

# VOLKSWAGEN

GROUP OF AMERICA

OFFICE OF CHIEF COUNSEL  
RECEIVED

2015 AUG 25 P 2:05

Paul Hemmersbaugh, Acting Chief Counsel  
Office of Chief Counsel  
National Highway Traffic Safety Administration  
West Building, W41-326  
1200 New Jersey Avenue S.E.  
Washington D.C. 20590

Christopher T. Sandvig NAME  
General Manager Title  
Group Customer Protection Department  
248-754-5000 Phone  
248-754-5093 Fax  
August 24, 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 partial response to the Special Order Directed To Volkswagen Group of America, Inc., in reference to EA15-011, Air Bag Inflator Rupture, dated August 13, 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 notes that due to the serious and complex nature of the Special Order request, every effort is being undertaken to obtain and compile the information in order to satisfy the requested 6 day timeframe provided by the agency, in order to provide a complete and comprehensive response as possible.

Volkswagen further advises the agency that the requested information is the product of a vast supply chain, with performance documentation, records, and test results are not fully resident and under the control of Volkswagen.

Volkswagen is providing a response pursuant to an email confirmation dated August 19, 2015 from Ms. Arija Flowers

Thank you for your consideration in granting our requested extension to submit further responses on August 31, 2015.

Volkswagen will utilize the continuing requirement for 30 day submissions, commencing October 01, 2015, to amend previous responses, if necessary, and provided supplemental documents 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,

A handwritten signature in black ink, appearing to read 'CT Sandvig', written in a cursive style.

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

Enclosures

The following constitute initial Volkswagen Group responses to 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.

Pursuant to Volkswagen's request for an extension, NHTSA agreed to an extension that was confirmed by Arija Flowers, Esq. Trial Attorney for Litigation and Enforcement to Anthony Cooke, Esq. of Volkswagen Group of America, Inc. permitting Volkswagen to respond to the Special Order until August 31, 2015.

Volkswagen will endeavor to provide complete responses to the Special Order on or before August 31, 2015, but may not be able to secure all required information, documents and translations in a timely manner in view of the breadth of the requests and the number of Group Companies and vehicle brands involved as well as the worldwide nature of the Group's operations.

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

Monday, June 15, 2015:

Volkswagen Group of America, Inc. (VWGoA) Customer Relations (CR&R) department was contacted by [REDACTED] regarding a motor vehicle accident involving his wife's 2015 Volkswagen Tiguan and a deer. [REDACTED] informed the customer advocate that when the deer struck the side of the vehicle, the driver's side air bags were deployed along with some metal shards which caused an injury. The customer then secured the deployed curtain air bag to the roof rack and continued to drive to North Carolina. He advised the customer relations representative that he had since taken the vehicle to a recommended certified body shop for Volkswagen vehicles in North Carolina, at which point the advocate informed him that the issue would be escalated and he would be contacted no later than close of business that Wednesday, June 17th. [refer to document: 150444717]

Subsequently [REDACTED], the primary case handler and customer interface, reached out to [REDACTED], the Product Liaison Engineer who handles air bag incidents, requesting that the vehicle be inspected. [REDACTED]'s supervisor, telephoned [REDACTED] for further details and asked him what his anticipated inspection date would be for [REDACTED]'s vehicle. [REDACTED] responded it would be the following week before he could inspect the vehicle. [REDACTED] instructed [REDACTED] to change his schedule so that he could inspect the vehicle within the next day or so.

At 6:32 PM, [REDACTED] Flow Certified Body Shop, 240a Stratford Rd. Winston Salem, NC 27103, sent VWGoA Product Liaison Department photographs of the vehicle via email attachment [refer to document: 20150616\_FW 2015 photos]

[REDACTED] called a contact at the Wolfsburg factory (WOB), notified the contact of the incident and VWGoA's intention to inspect the vehicle within 48 hours. It was also decided that any deployed air bag parts should be secured along with the vehicle if possible. [refer to documents: 20150616\_FW 2015 photos and 20150615\_FW Customer [REDACTED]. Case [REDACTED]

Tuesday, June 16, 2015:

[REDACTED] called [REDACTED] to apologize for the unfortunate incident at which time the customer advised him of their current move to North Carolina and his wife's [REDACTED] pregnancy. [REDACTED] expressed an interest in taking the vehicle in question to be inspected as well as the possibility of getting the customer into another vehicle while VWGoA investigated the matter. When asked about the injury, [REDACTED] stated that he was struck in his upper torso near his arm pit by the metal shards which then fell out at the scene. In a subsequent phone conversation on the same day, the customer advised that he wasn't sure what compensation he was looking for from Volkswagen and was concerned about using another vehicle with the same air bag considering the current issues surrounding the Takata air bag recalls. It was also determined that [REDACTED] and his wife are both attorneys.

The email and photographs, from [REDACTED] were forwarded by [REDACTED] at approximately 7:56 AM, to [REDACTED] and to Volkswagen AG. [refer to documents: 20150616\_FW 2015 photos; 20150615\_FW Customer [REDACTED] ..Case [REDACTED] and [REDACTED]]

Wednesday, June 17, 2015:

[REDACTED] indicated he had inspected the vehicle and that he had possession of the deployed air bag. [REDACTED] advised that a few pieces of the deployed air bag were in the possession of the customer. It was requested that [REDACTED] send the available parts that he removed from the vehicle and information to WOB immediately. [REDACTED] sent the parts and information, to WOB, as requested. His collection of photos and scan tool output can be found in his report. Most importantly, [REDACTED] notes that the inflator that had split open had some surface corrosion. It was [REDACTED]'s observation that this was the first time he had seen an air bag perform in this manner in the ten years that he has been in his position.

Thursday, June 18, 2015:

An internal meeting took place at VWAG in Wolfsburg, in which specialists from the Technical Development and Quality Assurance Departments reviewed in detail the above referenced photos. The tentative conclusion was the deployment of the driver side air bag was appropriate in the context of the impact in question, but the inflator was not intact and the air bag itself had been torn.

The generation of metal shards from the rupture of the inflator was unexpected and represented a significant malfunction. The matter was reported to the Head of the Quality Department at VWAG. The tentative conclusion was that the rupture was caused by interior pressure that was too high potentially caused by blockage of the gas vent holes. Undefined combustion behavior, particularly in the booster section, the form of the charge and potential differences in the booster charge as observed in Conformity of Production (CoP) testing. Takata was invited by telephone to a meeting in Wolfsburg to take place on Friday, June 19, 2015. [refer to documents: 20150618\_18.06. and Info\_an\_[REDACTED]\_SAB\_Takata\_Tiguan\_USA.]

Friday, June 19, 2015:

Representatives of Volkswagen Technical Development and Quality Assurance Departments met with Representatives of Takata Europe, Technical Development, and Takata Freiberg/Saxony inflator plant. Takata provided information pertaining to the production lot from which the subject SSI-20 side air bag inflator installed in the individual subject Tiguan was taken.

Takata explained the design and construction of the inflator and explained the pressure characteristics including the designed maximum pressure generated by the propellant and the design pressure limit of the inflator housing. The data showed no indication for any deviation or fault in the production process of the SSI-20 inflator from the production lot. The individual SSI-20 inflator from the subject Tiguan incident, passed the production line quality testing without rework or abnormality. At the time of this meeting, the metallic particles obtained from the subject Tiguan inflator in question were not yet available for analysis.

In the course of this meeting, Takata notified Volkswagen of two (2) additional events in which an SSI-20 inflator had ruptured. One case related to a product designed for a competitor in South Korea and the other related to a lot acceptance test (LAT) conducted at Takata in Shanghai, China (inflator produced for Volkswagen).

It was agreed in this meeting to continue with follow up meetings and exchange information between Takata and Volkswagen in order to identify the cause of the incident.

During the meeting Takata provided Volkswagen a powerpoint presentation. [refer to documents: 20150619\_Acrobat-Dokument and 20150618\_Microsoft PowerPoint - 3\_SSI-20\_Anomaly\_Investigation\_Summary\_150618 [Kompatibilitätsmodus]].

In a follow-up phone call on June 19, 2015, [REDACTED] advised VWGoA he was currently in possession of the pieces that struck him and would happily email photos or have someone come to inspect them. He also indicated he had some reservations about getting into another VW vehicle but would be comfortable with a replacement vehicle being issued as long as it was inspected by a field engineer to ensure it meets the customer's expectation. [REDACTED] took the time to thank the representative with whom he was talking for the aggressive approach that showed how seriously Volkswagen took the matter.

Monday – Wednesday, June 22 - 24, 2015:

[REDACTED] indicated he was agreeable to taking a replacement vehicle with an engineer present. In addition, there were comments made by the customer wanting to know if \$10,000 dollars would be considered reasonable compensation.

[REDACTED] called the leader of the VWGoA Customer Resolution and Retention (CR&R) department asking for the availability of a 2016 Tiguan. He was advised that none were available, but, that they were on a ship en route to Houston, Texas. He asked if there were any 2015 Tiguan's available that matched the existing vehicle. He was advised that there were a few, but none had a trailer hitch installed.

[REDACTED] spoke with [REDACTED] and suggested three alternative offers be made to [REDACTED]  
--VWGoA will replace the vehicle with a 2015 model and have a dealer install the trailer hitch.  
--VWGoA will provide a rental car at our expense until the ship arrives with a 2016 Tiguan.  
--VWGoA gives him his purchase price back for his vehicle.

Replacement vehicle options were discussed with the customer as well as suitable compensation. VWGoA agreed to offer the amount requested by the customer. [REDACTED] also agreed to relinquish pieces of the air bag inflator he had retained.

Thursday, June 25, 2015:

Takata sent an email to VWAG and informed Volkswagen of one additional failed LAT of an SSI-20 inflator. An inflator rupture was observed in a LAT conducted with respect to a product for Volkswagen that was tested at TAKATA's plant in Shanghai, China. [refer to documents: 20150625\_2015\_06\_25\_VW\_SSI\_Event\_overview (4)].

On or about Wednesday, June 24 or Thursday, June 25, 2015, as collected by [REDACTED] pieces of the subject Tiguan inflator, and other parts of the side air bag assembly, were received by the Central Laboratory at Volkswagen AG in Wolfsburg and analysis of the inflator started immediately.

On Thursday, June 25, the Central Laboratory provided the first assessment of its metallurgical examination of the interior parts of the subject Tiguan inflator that were expelled when the inflator ruptured. The report concluded that the rupture of the inflator's body was caused by excessive internal pressure generated during deployment of the side air bag. No indication of deficient welding or crimping of the inflator housing was found. [refer to document: 20150625\_Labor\_SAB\_Tiguan]

That same day, Thursday, June 25, 2015, Volkswagen personally met with Takata representatives in Wolfsburg and received that same evening the "action plan" from Takata that had been requested by VWAG during the meeting earlier that day. The action plan covers possible influencing factors which may have an impact on the potential rupture of inflator bodies.



Additionally, Volkswagen and Takata discussed an increase in the number of CoP and LATs to be conducted by Takata. [refer to document: 20150625\_WG SSI\_20\_Action\_Plan.xls]

Friday, June 26, 2015:

The Central Laboratory at VWAG in Wolfsburg supplemented its initial report of June 25, 2015. The laboratory's analysis remained inconclusive and could offer no reason for the excessive pressure believed to have caused the rupture of the inflator housing. [refer to document: 20150626\_██████████]

The Product Safety Committee of Volkswagen was informed of the Tiguan incident and current status of the investigation. [refer to document: 0150626\_Info\_an\_APS\_SAB\_Takata\_Tiguan\_USA]

Monday, June 29, 2015:

██████████ received an update call from ██████████ advising that the customer went looking at a Tiguan at a dealer. Since both ██████████ and ██████████ are attorney's, they were offered the opportunity to draft a suitable release. ██████████ subsequently requested that we start crafting a release for his review. ██████████ then contacted VWGoA's legal counsel to draft a release. He then contacted ██████████ seeking vehicle details for the attorney drafting the release. ██████████ indicated the accident occurred at 10:35pm on Sunday, June 7th, 2015 outside St. Louis, in Callaway County, on Interstate 70.

Tuesday, June 30, 2015:

Volkswagen held a telephone conference call with Takata, during which Takata identified five (5) additional tests in which an inflator was noted to have ruptured. These tests included three (3) SSI-20 LAT conducted on a competitor's product and two (2) development tests; one of which was conducted for a competitor and the other that was conducted in the context of a test, the purpose of which, was not specified by Takata.

All the eight (8) ruptures reported by Takata occurred during LATs or development tests conducted at Takata facilities either in Shanghai, China or in Freiberg, Germany. These tests were all conducted between May 4, and June 24, 2015. The only inflator rupture known to date from the field is the subject Tiguan impact-related deployment that was reported to VWGoA on June 15, 2015.

Takata's presentation to Volkswagen discussed commonalities and differences with respect to the inflators that had ruptured. The principal common factors - the "auto ignition pill" and the "main propellant" were both identified as having been manufactured by Takata in Moses Lake, WA. Other common components were the cushion and the outer inflator body. In most other respects there were significant differences among the inflators in question: The booster charge manufactured in Moses Lake, WA was common to four (4) inflators, while the booster charge in the remaining five (5) inflators was manufactured Sachsen Feuerwerk, in Freiberg, Germany; The generators themselves were manufactured in two different Takata plants on 4 different production lines; the igniters were manufactured by two different suppliers; the dessicant material within the main charge was included in 5 of the inflators and was not included in 4 of the inflators in question; logistical and shipping arrangements differed among the inflators; the inner inflator tube was sourced from three different suppliers.

In view of the general lack of commonality in the SSI-20 inflators in question, the decision was made to focus future investigation and analysis on the propellants and their production.

During the conference call, Takata also confirmed that the number of CoP and LATs would be increased. [refer to document: 20150630\_Acrobat-Dokument]

██████ received crash location details which were provided by ██████ through ██████. These details were then communicated to VWGoA's legal counsel. ██████ then participated in a conference call with a leader of CR&R and ██████ to determine which vehicles VWGoA may have available, estimated arrival dates and times.

Through further internal discussion regarding vehicle inventory and the conveyance of this information to ██████ VWGoA offered him a new 2016 VW Tiguan, with anticipated delivery in early August of 2015. Additionally, the customer would be reimbursed for a rental vehicle until the time of that new Tiguan's delivery.

Thursday, July 02, 2015:

Volkswagen held a conference call with Takata, in which the results of further analysis and DFMEA and PFMEA were discussed. No new information regarding root cause determination was forthcoming through these analyses. [refer to document: 20150702\_Acrobat-Dokument; 20150702\_Folgeteko Gasgenerator SAB]

Additional laboratory investigation concerning the disc in the "auto ignition pill" provided no new information that could assist in reaching the root cause determination. [refer to document: 20150702\_██████ 2 ██████]

██████ spoke with ██████, who stated that he would like to accept Volkswagen's offer. At this point he was told the vehicle would arrive in the United States on or around July 10, 2015, most likely making it to his local dealer about two weeks later.

The drafted release letter was sent to ██████.

Friday, July 03, 2015:

Volkswagen received information from Takata via a phone call, of an additional incident in Takata's Monclova Plant in Mexico. Takata was unable to provide VWAG with additional information pertaining to this SSI-20 inflator rupture. The inflator was tested in the context of a LAT and had not yet been released for production. Based on this new information, the presentation to Volkswagen's Product Safety Committee was updated. [refer to document: 20150703\_Info\_an\_APS\_GG\_SAB\_Takata\_03072015]

A previous Volkswagen presentation to management was updated to reflect this information. [refer to document: 20150703\_Info\_SAB\_Takata\_GG\_02072015 V1, 20150703\_WG ██████]

Monday, July 6, 2015:

██████ returned the release letter with some modifications.

Tuesday, July 07, 2015:

Telephone conference with Takata took place to discuss the Monclova incident in Mexico (reported July 03, 2015). Takata was unable to provide any new information regarding a root cause determination. Investigation and analysis regarding pressure development related to the different inflator zones were presented and discussed in the context of the ongoing exchange of information with Takata. [refer to document: 20150707\_Acrobat-Dokument, 20150707\_TEKO Gasgenerator SAB - Agenda angefügt!!!]

Wednesday, July 8, 2015:

██████ was informed that the changes he and his wife had made to the proposed release document were acceptable and that all outstanding paperwork would be completed at the dealer location upon his receipt of the 2016 Tiguan.



Thursday, July 09, 2015:

A face-to-face meeting took place at VWAG headquarters in Wolfsburg, Germany with participants from Takata Germany, Takata China and Takata Moses Lake, WA (propellant production plant). An overview of the complete production process for the propellant in Moses Lake was presented by Takata. During the meeting Volkswagen announced its intention to visit and inspect the Moses Lake facility in order to review the complete propellant production process. [refer to documents: 20150709\_2004 Tablet Process Overview 2015, 20150709\_9339 Process Overview revb, 20150709\_Agenda [REDACTED] Fa.Takata, and 20150709\_Vor-Ort-Termin Gasgenerator SAB]

For an upcoming management meeting, a preparatory meeting took place where the status of the investigation and further action was outlined. [refer to document: 20150709\_Info\_an\_[REDACTED]\_GG\_SAB\_Takata\_09072015\_[REDACTED]]

Takata provided VWAG with a list of customers (Volkswagen seat suppliers that receive parts from Takata) who were informed of the request to increase the number of CoP tests. [refer to document: 20150709\_[REDACTED]\_[REDACTED]]

More tests with different orientations of the inflator were agreed upon between Volkswagen and Takata, in order to determine whether the orientation of the inflator in the vehicle may have an influence on inflator rupture. No such influence was determined. [refer to document: 20150709\_SSI20\_VW\_issue\_reporting\_09072015(6) (2)]

Friday, July 10, 2015:

Presentation materials for Volkswagen's Product Safety Committee were updated. No new information regarding root cause determination was able to be provided. [refer to document: 20150710\_Info\_an\_APS\_GG\_SAB\_Takata\_10072015]

Tuesday, July 14, 2015:

Meeting conducted with VWAG Quality Department management and the management of Takata Europe, to provide current status report. No new or additional information was forthcoming from Takata.

[refer to documents: 20150714\_10.00h TAKATA [REDACTED]  
[REDACTED] TAKATA [REDACTED], 20150714\_Agenda\_Status\_Takata\_14.7.2015,  
20150714\_SSI20\_issue\_General\_Information\_150713\_, and  
20150714\_TREAD\_Status\_Takata\_9.7.2015]

Wednesday, July 15, 2015:

Volkswagen Group employees met with NHTSA. During the meeting NHTSA was informed about the Tiguan incident and the current status knowledge and findings from Volkswagen's investigation was presented NHTSA officials. [refer to document: 20150715\_Info\_for\_NHTSA\_20150714]

Thursday, July 16, 2015:

Conference call between Volkswagen and Takata, during which no additional events were reported. Update of presentation. [refer to document: 20150716\_SSI20\_VW\_issue\_reporting\_16072015 and 20150716\_TEKO Gasgenerator SAB TAKATA]

As there was still no determination for root cause for inflator rupture, a visit to and inspection of Takata's Moses Lake plant was agreed upon for the following week. A list of questions to which Takata was asked to respond, was forwarded to Takata in advance of the visit. The questions related to Takata's assessment of the rupture of the SSI-20 inflator in the subject Tiguan in question as well as the details of the propellant production process. [refer to document: 20150716\_FW [REDACTED] Moses Lake, 20150716\_[REDACTED]\_2004\_9339\_questionnaire]

After the meeting, new information was revealed by Takata regarding the location of desiccant bags within the transport barrel (additional desiccant bags were directly positioned on top of the propellant in the propellant bags). It was agreed that an analysis in greater detail regarding the influence of this change in the production process at Takata was necessary. [refer to document: 20150716\_FW Moisture2422122.xlsx, 20150716\_Moisture2422122]

Monday, July 20, 2015:

██████ learned from CR&R that a replacement vehicle had arrived and is in transit to the dealer in North Carolina. There was further discussion of what yet needs to be completed for delivery of the new vehicle to the customer. ██████ proceeds to establish a tentative delivery date of Friday, July 24, 2015.

After further coordinating with ██████ on July 20, 2015, it was arranged that he would pick up the vehicle and meet with ██████ on the afternoon of July 25, 2015.

Tuesday and Wednesday, July 21-22 July 2015:

Volkswagen conducted an onsite visit to Takata's Moses Lake propellant production plant. Participants included representatives from Volkswagen AG, Takata Europe and Takata USA.

Process evaluation was carried out. Discussions were held regarding possible root causes, e.g. humidity, stiffness of propellant, propellant density, influence of transport and storage, maintenance, handling of rejected parts, etc. Deviations were identified (auto rejection, maintenance, sieve removal, scrap removal, etc.). These observed deviations were documented and countermeasures were defined in an action plan. However, all identified deviations are not seen as a cause of the rupture of the SSI-20 inflator. Further testing concerning the influence of the desiccant on the performance of the propellant were agreed upon. [refer to documents: 20150721-22\_Dokument in Zusammenfassung Takata, 20150721-22\_Doku ML Prozessbegehung, 20150721-22\_Dokument in Zusammenfassung Takata2, 20150721-22\_Dokumentation ML Prozessbegehung, 20150721-22\_Fragen zum Prozess in Moses Lake\_2, 20150721-22\_Tabelle von Zusammenfassung Takata]

Wednesday, July 22, 2015:

Conference call between Volkswagen visitors on-site in Moses Lake and VWAG headquarters in Wolfsburg, Germany. This call dealt with a summary of the deviations identified and the further steps that were agreed upon with Takata (outcome of the visit). [refer to document: 20150722\_TEKO Gasgenerator SAB TAKATA]

Due to delays with the paperwork caused by the new vehicle being released early, the customer was contacted by a representative on July 23, 2015 and advised the delivery of the vehicle was rescheduled for the morning of Thursday, July 30, 2015.

Monday, July 27, 2015:

Update provided to Quality Assurance Department management regarding results of the visit to Takata's Moses Lake propellant production facility. [refer to document: 20150727\_Info zu Mose Lake, 20150727\_██████]

Tuesday, July 28, 2015:

Conference call between Volkswagen and Takata to prepare a face-to-face meeting of respective VWAG and Takata management personnel in regard current status of the joint investigation and to review the results of the visit to Moses Lake. [refer to documents: 20150728\_2015-07-28\_██████\_2, 20150728\_SSI\_for\_NHSTA\_Jul\_28\_2015\_2, 20150728\_TEKO Gasgenerator SAB TAKATA]

Wednesday, July 29, 2015:

A face-to-face meeting between VWAG and Takata took place in Wolfsburg, Germany. Review of investigation status and of documents and information which Takata will share with NHTSA on July 30, 2015. Further discussion regarding a reduction of the amount of main propellant (as decided by GM) is not a confirmed ad hoc solution for the issue, as the reduction might affect the performance (and compliance) of the side air bag and the question of the root cause remains undetermined. Prior to any change, proposed measures would have to be tested, verified and approved. [refer to documents: 20150729\_Acrobat-Dokument2, 20150729\_VW29072015\_de, 20150729\_WG [REDACTED] Takata bei NHTSA insbesondere Thema SAB]

Friday, July 30, 2015:

[REDACTED] met with [REDACTED] and [REDACTED] at the [REDACTED] to deliver their replacement Tiguan. The inspection of the new vehicle that the customers' requested along with the relevant paperwork were both completed and the few remaining air bag pieces that the customer had retained were given to [REDACTED] who ultimately sent them along to [REDACTED].

Monday, August 3, 2015:

[REDACTED] called [REDACTED] to follow-up on all that had taken place and to check the status of his rental car reimbursement. He stated that he was extremely happy with how the issue was handled and based on his experience he and his family would be Volkswagen customers for life.

[REDACTED] received all documents for the damaged 2015 Tiguan, as well as the signed release. Also received were the small parts the customer had retained. [REDACTED] then telephoned CR&R and asked that the damaged vehicle be shipped to a VWGoA facility in NJ. [refer to document: signed release – submitted under Request for Confidentiality]

Wednesday, August 05, 2015:

Conference call between VWAG Central Laboratory, Takata and ICT (Fraunhofer Institut, Karlsruhe, Germany). Takata decided to retain ICT for a deeper investigation into the influence of the desiccant on the propellant. Verification as to whether propellant pills close to the desiccant bag during storage and transportation would become more aggressive than propellant pills "far away" from the desiccant bag. Tests according to this hypothesis were agreed to be conducted by Takata. [refer to document: 20150805\_FW Protokoll TelKo – Gasgenerator]

Monday, August 10, 2015:

[REDACTED] is advised that the 2015 damaged Tiguan has arrived and is stored in a VWGoA facility in NJ.

Tuesday, August 11, 2015:

Conference call between VWAG and Takata, initial results of desiccant influence on propellant pill tests were shared. No clear trend has emerged at this time concerning the distance between desiccant and propellant pills. [refer to document: 20150811\_VW11082015\_de, 20150811\_TEKO Gasgenerator SAB TAKATA]

Friday, August 14, 2015:

Conference call between Volkswagen and Takata. No documents were exchanged. Discussion regarding the status of tests conducted by Takata, which were incomplete. Discussion and agreement as to next steps in the investigation, relating to potential desiccant influence, which are to be conducted by ICT. [refer to document: 20150814\_Gasgenerator SAB Takata]

Tuesday, August 18, 2015:

Conference call between VWAG and Takata, regarding test results conducted by Takata to date. Currently there are no reliable results which provide determination of root cause.

Next steps: Crush strength to be investigated, related to the moisture content of the propellant pills. [refer to document: 20150818\_VW18082015\_de, 20150818\_TEKO Gasgenerator SAB TAKATA]

Wednesday and Thursday, August 19 – 20, 2015:

██████████ reached out to ██████████ regarding how to respond to various reporters who began contacting him. It was determined based on the customer's comfort level that he and ██████████ need not reply to any of them or simply offer that he had "no comment" regarding the issue.

Friday, August 21, 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 requested a copy of the official report, but has not yet received a copy for inclusion in this response.

Monday, August 24, 2015:

Volkswagen notes that since initial introduction of the SSI-20 inflator in Volkswagen Group vehicles in 2008, nearly 5.5 million vehicles – thus almost 11 million inflators have been installed on Group vehicles throughout the world. The Volkswagen Group is aware of only one field incident regarding the rupture of an SSI-20 inflator – the incident that is the subject of this Special Order. Volkswagen has for many years utilized a worldwide field reporting system to capture such incidents on any Volkswagen Group product operating in any market throughout the world. It is apparent that the situation observed with the subject Tiguan is an anomaly that the best efforts of Volkswagen and Takata have yet to understand. Efforts to determine the root cause of this rupture are continuing.



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

### July 15, 2015 through August 21, 2015

Upon notification of the June 7, 2015 incident involving the 2015 Tiguan, Volkswagen conducted an exhaustive review of internal systems and has determined that there are no additional alleged or confirmed cases of SSI-20 air bag inflator rupture in any Volkswagen vehicle, other than the incident identified in Request 1.

### Friday, June 19, 2015:

Representatives of Volkswagen Technical Development and Quality Assurance Departments met with Representatives of Takata Europe, Technical Development, and Takata Freiberg/Saxony inflator plant. Takata provided information pertaining to the production lot from which the subject SSI-20 side air bag inflator installed in the individual subject Tiguan was taken.

Takata explained the design and construction of the inflator and explained the pressure characteristics including the designed maximum pressure generated by the propellant and the design pressure limit of the inflator housing. The data showed no indication for any deviation or fault in the production process of the SSI-20 inflator from the production lot. The individual SSI-20 inflator from the subject Tiguan incident, passed the production line quality testing without rework or abnormality. At the time of this meeting, the metallic particles obtained from the subject Tiguan inflator in question were not yet available for analysis.

In the course of this meeting, Takata notified Volkswagen of two (2) additional events in which an SSI-20 inflator had ruptured. One case related to a product designed for a competitor in South Korea and the other related to a lot acceptance test (LAT) conducted at Takata in Shanghai, China (inflator produced for Volkswagen).

It was agreed in this meeting to continue with follow up meetings and exchange information between Takata and Volkswagen in order to identify the cause of the incident.

During the meeting Takata provided Volkswagen a powerpoint presentation. [refer to documents: 20150619\_Acrobat-Dokument and 20150618\_Microsoft PowerPoint - 3\_SSI-20\_Anomaly\_Investigation\_Summary\_150618 [Kompatibilitätsmodus]].

### Thursday, June 25, 2015:

Takata sent an email to VWAG and informed Volkswagen of one additional failed LAT of an SSI-20 inflator. An inflator rupture was observed in a LAT conducted with respect to a product for Volkswagen that was tested at TAKATA's plant in Shanghai, China. [refer to documents: 20150625\_2015\_06\_25\_VW\_SSI\_Event\_overview (4)].

On or about Wednesday, June 24 or Thursday, June 25, 2015, as collected by [REDACTED] pieces of the subject Tiguan inflator, and other parts of the side air bag assembly, were received by the Central Laboratory at Volkswagen AG in Wolfsburg and analysis of the inflator started immediately.

On Thursday, June 25, the Central Laboratory provided the first assessment of its metallurgical examination of the interior parts of the subject Tiguan inflator that were expelled when the inflator ruptured. The report concluded that the rupture of the inflator's body was caused by excessive internal pressure generated during deployment of the side air bag. No indication of deficient welding or crimping of the inflator housing was found. [refer to document: 20150625\_Labor\_SAB\_Tiguan]

That same day, Thursday, June 25, 2015, Volkswagen personally met with Takata representatives in Wolfsburg and received that same evening the "action plan" from Takata that had been requested by VWAG during the meeting earlier that day. The action plan covers possible influencing factors which may have an impact on the potential rupture of inflator bodies. Additionally, Volkswagen and Takata discussed an increase in the number of CoP and LATs to be conducted by Takata. [refer to document: 20150625\_WG SSI\_20\_Action\_Plan.xls]

Friday, June 26, 2015:

The Central Laboratory at VWAG in Wolfsburg supplemented its initial report of June 25, 2015. The laboratory's analysis remained inconclusive and could offer no reason for the excessive pressure believed to have caused the rupture of the inflator housing. [refer to document: 20150626\_ ]

The Product Safety Committee of Volkswagen was informed of the Tiguan incident and current status of the investigation. [refer to document: 0150626\_Info\_an\_APS\_SAB\_Takata\_Tiguan\_USA]

Tuesday, June 30, 2015:

Volkswagen held a telephone conference call with Takata, during which Takata identified five (5) additional tests in which an inflator was noted to have ruptured. These tests included three (3) SSI-20 LAT conducted on a competitor's product and two (2) development tests; one of which was conducted for a competitor and the other that was conducted in the context of a test, the purpose of which, was not specified by Takata.

All the eight (8) ruptures reported by Takata occurred during LATs or development tests conducted at Takata facilities either in Shanghai, China or in Freiberg, Germany. These tests were all conducted between May 4, and June 24, 2015. The only inflator rupture known to date from the field is the subject Tiguan impact-related deployment that was reported to VWGoA on June 15, 2015.

Takata's presentation to Volkswagen discussed commonalities and differences with respect to the inflators that had ruptured. The principal common factors - the "auto ignition pill" and the "main propellant" were both identified as having been manufactured by Takata in Moses Lake, WA. Other common components were the cushion and the outer inflator body. In most other respects there were significant differences among the inflators in question: The booster charge manufactured in Moses Lake, WA was common to four (4) inflators, while the booster charge in the remaining five (5) inflators was manufactured Sachsen Feuerwerk, in Freiberg, Germany; The generators themselves were manufactured in two different Takata plants on 4 different production lines; the igniters were manufactured by two different suppliers; the dessicant material within the main charge was included in 5 of the inflators and was not included in 4 of the inflators in question; logistical and shipping arrangements differed among the inflators; the inner inflator tube was sourced from three different suppliers.

In view of the general lack of commonality in the SSI-20 inflators in question, the decision was made to focus future investigation and analysis on the propellants and their production.

During the conference call, Takata also confirmed that the number of CoP and LATs would be increased. [refer to document: 20150630\_Acrobat-Dokument]



Thursday, July 02, 2015:

Volkswagen held a conference call with Takata, in which the results of further analysis and DFMEA and PFMEA were discussed. No new information regarding root cause determination was forthcoming through these analyses. [refer to document: 20150702\_Acrobat-Dokument; 20150702\_Folgeteko Gasgenerator SAB]

Additional laboratory investigation concerning the disc in the "auto ignition pill" provided no new information that could assist in reaching the root cause determination. [refer to document: 20150702\_2 ]

Friday, July 03, 2015:

Volkswagen received information from Takata via a phone call, of an additional incident in Takata's Monclova Plant in Mexico. Takata was unable to provide VWAG with additional information pertaining to this SSI-20 inflator rupture. The inflator was tested in the context of a LAT and had not yet been released for production. Based on this new information, the presentation to Volkswagen's Product Safety Committee was updated. [refer to document: 20150703\_Info\_an\_APS\_GG\_SAB\_Takata\_03072015]

A previous Volkswagen presentation to management was updated to reflect this information. [refer to document: 20150703\_Info\_SAB\_Takata\_GG\_02072015 V1, 20150703\_WG ]

Tuesday, July 07, 2015:

Telephone conference with Takata took place to discuss the Monclova incident in Mexico (reported July 03, 2015). Takata was unable to provide any new information regarding a root cause determination. Investigation and analysis regarding pressure development related to the different inflator zones were presented and discussed in the context of the ongoing exchange of information with Takata. [refer to document: 20150707\_Acrobat-Dokument, 20150707\_TEKO Gasgenerator SAB - Agenda angefügt!!!]

Thursday, July 09, 2015:

A face-to-face meeting took place at VWAG headquarters in Wolfsburg, Germany with participants from Takata Germany, Takata China and Takata Moses Lake, WA (propellant production plant). An overview of the complete production process for the propellant in Moses Lake was presented by Takata. During the meeting Volkswagen announced its intention to visit and inspect the Moses Lake facility in order to review the complete propellant production process. [refer to documents: 20150709\_2004 Tablet Process Overview 2015, 20150709\_9339 Process Overview revb, 20150709\_Agenda Fa.Takata, and 20150709\_Vor-Ort-Termin Gasgenerator SAB]

For an upcoming management meeting, a preparatory meeting took place where the status of the investigation and further action was outlined. [refer to document: 20150709\_Info\_an\_GG\_SAB\_Takata\_09072015\_ ]

Takata provided VWAG with a list of customers (Volkswagen seat suppliers that receive parts from Takata) who were informed of the request to increase the number of CoP tests. [refer to document: 20150709\_ ]

More tests with different orientations of the inflator were agreed upon between Volkswagen and Takata, in order to determine whether the orientation of the inflator in the vehicle may have an influence on inflator rupture. No such influence was determined. [refer to document: 20150709\_SSI20\_VW\_issue\_reporting\_09072015(6) (2)]

Friday, July 10, 2015:

Presentation materials for Volkswagen's Product Safety Committee were updated. No new information regarding root cause determination was able to be provided. [refer to document: 20150710\_Info\_an\_APS\_GG\_SAB\_Takata\_10072015]

Tuesday, July 14, 2015:

Meeting conducted with VWAG Quality Department management and the management of Takata Europe, to provide current status report. No new or additional information was forthcoming from Takata.

[refer to documents: 20150714\_10.00h TAKATA [REDACTED] TAKATA [REDACTED] 20150714\_Agenda\_Status\_Takata\_14.7.2015, 20150714\_SSI20\_issue\_General\_Information\_150713\_, and 20150714\_TREAD\_Status\_Takata\_9.7.2015]

Wednesday, July 15, 2015:

Volkswagen Group employees met with NHTSA. During the meeting NHTSA was informed about the Tiguan incident and the current status knowledge and findings from Volkswagen's investigation was presented NHTSA officials. [refer to document: 20150715\_Info\_for\_NHTSA\_20150714]

Thursday, July 16, 2015:

Conference call between Volkswagen and Takata, during which no additional events were reported. Update of presentation. [refer to document: 20150716\_SSI20\_VW\_issue\_reporting\_16072015 and 20150716\_TEKO Gasgenerator SAB TAKATA]

As there was still no determination for root cause for inflator rupture, a visit to and inspection of Takata's Moses Lake plant was agreed upon for the following week. A list of questions to which Takata was asked to respond, was forwarded to Takata in advance of the visit. The questions related to Takata's assessment of the rupture of the SSI-20 inflator in the subject Tiguan in question as well as the details of the propellant production process. [refer to document: 20150716\_FW [REDACTED] Moses Lake, 20150716\_[REDACTED] 2004\_9339\_questionnaire]

After the meeting, new information was revealed by Takata regarding the location of desiccant bags within the transport barrel (additional desiccant bags were directly positioned on top of the propellant in the propellant bags). It was agreed that an analysis in greater detail regarding the influence of this change in the production process at Takata was necessary. [refer to document: 20150716\_FW Moisture2422122.xlsx, 20150716\_Moisture2422122]

Tuesday and Wednesday, July 21-22 July 2015:

Volkswagen conducted an onsite visit to Takata's Moses Lake propellant production plant. Participants included representatives from Volkswagen AG, Takata Europe and Takata USA.

Process evaluation was carried out. Discussions were held regarding possible root causes, e.g. humidity, stiffness of propellant, propellant density, influence of transport and storage, maintenance, handling of rejected parts, etc. Deviations were identified (auto rejection, maintenance, sieve removal, scrap removal, etc.). These observed deviations were documented and countermeasures were defined in an action plan. However, all identified deviations are not seen as a cause of the rupture of the SSI-20 inflator. Further testing concerning the influence of the desiccant on the performance of the propellant were agreed upon. [refer to documents: 20150721-22\_Dokument in Zusammenfassung Takata, 20150721-22\_Doku ML Prozessbegehung, 20150721-22\_Dokument in Zusammenfassung Takata2, 20150721-22\_Dokumentation ML Prozessbegehung, 20150721-22\_Fragen zum Prozess in Moses Lake\_2, 20150721-22\_Tabelle von Zusammenfassung Takata]

Wednesday, July 22, 2015:

Conference call between Volkswagen visitors on-site in Moses Lake and VWAG headquarters in Wolfsburg, Germany. This call dealt with a summary of the deviations identified and the further steps that were agreed upon with Takata (outcome of the visit). [refer to document: 20150722\_TEKO Gasgenerator SAB TAKATA]

Monday, July 27, 2015:

Update provided to Quality Assurance Department management regarding results of the visit to Takata's Moses Lake propellant production facility. [refer to document: 20150727\_Info zu Mose Lake, 20150727\_██████████]

Tuesday, July 28, 2015:

Conference call between Volkswagen and Takata to prepare a face-to-face meeting of respective VWAG and Takata management personnel in regard current status of the joint investigation and to review the results of the visit to Moses Lake. [refer to documents: 20150728\_2015-07-28 Kurzinfo H. Tuch\_2, 20150728\_SSI\_for\_NHSTA\_Jul\_28\_2015\_2, 20150728\_TEKO Gasgenerator SAB TAKATA]

Wednesday, July 29, 2015:

A face-to-face meeting between VWAG and Takata took place in Wolfsburg, Germany. Review of investigation status and of documents and information which Takata will share with NHTSA on July 30, 2015. Further discussion regarding a reduction of the amount of main propellant (as decided by GM) is not a confirmed ad hoc solution for the issue, as the reduction might affect the performance (and compliance) of the side air bag and the question of the root cause remains undetermined. Prior to any change, proposed measures would have to be tested, verified and approved. [refer to documents: 20150729\_Acrobat-Dokument2, 20150729\_VW29072015\_de, 20150729\_WG ██████████ Takata bei NHTSA insbesondere Thema SAB]

Wednesday, August 05, 2015:

Conference call between VWAG Central Laboratory, Takata and ICT (Fraunhofer Institut, Karlsruhe, Germany). Takata decided to retain ICT for a deeper investigation into the influence of the desiccant on the propellant. Verification as to whether propellant pills close to the desiccant bag during storage and transportation would become more aggressive than propellant pills "far away" from the desiccant bag. Tests according to this hypothesis were agreed to be conducted by Takata. [refer to document: 20150805\_FW Protokoll TelKo – Gasgenerator]

Tuesday, August 11, 2015:

Conference call between VWAG and Takata, initial results of desiccant influence on propellant pill tests were shared. No clear trend has emerged at this time concerning the distance between desiccant and propellant pills. [refer to document: 20150811\_VW11082015\_de, 20150811\_TEKO Gasgenerator SAB TAKATA]

Friday, August 14, 2015:

Conference call between Volkswagen and Takata. No documents were exchanged. Discussion regarding the status of tests conducted by Takata, which were incomplete. Discussion and agreement as to next steps in the investigation, relating to potential desiccant influence, which are to be conducted by ICT. [refer to document: 20150814\_Gasgenerator SAB Takata]

Tuesday, August 18, 2015:

Conference call between VWAG and Takata, regarding test results conducted by Takata to date. Currently there are no reliable results which provide determination of root cause.

Next steps: Crush strength to be investigated, related to the moisture content of the propellant pills. [refer to document: 20150818\_VW18082015\_de, 20150818\_TEKO Gasgenerator SAB TAKATA]

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

Information to be provided under extension requested to August 31, 2015 and granted on August 19, 2015

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 documents, identified to date, in response to Requests 1 and 2 are being provided; documents for request 3 will be provided per the extension request of August 31, 2015 and granted on August 19, 2015

## Exhibit to Request 4

Data is provided in a TIFF file format in the Exhibit to Request 4 folder on the Special Order Re:  
EA15-001 Data Collection Disc

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

Volkswagen submits all relevant documents, identified to date, in response to Request 5 as inclusive in its response to Request 4.

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

Information to be provided under extension requested to August 31, 2015 and granted on August 19, 2015

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

Information to be provided under extension requested to August 31, 2015 and granted on August 19, 2015