



GENERAL MOTORS NORTH AMERICA
Structure & Safety Integration

December 15, 2004

NHTSA
20590
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Thomas Z. Cooper, Chief
Vehicle Integrity Division
Office of Defects Investigation
NHTSA Safety Assurance
Room #5326
400 Seventh Street, S.W.
Washington, D.C. 20590

CHIEF
COUNSEL
GM-687

NVS-212mj
PE04-072

Dear Mr. Cooper:

This letter is General Motors' (GM) response to your information request (IR), dated October 29, 2004, regarding alleged failure or malfunction of the brake lamp and/or hazard lamp in MY 2001 Chevrolet Astro and GMC Safari vehicles, and all other model year Astro and Safari vehicles equipped with multifunction switches (subject components) identical in design to those in MY 2001 Astro and Safari vehicles.

GM has determined that MY 2001 Astro and Safari vehicles were produced with a multifunction switch that is different than previous and subsequent model years. Therefore, the subject vehicles for this inquiry are MY 2001 vehicles only.

Per our telephone conversation on November 4, 2004, the turn signal lamp is not part of this investigation.

Your questions and our corresponding replies are as follows:

1. State, by model and model year, the number of subject vehicles GM has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by GM, state the following:
 - a. Vehicle identification number (VIN);
 - b. Make;
 - c. Model;
 - d. Model Year;
 - e. Date of manufacture;
 - f. Date warranty coverage commenced; and
 - g. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

Provide the table in Microsoft Access 2000, or a compatible format, entitled "PRODUCTION DATA."

The number of subject vehicles GM has manufactured for sale or lease in the United States is shown in Table 1. An electronic summary of the production data is provided on the CD identified as Attachment 1; refer to the Microsoft Access 2000 file in the folder labeled "Response for Q1 - PRODUCTION DATA."



VEHICLE	2001MY
Chevrolet Astro	51,053
GMC Safari	17,962
Total	69,015

TABLE 1: U.S. VEHICLE PRODUCTION SUMMARY

This data was collected from the GM Claims Analysis Retrieval Database (CARD) on November 9, 2004.

2. State the number of each of the following, received by GM, or of which GM is otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles:
- Consumer complaints, including those from fleet operators;
 - Field reports, including dealer field reports;
 - Reports involving a crash, injury, or fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;
 - Property damage claims;
 - Third-party arbitration proceedings where GM is or was a party to the arbitration; and
 - Lawsuits, both pending and closed, in which GM is or was a defendant or codefendant.

For subparts "a" through "f," state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report and a consumer complaint).

In addition, for items "c" through "f," provide a summary description of the alleged problem and causal and contributing factors and GM's assessment of the problem, with a summary of the significant underlying facts and evidence. For items "e" and "f," identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

Table 2-1 below summarizes records for the subject vehicles that could relate to the subject condition.

TYPE OF REPORT	COUNT (INCLUDING DUPLICATES)	GM REPORTS	GM REPORTS CORRESPONDING TO NHTSA REPORTS	LOCATION OF REPORTS (ATTACHMENT)	NUMBER WITH PROPERTY DAMAGE	NUMBER WITH CRASH	NUMBER WITH INJURIES/FATALITIES	NUMBER WITH FIRE
Owner Reports	42	40	2	Folder labeled "Response to Q3" in field label 2A	0	0	0	0
Field Reports & Technical Assistance System Reports	6	6	0	Folder labeled "Response to Q3" in field label 2B	0	0	0	0
Not-In-Suit Claims	0	0	0	N/A	0	0	0	0
Subrogation Claims	0	0	0	N/A	0	0	0	0
Third Party Arbitration Proceedings	0	0	0	N/A	0	0	0	0
Product Liability Lawsuits	0	0	0	N/A	0	0	0	0
Total (Including Duplicates)	48	46	2	N/A	0	0	0	0
Total (Excluding Duplicates)	48	46	2	N/A	0	0	0	0

TABLE 2-1: REPORT BREAKDOWN

N/A Not Applicable

The sources of the requested information and the last date the searches were conducted are tabulated in Table 2-2 below.

SOURCE SYSTEM	LAST DATE GATHERED
Corporate Central File	11/11/2004
Customer Assistance Center	11/09/2004
Technical Assistance Center	11/08/2004
Early Quality Feedback (EQF)	11/09/2004
Field Information Network Database (FIND)	11/11/2004
Field Product Report Database (FPRD)	11/11/2004
Company Vehicle Evaluation Program (CVEP)	11/04/2004
Captured Test Fleet (CTF)	11/04/2004
Legal / Employee Self Insured Services (ESIS)	11/16/2004

TABLE 2-2: DATA SOURCES

3. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:
- GM's file number or other identifier used;
 - The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);
 - Vehicle owner or fleet name (and fleet contact person), address, and telephone number;
 - Vehicle's VIN;
 - Vehicle's make, model and model year;
 - Vehicle's mileage at time of incident;
 - Incident date;
 - Report or claim date;
 - Whether a crash is alleged;
 - Whether a fire is alleged;
 - Whether property damage is alleged;
 - Number of alleged injuries, if any; and
 - Number of alleged fatalities, if any.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

An electronic summary of the 48 reports included in response to question 2 is provided on the CD identified as Attachment 1 CD; refer to the Microsoft Access 2000 file in the folder labeled "Response to Q3 - REQUEST NUMBER TWO DATA." GM has organized this summary by GM file number within each attachment.

4. Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method GM used for organizing the documents.

Copies of the 48 reports identified in response to question 2 are provided on the Attachment 1 CD; refer to the folder labeled "Response to Q3 - REQUEST NUMBER TWO DATA." GM has organized the reports by the GM file number within each attachment.

5. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by GM to date that relate to, or may relate to, the alleged defect in the subject vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

Separately, for each such claim, state the following information:

- a. GM's claim number;
- b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
- c. VIN;
- d. Repair date;
- e. Vehicle mileage at time of repair;
- f. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
- g. Labor operation number;
- h. Problem code;
- i. Replacement part number(s) and description(s);
- j. Concern stated by customer; and
- k. Comment, if any, by dealer/technician relating to claim and/or repair.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "WARRANTY DATA."

For the subject vehicles, the 3,388 regular warranty claims and 474 extended warranty claims are summarized by model and model year in Tables 5-1 and 5-2. A summary of these warranty claims is provided on the Attachment 1 CD; refer to the folder labeled "Response to Q6."

Model	2001MY
Chevrolet Astro	2,500
GMC Safari	888
TOTAL	3,388

TABLE 5-1: REGULAR WARRANTY CLAIMS

MODEL	2001MY
Chevrolet Astro	333
GMC Safari	141
TOTAL	474

TABLE 5-2: EXTENDED WARRANTY CLAIMS

GM searched the GM North America Claim Adjustment Retrieval Database (CARD-regular warranty), the Motors Insurance Corporation (MIC-extended warranty), and the Universal Warranty Corporation (UWC-extended warranty) databases to collect the warranty data for this response. The warranty data was last gathered on November 29, 2004.

GM's warranty database does not contain the vehicle owner's name or telephone number. Some of the replacement part numbers; part descriptions and customer concern code descriptions are not included in the GM warranty database. GM is providing a field labeled "Verbatim Text" in response to request 5k (dealer/technician comment). The verbatim text is

an optional field in the GM warranty system for the dealer to enter any additional comments that may be applicable to the warranty claim. The verbatim text field is not required to be completed for every warranty claim.

The MIC extended warranty system does not contain the following information: repairing dealer code, vehicle owner information, trouble code, trouble code description, part number, part description or verbatim text. The UWC extended warranty system does not use the GM labor code or labor code description, and it does not contain the repairing dealer code, trouble code or trouble code description.

The warranty data provided has limited analytical value in analyzing the field performance of a motor vehicle component. The warranty records do not contain sufficient information to establish the condition of the part at the time of the warranty correction; and service personnel may not consistently use the appropriate labor and trouble codes. Warranty numbers represent claims by our dealers for reimbursement for parts and labor costs incurred in performing warranty service for our customers.

6. Describe in detail the search criteria used by GM to identify the claims identified in response to Request No. 5, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by GM on the subject vehicles (i.e., the number of months and mileage for which coverage is provided and the vehicle systems that are covered). Describe any extended warranty coverage option(s) that GM offered for the subject vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

The regular warranty data was collected from the GM CARD database by searching for the labor operation codes listed in Table 6-1 and trouble codes listed in Table 6-2.

LABOR CODE	DESCRIPTION
N1750	Flasher, Hazard warning - Replace
N1755	Flasher, Hazard/turn signal - Replace
N2365	Switch, Multifunction - Replace
N2530	Switch, Turn signal & hazard warning - Replace

TABLE 6-1: LABOR CODES USED IN CARD & MIC SEARCH

TROUBLE CODE	TROUBLE DESCRIPTION
1D	Broken
1E	Burned
3F	Not Connected
6C	Component-Inoperative
6D	Component-Intermittent
6F	Component-Open
6G	Component-Shorted
7D	Wire-Shorted to ground
7L	Wire-Cut/Broken/Open

TABLE 6-2: REGULAR WARRANTY TROUBLE CODES

The MIC extended warranty data was also collected by searching for the labor codes listed in Table 6-1. The UWC extended warranty data was collected by searching for the labor codes in Table 6-3.

LABOR CODE	DESCRIPTION
12098	Enhanced Electrical - MiscBmpr2Bmpr
13098	Int/Ext Appointment - MiscBmpr2Bmpr

TABLE 6-3: LABOR CODES USED IN UWC SEARCH

The subject vehicles are covered by a bumper-to-bumper new vehicle warranty for three years or 36,000 miles, whichever occurs first. Many different extended warranty options are available through GM dealerships. They are offered at different prices and for varying lengths of time, based on customers' preference, up to 7 years from the date of purchase or up to a total of 100,000 vehicle miles. The General Motors warranty system does not contain information on the number of vehicles that have extended warranty coverage.

7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that GM has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications, with the exception of standard shop manuals. Also include the latest draft copy of any communication that GM is planning to issue within the next 120 days.

No bulletins were issued by GM that relate to, or may be related to the alleged defect in the subject vehicles. GM has no plans to issue any communication related to the alleged defect in the next 120 days. The data was last gathered on November 9, 2004.

8. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, GM. For each such action, provide the following information:
 - a. Action title or identifier;
 - b. The actual or planned start date;
 - c. The actual or expected end date;
 - d. Brief summary of the subject and objective of the action;
 - e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
 - f. A brief summary of the findings and/or conclusions resulting from the action.

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action. If an action is not complete, provide a detailed schedule for the work to be done, tentative findings and/or conclusions, and provide an update within 10 days of completion of the action.

Documents and information related to multifunction switch thermal and brake tests are provided below. Copies of documents related to the action are provided on the Attachment 1 CD; refer to the folder labeled "Response to Q8." Delphi Automotive provided the following information at GM's request. Delphi is submitting documents related to the action, and request confidential

treatment for the documents attached on Attachment 2 CD, Delphi Confidential; refer to the folder labeled "Response to Q8 Delphi Confidential."

<p>Action A: Hazard switch and turn signal switch thermal validation tests with Syn-tech grease Start Date: March 15, 2000 End Date: May 9, 2000 Engineering Group: GM Engineering, Delphi Engineering, Valeo Engineering Objective: Validate hazard switch and turn signal switch through durability test with and without thermal cycles Summary of Action: Validated the Syn-tech grease application on the hazard and turn-signal switches.</p>
<p>Action B: Hazard switch thermal validation test with copper contact Start Date: February 27, 2001 End Date: April 2, 2001 Engineering Group: GM Engineering, Delphi Engineering, Valeo Engineering Objective: Validate hazard switch and turn signal switch through durability test with thermal cycles Summary of Action: Validated the copper contact application on the hazard switch.</p>

The data was last gathered on December 6, 2004.

9. Furnish a detailed technical description and explanation as to any similarities and/or differences in the design and/or failure modes of the subject components in the subject vehicles and certain MY 2000-2002 GM sport utility vehicles which were the subject of a safety recall in 2001 (GM Recall No. 01073 and NHTSA Recall No. 01V-364) to remedy defective multifunction switches.

The functional differences are described below and the photos that help to illustrate the differences are provided on the Attachment 1 CD; refer to the folder labeled "Response to Q8." Delphi Automotive provided this report at GM's request.

A) Brake	The subject vehicles have one brake bulb per side and the S/T utility vehicles have two brake-bulbs per side, resulting in 50% less electrical current flow through the multifunction switch in the subject vehicles for the brake operation.
B) Hazard (figure B&D)	The module shroud assembly that contains the modules for the wash/wash and beam-change functions has different design than the S/T multifunction switch. The subject vehicle has three hazard bulbs and the S/T utility vehicle has three hazard bulbs per side. Therefore the electrical current flow through the multifunction switch is the same.
C) Turn Signal (figure C)	The lever assembly mechanization, including pin-outs, graphics, & driver inputs for the cruise control operation is different.
D) Beam Change (figure B&D)	The module shroud housing assembly that contains the module for the beam-change function has different design than the S/T multifunction switch.
E) Wash/ Wipe (figure E)	The lever assembly design is different. The subject vehicle used 3-wire system and the S/T utility vehicle used 5-wire system for the wash / wipe function.
F) Cruise controls (Figure F)	The assembly housing, slider, button, PC board, and contactor are mechanized differently.
G) Harnesses (figure G)	The subject vehicles use heavier gage wires (2.0 mm ²) and the S/T utility vehicle used 1.0 mm ² gage wires in the steering column assembly for certain hazard and turn signal functions. Compared to S/T utility vehicles, the heavier gage wires yield up to 100% more efficiency in dissipating the heat and up to 50% less of the electrical resistance. The subject vehicle harness is nominally 45 mm longer than the S/T utility vehicle.

In addition to these design and functional differences, the subject vehicles and the S/T utility vehicles had different steering column architectures and part numbers.

Although the failure mode of the hazard switch in both vehicles is similar, the failure rates of both vehicles are significantly different due to differences in number of bulbs and wire gage sizes.

10. Describe all modifications or changes made by, or on behalf of, GM in the design, material composition, manufacture, quality control, supply, or installation of the subject components, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject vehicles. For each such modification or change, provide the following information:
- a. The date or approximate date on which the modification or change was incorporated into vehicle production;
 - b. A detailed description of the modification or change;
 - c. The reason(s) for the modification or change;
 - d. The part numbers (service and engineering) of the original component;
 - e. The part number (service and engineering) of the modified component;
 - f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
 - g. When the modified component was made available as a service component; and
 - h. Whether the modified component can be interchanged with earlier production components.

Also, provide the above information for any modification or change that GM is aware of which may be incorporated into vehicle production within the next 120 days.

The folder labeled "Responsive to Q10" on the Attachment 1 CD contains a chart describing the changes and modifications on the multifunction switch in the subject vehicles, and components that relate or could relate to the alleged defect. Delphi Automotive provided this information at GM's request.

General Motors is not aware of any modifications or changes that may be incorporated into vehicle production within the next 120 days. The data was last gathered on December 1, 2004.

11. Produce two of each of the following:
- a. Exemplar samples of each design version of the subject components;
 - b. Field return samples of the subject components exhibiting the subject failure mode; and
 - c. Any kits that have been released, or developed, by GM for use in service repairs to the subject component/assembly which relate, or may relate, to the alleged defect in the subject vehicles.
- a. GM is providing two samples of the current service multifunction switch assembly. Prior design versions were removed from service. The multifunction switches were released with and without the cruise control function. Since the multifunction switch with the cruise

control function comprehends the function without the cruise control, GM is providing only the samples with the cruise control function.

- b. GM is providing one sample of a field returned multifunction switch that exhibits the subject condition.
- c. No kits have been released or developed for the alleged defect on the subject vehicles.

The data was last gathered on November 28, 2004.

12. State the number of each of the following that GM has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale (including the cut-off date for sales, if applicable):

- a. Multifunction switch;
- b. Any other component replaced under warranty by GM to address the alleged defect in the subject vehicles; and
- c. Any kits that have been released, or developed, by GM for use in service repairs to the subject component/assembly which relate, or may relate, to the alleged defect in the subject vehicles.

For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number). Also identify by make, model and model year, any other vehicles of which GM is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

An electronic summary table of the requested service part information for the subject component is provided on the Attachment 1 CD; refer to the folder labeled "Response to Q12." GM does not offer any kits that have been released or developed for use in service repairs specifically related to the subject condition. The data was last gathered on November 10, 2004.

These sales numbers represent sales to dealers in the US and Canada. This data has limited analytical value in analyzing the field performance of a motor vehicle component because the records do not contain sufficient information to establish the reason for the part sale. It is not possible from this data to determine the number of these parts that have been installed in the subject vehicles or the number remaining in dealer or replacement part supplier inventory.

This table contains service part numbers, part description, part usage information including the GM vehicles that contain the identical component, part sales figures by month and calendar year and the supplier's name and address, contact name and phone number. The General Motors Service Parts System does not contain a title of a contact person for each component and is therefore unable to provide this information.

13. Furnish GM's assessment of the alleged defect in the subject vehicles, including:

- a. The causal or contributory factor(s);
- b. The failure mechanism(s);
- c. The failure mode(s);
- d. The risk to motor vehicle safety that it poses;

- e. What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning; and
- f. The reports included with this inquiry.

The bottom contact material of the hazard switch was changed from copper to brass in September 1999, as a visual (color) manufacturing error proofing measure. The grease in the hazard switch was changed on August 30, 2000 to have a common lubricant within the multifunction switch assembly.

The combined effects of the changes resulted in increased resistance in the hazard switch. The brass contactor generates more resistance during electrical load than a copper contactor due to the difference in the electrical conductivity. Increased electrical resistance in the hazard switch may cause the brass contactor to stick in a position that does not allow one or more of the three dimples to contact the mating grid within the hazard-switch contactor carrier. The result is an open circuit condition in the stop lamp or hazard lamp circuit.

If the vehicle brakes are applied in a vehicle with a failed hazard switch, the two brake lamps in the rear of the vehicle would not illuminate, but the Center High Mount Stop Lamp (CHMSL) lamp would illuminate. No warnings would be shown for the brake lamp outage. If the hazard switch failed during switch activation, the two hazard lamps in the front and the two brake lamps in the rear of the vehicle would not illuminate. However, all 4 turn signal lamps would function properly and all other interior and exterior lamps would function properly. Hazard switch actuation may require high effort to push it down or it may stick in a fixed position.

Unlike the S/T utility vehicles, the subject vehicles have one brake lamp bulb rather than two brake lamp bulbs per side, resulting in 50% less electrical current flow through the multifunction switch in the subject vehicles for brake operation. The subject vehicles use heavier gage wires (2.0 mm²) and the S/T utility vehicle used 1.0 mm² gage wires in the steering column assembly for certain hazard and turn signal functions. Compared to S/T utility vehicles, the heavier gage wires yield up to 100% more efficiency in dissipating the heat and up to 50% less of the electrical resistance.

Consumer complaints, field reports, and warranty claims for the subject vehicles are significantly lower than S/T utility vehicles due to the differences of the multifunction switch design, assembly and vehicle electrical architecture. The S/T utility warranty rate for 9-month exposure was 214.3 IPTV compare to the subject vehicle warranty rate of 2.3 IPTV.

Six of the nine VOQs matched the description of the alleged defect.

GM is continuing its investigation.

* * *

GM claims that certain information, in documents that are part of lawsuit and claims files maintained by the GM Legal Staff, is attorney work product and/or privileged. That information includes notes, memos, reports, photographs, and evaluations by attorneys (and by consultants,

claims analysts, investigators, and engineers working at the request of attorneys). GM is producing responsive documents from claims files that are neither attorney work product nor privileged and withholding those that are attorney work product and/or privileged.

This response is based on searches of General Motors Corporation (GM) locations where documents determined to be responsive to your request would ordinarily be found. As a result, the scope of this search did not include, nor could it reasonably include, "all of their divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of GM (including all business units and persons previously referred to), who are or, in or after 2000, were involved in any way with any of the following related to the alleged defect in the subject vehicles:

- a. Design, engineering, analysis, modification or production (e.g. quality control);
- b. Testing, assessment or evaluation;
- c. Consideration, or recognition of potential or actual defects, reporting, record-keeping and information management, (e.g., complaints, field reports, warranty information, part sales), analysis, claims, or lawsuits; or
- d. Communication to, from or intended for zone representatives, fleets, dealers, or other field locations, including but not limited to people who have the capacity to obtain information from dealers."

This response was compiled and prepared by this office upon review of the documents produced by various GM locations, and does not include documents generated or received at those GM locations subsequent to their searches.

Please contact me if you require further information about this response or the nature or scope of our searches.

Sincerely,



Gay P. Kent
Director

Product Investigations

Attachments



U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

GM-667
Sim Washell

400 Seventh Street, S.W.
Washington, D.C. 20590

Original 2/10/04

OCT 29 2004

*Received
11-8-04*

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Gay P. Kent, Director
Product Investigations
Structure and Safety Integration
General Motors Corporation
Mail Code: 480-111-E18
30200 Mound Road
Warren, MI 48090-9010

NVS-212mj1
PE04-072

Dear Ms. Kent:

This letter is to inform you that the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) has opened a Preliminary Evaluation (PE04-072) to investigate allegations of brake lamp failure in model year (MY) 2001 Chevrolet Astro and GMC Safari vehicles manufactured by General Motors Corporation, and to request certain information.

This office has received nine reports of alleged loss of brake lamp, hazard lamp, and/or turn signal lamp illumination on MY 2001 Chevrolet Astro and GMC Safari vehicles. The most common problem reported was loss of brake lamp illumination. Several reports stated that the cause of the problem was failure of the multifunction switch. A copy of each of the reports is enclosed for your information.

Unless otherwise stated in the text, the following definitions apply to these information requests:

- **Subject vehicles:** All MY 2001 Chevrolet Astro and GMC Safari vehicles, and all other model year Astro and Safari vehicles equipped with multifunction switches (subject components) identical in design to those in MY 2001 Astro and Safari vehicles, manufactured for sale or lease in the United States.
- **Subject components:** Multifunction switches.
- **GM:** General Motors Corporation, all of its past and present officers and employees, whether assigned to its principal offices or any of its field or other locations, including all of their divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and



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all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of GM (including all business units and persons previously referred to), who are or, in or after 2000, were involved in any way with any of the following related to the alleged defect in the subject vehicles:

- a. Design, engineering, analysis, modification or production (e.g. quality control);
 - b. Testing, assessment or evaluation;
 - c. Consideration, or recognition of potential or actual defects, reporting, record-keeping and information management, (e.g., complaints, field reports, warranty information, part sales), analysis, claims, or lawsuits; or
 - d. Communication to, from or intended for zone representatives, fleets, dealers, or other field locations, including but not limited to people who have the capacity to obtain information from dealers.
- **Alleged defect:** Any alleged failure or malfunction of the brake lamp, hazard lamp and/or turn signal lamp.
 - **Document:** "Document(s)" is used in the broadest sense of the word and shall mean all original written, printed, typed, recorded, or graphic matter whatsoever, however produced or reproduced, of every kind, nature, and description, and all non-identical copies of both sides thereof, including, but not limited to, papers, letters, memoranda, correspondence, communications, electronic mail (e-mail) messages (existing in hard copy and/or in electronic storage), faxes, mailgrams, telegrams, cables, telex messages, notes, annotations, working papers, drafts, minutes, records, audio and video recordings, data, databases, other information bases, summaries, charts, tables, graphics, other visual displays, photographs, statements, interviews, opinions, reports, newspaper articles, studies, analyses, evaluations, interpretations, contracts, agreements, jottings, agendas, bulletins, notices, announcements, instructions, blueprints, drawings, as-builts, changes, manuals, publications, work schedules, journals, statistical data, desk, portable and computer calendars, appointment books, diaries, travel reports, lists, tabulations, computer printouts, data processing program libraries, data processing inputs and outputs, microfilms, microfiches, statements for services, resolutions, financial statements, governmental records, business records, personnel records, work orders, pleadings, discovery in any form, affidavits, motions, responses to discovery, all transcripts, administrative filings and all mechanical, magnetic, photographic and electronic records or recordings of any kind, including any storage media associated with computers, including, but not limited to, information on hard drives, floppy disks, backup tapes, and zip drives, electronic communications, including but not limited to, the Internet and shall include any drafts or revisions pertaining to any of the foregoing, all other things similar to any of the foregoing, however denominated by GM, any other data compilations from which information can be obtained, translated if necessary, into a usable form and any other documents. For purposes of this request, any document, which contains any note, comment, addition, deletion, insertion, annotation, or otherwise comprises a non-identical copy of another document shall be treated as a separate document subject to production. In all cases where original and any non-identical copies are not available,

"document(s)" also means any identical copies of the original and all non-identical copies thereof. Any document, record, graph, chart, film or photograph originally produced in color must be provided in color. Furnish all documents whether verified by GM or not. If a document is not in the English language, provide both the original document and an English translation of the document.

- **Other Terms:** To the extent that they are used in these information requests, the terms "claim," "consumer complaint," "dealer field report," "field report," "fire," "fleet," "good will," "make," "model," "model year," "notice," "property damage," "property damage claim," "rollover," "type," "warranty," "warranty adjustment," and "warranty claim," whether used in singular or in plural form, have the same meaning as found in 49 CFR 579.4.

In order for my staff to evaluate the alleged defect, certain information is required. Pursuant to 49 U.S.C. § 30166, please provide numbered responses to the following information requests. Insofar as GM has previously provided a document to ODI, GM may produce it again or identify the document, the document submission to ODI in which it was included and the precise location in that submission where the document is located. When documents are produced, the documents shall be produced in an identified, organized manner that corresponds with the organization of this information request letter (including all individual requests and subparts). When documents are produced and the documents would not, standing alone, be self-explanatory, the production of documents shall be supplemented and accompanied by explanation.

Please repeat the applicable request verbatim above each response. After GM's response to each request, identify the source of the information and indicate the last date the information was gathered.

1. State, by model and model year, the number of subject vehicles GM has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by GM, state the following:
 - a. Vehicle identification number (VIN);
 - b. Make;
 - c. Model;
 - d. Model Year;
 - e. Date of manufacture;
 - f. Date warranty coverage commenced; and
 - g. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

Provide the table in Microsoft Access 2000, or a compatible format, entitled "PRODUCTION DATA."

2. State the number of each of the following, received by GM, or of which GM is otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles:
 - a. Consumer complaints, including those from fleet operators;

- b. Field reports, including dealer field reports;
- c. Reports involving a crash, injury, or fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;
- d. Property damage claims;
- e. Third-party arbitration proceedings where GM is or was a party to the arbitration; and
- f. Lawsuits, both pending and closed, in which GM is or was a defendant or codefendant.

For subparts "a" through "f," state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted separately. Multiple reports of the same incident are also to be counted separately (i.e., a consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report and a consumer complaint).

In addition, for items "c" through "f," provide a summary description of the alleged problem and causal and contributing factors and GM's assessment of the problem, with a summary of the significant underlying facts and evidence. For items "e" and "f," identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

3. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:
 - a. GM's file number or other identifier used;
 - b. The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);
 - c. Vehicle owner or fleet name (and fleet contact person), address, and telephone number;
 - d. Vehicle's VIN;
 - e. Vehicle's make, model and model year;
 - f. Vehicle's mileage at time of incident;
 - g. Incident date;
 - h. Report or claim date;
 - i. Whether a crash is alleged;
 - j. Whether a fire is alleged;
 - k. Whether property damage is alleged;
 - l. Number of alleged injuries, if any; and
 - m. Number of alleged fatalities, if any.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

4. Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method GM used for organizing the documents.

5. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by GM to date that relate to, or may relate to, the alleged defect in the subject vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

Separately, for each such claim, state the following information:

- a. GM's claim number;
- b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
- c. VIN;
- d. Repair date;
- e. Vehicle mileage at time of repair;
- f. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
- g. Labor operation number;
- h. Problem code;
- i. Replacement part number(s) and description(s);
- j. Concern stated by customer; and
- k. Comment, if any, by dealer/technician relating to claim and/or repair.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "WARRANTY DATA."

6. Describe in detail the search criteria used by GM to identify the claims identified in response to Request No. 5, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by GM on the subject vehicles (i.e., the number of months and mileage for which coverage is provided and the vehicle systems that are covered). Describe any extended warranty coverage option(s) that GM offered for the subject vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.
7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that GM has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications, with the exception of standard shop manuals. Also include the latest draft copy of any communication that GM is planning to issue within the next 120 days.
8. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, GM. For each such action, provide the following information:

- a. Action title or identifier;
- b. The actual or planned start date;
- c. The actual or expected end date;
- d. Brief summary of the subject and objective of the action;
- e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and
- f. A brief summary of the findings and/or conclusions resulting from the action.

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action. If an action is not complete, provide a detailed schedule for the work to be done, tentative findings and/or conclusions, and provide an update within 10 days of completion of the action.

9. Furnish a detailed technical description and explanation as to any similarities and/or differences in the design and/or failure modes of the subject components in the subject vehicles and certain MY 2000-2002 GM sport utility vehicles which were the subject of a safety recall in 2001 (GM Recall No. 01073 and NHTSA Recall No. 01V-364) to remedy defective multifunction switches.
10. Describe all modifications or changes made by, or on behalf of, GM in the design, material composition, manufacture, quality control, supply, or installation of the subject components, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject vehicles. For each such modification or change, provide the following information:
 - a. The date or approximate date on which the modification or change was incorporated into vehicle production;
 - b. A detailed description of the modification or change;
 - c. The reason(s) for the modification or change;
 - d. The part numbers (service and engineering) of the original component;
 - e. The part number (service and engineering) of the modified component;
 - f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
 - g. When the modified component was made available as a service component; and
 - h. Whether the modified component can be interchanged with earlier production components.

Also, provide the above information for any modification or change that GM is aware of which may be incorporated into vehicle production within the next 120 days.

11. Produce two of each of the following:
 - a. Exemplar samples of each design version of the subject components;
 - b. Field return samples of the subject components exhibiting the subject failure mode; and
 - c. Any kits that have been released, or developed, by GM for use in service repairs to the subject component/assembly which relate, or may relate, to the alleged defect in the subject vehicles.

12. State the number of each of the following that GM has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale (including the cut-off date for sales, if applicable):
- Multifunction switch;
 - Any other component replaced under warranty by GM to address the alleged defect in the subject vehicles; and
 - Any kits that have been released, or developed, by GM for use in service repairs to the subject component/assembly which relate, or may relate, to the alleged defect in the subject vehicles.

For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number). Also identify by make, model and model year, any other vehicles of which GM is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

13. Furnish GM's assessment of the alleged defect in the subject vehicles, including:
- The causal or contributory factor(s);
 - The failure mechanism(s);
 - The failure mode(s);
 - The risk to motor vehicle safety that it poses;
 - What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning; and
 - The reports included with this inquiry.

This letter is being sent to GM pursuant to 49 U.S.C. § 30166, which authorizes NHTSA to conduct any investigation that may be necessary to enforce Chapter 301 of Title 49 and to request reports and the production of things. It constitutes a new request for information. GM's failure to respond promptly and fully to this letter could subject GM to civil penalties pursuant to 49 U.S.C. § 30165 or lead to an action for injunctive relief pursuant to 49 U.S.C. § 30163. (Other remedies and sanctions are available as well.) Please note that maximum civil penalties under 49 U.S.C. § 30165 have increased as a result of the recent enactment of the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act, Public Law No. 106-414 (signed November 1, 2000). Section 5(a) of the TREAD Act, codified at 49 U.S.C. § 30165(b), provides for civil penalties of up to \$5,000 per day, with a maximum of \$15 million for a related series of violations, for failing or refusing to perform an act required under 49 U.S.C. § 30166. This includes failing to respond to ODI information requests.

If GM cannot respond to any specific request or subpart(s) thereof, please state the reason why it is unable to do so. If on the basis of attorney-client, attorney work product, or other privilege, GM does not submit one or more requested documents or items of information in response to this information request, GM must provide a privilege log identifying each document or item withheld, and stating the date, subject or title, the name and position of the person(s) from, and

the person(s) to whom it was sent, and the name and position of any other recipient (to include all carbon copies or blind carbon copies), the nature of that information or material, and the basis for the claim of privilege and why that privilege applies.

GM's response to this letter, in duplicate, together with a copy of any confidentiality request, must be submitted to this office by December 15, 2004. Please refer to PE04-072 in GM's response to this letter. If GM finds that it is unable to provide all of the information requested within the time allotted, GM must request an extension from me at (202) 366-5218 no later than five business days before the response due date. If GM is unable to provide all of the information requested by the original deadline, it must submit a partial response by the original deadline with whatever information GM then has available, even if an extension has been granted.

If GM claims that any of the information or documents provided in response to this information request constitute confidential commercial material within the meaning of 5 U.S.C. § 552(b)(4), or are protected from disclosure pursuant to 18 U.S.C. § 1905, GM must submit supporting information together with the materials that are the subject of the confidentiality request, in accordance with 49 CFR Part 512, as amended (69 Fed. Reg. 21409 et seq; April 21, 2004), to the Office of Chief Counsel (NCC-113), National Highway Traffic Safety Administration, Room 5219, 400 Seventh Street, S.W., Washington, D.C. 20590. GM is required to submit two copies of the documents containing allegedly confidential information (except only one copy of blueprints) and one copy of the documents from which information claimed to be confidential has been deleted.

If you have any technical questions concerning this matter, please call Mr. Michael Lee of my staff at (202) 366-5236.

Sincerely,



Thomas Z. Cooper, Chief
Vehicle Integrity Division
Office of Defects Investigation

Enclosures: Vehicle Owner's Questionnaires
10049348, 10083784, 10033291, 10063901, 10081185, 10060249, 10031657, 10090054,
10069268

GM667
PE04-072

ATTACHMENT "1"

**GM667
PE04-072**

ATTACHMENT "2"

**CONFIDENTIAL MATERIAL
HAS BEEN REMOVED FROM
THIS ATTACHMENT AND
SUPPLIED TO THE OFFICE
OF THE CHIEF COUNSEL**