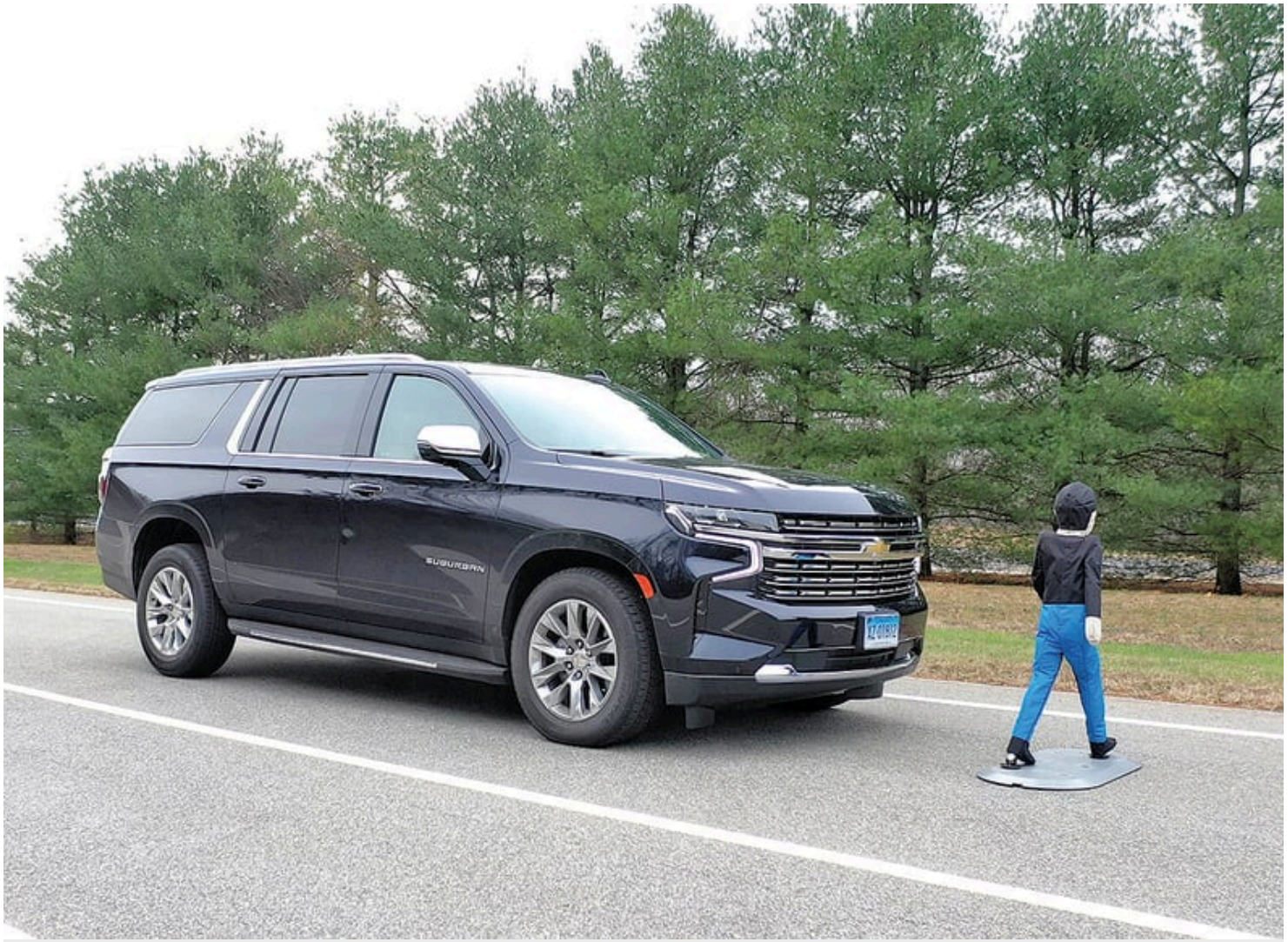
Automakers say new automatic emergency braking standard will cause more false positives

Government officials have criticized NHTSA for failing to keep up with driver-assistance technology, but it must also attempt to issue regulations for a lifesaving system that is still in its relatively early days.

August 23, 2024 09:20 AM | UPDATED 16 HOURS AGO

MOLLY BOIGON



CONSUMER REPORTS

NHTSA estimates 362 lives are saved in the U.S. each year by automatic emergency braking systems.

As NHTSA investigates false activations of automatic emergency braking systems, automakers and industry groups say the agency's new standard

will make those episodes more frequent.

The Alliance for Automotive Innovation, Honda, Nissan, Stellantis, Volkswagen, Specialty Equipment Market Association, Motor and Equipment Manufacturers Association and Bosch say that NHTSA is too strict in its rulemaking that mandates automatic emergency braking in all new vehicles by September 2029. They say higher test speeds and stringent test requirements may not be feasible and will lead to mistaken activations of the system.

"We anticipate that the Final Rule's requirements will significantly impact incidents of false positives," the alliance said in its petition to reconsider aspects of the mandate. Meeting the standard "will induce new incremental rear-end collisions precipitated by vehicles following the rule-compliant [automatic emergency braking] vehicles that are not expecting the [automatic emergency braking] vehicle to brake in certain conditions."

The disquiet over NHTSA's final rule highlights an uncomfortable situation for the agency. Advocacy groups and a government watchdog have criticized NHTSA for failing to keep up with technology, leaving automakers without standard terminology and consumers in the dark. It also must attempt to issue regulations for a lifesaving system that is still in its relatively early days, with underlying algorithms and sensor capabilities that change frequently.

Automakers have mostly successfully created a game-changing technology, though it is occasionally plagued by inaccuracies and bad commands. They must sort out how much of this discomfort is necessary and how much presents a disqualifying threat. To make systems better, they will likely have

to invest in expensive sensors that will only drop in price when produced at scale.

"Consumers will have to understand that we're moving forward with a new technology that is not perfect, and the driving environment is extremely complex, and the automakers are going to have to get comfortable with pushing that envelope a little bit more," said Greg Brannon, director of automotive engineering at AAA.

RELATED ARTICLES

AEB 'phantom braking' causes crashes, recalls

Inadequate sensors and decision-making at the root of false activations

NHTSA upgrades probe into braking issues in 3 million Honda vehicles; 50 injuries reported

Voluntary standard

The industry has long recognized the importance of automatic emergency braking.

In 2016, NHTSA and the Insurance Institute for Highway Safety announced that 20 manufacturers, comprising more than 99 percent of the American light-vehicle market, would include low-speed **automatic emergency braking** as a standard feature by September 2022.

About 90 percent of new light vehicles manufactured in 2022 in the U.S. had the feature.

But the voluntary standard has had its limits. Test speeds for NHTSA's New Car Assessment Program max out at 25 mph, but the majority of crashes resulting in fatalities, injuries and property damage happen at higher speeds.

Pedestrian fatalities also are increasing. The agency hopes to address that with the new standard.

The outcry

NHTSA wants brakes to trigger at speeds above 6.2 mph when a collision with another vehicle or pedestrian is imminent. The upper limit of the requirement is 90.1 mph for forward-collision warning and automatic emergency braking for another vehicle, and 45.4 mph for automatic emergency braking for a pedestrian.

Vehicles in test scenarios must not have contact with the lead vehicle when traveling at speeds up to 62.2 mph, and they must also pass a test scenario requiring the vehicle to brake for a pedestrian who appears suddenly.

Stakeholders who have criticized the new rule say it is not practicable and will lead to more false activations.

"Increases in relative speed may increase the likelihood for false positives, or perceived false positives, due to the requirements driving the need for earlier prediction and intervention," the alliance said in its petition.

Honda and Bosch, according to NHTSA, also "had concerns about requiring no contact when testing at higher speeds as current [automatic emergency braking] systems sensor range makes it difficult for the system to discern objects far enough to achieve no contact and mitigate false positives."

Bosch spokesperson Tim Wieland said in an email that the company supports the rulemaking but has expressed reservations about the feasibility of the no-contact stipulation for avoiding pedestrians.

Others, however, support the more rigorous standard. The Insurance Institute for Highway Safety encouraged NHTSA to make the standard effective sooner than 2029, and AAA, Advocates for Highway and Auto Safety, and sensor manufacturers Adasky and Luminar supported the no-contact requirement.

Plus, the final rule has a false activation test. Vehicles must be able to drive over a steel trench plate and drive between two parked vehicles without a false activation.

That is the best the agency can do for now, said Michael Brooks, executive director at the Center for Auto Safety.

"With newer technology, it's going to be very difficult for NHTSA to determine exactly what conditions that technology fails under until it's actually out on the road and they have data," he said.

Consumer miseducation

Meanwhile, automakers, advocacy groups and government agencies agree that NHTSA has struggled to regulate this new technology.

It has had its hands full with what Brooks said was a disproportionate focus on higher levels of autonomy, including robotaxis, which have limited deployment compared with automatic emergency braking.

"It makes me wonder why a lot of those higher-level efforts aren't suspended in favor of focusing on really proven technology that can enhance safety, like automatic emergency braking," Brooks said. Why are we "not ensuring that some of the lower-level features are working really well before we get to" higher levels?

The agency began telling consumers whether manufacturers' vehicles had automatic emergency braking that met NHTSA's performance criteria starting with the 2018 model year. But that program includes no ranking or evaluation beyond an indication that the system meets the minimum requirements.

NHTSA published a draft road map in 2022 that included plans to compare advanced driver-assist features such as automatic emergency braking across manufacturers, but the Government Accountability Office said in March that "NHTSA has not finalized its road map and has missed time frames even though work on these upgrades started years ago."

"NHTSA is by design a more reactive agency," said Andrew Von Ah, a director in the Government Accountability Office's physical infrastructure team. "When you're innovating and you have a lot of emerging technologies … you're going to have a regulator who's a little behind the eight ball."

The agency said in an email that in addition to the rulemaking, it has established two new organizational units dedicated to emerging vehicle technologies, launched a standing general order for crash reporting, conducted 12 investigations into automatic emergency braking since 2014 with seven currently open and issued 28 recalls involving forward collision avoidance since 2014.

Consumers also generally misunderstand driver-assistance technologies, said David Kidd, a senior research scientist at the Insurance Institute for Highway Safety. Dealers fail to explain the technology well, commercials mislead drivers and terminology is confusing.

AAA, for example, found in 2019 that 34 vehicle brands used 40 unique names for automatic emergency braking, and the organization was still imploring the industry to adopt standard terminology in 2022.

RECOMMENDED FOR YOU

Daily 5 report for Aug. 23: The conundrum of automotive safety technologies

AEB ‘phantom braking’ causes crashes, recalls

Inadequate sensors and decision-making at the root of false activations

Sponsored Content: Unleashing the power of AI: How auto dealers can maximize revenue and efficiency

Sponsored Content: It starts with my mindset

Automotive News
A CRAIN FAMILY BRAND

CONTACT US

1155 Gratiot Avenue
Detroit, Michigan
48207-2997

(877) 812-1584

Email us

Automotive News
ISSN 0005-1551 (print)
ISSN 1557-7686 (online)

RESOURCES

About us

Contact Us

Help Center

Media Kit

Subscribe

Manage your account

Reprints

Feedback