

P3969

Fault code description

Tank heater valve - Heating error

Possible cause

1. Blocked or restricted coolant flow to the DEF tank heater
2. Disconnected or broken tank heater coolant supply hose
3. Engine coolant level low
4. Malfunctioning or stuck closed DEF tank heater control valve
5. Malfunctioning DEF tank temperature sensor
6. Operation in extremely cold ambient conditions

Additional information

The pump module will purge and DEF injection is disabled.

This fault may result in engine torque reduction or vehicle speed limiting.

Set condition of fault code

The EAS-3 ECU detects the DEF tank temperature did not increase over a calibratable amount of time when the DEF tank heater valve was commanded on.

Reset condition of fault code

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

This fault code will change to inactive once the DEF tank heater is able to adequately maintain the tank temperature.

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P3969, Diagnostic information

Technical data

["Valve, tank heater \(L076\)"](#)

Location of component(s)

["Location information, EAS-3"](#)

Electrical diagram(s)

Refer to the OEM service manual for more information.

Description of component(s)

["Valve, tank heater \(L076\)"](#)

Block diagram

["Block diagram EAS-3"](#)

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.



- Disconnecting the EAS 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.
- It is necessary to exit the fault code menu 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 fault codes. Refer to the 'possible causes' section.

Step by step 1: Check fault codes

Step 1A: Check for fault codes

Troubleshooting steps

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

Is fault code P3853, P3854, P3855, P3856, P3868, P3870, P3871, P3872, P3873, P3875, P3877, P3878, P3880, P3883, P3904 or P3905 active?

- **Yes** – Proceed with the appropriate fault code
- **No** – Proceed to step 2A

Step by step 2: Check the DEF tank heater system

Step 2A: Check the DEF tank heater coolant lines

Troubleshooting steps

1. Turn the key switch OFF.
2. Inspect the tank heater coolant lines and connectors for:
 - leaking or damaged coolant lines
 - kinked, restricted or blocked coolant lines
 - loose connections
 - leaking seals and gaskets



Refer to the OEM service manual for details on coolant line routing and flow.

Are leaks or damage found in the tank heater system?

- **Yes** – Repair or replace the leaking or damaged coolant lines, fittings or seals. Verify that the engine coolant level is within normal operating range before returning to service. Proceed to step 4A
- **No** – Proceed to step 2B

Step 2B: Check the engine coolant level

Troubleshooting steps

1. Turn the key switch OFF.
2. Check the engine coolant level. Make sure that the coolant level is within normal operating levels.

Is the engine coolant level correct?

- **Yes** – Proceed to step 3A
- **No** – Add coolant to the engine as necessary. Proceed to step 4A

Step by step 3: Check the DEF tank heater system operation.

Step 3A: Verify proper operation of the tank heater valve.

Troubleshooting steps

1. Turn the key switch OFF.
2. Activate the DEF tank heater valve with DAVIE.
3. Make sure the tank heater valve is operating correctly, **not** stuck closed or slow to respond, and able to fully open.

Is the tank heater control valve operating correctly?

- **Yes** – Proceed to step 4A
- **No** – Repair or replace the tank heater valve. Proceed to step 4A

Step by step 4: Clear the fault code

Step 4A: Disable the fault code

Troubleshooting steps

1. Connect all components.
2. Operate the system within the 'reset condition of the fault code' found in the fault code information.
3. Use DAVIE to verify if the fault codes are inactive.

Is fault code P3969 inactive?

- **Yes** – Proceed to step 4B
- **No** – Return to the troubleshooting steps - Proceed to step 1A

If all the steps have been completed and checked again, contact the Engine Support Center for further instructions.

Step 4B: Clear the inactive fault codes

Troubleshooting steps

1. Connect all components
2. Turn the key switch ON.
3. Use DAVIE to clear the inactive fault codes.

Have all the fault codes been cleared?

- **Yes** – Repair complete
- **No** – Troubleshoot any remaining active fault codes

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