P0490

Fault code description

EGR valve - Short circuit to supply on ECU (D375) pin (C5)

Possible cause

1. Faulty sensor
2. Faulty wiring
3. Faulty connector

Additional information

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Set condition of fault code

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Reset condition of fault code

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P0490, Diagnostic information

Technical data

"EGR valve sensor (L033)"

Location of component(s)

"Location information, PMCI-2"

Electrical diagram(s)

"PMCI-2"

Description of component(s)

"EGR valve sensor (L033)"

Block diagram

"PMCI-2"

Step by step troubleshooting

Please perform the troubleshooting steps below by utilising the breakout harness if necessary to check electrical components such as sensors, electrical control units or harnesses. Back probing is not recommended as it could damage the harness. The ignition should always be in the OFF position when connecting or disconnecting electrical components to reduce the likelihood of damage to electrical components.

- This troubleshooting tree is based on the assumption that supply power and earth to the PMCI are functioning properly.
- Disconnecting the PMCI connectors during the troubleshooting process will result in multiple errors.
- For specific electrical component information and pin out locations, always refer to the technical data in Rapido.
- It is necessary to exit the 'active errors' screen in DAVIE and run the diagnostic test again to identify any change in errors.
- Remember that the truck's operational or mechanical issues may be the root cause of both active and inactive codes. Refer to the 'possible causes' section in Rapido.

Step 1

Visual inspection - Visually inspect all applicable connectors and harnesses for corrosion, damage and rubbing during each step of the diagnostic procedure. Proceed to step 2.

Step 2

With key OFF, disconnect the engine harness from the EGR valve. With key ON, read the voltage on the harness at pin 3.

- If the voltage is approximately 5 V – Proceed to step 3.
- If the voltage is less than 4 V or higher than 6 V – Proceed to step 4.

Step 3

With key ON, read the voltage on the engine harness while performing a gentle wiggle test on the EGR wire harness.

- If the voltage changes – Repair or replace the engine harness.
- If the voltage remains constant – Proceed to step 4.

Step 4

With key OFF, disconnect the engine harness from the EGR valve. Measure the resistance across the actuator at pins C51 to C05.

- If the resistance is 3.8 ohms +/- 10% at 71.5°F (22°C) – Proceed to step 5.
- If the resistance is not acceptable – Replace valve. Proceed to the verification procedure.

Step 5

With key OFF, disconnect the engine harness from the PMCI, disconnect the EGR connector, and measure the continuity of signal and ground wires

- If there is an open circuit or high resistance – Replace the harness. Proceed to the verification procedure.
- If the circuit test passes – Replace the EGR Valve. Proceed to the verification procedure.

Verification procedure

With DAVIE connected and key ON, clear the errors. Start the engine and let it idle to verify with DAVIE that the errors do not re-occur.

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