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DEFECTS INVESTIGATION
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DaimlerChrysler Corporation
Stephan J. Speth
Director
Vehicle Compliance & Safety Affairs

September 12, 2005

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-212am; EA05-009

This document contains DaimlerChrysler Corporation's ("DCC") response to the referenced inquiry regarding alleged headlight flicker on 2001-2002 model year DCC minivans. 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.

In the seven months since the opening of PE05-004, DCC has completed significant investigation and analysis into the potential causes for complaints of intermittent headlamp operation while driving. Some of these activities include:

- Thorough analysis of complaint narratives from many sources.
- Identification, evaluation and instrumentation of employee owned vehicles and their major systems, including the Front Control Module (FCM) and Body Control Module (BCM).
- Interview of customers allegedly experiencing some potentially related condition.
- Repurchase and evaluation of a complaint vehicle.
- Institution of a warranty part retention program.
- Initiation of a three party (DCC, Delphi, Detroit Test Laboratory) test program on field returned headlamp switches.

Although these efforts have been extensive, DCC has not been able to reproduce the condition alleged by NHTSA in the subject vehicle population. DCC further

notes that it has become aware of a total of only 66 new vehicles with complaints for the nearly 6 month period since the PE05-004 submission in a population of over 813,000 vehicles. Of these 66 complaints, DCC believes that only 38, or just over half, are even potentially related to the headlamps flickering or turning off. It is also important to note that there are no allegations of accident, property damage or injury reported as part of any of these complaints.

DCC's investigation into allegation of the headlights flickering and/or turning off on 2001-2002 model year DCC minivans has established that customer complaints vary widely, and may not be an accurate indicator of what, if any, abnormal event is actually occurring.

In fact, NHTSA has reached similar conclusions on a recently closed investigation with comparable allegations. PE02-005, which related to allegations of headlamp dimming or flickering in 1999-2001 MY Oldsmobile Intrigue vehicles, contained 26 VOQs. A review of these VOQs found that 12 of the 26 alleged the headlamps physically turned off ("headlights flickered on and off", "headlights flicker from bright to dim until they finally just shut off", "without any warning headlights will completely shut down", "headlights go out", etc.), yet NHTSA closed the investigation with no action stating that based on the absence of any crashes or injuries a safety-related defect trend was not identified. The closing also stated that the ODI investigator spoke with several complainants, and in each incident it was determined that their headlamps never completely went out, even though the VOQs stated this condition had occurred. In addition, DCC's complaint rate is approximately 91 c/100k vehicles while the rate in closed PE02-005 was 254 c/100k vehicles, a factor of nearly 3 times.

DCC believes NHTSA's closing of PE02-005 was appropriate and correct, as it had clearly not risen to the level of a safety-related defect trend, and the subject investigation, with a significantly lower complaint rate, is otherwise no different and should be closed.

Sincerely,



Stephan J. Speth

Attachment and Enclosures

- Q1. State, by model and model year, the number of subject vehicles DCC has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by DCC, 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."

NOTE: UNLESS OTHERWISE INDICATED IN THE QUESTION RESPONSE, THIS DOCUMENT APPENDS THE PE05-004 RESPONSE SUBMITTED MARCH 23, 2005. THE UPDATED INFORMATION CONTAINED WITHIN IS THROUGH JULY 22, 2005, AND DOES NOT CONTAIN INFORMATION PREVIOUSLY SUBMITTED WITH PE05-004.

- A1. The MY 2001-2002 DaimlerChrysler Corporation ("DCC") Dodge Caravan and Grand Caravan, and Chrysler Voyager and Town & Country are similar vehicles and have the same subject components. The subject vehicles are referred to as the RS model. The total number of subject RS vehicles manufactured for the US market is 813,597.**

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

- Q2. State the number of each of the following, received by DaimlerChrysler, or of which DCC 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;
- e. Third-party arbitration proceedings where DCC is or was a party to the arbitration; and
- f. Lawsuits, both pending and closed, in which, DCC is or was a defendant or codefendant.

For subparts "a" through "d" 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 contributing factors and DCC'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 41 complaints, which include 8 NHTSA reports (VOQ's) and 33 complaints in the DCC system that may relate to the alleged condition. Note that there were 9 VOQ's submitted to NHTSA, however, 1 of the reports was for a vehicle built for the Canadian market and has been deleted from the US totals. There are 34 unique VINs associated with the 41 complaints .

The list of 8 VOQ's received from NHTSA included 4 with related customer complaints in the DCC system. The remaining 4 VOQ's are unique reports which do not have related complaints in the DCC system

- b. There are 31 field reports that contain 30 unique vehicle VIN's.

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 VOQ column and the CAIR row indicates that 3 VINs had a VOQ report and a CAIR report for the alleged condition. Another example is the cell that has the VOQ column and the VOQ row indicates that 4 VINs had a VOQ complaint only.

Totalling a single row across the columns yields the total number of that type of report. There are 8 VOQ reports, 33 CAIR reports, 31 Field Reports and 1 Lawsuit. The total number of reports is $8 + 31 + 33 + 1 = 73$. The number of unique VINs is established by summing the total cells within the double border cells. The total of unique VIN's from all data sources including legal claims/lawsuits is 66.

Number of VINs By Report Type						
	VOQ	CAIR	Field Report	VOQ (and Lawsuit)	2nd CAIR	Totals
VOQ	4	4	0	0		8
CAIR	3	27	1	1	1	33
Field Report	0	1	30	0		31
Lawsuit + VOQ	0	1	0	0		1
Total number of reports = sum of far right column = 73						
Unique VINs = sum of cells in double border area = 66						

- c. There are 0 claims alleging crash, injury, or fatality that are responsive to this inquiry.
- 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 0 claims against DCC, or notices received by DCC, that are potentially responsive to this inquiry. There is 1 lawsuit, pending or closed, involving DCC that is potentially responsive to this inquiry.

DCC's analysis of field reports indicates that 6 of the 66 unique VINs (9.1%) refer to headlamps and park lamps or headlamps and horn activating on and off.

This condition can be attributed to an improper software algorithm in the Front Control Module (FCM). The software of the FCM could allow erroneous actuation of the headlamps, park lamps and horn while the vehicle is parked. DCC released TSB #08-005-04 on February 3, 2004 to address this issue. This TSB is being supplied again as reference in Enclosure 5 - SERVICE BULLETINS.

DCC found that 28.8% of the unique VINs (19 out of 66) reference the headlights flickering or dimming. DCC believes some of these complaints are a misinterpretation of a normal operating condition and the result of an increased electrical load on the vehicle's charging system. For example, if a customer has the front headlamps turned on and an additional electrical feature such as the blower motor, radiator fan, or brake lamps is turned on, the front headlamps may dim slightly. This is an expected condition. As the new feature is actuated, the charging system attempts to supply the adequate current for the electrical load and a large inrush current can occur. As this inrush current is being supplied the operating voltage may drop slightly. This drop in operating voltage can be seen as a dimming of the front headlamps of the vehicle. Depending on the particular electrical load being added, the dimming may be momentary while the dimming may be seen for a longer duration. An example of the momentary electrical load increase is the actuation of the turn signals and an example of a longer duration electrical load is the A/C compressor turning on. This increased electrical local load condition may occur while the vehicle is either in a static or dynamic mode.

In this response, DCC drew a distinction between flickering and dimming allegations. Flickering is a condition where the headlamps completely turn off for a period of time, however brief. Dimming is a condition where the headlamps momentarily dim, and do not completely turn off. DCC interprets NHTSA's modification of the "Alleged Defect" definition to no longer include notices, claims and lawsuits that allege headlamp dimming.

DCC found approximately 4.5% of the unique VINs (3 out of 66) reference headlamps inoperable or not working. DCC believes the nature of this complaint to be too ambiguous to conclude that the complaint specifically involved headlamps flickering or turning on/off. Further, DCC asserts all headlamp bulbs, utilized in all DCC vehicles, are serviceable and not designed or expected to last the life of a vehicle.

The remaining unique VINs (38 out of 66) or 57.6% reference the headlights and/or dashlights turning on/off or flickering while driving, however brief. It is DCC's opinion that these 38 inputs are the only ones possibly related to the alleged defect.

- 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. DCC's file number or other identifier used;**
 - b. The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field reports, etc.);**
 - c. Vehicle owner or fleet name (and fleet contact person), address, and telephone number;**
 - d. Vehicle's VIN;**
 - e. Vehicle's make, 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 property damage is alleged;**
 - k. Number of alleged injuries, if any; and**
 - l. 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 DCC used for organizing the documents.**
- A4. Copies of all documents within the scope of Request No. 2 are provided in Enclosure 3 – COMPLAINTS AND 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 DCC 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. DCC'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.

08-19-02-01	2001 Model Year	2002 Model Year
08-19-02-01	159	249
08-19-02-60	0	0
08-19-02-70	0	0
08-19-08-01	8	72
08-80-36-01	13	187

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.

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 DCC 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 DCC 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 DCC 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:

DESCRIPTION OF REPAIR	LABOR OPERATION
Module, Body Control – Replace	08-19-02-01
Module, Body Control – Diagnostic Procedures Manual Allowance	08-19-02-80
Module, Body Control – Mopar Diagnostic System Procedures Allowance	08-19-02-70
Module, Front Control – Replace	08-19-08-01
Switch, Headlamp & Instrument Panel – Test & Replace	08-80-36-01

FAILURE CODE	DESCRIPTION	FAILURE CODE	DESCRIPTION
11	Broken or Cracked	67	Noisy Rattles (Loose)
14	Burned or Burned Out	83	Connection Loose
18	Circuit Open	UC	Uncodeable
48	Grounded or Shorted	ML	Malfunction Indicator Lamp On
51	Improperly Installed	SE	Shortage and/or Error
58	Internal Defect	X2	Split, Cut or Torn
61	Intermittent Operation	X6	Terminals Damaged
65	Leaks	UR	Containment Repair

The standard warranty offered on all 2001 – 2002 model year RS vehicles was 36 month / 36,000 miles. There was 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 DCC 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 DCC is planning to issue within the next 120 days.**
- A7. There has been 1 Technical Service Bulletin (TSB 08-005-04 - Erroneous Actuation of Horns, Headlamps and Parking Lamps), provided in Enclosure 5 – SERVICE BULLETINS that may be responsive to this inquiry. This TSB was previously submitted in the response to PE05-004 and is being included again for reference.**

There have been no communications related to the alleged condition since the PE05-004 submittal and none 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, DCC. 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. **Since the opening of PE05-004 / EA05-009, DCC has initiated the following steps to evaluate or otherwise analyze the alleged condition of the headlights and/or dashlights turning on/off or flickering while driving:**
- **Surveyed employee owned vehicles with reported abnormal headlamp operation.**
 - **Conducted phone interviews with VOQ customers.**
 - **Repurchased one of the VOQ complaint vehicles for evaluation and analysis.**
 - **Initiated a hold for headlamp switches returned through warranty.**
 - **Initiate testing of warranty return headlamp switches.**
 - **Conducted a study in the DCC Materials Engineering laboratory on headlamp switches returned through warranty.**

The following describes each of the above steps in more detail and refers to data or enclosures where appropriate.

Vehicle Survey: DCC has completed a 14 vehicle survey in which the owner has alleged that the headlights flicker and/or completely turn off while the vehicle is in motion. The objective of the vehicle survey was to determine the reason that the owner may be experiencing this condition. Upon physical review of the 14 vehicles in the survey, DCC determined that only 5 of the vehicles were reasonable candidates for further study. DCC instrumented the entire headlamp and vehicle communication system of these vehicles and evaluated them under a variety of driving conditions. DCC was not able to reproduce the alleged condition on any of the vehicles evaluated in this survey. A detailed summary of the vehicle survey is included as Enclosure 06 – SURVEY.

Phone Survey of VOQ Customers: The purpose of this phone survey was to get more detail on the alleged condition in terms of when and how it occurs. Of the 21 original VOQ customers, only 18 were able to be identified as 3 of the 21 did not have VIN numbers provided as part of the VOQ. All 18 of these customers were attempted to be contacted by phone. The results of this survey indicate that of the 18 customers, only 9 of the customers were able to be reached and provide feedback on the alleged condition. The others were not able to be reached, did not own

the vehicle anymore, or in one case, denied ever complaining about headlight problems. The transcripts from the surveys are included in Enclosure 07 – PHONE SURVEYS.

VOQ Vehicle Repurchase: Of the VOQ customers who provided feedback to DCC during the phone survey, one (VIN# - 1R271187) indicated that the vehicle persistently and frequently exhibited this condition. DCC repurchased this vehicle for evaluation and analysis and DCC engineering took possession on August 12, 2005. The evaluation included a visual inspection of lighting system functions (in one instance headlamps stayed on when switched off with the engine running), interrogation of the BCM for failure codes (none found) and driving more than 10 times over the DCC Rumble Road in Auburn Hills, Michigan while monitoring the headlamp switch voltage input to the BCM with an EDT (Engineering Diagnostic Tool). No abnormal headlamp behavior was observed in the subject vehicle while driving.

The headlamp switch was then removed from the vehicle and evaluated on a portable circuit tester. This tester displays real time digital readouts of switch output voltages in various switch positions, but does not provide any permanent record of test activity or results. Initially the switch from the subject vehicle showed unstable (varying) voltage output when the knob was tapped lightly while the switch set in the Headlamp On position. Subsequent evaluation also showed unstable (varying) voltage outputs in other switch positions as well.

Further analysis of the headlamp switch from the subject vehicle is being conducted at the headlamp switch supplier, Delphi. This information will be forwarded to NHTSA when it is completed.

Warranty Part Return Hold – Headlamp Switches: DCC has initiated a hold on headlamp switches repaired under warranty. This will provide DCC with a supply of headlamp switches for further analysis. DCC is in the process of evaluating a small sample of parts that have been returned to date. Some of the testing is described below. Results from the evaluation of the warranty return parts will be forwarded to NHTSA as they are completed.

Testing of Warranty Return Headlamp Switches: A small sample of returned headlamp switches has been provided to Delphi, the switch supplier, for analysis. A tester at Delphi plots switch resistance versus switch angle as a critical characteristic for proper operation of the headlamp switch. This testing has shown that some of the small number of headlamp switches returned through warranty exhibited variations in

resistance that could potentially affect headlamp performance when compared to the expected resistance values of a "normal" switch. These traces have been submitted in Enclosure 8 – Confidential – Headlamp Switch Traces (CD-Rom) to Ms. Jacqueline Glassman, Office of the Chief Counsel, under separate cover with a request for confidential treatment of information.

DCC is continuing to pursue additional testing of this type and also plans to test the switch from the repurchased vehicle. Results from this testing will be forwarded to NHTSA as completed.

DCC is also pursuing additional testing of warranty return switches. This includes testing at Delphi and at an independent test lab, Detroit Test Laboratory. The purpose of such testing is to complete dimensional layouts, X-ray testing, vibration testing, and age testing. A test plan has been submitted in Enclosure 9 – Confidential – Headlamp Switch Test Plans (CD-Rom) to Ms. Jacqueline Glassman, Office of the Chief Counsel, under separate cover with a request for confidential treatment of information. This testing is planned to be completed in the mid-October 2005 timeframe. Results will be forwarded to NHTSA when complete.

Headlamp Switch Materials Laboratory Testing: DCC submitted 3 headlamps switches returned through warranty to the DCC Materials Engineering test laboratory for evaluation of material properties, electrical properties, and magnified photography of the switches. See Enclosure 10 – Headlamp Switch Material Study for the 3 reports. DCC is evaluating the results of this testing and will provide conclusions, if any, to NHTSA when complete.

- Q9. Describe all modifications or changes made by, or on behalf of, DCC 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. For each 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 DCC is aware of which may be incorporated into vehicle production within the next 120 days.

A9. **A detailed summary of all pertinent design change information and how it affects headlamp performance for the subject components is included as Enclosure 11 – CHANGE HISTORY. This information was previously provided in the submission for PE05-004.**

Q10. **Supply (in a separate table) those part and design changes to the subject components that are directly related to the operation of the headlights. Specifically state when the part or design change was made and incorporated into production, how the change affects headlight operation / performance, and when the change was made.**

A10. **See response to Question 9. The table in Enclosure 11 has columns at the far right that refer to whether and how the headlamp operation is affected by the change.**

Q11. **State the number of each of the following that DCC 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 for which the part was intended (if known) and month/year of sale (including the cut-off date for sales, if applicable):**

- a. **Headlight Switch, BCM, FCM; and**
- b. **Any kits that have been released, or developed, by DCC for use in service repairs to the subject component / assy.**

For each component part number, provide the supplier's name, address, and appropriate point of contact (name, title, and telephone number).

A11. **The part sales information is included in Enclosure 12 – Part Sales.**

It is impossible to determine what these part sales are for. There are other customer issues (e.g. customer damage) 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. Please note that this information is cumulative and is not additive to the information supplied in PE05-004.

Q12. Furnish DCC's assessment of the alleged defect in the subject vehicle, including:

- c. The casual or contributory factor(s);**
- d. The failure mechanism(s);**
- e. The failure mode(s);**
- f. The risk to motor vehicle safety that it poses;**
- g. 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**
- h. The reports included with this inquiry.**

A12. In the over seven months since the opening of PE05-004, DCC has completed significant investigation and analysis into the potential causes for complaints of intermittent headlamp operation while driving. Some of these activities include:

- Thorough analysis of complaint narratives from multiple sources.
- Identification, evaluation and instrumentation of employee owned vehicles and their major systems, including the Front Control Module (FCM) and Body Control Module (BCM).
- Interview of customers allegedly experiencing some potentially related condition.
- Repurchase and evaluation of a complaint vehicle.
- Institution of a warranty part retention program.
- Initiation of a three party (DCC, Delphi, Detroit Test Laboratory) test program on field returned headlamp switches.

Although these efforts have been extensive, DCC has not been able to reproduce the condition alleged by NHTSA in the subject vehicle population. To date, the only potential anomaly identified during this investigation has been headlamp switch resistance variation on a small

number of field returned parts. DCC has all but eliminated the Front Control Module (FCM) from the study because it is not capable of affecting the operation of the interior dash lamps, which is a condition that is common in many of the complaints. In addition, while the Body Control Module (BCM) does control both the headlights and interior dash lamps, replacement of the BCM on complaint vehicles does not appear to resolve the condition. Therefore, DCC believes that the BCM is likely not the cause of the alleged condition either.

DCC further notes that it has become aware of a total of only 68 new vehicles with complaints for the nearly 6 month period since the PE05-004 submission in a population of over 813,000 vehicles. Of these 66, DCC believes only 38, or slightly more than half, are even potentially related to the headlamps flickering or turning off. It is also important to reiterate that there are no allegations of accident, property damage or injury reported as part of these complaints.

DCC's investigation into allegation of the headlights flickering and/or turning off on 2001-2002 model year RS minivans has established that customer complaints vary widely, and may not be an accurate indicator of what, if any, abnormal event is actually occurring.

In fact, NHTSA has reached similar conclusions on a recently closed investigation with comparable allegations. PE02-005, which related to allegations of headlamp dimming or flickering in 1999-2001 MY Oldsmobile Intrigue vehicles, contained 26 VOQs. A review of these VOQs found that 12 of the 26 alleged the headlamps physically turned off ("headlights flickered on and off", "headlights flicker from bright to dim until they finally just shut off", "without any warning headlights will completely shut down", "headlights go out", etc.), yet NHTSA closed the investigation with no action stating that based on the absence of any crashes or injuries a safety-related defect trend was not identified. The closing also stated that the ODI investigator spoke with several complainants, and in each incident it was determined that their headlamps never completely went out, even though the VOQs stated this condition had occurred. In addition, DCC's complaint rate is approximately 81 c/100k vehicles while the rate in closed PE02-005 was 254 c/100k vehicles, a factor of nearly 3 times.

DCC believes NHTSA's closing of PE02-005 was appropriate and correct, as it had clearly not risen to the level of a safety-related defect trend, and the subject investigation, with a significantly lower complaint rate, is otherwise no different and should be closed.