

# BLOCK TESTER®

## OPERATING INSTRUCTIONS

### WARNING!

Performing a combustion leak test requires you to work on an engine that is RUNNING and HOT. Use extra caution to prevent being burned by hot coolant or engine parts and to prevent entanglement of clothing or body parts in the running engine. Wear goggles, heat resistant gloves and outer clothing that will protect you from burns if coolant system fails during test. Remember, cooling components, fan belts, parking brakes, etc. can fail at any moment, causing personal injury or death.

### HOW THE TEST WORKS:

When an engine has a combustion leak, exhaust gases that normally exit the tailpipe find their way into the cooling system. AIR sampled from the cooling system is drawn through the Block Tester™ Test Fluid and a simple color change in the test fluid indicates whether or not exhaust gases are present.

### TO CONDUCT THE TEST:

1. Remove radiator cap, and check the coolant level. (Note: on some late-model vehicles, the expansion tank is pressurized, and there is no cap on the radiator itself.) The coolant level must be 2 to 3 inches below the neck to prevent coolant from being drawn into the tool during test. If necessary, drain, siphon or use a turkey baster to remove enough coolant to lower the level.
2. Warm engine enough to ensure thermostat is open and leave engine idling during test. Coolant MUST be warm and circulating while test is in process.
3. Check color of test fluid before pouring into the tool. If blue, OK to use. If green or yellow, discard and obtain fresh fluid.
4. Add test fluid to the tool, fill to the **fluid level line**. Test fluid can be added by pouring through the bulb insertion hole in the **top cap** or by removing the **top cap**.
5. Replace **top cap**, if removed, and insert the **aspirator bulb** with the **metal valve end** pointing up.
6. Insert **bottom cap** into radiator neck, and ensure a good seal.
7. Draw AIR from radiator (not coolant!) through test fluid by squeezing bulb repeatedly for about 1 minute. If coolant is accidentally drawn into the tool, discard fluid and rinse tool thoroughly with cool, clean water. Lower the coolant level (step 1) and re-test.
8. If fluid turns YELLOW, a combustion leak is present. (In diesel engines, the fluid may turn yellow-green.) If fluid remains BLUE or the **aspirator bulb** will not draw air, a combustion leak is not occurring while test is in process.

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9. Discard used fluid as it becomes activated whether or not a color change occurs, and rinse tool thoroughly with cool, clean water.
10. If repairs are necessary, FLUSH COOLING SYSTEM and re-test after repairs have been made.

If a leak is indicated, the exact location may be determined by rerunning the test each time with the fuel/spark disconnected on a different cylinder until the faulty cylinder is identified.

If radiator opening is greater than 1 ¾", place Large Engine Adaptor accessory (sold separately) over radiator neck and plug overflow outlet, if equipped, to ensure an airtight seal.

If one-way check valve in **bottom cap** or **aspirator bulb** becomes sticky, gently tap on a hard surface until valve becomes free and "rattles".

See your dealer for replacement test fluid, accessories or parts for your Block Tester™. In the unlikely event your Block Tester™ malfunctions due to defects in materials or workmanship, please return it to its place of purchase for a replacement.

#### FLUID SHELF LIFE:

Fluid should be used within one year. For maximum shelf life, fluid should be stored in a cool, dark area (DO NOT STORE IN DIRECT SUNLIGHT). If fluid is green or yellow-green, discard and obtain fresh fluid.

Visit us on the web at [www.blocktester.com](http://www.blocktester.com) for additional instructions and tips.

