

## New Diagnostic Charge Battery Station

Now Shipping to Dealerships



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# NEW Diagnostic Charge Battery Station

SHIPPING TO DEALERSHIPS

Early orders of the next generation EL-52800 Diagnostic Charge Battery Station (DCBS) are now shipping from GM Dealer Equipment. Its capabilities will make it easier and faster to test a variety of batteries in the dealership as well as perform comprehensive battery diagnostic services.

The DCBS is an essential tool for when submitting battery warranty claims, but it will not be automatically shipped to all dealerships. It replaces the EL-50313 Midtronics GR8 Battery Tester/Charger and is available for order through GM Dealer Equipment.

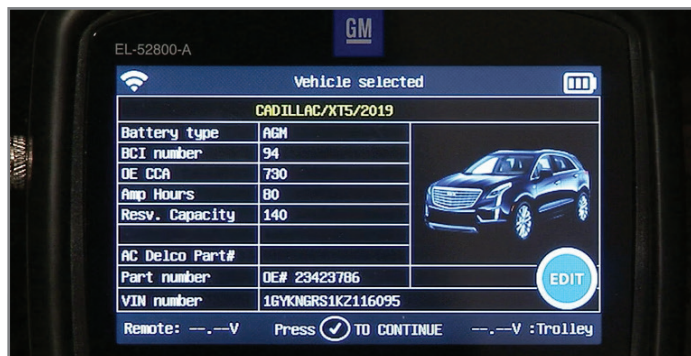


## NEW DIAGNOSTIC CHARGE BATTERY STATION

The DCBS provides comprehensive battery diagnostic services using a smart logic test sequence, which produces in-depth test results for lead acid, Absorbent Glass Mat (AGM) and Enhanced Flooded Battery (EFB) batteries. It can detect a cold battery and offers a battery warming function. Plus, it tops off the battery charge when deemed a good battery.

## INTEGRATED VEHICLE DATABASE

The hand-held diagnostic remote included with the DCBS can read 1D barcodes and 2D QR codes that, along with an



After scanning the VIN, the vehicle information and original battery specifications are shown on the hand-held remote screen.

integrated GM vehicle database with battery specifications, offers quick vehicle identification of GM vehicles to help speed up the diagnostic process. The GM database also eliminates the need to find the battery rating on the original battery label during testing.

## REMOTE DIAGNOSTIC TESTER

The hand-held diagnostic remote, which is rechargeable, can be used in the service lane for basic battery testing while the main unit, or trolley, is charging/maintaining a battery. The remote tester also features a PDI (Pre-Delivery Inspection) Mode to check the battery on new vehicles at the dealership.

The remote features a keypad to navigate the tool menus and perform testing procedures. The Power button is the red button on the keypad. The Enter button (check mark) is at the center of the controls. The Start button (forward arrow) is at the top-left of the keypad. The button at the top-right is the Back button (curved arrow) that goes back to the previous step or menu.

When setting up the diagnostic remote, it must first be paired to the trolley. To pair the remote, select Settings from the main menu and then the wireless icon. Select Settings again and then select the Barcode Scan. Scan the serial number barcode on the back of the trolley to link the remote and the trolley together. A remote can only be paired to one trolley.

CONTINUED ON PAGE 3

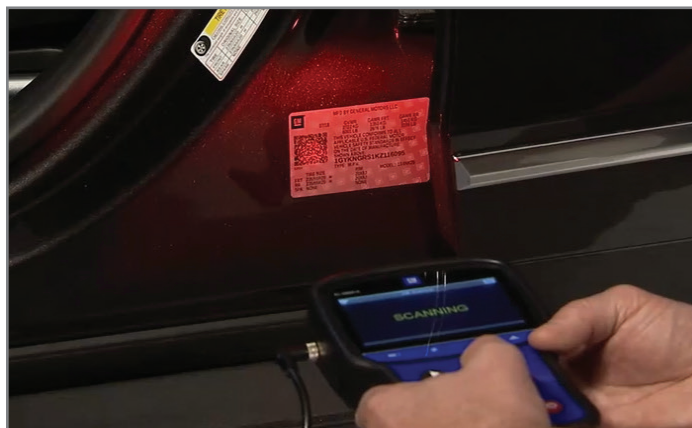
## TESTING FUNCTIONS

The DCBS features a true 1/2 CCA load test and an integrated reserve capacity (RC) tester for true RC measurement. The bottom lamp on the trolley will flash blue during a load test or a reserve capacity test. Testing to determine the condition of a battery will take only about 20 minutes. More time may be required to charge the battery for final testing,



Remote handheld diagnostic tester

vehicle along with the battery type, CCA, amp hours, reserve capacity, and part number of the original, factory-specified battery.



Scan the vehicle VIN to identify the vehicle and battery.

Before testing, the tool will require the user to measure the temperature of the negative battery post by aiming the red dot from the remote at the battery post and pressing the Enter button. Next, connect the clamps to the battery. The DCBS will signal a reverse voltage warning if the battery leads are connected incorrectly.

If the battery voltage is below 12.4 volts, the unit will pre-charge the battery in order get it to a state where it can be accurately tested.

The on-screen results will show "Battery is good" if the battery has a good state of health. The test results will show "Battery is bad" if the battery needs to be replaced. The tool will ask for the RO along with the VIN and BAC if not already entered. It will then print a warranty code if the test was run using the trolley.

**TIP:** No warranty code will be generated when a battery test is done with the remote only.



Link the remote to the trolley.

but the DCBS will eliminate situations where a battery is charged for 45 minutes just to determine that the battery is bad.

To test a battery, select the Diagnostic icon and press Enter on the keypad. Next, select Remote or Trolley.

Scanning the vehicle VIN on the driver's door jamb will populate the year, make, and model of the



Diagnostic icon



The on-screen results show if the battery is good or bad.

# NEW DIAGNOSTIC CHARGE BATTERY STATION NOW SHIPPING TO DEALERSHIPS *continued*



The on-screen results show if the battery is good or bad.

If the test results show that the battery needs to be recharged, the tool will show “Battery needs to be recharged” and will begin charging. The top lamp on the trolley will flash when the unit is charging a battery. Once the battery is sufficiently charged, the tool will automatically test the battery.

## BATTERY CHARGING

To charge a battery without running the diagnostic test, select the Charge icon from the main menu and then choose Normal or Fast charge. The Normal charge setting (Turtle icon) will charge the battery to 100% State of Health (SOC) or under 2 amps charge acceptance. The Fast charge setting (Rabbit icon) will charge the battery to 80% SOC. Next, select the battery type and the battery standard and then enter the CCA value. After using the remote to measure the negative post temperature, connect the trolley clamps and select Start to begin charging the battery.

The built-in 12V/80–100A battery charger/maintainer also provides a clean, conditioned and controlled power supply for control module calibration updates.



Battery charging can be performed using a fast charge or normal charge setting.

## WARRANTY CODES

The printer incorporated into the DCBS prints the required battery warranty codes for warranty claims, such as when a battery is replaced. The warranty code from the DCBS is a 20-character alpha-numeric code, which is different from the code generated by the GR8 Battery Tester. In addition to continuing to accept the 15-character codes, the Global Warranty Management (GWM) system will accept the 20-character codes with warranty claim submissions.

When dealerships receive the new DCBS unit, it is critical that the Optimus software, which is included with the DCBS, be downloaded. The Optimus site is used to store all the testing records (up to 65,000) that are performed at the dealership and enables dealerships to view past test records and retrieve warranty codes.

Additionally, all DCBS software updates that are released to keep the DCBS operating with the latest vehicle information and product enhancements will only be delivered to the handheld diagnostic remote through the Optimus program.

Dealerships with any questions regarding the Optimus platform, software updates or general product inquiries should contact the customer help desk at 1-877-453-3265.

Service departments are encouraged to review their battery testing and charging equipment to ensure that current tools meet their needs for battery diagnosis and charging. The new DCBS can be ordered from GM Dealer Equipment at [GMDESolutions.com](http://GMDESolutions.com).



The DCBS prints battery warranty codes.

► Thanks to Rob Kennedy

# Battery Replacements and Warranty Claims



Perform proper testing before replacing a battery.

When testing or charging a battery in a vehicle that is in for service or is part of the dealership's inventory, it's critical to get an accurate diagnosis of the battery's state of health before making a determination about replacing it. If a battery must be replaced, there are a few items that are needed in order to complete the warranty replacement.

Refer to the latest version of Bulletin #03-06-03-004 – Battery Testing and Warranty Replacement Requirements outlining the testing process and warranty claims.

Following are some battery testing and battery replacement tips from the Warranty Support Center (WSC) that may be helpful when performing a battery replacement and the subsequent warranty transaction submission requirements.

## WARRANTY REQUIREMENTS

**Enter the VIN** – It is important for service consultants to enter the VIN into Investigate Vehicle History (IVH) and validate an applicable warranty prior to work being performed. Batteries are a covered component under the New Vehicle Limited Warranty.

**Testing Equipment** – The EL-50313 Midtronics GR8 or new EL-52800 DCBS Diagnostic Charge Battery Station must be used to test a battery. The test needs to be set up as “out of vehicle” — which means either outside of the vehicle or with the positive/negative battery cables disconnected — in order to ensure a proper test and accurate result.

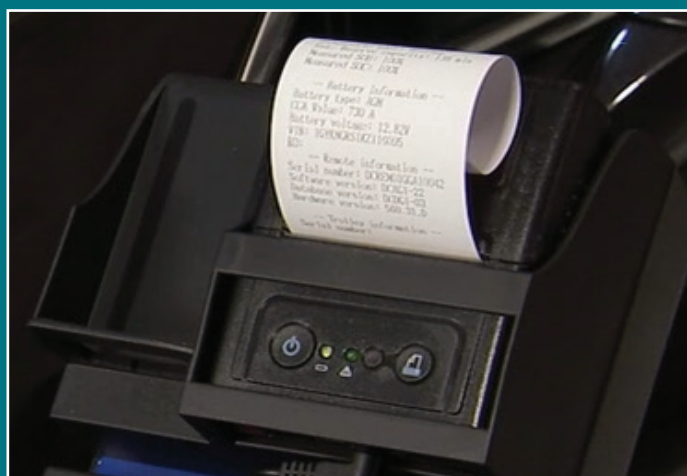
**Correct VIN and RO** — The correct VIN and job card number (repair order) should be entered by the technician when performing the battery test. This information allows the battery test printout to serve as the appropriate supporting documentation for the warranty transaction.

**Warranty Code** – When a “replace battery” result occurs, the tester will supply a Warranty Code on the test result printout. The printout must be attached to the job card and stored in the dealership's vehicle history folder. The code must be entered by the warranty administrator in the “Battery Tester Code” Field of the transaction.

**Replacement Details** — The Cause and Correction comments on the job card and submitted with the transaction must indicate why the battery was replaced.

For additional information, Bulletin #03-06-03-004 or contact your WSC Specialist.

► Thanks to Troy Henige and Patti Marino



Warranty code test printout

# NEW

# DEALER INFRASTRUCTURE GUIDELINES

## ANNOUNCED FOR 2020

GM has recently released revised Dealer Infrastructure Guidelines (DIG) for 2020. The guidelines outline the dealership technology needed to ensure reliable data communications for all dealers, including recommended personal computer (PC) specifications.

GM will end support for Windows 7 Professional Operating System (OS) on December 31, 2019. In 2020, dealership computers must meet the minimum standard, including using the Windows 10 Professional OS, in order to receive assistance from the Techline Customer Support Center (TCSC).

## UPGRADING PCS

PCs used by technicians in the service bay should not be simply upgraded with a new operating system unless the PC processor is 6th generation or better. The DIG provides "Best" specifications for replacing PCs.

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

GMDESolutions is currently offering several PC/MDI 2 bundles with special pricing (U.S.). Non-bundled PC's meeting GM specifications also are available. In addition, new PC's pre-loaded with GM's Techline Connect diagnostic software are available as well to help save time and effort at the dealership.



### LAPTOP & TABLET PC'S

	Good	Better	Best
Processor	Intel Core i3, i5, i7 6 <sup>th</sup> Gen	Intel Core i3, i5, i7 7 <sup>th</sup> Gen	Intel Core i5, i7 8 <sup>th</sup> Gen* & above Server: Intel Dual core Xeon or better
System memory (RAM)	8GB	8GB	16GB +
Hard Disk Drive (HDD or SSD)	**256 GB +	500 GB +	750 GB +
CD / DVD Drive (optional/external)	CD/DVD Combo	CD/DVD Combo	CD/DVD Combo
USB A 2.0 & 3.0	2+	2+	2+
Display	13" 1366 x 768 (HD)	15" 1920 x 1080 (FHD)	15+" 1920 x 1080 (FHD)
Network Adapter	Wired: Gigabit Wireless: 802.11n	Wired: Gigabit+ Wireless: 802.11ac	Wired: Gigabit+ Wireless: 802.11ac
Operating System	Windows 10 Professional, 64 bit	Windows 10 Professional, 64 bit	Windows 10 Professional, 64 bit
Warranty	3 Year on site	3 Year on site	3 Year on site






\* Note: 8th Generation or above have model numbers of 8000 or greater (example: Intel Core i5-8269U).

\*\* Note: For Service Technicians who perform Infotainment programming the 256GB drive size is not sufficient for large calibration files. Select from the Better or Best category.

Recommended laptop PC specifications

CONTINUED ON PAGE 7

**Choose your standard or GM configured laptop as recommended by GM**  
Each PC meets the Dealer Infrastructure Guideline (DIG) Requirements.  
Configured Laptops are preloaded with the new Techline Connect Diagnostic Software.

Getac S410 G2	Dell Precision 5540	HP EliteBook 840
 <b>Better</b>	 <b>Better</b>	 <b>Best</b>
<ul style="list-style-type: none"> <li>• Intel Core i5 processor</li> <li>• 8 GB Memory (expandable to 32 GB)</li> <li>• 1 TB HDD</li> <li>• 14" FHD (1920 x 1080)</li> <li>• Semi Rugged</li> <li>• Windows 10 PRO</li> </ul>	<ul style="list-style-type: none"> <li>• Intel Core i5 processor</li> <li>• 8 GB Memory</li> <li>• 1 TB HDD</li> <li>• 15.6" Ultra Sharp FHD (1920 x 1080)</li> <li>• Windows 10 PRO</li> </ul>	<ul style="list-style-type: none"> <li>• Intel Core i7 processor</li> <li>• 16 GB Memory</li> <li>• 512 SSD Drive</li> <li>• 14" FHD (1920 x 1080) Sure View Screen</li> <li>• Webcam</li> <li>• Windows 10 PRO</li> </ul>
<b>GM Configured:</b> <b>MODEL NO. CDSS410G2CON</b> <b>PROMO: \$2,317</b> Reg. Dealer Price: \$2,375 <b>Standard:</b> <b>MODEL NO. CDSS410G2</b> <b>PROMO: \$2,200</b> Reg. Dealer Price: \$2,233	<b>GM Configured:</b> <b>MODEL NO. CDS5540CONF</b> <b>PROMO: \$2,122</b> Reg. Dealer Price: \$2,235 <b>Standard:</b> <b>MODEL NO. CDS5540</b> <b>PROMO: \$2,005</b> Reg. Dealer Price: \$2,093	<b>GM Configured:</b> <b>MODEL NO. CDS7KKCONF</b> <b>PROMO: \$1,728</b> Reg. Dealer Price: \$1,857 <b>Standard:</b> <b>MODEL NO. CDS7KK32</b> <b>PROMO: \$1,612</b> Reg. Dealer Price: \$1,696

GMDESolutions is currently offering several PC/MDI2 bundles.

## TECHLINE APPLICATION RECOMMENDATIONS

GM Techline service technician applications (Techline Connect, TIS2Web, GDS 2, MDI Manager, MDI/MDI 2, Tech2Win, Data Bus Diagnostics Tool and Service Information) require additional computing power to perform appropriately during vehicle diagnosis and repairs.

The following recommendations are for all service technician applications:

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

U.S. dealerships: To view the latest DIG (Fig. 15) as well as PCs for purchase, go to [gmdesolutions.com](http://gmdesolutions.com) and select the Dealer Services tab. Once you've input your BAC and zip code, select Techline IT Solutions from the Dealer Services menu.

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

► Thanks to Lisa Scott



**GM DEALER  
INFRASTRUCTURE  
GUIDELINES (DIG)**

Version 20.1

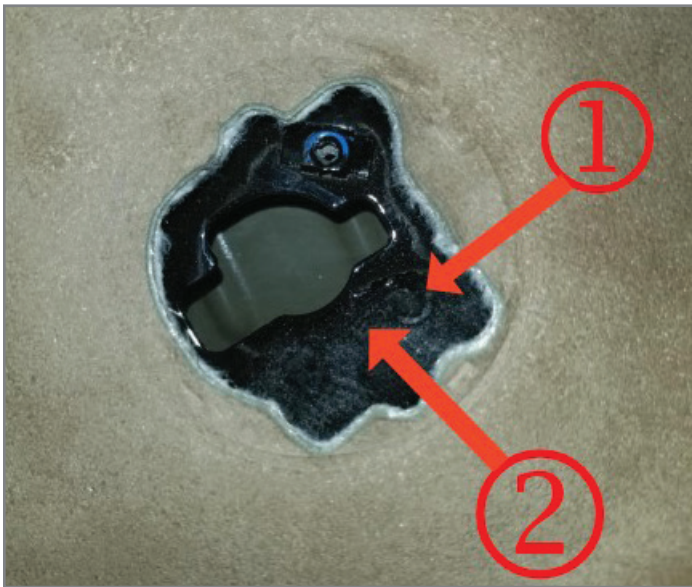
The GM Dealer Infrastructure Guidelines have been designed to outline the dealership technology needed to ensure seamless and reliable dealer data communications and develop customers for life through efficient and effective systems and solutions.

GM DIG Version 20.1 January 2020

2020 Dealer Infrastructure Guidelines

# Unavailable Driver Assistance Features Messages

Service Drivers Assist and Service Side Object Detection messages and/or a Super Cruise Temporarily Unavailable message may display on the Driver Information Center of some 2019-2020 CT6 models. DTC U0075 (Control Module Communication Object Detection CAN Bus Off) may be set.



1. Sun visor screw impression
2. Headliner harness

If these conditions are found, there may be a short to ground on Object bus circuits 3811 and 3813 at the driver's sun visor mounting screws. Remove the driver's sun visor and lower the harness

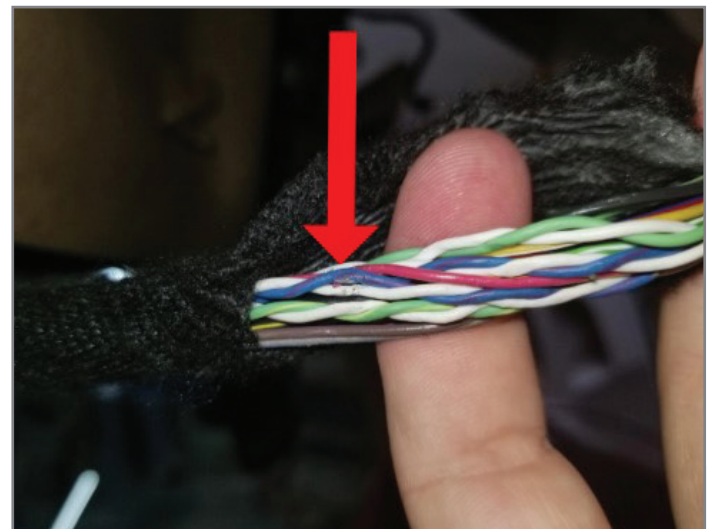
Unwrap the harness to expose the wiring. The Object High Speed GM LAN circuits 3811 and 3813 may be damaged by the sun visor mounting screw.

If any damage is evident, repair the wiring following the appropriate Service Information for wiring repairs.

► Thanks to David Antal



Headliner harness



Check for damage to the wiring.

# 2020 CT5

## TAC ACTION CENTER



**The GM Technical Assistance Center, or TAC, (U.S.) has established an Action Center for the all-new 2020 Cadillac CT5, the latest luxury sedan in Cadillac's lineup.**

TAC Action Centers are designed to gather early product feedback and provide support for the introduction of new GM models. Dealership service departments are asked to report all vehicle issues that require immediate attention, not just concerns that require technical assistance. The goal is to develop a quick resolution to any product concerns, such as fit and finish, performance, and operation, as well as to address customer expectations of the vehicle.

TAC Action Centers have a direct connection to GM Engineering, Brand Quality and the assembly plant, which offer combined resources to immediately address product concerns seen in the dealership.

### **CONTACTING THE TAC ACTION CENTER**

If any concerns are encountered with the new CT5 in your dealership, create a TAC case using the Dealer Case Management (DCM) system. Refer to the latest version of Bulletin #08-00-89-014 for more information on using the DCM system.

Once a case has been submitted, your concern will be answered by a CT5 specialist who will provide diagnostic direction as needed through the DCM system. After a case has been started, feel free to contact the TAC if any additional support is needed.

### **CASE DETAILS**

Service department personnel are encouraged to contact the action center to report all product concerns and provide digital photos of a concern when applicable. Photos are extremely important to show engineering where the concern is located, whether it's a pinched harness or a backed out terminal.

It is imperative to follow up on an action center case, even if it's as simple as a cannot duplicate concern or waiting for parts. All case information is reviewed daily and used by GM to resolve launch issues as quickly as possible.

For additional 2020 Cadillac CT5 New Model Features information, refer to Bulletin #19-NA-247.

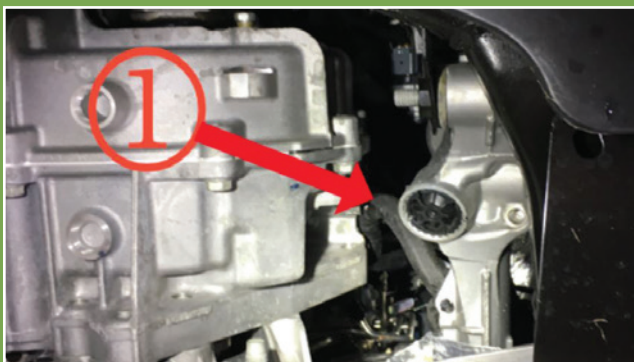
► Thanks to Blake Streling

# Engine Harness

## CHAFING AND COMMUNICATION DTCS SET

An illuminated Check Engine MIL may be seen while driving on some 2019-2020 XT4 models. One or more of the following DTCs may be set: B1011, P175F, and/or P25A2. In addition, any of the following data communication DTCs may be set: U0073, U0077, U0114, U0121, U0130, U0131, U0132, U0151, U0159, U0415, U0420, U0452, and/or U2415.

The illuminated warning lamp and set DTCs may be caused by the engine wiring harness chafing between the power steering gear and the rear of the transmission case. Since the wiring harness is a multi-wire bundled harness, a variety of DTCs may be set depending on which wire is damaged.



Engine harness



Possible damage between the power steering gear and transmission case

To correct the condition, repair the damaged wiring following the appropriate wire-to-wire repair procedures in the Service Information. Once the repairs are complete, protect and reposition the engine wiring harness to prevent future harness damage.

► Thanks to Chris Hightower

## Silverado 4500HD/5500HD/6500HD

### Maximum Speed Based on Axle Ratio

The 2019 Silverado 4500HD/5500HD/6500HD has a maximum vehicle speed that is based on the axle ratio of the truck. For example, if the truck has a 4.88 rear axle ratio, the truck will be limited to 65 mph. The speed limitation is operating as designed. There is no need to perform any diagnostics or replace any parts.

The 2019 Silverado 4500HD/5500HD/6500HD Speed and axle ratios are:

- Rear axle RPO 066, 4.10 ratio  
Maximum (Max) road speed: 78 mph
- Rear axle RPO 092, 4.30 ratio  
Maximum (Max) road speed: 75 mph
- Rear axle RPO 005, 4.56 ratio  
Maximum (Max) road speed: 70 mph
- Rear axle RPO 008, 4.88 ratio  
Maximum (Max) road speed: 65 mph

To resolve top speed concerns on the 2019 Silverado medium-duty trucks only, the rear axle ratio (RAR) can be changed at the customer's expense using GM parts for the rear gears and contacting the Techline Customer Support Center (TCSC) at 1-800-828-6860 (English) or 1-800-503-3222 (French) for an updated GM calibration.

There may be other concerns where a customer/dealer may want to change from a lower (numerical) RAR to a higher RAR to improve towing performance. The following changes apply only to 4x2 trucks. 4x4 trucks are equipped only with a 4.30 rear axle.

**TIP:** 2019 Silverado medium-duty trucks are equipped with tires for the maximum road speed listed previously.

► Thanks to Richard Renshaw

Top Speed Possible Rear Axle Changes	
Change from:	Change to:
4.88	4.10
4.88	4.30
4.88	4.56
4.56	4.10
4.56	4.30

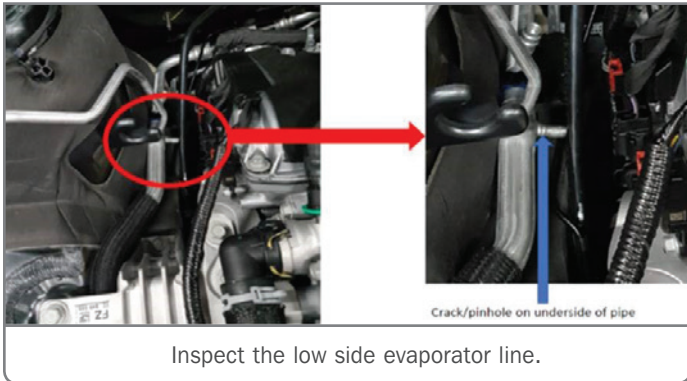
Towing Performance Possible Rear Axle Changes	
Change from:	Change to:
4.10	4.56
4.10	4.88
4.30	4.56
4.30	4.88
4.56	4.88

# Air Conditioning Blows Warm Air

Some 2017-2020 Impala models may have an air conditioning system that blows warm air. During diagnosis, it may be found that there is little to no refrigerant in the A/C system.

The refrigerant leak may be due to an inconsistency in the weld process, a welded joint in the evaporator lock ring, a compressor hose, or a low side evaporator line. Any of these sources may have the potential to slowly leak refrigerant over a period of time.

Inspect the low side evaporator line for leaks. Allow the A/C system to run for 30 minutes with refrigerant at the specified capacity before attempting to check for leaks. The dye that is installed in pellet form may take about 30 minutes of continuous operation to dissolve and disperse throughout the system.



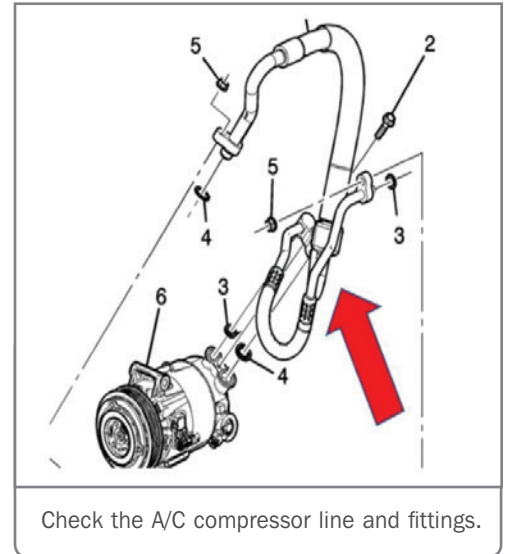
Also check the joints at the A/C compressor line and the fittings where the line attaches to the compressor and condenser.

**TIP:** Failure of two or more components is not common. Inspect the compressor and evaporator line first before other components.

If the A/C system has low refrigerant or no refrigerant, follow Refrigerant, Recovery and Recharging procedures in the appropriate Service Information.

To help find the source of the leak, follow the leak testing guidelines for R-134a and R1234yf systems. Special tools needed for leak testing may include:

- GE-41447 R-134A A/C Tracer Dye–Box of 24
- GE-42220 Universal 12V Leak Detection Lamp
- GE-43872 Fluorescent Dye Cleaner
- GE-46297 A/C Dye Injector Kit
- GE-50078 Electronic Leak Detector
- GE-50744 R-1234yf PAG Oil Injection Hose
- GE-50745 R-1234yf POE Oil Injection Hose



Once the source of the leak is found, follow the recommended repair procedures in the appropriate Service Information.

Refer to #PIC6380 for additional information and part numbers.

► Thanks to David Goodrow

## 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:**  
John Meade  
GM Customer Care and Aftersales

**Editor:**  
Lisa G. Scott  
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

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