P2237

Fault code description

Lambda - Open circuit on ECU (D365) pin (C45)

Possible cause

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

Additional information

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Set condition of fault code

This fault sets when an open circuit is detected on PMCI pin C45 (ion pump cell current) during operation of the lambda sensor.

Reset condition of fault code

This fault is reset when the diagnostic is run with the fault condition not present.

Switch the ignition key off for at least 15 seconds, then switch the key on again. Start the engine and let it idle for 2 minutes and drive the vehicle until the coolant temperature is at least 70°C [158°F].

Once the minimum target temperature has been reached, proceed at a minimum speed of 80 km/h [50 mph] in the highest gear possible with the engine speed between 1100 and 1500 rpm and set the cruise control. This test is best performed with a loaded vehicle/trailer, but if load is unavailable, turn as many engine power consumers on as possible to produce as much as engine load as possible. Perform this test for roughly 5 to 8 km [3 to 5 miles] or in 3 separate 1.5 km [1 mile] increments if a steady 5 to 8 km [3 to 5 miles] is unachievable. Use a flat road, if possible.

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P2237, Diagnostic information

Technical data

"Sensor, lambda (F834)"

Location of component(s)

"Location information, PMCI-2"

Electrical diagram(s)

"PMCI-2"

Description of component(s)

"Lambda sensor (F834)"

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: Visual Inspection

Troubleshooting steps

Visually inspect the associated component connections and wiring for any of the following:

1. Moisture or dirt in the connections.
2. Damage to the wire harness or insulation.
3. Damaged or disconnected ECU connections.
4. Battery damage or loose battery terminals.
5. Incorrectly installed sensor.

Was there evidence of any of the above?

- Yes – Clean, adjust, repair, or replace affected components for any issues identified.

  Use DAVIE to re-check for the presence of active faults. If this fault is no longer active, then this issue has been resolved. If this fault is still active, proceed to step 2.
- No – Proceed to step 2.

Step by step 2: Electrical checks lambda sensor (F834)

Troubleshooting steps

1. Disconnect the lambda sensor (F834) from the engine harness.
2. Measure the resistance between pin 1

and pin 5 of the lambda sensor.

Did the meter indicate an open circuit?

- Yes – Replace sensor. Proceed to step 4.
- No – Proceed to step 3.

Step by step 3: Wiring check

Troubleshooting steps

1. Disconnect the engine harness (J3 or C) connector from the PCI ECU.
2. Place a jumper between pin 1 and pin 5 of the lambda sensor connector (F834).
3. Measure the resistance between pins 45 and 21 of the J3 or C connector of the PCI ECU.

Does the meter indicate an open circuit?

- Yes – Troubleshoot engine harness wiring. Make appropriate repairs or replace harness if necessary. Proceed to step 4.
- No – Proceed to step 5.

Step by step 4: Validate repair

Troubleshooting steps

1. Use DAVIE to re-check for the presence of active faults.

Is the fault code inactive?

- Yes – Issue resolved.
- No – Proceed to step 5.

Step by step 5: Contact PACCAR Engine Support Center

Contact the PACCAR Engine Support Center for further assistance.

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