P3769

Fault code description

Diesel Oxidation Catalyst (DOC) performance - Too low

Possible cause

1. Particulates clogging the front face of the Diesel Oxidation Catalyst (DOC).
2. Engine oil or fuel contamination of the Diesel Oxidation Catalyst (DOC).
3. A cracked or contaminated Diesel Oxidation Catalyst (DOC).
4. A malfunction of the aftertreatment fuel dosing module.
5. Electrical connector corrosion in the aftertreatment fuel injection system.
6. A leaking exhaust system between the turbo charger and the DPF unit.
7. Particulates clogging the hydrocarbon dozer.
8. Hydrocarbon dozer not properly activated due to electrical issues.
9. Clogged secondary fuel filter.
10. Malfunctioning fuel dosing module.

Additional information

An in-range failure of the exhaust gas temperature before the DOC sensor or the exhaust gas temperature before the DPF sensor can cause this fault code. Make sure that there are no fault codes related to the exhaust gas temperature sensors before troubleshooting this fault code.

Active DPF regeneration may be disabled.

Set condition of fault code

This diagnostic runs continuously when the key switch is in the ON position, when the engine is running, when an active regeneration of the DPF is underway or at the end of a stationary

regeneration.

The EAS-3 ECU detects that the temperature difference across the aftertreatment DOC during active regeneration is not conforming to the expected temperature increase.

Reset condition of fault code

To validate the repair, perform the 'DPF regeneration' test with DAVIE.

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P3769, Diagnostic information

Technical data

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Location of component(s)

"Location information, EAS-3"

Electrical diagram(s)

Refer to the OEM service manual for more information.

Description of component(s)

"DPF unit"

Block diagram

"Block diagram EAS-3"

Step by step troubleshooting

Please perform the troubleshooting steps below using 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 the 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 P3769 active?

- Yes – Proceed to step 1B.
- No – Proceed to step 6A.

Step 1B: Check for fault codes

Troubleshooting steps

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

Is a fault code related to the DOC or DPF temperature sensors active?

- Yes – Proceed with the appropriate fault code.
- No – Proceed to step 1C.

Step 1C: Check for fault codes

Troubleshooting steps

1. Turn the key switch ON.
2. Check for engine-related fault codes.
3. Use DAVIE to check for fault codes.

Is fault code P3777 or P3778 active?

- Yes – Proceed with fault code P3777 or P3778.

- No – Proceed to step 2A.

Step by step 2: Check the exhaust system

Step 2A: Inspect the exhaust system for leaks

Troubleshooting steps

1. Turn the key switch OFF.
2. Visually inspect the exhaust system between the turbo charger outlet and the aftertreatment system for exhaust leaks.

Are exhaust system leaks found?

- Yes – Repair or replace the leaking components. Proceed to step 3A.
- No – Proceed to step 3A.

Step by step 3: Check the secondary fuel filter

Step 3A: Inspect for a clogged secondary fuel filter

Troubleshooting steps

1. Turn the key switch OFF.
2. Check the secondary fuel filter for blockage.

Is blockage found in the secondary fuel filter?

- Yes – Replace the secondary fuel filter. Proceed to step 8A.
- No – Proceed to step 4A.

Step by step 4: Inspect the fuel intake module

Step 4A: Inspect the fuel intake module

Troubleshooting steps

1. Turn the key switch OFF.
2. Perform the fuel shut-off valve leak test.
3. Inspect the intake module, fuel lines and fuel line connections for leaks.

4. Remove the fuel intake module
5. Inspect the fuel inlet and outlet ports of the fuel module for blockage.

Is debris or leakage found?

- Yes – Remove any debris that is found. If the fuel intake module is leaking, contact the Engine Support Center as it may need to be replaced. Proceed to step 8A
- No – Proceed to step 5A

Step by step 5: Check the fuel dosing module circuit.

Step 5A: Inspect the fuel dosing module and related circuit connector pins

Troubleshooting steps

1. Turn the key switch OFF.
2. Unplug the connectors for the fuel dosing module circuit.
3. Inspect the connectors for:
    1. Corroded or dirty pins
    2. Damaged pins
    3. Pushed back or expanded pins
    4. Loose connector
    5. Moisture in or on the connector
    6. Connector shell damaged
    7. Missing or damaged connector seals
    8. Wire insulation damage
4. Clean connectors with electrical contact cleaner.

Dirty or damaged pins/connector?

- Yes – A dirty or damaged connection has been detected. Clean, repair or replace the damaged connection or harness if possible – Proceed to step 8A.
- No – Proceed to step 6A.

Step by step 6: Check the fuel dosing module

Step 6A: Inspect the fuel dosing module injector tip

Troubleshooting steps

1. Turn the key switch OFF.
2. With the dosing module removed inspect the fuel dosing module for the following problems:
   - Build-up of carbon around the injector tip.
   - Corroded injector tip.

Does the fuel dosing module have a build-up of carbon or corrosion around the injector tip?

- Yes – If there is a build-up of carbon, remove the carbon build-up and proceed to Step 6B. If there is corrosion, replace the fuel dosing module and proceed to Step 8A.
- No – Proceed to step 6B.

Step 6B: Inspect the fuel dosing module

Troubleshooting steps

1. Turn the key switch ON.
2. Remove the fuel dosing module.
3. Place the fuel dosing module in a measuring container and cover the measuring container.
4. Perform the 'fuel dosing module leak test', the 'fuel shut-off valve leak test' and the 'fuel dosing system override test'. For more information, go to 'Explanatory notes to DAVIE'.

Does the fuel dosing module meet the specifications?

- Yes – Proceed to step 6C.
- No – Failed fuel dosing module is detected.

Replace the fuel dosing module – Proceed to step 8A.

Step 6C: Inspect the DOC

Troubleshooting steps

1. Turn the key switch OFF.
2. Remove the DOC.
3. Check the DOC for the following:
   - Particulate blockage, face plugging and/or oil contamination in the catalyst.
   - Cracks or damage to any cells in the catalyst.

Is the DOC damaged or face plugged?

- Yes – If the DOC is damaged, replace it and proceed to Step 8A. If the DOC is face plugged, attempt to remove the face plugging and proceed to Step 8A.
- No – Proceed to step 7A.

Step by step 7: Check the aftertreatment exhaust gas temperature sensors

Step 7A: Monitor the exhaust gas temperature sensors

Troubleshooting steps

Only perform this test if the truck is cold and has not recently been regenerated.

1. Turn the key switch ON.
2. Use DAVIE to monitor the DOC inlet temperature sensor, the DOC outlet temperature sensor and the DPF outlet temperature sensor.

Are the temperature sensors within 20°F of each other?

- Yes – Proceed to step 7B.
- No – Replace the sensor that is not within 20°F of the other two sensors. Proceed to step 8A.

Step 7B: Inspect the DOC inlet temperature sensor

Troubleshooting steps

1. Turn the key switch ON.
2. Observe the EAS faults or values in DAVIE.
3. Unplug the DOC inlet temperature sensor on the DPF unit.

Does the P3750 fault occur?

- Yes – Plug in DOC inlet temperature sensor. Proceed to Step 7C.
- No – Record which faults occurred or check that the DOC inlet temperature sensor value is -40°F. Plug in DOC inlet temperature sensor. Proceed to Step 7C.

Step 7C: Inspect the DOC outlet temperature sensor

Troubleshooting steps

1. Turn the key switch ON.
2. Clear the faults.
3. Observe the EAS faults or values in DAVIE.
4. Unplug the DOC outlet temperature sensor on the DPF unit.

Does the P3753 fault occur?

- Yes – Plug in DOC outlet temperature sensor. Proceed to Step 7D.
- No – Record which faults occurred or check that the DOC outlet temperature sensor value is -40°F. Plug in DOC outlet temperature sensor. Proceed to Step 7D.

Step 7D: Inspect the DPF outlet temperature sensor

Troubleshooting steps

1. Turn the key switch ON.
2. Clear the faults.
3. Observe the EAS faults or values in

DAVIE.

4. Unplug the DPF outlet temperature sensor on the DPF unit.

Does the P3756 fault occur?

- Yes – Plug in DPF outlet temperature sensor. Proceed to Step 7E.
- No – Record which faults occurred or check that the DPF outlet temperature sensor value is -40°F. Plug in DPF outlet temperature sensor. Proceed to Step 7E.

Step 7E: Inspect the SCR inlet temperature sensor

Troubleshooting steps

1. Turn the key switch ON.
2. Clear the faults.
3. Observe the EAS faults or values in DAVIE.
4. Unplug the SCR inlet temperature sensor on the SCR unit.

Does the P3796 fault occur?

- Yes – Plug in SCR inlet temperature sensor. Proceed to Step 7F.
- No – Record which faults occurred or check that the SCR inlet temperature sensor value is -40°F. Plug in SCR inlet temperature sensor. Proceed to Step 7F.

Step 7F: Fix reversed temperature sensors

Troubleshooting steps

1. Review the results of the temperature sensor tests in steps 7B, 7C, 7D and 7E.

Do all of the EAS temperature sensors have the correct fault or correct value when unplugged?

- Yes – Proceed to Step 8A.
- No – Contact the Engine Support Center for further instructions.

Step by step 8: Clear the fault code

Step 8A: 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 whether the fault codes are inactive.

Is fault code P3769 inactive?

- Yes – Proceed to step 8B.
- 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 8B: 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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