longacre® Monroe, Wa. 360 453 2030 www.longacreracing.com

Engine Leak Down Tester

Digital and Analog Models

Step 1: Warm up motor to operating temperature.

Step 2: Remove all spark plugs, put transmission in neutral, block wheels.

Step 3: Remove rocker arms of cylinders to be checked

Step 4: ⚠ Important WARNING: TURN THE MOTOR OVER SO THE PISTON OF THE CYLINDER TO BE TESTED IS AT BOTTOM DEAD CENTER OR AT **EXACTLY** TOP DEAD CENTER (TDC). If not the motor will suddenly turn over when you connect the air line. This could cause serious injury or death.

Step 5: Screw the included hose into the spark plug hole just tight enough so it doesn't leak (**ANY** leakage will give you a false reading).

Step 5.5: Digital only: Turn on both gauges and zero if Primary gauge (left) is not at 0.0 and Secondary gauge (right) is not at 100.0. (these read to .5). DO NOT re-zero after this.

Step 6: Close the lever ball valve. Connect the tester to the hose and then the tester to your air line (must be over 105 psi). **SLOWLY** open the ball valve.

Step 7: Adjust the regulator knob on the tester until the left gauge reads exactly 100.0

Step 8: Read the leakdown on the right gauge.
It will be somewhere between 3 - 5% (fresh engine) and 20 - 30% (very tired engine). Consult your engine builder on what to expect or use your own experience. Different ring combinations and cylinder finishes can give different leakdowns. He will also advise you at what point you need a rebuild. Of course you can also use your own experience as a guide.

Step 8: Close the ball valve. Disconnect the hose to the engine. Repeat all steps above for the other cylinders to be tested.

Step 8.5: Digital only: Shut off gauges. They do not have an auto-off feature,

Do not drop the unit. Keep it clean and dry. Do not connect to an airline of more than 175 psi.

Leakdown normally comes past the rings. However if your leakdown is excessive listen for a leaking valve at the carb (intake valve) or at the exhaust (exhaust valve). It is a good idea to check several cylinders and keep a record of the leakdown and the number of laps run.