



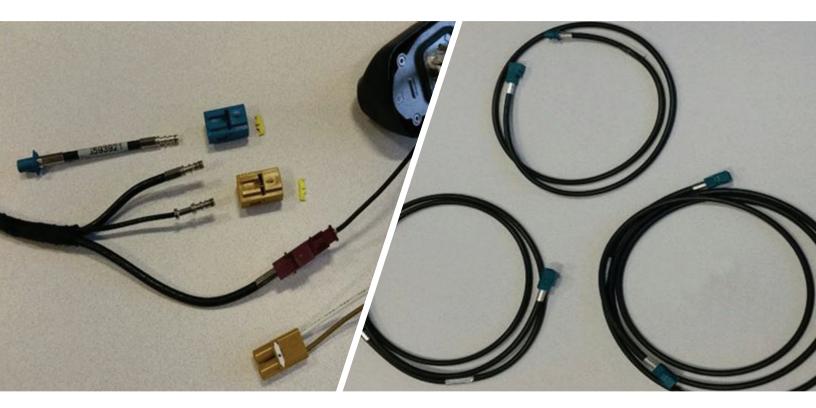






Mid-October 2017, Volume 19, No. 20

# Coaxial Cable Repair Kit Now Available



GM has implemented a new service strategy using universal coaxial cable repair kits to repair cables used for high frequency signals, such as cellular (OnStar), satellite radio (XM), GPS (navigation, and the AM/FM signal, on 2006-2018 GM models. There are eight individual kits available.

Coaxial cable is used to protect the signal from external interference. It has an inner conductor surrounded by an insulating layer that is surrounded by a conducting shield.

Original Equipment Manufacturer (OEM) replacement cables should be used when the exact cable is available and replaceable. In cases where this is not possible, the service kits should be used. Repairs may require the use of one or more kits.

## **Service Strategy**

When making coaxial cable repairs, it's not necessary to remove the old coaxial cable from the vehicle. Using the cable repair kits, a new service cable should be routed in the vehicle from point A to point B. Secure the cables using tie straps, electrical tape, or clips with foam tape to prevent possible rattling.

It may be necessary to combine various lengths of cable to create the needed length. Extra cable can be coiled around itself. However, do not bend the cable in more than a 2-inch radius to prevent damage to the cable.

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**Customer Care and Aftersales** 

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The service cables have a 1-way universal connector on each end. If a different end is needed, use a jumper to connect from the 1-way connector to the proper connector.

If an in-vehicle connector is damaged, it may be possible to replace it with a new service connector housing from one of the service kits. Kits include non-keyed water blue connectors for 1-way and 2-way styles. The 3-way connectors are color coded. If it's not possible to replace only a connector, run a cable and bypass the non-replaceable connector.

## **Repair Kits**

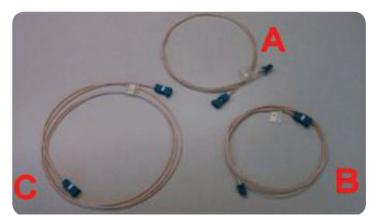
The following kits are available for service.

1. Communication Interface (OnStar) Module Antenna Cable Kit – replaces the cables for carrying a cellular signal or a combined cellular and GPS signal. It is also referred to as the long run cellular kit. It includes four different RG58LL cables in lengths of 18 inches (A), 3.5 feet (B), 5 feet (C) and 7 feet (D).



Communication Interface (OnStar) Module Antenna Cable Kit cables in lengths of 18 inches (A), 3.5 feet (B), 5 feet (C) and 7 feet (D).

2. Digital Radio (XM) and Vehicle Locator (GPS) Antenna Coaxial Cable Kit – replaces RG316 or RG174 satellite radio and GPS cables. It is also referred to as the long run XM/GPS kit. It includes three different RG174 cables in lengths of 3.5 feet (A), 5 feet (B) and 7 feet (C).



Digital Radio (XM) and Vehicle Locator (GPS) Antenna Coaxial Cable Kit cables in lengths of 3.5 feet (A), 5 feet (B) and 7 feet (C).

3. Digital Radio (XM), Mobile Telephone (OnStar) and Vehicle Locator (GPS) Antenna Coaxial Cable Kit — used to repair a connector or in conjunction with the long run kits to change the connector ends. It is also referred to as the connections kit. It includes different connectors, housings and jumpers to mate into the connector housings.



Digital Radio (XM), Mobile Telephone (OnStar) and Vehicle Locator (GPS) Antenna Coaxial Cable Kit

4. Digital Radio (XM), Mobile Telephone (OnStar) and Vehicle Locator (GPS) Antenna Cable – includes one 90 degree adapter cable to be used with any of the long length cable kits. Available individually or as part of the Digital Radio (XM), Mobile Telephone (OnStar) and Vehicle Locator (GPS) Antenna Coaxial Cable Kit.



Digital Radio (XM), Mobile Telephone (OnStar) and Vehicle Locator (GPS) Antenna Cable

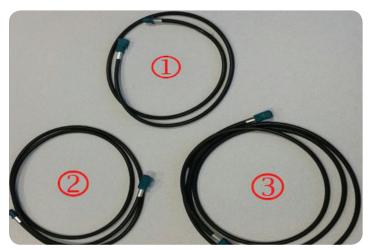
5. Communication Interface (OnStar) Module Antenna Cable Kit – includes a 4-inch jumper for the mini-UHF connector used on several OnStar modules before the 2011 model year.



Communication Interface (OnStar) Module Antenna Cable Kit

# Coaxial Cable Repair Kit Now Available - continued from page 2

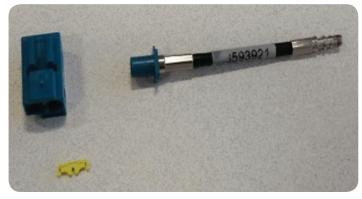
6. AM/FM Radio Antenna Cable Kit – used to replace the cables for carrying an AM/FM signal. These cables are used to connect between the radio and any AM/FM antenna (mast, glass antenna amplifier, glass antenna module, or roof mounted antenna base). It includes three different RG59 cables in lengths of 3.5 feet (1), 5 feet (2), and 7 feet (3).



AM/FM Radio Antenna Cable Kit

- 7. AM/FM/XM Connector Antenna Jumper with Dual Connector – used to connect a single AM/FM coaxial cable to an existing dual connector at the antenna. Re-use the factory dual connector body, or use the water blue universal connector body if the original is not serviceable. It includes one 4 inch universal antenna connector adaptor and a universal dual connector body
- 8. AM/FM Radio Antenna Jumper Cable with Tyco Right-Angle Connector – used on 2006-2010 radios; all Acadia, Captiva, Enclave, Express, Savana, and Traverse models with radio RPOs UG4, UGU, UUI, UHU, UJL, UGY, UGX,

UI6, UI4, UUI, UI2, UI5, UI7, or UI8; and can be used on additional models with the same connection. It includes a 90-degree adapter cable to be used with any of the long length cable kits.



AM/FM/XM Connector Antenna Jumper with Dual Connector



AM/FM Radio Antenna Jumper Cable with Tyco Right-Angle Connector

For additional information and part numbers, refer to Bulletin #17-NA-346.

Thanks to Matt Bunting

# Remanufactured V6 Engine Misfire

An engine misfire may be found on some GM remanufactured 2.8L, 3.0L and 3.6L High Feature V6 engines immediately after installing the engine. The misfire is usually limited to one bank or one cylinder, often cylinder 5 or 6.

The 2.8L engine (RPO LPI, LAU), 3.0L engine (RPOs LFI, LFW) and 3.6L engine (RPOs LY7, LLT, LFY, LFX) are available on 2007-2009 G6; 2007-2010 Aura, Outlook; 2007-2011 STS; 2007-2012 Malibu; 2007-2016 Allure (Canada only), CTS, SRX; 2007-2017 Enclave, LaCrosse, Equinox, Acadia; 2008-2009 G8, Torrent; 2008-2010 Vue; 2009-2017 Traverse; 2010-2015 Camaro; 2010-2016 Terrain; 2012-2018 Impala; 2013-2015 ATS; and 2015-2016 Colorado, Canyon models.

If the misfire condition is present, it may be caused by the wrong camshaft installed in the engine at the remanufacturer's facility.

Inspect the camshafts to ensure the correct camshaft is installed in each intake and exhaust position by comparing the ring strategy to either the engine that was removed (recommended) or to the charts included in #PIP5528.

Ring strategy camshaft identification is a series of rings along the camshaft that are either simply cast on the camshaft or machined down. There are five rings on each camshaft, which can be identified by the order in which the machined or cast rings are on the camshaft.

If the wrong camshaft is installed, either



Cast ring
 Machined ring

replace the camshaft with the same one from the original engine if undamaged or with a new camshaft. It is not necessary to replace the engine.

Thanks to Aron Wilson

Mid-October 2017

# EV Battery Service and Depowering Tool Software Update

A software update for the EL-50332 EV Battery Service and Depowering Tool is now available through the Service Workbench selection of "Essential Tools – Software Updates" in GM GlobalConnect. The update (EL-50332-370H) includes programming enhancements to increase the upper voltage threshold for the Bolt EV and CT6 battery packs and also adds three global applications to the vehicle menu selections.



EL-50332 EV Battery Service and Depowering Tool

The EL-50332 EV Battery Service and Depowering Tool is used to match the voltage level of a replacement battery section to the existing battery sections following a service event on 2011-2018 Volt; 2014 ELR; 2014-2016 Spark EV; 2017-2018 Bolt EV and CT6 PLUG-IN models.

### **Software Updates**

The EL-50332 tool requires periodic software updates, which are available on the GM Dealer Equipment Website (U.S.). GM dealer-ships can download the updates free of charge by going through GM GlobalConnect > Service Workbench > GM Essential Tools – Software Updates.

In Canada, go to the Service Department page in GM GlobalConnect. Select "GM Special Tools & Equipment – Software Updates" located under the Applications section.

To update the EL-50332 tool when software updates are available, use the Update function found under the Utility menu on the tool. Insert a USB-style flash drive with the updated software into the USB-A port. When performing an update. the tool will first check the inserted USB drive. Next, the version informa-



The Software Downloads pages includes the EL-50322 Instruction Manual.

tion of the currently loaded software and the new version information found on the USB drive will be displayed on the screen.

The current software version on the tool also can be checked by going to the Tool Info menu and selecting the Version utility. Tool

information available in the Version utility includes the software version, EEPROM, version date, tool serial number, and build number. Use the arrow keys to scroll between the screens of version information.

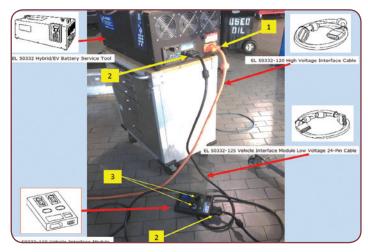
TIP: To view the EL-50322 Instruction Manual, go to the gmtoolsandequipment.com website and select the Software Downloads link. The manual is listed under Support Documents for the EL-50322 tool.

### **Battery Section Balancing**

The EL-50332 tool charges and discharges the replacement battery section through a direct connection to the replacement battery section positive and negative terminals. The replacement section is charged or discharged, as required, based on measured cell group voltage data.

Prior to servicing any High Voltage component or connection, always perform the High Voltage Disabling procedure. Personal Protection Equipment (PPE) and proper procedures must be followed.

The EL-50332 tool includes a universal fuse box, an interface module and a number of cables. Before beginning the balance procedure, make sure all the external EL-50332 components and cables are properly connected. Refer to the Hybrid/EV Battery Cell Balancing procedure in the appropriate Service Information for complete instructions on connecting the EL-50332 tool.



Check that all components and cables are properly connected before beginning the balance procedure.

If any codes appear when starting up the tool, check the following:

- Make sure the USB memory stick is fully inserted into the tool.
- Do not hook the machine to the battery section until instructed to do so by the tool.
- Update the tool software to the latest version available.

Depending on the charge condition of the battery pack and the section being balanced, the balancing process can take up to four hours to perform. A warranty code and pack voltage current data will be displayed at the conclusion of the balancing event. An audible tone will sound at the end of balancing or if there is a fault condition.

#### Thanks to Chuck Berecz

# Pop Sound from Front Suspension Area while Making Turns

Some 2015-2018 Escalade, Silverado, Suburban, Tahoe, Sierra and Yukon models may have a clicking, popping, or cracking sound coming from the front suspension or front frame area while the vehicle is making turns. The sound also may be felt in the footwell area.

The sound may be caused by either insufficient torque of the front frame crossmember or lower control arm bolts.

#### Frame Crossmember

To correct the sound coming from front frame crossmember, loosen and re-torque the four crossmember bolts to 70 Nm (52 lb.-ft.) on the first pass, followed by 110 degrees on the final pass.

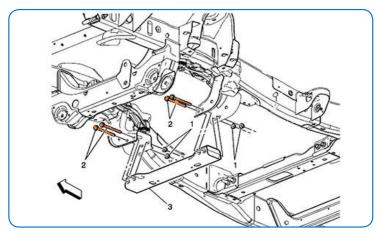
#### **Front Lower Control Arm**

To correct the sound coming from the front lower control arm, loosen and re-torque the four lower control arm bolts to 175 Nm (129 lb.-ft.).

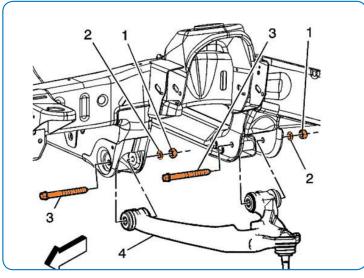
TIP: If the front lower control arms nuts and washers are removed, the directional washers must be installed in the same direction as they were removed.

When performing the service procedure, document the before and after torque readings on the repair order.

Thanks to James Will



Front frame crossmember bolts



Front lower control arm bolts



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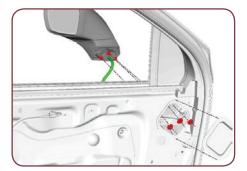
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# 2018 Buick Enclave Service Tips

These service procedures on the new 2018 Enclave differ from the previous model year vehicle. Refer to the appropriate Service Information for more details.

#### **Outside Rearview Mirror Fasteners:**

The fasteners are bolts through the door sheet metal; there are no studs on the mirror base.

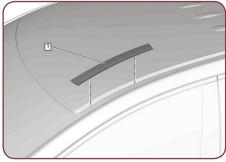


Outside rearview mirror fasteners

## **Rear Door Upper Reveal Moldings:**

"Football" clips on the run channel/glass assembly hold the molding in place. Use a trim stick and twist (do not pull straight off) to release the molding or the clips will break. The aluminum upper molding will bend easily if caution is not used.

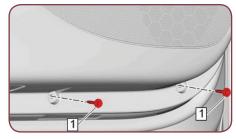
**Roof Rack/Ditch Moldings:** Studs through the roof hold on the roof rack. The headliner must be removed to service. Ditch



Front ditch molding

moldings are now clipped in and it may be difficult to prevent damaging them during removal. They may require replacement when servicing.

**Front Door Trim Removal:** Two screws located at the bottom of the door trim must be removed in order to remove the door trim.



Door trim panel fasteners

**Headliner Material:** The robust headliner material is easy to remove by tilting the headliner down on the right-hand side and removing it through the liftgate opening.



Rear air duct

**Headliner Removal:** Remove 1/4 trim on the right-hand side and remove the rear air duct to prevent the air duct from breaking the integrated duct work in the headliner.

**Overhead Console:** Use care when pulling down the garage door opener (roof console) bezel to prevent damage to the wiring



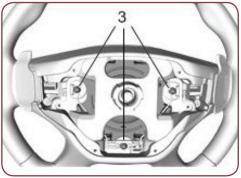
Garage door opener bezel

harness connector. Since the harness is glued to the headliner, carefully removing the bezel will prevent damage to the connector.

**One-Piece Glovebox:** The one-piece glovebox incorporated into the knee bolster means that the console needs to be removed to service the glovebox.

**Steering Wheel Shroud:** The steering wheel shroud is incorporated into the cluster trim as a one-piece unit that requires removal of the steering wheel to service.

**Driver's Airbag:** Removing the driver's airbag requires turning the wheel left, right, and then bottom side up to release the spring fasteners in order to remove the airbag.



Enc airbag spring fasteners

( ) Thanks to Sherman Dixon and Steve Bruder

# Service Know-How

# 10217.11V - Emerging Issues, November 9, 2017

The latest service topics from Brand Quality and Engineering are reviewed, including a review of Warranty Parts Center shipping safety guidelines and an introduction to the new Dealer Case Management system.

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