



Service Bulletin

Bulletin No.: 22-NA-150

Date: February, 2024

TECHNICAL

Subject: Malfunction Indicator Lamp (MIL) Illuminated, Service Emission System and/or DEF Level Low Message on Driver Information Center (DIC), DEF Level Sensor Reading Incorrectly, DEF Level Sensor Being Erratic, DEF Level Sensor Stuck

Brand:	Model:	Model Year:		VIN:		Engine:	Transmission:
		from	to	from	to		
Cadillac	Escalade Models	2021	2024				
Chevrolet	Silverado 1500	2020	2021			LM2, L5P, LZ0	
	Silverado 1500 LTD (RPO J21, VIN Digit 5 = W/Y)	2022	2022				
	Silverado 1500 New (RPO J22, VIN Digit 5 = A/D)						
	Silverado 1500	2023	2024				
	Silverado 2500HD/ 3500HD	2020	2024				
	Suburban	2021	2024				
	Tahoe	2021					
GMC	Sierra 1500	2020	2021				
	Sierra 1500 Limited (RPO J21, VIN Digit 5 = 8/9)	2022	2022				
	Sierra 1500 New (RPO J22, VIN Digit 5 = H/U)						
	Sierra 1500	2023	2024				
	Sierra 2500HD/ 3500HD	2020	2024				
	Yukon Models	2021	2024				

Involved Region or Country	North America
Condition	Some customers may comment on one or more of the following conditions: <ul style="list-style-type: none"> • MIL illuminated • Service Emission System and/or DEF Level Low Message Displayed on the DIC • DEF Level Sensor Reading Incorrectly • DEF Level Sensor Being Erratic • DEF Level Sensor Stuck
Cause	This condition may be caused by a software anomaly.
Correction	Two variables are now available to view during Reductant Fluid Tank Level Reset function on GDS2: <ul style="list-style-type: none"> • Reductant Level = Learned and stored reductant level representing the percentage of total tank volume. • Reductant Level Sensor = Output from reductant level sensor representing a percentage of reductant tank fluid height. The Reductant Fluid Tank Level Reset function learns a new reductant level Perform the following: <ol style="list-style-type: none"> 1. Update the K115 Reductant Control Module with the latest calibration. 2. Check Reductant Level is more than 35% using GDS2. If less than 35%, note value in Repair Order Comments. 3. Check Reductant Level Sensor %. Note value in Repair Order Comments. 4. Add one gallon of Diesel Exhaust Fluid. 5. Check Reductant Level and Reductant Level Sensor % again. Note values in Repair Order Comments. 6. Perform Reductant Fluid Tank Level Reset using GDS2. 7. Check Reductant Level and Reductant Level Sensor % one more time. Note values in Repair Order Comments. <p>Note: After updating the reductant control module, the level percentage can be viewed under ECM data.</p>

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 12 V 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.

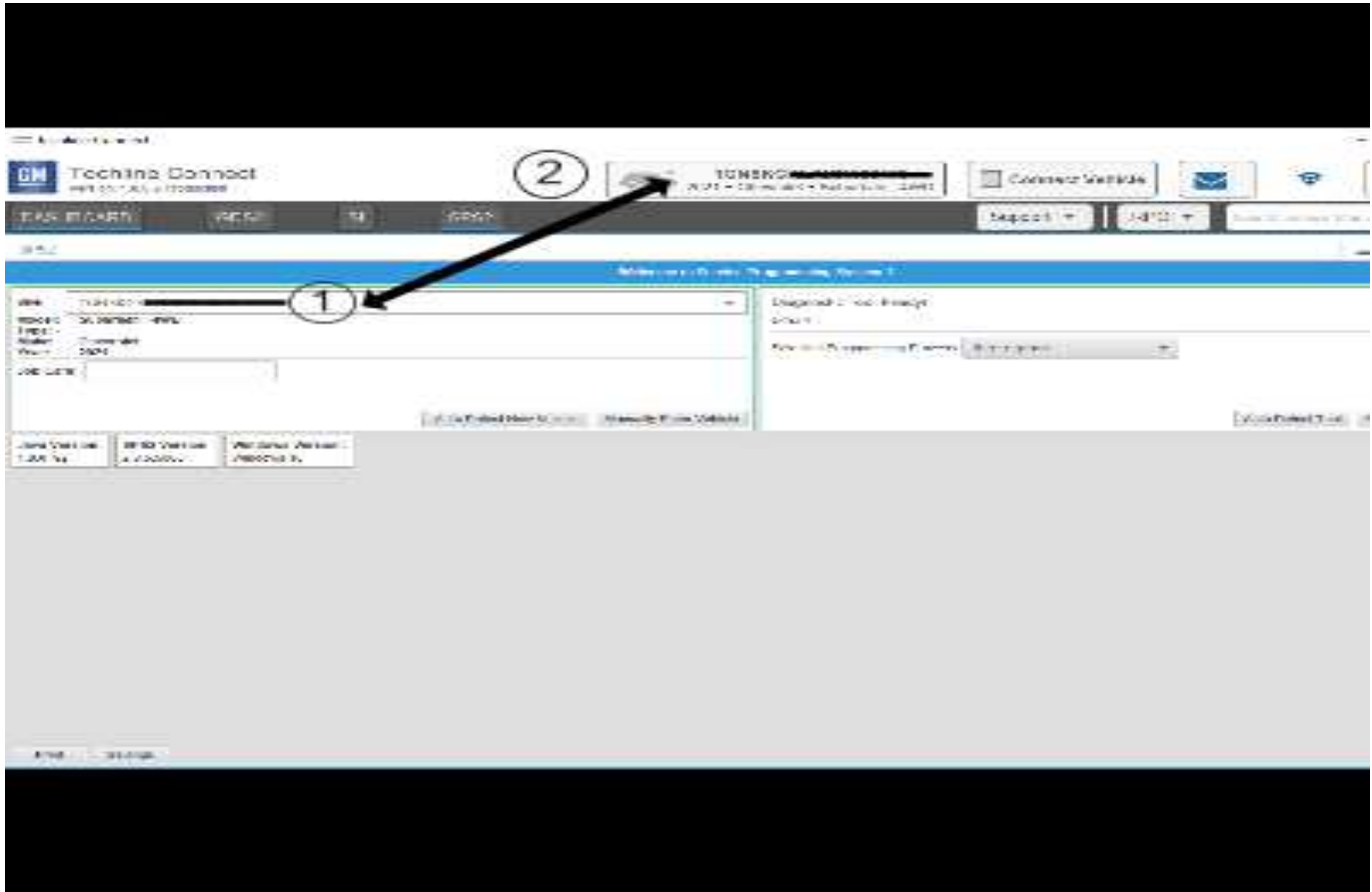
Important: The service technician always needs to verify that the VIN displayed in the TLC left side drop down menu and the top center window match the VIN plate of the vehicle to be programmed prior to using Service Programming System 2 (SPS2) for programming or reprogramming a module.

- 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

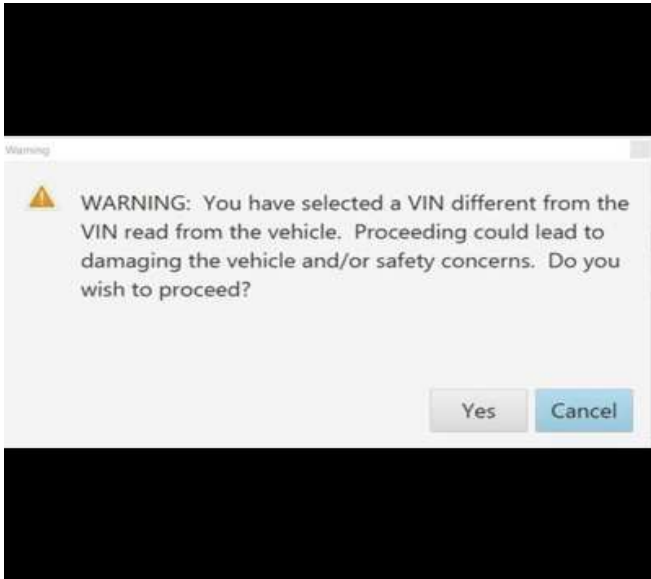
reprogramming the subject module with the correct vehicle VIN and software and/or calibrations.

- 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.

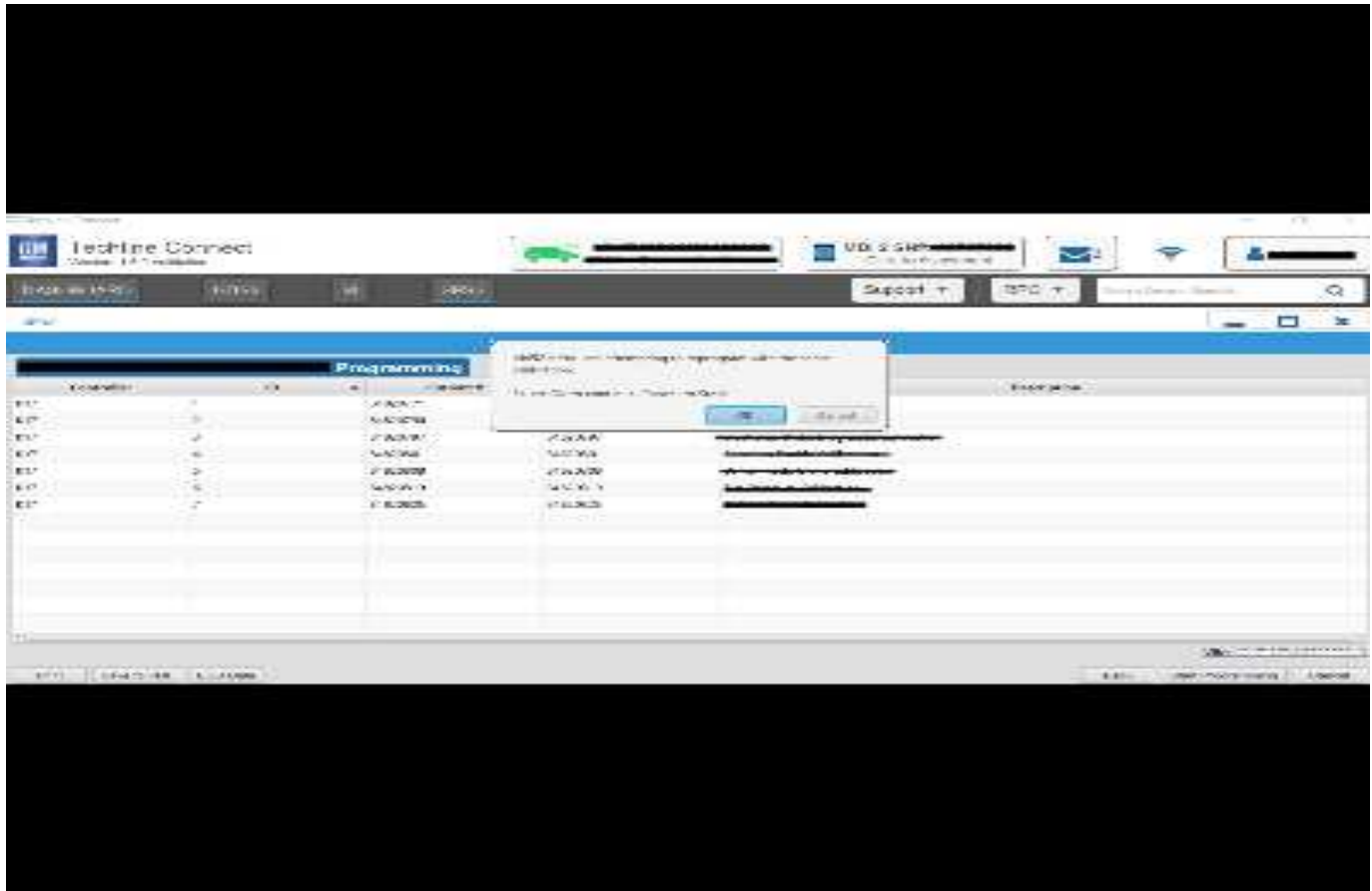
Caution: Be sure the VIN selected in the drop down menu (1) is the same as the vehicle connected (2) before beginning programming.



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



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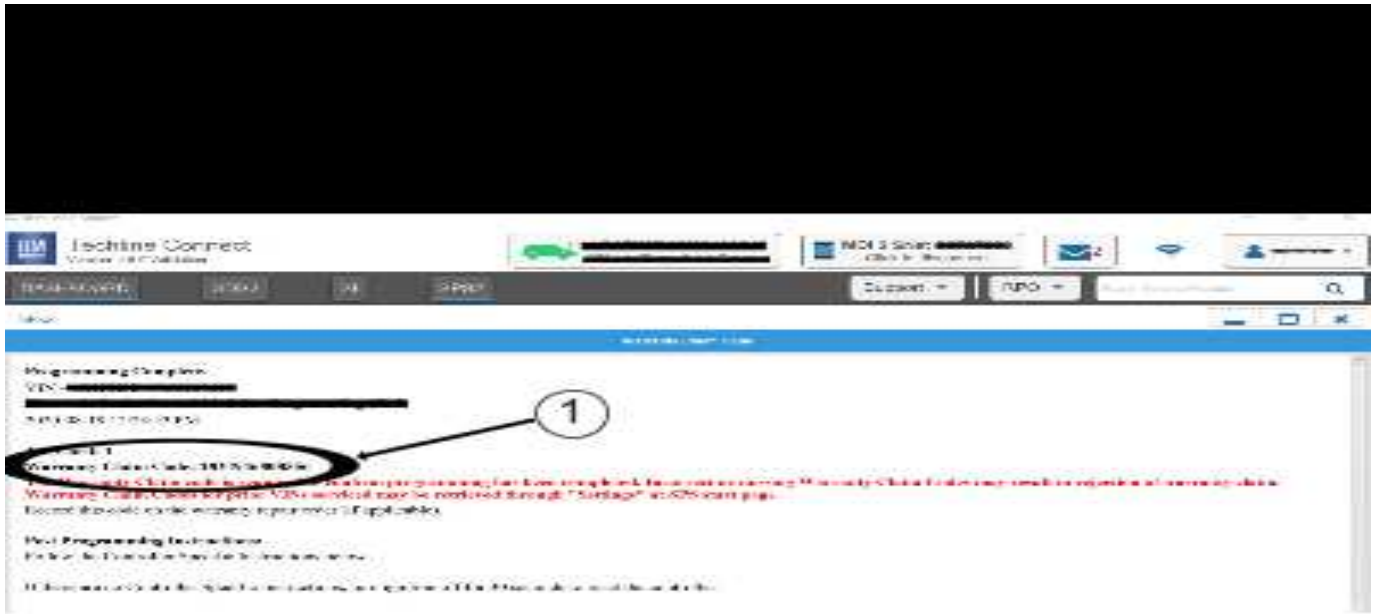
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Important: Techline Connect screens shown above.

Important: If the same calibration/software warning is noted on the TLC 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. No further action is required. Refer to the Warranty section of the bulletin.

1. Reprogram the K115 Reductant Control Module. Refer to Reductant Control Module Programming and Setup in SI.



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Note: The screenshot above is 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 Warranty Claim Code (WCC) screen shown above on the job card. Refer to callout 1 above for the location of the WCC on the screen.

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

Parts Information

No parts are required for this repair.

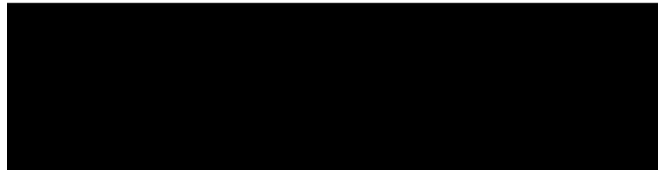
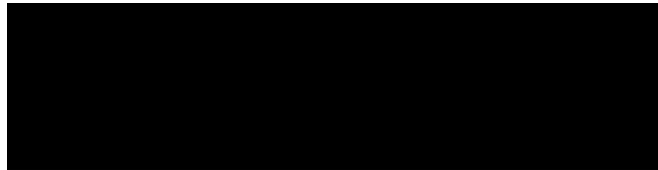
Warranty Information

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

Labor Operation	Description	Labor Time
2888888*	Reductant Control Module Programming and Setup and Perform the Reductant Fluid Tank Level Reset	0.9 hr

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

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



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- The Warranty Claim Code must be accurately entered in the "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 "Warranty Claim Code" field of the transaction, otherwise the transaction will reject. It is best practice to enter the FINAL code provided by SPS2.

Warranty Claim Code Information Retrieval



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If the Warranty Claim Code was not recorded on the Job Card, the code can be retrieved in the SPS2 system as follows:

1. Open TLC on the computer used to program the vehicle.
2. Select and start SPS2.

3. Select Settings (1).

4. Select the Warranty Claim Code tab (2).

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	8
Modified	Released August 01, 2022 Revised February 22, 2023 - Added 2023 to Model Year. Revised March 20, 2023 – Added 2024 Model Year HD Trucks Revised May 17, 2023 – Changed “verbatim” to read “work order comments” under Correction Section Revised September 26, 2023 – Added the 2024 Model Year Revised December 21, 2023 - Added bullet points and changed correction procedure in Correction Section. Revised January 04, 2024 – Added a note to the Correction Section. Revised February 05, 2024 - Added engine RPO to Model list.

