P3766

Fault code description

DPF pressure - Data erratic, intermittent or incorrect

Possible cause

1. Stuck in-range DPF pressure sensor reading
2. High resistance in the sensor signal or return wiring
3. Higher than expected outlet pressure
4. Excessive DEF deposits in the decomposition pipe
5. Blocked DPF outlet pressure sensor

Additional information

The EAS-3 ECU will use a replacement value of 0 PSI (0 bar) for the pressure after DPF.

It is possible that this fault is set in a workshop environment, by performing a key cycle with the tailpipe connected to an exhaust ventilation system.

Set condition of fault code

This diagnostic runs continuously after key on and engine running.

This fault code is a combination of multiple diagnostics. Part of the diagnostic runs at key on, while the remainder runs when the engine is running at higher exhaust volumetric flow rate conditions (above 14.1 ft3/s [0.4 m3/s]). The exhaust volumetric flow rate can be monitored using DAVIE.

The outlet pressure is greater than 0.22 PSI (0.015 bar) or less than -0.22 PSI (-0.015 bar) at initial key-on, or is not changing with engine conditions.

Reset condition of fault code

The fault code will change to inactive when an in-range pressure condition is detected.

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This information applies exclusively to the entered chassis number or the selected engine type. Please take into account that this information may change daily. Therefore the provided information is only valid on 12-15-2015. You cannot derive any rights from the information provided with respect to vehicles and/or components of another series, with another chassis number, and/or of another date. (/)

P3766, Diagnostic information

Technical data

"Sensor, DPF pressure (F837)"

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, DPF pressure (F837)"

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 P3763 or P3764 active?

- Yes – Proceed with fault code P3763 or P3764
- No – Proceed to step 2A

Step by step 2: Check the aftertreatment system

Step 2A: 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.

Are there damaged, disconnected or blocked tubes?

- Yes – Clean, repair or replace the damaged pressure sensor tubes - Proceed to step 6A
- No – Proceed to step 2B

Step 2B: Monitor the pressure after the DPF

Troubleshooting steps

1. Connect all components
2. Turn the key switch ON.
3. Engine off.
4. Monitor the pressure after the DPF with DAVIE.

An exhaust ventilation system connected to the exhaust can influence the pressure sensor reading. Remove any ventilation or vacuum system before reading the pressure after the DPF.

Is the pressure after DPF reading 0±0.22 PSI (0±1.5kPA) with the key switch ON and engine OFF?

- Yes – Proceed to step 2C
- No – A damaged sensor has been detected. Replace the sensor. Proceed to step 6A

Step 2C: Check for deposits in the decomposition pipe

Troubleshooting steps

1. Turn the key switch OFF.
2. Engine off.
3. Remove the decomposition pipe from the vehicle.
4. Inspect for excessive DEF deposits.

Are excessive deposits found inside the decomposition pipe?

- Yes – Clean and re-install the decomposition pipe - Proceed to step 6A
- No – Proceed to step 3A

Step by step 3: Check the DPF pressure sensor (pressure after DPF) and the circuit

Step 3A: Inspect the DPF pressure sensor and connector pins

Troubleshooting steps

1. Turn the key switch OFF.

2. Disconnect the DPF pressure sensor from the harness.
3. Inspect the DPF pressure sensor connector 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. Damage to the connector shell
    7. Missing or damaged connector seals
    8. Wire insulation damage

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 6A
- No – Proceed to step 3B

Step 3B: Check the circuit response

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the DPF pressure sensor from the harness.
3. Turn the key switch ON.
4. Check for the appropriate circuit response after 30 seconds.
5. Use DAVIE to read the fault codes.

Is fault code P3764 active?

- Yes – Proceed to step 3C
- No – Proceed to step 4A

Step 3C: Check the circuit response

Troubleshooting steps

1. Turn the key switch OFF.

2. Disconnect the DPF pressure sensor from the harness.
3. Place a jumper wire between the sensor supply pin and the signal pin at the sensor connector of the DPF pressure sensor.
4. Turn the key switch ON.
5. Check for the appropriate circuit response after 30 seconds.
6. Use DAVIE to read the fault codes.

Is fault code P3763 active?

- Yes – Proceed to step 5A
- No – Proceed to step 4A

Step by step 4: Check the EAS-3 unit and the harness

Step 4A: Inspect the EAS-3 unit and the harness connector pins

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the EAS-3 unit from the harness.
3. Inspect the harness and EAS-3 unit connector 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. Damage to the connector shell
    7. Missing or damaged connector seals
    8. Wire insulation damage

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 6A

- No – Proceed to step 4B

Step 4B: Check for resistance in the harness

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the EAS-3 unit from the harness.
3. Disconnect the DPF pressure sensor from the harness.
4. Check for resistance in the circuit.
5. Measure the resistance of the DPF pressure sensor signal wire between the EAS-3 unit connector pin and the sensor connector pin.

Is the resistance less than 10 ohms?

- Yes – Proceed to step 4C
- No – High resistance has been detected in the harness. Repair or replace the harness - Proceed to step 6A

Step 4C: Check for a pin to earth short circuit

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the EAS-3 unit from the harness.
3. Disconnect the DPF pressure sensor from the harness.
4. Check for a pin to earth short circuit.
5. Measure the resistance between the EAS-3 unit connector DPF pressure sensor signal pin and earth.

Is the resistance greater than 100k ohms?

- Yes – Proceed to step 4D
- No – A pin to earth short circuit has been detected in the harness. Repair or replace the harness - Proceed to step 6A

Step 4D: Check for a pin-to-pin short circuit in the harness

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the EAS-3 unit from the harness.
3. Disconnect the DPF pressure sensor from the harness.
4. Check for a pin-to-pin short circuit.
5. Measure the resistance between the EAS-3 unit connector DPF pressure sensor signal pin and all other pins in the harness.

Is the resistance greater than 100k ohms?

- Yes – Proceed to step 4E
- No – A pin-to-pin short circuit has been detected in the harness. Repair or replace the harness - Proceed to step 6A

Step 4E: Check for an inactive fault code

Troubleshooting steps

1. Connect all components.
2. Turn the key switch ON.
3. Check for the appropriate circuit response after 30 seconds.
4. Use DAVIE to read the fault codes.

Is fault code P3766 inactive?

- Yes – The removal and installation of the connector corrected the fault - Proceed to step 6A
- 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 instruction on replacement of the EAS-3 unit.

Step by step 5: Check exhaust system restrictions

Step 5A: Check the exhaust system for restrictions

Troubleshooting steps

1. Check for restrictions in the exhaust system

Have any restrictions in the exhaust been identified?

- Yes – A damaged sensor has been detected. Replace the sensor. Proceed to step 6A
- No – Investigate and repair the cause of the high exhaust restriction. Proceed to step 6A

Step by step 6: Clear the fault code

Step 6A: 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 P3766 inactive?

- Yes – Proceed to step 6B
- 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 6B: 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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