APPENDIX

Contents

Department of Transportation

Light-Duty Vehicle Corporate Average Fuel Economy Standards

Recommendation Reassess the feasibility of light-duty CAFE regulations respecting 49 USC 32903(h) prohibitions on the consideration of electric vehicles in setting CAFE standards; reflect maximum feasible improvements for non-alternative fueled vehicles consider passenger cars and light trucks separately; duly consider technological feasibility and economic practicability for legacy automakers; account for any changes to the Department of Energy's petroleum equivalency factor for electric vehicles; and ensure that manufacturers that comply with the Environmental Protection Agency's greenhouse gas regulations are not assessed civil penalties.

Justification Unlawful

Background NHTSA statutes require the agency to "not consider" the fuel economy of dedicated or dual fueled automobiles when setting standards. 49 USC 32903(h). Such dedicated or dual fueled automobiles include battery electric and plug-in hybrid electric vehicles (EVs). Yet, NHTSA included existing EVs and assumed expanded production of them in response to the California ZEV Mandate in its analysis fleet, which informed the final rule. 89 Fed. Reg. 52540 (Jun. 24, 2024). Furthermore, the presence of EV-only manufacturers in the analysis fleet skews overall industry averages, making more stringent regulations appear feasible while remaining very challenging for legacy automakers to meet without rapidly increasing their transition to electric and electrified vehicles.

Light-Duty Vehicle Corporate Average Fuel Economy Credit Transfer Limits

Recommendation Promulgate regulations under 49 CFR Part 536 that would interpret 49 USC 32903(g) limits on the transfer of CAFE credits in terms of gallons of oil savings as was done for other aspects of 49 USC 32903(g).

Justification Unsound

Background Congress specified limits on the transfer of CAFE credits between compliance fleets in terms of miles per gallon. As CAFE standards and performance increase, the oil savings represented by those caps decrease, limiting and all but eliminating the flexibility intended by Congress. Congress specified that NHTSA consider CAFE credit trades (between manufacturers) in the context of oil savings. NHTSA applied the same consideration of oil savings in calculating the value of credits transferred between fleets, but (inconsistently) did not apply the same consideration to the caps on credit transfers. Applying an oil savings approach to credit transfer limits would be consistent with the goals of the CAFE statutes and related regulations. Doing so would result in greater flexibility for manufacturers to increase fuel economy in fleets where it is most cost-effective to do so. A detailed concept for this action was shared by Auto Innovators in Appendix O of its comments to the proposed rule.[1]

[1] See Appendix O at https://www.regulations.gov/comment/NHTSA-2023-0022-60652

FMVSS 100 - Accommodate ADS

Recommendation	Advance rule to determine where regulatory updates are needed to accommodate testing and modernize outdated requirements for automated driving systems (ADS)
Justification	Unnecessary
Background	NHTSA issued an ANPRM in May 2019 focused on identifying near- and long-term challenges of testing and verifying ADS compliance with existing crash avoidance regulations (FMVSS 100-series).[2] NHTSA should advance that work to better facilitate technological innovation and support the expedient introduction of ADS technology to the fleet. Appendix 1 of Auto Innovators' response to the 2017 deregulatory review suggests an initial roadmap detailing potential FMVSS barriers for highly automated vehicles.[3]

FMVSS 108 - Lamps, Reflective Devices, and Associated Equipment

Recommendation	Modernize current, outdated lighting standards and allow advanced technology the compliance option to meet other international and voluntary standards as intended by Congressional mandate
Justification	Outdated
Background	On December 30, 2024, NHTSA denied[4] Auto Innovators' petition[5] to the NHTSA final rule[6] on FMVSS 108 ("Vehicle Lighting"), along with several other petitioners. The unique requirements in many aspects of FMVSS 108 make the standard more complicated than requirements in other markets and does not follow the original Congressional mandate. If not adjusted, parts of this rule stand as an obstacle to the cost-effective deployment of important safety technology in the U.S. market like Adaptive Driving Beams (ADBs). Limiting deployment runs counter to the public's best interest – particularly with respect to affordability, equity and ensuring the technology is more widely accessible to consumers. FMVSS 108 also contains outdated requirements such as for intensity values that make headlamps less effective than they otherwise could be. ADBs minimize "glaring" and should be given higher max intensity thresholds (e.g. UN ECE vs. US thresholds).

FMVSS 111 - Camera Monitoring Systems (CMS) for Rear Visibility

Recommendation	Reduce regulatory burden by modernizing regulations that are outdated and supporting the introduction of innovative safety technology.
Justification	Outdated

[2] https://www.federalregister.gov/documents/2019/05/28/2019-11032/removing-regulatory-barriers-for-vehicles-with-automated-driving-systems
[3] https://www.regulations.gov/comment/DOT-OST-2017-0069-2700
[4] https://www.govinfo.gov/content/pkg/FR-2024-12-30/pdf/2024-31141.pdf
[5] https://www.regulations.gov/comment/NHTSA-2022-0013-0013
[6] https://www.nhtsa.gov/sites/nhtsa.gov/files/2022-02/ADB-Final-Rule-02-01-2022-web.pdf

Background	NHTSA issued an ANPRM in 2019 seeking public comment to inform the development of a rule that would support the introduction of CMS as an alternative to rear view mirrors.[7] Rear view mirrors, as prescribed within regulation, have played an important role in improving safety. However, advancements in vehicle technology present new opportunities to both meet and exceed the existing requirements through the exclusive use of CMS – an approach that is not currently permitted within the standard. NHTSA should remove current regulatory barriers that limit the introduction of these innovative camera monitoring systems as an alternative to conventional rearview mirrors.

FMVSS 124 - Accelerator Control Systems

Recommendation	Revise outdated rule to align with modern technology.
Justification	Outdated
Background	FMVSS No. 124 was designed to ensure that mechanical accelerator control systems returned to idle when released by the driver or otherwise disconnected. Since the final rule was promulgated in the 1970s, the fundamental underlying technology has dramatically changed. As NHTSA acknowledged in its withdrawn NPRM on the standard, nearly all vehicles required to comply with that standard use sensors and electronic control systems to ensure safe operation, making many of the mechanical requirements of FMVSS No. 124 overly burdensome.[8] It does not account for newer technology and creates unnecessary compliance costs without public benefits.

FMVSS 127 - Automatic Emergency Braking (AEB) Systems for Light Vehicles

Recommendation	Revise rule to meet intent of Congressional mandate and align requirements with current system capability and technology maturity at a reasonable cost when compared to the expected public benefits.
Justification	Unsound

[7] https://www.federalregister.gov/documents/2019/10/10/2019-22036/federal-motor-vehicle-safety-standard-no-111-rear-visibility

[8] https://www.federalregister.gov/documents/2019/05/14/2019-09820/federal-motor-vehicle-safety-standards-accelerator-control-systems

Background	NHTSA issued a final rule mandating Automatic Emergency Braking (AEB) and Pedestrian Automatic Emergency Braking (PAEB) in new vehicles beginning in 2029.[9] The related Congressional mandate[10] only required Forward Collision Warning (FCW) and AEB systems, but NHTSA also issued requirements for the much more technologically challenging and costly PAEB systems. Rather than leverage a voluntary commitment[11] automakers made to NHTSA in 2016 to deploy AEB technology, the final rule mandates technology that is inconsistent with regulations implemented in other parts of the world and likely to result in aggressive and unpredictable braking that will frustrate drivers. Auto Innovators filed a petition for reconsideration[12] in June of 2024. With the exception of sound suppression, our substantive technical concerns were denied in NHTSA's response.[13] Codifying the requirements of the voluntary commitment would have met the statutory intention with no cost to industry or consumers for net positive safety benefits. Harmonizing FMVSS 127 with R152 would result in improved performance over the voluntary commitment while keeping costs down.

FMVSS 129 - New Non-Pneumatic Tires for Passenger Cars

Recommendation	Reduce compliance costs and remove unnecessary requirements by repealing the rule.
Justification	Unnecessary
Background	FMVSS 129 regulates a type of equipment, non-pneumatic spare tires, that is not widely available in the light vehicle fleet. This creates a regulatory obligation with no safety benefit. It may also inadvertently limit the innovation of new equipment.

FMVSS 135 - Light Vehicle Brake Systems

Recommendation	Reduce regulatory burden by modernizing regulations that are outdated and supporting the introduction of innovative safety technology.
Justification	Outdated
Background	NHTSA's FMVSS 135 parking brake provision S5.2. is based on an antiquated braking standard developed at a time when total brake system failure was a relatively common occurrence. Originally developed to address both hill holding and emergency stopping, the standard required the parking brake system to be of a "friction type." The "friction type" specification was established to ensure the parking brake (provided to prevent vehicle roll-away) could also be used to stop the vehicle in an emergency.

[9] https://www.nhtsa.gov/sites/nhtsa.gov/files/2024-04/final-rule-automatic-emergency-braking-systems-light-vehicles_web-version.pdf

[10] Section 24208 of Public Law No. 117-58 https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf

[11] https://www.nhtsa.gov/press-releases/nhtsa-announces-update-historic-aeb-commitment-20-automakers

[12] https://www.autosinnovate.org/posts/agency-comments/petition-for-reconsideration-on-aeb-rule

[13] https://public-inspection.federalregister.gov/2024-27349.pdf

Emergency stopping functionality is provided today via electronic stability control (ESC) systems.[14] There is a reduced need for the parking brake to play a role in emergency stopping and no need for the design of a parking brake to be restricted to a "friction type." If this obsolete "friction type" provision was deleted, manufacturers would be free to implement even more robust and reliable parking brakes. Absent the "friction type" provision, modern solutions (e.g., double locking gear systems) could be implemented. Such systems have the added safety advantage of not being susceptible to extreme temperature, usage, or environmental conditions (e.g., ice buildup).

AFAI recommends NHTSA update FMVSS's parking brake requirements by removing the requirement in Section 5.2 which requires the parking brake to be of a "friction type." In the interim, AFAI recommends NHTSA respond favorably to the interpretation request on this matter, which was filed by Porsche Cars North America, Inc. on January 12, 2024. A copy of the Porsche request for interpretation is attached as Appendix B.

FMVSS 141 - Minimum Sound Requirements for Hybrid and Electric Vehicles

Recommendation	Revise rule to allow multiple compliance options to support economic competitiveness and innovation
Justification	Unduly burdensome
Background	No updates to the sound level requirements are necessary, however, there are areas of improvement needed to ensure compliant vehicles in the U.S. are not erroneously subject to enforcement activities, such as upgrading the background noise acceptance criteria. NHTSA should incorporate some of the latest technical improvements from ISO 16254[15] (and SAE J2889-1[16], when updated), and improve the alignment of FMVSS 141 with the recently updated UN Regulation No. 138 for Quiet Road Transport Vehicles (QRTV) (UNECE R138[17]). To increase regulatory flexibility, and decrease compliance costs, NHTSA could also permit optional compliance with UNECE R138 and certain other test methods and standards.

FMVSS 201 - Occupant Protection in Interior Impact

Recommendation	Repeal costly upper interior testing requirements to allow allocation of engineering resources to improve head restraint designs.
Justification	Unnecessary

[14] https://www.law.cornell.edu/cfr/text/49/571.126
[15] https://www.iso.org/standard/80707.html
[16] https://www.sae.org/standards/content/j2889/1_201511/
[17] https://op.europa.eu/en/publication-detail/-/publication/84e9768e-d95c-11e6-ad7c-01aa75ed71a1/language-en

Background	Sections S6-S10 of FMVSS 201 were issued prior to the ubiquity of head side airbags in the fleet, making the energy-absorbing requirements redundant and potentially ineffective. Designing interior structures to these specifications limits engineering ingenuity and creates a compliance burden with little to no safety benefits since vehicles meet or exceed the FMVSS 201 head acceleration performance criteria with modern head side airbags. These requirements are also unique to the U.S., which creates additional cost and design burdens.

FMVSS 208 - Seat Belt Reminder Systems

Recommendation	Reduce regulatory burden associated with late-stage design changes by extending the lead time provided for complying with the updated front and rear seat belt reminder system requirements and including a phase in period. Modify the rule to provide clarification on the requirements for visual warnings associated with multiple front outboard seats.
Justification	Unduly burdensome
Background	NHTSA issued a final rule to require seat belt reminder systems in rear row seating positions.[18] However, several requirements are misaligned with established international regulations. The agency adopted a unique approach whereby several aspects of the rule are not economically practical and will require costly redesign. NHTSA has underestimated the engineering costs required to design and implement the necessary hardware and software changes required to meet the rule. Specifically, high seating capacity vehicles may necessitate additional technology and a robust Human-Machine Interface (HMI) to manage reminders for numerous occupants, thereby increasing complexity and cost. Auto Innovators also anticipates the proposed requirements will result in significant consumer acceptance issues and filed a petition for reconsideration on the rule.[19]

FMVSS 208 - Unbelted Requirements

Recommendation	Repeal costly unbelted testing requirements to allow allocation of engineering resources to improving belted occupant restraint outcomes or provide a compliance option alternative that supports regulatory flexibility and the introduction of innovative safety technology.
Justification	Unduly burdensome

[18] https://www.nhtsa.gov/sites/nhtsa.gov/files/2024-12/SBRS-Final-Rule-12162024-web-version.pdf
[19] https://www.regulations.gov/document/NHTSA-2024-0071-0006

Background	Seat belt use rates are over 91% nationally, creating opportunities to deemphasize the regulatory requirements surrounding unbelted occupant protections. Repealing the unbelted requirements of FMVSS 208 would allow manufacturers and suppliers to allocate increased design resources to systems that improve outcomes for the majority of occupants who are belted.[20] Unbelted testing requirements impose significant vehicle development costs and force automakers to allocate resources to scenarios (e.g. crash tests with unbelted dummies) that no longer reflect real-world safety needs and can result in tradeoffs when ensuring the safety of belted occupants in the real world. On July 2, 2020, Auto Innovators submitted a petition[21] to NHTSA to modify aspects of FMVSS No. 208 ("Occupant crash protection") to add a compliance option for vehicles equipped with Seat Belt Assurance System (SBAS) technology to be exempt from the current unbelted test requirements. Providing this additional compliance option will enable interior and restraint system designs that can further reduce injuries for properly restrained front seat occupants and help address regulatory burden associated with the unbelted test. Given that the fitment of the SBAS systems will be voluntary, it also provides an opportunity to introduce the systems in a gradual manner.

FMVSS 208 - Occupant Crash Protection

Recommendation	Reduce burden by modernizing and clarifying the regulation as well as incorporating extensive legal interpretations.
Justification	Unduly burdensome
Background	FMVSS 208 includes several unclear requirements that require extensive, costly, and time-consuming agency interpretations. A streamlined and simplified standard that more cleanly conveys the restraint requirements for modern vehicles would remove regulatory inefficiencies surrounding these legal interpretations and enable OEMs to deploy innovative product designs with increased certainty. • *Section 4.5.1(e) – Dashboard label:* The content of the non-permanent label on the dashboard overlaps substantially with the content of the permanent label on the sun visor and should be repealed. • *Section 4.1.5.5.2 – Use of seat belt release mechanism at folding seats:* NHTSA should provide additional design flexibility to allow for new seat belt release mechanisms when detachable lap and shoulder belts are provided for inboard folding rear seats. More specifically, the standard should be revised to no longer specific design-restrictive criterion such as "key or key-like object" if a manufacturer can provide similar levels of protection through other means.

[20] https://www.nhtsa.gov/vehicle-safety/seat-belts

[21] https://www.autosinnovate.org/posts/letters/Auto%20Innovators%20FMVSS%20208%20Seat%20Belt%20Petition%20for%20Rulemaking%20July%202%2020%20%28ID%202516%29.pdf

FMVSS 209 - Seat Belt Assemblies

Recommendation	Reduce regulatory burden and modernize outdated requirements through alignment with international standards by including a new compliance option to permit the use of seat belt pretensioners and load limiters in rear row seating positions.
Justification	Outdated
Background	There are several outstanding petitions for rulemaking to modernize the requirements of FMVSS No. 209 such as through aligning with UNECE Regulation No. 16 (ECE R16). Current rules limit the fitment of seat belt pretensioners and load limiters in rear row seating positions. Favorable resolution of these petitions will help support innovative restraint system designs, improve safety, and to be responsive to recent changes to the IIHS test procedures for evaluating rear row occupant protection in frontal impacts.

FMVSS 219 - Windshield Zone Intrusion

Recommendation	Reduce compliance and testing costs and remove unnecessary requirements by repealing the rule.
Justification	Unnecessary
Background	On July 7, 2008, NHTSA issued a regulatory proposal[22] to repeal FMVSS 219. The agency stated in its proposal that "NHTSA tentatively concludes that the windshield zone intrusion standard is no longer necessary because other FMVSSs are now in place to meet the safety need that the standard had addressed." Per that proposal, the dummy performance requirements of FMVSS 208 are expected to "reflect any blunt impact injuries due to zone intrusions at the windshield" and "the air bag will aid in preventing any lacerative injuries."

FMVSS 225 - Child Restraint Anchorage Systems

Recommendation	Revise requirements for locating top tether that have no added safety benefit.
Justification	Unsound
Background	Changes to top tether (via routing under/over the head restraint) were shown not to impact child restrain kinematics,[23] yet NHTSA forces costly changes to manufactures without proven safety benefit. The final rule mentions that routing over a head restraint improves access to the hardware. The final rule requires adjustable head restraints to comply with the minimum distance of a tether anchorage from R-Point but does not have similar requirements for vehicle seats with fixed head restraints.

[22] https://www.regulations.gov/document/NHTSA-2008-0124-0001

[23] https://www.nhtsa.gov/sites/nhtsa.gov/files/documents/effect-tether-routing-anchor-location-child-restraint-kinematics-812467.pdf

FMVSS 305a - Electric-Powered Vehicles

Recommendation	Reduce regulatory burden through alignment with international standards by allowing component-level testing for certification purposes; provide exclusions for certain hybrid systems.
Justification	Unduly burdensome
Background	On December 20, 2024, NHTSA finalized FMVSS No. 305a,[24] which replaces FMVSS No. 305, "Electric-powered vehicles: Electrolyte spillage and electrical shock protection." Among other changes, FMVSS No. 305a would apply to light and heavy vehicles and would have performance and risk mitigation requirements for the propulsion battery. Auto Innovators supports efforts to establish FMVSS No. 305a. However, per our NPRM comments[25], we have outstanding concerns regarding the extent to which the agency proposal deviates from the established Global Technical Regulation (GTR No. 20) on Electric Vehicle Safety's allowance of component-level testing as an option for certification purposes. The incongruence of requiring a vehicle-only certification approach adds unnecessary cost and testing complexities for OEMs and, ultimately, provides consumers with de minimis, if any, added safety benefits. In addition, the standard should introduce physical protection requirements that accommodate mild hybrid vehicles given the NPRM's acknowledgement their design strategies ensure a low likelihood of shock.

FMVSS 307 & 308 - Fuel System Integrity of Hydrogen Vehicles

Recommendation	Reduce regulatory burden through alignment with international standards by revising labeling and testing requirements.
Justification	Unduly burdensome
Background	NHTSA finalized a rule to establish two new FMVSS specifying performance requirements for all motor vehicles that use hydrogen as a fuel source.[26] Auto Innovators supports NHTSA efforts to establish FMVSS for both fuel system and storage system integrity. However, we have concerns regarding the extent to which the agency proposal deviates from certain aspects of the established Global Technical Regulation (GTR No. 13) on Hydrogen and Fuel Cell Vehicles.[27] While we generally support the areas of the final rule where the agency has aligned its proposal with the GTR, areas of misalignment around labeling requirements and a deviation from certain GTR testing requirements may create compliance testing inconsistencies. These create regulatory uncertainty and increase the cumulative burden due to the need to certify and/or modify vehicles to meet US-specific design and testing requirements. This incongruence adds unnecessary cost for OEMs and, ultimately, provides consumers with de minimis, if any, added safety benefits.

[24] https://www.federalregister.gov/documents/2024/12/20/2024-28707/federal-motor-vehicle-safety-standards-fmvss-no-305a-electric-powered-vehicles-electric-powertrain
[25] https://www.regulations.gov/comment/NHTSA-2024-0012-0027
[26] https://www.federalregister.gov/documents/2025/01/17/2024-31367/federal-motor-vehicle-safety-standards-fuel-system-integrity-of-hydrogen-vehicles-compressed
[27] https://www.regulations.gov/comment/NHTSA-2024-0006-0025

Parts 541 and 543 - Vehicle Theft Prevention Standard

Recommendation	Reduce parts-marking costs and incentivize installation of more technologically effective™ immobilizers by expanding parts marking exemptions for multiple vehicle lines per model year if immobilizers are standard.
Justification	Unduly burdensome
Background	The existing Parts 541 and 543 allows only one car line per model year to receive an exemption from anti-theft label placement requirements if equipped with immobilizers. Expanding these exemptions would streamline compliance for U.S exported and domestically or in U.S. produced vehicles, addressing both safety and anti-theft priorities without compromising regulatory intent. Ideally, NHTSA would exclude vehicles which are equipped with an immobilizer from the scope of Part 541, so that these vehicles will be automatically exempt from parts marking requirements, and avoiding the need for the Part 543 petition for exemption process. A statutory amendment may be required, per Global's comments[28] to the 2017 regulatory review, but DOT should seek to support legislation that would allow these changes.

Part 563 - Event Data Recorders

Recommendation	Reduce the regulatory cost burden by reducing the required event data recorder (EDR) recording duration to five seconds and granting the lead-time of 3 years and phase-in implementation requirements (year 1 25%, year 2 50%, year 3 75%, and year 4 100%) as outlined in Auto Innovators' petition for reconsideration.
Justification	Unduly burdensome
Background	On December 18, 2024, NHTSA issued a final rule on changes to the Part 563 EDR requirements.[29] The final rule did not address industry concerns that the rule will significantly increase both the EDR size (requiring repackaging) and cost to consumers, with questionable and unquantified safety benefits. Auto Innovators submitted a petition for reconsideration to this rule.[30]

Part 572 - Anthropomorphic Test Devices

Recommendation	Reduce the regulatory cost burden by incorporating any new Anthropomorphic Test Devices (dummies) to Part 572, in particular THOR 50th or THOR 5th, as options for compliance or consumer information program use and not as testing requirements.
Justification	Unduly burdensome
Background	Dummy development has and continues to be inordinately costly. The costs associated with ensuring compliance to a standard requiring the use of a new device are also enormous and are completely disproportional to safety benefits. For example, NHTSA has focused on demonstrating the biofidelity of the THOR dummy without showing how it will improve frontal crash protection, which NHTSA has not shown an advanced dummy can improve.

[28] https://www.regulations.gov/comment/DOT-OST-2017-0069-2772
[29] https://www.federalregister.gov/documents/2024/12/18/2024-29862/event-data-recorders
[30] https://www.regulations.gov/document/NHTSA-2024-0084-0005

The cost of a THOR dummy is an order of magnitude higher than that of the currently used test devices. These increased costs will be difficult to absorb for major OEMs and nearly impossible for smaller OEMS. Independent test houses would have to greatly increase the cost of testing with the THOR because of its added data collection complexity. Rather than advance increasingly outdated technology like crash test dummies, DOT should instead focus its research resources on improving more innovative and flexible technology like simulation tools.

Part 581 - Bumper Standard

Recommendation Reduce regulatory burden through alignment with international standards or repeal requirements altogether. Alternatively, address regulatory conflicts with other FMVSS and consumer information program requirements.

Justification Unsound

Background On December 5, 2018, as part of the initial push to install AEB into vehicles voluntarily, Auto Innovators' predecessor trade associations filed a petition[31] to harmonize the current bumper test requirements with UNECE R42. The current Part 581 requirements continue to prioritize vehicle damageability over pedestrian protection. Alignment or increased harmonization with UNECE R42 will reduce regulatory burden and permit manufacturers to reduce the stiffness of bumper systems to help improve pedestrian safety.

As technology improves, Part 581 requirements may also become unnecessary as a result of parking sensors and related automatic braking systems deployment. Continuing to require Part 581 bumper designs hinders design advancements and prevents optimization of sensing and perception technologies. The requirements often force sensors to be mounted in locations suboptimal for their performance.

Permitting Electronic Owner's Manuals as an Alternative to Printed Manuals

Recommendation Reduce regulatory cost and environmental impact of producing current vehicle owner's manuals.by updating owner's manual requirements within all applicable FMVSS/regulations to permit the use of electronic owner's manuals as a compliance alternative to requiring printed manuals.

Justification Outdated

31 https://www.autosinnovate.org/posts/letters/Joint%20Alliance%20Global%20MEMA%20Part%20581%20Petition%20Phased%20Approach%20Dec%205%2018.pdf

Background The vehicle owner's manual is an important tool for providing owners with relevant information related to the safety, performance, and maintenance of a motor vehicle. However, the agency has discretion in terms of the information that must be provided in "printed matter" to the first purchaser of the vehicle. We recommend that NHTSA consider the development of new compliance options to permit digital format owners' manuals in lieu of hard copy (printed) owners' manuals. The use of electronic means of storing and communicating vehicle owner's manual information can improve the quality, utility, and clarity of information, by providing features and functionality that allow consumers to access relevant information more easily. These technological solutions ensure robust alternatives are provided while not compromising consumer access to relevant and up-to-date vehicle information.

Standing General Order (SGO) on Crash Reporting, Advanced Driver Assistance Systems (ADAS) and Automated Driving System (ADS)

Recommendation Reduce cost burdens by continuing to evaluate and streamline the SGO requirements to provide NHTSA data and information that is used effectively.

Justification Unduly burdensome

Background In June 2021, NHTSA first issued the SGO[32] requiring identified manufacturers and operators to report to the agency certain crashes involving vehicles equipped with either automated driving systems or SAE Level 2 advanced driver assistance systems. On April 24, 2025, the agency issued a third amendment to the SGO[33] that more appropriately narrows the scope of these data collection efforts and extends reporting timelines. It also amends confidential business information (CBI) protections and streamlines certain reporting requirements and processes. However, there are still concerns that the data being collected for Levels 2 through 4 ADAS and ADS may not effectively support regulatory pathways or identify defects. NHTSA should more periodically review the SGO data, explain its current utility, and request public input on any desired changes. This would help ensure the industry burden in providing this data is better balanced by measurable safety outcomes.

New Car Assessment Program – Delayed Implementation

Recommendation Delay implementation of final decision on the New Car Assessment Program (NCAP)[34] ADAS and pedestrian protection program updates by at least one year; review potential opportunities to streamline the program and ensure a comparative ratings structure is in place.

Justification Unduly burdensome

[32] https://www.nhtsa.gov/document/sgo-crash-reporting-adas-ads
[33] https:/www.nhtsa.gov/sites/nhtsa.gov/files/2025-04/third-amended-SGO-2021-01_2025.pdf
[34] https://www.federalregister.gov/documents/2024/12/03/2024-27447/new-car-assessment-program-final-decision-notice-advanced-driver-assistance-systems-and-roadmap

Background

In November 2024, NHTSA issued two final decision notices on the inclusion of crash avoidance[35] and pedestrian impact protection[36] ratings in NCAP, with program updates going into effect for MY2025 vehicles. These final decisions introduced a substantial number of new test procedures that will add significant time and resource burdens for both manufacturers and NHTSA, and will likely impact the overall number of vehicles that can be rated each year. We support updates to the program; however, several aspects of the agency's final decision should be reconsidered to improve the efficiency of the program and address any outstanding technical concerns. Delaying the start of the new program enables more effective use of both NHTSA and industry resources by ensuring that (1) any outstanding technical issues identified during preliminary testing are addressed, (2) areas where significant misalignment between FMVSS and NCAP test requirements exist can be resolved to minimize test burden, and (3) the ratings structure is updated to ensure consumers are provided with more relevant comparative safety ratings information.

New Car Assessment Program - Self-Evaluations

Recommendation

Modernize program by considering additional ways to accept and incorporate voluntary vehicle manufacturer-generated test results for use in calculating NCAP safety ratings.

Justification

Unnecessary

Background

NHTSA allows vehicle manufacturers to submit self-certification data to demonstrate FMVSS compliance. NCAP currently uses OEM data for crash avoidance testing to determine whether a system meets the agency's requirements for recommendation. For its well-established tests, including crashworthiness evaluations, the IIHS uses a similar process. Vehicle manufacturers provide IIHS with data from sanctioned in-house tests that are used to formulate a vehicle's safety score. This allows the IIHS to develop and subject vehicles to more challenging sanctioned safety tests with its limited resources while preventing a regression in vehicle safety levels.

NCAP, with its similarly limited resources, could allocate its resources towards more complex or cutting-edge safety evaluations if more self-evaluation data from OEMs was incorporated to the program. This would maximize the number of vehicles that can be rated each year, without imposing additional testing costs on the agency. This may have the added benefit of keeping the program focused and efficient.

[35] https://www.federalregister.gov/documents/2024/12/03/2024-27447/new-car-assessment-program-final-decision-notice-advanced-driver-assistance-systems-and-roadmap

[36] https://www.federalregister.gov/documents/2024/11/25/2024-27446/new-car-assessment-program-final-decision-notice-crashworthiness-pedestrian-protection

New Car Assessment Program – Optional Testing Process

Recommendation	Reduce regulatory and cost burdens by updating the optional NCAP testing process. Modernizing the requirements would accelerate testing and rating, reduce burdens on NCAP staff, and facilitate more effective use of agency resources.
Justification	Outdated
Background	The agency's current optional NCAP testing[37] process is outdated and potentially underutilized because of its structural limitations, particularly with respect to the requirement that testing is only permitted at NHTSA contract laboratories. NHTSA can develop laboratory requirements and a vetting process for third party labs to conform to and guarantee the credibility of NCAP.

Driver Distraction Guidelines

Recommendation	Modernize outdated distraction guidelines to reflect both the current distraction problem and the state of vehicle technology.
Justification	Outdated
Background	Auto Innovators issued driver distraction guidelines in 2012 and NHTSA issued further guidance in 2013.[38] Neither reflects the current state of the art. Distracted driving has increased and many changes in vehicle technology and related human factors have occurred since then. As a result, updates are needed to this guidance. To update those guidelines, NHTSA can consider leveraging more recent work in Europe (EU's November 2019 General Safety Regulation). Insights from the NHTSA Distraction Action Forum and other workshops can also aid in their modernization.

Federal Communications Commission

47 CFR 15.503 and 15.519 - Ultra-Wideband

Recommendation	Amend current regulations to allow for a variety of ground-based vehicle uses of ultra-wideband.
Justification	Outdated

[37] https://www.nhtsa.gov/sites/nhtsa.gov/files/52_fr_31691.pdf

[38] https://www.federalregister.gov/documents/2013/04/26/2013-09883/visual-manual-nhtsa-driver-distraction-guidelines-for-in-vehicle-electronic-devices

Background	Auto Innovators recently submitted comments to the Federal Communications Commission encouraging the Commission to make a handful of changes to its existing ultra-wideband (UWB) rules to promote the auto industry's competitiveness by accelerating the deployment of new UWB-enabled technologies that can enhance vehicle safety, drive innovation, and meet American consumer demand.[39] These changes include: (a) eliminating the requirement in 15.519 that devices be "hand held" and instead allow for indoor and outdoor operations of "mobile" and "non-fixed" UWB devices; (b) providing an exemption in 15.519(a)(1) from the requirements to cease transmission within 10 seconds if an acknowledgement of reception is not received if the device operates with a maximum duty cycle of 5% within 1 second and is not capable of transmission; (c) permitting the use of antennas under 15.519(a)(2) on "mobile UWB devices"; (d) increasing the radiated emissions in 15.519(c) by 10dB to -31.3 EIRP in dBm for devices operating between 3,100 MHz and 10,600 MHz and by 13 dB to -48.3 dBm for devices operating above 10,600 MHz; and (e) amending the definition "fixed outdoor operation" in 15.503 to be "permanent installation outdoors on a non-mobile structure."

27 CFR 25.115 and 25.137 - Positioning, Navigation, and Timing Services

Recommendation	Streamline existing rules requiring licensing of non-Federal receive-only equipment operating with non-U.S. satellite systems
Justification	Unnecessary
Background	Auto Innovators submitted comments to the Federal Communications Commission encouraging the Commission to review its rules requiring licensing of non-Federal receive-only equipment operating with non-U.S. satellite systems.[40] The current rules were designed for large, stationary infrastructure and not consumer products, such as motor vehicles, that are designed for global markets. The existing process to obtain a waiver is lengthy and complex and should be simplified to align with current market and technological realities.

47 CFR 15.403 - 6 GHz Very Low Power

Recommendation	Amend current rules to remove the requirement that very low power devices have an integrated antenna
Justification	Unnecessary

[39] https://www.fcc.gov/ecfs/document/10411243303318/1
[40] https://www.fcc.gov/ecfs/document/10411243303318/1

Background The Federal Communications Commission recently issued a final rule to expand unlicensed very low power (VLP) device operation to the entire 6 GHz band.[41] Unfortunately, the regulations require VLP devices to have an integrated antenna, presumably with small mobile devices in mind. Auto Innovators submitted comments to the Federal Communications Commission encouraging the Commission to remove the requirement for integrated antennas from the 6 GHz device category for U-NII bands and modify its rules to allow VLP devices inside of vehicles where the modem and antenna may not be in the same housing or encasement but are inaccessible to users. The only equipment class category that is acceptable for automotive use in the 6 GHz band is VLP but the prohibition on external antennas excludes most automotive applications.

47 CFR 2.2043 - Class II Permissive Changes

Recommendation Amend current rules to allow for an improved maximum power or field strength rating for Class II permissive changes.

Justification Unnecessary

Background Auto Innovators submitted comments to the Federal Communications Commission encouraging the Commission to allow for an improved maximum power or field strength rating for Class II permissive changes.[42] A change to the maximum power or field strength rating for certified equipment requires a full new application unless there is a permissive change under subsection (b)(3). Under subsection (b)(2), only a degradation in performance is allowed when applying a Class II permissive change. In contrast, Class III permissive changes include improved maximum output power for modifications to the software of a software defined radio transmitter.

Environmental Protection Agency

40 CFR Part 86 - Control of Emissions from New and In-Use Highway Vehicles and Engines

Recommendation Reconsider the greenhouse gas (GHG) and criteria emissions standards

Justification Unsound

[41] https://www.fcc.gov/ecfs/document/10411243303318/1

[42] https://www.fcc.gov/ecfs/document/10411243303318/1

Background In March of 2024, the Environmental Protection Agency finalized the Multipollutant Rule that regulates light-duty and medium-duty vehicle emissions for Model Years 2027 and later.[43] To meet the stringency of these standards, vehicle manufacturers would need to have electric vehicles make up 50% of their sales in 2030. The final rule was based on the assumptions that the market demand for electric vehicles would be sufficient to support such sales, there would enough charging infrastructure to support such a large fleet of electric vehicles, and the cost of electric vehicles would be attainable for a large segment of the population. Unfortunately, none of these assumptions have come to fruition. EV sales in 2024 made up 10.2% of all light-duty vehicle sales, only a 0.7% increase from 2023.[44] In addition, charging infrastructure is woefully behind where it would need to be to support that level of electrification. Finally, even with consumer incentives, the average EV costs $55,544.

40 CFR Part 705 - Reporting and Recordkeeping for Per- and Polyfluoroalkyl Substances

Recommendation Amend current reporting requirements to not require reporting for imported articles, impurities, waste products, research and development chemicals, and reaction products.

Justification Unduly burdensome

Background In November of 2023, the Environmental Protection Agency finalized rules that imposed significant new reporting requirements on companies. EPA's final Toxic Substances Control Act 8(a)(7) rule requires expansive reporting of per- and polyfluoroalkyl substances (PFAS) – including imported articles containing PFAS, impurities, waste products, research and development chemicals, and reaction products. This creates a sizeable burden for many industries, including the auto industry, which imports vehicles and vehicle parts that would be considered articles containing PFAS. It will result in EPA receiving a massive amount of data, most of it potentially unhelpful. It also strays from what Auto Innovators views as the intended scope of the statute. Finally, past TSCA Section 8 rules exempted imported articles from reporting. Additional information can be found in Auto Innovators' comments.[45]

40 CFR Part 702 - Chemical Substance Risk Evaluations

Recommendation Amend the current procedural framework for conducting risk evaluations under the Toxic Substances Control Act to eliminate the whole-chemical approach and assumptions regarding no use of personal protective equipment

Justification Unsound

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[43] https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-multi-pollutant-emissions-standards-model

[44] https://www.autosinnovate.org/posts/papers-reports/Get%20Connected%20EV%20Quarterly%20Report%202024%20Q4.pdf

[45] https://www.regulations.gov/comment/EPA-HQ-OPPT-2020-0549-0163 and https://www.regulations.gov/comment/EPA-HQ-OPPT-2020-0549-0030

Background In May of 2024, the Environmental Protection Agency finalized rules in 40 CFR Part 702, Subpart B that outline certain procedural assumptions and strategies for conducing risk evaluations. These include evaluating chemicals as part of a "whole chemical approach" instead of making use-by-use determinations of risk and assuming in the risk evaluation that no personal protective equipment is used. Auto Innovators views the whole chemical approach as inconsistent with EPA's directive to make findings regarding the level of risk for specified uses of a chemical. Additionally, assuming that no personal protective equipment is used in facilities is not realistic or representative of true manufacturing conditions. Additional information can be found in Auto Innovators' comments.[46]

Securities and Exchange Commission

17 CFR Parts 229, 232, 239, 240, and 249 - Cybersecurity Risk Management, Strategy, Governance, and Incident Disclosure

Recommendation Repeal regulations

Justification Unduly burdensome

Background In 2023, the Securities and Exchange Commission finalized rules to mandate that publicly traded companies report material cybersecurity incidents within four days and to annually disclose material information regarding their cybersecurity risk management, strategy, and governance. The rules require foreign private issuers to make comparable disclosures. By redirecting resources, disclosing an ongoing cybersecurity incident detracts from a firm's ability to fully remediate an active incident. It also potentially alerts additional bad actors that a firm may be vulnerable. In addition, having only four business days to report incidents pressures registrants to submit incomplete (and potentially inaccurate) information, creates significant administrative burdens and costs on companies, and contributes to investor and shareholder confusion. Furthermore, the annual disclosures regarding a firm's cybersecurity risk management, strategy, and governance provide little benefit to investors and shareholders who do not also know a firm's system architecture and data practices, while potentially providing bad actors with information to perpetrate a potential cybersecurity attack. Additional perspective can be found in Auto Innovators' comments.[47]

[46] https://www.regulations.gov/comment/EPA-HQ-OPPT-2023-0496-0230

[47] https://www.sec.gov/comments/s7-09-22/s70922-20128350-291113.pdf

Department of Treasury

31 CFR Part 850 - Provisions Pertaining to U.S. Investments in Certain National Security Technologies and Products in Countries of Concern

Recommendation	Consider this rule in the context of other existing and planned restrictions on critical and emerging technologies and exempt civil automotive applications from the prohibition and notification requirements
Justification	Unnecessary
Background	In November of 2024, the Department of Treasury finalized its rule to prohibit or require notification of certain types of outbound investments in specific categories of advanced technologies and products, including semiconductors and microelectronics, quantum information technologies, and artificial intelligence. Outbound investment restrictions have the potential to inadvertently disrupt global supply and value chains, increasing costs for companies and consumers and advantaging businesses in other jurisdictions that are not similarly restricted and constrained. The final rule remains overly broad, creating the risk that the outbound investment program may inadvertently capture investments that do not pose a clear threat to national security and creating uncertainty that reduces the global competitiveness of U.S investors and companies without a corresponding benefit to national security. Additional information can be found in Auto Innovators' comments.[48]

[48] https://www.regulations.gov/comment/TREAS-DO-2024-0012-0037 and https://www.regulations.gov/comment/TREAS-DO-2023-0009-0030