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Instruction Sheet For Tool #782

DUAL GAUGE LEAKDOWN TESTER

This tool comes with thread adapter hose assemblies for 10mm, 12mm, 14mm, and 18mm spark plug threads. With this dual gauge design it will make it very easy to pinpoint any leakage in the combustion chamber. This will include any leaks from piston rings, valve seats or a leaking head gasket and it's simple to use.

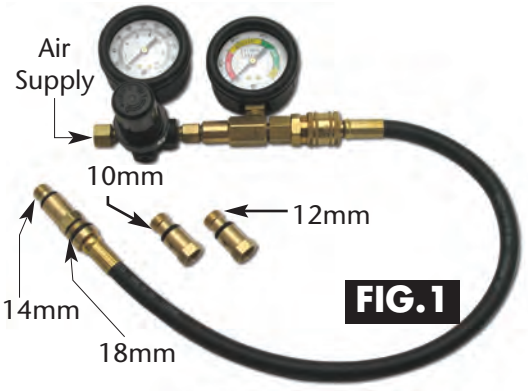


FIG.1

No.**782** - Use on all Harley Davidson or Buell models.

Note: *You will need to provide the air connector fitting. See air supply in* **Fig 1**.

JIMS Tools needed to perform this service:

1. Certain models will dictate the use of a primary locking tool.

2. JIMS mighty bite flywheel lock No.**753** for Twin Cam or No. **5823** for Milwukee 8.

3. No. **936** Tire rotator

4. H-D service manual for appropriate year and model motorcycle you will be servicing.

5. Spark plug socket with ratchet.

6. Tools to remove outer primary.

7. Air compressor that can hold 100 PSI.

8. Clean engine oil (about 2 oz).

9. Primary Gasket.

10. Air chuck.

11. Clean oil can

12. Primary oil

13. Hand held spray bottle of soapy water

If for any reason you need assistance please **call JIMS TECH department at 805-482-6913**.

Caution: ***Read complete instructions, and do not skip any of the steps in this instruction sheet before using tool.***

Preparing motorcycle for leak down testing:

1. Safely lift rear tire of motorcycle off the ground using JIMS No. **904** scissor jack with motorcycle being level. Support bike with tie downs so it cannot and will not fall over.

2. Clean any dirt and grime from around both spark plugs.

3. Run engine until operating temp has been reached.

4. Remove spark plugs.

Caution: ***All engine components are HOT, use caution to avoid burning yourself.***

5. Checking the front cylinder first. Place the front piston at TDC on the compression stroke. (Ignition stroke both valves closed.)

6. Lock engine in this position. Use Mighty Bite No. **753** or **5823**.

A. Remove primary cover and use the appropriate primary locking bar for your year and model. Follow the instruction sheet with the tool you will be using. On Twin Cams use a flywheel lock tool No. **753.**

B. Place motorcycle in low gear and keep rear tire from rotating by applying rear brake.

C. Remove all 4 pushrods and lock engine from rotating.

CAUTION: Wear safety glasses over your eyes.
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The last tools you will ever need to buy.

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Caution: ***If removing the primary cover, disconnect battery ground cable at the battery.***

7. Apply a few drops of clean oil to the threads and O-ring of the appropriate hose adapters. Hand thread in the adapter into the front spark plug hole until O-ring is sealing off any air.

Note: *Do not over tighten the adapter or hose to adapter with a wrench or you will tear the O-ring causing leakage. Always install hand tight only.*

Note: *Make sure regulator knob is not on. The knob needs to be pulled out and turned all the way to the counter-clock wise direction before hooking up shop air.*

8. Connect your air hose coupler to the air supply nipple fitting attached to tool. **See Fig 1**

9. Slowly turn regulator knob clockwise until the air gauge (shop air supply gauge) is set at 100 PSI.

Note: Make sure the engine has not rotated from TDC

10. If the right side gauge is showing 5 psi or lower, this cylinder is in good serviceable condition at 5% leak down. The rear should be within 2 to 4% of the front cylinder. If the cylinder is showing more than 5%, say about 6% to 10%, the gauge will read 6 to 10%. At the same time you should not hear air escaping from either the intake port or the exhaust port. This indicates either a bad head gasket or leaky piston rings. To check for head gasket leakage, you will need to spray soapy water completely around the head gasket surface where the head meets the cylinder while looking for any bubbles. If you do find air escaping from the head gasket, take note of this and where it is coming from so at the time the head is removed for inspection you have a better idea as to what may be causing the leak. To check for bad rings you can add about one ounce of clean engine oil to the inside of cylinder. If the % of leakage goes down, and the gauge goes down (over 5 %) you know the rings are weak. Do the complete check for both cylinders. If you do have air leaking from head gasket and can hear air coming from either the intake or exhaust valve's ports, make sure that the engine has not rotated. If you are sure that both valves are closed and not being held open by the cam or incorrect valve adjustment, you should still apply oil to that cylinder making sure that the rings are in serviceable condition or need replacing. This way you will not need to back track if all you found was a leaking valve.

1 YEAR WARRANTY

JIMS will repair or replace at our option any product found to be defective in materials or workmanship for one year from date of purchase. This warranty does not cover items damaged by accident , misuse, or neglect. Any implied warranties are expressly excluded, and JIMS shall not be liable for any loss of product use , or other consequential or incidental costs incurred by the user of our tools.

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