



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

MAY 16 2006

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

GM-681B

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Gay Kent
GM Product Investigation
Mail Code 480-111-E118 Engineering Bldg
30200 Mound Road
Warren, Michigan 48090-9010

NVS-212-pco
EA06-001PIR

Dear Ms. Kent:

The Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) is conducting an investigation (EA06-001) of alleged shattering of the sunroof glass panel resulting in injuries from falling glass fragments in certain model year 2004 - 2006 Cadillac SRX vehicles manufactured by the General Motors Corporation. For a comparative assessment, we are requesting information concerning certain GM vehicles equipped with a glass "panoramic" type sunroof system.

Unless otherwise stated in the text, the following definitions apply to this information request:

- **Subject peer vehicles:** all model year (MY) 2004 - 2006 Pontiac G6 and Saturn vehicles, equipped with a panoramic sunroof system, manufactured for sale or lease in the United States.
- **Panoramic sunroof system:** panoramic sunroof system is defined as a glass panel system with a combined surface area of greater than 0.5 m² and having single or multiple fixed glass panels and/or single or multiple movable glass panels that can tilt upward and slide back over the existing roof structure. If a retractable front wind deflector is made of glass and part of the sunroof surface, it shall be included.
- **Subject condition:** allegation of glass breakage of the panoramic glass roof while the vehicle is being driven.
- **GM:** General Motor 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



VEHICLE SAFETY HOTLINE
888-327-4236

September 1, 2003, were involved in any way with any of the following related to the subject condition in the subject peer 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.
- **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 subject condition, 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. On data retrievals (sales data, warranty data etc...), the data shall be collected at the end of the monthly period (no partial month data) but no earlier than 15 days from the posted date of this letter.

1. State, by model, model year and each sunroof configuration, the number of subject peer vehicles GM has manufactured for sale or lease in the United States.

Provide the table in Microsoft Excel 2000, or a compatible format, entitled “PRODUCTION DATA.”

2. State the number of each of the following (in a table format) by each model, model year, sunroof configuration and the specific sunroof section or panel, received by GM, or of which GM is otherwise aware, which relate to, or may relate to, the subject condition in the subject peer 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 (including own vehicle); 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 consumer complaint, field report (duplicate) and a crash report (duplicate)), but the duplicated reports shall be identified.

Provide the table in Microsoft Access 2000, or a compatible format, entitled "MANUFACTURER REPORT COUNT."

3. State, by each model, model year, sunroof configuration and the specific sunroof section or panel, the 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 subject condition in the subject peer 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. Do not count the claim if it is a duplicate of a subpart report in question 2.

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

4. Describe in detail the search criteria used by GM to identify the claims identified in response to Request No. 3, 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 subject condition in the subject peer vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by GM on the overall subject vehicle, on glass breakage in the side windows and glass breakage in the sunroof system (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 peer vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.
5. For each glass panel utilized (from front to rear of vehicle) in the subject vehicle, provide the following information:
 - a. Formal item name;
 - b. Common item name;
 - c. Movable or Fixed glass panel system;
 - d. Single or multiple panel design (state no. of panels);
 - e. Type of movable glass panel deployment design (i.e., Slide-in-Roof; Tilted and Slide over roof; Tilted, Slide and Stacked (for sectioned design), etc.);
 - f. Interior opening beneath glass panel area (length x width across roof in centimeters);
 - g. Location of glass panel (i.e., "over 1st-row occupants", "over 2nd-row occupants", "over 1st & 2nd-row occupants," etc...);
 - h. Size of panel (length x width centimeters);
 - i. Thickness of glass (millimeters);

- j. Weight of glass panel (kilograms);
 - k. Type of glass used (i.e. laminated, tempered, tempered-laminated, multiple glazed unit, rigid plastics, etc... as classified in ANSI/SAE Z26.1)
 - l. Certified to ANSI/SAE Z26.1, Item 3/4 Glazing Material Standard (specify all applicable Table 1 Tests);
 - m. Provide any impact test results per ANSI/SAE Z26.1 Test No. 6-14 or per other standards if available;
 - n. ANSI/SAE Z26.1 certification marking (i.e. AS1, AS2 etc.) if any; and
 - o. Explain the reasons for selecting the type, thickness, and other relevant aspects of the glass used in the subject component in comparison with other types, thicknesses, and other relevant aspects of glass, which were considered or which could have been used.
6. Provide photographs showing an exterior top view looking down at the vehicle's entire roof section. If the glass panel opens, provide photographs for both the close position and the open position. In addition, show wide-angled interior views looking up at the entire roof liner, with all shades opened, with the glass roof panels in the close position and in the open position. Provide a minimum of two pictures each originating from two opposite angles for each exterior and interior screen shots. The files shall be in a "JPG" format with a minimum resolution of 2, 500 x 2,000 pixels each and 2.0 MB size.
7. For each model, model year and glass panel design on the subject peer vehicles, identify the part number, supplier name and a complete street address, contact name, and telephone number.

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.

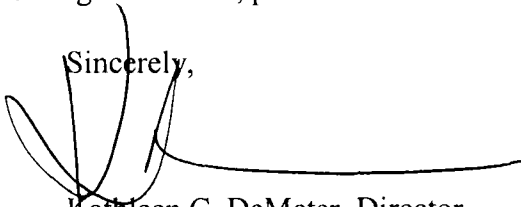
If GM cannot respond to any specific request or subpart(s) thereof, please state the reason why it is unable to do so. If on the basis of attorney-client, attorney work product, or other privilege, GM does not submit one or more requested documents or items of information in response to this information 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 (including color photographs, diagrams and drawings), together with a copy of any confidentiality request, must be submitted to this office by July 14, 2006. Please refer to EA06-001PIR 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 Mr. Thomas Z. Cooper 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 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 Peter C. Ong of my staff at (202) 366-0583.

Sincerely,



Kathleen C. DeMeter, Director
Office of Defects Investigation
Enforcement



July 14, 2006

Kathleen C. DeMeter, Director
 Office of Defects Investigation
 NHTSA Enforcement
 Room #5326
 400 Seventh Street, S.W.
 Washington, D.C. 20590

GM-681B

NVS-212pcio
 EA06-001PIR

Dear Ms. DeMeter:

This letter is General Motors' (GM) response to your information request (IR), dated May 4, 2006, requesting peer vehicle information for certain model year (MY) 2004 – 2006 Pontiac G6 and Saturn vehicles, equipped with a panoramic sunroof regarding the occurrence of sunroof fracture while driving. Your office has requested this comparative information to support your evaluation of similar occurrences on certain MY 2004 – 2006 Cadillac SRX vehicles manufactured by GM.

The following table summarizes the available sunroof options in the requested model years for each of the subject peer vehicles.

REGULAR PRODUCTION OPTIONS (RPOS) – SUBJECT PEER VEHICLES

| MAKE / MODEL | RPOS AVAILABLE ⁽¹⁾ | | |
|-----------------------|-------------------------------|-----------|-----------|
| | MY 2004 | MY 2005 | MY 2006 |
| Pontiac G6 Coupe | N/A | N/A | CF5 |
| Pontiac G6 Sedan | N/A | CF5 & C3Y | CF5 & C3Y |
| Saturn Ion Quad Coupe | CF5 | CF5 | CF5 |
| Saturn Ion Sedan | CF5 | CF5 | CF5 |
| Saturn Vue | CF5 | CF5 | CF5 |

⁽¹⁾ CF5 – conventional, single-panel sunroof
 C3Y – Lamella, four-panel sunroof

N/A – model not available for this model year

Based upon the criteria set forth in your definition of “panoramic roof system,” only the Pontiac G6 model equipped with a Lamella sunroof, RPO C3Y, is responsive to this inquiry. None of the other GM vehicle models identified in the subject peer group were offered with sunroofs with a total glass area of 0.5m² or greater, as specified in the definition of panoramic roof system. GM is providing information regarding the glass size and area for the available CF5 sunroof for each of the subject peer vehicles in Attachment 1 CD GM, folder labeled “CF5 Sunroof Data.”

For this response, GM is providing information that relates to or may relate to sunroof fracture while driving, for MY 2005 and 2006 Pontiac G6 models equipped with a C3Y Lamella sunroof. GM has gathered the requested information in a manner consistent with GM's approach to EA06-001 concerning certain Cadillac SRX vehicles equipped with an Ultraview sunroof module.

Your questions and our corresponding replies are as follows:

1. **State, by model, model year and each sunroof configuration, the number of subject peer vehicles GM has manufactured for sale or lease in the United States.**

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

GM is providing a summary of the number of Pontiac G6 vehicles built through May 31, 2006 that were equipped with a C3Y sunroof, and were manufactured for sale or lease in the United States in Attachment 1 CD GM, folder labeled "Response for Q1;" refer to the Microsoft Excel file named "Production Data." The information contained in this file is represented in Table 1 below.

PRODUCTION DATA – PONTIAC G6

| SUNROOF OPTION (RPO) | MY 2004 | MY 2005 | MY 2006 ⁽²⁾ | TOTAL |
|----------------------|------------------|---------|------------------------|--------|
| Lamella (C3Y) | 0 ⁽¹⁾ | 14,888 | 16,522 | 31,410 |

TABLE 1

⁽¹⁾ The Pontiac G6 vehicle was new for MY 2005

⁽²⁾ Number of vehicles built through 5/31/2006

2. **State the number of each of the following (in a table format) by each model, model year, sunroof configuration and the specific sunroof section or panel, received by GM, or of which GM is otherwise aware, which relate to, or may relate to, the subject condition in the subject peer 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 (including own vehicle); 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 consumer complaint, field report (duplicate) and a crash report (duplicate)), but the duplicated reports shall be identified.

Provide the table in Microsoft Access 2000, or a compatible format, entitled "MANUFACTURER REPORT COUNT."

Table 2A below summarizes the total number of reports GM has received for Pontiac G6 vehicles equipped with the lamella sunroof that either allege fracture of a glass sunroof panel

while driving or may relate to the same. Two of the seven reports allege fracture of the front panel and one report alleges fracture of the rear panel. Four of the seven reports contain insufficient detail to determine which panel fractured.

REPORT BREAKDOWN: PONTIAC G6 LAMELLA SUNROOF

| TYPE OF REPORT | GM REPORTS | SUBCATEGORIES | | |
|--|------------|-----------------------------|-------------------|-------------------------------------|
| | | NUMBER WITH PROPERTY DAMAGE | NUMBER WITH CRASH | NUMBER WITH INJURIES ⁽¹⁾ |
| Owner Reports | 6 | 0 | 0 | 1 |
| Field Reports | 1 | 0 | 0 | 0 |
| Not-In-Suit Claims | 0 | 0 | 0 | 0 |
| Subrogation Claims | 0 | 0 | 0 | 0 |
| Third Party Arbitration Proceedings | 0 | 0 | 0 | 0 |
| Product Liability Lawsuits | 0 | 0 | 0 | 0 |
| Total Reports (Including Duplicates) | 7 | 0 | 0 | 1 |
| Total Vehicles with Reports (Unique VIN) | 7 | 0 | 0 | 1 ⁽²⁾ |

TABLE 2A

⁽¹⁾ GM has no reports of fatality

⁽²⁾ 1 person has alleged minor cuts and scratches

GM is providing table 2A in Microsoft Excel format in Attachment 1 CD GM, folder labeled "Response for Q2."

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

DATA SOURCES

| SOURCE SYSTEM | LAST DATE GATHERED |
|---|--------------------|
| Customer Assistance Center (CAC) | 06/07/2006 |
| Technical Assistance Center (TAC) | 06/05/2006 |
| Field Information Network Database (FIND) | 06/07/2006 |
| Company Vehicle Evaluation Program (CVEP) | 06/15/2006 |
| Captured Test Fleet (CTF) | 06/15/2006 |
| Early Quality Feedback (EQF) | 06/20/2006 |
| Field Product Report Database (FPRD) | 06/07/2006 |
| Legal / Employee Self Insured Services (ESIS) / Product Liability Claims and Lawsuits | 06/05/2006 |

TABLE 2B

3. State, by each model, model year, sunroof configuration and the specific sunroof section or panel, the 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 subject condition in the subject peer 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. Do not count the claim if it is a duplicate of a subpart report in question 2.

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

GM has searched for regular and extended warranty claims associated with the replacement of any of the four glass roof panels due to fracture while driving or that may relate to the same for the subject peer vehicles.

Table 3A summarizes the total number of warranty claims GM has paid to date for the subject peer vehicles, other than those provided in response to question 2. As of the search dates, there were no extended warranty claims associated with the replacement of any of the four glass roof panels.

REGULAR WARRANTY DATA – PONTIAC G6

| ROOF PANEL | MY 2005 | MY 2006 | TOTAL |
|-------------------------|---------|---------|-------|
| Front (Panel 1) | 6 | 3 | 9 |
| Middle (Panels 2 and 3) | 2 | 2 | 4 |
| Rear (Panel 4) | 0 | 1 | 1 |
| TOTAL | 8 | 6 | 14 |

TABLE 3A

GM is providing Table 3A in Microsoft Excel format in Attachment 1 CD GM, folder labeled "Response for Q3." 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 dates on which the warranty data was last gathered is summarized in Table 3B below.

WARRANTY SOURCES

| SOURCE SYSTEM | LAST DATE GATHERED |
|--|--------------------|
| Claim Adjustment Retrieval Database (CARD) | 05/30/2006 |
| Motors Insurance Corporation (MIC) | 06/08/2006 |
| Universal Warranty Corporation (UWC) | 06/06/2006 |

TABLE 3B

4. Describe in detail the search criteria used by GM to identify the claims identified in response to Request No. 3, 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 subject condition in the subject peer vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by GM on the overall subject vehicle, on glass breakage in the side windows and glass breakage in the sunroof system (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 peer vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

The GM regular warranty data was collected by searching GM CARD for warranty claims that may relate to the replacement of any of the four glass roof panels or the complete sunroof module due to glass fracture. The three specific labor codes searched are provided in Table 4.

From this broad list of claims, any claims that clearly did not relate to the alleged defect based on a review of the dealer verbatim, customer code and trouble code were removed and are not being provided. For claims without a dealer verbatim involving customer and trouble codes that may relate to glass fracture, GM called the repairing dealer for information related to the customer's concern. Based on information provided by the repairing dealer, claims involving repairs for reasons other than glass fracture were removed. GM is providing information obtained from the repairing dealer in Attachment 1 CD GM, folder labeled "Response for Q4;" refer to the Microsoft excel file.

GM also examined the complete warranty histories for vehicles with reports responsive to question 2 for any warranty claims that involved the replacement of the moveable glass roof panel under other labor codes not previously searched. This search did not reveal any additional warranty claims that may relate to the reported incident of glass fracture.

LABOR CODES USED FOR REGULAR WARRANTY CLAIMS SEARCH

| LABOR CODE | DESCRIPTION |
|------------|--------------------------------------|
| B2760 | PANEL, SUNROOF SLIDING EXTERIOR-REPL |
| B2180 | GLASS, ROOF ASM (FIXED) - REPLACE |
| B2900 | SUNSHADE, SLIDING GLASS- R&R/REPLACE |

TABLE 4

There were no extended warranty claims in the Motors Insurance Corporation (MIC-extended) and Universal Warranty Corporation (UWC-extended) data for the subject peer vehicles. Based on their age, nearly all of the subject vehicles are still within the regular warranty period.

GM covers all model years of the Pontiac G6 by a bumper-to-bumper new vehicle warranty for three years or 36,000 miles, whichever occurs first. In addition, many different extended warranty options are available through GM dealerships. They are offered at different prices and for varying lengths of time, based on the customer's preference, up to 7 years from the date of purchase or up to a total of 100,000 vehicle miles. The GM warranty system does not contain information on the total number of vehicles that have extended warranty coverage.

5. For each glass panel utilized (from front to rear of vehicle) in the subject vehicle, provide the following information:
- a. Formal item name;
 - b. Common item name;
 - c. Movable or Fixed glass panel system;
 - d. Single or multiple panel design (state no. of panels);
 - e. Type of movable glass panel deployment design (i.e., Slide-in-Roof; Tilted and Slide over roof; Tilted, Slide and Stacked (for sectioned design), etc.);
 - f. Interior opening beneath glass panel area (length x width across roof in centimeters);
 - g. Location of glass panel (i.e., "over 1st-row occupants", "over 2nd-row occupants", "over 1st & 2nd-row occupants," etc...);
 - h. Size of panel (length x width centimeters);
 - i. Thickness of glass (millimeters);
 - j. Weight of glass panel (kilograms);
 - k. Type of glass used (i.e. laminated, tempered, tempered-laminated, multiple glazed unit, rigid plastics, etc... as classified in ANSI/SAE Z26.1)
 - l. Certified to ANSI/SAE Z26.1, Item 3/4 Glazing Material Standard (specify all applicable Table 1 Tests);
 - m. Provide any impact test results per ANSI/SAE Z26.1 Test No. 6-14 or per other standards if available;
 - n. ANSI/SAE Z26.1 certification marking (i.e. AS1, AS2 etc.) if any; and
 - o. Explain the reasons for selecting the type, thickness, and other relevant aspects of the glass used in the subject component in comparison with other types, thicknesses, and other relevant aspects of glass, which were considered or which could have been used.

The panoramic roof that is available on Pontiac G6 models under RPO C3Y is formally referred to as the Lamella large roof module assembly and commonly called the Lamella sunroof. The G6 Lamella sunroof is a moveable sunroof module system that consists of four glass panels. It operates in an outer tilt and slide manner in which the rear three panels form a stacked section when the sunroof is fully open.

The Lamella sunroof provides an interior opening beneath the glass module of 788.8mm by 693.1mm. The exact location of occupants beneath the sunroof varies based upon a number of factors including occupant size and seating position. In order to respond to 5(g) GM has evaluated an interior model that provides the location of a 95th percentile male occupant head form with respect to the interior sunroof opening over the full range of seat travel. GM is providing this study in Attachment 4 CD Supplier Confidential, folder labeled "Response for Q5;" refer to the Adobe Acrobat file named "Pontiac G6 Functional Description."

The information requested in 5(h – l) is summarized in Table 5 below.

G6 LAMELLA SUNROOF PHYSICAL DATA

| QUESTION / DESCRIPTION | GM RESPONSE |
|---|--|
| 5(h) Overall Size of Panel ⁽¹⁾ | 122.23cm X 95.97cm (dimensions do not account for curvature) |
| 5(i) Thickness of glass | 4.0mm |
| 5(j) Weight of glass panel | 31.83 kg |
| 5(k) Type of glass used | ANSI Z26.1 Item 3 Certified Tempered Glass |

TABLE 5

The glazing used in the Pontiac G6 Lamella sunroof is designed to meet the Item 3 glazing standards provided for in ANSI Z26.1, as well as the standards set forth in ECE R43, ASTM 448 and DOT39. ANSI Z26.1 and ECE R43 provide standards for impact resistance. GM is providing the requested test results for the impact tests conducted in Attachment 3 CD Supplier, folder labeled "Response for Q5." ANSI Z26.1 specifies that Item 3 glazing shall pass Test 6 – Impact, Ball, 3.05m (10ft.), Test 7 – Fracture Test and Test 8 – Impact, Shot bag, 2.44 m (8ft.).

For item 5(n), GM is providing a photograph of the certification marking that appears on each glass panel used in the Lamella sunroof in Attachment 3 CD Supplier, folder labeled "Response for Q5;" refer to Adobe Acrobat file.

FMVSS 205 requires vehicle manufacturers to use glazing that meets various test requirements depending upon its intended use and location. S2 of Federal Motor Vehicle Safety Standard No. 205 states: "The purpose of this standard is to reduce injuries resulting from impact to glazing surfaces, to ensure a necessary degree of transparency in motor vehicle windows for driver visibility, and to minimize the possibility of occupants being thrown through the vehicle windows in collisions."

GM chose "Item 3" tempered glass for the Lamella sunroof panels because tempered glass is designed to possess mechanical strength substantially higher than other glazing materials and if broken at any point, because it breaks entirely into small nuggets of glass that have relatively dull edges. GM and other manufacturers have used tempered glass like that chosen for the Lamella sunroof in many other applications for decades, because experience has shown it is durable and safe in such applications.

- 6. Provide photographs showing an exterior top view looking down at the vehicle's entire roof section. If the glass panel opens, provide photographs for both the close position and the open position. In addition, show wide-angled interior views looking up at the entire roof liner, with all shades opened, with the glass roof panels in the close position and in the open position. Provide a minimum of two pictures each originating from two opposite angles for each exterior and interior screen shots. The files shall be in a "JPG" format with a minimum resolution of 2, 500 x 2,000 pixels each and 2.0 MB size.**

GM is providing a list of the photographs taken in response to this question, along with the requested photographs in Attachment 1 CD GM, folder labeled "Response for Q6;" refer to the Microsoft Word document and JPEG files.

- 7. For each model, model year and glass panel design on the subject peer vehicles, identify the part number, supplier name and a complete street address, contact name, and telephone number.**

GM is providing the requested part number and supplier information in Attachment 1 CD GM, folder labeled "Response for Q7;" refer to Microsoft Excel file.

* * *

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 September 1, 2003, were involved in any way with any of the following related to the subject condition in the subject peer 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:

- 3 CDs - Attachment 1 CD GM
- Attachment 3 CD Supplier
- Attachment 4 CD Supplier Confidential

**GM681B - PEER
EA06-001PIR**

SUPPLIER CONFIDENTIALITY LETTER

**SUPPLIER CONFIDENTIALITY LETTER
HAS BEEN REMOVED FROM THIS
ATTACHMENT AND SUPPLIED TO
THE OFFICE OF THE CHIEF COUNSEL**

**GM681B - PEER
EA06-001PIR**

ATTACHMENT "1"

GM NON-CONFIDENTIAL MATERIAL

**GM681B - PEER
EA06-001PIR**

ATTACHMENT "2"

DOES NOT EXIST

**GM681B - PEER
EA06-001PIR**

ATTACHMENT "3"

SUPPLIER NON-CONFIDENTIAL MATERIAL

**GM681B - PEER
EA06-001PIR**

ATTACHMENT "4"

SUPPLIER CONFIDENTIAL MATERIAL

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