P3445

Fault code description

Engine brake solenoid valve cylinder 6 - Open circuit on ECU (D365) pin (A20)

Possible cause

1. Faulty wiring
2. Faulty connector
3. Faulty solenoid valve

Additional information

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Set condition of fault code

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Reset condition of fault code

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P3445, Diagnostic information

Technical data

"MX engine brake solenoid valve (B411, B412, B413, B414, B415, B416)"

Location of component(s)

"Location information, PMCI-2"

Electrical diagram(s)

"PMCI-2"

Description of component(s)

-

Block diagram

"PMCI-2"

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.

- This troubleshooting tree is based on the assumption that supply power and earth to the PMCI are functioning properly.
- Disconnecting the PMCI 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 in Rapido.
- It is necessary to exit the 'active errors' screen 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 codes. Refer to the 'possible causes' section in Rapido.

Step 1

Visual inspection - Visually inspect all applicable connectors and harnesses for corrosion, damage and rubbing during each step of the diagnostic procedure. Proceed to step 2.

Step 2

With key OFF, disconnect the pass-through connector located on the exterior of the engine. Turn the key ON and measure the voltage between the signal terminal on the encapsulated harness and a battery earth:

- If the measured voltage is approximately 3.5 V – Proceed to step 3.
- If the measured voltage is 0.0 V – Proceed to step 7.

Step 3

With key OFF, disconnect the pass-through connector and measure the resistance between the earth terminal on the encapsulated harness and a battery earth:

- Closed circuit found – Proceed to step 4.
- If open circuit or >100,000 ohms are found – Proceed to step 8.

Step 4

With key OFF, disconnect the signal connector circuit from the engine brake solenoid. Turn the key ON and measure the voltage between the signal terminal connector and a battery earth:

- If the measured voltage is approximately 3.5 V – Proceed to step 5.
- If the measured voltage is 0.0 V – Replace the pass-through harness. Proceed to the verification procedure listed at the end of this document.

Step 5

With key OFF, disconnect the earth connector from the engine brake solenoid and measure the resistance between the earth terminal wire and battery earth:

- Closed circuit found – Proceed to step 6.
- If open circuit or >100,000 ohms are

found – Replace the pass-through harness. Proceed to the verification procedure listed at the end of this document.

Step 6

With key OFF, disconnect both connectors from the engine brake solenoid and measure the resistance between the terminals on the solenoid: (refer to your multimeter operation manual for the correct resistance test procedure).

- Closed circuit found – Proceed to step 7.
- If open circuit or >100,000 ohms are found – Replace the pass-through harness. Proceed to the verification procedure listed at the end of this document.

Step 7

With key OFF, disconnect the encapsulated harness at the PMCI. Turn the key ON and measure the voltage between the engine brake signal circuit terminal of the PMCI and battery earth:

- If the measured voltage is approximately 3.5 V – Replace the encapsulated harness. Proceed to the verification procedure listed at the end of this document.
- If the measured voltage is 0.0 V – Proceed to step 9.

Step 8

With key OFF, disconnect the encapsulated harness at the PMCI and measure the resistance across the earth terminal on the PMCI and a battery earth:

- Closed circuit found – Replace the encapsulated harness. Proceed to the verification procedure listed at the end of this document.
- If open circuit or >100,000 ohms are

found – Proceed to step 9.

Step 9

Possible PMCI failure – Contact the Engine Support Center for further instruction on replacement of the PMCI.

Verification procedure

With DAVIE connected and key ON, clear the errors. Start the engine and let it idle to verify with DAVIE that the errors do not re-occur.

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