

Generator Operation and Troubleshooting

Over the past few model years, GM has improved generator reliability by installing larger generator bearings, higher temperature greases, and high temperature press-fit diodes across all generator lines. However, while these design changes have improved generator warranty over-all, the percentage of good generator replacements has increased. A recently completed analysis of generators that were replaced shows that roughly half were functioning properly. This raises concerns with proper on-vehicle generator diagnosis.

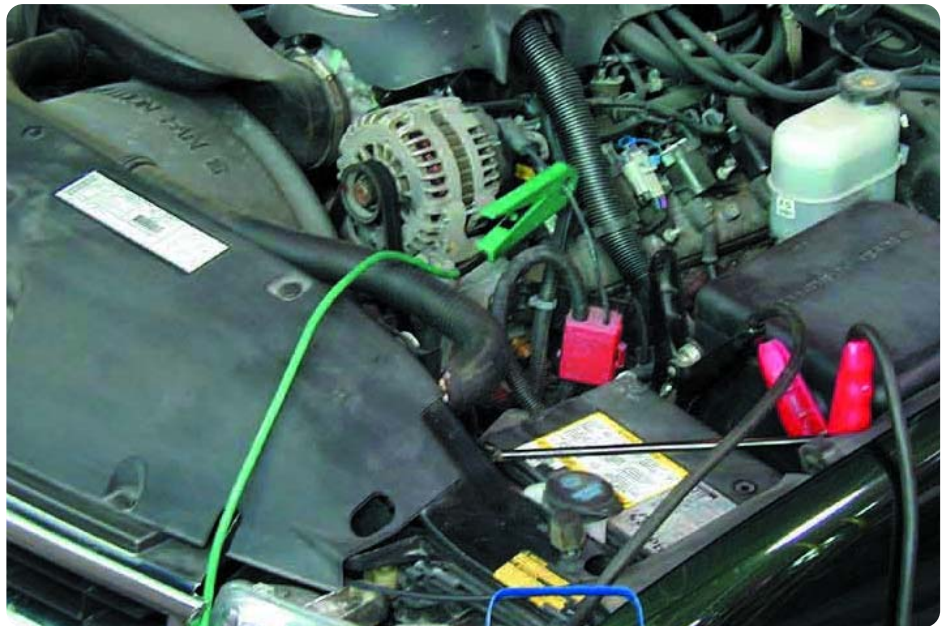
Generator Operation

The generator's purpose is to provide electrical power and maintain the battery voltage at the proper level. When electrical loads are switched on, the generator senses this change and increases its output current (amperage) to maintain the proper voltage, until maximum generator output is reached. Electrical loads in excess of generator capability will cause the system voltage to drop below normal. Example: a generator is heavily loaded (summer city traffic) and is attempting to recharge a discharged battery.

Generator maximum output increases with engine speed, and typically at low idle speed the generator output capability can be exceeded.

Troubleshooting

When measuring generator output amperage, make sure you are measuring DC amps in the cable attached to the generator B+ stud and that the current probe is fully



closed. Do not measure generator current at the battery. Also make sure your voltage measurement is correct and that the meter is operating properly.

Q: What battery voltage level is proper, or normal?

A: The generator senses underhood temperature and adjusts the voltage level for proper battery charging. A warm battery will accept a charge more readily,

continued on page 3

Techline News

"Which Password Should I Use?"

Since we ran the introductory article about the Service Information Forums (technician "chat room") in the March issue, we've had numerous inquiries about which ID and password to use.

TIP: You cannot access the Service Information website using your GM Dealer World or GM Common Training passwords.

TIP: This service is for the U.S. only.

To access the Forums, you must first go to the <http://service.gm.com> website. This

site also contains links to SI 2000, TIS 2000, Techline Information, TechLink On-Line, and Vehicle Calibration Information.

You will need an ID and password to access any of these (other than TechLink). The ID and password can be obtained from your Area Service Manager. Or you can call the Techline Customer Service Center (TCSC) at 800.828.6860.

—Thanks to Matt Singer

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Tracker Cruise Control Characteristics

On 1999-2002 Chevrolet Trackers, these operating characteristics are considered normal.

The first two conditions are related to built-in time delays. If the customer attempts an input during the time delay, the cruise control module will ignore it. When the customer tries a second time, the time delay is past, and the input "takes." The customer may comment that it takes two inputs to get the system to respond.

1. There is a 1 second delay between the time the cruise control is turned on and the time it will accept a set speed input. Instruct the customer to wait at least 1 second.
2. There is a time delay from the moment a brake or cancel input is received by the module until the module will accept a new set speed input. This delay increases with vehicle speed, and at highway speeds may be up to 3 seconds. Instruct the customer to wait at least 3 seconds.

3. When braking or canceling cruise operation, the cruise control module immediately releases the throttle cable, allowing it to snap back to the closed position. If the operator's foot is not in position to catch the pedal, it will hit its stop with a thump. This is normal and does not require repairs.
4. Most GM cruise control systems will retain a previously set speed in memory, allowing the Resume feature to return the vehicle to the previous speed. On the Tracker, when the vehicle's speed drops below 25 mph, the previous set speed will not be retained in memory. It is necessary to set a new speed input. This is normal and does not require repairs.

Diagnostics for other conditions, including resistance specifications to bench test the cruise control switch, are located in SI 2000.

– Thanks to Donald B. Sherman

Launch Shudder

On some 1998-2002 S-10 and Sonoma extended cab models with 4-cylinder engine, owners may comment that the vehicle vibrates at take off. Use the 6-cylinder transmission mount p/n 15767866 (which supersedes 22145732). Before installing the new mount, measure and record the driveline angles. After installation, check the angles. It

may be necessary to add two 1/8-inch shims, p/n 1254001, to return the driveline angles to original. To prevent inducing a drone, it may be necessary to grind a portion of the mount to prevent contact with the crossmember.

– Thanks to Dan Oden



No-Start or No-Start/No-Crank complaints can occur for multiple reasons. However, one of the reasons can be a shorted Class 2 bus. Vehicle Theft Deterrent systems utilize the Class 2 bus to communicate security information between various controllers. For instance, the BCM will get information from the Passlock module and then communicate with the PCM to allow or disallow fuel delivery and/or starter enable.

When the Class 2 bus is shorted to either ground or battery voltage, the controllers are unable to communicate with each other. This is because the voltage on the line is held static at either ground or B+. The Class 2 message toggles the voltage on the bus between 0 and 7 volts, but when the bus is

shorted, the toggling cannot take place. Because the voltage remains static at either ground or B+, the Class 2 message can't be sent or received.

Without these Class 2 messages being sent and received, the PCM won't get the proper security messages which would normally enable fuel and/or starter enable and the customer will have a No-Start or No-Start/No-Crank complaint.

TIP: If the problem is intermittent, remember to search for the U1300 - Class 2 Data Link Low, and U1301 - Class 2 Data Link High—in "History". This will help determine the source of the problem.

– Thanks to Mark Harris

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. This magazine is a companion to the GM Edge publication.

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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.

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so at higher temperatures, the generator voltage level is lower to avoid overcharging and excessive use of battery water. A higher voltage is needed to charge a cold battery.

Normally, battery voltage ranges between 12.0 and 16.0 volts, depending on temperature and load.

At engine idle with a fully charged battery and all other electrical loads switched off, the battery voltage should be 13.0 V or greater.

At engine idle with a fully charged battery and all electrical loads switched on, the battery voltage can be as low as 12.0 V.

Q: If the battery voltage is below 12.0 V, is the generator bad?

A: Not necessarily. A discharged battery, and/or high demand for power could mean a low voltage level even though the generator is good and is at maximum output. Also, be sure you are measuring DC volts and not AC.

Q: So, then, is the battery bad?

A: Not necessarily. If the battery is discharged, and/or if electrical loads are high, the battery voltage could be below the proper level even though the battery and generator are both good.

Correct current probe connection at generator



Example: at idle with A/C and other loads operating, the generator may not be able to keep up with demand, so the remaining power comes from the battery. As the battery runs down, the voltage will continue to drop. By raising engine speed, the generator can provide greater output to restore system voltage.

If the battery voltage is below 12.0 V, the generator and battery should be tested independently, following the manufacturer's recommended procedure.

Q: If a generator has low or no output current, is it a bad generator?

A: Not necessarily. If the battery voltage level is proper for that temperature, the generator will reduce output. Example: the battery has just been charged and is at full voltage when re-installed in the vehicle. If a no-output condition is observed, check the input connection, output connection, and/or presence of a generator turn-on signal.

Q: What if the battery voltage is below 12.0 V and there is no output from the generator?

A: Disconnect and reconnect the multi-pin connector at the generator. The generator could be good, but not getting a good multi-pin connection. In this case, changing the generator may solve the problem, but only because a good connection was made when the new part was installed, not because the removed generator was bad.

Q: What if everything seems OK but the generator has very low current output?

A: Apply a test load, or turn on the lights, heater blower, rear defroster, etc., and see if the generator output goes up when the demand for electrical power goes up. Try raising the RPM a little. Check all wiring, electrical connections and belt tension.

Q: What if the generator current output is intermittent – high then low amperage?

A: Check for an intermittent load. If the A/C, defroster, or climate control are on, the A/C clutch and/or the blower could be kicking in and out, changing the demand, which would cause generator output to fluctuate.

Check all connections thoroughly. If vibrations cause any connection to be intermittent, the generator output could fluctuate. Wiggle the wires. One or more of them could be broken inside the insulation.

Q: What if the battery voltage is too high, over 16 volts?

A: Make sure you are measuring DC voltage and not something else. Check all generator and battery connections, especially if the vehicle is wired with an external battery voltage sense lead through the multi-pin connector. Excess resistance in the sense circuit can fool the generator into overcharging even though it is a good generator.

Q: If the battery was discharged, but then checks good after charging, the generator must be bad, right?

A: Not necessarily. Maybe the owner just left the dome light on all weekend, or there may be some other power drain due to an electrical problem in the vehicle (see Parasitic Drain, April 2002 TechLink). This would discharge the battery even though the generator and battery are both good. Occasionally, a battery will become discharged due to the driving pattern of the owner. If the owner takes many short trips every day, over a period of time the battery charge may drop low enough that it will be unable to start the vehicle.

Once the battery has been recharged, perform a test of the generator, following the manufacturer's recommended procedure.

Q: If I replace the generator and the output of the new one is higher than the old one, the old one must have been bad, right?

A: Not necessarily. The old one was most likely warm. A cool generator will always have a higher output than a warm one until it warms up.

Noises

Because the generator has a magnetic field inside which rotates with engine RPM, a magnetic whine can often be heard coming from the generator. Some magnetic noise is considered normal. When trying to determine if a noise is excessive, compare the suspect vehicle to another vehicle of the same type.

Noises are difficult to diagnose. There are many devices under the hood that can produce noise similar to that of the generator, such as the power steering pump, fuel pump, fuel regulator, air conditioner, idler pulley, etc. The Technical Assistance Center might be of help and can offer tips about noise issues with particular types of vehicles.

– Thanks to Rob Rice and Tom Radomski

No TCC Command, Intermittent

This condition affects 1996-2002 cars and light trucks. Some vehicles may experience poor fuel economy with no command for TCC intermittently, and possibly a DTC P0300.

For example, the TCC may work for a few miles, then for no apparent reason may be commanded off by the PCM for a few miles. It then begins functioning again.

Most likely, there will be no driveability concerns or DTCs. In some cases a DTC P0300 may be set.

Use the Tech 2 scan tool and check for misfires. Once the misfire counter registers up to 500 misfires, the PCM commands the TCC off. The misfires may occur only under light load and may not be felt. The misfire counts may not even be related to an engine performance issue. It is very possible that the misfires are being induced by the serpentine belt. If the engine exhibits misfires but there are no driveability concerns, the serpentine belt should be installed on a known-good vehicle or a known-good belt installed on the suspect vehicle for testing purposes.

This concern should not be confused with a typical TCC chuggle.

– Thanks to Chris Anderson

Engine Oil Capacity Chart

This engine crankcase capacity chart covers all GM cars and trucks (including Canada) for model years 1988 to the present.

You may want to post a copy near your lube rack as a convenience.

- Thanks to Jerry Garfield

Buick			
Year	Description	Liters	Qt
1988-2003 All Models			
1988-91	All	4.3	4.5
1992-95	5.7L	4.7	5
1992-95	All others	4.3	4.5
1996-2003	All	4.3	4.5
Cadillac			
Year	Description	Liters	Qt
1988-2003 All Models except Escalade			
1988-90	4.1L , 4.5L	5.7	6 *
1988-90	Allante		
1988-90	4.1L , 4.5L , 4.9L	4.7	5 *
	All other FWD		
1988-90	Others	3.8	4 *
1991-95	4.5L Allante Code 8	5.7	6 *
1991-95	4.6L Code Y,9	6.6	7 *
1991-95	Code B	4.7	5 *
1991-95	RWD 5.7L Code 7,P	3.8	4 *
1996-2001	3.0L	5.8	6.1
1996-2003	4.6L	7.1	7.5
1996	5.7L	4.7	5
2003	3.2 L	4.8	5.1
* = Capacity shown is without filter. When replacing the filter additional oil will be needed.			
Chevrolet			
Year	Description	Liters	Qt
1988-90 All Models except Geo, Lumina APV, Nova, Spectrum, Sprint and Venture			
1990	Corvette Code J	7.1	7.6
1988-90	Others	4.3	4.5
1991-95 All FWD Models except Geo, Lumina APV, Nova, Spectrum, Sprint and Venture			
1991-95	3.4L Code X	5.2	5.5
1991-95	Others	4.3	4.5
1991-95 All RWD Models			
1991-95	Corvette Code J	7.2	7.6
1991-95	Others	4.3	4.5
1996-2003 All FWD Models except Geo, Lumina APV, Nova, Spectrum, Sprint and Venture			
1996-97	3.4L Code X	5.2	5.5
1996-2003	Others exc. 2.2 L Code F	4.3	4.5
2002-03	2.2 L Code L61	4.75	5
1996-2002 ALL RWD Models			
1996-2002	3.8L	4.3	4.5
1997-2003	5.7L Code G, Corvette	6.2	6.5
1998-2002	5.7L Code G, Camaro	5.2	5.5
1996-97	5.7L Code P	4.7	5
Chevrolet/GMC Trucks			
Year	Description	Liters	Qt
1988-90 S-Series, Astro and Safari			
1988-90	4-cyl. 2.5L	3.3	3.5
1988-90	Others	4.3	4.5
1988-89 C,G,K,P,R,V, Series, All Heavy Duty Gasoline Models			
1988-89	6-cyl. 292	5.2	5.5
1988-89	6-cyl. 4.3L	4.3	4.5
1988-89	8-cyl. 350	4.3	4.5
1988-89	8-cyl. 454 4V ex. 1988 V30/35	6.6	7
1988-89	8-cyl. 454 Others	5.7	6
1988-91 C,G,K,P,R,V, Series, All Light Duty Gasoline Models			
1988-91	7.4L 4V ex. 1988 V30/35	6.6	7
1988-91	7.4L others 1988-90	5.2	5.5
1991	7.4L 1991	6.6	7
1988-91	All others	4.3	4.5
1988-95 All Diesel Models			
1988-95	6.2L , 6.5L	6.6	7
1996-2003 All Diesel Models			
1996-97	6.5L	6.5	7
1998-2002	6.5L	7.6	8
2001-03	6.6L	9.5	10
1990-2003 Chevrolet Lumina APV, Venture			
1990-2003	All	4.3	4.5
1990-95 C,G,K,P,R,V, Series, All Heavy Duty Gasoline Models			
1990-91	4.3L	4.8	5
1992-95	4.3L	4.3	4.5
1990	5.7L	4.8	5
1991-95	5.7L	4.8 (1.2)	5 (1.2)
1990	7.4L P Chassis	6.6	7
1990	7.4L Others	5.7	6
1991	7.4L	6.6	7
1992-95	7.4L	6.6 (2)	7 (2)
1) Add 1 qt (0.9L) additional for CNG, or large crankcase option			
2) Add 1 qt (0.9L) additional for 3500HD installation			

1991-95 S/T Series, Astro,Safari			
1991-95	4-cyl. 2.5L	3.3	3.5
1991-95	Others	4.3	4.5
1996-2003 S/T Series, Astro,Safari			
1996-2003	4.3L	4.3	4.5
2002-03	4.2L	6.6	7
2003	S/T 5.3L	5.7	6
1992-95 C,G,K Series, All Light Duty Gasoline Models			
1992-95	4.3L	4.3	4.5
1992-95	5.0L , 5.7L	4.8	5
1992-95	7.4L	6.5	7
For 5.7L engine add 1.0 qt (0.9L) for either natural gas , or 5.0 qt (4.8L) crankcase option			
1996-2003 C,G,K,P,SSR Gasoline Models			
1996-2003	4.3L	4.3	4.5
1999-2003	4.8L	5.7	6
1996-99	5.0L , 5.7L	4.8	5
1999-2003	5.3L	5.7	6
1996-2002	5.7L	4.8 (1)	5.0 (1)
1999-2003	6.0L V8	5.7	6
1996-97	7.4L	6.5 (1)	7 (1)
1998-2000	7.4L	6.5	7
2001-03	8.1L	6.2	6.5
(1) Add 1 qt. (0.9L) additional for: CNG; large crankcase option; C3500HD installation			
Geo-Asuna/Chevrolet-Pontiac			
Year	Description	Liters	Qt
1989-91 Firefly, Metro, Sprint; 1992-98 Firefly, Metro; 1998-2000 Chevy Metro			
1989-93	3-cyl.	3.5	3.7
1989-2000	Others	3.3	3.5
1989-93 Spectrum, Storm, Sunfire			
1989-93	Spectrum	2.8	3 *
1989-93	Storm, Sunfire: SOHC	3	3.2 *
1989-93	Storm, Sunfire: DOHC	3.8	4 *
1989-95 Prizm			
1989-95	Code 5	3.4	3.6 *
1989-95	Code 6	3.1	3.3 *
1989-95	Code 8	3.5	3.7 *
Geo 1996-2002 Prizm			
1996-99	Code 6	2.8	3 *
1996-97	Code 8	3.5	3.7 *
1998-2002	Code 8	3.7	3.9
* = Capacity shown is without filter. When replacing the filter additional oil will be needed.			
Geo-Asuna/Chevrolet-Pontiac-GMC			
Year	Description	Liters	Qt
1989-2003 Tracker, Sunrunner,Vibe			
1989-2000	2.0L Code C	5.2	5.5
1989-2000	All others	4.2	4.5
2001-02	1.8L	4.2	4.5
2001-03	2.0L	5.2	5.5
2001-03	2.5L	5.5	5.8
2003	1.8L LV6	3.7	3.9
2003	1.8L LNK	4.4	4.8
Oldsmobile			
Year	Description	Liters	Qt
1988-89 All Models			
1988-89		4.3	4.5
1990-2003 All Models			
1991-97	3.4L DOHC	5.2	5.5
1995-2003	4.0L V8	7.1	7.5
1999-2002	3.5L V6	5.7	6
2001-02	2.2L L4	4.75	5
2002-03	4.2L L6	6.6	7
1990-2003	Others	4.3	4.5
Pontiac			
Year	Description	Liters	Qt
1988-95 All Models Except Firefly			
1988-95	3.4L DOHC	5.2	5.5
1988-95	Others	4.3	4.5
1996-2003 All Models Except Firefly			
1996-2003	2.2L exc Code F, 2.4L, 3.1L, 3.8L	4.3	4.5
1999-2003	3.4L Code E	4.3	4.5
1996	3.4L DOHC	5.2	5.5
1996-97	5.7L	4.7	5
1998-2002	5.7L	5.2	5.5
2002-03	2.2L Code F	4.75	5

New A/C Testers Now Available

Kent-Moore and GM gathered and evaluated some of the latest technology available on the market for refrigerant leak detection. Each detector was evaluated on its sensitivity, durability and ability to avoid false alarms.

Currently there are three types of leak detection sensor technology available:

- Negative Corona – the least expensive sensor and most prone to false alarms. This technology does not provide the most accurate results for its value.
- Heated Sensor – this sensor provides the most favorable results for the cost-conscious technician.
- Infrared Sensor – a sensor technology commonly used in leak testing for stationary refrigeration units, but still in the prototyping stage for mobile A/C leak detection.

Fifteen detectors from various suppliers were evaluated on sensitivity, durability, and ability to avoid false alarms. GM has determined the following three to be the best of the best.

J-41995, D-Tek

This leak detector is for both R12 and R134a applications. The hand-held detector is cordless, with rechargeable NiCad batteries. The D-Tek features a heated diode sensor, variable audible/visible alarm and durable carrying case. This unit exceeds current SAE and GM standards for refrigerant leak detection.

J-46053, ZX-1

This leak detector is for both R12 and R134a applications. Its ergonomic design makes it easy to handle. The ZX-1 offers great sensitivity and fast response. This is achieved through a heated Pentode™ sensor combined with a sophisticated microprocessor controlled circuit using patent



pending technology. This unit uses rechargeable NiCad batteries and exceeds current SAE and GM standards for refrigerant leak detection. The ZX-1 comes with a 25-year warranty.



J-46054, Tek-Mate

This leak detector is used for both R12 and R134a applications. It was chosen to be the best value. Tek-Mate combines sophisticated technology with durability for an instrument with outstanding sensitivity. It features an electrochemical heated-diode sensor, high/low leak sensitivity, and On/Off in one switch, with variable-pitch audible leak signal. The Tek-Mate operates on standard C cell batteries and exceeds current SAE and GM standards for refrigerant leak detection.

These detectors, and a full line of A/C service tools, are available from Kent-Moore at 1.800.GM.TOOLS.

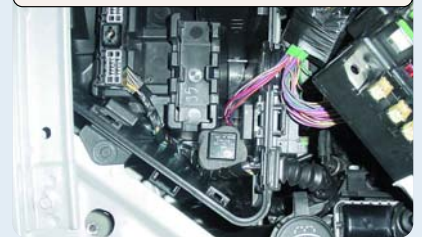
– Thanks to Dave Roland



Headlamp Washer Relay Location

On 2003 Cadillac CTS vehicles equipped with headlamp washers, the headlamp washer relay may be in one of two locations.

Location of relay in early vehicles



Early production vehicles built before VIN break point 1G6DM57N030105858 have the headlamp washer relay connected to a remote wire harness. It is located beneath the underhood fuseblock in the left front corner of the fuseblock case. For these vehicles, a jumper wire is located in the underhood fuseblock between cavities 67 and 68. This is the location indicated for the headlamp washer relay on the underhood fuseblock label.

The jumper provides battery positive voltage from the HDLP WASH C/B – OPT circuit breaker to the switch side input circuit of the headlamp washer relay.

After the VIN breakpoint listed above, the headlamp washer relay is located in the underhood fuseblock. This is the location indicated for the headlamp washer relay on the underhood fuseblock label.

Location of relay in later vehicles



The two configurations are not interchangeable, but are functionally the same. Follow published service manual diagnostics for both configurations. Before attempting to diagnose inoperative headlamp washers, ensure the washer fluid is above the minimum level and the headlamps are ON.

– Thanks to Michael Van Houten

Wiring Schematic Books Now Available

You asked, and GM Service and Parts Operations listened. You can now obtain paper copies of the wiring schematics manuals for 9 platforms for the 2001 model year.

They are:

- Cadillac Eldorado
- Cadillac Seville
- Cadillac DeVille
- Cadillac Catera
- Chevrolet Cavalier/Pontiac Sunfire
- Buick Regal/Century
- Chevrolet Impala/Monte Carlo
- Pontiac Grand Prix
- C/K GMT800 Pickups and Utilities

Each manual gathers the information for one platform from the various sections of SI 2000 and consolidates it into one place. You'll find:

- Wiring Diagrams
- Harness Routing Views
- Connector End Views
- Component Locator Views

Service and Parts Operations has created these manuals in response to your requests, and is continually evaluating the need for additional coverage. An important indicator is how well you respond to these initial manuals.

These nine manuals may be purchased from Helm, Inc. at www.helminc.com on the web. The website permits either individuals or dealerships to place orders. Just follow the prompts. You can also call 1.800.782.4356.

- Thanks to Larry Quinn



HVAC AUTO Indicator Lamp Operation

On Buick Century and Regal, the HVAC control head has an LED to indicate that the AUTO function is operating. On Chevrolet Corvette and Oldsmobile Intrigue, the HVAC system control head displays the word AUTO to indicate that the AUTO function is operating. When the AUTO button is pressed and the indicator (LED or word) is visible, the system maintains the selected temperature, regulates fan speed automatically, and determines the appropriate air distribution path.

Some customers may comment that the AUTO indicator turns off under certain conditions.



1. When the temperature selector is run to the extreme in either direction (60°F/16°C or 95°F/35°C), the HVAC system will cease regulating the temperature. Instead, it outputs full cold or full hot. This defeats the AUTO function, so the indicator turns off.
2. Manually selecting a fan speed by pressing the + or - button will defeat the AUTO function, so the indicator turns off.
3. Similarly, manually selecting an air distribution path (just IP, just floor, etc.) will defeat the AUTO function, so the indicator turns off.

In all three of these cases, it is normal for the indicator to turn off, and no repair or component replacement is necessary.

TIP: On the Corvette, when the system is in the automatic mode, the Air Conditioning light may be illuminated even though the outside temperature may be cold. This occurs because the A/C is being used to dehumidify the incoming air to reduce window fogging.

- Thanks to Wayne Zigler and Dave Peacy

Damaged O2 Sensor Wiring

On some 2001-02 Buick Century and Regal, Chevrolet Impala and Monte Carlo, and Pontiac Grand Prix, the oxygen (O2) sensor wiring may be damaged. The location is on the engine harness, on the harness side of the rear O2 sensor connector. The wires are covered in plastic conduit.

Alternating pressure and vacuum conditions occur inside the wire insulation when the engine is operating and allowed to cool down. Water can literally be pumped inside the insulation by these pressure/vacuum cycles. If the wire insulation is perforated, water can travel inside the wire insulation into the O2 sensor and to the PCM.

Harness in Trough



Water damage to these components can cause engine stall, general driveability problems, P0141 (HO2S2 Heater Performance) and others.

The harness lies in a trough which may collect water from the HVAC evap core drainage or from the environment.

Location of damage



Water-damaged components must be replaced. To prevent the problem from recurring, put a length of 5/8-inch hose on the A/C drain elbow. Route the hose down so water drains properly, and secure as necessary with tie straps.

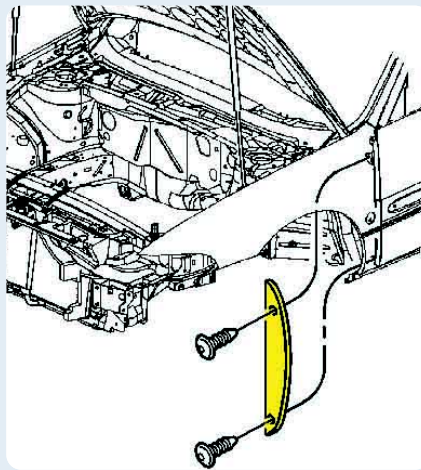
- Thanks to John Fletcher and Wayne Zigler

Squeak/Rattle in Windshield Pillar Area

The owner of a 2000 – 2002 Buick LeSabre may comment about a noise from the area of the A pillar, generally on the passenger side of the vehicle. Although the noise may sound like it's coming from the top of the pillar, it often is traveling up the pillar.

The close out panel inside the fender, looking forward with the front door open, may be loose. There are two push fasteners which hold the panel in place which may not have been fully seated and/or have worked loose. Reinserting them and/or replacing them will resolve the concern. The close out can be seen in document 796030 of SI 2000.

– Thanks to GM Technical Assistance



A/C Squeak or Moan

Some 2002 Chevrolet Camaros and Pontiac Firebirds may exhibit a squeak or moan noise when the A/C mode is switched from defrost to heat or heat to defrost. The noise comes from the actuator arm which is cycled.

The actuator arm is normally greased, to facilitate its insertion into the module. The noisy modules do not appear to have any grease. Remove the lower sound insulator (hush) panel. Apply a small amount of white lithium grease to the actuator arm, with a long cotton swab.

– Thanks to GM Technical Assistance

Metallic Spring Rattle Noise When Braking

On some 1999-01 full size pickups, a metallic spring rattle noise may be heard in the passenger compartment when braking. The noise occurs during application and/or release of the brake pedal.

Replace the vacuum booster with part number 18042073.

– Thanks to GM Technical Assistance

Workhorse Custom Chassis

Affected Models:

- 1999 Chevrolet P3 Chassis
- 1999 GMC P3 Chassis
- 2000-2002 Workhorse Custom Chassis (Not General Motors Built)

Chevrolet and GMC dealers may call GM TAC requesting assistance on P-Model Chassis that were manufactured by Workhorse Custom Chassis. The following information can be used to determine if the chassis was manufactured by General Motors or Workhorse Custom Chassis

If the VIN starts with 5B4xxxx, the vehicle was manufactured by Workhorse Custom Chassis and the servicing dealer should call Workhorse Technical Assistance at 1-877-246-7731. If the VIN starts with 1Gxxxx, GM Technical Assistance should assist the dealer as the chassis was produced by General Motors.

– Thanks to GM Technical Assistance

Rattle in Roof Area

This information applies to the 2003 Pontiac Vibe. Owners may comment that there is a rattle from the roof area.

First, make sure the thumb knobs for the cross bows are tight. Next, be sure that the cross bows are tight in the slider assembly. There are two screws on the underside of the slider that hold the cross bows tight into the slider. The screws are No. 15 Torx and can be tightened using a 90° Torx driver (similar to an allen wrench). Access to the screws on the front bow is improved by first moving the bow as far to the rear as possible.

– Thanks to GM Technical Assistance

CHMSL Loose or Fallen

Some customers may comment that the CHMSL assembly is loose or has fallen down from the rear window on 2001-02 Oldsmobile Aurora.

If the vehicle is fairly new, clean the glass with a mixture of water/alcohol and reapply the CHMSL assembly. If that does not work, obtain some 3M Dual Lock Velcro or equivalent and cut in three 1-inch squares. Attach one side of the Velcro squares to the CHMSL assembly in three different areas (2 on corners and 1 in the center) and the other sides to the black portion of the window and reapply the assembly.

– Thanks to GM Technical Assistance

Liftgate and/or Glass Won't Lock With Key

This information applies to 2002 Chevrolet TrailBlazer, GMC Envoy, and Oldsmobile Bravada, and is not found in the owner's manual.

The liftgate must be locked using the front power door lock switch or RKE (if equipped). This concern is normally found in vehicles without the RKE option AU0.

This is a normal condition. The vehicle is operating as designed. Do not attempt any repairs.

– Thanks to GM Technical Assistance

A Friendly Reminder Exterior Light Lens Guidelines

Most late model vehicles have polycarbonate lenses in the exterior lamps, because of its resistance to temperature and impact. However, it is very sensitive to a wide variety of chemicals, which can cause crazing or cracking of the lens. The entire lamp housing must be replaced. Avoid contact with all exterior lights when treating a vehicle with any type of chemical, such as those recommended for rail dust removal.

– Thanks to Dan Oden

Bulletins – April 2002

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

GENERAL INFORMATION:

02-00-89-001; Sublet Repairs (Policy S); 2003 and Prior Passenger Cars and Trucks

02-00-90-001; GM Oil Life System™ – Resetting; 2002 Chevrolet and GMC S/T Utility Models, Oldsmobile Bravada

HVAC:

02-01-37-002; Service Diagnosis/Recommendations for Inoperative A/C Systems; 1990-2002 Chevrolet and GMC Medium Duty Models

STEERING:

02-02-32-004; Power Steering Gear Grease Seepage From Around Sector (Output) Shaft (Install New Sector Shaft Seals); 1997-2002 Chevrolet and GMC Medium Duty Models

02-02-32-005; Excessive Noise from Power Steering System While Turning or Under Light Braking (Replace Power Brake Booster Inlet Hose); 1996-2002 Chevrolet and GMC M/L Vans

02-02-32-006; New Police Car Tie Rod Service Kit (RPO 9C1 or 9C3); 2000-2001 Chevrolet Impala

DRIVELINE AXLE:

01-04-17-001B; replaces 01-04-17-001A; Launch Shudder On Acceleration (Install New One-Piece Propeller Shaft); 1999-2002 Chevrolet and GMC K2500/3500

BRAKES:

02-05-24-001; Revised Drum Brakes Component Specifications; 1999-2000 Cadillac Escalade, 1997-2000 Chevrolet and GMC C/K Pickup and Utility Models

ENGINE/PROPULSION SYSTEM:

01-06-04-008B; replaces 01-06-04-008A; Inaccurate or Erratic Fuel Gauge Reading (Install New Fuel Tank Sender Sensor); 2000-01 Chevrolet Cavalier, Malibu, Oldsmobile Alero, Pontiac Grand Am, Sunfire with plastic fuel tanks

01-06-04-008C; replaces 01-06-04-008B; Inaccurate or Erratic Fuel Gauge Reading (Install New Fuel Tank Sender Sensor); 2000-02 Chevrolet Cavalier, Malibu, Oldsmobile Alero, Pontiac Grand Am, Sunfire with plastic fuel tanks

01-06-04-049; White Exhaust Smoke During Start-Up (Replace Engine Coolant Temperature ECT Sensor); 1998-2002 Chevrolet and GMC MD Tilt Cab Models

02-06-01-001A; replaces 02-06-01-001; Drone Noise From Engine Area (Replace Accessory Drive Belt); 1999-2002 Chevrolet Cavalier, Pontiac Sunfire with 2.2L engine (VIN 4 - RPO LN2)

02-06-01-007; Accessory Drive Belt Noise (Properly Align Power Steering Pump Pulley); 2001 Chevrolet and GMC C/K Pickup Models with 4.8L, 5.3L or 6.0L Engine (VINs V, T, U – RPOs LR4, LM7, LQ4)

02-06-01-008; Information on a New Engine Preluber Tool; 1990-2002 All Cars and Light Duty Trucks

02-06-03-002; Engine Will Not Start (Replace Starter Motor Relay and Repair Wire); 1997-2002 Chevrolet and GMC MD Tilt Cab Models

02-06-04-008; Revised DTC P0341 Camshaft Position (CMP) Sensor Performance; 2002 Buick Park Avenue, Regal, Chevrolet Camaro, Pontiac Firebird, Grand Prix with 3.8L Engine (VIN K - RPO L36)

02-06-04-009; Hesitation or Stumble on Throttle Application After Cold Start (Reprogram PCM); 1999 Chevrolet Malibu, 1999-2001 Chevrolet Cavalier, Oldsmobile Alero, Pontiac Grand Am, Sunfire with 2.4L Engine (VIN T - RPO LD9)

02-06-04-010; Erratic Fuel Gauge Reading (Reprogram PCM); 2002 Chevrolet Corvette

02-06-04-011; Revised DTC P0140; Various 1998-2001 Cars and Light Trucks

02-06-04-012; Slow, Difficult Fuel Fill, Short Fill, Fuel Gauge Inaccurate (Correct Fuel Tank Vent); 2002 Chevrolet and GMC C/K 2500 Utility Models

02-06-04-014; Elimination of Service Bay Test Procedure; various 2001-02 Cars V6 Engines

02-06-04-015; Intermittent No Crank, No Start (Clean Battery Side Terminal Stripped Threads, Replace Battery Cable Bolt); 2001-02 Passenger Cars and Trucks

TRANSMISSION/TRANSAXLE:

02-07-30-009; AISIN Automatic Transmission False DTC Code 11 Set; 1999-2002 Chevrolet and GMC Medium Duty

02-07-30-011; Diagnostics for Possible Gear Indicator (PRNDL) Concerns (Blank PRNDL Display, Flashing PRNDL, Slow or No Engagement of Automatic Transmission); 2001-02 Chevrolet and GMC C/K Pickup and Utility Models

02-07-31-001; Clutch Pedal Return Spring Breaks or Scraping Noise When Clutch Pedal Applied (Replace Clutch Pedal Return Spring); 1998-2002 Chevrolet Camaro, Pontiac Firebird with Manual Transmission

BODY AND ACCESSORIES:

99-08-51-007A; replaces 99-08-51-007; Refinishing Aluminum Wheels; 2003 and Prior Passenger Cars and Trucks

00-08-64-018C; replaces 00-08-64-018B; Rear Door Window Inoperative (Replace Affected Motor/Inspect Opposite Motor); 2000-2001 Chevrolet and GMC C/K Utility and Crew Cab Models

02-08-42-001; Chemical Damage to Exterior Polycarbonate Headlamp Lenses; 2002 and Prior Passenger Cars and Trucks

02-08-44-003; Buzz or Rattle Sound from Speaker Locations (Add Foam Tape to Speaker Grilles or Door Panels); 1997-2002 Chevrolet Camaro, Pontiac Firebird with Monsoon Audio System

02-08-64-004; Window Binds/Glass Tips Forward When Opening (Remove Section of Weatherstrip); 1999-2002 Chevrolet Tracker

02-08-64-005; Inside Door Handle Rattle (Install Flocking Tape); 1998-2002 Chevrolet Camaro

02-08-66-002; Waterleaks Between End Gate and Hard Cover Seal (Sand Down Rough Finish); 2002 Chevrolet Avalanche, Cadillac Escalade EXT