

December 3, 2023

Comments on NHTSA's Initial Decision to Declare more than 40 million ARC Automotive Airbag Inflators Defective, by John Keller P.E.

Re: Docket No. NHTSA-2023-0038

Thank you for the opportunity to comment on NHTSA's Initial Decision to declare ARC's toroidal inflators built between 2001 and 2018, defective. I offer these comments as an airbag inflator expert with detailed knowledge of this defect, as well as the defects affecting Takata inflators. I have a Professional Engineering License in the State of Tennessee, with expertise on this subject matter.

I do not represent anyone affected by NHTSA's decision, nor do I have any financial stake in this matter. I offer these comments out of concern for the driving public. I spent a substantial portion of my career as an Engineer, employed by Takata from 1998 to 2001, and ARC from 2001 to 2011. I also have experience as an Engineer employed by a manufacturer of CT scanners.

I applaud NHTSA for taking the position that the subject inflators manufactured by ARC Automotive between 2001 and 2018 are affected by a weld-flash-defect until proven otherwise, regardless of how many inflators that entails. In my expert opinion, the weld flash defect in this case is significantly different from defects that cause Takata inflators to rupture. Eventually all Takata PSAN inflators will exhibit performance failure, including desiccated PSAN inflators which have yet to be recalled. All Takata's PSAN inflators must ultimately be replaced with a different (non-defective) inflator design due to the nature of that defect. This is not the case for ARC's toroidal inflator designs.

Only a small percentage of ARC's inflators are believed to have been assembled with a weld flash defect, the vast majority are otherwise not defective, and will remain so. If the weld-flash-defect could be detected for inflators in the field, only those inflators with the defect would need to be replaced. In my expert opinion, a Computed Tomography (CT) scan protocol could be developed to reliably determine if the weld-flash-defect exists in the subject ARC inflators currently in the field, thereby eliminating the need to replace tens of millions of

ARC inflators that were not assembled with the defect. CT scanning offers a nondestructive way to determine if the defect exists in each ARC inflator.

I believe using a CT-scan protocol to detect the weld-flash-defect in the field may ultimately allow a more rapid remedy than a recall procedure that involves replacing every inflator in question, due to the time it will take to manufacture the tens-of-millions of replacement inflators. The excessive time it's taken to complete the recall of 70 million Takata PSAN inflators serves as an example to this point. More than a dozen people have been killed by Takata PSAN inflators during the gruelingly slow completion of that recall since it began in 2016.

I urge NHTSA to consider the benefits of incorporating a CT-scan protocol to detect the weld-flash-defect in the field. It stands to reason that such an approach is in the public interest if it eliminates risk to the driving public more rapidly than allowing the recall to drag on for many years while tens of millions of replacement inflators are being manufactured.

Specifically, a CT-scan protocol could be incorporated into field service with relatively short scan time and automated defect detection algorithms. If NHTSA considers this proposal to use a CT-scan protocol for detection of the defect, prior to formal approval, I urge the Agency to use its authority to ensure such CT-scan protocol is only implemented after ample due diligence, proven reliably, and rigorous quality/process controls have been demonstrated. Furthermore, the Agency should ensure such a CT-scan protocol is implemented in a way that remedies the problem and associated risks to the driving public more rapidly than otherwise possible. I offer these comments in hope that we never see another recall drag on like Takata's, with the sustained risk to public safety that continues year after year.

Thanks in advance for your consideration of these comments.

Truly,

John Keller P.E.