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## A look at the Takata airbag recalls

The historic nationwide recalls of defective frontal airbags from Japanese supplier Takata have affected tens of millions of vehicles, with a projected 70 million airbag inflators expected to be recalled by 2019. Ruptures of the Takata inflators when airbags deploy in a crash have been tied to 10 deaths and more than 100 serious injuries in the U.S., the National Highway Traffic Safety Administration (NHTSA) reports.

Although neither IIHS nor HLDI track vehicle recalls, as insurer-supported organizations with a long history of advocating for airbags, the institutes do have a compelling safety interest in helping regulators, insurers and journalists get the word out to consumers about the critical importance of the Takata recalls. The information contained in this advisory is largely based on published alerts from NHTSA and not any tests conducted by IIHS or data collected by HLDI.

### How airbags work

Airbags are inflatable cushions that protect people from hitting interior components or objects outside the vehicle – for example, other vehicles or trees – during a crash. The instant a crash begins, sensors start to measure impact severity. If the crash is severe enough, the sensors signal inflators to fill the bags with gas in a fraction of a second. Inflators are metal cartridges packed with enough propellant to deploy airbags stored inside steering wheels, dashboards or door panels from their compact state. Airbags can deploy at speeds reaching 200 mph. Airbag systems don't typically require regular maintenance. A properly functioning airbag can last the lifetime of a vehicle unless it deploys in a crash. A demonstration test IIHS conducted in 1992 showed that the original frontal airbags in a 1973 Chevrolet Impala deployed properly more than 20 years after the car was built.

### Why a recall is needed

The Takata frontal airbags under recall contain inflators with ammonium nitrate-based propellant. The inflators don't include a chemical drying agent, also called desiccant, to counteract any moisture buildup inside the cartridge. Over time, the moisture-sensitive propellant can break down and become unsafe. Heat and humidity speed up this process. When the propellant degrades substantially, the metal inflators can become overpressurized and rupture during airbag deployment, sending shrapnel through the airbag into the vehicle interior. An older inflator is more likely to rupture than a newer version of the same inflator type.

### **Recall strategy**

NHTSA has ordered manufacturers to replace inflators in older vehicles that are most likely to have been exposed to hot and humid conditions first. That means the oldest vehicles located in warm states, such as Florida and Alabama, for example, are getting new airbags before newer vehicles garaged in states with moderate or cold climates. The recalls assume that a vehicle's current registration location indicates where it has spent its life. The availability of replacement airbags also is affecting the speed of repairs.

To rank priority, NHTSA has divided states into three climate regions and has projected how long it will take the propellant inside the airbag inflators to degrade. The agency has published a list of priority groups at <u>www.safercar.gov/rs/takata/pdfs/TakataPriorityGroups.pdf</u>. The list includes the caveat that "in limited instances, parts for some HAH (high absolute humidity) recalls are currently only available to a limited area within the HAH with the highest risk of rupture."

Zone A covers states with high temperatures and humidity. NHTSA projects that it will take 6-9 years for the propellant to degrade to the point where it is unsafe. Zone A includes Alabama, California, Florida, Georgia, Hawaii, Louisiana, Mississippi, South Carolina, Texas, Puerto Rico, American Samoa, Guam, the Northern Mariana Islands (Saipan) and the U.S. Virgin Islands. Vehicles originally sold or ever registered in these areas are marked as priority 1 for airbag replacement.

Zone B covers states that have moderate temperatures and humidity. NHTSA projects that it will take 10-15 years for the propellant to degrade to the point where it is unsafe. Zone B includes Arizona, Arkansas, Delaware, District of Columbia, Illinois, Indiana, Kansas, Kentucky, Maryland, Missouri, Nebraska, Nevada, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Pennsylvania, Tennessee, Virginia and West Virginia.

Zone C covers states with lower temperatures and humidity. NHTSA projects that it will take 15-20 years for the propellant to degrade to the point where it is unsafe. Zone C includes Alaska, Colorado, Connecticut, Idaho, Iowa, Maine, Massachusetts, Michigan, Minnesota, Montana, New Hampshire, New York, North Dakota, Oregon, Rhode Island, South Dakota, Utah, Vermont, Washington, Wisconsin and Wyoming.

### Affected vehicles

The recalls cover 12 automakers selling vehicles in the U.S. Manufacturers are sending notices to vehicle owners, and NHTSA has asked for help from insurers, the media and the public in tracking down vehicles that have changed hands since the original purchase or registration. A list of all affected vehicles and manufacturers can be found at www.safercar.gov/rs/takata/takatalist.html.

As of Aug. 12, slightly more than 10 million airbags have been replaced, NHTSA says. These include models from the following manufacturers: BMW, Fiat Chrysler Automobiles, Ford, General Motors, Honda, Mazda, Mercedes-Benz, Mitsubishi, Nissan, Subaru and Toyota (see <u>www.safercar.gov/rs/takata/takata-completion-rates.html</u>).

Many of these are interim fixes. Because of supply constraints, some manufacturers are replacing older Takata inflators with newly manufactured versions of the same type. These units eventually will need to be replaced, too.

#### Older Hondas and Acuras need critical fixes

The agency in June flagged recalls for a group of 2001-03 Honda and Acura models as especially critical. U.S. Transportation Secretary Anthony Foxx in a statement advised owners to stop driving these vehicles unless heading straight to the repair shop. Test data indicate that airbag inflators in these models have rupture rates as high as 50 percent. The agency says 8 of the 10 confirmed U.S. fatalities due to Takata ruptures were in these vehicles.

They are the 2001-2002 Honda Accord and Civic, 2002 Honda CR-V and Odyssey, 2003 Honda Pilot, 2002-2003 Acura TL and 2003 Acura CL. The affected models were recalled between 2008 and 2011, and Honda reported in June that more than 70 percent have already been repaired. Still, the automaker and the federal government are asking for help in locating owners of about 313,000 vehicles with the dangerous airbags that haven't been replaced.

#### Key message for consumers

The key message for consumers is to pay attention to any manufacturer recall notice. The particular danger of the defective Takata inflators makes it even more crucial that people who get recall letters take their vehicles to the dealership for replacement without delay.

Here is some suggested guidance to share with vehicle owners:

- Check NHTSA's online recall VIN lookup tool at <u>www.safercar.gov/checkforrecalls</u> if you haven't already received a notice. If the vehicle can be fixed now, meaning the needed parts are available, the website will indicate that the recall is "incomplete." Get your vehicle fixed right away. If the vehicle can't be fixed yet, the website will display the message that the recall is "incomplete parts not available." In this case, contact your dealer to see when you can bring in your vehicle for repair.
- Be aware that you may have to bring your vehicle back to the dealer at least twice. On an interim basis, replacing the older inflator with a newer version reduces the safety risk until a final remedy inflator can be produced and installed.
- Ask your dealer for a loaner vehicle if you feel uncomfortable driving a vehicle that can't yet be repaired. Several major manufacturers are making loaners available. Note that it is illegal to disconnect airbags.
- Airbags save lives and reduce injuries. The vast majority of Takata airbags will perform as expected. NHTSA estimates that 39,886 lives have been saved by frontal airbags as of 2013.

More information about the Takata airbag recalls can be found at <u>www.safercar.gov/rs/takata/index.html</u>. A list of frequently asked questions about the Takata airbag recall can be found at <u>www.safercar.gov/rs/takata/takata-faq.html</u>.

#### **Recall timeline**

In November 2008, Honda issued the first recall for Takata driver side inflators with defective propellant that can rupture when activated. Honda expanded these recalls in 2009, 2010 and 2011 to include 2.5 million 2002-04 Hondas and Acuras.

In April 2013, Takata filed a defect report stating that certain passenger airbag modules may rupture as a result of manufacturing errors that are aggravated by exposure to hot and humid environments.

In June 2014, NHTSA asked several manufacturers to recall vehicles with Takata airbags in hot and humid regions following airbag ruptures in Florida and Puerto Rico. In November 2014, NHTSA called for a nationwide recall.

In May 2015, Takata acknowledged that a defect may exist in some of its airbag inflators, leading to nationwide recalls of roughly 22 million airbag inflators under a consent order.

In December 2015 and January 2016, NHTSA ordered Takata to expand the recalls to an additional 5 million inflators.

In May 2016, NHTSA announced another expanded recall covering an estimated 38 million inflators, adding to the already 28.8 million inflators previously recalled. These expansions under an amended consent order are planned to take place in phases between May 2016 and December 2019. The expansions mean that all Takata ammonium nitrate-based propellant driver and passenger frontal airbag inflators without a chemical drying agent will be recalled.

#### For more information, see:

"Recalls spotlight: Takata air bags recalls." National Highway Traffic Safety Administration. www.safercar.gov/rs/takata/index.html

"Airbag recall." Takata Corp. www.airbagrecall.com/home

"Coordinated remedy program priority groups." National Highway Traffic Safety Administration. www.safercar.gov/rs/takata/pdfs/TakataPriorityGroups.pdf

"Massive Takata airbag recall: Everything you need to know, including full list of affected vehicles." *Car and Driver*. <u>blog.caranddriver.com/massive-takata-airbag-recall-everything-you-need-to-know-including-full-list-of-affected-vehicles</u>

"Takata airbag recall – everything you need to know." *Consumer Reports*. www.consumerreports.org/cro/news/2016/05/everything-you-need-to-know-about-the-takata-air-bag-recall/index.htm

"The airbag in your car could explode. This is what you should do about it." *The New York Times*. http://www.nytimes.com/interactive/2016/business/takata-airbag-recall-guide.html? r=0