



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

APR 7 2008

1200 New Jersey Avenue SE
Washington, DC 20590

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Gay P. Kent, Director
GM Product Investigations
General Motors Corporation
Mail Code 480-210-G11
30001 Van Dyke
Warren, MI 48090

NVS-213dlr
PE08-016

Dear Ms. Kent:

This letter is to inform you that the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) has opened a Preliminary Evaluation (PE08-016) to investigate allegations of excessive brake pedal effort after cold engine start in model year (MY) 2008 Pontiac Solstice and Saturn Sky vehicles equipped with 2.0L turbocharged engines and manufactured by General Motors Corporation, and to request certain information.

This office has received 50 complaints of excessive brake pedal effort in MY 2008 Pontiac Solstice and Saturn Sky vehicles with 2.0L turbocharged engines. ODI is aware of one crash that may have resulted from the alleged defect. A copy of each of the reports is enclosed for your information.

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

- **Subject vehicles:** all MY 2008 Pontiac Solstice and Saturn Sky vehicles equipped with 2.0L turbocharged engines that have been manufactured for sale or lease in the United States.
- **Subject system:** the brake power assist system, including all components and software associated with Optimized Hydraulic Braking (OHB), manufactured for use as original equipment or service parts for the subject vehicles.
- **Peer vehicles:** MY 2008 Pontiac Solstice and Saturn Sky vehicles with naturally aspirated engines; and all MY 2007 Pontiac Solstice and Saturn Sky vehicles.
- **GM:** General Motors Corporation, all of its past and present officers and employees, whether assigned to its principal offices or any of its field or other locations, including all of its divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and

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all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of GM (including all business units and persons previously referred to), who are or, in or after January 1, 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.
- **Alleged defect:** inadequate brake power assist following cold engine start up.
 - **Document:** "Document(s)" is used in the broadest sense of the word and shall mean all original written, printed, typed, recorded, or graphic matter whatsoever, however produced or reproduced, of every kind, nature, and description, and all non-identical copies of both sides thereof, including, but not limited to, papers, letters, memoranda, correspondence, communications, electronic mail (e-mail) messages (existing in hard copy and/or in electronic storage), faxes, mailgrams, telegrams, cables, telex messages, notes, annotations, working papers, drafts, minutes, records, audio and video recordings, data, databases, other information bases, summaries, charts, tables, graphics, other visual displays, photographs, statements, interviews, opinions, reports, newspaper articles, studies, analyses, evaluations, interpretations, contracts, agreements, jottings, agendas, bulletins, notices, announcements, instructions, blueprints, drawings, as-builts, changes, manuals, publications, work schedules, journals, statistical data, desk, portable and computer calendars, appointment books, diaries, travel reports, lists, tabulations, computer printouts, data processing program libraries, data processing inputs and outputs, microfilms, microfiches, statements for services, resolutions, financial statements, governmental records, business records, personnel records, work orders, pleadings, discovery in any form, affidavits, motions, responses to discovery, all transcripts, administrative filings and all mechanical, magnetic, photographic and electronic records or recordings of any kind, including any storage media associated with computers, including, but not limited to, information on hard drives, floppy disks, backup tapes, and zip drives, electronic communications, including but not limited to, the Internet and shall include any drafts or revisions pertaining to any of the foregoing, all other things similar to any of the foregoing, however denominated by GM, any other data compilations from which information can be obtained, translated if necessary, into a usable form and any other documents. For purposes of this request, any document which contains any note, comment, addition, deletion, insertion, annotation, or otherwise comprises a non-identical copy of another document shall be treated as a separate document subject to production. In all cases where original and any non-identical copies are not available, "document(s)" also means any identical copies of the original and all non-identical copies thereof. Any

document, record, graph, chart, film or photograph originally produced in color must be provided in color. Furnish all documents whether verified by GM or not. If a document is not in the English language, provide both the original document and an English translation of the document.

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

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

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

1. State, by model, engine, transmission (automatic or manual) and model year, the number of subject and peer vehicles GM has manufactured for sale or lease in the United States. Separately, for each subject and peer vehicle manufactured to date by GM, state the following:
 - a. Vehicle identification number (VIN);
 - b. Make;
 - c. Model;
 - d. Engine;
 - e. Transmission (automatic or manual);
 - f. Model Year;
 - g. Date of manufacture;
 - h. Date warranty coverage commenced; and
 - i. 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 2003, or a compatible format, entitled “PE08-016 PRODUCTION DATA.” See Enclosure, Data Collection Disc, for a pre-formatted table which provides further details regarding this submission.

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 and the 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; and
 - e. Third-party arbitration proceedings where GM is or was a party to the arbitration; and
 - f. Lawsuits, both pending and closed, in which GM is or was a defendant or codefendant.

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

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

3. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:
- a. GM's file number or other identifier used;
 - b. The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);
 - c. Vehicle owner or fleet name (and fleet contact person), address, and telephone number;
 - d. Vehicle's VIN;
 - e. Vehicle's make, model and model year;
 - f. Vehicle's mileage at time of incident;
 - g. Incident date;
 - h. Report or claim date;
 - i. Whether the report or claim date is after TSB 07-05-25-007 was performed (if it was performed).
 - j. Whether a crash is alleged;
 - k. Whether property damage is alleged;
 - l. Number of alleged injuries, if any; and
 - m. Number of alleged fatalities, if any.

Provide this information in Microsoft Access 2003, or a compatible format, entitled "PE08-016 REQUEST NUMBER TWO DATA." See Enclosure, Data Collection Disc, for a pre-formatted table which provides further details regarding this submission.

4. Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method GM used for organizing the documents.
5. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by GM to date that relate to, or may relate to, the alleged defect in the subject vehicles and the 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 (TSB) or customer satisfaction campaign. This should include TSB 07-05-25-007.

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

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

Provide this information in Microsoft Access 2003, or a compatible format, entitled "PE08-016 WARRANTY DATA." See Enclosure, Data Collection Disc, for a pre-formatted table which provides further details regarding this submission.

6. Describe in detail the search criteria used by GM to identify the claims identified in response to Request No. 5, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide a list of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to the alleged defect in the subject vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by GM on the subject vehicles (i.e., the number of months and mileage for which coverage is provided and the vehicle systems that are covered). Describe any extended warranty coverage option(s) that GM offered for the subject vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.
7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that GM has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or

communications, with the exception of standard shop manuals. Also include the latest draft copy of any communication that GM is planning to issue within the next 120 days.

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

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action.

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

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

10. Provide the following information regarding the braking performance of the subject vehicles and the peer vehicles. For the subject vehicles, provide the information for all modes of operation (i.e., low vacuum mode and normal mode):
 - a. Provide detailed descriptions of the control logic used in the production release calibration of the OHB system of the subject vehicles and after any changes in the control algorithm – include all sensor inputs and all set points for changing modes of operation;

- b. Provide graphs showing (1) brake line pressure as a function of brake pedal force; (2) brake pedal travel as a function of pedal force; and (3) vehicle deceleration as a function of brake line pressure;
 - c. For each of the graphs provided in the responses to 10.b provide GM's assessment of the typical range of operation for braking events at low-speeds (≤ 10 mph), such as in driveways or parking lots. Provide this information for flat, level surfaces and for inclined surfaces (e.g., a driveway with a 15% grade or any and all other grades for which GM has this or other information);
 - d. Provide graphs plotting brake line hydraulic pressure as a function of pedal effort for (1) the subject vehicles with and without OHB functioning and (2) for the peer vehicles;
 - e. The range in times after engine shut-off required for brake booster vacuum to drop below the level at which the OHB mode is activated; and
 - f. GM's assessment of the time required, for the subject vehicles just after engine start-up to achieve full vacuum level.
11. Describe all human factors, or other types of, studies or analyses related to the effects of changing the brake pedal force required to achieve a given vehicle deceleration during different modes of brake system operation – especially on initial brake applications immediately after starting the vehicle. Include the following factors in the description and provide copies of all documents related to all such studies or analyses:
- a. Amount of increased effort required to initiate braking (i.e., produce hydraulic pressure at the wheels) for the subject vehicles in normal braking mode (with sufficient booster vacuum) and in OHB mode (state answer for all calibrations of the OHB system);
 - b. Whether all drivers will perceive and respond to the change in system response in the same way (e.g., by pressing harder on the brake pedal);
 - c. The range in reaction times for drivers to recognize the differences in system response and achieve the necessary pedal force; and
 - d. The effects of all of the above on stopping distances, particularly during low-speed driveway and parking lot type braking maneuvers.
12. Furnish GM's assessment of the alleged defect in the subject vehicle, including:
- a. Differences in field experience, measured by complaint rates, between subject vehicles with automatic and manual transmissions
 - b. An explanation for the differences described in 12.a;
 - c. Differences in field experience, measure by complaint rates adjusted for exposure, between subject vehicles produced with the original OHB calibration and with any recalibrations;
 - d. The safety consequences associated with the factors discussed in request 11; and
 - e. The reports included with this inquiry, including the crash alleged in VOQ 10208536.

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 \$6,000 per day, with a maximum of \$16,375,000 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 71 Fed. Reg. 28279 (May 16, 2006)). This includes failing to respond to ODI information requests.

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

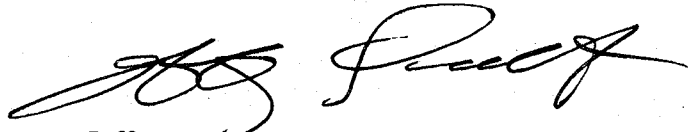
GM's response to this letter, in duplicate, together with a copy of any confidentiality request, must be submitted to this office by May 23, 2008. **All business confidential information must be submitted directly to the Office of Chief Counsel as described in the following paragraph and should not be sent to this office.** In addition, do not submit any business confidential information in the body of the letter submitted to this office. Please refer to PE08-016 in GM's response to this letter and in any confidentiality request submitted to the Office of Chief Counsel. If GM finds that it is unable to provide all of the information requested within the time allotted, GM must request an extension from me at (202) 366- 5207 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, to the Office of Chief Counsel (NCC-111), National Highway Traffic Safety Administration, Room W41-227, 1200 New Jersey Avenue, S.E., Washington, D.C. 20590. GM is required to **submit two copies of the documents containing allegedly confidential information (except only one copy of blueprints) and one copy of the documents from which information claimed to be confidential has been deleted.** Please remember that the word "CONFIDENTIAL BUSINESS INFORMATION" must appear at the top of each page containing information claimed to be confidential, and the information must be clearly identified in accordance with 5 U.S.C. § 512.6. If you submit a request for confidentiality for all or part of your response to this IR, that is in an electronic format (e.g., CD-ROM), your request and associated submission must conform to the new requirements in NHTSA's Confidential Business Information Rule regarding submissions in electronic formats (49 CFR 512.6(c)). *See* Federal Register, volume 72, page 59434 (October 19, 2007).

Please send email notification to Derek Rinehardt (derek.rinehardt@dot.gov) and to ODI_IRresponse@dot.gov when GM sends its response to this office and indicate whether there is confidential information as part of GM response.

If you have any technical questions concerning this matter, please call Derek Rinehardt of my staff at (202) 366-3642.

Sincerely,



Jeffrey L. Quandt, Chief
Vehicle Controls Division
Office of Defects Investigation

Enclosure, one CD ROM titled Data Collection Disc containing four files:

PE08-016 PRODUCTION DATA
PE08-016 REQUEST NUMBER TWO DATA
PE08-016 WARRANTY DATA
PE08-016 VOQs