

TAKATA

PAINFUL RECALL: Takata  
Executive Vice President Yoichiro  
Nomura apologised for the series  
of vehicle recalls due to potentially  
faulty air bags in Tokyo on Nov. 6.  
REUTERS/THOMAS PETER



# Takata air bag probe zeroes in on troubled Mexican plant

Takata managers were concerned that quality and safety standards were being broken at factory that blew up in 2006.

BY JOANNA ZUCKERMAN BERNSTEIN AND BEN KLAYMAN

## TAKATA MEXICO PLANT FOCUS OF AIR BAG PROBE

CIUDAD FRONTERA, MEXICO/DETROIT,  
NOVEMBER 20, 2014

**T**he dusty, industrial town of Ciudad Frontera, Mexico, has moved from the far reaches of the global auto supply chain to the front lines of an investigation into why air bags from Takata Corp are blowing up with lethal force in accidents.

The Takata plant there has been confirmed as the source of defective air bags made in 2001 and 2002 and again around 2012, according to recall records, automakers and regulators. In 2006, the factory blew up, driving home for workers and residents the volatility and risk of the explosive compound at the core of Takata's air bags.

Now, the U.S. National Highway Traffic Safety Administration (NHTSA) has ordered Tokyo-based Takata Corp <7312.T> to submit a wide array of records, including those pertaining to manufacturing controls at the Mexican plant, as part of an investigation into why its air bags have shot shrapnel at drivers in five fatal accidents from Oklahoma to Malaysia.

All five of the victims - including three in the last 14 months - were hit by shrapnel from air bags in Honda vehicles. At least another 160 injury claims involving cars from several automakers have been reported to NHTSA, according to a Reuters tally.

Interviews with 21 former and current Takata workers and consultants, along with company presentations and email reviewed by Reuters reveal the pressure inside the Japanese supplier to ramp up output and drive down costs for inflators - the mechanism that triggers air bags to deploy in a fraction of a second after a crash.

The accounts include the concerns of managers that workers broke quality rules to boost output. It isn't clear whether the productivity pressures and quality issues they describe led to specific accidents. But the portrait they draw suggests that top executives at the company were not fully



EXPLODING PLANT: A series of blasts badly damaged Takata's air bag factory in Ciudad Frontera, Mexico on March 30, 2006. REUTERS/Gustavo Adolfo Rodriguez

“We are highly focused on cooperating with NHTSA and the (U.S.) government investigation.

**Alby Berman**

Takata spokesman

aware of what was going on at the foreign factories that churned out millions of air bags. So far, the Takata problems have led to the recall of over 16 million vehicles worldwide.

“We are highly focused on cooperating with NHTSA and the (U.S.) government investigation,” Takata's U.S. spokesman Alby Berman said in response to questions sent by email.

The NHTSA administrative order requires Takata to supply documents and answer questions under oath related to any problems in producing air bag inflators. The order was prompted in part by an Oct. 17 Reuters report detailing production and quality problems at the Mexico plant. The company has until Dec. 1 to comply.

In addition to the regulatory probe, Takata faces a criminal investigation by U.S. prosecutors.

The investigations come as the Mexico plant gears up to make parts needed to replace millions of air bags in the ongoing vehicle recalls.

### ‘WE’RE SCARED’

On the evening of March 30, 2006 Takata's Mexican air bag factory exploded a year into its run as the company's main inflator production point. The series of blasts blew out windows on houses a kilometer away and threw up fireballs as workers and residents fled to escape injury, witnesses say.

Remarkably, residents and workers say, there were no injuries. Hundreds of workers inside the factory that evening all managed to evacuate, some by climbing over a factory fence because a gate had been mistakenly left shut.

Takata, which accounts for about a fifth of global air bag production, never announced the exact cause of the 2006

## TAKATA MEXICO PLANT FOCUS OF AIR BAG PROBE

explosion, workers there at the time said. An official at the fire department, where Takata has donated trucks, said he had no records from that time.

Some workers said the blast was fueled by bunkers of ammonium nitrate stored next to the plant. Takata air bags are inflated using ammonium nitrate, an explosive propellant that is encased in a canister to make an inflator.

Josefina Vargas lives next door to the Takata factory. She said the first sign of trouble from the factory was a thin line of smoke visible from the sidewalk in front of her house. Vargas, 52, who did not work at Takata, remembers her shock as explosions threw fiery debris almost to her feet as she sat outside her house. Vargas and others fled by foot and by car.

"We're scared," Vargas told Reuters in recounting the explosion from her home where she sells tortillas and cookies. "When we hear a sound now, we think it's the plant."

Takata's Berman said the company's safety training had "allowed for the successful evacuation of thousands of employees within a few minutes of the discovery of the fire and prevented a possible loss of life." He said the company had put new safety policies in place after the accident.

Alejandro Perez, a former Takata facility manager, stayed at work for four days straight after the accident, taking short breaks to go home and nap or shower, he said.

The company offered workers who returned and stayed on the job special incentives, Perez and other workers say. Takata raffled off televisions, refrigerators and cars, and even held Easter services at the plant for workers on the job that April 16.

Takata managers were proud of the comeback. They marked the rebuilding with a commemorative in-house coffee table book with pictures of the blast, and baseball caps stitched with the exact date and time of the first explosion. The company took



BUCKLE UP: A billboard promoting Takata seatbelts along a Tokyo highway. REUTERS/TORU HANAI

a \$21 million charge as it prepared for an IPO in November of that year.

Within a month, Takata had resumed production, fast enough so that customers such as Honda Motor Co <7267.T>, Ford Motor Co <F.N> didn't have to shut down their own factories due to lack of parts. Rival Autoliv <ALV.N> also stepped up its output to make up for what Takata could not supply, the companies said at the time.

### UNRELENTING PRESSURE

But on the ground, the pressure to restart and make up for lost production was unrelenting, especially from American managers who had been flown to Mexico, said Perez, the former facility manager. He was laid off at the plant in 2008. Other workers also said pressure remained high.

Takata workers said they had to make a quota of inflators - sometimes more than 200 per hour. "If you didn't make it, you would be behind and they wouldn't pay you a productivity bonus," said Jose Sanchez, 42, a former worker who made inflators at Takata from 2004 to 2010.

In 2010 and 2011, the Monclova plant was consistently behind quota in making a new kind of driver's-side air bag inflator. In an effort to crack down, supervisors used security cameras to catch workers on a line "fooling around," and apparently engaged in conversation rather than making inflators, an email circulated to staff that included still images from a camera shows. Takata's Berman said security cameras at the plant were there to prevent theft and not intended to monitor workers.

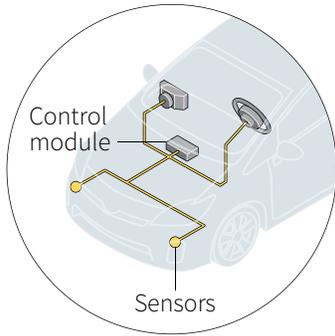
Around the same time, a worker was also cutting corners by trying to "rework" or fix defective parts on the inflator assembly line. That would have made it easier for them to meet output quotas. But Takata prohibited that practice in order to reduce the chances of bad parts being shipped to automakers, according to an email. Inflators identified as defective were supposed to be placed in a separate, red bin and then examined and repaired if possible by other workers, according to former workers.

Guillermo Apud, a supervisor at the

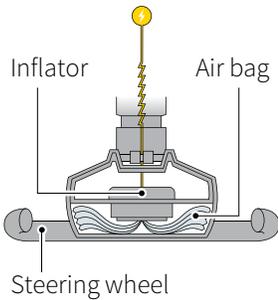
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# Air bag deployment

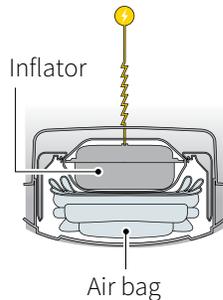
**1** Sudden deceleration causes crash sensors located in front of the vehicle to send a signal to a control module which activates the inflator.



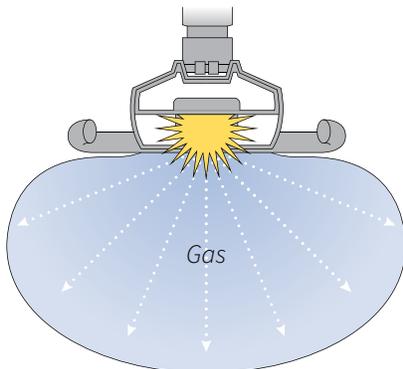
## DRIVER-SIDE AIR BAG



## PASSENGER-SIDE AIR BAG\*

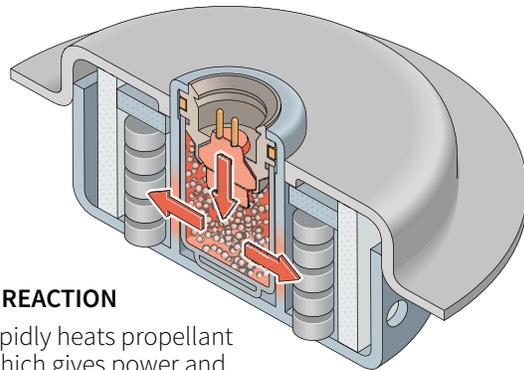
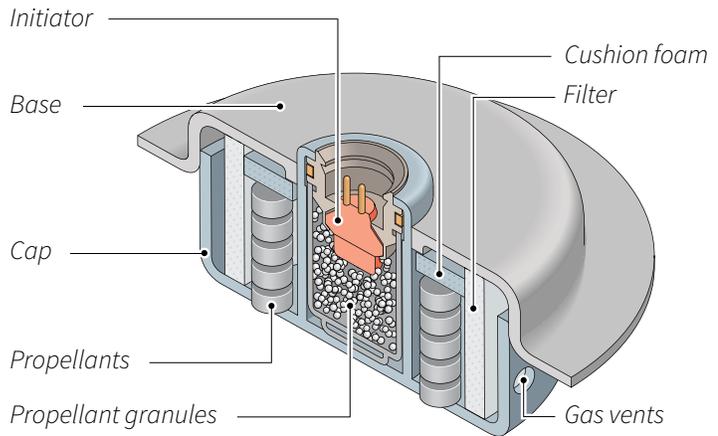


**2** Inside the **inflator**, a rapid chemical reaction produces gas that fills the air bag within milliseconds.



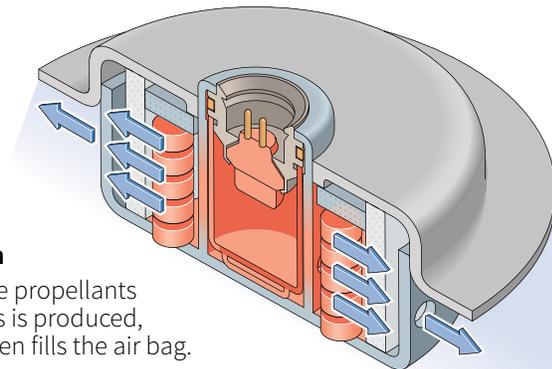
**3** Shortly after, the gas quickly dissipates through tiny holes in the bag, deflating it so the driver can move.

## Parts of the inflator assembly



## CHEMICAL REACTION

**Initiator** rapidly heats propellant granules, which gives power and heat to burn the propellants.



## Inflation

When the propellants burn, gas is produced, which then fills the air bag.

Damaged or cracked propellants can end up producing too much pressure inside the inflator, which can cause the inflator to explode into pieces.

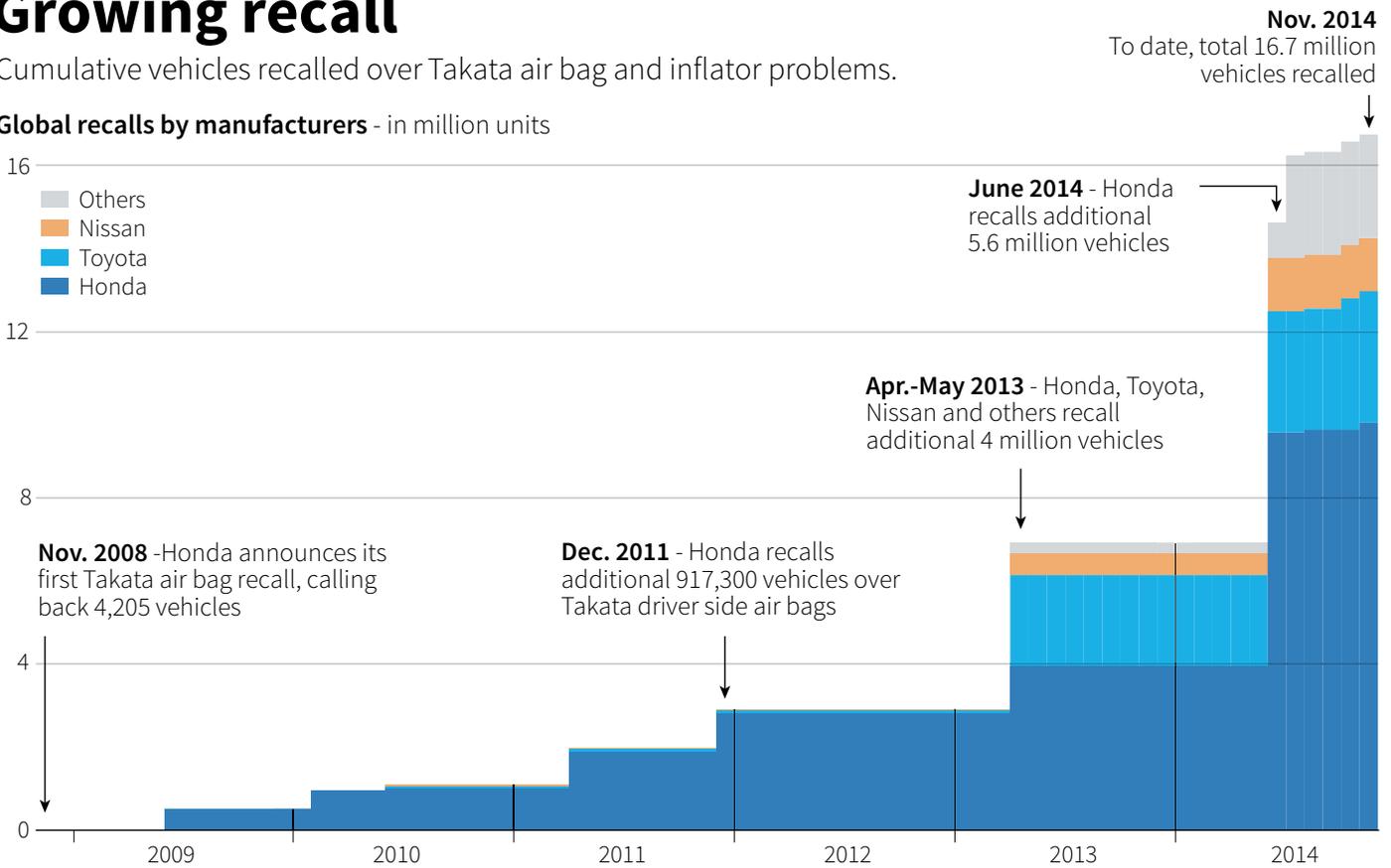
Sources: Takata; Autoliv; Daicel; Explosion (Japan explosives society's journal) \*Inflator assembly varies by car model.

Graphics: Chris Inton

# Growing recall

Cumulative vehicles recalled over Takata air bag and inflator problems.

Global recalls by manufacturers - in million units



Source: Reuters, companies

plant, scolded other employees about this problem in a May 2011 email reviewed by Reuters. “Rework on the line is PROHIBITED!!!!” he said. “We can’t have leaders/materials people/operators REWORKING material left and right without ANY control, this is why we have defect upon defect,” his email, translated from Spanish, said. “We need to change NOW!”

Apud declined to comment. Berman said Apud was acting to reinforce company safety guidelines after finding an employee had improperly reworked an inflator. “The email is an example of the manager performing his supervisory responsibility and enforcing company quality controls,” he said.

In 2012, Takata workers at the Mexico

plant put the wrong part into inflators being readied for shipment, according to documents Takata and automakers filed with NHTSA. More than 350,000 vehicles from three different car makers were later recalled for that defect. The mistake was possible because parts bins were kept too close together, the company told regulators in Japan.

The mistake was not discovered until after a lawsuit was filed over an October 2013 accident when Brandi Owens, then 25, hit another car in stop-and-go traffic while driving a new GM Chevrolet Cruze. The Cruze’s air bag exploded and hit Owens so hard it blinded her in the left eye, she said in the lawsuit filed in April 2014. Her case prompted a recall two months later, in June.

Owens settled with Takata and General Motors Co <GM.N> on undisclosed terms in August.

A fatal accident just after that June vehicle recall illustrates the complexity of the problem facing automakers and safety investigators. Takata said a defective inflator from its now-shuttered plant in the U.S. state of Georgia was installed in a 2003 Honda City assembled in Thailand and sold in Malaysia.

On July 27, Law Suk Leh was driving that car when she hit another vehicle in the Malaysian town of Sibu on Borneo island. Law, who was in the final stages of pregnancy, was killed by a “severe puncture wound” to the neck when she was hit by a metal fragment after the car’s air bag

blew apart, Malaysian police said. Honda revealed details of the death last week in announcing a recall of another 170,000 vehicles to replace their air bags.

### BOOMING DEMAND

For Takata, building the factory in Mexico in 2000 would enable it to help meet booming demand for air bags with cheaper labor, projections prepared for executives show.

By moving inflator production from two plants in the United States to Mexico, Takata saved \$70 million in labor costs over five years to 2006, an internal company presentation shows, dropping the labor cost for making an inflator from \$2 to about 75 cents. Takata's automaker customers benefited: the cost to them fell by more than 20 percent to less than \$20 each, according to the presentation.

By spring 2005, Takata's big bet on the Mexican factory appeared to be paying off. Workers at the Monclova plant, as it was known in the company, posed for a commemorative photo, raising both hands in the air in a banzai salute.

Soon afterward, Takata closed its factory in La Grange, Georgia, southwest of Atlanta. Takata had been reducing inflator production there and at a second U.S. plant in remote Moses Lake, Washington for four years, records show.

Worker morale had suffered at the plant in Moses Lake, built on the site of a former U.S. military base, workers there told Reuters. By 2000, a new management team prioritised meeting output quotas and enforced overtime as demand for U.S. cars and SUVs soared, former workers say. "We just burned people out," said one former worker, who like others asked not to be named. In 2002, the plant laid off 100 workers and sent more production to Mexico, media reports at the time said.

A series of mistakes by workers in handling ammonium nitrate at the La Grange, Georgia and Mexico plants between 2000 and 2002 left the explosive compound

## Takata's air bag disaster

**1933** Takata founded in Shiga, Japan by Takezo Takada to produce sturdy textile materials.

**1987** Takata Corp starts making airbags.

**2001** Engineers at Takata's Monclova, Mexico plant identify range of problems, including faulty welding that could have caused inflators to fail

**May 2004** Honda acknowledges "unusual airbag deployment" in Alabama case in which the bag ruptured and sprayed metal debris at the driver.

**March 30, 2006** Takata's air bag plant in Monclova, Mexico rocked by series of explosions.

**November 2008** Japanese carmakers conduct the first of a series of recalls over potentially defective Takata air bags.

**November 2009** National Highway Traffic Safety Administration opens inquiry into whether Takata and Honda recalled vehicle fast enough.

**April-May 2013** Takata's customers, including Honda and Nissan, recall over 4 million cars from model years 2001-2004 from around the world for potential air bag defects.

**Nov. 6, 2014** Yoichiro Nomura, Takata executive vice president and chief financial officer, apologises for recalls, forecasts net loss for year of 25 billion yen (\$217 million)

**Dec. 1, 2014** Date by which Takata must hand over all documents and other materials related to a safety investigation by the U.S. National Highway Traffic Safety Administration. The probe was partly triggered by a Reuters investigative report.



CAR BLASTS: At least five people have died and 160 injured by exploding Takata air bags over the past decade. REUTERS/TORU HANI



FACING LOSS: Takata Corp is forecasting a full year loss of \$217 million and its share price has more than halved. REUTERS/YUYA SHINO

exposed to dangerous levels of humidity, Takata told regulators in the United States and Japan.

Takata says inflators could be susceptible to rupture if exposed to moisture or extreme humidity. The defect in Law's air-bag in the Malaysian accident was caused by humid conditions at the Georgia plant, Takata and Honda said.

It is unclear how much Takata's headquarters in Tokyo knew about the problems at its inflator plants. Takata did not dispatch permanent staff from headquarters to the Mexican plant as it ramped up output, workers say.

A Takata safety auditor dispatched from the United States inspected the Mexican inflator plant in May 2011 and found problems in handling the volatile ammonium nitrate. His audit report, seen by Reuters,

faulted the plant for not closing bags of the compound tightly enough and for storing scrapped or contaminated propellant near good material, risking mix-ups. He said in his report he would not send the audit to Takata's headquarters in Tokyo.

Shigehisa Takada, the grandson of the founder, now chairman and chief executive, has said the company made a mistake by allowing too much autonomy to its local managers in North America during a period of rapid growth. Takata acquired at least six companies in the United States and Germany between 1989 and 2012.

"Back then, the U.S. markets were expanding very rapidly, and we could not see everything that was happening there," according to a recording of Takada's speech to a closed shareholders meeting in June. It was his most recent public appearance.

*Additional reporting by Yoko Kubota in Tokyo, Gabriela Lopez in Ciudad Frontera and Paul Lienert in Detroit. Writing by Kevin Krolicki. Editing by Bill Tarrant and Peter Hirschberg*

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