

Instrument Panel, Gauges and Warning Indicators: Testing and Inspection

Test D: Incorrect Oil Pressure Gauge Indication

PINPOINT TEST D: INCORRECT OIL PRESSURE GAUGE INDICATION

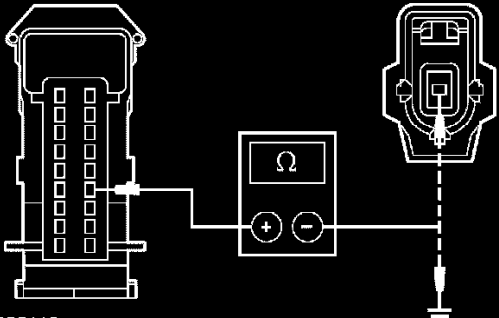
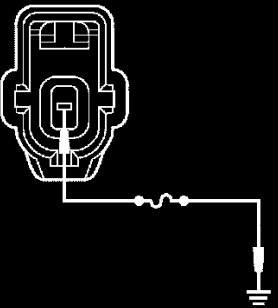
PINPOINT TEST D: INCORRECT OIL PRESSURE GAUGE INDICATION

 **CAUTION:** Use the correct probe adaptor(s) when making measurements. Failure to use the correct probe adaptor(s) may damage the connector.

Test Step		Result / Action to Take
D1	CARRY OUT THE INSTRUMENT CLUSTER OIL PRESSURE GAUGE ACTIVE COMMAND USING THE DIAGNOSTIC TOOL	
	<ul style="list-style-type: none"> • Key in ON position. • Enter the following diagnostic mode on the diagnostic tool: Instrument Cluster Active Command. • Select the instrument cluster oil pressure gauge active command. Trigger the active command on and off. Observe the oil pressure gauge. • Does the engine oil pressure gauge read mid-range when triggered on and low when triggered off? 	<p>Yes GO to D2.</p> <p>No GO to D5.</p>
D2	CHECK THE ENGINE OIL PRESSURE	
	<ul style="list-style-type: none"> • Carry out the engine oil pressure test. Refer to Engine. • Is the oil pressure within specification? 	<p>Yes GO to D3.</p> <p>No REFER to Engine to continue diagnosis of the engine oil system.</p>

(Continued)

D1-D2

PINPOINT TEST D: INCORRECT OIL PRESSURE GAUGE INDICATION (Continued)		Result / Action to Take
Test Step		
D3	CHECK CIRCUIT 31 (WH/RD) AND CIRCUIT 1308 (BN/OG) FOR AN OPEN OR A SHORT TO GROUND	
	<p>NOTE: For gasoline engines, check circuit 31 (WH/RD) only. For diesel engines, check circuit 31 (WH/RD) and circuit 1308 (BN/OG).</p> <ul style="list-style-type: none"> • Key in OFF position. • Disconnect: Instrument Cluster C220a. • Disconnect: Engine Oil Pressure Switch C103. • Measure the resistance between the instrument cluster C220a-13, circuit 31 (WH/RD), harness side and the engine oil pressure switch C103-1, circuit 31 (WH/RD) (gasoline engines) or circuit 1308 (BN/OG) (diesel engines), harness side; and between the instrument cluster C220a-13, circuit 31 (WH/RD), harness side and ground.  <p>N0026112</p> <ul style="list-style-type: none"> • Is the resistance less than 5 ohms between the instrument cluster and the engine oil pressure switch, and greater than 10,000 ohms between the instrument cluster and ground? 	<p>Yes GO to D4.</p> <p>No REPAIR the circuit in question. TEST the system for normal operation.</p>
D4	CHECK THE ENGINE OIL PRESSURE SWITCH	
	<ul style="list-style-type: none"> • Connect: Instrument Cluster C220a. • Connect a fused (5A) jumper wire between the engine oil pressure switch C103-1, circuit 31 (WH/RD), (gasoline engines) or circuit 1308 (BN/OG) (diesel engines), harness side and ground.  <p>N0002760</p> <ul style="list-style-type: none"> • Key in ON position. • Does the engine oil pressure gauge indicate normal oil pressure? 	<p>Yes INSTALL a new engine oil pressure switch. TEST the system for normal operation.</p> <p>No REMOVE the jumper wire. GO to D5.</p>
D5	CHECK FOR CORRECT INSTRUMENT CLUSTER OPERATION	
	<ul style="list-style-type: none"> • Disconnect all the instrument cluster connectors. • Check for: <ul style="list-style-type: none"> • corrosion • pushed-out pins • Connect all the instrument cluster connectors and make sure they seat correctly. • Operate the system and verify the concern is still present. • Is the concern still present? 	<p>Yes INSTALL a new instrument cluster. TEST the system for normal operation.</p> <p>No The system is operating correctly at this time. The concern may have been caused by a loose or corroded connector.</p>

D3-D5

Normal Operation

The engine oil pressure switch is a normally open switch. When the oil pressure is within normal ranges, the engine oil pressure switch closes sending a ground signal to the instrument cluster through circuit 31 (WH/RD). The instrument cluster, upon receipt of the ground signal, commands the oil pressure gauge to the normal or mid-range position. When the oil pressure is low the engine oil pressure switch opens, removing the ground signal, and the instrument cluster commands the oil pressure gauge to the L (low) position.

Possible Causes

- circuit 31 (WH/RD) open or short to ground
- circuit 1308 (BN/OG) open or short to ground (diesel only)
- engine oil pressure switch
- base engine concern
- instrument cluster