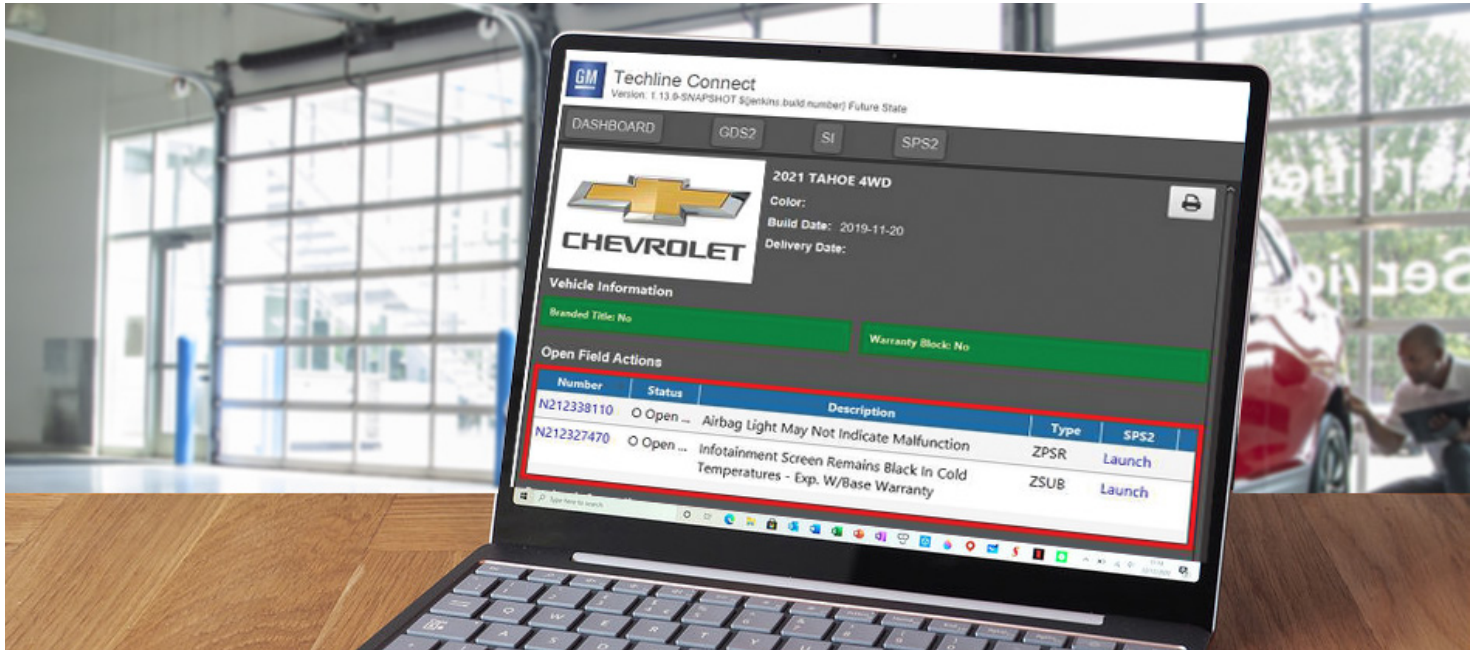


## TechLine Connect Software Update



## ADDS NEW DIRECT LAUNCH PROGRAMMING FUNCTIONALITY



**New Dealer Infrastructure & Security Guidelines Released for 2022**

see page 4



**Poor Splice Connection in 1.2L Engine Wiring Harness**

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# TechLine Connect Software Update

## Adds New Direct Launch Programming Functionality

The November Techline Connect (TLC) software update introduces “Direct Launch” capability to simplify any service programming related to Field Actions. Direct Launch functionality is designed to improve first time quality in completion of Field Actions as well as first time quality in claim payments. The update should be downloaded automatically when logging in to Techline Connect.

The screenshot shows the Techline Connect dashboard for a 2021 Tahoe 4WD. The dashboard includes a GM logo, version information, and navigation tabs for Dashboard, GDS2, SI, and SPS2. The vehicle information section displays the Chevrolet logo, model, color, build date, and delivery date. Below this, there are sections for Branded Title and Warranty Block. The Open Field Actions section is highlighted with a red box and contains a table of open field actions.

Number	Status	Description	Type	SPS2
N212338110	O Open ...	Airbag Light May Not Indicate Malfunction	ZPSR	Launch
N212327470	O Open ...	Infotainment Screen Remains Black In Cold Temperatures - Exp. W/Base Warranty	ZSUB	Launch

Field actions requiring programming can be accessed from the dashboard.

For technicians with access to the GM warranty data as part of their Techline Connect profile, field actions that require service programming are identified on the Techline Connect Dashboard. Technicians also can “launch” the field action programming from the Dashboard, helping to simplify the steps necessary to close an open field action. Direct links to related bulletins also are provided in the Open Field Actions section.

### PROGRAMMING LINKS ON THE DASHBOARD

Where open programming-related field actions are present on the current VIN in Techline Connect, a new Open Programmable Field Actions screen is shown on the Dashboard that lists all currently open programming-related field actions in IVH. The Open Programmable Field Actions screen replaces the Open Field

Action warning with additional information relevant to the service programming activity.

The Open Programmable Field Actions screen divides field actions into two groups: Direct Launch Handling Available and Legacy Programming. Be sure to scroll down to view all open field actions in both sections, if needed.

The screenshot shows the Open Programmable Field Actions screen. It is divided into two sections: "Direct Launch Handling Available" and "Legacy Programming". The "Direct Launch Handling Available" section lists field actions that can be launched directly. The "Legacy Programming" section lists field actions that require legacy programming. A blue box highlights the "Legacy Programming" section.

Required service programming is shown in two sections.

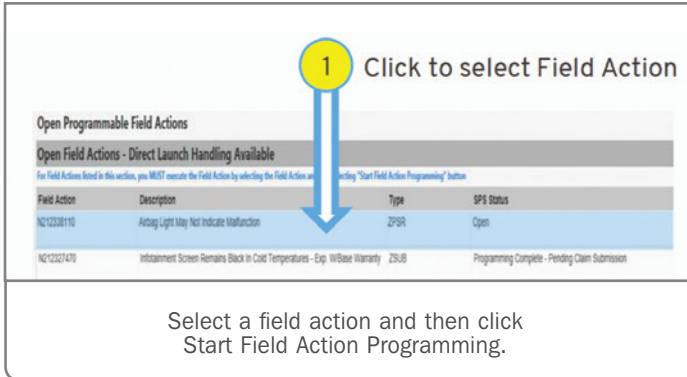
### DIRECT LAUNCH HANDLING

Beginning in November, many newly launched field actions will leverage the Direct Launch Field Actions feature. It ties all of the required programming into a single launch point, eliminating the need to conduct multiple individual programming actions. In addition, programming that has previously been completed successfully is clearly shown.

**TIP:** Where Direct Launch Handling is enabled, it is required that the field action be initiated from the page accessed from the Dashboard.

To begin programming, select a field action with a status of Open or Incomplete. With the Open Field Action or Incomplete Field Action highlighted, select Start Programming. All required control module and programming actions for the selected field action will be initiated. Upon completion, the Warranty Claim Code page printout will be displayed.

Repeat this process for each open or incomplete field action.



**1 Click to select Field Action**

Open Programmable Field Actions

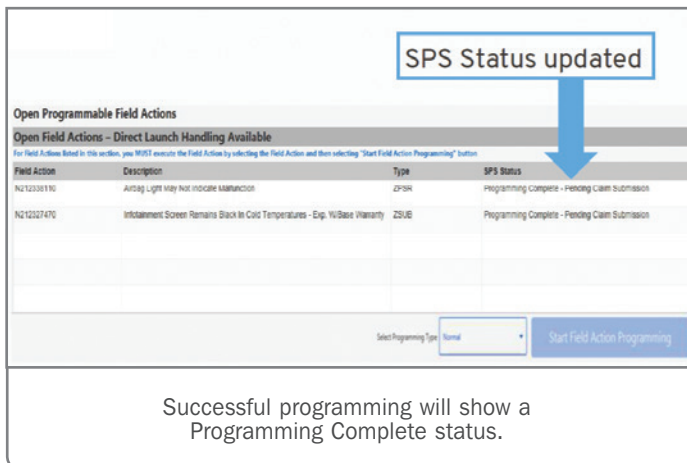
Open Field Actions - Direct Launch Handling Available

For Field Actions listed in this section, you MUST execute the Field Action by selecting the Field Action and then selecting "Start Field Action Programming" button

Field Action	Description	Type	SPS Status
N212338110	Airbag Light May Not Indicate Malfunction	ZPSR	Open
N212327470	Infotainment Screen Remains Black in Cold Temperatures - Exp. V6 Base Warranty	ZSUS	Programming Complete - Pending Claim Submission

Select a field action and then click Start Field Action Programming.

Once a field action has been successfully programmed, the status will be updated to Programming Complete – Pending Claim Submission. At this point, no further programming actions are required and the normal processes for claim submission should be followed. After the claim is processed and closed, the field action will no longer be displayed.



**SPS Status updated**

Open Programmable Field Actions

Open Field Actions - Direct Launch Handling Available

For Field Actions listed in this section, you MUST execute the Field Action by selecting the Field Action and then selecting "Start Field Action Programming" button

Field Action	Description	Type	SPS Status
N212338110	Airbag Light May Not Indicate Malfunction	ZPSR	Programming Complete - Pending Claim Submission
N212327470	Infotainment Screen Remains Black in Cold Temperatures - Exp. V6 Base Warranty	ZSUS	Programming Complete - Pending Claim Submission

Select Programming Type:  Start Field Action Programming

Successful programming will show a Programming Complete status.

If there is a programming event failure, the status will be updated to Programming Incomplete – Retry Required. Select the field action and try programming again.

**TIP:** If a control module needs to be programmed prior to executing field actions, use the “Go to Controller Selection” button below the Legacy Programming window. The Supported Controllers screen will be displayed, where all normal programming can be conducted.

## LEGACY PROGRAMMING

Field actions launched prior to November 2021 will continue to require technicians to navigate to the SPS Supported Controller screen and select the correct programming actions as specified in the related Field Action Bulletin. Field action listed under the Legacy Programming section are not selectable. The list is for reference only.

Always refer to the related Field Action Bulletin for comprehensive direction for correct handling of any required programming procedures.

## APPLICATION UPDATES

To ensure all updates are downloaded properly, make sure your dealership's IT department correctly configures the security settings of all Techline PCs. Techline Connect needs to be set to “Run as Administrator” in order to ensure that all updates are received. Refer to the Run as Administrator PDF for instructions.

To see if an update has been released and should have been downloaded, check the Messages box at the top of the Techline Connect Dashboard. A message will be sent out when an update has been released.

For any questions about Techline Connect features, contact the Techline Customer Support Center (TCSC) at 1-800-828-6860 (English) or 1-800-503-3222 (French).

► Thanks to the Techline Connect team

# New Dealer Infrastructure & Security Guidelines Released for 2022

GM has recently released new Dealer Infrastructure & Security Guidelines (DISG) for 2022. The new guidelines outline the dealership technology needed to ensure reliable data communications for all dealers, including recommended personal computer (PC) specifications. The guidelines also now include several security principles and best practices.

## SUPPORTED VS. NOT SUPPORTED APPLICATIONS/SOFTWARE

The Supported vs. Not Supported matrix has been updated in the guidelines. For Operating Systems, Windows 10 Professional is supported. Windows 11 Professional is currently excluded and is not supported. At this time, Windows 11 Professional has not been tested for compatibility with GM applications. Once testing is complete, more communications will be distributed.

SUPPORTED	NOT SUPPORTED
Enterprise grade hardware (PCs and Access Points)	Consumer grade hardware (PC and Access Points), Apple or Mac tablets & PCs Non-branded, built by hand or thin client PC
Intel Core i3 / i5 / i7 / i9 processors 7 <sup>th</sup> generation and above	ALL Intel Core i-series 6 <sup>th</sup> generation and below Processors plus AMD, Celeron, Pentium, and Atom processors
Windows 10 Professional, 64-bit Windows Server 2016 Standard	All Operating Systems <u>except</u> Windows 10 Professional, 64 bit and Windows Server 2016 Standard All Home Operating Systems Tablets running Android or Mac operating systems
Java Run Time Environment 32 bit	All 64-bit versions of Java
Supported and Not Supported hardware and software.	

## UPGRADING PCS

The Desktop, Laptop and Tablet computers matrix includes Operating Minimum – minimum acceptable capability/ components – and Operating Recommended – capability/ components that will deliver the best performance while maximizing the lifecycle of the investment. PCs used by technicians in the service bay should not be simply upgraded with a new operating system unless the PC processor is 7th generation or better. A 9th generation or better processor is recommended.

	Operating Minimum*	Operating Recommended
Processor	Intel Core i3, i5, i7 7th Gen	Intel Core i5, i7, i9 9th Gen* & above
System memory (RAM)	8 GB +	16 GB +
Hard Disk Drive (HDD or SSD)	500 GB +*	1 TB +
CD / DVD Drive (Optional)	CD/DVD Combo or external drive	CD/DVD Combo or external drive
USB A 2.0 & 3.0	2+	2+
Network Adapter	Wired: Gigabit Wireless: 802.11ac	Wired: Gigabit+ Wireless: 802.11ax
Operating System	Windows 10 Professional, 64-bit	PC: Windows 10 Professional, 64-bit or Windows Server 2016 Standard (EPC)
Recommended laptop PC specifications		

Approved browsers include Microsoft Edge version 92+ and Google Chrome version 93+. Microsoft has retired Internet Explorer (IE) and this browser is no longer supported.

The DISG covers the equipment that is supported as well as the difference between Consumer vs. Enterprise products. GM's robust applications require Enterprise-grade products.

All dealership computers must meet the minimum standard, including using the Windows 10 Professional OS, in order to receive assistance from the Techline Customer Support Center (TCSC).

Computers used in the service department for programming are recommended to have a hard drive size of 1 TB or larger in order to handle large calibration files.

GMDESolutions offers several laptop PCs meeting all GM specifications. The laptops also are pre-loaded with Techline Connect diagnostic software to help save time and effort at the dealership.

## TECHLINE APPLICATION RECOMMENDATIONS

GM Techline service technician applications (Techline Connect, GDS 2, MDI Manager, MDI/MDI 2, Tech2Win, Data Bus Diagnostics Tool and Service Information) require additional

CONTINUED ON PAGE 5





computing power to perform appropriately during vehicle diagnosis and repairs.

The following recommendations are for all service technician applications:

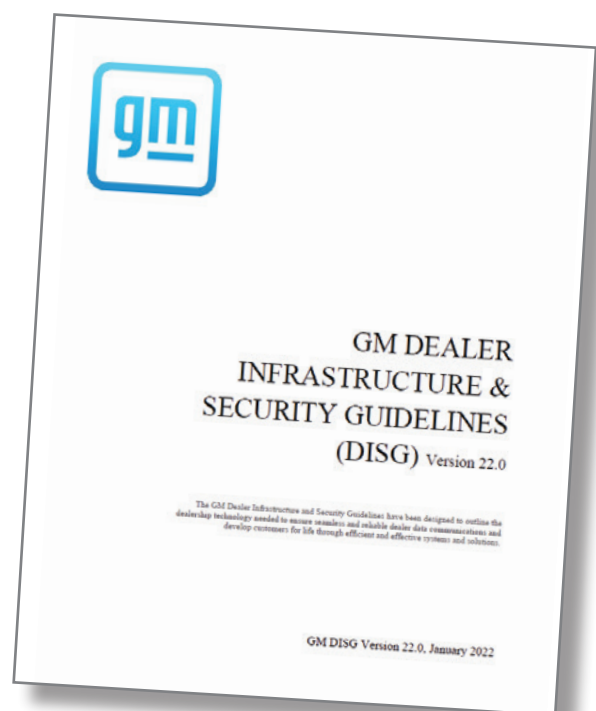
- Local Windows Administrative access for software installation and updates to Windows registry
- One laptop for each technician performing service programming and vehicle diagnostics; otherwise, one for every two technicians
- One MDI 2 for every Techline PC
- One battery maintainer for every two MDI tools in use
- Use of Tripp-Lite Keyspan USB-to-serial adapter (Model: USA - 19HS) for computers without serial ports

## SECURITY GUIDELINES

The security guidelines included are the minimum set of security capabilities that should be in place to reasonably protect information and ensure it from loss, theft and unauthorized access. The guidelines provide recommendations for accounts, access, passwords and logins as well as firewalls and data security.

## VIEW THE GUIDELINES

U.S. dealerships: To view the latest DIG as well as PCs for purchase, go to [gmdesolutions.com](http://gmdesolutions.com) and select the Dealer Services tab. Once you've input your BAC and zip code, select Techline IT Solutions from the Dealer Services menu.



Canadian Dealerships: The latest DIG can be found in the Dealer Security and Information Technology App on GM GlobalConnect.

► Thanks to Lisa Scott

# Driver's Outside Rearview Mirror Appearance



The driver's outside rearview mirror on some 2020-2022 Corvettes may have poor operation and appearance, including numerous lines shown in the mirror and a dim reflection at all times.

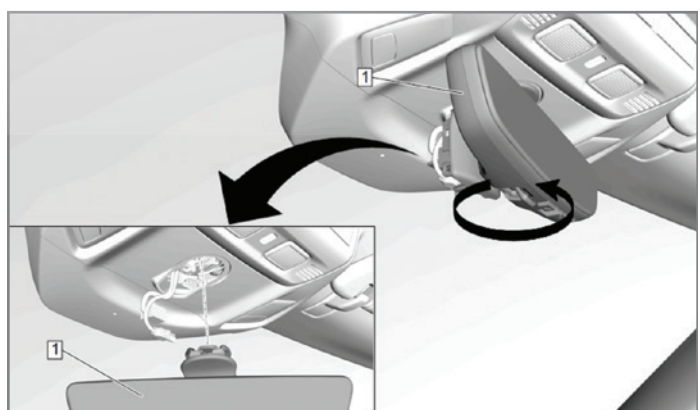
The poor appearance may be caused by the installation of an aftermarket radar detector in the vehicle. Depending on the installation location, the aftermarket electrical device may cause higher voltage to the mirror.

If the damaged mirror appearance is shown, check for the installation of a jumper harness to power the radar detector added to the mirror's X1 connector. The connector is located behind the front cover of the inside rearview mirror.

Disconnecting the jumper harness, and replacing the damaged outside rearview mirror due to the jumper harness, must be authorized by the customer. Vehicle damage resulting from aftermarket devices is not covered under warranty.

For additional information, refer to Bulletin #21-NA-251.

► Thanks to Jeff Strausse



The X1 connector is located behind the front cover of the inside rearview mirror.

# Poor Splice Connection in 1.2L Engine Wiring Harness

A poor splice connection in the engine wiring harness on some 2020-2021 Trailblazer and Encore GX models equipped with the 1.2L engine (RPO LIH) may result in an illuminated Check Engine MIL and DTC P0521 (XXX).

If these conditions are present, run the engine, with the hood closed, to normal operating temperature and then use GDS 2 to view the engine oil pressure in PSI. Next, turn the engine off and place the ignition in Service Mode. Monitor the engine oil pressure for readings above 0.0 PSI. It may be necessary to close the hood and run the engine for an additional amount of time to duplicate the condition.

Once the engine oil pressure reading is above 0.0 PSI, open the hood and slightly bend the main engine wiring harness back-and-forth at the front of the engine (see below) while monitoring GDS 2 for a pressure change.

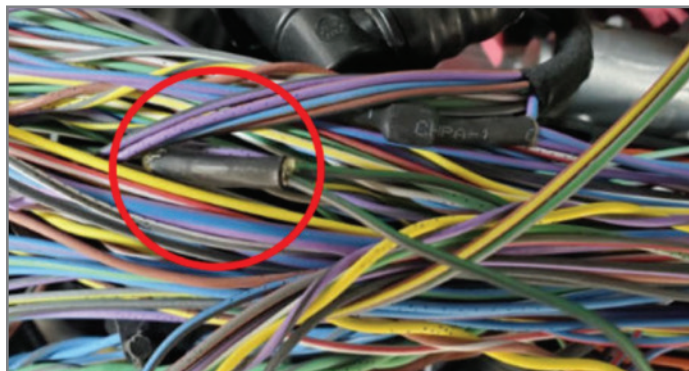


Move the engine wiring harness at the front of the engine back-and-forth.

**TIP:** If the engine oil pressure reading moves to 0.0 PSI while manipulating the harness, the reading may not change from 0.0 PSI without further movement of the harness.

A change in the engine oil pressure reading, either an increase or decrease in PSI, isolates the condition to this specific location on the engine wiring harness. A high resistance splice in the engine wiring harness above the EVAP purge pump may cause DTC P0521 to set.

Do not replace the oil pump or oil pressure sensor without first diagnosing the potential splice concern, as this may result in a return repair visit.



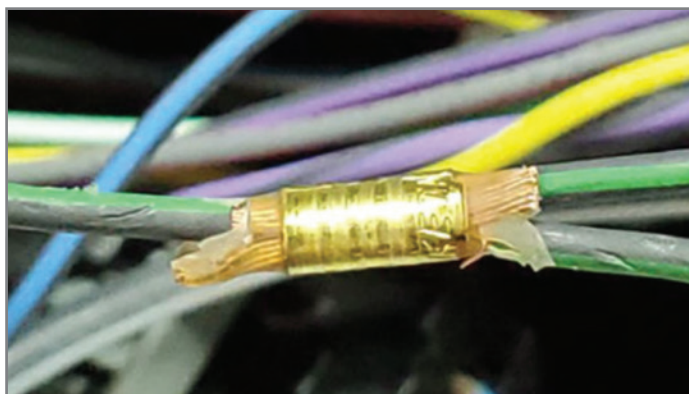
Three-wire splice located in the wiring harness above the EVAP purge pump assembly.

## SPLICE LOCATION

The Service Information may show only one splice for low reference circuit 548 (J114). An additional three-wire splice has been added to the low reference circuit 548 (BK/GN).

The three-wire splice is located in the main branch of the engine wiring harness above the EVAP purge pump assembly.

Open the engine wiring harness to access the three-wire splice and inspect each leg for broken wire strands. Repair any damaged wiring.



Repair any damaged wiring.

After repairs are completed, be sure to install an appropriately-sized heat shrink tube over the circuit and wrap the engine wiring harness with the appropriate PET underhood tape.

► Thanks to Raymond Haglund



# Driver Assistance Systems

## DISABLED DUE TO INCORRECT TIRE SIZE

The Lane Keep Assist and Forward Collision Alert systems may become inoperative on some 2020-2022 Encore GX and 2021-2022 Trailblazer models. While driving, the Lane Keep Assist and vehicle detection icons may flash and a System Unavailable message may be displayed when the Lane Keep Assist button on the center console is pressed.



Lane Keep Assist button

If a tire has been replaced with a tire size that is different than the original equipment manufacturer (OEM) tire size, the wheel speed discrepancy while traveling on a straight road will cause all driver assistance systems (B174W Frontview Camera Module) that rely on wheel speed sensor data inputs to be disabled. These system include:

- Lane Keep Assist (LKA)
- Lane Departure Warning (LDW)
- Forward Collision Alert (FCA)

- Low Speed Collision Mitigation Braking (LSCMB) (RPO UHY)
- Pedestrian Collision Mitigation Braking (PCMB) (RPO UKJ)

If these conditions are found, inspect the tires on the vehicle



All tires should be the same size as the original OEM tires.

to ensure that they are all the same size as the original OEM tires.

If a tire has been replaced that is not the correct OEM size, it will have to be replaced with the correct OEM size tire as indicated on the vehicle tire placard, located below the driver's door latch. This is not a warrantable repair.

► Thanks to Chris Hightower



# Charge Air Cooler Icing During Extreme Cold Weather

When driving in extreme cold weather conditions (0°F or less / -18°C or less), a winter grille cover should be installed on 2019-2022 XT4 models equipped with the 2.0L turbo engine (RPO LSY). The winter grille cover is needed to prevent any possible charge air cooler icing in extremely cold temperatures. Ice accumulation may restrict air flow, resulting in a loss of power, hesitation on acceleration and other poor performance conditions. Any ice accumulation should be allowed to melt so that moisture can be drained from the induction system, including the charge air cooler, without component damage.



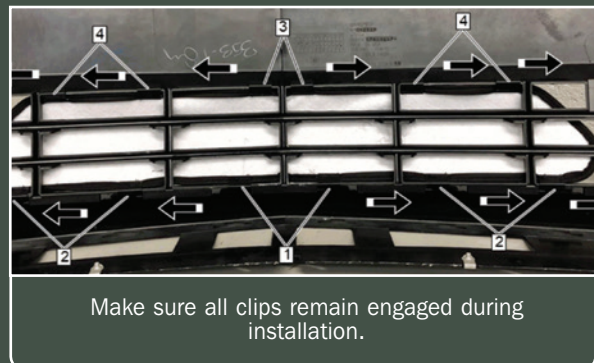
The winter grille cover is included on 2022 model year vehicles equipped with the engine block heater (RPO K03). It's recommended to review the installation and removal procedure for the winter grille cover with customers. Installation information is included in the grille cover instruction sheet and the Owner's Manual.

## COVER INSTALLATION

A one-time installation of the grille cover is covered under warranty for up to 12 months after vehicle delivery for 2022 models. For 2019-2021 models, refer to Bulletin #21-NA-229.

During the first installation of the cover, it may appear that the cover is undersized. The special vinyl used for the cover will stretch during installation, yet will provide a tight fit.

Before installing the grille cover, be sure to clean the front surface of the vehicle. The grille cover also should be warm when installing it. During installation, the center lower plastic clips should be engaged first. Make sure all clips remain engaged during installation.



The winter grille cover should only be used in extreme cold weather and should be removed when the winter season changes (temperatures above 0°F / -18°C).

**TIP:** If the winter grille cover is missing at PDI, order the winter grille cover following the information in Bulletin #21-NA-233.

For more details, including winter grille cover ordering information, refer to Bulletin #21-NA-233.

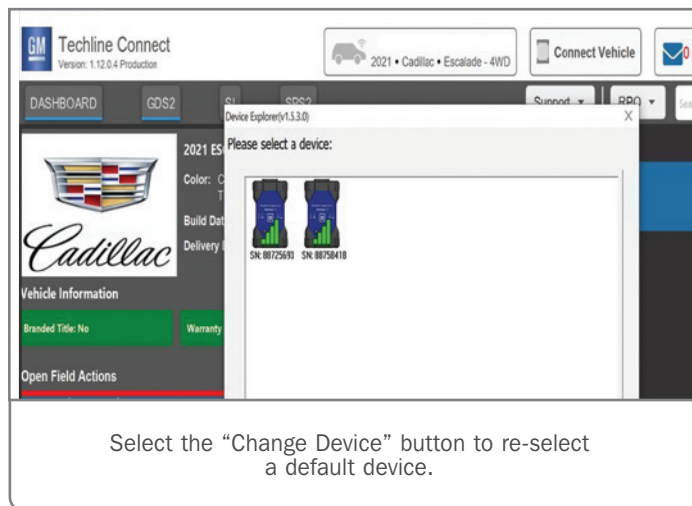
► Thanks to Chris Semanisin

# GDS2 Update

## Includes New MDI Tool Selection Window

The latest GDS2 core update release (v22.2.05000) includes an update to the J2534 Wrapper, or MDI tool selection window.

Since the MDI no longer receives updates to its core software, changes are being made to the MDI Manager and the MDI tool selection window that pops up in Techline Connect, SPS2 and GDS2.



With the update, any available MDI and MDI 2 will no longer be shown in the same tool selection window (Device Explorer). To re-select a default device, it will be necessary to select the "Change Device" button.

### CHANGE DEVICE

To view the available MDI tools, select the "Change Device" button and select the desired MDI as the default device.

If USB is used as a connection method, the Device Explorer will not be displayed. If the device on USB does not match the type of the established default device, an automatic connection with the device will not be established and the appropriate device must be selected. Select "Connect Vehicle" to display the Device Explorer and then proceed to change the default device type.

Please select a device type:			
Device Name	Device Manufacturer	Comment	Version
MDI	Bosch	Device is supported.	
<input checked="" type="checkbox"/> MDI 2	Bosch	Device is supported.	
SIMU	General Motors	Device is supported.	
Available devices will be listed in the Device Explorer.			

### UPDATING SOFTWARE

When updating to a new core version, many firewalls/antivirus programs will recognize it as a new application. It may be necessary to engage your local IT support to ensure GDS2 is entered as an exception in these programs to allow normal functionality. GDS2 users also need full administrative rights to install the update. If issues are encountered with GDS2 not functioning properly, right click on the GDS2 icon on the desktop and select "Run as administrator."

To set Techline Connect to always run as administrator:

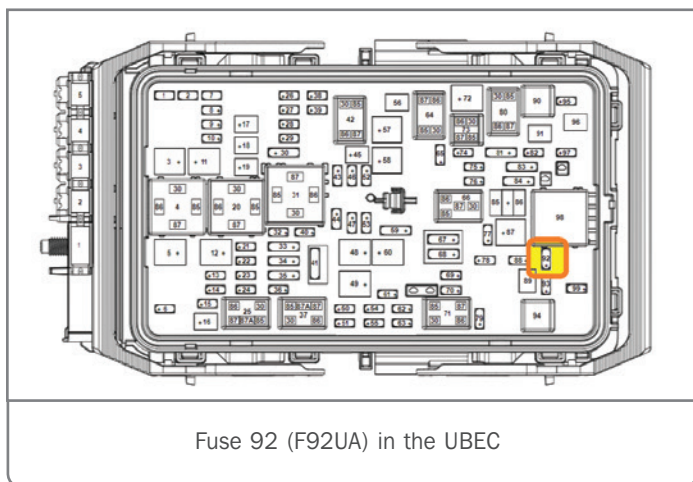
1. Right-click the TLC desktop icon and select "Properties."
2. Click "Advanced" and then check the box for "Run as Administrator."
3. Click "OK" and then click "Apply."
4. Click "Continue" and then "OK" to close the dialog box.

For assistance, contact the Techline Customer Support Center (TCSC) at 1-800-828-6860 (English) or 1-800-503-3222 (French).

► Thanks to Chris Henley

# DTCs Set Due to Transmission Fluid Pump Fuse

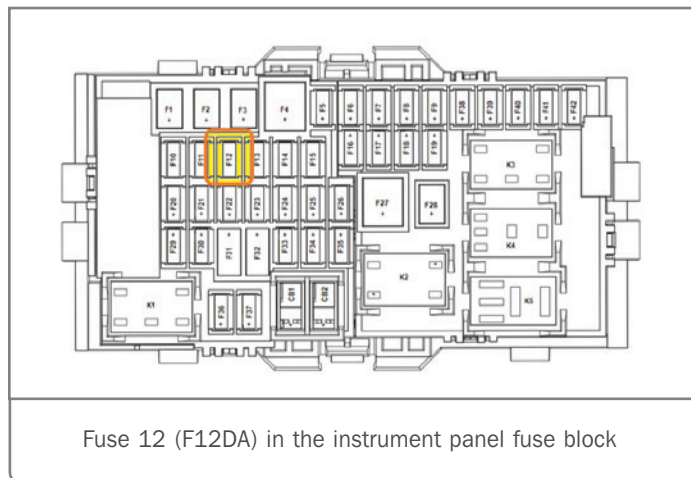
Some 2020 Malibu models equipped with the 1.5L engine (RPO LFV) and the VT40 automatic transmission (RPO MRG) may have an illuminated Check Engine MIL and/or the engine stop/start feature may be inoperative. DTC P2796 (Auxiliary Transmission Fluid Pump Control Circuit) and DTC P2798 (Auxiliary Transmission Fluid Pump Relay Control Circuit Low Voltage) may be set in the Transmission Control Module (TCM).



Fuse 92 (F92UA) in the UBEC

During diagnosis, 0 (zero) volts may be measured at the auxiliary fluid pump. In addition, fuse 92 (F92UA) may not be found in the UBEC.

Some Malibu models may still have the fluid auxiliary pump powered by fuse 12, G5 Transmission Fluid Pump (Electric/Auxiliary, MRG, F12DA). This fuse may be missing or open, and the fuse box label may read "Not Used."



Fuse 12 (F12DA) in the instrument panel fuse block

If the fuse is missing from the UBEC, look for fuse 12 (F12DA) in the instrument panel fuse block to be either open and/or missing. If the fuse is missing from the instrument panel fuse block, a 20 Amp fuse should be installed into the fuse 12 (F12DA) location.

With the fuse installed, check for voltage at the pump. If voltage is present, the vehicle should be driven to verify the DTCs do not reset and that the engine stop/start system operates properly.

If the DTCs reset, follow the appropriate diagnostics in the Service Information for the 2019 model year.

► Thanks to Bill Alley

## TECH LINK

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