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Supplemental Statement for the Record:
NHTSA's Historical Timeline of Events Regarding Takata Inflator Ruptures

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The history of rupturing Takata inflators is long and complex, dating back to May 2004. The causes of some of the early ruptures, which we believed were the result of manufacturing problems, have been known for many years. But the more recent ruptures have not been explained by manufacturing errors and the exact cause is unknown, though it seems to be related to environmental conditions.

As we understand the facts today, the first Takata inflator rupture that relates to the safety defect we are currently seeing in vehicles on the road occurred in February 2007, in Arizona, when a driver air bag inflator ruptured in a 2001 Honda Civic. Although there had been a prior rupture, in May 2004 in a 2002 Honda Accord in Alabama, Honda and Takata both told NHTSA they believed that incident was an anomaly and was not related to any other ruptures. However, after the Arizona rupture incident, three more ruptures occurred between 2007 and 2008, in South Carolina, Puerto Rico, and California. All of those ruptures were in Honda Civic and Honda Accord driver air bag inflators manufactured by Takata around the fall of 2000.

On November 11, 2008, Honda began the first recall action (Recall 08V-593) to address the driver air bag ruptures. The number of vehicles recalled was small, including only 3,940 model year 2001 Honda Accords and Civics equipped with inflators built during a 6-week period in the fall of 2000. The recall was limited to these vehicles because Honda believed Takata's explanation that the defect was the result of improper handling of the propellant at a Takata plant during that specific period of time.

Then more driver air bags ruptured in Honda vehicles in 2009. A driver air bag ruptured during a Florida crash of a 2001 Civic on April 29, 2009. In Oklahoma, the driver of a 2001 Accord died after the air bag ruptured in a May 27, 2009, crash. Honda expanded its existing recall in June 2009 because both 2009 ruptures were in vehicles outside the initial 2008 recall (Recall 09V-259). However, the expanded recall was still limited to 2001 Honda Civics and Accords. One month later, in July 2009, Honda expanded the recall again to include some 2002 and 2003 Acura 3.2TL vehicles.

At that point, partly because of the repeated expansions of the Honda recalls, the agency opened an investigation called a Recall Query in November 2009. This Recall Query, RQ09-004, investigated whether Honda had acted appropriately in deciding which vehicles should have been included in the first two recalls of the Takata inflators. During that investigation, Honda explained that Takata had decided the ruptures were not caused by Takata employees mishandling the propellant, as previously believed; instead, Takata stated that the ruptures were due to the use of a certain machine to make the propellant into a wafer in the shape of a "batwing" that were then put in the inflators. Based on Takata's information, Honda believed that all of the ruptured inflators had propellant wafers that were made on a press known as the "Stokes press" at Takata's plant in Moses Lake, Washington. According to Takata, the "Stokes" press wafers might burn too quickly when ignited and cause a rupture while those made on a different press, the "Gladiator press," would not.

In December 2009, one month after NHTSA opened the recall query, the driver of a 2002 Honda Accord was killed in a crash in Virginia when the air bag inflator ruptured. Shortly after learning of this incident, Honda expanded the recall again (Recall 10V-041) to include all inflators that might contain propellant wafers made on the "Stokes press" from the time that press was first used in June 2000 until Takata stopped using it in October 2001.

Based on Honda's, and Takata's, explanation that the "Stokes press" had been the problem, and Honda's decision in February 2010 to recall all inflators made on the "Stokes press," NHTSA closed Recall Query 09-004 without any further agency action.

Unfortunately, Honda's February 2010 recall did not resolve all the issues caused by Takata's manufacturing flaws. In April 2011, Honda expanded its recall (Recall 11V-260) for the fifth time to find air bag modules used as replacement parts that might also have defectively manufactured inflators. Casting a wide net, Honda expanded the recall to make sure that any

potentially defective replacement parts that had already been used to repair vehicles were found and replaced. Finally, Honda expanded the population of the defectively manufactured driver side inflators a sixth time in December 2011, because an inflator rupture had occurred in a vehicle outside the existing recall population. By the end of 2011, the number of recalled vehicles had grown to include more than 1 million Honda and Acura models made between 2001 and 2003.

When ruptures began occurring in Takata driver air bag units, it appeared that the manufacturing problems did not include Takata's passenger air bag inflators. However, in October 2011, Honda and Takata learned of a rupture in a passenger air bag inflator when a vehicle in Japan was being salvaged. At that time, they believed that single passenger inflator rupture was an anomaly. However, the following month, in November 2011, Honda notified NHTSA that a passenger air bag inflator may have ruptured in a 2001 Honda Civic involved in a crash in Puerto Rico. Honda began to investigate, and by February 2012, Honda confirmed that the inflator had ruptured in the Puerto Rico case. Honda began collecting "exemplar" passenger inflators from vehicles Honda was concerned were at risk of rupturing in order to begin studying the cause of the ruptures.

In March 2013, Honda informed NHTSA that it had learned that some passenger inflators produced in 2001 and 2002 may have contained a propellant that should have been rejected as part of Takata's manufacturing processes. According to Takata, an auto-reject function meant to stop propellant wafers that were incorrectly pressed from leaving the Takata plant may have either been turned off by the press operator or wasn't working correctly at different times in 2001 and 2002. This had continued until a device called an interlock was added in September 2002. Takata also informed NHTSA that propellant wafers it had produced in its Monclova, Mexico, plant during that same time period might also have been damaged by moisture exposure before being put into inflators.

Based on these discoveries, Takata submitted a formal notice of a defect called a "Defect Information Report" to the agency in April 2013. At the time Takata began this recall, there had been six passenger inflator ruptures in the United States, including two that had caused injuries. These ruptures involved 2001 and 2002 Honda Accords and Civics and a 2003 Toyota Corolla. Four of the ruptures happened in Puerto Rico, one in Florida, and the last—which involved a vehicle that had spent most of its service life in Florida—occurred in Maryland. Because the

manufacturing issues that were believed to be the cause of the ruptures may have involved passenger side inflators manufactured for BMW, Honda, Mazda, Nissan, and Toyota, all five of these manufacturers filed nationwide recalls for these passenger inflators in 2013, which were then updated in 2014.

Between August 2013 and April 2014, NHTSA received three Vehicle Owner Questionnaires, or "VOQs," that each claimed a passenger air bag inflator had ruptured in a vehicle that was not covered by any of the existing Takata passenger inflator recalls. The agency began to evaluate these reports and asked for information from the manufacturers informally. In May 2014, Takata confirmed that the three ruptures reported to NHTSA had in fact occurred and also reported that it knew of three more passenger inflator ruptures. All six of the passenger inflator ruptures involved vehicles that had spent their service life in Florida or Puerto Rico, and had been exposed to high absolute humidity and high temperatures for long periods of time.

On June 10, 2014, NHTSA convened a conference call with Takata and the affected vehicle manufacturers. After the call, Takata and the affected vehicle manufacturers agreed to begin parts collection campaigns in Florida, Hawaii, Puerto Rico, and the U.S. Virgin Islands to verify the apparent connection between long-term exposure to high heat and humidity and the ruptures in Takata inflators that occurred despite a lack of any known defects that could be attributed to a mistake in the manufacturing process. The next day, NHTSA opened a Preliminary Evaluation, PE14-016, to investigate the passenger air bag inflator ruptures.

As NHTSA continued its investigation, and Takata and the vehicle manufacturers continued studying the returned exemplar inflators throughout the rest of 2014, the affected vehicle manufacturers converted their regional passenger inflator service campaigns to regional recalls. They also expanded the geographic region of the recalls (adding the southern coastal States of Texas, Louisiana, Mississippi, Alabama, and Georgia), though the recalls remained limited to certain regions of the country with consistently high absolute humidity, or "HAH" regions.

In November 2014, Takata submitted a Defect Information Report for the passenger inflators and noted that certain passenger inflators exposed to high absolute humidity conditions could be at risk for rupture. Over the following months we encouraged all of the vehicle manufacturers conducting Takata inflator recalls to include not just the coastal counties in the HAH region, but the entire State when any part of the State was covered under a recall.

At that time the agency also urged Takata to file a Defect Information Report for the driver inflators in all regions of the United States, but Takata was unwilling to do so. Ultimately, the vehicle manufacturers stepped in and expanded their service campaigns to replace the driver inflators nationwide.

With many questions still remaining about the driver inflators and the risk of passenger inflators rupturing outside of the HAH region, NHTSA upgraded Preliminary Evaluation 14-016 to an Engineering Analysis on February 24, 2015. An Engineering Analysis is a more intensive investigation that NHTSA's Office of Defect Investigations uses to study possible defect issues more closely.

On May 18, 2015, after NHTSA's continued urging, Takata filed four Defect Information Reports, acknowledging on a nationwide basis that a defect exists in certain types of driver and passenger air bag inflators. As explained in the Defect Information Reports (15E-040, 15E-041, 15E-042 and 15EV-043), Takata's understanding of the defect was that, "the inflator ruptures appear to have a multi-factor root cause that includes the slow-acting effects of a persistent and long term exposure to climates with high temperatures and high absolute humidity."

The Defect Information Report pertaining to driver side air bag inflators covered certain driver inflator types that contain propellant in the shape of a "batwing" wafer from the start of production through the end of production. All of these inflators with the "batwing" propellant will be replaced as part of the recalls currently underway.

Other Takata Defect Information Reports—for the passenger inflator types—are more limited. The passenger inflator Defect Information Reports cover certain passenger inflator types and certain makes and models from the start of production through model year 2008 vehicles. So far, for vehicles that are model year 2008 and later, there have been no ruptures of Takata inflators in vehicles or in routine product testing. However, the agency is monitoring this situation very closely.

Since Takata's defect filings in May of this year, the 12 affected vehicle manufacturers have started recall campaigns, which are in various stages of completion at this time.

As of October 20, 2015, the agency is aware of 89 driver and 32 passenger inflator rupture events, with 98 alleged injuries as a result of rupturing Takata inflators. Some of these injuries have been serious and include cuts or lacerations to the face or neck, broken or fractured facial bones, loss of eyesight, and broken teeth. The agency is also aware of seven deaths in the

United States—and one more death in another country—that we have determined were caused by the rupture of a driver inflator. This means that, in round numbers, nearly 1 in 10 driver inflator ruptures has resulted in death. So far, a rupture of the passenger inflator seems less likely to cause the severity of injury that the driver inflator causes since none of the passenger inflator ruptures has resulted in death.

Because of the severity of the injuries people have suffered, the risk of serious injury or death from a rupture, the size of the affected vehicle population, the number of affected vehicle manufacturers, and the unanswered questions surrounding the root cause of the ruptures, the agency filed a Notice of Intent to Open a Coordinated Remedy Program Proceeding for the Replacement of Certain Air Bag Inflators on May 22, 2015, and formally opened the Coordinated Remedy Program Proceeding with the publication of another Federal Register notice on June 5, 2015.