P009A

Fault code description

Ambient temperature sensor - Data erratic, intermittent or incorrect

The following inputs are used to calculate the air temperature:

- Vehicle speed
- Engine load
- Pre compressor temperature (humidity sensor (F852))
- Fan speed
- Coolant temperature

Possible cause

- Faulty humidity sensor
- Faulty ambient temperature sensor

Additional information

If fault P0072 and/or P0073 are present, solve these first.

Check and compare the ambient air temperature with the actual temperature outside the truck. These should match.

Check and compare the pre compressor temperature (from the humidity sensor) with the intake air temperature while the engine is not running. These should also be about the same.

Set condition of fault code

The PMCI-2 ECU (D365) detects that the measured ambient temperature differs too much from the calculated ambient temperature for more than 300 seconds.

Reset condition of fault code

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

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P009A, Diagnostic information

Technical data

"Sensor, humidity (F852)"

"Sensor, ambient temperature (F748)"

Location of component(s)

"Location information, PMCI-2"

Electrical diagram(s)

"PMCI-2"

Description of component(s)

"Humidity sensor (F852)"

Block diagram

"PMCI-2"

Step by step troubleshooting

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.

The ambient air temperature sensor is normally located on the driver's side mirror. Please use the location information for your respective OEM.

The ambient air temperature sensor circuit is integrated into the engine harness and main cabin harness. Please use the diagram for your respective OEM.

Step 1

Look for other active or inactive fault codes. One or more faults could have been the cause of this fault.

Are there other fault codes?

- Yes – Proceed with other fault codes.
- No – Proceed to step 2.

Step 2

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

- Loose, bent or broken connector.
- Bent, broken, corroded or pushed back pins.
- Moisture or dirt inside the connector.
- Damage to the wire harness or insulation.
- ECU connections are damaged or disconnected.
- There is a problem with the batteries; the contacts are not secure.
- The related sensor is not installed correctly.
- Broken or missing clamps on the air system.
- The Humidity Sensor is broken or incorrectly installed.

Were issues found during the visual inspection?

- Yes – Perform the following:

  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 code is no longer active, then proceed to other active fault codes. If this fault code is still active, proceed to step 3.
- No – Proceed to step 3.

Step 3

If the truck is equipped with an under-the-hood air cleaner, visually inspect for any of the following:

- Improper sealing between the hood and the air cleaner mounting surface.
- Mounting seal is folded over, cut, torn or missing.

Were issues found during the visual inspection of the air cleaner?

- Yes – Perform the following:

  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 code is no longer active, then proceed to other active fault codes. If this fault code is still active, proceed to step 4.
- No – Proceed to step 4.

Step 4

Use DAVIE to monitor the ambient air temperature sensor and the pre compressor air temperature value.

1. While monitoring, no temperature should vary by a value of more than 35°F (20°C).

Do any monitored values vary by more than 35°F (20°C) for more than 5 seconds?

- Yes – Perform the following:

  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 code is no longer active, then proceed to other active fault codes. If this fault code is still active, proceed to step 5.
- No – Proceed to step 5.

Step 5

Air side pressure test.

1. Perform the air side pressure test to determine if there are any leaks in the air system.

Are there air leaks?

- Yes – Perform the following:

  Find and make the appropriate repairs or component replacements.

  Use DAVIE to re-check for the presence of active faults. If this fault code is no longer active, then proceed to other active fault codes. If this fault code is still active, contact the PACCAR Engine Support Center.

- No – Contact the PACCAR Engine Support Center for further assistance.

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