TP-DSP-01
October 19, 2015

U.S. DEPARTMENT OF TRANSPORTATION

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

SUPPLIMENTAL LABORATORY TEST PROCEDURE

FOR

DETERMINING THE NUMBER OF DESIGNATED SEATING POSITIONS (DSPs) IN A ROW

ENFORCEMENT
Office of Vehicle Safety Compliance
Mail Code: NVS-220
1200 New Jersey Ave. SE
Washington, DC 20590

PREFACE

The definition for Designated Seating Positions (DSPs) is provided in Title 49, of the Code of Federal Regulation, Part 571.3 (49 CFR 571.3). The definition is not a Federal motor vehicle safety standard (FMVSS), but the term DSP is used in other FMVSSs. The National Highway Traffic Safety Administration (NHTSA) amended the definition for DSPs through a final rule (73 FR 58887) issued on October 8, 2008. That final rule was amended (74 FR 68185) and revised the effective date to September 1, 2011. The final rule was amended again (78 FR 68748) to address the remaining issues raised in the petitions for reconsideration, to make clarifying changes to the manner of measuring, and to include technical corrections.

The Office of Vehicle Safety Compliance (OVSC) developed this test procedure in response to the final rule and is issuing it as a supplemental procedure for determining the number of seating positions for other FMVSS test procedures for which it is applicable. As such, this supplemental test procedure does not include any of the standardized language or formatting that is normally included in the OVSC test procedures.

The OVSC laboratory test procedures are not rules, regulations or NHTSA interpretations regarding the meaning of a FMVSS or regulation. The procedures are generated to provide a basis for laboratories to bid on NHTSA contracts for testing. The laboratory test procedures are not intended to limit the requirements of the applicable FMVSS(s) or regulations. In some cases, the OVSC laboratory test procedures do not include all of the various minimum performance requirements of a FMVSS or regulation. The laboratory test procedures may specify test conditions that are less severe than the minimum requirements of the FMVSS or regulation. In addition, the laboratory test procedures may be modified by the OVSC at any time without notice, and the COR may direct or authorize contractors to deviate from these procedures, as long as the tests are performed in a manner consistent with the FMVSS or regulation itself and within the scope of the contract. Laboratory test procedures may not be relied upon to create any right or benefit in any person. Therefore, compliance of a vehicle or item of motor vehicle equipment is not necessarily guaranteed if the manufacturer limits its certification tests to those described in the OVSC laboratory test procedures.

The OVSC test procedures include requirements, but provide flexibility to perform compliance testing and are not intended to limit or restrain the development or utilization of testing techniques or equipment which will assist in collecting the required compliance test data. These test procedures do not constitute an endorsement or recommendation for use of any particular product or testing method.

REVISION CONTROL LOG
FOR OVSC LABORATORY
TEST PROCEDURES

TP-DSP-01
Designated Seating Positions

TEST PROCEDURE		49 CFR Part 571.10		DESCRIPTION
REV. No.	DATE	AMENDMENT	EFFECTIVE DATE	
00	Preliminary 03/27/09	73FR58887 10/8/08 Final Rule	10/8/08	Final rule (73FR58887) Amends the definition of "Designated Seating Position" and establishes a calculation procedure.
		74FR68185 12/23/09 Final Rule	2/22/10	Final rule (74FR68185) Responds to petitions for reconsideration.
01	10/19/15	78FR68748 11/15/13 Final Rule	12/16/13	Final rule (78FR68748) Responds to petitions for reconsideration and issues technical corrections.
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1. PURPOSE

This document is a supplemental test procedure provided by the National Highway Traffic Safety Administration (NHTSA), Office of Vehicle Safety Compliance (OVSC). It presents procedures, in a data sheet type format, for use with other Federal motor vehicle safety standards (FMVSS) for which designated seating position (DSP) needs to be determined. DSP is not an FMVSS.

2. Applicability of 571.3, 571.10(b), and 571.10(c)

<table>
<tr><th>GVWR</th><th>Subject</th><th>Part 571</th><th>PC</th><th>Bus</th><th>Truck</th><th>MPV</th><th>Police Vehicle</th><th>Fire Vehicle</th><th>Ambulance</th><th>Motorhome</th><th>School Bus</th></tr>
<tr><td rowspan="3">≥ 10k lb</td><td>Surface Measurement</td><td>571.10(c)</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td><td>No[1]</td></tr>
<tr><td rowspan="2">DSP Calculation</td><td>571.10(b), No. of DSP formula</td><td>Yes</td><td>Yes</td><td>Yes</td><td>Yes</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No[1]</td></tr>
<tr><td>571.3</td><td colspan="4"></td><td colspan="5">The number of DSPs is determined by the manufacturer. However, a seating surface, as determined by 571.10(c), of 330 mm is at least one DSP. [2]</td><td>No[1]</td></tr>
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</table>

1. For school buses, S4.1 of FMVSS No. 222, ‘‘School bus passenger seating and crash protection’’ applies for determining the number of DSPs.
2. For trucks and multipurpose passenger vehicles with a gross vehicle weight rating greater than 10,000 lbs, police vehicles as defined in S7 of FMVSS No. 208, firefighting vehicles, ambulances, and motor homes, a seating location that is labeled in accordance with S4.4 of FMVSS No. 207 will not be considered a designated seating position.

The following procedures reference the sections of 571.10 to which they apply. Based on those references and the chart above it can be determined whether the procedural item is applicable to a particular vehicle.

3. PROCEDURE

The following procedure is formatted as a data sheet for ease of use with other test procedures.

DATA SHEET
PROCEDURE TO DETERMINE NUMBER OF DESIGNATED SEATING POSITIONS IN A ROW OF SEATS

NHTSA No. _____ Test Date: _____

Laboratory: _____Test Technician(s): _____

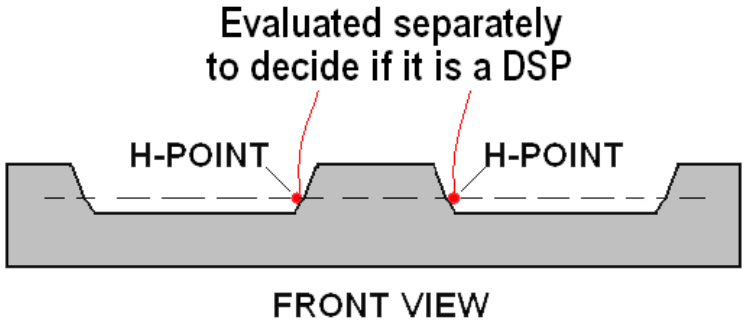
A. Vehicle Model Year: _____
B. Vehicle Make: _____
C. Vehicle Model: _____
D. Vehicle Body Style: _____
E. GVWR: _____
F. Vehicle Identification Number: _____
G. Row or Seat Position: _____

This procedure applies to forward, rearward and side facing, folding and jump seats in passenger cars, and trucks, multipurpose passenger vehicles, and buses manufactured on or after September 1, 2011. Folding, removable, and adjustable seats are measured in the configuration that results in the single largest maximum width (571.10(c)(3)). For example, if seats are removable, measurements will be taken with seats installed.

NOTE: "Seating surface" only includes the seat cushion and soft trim and excludes unpadded trim components such as a decorative seat shield, seat adjusters, or adjuster covers. Do not include these items when determining Plane A or seat cushion edges. (571.10(c)(1)).

1. Determine the seating surfaces in a row.

1.1 Does the lateral projection of the H-point (as measured in SAE Practice J826) intersect the seat cushion (e.g. a deep bucket seat that has an H-point recessed below the dividing trim) (571.10(c)(2)(ii)) between adjacent seating positions?



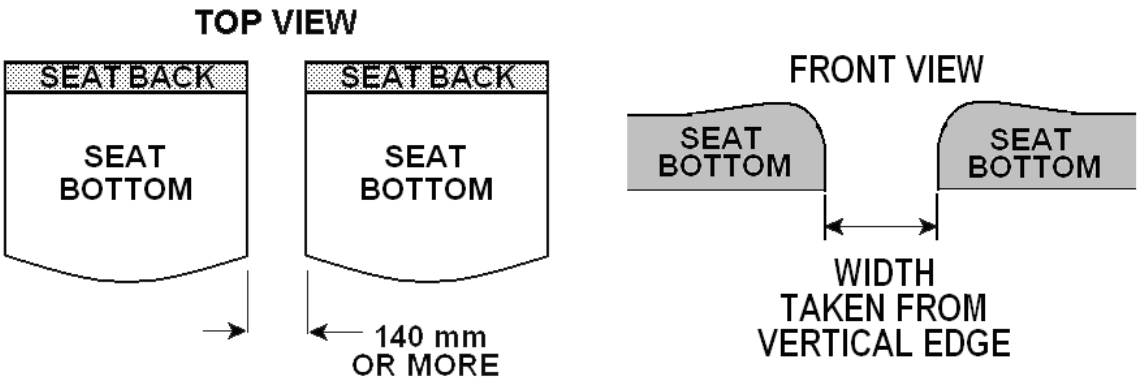
FRONT VIEW

__Yes – Number of seating surfaces including the raised cushion

section = _____Complete a data sheet for each seating surface.

__No - Proceed to item 2

1.2 Separation. Are the seating surfaces adjacent outboard seats where the lateral distance between any point on the seat cushion of one seat and any point on the other seat is 140 mm (5.5 inches) or greater? (571.10(c)(2)(iii))



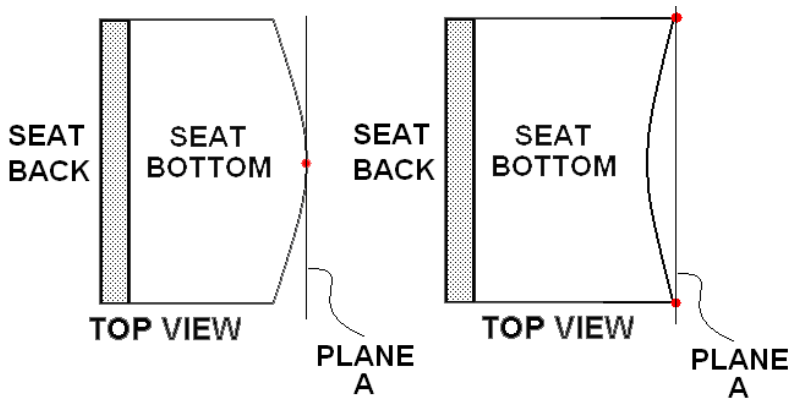
__Yes – Minimum lateral distance between seat cushions = _____mm (140 mm or greater). Complete a data sheet for each seating surface. Beginning with 1.3.

__No - Minimum lateral distance between seat cushions = _____mm (Less than 140 mm). Proceed to 1.3.

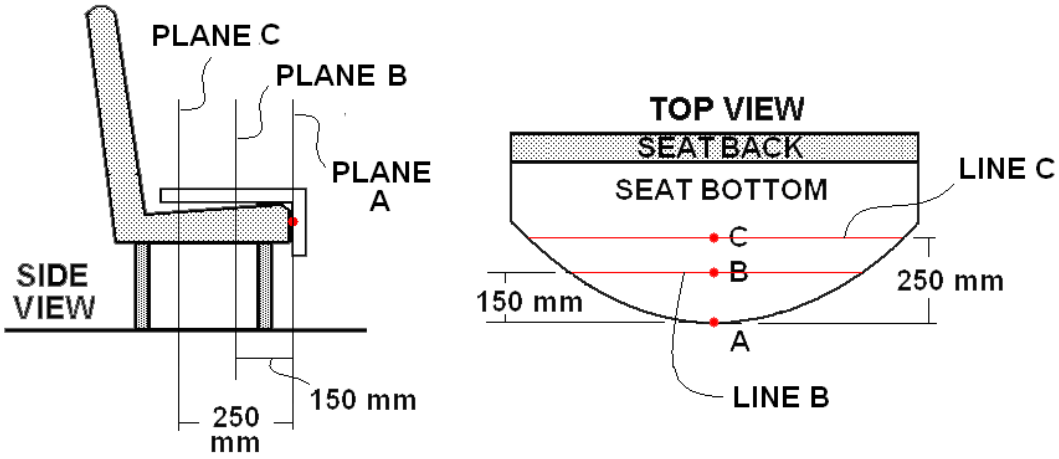
__No separation. Proceed to 1.3.

1.3 Determine if the seating surface is separated by trim or a void.

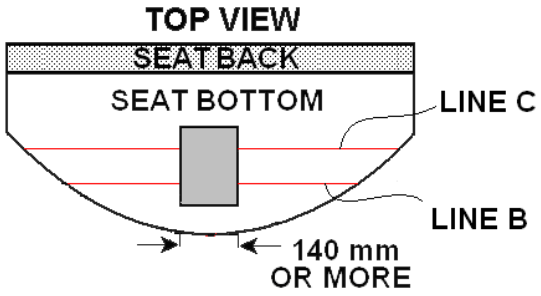
1.3.1 Determine Plane A, the transverse vertical plane, perpendicular to the direction the seat is facing, that passes through the most forward edge of the seat cushion in a row of seats. (571.10(c)). Possible testing equipment could be a T-square and level for determination.



1.3.2 Determine Plane B, the transverse vertical plane that is 150 mm (5.9 inches) horizontally rearward of Plane A and mark this plane on the upper surface of the seat cushion (line B) in a row of seats. Determine Plane C, the transverse vertical plane that is 250 mm (9.8 inches) horizontally rearward of Plane A and mark this plane on the upper surface of the seat cushion (line C) in a row of seats. (571.10(c)).



1.3.3 Fixed Trim Surface. Is there a fixed trimmed surface present on the seating surface whose top surface is unpadded and that has a width 140 mm (5.5 inches) or greater, as measured within the zone defined by line B and C? (571.10(c)(2)(i)(A))?



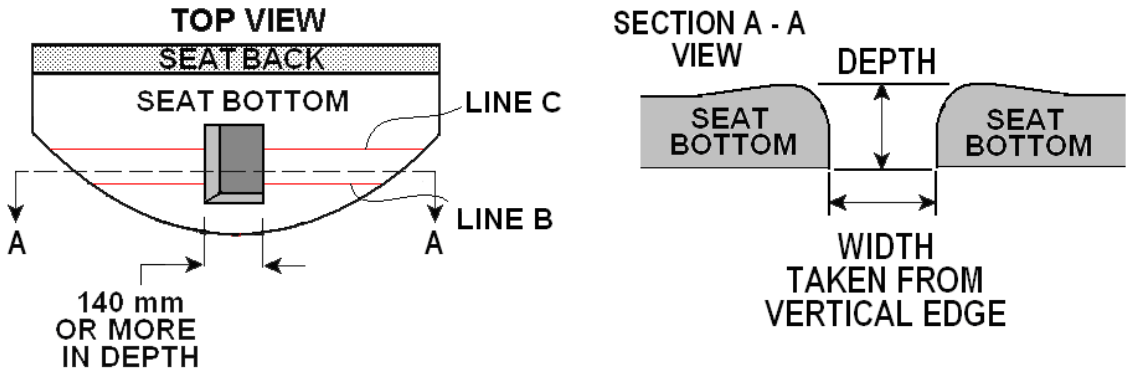
__ Yes, record the width of the unpadded fixed trim surface. _____mm (140 mm or greater). Proceed to 2.

The seating surfaces are not considered adjacent and the width must be measured separately for each seating surface to determine the number of designated seating positions (DSPs). Complete a data sheet for each seating surface by performing items 2 and 3.

__ No, record the width of the unpadded fixed trim surface. _____mm (Less than 140 mm). Proceed to 1.3.4

__Trim Surface not present – Proceed to 1.3.4.

1.3.4 Void. Is there a void whose cross section in each transverse vertical plane within the zone defined by lines B and C is 140 mm (5.5 inches) or greater in width and 140 mm (5.5 inches) or greater in depth? (571.10(c)(2)(i)(B))



__Yes - record the minimum width and depth. Proceed to 2.

Width _____mm (140 mm or greater)
Depth _____mm (140 mm or greater)

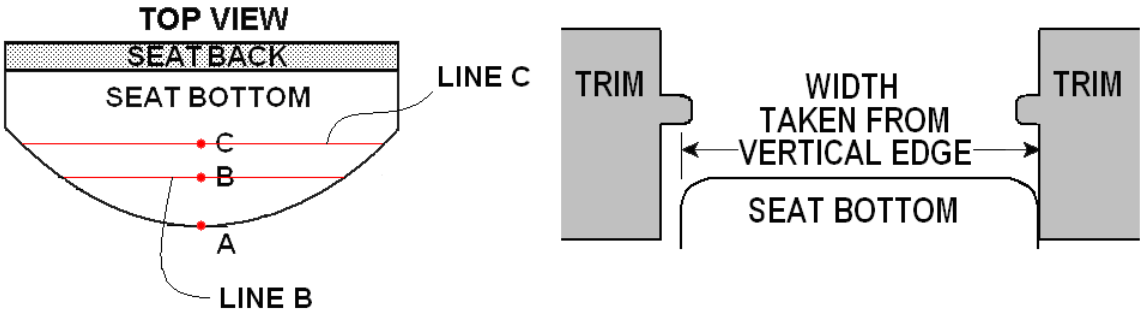
The seating surfaces are not considered adjacent and the width must be measured separately for each seating surface to determine the number of DSPs. Complete a data sheet for each seating surface by performing items 2 and 3 of this data sheet.

__No - record the minimum width and depth. Proceed to 2.

Width _____mm (Less than 140 mm)
Depth _____mm (Less than 140 mm)

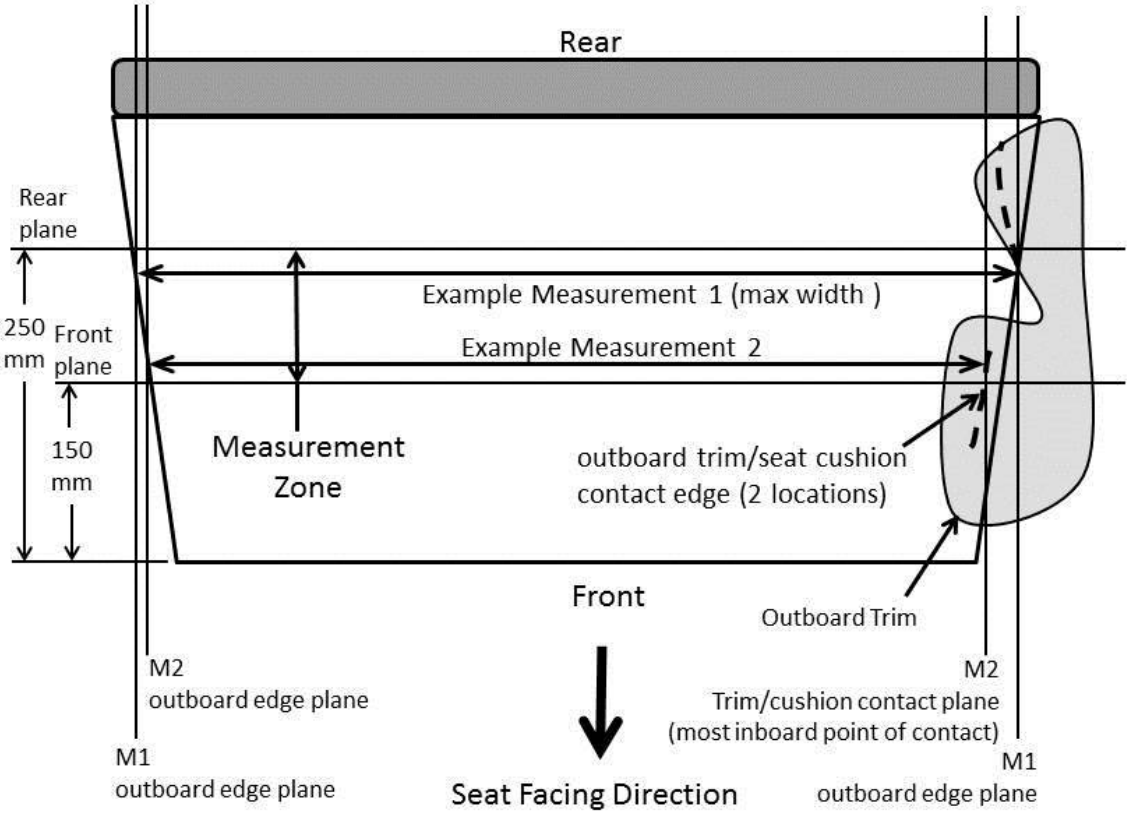
__Void not present – Proceed to 2.

2. For each seating surface determined in item 1, determine the longest transverse distance (LTD) from the side of the seat cushion within the zone defined by lines B and C as determined by the procedure in item 1.3.1 and 1.3.2. (571.10(c)). A data sheet must be completed for each seating surface.



In this configuration, LINE C is $LTD_{max.}$

FIGURE 1: Example Measurements for Seat Cushion Width



Plan View of seat showing several example measurement locations for determination of seating surface width. Measurement 1 is the LTD for this illustration.

LTD = _____ mm

3. For passenger cars, trucks, MPVs, and buses (not a school bus, not a police vehicle, not a firefighting vehicle, not an ambulance, and not a motor home) that have a GVWR equal to or less than 10,000 lb and passenger cars that have a GVWR greater

than 10,000 lb, determine the number, N, of DSPs for a specific seating surface determined in item 1.

3.1 Is LTD determined in item 2, less than 1400 mm (55 inches)?

__Yes, divide LTD by 350 mm and round down to the nearest whole number to determine N. If N is less than 1, then N equals 1. (571.10(b)(1)).

N = LTD / 350 mm (round down to the nearest whole number)

N = (_____/ 350 mm) = _

Note: N represents the minimum number of DSPs for the seating surface, more can be provided.

__No, go to item 3.2.

3.2 The LTD from item 2 is equal to or greater than 1400 mm (55 inches). Divide LTD by 450 mm and round down to the nearest whole number to determine N. (571.10(b)(2)).

N = LTD / 450 mm (round down to the nearest whole number)

N = _____/_____ = ____

Note: N represents the minimum number of DSPs for the seating surface, more can be provided.

_____ _____

I certify that I have read and performed each instruction. Date