

**UNITED STATES DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION**
Office of the Chief Counsel (NCC-100)
1200 New Jersey Avenue, SE
Washington, DC 20590

In re:)
EA16-003)
Air Bag Inflator Rupture)
)
)
)

**ARC AUTOMOTIVE, INC.'S
WRITTEN RESPONSE TO MAY 31, 2023 SPECIAL ORDER**

PRELIMINARY STATEMENT

On May 31, 2023, the Chief Counsel of the National Highway Traffic Safety Administration (NHTSA or Agency) issued a Special Order directed to ARC Automotive, Inc. (ARC) as part of the Agency's continuing investigation related to inflator ruptures (EA 16-003).

On July 13, 2015, NHTSA opened a preliminary evaluation (PE 15-027) related to ARC's compact, driver-side air bag inflator (CADH) based on two reports of ruptures in the field. On August 4, 2016, the Agency upgraded the investigation to an engineering analysis, following a reported rupture in Canada of a CADH inflator. During the course of NHTSA's engineering analysis, the Agency has expanded its investigation beyond CADH inflators. The Agency has issued two Standing General Orders (SGO 2016-01 and SGO 2017-01) seeking information concerning inflator ruptures during internal or customer quality testing. Additionally, the Agency has issued five information requests to ARC (as well as multiple information requests to Tier 1 suppliers of air bag modules and vehicle manufacturers) and two other special orders. In addition to these formal requests for information, ARC has participated in multiple meetings and briefings

with NHTSA, ARC's Tier 1 customers, and vehicle manufacturers to discuss reported field issues, root cause analyses, tests of parts collected from the field, and the activities of a joint task force (which included NHTSA).

With respect to field ruptures, NHTSA issued standing general orders that require vehicle manufacturers, airbag module suppliers, and inflator suppliers to report to the Agency, on an ongoing basis, alleged field incidents that may involve an inflator rupture. In this regard, Standing General Order 2015-02A (SGO 2015-02A) requires ARC to submit to NHTSA reports regarding alleged incidents that may involve ARC inflators. On February 17, 2019, following a recall of an inflator lot that had included an inflator involved in an alleged field rupture in Pennsylvania (Recall No. 19V019), NHTSA held a meeting at its headquarters in Washington, DC, where NHTSA agreed that a recall of inflators from the same lot as an inflator that ruptured in the field was an appropriate response. Following this incident, vehicle manufacturers that received reports of alleged failures likewise recalled the corresponding inflator lots after the vehicle manufacturers had an opportunity to inspect the vehicles involved in a rupture incident.

On March 28, 2023, ARC received notice of an alleged inflator rupture in Michigan. On April 25, 2023, ARC and NHTSA attended a visual inspection and confirmed that ARC manufactured the inflator at issue. That same day, NHTSA notified ARC that the Agency had scheduled a Multidisciplinary Review Panel for the following day in which NHTSA's Office of Defects Investigation (ODI) would recommend that the Agency issue a recall request letter (RRL) to ARC covering the entire population of driver and passenger toroidal inflators from start of production (SOP) through January 2018. The Agency's position represented an extraordinary and surprising departure from its prior acceptance of lot-specific recalls to address these rare field events. Indeed, the RRL was the first time during the eight-year history of this investigation that

the Agency requested that such a broad recall be conducted. No Agency representative had previously even suggested to ARC (or, ARC believes, to any other manufacturer involved in the investigation) that the entire population should be subject to recall.

Despite the collaborative and cooperative nature of this investigation, NHTSA declined to meet with ARC to discuss the basis of the Agency's tentative conclusion or to seek ARC's views on the matter before ODI recommended the issuance of a recall request letter. On April 26, 2023, the Multidisciplinary Review Panel concurred with ODI's recommendation, and on April 27, 2023, NHTSA issued a recall request letter to ARC. ARC responded to the RRL on May 11, 2023.

In furtherance of its investigation, NHTSA issued its May 31, 2023 Special Order. The Special Order contains 11 separate requests, some of which require searches through large volumes of documents and multiple data systems across a number of ARC's departments. Given the short (14-day) period of time provided to respond to the Special Order, ARC has directed inquiries in good faith in a manner that is reasonably calculated to assure that answers and the production of documents are complete and correct (subject to ARC's comments below). In conducting these inquiries, ARC directed personnel in relevant divisions to search for potentially responsive materials. The scope of ARC's search for responsive materials focused on personnel and data systems where potentially responsive information was most likely to be found and to which ARC would ordinarily refer.

COMMENTS REGARDING DEFINITIONS AND INSTRUCTIONS

ARC maintains the following understanding of NHTSA's May 31, 2023 Special Order definitions and instructions:

1. ARC notes the definition of "ARC" set forth in Definition No. 1 is unduly burdensome to the extent it encompasses "all of [ARC's] past and present officers and employees,

and representatives . . . whether assigned to its/their principal offices or any of its/their field or other locations . . .” ARC has undertaken reasonable and diligent steps to investigate the topics of these requests, focusing on personnel and data systems where potentially responsive information was most likely to be found and to which ARC would ordinarily refer. In responding to this request, ARC has not contacted *former* officers and employees.

2. ARC notes that in accordance with Instruction No. 6, NHTSA intends to make narrative responses public. Therefore, those portions of ARC’s response that constitute “trade secrets and commercial or financial information obtained from a person [that is] privileged or confidential” for which ARC seeks confidential treatment in accordance with 49 C.F.R. Part 512 are contained in separate exhibits.

3. ARC notes Instruction No. 13 appears to seek to create an ongoing and indefinite duty to amend or supplement responses if ARC obtains or becomes aware of “any new, additional, or differing responsive information or documents.” The phrase “new, additional, or differing” is vague and ambiguous, and it does not provide meaningful notice as to what type of information or documents rise to the level of requiring supplementation. Read literally, this Instruction creates a perpetual, open-ended request to update data, some of which could periodically change. Accordingly, ARC interprets this instruction to require amendment consistent with the requirements of Fed. R. Civ. P. 26€. Further, to the extent that NHTSA later requests additional data or information with specificity, ARC will respond accordingly, as it has throughout the course of NHTSA’s investigation.

RESPONSES TO REQUESTS

Responses to the Agency’s requests are set forth below. As requested, after each numeric designation, ARC has set forth verbatim the request for information, followed by our response.

Unless otherwise stated, ARC has undertaken to provide responsive information dated up to and including June 14, 2023.

1. *State whether ARC contends that air bag inflators are expected to occasionally experience a field rupture. If yes, state the frequency of field ruptures ARC considers to be expected and explain how ARC arrived at this frequency.*

Response: ARC interprets the term “air bag inflators” (as used in this Request No. 1) as referring to air bag inflators designed or manufactured *by any entity* for use in motor vehicles. However, ARC does not have a basis to assess expectations with respect to air bag inflators that ARC does not manufacture, the likelihood of non-ARC inflators to rupture in the field, or the potential frequency of non-ARC inflators to rupture.

With respect to ARC’s inflators specifically, ARC designs its inflators, manufacturing processes, and quality controls to operate within the manufacturing and performance parameters specified by its customers. Vehicle and equipment manufacturers seek to minimize the risk of failure due to flaws in design, construction (including occasional human error on the production line) or inspection processes, including flaws that could result in the rupture of an airbag inflator. ARC did not design and manufacture its inflators with an expectation that some would occasionally experience a field rupture. ARC recognizes, however, that even with appropriate industry standards (see Advanced Product Quality Process (APQP) discussion in ARC’s response to Request No. 2) and efforts by manufacturers to minimize the risks of failures, the manufacturing processes may not completely eliminate the risk of occasional or isolated failures. In this regard, the Safety Act does not require vehicles and equipment to *never* experience a failure in the field. Rather, the Safety Act seeks to protect the public against *unreasonable* risks. *See* 49 U.S.C. § 30102(a)(3), (a)(9); *see also United States v. Gen. Motors Corp.*, 561 F.2d 923, 929 (D.C. Cir. 1977) (Leventhal, J., dissenting in part) (emphasis added), *cert. denied*, 434 U.S. 1033 (1978).¹

2. *Did ARC notify any of its customers that its inflators are expected to occasionally experience field ruptures? If yes, identify each customer that received such a notification and*

¹ As Judge Leventhal aptly stated, “Out of any manufacturing process, some products are bound to be ‘lemons.’ These failures may be due to flaws in the design, construction (including occasional human error on the production line) or inspection process. When the defects are occasional or isolated, the risk associated with them is part of the ordinary danger of operating an automobile . . .” 561 F.2d at 929.

describe the timing, contents, and other circumstances of the notification. If no, explain why no such notification was made.

Response: ARC did not design and manufacture its inflators with an expectation that some would occasionally experience field ruptures and, therefore, ARC did not issue any notification to customers of such expectation, apart from the information provided to customers throughout the APQP (discussed below). During the eight-year investigation, ARC's customers, the vehicle manufacturers, and NHTSA have been informed that there have been unexplained field ruptures, and, as the case law recognizes and all manufacturers are aware, the risk of manufacturing anomalies cannot be completely ruled out in any mass production process.

Regarding when and how in the design and manufacturing process customers would receive information regarding risks of failure and the types of information provided to customers, ARC, its Tier 1 customers, and the vehicle manufacturers participate in an APQP for design and production validation that includes a Design Failure Mode and Effects Analysis (DFMEA) and evaluation. The specifications and quality requirements that ARC must meet are defined by its Tier 1 supplier customers and the vehicle manufacturers (through the Tier 1 suppliers). The DFMEA evaluates, at the design level, potential failure modes (such as over pressurization) and possible effects (such as ruptures). The design and production validation process also includes a Process Failure Mode and Effects Analysis (PFMEA), which evaluates each process step. The DFMEA and PFMEA identify the Risk Priority Number (RPN). The RPN assesses the severity, occurrence, and detection of design and process failures. The RPN calculation is defined by standard industry parameters and is calculated by ARC using these parameters. To minimize the potential for manufacturing errors that could lead to failure and other risks identified in the RPN, ARC creates a Control Plan, which is shared with each of its Tier 1 supplier customers as part of the Inflator Production Part Approval Process (PPAP) for each new inflator model.

Before approving parts for production, the Tier 1 suppliers and vehicle manufacturers may review or audit the DFMEA and PFMEA evaluations and analyses, the justifications of the RPN values ARC assigned for each part, and the Control Plans to determine an acceptable RPN for each individual part the Tier 1 suppliers and vehicle manufacturers consider for purchase. Based on this information, each customer determines whether the RPN meets its requirements for production parts. The Tier 1 suppliers' and vehicle manufacturers' option to review these documents, evaluations, and justifications are not limited to the PPAP review; Tier 1 suppliers and vehicle manufacturers may further audit this information after the start of production.

The PPAP process is an industry standard approval process that, among other things, includes a standardized process for identifying, evaluating, and mitigating potential risks in mass-manufacturing vehicle components. For ARC's inflators, the DFMEA, PFMEA, RPN, and Control Plan outlined potential risks of failures, including a rupture. ARC views this analysis as identifying potential risks of failures, but it does not quantify the probability of field failures.

ARC provided the Control Plan for individual parts to the customers identified in the file "CONF BUS INFO – Response to Req. No. 2, Customer List." This confidential file has been submitted to NHTSA in a request for confidential treatment in accordance with 49 C.F.R. Part 512.

With respect to ruptures that occur during ARC quality and similar testing, ARC's practice is to notify the Tier 1 supplier of a rupture. Likewise, if a rupture occurs during the Tier 1 supplier's testing, the supplier notifies ARC of such a rupture. ARC and the Tier 1 supplier then work together to analyze the potential root cause(s) of the rupture and, if determined necessary through this collaborative process, take corrective action(s). For field ruptures, ARC works with the relevant Tier 1 customer and vehicle manufacturer to evaluate the potential root cause(s) of the incident. ARC's investigation includes standard methodologies for determining the root cause(s) of a failure, such as the Eight Disciplines Methodology (8D) and similar engineering methods. ARC shares its root cause analyses, which provide additional information for Tier 1 suppliers and vehicle manufacturers to evaluate the potential risks of future failures, to the involved Tier 1 suppliers and vehicle manufacturers.

3. *In developing ARC's inflator design and manufacturing process for the subject inflators, state the frequency of field ruptures of the subject inflators ARC anticipated occurring as "random 'one-off' anomalies." Explain how ARC arrived at this frequency.*

Response: In designing and manufacturing the subject inflators, ARC did not calculate or estimate a frequency of field ruptures that ARC anticipated could occur due to "random 'one-off' anomalies." As described in detail in above, ARC utilizes the industry standard APQP. That process utilizes DFMEA and PFMEA analyses and evaluations to identify potential failures by identifying RPNs. ARC's inflator design and manufacturing process includes the development of a Control Plan and solutions for minimizing RPNs identified during the APQP and the DFMEA and PFMEA analyses and evaluations.

In accordance with the industry standard, the component design, manufacturing control, and processes cannot be developed in anticipation of "random, one-off" manufacturing anomalies that were not (and have not) been identified during the development process.

4. *State the frequency of field ruptures of the subject inflators ARC believes would evidence something more than "random 'one-off' manufacturing anomalies." Explain how ARC arrived at this frequency.*

Response: ARC takes any field rupture of an inflator seriously and has dedicated significant resources investigating these incidents with NHTSA, as well as with its Tier 1 and vehicle manufacturer customers. This request asks ARC to speculate regarding potential future events without all of the information that would be necessary to conduct a proper evaluation.

As NHTSA has acknowledged, under the Safety Act, determining the number of failures that indicates a potential field issue across a population would require "a fact-specific inquiry that

includes considerations such as: the failure rate of the component in question; the failure rates of comparable components; the importance of the component to the safe operation of the vehicle; and the severity of harm to the vehicle and/or occupant caused by the failure.” *NHTSA Enforcement Guidance Bulletin 2016-02: Safety-Related Defects and Automated Safety Technologies*, 81 Fed. Reg. 65705, 65708 (Sep. 23, 2016) (internal citations omitted) (citing *United States v. Gen. Motors Corp.*, 518 F.2d 420, 427 (D.C. Cir. 1975) (“*Wheels*”). Thus, in order to answer NHTSA’s hypothetical question, ARC would need the following additional information: the production date(s) or lot(s) of the inflators involved, the number of deployments during a specified/relevant time period, the total population of parts, the specific manufacturing plant(s) and line(s) where the parts were produced, potential root cause(s) (including whether there are common root causes among the failures), as well as a variety of other information that may be relevant to determining whether an issue is systemic or isolated (e.g., manufacturing data for the production period, the manufacturing personnel on the respective manufacturing line, the subcomponents and raw materials, the design of the air bag module in which the inflator was installed, integration of the inflator to a module and vehicle, and the vehicle make and model).

5. *State ARC’s best estimate of the number of additional field ruptures of the subject inflators it believes will occur and provide an explanation of the methodology for that estimate. If ARC contends that no additional field ruptures of the subject inflators will occur, describe the basis for that contention.*

Response: ARC understands this request as seeking an estimate of additional field ruptures for both CADH and PH7 inflators produced from the start of production through implementation of ARC’s automated borescope check. ARC does not currently have complete data from which to derive an evidence-based estimate of the number of additional field ruptures, if any, that may occur.

ARC uses reliability calculations to demonstrate its confidence that inflators will deploy without a failure. The reliability analysis is an attribute test-type assessment that assumes a binomial distribution of the results: pass (no rupture) or fail (rupture).

As ARC explained in its February response to NHTSA’s December 13, 2022 Information Request (IR) related to CADH deployment data, to fully assess the reliability of its inflators, the following inputs would be necessary to calculate the respective reliability for the CADH and PH7 inflators:

Total # of Ruptures & Total # of Deployments

For the Total Number of Ruptures, the inputs are as follows:

$$\begin{aligned}
& \textit{Total \# of Ruptures} \\
& = \textit{\# of Deployment Ruptures at ARC} \\
& + \textit{\# of Deployment Ruptures at Tier 1} \\
& + \textit{\# of Deployment Ruptures at OEM} \\
& + \textit{\# of Deployment Ruptures in the Field}
\end{aligned}$$

For the Total Number of Deployments, the inputs are as follows:

$$\begin{aligned}
& \textit{Total \# of Deployments} \\
& = \textit{\# of Deployments at ARC} \\
& + \textit{\# of Deployments at Tier 1} \\
& + \textit{\# of Deployments at OEM} \\
& + \textit{\# of Deployments in the Field}
\end{aligned}$$

With these inputs, ARC could calculate the reliability of the inflators as follows:

$$\begin{aligned}
& \textit{Reliability} \\
& = f(\textit{Total \# of Failures, Total \# of Deployments}) \textit{ at} \\
& \quad \textit{selected Confidence Level}
\end{aligned}$$

A confidence and reliability calculation does not, by itself, forecast future failures; it is a tool for objectively understanding the currently available information. The reliability percentage provides an estimated probability that an inflator will successfully deploy. The confidence interval can be used to estimate the likely range of these probabilities.

As noted, ARC does not currently have a full set of the data inputs necessary to make the reliability calculation. NHTSA requested *a portion* of this information from the vehicle manufacturers and Tier 1 suppliers in two sets of information requests.² ARC requested that the Agency share the data with these inputs. However, NHTSA has declined to share any of the information due to confidentiality restrictions and, as far as ARC is aware, NHTSA has not requested permission from the respective manufacturers to share this information with ARC at this time. Some of the Tier 1 suppliers and vehicle manufacturers have shared with ARC the deployment information they submitted to NHTSA. The information ARC has received at this time does not include deployment information for the full production period covered by NHTSA's RRL (i.e., start of production through January 2018). ARC's response to Request No. 6 details the information that would be necessary for ARC to make a reasonable estimate of the total number of field deployments.

Because ARC does not have the data needed to calculate reliability and confidence percentages, it cannot provide a reasonable estimate of the number of additional field ruptures, if any, that may occur.

² These information requests, issued to Tier 1 suppliers and vehicle manufacturers, requested estimates of deployment data covering internal testing as well as the vehicle manufacturer's estimates of field deployments. The information requests requested Tier 1 suppliers and vehicle manufacturers provide a range of potential deployments using high and low estimates.

6. *Provide ARC's best estimate of the number of field deployments of the subject inflators that have occurred in the United States.*

Response: ARC interprets this request as seeking an estimate of field deployments for both CADH and PH7 inflators produced from the start of production through implementation of ARC's automated borescope check.

To derive a proper estimate of U.S. field deployments, ARC would need (at a minimum) field deployment data from each vehicle manufacturer for the entire production range of inflators manufactured prior to ARC implementing the borescope (approximately 2001 - 2018). This data originates from the vehicle manufacturers; as a Tier 2 supplier, ARC does not have access to the complete data set. As discussed in ARC's response to Request No. 5, NHTSA requested *a portion* of the relevant information (*i.e.*, 2010 - 2018) from the vehicle manufacturers in information requests issued to these manufacturers in December 2022. Our understanding is that the Agency requested this information to allow the Agency and the manufacturers to conduct a risk analysis and to identify potential risk subpopulations for a possible field recovery effort. It appears that the Agency has abandoned this objective, evidence-based approach, as it issued its RRL without proceeding with this activity and its RRL was completely silent regarding the number of field deployments and failure rates based thereon.

In response to information requests NHTSA issued to vehicle manufacturers in December 2022, ARC understands the Agency received estimates of field deployments in the U.S. from those manufacturers in or around February 2023. ARC requested that Agency staff provide this data (which could be anonymized) to ARC so that an appropriate evaluation could be performed, but the Agency declined this request due to confidentiality restrictions.³ As a consequence, ARC has been forced to request this data from each of the manufacturers.

As of the date of this response, ARC has received data from six vehicle manufacturers, which included separate estimates for driver-side inflators (CADH) and for passenger-side inflators (PH7). ARC has not been able to determine whether the various subpopulations covered by the manufacturers' responses (none of which cover the pre-2010 time period) are representative of the full production period at issue (2000 – January 2018).

Using the information that ARC has received from vehicle manufacturers to date, ARC aggregated the estimates from the respective vehicle manufacturers and calculated field deployment totals for CADH inflators and PH7 inflators as follows, with a range from low to high:⁴

- 185,424 and 200,038 field deployments of CADH inflators in the U.S. for the subpopulation
- 6,822 and 85,609 field deployments of PH7 inflators in the U.S. for the subpopulation

³ ARC renews its request that NHTSA share this data.

⁴ The vehicle manufacturers provided their methodology for determining the field deployments in responses to NHTSA's information requests. ARC understands that the methodologies and data used to determine the estimates are not necessarily the same for each vehicle manufacturer.

These totals represent a subset of the total number of field deployments for the full production range. Because the vehicle manufacturers use different methodologies for estimating field deployments, ARC cannot use this data to reasonably estimate the total number of field deployments.

7. *Provide a detailed narrative describing ARC's implementation of the borescope into ARC's manufacturing process. This narrative should include, but is not limited to, describing (1) the borescope's criteria for acceptance/rejection of a subject inflator and why ARC decided to use those criteria, (2) ARC's desired outcome of the implementation, and (3) ARC's assessment of the actual outcome of the implementation.*

Response: As explained in ARC's response to the RRL:

In May 2017, at ODI's request, a group of vehicle manufacturers, Tier 1 suppliers, a third-party friction welding consultant, ARC, and NHTSA formed the Collaboration Team (also referred to as the ARC Joint Task Force) to investigate ruptures that occurred during certain quality tests of *passenger-side* inflators as early as January 2017. The Collaboration Team, led by a Tier 1 supplier, included several Tier 1 suppliers and vehicle manufacturers, as well as NHTSA and Transport Canada, to investigate the root cause of LAT [(lot acceptance test)] failures that resulted in over pressurization.

All members of the Collaboration Team, including NHTSA, had access to the confidential design and investigation information reviewed and the analyses generated by this team. The Collaboration Team evaluated a possible root cause of the LAT failures: abnormal weld flash that, if loose and of a sufficient size during deployment, could potentially block the exit orifice of the inflator and result in a rupture. Under the direction of the Collaboration Team, ARC designed experiments that attempted to manufacture inflators that would form abnormal weld flash and result in a rupture. These experiments were unable to replicate the issue.

Although the possible root cause could not be replicated, the Collaboration Team recommended that ARC implement corrective actions in the form of changes to the weld schedules of the existing Inertia Friction Welding (IFW) friction welders and the implementation of an automated borescope inspection system for PH7 inflators. All members of the Collaboration Team, including NHTSA, agreed with the corrective actions.

In August 2017, ARC began implementing the borescope check on lines manufacturing PH7 inflators. Although CADH inflators were outside the scope of the Collaboration Team's evaluation, ARC agreed to implement an automated borescope inspection on all lines manufacturing toroidal inflators, including lines manufacturing CADH inflators.

The borescope process uses a camera system that visually inspects the orifice of the pressure vessel that measures criteria used to reject parts due to a risk of a blockage. The system counts the number of pixels in an inspection zone near the exit orifice of the inflator and rejects inflators that have a reading greater than threshold set value. The threshold set value is significantly lower than the value which might create a blockage. The system also rejects parts where it cannot find or match the position of the center support, cannot confirm the part is properly positioned for the inspection, or cannot verify the proper number of vents on the center support. These criteria are intended to confirm that the exit orifice is not obstructed or blocked with material that could potentially result in a rupture and that the center support has the proper number of vents. ARC is providing additional information in the file “CONF BUS INFO – Response to Req. No. 7, BoreScope Narrative Supplement.” This confidential file has been submitted to NHTSA in a request for confidential treatment in accordance with 49 C.F.R. Part 512.

As discussed above, ARC has implemented this automated borescope inspection process for all lines manufacturing toroidal inflators. ARC is not aware of any field or LAT ruptures that may have involved a blockage of the exit orifice since implementing this inspection.

8. *Beginning in 2000 and for each year after, including the current year (2023), list the number of subject inflators rejected due to weld flash.*

Response: NHTSA’s request does not explain who or what is rejecting subject inflators “due to weld flash.”⁵ Because Request Nos. 7 and 9 request information related to ARC’s automated borescope inspection system, ARC interprets the phrase “rejected due to weld flash” as seeking annual totals of production inflators that the automated borescope inspection determined were outside the parameters of the inspection criteria described in Response to Request No. 7.⁶ As explained in its response to Request No. 7, the parameters of the borescope inspection use conservative criteria for estimating the placement and attributes of weld flash in the inflator’s center support near the exit orifice.

As the Agency is aware, ARC completed implementation of the borescope check across all manufacturing lines for the subject inflators in 2018. In its December 13, 2022 information request directed to ARC, NHTSA requested “rejection/acceptance” totals by the borescope inspection for each customer by month and year, along with detailed information about the inflators. NHTSA’s request defined the “Production Time Frame of Interest” for this data as January 1, 2018 through

⁵ Request No. 8 includes a footnote after the phrase “weld flash” that appears to cite page 10 of ARC’s Response to the RRL. Page 10 of ARC’s Response to NHTSA’s RRL does not include a reference to weld flash. Page 10 contains a discussion of the statutory and regulatory requirements for reporting safety-related defects and conducting recalls and does not include any discussion of the subject inflators, weld flash, or rejecting inflators.

⁶ Note, however, that ARC’s quality controls also include additional checks and processes that could potentially be related to weld flash, including a flash-dam pin inserted into the inflator’s center support to ensure that the flash was formed normally and outside of the orifice; and regular part inspections that include cross-sectioning a production inflator and inspection of the welds (which could include inspecting the weld flash). Parts could be removed based upon these inspections, but it may not be clear whether this was due to weld flash.

the date of the request. On February 28, 2023, ARC submitted responsive data to NHTSA through December 31, 2022.⁷

Because ARC began implementing the borescope check in August 2017, it does not have rejection totals for years prior to 2016. The attached file lists the calendar year and separately provides the total, cumulative number of CADH and PH7 inflators that did not meet the pixel count criteria and were therefore rejected by the borescope inspection, worldwide, from August 2017 through May 31, 2023.

ARC is providing rejection data in the file “CONF BUS INFO – Response to Req. No. 8, Borescope Data.” This confidential file has been submitted to NHTSA in a request for confidential treatment in accordance with 49 C.F.R. Part 512.

9. *State the name and title of the ARC employee responsible for approving the decision to implement the automated borescope.*

Response: The decision to develop and implement the automated borescope inspection system on ARC manufacturing lines was the result of a collaborative process with the Tier 1 suppliers, vehicle manufacturers, and NHTSA. As discussed in ARC’s Response to NHTSA’s RRL, the ARC Joint Task Force, also known as the Collaboration Team, reviewed and recommended the implementation of the automatic borescope inspection system. *See* ARC’s Response to the RRL at p. 7. The recommendation to implement the automatic borescope check involved more than one layer of review at ARC and included the receipt of approvals from the Tier 1 suppliers and vehicle manufacturers for ARC to make changes to the manufacturing process. The Chief Executive Officer of ARC Automotive, Inc., at that time, Michael Goodin, issued the final approval to implement the automatic borescope check.

10. *Provide a copy of the licensing agreement ARC and Delphi entered into on or around July 17, 2001.*

Response: ARC voluntarily provided to NHTSA a copy of the licensing agreement between ARC and Delphi in August 2015 with a confidential treatment request. ARC is providing the agreement again with this response in the file “CONF BUS INFO – Response to Req. No. 10, ARC-Delphi Inflator License Agreement.” This confidential file has been submitted to NHTSA in a request for confidential treatment in accordance with 49 C.F.R. Part 512.

⁷ Because some PH7 lines implemented the automated borescope inspection system starting in August 2017, ARC provided the relevant data for these lines starting from the date ARC implemented the borescope system for the respective manufacturing line.

11. *Explain whether the licensing agreement requested in Request 10, above, allowed or required Delphi to use ARC's inflator design(s), manufacturing process(es), or both. Describe in detail any discretion the licensing agreement gave Delphi related to ARC's inflator design(s) and manufacturing process(es).*

Response: ARC is providing its response to this request in the file "CONF BUS INFO – Response to Req. No. 11, ARC-Delphi Inflator License Agreement Narrative." This confidential file has been submitted to NHTSA in a request for confidential treatment in accordance with 49 C.F.R. Part 512.

* * *

Declaration

I, Stephen Gold, Vice President – Product Integrity of ARC Automotive, Inc., am authorized by ARC Automotive, Inc. to make this declaration on its behalf. The factual statements and substantive responses set forth above are based on one or more of the following: my review of company records kept and maintained in the ordinary course of business, discussions with knowledgeable individuals, and my own personal knowledge. As part of the company's efforts to respond to NHTSA's Special Order, ARC has taken diligent steps to locate and review information, documents, and data responsive to NHTSA's inquiries that are in the company's possession, custody, or control. Based on the above, the answers to the inquiries provided to NHTSA respond completely and correctly to this Special Order, subject to the company's comments provided in response. I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on June 14, 2023.



Stephen Gold
Vice-President – Product Integrity
ARC Automotive, Inc.