

Track Engine Temperature on Track-Ready Corvettes

There may be some questions from owners of track-ready 2015-2016 Corvette Z06 models (equipped with the 6.2L engine – RPO LT4) regarding the hot temperature message. Here's some information to relay to owners about Corvette track-ready vehicles and track engine temperature.

The manual transmission-equipped Z06 is designed to keep engine oil, coolant, transmission and differential fluids below the hot warning targets when driven by a professional driver on an 86°F (30°C) day on a "typical" racetrack for an indefinite period of time (effectively the time to burn through a full tank of fuel). The Corvette team validates the durability of the Z06 cooling systems with a 24 hour accumulated track test to simulate the most aggressive track day usage by Corvette owners.



The Milford Road Course at the GM Proving Ground used by the Corvette team is designated as a "typical" standard track, but GM recognizes that there are tracks around the world that are easier on a cooling system and some that are harder on a cooling system. Generally speaking, tighter tracks with a lower average speed and higher sustained RPM will drive higher fluid system temperatures. In addition, higher ambient temperature conditions affect any car's ability to run sustained laps at ten-tenths.

On Z06 models equipped with an automatic transmission, when in the Drive (D) position, the transmission selects the lowest possible gear ratio for the best acceleration and, because it has eight closely-spaced ratios, typically runs a higher average RPM than vehicles with the manual transmission. This optimizes lap time performance, but also taxes the engine oil and coolant more for any given track. As a result, the automatic transmission has the capability to run faster laps than the manual transmission, but thermal limitations are

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Techline News



Updated Dealership Guidelines for Computers in the Service and Parts Departments

The GM Dealership Infrastructure Guidelines (version 15.2) have been updated recently with the hardware and software specifications required for GM dealerships to follow when purchasing new computers for use in the service and parts departments.

The most notable change in the guidelines is the recommendation to use Internet Explorer (IE) 11. IE 10 is the minimum browser version. PCs running IE 9 are encouraged to update to IE 11.

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Customer Care and Aftersales

Track Engine Temperature on Track-Ready Corvettes

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reached more quickly. Owners who are planning to run extended track-day sessions at "professional" speeds are advised to use a vehicle equipped with the manual transmission, or to paddle shift the automatic transmission and select higher gears when conditions warrant.

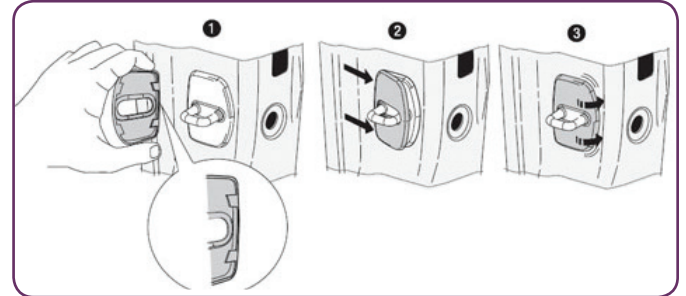
Any time the maximum recommended temperatures are reached in any condition, warnings will display on the Driver Information Center at the appropriate time for coolant, oil, or transmission fluid. A cool-down lap or two will bring operating temperatures back to a reasonable level and then aggressive track driving can be resumed.

Some may wonder why the Corvette is not designed to higher temperatures, say 110°F (43°C), to accommodate southern tracks in the summer. Corvettes have been designed using the "pro driver at 86 degrees" criteria for generations and, for the vast majority of owner use, it has resulted in excellent performance. If the Corvette was designed to higher temperature criteria, it would require adding additional cooling hardware, which drives up mass and, perhaps more importantly, requires the system to be fed more air. This would have a great impact on appearance and aerodynamic drag. Like most aspects of car design, the challenge is in finding the best balance of conflicting requirements.

👤 Thanks to Tracy Lucas

Door Striker Cover Installation during PDI

Installation of the front and rear door striker covers is part of the Pre-Delivery Inspection (PDI) process for 2015-2016 Escalade models; 2015-2016 Tahoe LTZ, Suburban LTZ and Yukon Denali models. These covers are shipped with the vehicle from the assembly plant.



Position the rounded side of the cover toward the outboard side of the vehicle.

When installing the door striker, check its orientation to ensure it is not installed backwards. The rounded side of the cover should be positioned toward the outboard side of the vehicle during installation.

👤 Thanks to Jim Will

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Updated Dealership Guidelines

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The updated guidelines provide a detailed description of what is and what is not currently supported by GM to properly run Techline software (TIS2Web, SPS, GDS2, MDI, Tech2Win, and Service Information).

GM continues to support:

- Intel i3/i5/i7 processors
- Business grade hardware (PC and Access Points)
- Windows® 7 Professional 32 bit and 64 bit operating systems
- Windows Vista Business 32 bit SP1.
- Internet Explorer (IE) 11

GM does not support the following:

- All processors below the Intel I series plus AMD, Celeron and Atom processors
- Consumer grade hardware
- Non-branded, built by hand or think client PCs
- Tablets running Android or Mac operating systems
- Windows XP or XP Mode/Virtual PC
- Any Home version of operating system
- Windows 8.x (any version)
- Java 64 bit version

- Internet Explorer 64 bit version
- Apple or Mac tablets, PCs

TIP: Computers purchased preinstalled with Windows 8.1 Pro software may include downgrade rights to Windows 7 Professional. Contact your PC manufacturer or refer to Microsoft's website for further details regarding eligibility and options available. Do not update to the new Windows 10 operating system until General Motors communicates applications are compatible.

Techline requires local Windows administrative access for software installation and updates. The guidelines include an updated list of Techline security and firewall exceptions for TIS2Web applications. This information should be communicated to your dealership IT specialist to reference as recommended firewall exceptions.

The complete Dealer Infrastructure Guidelines [add link to http://www.gmdesolutions.com/pdfs/GM_Dealer_IT_Guidelines.pdf] link are available at www.gmdesolutions.com under the Techline IT Solutions tab > GM IT Standards. In Canada, the Dealer IT Guidelines are located in the GlobalConnect Reference Library under Service.

Any questions regarding the guidelines or where to purchase PC hardware should be directed to the Techline Customer Support Center (TCSC) at 1-800-828-6860 (English) or 1-800-503-322 (French).

👤 Thanks to Lisa Scott

New AFIT Tool Adapters Coming This Fall

Several new control modules on 2016 GM models use new sensor technology. The SAE J2716 SENT (Single Edge Nibble Transmission) protocol allows for high resolution data transmission from a sensor to a control module, such as readings for temperature, pressure, throttle position and mass airflow.

The SENT protocol is a one-way asynchronous voltage interface that requires three wires — a signal line, supply voltage line and ground line. An asynchronous signal uses a form of computer control timing protocol in which a specific operation begins upon receipt of an indication (signal) that the preceding operation has been completed. A transmitted signal consists of a series of pulses, where the distance between consecutive falling edges defines the transmitted 4-bit data nibble.

This new technology requires three new adapters for the CH-47976-500A Active Fuel Injector Tester (AFIT) for the 2016 model year.

Alternative Diagnostics

The new tool adapters for the 2016 ATS, CTS, XTS and Encore will not be available at the start of production. Instead of using the AFIT, the diagnostic procedures included in the appropriate 2016 Service Information should be used.

If dealerships need additional help with the existing tools and procedures, Bosch can offer assistance and provide a loaner tool for temporary use. Call 1-800-GM-TOOLS (1-800-468-6657) and select for prompt 3 for Special Service Tools.

The new adapters are expected to be shipped to dealerships in September 2015.

📧 Thanks to Jon Nowak

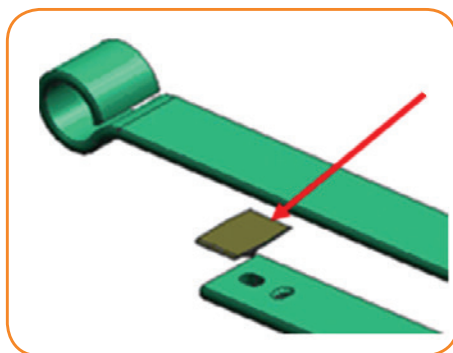
Tool Number/ Name	Tool	2016 Models (Engine RPO)
CH-47976-507-AFIT- SENT Fuel Sensor Adapter	Adapter to convert analog to digital signals	ATS (LGX, LF4), XTS (LF3), CTS (LF3, LGX), Encore (LE2), Ca- maro (LGX), Malibu (LFV), CT6 (LGX, LGW) and Cruze (LE2, LFV)
CH-47976-509-AFIT- G4 Connector	New E81 controller adapter with 4 connectors	CT6 (LGW)
CH-47976-511-AFIT- G5 Connector	New E82 control- ler adapter with 3 connectors and different pin outs than previous connectors	ATS Sedan (LGX), CTS (LGX), CT6 (LGX) and Camaro (LGX)

Rear Leaf Spring Noises

A squeaking or clunking noise may be heard coming from the rear of some 2015 Colorado and Canyon models as well as late model full-size trucks. These noises have been traced to the rear suspension leaf spring area.

Do not replace the rear leaf springs for a noise condition.

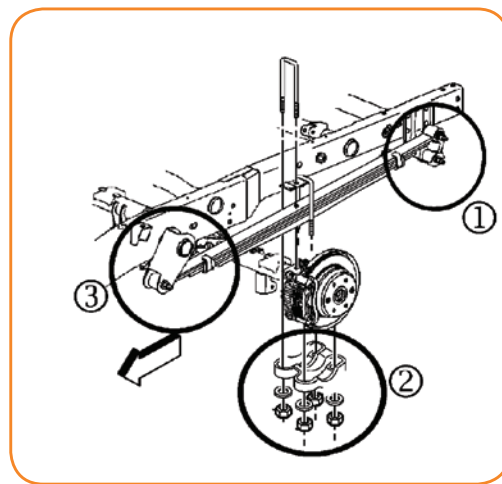
A squeak noise from the rear leaf springs on 2015 Colorado and Canyon; 2007-2015 Silverado and Sierra; 2007-2012 Colorado and Canyon; 2007-2010 Hummer H3 and H3T; and 1999-2007 Silverado (Classic) and Sierra (Classic) may be due to debris getting between the leaf springs. The frequency and severity of the noise is affected by the types of local roads on which the vehicle is driven.



Apply grease on the front and rear tip inserts.

Pressure wash the rear leaf springs to remove as much dirt and debris as possible. Dry the springs with compressed air. Apply a liberal amount of grease (P/N 12345996, U.S.; P/N 10953501, Canada) both underneath and on top of the front and rear plastic pad inserts for the #2 and #3 leaves. Protect any tool used to gently pry up the tip inserts to prevent damage to the spring leaves. Refer to Bulletin #06-03-09-004G for more details.

Clunking noises on 2015 Colorado and Canyon; 2014-2015 Silverado 1500, Silverado 2500/3500, Sierra 1500, Sierra 2500/3500; and 2007-2013 Silverado and Sierra models can usually be eliminated by re-torquing the joints of the leaf spring assembly. This includes the shackle joint to the frame and to the rear eye (Fig. #1), the anchor plate U-bolts (Fig. #2), and the front rear-spring mounting nut. (Fig. #3) Refer to the appropriate Service Information for the correct torque specifications. Refer to Bulletin #09-03-09-001C for additional information.



Re-torque the joints of the leaf spring assembly.

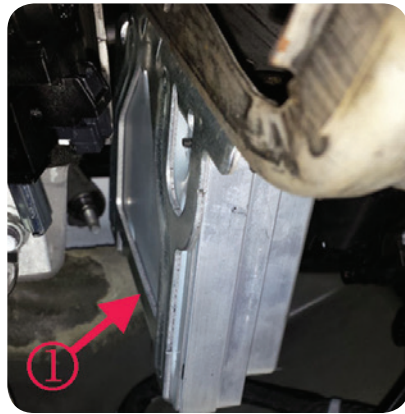
TIP: It is not necessary to remove the fuel tank to re-torque the leaf spring.

📧 Thanks to Charles Hensley

Instrument Panel Rattle Sounds

There are three areas that have been identified that may cause a rattle-type sound from the instrument panel area on some 2015 Escalade models, Silverado, Suburban, Tahoe, Sierra, Yukon; 2014 Silverado 1500 and Sierra 1500 models equipped with the 110 Volt AC Converter (RPO K14).

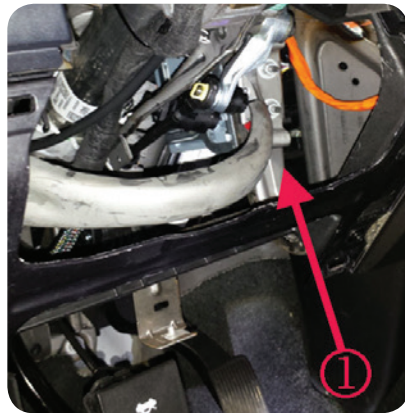
Condition 1: A metallic rattle-type sound from the left side of the instrument panel area.



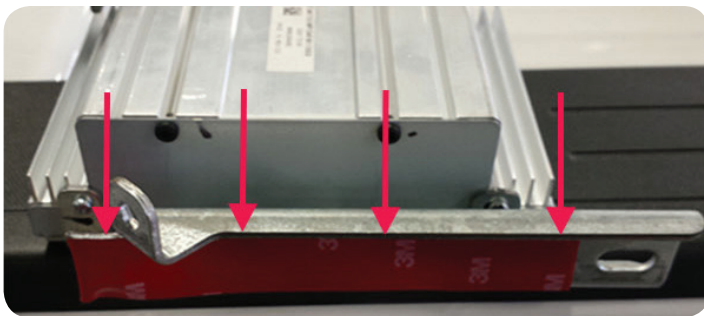
Accessory power control module

The sound may be caused by the K14 110 volt power inverter module not being seated properly in the mounting bracket. Inspect the accessory AC and DC power control module located to the right of the steering column for possible movement against the mounting bracket.

Also remove the K14 power inverter module and apply Kent Automotive two-sided tape (P/N P40519) or equivalent to the module bracket to insulate it from the mount.



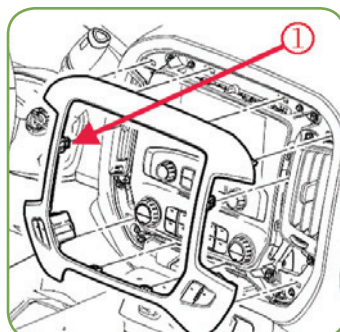
The accessory power control module is located to the right of the steering column.



Apply two-sided tape to the module bracket.

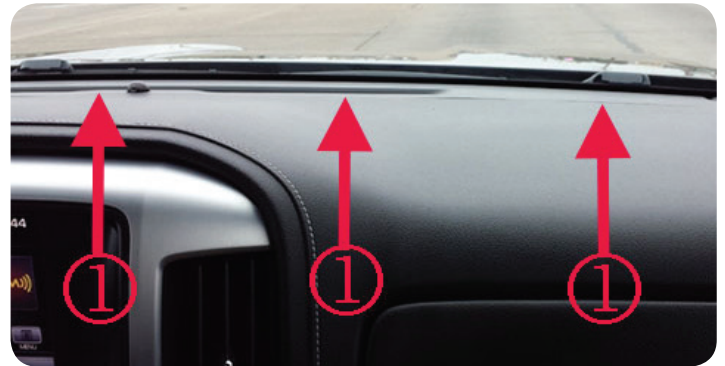
Condition 2: A rattle or itch-type sound from the center of the instrument panel in the radio area.

The instrument panel accessory bezel may be rattling due to insufficient tension of the retainers. Press on the bezel while duplicating the sound to see if it is eliminated. Wrap Kent Automotive BRS flocking tape (P/N KT13487) or equivalent over the ten retainers and reinstall the bezel.

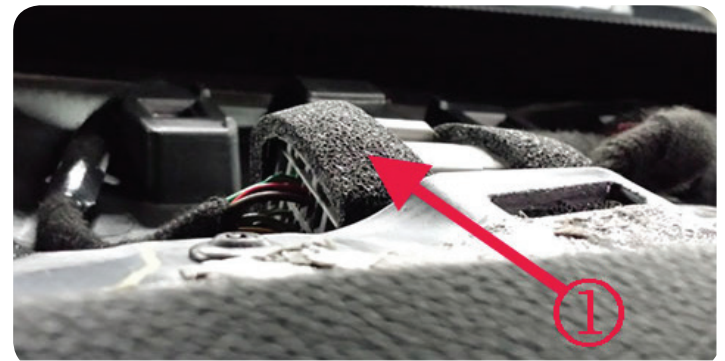


Apply flocking tape over the retainers.

Condition 3: A rattle or itch-type sound from the instrument panel area near the windshield.



Defroster grille



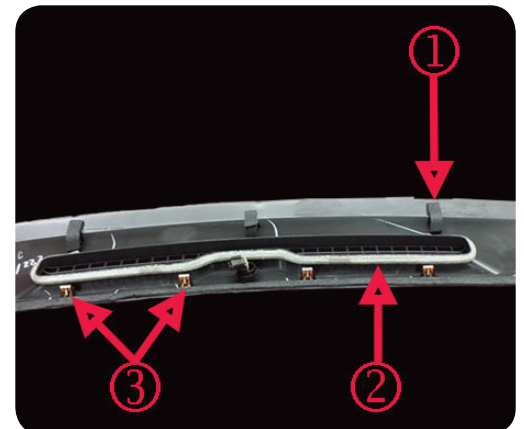
Apply foam tape around the connectors.

The defroster grill may be rattling due to insufficient retention of the retainers. Press on the defroster grille while duplicating the sound to see if it is eliminated.

Remove the defroster grille and apply foam tape around the connectors located under the grille to prevent them from rattling on the grille.

Also wrap Kent Automotive BRS flocking tape (P/N KT13487) or equivalent over the 22 metal retaining tabs that secure defroster grill in position. (Fig., #3)

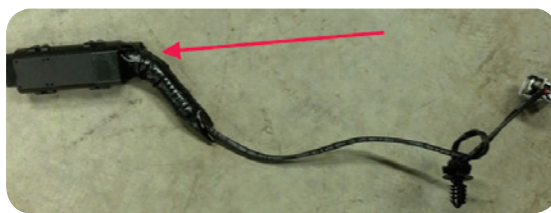
🙏 Thanks to David Goodrow



Apply foam tape to the mounting hooks (#1) and along the grille (#2) and wrap flocking tape over the retaining tabs (#3).

Service Driver Assist Message

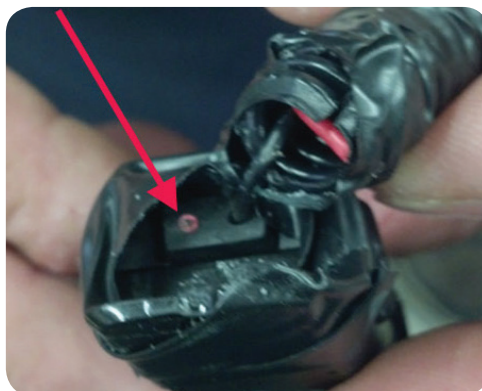
On some 2015 Escalade, Silverado, Suburban, Tahoe, Sierra and Yukon models and 2014 Silverado 1500 and Sierra 1500 models equipped with the Safety Alert Seat, a Service Driver Assist Message may be displayed on the Driver Information Center. If the Collision/Detection Systems Alert Type menu in the Vehicle Settings is set to Safety Alert Seat, the driver may notice that the alert type has changed to Beeps. DTCs B172E (XXX) and/or B172F (CCC) may be set in the Seat Memory Control Module.



Driver's cushion haptic seat motor

This condition may be caused by an open Driver's Cushion Haptic Seat Motor circuit or high resistance near the motor.

The Safety Alert Seat provides a vibration to alert the driver in certain circumstances. There are two motors in the driver's seat cushion. Either the right, left, or both motor(s) can run, depending on the alert. The Seat Memory Control Module provides the output voltage for the motors.



Open haptic seat motor circuit

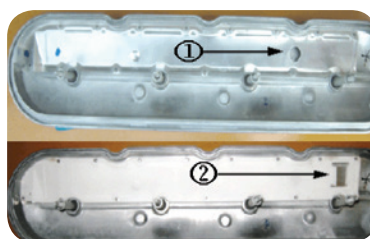
Using a scan tool, go to the Seat Memory Control Module and command on the left and right driver's cushion haptic seat motors. If a haptic seat motor does not operate, follow the appropriate Service Information and perform further diagnosis.

TIP: The haptic seat motor has a pigtail lead coming off the motor. In many cases, the wiring pigtail near the haptic seat motor may be broken. Do not repair the pigtail wiring; replace the haptic seat motor.

🙏 Thanks to Jim Will

Low Oil Pressure on V8 Engines

A Service Engine Soon (SES) lamp may be illuminated or low oil pressure may be indicated on the instrument cluster with DTC P0521 (Engine Oil Pressure Sensor Performance) stored on some 2007-2013 CTS-V, Escalade, Avalanche, Camaro SS, Colorado, Corvette, Express, Silverado, Suburban, Tahoe, Canyon, Sierra, Savana, and Yukon models equipped with a V8 engine (RPOs L20, L77, L94, L96, L99, L9H, LC8, LC9, LH9, LMF, LMG, LY6, LZ1). In some cases, these conditions may have started shortly after an oil change.



Old design valve cover (#1) and new design valve cover with square baffle (#2)

If DTC P0521 and/or low oil pressure is indicated on the instrument cluster in cold or hot weather on a Gen4 V8 engine and the engine is currently equipped with a PF48E oil filter, determine if the engine has been properly repaired and cleaned following the procedure used in the latest version of Bulletin #10-06-01-008. The bulletin covers engine oil consumption on engines with Active Fuel Management (AFM). If the engine has not been properly repaired, update the engine with the components outlined in the bulletin.

If the engine has been properly repaired and cleaned, inspect the left rocker cover (square baffle) and verify that the baffles can hold water and do not leak. If any leaks are found, clean and seal the edge of the baffle with RTV, if possible, or replace the valve cover. Thoroughly clean and dry the valve cover before installation and/or resealing.

In addition, change the engine oil and replace the oil filter with a PF48E filter.

🙏 Thanks to Rich Renshaw and Tracy Lucas

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Bulletin Category	Bulletin Number	Subject	Models
Body Hardware and Trim General Information	10-08-110-001D	Information on Proper Use of Floor Mats	2016 and Prior GM Passenger Cars and Trucks
Body Repair	12-08-51-002B	Spray-in Bed Liner General Information and Repair Procedures	2013-2014 Chevrolet Silverado HD 2500/3500 Series; 2015 Chevrolet Colorado, Silverado; 2013-2014 GMC Sierra HD 2500/3500 Series; 2015 GMC Canyon, Sierra
Body Repair	01-08-51-003E	Application of Anti-Corrosion Materials	2016 and Prior GM Passenger Cars and Trucks
Diagnostic Overview, Starting Point, and Programming Engine Engine/Propulsion	15-06-04-003	Intermittent Stall After Making a Left or Right Turn, No DTCs Set, No Driveability Concerns, Vehicle Immediately Restarts	2013-2015 Chevrolet Camaro
Driver Information and Entertainment	15-08-44-002	Information on Upgrading an IO5 Non-Navigation Radio to an IO6 Navigation Radio	2014 Chevrolet Silverado 1500; 2015 Chevrolet Silverado 2500/3500 (without AVF); 2014 GMC Sierra 1500; 2015 GMC Sierra 2500/3500 (without AVF)
Engine Engine/Propulsion	15-06-04-004	Fuel Odor, Fuel Leak at Injector to Fuel Rail Connection	2011-2015 Chevrolet Cruze
Engine Engine/Propulsion	00-06-01-026G	Intake Manifold Inspection/Replacement After Severe Internal Engine Damage	2016 and Prior GM Passenger Cars and Trucks
Engine Transmission/Transaxle	08-06-04-006M	Information for Identifying Non-GM ECM Calibration Use and Power-Up Hardware Detection in Duramax™ Diesel Engines	2006-2013 Chevrolet Express, Kodiak, Silverado; 2006-2013 GMC Savana, Sierra, TopKick
Engine	09-06-04-026K	Identifying Non-GM (Aftermarket) Engine Calibrations for Gasoline Engines Using Tech 2® or GDS 2	2005-2006 Chevrolet Corvette — Equipped with any V8 Gasoline Engine; 2007-2016 GM Passenger Cars and Light Duty Trucks — Equipped with any V8 Gasoline Engine; 2012-2016 Chevrolet Camaro — Equipped with V6 Engine
Engine	08-06-01-006E	Engine Squealing Type Noise on Start-up or Vibration or Intermittent Loss of Accessory Drive	2007 Buick Rendezvous; 2007-2008 Buick Terraza; 2007 Chevrolet Monte Carlo; 2007-2009 Chevrolet Uplander; 2007-2010 Chevrolet Malibu; 2007-2011 Chevrolet Impala; 2007-2009 Pontiac Montana SV6; 2007-2010 Pontiac G6; 2007-2008 Saturn Relay; 2007-2009 Saturn AURA; 2007-2010 Saturn VUE
Engine Engine/Propulsion	05-06-04-022M	TOP TIER Detergent Gasoline Information and Available Brands	2016 and Prior GM Passenger Cars and Trucks
Engine/Propulsion Transmission/Transaxle	14-06-04-003A	Identifying Non-GM ECM Calibration Use and Power-Up Hardware Detection in Duramax® Diesel Engines Using GDS 2	2014-2016 Chevrolet Express, Silverado; 2014-2016 GMC Savana, Sierra
Engine/Propulsion	15-06-01-002A	Engine Misfire/Tick Noise, Malfunction Indicator Lamp (MIL) On, DTC P0300 Set	2015 Cadillac Escalade; 2014 Chevrolet Silverado 1500; 2014-2015 Chevrolet Corvette; 2015 Chevrolet Silverado, Suburban, Tahoe; 2014 GMC Sierra 1500; 2015 GMC Sierra, Yukon, Yukon XL
General Information	09-00-89-002L	Properly Maintaining Vehicles in Dealer Inventory	2011-2016 GM Passenger Cars and Trucks
General Information	06-00-89-029L	Interior Cleaning – Instrument Panel (IP), Hard or Plastic Surfaces, Seats, Carpet, Leather, Vinyl, Fabric Cleaner, Stain Remover, Restorer — Product Availability	2006-2016 GM Passenger Cars and Trucks
General Information	03-07-29-004J	Manual Transmission Operating Characteristics	2016 and Prior GM Passenger Cars and Light Duty Trucks; 2009 and Prior Chevrolet and GMC Medium Duty Trucks
General Information	03-00-89-006L	New Vehicle Pre-Delivery Inspection (PDI) – Delivering Quality Vehicles and Generating Higher CSi Scores	2016 and Prior GM Passenger Cars and Light Duty Trucks
HVAC	99-01-39-004G	Air Conditioning Odor	2016 and Prior GM Passenger Cars and Trucks
Safety and Security	09-09-40-001C	Seat Belt Buckle Latching Issues and/or Seat Belt Warning Lights Illuminated	2016 and Prior GM Passenger Cars and Trucks
Safety and Security Steering	15-09-83-001A	Transmitter/Fob Appearance After Integrated Blade Removed	2010-2015 Chevrolet Camaro
Suspension	15-03-09-001	Rattle or Clunk Noise from Rear of Vehicle When Traveling Over Bumps	2011-2015 Chevrolet Cruze
Transmission/Transaxle	14-07-30-001E	Information on Transmission Adaptive Functions and Correcting Low Mileage Harsh Shifts	2015 Cadillac Escalade, Escalade ESV; 2015 Chevrolet Corvette, Silverado; 2015 GMC Sierra, Yukon, Yukon XL

Service Know-How

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