

P0522	Engine Oil Pressure Sensor/Switch "A" Circuit Low	Sets in the PCM when the PCM detects a short to ground on the hardwired input from the oil pressure switch.
P0523	Engine Oil Pressure Sensor/Switch "A" Circuit High	Sets in the PCM when the PCM detects an open on the hardwired input from the oil pressure switch.
P0524	Engine Oil Pressure Too Low	Sets in the PCM when the PCM detects low oil pressure.

Possible Sources

- Wiring, terminals or connectors
- Tachometer concern
- Message center concern
- Engine oil pressure concern
- Engine oil pressure switch
- GWM concern
- PCM
- IPC

Visual Inspection and Diagnostic Pre-checks

Inspect the:

- engine for noise or other symptom indicating a base engine or low engine oil pressure concern.
- engine oil pressure switch for signs of external damage.
- engine oil pressure switch connector for signs of corrosion
- harness for damage indicating an open or short to ground.

DIAGNOSIS AND TESTING > INSTRUMENTATION, MESSAGE CENTER AND WARNING CHIMES > PINPOINT TESTS > PINPOINT TEST AD : THE LOW OIL PRESSURE INDICATOR IS NEVER OR ALWAYS ON (2.7L AND 5.0L ENGINES) > PINPOINT TEST AD : THE LOW OIL PRESSURE INDICATOR IS NEVER OR ALWAYS ON (2.7L AND 5.0L ENGINES)

AD1 IDENTIFY THE IPC (INSTRUMENT PANEL CLUSTER) LEVEL

Determine if the vehicle is equipped with a base IPC. REFER to: Instrument Panel Cluster

Is the vehicle is equipped with a base IPC?

Yes	GO to AD3
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No	GO to AD2
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AD2 CHECK THE MESSAGE CENTER OPERATION

Ignition ON.

Close all doors and the hood.

Clear all message center warnings by pressing the OK button for each warning present.

Monitor the door ajar RTT.

Open the driver door.

Clear the message center popup warning.

Monitor the door ajar RTT.

Is the door ajar RTT off with the door closed, and on with the door open?

Yes	GO to AD4
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No	GO to Pinpoint Test A
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AD3 CHECK THE LOW OIL PRESSURE WARNING INDICATOR OPERATION USING A SCAN TOOL

Ignition ON.

Using a diagnostic scan tool, view the IPC Parameter Identifications (PIDs).

Select the IPC all warning lamps (ALL_LAMP) PID.

Command all the warning lamps on and off while monitoring the low oil pressure warning indicator.

Does the low oil pressure warning indicator illuminate when commanded on and turn off when commanded off?

Yes	GO to AD4
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No	
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AD4 CHECK THE GWM (GATEWAY MODULE A) DIAGNOSTIC TROUBLE CODES (DTCS)

Using a diagnostic scan tool, check the GWM Continuous Memory Diagnostic Trouble Codes (CMDTCs).

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to: Communications Network .
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No	GO to AD5
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AD5 CHECK THE TACHOMETER OPERATION

Start the engine.

Verify the tachometer operates.

Does the tachometer operate?

Yes	GO to AD6
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No	GO to Pinpoint Test H
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AD6 PERFORM THE IPC (INSTRUMENT PANEL CLUSTER) SELF-TEST

Using a diagnostic scan tool, perform the IPC self-test.

Are any Diagnostic Trouble Codes (DTCs) recorded?

Yes	REFER to DTC Chart: IPC .
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No	GO to AD7
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AD7 CHECK THE OIL PRESSURE

Test the engine for low oil pressure.

Was a low oil pressure concern detected?

Yes	REPAIR the low oil pressure concern. Refer to the appropriate article for the procedure.
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No	GO to AD8
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AD8 CHECK FOR VOLTAGE AT THE OIL PRESSURE SWITCH

Ignition OFF.

Disconnect Engine Oil Pressure Switch C1657 .

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1657-3		C1657-2

Is the voltage approximately 5 volts?

Yes	GO to AD9
No	GO to AD12

AD9 CHECK THE OIL PRESSURE SENSOR SIGNAL CIRCUIT FOR A SHORT TO VOLTAGE

Ignition OFF.

Disconnect PCM C1232B (2.7L Engine).

Disconnect PCM C1381E (5.0L Engine).

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1657-1		Ground

Is any voltage present?

Yes	REPAIR the circuit.
No	GO to AD10

AD10 CHECK THE OIL PRESSURE SENSOR SIGNAL CIRCUIT FOR AN OPEN

Ignition OFF.

Measure:

2.7L Engine

Positive Lead	Measurement / Action	Negative Lead
C1657-1	Ω	C1232B-70

5.0L Engine

Positive Lead	Measurement / Action	Negative Lead
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C1657-1	Ω	C1381E-57
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Is the resistance less than 3 ohms?

Yes	GO to AD11
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No	REPAIR the circuit.
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AD11 CHECK THE OIL PRESSURE SENSOR SIGNAL CIRCUIT FOR A SHORT TO GROUND

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1657-1	Ω	Ground

Is the resistance greater than 10, 000 ohms?

Yes	INSTALL a new engine oil pressure sensor. Refer to the appropriate article for the procedure. CLEAR the Diagnostic Trouble Codes (DTCs). TEST the system for normal operation. If the oil pressure RTT is still never or always on, GO to AD16
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No	REPAIR the circuit.
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AD12 CHECK THE OIL PRESSURE SENSOR VREF CIRCUIT FOR A SHORT TO VOLTAGE

Ignition OFF.

Disconnect PCM C1232E (2.7L Engine).

Disconnect PCM C1381E (5.0L Engine).

Ignition ON.

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1657-3		Ground

Is any voltage present?

Yes	REPAIR the circuit.
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No	GO to AD13
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AD13 CHECK THE OIL PRESSURE SENSOR VREF CIRCUIT FOR AN OPEN

Ignition OFF.

Measure:

2.7L Engine

Positive Lead	Measurement / Action	Negative Lead
C1657-3	Ω	C1232E-6

5.0L Engine

Positive Lead	Measurement / Action	Negative Lead
C1657-3	Ω	C1381E-34

Is the resistance less than 3 ohms?

Yes	GO to AD14
No	REPAIR the circuit.

AD14 CHECK THE OIL PRESSURE SENSOR VREF CIRCUIT FOR A SHORT TO GROUND

Measure:

Positive Lead	Measurement / Action	Negative Lead
C1657-3	Ω	Ground

Is the resistance greater than 10, 000 ohms?

Yes	GO to AD15
No	REPAIR the circuit.

AD15 CHECK THE OIL PRESSURE SENSOR RETURN CIRCUIT FOR AN OPEN

Measure:

2.7L Engine

Positive Lead	Measurement / Action	Negative Lead
C1657-2	Ω	C1232E-20

5.0L Engine