

**VOLKSWAGEN**



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May 7, 2004

Jeffrey L. Quandt  
Chief Vehicle Control Division, ODI  
U. S. Department of Transportation  
National Highway Traffic Safety Administration  
400 Seventh Street, S.W.  
Washington, D.C. 20590

Subject: NVS-213c1a / PE04-023, "Audi A6 Stuck-Open Throttle"

Dear Mr. Quandt,

This responds to your letter dated March 18, 2004, concerning "allegations of throttles failing to return to idle in low ambient temperature driving conditions in model year (MY) 1998 through 1999 Audi A6 vehicles."

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

As a result of this inquiry, Volkswagen has investigated the alleged defect as described under Response 8 of PE04-23.

As a result of this investigation, Volkswagen does not see any unreasonable risk to motor vehicle safety. However, Volkswagen takes its customers' concerns regarding the alleged defect very seriously and thus has decided to voluntarily conduct a service action for the subject vehicles. Additionally, Volkswagen is currently investigating whether other vehicles equipped with this 2.8l V6-engine are also affected.

Volkswagen is still assessing further details for this service action and would request the opportunity to present this information to NHTSA at the beginning of June 2004.

Please contact me if you have any questions or request any further information.

Sincerely,

John Meddox  
Product Compliance Officer  
Volkswagen of America, Inc.

Encl: PE04-023 Data Collection Disc (CD-ROM)

### Question 1

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

- a. Vehicle identification number (VIN);
- b. Make;
- c. Model;
- d. Engine;
- e. Model Year;
- f. Date of manufacture;
- g. Date warranty coverage commenced; and
- h. The State in the United States where the vehicle was originally sold or leased (or delivered for sale or lease).

### Response 1

The number of subject vehicles Volkswagen has manufactured for sale or lease in the United States is

| Model           | Model Year | Sales  |
|-----------------|------------|--------|
| A5 and A6 Avant | 1998       | 18,200 |
|                 | 1999       | 24,808 |
|                 | Total      | 40,008 |

Source: ED Business Objects Vehicle Universe  
Gathered: May 8, 2004

The detailed responses to subparagraphs a. through h. are provided in a Microsoft Excel data file entitled "01\_Production-Data\_(PE04-023).xls" on the enclosed PE04-023 data collection disc.

### Question 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 the subject vehicles:

- a. Consumer complaints, including those from fleet operators;
- b. Field reports, including dealer field reports;
- c. Reports involving a crash, injury, or fatality, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;
- d. Reports involving a fire, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports;
- e. Property damage claims;
- f. Third-party arbitration proceedings where VW is or was a party to the arbitration; and
- g. Lawsuits, both pending and closed, in which VW is or was a defendant or codefendant.

For subparts "a" through "d/e", state the total number of each item (e.g., consumer complaints, field reports, etc.) separately. Multiple incidents involving the same vehicle are to be counted

separately. Multiple reports of the same incident are also to be counted separately (i.e., a consumer complaint and a field report involving the same incident in which a crash occurred are to be counted as a crash report, a field report and a consumer complaint).

In addition, for items "c" through "d/e/f/g," 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 "f" and "g," identify the parties to the action, as well as the caption, court, docket number, and date on which the complaint or other document initiating the action was filed.

### Response 2

- a. In response to this inquiry, VW has identified a total of 31 consumer complaints, involving 30 vehicles, which are related to the alleged defect.
- b. In response to this inquiry, VW has identified a total of 23 field reports, involving 22 vehicles. Four of these reports, relating to 3 of the 30 vehicles mentioned under a.), have associated consumer complaints.
- c. In response to this inquiry, VW has not identified any 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. In response to this inquiry, VW has not identified any vehicles that have a report involving a fire that is related to the alleged defect, based on claims against the manufacturer involving a death or injury, notices received by the manufacturer alleging or proving that a death or injury was caused by a possible defect in a subject vehicle, property damage claims, consumer complaints, or field reports.
- e. In response to this inquiry, VW has not identified any property damage claims related to the alleged defect.
- f. In response to this inquiry, VW has not identified any cases of third-party arbitration proceedings that are related to the alleged defect.
- g. In response to this inquiry, VW has not identified any lawsuits, either pending or closed, that are related to the alleged defect and in which VW is a defendant or codefendant.

### Question 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. Volkswagen'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. VIN;
- e. Make, Model, and model year;
- f. Vehicle 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.

#### Response 3

In response to this inquiry, VW has identified 49 unique vehicles, associated with 23 field reports and 31 consumer complaints that relate to the alleged defect. The responses to subparagraphs a. through l. are provided in a Microsoft Excel data file entitled "03\_Complaint\_Data\_(PE04-023).xls" on the enclosed PE04-023 data collection disc.

#### Question 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 Volkswagen used for organizing the documents. Also, provide dealer copies of the full service histories of each vehicle identified in the enclosed complaints and in the vehicles identified in Volkswagen's information responsive to the Request No. 2.

#### Response 4

VW has provided .pdf files for all 31 consumer complaints, identified by the internally used sequential number ("ID"), VIN, and consumer surname. VW has provided .pdf files of all 49 service histories identified by ID, VIN, and consumer surname. VW has provided a Microsoft Excel data file entitled "04\_Field\_Reports\_PE04-023.xls" on the enclosed PE04-023 data collection disc that contains the 23 electronic field report information requested.

#### Question 5

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

### Response 5

In response to this inquiry, VW has identified a total of 29 paid warranty claims, referring to 27 vehicles, which relate to the alleged defect. The responses to subparagraphs a. through k. are provided in a Microsoft Excel data file entitled "05\_Warranty\_Data\_PE04-023.xls" on the enclosed PE04-023 data collection disc.

### Question 6

Describe in detail the search criteria used by Volkswagen 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 Volkswagen 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 Volkswagen 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, VW searched all warranty claims with a damage number that related to various fuel injection systems, pedal valve sender, accelerator pedal, throttle cable for manual gearbox, and throttle cable on automatic gearbox. Then, VW searched the resulting claims for words containing the strings "loy," "loa," "stuck," "stjok," "throttle," "thrti," "thrti," "water," "condens," "moist," "idle," "frees," "frozen," "bind," "surge," and "accel." Matching claims were read individually and further narrowed, based upon the description of the problem.

A list of all labor operations and labor operation descriptions applicable to the alleged defect in the subject vehicles is given in the table provided in Response 5. Additional problem codes and problem code descriptions do not exist.

VW provided a Limited New Vehicle Warranty that covered the subject vehicles for 3 years/ 50,000 miles. VW did not offer any extended warranty coverage.

### Question 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 Volkswagen 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 Volkswagen is planning to issue within the next 120 days.

### Response 7

In response to this inquiry, Volkswagen has not identified any previously issued service, warranty, and other documents that relate to the alleged defect.

For the reasons set forth in Response 13, Volkswagen does not see any unreasonable risk to motor vehicle safety, but does take its customers' concerns regarding the alleged defect very seriously and thus has decided to voluntarily conduct a service action for the subject vehicles. Volkswagen has not yet drafted any documents responsive to this inquiry.

#### Question 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, Volkswagen. 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

- I a) Technical Investigation.
- I b) March 22, 2004.
- I c) Beginning of June.
- I d) Analysis of throttle icing.
- I e) AUDI AG Technical Development.
- I f) Volkswagen concluded that under certain driving conditions (only short distance rides over several weeks, engine temperature below 70°C [158°F]) water will accumulate in the motor oil. This water will evaporate after the engine oil temperature exceeds 70°C [158°F] and could, within 15 to 20 minutes when driving at a constant speed with an outside temperature below -20°C [-4°F], cause the icing of the throttle body and valve. During typical vehicle usage (mixture of short and long distance driving) this phenomenon does not occur.  
All documents related to this action are provided in .pdf files in the folder entitled "Question-No-08-I" on the enclosed PE04-023 data collection disc.
- II a) Customer Survey.
- II b) April 13, 2004.
- II c) April 30, 2004.
- II d) In order to gather more information about the incident, Audi of America Product Compliance contacted customers that submitted a VOQ to NHTSA and in their VOQ agreed to be identified.
- II e) Audi of America Product Compliance.
- II f) Two out of four customers responded.  
All documents related to this action are provided in .pdf files in the folder entitled "Question-No-08-II" on the enclosed PE04-023 data collection disc.

### Question 9

Describe all modifications or changes made by, or on behalf of, Volkswagen in the design, material composition, manufacture, quality control, supply, or installation of the subject components, from the start of production to date, which relate to, or may relate to, the alleged defect in the subject vehicles. For each such modification or change, provide the following information:

- a. The date or approximate date on which the modification or change was incorporated into vehicle production;
- b. A detailed description of the modification or change;
- c. The reason(s) for the modification or change;
- d. The part numbers (service and engineering) of the original component;
- e. The part number (service and engineering) of the modified component;
- f. Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;
- g. When the modified component was made available as a service component; and
- h. Whether the modified component can be interchanged with earlier production components.

Also, provide the above information for any modification or change that Volkswagen is aware of which may be incorporated into vehicle production within the next 120 days.

### Response 9

No modifications or changes were made that relate to the alleged defect in the subject vehicles.

### Question 10

Produce one of each of the following:

- a. Exemplar samples of each design version of the subject components; and
- b. Any kits that have been released, or developed, by Volkswagen for use in service repairs to the subject components/assembly which relate, or may relate, to the alleged defect in the subject vehicles.

### Response 10

- a. Volkswagen did not make any design changes that relate to the alleged defect. (Volkswagen did make a design change that added an additional pipe to facilitate an additional vacuum hose. This design change did and does not relate to the alleged defect.)  
There are no parts available any more with the old design because these parts are obsolete. Two exemplar samples of the current throttle bodies are provided together with this response.
- b. No kits that relate to the alleged defect have been released.

### Question 11

State the number of each of the following that Volkswagen 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):

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

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

### Response 11

- a. VW found that the alleged defect is the phenomenon of throttle icing. That phenomenon is not caused by the failure of any specific part, but by specific environmental conditions (outside air temperature below -20°C [-4°F]) combined with specific driving cycles (driving only short distances over several weeks, engine temperatures below 70°C [158°F]).  
As this phenomenon does not cause any damage to the throttle or any other part of the engine or vehicle, the part sales history does not indicate any pattern related to the alleged defect.
- b. As stated in Response 10, no kits have been released or developed which relate or may relate to the alleged defect in the subject vehicles.

### Question 12

Provide a schematic and description showing all aspects of the design of the subject components that relate to the control/prevention of throttle icing. Provide Volkswagen's assessment of the environmental and operating conditions that can produce throttle icing in the subject vehicles when subject components are functioning properly. Provide Volkswagen's assessment of factors that affect throttle ice prevention functionality as a vehicle accumulates time/miles in service.

### Response 12

- a. Schematic and description: See "PDM sheet" entitled "Attachment-1\_(PDM-Sheet).pdf" on the enclosed PE04-023 data collection disc.
- b. Volkswagen concluded that under certain driving conditions (only short distance rides over several weeks, engine temperature below 70°C [158°F]) water will accumulate in the motor oil. This water will evaporate after the engine oil temperature exceeds 70°C [158°F] and could, within 15 to 20 minutes when driving at a constant speed with an outside temperature below -20°C [-4°F], cause the icing of the throttle body and valve. During typical vehicle usage (mixture of short and long distance driving) this phenomenon does not occur.



- c. Volkswagen found out that the throttle icing is a function of the driving cycle and outside temperature as described under Response 8. Volkswagen did not find any correlation between age or mileage of the vehicle and the phenomenon of throttle icing.

**Question 13**

Furnish Volkswagen'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 components was malfunctioning; and
- f. The reports included with this inquiry.

**Response 13**

a-c. Volkswagen concluded that under certain driving conditions (only short distance rides over several weeks, engine temperature below 70°C [158°F]) water will accumulate in the motor oil. This water will evaporate after the engine oil temperature exceeds 70°C [158°F] and could, within 15 to 20 minutes driving at a constant speed with an outside temperature below -20°C [-4°F), cause the icing of the throttle body and valve. During typical vehicle usage (mixture of short and long distance driving) this phenomenon does not occur.

- d. If, in rare cases, the throttle cannot close due to icing, the car will stay at the same speed or partly reduce the speed, but will not accelerate. The driver can still both control the vehicle and bring the vehicle to a stop by braking. The phenomenon does not occur during typical vehicle usage (mixture of short and long distance driving). As stated in response to Question 2, VW has not identified any reports involving a crash, injury, or fatality, based on claims against the manufacturer that are related to the alleged defect. Based on these facts and Volkswagen's findings mentioned above, Volkswagen does not see any unreasonable risk to motor vehicle safety.

However, Volkswagen takes its customers' concerns regarding the alleged defect very seriously and thus has decided to voluntarily conduct a service action for the subject vehicles.

Additionally, Volkswagen is currently investigating whether other vehicles equipped with this 2.8l V6-engine are also affected.

- e. There are no warnings prior to the phenomenon.
- f. Please refer to the evaluations under Response 8.