

# VOLKSWAGEN

GROUP OF AMERICA

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  
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August 02, 2018 Date

Subject: EA18-003 NEF101sly

VOLKSWAGEN GROUP OF AMERICA, INC  
3800 HAMLIN ROAD  
AUBURN HILLS, MI 48326  
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Dear Mr. Ridella:

Please find enclosed Volkswagen's 3rd partial 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.

As was agreed, Volkswagen will provide to the agency submissions every 2 weeks, until completion, on or before August 17, 2018.

For the enclosed partial response, Volkswagen is providing its response and information specifically to Requests 8 thru 10, with each request is restated verbatim and then followed by our response. The abbreviated submission is at the direction of Ms. Sharon Yukevich, per a phone conversation August 02, 2018.

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 supplier Valeo, as part of this partial response, is 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 number of Valeo's submission.

Sincerely,

A handwritten signature in blue ink, appearing to read 'C.T.S.', with a large, sweeping flourish extending to the right.

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

Enclosures

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

Complete response due on or before August 17, 2018

In its partial 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.xlsx in the folder attached hereto as Exhibit to Request 8.

In response to this inquiry, Volkswagen initiated a document collection between January 01, 2009 through May 23, 2018 (the start date established to include non-subject Volkswagen and all peer Volkswagen and Audi vehicles, through the receipt date of EA18-003).

The current subset of responsive documents are located in a subfolder, entitled DOCUMENTS, in the folder attached hereto as Exhibit to Request 8. Volkswagen understands it is to provide all documents on or before August 17, 2018.

Volkswagen also notes, portions of documents that contain personal identifying information, have been redacted, as is required under German Privacy law. Additionally, information that is not relevant to the US market and/or to the alleged defect, also has been redacted.

Documents related to recall 15V-483 are provided under action title "recall related".

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:

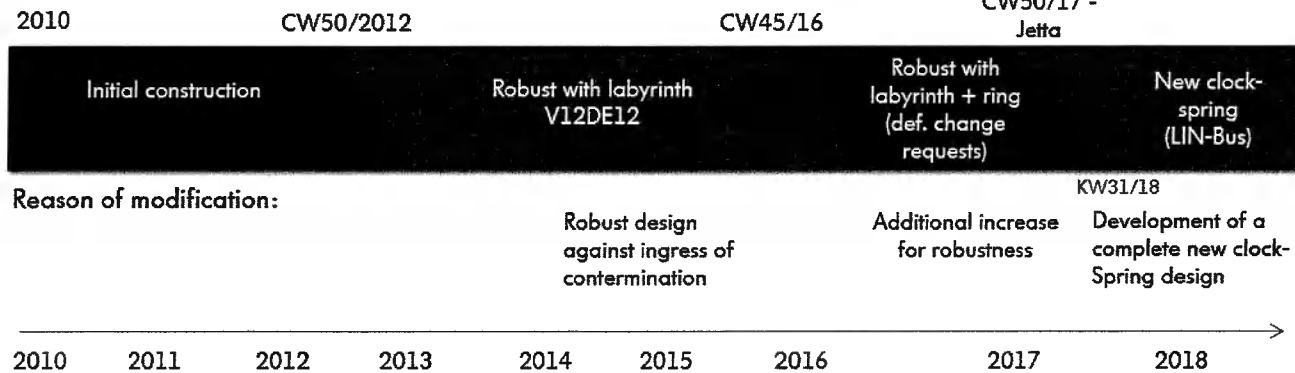
Req	1) Valeo Robust Design	2) Valeo Ring	3) Valeo New Design	Kostal (new grease/cable combination)
a.	CW50/12	CW 45/16	CW50/17 for new models only (new design started with introduction of 2019 MY Jetta)	Modifications occurred during 2010, dependent on Part Number
b.	Robust design against ingress of contamination	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	Noise reduction, improved roll motion
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 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:



Reason of modification:

Robust design against ingress of contermination

Additional increase for robustness

Development of a complete new clock-Spring design

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.

Volkswagen also notes that the supplier Valeo, as part of this partial response, is providing documents in response to Request 9, under separate cover and under request for confidentiality, to NHTSA’s Office of Chief Counsel.

Exhibit to Request 9

PART NUMBER APPLICATION

Data is provided in the files 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

Volkswagen notes that in its partial response to subparagraphs "a." and "b.", it has received approximately half of the drawings for submission for inclusion with the partial response due August 03, 2018.

An index is provided for the agency's convenience. The index identifies the make, drawing number, supplier information, folder location and file name of the respective blueprints. It is noted that due to the original file size, the pages of the blueprints have been saved as individual documents. Dependent on the number of pages of each print, there will be a corresponding number of documents (pages).

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

Response 10 cont'd.

Volkswagen notes that in response to subparagraphs “d.” and “e.”, the supplier Valeo, as part of this partial response, is providing their documents in response to Request 10, under separate cover and under request for confidentiality, to NHTSA’s Office of Chief Counsel.

Volkswagen notes that the supplier Kostal has provided a written response to the requested FMEA information and the document is provided on the enclosed electronic media in the sub-folder EXHIBIT TO REQUEST 10, labeled as “18080101ir\_Behördenanfrage NHTSA\_Wickelfeder\_FMEA.pdf.”

Volkswagen also notes that it is submitting the index and drawings in response to Request 10, under separate cover and under request for confidentiality, to NHTSA’s Office of Chief Counsel.



Exhibit to Request 10

KOSTAL FMEA

Information is provided in the file labeled as "18080101ir\_Behördenanfrage NHTSA\_Wickelfeder\_FMEA.pdf." in Adobe Acrobat format in the Exhibit to Request 10 folder on the enclosed (non-confidential) EA18-003 electronic media

INDEX and DRAWINGS

Information and data is provided in the file labeled as "Drawing ID to File Name\_Index\_CONFID.pdf.", in Adobe Acrobat format in the Exhibit to Request 10 folder on the 'CONFIDENTIAL' EA18-003 electronic media, provided to NHTSA Office of General Counsel, under separate cover

