P3779

Fault code description

Diesel Particulate Filter efficiency - Too low

Possible cause

1. Large exhaust flow leaks between the exhaust manifold and the DPF unit.
2. DPF pressure sensor tubes malfunction.
3. DPF pressure sensor malfunction.
4. Failed DPF.

Additional information

Inspect the DPF according to the guidelines for re-use. Replace the filter if it does not pass the inspection.

Set condition of fault code

This diagnostic only runs when:

- no fault codes that are related to the DPF pressure sensor DOC and DPF temperature sensor are active;
- no fault codes that are related to a missing DPF, DPF incomplete active regeneration and DPF replaced, are active;
- the exhaust gas mass flow must be within the threshold limit during the calibratable period of time to be reliable; and
- the calibratable period of time has not elapsed since the last active regeneration of the DPF and stabilisation of the differential pressure.

This diagnostic only runs for a certain calibratable amount of time since the last active regeneration. This is to avoid a high differential pressure value due to further soot collection.

The EAS-3 ECU detects conditions where the aftertreatment DPF flow resistance is not meeting a pre-determined flow resistance threshold. The DPF flow resistance depends

on the soot level, exhaust flow, temperature, ash level and filter condition. The diagnostic counts these occurrences and sets the fault when these exceed the pre-determined values at certain operating conditions. This diagnostic detects DPF efficiency and will detect a malfunction prior to a decrease in the filtering capability of the PM filter due to possible filter damage that would cause PM emissions from the tail pipe to exceed the applicable threshold.

Reset condition of fault code

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

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P3779, 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 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 P3759, P3760, P3761, P3762 or P3790 active?

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

Step by step 2: Check the DPF pressure sensor

Step 2A: Inspect the DPF pressure sensor tubes

Troubleshooting steps

1. Turn the key switch OFF.
2. Inspect the DPF pressure sensor tubes for:
    1. both ends securely connected
    2. leaks or damage
    3. missing or blockage

Make sure the pressure sensor tubes are correctly installed. It is possible to connect the tubes backwards at the sensor connection.

Are the pressure sensor tubes in a good condition and installed correctly?

- Yes – Proceed to step 3A

- No – Repair or replace the pressure sensor tubes. Proceed to step 4A

Step by step 3: Check the DPF

Step 3A: Inspect the presence of the DPF

Troubleshooting steps

1. Turn the key switch OFF.
2. Remove the DPF.
3. Inspect the DPF to determine if the DPF has been tampered or removed.

Has tampering or removal of the aftertreatment system been detected?

- Yes – Repair or replace the affected components - Proceed to step 4A
- No – 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 P3779 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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