



Service Bulletin

Bulletin No.: 24-NA-146

Date: August, 2024

TECHNICAL

Subject: Improved NVH and Knock Detection Diagnostics Available through ECM Software Download

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Cadillac	CT5	2022	2024	-	-	6.2L (RPO LT4)	All

Involved Region or Country	United States, Canada, Middle East, Israel, Palestine, Japan, Cadillac Korea (South Korea)
Additional Options (RPOs)	Equipped with 6.2L Engine (RPO LT4)
Condition	General Motors has identified a calibration improvement for the 2022-2024 Cadillac CT5 6.2L engine RPO LT4. This improvement helps isolated areas of the knock system to improve attenuation, reducing noise and vibration. Some customers may also notice a lack of power or noise under heavy loads especially while using a lower octane fuel.
Correction	As part of continuous improvement, engineering has released an updated calibration for knock system response. To take advantage of these improvements, an updated ECM calibration is available. Please reprogram the ECM using the following Service Procedure.

Important: Service agents must comply with all International, Federal, State, Provincial, and/or Local laws applicable to the activities it performs under this bulletin, including but not limited to handling, deploying, preparing, classifying, packaging, marking, labeling, and shipping dangerous goods. In the event of a conflict between the procedures set forth in this bulletin and the laws that apply to your dealership, you must follow those applicable laws.

Service Procedure

Caution: Before downloading the update files, be sure the computer is connected to the internet through a network cable (hardwired). DO NOT DOWNLOAD or install the files wirelessly. If there is an interruption during programming, programming failure or control module damage may occur.

- Ensure the programming tool is equipped with the latest software and is securely connected to the data link connector. If there is an interruption during programming, programming failure or control module damage may occur.
- Stable battery voltage is critical during programming. Any fluctuation, spiking, over voltage or loss of voltage will interrupt

programming. Install a GM Authorized Programming Support Tool to maintain system voltage. Refer to www.gmdesolutions.com for further information. If not available, connect a fully charged 12V jumper or booster pack disconnected from the AC voltage supply. DO NOT connect a battery charger.

- Follow the on-screen prompts regarding ignition power mode, but ensure that anything that drains excessive power (exterior lights, HVAC blower motor, etc) is off.
- Please verify that the radio time and date are set correctly before inserting USB drive into vehicle for programming, **otherwise an error will result.**
- Clear DTCs after programming is complete. Clearing powertrain DTCs will set the Inspection/Maintenance (I/M) system status indicators to NO.

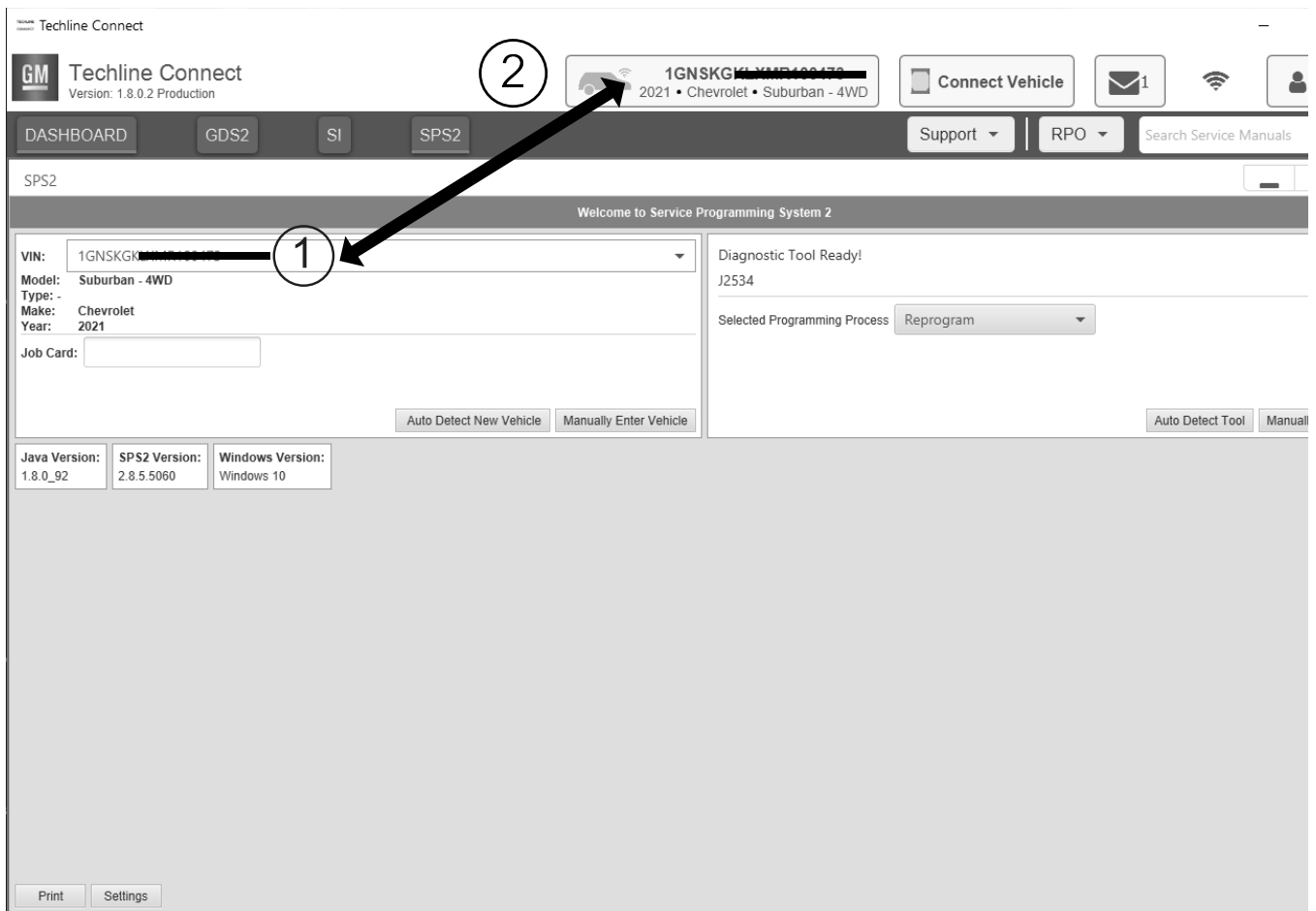
Important: The service technician always needs to verify that the VIN displayed in the TLC left side drop down menu and the top center window match the VIN plate of the vehicle to be programmed prior to using Service Programming System 2 (SPS2) for programming or reprogramming a module.

- For the TLC application, service technicians need to always ensure that the power mode (ignition) is "ON" before reading the VIN from the vehicle's VIN master module and that they do not select a VIN that is already in the TLC application memory from a previous vehicle.
- If the VIN that shows up in the TLC top center window after correctly reading the VIN from the vehicle does not match the VIN plate of the vehicle, manually type in the VIN characters from the vehicle VIN plate into the TLC top center window and use these for programming or reprogramming the subject module with the correct vehicle VIN and software and/or calibrations.
- The Engine Control Module (ECM) is the master module (for VIP vehicles) that TLC reads to

determine the VIN of the vehicle. If the VIN read from the vehicle by TLC does not match the VIN plate of the vehicle, the ECM also needs to be reprogrammed with the correct VIN, software and calibrations that match the vehicle's VIN plate.

- The Body Control Module (BCM) is the master module (for GEM vehicles) that TLC reads to determine the VIN of the vehicle. If the VIN read from the vehicle by TLC does not match the VIN plate of the vehicle, the BCM also needs to be reprogrammed with the correct VIN, software and calibrations that match the vehicle's VIN plate.

Caution: Be sure the VIN selected in the drop down menu (1) is the same as the vehicle connected (2) before beginning programming.



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Important: If the vehicle VIN DOES NOT match, the message below will be shown.



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Techline Connect

GM Techline Connect
Version: 1.6.0 Validation

MDI 2 SN# 0070700
Click to disconnect

DASHBOARD GDS2 SI SPS2 Support RPO Search Service Manuals

SPS2

Controller	ID	Current #	Description
K17	1	84820771	
K17	2	84820790	
K17	3	84820797	84820797 Electronic Brake Diagnostic Calibration
K17	4	84820801	84820801 Function Enable Calibration
K17	5	84820808	84820808 Driver mode brake calibration
K17	6	84820819	84820819 Trailer Brake Calibration
K17	7	84820825	84820825 Trailer Brake Calibration

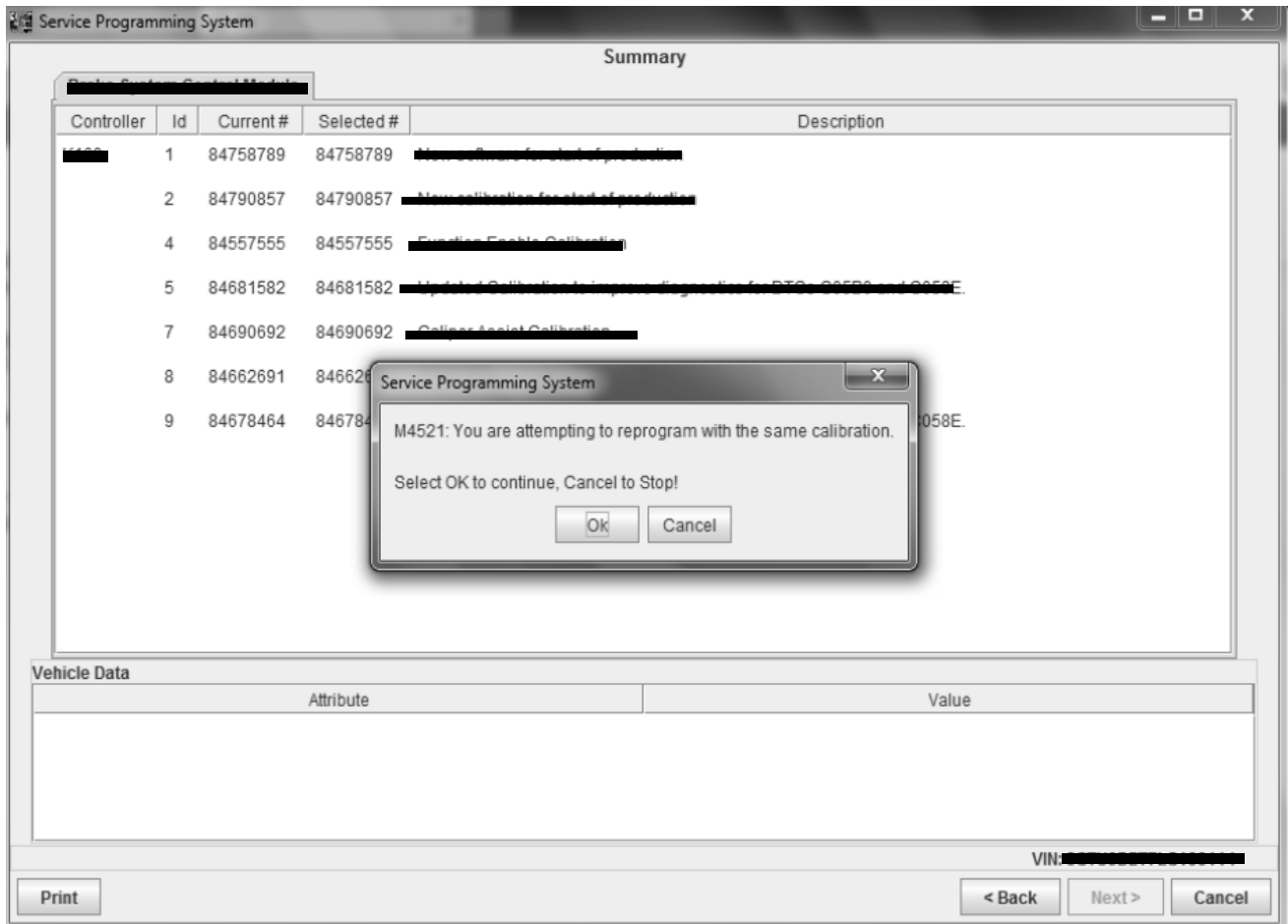
M4521: You are attempting to reprogram with the same calibration.
Select OK to continue, Cancel to Stop!

OK Cancel

Print Save to PDF ECU Data Back Start Programming Cancel

VIN: 2G31J5E0000000000000

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Important: Techline Connect and TIS2WEB screens shown above.

Important: If the same calibration/software warning is noted on the TLC or SPS Summary screen, select OK and follow screen instructions. After a successful programming event, the WCC is located in the Service Programming System dialogue box of the SPS

Summary screen. Record the WCC on the job card. No further action is required. Refer to the Warranty Information section of this bulletin.

1. Reprogram the Engine Control Module or (ECM). Refer to *K20 Engine Control Module: Programming and Setup* in SI.

Techline Connect

GM Techline Connect
Version: 1.6.0 Validation

MDI 2 SN#: [REDACTED]
Click to disconnect

2

DASHBOARD GDS2 SI SPS2 Support RPO Search Service Manuals

SPS2

Warranty Claim Code

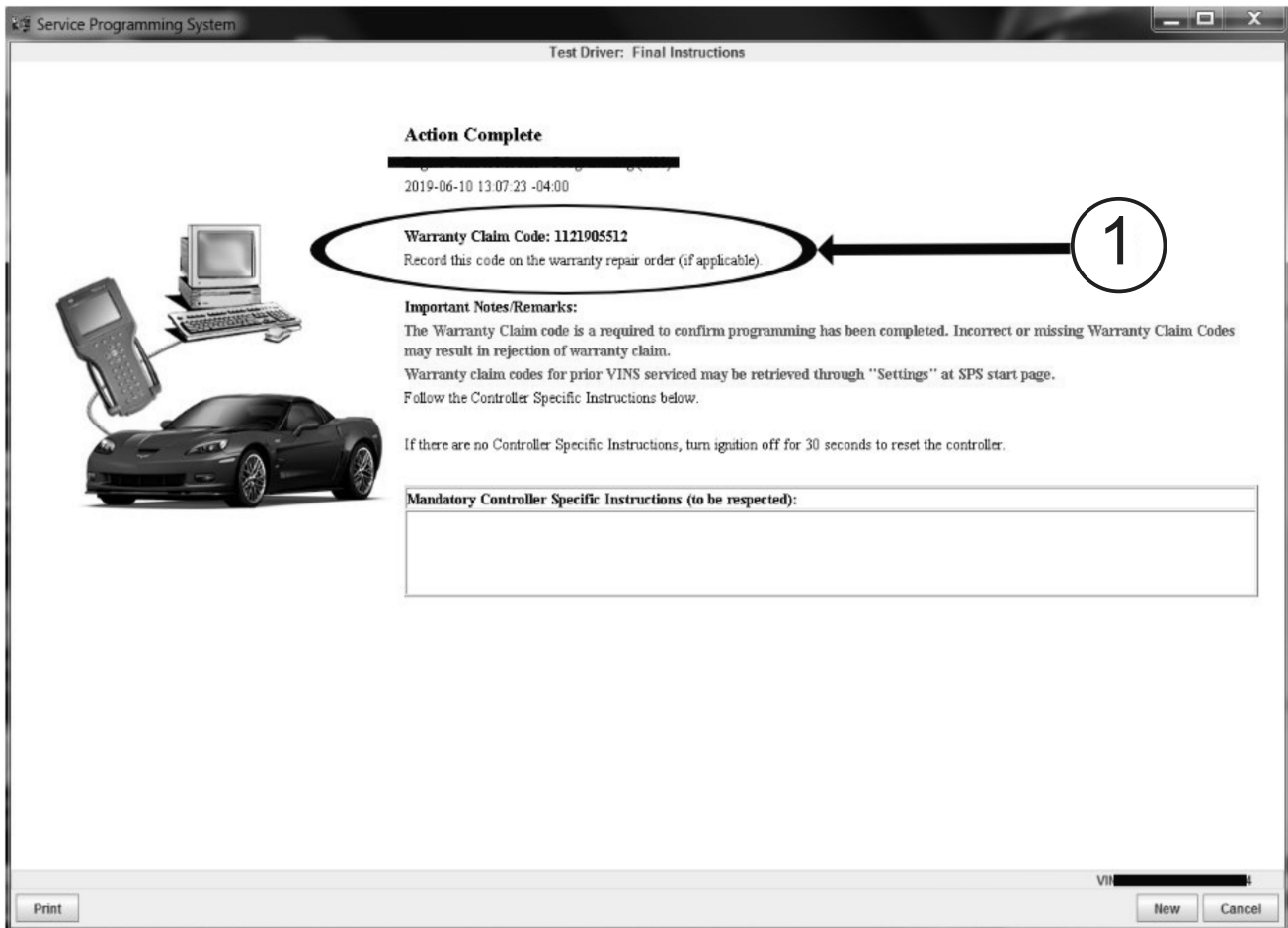
Programming Complete.
VIN: [REDACTED]
2020-08-19 12:23:43 PM

Card: 1
Warranty Claim Code: 28YN46808556

The Warranty Claim code is required to confirm programming has been completed. Incorrect or missing Warranty Claim Codes may result in rejection of warranty claim. Warranty Claim Codes for prior VINs serviced may be retrieved through "Settings" at SPS start page.
Record this code on the warranty repair order (if applicable).

Post Programming Instructions:
Follow the Controller Specific Instructions below.

If there are no Controller Specific Instructions, turn ignition off for 30 seconds to reset the controller.



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Note: The screenshots above are an example of module programming and may not be indicative of the specific module that is being programmed. Module selection and VIN information have been blacked out.

Important: To avoid warranty transaction rejections, you **MUST** record the warranty claim code provided on the SPS Warranty Claim Code (WCC) screen shown above on the job card. Refer to callout 1 above for the location of the WCC on the SPS screen.

2. Record the SPS Warranty Claim Code on the job card for warranty transaction submission.

Parts Information

No parts are required for this repair.

Warranty Information

For vehicles repaired under the Bumper-to-Bumper coverage (Canada Base Warranty coverage), use the following labor operation. Reference the Applicable Warranties section of Investigate Vehicle History (IVH) for coverage information.

Labor Operation	Description	Labor Time
4088478*	Engine Control Module Reprogramming for Knock System and NVH Improvements	0.3 hr

*This is a unique Labor Operation for bulletin use only.

Important: To avoid warranty transaction rejections, carefully read and follow the instructions below:

- The Warranty Claim Code must be accurately entered in the "SPS Warranty Claim Code" field of the transaction.
- When more than one Warranty Claim Code is generated for a programming event, it is required to document all Warranty Claim Codes in the "Correction" field on the job card. Dealers must also enter one of the codes in the "SPS Warranty Claim Code" field of the transaction, otherwise the transaction will reject. It is best practice to enter the FINAL code provided by SPS/SPS2.

Warranty Claim Code Information Retrieval

If the SPS Warranty Claim Code was not recorded on the Job Card, the code can be retrieved in the SPS system as follows:

1. Open TLC/TIS on the computer used to program the vehicle.
2. Select and start SPS/SPS2.
3. Select Settings.
4. Select the Warranty Claim Code tab.

The VIN, Warranty Claim Code and Date/Time will be listed on a roster of recent programming events. If the code is retrievable, dealers should resubmit the transaction making sure to include the code in the SPS Warranty Claim Code field.

Version	1
Modified	Released August 01, 2024

