May I Request an Alternative Method of Compliance?

(f) You may request a different method of compliance or a different compliance time for this AD by following the procedures in 14 CFR 39.19. Unless FAA authorizes otherwise, send your request to your principal inspector. The principal inspector may add comments and will send your request to the Manager, Standards Office, Small Airplane Directorate, FAA. For information on any already approved alternative methods of compliance, contact Greg Davison, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329–4130; facsimile: (816) 329–4090.

May I Get Copies of the Documents Referenced in This AD?

(g) You may get copies of the documents referenced in this AD from GROB Luft-und Raumfahrt, Lettenbachstrasse 9, D–86874 Tussenhausen-Mattsies, Federal Republic of Germany; telephone: 49 8268 998139; facsimile: 49 8268 998200. You may view these documents at FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri 64106.

(h) German AD Numbers 2001–317/4, dated January 9, 2003, and 2001–317/3, dated November 14, 2002, also address the subject of this AD.

Issued in Kansas City, Missouri, on May 25, 2004.

David R. Showers,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 04–12575 Filed 6–2–04; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. NHTSA–04–17980]

RIN 2127–AI38

Federal Motor Vehicle Safety Standards; Seat Belt Assemblies

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

ACTION: Notice of proposed rulemaking.

SUMMARY: In this document, NHTSA proposes to amend the Federal motor vehicle safety standard for seat belt assemblies to redefine the requirements and to establish a new test methodology for emergency-locking retractors. This rulemaking is in response to a petition for rulemaking submitted by a trade association representing manufacturers of occupant restraints. If adopted, the amendments would establish a new acceleration corridor, add a figure illustrating the acceleration corridor, provide tolerance on angle measurements, and employ the same instrumentation specifications currently found in other Federal motor vehicle safety standards containing crash tests.

DATES: You should submit comments early enough to ensure that Docket Management receives them not later than August 2, 2004.

ADDRESSES: You may submit comments [identified by DOT DMS Docket Number—04–17980] by the following methods:

- Web site: *http://dms.dot.gov.* Follow the instructions for submitting comments on the DOT electronic docket site.
- 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. and 5 p.m., Monday through Friday, except Federal Holidays.
- Federal eRulemaking Portal: Go to *http://www.regulations.gov.* Follow the online instructions for submitting comments.

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 Submission of Comments heading under 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. Please see the Privacy Act heading under Regulatory Analysis and Notices.

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 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: For non-legal issues, you may contact William Fan, Office of Crashworthiness Standards, at (202) 366–4922, and fax him at (202) 493–2739.

For legal issues, you may contact Christopher Calamita, Office of Chief Counsel, at (202) 366–2992, and fax him at (202) 366–3820.

You may send mail to these officials at the National Highway Traffic Safety Administration, 400 Seventh St., SW., Washington, DC 20590.

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I. Background

The seat belt emergency-locking retractor was developed in the early 1960s to help maintain occupant position during rapid deceleration. The locking sensitivity of the device has been an important issue given the need to assure that the retractor would lock very early during a collision and even during the application of emergency braking, but not be so sensitive as to cause ''nuisance'' locking during normal driving conditions. Based on the limited knowledge and technology at the time, the Society of Automotive Engineers (SAE) Motor Vehicle Seat Belt Committee (MVSBC) developed the recommended practice SAE J–4b, and subsequently SAE J–4c. These recommended practices provided performance requirements, laboratory test procedures, and minimal design requirements for seat belt assemblies for use in motor vehicles, in order to minimize the risk of bodily harm in an impact. However, the test methodologies for the emergency-locking retractor were not clearly defined in these SAE recommended practices. SAE J–4c was ultimately adopted by NHTSA in the promulgation of Federal Motor Vehicle Safety Standard (FMVSS) No. 209, *Seat belt assemblies.* As a result, the test methodology, instrumentation, and measurements for assessing conformance were not explicitly described in S4.3(j) and S5.2(j) of FMVSS No. 209. This situation has not changed since the adoption of the standard on February 3, 1967.

Based on FMVSS No. 209, the agency developed a laboratory test procedure for its compliance laboratories to follow, which provided more detail concerning the test set up. The most recent version,

TP–209–05, was issued on January 17, 2003. To ensure that the retractor will be subject to at least 0.7 g in testing, as required by the standard, the test procedure specifies the use of a 0.72 g acceleration pulse. This test pulse accounts for calibration and accuracy ranges of the test equipment.

The Automotive Occupant Restraints Council (AORC) requested an interpretation of S4.3(j) and S5.2(j) to gain a better understanding of the seat belt emergency-locking retractor test procedures and performance requirements. NHTSA responded through an interpretation letter dated February 4, 2000. The AORC did not agree with the position expressed in the interpretation letter and subsequently submitted a petition for rulemaking on June 2, 2000.

The AORC petition requested that NHTSA amend sections S4.3(j) and 5.2(j) of FMVSS No. 209 with respect to the acceleration pulse shape, onset rate,[1] time duration, and acceleration tolerance. (Docket Number NHTSA–2127–2000–7073–12.) In addition, the AORC requested that NHTSA apply to S4.3(j) and S5.2(j) the same instrumentation specifications used in other FMVSS dynamic performance requirements.

The AORC indicated that at the time FMVSS No. 209 was developed, both the SAE Committee and NHTSA were working on emergency-locking retractors. Due to limitations of test equipment at that time, the SAE Committee specified that the 0.7 g acceleration be achieved within a time window of 50 milliseconds (ms), but declined to include an onset rate specification. The AORC believes that the intent of both the SAE Committee and NHTSA, at the time when FMVSS No. 209 was adopted, was to mimic a hard braking deceleration pulse in which the 0.7 g level should be achieved with a sharp onset rate, followed by a steady-state deceleration. However, neither the SAE Committee nor NHTSA addressed the onset rate range and the deceleration tolerance at that time, and neither organization has addressed the requirements for emergency-locking retractors since then.

In response to the AORC's request for an interpretation, the agency stated in the February 4, 2000 letter:

> Nothing in the standard purports to require a constant acceleration (or a constant rate of increase of acceleration), to establish a specific period during which the acceleration must be maintained, or to prohibit any ''decay'' after the 0.7 g level is reached. Therefore, each retractor must be able to meet the locking requirements of the standard regardless of the rate of acceleration, the duration of the acceleration, or the extent of any subsequent ''decay.''

The AORC agreed that sections S4.3(j) and S5.2(j) do not explicitly address the technical points of the testing methodology. In its petition for rulemaking, the AORC argued that many acceleration pulses conform to S4.3(j) and S5.2(j) in theory, but those pulses would cause ''currently-considered FMVSS No. 209 compliant retractors'' to fail the locking requirements within the 25 millimeter (mm) webbing payout. Further, AORC believes that NHTSA's interpretation permits testing methodologies that virtually no known emergency-locking retractor could possibly meet. In its petition, the AORC provided several example pulses that would conform to the criteria in the interpretation letter, but would not be sufficient to consistently lock a production retractor.

To address these concerns, the AORC petitioned that S5.2(j) should include a specific acceleration-time (a-t) corridor, with the maximum and minimum acceleration onset rates matching those specified in the Economic Commission for Europe Regulation No. 16, *Uniform Provisions Concerning the Approval of: Safety Belts and Restraint Systems for Occupants of Power-Driven Vehicles and Vehicles Equipped with Safety Belts* (ECE R16). The AORC also stated that the acceleration and the webbing displacement recording techniques should conform to SAE Recommended Practice J211/1 rev. Mar 95, ''Instrumentation for Impact Test-Part 1—Electronic Instrumentation,'' (SAE J211/1 rev. Mar 95), the signals should be filtered with an SAE Class 60 filter, and the accelerometer should be an instrumentation grade, high accuracy, 10 g device. The petition contended that the addition of an a-t corridor and the specification of the test methodology and instrumentation would create the needed objectivity in the standard and fully clarify the standard in this area.

II. Performance Requirements

Currently, there are two types of emergency-locking retractors in production. There are those that are sensitive to webbing withdrawal rate and those sensitive to vehicle deceleration. The latter type of retractor responds directly to the 0.7 g acceleration pulse and lock-up usually occurs within a short period of time. The former type of retractor responds to the webbing withdrawal speed, which slowly builds up from zero to the threshold speed, when the assembly is subjected to the 0.7 g acceleration pulse. As a result, a longer time period may be required for this type of retractor to respond. Despite the two different basic designs, FMVSS No. 209 has only one requirement for compliance testing.

Under S4.3(j)(1) of FMVSS No. 209, an emergency-locking retractor of a Type 1 or Type 2 seat belt assembly,[2] when tested in accordance with S5.2(j), ''shall lock before the webbing extends 25 mm when the retractor is subject to an acceleration of 7 m/s^2 (0.7 g).'' S5.2(j) states in part that ''[t]he retractor shall be subject to an acceleration of 7 m/s^2 (0.7g) within a period of 50 milliseconds (ms), while the webbing is at 75 percent extension[.]''

The AORC asserts that these sections do not provide sufficient detail for certain allegedly essential elements necessary for conducting compliance tests. In its petition, the AORC stated that S4.3(j) and S5.2(j) do not specify: (A) A rate of onset, (B) an acceleration pulse duration, (C) an acceleration tolerance level, and (D) a subsequent acceleration decay.[3] In response to the AORC's concerns, we are proposing to amend those paragraphs of the standard.

A. Rate of Onset

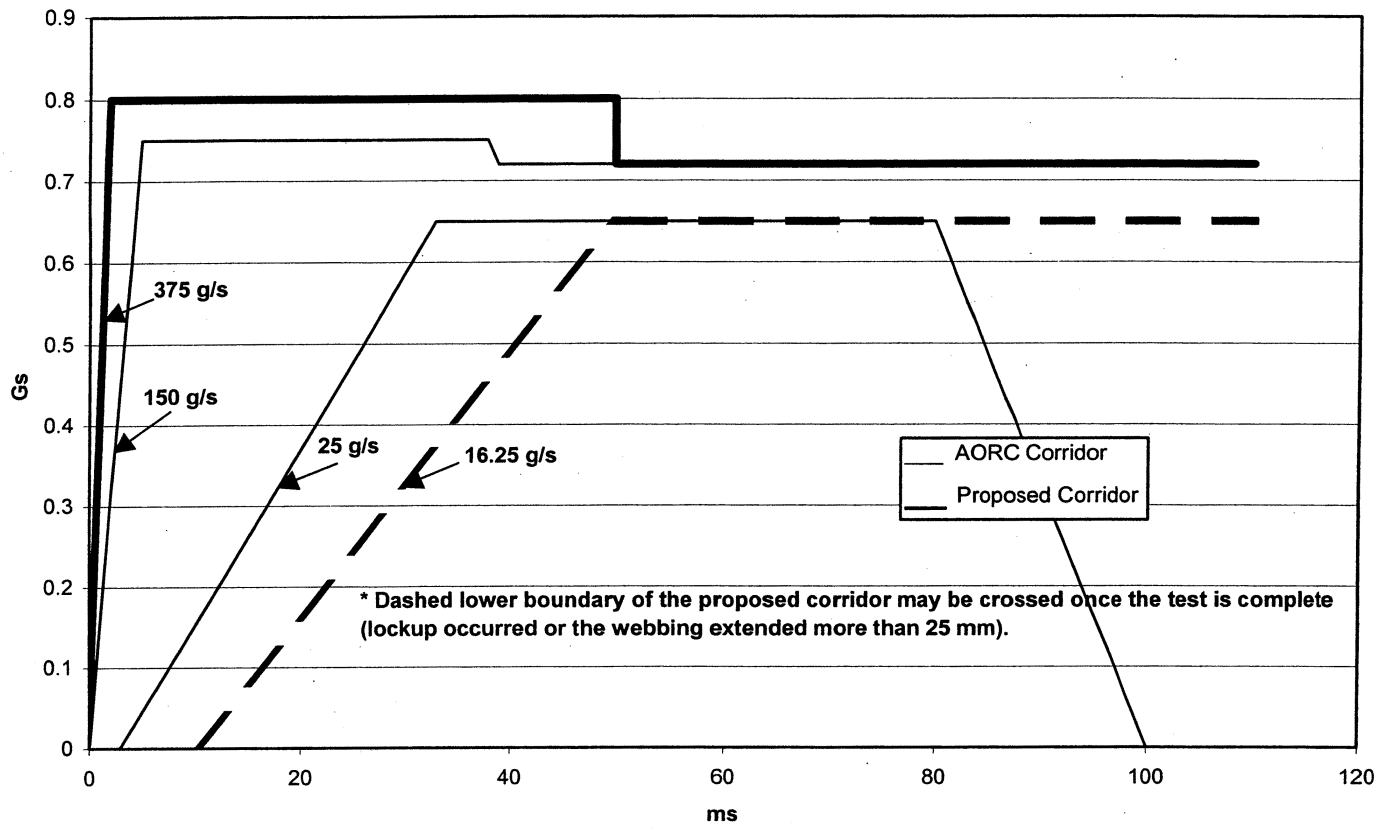
The agency is proposing a new acceleration corridor with an increased maximum onset rate and a wider acceleration corridor, which would allow a range of onset rates to be tested that we have preliminarily determined to be more representative of real world crashes and emergency braking events. If made final, these amendments would establish a maximum onset rate of 375 g/sec. (See Figure A.) We are also proposing a wider onset corridor to provide the opportunity for conducting compliance tests with simulated emergency braking pulses, or those pulses that have a half-bell shaped onset curve. This document also proposes a 16.25 g/sec minimum onset rate to accommodate purely linear pulses during the first 50 ms interval.

[1] Onset rate is defined as the rate (in g/sec) at which the seat belt retractor is initially accelerated from time zero.

[2] Under S3 of FMVSS No. 209, a Type 1 seat belt assembly is a lap belt for pelvic restraint, and a Type 2 seat belt assembly is a combination of pelvic and upper torso restraints.

[3] Acceleration decay is defined as the rate (in g/sec) at which the retractor acceleration is returned to zero.

Figure A: Comparison of NHTSA and AORC-proposed acceleration corridors.



In developing this proposal, the agency examined vehicle crash tests, hard braking tests, FMVSS No. 209 compliance test pulses,[4] and data presented by the AORC in its petition for rulemaking.[5] We found that the onset rate for various crash test pulses varied greatly, from over 1,000 g/sec for crash pulses to 2 g/sec for emergency braking pulses. We determined that there are three basic onset pulse shapes used in compliance testing—(1) linear (Dayton T. Brown and Pacific Scientific Co.), (2) quarter-sine wave (Pacific Scientific Co.), and (3) half-bell shaped (U.S. Testing). While the linear type has a well-defined rate of onset, the remaining two do not.

To accommodate the range of onset rates, the agency is proposing to amend the time window within which the 0.7 g acceleration must be obtained. The proposed maximum onset rate of 375 g/sec would allow pulses that have historically been used for ensuring a minimum level of safety performance for the emergency-locking retractor in vehicle seat belts along with a wide range of acceleration pulses. The proposal expands the 150 g/sec maximum onset recommended by the AORC to include the acceleration pulses used for compliance testing by Dayton T. Brown and U.S. Testing. (See Figure B.) To exclude these pulses could potentially degrade the requirements of the standard. AORC did not provide any data to substantiate its assertion that its proposed onset rates were more appropriate. It merely noted that the onset rates matched closely to those specified in the ECE R16 (25 g/sec to 125 g/sec).

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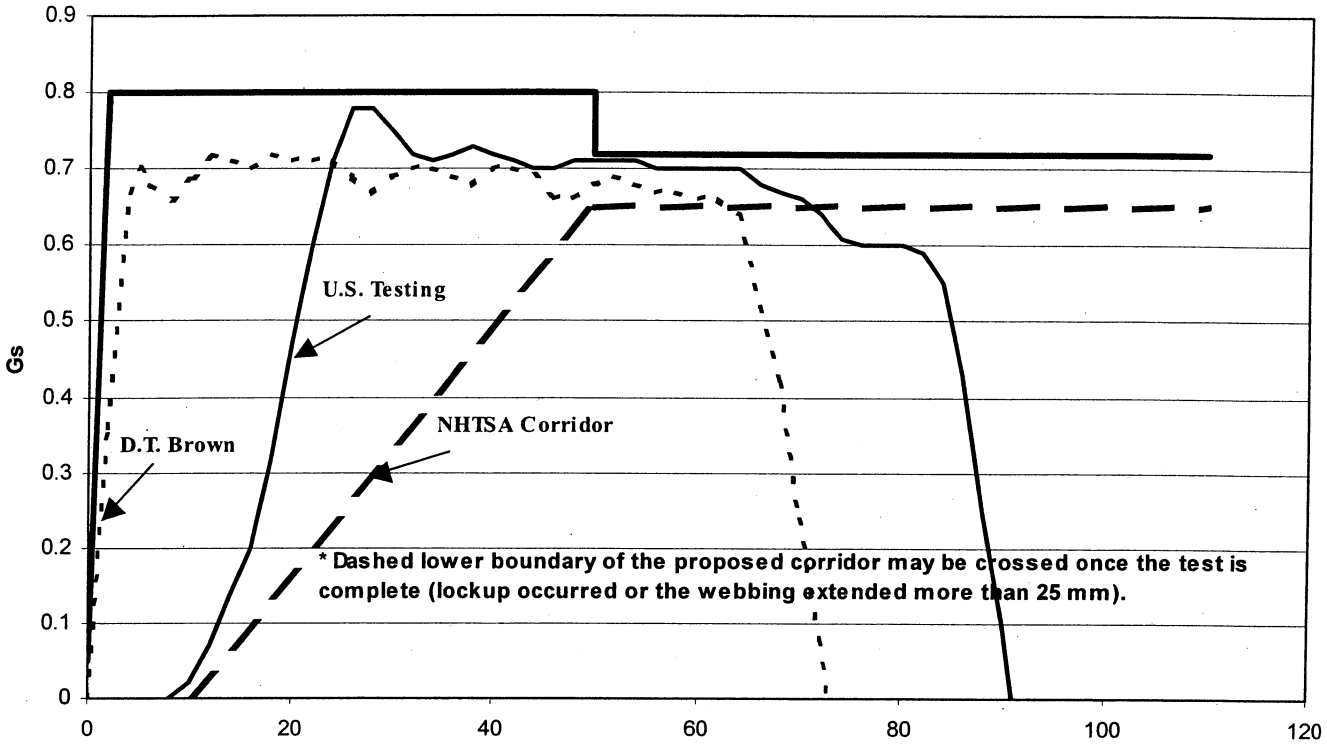
[4] From U.S. Testing and Dayton T. Brown test laboratories.

[5] From Pacific Scientific Company.

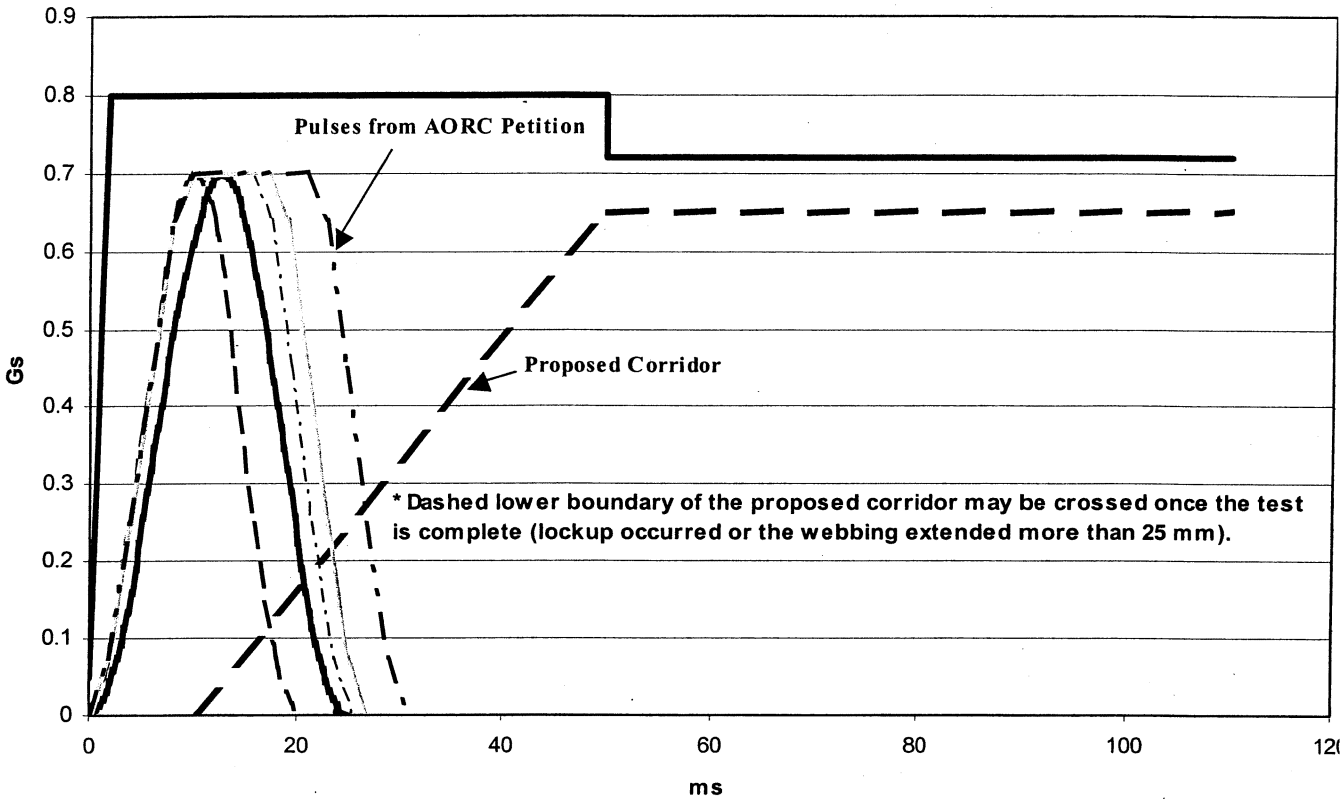
Figure B: Comparison of Rulemaking Corridor and Test Pulses from U.S. Testing and Dayton T. Brown.



The proposed onset corridor and 16.25 g/sec minimum onset rate would allow for pulses with slower onset rates and require compliance under the acceleration pulses currently used for FMVSS No. 209 compliance testing by U.S. Testing. The acceleration pulses currently used for FMVSS No. 209 have proven to be repeatable and reproducible. Specifying a corridor that includes the current acceleration pulses used for compliance testing demonstrates that it is possible to conduct a repeatable and reproducible acceleration pulse within the proposed corridor. While the AORC suggested a corridor more narrowly defined at the beginning (*i.e.*, a 0–4 ms window), it did not provide a rationale for that limitation.

Lastly, the proposed corridor addresses the AORC's concern of needing to certify to theoretical acceleration pulses that meet the letter of the current FMVSS No. 209 regulation, but may not exist in real world crash or emergency braking events. Figure C provides a plot demonstrating that the theoretical pulses and mathematical models provided by the AORC in its petition would be eliminated by the onset rate corridor proposed by this document. The revised onset rate corridor for the acceleration pulse in the proposal would maintain the integrity of the current FMVSS No. 209 standard.

Figure C: Comparison of the Proposed Corridor and Example Pulses from AORC Petition



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B. Acceleration Pulse Duration

The proposal in this document would not require the test pulse to have a minimum time duration, as suggested in AORC's petition. The 50 ms time period specified in S5.2(j) implicitly specifies an onset rate and not the time duration of the acceleration pulse. Since S4.3(j) and S5.2(j) do not provide a specific acceleration time duration, the AORC recommended that a retractor a-t corridor be included in S5.2(j). (See Docket Number NHTSA–2000–7073–12.)

The lower bound of the corridor proposed by the AORC has a minimum time limit of 100 ms while the upper bound has no time limit. In theory, the AORC is suggesting that the minimum time duration for the 0.7 g pulse should be 100 ms. However, the suggested a-t corridor presents some problems. For example, the minimum 100 ms time duration does not work for an acceleration pulse that coincides with the suggested upper a-t corridor, since it will produce a 25 mm webbing payout in about 86 ms. (This time estimate was made by double integrating the upper corridor of the a-t pulse.) We also note that the two compliance test pulses used by U.S. Testing and Dayton T. Brown laboratories would be disqualified by the AORC corridor since their duration is less than 100 ms. In these tests a lock-up occurs 10 ms to 15 ms before the acceleration drops to zero.

Once the onset rate of the acceleration pulse is given, the pulse duration that is required to produce 25 mm webbing payout is implicitly determined. Therefore, a pulse time duration specification is not essential.

C. Acceleration Tolerance Level

In order to preserve test pulses that simulate the worst case test condition, we decided against proposing an a-t corridor that defines the permissible a-t curves with which to demonstrate performance. Some laboratory hard (emergency) braking tests show a peak in the acceleration before acceleration achieves a ''steady-state'' condition. In some instances, the initial peak pulse may exhibit several rapid oscillations before it converges to the 0.7 g acceleration. NHTSA's field braking test data (see the agency's document in this docket) show that the vehicle deceleration reaches its threshold value of 0.7 g at about 0.5 seconds and lasts for a few seconds, depending upon the vehicle travel velocity. The deceleration reaches its initial peak and then drops off, or perhaps even increases, slightly before it achieves the so-called ''steady-state condition.''

The upper bound of the first 48 ms corridor (between 2 ms and 50 ms) proposed in this document is 0.8 g to allow the initial peak to exceed 0.7 g prior to reaching a steady state response. Test laboratories often overshoot or undershoot the 0.7 g level at the beginning of the pulse for a short period of time. We have examined various compliance test pulses and found that many of them have an initial peak that is slightly higher than 0.7 g. For instance, the pulse used by U.S. Testing (see Figure B) shows that the acceleration starts at 9 ms to 10 ms, peaks at 0.75 g to 0.78 g around 26 ms, and then returns to the 0.7 g to 0.72 g range around 32 ms. The acceleration remains at approximately this range until the retractor locks. While the test pulse used by U.S. Testing shows a smooth, uni-modal initial peak pulse, this may not always be the case. An initial peak pulse may exhibit several rapid oscillations before it converges to the 0.7 g acceleration.

Based on the current compliance test data, the agency has tentatively concluded that an initial peak above 0.7 g should be allowed within the first 50

ms time period. While the a-t corridor proposed by the AORC would allow an initial peak of up to 0.75 g, it would exclude some of the test pulses used by U.S. Testing. If made final, the corridor proposed in this document would have an upper bound of 0.8 g from 2 ms to 50 ms to allow the initial peak to exceed 0.7 g prior to reaching a steady state response. This would reflect the agency's intent that the test pulse should simulate the worst case test condition, similar to those observed in laboratory hard (emergency) braking tests. For the remainder of the a-t corridor (from 50 ms of the lower corridor and upper corridor to the end of the test), the a-t corridor would be specified at 0.7 g with a +0.02/−0.05 g tolerance boundary.

D. Subsequent Acceleration Decay

We are not proposing to include a specification for acceleration decay (pulse shape and duration) as requested by the AORC. FMVSS No. 209 specifies that the emergency-locking retractor shall lock within the 25 mm webbing payout and that the acceleration shall reach 0.7 g within 50 ms, but does not address acceleration decay (time and rate of decrease from 0.7 g). The AORC requested that NHTSA amend the standard to include a specification for acceleration decay, but did not provide sufficient data demonstrating that such a specification is appropriate. It appears that the AORC is concerned about rapid acceleration decay after the initial peak.

The AORC presented several theoretical analyses in support of its argument for a specified acceleration decay. One analysis showed that allowing an early acceleration decay far below the 0.7 g level is problematic to the webbing payout specification because it could cause a currently FMVSS No. 209 compliant retractor to not lock up during the test.

While we acknowledge the difficulty of early decay, the AORC's concern has been addressed through this proposal. The lower boundary of the proposed corridor, as shown in Figure C, would prevent the use of acceleration pulses that have an early, rapid acceleration decay. After either a lock-up occurs or the webbing payout reaches 25 mm, the test is officially over. The acceleration pulse after this point does not affect the test results and is no longer a concern to test accuracy. Based on the above reasons, we conclude that a specification for acceleration decay is not required.

III. Test Procedures and Measurement Specification

In agreement with the AORC petition, we are proposing that the acceleration specifications under FMVSS No. 209 be recorded and processed according to the practices specified in the SAE J211/1 rev. Mar 95. If these proposals are made final, the instrumentation used to record the a-t history and the webbing payout would be in conformance with the instrumentation requirements of SAE J211/1 rev. Mar 95, the electronic signals would be filtered with an SAE Class 60 filter, and the accelerometer used for retractor testing would be an instrumentation grade, high accuracy, 10 g device. While SAE J211/1 rev. Mar 95 does not specify a measurement requirement for webbing payout, this proposal would require seat belt webbing payout be filtered with an SAE Class 60 filter, as is required under SAE J211/1 rev. Mar 95 for seat belt forces. If made final, the proposal would employ the same instrumentation requirements currently specified in other dynamic performance Federal motor vehicle safety standards.

The proposed test procedure would also specify use of a displacement transducer to measure webbing displacement. A displacement transducer would record a direct measurement of webbing displacement and eliminate uncertainty that is inherent in indirect measurement techniques, such as applying a numerical integration to accelerometer data.

We are also proposing a tolerance for the angles specified in the test procedures. If made final, the standard would permit a tolerance of plus or minus 3 degrees for all angles and orientations of the seat belt assemblies and component, unless otherwise specified.

IV. "Nuisance" Locking

FMVSS No. 209 establishes a sensitivity threshold for emergency-locking retractors to prevent "nuisance" locking during normal driving conditions. Under S4.3(j)(2), an emergency-locking retractor sensitive to vehicle deceleration must not lock up when the retractor is rotated in any direction to any angle 15 degrees or less. Under S4.3(j)(3), an emergency-locking retractor sensitive to webbing withdrawal must not lock up before the webbing extends 51 mm when the retractor is subject to an acceleration of 0.3 g or less.

The test procedure for determining compliance with the sensitivity threshold for an emergency-locking retractor sensitive to webbing withdrawal is similar to the test procedure for determining compliance with the 0.7 g lock-up requirement. As such, this document is also proposing to require that retractors sensitive to webbing withdrawal be subjected to an acceleration of 0.3 g occurring within a period of the first 50 ms and sustaining an acceleration no greater than 0.3 g throughout the test, while the webbing is at 75 percent extension, to determine compliance with S4.3(j)(2). We are not proposing a corridor for the 0.3 g acceleration because the current specification is valid and the AORC did not petition us to amend it.

V. Regulatory Text

The proposed amendment would revise the format of the regulatory text. Under the proposal, all of the emergency-locking retractor requirements would be placed in S4.2(j). The proposed format would clarify the requirements and test procedures applicable to retractors sensitive to vehicle acceleration and retractors sensitive to webbing withdrawal.

VI. Costs and Benefits

NHTSA did not estimate benefits for this rulemaking since it is anticipated that there would not be substantial changes in the performance of emergency-locking retractors. The proposed amendments more directly affect the test procedure specifications and are intended only to clarify the test specifications.

NHTSA anticipates only a minimal cost burden to vehicle manufacturers from this proposal. The testing laboratories might have to develop new specifications for the instrumentation used to generate the acceleration pulses and may be required to obtain the specified accelerometer. However, NHTSA anticipates that only a small number of businesses would need to purchase new equipment since the specifications were requested by the AORC in its petition. The members of the AORC constitute the majority of seat belt suppliers in the U.S. Those who would have to purchase new equipment could do so for a one time minimal cost to the test laboratory. Further, it is anticipated that all current emergency-locking retractors would continue to comply with FMVSS No. 209 without change under the proposed amendments.

VII. Lead-Time

If made final, the proposed amendments would have a one-year lead-time. The major seat belt manufacturers in the United States,

through the AORC, initiated the petition associated with this rulemaking, so we do not anticipate any regulated parties having difficulties in complying. Although seat belt assemblies currently meet the proposals, the one-year lead-time would provide compliance laboratories time to reconfigure their acceleration pulses to meet the proposed corridors.

VIII. Request for Comments on Specific Issues

In addition to the matters discussed above, we are seeking responses to the following questions:

1. The AORC suggested a corridor more narrowly defined at the beginning (*i.e.*, a 0–4 ms window). Would a narrower corridor as suggested by the AORC be feasible? Would a narrower corridor more accurately specify the a-t onset?

2. Would any currently compliant emergency-locking retractor be unable to comply under the proposed corridor?

3. Is 50 ms at the beginning of the time period sufficient to allow for an initial peak above 0.7g limit?

4. ELR lock-up occurs when rotation of the ELR gear assembly stops. The methods employed by test laboratories to determine ELR lock-up are indirect methods rather than direct measurement of the ELR gear. In general, an ELR lock-up occurrence is determined by the observation of a sudden change in sled acceleration-time curve. Thus, the exact time of lock-up is subject to test laboratory's interpretation of this event. We are requesting input on methods that can be employed in our test procedures to accurately determine when ELR lock-up occurs. Your response should include the following:

a. The type of sensing device and/or test equipment to be employed for detecting lock-up.

b. Any procedures for performing a lock-up test. Please provide technical support.

c. Any criteria used to evaluate the lock-up condition. Please provide technical support.

IX. Submission of Comments

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 you to write your primary comments in a concise fashion. However, you may attach necessary additional documents to your comments. There is no limit on the length of the attachments.

Please submit 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 Docket Management System Web site at *http://dms.dot.gov.* Click on ''Help & Information'' or ''Help/Info'' to obtain instructions for filing the document electronically. Please note, if you are submitting comments 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.[6]

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 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 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.** In addition, you should submit two copies, from which you have deleted the claimed confidential business information, to Docket Management at the address given above under **ADDRESSES.** When you send a comment containing information claimed to be confidential business information, you should include a cover letter setting forth the information specified in our confidential business information regulation. (49 CFR Part 512.)

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 in developing a final rule (assuming that one is issued), we will consider that comment as an informal suggestion for future rulemaking action.

How Can I Read the Comments Submitted by Other People?

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 see 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 (*http://dms.dot.gov/search/*), type in the four-digit docket number shown at the beginning of this document. Example: If the docket number were ''NHTSA–1998–1234,'' you would type ''1234.'' 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 may download the comments. However, since the comments are imaged documents, instead of word processing documents, the downloaded comments are not word searchable.

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.

[6] 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.

X. Regulatory Analyses and Notices

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

Executive Order 12866, ''Regulatory Planning and Review'' (58 FR 51735, October 4, 1993), provides for making determinations whether a regulatory action is ''significant'' and therefore subject to Office of Management and Budget (OMB) review and to the requirements of the Executive Order. The Order defines a ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budget impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

This rulemaking document was not reviewed by the Office of Management and Budget under E.O. 12866. It is not considered to be significant under E.O. 12866 or the Department's Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). As stated above in the Costs and Benefits section, this proposal would not require substantial changes in performance of emergency-locking retractors. Testing laboratories might need to develop new specifications for the instrumentation used to generate the acceleration pulses, but this is not expected to be more than a minimal cost burden for manufacturers.

B. Regulatory Flexibility Act

In compliance with the Regulatory Flexibility Act, 5 U.S.C. 60l *et seq.*, NHTSA has evaluated the effects of this proposed action on small entities. I hereby certify that this notice of proposed rulemaking would not have a significant impact on a substantial number of small entities.

The following is the agency's statement providing the factual basis for the certification (5 U.S.C. 605(b)). If adopted, the proposal would directly affect motor vehicle manufacturers, manufacturers of seat belt assemblies, and test laboratories. North American Industry Classification System (NAICS) code numbers 336111, *Automobile Manufacturing,* and 336112, *Light Truck and Utility Vehicle Manufacturing,* prescribe a small business size standard of 1,000 or fewer employees. A majority of vehicle manufacturers would not qualify as a small business. NAICS code No. 336399, *All Other Motor Vehicle Parts Manufacturing,* prescribes a small business size standard of 750 or fewer employees.

This proposal is in response to a petition from the AORC, which represents U.S. manufacturers of seat belt assemblies. The agency does not anticipate manufacturers of seat belt assemblies having any difficulty in complying with the proposal. The proposal, if made final, might make it necessary for testing laboratories to develop new specifications for the instrumentation used to generate and record the acceleration pulses. This would result in only a minimal burden to seat belt and vehicle manufacturers. Since test laboratories already have instrumentation necessary to record the a-t response for compliance testing, we estimate that the maximum, one-time cost to laboratories would be less than $500. This cost would be for the purchase of an instrument grade, high accuracy 10 g accelerometer.

C. Executive Order No. 13132

NHTSA has analyzed this proposed rule in accordance with the principles and criteria set forth in Executive Order 13132, Federalism, and has determined that this proposal does not have sufficient Federal implications to warrant consultation with State and local officials or the preparation of a Federalism summary impact statement. The proposal would not have any substantial impact on the States, or on the current Federal-State relationship, or on the current distribution of power and responsibilities among the various local officials.

D. National Environmental Policy Act

NHTSA has analyzed this proposal for the purposes of the National Environmental Policy Act. The agency has determined that implementation of this action would not have any significant impact on the quality of the human environment.

E. Paperwork Reduction Act

This proposed rule does not contain any collection of information requirements requiring review under the Paperwork Reduction Act of 1995 (Pub. L. 104–13).

F. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Public Law 104–113, section 12(d) (15 U.S.C. 272) directs NHTSA to use voluntary consensus standards in its regulatory activities unless doing so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies, such as the Society of Automotive Engineers (SAE). The NTTAA directs the agency to provide Congress, through the OMB, explanations when we decide not to use available and applicable voluntary consensus standards.

The amendments that NHTSA is proposing in this document incorporate voluntary consensus standards adopted by the Society of Automotive Engineers. Accordingly, this proposed rule is in compliance with Section 12(d) of NTTAA.

G. Civil Justice Reform

This proposal would not have any retroactive effect. Under 49 U.S.C. 21403, whenever a Federal motor vehicle safety standard is in effect, a State may not adopt or maintain a safety standard applicable to the same aspect of performance which is not identical to the Federal standard, except to the extent that the state requirement imposes a higher level of performance and applies only to vehicles procured for the State's use. 49 U.S.C. 21461 sets forth a procedure for judicial review of final rules establishing, amending or revoking Federal motor vehicle safety standards. That section does not require submission of a petition for reconsideration or other administrative proceedings before parties may file suit in court.

H. Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 requires agencies to prepare a written assessment of the costs, benefits and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local or tribal governments, in the aggregate, or by the private sector, of more than $100 million annually (adjusted for inflation with base year of 1995). This rulemaking would not result in expenditures by State, local or tribal governments, in the aggregate, or by the

private sector in excess of $100 million annually.

I. Executive Order 13045

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant'' as defined under E.O. 12866, and (2) concerns an environmental, health, or safety risk that NHTSA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, we must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by us.

This proposed rule is not subject to the Executive Order because it is not economically significant as defined in E.O. 12866 and does not involve decisions based on environmental, health, or safety risks that disproportionately affect children.

J. Executive Order 13211

Executive Order 13211 (66 FR 28355, May 18, 2001) applies to any rule that: (1) Is determined to be economically significant as defined under E.O. 12866, and is likely to have a significantly adverse effect on the supply of, distribution of, or use of energy; or (2) that is designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action. If made final, this rulemaking would amend the acceptable pulse corridor for demonstrating compliance with the seat belt emergency-locking retractor specifications. This proposal would also incorporate SAE measurement procedures. Therefore this proposal was not analyzed under E.O. 13211.

K. Data Quality Act

Section 515 of the Fiscal Year (FY) 2001 Treasury and General Government Appropriations Act (Pub. L. 106–554, § 515, codified at 44 U.S.C. § 3516 historical and statutory note), commonly referred to as the Data Quality Act, directed OMB to establish government-wide standards in the form of guidelines designed to maximize the ''quality,'' ''objectivity,'' ''utility,'' and ''integrity'' of information that federal agencies disseminate to the public. The Act also required agencies to develop their own conforming data quality guidelines, based upon the OMB model. OMB issued final guidelines implementing the Data Quality Act (67 FR 8452, Feb. 22, 2002). On October 1, 2002, the Department of Transportation promulgated its own final information quality guidelines that take into account the unique programs and information products of DOT agencies (67 FR 61719). The DOT guidelines were reviewed and approved by OMB prior to promulgation. NHTSA made information quality a primary focus well before passage of the Data Quality Act, and has made implementation of the new law a priority. NHTSA has reviewed its data collection, generation, and dissemination processes in order to ensure that agency information meets the standards articulated in the OMB and DOT guidelines, and plans to review and update these procedures on an ongoing basis.

NHTSA believes that the information and data used to support this rulemaking adhere to the intent of the Data Quality Act and comply with both the OMB and DOT guidelines. NHTSA has reviewed all relevant procedures for research and analysis in order to ensure that information disseminated by the agency is accurate, reliable, and unbiased in substance, and is presented in a clear, complete, and unbiased manner. Having followed those procedures, NHTSA believes that the information related to this rulemaking meets the requirements of the Data Quality Act guidelines of both OMB and DOT. This expectation regarding information quality has been confirmed by the agency in the course of its pre-dissemination review, per the guidelines.

Individuals may review all of the data related to this rulemaking by accessing the DOT docket management Web site at *http://dms.dot.gov* and using the docket number of this notice. See Section N. of this notice for further instructions.

L. Plain Language

Executive Order 12866 requires each agency to write all rules in plain language. Application of the principles of plain language includes consideration of the following questions:

- Have we organized the material to suit the public's needs?
- Are the requirements in the rule clearly stated?
- Does the rule contain technical language or jargon that isn't clear?
- Would a different format (grouping and order of sections, use of headings, paragraphing) make the rule easier to understand?
- Would more (but shorter) sections be better?
- Could we improve clarity by adding tables, lists, or diagrams?
- What else could we do to make the rule easier to understand?

If you have any responses to these questions, please include them in your comments on this proposal.

M. Regulation Identifier Number (RIN)

The Department of Transportation assigns a regulation identifier number (RIN) to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. You may use the RIN contained in the heading at the beginning of this document to find this action in the Unified Agenda.

N. 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 (Volume 65, Number 70; Pages 19477–78) or you may visit *http://dms.dot.gov*.

List of Subjects in 49 CFR Part 571

Imports, Motor vehicle safety, Motor vehicles, Tires.

In consideration of the foregoing, NHTSA proposes to amend 49 CFR Part 571 as set forth below.

PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

1. The authority citation for Part 571 continues to read as follows:

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

2. Section 571.209 is amended by:

a. Revising S4.1(a) and (b), S4.3(j) and S5.2(j);

b. Adding S5.4; and

c. Adding Figure 8 after Figure 7 of § 571.209.

The revised and added sections read as follows.

§ 571.209 Standard No. 209; Seat belt assemblies.

* * * * *

S4 *Requirements.*

S4.1 (a) *Incorporation by reference.* SAE Recommended Practice J211/1 rev. March 1995, ''Instrumentation for Impact Test—Part 1—Electronic Instrumentation,'' is incorporated by reference in S5.2(j) and is hereby made part of this Standard. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1

CFR part 51. Copies of SAE Recommended Practice J211/1 rev. March 1995, ''Instrumentation for Impact Test—Part 1—Electronic Instrumentation'' are available from the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096. You may inspect a copy at NHTSA's Technical Reference Library, 400 Seventh Street, SW., room 5109, Washington, DC, or at the or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

(b) *Single occupancy.* A seat belt assembly shall be designed for use by one, and only one, person at any one time.

* * * * *

S4.3 *Requirements for hardware.*

* * * * *

(j) *Emergency-locking retractor.* An emergency-locking retractor of a Type 1 or Type 2 seat belt assembly, when tested in accordance with the procedures specified in paragraph S5.2(j)—

(1) Shall under zero acceleration loading—

(i) Exert a retractive force of not less than 1 N and not more than 7 N when attached to a strap or webbing that restrains both the upper torso and the pelvis;

(ii) Exert a retractive force not less than 3 N when attached only to the pelvic restraint; and

(iii) Exert a retractive force of not less than 1 N and not more than 5 N when attached only to an upper torso restraint.

(iv) For a retractor sensitive to vehicle acceleration, lock when tilted at any angle greater than 45 degrees from the angle at which it is installed in the vehicle or meet the requirements of S4.3(j)(2).

(v) For a retractor sensitive to vehicle acceleration, not lock when the retractor is rotated in any direction to any angle of 15 degrees or less from its orientation in the vehicle.

(2) Shall lock before the webbing payout exceeds the maximum limit of 25 mm after the retractor is subjected to an acceleration of 0.7 g under the applicable test conditions of S5.2(j)(3)(i) or (ii).

(3) For a retractor sensitive to webbing withdrawal, shall not lock before the webbing payout extends to the minimum limit of 51 mm when the retractor is subjected to an acceleration no greater than 0.3 g under the test condition of S5.2(j)(3)(iii).

* * * * *

S5.2 *Hardware.*

* * * * *

(j) Emergency-locking retractor. A retractor shall be tested in a manner that permits the retraction force to be determined exclusive of the gravitational forces on hardware or webbing being retracted.

(1) Retraction force: The webbing shall be extended fully from the retractor, passing over and through any hardware or other material specified in the installation instructions. While the webbing is being retracted, measure the lowest force of retraction within plus or minus 51 mm of 75 percent extension.

(2) Gravitational locking: For a retractor sensitive to vehicle acceleration, rotate the retractor in any direction to an angle greater than 45 degrees from the angle at which it is installed in the vehicle. Apply a force to the webbing greater than the minimum force measured in S5.2(j)(1) to determine compliance with S4.3(j)(1)(iv).

(3) Dynamic tests: Each acceleration pulse shall be recorded using an accelerometer having a full scale range of plus and minus 10 g and processed according to the practice set forth in SAE Recommended Practice J211/1 rev. March 1995, ''Instrumentation for Impact Test—Part 1 —Electronic Instrumentation,'' Channel Frequency Class 60. The webbing shall be positioned at 75 percent extension and the displacement shall be measured using a displacement transducer. The displacement data shall be processed at Channel Frequency Class 60. For tests specified in S5.2(j)(3)(i) and (ii), the 0.7 g acceleration pulse shall be within the acceleration-time corridor shown in Figure 8 of this standard.

(i) For a retractor sensitive to vehicle acceleration—

(A) The retractor drum's central axis shall be oriented at the angle at which it is installed in the vehicle. Accelerate the retractor in the horizontal plane in two directions normal to each other and measure webbing payout; and

(B) If the retractor does not meet S4.3(j)(1)(iv), accelerate the retractor in three directions normal to each other while the retractor drum's central axis is oriented at angles of 45, 90, 135 and 180 degrees from the angle at which it is installed in the vehicle and measure webbing payout.

(ii) For a retractor sensitive to webbing withdrawal—

(A) The retractor drum's central axis shall be oriented horizontally. Accelerate the retractor in the direction of webbing retraction and measure webbing payout; and

(B) The retractor drum's central axis shall be oriented at angles of 45, 90, 135, and 180 degrees to the horizontal plane. Accelerate the retractor in the direction of webbing retraction and measure the webbing payout.

(iii) A retractor that is sensitive to webbing withdrawal shall be subjected to an acceleration no greater than 0.3 g occurring within a period of the first 50 ms and sustaining an acceleration no greater than 0.3 g throughout the test, while the webbing is at 75 percent extension. Measure the webbing payout.

* * * * *

S5.4 Tolerance on angles. Unless a range of angles is specified, all angles and orientations of seat belt assemblies and components specified in this standard shall have a tolerance of plus or minus 3 degrees.

* * * * *

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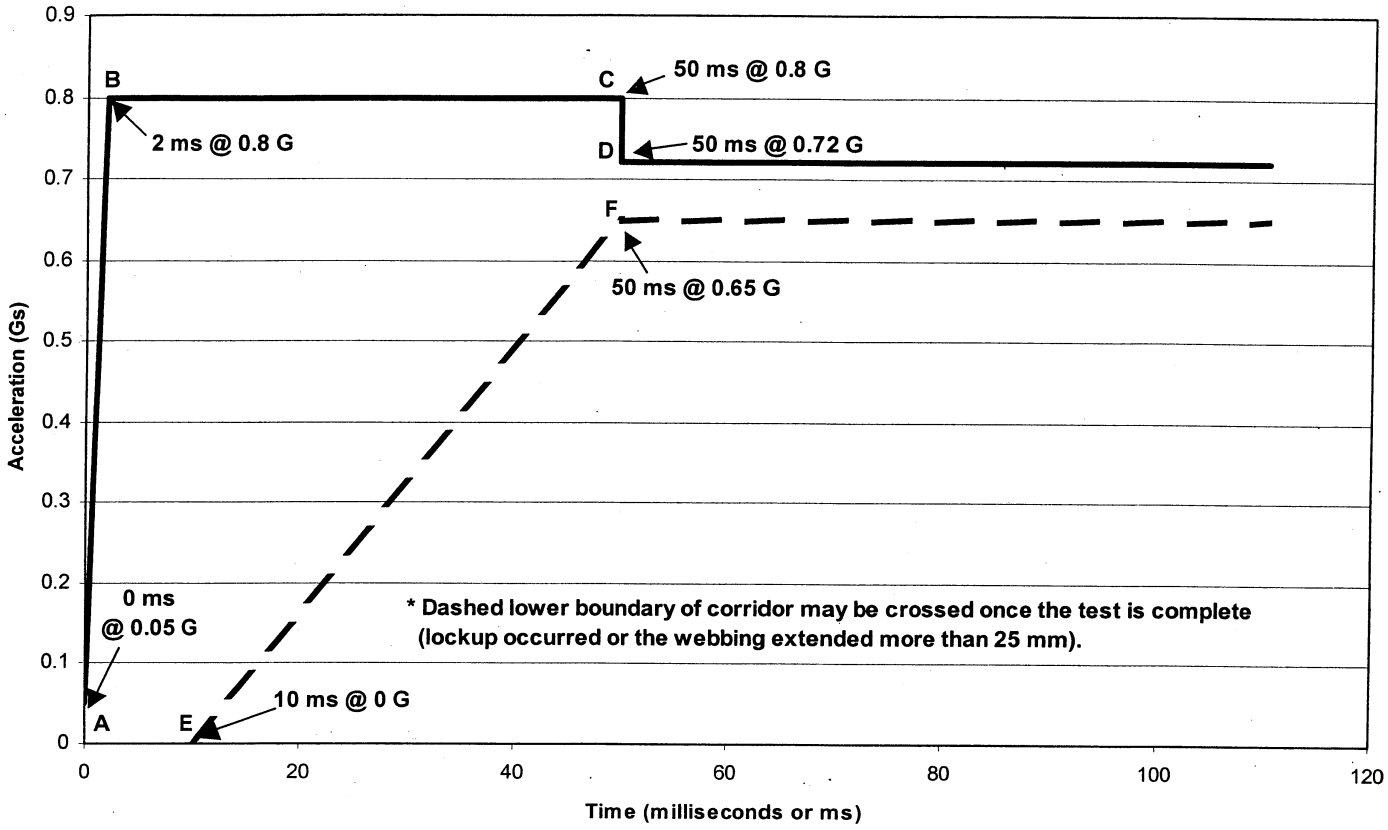
Figure 8: Acceleration corridors



The time zero for the test is defined by the point when the acceleration achieves 0.05 g.

Reference Point	Time (ms)	Acceleration (g)
A	0	0.05
B	2	0.8
C	50	0.8
D	50	0.72
E	10	0
F	50	0.65

* * * * *

Issued on May 26, 2004.

Stephen R. Kratzke,

Associate Administrator for Rulemaking.

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