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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 575

Docket No. NHTSA-2013-0076

New Car Assessment Program (NCAP)

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Request for comments.

SUMMARY: This document requests public comment on the agency's planned update to the U.S. New Car Assessment Program (NCAP). This update would enhance the program's ability to recommend to motor vehicle consumers various vehicle models that contain rearview video systems that would substantially enhance the driver's ability to avoid backover crashes. For many years, NCAP has provided comparative information on the safety of new vehicles to assist consumers with vehicle purchasing decisions. NCAP was most recently upgraded for model year 2011 to include recommended crash avoidance technologies. Including this information in NCAP not only allows consumers to better determine which vehicle models have advanced crash avoidance safety features but also which of these advanced features are best able to help them avoid crashes.

DATES: You should submit your comments early enough to ensure that Docket Management receives them no later than **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Comments should refer to the docket number above and be submitted by one of the following methods:

- Federal Rulemaking Portal: <http://www.regulations.gov>. Follow the online instructions for submitting comments.
- Mail: Docket Management Facility, U.S. Department of Transportation, 1200 New Jersey Avenue, S.E., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.
- Hand Delivery: 1200 New Jersey Avenue, S.E., West Building Ground Floor, Room W12-140, Washington, DC, between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal Holidays.
- *Instructions:* For detailed instructions on submitting comments and additional information on the rulemaking process, see the Public Participation heading of the SUPPLEMENTARY INFORMATION section of this document. Note that all comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided.
- *Privacy Act:* Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78). For access to the docket to read background documents or comments received, go to <http://www.regulations.gov> or the street address listed above.

Follow the online instructions for accessing the dockets.

FOR FURTHER INFORMATION CONTACT:

For technical issues: Mr. Markus Price, Office of Vehicle Rulemaking, Telephone: 202-366-1810, Facsimile: 202-366-5930, NVS-121.

For NCAP logistics: Mr. Clarke Harper, Office of Crash Avoidance Standards, Telephone: 202-366-1810, Facsimile: 202-366-5930, NVS-120.

The mailing address for these officials is: National Highway Traffic Safety Administration, 1200 New Jersey Avenue, S.E., Washington, DC 20590.

SUPPLEMENTARY INFORMATION:

This document requests comment on the agency's plan to upgrade the U.S. New Car Assessment Program (NCAP) to include recommendations to motor vehicle consumers on vehicle models that contain rearview video systems that can substantially enhance the driver's ability to avoid a backover crash. The plan substitutes the rearview video systems for electronic stability control (ESC) as a recommended crash avoidance technology on www.safercar.gov. As ESC is now required equipment on vehicles with a gross vehicle weight rating (GVWR) of 10,000 pounds or less, the agency believes that it is no longer necessary to include ESC as a recommended technology to consumers. NCAP provides comparative information on the safety performance and features of new vehicles to assist consumers with their vehicle purchasing decisions. The program was most recently upgraded for model year 2011 to include (among other changes) recommended crash avoidance technologies. By including rearview video systems as a recommended technology in NCAP, the agency believes that it can help educate consumers on the important safety benefits of these systems and support the provision of this important safety technology to the American public before the effective date (for all vehicles¹) of

¹ The proposal to amend FMVSS No. 111 covers all vehicles (except motorcycles and trailers) with a GVWR of 10,000 pounds or less. *See* 75 FR 76185.

any final rule resulting from the agency's current rulemaking to amend the requirements of Federal motor vehicle safety standard (FMVSS) No. 111.²

Planned Upgrade to NCAP is Separate from the Rulemaking to Amend FMVSS No. 111

Pursuant to the Cameron Gulbransen Kids Transportation Safety Act of 2007 ("K.T. Safety Act"),³ the agency is conducting a rulemaking to amend FMVSS No. 111.⁴ The agency would like to emphasize that any change to NCAP to encourage the installation of rearview video systems to assist drivers in avoiding backover crashes is separate from the agency's consideration of appropriate amendments to FMVSS No. 111. Any update to NCAP as a result of this request for comment is not a resolution to the rulemaking action to amend FMVSS No. 111, it does not replace the agency's efforts in that area, nor is it an alternative to completing the rulemaking process to amend FMVSS No. 111. However, the agency believes that it is appropriate to conduct this separate action to consider incorporating rearview video systems into NCAP.

The agency believes that there will be significant advantages in incorporating rearview video systems into NCAP at this point in time. In doing so, the agency believes that consumers will receive important information regarding the safety risks associated with backovers and the available vehicle models with an effective countermeasure that can assist the driver in avoiding backover crashes. As an added benefit, the agency believes that including rearview video systems in NCAP will afford manufacturers recognition for designing and installing these systems that can help drivers avoid backover crashes and incentivize further installation of these

² The current proposal to amend FMVSS No. 111 included a phase-in period covering three model years. *See* 75 FR 76185, 76188.

³ Pub. L. No. 110-189, Feb. 28, 2008.

⁴ *See generally* Docket No. NHTSA-2010-0162.

systems. By adding rearview video systems into NCAP at this time, the agency believes that the aforementioned advantages can be realized not only prior to the promulgation of a final rule to amend FMVSS No. 111 but also during any phase-in period following the final rule's promulgation.

Rearview Video Systems as a “Recommended Advanced Technology Feature”

Beyond issuing star ratings based on the crashworthiness of vehicle models, NCAP currently already offers additional information to consumers regarding “Recommended Advanced Technology Features” through its website (www.safercar.gov). For each vehicle make/model, the website currently shows (in addition to a list of safety features) the model's five-star crashworthiness ratings and whether the vehicle model is equipped with any of three advanced crash avoidance safety technologies that NHTSA currently recommends to consumers.⁵ The agency selected three advanced crash avoidance technologies to recommend to consumers starting in model year 2011 because those technologies (1) address a major crash problem, (2) have information to project their potential safety benefit, and (3) are able to be tested by available performance tests and procedures that can ensure an acceptable level of performance.⁶

At this point, the agency believes it is appropriate to include rearview video systems as opposed to ESC as a recommended crash avoidance technology on www.safercar.gov. While NCAP recommended ESC to consumers before ESC became required equipment on vehicles with a GVWR of 10,000 pounds or less, FMVSS No. 126 now requires ESC on all of those

⁵ The three technologies currently recommended to consumers on www.safercar.gov are: lane departure warning, forward collision warning, and electronic stability control.

⁶ See 73 FR 40016, 40033.

vehicles.⁷ For that reason, there is no reason to continue ESC as a “Recommended Advanced Technology Feature” in NCAP. Having considered the available information on rearview video systems, the agency believes that such systems that provide drivers visual access to the area directly behind their vehicles that are associated with the highest crash risk meet the aforementioned criteria for incorporation into NCAP. In other words, rearview video systems address a major safety problem (backover crashes), the available information strongly indicates that they are effective in assisting drivers at avoiding backover crashes, and performance/test criteria are available to ensure that such systems perform adequately to address the backover safety problem.

As evidenced by the decision by Congress to pass the K.T. Safety Act, backover crashes constitute a major safety problem. Backover crashes cause a significant number of fatalities and injuries each year because drivers cannot see the area behind the vehicle where pedestrians can be located. The currently available information indicates that vehicles with a GVWR of 10,000 lbs. or less alone are involved in approximately 202 fatalities and 14,000 injuries per year.⁸ Further, the research summarized in the NPRM to amend FMVSS No. 111 indicates that rearview video systems (which afford drivers a view of the area behind the vehicle) are effective in helping drivers avoid a backover crash. Thus, the agency believes that backover crashes are a

⁷ See 49 CFR Part 571.126, S8.4.

⁸ These figures differ from the NPRM to amend FMVSS No. 111 because these figures have been updated with the latest information on the backover crash problem. As backover crashes often do not occur on public roads a large portion of the available information on this crash problem comes from the “Not-in-Traffic Surveillance” or “NiTS” system. At the time of the NPRM, only 1 year of NiTS data was available. However, the database was most recently updated in October 2012 with additional years of data. Combined with the information from other NHTSA databases, the agency now estimates the target population to be approximately 202 fatalities and 14,000 injuries per year.

major safety problem that can be reduced through an increased proliferation of rearview video systems.

As the available information indicates that such systems meet the agency's criteria for incorporation into NCAP as a recommended advanced crash avoidance technology, the agency is issuing this document to request comment on this planned update to the program. The agency believes that, through NCAP, the agency can help educate motor vehicle consumers on the important safety benefits that can be realized through rearview video systems and help support the proliferation of this important safety technology.

We note that the agency is currently also considering other updates to NCAP. On April 5, 2013, the agency published a request for comment in the Federal Register on a large variety of potential updates to NCAP (including various crash avoidance and crashworthiness technologies such as automatic collision notification systems, automatic braking systems, improved test dummies, testing for rear seat occupants, etc.).⁹ While each technology being considered by NHTSA is at a different state of development, the agency believes that the available information on rearview video systems is such that the agency can quickly implement the relevant changes to NCAP to begin offering consumers important information about the backover safety problem and the available countermeasures. The agency believes that updating NCAP to include rearview video systems is an appropriate change that can be accomplished relatively quickly without any impact on the agency's plans to implement additional technologies that are under consideration in the April, 2013 request for comment.

⁹ See 78 FR 20597.

A Two-Phase Approach for Adding Rearview Video Systems to NCAP

In order to accomplish the goals outlined above as quickly as possible, the agency plans to use a two-phase approach to incorporate this change into NCAP. As described above, the agency provides information for each vehicle model on www.safercar.gov concerning the vehicle's five-star crashworthiness ratings, stating whether the vehicle model has a "Recommended Advanced Technology Feature," and listing the major safety features available on the vehicle model. By leveraging these different sections of the website, the agency believes it can quickly inform consumers of the availability of this important safety technology through the following two phases.

- Phase 1: The agency would immediately begin to list rearview video systems in the "safety feature" section for each vehicle model on www.safercar.gov that has this safety feature available.
- Phase 2: As soon as the agency is able to verify that the vehicle model has a rearview video system meeting certain basic criteria (as further discussed below) the agency would recognize those vehicle models as having a "Recommended Advanced Technology Feature" on the www.safercar.gov website.

The agency believes that this two-phase approach minimizes the amount of time that is needed for the agency to begin providing information in the short term. At the same time, the agency believes that this approach would maximize the usefulness of the information available to consumers in the long run. In order to recommend rearview video systems as a technology to consumers that can help drivers avoid backover crashes, the agency would establish certain basic criteria that these rearview video systems installed in participating vehicle models must meet.

Thus, under this approach, the agency would be able to begin providing information to consumers quickly under Phase 1 and follow up with additional information in Phase 2.¹⁰

We note that the advanced crash avoidance technologies that are currently recommended by NHTSA through NCAP (as “Recommended Advanced Technology Features”) are shown on www.safercar.gov and not included on the Monroney label.¹¹ Our plan to update NCAP to adopt rearview video systems as a recommended technology feature is, at least initially, likewise to show the technology on that website and not on the vehicle’s Monroney label. We are considering whether to incorporate additional advanced crash avoidance technologies into NCAP. When we have determined which additional technologies will be incorporated, we will consider whether we should initiate a rulemaking to determine whether and how the incorporated advanced technologies should be included on the Monroney label.

Basic Criteria for Recognizing a Model as Having a Recommended Rearview Video System

In order to recommend rearview video systems to the motor vehicle consumer, the agency would need to ensure that such systems are designed to address the backover safety problem (and not merely designed as a convenience feature aimed at assisting drivers in parking maneuvers). The agency believes that, due to the nature of NCAP as a consumer information program, the agency needs to ensure that the criteria for recommending a rearview video system to consumers appropriately distinguishes systems designed to assist drivers in avoiding backover

¹⁰ While the agency believes that this two-phase approach can bring information regarding these systems to the consumers as soon as possible, the agency’s planned approach would not require the completion of phase 1 before phase 2. In other words, if the agency is able to verify that the rearview video system installed on a vehicle model meets the aforementioned basic requirements the agency could list that vehicle model as having a “Recommended Advanced Technology Feature” immediately.

¹¹ The Monroney label is a label that is required to be affixed on a motor vehicle prior to the delivery of the vehicle to a dealer. *See* 15 U.S.C. § 1232. This label is required to show certain safety ratings from NCAP.

crashes and does not misrepresent the capabilities of systems designed to assist drivers conducting parking maneuvers. Towards this end, the agency believes that three basic criteria are necessary. To be designed for the purpose addressing the backover safety problem, the agency believes that the rearview video system (at a minimum) needs to:

- (1) show a visual image of a minimum area behind the vehicle that is associated with the greatest crash risk,
- (2) show this area at a sufficient size so as to enable the driver to make judgments about the objects behind the vehicle, and
- (3) show this area quickly enough to provide the driver with the relevant information before he/she begins the backing maneuver.

Thus, for purposes of incorporating rearview video systems into NCAP as a recommended technology, the agency would (in Phase 2) recommend to consumers vehicle models with rearview video systems that meet field of view, image size, and response time¹² criteria that were proposed in the agency's NPRM to amend FMVSS No. 111. We believe that adopting these criteria from the FMVSS No. 111 NPRM appropriately ensures that the systems recommended by NCAP will be designed for the purpose of avoiding backover crashes. Further, these criteria from the FMVSS No. 111 NPRM have been developed for the purpose of providing an objective method for determining whether a rearview video system can address the safety problem.

¹² As discussed below, NCAP would specify a test procedure to evaluate the response time criterion proposed in the NPRM.

Finally, the agency believes that these three criteria strike an appropriate balance between the agency's interest in recommending to consumers vehicles with systems that are designed to address a major safety problem (as opposed to assisting drivers in conducting parking maneuvers) and the agency's interest in avoiding the establishment of too many criteria that may discourage manufacturer participation in this aspect of NCAP.

Field of View and Image Size

The field of view and image size requirements from the FMVSS No. 111 NPRM are designed to ensure that rearview video systems afford drivers visual access to a 20-foot by 10-foot zone directly behind the vehicle. They further ensure that the image displayed to the driver is large enough to enable the driver to make judgments about the objects in the image and avoid a crash with those objects. The agency believes that these criteria apply to the most basic functions that the rearview video system needs to perform in order to address the backover safety problem. As discussed in the NPRM to amend FMVSS No. 111, we believe that the field of view criterion for a 20-foot by 10-foot zone¹³ directly behind the vehicle covers the areas behind the vehicle that are associated with the greatest backover crash risk.¹⁴ Further, the available research indicates that the image size criterion (that the test objects contained in the rearview image subtend to a visual angle of at least 5 minutes of arc¹⁵) will help ensure that drivers are

¹³ The NPRM to amend FMVSS No. 111 proposed testing the field of view requirement by placing 7 test objects along the perimeter of the 20-foot by 10-foot zone behind the vehicle. *See* 75 FR 76186, 76244. The first row of test objects is placed 1 foot behind the vehicle bumper, the second row is placed 10 feet behind the vehicle bumper, and the last row is placed 20 feet behind the vehicle bumper. The proposal required the entirety of each test object in the second and third rows to be visible in the rearview image and a minimum 150-mm wide portion of first row of objects be visible in order to accommodate the large variety of vehicles that have a GVWR of 10,000 lbs. or less. We plan to adopt this same testing methodology to assess conformity with the NCAP rearview video system criteria.

¹⁴ *See* 75 FR 76186, 76227.

¹⁵ The NPRM to amend FMVSS No. 111 proposed two requirements relating to image size. *See id.* First the horizontal width of the 3 test objects in the last row along the 20-foot by 10-foot zone subtend to an average visual

able to make judgments about the objects contained in the rearview image.¹⁶ By including these two criteria in our assessment of whether a particular vehicle model's rearview video system is listed as a "Recommended Advanced Technology Feature," the agency believes that rearview video systems that are recommended to consumers will be designed to reasonably assist drivers in avoiding backover crashes. The agency plans to utilize the test procedures proposed in the NPRM to evaluate conformity with these criteria for the purposes of NCAP.¹⁷

Response Time

In addition, the response time requirement from the NPRM to amend FMVSS No. 111 is designed to ensure that the rearview image (meeting the criteria above) is shown to the driver in a timely fashion. The agency believes that this requirement is especially important because, regardless of the quality of the image shown to the driver, if the image is not shown before a driver begins a backing maneuver, then it is unlikely that the rearview video system will be able to assist the driver in avoiding a backover crash. Thus, we plan to adopt the 2.0 second response time requirement from the proposal to amend FMVSS No. 111 as a criterion for rearview video systems in NCAP.¹⁸ As in the proposal to amend FMVSS No. 111, the agency plans to evaluate conformity with this criterion based on the time that the vehicle is shifted into reverse. In other words, the NCAP criterion would state that the rearview image must be displayed within 2.0 seconds after the vehicle transmission is shifted into reverse. As the agency explained in the

angle of 5 minutes of arc. Second, for each of those test objects, the subtended angle must not subtend to any angle less than 3 minutes of arc. We plan to continue to use this approach in evaluating conformity with the NCAP rearview video system criteria.

¹⁶ The available research cited in the NPRM to amend FMVSS No. 111 states that a driver can make judgments about an object if the object is shown at a subtended angle of 5 minutes of arc. *See* 75 FR 76186, 76229.

¹⁷ The agency plans to utilize the test procedure described in S14.1 of the proposed regulatory text in the NPRM to amend FMVSS No. 111. *See* 75 FR 76186, 76246.

¹⁸ *See* 75 FR 76186, 76245.

FMVSS No. 111 NPRM, we believe the 2.0-second limit is appropriate given the amount of time necessary for rearview video systems to conduct the necessary system checks and the activation times that are achievable by liquid crystal displays.¹⁹

However, in response to the proposal, the agency received various comments from vehicle manufacturers stating that (depending on the initialization process of the vehicle tested) the response time of the rearview image can be delayed significantly if the vehicle is shifted into reverse immediately after starting the engine. The manufacturers further suggested that the agency adopt a vehicle initialization test procedure to condition the vehicle prior to testing for the 2.0-second response time. The agency recognizes that, for assessing conformity with the NCAP criteria, it is important to establish the state of the vehicle prior to testing for response time. Thus, in order to address the manufacturers' concerns, we plan to include the following vehicle conditioning procedure when assessing conformity with the NCAP response time criterion.

Image response time test procedure. The temperature inside the vehicle during this test is any temperature between 15°C and 25°C. Immediately prior to commencing the actions listed in subparagraphs (a) – (c) of this paragraph, all components of the rearview video system are in a powered off state. Then:

- (a) open the driver's door,
- (b) activate the starting system using the key,²⁰ and
- (c) place the vehicle in reverse at any time not less than 4 seconds after the driver's door is opened.

Immediately after the vehicle is conditioned in accordance with the above procedure, the agency would select the reverse gear in the vehicle and measure the 2.0-second response time.

We believe that this conditioning procedure will provide additional certainty to manufacturers

¹⁹ See 75 FR 76186, 76230.

²⁰ The terms "starting system" and "key" have the same meanings that these terms have in FMVSS No. 114. See 49 CFR Part 571.114.

regarding the conditions under which the agency would assess conformity with the NCAP 2.0-second response time criterion. Further we believe that this method will still ensure that the rearview image is available to the driver at a time that is appropriate for a driver relying on it to avoid a backover crash. Our naturalistic driving data²¹ indicate that approximately 90% of the time drivers do not select the reverse gear to begin the backing maneuver less than 4.25 seconds after opening the vehicle's door. In other words, only approximately 10% of the time drivers enter their vehicle and select the reverse gear in less than 4.25 seconds. Thus, we believe that the vehicle conditioning procedure shown above reasonably approximates the real world conditions under which drivers would use these systems and that a vehicle conforming to the 2.0 second criteria under those test conditions would have the rearview image available for the driver in a timely fashion.

²¹ These data are information NHTSA prepared in support of the research report titled "On-Road Study of Drivers' Use of Rearview Video Systems." See Mazzae, E. N., et al. (2008). On-Road Study of Drivers' Use of Rearview Video Systems (ORS DURVS), National Highway Traffic Safety Administration, DOT HS 811 024. A summary of these naturalistic driving data prepared for that study (as it pertains to the length of time drivers take to select the reverse gear) is available in Docket No. NHTSA-2010-0162-0227.

Public Participation

On what topics is the agency requesting comments?

This document requests comments on the agency's plan to incorporate rearview video systems into NCAP. However, this document is not intended to solicit comments concerning our proposed rule to amend FMVSS No. 111. The comment period on that proposed rule closed on April 18, 2011.

How do I prepare and submit comments?

Your comments must be written and in English. To ensure that your comments are filed correctly in the docket, please include the docket number of this document in your comments.

Your comments must not be more than 15 pages long (49 CFR 553.21). NHTSA established this limit to encourage you to write your primary comments in a concise fashion. However, you may attach necessary additional documents to your comments. There is no limit on the length of the attachments.

Please submit one copy (two copies if submitting by mail or hand delivery) of your comments, including the attachments, to the docket following the instructions given above under ADDRESSES. Please note, if you are submitting comments electronically as a PDF (Adobe) file, we ask that the documents submitted be scanned using an Optical Character Recognition (OCR) process, thus allowing the agency to search and copy certain portions of your submissions.

How do I submit confidential business information?

If you wish to submit any information under a claim of confidentiality, you should submit three copies of your complete submission, including the information you claim to be confidential business information, to the Office of the Chief Counsel, NHTSA, at the address given above

under FOR FURTHER INFORMATION CONTACT. In addition, you may submit a copy (two copies if submitting by mail or hand delivery), from which you have deleted the claimed confidential business information, to the docket by one of the methods given above under ADDRESSES. When you send a comment containing information claimed to be confidential business information, you should include a cover letter setting forth the information specified in NHTSA's confidential business information regulation (49 CFR Part 512).

Will the agency consider late comments?

NHTSA will consider all comments received before the close of business on the comment closing date indicated above under DATES. To the extent possible, the agency will also consider comments received after that date.

How can I read the comments submitted by other people?

You may read the comments received at the address given above under COMMENTS. The hours of the docket are indicated above in the same location. You may also see the comments on the Internet, identified by the docket number at the heading of this notice, at <http://www.regulations.gov>.

Please note that, even after the comment closing date, NHTSA will continue to file relevant information in the docket as it becomes available. Further, some people may submit late comments. Accordingly, the agency recommends that you periodically check the docket for new material.

Anyone is able to search the electronic form of all comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's

complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78) or you may visit <http://www.dot.gov/privacy.html>.

Issued in Washington, DC, on: June 19, 2013.

under authority delegated in 49 CFR 1.95.

Christopher J. Bonanti
Associate Administrator for Rulemaking

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