

2008 Chrysler Truck Aspen 2WD V8-5.7L

Vehicle > ALL Diagnostic Trouble Codes (DTC) > Testing and Inspection > P Code Charts > P3497

GAS

P3497-MDS RATIONALITY BANK 2

For a complete wiring diagram **Consult Diagrams/Electrical**.

Theory of Operation

When all criteria has been met, power is supplied to each MDS Solenoid when the engine is making a transition from 8 cylinder mode to 4 cylinder mode. By actuating the solenoid, oil pressure is raised to the pair of lifters that coincide with each particular solenoid. The oil pressure pushes in the locking pins that allows the lifter to collapse, decoupling the valves and camshaft.

- When Monitored:

Transition from 8 to 4 cylinder mode.

- Set Condition:

O2 sensor readings on Bank 2 side indicate a lean condition while in 4 cylinder mode. One trip fault.

Possible Causes
INSUFFICIENT OIL PRESSURE ACTING ON THE LIFTER LOCKING PINS
OIL PASSAGES RESTRICTED
LIFTER
MDS SOLENOID

Always perform the Pre-Diagnostic Troubleshooting procedure before proceedingSee: Computers and Control Systems > Initial Inspection and Diagnostic Overview > Pre-Diagnostic Troubleshooting Procedure.

Diagnostic Test

1. ACTIVE DTC

NOTE: Diagnose any Misfire DTCs before continuing.

Start the engine and allow it to reach normal operating temperature.

WARNING: When the engine is operating, do not stand in direct line with the fan. Do not put your hands near the pulleys, belts, or fan. Do not wear loose clothing. Failure to follow these instructions can result in personal injury or death.

NOTE: It may be necessary to test drive the vehicle in order for this DTC to set.

With a scan tool, select View DTCs.

NOTE: Diagnose any Deactivation or Oil Pressure DTCs before continuing with this test.

Is the DTC Active at this time?

Yes

- Go To 2

No

- Refer to the INTERMITTENT CONDITION Diagnostic Procedure. See: Computers and Control Systems > Component Tests and General

Diagnostics > Intermittent Condition

2. MDS SOLENOID 4

Turn the ignition off.
Remove the Intake Manifold.
Turn the ignition on.

NOTE: The DTC needs to be cleared before actuating the Solenoid, if the DTC is not cleared, the Solenoid may not be allowed to actuate.

With the scan tool actuate the MDS Solenoid 4.

Can you feel and hear the Solenoid Actuating?

Yes

- Go To 3

No

- Remove the Solenoid and check for any debris that may be blocking the oil passages to the Solenoid. If the passages are clogged, clean the passages and replace the MDS Solenoid 4. If the passages are not clogged with debris, replace the MDS Solenoid 4.
- Perform the POWERTRAIN VERIFICATION TEST. See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests > Powertrain Verification Test

3. MDS SOLENOID 6

With the scan tool actuate the MDS Solenoid 6.

NOTE: The DTC needs to be cleared before actuating the Solenoid, if the DTC is not cleared, the Solenoid may not be allowed to actuate.

Can you feel and hear the Solenoid Actuating?

Yes

- Go To 4

No

- Remove the Solenoid and check for any debris that may be blocking the oil passages to the Solenoid. If the passages are restricted, clean the passages and replace the MDS Solenoid 6. If the passages are unable to be cleaned out, replacing the engine block may be necessary. If the passages are not clogged with debris, replace the MDS Solenoid 6.
- Perform the POWERTRAIN VERIFICATION TEST. See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests > Powertrain Verification Test

4. OIL PASSAGES RESTRICTED

Turn the ignition off.
Remove both Solenoids on Bank 2 of the engine block.
Remove the Bank 2 Cylinder Head.
Remove the each pair of lifters for Cylinders 4 and 6.
Inspect the oil passages to the Solenoids and from the Solenoids to the lifters.

Are the passages blocked?

Yes

- Clean the oil passages as necessary. If the entire engine is restricted, disassembly of the entire engine block may be necessary.
- Perform the POWERTRAIN VERIFICATION TEST. See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests > Powertrain Verification Test

No

- Replace both sets of lifters if no other possible causes remain.

- Perform the POWERTRAIN VERIFICATION TEST. See: A L L Diagnostic Trouble Codes (DTC) > Verification Tests > Powertrain Verification Test