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

NISSAN MOTOR CO., LTD.
2009 NISSAN ALTIMA, PASSENGER CAR
NHTSA NO. C95202

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

September 1, 2009
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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Approved By: Grant Farrand
Approval Date: ________________

FINAL REPORT ACCEPTANCE BY OVSC:
Accepted By: Edward E. Chan
Acceptance Date: ________________
### 4. Title and Subtitle
Final Report of FMVSS 225 Compliance Testing of 2009 NISSAN ALTIMA PASSENGER CAR
NHTSA No. C95202

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Enforcement
Office of Vehicle Safety Compliance (NVS-220)
1200 New Jersey Ave., S.E.,
Washington, DC  20590

### 16. Abstract
Compliance tests were conducted on the subject, 2009 Nissan Altima 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

### 17. Key Words
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Safety Engineering
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SECTION 1
PURPOSE OF COMPLIANCE TEST

1.0 PURPOSE OF COMPLIANCE TEST

A 2009 Nissan Altima 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 2009 Nissan Altima Passenger Car. Nomenclature applicable to the test vehicle are:

A. **Vehicle Identification Number**: 1N4AL21E29N438896
B. **NHTSA No.**: C95202
C. **Manufacturer**: NISSAN MOTOR CO., LTD.
D. **Manufacture Date**: 10/08

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 225 testing during the time period August 11-17, 2009.
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 Altima Passenger Car 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 Altima Passenger Car.
DATA SHEET 1
SUMMARY OF RESULTS

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN ALTIMA PASSENGER CAR
VEH. NHTSA NO: C95202; VIN: 1N4AL21E29N438896
VEH. BUILD DATE: 10/08; TEST DATE: AUGUST 11-17, 2009
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>
</tr>
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<tbody>
<tr>
<td>DSP a</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>DSP b</td>
<td></td>
<td>X</td>
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<tr>
<td>DSP c</td>
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C. LOCATION OF TETHER ANCHORAGES

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<td>X</td>
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<tr>
<td>DSP c</td>
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D. LOWER ANCHORAGE DIMENSIONS

<table>
<thead>
<tr>
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<tbody>
<tr>
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<tr>
<td>DSP b</td>
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<td>N/A</td>
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<tr>
<td>DSP c</td>
<td></td>
<td>X</td>
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**DATA SHEET 1 CONTINUED**  
**SUMMARY OF RESULTS**

### E. CONSPICUITY AND MARKING OF LOWER ANCHORAGES

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<tbody>
<tr>
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<td></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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### F. STRENGTH OF TETHER ANCHORAGES

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<thead>
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<tbody>
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<td></td>
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<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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### G. STRENGTH OF LOWER ANCHORAGES (Forward Force)

<table>
<thead>
<tr>
<th>DSP</th>
<th>PASS</th>
<th>FAIL</th>
</tr>
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<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>
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### H. STRENGTH OF LOWER ANCHORAGE (Lateral Force)

<table>
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<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>
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### I. OWNER’S MANUAL

<table>
<thead>
<tr>
<th></th>
<th>PASS</th>
<th>FAIL</th>
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<tbody>
<tr>
<td></td>
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**REMARKS:**

**NOTE:**

RECORDED BY: G. Farrand  
DATE: 08/17/09  
APPROVED BY: D. Messick
DATA SHEET 2
REQUIREMENTS FOR CHILD RESTRAINT ANCHORAGE SYSTEMS
AND TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN ALTIMA PASSENGER CAR
VEH. NHTSA NO: C95202; VIN: 1N4AL21E29N438896
VEH. BUILD DATE: 10/08; TEST DATE: AUGUST 17, 2009
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 anchorage 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? NO

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 an air bag on-off switch or a special exemption for no passenger air bag?
Yes = PASS  NO = FAIL (S5(e))

Record the distance between the front and rear seat back: 720 mm
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 anchorage 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 = PASS  NO = FAIL (S4.4(a) or (b) or (c))
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 = Top Tether
* = Lower Anchors

RECORDED BY:  G. Farrand             DATE:  08/17/09
APPROVED BY:  D. Messick
DATA SHEET 3
LOCATION OF TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN ALTIMA PASSENGER CAR
VEH. NHTSA NO: C95202; VIN: 1N4AL21E29N438896
VEH. BUILD DATE: 10/08; TEST DATE: AUGUST 17, 2009
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:
LOCATED ON HAT SHELF BEHIND 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?
    ___YES___
      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?
        ___YES___
          If YES = FAIL (S6.2.1)
          If NO, Is a tether routing device provided?
            ___YES___
              If YES = PASS
              IF NO = FAIL (S6.2.1.2)

Is the tether anchorage recessed? ___YES___
  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___
DATA SHEET 3 CONTINUED

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: _____08/17/09_____

APPROVED BY: __D. Messick_________
DATA SHEET 4
LOWER ANCHORAGE DIMENSIONS

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN ALTIMA PASSENGER CAR
VEH. NHTSA NO: C95202;  VIN: 1N4AL21E29N438896
VEH. BUILD DATE: 10/08;  TEST DATE: AUGUST 11, 2009
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

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

Outboard Lower Anchorage bar diameter: 6.03 mm
6mm ± 0.1 mm = PASS  Other size = FAIL (S9.1.1(a))

Inboard Lower Anchorage bar diameter: 6.00 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): 29 mm
Length ≥25mm = PASS  Length <25mm = FAIL(S9.1.1(c) (i))

Length between the anchor bar supports (outboard lower anchorage): 38 mm
Length ≤60mm = PASS  Length >60mm = FAIL(S9.1.1(c) (ii))

Length between the anchor bar supports (inboard lower anchorage): 38 mm
Length ≤60mm = PASS  Length >60mm = FAIL(S9.1.1(c) (ii))

CRF Pitch angle: 15.9°
Angle = 15º±10º = PASS  Angle≠15º±10º = FAIL (S9.2.1)

CRF Roll angle: 0.1°
Angle = 0º±5º = PASS  Angle≠0º±5º = FAIL (S9.2.1)

CRF Yaw angle: 0.0°
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: 54 mm
Distance ≤70mm = PASS  Distance > 70mm = FAIL

Distance between point Z on the CRF and the front surface of inboard anchor bar: 53 mm
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: 142 mm
Distance ≥ 120mm = PASS Distance < 120mm = FAIL

Distance between SgRP and the front surface of inboard anchor bar: 133 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: 08/11/09

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

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN ALTIMA PASSENGER CAR
VEH. NHTSA NO: C95202; VIN: 1N4AL21E29N438896
VEH. BUILD DATE: 10/08; TEST DATE: AUGUST 17, 2009
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

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

Outboard Lower Anchorage bar diameter: 6.03 mm

6mm ± 0.1 mm = PASS Other size = FAIL (S9.1.1(a))

Inboard Lower Anchorage bar diameter: 6.03 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): 29 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): 39 mm
Length ≤60mm = PASS Length >60mm = FAIL (S9.1.1(c) (ii))

Length between the anchor bar supports (inboard lower anchorage): 39 mm
Length ≤60mm = PASS Length >60mm = FAIL (S9.1.1(c) (ii))

CRF Pitch angle: 15.8°
Angle = 15º±10º = PASS Angle≠15º±10º = FAIL (S9.2.1)

CRF Roll angle: 0.1°
Angle = 0º±5º = PASS Angle≠0º±5º = FAIL (S9.2.1)

CRF Yaw angle: 0.0°
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: 54 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: 152 mm
  Distance ≥ 120 mm = PASS  Distance < 120 mm = FAIL

Distance between SgRP and the front surface of inboard anchor bar: 155 mm
  Distance ≥ 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: 08/17/09
APPROVED BY: D. Messick
DATA SHEET 5
CONSPICUITY AND MARKING OF LOWER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN ALTIMA PASSENGER CAR
VEH. NHTSA NO: C95202; VIN: 1N4AL21E29N438896
VEH. BUILD DATE: 10/08; TEST DATE: AUGUST 17, 2009
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE

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

MARKING (Circles)

Diameter of the circle: 15.0 mm

Diameter ≥ 13 mm = PASS Diameter < 13 mm = 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 = 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 & 100 mm = 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 & 125 mm = 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 ≤ 25 mm = PASS Distance > 25 mm = 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))
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?

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: 08/17/09

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

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN ALTIMA PASSENGER CAR
VEH. NHTSA NO: C95202; VIN: 1N4AL21E29N438896
VEH. BUILD DATE: 10/08; TEST DATE: AUGUST 17, 2009
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE
TEST NO: 6283

DESIGNATED SEATING POSITION: ROW 2 LEFT SIDE (DSP A)
SFAD: 2
Seat Back Angle: 27°
Location of seat back angle measurement: 2D Template
Head Restraint Position: FIXED
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: 60 N

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

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): 14,905 N

Tested simultaneously with another DSP? NO

COMMENTS:

RECORDED BY: G. FARRAND DATE: 08/17/09
APPROVED BY: D. MESSICK
DATA SHEET 6A
STRENGTH OF TETHER ANCHORAGES

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN ALTIMA PASSENGER CAR

VEH. NHTSA NO: C95202; VIN: 1N4AL21E29N438896

VEH. BUILD DATE: 10/08; TEST DATE: AUGUST 17, 2009

TEST LABORATORY: GENERAL TESTING LABORATORIES

OBSERVERS: GRANT FARRAND, JIMMY LATANE

TEST NO: 6284

DESIGNATED SEATING POSITION: ROW 2 CENTER (DSP B)

SFAD: 1

Seat Back Angle: 27º

Location of seat back angle measurement: 2D Template

Head Restraint Position: N/A

D-ring Position: N/A

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

Lap belt tension: 55 N (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): 14,919 N

Tested simultaneously with another DSP? NO

COMMENTS:

RECORDED BY: G. FARRAND DATE: 08/17/09

APPROVED BY: D. MESSICK
DATA SHEET 7
STRENGTH OF LOWER ANCHORAGES (Forward Force)

VEH. MOD YR/MAKE/MODEL/BODY: 2009 NISSAN ALTIMA PASSENGER CAR
VEH. NHTSA NO: C95202; VIN: 1N4AL21E29N438896
VEH. BUILD DATE: 10/08; TEST DATE: AUGUST 17, 2009
TEST LABORATORY: GENERAL TESTING LABORATORIES
OBSERVERS: GRANT FARRAND, JIMMY LATANE
TEST NO: 6282

DESIGNATED SEATING POSITION: ROW 2 RIGHT SIDE (DSP C)
Seat Back Angle: __27°__
Location of seat back angle measurement: ___2D Template____
Head Restraint Position: ___N/A___
Force at lower front crossmember for SFAD2 while tightening rearward extensions: ___140 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 (10,950 N ± 50 N): ___10,987 N___
Displacement, H1 (at 500N): ____0____
Displacement, H2 (at maximum load): ___43.9 mm___
Displacement of Point X: ___43.9 mm___ (H2-H1)
Displacement > 175 mm = FAIL (S9.4.1(a))
Tested simultaneously with another DSP? ___NO___
Distance between adjacent DSP’s: ___345 mm___

COMMENTS:

RECORDED BY: ___G. FARRAND_________ DATE: ___08/17/09_______
APPROVED BY: ___D. MESSICK________
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:  08/17/09
APPROVED BY:  D. Messick
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<th>DESCRIPTION</th>
<th>MODEL/ SERIAL NO.</th>
<th>CAL. DATE</th>
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<td>486DX266</td>
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<td>215636</td>
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<td>MEASUREMENT FIXTURE</td>
<td>GTL CRF</td>
<td>BEFORE USE</td>
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<tr>
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<td>FORCE APPLICATION DEVICE</td>
<td>GTL SFAD 1</td>
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<td>SFAD 2</td>
<td>FORCE APPLICATION DEVICE</td>
<td>GLT SFAD 2</td>
<td>BEFORE USE</td>
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SECTION 5
PHOTOGRAPHS
2009 NISSAN ALTIMA
NHTSA NO. C95202
FMVSS NO. 225

FIGURE 5.1
LEFT SIDE VIEW OF VEHICLE
2009 NISSAN ALTIMA
NHTSA NO. C95202
FMVSS NO. 225

FIGURE 5.3
¾ FRONTAL VIEW FROM LEFT SIDE OF VEHICLE
FIGURE 5.4
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE
MFD BY NISSAN MOTOR CO., LTD.

DATE: 10/08

GVWR: 1941 KG
4279 LB

GAWR FR.: 1017 KG
2242 LB

GAWR RR.: 993 KG
2189 LB

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY, BUMPER, AND THEFT PREVENTION STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.

1N4AL21E29N438896
PASSENGER CAR 623
MODEL: BDBALAZ-EUA
COLOR: QX3 TRIM: K 9N00A

FIGURE 5.5
CLOSE-UP VIEW OF VEHICLE CERTIFICATION LABEL
### TIRE AND LOADING INFORMATION

<table>
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<tr>
<th>Seating Capacity / Nombre de places</th>
<th>Total / Total</th>
<th>Front Avant / Avant</th>
<th>Rear Arrière / Arrière</th>
<th>Spare De Secours / Secours</th>
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<tr>
<td>5</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>T135/90R16</td>
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**TIRE PNEU**

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<tr>
<th>Front Avant / Avant</th>
<th>Original Size Taille Original</th>
<th>Cold Tire Pressure Pression des Pneus Froids</th>
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<td>P215/60R16 94T</td>
<td>220kPa, 32PSI</td>
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<tr>
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</tr>
<tr>
<td>T135/90R16</td>
<td>420kPa, 60PSI</td>
<td></td>
</tr>
</tbody>
</table>

**The combined weight of occupants and cargo should never exceed 408 kg or 899 lbs.**

Le poids combiné d'occupants et de cargaison ne devrait jamais excéder 408 kg ou 899 lbs.
FIGURE 5.7
PRE-TEST VIEW OF ROW 2 SEATING POSITIONS
FIGURE 5.8
MEASUREMENT OF LOWER ANCHOR SYMBOL
FIGURE 5.9
VISIBILITY OF LOWER ANCHOR BARS
FIGURE 5.10
ROW 2, LEFT SIDE, TOP TETHER ANCHOR, PRE-TEST
FIGURE 5.12
ROW 2, RIGHT SIDE, TOP TETHER ANCHOR, PRE-TEST
FIGURE 5.13
ROW 2, RIGHT SIDE, OUTBOARD LOWER ANCHOR, PRE-TEST
FIGURE 5.15
ROW 2, LEFT SIDE, OUTBOARD LOWER ANCHOR, PRE-TEST
FIGURE 5.16
ROW 2, LEFT SIDE, INBOARD LOWER ANCHOR, PRE-TEST
FIGURE 5.19
ROW 2, RIGHT SIDE, OUTBOARD Z MEASUREMENT
FIGURE 5.21
ROW 2, LEFT SIDE WITH CRF INSTALLED
FIGURE 5.23
ROW 2, LEFT SIDE OUTBOARD Z MEASUREMENT
FIGURE 5.26
ROW 2, LEFT SIDE WITH 2-D TEMPLATE
FIGURE 5.28
ROW 2, LEFT SIDE, TOP TETHER ROUTING
FIGURE 5.29
ROW 2, LEFT SIDE, TOP TETHER ROUTING
2009 NISSAN ALTIMA
NHTSA NO. C95202
FMVSS NO. 225

FIGURE 5.30
ROW 2, RIGHT SIDE, TOP TETHER ROUTING
2009 NISSAN ALTIMA
NHTSA NO. C95202
FMVSS NO. 225

FIGURE 5.31
ROW 2, RIGHT SIDE, TOP TETHER ROUTING
2009 NISSAN ALTIMA
NHTSA NO. C95202
FMVSS NO. 225

FIGURE 5.32
ROW 2, CENTER TOP TETHER ROUTING
FIGURE 5.33
ROW 2, LEFT SIDE, OUTBOARD SRP MEASUREMENT
FIGURE 5.34
ROW 2, LEFT SIDE INBOARD SRP MEASUREMENT
2009 NISSAN ALTIMA
NHTSA NO. C95202
FMVSS NO. 225

FIGURE 5.35
ROW 2, RIGHT SIDE, OUTBOARD SRP MEASUREMENT
FIGURE 5.36
ROW 2, RIGHT SIDE, INBOARD SRP MEASUREMENT
2009 NISSAN ALTIMA
NHTSA NO. C95202
FMVSS NO. 225

FIGURE 5.37
¾ LEFT FRONT VIEW OF VEHICLE IN TEST FIXTURE
2009 NISSAN ALTIMA
NHTSA NO. C95202
FMVSS NO. 225

FIGURE 5.39
PRE-TEST ROW 2, LEFT SIDE WITH SFAD 2
FIGURE 5.40
POST TEST ROW 2, LEFT SIDE WITH SFAD 2
2009 NISSAN ALTIMA
NHTSA NO. C95202
FMVSS NO. 225

FIGURE 5.41
PRE-TEST ROW 2, RIGHT SIDE WITH SFAD 2
FIGURE 5.42
POST TEST ROW 2, RIGHT SIDE WITH SFAD 2
FIGURE 5.44
POST TEST ROW 2, CENTER WITH SFAD 1
APPENDIX A
OWNER’S MANUAL RESTRAINT INFORMATION
**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. The child restraint should not move more than 1 inch (25 mm), from side to side. Try to tug it forward and check to see if the belt holds the restraint in place. 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 buckles before placing your child in the child restraint.

This vehicle is equipped with a universal child restraint lower anchor system, referred to as the LATCH (Lower Anchors and Tethers for Children) system. Some child restraints include two rigid or webbing-mounted attachments that can be connected to these lower anchors. For details, see “LATCH (Lower Anchors and Tethers for Children) system” 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 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. Canadian law requires the top tether strap on front-facing child restraints be secured to the designated anchor point on the vehicle.

---

**LATCH system anchor locations**

LATCH (Lower Anchors and Tethers for Children) SYSTEM

Your vehicle is equipped with special anchor points that are used with LATCH (Lower Anchors and Tethers for Children) system 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 only. Do not attempt to install a child restraint in the center position using the LATCH anchors.

**LATCH lower anchor location**

**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 system compatible child restraints only at the locations shown. 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 rear seating 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 harnesses.

1-24 Safety—Seats, seat belts and supplemental restraint system
LATCH webbing-mounted attachment
Installing child restraint LATCH anchor attachments
LATCH compatible child restraints include two rigid or webbing-mounted attachments that can be connected to two anchors located at certain seating positions in your vehicle. With this system, you do not have to use a vehicle seat belt to secure the child restraint. Check your child restraint for a label stating that it is compatible with LATCH. This information may also be in the instructions provided by the child restraint manufacturer.

LATCH rigid-mounted attachment
LATCH child restraints generally require the use of a top tether strap. See "Top tether strap child restraint" later in this section for installation instructions.
When installing a child restraint, carefully read and follow the instructions in this manual and those supplied with the child restraint. See "Child restraint installation using LATCH" later in this section.

TOP TETHER STRAP CHILD RESTRAINT
If the manufacturer of your child restraint requires the use of a top tether strap, it must be secured to the anchor point.

⚠️ 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 harnesses.
- 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 cargo that contacts the top tether strap may damage it during a collision. Your child could be seriously injured or killed in a collision if the top tether strap is damaged.

Safety—Seats, seat belts and supplemental restraint system 1-25
Top tether anchor point locations
Anchor points ① are located on the rear parcel shelf.
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 Flip up the anchor cover from the anchor point which is located directly behind the child seat.
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 system compatible child restraints only at the locations shown. For the LATCH lower anchor locations see “LATCH (Latch Anchors and Tethers for Children) system”. 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 circumstances are they to be used for adult seat belts or harnesses.
Inspect the lower anchors by inserting your fingers into the lower anchor area and feeling to make sure there are no obstructions over the LATCH anchors, such as seat belt webbing or seat cushion material. The child restraint will not be secured properly if the LATCH anchors are obstructed.

Front-facing

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

1. If the rear seat cushion has a flap ①, pull the flap down to allow access to the anchors ②.
2. Position the child restraint on the seat. Always follow the child restraint manufacturer's instructions.

(if so equipped)

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 reinstall the head restraint when the child restraint is removed.

Safety—Seats, seat belts and supplemental restraint system
Front-facing rigid-mounted - step 3
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.

Front-facing - step 5
6. 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 knees to compress the vehicle seat cushion and seatback 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 restraint" in this section.

Front-facing - step 7
7. 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 path. The child restraint should not move more than 1 inch (25 mm), from side to side. Try to tug it forward and check to see if the LATCH attachment holds the restraint in place. If the restraint is not secure, tighten the LATCH attachment 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.

1-28 Safety—Seats, seat belts and supplemental restraint system
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 System:

1. If the rear seat cushion has a flap ①, pull the flap down to allow access to the anchors ②.
2. Position the child restraint on the seat. Always follow the child restraint manufacturer’s instructions. Check to make sure the LATCH attachment is properly attached to the lower anchors.

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.
Rear-facing rigid-mounted – step 3

Rear-facing – step 4

4. 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 seatback while tightening the webbing of the anchor attachments.

Rear-facing – step 5

5. 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 path. The child restraint should not move more than 1 inch (25 mm) from side to side. Try to tug it forward and check to see if the LATCH attachment holds the restraint in place. If the restraint is not secure, tighten the LATCH attachment 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.

1-30 Safety—Seats, seat belts and supplemental restraint system
6. Check to make sure the child restraint is properly secured prior to each use. If the
child restraint is loose, repeat steps 3 through 5.

![Diagram of child restraint installation using seat belts]

**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 front-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) 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.
- 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.

Safety—Seats, seat belts and supplemental restraint system 1-31
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 vehicle seatback.

If necessary, adjust or remove the head restraint to obtain the correct child restraint fit. See "Head restraint adjustment" in this section.

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

1-32 Safety—Seats, seat belts and supplemental restraint system
Front-facing – step 4
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.

Front-facing – step 5
5. Allow the seat belt to retract. Pull up on the shoulder belt to remove any slack in the belt.

Front-facing – step 6
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” 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. 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 seat belt path. The child restraint should not move more than 1 inch (25 mm), from side to side. Try to tug it forward and check to see if the belt holds the restraint in place. 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.

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.

11. If the child restraint is installed in the front passenger seat, push 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" 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 seats:

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 the 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 to compress the vehicle seat cushion and seatback while pulling up on the seat belt.

6. 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 seat belt path. The child restraint should not move more than 1 inch (25 mm), from side to side. Try to tug it forward and check to see if the belt holds the restraint in place. 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.
6. 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 seat belt path. The child restraint should not move more than 1 inch (25 mm), from side to side. Try to tug it forward and check to see if the belt holds the restraint in place. 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.

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 seat 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.
APPENDIX B

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

FMVSS No. 225
(All dimensions in mm)


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

LEFT SIDE VIEW OF TEST VEHICLE
Table 1. Seating Positions\(^1\) and Torso Angles

<table>
<thead>
<tr>
<th></th>
<th>Left (Driver Side)</th>
<th>Center (if any)</th>
<th>Right</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td></td>
<td>210</td>
<td>210</td>
</tr>
<tr>
<td>A2</td>
<td></td>
<td>254</td>
<td>254</td>
</tr>
<tr>
<td>A3</td>
<td></td>
<td>263</td>
<td>254</td>
</tr>
<tr>
<td>B</td>
<td></td>
<td>349</td>
<td>349</td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>1221</td>
<td>1221</td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Torso Angle (degree)</td>
<td>Front Row</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Second Row</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Third Row</td>
<td>27</td>
<td>27</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/Fixed Back / THIRD ROW: N/A

Front

Second

Third

Driver's seat front outboard seat adjuster anchorage

NVS-221/H/Th/OA-VAR-081011A-E
W-1453-Y
Attachment 7
Page 3 of 10
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>349</td>
</tr>
<tr>
<td>E1</td>
<td>232</td>
</tr>
<tr>
<td>B2</td>
<td></td>
</tr>
<tr>
<td>E2</td>
<td></td>
</tr>
<tr>
<td>B3</td>
<td>349</td>
</tr>
<tr>
<td>E3</td>
<td>962</td>
</tr>
<tr>
<td>Second Row</td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>1221</td>
</tr>
<tr>
<td>F1</td>
<td>247</td>
</tr>
<tr>
<td>C2</td>
<td>1178</td>
</tr>
<tr>
<td>F2</td>
<td>597</td>
</tr>
<tr>
<td>C3</td>
<td>1221</td>
</tr>
<tr>
<td>F3</td>
<td>947</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/Fixed Back / THIRD ROW: N/A

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>537</td>
</tr>
<tr>
<td>L1</td>
<td>0</td>
</tr>
<tr>
<td>I2</td>
<td>580</td>
</tr>
<tr>
<td>L2</td>
<td>0</td>
</tr>
<tr>
<td>I3</td>
<td>537</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:

For manual seat, 7 clicks from the most upright position or 14 degrees off H/R post from the most upright position. For power seat, (1) Put the seat in full rear position, (2) Adjust the lift to get torsion tube center 54.5 mm above top edge of pivot bracket and (3) Rotate the back by 28 degrees.

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

Measurement Instructions:

7 clicks from the most upright position.

Seat back angle for 2nd row seat = 27 degrees.

Measurement Instructions:

Fixed for both folding and bench seat.

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

Measurement Instructions:

N/A.
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>535</td>
</tr>
<tr>
<td>O2 (Center)</td>
<td>526</td>
</tr>
<tr>
<td>O3 (Right)</td>
<td>535</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?
   
   5.

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 position(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).
GTL 6283, NHTSA C95202

225, Child Restraint, Top Tether.

Time in Seconds

Force in Newtons (Thousands)