SAFETY COMPLIANCE TESTING FOR
FMVSS NO. 225
CHILD RESTRAINT ANCHORAGE SYSTEMS
LOWER AND TETHER ANCHORAGES

BAYERISCHE MOTORENWERKE
2008 BMW 328i, PASSENGER CAR
NHTSA NO. C80509

GENERAL TESTING LABORATORIES, INC.
1623 LEEDSTOWN ROAD
COLONIAL BEACH, VIRGINIA 22443

SEPTEMBER 15, 2008
FINAL REPORT
PREPARED FOR
U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
1200 NEW JERSEY AVE., SE
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Prepared By:________________________
Approved By:________________________
Approval Date:______________________

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By:________________________
Acceptance Date:____________________
# Final Report of FMVSS 225 Compliance Testing of 2008 BMW 328i, PASSENGER CAR

## NHTSA No. C80509

### Abstract

Compliance tests were conducted on the subject, 2008 BMW 328i Passenger Car in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-225-01 for the determination of FMVSS 225 compliance. Test failures identified were as follows:

None

### Key Words

- Compliance Testing
- Safety Engineering
- FMVSS 225

### Distribution Statement

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SECTION 1

PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF COMPLIANCE TEST

A 2008 BMW 328i Passenger Car was subjected to Federal Motor Vehicle Safety Standard (FMVSS) No. 225 testing to determine if the vehicle was in compliance with the requirements of the standard. The purpose of this standard is to establish requirements for child restraint anchorage systems to ensure their proper location and strength for the effective securing of child restraints, to reduce the likelihood of the anchorage systems’ failure and to increase the likelihood that child restraints are properly secured and thus more fully achieve their potential effectiveness in motor vehicles.

1.1 The test vehicle was a 2008 BMW 328i Passenger Car. Nomenclature applicable to the test vehicle are:

A. Vehicle Identification Number: WBAVC53588A246718

B. NHTSA No.: C80509

C. Manufacturer: BAYERISCHE MOTORENWERKE

D. Manufacture Date: 11/07

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 225 testing during the time period August 26-27, 2008.
SECTION 2

COMPLIANCE TEST RESULTS

2.0 TEST RESULTS

All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedures, TP-225-01 dated 11 April 2005.

Based on the test performed, the 2008 BMW 328i Passenger Car appears to meet the requirements of FMVSS 225 testing.
SECTION 3

COMPLIANCE TEST DATA

3.0 TEST DATA

The following data sheets document the results of testing on the 2008 BMW 328i Passenger Car.
DATA SHEET 1
SUMMARY OF RESULTS

VEH. MOD YR/MAKE/MODEL/BODY: 2008 BMW 328i Passenger Car
VEH. NHTSA NO: C80509; VIN: WBAVC53588A246718
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 26, 2008
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

A. VISUAL INSPECTION OF TEST VEHICLE

Upon receipt for completeness, function, and discrepancies or damage which might influence the testing.

RESULTS: OK FOR TEST

B. REQUIREMENTS FOR CHILD RESTRAINT SYSTEMS AND TETHER ANCHORAGES

<table>
<thead>
<tr>
<th>DSP a</th>
<th>PASS</th>
<th>FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>DSP b</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>DSP c</td>
<td></td>
<td>X</td>
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</table>

C. LOCATION OF TETHER ANCHORAGES

<table>
<thead>
<tr>
<th>DSP a</th>
<th>PASS</th>
<th>FAIL</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>DSP b</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>DSP c</td>
<td></td>
<td>X</td>
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D. LOWER ANCHORAGE DIMENSIONS

<table>
<thead>
<tr>
<th>DSP a</th>
<th>PASS</th>
<th>FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>DSP b</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>DSP c</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
### DATA SHEET 1 CONTINUED
### SUMMARY OF RESULTS

#### E. CONSPICUITY AND MARKING OF LOWER ANCHORAGES

<table>
<thead>
<tr>
<th></th>
<th>PASS</th>
<th>FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSP a</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>DSP b</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>DSP c</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

#### F. STRENGTH OF TETHER ANCHORAGES

<table>
<thead>
<tr>
<th></th>
<th>PASS</th>
<th>FAIL</th>
</tr>
</thead>
<tbody>
<tr>
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<td>X</td>
<td></td>
</tr>
<tr>
<td>DSP b</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>DSP c</td>
<td>N/A</td>
<td>N/A</td>
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</table>

#### G. STRENGTH OF LOWER ANCHORAGES (Forward Force)

<table>
<thead>
<tr>
<th></th>
<th>PASS</th>
<th>FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSP a</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>DSP b</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>DSP c</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

#### H. STRENGTH OF LOWER ANCHORAGE (Lateral Force)

<table>
<thead>
<tr>
<th></th>
<th>PASS</th>
<th>FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSP a</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>DSP b</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>DSP c</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

#### I. OWNER’S MANUAL

<table>
<thead>
<tr>
<th></th>
<th>PASS</th>
<th>FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

**REMARKS:**

**NOTE:**

RECORDED BY: G. Farrand  
DATE: 08/26/08  
APPROVED BY: D. Messick
### DATA SHEET 2
### REQUIREMENTS FOR CHILD RESTRAINT ANCHORAGE SYSTEMS AND TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2008 BMW 328i Passenger Car  
VEH. NHTSA NO: C80509; VIN: WBAVC5358A246718  
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 26, 2008  
TEST LABORATORY: GENERAL TESTING LABORATORIES  
OBSERVERS: GRANT FARRAND, JIMMY LATANE

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of rows of seats:</td>
<td>2</td>
</tr>
<tr>
<td>Number of rear, forward-facing designated seating positions:</td>
<td>3</td>
</tr>
<tr>
<td>Number of required CRAS (lower anchorages only, for convertibles/school buses):</td>
<td>2</td>
</tr>
<tr>
<td>Number of required tether anchorages (can be additional CRAS):</td>
<td>3</td>
</tr>
<tr>
<td>Is the vehicle a convertible?</td>
<td>No</td>
</tr>
<tr>
<td>Is the vehicle a school bus?</td>
<td>No</td>
</tr>
<tr>
<td>Does the vehicle have a CRAS (lower anchorage only, for convertibles/school buses) installed at a front passenger seating position?</td>
<td>No</td>
</tr>
<tr>
<td>If NO, skip to next question.</td>
<td></td>
</tr>
<tr>
<td>If YES, does the vehicle have rear designated seating positions?</td>
<td></td>
</tr>
<tr>
<td>If NO, does the vehicle have an air bag on-off switch or a special exemption for no passenger air bag?</td>
<td></td>
</tr>
<tr>
<td>If NO = FAIL; If YES = PASS</td>
<td></td>
</tr>
<tr>
<td>If Yes, does the vehicle meet the requirements of S4.5.4.1 (b) of S208 and have an air bag on-off switch or a special exemption for no passenger air bag?</td>
<td></td>
</tr>
<tr>
<td>Record the distance between the front and rear seat back:</td>
<td></td>
</tr>
<tr>
<td>If Distance &lt; 720 mm and vehicle has an air bag on-off switch or special exemption = PASS</td>
<td></td>
</tr>
<tr>
<td>If Distance ≥ 720 mm or no air bag on-off switch or no special exemption = FAIL</td>
<td></td>
</tr>
<tr>
<td>Does the vehicle have rear designated seating position(s) where the lower bars of a CRAS are prevented from being located because of transmission and/or suspension component interference?</td>
<td>No</td>
</tr>
<tr>
<td>If NO, skip to next question.</td>
<td></td>
</tr>
<tr>
<td>If YES, does the vehicle have a tether anchorage at a front passenger seating position?</td>
<td></td>
</tr>
<tr>
<td>YES = PASS; NO = FAIL (S5(e))</td>
<td></td>
</tr>
<tr>
<td>Number of provided CRAS (lower anchorage only, for convertibles/school buses), indicate if a built-in child restraint is counted as a CRAS:</td>
<td>2</td>
</tr>
<tr>
<td>Is the number of provided CRAS (lower anchorages only, for convertible/school buses) greater than or equal to the number of required CRAS (lower anchorages only, for convertibles/school buses)?</td>
<td>Yes</td>
</tr>
<tr>
<td>YES = PASS; NO = FAIL (S4.4(a) or (b) or (c))</td>
<td></td>
</tr>
</tbody>
</table>
DATA SHEET 2 CONTINUED

If the vehicle has 3 or more rows of seats is a CRAS (lower anchorage only for convertibles/school buses) provided in the second row:  N/A
YES = PASS  NO = FAIL (S4.4(a)(1))

Number of provided tether anchorages (can be additional CRAS) indicate if a built-in child restraint is counted as tether anchorage (NOTE: a built-in child restraint can only be counted toward either the required number of CRAS or tether anchorages, not both):  3

Is the number of provided tether anchorages greater than or equal to the number of required tether anchorages?  YES
YES = PASS  NO = FAIL (S4.4 (a) or (b) or (c))

If the vehicle has 3 or more rear dsps and a non-outboard dsp, is a tether anchorage or CRAS provided at a non-outboard dsp?  YES
YES = PASS  NO = FAIL (S4.4 (a)(2))

Are all tether and lower anchorages available for use at all times when the seat is configured for passenger use?  YES
YES = PASS  NO = FAIL (S4.6 (b))

Provide a diagram showing the location of lower anchorages and/or tether anchorages.

X  

A

*  

B

*  

C

*  

Drvr.

Psgr.

X = Top Tether  
* = Lower Anchors

RECORDED BY:  G. Farrand  
DATE:  08/26/08

APPROVED BY:  D. Messick
DATA SHEET 3
LOCATION OF TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2008 BMW 328i Passenger Car
VEH. NHTSA NO: C80509; VIN: WBAVC53588A246718
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 26, 2008
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

DESIGNATED SEATING POSITION: ROW 2 LEFT, RIGHT AND CENTER POSITIONS

Detailed description of the location of the tether anchorage:
ON REAR HAT SHELF DIRECTLY BEHIND SEAT

Based on visual inspection, is the tether anchorage within the shaded zone? YES
If YES = PASS, skip to next section
If NO, After constructing the shaded zone, is the tether anchorage within the shaded zone?

If YES = PASS, skip to next section
If NO, Is it possible to locate a tether anchorage within the shaded zone without removing a seating component?
If YES = FAIL (S6.2.1)
If NO, Is a tether routing device provided?
If YES = PASS
IF NO = FAIL (S6.2.1.2)

Is the tether anchorage recessed? NO
If NO, skip to next question
If YES, is it outside of the tether strap wraparound area? YES = PASS NO = FAIL (S6.2.1)

Does the tether anchorage permit attachment of a tether hook? YES
YES = PASS NO = FAIL (S6.1(a))

Is the tether anchorage accessible without the need for any tools other than a screwdriver or coin? YES
YES = PASS NO = FAIL (S6.1(b))

After the tether anchorage is accessed, is it ready for use without the need for tools? YES
YES = PASS NO = FAIL (S6.1(c))

Is the tether anchorage sealed to prevent the entry of exhaust fumes into the passenger compartment? YES
YES = PASS NO = FAIL (S6.1(d))

If the DSP has a tether routing device, is it flexible or rigid? N/A
DESIGNATED SEATING POSITION: ROW 2 LEFT, RIGHT AND CENTER POSITIONS

If the DSP has a flexible tether routing device, after installing SFAD2 record the tether strap tension: N/A (Must be 60 N ± 5 N)

If the DSP has a flexible tether routing device, record the horizontal distance between the torso reference plane and the routing device: N/A
Greater than or equal to 65mm = PASS Less than 65mm = FAIL

If the DSP has a rigid tether routing device, record the horizontal distance between the torso reference plane and the routing device: N/A
Greater than or equal to 100mm = PASS Less than 100mm = FAIL

COMMENTS:

RECORDED BY: G. Farrand DATE: 08/26/08
APPROVED BY: D. Messick
DATA SHEET 4
LOWER ANCHORAGE DIMENSIONS

VEH. MOD YR/MAKE/MODEL/BODY: 2008 BMW 328i Passenger Car
VEH. NHTSA NO: C80509; VIN: WBAVC53588A246718
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 26, 2008
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

DESIGNATED SEATING POSITION: ROW 2 LEFT SIDE (DSP A)

Outboard Lower Anchorage bar diameter: 6.02 mm
6mm ± 0.1 mm = PASS Other size = FAIL (S9.1.1(a))

Inboard Lower Anchorage bar diameter: 6.02 mm
6mm ± 0.1 mm = PASS Other size = FAIL (S9.1.1(a))

Are the bars straight, horizontal and transverse? YES
YES = PASS NO = FAIL

Length of the straight portion of the bar (outboard lower anchorage): 28 mm
Length ≥25mm = PASS Length <25mm = FAIL(S9.1.1(c) (i))

Length of the straight portion of the bar (inboard lower anchorage): 28 mm
Length ≥25mm = PASS Length <25mm = FAIL(S9.1.1(c) (i))

Length between the anchor bar supports (outboard lower anchorage): 31 mm
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

Length between the anchor bar supports (inboard lower anchorage): 31 mm
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

CRF Pitch angle: 18.0º
Angle = 15º±10º = PASS Angle ≠15º±10º = FAIL (S9.2.1)

CRF Roll angle: 0º
Angle = 0º±5º = PASS Angle ≠0º±5º = FAIL (S9.2.1)

CRF Yaw angle: 0º
Angle = 0º±10º = PASS Angle ≠0º±10º = FAIL (S9.2.1)

Distance between point Z on the CRF and the front surface of outboard anchor bar: 43 mm
Distance ≤70mm = PASS Distance > 70mm = FAIL

Distance between point Z on the CRF and the front surface of inboard anchor bar: 54 mm
Distance ≤70mm = PASS Distance > 70mm = FAIL
DESIGNATED SEATING POSITION: ROW 2 LEFT SIDE (DSP A)

Distance between SgRP and the front surface of outboard anchor bar: 147 mm
Distance ≥ 120mm = PASS  Distance < 120mm = FAIL

Distance between SgRP and the front surface of inboard anchor bar: 145 mm
Distance ≥ 120mm = PASS  Distance < 120mm = FAIL

Based on visual observation, would a 100 N load cause the anchor bar to deform more than 5 mm?
NO

If NO = PASS
If YES = FAIL (S9.1.1(g)), Provide further description of the attachment of the anchor bar:

COMMENTS:

RECORDED BY: G. Farrand DATE: 08/26/08
APPROVED BY: D. Messick
DATA SHEET 4A  
LOWER ANCHORAGE DIMENSIONS

VEH. MOD YR/MAKE/MODEL/BODY: 2008 BMW 328i Passenger Car
VEH. NHTSA NO: C80509; VIN: WBAVC53588A246718
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 26, 2008
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

DESIGNATED SEATING POSITION: ROW 2 RIGHT SIDE (DSP C)

Outboard Lower Anchorage bar diameter: 6.02 mm
6mm ± 0.1 mm = PASS Other size = FAIL (S9.1.1(a))

Inboard Lower Anchorage bar diameter: 6.02 mm
6mm ± 0.1mm = PASS Other size = FAIL (S9.1.1(a))

Are the bars straight, horizontal and transverse? YES
YES = PASS NO = FAIL

Length of the straight portion of the bar (outboard lower anchorage): 28 mm
Length ≥25mm = PASS Length <25mm = FAIL(S9.1.1(c) (i))

Length of the straight portion of the bar (inboard lower anchorage): 28 mm
Length ≥25mm = PASS Length <25mm = FAIL(S9.1.1(c) (i))

Length between the anchor bar supports (outboard lower anchorage): 31 mm
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

Length between the anchor bar supports (inboard lower anchorage): 31 mm
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

CRF Pitch angle: 17.8°
Angle = 15°±10° = PASS Angle≠15°±10° = FAIL (S9.2.1)

CRF Roll angle: 0°
Angle = 0°±5° = PASS Angle≠0°±5° = FAIL (S9.2.1)

CRF Yaw angle: 0°
Angle = 0°±10° = PASS Angle≠0°±10° = FAIL (S9.2.1)

Distance between point Z on the CRF and the front surface of outboard anchor bar: 45 mm
Distance ≤70mm = PASS Distance > 70mm = FAIL

Distance between point Z on the CRF and the front surface of inboard anchor bar: 54 mm
Distance ≤70mm = PASS Distance > 70mm = FAIL
DATA SHEET 4A CONTINUED

DESIGNATED SEATING POSITION: ROW 2 RIGHT SIDE (DSP C)

Distance between SgRP and the front surface of outboard anchor bar: 142 mm
Distance $\geq 120$ mm = PASS  Distance $< 120$ mm = FAIL

Distance between SgRP and the front surface of inboard anchor bar: 147 mm
Distance $\geq 120$ mm = PASS  Distance $< 120$ mm = FAIL

Based on visual observation, would a 100 N load cause the anchor bar to deform more than 5 mm?

_____ NO _____

If NO = PASS
If YES = FAIL (S9.1.1(g)), Provide further description of the attachment of the anchor bar:

COMMENTS:

RECORDED BY: G. Farrand  DATE: 08/26/08
APPROVED BY: D. Messick
DATA SHEET 5
CONSPICUITY AND MARKING OF LOWER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2008 BMW 328i Passenger Car
VEH. NHTSA NO: C80509; VIN: WBAVC53588A246718
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 26, 2008
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

DESIGNATED SEATING POSITION: ROW 2 LEFT AND RIGHT SIDE (DSP A & C)

MARKING (Circles)

Diameter of the circle: 15.0 mm
Diameter ≥13mm = PASS Diameter <13mm = FAIL (S9.5(a)(1))

Does the circle have words, symbols or pictograms? PICTOGRAM
NO skip to next question
YES, are the meaning of the words, symbols or pictograms explained in the owner’s manual? YES
YES = PASS NO = FAIL (S9.5(a)(2))

Where is the circle located? Seat back or seat Cushion: Seat Back

For circles on seat backs, vertical distance from the center of the circle to the center of the anchor bar: 80 mm
Distance between 50 & 100mm = PASS Other Distance=FAIL (S9.5(a)(3))

For circles on seat cushions, horizontal distance from the center of the circle to the center of the bar: N/A
Distance between 75 & 125mm= PASS Other Distance=FAIL (S9.5(a)(3))

Lateral distance from the center of the circle to the center of the anchor bar: 10 mm
Distance≤25mm = PASS Distance >25mm = FAIL (S9.5(a)(3))

CONSPICUITY (No Circles)

Is the anchor bar or guide visible when viewed from a point 30° above the horizontal in a vertical longitudinal plane bisecting the anchor bar or guide? N/A
YES = PASS NO = FAIL (S9.5(b))

If there is a guide, is it permanently attached? N/A
YES = PASS NO = FAIL (S9.5(b))
DESIGNATED SEATING POSITION: ROW 2 LEFT SIDE AND RIGHT SIDE (DSP A & C)

Is there a cap or cover over the anchor bar? __ N/A _______

If YES, Is the cap or cover marked with words, symbols or pictograms? _______

If NO = FAIL (S9.5(b))

If YES, is the meaning of the words, symbols or pictograms explained in the owner's manual?

YES = PASS  NO = FAIL (S9.5(b))

If NO, there are no requirements for having a cover.

RECORDED BY:  G. Farrand  DATE:  08/26/08

APPROVED BY:  D. Messick
DATA SHEET 6
STRENGTH OF TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2008 BMW 328i Passenger Car

VEH. NHTSA NO: C80509; VIN: WBAVC53588A246718

VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 27, 2008

TEST LABORATORY: GENERAL TESTING LABORATORIES

OBSERVERS: GRANT FARRAND, JIMMY LATANE

TEST NO: 6058

DESIGNATED SEATING POSITION: ROW 2 LEFT SIDE (DSP A)

SFAD: 2

Seat Back Angle: 26º

Location of seat back angle measurement: 2D Template

Head Restraint Position: UP

D-ring Position: N/A

Force at Point X (lower front crossmember for SFAD2) while securing belts and tether: 140 N

Lap belt tension: N/A (SFAD 1 only)

Tether strap tension: 55 N

Angle (measured above the horizontal at 500 N): 10º

Separation of tether anchorage at 500 N: NO

NO = PASS

YES = FAIL (S6.3.1)

Force application rate: 577 N/S

Time to reach maximum force (24-30 s): 26 sec.

Maximum force (14,950 N ± 50 N): 14,968 N

Tested simultaneously with another DSP? NO

COMMENTS:

RECORDED BY: G. FARRAND DATE: 08/27/08

APPROVED BY: D. MESSICK
DATA SHEET 6A
STRENGTH OF TETHER ANCHORAGES

VEH. MOD JR/MAKE/MODEL/BODY: 2008 BMW 328i Passenger Car
VEH. NHTSA NO: C80509; VIN: WBAVC53588A246718
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 27, 2008
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE
TEST NO: 6060

DESIGNATED SEATING POSITION: ROW 2 CENTER (DSP B)
SFAD: 1
Seat Back Angle: 24º
Location of seat back angle measurement: 2D Template
Head Restraint Position: UP
D-ring Position: N/A

Force at Point X (lower front crossmember for SFAD2) while securing belts and tether: N/A
Lap belt tension: 55 N (SFAD 1 only)
Tether strap tension: 55 N
Angle (measured above the horizontal at 500 N): 10º
Separation of tether anchorage at 500 N: NO = PASS YES = FAIL (S6.3.1)
Force application rate: 577 N/S
Time to reach maximum force (24-30 s): 26 sec.
Maximum force (14,950 N ± 50 N): 14,950 N
Tested simultaneously with another DSP? NO

COMMENTS:

RECORDED BY: G. FARRAND DATE: 08/27/08
APPROVED BY: D. MESSICK

17
DATA SHEET 7
STRENGTH OF LOWER ANCHORAGES (Forward Force)

VEH. MOD YR/MAKE/MODEL/BODY: 2008 BMW 328i Passenger Car
VEH. NHTSA NO: C80509; VIN: WBAVC53588A246718
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 27, 2008
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE
TEST NO: 6059

DESIGNATED SEATING POSITION: __ROW 2 RIGHT SIDE (DSP C)__

Seat Back Angle: __26°__

Location of seat back angle measurement: __2D Template____

Head Restraint Position: __N/A________

Force at lower front crossmember for SFAD2 while tightening rearward extensions: __135 N__

Angle (measured above the horizontal at 500 N): __10°__

Force application rate: __423 N/S____

Time to reach maximum force (24-30 s): __26 sec.____

Maximum force (14,950 N ± 50 N): __10,973 N____

Displacement, H1 (at 500N): __0____

Displacement, H2 (at maximum load): __37.6 mm____

Displacement of Point X: __37.6 mm____ (H2-H1)

Displacement > 175 mm = FAIL (S9.4.1(a))

Tested simultaneously with another DSP? __NO__

Distance between adjacent DSP’s: __320 mm____

COMMENTS:

RECORDED BY: __G. FARRAND_________ DATE: __08/27/08_________

APPROVED BY: __D. MESSICK__________
DATA SHEET 8
OWNER’S MANUAL

VEH. MOD YR/MAKE/MODEL/BODY: 2008 BMW 328i Passenger Car

VEH. NHTSA NO: C80509; VIN: WBAVC53588A246718

VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 26, 2008

TEST LABORATORY: GENERAL TESTING LABORATORIES

OBSERVERS: GRANT FARRAND, JIMMY LATANE

Description of which DSP’s are equipped with tether anchorages and child restraint anchorage systems: __YES__

PASS _X_ FAIL _____

Step-by-step instructions for properly attaching a child restraint system’s tether strap to the tether anchorage. Diagrams are required. __YES__

PASS _X_ FAIL _____

Description of how to properly use the tether anchorage and lower anchor bars: __YES__

PASS _X_ FAIL _____

If the lower anchor bars are marked with a circle, an explanation of what the circle indicates as well as any words or pictograms: __YES__

PASS _X_ FAIL _____

COMMENTS:

RECORDED BY: G. Farrand _______________ DATE: 08/26/08

APPROVED BY: D. Messick _______________
## SECTION 4
### INSTRUMENTATION AND EQUIPMENT LIST

#### TABLE 1 - INSTRUMENTATION & EQUIPMENT LIST

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>DESCRIPTION</th>
<th>MODEL/ SERIAL NO.</th>
<th>CAL. DATE</th>
<th>NEXT CAL. DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPUTER</td>
<td>AT&amp;T</td>
<td>486DX266</td>
<td>BEFORE USE</td>
<td>BEFORE USE</td>
</tr>
<tr>
<td>LOAD CELL</td>
<td>INTERFACE</td>
<td>215709</td>
<td>01/08</td>
<td>01/09</td>
</tr>
<tr>
<td>LINEAR TRANSDUCER</td>
<td>SERVO SYSTEMS</td>
<td>20</td>
<td>BEFORE USE</td>
<td>BEFORE USE</td>
</tr>
<tr>
<td>SEAT BELT LOAD CELL</td>
<td>TRANSDUCER</td>
<td>135</td>
<td>BEFORE USE</td>
<td>BEFORE USE</td>
</tr>
<tr>
<td>SEAT BELT LOAD CELL</td>
<td>TRANSDUCER</td>
<td>137</td>
<td>BEFORE USE</td>
<td>BEFORE USE</td>
</tr>
<tr>
<td>LEVEL</td>
<td>STANLEY</td>
<td>42-449</td>
<td>BEFORE USE</td>
<td>BEFORE USE</td>
</tr>
<tr>
<td>FORCE GAUGE</td>
<td>CHATILLON</td>
<td>8761</td>
<td>BEFORE USE</td>
<td>BEFORE USE</td>
</tr>
<tr>
<td>CALIPER</td>
<td>N/A</td>
<td>Q9322365</td>
<td>BEFORE USE</td>
<td>BEFORE USE</td>
</tr>
<tr>
<td>CRF</td>
<td>MEASUREMENT FIXTURE</td>
<td>GTL CRF</td>
<td>BEFORE USE</td>
<td>BEFORE USE</td>
</tr>
<tr>
<td>SFAD 1</td>
<td>FORCE APPLICATION DEVICE</td>
<td>GTL SFAD 1</td>
<td>BEFORE USE</td>
<td>BEFORE USE</td>
</tr>
<tr>
<td>SFAD 2</td>
<td>FORCE APPLICATION DEVICE</td>
<td>GLT SFAD 2</td>
<td>BEFORE USE</td>
<td>BEFORE USE</td>
</tr>
</tbody>
</table>
SECTION 5
PHOTOGRAPHS
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.2
RIGHT SIDE VIEW OF VEHICLE
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.3
3/4 FRONTAL VIEW FROM LEFT SIDE OF VEHICLE
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.4
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE
### Tire and Loading Information

**Seating Capacity**
- Total: 5
- Front: 2
- Rear: 3

The combined weight of occupants and cargo should never exceed 480 kg or 1058 lbs.

<table>
<thead>
<tr>
<th>Original Tire Size</th>
<th>Cold Tire Inflation Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>205/55 R 16</td>
<td>Front 220 kPa, 32 PSI</td>
</tr>
<tr>
<td>205/55 R 16</td>
<td>Rear 250 kPa, 36 PSI</td>
</tr>
<tr>
<td>Compact Spare Tire</td>
<td>Cold Tire Inflation Pressure</td>
</tr>
<tr>
<td>None</td>
<td>None kPa, None PSI</td>
</tr>
</tbody>
</table>

**Important Note:**
Use inflation pressure specified above up to 100 mph only!

**Diagram:**
- [Image of the vehicle tire information label]

**Figure 5.6**
Vehicle Tire Information Label

---

2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.7
ROW 2, LEFT SIDE, OUTBOARD LOWER ANCHOR, PRE-TEST
FIGURE 5.8
ROW 2, LEFT SIDE, INBOARD LOWER ANCHOR, PRE-TEST
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.9
ROW 2, LEFT SIDE, TOP TETHER ANCHOR, PRE-TEST
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.11
ROW 2, RIGHT SIDE, INBOARD LOWER ANCHOR,
PRE-TEST
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.12
ROW 2, RIGHT SIDE, INBOARD LOWER ANCHOR,
PRE-TEST
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.13
ROW 2, RIGHT SIDE, TOP TETHER ANCHOR, PRE-TEST
FIGURE 5.14
OVERALL VIEW OF ROW 2 SEATING POSITIONS
PRE-TEST
FIGURE 5.17
ROW 2, LEFT SIDE WITH TOP TETHER ROUTING
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.19
ROW 2, RIGHT SIDE WITH 2-D TEMPLATE
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.21
ROW 2, CENTER WITH 2-D TEMPLATE
FIGURE 5.22
ROW 2, CENTER TOP TETHER ROUTING

2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.23
ROW 2, RIGHT SIDE INBOARD CRF MEASUREMENT
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.24
ROW 2, RIGHT SIDE OUTBOARD CRF MEASUREMENT
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.25
ROW 2, LEFT SIDE INBOARD CRF MEASUREMENT
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.27
MEASUREMENT OF SYMBOL
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.28
ROW 2, LEFT SIDE PITCH MEASUREMENT
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.29
ROW 2, RIGHT SIDE PITCH MEASUREMENT
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.30
ROW 2, LEFT SIDE, OUTBOARD SRP MEASUREMENT
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.32
ROW 2, RIGHT SIDE, INBOARD SRP MEASUREMENT
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.33
ROW 2, RIGHT SIDE OUTBOARD  SRP MEASUREMENT
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.34
¾ LEFT FRONT VIEW OF VEHICLE IN TEST RIG
2008 BMW 328i  
NHTSA NO. C80509  
FMVSS NO. 225  

FIGURE 5.35  
¾ RIGHT FRONT VIEW OF VEHICLE IN TEST RIG
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.36
PRE-TEST ROW 2, LEFT SIDE WITH SFAD 2
FIGURE 5.37
PRE-TEST ROW 2, LEFT SIDE WITH SFAD 2
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.39
POST TEST ROW 2, LEFT SIDE WITH SFAD 2
FIGURE 5.40
PRE-TEST ROW 2, RIGHT SIDE WITH SFAD 2
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.41
POST TEST ROW 2, RIGHT SIDE WITH SFAD 2
FIGURE 5.43
PRE-TEST ROW 2, CENTER WITH SFAD 1
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.44
POST TEST ROW 2, CENTER WITH SFAD 1
2008 BMW 328i
NHTSA NO. C80509
FMVSS NO. 225

FIGURE 5.46
POST TEST ROW 2, CENTER WITH SFAD 1
Transporting children safely

The right place for children

⚠ Do not leave children unattended in the vehicle, otherwise they could endanger themselves and/or other persons by opening the doors, for example.

The rear center seat is not suitable for installing child-restraint systems for all age groups, approved for the age group in question.

Children always in the rear

Accident research has shown that the safest place for children is in the rear seat.

⚠ Children under the age of 13 or smaller than 5 ft/150 cm may be transported only in the rear in suitable child-restraint systems appropriate for their age, weight and size. Otherwise there is an increased risk of injury in the event of an accident.

Children 13 years of age or older must be buckled in with a safety belt as soon as there no longer is any child-restraint system that is appropriate for their age, size and weight.

Exception for front passenger seat

⚠ Should it be necessary to use a child-restraint system on the front passenger seat, the front and side airbags for the front passenger must be deactivated. Otherwise, a child traveling on that seat will face a significant risk of injury if the airbags are triggered off, even with a child-restraint system.

For more information on automatic deactivation of the front passenger airbags refer to page 77.

Installing child-restraint systems

⚠ Observe the child-restraint system manufacturer's instructions when selecting, installing and using child-restraint systems. Otherwise the protective effect may be diminished.

Standard child-restraint systems are designed to be secured with a lap belt or with the lap-belt section of a lap-and-shoulder belt. Incorrectly or improperly installed child-restraint systems can increase the risk of injury to children.

Always follow the installation instructions for the system with the greatest care.

On the front passenger seat

⚠ After installing a child-restraint system on the front passenger seat, make sure that the front and side airbags for the front passenger are deactivated, otherwise there is an increased risk of injury if the airbags deploy.

Backrest width *

⚠ The backrest width of the front passenger's seat must be at its widest possible setting. Do not change the setting after installing the child seat. Otherwise the child seat's stability on the front passenger's seat is limited.

1. Adjust the backrest width to its widest setting, refer to page 36.
2. Install the child seat.

Child seat security

The rear safety belts and the front passenger's safety belt can be prevented from being pulled out in order to fasten child-restraint systems.
To lock the safety belt
1. Secure the child-restraint system with the belt.
2. Pull the belt strap all the way out.
3. Allow the belt strap to retract and pull it taut against the child-restraint system.
The safety belt is locked.

To unlock the safety belt
1. Open the belt buckle
2. Remove the child-restraint system.
3. Allow the safety belt strap to retract all the way.

LATCH child-restraint fixing system
LATCH: Lower Anchors and Tethers for Children.

⚠️ To install and use the LATCH child restraint system, follow the operating and safety instructions provided by the manufacturer of the system, otherwise the protective function of the seat may be compromised.

Before installing the child seat, pull the belt out of the area for the child-restraint fixing system.

⚠️ Ensure that both lower LATCH anchors are correctly engaged and that the child restraint system is resting firmly against the backrest, otherwise the protective function of the seat may be compromised.

Rear seats with through-loading system
The anchor points for the lower LATCH anchors are located behind the labeled protective caps.

Rear seats without through-loading system
The anchor points for the lower LATCH anchors are located at the positions indicated by arrows, in the gap between the seat and the backrest.

Child-restraint system with tether strap
⚠️ Use the top tether anchors to secure child-restraint systems only, otherwise the anchors could be damaged.
Transporting children safely

There are three additional anchors for child-restraint systems with tether straps, see arrows.

**Placement of the tether strap**

⚠️ Make sure the upper retaining strap does not run over sharp edges and is not twisted as it passes to the top anchor. Otherwise the strap will not properly secure the child-restraint system in the event of an accident.⚠️

1. Direction of travel
2. Head restraint
3. Hook for upper retaining strap
4. Anchor
5. Rear window shelf/cargo bay floor
6. Seat backrest
7. Upper retaining strap of child-restraint system

Fold the anchors and, if necessary, the head restraints* upward before use.
1. Push the head restraint upward.
2. Guide the upper retaining strap between the head restraint holders.
3. Use the hook to clip the retaining strap to the anchor.
4. Push the head restraint into its lowermost position.
5. Pull the retaining strap taut.

On journeys

Child-safety locks for rear doors

Slide down the safety lever on the rear door:
The door can now be opened from the outside only.

Safety switch for power windows
Press the safety switch for the power windows, refer to page 29, if children are traveling on the rear seat.
APPENDIX B

MANUFACTURER’S DATA
SEAT REFERENCE POINT (SRP) AND TORSO ANGLE DATA

FMVSS No. 225
(All dimensions in mm)

MODEL YEAR: 2008 / MAKE: BMW / MODEL: 3 series / BODY STYLE: sedan

SEAT STYLE: FRONT ROW: not applicable / SECOND ROW: bench type seat / THIRD ROW: not applicable
### Table 1. Seating Positions and Torso Angles

<table>
<thead>
<tr>
<th></th>
<th>Left (Driver Side)</th>
<th>Center (if any)</th>
<th>Right (Front Passenger)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>(Driver) N/A</td>
<td>N/A</td>
<td>(Front Passenger) N/A</td>
</tr>
<tr>
<td>A2</td>
<td>32</td>
<td>71</td>
<td>32</td>
</tr>
<tr>
<td>A3</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>B</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>C – standard rear seat</td>
<td>1146</td>
<td>1114</td>
<td>1146</td>
</tr>
<tr>
<td>C – rear seat with fold-down “ski bag”</td>
<td>1141</td>
<td>1114</td>
<td>1141</td>
</tr>
<tr>
<td>D</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Torso Angle (degree)**

<table>
<thead>
<tr>
<th></th>
<th>Front Row</th>
<th>Second Row</th>
<th>Third Row</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N/A</td>
<td>27</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
<td>N/A</td>
<td>27</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note: All dimensions are in mm. If not, provide the unit used.
SEATING REFERENCE POINT
FMVSS No. 225
(All dimensions in mm)

MODEL YEAR: __2008__/ MAKE: BMW / MODEL: __3 series__/ BODY STYLE: __sedan__

SEAT STYLE: FRONT ROW: _not applicable_/ SECOND ROW: _bench type seat_/ THIRD ROW: _not applicable_

Driver's seat front outboard seat adjuster anchorage
Table 2. Seating Reference Point and Tether Anchorage Locations

<table>
<thead>
<tr>
<th>Seating Reference Point (SRP)</th>
<th>Distance from Driver’s front outboard seat adjuster anchorage¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Row</td>
<td></td>
</tr>
<tr>
<td>B1</td>
<td>N/A</td>
</tr>
<tr>
<td>E1</td>
<td>N/A</td>
</tr>
<tr>
<td>B2</td>
<td>N/A</td>
</tr>
<tr>
<td>E2</td>
<td>N/A</td>
</tr>
<tr>
<td>B3</td>
<td>N/A</td>
</tr>
<tr>
<td>E3</td>
<td>N/A</td>
</tr>
<tr>
<td>Second Row</td>
<td></td>
</tr>
<tr>
<td>C1 – standard seat</td>
<td>1146</td>
</tr>
<tr>
<td>C1 – &quot;ski-bag&quot; seat</td>
<td>1141</td>
</tr>
<tr>
<td>F1</td>
<td>278</td>
</tr>
<tr>
<td>C2</td>
<td>1114</td>
</tr>
<tr>
<td>F2</td>
<td>603</td>
</tr>
<tr>
<td>C3 – standard seat</td>
<td>1146</td>
</tr>
<tr>
<td>C3 – &quot;ski-bag&quot; seat</td>
<td>1141</td>
</tr>
<tr>
<td>F3</td>
<td>928</td>
</tr>
<tr>
<td>Third Row</td>
<td></td>
</tr>
<tr>
<td>D1</td>
<td>N/A</td>
</tr>
<tr>
<td>G1</td>
<td>N/A</td>
</tr>
<tr>
<td>D2</td>
<td>N/A</td>
</tr>
<tr>
<td>G2</td>
<td>N/A</td>
</tr>
<tr>
<td>D3</td>
<td>N/A</td>
</tr>
<tr>
<td>G3</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note: Use the center of anchorage.
TETHER ANCHORAGE LOCATIONS
FMVSS No. 225
(All dimensions in mm)


SEAT STYLE: FRONT ROW: __not applicable__ / SECOND ROW: _bench type seat_ / THIRD ROW: __not applicable__

Note: The location shall be measured at the center of anchorage.
Table 3. Seating Reference Point and Tether Anchorage Locations

<table>
<thead>
<tr>
<th>Seating Reference Point (SRP)</th>
<th>Distance from SRP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Row</td>
<td></td>
</tr>
<tr>
<td>H1</td>
<td>N/A</td>
</tr>
<tr>
<td>K1</td>
<td>N/A</td>
</tr>
<tr>
<td>H2</td>
<td>N/A</td>
</tr>
<tr>
<td>K2</td>
<td>N/A</td>
</tr>
<tr>
<td>H3</td>
<td>N/A</td>
</tr>
<tr>
<td>K3</td>
<td>N/A</td>
</tr>
<tr>
<td>Second Row</td>
<td></td>
</tr>
<tr>
<td>L1</td>
<td>647</td>
</tr>
<tr>
<td>L1</td>
<td>10</td>
</tr>
<tr>
<td>L2</td>
<td>680.5</td>
</tr>
<tr>
<td>L2</td>
<td>0</td>
</tr>
<tr>
<td>L3</td>
<td>647</td>
</tr>
<tr>
<td>L3</td>
<td>10</td>
</tr>
<tr>
<td>Third Row</td>
<td></td>
</tr>
<tr>
<td>J1</td>
<td>N/A</td>
</tr>
<tr>
<td>M1</td>
<td>N/A</td>
</tr>
<tr>
<td>J2</td>
<td>N/A</td>
</tr>
<tr>
<td>M2</td>
<td>N/A</td>
</tr>
<tr>
<td>J3</td>
<td>N/A</td>
</tr>
<tr>
<td>M3</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note: Use the center of anchorage.
NOMINAL DESIGN RIDING POSITION

For adjustable driver, passenger, 2nd row and 3rd row seat backs, describe how to position the inclinometer to measure the seat back angle. Include a description of the location of the seat back adjustment latch detent if applicable. Indicate if applicable, how the detents are numbered (Is the first detent "0" or "1"?). Indicate if the seat back angle is measured with the dummy in the seat.

Seat back angle for driver’s seat = __N/A__ degrees.

Measurement Instructions:

______________________________________________________________________________

______________________________________________________________________________

Seat back angle for passenger’s seat = __N/A__ degrees.

Measurement Instructions:

______________________________________________________________________________

______________________________________________________________________________

Seat back angle for 2nd row seat = __27__ degrees.

Measurement Instructions:

______________________________________________________________________________

______________________________________________________________________________

Seat back angle for 3rd row seat = __N/A__ degrees.

Measurement Instructions:  

______________________________________________________________________________
TETHER ANCHORAGE LOCATIONS - VERTICAL

FMVSS No. 225
(All dimensions in mm)


SEAT STYLE: FRONT ROW: _not applicable_ / SECOND ROW: _bench type seat_ / THIRD ROW: _not applicable_

LEFT SIDE VIEW OF TEST VEHICLE
Table 4. Vertical Dimension For The Tether Anchorage

<table>
<thead>
<tr>
<th>Seating Row</th>
<th>Vertical Distance from Seating Reference Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front Row</td>
<td></td>
</tr>
<tr>
<td>N1 (Driver)</td>
<td>N/A</td>
</tr>
<tr>
<td>N2 (Center)</td>
<td>N/A</td>
</tr>
<tr>
<td>N3 (Right)</td>
<td>N/A</td>
</tr>
<tr>
<td>Second Row</td>
<td></td>
</tr>
<tr>
<td>O1 (Left)</td>
<td>592</td>
</tr>
<tr>
<td>O2 (Center)</td>
<td>554</td>
</tr>
<tr>
<td>O3 (Right)</td>
<td>592</td>
</tr>
<tr>
<td>Third Row</td>
<td></td>
</tr>
<tr>
<td>P1 (Left)</td>
<td>N/A</td>
</tr>
<tr>
<td>P2 (Center)</td>
<td>N/A</td>
</tr>
<tr>
<td>P3 (Right)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note: All dimensions are in mm. If not, provide the unit anchorage.

For each vehicle, provide the following information:

1. How many designated seating positions exist in the vehicle? FRONT 2 REAR 3
2. How many designated seating positions are equipped with lower anchorages and tether anchorages? Specify which position(s).
3. 2 in SECOND ROW – OUTER 2
4. How many designated seating positions are equipped with tether anchorages? Specify which positions(s).
   3 in SECOND ROW – OUTER 2 AND INNER 1
5. Lower Anchorages Marking and Conspicuity: Whether the anchorages are certified to S9.5(a) or S9.5(b) of FMVSS No. 225. Marking according to S9.5(a)