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May 2, 2016

Mark R. Rosekind
Administrator
National Highway Traffic Safety Administration
1200 New Jersey Avenue, SE, West Building
Washington, DC 20590

RE: Docket 2016-0040; NHTSA Enforcement Guidance Bulletin 2016-02: Safety-Related Defects and Emerging Automotive Technologies

Dear Administrator Rosekind:

The following is a response to NHTSA's request for comments on Enforcement Guidance Bulletin 2016-02: Safety-Related Defects and Emerging Automotive Technologies.

Safety Research & Strategies is a multi-disciplined group specializing in product safety, with particular expertise in motor vehicle issues. Our company examines hundreds of vehicle-related death and injury crashes each year. We also examine technology, data and develop strategies and solutions for addressing harm caused by potentially defective products and practices for a wide range of clients including attorneys, engineers, supplier and technology companies and government. Thus, we have relevant perspectives on the agency's request for comments.

First, we agree NHTSA has authority to regulate emerging automotive technologies, including after-market vehicle software related to cybersecurity and original equipment electronics governing safety-critical functions. It is important for the agency to clearly assert its enforcement and rulemaking powers as a public health organization – particularly in light of resistance from industry groups such as The Telecommunications Industry Association, the CTIA—The Wireless Association, and some members of Congress.

We are concerned, however, that the framing language in the Guidance Bulletin is contradictory and its emphasis misplaced. More importantly, we note that the agency, is in fact, doing very little to regulate automotive software and new technology, and absent rulemaking in this area, the rapid cycle automotive defect crises will continue and potentially accelerate.

First, the agency states: “As the world moves toward autonomous vehicles and innovative mobility solutions, NHTSA is interested in facilitating the rapid advance of technologies that will

promote safety.”¹ This statement is of a piece with a previous policy directive regarding the development of autonomous vehicles: “NHTSA will fully utilize its currently available regulatory tools, such as interpretations and exemptions, to more rapidly enable safety innovations.”² We find both statements deeply troubling. NHTSA’s mission is to ensure the safe advance of automotive technology – be it a lane departure warning system or an electronic throttle. As the agency informs the public: “NHTSA is responsible for reducing deaths, injuries and economic losses resulting from motor vehicle crashes. This is accomplished by setting and enforcing safety performance standards for motor vehicles and motor vehicle equipment.”³

Unfortunately, NHTSA has, in the past, too often resisted setting safety performance standards in the wake of new technologies and designs. As a result, in numerous instances, the public has been exposed to unreasonable safety risks that resulted in deaths and injuries. Rulemaking is an important preventative tool that can mitigate safety defects, which absent a rule, may only get addressed through enforcement. Notwithstanding that enforcement addresses defect issues after the fact, the rulemaking process serves the public and the agency by providing NHTSA with the opportunity to develop an institutional understanding of vehicle technology and functional outcomes. Without rulemaking automakers are left to self-regulate; NHTSA is left behind the technological curve. When bad designs and manufacturing processes kill and injure, and NHTSA is called upon to ferret out a defect, it may be ill-prepared to do so – and high profile defect issues can divert greater resources from an already underfunded agency. The more widespread the defect and more expensive the post-market remedy, the more likely the agency will have to settle for a fix it thinks it can get – whether it solves the full problem or not.⁴

The Ford Explorer-Firestone tire debacle is but one example. In the 1990s, the Ford Explorer was the nation’s most popular SUV. Equipped with OE Firestone Radial ATX and Wilderness tires, the best-selling Explorer was prone to rollovers after tread separations, causing significant numbers of deaths and injuries. The tires met all of the federal regulations at the time, but those standards were written decades earlier in an era of bias-ply tires – radial tires were just emerging. There were no federal standards for occupant protection in rollovers, save for FMVSS 216 – Roof Strength, which was a “temporary” standard promulgated in 1972 that required nominal static roof strength in place of dynamic rollover testing. There was no minimum stability standard for SUVs, a new breed of station wagon with a high-center of gravity based on truck platforms.

Industry fought off any regulations, even as the rollover death tolls in light trucks rose to epidemic levels. A 2003 NHTSA report showed that rollovers accounted for 8 percent of light vehicle crashes, but 31 percent of all occupant fatalities.⁵ The agency did not take action until a series of gruesome high-profile crashes and news stories about the safety of Ford Explorers and Firestone tires compelled NHTSA to investigate. The agency’s enforcement division was handed a legacy of rulemaking neglect for which post-market solutions were thin and expensive. The Firestone tires were blamed for the rollovers and massive recalls ensued. That crises also prompted legislation that forced the agency to upgrade its rules. Ultimately, NHTSA issued new standards for tires and vehicle roofs and it promulgated a stability rating followed by the

¹ Docket 2016-0040; Request for Public Comments on NHTSA Enforcement Guidance Bulletin 2016-02: Safety-Related Defects and Emerging Automotive Technologies; 63 FR 18935; National Highway Traffic Safety Administration; April 1, 2016

² DOT/NHTSA Policy Statement Concerning Automated Vehicles; 2016 Update to Preliminary Statement Of Policy Concerning Automated Vehicles; National Highway Traffic Safety Administration; National Highway Traffic Safety Administration

³ <http://www.nhtsa.gov/About+NHTSA/Who+We+Are+and+What+We+Do>; accessed May 2, 2016

⁴ Toyota Unintended Acceleration: Learning From Crises and Moving Forward; Presentation by Sean Kane to the National Academy of Sciences; June 13, 2011

⁵ Initiatives to Address the Mitigation of Vehicle Rollover; NHTSA, June 2003

establishment of FMVSS 126, requiring passenger vehicles to be equipped with electronic stability control.

But replacing the Firestone tires did not stop tire-related Ford Explorer rollover deaths. An analysis of crash data showed, post-recall, Ford Explorers are standouts among their peers in tire-related rollover deaths.⁶ The continued high rate of fatal tire-related crashes in rollovers compared to peer vehicles suggests that tires weren't the only problem.

In August 2009, when the deaths of the Saylor family brought the Toyota Unintended Acceleration crises to the fore, the agency was decades behind in regulating and investigating automotive electronics. FMVSS 124 Accelerator Controls was established in 1972 for mechanical throttles. It had not been significantly upgraded since, leaving the agency ill-prepared to investigate complex electronic defects in torque management systems. Numerous NHTSA investigations found causes no more complicated than errant floor mats, sticky pedals and driver error. Subsequently, independent investigations have found Toyota's control system software riddled with errors; Toyota developed an Intensive Settlement Process and has settled hundreds of death and injury claims related to unintended acceleration; and Early Warning Reporting claims associated with "Vehicle Speed Control" show Toyota models – some covered by the UA recalls – experiencing troubling rates.^{7 8 9}

In 2002, when NHTSA attempted to upgrade the accelerator control standard, industry fought off any changes. NHTSA summarized manufacturers' arguments as follows:

"In general, the comments of vehicle and engine manufacturers did not address the specific questions in the notice. Instead, they voiced a preference for rescinding the standard altogether, suggesting that market forces and litigation pressure are sufficient to assure fail-safe performance without a Federal motor vehicle safety standard."¹⁰

Instead of forging ahead, in November 2004, NHTSA withdrew the rulemaking, saying it would do further research. The agency's subsequent attempt to upgrade to the FMVSS 124, is a 2012 proposal to require a brake-throttle override that would only stop an unintended acceleration caused by mechanical interference.

The introduction of keyless ignitions is yet another example. Automakers began to replace traditional mechanical keys with keyless ignition systems in the 1990s, but NHTSA waited until 2005 to amend FMVSS 114 to address this change. In the interim, the agency allowed the migration to be guided by interpretation letters in lieu of rulemaking that might have preserved the safety intent of FMVSS 114. One particularly prescient letter authored by Chief Counsel Jacqueline Glassman in 2002 noted that "the removal of the "Smart Key" from the running vehicle would have no effect on the vehicle's operation until the engine is stopped."¹¹ Glassman also acknowledged the human factors problem associated with such systems:

⁶ NHTSA's Secret Data and Ford Explorers in Fatal, Post-recall, Tire-related Crashes, Quality Control Systems, 2006

⁷ Toyota Unintended Acceleration and the Big Bowl of Spaghetti Code, The Safety Record, Nov. 7, 2013, accessed at <http://www.safetyresearch.net/blog/articles/toyota-unintended-acceleration-and-big-bowl-%E2%80%9Cspaghetti%E2%80%9D-code>

⁸ Out-of-Control Toyotas, Out-of-Luck Owners, The Safety Record, Mar.31, 2016, accessed at <http://www.safetyresearch.net/blog/articles/out-control-toyotas-out-luck-owners>

⁹ Vehicle Safety Watch List, The Safety Institute, accessed at <http://www.thesafetyinstitute.org>

¹⁰ Docket 2002-12845-001; 67 FR 48117; July 23, 2002

¹¹ Case 4:09-cv-03660-SBA Document15-2; Letter to Unnamed Manufacturer; NHTSA; Jacqueline Glassman; August 15, 2002

“We observe that if the ‘Smart Key’ device remained in the car. e.g. in the pocket of a jacket laying on the seat, a person would need only turn the ignition switch knob to start the engine. It appears to us that, with systems of this kind, there would be, in the absence of some kind of a warning, a greater likelihood of drivers inadvertently leaving a ‘Smart Key’ device in the car than with a traditional key. This is because the driver must physically touch a traditional key, unlike the "Smart Key" device, as part of turning off the engine. You and/or the vehicle manufacturer may wish to consider whether there are any practicable means of reducing the possibility of drivers inadvertently leaving their ‘Smart Key’ devices in the car.”¹²

Fourteen years later, keyless ignitions have re-introduced the rollaway problem the agency sought to solve in a 1990 Final Rule and added a new safety hazard: carbon monoxide poisoning. The agency has initiated two rounds of rulemaking to address the problems to which Glassman alluded, but has failed to initiate rules that prevent needless deaths and injuries caused by the advent of keyless ignitions.

We also question the efficacy of the Guidance Bulletin’s advice to manufacturers to “consider adopting a life-cycle approach to safety risks when developing automated vehicles, other innovative automotive technologies, and safety compliance programs and other business practices in connection with such technologies.”¹³ The average age of passenger vehicles and trucks on the road today is 11.4 years; the recall statute is limited to vehicles that are 10 years old or less. Consumer electronics generally have a life cycle of far less. Again, encouraging the industry to adopt sound safety practices is not a substitute for agency leadership and rulemaking.

Finally, we urge NHTSA to eliminate a passage from the Guidance Bulletin that contradicts an earlier statement and the dictates of the Code of Federal Regulations:

If a manufacturer discovers or is otherwise made aware of any defects, noncompliances, or other unreasonable risks to safety after the vehicle and/or technology has been in safe operation for some time, *then it should strongly consider promptly* contacting the appropriate NHTSA personnel to determine the necessary next steps. ¹⁴

This negates the agency’s admonition elsewhere that “Manufacturers are also reminded that they remain responsible for promptly reporting to NHTSA any safety-related defects or noncompliances, as well as timely notifying owners and dealers of the same.”¹⁵

Further, Part 573 Defect and Noncompliance Responsibility and Reports establishes manufacturers’ clear statutory duty to report and remediate defects.¹⁶ Citing the regulation that outlines manufacturers and importers requirements when defects are discovered would provide better guidance than strong encouragements and suggestions.

¹² Case 4:09-cv-03660-SBA Document15-2; Letter to Unnamed Manufacturer; NHTSA; Jacqueline Glassman; August 15, 2002

¹³ Docket 2016-0040; Request for Public Comments on NHTSA Enforcement Guidance Bulletin 2016–02: Safety-Related Defects and Emerging Automotive Technologies; 63 FR 18935; National Highway Traffic Safety Administration; April 1, 2016

¹⁴ Docket 2016-0040; Request for Public Comments on NHTSA Enforcement Guidance Bulletin 2016–02: Safety-Related Defects and Emerging Automotive Technologies; 63 FR 18935; National Highway Traffic Safety Administration; April 1, 2016

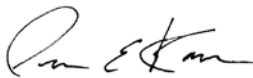
¹⁵ Docket 2016-0040; Request for Public Comments on NHTSA Enforcement Guidance Bulletin 2016–02: Safety-Related Defects and Emerging Automotive Technologies; 63 FR 18935; National Highway Traffic Safety Administration; April 1, 2016

¹⁶ CFR Title 49; Volume 17; Part 573 Defect and Noncompliance Responsibility and Reports

The Guidance Bulletin observes that the complexities of new safety technologies “do not diminish manufacturers’ duties under the Safety Act—both motor vehicle manufacturers and equipment manufacturers remain responsible for ensuring that their vehicles or equipment are free of safety-related defects or noncompliances, and do not otherwise pose an unreasonable risk to safety.”¹⁷ Nor, we would argue, does it diminish NHTSA’s responsibility under the Safety Act to regulate these complex systems.

Rulemaking may be a slow, deliberate, conflict-ridden process, but its value to the agency and to the public health in meaningful enforcement and saved lives is invaluable. Interpretation letters, policy statements and Guidance Bulletins are no substitute.

Sincerely,

A handwritten signature in black ink, appearing to read "Sean E. Kane". The signature is fluid and cursive, with a prominent initial "S" and a long, sweeping underline.

Sean E. Kane

¹⁷ Docket 2016-0040; Request for Public Comments on NHTSA Enforcement Guidance Bulletin 2016-02: Safety-Related Defects and Emerging Automotive Technologies; 63 FR 18935; National Highway Traffic Safety Administration; April 1, 2016