P3791

Fault code description

Diesel particulate filter (DPF) - Regeneration completed but insufficient

Possible cause

1. An engine malfunction that is increasing smoke output.
2. Fuel dosing module malfunction.
3. Failure in EAS-3 temperature sensors
4. Malfunctioning DOC.
5. The DPF pressure sensor has malfunctioned.

Additional information

The aftertreatment control module calculates an estimated value of the soot load in the aftertreatment diesel particulate filter using the aftertreatment diesel particulate filter differential pressure sensor.

Set condition of fault code

This diagnostic runs after completion of a successful active regeneration of the aftertreatment diesel particulate filter.

The estimated soot load in the DPF, which is calculated using the differential pressure, is higher than 3 gram/litre

Reset condition of fault code

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

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P3791, 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 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 P3791 active?

- Yes – Proceed to step 1B
- No – Proceed to step 5A

Step 1B: Check for fault codes

Troubleshooting steps

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

Is fault code P3759, P3760, P3761, P3762 or P3790 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.

Are fault codes related to the engine active?

- Yes – Proceed with the appropriate fault code

- No – Proceed to step 2A

Step by step 2: Check the DPF pressure sensor

Step 2A: Monitor the DPF pressure sensor

Troubleshooting steps

1. Turn the key switch ON.
2. Engine OFF.
3. Monitor the DPF pressure sensor with DAVIE.

Is the differential pressure reading 0±0.44 PSI (0±0.03 bar) with key switch ON and engine OFF?

- Yes – Proceed to step 3A
- No – Proceed to step 2B

Step 2B: Inspect the DPF pressure sensor tubes

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the DPF pressure sensor tubes.
3. Check the DPF pressure sensor tubes for blockage or leakages.

Are there damaged, disconnected or blocked tubes?

- Yes – Clean, repair or replace the damaged pressure sensor tubes - Proceed to step 5A
- No – Check for a pin-to-pin short circuit in the differential pressure signal wire. If no short circuit is found, replace the DPF pressure sensor - Proceed to step 5A

Step by step 3: Check the fuel dosing module

Step 3A: Inspect the fuel dosing module

Troubleshooting steps

1. Turn the key switch OFF.
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 system override test' and the 'dosing module leak test'. For more information, go to 'Explanatory notes to DAVIE'.

Does the fuel dosing module meet the specifications?

- Yes – Proceed to step 4A
- No – Replace the fuel dosing module - Proceed to step 5A

Step by step 4: Check the exhaust

Step 4A: Inspect the DOC for soot accumulation

Troubleshooting steps

1. Turn the key switch OFF.
2. Remove the DOC.
3. Check the inlet of the DOC for soot accumulation.

Are more than 50 percent of the cells completely blocked?

- Yes – Clean the DOC. An engine-related failure that causes excessive exhaust smoke could be the cause. Proceed to step 5A
- No – An engine-related failure that causes excessive exhaust smoke could be the cause. Proceed to step 5A

Step by step 5: Clear the fault code

Step 5A: 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 P3791 inactive?

- Yes – Proceed to step 5B
- 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 5B: 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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