# P3781

## Fault code description

Diesel particulate filter (DPF) - Not detected

## Possible cause

1. The DPF pressure sensor tubes are installed incorrectly, backwards, broken, loose, or have been tampered with.
2. The DPF unit has been removed from the vehicle.
3. The DPF unit is cracked or broken.
4. The DPF pressure sensor tubes are installed backwards

## Additional information

The EAS-3 system monitors for the presence of the DPF unit. This diagnostic checks to make sure that the DPF unit is present and is functioning correctly.

## Set condition of fault code

This diagnostic runs when the engine is running and exhaust gas mass flow is above a minimum level.

The EAS-3 ECU detects that the DPF differential pressure is below a minimum value and exhaust gas mass flow rate is above a minimum flow rate, and sets the fault code.

## Reset condition of fault code

This fault code will change to inactive immediately after the diagnostic runs and passes. It will be necessary to run the engine at high idle to increase the exhaust gas mass flow for this fault code to change to inactive.

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# P3781, 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 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 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 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: Check for the presence of the DPF

Troubleshooting steps

1. Turn the key switch OFF.
2. Remove and inspect the DPF to determine whether the DPF has been tampered with or removed. See Engine Rapido job: 'check/clean DPF element'.

### Has tampering or removal of the aftertreatment system been detected?

- Yes – Repair or replace the components involved - Proceed to step 3B
- No – Proceed to step 3B

### Step 3B: Check the DPF for Damage

Troubleshooting steps

1. Turn the key switch OFF.
2. Remove and inspect the DPF. See Engine Rapido job: 'check/clean DPF element'
3. Clean the DPF as needed. Refer to the cleaning machine manufacturing instructions.

DPF discolouration does not indicate a failed filter. See Engine Rapido job: 'check/clean DPF element'.

### Is the DPF damaged according to the Engine Rapido job: 'check/clean DPF element'

- Yes – The DPF may need to be replaced. Contact the Engine Support Center for confirmation before replacing the DPF. 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 that the fault codes are inactive.

### Is fault code P3781 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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