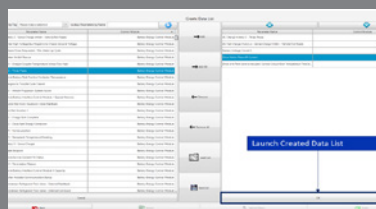


## Updated Transfer Case Input Shaft Seal Installation

*DT-53018  
Seal Installer  
Now an  
Essential Tool*



**Create Custom Data Lists in GDS 2**

see page 7

*Updated Transfer Case  
Input Shaft Seal Installation..... 2*

*TCSC Top Issues This Week..... 4*

*A/C Leak Detection  
Dye for EVs..... 10*

*When and Why to Use  
Fuel Additives ..... 12*

# Updated Transfer Case Input Shaft Seal Installation

## DT-53018 SEAL INSTALLER NOW AN ESSENTIAL TOOL

Seal installation depth is critical when replacing the transfer case front input shaft seal between the transmission and transfer case on 2020-2026 Silverado 2500HD/3500HD and Sierra 2500HD/3500HD trucks equipped with the RPO NQF or NQH transfer case.



Transfer case front input shaft seal in position to be installed.

The transfer case has a gap around the outer portion of the seal that needs to be centered over a weep hole in the transfer case. The weep hole is drilled in the center of a groove machined into the case. The DT-50648-A Seal Installer will not work for these applications.

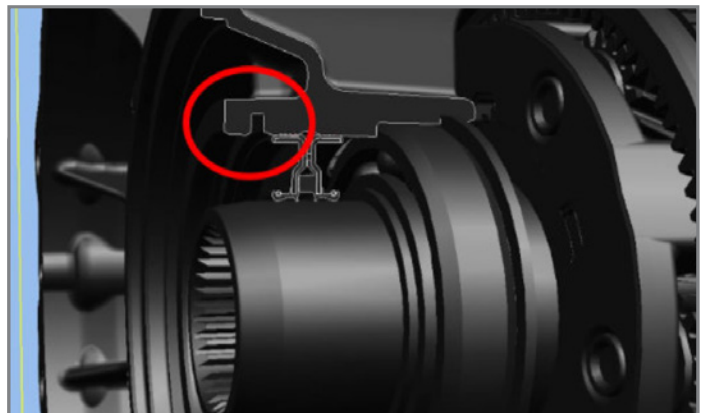


Weep hole in the center of the case groove.

## TWO TOOLS, TWO TRANSFER CASE DESIGNS

There are two special tools available, depending on transfer case design, for installing the input shaft seal to the correct depth. The seals are installed at different depths on first design and second design cases.

To identify each design, look for a machined groove where the seal is installed (circled as shown). If there is a defined machined groove in the case, it is a first design case.



First design transfer case



Second design transfer case

CONTINUED ON PAGE 3

If there is not a defined groove machined into the case, it is a second design case.

## FIRST DESIGN TRANSFER CASE

For the first design transfer case used on early 2020 model year vehicles, refer to Transfer Case Assemble (VIN LF263576 and Earlier – with MGM or MGU) in the Transfer Case – Off Vehicle repair instructions in the 2020 model year Service Information. Seal installer DT-53017 (GM-53017) should be used for these applications.

The DT-53017 tool is currently available to order and also is available through the Loan Tool Program

## SECOND DESIGN TRANSFER CASE

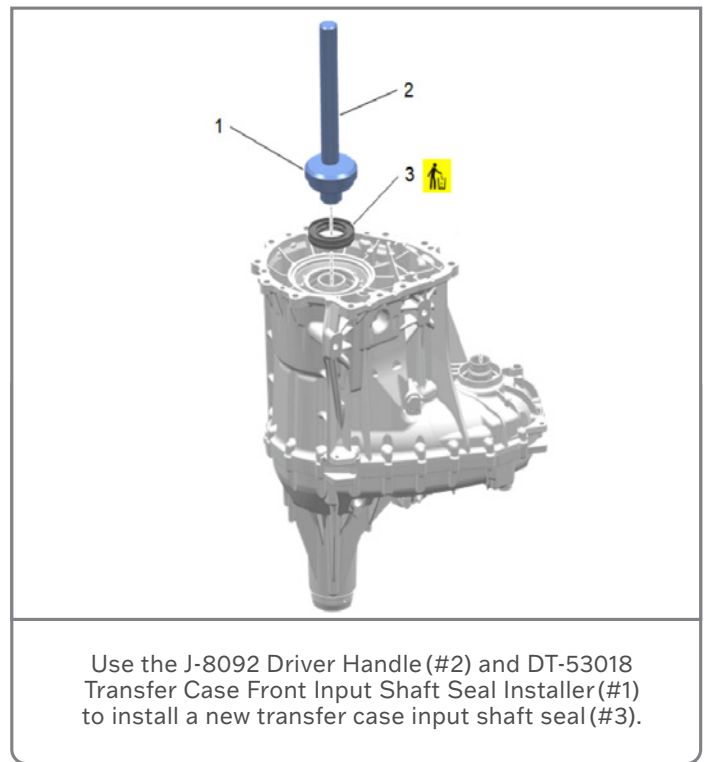
For the second design transfer case, which was introduced later in the 2020 model year and used on 2020–current model year vehicles, follow either the Transfer Case Assemble (VIN LF263577 and Later – with MGM or MGU) in the Transfer Case – Off-Vehicle repair instructions in the 2020 model year Service Information or the year of the vehicle being repaired. The DT-53018 (GM-53018) Seal Installer should be used for these applications.



DT-53018 (GM-53018) Seal Installer

The DT-53018 tool is an Essential tool and will be identified as GM-53018. It will begin being shipped to all dealerships that have not already purchased the tool.

**TIP:** Using the incorrect tool will create a repeat leak as the seal may not be at the correct depth or may not be installed straight.



Use the J-8092 Driver Handle (#2) and DT-53018 Transfer Case Front Input Shaft Seal Installer (#1) to install a new transfer case input shaft seal (#3).

The tools can be ordered through the GM Special Tools and Equipment website at [gmglobaltools.com](http://gmglobaltools.com).

For more information, refer to #PIP5810C.

► Thanks to Steve Underwood

# 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 May 14, 2026.**

## WEEKLY ISSUES

### 1. UPDATED – E-4398 Issue on the Front View Camera (FCM)

There is a known issue involving the Front View Camera (FCM) on the 2025 Acadia, Traverse and Enclave. These vehicles will show E-4398 in SPS2 when attempting to reprogram the existing or replacement modules. FCM programming will be unable to be completed at this time. This issue is currently being investigated but no ETA is available.

### 2. MDI/Scan Tool Disconnecting in SPS2, Showing Status: Disconnected in TLC

Users may see the MDI/Scan tool disconnect/reconnect rapidly in SPS2, causing issues with connectivity. GM is aware of this issue and actively investigating.

To potentially resolve this issue, disconnect the scan tool, reboot the tool, and then reconnect.

### 3. NEW – Tech2 Scan Tool Not Connecting in TLC

Users may see issues with the Tech2 being unable to connect in TLC. The system may get stuck on “Connecting to vehicle...” and/or “E-9047 Tool Communication Failed” messages/. GM is investigating this issue. There is no workaround at this time.

### 4. NEW – DTC U3000 Set in IPC After Reprogramming Any Module in SPS2 on 2022-2023 T1 Trucks

Users may see DTC U3000 set in the Instrument Panel Cluster (IPC) after reprogramming any module on 2022-2023 T1 Trucks (Silverado/Sierra).

Please reach out to Techline if you are experiencing this issue. Users may be able to resolve the issue by performing a key cycle and/or battery disconnect.

### 5. NEW – EPC Showing Incorrect Radio Hardware for 2025 Blazer EV and 2026 Corvette

Users report that the EPC is directing to an incompatible part for both 2025 Blazer EV and 2026 Corvette.

PN 85852385 is not compatible with the 2025 Blazer EV. Contact your local Electronic Service Center (ESC) for a proper replacement.

PN 86294862 is not compatible with 2026 Corvette. Please use PN 86294870.

GM is working on correcting the EPC to show the correct hardware.

### 6. 2021 T1 SUVs (Tahoe, Suburban, Yukon, Escalade) Unable to Complete SDAC (Serial Authentication Data Configuration)

There is currently a known issue affecting 2021 T1 SUVs where the SDAC may fail. The radio, IPC, or Telematics (OnStar) module may be the cause of these failures.

DO NOT REPLACE THE MODULE. This is a known SPS issue and the current workaround is to disconnect the SDGM X3 connector and re-attempt SDAC. Engineering is aware of this concern and working on a permanent resolution.

### 7. 9G8 (DRL/AHL Disable), SK4 (Engine Idle Timeout), UTQ (Content Theft) and 6N6 (Rear Window Disable) Not Yet Available on 2026 Vehicles

Calibrations for RPOs 9G8, SK4, UTQ and 6N6 are not yet available for model year 2026 vehicles but are planned to be released. However, there is not currently an ETA.

CONTINUED ON PAGE 5

Note: RPO SK4 calibrations are now available for T1 Trucks (Silverado, Sierra). T1 SUV (Tahoe, Suburban, Yukon, Escalade) is still being worked on.

## COMMON ISSUES AND HELPFUL INFORMATION

### 1. Accessory/Reconfiguration Programming Window Reduced from 90 Days to 14 Days on VIP Vehicles Only

Accessory/Reconfiguration added to a VIP Vehicle VIN by TCSC must be reprogrammed by the dealership within 2 weeks (14 days). If programming is not completed by this time, the changes will be reverted, and the dealership will be required to reach out to TCSC and request the update(s) again.

Note: There will not be an additional charge for changes that are requested again.

### 2. 2020 Trax IPC Programming Issue

GM is aware of an issue affecting 2020 Trax models where a replacement IPC may fail with E-4491 and line/op/error indicate (X, B0, 85).

This issue is currently being investigated by Engineering. Please reach out to TCSC if you are experiencing this issue.

### 3. 2023-2026 HUMMER EV RWQ (37-inch Tire) Calibration Freeze

Currently, TCSC is unable to add 37-inch "RWQ" tires to any 2023-2026 HUMMER EV.

A resolution for this issue is being developed by Engineering but there is currently no ETA or workaround.

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

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

- For IPC Graphics programming, use the "Boot Software Part Number 1" found in GDS2 under Identification Information.
- For the Radio USB Programming, use the "Calibration Part Number 1" (also may be called "Application Part Number 1") found in GDS2 under Identification Information.
- For the ECM, use the "Calibration Part Number 1" (also may be called "Software Module Part Number 1") found in GDS2 under Identification Information.

### 5. 2015+ Chevrolet Express SOSM E-4399 Issue and ECM VIN Write Issue

GM is aware of a known issue where programming current/replacement SOSM modules (Left/Right) will cause an E-4399 in SPS2, despite the modules having communication.

Additionally, the VIN may not write on a replacement ECM successful programming events.

Please reach out to TCSC for a VCI to correct either concern.

### 6. 2024+ Silverado 2500HD/3500HD and Sierra 2500HD/3500HD Adding ZW9 (Bed Delete) Support

Engineering has confirmed that there are not any compatible calibrations that support both RPO ZW9 (Bed Delete) and RPO UV2 (HD Surround Vision Camera) on any model. RPO ZW9 cannot be added to vehicles with RPO UV2 regardless of trim level.

Note:

- RPO ZW9 is supported for long-bed models only
- RPO ZW9 is supported regardless of 17/18/20/22-inch tire sizes.

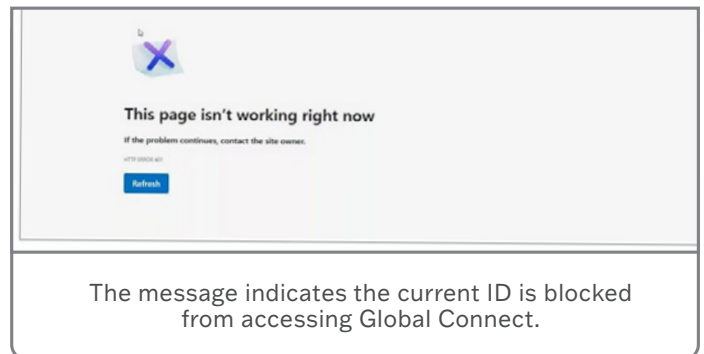
Refer to the GM Vehicle Order Guide for details, including equipment groups supported (e.g., 1WT, 1LT).

### 7. 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.

### 8. TLC Restricted Access

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



CONTINUED ON PAGE 6

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 CX Connect 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.

#### **9. E-9111 or E-9113/E-9114 TCM/MCVM Operation Errors**

An E-9111 or E-9113/E-9114 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.
- The TUN/PUN is in capital letters.
- The number zero (0) is not a letter "O".
- There are not any typos, extra characters, or spaces.

If the TUN/PUN is correct, open a 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.

#### **10. Front View Camera Programming or Camera Learn Issues Specific to 2024 Colorado and Canyon (ZR2)**

There is currently a known issue with the Front View Camera involving ONLY 2024 Colorado/Canyon built with ZR2 and UHY, and without UWI, UKW, or ULV.

The Front View Camera may fail to program or set loss of communication codes such as DTC U0265. The camera learn also may fail in GDS2 with various errors.

A VCI is required to correct this problem. Please reach out to TCSC for this fix.

## **HOW TO CONTACT TCSC**

- U.S. ONLY: Assistance can be provided by using the CX Connect portal in Global Connect. If additional support is needed once the CX Connect case is created, contact TCSC at 1-800-828-6860. For U.S. only, a 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**

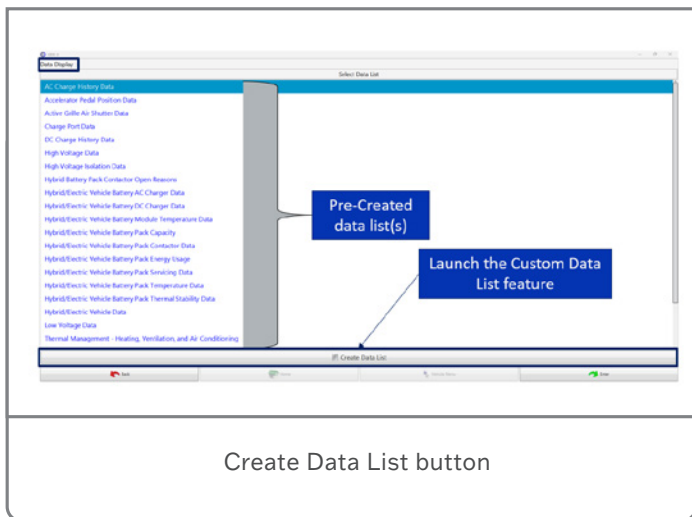
# Create Custom Data Lists in GDS 2

The latest update to GDS 2 in Techline Connect provides technicians with the ability to build personalized data parameter lists tailored for specific diagnostic sessions — identifying only the data points relevant to the current vehicle concern. Custom data lists can be created using specific parameters across multiple control modules, resulting in a single list that is easy to analyze. These lists also can be saved for future use and may work on multiple vehicles, depending on individual model support.

Here are some tips for selecting specific parameters to create custom data lists.

## ACCESSING FUNCTIONALITY

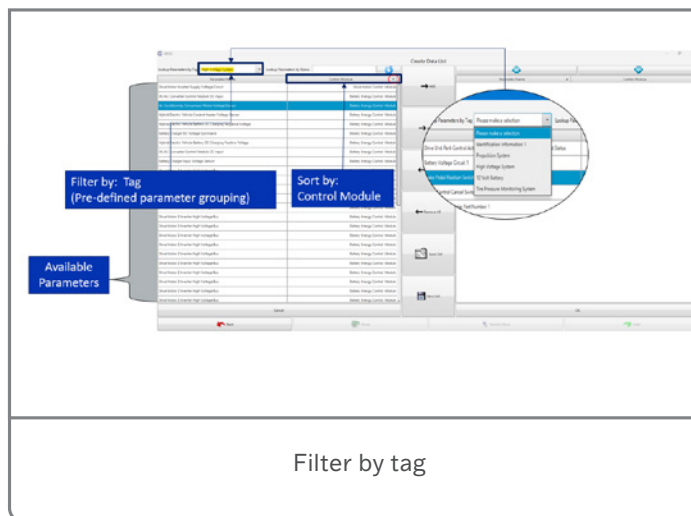
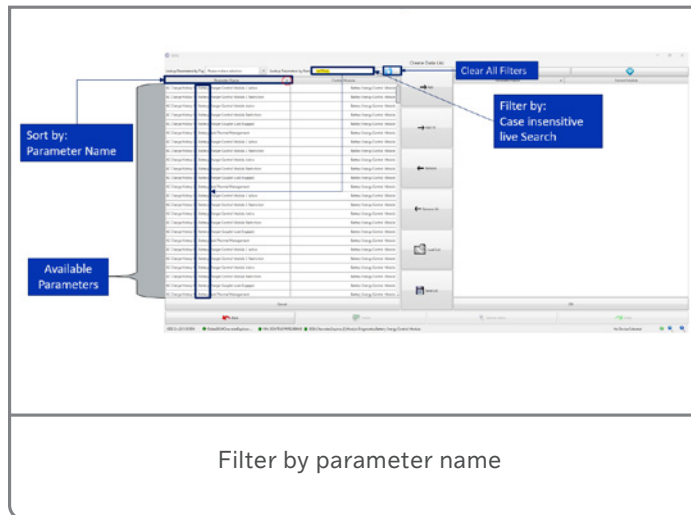
The custom data list functionality is accessible in every module's data list (Identification Information, Data Display). Launch the custom data list feature by selecting the Create Data List button at the bottom of the screen.



## FILTER PARAMETERS

There are several ways to find the parameters needed for a custom data list. A parameter name can be entered directly into the search bar, or the available parameters can be filtered by name or tag (identifies pre-defined parameter groups).

Parameters also can be sorted by control module. Use the Clear All Filters button to reset the filters.



## ADDING PARAMETERS

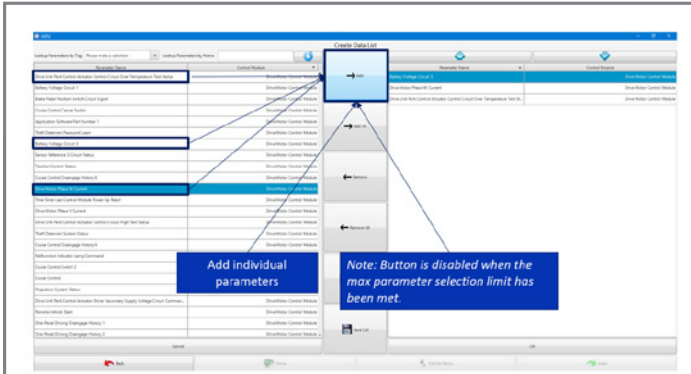
Individual or multiple parameters may be selected for a custom data list. Select a parameter or several parameters from the list in the left panel and click the Add button. To add all parameters, click the Add All button.

The Add and Add All buttons will be disabled when the available parameter count exceeds the maximum parameter selection limit.

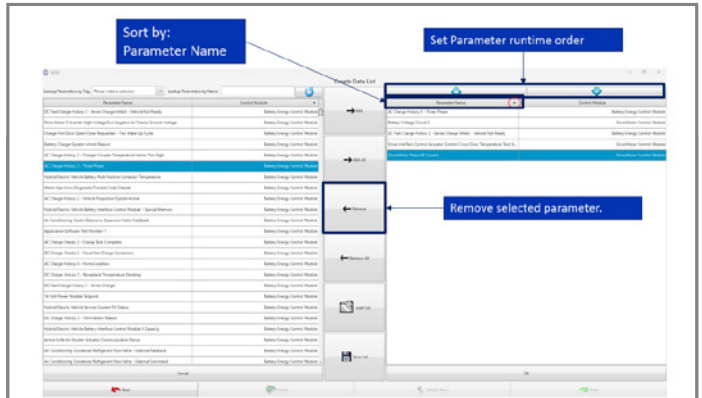
## MODIFYING PARAMETERS

The custom data list can be modified after being created. Remove a parameter by selecting the individual parameter and clicking the Remove button. Click the Remove All button to remove all parameters from the list.

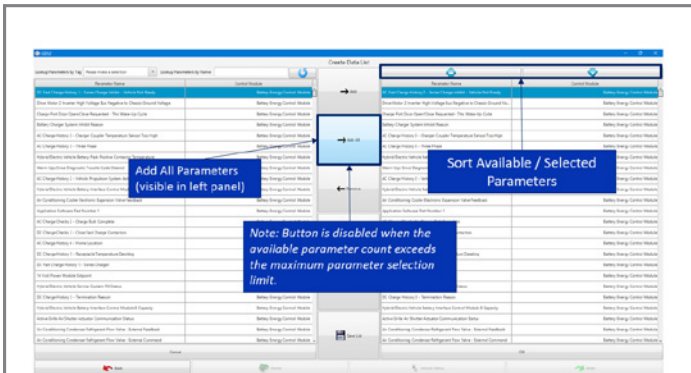
The parameter runtime order can be changed using the arrow buttons at the top of the data list in the right panel.



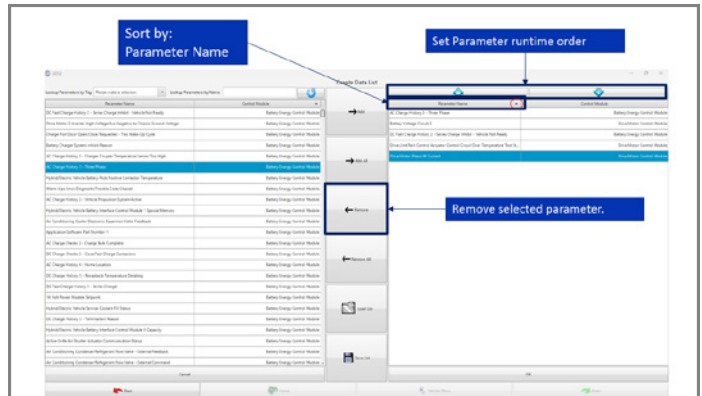
Single parameter selection



Parameters can be removed from the data list using the Remove and Remove All buttons.

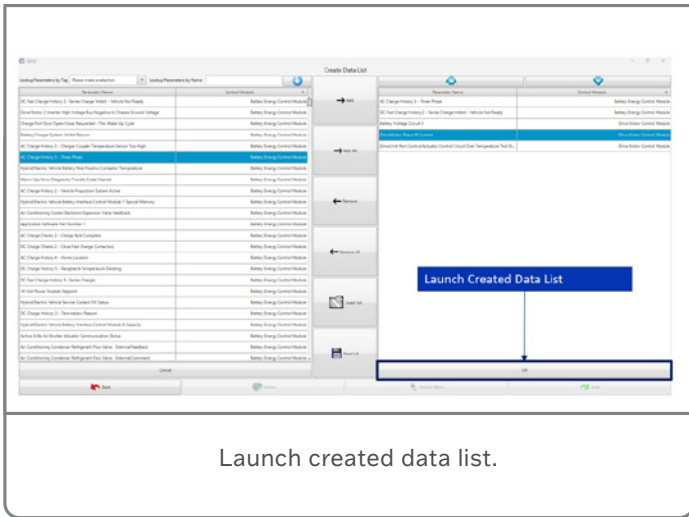


Multiple parameter selection

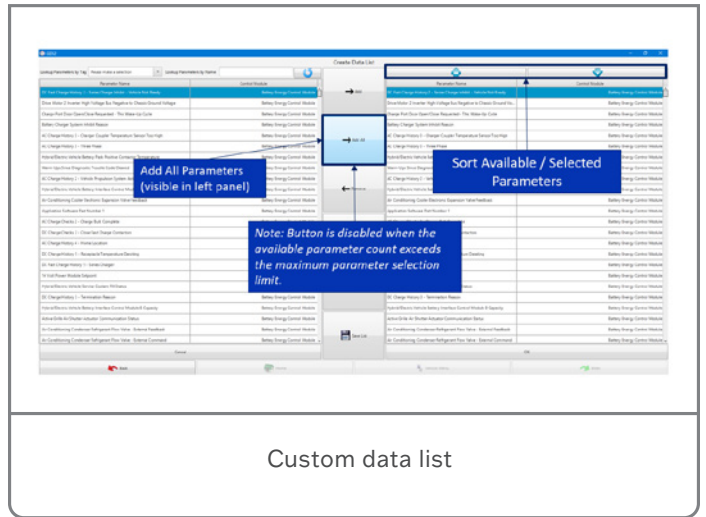


Parameter runtime order can be changed using the arrow buttons.

The new custom data list is shown in the right panel. The data list can be sorted by name or control module.



Launch created data list.



Custom data list

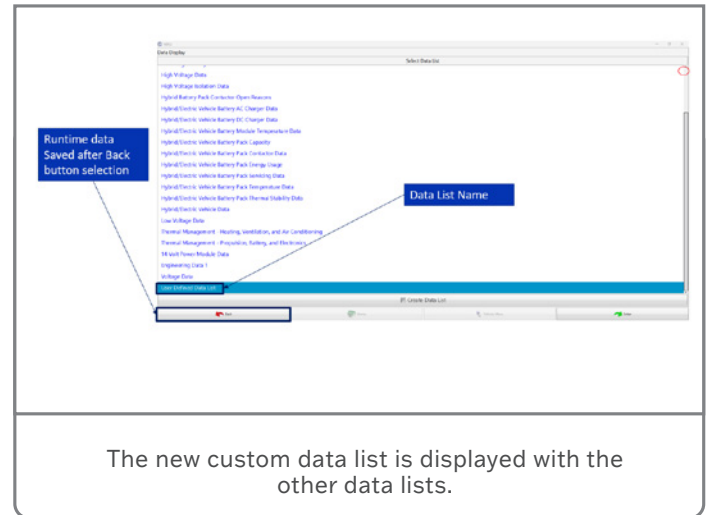
## LAUNCH DATA LIST

Once the data list is created and modifications are complete, click the OK button at the bottom of the right panel to launch the custom data list.

Once launched, the custom data list will be displayed with the selected parameters. The data list can be named using the name field at the top of the screen.

Select the Back button to return to the data list selection page. The new custom data list will be displayed along with the pre-created data lists so it can be used for future diagnostics. Runtime data is saved automatically after selecting the Back button.

If you have questions about custom data lists, contact the Techline Customer Support Center (TCSC) at 1-800-828-6860.



The new custom data list is displayed with the other data lists.

► Thanks to Chris Henley

# A/C Leak Detection Dye for EVs

GM has recently established a new air conditioning refrigerant leak diagnostic procedure for GM EVs and PHEVs — including the Silverado EV, Blazer EV, Equinox EV, Bolt EV/EUV, Corvette E-Ray, Volt, Sierra EV, HUMMER pickup and SUV, ESCALADE IQ, VISTIQ, LYRIQ, OPTIQ, ELR, CT6 PHEV, BrightDrop van, and GMT900 HP2 Two-Mode truck and SUV — that requires the use of new materials and methods.

The updated A/C leak diagnosis requires a different fluorescent dye process than used on earlier systems. Instead of adding 0.25 oz. of PAG-based dye by free-pour, a sealed injection process is now used with a newly released Polyol ester Oil (POE)-based dye that is designed for these electrified applications.



Updated A/C leak diagnosis requires a different fluorescent dye process than used on earlier systems.

By using this new dye and injection method, A/C system integrity is protected during leak diagnosis because it does not need to be opened for dye installation, which helps prevent moisture from being introduced into the system. The dye can be injected whether the system is fully charged, partially charged, or empty, and the dye's base fluid is compatible with the compressor oil already used in these vehicles.



EV A/C Dye Injection Kit

## INJECTION TOOL KIT

The EV A/C Dye Injection Kit (TRPTP9814EVHY) enables leak detection dye to be added to the A/C system. It is available through the GM Special Tools and Equipment catalog at [gmglobaltools.com](http://gmglobaltools.com).

The kit includes the T-handle injector, brass couplers for R134a and R1234yf systems, two purge adapters, and a starter set of three POE fluorescent dye cartridges. Because the kit is not classified as an Essential tool, it will not be shipped to dealerships automatically and must be ordered.

Additional dye packages can be purchased through GM Parts under PN 19540212, which includes 12 ACDelco-branded POE dye cartridges.

CONTINUED ON PAGE 11

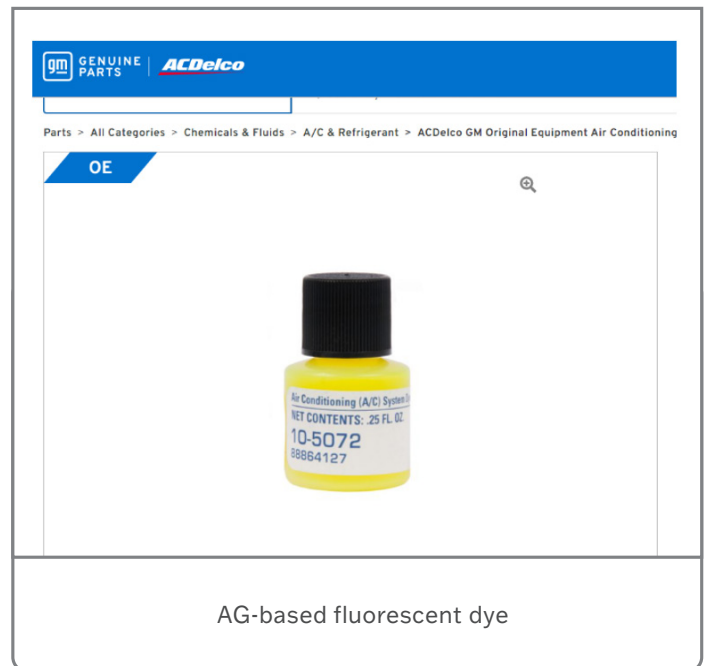


POE dye cartridges

## USING THE INJECTOR

Before using the new injector and dye cartridges for the first time, it is recommended to review the April 2026 Emerging Issues Seminar – 10226.04V (in Canada, review the May 2026 Emerging Issues Seminar), available through the Center of Learning link on Global Connect. The video covers the injection procedure, showing the priming procedure for the tool, how dye is injected into the A/C system with the injection tool and how to use the sealed dye cartridge.

Leak detection dye requires time to work. Depending upon the leak rate, a leak may not become visible using the leak detection lamp for between 15 minutes and 7 days. To ensure that the dye has been circulated through the entire refrigerant system, run the HVAC system in both the maximum heat and maximum cold temperature settings for at least 5 minutes each.



AG-based fluorescent dye



Injecting dye into the A/C system.

The vehicle should have at least 15 percent of the specified refrigerant charge in the A/C refrigeration system in order to perform a leak test.

**TIP:** Vehicles with internal combustion engines and belt-driven A/C compressors continue to require the current PAG-based fluorescent dye (PN 88864127)

For more information, refer to Leak Testing under Heating, Ventilation and Air Conditioning in the appropriate Service Information.

► Thanks to Scott Jesnig

# When and Why to Use Fuel Additives

Fuel additives are not routine maintenance items. The latest GM guidelines recommend using approved products only to address a verified vehicle condition or fuel-quality concern on GM passenger cars and light-duty and medium-duty trucks using gasoline or diesel fuel.

Fuel additives should be used only under documented conditions and when outlined in specific service procedures. Fuel additives are not required to maintain warranty coverage and any unverified performance improvements, generic “cleaning packages,” or fuel-economy benefits should not be promoted.

## IT STARTS WITH FUEL QUALITY

The first step to address fuel-related engine performance conditions is to use quality fuel, especially to help prevent deposit-related concerns. In gasoline applications, TOP TIER Detergent Gasoline at the recommended octane level helps maintain injector cleanliness and reduce intake valve deposits. In diesel applications, TOP TIER Approved Diesel Fuel meeting ULSD requirements provides the preferred baseline. If quality fuel is used consistently and the vehicle does not have any drivability issues, an additive typically is not necessary.



Valve deposits

## GASOLINE APPLICATIONS

For gasoline vehicles, ACDelco Fuel System Cleaner 44K provides detergent deposit control for intake valves, fuel injectors and combustion chambers. It may be used as a tank additive when drivability concerns point to deposit-related issues or when preventive maintenance is needed because TOP TIER gasoline is not consistently available. Symptoms such as loss of power, stalling, hard starting, or reduced fuel economy still require normal diagnosis first. Additives should support the repair process, not replace it. When carbon buildup is confirmed, upper-engine cleaning procedures also may be required, but only as directed in the appropriate Service Information. Refer to Bulletin #16-NA-383 for more information.



ACDelco Fuel System Cleaner 44K

## DIESEL APPLICATIONS

There are several recommendations for diesel applications, based on specific conditions. Fuel System Treatment Plus – Diesel is a concentrated detergent for deposit removal in injectors and combustion chambers. It's intended for drivability concerns such as poor performance, black smoke, no-start conditions, or reduced fuel economy when fuel quality is poor. It is not for continual every-tank use.

CONTINUED ON PAGE 13

Other approved diesel additives address specific needs. Diesel Basic Maintenance Additive supports lubricity, corrosion protection, and injector cleanliness when fuel quality is marginal. Diesel Fuel Conditioner adds detergency, lubricity, corrosion protection, and fuel stability, which can help in situations involving biodiesel blends or aged fuel. In cold-weather operation, Diesel Cold Flow Additive offers enhanced performance, although its effectiveness may be limited in higher biodiesel blends.



## WHAT TO AVOID

Knowing what not to use is just as important as using the proper additives. GM does not support routine engine or fuel-system additives outside of the approved products. Aftermarket products that use solvent-based additives or unapproved organometallic compounds and water emulsifiers may contribute to corrosion, seal damage and deposit formation.

When additives are recommended for specific conditions, always follow the product label directions and Service Information or Bulletin instructions for dose per tank and vehicle eligibility. Always document additive use on the repair order as well. Be sure to avoid overdosing or combining multiple additives in the same tank, since exceeding the recommended treat rate can create new issues instead of correcting the original concern.

Refer to Bulletin #05-00-89-072 for more details about fuel additives.

► Thanks to Bryan Salisbury and Shailesh Lopes

## 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 Global Connect

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 © 2026 General Motors. All rights reserved.