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314200V3 – Diesel Engine Compression Test Kit - Car

NOTE: IN ALL INSTANCES ENGINE MANUFACTURER PROCEDURES SHOULD BE FOLLOWED

DUMMY GLOW PLUG METHOD

This is generally the preferred test method as avoids potential damage to the injector and fuel system contamination.

1. Run engine and warm up to normal operating temperature.

2. Disconnect supply to heater plug relay. Remove glow plug from cylinder and fit the appropriate dummy glow plug.
Warning: Do not exceed manufacturer's glow plug torque setting figure when securing dummy glow plug.

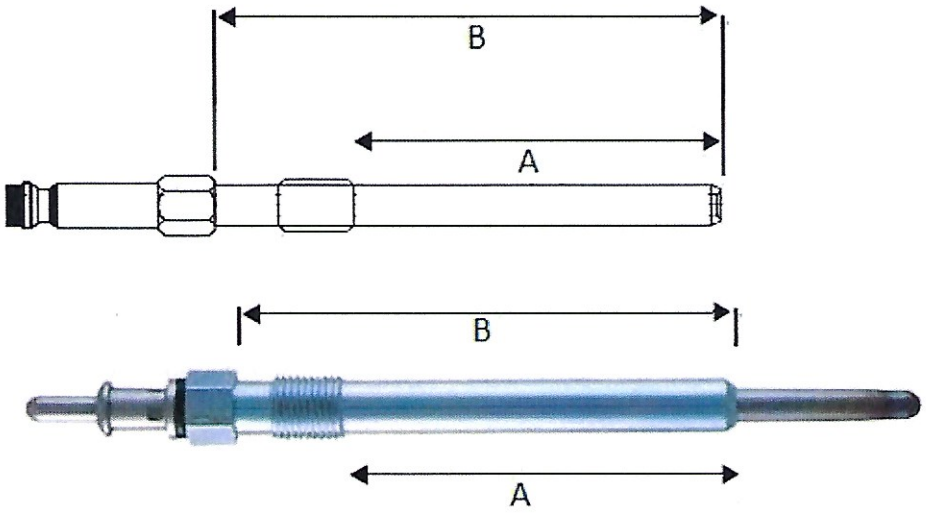
When selecting a Dummy Glow Plug

The application guide list has been compiled from both our testing and customer feedback and there are some tips listed below to help insure the correct adaptor is selected. There will be other applications on older vehicles covered by this kit and using the tips below, will help you identify if this is possible.

2a Check thread diameter and pitch of glow plug against dummy glow plug.

2b Section A on the dummy glow plug has to be at least the same length as section A on the glow plug. This can be slightly longer if there is still enough thread left to secure the dummy glow plug in place for the test.

2c Section B on the dummy glow plug has to be the same or greater than section B on the glow plug, to allow the dummy glow plug to seat correctly.



Note: Where access is an issue fitting and securing a dummy glow plug, the extension can be used (glow plugs can be fitted to the extension first and then fitted to engine - ideal when access is an issue)

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3. When cranking, stop the fuel supply by either:
- Disconnecting the fuel pump solenoid
- Manually using the "pull to stop" knob
When running tests are required, unfasten the fuel line from the appropriate injector and re- direct fuel into a suitable container.

4. Couple the tester assembly onto the dummy glow plug or extension.

5. Check the battery condition before cranking tests. Approximately 8-10 cranking cycles should be enough to indicate the cylinder pressure. For running test, start the engine and perform the compression test at idle or full revs as required. Check engine manufacture's specification against results.

6. In order to repeat test on same cylinder, the gauge pressure can be released by pressing the relief valve button.

7. To repeat the test on other cylinders, stop the engine and connect as appropriate.

Note: A comparison of pressure readings from each cylinder is a better guide to condition of valves or piston rings than a single cylinder test.

DUMMY INJECTOR METHOD
1. Run engine to normal operating temperature.
2. Remove the appropriate injector and redirect the fuel line into a suitable container.
3. When a crank test is required, ensure battery is fully charged as this could influence the results.
4. Crank the engine to clear away any debris from the injector port.
5. Place injector end into the extension and by using a combination of clamp plates provided and clamp used to hold the injector in position, secure in place, ensuring the mating faces are sealed. Do not over tighten.
6. Couple the tester assembly onto the dummy injector.
7. Start or crank the engine and perform test. The gauge will display the compression of that cylinder.
8. In order to repeat test on same cylinder, the pressure can be released by pressing the relief valve button.
9. To repeat the test on other cylinders, stop the engine and connect as appropriate.

Note: Check engine manufacturer's specification for compression results. A comparison of pressure readings from each cylinder is a better guide to condition of valves or piston rings than a single cylinder test.

Sykes-Pickavant Compression Testing Tip:
If uncertain of a worn engine when conducting a compression test – carry out and record the results for 2 separate cranking tests on each cylinder as follows for comparison:

1. A "dry" test - A standard engine compression test and no special preparation is required.
2. A "wet" test - For "wet" tests add a small amount of good quality clean engine oil (2 – 3 drops) into compression chamber before the test.
   a. When wear is present between piston rings and cylinder wall – the small amount of oil should work to temporarily seal this gap and restore some missing compression as a result, proving internal wear is present.
   b. Where negligible wear is present, the "wet" test should indicate a very low increase in test results.
   c. 10 - 20% or more of difference between "dry" & "wet" tests indicates internal wear is present.