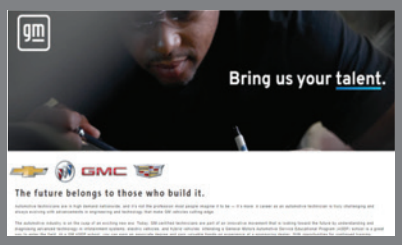
TECH LINK

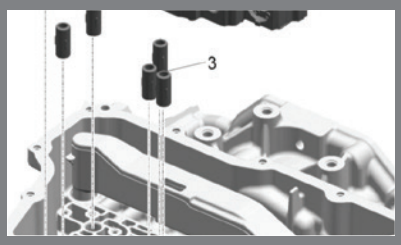
August 2021, Volume 23, No. 15

Trailering App Functionality and Diagnostic Tips



Bring Us Your Talent Campaign Aims to Build Technician Recruiting Efforts

see page 5



Diagnostic Tips for Low-Mileage 9T45/50/60 Transmissions

see page 6

Trailering App Functionality and Diagnostic Tips

The in-vehicle trailering app (RPO U1D) included with the Advanced Trailering System available on the 2019-2021 Silverado 1500 and 2020-2021 Silverado 2500HD/3500HD and the ProGrade Trailering System available on the 2019-2021 Sierra 1500 and 2020-2021 Sierra 2500HD/3500HD incorporates the functions of several vehicle systems in order to provide trailer lighting diagnostics, trailer tire pressure/temperature monitoring and trailer braking with an Integrated Trailer Brake Controller.

The trailering system consists of the following systems:

- Trailer lighting
- Trailer brakes
- Trailer battery charging system
- Trailer detection
- Trailer tire pressure monitoring system
- Trailer theft detection

TIP: When a trailer is detected on a vehicle equipped with Side Blind Zone Detection, Rear Park Assist, and/or Rear Cross Traffic Alert, the vehicle will automatically turn these features off in order to prevent false detections due to the trailer obstructing the view of the sensors.

TRAILER DETECTION

The K68 Trailer Lighting Control Module constantly monitors for trailer connection status through the lighting circuits of the trailer. The total combined park lamps and stop/turn signal lamps of the trailer must draw a minimum of 55mA to be detected by the Trailer Lighting Control Module. With the key off, the Trailer Lighting Control Module will periodically pulse the lighting circuits of the trailer to verify it is still connected. Depending on the configuration of the trailer lights, the trailer lights may periodically flash as part of the trailer connection detection or theft deterrent functions. These flashes may be more visible in dark ambient light environments and correspond to when the Trailer Lighting Control Module pulses the lighting circuits to ensure the trailer is still connected.

When a trailer is connected, the trailering app asks the user to set up a trailer prolife. The Trailer Detection Alert setting must be enabled in the trailering app for the alert to display when a trailer is connected. If a trailer is disconnected with the ignition on, the vehicle will display multiple trailer lighting messages.

Some trailers use a trailer-mounted control module to control the trailer lighting, which may require a B+ circuit to the trailer connector to control trailer lighting. These trailers may not be detected by the K68 Trailer Lighting Control Module and may require an additional trailer adaptor for the vehicle to recognize that the trailer is connected, such as load resistors added in parallel to the detectable lighting circuits of the trailer to increase current draw or rewiring the trailer to eliminate the trailer-mounted control module so the circuits are wired directly to the trailer lamps.

CONTINUED ON PAGE 3

TRAILER LIGHTING

For lighting operation, the K68 Trailer Lighting Control Module receives serial data messages from the Body Control Module (BCM) and/or Exterior Light Module (ELM), indicating which lamps have been activated on the vehicle. The Trailer Lighting Control Module responds by applying voltage to the appropriate control circuits for the requested lamps to illuminate the lamps on the attached trailer. The Trailer Lighting Control Module constantly monitors the trailer's reverse (optional), park, and left and right stop/turn signal lamps.

Vehicles equipped with a Trailer Lighting Control Module cannot drive as much current on each circuit when compared to the non-Trailer Lighting Control Module trailer lighting system. The Trailer Lighting Control Module drives four trailer circuits using four solid state drivers that are fed from two 30A lighting fuses. If the total current on the circuits overloads either of the fuses, it will fail. If any single lighting circuit exceeds the driver threshold, it will deactivate the aoutput for the balance of the key cycle and a reactivation of the lamp load is required. Individual DTCs are activated for each circuit and that load is turned off due to high current. If a trailer draws too much current, it may be helpful to change some or all of the trailer lighting to LEDs.

Beginning with the 2020 model year, the trailer park lamps amperage capability was increased to handle electrical loads up to 16 amps. The park lamp circuit was moved from terminal 5 to terminal 25 and driven by an internal relay that allows for higher amperage values for the parking lamps. The park lamp circuits are not used for trailer connection detection on 2020 models.

For additional trailering lighting information, refer to #PIT5747A and Bulletin #20-NA-198.

TRAILER TIRE PRESSURE MONITORING SYSTEM

The Trailer Tire Pressure Monitor System is designed to monitor the pressure of the trailer tires and warn the driver when a low-pressure condition exists. Trailer Tire Pressure Monitor System sensors for four tires are provided in the vehicle's glove box. The system can accommodate a trailer with up to six tires if additional sensors are purchased from the dealership. Also, the system can be paired with up to five individual trailers. The sensors must be mounted onto each tire and wheel assembly, and the sensors must be learned by the vehicle by following the learning procedure in the appropriate Service Information.

The Trailer Tire Pressure Monitor System sensors monitor the air pressure in the trailer tires and transmit the trailer tire pressure readings to a receiver located in the vehicle. The tire pressure values can be viewed in the trailering app on the vehicle's infotainment screen.

The tire pressure values can be viewed in the trailering app.

TIP: The sensor readings can only be received from a trailer that has axles no more than 23 feet from the rear of the truck. For example, if the first axle of a trailer is less than 23 feet, yet the second or third axle is farther, the system can only receive data from the first axle. GM does not offer a system to extend the range.

The system is compatible with trailer tires that have placard pressure values from 15 - 100 psi (103 - 689 kpa). The system can handle higher pressures, but any pressures higher than 100 psi will not be displayed. The hole in the wheel for the tire stem must be 0.453 inches (11.43 mm) in diameter. Use of the pressure sensors on a wheel with a different stem hole size could result in loss of air from the tire.

The sensor readings can only be received from a trailer that has axles no more than 23 feet from the rear of the truck.

In addition, the system monitors the temperature of the trailer tires. If the system detects a high temperature on one or more of the trailer tires, a warning message will be displayed on the DIC. Common causes for high trailer tire temperature are underinflation, overloading, or tire damage.

CONTINUED ON PAGE 4

TRAILER TIRE PRESSURE MONITORING DIAGNOSIS

The learn procedure for the trailer tires requires using the EL-46079 Tire Pressure Monitor Diagnostic Tool or EL-50448 Tire Pressure Monitor Sensor Activation Tool, just as when learning the tire pressure sensors on a vehicle. If the trailer is not available, the trailer tire pressure sensors can be learned using the EL-52641 Trailer Presence Simulator Tester, which can simulate the presence of a trailer. The tool can be helpful when a customer would like the trailer tire pressure sensors learned without having the actual trailer at the dealership.

EL-52641 Trailer Presence Simulator Tester

When using the tire pressure monitor special tool to activate a sensor, ensure the tool is placed along the tire sidewall close to the sensor and not on the rim. If a sensor is not recognized, it may help to rotate the wheel so that the sensor is in a different position relative to the trailer. The sensor activation procedure may have to be repeated up to three times before determining a sensor is malfunctioning. If a particular sensor is not learned and the horn does not chirp, it may be necessary to rotate the wheel to a different position due to the RF signal being blocked by another component.

A sensor also may have been damaged by a previous wheel/tire service or flat tire event. Occasionally sensor transmissions are not received by the control module due to radio interference from internal sources, such as aftermarket ignition systems, DVD players, CB radios, etc., or external sources.

Before replacing a sensor, perform the learn procedure for all sensors to make sure the DTC was set for the correct position on the trailer. The wheels may have been exchanged during a previous tire rotation without learning the new positions. In addition, the use of tire sealants, other than those approved by GM, can obstruct the sensor pressure sensing port and cause inaccurate tire pressure readings. If this condition is verified, remove the sealer from the tire and replace the sensor.

A sensor low battery condition also will set a sensor DTC but will not display a message on the Driver Information Center. The sensor battery condition can be verified in the scan tool BCM data list. If a sensor low battery condition is indicated on the scan tool, the sensor will need to be replaced.

TRAILERING APP PROFILES

When a trailer is connected, the driver has the option of selecting a Guest profile or naming the trailer and storing settings in the trailering app. The settings can include basic information — profile name, hitch type and trailer type — or more advanced information — Tow/Haul Mode reminder, Trailer Tire Pressure, and maintenance reminders.

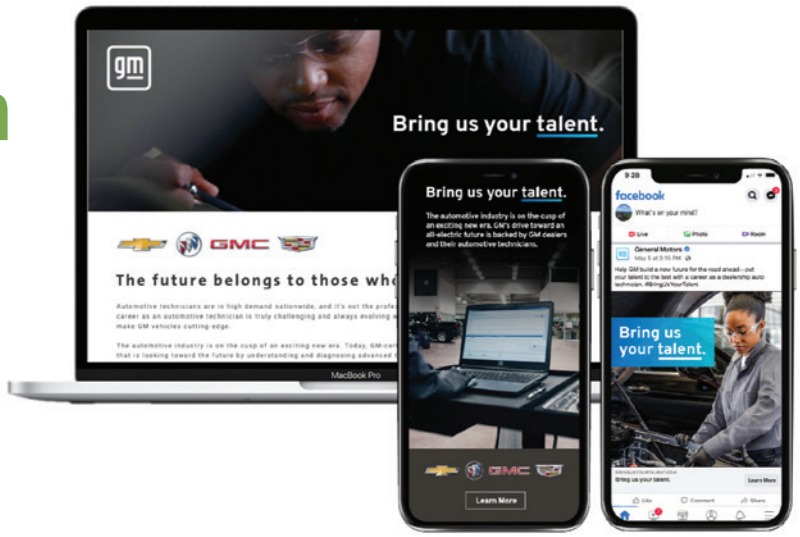
A customized trailer profile can be set up in the trailer app.

If the trailering app is set up incorrectly for the connected trailer, several DTCs or Driver Information Center messages may appear. For example, if a trailer does not have any reverse circuit loads, yet a reverse circuit load is expected in the trailering app, the Trailer Lighting Control Module will set DTC B3890 (Trailer Backup Lamps Circuit). If the trailer does not have reverse lamps or any loads on the reverse circuit, change the trailering app profile settings and clear any DTCs. Do not replace the Trailering Lighting Control Module.

For a list of possible trailering app-related message that may appear on the Driver Information Center, refer to the Trailering Description and Operation document in the appropriate Service Information.

▶ Thanks to Kevin Minor

Bring Us Your Talent Campaign Aims to Build Technician Recruiting Efforts



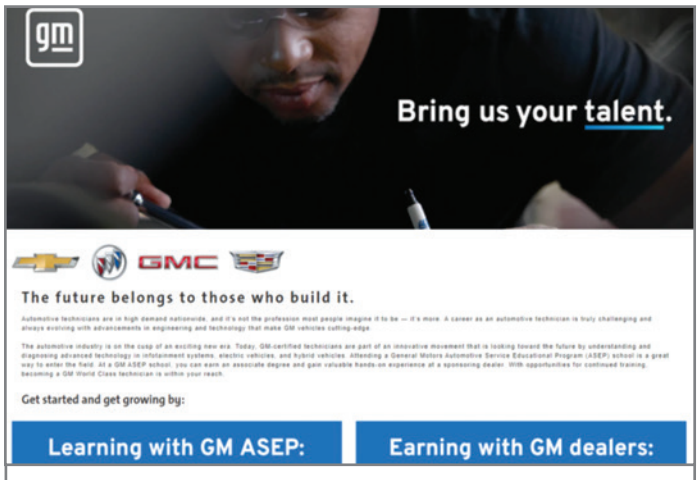
GM recognizes the value and skill that certified technicians bring to the service department and the impact the nationwide shortage of technicians is having on the industry. Retaining and recruiting talent to sustain the quality of work being provided to customers is critical to the success of GM dealerships.

GM's Bring Us Your Talent campaign puts the spotlight on technicians while highlighting the opportunities available to those who may be interested in an automotive repair career.

FOCUS ON SKILLED TRADES

The campaign kicked off in May with a particular focus on Skilled Trades Day. Understanding that half of the labor force in skilled trades is near retirement age, the campaign is geared at raising awareness and highlighting the potential of an automotive service career at a GM dealership.

The bringusyourtalent.com website has been created to help promote the benefits of the technician trade, and provides details about potential training programs, such as the GM Automotive Service Educational Program (ASEP).



Technical career information can be found at bringusyourtalent.com.

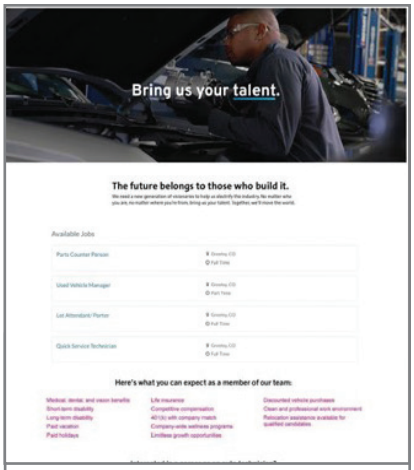
SPONSOR AN ASEP STUDENT

GM ASEP offers customized automotive service training with hands-on access to the latest GM technology along with real-world dealership experience. In the program, students alternate between classroom training and hands-on work experience at a sponsoring GM dealership. Students can earn an Associate's Degree in Automotive Technology (or similar) in addition to the GM required technician training in as little as two years.

With fall semester classes beginning soon at the 50 GM ASEP schools across the U.S., now is the perfect time to inquire about sponsoring an ASEP student. For more details about GM ASEP, visit gmasep.org.

RECRUITING RESOURCES

To help dealerships with their recruiting efforts, a helpful activation guide on GM GlobalConnect outlines available marketing materials, various resources and best practices for maximizing technician satisfaction and retention. Marketing assets and supporting materials are available on GM Asset Central. Lastly, dealerships are encouraged to create or update a careers page on their website that incorporates the benefits of working at the dealership as well as training and career path opportunities.



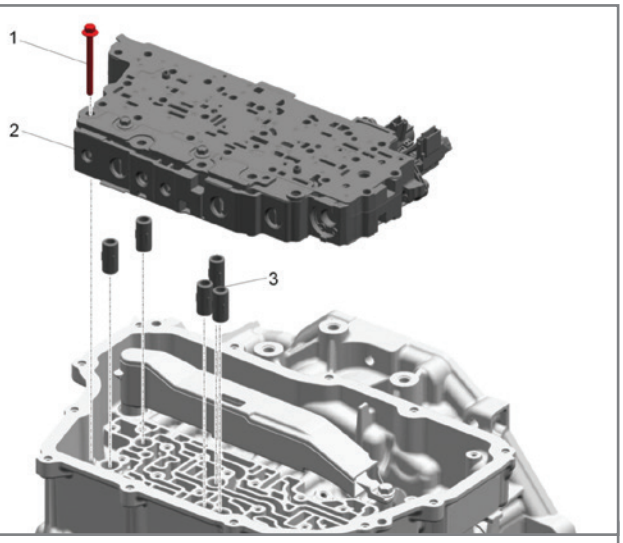
Dealerships are encouraged to promote career opportunities on their website.

For additional recruiting information, go to bringusyourtalent.com.

Thanks to Eric Kenar and Brittani Bridger

Low-Mileage 9T45/50/60 Transmissions

When diagnosing low-mileage 2020 Regal, Equinox; 2020-2022 Encore GX, Envision, XT4, XT5, XT6, Blazer, Malibu, Acadia, Terrain; and 2021-2022 Trailblazer models equipped with the 9T45 (RPO M3F, M3U), 9T50 (RPO M3D, M3E, M3H) or 9T60 (RPO M3G, M3T) automatic transmission, there are several service procedures to follow to ensure repairs are completed properly. These low mileage vehicles (less than 12,000 miles or 19,000 km) may have DTCs set that are related to the control solenoid and valves.



Control valve body

Refer to these bulletins and PIs for additional information before proceeding with the following service procedures:

- #18-NA-359: Information on Flashing D in PRNDL and/or Transmission Slip/Flare on 1-2 Upshift with Zero to Very Light Throttle Input
- #21-NA-038: Humming Noise Heard Coming from Front End of Vehicle When Driving at Highway Speeds (Blazer)
- #19-NA-023: High Pitch Whine Noise Heard at 32-56 km/h (20-35 mph) in Any Gear under Light to Moderate Acceleration (Equinox, Terrain)
- #20-NA-165: Flutter or Boom Noise at 1200 RPM - Service Calibration (Trailblazer, Encore GX)
- #PIT5778A: Vibration or Boom at 1300 RPM (Equinox, Terrain)
- #PIP5697B: DTC P0747 Setting at Engine Start-Up When the Transmission is in Park
- PIT5825B: Vibration-Type Noise Heard at Highway Speeds or with Engine Speed at 1,300-1,500 RPM (XT5, XT6, Blazer, Acadia)

For complete details on these diagnostic steps, refer to Bulletin #21-NA-169.

STEP 1 – DTCS

Check all modules for DTCs. Record all current DTCs or DTCs set in History along with the control module on the repair order.

STEP 2 – FLUID LEVEL AND CONDITION CHECK

Ensure the transmission has enough fluid in it to safely start the vehicle without damaging the transmission. With the vehicle off and the transmission fluid temperature at approximately 20–25°C (68–77°F), there should be enough fluid to drain out of the fluid level hole. This will ensure that there is enough fluid in the sump to fill the components once the vehicle is started.

To check for the proper fluid level, the transmission fluid temperature (TFT) must be 85–95°C (185–203°F). If the TFT is not at this temperature, operate the vehicle or allow the fluid to cool as required. Setting the fluid level with a TFT outside this temperature range will result an under- or over-filled transmission. An under-filled transmission will cause premature component wear or damage. An over-filled transmission will cause fluid to discharge out the vent tube, fluid foaming, or pump cavitation.

Also check the condition of the fluid. It should be red or brown and transparent enough so that objects or writing can be seen through it.

The fluid should not have an odor of burnt fluid. Dark fluid or a burnt odor would indicate clutch damage has occurred internally in the transmission.

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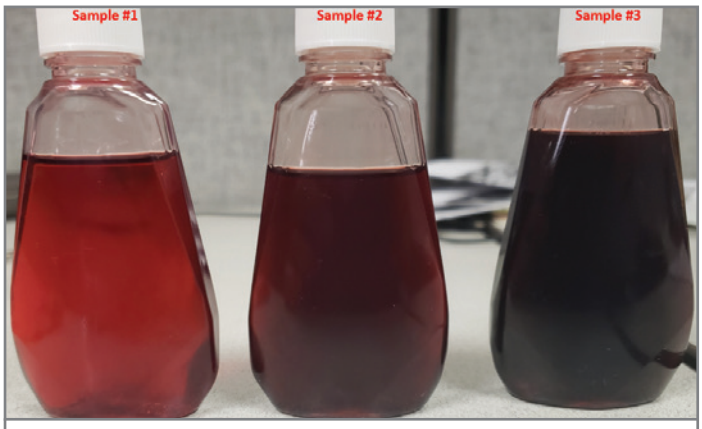
In addition, inspect the fluid for excessive metal particles or debris. A small amount of friction material or metal from the manufacturing process – observed as fine silver streaks – are normal conditions.



Check the condition of the fluid. It should be transparent enough to see through.

STEP 3 – LINE PRESSURE CHECK

To access the transmission line pressure test hole plug, it may be necessary to remove or disconnect some components. Use the GE-21867 Pressure Gauge to check the transmission fluid pressure with the engine running.

If pressure is below 50 psi, follow the procedure for Fluid Pressure High or Low in the appropriate Service Information. If pressure is above 50 psi, continue diagnosis with a road test.

GE-21867 Pressure Gauge

STEP 4 – ROAD TEST

Be sure to inspect all electronic transmission components for proper operation before the road test. If these components are not checked, a simple electronic condition may be misdiagnosed.

Check the garage shifts and verify the gear engagements are immediate (less than two seconds to complete if transmission fluid temperature is above 20°C (68°F) and not harsh or delayed. Possible causes of harsh engagement include high engine idle speed, a default condition caused by certain DTCs that result in maximum line pressure to prevent clutch slippage, or incomplete adapting or incorrect adapting. Delayed engagement may be caused by low idle speed, low fluid level, cold TFT, a selector linkage condition, or incomplete or incorrect adapting.

Next, with the vehicle in Drive, monitor scan tool parameters while checking:

- Upshifts
- Part-throttle step-in downshifts
- Coasting downshifts
- Reverse

Note any harsh, soft or delayed shifts or slipping as well as any noise or vibration. Follow the appropriate Service Information for any detected conditions.

TIP: If completion of the road tests are inconclusive to isolate if any transmission shifting concerns are related to internal transmission or input/command issues, use the control function feature in GDS2 to command all shifts. When using GDS2 to command shifts and the transmission shifts into each range, the concern is generally an input/command concern, and not an internal transmission concern. If ranges are not completed when using GDS2 to command, then the concern may be an internal transmission concern.

STEP 5 – DTCS

Record any current DTCs or DTCs that reset during the road test on the repair order.

Based on the transmission control solenoid valve DTCs that set, along with the condition of the transmission fluid, it may be necessary to inspect for damage to the clutch packs. However, some DTCs may only require the solenoid body and valve body be replaced, while others may require replacing only the solenoid body or valve body.

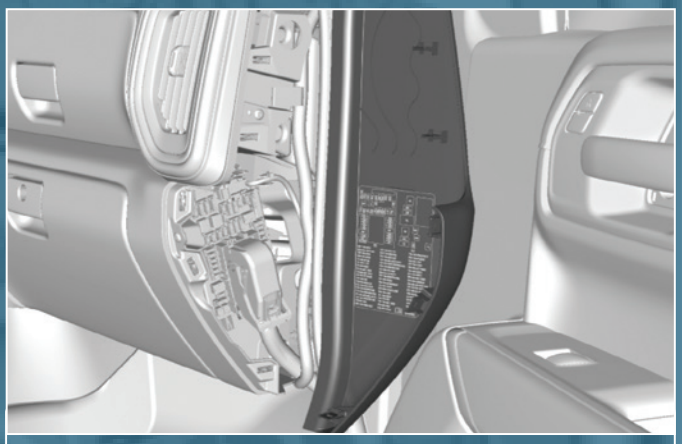
Refer to Bulletin #21-NA-169 for a complete list of possible DTCs and the related repairs. Also refer to the bulletin for additional details for each service procedure step.

Thanks to Mark Kevnick

Incorrect Fuses May Lead to Inoperative Auto Stop/Start

The Auto Stop/Start function (RPO KL9) may be inoperative on some 2019-2021 Silverado 1500 and Sierra 1500 models. In addition, the Check Engine MIL may be illuminated and DTCs P3055 (DC/DC Converter Output Voltage 1 Performance) and P3056 (DC/DC Converter Output Voltage 2 Performance) may be set in the Engine Control Module.

If these conditions are found, check for the presence of fuses F51DR and/or F52DR in the X51R instrument panel fuse block, located behind the side trim panel on the right side of the instrument panel. These fuses should not be installed on vehicles equipped with Auto Stop/Start. These fuses will create an additional load for the T19 Power Supply Transformer, which will pull down the outlet voltage, causing the Auto Stop/Start system to not function.



X51R instrument panel fuse block

Verify that the correct fuses are installed in the F51DR, F52DR, F56DR and the F57DR locations of the X51R instrument panel fuse block.

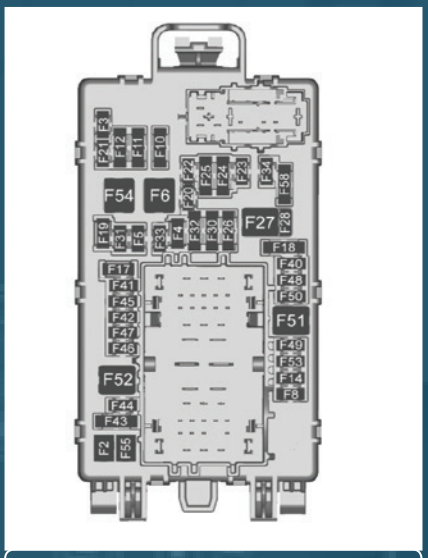
- If the vehicle is equipped with Auto Stop/Start, there should not be any fuses in the F51DR and F52DR locations on the front of the fuse block.
- If the vehicle is equipped with Auto Stop/Start, verify fuses are present in the F56DR and F57DR locations on the back of the fuse block.
- If all four fuse locations are correct, but the concern is still present, follow the diagnostic procedures in the appropriate Service Information.

There are two part numbers for the right instrument panel fuse block on light-duty pickups – one without the Auto Stop/Start feature (84582038) and one with the Auto Stop/Start feature (84582037). Vehicles with Auto Stop/Start but with the incorrect fuse block will have DTCs set for the DC/DC converter.

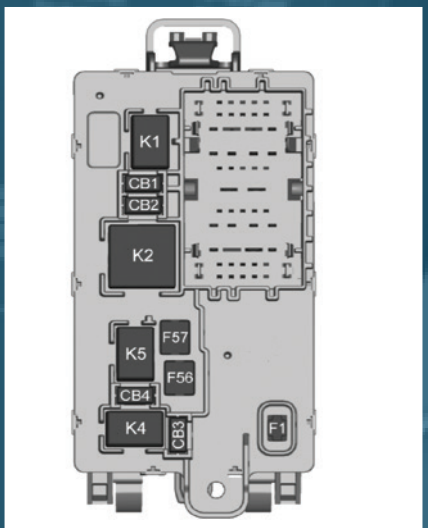
If the condition persists after confirming the fuse block is correct and, if necessary, removing or adding fuses as appropriate, begin diagnosis of the DC/DC converter as outlined in Service Information.

For additional information, refer to Bulletin #21-NA-121.

▶ Thanks to David MacGillis



There should not be any fuses in the F51DR and F52DR locations (with Auto Stop/Start)



Verify fuses are present in the F56DR and F57DR locations (with Auto Stop/Start).

NEW 2021 Engine Oil Capacities Chart

A new Engine Oil Capacities chart for the 2021 model year is now available under the Reference Chart menu on the TechLink website. The chart includes engine, RPO, specifications (liters and quarts) and oil viscosity for 2021 Chevrolet, Buick, GMC and Cadillac models.

TECHLINK 2021

2021 ENGINE OIL CAPACITIES (WITH FILTER) – U.S. and Canada only

CHEVROLET

MODEL	ENGINE	RPO	SPEC - LITERS	SPEC - QUARTS	GRADE/VISCOSITY
Blazer	2.0L L4	L3Y	5.0	5.3	dexos1 0W-20
	2.0L L4 FWD	LCV	4.7	5.0	dexos1 0W-20
	2.0L L4 AWD	LCV	5.7	6.0	dexos1 0W-20
	3.6L V6	L6X	5.7	6.0	dexos1 5W-30
Camaro	2.0L L4	LTG	4.7	5.0	dexos1 5W-30
	3.6L V6	LTG with Y4Q	5.2	5.5	dexos1 5W-30
		L6X	5.2	5.5	dexos1 5W-30
		L6X with YC4	5.7	6.0	dexos1 5W-30
	6.2L V8	LT1, LT4	9.5	10.0	dexos2 0W-40
Colorado	2.5L L4	LCV	4.7	5.0	dexos1 0W-20
	2.8L L4 Diesel	LWN	5.6	6.0	dexos2 5W-30
	3.6L V6	LGZ	5.7	6.0	dexos1 5W-30
Corvette	6.2L V8	LT2	7.1	7.5	dexos2 0W-40
Equinox	1.5L L4 FWD	LYX	4.0	4.2	dexos1 0W-20
	1.5L L4 AWD	LYX	5.0	5.3	dexos1 0W-20
Express	2.8L L4 Diesel	LWN	5.6	6.0	dexos2 5W-30
	4.3L V6	LV1	5.7	6.0	dexos1 5W-30
	6.6L V8	L8T	7.7	8.0	dexos1 5W-30
Low Cab Forward	5.2L L4 Diesel	I1B	11.0	11.6	CK-4 10W-40
	6.6L V8	L8T	7.6	8.0	dexos1 5W-30
Malibu	1.5L L4	LFV	4.0	4.2	dexos1 0W-20
	2.0L L4	LTG	4.7	5.0	dexos1 5W-30
Silverado 1500	3.7L L4	L3B	5.7	6.0	dexos1 5W-30
	3.0L L6 Diesel	LM2	6.6	7.0	dexosD 0W-20
	4.3L V6	LV3	5.7	6.0	dexos1 5W-30
	5.3L V8	L82, L84	7.6	8.0	dexos1 0W-20
	6.2L V8	L87	7.6	8.0	dexos1 0W-20
Silverado HD 2500/3500	6.6L V8	L8T	7.6	8.0	dexos1 5W-40
	6.6L V8 Diesel	L5P	9.5	10.0	CJ-4 or CK-4 15W-40
Silverado HD 4500/5500/6500	6.6L V8 Diesel	L5D	9.5	10.0	CK-4 15W-40
Spark	1.4L L4	LV7	4.0	4.23	dexos1 0W-30
Tahoe/Suburban	3.0L L6 Diesel	LM2	6.6	7.0	dexosD 0W-20
	5.3L V8	L84	7.6	8.0	dexos1 0W-20
	6.2L V8	L87	7.6	8.0	dexos1 0W-20
Trailblazer	1.2L L3	LJH	4.0	4.2	dexos1 5W-30
	1.3L L3	L3T	4.5	4.8	dexos1 0W-20
Traverse	3.6L V6	LFY	5.7	6.0	dexos1 5W-30
Trax	1.4L L4	LUV	4.0	4.2	dexos1 5W-30
	1.4L L4	LE2	4.0	4.2	dexos1 0W-20

For more information on the appropriate engine oil for a particular engine application, check the Approximate Fluid Capacities section and the Fluid and Lubricant Recommendations section under the Maintenance Items link at the top of the Service Category

Maintenance items link in Service Information.

Type page in the appropriate Service Information.

The Maintenance Items link also provides quick access to information on GM Oil Life System resetting, tire rotation, air filter replacement, spark plug replacement, brake pad inspection, and other common maintenance items.

▶ Thanks to Mark Spencer

Inoperative Adaptive Cruise Control with DTC U0422

The Adaptive Cruise Control (RPO KSG) may be inoperative on some 2019-2021 XT5, XT6, Blazer and Acadia models along with an Adaptive Cruise Control Temporarily Unavailable message on the Driver Information Center. The operation of the regular Cruise Control system is not affected.

TIP: Press and hold the Cancel button on the steering wheel controls to switch between regular Cruise Control and Adaptive Cruise Control.

DTC U0422 (Invalid Data Received From Body Control Module) also may be set in the Electronic Brake Control Module (EBCM). Communication codes such as DTC U0422 will be set when a receiving device on the serial data communication network detects a discrepancy in information it receives from another device, causing its integrity to be questioned.

If these conditions are found, check for any concerns with the front seat belts, which may cause DTC U0422 to set.

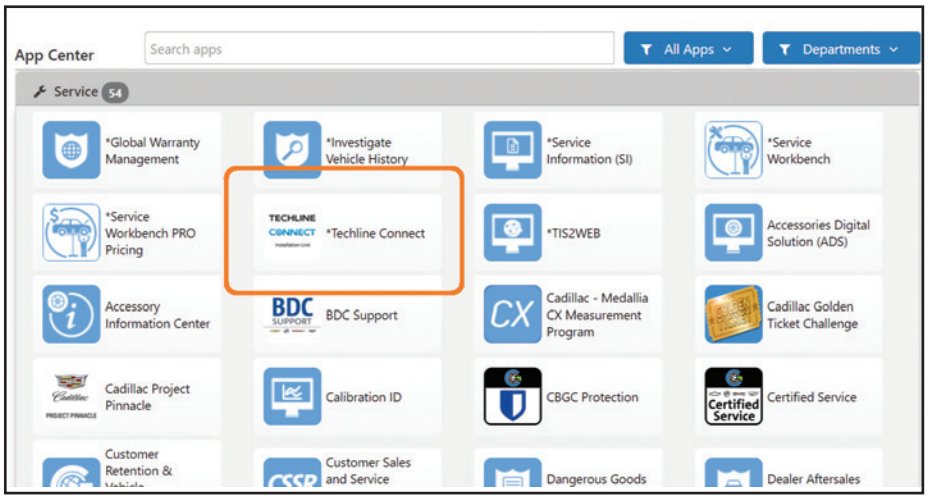
Use GDS 2 to monitor the SDM data while buckling the front seat belts. Verify that the status of the driver's and passenger's seat belts change when buckled and unbuckled. If the status of the seat belts does not change when buckling the belts, diagnose any seat belt concerns prior to investigating any Adaptive Cruise Control conditions.

Adaptive Cruise Control switches

▶ Thanks to Dave Goodrow

Techline Connect Tips

FROM THE TCSC



Techline Connect brings together all the common resources technicians use every day for diagnosis and repairs in an all-in-one application, integrating Service Information, programming, diagnostics, vehicle information and other features.

If Techline Connect has not been installed in the dealership yet, GM recommends to do so as soon as possible. The phased retirement of TIS2Web in the U.S. and Canada will conclude soon. Once retired, the user will see the message: "If you are trying to reach TIS2Web, this page is no longer available. TIS2Web has been retired. Techline Connect is the vehicle application successor to TIS2Web." Techline Connect is available for download in GM GlobalConnect.

To help technicians get the most out of Techline Connect (TLC), here are a few tips when using the application from the Techline Customer Support Center (TCSC).

TECHLINE CONNECT CORE APPLICATION

PC Specs

Ensure the PC (personal computer) meets the minimum specifications or better as defined by the latest GM Dealer Infrastructure Guidelines (DIG) for 2021. The guidelines outline the dealership technology needed to ensure reliable data communications for all dealers, including recommended PC specs.

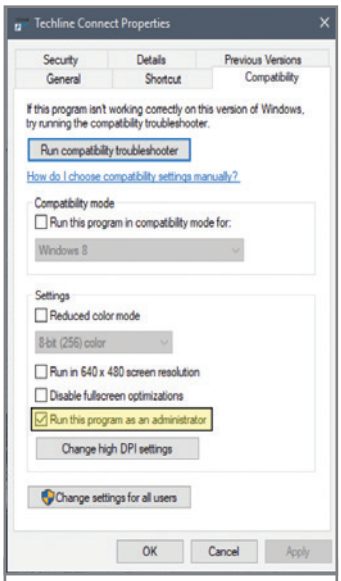
To view the latest DIG (U.S.) as well as PCs for purchase, go to gmdesolutions.com and select the Dealer Services tab. Once you've input your BAC and zip code, select Techline IT Solutions from the Dealer Services menu. In Canada, the latest DIG can be found in the Dealer Security and Information Technology App on GM GlobalConnect.

Performance Issues

If the PC meets the specs for running TLC, many times performance issues can be solved by a PC reboot, or an uninstall and reinstall of Techline Connect.

Local Admin Rights

Run Techline Connect as an Administrator for the latest updates. All Techline application updates and installations must be performed from an account with local Windows administrative rights. Firewall exceptions should be made for the Techline Connect application.



Run as Administrator setting

CONTINUED ON PAGE 11

The DIG includes a list of how to configure Techline Connect to have the elevated privileges necessary to ensure the application updates are received, downloaded and installed properly. Also refer to the Techline Connect Setup for Updates PDF on TechLink for additional instructions.

Authenticate User Error

If an "Unable to Authenticate User" error occurs, ensure that the ID can successfully log in to GM GlobalConnect. If the ID is locked in GM GlobalConnect, the Techline Connect log in will fail.

If the user can log in to GM GlobalConnect without issue, reboot the PC and attempt to log in again to Techline Connect.

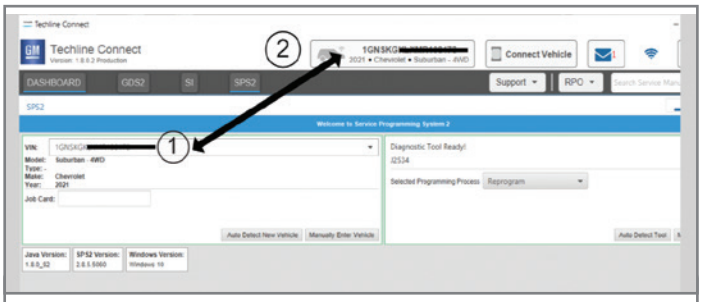
Reporting TLC Concerns

Although the user can select to "report an issue", do not use this feature if immediate assistance is needed. Contact TCSC to assist with troubleshooting.

SERVICE PROGRAMMING

Confirm the VIN

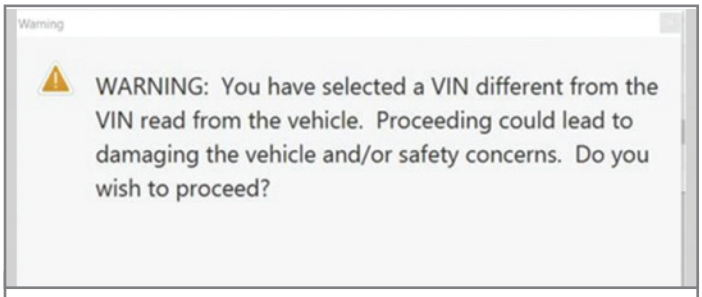
Technicians can manually enter the VIN for a vehicle being serviced via "Select Vehicle," followed by entering the VIN on the left side of the TLC screen. Always verify that the VIN displayed in the TLC left-side drop-down menu and the top-center window match the VIN plate of the vehicle to be programmed prior to using Service Programming System 2 (SPS2) for programming or reprogramming a module.



Verify the VIN before programming.

For the TLC application, make sure that the power mode (ignition) is ON before reading the VIN from the vehicle's VIN master module and that a VIN that is already in the TLC application memory from a previous vehicle is not selected.

TLC implemented a change that has SPS2 always check that the VIN that TLC is set to matches the VIN read from the VIN master module (for example, the ECM for VIP vehicles). This is to address the potential for an incorrect VIN being set in TLC. If the vehicle VIN does not match, a warning message will be shown.



An incorrect VIN will result in a warning message being shown.

Tech2 Programming

Technicians are able to program via Tech2 in SPS2 by selecting "Manually Select Tool" followed by selecting the applicable programming method in SPS2.

Battery Voltage

Battery voltage must be 12.5v or higher when programming any vehicle. 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 more 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.

Hardwired Connection

An MDI or MDI 2 hardwired connection from the PC to the vehicle ensures successful programming on newer architecture vehicles.

Do not download or install the files wirelessly. If there is an interruption during programming, programming failure or control module damage may occur.

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

▶ Thanks to the Techline Connect team

Original Engine Oil Filter Leak

Some new 2020-2021 XT5, XT6, Blazer, Camaro and Acadia models equipped with the 3.6L V6 engine (RPO LGX) may have an oil leak at the engine oil filter. Drops of oil may be noticed on the ground underneath the front of new vehicles before the first oil change.

If the engine oil is found to be leaking from the original oil filter – before the first oil change – between the oil filter body and the mounting surface of the gasket area, GM Engineering is requesting that photos of the condition be taken and submitted using the Field Product Reporting (FPR) app before any repairs are made.

SUBMIT A FIELD PRODUCT REPORT

TIP: Install the FPR app on your phone following the detailed instructions in Bulletin #02-00-89-002 (U.S. only). When submitting the FPR, complete all required fields and add PIE0651 in the Condition field.

#PIE0651 is an EI Lite (Engineering Information), which does not require technicians to call an engineer, but asks that a description of the condition and photos be submitted using the FPR app.

BEFORE MAKING REPAIRS

Before removing the oil filter, take a photo of the location of the oil leak. Use a pointer, colored tape or another type of stick-on marker to indicate the area of the oil leak.

The leaking oil filter will be requested back by Engineering for review and testing. Please properly drain the filter and return it to the parts department.

Refer to #PIE0651 for additional information.

▶ Thanks to Bryan Salisbury

TECHLINK

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.

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