

CENTER FOR AUTO SAFETY

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July 9, 2013

Honorable David Strickland, Administrator
National Highway Traffic Safety Administration
1200 New Jersey Avenue, SE
Washington, D.C. 20590

Dear Administrator Strickland:

Thank you for meeting with us on July 1, 2013 regarding the investigation into the 1993-1998 Jeep Grand Cherokee, 1993-2001 Jeep Cherokee and 2002-2007 Jeep Liberty for serious defects in the fuel systems and Chrysler's voluntary recall of the 1993-1998 Jeep Grand Cherokee and 2002-2007 Jeep Liberty. The key points raised during the meeting include:

1) Chrysler's proposed trailer hitch remedy failed to prevent fuel tank rupture in the death of 4-year old [REDACTED] and others. Former Chrysler Executive Vice President for Vehicle Engineering Francois Castaing testified trailer hitches do not protect the fuel tank.

2) The trailer hitch may actually worsen the problem by becoming a spear to puncture the tank as happened in the death of [REDACTED].

3) The concept of low and high energy crashes never came up in the agency's investigation. Chrysler [raised the concept in its voluntary recall objection letter on June 18, 2013](#). Not a single one of the 44 fatal fire crashes cited by NHTSA in its [June 3, 2013 recall letter](#) is a low energy crash so **the trailer hitch will not prevent a single Jeep fatal rear impact fire death**. (See attached Figures 1-3 in Chrysler's June 18 letter for its analysis of high energy crashes above FMVSS 301.)

4) Doors jam in high energy Jeep crashes and prevent occupants from escaping before they burn to death. Jeep occupants do not burn to death in the low energy crashes because doors are much less likely to jam and occupants can escape.

In 1978, NHTSA Chief Counsel Frank Berndt [wrote the seminal memo on auto defect enforcement](#) which pointed out the limitations of accident data such as used in the Jeep investigation.

*Although accident information may, on occasion, be useful, the industry's insistence that the agency always prove safety-defect cases by accident information alone is excessively rigid. From both a practical and statutory standpoint, reliance upon numbers alone would confine the agency's effectiveness and distort fulfillment of its statutory mission. . . . Accident information is often erroneous, incomplete or unavailable. Although accident investigation systems are often mentioned as reliable data sources, they contain inherent limitations when used to define and substantiate the realm of all possible safety defects. . . . [S]ole reliance on numbers of accidents presents statutory problems. The Act's purpose is preventive. The agency would be violating that goal if in every case it waited for evidence of accidents, injuries or deaths to accumulate. In addition, the Act specifies several ways of finding safety defects: **testing**, inspection, investigation, research, examination of communications, or "otherwise".¹ The Act thus directs the Secretary to use any means available, not just accident information, to discover safety defects. The industry's recommended approach [risk analysis that some threshold number of accidents, injuries or deaths have and will occur] would significantly undermine the statutory purpose and effectiveness. [Emphasis added.]*

¹ 49 USC § 30118(a): Notification by Secretary.--The Secretary of Transportation shall notify the manufacturer of a motor vehicle or replacement equipment immediately after making an initial decision (through testing, inspection, investigation, or research carried out under this chapter, examining communications under section 30166(f) of this title, or otherwise) that the vehicle or equipment contains a defect related to motor vehicle safety or does not comply with an applicable motor vehicle safety standard prescribed under this chapter. . . .

The Center for Auto Safety and the Federal Highway Administration ran a [series of crash tests](#) in which the Grand Cherokee suffered catastrophic fuel system failures at energy levels both significantly below and slightly above present FMVSS 301 levels while its biggest competitor, the Ford Explorer had no fuel system damage in a 75 mph impact with an energy level over twice that of FMVSS 301.

Test	Impactor	Impactor Weight	Impactor Speed	Crash Energy
old FMVSS 301	flat face barrier	4,000 pounds	30 mph	121,000 lb-ft
new FMVSS 301	contoured barrier	3,015 pounds	50 mph	253,000 lb-ft
FHWA Explorer	2003 Taurus sedan	3,110 pounds	68 mph	483,000 lb-ft
FHWA Explorer	2001 Taurus SW	3,335 pounds	75 mph	630,500 lb-ft
FHWA Grand Cherokee	2000 Taurus SW	3,296 pounds	49.7 mph	274,000 lb-ft
First Karco test	1987 Taurus sedan	3,387 pounds	51.4 mph	301,000 lb-ft
Second Karco test	1988 Taurus sedan	3,364 pounds	40.7 mph	187,000 lb-ft

The fact that the Ford Explorer can sustain at least a 630,500 lb-ft rear crash impact when a Grand Cherokee's fuel tank ruptures at 187,000 lb-ft explains why the Grand Cherokee is more than 20 times as likely as the Explorer to be involved in a fatal rear impact fire crash where fire is the most harmful event according to [Chrysler's own submission to NHTSA in April 2011](#).

This crash test series is not referenced in the June 3 NHTSA voluntary recall request but should be as the tests identify defects in the Jeeps that must be corrected in a recall. Every Jeep test conducted with the 3 mm steel skid plate had no fuel tank puncture even though run at 50-mph. The one Jeep test run at 40.7-mph without a shield had a fuel tank rupture. The two 50-mph Jeep test with a shield both failed because the filler hose pulled loose from either the top at the filler inlet or the bottom at the tank showing that a better filler hose is necessary as crash testing showed in the Pinto recall. As we showed in the July 1 meeting, the Grand Cherokee contains a defectively designed check valve that allows fuel to flow out when the filler hose pulls lose.


The recall remedy proposed by Chrysler simply drew a line at crash energy greater than FMVSS 301 and ignored the fact that Jeep occupants survived the trauma of the crash but died by fire and that occupants in Ford Explorers would have survived the trauma of the crash without any fire occurring.

We urge the agency to conduct crash tests of Chrysler's proposed trailer hitch remedy using the present FMVSS 301 crash test procedures and passenger cars at speeds approximating the 50-mph standard. To fail to do such testing and not to include the above tests in determining both the remedy and the existence of a safety defect is an abuse of discretion.

Sincerely,



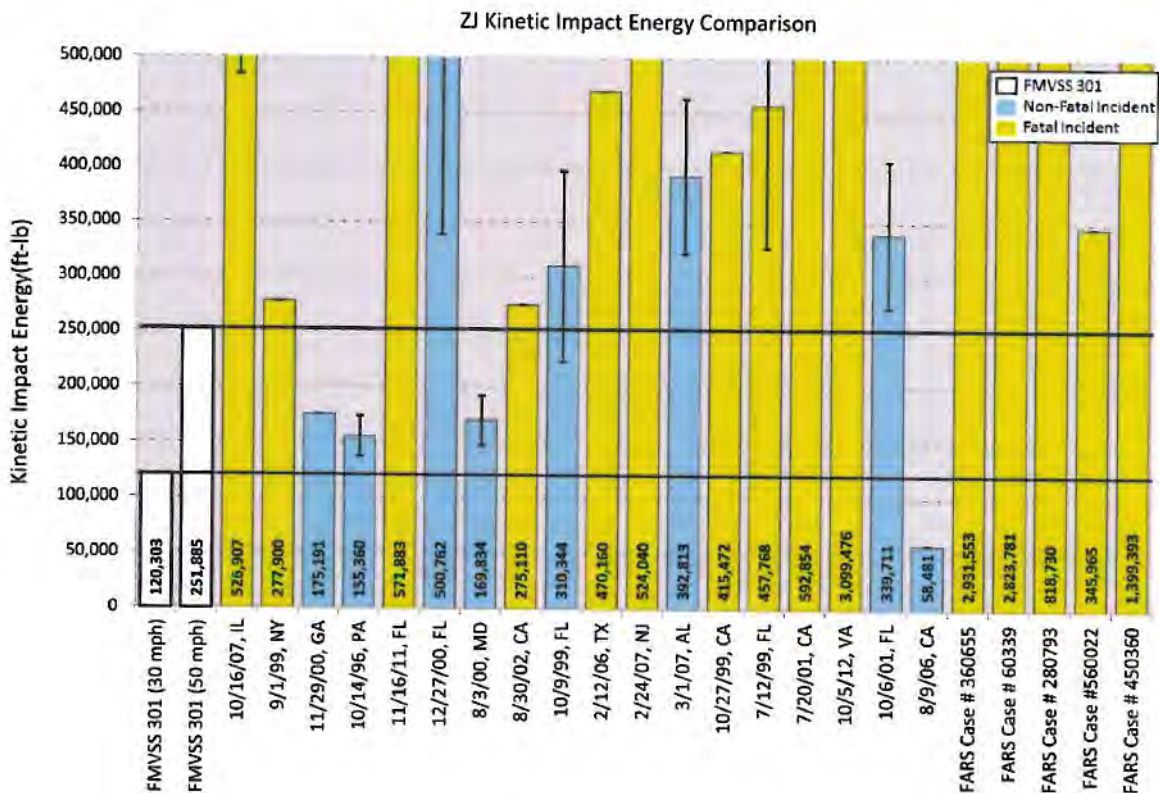
Clarence Ditlow
Executive Director
Center for Auto Safety



Joan Claybrook, President Emeritus
Public Citizen and
Former NHTSA Administrator

Attachment 1

Figure 1 – ZJ Kinetic Energy Comparison, below, charts the calculated energy levels experienced in the Grand Cherokee ZJ crashes as compared to the FMVSS 301 requirements, both the requirements that applied to the Subject Vehicles and the current requirements.



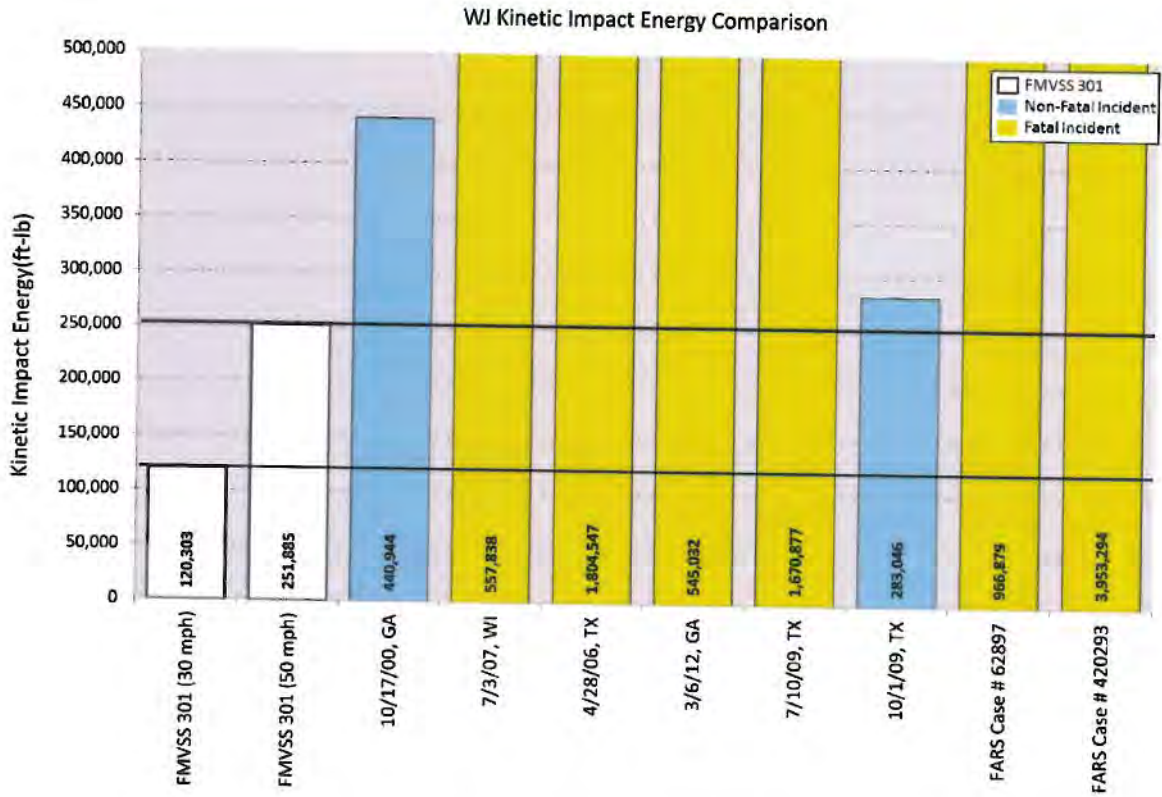
12 Incidents had insufficient data to calculate kinetic impact energy and were not included

Figure 1 – ZJ Kinetic Energy Comparison

22 of 23 Grand Cherokee (ZJ) crashes analyzed for kinetic energy levels exceeded the applicable FMVSS 301 energy levels. 19 of the 23 Grand Cherokee (ZJ) crashes analyzed for kinetic energy levels exceeded the current FMVSS 301 energy levels. Only the incident noted as “8/9/06, CA” did not exceed any FMVSS 301 energy levels.²

² This incident involved a motorcycle that was reportedly travelling at 50-55 mph as it approached the rear of the 1994 Grand Cherokee (ZJ). To avoid a direct collision, the motorcycle laid on its side and slid under the rear of the Grand Cherokee (ZJ) and a fire ensued. An inspection revealed that the impact was a focused load on the aftermarket trailer hitch causing the hitch to fail and pushing it approximately 10 inches into the fuel tank, puncturing it and resulting in the fire. The receiver of the aftermarket trailer hitch had sharp edges.

Figure 2 – WJ Kinetic Energy Comparison, below, charts the calculated energy levels experienced in the Grand Cherokee (WJ) crashes, as compared to the FMVSS 301 requirements, both the requirements that applied to the Subject Vehicles and the current requirements.

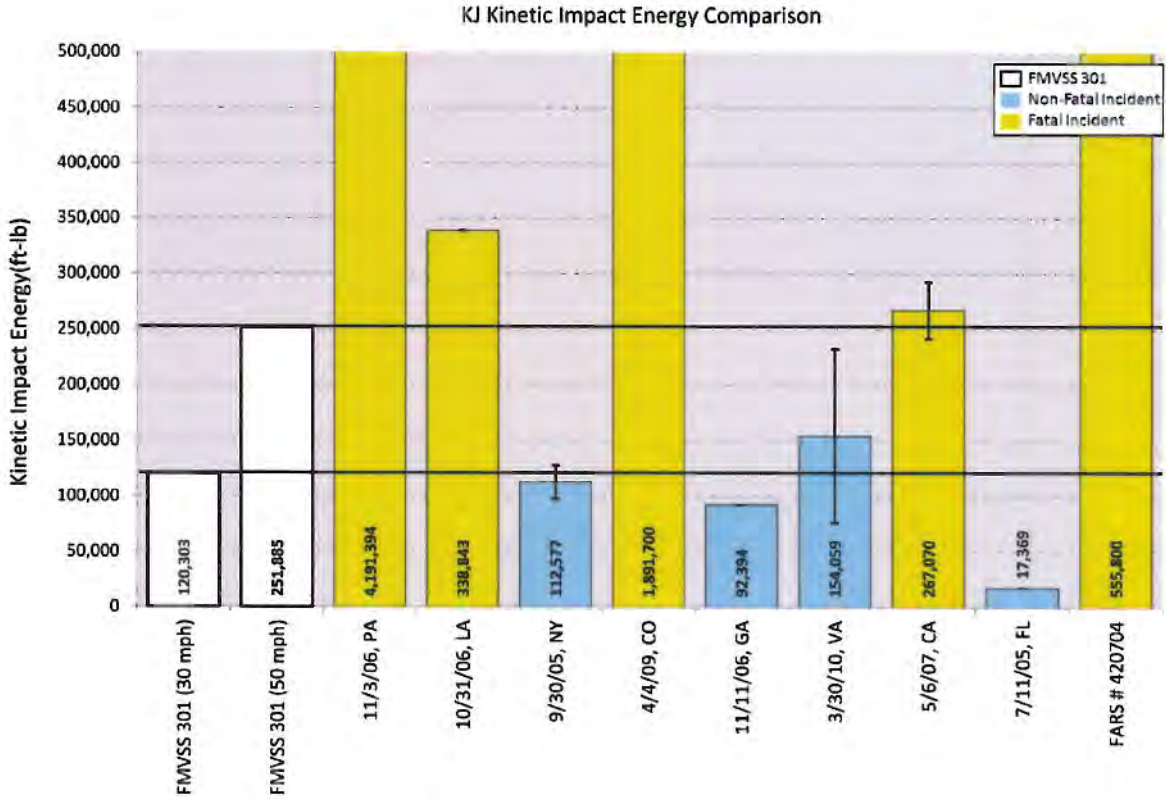


5 Incidents had insufficient data to calculate kinetic impact energy and were not included

Figure 2 – WJ Kinetic Energy Comparison

All of the eight Grand Cherokee (WJ) crashes analyzed for kinetic energy levels exceeded both the applicable FMVSS 301 energy levels and the current FMVSS 301 energy levels.

Figure 3 – KJ Kinetic Energy Comparison, below, charts the calculated energy levels experienced in the Liberty (KJ) crashes, as compared to the FMVSS 301 requirements, both the requirements that applied to the Subject Vehicles and the current requirements.



12 Incidents had insufficient data to calculate kinetic impact energy and were not included

Figure 3 – KJ Kinetic Energy Comparison

6 of 9 Liberty (KJ) crashes analyzed for kinetic energy levels exceeded the applicable FMVSS 301 energy levels. 5 of the 9 Liberty (KJ) crashes analyzed for kinetic energy levels exceeded the current FMVSS 301 energy levels.