



TESTIMONY OF

KEVIN M. KENNEDY

**EXECUTIVE VICE PRESIDENT OF NORTH AMERICA
TK HOLDINGS INC. (“TAKATA”)**

BEFORE THE

**SENATE COMMITTEE ON COMMERCE, SCIENCE,
AND TRANSPORTATION**

HEARING ON

**“UPDATE ON THE RECALLS OF TAKATA AIR BAGS AND NHTSA’S
VEHICLE SAFETY EFFORTS”**

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KEVIN M. KENNEDY
EXECUTIVE VICE PRESIDENT OF NORTH AMERICA
TK HOLDINGS INC. (“TAKATA”)**

Chairman Thune, Ranking Member Nelson, and distinguished Members of the Committee, I am honored to be here today on behalf of Takata and our employees across the United States and around the world who are dedicated to making products that save lives.

For Takata, safety is more than an obligation; it is the core of who we are and what we do. We are proud that millions of Takata airbags have inflated properly, preventing thousands of deaths and avoiding serious injuries in hundreds of thousands of accidents. We are also proud of our seatbelts that save lives, the spacesuit materials we make to protect our astronauts, and all the other high-quality products Takata manufactures.

It is unacceptable to us and incompatible with our safety mission for even one of our products to fail to perform as intended and to put people at risk. We deeply regret each instance in which a Takata airbag inflator has ruptured, especially in those cases where someone has been injured or killed.

We understand how important it is to the driving public, Congress, the National Highway Traffic Safety Administration (“NHTSA”), and our automaker partners to address and resolve the safety concerns raised by the airbag ruptures, and we are committed to doing everything in our power to help achieve that goal.

I am therefore pleased to tell you today what Takata is doing to address these issues.

TAKATA’S AGREEMENT WITH NHTSA

After months of testing and analysis of tens of thousands of returned inflators and extensive discussions and collaboration, we voluntarily agreed with NHTSA to take broad actions, in conjunction with the automakers, to respond to the public safety concerns.

Our agreement with NHTSA contemplates dramatically expanded recalls—including in several instances *nationwide* recalls—encompassing various types of airbag inflators.

The proposed recalls and the related commitments we have made go well beyond the scope of the safety risk suggested by the current science and testing data.

Root Cause Assessment.

Takata has engaged world-renowned experts in energetic systems from Germany's Fraunhofer Institute to conduct years of research into the root cause of the inflator ruptures, and we have consulted with various engineering experts in the United States. Takata has also tested and analyzed tens of thousands of returned inflators over the past several months. We have shared the results of that research with NHTSA and the automakers, as well as with this Committee.

Based on this research and our ongoing testing and analysis of returned inflators, Takata has gained a much better understanding of the long-term phenomenon behind the recent ruptures. Our best current judgment is that the potential for rupture is related to long-term exposure, over a period of several years, to persistent conditions of high heat and high absolute humidity. In certain circumstances, these conditions can result in an alteration in the propellant wafers in the inflators that could potentially lead to over-aggressive combustion.

The research of our experts suggests that the potential for this long-term phenomenon to occur was not within the scope of the testing specifications prescribed by automakers or comprehended within the industry's inflator validation practice when the inflators were originally made—an important fact that is not intended to put blame on the automakers or suggest an allocation of responsibility between the automakers and Takata.

The potential for rupturing may also be influenced by other factors, including the possibility of manufacturing issues, like those identified in earlier recalls, and factors specific to particular vehicle models.

Consistent with this research, most of the field ruptures have involved older inflators and most have occurred in regions of the country with high heat and high levels of absolute humidity. All research to date indicates that the potential for ruptures is limited to an extremely small fraction of older inflators.

But even one rupture is too many, and so Takata has agreed to take much broader action.

Driver Airbag Inflators.

All of the fatalities—including most recently in Louisiana—and most of the injuries that have occurred in accidents with ruptured airbag inflators in the United States have involved older types of driver-side airbag inflators that feature “batwing-shaped” propellant wafers.

We propose to replace all of these “batwing” driver inflators, from start of production through end of production, in all vehicles registered anywhere in the United States.

To date, there have been a total of 70 reported instances in the U.S. of such “field ruptures” involving the “batwing” driver inflators. Fifty-eight (58) of those ruptures occurred in vehicles that were already subject to previous recalls involving identified issues with the pressing of the propellant wafers in some of these inflators.

To put these incidents in perspective, the 70 reported cases of field ruptures involving the older batwing driver inflators represent approximately 0.009 percent of estimated total deployments of these airbags, or around 9 failures out of every 100,000 deployments.

In the past several months, Takata has conducted ballistic tests of more than 19,000 of these driver inflators, and 16 of them have ruptured during testing, or approximately 0.084 percent of the tested inflators. The inflators selected for this ballistic testing include a disproportionate number of older inflators returned from areas of high absolute humidity, so the percentage of failures seen in the testing results is likely to overstate the overall potential for rupture.

These figures are not meant to minimize the issue. But they do put in perspective why Takata’s Defect Information Reports (“DIRs”) state that a safety-related defect “*may arise*” in “*some*” of these inflators. ***It is not the case that all of the inflators covered by the DIRs are “defective.”***

Notwithstanding the science and testing data suggesting that the problem is focused on a small number of older inflators that have spent years in regions of high heat and absolute humidity, Takata will support the replacement of ***all*** the batwing driver inflators through national recalls to be conducted by the affected automakers.

The recommended recalls will proceed in four stages. In order to prioritize the replacement of inflators where the safety need is greatest, the first stage will target older vehicles that have ever been registered in the Southern States, Hawaii, and territories where the levels of both heat and absolute humidity are higher than anywhere else in the country.

But the recalls will not stop there. Subsequent stages of the recalls will target the batwing driver inflators manufactured in later years and vehicles registered in other States outside the areas of high absolute humidity. The recalls will continue until we have replaced all of the batwing driver inflators, from start of production to end of production, and they will include vehicles manufactured by five different automakers—Honda, BMW, Chrysler, Ford, and Mazda. The final stage of the recalls will include the replacement of batwing driver inflators that were previously installed as remedy parts in prior recalls.

Takata has also committed to cease producing the batwing driver inflators.

Passenger Airbag Inflators.

There have been far fewer field ruptures involving passenger airbags: 22 total reported instances in the U.S. to date (of which most occurred in vehicles subject to prior recalls), and none has involved a fatality. Nevertheless, our agreement with NHTSA also contemplates significantly expanded recalls covering several types of passenger airbag inflators.

One of these proposed recalls will be *nationwide* in scope. The other two will focus initially on high humidity States, but with the *potential to expand* to a nationwide recall if ordered by NHTSA after consideration of additional testing and consultations with Takata and the affected automakers. Specifically:

For one type of passenger inflator, we have recommended a nationwide recall that will proceed in four stages, according to the year the inflator was made. This recall will encompass all of the inflators of this type from start of production through vehicle model year 2008, and it will involve vehicles manufactured by eight different automakers.

The root cause assessment for the potential issue with these inflators includes the long-term exposure to high heat and absolute humidity discussed above, but it also includes the possibility of a specific manufacturing issue.

This type of passenger inflator has been involved in nine (9) reported field ruptures in the U.S., which represents approximately 0.0045 percent of estimated deployments. While it has ruptured at a higher rate in Takata's ballistic testing (approximately 0.68 percent out of nearly 10,300 tested), all but two of the test ruptures to date have involved inflators returned from high absolute humidity States. The two exceptions were inflators manufactured on the same day, which suggests the possibility of a discrete manufacturing issue.

Takata has committed to continue testing this type of inflator from later model years and to share this test data with NHTSA, in order to monitor whether additional action may be appropriate.

For two other types of passenger inflators, Takata has recommended recalls focused on particular models and model years of vehicles manufactured by certain automakers. The recalls will initially cover the relevant makes, models, and model years of these vehicles that were sold or ever registered in Florida, Georgia, Texas, and the other high absolute humidity States and territories. But there will be the potential for these recalls to expand later to other States and potentially nationwide if NHTSA finds that the results of further testing show the need for an expansion, after consultation with Takata and the affected automakers.

The scope of the recalls recommended for these last two types of passenger inflators tracks the results of Takata's testing and analysis. While there have been 13 reported field ruptures of these inflators, representing approximately 0.0055 percent of estimated deployments, ***all have involved vehicles of the specific makes and models covered by our DIRs and all were in vehicles that had spent years in the areas of high absolute humidity.***

In addition, Takata's ballistic testing of these two inflator types has shown elevated rates of test ruptures for these inflators when returned from the areas of high absolute humidity and from the particular models covered in the DIRs, ***and no test ruptures for the same types of inflators in other circumstances.*** These results show the clear importance of long-term exposure to an environment of high heat and absolute humidity. But they also indicate that something about the particular makes and models of these cars appears to be correlated with the potential for these inflators to rupture.

Takata has committed to NHTSA that we will continue to test these types of passenger inflators from other vehicles and from other States to help determine whether the scope of these recalls should be expanded.

Continued Use of Phase-Stabilized Ammonium Nitrate, Including in Remedy Parts.

In serving the demands of its customers, Takata continues to use phase-stabilized ammonium nitrate ("PSAN") in the propellant formulations for many of its airbag inflators. PSAN is safe for use in airbag inflators, and Takata has full confidence in the safety of our current products that use PSAN propellant, including the replacement parts we are making in response to the recalls. The chemistry of phase stabilizing ammonium nitrate is well established and well understood, and our research into the root cause of the inflator ruptures has not shown that they are associated with any measurable loss of phase stabilization of the propellant, even after many years in the field.

PSAN has distinct advantages over other chemicals used in alternative inflator propellants. It is non-toxic; it is stable and safe to handle during the manufacturing process; it produces far less smoke and particulate matter when the airbag is deployed, so that it is much less irritating to vehicle occupants with respiratory sensitivities; and PSAN-based propellants are significantly more efficient than other propellants (converting a higher percentage of the solid propellant into gas), so that PSAN inflators can be smaller and lighter, which has helped automakers meet government mandates to produce more fuel-efficient vehicles.

At the present time, more than 50 percent of the airbag replacement kits Takata is providing in response to the recalls contain inflators made by other suppliers that do not use ammonium nitrate propellant. We expect that number to reach 70 percent by the end of this year. The use of other suppliers' inflators significantly augments Takata's

capacity for production of replacement inflators and also responds to some automakers' desire to use alternative technologies in implementing their recalls.

Through investments in innovation, Takata has developed and continues to develop a range of new inflator products for use in both driver airbags and passenger airbags, including updated PSAN-based inflators with desiccant and inflators that do not use ammonium nitrate in the propellant. Takata is working intensively with vehicle manufacturers to validate new inflator products, including for use as remedy parts. Over time, all of our inflators will consist of new products.

The process of developing and qualifying inflators that are re-engineered, including re-engineering inflators to add desiccant, takes time. Among other things, this process involves testing to establish that the airbag modules equipped with re-engineered inflators will adequately protect vehicle occupants in a crash. The completion of that process requires several months.

For certain types of inflators in certain vehicle models, there is currently no available alternative to the use of a PSAN-based inflator as the remedy part. In these cases, we have agreed with NHTSA that the right solution for public safety is not to wait for the completion of a process of engineering changes and approvals, but is to take action now to replace the original inflators that are subject to the recalls with new PSAN inflators.

The replacement of the original inflator with a newly made PSAN-based inflator is absolutely the right response to the public safety concerns raised by the inflator ruptures, and doing so provides an important safety benefit. Because a clear factor in these ruptures is the age of the inflator and long-term exposure to particular environmental conditions over many years, the replacement of older inflators with newly manufactured units, even ones without desiccant, will provide an ample margin of safety over the older units being replaced, particularly those that have been exposed for many years to conditions of high heat and absolute humidity.

In replacing the batwing inflators on the driver side, Takata's remedy parts include, in addition to inflators from other suppliers, a newer type of PSAN driver inflator that has not shown a potential risk for rupture after exposure to high heat and absolute humidity. On the passenger side, Takata has made improvements to address specific manufacturing issues and other improvements in the production of new inflators, and these improvements also contribute to the added safety of the newly manufactured PSAN replacement inflators.

As we pledged in writing in the Consent Order and the DIRs we filed, Takata has agreed with NHTSA to conduct ongoing testing of PSAN-based inflators used as remedy parts, in order to determine the appropriate service life of the parts and whether further action may be needed to replace the remedy parts in the future. You can be assured that

if later replacement of these remedy parts is determined to be appropriate, Takata will take the necessary action, in conjunction with the affected automakers, to complete such replacements well before any potential risk of rupture develops.

In the meantime, we strongly believe, and NHTSA agrees, that the goal of safety is best served through the expanded recall actions we have recommended.

IMPLEMENTING THE RECALLS

The Consent Order that we have agreed to with NHTSA makes clear that NHTSA will play a central role in overseeing the organization and implementation of these proposed recalls. NHTSA has now issued notices in the Federal Register to receive comments on how best to proceed in this regard. We anticipate that NHTSA will convene meetings involving Takata and all of the affected automakers to organize and coordinate the staging of the recalls, so as to ensure that the remedy is appropriately prioritized to those vehicles where the public safety need is most immediate.

The Consent Order also requires Takata, after consulting with the automakers, to prepare a plan for NHTSA's approval that outlines the steps Takata will take, both on its own and in conjunction with the affected automakers, to maximize recall completion rates and, as noted, to carry out further testing of inflators to help determine the safety and appropriate service life of the remedy inflators.

Because the recalls will only succeed if consumers bring their cars in for repair, we have committed to working with NHTSA and our customers to help inform consumers about the risks associated with some inflators, and to urge them to respond in a timely fashion to the recalls that are being implemented.

To this end, we are in the process of developing a proactive advertising campaign for NHTSA's approval that would be designed for implementation in conjunction with the automakers, in order to reach greater numbers of vehicle owners and help to ensure that the recall completion rates will be as high as possible.

ADDITIONAL MEASURES

Let me say a bit more about Takata's extensive testing program and our ramped up production of replacement kits to address the needs of these recalls.

Since the last hearing before this Committee, we have continued to advance our investigation into the root cause factors associated with the inflator ruptures. We have performed ballistic tests on more than 50,000 inflators since September of last year, and that testing and analysis is ongoing. We also have performed live dissections, propellant analysis for moisture, chemical analysis, leak testing, and CT scanning.

We continue fully to support efforts by David Kelly's Independent Testing Consortium and the automakers to do additional testing and analysis. And we welcome NHTSA's decision to do its own testing, as well as to coordinate with us on our testing.

In addition to supporting these ongoing testing efforts, we are continuing to support the work of the independent Quality Assurance Panel, led by former Secretary of Transportation Samuel K. Skinner, to ensure that best practices are in place for the production of safe inflators. We are committed to adopting the recommendations his panel puts forth, and sharing the findings of the report with you and with the public.

We also have continued to ramp up substantially our production of replacement kits to fulfill automaker orders. In December, we were producing approximately 350,000 kits per month. In May, we produced approximately 700,000 units. By September, we expect to be producing 1 million per month. That is capacity primarily directed to production for the U.S. market. And, as mentioned, we continue to work with other inflator suppliers to increase further the production of replacement inflators to meet anticipated demand.

CONCLUSION

In closing, I want to emphasize that we have confidence in the inflators we are producing today. We have confidence in the integrity of our engineering and our current manufacturing processes. We believe that, properly manufactured and installed, these inflators will work as designed to save lives. Of course, we know that the proof is in the data, and that is why we have enlisted the assistance of the Quality Assurance Panel and why we have agreed to conduct ongoing testing, including of our remedy parts. We will continue to do everything we can to ensure uncompromised safety for our customers and the success of the recall efforts, and we will keep Congress, NHTSA, and the public updated on our progress.

Thank you, Mr. Chairman.

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