Mazda - warning message displayed: System check required Error code P258B-00

Data sheet	
Manufacturer	Mazda
Vehicle model	CX5 GH/KE with automatic transmission
Engine	2.2 16V CDI Skyactiv-D
Engine code	SH-Y4
Year of manufacture	2013-2017
Symptoms	Warning message displayed: System check requiredError code P258B-00 / Vacuum pump is displayed intermittently.
Recommended HGS tool	macs X

Important safety information

Warning message in the instrument cluster: ‘System check required’ – Error code P258B-00 / Vacuum pump Carry out performance check on vacuum pump

If the error message "System check required" is displayed in the instrument cluster on the above-mentioned vehicle model, and at the same time the error code 258B-00 can be read out, this could be caused by a defect in the mechanical vacuum pump.

The engine control unit uses the stored algorithms to detect that the vacuum pump is unable to generate the required vacuum. In some cases, the fault can be cleared and only reappears after driving for a longer period.

If no other fault has been identified in the vacuum system during troubleshooting, it is advisable to take a closer look at the pump’s vacuum readings.

A test can be carried out as follows:

- Connect the diagnostic device and select the Parameters function.
- Select the value for the brake booster vacuum sensor.
- Let the engine idle, wait for about 30 seconds, then read the measured value.
- Then depress the brake pedal about 5 times. The measured value should rise.
- Once you have stopped operating the pedal, check the vacuum reading. The reading should drop below 0.10 bar after 20 seconds.
- Repeat the test 2–3 times.

If the value is above 0.10 bar and can be reduced by increasing the engine speed, this usually indicates that the pump is faulty.

In our workshop case, the value was 0.12 bar and reached a maximum of 0.10 bar as the speed increased. After the pump had been replaced, a reading of 0.08 bar was recorded in three consecutive tests.

Please always observe the maintenance and repair instructions provided by the vehicle manufacturer when carrying out such work!

Repair instructions

In some cases, poor pump performance may be caused by worn camshafts. Swarf in the pump will impair its mechanical operation, resulting in a slow or inadequate vacuum and often necessitating the replacement of the camshaft and the pump.

In such a case, before replacing the vacuum pump, the mechanics of the engine should be checked for wear and the engine oil for swarf.

Please note

This defect may also occur in other vehicle models that have the same type of engine design/equipment.