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DOT Amends Safety Standards to Account for Autonomous Vehicles

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The rule amends the Federal Motor Vehicle Safety Standards (FMVSS) on occupant protection, changing terminology to reflect the spatial layout of autonomous vehicles (AVs), which come equipped with Automated Driving Systems (ADS),[2] and changing the standards to maintain the level of safety provided to occupants in traditional vehicles.

This rule becomes effective September 26, 2022 (early compliance is optional). NHTSA will receive petitions for reconsideration on or before May 16, 2022.

Background

This rule builds on NHTSA's previous efforts to ensure public safety as driving automation evolves, while at the same time encouraging innovation. Last year, NHTSA issued an order requiring AV operators and manufacturers to report crashes to the agency, while in 2020 it launched an AV testing initiative that allows states and companies to submit information about AV testing that can be viewed by the public. The final rule is mostly unchanged from the Notice of Proposed Rulemaking issued by the NHTSA nearly two years ago, from which it solicited input from industry experts along with vehicle manufacturers and technology companies such as General Motors, Tesla, Waymo and others.[3]

New Terminology

The rule makes changes to FMVSS terminology written for traditionally designed vehicles in order to avoid ambiguity and unnecessary terminology. Terms like "driver's seat," "passenger seat" or "steering wheel" do not make sense to use as spatial references for purpose-built AVs that come without these features.[4] For example, companies like Cruise and Zoox are building

driverless AVs designed for ride-sharing that lack many features of traditional interiors. Some of the rule's most significant changes in terminology include:

- Changed "steering wheel" to "steering control."[5]
- "Passenger seating position" changed to include what would have been the driver's seat prior to stowing manual driving controls.[6]
- Clarification of "outboard seating position."[7]
- Added new definitions for "driver air bag" and "driver dummy."[8]

For AVs that can be operated by either an ADS or a steering control, such as those built by Waymo and Motional, the NHTSA terms them "dual-mode vehicles" and clarifies how the FMVSSs apply to them (see below).[9]

New Requirements

The final rule also amends requirements for manufacturers resulting from the terminology revisions in order to maintain the same level of safety provided to occupants of traditional vehicles. This includes "the treatment of advanced air bags and advanced air bag suppression telltales in ADS-equipped vehicles, lockability requirements, and changes to...seat belt requirements for medium-sized buses and large school buses following the removal of the term 'driver.'"[10] New requirements include:

- Using "front row" as a spatial reference instead of "driver's seat."[11]
- Using "outboard seats" as a spatial reference for placement of test dummies.[12]
- "Dual-mode certification" requiring dual mode vehicles to comply with applicable FMVSSs in both modes.[13]

In cases where AVs are manufactured to transport goods instead of people, such as the AVs made by Nuro, the rule tailors the FMVSSs to exclude those vehicles, ruling that the original safety need does not exist when there are no occupants to protect.[14]

The rule also contemplates how the design of AVs changes safety considerations. For example, since there is no need for conventional driver's side airbags in AV front passenger seats, the rule requires advanced air bags for all front outboard seats, because "applying advanced air bag requirements to all front outboard seating positions maintains the current levels of safety for ADS-equipped vehicles without manually operated driving

controls."[15] Some AV manufacturers are taking this a step further, using the nature of AVs to build new additional safety measures. Zoox, for example, has built an entirely new style of ceiling-deployed air bag for its vehicle, and has designed a system of sensors to ensure proper seat belt usage. While these new features are not covered, AV manufacturers can still look to the rule for guidance in the design and manufacture of future AV features.

Other New Developments

This rule is not the only new agency action on AVs. DOT released a request for public comments in connection with the Non-Traditional and Emerging Transportation Technology (NETT) Council, an internal DOT body tasked with identifying and resolving jurisdictional and regulatory gaps that hinder the deployment of emerging technology such as AVs, hyperloop and other innovations.[16] DOT is looking for input on the specific types of projects, topics and issues the NETT Council should consider. The comment period ends on April 8, 2022.

While NHTSA has taken steps to regulate safety of autonomous vehicles within its current authority, Congress has been unable to pass legislation addressing the many complicated issues regarding deployment of AVs. As a result, AVs have been subject to a patchwork of state laws. On February 2, the House of Representatives Committee on Transportation and Infrastructure held a hearing titled "The Road Ahead for Automated Vehicles," where industry experts voiced a need to increase consumer trust in AVs, while calling for a new national framework to facilitate safe AV deployment. Later that same month, the California Public Utilities Commission (CPUC) issued its first "Drivered Deployment" permits to Waymo and Cruise, allowing those companies to offer AV rides on select roads. "Drivered" is the term CPUC uses to refer to AVs with safety drivers, as opposed to "driverless" AVs without safety drivers.[17] The Infrastructure Investment and Jobs Act passed last year also contains provisions affecting AVs, including the Strengthening Mobility and Revolutionizing Technology (SMART) grant program, which provides funds for "automated transportation and autonomous vehicles."[18]

Conclusion

This final rule has turned a significant new page for this rapidly evolving industry. Manufacturers of AVs and related equipment should start familiarizing themselves with the rule's new definitions and requirements immediately. AV innovation is making progress carving out a regulatory space, and the participating companies will likely have many more future

opportunities for engagement with federal and state lawmakers and agencies on the key issues.

Please contact a member of Akin Gump's transportation or cybersecurity, privacy and data protection teams if you have any questions about how this rule may impact your company.

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[1] 49 C.F.R. § 571 (2022), available at https://www.govinfo.gov/content/pkg/FR-2022-03-30/pdf/2022-05426.pdf.

[2] This includes both fully automated or "self-driving" vehicles where no driver is required and vehicles with more limited automated driving functions. SAE Int'l, *International Taxonomy and Definitions for Terms Related to Driving Automation Systems for On-Road Motor Vehicles*, J3016 (April, 30 2021), available at https://www.sae.org/standards/content/j3016_202104.

[3] 49 C.F.R. § 571 at 18568-69.

[4] *Id*. at 18566.

[5] *Id*. at 18569.

[6] *Id*.

[7] *Id*. at 18569.

[8] *Id*.

[9] *Id*. at 18561-62.

[10] *Id*. at 18566.

[11] *Id*. at 18569.

[12] *Id*. at 18570.

[13] *Id*. at 18571, "both modes" referring both to the mode where manual controls are available and the mode where the controls are stowed.

[14] *Id*. at 18566.

[15] *Id*. at 18575. "Advanced air bags" provide the benefit of protection of out-of-position occupants instead of conventional air bags designed to protect a driver. According to the rule this configuration will provide the same protection to the occupant whether they sit in the left of right front outboard seat.

[16] Dept. of Transp., *Non-Traditional and Emerging Transportation Technology (NETT) Council; Request for Comment*, 87 FR 13368 (March 9, 2022), available at https://www.federalregister.gov/documents/2022/03/09/2022-04728/non-traditional-and-emerging-transportation-technology-nett-council-request-for-comment.

[17] Ca. Public Utilities Comm'n, *CPUC Issues First Autonomous Vehicle Drivered Deployment Permits*, Press Release (February 28, 2022), available at https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M455/K694/455694131.PDF.

[18] P.L. 117-58 (2021).

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