

preparation of a Federalism Assessment. Title VIII of ANILCA precludes the State from exercising subsistence management authority over fish and wildlife resources on Federal lands unless it meets certain requirements.

In accordance with the President's memorandum of April 29, 1994, "Government-to-Government Relations with Native American Tribal Governments" (59 FR 22951), Executive Order 13175, and 512 DM 2, we have evaluated possible effects on Federally recognized Indian tribes and have determined that there are no effects. The Bureau of Indian Affairs is a participating agency in this rulemaking.

On May 18, 2001, the President issued Executive Order 13211 on regulations that significantly affect energy supply, distribution, or use. This Executive Order requires agencies to prepare Statements of Energy Effects when undertaking certain actions. As this rule is not a significant regulatory action under Executive Order 13211, affecting energy supply, distribution, or use, this action is not a significant action and no Statement of Energy Effects is required.

Drafting Information—William Knauer drafted these regulations under the guidance of Thomas H. Boyd, of the Office of Subsistence Management, Alaska Regional Office, U.S. Fish and Wildlife Service, Anchorage, Alaska. Taylor Brelsford, Alaska State Office, Bureau of Land Management; Bob Gerhard, Alaska Regional Office, National Park Service; Dr. Glenn Chen, Alaska Regional Office, Bureau of Indian Affairs; Rod Simmons, Alaska Regional Office, U.S. Fish and Wildlife Service; and Steve Kessler, USDA-Forest Service provided additional guidance.

List of Subjects

36 CFR Part 242

Administrative practice and procedure, Alaska, Fish, National forests, Public lands, Reporting and recordkeeping requirements, Wildlife.

50 CFR Part 100

Administrative practice and procedure, Alaska, Fish, National forests, Public lands, Reporting and recordkeeping requirements, Wildlife.

For the reasons set out in the preamble, the Federal Subsistence Board proposes to amend 36 CFR 242 and 50 CFR 100 for the 2005–06 regulatory year. The text of the amendments would be the same as the final rule amendments for the 2004–05 regulatory year published elsewhere in this issue of the **Federal Register**.

Dated: December 11, 2003.

Thomas H. Boyd,

Acting Chair, Federal Subsistence Board.

Dated: December 11, 2003.

Steve Kessler,

Subsistence Program Leader, USDA-Forest Service.

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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. NHTSA–2003–15715]

RIN 2127–AH73

Request for Comments; Federal Motor Vehicle Safety Standards; Occupant Crash Protection

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

ACTION: Request for comments.

SUMMARY: This document is intended to inform the public about recent testing the agency has conducted in consideration of whether to propose a high speed frontal offset crash test requirement. NHTSA has been conducting research since the early to mid-1990s on developing a frontal offset crash test procedure. In fiscal year 1997, the U.S. House of Representatives directed the National Highway Traffic Safety Administration (NHTSA) to work toward "establishing a federal motor vehicle safety standard for frontal offset crash testing." Since then, frontal offset crash tests have been adopted for New Car Assessment Programs in several countries worldwide. Additionally, in the U.S., the Insurance Institute for Highway Safety began a consumer crashworthiness ratings program in 1995 that included a fixed offset deformable barrier crash test.

Over the past several years, NHTSA has conducted testing to evaluate the feasibility of adopting a fixed offset deformable barrier crash test in Federal Motor Vehicle Safety Standard (FMVSS) No. 208, "Occupant crash protection," for improving frontal crash protection. It was preliminarily determined that the benefits from such a crash test could lead to an annual reduction in approximately 1,300 to 8,000 MAIS 2+ lower extremity injuries. NHTSA also conducted vehicle-to-vehicle crash tests to investigate the potential for disbenefits from a fixed offset

deformable barrier crash test requirement. The testing demonstrated that, for some sport utility vehicles, design changes that improved their performance in high speed frontal offset crash tests may also result in adverse effects on the occupants of their collision partners. This notice discusses additional tests the agency plans to conduct to further evaluate the potential disbenefits, and poses some alternative strategies that could be coupled with a frontal offset crash test requirement. The agency invites the public to comment on this notice and share information and views with the agency.

DATES: Comments must be received by April 5, 2004.

ADDRESSES: You may submit comments (identified by the docket number set forth above) by any of the following methods:

- Web Site: <http://dms.dot.gov>.

Follow the instructions for submitting comments on the DOT electronic docket site. Please note, if you are submitting petitions electronically as a PDF (Adobe) file, we ask that the documents submitted be scanned using Optical Character Recognition (OCR) process, thus allowing the agency to search and copy certain portions of your submissions.¹

- Fax: 1–202–493–2251.
- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL–401, Washington, DC 20590–001.

- Hand Delivery: Room PL–401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC between 9 a.m. to 5 p.m., Monday through Friday, except Federal Holidays.

Instructions: All submissions must include the agency name and docket number or Regulatory Identification Number (RIN) for this rulemaking. 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://dms.dot.gov>, including any personal information provided.

Docket: For access to the docket to read background documents or comments received, go to <http://dms.dot.gov> at any time or to Room PL–401 on the plaza level of the Nassif

¹ 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.

Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal Holidays.

FOR FURTHER INFORMATION CONTACT: The following persons at the National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590 can be contacted.

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SUPPLEMENTARY INFORMATION:

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I. Introduction

Improving occupant protection in crashes is a major goal of the National Highway Traffic Safety Administration (NHTSA). Frontal crashes are the most significant cause of motor vehicle fatalities. In 1972, NHTSA promulgated FMVSS No. 208 to improve the crash protection provided to motor vehicle occupants. This standard has been amended many times. The main dynamic performance requirements in this standard have been vehicle-to-rigid barrier crash tests, at angles between perpendicular and ± 30 degrees with both belted and unbelted dummies.² Occupant protection is evaluated based on data acquired from anthropomorphic test dummies positioned in the driver and right front passenger seats. Data collection instrumentation is mounted

²In March of 1997, NHTSA temporarily amended FMVSS No. 208 so that passenger cars and light trucks had the option of using a sled test for meeting the unrestrained dummy requirements. This option will be phased out as part of the advanced air bag rulemaking schedule.

in the head, chest, femur and, more recently, neck of the test dummies.

With the mandated requirements for driver and right front passenger air bags in new vehicles, and the eventual disappearance of non-air bag equipped vehicles in the future, within a few years, nearly all passenger cars and light trucks on the road will have frontal air bags. However, NHTSA has estimated that over 8,000 fatalities and 100,000 moderate-to-severe injuries will continue to occur in frontal crashes even after all passenger cars and light trucks have frontal air bags. Consequently, NHTSA has focused on the development of performance tests not currently addressed by FMVSS No. 208, such as high severity frontal offset crashes that involve only partial engagement of a vehicle's front structure. These tests result in large amounts of occupant compartment intrusion and increased potential for lower leg injury.

FMVSS No. 208 does not currently have provisions in place to fully assess the potential for lower extremity injury in frontal crashes, specifically knee ligament, tibia, and ankle injuries. The 5th and 50th percentile adult Hybrid III dummies prescribed for use in FMVSS No. 208 are limited to axial instrumentation on the left and right femurs. On May 3, 2003, NHTSA published an Advance Notice of Proposed Rulemaking [67 FR 22381] requesting comments on two versions of lower leg instrumentation for use in full frontal and offset frontal vehicle crashes. NHTSA is currently evaluating the comments and assessing the merits of the two devices.

II. Background

A. European Frontal Offset Crash Test

In 1990, the European Experimental Vehicles Committee (EEVC) created a Working Group (WG-11) for the improvement of protection in frontal collisions. The EEVC is comprised of representatives from several European nations that jointly initiate research in automotive safety areas. In the interest of global harmonization, the EEVC invited NHTSA, the Japanese Ministry of Transport, Transport Canada, and the Australian Federal Office of Road Safety to participate in the WG-11 activities. Automotive experts from the U.S., Europe, and Japan also provided input to WG-11.

After examining available crash data, the WG-11 concluded that the most effective way to reduce deaths and serious injuries in frontal impacts was to introduce a crash test that simulated the dynamic conditions of frontal car-to-

car impacts at 60 km/h or greater. The committee concluded that frontal impacts were still a major cause of severe and fatal injuries even in countries with high rates of safety belt usage. The WG-11 also found that many car-to-car impacts were offset impacts involving only part of the vehicle's frontal structure, and resulted in a large degree of intrusion.

The EEVC generally concurred with the WG-11's findings. However, the EEVC determined that the initial test speed should be 56 km/h until design methodologies were better understood at higher energies. The EEVC made a recommendation to the member states for a two-stage approach. The first stage was to be based on a 30-degree angled rigid barrier test with an anti-slide device, called ASD-30, and a future second stage was to be based on a fixed offset deformable barrier. Due to the high seat belt usage rates in Europe, the test dummies were tested in the restrained condition only, and new injury criteria were incorporated to address lower limb injury.

In December of 1996, the European Union (EU) adopted the EU Directive 96/79 EC³ for frontal crash protection, which became effective in October of 1998 for new types and models of vehicles, and will become effective in October of 2003 for all new vehicles. The first stage angled rigid barrier test with ASD-30 was omitted and a 56 km/h, 40 percent offset, fixed deformable barrier test was required in the Directive.

B. Other Countries

Other countries and consumer rating programs have adopted the use of a fixed offset deformable barrier crash test procedure. Those that currently use a high speed offset deformable barrier (ODB) test include the European New Car Assessment Program (EuroNCAP), Australia (regulation and NCAP), and Japan (NCAP).

EuroNCAP was developed in the United Kingdom with the aim of bringing about vehicle improvements throughout the European Union. EuroNCAP has grown with sponsorship from other European countries, the European Commission, European consumer groups, and international motoring organizations. The frontal offset test is based on the EU Directive 96/79 EC, except that the impact speed is 64 km/h instead of 56 km/h. The impact speed of 64 km/h was chosen

³Directive 96/79 EC of the European Parliament and of the Council on the Protection of Occupants of Motor Vehicles in the Event of a Frontal Impact and Amending Directive 70/156/EEC, December 16, 1996.

based on crash data analyses conducted for the EEVC WG-11.

In 1992 Australia began a consumer information program called the Australian New Car Assessment Program (ANCAP). In 1994, ANCAP added the draft EU Directive 96/79 EC frontal offset crash test procedure, except that the impact speed was specified at 60 km/h; however, the impact speed was later increased to 64 km/h in 1995. In 1998, the Australians introduced a frontal offset occupant protection regulation for new passenger car model approvals starting from January 1, 2000. The impact speed was established at 56 km/h.

Japan does not currently have a high speed frontal offset crash test regulation. However, the National Organization for Automobile Safety has been conducting high speed fixed offset deformable barrier crash tests at 64 km/h for the New Car Assessment Program in Japan since 2000.

C. Insurance Institute for Highway Safety Crashworthiness Rating Program

In 1995, the Insurance Institute for Highway Safety (IIHS) began a vehicle crashworthiness evaluation program that included a 64 km/h, 40 percent offset deformable barrier crash test. The IIHS essentially adopted the EU offset crash test procedure, but raised the impact speed to 64 km/h. The purpose of the program is to provide consumer information about the safety potential of the subject vehicles in frontal offset crashes, particularly related to intrusion-induced lower leg injuries.

In the IIHS vehicle crashworthiness evaluations, three aspects of performance are rated: (1) Vehicle structure, (2) dummy injury measures, and (3) restraint system performance and dummy kinematics. To evaluate the first component, vehicle structure, the post-test vehicle is evaluated based on how well the front-end crush zone manages the crash energy and limits the damage to the occupant compartment. Pre-crash and post-crash measurements are taken at several points on the instrument panel and in the footwell area. Movement of the steering column and closure of the driver door opening is also monitored.

For the second component, the dummy injury criteria evaluation is based on the measurements obtained from the instrumentation mounted on the dummy head, neck, chest, left and right leg and left and right foot. The dummy is instrumented with Denton Hybrid III lower legs.

For the last component, restraint system and dummy kinematics, IIHS utilizes a number of observational

criteria that monitor how well the driver dummy loads the seat belt and air bag, and rebounds into a normal seated position. For example, how well the air bag stayed between the occupant and the hard surfaces of the front structure is considered a performance criterion that is subjective. Door openings, partial head ejections, or head strikes with the door frame can also lead to lower ratings.

IIHS has evaluated the crashworthiness of more than 150 vehicle models using the 64 km/h, 40 percent ODB crash test since 1995. According to their results, many of the models originally tested have been redesigned and retested, with the majority producing better structural performance than their predecessors. They have also stated that in the past, fewer than one of every four model year (MY) 1995-1998 cars and passenger vans tested by IIHS earned a "good" overall crashworthiness evaluation based primarily on their performance in the offset test, whereas about half of all 1999-2001 models tested earned good ratings. IIHS researchers have stated that the large improvements in performance are principally due to the fact that vehicle structures have been redesigned to prevent major collapse of the occupant compartment.

III. Crash Tests To Assess the Benefits of Adopting a Fixed Offset Deformable Barrier Crash Test Requirement as Part of FMVSS No. 208

NHTSA initiated research in the early to mid-1990s to develop a frontal offset crash test procedure. Given the worldwide focus placed on the fixed offset deformable barrier crash test procedure, in fiscal year (FY) 1997, the U.S. House of Representatives directed NHTSA to work "toward establishing a federal motor vehicle safety standard for frontal offset crash testing." NHTSA was further directed to consider the harmonization potential with other countries and to work with interested parties, including the automotive industry, under standard rulemaking procedures.

In 1997, NHTSA submitted a Report to Congress⁴ on this program, providing a status report on the agency's efforts toward establishing a high speed frontal offset crash test standard. The agency made a preliminary assessment that the adoption of the EU 96/79 EC frontal offset test procedure, in addition to the current requirements of FMVSS No.

208, could yield benefits in terms of a reduction in lower limb injuries. To further assess this, a proposed matrix of tests was presented in the report.

In 1998, NHTSA completed the crash tests discussed in the Report to Congress. Tests were conducted with restrained 5th and 50th percentile dummies instrumented with Denton lower legs. The tests followed the EU 96/79 EC frontal offset test procedure, but the vehicle impact speed was increased to 60 km/h, since, at that time, the agency had thought that Europe would eventually increase their impact speed to 60 km/h. Occupant responses in the frontal offset crash tests were compared to those resulting from 48 km/h belted rigid barrier crash tests using the same vehicle model.

For the 5th percentile female dummy, it was found that the head and chest readings were approximately the same, or slightly greater in the full frontal rigid barrier crash tests. However, for the lower limb and neck areas, higher injury measures were found in the frontal offset crash tests. Overall, the 5th percentile dummy was also found to be more likely to experience higher normalized injury measures than the 50th percentile dummy in the same crash configuration. This was particularly true for neck injury.⁵ The test results with the 50th percentile dummy suggested that additional safety benefits might be provided for the lower extremities using the frontal offset crash test configuration.

In 1999-2002, NHTSA conducted another 25 tests to support an assessment of benefits and feasibility of a fixed offset deformable barrier crash test. The trends in dummy injury measurements were similar to that observed in the previous series of tests. Therefore, it was preliminarily determined that the benefits from a high speed fixed offset deformable barrier crash test standard would lead to a reduction in leg injuries for all occupants, and potentially a reduction in neck injuries for those of small stature. Consequently, in a notice published July 18, 2000 (65 FR 44565), NHTSA proposed that frontal offset be one of its highest priority harmonization recommendations under the 1998 Global Agreement, and announced its adoption of full/offset frontal as an agency recommendation in a notice published on January 18, 2001 (66 FR 4893).

In the 2001-2002 timeframe, the agency continued research by comparing the response of two types of lower leg instrumentation in eight high

⁴ Report to Congress "Status Report on Establishing a Federal Motor Vehicle Safety Standard for Frontal Offset Crash Testing," April 1997.

⁵ Docket NHTSA-1998-3332.

speed fixed offset deformable barrier crash tests with the 50th percentile adult male dummy. The two types of instrumentation included: the Hybrid III Denton legs and the Thor-Lx Hybrid III retrofit (Thor-Lx/HIIIr). Both lower leg instrumentation packages have been designed to fit the existing 50th percentile adult male Hybrid III dummy and to predict injury to the lower extremities. [Further discussion on the merits of the two types of lower leg instrumentation can be found in NHTSA Docket No. NHTSA-2002-11838].

In the test series, four vehicle models were crash tested twice, once with each of the two types of lower leg instrumentation, for comparison. The results showed that both the Denton legs and the Thor-LX/HIIIr legs were durable in the offset crash environment. The driver dummy head and chest injury measures with the two types of lower leg instrumentation were generally within the realm of crash test variability in the paired tests. The head and chest measures were, again, generally below the limits prescribed in FMVSS No. 208. However, the lower leg injury measures were exceeded in many of the tests, particularly with the Thor-LX.

IV. Crash Tests To Assess Potential Disbenefits of Adopting a Fixed Offset Deformable Barrier Crash Test Procedure

On December 7, 2001, John D. Graham, Administrator of the Office of Information and Regulatory Affairs of the Office of Management and Budget, wrote a letter to the Deputy Secretary of the U.S. Department of Transportation (DOT) asking DOT and NHTSA to consider giving greater priority to modifying its frontal occupant protection standard by establishing a high speed, frontal offset crash test requirement. If consideration was given, the letter suggested that refinements would need to be made in the estimates of the specific safety benefits that a new offset test would generate. This assessment would also need to include potential losses in existing safety benefits due to possible changes in vehicle structure and design. In response to this letter, NHTSA further examined the benefits and disbenefits of adopting a high speed frontal offset

crash test procedure. Data from the 1995-2001 National Automotive Sampling System Crashworthiness Data System indicated that approximately 84,811 front seat vehicle occupants annually experience AIS 2+ skeletal and joint injuries to the lower extremities and hip in frontal offset crashes. Of these 84,811 vehicle occupants, 67,848 (80 percent) were drivers and 16,963 (20 percent) were front outboard passengers. Based on evaluating the agency's fixed offset deformable barrier crash tests conducted to date and those from IIHS, it was preliminarily determined that such a test requirement would have the potential of annually reducing 1,300 to 8,000 MAIS 2+ lower extremity injuries. The dummy head, chest, and femur injury measures were typically meeting the injury criteria in the fixed offset deformable barrier crash tests, so no additional benefits were projected in these areas beyond those already achieved through the FMVSS No. 208 advanced air bag final rule.

However, the high speed frontal offset crash test procedure did demonstrate that benefits could be achieved in the lower leg region. Many vehicles exceeded the provisional injury criteria for the lower legs, particularly with the Thor-Lx/HIIIr instrumentation. A test that led to new vehicle designs with improved crash protection to the lower extremities could result in substantial benefits, since NHTSA has found that lower leg injuries are typically associated with long-term recovery and significant economic cost.

The agency also conducted a few tests to assess the potential for any disbenefits that such a regulation might cause. Since the IIHS frontal offset crash test procedure has been conducted on vehicles of the U.S. fleet for over eight years, NHTSA has tried to assess the effect that vehicle design changes leading to better performance in the high speed offset test have had on overall benefits and disbenefits. For example, if a vehicle model was rated "poor" in the IIHS test in 1997, but improved its rating to "good" in 2002, NHTSA sought to understand how those design changes affected the injuries received by not only the vehicle's occupants, but also the occupants of the vehicle's collision partner.

To assess potential disbenefits, NHTSA used the vehicle-to-vehicle crash test configuration from the agency's vehicle compatibility program.⁶ In this test configuration, both vehicles are moving at 56.3 km/h such that the subject vehicle impacts the left front corner of its collision partner at an offset of 50 percent and an impact angle of 30 degrees. Two vehicle-to-vehicle crash tests were conducted for each vehicle model under study, one from several years ago and one newer vehicle that had been redesigned. Both vehicles struck a MY 1997 Honda Accord. The two sets of dummy injury measurements for the driver of the MY 1997 Honda Accord were compared to determine which MY of the subject vehicle (*i.e.*, the new or old) imparted the higher injury numbers.

A. Chevrolet Blazer/Trailblazer Series

The first vehicle NHTSA examined was the General Motors (GM) Chevrolet Blazer sport utility vehicle (SUV). The 1997 MY Chevrolet Blazer received a "poor" overall crashworthiness rating in the IIHS frontal offset crash test program. However, in MY 2002, GM redesigned the Blazer, as the Chevrolet Trailblazer, and received an "acceptable" rating for its vehicle structure, but a "marginal" rating overall.

In June of 2002, NHTSA conducted two vehicle-to-vehicle crash tests.⁷ The first used an older MY 1997 Chevrolet Blazer impacting a MY 1997 Accord. The second used a redesigned 2002 Chevrolet Trailblazer impacting a MY 1997 Honda Accord. The occupant of interest, the driver of the MY 1997 Honda Accord, was a Hybrid III 50th percentile adult male dummy with Denton lower leg instrumentation.

In the first crash test of the MY 1997 Chevrolet Blazer, the Honda Accord driver dummy slightly exceeded the head and leg injury criteria specified in FMVSS No. 208. However, the chest and neck injury criteria were met (*See Table 1*).

⁶ Summers, Prasad, Hollowell, "NHTSA's Vehicle Compatibility Research Program," Society of Automotive Engineers Paper No. 1999-01-0071, March 1999.

⁷ Docket NHTSA-1998-3332.

TABLE 1.—DRIVER INJURY MEASURES FOR 1997 HONDA ACCORD
[Blazer/Trailblazer Series]

	HIC15	Chest Gs	Chest deflection (mm)	Nij	Max. femur (N)
FMVSS No. 208 Injury Criteria Perf. Limits	700	60	63	1.0	10,008
1997 Chevrolet Blazer Test	738	53	24	0.39	12,114
2002 Chevrolet TrailBlazer Test	3,310	81	85	0.85	16,859

In the second crash test, involving the MY 2002 Chevrolet Trailblazer, all FMVSS No. 208 injury criteria for the Honda Accord driver were exceeded with the exception of Nij. (The Nij was marginally below the performance limits, but was still higher than in the MY 1997 Chevrolet Blazer test). All other injury measures for the head, chest and femurs of the Honda Accord driver increased substantially when struck by the later MY vehicle. The driver head injury measurement for the Honda driver in the MY 2002 Chevrolet Trailblazer crash test was four times higher than that in the MY 1997 Chevrolet Blazer crash test.

NHTSA examined force-deflection profiles of the MY 1997 Blazer and MY 2002 Trailblazer vehicles to provide insight on how the vehicles crushed when impacting a rigid barrier under NCAP conditions. Due to the sharp-rising slope of the force-deflection profile and the reduced crush space in the MY 2002 Trailblazer, the vehicle model exhibited stiffer characteristics

when compared to its predecessor. The MY 2002 Trailblazer also increased in mass by 227 kg (500 lbs).

On the other hand, the MY 2002 Chevrolet Trailblazer exhibited notable improvements in structural integrity, as demonstrated in the IIHS frontal offset crash test. The MY 1997 Blazer, in contrast, had a large amount of structural deformation to the A-pillar and driver door frame.

Overall, the crash test results showed that the MY 2002 Chevrolet Trailblazer slightly improved the crash protection provided to its own occupants in frontal offset crashes; however, it reduced the injury protection provided to its collision partner. The newer vehicle had increased stiffness and mass, and different geometry. It was difficult to assess how much of a contribution each of these factors made toward increasing the injury measures experienced by the Honda driver.

B. Mitsubishi Montero Sport Series

Following the Blazer/Trailblazer tests, the agency decided to conduct a second

pair of tests to better assess the influence of structural stiffness versus mass and geometric effects. The vehicle model selected for study was the Mitsubishi Montero Sport SUV. In MY 1999, IIHS rated the crashworthiness of this vehicle as “poor.” However, after a redesign in MY 2001, the Montero Sport improved its rating to “good.” This vehicle had virtually no change in mass, and minimal change in front end geometry, during the course of the subject model years. Force-deflection measurements for the MY 1999 and MY 2001 vehicles were not available.

The Mitsubishi Montero Sport test series was conducted in November of 2002.⁸ NHTSA used the same 30 degree frontal oblique test configuration from the Blazer/Trailblazer series. As before, the target vehicle was a 1997 Honda Accord with a 50th percentile male Hybrid III driver dummy with Denton lower leg instrumentation (Table 2).

TABLE 2.—DRIVER INJURY MEASURES FOR 1997 HONDA ACCORD
[Montero Sport Series]

	HIC15	Chest Gs	Chest deflection (mm)	Nij	Max. femur (N)
FMVSS No. 208 Injury Criteria Perf. Limits	700	60	63	1.0	10,008
1999 Mitsubishi Montero Sport Test	323	58	32	0.65	9,744
2001 Mitsubishi Montero Sport Test	480	71	58	0.61	10,903

The results demonstrated that injury measures for the head, chest, and femurs of the Honda Accord driver increased when struck by the redesigned MY 2001 Mitsubishi Montero Sport. Although, the increases in the injury measures were not as large in this test series, the test series exhibited the same trend toward increased injuries to the driver occupant of the crash partner from the later MY striking vehicle as was found in the Chevrolet Blazer/Trailblazer series.

C. Future Vehicle Crash Tests

The two series of vehicle-to-vehicle crash tests were indicative of the same general trend, but the magnitude of differences observed were very different. The later model year striking vehicle generally imparted higher injury numbers to the struck vehicle’s driver dummy. Furthermore, the greatest increase in injury measures were in the body regions of the head and chest, which could largely offset any potential benefits gained by reducing injuries to

lower legs of occupants of the striking vehicle. Consequently, NHTSA’s two test series have raised questions about whether or not these results are representative of the effects on collision partner protection in the current fleet, and the extent to which disbenefits to crash partners are associated with design changes made to improve performance in a high speed frontal offset crash test.

Because of this, the agency has decided to study the performance of

⁸Docket NHTSA–1998–3332.

four additional vehicle models that have improved their IIHS crashworthiness rating from “poor” (or “marginal” in one case) to “good” over the course of a vehicle redesign. The vehicle models selected are the Cadillac Seville, the Toyota Avalon, the Dodge Ram 1500 and the Toyota Previa. Generally, these vehicle models received a “poor” or “marginal” crashworthiness rating in the 1993–1998 MY time period.

However, more recently, these vehicle models improved their rating to “good.” While we previously studied two SUV models, we are now conducting the tests of other vehicle types to see if a similar trend is observed. We have broadened our selection to include two vehicle models from the other light truck and van (LTV) classes, specifically a pickup truck and a minivan. We have also selected two passenger cars, since load cell data collected in NHTSA’s New Car Assessment Program has suggested that passenger cars have generally been getting stiffer during the past five years.⁹

Three of the vehicle models, the Cadillac Seville, the Dodge Ram 1500 and the Toyota Previa, improved their IIHS overall crashworthiness rating from “poor” to “good” during the course of a redesign without a significant increase in vehicle weight (less than 59 kg or 130 lb). The fourth vehicle, the Toyota Avalon, improved its rating from “marginal” to “good,” but had a 110 kg (243 lb.) increase in vehicle weight. Therefore, with the exception of the Avalon, increased mass should not be a relevant factor.

NHTSA plans to docket the results of these tests in Docket Number NHTSA–1998–3332, as they become available. We anticipate this will occur during the comment period for this notice. NHTSA does not know at this time what conclusions, if any, can be reached regarding potential benefits and disbenefits of a high speed frontal offset crash test requirement. Therefore, in addition to the tests described above, we would like to consider data and views from others in deciding on the next steps for our high speed frontal offset rulemaking. We will then proceed with a proposal or pursue potential alternative strategies, depending on the outcome of these tests and the comments received.

V. Potential Alternative Strategies

If there appears to be a trend of higher partner vehicle injury measures for new

vehicles that have been redesigned to perform better in an offset frontal crash test, NHTSA may consider potential alternative strategies aimed at preserving the potential lower leg benefits from a high speed frontal offset crash test requirement, while minimizing the risk of increasing vehicle aggressivity in the fleet. The alternative strategies discussed in this section do not constitute an exhaustive list of options. NHTSA is seeking comments on others as well.

A. Exemption of Certain Vehicles

One strategy to reduce the potential disbenefits of a frontal offset crash test requirement would be to limit the vehicle classes or gross vehicle weight rating (GVWR) of the vehicles to which the potential regulation would apply. For example, NHTSA’s initial disbenefits assessment tests were conducted on SUVs only. If tests with the Cadillac DeVille and Toyota Avalon passenger cars do not show the same trend as observed for the Blazer/Trailblazer and Montero Sport, one potential strategy would be to apply the high speed frontal offset requirement only to passenger cars. Excluding SUVs (or all LTVs) from the proposed frontal offset crash test requirement would not contribute to encouraging vehicle manufacturers to stiffen their front structures to comply with the test procedure. However, this option is not a panacea since it would exempt LTV manufacturers from being required to improve their compartment integrity. This is of particular concern since LTVs are a growing proportion of the U.S. passenger vehicle fleet.

Passenger car occupants, on the other hand, could benefit from a frontal offset crash test requirement since their vehicles would be required to maintain compartment integrity and provide better lower leg protection. Since passenger cars typically incur more intrusion when involved in frontal crashes with larger, stiffer LTVs, their occupants would largely be the benefactors from such a frontal offset regulation. NHTSA estimates that approximately 77 percent of the benefits of a high speed frontal offset regulation would accrue to passenger car occupants. In addition, passenger car occupants may also benefit from the LTV exclusion, since the LTVs striking them by may not be designed to be as stiff.

Overall, this approach would increase the self protection (*i.e.*, the protection a vehicle provides to its own occupants) of passenger cars, but would not address the self protection needs of LTV occupants. The approach may also

create disbenefits to LTV occupants if future passenger car collision partners become significantly stiffer as a result of a frontal offset crash test requirement. LTVs could alternatively be addressed in a future rulemaking when a more comprehensive strategy for addressing fleet compatibility is developed.

B. Additional Performance Requirement

Another alternative under consideration would be to include a loading requirement that would limit the stiffness and/or energy management such that LTV/SUV’s structural properties were more similar to those of passenger cars. There are a number of long term strategies to accomplish this. The potential strategies could include a fleet-representative moving deformable barrier-to-vehicle test, a fixed offset deformable barrier test with a mass-dependent impact speed, or a fixed offset deformable barrier test (with a constant impact speed) and either a load limit or a height requirement on the average force applied to the barrier face. However, NHTSA has collected only a very limited amount of load cell data in its frontal offset deformable barrier crash tests. A similar effort is described for partner protection in NHTSA’s vehicle compatibility report,¹⁰ but test results from the compatibility initiative will not be available for about a year, and do not include fixed offset deformable barrier testing. Thus, pursuing this alternative is viewed as a longer term effort, and is not consistent with establishing a high speed frontal offset crash test requirement in the near future. Comments on alternative loading requirements that have been developed and could be used in the near term are sought.

VI. Solicitation of Comments

To assist the agency in acquiring the information it needs, NHTSA is including a list of questions and requests for comments and data in this notice. For easy reference, the questions 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 very specific, including analysis of safety consequences. NHTSA encourages commenters to provide scientific

⁹Swanson, J., Rockwell, T., Beuse, N., Summers, L., Summers, S., Park, B., “Evaluation of Stiffness Measures from the U.S. New Car Assessment Program,” Proceedings of the 18th International Technical Conference on the Enhanced Safety of Vehicles, Nagoya, Japan, Paper 527.

¹⁰“Initiatives to Address Vehicle Compatibility,” June 2003, 68 FR 36534, and Docket NHTSA–2003–14622.

analysis and data relating to materials, designs, testing, manufacturing, and field experience.

The following is a list of questions for which the agency is requesting feedback. NHTSA also encourages commenters to provide any other data, analysis, arguments or views they believe are relevant.

1. Are NHTSA's anticipated safety benefits associated from a fixed offset deformable barrier crash test requirement provided in Section IV realistic? Please provide data to support any views.

2. In addition to potential disbenefits to the occupants of collision partners described in this notice, are there other potential disbenefits NHTSA should consider? Please provide data to support any views.

3. Is it necessary to stiffen the front corners of vehicles to do well in a fixed offset deformable barrier crash test? Please explain the answer. Also, is the answer to this question different for different vehicle classes? If so, please explain the answer for each vehicle class.

4. If stiffening the front corners of vehicles to do well in a fixed offset deformable barrier crash test is just one alternative for improving performance, what other types of countermeasures are available to achieve good performance in a fixed offset deformable barrier crash test? What are the costs and required lead-time associated with these countermeasures?

5. What are the constraints vehicle manufacturers must face in designing a vehicle to meet a high speed fixed offset deformable barrier crash test requirement? Which are the most difficult to overcome? What types of vehicles have the most constraints?

6. Is it necessary for the agency to consider alternative strategies to prevent vehicles from being too stiff or aggressively designed as a result of a fixed offset deformable barrier crash test requirement?

7. Are there certain vehicle classes or vehicle weights that should be exempted from a frontal offset crash test requirement? If so, please state the rationale for each vehicle class exemption or vehicle weight limitation.

8. This notice discussed one potential alternative strategy establishing an additional performance requirement to limit stiffness and/or energy management. Is this an appropriate strategy to pursue? If so, what requirement should be established?

9. Are there other alternative strategies, beyond those mentioned in this notice, which the agency should consider in conjunction with a fixed

offset deformable barrier crash test requirement?

10. What optimum test speed should be employed in the fixed offset deformable barrier test so as to maximize occupant compartment integrity and at the same time ensure no undue stiffening of the fronts of large vehicles? What are the trade-offs between test speed and front-end stiffness of vehicles? Are the countermeasures dependent upon the test speed? If so, please explain the dependence.

VII. Public Participation

A. 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 (49 CFR 553.21). We established this limit to encourage the preparation of 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 two copies of your comments, including the attachments, to Docket Management at the address given above under **ADDRESSES**.

Comments may also be submitted to the docket electronically by logging onto the Dockets Management System website at <http://dms.dot.gov>. Click on "Help & Information" or "Help/Info" to obtain instructions for filing the document electronically.

B. How Can I Be Sure That My Comments Were Received?

If you 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.

C. 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**. In addition, you should submit two copies, from which you have deleted the claimed confidential

business information, to Docket Management. 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 (49 CFR part 512.)

D. Will the Agency Consider Late Comments?

We will consider all comments that Docket Management receives before the close of business on the comment closing date indicated above under **DATES**. To the extent possible, we will also consider comments that Docket Management receives after that date. If Docket Management receives a comment too late for us to consider it in developing a proposed rule (assuming that one is issued), we will consider that comment as an informal suggestion for future rulemaking action.

E. How Can I Read the Comments Submitted by Other People?

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 April 11, 2000 (Volume 65, Number 70; Pages 19477-78) or you may visit <http://dms.dot.gov>.

You may read the comments received by Docket Management at the address given above under **ADDRESSES**. The hours of the Docket are indicated above in the same location.

You may also review the comments on the Internet. To read the comments on the Internet, take the following steps:

(1) Go to the Docket Management System (DMS) Web page of the Department of Transportation (<http://dms.dot.gov/>).

(2) On that page, click on "Simple Search."

(3) On the next page, type in the five-digit docket number shown at the beginning of this document. Example: If the docket number were "NHTSA-1998-12345," you would type "12345." After typing the docket number, click on "search."

(4) On the next page, which contains docket summary information for the docket you selected, click on the desired comments. You can then download the comments.

Please note that even after the comment closing date, we will continue to file relevant information in 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: January 28, 2004.

Stephen R. Kratzke,

Associate Administrator for Rulemaking.

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