P1261

Fault code description

Injector solenoid valve cylinder 1 - Open circuit on ECU (D365) pin (A1) and/or pin (A2)

Possible cause

1. Faulty wiring
2. Faulty connector
3. Faulty injector

Additional information

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Set condition of fault code

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Reset condition of fault code

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P1261, Diagnostic information

Technical data

"Injector (B421, B422, B423, B424, B425, B426)"

Location of component(s)

"Location information, PMCI-2"

Electrical diagram(s)

"PMCI-2"

Description of component(s)

"Injector (B421, B422, B423, B424, B425, B426)"

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 is 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 any 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.

This pump unit circuit test procedure will address the following types of pump unit error:

- Injector needle valve high side short circuit to ground
- Injector needle valve high side short circuit to battery voltage
- Injector needle valve open circuit
- Injector needle valve short circuit across injector

Following each step, the connector removed for testing MUST be reconnected before

proceeding to the next test.

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 side of the connector and a battery earth:

- If the measured voltage is approximately 7.0 V – Proceed to step 3.
- If the measured voltage is below 5.0 V or above 9.0 V– Proceed to step 6.

Step 3

With key OFF, disconnect the pass-through connector located on the exterior of the engine and perform a diode test (please refer to your multimeter operation manual for proper diode test procedure) between the ground terminal on the encapsulated harness side of the connector and a battery ground:

- If the circuit is open during REVERSE bias test and indicates 600 mV ± 200 mV during FORWARD bias test – Proceed to Step 4.
- If any result other than Open Circuit during REVERSE bias test and 600 mV ± 200 mV during FORWARD bias test is found - Proceed to Step 7.

Step 4

With key OFF, disconnect the connector from the injector solenoid. Turn the key ON, and measure the voltage between the signal terminal on the connector and a battery ground:

- If the measured voltage is approximately 7.0V– Proceed to Step 5.
- If the measured voltage is below 5.0V or above 9.0V – Replace the pass-through harness on the engine. Proceed to the verification procedure listed at the end of this document.

Step 5

With key OFF, disconnect the connector from the injector solenoid and perform a diode test (please refer to your multimeter operation manual for proper diode test procedure) between the ground terminal on the connector and a battery ground:

- If the circuit is open during REVERSE bias test and indicates 600 mV ± 200 mV during FORWARD bias test – Replace the fuel injector. Proceed to the verification procedure listed at the end of this document.
- If any result other than Open Circuit during REVERSE bias test and 600 mV ± 200 mV during FORWARD bias test is found – Replace the pass-through harness. Proceed to the verification procedure listed at the end of this document.

Step 6

With key OFF, disconnect the encapsulated harness at the PMCI. Turn the key ON, and measure the voltage between the signal pin of the PMCI and chassis ground:

- If the measured voltage is approximately 7.0V– Replace the encapsulated harness.

Proceed to the verification procedure listed at the end of this document.

- If the measured voltage is below 5.0V or above 9.0V – Proceed to Step 8.

Step 7

With key OFF, disconnect the PMCI connector and perform a diode check (please refer to your multimeter operation manual for proper diode test procedure) across the ground circuit terminal on the PMCI and battery ground:

- If the circuit is open during the REVERSE bias test and measures 600 mV ± 200 mV during the FORWARD bias test – Replace the encapsulated harness. Proceed to the verification procedure listed at the end of this document
- If any result other than Open Circuit during REVERSE bias test and 600 mV ± 200 mV during FORWARD bias test is found – Proceed to step 8.

Step 8

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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