



GENERAL MOTORS CORPORATION

Vehicle Structure & Safety Integration

March 18, 2008

Kathleen C. DeMeter, Director
Office of Defects Investigation
National Highway Traffic Safety Administration
1200 New Jersey Ave., S. E., Room W46-409
Washington, D.C. 20590

RECEIVED
NVS-212

2008 MAR 20 11:12:54

OFFICE OF DEFECTS INVESTIGATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
WASHINGTON, D.C. 20590

N070236A

NVS-212mjl
EA07-019

Dear Ms. DeMeter:

This letter is General Motors (GM) response to your information request (IR), dated January 31, 2008, regarding allegations of the power sliding door opening while the vehicle is in motion on model year (MY) 2005 through 2007 General Motors minivans.

The subject vehicles for this inquiry are 2005–2007 (MY) Chevrolet Venture/Uplander, Pontiac Montana/Montana SV6, Buick Terraza, and Saturn Relay – equipped with one or more power sliding doors.

Mr. Mike Lee of your staff clarified that the alleged defect for this inquiry is unintended or unexpected opening of the power sliding door when the vehicle is out of PARK and "electronic controls" means the power sliding door module (PSDM).

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. **Location of power sliding door (left side, right side or both);**
 - g. **Date warranty coverage commenced; and**
 - h. **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 production data responsive to this request was provided in the GM response to PE07-044 dated October 17, 2007, please refer to that response.

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;**

Product Investigations

Mail Code: 480-210-G11 • 30001 Van Dyke • Warren, MI 48090
EA07-019_N070236A Response.doc

- 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.

The GM response to PE07-044 dated October 17, 2007 contained the requested information collected in searches with a last day gathered listed in Table 2-2 for that response. This update response contains records collected from that date to the last date gathered listed in Table 2-2 below.

Table 2-1 below summarizes the update records that could relate to the alleged defect because the records contain information related to the door being open. Some of the records lack sufficient detail to establish that the report is related to unintended or unexpected opening of the power sliding door (PSD) when the vehicle is out of PARK. GM is in the process of contacting customers to clarify the details and circumstances regarding these reports.

TYPE OF REPORT	GM REPORTS	CORRESPONDING TO NHTSA REPORTS	NUMBER WITH PROPERTY DAMAGE	NUMBER WITH CRASH	NUMBER WITH INJURIES/FATALITY*
Owner Reports	33	0	0	0	0
Field Reports	40	0	0	0	0
Not-In-Suit Claims	0	0	0	0	0
Subrogation Claims	0	0	0	0	0
Third Party Arbitration Proceedings	0	0	0	0	0
Product Liability Lawsuits	0	0	0	0	0
Total Reports (Including Duplicates)	73	0	0	0	0
Total Vehicles with Reports (Unique VIN)	68	0	0	0	0

TABLE 2-1: REPORT BREAKDOWN

* GM HAS NO FATALITY REPORTS

To date, GM's investigation of the alleged defect has not included an assessment of the cause(s) of each incident responsive to Request No. 2. Some incident reports may not contain sufficient reliable information to accurately assess cause. Assessments of other incidents (from lawsuits and claims) may be attorney work product and/or privileged. Therefore, information and documents provided in this response, if any, consist only of non-attorney work product and/or non-privileged material for incidents that have been investigated and assessed.

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
Customer Assistance Center	2/14/2008
Technical Assistance Center	2/12/2008
Field Information Network Database (FIND)	2/08/2008
Field Product Report Database (FPRD)	2/13/2008
Company Vehicle Evaluation Program (CVEP)	2/07/2008
Captured Test Fleet (CTF)	2/07/2008
Early Quality Feedback (EQF)	2/07/2008
Legal / Employee Self Insured Services (ESIS)/Product Liability Claims/ Lawsuits	2/14/2008

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 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."

The requested information is provided on the Att_1_GM disk in the folder labeled "Q_03," refer to the Microsoft Access 2000 file labeled, "Q_03_REQUEST NUMBER TWO DATA." Some incident reports may not contain sufficient reliable information to accurately answer all parts of question 3.

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 records summarized in Table 2-1 are on the Att_1_GM disk embedded in the folder labeled "Q_03," refer to the Microsoft Access 2000 file labeled, "Q_03_REQUEST NUMBER TWO DATA." GM has organized the records 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, or repairs involving any of the subject components (e.g., latches/striker, plungers/pads, seals, contacts, unlatch actuators, sensors, and electronic controls) 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. Vehicle's 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."

Tables 5-1 and 5-2 summarize by model year the regular, goodwill and extended warranty claims for the subject vehicles that were collected by searching the labor codes, customer complaint codes and trouble codes that may be related to the alleged defect.

Tables 5-3 and 5-4 summarize by model and model year the regular, goodwill and extended warranty claims for the subject vehicles that were collected by searching the labor code related to repairs involving any of the subject components for reasons not related to the alleged defect.

A list of the labor codes, customer complaint codes and trouble codes is provided in response to item No. 6. A summary of the warranty claims, including the information requested in 5(a-k), is provided on the Att_1_GM disk in the folder labeled "Q_05," refer to the Microsoft Access 2000 file labeled, "Q_05_WARRANTY DATA."

REGULAR WARRANTY CLAIMS FOR SLIDING DOOR RELEASE ACTUATOR REPLACEMENT

MAKE/MODEL	2005 MY	2006 MY	2007 MY	TOTAL
CHEVROLET VENTURE	21	N/A	N/A	21
CHEVROLET UPLANDER	56	30	33	119
PONTIAC MONTANA	3	N/A	N/A	3
PONTIAC MONTANA SV6	25	21	N/A	70
Buick Terraza	28	19	10	46
SATURN RELAY	1	0	0	1
TOTAL	122	70	43	235

TABLE 5-1
N/A – NOT APPLICABLE

EXTENDED WARRANTY CLAIMS FOR SLIDING DOOR RELEASE ACTUATOR REPLACEMENT

MAKE/MODEL	2005 MY	2006 MY	2007 MY	TOTAL
CHEVROLET VENTURE	4	N/A	N/A	4
CHEVROLET UPLANDER	25	4	0	29
PONTIAC MONTANA	1	N/A	N/A	1
PONTIAC MONTANA SV6	5	2	N/A	7
BUICK TERRAZA	3	0	0	3
SATURN RELAY	7	0	1	7
TOTAL	43	4	1	48

TABLE 5-2
 N/A – NOT APPLICABLE

REGULAR WARRANTY CLAIMS FOR REPAIRS TO THE SUBJECT COMPONENTS

MAKE/MODEL	2005 MY	2006 MY	2007 MY	TOTAL
CHEVROLET VENTURE	2,126	N/A	N/A	2,126
CHEVROLET UPLANDER	12,944	3,038	4,746	20,728
PONTIAC MONTANA	735	N/A	N/A	735
PONTIAC MONTANA SV6	5,700	2,557	N/A	8,257
BUICK TERRAZA	7,738	1,470	1,840	11,048
SATURN RELAY	4,746	505	799	6,050
TOTAL	33,989	7,570	7,385	48,944

TABLE 5-3
 N/A – NOT APPLICABLE

EXTENDED WARRANTY CLAIMS FOR REPAIRS TO THE SUBJECT COMPONENTS

MAKE/MODEL	2005 MY	2006 MY	2007 MY	TOTAL
CHEVROLET VENTURE	37	N/A	N/A	37
CHEVROLET UPLANDER	252	13	1	266
PONTIAC MONTANA	15	N/A	N/A	15
PONTIAC MONTANA SV6	69	9	N/A	78
BUICK TERRAZA	121	1	0	122
SATURN RELAY	135	1	0	136
TOTAL	630	24	1	655

TABLE 5-4
 N/A – NOT APPLICABLE

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. Consequently, some of these warranty claims are not related to the alleged defect.

GM's warranty database does not contain the following information: vehicle owner's name or telephone number, replacement part number description, or customer concern statement. 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 Motors Insurance Corp (MIC) extended warranty system does not contain the vehicle owner information. The Universal Warranty Corporation (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.

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.

To search for and collect the warranty data for this response that may relate to unintended or unexpected opening of the PSD when the vehicle is out of PARK, the GM Claim Adjustment Retrieval Database (CARD) regular warranty database and the MIC extended warranty database were searched using the labor codes listed in table 6-1. UWC does not use labor codes or trouble codes.

GM lists the customer complaint codes in Table 6-2 and the trouble codes in Table 6-3, within the labor codes listed in Table 6-1 that may relate to unintended or unexpected opening of the PSD when the vehicle is out of PARK.

GM also included warranty claims in Table 6-1 that showed replacement of the actuator or actuator assembly part numbers, unless the verbatim indicated that the issue was unrelated to the door opening when the vehicle is out of PARK.

LABOR CODE	DESCRIPTION
N3226	Actuator Assembly - Door Lock Slide R/L
N4874	Actuator, Door Unlatch (Power Sliding)
N4875	Actuator, Lock (Power Sliding DR) R/L
Z1241	Product Liability/Investigation R/P PR (Goodwill)
Z1242	PAR - Repairs/Reimbursement (Goodwill)
Z1243	PAR - Inspections Requested

TABLE 6-1 LABOR CODES RELATED TO REPLACEMENT OF THE UNLATCH ACTUATOR

CUSTOMER COMPLAINT CODE	DESCRIPTION
MJ	Misc. Customer Satisfaction
O7	Operation: No Maintain Adjustment
O8	Operation: Won't Turn Off
OA	Operation: Binds
OI	Operation: Engage/Disengage (Excessive Effort)
OG	Operation: Excessive Effort (Excessive Play)
CJ	Operation: Inoperative
OL	Operation: Intermittent
VB	Visual: Broken
VP	Visual: Misaligned (Orange Peel)

TABLE 6-2 CUSTOMER COMPLAINT CODES USED IN WARRANTY SEARCH

TROUBLE CODE	DESCRIPTION:
1D	Broken
1Y	Foreign material
2I	Clearance Too tight
2W	Loose
3A	Not adjusted
3I	Out of Calibration
5W	Rusted/Corroded
6C	Component - Inoperative
6D	Component - Intermittent
6F	Component - Open
6G	Component - Shorted
6J	Connector - Corroded
93	Technical Service Bulletin
98	Customer Satisfaction

TABLE 6-3 TROUBLE CODES USED IN WARRANTY SEARCH

To search for and collect the warranty data for this response for repairs involving any of the subject components, the GM Claims Adjustment Retrieval Database (CARD) regular warranty database and the Motors Insurance Corp (MIC) extended warranty database were searched using the labor codes listed in table 6-4.

The labor codes listed in Table 6-4 are the labor codes related to repairs of the subject components for any reason. Thus all customer complaint codes and trouble codes within the labor codes listed are included.

LABOR CODE	DESCRIPTION:
B5060	LOCK, SLIDING OR SWING OUT DOOR - RIGHT - R&R OR REPLACE
B5060	LOCK, SLIDING OR SWING OUT DOOR - LEFT - R&R OR REPLACE
B4979	STRIKER, FRONT/REAR/SWING-OUT OR SLIDING DOORS - ADJUST
B5050	STRIKER, SLIDING OR SWING OUT DOOR LOCK - DOOR LOCK - ADJUST
B5051	STRIKER, SLIDING OR SWING OUT DOOR LOCK - DOOR LOCK - LEFT
B5054	DR STRIKER ADJ/RPL
B5055	DR STRIKER ADJ/RPL
N3010	CONTACT, ELECTRICAL - SLIDING DOOR LOCK - REPLACE
C1170	WEATHERSTRIP SEAL ALIGN/RPL
C1180	WEATHERSTRIP - SLIDING DOOR - ALIGN OR REPLACE
C1635	GUARDS, REAR SIDE DOOR - RIGHT - REPLACE
C1636	GUARDS, REAR SIDE DOOR - LEFT - REPLACE
N2186	SWITCH - DOOR JAMB - SLIDING - REPLACE
N4842	POWER SLID DR MODUL
N4872	MODULE CONTROL (POWER SLIDING DOOR) - REPLACE
B5006	CABLE SLIDING DR CATCH RELEASE - RPL
N9523	POWER SLIDING DOOR MODULE - RPL PROGRAM
N3316	SLIDING DOOR MOTOR PRI
N4870	MOTOR, CLUTCH ASSEMBLY (POWER SLIDING DOOR) - REPLACE
N4881	SLIDING DOOR COMPONENT OPTICAL SENSOR - REPLACE

TABLE 6-4 LABOR CODES RELATED TO REPAIRS OF THE SUBJECT COMPONENTS

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 customer's preference, up to 7 years from the date of purchase or up to a total of 100,000 vehicle miles. The GM's warranty system does not contain information on the number of vehicles that have extended warranty coverage. The number of extended warranty coverage

contracts on the subject vehicles that have been sold by MIC regardless of status (in-force, expired, cancelled) as of February 12, 2008 is contained in Table 6-5.

MAKE/MODEL	2005 MY	2006MY	2007 MY	TOTAL
CHEVROLET VENTURE	4,437	N/A	N/A	4,437
CHEVROLET UPLANDER	10,047	8,658	4,213	22,918
PONTIAC MONTANA	2,180	N/A	N/A	2,180
PONTIAC MONTANA SV6	4,055	2,716	N/A	6,771
BUICK TERRAZA	4,580	1,378	575	6,533
SATURN RELAY	10,264	2,320	925	13,509
TOTAL	35,563	15,072	5,713	56,348

TABLE 6-5: MIC EXTENDED WARRANTY COVERAGE CONTRACTS SOLD
N/A – NOT APPLICABLE

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.**

GM has not issued any service, warranty or other documents to dealers, regional or zone offices, that relates to or may relate to unintended or unexpected opening of the power sliding door when the vehicle is out of PARK.

General Motors is not planning to issue in the next 120 days, any service, warranty or other technical documents or communications to its dealers, regional offices, zone offices or other entities regarding the subject condition in the subject vehicles.

The preceding information was collected from GM Service Operations. The data collection was completed on March 4, 2008.

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:**
- Action title or identifier;**
 - The actual or planned start date;**
 - The actual or expected end date;**
 - Brief summary of the subject and objective of the action;**
 - Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and**
 - 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.

The GM response to PE07-044, dated October 17, 2007 contained the requested information regarding the subject condition on the subject vehicles as of October 12, 2007. The information listed in Table 8-1 below is a summary of actions that have been conducted, are being conducted, are planned, or are being planned by or for GM regarding the subject condition on the subject vehicles since October 12, 2007. Documents and additional supporting information are included in the Attachments as noted in the table.

<p>Action 8-A: Vehicle inspections and customer contacts Start Date: 08/2007 End Date: On Going Engineering Group: GM Engineering and Delphi Corporation Attachments: Documents can be found on the Att_1_GM disk in the folder labeled Q_08, refer to the folder labeled Q_08_A_Veh Inspect. Documents related to the customer contacts were provided in the GM N0700236 Supplement 1 response dated November 15, 2007. Description: GM contacted customers and inspected vehicles to investigate the subject condition. Summary of Action: The summary of the customer contacts indicates the condition customers described as unintended or unexpected opening of the closed PSD while the vehicle is in motion is actually the result of driving away before the door is closed and latched. The 3 vehicles inspected by GM did not exhibit unintended or unexpected opening of the closed PSD when the vehicle was out of PARK.</p>
<p>Action 8-B: Warranty Parts Return Start Date: September 2007 End Date: On Going Engineering Group: GM Engineering Attachments: Documents can be found on the Att_1_GM disk in the folder labeled Q_08_B, refer to the files labeled Q_08_B_Ret Part Summary 1, Q_08_B_Ret Part Summary 2 and Q_08_B_Ret Part Summary 3. Documents can also be found on the Att_2_GM disk in the folder labeled Q_08_B, refer to the files labeled Q_08_B_Return 2 Part Test and Q_08_B_Return 3 Part Analysis Test. Description: The 9 unlatch actuators and 5 actuator assemblies replaced by dealers were returned, reviewed and checked for functionality. Actuators were inspected visually, moved manually, and cycled 3 times at 3 three different voltage levels. An additional 8 actuator assemblies and 4 unlatch actuators replaced by dealers were moved manually 30 times and power cycled 30 times at the GM Engineering Structural Development Laboratories. Summary of Action: All 26 unlatch actuators functioned correctly. All 26 moved freely without irregularities. All 26 of them functioned correctly and returned to the extended position after power was removed.</p>
<p>Action 8-C: Power Sliding Door (PSD) Technical Briefing Start Date: January 17, 2008 End Date: January 17, 2008 Engineering Group: GM Engineering Attachments: Documents can be found on the Att_1_GM disk in the folder labeled Q_08_C, refer to the file labeled Q_08_C_Technical Presentation. Description: GM demonstrated the function of the power sliding door on the subject vehicles for NHTSA. Summary of Action: Technical presentation and demonstration of PSD function.</p>

Action 8-D: Customer Survey VOQ customers

Start Date: January 2, 2008

End Date: March 11, 2008

Engineering Group: GM Product Investigations

Attachments: Documents can be found on the Att_1_GM disk in the folder labeled Q_08_D, refer to the folder labeled Q_08_D_Surveys.

Description: GM contacted the customers named in the VOQs provided by NHTSA to clarify the details and circumstances regarding the reports.

Summary of Action: NHTSA provided 13 VOQs. One VOQ was a duplicate of a VOQ provided with PE07-044. One VOQ did not have the customer's name, phone number or the VIN. GM was not able to contact 6 of the customers named in the VOQs because the phone numbers were incorrect or disconnected. GM contacted 5 VOQ customers and 100 % of them provided additional information indicating either the PSD did not open when the vehicle was out of PARK or they took the vehicle out of PARK before the door was completely closed.

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 components, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject vehicles including, but not limited to, those modifications or changes that relate to the closing or unintended or unexpected opening of a power sliding door including, but not limited to, modifications of the door latch strikers, door seals, door fit, unlatch actuators, electrical pad contacts, sensors, and electrical controls. 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;
 - Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
 - When the modified component was made available as a service component; and
 - 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 GM response to PE07-044 dated October 17, 2007 contained the requested information regarding modifications to the subject components, from the start of production to date, that may be related to the alleged defect in the subject vehicles. GM is not aware of any other changes to the door latch strikers, door seals, door fit, unlatch actuators, electrical pad contacts, sensors, and electrical controls related to unintended or unexpected opening of the power sliding door when the vehicle is out of PARK.

10. Describe in detail the operation and action of the power sliding door when, performing as intended, it is not fully or properly latched and the vehicle is taken out of PARK. In your answer, address among other operational characteristics whether the door will remain in the unlatched condition, whether it will reverse (open) and remain in the fully open position, whether it will reverse and attempt to close, and the circumstances under

which it will reverse. Produce all documents regarding operation under various conditions.

Attachment "Q_10_operation", included in GM's response to PE07-044, contains a detailed description of the operation and action of the power sliding door (PSD). Included in the explanation is a description of the action of the PSD when it is not fully or properly latched and the vehicle is taken out of PARK. The explanation also describes the operational characteristics and the circumstances under which the door will reverse.

- 11. Produce copies of all engineering specifications and drawings including, but not limited to, design and performance requirements and guidelines, of the unlatch actuators in the subject vehicles.**

The GM response item No. 8 of PE07-044, dated October 17 2007, contained the engineering specifications, performance requirements and process controls of the unlatch actuators.

Engineering drawings of the unlatch actuators in the subject vehicles are on the Att_2_GM_Conf disk in the folder labeled "Q_11," refer to the files labeled, "Q_11_Valeo" and "Q_11_Harada"

- 12. Describe in detail the reasons for changing the supplier of the unlatch actuators used in the subject vehicles, from Valeo Security Systems (Valeo) to Harada Industries of America in May 2006. Include in your response any assessment of the design or performance (both in the field and testing) of the unlatch actuators made by Valeo. Provide all documents relating to GM's assessment, including, but not limited to, material GM assessments, material Valeo assessments, and material communications between GM and Valeo.**

The supplier of the unlatch actuator used in the subject vehicles was changed from Valeo Security Systems (Valeo) to Harada Industries of America because Valeo made a decision to discontinue the manufacture of unlatch actuators and exit the actuator business. Consequently GM was required to develop a different source for unlatch actuators.

Documents related to GMs assessment of the Valeo unlatch actuator were provided in the GM response to item No. 8 of PE07-044, dated October 17 2007. Documentation related to Valeo material assessments and communications between GM and Valeo are on the Att_1_GM_ disk in the folder labeled "Q_12", refer to the file labeled, "Q_12_Communications".

- 13. Describe in detail all reasons for changing the unlatch actuator output force and retract time on or about the time when GM changed the supplier of the unlatch actuator as identified in Request No. 12. Provide all documents that relate to these changes including the original and revised unlatch actuator output force and retract time.**

The Valeo unlatch actuator design met all GM design specifications and requirements. While in the process of re-sourcing the unlatch actuator, GM improved the unlatch actuator clutch design, improved the robustness of the case joint and increased the output force. These continuous improvements were made because the opportunity existed while developing a new source for the actuator. GM continued to use all existing Valeo unlatch actuator stock, for production and service, further demonstrating that the Valeo design met all GM requirements and the changes to output force and retract time were continuous improvements made while re-sourcing the unlatch actuator.

Output force was increased based on door seal forces measured on production products to assure that under high door seal loads the door would unlatch when commanded. A force / travel over time requirement was developed for the Harada actuator based on empirical measurements of the production latch assembly installed in the door. This improved requirement better represents the resultant force profile of unlatching the sliding door than the constant force profile applied to the Valeo actuator that it superseded.

The engineering drawings of the unlatch actuators in the subject vehicles on the Att_2_GM_Conf disk in the folder labeled "Q_11," refer to the files labeled, "Q_11_Valeo" and "Q_11_Harada", contain the specifications of the original (Valeo) and revised (Harada) output force and retract time.

14. Describe in detail the reasons for reprogramming the power sliding door module in the subject vehicles as described in GM's service bulletins dated March 2005 and March 2007 as well as all other reprogramming of the module that have been made or are available for the subject vehicles.

GM did not issue a service bulletin regarding reprogramming the power sliding door module (PSDM) in the subject vehicles in March 2005 or March 2007.

There have been 2 new software calibrations for reprogramming of the PSDM that have been made available for the subject vehicles. The two software calibrations made available for reprogramming of the PSDM are not related to unintended or unexpected opening of the power sliding door when the vehicle is out of PARK. GM service bulletins #05-08-64-013 and #07-08-64-007A contain information regarding reprogramming the PSDM.

On April 28, 2005, GM issued service bulletin #05-08-64-013: Power Sliding Door Bounces When it Stops, Does Not Achieve Full Open Position, Driver Information Center (DIC) Message Displayed (Reprogram Power Sliding Door Module) - (Apr 28, 2005).

The subject of the bulletin is some customers may comment on one or more of the following conditions:

- A bounce of the power sliding door when it stops in the opening direction due to the fuel fill door being still open.
- The power sliding door does not achieve the full open position and stops before the hold open position.
- The Driver Information Center (DIC) displays "Passenger/Driver Sliding Door in Motion" message.
- The DIC displays "Passenger/Driver Sliding Door Obstacle Detected" message.

The bulletin recommends that technicians reprogram the PSDM with an updated software calibration introduced to eliminate these conditions. The subject conditions of this bulletin are not related to unintended or unexpected opening of the power sliding door when the vehicle is out of PARK.

On November 13, 2007, GM issued service bulletin #07-08-64-007A: General Power Sliding Side Door Diagnosis/Repair Procedures - (Nov 13, 2007). Service bulletin #07-08-64-007A was issued to revise the Correction/Warranty Information contained in Corporate Bulletin Number 07-08-64-007 - (March 2007) and advise dealers to discard Corporate Bulletin Number 07-08-64-007.

Service bulletin #07-08-64-007A recommends reprogramming of the PSDM to eliminate over-cinch, a condition where the PSD motor continues to run for up to three seconds after the door has fully closed or the customer may describe a grinding noise. Reprogramming the PSDM with new software affected the output of the drive motor to elongate the time of the door travel between secondary and primary latch position. This in effect allows the controller to see the primary latch detent signal and stop closing the door avoiding over-cinching. The subject conditions of this bulletin are not related to unintended or unexpected opening of the power sliding door when the vehicle is out of PARK.

On March 26, 2007, GM issued service bulletin #07-08-64-008: E107084 - Power Sliding Door Increased Effort While Opening (Engineering Information) - (Mar 26, 2007). The subject of the bulletin is increased effort while manually opening the power sliding door (PSD). The bulletin does not contain any information regarding reprogramming the power sliding door module (PSDM). The subject conditions of this bulletin are not related to unintended or unexpected opening of the power sliding door when the vehicle is out of PARK.

15. Identify all subject vehicles that GM bought back from vehicle owners for reasons that relate to problems or issues related to the subject components. For each such vehicle, provide 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. Date of buyback;
- g. Reason(s) for buyback;
- h. Disposition of the vehicle (e.g., resold, salvaged).

Produce GM's evaluation of each of the buyback vehicle as it relates to the alleged defect or subject components. Provide all documents related to vehicle inspections, evaluations, analyses, tests, test results and/or repairs that relate to the subject components which GM performed after the vehicles were bought back. Also, provide all documents that relate to repairs involving the subject components that were made prior to the buybacks.

Many of the reported incidents of unintended or unexpected opening of the PSD when the vehicle is out of PARK are the consequence of driving away before the door is closed and latched, disregarding the audible warning chime, DIC door ajar message and illumination of the overhead courtesy lamp.

Therefore, only the vehicles on the list that have a warranty claim related to the unlatch actuator may have been repurchased for reasons related to the alleged defect. However, a warranty claim related to the unlatch actuator does not conclusively establish that the unlatch actuator stuck in the open position. GM has evaluated 26 unlatch actuators replaced under warranty and none of the 26 had a stuck unlatch actuator.

The GM Business Resource Repurchase Center provided a list of 461 subject vehicles that have been repurchased for any reason. The information provided by the GM Business Resource Repurchase Center is contained on the Att_1_GM disk in the folder labeled "Q_15" in

the file labeled "Q_15_Buy Backs". GM did not inspect and evaluate the subject components in each of the repurchased vehicles as it relates to the alleged defect.

Fifty-one vehicles identified did not have a reason for repurchase as it relates to the alleged defect. There were no warranty claims and no GM reports related to the power sliding door. Therefore, these 51 vehicles were removed from the list.

Of the remaining 410 vehicles with warranty claims related to the subject components, 155 vehicles included as the reason for repurchase information related to the PSD open while driving or a GM report related to the PSD open while driving.

Of the 155 vehicles, 12 had an unlatch actuator warranty claim. The reason for repurchase of these 12 vehicles may be related to the alleged defect.

A summary of the subject vehicles that GM repurchased for reasons that may relate to the subject components or may relate to the alleged defect, including the information requested in 15(a-h), is provided on the Att_1_GM disk in the folder labeled "Q_15," in the file labeled "Q_15_Buy Backs1". Column "M" of the attachment indicates GM's analysis of the relationship if any to the alleged defect and subject components.

The documents that relate to the final repair made by GM after the vehicles were repurchased are contained on the Att_1_GM disk in the folder labeled "Q_15," in the folder labeled "Q_15_Final Repair."

GM will search its records for additional documents that relate to repairs involving the subject components that were made prior to the buybacks. If additional documents are discovered, they will be provided in a supplemental response.

16. Produce two of each of the following:

- a. Exemplar samples of each design version of the front and rear latch assemblies including the unlatch actuators and actuator assemblies; and**
- b. Field-returned samples of the front and rear latch assemblies including the unlatch actuators and actuator assemblies that exhibit stuck or open unlatch actuators.**

There are two versions of the actuator assembly, including the front latch assembly, and one version of the rear latch assembly installed in the subject vehicles.

Enclosure 16a contains two exemplar samples of a new (unused) Harada actuator assembly and two new (unused) rear latch assemblies. The Valeo version of the front actuator assembly is no longer manufactured and there are none in GM stock.

Enclosure 16b contains two exemplar samples of field returned Harada version actuator assemblies, including the front latch assembly, and two field returned rear latch assemblies. These unlatch actuators do not exhibit a stuck or open condition.

Enclosure 16c contains two exemplar samples of field returned Valeo actuator assemblies including the front latch assembly. These unlatch actuators do not exhibit a stuck or open condition.

- 17. State the number of each component/assembly of the subject components 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). Include 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).

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 components is provided on the Att_1_CD, GM disk in the folder labeled "Q_17," refer to the Microsoft Excel file labeled, "Q_17_Part Sales."

GM does not offer any kits that have been released or developed for use in service repairs specifically related to the alleged defect. GM Service Parts does offer a replacement unlatch actuator kit that includes a replacement actuator and attaching hardware in addition to offering the actuator assembly.

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.

- 18. Produce 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 Power Sliding Door (PSD) system will open and close the side door(s) of the vehicle using switches inside the vehicle or the remote keyless entry (RKE) transmitter. The PSD will not open if the door is closed and latched when the transaxle has been shifted out of PARK.

When the vehicle is driven before the sliding door has power closed and latched and the audible warning chime has been ignored, the unlatched door may reverse open due to forces created by vehicle movement. Consequently, the condition described by customers as unintended or unexpected opening of the closed PSD when the vehicle is out of PARK is actually the result of driving away before the door is closed and latched.

The PSD system contains multiple safeguards to prevent the door from unlatching when the vehicle is in motion. In addition, there are multiple warnings and indicators designed into the PSD system to notify the driver that the door is not closed and latched when the driver shifts

from PARK (P) to a drive gear. The GM response to PE07-044 dated October 17, 2007, contains a detailed description of the safeguards and warnings designed into the PSD system. The response also identifies the causal or contributory factors, failure mechanisms and failure modes of the alleged defect.

GM has conducted extensive testing and validation of the PSD, analyzed and tested 26 returned parts, inspected numerous vehicles, conducted customer surveys and analyzed field reports and warranty claims. Many of the reported incidents of unintended or unexpected opening of the PSD when the vehicle is out of PARK are the consequence of driving away before the door is closed and latched, disregarding the audible warning chime, DIC door ajar message and illumination of the overhead courtesy lamp.

GM contacted 5 VOQ customers and 100% of them provided additional information indicating either the PSD did not open when the vehicle was out of PARK or they took the vehicle out of PARK before the door was completely closed.

GM's analysis of the warranty data provided in the GM response to PE07-044 indicates that replacement of the unlatch actuator or the actuator assembly are two of many repairs made by dealers to address a wide variety of PSD complaints. The data shows that 82 percent of the 1,259 unique VINs in the 1,318 regular warranty claims have multiple PSD repairs. Because of this frequency of multiple repairs and the absence of information about the condition of the actuators that were replaced, these warranty repairs do not indicate that customers experienced PSD openings because of stuck actuators.

GM continues to believe that this condition does not pose an unreasonable risk to motor vehicle safety because:

- The PSD system has successfully completed extensive validation testing without incident, including verification of: (1) the safeguards to prevent inadvertent unlatching of the door, and (2) the functions of warnings/indicators that the door is not latched.
- There are multiple warnings/indicators that the PSD is not closed and latched.
- GM has tested 26 unlatch actuators returned by dealers. All 26 functioned correctly and moved freely without irregularities.
- During this investigation GM has inspected 3 vehicles, the 3 vehicles inspected did not exhibit unintended or unexpected opening of the closed PSD when the vehicle was out of PARK.
- For over 12 years GM has assisted over 100 dealers with PSD service and has not identified a single vehicle in which the door unexpectedly or unintentionally opened when the vehicle was out of PARK, if the door was closed and latched when the vehicle was shifted from PARK (P).
- There is no defect trend related to the unlatch actuator and the unlatch actuator assembly.

* * *

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 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