P2457

Fault code description

EGR temperature - Data valid but too high

Possible cause

1. Coolant level too low.
2. Reduced coolant flow, EGR cooler.
3. EGR temperature sensor deviation.

Additional information

The EGR gas flow temperature is monitored by the EGR temperature sensor (F749).

Set condition of fault code

The PMCI-2 ECU sets this fault if the EGR temperature is higher than 500°F (260°C) for more than 30 seconds.

Reset condition of fault code

This fault code will change to inactive immediately after the diagnostic runs and passes.

To validate the repair, drive the vehicle until the coolant temperature is at least 70°C [158°F]. Once the minimum target temperature has been reached, perform several low to higher speed accelerations with moderate engine load. Also perform high-load to low-load transitions. This activity should be conducted within the range of 15 km/h [10 mph] to 65 km/h [40 mph] for no more than 5 to 8 km [3 to 5 miles].

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P2457, Diagnostic information

Technical data

-

Location of component(s)

"Location information, PMCI-2"

Electrical diagram(s)

"PMCI-2"

Description of component(s)

-

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 a 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 by step 1: Check fault codes

Troubleshooting steps

1. Turn the key switch ON.
2. Use DAVIE to check for fault codes.

Are related fault codes active?

- Yes – Proceed to the appropriate fault code.
- No – Proceed to step 2

Step by step 2: Coolant level

Troubleshooting steps

1. Check that the coolant level is at the proper level.

Is the coolant at the proper level?

- No – Fill the coolant to the proper level. Check for coolant leaks. Proceed to step 8.
- Yes – Proceed to step 3.

Step by step 3: Check the temperature sensors

Troubleshooting steps

1. The engine must be cold.
2. Turn the key switch ON.
3. Compare the venturi temperature sensor with ambient and other engine temperature sensors. They must be within ±30°F of each other.

Are the temperature sensors within ±30°F of each other?

- Yes – Proceed to step 4.
- No – Contact the Engine Support Center for replacement approval. Proceed to step 8.

Step by step 4: Check the EGR temperature sensor

Troubleshooting steps

1. Check pin C31 of the EGR temperature sensor for a short circuit.

Does the EGR temperature sensor have a short circuit?

- Yes – Replace the sensor. Proceed to step 8.
- No – Proceed to step 5.

Step by step 5: Check the PMCI-2 ECU

Troubleshooting steps

1. Check the connections to the ECU. Look for damage to the harness or insulation, bent, corroded or damaged pins.

Were any issues found?

- Yes – Repair or replace as needed. Proceed to step 8.
- No – Proceed to step 6.

Step by step 6: Check the EGR for blockage

Troubleshooting steps

1. Remove the inlet and the outlet of the EGR cooler.
2. Check the outlet for:
   - blockage
   - face plugging
3. If the EGR cooler seems clogged or plugged, blow shop air from the front to the back through the cooling cells. Be

aware that this may cause a soot cloud.

Is the EGR cooler restricted or blocked?

- Yes – Perform the following actions, as needed:

  If the EGR cooler is still blocked or restricted by soot build-up, see campaign E051 for a cleaning kit.

  If coolant is found, use the EGR cooler pressure test Kit (part number 1903031). Before replacing an EGR cooler, contact the Engine Support Center with the test results.

  Proceed to step 8.
- No – Proceed to step 7.

Step by step 7: Check the components related to EGR for blockage

Troubleshooting steps

1. Turn the key switch OFF.
2. Check these EGR system regions for restrictions or blockages:
   - EGR valve
   - Piping
   - Intake horn/mixer

Were any restrictions or blockages found?

- Yes – Solve the restriction or blockage. Proceed to step 8.
- No – Proceed to step 8.

Step by step 8: Validate repair

Troubleshooting steps

1. Perform the reset condition at the beginning of this document to validate the repair.

Is the repair complete?

- Yes – Troubleshooting complete.
- No – Proceed to step 9.

Step by step 9: Contact PACCAR Engine Support Center

Contact the PACCAR Engine Support Center
for further assistance.

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