

P0027

Fault code description

BPV control - Incorrect

Possible cause

1. Back pressure valve (BPV) is stuck
2. Back pressure position sensor faulty

Additional information

-

Set condition of fault code

-

Reset condition of fault code

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

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P0027, Diagnostic information

Technical data

["BPV actuator \(L020\)"](#)

["Sensor, pressure before turbine \(F826\)"](#)

Location of component(s)

["Location information, PMCI-2"](#)

Electrical diagram(s)

["PMCI-2"](#)

Description of component(s)

["BPV actuator \(L020\)"](#)

["Back Pressure Valve"](#)

Block diagram

["PMCI-2"](#)

Step by step 1: Visual Inspections

Troubleshooting steps

1. Visually inspect the associated component connections and wiring for any of the following:
 - Loose or broken clamps on the air system.
 - Dirt or debris build-up (blockage) at the front of the intercooler.
 - Moisture or dirt in the connections.
 - Damage to the wire harness or insulation.
 - Damaged or disconnected ECU connections.
 - Battery damage, contacts that are not tight.
 - Cuts, holes or abrasions in the air piping.
 - Incorrectly installed sensor.

Was there evidence of any of the above?

- **Yes** – Clean, adjust, repair, or replace

affected components for any issues identified.

Use DAVIE to re-check for the presence of active faults. If this related fault is no longer active, then this issue has been resolved. If this related fault is still active, proceed to step 2.

- **No** – Proceed to step 2.

Step by step 2: Electrical Checks before turbine pressure sensor (F826)

Troubleshooting steps

1. Refer to Rapido electrical diagrams or the links at the top of this document to confirm that the electrical values are within the specified ranges or limits.
2. Check the BPV control valve wiring, the BPV position sensor wiring and the wiring between the BPV and the ECU.

Are any issues found?

- **Yes** – Repair and proceed to step 3
- **No** – Proceed to step 4.

Step by step 3: Check for BPV air leaks

Troubleshooting steps

1. Using a spray bottle filled with soapy water, spray the pneumatic tubes that feed the actuator and watch for bubbles.

Are any issues found?

- **Yes** – Tighten the tube connections.
Proceed to step 4.
- **No** – Proceed to step 4.

Step by step 4: Initialise BPV

Troubleshooting steps

1. 1. Use DAVIE to initialise the BPV.

Does the BPV actuator move and the fault code reappear?

- **Yes** – Check for BPV sticking. Does it stick? If no, replace the actuator. Proceed to step 5.
- **No** – Check for BPV sticking. Does the actuator stick? If no, the control valve may need to be replaced. Proceed to step 6.

Step by step 5: Validate repair

Troubleshooting steps

1. Clear the fault codes.
2. Drive the truck (steady state transient).

Does the fault code become active?

- **Yes** –The BPV may need to be replaced. Proceed to step 6.
- **No** – Troubleshooting completed.

Step by step 6: Contact PACCAR Engine Support Center

Contact the PACCAR Engine Support Center for further assistance.

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