

VOLKSWAGEN

GROUP OF AMERICA

rec'd 8/20/18
sly

Stephen Ridella
Director, Office of Defects Investigation
National Highway Traffic Safety Administration
1200 New Jersey Avenue S.E.
Washington, DC 20590

Christopher T. Sandvig NAME
Director Title
Group Customer Protection Department
248-754-5000 Phone
248-754-5093 Fax
August 17, 2018 Date

Subject: EA18-003: Clock Spring – 2010 MY to Present Volkswagen and Audi Vehicles
(NEF101sly)

VOLKSWAGEN GROUP OF AMERICA, INC
3800 HAMLIN ROAD
AUBURN HILLS, MI 48326
PHONE +1 248 754 5000

Dear Mr. Ridella:

Please find enclosed Volkswagen's final and complete response to EA18-003, dated May 23, 2018, requesting information concerning allegations of steering wheel clock spring/steering column control module (SCCM) failures for the following subject vehicles: 2010-2014 Model Year (MY) CC, Passat, Eos, Golf, GTI, Jetta, Tiguan and Jetta Sportwagen models. Additionally, the inquiry expanded the scope to include the following peer vehicles: 2015 MY to present CC, Passat, Eos, Golf, GTI, Jetta, Tiguan and Jetta Sportwagen vehicles and all other 2010 MY to present Volkswagen and Audi vehicles.

Thank you for your approval of Volkswagen's request of July 02, 2018 for a partial extension of time to respond to the Office of Defects Investigation (ODI) Information Request letter for EA18-003 to August 17, 2018.

For the enclosed final response, Volkswagen is providing information in its entirety to Requests 1 through 11, with each request restated verbatim and followed by Volkswagen's response.

Volkswagen notes that certain documents, emails, exhibits and personal information have been redacted due to: compliance with European privacy law; non-related to the requests of the IR; or, the information was related to vehicles and / or markets outside of the US.

Volkswagen acknowledges that non-confidential material is enclosed with this communication; Volkswagen has submitted certain information to NHTSA's Office of Chief Counsel under separate cover and under request of confidentiality.

Volkswagen also notes that the suppliers Valeo and Kostal, as part of this response, are providing documents in response to Requests 9 and 10, under separate cover and under request of confidentiality, to NHTSA's Office of Chief Counsel.

An email notification is also forwarded to Ms. Sharon Yukevich and includes the FedEx tracking numbers of Volkswagen's and Kostal's submissions.

Sincerely,

A handwritten signature in blue ink, appearing to read "C.T. Sandvig", with a large, stylized flourish at the end.

Christopher T. Sandvig
Director, Group Customer Protection
Volkswagen Group of America, Inc.

Enclosures

Request 1

1. State, by model and model year, the number of subject vehicles and peer vehicles VW has manufactured for sale or lease in the United States. Separately, for each subject vehicle and peer vehicle manufactured to date by VW, state the following:
 - a. Vehicle identification number (VIN);
 - b. Make;
 - c. Model;
 - d. Model Year;
 - e. Subject component part number and design version installed as original equipment;
 - f. Supplier of subject component installed as original equipment;
 - g. Date of manufacture;
 - h. Date warranty coverage commenced; and
 - i. 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 2010, or a compatible format, entitled "PRODUCTION DATA."

Response 1

In response to this inquiry, Volkswagen provides the population of the following subject vehicles:

- All 2010-2014 Model Year (MY) CC, Passat, Eos, Golf, GTI, Jetta, Tiguan and Jetta Sportwagen vehicles manufactured for sale or lease in the United States, including, but not limited to, the District of Columbia, and current U.S. territories and possessions.

Additionally, Volkswagen provides the population of the following peer vehicles:

- All 2015 MY to present CC, Passat, Eos, Golf, GTI, Jetta, Tiguan and Jetta Sportwagen vehicles and all other 2010 MY to present Volkswagen and Audi vehicles.

Please reference the table in Attachment 1 for an overview of the population of subject and peer vehicles.

For responses to subparagraphs "a" through "i," please see Microsoft Access database entitled "PRODUCTION DATA.accdb" in the folder attached hereto as Exhibit to Request 1.

Volkswagen notes that for VINs without supplier and/or part number information, the information was not present or available in Volkswagen's production management system. In cases where the missing information could be updated based on the known supplier, the clock spring base part number is provided with an asterisk, as the exact part number installed at production was not recorded.

Response 1 cont'd.

Volkswagen notes the following:

For the purpose of this inquiry, the subject vehicle population, 2010-2014 MY CC, Passat, Eos, Golf, GTI, Jetta, Tiguan and Jetta Sportwagen vehicles, are designated in the population file and enclosed responsive documents as "RQ17". These vehicles were subject to recall 15V-483

For the purpose of this inquiry, the peer vehicle population, is designated in the population file and enclosed responsive documents as:

- 2015 MY to present CC, Passat, Eos, Golf, GTI, Jetta, Tiguan and Jetta Sportwagen vehicles – "VW SUBJECT". These vehicle were NOT subject to recall 15V-483
- 2010 MY to present Volkswagen vehicles NOT included in above – "VW PEER"
- 2010 MY to present Audi – "AUDI PEER"

The vehicle populations and responsive materials are identified in the above manner to ensure the agency is able to evaluate responsive information that is aligned to the subject / peer vehicles requested.

Source: Business Objects Vehicles Universe

Date Gathered: Through the date of the inquiry

Exhibit to Request 1

PRODUCTION DATA

Data is provided labeled as "PRODUCTION DATA.accdb" in Microsoft Access format in the Exhibit to Request 1 folder on the enclosed EA18-003 electronic media

Request 2

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 and/or peer vehicles:
 - a. Consumer complaints, including those from fleet operators;
 - b. Field reports, including dealer field reports;
 - c. Reports involving a crash, injury or fatality;
 - 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 “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 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

Volkswagen notes that the following responses to subparagraphs “a” through “f” include multiple reporting about the same underlying incident; these counts may not be added together because a false total count would result.

- a. In response to this inquiry, Volkswagen has identified 1,451 consumer complaints related to the alleged defect in the subject and peer vehicles;
- b. In response to this inquiry, Volkswagen has identified 524 field reports related to the alleged defect in the subject and peer vehicles;
- c. In response to this inquiry, Volkswagen has not identified any reports involving a crash, injury or fatality related to the alleged defect in the subject and peer vehicles;
- d. In response to this inquiry, Volkswagen has not identified any property damage claims related to the alleged defect in the subject and peer vehicles;
- e. In response to this inquiry, Volkswagen has identified 4 third-party arbitration proceedings where VW is or was a party to the arbitration;
- f. In response to this inquiry, Volkswagen has not identified any lawsuit, in which VW is or was a defendant or codefendant.

Source: LISTEN, MED/ARB, PL, FRED, FTIS, ATA/VTA

Date Gathered: Through the date of the inquiry

Request 3

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 another 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), street address, email 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. Clockspring manufacturer;
 - h. Clockspring part number;
 - i. Incident date;
 - j. Report or claim date;
 - k. Whether a crash is alleged;
 - l. Whether property damage is alleged; and
 - m. Number of alleged injuries, if any;
 - n. Number of alleged fatalities, if any.

Provide this information in Microsoft Access 2010, or a compatible format, entitled "REQUEST NUMBER TWO DATA."

Response 3

Responses to subparagraphs "a" through "n" are provided in four separate files entitled,

- REQUEST NUMBER TWO DATA_Audi Peer.xlsx;
- REQUEST NUMBER TWO DATA_RQ17 Update.xlsx;
- REQUEST NUMBER TWO DATA_VW Peer.xlsx;
- REQUEST NUMBER TWO DATA_VW Subject.xlsx

in the folder attached hereto as Exhibit to Request 3. Records are organized by case number then by category.

Source, Date Gathered: See Response 2

Exhibit to Request 3

REQUEST NUMBER TWO DATA

Data is provided in Microsoft Excel format in the Exhibit to Request 3 folder on the enclosed EA18-003 electronic media. The files are labeled as listed:

REQUEST NUMBER TWO DATA_Audi Peer.xlsx;
REQUEST NUMBER TWO DATA_RQ17 Update.xlsx;
REQUEST NUMBER TWO DATA_VW Peer.xlsx;
REQUEST NUMBER TWO DATA_VW Subject.xlsx

Request 4

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. Describe in detail the search methods and search criteria used by VW to identify the items in response to Request No. 2.

Response 4

In response to this inquiry, the following search criteria were used to identify items responsive to Request No. 2:

- Identify the population of subject vehicles covered by the subject inquiry (EA18-003): All 2010-2014 Model Year (MY) CC, Passat, Eos, Golf, GTI, Jetta, Tiguan and Jetta Sportwagen vehicles manufactured for sale or lease in the United States, including, but not limited to, the District of Columbia and current U.S. territories and possessions.
- Identify the population of peer vehicles covered by the subject inquiry (EA18-003): All 2015 MY to present CC, Passat, Eos, Golf, GTI, Jetta, Tiguan and Jetta Sportwagen vehicles and all other 2010 MY to present Volkswagen and Audi vehicles.
- Identify applicable part numbers of the subject component used to affect repairs in the subject and peer vehicles covered by the subject inquiry (EA18-003):

The individual items were then manually screened to identify those which contained customer concerns related to the alleged defect, "Failure of the steering wheel clock spring/steering column control module (SCCM) potentially resulting in improper function steering wheel controls and/or failure of the driver front air bag to deploy in the event of a crash of sufficient severity to require a commanded deployment including a split deployment (i.e. non-deployment of driver's front air bag and deployment of passenger's front air bag).

Responsive documents to Request No. 2 subparagraphs "a", "b", and "e" are provided within the four separate files entitled:

- REQUEST NUMBER TWO DATA_Audi Peer.pdf;
- REQUEST NUMBER TWO DATA_RQ17 Update.pdf;
- REQUEST NUMBER TWO DATA_VW Peer.pdf;
- REQUEST NUMBER TWO DATA_VW Subject.pdf

in the folder attached hereto as Exhibit to Request 4. Records are organized by case number then by category.

There are no responsive documents to Request No. 2 subparagraphs "c", "d", or "f".

Source, Date Gathered: See Response 2

Exhibit to Request 4

REQUEST NUMBER TWO DOCUMENTS

Data is provided in Adobe Acrobat format in the Exhibit to Request 4 folder on the enclosed EA18-003 electronic media. The files are listed as:

REQUEST NUMBER TWO DATA_Audi Peer.pdf;
REQUEST NUMBER TWO DATA_RQ17 Update.pdf;
REQUEST NUMBER TWO DATA_VW Peer.pdf;
REQUEST NUMBER TWO DATA_VW Subject.pdf

Request 5

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 and/or 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. VW's claim number;
- b. Vehicle owner or fleet name (and fleet contact person), street address, email address and telephone number;
- c. VIN;
- d. Repair date;
- e. Original clockspring manufacturer;
- f. Replacement clockspring manufacturer;
- g. Recall 15V-483 Remedy Repair (Yes or No);
- h. Recall 15V-483 Remedy Performed (Shield, Module Replacement or Not Applicable);
- i. Vehicle mileage at time of repair;
- J. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
- k. Labor operation number(s);
- l. Problem code(s);
- m. Diagnostic trouble code(s);
- n. Original part number(s) and description(s);
- o. Replacement part number(s) and description(s);
- p. Concern stated by customer;
- q. Cause as stated on the repair order;
- r. Correction as stated on the repair order; and
- s. Additional comments, if any, by dealer/technician relating to claim and/or repair.

Provide this information in Microsoft Access 2010, or a compatible format, entitled "WARRANTY DATA."

Response 5

Volkswagen notes that the following response includes multiple reporting about the same underlying incident; these counts may not be added together because a false total count would result.

In response to this inquiry, Volkswagen has identified 310,573 unique recall / warranty claims on 303,855 unique vehicles related to the alleged defect in the subject and peer vehicles. Volkswagen notes that 928 claims are duplicative of consumer complaints and 512 claims are duplicative of field reports.

Information for these claims is provided in Microsoft Excel format, in two files entitled "WARRANTY DATA.xlsx" and "69L2_EFTs.xlsx", in the folder attached hereto as Exhibit to Request 5. The claims are organized by claim number.

Response 5 cont'd.

Volkswagen also provides a summary table of claim counts, separated by claim type, in response to the agency's request for the information. As requested, the information is listed by make, model and model year.

Information for these claims is provided in Microsoft Excel format, entitled "WARRANTY SUMMARY.xlsx", in the folder attached hereto as Exhibit to Request 5.

Source: Business Objects Warranty Universe

Date Gathered: Through the date of the inquiry

Exhibit to Request 5

WARRANTY DATA

Data is provided in the files labeled as “WARRANTY DATA.xlsx”, “69L2_EFTs.xlsx”, and “WARRANTY SUMMARY.xlsx” in Microsoft Excel format in the Exhibit to Request 5 folder on the enclosed EA18-003 electronic media

Request 6

6. Describe in detail the search methods and search criteria used by VW to identify the claims in response to Request No. 5, including the labor operations, problem codes, diagnostic trouble 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, diagnostic trouble codes and diagnostic trouble code descriptions applicable to the alleged defect in the subject vehicles and peer vehicles. State whether the diagnostic trouble codes are automatically reported to the warranty database electronically or manually entered in the warranty database by a claims administrator.

State, by make and model year, the terms of the new vehicle warranty coverage offered by VW on the subject vehicles 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 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 order to respond to this inquiry, the following search criteria were used to search Warranty data to identify claims responsive to Request No. 5:

- Identify the population of subject vehicles covered by the subject inquiry (EA18-003): 2010-2014 Model Year (MY) CC and Passat, 2010-2013 MY Eos, 2011-2014 MY Golf, GTI, Jetta and Tiguan and 2012-2014 MY Jetta Sportwagen vehicles manufactured for sale or lease in the United States, including, but not limited to, the District of Columbia and current U.S. territories and possessions.
- Identify the population of peer vehicles covered by the subject inquiry (EA18-003): All 2015 MY to present CC, Passat, Eos, Golf, GTI, Jetta, Tiguan and Jetta Sportwagen vehicles and all other 2010 MY to present Volkswagen and Audi vehicles.
- Identify claims in which the Clock Spring Cover (5K0953259%) service part was utilized to affect repairs in the subject vehicle (for subject vehicles affected by recall 15V-483)
- Identify claims in which the Steering Wheel Clock Spring service part was utilized to affect repairs in the subject and peer vehicles
- Identify the diagnostic trouble code(s) which indicate a fault in the airbag system as it relates to the steering wheel clock spring/steering column control module (SCCM):
 - B100001 – Driver airbag igniter: Resistance too high
 - VAG00588 – Driver side airbag igniter: Upper limit exceeded

Diagnostic trouble codes are neither automatically nor manually entered into the warranty database. Diagnostic trouble codes, for each vehicle, retrieved on a case by case basis. There is no existing link between the warranty database and diagnostic trouble codes.

Response 6 cont'd.

The individual items were manually screened to identify those which contained customer concerns related to the subject allegation of steering wheel clock spring/steering column control module (SCCM) failures potentially resulting in improper function of the steering wheel controls and/or failure of the driver front air bag to deploy in the event of a crash of sufficient severity to require a commanded deployment. Failure of the system includes a split deployment (i.e. non-deployment of the driver front air bag and deployment of the passenger front air bag).

The following tables indicate, by make, model year, and model, the terms of the new vehicle warranty coverage offered by VW on the subject vehicles and peer vehicles.

Table 1 is representative of 2010 MY – 2014 MY Volkswagen subject vehicles included in RQ17-009, and 2015 MY through present Volkswagen peer vehicles:

Make	Model Year	Model	New Vehicle Limited Warranty	Extended Warranty	Classification
Volkswagen	2010-2014	CC	3 Years / 36,000 Miles	N/A	RQ
Volkswagen	2010-2013	Eos	3 Years / 36,000 Miles	N/A	RQ
Volkswagen	2011-2014	Golf/GTI/R	3 Years / 36,000 Miles	N/A	RQ
Volkswagen	2010-2013	Jetta	3 Years / 36,000 Miles	N/A	RQ
Volkswagen	2012-2013	Jetta Sportwagen	3 Years / 36,000 Miles	N/A	RQ
Volkswagen	2010-2014	Passat (USA/Germany)	3 Years / 36,000 Miles	N/A	RQ
Volkswagen	2011-2014	Tiguan	3 Years / 36,000 Miles	N/A	RQ
Volkswagen	2015-2017	CC	3 Years / 36,000 Miles	N/A	VW Subject
Volkswagen	2014-2016	Eos	3 Years / 36,000 Miles	N/A	VW Subject
Volkswagen	2015-2017	Golf/GTI/R	3 Years / 36,000 Miles	N/A	VW Subject
Volkswagen	2018	Golf/GTI/R	6 Years / 72,000 Miles	N/A	VW Subject
Volkswagen	2014-2017	Jetta	3 Years / 36,000 Miles	N/A	VW Subject
Volkswagen	2018-2019	Jetta	6 Years / 72,000 Miles	N/A	VW Subject
Volkswagen	2014	Jetta Sportwagen	3 Years / 36,000 Miles	N/A	VW Subject
Volkswagen	2015-2017	Passat (USA/Germany)	3 Years / 36,000 Miles	N/A	VW Subject
Volkswagen	2018	Passat (USA/Germany)	6 Years / 72,000 Miles	N/A	VW Subject
Volkswagen	2015-2017	Tiguan	3 Years / 36,000 Miles	N/A	VW Subject

Source: VWGoA

Date Gathered: Through the date of the inquiry

Response 6 cont'd.

Table 2 is representative of 2010 MY through present Volkswagen and Audi peer vehicles:

Make	Model Year	Model	New Vehicle Limited Warranty	Extended Warranty	Classification
Volkswagen	2018	Atlas	6 Years / 72,000 Miles	N/A	VW Peer
Volkswagen	2010, 2012-2017	Beetle	3 Years / 36,000 Miles	N/A	VW Peer
Volkswagen	2018	Beetle	6 Years / 72,000 Miles	N/A	VW Peer
Volkswagen	2015-2018	eGolf	3 Years / 36,000 Miles	N/A	VW Peer
Volkswagen	2017	Golf Alltrack	3 Years / 36,000 Miles	N/A	VW Peer
Volkswagen	2018	Golf Alltrack	6 Years / 72,000 Miles	N/A	VW Peer
Volkswagen	2015-2017	Golf Sportwagen	3 Years / 36,000 Miles	N/A	VW Peer
Volkswagen	2018	Golf Sportwagen	6 Years / 72,000 Miles	N/A	VW Peer
Volkswagen	2018	Tiguan	6 Years / 72,000 Miles	N/A	VW Peer
Volkswagen	2010-2017	Touareg	3 Years / 36,000 Miles	N/A	VW Peer
Audi	2010-2013	A3	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2015-2018	A3	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2010-2018	A4	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2010-2018	A5	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2010-2018	A6	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2012-2018	A7	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2010-2018	A8	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2015-2018	Q3	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2010-2018	Q5	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2010-2015	Q7	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2017-2018	Q7	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2010-2012	R8	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2014-2015	R8	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2017-2018	R8	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2010-2012	S5	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2010-2011	S6	4 Years / 50,000 Miles	N/A	Audi Peer
Audi	2010-2018	TT	4 Years / 50,000 Miles	N/A	Audi Peer

Source: VWGoA

Date Gathered: Through the date of the inquiry

Request 7

7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles and peer 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

Volkswagen provides copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject vehicles and peer vehicles that VW has issued to any dealers, regional or zone offices, field offices, fleet purchasers, or other entities, in response to Request 7 in a folder entitled REQUEST NUMBER SEVEN DATA in the folder attached hereto as Exhibit to Request 7.

Exhibit to Request 7

Please reference documents provided in Adobe Acrobat format in the Exhibit to Request 7 folder on the enclosed EA18-003 electronic media

Request 8

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 or peer 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 is providing a table outlining each item in subparagraphs a) through f) in a file, entitled REQUEST NUMBER EIGHT DATA in the folder attached hereto as Exhibit to Request 8.

The documents received from AG are separated by brand and by confidential and non-confidential folders. Responsive documents utilize the date format "YYMMDD" to provide a chronological order.

Responsive documents from the US were unable to utilize the "YYMMDD" format, due to Bates numbering of the documents. Additionally, Volkswagen provides a reference folder for document that have been translated and /or redacted; an index is supplied in the folder to reference a redacted and / or translated document back to the original file.

Volkswagen notes that under European privacy laws personal identifying information has been redacted where required. Additionally, were made for the following reasons:

- content not relevant to the inquiry;
- content is not relevant to or regarding the US market;
- content related to complaints such as noise, inoperative radio controls, cruise control, etc.;
- content related to modules which may interface with the clock spring, but experienced a concern / or replacement not as a result of the clock spring

Exhibit to Request 8

REQUEST NUMBER EIGHT DATA

An information table is provided in Adobe Acrobat format in the Exhibit to Request 8 folder on the enclosed EA18-003 electronic media

Data files are provided in a format compatible with Concordance in the Exhibit to Request 8 folder on the EA18-003 electronic media submitted to the agency under request for confidentiality

Request 9

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 or peer 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) (service and engineering) of the original component;
 - e. The part number(s) (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 VW is aware of which may be incorporated into vehicle production within the next 120 days.

Response 9

Volkswagen provides the following table in response to Request 9, listing the requested information for subparagraphs a. – h. for each applicable version of clock spring design:

Req	1) Valeo Robust Design	2) Valeo Ring	3) Valeo New Design	Kostal (new grease/cable combination)
a.	CW50/12	CW 45/16	CW50/17 for new models only (new design started with introduction of 2019 MY Jetta)	Modifications occurred during 2010, dependent on Part Number
b.	Robust design against ingress of contamination	Additional increase for robustness	New development of complete new design	New grease/cable combination
c.	Analysis results showed possible contamination with hair and fiber	Despite decreasing numbers for failing clock springs due to the implementation of the robust design, analysis results showed that robust design still left possibility for hair and fiber to enter clock spring	Change to a different design that eliminates the consequences if hair or fiber entering the clock spring	Improved roll motion to prevent possible rupture of cable
d.	Please reference enclosed excel file and the individual tabs "VWAG" and "Audi AG"	Please reference enclosed excel file and the individual tabs "VWAG" and "Audi AG"	Please reference enclosed excel file and the individual tabs "VWAG" and "Audi AG"	Please reference enclosed excel file and the individual tabs "VWAG" and "Audi AG"
e.	Please reference enclosed excel file and the individual tabs "VWAG" and "Audi AG"	Please reference enclosed excel file and the individual tabs "VWAG" and "Audi AG"	Please reference enclosed excel file and the individual tabs "VWAG" and "Audi AG"	Please reference enclosed excel file and the individual tabs "VWAG" and "Audi AG"

Response 9 cont'd.

Req	1) Valeo Robust Design	2) Valeo Ring	3) Valeo New Design	Kostal (new grease/cable combination)
f.	Running change in production	Introduction of an additional ring, no withdrawal from production necessary	New design was introduced in 2019 MY Jetta. Not interchangeable, therefore no withdrawal necessary	Running change in production
g.	When modified clock springs were approved, both service parts and production parts were available simultaneously	When modified clock springs were approved, both service parts and production parts were available simultaneously	New design was introduced in 2019 MY Jetta. New service parts for 2019 MY Jetta were available at the same time.	When modified clock springs were approved, both service parts and production parts were available simultaneously
h.	Robust design is backwards compatible for use on vehicles equipped with original design clock springs	The introduction of the "ring" in production is not backwards compatible to all models with the previous "robust" design, due to possible interference with the steering wheel. Depending of the steering wheel design/model, modifications are necessary to fit an additional ring	Not interchangeable with any previous model/vehicle	No part number change for individual part numbers (running change) and is interchangeable

Overview of Valeo Changes

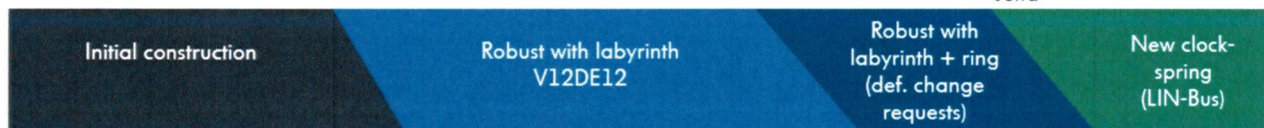
Production:

2010

CW50/2012

CW45/16

CW50/17 -
Jetta



Reason of modification:

Robust design against ingress of contamination

Additional increase for robustness

KW31/18

Development of a complete new clock-Spring design

2010 2011 2012 2013 2014 2015 2016 2017 2018 →

Volkswagen does not have additional modifications or changes currently planned for incorporation into vehicle production within the next 120 days.

For responses to subparagraphs “d” and “e,” please reference the Microsoft Excel file entitled “Part Number Applications.xlsx” in the folder attached hereto as Exhibit to Request 9.

Exhibit to Request 9

PART NUMBER APPLICATION

Data is provided in the file labeled as “Part Number Application.xlsx” in Microsoft Excel format in the Exhibit to Request 9 folder on the enclosed EA18-003 electronic media

Request 10

10. Produce the following:

- a. Drawings of the subject component(s) supplied to VW for use in the subject vehicles;
- b. Drawings of the subject component(s) supplied to VW for use in the peer vehicles;
- c. Two (2) exemplar samples of the design version of the subject component(s);
- d. The most current Design and Process Failure Mode and Effects Analysis (FMEA) that refers or relates to the design and development of the subject component(s) used in the subject vehicles and peer vehicles; and
- e. Design and performance standards, parameters, requirements for the subject component(s) as used in the subject and peer vehicles.

Response 10

In response to subparagraphs “a.” and “b.”, Volkswagen provides drawings of the subject components for both subject and peer vehicles in the enclosed folder labeled “EXHIBIT TO REQUEST 10”.

Volkswagen provides an index file, labeled “Matrix VW Audi Drawings.xls” to identify the file of the drawing (TAB) for each clock spring part number, by model / model year.

Volkswagen also provides the file, “Manual Matrix Part Number Drawings.pdf” to assist with the identification of drawings within the folder structure. Drawings are located in sub-folders structured by brand, then by supplier.

Response to Request 10 subparagraph “c” was provided to the attention of Ms. Sharon Yukevich, via FedEx shipment, tracking number: 7726 5010 4096. FedEx confirmed delivery on Monday, July 09, 2018 at 11:53 AM.

The following exemplar samples of the various design versions were included in the aforementioned shipment:

Part Number	Supplier	Qty	Model	Model Year
5K0953549B	Valeo	2	Jetta	2011-2014
			Golf	2010-2014
			Eos	2011-2016
5Q0953549E	Kostal	2	Golf	2014-
3C0959653B	Kostal	2	Passat/CC	2010-2012
5K0953569AS	Valeo	2	CC	2012-2017
5K0953549A	Valeo	2	Golf	2010-2013
			Jetta	2011-2014
			Eos	2011-2016
1K0959653C	Kostal	2	Golf	2010-2014
			Eos	2010-2011
			Jetta	2010
			Tiguan	2010-2011
5C0959653	Valeo	2	Jetta	2011-2018
5C0959654A	Valeo	2	Jetta	2011-2018
1K0959653D	Kostal	2	Golf	2010
			Jetta	2010

Volkswagen notes that in response to subparagraph “d.”, the requested information was provided by each supplier, under separate cover, in support of Volkswagen’s partial response submission on August 03, 2018.

Volkswagen submits in response to subparagraph “e.”, the following reference from the design requirement system, indicating the latest status of development design parameters:

LAH-REDESIGN-LSS/WFK-1282 **4.6 Mechanische Schnittstellen**
 LAH-REDESIGN-LSS/WFK-1283 **4.6.1 Mechanische Schnittstelle Rotor zum Stator**
 LAH-REDESIGN-LSS/WFK-1284 Das Eindringen von Fremdkörpern in die Wickelfeder ist konstruktiv zu verhindern (z.B: Fäden, Haare, Fusseln, Körnchen,...)
 Details sind mit der zuständigen Fachabteilung abzustimmen.
 Ähnlich der IP Schutzklasse IP5KX
 Der genaue Prüfablauf ist noch zu definieren und beim AG anzufragen.

The translation of the above information:

4.6 Mechanical interface

4.6.1 Mechanical interface between rotor and stator

- The ingress of foreign bodies (fibers, hair, fuzz, granules) should be constructively impeded
- Details may be confirmed with the responsible department
- Similar to IP protection standard IP5KX
- The specific test procedure remains to be defined and must be requested from AG

In addition to Volkswagen’s requirements, similar information has previously been submitted to the agency under separate cover by the supplier. Additional internal Volkswagen standards (i.e., disposal/recycling, naming conventions, etc.) are provided on the blueprints, included with this response.

Request 11

11. State the number of each of the following that VW has sold that may be used in the subject vehicles or peer 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 component(s); and
 - b. Any kits that have been released, or developed, by VW for use in service repairs to the subject component/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 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 11

In response to this inquiry, Volkswagen is providing a table outlining each item in subparagraph "a" in a Microsoft Excel file, entitled "PART SALES.xlsx" in the folder attached hereto as Exhibit to Request 11.

Volkswagen notes the part sales information is inclusive of service part components utilized during the repair of vehicles subject to recall 15V-483.

Volkswagen further notes that no kits have been developed or released for use in service repairs to the clock spring/SCCM, per subparagraph "b".

Additionally, in response to this inquiry, Volkswagen is providing supplier identification and point of contact information in an Adobe Acrobat file format, "SUPPLIER-CONTACT_VALEO.xlsx" and "SUPPLIER-CONTACT_KOSTAL.xlsx", in the folder attached hereto as Exhibit to Request 11.

Clock spring application information, specific to model and model year of the vehicle in which it is used, is included on the adjacent tabs contained in the aforementioned supplier contact files.

Source: Volkswagen

Date Gathered: Through the date of the inquiry

Exhibit to Request 11

PART SALES

&

SUPPLIER-CONTACT_VALEO;
SUPPLIER-CONTACT_KOSTAL

Data is provided in Microsoft Excel format in the Exhibit to Request 11 folder
on the enclosed EA18-003 electronic media

Summary

The evaluation of all documents collected during this inquiry confirms the Failure Mechanism, Mode and Causal or Contributory Factors provided with RQ17-009 and PE15-010.

Clock spring failures were primarily caused by contamination of the internal mechanism with hair or fabric strands/filaments for parts designed by one specific supplier.

In response to Request 8, Volkswagen provides information that demonstrate failure detection, escalation, part redesign and implementation of robustness measures as the result of evaluations made related to field failures. A number of manufacturing process improvements were implemented to prevent internal contamination of the clock spring assembly during the manufacturing process.

Part modifications, to reduce existing gaps, were implemented to provide additional robustness against external contamination during vehicle operation. The evaluation of field data showed a decrease in complaints with the robust design. To further improve field performance, an additional cover/ring was introduced in series production, as this modification represented a significant improvement as a recall measure. Volkswagen is considering the measure as successful.

With the introduction of the 2019 MY Volkswagen Jetta, a completely different clock spring design that is robust against hair/fiber intrusion is used.

Tests conducted during 2015 of parts designed by a second supplier of Volkswagen, has shown this design is robust against hair intrusion and does not indicate a tendency to fail due to similar contamination. It was not possible to provoke a failure, even with massive hair contamination.

The part from the second supplier is not compatible as a service component for earlier model year subject / peer vehicles (prior to 2017 MY). The primary reason for the incompatibility is due to the communication properties between the clock spring and the vehicle, including the airbag control module.

Assessment

A fracture of the clock spring flat cable can only occur when the steering wheel is significantly turned, typically occurring during low speed maneuvers. As the airbag warning light illuminates immediately, the driver is alerted about the malfunction and directed to bring the vehicle immediately into a workshop for inspection, as stated in the owner's manual. Other functions on the steering wheel may also be affected like radio operation, cruise control, etc., this could be an additional reason for the driver to visit a workshop.

An evaluation of the warranty data of customers that experienced a fracture of the clock spring showed that 50% of all customers had their vehicle repaired within 9 days after the warning light came on.

The failure of a clock spring does not impair vehicle control or drivability (steering, brakes, acceleration). Indeed, the clock spring is designed in a way that the flat cable inside must break with minimal force, as there must be no obstruction when turning the steering wheel. A flat cable not designed to tear in this manner could prevent or impede steering wheel movement, thus affecting vehicle controllability.

Volkswagen notes that in all reported warranty claims, field reports and customer complaints, no injury or fatality is attributed to a clock spring failure.

Volkswagen has not identified an unreasonable risk to motor vehicle safety related to the alleged defect of the steering wheel clock spring in the subject vehicles.

Attachment 1

Make	Model	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total Of VIN	Classification
Audi	A3	4,595	6,733	7,265	3,719		46,733	39,405	22,725	20,620		151,795	Audi Peer
	A4	31,082	35,281	31,571	46,719	42,252	31,709	20,490	53,444	37,605		330,153	Audi Peer
	A5	11,866	12,950	11,470	21,818	19,145	13,174	10,365	3,242	39,799		143,829	Audi Peer
	A6	6,777	7,108	18,371	21,072	23,927	15,800	30,483	16,973	16,429		156,940	Audi Peer
	A7			11,768	7,733	9,357	3,632	11,342	6,144	4,269		54,245	Audi Peer
	A8	649	4,750	4,539	6,650	5,574	7,141	4,044	4,210	761		38,318	Audi Peer
	Q3						10,518	20,195	14,618	29,498		74,829	Audi Peer
	Q5	18,887	23,731	33,831	28,565	42,005	48,819	54,702	35,524	78,073		364,137	Audi Peer
	Q7	6,181	9,038	8,951	14,277	17,879	28,909		51,661	39,728		176,624	Audi Peer
	R8	546	1,416	1,272		1,113	722		1,532	594		7,195	Audi Peer
	S5	2,627	2,463	2,413								7,503	Audi Peer
	S6	140	159									299	Audi Peer
	TT	1,201	1,434	2,259	2,191	1,221	750	3,503	2,189	2,119		16,867	Audi Peer
Volkswagen	Atlas									61,927		61,927	VW Peer
	Beetle	16,832		30,438	47,732	27,709	20,354	17,744	17,126	10,749		188,684	VW Peer
	CC	29,078	12,987	29,352	32,257	10,893	5,254	3,859	1,837			125,517	RQ17 / Subject
	E-Golf						3,370	7,892	1,742	489		13,493	VW Peer
	Eos	5,751	1,877	11,117	4,775	3,409	2,742	1,136				30,807	RQ17 / Subject
	Golf	12,519	16,563	25,060	21,455	6,916	28,751	21,837	22,445	9,241		164,787	RQ17 / Subject
	Golf Alltrack								24,283	8,684		32,967	VW Peer
	Golf SportWagen						16,404	19,123	10,096			45,623	VW Peer
	GTI	12,268	15,128	18,566	17,168	5,082	27,814	24,616	32,624	9,108		162,374	RQ17 / Subject
	Jetta	98,166	122,123	154,410	148,325	157,878	117,813	125,463	141,641	31,691	19,804	1,117,314	RQ17 / Subject
	Jetta Sportwagen	25,361	26,162	23,684	27,780	25,017						128,004	RQ17 / Subject
	Passat (Germany)	13,204										13,204	RQ17 / Subject
	Passat (USA)			95,836	128,807	102,124	98,078	57,434	76,532	34,844		593,655	RQ17 / Subject
	Tiguan	17,460	25,618	29,806	33,457	26,030	22,513	44,602	51,081	88,076		338,643	RQ17 / Subject
	Touareg	3,493	6,058	10,399	9,583	9,715	3,964	8,274	5,105			56,591	VW Peer
Sum:		318,683	331,579	562,378	624,083	537,246	554,964	526,509	596,774	524,304	19,804	4,596,324	