

Comment from Anonymous

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(Part 1/2)

The proposals outlined for the New Car Assessment Program (NCAP) for emerging advanced driver assistance systems (ADAS) are a welcome development that will help foster the adoption of new safety systems by both consumers and manufacturers.

Before commenting on the specific questions outlined within NHTSA-2021-0002-0001, I believe it is important to highlight that the proposed changes to NCAP for ADAS do not appear to consider simple mechanisms for improving safety. One such mechanism for reducing rear impacts is not advanced and has been effectively implemented by every manufacturer for international markets. That mechanism is rear amber turn indicators. NHTSA's own research from 2009 (<https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/811115>) found that "amber signals show a 5.3% effectiveness in reducing involvement in two-vehicle crashes where a lead vehicle is rear-struck in the act of turning left, turning right, merging into traffic, changing lanes, or entering/leaving a parking space. The advantage of amber rear turn signals is shown to be statistically significant." A Road and Track article from 2020 (<https://www.roadandtrack.com/new-cars/car-technology/a32718015/turn-signal-dangers-july-2020/>) brought up an excellent point by stating, "By comparison, the third brake light mandated in 1986 reduces rear-end collisions by just 4.3 percent. That means switching the color of a turn signal's bulb is 25 percent more effective than adding an entire additional brake light." An Institute for (IIHS) status report from 2016 (<https://www.iihs.org/api/datastoredocument/status-report/pdf/51/3>) indicated that amber rear turn indicators were proposed to be a part of NCAP rating; however, it does not appear that such a change was carried forward to the latest proposal.

I strongly implore NHTSA to include amber rear turn indicators in NCAP's safety ratings due to the demonstrated safety benefit. Amber rear turn indicators are required by law in nearly every international market (due to UN ECE) and yet manufacturers continue to introduce vehicles in the United States that leverage red rear turn indicators. Automotive lighting should continue to leverage new technological advancements to improve safety rather than leveraging historical exemptions that enable manufacturers to prioritize visual aesthetic over safety.

In addition to including amber rear turn indicators in NCAP, NHTSA should look toward harmonizing automotive lighting regulations with UN ECE in order to enable manufacturers to design lighting assemblies that meet both FMVSS and UN ECE regulations. The efficacy of signaling mechanisms such as LED sequential (dynamic) rear turn indicators should also be studied; if there is a benefit, or there is no adverse effect, then sequential turn indicators should be permitted as closely to UN ECE regulations as possible rather than following the existing FMVSS regulations that factored in incandescent illumination. If there is a significant benefit, the Agency may wish to consider the technology as part of a future revision to NCAP. FMVSS should continue to evolve with time rather than serve as an impediment to progress.

To address a selection of questions that NHTSA posed:

(1) Yes, the Agency should award credit to vehicles equipped with LDW systems that provide a passing alert, regardless of the alert type. Manufacturers continue to respond to consumer preference and have implemented unique methods for alerting drivers: haptic feedback, heads up displays, etc. The caveat that I believe the Agency should apply to these systems is that if the alert mechanism is visual only, the alert should be directly visible (in the driver's line of sight) without requiring the driver to look down to notice the indicator (e.g., heads up display, instrument cluster that is fairly high on the dashboard, etc.). Credit can be awarded for a visual indicator that is not immediately visible if a separate alert mechanism is provided (e.g., auditory).

(4) Yes. If California removes the lane marking type, and it is not used elsewhere, there is no reason to maintain the test scenario.

(8) Yes. There are many roads that do not have markings (or the markings have faded).