

# Engine Emission Control - ID4 2.2L Diesel - Engine Emission Control

Diagnosis and Testing

## Overview

For information on description and operation:

REFER to: [Engine Emission Control](#) (303-08 Engine Emission Control - ID4 2.2L Diesel, Description and Operation).

## Inspection and Verification

1. Verify the customer concern.
2. Visually inspect for obvious signs of mechanical or electrical damage.

### Visual Inspection Chart

Mechanical	Electrical
<ul style="list-style-type: none"> <li>● Engine breather hoses</li> <li>● Oil separator</li> <li>● Exhaust gas recirculation (EGR) pipes (check for cracks, leaks at joints or gaskets)</li> <li>● EGR valve</li> <li>● EGR cooler(s)</li> </ul>	<ul style="list-style-type: none"> <li>● Fuse(s)</li> <li>● Wiring harness</li> <li>● Loose or corroded electrical connector(s)</li> <li>● EGR valve</li> <li>● Engine control module (ECM)</li> </ul>

3. If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.
4. Use the approved diagnostic system or a scan tool to retrieve any diagnostic trouble codes (DTCs) before moving onto the symptom chart or DTC index.
  - Make sure that all DTCs are cleared following rectification.

## Symptom Chart

Symptom (specific)	Possible cause	Action
Difficult to start	<ul style="list-style-type: none"> <li>● Exhaust gas recirculation (EGR) valve stuck open</li> </ul>	<p><b>NOTE: Confirm that the latest level throttle-EGR-inlet valve is installed. Using the manufacturer approved diagnostic system check and install latest relevant level of software to the engine control module</b></p> <p>Check the EGR valve and circuits. Refer to the electrical guides. Check the mechanical condition of the EGR valve. Rectify as necessary.</p>
Poor/Erratic idle		
Lack of power when accelerating		
Engine stops/stalls	<ul style="list-style-type: none"> <li>● Exhaust gas recirculation (EGR) valve stuck open</li> <li>● Breather system disconnected/restricted/blocked</li> </ul>	<p><b>NOTE: Confirm that the latest level throttle-EGR-inlet valve is installed. Using the manufacturer approved diagnostic system check and install latest relevant level of software to the engine control module</b></p>
Excessive fuel consumption	<ul style="list-style-type: none"> <li>● Exhaust gas recirculation (EGR) valve stuck open</li> <li>● EGR not operating</li> <li>● Breather system restricted/blocked</li> </ul>	<p>Check the EGR valve and circuits. Refer to the electrical guides. Check the mechanical condition of the EGR valve. Check the engine breather system. Check the oil separator. REFER to: <a href="#">Engine Emission Control</a> (303-08 Engine Emission Control - ID4 2.2L Diesel, Description and Operation). Check for DTCs indicating an EGR valve, throttle or sensor fault. Rectify as necessary.</p>
Excessive black smoke		
Excessive emissions		
Excessive blow-by	<ul style="list-style-type: none"> <li>● Breather system restricted/blocked</li> </ul>	<p>Check the engine breather hoses. Check the oil separator. REFER to: <a href="#">Engine Emission Control</a> (303-08 Engine Emission Control - ID4 2.2L Diesel, Description and Operation). Rectify as necessary.</p>
Engine oil leaks	<ul style="list-style-type: none"> <li>● Breather system restricted/blocked</li> </ul>	<p>Check the engine breather hoses. Check the oil separator. REFER to: <a href="#">Engine Emission Control</a> (303-08 Engine Emission Control - ID4 2.2L Diesel, Description and Operation). Rectify as necessary.</p>

For a complete list of all diagnostic trouble codes that could be logged on this vehicle, please refer to Section 100-00. REFER to: [How To Use This Manual](#) (100-00 General Information, Description and Operation).