



THE RELIABLE PART

Troubleshooting guidelines: EGR valves





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01 Be careful with ESD sensitive valves

Be careful with ESD sensitive EGR valves - all EGR valves that have a warning that the valve is ESD sensitive, **do not touch** the plug or plug pins.

02 Check that the new valve matches the old one

Check the new EGR-valve against the old EGR-valve and compare them carefully. Check the OE number from the old EGR-valve match or crosses direct to the new.

03 Find the root cause of contamination and clean the pipes if needed

Inspect and clean the connecting pipes. If significant contamination is found, the pipes must be dismantled for proper cleaning, or changed. It is important to determine the reason for the contamination, and repair it. If the reason is not found, the EGR-valve will fail soon due to contamination.

04 Always use the new gasket

Always use the new gaskets supplied with the EGR-valve.

05 If needed, synchronise the valve with the ECU

Make sure, if the ECU of the specific vehicle needs to be synchronised with the new EGR-valve. Your diagnostic equipment normally have this function.

06 Some smoke may appear after the installation

A while after installation of the new EGR-valve, the vehicle might show some smoke and soot in the exhaust. The reason is that the engine is adapting to the new valve.



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POSSIBLE ERRORS

Problem	Cause	How to identify	Why the problem occurs	Solution	Preventive actions
<p>If the engine light still comes on in the dash after changing the EGR valve, the engine is possibly not running well.</p> <p>Error codes: 403 - 408</p>	<p>The valve has to be learned by the cars ECU using a suitable test device.</p>	<p>The valve is opening but the engine light is still on.</p>	<p>The signal from the valve has to be adapted to the ECU of the car.</p>	<p>Use suitable tester to delete error codes, and adapt the new valve to the car. Some cars need OE tester to adapt.</p>	<p>None.</p>
<p>If the engine light still comes on in the dash after changing the EGR valve, the engine is possibly not running well.</p> <p>Error codes: 400 - 401</p>	<p>Insufficient vacuum to operate the valve.</p>	<p>Check with a hand pump, if the vacuum is present at the valve.</p>	<p>Pressure transducer is not ok, or the vacuum line is damaged or bent.</p>	<p>Replace vacuum line or pressure transducer as needed.</p>	<p>Before changing a valve, check if the vacuum is present, operate the valve with a hand pump, and check if the vacuum is maintained.</p>
<p>If the engine light still comes on in the dash after changing the EGR valve, the engine is possibly not running well.</p> <p>Error codes: 400 - 401</p>	<p>Passage to or from the valve is clogged by soot.</p>	<p>Visually check if there is passage, or check if exhaust gas is able to pass through the pipes.</p>	<p>Over the excessive amount of soot can build up, or problems in injection or driving patterns can cause a buildup of soot.</p>	<p>Cleaning.</p>	<p>Always clean passages when replacing an EGR valve. Check that the injection system is performing well, and the DPF should not be clogged</p>



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POSSIBLE ERRORS

Problem	Cause	How to identify	Why the problem occurs	Solution	Preventive actions
<p>If the engine light still comes on in the dash after changing the EGR valve, the engine is possibly not running well.</p> <p>Error codes: 401 - 402</p>	<p>Air mass sensor defective.</p>	<p>Check with diagnostic tester that the air mass is as expected at idle, as well as an increased RPM and EGR closed.</p>	<p>Air mass sensors are often soiled or worn out.</p>	<p>Replace air mass sensor.</p>	<p>Before changing an EGR valve, always check that the air mass sensor is working.</p>
<p>If the engine light still comes on in the dash after changing the EGR valve, the engine is possibly not running well.</p> <p>Error codes: 401 - 402</p>	<p>An excessive buildup of soot.</p>	<p>The valve and surrounding pipes are clogged by excessive amounts of soot. The valve is either not opening or closing completely.</p>	<p>Faulty injection system, excessive oil leakage from turbo or crank ventilation causing massive soiling of the valve and intake. This can also be caused by driving pattern - too many short trips.</p>	<p>Locate the faulty components and replace them. Clean pipes and intake. Replace the valve.</p>	<p>In some cases, additives for cleaning injectors are used on a regular basis will increase the lifetime of the injectors.</p>