

## Corvette Competition Sport Seat Bolster Pad Support



### Excellence in Service Award

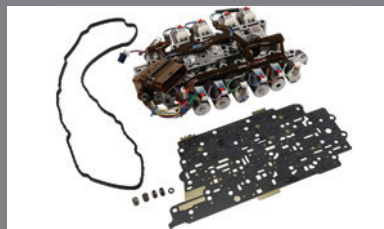
In recognition of your efforts to go above and beyond the call of duty to the delight of General Motors and our customers, delivering exceptional Skill, and Integrity. We hereby present:

**Dealer Technician**  
**ABC GM Dealer**

with this certificate of recognition for your high standards of excellence.

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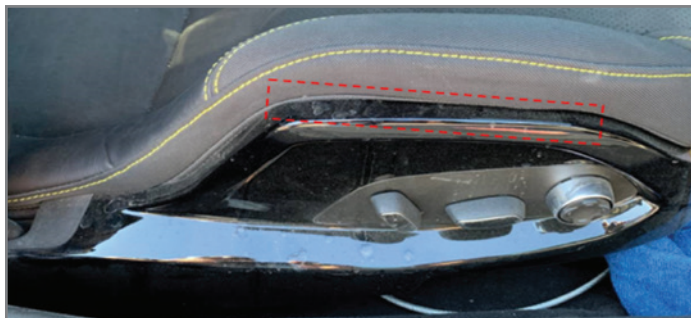
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# CORVETTE

## Competition Sport Seat Bolster Pad Support

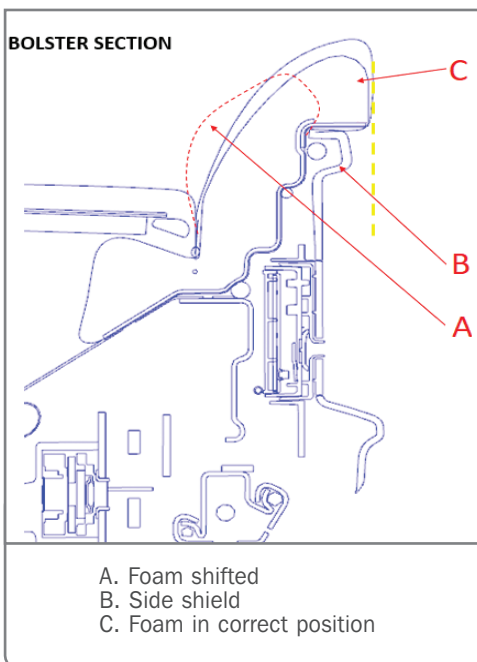
*The all-new 2020 Corvette Stingray features three available seats: GT1, GT2, and Competition Sport. On some models with the Competition Sport seats, the sides of the aggressive seat cushion bolsters may have a fit and appearance condition where the seat cushion pad folds under the cushion cover.*

The fit and appearance condition is due to an incorrect seat foam-to-side shield interface that causes the foam to be unsupported. As a result, the unsupported seat foam can create a poor appearance as the driver enters and exits the vehicle over time.



Incorrect seat foam-to-side shield interface

If this condition is found, check that the foam and bottom felt of the foam pad (A) are not caught on the edge of the side shield (B), which may cause the poor trim appearance. The felt on the bottom of the foam pad should extend over the edge of the side shield, allowing the foam to be proud to the side shield. (C)

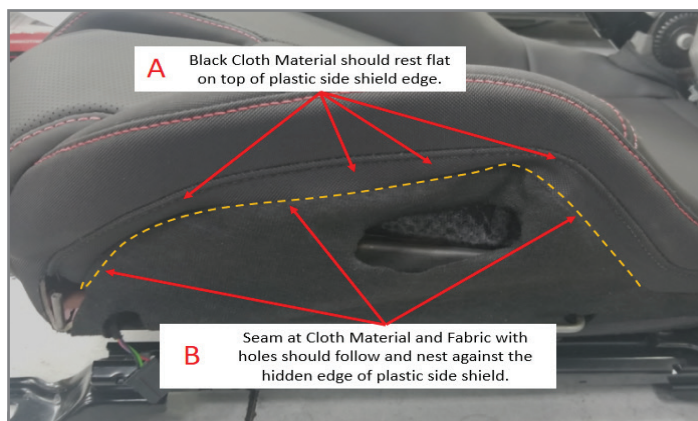


When properly fitted, the bolster will be flush with the vertical surface of the side shield.

### ADJUST FOAM PAD POSITION

To correct the fit and appearance condition, remove side shield and massage the foam pad back into position. The pad must be pulled up vertically. Make sure it is not folded or collapsed.

When in proper position, the pad will fit into the cushion cover of the bolster with the black cloth material of the bolster cover resting flat on the top of the side shield edge. In addition, the seam of the cloth material and perforated fabric should follow along the hidden edge of the side shield.



A. Black cloth should rest flat on top of side shield.  
B. Seam should follow hidden edge of side shield.

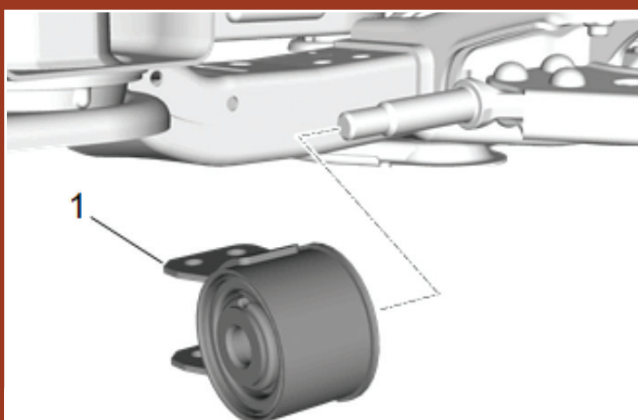
If the foam pad is folded or collapsed, replace the pad. The cushion cover and pad are removed from the seat frame as an assembly. Refer to Seat Cushion Cover and Pad Replacement in the appropriate Service Information.

After properly positioning the foam pad, reinstall the side shield so the bolster sits on top of the shield and is flush with it. The trim should not be under any tension that would pull the bolster foam off the side shield.

CONTINUED ON PAGE 3

# Front Suspension Rattle at Slow Speeds

A rattle or creak noise at slow speeds over bumps or broken pavement on some 2013-2016 Acadia; 2013-2017 Enclave, Traverse; and 2017 Acadia Limited models may be originating from the front lower control arm front bushing.

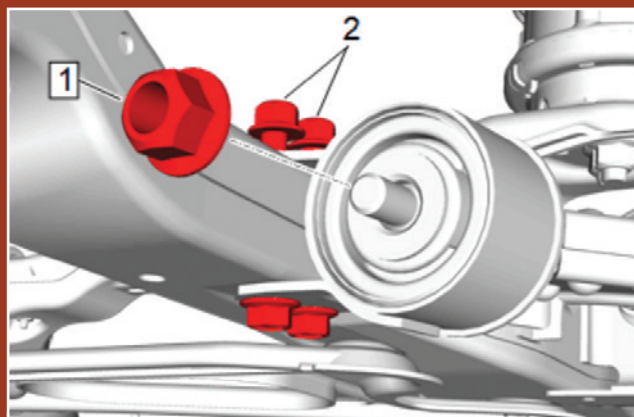


Front lower control arm front bushing

To determine the source of the rattle, follow the Noise Diagnosis – Front Suspension procedures in the appropriate Service Information.

If the rattle sound cannot be determined after a thorough visual inspection of all front suspension components and the use of the J39570 Chassis Ear tool, it may be necessary to replace the front lower control arm front bushing. Only replace the front lower control arm front bushing on the side that is making the rattle sound.

When replacing the front bushing, be sure to follow all steps in the service procedure as written in the Service Information.

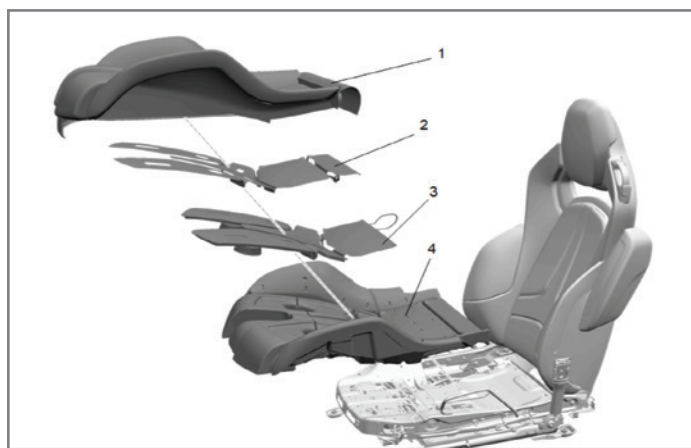


1. Front lower control arm front bushing nut
2. Front lower control arm front bushing bolt

**TIP:** The front lower control arm front bushing is not serviced separately from the mounting bracket. Do not remove the bushing from the bracket.

The torque sequence of the bushing is critical to resolving the rattle condition. Ensure that the front lower control arm front nut is fully tightened to properly seat the front lower control arm front bushing before tightening the front lower control arm front bushing nuts.

► Thanks to Jim Miller



Cushion cover and pad replacement



Bolster flush with the side shield.

► Thanks to Chris Daniels



# New FSE Technician

## RECOGNITION AWARDS

The Field Service Engineer (FSE) Technician Recognition Awards (U.S.) is a new recognition program that celebrates the skill and dedication of dealership technicians who have recently worked with FSE's on challenging repairs.

Six technicians from GM dealerships around the country will be selected each quarter — two each from the East, Central, and West, regions — for their outstanding performance. The criteria for recognition includes a focus on safety, customer satisfaction, personal accountability, training achievements, diagnostic abilities, and the level of repair documentation.

Each recognized technician will receive a Service Excellence magnetic plaque and an Excellence in Service Award certificate.

### 1ST QUARTER 2020 TECHNICIAN RECOGNITION AWARDS



### EAST REGION

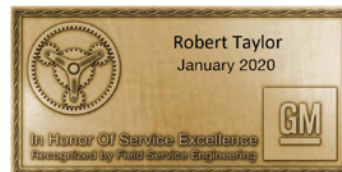


**Technician:** Carl Schmidt

**Dealership:** Alexander Cadillac, Sunbury, Pennsylvania

**Repair:** A vehicle recently in the service department with a difficult customer concern regarding intermittent, unwanted parking brake activation.

**Service Excellence:** Carl spent significant time trying to understand and duplicate the customer's concern while researching information in the Service Information. He road-tested the vehicle with the customer to try to better understand and determine the cause of the issue. Ultimately, Carl determined that it was probably the customer inadvertently pushing the Park Brake button at low vehicle speeds that was causing the Park Brake to activate. He explained the operation of the Park Brake to the customer and how it may be set inadvertently. Making sure the customer's vehicle was safe to drive, and fully understanding what was happening in this situation is an example of going above and beyond for a customer.



**Technician:** Robert Taylor

**Dealership:** M & J Automotive, Hermitage, Pennsylvania

**Repair:** 2018 Yukon with an ABS light illuminated due to a broken right rear wheel speed sensor wire. The customer stated the vehicle would pull violently to the right when braking at about 40 mph. Robert repaired the wheel speed sensor condition and verified operation.

**Service Excellence:** After the sensor wiring repair, Robert took it upon himself to see if the steering pull condition was present. He disconnected the right rear wheel speed sensor and drove the vehicle. At about 42-45 mph with the brake applied, the vehicle did pull to the right. Robert contacted the Technical Assistance Center and explained concern. The case was escalated to the FSE level. After verifying the steering pull condition with the speed sensor disconnected, Robert and the FSE tried duplicating the condition on several other 2018 and 2019 vehicles. They discovered that the pull condition doesn't occur in two-wheel drive mode. The information was passed on to the engineering team for investigation and, ultimately, resulted in a campaign. Instead

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of just returning the vehicle after repairing the speed sensor wiring, Robert went the extra mile for the safety of our customers and to ensure GM was aware of this condition.

## CENTRAL REGION



**Technician: Dale Collins**

**Dealership:** Capitol Chevrolet, Austin, Texas

**Repair:** Dale always goes above and beyond assisting in Field Service Engineer

(FSE) cases. In some cases with other technicians at his dealership, Dale's assessment of the concern is gathered prior to a dealer visit. With his technical abilities, many cases have been repaired prior to FSE arrival, which helps speed up the process of getting the vehicle back to the customer in a timely fashion.

**Service Excellence:** Dale is a respected technician among his peers and is looked up to by other technicians. He is very meticulous and a great source of information. Many times, he has already investigated the recommended actions suggested by FSE's to help resolve a concern.



**Technician: Tom Popp**

**Dealership:** Holiday Chevrolet, Buick, GMC, Fondu Lac, Wisconsin

**Repair:** Tom has worked

with several Field Service Engineers (FSE) during his tenure at Holiday Automotive and has assisted the FSE's with other technicians. He always has gone above and beyond in assisting with cases. Tom is known as the technician to go to first with a case in the dealership. Tom's diagnostic techniques are top-notch and he always makes sure the issue is either fixed or if FSE assistance is really needed.

**Service Excellence:** Tom immediately impresses others with his talent and character. Tom became a World Class Technician in 2004, the 7th in the state of Wisconsin. He is a genius with electrical and drivability concerns, and specializes in Advanced Tech vehicles, Corvette, transmissions and electrical. The dealership has created a special team for him to service these unique vehicles. He also became a Service Technology expert to better assist his customers. In addition, he's a substitute teacher for both ASE and regular Auto Tech courses at the local technical school.

## WEST REGION



**Technician: Martin Moreno**

**Dealership:** Mark Christopher Chevrolet, Ontario, California

**Repair:** 2019 Silverado from

an auction house with a no start condition caused by a loose ground in the starter relay circuit. What Martin did not know was that other technicians had worked on this truck for the no start condition and, ultimately, the truck had been repurchased. Due to Martin's diagnostic skills, the truck was finally repaired correctly, and GM was able to recuperate some of the truck's value at auction.

**Service Excellence:** What sets Martin apart is not that he figures out the tough problems, but that he displays a never-give-up attitude every day. Martin keeps a binder detailing all his complex TAC cases and shares that information with other technicians when they run into similar repairs. Martin's dedication to his craft is always apparent with his positive attitude and is inspiring to the other technicians at the dealership.



**Technician: Michael Krieger**

**Dealership:** Dublin Cadillac, Dublin, California

**Repair:** 2019 CT6 with all-wheel drive and DTC P0562

(System Voltage Low) set in the Transfer Case Control Module (TCCM). The code could not be duplicated and the TCCM was replaced. Unfortunately, the vehicle returned about one week later. At this time, the DTC was duplicated and a 1-volt difference was noted in the TCCM data between battery and ignition voltage. A high resistance splice connection that was crimped over the insulation of the TCCM battery power wire circuit was found. A new splice was put in place to fix the condition.

**Service Excellence:** Michael is very methodical in his diagnostic procedures and spends extra time to make sure customers' vehicles are returned in a properly repaired state. He is always customer focused and works hard to earn every customer's business every day. He is also very detailed in his repair order documentation relative to repair direction and exactly what has been done. He also contacts the Technical Assistance Center for help at the appropriate time and engages other people and resources to ensure the repair is completed in a reasonable amount of time.

► Thanks to Hank Poelman

# Identify

## Key Fobs & Relearn TPMS Sensors with

# ESSENTIAL TOOL EL-52545

The EL-52545 TPMS and RF tool that was shipped as an essential tool to all GM dealerships in October 2019 can help with the diagnosis and repair of systems that rely on Radio Frequency (RF) communications, including the Tire Pressure Monitoring System (TPMS), Keyless Entry (Key Fob Active Functions), Passive Entry and Pushbutton Start.

In addition, it offers the ability to quickly relearn TPMS sensors after a tire rotation or aid with key fob identification. For example, with a key fob in hand, the tool can display the last eight digits of the VIN of the associated vehicle, making it easy to match the fob with a vehicle in the dealership's inventory or a vehi

The EL-52545 tool works with the new Vehicle Intelligence Platform electrical architecture on the 2020 Corvette, CT5 and CT4 as well as with electrical architectures on 2008 and later GM models. The tool also has the ability to service non-GM vehicles, providing support for the dealership's used vehicle department.

The EL-52545 TPMS and RF tool package includes the TPMS Module, USB and RJ45 cables, power adapter, OBD II module and a hand strap.

### KEY FOB DIAGNOSIS AND SIGNAL DETECTION

The EL-52545 tool can be used to:

- Read the 8-digit VIN from the key-integrated fob or stand-alone key, along with additional data
- Monitor and display the frequency and signal strength for key fob output
- Monitor and display the signal strength for the Passive Entry/Passive Start system signals from the vehicle to the key fob

Warranty data shows that about 37% of returned key fobs do not match the VIN on the warranty claim, often due to an accidental mix up with other key fobs during transportation, at the dealership or by the customer. The Signal Detect function of the EL-52545 tool can be used to display the key fob identification along with the ability to check the fob frequency and signal strength.



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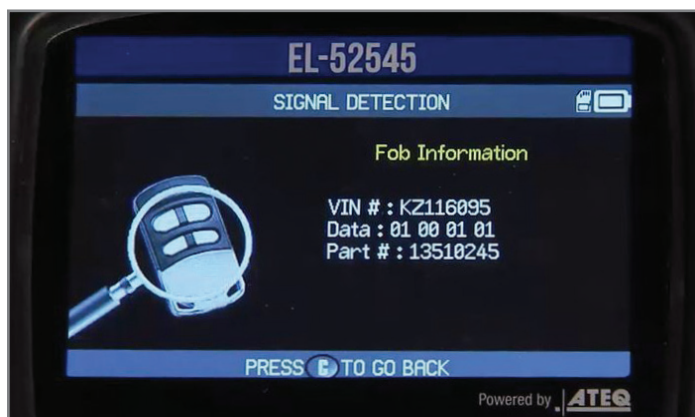




Signal Detect function

**TIP:** The Pre-Delivery Inspection (PDI) process includes a check of all key fobs. Verify that all functions of both key fobs are working properly. Replacements for missing key fobs should not be submitted as a warranty transaction.

To determine the VIN associated with a key fob, select the Signal Detect function on the EL-52545 tool. From the Fob/Key ID screen, the tool will instruct to place the fob on the small pocket on the back of the tool and press OK. The last eight digits of the VIN and the fob part number will be displayed on the tool.



Fob/Key ID identifies the VIN

## TPMS RELEARN

A recent GM study of 2018 model year vehicles has shown that TPM DTCs C0750, C0755, C0760, C0765 (Tire Pressure Sensor Low Voltage, Too Few Pulses, and Internal Malfunction codes) combined to account for more than 20% of all codes set, most of which set after a maintenance event (tire rotation) or dealer

installation of accessory wheels. The EL-52545 tool changes TPMS relearn communication from radio frequency to writing IDs directly via the Diagnostic Link Connector (DLC) without any time penalty when doing a normal tire rotation. As long as the tool is placed by the proper tire, an incorrect sensor cannot be learned, greatly reducing a common issue of learning a stray sensor on a near-by vehicle.

The Rotate–Diagnose–Relearn (RDR) function of the EL-52545 tool can be used anytime the TPMS or tires are serviced on a vehicle, such as a tire rotation or if the TPMS warning lamp is illuminated. All TPMS data is available on the tool.



RDR function

## TOOL UPDATES

The 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](http://gmtoolsandequipment.com) website using the link in GlobalConnect.

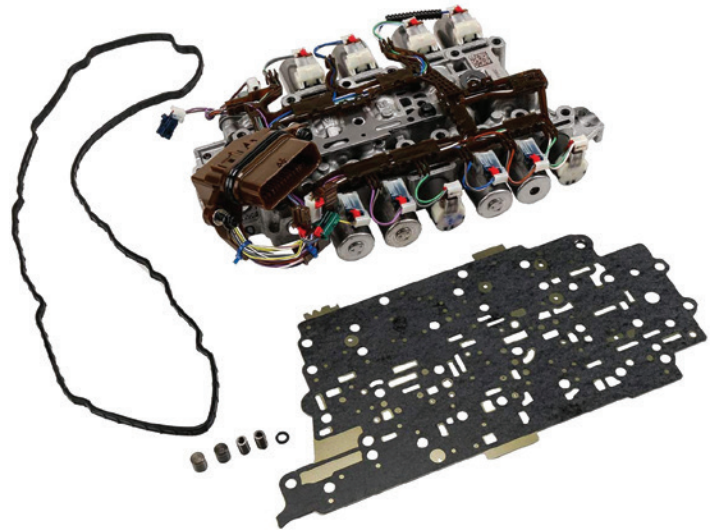
Future software releases will add more functionality to the tool, including a new Trailer TPMS feature that can be used to check the Trailer TPMS sensors.

For more information about the EL-52545 TPMS and RF tool, visit [gmtoolsandequipment.com](http://gmtoolsandequipment.com) or call 1-800-GM-TOOLS.

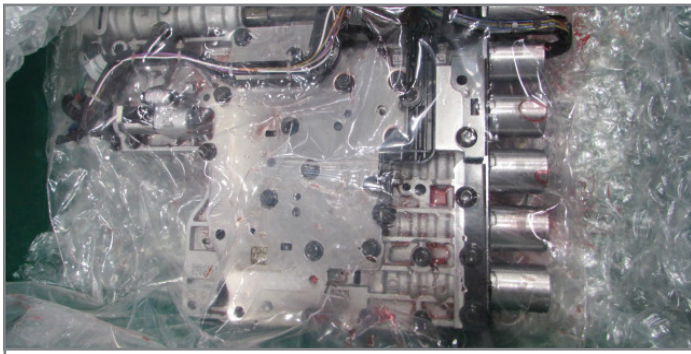
Additional information about the tool's features also can be found in the recent GlobalConnect message GCUS-9-9350 (U.S.).

► Thanks to Mike Waszczenko and Rick Jackson

# Valve Body Assemblies Function Tested Before Shipping



When replacing a valve body assembly on an 8-speed or 10-speed automatic transmission or solenoid body assembly on a 9-speed automatic transmission, technicians may notice the service part arrives wet with residual transmission fluid from function testing.



Valve body wet from testing.

The new parts should not be returned because they are wet with fluid from testing, which is a normal condition.

The components go through a function testing procedure before being shipped. The solenoids are characterized through a wet test and, as a result, transmission fluid may collect in the shipping package.



Solenoids wet after testing.

## SOLENOID CHARACTERIZATION

The valve bodies feature control solenoid valves that are tested after assembly to determine the output fluid pressure at certain electrical values, referred to as solenoid current/pressure data points. The solenoid valves are tested two ways, with an increasing and then a decreasing electrical current applied to the coil winding. The resultant current versus pressure data points are saved and assigned a file number, which is attached to the valve body or solenoid body. The file number of the entire valve body or solenoid body is printed on the assembly. The solenoid performance data file is stored on the TIS website. The data file is programmed and stored in the vehicle's Transmission Control Module (TCM).

The TCM must be programmed with either the new or existing solenoid valve performance data, depending on what component is replaced, in order to function at maximum efficiency. Reprogramming also ensures that the characteristic data relationship is properly matched between the solenoids, valve body, and transmission.

Replacing any of the following components requires the TCM to be programmed:

- Transmission assembly – Program the TCM with the new data file stored on the TIS website for all pressure regulating solenoid valves.
- Lower control valve body assembly with solenoid valves — Program the TCM with the new data file stored on the TIS website for all pressure regulating solenoid valves.
- TCM — Program the TCM with the existing data file stored on the TIS website for all pressure regulating solenoid valves.

► Thanks to Colleen Diemer



# Loose Carbon Patch in Air Cleaner Housing

If any of these DTCs are set, remove the air filter and inspect the carbon patches to determine if they are out of place.

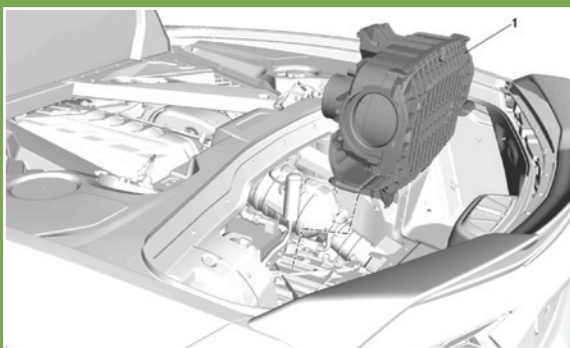
If a carbon patch is not secure and positioned properly, the air cleaner housing assembly will need to be replaced.



Loose carbon patch in air cleaner housing.



## Out of position carbon patch

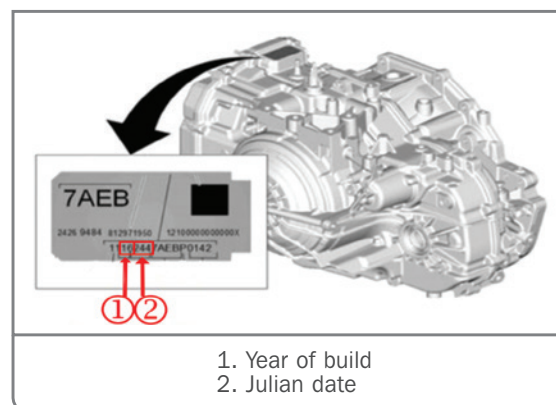


## Air cleaner housing assembly

# Fluid on Top of Transmission Assembly

Some 2020 Encore GX, Regal, XT4, XT5, XT6, Blazer, Equinox, Malibu, Acadia, and Terrain models equipped with the 9T45/50/60/65 9-speed automatic transmission (RPOs M3F, M3D, M3T, M3H, MJD, M3G, M3W, M3V, M3U, M3E) may have transmission fluid seen on the transmission assembly. The transmission build range for this condition is Jan. 1, 2020 through Feb. 15, 2020. (Julian date 0001 thru 0046).

The transmission fluid noticed in the top pockets of the transmission assembly may be fluid that was not thoroughly cleaned during assembly. The remaining fluid may now be seen underneath the vehicle and may be mistaken as a fluid leak.



Clean any transmission fluid on the transmission assembly. Also inspect the transmission fluid level and adjust the fluid to the correct level as needed.

To check for any leaks, install dye into the transmission and road test for a minimum of 15 minutes to ensure that the transmission fluid reaches operating temperature. After the road test, use a black light to inspect for any visual signs of the dye.

If dye is detected, follow the appropriate Service Information to make any repairs.

If dye is not detected, no further repairs are needed.

► Thanks to Tom Ellison

► Thanks to Richard Renshaw

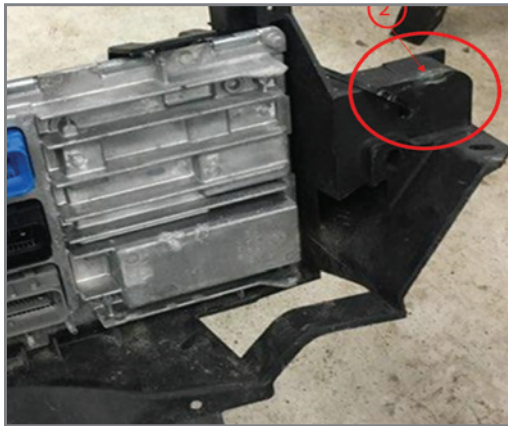
# Wiring Harness Routing and Engine Performance Conditions

There may be several engine performance conditions found on some 2019-2020 Silverado 1500 and Sierra 1500 models equipped with the 4.3L V6 engine (RPO LV3), 5.3L V8 engine (RPOs L82, L84) or 6.2L V8 engine (RPO L87). Engine conditions may include an illuminated Check Engine light, no start, engine runs rough, erratic gauge operation, erratic transmission shifting, and several blown fuses. There also may be a number of powertrain and communication DTCs set.

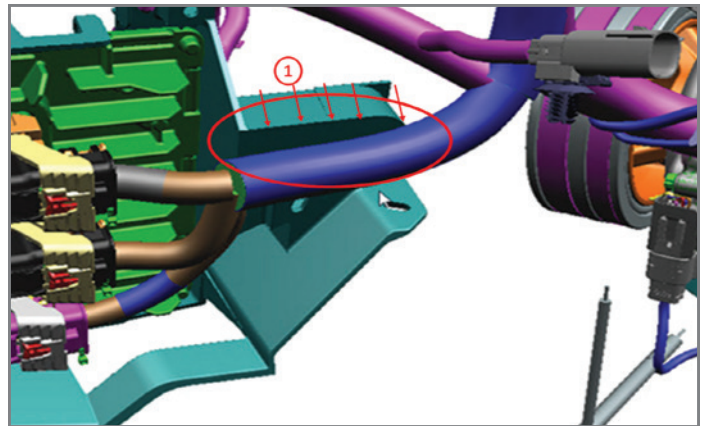
The engine performance conditions may be caused by the engine wiring harness chafing on the Engine Control Module (ECM) mounting bracket.

The contact with the edge of the ECM mounting bracket may be causing damage to a number of circuits in the wiring harness, resulting in the wide variety of different symptoms that may occur.

Inspect the engine harness in the area around the ECM mounting bracket. If harness damage is found, repair the damaged wiring following the appropriate Service Information wire to wire repair procedures. Once repaired, protect the engine wiring harness using Woven Polyester (PET) Electrical/Anti-Abrasive Tape.



Harness contact area



ECM mounting bracket location



Repair any harness damage.

► Thanks to Richard Renshaw

## TECH LINK

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