



Dale E Dawkins
Director - Vehicle Compliance and
Safety Affairs

January 21, 1993

Office of the Chief Counsel, Room 5219
National Highway Traffic Safety Administration
400 Seventh Street, SW
Washington, D.C. 20590

Re: Docket No. 89-20; Notice 03
MVSS 207 - Seating Systems
MVSS 202 - Head Restraints

Chrysler Corporation has submitted the attached comments in response to the referenced docket, and has identified portions of those comments as proprietary and confidential information. In accord with 49 CFR Part 512, those confidential portions are not shown in the copies of our response submitted to the docket, but are included in the copies attached to this statement.

Supporting Statements

The information offset by brackets is not customarily made public by Chrysler, is either financial information that is privileged or trade secrets that are confidential and known only to Chrysler and its vehicle-specific seat system suppliers. The aforesaid information would be of substantial competitive value to all other vehicle manufacturers. A competitor could compare its seat system development costs with those of Chrysler, and make changes to its own seat systems development procedures to better compete with Chrysler. A competitor could use its knowledge of our confidential product plans to advantage, either by adjusting its own plans for comparable vehicles or through comparative advertising.

For these reasons, Chrysler considers this information as confidential and proprietary, known only to its employees and to employees of vehicle-specific seat system suppliers, and not otherwise known to the public. The information is maintained in systems designed to control dissemination within the Corporation, and to assure that it is not disseminated outside Chrysler except by means which are taken to preserve confidentiality.

To the best of our knowledge, no determinations of the confidentiality of the subject information has been made by the NHTSA, other Federal agencies, or the Federal courts. However, to the best of our knowledge, information of this type has been granted confidential treatment in the past.

Confidential treatment is requested for the information offset by brackets in the attachment. For that information in our responses to Questions 1 and 4, we ask that confidential treatment be permanent. For that information in our response to Question 6, we ask that confidential treatment be provided until the sale of vehicles equipped with the subject seat system. If a request for disclosure of the confidential information in the attachment is received by the NHTSA, we request notification of receipt of each request, and, if necessary, an opportunity to expand upon the reasons why that information should not be disclosed.

We further request that notice of the determination of confidentiality for the referenced portions of the attachment, and any other notices or questions relating to confidentiality be addressed to Stephen W. Goodrich, Senior Staff Counsel, CIMS 417-27-40, 12000 Chrysler Drive, Highland Park, MI, 48288-1919.

If the agency decides to make public or release outside of the Department of Transportation any of the information for which we are requesting confidential treatment, we request at least ten days notice of your intent to release, and the reason for its intended release.

Certificate in Support of Request for Confidentiality

I, Dale E. Dawkins, pursuant to the provisions of 49 CFR 512, state as follows:

I am Director, Vehicle Compliance and Safety Affairs, and I am authorized to execute documents on behalf of Chrysler Corporation.

The information offset by brackets in the attachment to this letter is confidential and proprietary data and is being submitted with the claim that it is entitled to confidential treatment under 5 U.S.C. § 552(b)(4) as incorporated by reference in and modified by Title 5 of the Motor Vehicle Information and Cost Savings Act.

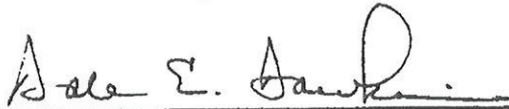
I, or my subordinates, have personally inquired of the responsible Chrysler personnel who have authority in the normal course of business to release the information for which a claim of confidentiality has been made to ascertain whether such information has ever been released outside Chrysler Corporation.

Based upon such inquiries, to the best of my knowledge, information and belief, the information for which Chrysler has claimed confidential treatment has never been released or become available outside Chrysler except as hereinafter specified:

The information is known to certain employees of our seat system suppliers, and then only for the vehicles for which they are the supplier.

I make no representations beyond those contained in this certificate and in particular, I make no representations as to whether this information may become available outside Chrysler Corporation because of unauthorized or inadvertant disclosure except as stated above.

I certify under penalty of perjury that the foregoing is true and correct. Executed on this the 21st day of January, 1993.



Dale E. Dawkins

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Chrysler Corporation
Comments on Questions at 57 FR 54961
Docket No. 89-20; Notice 3
MVSS 207 - Seating Systems
MVSS 202 - Head Restraints
Request for Comments

Question 1. Manufacturers are requested to provide information and data on seating system structural design specifications, test procedures, test results, analytical models, including computer aided design and finite element models, and accident analyses. The information and data provided to the agency will be kept confidential, if proper request for such treatment is made.

Answer: Attachment A outlines the Federal, European, and Chrysler corporate standards relative to rearward loading of seat systems. [

] Like most motor vehicle manufacturers, we recognize the need to dissipate the energy generated in a rear impact so as to reduce traumatic effects on occupants. However, scientific knowledge has not progressed to the point of being able to set quantifiable seat back performance objectives. The exact injury causing mechanisms are not fully understood, and the optimization of seat back performance at widely varying speeds has not yet been determined by the industrial and academic research communities.

Question 2. Manufacturers are requested to provide specifications and performance data on present production seats for cars, vans, and light trucks, especially regarding the seat backs and seat back locks for folding seats. Manufacturers also are requested to explain why the folding seat back locks are generally provided on only one side (the outboard side) of the seat back. Was this based on structural design or a design for convenience?

Answer: We have produced seats with both one-sided and two-sided seat back latch systems. Either system can meet the performance and design criteria.

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Question 3. Manufacturers are requested to provide data on seating system weight (system and components) and seat back height (including height range for adjustable head restraint).

Answer: There are a great many seat system weights and seat back heights in Chrysler products. A comprehensive summary is not available at this time.

Question 4. Please comment on the feasibility of and costs associated with adopting a dynamic test to replace the current Standard No. 207 static tests. One possible test is a 30 mph rear impact test using a rigid moving barrier (similar to the Standard No. 301 rear impact test). What pass/fail criteria could be required for such a dynamic test for seating systems, and why? Should the seat back rotation angle be limited, if so, to what degree from the vertical, and why? Should the agency specify a minimum frictional coefficient for seat back surfaces? Should a restrained dummy be used for the test? What type and size dummy or dummies should be used? Are currently available dummies suitable for rear impact tests? What injury criteria are appropriate for the test dummy? Since the Standard No. 301 test requires test dummies only in the front outboard positions, will additional difficulties of test result interpretation or test validity for seating integrity evaluation be introduced if dummies were to be placed in multiple seating positions? Please provide any available test data and potential costs related to a dynamic test.

Answer. [

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] In addition, we strongly believe that further research is necessary relative to human tolerance thresholds and injury mechanisms in this regard.

Question 5. Should Standards No. 202 and 207 be combined and should integral head restraints be required? What percentage of today's production cars have integral head restraints?

Answer. We have no comment at this time relative to the proposal to combine MVSS 202 with MVSS 207.

There are a number of human factors considerations which need further analysis on the question of whether integral head restraints should be required.

Question 6. Is an integrated seating system the best possible design to achieve a proper balance of stiffness and/or occupant crash energy management? What are the advantages and disadvantages of such a system? Is it practical in terms of costs? Please describe research and production information regarding your integrated seats and provide design data, test results, and any available accident data.

Answer. [] Once again, we believe that it is essential to obtain further research relative to human tolerance thresholds and injury mechanisms when evaluating "the best possible design to achieve a proper balance of stiffness and/or occupant crash energy management in automobile seats."

Question 7. The current concern for seat damage related injuries has been focused on rear and frontal impacts. Should other impact modes, i.e., side and rollover impacts, also be evaluated? What specific emphasis and goals should be evaluated in each crash mode?

Answer. In other impact modes such as side and rollover impacts, the seat is only one of many components or elements of the vehicle which the occupant encounters, whereas in a rear impact, the seat becomes the primary focus. Seat performance requirements for side and rollover impacts are not necessary.

STANDARDS FOR REARWARD LOAD STRENGTH OF SEAT SYSTEMS

	FMVSS 207	ECE 17.04	CHRYSLER PP-8401-B
OCCUPANT RESTRAINT Rearward Loading	<p>A rearward moment applied about the SRP to the upper crossmember of the seat back frame.</p> <p>3300 in•lb (373 Nm)</p> <p>(Point Loading)</p> <p>FMVSS 207.S4.2D</p>	<p>A rearward moment applied about the R-Point to the upper part of the back frame through a component simulating the back of a manikin.</p> <p>4694 in•lb (530 Nm)</p> <p>(Distributed Loading)</p> <p>ECE 17.04.6.2.1</p>	<p>A rearward moment applied about the H-Point to the upper crossmember of the seat back frame.</p> <p>3960 in•lb (447.4 Nm)</p> <p>(Point Loading)</p> <p>Time Duration of Load: Apply in 5 sec. Hold for 5 sec. Release in 4 sec.</p> <p>PP-8401.2.1.2.3</p>
HEAD RESTRAINT Strength Test	<p>The rear most portion of the head form shall not be displaced to more than 4 in (102 mm) perpendicularly rear ward of the displaced torso reference line during a load of 3300 in•lb (373 Nm) applied 2.5 inches below the top of the fully extended head restraint about the SRP.</p> <p>4 in (102 mm) max deflection 3300 in•lb (373 Nm) moment</p> <p>FMVSS 202.S4.3.3</p> <p>The head restraint shall withstand a load of 200 lb (890 N) applied as stated in FMVSS 202.S4.3.3</p> <p>FMVSS 202.S4.4.ii</p>	<p>The head restraint and its anchorage shall be such that the maximum backward displacement of the head permitted by the head restraint is less than 4 in (102 mm).</p> <p>(Test setup is different than the FMVSS test)</p> <p>4 in (102 mm) max deflection 3300 in•lb (373 Nm) moment</p> <p>ECE 17.04.59</p> <p>The head restraint and its anchorage shall be strong enough to bear without breakage a load of 200 lb (890 N)</p> <p>ECE 1704.5.10</p>	<p>The seat head restraint system must meet the maximum specified deflection of 3.2 in (81.3 mm) when subjected to a 3300 in•lb (372.8 Nm)</p> <p>(Test set-up parallels FMVSS set-up)</p> <p>3.2 in (81.3 mm) max deflection 3300 in•lb (372.8 Nm) moment</p> <p>PF8401.2.1.2.11</p> <p>The head restraint shall not exhibit a structural failure when subjected to a 240 lb (1068 N) load.</p> <p>PF840.2.1.2.11</p>
REARWARD LOADING STRENGTH TEST Seat back	<p>No requirement beyond occupant restraint</p>	<p>No requirement beyond occupant restraint</p>	<p>The frame assembly must not exceed specified deflection and set requirements and must withstand the maximum load without failure or loss of function of its components.</p> <p>4126 in•lb (466 Nm) moment</p> <p>Sideview max deflection 2.4 in (61 mm) Max set 0.6 in (15.2 mm)</p> <p>6215 in•lb (702 Nm) max moment with no structural failure</p> <p>PF8401.2.1.2.3</p>
REARWARD LOAD FATIGUE TEST Seat Back	<p>No requirement</p>	<p>No requirement</p>	<p>The frame assembly must sustain the specified load cycles without structural collapse and must not exhibit any weld or component fatigue cracks.</p> <p>250 lb @ 11" above "H-Point" per occupant (1112 N) (280 mm) 10,000 cycles</p> <p>PF8401.2.1.1.2</p>