

VOLKSWAGEN



Handwritten: 10/12/05

3800 Hamlin Road
Auburn Hills, MI 48326
Tel. (248) 754-5000

October 7, 2005

Kathleen Demeter
Director, Office of Defects Investigation
US Department of Transportation
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, DC 20590

Subject: DP05-003; Passat Tie Rod

Dear Ms. Demeter,

Attached is our response to your letter dated August 30, 2005 requesting information concerning defect petition DP05-003 regarding certain Volkswagen Passat vehicles.

For your convenience, each request is restated verbatim and then followed by our response.

Please contact me if you have any questions regarding this response.

Regards,

Handwritten signature of John Maddox
John Maddox
Compliance Officer
Volkswagen of America

Attachments

Handwritten: 10/11/05

Request 1. State, by model and model year, the number subject vehicles VW has manufactured for sale or lease in the United States. Separately, for each subject vehicle manufactured to date by VW, state the following:

- a. Vehicle Identification number (VIN);
- b. Make;
- c. Model;
- d. Model Year;
- e. Date of manufacture;
- f. Date warranty coverage commenced;
- g. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease); and
- h. Whether or not the vehicle is included in any subject recall.

Provide the table in Microsoft Access 2000, or a compatible format, entitled "PRODUCTION DATA." See Enclosure 1, Data Collection Disc, for a pre-formatted table that provides further details regarding this submission.

Response 1.

In response to this inquiry, Volkswagen has identified the following vehicle population:

| | MY 1998 | MY 1999 | MY 2000 |
|--------|---------|---------|---------|
| Passat | 25,913 | 79,398 | 68,137 |

Our response to this request including subparagraphs a. through h. is provided in a Microsoft Access file entitled, "PRODUCTION DATA.mdb" attached hereto as Exhibit to Request 1.

Source: Business Objects. Data Gathered: Through the date of the inquiry

Exhibit to Request 1

PRODUCTION DATA

Data is provided in Microsoft Access format on DP05-003 Data Collection Disc

Request 2. State the number of each of the following, received by VW, or of which VW is otherwise aware, which relate to, or may relate to, the alleged defect in any subject vehicles NOT included in any subject recall:

- 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 VW is or was a party to the arbitration; and
- f. Lawsuits, both pending and closed, in which VW 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 "d," provide a summary description of the alleged problem and causal and contributing factors and VW'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.

Response 2.

- a. In response to your inquiry, Volkswagen has identified 633 Consumer complaints involving 603 unique vehicles, none of which are from fleet operators. Volkswagen is also providing copies of complaints in which the allegations are not clearly specified and Volkswagen is unable to determine if they may or may not be related to the alleged defect in the subject vehicles.

Volkswagen notes that due to the broad definition of the alleged defect, these cases are composed of a variety of allegations of reasons for failure or replacement, including "noise" and non-specific allegations of "defective" or "replacement."
- b. In response to your inquiry, Volkswagen has not identified any Field Reports which may relate to the alleged defect in the subject vehicles.
- c. In response to your inquiry, Volkswagen has not identified any report alleging an 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. Volkswagen has identified one report alleging an accident when the "upper control arm and tie rod on the passenger side broke." The vehicle was repaired at an independent repair facility and the replaced parts are not available. Volkswagen notes that the circumstances of this incident are unclear, including if the broken components were caused by or were the cause of the accident. Volkswagen notes, however, that it is unlikely that both components would have failed simultaneously. Volkswagen also notes that the customer did not contact Volkswagen at that time to inform us, or seek reimbursement for replaced parts or any damage due to the alleged accident.
- d. In response to your inquiry, Volkswagen has not identified any property damage claims.
- e. In response to your inquiry, Volkswagen has not identified any third-party arbitration proceedings, where Volkswagen is or was a party to the arbitration.

- f. In response to your inquiry, Volkswagen has not identified any lawsuits in which Volkswagen is or was a defendant or codefendant.

Source: VNA LISTEN. Date Gathered: Through the date of the inquiry

Request 3. Separately, for each item (complaint, report, claim, notice, or matter) within the scope of your response to Request No. 2, state the following information:

- a. VW'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 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." See Enclosure 1, Data Collection Disc, for a pre-formatted table that provides further details regarding this submission.

Response 3.

Responses to subparagraphs a. through l. are provided in the REQUEST NUMBER TWO DATA folder attached hereto as Exhibit to Request 3.

Source, Date Gathered: See Response Two

Exhibit to Request 3

REQUEST NUMBER TWO DATA

&

NON-SPECIFIC NUMBER TWO DATA

**Data is provided in Microsoft Excel format in the REQUEST NUMBER TWO DATA folder on
DP05-003 Data Collection Disc**

Request 4. Produce copies of all documents related to each item within the scope of Request No. 2. Organize the documents separately by category (i.e., consumer complaints, field reports, etc.) and describe the method VW used for organizing the documents.

Response 4.

In response to this inquiry, Volkswagen is providing copies of documents identified for each item in Response 2. The documents are provided in an Adobe Acrobat file entitled "REQUEST NUMBER FOUR DATA.pdf" attached hereto as Exhibit to Request 4.

Volkswagen is also providing copies of customer complaints in which the reason for the claim does not contain sufficient information for Volkswagen to determine if they may or may not be related to the alleged defect. Information on these claims is provided in an Adobe Acrobat file entitled "NON-SPECIFIC NUMBER FOUR DATA.pdf" attached hereto as Exhibit to Request 4.

Source, Data Gathered: See Response Two

Exhibit to Request 4

**REQUEST NUMBER FOUR DATA
&
NON-SPECIFIC NUMBER FOUR DATA**

**Data is provided in Adobe Acrobat format in the REQUEST NUMBER FOUR DATA folder on
DP05-003 Data Collection Disc**

Request 5. State, by model and model year, a total count for all of the following categories of claims, collectively, that have been paid by VW 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. VW'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(s);
- h. Problem code(s);
- 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." See Enclosure 1, Data Collection Disc, for a pre-formatted table that provides further details regarding this submission.

Response 5.

In response to this inquiry, Volkswagen has identified 2,543 non-duplicative warranty claims, exclusive of any recall claims, on 2,505 unique vehicles which have been paid by Volkswagen to date.

Volkswagen notes that due to the broad definition of the alleged defect, these cases are composed of a variety of allegations of reasons for failure or replacement, including "noise" and non-specific allegations of "defective" or "replacement."

Our response to this request is provided in Microsoft Excel format entitled "WARRANTY DATA.xls" attached hereto as Exhibit to Request 5.

Source: Business Objects Warranty Claims Universe. Data Gathered: Through the date of the inquiry

Exhibit to Request 5

WARRANTY DATA

Data is provided in Microsoft Excel format on DP05-003 Data Collection Disc

Request 6. Describe in detail the search criteria used by VW 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 VW 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 VW 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.

Response 6.

In response to this inquiry, the following methods were used to identify claims in response to request number five.

1. All subject vehicles made available for sale or lease in the United States with claim dates through the calendar week of the inquiry.
2. All warranty claims containing the following part numbers:

| <u>Number:</u> | <u>Description:</u> |
|----------------|---------------------|
| 4B0419801* | TIE ROD |
| 4B0419811* | TIE ROD END |
| 8E0419811B | TIE ROD END |
| 8D0488988A | TIE ROD KIT |

Where * is used as a wildcard

Resultant claims, including technician comments, were screened individually for relevance to the alleged defect in the subject vehicles.

Volkswagen has identified, through screening the resultant claims, a list of all problem codes and problem code descriptions that were used in claims related to the alleged defect in the subject vehicles. The following overviews these findings:

Damage Codes with Description:

10 – Mechanical Defect
11 – Incorrectly Adjusted
13 – Out of Round/Out of Balance
15 – Broken, Cracked, Torn
16 – Ineffective
17 – Binding
18 – Loose
20 – Noisy
30 – Unsatisfactory Appearance
32 – Wavy, Warped
33 – Corrosion
40 – Electrical Malfunction
50 – Leaking
66 – Upon Instruction from VWoA
88 – Vehicle towed in to dealership

The following is a list, by make and model year, of the terms of the new vehicle warranty coverage offered by Volkswagen on the subject vehicles:

| Model Year | Warranty Terms and Vehicles | Coverage Type |
|------------|-----------------------------|------------------|
| 1998 | 2 Years / 24,000 miles | Bumper to Bumper |
| 1999 | 2 Years / 24,000 miles | Bumper to Bumper |
| 2000 | 2 Years / 24,000 miles | Bumper to Bumper |

Source: Warranty Universe, VESIS, ETKA. Date Gathered: Through the date of the inquiry

Request 7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles, that VW 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 VW is planning to issue within the next 120 days.

Response 7.

In response to this inquiry, Volkswagen has identified and is providing copies of the Customer Letters and Dealer Circulars for the recall campaigns. Volkswagen is providing these documents in an Adobe Acrobat file entitled "CAMPAIGN LETTERS AND CIRCULARS.pdf" attached hereto as Exhibit to Request 7.

Source: VESIS. Date Gathered: Through the date of the inquiry

Exhibit to Request 7

CAMPAIGN LETTERS AND CIRCULARS

Data is provided in Adobe Acrobat format on DP05-003 Data Collection Disc

Request 8. Describe all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations (collectively, "actions") that relate to, or may relate to, the alleged defect in the subject vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, VW. 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.

Response 8.

In response to this inquiry, Volkswagen identified documents regarding tests and test results performed in the normal course of the design and release process for the subject parts and is providing these as attached. The documentation is provided in German and is currently being translated and will be provided upon completion.

Volkswagen did not identify any further studies or surveys, assessments, simulations, investigations, inquiries or evaluations related to the alleged defect in the subject vehicles or related to the recall.

Source: VWoA and VWAG. Date Gathered: Through the date of the inquiry

Request 9. Describe all modifications or changes made by, or on behalf of, VW 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 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.

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

Response 9.

Our response to this request is provided in an Adobe Acrobat file entitled "PARTS HISTORY.pdf" attached hereto as Exhibit to Request 9.

Supplier:

**ZF Lemförder Fahrwerktechnik AG & Co.
Mr. Werner Pecht
Customer Director Volkswagen Group
Postfach 1220
49441 Lemförde
Germany**

Phone: +49(0)5474/60-2827

Fax: +49(0)5474/60-2878

Source: VWAG. Data Gathered: Through the date of the inquiry

Exhibit to Request 9

PARTS HISTORY

Data is provided in Adobe Acrobat format on DP05-003 Data Collection Disc

Request 10. Produce one exemplar sample of each design version of the subject component.

Response 10.

Volkswagen is providing sample parts of design versions where available. Some of the design versions are no longer obtainable.

Source: VWoA and VWAG. Data Gathered: Through the date of the inquiry

Request 11. Furnish VW'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.

Response 11.

Based on a review of the reports identified in response to this inquiry, Volkswagen firmly believes that the alleged defect does not constitute a risk to motor vehicle safety for those vehicles outside of the scope of recall 99V-246 and 00V-414.

Volkswagen initiated recall 99V-246 as a result of its internal investigations for 1998-1999 model year vehicles that were manufactured with a tie rod with aluminum body that had been determined by Volkswagen to be defective. At the time of the campaign, Volkswagen identified the specific VIN range of vehicles that were built with the aluminum tie rod, and additionally expanded the build date with two months before and after these vehicles to be sure to include any vehicle that might have been built with the aluminum tie rod stock. These vehicles were recalled and a steel tie rod was installed in the vehicle. The same or similar steel tie rod was used in production for all other subject vehicles that were not included in the recall.

Volkswagen has examined the report trends for the reports identified in response to this inquiry and believes that the nature of these reports and the exhibited failure modes for the steel components are entirely different from the recalled aluminum parts.

a) Volkswagen examined worn tie rods before the recall determination that showed damage to the rubber boots allowed water and dirt to enter the bearings leading to excessive wear of the joints. In particular, aluminum tie rods wore rapidly due to their low inherent material hardness. Boot damage on aluminum tie rods was caused by external forces (impact or in-use damage) and in rare cases may have been damaged in assembling the tie rod to the front strut. Measures to improve ease of assembly (introduction of stop ring), boot resilience and sealing were implemented in production and service. In addition, the tie rod material was changed to steel in order to improve the wear characteristics of the joint in the event of boot damage.

b,c) The tie rods incorporate a rubber boot that is intended to prevent the intrusion of dirt, dust, water, and other environmental particles that could cause corrosion and wear of the ball and socket joint. Damage to the rubber boot allows water and dirt to enter the bearings

leading to corrosion and excessive wear. In particular, aluminum tie rods wear rapidly due to their low inherent material hardness.

Volkswagen notes that the consumer complaints and warranty claims identified in response to this inquiry clearly show that the aluminum parts show a very different pattern for replacement than the steel parts. The aluminum parts are replaced at a much lower mileage range, such as is indicative of an "infant mortality" failure pattern, whereas the steel parts are replaced at a significantly higher mileage.

d,e) Both the aluminum and the steel tie rods show a progression of symptoms, starting with an identifiable noise (particularly noticeable in the case of steel), then progressing to play as evidenced in the steering feel or as found during routine maintenance inspection, and finally to a noticeable "clunk" when turning. Volkswagen notes that this progression of symptoms is clearly demonstrated and confirmed by the claims/reports that were identified in response to this inquiry. Among those reports that include a specific allegation as to the reason for replacement, the vast majority of claims include allegations limited to "noise" and/or "loose" and/or "worn." The general allegations of "broken" were very rare and Volkswagen notes that the use of the term "broken" commonly describes a general condition of a part requiring replacement. This indicates that the tie rods are following a normal wear pattern, and that pattern does provide substantial warning of a tie rod that is in need of replacement.

Additionally, Volkswagen clearly specifies that tie rods, including the subject tie rods, are subject to regular inspection under the maintenance program outlined in the owner's literature in the subject vehicles. Inspection of chassis components such as tie rods is typical throughout the industry, and is included in a general steering check specified at the Volkswagen 12-month maintenance service interval. Furthermore, Volkswagen has a specific inspection of the tie rod and the tie rod end at every 40,000 miles, or every 4 years.

Volkswagen believes, based on the information described above, that in case of damage to the rubber boot, wear conditions of the steel tie rod such as "worn", "noisy" or "loose" will be readily noticed by the driver and/or identified by maintenance inspection. This belief is also reinforced by the lack of confirmed reports of loss of steering control, accident, injuries, or fatalities.

f) Volkswagen has inspected the petitioner's subject vehicle as a result of this inquiry. The vehicle had been repaired by an independent repair facility that is not authorized by Volkswagen. Volkswagen can unfortunately make no statement as to the condition of the tie rods or the rubber boots at the time of replacement. Volkswagen has been informed by the repair facility that the replaced tie rods were not retained, and therefore are no longer available for inspection.

Volkswagen notes that the petitioner is alleging a "loosening" condition of the tie rods and is not alleging any loss of steering, accident, or injury. The petitioner informed Volkswagen that she identified the condition by a noise and was confirmed by dealer inspection.