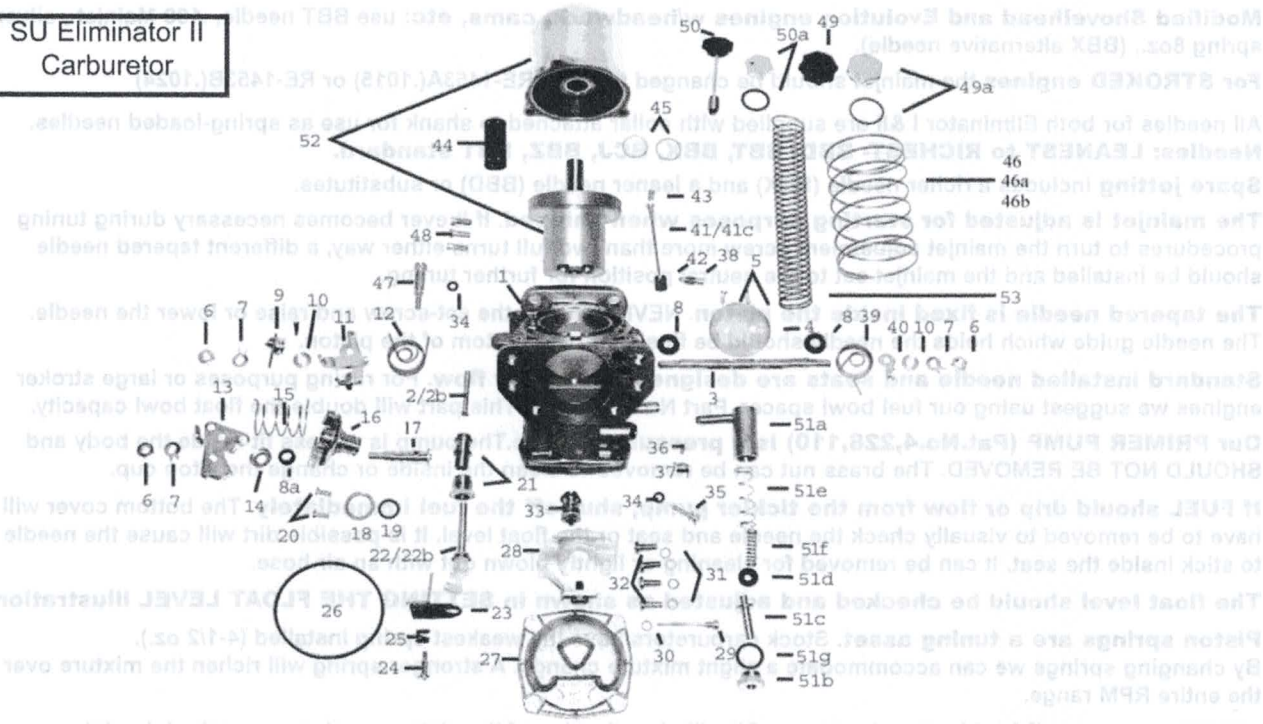




# SU CARBURETOR



## SU Eliminator II Carburetor



### "ELIMINATOR II" PARTS LISTING

1	carb body	1042-0517	228	main jet .1024	1042-0071	45	piston sleeve retainer	1042-0039
2	piston lift pin	1042-0059	23	bi-metallic lever	1042-0512	46	piston return spring (4 oz)	1042-0060
2A	piston lift spring	1042-0030	24	bi-metallic screw	1042-0046	46-A	piston return spring (8 oz)	1042-0061
2B	circ-clip	1042-0055	25	spring	1042-0045	46-B	piston return spring (12 oz)	1042-0535
3	throttle spindle	1042-0543	26	float lid o-ring seal	1042-0048	47	idle speed screw	1042-0575
4	throttle disc	1042-0040	27	float lid	1042-0518	48	dome screw	1042-0538
5	throttle disc screws	1042-0031	28	float	1042-0547	49	plastic dome cap	1042-0548
6	nut spindle	1042-0027	29	float spindle screw	1042-0524	49-A	chrome dome cap	1042-0565
7	tab washer	1042-0043	30	crush washer	1042-0035	50	dome cap/plastic 1996-up	1042-0036
8	shaft spindle seal	1042-0544	31	float lid washers	1042-0033	50-A	dome cap/chrome 1996-up	1042-0037
8A	choke spindle seal	1042-0044	32	float lid screws	1042-0049	50-AA-KIT	pull/ pull brkt/bshng(73-89)	1042-0013
9	throttle lever w/cbl holder	1042-0572	33	needle & seat	1109-0007	50-B-KIT	pull/ pull brkt/rotor	1042-0201
10	spacer bushing	1042-0549	34	o-ring (adj screw)	1042-0047		w/o bushing (1990-up)	
11	idle stop lever	1042-0065	35	main jet adj screw	1042-0558	50-C	throttle cable holder(pre-90)	1042-0203
12	throttle return spring	1042-0532	36	piston guide screw	1042-0581	51	tickler pump complete	1042-0515
13	choke cam lever	1042-0541	37	piston guide	1042-0032	51-A	tickler pump body	1042-0574
14	choke body cap	1042-0056	38	jet needle screw ret	1042-0058	51-B	tickler nut	1042-0506
15	choke spring	1042-0062	39	throttle return spring	1042-0536	51-C	tickler stem	1042-0508
16	choke body	1042-0545	40	spring retainer	1042-0520	51-D	Viton cup	1042-0500
17	choke spindle	1042-0528	41	jet needle BBX	1109-0002	51-E	large tickler spring	1042-0510
18	choke body gasket	1042-0053	41-A	jet needle BBT	1109-0024	51-F	small tickler spring	1042-0501
19	choke body O-ring	1042-0052	41-B	jet needle BBD	1109-0004	51-G	tickler gasket	1042-0503
20	choke body screws	1042-0054	41-C	jet needle BCJ	1109-0022	52	piston & dome	1042-0530
21	jet bearing	1042-0583	42	jet needle guide	1109-0006	53	pstn rtn spring(4 oz) pre-96	1042-0566
22	main jet .100	1042-0070	43	jet needle spring	1042-0042	53-A	pstn rtn spring(8 oz) pre-96	1042-0567
22A	main jet .1015	1109-0020	44	piston sleeve w/brngs	1042-0523	53-B	pstn rtn spring (12 oz) pre-1996	1042-0568

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## SPECIFICATIONS & SPECIAL NOTES

**Stock Applications: Shovelhead, Sportsters, Evolution Models**

**Supplied with kit as standard:** .100 Mainjet - Red Spring 4-1/2 oz. - BBT needle.

**Stock 900cc Sportster:** use BBD needle, 4-1/2 oz. spring, .100 mainjet.

**Modified Shovelhead and Evolution engines w/headwork, cams, etc:** use BBT needle, .100 Mainjet, silver spring 8oz., (BBX alternative needle).

**For STROKED engines** the mainjet should be changed to Part #RE-1453A(.1015) or RE-1453B(.1024)

All needles for both Eliminator I & II are supplied with collar attached to shank for use as spring-loaded needles.

**Needles: LEANEST to RICHEST- BBD, BBT, BBX, BCJ, BBZ, BBT standard.**

**Spare jetting** includes a richer needle (BBX) and a leaner needle (BBD) or substitutes.

**The mainjet is adjusted for starting purposes when shipped.** If it ever becomes necessary during tuning procedures to turn the mainjet adjustment screw more than two full turns either way, a different tapered needle should be installed and the mainjet set to the neutral position for further tuning.

**The tapered needle is fixed inside the piston.** NEVER loosen the set-screw and raise or lower the needle. The needle guide which holds the needle should be flush with the bottom of the piston.

**Standard installed needle and seats are designed for gravity flow.** For racing purposes or large stroker engines we suggest using our fuel bowl spacer, Part No. RE-680-S. This part will double the float bowl capacity.

**Our PRIMER PUMP (Pat.No.4,228,110) is a pressure system.** The pump is a press fit inside the body and SHOULD NOT BE REMOVED. The brass nut can be removed to clean the inside or change the viton cup.

**If FUEL should drip or flow from the tickler pump, shut off the fuel immediately.** The bottom cover will have to be removed to visually check the needle and seat or the float level. It is possible dirt will cause the needle to stick inside the seat. It can be removed for cleaning or lightly blown out with an air hose.

**The float level should be checked and adjusted as shown in SETTING THE FLOAT LEVEL illustration.**

**Piston springs are a tuning asset.** Stock carburetors have the weakest spring installed (4-1/2 oz.).

By changing springs we can accommodate a slight mixture change. A stronger spring will richen the mixture over the entire RPM range.

**NEVER use any oil inside the dampner.** Oil will slow the rise of the piston causing an overly rich mixture. Every 30 days unscrew the dome cap and lightly spray around the piston shaft with WD-40. The piston must float freely at all times to accomplish the constant velocity principle of allowing the engine to determine its position.

**Stroker size manifolds for popular stroker kits.** If you require a stroker manifold please ask when placing carburetor orders.

### SU NEEDLE GUIDE

**NOTE:** The numbers under each needle is the profile dimension of that needle.  
Dimensions are taken every 1/8" from the top shoulder.

#### LEANER

##### BBD

.099  
.095  
.092  
.090  
.088  
.0862  
.0844  
.0825  
.0818  
.0808  
.0798  
.0788  
.0778  
.0768  
.0758  
.0748

##### BBT

.099  
.096  
.0932  
.0903  
.0877  
.0850  
.0827  
.0807  
.0792  
.0778  
.0765  
.0753  
.0740  
.0725  
.0713  
.0700

##### BBX

.099  
.095  
.0932  
.0905  
.0875  
.0852  
.0829  
.0806  
.0782  
.0755  
.0730  
.0702  
.0675  
.0650  
.0624  
.0598

##### BCJ

.0995  
.0967  
.0939  
.0909  
.0881  
.0848  
.0781  
.0740  
.0703  
.0671  
.0650  
.0630  
.0610  
.0590  
.0570  
.0560

##### BCJ

.098  
.0954  
.0924  
.0892  
.0862  
.0819  
.0780  
.0751  
.0713  
.0673  
.0653  
.0629  
.0605  
.0580  
.0560  
.0540

(Standard)



American Prime Mfg.

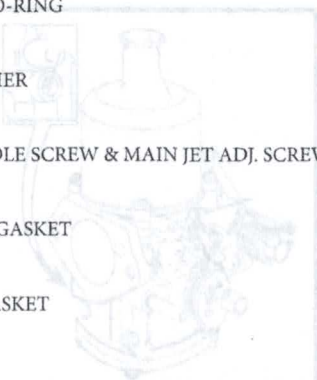
# American Prime Mfg. Inc.

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pollution controlled motor vehicles.

## SU CARBURETOR REBUILD KIT 1042-0101 INSTALLATION INSTRUCTIONS

### SU ELIMINATOR 2/3 REBUILD KIT (1042-0101)

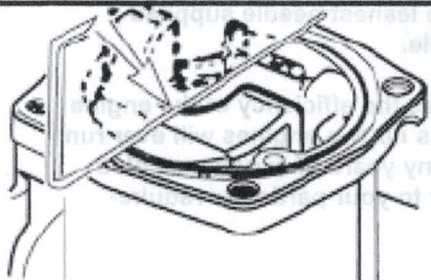
1109-0007 NEEDLE & SEAT	1 EA.
1042-0591 VITON CUP SEAL/TICKLER PUMP	1 EA.
1042-0501 SMALL SPRING/TICKLER PUMP	1 EA.
1042-0503 FIBER WASHER GASKET/TICKLER PUMP	1 EA.
1042-0510 LARGE SPRING/TICKLER PUMP	1 EA.
1042-0031 SCREW FOR THROTTLE DISC TO THROTTLE SHAFT	2 EA.
1042-0043 TABBED WASHER	3 EA.
1042-0044 SPINDLE SEAL	1 EA.
1042-0053 CHOKE BODY GASKET	1 EA.
1042-0052 O-RING	1 EA.
1042-0048 FLOAT BOWL O-RING	1 EA.
1042-0035 SPINDLE WASHER	1 EA.
1042-0047 O-RING FOR IDLE SCREW & MAIN JET ADJ. SCREW	2 EA.
1094-0014 AIR CLEANER GASKET	1 EA.
1094-0015 MANIFOLD GASKET	1 EA.
1042-0070 .100 MAIN JET	1 EA.
1042-0544 SPINDLE SHAFT SEAL	2 EA.
1042-0055 PISTON LIFT PIN E-CLIP	1 EA.



### SU 1 BOM FOR INFO ONLY

### SU ELIMINATOR 1 REBUILD KIT (1042-0569)

1109-0008 NEEDLE & SEAT
1042-0591 VITON CUP SEAL/TICKLER PUMP
1042-0501 SMALL SPRING/TICKLER PUMP
1042-0503 FIBER WASHER GASKET/TICKLER PUMP
1042-0510 LARGE SPRING/TICKLER PUMP
1042-0031 SCREW FOR THROTTLE DISC TO THROTTLE SHAFT
1042-0043 TABBED WASHER
1042-0044 SPINDLE SEAL
1042-0053 CHOKE BODY GASKET
1042-0052 O-RING
1042-0048 FLOAT BOWL O-RING
1042-0035 SPINDLE WASHER
1042-0047 O-RING FOR IDLE SCREW & MAIN JET ADJ. SCREW
1094-0014 AIR CLEANER GASKET
1094-0015 MANIFOLD GASKET
1042-0070 .100 MAIN JET



## SETTING THE FLOAT LEVEL

The float level is carefully checked before shipping. Transporting could alter the setting. To check the float level it will be necessary to remove the carburetor from the motorcycle.

Remove the four screws holding the bottom plate. Turn the carburetor upside down and lay a flat rule across the bottom as shown in picture. The rule should just clear the center of the float.

If adjustment is required carefully bend the brass tang on the float.

~ 8205 SECURA WAY ~ SANTA FE SPRINGS, CA 90670 ~

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1108-0009

## **COLD STARTING & TUNING INSTRUCTION**

**(ALL SU ELIMINATOR CARBURETORS)**

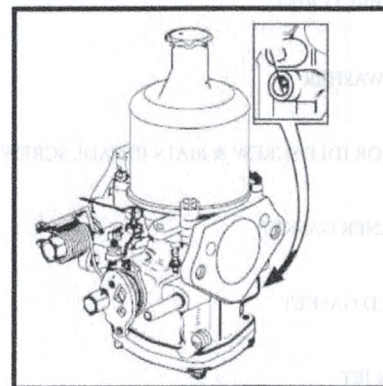
Turn the fuel on allowing a reasonable time for the fuel bowl to fill. **NOTE:** if any fuel runs from the hollow shaft on the end of the tickler pump, shut fuel off (if this occurs the needle is stuck in the open position and must be corrected -see setting the fuel level). Assuming no fuel is running from the overflow, place a finger from your left hand on the piston lift pin located on the left side of the carburetor body near the center top. Push up and hold this pin while pumping the tickler a half dozen times. This procedure will induce fuel into the venturi by pressurizing the fuel bowl and forcing fuel through the mainjet into the venturi. By lifting the piston you allow no obstruction to the fuel flow. Release the lifting pin and set the choke to the on position by rotating the choke lever clockwise until it locks into a pre-cut groove on the cam. Use of the choke is optional. In warm weather it may not be necessary. With the choke on, press the button or kick the engine to life. Allow a few minutes for a warm up period noting the increase of RPM as the engine warms. It is a good idea to cut off the choke as soon as possible as it may load your engine if left on for over a few minutes. To automatically turn off the choke simply twist the throttle grip. It will release the cam lever.

All tuning should be done on a warm engine. Ride the motorcycle until it reaches normal operating temperature. If the engine seems strong and pulls well throughout the RPM range it is probably tuned very close. If there is a question we suggest running the motorcycle at a sustained speed of 55 MPH for a few miles. Pull in the clutch, turn off the key and brake to a stop. At this time a plug reading can be obtained from either cylinder which will indicate a rich or lean condition.

All carburetors are shipped with a standard needle and spring unless ordered for a specific purpose. The standard needle can be changed to a richer or leaner as two extra needles are sent with each carburetor kit.

The mainjet adjustment (see diagram) on the bottom right side of the carburetor adjusts the main jet up or down on the tapered needle installed. All carburetors are shipped with the mainjet in the neutral position which allows an adjustment of two full turns either way for mixture strength.

Turning the adjustment screw clockwise or to the right will richen the mixture. Turning the adjustment screw counter-clockwise will lean the mixture. The adjustment on the mainjet affects the position of the mainjet down onto a smaller taper needle which allows more area for fuel to flow, hence a richer mixture.



The normal or standard position is preset at the factory. The way to find neutral is to remove the dome and piston and visually look at the position of the mainjet in relation to the mainjet holder which is the part the mainjet moves inside. The correct position for neutral is when the mainjet is 1/16" below the bottom edge of the main jet holder. Then you will have 2 turns either way to correct any mixture problem you may have. For altitude we suggest using the leanest needle supplied with the kit. Any altitude above 3000 ft. will benefit from a leaner needle.

A motor that has ported heads may very well require a leaner needle as the efficiency of the engine increases with such modifications. There are no set rules for tuning as no two engines will ever run exactly the same. We will make some recommendations based on many years of experience plus feedback from customers on tuning tips. They may vary and not apply to your particular requirements, so use them as a guide only.