Chrysler shot down suggestion for better seats, ex-worker says

By CHRISTOPHER JENSEN
PLAIN DEALER AUTO EDITOR

As the newly appointed leader of Chrysler's Minivan Safety Leadership Team, Paul V. Sheridan thought he had a good idea: Chrysler should make its seats much, much stronger.

So Sheridan met with his team in March 1993. They decided that if Chrysler wanted to take the lead in safety when it introduced its redesigned 1996 minivan, it should match automakers like Mercedes-Benz.

The idea was that the seats used on the next minivans should significantly exceed Federal Vehicle Motor Safety Standard 207, which specified minimum requirements for seat-back strength.

The team felt that 207 was "virtually irrelevant" when it came to protecting consumers in real-world crashes, he said.

Minutes of the meeting were sent to Chrysler executives, who quickly ordered that every copy be retrieved, Sheridan said.

Sheridan figured that meant not to pursue the seat-back issue.

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PAUL V. SHERIDAN, *former leader of Chrysler's Minivan Safety Leadership Team*

"But by demanding we round up meeting minutes and destroy them, that is a very strong message," he said. "It had to be the rudest awakening of my career at Chrysler."

Sheridan contends that the team's suggestion posed a legal problem for the automaker because the core of Chrysler's defense in some cases was claiming that its seat backs were safe because they met or exceeded Standard 207.

"I got my brains kicked in for saying that regulatory compliance is not the name of the game," Sheridan said.

He said Chrysler also was arguing that there was a safety advantage in having a seat back give way because that would help absorb energy and protect the occupant. To satisfy the safety team's curiosity, Sheridan said, he once went to the engineers responsible for seating and asked to see those specifications.

"The engineers just laughed at me. Chrysler has no such spec. There was no testing for any such specification," said Sheridan, who now lives in Dearborn and often testifies against DaimlerChrysler.

DaimlerChrysler officials declined to respond to Sheridan's charges in detail, instead providing a written statement noting that he was fired from Chrysler and that the team he headed was doing work related to marketing and advertising, not engineering.

But Sheridan provided a series of letters from Chrysler officials in which his job performance was praised — until he began raising safety issues.

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KATHLEEN WAYT / ASSOCIAT

As a Chrysler employee, Paul V. Sheridan argued that DaimlerChrysler should start using much stronger seats in its new minivans.

Auto seat-back safety remains an issue

"There is no reason on God's green earth that we cannot design against that sort of thing. I personally feel the North American [auto] industry has been somewhat negligent," said Frank Navin, a professor of engineering at the University of British Columbia who has studied and written about seat-back strength.

"It is not that they can't do it; it will simply cut into the profits of a vehicle if they do it," Navin said.

The U.S. and Japanese automakers are "more than capable" of designing seats that could provide substantial improvements in protection, according to Douglas P. Romilly, an associate professor of mechanical engineering and seat-back researcher at the University of British Columbia.

A decade of delay

In 1989, two safety researchers who worried that too many seats were breaking, causing injuries, asked the National Highway Traffic Safety Administration (NHTSA) to do something about it.

In particular, they asked for improvements in Federal Motor Vehicle Safety Standard 207, which governs the strength of seat backs and had received no update since 1972.

One of the researchers was Alan Cantor, chairman of ARCCA, a Penns Park, Pa., consulting and engineering firm specializing in aviation and automotive crash safety that sometimes provides testimony in civil suits against automakers.

"I was astounded by the number of seat-failure cases I was seeing . . . with massive injuries. I looked at the standard [207], and . . . it was a joke," Cantor said.

Early in 1990 the agency agreed to consider a change, but more than a decade later the 1972 rule remains intact.

NHTSA says it is still considering what, if anything, to do. That doesn't mean it has not worked on the issue. The agency undertook studies and requested advice and information from the automakers.

For the most part, the auto companies told the NHTSA that the existing seats were pretty good. They said that rear-impact collisions were not a major problem and that there wasn't enough information on how to make seats stronger without possibly posing other dangers to consumers, such as neck injuries.

In a written statement to The Plain Dealer, DaimlerChrysler expressed belief that its seats are designed like "virtually all of today's automobile seats" and "yield in a controlled fashion to absorb and dissipate the energy of an accident."

Company officials declined to explain whether such yielding could include a seat back that collapses so far as to almost touch the seat behind it. That is apparently what happened in the cases of Comella and Thomas.

In suits filed on behalf of Thomas and Comella, Cleveland lawyer James A. Lowe argued that those seats failed catastrophically and that the automaker knew or should have known that they were not strong enough. DaimlerChrysler officials declined to comment on the cases because they were settled out of court.

NHTSA's position is that it does not want to change the seat-back standard if there is a chance that it will cause other problems and if experts disagree over what, if anything, should be done.

"If the auto industry resists something strongly, the agency is very reluctant to do anything," said Clarence Ditlow, director of the Washington, D.C.-based Center for Auto Safety, a group Ralph Nader founded.

Standard goes unchallenged

Cantor contends that the NHTSA has been "scared to death" to change the seat-back standard, fearing that if any problems occur with the new seats the agency will be criticized.

The agency already has been through the second-guessing meat grinder. After it required air bags, it discovered that deployment could kill or injure improperly restrained children or frail adults. Horrified and embarrassed, the NHTSA had to modify the regulation.

The best light that can be put on the agency's inaction is that, with limited resources, it has focused on the problems that cause the most injuries or deaths, Ditlow said.

That meant the top priority was frontal impacts, which result in the largest percentage of serious injuries and deaths.

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Charlottesville, Va., who has studied seat-back strength and worked for NHTSA, the University of Virginia and George Washington University.

"Just because a small number are injured doesn't mean you shouldn't do something. For those people who are injured, it is very important," he said.

The collapse of a front seat can do more than injure its occupant. There have been cases of children seated in the back seat being killed or injured when a front seat broke, launching an adult missile into the back seat.

A farcical standard?

Standard 207 was adopted in 1968, based on a 1963 report issued by the Society of Automotive Engineers. It was modified slightly in 1972.

The standard is simply not based on "any meaningful assessment" of what happens to a seat in a rear impact, according to Romilly.

Part of the standard states that the seat should be able to support 20 times its own weight. That is not a very strong seat, according to some safety researchers.

In addition, automakers are trying to make their vehicles lighter to achieve better fuel economy. But if they make the seats lighter, that means a weaker seat back, according to a 1993 study by safety researchers from the University of British Columbia.

Measuring the force

The standard also calls for the seat back to withstand a force of 3,300 inch-pounds. Many other countries, including Japan and Canada, have adopted that part of Standard 207. But the European Community has insisted that the seat be about 40 percent stronger.

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Lowe, the Cleveland lawyer who represented Comella and Thomas, is more blunt: "This whole thing is such an absolute farce. It is one of the last, great hidden [automotive] dangers."

Going beyond

Generally, automakers have told NHTSA that the seating standard shouldn't be changed because making stronger seats is uncharted territory.

But while they talk about the extraordinary difficulty of designing seats to meet a tougher standard, some have gone ahead and built far stronger seats.

Safety leaders, including Volvo, which has encouraged NHTSA to explore a stronger seat-back regulation, routinely produce seats of the kind researchers like Cantor, Digges, Romilly and Navin like to see.

These are seats that not only resist collapsing in a rear impact but also absorb energy to minimize the chance of other injuries, including whiplash.

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Serious cases usually involve lawsuits, which insurance companies and automakers often settle out of court. Normally a condition of these settlements is confidentiality, including court orders that incriminating documents be kept secret.

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One of the most controversial aspects of Standard 207 is how automakers prove they meet it. The seat is tested without the weight of a human, which some critics say is unrealistic, if not ridiculous.

Seats that pass 207 and have the NHTSA stamp of approval often break during tests required under a federal standard called 301R, which some safety researchers see as a better indication of real-world performance.

The 301R test examines the resistance of the fuel tank to leak after a rear impact. In that test the vehicle, with two dummies strapped in the front seats, is hit from behind at 30 mph. It is not

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"For the life of me I cannot see why an industry that can design such a fine mechanical device as a car . . . can't design a seat," said Navin, who has studied and written about seat-back safety. "You can't tell me they don't have enough analytical skills to sit down and analyze a seat."

THE PLAIN DEALER

BUSINESS

SUNDAY, MAY 13, 2001 | SECTION H

A QUESTION OF STANDARDS

PHOTOGRAPH COURTESY OF LOWE EKLUND WAKEFIELD CO.

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The seats in the 1992 Plymouth Voyager owned by Thomas Comella collapsed in a crash which left the former mayor of Highland Heights paralyzed and blind. Some experts contend auto seat backs, built to a standard devised in 1968, are not strong enough and collapse too easily.

Critics, automakers debate the correct remedy for devastating collapses of auto seat backs

By CHRISTOPHER JENSEN | PLAIN DEALER AUTO EDITOR

Neither Victoria Thomas nor Thomas Comella ever imagined that the backs of their car seats would collapse in crashes, but then they never imagined they would spend the rest of their lives paralyzed, either.

On the afternoon of Aug. 17, 1997, 19-year-old Thomas was driving her 1996 Dodge Neon near Marion when she hit a puddle and skidded out of control. It struck a pole with an impact that caused it to slow by about 11 miles per hour, according to consultants working for Thomas' lawyer.

Almost two years later, on June 25, 1999, Comella decided to take advantage of owning his own business and treat himself to a day off to enjoy some nice weather.

He was driving his 1992 Plymouth Voyager on Interstate 90 in Wickliffe when a motor home changed lanes to avoid a vehicle that was merging. The motor home came up too quickly on Comella's minivan and hit it from the rear. Comella was without fault, a witness told police.

"It felt like the old days at Euclid Beach when I was in the Dodgem. It did not feel like I got hit that hard," Comella, now 52, said.

In each crash, the seat back collapsed, allowing each driver to be thrown backward, even though both were wearing seat belts. Their heads hit the rear seats, and they suffered spinal injuries.

Thomas' legs were paralyzed.

Comella, the father of two teenage girls and the former president of the Highland Heights City Council, suffered nerve damage that left him blind and paralyzed except for the extremely limited use of his arms.

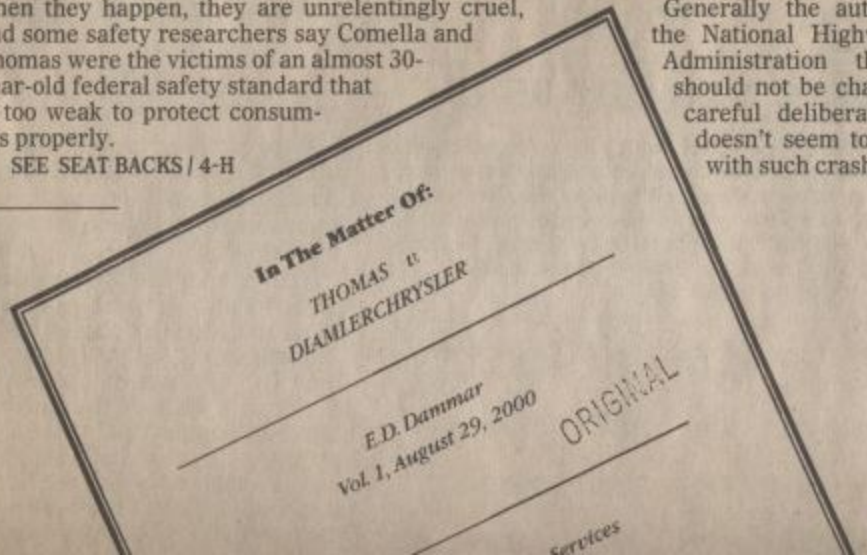
Comella and Thomas won the nightmare lottery.

Accidents like theirs apparently are not common. But when they happen, they are unrelentingly cruel, and some safety researchers say Comella and Thomas were the victims of an almost 30-year-old federal safety standard that is too weak to protect consumers properly.

SEE SEAT BACKS / 4-H

FIGHTING AN UPHILL BATTLE:

A former Chrysler worker contends company officials dismissed his suggestion to build safer seats for its vehicles. **4-H.**



Researchers debate how to design a safe seat back

By CHRISTOPHER JENSEN
PLAIN DEALER AUTO EDITOR

Safety researchers have reached no consensus on exactly how to improve auto seats.

Some researchers say that one cannot simply make a seat incredibly stiff. If a seat is too rigid, it could cause serious neck or back injuries in a rear impact, particularly if it has a poorly designed head restraint, they contend.

Safety researcher Alan Cantor says that concerns about making seats too stiff are overstated and that there is no excuse for not making seats stronger and safer.

"They are trying to make an excuse for the seats that are out there," said Cantor, the chairman of ARCCA, a Penns Park, Pa., consulting and engineering firm.

Generally the automakers have told the National Highway Traffic Safety Administration that the standard should not be changed without more careful deliberation because there doesn't seem to be a big prob lem with such crashes.

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