POWERTRAIN CONTROL MODULE (PCM) - CHARGE AIR COOLER EFFICIENCY BELOW THRESHOLD (6.7L DSL)

P026A-CHARGE AIR COOLER EFFICIENCY BELOW THRESHOLD

- **When Monitored:**
  With the engine running, Charge Air Cooler (CAC) Temperature Sensor, Inlet Air Temperature, and Ambient Air Temperature Sensor status are valid.
- **Set Condition:**
  The Powertrain Control Module (PCM) compares the CAC Temperature Sensor reading to a calibrated threshold. The calibrated threshold varies, and is dependant on the reading from the Ambient Air Temperature Sensor. If the CAC Temperature Sensor reading is above the calibrated threshold for a cumulative total of 120 seconds, the PCM determines that the Charge Air Cooler is inefficient. Two trip fault.

Possible Causes
CHARGE AIR COOLER TEMPERATURE SENSOR
CHARGE AIR COOLER FINS BLOCKED FROM DEBRIS
COOLING FAN FAULTY

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

1.**OTHER DTCS**

1. Turn the ignition on.
2. With the scan tool, record all Freeze frame data.
3. With the scan tool, read DTCs.

Are there any CAC Temperature sensor or Cooling Fan DTCs present?

Yes

- Repair other DTCs before proceeding.

No

- Go To **2**

2.**CAC TEMPERATURE SENSOR**

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1. Turn the ignition off.
2. Disconnect the CAC Temperature Sensor harness connector.
3. Remove the CAC Temperature Sensor and reconnect the wiring to the sensor.
4. Turn the ignition on.
5. With the scan tool in, monitor the CAC Temperature Sensor while heating the sensor with an external heat source (DO NOT USE OPEN FLAME).

Does the reading from the sensor increase at least 5°F on the scan tool?

Yes

- Go To **3**

No

- Replace the Charge Air Cooler Temperature Sensor in accordance with the service information.
- Perform the POWERTRAIN VERIFICATION TEST - 6.7L. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

3.**VISUALLY INSPECT THE CHARGE AIR COOLER**

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1. Visually inspect the Charge Air Cooler and Radiator fins for excessive debris restricting air flow through the Charge Air Cooler.

Are the Charge Air Cooler or Radiator restricted with debris?

Yes

- Clean the debris from the Charge Air Cooler or Radiator.
- Perform the POWERTRAIN VERIFICATION TEST - 6.7L. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

No

- Go To **4**

4.**CHECK THE COOLING FAN OPERATION**

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1. Check the Viscous Cooling Fan operation. (Refer to 07 - Cooling/Engine/FAN, Cooling - Diagnosis and Testing) .

Was the Viscous Fan found to be operating normal?

Yes

- Check for a base engine condition, such as an engine overheat or intake air restriction that could cause the Charge Air Cooler to work inefficiently.
- Perform the INTERMITTENT CONDITION diagnostic procedure. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).

No

- Clean the debris from the Charge Air Cooler or Radiator.
- Perform the POWERTRAIN VERIFICATION TEST - 6.7L. (Refer to 28 - DTC-Based Diagnostics/MODULE, Powertrain Control (PCM) - Standard Procedure).