



October 13, 2010

Mr. Scott Yon, Chief
Vehicle Integrity Division (VID), NVS-212
U.S. Department of Transportation

National Highway Traffic Safety Administration (NHTSA)
Office of Defects Investigation (ODI)
Room W48-314
1200 New Jersey Avenue SE
Washington, D.C. 20590

Reference: NVS-212mjl; PE10-032

2010 OCT 14 A 11:46
OFFICE OF DEFECTS &
INVESTIGATIONS

Dear Mr. Yon:

Attached is Chrysler Group LLC's ("Chrysler") response to the referenced inquiry. In performing the analysis and reaching conclusions, and by providing the information contained herein, Chrysler is not waiving its claim to attorney work product and attorney-client privileged communications.

The evidence and analysis presented in the attached response confirms that there is not a design defect in the subject components and that a safety defect does not exist in the subject vehicles. The occurrence rate of the alleged condition is lower than historical levels that have led NHTSA to reach the same conclusions. Further, the data indicates that the condition is likely due to fuel system exposure to ethanol levels greater than what they were designed for (i.e. ethanol levels >10%). Based on the information provided in this response, it is clear that the alleged condition on the subject vehicles does not rise to the level of a safety defect and this investigation should be closed.

Sincerely,

A handwritten signature in black ink, appearing to read "David D. Dillon".

David D. Dillon

Attachment and Enclosures

Preliminary Statement

On April 30, 2009 Chrysler LLC, the entity that manufactured and sold the vehicles that are the subject of this Information Request, filed a voluntary petition for relief under Chapter 11 of Title 11 of the United States Bankruptcy Code.

On June 10, 2009, Chrysler LLC sold substantially all of its assets to a newly formed company now known as Chrysler Group LLC. Pursuant to the sales transaction, Chrysler Group LLC assumed responsibility for safety recalls pursuant to the 49 U.S.C. Chapter 301 for vehicles that were manufactured and sold by Chrysler LLC prior to the June 10, 2009 asset sale.

On June 11, 2009, Chrysler LLC changed its name to Old Carco LLC. The assets of Old Carco LLC that were not purchased by Chrysler Group LLC, as well as the liabilities of Old Carco that were not assumed, remain under the jurisdiction of the United States Bankruptcy Court – Southern District of New York (*In re Old Carco LLC, et al.*, Case No. 09-50002).

Note: Unless indicated otherwise in the response to a question, this document contains information through August 31, 2010, the date the information request was received.

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

A1. The 2005 and 2006 model year (MY) Jeep Wrangler for the US market is designated as the TJ model and 2007 thru 2010 MY Jeep Wrangler for the US market is designated as the JK model. Both the TJ and the JK models were built in the Toledo South Assembly Plant in Toledo, Ohio. Throughout this response, both models described above are referred to as the subject vehicles. The subject components - fuel tank assembly including the inlet check valve (ICV) - are standard equipment on the subject vehicles. The total number of subject vehicles manufactured by Chrysler for sale or lease for the US market was 542,650.

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

2. State, by model and model year, the number of the peer vehicles that Chrysler has manufactured for sale or lease in the United States. Separately, for each peer vehicle manufactured to date by Chrysler, 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-PEER VEHICLES."

- A2. The 2005 thru 2008 MY Dodge Durango vehicles for the US market are designated as the HB model and were built at the Newark Assembly Plant in Newark, Delaware. Throughout this response, these vehicles are referred to as the peer vehicles. The total number of peer vehicles manufactured by Chrysler for sale or lease for the US market was 266,315.

The detailed response that lists the production data is provided in Enclosure 2 as a Microsoft Access 2000 table titled "PRODUCTION DATA – PEER VEHICLES."

3. **State the number of each of the following, received by Chrysler, or of which Chrysler 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, fire, 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 Chrysler is or was a party to the arbitration; and**
 - f. **Lawsuits, both pending and closed, in which Chrysler 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 Chrysler'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.

- A3. The following summarizes the reports identified by Chrysler that relate to, or may relate to, the alleged condition in the subject vehicles. Chrysler has conducted a reasonable and diligent search of the normal repositories of such information.

- a. There are 127 consumer complaints (Customer Assistance Inquiry Request or CAIR) that may relate to the alleged condition for the subject vehicles, which represents 117 unique VINs.
- b. There are 72 field reports for the alleged condition in the subject vehicles, which represent 70 unique VINs.
- c. There are no reports alleging fuel spit-back or fuel spills (alleged condition) resulting in crash, fire, injury or fatality for the subject vehicles.
- d. There are no reports that allege property damage for the subject vehicles.
- e. There are no third-party arbitration proceedings involving Chrysler for the subject vehicles.
- f. There are 6 legal claims involving the subject vehicles for the alleged condition, all of which represent unique VINs.

Based on the analysis of these complaints for the subject vehicles, Chrysler has determined that there are a total of 205 complaints which represent 191 unique VINs. All of these complaints refer to a fuel spill of some kind as a result of filling a fuel tank in a subject vehicle. Chrysler notes, however, that it is possible for fuel spills to occur as a result of users erroneously overfilling a fuel tank by continuing to fill after the automatic shut off mechanism kicks in. It is not possible to discern how many of the subject vehicle complaints are a result of user error. Such complaints are obviously not a result of a vehicle design issue.

4. **Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 3, state the following information:**
 - a. **Chrysler's file number or other identifier used;**
 - b. **The category of the item, as identified in Request No. 3 (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 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 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 THREE DATA."

- A4. The detailed response that lists the customer complaints, field reports, and legal claims and lawsuits from Request No. 3, as requested in Items a. through m. is provided in Enclosure 4 in a Microsoft Access 2000 table, titled "Request Number Three Data".
- 5. Produce copies of all documents related to each item within the scope of Request No. 3. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method Chrysler used for organizing the documents.**
- A5. Copies of all documents within the scope of Request No. 3 are provided in Enclosure 5 – Field Data. The documents are organized by report type: CAIR, Field Report, or Legal Claim. For the customer complaints, the CAIR summaries are submitted in one .pdf file and the related documents are arranged in folders by CAIR number. The field reports are submitted in one .pdf file and the legal claims are arranged by claimant name.
- 6. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by Chrysler to date that involved the replacement of the fuel tank, the filler tube or the inlet check valve for any reason 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. Chrysler'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-SUBJECT VEHICLES."

A6. The warranty claims are itemized by labor operation code below:

Requested Claims (Total of All Replacement Claims for Subject Components):

Labor Operation (LOP) Code	Subject Vehicle Claims
14600101: – Fuel Tank Replacement	2078
14601501: – Fuel Filler Tube Replacement	569

Claims denoted as "Responsive" (Subset of total claims deemed potentially relevant to alleged condition - see response to Request No. 8):

Labor Operation (LOP) Code	Subject Vehicle Claims
14600101: – Fuel Tank Replacement	468
14601501: – Fuel Filler Tube Replacement	304

Thus, the total for all requested claims is 2647 (2078 + 569) and the subset of that total potentially responsive to the alleged condition is 772 (468 + 304). This table includes all paid claims for all subject component part replacements related to the failure code conditions listed in response to Request No. 8. Note that the ICV cannot be serviced separately and requires a fuel tank replacement on these vehicles. However, even the "responsive" claims are not all necessarily related to the alleged condition as there are other reasons for replacing the subject components under these specific LOP code / failure code combinations. For example, loose fill tube hose clamps or hard to fill complaints (see response to Request No. 9) are likely in the "responsive" counts even though not related to the alleged condition. Therefore, the number of "responsive" warranty claims shown here may also be artificially high with regard to the alleged condition. Thus, Chrysler has not drawn conclusions regarding trends for the alleged condition in the subject vehicles based on warranty data alone.

The detailed response that lists the warranty claims is provided in Enclosure 6 - Warranty Data – Subject Vehicles.

7. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by Chrysler to date that involved the replacement of the fuel tank, the filler tube or the inlet check valve for any reason in the peer 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. Chrysler'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-PEER VEHICLES."

A7. The warranty claims are itemized by labor operation code below:

Requested Claims (Total of All Replacement Claims for Subject Components):

Labor Operation (LOP) Code	Peer Vehicle Claims
14600101: – Fuel Tank Replacement	3515
14601501: – Fuel Filler Tube Replacement	499

Claims denoted as "Responsive" (Subset of total claims deemed potentially relevant to alleged condition - see response to Request No. 8):

Labor Operation (LOP) Code	Peer Vehicle Claims
14600101: – Fuel Tank Replacement	945
14601501: – Fuel Filler Tube Replacement	296

Thus, the total for all requested claims is 4014 (3515 + 499) and the subset of that total potentially responsive to the alleged condition is 1241 (945 + 296). This table includes all paid claims for all subject component part replacements related to the failure code conditions listed in response to Request No. 8. Note that the ICV cannot be serviced separately and requires a fuel tank replacement on these vehicles. However, even the "responsive" claims are not all necessarily related to the alleged condition as there are other reasons for replacing the subject components under these specific LOP code / failure code combinations. For example, loose fill tube hose clamps or hard to fill complaints (see response to Request No. 9) are in the "responsive" counts even though not related to the alleged condition. Therefore, the number of "responsive" warranty claims shown here may also be artificially high with regard to the alleged condition.

The detailed response that lists the warranty claims is provided in Enclosure 7 - Warranty Data – Peer Vehicles.

8. Describe in detail the search criteria used by Chrysler to identify the claims identified in response to Request No. 6 and 7, including the labor operations, problem codes, part numbers and any other pertinent parameters used. Provide lists of all labor operations, labor operation descriptions, problem codes, and problem code descriptions applicable to any replacement of the fuel tank, the filler tube or the inlet check valve for the subject and peer vehicles. State, by make and model year, the terms of the new vehicle warranty coverage offered by Chrysler on the subject and peer 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 Chrysler offered for the subject and peer vehicles and state by option, model, and model year, the number of vehicles that are covered under each such extended warranty.

A8. The search criteria used by Chrysler to identify claims reported in the response to Request No. 6 and 7 can be found in the charts below:

Description of Repair	Labor Operation
Fuel tank – replace	14600101
Fuel filler tube – replace	14601501

Chrysler is supplying all fuel tank and fuel filler tube replacements as requested; however, Chrysler believes that only the failure codes listed below are potentially relevant to the alleged condition. Therefore, Chrysler has added a column to the data tables provided in response to Request No. 6 and 7, titled "Responsive" that is populated with a checkmark (relevant complaint) or not. Chrysler has counted all claims and relevant claims separately in response to Request No. 7 and 8.

Failure Code	Code Descriptions
7	Binds, Sticks or Seized
8	Blocked
43	Fuel leak
61	Intermittent Operation
FH	Fill Failure
UC	Uncodeable

The standard warranty offered on both the subject and peer vehicles was 36 months / 36,000 miles. There was no extended warranty coverage for the subject components, but there were service contract coverage options available for purchase through Chrysler's authorized dealers which extend coverage on the subject components. Beyond standard warranty coverage, LOPS 14600101 (fuel tank replacement) and 14601501 (fill tube assembly replacement) are covered by any Maximum Care, Added Care Plus, Added Care, Added Limited warranty service contracts and the CPOV limited warranty during the first 3 months. The coverage choices available within these plans range from 36 months / 45,000 miles to LIFETIME UNLIMITED MILEAGE of vehicle life.

The total number of subject and peer vehicles that are or have been covered by one of the service contract plans is listed in Enclosure 8 – Extended Service Contracts CONF BUS INFO which has been submitted under separate cover to the NHTSA Chief Counsel's Office with a request for confidential treatment.

Any service contract claims for the applicable labor operation codes are included in the warranty data being provided in response to Request No. 6 and 7. Chrysler notes that owners may also have the opportunity to purchase additional service contract coverage through other third-party providers, but Chrysler does not have access to that data.

- 9. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that Chrysler 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 Chrysler is planning to issue within the next 120 days.**
- A9. There are two GPOP tech tips (9002199 and 9001902) and one Technical Service Bulletin (TSB 14-001-09) that are not related to the alleged condition in the subject vehicles; however, fuel tank replacements under warranty or fuel system complaint narratives not clearly articulated or explained could artificially increase the number of inputs that are being supplied in response to Request No.'s 3, 4, 5, 6 and 7. These referenced field communications documents are provided in Enclosure 9 – Field Communications.

10. 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, Chrysler. This includes but is not limited to any and all actions by the subject component manufacturer relating to the alleged defect. For each such action, provide the following information:

- a. Action title or identifier;**
- b. The actual or planned start date;**
- c. The actual or expected end date;**
- d. Brief summary of the subject and objective of the action;**
- e. Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and**
- f. A brief summary of the findings and/or conclusions resulting from the action.**

For each action identified, provide copies of all documents related to the action, regardless of whether the documents are in interim, draft, or final form. Organize the documents chronologically by action. If an action is not complete, provide a detailed schedule for the work to be done, tentative findings and/or conclusions, and provide an update within 10 days of completion of the action.

A10. Chrysler has split the assessments into confidential and non-confidential lists. The non-confidential assessments are listed below (Assessments 1 through 5) and the confidential assessments are listed in Enclosure 10A – Assessments CONF BUS INFO (Assessments 6 through 9). Each list refers to the appropriate enclosure for each assessment as applicable. The confidential enclosures have been sent under separate cover to the NHTSA Chief Counsel's Office with a request for confidential treatment.

Assessment 1: 2007 – 2010 MY Jeep Wrangler Fuel Spit Back Voluntary Submission to NHTSA ODI

Start Date	End Date	Engineering Group Responsible
3/15/2010	7/28/2010	Chrysler Product Investigations & Recall Administration

Voluntary Submission Objective: Voluntarily provide to NHTSA ODI information on the background, rate of incidence, test data, dimensional assessment, and continuous improvement activities with regard to the alleged condition on the JK subject vehicles.

Voluntary Submission Results & Summary: Complaint, dimensional and test data suggest that there is no design defect in the subject components. Rather, the subject components appear to be exposed to ethanol levels greater than what the subject vehicle fuel system was designed for. See Enclosure 10B – Voluntary Submission for details. Note on page 3, 3rd line down, that a mathematical error was made in the original submission in the poppet diameter. That error has been corrected in the document in Enclosure 10B.

Assessment 2: Survey & Analysis of Subject Components

Start Date	End Date	Engineering Group Responsible
9/1/2010	11/1/2010 (estimated)	Chrysler Product Investigations & Recall Administration

Survey & Analysis of Subject Components Objective: Survey and assess vehicles with reported fuel issues or tank replacements in the field and replace subject components for exemplar samples, testing and analysis.

Survey & Analysis of Subject Components Results & Summary: Twenty-two subject vehicles were reviewed and fuel tanks replaced and ICVs removed. Most of these ICVs were sent to ICV supplier Alfmeier for additional analysis including dimensional checks and fuel soak studies. This analysis is not complete.

Assessment 3: MOPMIS Analysis

Start Date	End Date	Engineering Group Responsible
9/1/2010	10/6/2010	Chrysler Product Investigations & Recall Administration

MOPMIS Analysis Objective: Review the warranty claims rate, weighted by vehicle volume and shown as complaints per 1000 (C/1000), for the subject components by month of production and months in service (MOPMIS). The fuel tank replacement LOP (14600101) was assessed separately from the fuel filler neck replacement LOP (14601501). Note that only the relevant LOPs and failure codes, identified in response to Request No. 8 were included in this analysis.

MOPMIS Analysis Results & Summary: See Enclosure 10C – MOPMIS Analysis for details on the results. The analysis showed there is a distinct subject vehicle build timeframe, from March 2007 to February 2008, where the fuel tank replacement rates were two to three times higher than for the rest of the subject vehicle builds. A reason for the drop off in the claim rate may be related to a dimensional mean shift toward the larger end of the specified ICV housing inside diameter range (discussed in Enclosure 10G – Historical ICV Dimension Study - CONF BUS INFO which is being submitted to Office of the Chief Counsel, under separate cover with a request for confidential treatment of information).

Assessment 4: Complaint Analysis by Report Open / Build Dates & Mileage

Start Date	End Date	Engineering Group Responsible
9/9/2010	10/7/2010	Chrysler Product Investigations & Recall Administration

Complaint Analysis Assessment Objective: Determine if there are any identifiable trends in the number of complaint vehicles (any subject vehicle with a CAIR, field report or legal claim associated with the alleged condition) sorted by open date (date of complaint), build date of the vehicle and by the mileage of the vehicle when the complaint occurred.

Complaint Analysis Assessment Results: See Enclosure 10D – Complaint Analysis for details on the results.

Complaint Analysis Assessment Summary: The complaint analysis by report open date shows that the majority of the complaints of the alleged condition in the subject vehicles have occurred within the past year. The complaint analysis by mileage shows the alleged condition occurring over a range of vehicle mileages with the majority of the complaints occurring between 30,000 and 60,000 miles. The complaint analysis by vehicle build date shows almost a complete absence of complaints after the 1st half of 2008 MY. Examination of the underlying data used to generate the plot reveals that there is only one complaint for subject vehicles built after March 6, 2008; thus subject vehicles built after this date appear to be not as susceptible to the alleged condition. The reason for the drop off in the complaints may be related to a dimensional mean shift toward the larger end of the specified ICV housing inside diameter range (discussed Enclosure 10G – Historical ICV Dimension Study - CONF BUS INFO which is being submitted to Office of the Chief Counsel, under separate cover with a request for confidential treatment of information).

Assessment 5: Warranty Analysis by Report Open / Build Dates & Mileage

Start Date	End Date	Engineering Group Responsible
9/30/2010	10/7/2010	Chrysler Product Investigations & Recall Administration

Warranty Analysis Assessment Objective: Determine if there are any identifiable trends in the number of warranty claims (for the “responsive” claims referenced in response to Request No. 6 and No. 7) sorted by claim date (warranty repair date), build date of the vehicle and by the mileage of the vehicle when the warranty repair occurred.

Warranty Analysis Assessment Results: See Enclosure 10E – Warranty Analysis for details on the results.

Warranty Analysis Assessment Summary: The warranty analysis by vehicle build date shows a majority of the complaints in the Jan / Mar 2007 to Jan / Mar

2008 timeframe. Examination of the underlying data used to generate the plot reveals the number of warranty claims begins to rise beginning in mid-February 2007 and begins to drop off after mid-March 2008; thus subject vehicles built outside of this time window appear to be not as susceptible to the alleged condition. A reason for the drop off in the number of claims may be related to a dimensional mean shift toward the larger end of the specified ICV housing inside diameter range (discussed Enclosure 10G – Historical ICV Dimension Study - CONF BUS INFO which is being submitted to Office of the Chief Counsel, under separate cover with a request for confidential treatment of information).

11. Describe all modifications or changes made by or on behalf of Chrysler (e.g., by a supplier) 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 number(s) (engineering and service) of the original component;
- e. The part number(s) (engineering and service) 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 Chrysler is aware of which may be incorporated into vehicle production within the next 120 days.

- A11. The subject components are purchased assemblies and there are no documented changes that relate to, or may relate to, the alleged condition. There is, however, a change that is planned for February 2011 that involves dimensional changes to the poppet component of the ICV to increase clearance to the housing. The additional clearance is being implemented to enhance customer satisfaction and intended to minimize the potential for ICV sticking and account for swell conditions as a result of field exposure to ethanol levels greater than what the subject vehicles were designed for (i.e. ethanol levels >10%).

12. Produce one or two of each of the following:

- a. One exemplar sample of each design version of the filler tube inlet check valve used in the subject vehicles;**
- b. Two field-returned samples of failed filler tube inlet check valves from MY 2007-2008 Jeep Wrangler vehicles; and**
- c. Any kits (one sample) that have been released, or developed, by Chrysler for use in service repairs to the subject component in the subject vehicles.**

A12. Chrysler is providing NHTSA ODI with one new exemplar filler tube JK and TJ ICV and one field returned sample from a MY 2007 / 2008 JK vehicle. Chrysler is still attempting to locate a second field returned sample (that hasn't been already used for testing and analysis in Assessment 2 – Survey & Analysis, discussed in response to Request No. 10) that exhibits the alleged condition and will forward this additional part to NHTSA ODI when received. There are no separate kits released to repair the alleged condition, aside from subject component replacement parts.

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

For each subject component part number, provide the supplier's name, address, and point of contact used by Chrysler (name, title, and telephone number). Also, identify by make, model and model year, any other vehicles of which Chrysler 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. Part sales information is included in Enclosure 13 – Part Sales. The subject component replacement parts are not used on any other Chrysler vehicles. The table in Enclosure 13 includes all subject component service part sales, whether or not they are related to the alleged condition. It is difficult to determine whether the alleged condition prompted these part sales as there are circumstances not related to the alleged condition that generate sales. In particular, Jeep Wranglers are a premier off-roading vehicle and fuel tanks replaced as a result of driving over stumps or rocks that damage the tank are common and will show up in part sales though unrelated to the alleged condition. Additionally, complaints for "hard to fill" as a result of the issue identified in Technical Service Bulletin in Enclosure 9 – Field Communications, may have prompted subject vehicle fuel tank service part sales which are not related to the

alleged condition. Thus, Chrysler has concluded that the use of part sales data will not be conclusive to assess any trend related to the alleged condition.

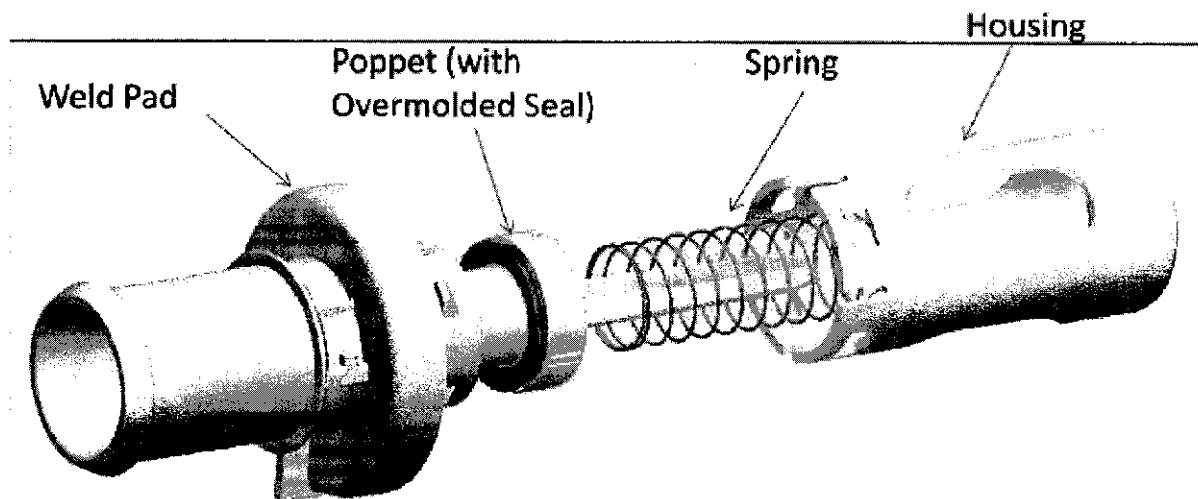
14. Furnish Chrysler's assessment of the alleged defect in the subject vehicles, including:

- a. The causal or contributory factor(s);**
- b. The failure mechanism(s);**
- c. The failure mode(s);**
- d. The risk to motor vehicle safety that it poses; and**
- e. What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning; and**
- f. The reports included with this inquiry.**

A14. The subject components consist of a fuel tank that incorporates an inlet check valve (ICV) that is integrated into the fuel tank at the top where the fuel enters from the fuel filler tube neck during the refueling process. During refueling, the ICV is designed to close when the fuel level in the tank reaches a near full level to prevent the air pressure, created in the top of the fuel tank during refueling, from pushing the fuel that is still in the fuel filler neck back out of the fuel filler tube. This subject vehicle ICV design is based on fuels such as E10 or regular unleaded and not for flexible fuel E85 or any other ethanol blends.

Chrysler has experienced a small number of complaints on the subject vehicles where some amount of fuel is expelled during the fuel filling process and the allegation in this matter is that the ICV is not closing properly when achieving full levels during refueling. NHTSA ODI first contacted Chrysler on this matter in 1st quarter 2010 (prior to the initiation of PE10-032) and, Chrysler at that time, provided an informal response to this inquiry on July 28, 2010. In that voluntary submission provided in Enclosure 10B – Voluntary Submission, Chrysler highlighted the following key points:

- The ICV in the subject vehicles functions by a spring loaded poppet that slides inside a plastic housing. Proper clearance between the poppet and housing is required for the poppet to slide to the fully extended spring (ICV closed) position.



- Assessment of a fuel tank from an owner who had contacted NHTSA alleging fuel “spit-back” indicated a lack of proper clearance between the ICV poppet and housing that affected the proper closing of the ICV; however, there was no root cause determination for this inadequate clearance.
- Chrysler complaint rates in the subject vehicles were approximately 2 complaints per 1000. However, this complaint rate may be artificially high due to “hard to fill” or “nozzle shuts off repeatedly” complaints.
- Analysis of the design dimensions and tolerances indicated that, by design, there is proper clearance between the ICV poppet and housing.
- Supplier measurement data also showed proper dimensional clearances between the poppet and housing, prior to field exposure, thus indicating proper clearance in the ICV as built.
- The material of the ICV poppet (30% glass filled nylon) and housing (Acetal) is subjected to dimensional increases, over time (i.e. “swell”), in varying degrees, when subjected to different types of fuels. Supplier data showed that the swell is significantly greater in fuels with ethanol levels greater than that found in E10 (10% ethanol).
- Testing and analysis of poppet and housing dimensions in the presence of standard unleaded fuel, reformulated gas fuel (RFG) and E10 (i.e. the fuels the subject vehicles were designed to operate with) reveal that dimensions do not change enough to cause ICV sticking (i.e. no poppet interference to housing).
- The subject vehicles are not “flexible fuel” vehicles and are not designed to accommodate fuels with higher levels of ethanol than E10 (such as E85 flex fuel which is 85% ethanol).
- Root cause of ICV sticking was unknown, but data suggested that subject vehicles were being exposed to levels of ethanol higher than what the subject vehicles were designed for.

- Despite Chrysler's belief that there was no design defect in the ICV, it was undertaking actions to improve ICV robustness to increase clearance by design between the poppet and housing to accommodate the "swell" that it is not designed for.

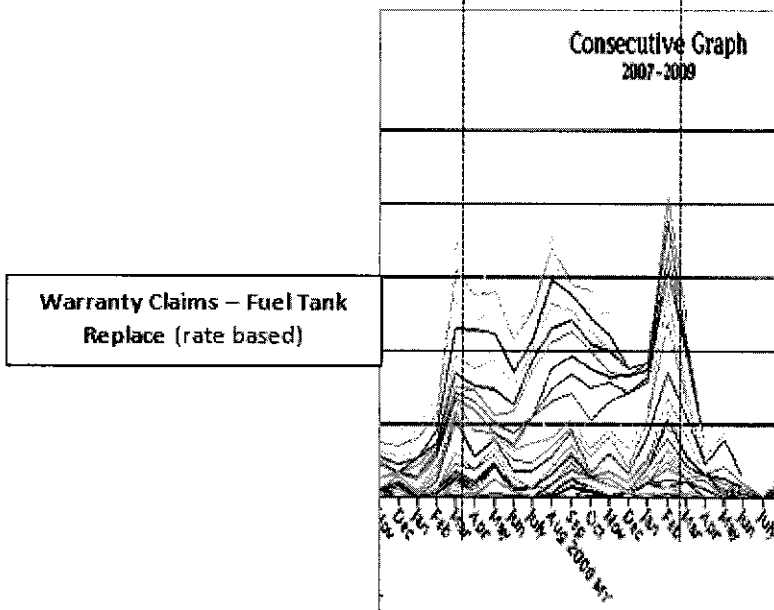
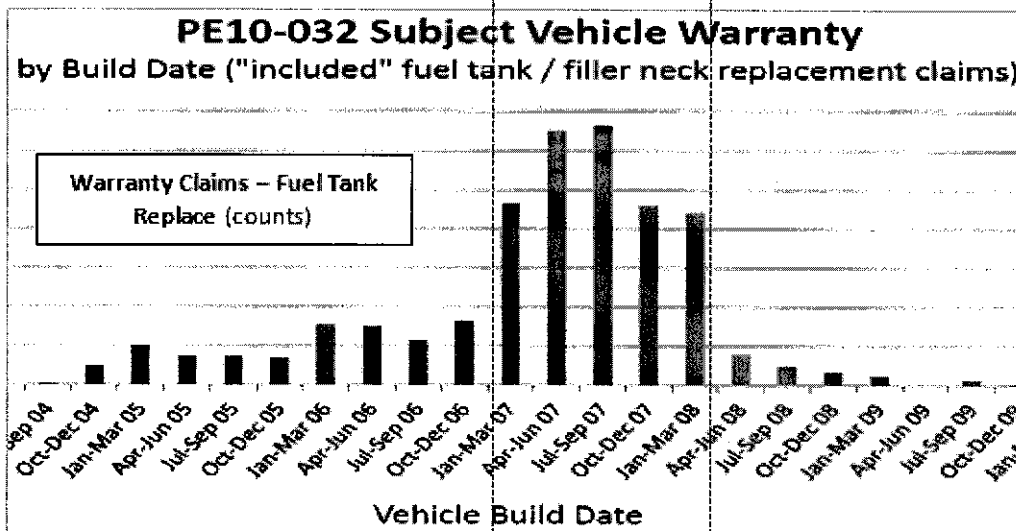
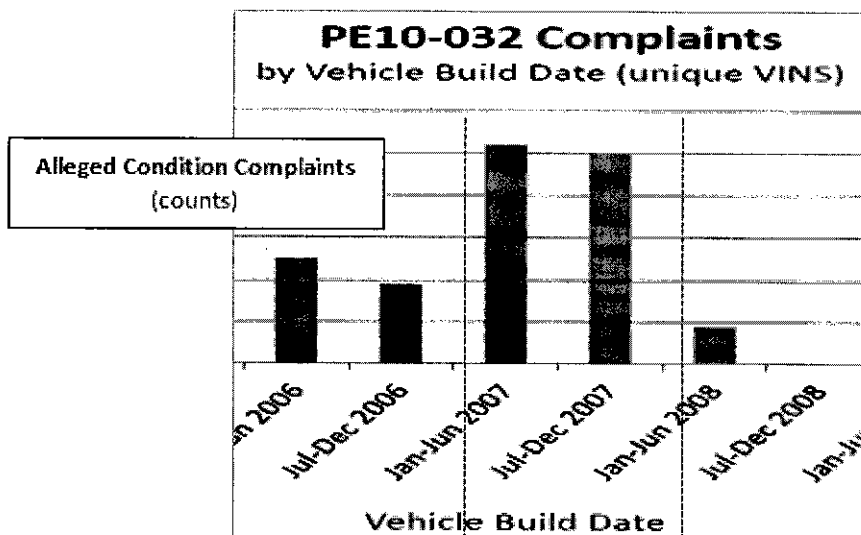
Since the voluntary submission in July, Chrysler has done additional analysis with regard to the alleged condition, in terms of the scope, root cause / corrective action and consequence. These findings are presented in this response with the following key points highlighted below:

Scope:

- For the complaints and warranty claims provided in this response, there is no way of knowing how many customers erroneously overfilled their tanks by continuing to fill it after the refilling station's automatic fuel fill shut off mechanism actuated. In fact, erroneous over-filling is enough of a concern that Chrysler cautions against over filling the fuel tank in its owner's manuals.

CAUTION!
To avoid fuel spillage and overfilling, do not "top off" the fuel tank after filling.

- As noted in ODI's closing resume for GM investigation PE04-001 (same alleged condition as this inquiry), fuel station flow rates may vary with some exceeding regulated maximum of 10 gpm (gallons / min), thus potentially contributing to spit back complaints that may be unrelated to the alleged condition.
- Of the 191 unique complaints (customer call center, field reports, legal claims) referencing the alleged condition and the 772 warranty claims for fuel tank or fuel filler tube replacement, there is a distinct time window within the subject vehicle population where the complaint / warranty rates are significantly greater than for the rest of the subject vehicle population. This time window is for vehicles built from approximately mid-February 2007 to mid-March 2008 (thus spanning the last part of the 2007 MY and first part of the 2008 MY JK vehicles).
- This affected time window is repeated in warranty counts (Enclosure 10E – Warranty Analysis), warranty rates that are normalized for vehicle volume (Enclosure 10C – MOPMIS Analysis) and customer complaints (Enclosure 10D – Complaint Analysis). See graphic below highlighting the alignment of the vehicle build window across the data types.



Root Cause & Corrective Action:

- Enclosure 10H – Fuel Soak – Swell Study CONF BUS INFO shows the fuel swell mechanism is directly related to, but not directly proportional to, the ethanol content in the fuel. The largest swell results from E22 fuel (22% ethanol) soak for both the housing and the poppet, which is significantly greater than the swell attributed to fuel soak in E10.
- Enclosure 10G– Historical ICV Dimensions Study confirms the historical dimensions for the ICV poppet outside diameter and housing inside diameter, from Alfmeier quality control measurement data from calendar year 2007 through 2010, have been within the required specifications.
- The time window with higher complaint / warranty rates identified above appears to line up with a shift to a larger mean inside diameter of the ICV housing dimension as shown in Enclosure 10G – Historical ICV Dimensions Study CONF BUS INFO. The mean shift is in the range of 0.03 – 0.05 mm larger. Chrysler believes that the additional clearance to the ICV poppet may be one of the reasons for the complaint drop off starting with subject vehicles built in March 2008. This dimensional shift created greater clearance statistically within the ICV and reduced its susceptibility to swelling as a result of being subjected to elevated ethanol levels beyond what the subject vehicle fuel system was designed for.
- Chrysler has engaged in a more extensive statistical study that shows the resultant clearances between housing and poppet in Enclosure 10J – ICV Interference Model CONF BUS INFO using the supplier quality control measurement data shown in Enclosure 10G – Historical ICV Dimensions Study CONF BUS INFO and the fuel swell data in Enclosure 10H – Fuel Soak – Swell Study CONF BUS INFO. This study assesses the clearances statistically as built and, as separate analyses, clearances after fuel soak with various ethanol content levels. The major highlights of this study are listed below:
 - In general, probabilities for interference (and ICV sticking) increase as both the poppet outside diameter trends toward the high end of tolerance and the housing inside diameter trends toward the low end. The interference model calculates the probability of the poppet outside diameter exceeding the housing inside diameter under all possible combination of individual components.

- The table below indicates the statistical potential for interference to occur between the ICV poppet and housing, considering the normal dimensional variation and ICV component material swell characteristics upon exposure to various levels of ethanol blended fuels.

Model Condition	Ethanol Content	*Avg Rate Interference – Upper ICV Housing to Poppet (per 100,000 vehicles)	*Avg Rate Interference – Lower ICV Housing to Poppet (per 100,000 vehicles)
As Built (no swell)	0%	< 0.05	< 0.05
RFG Fuel Soak	0%	< 0.05	< 0.05
E10 Fuel Soak	10%	0.1	3.1
E22 Fuel Soak	22%	8,936	15,331
E50 Fuel Soak	50%	2.2	25.7
E85 Fuel Soak	85%	1,334	3,551
E100 Fuel Soak	100%	37,866	46,740

* Avg = Average of eight tool cavities

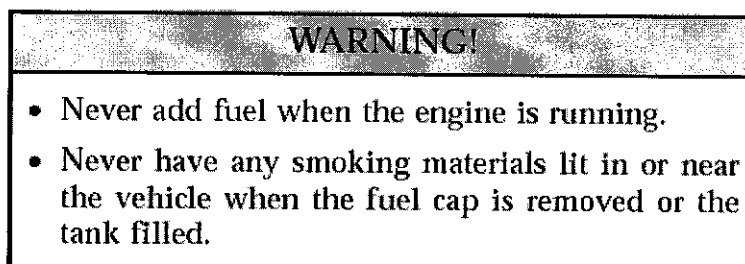
- The results in the table above indicate a strong relationship between the potential for ICV poppet and housing interference and the ethanol content in the fuel. The highest rates for interference occur for fuels the subject vehicles are not designed for. The maximum average interference rate (occurring at poppet to lower ICV housing) statistically for a fuel the subject vehicle was designed for is 3.1 in 100,000 vehicles.
- Because the complaint rates of the alleged condition exceeds that for the probability of ICV sticking using E10 fuel, a plausible explanation is that these subject vehicle ICVs are being exposed to ethanol contents higher than that found in E10.
- Chrysler recognized the consequences of using flex fuels in the subject vehicles and warned customers as such in the owner's manual (see below). The entire fuel requirements section of the owner's manual is also provided in Enclosure 14 - Owner's Manual (Fuel Requirements).

CAUTION!
DO NOT use gasolines containing Methanol or E85 Ethanol. Use of these blends may result in starting and driveability problems and may damage critical fuel system components.

- Despite overwhelming analysis that; by design, as built and after exposure to designated fuel types; clearances are adequate and the ICV component meets its performance requirements, Chrysler is working toward a more robust ICV design for production and service that is planned to be implemented in Feb 2011. This customer satisfaction initiative is being taken to account for swell conditions as a result of field exposure to ethanol levels greater than what the subject vehicles were designed for (i.e. ethanol levels >10%).

Alleged Condition Consequence:

- All of the complaints are characterized as a fuel spill of some kind and the fact that there is no property damage or fuel contact injuries suggests that the fuel is coming out in smaller amounts at low speeds and not coming in contact with the customer.
- There are no complaints of fire. The lack of reported fires may be attributed to the following:
 - Chrysler owner's manual warning (see below) to keep lit materials away when filling the fuel tank.



- Legal requirements in most, if not all states, mandate that any source of ignition be removed or extinguished before operating the fuel station pump, with warning signs conspicuously posted (reference NFPA 30A).
- The subject vehicle exhaust pipe is on the opposite side of the vehicle from the fuel filler inlet, thus eliminating another potential ignition source.
- There are safeguards by design to reduce the possibility that electro-static discharge (ESD) cause or ignite fuel. By design, the subject vehicle fuel filler neck is grounded to the rest of the subject vehicle. Furthermore, refueling station pumps are earth grounded; thus, when refueling and contact is made between the fuel pump and the fuel filler neck, the vehicle, fuel pump all become earth grounded, thus minimizing the possibility for ESD discharge.

In summary, further study since the voluntary submission confirms that there is not a design defect in the subject components and thus that a safety defect does not exist in the subject vehicles. The level of fuel spillage occurrences is similar to PE04-001, where ODI recognized that a 0.2% rate (warranty claims) of fuel spill was lower than historical levels of fuel spill rates that have led to prior determinations of a safety defect. In this investigation, Chrysler is reporting 772 responsive warranty claims for 542,650 subject vehicles, for a warranty rate of 0.14%.

Finally, the only plausible explanation, to date, is that the subject vehicles are being subjected to ethanol levels greater than what they were designed for (i.e. ethanol levels >10%). Additionally, despite having over 500,000 subject vehicles on the road for up to six years, there is not a single allegation of crash, fire, property damage or injury as a result of the alleged condition. Based on the information provided in this response, it is clear that the alleged condition on the subject vehicles does not rise to the level of a safety defect and this investigation should be closed.