

BUSINESS DAY

Sunroofs Are Growing in Size and Popularity. Rules Haven't Kept Up.

Wheels

By CHRISTOPHER JENSEN FEB. 22, 2018

After 18-year-old Liza Hankins was thrown through the closed sunroof of her sport-utility vehicle during a crash and paralyzed, her family sued the truck's maker, claiming it had failed to live up to its safety responsibilities.

The carmaker, Ford, won the case after it pointed out that no government regulations required a sunroof — even a closed one — to keep someone inside a vehicle in a crash.

Today, more than a dozen years after Ms. Hankins's crash, there are still no government regulations meant to prevent the hundreds of sunroof ejections that happen every year — even as more buyers are ticking the box for the sunroof option and more carmakers are stretching the size of the glass overhead with larger, panoramic sunroofs.

Some automakers have already taken steps to make sunroofs safer by using laminated safety glass, while gadgets now in the works could help limit sunroof ejections during rollovers. And a new test created by researchers at the National Highway Traffic Safety Administration could mean the federal government is laying the groundwork for regulations governing sunroofs.

“We know that there are fatalities and injuries,” said Cathy Chase, president of Advocates for Highway and Auto Safety. “And it is a solvable problem.”

With sunroofs becoming increasingly popular, consumer advocates worry that the danger will grow.

About seven million, or 40 percent, of the 2017 model year cars and light trucks sold in the United States came with a sunroof, compared with 33 percent for the 2011 model year, according to WardsAuto, a trade publication.

Crash data is not as up-to-date, but it is still troubling. About 300 people were killed and about 1,400 injured every year from 1997 to 2008 when they were thrown out of sunroofs, whether open or closed, the N.H.T.S.A. said in 2011. In 2016, the agency did a more limited study of ejections through closed sunroofs only: Between 2002 and 2012, about 230 people were killed and 500 injured each year.

In a statement, the agency said it was “actively looking into this issue and continues to analyze information related to the structural integrity of sunroofs.” The agency also said it was “evaluating factors that reduce passenger ejection.”

Federal regulators should update their data and take a serious look at sunroof standards, said Jason Levine, the executive director of the Center for Auto Safety.

“Sunroofs are getting bigger, and so that raises questions that perhaps those numbers are larger,” Mr. Levine said.

Ms. Hankins is among those whose lives were forever changed.

The sunroof in her 2000 Ford Expedition was fun when she first got the vehicle, but the novelty wore off and she usually kept it closed — just as it was when she crashed on the way to work in Yazoo City, Miss., in 2005.

“I didn’t think I would ever be thrown out of it,” she said in a telephone interview.

Ms. Hankins has no memory of the crash, but the evidence showed that the truck rolled over, the glass panel of the sunroof popped out and she was thrown through the opening.

“It put me in a wheelchair,” she said, adding, “It scarred my face really badly.”

In the suit against Ford, Ms. Hankins's lawyers argued that the automaker should have used laminated safety glass, the kind used in windshields, and more securely anchored the panel. The lawyers said Ford had known for decades that laminated glass — which uses a layer of plastic film between two layers of glass — was safer, but used less-expensive tempered glass.

The automaker acknowledged that tempered glass, which is used in side windows, was less expensive. However, it said serious brain and neck injuries could occur when heads hit laminated glass, a danger it concluded was a greater threat to belted occupants than ejection. (Ford asserted that Ms. Hankins had not been wearing a seatbelt — a suggestion she denied.)

The N.H.T.S.A. considered regulating sunroof safety in 2011 when it established rules to prevent side-window ejections but ultimately opted against doing so. (To comply with the side-window rules, carmakers usually rely on curtain airbags that cover the windows.)

The agency noted that only 3 percent of the 10,000 ejection deaths each year from 1997 to 2008 involved sunroofs. That contrasted with 62 percent through side windows.

The agency's decision dismayed safety advocates, who said it had ignored a 2005 congressional mandate to reduce the danger of being thrown from a vehicle.

At the time, the agency said that it was in compliance with the mandate and that it was “not reasonable” to adopt a sunroof standard. One major impediment: It didn't have a test to measure sunroof safety.

Now there may be one.

Last year, three N.H.T.S.A. researchers announced that they had developed “a viable performance test” using a ram to push up and gauge the strength and anchoring of laminated glass in a sunroof.

David Friedman, a former top official at the agency who oversees automotive issues for Consumers Union, said it appeared that the test had been developed with the idea of exploring a new regulation. “I'd argue it should be on the list,” he said.

Although research shows that wearing a seatbelt greatly reduces the chances of being completely thrown out a sunroof, a partial ejection is still possible in a particularly violent crash, said Stephen Batzer, a forensic engineering consultant from Michigan and a court-recognized expert in automotive crash safety. If federal regulators decide to explore a sunroof regulation, they will most likely consider mandating the use of laminated glass, Mr. Batzer said.

Some automakers already use laminated glass for sunroofs. Volvo favors it.

“From a safety perspective, the most important aspect of the roof being laminated is to ensure that the occupant stays in the compartment in case of a rollover,” Russell Datz, a Volvo spokesman, said in an email.

And Ford — which in Ms. Hankins’s lawsuit warned that laminated glass sunroofs could be dangerous — now uses it in some of its sunroofs “depending on engineering requirements,” a company spokeswoman, Elizabeth Weigandt, said. She declined to detail the models or requirements.

An auto-industry supplier in South Korea will soon offer what it says is a better safety option. Hyundai Mobis, which supplies parts to automakers including Hyundai and Kia, has developed what it believes is the first sunroof airbag.

An airbag would provide protection even when the sunroof was open, said Choon Kee Hwang, a spokesman for the company. He said it could appear on new vehicles in a year or two.

Even if carmakers are showing a willingness to address sunroof safety on their own, it’s well past time for the government to establish standards, said Joan Claybrook, who headed the N.H.T.S.A. from 1977 to 1981 and is president emeritus of Public Citizen.

Two hundred or three hundred deaths a year indicate a “deadly issue” that should be addressed, Ms. Claybrook said. There is precedent for a relatively small number of deaths to prompt regulatory action, she said. In 2014 — citing 210 fatalities a year — the N.H.T.S.A. required automakers to make backup cameras standard equipment on cars and light trucks.

Regulators, Ms. Claybrook said, have just as much reason to address sunroof standards.

“It is so obvious,” she said.

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