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October 11, 2019  
Ref. No.: FSG19-015

Mr. Jeffrey L. Quandt  
Chief, Vehicle Defect Division D  
Office of Defects Investigation  
1200 New Jersey Avenue SE,  
Washington, D. C. 20590

**RE: NEF-104car / PE19-009**

Dear Mr. Quandt,

Please see the following response to your mail correspondence on August 14, 2019 regarding a Preliminary Evaluation (PE19-009) to investigate allegations of Occupant Detection System (ODS) failure in certain model year (MY) 2016 through 2018 Subaru Forester vehicles. Our reply repeats the applicable request verbatim before each response.

- 1. State, by model year, the number of subject and peer vehicles Subaru has manufactured for sale or lease in the United States. Separately, for each subject and peer vehicle manufactured to date by Subaru, state the following:**
  - a. Vehicle identification number (VIN);
  - b. Model Year;
  - c. Subject component part number installed as original equipment;
  - d. The ODS software version;
  - e. Subaru's Starlink Technology (Y/N);
  - f. Date of manufacture (in "yyyy/mm/dd" date format);
  - g. Date warranty coverage commenced (in "yyyy/mm/dd" date format); and
  - h. 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: Please see "PRODUCTION DATA.accdb" on the drive accompanying this response letter. On October 3, 2019, Subaru reported a voluntary safety recall, NHTSA Campaign Number 19V701. Items 1(g) and 1(h) were not completed by the time of this submission. If requested again, Subaru can provide NHTSA updated information including Items 1(g) and 1(h).

**2. State within the body of the response to this letter the number of each of the following, received by Subaru, or of which Subaru is otherwise aware, which relate to, or may relate to, the alleged defect in the subject and peer vehicles:**

- a. Consumer complaints;
- b. Field reports, including supplier and dealer field reports;
- c. Reports involving a crash, injury or fatality, based on claims against Subaru involving a death or injury, or notices received by Subaru alleging or proving that a death or injury was caused by the alleged defect in a subject vehicle;
- d. Property damage claims;
- e. Third-party arbitration proceedings where Subaru is or was a party to the arbitration; and
- f. Lawsuits, both pending and closed, in which Subaru 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).**

Response:

	2a	2b	2c	2d	2e	2f
Total No.	1,749	243	0	0	0	1

Note: 2a items have not been screened for applicability. The Total No. represented under item 2a includes all category: airbag and subcategory: airbag complaints made to Subaru for the subject and peer vehicles.

**In addition, for items "c" through "f," provide a summary description of the alleged problem and causal and contributing factors and Subaru'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:

2f. Lawsuits, both pending and closed, in which Subaru is or was a defendant or codefendant.

Parties: Plaintiff-Gerrell Johnson; and Defendants- Subaru of America, Inc. and Subaru Corporation

Caption: Gerrell Johnson on behalf of himself and all others similarly situated v. Subaru of America, Inc. and Subaru Corporation

Court: U.S. District Court-Central District of California

Civil Action No. 2:19-cv-05681 JAKMAA

Service of Process: 7/8/19

**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. Subaru's file number or other identifier used;
- b. The category of the item, as identified in Request No. 2 (i.e., consumer complaint, field report, etc.);
- c. Vehicle owner name, street address, email address and telephone number;
- d. Vehicle's VIN;
- e. Vehicle's model year;
- f. Vehicle's date of manufacture;
- g. Vehicle's mileage at time of incident;
- h. Incident date (in "yyyy/mm/dd" date format);
- i. Report or claim date (in "yyyy/mm/dd" date format);
- j. The stature (weight and height) of the occupant in the passenger seat, if known;
- k. Whether a crash is alleged;
- l. Whether property damage is alleged;
- m. Number of alleged injuries, if any; and
- n. Number of alleged fatalities, if any.

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

Response: Please see "REQUEST NUMBER TWO DATA.accdb" on the drive accompanying this response letter.

**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 Subaru used for organizing the documents. Describe in detail the search methods and search criteria used by Subaru to identify the items in response to Request No. 2.**

Response: Please see folder "REQUEST NUMBER TWO DOCS" on the drive accompanying this response letter. On October 3, 2019, Subaru reported a voluntary safety recall, NHTSA Campaign Number 19V701. Per telephone discussion with NHTSA ODI on September 27, 2019, copies of all documents related to Item 2b, dealer and non-dealer field reports, are included on the drive accompanying this response letter. If requested again, Subaru can provide NHTSA updated information including Items 2(a), customer complaints.

The search methods and criteria used by Subaru to identify items are outlined by subpart, below and on the following page.

**2a. Customer Complaints**

- a. MY/ Model = 2014-2018 Forester vehicles
- b. Table, below, shows the combination Issue Type / Area / Subarea

ISSUE_TYPE	ISSUE_AREA	ISSUE_SUBAREA
Vehicle	Air Bag	Air bags

Note: Customer complaints have not been screened for applicability.

2b. Field Reports, including supplier and dealer field reports

- a. MY/ Model = 2014-2018 Forester vehicles
- b. Fail Codes = URC, URD, YMA, UZH, ULI, VQC, ULM, URC, UYH (excluding UYH00), UQF, URJ, URI, URF, URE URG
- c. DTCs = B1650, B1760, B1761, B1771, or B1795
- d. Manually screened customer and/or technician comments for applicability

**5. State, by model year, a total count for all of the following categories of claims, collectively, that have been paid by Subaru to date that relate to, or may relate to, the alleged defect in the subject and 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, customer satisfaction campaign, or other such activity.**

Separately, for each such claim, state the following information:

- a. Subaru's claim number;
- b. Vehicle owner name, email address and telephone number;
- c. VIN;
- d. Repair date;
- e. Vehicle's date of manufacture (in "yyyy/mm/dd" date format);
- f. Vehicle mileage at time of repair;
- g. Repairing dealer's or facility's name, telephone number, city and state or ZIP code;
- h. Labor operation number(s);
- i. Problem code(s);
- j. Diagnostic trouble code(s);
- k. Replacement part number(s) and description(s);
- l. Concern stated by customer;
- m. Cause as stated on the repair order;
- n. Correction as stated on the repair order; and
- o. Additional comments, if any, by dealer/technician making the repair, and/or the person(s) processing the claim that relate to claim and/or repair.

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

Response:

The table, below, states, by model year, the total count of claims:

<b>Model Year</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Total Claims</b>	2,203	2,967	7,799	16,176	4,659

- a. Subparts 5(j) – 5(o) are included in the "Notes" column, if available.
- b. On October 3, 2019, Subaru reported a voluntary safety recall, NHTSA Campaign Number 19V701. Per telephone discussion with NHTSA ODI on September 27, 2019, subparts 5(m), 5(n), and 5(o) regarding information included on any

associated Repair Order (RO) can be provided by Subaru at a later date, upon NHTSA request.

- 6. Describe in detail the search methods and search criteria used by Subaru 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, problem code descriptions, diagnostic trouble codes and diagnostic trouble code descriptions applicable to the claims provided in response to Request No. 5. State whether the diagnostic trouble codes are automatically reported to the warranty database electronically or manually entered into the warranty database by a claims administrator. In addition, provide a summary table of the specifications that would trigger each of the problem codes and diagnostic trouble codes.**

Response:

Populated data using the following parameters (Must have TRUE for 1 and 2):

- a. MY/ Model = 2014-2018 Forester vehicles
- b. Fail Codes = URC, URD, YMA, UZH, ULI, VQC, ULM, URC, UYH (excluding UYH00), UQF, URJ, URI, URF, URE URG

Process for screening data:

- a. Include all claims with Part Numbers = 64139SG000\*\*, 64139SG001\*\*, 64139SG002\*\*, 64139SG020\*\*, 64139SG021\*\*, 64139SG022\*\*, 64139SG023\*\*, 64139SG040\*\*, 64139SG041\*\*, 64139SG042\*\*, 64139SG043\*\*, 64139SG060\*\*, 64139SG080\*\*, 64139SG100\*\*, 64139SG101\*\*, 64139SG102\*\*, 64139SG120\*\*, 64139SG122\*\*, 64139SG140\*\*, 64139SG160\*\*, 64139SG180\*\*, 64139SG200\*\*, 64139SG220\*\*
- b. Include all claims with Fail Codes = URC, URD, YMA, or URJ
- c. Include all claims with DTCs = B1650, B1760, B1761, B1771, or B1795

Note: Subaru did not remove duplicate claims, as identified by the Claim ID Number.

**Summary Table of Fail Codes:**

Fail Codes	Description
URC	Occupant Detection Control Module
URD	Load Cell Sensor Cushion Assembly
YMA	ODS Seat Cushion Frame & Slide Rail Assy
UZH	Electrical Operation
ULI	Right Front Air Bag Sensor
VQC	Vehicle Wire Harness
ULM	Air Bag Control Unit Wire Harness
UYH	Electrical Operation
UQF	P/S Power Seat Frame Assembly
URJ	ODS Seat Wire Harness
URI	Driver Seat Buckle Switch
URF	Passenger Seat Buckle Switch
URE	Airbag On/Off Indicator
URG	Passenger Seat Buckle Indicator Light

**Summary Table of Diagnostic Trouble Codes (DTCs):**

DTC	Description
B1650	Occupant Detection System Malfunction
B1760	Occupant Detection Sensor Mat
B1761	DTC cannot be found
B1771	Buckle Switch
B1795	Occupant Detection Module Internal Circuit

DTCs are manually entered into the claims system.

**State, by model year, the terms of the new vehicle warranty coverage offered by Subaru on the subject 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 Subaru offered for the subject vehicles and state by option and model year, the number of vehicles that are covered under each such extended warranty.**

Response: For all subject and peer vehicles, the standard warranty is 36 month / 36,000 miles. Extended Warranty is available for 60 month / 60,000 miles. On October 3, 2019, Subaru reported a voluntary safety recall, NHTSA Campaign Number 19V701. If requested again, Subaru can provide NHTSA updated information including number of vehicles covered under an extended warranty by option and model year.

- 7. Produce copies of all service, warranty, and other documents that relate to, or may relate to, the alleged defect in the subject and peer vehicles, that Subaru has issued to any dealers, regional or zone offices, field offices, or other entities. This includes, but is not limited to, bulletins, advisories, informational documents, training documents, or other documents or communications to or for Subaru customer service representatives, or consumers. Also include the latest draft copy of any of the above communication that Subaru is planning to issue within the next 120 days.**

Response: On October 3, 2019, Subaru reported a voluntary safety recall, NHTSA Campaign Number 19V701. Per telephone discussion with NHTSA ODI on September 27, 2019, response to Request No. 7 is no longer requested. If requested again, Subaru can produce additional information.

- 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, or the subject bulletins in the subject and peer vehicles that have been conducted, are being conducted, are planned, or are being planned by, or for, Subaru. 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:

a	Action title or identifier;	Subaru PODS-F Warranty
b	The actual or planned start date;	April 9, 2018
c	The actual or expected end date;	August 21, 2019
d	Brief summary of the subject and objective of the action;	<ul style="list-style-type: none"> <li>- Appearance observation</li> <li>- ECU testing</li> <li>- Seat testing</li> <li>- Vehicle testing</li> <li>- Harness routing observation</li> <li>- Connection observation</li> <li>- Vibration testing</li> <li>- Harness crimp check</li> <li>- Connector measurement</li> <li>- Various temperature resistance testing</li> <li>- Difference between heated and non-heated seat</li> <li>- Sensor blade thickness measurement</li> <li>- Fault code summary</li> </ul>
e	Engineering group(s)/supplier(s) responsible for designing and for conducting the action; and	Aptiv (Supplier)
f	A brief summary of the findings and/or conclusions resulting from the action.	Movable connection was observed in certain collected parts as a factor. Additionally, it was observed that the harness tension affects connection movement.

Please see "REQUEST NUMBER NINE DOC.pptx" on the drive accompanying this response letter. The entirety of this document, including any embedded documents, is considered business confidential information.

**9. Describe all modifications or changes made by, or on behalf of, Subaru 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 and 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 Subaru is aware of which may be incorporated into vehicle production within the next 120 days.

Response:

a	The date or approximate date on which the modification or change was incorporated into vehicle production;	w/o seat heater: early-Feb 2015 w/ seat heater: late-Jan 2015
b	A detailed description of the modification or change;	w/o seat heater: Terminal change w/ seat heater: Terminal change, change of direction to assemble terminal, Terminal length change
c	The reason(s) for the modification or change;	To improve supplier's assembly quality and workability
d	The part number(s) (service and engineering) of the original component;	w/o seat heater: 64084SG000 w/ seat heater: 64084SG020
e	The part number(s) (service and engineering) of the modified component;	No part number change
f	Whether the original unmodified component was withdrawn from production and/or sale, and if so, when;	No
g	When the modified component was made available as a service component; and	NR
h	Whether the modified component can be interchanged with earlier production components.	Yes, it is interchangeable.
	Also, provide the above information for any modification or change that Subaru is aware of which may be incorporated into vehicle production within the next 120 days.	No plan for modification or change.

On October 3, 2019, Subaru reported a voluntary safety recall, NHTSA Campaign Number 19V701. Additional information can be found in the Part 573 Defect Information Report.

**10. Produce one of each of the following:**

- a. Exemplar samples of each design version of the subject and peer component; and
- b. Exemplar samples of each of the harness connectors referenced in the diagnostic procedure of the August 22, 2018 revision to the subject bulletin.

Response: Per telephone discussion with NHTSA ODI on September 27, 2019, one (1) exemplar sample and one (1) return part sample of the Right Front Seat Cushion Assembly, including the harness and connectors described in the Part 573 DIR, will be provided to NHTSA ODI. Both samples will be shipped at a later date, once a return part have been received by North American Subaru, Inc.

**11. State the number of each of the following that Subaru has sold that may be used in the subject and peer vehicles by component name, part number (both service and engineering/production), 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; and
- b. Any kits that have been released, or developed, by Subaru for use in service repairs to the subject and peer 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 Subaru 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: On October 3, 2019, Subaru reported a voluntary safety recall, NHTSA Campaign Number 19V701. Per telephone discussion with NHTSA ODI on September 27, 2019, response to Request No. 11 is no longer requested. If requested again, Subaru can produce additional information.

**12. Provide a detailed description of the ODS system in the subject vehicles, including the following information:**

- a. A block functional diagram of the ODS system;
- b. A wiring diagram of the ODS system;
- c. Drawings showing the physical location of ODS system components, the Right Hand rear body harness, and each of the harness connectors referenced in the diagnostic procedure of the August 22, 2018 revision to the subject bulletin (07-108-16R);
- d. Provide a table listing all diagnostic trouble codes (DTCs) associated with the subject component, including but not limited to DTCs B1650, B1760, B1761, B1771 and B1795, with the following information for each DTC: (1) code; (2) name/description; (3) the specific conditions for setting the code; (4) system response; (5) all visual and audible warnings or other information provided to the user when the code is set; and (6) conditions for clearing the code from memory;
- e. Copies of the most updated Failure Mode and Effects Analysis documents for the subject component; and
- f. A detailed description of all use and environmental factors that can affect the performance of the subject component or result in the detection of a system

fault, including all design/manufacturing factors identified by Subaru that may affect the sensitivity of the subject component to such factors.

Response: On October 3, 2019, Subaru reported a voluntary safety recall, NHTSA Campaign Number 19V701. Per telephone discussion with NHTSA ODI on September 27, 2019, response to Request No. 12 is no longer requested. If requested, Subaru can produce additional information.

**13. Provide a spreadsheet summarizing all subject component returned part analyses from subject or peer vehicles conducted by, or for, Subaru, with the following information:**

- a. Vehicle identification number (VIN);
- b. Model year;
- c. repair date;
- d. The repair mileage;
- e. Component part number;
- f. A summary of the customer concern;
- g. The returned part analysis report number;
- h. The returned part analysis report date; and
- i. Subaru's assessment of the cause of the failure.

In addition, provide copies of all reports and photographs related to the return part analyses provided in response to this request.

Response: On October 3, 2019, Subaru reported a voluntary safety recall, NHTSA Campaign Number 19V701. Per telephone discussion with NHTSA ODI on September 27, 2019, response to Request No.13 is no longer requested. If requested again, Subaru can produce additional information.

**14. Provide a description of Subaru's Starlink In-Vehicle Technology and how the technology is used for performing health checks and consumer messaging relative to the subject component, including the following information:**

- a. Describe how Starlink conducts health checks on the subject components, including whether the checks are limited to active fault codes or also include stored codes and fault histories;
- b. Describe when health checks are performed by Starlink, including whether the system is capable of receiving automatic notifications as fault codes are set;
- c. Describe the health check freeze frame data elements related to the subject component that are received by Starlink and how the data are used and stored by Subaru;
- d. Describe the health check results that would prompt a message to the consumer;
- e. Describe the information that is provided to the consumer and how the information differs, or supplements, information available to the operator from in-vehicle displays, warning lamps, and status indicators;
- f. Provide copies of messages that have been sent to consumers regarding the subject component; and
- g. Provide a tabular summary of Starlink health check results for subject and peer vehicles for 2019. Provide the summary in Excel file format, with separate worksheets for each model year equipped with Starlink technology. In each spreadsheet, by calendar month, show the number of vehicles receiving health checks, the number with fault codes

related to the subject component detected (provide counts by fault code) and the number resulting in a message to the consumer.

Response: On October 3, 2019, Subaru reported a voluntary safety recall, NHTSA Campaign Number 19V701. Per telephone discussion with NHTSA ODI on September 27, 2019, response to Request No.14 is no longer requested. If requested again, Subaru can produce additional information.

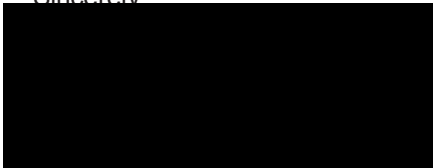
**15. Furnish Subaru's assessment of the alleged defect in the subject vehicle, including:**

- a. The causal or contributory factor(s);
- b. The failure mechanism(s);
- c. The failure mode(s);
- d. The risk to motor vehicle safety that it poses;
- e. What warnings, if any, the operator and the other persons both inside and outside the vehicle would have that the alleged defect was occurring or subject component was malfunctioning; and
- f. The reports included with this inquiry.

Response: On October 3, 2019, Subaru reported a voluntary safety recall, NHTSA Campaign Number 19V701.

If you need any additional information or have any questions, please do not hesitate to contact me at (856) 488-3476.

Sincerely



Nick Aplin  
Manager, Field Safety Group  
Attachments