



July 3, 2021

VIA SECURE LINK PROVIDED BY KEVIN SMITH

Tanya Topka
Chief Vehicle Defect Division A

PE21-010

National Highway Traffic Safety Administration
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

RE: PE21-010, May 7, 2021 Information Request Response

Dear Ms. Topka,

This letter is in response to the Office of Defects Investigation (ODI) of the National Highway Traffic Safety Administration (NHTSA) May 7, 2021 Information Request (IR) regarding Preliminary Evaluation (PE21-010) to investigate allegations of air bag warning light illumination or failure of the air bag to deploy in vehicles equipped with Autoliv Driver Pyro Smart (ADPS) 1.5 air bag inflators.

Preliminary Statement

Autoliv ASP, Inc. (Autoliv) incorporates into this response the May 13, 2021 submission to the NHTSA referred to as the "Meeting Slides," Bates Nos. PE21-010 ALV000001-ALV000030. Detailed responses for the questions below are considered Autoliv Confidential Business Information and as such, should be accorded confidential treatment under this agency's regulations at 49 CFR Part 512 and Exemption 4 of the Freedom of Information Act ("FOIA"), 5 USC §552(b)(4). Therefore, Autoliv is submitting a public copy of this response and its attachments to your attention and the confidential copy of the same, together with a request for confidential treatment and Certificate in Support of Request for Confidentiality, to the Office Of Chief Counsel, attention Mr. Daniel Rabinovitz.

Information Requests

1. Identify all automobile manufacturing companies (OEM) to whom Autoliv provided air bag modules that included in the assembly the subject component. Separately, for each OEM (i.e. customer), provide the following additional information in tabular form:

- a. Customer name (i.e. General Motors);
- b. Customer contact information including the name(s) and title(s) of person(s) familiar with the subject components, address, phone number(s), email address(es) and other pertinent information;
- c. Customer part number;
- d. Autoliv part number;
- e. Autoliv manufacturing location (including assembly line if pertinent);
- f. Address the parts were shipped to;
- g. Any information Autoliv possesses regarding the final stage user/OEM of the part number;
- h. Any information Autoliv possesses regarding the market (US or foreign) the part was intended for; and
- i. Total number of parts provided (for the manufacturing location in item e) by year of manufacture.

RESPONSE: The information provided is based on modules shipped from Autoliv Ogden Utah and Queretaro Mexico facilities with the subject component between the years 2012 – 2021. Autoliv does not have sufficient information to provide a response to Questions 1.g or 1.h. See responsive information in the "Q1 PE21-010 CONF AUTOLIV" subfolder in "PE21-010 CONF AUTOLIV." Public copies of the same to be provided [see PE21-010 NONCONF AUTOLIV file submission.]

Information Source: Information was gathered and prepared by the Legal Department after consultation with Autoliv Operations and Quality functions

Last Date Gathered: 2021 June 11

2. Describe in detail all quality control or assurance policies, processes, procedures and other governing provisions that are currently in use at Autoliv for components purchased from suppliers that are used to assemble the subject components Autoliv produces. The response should include, but not be limited to, any policies, processes, procedures that address the issue of rust on the components.

RESPONSE: Autoliv quality control requirements are set forth in various Autoliv Standards (AS documents). Autoliv Standards are shared with suppliers via the Autoliv Supplier Manual (ASM) which is a web-based portal. External suppliers acknowledge their awareness and acceptance of the Autoliv Standards via written confirmation that is part of supplier on-boarding process and during regular review and audit procedures. See responsive information in the "Q2 PE21-010 CONF AUTOLIV" subfolder in "PE21-010 CONF AUTOLIV." Public copies of the same to be provided [see PE21-010 NONCONF AUTOLIV file submission.]

Information Source: Information was gathered and prepared by the Legal Department after consultation with Autoliv Operations, Quality and Engineering functions

Last Date Gathered: 2021 June 30

3. Describe in detail all quality control or assurance policies, processes, procedures and other governing provisions that are currently in use at Autoliv for end product air bag inflators and air bag modules. The response should include, but not be limited to, any policies, processes, procedures that address the issue of rust on the subject component.

RESPONSE: Autoliv quality control requirements are set forth in various Autoliv Standards (AS documents). See responsive information in the "Q3 PE21-010 CONF AUTOLIV" subfolder in "PE21-010 CONF AUTOLIV." Public copies of the same to be provided [see PE21-010 NONCONF AUTOLIV file submission.]

Information Source: Information was gathered and prepared by the Legal Department after consultation with Autoliv Operations, Quality and Engineering functions

Last Date Gathered: 2021 June 30

4. Describe in detail the quality control (quality monitoring) processes Autoliv utilizes to ensure the subject components and air bag modules produced meet all internal (Autoliv imposed), external (customer or other imposed) and regulatory quality and safety requirements. The response should include, but not be limited to, any processes, that address the issue of rust on the subject component.

RESPONSE: The quality control processes for the subject component and air bag module production is in the "Q4 PE21-010 CONF AUTOLIV" subfolder in "PE21-010 CONF AUTOLIV." Public copies of the same to be provided [see PE21-010 NONCONF AUTOLIV file submission.]

Information Source: Information was gathered and prepared by the Legal Department after consultation with Autoliv Operations, Quality and Engineering functions

Last Date Gathered: 2021 June 30

5. Describe in detail the manufacturing processes Autoliv utilizes to manufacture the subject component including a description of the operations performed at each manufacturing station. Provide an illustration of the overall layout of the assembly line depicting each station. Describe or otherwise provide detailed information for any processes or specialized equipment Autoliv utilizes to prevent the alleged defect from occurring in the subject components.

RESPONSE: The manufacturing process overview information can be found in the Meeting Slides (see PE21-010 ALV000015 - 21-010 ALV000019). Additional information regarding the subject component manufacturing process is found in the "Q5 PE21-010 CONF AUTOLIV" subfolder in "PE21-010 CONF AUTOLIV." Public copies of the same to be provided [see PE21-010 NONCONF AUTOLIV file submission.]

Information Source: Information was gathered and prepared by the Legal Department after consultation with Autoliv Operations, Quality and Engineering functions

Last Date Gathered: 2021 June 30

6. For the subject component describe in detail the individual components that comprise the subject component. For each component used in the assembly of the subject component provide, in tabular form:

- a. Component name;
- b. Component specifications;
- c. Method(s) of transportation to deliver component to Autoliv assembly facility;
- d. Supplier name; and
- e. Supplier contact information including the name(s) and title(s) of a person(s) familiar with the subject components, address, phone number(s), email address(es) and any other pertinent information Third-party arbitration proceedings where Autoliv is or was a party to the arbitration; and

RESPONSE: The information requested in response to Question 6¹ is based on Autoliv part that is representative of the subject components identified in response to Question 1. Additional information regarding the transportation process can be found in the Meeting Slides (see PE21-010 ALV000015 - 21-010 ALV000019). Additional information regarding the individual components of the subject component is found in the "Q6 PE21-010 CONF AUTOLIV" subfolder in "PE21-010 CONF AUTOLIV." Public copies of the same to be provided [see PE21-010 NONCONF AUTOLIV file submission.]

Information Source: Information was gathered and prepared by the Legal Department after consultation with Autoliv Operations, Quality and Engineering functions

Last Date Gathered: 2021 June 30

7. Describe in detail the storage procedure for components used in the assembly of the subject component, the subject component and the air bag module the subject component is used in. Include the following information in the description:

- a. Component;
- b. Containers used for storage;
- c. Storage environment (i.e. climate controlled)
- d. Typical length of time in storage;
- e. Any changes to storage to accommodate COVID restrictions; and
- f. Any other pertinent information.

Provide this information in tabular form.

RESPONSE: See the Meeting Slides (see PE21-010 ALV000015 - 21-010 ALV000019) previously provided. See also information provided in response to Question 6. Additional information regarding the individual components of the subject component is found in the "Q6 PE21-010 CONF AUTOLIV" and "Q7 PE21-010 CONF AUTOLIV" subfolders in "PE21-010 CONF AUTOLIV." Public copies of the same to be provided [see PE21-010 NONCONF AUTOLIV file submission.]

Information Source: Information was gathered and prepared by the Legal Department after consultation with Autoliv Operations, Quality and Engineering functions

Last Date Gathered: 2021 June 30

¹ Autoliv has responded to Question 6 ignoring the following portion of the question presumably included in error: "Third-party arbitration proceedings where Autoliv is or was a party to the arbitration; and."

8. Describe in detail the method of transportation for the subject component and the air bag module the subject component is used in. Include the following information in the description:

- a. Component;
- b. Containers used for transportation;
- c. Transportation method;
- d. Typical length of time in transport;
- e. Any changes to transport to accommodate COVID restrictions; and
- f. Any other pertinent information.

Provide this information in tabular form.

RESPONSE: See the Meeting Slides (see PE21-010 ALV000015 - PE21-010 ALV000019) previously provided. See also information provided in response to Questions 6 and 7. Additional information regarding the individual components of the subject component is found in the "Q6 PE21-010 CONF AUTOLIV," "Q7 PE21-010 CONF AUTOLIV" and "Q8 PE21-010 CONF AUTOLIV" subfolders in "PE21-010 CONF AUTOLIV." Public copies of the same to be provided [see PE21-010 NONCONF AUTOLIV file submission.]

Information Source: Information was gathered and prepared by the Legal Department after consultation with Autoliv Operations and Quality functions

Last Date Gathered: 2021 June 30

9. Describe in detail the testing process and tests used for Production Validation and Design Validation used by Autoliv for both the subject component and air bag modules.

RESPONSE: See the Meeting Slides (see PE21-010 ALV000027) previously provided. Additional information is found in the "Q9 PE21-010 CONF AUTOLIV" subfolder in "PE21-010 CONF AUTOLIV." Public copies of the same to be provided [see PE21-010 NONCONF AUTOLIV file submission.]

Information Source: Information was gathered and prepared by the Legal Department after consultation with Autoliv Operations, Quality and Engineering functions

Last Date Gathered: 2021 June 30

10. 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 component that have been conducted, are being conducted, are planned, or are being planned by, or for, Autoliv. 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: Information in response to Question 10 is found in the "Q10 PE21-010 CONF AUTOLIV" subfolder in "PE21-010 CONF AUTOLIV." Public copies of the same to be provided [see PE21-010 NONCONF AUTOLIV file submission.]

Information Source: Information was gathered and prepared by the Legal Department after consultation with

Autoliv Operations, Quality, Business Unit and Engineering functions

Last Date Gathered: 2021 June 30

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

RESPONSE: Autoliv has not made any modifications or changes that relate to or may relate to the alleged defect in the subject vehicle, therefore Autoliv has no information in response to Question 11.

Information Source: Information was gathered and prepared by the Legal Department after consultation with Autoliv Operations, Quality and Engineering functions

Last Date Gathered: 2021 June 30

12. List all OEMs that have reported to Autoliv any issues with rust on the subject component since February 2020. For each such allegation, furnish:

- a. OEM;
- b. Date of allegation;
- c. Autoliv part number;
- d. Platform / model / model year of vehicle component installed in; and
- e. Autoliv's assessment of the cause and effect

RESPONSE: There have been no such reports, therefore Autoliv has no information in response to Question 12.

Information Source: Information was gathered and prepared by the Legal Department after consultation with Autoliv Operations, Quality and Engineering functions

Last Date Gathered: 2021 June 30

13. List all the instances Autoliv is aware of that allege rust on the subject component since December 2019.

- a. Reporting entity
- b. Date of allegation;
- c. Autoliv part number
- d. Platform / model / model year of vehicle component installed in; and
- e. Autoliv's assessment of the cause and effect

RESPONSE: There have been no such reports, therefore Autoliv has no information in response to Question 13.

Information Source: Information was gathered and prepared by the Legal Department after consultation with Autoliv Operations, Quality and Engineering functions

Last Date Gathered: 2021 June 30

14. Furnish Autoliv's assessment of the alleged defect in the subject component, 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; and
- 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.

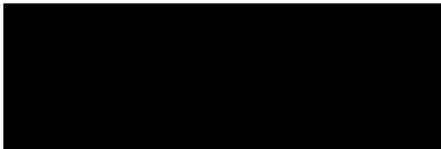
RESPONSE: Autoliv does not believe there is any defect in the subject component or parts supplied by Autoliv. Autoliv is not aware of any evidence to support the theory that rust on the inflator is a factor or a contributing factor to air bag warning light illumination or failure of the air bag to deploy. Information in response to Question 14 is found in the "Q14 PE21-010 CONF AUTOLIV" subfolder in "PE21-010 CONF AUTOLIV." Public copies of the same to be provided [see PE21-010 NONCONF AUTOLIV file submission.]

Information Source: Information was gathered and prepared by the Legal Department after consultation with Autoliv Operations, Quality and Engineering functions

Last Date Gathered: 2021 June 30

Autoliv's responses are based on information available for Autoliv North American locations where information and documents determined to be responsive to NHTSA request would ordinarily be found. The scope of the search did not include, nor could it reasonably include, "all of its divisions, subsidiaries (whether or not incorporated) and affiliated enterprises and all of their headquarters, regional, zone and other offices and their employees, and all agents, contractors, consultants, attorneys and law firms and other persons engaged directly or indirectly (e.g., employee of a consultant) by or under the control of Autoliv (including all business units and persons previously referred to), who are or, in or after April 26, 2011, were involved in any way with any of the following related to the alleged defect in the subject vehicles."

Autoliv is continuing its investigation and will provide supplemental information if and when such information becomes available. Please contact me if you require further information regarding the information provided or scope.



Maryann Pierce Perttunen
Vice President Legal