



Preliminary Information

PIP5826B MIL illuminated with DTC P0521

Models

Brand:	Model:	Model Years:	VIN:		Engine:	Transmissions:
			from	to		
Buick	Encore GX	2020 - 2021	All	All	1.2L (LIH)	All
Chevrolet	Trailblazer	2020 - 2021	All	All	1.2L (LIH)	All

Involved Region or Country	North America
Condition	Some customers may comment that the MIL light is illuminated. A P0521 may be stored Current or in history.
Cause	This may be caused by high resistance in the engine wiring harness.

Correction:

Run the engine with the hood closed until normal operating temperature is achieved.

Connect GDS2 to the vehicle and enter Module Diagnostics / Engine Control Module / Data Display / Engine Mechanical Data.

Lock GDS2 Parameter: Engine Oil Pressure in PSI.

Note: GDS2 Parameter: Engine Oil Pressure Sensor or GDS2 Parameter: Absolute Engine Oil Pressure are not usable for this testing.

Start the engine.

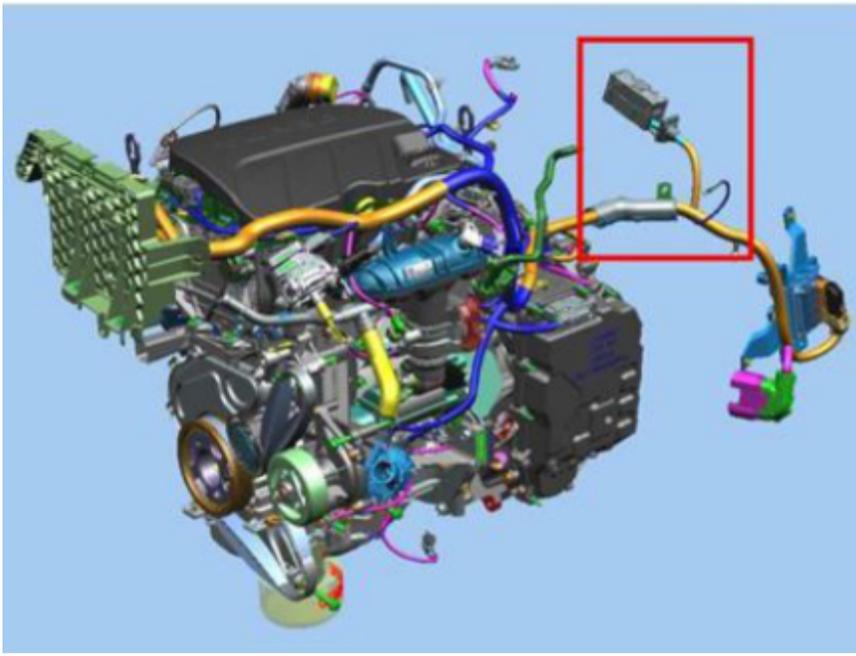
Validate proper engine oil pressure.

At idling speed, engine oil pressure should be 160 - 200 kPa (23.21 - 29.01 psi) and the oil temperature must be between 80°C (176°F) and 100°C (212°F).

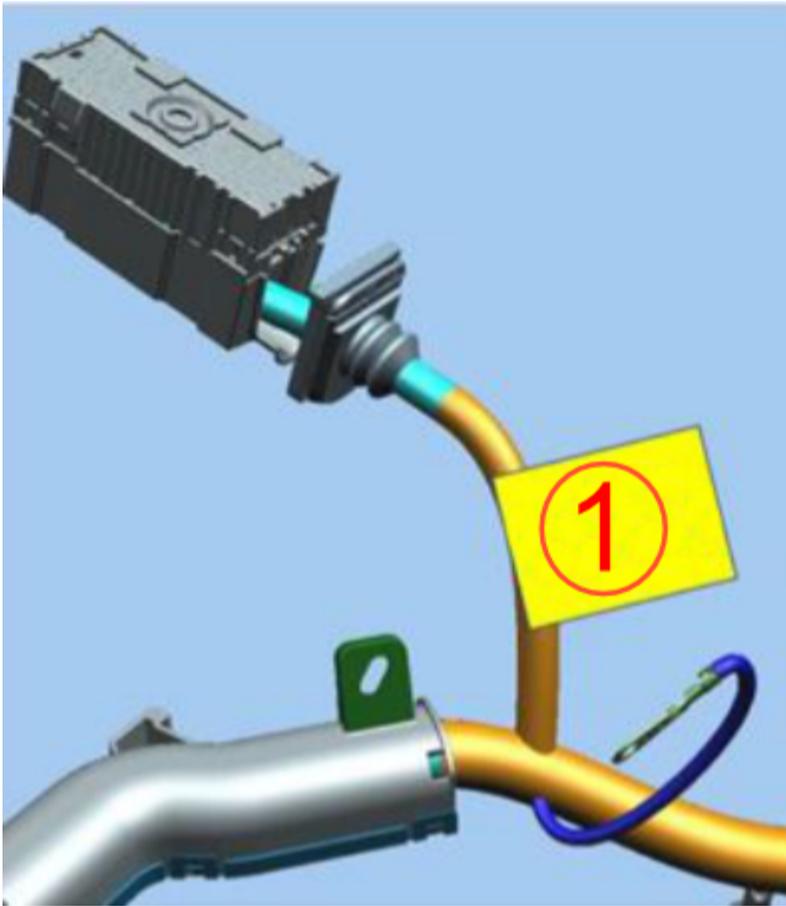
At 4000 rpm, engine oil pressure should be 340 - 380 kPa (49.31 - 55.11 psi) and the oil temperature must be between 80°C (176°F) and 100°C (212°F).

If the engine oil pressure is within specification, use the pictures shown below to locate the engine wiring harness part number tag.

It is located on the harness branch for X50A Fuse Block - Underhood as shown below.



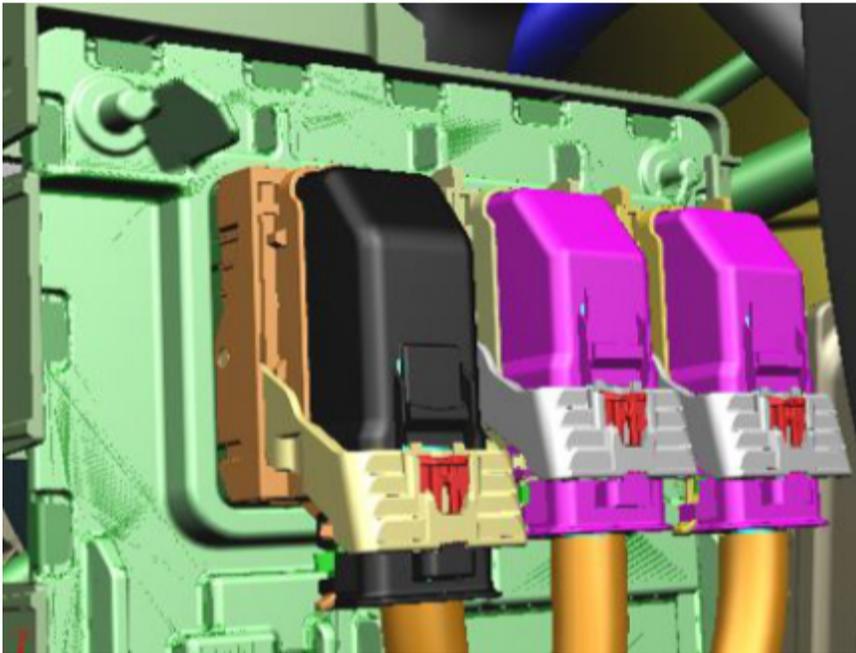
Branch for X50A Fuse Block - Underhood.



Engine wiring harness part number tag.



If the part number is one of the following (42737310, 42737311, 42749493, 42749494), inspect the three ECM connectors for proper locking lever and CPA lock positions. (refer to picture below).



Use the appropriate Global Service Information documents to locate and inspect the following circuits for bent pins or poor terminal tension.

Circuit 460 5V1 Reference Bus at ECM.

Circuit 580 Low Reference Bus at ECM.

Inspect the 4 clips circled below for broken Tie Straps and proper retention of the main engine wiring harness.



If the engine oil pressure is within specification, turn the engine off and immediately press and hold the Start button to enter Service Mode.

While in service mode, monitor the Engine Oil Pressure parameter for readings above 0.0 PSI. (You may have to close the hood and run the engine for additional time to duplicate)

Once duplicated, open the hood and bend the harness back and forth at the circled location shown below while monitoring for the engine oil pressure to change.



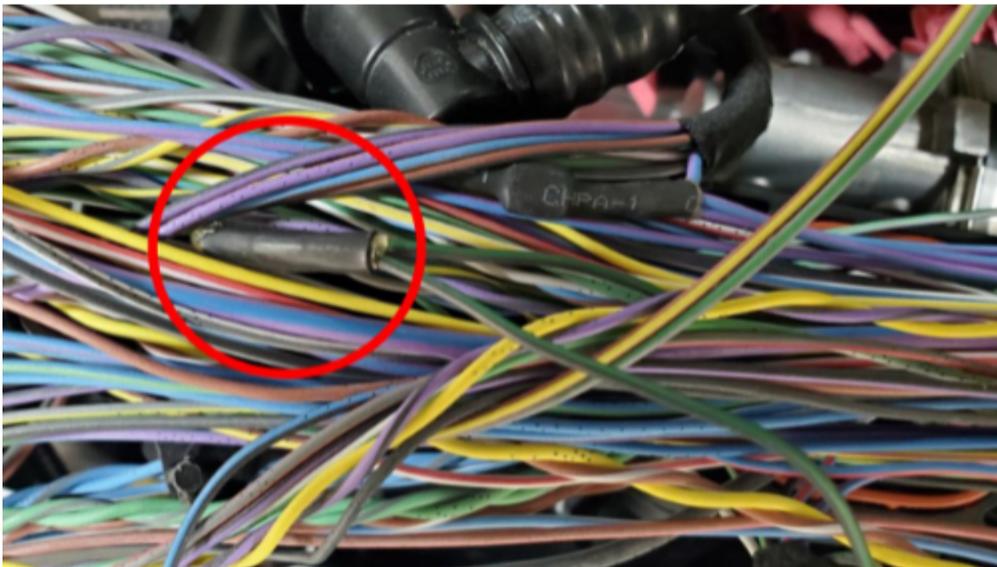
Note: If the engine oil pressure reading moves to 0.0 PSI while manipulating the harness, the reading may not change from 0.0 PSI with additional manipulation.

A change in the engine oil pressure reading either up or down in PSI, isolates the issue to the Special three wire Splice in this location of the main engine wiring harness.

Note: Not all of the listed harnesses will have the Special three wire splice.

Open the engine wiring harness in the location circled above to access the three wire special splice for Low Reference circuit 548 BK/GN.

Remove the Heat Shrink and splice clip to expose all three legs of the special splice.

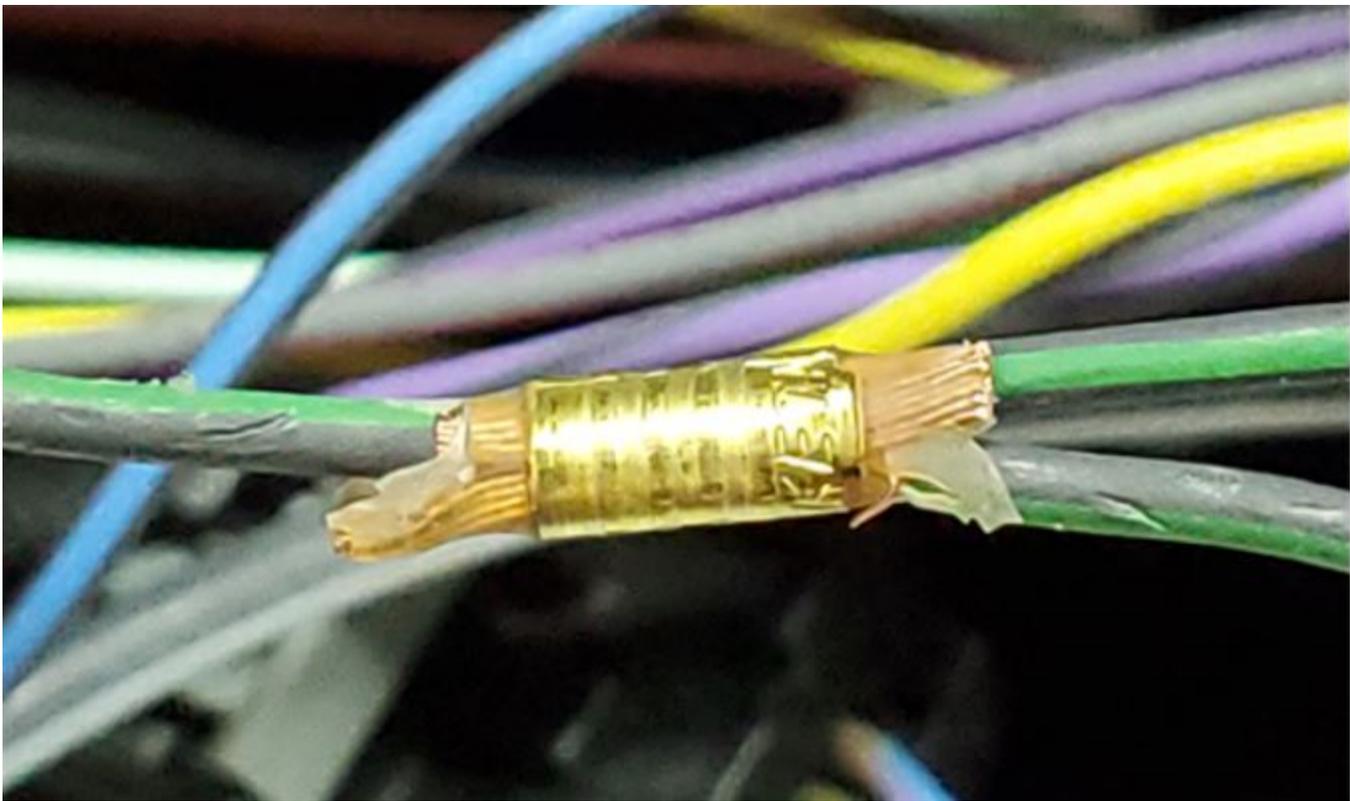


Inspect each leg for broken wire strands and correct any issues.

Slide the appropriate size heat shrink tube on one branch of the circuit.

Install a new splice clip, solder the three legs, and seal with the heat shrink.

Close the main engine wiring harness using the appropriate PET under hood tape.



NOTE: This PI will be updated or changed to a bulletin as more information becomes available

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
5486268*	Splice Repair	1.0 Hr.
*This is a unique Labor Operation for Bulletin use only.		

Version History

Version	3
Modified	11/08/2021 - Created on. 11/09/2021 - To update GDS2 Verbiage 12/22/21 - To add additional testing procedures.



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