

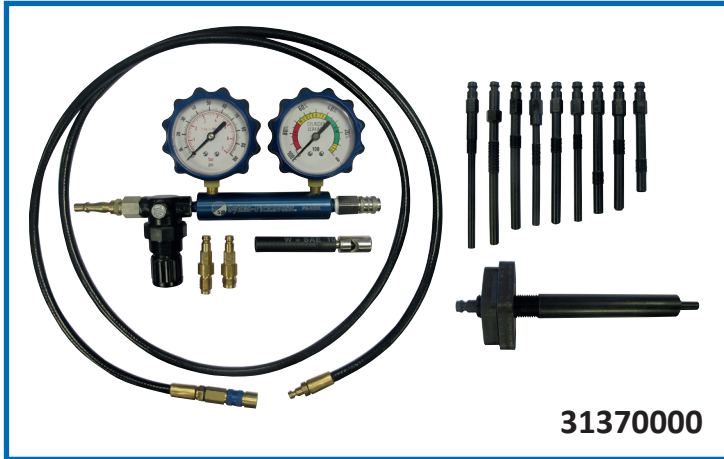
31370000 - Combined Petrol & Diesel Cylinder Leakage Tester Kit

31370500 - Petrol only Cylinder Leakage Tester Kit

SAFETY INFORMATION

Be certain that the vehicle is in "Park" or "Neutral" and hands are clear of engine compartment, as engine rotation may occur while using this tool.

- Wear safety goggles
- Avoid excess fuel spillage
- Do not smoke or cause sparks or flames within the vicinity
- Check all connections for leaks before and after testing
- Do not touch engine components that are hot



- Pin-points problem shown by compression test or cylinder balance test.
- Uses shop air to determine leakage source and the amount of leakage measured in percentage of loss.
- The pressure gauge monitors inlet pressure to ensure accurate testing.
- Leak down gauge measures the percentage of compression leakage.

HOW IT WORKS

1. Regulated shop air is supplied to each cylinder and the gauge measures the rate of leakage.
2. Remove oil dipstick and radiator cap and disconnect one end of PCV hose. If vehicle has a carburetor, remove air filter and open throttle all the way. If vehicle is fuel injected, remove air filter or throttle body hose to listen at the throttle body.
3. To locate the source, listen at these places:
 - A. Oil dipstick tube for bad rings
 - B. Radiator filler for cylinder wall cracks or head gasket
 - C. Adjacent spark plug hole for cylinder wall cracks or head gasket
 - D. Tail pipe for exhaust valve leakage
 - E. Carburetor air horn for intake valve leakage
 - F. Fuel injection throttle body for intake valve leakage

HOW TO USE TESTER

IMPORTANT – Be sure that the regulator knob is turned FULLY counter-clockwise before connecting to shop air. Over-pressurised gauges are not guaranteed.

1. Run engine until it reaches operating temperature.
2. Remove car parts specified in (2) above and disable the ignition system.
3. Remove all of the spark plugs and position the cylinder being tested to approximate top dead centre on the compression stroke so both valves are closed. Rotate engine only in correct engine rotational direction.

To position the cylinder correctly:

- A. Rotor points to cylinder coming up on compression.
- B. Piston is at approximately top dead centre when reluctor teeth align with stationary core.
- C. A whistle that whistles on the compression stroke and stops at approximately top dead centre can be quickly coupled to the cylinder hose of the tester.
4. Turn the regulator knob fully counter-clockwise. Then connect shop air 100–150 PSI to the regulator without the cylinder test hose connected. Turn regulator clockwise until the percentage gauge reads zero at the end of the yellow set band.
5. Screw the cylinder test hose into the spark plug hole and then connect the cylinder test hose to the gauge set. The amount of leakage will now show on the gauge as a percentage loss. Locate the source of leakage - if it is excessive, listen at places listed in (3) above.
6. Test the rest of the cylinders and compare leakage to determine which cylinders are bad.

IMPORTANT

This cylinder leakage tester was designed to work with other thread size compression test adaptors that are available from Sykes-Pickavant.

HELPFUL HINTS

1. If 100% or excessive leakage shows on the percentage gauge, the cylinder may not be at approximately top dead centre on the compression stroke. Check to make sure that the cylinder is correctly positioned so valves are closed. Try to position just before top dead centre for uniform results.
2. Like in compression testing, it is important that all cylinders have fairly uniform readings. Differences of 15 to 30% indicate excessive leaking. Large engines tend to leak more than small ones.
3. There will always be some leakage past the rings - even in a new engine.
4. The lower the pitch of the leakage sound, the greater the leakage.
5. Good listening devices are a length of hose or a mechanics' stethoscope with the probe removed.
6. Gauge readings may easily vary 10% or more when making repeat tests on the same cylinder(s). The piston position and the temperature of the engine can cause readings to vary.

Also compatible with glowplug adaptors and sparkplug adaptors from the following kits: 31427500 / 31400300 / 31405000

Note: Glow plugs also available for older vehicles - please contact Sykes-Pickavant for details

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