

# VOLKSWAGEN

GROUP OF AMERICA

OFFICE OF CHIEF COUNSEL  
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Paul Hemmersbaugh, Acting Chief Counsel  
Office of Chief Counsel  
National Highway Traffic Safety Administration  
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Washington D.C. 20590

Christopher T. Sandvig NAME  
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248-754-5000 Phone  
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October 01, 2015 Date

Re: EA15-001 Air Bag Inflator Rupture  
Special Order Directed To Volkswagen Group of America, Inc.

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

Dear Mr. Hemmersbaugh:

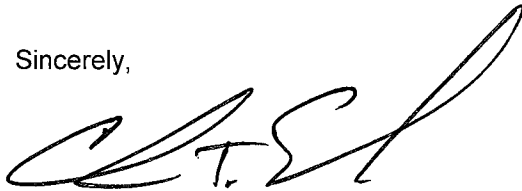
Please find attached Volkswagen's supplemental response to the Special Order Directed To Volkswagen Group of America, Inc., in reference to EA15-001, Air Bag Inflator Rupture, dated October 01, 2015, requesting information concerning a SSI-20 air bag inflator rupture in a 2015 MY Volkswagen Tiguan, on June 7, 2015, as reported to the agency on July 15, 2015.

Volkswagen will continue to meet the requirement for 30 day supplemental submissions as outlined in the Special Order.

Per the Special Order direction, each request is restated verbatim and followed by our response.

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

Sincerely,



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

Enclosures

The following constitutes supplemental Volkswagen Group responses to the Department of Transportation, National Highway Traffic Safety Administration.

**SPECIAL ORDER DIRECTED TO VOLKSWAGEN GROUP OF AMERICA, INC.**

**In re: EA 15-001 (Formerly PE14-01(6) Air Bag Inflator Rupture, Dated August 13, 2015 and Received by Volkswagen AG on Monday, August 17, 2015.**

Most of the information required to respond to this special order is in the possession of or can only be secured with the technical and logistical assistance of Volkswagen AG in Wolfsburg, Germany.

Volkswagen will continue to meet the requirement for 30 day supplemental submissions as outlined in the Special Order.

Volkswagen restates the request and follows with its response.

1. Provide a detailed, narrative explanation, including a timeline of events and knowledge, and supporting documentation (including police reports), of your understanding of the SSI-20 air bag inflator rupture in the Volkswagen Tiguan on or about June 7, 2015.

#### Response 1

The analysis of the Volkswagen Tiguan incident is completed, of which details were provided in Volkswagen's response to the agency dated August 31, 2015. Additional photographs, related to the Tiguan, were acquired as a result of the ongoing internal review of documents, and are provided in this response. [refer to folder: 20151001\_SSI20\Response to Request 5\Volkswagen AG]

As noted in the response dated August 31, 2015, VWGoA researched publicly available documents via the Missouri State Highway Patrol website and determined the existence of a police report describing the incident. VWGoA has since received a copy of the official report, and has included the copy in this response. [refer to document: MOAccidentReport#150343574.pdf]

Volkswagen notes that evaluation and analysis of SSI-20 air bag inflators continues on an ongoing basis. All new information will be incorporated within Volkswagen's supplemental responses and will be provided in response to Request # 2.

2. Provide a detailed, narrative explanation, including a timeline of events and knowledge, and supporting documentation (including police reports), of your understanding of any confirmed or alleged SSI-20 air bag inflator rupture in any Volkswagen vehicle (other than the incident identified in Request No. 1), or during any Volkswagen testing, including testing conducted by any third party on behalf of, or at the direction of, Volkswagen.

#### Response 2

Other than the incident identified in Request No. 1, of which details were provided in Volkswagen's response to the agency dated August 31, 2015, Volkswagen has received one additional report of a confirmed or alleged SSI-20 air bag inflator rupture during testing conducted by Takata, as directed by Volkswagen. Takata notified Volkswagen on August 25, 2015 of the SSI-20 airbag inflator rupture during an LAT test; however, Takata has not yet produced a report to Volkswagen about the event, which occurred at the end of 2010.

#### Monday, August 24, 2015

Conference call between VWAG and Takata regarding desiccant bag influence.

Takata reported improper handling of desiccant bag, but was not able to confirm this as a root cause. When matching the timeline with the changed handling of propellant storage (desiccant bags inside propellant bags), all CoP/LAT failures occurred after this handling process change. Return to prior process (desiccant outside propellant bags) stated. In addition density and crush strength are evaluated as possible cause. Propellant with low density produced increased burn rates and pressure. [refer to document: 20150824\_VW24082015\_150818\_r5\_CP]

Regular bi-weekly meetings and conference calls between Volkswagen and Takata continued throughout the month of September 2015.

Tuesday September 1, 2015

Takata provided results from the analysis of density and crush strength of propellant tablets [refer to document: 20150901\_150901\_SSI-20\_2004\_Propellant\_Tablet\_Analysis]

Thursday September 3, 2015

Additional analysis requests and clarifications were requested from Takata [refer to document: 20150903\_RE\_SSI HO Dichteuntersuchung]

Thursday, September 10, 2015

Takata provides results from desiccant bag analysis regarding improper storage and moisture collection and concluded that a small change of crush strength was observed. [refer to document: 20150910\_Desi\_Pak\_Influence\_10092015]

Monday, September 14, 2015

The undeployed side airbag generator (passenger side) from the Tiguan field incident was received. [refer to document: 20150914\_BF-GG Tiguan North Carolina]

Wednesday, September 16, 2015

Fraunhofer Institut (ICT) found that water ingress could cause pores in the propellant material, which may be considered as a cause for increased burn rates due to increased surface. [refer to document: 20150916\_2015 08 22 Update to life-time prediction model zur Åœbergabe]

Friday, September 18, 2015

New findings from Takata about density and crush strength were reported to Volkswagen's product safety committee. Takata also reported another SSI-20 LAT failure conducted for a competitor.

The information indicated that propellant is tested ok when leaving the factory Monclova in the US, but has changed characteristics when received in Freiberg, Germany. Desiccant bags, which were placed inside the propellant bags, are considered as possible cause.

Volkswagen has required Takata to revert back to the former process, where the desiccant was stored outside of the propellant tablet bags, when inside the transportation barrel. The new batches of propellant are currently in transport (transport chain must be maintained) and will be received in Germany in November (due to sea transport). The same analysis will be performed to conclude if desiccant may be the cause of propellant alteration during transportation. In the meantime, additional sampling is required from Takata in Freiberg. [refer to document: 20150918\_Info\_an\_APS\_GG\_SAB\_Takata\_17092015]

Monday, September 21, 2015

Initiation of increased sampling of density and crush strength in Freiberg, Germany, with rigid threshold for approval. [refer to document: 20150918\_150917 WE PrÅ¼fung Freiberg; 20150918\_Info\_an\_APS\_GG\_SAB\_Takata\_17092015]

Information has been acquired and reviewed through Tuesday, September 22, 2015, in preparation of Volkswagen's October 01, 2015 supplemental response.

3. Other than as previously disclosed in response to Requests No. 1 and 2 above, provide a detailed, narrative explanation, including a timeline of events and knowledge, and supporting documentation (including police reports), regarding any confirmed or alleged rupture of any air bag inflator in any Volkswagen vehicle.

### Response 3

Other than the incidents previously disclosed in response to Request No. 3, provided in Volkswagen's response to the agency dated August 31, 2015, Volkswagen reconfirms it has not received any additional reports of a confirmed or alleged rupture of any air bag inflator in any Volkswagen vehicle since February 2013.

As a follow up to the 3 incidents disclosed by Audi AG, the analysis results, as conducted by Key Safety Systems (KSS), is provided in this response. [refer to document: DA06\_HPH-S Concern\_Final\_Report\_2013-01-09]

4. For each incident identified in your responses to Request Nos. 1 - 3, provide a copy of all documents that refer to, relate to, discuss, or concern Takata's assessment of the incident, and all documents that Volkswagen gathered as part of its investigation (including any police accident reports).

### Response 4

All Takata related documents, identified to date, in response to Requests 1 and 2 are being provided in a folder entitled, "REQUEST NUMBER FOUR" on the enclosed disc.

Exhibit to Request 4

Data is provided in the specified file format in the REQUEST NUMBER FOUR folder on the Special Order Re: EA15-001 – Air Bag Inflator Rupture October 1, 2015  
Volkswagen Group of America, Inc. Response Material

5. For each incident identified in your responses to Request Nos. 1 - 3, provide a copy of all documents that refer to, relate to, discuss, or concern Volkswagen's assessment of the incident, and all documents that Volkswagen gathered as part of its investigation (including any police accident reports), other than those already identified or provided in your response to Request No. 4.

Response 5

All Volkswagen related documents, identified to date, in response to Requests 1-3 are being provided in a folder entitled, "REQUEST NUMBER FIVE" on the enclosed disc.

Exhibit to Request 5

Data is provided in the specified file format in the REQUEST NUMBER FIVE folder on the Special Order Re: EA15-001 – Air Bag Inflator Rupture October 1, 2015  
Volkswagen Group of America, Inc. Response Material



6. For all side air bag inflators installed in any vehicle produced by Volkswagen, provide the Lot Acceptance Testing (LAT) failure rates, number of inflators that failed, and total number of inflators tested, for each inflator type broken down by LAT group. For any other type of testing conducted by Volkswagen, or by a third party on your behalf or at your direction, on side air bag inflators state what type of testing was conducted (including how a group or test category is defined) and the failure rates, number of inflators that failed, and total number of inflators tested.

#### Response 6

Volkswagen has issued a test specification, PV3550 - Series Production Test of Side Air Bag Backrests, Side Air Bag Paddings, and Side Air Bag Padding Parts, Issued\_ 2010-06, for TIER 1 suppliers of seats with side airbag components.

This Test Specification (PV) defines the specifications for series production tests on side air bag system in backrests and padding parts. Its aim is to ensure the consistent quality and function of the side air bag in the assembly with the backrest or padding parts. Since the function of the air bag system is decisively influenced by the seat environment, the air bag modules are tested with all function-relevant add-on parts (e.g., lumbar support adjuster, seat heater, lumbar support), even if these components are not directly connected to each other. [refer to document: PV 3550engl\_confidential]

The PV3550 specification mandates the test frequency requirement in Section 2.4; accordingly, Section 3 mandates required actions in the event of irregularities. The TIER 1 supplier must notify Volkswagen and the component manufacturer immediately, in case of deviations.

Volkswagen has not received any reported failures (side airbag inflator rupture) from any of its TIER 1 suppliers of seats with side airbag components, in accordance with the PV3550.

In addition to the specifications mandated in PV3550 by Volkswagen to TIER 1 suppliers, TIER 2 and TIER 3 suppliers are responsible for conducting their own LAT testing (PV3550, Section 4). Test results at the TIER 2 and TIER 3 manufacturing level are typically reported to their respective Tier 1 suppliers and not reported directly to Volkswagen.

Volkswagen has asked its TIER 1 suppliers of seats with side airbag components to provide the requested LAT information. As of September 22, 2015, Volkswagen has not yet received information from all TIER 1 suppliers.

Volkswagen has received five (5) documents from Takata, which are included within the October 01, 2015 response. [refer to folder: 20151001\_SSI20\Response to Request 4\WWAG\_Takata]

Supplier information, when received, will be incorporated within Volkswagen's ongoing supplemental responses.

7. Provide a list of all vehicles ever produced by Volkswagen that contained an air bag inflator that in any way utilized phase stabilized ammonium nitrate as a propellant. Include the vehicle model (M), vehicle model year (MY), total number of vehicles produced for each MMY identified in response to this Request, inflator supplier, and inflator type. Organize the information chronologically based on inflator supplier and type.

Response 7

As 2016 Model Year US production information is updated by Volkswagen, it will be provided with the next scheduled update to the Special Order.