P1524

Fault code description

Engine oil pressure - low

Possible cause

1. Coolant sieve in oil module contaminated
2. Oil level is too low
3. Oil leakage
4. Faulty connector
5. Faulty wiring
6. Faulty sensor
7. Oil pump leakage
8. Incorrect filter installed
9. Bearing centrifugal oil filter damaged
10. Outdated software

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P1524, Diagnostic information

Technical data

"Sensor, oil pressure (F810)"

Location of component(s)

"Location information, PMCI-2"

Electrical diagram(s)

"PMCI-2"

Description of component(s)

"Sensor, oil pressure (F810)"

Block diagram

"PMCI-2"

Step by step troubleshooting

Running the engine with low oil can cause catastrophic failure.

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 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.

Step 1

Software version

1. Make sure that the software on the truck is the most recent version.

2. If the software is not the most recent version, update it.

Did the software need to be updated?

- Yes – Clear the codes then run the engine to verify that fault code P1524 does not return. If the fault code returns, proceed to step 2. If the fault code does not return, proceed to any remaining fault codes.
- No – Proceed to step 2

Step 2

Visual inspection

1. Verify that the correct oil filter is installed on the engine.
2. Visually inspect all applicable connectors and harnesses for corrosion, damage and rubbing during each step of the diagnostic procedure. Proceed to step 3.

Step 3

Check the oil level. Please refer to the owner operator manual:

- If the level is within the acceptable range. Proceed to step 4.
- If the level is not within the acceptable range. Please adjust the oil level with the appropriate fluid. Proceed to the verification procedure.

Step 4

Measure the oil pressure at the pressure port located on the oil module using the PACCAR MX oil pressure test kit (Part number 1903032).

- If the pressure is found to be at least 11.6 psi at idle - Proceed to Step 5
- If the pressure is found to be below 11.6 psi at idle – Contact the PACCAR Engine Support Center for further instructions.

Step 5

Replace the full-flow oil filter. Monitor active errors with DAVIE while the engine is idling:

- P1524 still active - Proceed to Step 6.
- P1524 not active - Proceed to the verification procedure below.

Step 6

Review the log file and verify if high oil temperature errors (P1298, P0298) were recorded jointly with P1524.

- Yes - Proceed to Step 11.
- No – Proceed to step 7.

Step 7

With key OFF, disconnect the pressure sensor harness. With key ON and the harness disconnected, measure the voltage between the supply and earth connectors of the pressure sensor circuit on the engine harness.

- If the voltage measured is between 4.75 volts and 5.25 volts – Proceed to step 8.
- If the voltage measured is not between 4.75 volts & 5.25 volts – Proceed to step 9.

Step 8

With DAVIE connected and Key ON, install a jumper wire between the supply and signal wires of the pressure sensor circuit on the engine harness and navigate through DAVIE to read errors.

- If the Oil Pressure Out of Range High Code is active – Replace the pressure sensor and reconnect the harness. Continue to the verification procedure listed at the end of this document.
- If the Oil Pressure Out of Range Low Code is active – Proceed to step 9.

Step 9

With key OFF, disconnect the engine harness from the PMCI. With DAVIE connected, turn the key ON. Install a jumper wire between the supply and signal terminals of the sensor circuit on the PMCI and navigate to read errors.

- If the Oil Pressure Out of Range High Code is active – Replace the engine harness and continue to the verification procedure listed at the end of this document
- If the Oil Pressure Out of Range Low Code is active – Proceed to step 10.

Step 10

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

Step 11

Determine if the coolant strainer has been removed.

- Yes, it has been removed – Proceed to step 6.
- No, it has NOT been removed – Remove as per Rapido instructions. Monitor errors with DAVIE while the engine is idling:
  - P1524 still active - Proceed to Step 6.
  - P1524 not active - Proceed to the verification procedure below.

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 reoccur.

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