

GM SERVICE AND PARTS OPERATIONS
DCS1453
URGENT DISTRIBUTE IMMEDIATELY

Date: September 23, 2005

Subject: 05068 Product Safety Recall
Front Wheel Speed Sensor Corrosion

Models: 1999-2002 Chevrolet Silverado
2000-2002 Chevrolet Tahoe, Suburban
2002 Chevrolet Avalanche
1999-2002 GMC Sierra
2000-2002 GMC Yukon, Yukon XL
Located in the Severe Corrosion Areas Listed

To: All Chevrolet and GMC Dealers

Attention: Service Manager, Parts Manager and Warranty Administrator

PRODUCT FIELD ACTION ANNOUNCEMENT

General Motors is announcing Product Safety Recall 05068 today. The total number of vehicles involved is 829,818. Please see the attached bulletin for details.

States Involved:

Connecticut	Maine	New Hampshire
Ohio	Vermont	New Jersey
Illinois	Massachusetts	New York
Pennsylvania	West Virginia	Rhode Island
Indiana	Michigan	

Mailing Information

Customer notification letter mailing will begin on October 14, 2005.

GM Vehicle Inquiry System (GMVIS)

GMVIS information will be available on September 23, 2005.

Service Information System (SI)

Bulletin 05068 is scheduled to be available on September 26, 2005.

Campaign Initiation Detail Report (CIDR)

The CIDR will be available in GM DealerWorld on September 30, 2005.

PLEASE DOUBLE CLICK ON THE ICON BELOW
THEN SINGLE CLICK ON THE LAUNCH BUTTON
TO VIEW OR PRINT THE BULLETIN

(See attached file: 05068 bulletin.pdf)

END OF MESSAGE
GM SERVICE AND PARTS OPERATIONS



Recall Bulletin



PRODUCT SAFETY RECALL

SUBJECT: FRONT WHEEL SPEED SENSOR CORROSION

**MODELS: 1999-2002 CHEVROLET SILVERADO
 2000-2002 CHEVROLET TAHOE, SUBURBAN
 2002 CHEVROLET AVALANCHE
 1999-2002 GMC SIERRA
 2000-2002 GMC YUKON, YUKON XL
 LOCATED IN THE SEVERE CORROSION AREAS LISTED BELOW**

CONDITION

General Motors has decided that a defect, which relates to motor vehicle safety, exists in **certain** 1999-2002 Chevrolet Silverado, 2000-2002 Chevrolet Tahoe, Suburban, 2002 Chevrolet Avalanche, 1999-2002 GMC Sierra, 2000-2002 GMC Yukon, Yukon XL vehicles located in the areas listed below. These vehicles may have a condition permitting corrosion to occur between the front hub/bearing assembly and the wheel speed sensor. If the brakes are applied while the vehicle is traveling at a speed of greater than 6 km/h (3.7 mph) but less than 16 km/h (10 mph), the corrosion may cause an unwanted anti-lock brake system (ABS) activation. If this condition occurred where stopping distance is limited, a crash could occur.

Connecticut	Maine	New Hampshire	Ohio	Vermont
Illinois	Massachusetts	New Jersey	Pennsylvania	West Virginia
Indiana	Michigan	New York	Rhode Island	

CORRECTION

Dealers are to inspect, clean, and treat the affected area. In some cases, the front wheel speed sensor may require replacement.

VEHICLES INVOLVED

Involved are **certain** 1999-2002 Chevrolet Silverado, 2000-2002 Chevrolet Tahoe, Suburban, 2002 Chevrolet Avalanche, 1999-2002 GMC Sierra, and 2000-2002 GMC Yukon, Yukon XL vehicles located in severe corrosion areas and built within these VIN breakpoints:

YEAR	DIVISION	MODEL	FROM	THROUGH
2002	Chevrolet	Avalanche	2G100018	2G363816
1999	Chevrolet	Silverado	X1100001	X1299264
1999	Chevrolet	Silverado	XE100001	XE256728

VEHICLES INVOLVED, Cont'd.

YEAR	DIVISION	MODEL	FROM	THROUGH
1999	Chevrolet	Silverado	XZ100001	XZ214620
2000	Chevrolet	Silverado	Y1100002	Y1409284
2000	Chevrolet	Silverado	YE100002	YE433962
2000	Chevrolet	Silverado	YZ100001	YZ371934
2001	Chevrolet	Silverado	11100001	11408134
2001	Chevrolet	Silverado	1E100006	1E346409
2001	Chevrolet	Silverado	1F106144	1F213814
2001	Chevrolet	Silverado	1Z100001	1Z335175
2002	Chevrolet	Silverado	21100014	21430580
2002	Chevrolet	Silverado	2E100011	2E306362
2002	Chevrolet	Silverado	2F100062	2F248816
2002	Chevrolet	Silverado	2Z100001	2Z348502
2000	Chevrolet	Suburban	YG100007	YG229687
2000	Chevrolet	Suburban	YJ100001	YJ210746
2001	Chevrolet	Suburban	1G100001	1G289564
2001	Chevrolet	Suburban	1J100001	1J318173
2002	Chevrolet	Suburban	2G100118	2G363837
2002	Chevrolet	Suburban	2J100042	2J343584
2002	Chevrolet	Suburban	2R198568	2R328601
2000	Chevrolet	Tahoe	YJ100005	YJ211874
2001	Chevrolet	Tahoe	1J100002	1J318222
2001	Chevrolet	Tahoe	1R100001	1R228111
2002	Chevrolet	Tahoe	2J100002	2J344551
2002	Chevrolet	Tahoe	2R113679	2R330559
1999	GMC	Sierra	X1500003	X1571404
1999	GMC	Sierra	XE500005	XE851656
1999	GMC	Sierra	XZ500001	XZ540964
2000	GMC	Sierra	Y1100003	Y1409272
2000	GMC	Sierra	YE100001	YE901593
2000	GMC	Sierra	YZ100002	YZ371826
2001	GMC	Sierra	11100005	11408122
2001	GMC	Sierra	1E100001	1E901422
2001	GMC	Sierra	1F106147	1F213498
2001	GMC	Sierra	1Z100006	1Z335087
2002	GMC	Sierra	21100002	21430585
2002	GMC	Sierra	2E100013	2E305599
2002	GMC	Sierra	2F100035	2F250173
2002	GMC	Sierra	2Z100004	2Z900912
2000	GMC	Yukon	YJ100008	YJ211846
2001	GMC	Yukon	1J100015	1J318223
2001	GMC	Yukon	1R100002	1R228105
2002	GMC	Yukon	2J100011	2J344529
2002	GMC	Yukon	2R109202	2R330554
2000	GMC	Yukon XL	YG100016	YG229681
2000	GMC	Yukon XL	YJ100017	YJ211624
2001	GMC	Yukon XL	1G100004	1G289613

VEHICLES INVOLVED, Cont'd.

YEAR	DIVISION	MODEL	FROM	THROUGH
2001	GMC	Yukon XL	1J100061	1J318194
2002	GMC	Yukon XL	2G100130	2G363835
2002	GMC	Yukon XL	2J100037	2J343548
2002	GMC	Yukon XL	2R215628	2R325703

IMPORTANT: Dealers retailers should confirm vehicle eligibility through **GMVIS** (GM Vehicle Inquiry System) prior to beginning recall repairs. [Not all vehicles within the above breakpoints may be involved.]

For dealers with involved vehicles, a Campaign Initiation Detail Report (CIDR) containing the complete vehicle identification number, customer name and address data has been prepared and will be loaded to the GM DealerWorld (US) Recall Information. Dealers will not have a report available if they have no involved vehicles currently assigned.

The Campaign Initiation Detail Report 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 recall 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 recall.

PARTS INFORMATION

Parts required to complete this recall are to be obtained from General Motors Service 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.

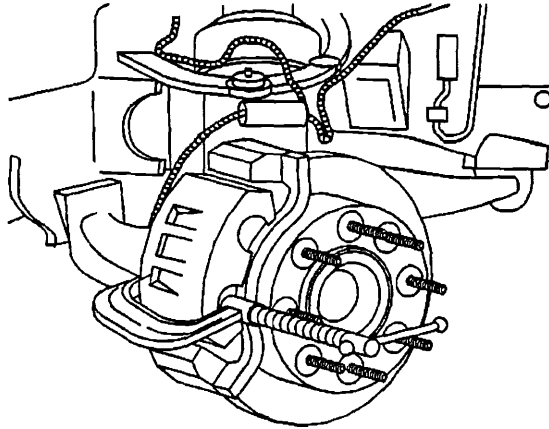
Note: Very few vehicles will require front wheel speed sensor replacement; if required, order appropriate part from GMSPO.

Part Number	Description	Quantity/ Vehicle
89022217	Lubricant, Rust Penetrating (will service 50+ vehicles)	1
01051344	Lubricant, Wheel Bearing (will service 25+ vehicles)	1

SERVICE PROCEDURE

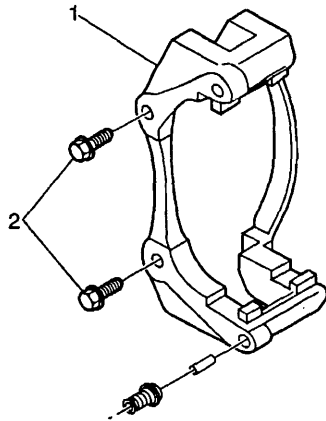
The following procedure provides instructions for repairing a corrosion condition where the front wheel speed sensor mounts on the front wheel bearing assembly.

1. Raise the vehicle on a suitable hoist and support as necessary.
2. Remove both front tires and wheels.



370154

3. Compress the front brake caliper pistons.
 - 3.1 Install a large C-clamp over the top of the caliper housing and against the back of the outboard pad.
 - 3.2 Slowly tighten the C-clamp until the pistons are pushed completely into the caliper bores.
 - 3.3 Remove the C-clamp from the caliper.



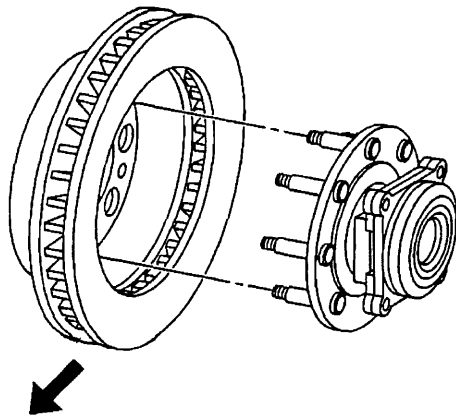
177036

Important: It is not necessary to remove the front brake caliper from the bracket when removing the bracket in the next step.

4. Remove the two bolts that attach the front brake caliper mounting brackets to the knuckle.

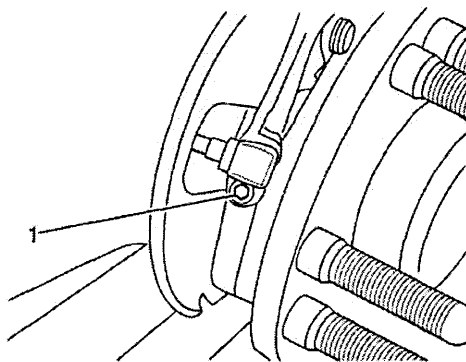
Notice: Support the brake caliper with heavy mechanic's wire, or equivalent, whenever it is separated from its mount, and the hydraulic flexible brake hose is still connected. Failure to support the caliper in this manner will cause the flexible brake hose to bear the weight of the caliper, which may cause damage to the brake hose and in turn may cause a brake fluid leak.

5. Remove the brake caliper and bracket as an assembly and support it with heavy mechanic's wire or equivalent. **DO NOT** disconnect the hydraulic brake flexible hose from the caliper.
6. Mark the relationship of the rotor to the bearing hub.
7. If equipped, remove the rotor retaining push nuts from the wheel studs.



370132

8. Remove the rotor.

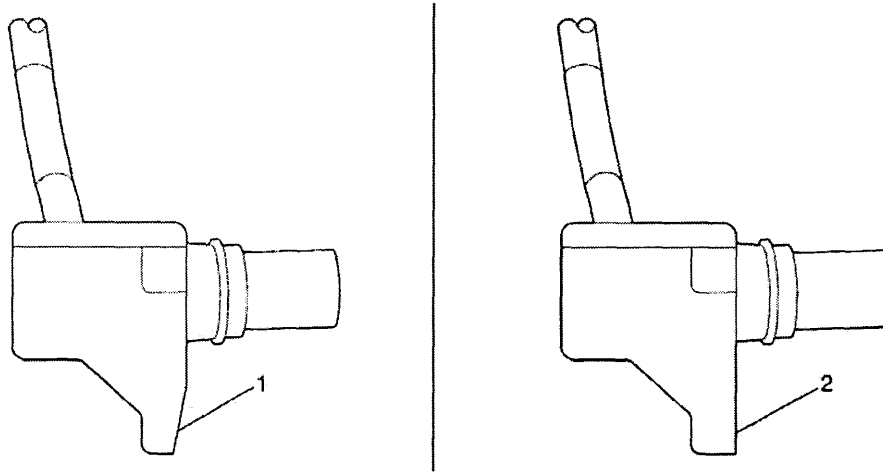


1563353

9. Remove the bolt (1) that attaches the wheel speed sensor to the bearing hub.

Notice: Carefully remove the sensor by pulling it straight out of the bore. **DO NOT** use a screwdriver or other device to try to pry the sensor out of the bore. Prying will cause the sensor body to break off in the bore.

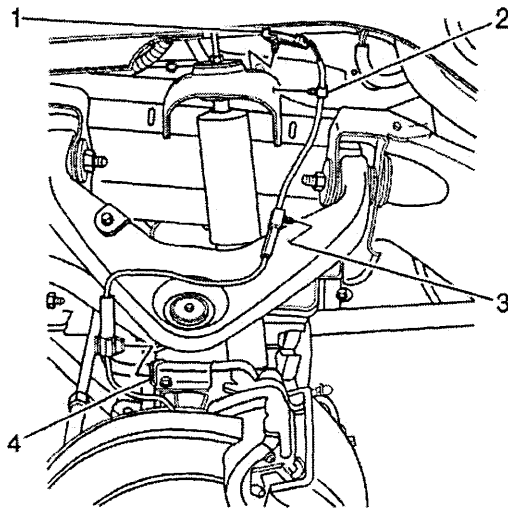
10. Remove the wheel speed sensor from the bearing hub assembly.



1563355

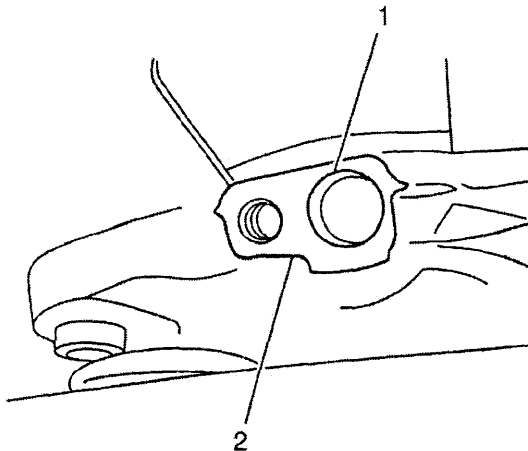
Important: The mounting surface on the sensor must be flat in the next step in order to be mounted correctly on the bearing hub assembly. If the mounting surface on the sensor is warped or bent, the sensor must be replaced.

11. Inspect to see if the mounting surface on the sensor is flat. Check the mounting surface on the sensor head for flatness by placing it on the edge of a metal machinist's scale or other suitable straight edge to measure the flatness. Check the sensor for flatness in multiple positions/directions (minimum 3).
- If the sensor mounting surface is NOT flat (1), the sensor must be replaced. Proceed to the next step and replace the sensor.
 - If the sensor mounting surface IS flat (2), the sensor IS to be reused. Proceed to Step 16.



1563350

12. Remove the wheel speed harness mounting clips from the knuckle (4) upper control arm (3) and frame (2).
13. Disconnect the wheel speed harness electrical connector (1) from the vehicle wiring harness.
14. Connect the new wheel speed sensor harness electrical connector to the vehicle wiring harness.
15. Attach the wheel speed sensor harness to the frame, upper control arm, and the knuckle.



1563354

16. Temporarily plug the wheel speed sensor hole (1) in the bearing hub to prevent debris from entering it when you clean it.

Important: All rust and corrosion must be removed from the wheel speed sensor mounting surfaces on the bearing hub in the next step.

17. Using a wire brush, sandpaper, emery cloth, scotch brite, or equivalent, thoroughly clean the wheel speed sensor mounting surface (2) on the bearing hub to remove any rust or corrosion.
18. Using compressed air, remove all debris from the bearing hub surface.
19. Using a clean shop towel, clean the sensor and the O-ring.

Important: While the corrosion inhibitor is drying in the next step, begin performing Steps 3-20 on the opposite side front wheel speed sensor.

20. Apply (spray) two thin coats of the specified rust penetrating lubricant (corrosion inhibitor) listed in this bulletin, to the complete sensor mounting surface on the bearing hub. Allow to dry for 3-5 minutes between coats.
21. When the corrosion inhibitor is dry to the touch (about 10 minutes), apply a light coating of the specified grease to the complete sensor mounting surface on the bearing hub and to the sensor and O-ring.
22. Remove the temporary plug from the hole in the bearing hub.
23. Install the wheel speed sensor in the bearing hub and install the bolt. Ensure that the sensor is seated flat against the hub.

Tighten

Tighten the wheel speed sensor mounting bolt to 18 N·m (13 lb ft).

24. Disconnect the front wheel speed sensor connector and place a digital volt meter (DVM) across the terminals of the wheel speed sensor connector. Rotate the bearing at approximately one revolution per second. The minimum reading should be at least 350 ACmV's. If the reading is less than 350 ACmV's, the wheel speed sensor must be replaced. Follow Steps 12-15 for instructions on replacing the wheel speed sensor. This step must be repeated after the new sensor has been installed.

Notice: Whenever the brake rotor has been separated from the wheel bearing flange, clean any rust or foreign material from the mating surface of the rotor and flange. Failure to do this may result in increased lateral runout of the rotor and brake.

Important: If the rotor was removed using the jack screw method, you must ensure that the hub flange is free of nicks or marks caused by this procedure. Remove all raised nicks or marks before installing the rotor.

25. Align the rotor to its original position on the hub and install the rotor.
26. Install the caliper and caliper mounting bracket assembly.
27. Perform the following procedure before installing the brake caliper bracket mounting bolts.
 - 27.1 Remove all traces of the original adhesive patch
 - 27.2 Clean the threads of the bolt with brake parts cleaner, or the equivalent, and allow to dry.
 - 27.3 Apply threadlocker to the threads of the bolts.

28. Install the caliper bracket mounting bolts.

Tighten

Tighten the brake caliper mounting bracket mounting bolts to the specification listed below.

1500 Series vehicles – 175 N·m (129 lb ft)

2500 Series vehicles – 300 N·m (221 lb ft)

29. Install the front tire and wheel assembly.

Tighten

Tighten the wheel nuts to 190 N·m (140 lb ft).

30. Complete Steps 21-30 on the opposite side front wheel speed sensor.

31. Lower the vehicle.

32. With the engine OFF, gradually apply the brake pedal to approximately 2/3 of its travel distance.

33. Slowly release the brake pedal.

34. Wait 15 seconds and repeat Steps 32-33 until a firm pedal is obtained. This will properly seat the brake caliper pistons and brake pads.

CUSTOMER REIMBURSEMENT

All customer requests for reimbursement for previous repairs for the recall condition will be handled by the Customer Assistance Center, not by dealers.

A General Motors Customer Reimbursement Procedure and Claim Form is included with the customer letter.

IMPORTANT: (For GM US Only) Refer to the GM Service Policies and Procedures Manual, section 6.1.12, for specific procedures regarding customer reimbursement and the form.

CLAIM INFORMATION

Submit a Product Recall Claim with the information indicated below:

REPAIR PERFORMED	PART COUNT	PART NO.	PARTS ALLOW	CC-FC	LABOR OP	LABOR HOURS	NET ITEM
Inspect Wheel Speed Sensor (inc. cleaning)	0	N/A	N/A	MA-96	V1410	0.8	**
• Add: Vehicles With 8-Lug Nut Wheels						0.1	
Inspect & Replace One or Both Wheel Speed Sensor(s) (inc. cleaning)	1-2	---	*	MA-96	V1411	0.9	**
• Add: Vehicles With 8-Lug Nut Wheels						0.1	
Customer Reimbursement (CAC) (Repair will still need to be performed)	N/A	N/A	N/A	MA-96	V1412	0.2	***

- * The "Parts Allowance" should be the sum total of the current GMSPO Dealer net price plus applicable Mark-Up for the front wheel speed sensor 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 actual amount of lubricants needed to perform the required repairs, not to exceed \$0.75.
- *** The amount identified in the "Net Item" column should represent the dollar amount reimbursed to the customer.

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 recall on their vehicle (see copy of customer letter included with this bulletin).

DEALER RECALL RESPONSIBILITY

The US National Traffic and Motor Vehicle Safety Act provides that each vehicle that is subject to a recall of this type must be adequately repaired within a reasonable time after the customer has tendered it for repair. A failure to repair within sixty days after tender of a vehicle is prima facie evidence of failure to repair within a reasonable time. If the condition is not adequately repaired within a reasonable time, the customer may be entitled to an identical or reasonably equivalent vehicle at no charge or to a refund of the purchase price less a reasonable allowance for depreciation. To avoid having to provide these burdensome remedies, every effort must be made to promptly schedule an appointment with each customer and to repair their vehicle as soon as possible. In the recall notification letters, customers are told how to contact the US National Highway Traffic Safety Administration if the recall is not completed within a reasonable time.

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

Dealers are to service all vehicles subject to this recall at no charge to customers, regardless of mileage, age of vehicle, or ownership, from this time forward.

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. Recall 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 recall enters your vehicle inventory, or is in your dealership for service in the future, you must take the steps necessary to be sure the recall correction has been made before selling or releasing the vehicle.



October 2005

Dear General Motors Customer:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Reason For This Recall: General Motors has decided that a defect, which relates to motor vehicle safety, exists in certain 1999-2002 Chevrolet Silverado, 2000-2002 Chevrolet Tahoe, Suburban, 2002 Chevrolet Avalanche, 1999-2002 GMC Sierra, and 2000-2002 GMC Yukon, Yukon XL vehicles located in severe corrosion areas. These vehicles may have a condition permitting corrosion to occur between the front hub/bearing assembly and the wheel speed sensor. If the brakes are applied while the vehicle is traveling at a speed of greater than 3 mph but less than 10 mph, the corrosion may cause an unwanted anti-lock brake system (ABS) activation. If this condition occurred where stopping distance is limited, a crash could occur.

What Will Be Done: Your GM dealer will inspect, clean, and treat the affected area. In some cases, the front wheel speed sensor may require replacement. This service will be performed for you at **no charge**.

How Long Will The Repair Take? This service correction will take approximately 1 hour. However, due to service scheduling requirements, your dealer may need your vehicle for a longer period of time.

Contacting Your Dealer: To limit any possible inconvenience, we recommend that you contact your dealer as soon as possible to schedule an appointment for this repair. Should your dealer be unable to schedule a service date within a reasonable time, you should contact the appropriate Customer Assistance Center at the listed number 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
GMC	1-866-996-9463	1-800-462-8583

If, after contacting the appropriate Customer Assistance Center, you are still not satisfied that we have done our best to remedy this condition without charge and within a reasonable time, you may wish to write the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, SW, Washington, DC 40990; or call the toll-free Vehicle Safety Hotline at 1-888-327-4236 (TTY: 1-800-424-9153); or go to <http://www.safercar.gov>.

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.

Reimbursement: The enclosed form explains what reimbursement is available and how to request reimbursement if you have paid for repairs for the recall condition.

Recall Information Online: More information about this recall, including answers to frequently asked questions, can be found at the Owner Center at My GMLink. This free online service offers vehicle and ownership related information along with tools tailored to your specific vehicle. To join, visit www.gm.com/recall and enter your vehicle's 17-character vehicle identification number (VIN), shown on the enclosed customer reply form.

Federal regulation requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

We are sorry to cause you this inconvenience; however, we have taken this action in the interest of your safety and continued satisfaction with our products.

General Motors Corporation

Enclosure
05068