13mm	Pkg. of 4
41004-4	3/8-24 UNF	0.390"	0.625"	7/16"	Pkg. of 4
41007-4	5/16-24	0.350"	0.520"	--	Pkg. of 4
41008-4	M9 x 1.25	0.315"	0.615"	11mm	Pkg. of 4
41009-4	M12 x 1.25	0.505"	0.750"	14mm	Pkg. of 4
41010-4	M10 x 1.25	0.400"	0.700"	12mm	Pkg. of 4
41011-4	M11 x 1.25	0.470"	0.800"	13mm	Pkg. of 4

KPMI® H.T. Billet Steel Nut Designs Offer a Diagram and Dimensions So You Can Insure For a Proper Fit

HIGH SPEED STEEL REAMERS

KPMI® valve guide reamers are manufactured from premium hardened High Speed Steel. The advertised finished reamer diameters are ground to: +/- .0002". These spiral fluted reamers incorporate a 1.00" long pilot (reduced diameter) which gets inserted into an unfinished guide bore, to align the reamer to the valve guide centerline, during the sizing process. These reamers have been specifically designed for KPMI® Manganese Bronze and Cast Iron valve guides. Do not attempt to use these reamers to size C630 Nickel Aluminum Bronze guides. Also, once a reamer is used on Cast Iron, it is not advisable to then use it on a bronze guide.

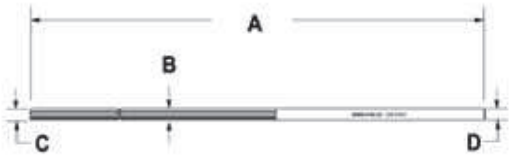


GR-3770 / GR-2770

Reamers					
KPMI P/N	Description	Overall Length A	Cutting Diameter B	Pilot Diameter C	Shank Diameter D
GR-1970	0.1970 HSS valve guide reamer	7.125"	0.1970"	0.191"	0.190"
GR-2357	0.2357 HSS valve guide reamer	7.125"	0.2357"	0.229"	0.288"
GR-2770	0.2770 HSS valve guide reamer	7.125"	0.2770"	0.271"	0.270"
GR-2820	0.2820 HSS valve guide reamer	7.125"	0.2820"	0.272"	0.275"
GR-3100	0.3100 HSS valve guide reamer	7.125"	0.3100"	0.304"	0.303"
GR-3110	0.3110 HSS valve guide reamer	7.125"	0.3110"	0.305"	0.304"
GR-3115	0.3115 HSS valve guide reamer	7.125"	0.3115"	0.305"	0.304"
GR-3120	0.3120 HSS valve guide reamer	7.125"	0.3120"	0.306"	0.305"
GR-3400	0.3400 HSS valve guide reamer	7.125"	0.3400"	0.334"	0.333"
GR-3410	0.3410 HSS valve guide reamer	7.125"	0.3410"	0.335"	0.334"
GR-3730	0.3730 HSS valve guide reamer	7.125"	0.3730"	0.367"	0.336"
GR-3770	0.3770 HSS valve guide reamer	7.125"	0.3770"	0.371"	0.370"
GR-3775	0.3775 HSS valve guide reamer	7.125"	0.3775"	0.371"	0.370"
GR-3780	0.3780 HSS valve guide reamer	7.125"	0.3780"	0.372"	0.371"
GR-3790	0.3790 HSS valve guide reamer	7.125"	0.3790"	0.373"	0.372"

SOLID CARBIDE REAMERS

KPMI® Carbide valve guide reamers are manufactured from Solid Carbide. All KPMI® reamers are ground to: +/- .0002". KPMI® carbide reamers are straight-flute and have a 6-flute design. The pilot portion of KPMI® reamers are 1.0" to 1.5" long. Insert the pilot into a guide that you intend to size. Using a hand held drill, apply honing oil or ATF before and during reaming a guide. KPMI® reamers have been specifically designed for Manganese Bronze valve guides and Cast Iron. Do not attempt to use these reamers to size C630 Nickel Aluminum Bronze guides. Also, once a reamer is used on Cast Iron, it's not advisable to then use it on a bronze guide.



CR-2768 / CR-3120

Solid Carbide Reamers					
KPMI P/N	Description	Overall Length A	Cutting Diameter B	Pilot Diameter C	Shank Diameter D
CR-2768	0.2768 carbide valve guide reamer	7.625″	0.2768"	0.271"	0.269"
CR-3110	0.3110 carbide valve guide reamer	7.625″	0.3110"	0.306"	0.304"
CR-3115	0.3115 carbide valve guide reamer	7.625″	0.3115"	0.306"	0.304"
CR-3120	0.3120 carbide valve guide reamer	7.625″	0.3120"	0.307"	0.305"
CR-3775	0.3775 carbide valve guide reamer	7.625″	0.3775"	0.372"	0.370"

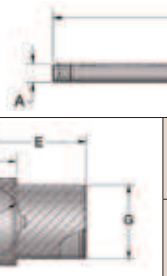
ORDER 650-557-2046

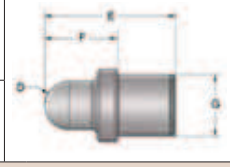
HIGH PERFORMANCE BLANK PUSHRODS

- KPMI® Pushrods are designed with thin walled Chrome Moly tube for increased stiffness over OEM components.
- Male and female endpieces are made from hardened steel and offer increased wear resistance over aluminum OEM parts.
- Blank Pushrod Kits come with one female endpiece pressed into the body and loose endpieces specified in the kit.
- Designed for BSA® and Triumph® applications but can be used as desired (see dimensions for fitment).
- Custom length pushrods up to 9" in "B" dimension available upon request.

90502-2

Blank Pushrods • Steel • Alloy Tube for Various Applications





				A	Ø.371" OD	Machining Information:			
				B	9.120" Overall Length				
				C	Ø.305" ID Before Machining				
D	R.156	E	0.420"	D	R.124	E	0.675"		
F	0.120"	G	0.310"	F	0.375"	G	0.310"	1. Break ID edge only at .015 x 45°	

KPMI P/N	Model	Material	Kit Includes
90502-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Male Endpieces
90512-2	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	2 Female Ended Pushrods / 2 Female Endpieces
90502-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Male Endpieces
90512-4	Various	• Thin Wall Chrome Moly Tube • H. T. Steel Tips	4 Female Ended Pushrods / 4 Female Endpieces

Blank Pushrods Kits (sets of 2 and 4) can be machined to desired length and assembled by KPMI® for a flat fee of $120.00. Orders can be placed by using the Custom Pushrod Order Form found on our website at www.kpmi.us/forms.html.

VALVE GUIDE INSTALLATION & REMOVAL TOOLS

- Machined to properly fit KPMI® Hayabusa valve guide designs
- Extra-long handles provide ergonomically grooved gripping area and the ability to work in tough to reach situations
- Guide installation tool is designed to register on uniquely designed seal relief minimizing guide deformation on the seal end, ensuring proper height above the head without guess and check measuring as seen in Figure (1)
- Guide removal tool allows the user to drive any 5mm guide with a 10mm outer diameter through lengthy guide bores thanks to its added length below the gripping area shown in Figure (2)
- Driver material is a high strength bronze purposefully selected for its shock absorption capabilities allowing for comfortable use as well as compatibility with cast and bronze guides

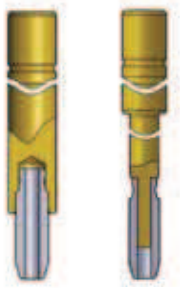


Figure 1

Figure 2

60-61400 / 60-61405

Special - Valve Guide Installer

KPMI P/N	O.L	Body Ø	Inner Ø 1	Inner Ø 2	Depth 1	Depth 2	Quantity
	A	B	C	D	E	F	
60-61400	8.000"	0.615"	0.425"	0.348"	0.285"	0.650"	Pkg. of 1

Install & Remove Valve Guides - Universal

KPMI P/N	O.L	Body Ø	Ø 1	Ø 2	Length 1	Length 2	Quantity
	A	B	C	D	E	F	
60-61405	8.000"	0.615"	0.182"	0.397"	1.000"	4.000"	Pkg. of 1

BLACK DIAMOND™ VALVE BLANKS

The Proprietary Black Diamond™ process is not a coating. It penetrates and treats the steel to a depth of .002", so it can never peel or flake off. Coatings such as chrome are "surface build ups" that rely on adhesion to remain intact. They can crack, peel, and flake off, depositing abrasive debris in the guide, causing wear and seizure. The Black Diamond™ process creates an extremely hard and smooth finish, preventing accelerated wear on the stem and keeper groove areas. This hard smooth finish has a low coefficient of friction, making it less aggressive on the valve guide, and promoting longer guide life. In exhaust environments, the Black Diamond™ process offers increased resistance to corrosion which is critical for long life.

Black Diamond™ Valve Blanks

KPMI Part No.	Type	Head Diameter		Stem Diameter	Tulip Profile	Overall Length
3/8" Stem Diameter						
20-4194B	IN	54.00mm	2.125"	0.3765"	23º	5.000"
20-4195B	EX	47.00mm	1.850"	0.3745"	29º	5.000"
5/16" Stem Diameter						
20-4171B2	IN	57.15mm	2.250"	0.3100"	23º	5.000"
20-4171B1	IN	53.34mm	2.100"	0.3100"	23º	5.000"
20-4170B2	EX	44.45mm	1.750"	0.3096"	30º	5.000"
20-4170B	EX	43.56mm	1.715"	0.3096"	40º	5.000"
7.0mm Stem Diameter						
11-10008	IN	50.80mm	2.000"	0.2750"	23º	5.200"
40-4178B	IN	42.00mm	1.654"	0.2745"	23º	5.000"
6.5mm Stem Diameter						
30-30228B	IN	42.00mm	1.653"	0.2590"	20º	5.000"
6.0mm Stem Diameter						
93-93015B	IN	42.00mm	1.653"	0.2352"	23º	5.000"
20-21019	IN	44.00mm	1.732"	0.2347"	10°	5.200"
5.5mm Stem Diameter						
40-4176B	EX	29.00mm	1.142"	0.2145"	29º	5.000"
4.5mm Stem Diameter						
11-10004	IN	34.00mm	1.339"	0.1760"	18º	5.000"
11-10005	IN	32.00mm	1.260"	0.1765"	18º	5.000"
11-10007	EX	26.00mm	1.024"	0.1755"	20º	5.000"
4.0mm Stem Diameter						
11-10000	IN	32.00mm	1.260"	0.1568"	18º	5.000"
11-10001	IN	28.00mm	1.102"	0.1568"	18º	5.000"
11-10002	EX	26.00mm	1.024"	0.1563"	20º	5.000"
11-10003	EX	24.00mm	0.945"	0.1563"	20º	5.000"

ORDER 650-557-2046

TENSILITE® TITANIUM / WHITE DIAMOND® WHITE BLANKS

Tensilite® Titanium Valve Blanks

KPMI Part No.	Type	Head Diameter		Stem Diameter	Tulip Profile	Overall Length
7.0mm Stem Diameter						
40-4238T	IN / Ex	42.00mm	1.654"	0.2745"	23º	5.000"
6.0mm Stem Diameter						
20-21018T	IN / EX	36.00mm	1.417"	0.2342"	20º	5.000"
20-21063T NEW	IN / EX	34.00mm	1.339"	0.2342"	20º	4.750"
20-21019T	IN / EX	44.00mm	1.732"	0.2347"	15º	5.000"
20-21061T NEW	IN / EX	42.00mm	1.654"	0.2347"	15º	4.750"
5.5mm Stem Diameter						
60-1060T	IN / Ex	34.00mm	1.339"	0.2155"	20º	5.000"
4.5mm Stem Diameter						
11-10016T	IN / Ex	28.00mm	1.102"	0.1755"	20º	4.300"
4.0mm Stem Diameter						
11-10013T	IN / Ex	30.00mm	1.181"	0.1568"	18º	5.000"
11-10014T	IN / Ex	26.00mm	1.024"	0.1560"	20º	5.000"

White Diamond® Valve Blanks

KPMI Part No.	Type	Head Diameter		Stem Diameter	Tulip Profile	Overall Length	AV&V Part No.
5/16" Stem Diameter							
*20-20975BH	IN	55.88mm	2.200"	0.3108"	25º	5.700"	AV2200BC
*20-20980BH	IN	53.34mm	2.100"	0.3108"	24º	5.700"	AV2100BC
*20-20985BH	EX	43.18mm	1.700"	0.3106"	25º	5.700"	AV1700BC

*Note: Bi-metallic composition provides the ability to flame harden the valve tip for when added wear resistance is an absolute must.

For all the blank valves available, please refer online to the valve blanks section of the ***www.kpmi.us*** website, under ***Precision Components***

Kibblewhite® Tensilite® titanium valves are manufactured from solid U.S. milled titanium bar. The titanium bar is cut, and forged, and then the stem is pulled from the forging process and cross-sectionally reduced.
These one piece forgings made from 6AL4V or 6-2-4-2 titanium alloy reflect the latest developments in titanium valve alloys. These alloys have superior hardness, strength, and thermal characteristics.
After final grinding and machining, Tensilite® valves are encased in a hard Chromium Nitride (CrN) shell. CrN offers excellent resistance to impact, abrasion and corrosion. These qualities and its low coefficient of friction make CrN the coating of choice for high performance titanium valves.

Tensilite® Valve Blank

We fully CNC machine our White Diamond® Valves from a one-piece forging of either EV8 Stainless Steel or Inconel-751. These materials have proven heat and corrosion resistance properties and are hard chromed with a 360 degree anode to produce the highest possible grade of hard chrome finish.

White Diamond® Valve Blank

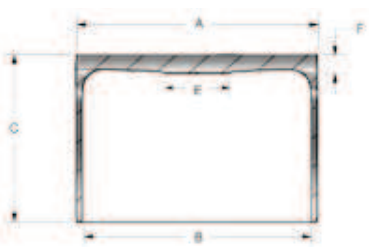
VISIT US AT WWW.KPMI.US

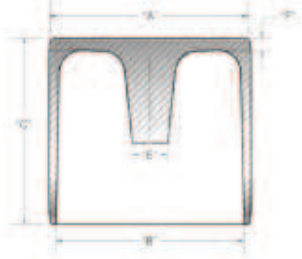
TAPPETS

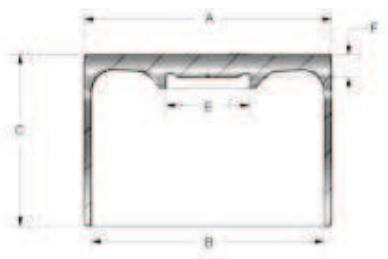
Shim On Bottom (SOB)

Shim On Bottom (SOB)

Shim In Tappet (SIT)







Tappet / Shim On Bottom (SOB)

Qty.1 Part Number	Outside Diameter A		Inside Diameter B	Overall Length C	Button Diameter E	Roof Thickness F
600-100001	26.00mm	1.0232”	0.970”	0.790”	0.236”	0.115”
600-100050	26.50mm	1.0420”	0.992”	0.748”	0.285”	0.106”
600-100200	28.00mm	1.1016”	1.040”	0.860”	0.310”	0.135”
600-100202	28.00mm	1.1017”	1.038”	0.763”	0.320”	0.098”
600-100300	28.38mm	1.1172”	1.037”	1.026”	0.197"	0.579"
600-100250	28.50mm	1.1220”	1.058”	0.763”	0.320”	0.098”
600-100500	31.00mm	1.2195”	1.156”	0.800”	0.325”	0.108”
600-100525	31.15mm	1.2260”	1.156”	0.800”	0.325”	0.108”
600-100700	33.00mm	1.2980”	1.235”	1.025”	0.340”	0.115”
600-100750	33.50mm	1.3184”	1.250”	1.025”	0.340”	0.115”
600-100800	34.00mm	1.3380”	1.258”	1.025”	0.313”	0.115”
600-101095	36.95mm	1.4547”	1.388”	1.040”	0.400”	0.105”
600-101300	39.00mm	1.5350”	1.457”	1.040”	0.400”	0.145”

Tappet / Shim In Tappet (SIT)

Qty.1 Part Number	Outside Diameter A		Inside Diameter B	Overall Length C	Shim Diameter E	Roof Thickness F
600-100900 NEW	25.98mm	1.0228"	0.935"	0.699"	0.295"	0.095"
600-100850	26.50mm	1.0420"	0.992"	0.748"	0.297"	0.120"
600-100205	28.00mm	1.1017”	1.038"	0.763"	0.375"	0.100”

Kibblewhite® Engineers design our tappets using Finite Element Stress Analysis (FEA) software. This software allows our engineers to lighten the tappets without sacrificing strength so we can create the strongest, lightest tappets possible. These tappets are machined from aircraft quality solid steel bar stock. They undergo a proprietary heat treat process that creates a hard surface and a non brittle-core, maximizing toughness and wear resistance. Kibblewhite® tappets are run in high performance automotive and motorcycle applications including Motocross, Flat Track, Road Race, Drag Race, and Land Speed Racing at the Bonneville Salt Flats.

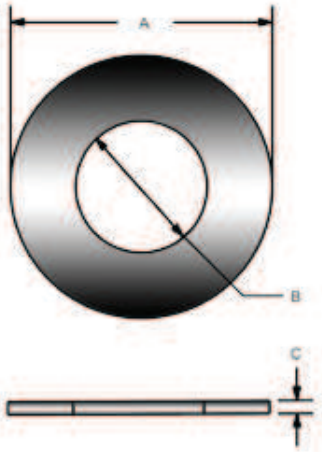
Tappet / DLC Coated

Qty.1 Part Number	Outside Diameter A		Inside Diameter B	Overall Length C	Button Diameter E	Roof Thickness F
600-100202-DLC	28.00mm	1.1017”	1.038”	0.763”	0.320”	0.098”
600-100525-DLC	31.15mm	1.2260”	1.156”	0.800”	0.325”	0.108”

Our coated tappets undergo a low temperature PVD process to deposit a DLC film, which is extremely hard and has a very low coefficient of friction. These properties help the tappet to maintain its durability in extreme duty situations. Although KPMI® never recommends running a camshaft off the edge of the tappet, this coating may help increase durability in these applications.

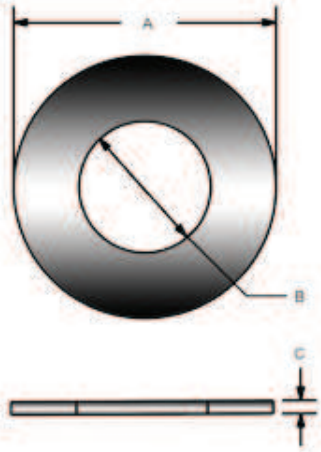
ORDER 650-557-2046

SHIMS BOOSTER / VALVE SPRING



Shims - Booster / Valve Spring							
Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Outside Diameter A	Inside Diameter B	Thickness C
92001-4	92001-8	92001-16	92001-50	92001-100	1.437”	0.645”	0.015”
92002-4	92002-8	92002-16	92002-50	92002-100	1.437”	0.645”	0.030”
92003-4	92003-8	92003-16	92003-50	92003-100	1.437”	0.645”	0.060”
92004-4	92004-8	92004-16	92004-50	92004-100	0.760”	0.578”	0.060”
92005-4	92005-8	92005-16	92005-50	92005-100	0.760”	0.578”	0.030”
92006-4	92006-8	92006-16	92006-50	92006-100	0.760”	0.578”	0.015”
92007-4	92007-8	92007-16	92007-50	92007-100	0.920”	0.520”	0.030”
92008-4	92008-8	92008-16	92008-50	92008-100	0.920”	0.520”	0.060”
92009-4	92009-8	92009-16	92009-50	92009-100	1.218”	0.875”	0.060”
92010-4	92010-8	92010-16	92010-50	92010-100	1.156”	0.828”	0.030”
92011-4	92011-8	92011-16	92011-50	92011-100	1.020”	0.735”	0.125”
92012-4	92012-8	92012-16	92012-50	92012-100	1.100”	0.719”	0.060”
92013-4	92013-8	92013-16	92013-50	92013-100	1.250”	0.812”	0.060”
92014-4	92014-8	92014-16	92014-50	92014-100	1.250”	0.812”	0.030”
92015-4	92015-8	92015-16	92015-50	92015-100	1.125”	0.719”	0.030”
92016-4	92016-8	92016-16	92016-50	92016-100	1.125”	0.719”	0.060”
92017-4	92017-8	92017-16	92017-50	92017-100	1.312”	0.765”	0.030”
92018-4	92018-8	92018-16	92018-50	92018-100	1.218”	0.875”	0.030”
92019-4	92019-8	92019-16	92019-50	92019-100	1.100”	0.719”	0.030”
92020-4	92020-8	92020-16	92020-50	92020-100	1.000”	0.688”	0.060”
92021-4	92021-8	92021-16	92021-50	92021-100	1.000”	0.765”	0.060”
92022-4	92022-8	92022-16	92022-50	92022-100	1.438"	1.059"	0.030"
92023-4	92023-8	92023-16	92023-50	92023-100	1.000"	0.688"	0.030"
92024-4	92024-8	92024-16	92024-50	92024-100	1.000"	0.688"	0.015"
92025-4	92025-8	92025-16	92025-50	92025-100	1.360"	1.000"	0.060"
92026-4	92026-8	92026-16	92026-50	92026-100	1.360"	1.000"	0.030"
92027-4	92027-8	92027-16	92027-50	92027-100	1.360"	1.000"	0.015"
92028-4	92028-8	92028-16	92028-50	92028-100	1.500"	1.031"	0.060"
92029-4	92029-8	92029-16	92029-50	92029-100	1.500"	1.031"	0.030"
92030-4	92030-8	92030-16	92030-50	92030-100	1.500"	1.031"	0.015"
92031-4	92031-8	92031-16	92031-50	92031-100	1.000"	0.765"	0.030"

SHIMS BOOSTER / VALVE SPRING



Shims - Booster / Valve Spring							
Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Outside Diameter - A -	Inside Diameter - B -	Thickness - C -
92032-4	92032-8	92032-16	92032-50	92032-100	1.000"	0.765"	0.015"
92033-4	92033-8	92033-16	92033-50	92033-100	1.218"	0.875"	0.015"
92034-4	92034-8	92034-16	92034-50	92034-100	1.100"	0.719"	0.015"
92035-4	92035-8	92035-16	92035-50	92035-100	1.250"	0.625"	0.060"
92036-4	92036-8	92036-16	92036-50	92036-100	1.250"	0.625"	0.030"
92037-4	92037-8	92037-16	92037-50	92037-100	1.250"	0.625"	0.015"
92038-4	92038-8	92038-16	92038-50	92038-100	0.970"	0.445"	0.060"
92039-4	92039-8	92039-16	92039-50	92039-100	0.970"	0.445"	0.030"
92040-4	92040-8	92040-16	92040-50	92040-100	0.970"	0.445"	0.015"
92041-4	92041-8	92041-16	92041-50	92041-100	0.915"	0.640"	0.060"
92042-4	92042-8	92042-16	92042-50	92042-100	0.915"	0.640"	0.030"
92043-4	92043-8	92043-16	92043-50	92043-100	0.915"	0.640"	0.015"
92044-4	92044-8	92044-16	92044-50	92044-100	0.796"	0.515"	0.060"
92045-4	92045-8	92045-16	92045-50	92045-100	0.796"	0.515"	0.030"
92046-4	92046-8	92046-16	92046-50	92046-100	0.796"	0.515"	0.015"
92047-4	92047-8	92047-16	92047-50	92047-100	1.312"	0.765"	0.060"
92048-4	92048-8	92048-16	92048-50	92048-100	1.312"	0.765"	0.015"
92049-4	92049-8	92049-16	92049-50	92049-100	1.480"	0.703"	0.060"
92050-4	92050-8	92050-16	92050-50	92050-100	1.480"	0.703"	0.030"
92051-4	92051-8	92051-16	92051-50	92051-100	1.480"	0.703"	0.015"
92052-4	92052-8	92052-16	92052-50	92052-100	1.640"	0.635"	0.060"
92053-4	92053-8	92053-16	92053-50	92053-100	1.640"	0.635"	0.030"
92054-4	92054-8	92054-16	92054-50	92054-100	1.640"	0.635"	0.015"
92055-4	92055-8	92055-16	92055-50	92055-100	1.500"	0.765"	0.060"
92056-4	92056-8	92056-16	92056-50	92056-100	1.500"	0.765"	0.030"
92057-4	92057-8	92057-16	92057-50	92057-100	1.477"	0.765"	0.015"
92058-4	92058-8	92058-16	92058-50	92058-100	1.500"	0.562"	0.060"
92059-4	92059-8	92059-16	92059-50	92059-100	1.500"	0.562"	0.030"
92060-4	92060-8	92060-16	92060-50	92060-100	1.500"	0.562"	0.015"
92061-4	92061-8	92061-16	92061-50	92061-100	1.247"	0.518"	0.060"
92062-4	92062-8	92062-16	92062-50	92062-100	1.247"	0.518"	0.030"
92063-4	92063-8	92063-16	92063-50	92063-100	1.247"	0.518"	0.015"

ORDER 650-557-2046

SHIMS VALVE ADJUSTMENT

Manufactured from heat treated aircraft quality steel, KPMI® holds exact dimensional tolerances, height and perpendicularity on these shims. KPMI® sets specific hardness and surface finish specifications to insure optimum fit, Performance, strength, and durability.
Shims are available in 7.5mm, 9.5mm, and 13.0mm ODs.

All KPMI® adj. shims are conveniently packaged in quantities of: 4, 8, 16, 50, and 100. For more infromation visit KPMI.US

7.5mm Shims - Valve Adjustment					
Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93075-4	93075-8	93075-16	93075-50	93075-100	1.20mm
93076-4	93076-8	93076-16	93076-50	93076-100	1.25mm
93077-4	93077-8	93077-16	93077-50	93077-100	1.30mm
93078-4	93078-8	93078-16	93078-50	93078-100	1.35mm
93079-4	93079-8	93079-16	93079-50	93079-100	1.40mm
93080-4	93080-8	93080-16	93080-50	93080-100	1.45mm
93081-4	93081-8	93081-16	93081-50	93081-100	1.50mm
93082-4	93082-8	93082-16	93082-50	93082-100	1.55mm
93083-4	93083-8	93083-16	93083-50	93083-100	1.60mm
93084-4	93084-8	93084-16	93084-50	93084-100	1.65mm
93085-4	93085-8	93085-16	93085-50	93085-100	1.70mm
93086-4	93086-8	93086-16	93086-50	93086-100	1.75mm
93087-4	93087-8	93087-16	93087-50	93087-100	1.80mm
93088-4	93088-8	93088-16	93088-50	93088-100	1.85mm
93089-4	93089-8	93089-16	93089-50	93089-100	1.90mm
93090-4	93090-8	93090-16	93090-50	93090-100	1.95mm
93091-4	93091-8	93091-16	93091-50	93091-100	2.00mm
93092-4	93092-8	93092-16	93092-50	93092-100	2.05mm
93093-4	93093-8	93093-16	93093-50	93093-100	2.10mm
93094-4	93094-8	93094-16	93094-50	93094-100	2.15mm
93095-4	93095-8	93095-16	93095-50	93095-100	2.20mm
93096-4	93096-8	93096-16	93096-50	93096-100	2.25mm
93097-4	93097-8	93097-16	93097-50	93097-100	2.30mm
93098-4	93098-8	93098-16	93098-50	93098-100	2.35mm
93099-4	93099-8	93099-16	93099-50	93099-100	2.40mm
93100-4	93100-8	93100-16	93100-50	93100-100	2.45mm
93101-4	93101-8	93101-16	93101-50	93101-100	2.50mm
93102-4	93102-8	93102-16	93102-50	93102-100	2.55mm
93103-4	93103-8	93103-16	93103-50	93103-100	2.60mm
93104-4	93104-8	93104-16	93104-50	93104-100	2.65mm
93105-4	93105-8	93105-16	93105-50	93105-100	2.70mm
93106-4	93106-8	93106-16	93106-50	93106-100	2.75mm
93107-4	93107-8	93107-16	93107-50	93107-100	2.80mm
93108-4	93108-8	93108-16	93108-50	93108-100	2.85mm
93109-4	93109-8	93109-16	93109-50	93109-100	2.90mm
93110-4	93110-8	93110-16	93110-50	93110-100	2.95mm
93111-4	93111-8	93111-16	93111-50	93111-100	3.00mm
93112-4	93112-8	93112-16	93112-50	93112-100	3.05mm

SHIMS VALVE ADJUSTMENT

Manufactured from heat treated aircraft quality steel, KPMI® holds exact dimensional tolerances, height and perpendicularity on these shims. KPMI® sets specific hardness and surface finish specifications to insure optimum fit, Performance, strength, and durability. Shims are available in 7.5mm, 9.5mm, and 13.0mm ODs.

All KPMI® adj. shims are conveniently packaged in quantities of: 4, 8, 16, 50, and 100. For more infromation visit KPMI.US

7.5mm Shims - Valve Adjustment					
Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93113-4	93113-8	93113-16	93113-50	93113-100	3.10mm
93114-4	93114-8	93114-16	93114-50	93114-100	3.15mm
93115-4	93115-8	93115-16	93115-50	93115-100	3.20mm
93116-4	93116-8	93116-16	93116-50	93116-100	3.25mm
93117-4	93117-8	93117-16	93117-50	93117-100	3.30mm
93118-4	93118-8	93118-16	93118-50	93118-100	3.35mm
93119-4	93119-8	93119-16	93119-50	93119-100	3.40mm
93120-4	93120-8	93120-16	93120-50	93120-100	3.45mm
93121-4	93121-8	93121-16	93121-50	93121-100	3.50mm
9.5mm Shims - Valve Adjustment					
Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93001-4	93001-8	93001-16	93001-50	93001-100	1.20mm
93002-4	93002-8	93002-16	93002-50	93002-100	1.25mm
93003-4	93003-8	93003-16	93003-50	93003-100	1.30mm
93004-4	93004-8	93004-16	93004-50	93004-100	1.35mm
93005-4	93005-8	93005-16	93005-50	93005-100	1.40mm
93006-4	93006-8	93006-16	93006-50	93006-100	1.45mm
93007-4	93007-8	93007-16	93007-50	93007-100	1.50mm
93008-4	93008-8	93008-16	93008-50	93008-100	1.55mm
93009-4	93009-8	93009-16	93009-50	93009-100	1.60mm
93010-4	93010-8	93010-16	93010-50	93010-100	1.65mm
93011-4	93011-8	93011-16	93011-50	93011-100	1.70mm
93012-4	93012-8	93012-16	93012-50	93012-100	1.75mm
93013-4	93013-8	93013-16	93013-50	93013-100	1.80mm
93014-4	93014-8	93014-16	93014-50	93014-100	1.85mm
93015-4	93015-8	93015-16	93015-50	93015-100	1.90mm
93016-4	93016-8	93016-16	93016-50	93016-100	1.95mm
93017-4	93017-8	93017-16	93017-50	93017-100	2.00mm
93018-4	93018-8	93018-16	93018-50	93018-100	2.05mm
93019-4	93019-8	93019-16	93019-50	93019-100	2.10mm
93020-4	93020-8	93020-16	93020-50	93020-100	2.15mm
93021-4	93021-8	93021-16	93021-50	93021-100	2.20mm
93022-4	93022-8	93022-16	93022-50	93022-100	2.25mm
93023-4	93023-8	93023-16	93023-50	93023-100	2.30mm
93024-4	93024-8	93024-16	93024-50	93024-100	2.35mm
93025-4	93025-8	93025-16	93025-50	93025-100	2.40mm
93026-4	93026-8	93026-16	93026-50	93026-100	2.45mm

ORDER 650-557-2046

SHIMS VALVE ADJUSTMENT

9.5mm Shims - Valve Adjustment

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93027-4	93027-8	93027-16	93027-50	93027-100	2.50mm
93028-4	93028-8	93028-16	93028-50	93028-100	2.55mm
93029-4	93029-8	93029-16	93029-50	93029-100	2.60mm
93030-4	93030-8	93030-16	93030-50	93030-100	2.65mm
93031-4	93031-8	93031-16	93031-50	93031-100	2.70mm
93032-4	93032-8	93032-16	93032-50	93032-100	2.75mm
93033-4	93033-8	93033-16	93033-50	93033-100	2.80mm
93034-4	93034-8	93034-16	93034-50	93034-100	2.85mm
93035-4	93035-8	93035-16	93035-50	93035-100	2.90mm
93036-4	93036-8	93036-16	93036-50	93036-100	2.95mm
93037-4	93037-8	93037-16	93037-50	93037-100	3.00mm
93038-4	93038-8	93038-16	93038-50	93038-100	3.05mm
93039-4	93039-8	93039-16	93039-50	93039-100	3.10mm
93040-4	93040-8	93040-16	93040-50	93040-100	3.15mm
93041-4	93041-8	93041-16	93041-50	93041-100	3.20mm
93042-4	93042-8	93042-16	93042-50	93042-100	3.25mm
93043-4	93043-8	93043-16	93043-50	93043-100	3.30mm
93044-4	93044-8	93044-16	93044-50	93044-100	3.35mm
93045-4	93045-8	93045-16	93045-50	93045-100	3.40mm
93046-4	93046-8	93046-16	93046-50	93046-100	3.45mm
93047-4	93047-8	93047-16	93047-50	93047-100	3.50mm

13mm Shims - Valve Adjustment

Qty 4 Part No.	Qty 8 Part No.	Qty 16 Part No.	Qty 50 Part No.	Qty 100 Part No.	Thickness
93050-4	93050-8	93050-16	93050-50	93050-100	2.05mm
93051-4	93051-8	93051-16	93051-50	93051-100	2.10mm
93052-4	93052-8	93052-16	93052-50	93052-100	2.15mm
93053-4	93053-8	93053-16	93053-50	93053-100	2.20mm
93054-4	93054-8	93054-16	93054-50	93054-100	2.25mm
93055-4	93055-8	93055-16	93055-50	93055-100	2.30mm
93056-4	93056-8	93056-16	93056-50	93056-100	2.35mm
93057-4	93057-8	93057-16	93057-50	93057-100	2.40mm
93058-4	93058-8	93058-16	93058-50	93058-100	2.45mm
93059-4	93059-8	93059-16	93059-50	93059-100	2.50mm
93060-4	93060-8	93060-16	93060-50	93060-100	2.55mm
93061-4	93061-8	93061-16	93061-50	93061-100	2.60mm
93062-4	93062-8	93062-16	93062-50	93062-100	2.65mm
93063-4	93063-8	93063-16	93063-50	93063-100	2.70mm
93064-4	93064-8	93064-16	93064-50	93064-100	2.75mm
93065-4	93065-8	93065-16	93065-50	93065-100	2.80mm
93066-4	93066-8	93066-16	93066-50	93066-100	2.85mm
93067-4	93067-8	93067-16	93067-50	93067-100	2.90mm
93068-4	93068-8	93068-16	93068-50	93068-100	2.95mm
93069-4	93069-8	93069-16	93069-50	93069-100	3.00mm
93070-4	93070-8	93070-16	93070-50	93070-100	3.05mm
93071-4	93071-8	93071-16	93071-50	93071-100	3.10mm

VISIT US AT WWW.KPMI.US

SEATS (HIGH CHROME)

- 18-22% Chromium for resistance to abrasion, corrosion and deformation
- 1-2% Nickel content, which lends to corrosion-resistance and toughness
- Machined from solid bar stock and ground to exacting tolerances
- The alternative to Powder Metal
- Machines as a continuous chip
- Use KPMI® “High Chromium Seats” for your next gasoline or diesel engine rebuild

KPMI Part Number	Outside Diameter		Inside Diameter		Height	
10-HC350	35.00mm	1.378″	26.00mm	1.024″	11.02mm	0.434"
10-HC360	35.99mm	1.417″	25.98mm	1.023″	10.00mm	0.394"
NEW 10-HC360S	35.99mm	1.417″	25.98mm	1.023″	8.99mm	0.354"
10-HC370	37.02mm	1.457″	27.99mm	1.102″	10.00mm	0.394"
NEW 10-HC370S	S37.02mm	1.457″	27.99mm	1.102″	8.99mm	0.354"
10-HC414	41.40mm	1.630″	29.97mm	1.180″	9.78mm	0.385″
10-HC440	43.99mm	1.732″	35.81mm	1.410″	10.92mm	0.430″
10-HC445	44.50mm	1.752″	35.99mm	1.417″	10.00mm	0.394"
NEW 10-HC445S	44.50mm	1.752″	35.99mm	1.417″	8.99mm	0.354"
10-HC446	44.63mm	1.757″	34.82mm	1.371″	8.00mm	0.315”
10-HC447	44.63mm	1.757″	35.81mm	1.410″	10.92mm	0.430″
10-HC462	46.23mm	1.820″	34.93mm	1.375″	11.43mm	0.450″
10-HC477	47.75mm	1.880″	36.45mm	1.435″	10.41mm	0.410″
10-HC478	47.80mm	1.882″	38.61mm	1.520″	10.41mm	0.410″
10-HC493	49.38mm	1.944″	40.01mm	1.575″	10.16mm	0.400″
10-HC494	49.40mm	1.945″	34.93mm	1.375″	11.18mm	0.440″
10-HC510	51.00mm	2.008″	40.89mm	1.610″	11.18mm	0.440″
10-HC518	51.82mm	2.040″	43.18mm	1.700″	10.80mm	0.425″
10-HC525	52.53mm	2.068″	44.45mm	1.750″	8.00mm	0.315″
10-HC526	52.58mm	2.070″	40.89mm	1.610″	11.68mm	0.460″
10-HC541	54.15mm	2.132″	45.72m	1.800″	11.68mm	0.460″
10-HC542	54.23mm	2.135″	44.45m	1.750″	10.16mm	0.400″
10-HC549	54.94mm	2.163″	44.45mm	1.750″	11.56mm	0.455″
10-HC573	57.33mm	2.257″	39.37mm	1.550″	12.70mm	0.500″

ORDER 650-557-2046

Seat Application

Replacement Valve Seats For Shovel Head 1200 &1340				
KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
10-HC493	Intake / Exhaust	1.944”	1.575”	0.400”
10-HC542	Intake / Exhaust	2.135”	1.750”	0.400”
Oversize Seats for Shovel, Evolution & Twin Cam- Machining Required				
KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
10-HC414	Intake / Exhaust	1.630”	1.180”	0.385”
10-HC447	Intake / Exhaust	1.757”	1.410”	0.430”
10-HC478	Intake / Exhaust	1.882”	1.530”	0.410”
10-HC510	Intake / Exhaust	2.008”	1.610”	0.440”
10-HC518	Intake / Exhaust	2.040”	1.700”	0.425”
10-HC526	Intake / Exhaust	2.070”	1.610”	0.450”
10-HC541	Intake / Exhaust	2.132”	1.800”	0.460”
10-HC549	Intake / Exhaust	2.163”	1.750”	0.455”
Iron Head Sportster				
KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
10-HC446	Intake / Exhaust	1.757”	1.371”	0.315”
10-HC525	Intake / Exhaust	2.068”	1.750”	0.315”
Milwaukee-Eight				
KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
10-HC350	Intake / Exhaust	1.378”	1.024”	0.434”
10-HC360	Intake / Exhaust	1.417”	1.023”	0.394”
NEW 10-HC360S	Intake / Exhaust	1.417”	1.023”	0.354”
10-HC370	Intake / Exhaust	1.457”	1.102”	0.394”
NEW 10-HC370S	Intake / Exhaust	1.457”	1.102”	0.354”
10-HC445	Intake / Exhaust	1.752”	1.417”	0.394"
NEW 10-HC445S	Intake / Exhaust	1.752”	1.417”	0.354"
10-HC447	Intake / Exhaust	1.757”	1.410”	0.430”
Universal Repair Seat				
KPMI PN	Type	Outside Diameter	Inside Diameter	Thickness
10-HC350	Intake / Exhaust	1.378”	1.024”	0.434”
10-HC440	Intake / Exhaust	1.732”	1.410”	0.430”
10-HC462	Intake / Exhaust	1.820”	1.375”	0.450”
10-HC494	Intake / Exhaust	1.945”	1.375”	0.440”
10-HC573	Intake / Exhaust	2.257”	1.550”	0.500”
10-HC477	Intake / Exhaust	1.880”	1.435”	0.410”

SEATS (POWDERED METAL)

In an effort to develop valve seats that fit our exacting standards, Kibblewhite® tested and chemically separated several iron based valve seats. We specified a combination of materials that gave us a seat with good uniform hardness and resistance to microwelding, wear, and recession. Casting a seat with this combination of alloys was not possible, and only with the latest in Powdered Metal Technology were we able to blend t hese alloys creating a high density seat with exceptional wear resistance, machinability, and thermal qualities. This material is compatible with all types of fuel blends, resists corrosion and burning, and is machinable with standard tooling. These seats have been thoroughly tested on the track and street, in high RPM multi-valve applications, high spring load V-twin applications, with leaded and unleaded gasoline, ethanol, methanol, and in naturally aspirated and forced induction applications. In each case they have performed flawlessly, making these the seats of choice for cylinder head builders everywhere.

KPMI Part Number	Outside Diameter		Inside Diameter		Height	
10-SC250	25.00mm	0.984”	17.00mm	0.669”	9.00mm	0.355”
10-SC260	26.00mm	1.024”	18.00mm	0.709”	9.00mm	0.355”
10-SC270	27.00mm	1.063”	19.00mm	0.748”	9.00mm	0.355”
10-SC280	28.00mm	1.102”	20.00mm	0.787”	9.00mm	0.355”
10-SC290	29.00mm	1.142”	21.00mm	0.827”	9.50mm	0.375”
10-SC300	30.00mm	1.181”	22.00mm	0.866”	9.50mm	0.375”
10-SC310	31.00mm	1.220”	23.00mm	0.906”	9.50mm	0.375”
10-SC320	32.00mm	1.260”	24.00mm	0.945”	9.50mm	0.375”
10-SC330	33.00mm	1.299”	25.00mm	0.984”	9.50mm	0.375”
10-SC340	34.00mm	1.339”	26.00mm	1.024”	9.50mm	0.375”
10-SC350	35.00mm	1.378”	26.00mm	1.024”	11.00mm	0.434”
10-SC360	36.00mm	1.417”	27.00mm	1.063”	11.00mm	0.434”
10-SC370	37.00mm	1.457”	28.00mm	1.102”	11.00mm	0.434”
10-SC380	38.00mm	1.496”	29.00mm	1.142”	11.00mm	0.434”
10-SC390	39.00mm	1.535”	30.00mm	1.181”	11.00mm	0.434”
10-SC400	40.00mm	1.575”	30.00mm	1.181”	11.00mm	0.434”
10-SC410	41.00mm	1.614”	31.00mm	1.220”	11.00mm	0.434”
10-SC414	41.43mm	1.631”	30.15mm	1.187”	11.43mm	0.450"
10-SC420	42.00mm	1.654”	32.00mm	1.260”	11.00mm	0.434”
10-SC430	43.00mm	1.693”	33.00mm	1.299”	11.00mm	0.434”
10-SC440	44.00mm	1.732”	34.00mm	1.339”	11.00mm	0.434”
10-SC446	44.62mm	1.757”	35.00mm	1.375”	11.43mm	0.450”
NEW 10-SC446S	44.62mm	1.757”	35.00mm	1.375”	8.13mm	0.320”
10-SC450	45.00mm	1.772”	34.50mm	1.358”	11.00mm	0.434”
10-SC460	46.00mm	1.811”	35.50mm	1.398”	11.00mm	0.434”
10-SC462	46.20mm	1.819”	34.93mm	1.375”	11.43mm	0.450”
10-SC470	47.00mm	1.850”	36.50mm	1.437”	11.00mm	0.434”
10-SC478	47.78mm	1.881”	36.50mm	1.437	11.43mm	0.450”
10-SC490	49.00mm	1.929”	38.50mm	1.516”	11.00mm	0.434”
10-SC494	49.40mm	1.945”	38.10mm	1.500”	11.43mm	0.450”
10-SC500	50.00mm	1.969”	39.00mm	1.535”	11.50mm	0.453”
10-SC510	50.98mm	2.007”	39.67mm	1.562”	11.43mm	0.450”
10-SC523	52.32mm	2.060”	39.67mm	1.562”	11.43mm	0.450”
10-SC525	52.53mm	2.068”	42.85mm	1.687”	11.43mm	0.450”
10-SC541	54.15mm	2.132”	42.93mm	1.690”	11.43mm	0.450”
10-SC550	54.97mm	2.164”	44.45mm	1.750”	11.43mm	0.450”
10-SC557	55.73mm	2.194”	45.72mm	1.800”	11.43mm	0.450”
10-SC573	57.30mm	2.256”	47.50mm	1.870”	11.43mm	0.450”

ORDER 650-557-2046

SEATS (NICKEL ALUMINUM BRONZE)

TITANIUM valves require the use of Kibblewhite® Nickel Aluminum Bronze valve seat inserts.This premium copper based alloy is designed specifically for use with titanium valves. These seats are the product of a 2 year Kibblewhite® R&D effort during which we recorded and verified results with 4&5 valve singles, domestic and foreign sport compacts, multi valve and single cylinder street bikes, as well as British and European 4strokes. In every one of our tests for wear, thermal conductivity, and machinability, the seats surpassed the standard we set for success.
Thes seats have been used successfully with titanium valves in drag race, road race, desert race, motocross, and land speed racing. The seats are tall, have ample material on the ID for shaping, and are offered in several sizes making them truly universal in application. The ODs have a smooth surface finish that offers maximum contact with the head counterbore for optimum heat transfer, and a generous radius on the leading edge to prevent galling during installation.

KPMI Part Number	Outside Diameter		Inside Diameter		Height	
10-SB240	24.00mm	0.945”	16.00mm	0.630”	9.00mm	0.355”
10-SB250	25.00mm	0.984”	17.00mm	0.669”	9.00mm	0.355”
10-SB260	26.00mm	1.024”	18.00mm	0.709”	9.00mm	0.355”
10-SB270	27.00mm	1.063”	19.00mm	0.748”	9.00mm	0.355”
10-SB275	27.50mm	1.083"	19.00mm	0.748"	9.00mm	0.355"
10-SB280	28.00mm	1.102”	20.00mm	0.787”	9.00mm	0.355”
10-SB285	28.50mm	1.122”	20.00mm	0.787”	9.00mm	0.355”
10-SB290	29.00mm	1.142”	21.00mm	0.827”	9.50mm	0.375”
10-SB295	29.50mm	1.161”	21.00mm	0.827”	9.50mm	0.375”
10-SB300	30.00mm	1.181”	22.00mm	0.866”	9.50mm	0.375”
10-SB305	30.50mm	1.201”	22.00mm	0.866”	9.50mm	0.375”
10-SB310	31.00mm	1.220”	23.00mm	0.906”	9.50mm	0.375”
10-SB315	31.50mm	1.240”	23.00mm	0.906”	9.50mm	0.375”
10-SB320	32.00mm	1.260”	24.00mm	0.945”	9.50mm	0.375”
10-SB325	32.50mm	1.280”	24.00mm	0.945”	9.50mm	0.375”
10-SB330	33.00mm	1.299”	25.00mm	0.984”	9.50mm	0.375”
10-SB335	33.50mm	1.319”	25.00mm	0.984”	9.50mm	0.375”
10-SB340	34.00mm	1.339”	26.00mm	1.024”	9.50mm	0.375”
10-SB345	34.50mm	1.358”	26.00mm	1.024”	9.50mm	0.375”
10-SB350	35.00mm	1.378”	25.00mm	0.984"	11.00mm	0.434”
10-SB355	35.50mm	1.398”	26.00mm	1.024”	11.00mm	0.434”
10-SB360	36.00mm	1.417”	27.00mm	1.063”	11.00mm	0.434”
10-SB365	36.50mm	1.437”	27.00mm	1.063”	11.00mm	0.434”
10-SB370	37.00mm	1.457”	28.00mm	1.102”	11.00mm	0.434”
10-SB375	37.50mm	1.476”	28.00mm	1.102”	11.00mm	0.434”
10-SB380	38.00mm	1.496”	29.00mm	1.142”	11.00mm	0.434”
10-SB385	38.50mm	1.516”	29.00mm	1.142”	11.00mm	0.434”
10-SB390	39.00mm	1.535”	30.00mm	1.181”	11.00mm	0.434”
10-SB395	39.50mm	1.555”	30.00mm	1.181”	11.00mm	0.434”
10-SB400	40.00mm	1.575”	30.00mm	1.181”	11.00mm	0.434”
10-SB405	40.50mm	1.594”	30.00mm	1.181”	11.00mm	0.434”
10-SB410	41.00mm	1.614”	31.00mm	1.220”	11.00mm	0.434”
10-SB415	41.50mm	1.634”	31.00mm	1.220”	11.00mm	0.434”
10-SB420	42.00mm	1.654”	32.00mm	1.260”	11.00mm	0.434”
10-SB430	43.00mm	1.693”	33.00mm	1.299”	11.00mm	0.434”
10-SB440	44.00mm	1.732”	34.00mm	1.339”	11.00mm	0.434”
10-SB450	45.00mm	1.772”	34.50mm	1.358”	11.00mm	0.434”
10-SB460	46.00mm	1.811”	35.50mm	1.398”	11.00mm	0.434”
10-SB470	47.00mm	1.850”	36.50mm	1.437”	11.00mm	0.434”
10-SB480	48.00mm	1.890”	37.50mm	1.476”	11.00mm	0.434”
10-SB490	49.00mm	1.929”	38.50mm	1.516”	11.00mm	0.434”
10-SB500	50.00mm	1.969”	39.00mm	1.535”	11.50mm	0.453”

• SNAPBACKS

- Red
- Front Patches with embroidery
- Pro Bill
- No curve
- 80% Acrylic, 20% cotton

- Black
- Front Patches with embroidery
- Pro Bill
- No curve
- 80% Acrylic, 20% cotton

- Cream
- Front Patches with embroidery
- Pro Bill
- No curve
- 80% Acrylic, 20% cotton

- Black and Red
- Front Patches with embroidery
- Pro Bill
- No curve
- 80% Acrylic, 20% cotton

- Black and White
- Trucker Hat
- Front Patches with embroidery
- Pro Bill
- No curve
- 80% Acrylic, 20% cotton

- White
- Trucker Hat
- Front Patches with embroidery
- Pro Bill
- No curve
- 80% Acrylic, 20% cotton

• BEANIES

• T-Shirts

- Black
- KPMI® screen printed graphics
- Soft 100% Cotton
- Regular fit
- Size : Medium, Large, and Extra Large

• STICKERS

Item Detail	
Size	Quantity
5 in x 1/4 in	Pkg. of 10
8.5 in x 1.55	Pkg. of 4
10.5 in x 1.88	Pkg. of 4

Item Detail	
Size	Quantity
5 in x 1/4 in	Pkg. of 10
8.5 in x 1.55	Pkg. of 4
10.5 in x 1.88	1 ea.

KPMI® RACING TEAMS

Kibblewhite Racing

Cole Crowley
2009 District 36 250cc Champion

Larry "Spiderman" McBride
Top Fuel World Champion

Jordan Phillips
Grand National Cross Country

To n Pels
European Super Twin Top Fuel Championship
1st / 2nd Finisher

ORDER 650-557-2046

KPMI® RACING TEAMS

For the latest racing news, videos and updates on all of the Kibblewhite® Sponsored Racers, please go online to the KPMI® Sponsorship Section of the ***www.kpmi.us*** for complete team coverange!

Ian King
European Top Fuel Champion

Sammy Halbert
AMA Flat Track Finals/ Expert Singles Champion

Alp Sungurtekin
175MPH Worlds Fastest 650cc Pushrod Engine
SCTA & AMA LSR Grand National Champion

Sims Motorsports
2012 New record
with APS-1350-G/ M-2000-G Class

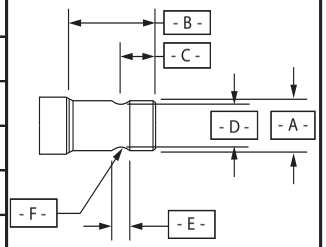
ORDER 650-557-2046

KPMI® Custom Valve Order Form

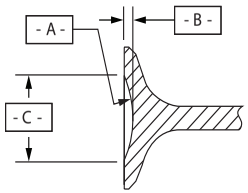
	Groove Dimensions		
	Radius Groove	Square Groove	Triple Groove
Groove Location:			
Groove Minor Ø:			
Groove Width:			
Groove Radius:		N/A	
Groove Spacing:	N/A	N/A	

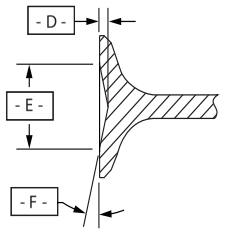
Groove Location is measured from the tip of the valve to the center of the radius or to the top of the square groove (for the triple groove it is measured from the tip of the valve to the center of the middle radius)

Reduced Dia. Groove Detail (if applicable)		
-A-	Undercut Ø:	
-B-	Undercut Length:	
-C-	Groove Location:	
-D-	Groove Ø:	
-E-	Groove Width: $E=2\sqrt{2F(A-D)-(A-D)^2}$	
-F-	Groove Radius:	

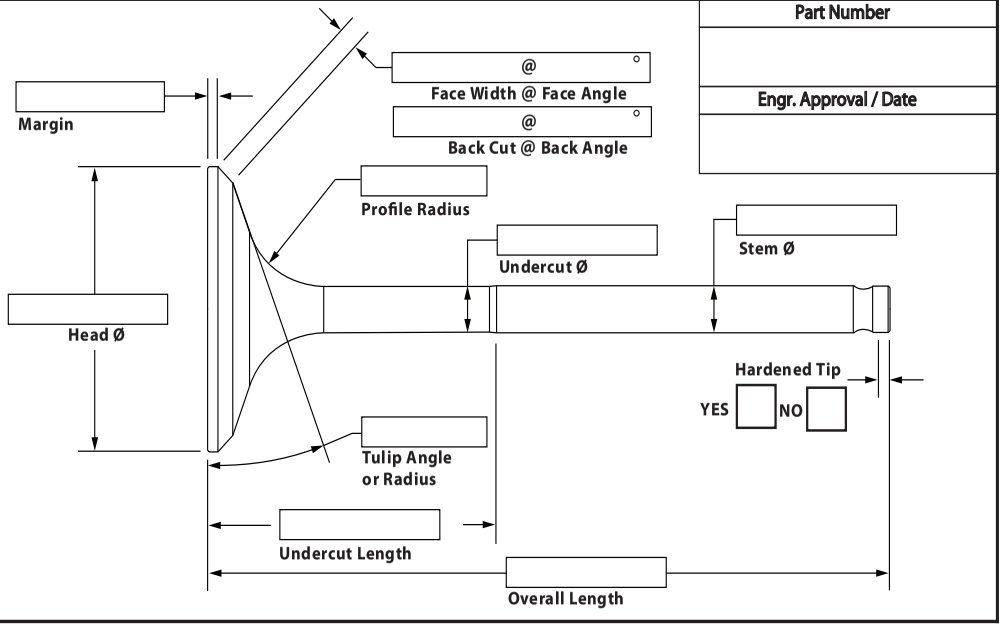


Dish Dimensions





Radius Dish			Angle Dish		
-A-	Dish Radius:		-D-	Dish Depth:	
-B-	Dish Depth:		-E-	Dish Width:	
-C-	Dish Width:		-F-	Dish Angle:	



Customer Information			
Contact:			
Company:			
Phone:		Fax:	
E-Mail:		Date:	
Make:		Disp:	
Model:		Years:	
Material:	☐ S.S. ☐ Ti. ☐ Other: _____		
Blank Part #:			
Notes:			

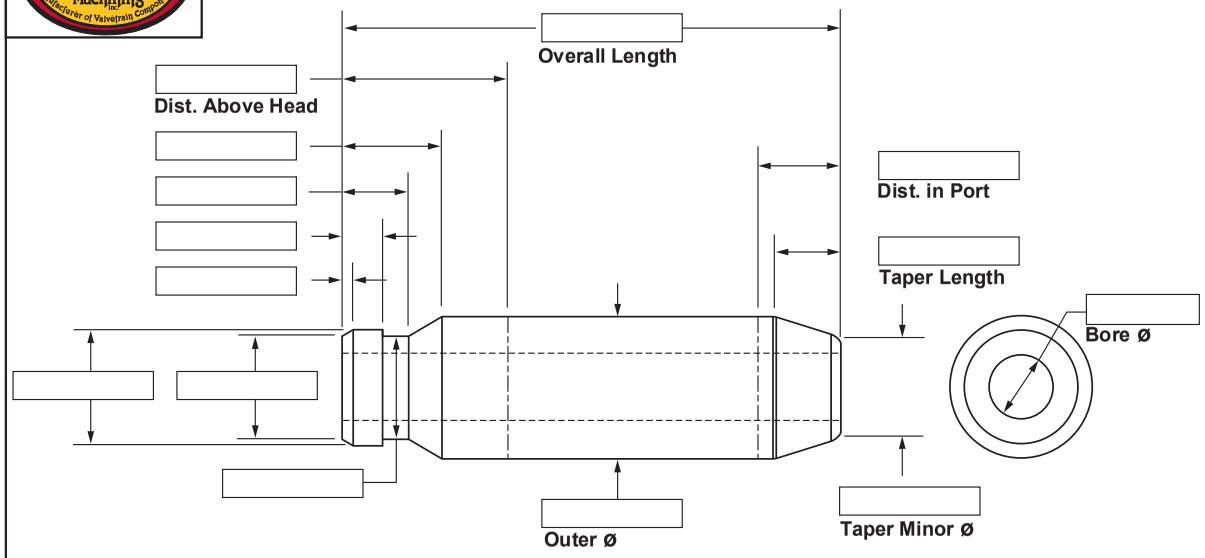
Additional Specifications	
Rocker Arm	YES ☐
Rocker Arm (w/ Elephant Foot)	YES ☐
Cam Follower (Shim & Bucket)	YES ☐
Using Lash Cap	YES ☐
Intake Valve	YES ☐
Exhaust Valve	YES ☐

Customer Approval:	
Date:	

KIBBLEWHITE PRECISION MACHINING, INC. 580H Crespi Dr. Pacifica, CA 94044 PH: 650-557-2046 FX: 650-359-8574
www.kpmi .us

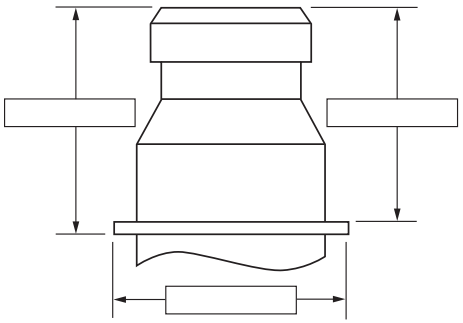
KPMI® CUSTOM VALVE ORDER FORM

KPMI® Custom Guide Order Form

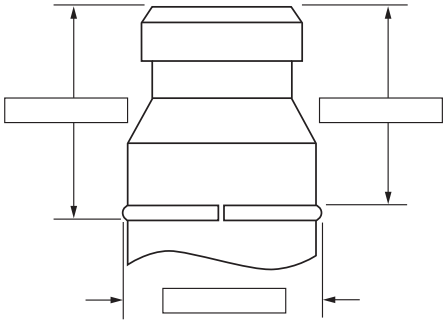


Part Number	
Engr. Approval / Date	
Customer Information	
Company:	
Contact:	
Phone:	
Fax:	Date:
E-mail:	
Material:	Cast Iron ☐ Ni Al Bronze ☐ Manganese ☐
Notes:	

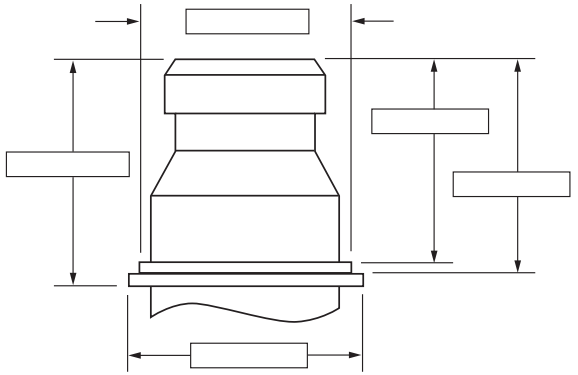
Shouldered Guide



Snap Ring Guide



Stepped Shoulder Guide



Make:		Model:		Disp:		Years:	

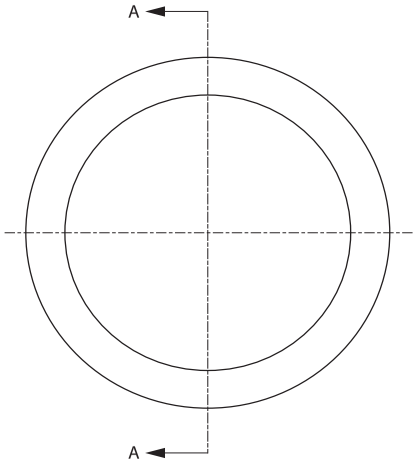
KIBBLEWHITE™ PRECISION MACHINING, INC. 580H Crespi Dr. Pacifica, CA 94044 PH: 650-557-2046 FX: 650-359-8574

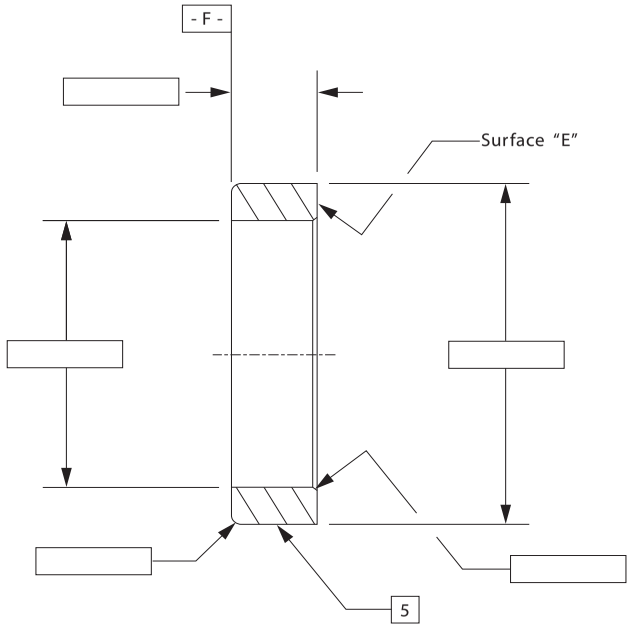
www.kpmi.us

ORDER 650-557-2046

KPMI® Custom Seat Order Form

Part Number:	





Customer Information			
Contact Name:			
Company Name:			
Phone:		Date:	
Make:		Model:	
Disp:		Years:	

Customer Approval:		Date:	

Seat Information			
Addtional Notes:			
KPMI Blank P/N:			
Material:	☐ SAE 630 ☐ G2 Cast Iron		
(KPMI use only) Total Cost Per Seat:		Qty.	
(KPMI use only) Total Cost:			

NOTES:

1. Break and deburr all sharp edges 0.010" X 45°
2. Finish O.D. to RMS-16 parallel and round within 0.0004"
   (For wall thinckness less than 0.120", parallel and round within 0.0008")
3. Surface "E" parallel to Datum F within 0.002"
4. I.D. and O.D. must be concentric within 0.010" TIR
5. I.D. and O.D. must be parallel within 0.002"
6. O.D. must be perpendicular to Datum F within 0.002"
7. (U.O.S.) Unless Otherwise Specified

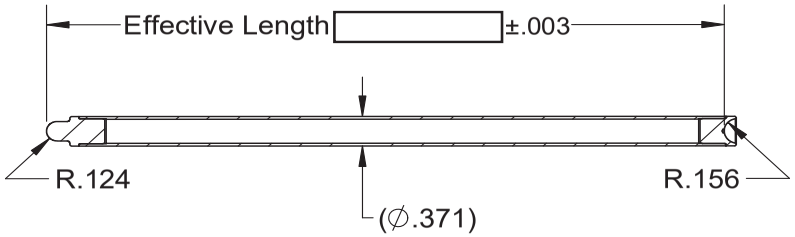
KIBBLEWHITE™ PRECISION MACHINING, INC. 580H Crespi Dr. Pacifica, CA 94044 PH: 650-557-2046 FX: 650-359-8574
www.kpmi.us

KPMI® CUSTOM SEAT ORDER FORM

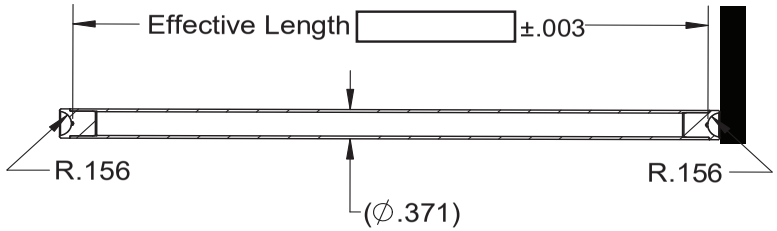
Custom Pushrod Order Form

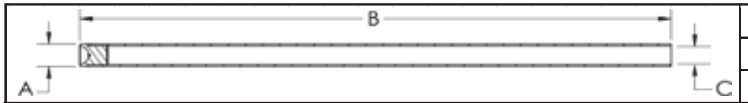
Part Number:	
Date:	

Male-Female Style

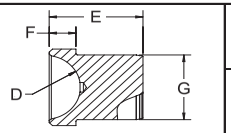


Female-Female Style

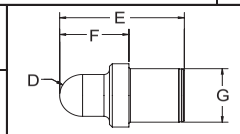




A:	Ø.371 OD
B:	9.120 Overall Length
C:	Ø.305 ID Before Machining

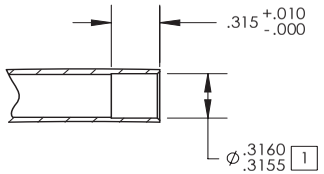


D	R.156	E	0.420	
F	0.120	G	0.310	



D	R.124	E	0.675
F	0.375	G	0.310

Machining Information:



1. Break ID edge only at .015" x 45°

KPMI P/N	Kit Includes	Model	Material	Retail Pricing
90502-2	2 Female Ended Pushrods / 2 Loose Male Endpiecs	Various	•Thin Wall Chrome Moly Tube •H.T. Steel Tips	$63.05
90512-2	2 Female Ended Pushrods / 2 Loose Female Endpiecs			
90502-4	4 Female Ended Pushrods / 4 Loose Male Endpiecs	Various	•Thin Wall Chrome Moly Tube •H.T. Steel Tips	$126.13
90512-4	4 Female Ended Pushrods / 4 Loose Female Endpiecs			

Customer Information

Contact Name:							
Company Name:							
Phone:							
E-mail:							
Make:		Model:		Disp:		Years:	

Pushrod Information

KPMI Blank P/N:	Male-Female					
	90502-2	QTY:		90502-4	QTY:	
KPMI Blank P/N:	Female-Female					
	90512-2	QTY:		90512-4	QTY:	
Custom Work Pricing:	KPMI® will custom machine and finish 2 or 4 pushrods for a flat fee of $120.00.					
Notes:	Please visit www.kpmi.us for our complete lineup of pushrods and more.					

Customer Approval:		Date:	

KIBBLEWHITE PRECISION MACHINING, INC. 580H Crespi Dr. Pacifica, CA 94044 PH: 650-557-2046

www.kpmi.us

KPMI® CUSTOM PUSHROD ORDER FORM

VISIT US AT WWW.KPMI.US

KPMI® PRODUCT ORDER FORM

KIBBLEWHITE PRECISION MACHINING, INC
Office / Billing: 4320 Coast Hwy 1 ~ Pacifica, CA 94044 **Shipping / Receiving:** 371 Princeton Ave ~ Half Moon Bay, CA 94019
Machine Shop: 580-H Crespi Dr ~ Pacifica, CA 94044 **Web:** www.kpmi.us **Phone :** (650) 557-2046

ORDER FORM

DATE: _____ BY: _____

CUST #: _____ P.O. #: _____

BILL TO: _____

SHIP TO: _____

CONTACT NAME: _____

STREET: _____

CITY: _____

ZIP CODE: _____ COUNTRY: _____

TELEPHONE: _____ FAX NUMBER: _____

UPS
- ☐ RED - 1 Day
- ☐ BLUE - 2 Day
- ☐ ORANGE - 3 Day
- ☐ GROUND

FEDEX
- ☐ RED - 1 Day
- ☐ BLUE - 2 Day
- ☐ SAVER - 3 Day

USPS
- ☐ AIR
- ☐ PRIORITY
- ☐ EXPRESS

WEIGHT: _____

- ☐ CREDIT CARD
- ☐ WILL CALL
- ☐ COD
- ☐ OPEN ACCT.

SHIP CHRG $: _____

INS $: _____

COD $: _____

MISC $: _____

TOTAL $: _____

ITEM #	QTY ORDERED	KPMI PART NO. / DESCRIPTION	PRICE	NOTES
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

NAME ON CARD: _____

CARD NUMBER: _____

EXP DATE: _____ SEC CODE: _____

CONTACT IF BACK ORDERED: Y _____ N _____

- ☐ VISA
- ☐ MASTERCARD
- ☐ AMER. EXP.
- ☐ OTHER

COMMENTS: _____

KPMI® DEALER APPLICATION

Kibblewhite® Precision Machining, Inc.
Dealer / Credit Application
Page 1 of 2

Company Name_____ Resale#_____
Street Address_____ City_____ State_____ Zip_____
Attn:_____ County_____ Country_____
Phone #_____ Fax#_____ E-Mail_____
Type of Business please check one: ☐ Partnership ☐ Sole Proprietor ☐ LLC ☐ Corporation Date Business Started_____
☐ Speed Shop ☐ Machine Shop ☐ Parts Store / Warehouse ☐ Other_____
Principal/Owner(s) Name_____ Title_____ Phone Number_____
Address_____ City_____ State_____ Zip_____
Soc. Sec#_____ Fed. ID#_____ WA Contractor #_____ Expires_____
Tres/Controller_____ Years in business under this ownership, at this location_____
If in business less than one year, please submit prior business work history.
Name of Bank_____ Branch_____ Phone_____
Address_____ City_____ State_____ Zip_____
Years at this bank_____ Account#_____

Trade References: Please list two firms within the industry and one firm outside the industry.

1. Company_____ Phone_____ Fax_____
   Address_____ City_____ State_____ Zip_____
2. Company_____ Phone_____ Fax_____
   Address_____ City_____ State_____ Zip_____
3. Company_____ Phone_____ Fax_____
   Address_____ City_____ State_____ Zip_____

Please indicate the type of account required ☐C.O.D. (Co check OK - A credit inquiry is required. Please allow 2-weeks for credit inquiry processing.) or ☐ Credit Card account with KIBBLEWHITE PRECISION MACHINING INC. I understand that all account balances are payable to KIBBLEWHITE PRECISION MACHINING, Inc. at the address specified on invoices or statements. I also understand that interest will be charged on past due balances at **a rate not to exceed the applicable legal maximum.**

Handling Fees: Handling fees may apply to all shipments. You will be informed if your shipments will incur a handling fee. Additional Fees: Drop-ship $15.00 / Wire transfer $20.00.

If establishing a credit card account please indicate the following:

Type of card_____ Card Number_____ Exp. Date_____
Signature_____ Printed_____ Date_____
Title_____

Please provide at least two of the following:

☐ Copy of your business license ☐ Copy of your state sales tax certificate ☐ Copy of an ad from any trade Magazine ☐ Copy of Yellow Pages ad

Applicant's Authorization & Agreement

In support of this application KIBBLEWHITE PRECISION MACHINING INC. is hereby authorized to obtain credit and/or financial information from my/our bank(s), other financial institutions or commercial firms with whom I/we have done business. It is understood that any such credit and/or financial information will be held in strict confidence and used only in consideration of this application.

Upon approval of this application, it is agreed that each invoice will be paid in full upon receipt or in accordance with the terms of sale as stated on the invoices(s). Should I/we not pay KIBBLEWHITE PRECISION MACHINING INC. according to term, it is understood that credit privileges may be withdrawn. Should KIBBLEWHITE PRECISION MACHINING INC. find it necessary to obtain assistance in collecting any past due balance, I/we agree to pay interest at the rate of 1.5% per month (or such other rate allowable by State law), reasonable attorney fees, collection fees and/or court costs allowable by law. At KIBBLEWHITE PRECISION MACHINING INC. option, jurisdiction and venue of any suit brought to collect this account shall be had in San Mateo County, CA. A copy of this statement and application has been received.

SIGNATURE_____ TITLE_____ Fax_____
(must be signed by an officer or principal of the firm)

PERSONAL GUARANTEE

The undersigned, [print name]_____, of the applicant corporation/company hereby agrees to the above terms and conditions and assumes personal responsibility for payment of said corporation's/company's account. It is understood that credit would not be extended to said corporation/company without this assumption of liability.

_____
(owner, partner or corporate officer)

CREDIT DEPARTMENT USE ONLY

CUSTOMER#_____ CREDIT LIMIT_____ TERMS CODE_____
CREDIT MANAGER SIGNATURE_____ DATE_____

VISIT US AT WWW.KPMI.US

KPMI® DEALER APPLICATION

Kibblewhite® Precision Machining, Inc.
Dealer / Credit Application

The only way to become and sustain KPMI Dealer status is to meet the following requirements:

Minimum Dealer Requirements

Full Dealer Status (all products available)
• 400 U$D Initial Order (Pre - Paid Only)
• 100 U$D minimum orders thereafter
• Purchase a minimum of 1,200 U$D of product per calendar year
• Credit based on approval

Company Name _____

Number of active customers _____ Approximate sales last 12 Months _____

Primary Focus of your business: _____

Types pf equipment served: Motorcycle ☐ Automobile ☐ ATV ☐ Other _____

Percentage of business related to engine components: _____ %

Other engine components marketed regularly: _____

KPMI components would be sold as: KPMI Brand ☐ Bundled with other components ☐ Repackaged in your packaging ☐ Used in OEM applications ☐

Other _____

Geographical areas currently covered in your dealer network:

☐ US Northwest	☐ US Southwest	☐ US Midwest	☐ US Southeast	☐ US Northeast
☐ California	☐ Canada (NE & Quebec)	☐ Canada Ontario	☐ Canadian West	☐ Canadian Prairie
☐ Mexico	☐ Other South America	☐ Brazil	☐ Other Central America	☐ European Union
☐ Australia	☐ New Zealand	☐ Japan	☐ Korea	☐ Germany
☐ Other Asia _____		☐ Other _____		

Vehicle Manufacturers currently supported by your dealer network:

☐ Harley-Davidson	☐ Indian	☐ Norton	☐ Triumph	☐ Honda
☐ Kawasaki	☐ Yamaha	☐ Suzuki	☐ BMW	☐ Rotax
☐ BSA	☐ Ducati	☐ Moto Guzzi	☐ Bombardier	☐ Polaris
☐ Acura	☐ Mitsubishi	☐ Ford	☐ Dodge	☐ Porsche
☐ Husqvarna	☐ Other Not Listed: _____			

Trade magazines your advertisements appear in: _____ _____

_____ _____

How KPMI product would fit into your business: _____

_____

_____

* No parts manufactured or sold by Kibblewhite Precision Machining, Inc. are licensed manufactured, sponsored, or endorsed by Harley Davidson, Inc. Use of the word Harley Davidson, various model names and designations are provided solely for reference. There is no affiliation between Kibblewhite Precision Machining, Inc. and Harley-Davidson, Inc. nor is any affiliation implied.

** All other brand names, trademarks or registered trademarks used in this document are property of there respective holders

KPMI® LEGAL NOTES

Since 1939, Kibblewhite® Precision Machining, Inc. (KPMI®), an independent company, has been committed to serving the valvetrain component needs of the powersport industry.

IMPORTANT TRADEMARK NOTICES

Harley, Harley-Davidson, Knucklehead, V-Twin, Panhead, Big Twin, Evolution, Shovelhead and Sportster are registered trademarks of Harley-Davidson, Inc., Milwaukee, Wisconsin, U.S.A. Any model designations for Harley-Davidson motorcycles used in this catalog is for reference only. No parts appearing in this catalog are licensed, manufactured, sponsored or endorsed by Harley-Davidson, Inc. Use of the word Harley-Davidson, various model names and designations, and O.E.M. part numbers are provided solely for reference and fitment information, and there is no affiliation between Harley-Davidson Inc. and Kibblewhite® Precision Machining, Inc. Black Diamond™, Tensilite® and White Diamond® are registered trademarks of Kibblewhite® Precision Machining, Inc., Pacifica, California, U.S.A. All other brand names or trademarks or registered trademarks used in this catalog are the property of their respective holders.

TERMS AND POLICIES

PAYMENTS - All Dealer/ Distributor orders will be shipped C.O.D., certified check / money order or prepaid by Visa®, MasterCard®, American Express® or bank wire transfer. Company checks will be accepted from Dealers or Distributors after completing a KPMI® Survey/ Application and histories warrant. All international orders should be prepaid in U.S. funds to avoid delays. Proforma invoices are available upon request. Terms are granted by arrangement only.

DISCOUNTS - Bank cleared advanced co-check, money order, certified check = $15.00 discount. Proforma invoices are available upon request.

HANDLING FEES - Handling fees may apply to all shipments and you will be informed if your shipments will incur a handling fee. Additional fees: Drop-ship $15.00 / Wire transfer $20.00.

DEALERS - Becoming a KPMI® Dealer requires completing a Dealer Application / Survey. After a successful survey review a Dealer must initiate and maintain KPMI® Dealer status based on the following policies: 400 U$D Initial Order (Pre-Paid only), 100 U$D minimum orders thereafter, purchase a minimum of 1,200 U$D of product per calendar year.

DISTRIBUTORS - Becoming a KPMI® distributor requires contacting KPMI® directly, and requesting a Distributor Application / Survey. Please allow a reasonable amount of time for processing.

WARRANTY - All merchandise and services offered by KPMI® are for racing use only. KPMI® warrants to the original purchaser the racing components listed in this catalog as manufactured by us to be free from defects in material and workmanship under normal use and service.

Our obligation under this warranty shall be limited to the repair or exchange of any part(s) which may thus prove defective under normal use and service within 30 days from date of installation by the original purchaser, and which our examination shall disclose to our satisfaction to be thus defective. This Warranty is expressly in lieu of all other warranties expressed or implied including the warranties of merchantability and fitness for use and all other obligations or liabilities on our part, and we neither assume, nor authorize any person to assume for us, any other liability in connection with the sale of these components. This warranty shall not apply to components or any part thereof which has been subjected to an accident, negligence, alteration, abuse or misuse. We make no warranty whatsoever with regard to accessories or parts not supplied by us. The term "original purchaser," as used in this warranty, shall be deemed to mean that person to whom the components were originally delivered. This warranty shall apply only within the continental United States. Seller makes no warranties which extend beyond that set forth in the preceding paragraph. Subject to applicable State laws.

SHIPPING - We ship by Federal Express (FedEx), United Parcel Service (UPS), USPS (upon request) and DHL Express. Shipping charges are added to invoice total.

BACK ORDERS - We do not cancel back orders unless requested to do so.

RETURNS - We will not accept any returned merchandise without prior consent. All items will be inspected upon receipt. Returns due to shipping error or manufacturing defects will be replaced immediately. No returns after 30 days from invoice date. Parts returned for any other reason will be subject to a 20% or $15.00 minimum restocking charge. Absolutely no returns on custom manufactured parts.

MACHINE WORK - Anything sent to Kibblewhite® Precision Machining to be machined must be accompanied with complete instructions and return address. Please be sure to include a packing list of the parts being sent to us. Any discrepancy that is not accounted for with the package(s) received will be the responsibility of the sender. Any damage to merchandise at the time of receipt will need to be handled by the sender with the carrier.

CLAIMS - If damage occurs to any item during transit; it is the responsibility of the freight carrier. Responsibility for the goods is passed from the shipper to carrier when the carrier leaves the point of pick-up. All claims must be made with the carrier. We will, however, help you with the clam in any way we can.

PHONE CALLS - We cannot accept collect calls. Our Order and Tech Line phone number is (650) 557-2046. After hours & weekends, please leave a message. Our FAX line operates 24-hours a day; the number is (650) 359-8574.

HOURS - Monday through Friday 8:30 a.m. – 5 p.m. (Pacific Time). After hours or weekends, please leave a message or send a FAX.

COPYRIGHTS - The entire contents of this catalog are copyrighted by KPMI®. All rights are reserved. Trademarks and logos represented in this catalog are the sole property of their owners. Call your dealer or account representative for verification of the latest model year applications.

© Copyright 2025 Kibblewhite Precision Machining, Inc. All rights reserved.
Copies distributed for personal internal use only. Any other use, reproduction, modification, public display, distribution or transmission of this catalog or its contents without the prior written consent of Kibblewhite Precision Machining, Inc. is strictly prohibited.

WARRANTY & LIABILITY LIMITATIONS

Except as may be expressly set forth in the product invoice, KPMI® makes no representations or warranties as to any of its products, express or implied, including, without limitation, any warranties of merchantability or fitness for a particular purpose, under Section 2314 or 2315 of the California Uniform Commercial Code or otherwise. Motorcycles can be dangerous. KPMI® has no control over the usage of any part. KPMI® expects the Dealer and the Dealer's customers to exercise good judgment as to the proper selection, installation, use, and maintenance of any parts. KPMI® assumes no responsibility for damage or injury of any kind because of the misuse or the improper application or installation of any parts in any way by the Dealer, the Dealer's customers or any other person. KPMI® shall not be liable for any indirect or consequential damages whatsoever. All matters shall be interpreted under California law.

CURRENT FITMENT INFORMATION

To the best of our knowledge, all the pictures and application information contained herein are accurate as of the date this catalog was approved for printing (June 2025). Because some models had not yet been released at the time, it was not possible to provide application information for these vehicles. Therefore, whenever a part is listed as fitting "to present" this would apply to models that had been able to verify application for by catalog press date ONLY. Please check with your KPMI® dealer or account representative for verification of the latest 2025 model year applications.

EMISSIONS NOTICE

FOR CLOSED COURSE COMPETITION USE ONLY. NOT INTENDED FOR STREET USE. THE MANUFACTURE, SALE OFFER FOR SALE, OR INSTALLATION OF THIS PRODUCT MAY ALSO BE ILLEGAL NATIONWIDE UNDER THE FEDERAL CLEAN AIR ACT (42 U.S.C. § 7522(A)(3))

NOTICES

All KPMI® valve guides, standard valves, and spring kits are intended for use as OEM replacement parts, exceeding OEM specifications in terms of durability and or expected cyclical life. Oversize valves are intended for racing vehicles with planned use on closed courses.

KIBBLEWHITE® PRECISION MACHINING, INC.

BILLING: 4320 COAST HWY 1 ~ PACIFICA, CA 94044
SHIPPING: 371 PRINCETON AVE ~ HALF MOON BAY, CA 94019
MACHINE SHOP: 580-H CRESPI DR ~ PACIFICA, CA 94044

Phone: (650) 557-2046
Fax: (650) 359-8574

www.kpmi.us
www.facebook.com/kpmusa
www.instagram.com/kpmiusa

VISIT US AT WWW.KPMI.US

Kibblewhite

Precision Machining Inc.

Manufacturer of Valvetrain Components

OUR BUSINESS IS PERFORMANCE

KIBBLEWHITE PRECISION MACHINING, INC.

Billing: 4320 Coast Hwy 1 ~ Pacifica, CA 94044
Shipping: 371 Princeton Ave ~ Half Moon Bay, CA 94019
Machine Shop: 580-H Crespi Dr ~ Pacifica, CA 94044
facebook.com/kpmusa - instagram.com/kpmiusa
www.kpmi.us - PH: 650-557-2046 - sales@kpmi.us