



U.S. Department
of Transportation
National Highway
Traffic Safety
Administration

SEP - 8 2003

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

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Lyndon R. Lie, Director
Product Investigations
General Motors Corporation
Mail Code 480-106-304
30500 Mound Road
Warren, MI 48090-9055

NVS-213cat
EA02-031

Dear Mr. Lie:

This letter is to request additional information to assist the Office of Defects Investigation (ODI) in its investigation of allegations that Electronic Column Locks have failed to unlock or inadvertently locked while driving in model year (MY) 1997 through 2004 Chevrolet Corvette vehicles manufactured by General Motors Corporation (GM). This letter is intended to both update and consolidate certain information submitted by GM during PE99-066, PE02-054, and in the March 28, 2003 response to this investigation.

This office has received 256 reports that either the:

1. Electronic Column Lock fails to unlock; or the
2. Electronic Column Lock inadvertently locks

in MY 1997 - 2004 Chevrolet Corvette vehicles. See below for definitions related to these two conditions. 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 1997 through 2004 Chevrolet Corvette vehicles manufactured for sale or lease in the United States.
- **Subject component:** all Electronically Locking Steering Columns and Control Systems manufactured for use as original equipment or replacement parts in the subject vehicles.
- **Failure to Unlock:** the electronic column locking system does not unlock the steering column upon vehicle startup.



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- **Inadvertent Lock:** the electronic column locking system locks the steering column while driving.
- **ECL:** The Electronic Column Lock module of the subject component.
- **PZM:** the component of the electronic locking column known as the Passenger Zone Module. Also known or referred to as the Body Control Module (BCM).
- **DIC:** the Driver Information Center, which can display messages on the instrument panel of the subject vehicles.
- **GM:** General Motors Corporation, all of their past and present officers and employees, whether assigned to their principal offices or any of their 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 January 1st, 1992, 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:** the alleged defect includes any failure involving either of the following conditions:
 - o Electronic Column Lock fails to unlock.
 - o Electronic Column Lock inadvertently locks.
- **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 the manufacturer 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. The responses to requests 1 through 6 should be comprehensive, including material submitted in response to prior information requests in PE99-066, PE02-054, and this investigation. For item 7, include any documents that relate to the subject component as described in this letter. These items may supplement any previous submissions.

1. State, by 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. Model Year;
 - c. Transmission;
 - d. Date of manufacture;
 - e. Date warranty coverage commenced; and
 - f. 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 EA02-031." See Enclosure 1, Data Collection Disc, for a pre-formatted table that 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, each category of the alleged defect in the subject vehicles:
 - a. Consumer complaints, including those from fleet operators;
 - b. Field reports, including dealer field reports;
 - c. Reports involving a crash, injury, or fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;
 - d. Property damage claims;
 - 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 f and g, 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 model year;
 - f. Vehicle's mileage at time of incident;
 - g. Incident date;
 - h. Report or claim date;
 - i. Whether a crash is alleged;
 - j. Whether property damage is alleged;
 - k. Number of alleged injuries, if any;
 - l. Number of alleged fatalities, if any; and
 - m. Whether the report includes allegations of "Inadvertent Locking;"
 - n. Whether the report includes allegations of "Failure to Unlock;"
 - o. Whether the allegations were investigated by, or for, GM (this includes any inspections and other analyses of the vehicle);
 - p. Whether the vehicle was involved in a "Buy Back" from the customer;
 - q. A summary of the allegations; and
 - r. A summary of GM's assessment of the allegations.

Provide this information in Microsoft Access 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA EA02-031." See Enclosure 1, Data Collection Disc, for a pre-formatted table that 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 the following categories:
 - a. Allegation of "Inadvertent Locking" and a crash;
 - b. Allegation of "Inadvertent Locking" and an injury;
 - c. Allegation of "Inadvertent Locking" and a fatality;
 - d. Allegation of "Inadvertent Locking" without a crash, an injury, or a fatality;
 - e. Allegation of "Failure to Unlock" and a crash;
 - f. Allegation of "Failure to Unlock" and an injury;
 - g. Allegation of "Failure to Unlock" and a fatality; and
 - h. Allegation of "Failure to Unlock" without a crash, an injury, or a fatality.

5. State, by model year, a total count for all of the following categories of claims, collectively, that have been paid by GM to date that relate to, or may relate to, the alleged defect in the subject vehicles: warranty claims; extended warranty claims; claims for good will services that were provided; field, zone, or similar adjustments and reimbursements; and warranty claims or repairs made in accordance with a procedure specified in a technical service bulletin or customer satisfaction campaign.

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

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

Provide this information in Microsoft Access 2000, or a compatible format, entitled "WARRANTY DATA EA02-031." See Enclosure 1, Data Collection Disc, for a pre-formatted table that 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 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) related to the alleged defect that GM offered for the subject vehicles and state by option and model year, the number of vehicles that are covered under each such extended warranty.

7. 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.

Include in your response to this request all material related to GM's inspections and other analyses of incident vehicles (e.g., copies of all checklists, service history research, interviews, and notes.) Also, provide a detailed description of all efforts by GM to identify and investigate incidents of Inadvertent Locking of the ECL while driving. Coordinate with Ms. Cheryl Tuosto of my staff to agree on a process for promptly notifying ODI whenever GM learns of a new incident of Inadvertent Locking of the ECL while driving.

8. Describe how the Powertrain Control Module (PCM) determines if the subject vehicle is moving when the subject component experiences a failure to unlock, and the Passenger Zone Module (PZM) commands the PCM to inhibit vehicle motion by stalling the engine when the vehicle speed reaches 1 to 2 mph. Describe how the PCM handles failures in the sensors or parameters that are used to determine vehicle motion, and what redundancies for detecting vehicle motion are designed into the system.
9. Describe how the subject component would respond to a permanent or semi-permanent "Short to Ground" in the "Key Out of Ignition Switch" circuit (see connections J2-C6 and J3-B8). The circuit in question includes any and all electrical circuits or wiring internal or external to the PZM. Include the following information in the description:
 - a. Any fault codes that are set or stored,
 - b. Any warning messages that are displayed on the DIC, and
 - c. An explanation as to whether or not the ECL will continue to function normally and why.

Provide separate responses for each model year and version of the PZM hardware/software if they are different.

10. For the subject vehicles that were involved in alleged Inadvertent Lock incidents at speeds greater than 20 mph, and subsequently investigated by GM, state whether or not the "Key Out of Ignition Switch" circuit was tested for a "Short to Ground" condition. In addition, list all subject vehicles, by VIN, that were inspected for this condition, regardless of whether the vehicle was inspected for Inadvertent Lock or Failure to Unlock of the ECL, and describe their respective results.

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 \$15 million for a related series of violations, for failing or refusing to perform an act required under 49 U.S.C. § 30166. 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 October 30, 2003. Please refer to EA02-031 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. Jeffrey Quandt 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, to the Office of Chief Counsel (NCC-113), National Highway Traffic Safety Administration, Room 5219, 400 Seventh Street, S.W., Washington, D.C. 20590. GM is required to submit two copies of the documents containing allegedly confidential

information (except only one copy of blueprints) and one copy of the documents from which information claimed to be confidential has been deleted.

If you have any technical questions concerning this matter, please call Cheryl Tuosto of my staff at (202) 366-1869.

Sincerely,

A handwritten signature in black ink, appearing to read 'K. DeMeter', with a long horizontal line extending to the right.

Kathleen C. DeMeter, Director
Office of Defects Investigation
Enforcement

Enclosure: One CD ROM titled Data Collection Disc containing three files