GM TECH Link

June 2011
Volume 13, No. 6

A Monthly Publication for GM Dealership Service Professionals

# Installing the Tech2Win Application

Tech2Win is a PC-based application version of the Tech 2 and CANdi (Control Area Network diagnostic interface) module that can be loaded onto a service department Techline PC or notebook computer via TIS2Web.


The rollout of the application will begin in mid-June, starting with Cadillac dealerships, to be followed by Chevrolet dealerships in early July and Buick/GMC dealerships in August. The GMCL rollout will begin in early August. Look for update messages in TIS2Web, Service Information and GM Global Connect.

When using the Tech2Win application, vehicle communication is performed using the Multiple Diagnostic Interface (MDI), which provides faster operation than a Tech 2 with a CANdi module.

Tech2Win offers virtually the same functionality as the Tech 2. See May *TechLink* for more details. It's used for diagnostics only. Service programming is still performed through TIS2Web SPS. Refer to the Quick Reference Guide (under TIS2Web News), section 10, "Limitations," for protocols and functions not supported.

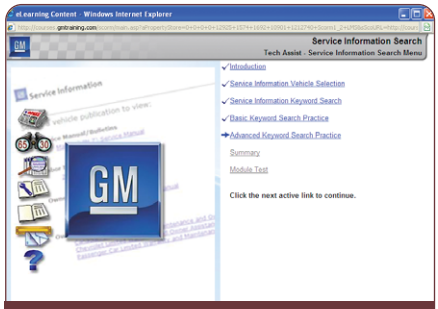
Tech2Win also includes the same vehicle coverage as the Tech 2. GDS 2 still must be used when servicing Global A vehicles (Camaro, Equinox, Cruze, Sonic, Volt, LaCrosse, Regal, Terrain and SRX).

continued on page 2

## TECHLINE news

# New Service Information Search TECHAssist

A new TECHAssist course available now on GM Training covers the different search functions technicians can use when looking up information in the Service Information (SI).




**The Service Information Search TECHAssist covers basic and advanced search features.**

Service Information Search, 10041.11T1, covers basic and advanced SI search features that can help technicians when searching for documents and specific components in the service manuals, bulletins and other publications.

In the course, participants will learn how to use advanced search features for searching documents and titles using a word or phrase as well as using the Ctrl-F function to find keywords in a document.

continued on page 2

## Contents



GM Customer Care and Aftersales

# Installing the Tech2Win Application – continued from page 1

## Installation

Before installing Tech2Win, the PC or notebook computer must meet or exceed the current minimum Techline hardware specifications. Review the latest specifications and guidelines at www.gmdesolutions.com. (In Canada, the IT guidelines are in the Service Library under Tools, Processes and Equipment on Global Connect.)

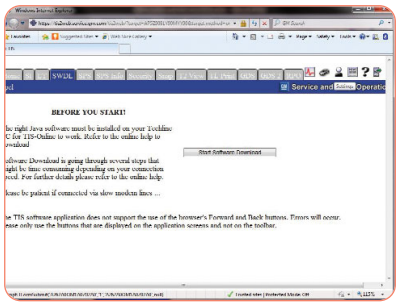
To install the application:

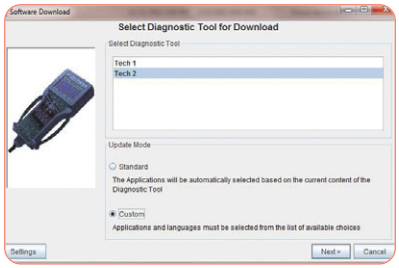
1. Connect the MDI to the computer. Power it using the AC adapter.
2. Select the Tech 2 software download on TIS2Web. A prompt will ask if you want to install Tech2Win. It can be installed on multiple PCs in the dealership.
3. Install the Tech2Win application using all the default selections. Installation should take less than 10 minutes.
4. Two icons will be placed on the PC desktop — a shortcut for Tech2Win QuickStart and a shortcut for the Tech2Win Configurator, which is used for multiple versions of Tech2Win depending on the vehicles being serviced in the dealership.

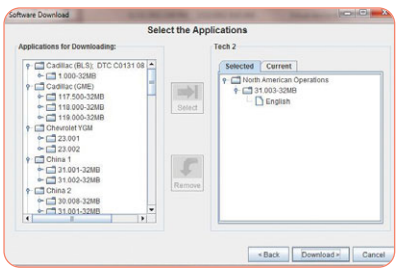

**Desktop icons: Tech2Win QuickStart and Tech2Win Configurator**

After the application installation is complete, the diagnostic software for the desired service coverage and software license (similar to the license renewal of GDS 2) must be obtained. To download:

1. Click the Tech2Win QuickStart icon that is now on the PC's desktop.
2. Since Tech2Win does not have a current license, a license dialog box will appear. Click OK.
3. When the MDI is detected, a dialogue box will direct you to select the vehicle communication interface.
4. To initiate the software license and install the diagnostic software, select the Software Download (SWDL) on TIS2Web and click Start Software Download.
5. Select Tech2 and Custom for the update mode.
6. Select the desired diagnostic software package. Available packages include the latest GM North American coverage as well as Saab and Saturn ASTRA.
7. Click Download to begin downloading the diagnostic package just like for a Tech 2. Current progress and Tech2Win will display during the download.




After the download is complete, the license countdown in the lower right corner will be updated to 30. This is the number of days until the license must be renewed. When the license expires, an expiration message will be displayed. To renew the license, use the security access service or update the diagnostic software using the standard update mode.

Tech2Win uses Communication Port (comm port) 9 on the PC. If this port is used for other devices, switch the comm port setting by selecting the Tech2Win Configurator icon on the desktop. Refer to the Quick Reference Guide for complete details.

To access the Quick Reference Guide for additional Tech2Win installation information, go to TIS2Web News and select the Tech2Win Quick Reference Guide.

When using Tech2Win, you can click the selections on screen or click the soft buttons on the screen where applicable.

Tech2Win activity between the vehicle, MDI, Tech2Win and the PC is shown on the bottom of the screen.


**Tech2Win activity is shown between the vehicle, MDI, Tech2Win and the PC**

For more information about installing Tech2Win, review the May Emerging Issues seminar on www.gmtraining.com in the U.S.

In Canada, more information about Tech2Win will be available in a future TAC Talk presentation as well as in the GDS 2/Tech2Win training course #16039.16H.

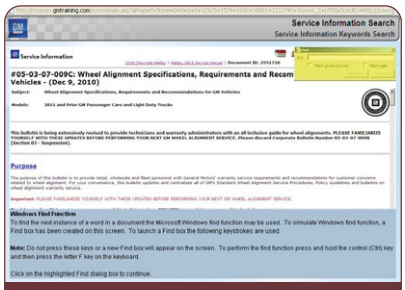
**Thanks to Mike Waszczenko**

TECHLINE news

continued from page 1

# Service Information Search TECHAssist

The AutoComplete feature available in Internet Explorer 7 and 8 also is reviewed. When AutoComplete is activated, it can save time by completing the inputting of commonly used keywords in the search field.




**Use Ctrl-F to find keywords in a document**

To complete the Service Information Search TECHAssist, go to www.gmtraining.com. Click the Catalog tab at the top of the page to perform a catalog search for a course. This TECHAssist also will be available on the Canadian LMS at www.gmprocanada.com once translation is completed.

**Thanks to Lisa Scott**

# Electric Power Steering Control Module Replacement and Programming

The 2010-2011 Equinox and Terrain, and 2011 Cruze and Volt are equipped with an Electric Power Steering (EPS) system as standard equipment on certain models. When servicing this system, the Power Steering Control Module (PSCM) is part of the power steering assist motor assembly and is replaceable as a complete unit independent of the steering gear assembly. Special steps must be followed when replacing the PSCM and motor as an assembly. After performing the replacement procedure, certain DTCs may be present.

It is important to follow all steps listed in the service procedure in the Service Information (SI) to ensure a successful PSCM and motor replacement and prevent DTCs from setting.

**TIP:** If a repair requires the replacement of the PSCM and motor, DO NOT DISCONNECT AND REMOVE THE OLD PSCM until the procedure calls for it.

The worm gear wear counter (or thermal cycle counter) data must be copied from the old power steering control module when the "Prepare Controller for Removal" option is selected. This data will be transferred to the new power steering control module using SPS once the new PSCM has been installed and programmed. If this step is missed and the PSCM was removed prior to copying the data, the PSCM will set DTC C0569 sym 3A, System Configuration Incorrect Component Installed, after programming. The DTC cannot be cleared.

To correct this error, reconnect the module and perform the steps outlined below in order to prevent unnecessary PSCM replacements (refer to the Power Steering Control Module Programming and Setup procedure in SI for more information):

1. Connect a scan tool to the vehicle and access SPS.
2. Perform the SPS function Electronic Power Steering – Prepare Control Module for Removal. This procedure copies the worm gear wear counter data from the old power steering control module prior to module removal and will transfer it to the new power steering control module upon running the Setup procedure on the new module.

   At this point, remove the old PSCM and install the new PSCM and continue with the rest of the programming instructions.
3. Perform the SPS function Electronic Power Steering – Programming. This procedure selects the correct calibration files for the vehicle.
4. Perform the SPS function Electronic Power Steering – Setup. This procedure transfers the worm gear wear counter data copied from the old power steering control module to the new power steering control module.
5. Perform the Steering Angle Sensor Centering and Software Endstop Learn procedure. Refer to Power Steering Control Module Calibration.
6. Clear DTCs after completing the programming procedure.

These steps are critical to ensure proper programming and also are covered in the SI Control Module References table.

For modules that no longer communicate with the vehicle or scan tool, it is necessary to replace the entire gear assembly with the PSCM and motor as a single service component. Complete the proper module programming and setup procedure.

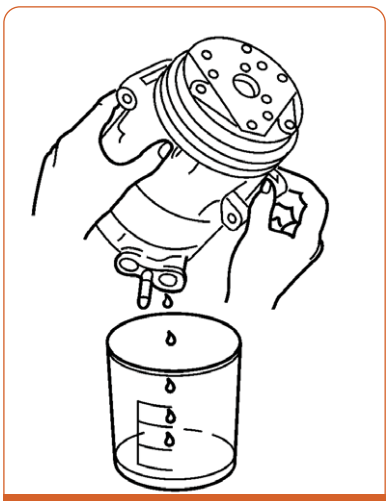
**Thanks to Alan Lustre and Steve Bunce**

# Air Conditioning Compressor PAG Oil Quantity Change

Many belt-driven air conditioning compressors in the past have contained 74 ml (2.5 oz.) of Polyalkylene Glycol (PAG) oil. To accommodate the latest vehicle A/C systems, new service A/C compressors may have a reduced quantity of PAG oil, containing only 40 ml (1.4 oz.).

Technicians should take note of the specific PAG oil quantity with every compressor replacement. The quantity must be known in order to perform the required oil balance procedure. Too much or too little PAG oil may compromise A/C system performance and compressor life.

Refer to the instruction sheet included with the service A/C compressor for the oil quantity contained within the service compressor and details regarding the oil balance procedure.



**Be sure to record the amount of oil drained from the removed compressor in order to perform the oil balance procedure before installing the service compressor.**

**Thanks to Larry Kasperek & the HVAC Service Engineering Team**

# Duramax Diesel Engine Performance

On some 2010-2011 Express and Savana models and 2011 Silverado and Sierra models equipped with the 6.6L Duramax diesel engine (RPO LML, LGH), there may be a condition of poor engine performance with low power during some driving maneuvers. DTC P0299, Turbocharger Engine Underboost, may be set.

This engine performance condition may be caused by the Engine Control Module (ECM) software. When this condition occurs, the ECM loses command of the Vane Position Sensor and the vane position is not optimized for all driving conditions, which may result in a lower-than-expected power response.

Perform the Diagnostic System Check for the vehicle. If DTC P0299 is set, reprogram the ECM. A revised ECM calibration is available on TIS2Web.

**TIP:** Do not reprogram the ECM or replace any components, such as a Manifold Absolute Pressure (MAP) sensor, until the diagnostic information in the Service Information for any set DTCs has been reviewed.

Refer to Bulletin #11-06-04-001A for additional information.

**Thanks to Mark Hoffman**

# New Coaxial Cable Service Strategy

The service strategy for coaxial cable replacement on vehicles has been to replace a whole cable with the exact production part. In some cases, this meant replacing an entire harness just to get a new cable.

GM is implementing a new service strategy that uses a set of universal coaxial repair kits to service a vehicle. This only applies to cable used for high frequency signals, such as cellular (OnStar), satellite radio (XM), and GPS (navigation). The kits do NOT apply to the AM/FM cables.

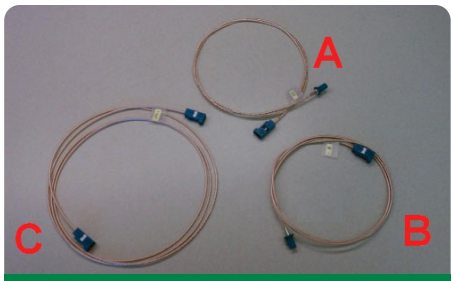
## Four Kits

There are four individual kits. Any given repair may require the use of one or more kits. Over time, stocking the original production coaxial cable will be phased out, and only the following kits will be used.

**Communication Interface Module Antenna Cable Kit (part number 13581174)** – Consists of four different RG56 cables in lengths of 7 feet, 5 feet, 3.5 feet, and 18 inches. This kit is used to replace the cables for carrying a cellular signal or a combined cellular and GPS signal. It's also referred to as the long run cellular kit.


**Communication Interface Module Antenna Cable Kit with RG56 cable**
**A. 18 in. cable B. 3.5 ft. cable**
**C. 5 ft. cable D. 7 ft. cable**

**Digital Radio and Vehicle Locator Antenna Coaxial Cable Kit (part number 13581173)** – Consists of four different RG316 cables in lengths of 7 feet, 5 feet, and 3.5 feet, and is used to replace the satellite radio and GPS cables. It is also referred to as the long run XM/GPS kit.




**Digital Radio and Vehicle Locator Antenna Coaxial Cable Kit with RG316 cable**
**A. 3.5 ft. cable B. 5 ft. cable**
**C. 7 ft. cable**

**Digital Radio and Mobile Telephone and Vehicle Locator Antenna Coaxial Cable Kit (part number 13581175)** – Consists of many different connectors, housings, and jumpers to mate into the connector housings. This kit may be used by itself to repair a connector or in conjunction with either of the long run kits to change the connector ends. It's also referred to as the connections kit.

**Digital Radio and Mobile Telephone and Vehicle Locator Antenna Coaxial Cable Kit**

**Communication Interface Module Antenna Cable Kit (part number 22803854)** – Consists of a 4-inch jumper for the mini-UHF connector that was used on several OnStar modules before the 2011 model year.

**Communication Interface Module Antenna Cable Kit**

With the new kit strategy, it is not necessary to remove old or bad coaxial cable from the vehicle. Using the long run kits, new service cable should be routed in the vehicle from point A to point B. The cables should be secured with a combination of tie straps, electrical tape, and/or clips with foam or felt tape placed around the cable to eliminate possible rattles.

It may be necessary to combine various lengths of cables to create the needed length. If there is extra cable, it can be coiled around itself, but be sure not to bend the cables more than a 2 inch radius or damage could occur.

By default, the cables have 1-way universal connectors on each end. If a different end is needed, use a jumper to connect from the 1-way connector on the service cable 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 the Digital Radio and Mobile Telephone and Vehicle Locator Antenna Coaxial Cable Kit. The kit will have mostly non-keyed water blue connectors for 1-way and 2-way styles. The 3-way connectors are color coded. In some cases, it will not be possible to replace only a connector. For these cases, run a long run cable and bypass the non-replaceable connector.

For more detailed instructions, refer to the wiring repair section in the appropriate Service Information. Go to Wiring System and Power Management > Diagnostic Information and Procedures > Coaxial Cable Repair.

**Thanks to Syed Rahaman**

# Individual Steering Column Part Availability

In the past, when replacing the steering column on a 2006-2009 Equinox, Torrent and VUE with Electronic Power Steering (EPS), the only part that has been available is a steering column assembly kit, which includes the motor and Electronic Control Unit (ECU). Using this kit, with all components, when only the steering column is needed leads to excessive cost.

A new steering column part has been released for service. The motor and ECU are not included. The steering column is available for VUE applications (part number 19257207) and Equinox/Torrent applications (part number 19257209).

When replacing only the steering column, the motor and ECU must be transferred from the original steering column.

**Thanks to Hassan Abdallah**

# Steering Angle Sensor DTCs

On the 2010-2011 Equinox and Terrain, a Service Steering message or Service Stability message may be displayed and DTC C056E with symptom code 42, calibration data set not programmed, may be set. Also, DTC C0569 3A may set after a new steering gear assembly is installed.

Before diagnosing DTC C056E 42 or C0569 3A: If Steering Angle Sensor (SAS) DTC C0710 symptom 71 (invalid serial data) or symptom 00 is set, it must be repaired first in order to learn the steering angle in the Power Steering Control Module (PSCM) and Electronic Brake Control Module (EBCM) or programming will fail. When a Steering Angle Sensor on the chassis bus fails, a DTC C0710 symptom 71 sets. This DTC will be found in the EBCM and the PSCM (if equipped with electric power steering).

In addition, the SAS sensor/module can store DTC C056D 00. When a DTC C056D symptom 00 sets in the SAS sensor/module, diagnose this code first. The PSCM does not have an internal Steering Angle Sensor; it is calculated. The PSCM learns the Steering Angle Sensor that is on the Chassis Bus from the EBCM through the high speed LAN.

### Diagnosing DTC C056E 42 or C0569 3A

The PSCM can set DTC C056E 42 when a steering gear assembly was replaced without SPS programming or programming was not completed. DTC C0569 3A can set from a previous motor/module or complete gear replacement.

For example, if a previous repair of a steering gear replacement was made at a body shop without SPS programming or set-up, the steering will work normally with no service steering message. However, after some time the PSCM will set DTC C056E 42. The Service information will instruct to program the PSCM using TIS2WEB and then set-up the module. During set-up, it may fail. Using GDS2 to perform the soft-stop learn function, it will appear to be completed but DTC C056E 42 will not clear. At this point, the complete steering gear with motor module assembly must be replaced.

In another example, if the previous steering gear assembly or motor/module was replaced for DTC C056E 42 and a new steering gear assembly is now installed, the PSCM module set-up procedure may fail during programming and DTC C0569 3A may set. This DTC will set when a Prepare Control Module for Removal procedure was not successfully completed. At this point, it will be necessary to contact the Techline Customer Support Center for programming instructions to complete the set-up procedure.

**Thanks to Gordon Baillod**

# Exhaust Rattle Noise

The 2011 Camaro Convertible SS equipped with the 6.2L engine (RPO L99) and the 6-speed automatic transmission (RPO MX0) may have a metallic or spring-type rattle noise that is usually heard at idle when parked next to a wall or when pulling into or out of a garage.

The exhaust system for the 2011 model year has been revised to reduce exhaust noises heard during Active Fuel Management (AFM) mode. This revision includes a spring-loaded valve placed in the exhaust system before the muffler.

**Spring-loaded valve in the exhaust system**

It is characteristic of this spring-loaded valve to make some noise during engine operation or when tapping on the exhaust pipes. No parts should be replaced or repaired for this noise.

**Thanks to Jeremy Richardson**

# Inoperative Seat Heater

On some 2010-2011 Camaro models, the driver and/or passenger heated seat (RPO KA1) may be inoperative or turn off shortly after being turned on. The vehicle may or may not have DTCs stored in the Seat Heating Control Module. This condition may be intermittent and difficult to duplicate.

**TIP:** Do not replace any parts without completely following the information in #PIC5444 in the Service Information.

Obtain the resistance value of the heated seat elements by disconnecting the Seat Heating Control Module. Compare the value with the values listed in #PIC5444 for the present temperature of the seat heater elements.

If the resistance value is outside of the listed specification, disconnect the seat elements and measure the resistance of each element individually to determine the cause of the out-of-range resistance reading. Replace the appropriate element or repair wiring as necessary.

If the resistance value of the entire system is within the specifications, DO NOT replace the Seat Heating Control Module or heating elements. Inspect all terminals of the Seat Heating Control Module mating connector X2 for poor pin tension or damage and replace terminals as necessary.

**Thanks to Jeremy Richardson**

# Instrument Cluster Backlighting

Owners of some 2011 Escalade models, Avalanche, Silverado, Suburban, Tahoe, Sierra, and Yukon models may notice that the instrument cluster backlighting may remain on with the ignition key off. The backlighting may turn off if the top Driver Information Center (DIC) button is pressed.

Confirm the cause of the condition is the DIC button by disconnecting it and verifying that the condition is eliminated. Replace the DIC button assembly.

**Thanks to Jim Will**

# Refueling the Volt

When refueling the 2011 Volt, there are two conditions that may require customer instruction.

### Fuel Pump Nozzle

If the fuel tank is slow to fill or intermitting does not accept fuel without the fuel pump shutting off prematurely, it may be due to the fuel pump nozzle.

Certain states across the country use a vapor recovery system on gas station fuel pump nozzles, which can be identified by a rubber bellows around the fuel pump nozzle that seats against the vehicle's fuel filler pipe. If the fuel pump nozzle is not fully inserted into the fuel filler pipe, the fuel from the fuel nozzle may hit the inner wall of the fuel filler pipe creating additional back pressure, causing the fuel pump to shut off automatically.

Common vapor recovery nozzles have a retention tab. GM fuel filler necks include an appropriately located ridge to assist in the proper positioning and retention of the fuel pump nozzle.

The graphic indicates the proper and improper position of the vapor recovery-style nozzle during the refueling of the vehicle.

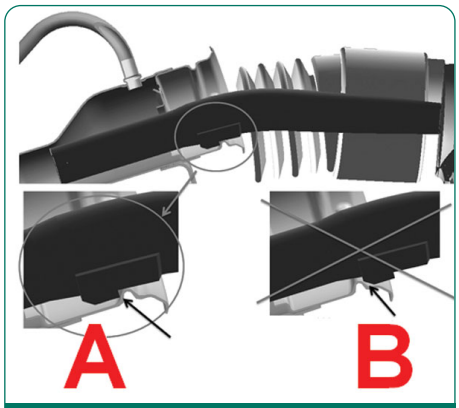
If the operator lifts the nozzle high, it will help in getting the nozzle in the correct retaining position.

### Overfilling the Tank

If the service engine soon light turns on and DTC P0497 is stored on some 2011 Volts, the fuel tank may be overfilled.

Follow the Service Information for any set DTCs and repair the vehicle as necessary.

Inform the customer to not overfill the fuel tank. After the fuel pump has shut off when refueling, do not force any more than three more pump "clicks" into the tank. Forcing excessive fuel into the tank can cause conditions with the vehicle's EVAP system.




**Proper (A) and improper (B) position of the vapor recovery-style nozzle during refueling.**

Thanks to Chuck Krepp

# Volt 12V Battery Charging

The Volt is equipped with a 12 volt battery just like all conventional vehicles. When displaying the vehicle, such as in the new car showroom, there is a common misconception that having the charge cord plugged in will maintain the 12 volt battery (either with the stationary 240V or portable 120V charger).

With the charge cord plugged in, the vehicle will charge the 300V battery and will also maintain the 12 volt battery to power up the modules needed to complete the charge event. When the 300V battery is fully charged, the modules will go to sleep and the vehicle will no longer trickle charge the 12 volt battery even though the charge cord is still plugged in.

If the vehicle is in Service Mode (by holding the Power button for 7-8 seconds without pressing on the brake pedal), all modules on the vehicle will stay awake, but the charging system will not be charging the 12 volt battery. This is the same as leaving the key in the On position (with the engine off) on a conventional vehicle.

TIP: The ignition should not be left in the Service Mode for more than five minutes without having a battery maintainer attached to the 12 volt battery.

To properly maintain the 12 volt battery while displaying the vehicle, use a battery maintainer, such as the EL-49642. The charge voltage should be kept below 14.8 volts due to the Volt having an AGM battery.

Periodically driving the vehicle also will activate the Accessory Power Module (APM) and can help to maintain and charge the 12 volt battery.

Thanks to Ashmi Haria

# Volt Control Module Calibrations

Various intermittent conditions on some 2011 Volt models built prior to VIN BU100954 may be corrected by updating several modules with the latest calibrations available on TIS2Web.

The intermittent conditions may include:

- Inconsistent heated seat operation from auto to manual mode
- Inconsistent blower motor operation
- Intermittent Navigation Radio reset
- Rear park assist volume concerns.
- MIL illumiation and DTCs setting in any combination in the following modules:
  - ECM P0128, P0604, P06E4, P1133, P2181
  - 14 Volt Accessory Power Module (APM) P1EA8, P1EA9
  - HPCM P07A3
  - HPCM2 P0ABB, P0604, P0D26, P0CD2, P0C4A
  - OBCM (Battery Charger Control Module) P0D3E, P0D3F, P1F05

TIP: The programming of these modules may take in excess of one hour to complete.

Always use the Midtronics battery charger (EL-49642) to maintain the 12V battery charge.

| | |
|---|---|
| K9 | BCM (Body Control Module) |
| K20 | ECM (Engine Control Module) |
| T6 | HPCM (Hybrid Powertrain Control Module) |
| K114B | HPCM 2 Hybrid Powertrain Control Module 2) |
| K57 | OBCM (Onboard Battery Charge Module) |
| K97 | Remote Heater and Air Conditioning Control Module |
| K1 | APM (14 Volt Accessory Power Module) |
| A11 | Radio USB programming for navigation software (must be completed prior to Radio SPS programming) |
| A11 | Radio |

After programming the modules, record all the warranty claim codes on the repair order.

Thanks to Chuck Krepp

GM TECHLink

GM *TechLink* is a monthly magazine for all GM retail technicians and service consultants providing timely information to help increase knowledge about GM products and improve the performance of the service department.

**Publisher:**
Thomas J. Arnold
GM Customer Care and Aftersales
Thomas.Arnold@GM.com

**Editor:**
Lisa G. Scott
GM Customer Care and Aftersales
Lisa.G.Scott@GM.com

**Technical Editor:**
Mark Spencer
mspencer@gpworldwide.com

**Production Manager:**
Marie Meredith

**Desktop Publishing:**
5by5 Design LLC
dkelly@5by5dzign.com

**FAX number:**
1-248-729-4704

**Write to:**
TechLink
PO Box 500
Troy, MI 48007-0500

**GM TechLink on the Web:**
GM GlobalConnect

General Motors service tips are intended for use by professional technicians, not a "do-it-yourselfer." They are written to inform those technicians of conditions that may occur on some vehicles, or to provide information that could assist in the proper service of a vehicle. Properly trained technicians have the equipment, tools, safety instructions and know-how to do a job properly and safely. If a condition is described, do not assume that the information applies to your vehicle or that your vehicle will have that condition. See a General Motors dealer servicing your brand of General Motors vehicle for information on whether your vehicle may benefit from the information.

Inclusion in this publication is not necessarily an endorsement of the individual or the company.

Copyright© 2011 General Motors
All rights reserved.

# Last Year for ASE Written Testing

The National Institute for Automotive Service Excellence (ASE) will offer the traditional written (paper-and-pencil) certification tests for the final time in November 2011. In 2012, ASE will transition all ASE certification tests from written testing to the Computer-Based Testing (CBT) format with test sessions available eight months of the year.

Enhanced ASE computer-based testing will debut in July and August 2011. Every ASE certification test and its recertification counterpart — 48 certification tests across 11 specialties — will be available in the enhanced CBT format.

Technicians at GM dealerships who need to complete their ASE certification or recertification in 2011 are encouraged to schedule a date and time in the July and August testing window to take the enhanced CBT.

CBTs offer test takers advantages in scheduling, convenience, and speed over the written tests. When fully implemented, ASE's CBTs will be offered four times each year in two-month windows. This will provide more choices when reserving an appointment. Plus, when completing a CBT, scores are available immediately, so test takers will know whether they passed before leaving the test center. Certificates will arrive via mail after the end of the two-month testing window.

Even though the ASE certification tests are computer-based, they will not be available to be completed online at home or at work. ASE does offer some non-certification programs online, but the ASE certification tests are only offered in secure, proctored test centers in order to give everyone a fair, consistent, and reliable testing environment, where the identity of each person taking a test is also verified. ASE has worked to expand the number of testing sites from its current number of 230 to more than 360 locations.

Visit www.ase.com for more information on the new enhanced CBTs as well as to find a test location near you.

**Thanks to Rich Orbain**

# Wheel Installation and Preventing Wheel Seizure

Beginning with 2011 model year vehicles, as part of tire and wheel installation, GM recommends putting a light coating of grease on the inner surface of the wheel pilot hole to prevent wheel seizure to the axle or bearing hub.

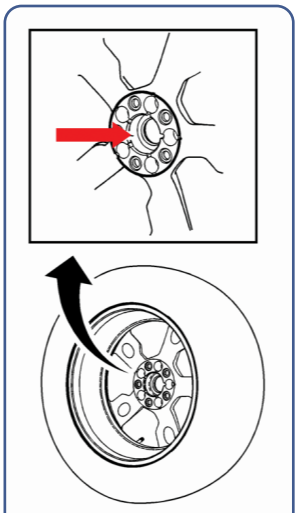
The dimension between the wheel and hub has been tightened in order to reduce mounting variation that results in 1st order tire variation. Only a very small amount of grease should be applied to the inner diameter of the wheel hub pilot hole of the wheel. Do not apply it to the entire pilot hole of the wheel or to the wheel bearing flange.

If wheel removal is difficult, it's recommended to apply the grease before installing the wheel for all model year vehicles.

Use lubricant part number 1051344 (in Canada, part number 993037).

**TIP:** Do not use penetrating oils, grease or other lubricants on the wheel studs to aid in removal or installation. Always install wheels to clean, dry wheel studs only.

**Thanks to Dave MacGillis**



**Apply grease on the inner surface of the wheel pilot hole.**

**Service Know-How**

**10211.06D Emerging Issues | June 9, 2011**

To view Emerging Issues seminars:

Log in to www.gmtraining.com, select Service Know-How/TECHAssist from the menu, select Emerging Issues, and then Searchable Streaming Video to choose the current Emerging Issues seminar or past programs.

# Car Issues – Fix It Right the First Time

| Model Year(s) | Vehicle Line(s)/Condition | Do This | Don't Do This | Reference Information/Bulletin |
|---|---|---|---|---|
| 2008 - 2011 | CTS, CTS-V, CTS Coupe – Water leak at rear of sunroof | Reseal sunroof frame end caps if needed | Replace sunroof frame | PI0436 |
| 2011 | Cruze – MIL On, DTC P0690 set | Check for updated ECM software | Replace ECM | PI0347A |
| 2009 - 2011 | DTS, Impala, LaCrosse, Lucerne, Malibu, Volt – FNC brake rotors | Follow diagnostic procedure for brake noise/pulsation | Replace brake rotors | 08-05-23-006G |
| 2010 - 2011 | Camaro, Cruze, Equinox, LaCrosse, Malibu, Regal, SRX, Terrain – iPod, Bluetooth, USB or UMS operation intermittent/inoperative | Follow the diagnosis for "Call End" | Replace the radio | PI0055A |
| 2011 - 2012 | Caprice PPV – New Model Features and Service Guide | Information only | | PI0426 |
| 2011 | Camaro – Rattle from rear compartment area when driving with convertible top up | Install foam blocks to trunk trim | Make any adjustments to the convertible top or replace suspension parts | PI0449 |
| 2010 - 2011 | Equinox, LaCrosse, Regal, Terrain – Noise from rear of engine | Install fuel pump isolator | Replace the fuel pump | 11-06-01-002 |
| 2011 | Camaro – Noise in rear floor area | Install insulating patch to floor | Replace shocks, struts, suspension parts | PI0424 |
| 2005 - 2011 | Corvette – Noise from roof panel while driving | Use GM Dielectric grease for lubrication of the weatherstrips | Replace roofs for noise or use GM Superlube to lubricate the weatherstrips | 08-08-67-013F |
| 2006 - 2011 | Impala – Noise from front of vehicle | Replace nut | Replace hub | 11-03-08-001 |
| 2006 - 2011 | DTS – Side door intermittently inoperative from outside door handle in higher temperatures | Replace the door latches | Replace the door handles | 09-08-64-035B |
| 2011 | Volt – DIC Select button inoperative, incorrect battery charging status indicated | Reprogram the cluster | Replace the cluster | PI0419 |
| 2008 - 2011 | Cobalt, G5, HHR – ESC message displayed in DIC, DTC C0460, C0280 or C0196 set | Reprogram the EBCM | Replace the steering sensor, Yaw sensor, or the EBCM | 11-05-25-001 |
| 2010 - 2011 | LaCrosse – Memory seat intermittently does not return to programmed position | Reprogram the memory seat module | Replace memory seat module or seat side shield | PI0431 |
| 2011 | Cruze – Inaccurate control of HVAC temperature, DTC B0233 and B0408 | Reset the HVAC controller | Replace the HVAC controller | PI0433 |
| 2011 | CTS-V, CTS-V Coupe, CTS-V Sport Wagon – Magnetically controlled suspension electrical connector not seated, DTCs C0575, C0580, C0585 or C0590 | Try reseating connector first and transfer connector side-to-side to aid diagnosis | Replace shock, unless confirmed by transferring connector side-to-side | PI0430 |
| 2011 | Regal – Center console door will not open or stay closed | Relocate the harness behind the center console door | Replace the center console assembly | PI0317 |

# Truck Issues – Fix It Right the First Time

| Model Year(s) | Vehicle Line(s)/Condition | Do This | Don't Do This | Reference Information/Bulletin |
|---|---|---|---|---|
| 2010 - 2011 | Suburban, Yukon – Exhaust noise or vibration in 6th gear | Add exhaust dampener | Replace exhaust components | PI0434 |
| 2008 - 2009 | Escalade, Tahoe, Yukon – Transmission shudder | After verifying the cause is the orifice, replace the pressure regulator valve inner spring | Replace Transmission | 09-07-30-001B |
| 2006 - 2011 | Avalanche, Escalade models, Sierra, Silverado, Suburban, Tahoe, Yukon models, – Body-colored side moldings dull | Clean body side moldings | Replace body side moldings | 11-08-111-002 |
| 2010 - 2011 | Express, Savana, Sierra, Silverado – Appearance of discoloration near edges on chrome bumpers | Clean off overspray | Replace front bumper | PI0437 |
| 2007 - 2012 | Avalanche, Canyon, Colorado, Envoy, Express, H3, SAAB 9-7X, Savana, Sierra, Silverado, Suburban, Tahoe, TrailBlazer, Yukon models – Hard 1-2 shift after transmission service | Install 1-2 accumulator springs only as indicated in SI usage chart | Install outer 1-2 accumulator spring #54 unless indicated in SI usage chart | PI0445 |
| 2007 - 2009 | Avalanche, Sierra, Silverado, Suburban, Tahoe, Yukon, Yukon XL – Body side molding service parts warped | Heat moldings to straighten | Return to CCA or RFI | PI0429 |
| 2008 - 2010 | Silverado, MIL illuminated, DTCs P0442, P0446, P0455 or P0449 Set, fuel tank hard to fill | Install new kit and jumper | Attempt to rewire connectors or add hoses | 09-06-04-028C |
| 2010 - 2011 | SRX – Wind buffeting noise when sunroof glass panel is opened all the way or the panel reverses while closing | Install new sunroof wind deflector | Replace sunroof seal, glass panel or reprogram the BCM | PI0444 |
| 2009 - 2011 | Traverse – Luggage carrier accessory cross rail wind noise | Move roof rack rails to position as recommended | Replace roof rack rails on 2010, 2011 MY | 09-08-67-005C |
| 2007 - 2011 | Sierra, Silverado - Audio system induced noise from rear side access door(s) | Repair trim cover rattle | Replace speakers | PI0420 |
| 2007 - 2011 | Avalanche, Escalade models, Sierra, Silverado, Suburban, Tahoe, Yukon models – Chrome outside door handle loose | Replace door handle with improved part | Use previous door handle parts | 09-08-64-032A |
| 2010 | Express, Savana – Driveline noise on acceleration | Replace only the U-joints | Replace the entire driveshaft | PI0438 |
| 2003 - 2010 | Express, Savana – Fuel tank vent hose quick release connector available | Replace the connector only | Replace the entire fuel tank filler pipe assembly | PI0427 |
| 2006 - 2009 | Equinox, Torrent, VUE – Individual steering column part component availability | Replace the steering column assembly (minus motor and ECU) | Replace the steering column assembly kit | PI0440 |
| 2011 | SRX – Clicking sound from HVAC system | Reprogram HVAC control module | Replace mode or temperature door actuators or the HVAC module | 11-01-39-001 |
| 2007 - 2012 | Avalanche, Escalade models, Sierra, Silverado, Suburban, Tahoe, Yukon, Yukon XL – Sunshade fails to stay in position | Re-seat the detent spring in the correct position | Replace the visor | 09-08-110-013A |
| 2010 | Equinox, Terrain – Driver seat cushion cover loose | Replace BOTH the driver seat cushion and cover | Replace the seat | PI0392 |
| 2010 - 2011 | Equinox, Terrain – Parking brake cable squeaking noise | Replace the rear left side parking brake cable with the new cable | Add any tape to fix this concern | PI0382 |
| 2010 - 2011 | Avalanche, Sierra, Silverado, Suburban, Tahoe, Yukon models – Excessive cabin moisture | Reprogram HVAC module | Replace module or other HVAC components | 11-01-38-001 |
| 2007 - 2011 | Acadia, Enclave, OUTLOOK, Traverse – Ignition switch/key difficult to turn | Review with customer that the key can bind when the wheels are turned off center | Replace the ignition switch | PI0416 |
| 2007 - 2011 | Acadia, OUTLOOK, Traverse – Manual seat adjuster jerky operation | Revised correction added to locate and repair the front seat track hooks | Replace the seat track assembly | 10-08-50-005C |
| 2011 | Acadia, CTS, Enclave, Equinox, LaCrosse, Malibu, Regal, SRX, Terrain, Traverse – Seat belt webbing/latch plate becomes twisted | Untwist the latch plate | Replace the retractor assembly | PI0388 |