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Cruise Control with Electronic Throttle Control (ETC)

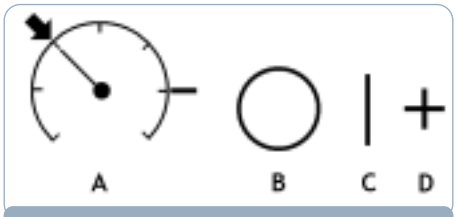
Over the past few years, a new kind of cruise control has been phased in as engine families switch over to the Electronic Throttle Control (ETC). In this system, the position of the throttle blade is controlled by an electric motor, driven by the Throttle Actuator Control and PCM. This eliminates the need for a mechanical cable attachment from the accelerator pedal to the throttle body. The driver's foot operates an Accelerator Pedal Position (APP) Sensor.

TIP: You can quickly tell if the vehicle has ETC by determining if the throttle pedal connects to a cable or to the APP.

Because the throttle blade is computer controlled, it's now possible to use the same hardware for the cruise control system. A separate cruise control module, connecting strap, linkage, and associated wiring are no longer needed. For these reasons, the new system is considerably more robust.

A great deal of effort went into the design of the new cruise control system to ensure that it performs as nearly as possible to the way GM owners' past vehicles have performed.

TIP: The appearance of control buttons or labels may vary between models, so the following descriptions are somewhat generic. For specific details, consult the owner's manual for the particular vehicle, found in SI for all 2003 vehicles.



Typical Cruise Control Symbols

A Set/Coast
B Off
C On
D Resume/Accelerate

With cruise control turned on, once the vehicle has reached the desired speed, simply press and release the designated SET button and the vehicle will maintain the chosen speed.

TIP: Cruise control cannot be engaged until the vehicle has reached a road speed of approximately 25 mph (40.2 km/h) or higher.

If the driver steps on the throttle and reaches a new, higher speed, pressing and releasing the SET button again will record and maintain the new, higher speed.

TIP: If the driver uses the throttle pedal to drive at a speed higher than is set, the cruise control will disengage after approximately a minute. This is also called drop-out. It is a new feature, and is not a malfunction. Press the + (RESUME/ACCEL) button to reengage and continue driving at the previously set speed.

If the brakes are applied, the cruise control disengages. Pressing the + (RESUME/ACCEL) button causes the cruise control to reengage and continue at the previously set speed.

TIP: On some versions of the new system, there is a CANCEL switch, which duplicates the function of stepping on the brake pedal, without actually applying the brakes.

The driver may override the set speed

continued on page 3

TECHlink GM

Contents

GM Service and Parts Operations

continued from page 1

by pressing and holding the + or - button until a new higher or lower speed is achieved. The new speed is recorded when the button is released. These are also referred to as the ACCEL and COAST buttons.

The driver may also choose a lower or higher speed using the tap-up/tap-down feature. Tapping the + or - (ACCEL or COAST) button will change the set speed by approximately 1 mph (1.6 km/h) per tap.

TIP: On the new system, the minimum speed that can be reached with tap-down is 25 mph (40.2 km/h). The maximum tap-up increase is 10 mph (16 km/h) above the previously set speed.

Diagnostic Tips

Inhibit Function

On the earlier cruise control system, the cruise module and the PCM were separate components joined by wiring. Under certain circumstances, it was necessary for the PCM to inhibit (prevent) cruise operation, so an inhibit circuit ran between the modules.

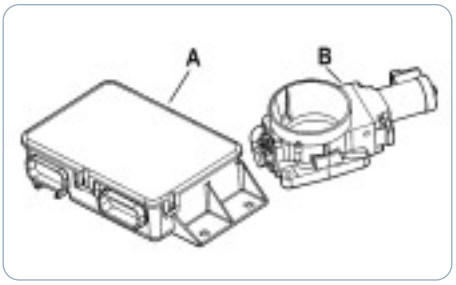
The status of the inhibit circuit was used in some system diagnostics.

The new system also has occasions when cruise control must be inhibited, but because the cruise control function is now contained within the PCM, there is no need for an external inhibit circuit.

TIP: The inhibit circuit in not mentioned in SI. This is not a mistake. For the reason just given, it no longer exists in the form you're familiar with. However, the inhibit parameter still appears in the Tech 2 display.

Commonality of Parts

In the cable-controlled system, it was possible for the cruise system to malfunction without affecting normal throttle operation. In the new system, because the same components operate the throttle blade for normal and cruise driving, a failure will affect both at the same time. Put another way, there are no longer any unique cruise components in the throttle control to malfunction or to diagnose.



A Module
B Throttle Body

Disengage History Record

On your Tech 2, you can view the last 8 reasons why cruise control was disengaged. This is a buffered list -- that is, the oldest item drops off the list as a new one is added.

You may find this list useful when diagnosing customer concerns, such as drop-out with the throttle depressed above the set speed, discussed earlier.

TIP: The Disengage History records all reasons, not just those that involve a DTC. In fact, the most common reason you will probably see is Brake Applied.

The previous system also had this record, but it's more comprehensive in the new system. Depending on model, there are up to 38 items that can be displayed.

Brake Application Before Engage

During each ignition cycle, the PCM must see one brake application before the cruise control will engage. On automatic transmission vehicles, this is satisfied by the brake application necessary to shift out of PARK (BTSI). On manual transmission vehicles, a switch on the clutch pedal serves the same function. The clutch must be depressed before the starter can be engaged.

Clutch Application

On manual transmission vehicles, stepping on the clutch pedal causes the cruise control to disengage, to prevent engine over-revving. The RESUME button may be used to engage cruise control again.

- Thanks to Ken Feliks and Kevin Fondaw

Know-How Broadcasts for March

IDL

Emerging Issues	March 13, 2003	9:00 AM, 12:30 PM, 3:30 PM EasternTime
Technology Close-Up Tech 2 Functional Diagnostics and GM-LAN	March 27, 2003	9:00 AM, 12:30 PM, 3:30 PM EasternTime

- Thanks to Tracy Timmerman

GM TechLink

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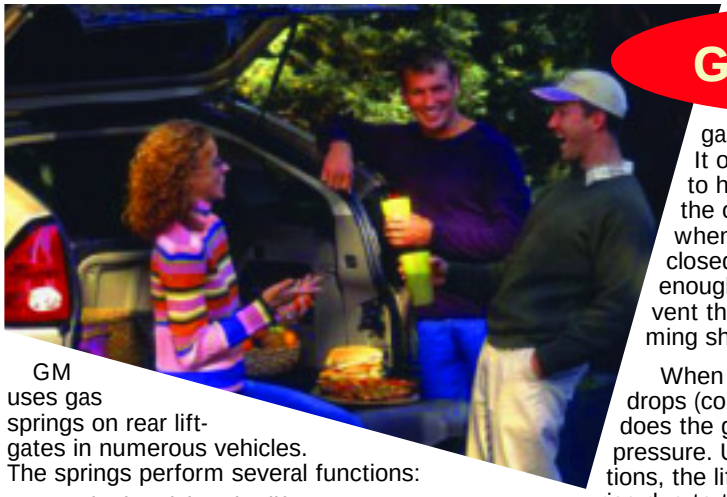
Gas Springs



GM uses gas springs on rear liftgates in numerous vehicles. The springs perform several functions:

- assist in raising the liftgate
- hold the liftgate in the raised position
- provide a controlled rate when the liftgate is closed.

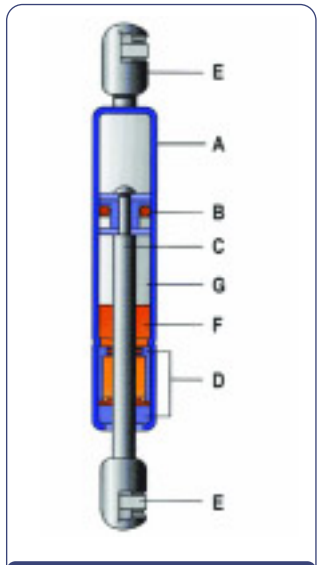
Operation

The gas spring looks somewhat like a shock absorber, although it doesn't work like one.

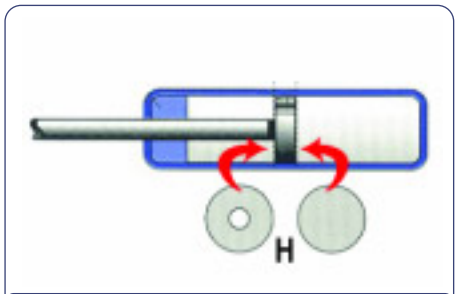
It consists of (A) pressure tube, (B) piston, (C) piston rod, (D) seal-guide, and (E) appropriate connection fittings.

The gas spring is a hydropneumatic device, meaning it contains a liquid (F - oil) and a gas (G - compressed nitrogen).

The compressed nitrogen acts with equal pressure on differently dimensioned cross-sectional areas of the piston (H). This produces a force in the extension direction. That is, the gas spring, if left on its own, will extend fully.



Gas Spring Components



Piston cross-sectional area

The gas spring is designed to operate over a range of - 20°F (-30°C) to 176°F (80°C). The compressed nitrogen in the gas spring behaves just like any other gas in a confined space. Pressure moves up or down along with temperature.

In normal temperatures (warm weather), the gas pressure is higher. This means that the gas spring may offer sufficient force to assist in raising the liftgate. It offers enough force to hold the liftgate in the open position. And when the liftgate is closed, it provides enough resistance to prevent the liftgate from slamming shut.

When the temperature drops (cold weather), so does the gas spring's internal pressure. Under these conditions, the liftgate may not autorise due to the reduced assistance in opening, although it will still hold the liftgate open. And it may offer reduced resistance when the liftgate is closed.

TIP: All of these characteristics are normal and a gas spring should not be replaced if the liftgate performs as described. Replacing a normal spring (that is cold) with a new spring (that is warm) will appear to correct the "problem," but it will return as soon as the replacement springs are allowed to become cold.

Hydro-Lift-T

The latest version of the gas spring is called the HLT, or hydro-lift temperature controlled. The name comes from a temperature sensitive bi-metal poppet valve in the piston (J). It's intended to minimize the effects of temperature on the operation of the spring. At temperatures above 50°F (10°C) the valve is inactive. Below this temperature, the valve closes and the holding force increases. The gas must pass through a small orifice (K), against the pressure of the bi-metal spring. This affects the flow of gas through the piston when the gas spring rod and piston move into the pressure tube. The effect is to provide extra holding force in the extended position to ensure that the liftgate remains open. The HLT does not affect the lift open effort or the closing resistance.

Considering the operation of the gas spring when it is cold, you may wonder how to tell if the spring should be replaced. Simple. If the springs do not hold the liftgate up after it is opened.

On vehicles equipped with the new HLT gas spring system, the temperature valve is contained in the LH spring, indicated by a red label. The RH spring is indicated by a green label.

TIP: One exception is the Cadillac Escalade, which uses a yellow label on the LH spring and a white label on the RH spring.

TIP: When replacing gas springs, be sure to check the parts book. There should be two numbers, one for each side.

TIP: If you should install two red-labeled (or yellow-labeled) gas springs, it will be very difficult to pull the liftgate shut. And two green-labeled (or white-labeled) springs may not hold the liftgate up when cold.

Gas springs should be installed with the piston rod pointing down when the liftgate is open.

Maintenance

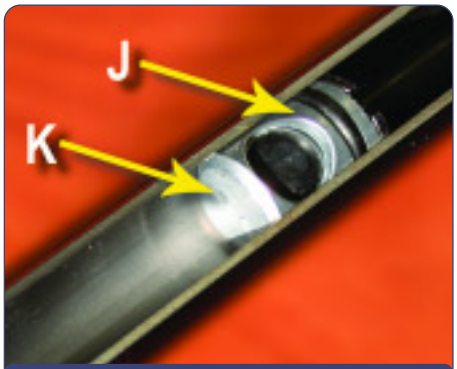
For a long service life, gas springs must not be subjected to bending forces. If the spring or its mounting points are bent, the spring may bind and not work properly.

Gas springs are designed for long life without maintenance. There is no need to lubricate the piston rod. You should, however, be sure the rod does not become contaminated (for instance with masking tape residue or overspray from a paint repair).

A light film of oil will appear on the rod as the spring extends. This is normal, and is for lubrication of the guide and seal.

Storage

If spare gas springs are stored in your parts department, be sure they are placed with the piston rod pointing down. After a maximum storage time of 6 months, the gas springs should be actuated.



Gas spring cutaway to show HLT

Disposal

IMPORTANT: Wear appropriate eye protection.

When gas springs are no longer needed, they should be disposed of in an environmentally correct manner. To accomplish this, drill the pressure tube open, release the compressed nitrogen gas, and drain the oil.

- Thanks to Rich Staton, Stabilus

3 Step Maintenance Fuel Induction Service Kit Followup

The December 2002 issue of TechLink introduced a new GM Vehicle Care line of products called the 3 Step Maintenance Fuel Induction Service Kit.

This followup is to clarify how to obtain the application tool kit and the cleaner kits.

Tool Kit -- The tool kit includes sprayer tips, adapters, hoses, gauge, and other items. To obtain the tool kit, contact the vehicle care specialist at 1.800.955.8591 (1.800.323.4592 in Canada). The maintenance cleaner kits (solvents) can also be purchased at this number.

TIP: Be sure to inquire about available incentives when both are purchased together.

Maintenance Kit -- The kit consists of three different cleaning solvents:

- Fuel System Treatment
- Throttle Body Cleaner
- Induction Cleaner

The GM part number is 12378546. In Canada the AC Delco part number is 88901337. The kits are sold by the case. Each case contains enough materials to service 12 vehicles. Your parts department can use the computerized RAPID ordering system or call the TRACS 2000 phone ordering system, 1.800.433.6961 (1.800.866.5832 in Canada).

- Thanks to Rene Richardson

Steering Wheel Mode Button

Owners of 2003 Chevrolet Venture vans may be unable to locate information on the steering wheel radio control 'mode' button in the owner's manual or in SI.

Steering wheel radio control information was completely omitted from the initial owner manual printing. Individual SWRC button operation is not found in SI. SWRC information may be found in other Chevrolet Division owner's manuals such as Monte Carlo or Impala.

For vehicles built with RPO UK3, this is a description of what the 'mode' button is for. Press this button to choose AM, FM1 OR FM2. If a tape or compact disc is playing, it will stop and the radio will play. It will not allow switching back to other sources such as cassette or compact disc.

- Thanks to GM Technical Assistance

OnStar Deactivation Strategy

This information affects 1999 through current model year vehicles equipped with the three-button OnStar system.

OnStar has begun deactivating the OnStar system in vehicles when the customer has chosen not to renew their OnStar subscription after expiration.

OnStar notifies customers that the OnStar system in their vehicle will be deactivated unless they renew the account.

After successful deactivation, customers will experience the following when attempting to contact OnStar from their vehicle:

Blue OnStar key -- the customer will be connected to a dedicated sales team who can sell an OnStar subscription and reactivate the vehicle. (On some vehicles, the customer may first hear a message stating there is no current OnStar subscription for the vehicle, and directing the customer how to activate services. A second press of the blue button will connect to a dedicated sales group who can reactivate the vehicle.)

Emergency key -- a message will indicate the service has been deactivated. On 1999 models, the operation of this key does not change with deactivation.

TIP: When successfully deactivated, the OnStar system will not attempt to connect to the OnStar center if the vehicle's front airbags deploy.

The system may not be able to establish a connection to the OnStar Call Center in certain situations, such as when the VIU is replaced on a deactivated system. When normal published diagnostic procedures do not indicate a possible cause for the no-connect concern, the vehicle may have been deactivated. Further diagnosis and repair is necessary only if the customer elects to become an active OnStar subscriber.

TIP: On the Tech 2 under the program phone option, you will notice that the phone number is 011.555.7529 or 123.456.7890 on all units that have been deactivated.

- Thanks to Dale Tripp

Hummer roof lights are typical RPAs

Regular Production Accessories (RPA)

There are several terms used to describe options and accessories that can be ordered with a new vehicle.

Regular Production Options (RPO) are installed on the vehicle at the assembly plant.

IMPORTANT: Some factory equipment is "shipped loose" with the vehicle for installation at the time of delivery. These items may be standard equipment or RPOs. Examples include wheel covers, radio antennas, and roof rack components.

Certain GM accessories can now be ordered at the same time the vehicle is ordered. These are called Regular Production Accessories (RPA). The accessory is listed on the vehicle's window label and SPID label. An example is the cargo net available with some Buick Rendezvous models (RPA code AP9).

However, the RPA does not accompany the vehicle when it leaves the assembly plant. Instead, the item is shipped directly to the dealership for installation at the time of delivery. The package is identified with the vehicle's VIN when it arrives at the dealership.

IMPORTANT: These RPA parts must not be installed on another vehicle. In fact, it's a good idea to store RPAs where they cannot be confused with normal parts department stock.

RPAs generally fall into the category of items that an owner may otherwise seek in the aftermarket. Examples may include cargo nets, floor mats, luggage compartment mats, body kits, running boards, mud flaps, off-road lights, and many more.

The advantage of ordering a factory RPA is that the item is designed specifically for the vehicle. Mounting holes, component fit, and colors are perfect matches for the vehicle, which may not be true of aftermarket items. And RPAs are covered under the new vehicle warranty.

This ensures that the customer is able to obtain desirable accessories conveniently, and because the items are considered factory equipment, they can be included in the vehicle's financing.

The labor time for installation of an RPA is handled as an add time to the Pre-Delivery inspection time (labor operation Z7000). Other warranty labor operations are not to be used for the initial installation of an RPA.

- Thanks to Russ Gilbert

Regular Production Option Master List

A vehicle consists of standard equipment and in most cases some optional equipment as well. For organizational purposes, optional equipment is identified by a Regular Production Option (RPO) code.

Every vehicle contains a Service Parts Identification label (SPID) which lists every RPO included on that vehicle.

Because there are so many RPOs in use, you will not be able to remember them all. When you encounter an RPO code that is unfamiliar, there are several ways to find out what it pertains to.

One way is to go to SI, "build" the vehicle, then look under General Information. All of the RPOs available on the "built" vehicle are listed, along with a brief description of each option.

Another way is to go to GM-VIS and input the VIN of a specific vehicle. You will see a list of the exact RPOs included on that vehicle, again with a brief description.

Now, there is another way. The current list of RPOs is found on the TechLink website at http://service.gm.com.

Open the TechLink website and click on a language button. At the top of the home page, locate the REFERENCE GUIDES tab. This will take you to a directory of available reference materials.

Click on the RPO Master List. It includes every RPO code in use for about 20 years, and they're arranged in alpha-numeric order.

TIP: This list is huge, running more than 18,000 items. You can scroll the list using your browser's scroll bar or up and down arrows.

- Thanks to Kevin Larson

New Gasket Material

According to SPO bulletin IB03-008, a new material is being used for service replacement transmission pan gaskets.

The previous black fiber material is superceded by UltraCork, comprised of cork granules embedded in rubber. The advantages of UltraCork include:

- Resists breaking when folded
- Conforms to warped or uneven surfaces
- Improved sealability
- Better torque retention
- Smaller bolt holes, to facilitate installation by holding pan bolts in place
- Improved thread sealing

The UltraCork transmission pan gasket will be included with the transmission filter. The transition will occur as inventory of the current black fiber gaskets is depleted.

- Thanks to GM Parts

Trailer Controller Information

The following vehicles are affected:

2002-2003
- **Cadillac Escalade, Escalade EXT**
- **Chevrolet Avalanche**

1999-2003
- **Chevrolet Silverado**
- **GMC Sierra**

2000-03
- **Chevrolet Suburban, Tahoe**
- **GMC Yukon Yukon XL**

2003
- **Hummer H2**

Some customers may comment that when the headlamps or park lamps are on, the brakes on the trailer are always applied, or that the back lighting for the trailer brake controller illuminates only when the brakes are applied.

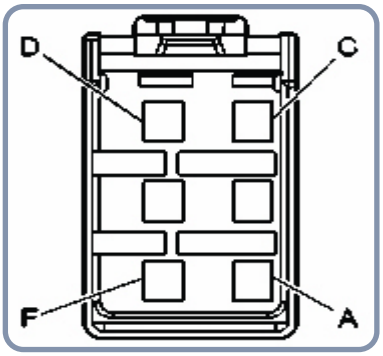
This condition may be due to wiring changes within the vehicle electrical system for the 2003 model year.

Inspect the brake controller wiring harness jumper that is plugged into the vehicle relay block body. The relay block body is located under the left side of the instrument panel near the left kick panel, behind a plastic cover.

The 1999 through early 2003 wiring harness jumper that plugs into the relay block will have a reddish/brown 6-way connector and a tag with the last four digits of the wiring harness part number. Second design 2003 may have a white plastic connector with part number 5418 as well.

- The 1999 jumper is/was PN 12171982 with a pink/purple tag identifier of 1982. This number has been superseded to 15366255, with a pink/purple tag identifier of 6255.
- The 2000 jumper harness is PN 15366255. The pink/purple tag identifier is 6255.
- the 2001-02 jumper is PN 15086884. The orange tag identifier is 6884.
- The 2003 jumper is PN 15085418. The orange tag identifier is 5418.

When transferring the brake controller with the wiring jumper attached from a 2001-02 vehicle to a 2003 vehicle, a change to the jumper harness connector must be performed.



To modify a 12171982, 15366255 or 15086884 harness for use in a 2003 vehicle, switch the wires in cavities A and D.

To modify a 15085418 harness for use in a 1999-2002 vehicle, switch the wires in cavities A and D.

- Thanks to Jim Maddy

1999-2002 Wiring Harnesses

PIN	WIRE COLOR	CIRCUIT NUMBER	FUNCTION
A	Lt blue	1620	Stop lamps
B	Red	142	Brake Controller 12 Volt Source
C	Dk blue	47	Brake Controller Output (Trailer Brakes)
D	Brown	2409	Brake Controller Illumination
E	- -	--	--
F	Black	1850	Ground

2003 Wiring Harness

PIN	WIRE COLOR	CIRCUIT NUMBER	FUNCTION
A	Brown	2409	Brake Controller Illumination
B	Red	242	Brake Controller 12 Volt Source
C	DK blue	47	Brake Controller Output (Trailer Brakes)
D	Lt blue	1620	Stop lamps
E	--	--	--
F	Black	1850	Ground

Liftgate Wedge Change

As a running change to 2003 Venture, Montana, Silhouette minivans and Aztek, a different liftgate wedge is being installed. This is the same wedge used on the Buick Rendezvous.

The liftgate trim panel is being revised to accommodate the shape of the new wedges. There should be a 6 mm gap between the panel and the wedges, right and left.


Liftgate Side Wedge

The wedge consists of two parts, the liftgate side and the body side.

Wedge -- Liftgate Side

The liftgate side wedge is attached by a single screw. It is tightened to 89 lb in (10 N.m).

Wedge -- Body Side

The body side wedge consists of a spacer and a wedge, and is attached by a single screw. Before loosening the screw, mark the location of the wedge on the spacer. Remove the screw and slide the wedge rearward off the spacer. Pry the spacer off with a flat-blade tool.

Install the spacer to the body. Slide the wedge onto the spacer to the previously marked location. Tighten the screw to 89 lb in (10 N.m).


Body Side Wedge

TIP: There are three different spacers, one for Rendezvous, one for Aztek, and one for the minivans.

- Thanks to Mike Muglia

Revised Windshield Wiper System

A revised windshield wiper system will be installed as a running change on 2003 Chevrolet Cavalier and Pontiac Sunfire beginning in January (VIN 7 on January 2, VIN S on January 11). The 2003 Pontiac Grand Am, Chevrolet Malibu and Oldsmobile Alero will be added on February 3.

Taking the most obvious first, a protective plastic sleeve is installed on the wiper blade at the factory.

Gaps in the hook clip and lever of the blade assembly have been reduced to reduce noise and chatter, and to improve winter performance.

The controller assembly now operates digitally instead of with variable voltage, providing a more reliable interval wipe.

The manufacturing process for the frame tube and transmission housing has been simplified, and it is more stable.

And finally, the new assembly weighs about 11 ounces (300 grams) less.

Plastic protective sleeve on wiper blade

Service Considerations

TIP: Leave the blade protectors in place until just before the vehicle is delivered, to prolong blade life.

New wiper frame assembly

TIP: Parts are not interchangeable between the earlier system and the new one. Consult your parts catalog for the appropriate numbers.

- Thanks to Steve Oakley

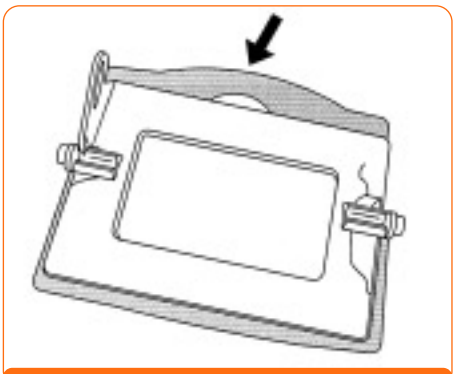
Air Vent Flutter

Owners of some 2002-03 Chevrolet Venture, Oldsmobile Silhouette and Pontiac Montana vehicles may comment on a fluttering sound from an I/P air vent when the fan is set on medium or high.

This may be caused by a dislodged strip of foam gasket on one of the air shutters.

Repair requires removing the air discharge outlet by pushing in at the top left corner and pulling out at the lower right. After the outlet pops out, remove the airflow adjusting wheel.

Pull out the shutter and observe where the gasket is dislodged.



Dislodged gasket

Pull the gasket partially out of the retaining groove and apply hot glue three places: at the center, and right and left of center. Reseat the gasket and allow the glue to set.

Repeat with the other edge of the gasket.

Install the shutter, wheel and outlet.

Refer to bulletin 02-01-37-008 for details.

- Thanks to Tom Geist

Synthetic Front Axle Lubricant

IMPORTANT: This information is intended for vehicles sold in very cold weather climates, especially those in Alaska and certain regions of Canada.

An upcoming bulletin addresses the use of synthetic front axle lubricant for 4wd C/K trucks with 9.25-inch front axle assemblies sold in cold weather climates.

TIP: Provide a copy of the bulletin to the owner when the lubricant is replaced.

The mineral based fluid used in the front axles of these vehicles may not lubricate properly at -12°F (-24°C) or below. This may contribute to premature pinion bearing wear if a vehicle is driven extensively in very low ambient temperatures.

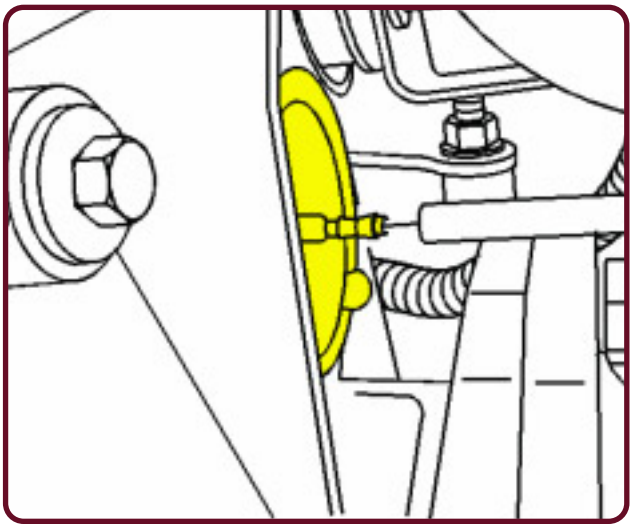
Before delivery to the first retail customer, the front axle fluid should be drained and refilled with synthetic axle lubricant, following the service manual procedure (document 673354).

It is not necessary to flush the front axle assembly. Use Synthetic Axle Lubricant 12378261 (Canadian 10953455). The approximate fluid capacity is 1.83 qts. (1.73L).

After changing the lubricant, inspect the front axle vent hose connector. The black type is not compatible with synthetic lubricants. If necessary, install vent connector 12479296, following the service manual procedure (document 843184)..

TIP: If the vent hose connector assembly is white, it does not need to be changed.

- Thanks to Rich Burrell and Ed Laskowski



Power Seat Adjuster Inoperative

Owners of some 2001-2003 Buick Century and Regal and Chevrolet Impala and Monte Carlo may comment that the horizontal or vertical power seat adjuster in the driver or passenger seat is inoperative.

The power seat adjuster cables may have been damaged or disconnected by objects pushed under the front seat.

Reconnect or replace the power seat adjuster horizontal or vertical cables. Refer to the Drive Cable Replacement -- Horizontal and Vertical procedures in the Seats sub-section of the Service Manual (SI Documents 964600 and 964621).

Up to now, it was necessary to replace the entire seat adjuster assembly because the individual cables were not available separately.

Parts are currently available from GMSPO.

- Thanks to Mel Spresney and Maurine Miller

Bulletins - January 2003

This review of service bulletins released through mid-January lists the bulletin number, superseded bulletin number (if applicable), subject and models.

GENERAL INFORMATION:

02-00-89-018; LD Truck Dealers Servicing Chevrolet Kodiak and GMC TopKick (C4500) Vehicles; 2003 Chevrolet Kodiak and GMC TopKick C4500 Series

HVAC:

02-01-37-008; Fluttering Sound From I/P Air Vent (Glue Air-Shutter Sealing Foam); 2002-03 Chevrolet Venture, Oldsmobile Silhouette, Pontiac Montana

02-01-38-004; Air Conditioning is not Cold Enough (Replace Condenser); 2002 Buick Rendezvous, 2001-02 Chevrolet Venture, Oldsmobile Silhouette, Pontiac Aztek, Montana

02-01-38-005; Revised Heater/Vent Module Replacement; 1998-2002 Chevrolet Blazer, S-10, GMC Jimmy, Sonoma, Oldsmobile Bravada

02-01-38-006; Revised Compressor Oil Balancing Procedure; 2002 Chevrolet TrailBlazer, GMC Envoy, Oldsmobile Bravada

02-01-38-007; Poor A/C Performance -- A/C Will Not Blow Cold Enough (Perform A/C System Checks); 2003 Chevrolet Silverado, GMC Sierra with 6.6L Diesel Engine (VIN 1 -- RPO LB7)

02-01-39-008; A/C Compressor Inoperative, A/C Cycles too Often, Insufficient Cooling, DTC P0530 (Replace A/C High Pressure Valve); 2002-03 Buick Rendezvous, Chevrolet Venture, Oldsmobile Silhouette, Pontiac Aztek, Montana with Mitsubishi Air Compressor

SUSPENSION:

02-03-08-008; Rattle/Creak/Popping Type Noise from Front of Vehicle When Turning (Replace Both Front Stabilizer Shaft Insulator Brackets); 2002-03 Chevrolet Cavalier, Oldsmobile Alero, Pontiac Grand Am, Sunfire with FE1 or FE2 Suspension

DRIVELINE AXLE:

02-04-17-003; Boom Noise or Vibration (Rotate/Reinstall Front Propeller Shaft to Axle); 2003 Chevrolet Express, GMC Savana 1500/2500 AWD Vans

BRAKES:

02-05-25-006A; replaces 02-05-25-006; Antilock Brake (ABS) Activation at Low Speeds (Clean Wheel Speed Sensor Mounting Surface); specified truck vehicles between 1995-2003

ENGINE/PROPULSION SYSTEM:

00-06-01-023B; replaces 00-06-01-023A; Engine/Balance Shaft "Rattle" Noise; 1992-2003 Chevrolet and GMC C/K, S/T, M/L, G and P Models, Oldsmobile Bravada with 4.3L V6 Engine (VINs W, X -- RPOs L35, LF6, LU3)

01-06-01-002A; replaces 01-06-01-002; Revised Piston Pin Removal/Installation Procedures; specified 1994-99 Vehicles with 3.1L Engine (VIN M -- RPO L82)

02-06-01-038; Engine Knock or Lifter Noise (Replace O-Ring); 2001-03 Cars and LD Trucks with 4.8L, 5.3L, 5.7L or 6.0L V8 Engine (VINs V, T, Z, G, S, N, U -- RPOs LR4, LM7, L59, LS1, LS6, LQ9, LQ4)

02-06-02-011A; replaces 02-06-02-011; Engine Overheating and/or Excessive Noise from Electric Cooling Fan Motor (Install Cooling Fan Shield and Cooling Fan Module Motor Shroud Assembly, If Necessary); 2000-02 Chevrolet Impala with specified RPOs

02-06-03-006A; replaces 02-06-03-006; No Start, No Crank, Battery, Batteries, Generator, Gages, SES, SIR, Brake, Security, Theft, ABS, Hot, DIC Messages, Lamp, Light, Battery and Generator Diagnostic Testing, and Cadillac Roadside Service, Warranty Claims Procedure (Proper Diagnostic Procedures); 1997-2003 Passenger Cars and Trucks (except electric vehicle), Hummer H2

02-06-03-011; Electrical System Diagnostic Work Sheet; 1997-2003 Passenger Cars and LD Trucks, 2003 Hummer H2

02-06-04-054; Increased Accelerator Pedal Effort (Clean Throttle Body and Adjust Blade); specified vehicles with 4.8L or 5.3L V8 Engine (VINs V, T, Z -- RPOs LR4, LM7, L59)

02-06-04-056; Gasoline Auxiliary Generator Will Not Run When Vehicle is Off (Replace Fuel Sending Unit With Non-RFCV Fuel Sending Unit); 2002 Chevrolet Express, GMC Savana Van with RPOs K50 (Fuel Fitting, Line Take Off) and/or 7T6 (Fuel Fitting, Line Take Off)

02-06-04-057; Labor Operation Assignments for Vehicle Control Module Reprogramming; 2003 and Prior Passenger Cars and Trucks, Hummer H2

02-06-04-058; SES Lamp Illuminated, False DTCs P0181 and/or P0116 (Reprogram ECM); 2001-02 Chevrolet Silverado, GMC Sierra 2500/3500 with 6.6L Duramax Diesel Engine

02-06-04-060; Automatic Engine Shutdown Feature; 1997-2001 Chevrolet and GMC F Model MD Tilt Cab with Air Brakes (RPO JE4) and Automatic Engine Shutdown (RPO KPJ)

TRANSMISSION/TRANSAXLE:

99-07-30-030B; replaces 99-07-30-030A; Grinding and/or Growling Noise in Park on Incline; 2003 and Prior FWD Passenger Cars with Hydra-Matic Front Wheel Drive Automatic Transmission

01-07-30-036B; replaces 01-07-30-036A; Diagnostic Tips for DTC P0756; 2001-03 Passenger Cars and LD Trucks with 4L60E or 4L65E Auto Transmission (RPO M30 or M32)

02-07-30-039A; replaces 02-07-30-039; Firm Transmission Shifts, Shudder/Chuggle, Transmission Won't Downshift On Deceleration, SES Light Illuminated, DTC P0742 Set (Perform Diagnostics and Replace TCC PWM Solenoid); 2003 Vehicles with 4T65E Transaxle (RPO MN3, MN7, M15, M76) or 4T40E/4T45E Transaxle (RPO MN4 or MN5)

01-07-30-042A; replaces 01-07-30-042; Information on 2-3 Upshift or 3-2 Downshift Clunk Noise; 2003 and Prior LD Trucks with 4L60E or 4L65E Auto Transmission (RPOs M30, M32)

02-07-30-046; Newly Designed Transaxle Valve Body and Oil Pump Service Information; specified 2002-03 vehicles with 4T65E Transaxles, RPOs MN3, MN7, M15, M76

02-07-30-050; Engineering Changes to Valve Body, Pressure Regulator Valve, 2-3 Accumulator Valve and Bore; applicable 1995-2003 Chevrolet Cavalier, Malibu, Oldsmobile Cutlass, Alero, Pontiac Sunfire, Grand Am with 4T40E or 4T45E Transaxle (RPOs MN4 or MN5)

02-07-30-051; Transmission Shifting In and Out of 4th and 5th Gear (Hunting) When Pulling/Carrying a Load, Unable to Manually Select 4th Gear (Install 5th Gear Inhibit Switch); 2001-02 Chevrolet Silverado, GMC Sierra with 6.6L Diesel or 8.1L Gas Engine (VINs 1, G -- RPOs LB7, L18) and Allison Auto Trans (RPO M74)

02-07-30-052A; replaces 02-07-30-052; Essential Tool J-45096 TransFlow; 2003 and Prior Passenger Cars and LD Trucks with Automatic Transmission (except M74 Allison)

BODY AND ACCESSORIES:

02-08-42-006; Relay Omitted for Bodybuilder Connection/Upfitter Provision; 2003 Chevrolet and GMC W3500/4500 MD Tilt Cab Models

02-08-44-016A; replaces 02-08-44-016; Whine, Buzz, Generator Whine, Whine Type Noise Heard on Acceleration (Repair Vehicle Sound System Wiring); 2002 Chevrolet TrailBlazer, GMC Envoy, Oldsmobile Bravada

02-08-44-019; Revised Audio System Diagnostic; 1998-2000 Pontiac Firebird, Chevrolet Camaro

02-08-44-020; No Audio Out of Speakers at Times (No Permanent Repair Available at this Time); 2003 Cadillac Escalade, Chevrolet Avalanche, Silverado, Suburban, Tahoe, GMC Sierra, Yukon, Hummer H2

02-08-44-022; Static Noise Heard in Radio Speakers (Install Capacitor into Rear Differential Clutch Check Valve Circuit); 2002-03 Buick Rendezvous, Chevrolet Venture, Oldsmobile Silhouette, Pontiac Aztek, Montana with All Wheel Drive

02-08-50-010; Power Seat Adjuster Inoperative (Reconnect or Replace Adjuster Cables); 2001-03 Buick Century, Regal, Chevrolet Impala, Monte Carlo

02-08-62-004; Front Fascia Wavy (Install Dual Lock); 2002-03 Chevrolet TrailBlazer, EXT

02-08-64-024; Discoloration/Fading of Door Glass Molding; 2002 Chevrolet TrailBlazer, GMC Envoy, Oldsmobile Bravada

02-08-64-026; Power Sliding Side Door Hard to Open (Replace Lock Rod); 2002-03 Chevrolet Venture, Oldsmobile Silhouette, Pontiac Montana (Long Wheel Base Only, with Manual or Power Sliding Side Door)

02-08-67-006A; replaces 02-08-67-006; Roof Perforation (Replace Roof); 1997-2003 Chevrolet Venture, Pontiac TransSport/Montana, Oldsmobile Silhouette