

inadvertently refers to the incorrect service bulletins. For applying double bonding connections on fuel tubes and doing general visual inspections for damage inside the tank, we refer to EADS CASA Service Bulletin SB-235-28-18, dated August 2, 2007. For modifying the separation between the center wing electrical harnesses and fuel tubes, we refer to EADS CASA Service Bulletin SB-235-24-20, dated August 2, 2007.

(2) The EASA AD 2009-0146, dated July 3, 2009; and EADS CASA Service Bulletin SB-235-28-18, dated August 2, 2007; do not specify corrective actions if any damage is found inside the tank. If any damage is found inside the tank, this AD requires contacting EADS CASA for repair instructions and doing the repair.

**Other FAA AD Provisions**

(i) The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Branch, ANM-116, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to *Attn*: Shahram Daneshmandi, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 227-1112; fax (425) 227-1149.

Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

(2) *Airworthy Product*: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these

actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) *Reporting Requirements*: For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*), the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

**Related Information**

(j) Refer to MCAI EASA Airworthiness Directive 2009-0146, dated July 3, 2009, the CMMs identified in Table 1 of this AD, and the service information identified in Table 2 of this AD, for related information.

TABLE 2—SERVICE INFORMATION

Document	Issue	Date
EADS CASA Service Bulletin SB-235-21-18 .....	Original .....	August 2, 2007.
EADS CASA Service Bulletin SB-235-24-20 .....	Original .....	August 2, 2007.
EADS CASA Service Bulletin SB-235-28-18 .....	Original .....	August 2, 2007.
EADS CASA CN-235/C-295 Technical Document DT-0-C00-05001 .....	Issue C .....	October 2006.
EADS CASA CN-235/C295 Technical Document, DT-0-C00-05001 .....	Issue D .....	October 2008.

Issued in Renton, Washington, on June 21, 2010.

**Ali Bahrami,**

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2010-15708 Filed 6-28-10; 8:45 am]

BILLING CODE 4910-13-P

**DEPARTMENT OF TRANSPORTATION**

**National Highway Traffic Safety Administration**

**49 CFR Part 571**

[Docket No. NHTSA-2010-0061]

**Federal Motor Vehicle Safety Standards; Occupant Crash Protection**

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

**ACTION:** Request for comments.

**SUMMARY:** This document requests public comments on a petition for rulemaking submitted by Public Citizen and Advocates for Highway and Auto Safety, to amend the Federal motor vehicle safety standard on occupant crash protection to require automobile manufacturers to install seat belt reminder systems for rear designated seating positions in light passenger vehicles. The document discusses the agency's research and findings as well

as our knowledge of the different types of rear seat belt reminder systems. In general, we are encouraged by new methods to increase seat belt use. NHTSA requests comments and information to assist the agency in determining whether to grant or deny the petition.

**DATES:** Comments must be received on or before August 30, 2010.

**ADDRESSES:** You may submit comments (identified by the DOT Docket ID Number above) by any of the following methods:

- *Federal eRulemaking Portal*: Go to <http://www.regulations.gov>. Follow the online instructions for submitting comments.

- *Mail*: Docket Management Facility; U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

- *Hand Delivery or Courier*: West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m. ET, Monday through Friday, except Federal Holidays.

- *Fax*: 202-493-2251.

*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. It is requested, but not

required, that two copies of the comment be provided. Note that all comments received will be posted without change to <http://www.regulations.gov>, including any personal information provided. Please see the Privacy Act heading below.

*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 FURTHER INFORMATION CONTACT:**

*For Non-Legal Issues:* Ms. Carla Rush, Office of Crashworthiness Standards, National Highway Traffic Safety Administration, 1200 New Jersey Ave., SE., Washington, DC 20590, Telephone: (202) 366-4583, Facsimile: (202) 493-2739.

*For Legal Issues:* Mr. J. Edward Glancy, Office of Chief Counsel, National Highway Traffic Safety Administration, 1200 New Jersey Ave., SE., Washington, DC 20590, Telephone: (202) 366-2992, Facsimile: (202) 366-3820.

**SUPPLEMENTARY INFORMATION:**

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### I. Background

#### A. Seat Belt Reminder Systems in the United States

Increasing seat belt use in the United States (U.S.) has been a long-standing priority for the National Highway Traffic Safety Administration (NHTSA). When used properly, NHTSA estimates that seat belts (lap/shoulder belts) reduce the risk of fatal injury to front seat passenger car occupants by 45 percent and the risk of moderate-to-severe injury by 50 percent. Seat belts are even more effective for light truck occupants, reducing the fatality risk by 60 percent and the moderate-to-serious injury risk by 65 percent.<sup>1</sup> For rear seat passenger car occupants, seat belts reduce the risk of fatal injury by 44 percent. For rear seat passenger van and sport utility vehicle occupants, seat belts reduce the risk of fatal injury by 73 percent.<sup>2</sup> During the 5-year period from 2004 to 2008, seat belts saved over 75,000 lives.<sup>3</sup> Historically, NHTSA has pursued two strategic approaches for increasing seat belt use: Behavioral programs and vehicle-based technologies.

Behavioral programs aimed at increasing seat belt use have included providing educational and technical assistance to the public, policy-makers and intermediaries on the benefits of seat belt use and the effectiveness of primary seat belt use laws and strengthening existing laws. NHTSA has also worked with the States to encourage high visibility seat belt use enforcement through programs such as

<sup>1</sup> Traffic Safety Facts: Occupant Protection, 2006 Data. DOT HS 810 807. Washington, DC: National Highway Traffic Safety Administration.

<sup>2</sup> Morgan, Christina. "Effectiveness of Lap/Shoulder Belts in the Back Outboard Seating Positions." DOT HS 808 945, NHTSA Technical Report, 1999.

<sup>3</sup> Traffic Safety Facts: Crash Stats: Lives Saved in 2008 by Restraint Use. DOT HS 811 153. Washington, DC: National Highway Traffic Safety Administration.

safety checkpoints and associated media campaigns. The agency has also worked on national communication plans directed towards media opportunities to support seat belt use mobilization efforts, as well as initiatives that partner with employers and the insurance industry.

In parallel with our behavioral strategies, the agency has also pursued vehicle-based technologies for increasing seat belt use. These include sensors in the seat belt system that can detect seat belt non-use and provide audio/visual warnings or other incentives to encourage unbelted occupants to fasten their seat belts. In this notice we will discuss four different types of vehicle-based technologies: Driver seat belt warning systems, seat belt interlocks, rear seat belt reminder systems (SBRs) and enhanced SBRs.<sup>4</sup> For the purposes of this notice, the term rear SBRs does not necessarily limit the system to the requirements of the driver seat belt warning systems that are regulated by Federal Motor Vehicle Safety Standard (FMVSS) No. 208, "Occupant crash protection," which will be discussed in the following section. However, as further discussed below, there are statutory limitations with respect to our ability to require some types of enhanced SBRs.

#### 1. Regulatory History

Early driver seat belt warning systems and seat belt interlocks date back to the 1970s, when seat belt use was only 12 to 15 percent.<sup>5</sup> In 1971, NHTSA sought to increase seat belt use by adopting occupant protection options for vehicles manufactured after 1972 that required the use of a SBR for the front outboard seating positions (36 FR 4600).<sup>6</sup> Then in 1972, NHTSA adopted an occupant protection option for passenger cars manufactured between August 15, 1973 and August 15, 1975, that required an interlock system which would prevent a vehicle from starting if any of the front seat belts were not fastened (37 FR 3911).<sup>7</sup>

Contrary to the agency's expectations, the initial vehicle introduction of these systems in the early 1970s was not well

<sup>4</sup> For the purposes of this notice an "enhanced SBR" is a seat belt warning system that goes beyond the specifications of the driver seat belt warning system that are set forth in S7.3 of FMVSS No. 208.

<sup>5</sup> "Buckling Up, Technologies to Increase Seat Belt Use," Special Report 278, Committee for the Safety Belt Technology Study, <http://www.TRB.org>, 2003, page 4. Haseltine, P.W. 2001. Seat Belt Use in Motor Vehicles: The U.S. Experience. In 2001 Seat Belt Summit, Automotive Coalition for Traffic Safety, Inc., Jan. 11–13.

<sup>6</sup> NHTSA Docket No. 69–7; Notice 9.

<sup>7</sup> NHTSA Docket No. 69–7; Notice 16.

received by the public. In particular, continuous buzzers and ignition interlocks annoyed many consumers to the point of disabling or circumventing the systems.<sup>8</sup> As a result of the negative consumer reaction, Congress adopted a provision, as part of the Motor Vehicle and School Bus Safety Amendments of 1974, prohibiting the agency from prescribing a motor vehicle safety standard that requires, or permits as a compliance option, either ignition interlocks designed to prevent starting or operating a motor vehicle if an occupant is not using a seat belt, or a buzzer designed to indicate a seat belt is not in use for a period of more than eight (8) seconds after the ignition was turned to the "start" or "on" position (49 U.S.C. 30124).<sup>9</sup>

FMVSS No. 208 was ultimately amended to only require that the driver's seating position be equipped with a seat belt warning system that activates, under circumstances when the driver's seat belt is not buckled, a continuous or intermittent audible signal for a period of not less than 4 seconds and not more than 8 seconds, and a continuous or flashing warning light for not less than 60 seconds after the ignition switch is turned on (39 FR 42692).<sup>10</sup> This provision was more readily accepted by the public and has remained a part of the standard for vehicles manufactured since 1974. Likewise, the Congressional statutory provision of 1974 is still in effect today (49 U.S.C. 30124).

#### 2. NHTSA Research and Consumer Information Programs

As seat belt use increased to 73 percent in calendar year 2001,<sup>11</sup> Congress directed NHTSA to study the potential benefits of technologies designed to increase seat belt use (through contract with the Transportation Research Board of the National Academy of Sciences (NAS)).<sup>12</sup> The study aimed to determine how current drivers might accept technologies designed to increase seat belt use, and consider whether legislative or regulatory actions were

<sup>8</sup> Kratzke, S.R. 1995. Regulatory History of Automatic Crash Protection in FMVSS 208. SAE Technical Paper 950865. International Congress and Exposition, Society of Automotive Engineers, Detroit, Mich., Feb. 27–March 2.

<sup>9</sup> There is no statutory requirement that the warning system be limited to the driver's seating position.

<sup>10</sup> NHTSA Docket No. 74–39; Notice 3.

<sup>11</sup> Glassbrenner, Donna. *Safety Belt and Helmet Use in 2002—Overall Results*. DOT HS 809 500. September 2002.

<sup>12</sup> House of Representatives Report 107–108 Department of Transportation and Related Agencies Appropriation Bill, 2002, June 22, 2001.

necessary to enable their installation on passenger vehicles.

The study found that enhanced SBRSS that went beyond the required FMVSS No. 208 driver seat belt warning system showed promise for increasing seat belt use. It concluded that the data available at that time provided “strongly converging evidence in support of both the potential effectiveness and consumer acceptance of many new seat belt use technologies, particularly enhanced belt reminder systems.”

The study also made eight recommendations for the continued development of these technologies. One of the recommendations stated that Congress should amend the statute regarding seat belt reminder systems by lifting the restrictions on systems with visual and audible signals that stay activated beyond the initial 8 seconds. It further stated that amending the statute would provide NHTSA more flexibility and the authority to require effective seat belt reminder technologies.<sup>13</sup> It also recommended that if voluntary efforts to install effective SBRSS did not produce sufficient results, NHTSA should mandate the most effective acceptable systems as determined by the current data. In addition, the study recommended that Congress provide NHTSA funding to support a multi-year program of research on the effectiveness of different enhanced SBRSS, because the findings of such research could help establish the scientific basis for regulation should regulation be needed.

Concurrent with the NAS study, NHTSA’s Administrator sent letters to vehicle manufacturers in 2002, and again in 2003, encouraging them to enhance their driver seat belt warning systems beyond the minimum required by FMVSS No. 208. In addition, the agency explained through a series of legal interpretations the attributes of various specific enhanced SBRSS designs contemplated by vehicle manufacturers that would enable them to comply with FMVSS No. 208.<sup>14</sup>

Based on the number of vehicle manufacturer responses, we were pleased that many manufacturers were

voluntarily moving in the direction of installing enhanced SBRSS.<sup>15</sup> However, we found that there was a spectrum of enhanced SBRSS types that were being introduced into the fleet. Some of the more rudimentary systems had a visual signal that stayed activated until the belt was buckled, some had audible signals that activated beyond the initial 8 seconds, and others had visual signals that stay activated beyond the initial 60 seconds. Some even had audible and visual signals that stay activated for several minutes.

For the most part, these enhanced SBRSS were directed at front seat applications. For the driver position, enhanced SBRSS primarily relied on sensors found in the seat belt buckle and latch assemblies, since the presence of a driver could be assumed. For front seat passengers, some of the more advanced SBRSS relied on the use of existing sensors in the seat, used for one of the advanced air bag compliance options. These could include pressure-sensitive or capacitive sensors in the seat cushions, for example, that were already installed for ensuring the proper deployment or suppression of advanced air bags as required by FMVSS No. 208.

In September 2002, NHTSA also chartered an integrated project team (IPT) to strategically identify innovative solutions and recommend effective strategies in increasing seat belt use. The IPT recommended several strategies for consideration.<sup>16</sup> These included: Continued work on encouraging vehicle manufacturers to voluntarily install enhanced SBRSS, providing consumer information on vehicles equipped with enhanced SBRSS as part of the New Car Assessment Program (NCAP), and continued monitoring and assessment of the effectiveness and acceptability of enhanced SBRSS through research.

In 2004, NHTSA started making enhanced SBRSS information available to consumers through the NCAP <http://www.safercar.gov> Web site. The consumer information explained the functionality of enhanced SBRSS and documented the availability of enhanced SBRSS for each vehicle model on the <http://www.safercar.gov> Web site. We have continued to collect and disseminate the information in the years since. Currently in the U.S., 479 vehicle models out of 493 were reported by their manufacturers as having a SBRSS

that went beyond the minimum performance requirements of FMVSS No. 208 according to the model year (MY) 2010 Buying a Safer Car information. Currently the agency requests information about the seating positions that have SBRSS and if the SBRSS signal time exceeds that required by FMVSS No. 208. It was reported that 372 of the 493 vehicle models have a SBRSS for the right front passenger seat, and 416 of the 493 vehicle models have a SBRSS signal (audio/visual/or both) that stays active beyond the FMVSS No. 208 requirement. As Volvo started introducing rear SBRSS in the U.S. in 2009, NHTSA expanded its data collection efforts to include vehicle models with rear SBRSS data. In the MY 2010 Buying a Safer Car information, Volvo remains the only vehicle manufacturer that offers rear SBRSS; furthermore, they have become standard equipment in the majority of Volvo’s 2010 model year vehicles.<sup>17</sup>

In 2005, the Safe, Accountable, Flexible, and Efficient Transportation Equity Act—Legacy for Users (SAFETEA—LU)<sup>18</sup> legislation required that NHTSA evaluate the effectiveness and acceptability of several different types of enhanced SBRSS being offered by a number of manufacturers. In response, the agency initiated a four-phase research study, which is partially completed.

The first phase included an observational study of actual vehicles in the field in which the front seat belt use rates in vehicles with the enhanced SBRSS were compared to rates in comparable vehicles with only the driver seat belt warning required by FMVSS No. 208. The study looked at 20 different enhanced SBRSS systems as well as baseline systems that did not exceed the FMVSS No. 208 requirements. Nine of the 20 enhanced SBRSS were driver only systems. The enhanced systems studied had a variety of enhanced features; some enhancements were related to the visual feedback, *i.e.*, icons and/or text, and others were related to auditory feedback. Similar systems were combined into groups when determining effectiveness. Combining all the effective estimates for all the enhanced SBRSS studied, it was estimated that these systems were associated with increased front seat belt usage of about 3–4 percentage points

<sup>13</sup> “Buckling Up, Technologies to Increase Seat Belt Use,” Special Report 278, Committee for the Safety Belt Technology Study, <http://www.TRB.org>, 2003.

<sup>14</sup> These interpretation letters can be found at <http://www.regulations.gov> (Docket Nos.: NHTSA–2001–9899, NHTSA–2002–13379, NHTSA–2003–14742, NHTSA–2003–15006, and NHTSA–2003–15156). In general, the interpretation letters indicate that if manufacturers want to provide a voluntary signal that goes beyond what is specified in FMVSS No. 208, S7.3, they may do so, but that they must provide a means for differentiating the voluntarily provided signal from the required signal.

<sup>15</sup> See Docket No. NHTSA–2002–13226 at <http://www.regulations.gov/>.

<sup>16</sup> U.S. Department of Transportation, National Highway Traffic Safety Administration, Initiatives to Address Safety Belt Use, July 2003, [http://www.nhtsa.dot.gov/people/injury/SafetyBelt/OPIPT\\_FinalRpt\\_07-17-03.html](http://www.nhtsa.dot.gov/people/injury/SafetyBelt/OPIPT_FinalRpt_07-17-03.html) (September 30, 2003).

<sup>17</sup> The Volvo models with rear SBRSS included: The XC60, XC70, C30, C70, S40, S80, V50, and V70.

<sup>18</sup> Safe, Accountable, Flexible, Efficient Transportation Equity Act, Public Law No. 109–59, § 10306 (2005).

above front seat belt usage rates for vehicles without enhanced SBRs.<sup>19</sup>

The second phase examined which seat belt reminder characteristics (e.g., visual, auditory, etc.) most influenced effectiveness and acceptance for drivers. This phase found that all of the enhanced SBRs were perceived to be more effective in encouraging seat belt use than the driver seat belt warning system required by FMVSS No. 208. The study found a strong positive correlation between subjective effectiveness and annoyance. Systems with more aggressive reminder displays and more frequent repetition patterns were perceived to be the most effective. However, no clear consensus existed regarding which systems or displays were most acceptable and the degree to which annoyance was an important attribute of an effective system.<sup>20</sup>

The third phase of our research study further analyzed the results of the first and second phases, as well as focused on optimizing the effectiveness and acceptance of enhanced SBRs. The study found that there is good agreement between the two studies on the association of a greater likelihood of seat belt use with enhanced SBRs and the importance of including an auditory component to the system. Based on the findings of this phase, a set of recommended system characteristics were presented as part of the report, as well as a proposed rating system for enhanced SBRs.<sup>21</sup>

The final phase, expected to be completed by mid-2010, is focused on the effectiveness and acceptance of enhanced SBRs in teen drivers and passengers.

### B. Seat Belt Reminder Systems in Europe

In April 2008, a seat belt reminder system for the driver's seat was incorporated into ECE R.16, "Uniform provisions concerning the approval of: safety belts, restraint systems, child restraint systems and ISOFIX child restraint systems for occupants of power-driven vehicles and vehicles equipped with safety belts, restraint systems, child restraint systems and

ISOFIX child restraint systems." The requirements include two levels of warning signals for seat belt non-use. The first level is a visual warning that is at least 4 seconds long that activates when the driver's seat belt is unbuckled and the ignition switch is engaged. An optional audible signal can be added. The second level is a visual and audible signal that is at least 30 seconds long that activates when a driver operates a vehicle with his or her seat belt unbuckled.

Many passenger vehicles in Europe have enhanced SBRs beyond the minimum required by the European standards. Since 2002, the consumer crash protection program in Europe, the European New Car Assessment Programme (Euro NCAP), has awarded points to a vehicle if it is voluntarily equipped with enhanced SBRs that fully comply with their protocol requirements.<sup>22</sup>

In the Euro NCAP SBRS protocol requirements, seat belt use must be identified for all seating positions at the start of a trip. However, it does not require occupant detection sensors to determine whether a passenger is actually occupying the seat. Separate points are given for the driver, front passenger, and rear passenger seating positions.

For front seats, an audiovisual signal must start when a front seat occupant is unbelted and one of the following events takes place: The engine has been running for 60 seconds, the vehicle has been in forward motion for 60 seconds or 500 meters, or the vehicle has reached a forward speed of 25 km/hr. The signal must be at least 90 seconds long.

For rear seats, a visual signal must start within five seconds of the engine starting or the start of forward motion. The visual signal must be at least 30 seconds long and it must indicate the number of rear seat belts that are in use. For rear seats with occupancy detection, they must meet the same signal requirements as those without occupancy detection except that no signal is required if there are no occupants in the rear passenger seats or if all rear seat occupants are belted. The system may allow the driver to acknowledge the signal for rear seats and switch it off.

Furthermore, when a seat belt experiences a change of status (from buckled to unbuckled), an audiovisual signal is required for front and rear seats.

### C. Seat Belt Reminder Systems in Japan

Japan's National Agency for Automobile Safety and Victim's Aid and Japan's Ministry of Land, Infrastructure and Transport (JMLIT) has initiated a two phase program as part of Japan's New Car Assessment Program (JNCAP) to promote the introduction of enhanced SBRs for passenger seats. The first phase will identify which vehicles voluntarily meet their enhanced SBRS requirements and make the information available to consumers through their JNCAP pamphlet and website.

The requirements for enhanced SBRs are similar to that of Euro NCAP. The front seat occupant enhanced SBRS must have a 30 second audible or visual signal that initiates when a front seat occupant is unbelted and one of the following events takes place: The engine has been running for 60 seconds, the vehicle has been in forward motion for 500 meters, or the vehicle has reached a forward speed between 10–25 km/h.

The rear SBRS must have at least a 30 second audible or visual reminder that is directed toward the driver or the unbuckled passenger. The rear SBRS must also indicate to the driver the number of seat belts that are in use. They do not require the rear SBRS to be equipped with occupant detection technology.

The second phase of the program will establish new enhanced SBRS requirements for JNCAP based on the findings of a study that is currently underway to evaluate human factors and the effectiveness of different types of visual and audible warning signals.

### D. Seat Belt Reminder Systems in Australia

In 1996, Australia's Department of Transport (now the Department of Transport and Regional Services) introduced a new Australian Design Rule (ADR) 69 that required manufacturers to meet certain crash performance criteria in a dynamic full frontal crash. This ADR also adopted a requirement for a driver SBRS that is currently still in place. The driver SBRS comprises of a visual signal that must remain activated for no less than four seconds after the ignition was switched on, or before one of the following events takes place: The engine has been running for 60 seconds, the vehicle has been in forward motion for 500 meters, or the vehicle has reached a forward speed between 25 km/h. The ADR does

<sup>19</sup>Freedman, M., Levi, S., Zador, P., Lopdell, J., and Bergeron, E., "The effectiveness of enhanced seat belt reminder systems—Observational field data collection methodology and findings," Report #: DOT HS 810 844, December 2007.

<sup>20</sup>Lerner, N., Singer, J., Huey, R., and Jenness, J., "Acceptability and Potential Effectiveness of Enhanced Seat Belt Reminder System Features," Report #: DOT HS 810 848, December 2007.

<sup>21</sup>Freedman, M., Lerner, N., Zador, P., Singer, J., and Levi, S. *Effectiveness and Acceptance of Enhanced Seat Belt Reminder Systems: Characteristics of Optimal Reminder Systems.* Report #: DOT HS 811 097, February 2009.

<sup>22</sup>Specifically, the awarded points are applied toward a vehicle's Safety Assist rating, which in turn is used in the overall rating for the vehicle. From February 2009, Euro NCAP will publish a new overall rating for every vehicle that will cover Adult Occupant Protection, Child Occupant Protection, Pedestrian Protection and a new area of assessment: Safety Assist.

not require the system to operate if the driver's seat belt is buckled or is withdrawn more than 10 cm from the retractor. The ADR also states that if the system complies with the U.S. FMVSS No. 208, S7.3 that it is deemed compliant with the ADR requirements.

The Australasian New Car Assessment Program (ANCAP) conducts assessments of seat belt reminders in accordance with the protocol issued by Euro NCAP. ANCAP prepared a questionnaire to assist in the assessment of seat belt reminder systems. Manufacturers may submit a completed questionnaire to obtain a provisional assessment of reminder systems by ANCAP. In addition to the Euro NCAP requirements, ANCAP prefers that if the system does not implement occupant detection that a positive indicator, such as a green light, be displayed for each rear seat belt that is being used and that no display lights be shown for unused seat belts. Furthermore, for systems with occupant detection, ANCAP prefers a negative indicator, such as a red light for any seating position that has an occupant that is unbuckled.<sup>23</sup> ANCAP also began applying Euro NCAP's change of status signal requirements for rear seats after January 2008.

## II. Petition

On November 21, 2007, Public Citizen and Advocates for Highway and Auto Safety (henceforth referred to as the petitioner) petitioned NHTSA to amend FMVSS No. 208, to require automobile manufacturers to install a SBRs for rear seats of passenger cars and multipurpose passenger vehicles with a gross vehicle weight rating (GVWR) of 4,536 kg (10,000 lbs.) or less.<sup>24</sup>

The petitioner stated that SBRs for rear seats would save hundreds of lives each year and that a large percentage of the lives saved would be children. The petitioner suggested that if rear seat belt usage matched the level of front seats, about 289 lives would be saved each year, and 78 of those would be children between 5 and 18-years-old. The petitioner noted that primary enforcement laws typically do not cover rear seat occupants and claimed that studies have proven that SBRs for rear seats significantly increase rear passenger seat belt use. The petitioner also stated that requiring SBRs for rear seats is consistent with former NHTSA administrator, Dr. Jeffrey Runge's, statements on enhanced SBRs as well as NHTSA's study on the effectiveness

<sup>23</sup> ANCAP, Notes on the assessment protocol, Version 4.8, October 29, 2007.

<sup>24</sup> See docket to this notice for a copy of the petition.

of enhanced SBRs for front seats, and the SAFETEA-LU requirements to increase belt use for all passengers. The petitioner further stated that SBRs for rear seats are technologically feasible and that they would be less costly if they were required in all vehicles. Lastly, the petitioner stated that the American public desires SBRs for rear seats.

## III. Analysis

In analyzing the petition to require SBRs for rear seats, it became readily apparent that the limiting factor in our benefits estimate is the unknown effectiveness of rear SBRs. Without this information, the agency cannot make an accurate assessment of how many lives would be saved and injuries reduced by requiring rear SBRs, and the cost-effectiveness of such systems. In the sections that follow, we preliminarily identify the potential target population, discuss the limitations of our effectiveness estimates, and the potential costs of various rear SBR technologies. However, as discussed further in this notice, we are seeking comment and information from the public on each aspect of our analysis.

### A. Target Population

The agency made some preliminary target population estimates in analyzing the petition using the 2008 calendar year as a baseline. In that year, front seat belt usage was 83 percent and rear seat belt usage was 74 percent.<sup>25</sup> According to the Fatality Analysis Reporting System (FARS) data, there were 2,163 rear seat occupants killed that year in motor vehicle crashes. According to the National Automotive Sampling System (NASS) General Estimates System (GES) data, there were another 266,163 MAIS<sup>26</sup> 1–5 rear seat occupant injuries that resulted.<sup>27</sup> Of those, 1,442 fatalities and 28,075 MAIS 1–5 injuries were to unrestrained rear seat occupants.<sup>28</sup> These unrestrained occupants are the target population any potential

<sup>25</sup> Traffic Safety Facts: Seat Belt Use in Rear Seats in 2008. DOT HS 811 133. Washington, DC: National Highway Traffic Safety Administration, May 2009.

<sup>26</sup> The Maximum Abbreviated Injury Score (MAIS) is an anatomical scoring system that provides a way of ranking the severity of injury. The higher the score, the more severe the injury.

<sup>27</sup> MAIS 1–5 injury benefits were further adjusted by a universal exaggeration factor of 1.369 to address the over reporting of safety belt use in injuries. (Fatality Reduction by Safety Belts for Front-Seat occupants of Cars and Light Trucks, December 2000, DOT HS 809 199).

<sup>28</sup> Injuries with unknown restraint usage were distributed proportionately to those with known usage.

rulemaking on rear SBRs would seek to address.

### B. Benefits

As previously mentioned, the agency lacks sufficient information on the effectiveness of rear SBRs. We are not aware of studies that show how effective a warning sent to the driver (and/or front seat passenger) would be in encouraging rear seat occupants to fasten their seat belts. Depending upon the type of rear SBRs implemented, repeated false alarms, for example, could be an annoyance to drivers and consequently reduce its effectiveness. On the other hand, less aggressive systems may not change an occupant's behavior.

In the petitioner's benefits calculations, three hypothetical outcomes were presented that could occur from requiring rear SBRs:

1. Increased rear seat belt usage to the level of front seat belt usage;
2. Increased rear seat belt usage by 9.1% in light trucks and 12.9% in cars; and
3. Increased rear seat belt usage to 85–90%.

However, for the first outcome to occur, rear seat belt usage would need to increase from 74 to 83 percent to be equivalent to front seat belt usage (based on our 2008 baseline). This would require an increase in rear seat belt usage of 9 percentage points, although front seat enhanced SBRs are preliminarily estimated to increase front seat belt use by only 3–4 percent.<sup>29</sup> The other two scenarios are more unlikely since they assume higher effectiveness rates for rear SBRs than are currently achieved for front seat SBRs. Finally, the petitioner also suggested that benefits would be accrued to front seat occupants if rear seat passengers were buckled up. While we agree, in principle, that front seat occupant risk would be reduced by having rear seat passengers restrained, we have evidence to suggest that these benefits would be small and not a significant proportion of the benefits gained from increases in rear seat belt usage.<sup>30</sup>

<sup>29</sup> We do not have data concerning the effectiveness of a basic front seat belt reminder system. The closest data we have are from the enhanced systems being implemented recently, which are over and above the basic system.

<sup>30</sup> Bean, James D., et al., "Fatalities in frontal crashes despite seat belts and air bags," NHTSA technical report, DOT HS 811 202, September 2009. (This report documents a review of 122 cases where a frontal fatality occurred to a belted driver or right-front passenger in a MY 2000 or newer vehicle in the CDS through calendar year 2007. Of these 122 cases, only one fatality was attributed to what the agency characterized as a "back-seat bullet.")

Generally, we are encouraged by the potential that enhanced SBRSS have in increasing seat belt use, but the agency would like more information prior to deciding whether to undertake a rulemaking action for rear SBRSS. We invite the public to share its information and views on rear SBRSS effectiveness in order to assist the agency in evaluating these systems and their merit.

### C. Countermeasure Costs

In deciding whether to pursue a rulemaking action, the agency must also consider the associated costs involved. The petitioner suggested that rear SBRSS provide an effective strategy for saving lives "at a minimal additional cost to manufacturers and consumers." It suggested that the following components would be needed: A seat sensor that detects occupancy, a sensor in the seat belt buckle, and a control unit that features a flashing light and audible sound. No costs for these components were provided.

In the NAS study, it was found that enhanced SBRSS for rear seats are more costly than front-seat systems because the majority of vehicles already have some type of front passenger occupancy sensor and central processing unit installed for advanced air bag system purposes. Occupancy detection technology is not readily-equipped in rear seats, and those passenger vehicles equipped with large numbers of rear seat occupant positions (*e.g.*, 8-passenger sport utility vehicles, minivans, and 15-passenger vans) would have to be equipped with sensors at each rear seating position. The NAS study cited low rear seat occupancy rates as another reason it did not consider the installation of rear seat occupancy sensors to be cost-effective in its findings. NHTSA estimates that rear seat occupants were 11 percent of the passenger vehicle occupants involved in police-reported crashes in 2007.<sup>31</sup>

Furthermore, whether contemplating sophisticated occupancy sensors or simpler belt use sensor technology, there are additional potential practicability concerns that rear seats present over front seats, including compatibility with removable seats (*e.g.*, Stow-n-Go, Flip and Fold). Additionally, occupancy detection complexities, such as inanimate cargo (groceries or heavy objects) or pets that

are often transported in the rear seat present additional technical challenges in mitigating false alarms. In consideration of these factors, the agency believes that requiring that each rear seating position be equipped with SBRSS technology may be costly. We are therefore seeking comment on this issue.

Specifically, we would like to receive information on the range of technologies, and related costs, that could be used in rear SBRSS strategies. For example, one system could include rear seat occupant detection technology, rear seat belt use sensors, and a warning system with visual and audible components. This system would likely provide a high amount of reliability in detecting seat belt non-use and alerting the driver, yet it would likely be the most costly to implement. It also most closely resembles the petitioner's recommended countermeasure. This system could activate an audible and visual signal whenever there is an unbuckled rear seat passenger. Occupant detection sensors would be used to identify the presence of rear passengers and mitigate false alarms when there is no passenger in the seat and the seat belt is unbuckled. While NHTSA is aware of the technology being available for such a system, we are not aware of any such systems in production.

There are also lower cost rear SBRSS that are more comparable to production systems designed to meet Euro NCAP requirements. Such a system could incorporate rear seat belt use sensors and audible/visual alarms, but would not include occupant detection capabilities. Additionally, unlike the previously mentioned system, this enhanced SBRSS visually reports the number of belted rear passengers to the driver, rather than notifying the driver of rear seat belt non-use. Hence, this type of system relies on the driver (or the human factor) to know how many rear seat occupants there are, and if that number equals the number of seat belts that are reported by the enhanced SBRSS as being buckled. Notification to the driver would be conducted by having a visual display on the console (either displaying a number, or icons of each belted seating position) to alert the driver of the number of rear seat belts in use. It could also provide an audible alarm in the event the status of the seat belt buckle changes during the course of the trip, as required by Euro NCAP. While the main limitation of such a system is its reliance on the driver to know the number of rear seat passengers and compare it to the visual reporting of the rear SBRSS, such a system could also

be easier to ignore and may not be as effective as an audible warning system that alerts the driver of unbelted passengers at the start of a trip. Therefore, we are seeking comment and information on the effectiveness of such a system.

We also note that both of the aforementioned rear SBRSS lack a means of detecting a child seat attached to a LATCH-equipped seating position. The first system could potentially use the occupant detection sensors to identify the presence of a child seat (*e.g.*, in the same manner that advanced air bag systems detect child seats in the front passenger seat), but it would lack the sophistication of detecting whether that child seat is actually attached to the LATCH anchorages. Some type of LATCH anchorage detection sensor would also be needed. While parents and caregivers could attach the child seat with the seat belt at such seating positions in addition to using the LATCH anchorages to minimize the audible/visual warnings to the driver, some are of the opinion that using both seat belts and LATCH could be considered a misuse condition. Alternatively, the consumer could attach the seat belt and then place the child seat on top of it, attaching the child seat with LATCH, or a seat belt detection system could also encourage them to revert back to not using the LATCH anchorages at all, and only restrain child seats using seat belts. The agency does not consider one method of child seat installation safer than the other; however, we have observed that child seats installed with LATCH are more likely to be installed securely than child seats installed with seat belts.<sup>32</sup>

On the other hand, the second system mentioned above (*e.g.*, the lower cost technology) would simply consider the seating position with the child seat attached by LATCH anchorages to be an unbuckled seating position. A driver using this system would need to take this fact into account when comparing the number of rear seat occupants against the number reported by the rear SBRSS. Or, like the first system, parents and caregivers could buckle the seat belt, in addition to using LATCH, to enable the system to count it as a belted seating position. However, again, this could encourage them to revert to not using LATCH at all or could encourage them to keep the belt buckled to mislead the system.

<sup>31</sup> In 2007 there were 13,613,000 passenger vehicle occupants involved in police-reported crashes. The source of this data is both the FARS and the NASS GES. Passenger vehicle occupant involvement in fatal crashes comes from FARS and involvement in injury and property damage only crashes comes from GES.

<sup>32</sup> Decina, L.E.; Lococo, K.H.; and Doyle, C.T. 2006. Child restraint use survey: LATCH use and misuse. Report no. DOT HS-810-679. Washington, DC: National Highway Traffic Safety Administration, Page 26.

Therefore, the agency is additionally seeking comment on how LATCH would interact with a rear SBRSS. Would LATCH detection be a necessary requirement of a rear SBRSS so that when LATCH anchorages are used at a LATCH-equipped seating position, the seating position would be displayed as belted?

#### D. Summary

The agency would like more information about the effectiveness of the rear SBRSSs discussed above, systems under development, and other potential alternatives, to assist it in deciding whether to grant or deny the petition. We have concerns that the estimated costs for some technologies could be high and have technical complexities with removable seats to overcome. Other lower cost systems may not be robust enough to attain the benefits that we would hope to attain with such a system.

#### IV. Solicitation of Comments

To assist the agency in determining whether to grant or deny the petition, NHTSA is soliciting comments and data in this notice. For easy reference, the questions that follow are numbered consecutively. NHTSA encourages commenters to provide specific responses for each question for which they have information or views. In order to facilitate tabulation of the written comments in sequence, please identify the number of each question to which you are responding. NHTSA requests that the rationale for positions taken by commenters be specific and supported by data, including any analysis of safety consequences. We encourage commenters to provide scientific analysis and data relating to system designs, testing, and field experience as well as arguments or views they believe are relevant to this topic.

In providing information in response to the questions, NHTSA invites commenters to address different kinds of potential rear SBRSS, including basic ones as well as enhanced systems. However, as noted earlier, there are statutory limitations on the kinds of enhanced systems that the agency could require by regulation. See 49 U.S.C. 30124. The petitioner stated that if the agency receives permission from Congress to required enhanced performance reminders, the new enhanced reminder requirement should also apply to the rear seat. While we do not intend to limit commenters from identifying potential regulatory requirements that they believe would be best, we ask that to the extent any commenters recommend requirements

that would not be consistent with the existing statutory limitations that they also provide recommendations as to what regulatory actions the agency should take, if any, given those limitations.

#### Effectiveness

1. What studies have been conducted (or are underway) on the effectiveness of rear SBRSSs in increasing rear seat belt use?

2. What are the most important characteristics of a highly effective rear SBRSS? And what are the minimum characteristics?

3. The agency's crash data show that a large percentage of unbelted rear seat fatalities were in vehicles with drivers who were belted.<sup>33</sup> What studies have been conducted (or are underway) on the effectiveness of rear SBRSSs in influencing *belted* drivers if they are reminded (by a rear SBRSS) that their rear passengers (especially child passengers) are being afforded less protection than they are providing for themselves?

4. How effective are visual reminders that provide the driver with the number of belted rear passengers, and rely on the driver to know how many rear seat occupants are in the vehicle, *i.e.*, a system that does not incorporate occupant sensors?

5. How would LATCH interact with a rear SBRSS?

6. What studies have been conducted (or are underway) to study how having a LATCH detection sensor would improve the rear SBRSS's effectiveness?

#### Consumer Acceptance

7. What studies have been conducted (or are underway) on the consumer acceptance of rear SBRSSs?

8. What characteristics should a rear SBRSS have to maintain a high level of effectiveness while maximizing consumer acceptance?

9. What types of comments/complaints have vehicle manufacturers received on their rear SBRSSs?

10. What are the "lessons learned" regarding the installation, use, and acceptance of existing rear SBRSSs?

11. What are the types of rear SBRSSs that are likely to cause some consumers to disarm or purchase vehicles without a rear SBRSS?

#### Technology and Costs

12. What types of rear SBRSSs are vehicle manufacturers installing (or planning to install) in the U.S. or in other countries?

13. What technologies would be necessary to overcome the installation

obstacles for rear seat occupant detection (*e.g.*, removable seats, folding seats, rotating seats, etc.) and what are their expected per vehicle costs? Are there similar concerns with the installation of rear seat belt use sensors?

#### Regulation

14. Should rear SBRSSs be a mandatory requirement, or only regulated if optionally provided?

If so, what characteristics should they exhibit?

a. Should the system be capable of detecting an occupant?

b. Should the system have a visual-only signal or a visual and audible signal?

c. Should change of belt status be monitored?

15. Are there better approaches to increase rear seat belt use other than requiring or regulating rear SBRSSs?

a. Should NHTSA just continue to rely on its education and outreach programs in supporting rear seat belt use laws?

b. Should NHTSA take an approach similar to Euro NCAP and provide ratings for rear SBRSSs?

#### V. Public Participation

##### *How Do I Prepare and Submit Comments?*

Your comments must be written and in English. To ensure that your comments are correctly filed in the Docket, please include the docket number of this document in your comments. Your comments must not be more than 15 pages long.<sup>34</sup> We 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. If you are submitting comments electronically as a PDF (Adobe) file, we ask that the documents submitted be scanned using the Optical Character Recognition (OCR) process, thus allowing the agency to search and copy certain portions of your submissions.<sup>35</sup> Please note that pursuant to the Data Quality Act, in order for substantive data to be relied upon and used by the agency, it must meet the information quality standards set forth in the OMB and DOT Data Quality Act guidelines.

Accordingly, we encourage you to consult the guidelines in preparing your comments. OMB's guidelines may be

<sup>34</sup> See 49 CFR 553.21.

<sup>35</sup> Optical Character Recognition (OCR) is the process of converting an image of text, such as a scanned paper document or electronic fax file, into computer-editable text.

<sup>33</sup> See docket to this notice.

accessed at: <http://www.whitehouse.gov/omb/fedreg/reproducible.html>. DOT's guidelines may be accessed at: <http://dmses.dot.gov/submit/DataQualityGuidelines.pdf>.

#### *How Can I Be Sure That My Comments Were Received?*

If you submit your comments by mail and wish Docket Management to notify you upon its receipt of your comments, enclose a self-addressed, stamped postcard in the envelope containing your comments. Upon receiving your comments, Docket Management will return the postcard by mail.

#### *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 Chief Counsel, NHTSA, at the address given above under **FOR FURTHER INFORMATION CONTACT**. 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 our confidential business information regulation.<sup>36</sup> In addition, you should submit a copy, from which you have deleted the claimed confidential business information, to the Docket by one of the methods set forth above.

#### *Will the Agency Consider Late Comments?*

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

#### *How Can I Read the Comments Submitted by Other People?*

You may read the materials placed in the docket for this document (e.g., the comments submitted in response to this document by other interested persons) at any time by going to <http://www.regulations.gov>. Follow the online instructions for accessing the dockets. You may also read the materials at the Docket Management Facility by going to the street address given above under **ADDRESSES**. The Docket Management Facility is open between 9 am and 5 pm Eastern Time, Monday through Friday, except Federal holidays.

Please note that even after the comment closing date, we will continue to file relevant information on the

docket as it becomes available. Further, some people may submit late comments. Accordingly, we recommend that you periodically check the docket for new material.

**Authority:** 49 U.S.C. 322, 30111, 30115, 30117 and 30166; delegation of authority at 49 CFR 1.50.

Issued on: June 24, 2010.

**Nathaniel Beuse,**

*Director, Office of Crash Avoidance Standards.*

[FR Doc. 2010-15773 Filed 6-28-10; 8:45 am]

**BILLING CODE P**

## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

**[Docket No. FWS-R4-ES-2009-0079]  
[MO92210-0-0009-B4]**

**RIN 1018-AW52**

#### **Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Vermilion Darter**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Proposed rule; reopening of comment period, availability of draft economic analysis, and amended required determinations.

**SUMMARY:** We, the U.S. Fish and Wildlife Service, announce the availability of the draft economic analysis (DEA) for the proposed designation of critical habitat for the vermilion darter (*Etheostoma chermocki*) under the Endangered Species Act of 1973, as amended. We also announce the reopening of the comment period and an amended required determinations section of the proposal. The comment period is reopened for an additional 30 days to allow interested parties an opportunity to comment simultaneously on the proposed critical habitat designation, the associated DEA, and the amended required determinations section. Comments previously submitted need not be resubmitted and will be fully considered in preparation of the final rule.

**DATES:** *Written Comments:* We will consider public comments received or postmarked on or before July 29, 2010. Please note that if you are using the *Federal eRulemaking Portal* (see **ADDRESSES** section, below) the deadline for submitting an electronic comment is 11:59 p.m. Eastern Daylight Savings Time on this date.

**ADDRESSES:** *Written Comments:* You may submit comments by one of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments to Docket No. **FWS-R4-ES-2009-0079**.

- *U.S. mail or hand-delivery:* Public Comments Processing, **Attn: FWS-R4-ES-2009-0079**; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, Suite 222; Arlington, VA 22203.

We will post all comments on <http://www.regulations.gov>. This generally means that we will post any personal information you provide us (see the **Public Comments** section below for more information).

#### **FOR FURTHER INFORMATION CONTACT:**

Stephen Ricks, Field Supervisor, Mississippi Fish and Wildlife Office, 6578 Dogwood View Parkway, Jackson, MS 39213; by telephone (601-321-1122); or by facsimile (601-965-4340). Persons who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 800-877-8339.

#### **SUPPLEMENTARY INFORMATION:**

##### **Public Comments**

We will accept written comments and information during this reopened comment period on the proposed designation of critical habitat for the vermilion darter that was published in the **Federal Register** on December 3, 2009 (74 FR 63366), the draft economic analysis (DEA) of the proposed designation of critical habitat for the vermilion darter, and the amended required determinations provided in this document. We will consider information and recommendations from all interested parties. We are particularly interested in comments concerning:

- (1) The reasons why we should or should not designate areas as "critical habitat" under section 4 of the Endangered Species Act (Act) (16 U.S.C. 1531 *et seq.*), including whether there are threats to the vermilion darter from human activity, the degree of which can be expected to increase due to the designation, and whether the benefit of designation would outweigh threats to the species caused by the designation, such that the designation of critical habitat is prudent.

- (2) Specific information on:

- The amount and distribution of vermilion darter habitat;
- What areas containing physical and biological features essential to the conservation of the species should be included in the designation and why;

<sup>36</sup> See 49 CFR 512.