

May 18, 2015

**DEFECT INFORMATION REPORT**

**TK HOLDINGS INC.**

**PSPI-L PASSENGER AIR BAG INFLATORS**

1. **Manufacturer's name:**

TK Holdings Inc. ("Takata").

2. **Items of equipment potentially affected:**

All PSPI-L air bag inflators installed as original equipment in frontal passenger air bag modules in specific vehicle models sold in the United States, as follows:

Model Years 2004-2007 Honda Accord vehicles  
Model Years 2003-2007 Toyota Corolla vehicles  
Model Years 2003-2007 Toyota Matrix vehicles  
Model Years 2003-2007 Pontiac Vibe vehicles

This Report contemplates the potential for a national recall, subject to the determinations of NHTSA and consultations with the affected vehicle manufacturers, as described in section 7 below. The recall contemplated in this Report would be in addition to the previous recalls and safety campaigns involving these inflators, including recall numbers 13V-132, 13V-133, 14V-312, 14V-349, 14V-353, 14V-655, and 14V-700. Takata previously filed Defect Information Reports 13E-017 and 14E-073 relating to the subject inflators.

Takata continues to conduct engineering analyses of other PSPI-L inflators, including those produced after the end of production for Model Year 2007.

The inflators covered by this determination were installed as original equipment in vehicles manufactured by the following vehicle manufacturers (listed alphabetically):

American Honda Motor Co.  
1919 Torrance Blvd.  
Torrance, CA 90501-2746  
Phone: (310) 783-2000

General Motors LLC  
30001 Van Dyke Road  
Warren, MI 48090-9020  
Phone: (313) 556-5000

Toyota Motor Engineering & Manufacturing  
19001 South Western Ave.  
Torrance, CA 90501  
Phone: (800) 331-4331

**3. Total number of items of equipment potentially affected:**

The total number of subject inflators potentially affected on a national basis in the vehicle models identified above is approximately 5.2 million. Of that number, Takata estimates that approximately 1.1 million are subject to previous recalls and safety campaigns.

**4. Approximate percentage of items of equipment estimated to actually contain the defect:**

The number of field incidents known to Takata involving ruptures of the subject inflators in the United States is ten (10). Of those field ruptures, four (4) involved inflators that were subject to previous recalls. For comparison purposes, Takata estimates that there have been approximately 143,000 total field deployments of the subject inflators in the United States. That estimate is based on the number of subject inflators described in section 3, an estimate of the average age of the subject inflators in the field (11 years), and an estimate that an average of 0.25 percent of passenger air bags deploy in the field each year. In addition, as described below, since September 2014, Takata has conducted ballistic testing of a selected population of subject inflators returned by the vehicle manufacturers, including a disproportionate number of subject inflators returned from areas of high absolute humidity; that ballistic testing to date has resulted in 180 ruptures (approximately 2.16 percent) of the subject inflators tested.

**5. Description of the defect:**

As a result of the developments and circumstances described below and in section 4 above, Takata has determined that a defect related to motor vehicle safety may arise in some of the subject inflators.

The propellant wafers in some of the subject inflators may experience an alteration over time, which could potentially lead to over-aggressive combustion in the event of an air bag deployment. Depending on the circumstances, this potential condition could create excessive internal pressure when the air bag is deployed, which could result in the body of the inflator rupturing upon deployment. Based upon Takata's investigation to date, the potential for such ruptures may occur in some of the subject inflators after several years of exposure to persistent conditions of high absolute humidity. In addition, Takata's test results indicate that even with identical inflator designs, the likelihood of a potential rupture is greater in certain vehicle models, including the models identified above, due to factors that have not yet been identified. The potential for rupture may also be influenced by other factors, including manufacturing variability.

In the event of an inflator rupture, metal fragments could pass through the air bag cushion material, which may result in injury or death to vehicle occupants.

**6. Chronological summary of events leading to this determination:**

October or November 2011 – Takata was notified of a rupture of a PSPI passenger inflator in a model year 2001 Honda Civic vehicle located in Puerto Rico. Takata promptly began an investigation.

2010–Present – Beginning in 2010 and at different periods thereafter, in connection with its investigation, Takata has consulted with the Fraunhofer Institute for Chemical Technology (“Fraunhofer ICT”) to provide an independent research investigation of the root cause of the inflator ruptures. Fraunhofer ICT conducts research for government and industry and its core competencies include energetic materials and energetic systems. Fraunhofer ICT is considered the leading research organization within the pyrotechnic gas generator and airbag system industry.

August 2012 – November 2012 – Takata was informed of three additional incidents in the United States (two in Puerto Rico and one in Maryland (the Maryland vehicle had previously been operated in Florida for eight years)). These incidents all occurred in Honda Civic or Toyota Corolla vehicles.

April 2013 – Based on its investigation, Takata submitted a defect information report (“DIR”), identified by NHTSA as 13E-017, which covered certain passenger inflators containing propellant wafers manufactured at Takata’s Moses Lake, Washington plant during the period from April 13, 2000 through September 11, 2002, and certain air bag inflators manufactured at Takata’s Monclova, Mexico plant during the period from October 4, 2001 through October 31, 2002. Promptly thereafter, the five manufacturers of vehicles in which those inflators had been installed submitted corresponding DIRs and recalled those vehicles: 13V-130 (Mazda); 13V-132 (Honda); 13V-133 (Toyota); 13V-136 (Nissan); and 13V-172 (BMW).

June 2014 – Takata notified the vehicle manufacturers that some of its traceability records were incomplete (*i.e.*, Takata could not identify with absolute certainty the propellant lots from which the propellant wafers in a specific inflator were taken), and that it was possible for propellant wafers to have been stored at its Monclova plant for up to three months before being used in an inflator. Based on those findings, and to assure that all potentially affected inflators were covered, Takata recommended that all PSPI, PSPI-L, and SPI inflators built through the end of 2002 should be recalled. Based on that recommendation, the five vehicle manufacturers identified above decided to expand their 2013 recalls: 14V-312 (Toyota); 14V-349 (Honda); 14V-361 (Nissan); 14V-362 (Mazda); and 14V-428 (BMW). In addition, based on the expanded date range for the covered inflators, Fuji Heavy Industries (Subaru) submitted a similar DIR covering a

relatively small number of vehicles (14V-399). Subaru was not affected by the original date range in 13E-017.

June 11, 2014 – Takata sent a letter to NHTSA stating that, consistent with the fact that Takata’s highest priority is safety, and in light of the Company’s desire to address potential safety concerns promptly and thoroughly, Takata would support NHTSA’s request for regional field actions to replace PSPI, PSPI-L, and SPI passenger inflators manufactured between the start of production in April 2000 and July 31, 2004 that were installed in vehicles sold in or registered in Puerto Rico, Florida, Hawaii, and the U.S. Virgin Islands, based on the high levels of absolute humidity in those areas. (Those regional field actions also covered certain driver inflators.) The 10 vehicle manufacturers that had installed these passenger inflators in their vehicles promptly agreed to conduct the requested regional field actions and to send the replaced inflators to Takata for testing.

June 11, 2014 – Based on six field ruptures of Takata inflators (three driver inflators and three passenger inflators), NHTSA opened a defect investigation, PE14-016. On March 2, 2015, that investigation was upgraded to EA15-001.

April 2014 – April 2015 – Takata was informed of seven additional incidents in which passenger inflators not covered by the prior recalls had ruptured. Four of these involved PSPI-L inflators installed in Toyota Corolla vehicles. Three of these incidents occurred in Puerto Rico and the remaining incident occurred in Texas.

October – December 2014 – At the request of NHTSA, Toyota, Honda, and Nissan submitted DIRs covering vehicles with the passenger inflators covered by the regional field actions identified above that had been sold in or registered in a wider geographical area, including Puerto Rico, Hawaii, the U.S. Virgin Islands, Guam, Saipan, American Samoa, Florida and adjacent counties in southern Georgia, as well as the coastal areas of Alabama, Louisiana, Mississippi and Texas. On November 17, 2014, Takata submitted DIR 14E-073. Subsequently, in December 2014, several other vehicle manufacturers submitted DIRs with respect to regional recalls covering vehicles with the identified inflators that had been sold in or registered in those areas.

September 2014 – May 2015 – As part of its continuing investigation, Takata has conducted extensive testing of inflators returned by the vehicle manufacturers. This testing has included (but has not been limited to) ballistic tests, live dissections, propellant analysis for moisture, chemical analysis, air and helium leak testing, and CT scanning. As of May 1, 2015, Takata has ballistically tested 8,320 PSPI-L inflators from the affected vehicle manufacturers, including inflators installed in vehicle models not covered by this report. Of those inflators, 180 ruptured during this testing, yielding a rupture rate of 2.16 percent. All but three of these test ruptures involved inflators returned from the high absolute humidity States listed in the first stage of the remedy program described in section 7 below. The remaining three test ruptures involved inflators returned from Illinois (2) and Kentucky (1), but the information available to

Takata indicates that these three inflators were removed from vehicles that had been registered for several years in Florida or coastal Texas.

Although the Company's testing and investigation is ongoing, with the aid of the independent research performed by Fraunhofer ICT, Takata has reached some preliminary conclusions. It appears that the inflator ruptures 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. Exposure over a period of several years to persistent levels of high absolute humidity outside the inflator, combined with the effects of thermal cycling, may lead to moisture intrusion in some inflators by means of diffusion or permeation. Fraunhofer ICT has identified the possibility in these climates for moisture intrusion into the inflator over time and a process by which the moisture may slowly increase the porosity of the propellant within the inflator. Fraunhofer ICT's analysis also indicates that the design of the inflator and the grain (shape) of the propellant can affect the likelihood that the porosity change will occur, as can manufacturing variability. The results of the Fraunhofer ICT research date are consistent with the geographic location and age of the inflators that have ruptured in the field and in Takata's testing.

Takata's testing indicates that vehicle and model design differences are associated with differences in outcomes. Significantly, Takata's test results indicate that the likelihood of a potential rupture is greater in the vehicle models identified in this report, due to as-yet unidentified factors.

In addition, the analysis to date suggests that the potential for this long-term phenomenon to occur was not within the scope of the testing specifications prescribed by the vehicle manufacturers for the validation and production of the subject inflators as original equipment.

May 2015 – Based upon the results of its investigation and the preliminary conclusions identified above, as well as NHTSA's insistence that action be taken to mitigate the risk posed to safety by these inflators, Takata decided to submit this Report.

**7. Description of the remedy program:**

Consistent with the Consent Order issued by NHTSA on or about May 18, 2015 (the "Consent Order"), Takata shall cooperate with NHTSA in all future regulatory actions and proceedings pursuant to NHTSA's authority under the National Traffic and Motor Vehicle Safety Act, or any regulations thereunder, including 49 U.S.C. § 30120(c)(3), regarding the organization and prioritization of replacement air bag inflators.

Pursuant to the Consent Order, Takata will continue to test the subject inflator type in all makes, models, and model years of vehicles that are covered by a safety campaign or otherwise made available or obtained by Takata for testing, and Takata will report those results to NHTSA.

Consistent with paragraphs 4 and 9 of the Consent Order, this Report recommends and contemplates that the remedy program for the subject inflators is to use a phased customer notification and remedy approach. Under that approach, Takata plans to work with the manufacturers of the vehicles in which the subject inflators were installed to implement appropriate recalls to replace the subject inflators first in high absolute humidity States, with any further expansion of the remedy program to proceed by geographic zones, contingent on subsequent orders that may be issued by NHTSA based on the results of further testing and engineering analysis of the subject inflators and following consultation with Takata and the affected vehicle manufacturers, as follows:

- The initial recall contemplated by this Report and the Consent Order would include the vehicle models listed in section 2 that were sold in or ever registered in any part of Florida, Puerto Rico, the U.S. Virgin Islands, Hawaii, the Outlying U.S. Territories, Texas, Louisiana, Georgia, South Carolina, Alabama, and Mississippi;
- Pursuant to the Consent Order, if ordered by NHTSA based on the results of further testing and engineering analysis of the subject inflators and following consultation with Takata and the affected vehicle manufacturers, the recall contemplated by this Report and the Consent Order would expand to include the vehicle models listed in section 2 that were sold in or ever registered in any part of California, Oklahoma, North Carolina, Virginia, Arkansas, Kentucky, Tennessee, Illinois, Delaware, Maryland, and Missouri;
- Pursuant to the Consent Order, if ordered by NHTSA based on the results of further testing and engineering analysis of the subject inflators and following consultation with Takata and the affected vehicle manufacturers, the recall contemplated by this Report and the Consent Order would expand to include the vehicle models listed in section 2 that were sold in or ever registered in any part of Ohio, Indiana, New Jersey, West Virginia, the District of Columbia, Kansas, Pennsylvania, Washington, Massachusetts, Connecticut, Michigan, New York, Rhode Island, Oregon, Iowa, and Nebraska; and
- Pursuant to the Consent Order, if ordered by NHTSA based on the results of further testing and engineering analysis of the subject inflators and following consultation with Takata and the affected vehicle manufacturers, the recall contemplated by this Report and the Consent Order would expand to include the vehicle models listed in section 2 that were sold in or ever registered in any of the remaining States.