

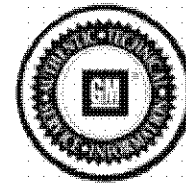
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**Document ID: 1870206**

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## **#06-02-32-014: Power Steering Fluid Leak (Replace Hose and Clamps or Pipe/Hose Assembly) - (Nov 1, 2006)**

**Subject:** Power Steering Fluid Leak (Replace Hose and Clamps or Pipe/Hose Assembly)



**Models:** 2006 Chevrolet Impala, Impala SS, Monte Carlo, Monte Carlo SS  
2005-2006 Pontiac Grand Prix GXP Only

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### **Condition**

Some customers may comment on a fluid leak. Upon investigation, the technician may find that the power steering cooler pipe/hose assembly is either split or leaking around the clamps. The leak generally occurs during cold start conditions.

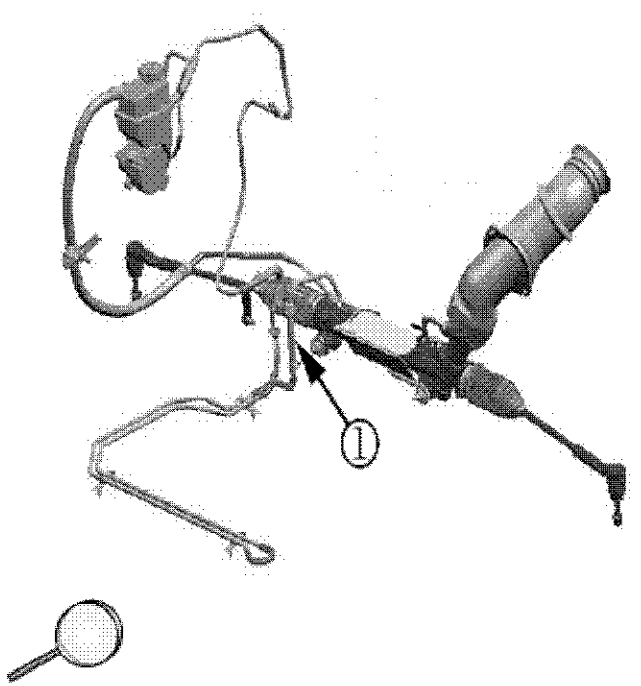
### **Cause**

The cause of this leak may be due to the higher pressures generated in cold temperatures. These pressures may exceed the strength of the hose or clamps.

### **Correction**

Use the appropriate repair procedure below based on the engine application of the vehicle being serviced.

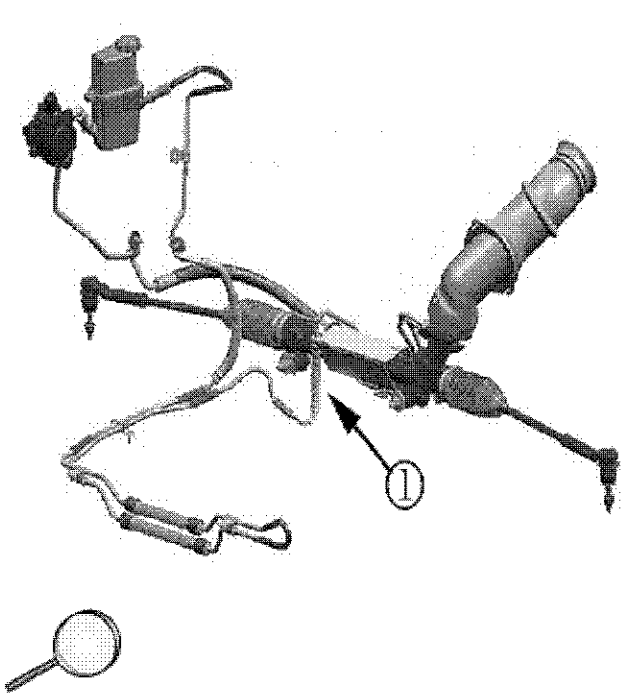
### **V6 Engines**



The hose section (1) where the leak can occur is shown above. On V6 applications, the hose fittings are constant tension clamps, therefore, the hose and clamps can be replaced. Use the procedure listed below.

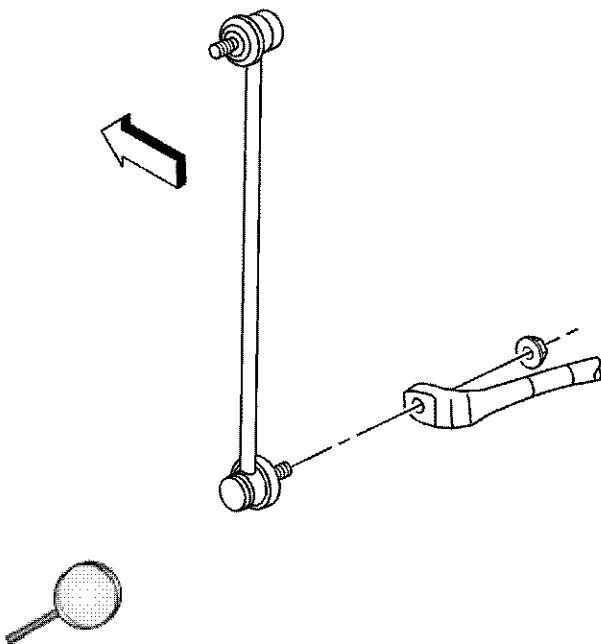
1. Raise and support the vehicle.
2. Place a drain pan under the vehicle.
3. Remove the hose clamps.
4. Remove the section of hose from the power steering cooler pipe/hose assembly.
5. Slide the new clamps onto the new section of hose.
6. Install the new section of hose with clamps to the power steering cooler pipe/hose assembly.
7. Position the new clamps and tighten until the torque caps break off.
8. Clean any fluid residue from under the vehicle.
9. Lower the vehicle.
10. Check the power steering fluid level and bleed the system. Refer to Power Steering System Bleeding in SI.

## V8 Engines

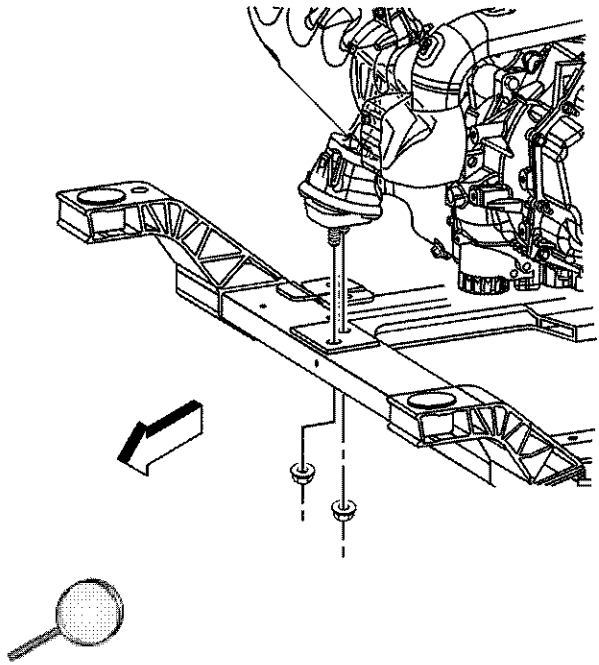


The hose section (1) where the leak can occur is shown above. On V8 applications, the fittings are crimped, therefore, the power steering cooler pipe/hose assembly must be replaced. Use the procedure listed below.

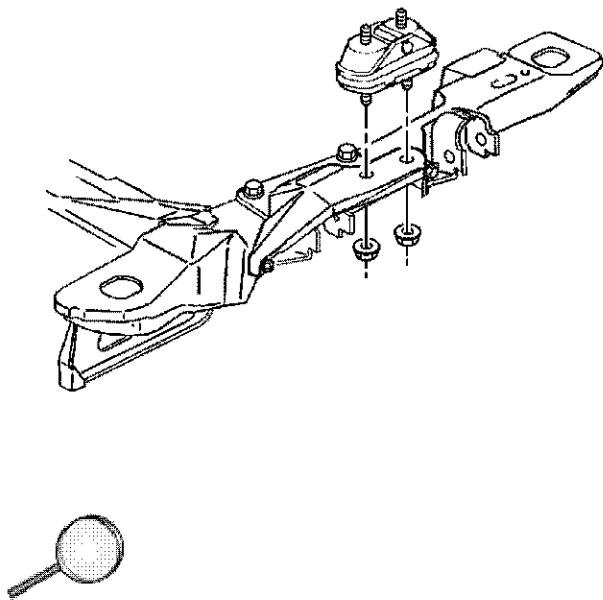
1. Raise and support the vehicle.
2. Place a drain pan under the vehicle.
3. Remove the power steering cooler pipe/hose from the retaining clips on the frame.



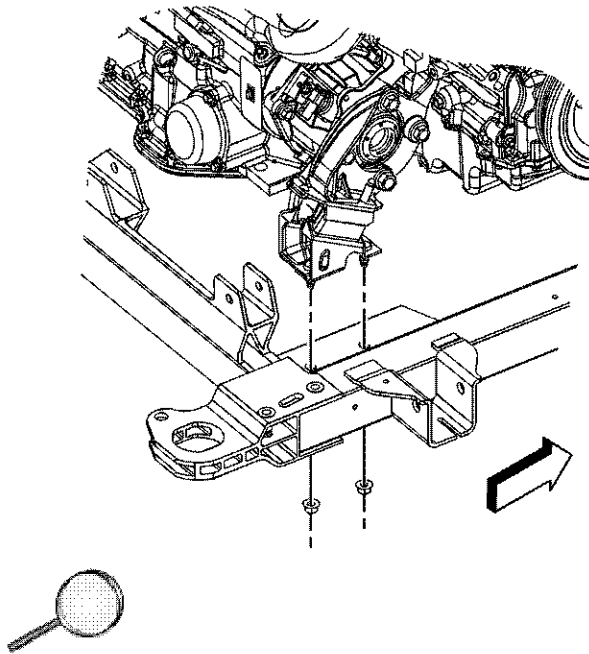
4. Disconnect both stabilizer shaft links from the shaft.



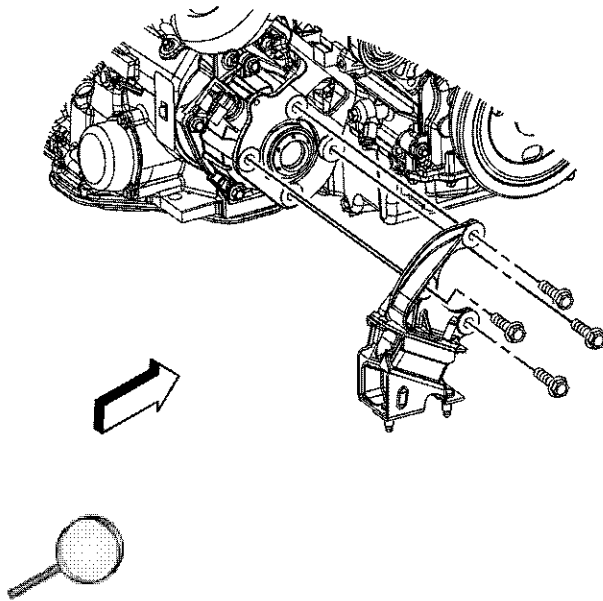
5. Remove the left side engine mount lower nuts from the frame.



6. Remove the left side transmission mount lower nuts from the frame.



7. Remove the right side engine mount lower nuts from the frame.
8. Support and raise the transmission. Raise the transmission about 51-76 mm (2-3 in).
9. Support the rear of the frame using an adjustable jackstand.
10. Remove the rear frame bolts from frame.
11. Lower the rear of the frame no more than 76 mm (3 in).



12. Remove the right side engine mount bracket bolts.
13. Remove the right side engine mount and bracket from the vehicle.
14. Disconnect the power steering cooler pipe/hose from the gear.
15. Remove the power steering cooler pipe/hose clamp from the return line.
16. Disconnect the power steering cooler pipe/hose from the return line.
17. Remove the power steering cooler pipe/hose assembly from the vehicle.
18. Install the power steering cooler pipe/hose assembly to the vehicle.
19. Connect the power steering cooler pipe/hose to the return line and install clamp.
20. Connect the power steering cooler pipe/hose to the gear.

21. Install the right side engine mount and bracket to the vehicle.
22. Install the right side engine mount bracket bolts.

**Tighten**

Tighten the engine mount bracket bolts to 50N·m(37 lb ft).

23. Raise the rear of the frame into place.
24. Install the rear frame bolts.

**Tighten**

Tighten the frame bolts to 160N·m(118 lb ft).

25. Remove the jackstand from under the frame.
26. Lower the transmission and remove support.
27. Install the left side transmission mount lower nuts to the frame.

**Tighten**

Tighten the nuts to 47N·m(35 lb ft).

28. Install the right side engine mount lower nuts to the frame.

**Tighten**

Tighten the nuts to 50N·m(37 lb ft).

29. Install the left side engine mount lower nuts to the frame.

**Tighten**

Tighten the nuts to 50N·m(37 lb ft).

30. Connect both stabilizer shaft links to the shaft.
31. Install the power steering cooler pipe/hose to the retaining clips on the frame.
32. Clean any fluid residue from under the vehicle.
33. Remove the drain pan.
34. Lower the vehicle.
35. Check the power steering fluid level and bleed the system. Refer to Power Steering System Bleeding in SI.

**Parts Information**

Part Number	Description	Qty
25793853	Pipe, P/S Fluid Cooling (V6)	1
25793936	Clamp (V6)	2
15876377	Pipe, P/S Fluid Cooling (Impala, Monte Carlo) (V8)	1
15876378	Pipe, P/S Fluid Cooling (Grand Prix) (V8)	1
89020661 (US)	Fluid, Hydraulic Power Steering	1 container for V8
89021186 (Canada)		¼ container for V6

**Warranty Information**

For vehicles repaired under warranty, use:

Labor Operation	Description	Labor Time
E9427* (V6)	P/S Cooler Pipe/Hose -- Repair	0.5 hr
E8906 (V8)	P/S Cooler Pipe/Hose -- Replace	1.2 hrs**

\*This is a unique labor operation number for bulletin use only. It will not be published in the Labor Time Guide.

\*\*This time is updated from the current Labor Time Guide. The next update of the Labor Time Guide will contain this change.

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these 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 your GM dealer for information on whether your vehicle may benefit from the information.



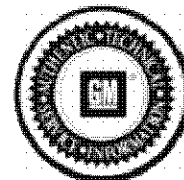
WE SUPPORT  
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CERTIFICATION

Document ID: 1867312

# #06072: Customer Satisfaction - Power Steering Hose Leak - (Oct 17, 2006)

**Subject:** 06072 -- Power Steering Hose Leak

**Models:** 2006 Chevrolet Impala, Monte Carlo w/V6 & V8 Engine  
2005-2006 Pontiac Grand Prix w/V8 Engine  
Registered in Canada, Alaska, Maine, Minnesota, Montana, New Hampshire, North Dakota, South Dakota, Vermont, Wisconsin, and Wyoming



\*\*\*\*\*THIS PROGRAM EXPIRED OCTOBER 31, 2007\*\*\*\*\*

GM bulletins are intended for use by professional technicians, NOT a "do-it-yourselfer". They are written to inform these 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 your GM dealer for information on whether your vehicle may benefit from the information.



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# Program Bulletin



## CUSTOMER SATISFACTION PROGRAM

**SUBJECT:** Power Steering Hose Leak

**MODELS:** 2006 Chevrolet Impala, Monte Carlo w/V6 & V8 Engine  
2005-2006 Pontiac Grand Prix w/V8 Engine  
Registered in Canada, Alaska, Maine, Minnesota, Montana, New Hampshire,  
North Dakota, South Dakota, Vermont, Wisconsin, and Wyoming

\*\*\*\*\*

THIS PROGRAM IS IN EFFECT UNTIL OCTOBER 31, 2007

### CONDITION

Customers in Canada, Alaska, Maine, Minnesota, Montana, New Hampshire, North Dakota, South Dakota, Vermont, Wisconsin, and Wyoming have reported an unusual number of power steering fluid leaks involving the power steering fluid return line in certain 2006 Chevrolet Impala and Monte Carlo vehicles equipped with a V6 or V8 engine, and 2005-2006 Pontiac Grand Prix vehicles equipped with a V8 engine. When these vehicles are started at temperatures of -20°C (-4°F) or below, the pressure on the hose is substantially higher than in warmer conditions and may exceed the strength of the power steering hose or clamps. If this were to occur, the driver would likely notice fluid spotting under the vehicle when the vehicle is parked and a decrease in power steering assist. If enough fluid is lost, damage to the power steering pump could occur.

### CORRECTION

Dealers are to replace the power steering hose assembly on vehicles with a V8 engine, and a length of hose and clamps on vehicles with a V6 engine.

### VEHICLES INVOLVED

Involved are **certain** 2006 Chevrolet Impala and Monte Carlo vehicles equipped with a V6 or V8 engine, and 2005-2006 Pontiac Grand prix vehicles equipped with a V8 engine registered in Canada, Alaska, Maine, Minnesota, Montana, New Hampshire, North Dakota, South Dakota, Vermont, Wisconsin, and Wyoming and built within these VIN breakpoints:

YEAR	DIVISION	MODEL	FROM	THROUGH
2006	Chevrolet	Impala	69100007	69425839
2006	Chevrolet	Monte Carlo	69102734	69425677

VEHICLES INVOLVED, Cont'd.

YEAR	DIVISION	MODEL	FROM	THROUGH
2005	Pontiac	Grand Prix	51227735	51356951
2006	Pontiac	Grand Prix	61100022	61315418

**Important:** Dealers are to confirm vehicle eligibility prior to beginning repairs by using GMVIS. Not all vehicles within the above breakpoints may be involved.

For dealers with involved vehicles, a listing with involved vehicles containing the complete vehicle identification number, customer name, and address information has been prepared and will be provided through the applicable system listed below. Dealers will not have a report available if they have no involved vehicles currently assigned.

- US dealers - GM DealerWorld Recall Information
- Canadian dealers - GMinfoNet Recall Reports

The listing may contain customer names and addresses obtained from Motor Vehicle Registration Records. The use of such motor vehicle registration data for any purpose other than follow-up necessary to complete this program is a violation of law in several states/provinces/countries. Accordingly, you are urged to limit the use of this report to the follow-up necessary to complete this program.

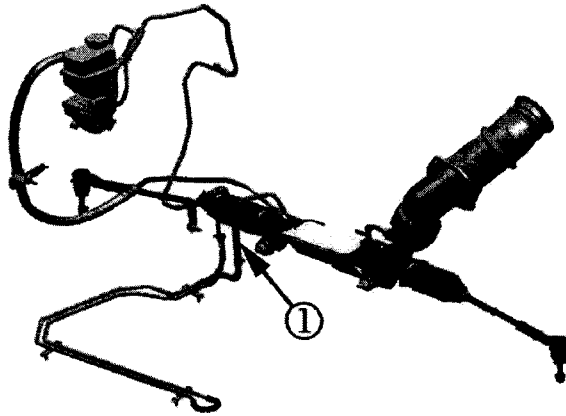
PARTS INFORMATION

Parts required to complete this program are to be obtained from General Motors Service and Parts Operations (GMSPO). Please refer to your "involved vehicles listing" before ordering parts. Normal orders should be placed on a DRO = Daily Replenishment Order. In an emergency situation, parts should be ordered on a CSO = Customer Special Order.

Part Number	Description	Quantity/Vehicle
25793853	Pipe, P/S Fluid Clg (V6)	1
25793936	Clamp, P/S Gr Otlt & P/S Fluid Rsvr Inl Hose (V6)	2
15876377	Pipe, P/S Fluid Clg (Impala, Monte Carlo) (V8)	1
15876378	Pipe, P/S Fluid Clg (Grand Prix) (V8)	1
89020661 - US 89021186 - CN	Fluid, Hydraulic Power Steering	1 container for V8 ¼ of container for V6

## SERVICE PROCEDURE

### V6 Engine



1854948

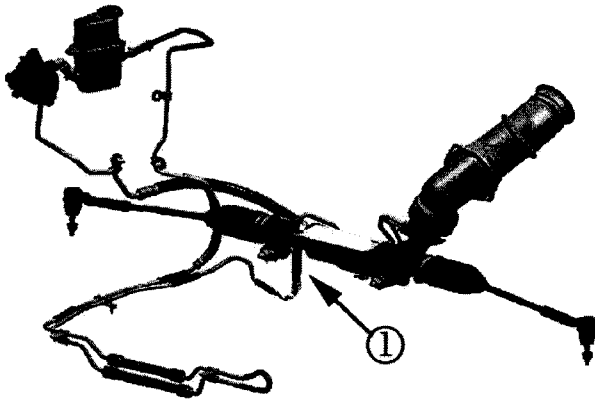
**Important:** The location of the leak (1) is shown above. The power steering cooler hose may leak from the hose clamp.

1. Raise and support the vehicle. Refer to the *Lifting and Jacking the Vehicle* procedure in SI.
2. Place a drain pan under the repair area.
3. Remove the power steering hose clamps.
4. Remove the power steering hose from the vehicle.
5. Slide the new clamps onto the new power steering hose.
6. Install the new power steering hose.
7. Position the power steering hose clamps.

#### **Tighten**

Tighten the clamps until the torque cap breaks off of the clamp.

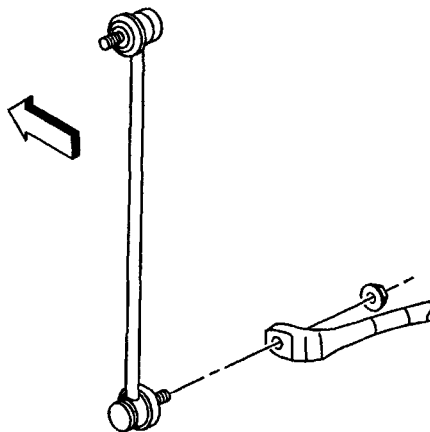
8. Clean the fluid from the underbody of the vehicle.
9. Lower the vehicle.
10. Check the power steering fluid. Add power steering fluid and bleed the system. Refer to the *Checking and Adding Power Steering Fluid* procedure in SI.

**V8 Engine**

1854947

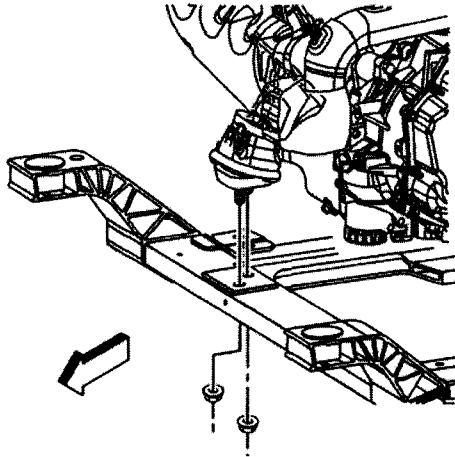
**Important:** The location of the leak (1) is shown above. Fittings on the hose are crimped socket and are not likely to leak.

1. Raise and support the vehicle. Refer to the *Lifting and Jacking the Vehicle* procedure in SI.
2. Place a drain pan under the vehicle.
3. Remove the power steering cooler pipe/hose from the retaining clips on the frame.



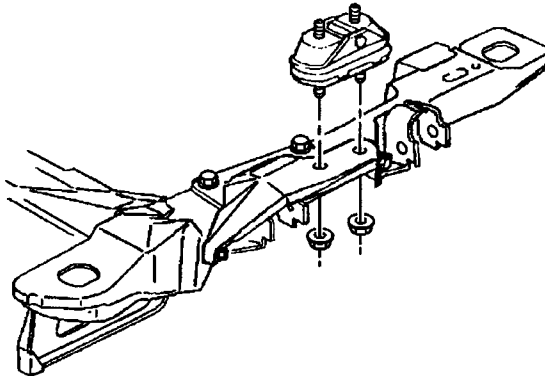
1208429

4. Disconnect both stabilizer shaft links.



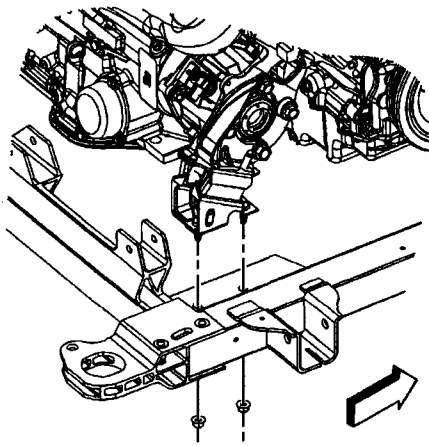
1551858

5. Remove the left side engine mount lower nuts from the frame.



161234

6. Remove the left side transmission mount lower nuts from the frame.

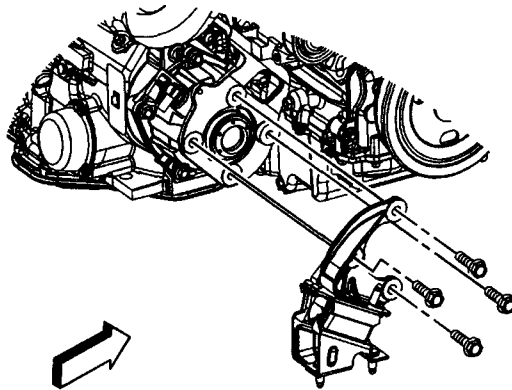


1551859

7. Remove the right side engine mount lower nuts from the frame.
8. Support and raise the transmission. Raise the transmission about 51-76 mm (2-3 in).
9. Support the rear of the frame (cradle) using an adjustable jackstand.
10. Remove the rear frame bolts from the frame.

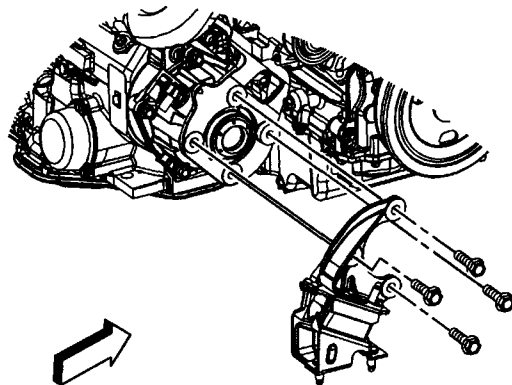
**Notice:** To avoid part damage, do NOT lower the rear frame (cradle) more than 76 mm (3 in).

11. Lower the rear frame (cradle) no more than 76 mm (3 in).



1551855

12. Remove the right side engine mount bracket bolts.
13. Remove the right side engine mount and bracket from the vehicle.
14. Disconnect the power steering cooler pipe/hose from the gear.
15. Remove the power steering cooler pipe/hose clamp from the pipe/hose and return line.
16. Disconnect the power steering cooler pipe/hose from the return line.
17. Remove the power steering cooler pipe/hose from the assembly from the vehicle.
18. Connect the power steering cooler pipe/hose to the return line and install the clamp.
19. Connect the power steering cooler pipe/hose to the gear.



1551855

20. Install the right side engine mount with the bracket to the vehicle.
21. Install the right side engine mount bracket bolts.

**Tighten**

Tighten the engine mount bracket bolts to 50 N·m (37 lb ft).

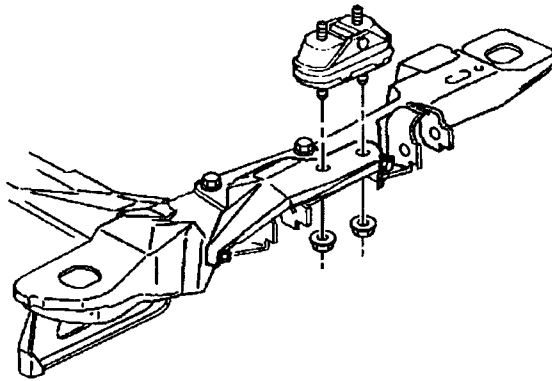
22. Raise the rear of the frame (cradle) using an adjustable jackstand.

23. Install the rear frame bolts.

**Tighten**

Tighten the rear frame bolts to 160 N·m (118 lb ft).

24. Remove the adjustable jackstand from under the frame.  
25. Lower the transmission and remove the support.

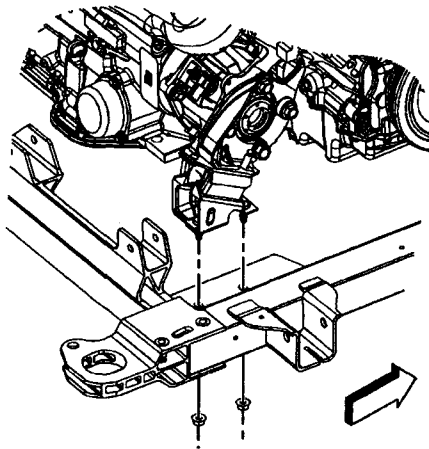


161234

26. Install the left side transmission mount lower nuts to the frame.

**Tighten**

Tighten the left side transmission mount lower nuts to 47 N·m (35 lb ft).

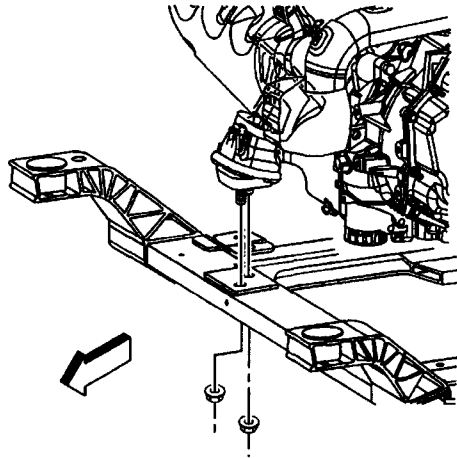


1551859

27. Install the right side engine mount lower nuts to the frame.

**Tighten**

Tighten the right side engine mount lower nuts to 50 N·m (37 lb ft).

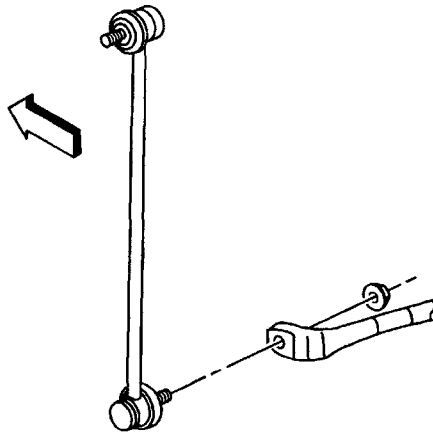


1551858

28. Install the left side engine mount lower nuts to the frame.

**Tighten**

Tighten the left side engine mount lower nuts to 50 N·m (37 lb ft).



1208429

29. Connect both stabilizer shaft links.

**Tighten**

Tighten the stabilizer link nuts to 60 N·m (44 lb ft).

30. Install the power steering cooler pipe/hose to the frame mounted retaining clips.  
31. Clean power steering fluid from the underbody of the vehicle.  
32. Remove the drain pan.  
33. Lower the vehicle.  
34. Check the power steering fluid. Add fluid and bleed the system. Refer to *Checking and Adding Power Steering Fluid* procedure in SI.



**COURTESY TRANSPORTATION**

The General Motors Courtesy Transportation program is intended to minimize customer inconvenience when a vehicle requires a repair that is covered by the New Vehicle Limited Warranty. The availability of courtesy transportation to customers whose vehicles are within the warranty coverage period and involved in a product program is very important in maintaining customer satisfaction. Dealers are to ensure that these customers understand that shuttle service or some other form of courtesy transportation is available and will be provided at no charge. Dealers should refer to the General Motors Service Policies and Procedures Manual for Courtesy Transportation guidelines.

**CLAIM INFORMATION**

Submit a Product Claim with the information indicated below:

REPAIR PERFORMED	PART COUNT	PART NO.	PARTS ALLOW	CC-FC	LABOR OP	LABOR HOURS	NET ITEM
Replace Power Steering Hose & Clamps (inc. system bleed) (V6)	3	---	*	MA-96	V1517	0.5	**
Replace Power Steering Cooler Line (inc. system bleed) (V8)	2	---	*	MA-96	V1518	1.2	N/A
Courtesy Transportation for vehicles within the New Vehicle Limited Warranty (US & Canadian GM Dealers)	N/A	N/A	N/A	MA-96	***	N/A	****

- \* The "Parts Allowance" should be the sum total of the current GMSPO Dealer net price plus applicable Mark-Up for the pipe and clamps (V6) or pipe and power steering fluid (V8) needed to complete the repair.
- \*\* The amount identified in the "Net Item" column should represent the actual sum total of the current GMSPO Dealer net price plus applicable Mark-Up for the power steering fluid (V6) needed to perform the required repairs, not to exceed \$1.30 USD, \$1.46 CAD.
- \*\*\* Submit courtesy transportation using normal labor operations for courtesy transportation as indicated in the GM Service Policies and Procedures Manual for vehicles within the New Vehicle Limited Warranty.
- \*\*\*\* The amount identified in the "Net Item" column should represent the actual dollar amount for courtesy transportation.

Refer to the General Motors WINS Claims Processing Manual for details on Product Recall Claim Submission.

**CUSTOMER NOTIFICATION**

General Motors will notify customers of this program on their vehicle (see copy of customer letter included with this bulletin).

**DEALER PROGRAM RESPONSIBILITY**

All unsold new vehicles in dealers' possession and subject to this program must be held and inspected/repared per the service procedure of this program bulletin before customers take possession of these vehicles.

Dealers are to service all vehicles subject to this program at no charge to customers, regardless of mileage, age of vehicle, or ownership, through October 31, 2007.

Customers who have recently purchased vehicles sold from your vehicle inventory, and for which there is no customer information indicated on the dealer listing, are to be contacted by the dealer. Arrangements are to be made to make the required correction according to the instructions contained in this bulletin. A copy of the customer letter is provided in this bulletin for your use in contacting customers. Program follow-up cards should not be used for this purpose, since the customer may not as yet have received the notification letter.

In summary, whenever a vehicle subject to this program enters your vehicle inventory, or is in your dealership for service through October 31, 2007, you must take the steps necessary to be sure the program correction has been made before selling or releasing the vehicle.

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We Support  
Voluntary Technician  
Certification

October 2006

Dear General Motors Customer:

This notice is sent to inform you that General Motors is conducting a customer satisfaction program that affects certain 2006 Chevrolet Impala and Monte Carlo vehicles, and 2005-2006 Pontiac Grand Prix vehicles registered in Canada, Alaska, Maine, Minnesota, Montana, New Hampshire, North Dakota, South Dakota, Vermont, Wisconsin, and Wyoming.

Customers have reported an unusual number of power steering fluid leaks involving the power steering fluid return line. When these vehicles are started at temperatures of -20°C (-4°F) or below, the pressure on the hose is substantially higher than in warmer conditions and may exceed the strength of the power steering hose or clamps. If this were to occur, the driver would likely notice fluid spotting under the vehicle when the vehicle is parked and a decrease in power steering assist. If enough fluid is lost, damage to the power steering pump could occur.

**What We Will Do:** To prevent this condition from occurring, your GM dealer will replace the power steering hose assembly on vehicles equipped with a V8 engine, or replace a length of hose and clamps on vehicles equipped with a V6 engine. This service will be performed for you at **no charge until October 31, 2007.**

**What You Should Do:** To limit any possible inconvenience, we recommend that you contact your dealer as soon as possible to schedule an appointment for this repair. By scheduling an appointment, your dealer can ensure that the necessary parts will be available on your scheduled appointment date.

**Customer Reply Form:** The enclosed customer reply form identifies your vehicle. Presentation of this form to your dealer will assist in making the necessary correction in the shortest possible time. If you no longer own this vehicle, please let us know by completing the form and mailing it back to us.

If you have any questions or need any assistance, just contact your dealer or the appropriate Customer Assistance Center at the number listed below. The Customer Assistance Center's hours of operation are from 8:00 AM to 11:00 PM, EST, Monday through Friday.

Division	Number	Text Telephones (TTY)
Chevrolet	1-800-630-2438	1-800-833-2438
Pontiac	1-800-620-7668	1-800-833-7668
Guam	1-671-648-8650	
Puerto Rico – English	1-800-496-9992	
Puerto Rico – Español	1-800-496-9993	
Virgin Islands	1-800-496-9994	

**Courtesy Transportation:** If your vehicle is within the New Vehicle Limited Warranty your dealer may provide you with shuttle service or some other form of courtesy transportation while your vehicle is at the dealership for this repair. Please refer to your Owner's Manual and your dealer for details on Courtesy Transportation.

We sincerely regret any inconvenience or concern that this situation may cause you. We want you to know that we will do our best, throughout your ownership experience, to ensure that your GM vehicle provides you many miles of enjoyable driving.

Scott Lawson  
General Director,  
Customer and Relationship Services

Enclosure  
06072