2020 Dodge or Ram Truck RAM 1500 Truck 4WD V6-3.0L DSL Turbo
Vehicle > ALL Diagnostic Trouble Codes (DTC) > Testing and Inspection > P Code Charts > P006D > P006D-00

POWERTRAIN CONTROL MODULE (PCM) - BAROMETRIC PRESSURE - INLET AIR PRESSURE CORRELATION

P006D-00-BAROMETRIC PRESSURE - INLET AIR PRESSURE CORRELATION

For a complete INTAKE AIR SYSTEM wiring diagram, **(refer to the Wiring Information)** .

Theory of Operation

The Mass Air Flow (MAF) Sensor is a multi-function smart device. The Powertrain Control Module (PCM) monitors the MAF Sensor signal directly through the hard-wired signal circuit like a typical MAF Sensor. The MAF Sensor also has an internal Intake Air Temperature Sensor, Humidity Sensor, and Inlet Air Pressure Sensor. The MAF Sensor communicates this information to the PCM over the LIN Bus circuit. The MAF Sensor also performs diagnostics on the internal air temperature sensor and reports faults to the PCM over the LIN Bus circuit.

When Monitored and Set Conditions

When Monitored: This diagnostic runs continuously when the following condition is met:

- With the ignition on.

Set Conditions:

- The PCM detects a plausibility error between the Inlet Air Pressure Sensor Signal and the BARO Pressure Sensor Signal for 4.0 seconds.

Default Actions:

- The MIL will illuminate.

Possible Causes
MASS AIR FLOW/INTAKE AIR SENSOR
POWERTRAIN CONTROL MODULE (PCM)

Always perform the PRE-DIAGNOSTIC TROUBLESHOOTING PROCEDURE before proceeding. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

Diagnostic Test

1. CHECK FOR AN ACTIVE DTC

1. Turn the ignition on.
2. With the scan tool, record all Freeze frame data.
3. With the scan tool, erase DTCs.
4. Turn the ignition off for 75 seconds.
5. Turn the ignition on.
6. With the scan tool, read DTCs and record on the repair order.

Is the DTC active or pending?

Yes
- Go To 2

No
- Perform to the INTERMITTENT CONDITION diagnostic procedure. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

2. CHECK FOR OTHER DTCS

1. Refer to the recorded DTCs.

Are the P012C-00, P012D-00 or any 5-Volt Supply DTCs active or pending?

Yes
- Perform the applicable diagnostic procedure(s). (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) /Diagnosis and Testing).

No
- Go To 3

3. CHECK THE MAF/INTAKE AIR SENSOR FOR PROPER OPERATION

1. Turn the ignition off.
2. Disconnect the MAF/Intake Air Sensor harness connector.
3. Turn the ignition on.
4. While monitoring the scan tool, connect a jumper between the (K188) 5-Volt Supply circuit and the MAF Sensor (K68) Pressure Signal circuit at the MAF/Intake Air Sensor harness connector.

Did the P012D-00 DTC set with the jumper in place?

Yes

- Replace the MAF/Intake Air Sensor in accordance with the Service Information.
- Perform the POWERTRAIN VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

No

- Go To **4**

4. CHECK RELATED PCM AND COMPONENT CONNECTIONS

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1. Disconnect all PCM harness connectors.
2. Disconnect all related in-line harness connections (if equipped).
3. Disconnect the related component harness connectors.
4. Inspect harness connectors, component connectors, and all male and female terminals for the following conditions:
   - Proper connector installation.
   - Damaged connector locks.
   - Corrosion.
   - Other signs of water intrusion.
   - Weather seal damage (if equipped).
   - Bent terminals.
   - Overheating due to a poor connection (terminal may be discolored due to excessive current draw).
   - Terminals that have been pushed back into the connector cavity.
   - Check for spread terminals and verify proper terminal tension.

   Repair any conditions that are found.
5. Connect all PCM harness connectors. Be certain that all harness connectors are fully seated and the connector locks are fully engaged.

6. Connect all in-line harness connectors (if equipped). Be certain that all connectors are fully seated and the connector locks are fully engaged.
7. Connect all related component harness connectors. Be certain that all connectors are fully seated and the connector locks are fully engaged.
8. With the scan tool, erase DTCs.
9. Test drive or operate the vehicle in accordance with the when monitored and set conditions.
10. With the scan tool, read DTCs.

Did the DTC return?

Yes

- Replace and program the Powertrain Control Module (PCM) in accordance with the Service Information.
- Perform the POWERTRAIN VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

No

- Repair the poor connections.
- Perform the POWERTRAIN VERIFICATION TEST. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).