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April 27, 2023

The Honorable Ann Carlson
Acting Administrator
National Highway Traffic Safety Administration
400 Seventh Street, S.W.
Washington, DC 20590

**Re: *Petition for Rulemaking to Amend FMVSS 114 pursuant to 49 CFR Part 552 -
Petitions for Rulemaking, Defect, and Noncompliance Orders***

Dear Acting Administrator Carlson:

We are hereby submitting a petition to add more stringent and meaningful performance requirements to the compliance test for S5.1.1 of 49 CFR § 571.114 - Standard No. 114; Theft protection and rollaway prevention.

The basis of this petition is NHTSA's inability to enforce the requirements or address the intent of FMVSS 114 in the wake of a continuing surge of Hyundai/Kia automobile thefts. In minutes, amateur thieves, without specialized tools or training are able to freely and successfully steal certain Hyundai/Kia vehicles that lack adequate theft protection features. This current situation is antithetical to the standard's historic purpose. Indeed, since the inception of the standard, NHTSA has repeatedly affirmed that auto theft is a threat to safety, and has sought to promulgate regulations which would – given changing technologies – thwart the casual thief from easily stealing a vehicle and creating hazards on the public roadways.

NHTSA's February 14 press release announcing that Hyundai/Kia planned to offer theft deterrent software via customer service campaigns, attributed at least 14 crashes and eight deaths to stolen Hyundai/Kia vehicles.¹ However, in March and April alone, the news media reported another 24 such crashes, resulting in four more deaths (including a six-month-old boy), 28 injuries, nine of which were said to be serious injuries, and one house fire, in addition to structure damage and other vehicle damage, including two police cruisers, caused by drivers of

¹ Hyundai and Kia Launch Service Campaign to Prevent Theft of Millions of Vehicles Targeted by Social Media Challenge. National Highway Traffic Administration, Feb. 14, 2023. Accessed at <https://www.nhtsa.gov/press-releases/hyundai-kia-campaign-prevent-vehicle-theft>

stolen Hyundai/Kia vehicles.² Also that month, Minneapolis police reported that in the past year, nearly two of every five vehicles stolen in the city involved Hyundai and Kia models and that five homicides, 13 shootings, 36 robberies and 265 crashes were tied to stolen Hyundai or Kia vehicles.³ In Chicago, officials reported more than 7,000 Hyundai/Kia thefts in 2022, accounting for 10 percent of Kia and 7 percent of Hyundai vehicles registered in the city.⁴ A March 2023 civil action brought against Hyundai and Kia, noted that the Buffalo, NY police had reported a 2,000 percent increase in theft of Kia and Hyundai vehicles in January 2023, compared to January 2022; an estimated 275 Kia vehicles were stolen in that city in 2022, compared to 69 stolen Kias in 2021 and 55 stolen Kias in 2020.^{5 6}

Despite the staggering numbers of crimes, crashes, fatalities and injuries directly attributed to Hyundai/Kia's lack of any significant theft protection, NHTSA did not open a defect investigation or press Hyundai/Kia to launch a formal recall with its notification and accountability requirements. NHTSA took no enforcement action at all, because it did not believe that the theft protection safety standard was actually enforceable. In response to inquiries from this petitioner, a NHTSA media representative stated that the agency could not act more forcefully, because "the standard does not define normal activation."

S5.1.1 of FMVSS 114 states:⁷

Each vehicle must have a starting system which, whenever the key is removed from the starting system prevents:

- (a) The normal activation of the vehicle's engine or motor; and
- (b) Either steering, or forward self-mobility, of the vehicle, or both.

According to the most recent 2010 edition of the FMVSS 114 compliance test, to demonstrate compliance with this section of the standard, the test is implemented by simply sitting in the vehicle and trying to start a keyed vehicle without placing the metal key in the ignition slot, or, the case of a keyless ignition vehicle moving the key fob out of vehicle range and attempting to start the vehicle by depressing the Start/Stop button.⁸

² See Appendix A, News Reports of Stolen Hyundai/Kia Crashes, March and April 2023

³ Orrick, Dave. Kia and Hyundai thefts skyrocket 836% in Minneapolis; attorney general and Twin Cities mayors urge recalls. Star Tribune, Mar. 2, 2023. Accessed at <https://www.startribune.com/kia-hyundai-thefts-tiktok-ellison-minneapolis-frey-st-paul-carter-mayor-urge-recall/600255806/>

⁴ Ramos, Elliot. Edwards, Brad. More than 7,000 Kias, Hyundais stolen in Chicago this year. CBS News, Dec. 14, 2022. Accessed at <https://www.cbsnews.com/chicago/news/kia-hyundais-stolen-chicago/>

⁵ Tokasz, Jay. City of Buffalo sues Kia, Hyundai over easy theft of vehicles. Buffalo News, Mar. 30, 2023. Accessed at https://buffalobnews.com/news/local/city-of-buffalo-sues-kia-hyundai-over-easy-vehicle-thefts/article_0f3c550c-cf58-11ed-b4e8-e70824ccb680.html

⁶ Schumer, Charles. Schumer: Dangerous & Infuriating Surge Of Kia, Hyundai Car Thefts In Upstate NY Is Out Of Control. Press release. February, 22, 2023. Accessed at https://www.schumer.senate.gov/newsroom/press-releases/schumer-dangerous-and-infuriating-surge-of-kia-hyundai-car-thefts-in-upstate-ny-is-out-of-control_350-stolen-in-buffalo-this-year-alone-and-hundreds-more-across-upstate-ny--senator-calls-on-feds-to-get-involved-and-demands-kia-hyundai-to-give-upstate-communities-the-help-they-need-now

⁷ 49 CFR Chapter V. Part § 571.114 Standard No. 114; Theft protection and rollaway prevention.

⁸ U.S. Department Of Transportation National Highway Traffic Safety Administration Laboratory Test Procedure for FMVSS 114 Theft Protection and Rollaway Prevention. Pg. 16, Jul. 28, 2010

TEST

- (1) Apply the vehicle's parking brake. With the key removed from the starting system, attempt to start the vehicle engine or motor. If the vehicle is equipped with an advanced key system, it may be necessary to move the electronic key device outside the minimum effective range for loading the electronic key into the vehicle starting system. (Determine the minimum effective range for loading the electronic key into the starting system from the vehicle owner's manual or contact the COTR). Make note if depressing the service brake is required in order to start the vehicle's engine or motor.
- (2) Reference the vehicle's owners manual to identify the proper procedure for activating the vehicle starting system. Activate the vehicle starting system and start the engine or motor using the key. If the vehicle is equipped with an advanced key system, it may be necessary to have the electronic key device inside the vehicle for the starting system to detect the electronic key. Center the steering wheel.
- (3) Turn off the engine or motor and remove the key. If the vehicle is equipped with an advanced key system, it may be necessary to move the electronic key device outside the minimum effective range for loading the electronic key into the vehicle starting system. For some vehicles that have an advanced key technology, the electronic key code is removed from the starting system when the engine is turned off. Refer to the manufacturer's information that was submitted to OVSC to determine how the key gets removed from the starting system.
- (4) Determine if the steering wheel locks as a result of removing the key from the starting system by rotating the wheel in both directions. Note the position in which the steering wheel locks in both directions.
- (5) Determine if forward self-mobility is prevented whenever the key is removed from the starting system. If the vehicle is equipped with an advanced key system, it may be necessary to move the electronic key device outside the minimum effective range for loading the electronic key into the vehicle starting system. If the vehicle has a means to prevent forward self-mobility, describe the means. (i.e. Is the transmission locked in park, is the vehicle equipped with an immobilizer, etc)

This procedure only partially addresses the second part of the requirement, that a FMVSS 114 compliant vehicle must ***also prevent*** “either steering, or forward self-mobility, of the vehicle, or both.” The first requirement, preventing normal activation, is impossible to fail, because it appears that the only way a vehicle could be noncompliant is if it could be started and operated without a key as it sits – i.e., without any attempted theft mechanism or procedure occurring – a very unlikely scenario. Certain Hyundai/Kia models can be easily stolen because engine start can be achieved without the key and operationalizing both steering and self-mobility.

In 2004, NHTSA Chief Counsel Jacqueline Glassman recognized the intersectionality of the two-part requirement in a response to an unidentified automaker, that had requested an interpretation regarding compliance of its engine control immobilizer module: “asked whether such a system would meet the requirements of S4.2 by (a) preventing normal activation of the vehicle's engine by removal of the key, and (b) preventing vehicle forward self-mobility by the presence of the immobilizer.”⁹ NHTSA Chief Counsel Jacqueline Glassman agreed that the system the automaker described would be compliant with FMVSS 114 because if an attempt was made to circumvent the ignition lock including through “hot-wiring,” it prevented engine starting without the key:

⁹ Glassman, Jacqueline. Interpretation letter to unknown automaker, Sept. 24, 2004

As you discussed in your letter, the two provisions of S4.2 were intended to reduce unauthorized operation of a motor vehicle in different ways. Provision (a) was intended to prevent unauthorized operation of a motor vehicle by requiring that the vehicle could not be started without the key. Provision (b) was intended to further impede unauthorized operation of a motor vehicle by preventing vehicle operation outside the normal activation method. That is, if an attempt were made to circumvent the ignition lock (through "hot-wiring," for example), another device would prevent unauthorized operation of a motor vehicle.

We note that in promulgating FMVSS No. 114, the agency expressed concern about car thieves who could bypass the ignition lock. In response to this concern, the agency decided to require a device, which would prevent either self-mobility or steering even if the ignition lock were bypassed (see 33 FR 4471, April 27, 1968).

The engine control module immobilizer described in your letter satisfies the requirements of S4.2(b) because it locks out the engine control module if an attempt is made to start the vehicle without the correct key or to bypass the electronic ignition system. When the engine control module is locked, the vehicle is not capable of forward self-mobility because it is incapable of moving forward under its own power.

In contrast, if a manufacturer chooses to use an engine immobilizer anti-theft technology *49 CFR Part 543 Appendix A – Performance Criteria*, provides specific criteria that the immobilization system must be designed to meet so that it cannot easily be defeated to allow forward self-mobility by either disrupting the voltage or by using tools. These criteria enumerate 18 common tools auto thieves are known to rely on: Scissors, wire strippers, wire cutters and electrical wires, a hammer, a slide hammer, a chisel, a punch, a wrench, a screwdriver, pliers, steel rods and spikes, a hacksaw, a battery operated drill, a battery operated angle grinder; and a battery operated jigsaw.

FMVSS 114 was originally promulgated in 1968 to reduce vehicle theft based on data that showed amateur thieves made up the majority of unauthorized drivers who were involved in crashes. The agency cited a Department of Justice study that 94,000 stolen cars were in crashes in 1966 and more than 18,000 of these incidents resulted in injury to one or more people. According to the report, the crash rate for stolen cars was some 200 times greater than the normal crash rate for non-stolen vehicles.¹⁰

The agency's initial proposal in 1969 required automakers to install devices to remind drivers to remove keys when leaving their vehicle and that manufactures use a large number of locking system combinations to prevent use of master keys for theft. The language in the original Final Rule was simple and remains in effect today (with additions that expanded the standard to include performance requirements intended to reduce "accidental rollaway of motor vehicles").

The regulation was aimed squarely at discouraging amateurs and petty criminals who made up the vast majority of thieves who became involved in crashes. The agency's goal in establishing a rule was to make it difficult to activate the engine "within a short period of time."¹¹ Although the final rule was not technically specific, there were robust discussions about the best ways to prevent engine activation, steering and self-mobility.

¹⁰ Docket 1-21-No.1. 33 FR 6471. National Highway Traffic Safety Administration, Apr. 27, 1968

¹¹ Docket 1-21 Notice 3. 41 FR 9374. National Highway Traffic Safety Administration, Mar. 4, 1976

Following years of debate between the agency and the industry, NHTSA vigorously defended its position that auto theft created a significant safety problem that was squarely within its authority to regulate.¹²

In view of the association of theft by joyriders and petty thieves with highway accidents and the significant number of accidents, deaths and injuries involving stolen vehicles found in the study, NHTSA believes that a serious safety problem still exists with regard to stolen vehicles and that further rulemaking in this area is justified. It should be noted that the consumer impact of vehicle theft is substantial. Vehicle theft costs society from \$1.8 billion to \$2.9 billion annually, and represents 8.4 percent of all the crimes committed in this country, placing a substantial burden on law enforcement agencies and the courts.

And, even back then, the agency understood that insufficient shielding of ignition wires was a factor in the speed at which a thief could breach the ignition system. In May 1979, a constituent of then Sen. Ernest Hollings noted that cars were easier to steal due to manufacturers' change from "a heavy metal casting steering-column (at a weight savings of only 1 ½ pounds) to a molded-plastic housing which no longer adequately protects the ignition lock."¹³ In a 1978 docket, NHTSA wrote:¹⁴

After a review of the state of the art in lock design and the difficulty of articulating performance standards for stronger locks, the NHTSA has tentatively concluded that it would be more effective to approach the problem of the susceptibility of locks to tampering by limiting the utility of removing the lock. Consequently, a new requirement is being proposed which requires the ignition systems to be inoperative if any part of the ignition lock is removed. To further protect the ignition system, the agency proposes also that the wires which activate this system shall be shielded so that they cannot be directly contacted from within the passenger compartment. The shielding could be provided by the vehicle structure or by other means. The agency is considering establishing a requirement that would necessitate the use of metal or other similar strong shielding materials which would have to be cut by special cutting tools before access to the ignition wires could be gained.

At the time, the idea that the ignition lock be designed to resist removal was supported by major automakers including General Motors, Ford Motor Company, Mercedes-Benz and Volkswagen, and NHTSA noted that it was evaluating a study of tensile, torque and extraction testing on current ignition lock systems by the National Bureau of Standards to determine if it would

¹² Docket 1-21 Notice 4. 43 FR 18577. National Highway Traffic Safety Administration, May 1, 1978

¹³ Docket 1-21 Notice 4. Comment 158. Letter from NHTSA to U.S. Sen. Ernest Hollings, Jul. 17, 1979

¹⁴ Docket 1-21 Notice 4. 43 FR 18577. National Highway Traffic Safety Administration, May 1, 1978

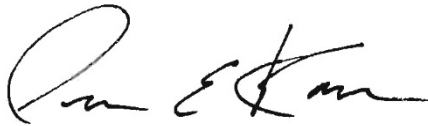
propose specific lock retention and system operations performance standards in the future.¹⁵ The agency and industry agreed one of the best strategies was to make car theft a slow-enough undertaking to increase the odds that a passerby might witness the break-in.

Fifty-five years ago NHTSA was motivated by the large disparity – 200 percent – in vehicle crashes in stolen versus non-stolen vehicles and declared that “a reduction in the incidence of auto theft would make a substantial contribution to motor vehicle safety. Not only would it reduce the number of injuries and deaths among those who steal cars, it would also protect the many innocent members of the public who are killed and injured by stolen cars each year.”¹⁶

Despite decades of rulemaking designed to prevent amateur thieves from easily stealing vehicles, Hyundai/Kia models with inadequate theft protection features that NHTSA apparently considers “compliant” with FMVSS 114 are continually targeted by non-professionals, who with little effort, are breaking into and joyriding in these vehicles, causing a disproportionate number of crashes and killing and injuring themselves as well as “*innocent members of the public.*” History is repeating itself, yet NHTSA claims it does not have an enforceable rule.

We urge the agency to once again amend FMVSS 114 to add a more stringent, meaningful compliance test to fulfill the standard’s historic intent.

Sincerely,

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

Sean E. Kane

¹⁵ Docket 1-21 Notice 5. Final Rule 45 FR 85450. National Highway Traffic Safety Administration. Dec. 29, 1980

¹⁶ Docket 1-21-No.1. 33 FR 6471. National Highway Traffic Safety Administration, Apr. 27, 1968

Appendix A

News Reports of Stolen Hyundai/Kia Crashes, March and April 2023

Stolen Kia high-speed chase ends with crash off bridge in Minneapolis. Fox 9 KMSP. Mar. 3, 2023

<https://www.fox9.com/news/juveniles-fleeing-police-ends-in-crash-over-bridge-2-arrested-video>

3 teens critically injured in Renton crash involving stolen Kia. KOMO News. Mar. 8, 2023

<https://komonews.com/news/local/renton-crash-stolen-kia-critical-injuries-airport-way-renton-avenue-south-extension-vehicle-theft-king-county-crime>

(3 injuries)

Stolen Kia causes fiery crash into West Pullman home. Fox 23 Chicago. Mar. 8, 2023

<https://www.fox32chicago.com/news/stolen-kia-causes-fiery-crash-into-west-pullman-home>

(3 injuries)

Near Me: Kia stolen from Prince George's ends up crashed in Southeast DC. WUSA9, March 9, 2023

<https://www.wusa9.com/article/sports/locked-on/lo-dc/stolen-kia-crash-washington-dc-maryland-prince-georges/65-4dd03fc6-6961-4c38-a284-b53026c457fd>

Juvenile charged after 2 cops injured in crash involving stolen Kia in Bronzeville. Chicago Tribune, Mar. 14, 2023

<https://www.chicagotribune.com/news/breaking/ct-stolen-veicle-crash-20230314-cs2bn762ebdvddw6twra4wevay-story.html>

(2 injuries)

Four boys, youngest just 11, charged after crashing stolen car in Chatham, police say. CBS News Chicago, Mar. 24, 2023

<https://www.cbsnews.com/chicago/news/four-boys-charged-crashing-stolen-car-chatham/>

(1 injury)

11-year-old boy in stolen vehicle gravely injured in north Minneapolis crash. WCCO News. Mar. 27, 2023

<https://www.cbsnews.com/minnesota/news/police-11-year-old-passenger-in-stolen-vehicle-injured-gravely-in-north-minneapolis-crash/>

(1 injury)

Teen driving stolen car dies in southwest Charlotte crash, police say. WBTV, Mar. 27, 2023

<https://www.wbtv.com/2023/03/27/teen-driving-stolen-car-dies-southwest-charlotte-crash-police-say/>

(1 fatality)

Stolen Kia crashes into fence, tree in GR. WOOD TV, Mar. 29, 2023

<https://www.woodtv.com/news/grand-rapids/stolen-kia-crashes-into-fence-tree-in-gr/>

Portland woman's stolen SUV involved in head-on, I-405 crash that injured 4. KGW8, Mar. 31, 2023

<https://www.kgw.com/article/news/local/portland-womans-stolen-car-405-crash/283-674ffd77-fb92-4801-84a8-6a49d3c4b1d4>

(4 injuries)

Pursuit of stolen car ends in crash, arrest of 18-year-old driver in Vista; deputy also crashes. The San Diego Union-Tribune, Apr. 2, 2023

<https://www.sandiegouniontribune.com/news/public-safety/story/2023-04-02/pursuit-of-stolen-car-ends-in-crash-arrest-of-18-year-old-driver-in-vista-deputy-also-crashes>

(1 injury)

East Rochester police officer hit by stolen car at Vision Kia dealership; teens taken into custody. Democrat & Chronicle, Apr. 3, 2023

<https://www.democratandchronicle.com/story/news/2023/04/03/east-rochester-officer-hit-by-stolen-car/70075483007/>

(1 injury)

Investigation into Fatal Crash at 12800 Whittington Drive. Houston Police Dept. Apr. 5, 2023

<https://www.houstontx.gov/police/nr/2023/apr/nr230405-2.htm>

(1 fatality)

RPD: Kia and Hyundai used in two smash-and-grabs in Rochester. WHEC News 10 NBC News, Apr. 5, 2023

<https://www.whec.com/top-news/rpd-kia-and-hyundai-used-in-two-smash-and-grabs-in-rochester/>

Teens wearing ski masks crash stolen vehicle into Sarasota home, police say. Fox 13 News Tampa, Apr. 11, 2023

<https://www.fox13news.com/news/driver-passenger-wearing-ski-masks-crash-into-sarasota-home-deputies-say>

Stolen car crashes into north Minneapolis house; 2 injured. WCCO CBS Minnesota, Apr. 12, 2023

<https://www.cbsnews.com/minnesota/news/stolen-car-crashes-into-north-minneapolis-house-2-injured/>

(2 injuries)

Stolen car crashes into pickup truck in Garfield Park, 4 hurt. Chicago Sun-Times, Apr. 16, 2023

<https://chicago.suntimes.com/crime/2023/4/16/23685864/stolen-car-crashes-into-pickup-truck-in-garfield-park-4-hurt>

(Three injured, 1 fatality)

Teen in stolen vehicle critically hurt after crash in Minneapolis, police say. KTSP-TV, Apr. 16, 2023

<https://kstp.com/kstp-news/local-news/teen-in-stolen-vehicle-critically-hurt-after-crash-in-minneapolis-police-say/>

(1 injury)

Rosemont police chase ends in Schiller Park crash; suspect injured. ABC 7 Chicago, Apr. 18, 2023

<https://abc7chicago.com/schiller-park-crash-mannheim-lawrence-rosemont-police-chase/13149343/>

(1 injury)

6-month-old killed in crash involving vehicle stolen by teens, police say. WSAZ News, Apr. 20, 2023

<https://www.wsaz.com/2023/04/20/6-month-old-killed-crash-involving-vehicle-stolen-by-teens-police-say/>

(1 fatality mentioned in Sun-Times story above)

14-year-old in stolen car leads police on chase at more than 100 mph. Dayton Daily News, Apr. 21, 2023

<https://www.daytondailynews.com/crime/suspects-in-custody-after-stolen-vehicle-flees-moraine-pursuit-crashes-in-dayton/FIUFUO3GXZCIJEDUMYHOATGYTE/>

2 minors arrested after hit-and-run crash involving stolen SUV in Pinellas Park, police say. WSTP, Apr. 22, 2023

<https://www.wtsp.com/article/news/local/pinellascounty/two-arrested-hit-and-run-crash-pinellas-park/67-5cde1287-af02-46ed-819c-5e39f9e77e56>

Troopers: Teenagers in custody after Ohio pursuit in stolen vehicles resulted in crashes. WCHS-TV, Apr. 22, 2023

<https://wchstv.com/news/local/troopers-teenagers-in-custody-after-ohio-pursuit-in-stolen-vehicles-resulted-in-crashes>

(1 injury)

1 killed, 4 seriously injured after teens in stolen car run red light in east Orlando. Orlando News.com, Apr. 24, 2023

<https://www.orlando-news.com/2023/04/24/1-killed-4-seriously-injured-after-orlando-teen-runs-red-light/>

(1 fatality, 4 injuries)

Police investigating 2 crashes involving juveniles, stolen Kias in Hilltop neighborhood. WBNS TV10, Apr. 25, 2023

<https://www.10tv.com/article/news/crime/police-investigating-2-crashes-involving-juveniles-kias-hilltop-neighborhood/530-5c86b801-5c67-40be-99f6-9ed8aad69a0e>