

A Monthly Publication for GM Dealership Service Professionals

Side Blind Zone Alert System



Lane-change accidents are caused by blind spots created by vehicle architecture, mirror resolution and a driver's physical capability to accurately assess a vehicle's presence, closing rate of speed and distance. Drivers changing lanes unaware of adjacent vehicles are the source of many near collisions every day. They are also the source of numerous damaged vehicles and injured people in North America each year.

Introduced in the 2008 model year, Side Blind Zone Alert (SBZA) is an increasingly available option for a number of higherend GM vehicles including the new 2009 full size trucks. Side

Object Detection (SOD) is another term sometimes used for this feature.

By appropriately illuminating amber icons in the outside rear view mirrors, this supplementary system alerts drivers to the presence of other road users as they pass through the vehicle's left and right side blind spots. An icon will flash to heighten the alert when turn signals are active on that side of the vehicle.



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Techline News

Vehicle Add-Ons Pay for VCI

Increasingly, vehicle buyers want to personalize or modify their vehicles. This can be accomplished several different ways, depending on what the owner wants to add.

One way is to purchase a kit from GM Accessories that changes the appearance or function of the vehicle. Examples include a roof rack, chrome wheel package or a two way remote start kit. Some of these kits are a straight bolt-on, and some need a software calibration changed to complete the installation.

Another alternative is to add a factory offered OEM option to the vehicle that it was not produced with. Often, these items are not offered by GM Accessories and need to be purchased as service parts. Examples include fog lights, an axle ratio change or a speed governor. Many times these items need the corresponding software to complete the installation.

Some of these reconfigurations are possible; others are not.

Over the past several months, the Techline Customer Support Center (TCSC) has received an increasing number of calls related to adding OEM factory options to a vehicle.

Before making a change to a vehicle, call TCSC at 1.800.828 6860 (English) or 1.800.503.3222 (French) to verify if your request can be supported. These types of modifications and support fall outside the normal support role of TCSC. To support these vehicle changes, Techline will bill the dealer's open account \$50 USD per modification. This charge applies only to vehicles being reconfigured from their original build, and not part of a GM Accessories kit or normal programming support.

- Thanks to Matt Singer

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<u>GM</u> Service and Parts Operations

Navigation Radio Parts Restriction Update (U.S. Only)

An article in the September 2008 issue of *TechLink* explained that, beginning September 2, all warranty replacement navigation radios are on parts restriction through the Product Quality Center (PQC).

Bulletin 08-08-44-010B has been released with more detail about the parts restriction. Here are some highlights.

TIP: Navigation radios with visible physical damage such as liquid spills or impact must be reviewed with the District Service Manager for appropriate coverage, before contacting the PQC. The dealership must note the DSM's approval on the R.O. along with the reason for the goodwill assistance. Refer to Bulletin 08-08-44-015 for more information.

With the parts restriction in place for warranty replacement navigation radios, you will be required to complete a partnumber-specific questionnaire and then contact the PQC (do not call your Electronic Service Center as you will simply be referred to the PQC).

TIP: The information gained from these questionnaires is fundamental in helping GM identify and solve radio concerns as

we strive to improve quality and increase customer satisfaction.

Reviewing the appropriate questionnaire will highlight published repair procedures to assist you in eliminating several known issues which could help prevent unnecessary navigation radio replacement. The PQC will capture information on the questionnaire and may direct you to published service information in the event you have not attempted the repair procedure. If a navigation radio is still required after proper diagnostics have been performed, the PQC will order the part for the dealer.

Bulletin 08-08-44-010B includes a table of all radio part numbers and the number of the corresponding questionnaire that must be completed for each radio. Copies of the questionnaires are included in the bulletin. Bulletins that pertain to specific radio issues are pointed out in the respective portions of the questionnaires.

TIP: Be sure to have completed these bulletin directives before contacting the PQC.

- Thanks to Terry Nicholas

Tech 2 Card Copy Function Is Now Disabled

Beginning with Tech 2 software version 28.007, the card copy function has been disabled. This function has been disabled due to the increasing issue of unauthorized software copying, primarily in the aftermarket. Software piracy is a growing concern for General Motors and its dealers as this behavior directly affects dealers' competitive advantage in the marketplace.

Tech 2s should be updated on a regular basis using **Tech 2 Software Download** in TIS 2 Web. In the event Tech 2 software needs to be reinstalled (such as in a failed download), software can be reinstalled by selecting **Custom** from the **Select Diagnostic Tool for Download** screen, then the North American Tech 2 software folder you wish to download from the **Applications For Downloading** box in the **Select the Applications** screen.

- Thanks to Mike Waszczenko

CD Player Condition

Some owners of a 2008 Corvette equipped with radio US9 - MP3, WMA and 6 disc in-dash CD player may comment that when starting their vehicle, the music disc playing on the current ignition cycle is not the music disc they were listening to during the previous ignition cycle.

This concern is typically intermittent and occurs only when the driver turns the vehicle off while listening to the first 30-45 seconds of the first song on the 2nd, 3rd, 4th, 5th or 6th disc.

Replacing the radio will NOT correct this concern. This is a normal operating characteristic and no repairs are recommended.

- Thanks to Dino Poulos



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.

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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.

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

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What Is a SUB and Why Is It Important?

The acronym SUB stands for Service Update Bulletin. A SUB represents a unique type of product field action that General Motors can use to remedy specific vehicle concerns. Release of a SUB means that GM has identified a potential vehicle system or component concern and is trying to minimize its impact on customers. A SUB instructs dealers to correct all involved vehicles currently in their inventory as soon as possible, whether or not the vehicle is exhibiting the concern. The required correction must be performed before vehicle sale and delivery or customer test drive. Your dealership must have 100% of the involved inventory vehicles completed within 30 days of SUB release.

A SUB can be released in one of two ways. The first is Inventory Only as described above and the second is Inventory and Customer Vehicles which, along with the completion of all involved inventory vehicles, authorizes dealers to correct any involved customer vehicles that return to the dealership for service whether or not the vehicle is exhibiting the concern, provided its base warranty has not expired.

When a SUB is released, involved dealers in the U.S. are notified by a GM Administrative Message which is posted on DealerWorld through the GlobalConnect portal. In Canada, a Dealer Communication message is sent to involved dealers by email. These messages are addressed to dealership management and should be printed and distributed immediately. Attached to the message is a copy of the subject bulletin and instructions for accessing a Vehicle Identification Number (VIN) listing of each dealer's involved vehicles in dealer inventory.

Once the VIN list is obtained, dealers should take immediate action to ensure the required correction is performed as soon as possible on all involved vehicles in their inventory, including vehicles being dealer traded or spot delivered. If an involved vehicle has been dealer traded, the receiving dealer should be contacted immediately regarding the new SUB. If an involved vehicle has been sold and delivered to a customer, no further action is required and the customer should not be contacted. In fact, dealers are prohibited from contacting involved customers for the express purpose of performing SUB corrections. Such vehicles can be corrected only if they return to the dealership for any type of service and the base warranty has not expired.

The GM Vehicle Inquiry System (GMVIS) can be used easily to check the current status of any vehicle in dealer inventory or on the service drive that may be involved in a SUB. SUBs are displayed in the Required Field Actions section of GMVIS as a YT type with a corresponding identification number and a short description. The status field will show either Open or Closed. Dealers should perform the required correction only if the status is Open and the involved vehicle's base warranty has not expired. Dealers should always check GMVIS for any open SUBs or other product field actions before vehicle service, sale, delivery or customer test drive.

In addition to the positive influence they can have on customer satisfaction, SUBs are relatively easy opportunities for dealers to generate additional service revenue because the related expense is not part of the calculation used to determine a dealer's cost per vehicle serviced. This means dealers are fully empowered to complete all of the involved vehicles as guickly as possible without concern for GM Regional Office or District Service Manager restrictions. To help dealers reach the 100% SUB completion objective for inventory vehicles, a SUB Information link is also available in GM DealerWorld (U.S. only). Using their Business Associate Code (BAC), this link provides each dealer with the most current list of vehicles involved in a SUB that are still open and assigned to their dealership. This list is updated twice a week in conjunction with warranty claims processing. Dealers are strongly encouraged to check this site on a regular basis to ensure that all involved vehicles are corrected as soon as possible. This feature is at present available only to U.S. dealers.

Remember that a great technician always checks GMVIS for any outstanding SUBs or other product field actions every time he/she services a vehicle. Again, our goal is to ensure that all required SUB corrections or other product field actions are completed before a customer can have an unsatisfactory experience with a GM product.

- Thanks to Loren Rusk

Side Blind Zone Alert System –

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IMPORTANT: SBZA is only a lane changing aid and does not replace driver vision. SBZA does not detect vehicles which may be rapidly approaching outside the side blind zones, or pedestrians, bicyclists, or animals.

The system is relatively simple. Sensors are located behind the left and right rear fascia sides. They scan adjacent road lanes and control their corresponding mirror alert icons by GMLAN serial data



communication to the door zone modules. In turn, the door zone modules switch power to the LED indicators within the mirrors.

SBZA can be turned on and off through a Driver Information Center (DIC) menu selection or an option on the navigation screen. The DIC also alerts the driver to 'SBZA unavailable' and 'needs service' conditions.

The SBZA unavailable message occurs when sensor performance is degraded by the presence of water and is typically triggered by rain, snow, mud or ice. If the system does not selfrecover once dry conditions have apparently returned, check that the sensors are clean and no labels are present on either side of the fascia.

As described in the owner manual, occasional false alerts on roadside infrastructures (such as guardrails, vegetation, etc.) or missed alerts are not service issues and are within normal operation.

TIP: Because a trailer can interfere with the system's operation and the detection zones do not alter when a trailer is attached, it's preferable to switch the system off when towing.

TIP: Always use the same part number when a replacement has to be made. Left and right sensors are identical and must always have the same part number. A harness ground connection automatically configures sensors for right hand side operation.

TIP: To avoid VIN mismatch lock-out problems, do not substitute parts from other vehicles.

Scan tools can be used to check DTCs on either sensor. History DTCs may indicate an intermittent condition and should be approached accordingly.

A DIC service SBZA message shortly after the mirror icons have completed their vehicle power-on bulb check generally indicates a current DTC. Door zone modules should be investigated if the bulb check fails.

TIP: Although often tied together in option packages, SBZA and Lane Departure Warning (LDW) are separate systems and should be treated as such. And as always, check for the latest service information and bulletins.

- Thanks to Simon Tong

Aveo BEC ISO Micro Relay Information

There are two different Underhood Bussed Electrical Centers (UBEC) used in the Aveo – 96539834 is used on the Hatchback model and 96539835 is used on the Notchback model.

The new Aveo Underhood Bussed Electrical Center (UBEC) uses a new ISO Micro Relay which uses both 4.8mm and 6.3mm terminals. The new relay looks like the common 280 relay you are used to seeing in most Bussed Electrical Centers.

There are two different ISO Micro relays used in the Aveo



There are three different ISO relays used in the Aveo Notchback UBEC. There is a black high current (35 amp) relay and a gray relay for all circuits with less than 20 amp current flow, as well as the larger 13502674 Mini ISO relay.

TIP: In some cases the service relay part may have 5 terminals rather than the 4 terminal relay you may be replacing.



Modified DOT 3 Brake Fluid

Several recent bulletins 08-05-22-002A and PIT3779J specify the use of modified DOT 3 brake fluid as a correction for a brake pedal squeak noise in certain vehicles.

IMPORTANT: Do not use modified DOT 3 brake fluid in the 2-Mode hybrid vehicles. It is not engineered for 2-Mode hybrid use. It can be used in other hybrids, however.

TIP: A note is being added in the Parts Catalog to each service number that modified DOT 3 fluid cannot be used in a 2-Mode hybrid vehicle.

| DOT 3 brake fluid OK for use in 2-Mode hybrid vehicles | 12377967 (U.S.) | 89021320 (Canada) |
|---|-----------------|----------------------|
| Modified DOT 3 brake fluid DO NOT use in 2-Mode hybrid vehicles | 88862806 (U.S.) | 88862807 (Canada) |

- Thanks to Jim Haist

V Engine Cylinder Bank Naming

General Motors uses two methods of naming cylinder banks in V engines.

For emission related components, cylinder banks are named using a Society of Automotive Engineers (SAE) recommended practice. Bank 1 is the cylinder bank that has number 1 cylinder, and bank 2 is the cylinder bank that does not have cylinder 1. Cylinder 1 location is given in service manual service category Engine Mechanical, within Engine Component Description.

For other than emission related components, cylinder banks are named Left and Right. This is determined by looking toward the front of the engine from the flywheel end. This method is used whether the engine is installed longitudinally or transversely.

- Thanks to Jerry Garfield

Fuel Rail Pressure Relief Valve

A 2007-08 Express, Kodiak, Silverado, Savana, Sierra or Topkick equipped with a 6.6 Duramax Diesel Engine RPO code LMM may experience an intermittent DTC P009E for fuel rail pressure relief valve performance setting.

Complete the current SI diagnostics for any symptoms or trouble codes set. P009E will set if the ECM interprets a rapid loss of fuel rail pressure.

If the current SI diagnostics for P009E are inconclusive, there has been an updated calibration released to address intermittent P009E.

Reprogram the ECM with the latest calibration and evaluate the concern.

- Thanks to Donald Langer

Noise From Rear of Vehicle During Cold Start

2004-08 Aveo 2006-08 Cobalt, HHR 2007-08 G5 2005-06 Pursuit (Canada) 2005-08 Wave (Canada) 2006-07 ION

Shortly after cold starting the engine, three to five brief knock noises may be heard from the rear of vehicle. The sound resembles someone tapping on the rear window or quarter panel. This may be the result of the EVAP vent valve going through a normal diagnostic cleaning cycle.

If this concern is experienced and the noise is isolated to the EVAP vent valve, inspect the vent valve pipe to ensure that it is routed properly and not grounding out. If the pipe is routed properly, this noise should be considered a normal characteristic and no repairs should be performed.

- Thanks to Jamie Parkhurst

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In this case the fifth terminal has no function and the relay will work as a replacement part.

The service part number is 13502676 for the low current gray relays and 96484304 for the high current 35 Amp black relays.

Removing BEC Cover

To remove the BEC cover, press the large tab at the end and lift the cover off.



Excess Oil in Air Intake Snorkel

Some owners of a 2006-09 Corvette with a 7.0L engine (RPO LS7), a 2008-09 Corvette with 6.2L engine (RPO LS3) or a 2009 Chevrolet Corvette with 6.2L supercharged engine (RPO LS9) may complain of a SES light. Upon inspection, oil in the air cleaner, a loose hydrocarbon patch in the air intake snorkel, and/or DTCs P0101, P0172, P0175, P1516, and/or P2176 may be found.

This may be the result of an improper oil level or PCV restriction, which can cause excess oil to be forced into the engine air intake snorkel. If this occurs, the oil can contaminate the adhesive that attaches the hydrocarbon absorber to the air intake snorkel, causing the absorber to become mis-positioned, which can alter incoming air flow.

If this concern is encountered, complete the following steps and re-evaluate the concern:

- 1. Follow the owner's manual for proper engine oil filling procedures. For 7.0L LS7 models, also review the latest version of 05-06-01-032.
- 2. Perform the Crankcase Ventilation System Inspection/Diagnosis in SI to ensure that the PCV system is operating properly with no restrictions.
- 3. If equipped with an oil tank, ensure that the semi-fresh and fresh PCV tubes are installed correctly. The fresh PCV tube is attached to the front port of the oil tank, and the semi-fresh tube is attached to the rear port of the oil tank.
- Clean excessive oil from the air intake system and inspect the hydrocarbon absorber in the air intake snorkel. Replace the air intake snorkel if the hydrocarbon absorber is mispositioned or loose.
- Thanks to Jamie Parkhurst

Oil Level Indicator Tube Vibration

This information applies to 2007-08 fullsize pickups and utilities with engine RPO L76, L92, LC9, LH6, LMG, LY2 or LY5.

Some customers may comment on a buzz and/or rattle noise that occurs at 40-45 mph (64-72 km/h) and/or 1100-1300 rpm just before the V4 to V8 transition. The noise sounds as though it's coming from within the IP. The cause may be the generator B+ cable misrouted on the outboard side of the engine oil level indicator tube. At 1200 rpm in V4 mode (AFM), the engine oil level indicator goes into resonance and vibrates against the generator cable which produces a rattle noise in the vehicle.

To correct this concern, reroute the generator B+ cable on the inboard side of the engine oil level indicator. Be sure the generator cable has at least 15 mm of clearance to the engine oil level indicator tube.

- Thanks to Jim Will



Cable misrouted outboard of oil level indicator tube A Cable touching oil level indicator tube



Cable correctly rerouted inboard of oil level indicator tube B 15 mm clearance between cable and oil level indicator tube

Continue to lift the cover up and away from the two rear tabs to completely remove the lid.

To remove the BEC from its mounting bracket in order to remove or gain access to the wiring harness connectors underneath the BEC, release the three tabs and lift the BEC up.

- Thanks to John Roberts

Differential Cooler

This month (October 2008) a differential cooler assembly is available for the 2009 Cadillac CTS-V. The part number is 20792934.

The system is designed to reduce the operating temperature of the rear differential fluid when the CTS-V is driven at extended high speed or in competitive driving. The CTS-V differential cooler includes a temper-



ature switch to operate the system when high rear differential fluid temperatures are met. The rear differential housing has provisions for the temperature switch. Installation time is less than 2 hours.

The differential lubricant pump and cooler assembly are located under the vehicle and are mounted to the rear storage compartment well. The cooler module assembly consists of a pump, a heat exchanger, an electric fan and assorted hoses/fittings. All components except the external lines, temperature switch and fittings are located in the Cooler Module.

Oil is pulled from the differential and pumped through a hose to the cooler/heat exchanger. The differential oil is cooled by dissipating heat as the 12



volt electric fan blows outside air over the heat exchanger. The cooled differential oil then returns to the differential.

TIP: The pump and electric fan can be turned on using the temperature switch bypass plug included with the kit.

If the vehicle is equipped with this system, rear differential fluid capacity is an additional 0.31 L (0.33 qt).

- Thanks to Jeff Miller

EBCM Condition

2007-09 Escalade, Avalanche, Silverado, Suburban, Tahoe, Acadia, Sierra, Yukon, OUTLOOK

2008-09 Enclave, G8

2009 XLR, Corvette

During normal diagnostics and/or repair verification, the ABS light, Traction Control and/or Stabilitrak indicators may be on with no DTCs displayed by the EBCM. This condition may be due to the EBCM requiring a full power-down to reset the diagnostic monitoring after a "Clear All DTCs" command has been performed with the Tech 2.

Do not replace an EBCM for this condition, as this is NOT an internal EBCM hardware problem. This condition can typically be resolved by performing a full power-down of the EBCM.

The following DTCs are applicable to this condition of "Lights On No DTCs": C0035, C0040, C0045, C0050, C0110, C0131, C0161, C0186, C0196, C0245, C0252, C0299, C0450, C0455, C0550, C0710, U0100, and U2142.

IMPORTANT: Follow the guidelines below when performing a Tech 2 DTC Clear Code Command Request. Do not replace an EBCM for this "Lights On No DTCs" condition.

 Perform Tech 2 EBCM "Clear All DTCs" command, if not already performed.

- 2. After EBCM "Clear All DTCs" process is complete, the EBCM telltales may still appear.
- 3. Key Off Ignition. Open and close the driver's door to turn off RAP (Retained Accessory Power) and wait at least 60 seconds.
- 4. Key On Ignition. Are the EBCM related telltales still present?
 - If no telltales and no DTCs, no further action is required.
 - If yes telltales and DTC present, follow the appropriate Diagnostic Trouble Code procedure.
 - If yes telltales and no DTC present, operate the vehicle at speeds greater than 15 km/h (10 mph) to complete the self test. If the vehicle is repaired, the EBCM will turn off the indicators. If a DTC resets, follow the appropriate Diagnostic Trouble Code procedure.
- If telltales remain with no DTCs after the drive cycle, disconnect the battery for at least 60 seconds and then reconnect. This will insure a complete powerdown of the EBCM. Turn Key On Ignition and operate the vehicle at speeds greater than 15 km/h (10 mph) to complete the self test. Verify no telltales or DTCs reset.

- Thanks to Jim Will

Exhaust Resonance

The owner of a 2008 Saab 9-3 Turbo X with B284R may comment of an exhaust resonance at 2000 rpm that is more noticeable at highway cruise speeds

The 2008 9-3 Turbo X is designed with a free flow exhaust system due to the higher output of the engine. This resonance is more noticeable at highway speeds (at 2000 rpm) and can be turned on and off by manipulating the throttle. Due to the AWD, the Turbo X does not use a center muffler/silencer. This is a normal characteristic of this vehicle and no repair attempts should be made.

- Thanks to Jeff Gorenflo

A/C Moan

Some owners of a 2008 Malibu or G6 equipped with V6 engines (LY7 & LZ4) may comment of a moan noise from the front of vehicle when the A/C system is operating. The noise will typically get louder as the RPM increases (usually loudest around 2000-2400 rpm).

Check that the A/C compressor mounting bolts are properly torqued (50 Nm / 37 lb ft). If these bolts were loose, also check that the A/C compressor hose nut is tight (20 Nm/15 lb ft).

- Thanks to Jim Loomis

Facts Regarding Usage of Biodiesel in GM Vehicles

General Motors has been a leading supporter of the renewable fuels industry, and is an advocate for the responsible and appropriate use of renewable fuels in the GM model vehicles that are designed for their use

Biodiesel: An Overview

Biodiesel is a renewable diesel fuel that is manufactured from vegetable oils, recycled cooking greases or animal fats. Biodiesel can be made using a variety of feedstocks. Soybean oil, rapeseed oil (canola), palm oil, waste cooking oil and sunflower oil are among the most common sources for commercial biodiesel production. The biodiesel manufacturing process converts oils and fats into chemicals called long chain mono alkyl esters. These chemicals are also referred to as fatty acid methyl esters or FAME. In the manufacturing process, oils or fats are reacted with an alcohol (usually methanol) in the presence of a catalyst (usually sodium or potassium hydroxide) to form biodiesel and glycerin. Glycerin is an alcohol, and is a co-product of the process. It is removed from the final biodiesel product.

Raw vegetable oil, refined vegetable oil or recycled greases that have not been processed into biodiesel are not biodiesel and should never be introduced into the fuel system.

When it's well made and the quality is carefully controlled, biodiesel can be used as a blending component with ULSD (ultra low sulfur diesel) in controlled percentages, without adverse consequences.

General Motors endorses the use of biodiesel blends of 5% (B5) or less, and provides warranty coverage for Duramax diesel equipped vehicles operated on this fuel. The exception to this is vehicles ordered with SEO option 5F4, which allows use of biodiesel blends of up to 20% biodiesel (B20). (Check with VISS for specific VIN option content). Repairs to conditions caused by the use of fuels other than those the vehicle was designed to accept are not covered under the terms of the New Vehicle Warranty.

Risks Associated With Biodiesel Use

Biodiesel has some unique characteristics that must be managed in order for it to be used as a reliable fuel. Management of those characteristics is one reason that OEM manufacturers limit the allowable percentage of biodiesel in diesel fuel.

Fuel instability is a significant concern for ULSD blends containing more than 5% biodiesel. Oxidation stability can lead to deposits fouling fuel filters and sticking injectors. Some concerns that have been encountered in tests with unstable B20 with Duramax diesel fuel systems included plugged jet pump nozzles and hardened and cracked or broken polymer tubing in the MRAs.

The less stable nature of the fuel can lead to deterioration from long periods of in-tank storage, as in the case of low use vehicles. This is similar to storing a lawn mower for the winter with gasoline in the tank. By the next season, the gasoline has varnished and clogs up the fuel system. Biodiesel oxidizes notably faster that 100% diesel fuel and the timeframe at which this could cause a problem is shorter than with regular diesel fuel.

Biodiesel is also less stable than regular diesel fuel when the vehicle is operated or stored at high ambient temperatures. Additional concerns that need to be managed when using higher concentrations of biodiesel include:

- Biodiesel has poor cold temperature properties that can lead to a clogged filter and hard starting at low temperatures.
- The polar nature of biodiesel can disable water-fuel separators and allow water to pass through.
 Biodiesel also contains more water than No. 2 diesel fuel.
- The heating value for B100 is about 10% lower compared with No. 2 diesel, so B20 users experience a 1-2% loss in fuel economy.
- DPF effectiveness can be compromised from both oil contamination and reduced effectiveness resulting from high metal levels (residual catalyst) present in some processed biodiesel.

For these reasons, repairs to conditions caused by biodiesel usage in percentages that exceed the allowable design limits are not covered under the terms of the New Vehicle Warranty.

One challenge that dealers face in diagnosing fuel related conditions that may be caused by excessive concentrations of biodiesel is that there is currently no simple in-dealership test that can determine the percentage of biodiesel present in the fuel.

General Motors is working with SPX to develop a dealer tool that will allow the technician to quickly determine – within minutes in the dealership – the percentage of biodiesel present in a vehicle fuel sample.

- Thanks to Jay Dankovich

Shifter Lubricant

This information applies to the 2007-09 Acadia and OUTLOOK and the 2008-09 Enclave.

IMPORTANT: Every time the shifter knob is serviced, the tip of the actuator rod and the top half of the exposed actuator rod toward the rear of the vehicle should be lubricated.

When replacing a shifter knob on these vehicles, the tip of the actuator rod and the backside of the exposed actuator rod need to be lubed with a special lubricant now available through GMSPO.

| p/n 88861426 | U.S. |
|--------------|--------|
| p/n 88861442 | Canada |

Ensure that lubricant is applied whenever the shifter base is replaced, the shifter knob is replaced, or the knob is removed from the shifter base to ensure proper operation of the knob button.

- Thanks to Daryl Funds





| | | the First Time | | |
|---------------|--|--|---|-------------------------------------|
| Model Year(s) | Vehicle Line(s) / Condition | Do This | Don't Do This | Reference Information / Bulletin |
| 2006-08 | HHR – Water leaks, multitude originating from several different areas | Follow bulletin completely | Don't stray from completing bulletin | 07-08-57-001A |
| 2006-08 | All except Saab and Saturn – Replacing batteries on vehicles in dealership inventory | Maintain battery for vehicles in inventory | Don't allow battery to discharge through lack of maintenance | N/A |
| 2006-08 | G6 Convertible – Convertible top will not cycle open or closed | Follow proper DTC diagnosis | Don't replace FTC module, replace hydraulic pump/motor | 07-08-67-010 |
| 2006-07 | HHR – No A/C, engine coolant leak, engine overheating | Install plastic protector | Don't replace any other components | 08-06-02-001 |
| 2006-08 | HHR – Intermittent SES, reduced engine power | Recrimp wires | Don't replace ECM or throttle body | 08-06-04-022 |
| 2004-09 | Corvette, XLR – Rear axle clunk and/or chatter noise on turns | Drain and fill rear axle using DEXRON LS gear oil | Don't replace differential clutch discs, remove any axle covers | 07-04-20-002A |
| 2006-08 | Impala – Key cannot be removed in Park, shifter cannot be moved | Repair wiring damage and reroute wiring | Don't replace shifter | 08-07-30-007A |
| 2003-06 | 9-3 – Surface coating of ACC panel peels off | Replace buttons or faceplate | Don't replace complete ACC control unit | TSB 870-2700 |
| 2006-08 | All vehicles with TPM – Transfer sensors to replacement wheels | MoveTPM sensors to new wheel | Don't install new TPM sensors | 08-03-16-003 |
| 2006-08 | Vehicles with aluminum wheels – Tire leaking air | Repair wheel and paint | Don't replace wheel | 08-03-10-006 |

Truck Issues – Fix It Right the First Time

| Model Year(s) | Vehicle Line(s) / Condition | Do This | Don't Do This | Reference Information / Bulletin | |
|---------------|---|---|--|--|--|
| 2001-04 | LB7 Duramax Diesel – Injector high pressure lines corroded | Clean connection area of line and nut of injector high pressure lines as required | Don't replace lines | 03-06-04-036A | |
| 2007-08 | Fullsize utilities – 1500 Series – Power steering fluid leak | Determine source of leak | Don't replace power steering rack | 07-02-32-002B | |
| 2006-08 | Colorado, Canyon, H3 – Loose module, broken tab under passenger seat | Reattach ECU with 3M two-way tape | Don't replace entire ECU and seat sensing pod assembly | 08-08-50-003 | |
| 2004-07 | Colorado, Canyon, H3 – Reduced power mode, codes | Check battery state of charge and charge or replace as necessary | Don't replace throttle body, throttle body module, accelerator pedal, accelerator position sensor, PCM, or ignition switch | 08-06-04-014 | |
| 2007-08 | Silverado, Sierra – Wet headliner, water leaking past sunroof glass panel seal | Inspect glass panel seal, replace seal | Don't replace sunroof glass panel | PIT 4621 | |
| 2008 | Sierra, Silverado – SES P1174 | Reprogram ECM using TIS2Web | Don't replace catalytic converter, PCM, injector(s), fuel rails, fuel pumps | 08-06-04-028 | |
| 2005-08 | Trailblazer, 9-7X – Growl, groan, shudder, bind from rear while turning | Replace rear differential fluid with DEXRON LS gear oil | Don't replace differential gear case | 08-04-20-002 | |
| 2007-08 | Acadia, OUTLOOK, Enclave – A/C compressor noise | Replace HVAC hose with suction line | Don't replace A/C compressor | 07-01-39-005A | |
| 2007-08 | Colorado, Canyon, H3 – Exhaust rattle | Place hose clamp around forward portion of heat shield | Don't replace exhaust/converter pipe assembly | 08-06-05-003 | |
| 2001-09 | All vehicles – Identifying aftermarket engine calibrations | Block warranty claim if aftermarket calibration is installed | Don't submit warranty claim if aftermarket calibration is installed | 08-06-04-033 – Gas 08-06-04-006B – Diesel | |

Know-How Broadcasts for November

10208.11D Emerging Issues New Model Features
 November 13, 2008
 9:30 AM and 12:30 PM Eastern Time

 For Web NMF courses, log on to the GM Training Website
 (www.gmtraining.com). Select Service Know-How/TechAssists from the menu, then choose New Model Features for a selection of courses.



– Thanks to John Miller