P0263

Fault code description

Cylinder 1 - Contribution too low or misfire

Possible Cause

1. Faulty solenoid valve of MX Engine Brake cylinder 1 (B411)
2. Short circuit to supply on pin A17 of the ECU
3. Mechanical defect:

   Symptom: Slightly reduced power

   1. Incorrect valve clearance
   2. Major imbalance in the drive shaft

   Symptom: Engine block vibration at high load

   1. Leakage in the high-pressure fuel line
   2. Worn pump unit
   3. Flywheel damaged
   4. Fuel supply issues (dirt, air in system)

Additional information

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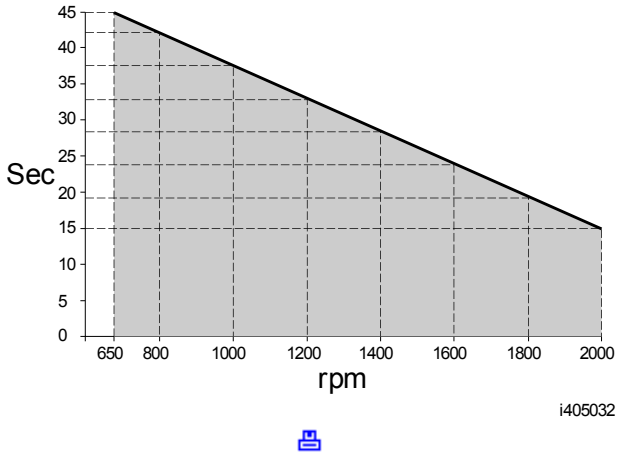
Set condition of fault code

This diagnostic runs:

- 30 seconds after the engine has been started, and;
- with the engine coolant temperature above 40 °C [104 °F], and;
- when the engine load and engine speed is steady

This fault code becomes active if the PMCI-2 ECU detects cylinder unbalance for more than a specific time. This time is dependent on engine speed. See graph for detailed information about the relation between the set time and the engine speed.



The graph shows the minimum time for the fault code to become active.

Reset condition of fault code

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

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This information applies exclusively to the entered chassis number or the selected engine type. Please take into account that this information may change daily. Therefore the provided information is only valid on 12-12-2015. You cannot derive any rights from the information provided with respect to vehicles and/or components of another series, with another chassis number, and/or of another date. (/)

P0264, Diagnostic information

Technical data

"Solenoid valve, pump unit (B131, B132, B133, B134, B135, B136)"

Location of component(s)

"Location information, PMCI-2"

Electrical diagram(s)

"PMCI-2"

Description of component(s)

"Solenoid valve, pump unit (B131, B132, B133, B134, B135, B136)"

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 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.

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

- Short circuit across pump unit
- Pump unit open circuit
- Pump unit low side short circuit to earth
- Pump unit low side short circuit to battery voltage

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 pump unit connector. Turn the key ON and measure the voltage between the signal circuit terminal on 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 5.

Step 3

With key OFF, disconnect the pump unit connector and perform a diode check between the connector earth circuit terminal and battery earth. Please refer to your multimeter operation manual for the correct diode check procedure:

- If the circuit is open during the REVERSE bias test and measures 600 mV ± 200 mV during the FORWARD bias test – Replace the pump unit. Proceed to the verification procedure listed at the end of this document.
- If any result other than open circuit during the REVERSE bias test and 600 mV ± 200 mV during the FORWARD bias test is found - Proceed to step 4.

Step 4

With key OFF, disconnect the encapsulated

harness at the PMCI and perform a diode check between the earth circuit terminal on the PMCI and battery earth. Please refer to your multimeter operation manual for the correct diode check procedure:

- 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 the REVERSE bias test and 600 mV ± 200 mV during the FORWARD bias test is found - Proceed to step 6.

Step 5

Disconnect the encapsulated harness from the PMCI. Turn the key ON and measure the voltage between the signal circuit terminal on the PMCI and battery earth:

- If the measured voltage is approximately 7.0 V – Replace the encapsulated harness. Proceed to the verification procedure listed at the end of this document.
- If the measured voltage is below 5.0 V or above 9.0 V - Proceed to step 6.

Step 6

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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with respect to vehicles and/or components of another series, with another chassis number, and/or of another date. (/)