



GENERAL MOTORS NORTH AMERICA
 Structure & Safety Integration

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 NVS-215

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OFFICE OF
 DEFECTS INVESTIGATION

Mr. Kenneth N. Weinstein
 Associate Administrator for Safety Assurance
 National Highway Traffic Safety Administration
 400 Seventh Street, S.W., Room 5321
 Washington, D.C. 20590

03V-093 ① of ⑩

Dear Mr. Weinstein:

The following information is submitted pursuant to the requirements of 49 CFR 573.5 as it applies to a determination by General Motors of a safety defect involving certain 1997 Chevrolet Blazer and Suburban; GMC Jimmy and Suburban; 1998 Chevrolet C/K Extended Cab Pickup, Astro Van, and Suburban; and GMC Sierra Extended Cab Pickup, Safari Van, and Suburban vehicles.

573.5(c)(1): Chevrolet and GMC Divisions of the General Motors Corporation.

573.5(c)(2)(3)(4): This information is shown on the attached sheet.

573.5(c)(5): General Motors has decided that a defect which relates to motor vehicle safety exists in certain 1997 Chevrolet Blazer and Suburban; GMC Jimmy and Suburban; 1998 Chevrolet C/K Extended Cab Pickup, Astro Van, and Suburban; and GMC Sierra Extended Cab Pickup, Safari Van, and Suburban vehicles equipped with electric outside rearview mirrors. Under certain conditions, some of these vehicles may develop a short circuit in the electric outside rearview mirror switch. If this were to happen, it could result in an inoperative switch, heat damage to the driver's door, and/or ignition of components in the driver's door and a subsequent vehicle fire without prior warning.

573.5(c)(6): General Motors began an investigation in June of 1998 after receiving two reported incidents of electrical fires involving the mirror control switch in 1998 C/K model vehicles. The subject mirror control switch, designed and supplied by Cherry Electrical Products, is of a design which replaced earlier spring-type contacts with an elastomer dome keypad embedded with gold-pellet contacts. When the switch is actuated to adjust the up-down or left-right position of either exterior mirror, low current from one of the four B+ wires flows through the switch to the mirror motor. The switch wiring is routed inside the driver's door from the switch to the mirror and also across the door hinge pillar area, through the instrument panel (IP) wiring harness, and across the passenger side door hinge pillar area to the mirror on the passenger's door.

Initial testing showed that a short circuit to ground on one of the mirror control switch B+ outputs to the mirror motor (in the wiring or the motor itself) within a specific current range could cause internal damage to the switch when the switch is operated to adjust one of the mirrors. After the internal mirror control switch circuitry was damaged, the switch could then continue to pass current directly from the battery under high resistance over extended time periods regardless of ignition key position. This reduced current could continue to flow through the switch after it became damaged because the foil traces on the printed circuit board (PCB) inside the switch would not completely "burn through," opening the circuit. The heat generated in the switch as a result of these events could eventually ignite the switch and/or surrounding materials on the driver's door trim panel, where the switch is mounted on all affected models.

Product Investigations

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 2087-08006.573.doc



More recently, GM Engineering discovered through additional testing that the mirror control switch is also susceptible to liquid intrusion around the perimeter of the concentric mirror selector control shaft. If a liquid containing an electrolyte such as salt gets into the mirror control switch and onto the circuit board, the pin-connector solder-joints to the mirror motor and switch illumination circuit traces can short-circuit and pass sufficient B+ current to cause smoking. Ultimately the switch could overheat and potentially create a fire. Similarly, such an electrolytic solution can short-circuit across the left-right selector contacts, enabling both mirror motors to receive B+ current simultaneously.

Description of Short Circuit Conditions: If the following three conditions occur in the listed sequence, the mirror control switch could become hot enough over time to cause a fire in the driver's door panel:

- 1) A resistive short circuit to ground on one of the four switch B+ outputs to either mirror motor must exist in one of the wires between the mirror switch and the mirror motor, at the pin connector to the switch, or inside the mirror motor.
- 2) Initial current draw through the switch caused by this pre-existing short circuit must be within an approximate range:

Vehicles built before 10/97: Current must be in the general range of 15 to 30 amperes. Current above 30-amperes will open-circuit the traces on the circuit board before reaching ignition temperature. Current below 15 amperes can damage the traces but will not generate sufficient heat for ignition.

Vehicles built after 10/97: Current must be in the general range of 6 to 10 amperes. Current above 10 amperes will open-circuit the traces in the switch. Current below 6 amperes will not generate sufficient heat for ignition.

- 3) The mirror control switch must be operated (contacts must be closed) to provide an alternate low-resistance current path in the circuit where the resistive short circuit exists (left-right or up-down adjustment on either the left or right exterior mirror).

If all three conditions are present, a brief surge of current could flow through the mirror control switch without blowing the circuit fuse. (Note: fuses of the type used to protect circuit wiring are designed to blow at not more than 140% of rated capacity within 30 seconds maximum.) The high current passing through the switch's contacts and printed circuit board could adhere the contacts to the circuit board, melt and spatter material from the foil traces, and/or carbonize the board material itself. These effects individually or in combination can cause a high-resistance conductive path through the switch. The switch can then continue to pass lower current directly from the battery over a prolonged time period whether or not the vehicle is in use. At the sustained lower current levels that an undamaged switch could accommodate, a damaged switch with high resistance could ultimately become hot enough to ignite surrounding materials.

Description of Liquid Intrusion Conditions: If a 5% or greater solution of salt or other electrolytic substance in water seeps into the mirror control switch, the solution can electrolytically conduct current. Current through the mirror-motor circuit trace equal to or greater than two amperes for a period of time sufficient to build up heat can lead to combustion of nearby materials. In addition, the electrochemical reaction could "bridge" from the motor circuit trace to the backlight circuit trace, causing electrical continuity and permitting unintended current flow in this circuit. The circuit fuses may not blow in time (or at all) to prevent heat build-up and a subsequent fire. Also, a gradual accumulation of dry salt residue inside the switch over time could, when dampened by incoming water, create a saline concentration sufficient to cause the same electrochemical reaction and potential heat build-up.

Effect of Conditions: It is important to note that neither of the above sequences of events means that a switch fire will result in every case, nor do they indicate how long the switch must pass current for ignition to take place. Documented occurrences from customer usage show varying levels of damage, ranging from smoldering and local "melting" at the switch location to complete consumption of the vehicle interior, and in some cases, the entire vehicle. Photos showed

extensive fire damage in some reported cases. In three incidents, slight burn injuries to the operator's extremities were reported. Reports indicate that fires began over a wide range of time periods, ranging from while the mirror was still being adjusted to several hours after the vehicle was left unattended.

Three Test Incident Reports (TIRs) written during 1998 M/L vehicle validation testing described thermal damage to the switch when the mirror on the passenger side was operated during a deliberate short-circuit condition. Similar damage did not occur when the driver-side mirror was operated. The passenger-side mirror is connected to the mirror control switch with longer cross-vehicle wiring. Under a short-circuit condition, the higher resistance of the longer wires may contribute to greater heat build-up in the mirror control switch circuit.

Revision to Switch: To close the three TIRs, Engineering Work Order CJ808 was implemented in October 1997 to reduce the width of the circuit board foil traces in the mirror control switch leading to B+ and to ground to enable a clean "burn-through" in the event of a high current draw caused by a short-circuit. This design change, which replaced switch p/n 15151364 with p/n 15009690, also added a new drawing specification: "The power mirror control switch's function will fail safe during exposure to 10 amperes or greater."

In the time period following the implementation of revised switch p/n 15009690, additional switch overheating conditions resulting in electrical fires were reported. Analysis of all documented incidents of mirror switch-related electrical fires reveals the following:

Incident vehicles built before change-making PCB traces thinner.....	65.1%
Incident vehicles built after change-making PCB traces thinner.....	29.2%
Incident vehicles with undetermined build date	05.7%

The analysis by GM Engineering and Cherry Electrical Products supports the potential of an ongoing circuit board anomaly after implementation of the design modification to reduce trace widths. Dimensional inspections by the circuit board supplier, BNI Ltd., showed significant variation in thickness of some of the reduced-size foil traces on PCBs arranged in a grid or "array" prior to separation during the manufacturing process. PCB traces around the outer edge of the array were susceptible to having larger cross-sectional areas than those near the center. Any PCB produced with a B+ trace thicker than specified could later potentially lead to a "non-fail safe" condition in the event of a wiring short circuit. To eliminate and/or compensate for unacceptable production variation, prototype testing was conducted on three proposals: 1) reduced plating thickness, 2) further reduced trace width, and 3) revised PCB manufacturing process to reduce the number of boards per array from 48 to 42. The results of this testing indicated that none of the proposed changes produced completely reliable "fail-safe" performance, especially at lower 6-10 ampere current levels. Rate of heat absorption by the circuit board over time was found to be a chief cause of switch-to-switch variation. Capability studies verified that no proposed design changes could be made to the circuit board itself that would guarantee absence of any thermal events. None of the three proposed changes were implemented. Proposals were then made to provide over-current protection for the switch itself, in the form of a fused jumper harness, a plug-in fuse adapter or a PTC (positive temperature coefficient) device. Since the number of incident reports appeared to have stabilized during that time period, none of these alternatives were quoted or released for production.

Frequency of Occurrence: The overall rate of incident occurrence across the entire population of vehicles affected is 2.01 reports per hundred thousand vehicles. The rates per hundred thousand vehicles for G/K, S/T and M/L vehicle lines are 1.80, 2.86 and 1.71 respectively.

The incident rate by year, model, and individual assembly plant is shown in the following table. It can be seen from this matrix that the incident rate for a specific year/model vehicle can be significantly different between plants producing that model. This supports the known fact that there is inherent variation in vehicle assembly conditions, worker skill levels and processes from plant to plant. Plant-to-plant differences in material handling and assembly tasks involving the

mirror switch and associated wiring may partially contribute to the existence of short circuit conditions in some vehicles but not others.

Incident Rate by Model, Year and Plant (Reports per 100,000)

	1995	1996	1997	1998	1999	2000	2001	2002	All Years
C/K-Flint									
Crew Cab P/U	0	0	0	0	0	0			0
Reg. Cab P/U			0	0	0	0			0
Ext. Cab P/U			0	0	0	0			0
C/K-Ft. Wayne									
Reg. Cab P/U	0	3.48	0	0					0.82
C/K-Janesville									
Utility	3.80	1.72	0	2.52	1.90				1.87
Suburban	2.42	4.52	0	8.29	0				2.22
C/K-Oshawa									
Ext. Cab P/U	0	1.06	1.16	6.11					2.33
C/K-Arlington									
Reg. Cab P/U					0	15.87			10.42
Ext. Cab P/U				1.45	0				0.88
Utility				0	0	0			0
C/K-Pontiac E.									
Reg. Cab P/U	0	0	0	0					0
Ext. Cab P/U	1.14	1.98	0.67	2.20					1.46
C/K-Sileo									
Utility	0	0	0	0	0				0
Suburban	0	1.82	7.08	12.88	0.52				2.97
S/T-Shreveport									
Reg. Cab P/U	0	0	0						0
Ext. Cab P/U	3.65	0	4.72						2.50
S/T-Moraine									
Utility	2.69	2.95	1.18						2.30
S/T-Linden									
Reg. Cab P/U	0	0	0						0
Ext. Cab P/U	0	10.1	0						4.12
Utility	4.71	4.97	5.81						5.14
M/L-Baltimore									
Van		3.78	0.88	5.15	1.03	0	0	0	1.71

Analysis of Representative Vehicles: Eight repurchased customer vehicles were given full teardown analyses by the Technical Integration Engineer (TIE) for electrical switches/components to determine specific causes for the high incident rates in certain model years. The mirror switches in two of these vehicles exhibited some signs of heat-related damage. A few sharp metal edges and "unfriendly" harness routings - mostly involving the longer cross-vehicle harness running to the passenger-side mirror - were discovered in all eight vehicles, but no visible or measurable short circuit conditions could be found in any of the wires in the IP harnesses in these vehicles.

Confirmed reports of electrical fires occurring in the driver's door have been documented in a total of 106 cases across the subject model/year population. There were 67 cases where the mirror control switch was specifically given as the fire's source. There were 36 cases where the source of the fire is described as the general area of the driver's door.

The condition was presented for discussion at the FPE Director's meeting on September 5, 2002. FPE direction was for the TIE to develop a complete understanding of the newly-discovered liquid intrusion phenomenon that was discussed at this meeting and its possible effects on the validity of the original field fix.

A complete review of additional findings by a "Red X" engineer relating to mirror-switch liquid intrusion was conducted with the FPE Director on November 8, 2002. Direction was given to develop a timetable for validation and implementation of the modified field fix. The TIE recommended utilizing 1.5 ampere fuses to minimize "nuisance blows" due to current transients, subject to agreement by the wiring TIE.

On December 6, 2002, a recommendation was adopted to downsize the fuses from 1.5 to 1.0 ampere.

The validation engineer convened a meeting on December 13, 2002 to review and agree on the harness validation plan and engineering samples of the production-intent harness design. Small revisions were made to the design before finalizing it. On January 7, 2003 a meeting chaired by the validation engineer convened to finalize the validation plan and determine which facilities would be used to perform the required testing.

Before validation testing could begin, the following tasks were performed during January 2003:

- Sufficient quantities of prototype jumper harnesses were hand-fabricated for use as test samples,
- New production mirror switches were procured from Service Parts Operations for test use,
- A representative vehicle driver's door was removed, shipped to the test site and fixtured for fatigue simulation testing,
- Two Advanced Reliability Methods Engineers were assigned to develop test parametrics for all tests in the validation plan,
- Contracts with three outside test facilities were negotiated and approved, and
- Test materials were shipped to the three test facilities.

Validation testing of the production-intent jumper harness design began February 3, 2003 with an expected completion date of March 13, 2003.

The Field Performance Evaluation Report was updated on February 27, 2003 with additional information about the field fix and validation plan.

On March 5, 2003 the Field Action Decision Committee made the decision to conduct a safety recall.

573.6(c)(8): This information is included in the service procedure of the attached draft dealer bulletin.

General Motors will provide reimbursement to owners for repairs completed on or before May 31, 2003, pursuant to the plan submitted on January 15, 2003.

573.6(c)(9): Draft copies of the dealer bulletin and the owner notification are attached. General Motors plans to begin this safety recall in April 2003. Final copies of the dealer bulletin and owner notification will be forwarded when available.

Sincerely,



Lyndon R. Lie
Director
Product Investigations

2087 - 03008
Attachments

573.5(c)(2),(3),(4)

VEHICLES POTENTIALLY AFFECTED BY MAKE, MODEL, AND MODEL YEAR
PLUS INCLUSIVE DATES OF MANUFACTURE

<u>MAKE</u>	<u>MODEL SERIES</u>	<u>MODEL YEAR</u>	<u>NUMBER INVOLVED</u>	<u>INCLUSIVE MANUFACTURING DATES (FROM) (TO)</u>		<u>DESCRIPTIVE INFO. TO PROPERLY IDENT. VEH.</u>	<u>EST. NO. W/CONDITION</u>
Chevrolet	S/T	1997	62,834	3/96	6/97	Blazer	* Unknown
Chevrolet	M/L	1998	61,360	4/97	9/98	Astro Van	"
Chevrolet	C/K	1997	52,815	5/96	8/97	Suburban	"
Chevrolet	C/K	1998	51,087	2/97	1/98	Suburban	"
Chevrolet	C/K	1998	166,487	5/97	5/98	Pickup	"
GMC	S/T	1997	6,984	3/96	6/97	Jimmy	"
GMC	M/L	1998	22,041	4/97	9/98	Safari	"
GMC	C/K	1997	20,312	5/96	8/97	Suburban	"
GMC	C/K	1998	23,659	2/97	1/98	Suburban	"
GMC	C/K	1998	49,482	5/97	5/98	Pickup	"
Grand Total:			507,171				

* All affected vehicles will be corrected.

2087 / 03006

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Recall Bulletin

File In Section: Product Recalls
Bulletin No.: B-12-02-05
Date:
Draft: Final



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PRODUCT SAFETY RECALL

SUBJECT: 020## – ELECTRIC OUTSIDE REARVIEW MIRROR SWITCH SHORT CIRCUIT

**MODELS: 1997 CHEVROLET BLAZER, SUBURBAN
1998 CHEVROLET C/K EXT. CAB PICKUP, ASTRO VAN, SUBURBAN
1997 GMC JIMMY, SUBURBAN
1998 GMC SIERRA EXT. CAB PICKUP, SAFARI VAN, SUBURBAN
EQUIPPED WITH ELECTRIC OUTSIDE REARVIEW MIRRORS**

DRAFT

**A FINAL VERSION OF THIS DRAFT WILL BE USED
IF THERE IS A DECISION TO RECALL**

CONDITION

General Motors has decided that a defect which relates to motor vehicle safety exists in certain 1997 Chevrolet Blazer and Suburban; GMC Jimmy and Suburban; 1998 Chevrolet C/K Extended Cab Pickup, Astro Van, and Suburban; and GMC Sierra Extended Cab Pickup, Safari Van, and Suburban vehicles equipped with electric outside rearview mirrors. Under certain conditions, some of these vehicles may develop a short circuit in the electric outside rearview mirror switch. If this were to happen, it could result in an inoperative switch, heat damage to the driver's door, and/or ignition of components in the driver's door and a subsequent vehicle fire without prior warning.

CORRECTION

Dealers are to install a fused jumper harness to the electric outside rearview mirror switch.

VEHICLES INVOLVED

Involved are certain 1997 Chevrolet Blazer and Suburban; GMC Jimmy and Suburban; 1998 Chevrolet C/K Extended Cab Pickup, Astro Van, and Suburban; and GMC Sierra Extended Cab Pickup, Safari Van, and Suburban equipped with electric outside rearview mirrors and built within these VIN breakpoints:

YEAR	DIVISION	MODEL	FROM	THROUGH
1997	Chevrolet	Blazer	VK100001	VK250286
1997	Chevrolet	Suburban	VG100001	VG195563
1998	Chevrolet	Suburban	WG100020	WG151246
			WJ300002	WJ379768
1998	Chevrolet	C/K Pickup	W1100001	W1282148
1998	Chevrolet	Astro	WB100001	WB214161
1997	GMC	Jimmy	VK500001	VK522300
1997	GMC	Suburban	VG500002	VG528445
1998	GMC	Suburban	WG500006	WG516118
			WJ700004	WJ736620
1998	GMC	Sierra	W1500001	W1563342
1998	GMC	Safari	WB500001	WB543258

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IMPORTANT: Dealers should confirm vehicle eligibility through **GMVIS** (GM Vehicle Inquiry System) or **GM Access Screen** (Canada only) or **DCS Screen 445** (IPC only) before beginning recall repairs. [Not all vehicles within the above breakpoints may be involved.]

Involved vehicles have been identified by Vehicle Identification Number. Computer listings containing the complete Vehicle Identification Number, customer name and address data have been prepared, and are being furnished to involved dealers with the recall bulletin. The customer name and address data will enable dealers to follow up with customers involved in this recall. Any dealer not receiving a computer listing with the recall bulletin has no involved vehicles currently assigned.

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

PARTS INFORMATION

Parts Pre-Ship Information – For US and Canada

Important: An initial supply of parts required to complete this program will be pre-shipped to involved dealers of record. This pre-shipment is scheduled to begin the week of _____ ##, 200#. Pre-shipped parts will be charged to dealer's open parts account.

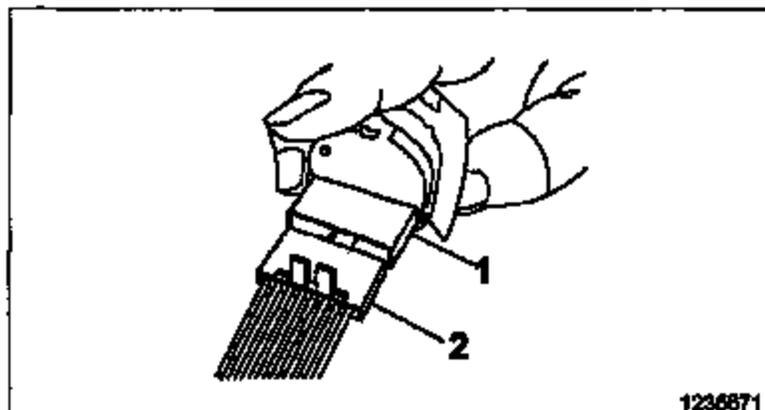
Additional parts, if required, are to be obtained from General Motors Service Parts Operations (GMSPO). Please refer to your "involved vehicles listing" before ordering parts. Normal orders should be placed on a DRO = Daily Replenishment Order. In an emergency situation, parts should be ordered on a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

Part Number	Description	Quantity/Vehicle
15104166	Harness Kit, O/S RR View Mir Body Wrg	1

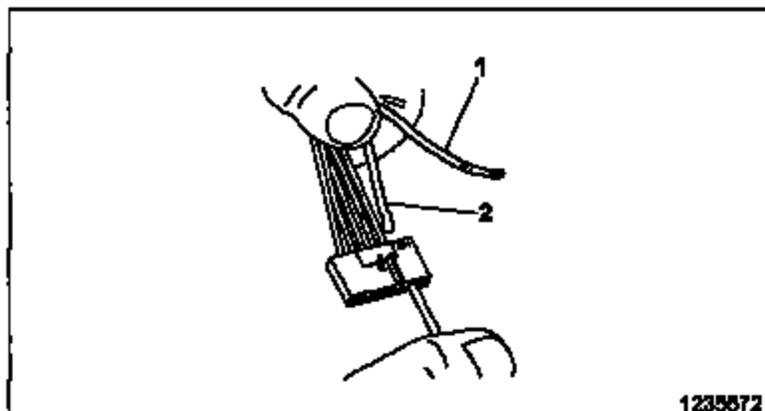
SERVICE PROCEDURE

The following procedure provides instructions for installing an in-line fuse wiring harness at the exterior power mirror switch located in the left front (driver's) door.

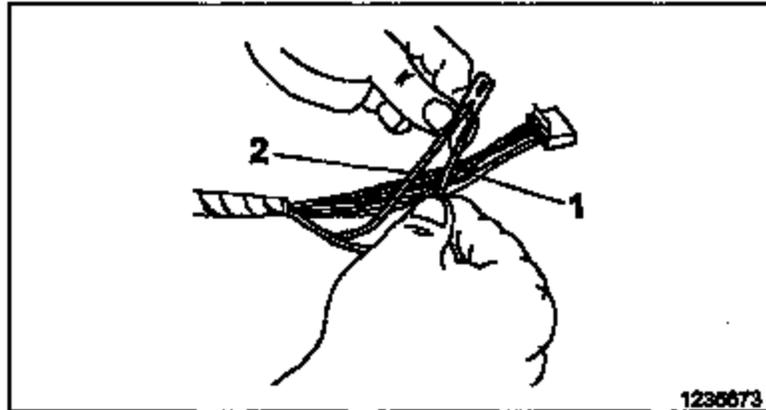
1. Open the driver's door and verify that the exterior power mirrors function properly.
2. If either or both mirrors do not function properly, see the appropriate service manual for diagnosis and repair BEFORE proceeding. Parts and labor for performing repairs to the power mirrors are the responsibility of the vehicle owner and are NOT covered by this recall.
3. Remove the panel (bezel) that holds the power mirror switch. See the Door Subsection in the Body and Accessories Section of the appropriate service manual if additional information is needed.
 - On C/K and S/T model vehicles, using a flat-bladed tool, carefully pry the bezel up from the door trim panel.
 - On M/L model vehicles, carefully remove the screw covers on the assist handle. Remove the assist handle screws and the screw attaching the front corner of the bezel to the door trim panel. Carefully pull the bezel away from the door trim panel.



4. Disconnect the electrical connector (2) from the power mirror switch (1).



- Using GM12094429 (electrical terminal release tool) contained in J-38125-B (Terminal Repair Kit), remove the terminal and BROWN wire from cavity "G" (2) and the terminal and ORANGE wire from cavity "H" (1) of the harness electrical connector. The letters "G" and "H" can be found on the harness connector.

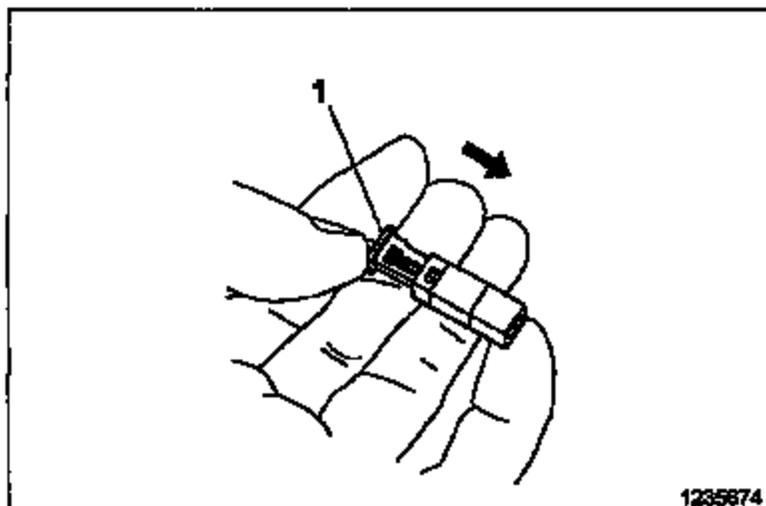


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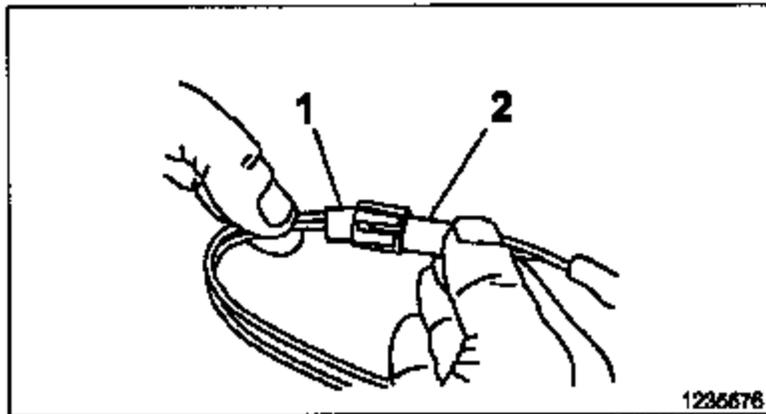
Important

The two wires must be installed in the correct cavities of the new connector in the next step. The cavities can be identified by a small letter (A & B) located at the end of the connector where the terminals are to be inserted.

- Take the two wires and terminals removed from the harness electrical connector and insert them in the two cavity loose connector provided in the recall kit.
 - Insert the BROWN wire (1) in cavity "B".
 - Insert the ORANGE wire (2) in cavity "A".
- Verify that both terminals are locked in the connector by LIGHTLY pulling on the wire.

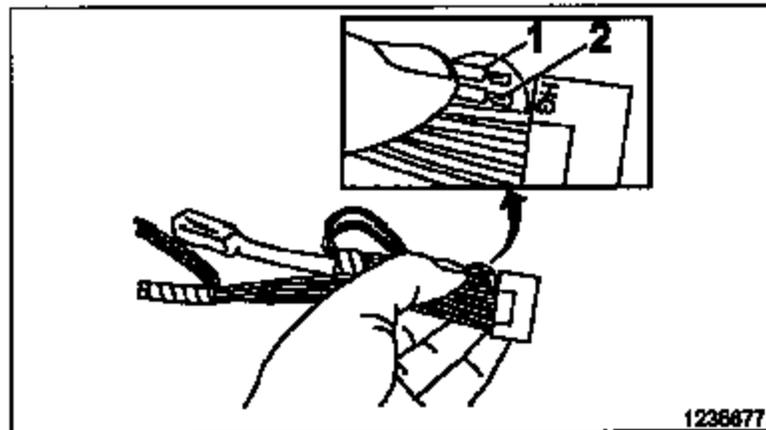


- Insert the gray terminal position assurance (1) included in the recall kit into the end of the connector where the two wires stick out. When properly installed a "click" type sound will be heard.



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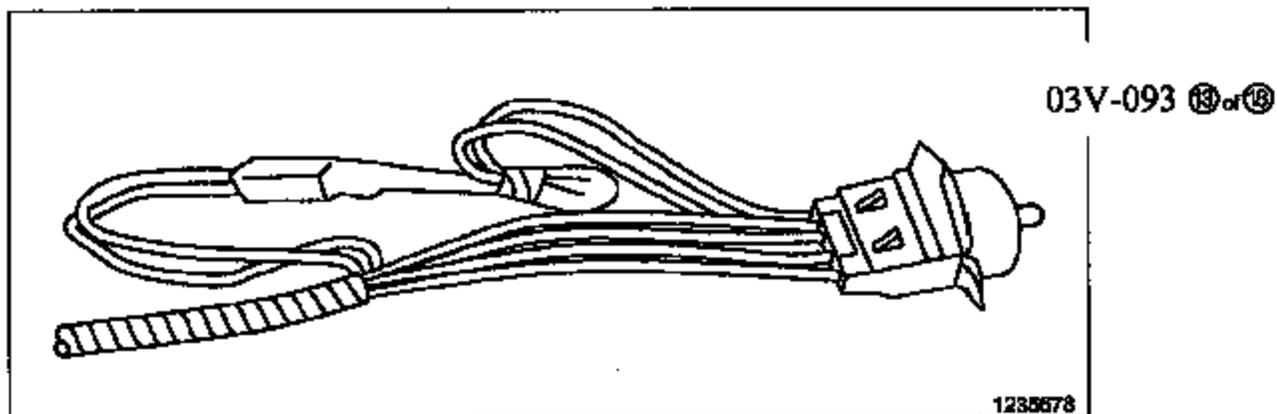
9. Take the new two-cavity connector (1) that you just installed the two wires into, and plug it into the two-cavity connector (2) on the fused wiring harness included in the recall kit. When properly installed a "click" type sound will be heard.



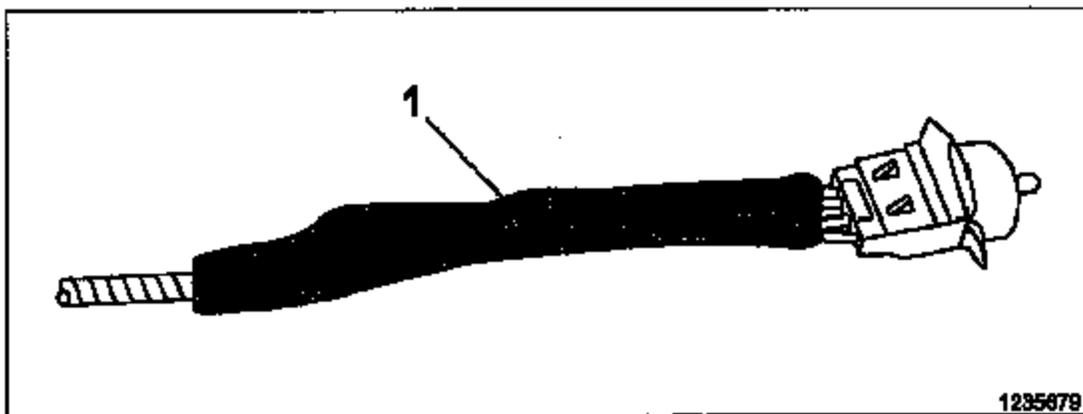
Important

The two wires must be installed in the correct cavities of the connector in the next step. The cavities can be identified by a small letter (G & H) located on the connector.

10. Take the two wires and terminals located on the other end of the fused wiring harness and insert them in the two cavities in the electrical connector that was disconnected from the power mirror switch.
- Insert the BROWN wire and terminal (2) into cavity "G".
 - Insert the ORANGE wire and terminal (1) into cavity "H".
11. Verify that both terminals are locked in the connector by LIGHTLY pulling on the two wires.



12. Connect the harness connector to the power mirror switch. When connected, the completed assembly should appear as shown.
13. Verify that the power mirrors operate correctly.



14. To prevent rattles, wrap the fused wiring harness as shown with the foam tape (1) included in the recall kit.
15. Reinstall the bezel in the door trim panel.
 - On M/L vans, tighten the screw to 5 Nm (44 lb in).
16. Install the GM Recall Identification Label.

RECALL IDENTIFICATION LABEL – For US and IPC

Place a Recall Identification Label on each vehicle corrected in accordance with the instructions outlined in this Product Recall Bulletin. Each label provides a space to include the recall number and the five (5) digit dealer code of the dealer performing the recall service. This information may be inserted with a typewriter or a ball point pen.

Put the Recall Identification Label on a clean and dry surface of the radiator core support in an area that will be visible to people servicing the vehicle. When installing the Recall Identification Label, be sure to pull the tab to allow adhesion of the clear protective covering. Additional Recall Identification Labels for US dealers can be obtained from Dealer Support Materials by either ordering on the web from DWD Store, gm-dealerworld.com, or calling 1-866-700-0001 (Monday-Friday, 8:00 a.m. to 5:00 p.m. EST). Request Item Number S-1015 when ordering.



Additional Recall Identification Labels for IPC dealers can be obtained from your Regional Marketing Office.

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RECALL IDENTIFICATION LABEL – For CANADA

Place a Recall Identification Label on each vehicle corrected in accordance with the instructions outlined in this Product Recall Bulletin. Each label provides a space to include the recall number and the five (5) digit dealer code of the dealer performing the recall service. This information may be inserted with a typewriter or a ball point pen.

Put the Recall Identification Label on a clean and dry surface of the radiator core support in an area that will be visible to people servicing the vehicle. Additional Recall Identification Labels for Canadian dealers can be obtained from DGN by calling 1-800-666-5539 (Monday-Friday, 8:00 a.m. to 5:00 p.m. EST). Ask for Item Number GMP 91 when ordering.



CUSTOMER REIMBURSEMENT - For US

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 Product Recall Customer Reimbursement Procedure Form is included with the customer letter.

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

CUSTOMER REIMBURSEMENT - For Canada

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Customer requests for reimbursement of previously paid repairs to correct a short circuit in the electric outside rearview mirror switch are to be submitted by _____ ##, 200#.

All reasonable customer paid receipts should be considered for reimbursement. The amount to be reimbursed will be limited to the amount the repair would have cost if completed by an authorized General Motors dealer.

When a customer requests reimbursement, they must provide the following:

- Proof of ownership at time of repair.
- Original paid receipt confirming the amount of unreimbursed repair expense(s), a description of the repair, and the person or entity performing the repair.

Claims for customer reimbursement on previously paid repairs are to be submitted as required by WINS.

IMPORTANT: Refer to the GM Service Policies and Procedures Manual, section 1.6.2, for specific procedures regarding customer reimbursement verification.

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
Install Fused Jumper Wire ▪ S/T, C/K ▪ ML	1	—	**	MA-96	V—	0.2 0.3	N/A
Courtesy Transportation	N/A	N/A	N/A	MA-96	***	N/A	****
Customer Reimbursement (Canadian Dealers ONLY)	N/A	N/A	N/A	MA-96	V—	0.2	*****

- * For Program Administrative Allowance, add 0.1 hours to the "Labor Hours".
- ** The "Parts Allowance" should be the sum total of the current GMSPD Dealer net price plus applicable Mark-Up or Landed Cost Mark-Up (for IPC) for the harness kit needed to complete the repair.
- *** Submit courtesy transportation using normal labor operations for courtesy transportation as indicated in the GM Service Policies and Procedures Manual.
- **** The amount identified in the "Net Item" column should represent the actual dollar amount for courtesy transportation.
- ***** 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 – For US and CANADA

Customers will be notified of this recall on their vehicles by General Motors (see copy of customer letter included with this bulletin)

CUSTOMER NOTIFICATION – For IPC

Letters will be sent to known owners of record located within areas covered by the US National Traffic and Motor Vehicle Safety Act. For owners outside these areas, dealers should notify customers using the attached sample letter.

DEALER RECALL RESPONSIBILITY – For US and IPC (US States, Territories, and Possessions)

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.

DEALER RECALL RESPONSIBILITY - ALL

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. This could be done by mailing to such customers, a copy of the customer letter accompanying this bulletin. 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.



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 1997 model year Chevrolet Blazer and Suburban; GMC Jimmy and Suburban; 1998 model year Chevrolet C/K Extended Cab Pickup, Astro Van, and Suburban; and GMC Sierra Extended Cab Pickup, Safari Van, and Suburban vehicles equipped with electric outside rearview mirrors. Under certain conditions, some of these vehicles may develop a short circuit in the electric outside rearview mirror switch. If this were to happen, it could result in an inoperative switch, heat damage to the driver's door, and/or ignition of components in the driver's door and a subsequent vehicle fire without prior warning.

What Will Be Done: Your GM dealer will install a fused jumper harness to the electric outside rearview mirror switch. This service will be performed for you at no charge.

How Long Will The Repair Take? The length of time required to perform this service correction is approximately 20 minutes. Additional time may be required to schedule and process your vehicle. If your dealer has a large number of vehicles awaiting service, this additional time may be significant. Please ask your dealer if you wish to know how much additional time will be needed to schedule, process and repair your vehicle.

Contacting Your Dealer: Please contact your GM dealer as soon as possible to arrange a service date. Parts are available and instructions for making this correction have been sent to your dealer. Your GM dealer is best equipped to obtain parts and provide services to correct your vehicle as promptly as possible. 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:

Division	Number	Deaf, Hearing Impaired or Speech Impaired *
Chevrolet	1-800-222-1020	1-800-833-2438
GMC	1-800-482-8782	1-800-462-8583
Puerto Rico – English	1-800-496-9992	
Puerto Rico – Español	1-800-496-9993	
Virgin Islands	1-800-496-9994	

* Utilizes Telecommunication Devices for the Deaf/Text Telephones (TDD/TTY)

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 20590 or call 1-888-327-4236.

Customer Reply Card: The attached customer reply card identifies your vehicle. Presentation of this card 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 attached and mailing it in the postage paid envelope.

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

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