5583

LASER®

Water Pump Tester

0-15psi | 0-1 Bar

Guarantee

If this product fails through faulty materials or workmanship, contact our service department direct on: **+44 (0) 1926 818186.** Normal wear and tear are excluded as are consumable items and abuse.

TOOL CONNECTION
The Complete Connection

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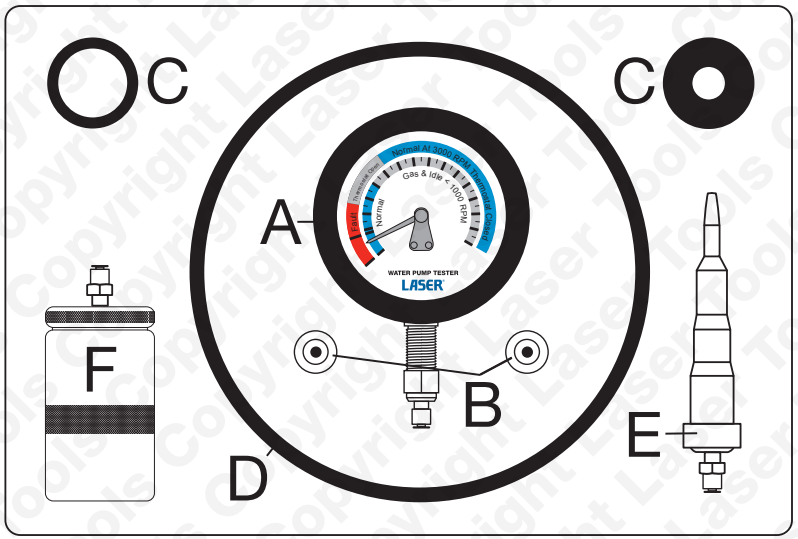
Water Pump Tester - In situ

The Water Pump Tester has been developed to test the function of mechanically driven cooling system water pumps in situ, while the engine is running. The analyser gives an effective indication of the coolant flow by measuring the smaller pressure rises that occur due to the coolant flowing around the block.

This product can help in identifying pump issues due to damaged impellers, seizing impeller shafts and excessive water pump belt or drive slippage. Many modern pump impellers are made of plastic and can break up without showing any external leaks. This kit can help to identify these issues prior to stripping the engine thus making a more effective and less time consuming

Kit Components

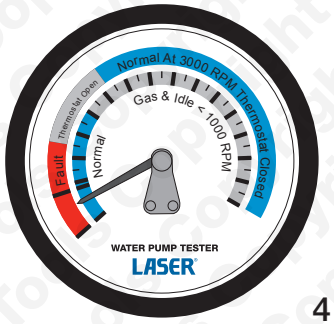
Code	Description
A	Gauge (low pressure 0-15psi)
B	Blanking plugs x 2
C	Rubber pipe seals x 2
D	6mm plastic hose (2m)
E	Male hose connector
F	Pipe connector body (two-piece)



Warning

- Engine must be cold prior to testing.
- Wear hand and eye protection.
- Be very careful when working with hot, pressurised cooling systems; there is a high risk of serious scalding.
- Keep tool set clean and in good condition; do not use tester and hose adaptors if damaged.
- Always refer to the manufacturer's service or diagnostic instructions to establish the correct procedure. These instructions are provided as a guide only.

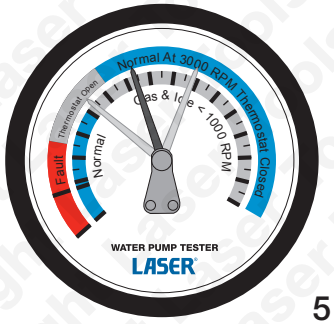
Safety First. Be Protected.



4

Reading at 2500 to 3000 RPM taken from outer scale: 2500 to 3000 RPM = no rise in pressure.

BAD READING: indicating impeller broken or seized.



5

Reading at 2500 to 3000 RPM taken from outer scale: 2500 to 3000 RPM = needle oscillating more than two divisions.

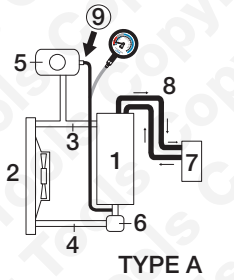
BAD READING: indicating pump slippage, impeller damage or shaft damage.

Note:
This kit cannot detect leaks in the cooling system, damaged seals, collapsed hoses or blockages. If no gas is detected and the pump shows a normal reading then any overheating may be due to a faulty thermostat, fuel mixture, leaks, collapsed hoses, defective pressure cap or a blockage in the cooling system.

Instructions for Use

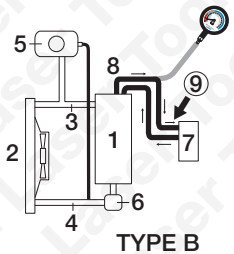
Pre-test requirements:
- Engine must be cold
- Thermostat fitted and closed
- Coolant level correct with no air locks
- Pay attention to safety care points listed.

Connection Procedure:
The connection procedure will vary according to the type of cooling system fitted to the vehicle:



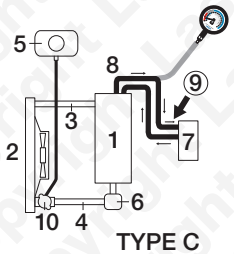
TYPE A

For vehicles fitted with a pressurised expansion tank where there is an auxiliary pipe fitted that connects directly between the expansion tank and engine side of the thermostat (refer to **Type A diagram**). All that is required is to disconnect this pipe from the expansion tank and connect the 5583 gauge to the pipe. Blocking off the open expansion tank can reduce spillage but is not required for the test.



TYPE B

Some vehicles that are fitted with a pressurised expansion tank have the auxiliary pipe on the radiator side of the thermostat (**Type B**); the gauge connection needs to be made via a pipe that has direct access to the engine block. In most cases this would be via the heater pipe that feeds the HVAC | heater matrix from the engine.



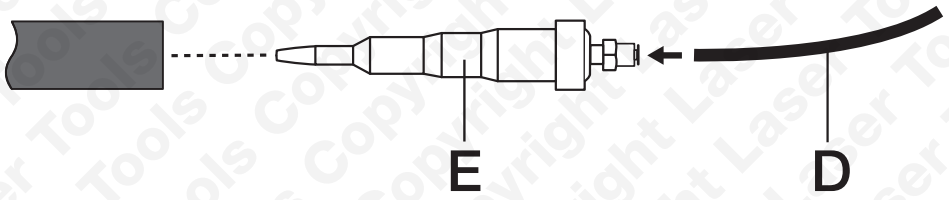
TYPE C

For vehicles that are not fitted with a pressurised expansion tank (**Type C**), the gauge connection needs to be made via a pipe that has direct access to the engine block. In most cases this would be via the heater pipe that feeds the HVAC | heater matrix from the engine.

1	Engine
2	Radiator
3	Bottom radiator hose
4	Top radiator hose
5	Expansion tank
6	Thermostat housing
7	HVAC / radiator matrix
8	Heater hose
9	Recommended gauge connection
10	Radiator cap.

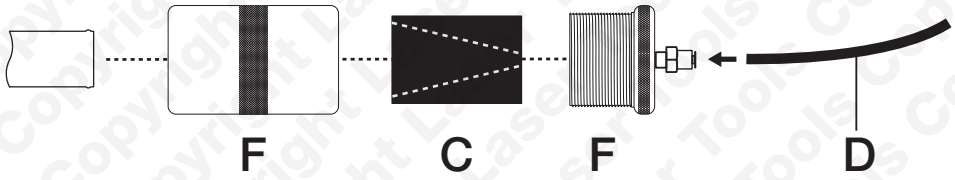
Connection Options

Connecting to hoses:
Slide the male hose connector (**E in components diagram**) into the hose as far as it will go. Secure with hose clip if required. Connect one end of the 6mm plastic hose (**D**) to **E** (push-fit) and the other to the gauge.

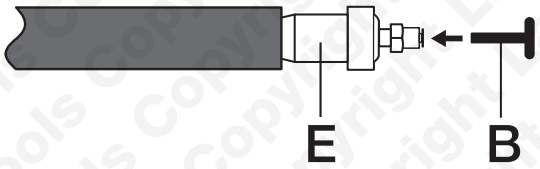


To disconnect the plastic hose from the push-fit connectors, simply push the outer collar of the push-fit connector inwards and withdraw the plastic hose.

Connecting to hard pipes:
Use the 2-piece pipe connector (**F**) and appropriate pipe seals (**C**) according to the pipe size being connected to. Refer to diagram; unscrew to top section of **F** and insert pipe seal **C** with the wider internal diameter towards the pipe to be sealed. Refit the top section of **F** and lightly tighten. Push the assembly over the pipe to be sealed and tighten top section of **F** to provide a better seal. Connect one end of the 6mm plastic hose (**D**) to **F** (push-fit) and the other to the gauge.

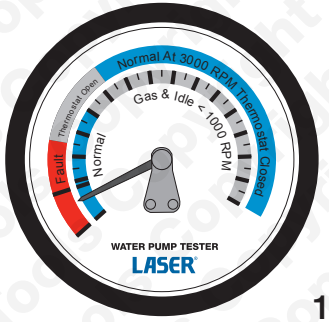


In some cases it will be necessary to seal off an open pipe to prevent excessive coolant loss. Use an adaptor as above and then seal the adaptor with component **B**.



Expected Readings and their Definitions

Gauge readings at idle (read off inner scale):

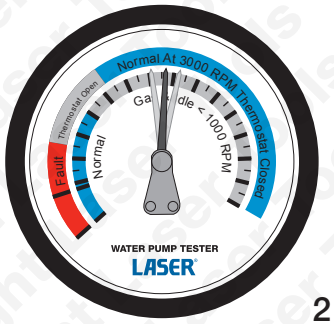


1

Idle (less than 1000 RPM) = steady needle in the blue zone.

GOOD READING

With the engine running at idle expect to see no significant rise in pressure. Needle should be steady.

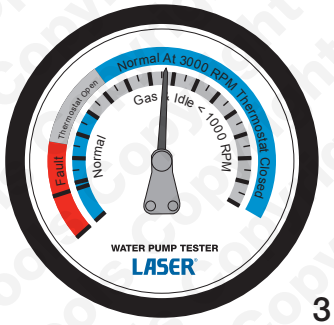


2

Idle (less than 1000 RPM) = needle pressure climbing quickly or an oscillating needle as shoe:

GAS PRESENT in the block, possible head gasket failure

Reading at 2500 to 3000 RPM taken from outer scale:
(Note: a slight oscillation of the needle at 2500 to 3000 RPM (less than two divisions) is acceptable.



3

Reading at 2500 to 3000 RPM taken from outer scale: Needle pressure should climb with RPM and remain steady.

GOOD READING