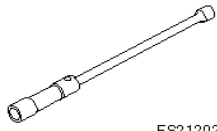
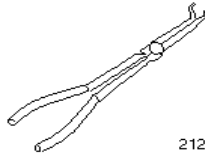


Compression - Engine Hot - Check (21 111 0)

Special Tools



ES21202



21226

21-202 Socket wrench, spark plugs

21-226 Pliers, spark plug connectors

Workshop Equipment

Description	
Compression pressure recorder	Motometer Order No. 623.000.1101
Connector	Motometer Order No. 622.004.1005

Materials

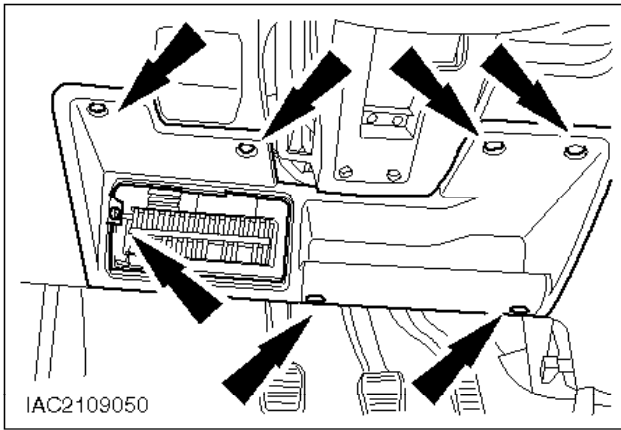
Description	
Spark plug lubricant 'Never-Seeze'	ESE-M1244-A
Silicone grease	A960-M1C171-AA

Measure the compression pressure.

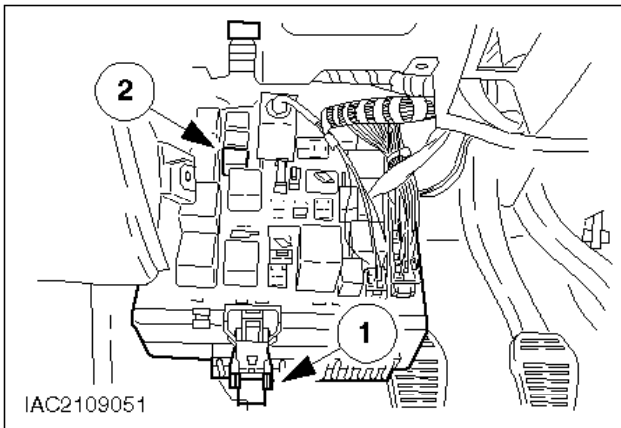
Note:

The different designs of compression pressure recorders and varying starter motor speeds mean that it is usually only possible to check that the compression is equal in all the cylinders. Measurement of the actual compression pressure depends on a number of factors and can only be carried out under certain conditions:

- The engine must be at operating temperature.
- The hydraulic valve tappets must be working. If necessary, run the engine for a few seconds to supply the hydraulic valve tappets with oil.
- The battery must be sufficiently charged.



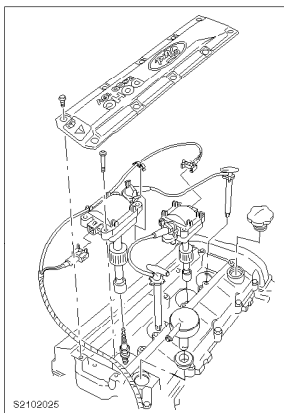
- 1. Remove the instrument trim panel.



- 2. Remove the fuel pump relay.

- 1 Undo the catch and fold down the central junction box (CJB).
- 2 Fuel pump relay (relay R9).

Start the engine: the engine will start, run for a few seconds and then stall.



⚠ CAUTION:

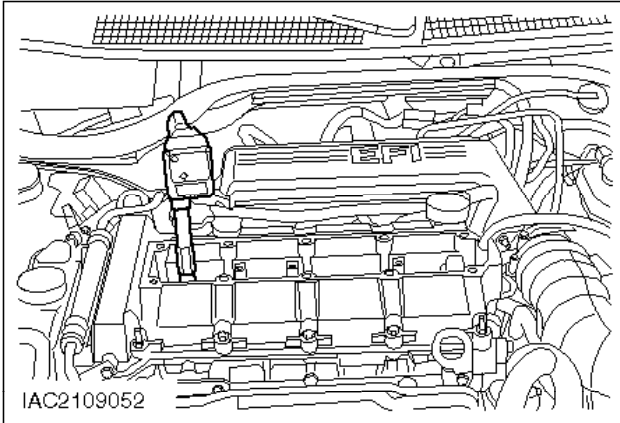
Do not pull on the cable when unplugging the spark plug connectors. If necessary disconnect the ignition cables from the ignition coil to prevent kinking of the cables. Slightly twist the spark plug connectors before pulling them off in order to release the seals.



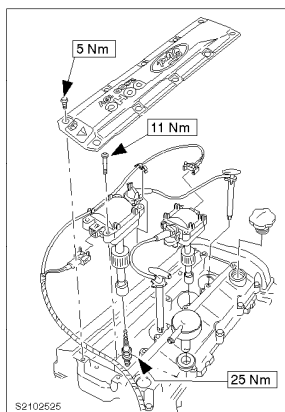
CAUTION:

Pull off the spark plug connectors in a straight line with the axis of the spark plug (use Special Tool 21-226 for angled spark plug connectors).

- ④ 3. Remove the cylinder head cover.
 - Detach the cover from the cylinder head cover.
 - Disconnect the plugs of the ignition coils and remove the engine wiring loom.
 - Remove the ignition coils and the spark plug connectors.
 - Remove the spark plugs using special tool 21-202.
 - Disconnect the positive crankcase ventilation.
 - Detach the cylinder head cover (11 bolts and 4 nuts).



- ④ 4. Measure the compression pressure.
 - Place a piece of graph paper in the compression pressure recorder.
 - Push the compression pressure recorder into the spark plug bore of cylinder no. 1.
 - Crank the engine with the throttle fully open until the pointer of the compression pressure recorder does not rise any further.
 - Reset the compression pressure recorder and get the graph paper ready for the next cylinder.
 - Repeat the procedure for the remaining cylinders.



CAUTION:

Use a blunt object to apply the silicone grease (e.g. a plastic cable tie) to avoid damaging the spark plug connector seal.



CAUTION:

Push on the spark plug connectors in a straight line with the axis of the spark plug.

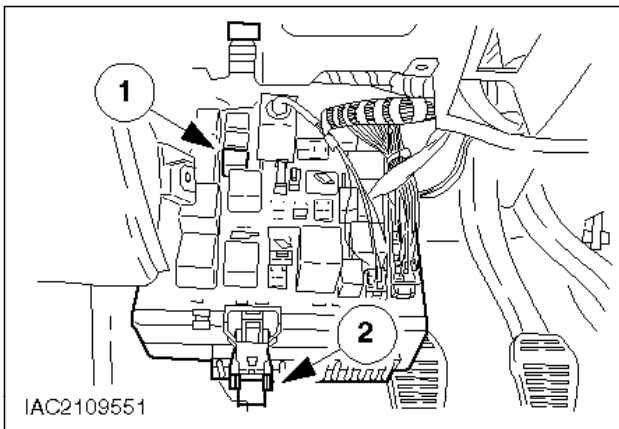
Note:

Coat the inside of the spark plug connectors to a depth of 5-10 mm with silicone grease (A960-M1C171-AA).

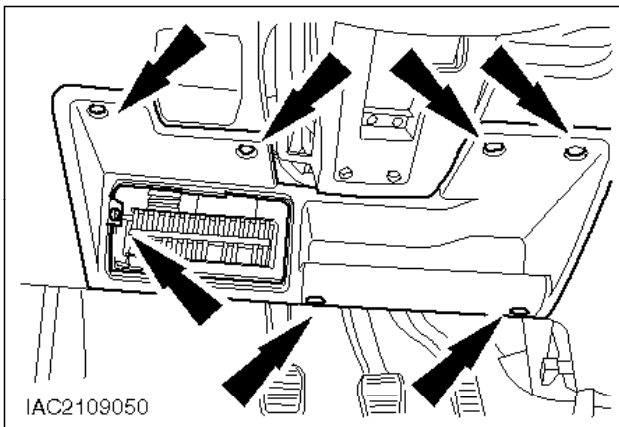
Note:

Apply lubricant 'Never Seize' (ESE-M1244-A) to the spark plug thread.

5. Fit the cover to the cylinder head cover.
- Connect the positive crankcase ventilation.
 - Install the spark plugs using special tool 21-202.
 - Install the ignition coils and spark plug connectors.
 - Lay the engine wiring loom in the cylinder head cover and connect the ignition coil plugs.
 - Attach the cover to the cylinder head cover.



6. Fit the fuel pump relay.
- 1 Fit the fuel pump relay (relay R9).
 - 2 Fold up the CJB and close the catch.



7. Fit the instrument trim panel.
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