P3954

Fault code description

NOx sensor before catalyst - Signal incorrect

Possible cause

1. The voltage supplied to the NOx before catalyst sensor is outside the specified values.
2. The NOx before catalyst sensor has malfunctioned or is damaged.
3. The NOx before catalyst sensor internal heater has malfunctioned.
4. The wiring or pins are damaged.

Additional information

-

Set condition of fault code

This diagnostic runs continuously when the key switch is in the ON position and the engine is running.

The EAS-3 ECU has detected that the NOx before catalyst sensor supply voltage is outside the specified range.

Reset condition of fault code

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

M028042 - 07/22/2015 15:07:05

P3954, 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 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 P3955, P3960, P3961 or P3953 active?

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

Step 1B: 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 P3954 active?

- Yes – An internal error has been detected in the NOx sensor. Replace the NOx sensor. Proceed to step 2A
- No – Proceed to step 2A

Step by step 2: Check the wiring

Step 2A: Check the wiring

Troubleshooting steps

1. Turn the key OFF.
2. Measure the resistance between pin 1

CAN and pin 2 CAN. It should read 60 ohms.

3. Turn the key ON.
4. Measure the power supply between pin 3 earth and pin 4. It should read 12V.
5. Check the wiring for loose or spread pins.
6. Check the harness on OEM side for moisture.

Do the pins meet the specified values and are the wires and pins free from damage and moisture?

- Yes – Replace the NOx sensor. Proceed to step 3A.
- No – Return to the troubleshooting steps - Proceed to step 1A

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

Step by step 3: Clear the fault code

Step 3A: Disable the fault code

Troubleshooting steps

1. Connect all components.
2. Connect DAVIE and initiate a stationary regeneration.
3. Once the temperature before DOC has exceeded 200°C (392°F), abort the regeneration. Wait 4 minutes before proceeding to the next step to allow the sensor diagnostic to execute completely.
4. Use DAVIE to verify if the fault codes are inactive.

Is fault code P3954 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

M046901 - 07/23/2015 02:06:23