

## Poor A/C Performance Due to Loss of Refrigerant



*Check for  
refrigerant leaks  
when there is poor  
A/C performance  
before replacing  
system components.*

**TECHLINE  
CONNECT**

**Techline Connect &  
GDS2 Split Update  
Released**

see page 3

Poor A/C Performance Due to Loss of Refrigerant.....	2
TCSC Top Issues This Week.....	4
Check Grounds for No Start Condition .....	6
Loss of A/C and Warm Air Conditions. ....	7
Anti-Chip Coating Appearance on Full-Size Trucks. ....	8

# Poor A/C Performance Due to Loss of Refrigerant

The fluorescent dye installed in the air conditioning refrigerant system of all current GM vehicles helps in locating leaks in the A/C system. Using the GE-42220 Universal 12V Leak Detection Lamp, the leaks in the system will be indicated in a fluorescent light green or yellow color when checking fittings, connections, A/C components, seals, hoses and other areas.



Use the GE-42220 Universal 12V Leak Detection Lamp to help locate leaks in the A/C system.

Recently, several evaporators and other A/C parts that were replaced on 2021-2025 Tahoe, Suburban, Yukon and Escalade models have shown No Trouble Found during warranty analysis. The poor performance of these A/C systems may have been the result of a loss of refrigerant, not the operation of the components.

Be sure to follow the diagnostics in the appropriate Service Information to prevent the unnecessary replacement of system components. The GE-50078 Electronic Leak Detector can be used to find smaller, passive leaks in addition to using the Leak Detection Lamp for most medium-to-large leaks.

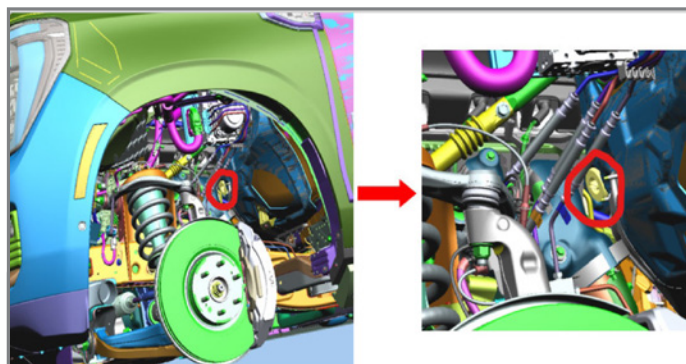
When checking for leaks, perform an A/C refrigerant recovery using the GE-50300R-1234yf Air Conditioning Refrigerant Recovery/Recharge Cart to see how much refrigerant is in the system before adding A/C dye. Only use fluorescent dye approved by GM.

Depending on the leak rate, a leak may not become visible for between 15 minutes and 7 days.

Keep in mind that condensation on the evaporator core or refrigerant lines may wash the fluorescent dye away from the actual leak. Condensation also may carry the dye through the HVAC module drain.

While wearing the yellow glasses, use the GE-42220 Universal 12V Leak Detection Lamp to visually inspect all refrigerant lines, all fittings and connections that use seal washers or O-rings, and all A/C components. On the full-size SUVs, be sure to check:

- **Front HVAC drain**, located over the transmission case at the center of the vehicle. To access the drain, remove the left front wheel.
- **A/C refrigerant heat exchanger**



Front HVAC drain



Refrigerant heat exchanger

CONTINUED ON PAGE 3

# Techline Connect & GDS2 Split Update Released

An update to Techline Connect and GDS2 was released on July 31, 2025, that changes the way

# TECHLINE CONNECT

GDS2 operates. The update was released to all GM dealerships in Michigan, except for medium-duty dealerships. More dealerships will receive the update in the coming weeks.

Once the update is installed, selecting the GDS2 icon from the Techline Connect (TLC) dashboard, GDS2 will launch outside of TLC. Designed to improve the performance of both TLC and GDS2, the update splits memory usage, allocating more memory to both applications. The enhanced performance should help reduce application crashes and improve overall operation.

## DOWNLOADING AND INSTALLATION

The update will download and install automatically upon logging into TLC with proper administrative rights.

When updating from one core version to the next, many firewalls/antivirus programs will recognize it as a new application. Users may need to engage local IT support to ensure TLC is entered as an exception in these programs to allow normal functionality. As a user, you also need full local administrative rights to install the update.

If you have questions related to this communication, please contact the Techline Customer Support Center (TCSC) at 1-800-828-6860.

► Thanks to Chris Henley

## POOR A/C PERFORMANCE, FROM PAGE 2

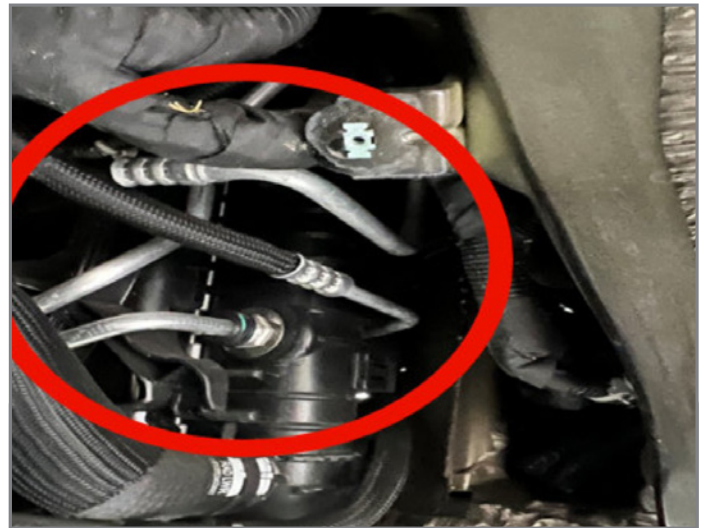
- **A/C condenser connections.** Remove the intake air splash shield for access.
- **A/C pipes and connectors.** Raise the vehicle for a better view under the components.



Remove the intake air splash shield to view the condenser connections.

**TIP:** To prevent false diagnosis in the future, thoroughly clean any residual dye from the area where a leak was found using a rag and GE-43872 Dye Cleaner.

Refer to Bulletin #25-NA-191 for additional information and to



A/C pipes and connectors

Leak Testing and Refrigerant Recovery and Recharging in the HVAC section of the appropriate Service Information.

For a closer look at using the Leak Detection Lamp, check out the August GM Service Know-How Emerging Issues seminar (10225.08V).

► Thanks to Mike Waszczenko





# TCSC Top Issues This Week

The Techline Customer Support Center (TCSC) is available to help dealerships with diagnostic and programming issues related to Techline Connect (TLC) and the Service Programming System (SPS).

TCSC has now released their latest tips to help technicians when using Techline Connect applications. Look for the latest tips on TechLink each week.

To get the most out of Techline Connect, be sure to review the following items before making a call to the TCSC.

The following information covers current issues and trends facing dealerships as of July 31, 2025.

## WEEKLY ISSUES

### 1. 2025 T1 Truck Extended Idle (SK4) Now Available

Calibrations for Extended Idle (SK4) have now been released for 2025 Silverado 1500, Sierra 1500, Silverado 2500HD/3500HD and Sierra 2500HD/3500HD models.

Please reach out to TCSC to have this reconfiguration completed.

Calibrations have not yet been released for 2025 Tahoe, Suburban, Yukon and Escalade models. The expected release for the calibrations for the full-size SUVs is August 2025.

### 2. 2025 T1 Series (Full-Size Trucks and SUVs) Tire Downsizing Not Supported

Downsizing tires of any kind is not supported on any 2021 to current T1 Series vehicle. This includes Silverado and Sierra trucks and Tahoe, Suburban, Yukon and Escalade SUVs.

### 3. Bulletin #25-NA-081: Calibrations Now Available for 2024-2025 XT4 Rear Short-Range Radar.

Calibrations for the rear short-range radar are now available, and the document has been updated to include both 2024 and 2025.

This issue is due to a software anomaly, and the B233R rear short-range radar and side object detection modules must be reprogrammed. Refer to document ID: 6879049 for details.

### 4. Vehicle-Wide Programming Failures Related to SDGM Memory Issues

There is a known issue with the SDGM that may cause Vehicle-Wide Programming (VWP) to fail on any vehicle currently enrolled in VWP. The error may appear as a failed VWP event, or multiple modules losing communication after failed VWP.

To correct this issue, pull the fuse for the SDGM for 2 minutes, or disconnect the 12-volt battery and re-attempt after re-connecting.

If there are any further issues, please reach out to TCSC for support.

### 5. 2025 Full-Size SUV 24-Inch Tire (QKN) Support

Currently, Service Information Document: 6791277 shows that the upsizing of the 24-inch tire (QKN) is not supported from a smaller size (20/22-inch tire) on 2025 Escalade, Tahoe, Suburban and Yukon models.

The 24-inch tires are supported only on vehicles built with 24-inch tires from the factory. At present, there are not any calibrations that will allow a reconfiguration to 24-inch tires from a smaller tire size.

The reason behind this is that there are differences between how the vehicles are built when they are produced at the factory with 20-inch or 22-inch tires and when the vehicles are built with 24-inch tires.

### 6. 2025 T1 Truck Manual Regeneration (FPF) Not Yet Available

Calibrations for Manual Regeneration (FPF) have not yet been released for 2025 Silverado and Sierra trucks. These vehicles are planned to be supported but no ETA is available yet for when the calibrations will be released.

### 7. DTC U3000 Set After One or Both Side Blind Zone Modules Replaced on 2023+ Colorado, Canyon, Corvette, CT4 and Envision

Engineering is tracking down the cause of this concern. Please answer the following questions to the best of your ability and provide them in your DCM case to TCSC for the quickest possible service:

CONTINUED ON PAGE 5

- Do the replacement SBZ module(s) have a green dot/line on the part label?
- Where did you obtain the new service parts from?
- Were these parts ordered? If so, from where?
- Is there currently a SPAC case set up for this issue?
- Were these parts obtained from another dealer?

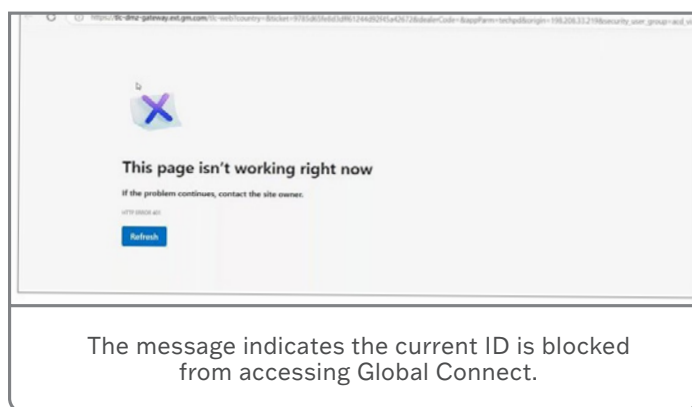
## COMMON ISSUES

### 1. Bulletin #24-NA-098: SPS Best Practices and Programming Error Troubleshooting

Document ID: 6662319 has been published to assist with common programming errors, descriptions and recommended helpful/general troubleshooting for SPS errors. Please refer to this page if you encounter a programming error within SPS2/TLC.

### 2. TLC Restricted Access

The following message may be seen when attempting to access Techline Connect:



The message indicates that the current ID is blocked from accessing Global Connect. This can be for several reasons but typically is due to a counterfeit MDI device.

To unblock the account, reach out to TCSC via Dealer Case Management (DCM) with the following information:

- User ID in Global Connect
- Email of User
- First and Last Name of User
- BAC/Dealer Code and Name of Dealership

TCSC will be able to reach out to the Cybersecurity team that will be able to determine the cause of the block and may be able to unblock the account. In the case of a counterfeit MDI, the counterfeit tool must be destroyed, and a legitimate Bosch device must be used to ensure the ID is not blocked again. Repeat offenders may not be unblocked from access.

### 3. E-9111/E-9113 TCM/MCVM Operation Errors

An E-9111 or E-9113 error may occur when programming the TCM, or after replacing the transmission assembly/valve body, and entering the TUN/PUN under MCVM Operations in SPS2.

The error is caused by a mismatch in data between the vehicle's TUN/PUN and the TUN/PUN uploaded in the GM database. Please ensure the complete TUN/PUN number is entered correctly, and that the TUN/PUN is in capital letters. Double check that the number zero (0) is not a letter "O" and that there are not any typos or extra characters.

If the TUN/PUN is correct, open a DCM case with TCSC and attach a clear picture of the replacement TUN/PUN in the case, as TCSC will require these to work with Engineering and have the issue addressed.

If you are receiving these errors via programming and the TUN/PUN was not replaced, TCSC may still require the TUN number.

### 4. Radio/IPC Part Missing from SPS2 Part Dropdown

When performing IPC Graphics programming or Radio USB programming, you may be prompted in SPS2 to select "Service Hardware." However, this is inaccurate.

For IPC Graphics programming, use the "Boot Software Part Number 1" found in GDS2 under Identification Information.

Similarly, for Radio USB Programming, use the "Calibration Part Number 1" (also may be called "Application Part Number 1") found in GDS2 under Identification Information.

### 5. 2024-2025 Silverado 2500HD/3500HD and Sierra 2500HD/3500HD Adding ZW9 (Bed Delete) Built with UV2 (HD Surround Vision Camera)

Engineering has confirmed that there are not any compatible calibrations that support both RPO ZW9 (Bed Delete) and RPO UV2 (HD Surround Vision Camera).

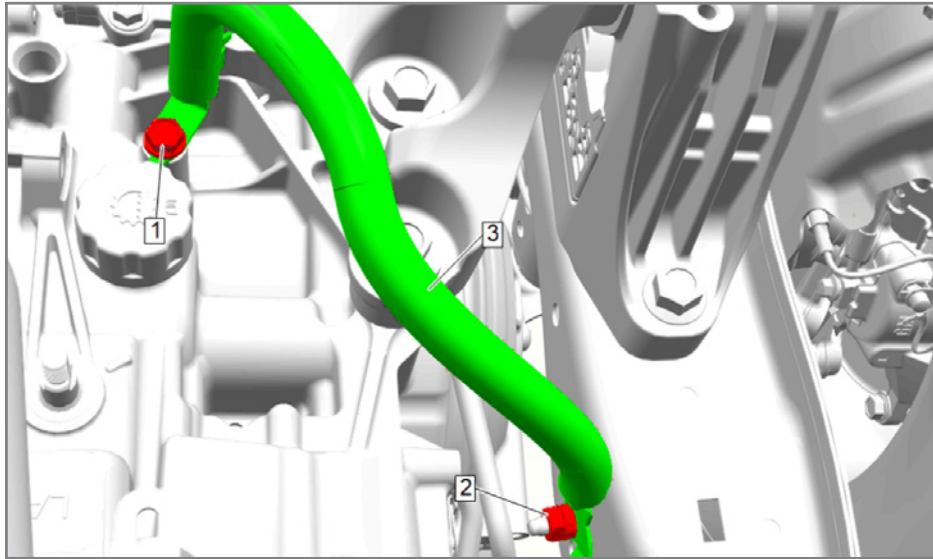
Please be advised that ZW9 cannot be added to vehicles with UV2 regardless of trim level.

## HOW TO CONTACT TCSC

- **U.S. ONLY:** Assistance can be provided by using the Dealer Case Management (DCM) portal on Global Connect. If additional support is needed once the DCM case is created, contact TCSC at 1-800-828-6860. For U.S. only, a DCM case is required for phone support.
- **Canada:** Contact TCSC at 1-800-828-6860 (English) or 1-800-503-3222 (French).
- **All other regions:** Contact your regional Technical Assistance team for Global Techline Support.

► Thanks to the Techline team

# Check Grounds for No Start Condition



There may be a no start condition on some 2025-2026 Equinox and Terrain models. In addition, the starter may click and there may be several DTCs set in the Engine Control Module (ECM).

These conditions may be caused by the 12V battery, the battery connections or the G111 and G112 grounds.

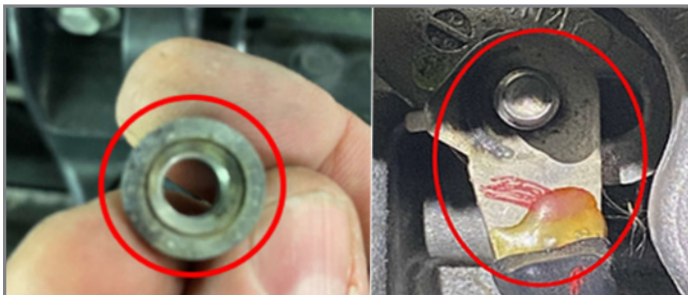
Begin diagnosis by verifying the 12V battery state of charge. If the battery is good, check the negative battery cable extension.

Perform a voltage drop test from the battery negative terminal to the transmission case. If the voltage drop is 100mV or more, continue with diagnosis. If it is less than 100mV, diagnose any current DTCs following the appropriate Service Information.

Next, check that the G111 and G112 grounds are properly torqued and in good condition.

G111 – Check that the stud is free of paint and the nut contact surface is clean. Also confirm the ground cable terminal is clean and free of debris, heat shrink glue and arcing residue. Clean the terminal, nut and stud as needed. Torque the G111 nut to 22 Nm.

G112 – Check that the bolt is clean with no signs of debris or arcing residue. Also confirm the ground cable terminal is clean and free of debris, heat shrink glue and arcing residue. Clean the terminal, bolt and transmission surface as needed. Torque the G112 bolt to 9 Nm (VT40 transmission, RPO MRQ) or 22 Nm (8T45 transmission, RPO MGH).



G111



G112

After inspecting the grounds, clear all DTCs and road test the vehicle to check for proper operation.

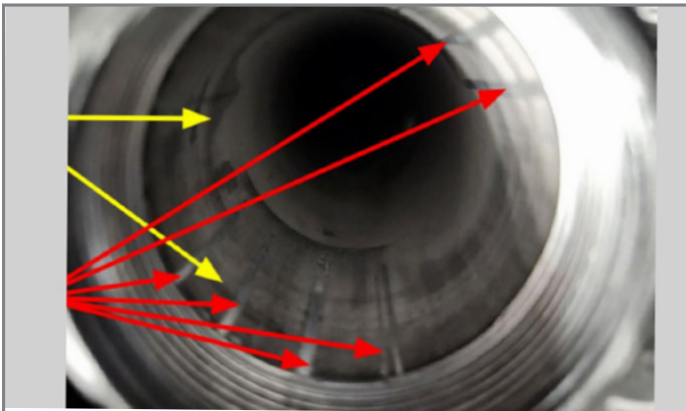
For additional information, refer to Bulletin #25-NA-143.

► Thanks to Rob Smith

# Loss of A/C and Warm Air Conditions

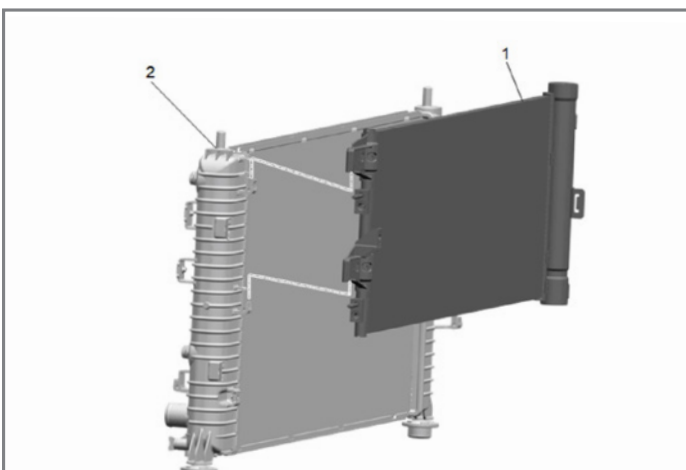
There may be a loss of air conditioning, weak cooling or warm air coming out of the vents on some 2024-2025 Silverado 1500 and Sierra 1500 trucks.

These conditions may be due to the desiccant chamber of the air conditioning condenser.



Check for scoring (red arrows) on the inside of the desiccant chamber.

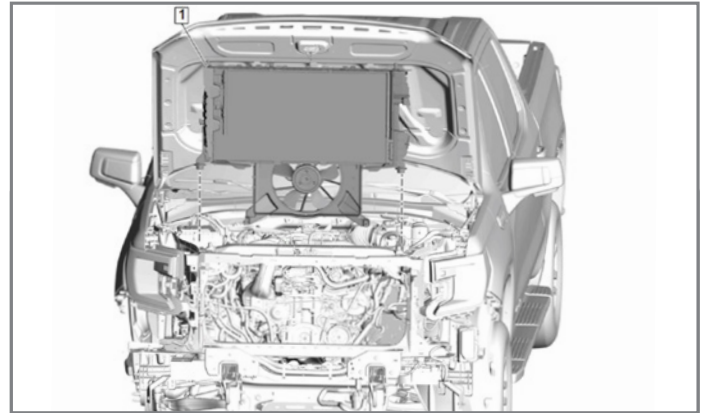
Check for scoring (red arrows) on the inside of the desiccant chamber, which may cause a slow leak of refrigerant at the receiver/dryer desiccant cap. Inspect the cap extensively using a refrigerant sniffer (GE-50078 Electronic Leak Detector) or a soapy solution to identify any leaks. Replace the condenser if a leak is



Air conditioning condenser (#1) and radiator (#2)  
(L84/L87 engines)

found. Refer to Air Conditioning Compressor Replacement in the appropriate Service Information. :

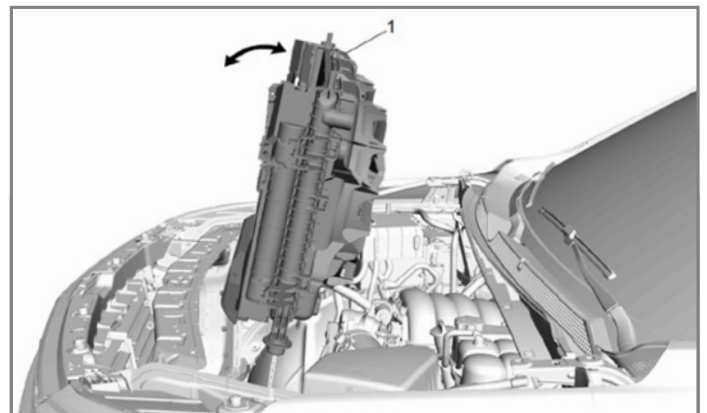
On vehicles equipped with the 2.7L engine (RPO L3B) or 3.0L diesel engine (RPO LZ0), remove the charge air cooler, condenser, fan motor and radiator as an assembly.



Charge air cooler, condenser, fan motor and radiator assembly

On vehicles equipped with the 5.3L or 6.2L engine (RPO L84, L87), remove the condenser, fan motor, radiator and transmission fluid auxiliary cooler, if equipped, as an assembly.

Refer to Bulletin #25-NA-170 for more details, including the plant code and condenser part number.



Condenser, fan motor, radiator and transmission fluid auxiliary cooler, if equipped, assembly

► Thanks to Dave MacGillis



# Anti-Chip Coating Appearance on Full-Size Trucks

All 2018-2026 Silverado 1500, Sierra 1500; and 2019-2026 Silverado 2500HD/3500HD and Sierra 2500HD/3500HD trucks have stone guard protection applied to the lower painted surfaces that provides added defense against stone chips and road debris to help keep the vehicle exterior looking good. For trucks built at the Oshawa assembly plant (11th VIN position – 1), there may be some customer concerns about the lack of an anti-chip coating on the exterior of the trucks.

Trucks built at the Flint, Fort Wayne, and Silao assembly plants feature stone guard protection along the lower painted surfaces that has a textured appearance, which provides a visible indication of the stone guard application.



Anti-chip protection is applied to the lower painted surfaces.

However, trucks that are built at the Oshawa assembly plant go through a powder anti-chip material process for stone guard protection that does not have a textured appearance. The anti-chip performance meets all engineering criteria for durability and quality

without a visibly textured surface.

No repairs should be performed and no additional applications of any anti-chip coatings should be applied.

Refer to Bulletin #25-NA-114 for additional information.

► Thanks to Dave MacGillis and Kevin Minor

## TECH LINK

GM TechLink is published for all GM retail technicians and service consultants to provide timely information to help increase knowledge about GM products and improve the performance of the service department.

**Publisher:**  
Rick Miller  
GM Customer Care and Aftersales

**Editor:**  
Paul Bielecki  
GM Customer Care and Aftersales

**Technical Editor:**  
Mark Spencer  
mspencer@gpstrategies.com

**Production Manager:**  
Marie Meredith

**Creative Design:**  
5by5 Design LLC  
dkelly@5by5dzn.com

**Write to:**  
TechLink  
PO Box 500, Troy, MI 48007-0500

**GM TechLink on the Web:**  
GM GlobalConnect

General Motors service tips are intended for use by professional technicians, not a "do-it-yourselfer." They are written to inform those technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions and know-how to do a job properly and safely. If a condition is described, do not assume that the information applies to your vehicle or that your vehicle will have that condition. See a General Motors dealer servicing your brand of General Motors vehicle for information on whether your vehicle may benefit from the information. Inclusion in this publication is not necessarily an endorsement of the individual or the company. All information contained herein is based on the latest information available at the time of publication and is subject to change without notice.  
Copyright © 2025 General Motors. All rights reserved.