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Many SUVs struggle in first IIHS seat belt reminder evaluations

ARLINGTON, Va. — A new ratings program from the Insurance Institute for Highway Safety aims to push manufacturers to improve their seat belt reminders in order to save as many as 1,500 lives a year.

“By now everybody knows that seat belts save lives when they are used,” says IIHS President David Harkey. “Our research shows that effective seat belt reminders can also save lives by getting those who aren’t diligent about belt use to buckle up. These new ratings are designed to push manufacturers to realize that potential.”

Federal standards specify that seat belt reminders must include an audible signal that lasts for 4-8 seconds total and a visual alert that lasts at least 60 seconds whenever the driver’s seat belt is unbuckled. However, [previous IIHS research](#) has shown that more noticeable and persistent alerts could increase belt use among those who do not routinely buckle up by as much as 34 percent, preventing an estimated 1,500 fatalities a year.

“Most Americans use their seat belts, especially in the front seat. But the small number who don’t translates into a lot of fatalities,” says Harkey. “Almost half of the drivers and front seat passengers killed in crashes in 2019 weren’t belted.”

Much of the time, they simply forget. The earlier IIHS study, which involved about 50 part-time belt users who had recently received a seat belt citation, found that a persistent reminder was much more effective at getting these drivers to buckle up than a minimal reminder and just as effective as a speed-limiting interlock that kept their speed under 15 mph unless they were buckled in.

Mission: impossible to ignore

Climb into the Honda HR-V, which earns a poor rating in the new IIHS seat belt reminder evaluation, and begin driving without fastening the seat belt. A red icon flashes on the instrument panel, and an intermittent chime sounds. The alert, barely audible above the ambient cabin noise, lasts a mere five seconds, then ceases. Around 25 seconds later, the chime sounds for another five seconds. This five-seconds-on, 25-seconds-off sequence continues for the full two-minute evaluation. The red icon remains illuminated.

Now start the good-rated Subaru Forester. The chime seems twice as loud. The standard red seat belt icon appears on the instrument panel, along with another one that indicates that the second-row seat belts are not fastened. The reminder tone does not stop chirping until the driver is buckled in.

“The gold standard is an alert that’s impossible to ignore,” says IIHS Senior Test Coordinator Sean O’Malley, who conducted the evaluations.

To encourage manufacturers to adopt more effective and consistent standards, the new IIHS protocol rates seat belt reminders as good, acceptable, marginal or poor, based primarily on the volume, duration and timing of the audible alert.

To earn a good rating, a seat belt reminder system must generate an audible signal and visual alert on the dashboard display, overhead panel or center console when the vehicle is moving at least 6 mph and the system detects an unbelted occupant in one of the front-row seating positions or the unfastening of a second-row belt that was previously buckled.

Along with other specifications, the audible alert must be loud enough to be heard over the background noise in the vehicle cabin. If the seat belt of an occupied front-row seat remains unbuckled, the visual and audible reminders must last at least 90 seconds. If a previously fastened second-row belt is unbuckled, the reminders must last at least 30 seconds. A visual indicator that appears when the driver starts the vehicle is also required for the second row.

Vehicles that meet all the requirements for the front row but miss any or all of the requirements for the second row earn an acceptable rating. Vehicles that miss any or all of the front row requirements but include an audible alert that is eight seconds or longer for both the driver and front seat passenger earn a marginal rating. Vehicles with reminders that are shorter than eight seconds earn a poor rating, whether or not they meet any of the other criteria.

How they fared

Most of the first batch of small and midsize SUVs evaluated for seat belt reminders fail to earn a good or acceptable rating.

Among the 26 vehicles tested, only two Subaru models, the Forester and Ascent, earn a good rating. Five others, the Hyundai Palisade, Hyundai Tucson, Nissan Pathfinder, Nissan Rogue and Nissan Murano, earn acceptable ratings.

Seven more are rated marginal: The Jeep Compass, Jeep Renegade, Jeep Wrangler, Mazda CX-5, Mazda CX-9, Toyota RAV4 and Toyota Highlander.

Twelve others receive a poor rating: The Audi Q3, Buick Encore, Chevrolet Equinox, Chevrolet Traverse, Ford Escape, Ford Explorer, Honda CR-V, Honda HR-V, Honda Pilot, Mitsubishi Eclipse Cross, Volvo XC40 and Volkswagen Atlas.

All 26 SUVs meet the IIHS standard for the pitch, or audio frequency, of the audible alert, but various other issues bring down scores.

Eleven of the 12 poor-rated vehicles fall short of the duration or sound level requirements, with audible alerts that are as short as five seconds and as little as 1 decibel louder than the ambient engine and road noise at one or more of the test speeds. The other poor-rated vehicle, the Mitsubishi Eclipse Cross, meets the sound requirements but only for the driver; for the front passenger there is no audible alert when the belt is unbuckled, just a visual icon.

Four of the seven marginal performers meet the sound level and duration requirements but miss out on an acceptable rating for other reasons, such as an audible alert that does not start soon enough. The others have reminders that are not loud enough at one or both of the test speeds.

Of the five acceptable vehicles, the Tucson and Murano do not have seat belt reminders for the second row. The Rogue's second-row reminder is too short, the Palisade's does not provide information about belt use at ignition, and the Pathfinder's is shorter than the required 60-second duration.

The only good-rated vehicles, the Ascent and Forester, feature audible alerts that the human ear perceives as about 4 times louder than the ambient vehicle noise at both test speeds. These alerts do not end until the offending belt is fastened, and they meet all the other requirements for both front and rear reminders.

Some simple software adjustments could probably lift all of the marginal and some of the poor performers to an acceptable rating.

“Most of these problems don’t require new hardware,” O’Malley says. “Even among the vehicles that earn poor ratings, it’s possible that simply lengthening the duration of the audible alert could do the trick.”

Seat belt reminder ratings for small and midsize SUVs

	Rating	2nd row reminder	
		Available?	Meets IIHS requirements?
2022 Subaru Ascent	G	✓	✓
2021-22 Subaru Forester	G	✓	✓
2021-22 Hyundai Palisade	A	✓	✗
2022 Hyundai Tucson	A	✗	✗
2021-22 Nissan Murano	A	✗	✗
2022 Nissan Pathfinder	A	✓	✗
2021-22 Nissan Rogue	A	✓	✗
2021-22 Jeep Compass	M	✗	✗
2021-22 Jeep Renegade	M	✗	✗
2022 Jeep Wrangler (hard top)	M	✗	✗
2021-22 Mazda CX-5	M	✓	✓
2021-22 Mazda CX-9	M	✓	✓
2022 Toyota Highlander	M	✓	✗
2021-22 Toyota RAV4	M	✓	✗
2021-22 Audi Q3	P	✗	✗
2021-22 Buick Encore	P	✗	✗
2021-22 Chevrolet Equinox	P	✗	✗
2021-22 Chevrolet Traverse	P	✗	✗
2021-22 Ford Escape	P	✓	✗
2022 Ford Explorer	P	✓	✗
2021-22 Honda CR-V	P	✗	✗
2021-22 Honda HR-V	P	✗	✗
2022 Honda Pilot	P	✗	✗
2022 Mitsubishi Eclipse Cross	P	✗	✗
2021-22 Volvo XC40	P	✓	✗
2021-22 Volkswagen Atlas	P	✗	✗

G Good **A** Acceptable **M** Marginal **P** Poor

For more information, go to [iihs.org](https://www.iihs.org)

The Insurance Institute for Highway Safety (IIHS) is an independent, nonprofit scientific and educational organization dedicated to reducing deaths, injuries and property damage from motor vehicle crashes through research and evaluation and through education of consumers, policymakers and safety professionals. IIHS is wholly supported by auto insurers.