DAIMLERCHRYSLER

2/7/06

DaimlerChrysler Corporation

January 27, 2006

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

Dear Mr. Cooper:

Reference: NVS-212mjl; PE05-061

This document contains DaimlerChrysler Corporation's ("DCC") response to the referenced inquiry regarding alleged front airbag crash sensor failures on some 2005 model year Dodge Caravan, Dodge Grand Caravan, and Chrysler Town & Country ("RS") vehicles. In reaching our analysis and conclusions, and by providing the information contained herein, DCC is not waiving its claim to attorney work product and attorney-client privileged communications.

DCC does not believe the alleged defect poses an unreasonable risk to motor vehicle safety.

The alleged defect under investigation is corrosion of the front crash sensor, resulting in loss of communication with the remainder of the airbag system. As to the causal or contributory factors for the corrosion itself, DCC is still working on the analysis of this question. Internal sensor corrosion in this application has been shown to be complex and possibly the result of several different causes. This includes mechanical stress of the sensor body, the effect of dissimilar metals on corrosion, the effect of corrosion on the plastic housing material, the variability of the plastic molding process or other potential causes. DCC and its suppliers have been conducting and continue to conduct tests to understand the relative contributions of each of these factors.

The front crash sensing system in the 2005 RS minivan consists of the occupant restraint controller (or ORC) and the two front crash sensors. The ORC is mounted

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800 Chrysler Drive CIMS 482-00-91
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in the passenger compartment and includes the diagnostics capability, the microprocessor, the crash sensing algorithm, and the main crash sensors. The ORC continuously monitors the front crash sensor circuits and illuminates an airbag light to let the customer know that the vehicle should be serviced.

The front crash sensors are not essential to deploy the airbag in crashes in which an airbag deployment is expected. The two front crash sensors act to modify the deployment thresholds for some frontal impacts, but it is important to note that input from a single front sensor is sufficient to make this adjustment. If a front crash sensor becomes disabled, the system illuminates an airbag light for the consumer, but the crash detection system is still functional and an airbag will still deploy if necessary. If both front sensors are disabled, the system defaults automatically to a calibration that is optimized for the primary sensor (single point) to act alone. The performance of the primary sensor is not an issue in this investigation.

The primary purpose of the front sensor is to optimize the performance of the airbag in offset deformable barrier and angular crashes. These types of crashes are characterized by a relatively lower level of deceleration (severity) in the initial part of the impact. The up front sensor will, upon detecting the onset of such a crash, temporarily lower the threshold to allow the ORC to deploy the airbag in a slightly timelier manner than it could otherwise do alone. However, even if an upfront sensor is disabled on the side of the vehicle that is involved in an offset or angular crash, the airbag will still deploy if expected, but at a slightly later time (measured in milliseconds). DCC believes that real world safety consequence to such a scenario is not detectable because the airbag would still be fully deployed before the occupant would reach it. In the rare instances in which the slight increase in deployment threshold results in a "no-fire" decision by the airbag system, DCC analysis shows that such collisions are in the "gray" zone as to whether or not an airbag deployment is beneficial.

Indeed, as there is no requirement to have a separate sensor to detect offset collisions, DCC could have designed this airbag system to operate solely with the single point sensor, and it would have produced acceptable performance. The effect of losing the functionality of the front sensor does not change the overall field performance.

DCC also emphasizes that the front sensor plays no role in child protection. In this vehicle, DCC's compliance strategy for the child protection provisions of FMVSS No. 208 is suppression for infants, 3 year olds and 6 year olds. This sensor is not involved in the occupant recognition system used to identify whether the suppression system should activate or not.

DCC regularly investigates and collects data on complaints alleging airbag non-deployment and the real world data collected and the reports submitted with this response support DCC's analysis and conclusions. The alleged defect does not present an unreasonable risk to motor vehicle safety. At the present time, despite a

subject vehicle population of over 622,000 vehicles not a single complaint of airbag non-deployment, injury or fatality can reliably be attributed to this condition. This includes all legal claims and customer complaints supplied with this submission.

Sincerely,

Stephan J. Speth

Attachment and Enclosures

Q1. State, by model and model year, the number of the subject vehicles DaimlerChrysler has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by DaimlerChrysler, 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 MY 2005 DaimlerChrysler Corporation ("DCC") Dodge Caravan, Dodge Grand Caravan and Chrysler Town & Country are all referred to as the RS model. The total number of subject 2005 model year RS vehicles manufactured for the US market is 622,820.

The detailed response that lists the market production data is provided in Enclosure 1 as a Microsoft Access 2000 table, titled "PRODUCTION DATA."

NOTE: UNLESS OTHERWISE INDICATED IN THE RESPONSE TO ANY OF THE QUESTIONS, THIS DOCUMENT CONTAINS INFORMATION THROUGH NOVEMBER 17, 2005, THE DATE THE INFORMATION REQUEST WAS RECEIVED.

Q2. State the number of each of the following, received by DaimlerChrysler, or of which DaimlerChrysler 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. Property damage claims; and,

e. Third-party arbitration proceedings where DaimlerChrysler is or was a party to the arbitration; and

f. Lawsuits, both pending and closed, in which DaimlerChrysler 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 DaimlerChrysler'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.

A2. The following summarizes the non-privileged reports received by DCC that relate to, or may relate to, the alleged condition in the subject vehicles. DCC has conducted a reasonable and diligent search of our normal repositories of such information.

a. There are a total of 221 consumer complaints (VOQ or CAIR or Legal Claim), which include 5 NHTSA reports (VOQs), 204 complaints in the DCC system (CAIRs) and 12 Legal Claims that may relate to the alleged condition. Due to some complainants providing more than 1 input, there are 191 unique VINs associated with the 221 complaints.

Of the 5 VOQs received from NHTSA none had related customer complaints in the DCC system and are therefore unique reports.

b. There are 717 field reports that contain 695 unique VINs.

See Table below for breakdown of VIN by report type. Each box within double borders represents the number of unique VINs that had that type of report associated with it. For example, the cell in the table that lies in the Field Report column and the CAIR row indicates that 26 VINs had both a Field Report report and a CAIR report due to the alleged condition. Two

other examples: the cell that has the VOQ column and the VOQ row indicates that 3 VINs had a VOQ complaint only; and the CAIR column / CAIR row indicates that 148 VINs had only a CAIR complaint (one or more).

Totaling a single row across the columns yields the total number of that type of report. There are 5 VOQ reports, 204 CAIR reports, 717 Field Reports and 12 legal claims. The total number of reports is 5 + 204 + 717 + 12 = 938. The number of unique VINs is established by summing the total cells within the double border cells. The total of unique VINs from all data sources including legal claims/lawsuits is 857.

TABLE: Number of Unique VINs / Number of Total Reports

	VOQ	CAIR	Field Report	Legal	CAIR + Field Rep	Legal + Field Rep	Add'l Field Rep	Add'l CAIRs	Totals
VOQ	3	0	1	0	1	0	–	–	5
CAIR	0	148	26	2	0	2	–	26	204
Field Report	1	26	666	2	0	–	22	–	717
Legal	0	2	2	6	2	–	–	–	12
CAIR + Field Report	1	0	0	0					Tot rep = 938
Legal + Field Report	0	2	0	0					

Total number of reports = sum of far right column = 938
Unique VINs = sum of cells in double border area = 857

c. There are 29 reports alleging crash, which include 5 reports of injury and 1 report of fatality that are responsive to this inquiry. However, DCC does not have any information to conclude that the alleged defect was the cause of or contributed to the injuries or death.

d. There are 0 reports that allege property damage that are responsive to this inquiry.

e. There are 0 third-party arbitration proceedings involving DCC that are responsive to this inquiry.

f. There are 12 legal claims (6) / lawsuits (6) DCC, or notices received by DCC, that are responsive to the condition alleged in this investigation ("failure or malfunction of the front crash sensors or any unexpected illumination of the air bag warning lamp").

Of the 6 lawsuits and 6 legal claims, there were only two allegations of airbag non-deployments with injury allegations. Neither of these legal claims can reliably be attributed front crash sensor malfunction for the following reasons: there was no prior history of warranty repairs to the front crash sensors or airbag system, there were no active codes that affirmatively indicated a front crash sensor malfunction or front crash sensor loss of communication, and both vehicles did not appear to have experienced the longitudinal deceleration necessary to deploy the airbags.

There were two customer complaints (CAIRs) that are not accompanied by any legal claim alleging injury as a result of airbag non-deployment. However neither of these vehicles was preserved in the post-impact condition so that DCC could have the opportunity to conduct an inspection, review any available diagnostic codes or otherwise assess the merits of the allegation. Therefore, DCC discounts these claims as being related to the alleged defect.

There is an additional non-deployment "claim" involving a fatality that is included in this response but cannot be reliably attributed to a front crash sensor malfunction. An inspection opportunity has not yet been provided and there was no prior history of warranty repairs to the front crash sensors or airbag system. DCC will be able to comment further when additional information has been obtained.

DCC's analysis of reports indicates that 21 of the unique VINs involved airbag non-deployment allegations in an accident, but there is no further data. This occurs for a variety of reasons including that the vehicle was not made available for an inspection by DCC. Customers often have a misconception of the type of accident in which an airbag should deploy or the level of severity of impact required to trigger an airbag deployment. Therefore it is questionable whether or not these claims can be considered responsive to this inquiry.

DCC found 3 other unique VINs where the complaint was airbag non-deployment, but even after an inspection by DCC, there was not enough data to determine whether the customer's complaint was responsive to this inquiry.

Another 97 unique VINs indicate some concern with airbag light illumination, but there is no data to verify whether this was a result of a front crash sensor malfunction. It is important to note that the airbag light and associated circuitry on the 2005 RS minivan monitors a state of the art, sophisticated restraint system for a multitude of potential fault codes

not related to front crash sensors and there is no way to reliably attribute these reports to the alleged defect.

The remaining unique VINs specifically reference airbag light illumination and front crash sensor(s) or front crash sensor replacements.

The front crash sensing system in the 2005 RS minivan consists of the occupant restraint controller (or ORC) and the two front crash sensors. The ORC is mounted in the passenger compartment and includes the diagnostics capability, the microprocessor, the crash sensing algorithm, and the main crash sensors. The ORC continuously monitors the front crash sensor circuits and illuminates an airbag light to let the customer know that the vehicle should be serviced.

The front crash sensors are not essential to deploy the airbag in crashes in which an airbag deployment is expected. The two front crash sensors act to modify the deployment thresholds for some frontal impacts, but it is important to note that input from a single front sensor is sufficient to make this adjustment. If a front crash sensor becomes disabled, the system illuminates an airbag light for the consumer, but the crash detection system is still functional and an airbag will still deploy if necessary. If both front sensors are disabled, the system defaults automatically to a calibration that is optimized for the primary sensor (single point) to act alone. The performance of the primary sensor is not an issue in this investigation.

The primary purpose of the front sensor is to optimize the performance of the airbag in offset deformable barrier and angular crashes. These types of crashes are characterized by a relatively lower level of deceleration (severity) in the initial part of the impact. The up front sensor will, upon detecting the onset of such a crash, temporarily lower the threshold to allow the ORC to deploy the airbag in a slightly timelier manner than it could otherwise do alone. However, even if an upfront sensor is disabled on the side of the vehicle that is involved in an offset or angular crash, the airbag will still deploy if expected, but at a slightly later time (measured in milliseconds). DCC believes that real world safety consequence to such a scenario is not detectable because the airbag would still be fully deployed before the occupant would reach it. In the rare instances in which the slight increase in deployment threshold results in a "no-fire" decision by the airbag system, DCC analysis shows that such collisions are in the "gray" zone as to whether or not an airbag deployment is beneficial.

DCC regularly investigates and collects data on complaints alleging airbag non-deployment and the real world data collected and the reports submitted with this response support DCC's analysis and conclusions.

The alleged defect does not present an unreasonable risk to motor vehicle safety. At the present time, despite a subject vehicle population of over 622,000 vehicles not a single complaint of airbag non-deployment, injury or fatality can reliably be attributed to this condition. This includes all legal claims and customer complaints supplied with this submission.

Q3. 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. DaimlerChrysler'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 and 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 a fire 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 2000, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

A3. The detailed response that lists the customer complaints and field reports, from Request No. 2, as requested in items a. through m. is provided in Enclosure 2 as a Microsoft Access 2000 table, titled "REQUEST NUMBER TWO DATA".

Q4. 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 DaimlerChrysler used for organizing the documents.

A4. Copies of all documents within the scope of Request 2 are provided in Enclosure 3 – FIELD REPORTS, on the enclosed CD-ROM.

Q5. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by DaimlerChrysler 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. DaimlerChrysler'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.

08142500	195
08142502	8573
08142503	4864
0893BE	33
0894BE	231

It is often not possible to determine whether each particular warranty claim is in any way related to the alleged condition. There are other random issues, not related to this alleged condition, that trigger replacement of subject components. DCC has concluded that warranty data cannot be used to determine any trend related to the alleged condition.

It is also important to note, the dealer communication "tech tip 9000773" identified in question 7, specifically directs dealers to replace both crash sensors even when only one requires replacement. Therefore the number of warranty claims will be artificially high.

The detailed response that lists the warranty claims is provided in Enclosure 4 as a Microsoft Access 2000 table, titled "WARRANTY DATA".

Q6. Describe in detail the search criteria used by DaimlerChrysler 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 DaimlerChrysler 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 DaimlerChrysler 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. The search criteria used by DCC to identify claims for Request No. 5 can be found in the chart below:

Sensor, airbag front impact	08142500
Sensor, airbag impact front left or right replace	08142501
Sensor, airbag impact front left or right replace	08142502
Sensor, airbag impact front left or right replace	08142503
Steering column wire harness, airbag	0893BE
Engine wire harness, airbag	0894BE

18	Circuit Open
48	Grounded or Shorted
UC	Uncodable
83	Connection Loose
51	Improperly Installed
UR	Containment Repair
11	Broken or Cracked
14	Short or open
23	Contact corroded
3T	Terminals corroded
58	Internal Defect
61	Intermittent Operation
BX	Broken Component
MX	Fault Code Set

The standard warranty offered on all 2005 model year RS vehicles was 36 month / 36,000 miles. There were no extended warranty coverage options related specifically to the subject components. Owners may have purchased additional warranty coverage through third-party providers not affiliated with DCC. This warranty data is not available to DCC and is not included in this response.

Q7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that DaimlerChrysler 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 DaimlerChrysler is planning to issue within the next 120 days.

A7. There have been 3 GPOP or dealer "tech tips" submitted relating to the 2005 RS minivan front crash sensors / connector. These are included in Enclosure 5 under DEALER COMMUNICATIONS folder on the CD and summarized below:

- tech tip # 9000752 – Notification to dealers regarding ordering sensors for service
- tech tip # 9000773 – Notification explaining the sensor service kit
- tech tip # 9000780 – Notification of the availability of a connector service package

There are no other communications to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities related to the alleged defect. There are also no additional communications planned in the next 120 days.

Q8. 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, DaimlerChrysler. 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 the completion of the action.

A8. DCC has initiated the following steps to evaluate or otherwise analyze the alleged defect with regard to the 2005 RS minivan front crash sensors:

1. Initiated a part retention program for the front crash sensors and wiring connectors returned through warranty that included part test and analysis
2. Coordinated with front crash sensor supplier, Robert Bosch Corporation, to conduct several evaluations
3. Coordinated with front crash sensor wiring connector supplier, Tyco, to conduct an evaluation of wiring connection integrity
4. Conducted a warranty study by labor operation
5. Conducted a more detailed study of warranty data
6. Conducted with the front crash sensor housing material supplier, BASF, to conduct a material assessment
7. Conducted a torque study in the DCC Fastener Engineering laboratory using subject sensor components
8. Conducted a corrosion study in the DCC Materials laboratory using subject sensor components (ongoing)
9. Evaluated parts for sensor seal integrity returned from DCC Phoenix Zone

10. Reviewed DCC vehicle assembly plant review and evaluation of sensors that went through the installation process
11. Reviewed customer complaint and field report data
12. DCC assessment of the crash detection system without the availability of front crash sensors

A more detailed description for each item above is referred to ENCLOSURE # 6 - Test Studies. The documents referred to in ENCLOSURE # 6 are in ENCLOSURE # 7 thru ENCLOSURE #16.

Q9. Describe all modifications or changes made by, or on behalf of, DaimlerChrysler in the design, material composition, manufacture, quality control, supply, or installation 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 DaimlerChrysler is aware of which may be incorporated into vehicle production within the next 120 days.

A9. A detailed summary of design change information for the 2005 RS front crash sensor is being submitted as ENCLOSURE 17 – CHANGE HISTORY.

Q10. Produce one of each of the following:

a. Exemplar samples of each design version of the subject components;
b. Field return samples of the subject component exhibiting the subject failure mode; and
c. Any kits that have been released, or developed, by DaimlerChrysler for use in service repairs to the subject component/assembly which relate, or may relate, to the alleged defect in the subject vehicles.

A10. DCC is providing NHTSA with an exemplary brass bushing front crash sensor, a steel bushing front crash sensor and the service kits that have been developed for the alleged condition.

DCC is providing NHTSA with a field return samples of failed brass bushing sensors but does not have any failed steel bushing sensors in it possession to give to NHTSA. Should a failed steel bushing sensor become available DCC will forward such a part to NHTSA at that time.

Please see ENCLOSURE # 18 – SENSOR MOUNTING LOCATIONS for diagrams of the front crash sensor mounting in the 2005 RS minivan.

Q11. State the number of each component / assembly of the subject components that DaimlerChrysler 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 the month/year of sale (including the cut-off date for sales, if applicable). Include kits that have been released, or developed, by DaimlerChrysler for use in service repairs to the subject component/assembly which relate to, or may relate to, the alleged defect in the subject vehicles.

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 DaimlerChrysler is aware that contain the identical component, whether installed in production or in service, and state the applicable dates of production or service usage.

A11. The part sales information is included in ENCLOSURE 19 – MOPAR REPLACEMENT SALES. It is impossible to determine what these part sales are for. There are other customer issues (e.g. accident repair) that are not related to this alleged condition, yet still trigger sales / replacement

of the subject components. DCC has concluded that the part sales cannot be used to determine any trend related to the alleged condition.

It is also important to note, the dealer communication "tech tip 9000773" identified in question 7, specifically directs dealers to replace both crash sensors even when only one requires replacement. Therefore the number of part sales will be artificially high.

Since its inception in 2004, the Chrysler Pacifica uses the same identical design front crash sensors mounted in a similar area of the vehicle. It is important to note that no problematic front crash sensor warranty issues have arisen on this make / model.

The supplier contact is:
Matthias Speeth 248-553-9000.

The supplier address is:
Robert Bosch Corporation
38000 Hills Tech Drive
Farmington Hills, MI 48331

Q12. Furnish DaimlerChrysler'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.**

A12. DCC does not believe the alleged defect poses an unreasonable risk to motor vehicle safety.

The alleged defect under investigation is corrosion of the front crash sensor, resulting in loss of communication with the remainder of the airbag system. As to the causal or contributory factors for the corrosion itself, DCC is still working on the analysis of this question. Internal sensor corrosion in this application has been shown to be complex and possibly the result of several different causes. This includes mechanical stress of the sensor body, the effect of dissimilar metals on corrosion, the effect of corrosion on the plastic housing material, the variability of the plastic

molding process or other potential causes. DCC and its suppliers have been conducting and continue to conduct tests to understand the relative contributions of each of these factors.

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The primary purpose of the front sensor is to optimize the performance of the airbag in offset deformable barrier and angular crashes. These types of crashes are characterized by a relatively lower level of deceleration (severity) in the initial part of the impact. The up front sensor will, upon detecting the onset of such a crash, temporarily lower the threshold to allow the ORC to deploy the airbag in a slightly timelier manner than it could otherwise do alone. However, even if an upfront sensor is disabled on the side of the vehicle that is involved in an offset or angular crash, the airbag will still deploy if expected, but at a slightly later time (measured in milliseconds). DCC believes that real world safety consequence to such a scenario is not detectable because the airbag would still be fully deployed before the occupant would reach it. In the rare instances in which the slight increase in deployment threshold results in a "no-fire" decision by the airbag system, DCC analysis shows that such collisions are in the "gray" zone as to whether or not an airbag deployment is beneficial.

Indeed, as there is no requirement to have a separate sensor to detect offset collisions, DCC could have designed this airbag system to operate solely with the single point sensor, and it would have produced acceptable performance. The effect of losing the functionality of the front sensor does not change the overall field performance.

DCC also emphasizes that the front sensor plays no role in child protection. In this vehicle, DCC's compliance strategy for the child protection provisions of FMVSS No. 208 is suppression for infants, 3 year olds and 6 year olds. This sensor is not involved in the occupant recognition system used to identify whether the suppression system should activate or not.

DCC regularly investigates and collects data on complaints alleging airbag non-deployment and the real world data collected and the reports submitted with this response support DCC's analysis and conclusions. The alleged defect does not present an unreasonable risk to motor vehicle safety. At the present time, despite a subject vehicle population of over 622,000 vehicles not a single complaint of airbag non-deployment, injury or fatality can reliably be attributed to this condition. This includes all legal claims and customer complaints supplied with this submission.