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June 30, 2006

DaimlerChrysler Corporation

Stephan J. Speth

Director
Vehicle Compliance & Safety Affairs

Mr. Thomas Z. Cooper
Office of Defects Investigation
National Highway Traffic Safety Administration
U.S. Department of Transportation
400 Seventh Street, SW
Washington, D.C. 20590

OFFICE OF DEFECTS INVESTIGATION
NHTSA

Dear Mr. Cooper:

Reference: NVS-212MBS; RQ06-006

This document contains DaimlerChrysler Corporation's ("DCC") response to the referenced inquiry regarding 2004 and 2005 model year Dodge Durango vehicles that have been manufactured for sale or lease in the United States. By providing the information contained herein, DCC is not waiving its claim to attorney work product and attorney-client privileged communications.

NHTSA has initiated this recall query inquiring whether the corrective action undertaken by DCC in its December 2003 voluntary recall 03V528 has adequately addressed an issue that DCC discovered as a result of its internal review of field data. That recall pertained to Durango vehicles built between July and early December of 2003 and involved a condition that led to instrument cluster fires. The corrective action undertaken by DCC was to remove a redundant surface mounted capacitor (C293) from the instrument cluster circuit board that may have been damaged during assembly of the circuit board.

For reasons discussed in the response, DCC is convinced that the December 2003 corrective action eliminated the cause of the instrument cluster fires related to the C293 capacitor that occurred in this particular population of Durango vehicles. DCC is aware of a small number of instrument cluster fires that do not appear related to the C293 capacitor and has opened an internal investigation to understand these reports. DCC will continue to investigate the cause of these fires and will update NHTSA at the conclusion of the investigation.

Sincerely,



for Stephan J. Speth

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Attachment and Enclosures

OFFICE OF DEFECTS INVESTIGATION
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1. **State, by model and model year, the number of subject vehicles DCX has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by DCX, state the following:**
 - a. **Vehicle identification number (VIN);**
 - b. **Make;**
 - c. **Model;**
 - d. **Model Year;**
 - e. **Date of manufacture;**
 - f. **Date warranty coverage commenced; and**
 - g. **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."

- A1. The chart below lists the 2004 through 2005 model year ("MY") Dodge Durango sport utility vehicles that have been manufactured by DaimlerChrysler Corporation ("DCC") for sale or lease in the United States.

Model Year	2004	2005
Volume	129,967	114,642
Total Volume = 244,609		

The specific data requested in items a. through g. is provided in Enclosure 1 as a Microsoft Access 2000 table, titled "PRODUCTION DATA".

2. **State the number of each of the following, received by DCX, or of which DCX is otherwise aware, which relate to, or may relate to, 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. **Reports involving a fire, 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;**
 - e. **Property damage claims; and**
 - f. **Third-party arbitration proceedings where DCX is or was a party to the arbitration; and**

g. Lawsuits, both pending and closed, in which DCX is or was a defendant or codefendant.

For subparts "a" through "e" 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 "g" provide a summary description of the alleged problem and causal and contributing factors and DCX's assessment of the problem, with a summary of the significant underlying facts and evidence. For items "c" 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.

A2. The following summarizes the non-privileged reports identified by DCC that relate to, or may relate to, the alleged condition ("smoke, fire or melting of the instrument cluster") for the subject components ("the C293 capacitor/instrument cluster circuit board") in the subject vehicles ("all MY 2004-2005 Dodge Durango sport utility vehicles manufactured for sale or lease in the United States"). DCC has conducted a reasonable and diligent search of records kept in the ordinary course of business for such information. All information was collected through May 5, 2006 unless otherwise noted.

- a. There are a total of 41 customer complaints for 41 unique VINs that may relate to the alleged condition. These customer complaints are also referred to as a Customer Assistance Inquiry Requests ("CAIRs").
- b. There are a total of 96 field reports for 79 unique VINs that may relate to the alleged condition, based on the limited text contained within the reports and no associated photographs.
- c. There are no reports alleging crash or fatality responsive to this investigation. There are two reports alleging three minor injuries responsive to this investigation.
- d. There are two reports involving a fire, based on claims against DCC alleging injuries. There are no reports or notices alleging fatality.
- e. There are seventeen property damage claims responsive to this investigation.
- f. There are no third-party arbitration proceedings where DCC is, or was, a party to the arbitration, that are responsive to this investigation.
- g. There are three lawsuits and forty legal claims involving DCC with allegations of overheating, smoke, or fire emanating from the instrument panel.

MY	Customer Complaints	Field Reports	Claims / Lawsuits
2004	40	88	36/3
2005	1	8	4/0

Total Unique VINs that may be related to the alleged condition = 124

- 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:**
- DCX'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 crash is alleged;**
 - Whether a fire 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 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA"

- A3. The information requested in items a. through m. is provided in Enclosure 2 as part of a Microsoft Access 2000 table titled "REQUEST NUMBER TWO DATA."
- 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 DCX used for organizing the documents.**
- A4. Copies of all documents within the scope of Question No. 2 are provided in Enclosure 3, titled "FIELD DATA."
- 5. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by DCX 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, customer satisfaction campaign or recall (in your response, specifically identify all claims for recall 03V528).

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

- a. DCX'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."

- A5. There are no labor operation codes within the DCC warranty claim system that apply to any type of vehicle fire. The labor operation code for cluster replacement is 08451001. There are no applicable fault codes, so none are provided. DCC's warranty system is designed to compensate dealers for repairs made, and cannot be reliably used to determine trends related to any alleged condition. It is impossible to determine the reason for each particular warranty claim. There are other random issues that are not related to an alleged condition, yet may still trigger replacement of the subject components. Clusters can be replaced for a number of different reasons such as cosmetic imperfections, etc.

Reports of alleged fire events are generally received by the DCC Office of the General Counsel, the DaimlerChrysler Customer Assistance Center (as a CAIR) or from other DCC field organizations. If an alleged fire event comes to the attention of a dealer technician during a warranty repair, the dealership is required to notify DCC and a CAIR is created. These CAIRs, to the extent they are responsive to this investigation, are being submitted in response to Questions 2, 3 and 4.

Labor Operation #	2004 MY	2005 MY	Total
08451001	3,240	1,287	4,527

The warranty data requested in items a. through k. is provided as a Microsoft Access table in Enclosure 4, titled "WARRANTY DATA".

The following labor operation (LOP) numbers are specific to recall C43. Recall C43 involved 27,586 Dodge Durango vehicles sold or leased in the United States. As of June 2006, 88% of the vehicles involved in C43 have been repaired.

Recall C43 Labor Operation #	
08C43182—remove capacitor	23, 779
08C43183—replace cluster	495
Total	24, 274

6. Describe in detail the search criteria used by DCX 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 DCX 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 DCX 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.

A6. There are two unique labor operations relative to the recall C43 (08C43182 and 08C43183). Data from the recall is contained in the chart above responsive to Request Number 5. There is one labor operation relative to cluster replacement (08451001). There are no fault codes relative to smoke, fire or melting as identified in the description of the defect. The search did not specify failure codes, so by default the system returns all that match the 8 digit labor operation number.

The standard warranty offered on all 2004 through 2005 MY Dodge Durango vehicles was 36 months / 36,000 miles. There was no extended warranty coverage option related specifically to the subject component. Owners may have purchased additional warranty coverage through third-party providers not affiliated with DCC. This warranty coverage is not available to DCC and is not included with this response.

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 DCX 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 DCX is planning to issue within the next 120 days.

A7. Recall C43 was released in December of 2003. A copy of the dealer service instructions and owner notification letter is included in Enclosure 5, titled "RECALL DOC C43".

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, DCX. 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.

A8. Analysis completed by DCC - Huntsville Electronics as part of their problem solving analysis regarding the C293 capacitor that was the subject of DCC recall C43 is included in Enclosure 6, titled "C293 Root Cause". Recall C43, which removed the suspect capacitor from the circuit board, was successful in addressing right side circuit board fires. Analysis determined that the capacitor was cracking due to circuit board stresses, which subsequently could lead to fire. Sources of circuit board stresses were identified and corrected by Huntsville Electronics. There have been no further reports of fire on the middle lower right side of the circuit board after the recall was performed.

In April of 2006, DCC opened an internal investigation into reports of Dodge Durango cluster fires that were occurring on the upper left side of the circuit board. The investigation was expanded to include DCC Engineering, Siemens / VDO Engineering (formerly DCC - Huntsville Electronics) in Huntsville, Alabama and Freescale (formerly Motorola) in Toulouse, France.

Several clusters in various stages of failure were returned to Siemens for analysis. The failures appeared to be centered around an Integrated Circuit (IC) that is used in the Durango cluster to control interior lighting functions, such as interior lighting switching, dimming, timing and pulse width modulation. This IC, manufactured by Freescale, is designated as SPI 12. Siemens, after performing basic checks of the returned clusters, where possible, forwarded the clusters to Freescale for additional analysis.

Freescale's preliminary analysis indicated that the component may have experienced Electrical Overload Stress (EOS). Internally, the IC contains a power section and a logic

section, and in some of the returned samples both of these sections had small holes in them, which may have been caused by EOS. Current and thermal limiting functions are built in so that during normal operation it shuts down in the event of over-current or over-temperature conditions. Once EOS damage has occurred, these features may no longer function as intended. Testing and analysis for the source of potential EOS is in process.

As part of ongoing analysis, a Durango that demonstrated early stages of IC failure with minimal damage was evaluated by DCC engineering. Electrical content of the vehicle including wiring, power, bulbs and grounds was evaluated together with measurements of loads. All was within specification. A check for voltage spikes also yielded no significant input. The collective team has conducted daily meetings as part of this investigation, and the data in response to Request Number 8 is through June 19, 2006 and provided in Enclosure 6, titled "Investigation Docs".

Additional documents that relate to Request Number 8 are being submitted to the Office of Chief Counsel, with a request for confidential treatment.

- 9. Describe all modifications or changes made by, or on behalf of, DCX in the design, material composition, manufacture, quality control, supply, or installation of the subject component, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject vehicles. Include all modifications or changes made to production vehicles produced subsequent to the recall scope. 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 DCX is aware of which may be incorporated into vehicle production within the next 120 days.

- A9. The information requested in items a. through e. is provided in Enclosure 7, titled "Cluster Change History", which also contains the Change Notification (CN) document for deletion of the C293 capacitor at Huntsville Electronics. The change was for recall C43 as previously discussed. Capacitor part numbers are controlled by Huntsville Electronics.

When recall C43 was launched in December of 2003, Huntsville Electronics removed the C293 capacitor from the circuit board and from production. The part number suffix of the affected clusters was changed from AK to AL. Huntsville Electronics issued a bulletin to their service centers on December 10, 2003 directing that all clusters in service stock must have the capacitor removed as indicated in the C43 recall instructions. The bulletin is located in Enclosure 7. The modified component, i.e., the instrument cluster, interchanges with earlier production units.

DCC made a change in the design of the cluster circuitry in MY 2005 to allow addition of the capacitor back into the door lock circuit for potential voltage spike protection. This change incorporated two smaller capacitors in series, in place of the previously eliminated C293 capacitor. This design eliminated the potential for capacitor cracking due to circuit board stresses during production. The new design with two smaller capacitors in series allowed redundant circuit protection that could not fail in the same manner as the single large case capacitor. See Enclosure 7 "2005 CN Two Caps". See Enclosure 7 for additional details regarding items f. through h.

10. Describe all actions taken by the supplier of the circuit board to guarantee redundant capacitor (C293) is never placed on the circuit board. Also describe DCX's method of verifying the redundant capacitor had been removed from the circuit board upon arrival at the manufactures final assembly plant.

A10. C293 was a 1uF ceramic surface mount capacitor previously used in the 2004 MY Dodge Durango cluster. C293 is a reference designator used to identify this specific component in this specific product design.

This capacitor was placed onto the printed circuit board (PCB) via an automatic placement machine during the manufacturing process. In order to place this part on the PCB:

- The capacitor must be listed on the bill of materials (BOM).
- A placement software program must be written to place the capacitor.
- A reel of capacitors must be loaded on the machine to be picked up.

Product engineering controls and releases the BOM. The placement program and machine component loading are controlled by the released BOM.

- As of December 5, 2003, this C293 capacitor is not on the BOM for the 2004 MY Durango cluster.
- For the 2005 and subsequent MY Durango cluster, the circuit of concern was redesigned to use two smaller (case size 0806) capacitors in series as described in response to Request Number 9.

Huntsville Electronics (Siemens / VDO) is a self-certifying supplier who is responsible for providing DCC assembly plants with certified stock. DCC does not typically perform incoming material inspection at any assembly plants.

11. ODI received one fire complaint based on a 2005 Dodge Durango (Vehicle Owner Questionnaire # 10156304). The consumer alleges the fire began in the driver's side dash area. Provide DCX's evaluation of this vehicle and if known, describe the root cause of failure.

A11. Investigation of VOQ# 10156304 (2005 MY Dodge Durango VIN# 5F5[REDACTED] determined the vehicle incurred an interior fire that originated at the top left section of the instrument cluster circuit board, as viewed from the driver's seating position. Fires involving C293 capacitors occurred in the middle lower right section of the circuit board. This fire is clearly not related to the C293 capacitor because a) the capacitor is not present, and b) the fire occurred on the opposite side of the circuit board from the C293 location. DCC's field inspection determined that aftermarket wiring attached to the dome light circuit, installed to operate lighted running boards, may be a potential cause of this fire. The instrument cluster in the 2005 Dodge Durango does control interior lighting. See attached photographs provided in Enclosure 8, titled "Photos VIN #5F5[REDACTED]"

12. Provide the following:

- a. Exemplar samples of each design version of the subject component;**
- b. Photos of circuit boards with and without redundant capacitor;**
- c. Field return samples of the subject component exhibiting the subject failure mode; and**
- d. Any kits that have been released, or developed, by DCX for use in service repairs to the subject component/assembly which relate, or may relate, to the alleged defect in the subject vehicles.**

- A12. a. Exemplar samples of each design version are being sent to NHTSA ODI under separate cover. Clusters with and without C293 capacitors are included, as well as a cluster with the two smaller capacitors in series (as discussed in response to Request Numbers 9 and 10).
- b. Photos of circuit boards with and without the redundant capacitor are contained in Enclosure 9, titled "Circuit Board Photos".
- c. No field return samples exhibiting a C293 failure are available. A cluster with an Integrated Circuit failure as discussed in response to Request Number 8 is being returned.
- d. There are no kits released or developed for servicing the subject component. DCC released recall C43 in December of 2003 to address subject vehicles with the C293 capacitors.

13. State the number of each of the following that DCX has sold that may be used in the subject vehicles by component name, part number (both service and engineering/production), model and model year of the vehicle in which it is used and month/year of sale :

- a. Subject component; and**
- b. Any kits that have been released, or developed, by DCX for use in service repairs to the subject component/assembly.**

For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number). Also identify by make, model and model year, any other vehicles of which DCX is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

A13 a. Dodge Durango Cluster Sales Chart

2004 MY Durango	Parts sold in 2004 CY	Parts sold in 2005 CY	Parts sold in 2006 CY	Total Parts Sold as of 6/15/06
56049091AH	1144	1	0	1145
56049091AK	21	23	0	44
56049091AL	113	1144	813	2070
56049092AK	18	7	0	25
56049093AK	2	7	0	9
2005 MY Durango				
56049691AH	0	570	19	589
56049691AI	0	797	670	1467
56049692AI	0	319	217	536
56049693AI	0	7	2	9

Note: There are other random issues not related to the alleged condition that may still trigger replacement of the subject component.

- b. There were no kits released for use in service.

Cluster Supplier Information:

Siemens / VDO
Tracy Choat
Manager - Hardware Engineering and NAFTA Strategic Planning
100 Electronics Boulevard
Huntsville, Alabama 35824
(256) 464-2236

14. Furnish DCX'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 or subject component was malfunctioning; and**
- f. The reports included with this inquiry.**

A14. Investigation of the VOOs submitted to DCC has revealed that three of the vehicles were inside the suspect population for recall C43 and four vehicles were outside the suspect population. The causal or contributory factor appears to possibly be an integrated circuit that controls interior light switching, timing and dimming functions. This component is located on the top left corner of the cluster circuit board, opposite of where C293 capacitor was located. The C293 capacitor, located on the middle right portion of the circuit board, was used for spike protection in the power door lock circuitry and was eliminated from production in December of 2003. This spike protection was added in 2005 as two separate, smaller capacitors in series, without the potential for cracking and the failure mode observed with the C293 capacitor. C293 is not related to the fires that are seen in the top left corner of the circuit board and accordingly this RQ should be closed. DCC continues to investigate the cause of fires linked to the top left corner of the circuit board.

A review of available field reports indicates that advance warning to the customer may involve the vehicle interior lights remaining on and eventually smoke may emanate from the dash area. In April of 2006, DCC opened an internal investigation into Durango cluster fires that were occurring on the left side of the circuit board, and investigation into this issue continues.

DCC has concluded that the December 2003 corrective action taken in initiating voluntary recall C43 has adequately addressed the issue leading to instrument cluster fires surrounding the C293 capacitor. DCC will continue to investigate the cause of left side circuit board fires and will update NHTSA at the conclusion of this investigation.