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OFFICE OF DEFECTS INVESTIGATION  
NHTSA

December 7, 2005

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

GM-682 Complete

NVS-212mbs  
PE06-056

Dear Mr. Cooper:

This letter completes General Motors' (GM) response to your information request (IR) dated October 7, 2005, regarding alleged failure, malfunction, or deficient performance, whether constant or intermittent, of the operation of the turn signals in MY 2002 Chevrolet Malibu, Oldsmobile Alero, and Pontiac Grand Am vehicles.

During a telephone conversation on October 13, 2005, NHTSA clarified the alleged defect to be turn signal malfunction due to an inoperative hazard switch.

Your questions and our corresponding replies for questions 7-14 are as follows:

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, or may be related to the alleged defect in the subject vehicles. GM is not aware of plans to issue any communication related to the alleged defect in the subject vehicles in the next 120 days. The data was last gathered on October 25, 2005.

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.

Responsive documents were previously provided in response to question 8 of RQ04-005 / GM681 IR on August 20, 2004. They are located on the Attachment 1 CD; refer to the folder labeled "Response to Q8" and on the Attachment 2 CD GM Confidential; refer to the folder labeled "Response to Q8 GM Confidential".

The information listed in Table 8 below is a summary of additional actions performed by GM and Stoneridge-Polak Ltd., the supplier of the hazard switch assembly, regarding the subject condition on the subject vehicles. Documents and additional supporting information are provided on the Attachment 1 CD; refer to the folder labeled "Response to Q8" and on the Attachment 2 CD GM Confidential; refer to the folder labeled "Response to Q8 GM Confidential". The data was last gathered on November 17, 2005.

<p><b>Action:</b> On-going quality control and reliability test reports <b>Start Date:</b> May 1998 <b>End Date:</b> July 2004 <b>Engineering Group:</b> Stoneridge, Inc. See Attachment 1 CD Complete; refer to the folder labeled "Response to Q8"; refer to the folder labeled "8A" - "Summary of Testing S367 (GM Hazard Switch) for Cracked Resistor Joints", "All test reports" <b>Description:</b> Stoneridge on-going quality control and reliability test reports. <b>Summary of Action:</b> Measures the performance of the hazard switch on durability cycles and thermal shock tests. All tested switches met or exceeded test requirements, which permits partial solder cracks if the hazard switch functions properly.</p>
<p><b>Action:</b> Warranty part return and testing <b>Start Date:</b> September 2004 <b>End Date:</b> January 2005 <b>Engineering Group:</b> Stoneridge, Inc. See Attachment 1 CD Complete; refer to the folder labeled "Response to Q8"; refer to the folder labeled "8B" - "Summary of Warranty Return Part Analysis" and "Vehicle and Part build dates" <b>Description:</b> Stoneridge warranty return part analysis and test reports. <b>Summary of Action:</b> Test and analyze the performance of the hazard switches that were returned through GM Warranty Return Center. GM requested reports from the supplier and will provide them when received.</p>

TABLE 8 SUMMARY OF ADDITIONAL ACTIONS

9. 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 component, 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:
- The date or approximate date on which the modification or change was incorporated into vehicle production;
  - A detailed description of the modification or change;
  - The reason(s) for the modification or change;
  - The part numbers (service and engineering) of the original component;
  - 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.

Responsive documents were previously provided in response to question 9 of RQ04-005 / GM661 IR on August 20, 2004. They are located on the Attachment 1 CD; refer to the folder labeled "Response to Q9" and on the Attachment 2 CD GM Confidential; refer to the folder labeled "Response to Q9 GM Confidential".

No additional changes or modifications were made since GM's last response.

10. 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 out-off date for sales, if applicable):
  - a. Subject component; and
  - b. Add any further requests or delete all, including requests for similar or substantially similar components; and
  - c. Any kits that have been released, or developed, by GM for use in service repairs to the subject component/assembly.

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 Complete; refer to the folder labeled "Response to Q10." 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 October 19, 2005.

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.

11. In response to EA02-037 GM Informed ODI that the hazard switch was modified by supplier Stoneridge-Pollak Ltd. on March 1, 2001. These changes included: Introduced strict FIFO and process flow to limit shelf life of post-plated grids prior to final

assembly; incorporated a sealing copper barrier under final silver layer of grid; revised and updated solder paste control process: increase quantity of solder paste with 0.8 diameter needle; better control of position of solder paste; and revised oven profile for tighter temperature tolerance and control. Provide a timeline for bringing these modified parts into production vehicles. Identify those subject vehicles by VIN that received the modified parts. Identify those vehicles in the 42 complaints received by NHTSA that contain the modified parts. Identify all vehicles responsive to question 2 of this letter that contain the modified parts.

GM estimates that subject vehicles built after April 15, 2001 have the modified part. The time required to ship parts from Stoneridge-Pollak Ltd UK to the Stoneridge Warehouse (then situated in Detroit, Michigan) was approximately 2 to 4 weeks. Since the part numbers were not changed, the actual breakpoints cannot be determined. The actual breakpoint dates were affected by the amount of stock at the Stoneridge Warehouse and at each of the instrument panel/ vehicle assembly plants and build schedules.

Regarding the 42 NHTSA complaints, GM has identified the build dates for the VOQs with complete VINs in the folder labeled "Response to Q11", on the Attachment 1 CD Complete. Regarding the 292 unique VINs identified in response to question 2 of this letter, those build dates can be found in Attachment 1 CD GM, folder labeled "Response for Q1 - PRODUCTION DATA" refer to the Microsoft Access file named "Production Data."

12. Explain the shipping and processing of the hazard switch from the supplier to the final assembly plant and explain the assembly line procedures for installation of the hazard switch in each factory and or each production line for the subject vehicles.

During manufacture all operations handling the Surface Mount Device components are fully Electro-Static Discharge protected. Each switch is fully function tested, after passing a full functional test, the switch is ink jet marked with a Julian date code, and GM part number. Switches are packed into individual compartments in a vacuum-formed plastic tray, and then placed into a cardboard box which is final checked for label accuracy and sealed.

The boxes are palletized, the full pallet is secured with corner protection and the whole pallet is wrapped in plastic film.

The pallets are transported to an off site consolidator, loaded into containers, and transported to the supplier's warehouse (then in Detroit, now in Massachusetts).

The parts for Grand Am are received directly from the supplier's warehouse. The parts for Malibu and Alero are sub-assembled at Delphi and sent to assembly plants. The requested N car Hazard Warning Switch vehicle assembly plant installation procedure is documented in Production Assembly Document (PAD) and can be found in Attachment 1 CD Complete, folder labeled "Response for Q12".

13. Provide reason for ODI receiving complaints alleging failure of turn signals and hazard lights after the hazard switch was modified with changes to prevent failure of the turn signals and hazard lights.

Investigation of the recall vehicles found an issue with the cracking of the hazard switch solder joint caused by thermal expansion and contraction. The hazard switch supplier introduced significant product and process changes in March of 2001. They monitored the progress and

continued to make incremental improvements to further reduce the defect rate for the cracked solder issue. This improvement is reflected in the turn signal and hazard switch performance for subsequent model years as demonstrated by the warranty charts.

The turn signal and hazard switch can become inoperative for a number of reasons. Some of the complaints ODI and GM received may be for issues other than a completely cracked solder joint on the hazard switch circuit board. Because of those issues, the complexity of the manufacturing process of circuit boards, and the in-vehicle field performance, there will continue to be some failures. Regarding the statement in this question, "...the hazard switch was modified with changes to prevent failure of the turn signals ..." the expectation of the modifications was to significantly reduce the number of these failures for this cause.

**14. Furnish GM's assessment of the alleged defect in the subject vehicle, including:**

- a. The causal or contributory factor(s);
- b. The failure mechanism(s);
- c. The failure mode(s);
- d. Why subject vehicles that contain the modified parts (refer to question 11) are reported to experience the alleged defect;
- e. The risk to motor vehicle safety that it poses;
- f. 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
- g. The reports included with this inquiry.

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 its 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 1987, 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

*SM 682*

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

OCT 7 2005

*Original  
Received 10-18-05*

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

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

NVS-212mbs  
PE05-055

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 (PE05-055) to investigate allegations of any report of failure, malfunction, or deficient performance whether constant or intermittent, of the operation of the turn signals in MY 2002 Chevrolet Malibu, Oldsmobile Alero, and Pontiac Grand Am manufactured by General Motors Corporation, and to request certain information.

This office has received 42 reports of any report of failure, malfunction, or deficient performance whether constant or intermittent, of the operation of the turn signals in MY 2002 Chevrolet Malibu, Oldsmobile Alero, and Pontiac Grand Am vehicles.

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

- **Subject vehicles:** all MY 2002 Chevrolet Malibu, Oldsmobile Alero, and Pontiac Grand Am manufactured for sale or lease in the United States.
- **Subject component:** the hazard switch and its assembly including associated parts that affect or control the operation of the turn signal function (including but not limited to the visual and audible functions of the turn signal) on the subject vehicles.
- **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 its 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



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1997, 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 report of failure, malfunction, or deficient performance whether constant or intermittent, of the operation of the turn signals.
  - **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; and
- 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 "d" 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 property damage is alleged;
  - k. Number of alleged injuries, if any; and
  - l. 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.

9. 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 component, 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.

10. 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. Subject component; and
  - b. Add any further requests or delete all, including requests for similar or substantially similar components; and
  - c. Any kits that have been released, or developed, by GM for use in service repairs to the subject component/assembly.

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.

11. In response to EA02-037 GM informed ODI that the hazard switch was modified by supplier Stoneridge-Pollak Ltd. on March 1, 2001. These changes included: introduced strict FIFO and process flow to limit shelf life of post-plated grids prior to final assembly; incorporated a

sealing copper barrier under final silver layer of grid; revised and updated solder paste control process; increase quantity of solder paste with 0.8 diameter needle; better control of position of solder paste; and revised oven profile for tighter temperature tolerance and control. Provide a timeline for bringing these modified parts into production vehicles. Identify those subject vehicles by VIN that received the modified parts. Identify those vehicles in the 42 complaints received by NHTSA that contain the modified parts. Identify all vehicles responsive to question 2 of this letter that contain the modified parts.

12. Explain the shipping and processing of the hazard switch from the supplier to the final assembly plant and explain the assembly line procedures for installation of the hazard switch in each factory and or each production line for the subject vehicles.
13. Provide reason for ODI receiving complaints alleging failure of turn signals and hazard lights after the hazard switch was modified with changes to prevent failure of the turn signals and hazard lights.
14. Furnish GM's assessment of the alleged defect in the subject vehicle, including:
  - a. The causal or contributory factor(s);
  - b. The failure mechanism(s);
  - c. The failure mode(s);
  - d. Why subject vehicles that contain the modified parts (refer to question 11) are reported to experience the alleged defect;
  - e. The risk to motor vehicle safety that it poses;
  - f. 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
  - g. 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 \$16,050,000 for a related series of violations, for failing or refusing to perform an act required under 49 U.S.C. § 30166. See 49 CFR 578.6 (as amended by 69 Fed. Reg. 57864 (Sept. 28, 2004)). 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 November 21, 2005. Please refer to PE05-055 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 Mark Swanson of my staff at (202) 366-7020.

Sincerely,



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

Enclosure: List of VOQ numbers

**PE05-055**

The following is a list of ODI reference numbers corresponding to the 42 Vehicle Owner Questionnaires (VOQ) for PE05-055

ODI #	ODI #
10138990	10136091
10134892	10134012
10132242	10131712
10129488	10129184
10128934	10128778
10126095	10125791
10125200	10125129
10125040	10121770
10118657	10118984
10118813	10117024
10118636	10112436
10112351	10109496
10109044	10108506
10106170	10104858
10101838	10100960
10100434	10100360
10099861	10099571
10094666	10092309
10091455	10088949
10087948	10081103
10071895	10068168

**GM682**  
**PE05-055**

**ATTACHMENT "1"**  
**GM NON-CONFIDENTIAL MATERIAL**