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ONE HUNDRED NINETEENTH CONGRESS

Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
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June 24, 2025

MEMORANDUM

TO:	Members, Subcommittee on Commerce, Manufacturing, and Trade
FROM:	Committee Majority Staff
RE:	Subcommittee on Commerce, Manufacturing, and Trade Hearing

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I. INTRODUCTION

The Subcommittee on Commerce, Manufacturing, and Trade has scheduled a hearing on June 26, 2025, at 10:00 a.m. (ET) in 2123 Rayburn House Office Building. The title of the hearing is "Looking Under the Hood: The State of NHTSA and Motor Vehicle Safety."

II. WITNESSES

- Jeff Farrah, CEO, Autonomous Vehicle Industry Association
- John Bozzella, President and CEO, Alliance for Automotive Innovation
- David Harkey, President, Insurance Institute for Highway Safety and Highway Loss Data Institute
- Catherine Chase, President, Advocates for Highway and Auto Safety *(Minority)*

III. BACKGROUND

Since the emergence of the first widely affordable, mass-produced automobile in the United States in the early twentieth century, the U.S. automotive industry has been a crucial driver of the American economy. Automobiles have even served as a cornerstone of the American Dream. The U.S. automotive industry and related services and products is a critical economic driver and an employer for millions of Americans.

The fatality rate from motor vehicles has plunged by almost 90 percent from its peak in the 1920s.[1] Despite significant advances in safety and design, motor vehicle fatalities remain stubbornly high. The National Highway Traffic Safety Administration (NHTSA) estimates that

[1] David Leonhardt, *The Rise in U.S. Traffic Deaths*, THE N.Y. TIMES (Dec. 11, 2023), https://www.nytimes.com/2023/12/11/briefing/us-traffic-deaths.html.

39,345 people died in motor vehicle crashes in 2024, a four percent reduction from 40,901 reported fatalities in 2023.[2] This is also the lowest estimate since COVID-pandemic; levels in 2020 and marks the eleventh consecutive quarter of a decline in fatalities since the second quarter of 2022.[3] Alcohol impairment, speeding, and lack of seat-belt use contributed to 43 percent of these fatalities.[4] In addition to the human tragedy, motor vehicle crashes cost the U.S. economy $340 billion annually, and $30 billion specifically in taxpayer expenses related to increased medical costs, lost productivity, and legal costs.[5]

The Committee on Energy and Commerce is responsible for overseeing significant aspects of the automotive industry, including NHTSA, motor vehicle emissions, privacy, emerging technologies such as automated vehicles (AV) and artificial intelligence (AI), and vehicle data and the right to repair, among other issues. Historically, revisions to NHTSA programs and authorities are incorporated in surface reauthorization legislation, which recently included the Infrastructure Investment and Jobs Act, the Fixing America's Surface Transportation (FAST) Act, and the Moving Ahead for Progress in the 21st Century Act (MAP-21).[6]

IV. THE U.S. AUTOMOTIVE SECTOR

The automotive industry is America's largest manufacturing sector, supporting 10.1 million jobs, contributing $1.2 trillion to the economy, and generating more than $340 billion in federal, state, and local annual tax revenue between auto manufacturing and vehicle sales.[7] The value of American automobile and parts exports total $143 billion to nearly 200 countries.[8] The automotive industry also supports an ecosystem of automotive related services. In 2023, premiums for personal automobile insurance totaled $318 billion and the aftermarket for light duty vehicles reached $392 billion.[9]

The U.S. automotive sector faces significant marketplace and regulatory challenges. The United States produced an estimated 10.6 million vehicles in 2023, which is down 39 percent since 2004. Meanwhile, China produced 30 million vehicles in 2023, which is up 297 percent

[2] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEPT. OF TRANSPO., EARLY ESTIMATE OF MOTOR VEHICLE TRAFFIC FATALITIES IN 2024 (2025). (NHTSA Estimate of Motor Vehicle Fatalities, 2024)
[3] *Id*.
[4] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEPT. OF TRANSPO., OVERVIEW OF MOTOR VEHICLE CRASHES IN 2023 (2023).
[5] Press Release, U.S. Dept. of Transpo., Nat'l Highway Traffic Safety Admin., Traffic Crashes Cost America $340 billion in 2019 (Jan. 10, 2023) (on file with author).
[6] Infrastructure Investment and Jobs Act, Pub. L. No. 117-20 (codified as amended in scattered sections of 49 U.S.C.); Fixing America's Surface Transportation Act, Pub. L. No. 114-94 (codified as amended in scattered sections of 49 U.S.C.); Moving Ahead for Progress in the 21st Century Act, Pub. L. No. 112-141 (codified as amended in scattered sections of 49 U.S.C.).
[7] Alliance for Automotive Innovation, *Data Driven Navigating the Road Ahead 2024 Industry Report* (Jan. 2025), https://www.autosinnovate.org/posts/papers-reports/Alliance%20for%20Automotive%20Innovation%20-%20DATA%20DRIVEN%20Report%20%28January%202025%29.pdf.
[8] *Id*.
[9] Press Release, Auto Care Ass'n, New Rsch.: Auto Care Indus. Expected to Grow 5.7% in 2024, Reach $617.4 Billion in 2027 (Jun. 10, 2024) (on file with author); FED. INS, OFF., U.S. DEPT. OF THE TREASURY, REPORT OF PERSONAL AUTO INSURANCE MARKETS AND TECHNOLOGICAL CHANGE (2025).

from 2004.[10] China is also focusing on establishing itself as the world leader in electric and automated vehicle technology. Domestically, the automotive industry faces a challenging regulatory environment, including duplicative vehicle emissions requirements, electric vehicle mandates, no clear regulatory framework for automated vehicles, and other unnecessary and burdensome regulations. Finally, the automotive industry has faced ongoing supply chain challenges including semiconductors, rare earth elements, and magnets.

V. NHTSA'S SAFETY MISSION

NHTSA's primary mission is to "save lives, prevent injuries, and reduce economic costs" stemming from road crashes. The 1966 National Traffic and Motor Vehicle Safety Act created NHTSA to address motor vehicle fatalities, which at the time, was the leading cause of death in the U.S. NHTSA aims to achieve its safety mission through consumer education, nationwide motor vehicle safety regulations, road safety programs, and research.[11]

NHTSA is responsible for issuing Federal Motor Vehicle Safety Standards (FMVSS), which set minimum safety requirements for motor vehicles designed to keep the driver, passengers, and other roadway users safe.[12] The more than 100 FMVSSs specify design, construction, performance, and durability requirements across three categories: crash avoidance, crashworthiness, and post-crash survivability. For example, some of these include automatic emergency braking (FMVSS No. 127), occupant crash protection (FMVSS No. 208), and fuel system integrity (FMVSS No. 301).[13] NHTSA updates these standards pursuant to specific motor vehicle safety needs, along with legislative directives.[14] Importantly, FMVSSs are preemptive, and state and local governments are allowed only to issue safety standards identical to the relevant FMVSS.[15] Since NHTSA's creation more than fifty years ago, FMVSSs have prevented more than 860,000 deaths and 49 million non-fatal injuries, providing a total societal benefit of $17.3 trillion.[16]

Motor vehicle manufacturers and importers are required to certify that their vehicles comply with the applicable FMVSSs.[17] NHTSA enforces compliance through investigations, recalls, and requiring manufacturers to fix defects.[18] In 2023, NHTSA issued about 750 vehicle recalls, capturing approximately 34 million vehicles. In 2024, NHTSA issued nearly a thousand (900) vehicle recalls, capturing about 29 million vehicles. Between 2013 and 2023, NHTSA recorded average recall completion rates between 61.5 percent (2021) and 73.0 percent (2018). See Figures 1 and 2 in the Appendix for recall trends.

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[10] *Id*.
[11] NHTSA's Core Values, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., https://www nhtsa.gov/about-nhtsa/nhtsas-core-values (last visited Jun. 16, 2025).
[12] *See generally*, 49 C.F.R. Part 571.
[13] 49 C.F.R. § 571.127; 49 C.F.R. § 571.208; 49 C.F.R. § 571.301.
[14] 49 U.S.C. § 30111.
[15] 49 U.S.C. § 30103.
[16] Press Release, U.S. Dept. of Transpo., Nat'l Highway Traffic Safety Admin., New Rsch.: 50 Years of Vehicle Safety Standards Saved Hundreds of Thousands of Lives, Prevented Millions of Injuries (Dec. 17, 2024) (on file with author).
[17] 49 U.S.C. § 30115.
[18] *See generally*, 49 U.S.C. Ch. 301.

NHTSA has other regulatory tools to achieve its mission. NHTSA can issue interpretations to clarify the applicability of existing rules and can provide limited exemptions from its rules including enabling innovative vehicle designs or low emission vehicles.[19] NHTSA also has civil penalty authority for violations of its rules.[20]

Finally, NHTSA is responsible for the National Car Assessment Program (NCAP). Through vehicle testing, NCAP provides comparative safety information and ratings on new vehicles to assist consumers and incentivize the development of safer vehicles. Section 24213 of the IIJA directed NHTSA to update NCAP to include four new advanced driver assistance systems technologies, create a long-term roadmap on anticipated changes to NCAP, and inform consumers about new advanced crash avoidance technologies and technologies to protect vulnerable road users. On November 18, 2024, NHTSA finalized updates to NCAP pursuant to Section 24213.[21]

VI. MOTOR VEHICLE AUTOMATION

A major trend in the automotive marketplace is the introduction of various levels of automation into motor vehicles. SAE International, a global automotive standards organization, outlines six levels of vehicle automation (See Figure 3 for details).[22] Levels 0-2 are driver support features and include technologies such as lane departure warning or adaptive cruise control. Levels 3-5 incorporate automated driving features. Levels 4 and 5 do not require a human to drive a vehicle. For Level 3, a driver may be required to take over the vehicle when requested by the vehicle.

Driver support features (also commonly known as Advanced Driver Assistance Systems or ADAS) are widely present in today's vehicles. Of the 14 key ADAS features, 10 were included in at least half of vehicles from model years 2015-2023.[23] Six of those features were in 90 percent or more vehicles.[24] The broad adoption of ADAS presents significant safety benefits—over the next 30 years ADAS is projected to avoid 249,400 fatalities and 14,138,000 non-fatal crashes.[25]

As a critical application of artificial intelligence, AVs demonstrate a promising technological development that could reshape the automotive landscape. To date, AVs have

[19] 49 U.S.C. § 30113.
[20] 49 U.S.C. § 30165.
[21] New Car Assessment Program Final Decision Notice-Advanced Driver Assistance Systems and Roadmap, 89 Fed. Reg. 95916 (Dec. 3, 2024).
[22] *SAE Levels of Driving Automation™ Refined for Clarity and International Audience*, SAE INT'L (May 3, 2021), https://www.sae.org/blog/sae-j3016-update.
[23] *PARTS: Market Penetration of Advanced Driver Assistance Systems (ADAS),* P'SHIP FOR ANALYTICS IN TRAFFIC SAFETY (Sept. 2024), https://www mitre.org/sites/default/files/2024-09/PR-24-2614-PARTS-Market-Penetration-Advanced-Driver-Assistance-Systems-0917.pdf.
[24] *Id*.
[25] Occupant Protection, Advanced Driver Assistance Systems, NAT'L SAFETY COUNCIL, https://injuryfacts nsc.org/motor-vehicle/occupant-protection/advanced-driver-assistance-systems/data-details/#:~:text=The%20study%20projects%20that%20the,fatalities%20and%208%2C673%2C000%20nonfatal%20injuries (last visited Jun. 16, 2025).

driven more than 145 million miles on public roads and are operating in 14 states.[26] Other countries, such as the China, are aggressively developing and deploying AV technology, putting American technological leadership at risk.

Aside from the geopolitical implications, AVs present substantial economic and societal benefits to the United States. The vast majority of crashes are the driver's fault, through speeding, driver distraction, or alcohol use, none of which are factors present within the AVs themselves.[27] A growing body of evidence suggests that AVs already outperforms human drivers from a safety perspective and have the long-term potential to substantially reduce fatalities, crashes, and corresponding economic costs.[28] AVs also have the potential to spur economic growth through increased productivity, and bolster mobility options for persons with disabilities and the elderly.[29]

AVs face significant regulatory and policy challenges. In the absence of federal action, 35 states have enacted laws related to AV deployment.[30] Some states have also sought to ban or place unworkable restrictions on AVs that hinder interstate commerce and the federal government's role over motor vehicle safety regulation.[31] At the federal level, NHTSA has taken initial steps to advance AVs, but a full federal framework has yet to be established. In 2022, NHTSA finalized a FMVSS for AVs and occupant protection.[32] In 2023, NHTSA issued a Standing General Order (SGO) requiring AV and ADAS motor vehicle manufacturers to report crashes to NHTSA.[33] The SGO was amended in April 2025 to streamline its requirements.[34] On June 13, 2025, Department of Transportation (DOT) Secretary Duffy announced modifying NHTSA's exemption process to more efficiently facilitate consideration of novel motor vehicle

[26] *State of AV 2025*, AUTONOMOUS VEHICLE INDUS. ASS'N (May 19, 2025), https://cdn.prod.website-files.com/67ee2ad971d86c70d02ed03f/683802d318db2c77d4ce3d43_2025_StateOfAV_AnnualReport_Web.pdf.
[27] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEP'T OF TRANSPO., CRITICAL REASONS FOR CRASHES INVESTIGATED IN THE NATIONAL MOTOR VEHICLE CRASH CAUSATION SURVEY (FEB. 2015).
[28] Luigi Di Lillo et al., *Do Autonomous Vehicles Outperform Latest-Generation Human-Driven Vehicles? A Comparison to Waymo's Auto Liability Insurance Claims at 25 Million Miles*, SWISS RE (2024), https://storage.googleapis.com/waymo-uploads/files/documents/safety/Comparison%20of%20Waymo%20and%20Human-Driven%20Vehicles%20at%2025M%20miles.pdf; Robert Shapiro & Isaac Yoder, *Innovation Highway Report: Unlocking the Social and Economic Benefits of Autonomous Vehicles*, U.S. CHAMBER OF COM. (July 2023), https://www.uschamber.com/technology/unlocking-the-social-and-economic-benefits-of-autonomous-vehicles.
[29] *Id*.
[30] James H. Dunn et al., *AV Compliance Is Still a State-by-State Slog — For Now*, FROST BROWN TODD (Dec. 17, 2024), https://frostbrowntodd.com/av-compliance-is-still-a-state-by-state-slog-for-now/.
[31] *California governor again vetoes bill banning large driverless trucks*, SAFETY+HEALTH, NAT'L SAFETY COUNCIL (Oct. 7, 2024), https://www.safetyandhealthmagazine.com/articles/26015-california-governor-again-vetoes-bill-banning-large-driverless-trucks.
[32] Occupant Protection for Vehicles With Automated Driving Systems. 87 Fed. Reg. 18560 (Mar. 30, 2022) (to be codified at 49 C.F.R. Part 571).
[33] NAT'L. HIGHWAY TRAFFIC AND SAFETY ADMIN, DEPT. OF TRANSPO., (2021-01) SECOND AMENDED STANDING GENERAL ORDER (2023).
[34] NAT'L. HIGHWAY TRAFFIC AND SAFETY ADMIN, DEPT. OF TRANSPO., (2021-01) THIRD AMENDED STANDING GENERAL ORDER (2025).

designs, including AVs.[35] Further, DOT, going back to 2016, has issued a series of strategies and roadmaps outlining steps to develop and deploy AVs.[36]

In the 115th Congress, the Committee passed H.R. 3388, the SELF-DRIVE Act, sponsored by Representative Latta.[37] While it subsequently passed out of the House of Representatives, the U.S. Senate never took up the measure. There have been several hearings on AVs, but no major legislation has been enacted, effectively leaving much of the policy debate to states, other countries, and the U.S. Department of Transportation.

VII. NHTSA AND MOTOR VEHICLE EMISSIONS

While NHTSA's primary mission is safety, the Energy Policy and Conservation Act of 1975 granted NHTSA the authority to regulate fuel economy of passenger vehicles and light trucks to reduce dependence on imported oil. Congress enacted the Energy Independence and Security Act in 2007 to further raise CAFE standards. Separately, the U.S. Environmental Protection Agency (EPA) regulates the emissions from mobile sources such as automobiles under the Clean Air Act. In 2007, the U.S. Supreme Court in *Massachusetts v. EPA* held that greenhouse emissions from motor vehicles are within the definition of the term pollutant under the Clean Air Act and that EPA may regulate such emissions. The Clean Air Act generally preempts states from setting their own emission standards, but the law includes an exception that allows EPA to waive preemption in certain circumstances. California is the only state that may qualify for preemption and issue its own emission rules under the current waiver authority, but other states are allowed to follow and implement the California emission standards in their states, EPA and NHTSA have at times, but not always, worked jointly to regulate vehicle emissions. [Further, California has also sought to regulate motor vehicle emissions through obtaining waivers from EPA, an action recently overturned by Congress.]

In April 2022, NHTSA issued a final rule for passenger cars and light trucks for model years 2024-2026 requiring an 8 percent annual increase in fuel efficiency for model years 2024 and 2025 and a 10 percent increase for model year 2026. In June 2024, NHTSA announced its CAFE standards for light duty vehicles model years 2027-2031 would be set at approximately 50.4 miles per gallon by model year 2031 and heavy-duty vehicles model years 2030-2035 would be 2.851 gallons per 100 miles by model year 2025.[38] Both rules were challenged by several states and industry organizations and face review by the U.S. Court of Appeals for the D.C. Circuit.

On January 28, 2025, Secretary Duffy issued a memorandum, *Fixing the CAFE Program*, which directs NHTSA to review and revise existing fuel economy standards, including for model

[35] Press Release, U.S. Dept. of Transpo., Nat'l Highway Traffic Safety Admin. U.S. Transpo. Sec. Sean P. Duffy Streamlines Exemption Process for Noncompliant Automated Vehicles (Jun. 13, 2025) (on file with author).
[36] *See* DEPT. OF TRANSPO., PREPARING FOR THE FUTURE OF TRANSPORTATION: AUTOMATED VEHICLES 3.0 (2019); DEPT. OF TRANSPO., ENSURING AMERICAN LEADERSHIP IN AUTOMATED VEHICLE TECHNOLOGIES: AUTOMATED VEHICLES 4.0 (2020).
[37] *See* H.R. 3388, 115th Cong. (2017).
[38] Corporate Average Fuel Economy Standards for Passenger Cars and Light Trucks for Model Years 2027 and Beyond and Fuel Efficiency Standards for Heavy-Duty Pickup Trucks and Vans for Model Years 2030 and Beyond, 89 Fed. Reg. 52540 (Jun. 24, 2024) (to be codified at 49 C.F.R. Parts 523, 531, 533, 535, 536, and 537).

year 2022 and forward, to ensure compliance with President Donald Trump's Executive Orders on *Unleashing American Energy* and *Initial Recissions of Harmful Executive Orders and Actions*. On June 6, 2025, NHTSA issued an interpretative rule outlining the Administration's future approach to adjusting CAFE standards.[39]

In the 119th Congress, the House of Representatives passed H.R. 1, One Big Beautiful Bill Act (OBBBA) on May 22, 2025, which included provisions repealing the 2022 and 2024 CAFE regulations.[40] The Senate Commerce Committee's budget reconciliation proposal lowers CAFE civil monetary penalties against automakers to $0.00, saving $200 million through 2034.[41] On June 12, 2025, President Trump signed three Congressional Review Act (CRA) resolutions that would reverse EPA's waivers allowing California to set its own motor vehicle emissions rules.[42] California and ten other states subsequently filed a lawsuit challenging the authority of Congress to reverse EPA's waivers under the CRA.[43]

VIII. VEHICLE DATA AND RIGHT TO REPAIR

Annually, U.S. households purchase $768 billion worth of motor vehicles and parts.[44] Goods and services produced after purchasing a motor vehicle constitute the aftermarket, which encompasses repair, maintenance, and replacement parts. This marketplace includes original equipment manufacturer-certified (OEM) repair shops and dealers as well as repair and maintenance shops that are independent of an OEM.

The average motor vehicle contains more than 30,000 parts, and vehicles are increasing in complexity as manufacturers (i.e. original equipment manufacturers or OEMs) continue to introduce ADAS, software, and other technology into vehicles.[45] Motor vehicle repair costs have accordingly increased, outpacing motor vehicle parts and equipment, new and used motor vehicles, and the average cost of all consumer goods.[46]

The crux of the present right to repair debate is how much information and access an OEM should provide to facilitate the repair of a vehicle and under what terms. A key area of focus is third-party access to telematics data, which is the capability for an OEM or a third party to remotely diagnose and update a vehicle's software.

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[39] Resetting the Corporate Average Fuel Economy Program, 90 Fed. Reg. 24518 (Jun. 11, 2025) (to be codified at 49 C.F.R. Parts 531, 533, and 535).
[40] *See* H.R. 1, 119th Cong. (2025).
[41] Budget Reconciliation Title Section-by-Section, U.S. Senate Comm. On Com., Sci., and Transpo., https://www.commerce.senate.gov/services/files/2E6BB212-533C-43AF-982C-26D375B4A746 (last visited Jun. 16, 2025).
[42] Rebeca Falconer & Ben German, *Trump signs bill blocking California gas car ban plan*, AXIOS (Jun. 12, 2025), https://www.axios.com/2025/06/13/trump-california-gas-car-ban-block.
[43] CalMatters Staff, *California sues Trump for blocking its clean-air rules for cars, trucks — and vows to set new mandates*, CALMATTERS (Jun. 12, 2025), https://calmatters.org/environment/2025/06/california-sues-trump-blocking-clean-air-rules-cars/.
[44] DANA A. SCHERER, CONG. RSCH, SERV., R48131, ACCESS TO MOTOR VEHICLE SOFTWARE AND DATA (2024) (CRS Report).
[45] Matt Hill, *Car Parts and What They Do: A Guide to What's Under the Hood*, THE EXTRA MILE (Jan. 8, 2025), https://cluballiance.aaa.com/the-extra-mile/advice/car/car-parts-and-what-they-do.
[46] *See* CRS Report at 3.

The right to repair issues cross several different policy areas including safety, competition, consumer protection, and intellectual property. NHTSA regulates aspects of the motor vehicle aftermarket given its broad authority over motor vehicle safety. In 2021, the Federal Trade Commission (FTC) issued a Policy Statement on right to repair concluding it will focus more enforcement resources on unlawful repair restrictions based on the FTC's authorities on consumer protection, competition, and warranties.[47] Access to vehicle software raises significant copyright questions, and stakeholders have petitioned the U.S. Copyright Office to take action to facilitate access to vehicle software.[48]

IX. KEY QUESTIONS

- How is NHTSA fulfilling its mission to improve motor vehicle safety? What can Congress be doing to help NHTSA fulfill its mission?
- What steps should Congress take to modernize NHTSA and key programs such as NCAP?
- What are the national and economic security implications of China leading in the deployment and development of AVs?
- What societal and economic benefits result from a national comprehensive framework for AV deployment? What can Congress and NHTSA do to reduce barriers to AV deployment to achieve these benefits?
- What is NHTSA's appropriate role in regulating motor vehicle emissions?

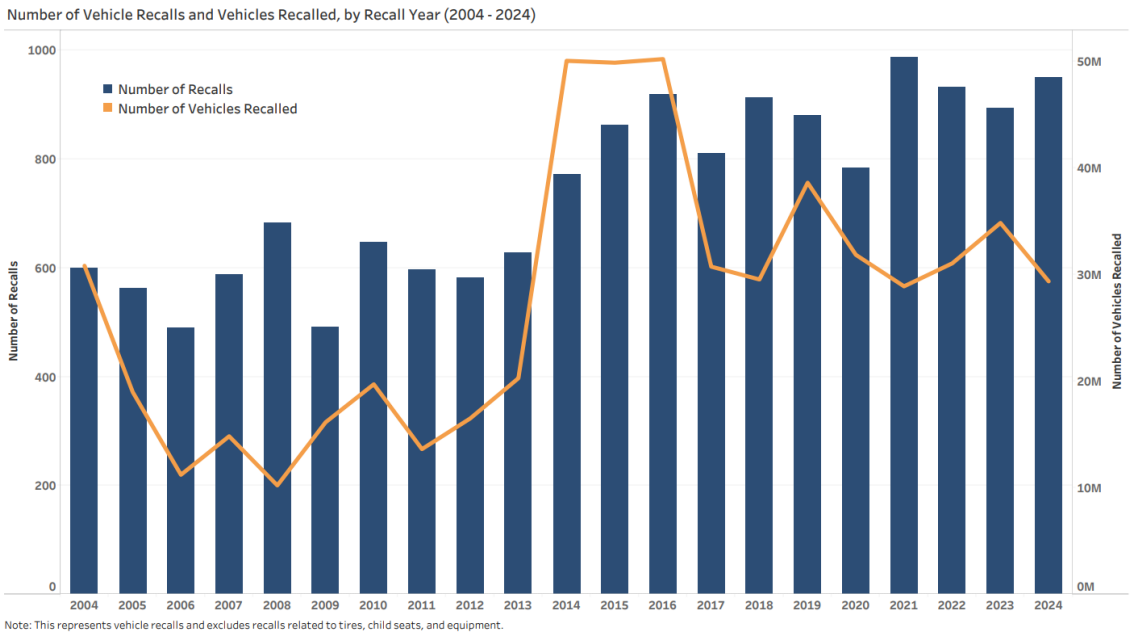
X. STAFF CONTACTS

If you have any questions regarding this hearing, please contact Giulia Leganski, Matt Furlow, or Alex Khlopin of the Committee Staff at (202) 225-3641.

[47] FED. TRADE COMM., POLICY STATEMENT ON REPAIR RESTRICTIONS IMPOSED BY MANUFACTURERS AND SELLERS (2021).
[48] *See* CRS report at 17.

APPENDIX

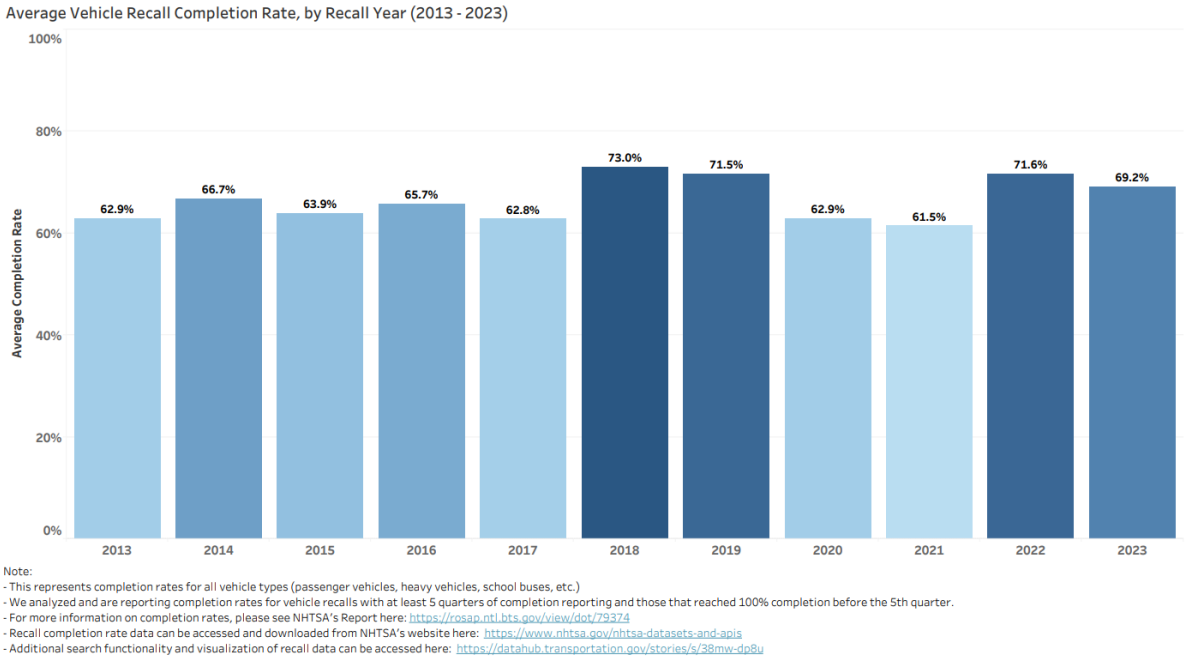
Figure 1



[49]

[49] NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., U.S. DEPT. OF TRANSPO, NHTSA 2024 ANNUAL REPORT SAFETY RECALLS (2025).

Figure 2



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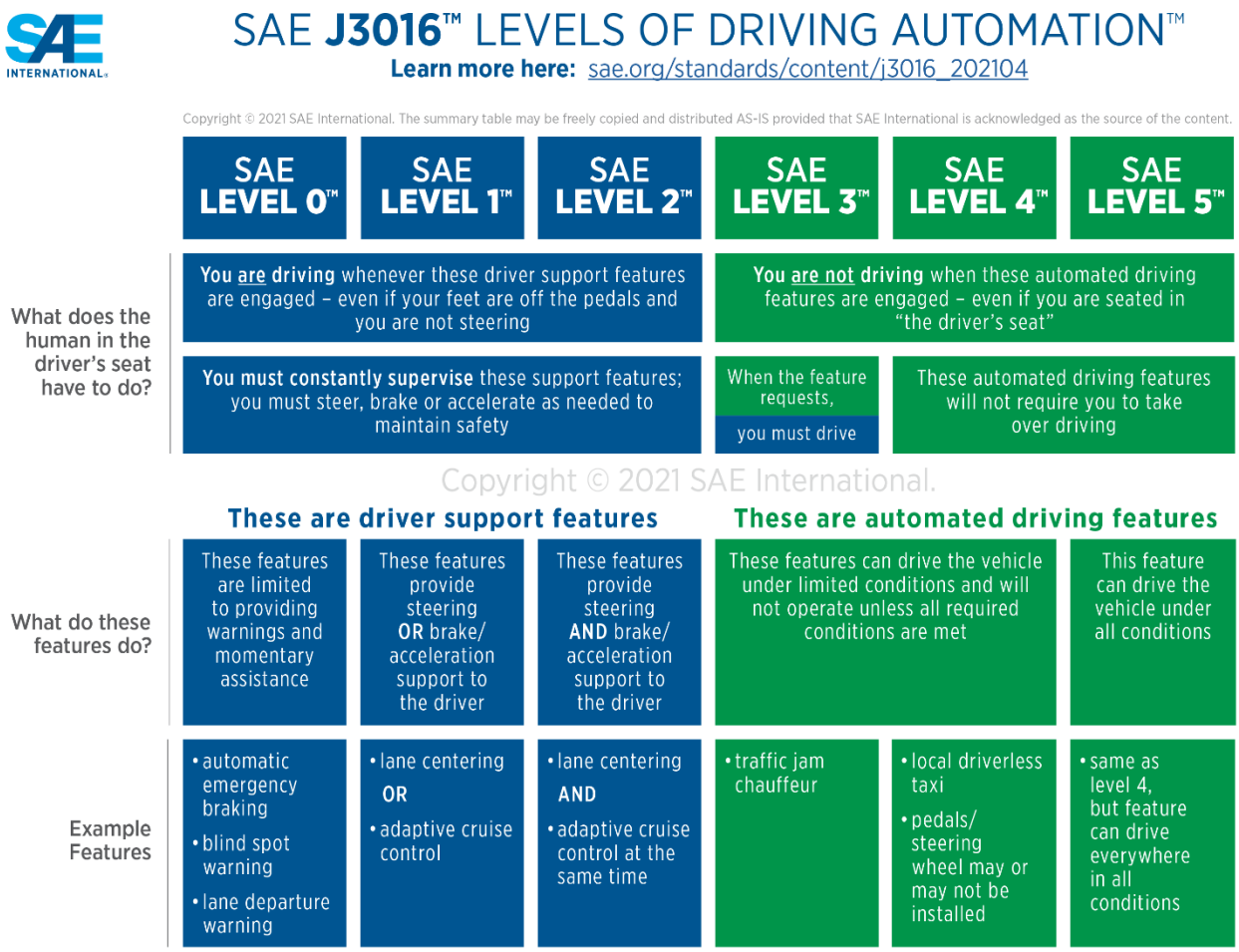
[50] *Id*.

Figure 3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SAE LEVEL 0™
SAE LEVEL 1™
SAE LEVEL 2™
SAE LEVEL 3™
SAE LEVEL 4™
SAE LEVEL 5™
What does the human in the driver's seat have to do?
You are driving whenever these driver support features are engaged – even if your feet are off the pedals and you are not steering
You are not driving when these automated driving features are engaged – even if you are seated in "the driver's seat"
You must constantly supervise these support features; you must steer, brake or accelerate as needed to maintain safety
When the feature requests, you must drive
These automated driving features will not require you to take over driving
Copyright © 2021 SAE International.
These are driver support features
These are automated driving features
What do these features do?
These features are limited to providing warnings and momentary assistance
These features provide steering OR brake/ acceleration support to the driver
These features provide steering AND brake/ acceleration support to the driver
These features can drive the vehicle under limited conditions and will not operate unless all required conditions are met
This feature can drive the vehicle under all conditions
Example Features
• automatic emergency braking
• blind spot warning
• lane departure warning
• lane centering OR
• adaptive cruise control
• lane centering AND
• adaptive cruise control at the same time
• traffic jam chauffeur
• local driverless taxi
• pedals/ steering wheel may or may not be installed
• same as level 4, but feature can drive everywhere in all conditions