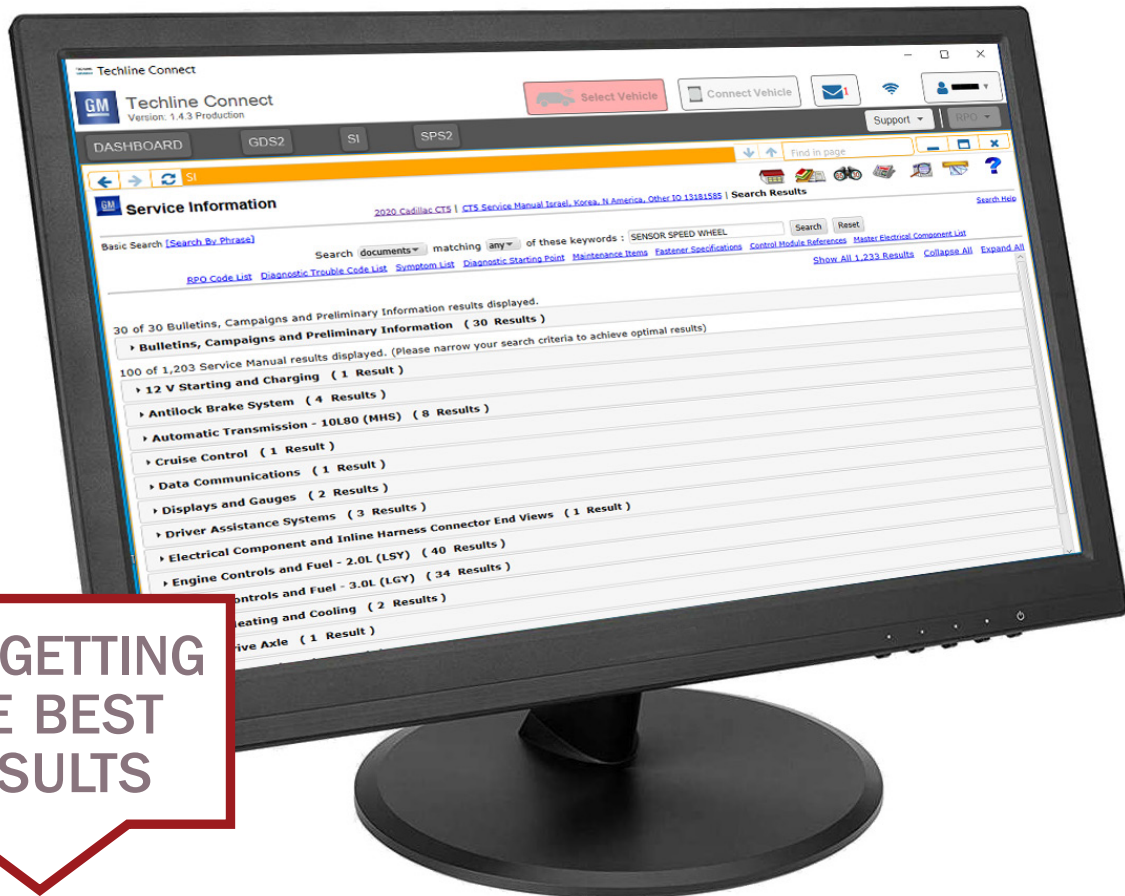


## Searching the Service Information



AND GETTING  
THE BEST  
RESULTS

*Enter a few keywords in the Search box of the Service Information (SI), click the Search button, and all related results are shown. In some cases, depending on how you searched for the information, the number of results may be much more than you're looking for. Don't be overwhelmed. There are many SI search functions that can help to narrow down a search result, delivering better, more accurate results.*

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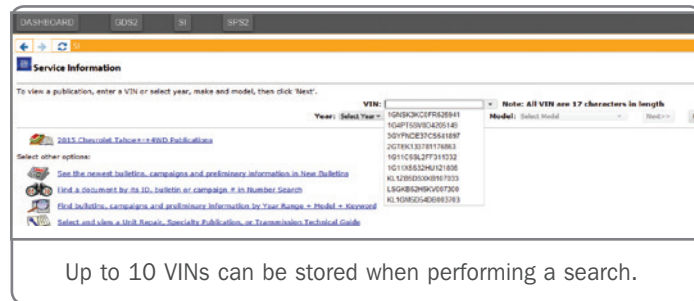
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# Searching the Service Information

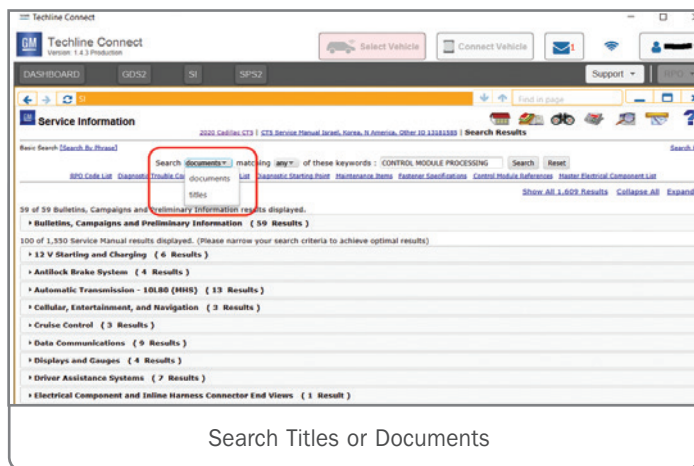
## VIN SEARCH

Enter a 17-digit VIN to get search results for a specific vehicle. Up to 10 VINs are stored to make it easier to recall information for a VIN that was entered previously.



## TITLES OR DOCUMENTS

When performing a search of SI after building a vehicle, users can select to search just the Titles in SI or complete Documents. Searching Documents will result in a more complete search and return a more exhaustive list of related information.



Search Titles or Documents

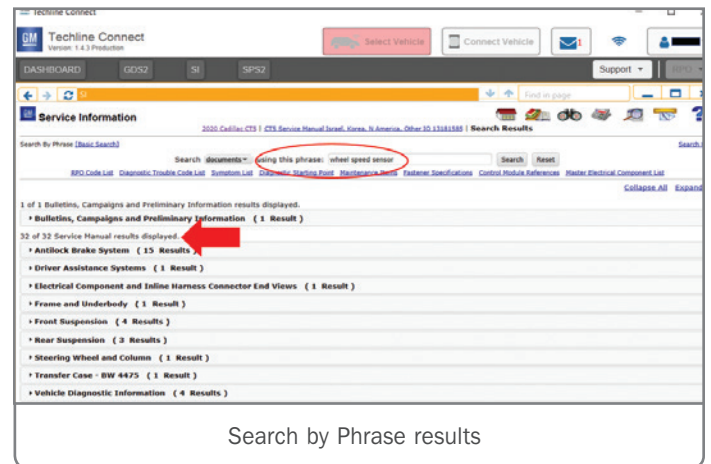
In addition, searching for All keywords (all keywords must be found to be delivered in the results) instead of Any of the keywords (any one of the keywords found will provide a result) will substantially change the search results.

For example, searching for the keywords "video processing control module" using the Documents and All functions provided search results that included two bulletins and 37 service manual results.

Searching for the keywords "video processing control module" and changing the search functions to Documents and Any resulted in 59 bulletins and 1,550 service manual results.

## SEARCH BY PHRASE

Searching by Phrase can be performed by selecting Search by Phrase in the top left corner of the Search page. A Basic Search returns all Service Information documents related to the model that include the keywords entered in the Search box. For example, "wheel speed sensor" returns results for "sensor," "speed" and "wheel."

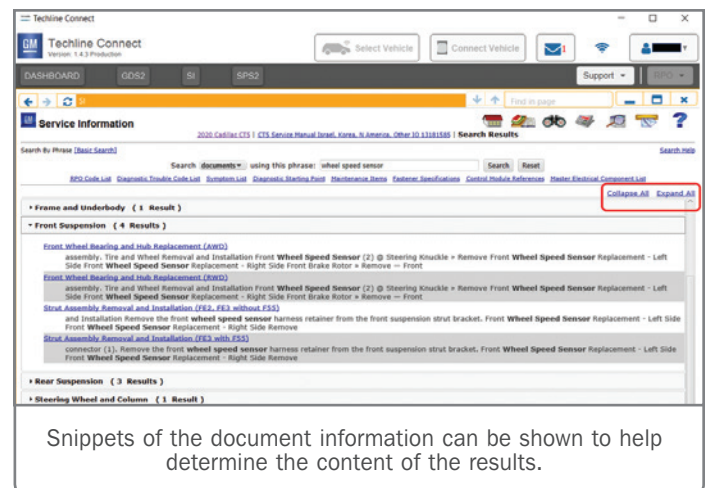


Search by Phrase results

Search by Phrase will use the keywords as a phrase and only returns results for that phrase, e.g., "wheel speed sensor." A Search by Phrase – searching Documents – for "wheel speed sensor" for a 2020 Cadillac CT5 narrows the search results from 83 to 32.

## SNIPPETS OF RESULTS

The results from a search include all Bulletins as well as Service Manual results. Depending on the number of results, they all may not be shown. Click Show All Results at the top right of the page to see all results.



Snippets of the document information can be shown to help determine the content of the results.

CONTINUED ON PAGE 3

# Duramax Diesel Warm Engine Idle Knock Sound

Some 2020 Silverado 2500HD/3500HD and Sierra 2500HD/3500HD trucks equipped with the 6.6L Duramax diesel engine (RPO L5P) may have a thumping or knocking sound coming from the rear of the engine. The sound is often more pronounced in the interior of the truck as it's amplified by the transmission bell housing.

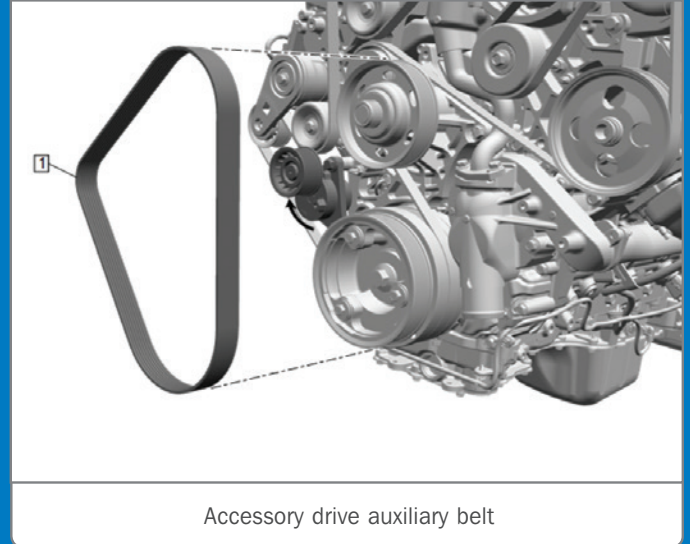
To duplicate the engine sound:

- Idle the engine at about 600 RPM with the transmission in Park or Neutral. The engine oil temperature should be 113–185°F (45–85°C).
- Turn the HVAC fan and radio off.
- Remove the accessory drive auxiliary belt.

If the noise level is significantly reduced, it should be considered a normal characteristic of the 2020 model year truck. No additional repairs are necessary.

Use the following procedure for accessory drive auxiliary belt removal, testing and installation:

1. Remove the air cleaner housing.
2. Remove intake air duct.
3. Separate the charge air cooler (CAC) tube and position aside.
4. Remove the belt and position aside.
5. Install the CAC tube.
6. Loosely place the air box and intake duct back in place. (So a DTC is not set for the sensor when starting.)
7. Start the engine and verify the sound is gone.



Accessory drive auxiliary belt

8. Remove the loosely installed air box and intake duct.
9. Separate the CAC tube.
10. Install the belt.
11. Install the CAC tube.
12. Install the air box and duct.

**TIP:** Do not run the vehicle more than three minutes without the auxiliary belt installed. Do not raise the RPM higher than idle with the belt removed.

The engine sound has no short- or long-term effects on the engine.

► Thanks to John Stempnik

## Searching the Service Information

A new feature of the search results is a “snippet” that can be shown with each result. The snippet is small section of the document information, which can be helpful in determining the content and relevancy of the results. To see the snippets, click Expand All at the top right of the page.

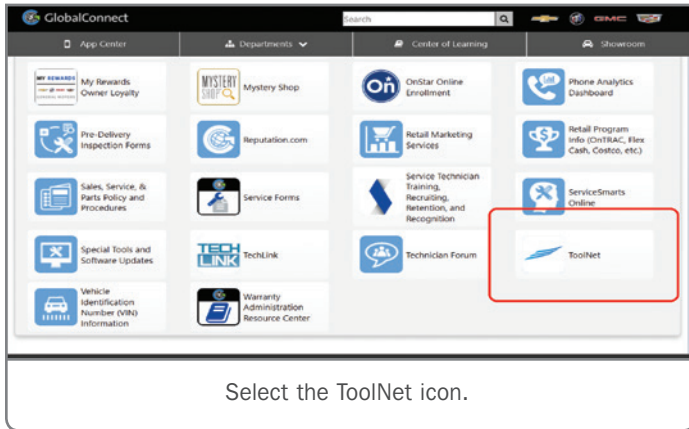
To view the snippets for only one bulletin or service manual category, click the title of the bulletin or category (for example, Front Suspension). SI will expand or collapse the section individually. Click the title again to collapse the section.

► Thanks to Heather Ball

# NEW GM TOOLNET

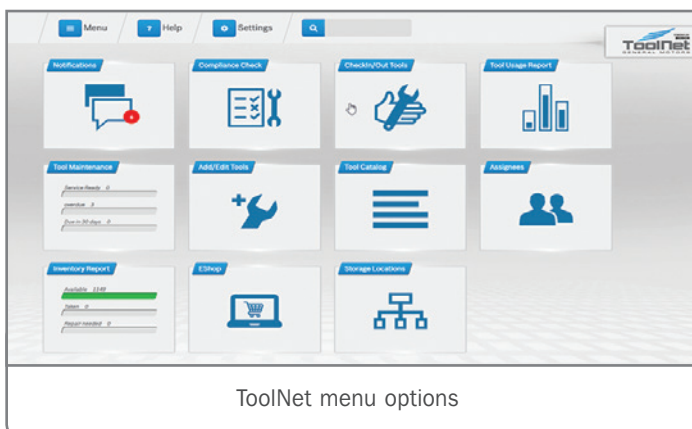
## Special Tools App Now Available

The new GM ToolNet special service tools inventory management application is now available to GM dealerships in the U.S. The Canadian application launches on April 20. To access the site, select the ToolNet icon in GM GlobalConnect on the Service page of the App Center.



The new application can help dealerships in organizing and managing their special service tools, helping technicians to reduce wasting valuable time searching for special tools or using incorrect tools for a repair. With proper organization, dealerships make their special tools inventory easier to find and use, leading to time savings, more efficient repairs, and increased productivity.

Developed by Bosch Corporation and available to all U.S. and Canadian dealerships, the new application replaces the current gmtoolorg.service-solutions.com application (ToolOrg), which will officially close May 31, 2020. Until then, the site will be available as a reference resource only.



GM ToolNet includes a variety of management features, including: Tool Check-In/Out, Tool Maintenance Scheduling, Storage Location Customization, User Management, and Tool Usage Reporting.

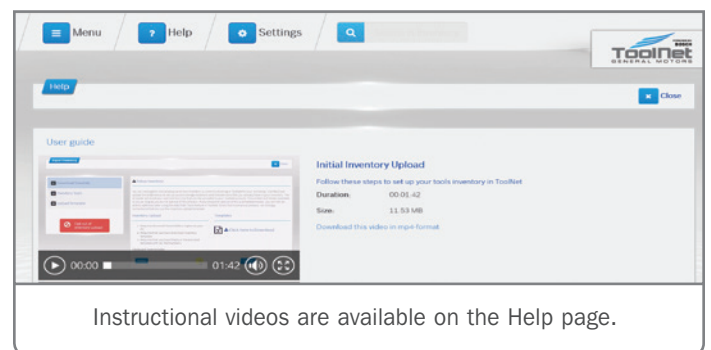
### DEALERSHIPS USING CURRENT TOOLORG APPLICATION

Tool-related data, including tool number/names and storage locations, for dealerships that were actively using the previous application has been transferred to each dealership's new ToolNet account. Any new tool data (new tools added) entered after January 31, 2020 will need to be entered into the ToolNet account.

### FIRST TIME TOOLNET SETUP FOR DEALERSHIPS NOT USING TOOLORG

Upon first logging in to the GM ToolNet application, dealerships that have not been using the previous ToolOrg application have the opportunity to start organizing their tools. The first step is to perform a special tool inventory. When completed, the tool data can be uploaded using the ToolNet template.

Each ToolNet account features an inventory upload template that is populated with the master list of all GM essential tools. Dealerships can use the Excel template to build a tool inventory list with custom storage locations for tools in their inventory. Once all the dealership's tool data is entered, it can be imported to ToolNet.



The Import Inventory screen will remain available as long as dealerships do not opt-out of the process. If you choose to opt out of the automated process, you will still be able to add tools using the Add/ Edit Tools feature in ToolNet. However, since adding tools later is a manual process, it's strongly recommend that dealerships take advantage of the inventory upload template.

CONTINUED ON PAGE 5

# Unable to Deactivate Brake Boost System

For an overview of the inventory upload process, check out the Initial Inventory Upload video under ToolNet-Help on the website.

The Help page also features a number of other videos with additional instructions and tips on using the features of ToolNet.

## TOOLS INVESTMENT

Tools are an investment for the dealership. Organizing, storing and maintaining those tools can make a positive impact on the dealership's productivity.

Just how much productivity is lost when a technician has to search for the right tools for a repair? The Return on Investment (R.O.I.) calculator on the [gmtoolsandequipment.com](http://gmtoolsandequipment.com) website can help determine that.

Tool Organization - R.O.I. Calculator	
<b>Step One:</b>	<b>Without Tool Organization</b> Tool Search Time - 5.00 Min. per tool
Enter your information next to dark blue fields below:	
Average number of tools referenced per day	7
Hours of Service per day	8
> Time spent looking for a tool (min)	5 minutes
Total Minutes searching for tools per day/tech	35
> Number of Technicians in your service dept.	3
Total Minutes each day Tech's searching for tools	105
Total Hours (productivity) lost per day	1.75
Customer Pay Rate per hour (Industry Average)	\$90.00
Lost Service Revenue PER DAY	\$157.50
Lost Service Revenue PER YEAR (260 work days)	\$40,950.00
Proceed to Step Two to see how saving just a few minutes per tool can impact your bottom line.	
<b>Step Two:</b>	<b>With Tool Organization</b> Tool Search Time - 3.00 Min. per tool
Enter your information next to dark blue field below:	
Average number of tools referenced per day	7
Hours of Service per day	8
Time spent looking for a tool (min)	3
Total Minutes searching for tools per day/tech	21
> Number of Technicians in your service dept.	3
Total Minutes each day Tech's searching for tools	63
Total Hours (productivity) lost per day	1.05
Customer Pay Rate per hour (Industry Average)	\$90.00
Lost Service Revenue PER DAY	\$94.50
Lost Service Revenue PER YEAR (260 work days)	\$24,570.00
Annual Savings with Tool Organization	\$16,380.00
R.O.I. Examples	
Entry Level Investment: (organized internally) Combination of Caseback, Tides and 1 powertrain tool chest	High Level Investment: (organized by Bosch) (\$12K for Lada Caters and \$8.5K for TDS Labors)
\$13,500.00 Investment Payback within 1 month	\$20,500.00 Investment Payback within 6 months
*Above ROI based on 3 minute average search time of 7 tools a day for 8 service technicians.	

R.O.I. calculator

From the Special Service Tools page, select the Return on Investment link to view the calculator. Fill in the estimated time spent looking for a tool and the number of technicians in the service department to see how much annual savings can be found using a proper tool organization system. A quick calculation shows that if three technicians spend just two less minutes per day looking for tools, it can lead to an annual savings of more than \$16,000.

If you have questions or would like more information about the new GM ToolNet application, call 1-800-GM-TOOLS.

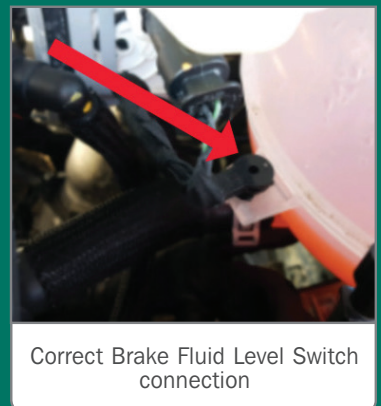
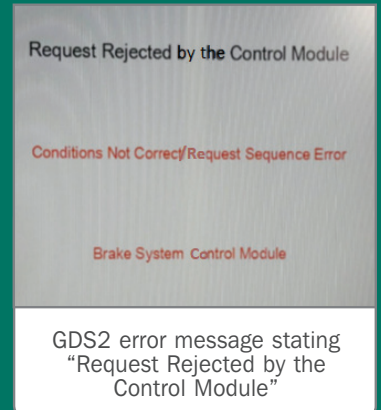
► Thanks to Rick Jackson and Kevin Damm

A GDS2 error message stating "Request Rejected by the Control Module" may occur when trying to deactivate the brake boost system while performing the hydraulic brake system bleeding procedure on some 2019-2021 XT4 models.

The error message may be caused by the B20 Brake Fluid Level Switch Connector and the B34D Engine Coolant Temperature Sensor 4 Connector being swapped during reassembly.

If these connectors are swapped, DTC C0049 (Low Brake Fluid Indicated) SYM05 (High Voltage/Open) will be stored in the Electronic Brake Control Module (EBCM) and P2AFF (Engine Coolant Temperature Sensor 4 Circuit High Voltage) will be stored in the Engine Control Module (ECM).

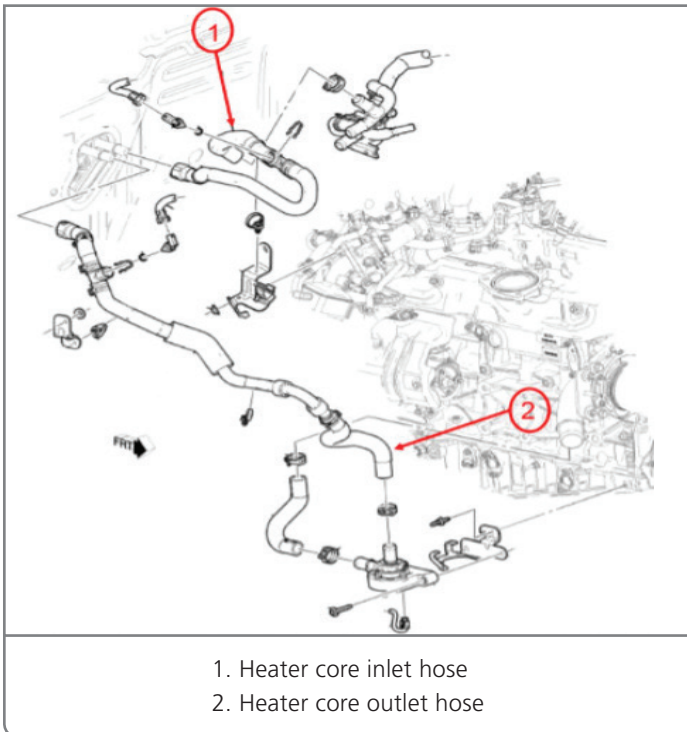
When connecting the Brake Fluid Level Switch and Engine Coolant Temperature Sensor 4, be sure to verify that the connectors are in the correct location. Reverse the connections if necessary.



► Thanks to Calvin Kohring

# Poor Heater Performance Due to Coolant Hose Restriction

Poor heater performance may be experienced on some 2020 Silverado and Sierra models equipped with the 3.0L diesel engine (RPO LM2). The poor performance may be caused by the heater core inlet or outlet hoses becoming twisted or kinked, which may restrict coolant flow.



Use GDS2 to compare the heater core inlet temperature sensor 3 to the heater core outlet temperature sensor 4. When comparing the difference in the heater core temperature sensors, make sure the blower motor is on high with the HVAC temperature set to full hot.

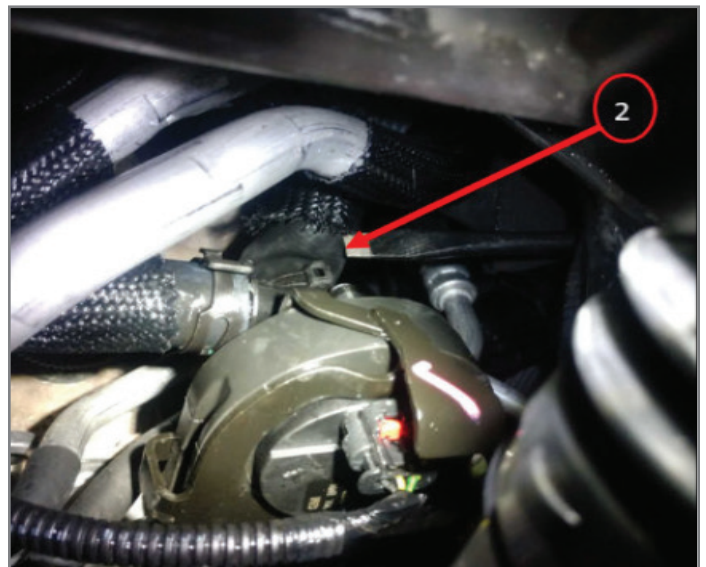
If there is a hose restriction, there will be a significant difference between the temperatures; for example, the inlet temperature may be 147°F (64°C) and the outlet temper may be 82°F (28°C). Typically, the temperatures will be within 10–20°F (5.5–11°C).

Follow the appropriate Service Information for poor heater performance. If diagnostics do not lead to a correction, inspect the heater core inlet and/or outlet hoses for any twists or kinks.

In some cases, it may be difficult to see the twist or kink in the hose due to the conduit that covers the hoses.



Heater core inlet hose on vehicle (#1)

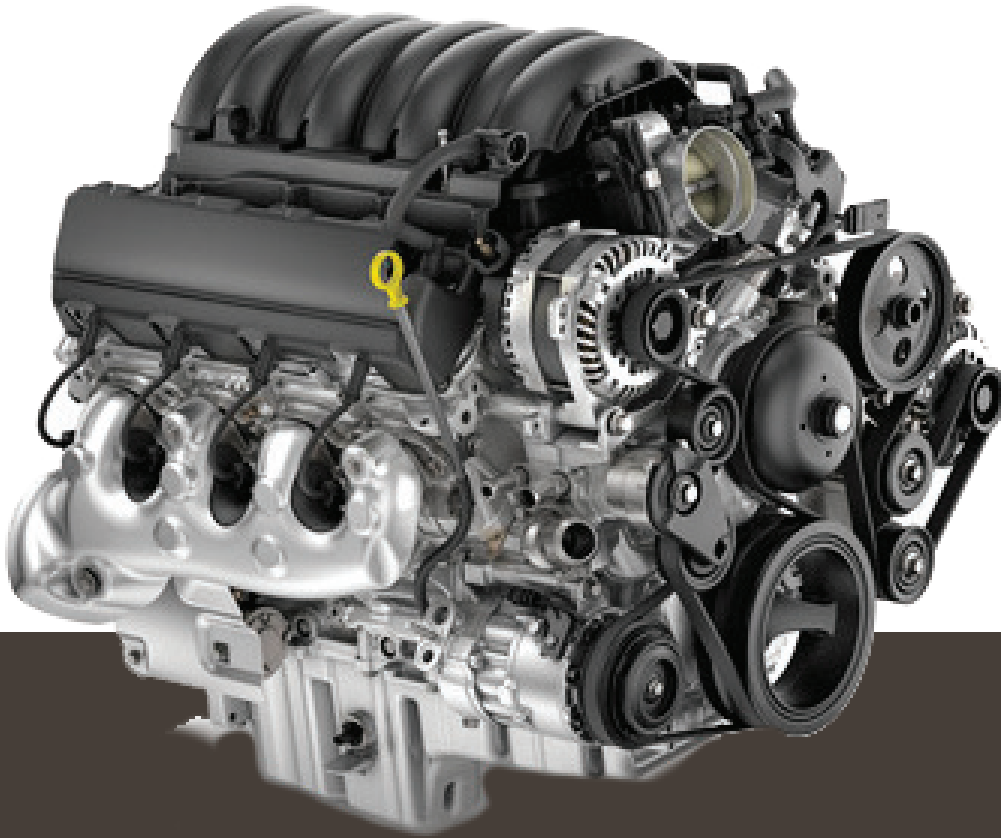


Heater core outlet hose on vehicle (#2)

In the examples shown, the illustration with callouts #1 (heater core inlet hose) and #2 (heater core outlet hose) correlate to the actual vehicle photos with callouts #1 and #2.

► Thanks to Jim Will

# Low Oil or Add Oil DIC Messages

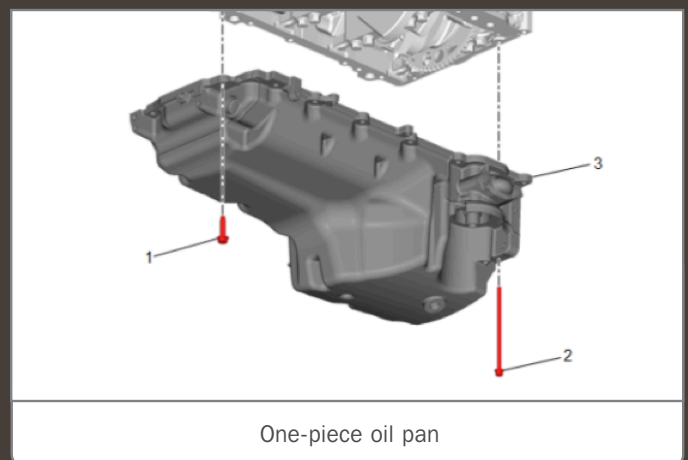


A Low Oil or Add Oil message may be displayed on the Driver Information Center (DIC) on some 2019 Silverado 1500, Sierra 1500; 2020-2021 Silverado 1500, Silverado 2500/3500, Sierra 1500, Sierra 2500/3500; 2021 Tahoe, Suburban, Yukon, and Escalade models equipped with the 5.3L V8 engine (RPO L82, L84), 6.2L V8 engine (RPO L87) or 6.6L V8 engine (RPO L8T). The DIC message may display prior to the first oil change.

The oil level condition may be caused by new engine RTV sealant leaching silicone into the engine oil.

When the silicone leaches into the oil, it can contribute to aeration of the oil and cause an erroneous oil level switch response. During normal engine operation, the Engine Control Module (ECM) checks the oil level dynamically between the RPM range of 1,000-1,400 RPM. Other Small Block engine RPOs check the oil level at idle.

The oil condition will most likely occur before the first scheduled oil change or after the recent addition of new RTV sealant, for example, during an oil pan replacement. In addition, the new one-piece oil pan design used on these engines may also increase the occurrence of this condition.



One-piece oil pan

If this condition is found, verify the engine oil level is full. Also check that there are not any oil level switch-related DTCs set and that the oil switch reads OK using GDS 2 (engine off/ignition on).

If DTCs are not present, perform an oil and filter change and then re-evaluate vehicle.

► Thanks to Bryan Salisbury

# Crankshaft Balancer Removal

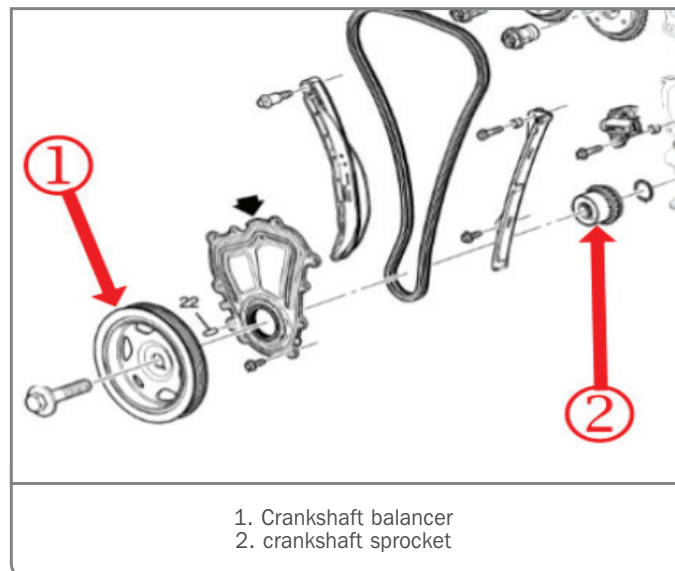
On some 2019 CT6; 2019-2020 XT4, Silverado, Sierra; 2020 CT4, CT5, XT5, XT6, Blazer, and Acadia models equipped with the 2.0L engine (RPO LSY) or 2.7L engine (RPO L3B), the crankshaft sprocket may disengage from the crankshaft during crankshaft balancer removal.

Anytime that the crankshaft balancer is removed for service, ensure that the crankshaft sprocket is not sticking to the crankshaft balancer; otherwise, the sprocket will pull off the end of the crankshaft.

To separate the crankshaft balancer from the crankshaft sprocket during service, first loosen the crankshaft balancer bolt a few turns and then strike the crankshaft balancer with a rubber mallet.

**TIP:** Do not rotate the crankshaft on these engines with the crankshaft balancer removed. The crankshaft balancer and bolt must be reinstalled to avoid damage to the crankshaft sprocket, crankshaft and valvetrain.

► Thanks to Raymond Haglund



## Normal 1.2L Engine Sound

The 2020 Encore GX and 2021 Trailblazer feature the new 1.2L turbocharged engine (RPO LIH). The engine may have a noticeable sound under certain circumstances.

Drivers may hear a deep thudding sound from the engine when it is operating in the lower speed range (typically less than 2,000 rpm) during a launch at moderate to high throttle inputs. The sound may be more pronounced when the engine is cold compared to when it has warmed up.

An example of the engine sound is included in Bulletin #20-NA-084 in the GM Service Information.

The sound is inherent to the small-displacement, power-dense design of the 1.2L engine and is considered a normal operating condition. The sound does not affect the performance or durability of the engine.

► Thanks to Jeff Kropp



### TECH LINK

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