

# Inside the Ford/Firestone Fight

## Finger pointing over SUV rollovers ends a century-long partnership. How it all went sour

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In the most spectacular corporate crack-up in recent memory, consumers hardly knew whom to trust or root for last week. First, Bridgestone/Firestone CEO John Lampe brought the tiremaker's 95-year-old business with Ford Motor Co. to a screeching halt over what Lampe called "significant concerns" about the safety of the Ford Explorer. One day later, Ford said it would replace 13 million Firestone Wilderness AT tires—mounted mainly on Explorers—that were excluded from Firestone's sweeping 6.5 million tire recall last August. Firestone admitted that those tires were no good but maintains that everything else on the road today is safe. Ford doesn't see it that way. Declared Ford boss Jacques Nasser: "We simply do not have enough confidence in the future performance of these tires keeping our customers safe."

Ford is clearly trying to pin the damage on Firestone, and vice versa. But a five-month investigation by TIME of Ford documents, which the company prepared for investigators and government lawyers, shows Ford's engineers were wrestling with the stability and handling of the Explorer even before it hit the market in 1990—as a sibling for the notorious bucking Bronco II, which cost the company approximately \$2.4 billion in damage settlements. Previously undisclosed memos and e-mails show the extent to which the engineers were juggling decisions about the Explorer's suspension systems, tire pressure, weight and steering characteristics, plus its height and width, all of which could factor into a vehicle's stability.

State and federal investigators as well as attorneys for the victims of Explorer rollovers are cheered by the split, because it will enable them to pit one company against the other in court. Accidents involving Firestone-equipped Explorers have accounted for most of the at least 174 deaths and more than 700 injuries that prompted Firestone to recall its 15-in. SUV tires last year. Ford faces hundreds of lawsuits that seek damages totaling more than \$590 million, and the company is bracing for a report on the tire failures from the National Highway Traffic Safety Administration (NHTSA). Moreover, Representative Billy Tauzin, a Louisiana Republican, plans to hold hearings this summer on the way "this whole mess started and why we didn't hear about it until people started dying."

Investigators in Florida, which is leading the inquiry on behalf of all 50 state attorneys general,

believe that Ford and Firestone share blame. Says attorney general Bob Butterworth: "If they already knew they had these problems, why did they put an inferior tire on this vehicle? The problem you have here is lawyers and the marketing department overruled the safety recommendations of engineers."

What is not in dispute is that some Firestone 15-in. Wilderness AT tires produced at its plant in Decatur, Ill., had defects that are implicated in tread separations and rollover accidents (338 claims out of 1.8 million tires made). Last week's \$3 billion recall by Ford covered 15-in., 16-in. and 17-in. Wilderness tires produced at all Firestone factories. Many of the accidents occurred in hot regions, such as Florida and Texas and the Middle East. And no one denies that SUVs roll over more frequently than traditional autos. One reason: until recently most SUVs were built on pickup-truck bodies, which ride higher off the ground, raising the center of gravity.

But that's pretty much it for points of agreement. Ford insists that Explorers fitted with Goodyear tires have experienced far fewer tread problems than those equipped with Firestones. Firestone retorts that the same tire that shreds on an Explorer holds up just fine on a Ford Ranger. General Motors last week described the safety of the Wilderness AT tires it puts on pickups as "excellent"—although the No. 1 automaker said it was planning to switch to the Bridgestone brand for some of its vehicles this summer. (Bridgestone owns Firestone.)

One conclusion stands out amid all the examples of mutually assured destruction: while neither Ford Explorers nor Firestone tires may be unusually dangerous in their own right, the combination of the two has sometimes proved lethal. And these products share a heritage, since Firestone customized the Wilderness AT tires for the Explorer to Ford's specifications.

No company sets out to design an unsafe vehicle. But creating a car always involves making trade-offs among engineering, manufacturing, safety, sales and advertising components as well as responding to consumer and competitive pressures. It is a wildly expensive process that takes five years or so to complete.

Engineers were concerned from the get-go about the Explorer's stability during emergency handling procedures. After a test-track trial in April 1989—one year before the Explorer reached showrooms billed as a rugged and reliable family vehicle—a report noted that the SUV prototype "demonstrated a rollover response ... with a number of tire, tire-pressure [and] suspension configurations." Another report noted that the Explorer's "relatively high engine position ... prevents further significant improvement in the Stability Index [a measure of resistance to tipping] without extensive suspension, frame and sheet-metal revisions," which the company rejected.

Of course, prototypes are early versions of vehicles that are built so that designers can get the bugs out. And Ford says it got the bugs out. "In developing any product you go through variations,"

says Ford spokesman Jon Harmon. "Then you test them until they meet standards." He adds that the Explorer has proved to be among the safest vehicles in its class. It's not a particularly safe class, compared with cars. The Explorer had a lower rate of fatal accidents from 1991 to 1999 than 9 of 11 other SUVs. Of the most popular models, the Explorer came in two spots ahead of the Chevy Blazer but behind the Jeep Cherokee and the top-ranked Grand Cherokee. Honda's Passport was last.

In developing the Explorer, Ford's engineers were constrained from the start by previous decisions that locked the SUV onto a narrow truck frame and into a front-end suspension that was designed in the 1960s. As early as 1987, a Ford memo warned that "light-truck rollovers are 2 to 4 times the car rate" and urged Explorer developers to consider "any design action that improves vehicle stability or helps maintain the passenger safety in the vehicle." Ford maintains it did exactly this.

The Explorer's platform dates back to the late 1970s, when Ford created a new line of light trucks—code-named Yuma—that came to include the Ranger pickup and the now infamous Bronco II. Both vehicles used a unique "Twin I-Beam" suspension that raised their center of gravity by placing crisscrossing beams atop one another between the front tires.

The company marketed I-Beam directly to consumers, since it had been used on the original and highly popular Bronco. But the Bronco II became a nightmare for Ford, which by the late 1980s faced more than 800 lawsuits that stemmed from accidents involving rollovers. That didn't deter Ford from using the same suspension on the new Explorer, which allowed the automaker to build the SUV on the same assembly lines as the Ranger pickup.

This choice soon produced unsettling results. While undergoing handling maneuvers in 1989, an Explorer prototype showed a greater tendency to lift its wheels while turning—a possible prelude to rollovers—than even the Bronco II. The test report observed that the Explorer had to be "at least equivalent to the Bronco II in these maneuvers to be considered acceptable for production."

That was a rock-bottom standard, since the image of the Bronco II continued to worsen. In June 1989 a Consumer Reports article titled "How Safe Is the Bronco II?" rated its handling as poor in a test that simulated rapid lane changes. The Consumers Union publication advised "prudent buyers" to steer clear of it. According to an original analysis prepared for TIME by University of Michigan statistician Hans Joksch, an expert in automotive statistics, the Explorer has had approximately the same rate of fatal rollovers as the Bronco II.

The Consumer Reports results stunned Ford engineers, who acknowledged in a memo that passing "the Consumers Union test became an implicit requirement for Explorer due to the potential for adverse publicity." The memo was referring to a double-lane-change test that Consumers Union used to evaluate an automobile's real-world maneuverability.

Ford made a curious choice with regard to the Explorer's tires. After putting the SUV through the Consumers Union test, engineer Roger Stornant wrote that the results yielded "a high confidence of passing CU with [Firestone's] P225 tires and less confidence on the [Firestone] P235." Ford chose the larger P235 anyway. Marketed first as the ATX and then as the Wilderness AT, the P235 became the tire that Firestone later recalled.

In a chilling aside, Stornant wrote that Ford "management is aware of the potential risk with P235 tires and has accepted [that] risk. CU test is generally unrepresentative of the real world," Stornant said, "and I see no 'real' risk in failing [the CU test] except what may result in the way of spurious litigation."

With the Explorer's 1990 production date approaching, Ford engineers listed four options for improving the stability of the SUV: widening the chassis by 2 in.; lowering the engine; or lowering the tire pressure and stiffening the springs. Ford chose the latter two fixes and recommended a tire pressure of 26 p.s.i.—rather than the 30-to-35 p.s.i. that Firestone normally used in its tires—to produce a more road-gripping ride. This created friction between Ford and Firestone after last year's recall, with Firestone insisting that the low pressure had increased the heat on the tires and caused the tread separations.

Ford engineers could hardly wait to replace the Explorer's outmoded front suspension. In another 1989 memo, engineer Charles White noted the start of discussions "to revise the Ranger and [Explorer] suspension due to out-of-date performance of the Twin I-Beam." White added that although Ford had planned to replace the Twin I-Beam in 1998, "it was agreed that we would look at earlier incorporation of a new front suspension out-of-cycle for the reasons stated above, not safety."

Replied engineer David Houston: "In the event you take a poll, my vote would be to change the cycle plan to replace the current front suspension at the earliest possible opportunity. I believe that this would positively position the [Explorer] to be immune from criticism arising from allegations regarding limit handling maneuvers"—an apparent reference to the SUV's test-track performance.

Ford's decision to increase the stability of the Explorer by lowering the tire pressure soon had unintended consequences. The mushier tires held the road better but worsened fuel economy. When Ford asked Firestone to fix the problem, Firestone reduced the weight of the tire about 3%.

By 1995, Ford had finally replaced the Explorer's unloved Twin I-Beam with a short-and-long-arm suspension but didn't act on previous recommendations to lower the engine and widen the chassis. And since the new suspension weighed less than the Twin I-Beam, the change raised—not lowered—the SUV's center of gravity.

A warning light flashed in August 1996 when, documents show, a trainee test driver in Oscoda, Mich., lost control of an Explorer while conducting lane-change maneuvers at 52.5 m.p.h. According to the accident report, the driver overcorrected for a rear-end slide, sending the vehicle first into a four-wheel slide and then a 360[degree] flip.

As the Explorers rolled over with increasing frequency on U.S. highways, Ford and Firestone turned their attention to a rash of similar accidents in automotive markets from Saudi Arabia to Thailand to Venezuela. In the Middle East, Ford replaced Wilderness AT tires on Explorers and Mercury Mountaineers in nine countries. It did not notify authorities in Washington, nor was it required to.

Yet by May of last year, NHTSA had launched an investigation into the rising number of tire failures—and Ford and Firestone were feuding. The automaker accused Firestone of withholding data that Ford said it needed to determine which tires were problematic.

Firestone's Lampe turned the tables this spring, accusing Ford of refusing to share data about possible Explorer problems. At the same time, Ford was studying a government analysis of tires that Firestone did not include in last year's recall. Although the rate of problems was lower than it had been for the Decatur tires, the data persuaded Ford to announce its recall—even though Ford and Firestone had insisted for months that the problems were confined to the Decatur plant.

Ford execs may have also been worried that NHTSA would eventually declare a stricter safety standard than Firestone's Wilderness tires could meet. Ford asked NHTSA about the possibility last month. When the agency was noncommittal, Ford opted to replace the tires on its own. Firestone protested and asked Ford to show it the data so the tire company could decide for itself.

In the days before Ford acted last week, Lampe learned that the automaker was considering a recall. Lampe angrily phoned Nasser from a meeting in Mexico and again during a plane change in Dallas, but the Ford CEO avoided him. Ford vice president Carlos Mazzorin returned Lampe's call and agreed to a 7 a.m. meeting at Firestone headquarters in Nashville, Tenn., where the two men wrangled over whether the federal data justified a new recall. Even before that meeting, a wary Lampe had drafted a letter to Nasser terminating the historic partnership between Ford and Firestone.

The rupture split two companies that have been joined at the hip since Henry Ford and Harvey Firestone went camping together in the early years of the 20th century. "All this does is make both look less responsible to the public," says Jim Wangers of Automotive Marketing Consultants Inc. in San Diego.

It also speaks volumes about where these two archetypes of American industry stand. Bridgestone may be willing to send the Firestone brand on the road to extinction. Yet Ford is in the midst of an ambitious strategy to reinvent itself as the automobile industry's most socially and consumer-conscious force. Ford has staked its future on honesty. "The reason that they are spending so much money on this is that their credibility is at stake," says Merrill Lynch analyst John Casesa. "They are hoping that this obsessiveness now will in the end benefit the company."

Nevertheless, Ford continues to struggle to recover from doubts about the safety of the Explorer that were raised during last year's recall—an effort that was hardly helped last week when the automaker had to call back 47,000 of the 2002 Explorers to replace tires that were slashed on Ford's assembly line.

Ford announced the recall as the 2002 Explorer — loaded with incentives for current Explorer owners — rolled into dealer showrooms. In advertising the new model, Ford touts a "new level of safety," and well it should. Lower and 2 1/2 in. wider than its predecessor, the new SUV is in many ways the culmination of battles that Ford engineers fought out in documents assembled in connection with investigations and lawsuits. Billed as the "all-new 2002 Explorer," it incorporates design improvements that Ford rejected more than a decade ago.

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