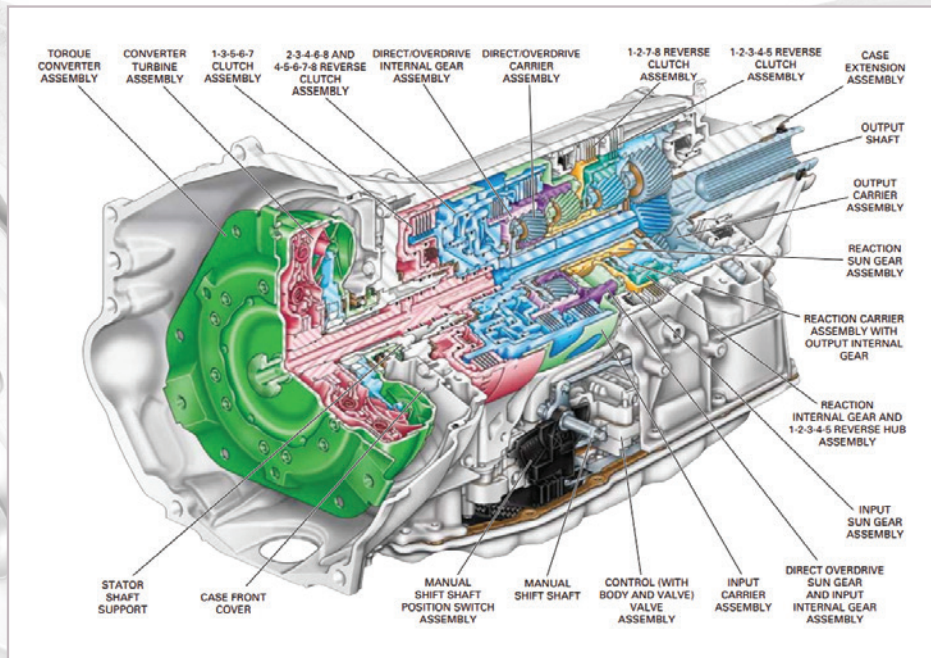
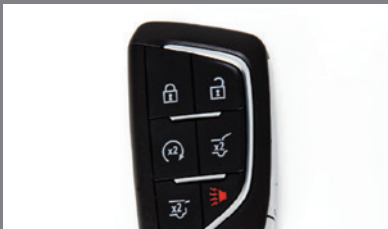


Latest Labor Time Guide



PROVIDES NEW ADD TIMES FOR TRANSMISSION REPAIRS, REDUCES NEED FOR OLH



Remote Keyless Entry Transmitter Warranty Replacements

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LATEST LABOR TIME GUIDE

Provides New Add Times for Transmission Repairs, Reduces Need for OLH

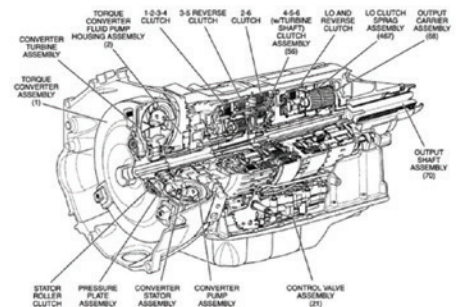
When performing internal transmission repairs on GM transmissions under warranty, current labor times focus on replacing the damaged part(s), with Other Labor Hours (OLH) as the only option for diagnosis or inspection and cleaning procedures for re-using components that are part of the overall transmission repair. The focus on part replacement can lead some technicians to be hesitant to spend too much time on the diagnostic and cleaning procedures necessary to identify and perform all aspects of a transmission repair. This labor time policy of using OLH for work beyond the base repair also can act as a disincentive for some technicians to invest in the training needed to become a specialized transmission technician. GM is out to change that.

By listening to many dealership technicians about their concerns with transmission labor times and related transmission repair procedures, GM is updating the Labor Time Guide with new Add Times for transmission diagnosis, cleaning and inspections. The goal is to assure technicians that the labor time for a complete transmission repair will cover all of the actual time spent on the repair.

The updated Add Time allowances will still require technician comments and punch times to support the extra time spent on repairs, but Service Management approval is not required as long as the time claimed is within the variable published allowance. And for difficult repairs that exceed the Add Time allowance, OLH is still available to cover the extra time needed with Service Management authorization.

6 Speed RWD example (Labor operations will vary by transmission)

Labor Operation C	Labor Operation Desc
8465050	Oil Pump Replacement
8466450	3-5-Reverse Clutch Plate Replacement
8466410	1-2-3-4 Clutch Plate Replacement
8466430	4-5-6 Clutch Plate Replacement
8465732	2-6 Clutch Plate Overhaul
8468030	4-5-6 Clutch Hub Replacement
8464910	Torque Converter Housing Replacement
8468630	Transmission Case Replacement
8467890	Low and Reverse Clutch Replacement
8468110	Output Carrier Replacement
8465830	Input Carrier Replacement
8466150	Center Support Replacement
8466290	4-5-6 Clutch Damper Replacement
8466030	Output Shaft Replacement
8464810	Torque Converter



Example of labor ops with new add times.

The new Add Times will bring transmission repairs more in line with the allowances for transmission replacements, where technicians are allowed Add Time for diagnosis as well as Add Time for disassembly and assembly.

UPDATED ADD TIMES

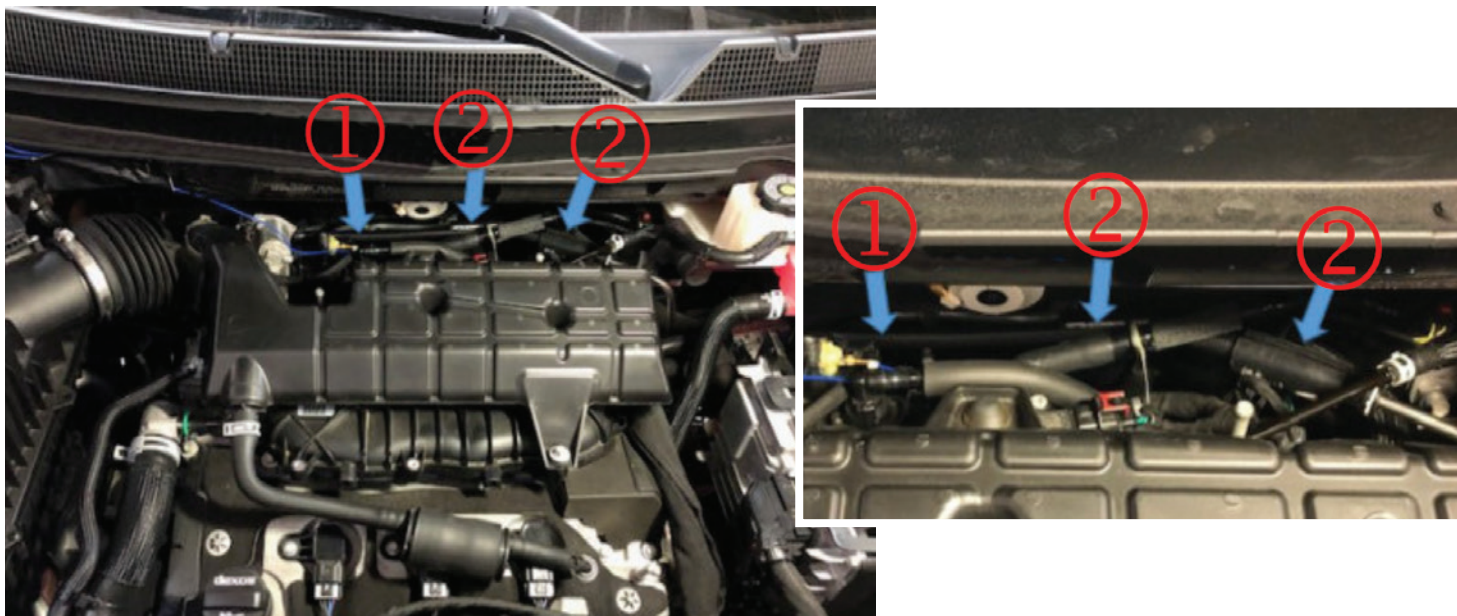
Add Times will be released for select internal repairs on GM automatic transmissions over several months, beginning with 6-speed transmissions in the May Labor Time Guide. Published allowances will be:

Diagnosis Time – 0.0-1.0 hr.

- You may claim up to the allowable labor hours depending on actual time to perform diagnosis, i.e., test drive, pressure tests, GDS2 diagnostics, etc.

CONTINUED ON PAGE 3

Engine Rattle Sound from Purge Solenoid



Purge line (#1) and damper installation locations (#2)

A loud ticking or rattle sound may be heard coming from the engine compartment on some 2020-2021 Enclave and Traverse models equipped with the 3.6L V6 engine (RPO LFY). The sound may be caused by pressure pulsations in the purge solenoid tube that occur when the purge solenoid is commanded on. The pulsations create an audible rattle or tick sound that can be heard inside and outside the vehicle.

To correct this condition, verify the noise is coming from the purge tube by commanding the purge solenoid on and off. If the noise can be duplicated, it will be necessary to install insulator/dampers on the tube at the identified locations.

Two insulators/dampers should be made using two 3-inch (76 mm) pieces of 3/8-inch rubber fuel hose and two 3-inch (76 mm) pieces of 1/2-inch rubber fuel or vacuum/heater hose placed on the outside of the 3/8-inch hose. Split the hoses lengthwise and install each insulator/damper with the seam facing down at the specified locations on the purge tube. Secure the insulator/dampers using two tie straps on each one.

A damper to further dampen the sound is being developed. Refer to #PIP5796A for additional information.

► Thanks to Aron Wilson

Cleaning and Inspection – 0.0-2.0 hr.

- You may claim up to the allowable labor hours depending on actual time to clean debris and inspect components for reuse. For example, when a component failure has introduced metal throughout the transmission, requiring further teardown, cleaning, and inspection of parts to determine if they can be reused.

ROLLOUT BEGINS IN MAY

The rollout for the release of the new Add Times in the Labor Time Guide are:

May 1, 2021

- 6-speed automatic transmissions

June 1, 2021

- 8-speed and 9-speed automatic transmissions

July 1, 2021

- 10-speed automatic transmissions, Allison transmissions, electric powertrains

With the new Add Times, technicians can be sure that their time spent on the necessary procedures – including diagnosis, inspections and cleaning – will be covered to make a proper transmission repair without OLH.

► Thanks to Steve Bruder and Mark Kevnick

Remote Keyless Entry Transmitter

Warranty Replacements

A new warranty requirement (U.S. only) is being implemented when replacing the Remote Keyless Entry (RKE) transmitter (key fob) under warranty on 2017-2022 GM vehicles equipped with Remote Keyless Entry/Passive Entry (RPO ATH) and Keyless Open/Start (RPO AVJ). Warranty data analysis shows that 37% of returned key fobs do not match the VIN on the warranty claim.

SIGNAL DETECTION SCREEN PHOTO REQUIRED

To address the number of mismatched key fobs, GM authorization is required for RKE transmitter replacement and the warranty claim must be routed to the Warranty Support Center.

In addition, a photo of the Signal Detection screen from the EL-52545 TPMS and RF Tool is required to confirm that the VIN of the key fob is the same as the service vehicle listed on the job card (repair order). The Signal Detection screen displays the VIN and other information embedded in the key fob.

TIP: The warranty claim for key fob replacement will be rejected if a photo of the Signal Detection screen confirming that the VIN of the key fob matches the VIN of the vehicle is not provided or if the VINs do not match.



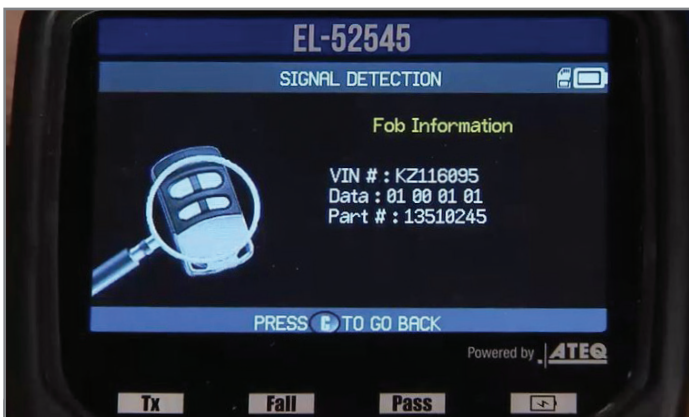
Consult with your warranty administrator on the best way to provide a photo of the screen to include with the warranty claim submission. It is not required to print the photo and attach it to the physical job card and/or store in the dealership's vehicle history folder. The photo only needs to be submitted as an electronic attachment to the warranty transaction. Once part of the submitted transaction in Global Warranty Management (GWM), the jpg photo can be deleted from the dealership's computer or employee's device.

As part of the diagnostic procedure for an inoperative key fob, using the EL-52545 TPMS and RF Tool to verify that the VIN learned to the key fob matches the VIN of the vehicle is a crucial step. Verifying the VIN ensures that the key fob is not misdiagnosed because it's the wrong key fob for the vehicle. A key fob with a VIN that is different from the service vehicle cannot be relearned to the service vehicle and is not considered a warranty claim.

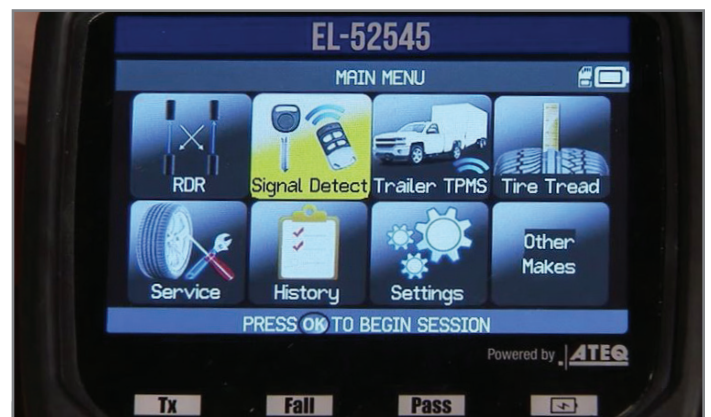
READING THE VIN

To use the EL-52545 Tool to read the VIN from the key fob, select Signal Detect from the main menu on the tool and then select Fob/Key I.D.

Next, place the key fob on the small pocket on the back of the tool and press OK.



Signal Detection screen must be included with the warranty claim submission.



Select Signal Detect from the main menu to read the VIN.

CONTINUED ON PAGE 5

The Signal Detect screen will display the last eight digits of the VIN along with other key fob data, including the number of key fobs currently learned to the vehicle.

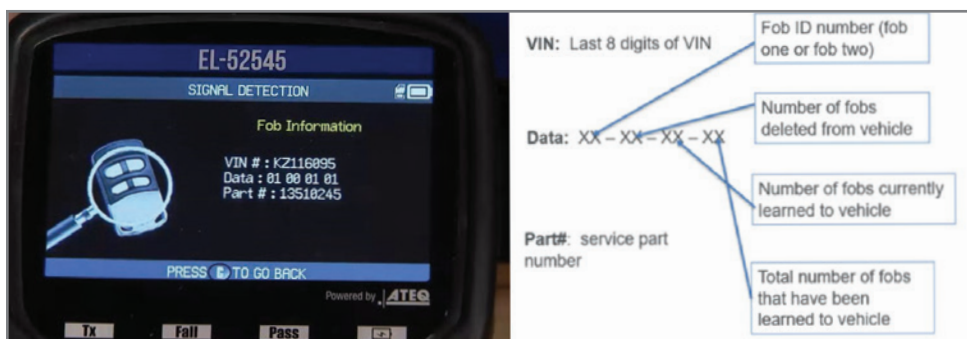
TIP: Be sure to have the latest tool software downloaded. EL-52545 tool software updates are available quarterly to ensure the latest information is being used, including new model support. As with other tools, the software updates are available through the gmtoolsandequipment.com website using the link in GlobalConnect.

For additional information, refer to Bulletins #21-NA-061 and #21-NA-068.

► Thanks to Mike Waszczenko



Place the key fob on the small pocket on the back of the tool.



The VIN and other key fob data is displayed.

Poor Engine Performance in High Ambient Temperatures

Some 2016-2020 Express and Savana vans equipped with the 6.0L V8 engine (RPO L96, LC8) may have a lack of power when driving up grades or after the vehicle has been idling for long periods of time in high ambient temperatures (90° F, 32° C or above). The poor performance may be more noticeable when the vehicle is outfitted with heavy work equipment, such as work boxes or ambulance bodies. When the ambient temperature drops below 90° F (32° C), the condition is less noticeable or is eliminated altogether.

The poor engine performance may be due to the high ambient temperatures affecting the intake airflow to the engine. The GDS 2 scan tool data will show an increase in total knock retard and backed out ignition timing, both of which may occur when the vehicle is under load or driving up a grade and more throttle input is required. The Engine Control Module (ECM) is adjusting to protect the engine from damaging spark knock, which is a normal operation under these conditions.

If poor engine performance is noticed, there are a number of components to check to determine if they are installed correctly or not missing or damaged. Any missing or damaged components could allow hot air into the intake duct, resulting in a lack



Check the intake duct for any restrictions.

of power. For example, check the intake duct for any restrictions, proper installation and any missing clamps.

Other components to inspect include the hood seal, radiator baffle, air box, and exhaust system as well as any modified components. Refer to #PIP5800 for a complete list of components that should be inspected if the lack of performance condition is present.

► Thanks to Richard Renshaw

Common Concerns from the Escalade TAC Action Center



The all-new 2021 Cadillac Escalade is available with a variety of new features and customized options. Several of these newly designed systems may be unfamiliar to technicians. Here are several of the top concerns noted by the Technical Assistance Center (TAC) Action Center for the Escalade, which recently ended.

AIR RIDE ADAPTIVE SUSPENSION AIR SPRINGS

The Air Ride Adaptive Suspension (RPO F47) offers a variable spring rate, automatic load leveling and up to 4 inches (10.2 cm) of ride-height adjustment. The four air springs raise or lower vehicle height based on the automatic level control module inputs. Airflow to the four air springs is determined by the pneumatic control unit, which contains the pressure sensor and control solenoid valves for each spring.



Air Ride Adaptive Suspension

The vehicle should not be driven without air in the air springs. There have been multiple vehicles returned to dealerships for blown out bags on the air springs. The main cause for this is either driving the vehicle with no air in the springs or lowering the vehicle down from the hoist and allowing the air bags to bottom out.

TIP: If the vehicle was driven for a period of time with no air pressure in an air spring, it may have damaged the air spring. Once the vehicle is repaired, a thorough inspection of the inflated air spring should be performed. If any damage is found or if it is uncertain that any damage occurred, the air spring should be replaced.

Refer to #PIT5801 for additional diagnostic tips.

AIR RIDE ADAPTIVE SUSPENSION MODES

The Air Ride Adaptive Suspension has two special modes – Service Mode and Alignment Mode – available for selection in the Settings menu of the infotainment system. Both of these modes can be manually enabled or disabled by selecting Settings > Vehicle > Suspension. The settings also will automatically disable when the vehicle is driven above 10 mph (16 km/h).

Service Mode: When active, all air suspension operations are completely disabled. Service mode is useful when working on the suspension, under the vehicle, towing the vehicle and more. Service Mode will be automatically enabled when the air suspension detects the vehicle is being lifted by either a hoist or jack.

Alignment Mode: Optimizes the air suspension for a vehicle alignment. To enable Alignment Mode, the vehicle must be at Normal Height and in Neutral.

CONTINUED ON PAGE 7



The white dots seen on the screen represent a city lights design.

OLED INFOTAINMENT SCREEN DESIGN

There may be white dots in the background of the Infotainment Screen display. This is a design intent feature and the display is functioning properly. The white dots seen on the screen represent city lights and may be more noticeable at night. This information should be shared with customers. Do not replace the Integrated Center Stack for this concern. Refer to Bulletin #21-NA-051 for additional information.



Ambient light sensor setting

SILL PLATE LIGHTING

The sill plate lighting may appear to be inoperative after installing the LPO Illuminated Sill Plate kit. The lighting concern may be caused by current ambient lighting conditions. The light sensor needs to see a dark condition. To ensure the vehicle is in

the night mode, cover the ambient light sensor and verify that the headlights icon is illuminated on the instrument cluster. In addition, check that the ambient light sensor setting under settings > Vehicle > Lighting is not turned Off. If off, select On to enable that ambient lighting. Refer to #PIT5835 for additional information.

110 VOLT POWER OUTLET

The 110 volt power outlet will momentarily turn off during an Auto Stop event. If the power outlet is being used to power a streaming device, for example, an Amazon Fire Stick, when the power outlet turns off and back on, it can cause the device to reboot, which interrupts its operation. This is normal operation of the 110 volt power outlet during engine cranking. Do not replace the T1 AC and DC Power Control Module for this condition.

To help reduce the power interruption to a device, suggest to customers to use the USB-C ports, if possible, which do not turn off during an Auto Stop event. A USB-C to USB-A adaptor may be needed.



1. 110 volt power outlet
2. USB-C ports

If an uninterrupted power supply is required while driving, disable the Auto Stop feature by pressing the Auto Stop Disable Switch on the instrument panel. Refer to #PIT5787A for additional information.

► Thanks to Stephen Jacob

Latest GM Global Electronic Parts Catalog Update

ENHANCES PART FILTERS FOR BETTER SEARCH RESULTS

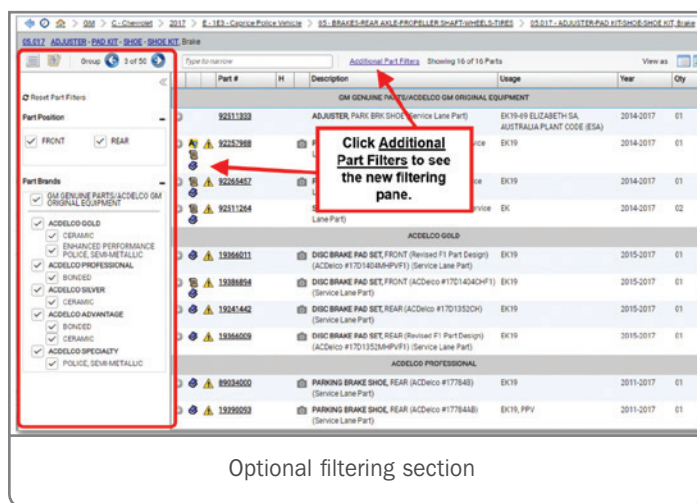
The latest update to the GM Global Electronic Parts Catalog (EPC) has recently been released. It features several enhancements to help make parts searches easier and more efficient, including additional part filtering capabilities as well as an easier way to identify single-use parts.

The new GM Global EPC was released in October 2020. The updated GM Global EPC runs on the advanced HTML5 platform, which provides improved stability, helping to deliver an increase in the levels of up-time and performance. The GM Global EPC link is available on your GlobalConnect Parts Workbench.

Here's a quick look at some of the latest Global EPC features that will make searches easier and more productive.

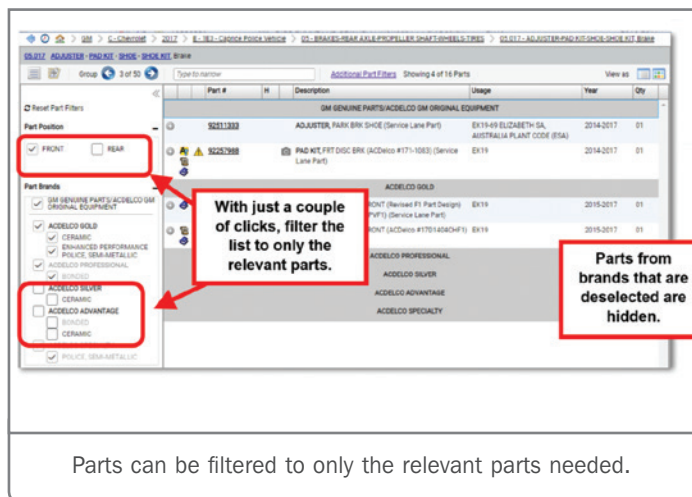
PART GROUP FILTERING

After navigating to a part group, parts will be shown sorted by brand in the main section of the window. A new optional filtering section on the left of the screen makes it easy to hide or show parts by brand and part position. Select Additional Part Filters at the top of the screen to see the new filtering pane.

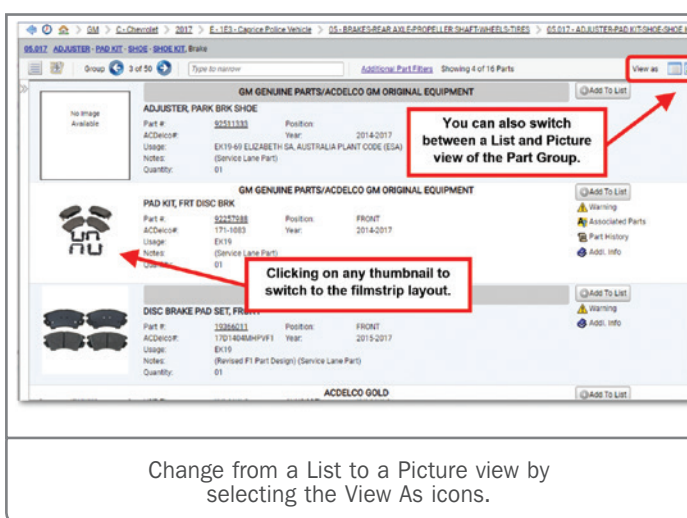


The list of parts can be filtered to only the relevant parts needed. Parts from brands or positions that are deselected are hidden from view.

Views also can be changed from a List to a Picture view of the part group by selecting the View As icons at the top-right of the screen.



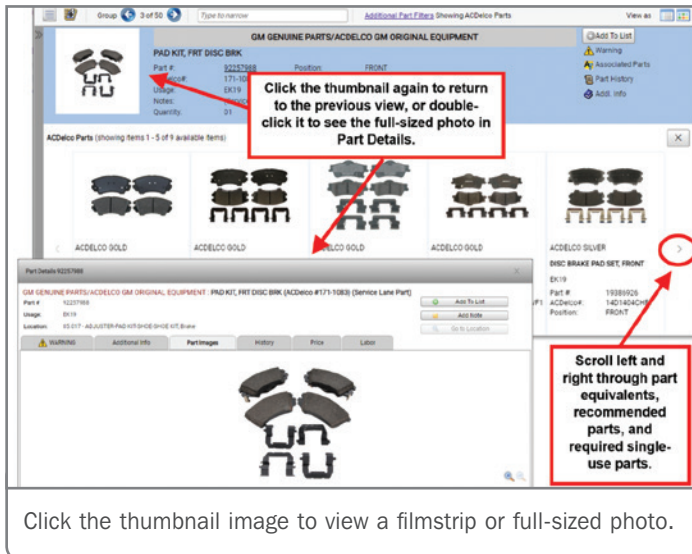
To view a filmstrip layout of a particular part, click the thumbnail image of the part. The filmstrip shows part equivalents, recommended parts, and required single-use parts. Click the thumbnail image again to return to the previous view, or double-click it to see the full-size photo in Part Details.



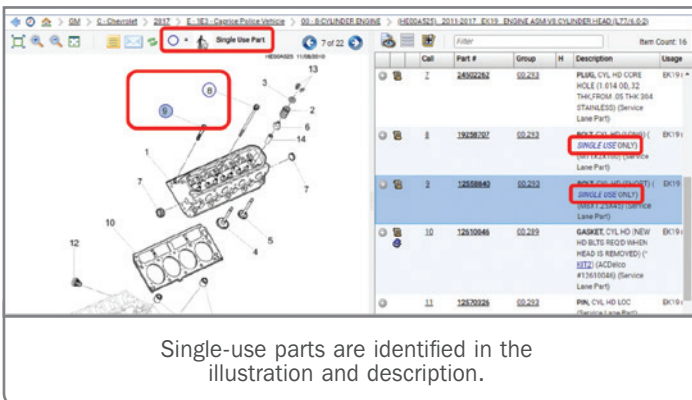
SINGLE-USE PARTS

The latest release of the Global EPC also uses new circle highlights on the callouts in the parts illustrations to identify single-use parts. Look for the circled callout and the single-use part icon to find single-use parts when searching and ordering parts.

CONTINUED ON PAGE 9



The part text also includes “SINGLE USE” in the description. These features will help users to never overlook a single-use part again.

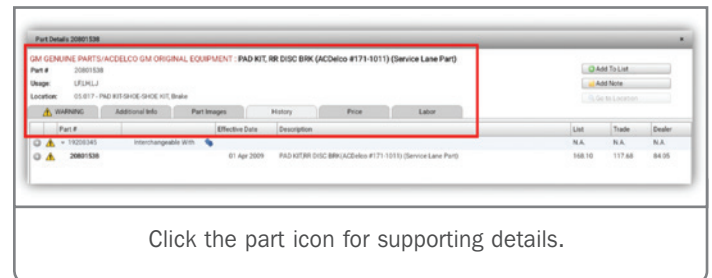


NEW EPC FEATURES

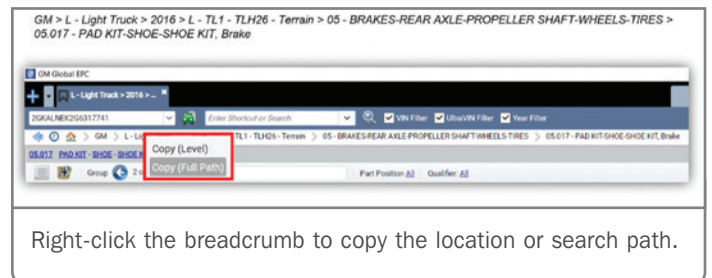
The new features within the EPC reflect feedback from dealership parts department personnel. New features include:

All Day Access – The time that the web EPC can be left open has been extended to 14 hours, which ensures that a full day of usage is available without having to log in again through GlobalConnect.

Improved Supporting Part Information – Clicking the part icon shows all the supporting details for that part.



Copy and Share Search Location – To copy the location or full search path, simply right-click the breadcrumb trail. Being able to easily copy a location can improve workflow between technicians.



Improved Tutorial and User Guide – The new Tutorial provides easy-to-use modules covering EPC functionality and the updated User Guide offers improved search functionality. Each tool opens in its own browser, allowing you to continue working without exiting the EPC.

SUPPORTED OS

The new Global EPC is supported on browsers running on PCs with a Windows 10 operating system. The Global EPC will not function on PCs running on Windows 7 or lower. Be sure that all dealership PCs are compliant with the latest GM Dealer Infrastructure Guidelines.

For more information about the GM Global EPC, review the Quick Reference Guide or contact Snap-on support at 1-888-994-6372.

► Thanks to Mary Daly

Tips for USB Programming

Programming calibrations and software requires the transfer of large files to the vehicle from the Service Programming System (SPS). When transferring a large file (greater than 1 GB) from the Techline Connect server to the PC and then to a USB stick (USB flash drive), there are several things to keep in mind in order to ensure a successful programming event.

USB DRIVE

For programming events, a USB 2.0 flash drive with a minimum capacity of 16 GB should be used.

WIRED CONNECTION

A wired connection to the network is the quickest, most stable way to download the file and decrease the likelihood of errors occurring during file download.

DOWNLOADED FILES

Once the file is downloaded to the PC, it will reside in cache on the PC unless the cache is cleared. Any additional USB sticks made from that PC will be copied from cache and take a much shorter time compared to downloading from the server.

CONFIRM SOFTWARE

Never take a USB stick directly to a vehicle for updating without starting a Techline Connect session for that particular VIN. If software is already on the stick, Techline

Connect will take only seconds to confirm that the software on the stick is the latest and correct for that vehicle. Failure to perform this step will result in no warranty claim code indicating a USB programming event was completed.

CALIBRATION OR SOFTWARE UPDATES

If the control module calibration is only being updated, USB programming may not be required, depending on the current software level, or the release of updates. USB programming also may not be required when replacing/reprogramming the control module. If USB files for the application are not available via SPS, or have not been received from GM in another manner, the USB process will not need to be performed unless instructed otherwise in a service document or publication.

INFOTAINMENT MENU OPTIONS

The infotainment system will not allow the installation of the same software version via USB. If the same software is detected, the installation process will not start.

If updated files are available, the infotainment system will recognize the updated files and display on-screen instructions. Select Update when prompted. Programming will take several

minutes. If instructions do not immediately appear on the infotainment display, from the Home page, select Settings > System > Updates.

Upon completion of programming, remove the USB drive. Follow the infotainment display on-screen instructions.

NO NEED TO MONITOR PROGRESS

Once the update is initiated, there is no need to monitor the progress when performing the USB portion of the programming steps. The vehicle can be moved to an alternate location, which could allow the possibility of working on another vehicle while the USB programming event is taking place.

INTERRUPTED PROGRAMMING

If USB programming was interrupted, a 5-minute recovery time period may be necessary before the software will reinitialize. Wait 3 minutes with the ignition Off, all access doors closed, and all vehicle systems Off. Upon restarting the USB portion of the programming, the display will show a countdown timer for up to 5 minutes before proceeding with the USB File Transfer.

► Thanks to Zach Gillett



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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