TECHlink
GM
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A Monthly Publication for GM Dealership Service Professionals

EVAP System Operation

2000-02 Chevrolet Prizm
2003 Pontiac Vibe

For over three decades, vehicles have been equipped with EVAP systems. The purpose of the EVAP system has always been to collect evaporated gasoline (for instance during fill-up, while parked, and continuously while driving) and to burn the vapors during normal engine operation. This is a major factor in the reduction of unburned hydrocarbon emissions.

From the beginning, two things have remained constant. The vapors are collected in a canister containing activated charcoal granules. And manifold vacuum is used to draw the vapors into the engine. Everything else about the system has been refined, modified and improved to more effectively collect vapors, and to more precisely control when the vapors are drawn off and burned. And the specific details of operation also vary from one vehicle platform to another.

Today, the EVAP system is controlled by the PCM. And to meet OBD II requirements, the latest systems are largely self-diagnostic, and able to detect leaks as small as 0.020 inch (0.51 mm).

The EVAP system on the 2000-02 Chevrolet Prizm and the 2003 Pontiac Vibe performs the same tasks and meets the same requirements as all other GM EVAP systems, but the control principles are somewhat different. This is explained in detail in the appropriate section of

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Techline News

Service Administrative Messages on SI

http://service.gm.com is fast becoming the one-stop-shopping place for Service Information.

The following are now available to you in SI:

- Service manuals
- 2003 Owners Manuals
- Bulletins
- Service Administrative Messages (US)
- Campaigns
- Preliminary Information
- Service VMEs (US)

Here's a little more detail on the latest addition, Service Administrative Messages.

Whenever GM sends out a Service Administrative Message over GM ACCESS, it will also be put on SI. You will no longer have to wait for the message to be relayed to you through your dealership's communication system. You will have direct access to it through SI.

There are several ways to access the Service Administrative Messages.

If you know the number -- simply use the SI Number Search feature. You must type VSS followed by the Service Administrative Message number.

If you have already "built" the vehicle -- select Service Manuals/Bulletins, then use the keyword search. This will present you with a list of all documents in SI that use the keyword, pertaining to the specified vehicle. The Service Administrative Messages will be at the bottom of the list.

You also have another option **if you have already "built" the vehicle --**

select Service Manuals/Bulletins, then select Bulletins by Category, then select Service Administrative Message. This will

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Contents

GM Service and Parts Operations

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present you a list of all Service Administrative Messages pertaining to the specified vehicle.

Updates

The Service Administrative Messages will be updated following the standard SI update schedule:

- update weekly on Internet
- update bi-weekly on broadcast
- update on CD whenever issued

- Thanks to Bob Savo, Lisa Scott and Mark Stesney

TechLink Website Renovated

During the last month, we've renovated the TechLink website. You can still find it at http://service.gm.com, fourth link.

In addition to a new look, you'll also find some new easy-to-use features.

First, the opening page allows you to view everything in any of four languages: Spanish, German, French, and of course English. You can return to this page at any time to quickly select a different language.

On most Internet service providers, you will notice that the new website downloads much quicker than before. For you techies, it's because we're using simple HTML format, so you won't need Acrobat Reader to view it.

Navigation is simple, and mostly intuitive. And all four languages work exactly the same way. All the control buttons are grouped at the top of the page. At present, several buttons are reserved for upcoming features.

You will notice that the current month's issue of TechLink now appears as a single, scrollable document. You can reach any article by clicking on its title in the table of contents, or simply scroll to it. Illustrations are shown in the left hand margin and are keyed to colored references in the text. You can enlarge any illustration simply by clicking on it.

And some good news for those who like to print articles for later reference. Simply drag to highlight whatever you want to print, then press the print button on your browser. Be sure to click on Selection. You can quickly print just one article, or the whole issue.

Finally, we've retained the archive of every TechLink published since January 2000. These are being presented in the format in which they first appeared, which means that some issues will still require Acrobat Reader.

- Thanks to Mark Stesney

Know-How Broadcasts for December

Emerging Issues	December 12	9:00 AM, 12:30 PM, 3:30 PM EasternTime
Technology Close-Up	December 19	9:00 AM, 12:30 PM, 3:30 PM EasternTime

- Thanks to Tracy Timmerman

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Water in AIR System

Some 1999 - 2001 Jimmy, Blazer, and Bravada vehicles with the L35 4.3 L engine may experience a repeat DTC P0410 with evidence of water in the AIR pump. If there is evidence of water in the AIR pump, the pump must be replaced.

Correct Hose Connection

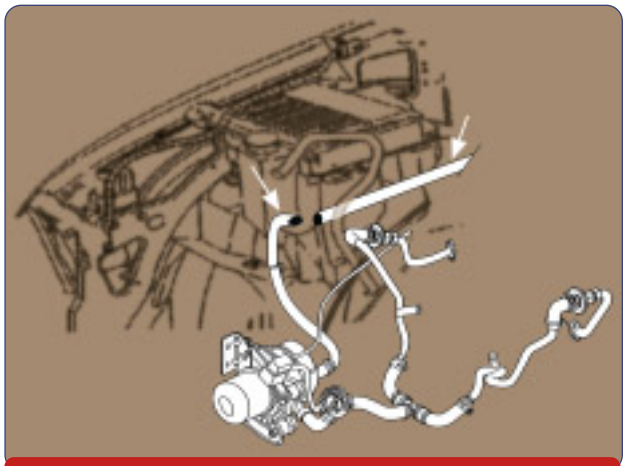
If the pump has been previously replaced, verify that the inlet and exhaust hoses are connected correctly before performing any additional diagnosis. Repeat failures have occurred because of these hoses being switched.

TIP: The inlet port on the pump is marked IN. As the hoses lie unconnected, it is very possible to assume that the reverse hose connection is correct.

If the hoses are connected correctly or this is the first repair of this concern on the vehicle, the source of the water could be either from the exhaust or the inlet side of the pump. To determine if the water originated from the exhaust side, follow the SI diagnosis for P0410 (Document ID 554347).

TIP: When you are at the step for testing the vacuum solenoid for proper operation, be sure to command the pump off and verify that the vacuum goes to zero. If not, the cause may be a stuck-open vacuum solenoid. Replace as necessary.

If you do not find an issue with the exhaust side of the system, water may be getting into the AIR system through the inlet hose and/or the pump itself.



Rerouting AIR Inlet Hose

To prevent this, cut the existing inlet hose near the bend and attach a 2 foot (.6 m) length of heater hose, using a coupling.

TIP: For 1999 and early 2000 vehicles you will need 5/8-inch (15.9 mm) heater hose and coupling. For late 2000 and early 2001 you will need a 3/4-inch (19 mm) heater hose and coupling.

Route the hose along the right side of the engine compartment, ending at the evaporator core housing. Cut the hose at a 45° angle, with the angle pointing downward. This is a dry area, and it prevents kinking of the inlet hose, which can cause a restriction.

The exhaust check valves are also a source of water entry into the AIR pump. This can be diagnosed by inspection of the water found in the AIR pump. If the water has a yellow tint and has an exhaust odor, replace both check valves. Replacement of the shut-off valve is also recommended, due to the caustic nature of the exhaust water, which can cause failure of the diaphragm.

To insure no water enters the pump at the pump itself, add silicone sealer to the grommet at the wire harness leading into the pump.

- Thanks to Marty Case and Frank Tornambe

AIR System Operation

The secondary air injection (AIR) system helps reduce exhaust emissions at startup by forcing fresh, filtered air into the exhaust stream to accelerate catalyst operation.

The vehicle control module (VCM) provides a ground for the AIR pump relay, which energizes the AIR pump and AIR solenoid. The AIR solenoid applies engine vacuum to the shut-off valve, allowing it to open. With the pump running, pressurized air flows from the pump, through the shut-off valve, through a check valve on each bank, and into the exhaust stream.

The control module monitors the pre-catalyst HO2S, and if insufficient flow is detected, a P0410 DTC will set. Insufficient flow may result from water in the system, as described above.

Typical Power Accessory Port or Cigarette Lighter Removal

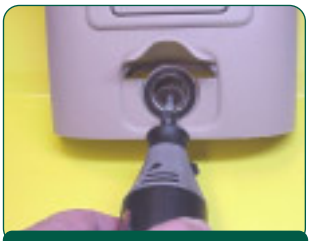
This procedure may be used to remove a cigarette lighter or accessory port if the standard method in SI does not work.

To review, here's the standard method.

Remove the power accessory port fuse. Then remove the power accessory port socket by placing one side of the T portion of J-42059 Cigarette Lighter Socket Remover into the tab window. Angle the other side into the opposite tab window. Pull the power accessory port socket straight out.

If the standard method fails to remove the socket, use the following alternate method.

Insert a small grinding tool with a cutoff wheel into the socket. Remove the plastic latches in the 3 mm (0.11 in.) square windows.



Using cutoff wheel to remove latches

With the tabs removed, use J-42059 as directed above to remove the socket.

Remove J-42059 from the power accessory port socket. Then, disconnect the electrical connector from the power accessory port.

And finally, use your index finger to pull out the power accessory port retainer.

- Thanks to Scott Burns

continued from page 1

SI. As with all parts of SI, these sections are revised on a continuing basis. And an upcoming Service Manual update bulletin will itemize the latest revisions to SI.

Components

The Prizm/Vibe EVAP system consists of a vapor canister and three PCM-controlled solenoid valves. (This is one solenoid more than most EVAP systems use.) A fuel tank pressure sensor is used for diagnostics.

The vapor canister contains granules of carbon, which absorb gasoline vapors on contact. When air is drawn through the granules, the carbon gives up the vapors.

TIP: The canister in this system is unique in that it consists of two halves, or chambers. The chamber connected to the fuel tank is the vapor side of the canister, and the chamber connected to the air cleaner is the air supply side.

The Purge Solenoid valve is normally

Purge Solenoid Valve

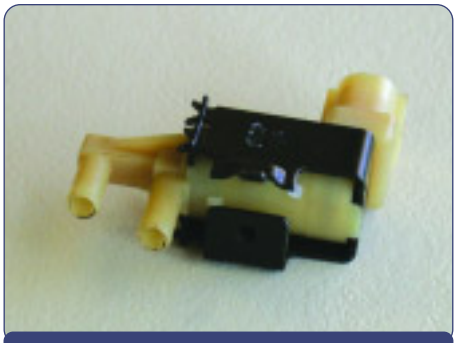
closed (no flow), and opens (flow) upon command from the PCM. This valve controls the application of manifold vacuum

Vent Solenoid Valve

to purge the EVAP system.

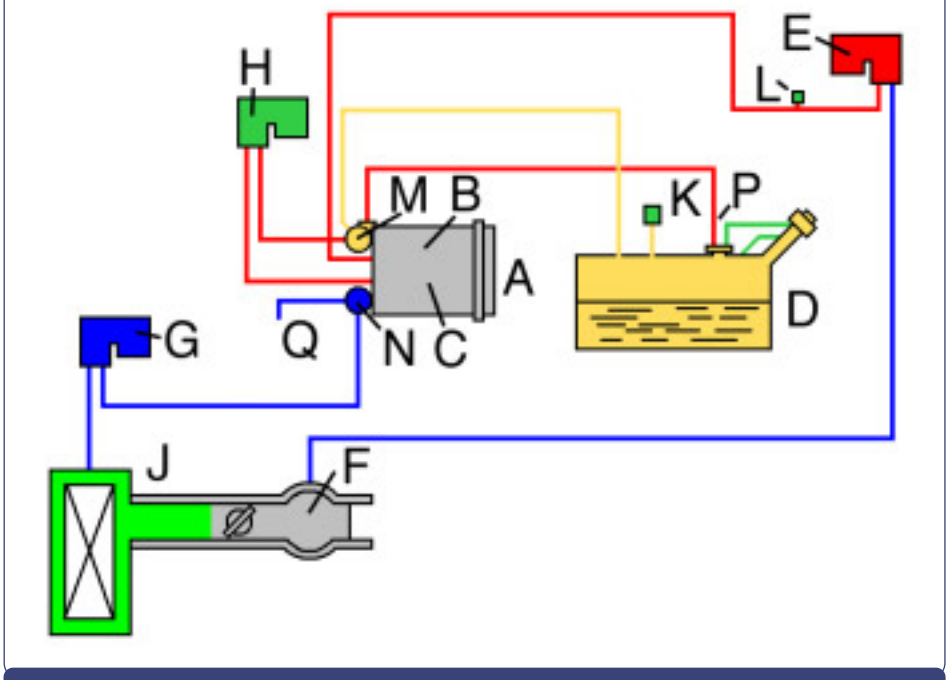
The Vent Solenoid valve is normally open (flow), and closes (no flow) upon command from the PCM. This valve allows air from the air cleaner to enter the EVAP system.

The Pressure Switching Solenoid valve, located between the two chambers of the canister, is normally closed (no flow). When necessary, it is opened (flow) by the PCM. When the valve is open, the vapor space in the fuel tank is



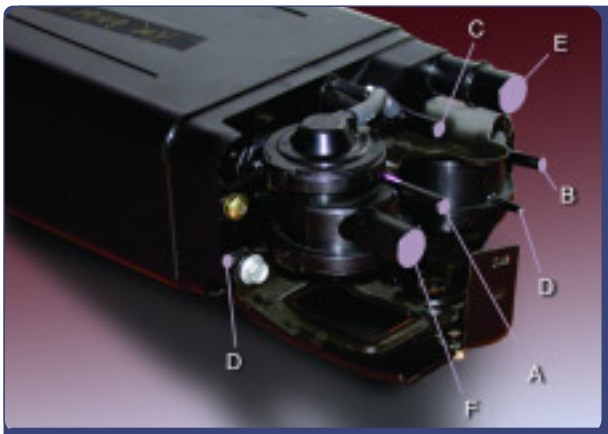
Pressure Switching Solenoid Valve

Fuel Tank Pressure Sensor



EVAP System Components

- A Canister
- B Vapor Chamber
- C Air Chamber
- D Fuel Tank
- E Purge Solenoid
- F Manifold Vacuum
- G Vent Solenoid
- H Pressure Switching Solenoid
- J Air Cleaner
- K Fuel Tank Pressure Sensor
- L EVAP Service Port
- M Evap Valve
- N Atmospheric Valve
- P Fuel Tank Vent Valve
- Q Drain Hose



- A From Vent Solenoid
- B From Fuel Tank
- C From Purge Solenoid
- D To Switching Solenoid (2)
- E From Fuel Tank (for refueling)
- F To Drain Hose

Vapor Canister Fitting Identification

connected to the canister.

Two additional valves are attached to the canister. They are operated by spring-loaded check balls and control flow into and out of the canister. The Evap Valve is on the vapor chamber side of the canister and the Atmospheric Valve is on the air chamber side.

The Fuel Tank Pressure Sensor is located on the top of the fuel tank (Vibe) or on the vapor canister (Prizm).

Operation

During shutdown, the valves assume their normal, relaxed positions.

Parked Shutdown (Cooldown) -- Both the purge valve and switching valve are closed and the vent valve is open. Under this condition, as vapors form in the fuel tank, they are routed to the canister. The calibration of the drain port passage check ball in the atmospheric valve is set at 5.5 in. H_2O, and above that pressure, air is allowed to pass through the drain hose to atmosphere. On most other systems, this air is allowed to pass through the vent solenoid to atmosphere.

Normal Operation After Ambient Air (Cold) Start -- When engine coolant temperature reaches 74° C (165° F), the purge valve opens, applying manifold vacuum to the vapor chamber of the canister. Because the vent valve is already open, manifold vacuum draws air through the canister. This draws vapor into the engine to be burned. The switching valve remains closed.

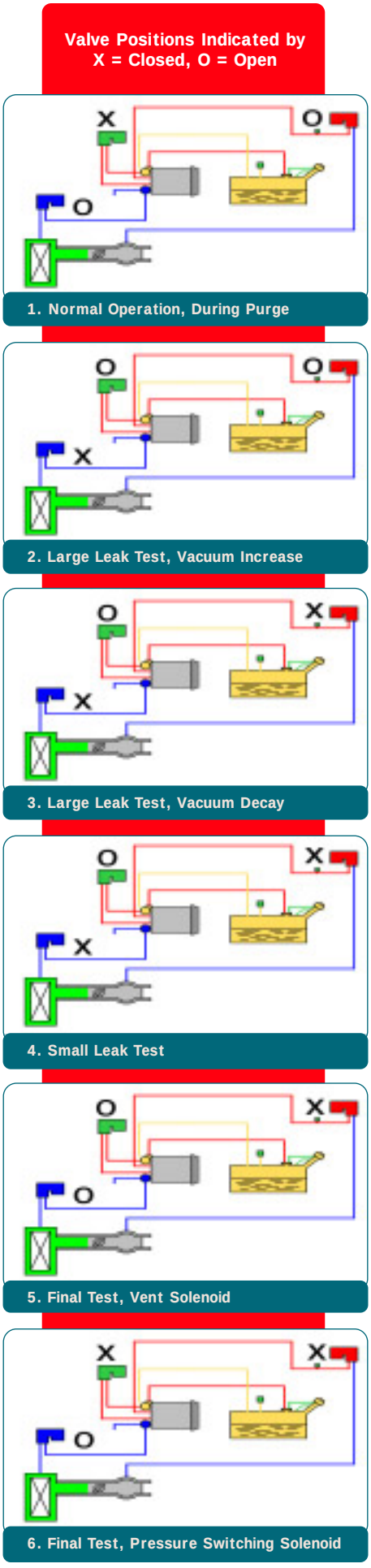
As the fuel in the tank is heated by the nearby exhaust system, fuel evaporates and pressure within the tank increases.

TIP: This is an important fact to understand. During normal operation of the system, when the purge valve is turned on, and evacuation occurs, the pressure in the fuel tank does not drop. In fact, it may even increase. This does not indicate a problem during diagnosis.

After the vehicle reaches normal operating temperature, and other conditions are met, the PCM runs a series of EVAP self-diagnostic tests. The purpose of these tests is to identify whether each of the solenoid valves operates as commanded, and also to determine if there are any leaks in the system. Refer to the accompanying illustration as you read about the self-test processes.

1. Normal Operation, During Purge -- Before these tests start, the vent valve is open, the switching valve is closed, and the purge valve is open.

2. Large Leak Test, Vacuum Increase -- First, the vent valve closes and the switching valve opens. The purge valve remains open. This causes vacuum to increase in the entire system. Vacuum is detected by the pressure sensor in the fuel tank. If the vacuum does not increase, or increases beyond the specified limit, P0440, P0441, and P0446 codes will set.



TIP: Because more than one code will set, it's recommended that you begin diagnosis with the code set in Freeze Frame Failure Record.

3. Large Leak Test, Vacuum Decay -- The purge valve is now closed, trapping vacuum in the EVAP system. Now, the pressure sensor watches to see if, or how much, the vacuum decreases. A rapid decrease in vacuum indicates a large leak. This will cause a code P0440 to set. This could indicate a leaky filler cap, a loose fitting, or other large leak.

4. Small Leak Test -- If the system passes the large leak test, the pressure sensor continues to monitor the trapped vacuum. A slight vacuum decrease indicates a small leak. The EVAP system must be able to identify a leak as small as 0.5 mm (0.020 inch). If a small leak is detected, a code P0442 will set.

5. Final Test, Vent Solenoid -- Next, the system starts to open the vent valve, admitting air into the system once again. Vacuum should drop rapidly, indicating that the vent solenoid is working.

6. Final Test, Pressure Switching Solenoid -- Finally, the switching valve is closed. The indicated drop in vacuum is now not as rapid, because the pressure sensor in the tank is isolated from the rest of the system. This indicates that the switching valve is working.

After the test is completed, the solenoid valves return to the normal purge mode.

Once the system passes this final test, the EVAP system is declared OK, and the necessary "PASSED" flag sets in the PCM.

If the system fails any step of the self-test, diagnostic codes will set. SI contains the necessary steps to locate the cause(s) of the code(s).

Diagnostic Tips

IMPORTANT: Perform the necessary diagnostic steps before replacing any components.

If you find it necessary to use the J-41413-200 EVAP Tester (the "smoke machine"), you will need to plug the canister drain hose. Use plug J-41413-301 for this purpose. If you do not, smoke will blow from the opening. The check

Vapor line between fuel tank and canister

ball in the atmospheric valve is calibrated for 5.5 in. H_2O, while the EVAP tester pressurizes the system to about 7-13 in. H_2O.

TIP: One known place to check for leaks using the "smoke machine" was covered in the October 2002 TechLink. This involves the corrugated plastic vapor line between the top of the fuel tank and the vapor canister. It is possible that the O-ring seals used in this line are not functioning properly, or that the vapor line is not fully connected.

Remember, when the system is purging, with the purge valve open, pressure in the fuel tank does not drop as it does in other systems, and actually may increase. This is normal.

The Tech 2 contains several Service Bay tests, to expedite the diagnostic process.

The EVAP Purge/Seal Function Test allows you to simulate the leak portion of the test.

TIP: This test applies only to the Pontiac Vibe.

The test is performed with the engine running. At first the Tech 2 controls all three solenoid valves to see if it is possible to apply vacuum to the entire system, then it seals the system to see if it will hold vacuum. This checks valve operation and also checks for leaks.

The Check Mode is most often used while driving the vehicle to duplicate the customer concern.

TIP: This test applies both to Prizm and Vibe.

TIP: It's important to capture and save any DTC or Freeze Frame information on the Tech 2 before entering the Check Mode. All DTC and Freeze Frame information is cleared when Check Mode is entered.

Using Check Mode temporarily makes the EVAP system much more sensitive to problems, so diagnostics will run quicker. It also temporarily turns all B codes into A codes, so the MIL will illuminate right away if a condition occurs.

- Thanks to Harry Cleaver, Frank Clark and Jeff Strausser

Park Brake Spring Kits

Park brake spring kits are available for rear disc brakes to eliminate the need to order park brake shoe kits to service broken retainers.

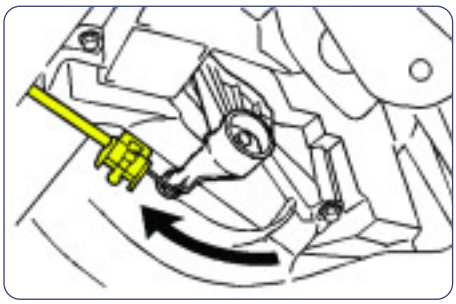
88936340 for 97-2002 Classic S/T pickup and utility trucks

88935962 for 1999-2003 2500 and 3500 C/K trucks, G vans and Hummers.

TIP: Clips will soon be available for 1500 C/K utility and pickup trucks.

- Thanks to Dan Oden

Vibe A/C Lack of Cooling



On the Pontiac Vibe, the A/C temperature control is cable operated. In the case of a customer concern of insufficient cooling, check and adjust the cable. The procedure is located in SI, document 841682.

Check this adjustment before replacing the compressor.

- Thanks to Jeff Strausser

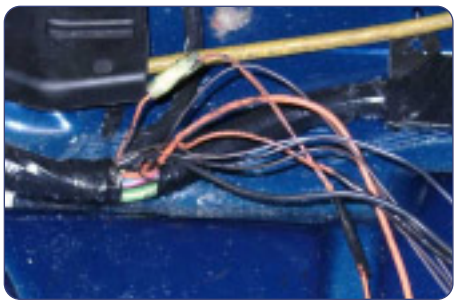
Chafed Wires Under Seat

Owners of 1999-2002 Chevrolet Blazers, S-10 Crew Cabs, GMC Jimmys, Sonoma Crew Cabs and 1999-2001 Oldsmobile Bravadas may comment that their vehicle will not start after sitting for 24 hours. Customers may also comment on a number of other symptoms:

- open cruise control fuse
- blower motor runs intermittently
- battery drain
- headlamps remain on
- headlights dim very slightly for a moment while driving at night
- endgate glass release inoperative

Chafed wires under the driver and passenger seats may cause these conditions. These wires carry battery voltage. If the wires are damaged, it can lead to open fuses, or circuit breakers, and/or battery discharge. On base vehicles, passenger seat wires are located under the carpet.

To correct these conditions, repair



damaged wires and replace any fuses or open circuit breakers.

- Thanks to Christopher Lee

Door Switch Module Service

Use care when replacing a door lock and side window switch module on 2003 Chevrolet and GMC full size pickup or utility.

To avoid damaging the trim panel, it's necessary to remove a screw that retains the switch module to the trim panel.

This is covered in SI documents 849812 and 849813.

- Thanks to Steve Arendt and Greg Mousseau

1999-2001 Cadillac Catera Transmission Control Module (TCM) DTCs P0601 and P0602

When diagnosing DTCs P0601 or P0602 set in the TCM, do not attempt to program the TCM. The TCM is not programmable and new replacement TCMs do not require programming. After replacing a TCM, clear all DTCs, using the Clear Eng/Trans DTC Info function on the scan tool. After replacing the TCM, if a DTC P0602 sets in the engine control module (ECM), clear all DTCs using the Clear Eng/Trans DTC Info function on the scan tool. If the DTC resets, update the ECM programming with the latest calibration available. The service manual information database has been updated to address this concern.

- Thanks to Michael G. Van Houten

Search Tip for Locating Product Information (PI) Documents on SI

Since June 17, 2002, it has been possible for you to search for PI documents on SI. However, some people are experiencing difficulties.

Here are some tips.

After entering SI, you must click on the blue line that says click here to enter a Vehicle Identification Number (VIN).

Next, input the vehicle's VIN in the space provided. Be sure to include all 17 characters. Then click on Submit.

Do not fill in keyword box. Click on Preliminary Information.

Next, choose Service Manual/Bulletins.

When the next screen comes up, you will see a keyword search box. Do not type anything in this box. The keyword search is not available for PI documents. Instead, look at the list at the left of the screen. Locate the line that says Preliminary Information and click on it.

You will now see a list of all PI documents that pertain to the VIN you input. You can then select any document for viewing.

- Thanks to GM Technical Assistance

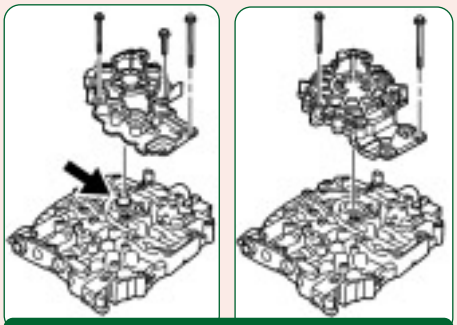
Select desired document from list.

4T65E Automatic Transmission Pump

When servicing the 4T65E automatic transmission, you may encounter two parts-compatibility issues. These involve the valve body and transmission oil pump.

Starting July 15, 2002 (Julian date 196) all 2002 and 2003 4T65E automatic transmissions have been built with a three-piece oil pump. The service valve body is specific to the pump design.

The two-piece oil pump design has the oil pump rotor support in the valve body. The first-design oil pump part number 24221299



Rotor support in valve body, left.
Rotor support in pump, right.

The three-piece oil pump design has the oil pump rotor support in the oil pump. The second-design oil pump part number 24225894

Part number questions for the valve body should be directed to Partech.

2002 and 2003 4T65E automatic transmissions built before July 15, 2002 (Julian date 196) could have been built with a first- or second-design oil pump.

The two-piece oil pump design and valve body and three-piece oil pump design and valve body are NOT interchangeable, because the pressure regulation and calibration are different.

- Thanks to GM Technical Assistance

Folding Mirror Will Not Lock in Outboard Position

The electrically operated folding mirrors on 2003 C/K trucks are normally folded in or out using the mirror control switch, when the mirror selection rocker switch is positioned at the mid-point.

You may encounter an electrically folding mirror that will not lock into the outboard position.

These mirrors are placed in the inboard position at the assembly plant. If the mirror is manually moved outboard, it will not lock. It must be moved electrically.

TIP: Be sure the predelivery technician is aware of this procedure. Folding the mirror outboard manually during PDI can lead to improper mirror operation.

If this condition occurs, move the mirror back inboard manually, and then electrically position it outboard.

Your customers can encounter the same situation if they manually move the mirrors.

- Thanks to Tom Mannering

Vibe Key Cutting Information

To duplicate a Pontiac Vibe key, use key blank p/n 88972631 and one of the key cutters in the accompanying chart. These key cutters are available from GM Dealer Equipment at 1.800.468.6657

- Thanks to Jeff Strausser

Pontiac Vibe Key Cutting Equipment

Supplier	Function	Part Number	Description
Ilco	Hand Operated Code Cutting * Accessory Kit	74-MK1-P26 74-MK1-TO-AE-01	Exacta Cutter & Case Kit - Pontiac VIBE
Ilco	Machine Duplicating	74-045-110VAC	Heavy Duty Duplicator
Ilco	Machine Duplicating and Code Cutting	74-029A-GM 74-029A-TOY2	Combo Key Duplicator & Key Code Cutter Kit - Pontiac VIBE
Ilco	Computerized Duplicating and Code Cutting	74-ULTRACODE	Ultracode Code Cutter & Duplicator
Curtis	Computerized Duplicating and Code Cutting	425-9100021	Curtis PC+

Available through GM Dealer Equipment
1-800-GM-TOOLS (1-800-468-6657)
* (Numerous Exacta Kits available for all GM products)

Bulletins - November 2002

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

GENERAL INFORMATION:

02-00-89-016; Policy Reminder on New and/or Remanufactured GM Service Replacement Parts During Warranty Period; 2003 and Prior GM Passenger Cars and LD Trucks, Hummer H2

HVAC:

02-01-39-005; HVAC System Inoperative for a Drive Cycle, Poor HVAC System Performance in High Ambient Temperatures (Update HVAC Control Module Software); 2002-03 Chevrolet TrailBlazer, EXT, GMC Envoy, XL, Oldsmobile Bravada

SUSPENSION:

01-03-10-010A; replaces 01-03-10-010; Inspection of Tire and Wheel Size Prior to Diagnosis of Transmission Shifts, Poor Performance, Speedometer, Cruise Control Concerns; 2001-02 Chevrolet, GMC Sierra with Duramax Diesel Engine and Allison Transmission

02-03-09-002A; replaces 02-03-09-002; Intermittent Boom, Rumbling Noise and/or Disturbance Heard in Passenger Compartment While Driving at Highway Speeds (Replace Rear Coil Springs); 2002-03 Chevrolet TrailBlazer, GMC Envoy with Rear Coil Springs

DRIVELINE AXLE:

02-04-95-001; Revised Differential Overhaul (11.5 Inch Axle) Procedure; 2001-02 Chevrolet Silverado, GMC Sierra Pickup Models

BRAKES:

02-05-22-004A; replaces 02-05-22-004; Trailer Brakes Applied when Headlights/Park Lamps are On, Brake Controller Illumination (Modify Brake Controller Wiring Harness); 2002-03 Cadillac Escalade, EXT, Chevrolet Avalanche, 2001-03 Chevrolet Silverado, Suburban, Tahoe, GMC Sierra, Yukon, XL, 2003 Hummer H2

02-05-26-001; Rear Parking Brake Shoe Retaining Spring Clip Service Kit for Drum-in-Hat (DIH) Equipped Vehicles; Specified 1998-2003 vehicles

ENGINE/PROPULSION SYSTEM:

01-06-04-018A; replaces 01-06-04-018; Intermittent Malfunction Indicator Lamp (MIL) and PCM DTC P1404 (Recalibrate PCM); 2001 Buick Century, Chevrolet Impala, Malibu, Monte Carlo, Venture, Oldsmobile Alero, Silhouette, Pontiac Aztek, Grand Am, Grand Prix, Montana with 3.1L or 3.4L Engine (VINs J, E -- RPOs LG8, LA1)

02-06-01-023A; replaces 02-06-01-023; Oil Leak at Oil Cooler to Engine Block Mating Surface (Replace O-rings, Apply Sealant); 2001-03 Trucks with 6.6L Duramax Diesel Engine (VIN 1 -- RPO LB7)

02-06-01-029; Needle Bearings Found in Oil Pan (Replace Rocker Arms); Specified vehicles 1998-2003 with 4.8L, 5.3L, 5.7L or 6.0L V8 Engine (VINs V, T, G, S, U -- RPOs LR4, LM7, LS1, LS6, LQ4, LQ9)

02-06-02-008; New Engine Coolant Fill Procedure; 2003 Chevrolet Express, GMC Savana with 4.8L, 5.3L or 6.0L Gen III V8 Engine (VINs V, T, U -- RPOs LR4, LM7, LQ4)

02-06-04-046; Service Engine Soon Light On Intermittently and DTC P1441 Stored (Reprogram the PCM); 2002 Chevrolet Cavalier, Pontiac Grand Am with 2.2L Engine (VIN 4 -- RPO LN2)

02-06-04-047; Revised Electronic Ignition (EI) System Diagnosis; 2002 Chevrolet TrailBlazer, GMC Envoy, Oldsmobile Bravada with 4.2L Engine (VIN S -- RPO LL8)

02-06-04-048; Revised DTC P0540; 2001-02 Chevrolet Silverado, GMC Sierra Pickup Models with 6.6L Engine (VIN 1 -- RPO LB7)

02-06-04-049; Revised DTC P0201 -- P0208; 2001-02 Chevrolet Silverado, GMC Sierra Pickup Models with 6.6L Engine (VIN 1 -- RPO LB7)

TRANSMISSION/TRANSAXLE:

99-07-30-016A; replaces 99-07-30-016; Diagnostic Information for Intermittent Transmission Downshift, Slip, Busy/Cycling TCC or Noisy Cooling Fan; 2003 and Prior LD Trucks, Hummer H2 with Automatic Transmission

02-07-30-029A; replaces 02-07-30-029; New Powertrain Quality Center for Engine and Transmission Assembly Replacement; 2003 and Prior Passenger Cars and LD Trucks, Hummer H3

02-07-30-032; Allison Transmission Control Module Fast Learn Procedure Update Required After Transmission Repairs; 2002-03 Chevrolet Silverado, GMC Sierra with Allison 1000 Series Automatic Transmission

BODY AND ACCESSORIES:

01-08-46-008A; replaces 01-08-46-008; Information on Upgrading Factory Installed OnStar Generation 2.0 Equipped Vehicles to Generation 2.6; Specified 2000-01 Vehicles with Factory Installed OnStar

02-08-49-007; Center Console Lid Hard to Open or Close (Lubricate Center Console Lid Latch); 1999-2003 Chevrolet Silverado, Suburban, Tahoe, GMC Sierra, Yukon, XL with Split Front Seats (RPO AE7)

02-08-49-008; Latch Replacement -- Instrument Panel (IP Compartment) Procedure; 2000-03 Chevrolet Malibu

02-08-64-020; Passenger Door Outside Rearview Mirror Vibration (Install New Reinforcement Bracket); Specified 1997-2001 MD Tilt Cab Models

RESTRAINTS:

02-09-40-003; Passenger Seat Shoulder Belt Too Tight or Cinches Up (Replace Passenger Seat Belt Retractor Assembly); 2002 Chevrolet TrailBlazer, EXT, GMC Envoy, XL, Oldsmobile Bravada

02-09-40-004; Front Seat Belt Buckles May Interfere with Door Panels (Relocate New Buttons on Webbing); 2000-02 Chevrolet Monte Carlo

02-09-41-002; Air Bag Lamp On, Passenger Air Bag Indicator Always Reads OFF, DTC B0092 Set (Repair Passenger Presence System PPS Sensor Harness); 2003 Cadillac Escalade, EXT, Chevrolet Avalanche, Silverado, Suburban, Tahoe, GMC Sierra, Yukon, XL with Sensor Indicator Inflatable Restraint Front Passenger/Child Presence Detector (RPO ALO)

REMINDER

New Vehicle Prep -- Corvette Magnetic Selective Ride Control

Magnetic Selective Ride Control (RPO F55) is available on 2003 Corvettes. When the ignition is turned off, the dampers offer very little damping. So, plastic stuffers are inserted in the dampers for shipping from the factory (Techlink, June 2002).

The stuffers must be removed during new vehicle prep. Failure to do so will result in customer dissatisfaction with the vehicle's ride quality. Refer to bulletin 02-03-11-002 for complete details.

You can recognize the presence of Ride Control three ways:

- Ride Control button on console
- Corrugated dust boots on dampers
- Yellow tabs protruding from dust boots

To remove the stuffers, lift the vehicle to allow the wheels to hang free. Reach from below, behind the tire. Compress the dust boot and pull the yellow tab to remove the stuffer.

TIP: There is a stuffer on each damper, front and rear.

After removing the stuffer, be sure to pull the dust boot down to cover the upper end of the damper tube.

- Thanks to Brad Thacher