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RICHARD J. CODEY
Acting Governor

New Jersey Office of the Attorney General
Division of Consumer Affairs
Consumer Service & Intake Center
124 Halsey Street, 3rd Floor, Newark, NJ 07102

PETER C. HARVEY
Attorney General

RENÉ ENDOE
Director

Mailing Address:
P.O. Box 45025
Newark, NJ 07101
(973) 504-6200

December 17, 2004

Iselin, NJ

Re:. Daimler Chrysler
File No: 04-22386

Dear Sir/Madam:

Thank you for contacting the New Jersey Division of Consumer Affairs. Because the allegations you made in your letter are not within the Division's jurisdiction, we are referring this matter to:

National Highway Traffic Safety Administration
400 7th Street, SW Room 5232
Washington, DC 20590
(888) 324-4236

All future correspondence, including inquiries and copies of additional documents, should be addressed to them.

Sincerely,

Patricia D. Pate

Patricia D. Pate
Supervisor
Consumer Service Center

1/14/05

PDP:ARO
CSC 11B -Form

Metropolitan Life Insurance Company
485-E US Highway 1South, 4th Floor
Iselin, NJ 08830
Phone: 732-326-4004 Fax 732-326-4041
acolyandro@metlife.com

[redacted]
Senior Vice President
Information Technology Services

MetLife®

October 27, 2004

Germany

RE: 2004 Jeep Grand Cherokee Spontaneous Acceleration Issue

Dear Chairman Schrempp:

I purchased a 2004 Jeep Grand Cherokee in August 2004. When I was driving on the night of September 28, 2004, I was involved in an accident with another vehicle. My jeep, while fully stopped with the brake engaged, spontaneously accelerated not once, but twice. The jeep's actions caused me to impact the car in front twice.

I have decided that it would be unsafe to continue driving the vehicle due to my concern that this issue may repeat. While engaging in multiple discussions with representatives from the National Customer Assistance Center (Case #12690301), I found the representative (Paul) to be abusive and rude. Following my discussion with Paul, I escalated the situation to the site posted off of the DaimlerChrysler webpage (1-800-215-6230 ext.503) and spoke with Esmerelda explaining what had happened. Her response was limited to the comment that she was unable to do anything. Both of these areas were referred to me from the dealership.

I strongly feel that my statement to the police was correct in the fact that while fully stopped the car's unintended acceleration caused me to hit another car. Originally, I was concerned that I may be at fault and I did some searching on the National Highway Transit Safety Agency Website (http://www-odi.nhtsa.dot.gov/cars/problems/complain/results.cfm). I was vindicated in the fact that there were approximately 20 similar incidents involving the same year and model Jeep. I am concerned that in all my discussions with both dealerships and the customer assistance center, no one was aware of the situation or interested.

Since I am insured with MetLife Auto and Home, I have forwarded all my findings to them as well as the State of NJ, Office of the Attorney General, Division of Consumer Affairs, Office of Consumer Protection at 124 Halsey Street, 7th Floor, Newark, NJ. I feel it is my responsibility to notify them of this issue in order to prevent future customers from hazard.

My next step will be to engage my counsel in meeting with the news media regarding this threat to public safety. Based upon both my experience and research, I would like to suggest the following remediation efforts:

1. Discussion with your office regarding the appropriate measures to take to insure the safety of drivers in the future
2. Review of the National Customer Assistance Center to address concerns of negligence and disloyalty towards customers
3. Nullification of my existing lease contract with absolution of all lease penalties
4. Development of official correspondence to my insurance company outlining the acceleration issue that plagues 2004 Jeep Grand Cherokees, clearing me of any fault

I appreciate your time in this matter and I look forward to your office contacting me.

Sincerely,

Anthony J. Colyandro
SVP, MetLife Incorporated

cc:
Peter C. Harvey, NJ Attorney General
Dan Deretchin, DaimlerChrysler Motors Company
Catherine A. Rein, President and CEO, MetLife Auto and Home
Customer Assistance Center

Attachments:
Professional Car Care Online Article
USA Today Article
Dr. Antony Anderson Article
Strategic Safety Article
NHTSA Results

Search Results

Report Date: October 12, 2004 at 01:02 PM

ODI Numbers Searched: 10024473

New Search

Results : 1 | All records displayed

Make : JEEP **Model :** GRAND CHEROKEE **Year :** 2004

Manufacturer : DAIMLERCHRYSLER CORPORATION

Crash : Yes **Fire :** No **Number of Injuries:** 0

ODI ID Number : 10024473 **Date of Failure:** June 12, 2003

VIN : Not Available

Component: POWER TRAIN:AUTOMATIC TRANSMISSION

Summary:
WHEN DRIVER BACKED OUT OF THE GARAGE, PUT THE VEHICLE INTO PARK, AND GOT OUT OF THE VEHICLE, WITHIN SECONDS, THE VEHICLE ACCELERATED AND HIT THE GARAGE. WHEN THE DRIVER RETURNED TO THE VEHICLE , IT WAS IN DRIVE. *AK PH *JB

☐ Check to Request Research. Submit below.

Request Research

Search Results

Report Date :October 12, 2004 at 02:04 PM

ODI Numbers Searched: 10024739

New Search

Results : 1 | All records displayed

Make : JEEP **Model :** GRAND CHEROKEE **Year :** 2004

Manufacturer : DAIMLERCHRYSLER CORPORATION

Crash : No **Fire :** No **Number of Injuries:** 0

ODI ID Number : 10024739 **Date of Failure:** June 23, 2003

VIN : 1J4GW48S64C...

Component: VEHICLE SPEED CONTROL

Summary:

INTERMITTENTLY THE VEHICLE EXPERIENCED SUDDEN ACCELERATION WHILE THE CONSUMER'S FOOT WAS ON THE BRAKE. THE DEALER INSPECTED THE VEHICLE SIX TIMES AND COULD NO DUPLICATE OR CORRECT THE PROBLEM. *AK *TS

☐ Check to Request Research. Submit below.

Request Research

Search Results

Report Date: October 12, 2004 at 01:07 PM [redacted] New Search

ODI Numbers Searched: 10042013

[redacted]

Results : 1 | All records displayed

Make : JEEP **Model :** GRAND CHEROKEE **Year :** 2004

Manufacturer : DAIMLERCHRYSLER CORPORATION

Crash : Yes **Fire :** No **Number of Injuries:** 0

ODI ID Number : 10042013 **Date of Failure:** September 28, 2003

VIN : 1J4GW48S64C...

Component: VEHICLE SPEED CONTROL

Summary:
CONSUMER STARTED VEHICLE, SHIFTED GEAR FROM PARK TO DRIVE AND THE VEHICLE LURCHED FORWARD, HITTING ANOTHER CAR BEFORE COMING TO A STOP. *AK THE CONSUMERS VEHICLE HIT ANOTHER VEHICLE. NO AMOUNT OF PRESSURE WOULD STOP THE BRAKES. *SCC *JB

☐ Check to Request Research. Submit below.

Request Research

Search Results

Report Date : October 13, 2004 at 01:10 PM [redacted] New Search

ODI Numbers Searched : 10066755

Results : 2 | All records displayed

Make : JEEP **Model :** GRAND CHEROKEE **Year :** 2004

Manufacturer : DAIMLERCHRYSLER CORPORATION

Crash : Yes **Fire :** No **Number of Injuries:** 0

ODI ID Number : 10066755 **Date of Failure:** April 3, 2004

VIN : Not Available

Component: SERVICE BRAKES, HYDRAULIC

Summary:
WHILE THE DRIVER WAS COMING OUT OF THE GARAGE VEHICLE SUDDENLY ACCELERATED. DRIVER APPLIED THE BRAKES, BUT THE BRAKES WERE INOPERATIVE. *AK

☐ Check to Request Research. Submit below.

Make : JEEP **Model :** GRAND CHEROKEE **Year :** 2004

Manufacturer : DAIMLERCHRYSLER CORPORATION

Crash : Yes **Fire :** No **Number of Injuries:** 0

ODI ID Number : 10066755 **Date of Failure:** April 3, 2004

VIN : Not Available

Component: VEHICLE SPEED CONTROL

Summary:
WHILE THE DRIVER WAS COMING OUT OF THE GARAGE VEHICLE SUDDENLY ACCELERATED. DRIVER APPLIED THE BRAKES, BUT THE BRAKES WERE INOPERATIVE. *AK

☐ Check to Request Research. Submit below.

Search Results

Report Date: October 13, 2004 at 01:17 PM

ODI Numbers Searched:10074323

New Search

Results : 1 | All records displayed

Make : JEEP **Model :** GRAND CHEROKEE **Year :** 2004

Manufacturer : DAIMLERCHRYSLER CORPORATION

Crash : Yes **Fire :** No **Number of Injuries:** 1

ODI ID Number : 10074323 **Date of Failure:** May 24, 2004

VIN : 1J8GW68J84C...

Component: VEHICLE SPEED CONTROL

Summary:

THE OWNER STATED THAT THE VEHICLE ACCELERATED SUDDENLY WHILE WAITING FOR THE VEHICLE IN FRONT OF HERS TO PROCEED THROUGH A GATE. THE VEHICLE LUNGED FORWARD AND HIT THE VEHICLE IN FRONT. *NM *SC

☐ Check to Request Research. Submit below.

Request Research

Search Results

Report Date :October 12, 2004 at 01:20 PM
ODI Numbers Searched: 10081765

New Search

Results : 1 | All records displayed

Make : JEEP **Model :** GRAND CHEROKEE **Year :** 2004

Manufacturer : DAIMLERCHRYSLER CORPORATION

Crash : Yes **Fire :** No **Number of Injuries:** 1

ODI ID Number : 10081765 **Date of Failure:** June 25, 2004

VIN : 1J8GW68J04C...

Component: VEHICLE SPEED CONTROL

Summary:
WHILE WAITING AT AN INTERSECTION THE VEHICLE ACCELERATED SUDDENLY. CONSUMER APPLIED THE BRAKES BUT THEY FAILED. CONSUMER LOST CONTROL OF VEHICLE WHICH RESULTED IN A CRASH. THE DRIVER SUSTAINED MINOR INJURIES. VEHICLE WAS TOWED TO THE DEALER FOR INSPECTION. *AK *NM

Check to Request Research. Submit below.

Professional Car care Online

Carwashing - 2/13/2003 10:10:57 AM

Carwash worker injured by unintended acceleration of Jeep Grand Cherokee

FORT WORTH, TX — A carwash employee drying a Honda was critically injured Wednesday when she was struck and dragged by an out-of-control Jeep Grand Cherokee driven by another employee.

The *Star-Telegram* reported that according to witnesses, an employee at Colonial Car Wash and Lube Center was driving the Jeep out of the carwash bay when it suddenly accelerated, striking another employee — a 37-year-old woman who has worked there since July — and three other vehicles before coming to a stop.

The woman was taken to a nearby hospital, the article said.

The employee told investigators that the Jeep's engine revved and the vehicle sped out of control despite his attempts to brake, the *Star-Telegram* reported.

Unintended acceleration problems with Jeep Cherokees have been blamed for several injuries and deaths over the past decade. Some carwash owners have refused to wash these vehicles in the past.

Cherokee manufacturer DaimlerChrysler (NYSE:DCX) claims the incidents result from drivers mistaking the gas pedal for the brake pedal, a finding that some carwash owners dispute.

"He said he hit the brake and at one time he even had two feet on the brake, but it kept going," said Sgt. Charlie Ramirez, supervisor of the traffic investigation unit, according to the newspaper.

[illegible] told the newspaper she heard a loud screech and "the next thing you know, this Grand Cherokee is coming toward me. You could tell it was out of control because it was just zigzagging."

(3)

According to the *Star-Telegram*, Wetzel said she watched in horror as the Jeep struck the Honda Accord that the woman was driving, then hit a nearby Mazda 626, and then bounced back into the Accord, knocking the female employee down and dragging her underneath.

For related information, click here.

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Carwashing Archives

View 100 Most Recent News Pieces

Technology puts unintended acceleration back in spotlight

By Jayne O'Donnell and David Kiley, USA TODAY

ROCKVILLE, Md. — Carol Mathews, 60, has been driving since she was 12 years old on a South Dakota farm. So when her 2002 Lexus ES 300 ran into a tree as she pulled into a restaurant parking space last fall, she was pretty sure she wasn't the problem. She says it was the third time the car lurched forward without her help.

Marlene Fett, 70, swears she hadn't touched the gas pedal when her 1988 Lincoln Town Car plowed into a carousel outside an Arkansas Wal-Mart in 1995. The crash killed 6-month-old Nathaniel Chapman and seriously injured his then-2-year-old brother, Jonathan.

Was it the car or the driver?

The question lingers 15 years after federal auto safety officials said so-called unintended or sudden acceleration was caused when drivers stepped on the gas instead of the brake. The National Highway Traffic Safety Administration's 1989 report was in response to well-publicized complaints that models sold by Audi and other automakers would take off on their own from a standstill, travel several feet and usually crash.

But lack of ironclad proof that the cause of unintended acceleration lies either with a car defect or driver error has made the issue a recurring nightmare for automakers and regulators. Each new spate of incidents can cause renewed jitters among drivers.

Now, NHTSA has opened an investigation into whether a new technology is making unintended acceleration more frequent — or just giving errant drivers and plaintiffs' lawyers something new to blame for crashes.

The technology, electronic throttle control, uses sensors to tell a car's computer how much to open the throttle, which lets in air, and how much fuel to inject into the engine to control speed. Automakers like the technology, which replaces a mechanical cable, for reliability and cost savings, and because its helps fuel economy and improves performance. But it works with other new and often bug-ridden electronics that plaintiffs' lawyers say are leading to unintended acceleration.

Specifically, NHTSA is investigating the electronic throttle control system in more than 1 million 2002-03 Toyota Camrys, Solaras and Lexus ES 300s. It has narrowed the probe to 11 complaints of engine surge, five that involved crashes. More than two dozen other complaints were dropped from the investigation.

But the Toyota cars [illegible] Audi A6 sedans pick up speed without help while car was to turn the ignition off. The agency is investigating.

•Subaru recalled 128,000 vehicles because of a possible defect in the cruise control system that could leave throttles sticking wide open. The throttle stayed open rather than returning to idle when the driver removed his foot, NHTSA says.

(5)

For more than a decade, decisions usually favored car companies and blamed drivers in unintended acceleration cases, but some recent trials and court decisions reversed that. Ford Motor and General Motors each recently lost a high-profile case.

Complaints about unintended acceleration have mostly come in three phases. After the surge of complaints in the 1980s, automakers added mechanisms known as shift-locks, which force drivers to press the brake pedal if they want to shift into drive or reverse. That cut the number of unintended acceleration complaints considerably in the 1990s.

But in the mid to late '90s, plaintiff lawyers began to blame increasingly popular cruise control systems for new unintended acceleration problems. They say simultaneous and undetectable cruise control failures can give cars power as soon as the ignition is turned on and cause them to accelerate on their own.

Automakers and regulators say that cruise control, like any component, can malfunction, but they dismiss the lawyers' theory that it is linked to cars taking off on their own from a stop. They say all the incarnations of cruise control have given often-elderly drivers a complicated new technology to blame for their own mistakes.

Now, many expect electronic throttle control will be the new lawsuit target.

Incident followed concerns

Carol Mathews is no mechanic, but she says she knows her car and her driving. And she's all but certain her car was operating on its own when it hit the tree last fall in the parking lot in Rockville, a Washington suburb. The incident followed several months of concerns about jerkiness, deceleration and acceleration without her help while driving at highway speeds. After seeing dozens of related complaints about Lexus and Toyota models on NHTSA's Web site, she petitioned NHTSA to open a probe, which it did last month.

Mathews, a nurse and school health official, bought her Lexus about a year before her crash and after putting 155,000 miles on a 1989 Oldsmobile Toronado Trofeo. She dismisses the longtime argument by regulators and automakers that it might have been hard to adjust to a new vehicle with new pedals that are positioned differently. Older-model American cars often have larger brake pedals than Japanese models, and the gas pedal might be where the brake was in a drivers' previous car. In Mathews' cars, the pedals are only slightly different in size and position.

Toyota spokesman Mike Michels says the automaker takes the complaints seriously but believes it's significant that NHTSA has already reduced the number it is investigating to 11. "That's a pretty small number, and we do not think that there is any event that could take place that couldn't be overcome by applying the brake," says Michels.

Electronic throttle control units show trouble codes on the car's computer and illuminate the check-engine light on the dash if there are malfunctions. Michels says Toyota technicians found no trouble codes with Mathews' car. None of the other complaints mentions a check-engine light.

Fett and her lawyer blame cruise control for her 1995 crash. "The car just took off," she says.

The deadly collision sent her to the hospital, where she says she had a heart attack and a bleeding ulcer that burst. Her husband, William, says that for six months, Fett couldn't look at a child without crying and couldn't bear to drive by Wal-Mart.

A Chapman family lawsuit against Ford is scheduled to be heard in November. The family settled its lawsuit [illegible]

[illegible] Fett on a "rocket ship to Mars" after she pulled out of her parking place. He petitioned NHTSA to investigate what he says is a defect in Ford and Lincoln models' cruise control that causes the accelerator to stick.

In a lengthy 1999 report denying McMath's petition, NHTSA investigator Bob Young wrote that even if such an occurrence took place and didn't leave evidence of a mechanical malfunction, the situation should be

reproducible through in-vehicle and laboratory tests. None of NHTSA's testing could do so.

McMath says he has an expert who can replicate it. "But it is not a road show you can put on and bring around the country."

Despite NHTSA's rulings, automakers have suffered recent losses in cruise control cases:

•A Missouri jury last year ordered GM to pay Constance Peters and her husband $80 million for the crash of her 1993 Oldsmobile Cutlass, which accelerated 120 feet in reverse and into a tree while she was backing up. They blamed faulty cruise control. GM is appealing.

•The U.S. Circuit Court of Appeals in New York in 2002 reinstated a $1.1 million judgment against Ford in the crash of a 1991 Ford Aerostar. Jurors had found that the crash was caused partly by a "negligently designed" cruise control system.

Age as an issue?

In its 1989 report, NHTSA noted that drivers over 60 were as much as six times as likely as younger drivers to be involved in an unintended acceleration incident, suggesting that deteriorating reflexes are a contributing factor.

But the older-driver theory raises the ire of McMath and Tom Murray of Sandusky, Ohio, another Chapman attorney. McMath calls it "the hobgoblin of geezer negligence." Murray says, "These cases go back to the 1980s and involve Audi 5000s, Ford Thunderbirds, Mercury Cougars and Grand Marquis, Ford Aerostar vans, as well as Town Cars, and the complaints and incidents cover a broad demographic waterfront."

Audi, which has been linked for many years to real or imagined unintended acceleration, perhaps has the most to fear from a fresh look at the issue. In the mid-1980s, the German automaker, owned by Volkswagen, was investigated for hundreds of complaints of unintended acceleration in its 5000 sedan. The resulting bad publicity caused Audi sales to drop 60% in three years, even though NHTSA never found a flaw in Audi's design and blamed driver error.

The company says it is cooperating fully with NHTSA's new probe into its A6 models but, like Toyota, doesn't believe the cars are defective.

"Our engineers are looking into what could have caused the complaints, but we don't believe this is related at all to claims of years ago," says Audi spokesman Doug Clark.

Michels says electronic throttle control systems are not likely to blame for Toyota models, either: "That's not to say they don't fail or they can't fail, but they are very reliable."

In the future, technology might lead to more concerns about unintended acceleration, but it may also finally bring some answers.

Automakers are rapidly adding electronics to cars, including systems that will control acceleration, braking and steering if a vehicle gets too close to another. While most of the high-tech additions are expected to make driving safer, some [illegible] out of government caution may also be the source of more complaints.

At the same time, new crash-recording devices, similar to the black boxes on airplanes, are increasingly showing up on vehicles. They will show computer codes that tell whether the throttle control system failed, the brakes were used and numerous other details about cars before a crash. That means the [illegible] electronic footprints of what caused a crash finally will be available.

Still, it's hard to imagine it will end the debate forever.

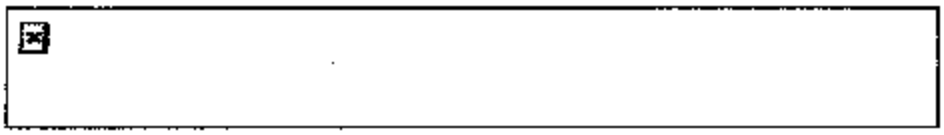
[illegible] Chicago attorney John Coleman, who has represented Ford in numerous unintended acceleration cases: "There will always be something to argue about in court."

7

Kiley reported from Detroit

Find this article at:
http://www.usatoday.com/money/autos/2004-04-13-unintended-acceleration_x.htm?POE=MONISVA

☐ Check the box to include the list of links referenced in the article.



(8)

A Note on Automobile Cruise Control Faults and Sudden Acceleration

by Dr Antony Anderson C.Eng FIEE

6. Frequency of sudden acceleration incidents and alleged examples

Some control system malfunctions outside the automobile industry - Alleged incidents of sudden acceleration - Litigation - Denial of McMath Petition - Discussion of NHTSA Denial

Some control system malfunctions outside the automobile industry

IN discussing alleged automobile sudden acceleration incidents, it is instructive to note that there have been a number of well documented examples of somewhat similar control system malfunctions in other fields. Here are a variety examples of malfunction in non-automotive systems, chosen to represent situations from the trivial to life threatening:

1. **Computers cause electronic cat flap latch to malfunction**
2. **Transient magnetic fields produced by an electric drill alter second hand of an electric watch by 10 seconds**
3. **Uncommanded operation of powered Wheelchair causes man to go over cliff.**
4. **Geomagnetic storm blacks out Quebec**
5. **Uncommanded release of munitions from a Navy jet landing on the aircraft carrier U.S.S. Forrestal causes 134 deaths**
6. **A DC 10 Autopilot disrupted during final landing approach by a battery-powered CD player forcing pilot to take emergency action to override the autopilot**
7. **Black Hawk Helicopter knocked out of the sky by radio waves.**
8. **Chinook Mark II Helicopters experience spurious engine accelerations and decelerations**
9. **Washington State Ferries replace "sail by wire" electronic control system with pneumatic controls**

Intermittent control system failures rarely leave visible traces behind them and, consequently, the root causes are often very difficult to identify with certainty. Sometimes human error is invoked on the questionable ground that there is no visible evidence of a system fault. For example, the Mull of Kintyre Chinook helicopter crash mentioned above was attributed to gross negligence of the pilot and co-pilot by the RAF Board of Enquiry. A subsequent Parliamentary enquiry produced evidence that the Mark II Chinook, fitted with a full authority digital engine control [illegible] was subject to spurious engine accelerations and decelerations and that, in the event of a malfunction, there was no provision for the pilot to exercise a manual override of the system.

[illegible] acceleration

Applying now to automobiles, reported cases of sudden acceleration, in terms of the restricted NHTSA definition mentioned in the last section are, seemingly, relatively infrequent. For example, in a study carried out between 1979 and 1987 on a population of 4.7 million cars from six manufacturers, there were 20 deaths, 877 injuries in 2,782 accidents to sudden acceleration.

However, in my view, to these should be added many potential sudden acceleration events that do not come within the NHTSA definition, for example: events that occurred on the move; events that did not result in an accident; speed instabilities; anomalous intermittent events [e.g. cruise control that only works in wet weather, horn and cruise that have both stopped working etc.]

Well publicised examples of suspected cruise control malfunction are :

- **January 2003 Two cases of alleged sudden acceleration in Chrysler Jeep Cherokees in Paris and Fort Worth Texas**
- **May 2002 :** Safetyforum.com report a number of alleged sudden unintended acceleration incidents involving Ford vehicles and state that in recent litigation Ford have been required to "disclose documents that revealed the breadth of the problem, ... the company's prior knowledge of the cruise control design defects and its efforts to keep them hidden." See Section 9-Links & References- FORD
- **March 2001: Santosa v. Gerstel and DaimlerChrysler Corporation – Jury verdict in Seattle, Washington State that sudden acceleration incident was not due to driver error but to a vehicle defect.** The jury found that the accident in which Ms. Santosa was injured was not due to driver error by the defendant Mrs. Ida Gerstel, but concluded that the accident was caused by defect in the 1993 Grand Cherokee that she was driving . The verdict was appealed by Daimler Chrysler but was upheld by the Court of Appeals. Expert Testimony for the defence in this case was provided by Romualdi, Davidson and Associates, in conjunction with Mr. Walter D. Salyer II of Infospace, who had just completed an extensive investigation of sudden acceleration events in certain 1991-1995 Jeep Cherokees and Grand Cherokees. After the trial, Romualdi, Davidson and Associates submitted a formal defect petition to the National Highway Traffic Safety Administration, requesting that an engineering investigation of the SAI issue be opened. The text of the submittal and NHTSA's response can be downloaded from the RDA Website See also Section 9-Links & References - CHRYSLER
- **Autumn of 2000 :** Several examples of Sudden Unexplained Acceleration in Ford Explorer vehicles in the UK, were reported in a Channel 4 TV documentary on Runaway Cars. UK vehicles in question had all been on the move and apparently without Cruise Control engaged.
- **Dec 1999** : "2000 Ford Focus (31,000 vehicles) recalled because the speed control cable end fitting can allow water to enter the speed control servo assembly. If this occurs corrosion the servo assembly could develop and cause intermittent speed control operation or prevent the throttle from returning to idle. A throttle that does not return to idle could result in unexpected acceleration, increasing the risk of a crash." See Section 9-Links & References- FORD
- **May 1999** : Ford recalled about 279,000 1992 and '93 Lincoln Town Car, Mercury Grand Marquis and Ford Crown Victoria sedans equipped with factory-installed cruise control. Ford is reported as saying in a statement that "a potentially defective cruise control deactivation switch could short-circuit, which in turn could overheat and catch fire. A short also could disable the cruise control system and blow the brake light fuse." Ford also reported 47 incidents involving a fire that may have been caused by the faulty switch and two injuries, but that there had been no fatalities related to the problem. [NHTSA Recall No. 99V-124/Ford Recall No. 99S15]
- **Oct 4, 1996 :** Chrysler disclosed in [illegible] Office of Defects Investigation that it knew of 98 incidents of unintended acceleration between 1993 and 1996 involving Cherokees and another 241 involving Grand Cherokees ref: See Section 9-Links & References CHRYSLER
- A group of independent engineering experts claims to have uncovered a defect specific to the 1993-96 5.2 litre V8 Grand Cherokee. If cruise control is left in the ON position a short to ground in the power control module connector can cause the vehicle's engine to race. The

short is said to be caused by water, moisture etc. getting into the connector and causing corrosion. ref: See Section 9-Links & References CHRYSLER : Strategic Safety. Special investigation Chrysler Cherokee 1998

- **26 March 1994 Hoffman Car Wash. Albany, NY. (1992 Jeep Cherokee Laredo. VIN 1J4FJ5880NL246884) An employee of the car wash shifted the Jeep into Drive; and the vehicle suddenly accelerated into the car wash tunnel. The vehicle entered the detailing area, struck the right wall and proceeded past two cars and an employee. Employees on the scene witnessed brake lights during the incident. ref: See Section 9-Links & References CHRYSLER: Strategic Safety. Special investigation Chrysler Cherokee 1998.**
- **1992 Chrysler tested a 1992 Jeep Cherokee for susceptibility to Radio Frequency radiation. The vehicle was part of a rental fleet from Dollar Rent-a-car that had experiences sudden unidentified acceleration. A police radar gun was aimed at the vehicle under the hood (bonnet) and in the passenger compartment. Chrysler concluded "radiated RF did not have any adverse effects on the Jeep. However, the summary notes that testing resulted in "engine surging" but was not considered "excessive engine/vehicle accelerations." ref: See Section 9-Links & References CHRYSLER : Strategic Safety. Special investigation Chrysler Cherokee 1998**
- **During the 1980's over 1000 incidents involving Audis. ref: http://www.safetyforum.com/sua/**
- **Buick Regal recalls in 1979, 1984, 1988 and 1989 relating to cruise control problems**
- **1986 : 4561 Toyota Celicas were recalled because soldered terminals of the cruise control module may develop cracks due to improper application of the coating to the printed circuit board. The consequences of the defect were said to be that continued use of cruise control could lead to complete separation of soldered terminals and circuit failure; engine speed would instantly race and vehicle could suddenly accelerate, possibly resulting in an accident. [NHTSA CAMPAIGN ID Number: 86V132000].**

Litigation on alleged sudden acceleration

There have been a number of occasions where malfunction of a cruise control system has been proposed in court as the possible cause of a sudden acceleration incident. Litigated cases include Manigault v. Ford and Jarvis v. Ford. Note 1
The main counter-argument against a cruise control malfunction has been that the event may have been caused by driver mistakenly pressing the accelerator while thinking that they were applying the brake.

Simplifying matters, and ignoring cases of stuck throttles, trapped actuator cables etc., there seem to be two plausible potential explanations of how the throttle might move to the fully open position:

(1) cruise control OFF : therefore cruise control cannot act : driver malfunction causes throttle to open
(2) cruise control ON : therefore driver cannot act : cruise control malfunction causes throttle to open

Neither explantion fits those cases where witnesses claim that the cruise control was OFF and the throttle moved of its own accord. So either the witnesses are lying, or they are telling the truth and some further explanation is required.

How could it be that a cruise control system that is to all appearances OFF may still be capable of a

malfunction? The answer lies in understanding the distinction between the functions of control and protection. Electronic switching devices or controllers *control* the voltage or current in a load, but they do not electrically *isolate* a load from its power supply or provide *protection* against damage in the event of a fault while in operation. For electrical isolation and protection an electromechanical switch, a relay or a contact breaker is required.

This principle is generally adopted, for example in domestic electrical supply. The individual device (Kettle, washing machine, lawnmower etc.) has a controller of some kind and is protected by an overload cutout and fuse so that in the event of any failure the device is disconnected from the electrical supply. At the next level the ring main is protected against overload by its own circuit breaker. If that fails, then there is a main circuit breaker for the whole dwelling which will operate. Should the lawnmower controller become jammed in the fully open condition creating a potential runaway situation, the connector and socked between the power lead and the lawnmower will automatically disconnect the moment tension is applied to the lead, so bringing the lawnmower to a rapid halt. A similar distinction between control and protection/isolation is to be found in large turbogenerators where the speed is controlled by controlling the flow of steam using electrohydraulic governor valves. Protection is provided by emergency stop valves placed in series with the governor valves which cut off the supply of steam from the boiler in an emergency and isolate the turbine.

It appears that the isolation and protection functions normally provided for control systems are absent in many automobile cruise control systems. Perhaps this is one of the reasons why cruise control systems appear to display the potential to malfunction with such serious knock-on results.

Denial of petition by NHTSA

It is in this context of an apparent lack of electrical isolation and protection of the power stages of cruise control systems, that we should consider the petition of Mr. Sandy S. McMath to the NHTSA[19th July 199] to re-open their enquiry on sudden acceleration. McMath was representing the parents of two boys injured in an alleged sudden acceleration incident in Mountain Home Arkansas June 7th 1995. The grounds of what seems to me to be a very reasonable petition were:

1. To date, NH TSA has neglected to consider the mechanisms that can cause sudden acceleration by bypassing the control logic of the cruise control system and thus can induce sudden acceleration in a stationary vehicle;
2. NHTSA has a pparently failed to consider the data collected by the Ford Motor Company in its investigation of 2,800 incidents of sudden acceleration during 1989-1992;
3. NHTSA has not add ressed the fact that there is no true failsafe mechanism to overcome sudden acceleration.

The petition was denied for reasons outline in Denial of Motor Vehicle Petition DP99-004, Part 2/2

With reference to (1) the Denial says in Section 4.1.2 :

"A review of the [NHTSA] Study demonstrates that this claim is without foundation. Clearly the Study considered [illegible] found no evidence that faults "bypassing the control logic of the cruise control system" were a viable explanation for SAI. [SAI = Sudden Acceleration Incident = Sudden Unexplained Acceleration]

...Under the petitioner's theory, a vehicle involved in a cruise control related SAI would have had to

experience the following simultaneous failures: (1) at least two electrical failures of the vacuum servo solenoid system; (2) a mechanical failure of the MVDV and (3) a mechanical failure of the brake system. Moreover, according to Mr. Sero, a post-SAI vehicle inspection would find not physical evidence that any of these systems failed. Thus Mr. Sero's theory is based on simultaneous electrical and mechanical faults, involving more than one element of the vehicle's control system, which would be undetectable after the incident has occurred .

...Extensive laboratory testing of the operation of cruise controls under stress from temperature extremes, power supply variations, EMI/RFI and high voltage discharges has demonstrated no failure modes of any relevance to SAI. Analysis of their circuitry shows that for nearly all controls designed in the past few years ["all" in the case of Ford], two or more independent, intermittent failures would have to occur simultaneously to cause throttle opening in a way that would be difficult to detect after the incident. The occurrence of such simultaneous, undetectable failures is virtually impossible."

In effect the NHTSA appear to be denying the following :

1. **That failure modes internal either to the cruise control module or the throttle actuating mechanism could cause the throttle to open;**
2. **That an intermittent fault could occur without leaving clear evidence that would be observed subsequently;**
3. **That two such independent intermittent failures could occur simultaneously (concurrence 'virtually impossible')**

Further, the statement that "*Extensive laboratory testing of the operation of cruise controls under stress from temperature extremes, power supply variations, EMI/RFI and high voltage discharges has demonstrated no failure modes of any relevance to SAI*" appears to be entirely at variance with the published evidence of Kimseng et al quoted in Section 7, which suggests that the PCBs of one particular cruise control system could suffer open and short circuits in accelerated laboratory testing.

Discussion of NHTSA Denial

One might ask the following of anyone expressing such robust views :

- Why is it unreasonable to envisage the possibility that intermittent faults might arise within the electronic control module and cause cause a malfunction in the throttle actuator? Note 2
- Why would an intermittent fault, or faults, necessarily leave an observable trace(s) behind? Intermittent faults, especially in wiring and electrical contacts are sometimes extremely difficult to locate.
- Why is the simultaneous occurrence of two independent intermittent failures necessarily 'virtually impossible'? In any case, it may be that only one fault, if it is in the right place, may be necessary.

Those who have carried out failure investigations will be aware of the difficulty in expressing a fault hypothesis clearly and concisely. It seems that this the difficulty that Mr Sero has faced. He describes the failure mode as "a fault that bypasses the control logic of the cruise control system".

This might mean :

- a fault that does not involve the control logic at all, ie. one that may occur whatever the control logic state and on which the control logic has no effect.
- Equally it might mean some fault that disables and therefore bypasses the control logic.
- A combination of both types of fault.

Mr Sero maybe expressing himself in slightly ambiguous terms, but nevertheless he appears to be suggesting, quite reasonably, in my opinion, that account should be taken of two kinds of fault :

- faults that involve malfunction of the control logic;
- faults that arise independently of the state of the control logic, i.e. faults that arise within the control system after the point of application of the control logic. [*"faults bypassing the control logic"*]

Re. the second type of fault, to which the NHTSA seems to take such exception, Mr Sero appears to be talking about faults that may occur, for example, in the main elements of the controller, such as the proportional or integral control amplifiers. Here he may not be presenting his ideas with the utmost of clarity, but the underlying argument is entirely sound. i.e. that control systems can experience internal faults that may manifest themselves as output malfunctions that cannot be controlled by the input. In my view, there is nothing extraordinary about this proposition. Runaway events would be more common were it not for the measures normally taken to prevent them. For example:

- Steam turbines, if not fully protected against sudden loss of load, would overspeed and self destruct.
- DC machines have to be protected against loss of field for a similar reason.

In my view, any competent electrical engineer carrying out a fault analysis on a control would recognise that a single point internal fault was a possibility and might cause a serious malfunction at the output, irrespective of any inputs. They would assume that such a malfunction was possible and work backwards to deduce what particular kind of internal faults might cause it. They would then look at the failure evidence and see whether it matched with the possible root causes or not.

The NHTSA refutes the claim that it has "neglected to consider the mechanisms that can cause sudden acceleration by bypassing the control logic of the cruise control system and thus can induce sudden acceleration in a stationary vehicle." on the basis that it found no evidence in its original report that this postulated mechanism was a viable explanation for sudden acceleration.

We shall see in the next section that, contrary to what the NHTSA asserts, faults on cruise control systems boards are known to have occurred in the field and can be induced in the laboratory and therefore their argument loses most of its force.

Notes: Section 6

Note 1: Litigation cases on Sudden Acceleration

- **Manigault v. Ford** [Virginia Manigault v. Ford Motor Co., 1991 Ohio App. LEXIS 3177 (9th App. Dist. 1991)] A Ford Crown Victoria car allegedly sped out of parking lot in Cleveland Ohio on one occasion and the driver managed to bring car to a halt. Several months later the same car allegedly roared out of owner's driveway into the back of a house, putting the driver into a coma. This was reported in NBC Dateline Feb 10 1998 : Vehicles that take off on their own The manufacturers issued a very strong Letter of complaint about the Dateline programme.

  Jarvis v. Ford see New York Law Journal November 5 1999

Note 2
The following are some possible intermittent fault scenarios :

- a lack of pressure on an electrical contact, in the presence of vibration, might cause fretting corrosion and an intermittent high contact resistance;
- a fractured printed circuit track or a dry joint might change the characteristics of a logic gate or a feedback path;
- a leakage path between printed circuit tracks might allow charge to build up on a capacitor and alter a speed reference signal.

For a general treatment of electrical contacts, including intermittent contacts see:
Holm, R.: "Electrical Contacts" Almqvist & Wiksells Akademiska Handboecker Hugo Gebers Foerlag Stockholm 1946.
LLewellyn Jones, F.: The Physics of Electrical Contacts Oxford 1957

Strategic Safety Special Investigation

Chrysler Jeep Cherokee/Grand Cherokee Sudden Unintended Acceleration

[Note: We are in the process of linking the documents referenced in this paper.]

At the mention of "sudden unintended acceleration" (SUA) most consumers conjure up the Audi debacle from the 1980s. Mention SUA today and many Jeep owners will tell you about the Cherokee and Grand Cherokee.

Incidents of SUA in Cherokee models have been reported for more than 10 years. Most complaints allege that the driver shifted their vehicle from Park to Reverse or Drive and the vehicle raced off. In most of these incidents, drivers also allege a loss of braking. What's happening and why have hundreds of Jeep owners complained about SUA incidents in their Jeeps? Why have these incidents resulted in significant numbers of collisions and injuries?

Strategic Safety presents the facts from our investigation into this contentious issue.

Chrysler Recalls Some Cherokees

In 1990, based on complaints from Jeep Owners, Ralph Nader-founded Center for Auto Safety (CAS) requested the National Highway Traffic Safety Administration (NHTSA) investigate SUA in Jeep Cherokee models. [NHTSA is a federal agency under the U.S. Department of Transportation that is responsible for reducing deaths, injuries and economic losses resulting from motor vehicle crashes. The agency sets and enforces minimum safety performance standards, investigates safety defects in motor vehicles, and researches driver and vehicle safety.]

The agency declined. One year after the CAS request, Chrysler voluntarily recalled 1989 and 1990 Cherokees (with the 4.0-liter 6-cyl. engine) to replace the Throttle Position Sensor (TPS). According to Chrysler, the defective TPS was causing "intermittent high idle" after engine start-up, which could lead to "unexpected movement of the vehicle and result in an accident."

SUA Reports Keep Rolling In

A review of post-recall complaints to NHTSA reveals that some owners still experienced SUA after the defective TPS was replaced. Other owners complained that their model year was not included in the recall, yet they experienced SUA.

NHTSA "Preinvestigation" into Cherokee SUA

In 1994, NHTSA opened what it termed a "preinvestigative file" into 1993 and 1994 Cherokee/Grand Cherokee SUA. [The Grand Cherokee was introduced in 1993 and used the same base 4.0-liter engine

'and drivetrain as the standard Cherokee; a 5.2-liter V8 became optional.] In a June 17, 1994, letter to Chrysler, NHTSA informed the company that it had received 40 reports, including 35 accidents and 25 injuries, of unwanted acceleration after starting the engine and shifting into gear. The purpose of NHTSA's letter was to learn what Chrysler knew about the problem--this was not a formal investigation into the problem.

Chrysler Responds to NHTSA

Chrysler responded to NHTSA that it had 108 owner reports and 10 field reports of SUA in 1993 through 1994 Cherokee/Grand Cherokee models (88 reports alleged an accident occurred as a result). The company also disclosed that it was aware of six claims and four lawsuits related to the alleged problem [**NOTE: These numbers relate to only the 1993 and 1994 models**].

Chrysler concluded the problem was caused solely by "driver pedal misapplication." The company went on to note that "in the absence of any other cause, pedal misapplication is the only reasonable remaining explanation." In other words, Chrysler argued that the drivers of these vehicles mistakenly depressed the gas pedal instead of the brake pedal.

The Numbers Continue to Climb

By 1996, the number of Jeep Cherokee SUA complaints to NHTSA had increased to more than 400. In addition, the International Car Wash Association (ICA), issued a "Special Alert" to its members [car wash owners] warning that it had received a number of calls from car wash operators who experienced unexpected "lurching" when the vehicles exited car washes. The alert stated that when the vehicles were shifted into gear they would unexpectedly accelerate without the gas pedal being depressed. ICA advised car wash operators to alert employees and Jeep owners to fully depress the brake pedal before shifting the vehicle into gear and to be prepared to shut off the ignition if necessary.

In April 1997, NHTSA examined the complaint rates (per 100,000 vehicles) of 1987 through 1995 Jeep Cherokee, Commanche, Wagoneer, and Grand Cherokee models. The rates ranged from a low of 3.41 per 100K in 1988 models to a high of 22.69 per 100K in 1993 models.

NHTSA also evaluated the SUA complaint rate per 100K vehicles for the 1993 through 1995 Cherokee and Grand Cherokee models only. The results ranged from an alarming 34.16 per 100K for 1995 models to an astounding 67.3 SUA incidents per 100K in 1993 models. The rate per 100K of 1993 through 1995 models averaged 48.97 reported incidents. (The data is based on complaints received by NHTSA and Chrysler)

Further, NHTSA evaluated the SUA complaint rate of peer 1993-1995 sport-utility vehicles based only on the complaints received by the agency. This comparison found that SUA complaint rates in Cherokee/Grand Cherokees were more than 4 times more frequent than the next closest peer vehicle. Compared to the combined rate of the 9 other peer sport-utility vehicles, the 1993 through 1995 Cherokee/Grand Cherokee averaged approximately 12 times greater number of reported SUA incidents.

'Another Request for a NHTSA Investigation

In April 1996, the Center for Auto Safety (CAS) again requested that NHTSA investigate Jeep Cherokee SUA problems and cited the ICA bulletin and 12 additional complaints of SUA in 1991-1995 model Cherokees. NHTSA did not open a formal investigation.

The Media Coverage

As the complaint numbers continued to grow the media began to pick up on the problem and in 1996 a number of local networks ran stories about Cherokee SUA. Chrysler's response to the media inquiries claimed that there is no such thing as SUA. Chrysler took the position with the media that there is a pattern to many of the incidents and that they are occurring because of "pedal misapplication." Chrysler argued that pedal misapplication resulted from

1.drivers who are not familiar with the vehicle and/or
2.drivers who are not fully seated, or seated incorrectly in the vehicle.

Chrysler also argued that witnesses do not report brake lights illuminated during incidents; therefore, drivers must be applying the accelerator. Both NHTSA and Chrysler were cited as saying that these types of incidents are the result of driver error and that there is no scientific evidence that sudden acceleration actually occurs.

In the media reports, Chrysler performed a "test" that allegedly proves sudden acceleration claims are the result of the drivers applying the accelerator rather than the brake pedal. The test consisted of Jeep's platform general manager Craig Winn getting behind the wheel of a Grand Cherokee and depressing the accelerator and the brake to show that the brakes have more power than the engine. Winn said that the problem could only occur if drivers were applying the accelerator.

Following the local media, *Prime Time Live* aired its version of the story. *Prime Time Live* hired an engineering firm to measure the pedal offset in the Cherokee and found that the pedals were positioned almost identically to those in Audi vehicles that were subject to high rates of SUA. Although the program included interviews with drivers who claimed that they had not mistaken the pedals, *Prime Time Live* concluded that SUA in the Cherokee was design-induced driver error.

Chrysler's Shift Interlock Recall

Several days prior to the *Prime Time Live* story, Chrysler, in a preemptive move, announced that it was going to initiate a "service campaign" to retrofit pre-1996 Jeep Cherokees with a shift-interlock device (1996 and later models were equipped with shift-interlocks as standard equipment). A shift-interlock requires that the driver depress the brake pedal before they can move the shift lever out of the Park position. Shift interlocks are credited with reducing incidents of inadvertent actuation of the gas pedal and have been standard equipment in many vehicles with automatic transmissions since the early 1990s.

Chrysler's letter to NHTSA announcing its intention to retrofit the shift interlock in all 1984 through 1995 Jeep Cherokee/Grand Cherokee models claimed it "is always concerned when an owner believes there is a safety risk, even where, as here, the vehicle is not the cause of the concern."

Is This Problem Really Design-Induced Driver Error or is There More to SUA?

Strategic Safety has examined hundreds of complaints, interviewed numerous witnesses, drivers, and technical experts. Our conclusion is that design-induced driver error is indeed causing *some* of the SUA incidents. However, we are convinced that many of these incidents are caused by electronic defects that are unrelated to "pedal misapplication."

The "Pedal Misapplication" Theory

The issue of pedal misapplication is important and deserves further explanation. The position of the brake and accelerator pedals on the Jeep Cherokee/Grand Cherokees is such that it is offset to the left of the steering wheel. This offset can disorient drivers and can create confusion regarding which pedal is being depressed. How do we know this happens? Owner complaint letters, interviews, and in some cases physical evidence.

In engineering terms, the driver interaction with the vehicle controls is referred to as "human factors" or "ergonomics." Good ergonomics are based on the principle that engineers consider the characteristics of drivers in their design and arrangement of vehicle controls in order that the vehicle can be appropriately operated without error. Chrysler's assertion that the Cherokee/Grand Cherokee "is not the cause of the concern" ignores this basic engineering tenant. An extreme analogy is a vehicle design in which the driver must turn the steering wheel right to make the vehicle turn left. The vehicle may indeed steer appropriately when operated correctly; however, the design is counterintuitive and would likely result in a significant number of collisions.

An examination of Chrysler documents reveals that the company took at least two steps toward reducing "pedal misapplication." In 1994, Chrysler modified the brake pedal pads and moved them 15mm inboard to help drivers distinguish between the brake and accelerator pedals, and in 1997 it offered to retrofit shift-interlocks in pre-1996 models.

Chrysler's pedal modification in 1994 may have contributed to the reduction in SUA rates in 1994 and 1995 models; however, the reported incident rates as of 1997 were still at very high levels (45.43 and 34.16 per 100K for 1994 and 1995 models, respectively). It is still too early to determine the efficacy of the retrofit installation of shift interlocks and the rates of post 1996 models equipped with shift interlocks. (Any evaluation of the reduced SUA rate in post-1996 models must take into account other vehicle changes in addition to the shift interlock.)

[Note: Strategic Safety is reviewing more than 30 incidents of post-shift interlock SUA. We will add details regarding these incidents as our investigation continues.]

What is the explanation for incidents in which the drivers claim they did not apply the wrong pedal?

In most cases we don't know. However, an examination of Chrysler documents, and again interviews with witnesses, drivers, and engineering professionals provides strong evidence that there is more to the

problem than ergonomics.

Experts Find One Defect

One group of independent engineering experts claims to have uncovered a defect specific in the 1993 through 1995 5.2-liter V8 equipped Grand Cherokee that can cause SUA. Their testing has allegedly demonstrated that when the cruise control is left in the "on" position, a short to ground in the powertrain control module (PCM) connector can cause the vehicle's engine to race without driver input on the accelerator. The short to ground condition is said to be caused by corrosion in the connector that occurs due to poor shielding from the elements (i.e., water, moisture, etc.). The PCM connector on 1996 Grand Cherokee 5.2-liter vehicles was purportedly redesigned by Chrysler. [Note: Strategic Safety has not examined this testing, nor are we aware of peer review of this proprietary work to date.]

Other experts who have examined Cherokee/Grand Cherokee models believe that the answer lies in the complex and proprietary electronics and electronic coding in these vehicles. Some theories conclude that the Throttle Position Sensor (TPS), which was the subject of a 1990 Chrysler recall, could be sending incorrect signals to the fuel injection system, causing unexpected high idle. Other possibilities include incorrect signals that may be sent from the vehicle's electronic control module.

Chrysler Documents Provide More Clues

An examination of Chrysler documents demonstrates "pedal misapplication" cannot be the only problem causing SUA. Following are excerpts from several Chrysler documents.

- Chrysler Document C964 051393 51 L. This internal Chrysler complaint file indicates that a Service Manager from a dealer called to advise that a 1993 Cherokee was being towed into his dealership. The owner of the vehicle claimed that the Jeep had suddenly accelerated. A Chrysler District Manager could not find any problem with the vehicle. However, service personnel contacted "Chrysler Special Investigations" who advised that the dealer inspect (1) the cruise control to determine if it is on, (2) carpet and floormat location, (3) shifter linkage, (4) the DRB II for the number of starts since the last stored fault code registered. [DRB II is used to detect fault codes in the vehicle computer.]

- Chrysler Inter Company Correspondence 93-10-345 October 21, 1993. This internal memo documents an incident in which a Chrysler's Cincinnati Field Operations Manager Mr. G. Drozd experienced SUA in a 1993 Cherokee. Mr. Drozd wrote to Chrysler's Customer Advocate Group that "I started the subject vehicle and moved the gear selector quickly from park to the drive position. The Jeep immediately went to wide-open throttle. With the wheels spinning, the Jeep lunged forward and I was ____ (original document illegible) to bring it to a stop by jamming both feet on the brake pedal. At that point (vehicle was ____ [original document illegible] at wide open throttle), I turned off the ignition switch and placed the gear selector in park." Mr. Drozd went on to state "This vehicle is unsafe to drive and should be diagnosed, repaired, and repairs should be

verified beyond a shadow of doubt, or the vehicle should be crushed."

- Chrysler Document LA2323 041394 71 L. This internal Chrysler complaint file documents an owner complaint of multiple SUA incidents in a 1993 Cherokee. In one incident the driver struck another vehicle. The vehicle owner brought the Jeep to a Chrysler dealer who attempted to determine the cause of the incidents. No problems were found and Chrysler denied responsibility for the repairs. The owner brought the vehicle to an independent body shop to repair the vehicle damage, and when the body shop owner started the vehicle the engine raced to 3000 RPMs. Chrysler was again contacted, and a district manager was sent to inspect the vehicle armed with Chrysler's electronic diagnostic tools (DRB II). No faults were detected. Further, Chrysler installed a "co-pilot" diagnostic computer to monitor the vehicle's performance, and again, no faults were found.

- Chrysler Inter Company Correspondence, March 24, 1994, Memo to File from R. R. Werner, Technical Advisor. This memo documents a 1994 Jeep Grand Cherokee SUA incident that occurred at a Chrysler dealer with the used car manager at the wheel. According to the memo, the used car manager started the vehicle, and shifted to Reverse when the vehicle accelerated even though his foot was on the brake. The Jeep struck two other vehicles on the dealer's lot. Chrysler Technical Advisor R.R. Werner noted in the file that "[a]lthough I can find no plausible explanation for the incident, the current theory of 'Drive Error/Wrong Pedal' scenario does not appear to be a factor." [emphasis added]

- Chrysler R.F. Radiated Susceptibility Test. This report documents Chrysler's tests to "verify the immunity to Radio Frequency (RF) radiation on a 1992 Jeep Cherokee. The vehicle tested previously was part of a rental fleet from Dollar Rent-a-Car that experienced SUA. A police radar gun was aimed at the vehicle, under the hood, and in the passenger compartment. Chrysler concluded "radiated RF did not have any adverse effects on the Jeep." However, the summary notes that testing resulted in "engine surging" but was not considered "excessive engine/vehicle accelerations."

Documented Incidents of Jeep SUA Raise Doubts

Some incidents of Jeep SUA have been witnessed by bystanders who report that the vehicles' brake lights were illuminated. In other incidents the vehicles' rear wheels continued to spin and engine raced while the driver was extricated from the vehicle. Jeeps with their engines racing to 3000 RPMs with no driver input have also been captured on videotape. Following are a several incidents that raise serious doubts about the "pedal misapplication" theory. We will be adding additional incident reports and details [illegible]

1.Hoffman Car Wash. Albany, NY. 3/26/94. 1992 Jeep Cherokee Laredo. VIN

1J4FJ5880NL246884. An employee of the car wash shifted the Jeep into Drive, and the vehicle suddenly accelerated into the car wash tunnel. The vehicle entered the detailing area, struck the right wall and proceeded past two cars and an employee. Employees on the scene witnessed brake lights during the incident.

2.NHTSA Com plaint Report 474145 (Names and Addresses are redacted due to the Privacy Act). 10/3/94. 1993 Jeep Grand Cherokee. Sudden acceleration from stopped position when car was put into gear. Witnesses observed brake lights but car did not stop. Investigation found nothing wrong with the accelerator linkage or brakes. Four injuries, one fatality.

3.Nashua, N H. 3/19/97. Reported by the *Nashua Telegraph*, 3/20/98. 1997 Jeep Grand Cherokee. The driver of the Jeep was exiting a car wash when it suddenly accelerated and hit a curb. Upon hitting the curb the vehicle slid on its side across a median and into the street and righted itself back onto four wheels. The vehicle continued to accelerate into a snowbank in a car dealer parking lot. The vehicle struck several other vehicles and was eventually stopped by another vehicle. Witnesses who were immediately on the scene extricated the driver who was injured and had to reach in to turn off the ignition switch because the vehicles rear wheels were still spinning.

4.Northridg e, CA. 1988-1991. *Keeney V. Chrysler*. The owner of a 1987 Jeep Cherokee reported multiple incidents of high idle (approximately 3000 RPM) when the vehicle was started. In some instances turning off the engine would "reset" the engine to a normal idle. The high idle occurred randomly; however, it frequently occurred when the ambient temperature was high. Although no SUA incident occurred, the owner was able to demonstrate the intermittent nature of the high idle, including capturing this random event on video. Chrysler failed to adequately respond to the owner's requests to repair the vehicle which lead to a lawsuit. The owner was able to obtain a $68,000 settlement in this case.

Summary as of November 12, 1998

Strategic Safety will continue its investigation into Jeep Cherokee/Grand Cherokee SUA incidents. There are a number of areas that need further exploration. We will be reporting recent incidents, the results of litigation against Chrysler in cases of serious injury and death, and additional findings of potential defects.

If you have experienced SUA in a Jeep and would like to report your incident to Strategic Safety please use our Vehicle Incident Report Form or email us. We also suggest reporting your incident to the National Highway Traffic Safety Administration (NHTSA) at 1-800-424-9393.