

## MICKELSON FINALLY WINS MAJOR



## PUDGE GIVES METRO PUERTO RICANS A SPOTLIGHT

## The Detroit News

Monday, April 12, 2004

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A B C D E F G

Metro Edition

## Predators clip Wings in Game 3

Detroit outshoots Nashville but can't get much past the vigilant Tomas Vokoun.

**NASHVILLE, Tenn.** All right, at some point, Nashville is going to realize where it is, and who it's playing, isn't it? Don't count on it.

They call it Smashville down here, and they make up for their lack of history with heapin' batches of youthful impunity. Nashville, in its first playoff series, keeps sticking to the Wings,

and in Game 3 on Sunday, stuck it to them good.

The Predators' 3-1 victory shaved Detroit's series lead to 2-1, ratcheting up everything — the energy, the pressure, the animosity. The Wings, who played well for long stretches, can look at it two ways.

They weren't going to win every playoff game anyhow. Or, the Predators are making

the transition from pesky to potent. The next step is dangerous, and it could come in Game 4 on Tuesday night in Nashville, especially with Nashville goalie Tomas Vokoun getting that ol' familiar confident look.

Stop me if you've heard these numbers before. The Wings outshot the Predators 42-21, including 23-9 in a frantic third period. Detroit finally looked dominant, just before it looked defeated.

"You can't get frustrated, that's the thing," said Brett

## STANLEY CUP PLAYOFFS

BOB WOJNOWSKI



Hull, who scored the Wings' lone goal. "(Vokoun) is playing very well. But with the guys in this room, we're not afraid of any goalie. We've

got to keep getting in front of his face, keep throwing it at the net."

The Wings need to do even more of that, before Vokoun gives them something to really be frightened about. See, this is why hockey can be a goofy sport, and the Wings can be one of its primary puzzles.

In the two games in Detroit, Nashville played well. The Wings won both, including Game 2 on a late fluke.

Please see WOJO, Page 2A



David Guralnick / The Detroit News  
Detroit's Tomas Holmstrom tries to collect the puck in front of Nashville's goal. Detroit lost 3-1.

## MORE IN SPORTS

## Michigan connection

State natives Legwand, Hall lead Predators' charge. Page 1D

## Power plays sink Wings

Detroit lets golden opportunities to score slip away. Page 8D

## DANGER OVERHEAD: CRUSHED ROOFS

## Seat belts not enough to save lives in rollovers

Man's death mirrors thousands each year

By Bill Vlastic and Jeff Plungis  
The Detroit News  
Part 2 of 3

**LINCOLN, Neb.** — He was cruising over a slight rise on Highway 33 when Clyde "Ray" Noyes saw a car stopped up ahead, waiting to turn into a farmhouse driveway.

Noyes pulled his Ford F-150 SuperCab pickup left to pass. But an oncoming car was approaching fast.

He cut back sharply to the right. The pickup's wheels skidded into a low guardrail. Then, the 4,600-pound truck flipped on its side, and rolled over several times before coming to rest in a shallow culvert on the edge of a cornfield.

And when a Lancaster County sheriff's deputy got to the accident scene at 7:06 p.m. last July 11, Noyes was dead in the driver's seat, his lap-and-shoulder belt buckled and the roof of the F-150's cab crumpled down over his head.

It was a split-second traffic maneuver that turned disastrous, one of nearly 7,000 deaths and serious injuries linked each year to crushed vehicle roofs.

But Noyes' death is also a chilling example of how seat-belted motorists are killed or injured when their vehicles' roofs crush around them.

An average of 3,700 deaths and serious injuries occur annually in rollover accidents in which the victims are belted and the roof is crushed, accord-



Brandy Baker / The Detroit News  
The Ford F-150 SuperCab that Ray Noyes was driving hit a guardrail, flipped and rolled, the roof caving in at least 10 inches on the driver's side. The truck is in storage.

## MORE INSIDE

## SuperCabs scrutinized

Jury links occupant ejection, crushed roofs in truck. Page 9A

## Europe sets standard

Foreign automakers conduct rigorous safety tests. Page 9A

ing to the National Highway Traffic Safety Administration.

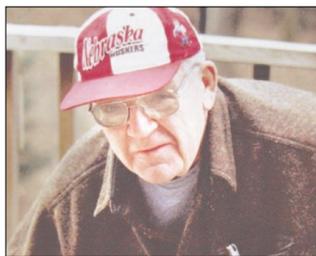
No subset of rollover statistics is under greater scrutiny by NHTSA, which is expected this year to propose a tougher new

roof-strength standard to replace the current rule enacted back in 1971.

"The biggest increase in rollover deaths is coming from belted occupants," said Sean Kane of the research firm Strategic Safety. "It is the key correlation between roof-crush and injury severity."

For more than 30 years, Detroit's Big Three automakers have maintained that crushed roofs do not cause fatal or catastrophic injuries, but simply reflect the violent circumstances of certain rollover accidents.

Please see CRASH, Page 8A



Noyes family photo

Clyde "Ray" Noyes of Nebraska died after the roof of his pickup crushed in a rollover accident.

## Suburb plan may not cut water rates

17 cities study ditching Detroit, building new plant. But saving money is a long shot.

By John Wisely and Amy Lee  
The Detroit News

While 17 suburban communities study the feasibility of leaving the Detroit water system, experts doubt a second system would reduce water rates for residents upset over double-digit increases.

A suburban system would require hundreds of millions of dollars in start-up costs, and would compete with Detroit for skilled operators.

The battle between Detroit and the suburbs has been brewing for years, with many suburban communities upset over secrecy surrounding the rate-setting process and a lack of representation on the water system board.

"The things people tend to forget about are the underlying costs," said Jack Hoffbuhr,

executive director of the American Water Works Association, a trade group of water suppliers that includes Detroit. "It's not like you build a treatment plant and it runs itself."

Leaders in the 17 communities in Oakland and Macomb counties have launched a \$350,000 study on treating water from Lake St. Clair and shipping it to cities from St. Clair Shores to Southfield. They say it's no pipe dream.

"We're still a ways away from doing this, but we are going to do this," said Warren Deputy Mayor Mike Greiner, who suspects Detroit has been using the water system as a cash cow to finance city operations. "Within five years, the people of Warren and St. Clair Shores are going to be getting their water from St. Clair Shores rather than Detroit."

Please see WATER, Page 2A

## Today's rates

Rates for some of the communities considering an alternative water system.

Community	Detroit local charge	Local charge	Total rate
Detroit	\$6.30	\$7.85	\$14.15
Birmingham	7	10.55	17.55
Southfield	7	10.54	17.54
St. Clair Shores	6.95	12.62	19.57
Warren	7.29	6.66	13.95

Note: Rates are for 7,500 gallons as of January 2004  
Source: Detroit Water and Sewerage Department  
The Detroit News

## Suburbs in study

The following communities are studying the possibility of forming their own water system: Berkley, Beverly Hills, Birmingham, Bingham Farms, Center Line, Clawson, Fraser, Grosse Pointe Shores, Huntington Woods, Lathrup Village, Pleasant Ridge, Royal Oak, Southfield, Southfield Township, St. Clair Shores, Troy, Warren.

MONEY&LIFE  
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## All U.S. big jets add defibrillators

USA TODAY

Starting today, every big jet in the U.S. fleet must have a defibrillator on board, making an airliner one of the safest places to suffer a cardiac arrest.

A Federal Aviation Administration rule, four years in the making, requires an automated external defibrillator and more advanced medical kits on all big jets. Commuter

planes are exempt.

A defibrillator is an easy-to-use device that delivers a life-saving shock when the heart goes into a deadly short-circuit known as ventricular fibrillation.

Doug Wills, a spokesman for the Air Transport Association, the airlines' trade group, said: "The airlines decided having these on the plane is just a good thing to do."

## Iraq violence simmers; Fallujah cease-fire holds

By Abdul-Qader Saadi and Lourdes Navarro  
Associated Press

**FALLUJAH, Iraq** — Gunfire was largely silenced today in the second day of a truce in Fallujah, where Iraqi doctors said 600 people, including many civilians, were killed. Top U.S. military spokesman U.S. Brig. Gen. Mark Kimmitt said about 70 Americans and 700 insurgents had been killed since April 1.

Additional U.S. forces have been maneuvering into place, and the military has warned it will launch an all-out assault on Fallujah if talks there between pro-U.S. Iraqi politicians and city officials — which were continuing today — fall through.

In the south, members of the Iraqi Governing Council have



Abdel Kader Saadi / Associated Press

A man mourns at his son's grave in Fallujah, where more than 600 Iraqis reportedly have been killed since last week. Story, Page 4A

reportedly held talks with followers of radical Shiite cleric Muqtada al-Sadr. U.S. coalition spokesman Dan Senor would not comment on Iraqi talks with al-Sadr's followers but said, "I

would say that our goal is to minimize bloodshed and to head off any sort of conflict."

The military suggested it is open to a negotiated solution in its showdown with al-Sadr.

## MONDAY'S WEATHER

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Low 34  
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“Ray thought he was buying the best, toughest truck out there. Most people buy a full-size pickup because it’s tough. You know, it’s Ford tough.”

MITCH KRENK, stepson of Ray Noyes

“The roof looked like a crinkled aluminum can, just crushed on one side. It was like a karate chop just chopped it. The passenger door opened up fine.”

CHUCK NOYES, son of Ray Noyes

## CRASH

Continued from Page 1A

But that explanation provides little solace to the Noyes family.

“Accidents can happen, but Ray didn’t have to die,” said his widow, Sally Noyes.

Ray Noyes, 65, was an American success story — an Eagle Scout, a U.S. Navy chief petty officer, nuclear plant engineer, youth wrestling coach, husband, father and grandfather.

He died on a rural road he’d traveled countless times, a ruler-straight stretch of two-lane blacktop cutting through the farms and pastures of southeastern Nebraska.

But it could have been any rollover anywhere: a momentary loss of control, a vehicle upended, a roof crushed — and a life lost.

Ray Noyes had more than 200,000 miles on his old-model Toyota pickup when he finally decided to buy a new truck.

And like any project he took on, Noyes analyzed it in detail.

“Ray was an engineer, a nuclear engineer,” said his stepson Mitch Krenk. “He researched everything to death.”

Born in 1937 in the tiny Nebraska town of Imperial, Noyes was a self-made man with a tireless work ethic. He joined the Navy at age 19, spent 10 years on active duty, and returned to earn degrees in mechanical and nuclear engineering.

A stocky, crew-cut former wrestler, Noyes had a lifelong love of machinery. “On our first date, he took me to Brownville (Neb.) to see the big hole in the ground for the Cooper nuclear plant,” Sally Noyes said.

“Ray was a hardware man,” said Larry Harrold, his long-time supervisor at the Energy Northwest public utility in Richland, Wash. “He had a nose for staying on top of problems and coming up with solutions.”

Methodical and meticulous, Noyes pored over product specifications of pickup trucks in the spring of 2000. For an engineer whose favorite book was “Why Materials Fail,” selecting a new truck was no small deal.

“We’d stop at a store and he’d be down on his knees looking at tires,” said his son Chuck Noyes. “He just really thought things through.”

Noyes settled on a bright red, 2000 Ford F-Series Super-Cab with leather captain chairs, 17-inch cast-aluminum wheels, and a special towing package. When he retired from Energy Northwest, Noyes packed up his Ford and moved his family back to their roots in Nebraska.

But he was never far from a toolbox, tinkering in the garage and building a home office exactly like the chief’s quarters on a naval warship. Mostly, Noyes enjoyed the fruits of retirement — spending time with old pals, hunting at his cabin in Wyoming and cheering on his grandsons at sporting events.

It wasn’t hard to pick his booming baritone out of a crowd at a high school basketball game.

“Every time my son made a basket, Ray would jump up and yell, ‘All right!’” Krenk said. “I finally told him he didn’t have to cheer during warm-ups.”

### Red lights flashing

On Friday nights, things get lively at the Veterans Of Foreign Wars Post 4959 in Crete, Neb. While the vets kick back and swap stories, their wives cook up a spread of ribs and side dishes for supper.

Ray and Sally Noyes came early for “Grill Menu” night at the VFW last July 11, bringing along Sally’s 90-year-old mother, Alice Weiss. After they ate, Sally headed off to a meeting for her 50th class reunion of Crete High School.

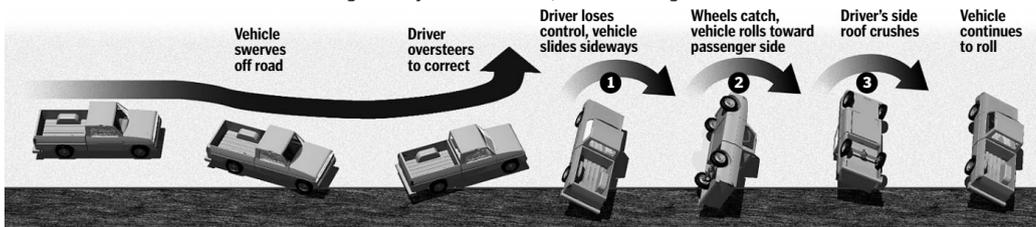
Noyes took his mother-in-law home, then started east on Highway 33 for the 20-minute trip back to Lincoln.

The weather was clear and warm. The speed limit was 55 mph. Noyes was halfway home when it happened.

He saw the car stopped in front of him and reacted. If he had lost control just up the road,

### Common rollover crash

Investigations based on accidents without an impact leading to rollover found the vehicle often drifts off the road to the right. The driver overcorrects and loses control. Sliding sideways down the road, the vehicle begins to roll.



#### 1 Vehicle tips

The vehicle slides sideways in the original direction of travel. The right side of the vehicle lifts off the ground, leading to a rollover.

#### 2 Sliding, passenger side leading

Passenger side leading, the vehicle is airborne for an instant. Often the passenger side of the roof is damaged and the windshield shatters, weakening the roof structure.

#### 3 Roof crush

The vehicle gains velocity as it rolls onto the driver’s roof rail. The force when it contacts the ground can cause the roof to crush.



Source: Xperts-LLC



Tim Summers / The Detroit News

### More Online

For previous installments of this series, animations of various rollover situations, additional data from NHTSA and comments on the Roof Crush Resistance standard, go to [detnews.com/specialreports/](http://detnews.com/specialreports/).

his F-150 might never have rolled.

Except he hit the only guardrail for miles. The F-150’s right wheels dug into the rail’s three metal cables, and the truck rolled over onto its right side, according to the police report.

The passenger side took the first blow, but the roof on the driver’s side bore the brunt of the crash.

On impact, the roof over Noyes crushed down at least 10 inches, nearly to the back of his seat. The roof on the other side hardly was deformed.

Lancaster County Sheriff’s Deputy Derek Horalek witnessed the rollover from down the road, and was on the scene almost instantly. Noyes, he said in his accident report, was wearing his lap-and-shoulder belt.

Noyes was taken to Bryan Lincoln General Hospital West, where he was pronounced dead on arrival. The certificate of death lists “cardiac arrest” and “trauma from MVA (motor vehicle accident)” as the causes.

Later that evening, Sally Noyes rode down Highway 33 with her sister, and passed the flashing red lights of police cars on the shoulder of the road.

“I said, ‘There must have been an accident,’” she said. “It looks like a red pickup. It never dawned on us ...”

She arrived home to find the front door locked and the house dark. When she got inside, the phone was ringing. There had been, she was told, an accident on Highway 33.

### Crash-test findings

When he saw his father’s F-150 at the storage yard, Chuck Noyes was shocked at the damage on the driver’s side roof.

“The roof looked like a crinkled aluminum can, just crushed on one side,” Chuck Noyes said. “It was like a karate chop just chopped it. The passenger door opened up fine.”

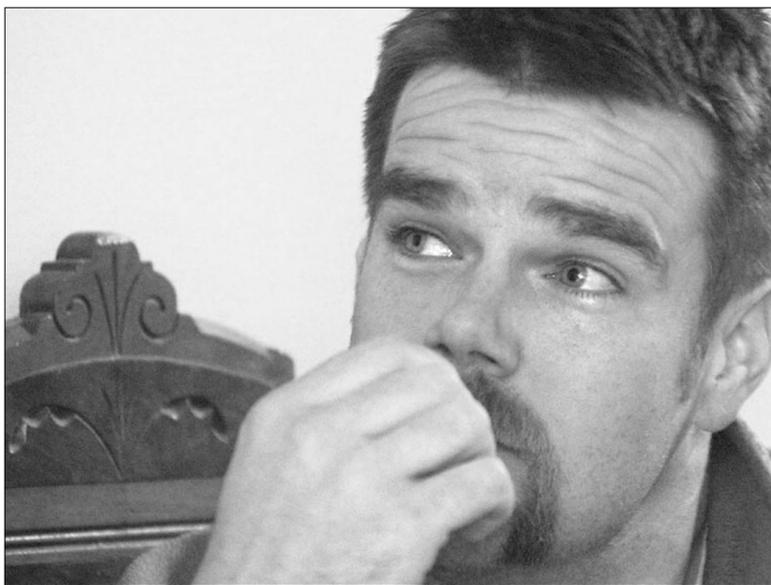
Auto-safety experts agree that two rollover accidents are identical, and that trucks roll differently than passenger cars.

But certain characteristics appear frequently in rollover conditions.

The leading side of the roll very often suffers less damage than the trailing side of the vehicle. If a car or truck rolls to the right, the left side of the roof crushes with more force.

And the trailing side — where Ray Noyes sat — is where the worst injuries occur.

In a 1994 study of 58 rollover accidents, former General Motors Corp. engineer Don Friedman cataloged where



Photos by Brandy Baker / The Detroit News

**Ray Noyes’ family can’t accept that the engineer bought a brand-new truck that couldn’t protect him in a rollover. “We’d stop at a store and he’d be down on his knees looking at tires,” son Chuck Noyes says. “He just really thought things through.”**

injuries occurred in relation to the leading side of the vehicle.

Nearly 85 percent of the deaths and severe injuries happened on the trailing side, and the majority of those victims wore seat belts.

Friedman recently expanded the study to 800 rollovers from 1992 to 1998, and found that 90 percent of deaths and injuries occurred on the trailing side.

Federal Motor Vehicle Safety Standard 216, which is under review by NHTSA, only requires automakers to test one side of the roof.

Pressure equal to 1.5-times the vehicle’s weight is applied gradually. If the roof crushes five inches or less into the passenger compartment, it passes 216.

Safety advocates contend that testing one side, particularly with the windshield intact, fails to show how the second side will perform in a rollover.

“The roof has got to be able to withstand what is a predictable and serious problem with these vehicles,” said R. David Pittle, senior vice president of technical policy and advocacy for Consumers Union.

Detroit’s Big Three automakers for decades have argued that crushed roofs have nothing to do with serious injuries in rollovers. Instead, they say injuries are caused by occupants “diving” into the roof before it collapses.

Ford Motor Co. has declined interview requests from The News on the topic of roof strength. But Ford’s position on the issue is clearly spelled out in government documents.

In a 2001 filing with NHTSA, Ford said “crash data suggesting the presence of roof deformation and occupant injury does not establish a causal connection between the two.”

Moreover, Ford rejects the notion that rule 216 needs updating after more than 30 years.



**“Accidents can happen, but Ray didn’t have to die,” says his widow, Sally Noyes, in their Lincoln, Neb., home.**

“There is no added benefit to occupant safety with increased overall roof strength,” the company said.

But safety experts say the growing percentage of belted rollover victims seems linked to the strength of the roof — or lack of it.

Ten years ago, 16 percent of the people injured in rollovers were belted, said Ken Digges, a professor with the National Crash Analysis Center at George Washington University.

Now NHTSA estimates that belted occupants represent 55 percent of deaths and injuries in roof-crush, rollover cases.

“As the percentage of belted occupants rises,” said Digges, “roof crush becomes more important.”

The metal A-pillars that frame the windshield are critical to the strength of a vehicle’s roof. On Noyes’ truck, the A-pillar on the left side was nearly flattened. The roof itself came down directly over the driver’s seat.

Noyes was a formidable man, a 6-foot-2, former University of Nebraska heavyweight wrestler in robust good health.

His lap-and-shoulder belt held him in his seat — right in the path of the crushed metal roof.

“The greater the roof crush,

the higher the likelihood of head injuries,” Digges said.

“We have studied two levels of roof intrusion ... five inches and 10 inches,” he said. “We found that the higher level had more frequent head impacts.”

### Family takes action

Did the roof of his F-150 kill Ray Noyes?

“There was massive blunt head trauma, which can cause brain-stem separation,” said Timothy Eves, a lawyer for the Noyes family.

A wrongful-death lawsuit against Ford will be filed within weeks, Eves said. Sally Noyes struggled with her decision to sue, but felt a lawsuit would help expose the problem of crushed roofs.

“You have to get their attention and their attention is lawsuits,” she said. “I’m thinking of other people. How many more will this happen to?”

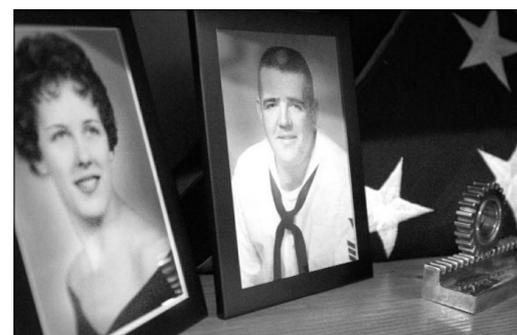
The family can’t accept that a hard-core engineer bought a brand-new, top-of-the-line truck that couldn’t protect him in a rollover.

“How often did he buy a new vehicle? Only twice in a lifetime,” said his stepdaughter Carrie Vitullo. “It makes you mad. I think about it every time I see a Ford truck on the



Noyes family photo

**Chuck Noyes is pictured as a child with his dad, Ray, who was a U.S. Navy chief petty officer, nuclear plant engineer, youth wrestling coach and grandfather.**



**Photos of Sally and Ray Noyes in their 20s sit next to the flag that adorned his casket in a home office he built to look like the chief’s quarters on a naval warship.**



Photo courtesy of Noyes family

**Federal standards only require automakers to test one side of the roof. The roof crushed on the driver’s side of Ray Noyes’ vehicle during the second impact of the rollover.**

highway.”

Noyes chose the Ford F-150 only after looking at every comparable pickup on the market.

“Ray thought he was buying the best, toughest truck out there,” Krenk said. “Most people buy a full-size pickup because it’s tough. You know, it’s Ford tough.”

After the accident, Krenk and Chuck Noyes went to the scene and picked Noyes’ tools out of the high grass. His two sisters, Barbara and Josephine, found his billfold. “When they came back, they were shaking,” Krenk said.

At his funeral, a video tribute was shown to a soundtrack of his favorite singer, Willie Nelson. There was Ray hunting in the mountains, celebrating with friends and family, posing proudly in his Navy uniform.

When he goes hunting now, Chuck Noyes always takes his favorite gun — a .338-caliber rifle that his father machined himself on a small lathe. It was a gift

for his high-school graduation. “The barrel, when he got it, was just a big chunk of steel,” he said. “It took him two years to get it done. He wasn’t fast, but he was very meticulous.”

In the basement of her home, Sally Noyes keeps the “chief’s quarters” just as her husband left it. Naval commendations are framed on the walls. Engineering manuals line the bookshelves. The carpet is the same shade of green that Navy captains have on a ship at sea.

“That was Ray,” she said. “He had to have the green carpet.”

Each year, an average of 253,000 vehicles roll over in the U.S. More than 26,000 people are killed or seriously injured. In 6,900 cases, there was roof-crush present in the vehicle. And in 3,700 instances, the victims were belted.

Ray Noyes was one of them.

You can reach Bill Vlasic at (313) 222-2152 or [bvlasic@detnews.com](mailto:bvlasic@detnews.com).

### About this series

This three-day series is the result of a three-month investigation by Detroit News reporters Bill Vlasic and Jeff Plungis working together with News photographer Brandy Baker.

Vlasic and Plungis reviewed thousands of pages of court records and government documents and interviewed crash victims, safety experts, attor-

neys and federal officials. Both Ford Motor Co. and Daimler-Chrysler AG declined interview requests. General Motors Corp. agreed to an interview with one of its safety executives.

The News team reported the series in Detroit; Washington, D.C.; Los Angeles and Santa Barbara, Calif.; Lincoln, Neb.; and Corpus Christi and Childress, Texas.

# Lawsuits target Ford SuperCab roof

## Jury links vehicle's roof design to ejection

By Bill Vlasic and Jeff Plungis  
*The Detroit News*

**CORPUS CHRISTI, Texas** — Ford Motor Co. has settled a number of lawsuits challenging the strength of the roof in its F-Series SuperCab pickup.

One case, however, stands out from the rest.

In December 2002, a Duval County, Texas, jury found that a crushed roof caused the side doors of a 2000-model SuperCab to burst open, ejecting Paul Alaniz and Laura Benavides to their deaths from the rolling pickup.

The verdict is believed to be the first time that a jury linked roof deformation to occupant ejection in a rollover accident.

Detroit's Big Three automakers have long maintained that ejection is an entirely separate issue from the growing debate over federal standards governing roof strength.

But in *Benavides v. Ford*, the jury ruled that a crushed roof forced open the driver's door and the rear-hinged passenger door on the same side.

"It was clearly a survivable accident if the doors had stayed closed," said Jeff Wigington, the attorney for the Alaniz family.

Ford declined interview requests. In court, the automaker's lawyers argued that the driver, Paul Alaniz, was solely at fault because he consumed alcohol on the evening of the accident, then lost control of his F-150 on a two-lane highway about 75 miles southwest of Corpus Christi.

The jury didn't agree, and awarded the Alaniz and Benavides families a combined \$225 million — one of the biggest automotive product-liability judgments on record.

Ford chose not to appeal the case and, instead, negotiated a confidential settlement, Wigington said.



Brandy Baker / *The Detroit News*  
**Tony Alaniz says his older brother, Paul, who was killed in a rollover accident, was not a reckless driver. Alaniz is standing near the spot where his brother's body was found.**

A critical piece of evidence introduced at trial was a four-minute video of an F-150 SuperCab ejected off a moving dolly at about 45 miles per hour.

Ford commissioned an outside firm to do the test, primarily to show the jury how severe the accident was that killed Alaniz and Benavides.

Instead, the plaintiffs' attorneys offered the video into evidence.

In the dolly-rollover test, the SuperCab's doors popped open on the driver's side, and test dummies were partially ejected from the vehicle.

Because of its "barn-door" style center-opening doors, the SuperCab has no B-pillars supporting the roof in the center of the truck.

### Door latches failed

At the Benavides trial, former Ford engineer John Stilson, testified that latches fastening the front and rear driver's side doors failed because the roof caved in.

"On the second roll, the driver's door latch failed because of the manner in which the roof crushed," said Stilson, testifying on behalf of the plaintiffs.

Each year, more than 26,000 people are killed or seriously injured in rollover accidents,



Photo courtesy of Alaniz family

**A jury found that a crushed roof caused the side doors of this F-Series SuperCab to burst open, ejecting Paul Alaniz and Laura Benavides to their deaths as the truck rolled.**

according to the National Highway Traffic Safety Administration. Nearly 7,000 deaths and serious injuries involve accidents where the vehicle roof crushed.

NHTSA only considers crushed roofs a factor in rollover accidents where the occupants aren't ejected. Safety experts, however, say deformed roofs do play a role in rollover ejections.

"The roof-crush mode influences not only roof deformation, it can influence the risk of ejection," said Ken Digges of the National Crash Analysis Center

at George Washington University, which is conducting an extensive roof-crush study for NHTSA.

Crush-related ejections are usually tied to windshields or windows breaking in a rollover, with occupants ejected out the opening, said former General Motors Corp. engineer Donald Friedman, a frequent plaintiff's witness in roof-crush lawsuits.

### High rollover rate faulted

Critics claim the Ford F-150 SuperCab appears to have an abnormally high rate of ejections in rollovers. (The lawsuits

### Key trial evidence



As part of its defense in the Benavides v. Ford lawsuit, Ford Motor Co. hired an outside firm to do a 45-mph dolly rollover test on a F-150 SuperCab. The truck suffered severe damage to the roof. The test showed the doors flying open and dummies being partially ejected.



The plaintiff's lawyers used Ford's own tests to convince a jury that the crushed roof helped cause the fatal ejection of Paul Alaniz and Laura Benavides. The jury awarded their survivors \$225 million.

against the SuperCab predate Ford's redesign of its F-Series lineup for the 2004 model year.)

A total of 134 people were fatally ejected from F-Series SuperCabs from 1998 to 2001, according to a Ford internal document introduced at the Benavides trial.

The CrewCab version of the F-Series, which has four conventional doors with front hinges, accounted for 71 fatal ejections during the same period.

Even if an occupant is not ejected, the lack of B-pillars in the SuperCab weakens the overall roof structure, said Houston plaintiff's attorney Mikal Watts.

"Everyone, including everyone at Ford, knows the roof structure on these trucks simply will not protect people in rollover accidents," Watts said after a Texas jury awarded \$18 million to Mario Castro, who was paralyzed in a SuperCab rollover.

million to Mario Castro, who was paralyzed in a SuperCab rollover.

In the Benavides trial, Ford lawyer Rosewell Page III said the SuperCab's roof exceeded Federal Motor Vehicle Safety Standard 216 by 43 percent. "The vehicle was reasonably safe," he said.

But the circumstances of the accident convinced the jury otherwise.

On the evening of July 20, 2001, Paul Alaniz, 35, drove to a club in Kingsville, Texas, with three friends: Laura Benavides, 20; Juan Flores, 26; and Eluterio Elizondo, 24.

Alaniz, a physical-education teacher and youth football coach, drank at least two beers during the night out, according to trial testimony. His blood-alcohol level was 0.04 percent, half of the legal limit in Texas.

On the return trip, Alaniz drove with Benavides seated behind him. Flores and Elizondo were in the front and rear seats on the passenger side.

About 2:30 a.m., Alaniz lost control of the F-150. The truck tipped on the passenger side, and rolled three times off State Highway 2285, according to court records.

The roof on the driver's side — the "trailing" side in the rollover — was crushed severely. Both doors on the driver's side came open. Alaniz and Benavides were ejected an estimated 100 feet into a field of sagebrush and cactus.

### Seat belts not used

But the doors on the passenger side stayed closed. Both Flores and Elizondo stayed in the vehicle and were uninjured.

None of the four were wearing seat belts.

"The two on the side where the roof crushed and the doors popped open, they died," said Tony Alaniz, Paul's younger brother. "The two on the right side where the doors stayed closed, they lived."

Page, Ford's lawyer, blamed Paul Alaniz for the wreck.

"If Mr. Alaniz had not lost control of this vehicle, there would be no accident and there would be no death," Page said.

The wreck, he said, was a "violent" accident.

"Accidents happen every day," Page said in court. "People die on the highway."

Tony Alaniz said his older brother was hardly a reckless driver.

"He never had a speeding ticket in his life, never had a single citation for anything," he said. "He didn't fall asleep. He went off the road, overcorrected, and the truck rolled over."

He wears a gold chain that he took off his brother's body at the accident scene nearly three years ago. Last month, Tony Alaniz visited the site, marked by two white, wooden crosses on the roadside.

"It's just something that's so hard to accept," he said. "You know, I had that same truck. Paul liked it so much he bought one just like it."

He sold his SuperCab after the accident, and now drives a four-door sedan.

# European vehicles exceed standard for U.S. car roofs

## Detroit automakers insist the existing rule is adequate.

By Jeff Plungis and Bill Vlasic  
*The Detroit News*

**WASHINGTON** — To demonstrate how well its XC-90 sport utility vehicle would hold up in a rollover crash, the Swedish automaker Volvo invited reporters to a demonstration in the spring of 2002.

Volvo, owned by Ford Motor Co., conducted a test using specifications the U.S. government developed in the late 1960s.

At the company's safety center in Gothenburg, Sweden, the SUV was loaded on a cart, which was accelerated to a speed of 30 mph. When the cart was brought to a sudden halt, the XC-90 went rolling, spinning more than three times before coming to a stop. At the end of the violent demonstration, the XC-90's roof sustained only slight creasing and its windows were cracked.

The XC-90 has one of the strongest roof structures of any vehicle on the road today, according to safety experts.

While the need for a strong roof is emphasized by Volvo and other European automakers, their U.S. counterparts insist there is no correlation between roof intrusion and serious injuries.

The Volvo roof is reinforced with boron steel, a high-strength alloy so hard that special factory tools are required to work with it. The alloy is 25 percent to 50 percent more expensive than conventional steel.

"We were entering a new segment, so it was natural for us to take the next step in the safety cage area, and introduce new technology," said Hans Wikman, project manager for the XC-90.

As a result, the XC-90 roof exceeds federal requirements by more than 100 percent, Volvo said.

During the test rollover, the SUV's rollover sensors activated belt tighteners, keeping the crash-test dummies in place. Side-curtain air bags stretched along all three rows of seats, preventing violent head contact with the windows.

Why did Volvo add so much rollover safety technology?

"We had a heavier vehicle, with a higher center of gravity making it more prone to roll over," said Thomas Broberg, Volvo's deputy director for research and development. "That's just basic physics."

### Ford takes different path

European automakers like Mercedes-Benz and GM-owned Saab follow similar regimens of testing to produce rollover-worthy cars and SUVs. Volkswagen, Toyota and BMW also conduct dolly rollover tests, according to company brochures.

But Volvo's parent, Ford, General Motors Corp. and DaimlerChrysler AG's Chrysler unit, follow a different path in developing its vehicles. Detroit's automakers do not routinely conduct either dolly tests or tests where vehicles are suspended from their roofs, according to court records and safety experts.

Ford conducts the basic government roof-crush test developed 33 years ago, and its internal company safety standard exceeds government requirements 25 percent, the company has said in court.

The test, known as Federal Motor Vehicle Safety Standard 216, is conducted by gradually applying pressure to a steel plate on one side of the roof. Critics contend it doesn't emulate real-world rollover conditions.

### Money-saving move

Steve Forrest, an engineer who has analyzed Ford documents in

### Rollover protection

Volvo designed the XC-90 and its "roll cage" to offer enhanced occupant protection in a side impact crash involving another SUV, as well as to protect occupants from roof intrusion in the event of a rollover.

**Reinforced A-pillar:** Exceeds government strength requirements by more than 100 percent.



Source: Volvo  
*The Detroit News*

**Side air curtain:** Protects head in a rollover crash.

**Strengthened B roof bow:** Functions as a roll bar.

**Strong B-pillar:** Helps direct energy flow away from occupants during a crash.

**Thicker, reinforced side structure:** Uses boron steel, four to five times stronger than conventional steel.

rollover trials, said it is clear that the company routinely takes weight out of the roof structure to save money and maximize fuel efficiency. He calls it "designing down to the standard."

Part of this is the natural process of engineering, the need to balance other regulatory requirements — such as fuel economy mandates — and consumer features against what is required to pass the roof-strength test.

Critics say the result is weaker roofs.

Jim Ragan, an attorney who has retained exhibits from a roof-crush case in a warehouse in Corpus Christi, Texas, says the standard Ford F-150 roof from 1980 through 1996 looks less substantial than earlier models.

Ford declined interview requests for this series, referring questions to the Alliance of Automobile Manufacturers, a Washington-based trade group. A spokesman for the Alliance said research on rollover crashes is under way and the group could not comment before the research is complete later this year.

Case files in the National Accident Sampling System, the gov-

ernment's database of in-depth crash investigations, show numerous models on the roads today can collapse in crashes of less intensity than the Volvo test crash, said Carl Nash, a former director of strategic planning at NHTSA who now consults on roof-crush lawsuits. The damage is especially severe if a roof impacts the ground a second time, he said.

"It's a clear safety problem," Nash said. "It's absolutely, abundantly clear."

### Test margins in question

Ken Digges, director of a rollover research project at George Washington University, said roofs that pass the 216 test may totally collapse at slightly greater forces. The test does not provide for an adequate safety margin for overloads or repeated roof impacts, he said.

"You can meet the test, but if you increase the load the roof can totally collapse," Digges said. "I suspect 216 has driven design the wrong way."

While Detroit's automakers contend there's no cause-and-effect relationship between crushing roofs and injuries, they

have touted the importance of a strong, secure structure in advertisements for decades.

In March, GM ran newspaper ads touting the use of "lightweight, ultra-high-strength steel" in its new Cadillac SRX sport utility vehicle.

"A stiff structure contributes to a secure cabin," the ad stated. "This high-strength steel team of bodyguards provides a formidable defense for driver and passengers alike."

That echoes an ad Ford ran for its 1964 Country Squire station wagon touting a roof strong enough to hold the weight of nine kids.

"Take the roof these youngsters are perched on. Three separate steel braces make it super-solid to sit on" or ride under, the ad stated.

Automakers often explain roof-crush injuries by arguing that no vehicle design can stand up to the most violent rollover crashes. The basic principles that are applied in passenger car safety can be seen on an extreme scale on the NASCAR racing circuit.

NASCAR employs roll

### Volvo rollover test



At a demonstration in Gothenburg, Sweden, Volvo rolled an XC-90 SUV in 2002. With a roof made from high-strength boron steel, the XC-90 rolled more than three times. There was minor cosmetic damage to the roof, but no significant intrusion into the occupants' safety cage.



Volvo also enhances safety by providing curtain-style airbags in all three rows of seats, reducing the likelihood of head injury. The SUV has a sensor that activates fractions of a second after a rollover begins, tightens seat belts and keeps passengers in place.

with safety instrumentation for the past 2 1/2 years.

"I can't recall a rollover or flip that resulted in a serious injury," McClellan said. "If the occupant compartment integrity is maintained, the potential for injury is pretty low."

Scott McClellan is executive vice president of Independent Witness, a Salt Lake City safety research firm that has been equipping NASCAR vehicles

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