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By Recall Management Division at 9:00 am, Apr 11, 2013



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April 11, 2013

Ms. Nancy L. Lewis  
Associate Administrator of Enforcement  
National Highway Traffic Safety Administration  
Attn: Recall Management Division (NVS-215)  
Room W48-302  
1200 New Jersey Ave. S.E.  
Washington, D.C. 20590

Re: Defect Information Report, Certain Air Bag Inflators Used as Original Equipment

Dear Ms. Lewis:

TK Holdings Inc. ("Takata") is submitting this Defect Information Report ("DIR") pursuant to 49 CFR 573.3(f) and 573.6(c). This DIR contains information about a potential defect relating to motor vehicle safety in certain air bag inflators used as original equipment in vehicles produced by several vehicle manufacturers.

If you have any questions about this DIR, please contact the undersigned at (202) 729-6332 or at [kazuo.higuchi@takata.com](mailto:kazuo.higuchi@takata.com).

Sincerely,

A handwritten signature in black ink that reads 'Kazuo Higuchi' in a cursive script.

Kazuo Higuchi  
Senior Vice President

Enclosure

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## DEFECT INFORMATION REPORT

1. **Manufacturer's name**

TK Holdings Inc.

2. **Items of Equipment Potentially Containing the Defect**

Certain air bag inflators installed in frontal passenger-side air bag modules equipped with propellant wafers manufactured at Takata's Moses Lake, Washington plant during the period from April 13, 2000 (start of production) through September 11, 2002 (an improved quality control process was confirmed to be in place no later than September 12, 2002), and certain air bag inflators manufactured at Takata's Monclova, Mexico plant during the period from October 4, 2001 (start of production) through October 31, 2002 (an improved quality control system for handling and storing of the propellant wafers was confirmed to be in place no later than November 1, 2002).

The inflators covered by this determination were installed as original equipment in vehicles manufactured by the following entities:

Toyota Motor Corporation  
Contact: Bob Waltz, Group VP  
Product Quality and Service Support  
Toyota Motor Sales, Inc.  
91001 South Western Ave.  
Torrance CA 90501  
(310) 468 9048

Honda Motor Co., Ltd.  
Contact: David Speck  
American Honda Motor Co., Inc.  
1919 Torrance Blvd.  
Torrance, CA 90501  
(310) 783-3693

Nissan Motor Co., Ltd.  
Contact: Dale Weiss and James Hunter  
Nissan North America, Inc.  
610 Enon Spring Rd E,  
Smyrna, TN 37167-4410  
(615) 223-3199

Mazda Motor Corporation  
Contact: Max Yamashita, Manager, Part Quality Assurance  
26900 Hall Road  
Woodhaven, MI 48183  
(734) 692-3681

BMW  
Contact: Robert Janssen  
Bayerische Motoren Werke AG  
Knorrstr. 147  
80788 München Germany  
+49 89 382-45277

General Motors  
Contact: M. Carmen Benavides, Director  
Product Investigations and Safety Regulations  
30001 Van Dyke Rd.  
Warren Mi 48090-9020

**3. Total Number of Items of Equipment Potentially Involved:**

Although Takata knows the number of subject air bag inflators it supplied to each vehicle manufacturer, Takata does not know how many of the subject inflators were installed in vehicles sold in the United States. That information is available from the vehicle manufacturers.

**4. Approximate Percentage of Items of Equipment Estimated to Actually Contain the Defect:**

Unknown. However, based on the very small number of field incidents that have occurred, it is extremely low.

**5. Description of the defect:**

Some propellant wafers produced at Takata's plant in Moses Lake, Washington between April 13, 2000 and September 11, 2002 may have been produced with an inadequate compaction force. (Beginning in September 2001, Takata utilized an "auto-reject" ("AR") function that can detect and reject propellant wafers with inadequate compression by monitoring the compression load that had been applied. However, for the next year, that function could be turned on and off manually by the machine operator in the plant. No later than September 12, 2002, the machine was modified by the addition of an interlock feature that precluded production of propellant wafers without the AR function in place.)

In addition, some propellant wafers used in inflators produced at Takata's plant in Monclova, Mexico between October 4, 2001 and October 31, 2002 may have been exposed to uncontrolled moisture conditions. Those wafers could have absorbed moisture beyond the allowable limits. (Production processes were revised no later than November 1, 2002 to assure proper handling and environmental protection of all in-process propellant.)

In both cases, the propellant could potentially deteriorate over time due to environmental factors, which could lead to over-aggressive combustion in the event of an air bag deployment. This could create excessive internal pressure within the inflator, and the body of the inflator could rupture.

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

October 2011 – Takata was first notified of an incident related to this issue, which involved the deployment of a passenger air bag in Japan. Takata promptly began an investigation, consisting of a fault tree analysis and an analysis of production records.

November 2011 – Takata was made aware of an incident in which an air bag inflator ruptured in a U.S vehicle (in Puerto Rico).

February - June 2012 – Takata conducted replication tests on inflators taken from vehicles in the field, but could not reproduce the problem.

September - 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)).

October 2012 – After considering a wide range of possible causes, Takata concluded that there was a possibility that the propellant in certain propellant wafers produced at the Moses Lake, Washington plant might not have been adequately compressed. Through replication tests, Takata confirmed that the combination of an inadequately compressed propellant wafer and exposure to certain environmental conditions for an extended period could create excessive internal pressure within the inflator during a deployment, and the body of the inflator could rupture. However, Takata also discovered at this time that, beginning in September 2001, the machine that molded the propellant into wafers was equipped with an “auto-reject” (“AR”) function that would identify and reject wafers with inadequate compression.

February - March 2013 – Takata discovered that, for approximately one year, the AR function could be turned on and off manually by the machine operator in the plant. Takata subsequently confirmed that an interlock feature was added no later than September 12, 2002, which precluded production of wafers unless the AR function was in place.

Takata also discovered that some propellant wafers that were used in inflators produced at its plant in Monclova, Mexico between October 4, 2001 and October 31, 2002 may have been exposed to uncontrolled moisture conditions, and that those wafers could have absorbed moisture beyond the allowable limits. Takata confirmed that the combination of excess moisture in a propellant wafer and exposure to certain environmental conditions for an extended period also could lead to an inflator rupture due to excessive internal pressure.

Takata is aware of only six such incidents involving the subject inflators in vehicles in the field (four in the United States and two in Japan). (In addition, there were six incidents that occurred in salvage yards in Japan.) Moreover, Takata is not aware of any injuries associated with the improper deployment of any air bags containing the suspect inflators. However, in view of the possibility that such a deployment could lead to an injury, on April 5, 2013, Takata decided that a defect related to motor vehicle safety exists.

**7. Description of the Remedy Program:**

Takata will work with the manufacturers of the vehicles in which the covered air bag inflators were installed to implement an appropriate field action.