Electrical exhaust gas recirculation valve | HELLA

Failure causes and troubleshooting

General information

EGR valves are installed in a bypass channel between the intake manifold and the exhaust manifold.



Impact of failure

A failure of the exhaust gas recirculation may be noticed as follows:

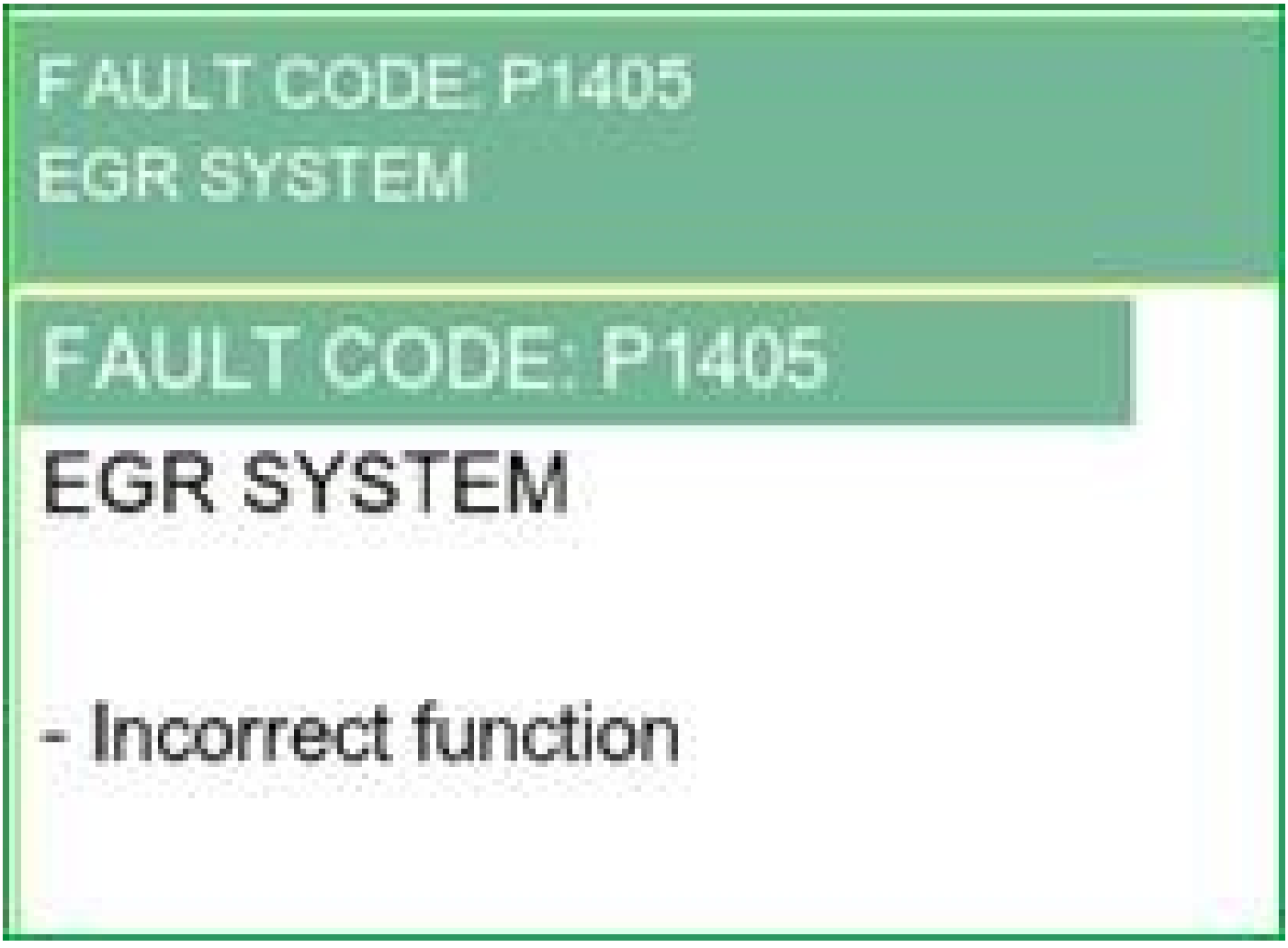
Causes of failure

Causes of failure may be:

Troubleshooting

The following points should be considered:

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Example diagnostics

In the following, we would like to present the testing options on a removed exhaust gas recirculation valve.

Electrical test

The resistance between the contact pins in the valve connector is measured at room temperature using a multimeter. Please always observe the information provided by the vehicle manufacturer when performing these tests.

Measurement:

1. connectors A and E = resistance 5.25 - 5.85 Ω



Solenoid voltage test

Solenoid to a fused voltage supply, battery or power supply, connect with 12.0 to 13.5 volts.



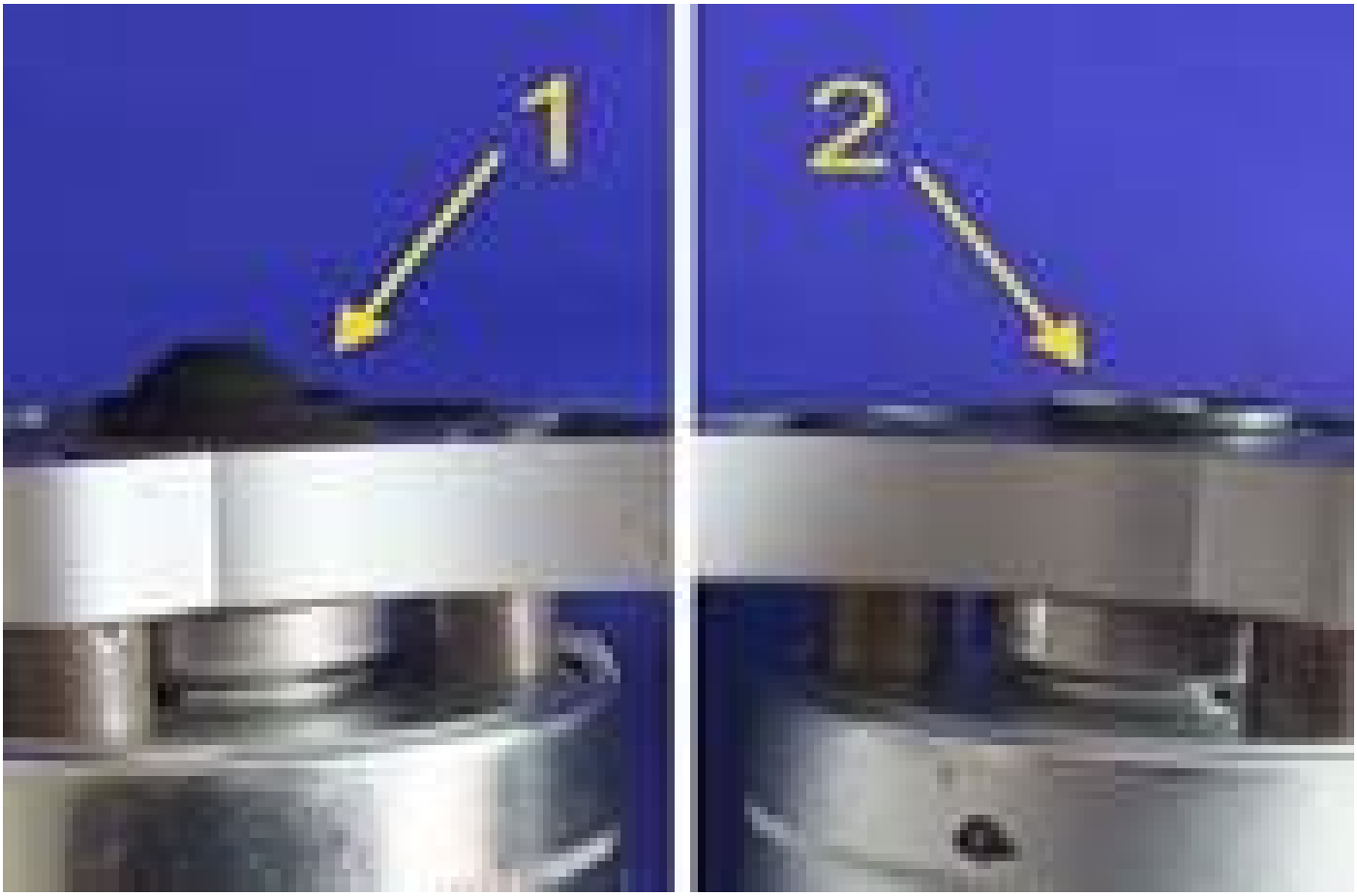
Result

Although the electrical tests reveal no defects, it was clear to see that the valve is defective during the mechanical test. The valve pintle jams when open and cannot be moved by the tensile force of the solenoid.



Comparison with a new EGR valve

As can clearly be seen in the image, the contaminated EGR valve (1) is already open in de-energized state.



Note

More information on exhaust gas recirculation can be found at: