



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

NOV 20 2006

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

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Julie Bade
Technical Manager, Safety Systems Engineering
Delphi Corporation - Electronics & Safety
M/C 483.400.416
5725 Delphi Drive
Troy, MI 48098-2815

NVS-212mj1
PE06-045

Dear Ms. Bade:

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 (PE06-045) to investigate the potential for side curtain air bag failures on model year (MY) 2006 Dodge Durango vehicles. DaimlerChrysler Corporation has informed this office that Delphi Corporation (Delphi) is the supplier of the side curtain air bags in the MY 2006 Dodge Durango vehicles. As part of the investigation, this letter requests certain information from Delphi.

NHTSA's Office of Vehicle Safety Research is currently conducting an ejection mitigation test program. More than a dozen vehicle models equipped with side curtain air bags, including the MY 2006 Dodge Durango, are included in the test program. As part of the test procedure, the headliner in the test vehicle is removed prior to testing and the side curtain air bag is deployed externally.

In three out of 35 tests conducted on the Durango, the metal gas-distribution tube (or diffuser tube) for the side curtain air bag fractured during deployment and the air bag failed to inflate properly. In addition, the broken diffuser tube ruptured the air bag as it dropped down. All three fractures occurred at the same location along the diffuser tube and at one of the triangular holes (not at any of the round holes in the tube). There have been no similar failures or any other catastrophic failures of side curtain air bags in seven other vehicle models tested to date. Also, ODI is not aware of any real-world failure reports describing a failure on a MY 2006 Durango vehicle similar to that observed in the above mentioned tests.

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

- **Subject vehicles:** All MY 2004 through 2007 Dodge Durango vehicles equipped with side curtain air bags.



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- **Subject components:** Diffuser tubes in the side curtain air bag system.
- **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 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 Delphi (including all business units and persons previously referred to), who are or, in or after 2002, 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 or fracture of the subject component, or allegation of any improper deployment of the side curtain air bag that could have been caused by a fracture of the subject component during deployment; e.g., air bag failed to inflate, air bag was ruptured, or a metal (diffuser) tube was exposed.
- **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 Delphi 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. Describe in detail Delphi's quality control system related to the manufacture, assembly and packaging of the subject components. This should include, but is not limited to, how a lot of diffuser tubes and the associated raw materials are defined, how the subject components are sampled and tested, how the tools/machines that produce the subject components are calibrated and tested, and what records are kept.
2. Provide copies of all documents related to all production records and quality control tests that relate to, or may relate to, the following three side curtain air bag assemblies in which the diffuser tube fractured during NHTSA tests:

	1	2	3
Manufacturer Diffuser Part No.	Delphi 16911465 L.H.	Delphi 16911465 L.H.	Delphi 16911465 L.H.
Diffuser Tube Date of Build	2S 30/03/2006 XX:XX	2S 14/03/2006 22:04	2S 12/06/2006 19:27
Country of Manufacture Diffuser Tube Other Nos.	Mexico 812526762	Mexico 812526762	Mexico 812526762
Canister Part No.	TQQCB12560002J	TQQCB100600048	TQQCB17060006E
Canister Tube Other No.	P52029345AD	P52029345AD	P52029345AD

Please explain whether or not the production and quality control data indicate that the failed subject components were produced correctly. For comparison, provide a discussion and summaries of production and quality control data for the subject components that were produced 30 days before and 30 days after the failed subject components were produced.

3. 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, Delphi. 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. 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.

4. Provide the material specifications for the diffuser tubes in the subject vehicles, including:
 - a. The material properties;
 - b. Tensile properties;
 - c. Any material testing;
 - d. Material supplier history and changes in suppliers, if any;
 - e. The source of the raw materials; and
 - f. Any concerns, returns, and history of any nonconforming material.
5. Describe the manufacturing process to create the diffuser tubes in the subject vehicles, including:
 - a. The rolling of the steel;

- b. The mapping of the wall thickness;
 - c. The nominal thickness;
 - d. The minimum thickness;
 - e. The location of the minimum thickness;
 - f. The welding of the seam;
 - g. The electrostatic coating or galvanization process;
 - h. The temperature control during the forming process;
 - i. Cold worked or hot worked;
 - j. The heat treatment before or after the creation of the holes;
 - k. The quality tracking system;
 - l. Any problems noted during production; and
 - m. Dynamic deployment FEA and PFMEA studies including the location of the attachment fasteners.
6. Describe the manufacturing process to create the triangle and round holes in the diffuser tubes in the subject vehicles, including:
- a. Photographs of the process in the production line;
 - b. Tool change requirements;
 - c. Tool life cycles;
 - d. Tool cut sheets;
 - e. Reasons for using the two types of holes; and
 - f. Design precautions to prevent problems at the stress concentration of the triangle holes.
7. Produce copies of reports and documents related to all tests (e.g., pre-production, production, design validation, product validation, etc.) related to the diffuser tube in the subject vehicles including all side curtain air bag deployment tests associated with the subject vehicles. For each test, include information concerning the test conditions:
- a. With and without the installation of the headliner;
 - b. With variations in the mounting points; and
 - c. On sled buck or vehicle body.
8. Produce copies of reports and documents not included in Delphi's response to Request Number 7 above and related to all sled and crash tests (developmental and certification) that involved side curtain air bag deployments in the subject vehicles.
9. Describe all modifications or changes made by, or on behalf of, Delphi in the design, material composition, manufacture, process control, quality control, supply, installation, or packaging 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. 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 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;
- 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.

10. Furnish Delphi'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; and
- 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.

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 \$16,050,000 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.

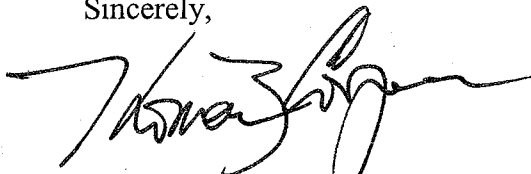
Delphi's response to this letter, in duplicate, together with a copy of any confidentiality request, must be submitted to this office by January 12, 2007. Please refer to PE06-045 in Delphi's response to this letter. If Delphi finds that it is unable to provide all of the information requested within the time allotted, Delphi must request an extension from me at (202) 366-5218 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, as amended (69 Fed. Reg. 21409 et seq; April 21, 2004), 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 Mr. Michael Lee of my staff at (202) 366-5236.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas Z. Cooper", with a long, sweeping horizontal line extending to the right.

Thomas Z. Cooper, Chief
Vehicle Integrity Division
Office of Defects Investigation