



January 13, 2012

Scott Yon, Chief
Vehicle Integrity Division
Office of Defects Investigation
National Highway Traffic Safety Administration
1200 New Jersey Ave, SE, Room W46-409
Washington, DC 20590

N110342

NVS-212eer
PE11-037

Dear Mr. Yon:

This letter is General Motors (GM) response to your preliminary evaluation (PE11-037), dated January 6, 2012, to investigate potential risks involved from intrusion damage to the high voltage battery on model year 2011-2012 Chevrolet Volt vehicles manufactured by General Motors Company (GM), and requests certain information.

Your requests 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) **Date of manufacture;**
 - c) **Date warranty coverage commenced;**
 - d) **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 2007, or a compatible format, entitled "PRODUCTION DATA."

General Motors is providing the number of subject vehicles produced for sale or lease in the United States by make, model and model year in Table 1 below:

Make/Model	2011 MY	2012 MY	TOTAL
Chevrolet Volt	4,369	10,366	14,735

TABLE 1: CHEVROLET VOLT PRODUCTION

The GM production information requested in 1(a)-1(d) is provided on the Att_1_GM disk in the folder labeled "Q_01". Refer to the Microsoft Access 2007 file labeled "Q_01_PRODUCTION_DATA".



GM is providing the state where the vehicle was shipped in response to request 1d. For some of the subject vehicles, which have incomplete warranty files, the GM warranty system does not contain a warranty start date or state where the vehicle was shipped and, therefore, these fields are blank in the Microsoft Access 2007 file.

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;
 - b. Field reports, including dealer field reports, field engineering reports and test fleet complaint logs;
 - c. Reports involving an 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 component, property damage claims, consumer complaints, or field reports;
 - d. Property damage claims;
 - e. Third-party arbitration proceedings where GM is or was a party to the arbitration; and
 - f. Lawsuits, both pending and closed, in which GM is or was a defendant or codefendant.

For subparts "a" through "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 "c" through "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.

General Motors' search has found no reports that relate to or may relate to the alleged defect in the subject vehicles.

The sources that were searched and the last date the searches were conducted are tabulated in Table 2-1 below.

Source	Last Date Gathered
Customer Assistance Center	1/9/12
Technical Assistance Center	1/9/12
Field Information Network Database (FIND)	1/9/12
Field Product Report Database (FPRD)	1/9/12
Company Vehicle Evaluation Report (CVEP)	1/9/12
Captured Test Fleet (CTF)	1/9/12
Early Quality Feedback (EQF)	1/9/12
Legal/Employee Self Insured Services(ESIS)/Product Liability Claims/Lawsuits	1/9/12

TABLE 2-1: 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 fire or thermal event 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 2007, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

As noted in the response to request 2, General Motors' search has found no reports that relate to or may relate to the alleged defect in the subject vehicles.

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.

As noted in the response to request 2, General Motors' search has found no reports that relate to or may relate to the alleged defect in the subject vehicles.

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 or replacement 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. Whether the claim occurred subsequent to a recall repair;
- k. Concern stated by customer; and
- l. Comment, if any, by dealer/technician relating to claim and/or repair or replacement.

Provide this information in Microsoft Access 2007, or a compatible format, entitled "WARRANTY DATA."

General Motors' search has found no claims that relate to or may relate to the alleged defect in the subject vehicles.

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.

GM searched the Global Analysis and Reporting Tool (GART - regular warranty), the Motors Insurance Corporation (MIC - extended service contract claims), and

the Universal Warranty Corporation (UWC – extended service contract claims) databases for this response.

GM searched the GART – regular warranty and MIC extended service contract claims databases for the labor codes listed in Table 6-1 for any warranty claims that may be related to the alleged defect. Universal Warranty Corporation (UWC) does not use labor codes.

Labor Code	Description
N5800	DRIVE MOTOR BATTERY REPLACEMENT
N5821	BATTERY ENERGY CONTROL MODULE REPLACEMENT
N5823	DRIVE MOTOR GENERATOR BATTERY REPLACEMENT AND SHIPPING PRE

TABLE 6-1: LABOR CODES USED IN WARRANTY AND MIC SEARCH

GM then reviewed all of the Service Problem Cause Codes, Customer Service Complaint Codes and the Service Case Comment Text for all warranty claims within these labor codes. GM has found no claims that relate to or may relate to the alleged defect in the subject vehicles.

The subject vehicles are covered by a bumper-to-bumper new vehicle warranty for 3 years or 36,000 miles, the gas engine powertrain components are covered for 5 years or 100,000 miles and electric vehicle battery powertrain components for 8 years or 100,000 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 number of extended service contracts on the subject vehicles that have been sold by MIC and UWC as of December 31, 2011, regardless of status (in-force, expired, cancelled) is contained in Table 6-2.

	2011 MY	2012 MY	Total
MIC	564	532	1096
UWC	20	31	51
Total	584	563	1147

TABLE 6-2: MIC/UWC EXTENDED SERVICE COVERAGE CONTRACTS SOLD

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 request specifically includes any bulletins, advisories, informational documents, consumer correspondence, training documents or other documents or communications related to the subject vehicle Customer Satisfaction Program (CSP) that GM announced on Thursday, January 5, 2012.

Documents related to emergency response can be found on Att_1_GM disk; folder labeled "Q_07", subfolder "Emergency Response".

Documents related to post crash towing and storage can be found on Att_1_GM disk; folder labeled "Q_07", subfolder "Second Responder".

Documents related to GM Field Service Engineer post crash inspections can be found on Att_2_GM_CONF disk; folder labeled "Q_07", subfolder, "Field Service".

A draft of the service bulletin related to the Customer Satisfaction Program that GM announced on January 5, 2012, can be found on Att_1_GM disk in the folder labeled "Q_07", subfolder labeled "CSP".

8. Fully describe all assessments, investigations, analyses, field surveys, and/or evaluations (collectively, "actions") of in-service subject vehicle crashes that have occurred in the field (in consumer's use), including crashes where no intrusion, or vehicle fire, or thermal event occurred, that have been conducted, or are being conducted, 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. A summary of the subject and objective of the action;
- e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action;
- f. A summary of the findings and/or conclusions resulting from the action; and
- g. If GM conducted a field inspection or other evaluation of a subject vehicle crash, provide:
 - i) The date and location of the crash;
 - ii) The date that GM became aware of the crash;
 - iii) The date and location of the inspection;
 - iv) Number of injuries alleged;
 - v) Number of fatalities alleged;
 - vi) Photographs of the subject and/or other vehicles/objects involved in the crash; and
 - vii) Copies of any electronic data taken from the subject vehicle (e.g., EDR).

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.

GM is providing the requested responsive information on the ATT_2_GM_CONF disk in the folder labeled "Q_08_Summary".

9. Describe all subject vehicle side impact pole tests that GM has conducted that involved full vehicles tests on subject vehicles containing the repair described in the CSP GM announced on Thursday, January 5, 2012, or subject vehicles upgraded to an improved production condition intended to reduce subject component intrusion in a side impact crash, or were conducted on unmodified subject vehicles that were produced in the same time period as the vehicle NCAP tested at the MGA test facility on May 5, 2011, and for each test provide the following information:
- a. GM's test number or ID;
 - b. The type of test conducted (e.g., 50% ATD pole, or 5% ATD pole)
 - c. The date and location where the test was conducted;
 - d. The VIN of the vehicle tested;
 - e. The design level/build condition of the vehicle under test (unmodified, modified to the CSP/field fix level, modified to a new production level, etc);
 - f. The speed the test was conducted at;
 - g. The complete test results, including the data collected (dummy injury measurements, vehicle crash pulse, etc) and photographs taken;
 - h. Whether any damage occurred to the subject component;
 - i. Whether any leakage of battery coolant occurred;
 - j. Whether a fire or thermal event occurred; and
 - k. Any other noted items of interest.

GM's response to subparts "a" through "f" and subparts "h" through "k" is provided on Att_2_GM_CONF disk; folder labeled "Q_09", in the subfolder labeled "Test Summary".

The test result information requested in subpart "g" is provided on Att_2_GM_CONF disk; folder labeled "Q_09", in the subfolder labeled "Test Results".

10. Describe all modifications or changes made by GM in the design, construction, material composition, manufacture, or assembly of the subject vehicles, 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. A detailed description of the modification or change and how it affects or impacts the alleged defect;
 - b. The date or approximate date on which the modification or change was, or will be, incorporated into component or vehicle production;
 - c. The date the original unmodified component or design level was withdrawn from production;
 - d. The supplier of each modified component; and
 - e. The models and model years of vehicles affected by the modification.

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.

General Motors has not made any modifications or changes from start of production to date that may relate to the alleged defect.

Information for modifications which are planned within the next 120 days can be found on Att_2_GM_CONF disk; folder labeled "Q_10".

11. Describe in detail the contents of the service kit GM produced for remedying the subject vehicles as described in the CSP announced on Thursday, January 5, 2012 including:
- a. GM's part number(s) for the kit;
 - b. A list of the components provided in the kit;
 - c. The material specifications of each mechanical components provided in the kit;
 - d. The date the kit was, or will be, offered for sale or use; and
 - e. Provide one complete kit of parts, or other detailed information (drawings, photographs, etc) of the kit, for ODI assessment.

The requested information for subparts "a" through "c" is provided on Att_2_GM_CONF disk; folder labeled "Q_11".

GM anticipates that this kit will be offered for use beginning in February 2012; the kits are not yet available. Photographs and additional information on these kits can be found on Att_2_GM_CONF disk; folder labeled "Q_11" and on Att_1_GM disk in the folder labeled "Q_07", subfolder labeled "CSP".

* * *

This response is based on reasonable searches of General Motors (GM) locations where documents determined to be responsive to your request would ordinarily be found. As a result, the scope of this search did not include, nor could it reasonably include, "all of their past and present officers and employees, whether assigned to their principal offices or any of its field or other locations, including all of their divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or

indirectly (e.g., employee of a consultant) by or under the control of GM (including all business units and persons previously referred to), who are or, in or after 2005, 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,



M. Carmen Benavides, Director
Product Investigations and Safety Regulations

Attachments