P3840

Fault code description

Air shut-off valve - Stuck in closed position

Possible cause

1. A stuck closed air shut-off valve.
2. Missing or leaking air supply line to the air shut-off valve.
3. Missing or leaking air supply line from the air shut-off valve to the fuel intake module.

Additional information

Active DPF regeneration is disabled until the next key cycle.

The air shut-off valve is part of the fuel intake module (L135).

The engine runs in protection mode.

Set condition of fault code

This diagnostic runs as a pre- and post-regeneration diagnostic. The fuel dosing module will not dose fuel if this diagnostic fails.

The EAS-3 ECU detects that the fuel pressure is lower than 49.9 PSI (3.44 bar) when the air shut-off valve is commanded on.

Reset condition of fault code

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

In order for this fault code to clear, an active regeneration of the DPF must be initiated. Once the temperature in the after-treatment is high enough to inject diesel fuel into the exhaust, the diagnostic will run.

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P3840, Diagnostic information

Technical data

"Valve, air shut-off (L071)"

Location of component(s)

"Location information, EAS-3"

Electrical diagram(s)

Refer to the OEM service manual for more information.

Description of component(s)

"Valve, air shut-off (L071)"

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 P3837, P3838, P3839, P3841 or P3842 active?

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

Step by step 2: Check the air shut-off valve

Step 2A: Inspect for a stuck closed air shut-off valve

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the fuel supply line from the fuel dosing module.
3. Place the fuel supply line in a measuring container and cover the measuring container.
4. Perform the fuel shut-off valve leak test. For more information, go to 'Explanatory notes to DAVIE'.
5. Air should flow continuously from the supply line during the test.

It may be necessary to run the engine to build up air pressure.

Residual fuel left in the lines will be purged from the system in the container and may become atomised into a fine mist. Therefore always cover the container.

Is air flowing from the supply line?

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

Step 2B: Check for vehicle air connected to the air shut-off valve

Troubleshooting steps

1. Turn the key switch OFF.
2. Connect all components.
3. Start the engine and let it run at idle.
4. Inspect the OEM air supply pipes to the air shut-off valve for blockages or leaks.

Are there leaks or blockage in the OEM air plumbing?

- Yes – Repair or replace the OEM air supply pipes to the air shut-off valve. Proceed to step 3A
- No – Proceed to step 2C

Step 2C: Check for a blocked fuel intake module

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the air supply line from the fuel intake module.
3. Start the engine and let it run at idle.
4. Perform the fuel shut-off valve leak test. For more information, go to 'Explanatory notes to DAVIE'.
5. Air should flow continuously from the supply line for 60 seconds during the test.

It may be necessary to run the engine to build up air pressure.

Is air flowing from the air supply line?

- Yes – The intake module is blocked or damaged. Repair or replace the intake module. Proceed to step 3A
- No – The air shut-off valve is stuck in the closed position. Replace the air shut-off valve. 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 that the fault codes are inactive.

Is fault code P3840 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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