



Preliminary Information

PIP5932D Information on Malfunction Indicator Lamp (MIL) Illuminated with Any Combination of DTCs P0521, P06DD or P06DE Setting

Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Buick	Encore GX	2024	All	All	1.2L LIH	All
Buick	Envista	2024	All	All	1.2L LIH	All
Chevrolet	Trailblazer	2024	All	All	1.2L LIH	All
Chevrolet	Trax	2024	All	All	1.2L LIH	All

Involved Region or Country	North America
Condition	MIL on with P0521 and/or P06DD, P06DE stored.
Cause	Several potential causes - oil pump debris - engine wiring harness issue.

Correction:

Perform the Engine Oil Pump Screening Test below:

Important: The purpose of this procedure is to perform two tests of ten cycles each, as described below, or to trigger DTCs P0521, P06DD, P06DE, whichever comes first.

The test should be stopped immediately upon triggering a listed DTC.

Park the vehicle in a safe location. Put the transmission in park and apply the parking brake.

Confirm that P0521 and/or P06DD - P06DE is set, the engine oil level is correct, and no drivability concerns exist.

Connect the MDI or MDI2 and start GDS. Clear all codes in the vehicle, and double check that there are no codes in the ECM before starting the procedure.

Module Diagnostics => [K20] Engine Control Module => Data Display => Engine Mechanical Data

Start and run engine for minimum 15 minutes until the coolant temperature gauge needle is centered in the gauge.



Raise the engine speed to 2,000 rpm for 30 seconds.

Raise the engine speed to 4,000 rpm for 15 seconds.

Release the accelerator pedal and idle 15 seconds.

Repeat the 2000 rpm, 4000 rpm, and idle test cycle ten times.

Check DTC Display Tab for trouble codes P0521, P06DD, P06DE. Exit Engine Mechanical Data screen to save session log.

If any of these DTCs set: P0521, P06DD, P06DE, skip to Engine Oil Pump Replacement in SI.

- If P0521, P06DE, P06DD are not present, turn off the engine.

Disconnect scan tool from DLC. Remove key fobs from vehicle. Open door and close door. Wait for 30 seconds to allow modules to power down.

Leaving engine off, enter service mode, connect GDS2 and enter Engine Mechanical Data.

Start engine. Repeat the test cycle ten more times.

Check DTC Display Tab for trouble codes P0521, P06DD, P06DE. Exit Engine Mechanical Data screen to save session log.

- If any of these DTCs set: P0521, P06DD, P06DE, during this test, Refer to Engine Oil Pump Replacement in SI.

If any of these DTC's are still setting after engine oil pump replacement, continue on with the below diagnostics.

Remove the engine oil pressure control solenoid valve and inspect for proper terminal tensions, crimps and locks.

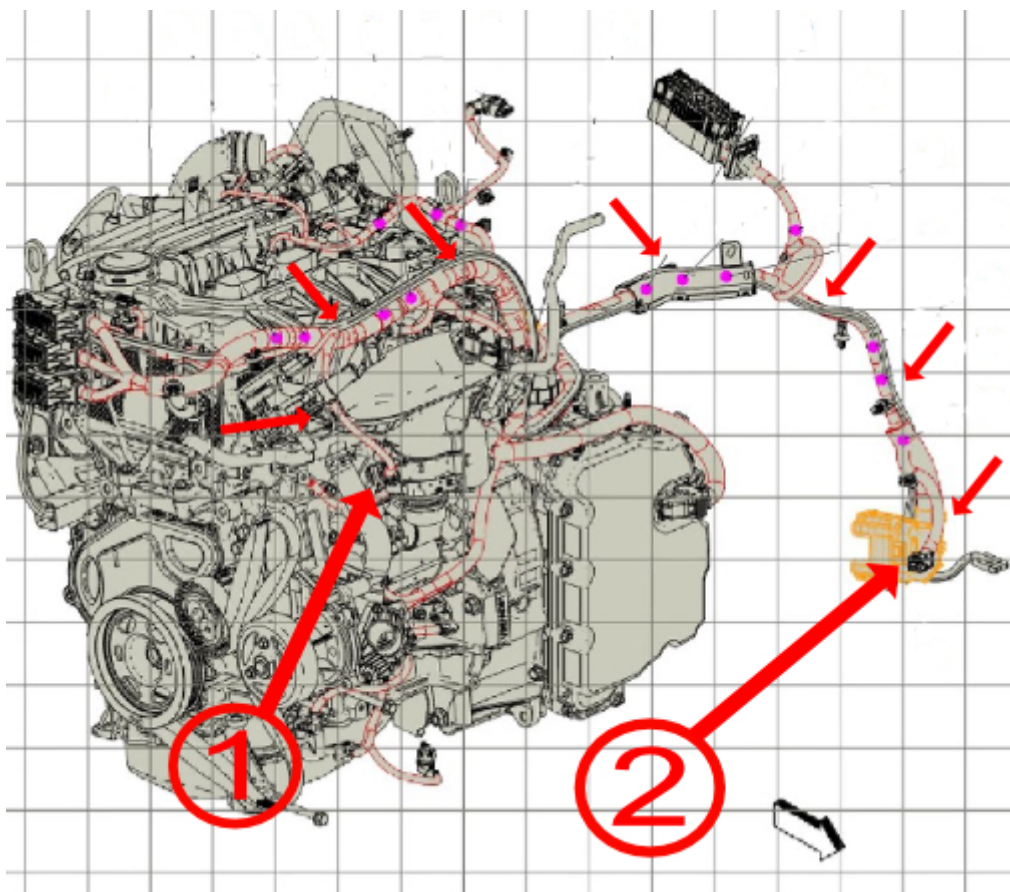
Test for 10 to 30 Ω between the test points: Control terminal 2/B & Ignition terminal 1/A of the engine oil pressure control solenoid valve.

If within range, inspect the solenoid valve for signs of debris.

If no debris are found and the concern is not isolated to the engine oil pressure control solenoid valve, follow Engine Oil Pressure Sensor Replacement in SI to remove the intake manifold and gain access to the engine oil pressure sensor.

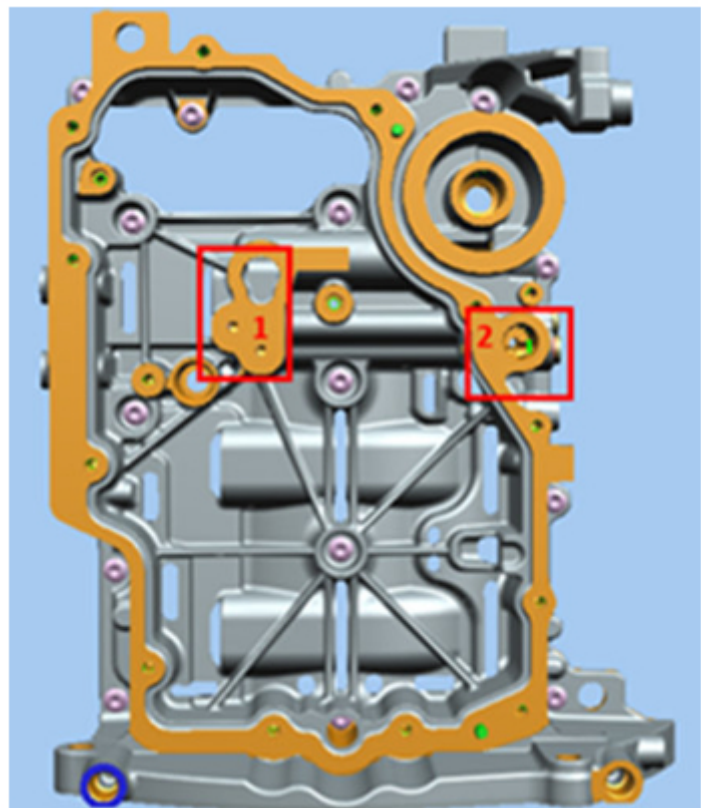
Disconnect the engine oil pressure sensor and test for less than 10 Ω between the low reference circuit 580 terminal 2 and ECM connector X1-terminal 23.

If the resistance is within range, tap and manipulate the engine wiring harness between the oil pressure sensor (1) and X125 (2) shown below, while monitoring for a change in the resistance reading.



If the concern is not isolated to the engine wiring harness, reinstall all components and if P0521, P06DD, P06DE

are not set during this test, No further action is required, Release the vehicle to the customer.



Caution: If oil pump replacement is needed, ensure the three oil pump oil holes (Area 1) and OCV mounting hole (Area 2) are free of debris BEFORE installing the oil pump and OCV. If debris is found, remove with a lint-free cloth or brush that will not scratch the surface.

Caution: When installing the engine oil pan on the 1.2L (RPO LIH) engine, proper placement of the room temperature vulcanizing (RTV) sealant is critical. Refer to PIP5739 for RTV sealant instructions. Carefully follow the instructions in SI and [PIP5739](#) to ensure proper oil pan installation.

Warranty Information

For vehicles repaired under the Powertrain coverage, use the following labor operation. Reference the Applicable Warranties section of Investigate Vehicle History (IVH) for coverage information.

Labor Operation	Description	Labor Time
4022600	Engine Oil Pressure Sensor Replacement	1.5 Hr.
ADD: Diagnosis	Harness inspection: You may claim up to the allowable labor hours depending on actual time to perform diagnosis	0.0-1.0 Hr.
4086708	Inspect Only Vehicle Passed Inspection (No Further Action Required)	20 cycles
ADD: Oil Pump Replacement	Engine oil pump failure screening test cycle Oil Pump Replacement (Includes oil + filter change)	0.8 Hr-1.3 Hr.

Version History

Version	5
Modified	06/28/2023 - Created on. 03/18/2024 - Updated Labor operation. 04/17/2024 - Updated models. 05/07/2024 - Updated correction and labor operation sections. 05/23/2024 - Updated models.



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