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

NISSAN MOTOR CO., LTD.
2009 NISSAN MURANO, MPV
NHTSA NO. C95200

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

SEPTEMBER 2, 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
WASHINGTON, D.C. 20590
Compliance tests were conducted on the subject, 2009 Nissan Murano MPV 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:

**Key Words**
- Compliance Testing
- Safety Engineering
- FMVSS 225

**Distribution Statement**
Copies of this report are available from NHTSA Technical Information Services (TIS) Room W45-212 (NPO-411) 1200 New Jersey Ave., S.E. Washington, DC 20590 Telephone No. (202) 366-4947
TABLE OF CONTENTS

SECTION                        PAGE
1  Purpose of Compliance Test    1
2  Compliance Test Results       2
3  Compliance Test Data          3
4  Test Equipment List           20
5  Photographs                   21

5.1 Left Side View of Vehicle
5.2 Right Side View of Vehicle
5.3 ¾ Frontal View from Left Side of Vehicle
5.4 ¾ Rear View from Right Side of Vehicle
5.5 Vehicle Certification Label
5.6 Vehicle Tire Information Label
5.7 Row 2, Left Side, Outboard Lower Anchor, Pre-Test
5.8 Row 2, Left Side, Inboard Lower Anchor, Pre-Test
5.9 Row 2, Left Side, Top Tether Anchor, Pre-Test
5.10 Row 2, Center, Top Tether Anchor, Pre-Test
5.11 Row 2, Right Side, Inboard Lower Anchor, Pre-Test
5.12 Row 2, Left Side, Outboard Lower Anchor, Pre-Test
5.13 Row 2, Right Side, Top Tether Anchor, Pre-Test
5.14 Overall View of Row 2 Seating Positions
5.15 Row 2, Left Side with CRF
5.16 Row 2, Left Side with 2-D Template
5.17 Row 2, Left Side, Top Tether Routing
5.18 Row 2, Right Side with CRF
5.19 Row 2, Right Side with 2-D Template
5.20 Row 2, Right Side, Top Tether Routing
5.21 Row 2, Center with 2-D Template
5.22 Row 2, Center Top Tether Routing
5.23 Row 2, Right Side, Inboard CRF Measurement
5.24 Row 2, Right Side, Outboard CRF Measurement
5.25 Row 2, Left Side, Inboard CRF Measurement
5.26 Row 2, Left Side, Outboard CRF Measurement
5.27 Symbol Measurement
5.28 Row 2, Left Side, CRF Pitch Measurement
5.29 Row 2, Right Side, Inboard CRF Pitch Measurement
5.30 ¾ Left Front View of Vehicle in Test Rig
5.31 ¾ Right Front View of Vehicle in Test Rig
5.32 Pre-Test Row 2, Left Side with SFAD 2
5.33 Pre-Test, Row 2, Left Side with SFAD 2
5.34 Post Test, Row 2, Left Side with SFAD 2
5.35 Post Test, Row 2, Left Side with SFAD 2
5.36 Pre-Test, Row 2, Right Side with SFAD 2
5.37 Post Test, Row 2, Right Side with SFAD 2
5.38 Pre-Test, Row 2, Center with SFAD 1
5.39 Pre-Test, Row 2, Center with SFAD 1
5.40 Post Test, Row 2, Center with SFAD 1
5.41 Post Test, Row 2, Center with SFAD 1
<table>
<thead>
<tr>
<th>Appendix A – Owner’s Manual Child Restraint Information</th>
<th>63</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix B – Manufacturer’s Data</td>
<td>74</td>
</tr>
<tr>
<td>Appendix C - Plots</td>
<td>85</td>
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</tbody>
</table>
SECTION 1
PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF COMPLIANCE TEST

A 2009 Nissan Murano MPV 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 2009 Nissan Murano. Nomenclature applicable to the test vehicle are:

A. **Vehicle Identification Number**: JN8AZ18UX9W001369

B. **NHTSA No.**: C95200

C. **Manufacturer**: NISSAN MOTOR CO., LTD.

D. **Manufacture Date**: 11/07

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 225 testing during the time period August 15-19, 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 2009 NISSAN MURANO MPV appears to meet the requirements of FMVSS 225 testing.
3.0 TEST DATA

The following data sheets document the results of testing on the 2009 Nissan Murano MPV.
DATA SHEET 1
SUMMARY OF RESULTS

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN MURANO MPV
VEH. NHTSA NO: C95200; VIN: JN8AZ18UX9W001369
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 15, 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></th>
<th>PASS</th>
<th>FAIL</th>
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<tbody>
<tr>
<td>DSP a</td>
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<tr>
<td>DSP b</td>
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<td>DSP c</td>
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C. LOCATION OF TETHER ANCHORAGES

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D. LOWER ANCHORAGE DIMENSIONS

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<td>DSP b</td>
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<td>DSP c</td>
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## E. CONSPICUITY AND MARKING OF LOWER ANCHORAGES

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<td>DSP b</td>
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<td>DSP c</td>
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## F. STRENGTH OF TETHER ANCHORAGES

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<td>DSP b</td>
<td>X</td>
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<tr>
<td>DSP c</td>
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## G. STRENGTH OF LOWER ANCHORAGES (Forward Force)

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<td>N/A</td>
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<tr>
<td>DSP b</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>DSP c</td>
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## H. STRENGTH OF LOWER ANCHORAGE (Lateral Force)

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<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>
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## I. OWNER’S MANUAL

<table>
<thead>
<tr>
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**REMARKS:**

**NOTE:**

RECORDED BY: G. Farrand

DATE: 08/19/08

APPROVED BY: D. Messick
VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN MURANO MPV
VEH. NHTSA NO: C95200; VIN: JN8AZ18UX9W001369
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 15, 2008
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

Number of rows of seats: 2
Number of rear, forward-facing designated seating positions: 3
Number of required CRAS (lower anchorages only, for convertibles/school buses): 2
Number of required tether anchorages (can be additional CRAS): 3
Is the vehicle a convertible? NO
Is the vehicle a school bus? NO

Does the vehicle have a CRAS (lower anchorages only, for convertibles/school buses) installed at a front passenger seating position? NO
   If NO, skip to next question.
   If YES, does the vehicle have rear designated seating positions? 
   If NO, does the vehicle have an air bag on-off switch or a special exemption for no passenger air bag?
   If NO = FAIL    If YES = PASS
   If Yes, does the vehicle meet the requirements of S4.5.4.1 (b) of S208 and have and air bag on-off switch or a special exemption for no passenger air bag? 
   Record the distance between the front and rear seat back: 
   If Distance <720 mm and vehicle has an air bag on-off switch or special exemption = PASS
   If Distance ≥ 720 mm or no air bag on-off switch or no special exemption = FAIL

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? NO
   If NO, skip to next question.
   If YES, does the vehicle have a tether anchorage at a front passenger seating position? 
   YES = PASS    NO = FAIL (S5(e))

Number of provided CRAS (lower anchorages only, for convertibles/school buses), indicate if a built-in child restraint is counted as a CRAS: 2

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)? YES
   YES = PASS    NO = FAIL (S4.4(a) or (b) or (c))
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 dsp 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.

* = Top Tether
X = Lower Anchors

RECORDED BY:  G. Farrand  DATE:  08/15/08
APPROVED BY:  D. Messick
DATA SHEET 3
LOCATION OF TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN MURANO MPV
VEH. NHTSA NO: C95200; VIN: JN8AZ18UXW001369
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 15, 2008
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

DESIGNATED SEATING POSITION: TYPICAL OF ROW 2 SEAT – LEFT, CENTER AND RIGHT SIDE POSITIONS

Detailed description of the location of the tether anchorage:
ON REAR FACE OF SEAT BACK

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
   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: TYPICAL OF ROW 2 SEAT – LEFT, CENTER AND RIGHT SIDE 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: 08/15/07
APPROVED BY: D. Messick
DATA SHEET 4
LOWER ANCHORAGE DIMENSIONS

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN MURANO MPV
VEH. NHTSA NO: C95200; VIN: JN8AZ18UX9W001369
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 15, 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: 5.98 mm
6mm ± 0.1 mm = PASS Other size = FAIL (S9.1.1(a))

Inboard Lower Anchorage bar diameter: 5.98 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): 37 mm
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

Length between the anchor bar supports (inboard lower anchorage): 37 mm
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

CRF Pitch angle: 17.0
Angle = 15º±10º = PASS Angle≠15º±10º = FAIL (S9.2.1)

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

CRF Yaw angle: 0
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: 65
Distance ≤70mm = PASS Distance >70mm = FAIL

Distance between point Z on the CRF and the front surface of inboard anchor bar: 65
Distance ≤70mm = PASS Distance >70mm = FAIL
DATA SHEET 4 CONTINUED

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

Distance between SgRP and the front surface of outboard anchor bar: ___165 mm____
Distance ≥ 120mm = PASS    Distance < 120mm = FAIL

Distance between SgRP and the front surface of inboard anchor bar: ___165 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:  08/15/08

APPROVED BY:  D. Messick
DATA SHEET 4A
LOWER ANCHORAGE DIMENSIONS

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN MURANO MPV
VEH. NHTSA NO: C95200; VIN: JN8AZ18UX9W001369
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 15, 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: 5.98 mm
6mm ± 0.1 mm = PASS Other size = FAIL (S9.1.1(a))

Inboard Lower Anchorage bar diameter: 5.98 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): 37 mm
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

Length between the anchor bar supports (inboard lower anchorage): 37 mm
Length ≤60mm = PASS Length >60mm = FAIL(S9.1.1(c) (ii))

CRF Pitch angle: 17.4
Angle = 15º±10º = PASS Angle≠15º±10º = FAIL (S9.2.1)

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

CRF Yaw angle: 0
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: 65
Distance ≤70mm = PASS Distance > 70mm = FAIL

Distance between point Z on the CRF and the front surface of inboard anchor bar: 65
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: ______165 mm_____
Distance \( \geq 120\text{mm} = \text{PASS} \) \( \text{Distance} < 120\text{mm} = \text{FAIL} \)

Distance between SgRP and the front surface of inboard anchor bar: ______165 mm_____
Distance \( \geq 120\text{mm} = \text{PASS} \) \( \text{Distance} < 120\text{mm} = \text{FAIL} \)

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: _____08/15/08_____
Approved by: __D. Messick__________
DATA SHEET 5
CONSPICUITY AND MARKING OF LOWER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN MURANO MPV
VEH. NHTSA NO: C95200; VIN: JN8AZ18UX9W001369
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 15, 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? PICTOGRAPH
NO skip to next question
YES, are the meaning of the words, symbols or pictograms explained in the owner’s manual?
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: 65 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: 0
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 30º 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))
DATA SHEET 5 CONTINUED

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? Yes

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: 08/15/08

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

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN MURANO MPV
VEH. NHTSA NO: C95200; VIN: JN8AZ18UX9W001369
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 18, 2008
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE
TEST NO: 6049

DESIGNATED SEATING POSITION: ROW 2 LEFT SIDE (DSP A)
SFAD: 2
Seat Back Angle: 22º
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: 65 N
Lap belt tension: N/A (SFAD 1 only)
Tether strap tension: 60 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): 14,914 N
Tested simultaneously with another DSP? NO

COMMENTS:

RECORDED BY: G. FARRAND DATE: 08/18/08
APPROVED BY: D. MESSICK
DATA SHEET 6A
STRENGTH OF TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN MURANO MPV
VEH. NHTSA NO: C95200; VIN: JN8AZ18UX9W001369
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 18, 2008
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE
TEST NO: 6051

DESIGNATED SEATING POSITION: ROW 2 CENTER (DSP B)
SFAD: 1
Seat Back Angle: 22º
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: 65 (SFAD 1 only)
Tether strap tension: 60 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): 14,950 N
Tested simultaneously with another DSP? NO

COMMENTS:

RECORDED BY: G. FARRAND DATE: 08/19/08
APPROVED BY: D. MESSICK
DATA SHEET 6B
STRENGTH OF LOWER ANCHORAGES (Forward Force)

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN MURANO MPV
VEH. NHTSA NO: C95200; VIN: JN8AZ18UX9W001369
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 18, 2008
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE
TEST NO: 6049

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

Seat Back Angle: 22º

Location of seat back angle measurement: 2D Template

Head Restraint Position: UP

Force at lower front crossmember for SFAD2 while tightening rearward extensions: 135 N

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

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 500 N): 0

Displacement, H2 (at maximum load): 81.5 mm

Displacement of Point X: 81.5 mm (H2-H1)
Displacement > 175 mm = FAIL (S9.4.1(a))

Tested simultaneously with another DSP? NO

Distance between adjacent DSP’s: 400 mm

COMMENTS:

RECORDED BY: G. FARRAND DATE: 08/19/08
APPROVED BY: D. MESSICK
DATA SHEET 7
OWNER’S MANUAL

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN MURANO MPV
VEH. NHTSA NO: C95200; VIN: JN8AZ18UX9W001369
VEH. BUILD DATE: 11/07; TEST DATE: AUGUST 15, 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: 08/15/08
APPROVED BY: D. Messick
### TABLE 1 - INSTRUMENTATION & EQUIPMENT LIST

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<tr>
<th>EQUIPMENT</th>
<th>DESCRIPTION</th>
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<th>NEXT CAL. DATE</th>
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<tr>
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<td>INTERFACE</td>
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<td>01/09</td>
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<td>SERVO SYSTEMS</td>
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<td>BEFORE USE</td>
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<td>CHATILLON</td>
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<td>MEASUREMENT FIXTURE</td>
<td>GTL CRF</td>
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<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
2009 NISSAN MURANO
NHTSA NO. C95200
FMVSS NO. 225

FIGURE 5.2
RIGHT SIDE VIEW OF VEHICLE
2009 NISSAN MURANO
NHTSA NO. C95200
FMVSS NO. 225

FIGURE 5.4
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE
<table>
<thead>
<tr>
<th>TIRE PNEU</th>
<th>SIZE DIMENSIONS</th>
<th>COLD TIRE PRESSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRONT AVANT</td>
<td>P235/65R18 104T</td>
<td>230kPa, 33PSI</td>
</tr>
<tr>
<td>REAR ARRIÈRE</td>
<td>P235/65R18 104T</td>
<td>230kPa, 33PSI</td>
</tr>
<tr>
<td>SPARE DE RÉCHANGE</td>
<td>T165/90D18</td>
<td>420kPa, 60PSI</td>
</tr>
</tbody>
</table>

The combined weight of occupants and cargo should never exceed 408 kg or 900 lbs.

Le poids total des occupants et des marchandises ne doit jamais dépasser 408 kg ou 900 lb.
FIGURE 5.8
ROW 2, LEFT SIDE, INBOARD LOWER ANCHOR, PRE-TEST
FIGURE 5.9
ROW 2, LEFT SIDE, TOP TETHER ANCHOR, PRE-TEST
FIGURE 5.10
ROW 2, CENTER, TOP TETHER ANCHOR, PRE-TEST
2009 NISSAN MURANO
NHTSA NO. C95200
FMVSS NO. 225

FIGURE 5.11
ROW 2, RIGHT SIDE, INBOARD LOWER ANCHOR
PRE-TEST
2009 NISSAN MURANO
NHTSA NO. C95200
FMVSS NO. 225

FIGURE 5.13
ROW 2, RIGHT SIDE, TOP TETHER ANCHOR, PRE-TEST
2009 NISSAN MURANO
NHTSA NO. C95200
FMVSS NO. 225

FIGURE 5.14
OVERALL VIEW OF ROW 2 SEATING POSITIONS
FIGURE 5.16
ROW 2, LEFT SIDE WITH 2-D TEMPLATE
FIGURE 5.17
ROW 2, LEFT SIDE, TOP TETHER ROUTING
FIGURE 5.19
ROW 2, RIGHT SIDE WITH 2-D TEMPLATE
FIGURE 5.20
ROW 2, RIGHT SIDE, WITH TOP TETHER ROUTING
FIGURE 5.23
ROW 2, RIGHT SIDE INBOARD CRF MEASUREMENT
2009 NISSAN MURANO
NHTSA NO. C95200
FMVSS NO. 225

FIGURE 5.24
ROW 2 RIGHT SIDE OUTBOARD CRF MEASUREMENT
2009 NISSAN MURANO  
NHTSA NO. C95200  
FMVSS NO. 225  

FIGURE 5.25  
ROW 2, LEFT SIDE INBOARD CRF MEASUREMENT
2009 NISSAN MURANO
NHTSA NO. C95200
FMVSS NO. 225

FIGURE 5.26
ROW 2, LEFT SIDE OUTBOARD CRF MEASUREMENT
FIGURE 5.27
SYMBOL MEASUREMENT
51

2009 NISSAN MURANO
NHTSA NO. C95200
FMVSS NO. 225

FIGURE 5.30
¼ LEFT FRONT VIEW OF VEHICLE IN TEST RIG
FIGURE 5.32
PRE-TEST ROW 2, LEFT SIDE WITH SFAD 2
FIGURE 5.33
PRE-TEST ROW 2, LEFT SIDE WITH SFAD 2
2009 NISSAN MURANO
NHTSA NO. C95200
FMVSS NO. 225

FIGURE 5.34
POST TEST ROW 2, LEFT SIDE WITH SFAD 2
2009 NISSAN MURANO
NHTSA NO. C95200
FMVSS NO. 225

FIGURE 5.35
POST TEST ROW 2, LEFT SIDE WITH SFAD 2
2009 NISSAN MURANO
NHTSA NO. C95200
FMVSS NO. 225

FIGURE 5.36
PRE-TEST ROW 2, RIGHT SIDE WITH SFAD 2
FIGURE 5.37
POST TEST ROW 2, RIGHT SIDE WITH SFAD 2
FIGURE 5.38
PRE-TEST ROW 2, CENTER WITH SFAD 1
2009 NISSAN MURANO
NHTSA NO. C95200
FMVSS NO. 225

FIGURE 5.39
PRE-TEST ROW 2, CENTER WITH SFAD 1
2009 NISSAN MURANO
NHTSA NO. C95200
FMVSS NO. 225

FIGURE 5.40
POST TEST ROW 2, CENTER WITH SFAD1
APPENDIX A
OWNER'S MANUAL RESTRAINT INFORMATION
CHILD RESTRAINTS

PRECAUTIONS ON CHILD RESTRAINTS

WARNING

- Infants and small children should always be placed in an appropriate child restraint while riding in the vehicle. Failure to use a child restraint can result in serious injury or death.

- Infants and small children should never be carried on your lap. It is not possible for even the strongest adult to resist the forces of a severe accident. The child could be crushed between the adult and parts of the vehicle. Also, do not put the same seat belt around both your child and yourself.

- Even with the NISSAN Advanced Air Bag System, never install a rear-facing child restraint in the front seat. An inflating front air bag could seriously injure or kill your child. A rear-facing child restraint must only be used in the rear seat.

- NISSAN recommends that the child restraint be installed in the rear seat. According to accident statistics, children are safer when properly restrained in the rear seat than in the front seat. If you must install a front-facing child restraint in the front seat, see "CHILD RESTRAINT INSTALLATION USING THE SEAT BELTS" later in this section.

- Improper use or improper installation of a child restraint can increase the risk or severity of injury for both the child and other occupants of the vehicle and can lead to serious injury or death in an accident.

- Follow all of the child restraint manufacturer's instructions for installation and use. When purchasing a child restraint, be sure to select one which will fit your child and vehicle. It may not be possible to properly install some types of child restraints in your vehicle.

- If the child restraint is not anchored properly, the risk of a child being injured in a collision or a sudden stop greatly increases.

- Child restraint anchor points are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts or harnesses.

- Adjustable seatbacks should be positioned to fit the child restraint, but as upright as possible.

- After attaching the child restraint, test it before you place the child in it. Push it from side to side while holding the seat near the LATCH attachment or by the seat belt path. Try to tug it forward and check to see if the belt holds the restraint in place. The child restraint should not move more than 1 in (25 mm). If the restraint is not secure, tighten the belt as necessary, or put the restraint in another seat and test it again. You may need to try a different child restraint. Not all child restraints fit in all types of vehicles.

- When your child restraint is not in use, keep it secured with the LATCH System or a seat belt to prevent it from being thrown around in case of a sudden stop or accident.

CAUTION

Remember that a child restraint left in a closed vehicle can become very hot. Check the seating surface and buckle up before placing your child in the child restraint.

This vehicle is equipped with a universal child restraint lower anchor system, referred to as the Lower Anchors and Tethers for Children System or LATCH. Some child restraints include two rigid or webbing-mounted attachments that can be connected to these lower anchors. For details, see "Lower Anchors and Tethers for Children SYSTEM (LATCH)" later in this section.

If you do not have a LATCH compatible child restraint, the vehicle seat belts can be used. (See "CHILD RESTRAINT INSTALLATION USING THE SEAT BELTS" later in this section.) In general, child restraints are also designed to be installed with the lap portion of a lap/shoulder seat belt.

Several manufacturers offer child restraints for infants and small children of various sizes. When selecting any child restraint, keep the following points in mind:

- Choose only a restraint with a label certifying that it complies with Federal Motor Vehicle Safety Standard 213 or Canadian Motor Vehicle Safety Standard 213.

- Check the child restraint in your vehicle to be sure it is compatible with the vehicle's seat and seat belt system.

- If the child restraint is compatible with your vehicle, place your child in the child restraint and check the various adjustments to be sure the child restraint is compatible with your child. Choose a child restraint that is designed for your child's height and weight. Always follow all recommended procedures.

All U.S. states and Canadian provinces or territories require that infants and small children be restrained in an approved child restraint at all times while the vehicle is being operated.

Lower Anchors and Tethers for Children SYSTEM (LATCH)

Your vehicle is equipped with special anchor points that are used with Lower Anchors and Tethers for Children System (LATCH) compatible child restraints. This system may also be referred to as the ISOFIX or ISOFIX compatible system. With this system, you do not have to use a vehicle seat belt to secure the child restraint.

The LATCH anchor points are provided to install child restraints in the rear outboard seating positions.
positions only. Do not attempt to install a child restraint in the center position using the LATCH anchors.

LATCH lower anchor point locations
The LATCH anchors are located at the rear of the seat cushion near the seatback. A label is attached to the seatback to help you locate the LATCH anchors.

**WARNING**
- Attach LATCH compatible child restraints only at the locations shown in the illustration. If a child restraint is not secured properly, your child could be seriously injured or killed in an accident.
- Do not secure a child restraint in the center seat/seat position using the LATCH anchors. The child restraint will not be secured properly.
- Child restraint anchor points are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts or harnases.

**WARNING**
- Child restraint anchor points are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts or harnases.
- Your child could be seriously injured or killed in a collision if the child restraint top tether strap is damaged.
  - If the cargo cover contacts the top tether strap when it is attached to the top tether anchor, remove the cargo cover from the vehicle or secure it on the cargo floor below its attachment location. If the cargo cover is not removed, it may damage the top tether strap during a collision.
  - Do not allow cargo to contact the top tether strap when it is attached to the top tether anchor. Properly secure the cargo so it does not contact the top tether strap. Cargo that is not properly secured or that con-
tacts the top tether strap may damage the top tether strap during a collision.

Top tether anchor point locations
Anchor points are located on the seatbacks.
Installing top tether strap
First secure the child restraint with the LATCH system (rear outboard seating positions only) or the seat belt as applicable.
1. Remove the head restraint from the seatback. Store it in a secure place.
2. Position the top tether strap over the top of the seatback.
3. Secure the tether strap to the tether anchor bracket that provides the straightest installation.

4. Tighten the tether strap according to the manufacturer’s instructions to remove any slack.

If you have any questions when installing a top tether strap child restraint on the rear seat, consult your NISSAN dealer for details.

CHILD RESTRAINT INSTALLATION USING LATCH

**WARNING**
- Attach LATCH compatible child restraints only at the locations shown. For the LATCH lower anchor locations, see “Lower Anchors and Tethers for Children System (LATCH)” earlier in this section. If a child restraint is not secured properly, your child could be seriously injured or killed in an accident.
- The LATCH anchors are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstance are they to be used for adult seat belts or harnesses.
- Inspect the lower anchors by insert-

Front-facing
Follow these steps to install a front-facing child restraint using LATCH:
1. Adjust the rear seatback to the upright position.
2. Position the child restraint on the seat. Always follow the child restraint manufacturer’s instructions.
3. Secure the child restraint anchor attachments to the LATCH lower anchors. Check to make sure the LATCH attachment is properly attached to the lower anchors.
4. The back of the child restraint should be secured against the vehicle seatback. If necessary, adjust or remove the head restraint to obtain the correct child restraint fit. (See “HEAD RESTRAINTS” earlier in this section.)

If the head restraint is removed, store it in a secure place. Be sure to install the head restraint when the child restraint is removed.
If the seating position does not have an adjustable head restraint and it is interfering with the proper child restraint fit, try another seating position or a different child restraint.

Safety — Seats, seat belts and supplemental restraint system
5. For child restraints that are equipped with webbing-mounted attachments, remove any additional slack from the anchor attachments. Press downward and rearward firmly in the center of the child restraint with your knee to compress the vehicle seat cushion and seatchek while tightening the webbing of the anchor attachments.

6. If the child restraint is equipped with a top tether strap, route the top tether strap and secure the tether strap to the tether anchor point. (See "TOP TETHER STRAP CHILD RESTRANT" earlier in this section.)

7. Before placing the child in the child restraint, hold child restraint near the LATCH attachment and use force to push the child restraint from side to side, and tug it forward to make sure that it is securely held in place. It should not move more than 1 in (25 mm). If it does move more than 1 in (25 mm), pull again on the anchor attachments to further tighten the child restraint. If you are unable to properly secure the restraint, move the restraint to another seating position and try again, or try a different child restraint. Not all child restraints fit in all types of vehicles.

8. Check to make sure the child restraint is properly secured prior to each use. If the child restraint is loose, repeat steps 4 through 7.

Rear-facing
Follow these steps to install a rear-facing child restraint using LATCH:

1. Position the child restraint on the seat. Always follow the child restraint manufacturer's instructions.

2. Secure the child restraint anchor attachments to the LATCH lower anchors. Check to make sure the LATCH attachment is properly attached to the lower anchors.

3. For child restraints that are equipped with webbing-mounted attachments, remove any additional slack from the anchor attachments. Press downward and rearward firmly in the center of the child restraint with your hand to compress the vehicle seat cushion and seatchek while tightening the webbing of the anchor attachments.
4. Before placing the child in the child restraint, hold the child restraint near the LATCH attachment and use force to push the child restraint from side to side and tug it forward to make sure that it is securely held in place. It should not move more than 1 in (25 mm). If it does move more than 1 in (25 mm), pull again on the anchor attachments to further tighten the child restraint. If you are unable to properly secure the restraint, move the restraint to another seating position and try again, or try a different child restraint. Not all child restraints fit in all types of vehicles.

5. Check to make sure the child restraint is properly secured prior to each use. If the child restraint is loose, repeat steps 3 through 4.

**WARNING**

- Even with the NISSAN Advanced Air Bag System, never install a rear-facing child restraint in the front passenger seat. Front air bags inflate with great force. A rear-facing child restraint could be struck by the front air bag in a crash and could seriously injure or kill your child.
- NISSAN recommends that child restraints be installed in the rear seat.

However, if you must install a forward-facing child restraint in the front passenger seat, move the passenger seat to the rearmost position. Also, be sure the front passenger air bag status light is illuminated to indicate the passenger air bag is OFF. See “Front passenger air bag and status light” later in this section for details.

- The three-point seat belt in your vehicle is equipped with an Automatic Locking Retractor (ALR) mode which must be used when installing a child restraint.
- Failure to use the ALR mode will result in the child restraint not being properly secured. The restraint could tip over or otherwise be unsecured and cause injury to the child in a sudden stop or collision.
- When using the rear center seat belt to install a child restraint, make sure the connector tongue and the seat belt tongue are secured. Do not use the seat belt with only the seat belt tongue attached. This could result in serious personal injury in case of an accident or sudden stop.

- A child restraint with a top tether strap should not be used in the front passenger seat.

The instructions in this section apply to child restraint installation using the vehicle seat belts in the rear seat or the front passenger seat.
2. Position the child restraint on the seat. Always follow the child restraint manufacturer’s instructions.

The back of the child restraint should be secured against the seatback. If necessary, adjust or remove the head restraint (front passenger seat only) to obtain the correct child restraint fit. (See “HEAD RE- STRAINTS” earlier in this section.)

If the head restraint is removed, store it in a secure place. Be sure to install the head restraint when the child restraint is removed.

If the seating position does not have an adjustable head restraint and it is interfering with the proper child restraint fit, try another seating position or a different child restraint.

3. Route the seat belt tongue through the child restraint and insert it into the buckle until you hear and feel the latch engage. Be sure to follow the child restraint manufacturer’s instructions for belt routing.

4. Pull the shoulder belt until the belt is fully extended. At this time, the seat belt retractor is in the Automatic Locking Retractor (ALR) mode (child restraint mode). It reverts to Emergency Locking Retractor (ELR) mode when the seat belt is fully retracted.

5. Allow the seat belt to retract. Pull up on the shoulder belt to remove any slack in the belt.

6. Remove any additional slack from the seat belt. Press downward and rearward firmly in the center of the child restraint with your knee to compress the vehicle seat cushion and seatback while pulling up on the seat belt.

7. If the child restraint is equipped with a top tether strap, route the top tether strap and secure the tether strap to the tether anchor point (rear seat installation only). (See “TOP TETHER STRAP CHILD RESTRAINT” earlier in this section.) Do not install child restraints that require the use of a top tether strap to seating positions that do not have a top tether anchor.

8. Before placing the child in the child restraint, hold the child restraint near the seat belt path and use force to push the child restraint from side to side, and tug it forward to make sure that it is securely held in place. It should not move more than 1 in (25 mm). If it does move more than 1 in (25 mm), pull again on the shoulder belt to further tighten the child restraint. If you are unable to properly secure the restraint, move the restraint to another seating position and try again, or try a different child restraint. Not all child restraints fit in all types of vehicles.

Safety — Seats, seat belts and supplemental restraint system
9. Check that the retractor is in the ALR mode
by trying to pull more seat belt out of the
retractor. If you cannot pull any more belt
webbing out of the retractor, the retractor is
in the ALR mode.

10. Check to make sure the child restraint is
properly secured prior to each use. If the
seat belt is not locked, repeat steps 3
through 9.

**Front facing — step 11**

11. If the child restraint is installed in the front
passenger seat, turn the ignition switch to
the ON position. The front passenger air bag
status light should illuminate. If this
light is not illuminated, see “Front passenger
air bag and status light” later in this section.

**Move the child restraint to another
seating position.** Have the system
checked by a NISSAN dealer.

After the child restraint is removed and the seat
belt is fully retracted, the ALR mode (child
restraint mode) is canceled.

**Rear-facing**

Follow these steps to install a rear-facing child
restraint using the vehicle seat belt in the rear
seat:

1. **Child restraints for infants must be
used in the rear-facing direction and
therefore must not be used in the front
seat.** Position the child restraint on the seat.
Always follow the restraint manufacturer’s
instructions.

2. Route the seat belt tongue through the child
restraint and insert it into the buckle until you
hear and feel the latch engage. Be sure to
follow the child restraint manufacturer’s
instructions for belt routing.

3. Pull the shoulder belt until the belt is fully
extended. At this time, the seat belt retractor
is in the Automatic Locking Retractor (ALR)
mode (child restraint mode). It reverts to
Emergency Locking Retractor (ELR) mode
when the seat belt is fully retracted.

4. Allow the seat belt to retract. Pull up on the
shoulder belt to remove any slack in the belt.
5. Remove any additional slack from the child restraint, press downward and rearward firmly in the center of the child restraint with your hand to compress the vehicle seat cushion and seatback while pulling up on the seat belt.

6. Before placing the child in the child restraint, hold the child restraint near the seat belt path and use force to push the child restraint from side to side, and tug it forward to make sure that it is securely held in place. It should not move more than 1/ in (25 mm). If it dose move more than 1/ in (25 mm), pull again on the shoulder belt to further tighten the child restraint. If you are unable to properly secure the restraint, move the restraint to another rear seating position and try again, or try a different child restraint. Not all child restraints fit in all types of vehicles.

7. Check that the retractor is in the ALR mode by trying to pull more seat belt out of the retractor. If you cannot pull any more seat belt webbing out of the retractor, the retractor is in the ALR mode.

8. Check to make sure that the child restraint is properly secured prior to each use. If the belt is not locked, repeat steps 3 through 7.

After the child restraint is removed and the seat belt fully retracted, the ALR mode (child restraint mode) is canceled.

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**BOOSTER SEATS**

**PRECAUTIONS ON BOOSTER SEATS**

**WARNING**

- Infants and small children should always be placed in an appropriate child restraint while riding in the vehicle. Failure to use a child restraint or booster seat can result in serious injury or death.
- Infants and small children should never be carried on your lap. It is not possible for even the strongest adult to resist the forces of a severe accident. The child could be crushed between the adult and parts of the vehicle. Also, do not put the same seat belt around both your child and yourself.
- NISSAN recommends that the booster seat be installed in the rear seat. According to accident statistics, children are safer when properly restrained in the rear seat than in the front seat. If you must install a booster seat in the front seat, see “BOOSTER SEAT INSTALLATION” later in this section.
- A booster seat must only be installed in a seating position that has a lap/shoulder belt. Failure to use a three-point type seat belt with a booster seat can result in a serious injury in sudden stop or collision.
- Improper use or improper installation of a booster seat can increase the risk or severity of injury for both the child and other occupants of the vehicle and can lead to serious injury or death in an accident.
- Do not use towels, books, pillows or other items in place of a booster seat. Items such as these may move during normal driving or a collision and result in serious injury or death. Booster seats are designed to be used with a lap/shoulder belt. Booster seats are designed to properly route the lap and shoulder portions of the seat belt over the strongest portions of a child’s body to provide the maximum protection during a collision.
- Follow all of the booster seat manufacturer’s instructions for installation and use. When purchasing a booster seat, be sure to select one which will fit your child and vehicle. It may not be possible to properly install some types of booster seats in your vehicle.
- If the booster seat and seat belt is not used properly, the risk of a child being injured in a collision or a sudden stop greatly increases.
- Adjustable seatbacks should be positioned to fit the booster seat, but as upright as possible.
- After placing the child in the booster seat and fastening the seat belt, make sure the shoulder portion of
the belt is away from the child's face and neck and the lap portion of the belt does not cross the abdomen.

- Do not put the shoulder belt behind the child or under the child's arm. If you must install a booster seat in the front seat, see "BOOSTER SEAT INSTALLATION" later in this section.
- When your booster seat is not in use, keep it secured with a seat belt to prevent it from being thrown around in case of a sudden stop or accident.

**CAUTION**

Remember that a booster seat left in a closed vehicle can become very hot. Check the seating surface and buckles before placing your child in the booster seat.

Booster seats of various sizes are offered by several manufacturers. When selecting any booster seat, keep the following points in mind:

- Choose only a booster seat with a label certifying that it complies with Federal Motor Vehicle Safety Standard 213 or Canadian Motor Vehicle Safety Standard 213.
- Check the booster seat in your vehicle to be sure it is compatible with the vehicle's seat and seat belt system.
- Make sure the child's head will be properly supported by the booster seat or vehicle seat. The seatback must be at or above the center of the child's ears. For example, if a low back booster seat ① is chosen, the vehicle seatback must be at or above the center of the child's ears. If the seatback is lower than the center of the child's ears, a high back booster seat ② should be used.

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**BOOSTER SEAT INSTALLATION**

**WARNING**

NISSAN recommends that booster seats be installed in the rear seat. However, if you must install a booster seat in the front passenger seat, move the passenger's seat to the rearmost position.

**CAUTION**

Do not use the lap/shoulder belt Automatic Locking Retractor (ALR) mode when using a booster seat with the seat belts.

Follow these steps to install a booster seat in the rear seat or in the front passenger seat:

1. Adjust the rear seatback to the upright position.
   If you must install a booster seat in the front seat, move the seat to the rearmost position.

2. Position the booster seat on the seat. Only place it in a front-facing direction. Always follow the booster seat manufacturer's instructions.

---

Safety — Seats, seat belts and supplemental restraint system 1-39
3. The booster seat should be positioned on the vehicle seat so that it is stable. If necessary, adjust or remove the head restraint to obtain the correct booster seat fit. (See "HEAD RESTRAINTS" earlier in this section.) If the head restraint is removed, store it in a secure place. Be sure to install the head restraint when the booster seat is removed. If the seating position does not have an adjustable head restraint and it is interfering with the proper booster seat fit, try another seating position or a different booster seat.

4. Position the lap portion of the seat belt low and snug on the child's hips. Be sure to follow the booster seat manufacturer's instructions for adjusting the belt routing.

5. Pull the shoulder belt portion of the seat belt toward the retractor to take up extra slack. Be sure the shoulder belt is positioned across the top, middle portion of the child's shoulder. Be sure to follow the booster seat manufacturer's instructions for adjusting the belt routing.

6. Follow the warnings, cautions and instructions for properly fastening a seat belt shown in the "THREE-POINT TYPE SEAT BELT" earlier in this section.

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**SUPPLEMENTAL RESTRAINT SYSTEM**

**PRECAUTIONS ON SUPPLEMENTAL RESTRAINT SYSTEM**

This Supplemental Restraint System (SRS) section contains important information concerning the following systems:

- Driver and passenger supplemental front-impact air bag (NISSAN Advanced Air Bag System)
- Front seat-mounted side-impact supplemental air bag
- Roof-mounted curtain side-impact and rollover supplemental air bag
- Seat belt pretensioner

**Supplemental front-impact air bag system:** The NISSAN Advanced Air Bag System can help cushion the impact force to the head and chest of the driver and front passenger in certain frontal collisions.

**Front seat-mounted side-impact supplemental air bag system:** This system can help cushion the impact force to the head of occupants in front and rear outboard seating positions in certain side impact or rollover collisions. In a side impact, the curtain and rollover air bags are designed to inflate on the side where the vehicle is impacted. In a rollover both curtain and rollover air bags are designed to inflate and remain inflated for a short period of time.

These supplemental restraint systems are designed to supplement the crash protection provided by the driver and passenger seat belts and are not a substitute for them. Seat belts should always be correctly worn and the occupant seated a suitable distance away from the steering wheel, instrument panel and door finishers. (See "SEAT BELTS" earlier in this section for instructions and precautions on seat belt usage.)

The supplemental air bags operate only when the ignition switch is in the ON position.

After turning the ignition switch to the ON position, the supplemental air bag warning light illuminates. The supplemental air bag warning light will turn off after about 7 seconds if the systems are operational.
APPENDIX B

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


SEAT STYLE: FRONT ROW: Bucket / SECOND ROW: 60/40 Folding Back / THIRD ROW: N/A

Use Center of Adjuster Anchorage

Driver's Seat Front Outboard Seat Adjuster Anchorage

Vehicle Floorpan

LEFT SIDE VIEW OF TEST VEHICLE

Torso Angle

Torso Line

SRP

A1

A2

A3

B

C

D

75
Table 1. Seating Positions and Torso Angles

<table>
<thead>
<tr>
<th>Torso Angle (degree)</th>
<th>Left (Driver Side)</th>
<th>Center (If any)</th>
<th>Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>299</td>
<td></td>
<td>299</td>
</tr>
<tr>
<td>A2</td>
<td>242</td>
<td>267</td>
<td>242</td>
</tr>
<tr>
<td>A3</td>
<td>366</td>
<td></td>
<td>366</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>1172</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>1212</td>
<td>1172</td>
<td>1212</td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Front Row</td>
<td>21°</td>
<td></td>
<td>21°</td>
</tr>
<tr>
<td>Second Row</td>
<td>25°</td>
<td>22°</td>
<td>25°</td>
</tr>
<tr>
<td>Third Row</td>
<td></td>
<td></td>
<td></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)


SEAT STYLE: FRONT ROW: Bucket / SECOND ROW: 60/40 Folding Back / THIRD ROW: N/A
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>366</td>
</tr>
<tr>
<td>E1</td>
<td>220</td>
</tr>
<tr>
<td>B2</td>
<td></td>
</tr>
<tr>
<td>E2</td>
<td></td>
</tr>
<tr>
<td>B3</td>
<td>366</td>
</tr>
<tr>
<td>E3</td>
<td>1000</td>
</tr>
<tr>
<td>Second Row</td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>1212</td>
</tr>
<tr>
<td>F1</td>
<td>240</td>
</tr>
<tr>
<td>C2</td>
<td>1172</td>
</tr>
<tr>
<td>F2</td>
<td>610</td>
</tr>
<tr>
<td>C3</td>
<td>1212</td>
</tr>
<tr>
<td>F3</td>
<td>980</td>
</tr>
<tr>
<td>Third Row</td>
<td></td>
</tr>
<tr>
<td>D1</td>
<td></td>
</tr>
<tr>
<td>G1</td>
<td></td>
</tr>
<tr>
<td>D2</td>
<td></td>
</tr>
<tr>
<td>G2</td>
<td></td>
</tr>
<tr>
<td>D3</td>
<td></td>
</tr>
<tr>
<td>G3</td>
<td></td>
</tr>
</tbody>
</table>

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


SEAT STYLE: FRONT ROW: Bucket / SECOND ROW: 60/40 Folding Back / THIRD ROW: N/A

Φ: SRP
†: Tether anchorage

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></td>
</tr>
<tr>
<td>K1</td>
<td></td>
</tr>
<tr>
<td>H2</td>
<td></td>
</tr>
<tr>
<td>K2</td>
<td></td>
</tr>
<tr>
<td>H3</td>
<td></td>
</tr>
<tr>
<td>K3</td>
<td></td>
</tr>
<tr>
<td>Second Row</td>
<td></td>
</tr>
<tr>
<td>I1</td>
<td>372</td>
</tr>
<tr>
<td>L1</td>
<td>0</td>
</tr>
<tr>
<td>I2</td>
<td>412</td>
</tr>
<tr>
<td>L2</td>
<td>0</td>
</tr>
<tr>
<td>I3</td>
<td>372</td>
</tr>
<tr>
<td>L3</td>
<td>0</td>
</tr>
<tr>
<td>Third Row</td>
<td></td>
</tr>
<tr>
<td>J1</td>
<td></td>
</tr>
<tr>
<td>M1</td>
<td></td>
</tr>
<tr>
<td>J2</td>
<td></td>
</tr>
<tr>
<td>M2</td>
<td></td>
</tr>
<tr>
<td>J3</td>
<td></td>
</tr>
<tr>
<td>M3</td>
<td></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 = 21 degrees.

Measurement Instructions:

- **Manual Seat**: 5 notches from 1st locking position (1st lock = 0 degrees).
- **Power Seat**: Headrest Stay Angle = 1.7 degrees.

Seat back angle for passenger's seat = 21 degrees.

Measurement Instructions:

- **Manual Seat**: 5 notches from 1st locking position (1st lock = 0 degrees).
- **Power Seat**: Headrest Stay Angle = 0 degrees.

Seat back angle for 2nd row seat = 25 degrees.

Measurement Instructions:

5 notches from 1st locking position (1st lock = 0 degrees).

Seat back angle for 3rd row seat = _______ degrees.

Measurement Instructions:

N/A.
TETHER ANCHORAGE LOCATIONS - VERTICAL
FMVSS No. 225
(All dimensions in mm)


SEAT STYLE: FRONT ROW: Bucket / SECOND ROW: 60/40 Folding Back / THIRD ROW: N/A

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></td>
</tr>
<tr>
<td>N2 (Center)</td>
<td></td>
</tr>
<tr>
<td>N3 (Right)</td>
<td></td>
</tr>
<tr>
<td>Second Row</td>
<td></td>
</tr>
<tr>
<td>O1 (Left)</td>
<td>272</td>
</tr>
<tr>
<td>O2 (Center)</td>
<td>247</td>
</tr>
<tr>
<td>O3 (Right)</td>
<td>272</td>
</tr>
<tr>
<td>Third Row</td>
<td></td>
</tr>
<tr>
<td>P1 (Left)</td>
<td></td>
</tr>
<tr>
<td>P2 (Center)</td>
<td></td>
</tr>
<tr>
<td>P3 (Right)</td>
<td></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?

2. How many designated seating positions are equipped with lower anchorages and tether anchorages? Specify which position(s).
   2 (rear outboard).

3. How many designated seating positions are equipped with tether anchorages? Specify which positions(s).
   3 (rear outboard and rear center).

4. Lower Anchorages Marking and Conspicuity: Whether the anchorages are certified to S9.5(a) or S9.5(b) of FMVSS No. 225.
   S9.5(a).
APPENDIX C
PLOTS
GTL 6049

225, Top Tether, Row 2 Left Side.
GTL 6050, NHTSA C95200

225, Child Restraint, Lower Anchorage.

(Thousands)
Force in Newtons

Time in Seconds

0 2 4 6 8 10 12 16 20 24 28
0 1 2 3 4