

Pontiac Vibe Tips



EVAP System Diagnostic Concerns – Technicians may encounter difficulties in diagnosing EVAP system leaks.

A great resource for U.S. technicians for additional helpful tips is found at this web address:

<http://beta.gmcommontraining.com>. Click on TechAssist in the left column, then look under Emerging Issues. Review the material from the February 2004 Know-How telecast.

TIP: This system was also explained in the November 2002 TechLink.

Water Leaking on the Front Passenger Carpeting – Owners may comment that the passenger's front carpeting gets wet.

continued on page 3

Chevrolet Aveo Tips



Clock Concerns – Owners may comment that their clock intermittently resets to 1:00 o'clock, or loses time. Changes were made to the clock's circuit board to correct these concerns.

The new clock assembly is p/n 96434566.

Radio Anti-Theft Code Deletion – Aveos no longer have the radio anti-theft card inside the glove box. Aveos built after April 12, 2004 no longer have the radio theft feature. The VIN break-point was 4B574659. This was implemented to improve customer satisfaction.

MIL Concern, P0128 Stored, Heater Performance – Owners may comment that the MIL stays on with code P0128 stored, or that the heater doesn't get hot enough.

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Techline News

SI Transition to the Web

For the past few years, one of the In recent years, one of the most common requests to GM Service and Parts Operations has been to provide daily updates to the SI web site. On June 26, 2004, this became a reality. Daily updates include Service Bulletins, Campaigns, PIs and Service Manuals. The daily updates allow access to the most current service information available in the industry. The benefits of up to date information in the hands of our technicians include:

- Well-informed technicians who have timely access to "the factory's" concerns.
- Increased vehicle owner confidence with technicians using the most current information.
- The increased ability to fix the vehicle right the first time and reduce customer comebacks and cost.

Web utilization of SI is rapidly increasing, with over 3 million hits per day and climbing. A recent survey of all U.S. dealerships indicates that more than 89% of U.S. dealers are utilizing high speed Internet access in the service bay.

Timeline for Transition

Beginning January 1, 2005, all U.S. dealers will be asked to use the SI web site as their primary source for GM Service Information. With SI web as the primary source for information, future efforts will be focused on enhancements and site performance. Throughout the transition to SI web as primary, various communications will be provided to our dealers.

During the week of October 8, U.S. dealers received their final set of SI CDs, labeled November 2004. It contains an application CD and six data CDs. A sticker on the shipping box indicates the SI web site will be the primary

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ry source for SI starting January 1, 2005. This new base set of CDs will be incrementally updated weekly, via GM ACCESS, until early February 2005.

Following the November 2004 release of SI, the application will transition in 2005 to a quarterly DVD to be used for backup purposes only. A PC with a DVD drive will be required to use SI on DVD. Details concerning SI on DVD will be communicated shortly.

In the past several months, GM SPO has strongly encouraged dealer participation in the Multiple PC Initiative (MPI). MPI participants meeting the recommended 2:1 ratio have seen measurable increases in CSI and service stall efficiency, with increased availability of Techline applications such as SI web and TIS.

- Thanks to Bob Savo and Lisa Scott

DTC Symptoms, Revisited

This topic was first mentioned in the September 2003 issue of TechLink.

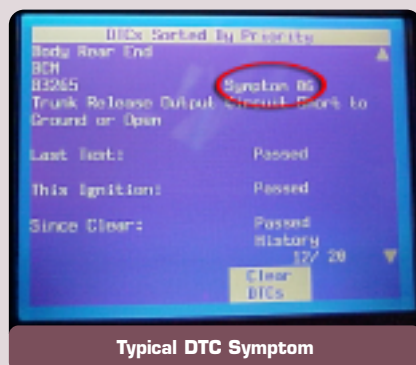
Briefly, due to the way DTC numbers were issued in the past, the list of numbers available for DTCs used on GM vehicles worldwide was being rapidly depleted. So, when the GMLAN communication system was being developed, a method was found to include additional data in each DTC message. This permits more information about a circuit failure to be displayed on the scan tool without needing additional DTC numbers. The extra data is called the DTC Symptom.

DTC symptoms are displayed as two additional alphanumeric characters, immediately after the traditional DTC.

The first character indicates the DTC symptom category, and the second character indicates the subtype.

TIP: A complete DTC Symptom Description is found in SI for each vehicle to which it applies. Follow this path:

- "Build" vehicle
- Vehicle Control Systems
- Vehicle DTC Information
- Description and Operation



Typical DTC Symptom

- DTC Symptom Description

TIP: You can view one such list on SI under document ID 1250630.

IMPORTANT: When you're working on a vehicle that displays DTC symptoms, be aware that the DTC symptoms contain information that should be provided on repair orders and warranty claims, and should be reported when talking with Technical Assistance. Engineers consider the DTC symptoms as a part of the DTC and write them as part of the DTC, separated by a space.

EXAMPLE: B3265 06

- Thanks to Bob Johncox and John Mason

Tech 2 Extended Warranty

REMINDER - Your new Tech 2 comes with a two-year manufacturer Express Exchange Warranty. You can extend the warranty, giving you a full five years of warranty coverage.

TIP: The extended warranty does not cover cables, adapters and PCMCIA cards.

Even if you do not presently have any warranty coverage on your Tech 2, you can purchase an Extended Warranty for 1, 2 or 3 years of coverage.

During the term of your warranty coverage, there are no charges for repairs performed to your Tech 2. And, you are guaranteed a 24-hour Express Exchange Warranty replacement service. If you have a problem with your Tech 2, simply call the GM Techline Customer Support

Center (1.800.828.6860) and you will receive an Express Exchange replacement unit the next business day at no additional charge (for requests received before 3 p.m. PST).

Contact 1.800.GM.TOOLS (468.6657) for additional information and Canadian pricing.

Compare:

	Warranty Service (with Extended Warranty)	Regular Repair (without warranty)
Repair Time	24 hrs. (replacement unit arrives the following morning)	4-6 days
Administration	None. One phone call gets you a replacement unit and return shipping.	Delays in getting repaired unit; i.e., issuing check, etc.
Costs	Extended Warranty Pricing valid through Dec. 31, 2004 1 year \$150.50 2 years \$280.00 3 years \$407.00	Approximately \$785 average repair, plus return shipping charges.

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.

Manager, Product Readiness:

R. M. (Bob) Savo
GM Service and Parts Operations
bob.savo@GM.com

Publisher & Editor:

Mark Stesney
GM Service and Parts Operations
Mark.Stesney@GM.com

Technical Editor:

Jim Horner
Jim.Horner@SandyCorp.com
1-248-816-3641

Production Manager:

Marie Meredith

Desktop Publishing:

Greg Szpaichler, MediaWurks
greg@mediawurks.com

FAX number:

1-248-649-5465

Write to:

TechLink
PO Box 500
Troy, MI 48007-0500

GM TechLink on the Web:

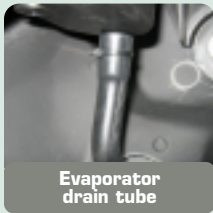
http://service.gm.com

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 bulletin 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.

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Pontiac Vibe Tips — from page 1



Evaporator drain tube

The source of the leak may be a disconnected HVAC evaporator drain tube. To correct the condition, attach the drain tube and secure with a plastic tie-strap.

Water Leaks from the Roof –

Owners may comment that there is water dripping from the front A-pillars or the headliner. The source of the leak may be an improperly sealed roof seam. The roof seam is located under the black rubber seal that runs from the front to the rear of the vehicle.

TIP: This leak may be misdiagnosed as a sunroof water leak.

1. Remove the Black Mohawk Molding and the luggage rack to gain access to the roof's body seam. Carefully pry the front edge of the molding up. Be careful not to damage the retaining clip, molding, and windshield.



Roof molding

2. After the molding has been removed, inspect the roof seam for skips or voids in the seam sealer.



Void in seam sealer

TIP: To help speed the diagnostic time, run water along the complete length of the seam. You may be able to see the skip in the body seam sealer.

3. Be careful not to damage the nylon retaining clip. If the water leak is coming from the front edge of the roof panel, the windshield will have to be removed.



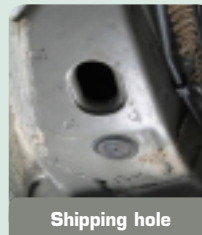
Front edge of roof panel

PDI Tips – Two key items are still being overlooked during the Vibe's PDI process: installation of the shifter override plastic button and the rear body plugs. See Service Bulletin 03-00-89-004.

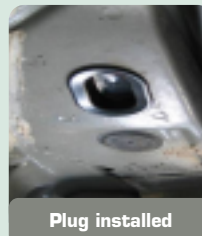


Button under plastic protection

1. The shifter override release button is attached to the paper tag under the plastic protection for the shifter knob.
2. Plugs must be installed in the holes used for shipping hooks during transportation of the vehicle. If the shipping hole plugs are not installed, owners may comment that the vehicle has excessive road noise, or the rear passenger's carpet gets wet.



Shipping hole



Plug installed

Automatic Headlamp – Owners of 2003-04 Vibes may comment that the automatic headlamp system does not turn the headlamps on when the vehicle is started during low light conditions.

A revised DRL module has been released to turn the headlamps on when the vehicle is started. The part number for the new module is 88973265.

- Thanks to Jeff Strausser

Chevrolet Aveo Tips — from page 1

The cause may be a stuck thermostat due to aluminum flashing from the cylinder head. To correct this concern, remove the loose piece of aluminum from the thermostat.



Flashing stuck in thermostat

Power Door Locks/RKE Inoperative –

Owners may comment that their power door locks and RKE system do not work. The 15 amp fuse for the power door lock circuit may be open. The fuse is located in the left side instrument panel fuse panel. To correct the concern, follow Service Bulletin 04-08-52-004.

- Thanks to Jeff Strausser

Grand Prix Mirror

According to bulletin 04-08-64-009, individual components are available for the 2004 Grand Prix outside mirror.

Do not replace the entire mirror assembly when replacing only the mirror glass or motor will correct the customer concern.

TIP: The mirror housing material was designed to flex on impact to reduce the chance of housing breakage or damage to the door sheet metal. But because the housing is more flexible, a high force impact can result in the mirror glass being struck by the housing as it flexes, especially on the out-board side, but the housing doesn't break. This may cause one or more of the retention points on the motor to separate, leaving the mirror loose but not always causing the mirror to fall out.

TIP: In the case of intermittent operation concerns, if the mirror switch is pushed at the edge of the dished out arrow, the switch will not engage the mirror motor. This could give the indication that the mirror operation is intermittent when in fact it is functioning correctly.

- Thanks to Fred Tebbets

Part Number	Description
88987556	Mirror Glass — OSRV Right
88987557	Mirror Glass — OSRV Left
88987558	Motor

Glass Cleaning Process

Owners of some Chevrolet Monte Carlo/Impala, Buick LaCrosse and Pontiac Grand Prix vehicles may comment about a film or haze on inside window surfaces when the vehicle is delivered. This film results from a manufacturing process, and is most visible when headlights or sunlight shine directly through the glass. Because the film attracts moisture from the air, it can contribute to reduced visibility under humid conditions.

To ensure high customer satisfaction with the new vehicle, the windows should be properly cleaned during the final Pre-Delivery Inspection, just before customer delivery.

TIP: The following procedure has been developed specifically for the vehicles listed above, but can be used successfully on any vehicle.

Step 1. Spray the entire glass surface of one window with water. Because the oily film is water-soluble, it should be removed when the glass is thoroughly wet. For this reason, do only one window at a time. You don't want the glass to dry until you wipe it.

TIP: Use regular water only. Avoid any type of chemical cleaner. Use a clean, empty spray bottle, which can be purchased at home supply stores.

Step 2. Use dry paper towels to wipe the window. To do this, fold a sheet of paper towel in half, and wrap it around a dry sponge.

TIP: Use a paper towel only. Avoid any type of cloth.

TIP: Use a sponge about 3 x 5 inches (76 x 125 mm). It should be about the size of your hand. If it's too large, the edges of the towel won't wipe well. If it's too small, your fingers may touch the glass.

The sponge will apply uniform pressure on the glass and by following its curvature will reduce finger-created streaking.

Step 3. Wipe/dry the glass surface in a uniform, linear, length-wise fashion, one swipe at a time. Avoid circular swipes. The idea is to lift the oily film into the paper towel without spreading it around by multiple swipes.

IMPORTANT: Discard each sheet of paper towel after one swipe.

- Thanks to Vass Theodoracatos

Low Coolant System Operation

The 2005 Chevrolet Corvette utilizes an algorithm-based low coolant level system which eliminates the need for the coolant level sensor previously positioned inside the surge tank.

The algorithm (a mathematical calculation) measures the difference in engine coolant temperature readings over time as a function of engine speed, to determine if the cooling system has a low coolant condition. After vehicle start-up, the ECM sends an engine RPM and engine coolant message through the BCM to the HVAC control head. The HVAC control head uses engine coolant temperature and engine RPM to determine if an increase in coolant temperature is due to a low coolant level condition.

This system is capable of losing 2 full liters of coolant before triggering the Low Coolant warning message. Because the surge tank holds approximately 0.8 liters when filled to the proper level, it's possible that a Low Coolant warning message is not triggered, even though the surge tank is completely dry.

TIP: After filling a system that has triggered the Low Coolant indicator message, the ignition must be cycled to turn the Low Coolant indicator off.

Diagnostic Tips

In the event that the Low Coolant message is present and the coolant is not low, verify that the RPM and Coolant Data (GMLAN) sent to the BCM matches the RPM and Coolant Data (Class 2) sent to the HVAC control module. If the RPM and Coolant GMLAN and Class 2 Data **do match**, the HVAC Module software needs updated. If the RPM and Coolant GMLAN and Class 2 Data **do not match**, the ECM and BCM software need updated.

TIP: This assumes that there are no RPM or Coolant codes set and no other messages or symptoms are present.

Always refer to SI for the latest service information before conducting any repairs.

- Thanks to Chris Semanisin



Manual Transmission Shifting

This information applies to 2004-05 Chevrolet Colorado and GMC Canyon pickups, equipped with the 5-speed manual transmission, RPO MA5.

Some owners may comment on difficulty in shifting into reverse. The Aisin-built 5-speed manual used in these vehicles does not have a synchronized reverse. Instead it uses a sliding idler gear and a brake system to slow down the shaft before reverse gear is engaged.

A customer may notice three things when shifting into reverse. All are normal operation.

1. If the driver moves from the neutral position into the 5th/reverse gate and leans the shifter toward 5th before heading toward reverse, this will block out reverse. A lock-out mechanism prevents shifting directly from 5th to reverse.

2. Although the driver operates



the shifter correctly, on some occasions the idler may slide and block the shift due to side to side contact between the gears.

If either of these occurs, the driver must move the shift lever back to neutral, release the clutch pedal, push it back in, then complete the shift to reverse.

3. The driver may attempt to shift into reverse when the vehicle is moving. High effort and gear grinding will result.

TIP: Advise the customer that this information is explained in the Colorado and Canyon owner's manual on page 2-26.

If a customer comments on difficulty in engaging reverse gear, check for normal operation as described. If the transmission is operating normally, no repair attempt should be made.

- Thanks to Rich Burrell

Binding Mode Valve – HVAC

An article in the April 2004 TechLink explained some conditions related to the mode and temperature valves in the HVAC system on 2003-04 Cavalier and Sunfire. A new bulletin 03-01-38-005B has been released with additional information.

If the foam on the HVAC mode valve (mode door) comes loose, the customer may experience difficulty in changing modes (heat, vent, or A/C) or air blows only from the upper vents.

A mode valve seal kit 89018656 is needed for this procedure.

Access to the mode door requires following procedures in SI and in the bulletin. Instructions for installing the foam seal kit are included with the part.

- Thanks to Steve Oakley

Tire Pressure Monitor Reset/Learn

Two types of Tire Pressure Monitor (TPM) systems are presently in use.

The **direct** type uses a pressure sensor/transmitter mounted in each wheel. When an out of specification tire pressure is detected, the driver is notified. On some vehicles, the actual tire pressure (either too high or too low) and tire location can be displayed. On others, only the fact that a tire is low is indicated.

When the pressure in the affected tire is set to specification on some vehicles, the CHECK TIRE PRESSURE and/or XX TIRE HIGH/LOW display is canceled within 20 seconds of the pressure adjustment. On other vehicles, the DIC displays can take up to 20 minutes to cancel, or will cancel when the vehicle speed is 20 mph (32 km/h) or greater.

When tires are rotated, the direct system requires a learn procedure to identify the new location of each pressure sensor. Refer to SI for details.

The **indirect** type compares tire rotational speeds using the ABS wheel speed sensors. A tire whose pressure is low rotates faster than the others. The indirect system notifies the driver by illuminating a low tire pressure notification, but does not indicate which tire is low.

After the pressure in the affected tire is corrected, the indirect system requires a reset procedure, which varies from vehicle to vehicle. Refer to the accompanying table and SI for details.

TIP: Various reset methods include: using the RDS radio display, using the

Tech 2, using the Driver Information Center, using a specific switch in the fuse panel, or turning the parking lamps on and off three times within five seconds. These are explained in the owner's manual and in SI.

TIP: After resetting, the TPM system

requires up to 30 minutes of straight line driving in each of three speed ranges to complete the calibration process and have full tire pressure detection capabilities.

Refer to SI for specific information.

- Thanks to John Spidle and Scott Bower

Tire Pressure Monitor				
GM Program	System Type	Model Year	Procedure Type	Procedure Summary
Impala/Monte Carlo	indirect (ABS)	01-04	Reset	Tech 2, Exterior Lamp Switch, Or RDS Radio
Grand Am	indirect (ABS)	01-02	Reset	Reset Switch in LT IPBEC
Regal/Century	indirect (ABS)	01-04	Reset	Tech 2, or Reset Switch in RT IPBEC
Grand Prix	indirect (ABS)	04	Reset	DIC
LeSabre	indirect (ABS)	01-04	Reset	Tech 2, or DIC
Park Avenue	indirect (ABS)	01-04	Reset	Tech 2, or DIC
Bonneville	indirect (ABS)	01-04	Reset	Tech 2, Systems Monitor, or DIC (if equipped)
Aurora	indirect (ABS)	01-03	Reset	Tech 2, or DIC
Cadillac Deville	direct (RF)	01-04	Learn	Keyless entry transmitter Lock-Unlock/J-41760
Cadillac XLR (Japan Export)	indirect (ABS)	04	Reset	Tech 2, or DIC
Cadillac XLR (Domestic)	direct (RF)	04	Learn	Keyless entry transmitter Lock-Unlock/J-41760, or J-46079
Corvette	direct (RF)	01-04	Learn	DIC/J-41760
CTS-V	direct (RF)	04	Learn	Keyless entry transmitter Lock-Unlock/Pressure delta, or J-46079
Cadillac SRX	direct (RF)	04	Learn	Keyless entry transmitter Lock-Unlock/Pressure delta, or J-46079
Cadillac Seville	direct (RF)	01-04	Learn	Keyless entry transmitter Lock-Unlock/J-41760
Aztek	indirect (ABS)	03-04	Reset	DIC
Rendezvous	indirect (ABS)	03-04	Reset	DIC
Escalade EXT	direct (RF)	04	Learn	Exterior lamp switch/Pressure delta, or J-46079
Tahoe/Yukon/Denali	direct (RF)	04	Learn	Exterior lamp switch/Pressure delta, or J-46079
Escalade	direct (RF)	04	Learn	Exterior lamp switch/Pressure delta, or J-46079
Suburban/Yukon XL/Denali XL	direct (RF)	04	Learn	Exterior lamp switch/Pressure delta, or J-46079

"One and Only GM Expert" Display

GM Service Operations has introduced a Goodwrench display program to honor the service and technical personnel in your dealership.

A display for your customer lounge highlights the names, positions and achievements of your service department members. This lets your customers know your service professionals are the best in the business. And employee recognition plaques can be displayed in individual work areas. These items will be updated twice per year to reflect certification achievements of each team member.

Ordering information is available at 1.888.821.4646.

- Thanks to Chuck Burns



Seatbelt Electrical Tension Reducer (ETR)

The 2005 Cadillac STS seatbelts have a feature called Electrical Tension Reducer (ETR) on the driver and front passenger seat belts that reduces the seat belt tension and improves occupant comfort.

When the vehicle is on and the seat belt is buckled, the ETR is ready to reduce belt tension on the upper body. A small amount of webbing pulled out will set a "comfort zone" and reduce belt tension across the shoulder and chest.

When the seat belt is unbuckled or the vehicle is turned off, the ETR is deactivated.

Once deactivated, the seatbelt returns to full spring tension to provide quick and full retraction of the latch plate to the post.

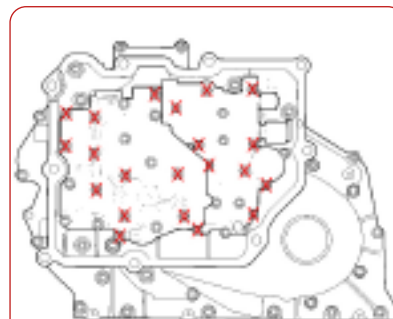
TIP: A slight click may be heard from the post between the front and the rear side doors during ETR activation and deactivation. This is the normal operation of the device.

- Thanks to John Woodrich

4T80E MH1 Case Cover Bolt Removal

To remove the valve body with the channel plate, remove all of the attached bolts except the bolts indicated by an X.

- Thanks to Darryl Butler



Do not remove bolts marked X

Rear Suspension Caged Nuts

This information applies to Chevrolet Malibu, Maxx and Equinox, Saturn Vue and LS, and Pontiac G6 models.

The caged nuts that provide attachment for the rear suspension system have a potential for coming out of the cage when removing the front or rear suspension mounting bolts.



Nut location in cage

TIP: A similar configuration is also used for the engine cradle attaching nuts.

When the attaching bolt is removed, the nut is free to escape the cage. This may happen if the vehicle is jostled or moved, as could occur during collision repair.



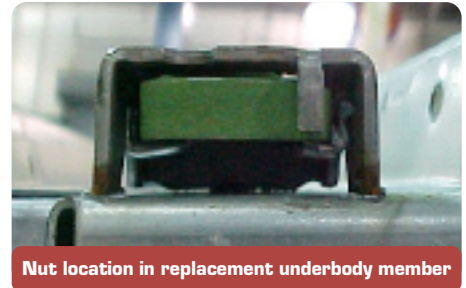
Nut escaped from cage

TIP: To prevent the nuts from dislodging, put the bolts back into the nuts as soon as the suspension is lowered away from the bottom of the vehicle.

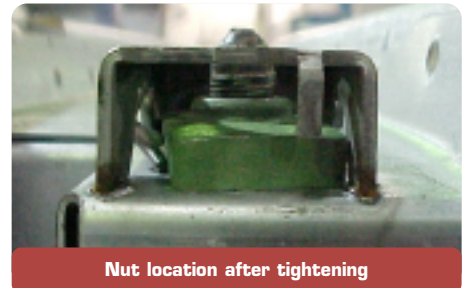
If the nut does become dislodged, the only way to get it back into place is to make a three-sided cut in the floorpan above the nut location and roll the metal back for access. It will then be necessary to weld and seal the floorpan.

TIP: If a replacement underbody member is purchased, the nut is temporarily suspended in the cage by deformable retainers. The first time the bolt is installed and tightened, the nut is drawn

out of the retainers. If the bolt is later removed, the nut is loose within the cage, as described above.



Nut location in replacement underbody member



Nut location after tightening

- Thanks to Gregg Potvin

Malibu or Classic?

There is some misunderstanding about which vehicle is a Malibu. Some technicians have been looking up the wrong vehicle in SI, and then thinking the service information is incorrect.

In model year 2004 there are two vehicles thought of as Malibu. The "old" Malibu (N Body) was called Malibu through model year 2003. It is now called Classic in 2004.

The "new" Malibu (Z Body) is called Malibu in 2004.

- Thanks to John Oppenlander

"Old" Malibu (N body)	"New" Malibu (Z body)
through 2003, called Malibu	
beginning 2004, called Classic	new for 2004, called Malibu

Proper Jump Starting Procedure

This information applies to the 2004-05 Pontiac GTO.

Burnt-out headlamp bulbs may result from incorrect jump-starting of the vehicle, especially if the battery is at an extremely low state of charge (less than 3 volts).

After starting, if the jumper cables are disconnected too quickly, the generator creates a momentary voltage spike until the regulator is able to adjust to the new load condition.

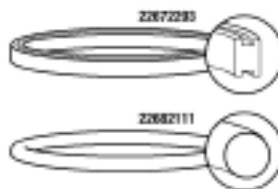
When jump-starting, ensure that both vehicles run for at least one minute before disconnecting the jumper cables. This allows the battery voltage to stabilize and avoid any spike in the voltage.

- Thanks to Art Spong

Fuel Sender/Pump Module Seal

Be sure to use the correct part on the 2004-05 Chevrolet Malibu and Maxx and 2005 Pontiac G6.

The Malibu Sedan uses a seal with an H cross section, GM p/n 22672293.



The Malibu Maxx and the Pontiac G6 use a seal with an O cross section, GM p/n 22682111.

TIP: These seals do not interchange.

- Thanks to David Macgillis

GM Vehicle Care Odor Eliminator

GM's Vehicle Care Odor Eliminator (p/n 12378554) (Canada 88901678) continues to be your best defense for controlling odors, reducing comebacks from dampness odors on water leak repairs, and controlling warranty expense.

Now, a specially calibrated mini-fogger is available for rapid and cost-effective applications to both vehicles and facility areas. The mini-fogger

speeds the application of the solution and allows much deeper penetration into fabrics, assuring positive results while using the minimum amount of product.

The mini-fogger can be ordered at 1.800.955.8591 in the US (1.800.977.4145 in Canada).

TIP: GM Odor Eliminator permanently eradicates odors after the source has been eliminated. This product is not a fungicide and will not clean or control mold and mildew.

- Thanks to Alan Srodawa



2005 Aveo A/C System

For 2004, the base-level Chevrolet Aveo was not available with A/C. For 2005, the base-level model can be upgraded with a dealer-installed manual A/C system. To expedite this installation, all base-level Aveos are equipped with factory-installed A/C prep equipment. The accompanying table shows the content differences between the 2004 and 2005 vehicles.



TIP: Only cars with RPO C59 can be upgraded using the dealer installed kit, p/n 96430552. Installation instructions are included in the kit.

TIP: A 2004 C46 Aveo cannot be upgraded to a 2005 C59 configuration. The A/C kit is not compatible with the 2004 C46 equipped Aveo.

TIP: Applies to U.S. only.

- Thanks to John Bowman and Jeff Strausser

	2004 Aveo	2005 Aveo	2004-05 Aveo
RPO Code	C46	C59	C60
Option Description	Heater Only	A/C Prep	Manual A/C
Radiator (480 mm)	X		
Radiator (600 mm)		X	X
Cooling Fan (single)	X		
Cooling Fan (double)		X	X
HVAC Module		X	X
A/C Switch		X	X
Wiring Harness Provision for A/C		X	X
A/C Kit (factory installed)			X
A/C Kit (dealer installed)		X	

TAC Tips

Abnormal Noise And Vibration While Driving

Some owners of 2005 and prior passenger cars and light duty trucks may notice an abnormal noise or vibration in their vehicle that may not have been there when the vehicle was new. Comparison of the customer's vehicle with another vehicle of the same make and model may reveal that the customer's vehicle has a higher level of noise or vibration.

The first step in diagnosis is to evaluate the customer's vehicle for aftermarket accessories. The mounting and location of these items are designed for convenience. Many times they do not take into consideration the negative effects they may have

with air flow over and around the vehicle, and noise transfer paths when the item is located between two isolated components.

One known example is the popular step bars (nerf bars) that touch both the frame of the truck and the cab without any type of insulation. This accessory becomes the transfer path of normally operating drivetrain noise into the passenger area of the vehicle.

Other known contributors to noise and vibrations are running boards, bug shields, sun visors, emergency lights, etc. Removal of these items, while perhaps not popular with the customer, is necessary in order to evaluate whether they contribute to the customer's concern.

- Thanks to Rusty Sampsel

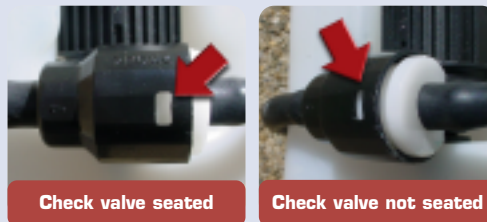
Windshield Washer Fluid Leak

On some 2005 Chevrolet Equinox vehicles, windshield washer fluid may leak from the windshield washer pump assembly.

Before replacing the complete windshield washer bottle and washer pump assembly, inspect the washer pump. Remove the washer fluid bottle and inspect the pump and check valve attached to the bottle.

The right hand cover of the check valve (white plastic) snaps into the pump body, and also contains the connection for the windshield washer hose. Notice that there is a snap molded into the white cover.

When fully assembled, the white snap should be visible through the opening in the



Check valve seated

Check valve not seated

black pump body. If the white plastic cover is not fully seated, use a pair of pliers to help snap the cover onto the pump body.

TIP: There should be an audible click sound when the cover snaps into the pump body. If there is no audible click sound, replace the washer fluid pump.

TIP: If the washer fluid pump or the reservoir needs to be replaced, they can be serviced as separate parts.

- Thanks to Ron Erman

Roof Door Module

On the 2005 Chevrolet SSR, code U1016 is set as current or history in the Roof Door Module (RDM), after replacing the RDM with part number 15134308. The

part number 15134308 is for the 2003 and 2004 SSR and is not interchangeable with the 2005 model year.

For the 2005 SSR, the correct part number for the RDM is 15227942.

- Thanks to Ron Erman

Class 2 Diagnostic Tip

This information applies to all GM vehicles Using Class 2 communication.

DTC U1000 or U1255 may set current or history, with or without other DTCs.

These DTCs set when the control module does not receive a message that it was expecting from another control module, and does not know which control module did not send the message.

1. If the DTC U1000 or U1255 is set in history with other DTCs set current or history, diagnose the other DTCs first.
2. If the DTC U1000 or U1255 is set current, this usually indicates a module that is currently not communicating or a configuration issue.

For example, if the control module is configured for an option (i.e., OnStar, keyless entry, memory mirrors, etc.) that the vehicle does not have, it may expect to receive a message regarding this missing feature. This would usually occur due to the control module being recently replaced and incorrectly set up.

3. When the DTC U1000 or U1255 is current, the module that is not communicating may not even be listed on the Tech 2 on the Diagnostic Circuit Check/Class 2 Message Monitor list.
4. If the DTC U1000 or U1255 has set in history without other DTCs, replacing the control module that sets the DTC is most likely NOT the solution. The module that has set the code is looking for an input from another module that is not communicating. Because the module did not receive an input that it is expecting to see, it sets a U1000 or U1255 which indicates there was a loss of communications. Look at the customer's concern (i.e., intermittent, erratic tachometer operation). This will probably be a better indication of the control module that is the source of the concern.

- Thanks to Ron Erman



Car Issues – Fix It Right the First Time

Model Year(s)	Vehicle Line(s) / Condition	Do This	Don't Do This	Reference Information / Bulletin
1997-2005	Buick Century, Regal – Broken Armrest Lid Latch	Replace lid latch only.	Don't replace console armrest lid or front seat center storage armrest when only latch is needed.	03-08-49-018A
2004-2005	Grand Prix – Outside Rearview Mirrors	Replace mirror glass or motor, whichever is defective.	Don't replace complete mirror assembly.	04-08-64-009
2004	Grand Prix – Steering, Suspension or Cradle Click Noise	Re-torque right steering gear mount.	Don't replace steering gear or cradle.	03-02-32-048
2000-2003	Century, Regal, Lumina, Impala, Monte Carlo, Grand Prix, Intrigue with 3.8L L36 Engine – Coolant Leak	Replace upper intake manifold gasket only.	Don't replace upper intake manifold assembly for coolant leak condition.	03-06-01-016
2001-2004	Aztek (01-04), Rendezvous (FWD, 02-04), Venture/Montana/Silhouette (01-04) – Pop and/or Rattle in Exhaust Down Pipe	Follow procedure in bulletin using clamp P/N on down pipe to correct rattle/buzz noise.	Don't replace converter assembly for rattle/buzz noise without completing instructions in bulletin.	03-06-05-003
2000-2004	All Cars with 4T40/4T45E and 4T65E – Light On/Various Transmission Codes Stored	Check transmission 20-way connector for secure connection (disconnect and reconnect).	Don't replace transmission, TCC PWM, VSS, PCS or valve body.	02-07-30-022B
1998-2004	Seville – Heated Seat Inoperative	Replace only needed heating element.	Don't replace entire seat cover if heated seat element is inoperative.	01-08-50-002C
2000-2004	Cavalier/Sunfire/Alero/Grand Am – Inoperative Sunroof Module	Retime module or replace only motor for inoperative complaints.	Don't replace entire sunroof module assembly.	03-08-67-009A (March 2004)
2003-2004	Cavalier/Sunfire – Air Conditioning Compressor Noisy	Inspect for ground out conditions that can cause A/C compressor noise complaints.	Don't replace A/C compressor for excessive noise complaint without inspecting for ground outs.	03-01-38-012
1999-2004	All Cars and Trucks – Brake Warranty, Service and Procedures	Issue One: Refinish brake rotor. Issue Two: Measure for LROs for multiple years.	Issue One: Don't replace brake rotors. Issue Two: Don't measure for LRO	00-05-22-002D



Truck Issues – Fix It Right the First Time (new issues in **bold**)

Model Year(s)	Vehicle Line(s) / Condition	Do This	Don't Do This	Reference Information / Bulletin
2004	Tahoe, Suburban, Silverado, Yukon, Yukon XL, Sierra, Escalade, Escalade EXT, Escalade ESV, H2 – Passenger Door Module and RKE Inoperative	Re-flash passenger door module.	Don't replace passenger door module.	04-08-52-005
2002-2004	Chevrolet Silverado, GMC Sierra – Accumulator/Accumulator Bracket	Replace accumulator and/or accumulator bracket.	Don't replace compressor.	02-01-38-007C
2001-2003	Fullsize Pickups – Injector Replacement for High Flow Rates	Use Corporate Bulletin Number 04-06-04-007A for injectors with high fuel return rates. Use Special Policy 04039 for all 01-02 vehicles.	Don't replace 8 injectors for any complaint other than high fuel return rates. All other injector failures are fix as failed.	Special Policy 04039
2004-2005	All Cars and Trucks – State-of-Charge Upon Delivery of a New Vehicle	Check battery's state-of-charge per revised PDI procedure using Midtronics Conductance Tester.	Don't remove and replace the battery.	02-06-03-009A
2002-2004	Fullsize and Midsize Pickups and Utilities – Labor Operation Assignments for Control Module Reprogramming	When submitting claims for reprogramming an electronic module, use correct labor operation that reflects module being programmed.	Do not use K5364, which is for reprogramming transmission control module (TCM), when reprogramming TCCM.	02-04-21-006D 02-06-04-057D
2002-2004	Fullsize and Midsize Pickups and Utilities – Sleepy New Venture Gear Transfer Case Control Module	Verify sleepy module as primary cause. Reprogram TCCM with latest software released 3/11/04.	Don't replace encoder motor or transfer case. Replace the module only if a C0550 DTC shows as current or in history.	02-04-21-006D
2002-2003	Chevrolet Avalanche and Cadillac Escalade EXT – Cargo Covers and Cladding Faded or Stained	Thoroughly clean, dry and treat the components with "Armor-dillo."	Don't replace cargo covers for this condition.	04-08-111-001A
2002-2004	All Passenger Cars and Trucks – Air Conditioner Compressor Diagnosis	Follow SI and bulletin for diagnostic information before compressor replacement.	Don't replace air conditioning compressor.	01-01-38-013A 03-01-38-019
2002-2004	All TrailBlazers, Envoy, Envoy XL, Bravada – Squeak/Rub/Scrub Type Noise in Steering Column	Lubricate and remove material, per bulletin.	Don't replace upper or lower intermediate shaft.	02-02-35-006A
2001-2004	Fullsize Pickups and Utilities – Servicing Wide Load Mirrors (RPO DPF)	Replace individual parts as needed.	Don't replace complete mirror assembly.	03-08-64-028

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– Thanks to Tracy Timmerman