P3965

Fault code description

EAS-3 ECU - Internal error

Possible cause

1. Faulty or malfunctioning EAS-3 ECU.
2. Open circuit, high resistance in battery power.
3. Open circuit, high resistance in battery ground.
4. Battery voltage drop during cranking
5. High voltage on the fuel pressure sensor or differential pressure sensor supply.
6. Low voltage on the fuel pressure sensor or differential pressure sensor supply.

Additional information

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Set condition of fault code

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

An internal error has been detected in the EAS-3 ECU.

Reset condition of fault code

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

To validate the repair, start the engine and let it idle for one minute.

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P3965, Diagnostic information

Technical data

"Power supply and earth of EAS-3 unit (D374)"

"CAN connection, EAS-3 unit (D374)"

Location of component(s)

"Location information, EAS-3"

Electrical diagram(s)

Refer to the OEM service manual for more information.

Description of component(s)

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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 P3965 active?

- Yes – Proceed to step 2A
- No – Proceed to step 6A

Step by step 2: Check the battery and the harness

Step 2A: Check the battery connections

Troubleshooting steps

1. Turn the key switch OFF.
2. Check the positive and negative battery terminals.

Are the connections tight and corrosion-free?

- Yes – Proceed to step 2B
- No – Tighten and/or clean the connections. Refer to the OEM manual. Proceed to step 6A

Step 2B: Check the battery voltage

Troubleshooting steps

1. Turn the key switch OFF.
2. Check the battery voltage between the

positive and negative terminal during cranking of the engine.

Is the voltage at least 12 VDC during normal conditions and 6.2 VDC during cranking?

- Yes – Proceed to step 3A
- No – Charge or replace the battery according the OEM instructions. Proceed to step 6A

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

Step 3A: 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. connector shell damaged
    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 for an open battery supply circuit

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the EAS-3 unit from the harness.
3. Check for an open circuit in the power supply of the EAS-3 unit.
4. Measure the voltage between the EAS-3 unit battery supply circuit and engine block ground.

Check the voltage at key ON, while cranking the engine and with the engine running at idle.

Is the voltage at least 10 VDC?

- Yes – Proceed to step 3C
- No – Malfunction in the power supply. Check the OEM power supply circuit - Proceed to step 6A

Step 3C: Check the resistance of the battery supply circuit

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the battery.
3. Disconnect the EAS-3 unit from the harness.
4. Check for an open circuit.
5. Measure the resistance of all EAS-3 unit supply wires between the EAS-3 unit connector pins and the positive battery terminal.
6. Measure the resistance of all EAS-3 unit ground wires between the EAS-3 unit connector pins and the negative battery terminal.

Is the resistance less than 10 ohms?

- Yes – Proceed to step 3D
- No – An open or high resistance circuit has been detected in the harness. Repair or replace the harness - Proceed to step 6A

Step 3D: Check the power supply after key switch

Troubleshooting steps

1. Turn the key switch OFF.
2. Inspect the power supply after key switch wire to the EAS-3 ECU. Make sure there are no interruptions in the wire, solenoids or relays.
3. Disconnect the EAS-3 actuator from the harness.

Is the wire uninterrupted?

- Yes – Correct the wiring - Proceed to step 6A
- No – Proceed to step 4A

Step by step 4: Check the DPF pressure sensor and circuit connections

Step 4A: Inspect the DPF pressure sensor connector pins

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the DPF pressure sensor from the harness.
3. Inspect the harness and 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. connector shell damaged
    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 an open circuit in the DPF pressure sensor wiring

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the EAS-3 unit.
3. Disconnect the DPF pressure sensor.
4. Check for an open circuit in the supply wire.
5. Check for an open circuit in the ground wire.

Is the resistance less than 10 ohms?

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

Step 4C: Check for a pin to pin short circuit in the DPF pressure sensor wiring

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the EAS-3 unit.
3. Disconnect the DPF pressure sensor.
4. Check for a pin to pin short circuit in the supply wire to all the other pins in the harness.
5. Check for a pin to pin short circuit in the ground wire to all the other pins in the harness.

Is the resistance greater than 100k ohms?

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

Step 4D: Check for a pin to ground short circuit in the DPF pressure sensor wiring

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the EAS-3 unit.
3. Disconnect the DPF pressure sensor.
4. Check for a pin to ground short circuit in the supply wire.

Is the resistance greater than 100k ohms?

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

Step 4E: Check the circuit response

Troubleshooting steps

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

Multiple fault codes related to the DPF pressure sensor will become active.

Is fault code P3965 active?

- Yes – Proceed to step 5A
- No – A damaged DPF pressure sensor has been detected. Replace the DPF pressure sensor. Proceed to step 6A

Step by step 5: Check the fuel pressure sensor and circuit connections

Step 5A: Inspect the fuel pressure sensor connector pins

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the fuel pressure sensor from the harness.

3. Inspect the harness and fuel 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. connector shell damaged
    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 5B

Step 5B: Check for an open circuit in the fuel pressure sensor wiring

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the EAS-3 unit.
3. Disconnect the fuel pressure sensor.
4. Check for an open circuit in the supply wire.
5. Check for an open circuit in the ground wire.

Is the resistance less than 10 ohms?

- Yes – Proceed to step 5C
- No – An open circuit has been detected in the harness. Repair or replace the harness - Proceed to step 6A

Step 5C: Check for a pin to pin short circuit in the fuel pressure sensor wiring

Troubleshooting steps

1. Turn the key switch OFF.

2. Disconnect the EAS-3 unit.
3. Disconnect the fuel pressure sensor.
4. Check for a pin to pin short circuit in the supply wire to all the other pins in the harness.
5. Check for a pin to pin short circuit in the ground wire to all the other pins in the harness.

Is the resistance greater than 100k ohms?

- Yes – Proceed to step 5D
- No – A pin to pin short circuit has been detected in the harness. Repair or replace the harness - Proceed to step 6A

Step 5D: Check for a pin to ground short circuit in the fuel pressure sensor wiring

Troubleshooting steps

1. Turn the key switch OFF.
2. Disconnect the EAS-3 unit.
3. Disconnect the fuel pressure sensor.
4. Check for a pin to ground short circuit in the supply wire.

Is the resistance greater than 100k ohms?

- Yes – Proceed to step 5E
- No – A pin to earth short circuit has been detected in the harness. Repair or replace the harness - Proceed to step 6A

Step 5E: Check the circuit response

Troubleshooting steps

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

Multiple fault codes related to the fuel pressure sensor will become active.

Is fault code P3965 active?

- Yes – 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 on replacement of the EAS-3 unit.
- No – A damaged fuel pressure sensor has been detected. Replace the fuel pressure sensor. 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 P3865 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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