

Chrysler and the Defective Design of Jeeps with Unsafe Fuel Tanks A Failure of Compassion, and Tactics of Conceal-Delay-Deny While Fiery Crashes Occur

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Presentation at National Highway Traffic Safety Administration
NHTSA Public Hearing on July 2nd, 2015 --- Washington, D.C.

Many of us will remember the notorious Ford Pinto, which made headlines in the 1970's and 1980's with revelations about its terribly vulnerable fuel tank located near the rear bumper, with resulting fuel-fed fires in rear-impact accidents coast-to-coast. I testified in the precedent-setting "reckless homicide" Pinto trial in Indiana in 1980, and I felt the case was sending a message to the entire auto industry: *Move the fuel tank away from the rear bumper, and design it into the safer location **forward** of the rear axle.*



Thankfully, most automakers made that safety change as their new models evolved, but there were exceptions... including the 1993-thru-2004 Jeep Grand Cherokee SUV and the 2002-thru-2007 Jeep Liberty SUV. *These Jeeps are the fiery Pintos reborn.* The Jeep Grand Cherokee and Jeep Liberty were designed with a High-Density Polyethylene (HDPE) molded plastic fuel tank located behind the rear axle and in close proximity to the rear bumper, with a portion of the fuel tank exposed below the bumper. In many accidents, the rear-ending vehicle would crash beneath the Jeep's bumper directly into the fuel tank, crushing and rupturing the tank and creating an immediate fuel-fed fire that quickly engulfed the Jeep's interior.



Many of the competitive SUVs in the same era, such as the Chevy Blazer (*shown below*) and the Chevy Tahoe and Ford Explorer, all had their fuel tank designed into the safer location **forward** of the rear axle.



My “Phoenix Project” Forward-of-Axle Fuel Tank Design and Crash Test. Beginning in the late-1960’s and early 1970’s, I had inspected and evaluated many vehicles that had been in rear-impact fiery crashes. It became clear that it was stupid and lethal to place the fuel tank behind the rear axle and near the rear bumper, where it was within the vehicle’s rear “*crush zone*” where it was highly susceptible to being crushed and ruptured. To demonstrate a safer design, back in 1975 I reconfigured a Ford sedan and placed the fuel tank system **forward** of the rear axle. I then conducted a car-to-car offset rear impact at 63 miles per hour, simulating the rear-world accident in which a man had burned to death. My Phoenix Project” showed the merits of designing the fuel tank into the safer zone **forward** of the rear axle. NHTSA’s so-called “*safety standard*” at the time, FMVSS 301, only required a 30 miles-per-hour rear impact by a flat-faced moving barrier.... basically a friendly pat across the entire rear of the car.



Does compliance with the Federal Motor Vehicle Safety Standards (FMVSS) mean the fuel tank is reasonably safe ? The short answer is NO. In the case of *Williamson versus Mazda*, the U.S. Supreme Court in 2011 affirmed by 8-to-0 that compliance with any Federal Motor Vehicle Safety Standard does not preempt an automaker from liability in common law. Remember that FMVSS are only *minimum* requirements, and do not necessarily reflect state-of-the-art safe design nor what may realistically occur in actual accidents. Even the Ford Pinto complied with the fuel tank integrity standard FMVSS-301 at the time. So even if the Jeep Grand Cherokee and Jeep Liberty complied with the rear-impact crash test requirement FMVSS-301, that does not demonstrate that the fuel tank offered reasonable protection from fuel-fed fires occurring in real-world accidents when the Jeep is impacted by another vehicle.

Case example A: This 1998 Jeep Grand Cherokee was rear-impacted by a large truck, with the driver and the two passengers all surviving the trauma of the crash. However, due to the rapid fuel-fed fire penetrating the interior, two of the three occupants perished in the fire. While the fuel tank was vulnerably exposed behind the rear axle, I noted that the exhaust system muffler did survive quite nicely, and it was located in the zone **forward** of the axle, where Chrysler should have designed the fuel tank.



Case Example B: This 2003 Jeep Liberty was rear-impacted by a full-size car that penetrated below the Liberty's bumper, directly into the fuel tank, and flipping the Jeep onto its driver's side down. The woman driver, who was 8-months pregnant, burned to death in the fuel-fed fire that quickly engulfed the Jeep. My evaluation showed that the exhaust system muffler clearly survived the crash, and it was located **forward** of the axle, where the fuel tank easily could and should have been located.



As previously noted, the Jeep Liberty SUV has a very Pinto-like fuel tank design, vulnerably exposed near the rear bumper. Chrysler had certainly known better, as evidenced by their own pronouncements for their various other vehicles in the 1970's and 1980's that placed the fuel tank **forward** of the rear axle, which Chrysler themselves referred to as a safer design. Where was Chrysler's compassion in failing to do so for their 1993-thru-2004 Jeep Grand Cherokee and 2002-thru-2007 Jeep Liberty? Also note that the successor versions of these same Jeep models **finally** did adopt the **forward** of axle design.



What about Chrysler's so-called recall and fix? The record shows that NHTSA was slow to recognize the Jeep fuel tank hazard. From my perspective of about 50 years in the auto safety trenches, I've seen that NHTSA has too often been a slowly reactive agency, rather than being pro-active in analyzing vehicle design and performance in real-world accidents. I've seen where automaker documents produced in product-liability court cases reveal that the company has known of the dangers and safety defects for many years, but preferred to conceal that knowledge, then delay its release, and then deny that it ever knew what the documents revealed. The Chrysler secretly-negotiated deal with NHTSA, without any public hearing, to provide trailer hitches as a so-called recall fix to improve fuel tank protection, but only in low-speed accidents, makes a mockery of what should be done. Look instead to what NASCAR and helicopters and military aircraft utilize for fuel tank safety, and you'll see safety technology that could and should be utilized. But that would require **compassion**... and that's not yet a Federal Motor Vehicle Safety Standard.

Let's **together** join forces to fight for safer vehicles for us all, with the vision of **zero fatalities**... by preventing vehicle accidents, and by more crashworthy vehicles to protect occupants when accidents occur, and by the elimination of needlessly unsafe and defective designs. **Thank you.**