



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

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

MAY 21 2004

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Mike McKale
Manager Product Government Affairs
Delphi Saginaw Steering Systems
5825 Delphi Drive
Troy, MI 48098-2815

NVS-214njs
EA04-012

Dear Mr. McKale:

The Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) has opened an Engineering Analysis (EA04-012) with General Motors Corporation (GM) to investigate allegations of Delphi manufactured hydraulic pump failures that are occurring in vehicles equipped with the Hydro-Boost system. Hydraulic pumps used in the Hydro-Boost system control both the power steering and brake booster systems for Model Year (MY) 2000-2004, 2500 and 3500 series vehicles manufactured by the General Motors Corporation.

ODI's preliminary investigation (PE04-004) began in January 2004, based on 19 complaints of alleged hydraulic pump shaft failures. GM's response has led ODI to inquire further and initiate a test program to examine the causes of those failures. Initially, the investigation focused on all three-quarter and one-ton vehicles for model year (MY) 2000-2002 vehicles. After reviewing the PE response, ODI has expanded the population to include MY 2003-2004 vehicles that use a Hydro-Boost system. GM's PE response was limited to pump failures that resulted from fracture of the pump shaft. ODI has reason to believe there may be multiple failure modes.

ODI is requesting information from Delphi, as the component supplier of the hydraulic pump and hydro-boost components. Unless otherwise stated in the text, the following definitions apply to these information requests:

- **Subject vehicles:** all MY 2000-2004 Chevrolet and GMC 2500 and 3500 series vehicles with a Hydro-Boost system manufactured for sale or lease in the United States.
- **Subject component:** all hydraulic pumps and/or boosters used in the brake and steering systems installed on the subject vehicles.



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- **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 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, 1998, 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.

- **Delphi:** Delphi Corporation, all of its past and present officers and employees, whether assigned to its principal offices or any of its field or other locations, including all of its divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of Delphi (including all business units and persons previously referred to), who are or, in or after January 1, 1998, 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:** any failure, malfunction or otherwise unsatisfactory performance of the hydraulic pump, resulting in a loss or reduction of power assist for steering and braking on subject vehicles.

- **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 Delphi, 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 Delphi has previously provided a document to ODI, Delphi 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 Delphi's response to each request, identify the source of the information and indicate the last date the information was gathered.

1. By model and model year, state the number of each of the following that Delphi has sold to GM or to other parties that may be used in the subject vehicles:
 - a. Subject component, by part number, and
 - b. Any kits that have been released, or developed, for use in service repairs to the subject component/assembly.

2. State, by subject component part number, a total count for all of the following categories of claims, collectively, that have been paid by Delphi or that, to Delphi's knowledge, were paid by any vehicle manufacturer 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, if known:

- a. Delphi's claim number;
- b. Vehicle owner or fleet name (and fleet contact person) and telephone number;
- c. VIN of vehicle component was installed in;
- 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. Comments, 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." See Enclosure 1, Data Collection Disc, for a pre-formatted table which provides further details regarding this submission.

3. Describe in detail the search criteria used by Delphi to identify the data identified in response to Request No. 2, including communications (e.g. correspondence and e-mail messages) from vehicle manufacturers regarding the subject component and the alleged defect. Provide a list of the databases or other information searched or relied on by Delphi in locating the above data. State whether Delphi offered vehicle manufacturers warranty, indemnification, or other

coverage for failures of the subject components. If the received data originated from a source outside of Delphi, please describe that data and their source.

4. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject components, that Delphi or, to the extent of Delphi's knowledge, any vehicle manufacturer, 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 Delphi is planning to issue within the next 120 days.
5. 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 component that have been conducted, are being conducted, are planned, or are being planned by Delphi, or, to the extent of Delphi's knowledge, by any vehicle manufacturer. 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.

6. Provide a copy of the results from any and all analyses of failed pumps that Delphi has inspected. Also provide a copy of all communications that transpired due to each analysis. Provide any conclusions or actions that were taken as a result of each analysis.
7. By part number, provide performance curves, such as those illustrating the relationships of input, output, efficiency, flow, brake pedal and steering effort, and other related performance parameters of the subject components under varying conditions, as well as all supporting data for all subject components.
8. Describe all modifications or changes made by, or on behalf of, Delphi in the design, material composition, material supply, manufacture, or quality control of the subject component, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject components. 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 the subject component's production;
- b. A detailed description of the modification or change;
- c. The reason(s) for the modification or change;
- d. The part numbers (service and engineering) of the original component;
- e. The part number (service and engineering) of the modified component;
- f. Whether the original unmodified component was withdrawn from production and/or sale, and, if applicable, its withdrawal date and the status of any remaining inventory;
- 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 Delphi is aware of which may be incorporated into vehicle production within the next 120 days.

9. For all MY 1995-1999 vehicles using the subject components or their predecessors, provide all modifications or changes made in the design, material composition, material supply, manufacture, or quality control of the subject components or their predecessors, which relate to, or may relate to, the alleged defect in the subject components. 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 product production;
 - b. A detailed description of the modification or change;
 - c. The reason(s) for the modification or change;
 - d. The part numbers (service and engineering) of the original component;
 - e. The part number (service and engineering) of the modified component;
 - f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when? If it was withdrawn, were inventories purged;
 - 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.
10. Provide the design criteria used by Delphi to design the pumps. These criteria should include, but are not limited to, information concerning technical specifications developed by, or on behalf of, Delphi, the intended use of the hydraulic pumps, durability and service life issues, anticipated failure modes, performance parameters specified by vehicle manufacturers, and anticipated vehicle applications for the subject components.
11. State the specific design criteria provided by GM to Delphi to design, manufacture, and/or specify the subject components used in the subject vehicles.
12. Provide a list of all vehicle manufacturers (other than GM) for whom Delphi supplied steering hydraulic pumps or Hydro-Boost systems for MY 2000-2004, inclusive. By population, for the three largest vehicle manufacturers, provide the following information:

- a. the criteria, such as those criteria described in Question 10, that were used to design and/or specify the pump to the application;
- b. the performance differences between the hydraulic pump used in the Hydro-Boost system employed in the subject vehicles and the hydraulic pumps used in the vehicles of the three largest (by population) Delphi-supplied vehicle manufacturers;
- c. the quantity of units supplied by Delphi listed according to vehicle manufacturer, model, and MY; and
- d. answer questions 2a-2k as it applies to each of the three vehicle manufacturers.

13. Furnish Delphi's assessment of the alleged defect in the subject vehicle, 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; and
- f. The reports included with this inquiry.

This letter is being sent to Delphi 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. Delphi's failure to respond promptly and fully to this letter could subject Delphi 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 Delphi 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, Delphi does not submit one or more requested documents or items of information in response to this information request, Delphi 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.

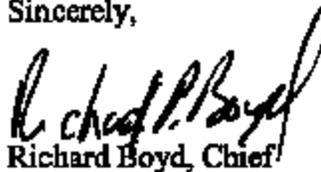
Delphi's response to this letter, in duplicate, together with a copy of any confidentiality request, must be submitted to this office by **July 16, 2004**. Please refer to EA04-012 in Delphi's response to this letter. If Delphi finds that it is unable to provide all of the information requested within the time allotted, Delphi must request an extension from me at (202) 366-4933 no later than five business days before the response due date. If Delphi 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 Delphi then has available, even if an extension has been granted.

If Delphi 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, Delphi 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. Delphi 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 Nate Seymour of my staff at (202) 366-6965.

Sincerely,



Richard Boyd, Chief

Medium & Heavy Duty Vehicle Division
Office of Defects Investigation

Enclosure 1, one CD ROM titled Data Collection Disc containing one file

