P3828

Fault code description

NOx sensor before catalyst - Data valid but too high

Possible cause

1. Engine performance issue causing increased engine NOx output.
2. Contaminated DEF.

Additional information

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Set condition of fault code

The EAS-3 unit detects that the engine NOx output (CAN message) is so high that the EAS-3 system has run out of capacity and is unable to provide an adequate amount of DEF for sufficient NOx reduction.

This diagnostic runs continuously when the engine is running and the exhaust gas temperature before DOC is above 302ºF (150ºC) for five seconds.

Reset condition of fault code

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

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P3828, Diagnostic information

Technical data

"Sensor, NOx, before catalyst (F844)"

Location of component(s)

"Location information, EAS-3"

Electrical diagram(s)

Refer to the OEM service manual for more information.

Description of component(s)

"Sensor, NOx, before catalyst (F844)"

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 line heating fault codes.

Is fault code P3828 active?

- Yes – Proceed to step 1B
- No – Proceed to step 2A

Step 1B: Check for fault codes

Troubleshooting steps

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

Are fault codes related to the EAS-3 actuator, pump module or DEF dosing valve 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. Use DAVIE to check for fault codes.

Are other fault codes related to the NOx before catalyst sensor active?

- Yes – Proceed with the appropriate fault

code

- No – Investigate the cause of the engine NOx emissions that are above normal. Proceed to step 2A

Step by step 2: Check the DEF quality

Step 2A: Inspect the DEF quality

Troubleshooting steps

1. Turn the key switch OFF.
2. Check the DEF quality:
   - Visually inspect the DEF in the tank for signs of debris or contamination.
   - Use a DEF refractometer to measure the urea concentration.
   - Use the oil test paper to test for diesel fuel or oil contamination in the DEF tank.

Is the DEF free of contamination and within the specifications?

- Yes – Proceed to step 3A
- No – The fluid in the tank is not pure DEF. Drain the tank, clean the system and fill the tank with DEF. Proceed to step 3A

Step by step 3: Clear the fault code

Step 3A: 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 P3828 inactive?

- Yes – Proceed to step 3B

- 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 3B: 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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