



THE SAFETY RECORD

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Last month, the National Highway Traffic Safety Administration closed an investigation into the problem of fuel spit-back affecting Jeep Wrangler vehicles from the 2007-2008 model years, concluding that no safety-related defect trend had been identified.

Fuel spit-back occurs when a vehicle's inlet check valve malfunctions, allowing gasoline to gush back out of the filler neck when a driver re-fuels, dousing the ground – or the driver. It's an environmental and human safety hazard, and one might presume that no trend meant that few owners had complained about the problem of gas spilling out of the tank. But NHTSA cited a different reason: *too many people complained*:

“Although the rate of complaints reported to the agency on the subject vehicles is higher than or similar to the rates experienced in previous investigations where safety recalls were conducted, ODI suspects that the NHTSA safety complaints submitted by subject vehicles owners may have been influenced by internet related publicity both before and during this investigation.”

More data may seem like an odd reason for a data-driven agency to conclude that a problem does-

The Hype Hypothesis

n't exist, but it is not the first time NHTSA has dismissed consumer complaints as illegitimate, and it likely will not be the last, as the rise of social media makes it easier for consumers to discover that they aren't alone in experiencing a particular problem, to organize around it and to notify the agency about it.

With the exception of a novice driver, most owners have been successfully operating vehicles for a number of years, if not decades. Presumably, over those decades, owners, through daily use, come to expect certain vehicle behaviors denoting proper operation. One might suppose that when an owner complains, the vehicle is deviating somehow from the well-established repertoire. Under NHTSA's hype hypothesis, however, complaints that are lodged after some media exposure are not “real” complaints, they are either the result of mistaken description – what the consumer alleges isn't really a match to the suspected defect, or the extra reports obscure the true incidence of the problem in the field.

It is possible to test, using standard statistical methods and practices, to determine if publicity creates a false defect trend. But the agency does not test this supposition. It treats the hype hypothesis as a fact, and applies it, when necessary, to kill defect investigations.

The History of the Hype Hypothesis

The dismissal of consumer complaints as mere hype, and not illustrative of a safety problem, goes back nearly a quarter of a century, when NHTSA lost its one and only fact-based defect case against an automaker in federal court.

The issue was rear-brake lock-up in General Motors X-cars, which caused the vehicles to skid uncontrollably. As recounted in *Auto Design Liability*, automotive writers had noted the problem in 1979, as soon as the cars hit the showrooms. The agency responded by running tests on the X-car's braking stability, and the results persuaded the Office of Defects Investigation to move to a formal inquiry. In 1981, the agency suggested that GM announce a voluntary recall for some 300,000 vehicles with aggressive brake linings and a 41-percent proportioning valve that contributed to the lock-up by putting too much pressure on the rear brakes at a hard stop. GM, however, only agreed to recall 47,000 1980 vehicles equipped with both the aggressive brake linings and the 41-percent proportioning valve, to replace the proportioning valve.

NHTSA didn't challenge the
(Cont. on p. 2)

NHTSA Takes a Walk, Toyota SUA Continues

WENDOVER, UTAH – Last November, as NASA's Engineering and Safety Center was dotting the “i”s and crossing the “t”s of its “exacting” study of Toyota's electronic throttle control, Paul VanAlfen was in a panic. The Utah man was frantically trying to disengage the cruise control as his 2008 Camry rocketed down an I-80 exit ramp.

The NASA Engineering and Safety Center (NESC) report, *Technical Support to the National Highway Traffic Safety Administration*

(NHTSA) on the Reported Toyota Motor Corporation (TMC) Unintended Acceleration (UA) Investigation, was decidedly bullish on the robustness of Toyota's cruise control system – despite finding that a short circuit could send the throttle racing and not set a Diagnostic Trouble Code. No problem, the NESC team concluded – there were multiple ways to disengage the cruise control.

It did not work out that way for Paul VanAlfen. On November 5, 2010, the VanAlfen

family was on the way to a concert, when they crashed into a rock wall off Aria Boulevard. Paul VanAlfen and passenger Charlene Lloyd died of their injuries. Surviving witnesses told Utah State Police the 2008 Camry was traveling about 70 mph, when the driver entered the ramp and hit the brakes to disengage the cruise control. Paul's wife Shirlene and his son, Cameron, told police that VanAlfen could not turn off the cruise control nor slow the vehicle.

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The Hype Hypothesis

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remedy, even though its tests showed that switching out the proportioning valve wouldn't fix the problem. In the meantime, the Center for Auto Safety continued to log in complaints from owners of 1980 and older models. In 1982, it petitioned the agency to recall the X-cars and include later models in its probe. NHTSA expanded its investigation to add the 1981-83 models.

Then, in January 1983, *The New York Times* threw a spotlight on the under-the-radar problem. The front-page story disclosed the tests that NHTSA had conducted showing that the recall was ineffective. Congress took an interest in the issue, and the General Accounting Office, at the request of Congressman Timothy Wirth, opened a separate probe to determine if NHTSA had unnecessarily delayed taking action against GM.

"NHTSA was now besieged with reports of lock-up from X-car owners. On January 14, 1983, when the agency issued an initial defect determination on 1980 X-cars equipped with aggressive rear brake linings (affecting only 240,000 out of over one million 1980 X-cars), it had received only 364 complaints in three years of investigation, including one death report. By February 18, 1983, NHTSA had gotten 900 more complaints including 13 death reports," according to Auto Design Liability.

With the public pressure boiling over, NHTSA and GM moved swiftly to repair their reputations. GM ordered another recall of 240,000 X-cars. NHTSA stepped up its investigation, subpoenaing internal documents which showed that GM had gone ahead with its production plans – even though it discovered that X-cars suffered from rear-brake lock-up months earlier – and attempted numerous fixes after the fact.

Later that year, the Department of Justice lodged a raft of charges against GM, seeking a recall of all 1980 X-cars and charging that the manufacturer had lied to and withheld information from the agency;

that the X-car suffered from four separate defects that contributed to the lockup, and that GM failed to recall the affected cars.

But four years later, NHTSA lost the suit and a subsequent appeal. In 1987, U.S. District Court Judge Timothy P. Jackson ruled that the government failed to specifically define the defect and dismissed the complaints as merely "anecdotal." The federal appellate court, in upholding Judge Jackson's verdict, more strongly rejected that value of consumer complaints, calling them "driving events for which there is no physical or engineering evidence of failure."

The Hype Hypothesis Today

These rulings reverberate today in the language used by manufacturers and NHTSA to degrade the value of consumer complaints.

Last month, for example, the agency used the hype excuse to minimize the significance of consumer complaints about Jeep fuel spit-back. Owners reported that gasoline splashed back out of the filler neck, whenever they re-fueled their Jeeps; some alleged that gasoline had gotten in their eyes or on their skin.

Chrysler, naturally, saw no defect. The rate of occurrence, it countered "is lower than historical levels that have led NHTSA to reach the same conclusions." The problem was that Jeep owners were filling their vehicles with high-ethanol gasoline (three-quarters of all fuel is laced with ethanol; the 10-percent formulation is the most common), Chrysler said. The automaker did extend the warranty for the fuel-neck filler to a lifetime part replacement. The agency rejected further investigation on a third basis. On February 16, the ODI closed the Preliminary Evaluation, despite receiving nearly 900 complaints:

"Although the rate of complaints reported to the agency on the subject vehicles is higher than or similar to the rates experienced in previous investigations where safety recalls were conducted, ODI suspects that the NHTSA safety com-

plaints submitted by subject vehicles owners may have been influenced by internet related publicity both before and during this investigation."

In an interview with Edmund's, NHTSA Administrator David Strickland explained that the agency wasn't trying to discourage vehicle owners from reporting problems – it was just noting an anomaly:

"All our investigations become high profile," he told Edmund's. "You get a spike and it could be beyond actual occurrences."

Rod LaFleur, the Chicago owner of a 2005 Jeep, was doused by a geyser of gasoline the first time he filled his tank at a Costco pump during his lunch hour.

"The upside was: I got a lot of work done that day because no one would get near me," he joked. "The bad side was: that's highly dangerous."

This was the third actual occurrence - the first two times LaFleur experienced the spit back, the gas merely gushed to the ground. LaFleur surmised that other Jeep owners might be struggling with this problem, so he joined an Internet based owner's group and threw his question out to the community. Several others shared their spit-back stories. Another forum member posted a link to NHTSA's website and encouraged any Jeep owner suffering from the problem to report it to the agency. The group kept the link active and LaFleur started a Facebook group with the same goal. LaFleur isn't happy that Chrysler hasn't acknowledged that other model years are plagued by the same problem; he took great exception to Strickland's comments.

"I was appalled. He called me a liar," LaFleur said. "Why would we complain about this, if it wasn't happening? I suggested on the Jeep forum that if he would like us all to re-file with NHTSA, I'm sure plenty of Jeep owners would do it. We just want this taken care of."

NHTSA had also raised the specter of too-much publicity in ending a 2002 investigation into allegations that Jeep Grand Cherokees suffered from a false-park and rollaway problem, and in two Toyota Unintended Acceleration probes. Daimler Chrysler had already addressed the problem in 1993-1998 Jeep Grand Cherokee and Grand Wagoneer vehicles, with a recall to add a second detent device in the shifter assembly to promote proper shifting into "Park." But ODI continued to investigate complaints in the re-designed 1999 MY Grand Cherokee. The 1999 and subsequent model years, however, had the re-designed shifter, and a different engine with a re-designed transmission and transmission pattern. Chrysler argued that this was sufficient to prevent a false park scenario. After testing, the agency agreed.

The problem appeared to be that NHTSA's tests apparently were not replicating what was happening in the real world. By the time NHTSA closed its Engineering Analysis with no defect finding, the agency had collected a total of 1,038 complaints, 425 crashes resulting in 192 injuries and four fatalities. The agency, however, dismissed the validity of those complaints as the result of media attention on the issue. Before July 5, 2001, the complaint rate for rollaways in the so-called WJ platform was 2.7 per 100,000 vehicles, with only 14 crashes and 20 incidents. After "substantial" media coverage, that rate shot up tenfold to 27.6 per 100,000 vehicles. NHTSA degraded the validity of these new complaints, based on the amount of time that elapsed between the complaint to NHTSA and the incident. This analysis showed that the lag time for VOQs reported after July 5 averaged 19 months between incident and complaint dates. The agency concluded: "The WJ complaint rate was inflated due to national exposure through the press."

The Hype Hypothesis and Toyota SUA

When a Tacoma owner from

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NHTSA Takes a Walk, Toyota SUA Continues

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“My dad was stating very clearly that he was hitting the brakes, but with no success. Had heard him tell us five or six times that nothing was working,” Cameron wrote in his witness statement to the police.

“Paul put on the brakes just as we exited the freeway. But Paul said ‘the cruise did not shut off’ as we started down the off-ramp. The brakes were not slowing us down. The off ramp was very short and Paul didn’t have much time to try other stopping measures. We told him to keep stomping on the brakes,” Shirlene VanAlfen attested.

But, the VanAlfen crash did not trigger more Congressional hearings on Toyota electronics, or public outrage or even generate much media coverage. Last month, the National Highway Traffic Safety Administration and its contractor, NESC, released twin reports claiming that they could not find a circumstance in which an electronic glitch could cause Toyota’s Electronic Throttle Control- Intelligent to initiate an uncommanded acceleration powerful enough to overcome the brakes, without setting a DTC. Secretary Ray LaHood delivered the bottom line to the press with a great flourish that left no room for doubt: “We enlisted the best and brightest engineers to study Toyota’s electronics system, and the verdict is in. There is no electronic-based cause for unintended, high-speed acceleration in Toyotas.”

And yet, bold statements cannot make technical problems disappear. NHTSA may have walked away under the impression that it has performed its enforcement duties, but the incidents continue to occur and contradict the agency’s assurances. Two weeks after the reports were presented, Joan M. Herrity, a Massachusetts teacher, was at the wheel when her 2004 Sienna crashed through the plate-glass window of a coffee shop, and would have exited out the back, had the refrigerated drinks case not stopped the vehicle. Paul VanAlfen and Charlene Lloyd, Cameron

VanAlfen’s fiancée, died in a manner that NESC team leader Michael T. Kirsch was quite certain could not happen at all. NHTSA has merely ignored the events it cannot explain or minimized the large and considerable holes in Toyota’s safety net by definitively declaring that drivers can easily mitigate any curveballs the system presents. The NESC report documented instances in which Toyota’s throttle system does not give drivers the throttle response they request. The pedal, the team noted, can behave in a “jumpy” manner – meaning that the driver may ask for low power, but get a large throttle opening instead. This can result in death injury and property damage, if the surge occurs in close proximity to another object or a person. All three have occurred in the real world. These recent incidents show that all causes of Toyota unintended acceleration have not been remedied and that drivers *cannot* always save themselves, their occupants, their vehicles or immovable objects – like buildings – when the system goes awry.

For example, VanAlfen’s vehicle was subject to CTS pedal recall to insert a shim to prevent a sticky pedal, as well as the mat/shortened pedal and brake override recalls. Only the CTS pedal modification had been performed at the time of the crash. The Toyota dealer had not replaced the mat, shortened pedal or added the brake override. The police ruled that the floor mats were not a factor, but that the unperformed recall repairs were contributing factors. But if Mr. VanAlfen was using the cruise control at the time, what bearing do mats and pedals have on the cause of the crash?

Herrity’s Feb. 27 crash occurred as she was pulling into a parking space at a local coffee shop on King Street in Weymouth, Massachusetts. Local news media interviewed Mrs. Herrity post-crash where she stated that she was certain that her foot was on the brake, yet the vehicle continued to lurch forward uncontrollably into the building. Surveillance video obtained by news media shows the brake lights illuminated as the vehicle crashes through the shop. The 2004 Sienna was not subject to any of the recalls, including the carpet interference recall that affected some

2004 Sienna vans. What caused Herrity’s crash? The brake lights attest to her attempts to stop the vehicle. Was Herrity depressing both pedals — a difficult and contorting task? Or was an electronic fault to blame?

Contrary to the way in which the results of the NASA report have been presented, the NESC team found numerous instances in which a resistive short could cause an undetected and uncommanded acceleration in Toyota vehicles. One such scenario involved the cruise control:

“functional failures of the cruise control can result in 0.06 g’s acceleration or 2.12 kph/s, and may not generate a DTC,” the authors wrote.

Among the functional failures:

“With the cruise control engaged, a 240 Ohm resistive short of the cruise control signal wire to ground caused the cruise control to remain engaged and the vehicle accelerated to the maximum speed threshold of the system. This test simulated the ACCEL button in a failed closed position. If the brake pedal was applied with the short present, the system canceled. After releasing the brake pedal, if the short is recycled, the system would resume to the previously set speed, and be canceled again by pressing the brake.”

“The brake switch consists of one normally-open switch and one normally-closed switch. Both are mechanically connected with a switch plunger. With the cruise control enabled and the brake switch plunger disabled, the cruise control remained activated and functioning even when brake pedal applications were induced. The system maintained the set speed until enough brake force was applied to decrease vehicle speed by approximately 9 mph or below the 25 mph threshold of operation causing the system to fully disengage. *No DTC was generated.*”

Meanwhile, the spouse of one Toyota SUA victim has started

posting the audio of a conversation he had with ODI inspector Scott Yon on YouTube. Elizabeth James, of Eagle, Colorado flipped her 2005 Prius after it raced out of control on Interstate 70 at 90 miles per hour. James applied the brake and the emergency brake, while looking for a safe place to crash her vehicle, but this did not stop the vehicle. She eventually steered her runaway Prius through the woods, hit a shed, and landed in a river. She still suffers long-term injuries to her legs and back and stomach as a result of the crash.

James’s husband, Ted, recently released three installments of his July 2008 conversation with NHTSA officials. NHTSA never examined the vehicle – just the floor mats. Investigators acknowledged that James was braking, but attempted to pass the crash off as a floor mat incident on the basis of a scratch on the mat. They conceded, however, that Ted James may have made that mark as he attempted to recreate a jammed pedal floor mat after the fact. ODI investigator Scott Yon also noted that brakes will not always overcome the throttle – if the driver can not supply sufficient pedal force:

“In fact, in most cases, female consumers were not able to stop the car simply through the application of the brake. They had to take some other countermeasure like shifting the vehicle into neutral or turning the vehicle off to be able to get the car to stop,” Yon says.

That’s a little less definitive than NHTSA’s public statements about drivers’ ability to fix Toyota’s electronic throttle problems as they happen in the field.

NHTSA to Investigate Seat Heaters

WASHINGTON, DC – Will the National Highway Traffic Safety Administration determine that seat heaters exceeding human burn tolerance are defective, as other public health agencies do, or will they continue to argue that not enough people have been burned?

Safety Research & Strategies and a group of burn specialists asked NHTSA last month to help prevent serious burn injuries that injure disabled drivers and passengers by re-examining its approach to seat heater defect investigations by categorizing seat heaters which exceed human tolerance as defective and encouraging automakers to recall them.

“This is a very simple issue: We should not wait to see how many people are burned by a feature that exceeds well-established human tolerances before the product is considered defective,” says SRS President Sean Kane. “Just like the limits on hot water temperatures to prevent scalding injuries, vehicle manufacturers need to take similar steps with seat heaters.”

SRS has requested that regulators, manufacturers and the mobility community take immediate steps and adopt long-term strategies to prevent further harm:

Manufacturers should limit the maximum seat heater temperatures to the limits of human heat tolerances and set all seat heaters on a timer. These time and temperature limits should be codified in an industry standard.

The mobility adapters and automakers’ mobility programs should develop a protocol to automatically disconnect seat heaters for disabled drivers with lower body sensory deficits.

The mobility adapters should immediately send out warnings to their customers alerting them to the dangers of seat heaters.

NHTSA should re-examine its approach to seat heater defect investigations and regulations.

Currently, there are no government

or industry-wide standards on seat heater design or temperatures. In the absence of regulation, manufacturers have installed a variety of seat heater systems – some that reach temperatures significantly above human tolerances or have no automatic shut-off mechanism – or both. While most drivers know when to turn a hot seat off, occupants with lower body sensory deficits don’t feel the burn. In other cases, seats get hot enough to burn holes through the seat cover.

NHTSA has been investigating seat heater malfunctions for more than a quarter century. In total, the agency has launched six investigations into seat heaters overheating since 1984. Manufacturers, either influenced by an Office of Defects Investigation inquiry or at their own instigation, have recalled more than 600,000 vehicles in 13 campaigns. Since 2000, however, the agency has closed five investigations into seat heater malfunctions involving Chrysler, Volvo, Mercedes and Volkswagen vehicles. In an investigation into Mercedes ML 320 seat heater malfunctions, the agency decided that based on the low complaint rate, no defect trend existed. In most cases, ODI came to the conclusion that the harm caused by burning seats was minimal.

SRS and doctors from the Shriners Burn Hospital asked NHTSA to align its policies with other federal public health agencies, such as the Federal Drug Administration and the U.S. Consumer Product Safety Commission which do not minimize the safety risk when consumers report even minor burns from a heating-generating product, such as an electric blanket.

But, NHTSA officials appear to be sticking with their current approach. In a *USA Today* story about the issue and the call for action, published on February 22, the agency responded:

“Mr. Kane has provided no data on the frequency of such injuries, but nevertheless, NHTSA is reviewing agency data to determine how widespread the problem is. As part of its analysis the agency will determine whether the frequency and

severity of this condition may create an unreasonable risk to safety. Based on its analysis, the agency will determine what actions, if any, are needed to address this issue.”

Medical literature has been documenting serious and permanent burn injuries from car seat heaters to occupants with paralysis or diabetes since 2003. Disabled motorists have been complaining about the problem to NHTSA since, at least, 2002. The industry’s response has been to bury a warning in the owner’s manual. NHTSA’s approach to seat heater defects has been: no flames, no problem.

Seat burn complaints are common on vehicle owner Internet forums covering a wide variety of manufacturers – BMW, Mercedes, GM, Toyota, Volkswagen and Volvo. Consumers have been lodging complaints with tNHTSA since the 1980s. A December 2001 report from an Irvine, CA owner of a 1996 Volvo 850 is typical:

“After starting the engine, I switched the seat heater on and drove away. Within 2 minutes of driving, a sharp pain developed in my right buttock. Within seconds a trail of dark smoke rose from the same area. After lifting my bottom off of the seat and realizing the smoke was coming from the seat I shutoff the seat warmer. The result of the incident left a burn mark on my pants and a cigarette sized hole in my seat cushion.”

The agency has also specifically received seat heater burn complaints from disabled vehicle owners or their advocates:

“My client, Peggy Stephenson was a passenger in the front passenger seat of a 2009 Ford Taurus. She is paralyzed from the waste down and was unaware the seat heater was on for the entire 2 hour drive from Phoenix Sky Harbor Airport to Sedona, Arizona. She subsequently discovered that she sustained 3rd degree burns on the bottom of her buttocks from the seat heater being on.... I just read a section of the owner’s manual for the car and there is a warning that says in substance that individuals with spinal

cord injuries can sustain burns even when the seat heater is used at low temperatures when used for an extended period of time. This owners’ manual warning was obviously not read by my client when she entered the rent-a-car. A seat that can burn someone is not acceptable under any circumstances. In addition, a warning should be posted inside the vehicle in plain view since car renters won’t read the owner’s manual. The car seat heater should be recalled before more injuries.”

A 2003 article in the *Journal of Burn Care Rehabilitation* described the case of a 48-year-old male paraplegic with decreased sensation in his buttocks who suffered third-degree burns, caused by the seat heater in his new minivan. The patient reported that the heater was on for 20 minutes before he noticed the pain. Researchers found that the vehicle was equipped with four heating panels. Their tests showed that they reached a temperature of 95°F, but the heating panel near his burns reached a localized temperature of 120°F. At this temperature third-degree burns can occur within 10 minutes.

The Standards

The ASTM standard safe touch temperature for heated surfaces, ASTM C 1055-03 (2009) *Standard Guide for Heated System Surface Conditions that Produce Contact Burn Injuries*, provides a burn injury threshold from unintentional contact and establishes a means by which the designer can determine the acceptable surface temperature of an existing system where skin contact may be made with a heated surface. The maximum acceptable temperature for a surface is derived from an estimate of probable contact time, surface configuration and acceptable level of injury. For industrial designs, a contact time of 5 seconds is established, but for consumer products, a longer 60 second contact time is proposed, and even longer to reflect the slower reaction times for children, the elderly or the injured.

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CPSC Database Demise Delayed, for the Moment: Republicans Try to Scuttle Legislation

WASHINGTON, D.C. – As the government ran on the fumes of a continuing budget resolution, and as the House Republicans and the Senate Democrats continued wrangling, the U.S. Consumer Product Safety Commission completed its soft launch of the new publicly accessible and searchable consumer product complaint database.

The SaferProducts.gov database is now live and available for consumers to use. CPSC spokesman Scott Wolfson said that no technical glitches have surfaced so far. In an earlier test – from late January to early March – manufacturers found only 13 complaints out of 1,500 to be materially inaccurate.

“CPSC staff put a lot of hard work into building this database and it is a good resource for families to have open access to potentially lifesaving information,” Wolfson said.

“We stayed on budget and we launched this database for consumers on time.”

The completion of the database marks another implementation milestone in the Consumer Product Safety Improvement Act. In August 2008, President George W. Bush signed into law the Consumer Product Safety Improvement Act. It was the most extensive overhaul of consumer protection regulations since the U.S. Consumer Product Safety Commission was established in 1972. Even more remarkably, the bill was overwhelmingly bipartisan and pro-consumer. It won the House of Representatives by a 424-1 vote and the Senate, 89-3.

At the time, the public was reeling from a spate of high-profile recalls of China-made products, from lead-tainted toys and toothpaste, to contaminated dog food and pharmaceuticals. With a record 448 recalls in 2007, there was a stampede on Capital Hill to expand regulation of children’s products and to toughen its oversight of imported products. The CPSIA gave the CPSC more recall authority, money and staff and reduced industry’s influence by banning the CPSC from accepting industry gifts, by raising civil penalties against violators and by tak-

ing away manufacturers’ control of negative information about their products.

Manufacturers have been gunning for the legislation ever since. With the Year of the Recall four years distant, and a Republican majority in the House, freshman Rep. Mike Pompeo (R-KS) decided to smother the CPSC database by choking off its appropriation. As part of a House budget bill to cut \$61 billion in this year’s spending, Pompeo introduced a measure prohibiting funds for a publicly available and searchable consumer database, even though the CPSC had already invested \$3 million to complete it. Not to be outdone, newly-minted Senator Rand Paul (R-KY) proposed Senate Amendment, SA 199 to defund the entire agency. Industry has ceaselessly complained that the consumer product safety database would be a font of misinformation and a breeding ground for product liability lawsuits. Their ire is rooted in the 30-year stranglehold industry had on complaints to the CPSC. Section 6B of the Consumer Product Safety Act imposed the most stringent public information policy of any government agency upon the commission. Manufacturers controlled what negative information the CPSC could disclose, requiring it to gain prior approval of a manufacturer before public release. Manufacturers could prevent the release of any information it deemed “inaccurate,” and could sue the agency to prevent the release of such information – effectively hobbling the CPSC’s ability to warn the public.

The new database took that control from manufacturers, and they have been trying to get it back. On the eve of a vote on the Final Rule, Commissioners Anne Northup and Nancy Nord, the Republican appointees, proposed an alternative version that would have sharply curtailed who could report, and erected other barriers to reporting alleged defects. The unchanged Final Rule passed in December by a 3-2 vote along party lines. In November, Safety Research & Strategies President Sean Kane provided testimony to CPSC and

technical advice, based on its extensive experience with the National Highway Traffic Safety Administration’s (NHTSA) Vehicle Owner Questionnaire (VOQ) database and its own Vehicle Safety Information Resource Center (VSIRC). The database will contain reports of harm; manufacturer comments on those reports; recall information and any additional information the commission feels is in the public interest.

The reporting mechanism is open to just about any member of the public who would have knowledge of an alleged product-based injury or death – including health professionals, lawyers, public safety officials and child care providers. The reporting scenario asks the submitter for information about the harm, the product and the victim. It also asks for contact information, a description and date of the incident, the category of submitter, the type of incident, information about the victim and his or injuries and a description of the product.

Incomplete incident reports will not make it into the public database, including those that do not contain an identifiable consumer product, manufacturer or private labeler, a description of the harm; intrusive photographs, medical records without consent and reports by minors without a parent or guardian’s consent. “The CPSC is committed to carefully reviewing each claim and making sure that all of the requirements are met,” Wolfson said. “Not all of the reports that come in through the website will qualify to go up onto the database. We need reports to be accurate and safety-based, and we at CPSC need to make sure the right company is being notified.”

Manufacturers still have some recourse to correct and respond to reports or shield certain information from public view. Manufacturers may request, and the commission may grant, confidential treatment of portions of a report. The commission is also obligated to pull or correct materially inaccurate complaints and delete duplicative within seven business days of determining an inaccuracy. More than 1500 companies have signed up to receive e-mail notifications if a consumer mentions

their company in a report, Wolfson said.

Last week, the public could lodge a new complaint in the database, but could not search for them. There is a 15-day lag time between the submission of a report and its appearance in the database, to allow the CPSC up to five business days to review the report, and to allow the manufacturer or private labeler 10 days to respond to the complaint. Consumers will be able to use the complaint search function starting in early April.

“Our database is different than other federal databases,” Wolfson said. “There are protections in place for businesses and we are educating consumers on the importance of reporting accurate information to CPSC.”



Vehicle Safety Information Resource Center

VSIRC research tools allow quick and easy retrieval of government data and documents that until now has been difficult to access and search, inaccessible through the government web portals, or no longer available from the National Highway Traffic Safety Administration.

Research that once took days or even weeks can be done in seconds.

Learn how VSIRC can provide instant access to vehicle defect histories and trends, crash test data, reports and videos and more. Visit WWW.VSIRC.COM or email Inquiry@VSIRC.COM for webinar information.

Fuel Spit-back Continues to Plague Chrysler Vehicles, Owners on the Hook

Fuel “spit back” through the filler neck has been a longstanding problem in several Chrysler, Dodge and Jeep models, caused by the Inlet Check Valve (ICV) mounted in the fuel tank. Despite some limited recalls and at least one extended lifetime warranty, this defect, which first surfaced in 2001, continues to plague a number of models. Tens of thousands of vehicles are outside of any campaign, forcing owners to pay for a repair that requires replacement of the entire tank assembly.

Numerous Dodge Durango owners have complained to NHTSA and Chrysler. Others have commiserated about “spit back” on Internet blogs and enthusiast websites, and posted dramatic video footage showing geysers of gasoline or significant fuel dumps into the concrete around the pump.

And yet, NHTSA has walked away from the problem. Citing the absence of a safety defect trend, the Office of Defects Investigations last month closed a Preliminary Evaluation into fuel spills and spit backs from the filler neck in 2007 and 2008 Model Year Jeep Wranglers. ODI had logged 895 failure reports, including 473 complaints directly to the agency, but dismissed those complaints as influenced by internet related publicity before and during the investigation. (*See The Hype Hypothesis, p. 1*).

More relevant to the agency’s reasoning was a Chrysler technical service bulletin issued five days before the inquiry officially closed, initiating a lifetime warranty program for 135,000 2007-2008 Jeep Wranglers built between March 2007 and April 2008. Owners of other problematic vehicles, however – namely the 2005-2006 Jeep Wrangler and the 2005-2008 Dodge Durango/Chrysler Aspen were on their own.

NHTSA initiated investigation PE10-032 on August 23, 2010 based on 217 consumer complaints involving 2007-2008 Jeep

Wranglers related to fuel spilling out during the refueling process. NHTSA’s letter to Chrysler, notifying them of the investigation, indicated that it had received similar VOQs (Vehicle Owner Questionnaire) on earlier generation 2005 and 2006 Wranglers, as well as 2005 though 2008 Dodge Durangos.

Bad Check Valve? Check.

These Jeeps suffer from a defective Inlet Check Valve, incorporated into the fuel tank at the top where the fuel enters from the fuel filler tube neck during the refueling process. The ICV is designed to close when the fuel level in the tank reaches a near full level to prevent the air pressure created in the top of the fuel tank during refueling from pushing the fuel that is still in the filler neck back out of the filler tube. If the check valve fails, fuel can spill or “spit back” onto the ground or the person refueling the vehicle.

In its response to NHTSA’s Office of Defects Investigation, Chrysler claimed that it couldn’t find the root cause of the ICV sticking, and blamed it on the ethanol content of the most common form of fuel available to consumers today. The automaker said that gas with ethanol levels higher than 10 percent can cause the components within the valve to swell which would prevent it from properly closing. Chrysler also claimed it performed a dimensional analysis of the ICVs and could find no design problem.

And yet, Chrysler has battled this same fuel spit-back problem three times before. In December 2001, Chrysler initiated a recall covering some 2002 Jeep Grand Cherokees, to remedy fuel inlet check valves that may partially stick in the open position, allowing the fuel to spill out of the fuel tube due to pressure differences between the tank and the atmosphere. Chrysler had determined that certain valve components, combined with fuel swell, could create an interference fit, allow-

ing the valve to remain partially open.

Similarly, in February 2005, Chrysler recalled 2005 Dodge Durangos manufactured from March 2004 to November 2004 for the fuel tank filler tube inlet check valve. Again, the recall noted that the valve may not fully close at the end of refueling which could allow some fuel to escape from the vehicle filler neck. According to Chrysler, this was a manufacturing problem. The automaker alleged that the supplier, Inergy Automotive Systems, had not centered the valve when it was welded to the fuel tank, causing the valve to be distorted by exposure to excessive heat.

Four years later, Chrysler expanded the 2005 recall to include more vehicles, because the corrections in the manufacturing process initiated after the original recall were only partially effective in preventing a failure of the fuel inlet check valve.

Chrysler also had issues with the fuel tanks being difficult to fill and the fuel nozzle shutting off repeatedly during refueling. On September 1, 2009, Chrysler published “TSB 14-001-09 Rev. A” which covers a wide range of Chrysler, Dodge and Jeep vehicles.

To date, Chrysler has gotten away with limited recalls that fail to address the problem. That leaves thousands of vehicle owners to pay for the replacement of the entire fuel tank assembly, if they want to fill up without endangering their health or the environment from a plume of gasoline spewing from the tank.

See The Safety Record Blog to view owner’s videos.

Human Factors Research Update

Cars That Drive Too Much

Where is the point of diminishing returns for advanced automotive technologies? The European City Mobil project investigated drivers’ reaction times in a critical-safety event and found that drivers in a highly automated vehicle had slower reaction times than those who retained full manual control of the vehicle. City Mobil conducted the human factors research to further its main goal of introducing advanced urban transport systems on a large scale. The researchers noted that the evolution of adaptive automotive technology is trending toward more automated functions, such as adaptive cruise control, lane departure warning systems and Intelligent Speed Adaptation. What happens to the driver’s skill level, situational awareness and ability to switch from passive to active driving in an emergency, when more operational aspects are controlled by the vehicle?

This experiment, published by the *Proceedings of the Fifth International Driving Symposium on Human Factors in Driver Assessment, Training and Vehicle Design*, investigated the issues associated with dual-mode driving, where a vehicle can be driven manually or by automation. In the automated mode, various systems controlled its speed at 40 mph and its longitudinal and lateral position within the center of the road and with respect to other traffic. Drivers were required to take control of the vehicle if the automated system could not handle a traffic condition. An auditory alarm alerted drivers in both groups to an impending crash. The researchers then compared driver’s responses in the automated and manual driving groups to “critical” scenarios. In general, drivers in the automated group had much slower response than those in the manual group. The researchers hypothesized that the automation reduced the drivers’ situational awareness, or that they relied too heavily on the system, waiting for the alarm before responding. The researchers said that these results show that designers of automated driving systems must strive to keep drivers engaged at all times, especially during critical situations.

(Cont. on p. 7)

The Hype Hypothesis

(Cont. from p. 2)

Helena, MT complained that his vehicle suffered an unintended acceleration event and petitioned for a defect investigation, the agency denied his request. William Kronholm, a retired Associated Press editor, had searched NHTSA's VOQ database and found "that the Toyota Tacoma for model years 2006 and 2007 was at least 32 times more likely to be the subject of a sudden acceleration complaint to NHTSA than any other light truck sold in the United States. That statistic alone suggests these complaints cannot be written off as panicked drivers pressing the wrong pedal," he said in a Jan. 25, 2008 letter to the agency.

But NHTSA wrote Kronholm's incident off to dual pedal application. And the complaints? Another product of hype. In its response to the agency, Toyota said: "the Tacoma has been the subject of extensive media coverage related to the possibility of sudden acceleration. In addition, there has been a high level of Internet activity going as far back as early 2007, including reports by members of Tacoma user groups detailing conversations with ODI staff and providing ODI contact information. Such exposure tends to generate consumer interest and complaints. Thus, the petitioner's assertion that the Tacoma stands out from its peers based on a relatively high number of com-

plaints in the NHTSA database is not a valid argument, since the other vehicles listed by the petitioner have simply not had the same media and Internet exposure."

Later, the agency noted that an increase in consumer complaints in 2006 and 2007 Tacomas over 2005 model years: "The trend found here may reflect an abnormal variability or another factor such as more recent publicity."

Kronholm has countered that there was no evidence to support this assertion.

The agency's use of the Hype Hypothesis reached its zenith in its most recent investigation into unintended acceleration allegations in multiple Toyota models. In a February report, *Technical Assessment of Toyota Electronic Throttle Control (ETC) Systems*, the agency devoted a brief chapter to Timing of Toyota Complaints: The Effects of Publicity. This section postulated that the intense media coverage of the issue disturbed the undefined ratio of VOQ complaints to real world occurrences. While the agency assumes that each complaint it receives represents many more incidents in the field. Publicity, the agency wrote, "can produce significant complaint volumes without indicating a corresponding increase in the number of real-world failures."

Nonetheless, the agency maintained that consumer complaints were still useful: "This fact requires careful consideration when drawing conclusions based on the sheer volume of complaints received on any subject. Notwithstanding these limitations, the consumer complaints are a valuable defect screening tool and play a central role in NHTSA's decisions on whether and when to open an in-depth investigation and, even after a publicity spike, specific complaints offer considerable insight into the circumstances surrounding the various safety defects investigated by NHTSA."

The NASA Engineering and Safety Center (NESC), NHTSA's contractor in examining unintended acceleration in Toyotas, however, was less sold on the value of consumer complaints. Its companion report, *Technical Support to the National Highway Traffic Safety Administration (NHTSA) on the Reported Toyota Motor Corporation (TMC) Unintended Acceleration (UA) Investigation*, raised considerable doubt about the data's value:

"Thus, while field report data appear to be the most logical source for evaluating whether a particular class of vehicles exhibits an unusually high rate of an

undesirable driving event (e.g., UA), intrinsic flaws and limitations of these databases render such analyses inconclusive, and qualitative at best."

Discouraging Consumers

In suggesting to Edmund's that Rod LaFleur's Facebook campaign did not represent "actual occurrences," Administrator Strickland's implicit message was: *Don't call us, we'll call you.*

Under the present arrangement, manufacturers control most of the data that flows into the pool of information guiding defect investigations, and the agency is content to use it, plus the complaints of the few consumers who contact NHTSA — second or third in the complaint line, after the owner has lodged his dissatisfaction with the dealership or the automaker. More is not better, if owners have actually organized themselves. LaFleur and his fellow Jeep enthusiasts, however, are not discouraged. They have talked about demonstrating the dangers of gas spit-back by, perhaps assembling a fleet and fueling up together at a pump. They plan to press their case beyond YouTube videos of gas geysers until the agency — and Chrysler — fix an obvious problem.

"It's harder for NHTSA to say Jeep owners are imagining it, when their clothes are soaked with gasoline," LaFleur said.

Human Factors Research Update

(Cont. from p. 6)

The Video Game Made Me Do It

Parents might want to re-think buying that *Need for Speed* video game for the young adult drivers in their family. New research published in the *Personality and Social Psychology Bulletin* found that video racing games that reward reckless behavior lead players to display a greater inclination for risk-taking and to perceive themselves as more reckless. European researchers wanted to test the association between aficionados of street racing games and drivers' willingness to take risks on real roads, to build on previous research exploring the effect of violent

shooting games on real-world aggression.

The authors of *The Racing Game Effect: Why do Video Racing Games Increase Risk-Taking Inclinations?* noted that most popular street-racing games — photo-realistic events that encourage players to run over pedestrians, crashing into other drivers, and generally commit automotive mayhem at high speed on virtual city streets — rewarded players for taking huge risks. An earlier study examined the video game-playing habits of young males, aged 13-17, and car-related behavior. This study found a positive correlation between racing game consumption

and traffic offenses. In addition, in-depth interviews with young males who engaged in illegal street racing revealed the "video racing games played a significant role in the development of attitudes and norms concerning risky driving behavior."

In this multi-part study, researchers compared the disposition for risk-taking behavior in traffic situations among respondents who played a video street-racing, those who played a Formula I racing game, which rewards accuracy, and those merely observing someone else play a virtual street racing game. They also looked at how playing video racing games affects players' perceptions of their willingness to

take risks when driving. The four studies showed that playing video racing games increases risk-taking in a subsequent simulated road satisfaction as well as risk-promoting perceptions and emotions. The effects were evident only when the individual played racing games that reward traffic violations rather than racing games that do not.

The authors questioned the public's preoccupation with video killer games' effect on young players while ignoring the link between aggressive driving games and bad driving. The researchers suggested that further study was warranted.



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NHTSA to Investigate Seat Heaters

(Cont. from p. 4)

The background of the standard reports that for a surface temperature below 44°C (111°F), no hazard exists for exposures sustained for 6 hours. As the temperatures of contact increase above 44°C (111°F), the time to damage is shortened by approximately 50% for each 1°C rise in temperature up to about 51°C (124°F). At temperatures above 70°C (158°F), the rate of injury exceeds the body reaction time and blood flow has little effect on the level of burn.

In 2001, Amerigon, a major seat heater supplier to the auto industry, recognized the importance of limiting temperature in another one of its products: a temperature-controlled mattress. The company, in conjunction with MicroClimate Solutions, is marketing a heating and cooling mattress under the brand name YuMe. The bed's maximum temperature setting is 104°F. The owner's manual contains an explicit warning to certain potential users: "Do not use the heat/cool feature of this bed with an infant, a child, an incapacitated person, a paraplegic, or a quadriplegic. A person who is insensitive to heat or cool, such as a person with poor blood circulation,

should not use the heat/cool feature of this product, or anyone who cannot clearly understand instructions and/or operate the controls." However, Amerigon does not provide similar temperature limits for its automotive designs.

Other industries manufacturing heat producing devices used in proximity to human skin are required to employ temperature-limiting design parameters. For example, pulse oximeters have become essential devices for evaluating and monitoring patient oxygenation. Under FDA regulations, the maximum allowable temperature of the probe, which emits a small amount of heat into the skin in the process of signal detection, is set at 41°C (106°F). Experiments show that pulse oximeter probes are safe up to a temperature of 43°C (109°F) for at least 8 hours in well-perfused skin and that above that temperature, there is a risk of burn injury.

[For more information, read SRS's Briefing Paper on Seat Heater Burn Injuries and SRS's request to NHTSA and the industry](#)

Vehicle Safety Information Resource Center: Foreign Recalls

Scenario: The cable holding the spare tire under a 2003 Toyota Land Cruiser fails and the spare falls off causing a serious injury crash. You find no complaints, recalls or NHTSA investigations for this model.

Solution: Every recalls search in VSIRC automatically identifies Foreign Recalls. The Land Cruiser model twin, the Lexus LX470 was recalled in Australia and Oman for spare tire cable failure because of the "unique" conditions in those countries. This leads you to learn that the same stronger component is on the shelf at U.S. parts dealers and used on other Toyota trucks in the U.S. Research that once took days or even weeks can be done in seconds.

The screenshot shows the VSIRC search interface. The search filters are set to: Category: Vehicle, Make: TOYOTA, Model: LAND CRUISER, Model Year: 2003, Text: spare tire. The search results table is as follows:

CAMPAID	Make	Model	Year	Foreign Recalls (1)	Summary	Component	Docs
02025	LEXUS	LX470	1999	...	...spare tire could become loose when the spare tire...		1 (1)
	LEXUS	LX470	1999	...	...spare tire could become loose when the spare tire...		
	LEXUS	LX470	2000	...	...spare tire could become loose when the spare tire...		
	LEXUS	LX470	2001	...	...spare tire could become loose when the spare tire...		
	LEXUS	LX470	2002	...	...spare tire could become loose when the spare tire...		

Learn how VSIRC can provide instant access to vehicle defect histories and trends, crash test data, reports and videos and more.

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