Report Number: 208-VRTC-03-003

Safety Compliance Testing for FMVSS 208

Occupant Crash Protection

CRABJ and 3-Year Old Suppression and Six-Year Old and Driver Low Risk Deployment Tests

Honda Manufacturing of Alabama, LLC

2003 Honda Odyssey

NHTSA Number: C35306

Vehicle Research and Test Center

10820 State Route 347

East Liberty, OH 43319

Report Date: December 16, 2003

Final Report

Prepared By:

U. S. Department of Transportation
National Highway Traffic Safety Administration
Office of Enforcement
Office of Vehicle Safety Compliance (NV8-220)

400 Seventh Street, S.W., Room No. 6115
Washington, DC 20590
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Report Approved By:

Charles Case, Safety Compliance Engineer
NHTSA, Office of Vehicle Safety Compliance

Final Report Acceptance By OVSC:

Contracting Officer's Technical Representative (COTR)
NHTSA, Office of Vehicle Safety Compliance
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Section 1

Purpose of Compliance Test
PURPOSE

This Federal Motor Vehicle Safety Standard 208 compliance test is part of a program conducted for the National Highway Traffic Safety Administration by Transportation Research Center (TRC Inc.) under contract DE-NA02-03-D-08067, Task Order VRTC-DCE2525. The purpose of the test was to determine whether the subject vehicle, a 2003 Honda Odyssey, NHSTA No. C55306, meets the suppression and low risk deployment performance requirements of FMVSS 208, "Occupant Crash Protection". The compliance tests were conducted in accordance with CVMC Laboratory Test Procedure No. TP-208-12 dated January 14, 2003.
Section 2

Tests Performed
The following checked items indicate the tests that were performed:

1. Rear outboard seating position seat belts (§4.1.4.2(b) and (c))
2. Air bag labels (§4.5.1)
3. Readiness indicator (§4.5.2)
4. Passenger Air Bag Manual Cut-Off Device (§4.5.4)
5. Lap belt lockability (§7.1.1.5)
6. Seat belt warning system (§7.3)
7. Seat belt contact force (§7.4.3)
8. Seat belt latch plate access (§7.4.4)
9. Seat belt retractor (§7.4.5)
10. Seat belt guides and hardware (§7.4.6)
11. Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart N)
12. Suppression tests with newborn infant Subpart K dummy (Part 572, Subpart N)
13. Suppression tests with 3-year-old dummy (Part 572, Subpart P)
14. Suppression tests with 6-year-old dummy (Part 572, Subpart R)
15. Test of Reactivation of the passenger Air Bag system with an Unbelted 50th percentile female dummy
16. Low risk deployment test with 12-month-old dummy (Part 572, Subpart N)
17. Low risk deployment test with 3-year-old dummy (Part 572, Subpart P)
18. Low risk deployment test with 6-year-old dummy (Part 572, Subpart R)
19. Low risk deployment test with 50th percentile female dummy (Part 572, Subpart P)
20. Impact tests
   Frontal Oblique
   ___ Belted 50th male dummy driver and passenger (0 to 48 km/h) (§5.1.1(a))
   ___ Unbelted 50th male dummy driver and passenger (0 to 48 km/h)
   ___ Unbelted 50th male dummy driver and passenger (32 to 40 km/h)
   ___ Unbelted 50th male dummy driver and passenger (32 to 40 km/h) (§5.1.2(a)(1) or §5.1.2(b))
   Frontal 0°
   ___ Belted 50th male dummy driver (0 to 48 km/h) (§5.1.1(b)(1) or §5.1.1(a))
   ___ Belted 50th male dummy passenger (0 to 48 km/h) (§5.1.1(b)(1) or §5.1.1(c))
   ___ Belted 5th female dummy driver (0 to 48 km/h) (§6.1.1(a))
   ___ Belted 5th female dummy passenger (0 to 48 km/h) (§6.1.1(a))
   ___ Unbelted 50th male dummy driver and passenger (0 to 48 km/h) (§5.1.2(a)(1))
   ___ Unbelted 50th male dummy driver (32 to 40 km/h) (§5.1.2(a)(1) or §5.1.2(b))
   ___ Unbelted 50th male dummy passenger (32 to 40 km/h) (§5.1.2(a)(1) or §5.1.2(b))
   ___ Unbelted 5th female dummy driver (32 to 40 km/h) (§6.1.1(b))
   ___ Unbelted 5th female dummy passenger (32 to 40 km/h) (§6.1.1(b))
  40% Offset 6° Belted 5th female dummy driver and passenger (0 to 40 km/h) (§18.1)
21. Skid test. Unbelted 50th male dummy driver and passenger (§13)
For the low risk deployment tests, the accelerometer data from the dummies were sampled at 12,500 samples per second and processed as specified in SAE J211/1 MAR95 and FMVSS 208, §4.13.

The low risk deployment tests were recorded using high-speed digital motion picture cameras.

The vehicle appears to meet the performance requirements to which it was tested.
Section 3

Injury Result Summary
INJURY RESULTS SUMMARY FOR CRASH TESTS AND/OR LOW RISK DEPLOYMENT TESTS

NHTSA No.: C35306 Test Date: 5/13-6/3/2002

VIN: 5FRRI18863084369

Frontal Crash ___ Offset Crash ___ Low Risk Deployment ___

Impact Angle: ___ 0 ___

Belted Dummies ___ Yes ___ No

Speed Range: ___ 32 to 40 km/h ___ 0 to 40 km/h ___ 0 to 48 km/h ___ 0 to 56 km/h

Test Speed: N/A

Driver Dummy: ___ 5th female ___ 50th male

Passenger Dummy: ___ 5th female ___ 50th male ___ 12-month ___ 3-year

___ 6-year

Test weight: N/A

5th Percentile Female Low Risk Deployment Test
Vehicles certified to S25.3

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<td>0.0</td>
<td>0.8</td>
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<tr>
<td>( N_{\text{ne}} )</td>
<td>1.0</td>
<td>0.4</td>
<td>0.2</td>
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<td>1490 N</td>
<td>51</td>
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<td>1820 N</td>
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<td>Chest displacement</td>
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Section 4

Discussion of Test
DISCUSSION OF TEST

Suppression Tests

There have been two Appendix A child restraint lists published. The Federal Register publish dates were May 12, 2000 and December 18, 2001. There were ten child restraints common to both lists. These ten restraints were the ones used, when the suppression testing required use of a child restraint. The following is a list of those restraints:

1. Britax Harness with Care 191
2. Britax Roundabout 161
3. Century Encore 461
4. Century Next Step 4920
5. Cosco Dream Ride 02-719
6. Cosco High Back Booster 02-442
7. Evenflo First Choice 204
8. Evenflo Medalion 254
9. Evenflo Right Fit 245
10. Graco Infant 8457

The following table shows the break down by category of restraints tested:

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The suppression system in this vehicle was weight based. Therefore, neither the firecraft seat position nor the child seat variations (blanket, handle, and sun shield) had an effect on suppression of the air bag. Therefore, it was not necessary to perform suppression test in all 3 seat track positions on this vehicle nor to use the blanket, sun shield and handle variations.

Low Risk Deployment Tests

There were two 5th female driver and two 6-year old passenger low risk deployment tests performed. After each low risk deployment test, the vehicle was repaired at a dealership. After the completion of all low risk deployment tests the vehicle was barrier crash tested. The crash test is in a separate report.
Section 5

Test Data Sheets
DATA SHEET 1
COTR Vehicle Work Order

Vehicle model year, make, and model: 2003 Honda Odyssey
NHTSA no.: G38306 
COTR signature: Charles Case

Tests to be performed for this vehicle are checked below.

1. Rear outboard seating positions seat belts (S4.1.4.2(b) & (S4.2.4))
2. Air bag labels (S4.5.1)
3. Readiness indicator (S4.5.2)
4. Passenger Air Bag Manual Cut-Off Device (S4.5.4)
5. Lap belt lockability (S7.1.4.5)
6. Seat belt warning system (S7.3)
7. Seat belt contact force (S7.4.3)
8. Seat belt latch plate access (S7.4.4)
9. Seat belt retention (S7.4.6)
10. Seat belt guides and hardware (S7.4.6)

X 11 Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart H) using the following indicated child restraints.

Section A
X Britax Roundabout 161 Full rearward Mid position X Full forward
X Century Convertit 4610 Full rearward Mid position XFull forward
X Century SS/E 1000 4416 Full rearward Mid position X Full forward
X Cosco Olympian 02803 Full rearward Mid position X Full forward
X Cosco Tourina 02519 Full rearward Mid position X Full forward
X Evenflo Horizon V42b Full rearward Mid position X Full forward
X Evenflo Medallion 254 Full rearward Mid position X Full forward

Section C
X Britax Roundabout 161 Full rearward Mid position X Full forward
X Century Convertit 4610 Full rearward Mid position X Full forward
X Century SS/E 1000 4416 Full rearward Mid position X Full forward
X Cosco Olympian 02803 Full rearward Mid position X Full forward
X Cosco Tourina 02519 Full rearward Mid position X Full forward

X 12 Suppression tests with Newborn infant (Part 572, Subpart K) using the following indicated child restraints.

Section A
X Cosco Dream Ride 02-719 Full rearward Mid position X Full forward

X 13 Suppression tests with 3-year-old dummy (Part 572, Subpart P) using the following indicated child restraints where a child restraint is required.

Section C
X Britax Roundabout 161 Full rearward Mid position X Full forward
X Century Convertit 4610 Full rearward Mid position X Full forward
X Century SS/E 1000 4416 Full rearward Mid position X Full forward
X Cosco Olympian 02803 Full rearward Mid position X Full forward
X Cosco Tourina 02519 Full rearward Mid position X Full forward
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<tr>
<th>Event Horizon V 425</th>
<th>Full rearward</th>
<th>Mid position</th>
<th>Full forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Horizon Medallion 254</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>FULL forward</td>
</tr>
</tbody>
</table>

Section D

<table>
<thead>
<tr>
<th>Britax Roadster 9004</th>
<th>Full rearward</th>
<th>Mid position</th>
<th>Full forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Century Next Step 4920</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>FULL forward</td>
</tr>
<tr>
<td>Cosco High Back</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
<tr>
<td>Booster 02-442</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>FULL forward</td>
</tr>
<tr>
<td>Event Horizon Right Fit 215</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
</tbody>
</table>

14. Suppression tests with representative 3-year-old child using the following indicated child restraints where a child restraint is required (Appendix I, Data Sheet 16H and 17H)

Section C

<table>
<thead>
<tr>
<th>Britax Roundabout 101</th>
<th>Full rearward</th>
<th>Mid position</th>
<th>Full forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Century Encore 4612</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
<tr>
<td>Century SLi 1000 441E</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
<tr>
<td>Cosco Olympian 2803</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
<tr>
<td>Cosco Tourna 02519</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
<tr>
<td>Event Horizon V 425</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
<tr>
<td>Event Horizon Medallion 254</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
</tbody>
</table>

Section D

<table>
<thead>
<tr>
<th>Britax Roadster 9004</th>
<th>Full rearward</th>
<th>Mid position</th>
<th>Full forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Century Next Step 4920</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
<tr>
<td>Cosco High Back</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
<tr>
<td>Booster 02-442</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
<tr>
<td>Event Horizon Right Fit 215</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
</tbody>
</table>

15. Suppression tests with 3-year-old dummy (Part 572, Subpart P) in the following positions:

| X | Sitting on seat with back against seat back (S22.2.2.1) |
| X | Sitting on seat with back against reclined seat back (S22.2.2.2) |
| X | Sitting on seat with back against seat back (S22.2.2.3) |
| X | Sitting on seat edge, spine vertical, hands by child's side (S22.2.2.4) |
| X | Standing on seat, facing forward (S22.2.2.5) |
| X | Kneeling on seat facing forward (S22.2.2.6) |
| X | Kneeling on seat facing backward (S22.2.2.7) |
| X | Lying on seat (S22.2.2.8) |

6. Suppression tests with representative 3-year-old child in the following positions:

| Sitting on seat with back against seat back (S22.2.2.1) |
| Sitting on seat with back against reclined seat back (S22.2.2.2) |
| Sitting on seat with back against seat back (S22.2.2.3) |
| Sitting on seat edge, spine vertical, hands by child's side (S22.2.2.4) |
| Standing on seat, facing forward (S22.2.2.5) |
| Kneeling on seat facing forward (S22.2.2.6) |
| Kneeling on seat facing backward (S22.2.2.7) |
| Lying on seat (S22.2.2.8) |

7. Suppression tests with 6-year-old dummy (Part 572, Subpart P) in the following indicated child restraints where a child restraint is required:

Section D

<table>
<thead>
<tr>
<th>Britax Roadster 9004</th>
<th>Full rearward</th>
<th>Mid position</th>
<th>Full forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Century Next Step 4920</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
</tbody>
</table>

8. Suppression tests with representative 6-year-old child using the following indicated child restraints where a child restraint is required:

Section D

<table>
<thead>
<tr>
<th>Britax Roadster 9004</th>
<th>Full rearward</th>
<th>Mid position</th>
<th>Full forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>Century Next Step 4920</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
<tr>
<td>Cosco High Back</td>
<td>Full rearward</td>
<td>Mid position</td>
<td>Full forward</td>
</tr>
</tbody>
</table>
Booster 02-442  Full rearward  Mid position  Full forward
Evendura Right Fit 2/15  Full rearward  Mid position  Full forward

19. Suppression tests with 6-year-old dummy (Part 572, Subpart N) in the following positions:
   __ Sitting on seat with back against seat back (S222 2.2.1)
   __ Sitting on seat with back against reclined seat back (S222 2.2.2)
   __ Sitting on seat edge, spine vertical, hands by the dummy's side (S222 2.2.2.2)
   __ Sitting back in the seat and leaning on the right front passenger door (S222 2.3)

20. Suppression tests with representative 6-year-old child in the following positions:
   __ Sitting on seat with back against seat back (S222 2.2.1)
   __ Sitting on seat with back against reclined seat back (S222 2.2.2)
   __ Sitting on seat edge, spine vertical, hands by the dummy's side (S222 2.2.2.2)
   __ Sitting back in the seat and leaning on the right front passenger door (S222 2.3)

21. Test of Reactivation of the Passenger Air Bag System with an Unbelted 5th Percentile Female Dummy (S202 2.2.3, S243.3) Perform this test after the following suppression test:

   Eventful Medallion with GRABBI Cosco High Back Booster with 3-year-old

22. Test of Reactivation of the Passenger Air Bag System with a representative 5th Percentile Female (S202 2.2.3, S243.3) Perform this test after the following suppression test:

23. Low risk deployment test with 12-month-old dummy (Part 572, Subpart K) using the following infant car restraints:
   Section B

   Britax Handle with Care 191  Full rearward  Mid position  Full forward
   Century Argenta 4553  Full rearward  Mid position  Full forward
   Century Avanta SF 415  Full rearward  Mid position  Full forward
   Century Smart Fit 543  Full rearward  Mid position  Full forward
   Cosco Arnova 0272  Full rearward  Mid position  Full forward
   Cosco Opus 35 02603  Full rearward  Mid position  Full forward
   Eventful Discovery Adjustable Right V 212
   Eventful One: Side 204
   Eventful: On My Way Position Right V 282
   Graco Infant 8497  Full rearward  Mid position  Full forward

   Section C

   Britax Roundabout 161  Full rearward  Mid position  Full forward
   Century Encore 4612  Full rearward  Mid position  Full forward
   Century Si 1000 4416  Full rearward  Mid position  Full forward
   Cosco Olympian 02003  Full rearward  Mid position  Full forward
   Cosco Tricia 02519  Full rearward  Mid position  Full forward
   Eventful Horizon V 425  Full rearward  Mid position  Full forward
   Eventful Medallion 254  Full rearward  Mid position  Full forward

24. Low risk deployment test with 3-year-old dummy (Part 572, Subpart P) in the following positions:
   Position 1
   Position 2
25. Low risk deployment test with 6-year-old dummy (Part 572, Subpart N) in the following positions:
   - Position 1
   - Position 2

26. Low risk deployment test with 5th female dummy (Part 572, Subpart O) in the following positions:
   - Position 1
   - Position 2

27. Impact tests:
   - Frontal Oblique Test Speed
     - Belted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.1(a))
     - Unbelted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a)(1))
     - Belted 50th female dummy driver and passenger (32 to 40 kmph) (S5.2.1(a)(1))

28. Slid test. Unbelted 50th male dummy driver and passenger (S13)

29. FMVSS 204 infant test

30. FMVSS 212 test

31. FMVSS 219 infant test

32. FMVSS 301 frontal test
DATA SHEET 14
WORKING OF REFERENCE POINTS FOR VARIOUS TEST POSITIONS AND POINTS

NATSA No. __ C55305______ Test Date 5/5/83
Laboratory: VRTC Test Technician(s) C Case, R Smith

1. Driver Designated Seating Position

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deleted adjustment position. (S162.10.1)
__ N/A No lumbar adjustment
X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S162.10.2)
X N/A — No additional support adjustment
X 1.3 Mark a point (seat cushion reference point) on the side of the seat cushion that is between 150 mm and 250 mm from the front edge of the seat cushion.
X 1.4 Draw a line (seat cushion reference line) through the seat cushion reference point.
X 1.5 Using only the controls that primarily move the seat in the fore-aft direction, move the seat cushion reference point to the nearest position
X 1.6 If the seat cushion adjusts fore-aft, independently of the seat back, use only the controls that primarily move the seat cushion in the fore-aft direction to move the seat cushion reference point to the nearest position. (S162.10.3)
__ N/A — No independent fore-aft seat cushion adjustment

X 1.7 Using any part or any control other than the parts just used for fore-aft positioning, determine the range of angles of the seat cushion reference line and set the seat cushion reference line at the mid-angle.
- Maximum angle 10° nose up
- Minimum angle 13° nose down
Max angle 4° nose up

X 1.8 If the seat and/or seat cushion height is adjustable, use any part or any control other than those which primarily move the seat or seat cushion fore-aft, to put the seat cushion reference point in its lowest position with the seat cushion reference line angle at the mid-angle found in 1.7.
__ N/A — No seat height adjustment
X 1.9 Using only the controls that primarily move the seat, in the fore-aft direction, verify the seat is in the nearest position.
X 1.10 Using only the controls that primarily move the seat in the fore-aft direction, mark for future reference the fore-aft seat positions. Mark each position so that there is a visual indication when the seat is in a particular position. For manual seats, move the seat forward and backward at a time and mark each detent. For power seats, mark only the rearmost, middle, and foremost positions. Table 1-3 of the positions with the following: F for foremost, M for middle, and R for rearmost. If there is a mid-position, label the closest adjustment position to the rear of the mid-position and R for rearmost.
X 1.11 Use only the controls that primarily move the seat in the fore-aft direction to place the seat in the rearmost position.

N/A 1.2 Using any controls, other than the controls that primarily move the seat and/or seat cushion in the fore-aft direction, find and visually mark for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.7.
__ N/A — No seat height adjustment. Go to 1.17
N/A 1.3 Using only the controls that primarily move the seat and/or seat cushion in the fore-aft direction, place the seat in the mid-fore-aft position.
N/A 14 Using any controls, other than the controls that primarily move the seat in the fore-aft direction, find and visually mark for future reference the maximum, minimum and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in "1.7."

X 1.15 Using only the controls that change the seat in the fore-aft direction, place the seat in the foremost position.

X 1.16 Using any controls, other than the controls that primarily move the seat in the fore-aft direction, find and visually mark for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in "1.7.

12 1/16 inches low
14 3/16 inches high
13 7/16 inches mid

X 1.17 Visually mark for future reference the seat back angle, if adjustable, at the manufacturer's nominal design riding position or a 50th percentile adult male in the manner specified by the manufacturer.

__ N/A __ No seat back angle adjustment.

Manufacturer's design seat back angle

5 3/16 inches from the sun visor screw to the headrest post.

1.18 Is the seat a bucket seat?

Yes, go to 1.18.1 and skip 1.18.2.
No, go to 1.18.2 and skip 1.18.1.

1.18.1 Bucket seats:

- Locate and mark for future reference the longitudinal centerline of the seat cushion.
- The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle (§16.3.1.1).
- Record the width of the seat cushion. 21.5 inches
- One half the width of the seat cushions is 10.75 inches.
- Record the distance from the edge of the seat cushion to the seat mark. 5 3/8 inches.

1.18.2 Bench seats:

- Locate and mark for future reference the longitudinal line on the seat cushion that marks the longitudinal vertical plane through the centerline of the steering wheel.

2 Designated Seating Position

X 2.1 Is the seat adjustable independent of the driver seating position?

X Yes, go to 2.2.
No, go to 2.18.

X 2.2 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deleted adjustment position. (§16.2.10.1, §20.1.9.1, §22.1.7.1)

N/A __ No lumbar adjustment.

X 2.3 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (§16.2.10.2, §20.1.9.2, §22.1.7.2)

N/A __ No additional support adjustment.

X 2.4 Mark a point (seat cushion reference point) on the side of the seat cushion that is between 150 mm and 250 mm from the front edge of the seat cushion.

X 2.5 Draw a line (seat cushion reference line) through the seat cushion reference point.

X 2.6 Using only the controls that primarily move the seat in the fore-aft direction, move the seat cushion reference point to the nearest position.

X 2.7 If the seat cushion adjusts fore-aft independent of the seat back, use only the controls that primarily move the seat cushion in the fore-aft direction to move the seat cushion reference point to the nearest position. (§16.2.10.3, §20.1.9.3, §22.1.7.3)

X N/A __ No independent fore-aft seat cushion adjustment.

N/A 2.8 Using any part of any control, other than the parts just used for fore-aft positioning, determine the range of angles of the seat cushion reference line and set the seat cushion reference line at the mid-angle.

Maximum angle

5.7
Minimum angle . . . . . . . .
Mid-angle
NO ANGLE ADJUSTMENTS

X 2.9 If the seat and/or seat cushion height is adjustable, use any part of any control other than those which primarily move the seat or seat cushion fore-and-aft to put the seat cushion reference point in its lowest position with the seat cushion reference line angled at the mid-range angle.
N/A — No seat height adjustment

X 2.10 Using only the controls that primarily move the seat and/or seat cushion in the fore-and-aft direction, verify the seat is in the rearmost position.

X 2.11 Using only the controls that primarily move the seat in the fore-and-aft direction, mark for future reference the fore-and-aft seat positions. Mark each position so that there is a visual indicator where the seat is at a particular position. For manual seats, move the seat toward and detect at a time and mark each detent. For power seats, mark only the rearmost, middle, and foremost positions. Label three of the positions with the following: F for foremost, M for mid-position (if there is no mid-position, label the closest adjustment position to the rear of the mid-point) and R for rearmost.

X 2.12 Using only the controls that primarily move the seat in the fore-and-aft direction, place the seat in the rearmost position.

X 2.13 Using any controls, other than the controls that primarily move the seat in the fore-and-aft direction, find and visually mark for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-range determined in 2.8.
N/A — No seat height adjustment. Go to 2.13.

X 2.14 Using only the controls that primarily move the seat in the fore-and-aft direction, place the seat in the mid-forward position.

X 2.15 Using any controls, other than the controls that primarily move the seat in the fore-and-aft direction, find and visually mark for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-range determined in 2.5.
N/A — No seat height adjustment. Go to 2.15.

X 2.16 Using only the controls that change the seat in the fore-and-aft direction, place the seat in the foremost position.

X 2.17 Using any controls, other than the controls that primarily move the seat in the fore-and-aft direction, find and visually mark for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-range determined in 2.7.
N/A — No seat height adjustment. Go to 2.17.

X 2.18 Visually mark for future reference the seat back angle adjustment at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer.
N/A — No seat back angle adjustment.

Manufacturer's design seat back angle
Actual seat back angle
Tilt seat rearward at 10° locking position.
2.19 Is the seat a bucket seat?
   X Yes, go to 2.19.1 and skip 2.19.2
   No, go to 2.19.2 and skip 2.19.1

2.19.1 Bucket seats

   Locate and mark for future reference the longitudinal centerline of the seat cushion.
   (S20.1.3, S22.1.3) The longitudinal centerline of a bucket seat cushion is determined at
   the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of
   the vehicle. (S20.1.10)
   Record the width of the seat cushion.       __________ inches
   One half the width of the seat cushion is     10.75 inches
   Record the distance from the edge of the seat cushion to the longitudinal centerline
   of the seat cushion. (The vertical plane through this longitudinal centerline is Plane B
   for suppression.)     10.75 inches

2.19.2 Bench seats

   Locate and mark for future reference the longitudinal centerline of the passenger
   seat cushion. The longitudinal centerline is the same distance from the longitudinal
   centerline of the vehicle as the center of the steering wheel. (S20.1.3, S22.1.3)
   Record the distance from the longitudinal centerline of the vehicle to the center of the
   steering wheel. ________
   Record the distance from the longitudinal centerline of the vehicle to the longitudinal
   centerline of the seat cushion. (The vertical plane through this longitudinal centerline
   is Plane B for suppression.) ________

3 Head Restraints

N/A Vehicle contains automatic head restraints.
N/A, there is no head restraint adjustment

X 3.1 Left outboard

X 3.1.1 Adjust the head restraint to its lowest position. (S16.1.4.2)

X 3.1.2 Any adjustment of the head restraint shall be used to position it full forward. For example, if it
   rotates, rotate it such that the head restraint extends as far forward as possible. Mark the
   foremost position.
X  N/A

X 3.1.3 Measure the vertical distance from the top most point of the head restraint to the
   bottom most point. Locate and mark a horizontal plane through the midpoint of this
   distance.
   Vertical height of head restraint ______ mm 7.3 inches
   Mid-point height ______ mm 3.65 inches

X 3.2 Right outboard

X 3.2.1 Adjust the head restraint to its lowest position. (S16.3.4.2)

X 3.2.2 Any adjustment of the head restraint shall be used to position it full forward. For example, if it
   rotates, rotate it such that the head restraint extends as far forward as possible. Mark the
   foremost position.
X  N/A

X 3.2.3 Measure the vertical distance from the top most point of the head restraint to the
   bottom most point. Locate and mark a horizontal plane through the midpoint of this
   distance.
   Vertical height of head restraint ______ mm 7.3 inches
   Mid-point height ______ mm 3.65 inches

X 4 Steering Wheel

X 4.1 Is the steering wheel adjustable up and down and/or in and out?
   X Yes - go to 4.2
   N/A This form is complete

X 4.2 Find and mark for future reference each up and down position. Label three of the positions
with the following: H for highest. M for mid-position (if there is no mid-position, label the next
lowest) adjustment position, and L for lowest.
N/A - steering wheel is not adjustable up and down
4.3 Find and mark for future reference each in and out position. Label three of the positions with the following: F for farmost, M for mid-position if there is no mid-position, label the next rearmost adjustment position, and R for rearmost.

4.3.1 N/A – steering wheel is not adjustable in and out

5. Driver Low Risk Deployment

5.1 N/A no low risk deployment tests scheduled

5.2 Position the steering wheel so that the front wheels are in the straight ahead position. (S26.2.1)

5.3 Position any adjustable parts of the steering controls to the mid-position as determined from item 3 above. If a mid-position adjustment is not achievable position the controls to the next lowest detent position. (S26.2.1)

5.3.1 Locate the vertical plane parallel to the vehicle longitudinal centerline through the geometric center of the opening through which the driver air bag deploys into the occupant compartment. This is referred to as "Plane E." (Check determination method below) (S26.2.2)

<table>
<thead>
<tr>
<th>&quot;Plane E&quot; Measurement</th>
<th>Measured</th>
<th>Specified</th>
<th>Verify Measured equals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ey (mm)</td>
<td>Centerline of steering wheel</td>
<td>Centerline of steering wheel</td>
<td>Specified +/- 6mm</td>
</tr>
</tbody>
</table>

CR

Plane E determined using manufacturer's information supplied by the COTR.

CR

Include manufacturer's information in the test report.

5.4.1 Locate the horizontal plane through the highest point of the air bag module cover. This is referred to as "Plane F." (Check determination method below) (S26.2.6)

5.4.2 Plane F determined using manufacturer's information supplied by the COTR.

CR

Include manufacturer's information in the test report.

<table>
<thead>
<tr>
<th>&quot;Plane F&quot; Measurement</th>
<th>Measured</th>
<th>Specified</th>
<th>Verify Measured equals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fz (mm)</td>
<td>4.6 mm above the bottom of the emblem on the steering wheel</td>
<td>4.6 mm above the bottom of the emblem on the steering wheel</td>
<td>Specified +/- 6mm</td>
</tr>
</tbody>
</table>

CR

Plane F determined by test lab personnel and approved by the COTR.

Include supporting documentation in the test report.

6. Passenger Low Risk Deployment

6.1 N/A no low risk deployment tests scheduled

6.2 Locate the horizontal plane through the geometric center of the opening through which the right front air bag deploys into the occupant compartment. This is referred to as "Plane C." (Check location method below) (S26.4.1.3)

6.2.1 Plane C located using manufacturer's information supplied by the COTR.

CR

Include manufacturer's information in the test report.

<table>
<thead>
<tr>
<th>&quot;Plane C&quot; Measurements</th>
<th>Measured</th>
<th>Specified</th>
<th>Verify Measured equals</th>
</tr>
</thead>
</table>

CR

Plane C located by test lab personnel and approved by the COTR.

Include supporting documentation in the test report.

5-10
Cz (mm) | 70.8 mm from edge of air bag cover | 70.8 mm from edge of air bag cover | Yes
---|---|---|---

X 6.2 Locate the vertical plane a distance to the vehicle longitudinal centerline through the geometric center of the opening through which the right front air bag deploys into the occupant compartment. This is referred to as "Plane D". (Check determination method below). (S22.1.1)

X Plane D determined using manufacturer’s information supplied by the COI. (Include manufacturer’s information in the test report.)

OK

Plane D determined by test lab personnel and approved by the COI (Include supporting documentation in the test report.)

<table>
<thead>
<tr>
<th>&quot;Plane D&quot; Measurements</th>
<th>Measured</th>
<th>Specified</th>
<th>Verify Measured equals Specified ± 6 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dy (mm)</td>
<td>191.4 mm</td>
<td>191.4 mm</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>from horn</td>
<td>from horn</td>
<td></td>
</tr>
<tr>
<td></td>
<td>left corner of air bag cover</td>
<td>left corner of air bag cover</td>
<td></td>
</tr>
</tbody>
</table>

X 6.3 Mark the intersection of Planes C and D on the instrument panel.

X 7. 5" Female Dummy  Done on 5/1/2013

Mark a point on the chin of the dummy 40 mm below the center of the mouth. (Chin Point) (S22.2.8)

X 8. 6-Year-Old Dummy

Locate and mark a point on the front of the dummy’s chest jacket on the mid-sagittal plane which is 139 mm (5.5 in) ± 3 mm (1/8 in) along the surface of the skin down from the top of the skin at the neck line. Designate this point as "Point 1". (S24.4.1.1)

"Point 1" measurement Not recorded ... mm

X 9. 3-Year-Old Dummy

X N/A - no tax risk deployment tests

Locate and mark a point on the front of the dummy’s chest jacket on the mid-sagittal plane which is 114 mm (4.5 in) ± 3 mm (1/8 in) along the surface of the skin down from the top of the skin at the neck line. Designate this point as "Point 1". (S22.4.1.1)

"Point 1" measurement mm ± 3 mm

C. Case, B. Smith Date 5/5/2013

I certify that I have read and performed each instruction.
DATA SHEET 16
Suppression Test Using Newborn Infant Dummy (Part 572, Subpart K)(S26)
(Car beds listed in Appendix A, section A)
NHTSA No. ... C35306 ... Test Date 2/7/93

Laboratory: ... VKTC ... Test Technician(s): ... G. Cane, B. Smith, A. Louden

Car Bed Name, Model, and Manufacture Date: ... Cosco Dream Ride

Base: ... On ... X NA-Restraint does not have a removable base
(A car bed with a removable base shall be treated as two separate models, i.e. this form and test procedure will be completed with the bed on and then repeated on a new form with the base off.)

Seat Position: ... Reclined, mid-height ... X Foremost, mid-height (Use a separate sheet for each of the three fore/aft positions)

X The child restraint has NO visible damage (S20.1.1)

1. Belted suppression tests with car beds. (S20.2.3) (Car beds listed in Appendix A, section A)
   X 1.1 Position the seat's head restraints so that the head restraints are in the lowest, retracted or deflated adjustment position. (S20.1.3.1)
   X NA No head restraint adjustment
   X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S20.1.9.2)
   X NA No additional support adjustment
   X 1.3 If the seat cushion adjusts fore and aft independently of the seat back, set this adjustment at the highest rearward position. (S20.1.3.3)
   X NA No independent fore/aft seat cushion adjustment
   X 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore/aft position, mid-height position and the seat cushion angle
   X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male occupant. (S20.1.3.5 and S8.1.3)
   X NA No seat back angle adjustment
   Manufacturer's design seat back angle ... 1st deflated back
   Tested seat back angle ... 1st deflated back
   X 1.6 If adjustable, set the head restraint at the full down and full forward position. (S20.1.9.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
   X NA No head restraint adjustment
   X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant. (S20.2.3.2(b))
   X NA No adjustable upper seat belt anchorages
   Manufacturer's specified anchorage position ... Hitched Position
   Tested anchorage position ... Hitched Position
   X 1.8 Read the car bed owner's manual for installation instructions.
   X 1.9 Secure the car bed with the seat belt. Following to the extent possible, the car bed manufacturer's directions regarding proper installation of the restraint. (S20.2.3.2(a)) Do NOT use any postioning devices such as tapers. If the vehicle has FMVSS 225 anchorages do not attach the car bed to these anchorages. (S20.1.6) Do NOT attach any tethers (S20.1.8)
   X 1.10 Position the 45 GFR Part 572 Subpart K Newborn Infant dummy in the car bed by following, to the extent possible, the car bed manufacturer's instructions provided with the car bed. (S20.2.3.2(a))

If the seat must be moved rearward because of contact with the instrument panel
describe the final location of the seat:

X - N/A - No contact with the instrument panel.

Manual seat adjuster: ___ detent(s) rearward of the forward most position (Move the seat to the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: ___ mm from instrument panel and child restraint (max allowed is 5 mm)

2.11 Complete rows 1 through 12 in Table 2 without changing the position of the child restraint or dummy. For each variation of blanket, handle, and sunshield position, start the vehicle engine or place the ignition in the “on” position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed.

2 Unhatched suppression tests using FMVSS 225 Anchorages with car bed. (Car beds listed in Appendix A, section A) Car beds are not required by FMVSS 213 to have devices to mate to FMVSS 225 anchorages.

X - N/A - Vehicle does not have FMVSS 225 anchorages or car bed does not have FMVSS 213

S 8 9 devices to mate to the FMVSS 225 anchorages.

2.2 Read the car bed owner’s manual and the vehicle owner’s manual for installation instructions.

2.3 Attach the car bed to the FMVSS 225 anchorages according to the instructions in the car bed owner’s manual and the vehicle owner’s manual. Do NOT attach seat belts. (S20.1.5) Do NOT attach any tether. (S20.4.1.8)

2.4 Position the 43 CFR Part 572 Subpart K Newborn Infant dummy in the car bed by following, to the extent possible, the car bed manufacturer’s instructions provided with the car bed. (S20 2.3.2 (c))

If the seat must be moved rearward because of contact with the instrument panel, describe the final location of the seat:

X - N/A - No contact with the instrument panel.

Manual seat adjuster: ___ detent(s) rearward of the forward most position (Move the seat to the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: ___ mm from instrument panel and child restraint (max. allowed is 5 mm)

2.5 Complete rows 13 through 24 in Table 2 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the “on” position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20 2.3.2 (c))
DATA SHEET 15

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart N (S20))

N-1/SA No. 2G3505 Test Date 5/26/03

Laboratory: VRTC Test Technician(s): C. Case, B. Smith, A. Louder

Child Restraint Name, Model, Date of Manufacture: Britax Haddle with Care, 5/28/03

Base: On X Off - X NA-Restraint does not have a removable base

A child restraint with a removable base shall be treated as two separate models, i.e., this form and test procedure will be completed with the base on and then repeated with the base off. (S20.1.7)

Seat Position: ___ Rearmost, mid-height ___ Mid position, mid-height ___ Foremost, mid-height (Use a separate sheet for each of the three fore-aft positions.)

X The child restraint has NO visible damage (S20.1.1)

1. Belted tests with rearward facing child restraints and convertible restraints in the rearward-facing mode (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4)

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deleted adjustment positions. (S20.1.9.1)

X NA - No lumbar adjustment

X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S20.1.9.2)

X NA - No additional support adjustment

X 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S20.1.9.3)

X NA - No independent fore-aft seat cushion adjustment

X 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angle.

X 1.5 The seat back angle is adjustable. (Set at the manufacturer's nominal design seating position for a 50th percentile adult male in the mannequin specified by the manufacturer, (S20.1.9.5 and S8.1.3))

X NA - No seat back angle adjustment

Manufacturer's design seat back angle ___1st detect back

Tested seat back angle ___1st detect back

X 1.6 If adjustable, set the head restraint at the full down and full forward position. (S20.1.8) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.

X NA - No head restraint adjustment

X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (S20.2.1.4(c))

X NA - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position: ___Full up position

Tested anchorage position: ___Full up position

X 1.8 Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint (S20.2.1.2)

X 1.9 Read the child restraint owner's manual for installation instructions.

X 1.10 Place the child restraint facing rearward in the seat such that Plane A (from 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14) (S20.2.1.4(a)(1))

X 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's instructions regarding proper installation of the restraint in the rear facing mode. (S07.7.14(a)(3)) Do NOT use any positioning devices such as towels. (FR 95 9/7/11 footnote 23, 5/12/2003) If the
vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)) Do NOt attach any others. (S20.1.8)
X.1.12 Place a load cell with maximum full scale reading of 275 N (60.5 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.4(c))
Is there a sheath around the seat belt that interferes with the load cell? __ Yes __ No
If yes, cut off all or part of the sheath.
X.1.13 Cinch the seat belt to a tension load of 130 N - 3N (29.2 lb ± 0.7 lb) (S20.2.1.4(e))
Record seat belt tension... 28.4 lb
X.1.14 Position the 49 CFR Part 572 Subpart R 12-month-old CRAB dummy in the child restraint by following to the extent possible, the manufacturer's instructions provided with the child restraint (S20.2.1.4(d)) (The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
X. N/A — No dummy contact with the instrument panel.
Manual seat adjuster: __ move(s) rearward of the forward most position. (Move the seat the minimum number of dentists to eliminate contact with the instrument panel.)
Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)
Reinforce the seat belt to a tension load of 130 N - 3N (29.2 lb ± 0.7 lb) (S20.2.1.4(e))
Record seat belt tension
X.1.15 Complete rows 1 through 21 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sun shade position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(d))
X.2.1.5 Complete tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4(a)) If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(c)) Do NOT attach any others. (S20.1.8)
X.2.1.5 Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sun shade position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(c))
3. Conduct tests using FMVSS 225 Anchorages with rear facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4(a)) — Do NOT attach seat belts. (S20.1.8) Do NOt attach any others. (S20.1.8)
X. N/A — Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 225 55.5 g forces to mate to the FMVSS 225 anchorages.

**3.1.** Keep the same seat position as in 1.1 through 1.7 above

**3.2.** Read the child restraint owner's manual for installation instructions.

**3.3.** Attach the child restraint facing rearward to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any repositioning devices or as towels. (FR 65 30711 footnote 23, 5/12/2000) Do NOT attach any others. (S20.1.7)

**3.4.** Position the 49 CFR Part 572 Subpart R 12-month-old CRAB dummy in the child restraint by following to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d))
If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
N/A — No dummy contact with the instrument panel.
Manual seat adjuster: ...rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: ...mm between instrument panel and child restraint (max. allowed: 5 mm.)

3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(a))

4. Beta tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any latches. (S20.1.8)

X. NA: Not a convertible restraint

4.1 Keep the same seat position as in 1.1 through 1.7 above.

4.2 Read the child restraint owner's manual for installation instructions.

4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14) (S20.2.1(a)(1)).

4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward facing mode. (S20.2.1.5(a)(1)) Do NOT use any positioning devices such as towels. (1R 65 3971, footnote 23, 5.:2) 3971, footnote 23, 5.:2) If the vehicle has FMVSS 225 anchorages, do not attach (S20.2.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any latches (S20.1.8).

4.5 Place a load on with a maximum full-scale reading of 225 N (50.0 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, or the side away from the buckle (to avoid interference from the shoulder portion of the belt) (S20.2.1.5(c)). Is there a seat belt that interferes with the load cell? Yes No. If yes, cut out all or part of the contact area. (S20.1.5(c))

4.6 Check the seat belt to a tension load of 130 N (29.2 lb) (S20.2.1.5(c)). Record seat belt tension.

4.7 Position the 40 CFR Part 571 Subpart R 12-month-old CRABL dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)). (The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:

--- NA: No dummy contact with the instrument panel

Manual seat adjuster: ...detents) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: ...mm between instrument panel and child restraint (max. allowed: 5 mm.)

Recumb the seat belt to a tension load of 130 N (29.2 lb) (S20.2.1.5(c)). Record seat belt tension.

--- NA: No dummy contact with the instrument panel

Manual seat adjuster: ...detents) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: ...mm between instrument panel and child restraint (max. allowed: 5 mm.)

Recumb the seat belt to a tension load of 130 N (29.2 lb) (S20.2.1.5(c)). Record seat belt tension.

4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sun shield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(c))

5. Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode. (Appendix A, sections Band C) (S20.2.2.5) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any latches (S20.1.8) without changing the position of the child restraint or dummy. Disconnect the seat belt and return it to its stowed position.
Complete rows 29 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. \( S20.2.2(5) \)

X N/A Not a convertible restraint

6. Unbuckle tests using FMVSS 225 Anchorages with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section (b) \( S20.2.1(5) \) - Do NOT attach seat belts.

\( S20.1.6(8) \) Do NOT attach any labels \( S20.1.6(8) \)

__ N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 "S" device to mate to the FMVSS 225 anchorages.

X N/A - Not a convertible restraint

__6.1 Keep the same seat position as in 11 through 17 above.

6.2 Read the child restraint owner's manual for installation instructions.

6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any to the seat \( S20.1.3(4) \) Do NOT use any positioning devices such as belts. (FR 222 30/6, footnote 23, b/12/2000)

6.4 Position the 29 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. \( S20.2.1.5(d) \)

If the seat must be moved rearward because of dummy contact with the instrument panel, relocate the final location of the seat:

N/A - No dummy contact with the instrument panel.

Virtual seat adjuster detent(s) rearward of the forward most position. Move the seat to the minimum number of detents to eliminate contact with the instrument panel.

Power seat adjuster __ mm between instrument panel and child restraint (max.

allowance __ mm).

6.5 Complete rows 51 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. \( S20.2.1.5(5) \)

C. Case. B. Schn. A. Allison _______________ _______________ 5/5/03

I certify that I have read and performed each instruction. Date
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<td>In-use</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>42</td>
<td>Bolted</td>
<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>43</td>
<td>Bolted</td>
<td>Forward</td>
<td>Upright</td>
<td>In-use</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>44</td>
<td>Bolted</td>
<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>45</td>
<td>Bolted</td>
<td>Forward</td>
<td>Down</td>
<td>In-use</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>46</td>
<td>Bolted</td>
<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
<td>On</td>
<td>N/A</td>
</tr>
<tr>
<td>47</td>
<td>Bolted</td>
<td>Forward</td>
<td>Upright</td>
<td>In-use</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>48</td>
<td>Bolted</td>
<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
<td>On</td>
<td>N/A</td>
</tr>
<tr>
<td>49</td>
<td>Unbelted</td>
<td>Forward</td>
<td>Down</td>
<td>In-use</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>50</td>
<td>Unbelted</td>
<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>51</td>
<td>Unbelted</td>
<td>Forward</td>
<td>Upright</td>
<td>In-use</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>52</td>
<td>Unbelted</td>
<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>53</td>
<td>Unbelted</td>
<td>Forward</td>
<td>Down</td>
<td>In-use</td>
<td>On</td>
<td>N/A</td>
</tr>
<tr>
<td>54</td>
<td>Unbelted</td>
<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
<td>On</td>
<td>N/A</td>
</tr>
<tr>
<td>55</td>
<td>Unbelted</td>
<td>Forward</td>
<td>Upright</td>
<td>In-use</td>
<td>On</td>
<td>N/A</td>
</tr>
<tr>
<td>56</td>
<td>Unbelted</td>
<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
<td>On</td>
<td>N/A</td>
</tr>
<tr>
<td>57</td>
<td>Unbelted</td>
<td>Forward</td>
<td>Down</td>
<td>In-use</td>
<td>N/A</td>
<td>On</td>
</tr>
<tr>
<td>58</td>
<td>Unbelted</td>
<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
<td>N/A</td>
<td>On</td>
</tr>
<tr>
<td>59</td>
<td>Unbelted</td>
<td>Forward</td>
<td>Upright</td>
<td>In-use</td>
<td>N/A</td>
<td>On</td>
</tr>
<tr>
<td>60</td>
<td>Unbelted</td>
<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
<td>N/A</td>
<td>On</td>
</tr>
<tr>
<td>61</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>In-use</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>62</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>63</td>
<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>In-use</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>64</td>
<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>65</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>In-use</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>66</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>67</td>
<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>In-use</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>68</td>
<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>69</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>In-use</td>
<td>N/A</td>
<td>On</td>
</tr>
<tr>
<td>70</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
<td>N/A</td>
<td>On</td>
</tr>
<tr>
<td>71</td>
<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>In-use</td>
<td>N/A</td>
<td>On</td>
</tr>
<tr>
<td>72</td>
<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
<td>N/A</td>
<td>On</td>
</tr>
</tbody>
</table>

1. If there is no handle, place N/A in the SuppressedFAIL column in the rows marked “Upright” or “Down.”
2. If there is no sunshield, place N/A in the SuppressedFAIL column in the rows marked “In-use.”
3. Blanket position 1 (20.1.5(a)). Place a blanket on the child restraint so that the top and side edges of the restraint are covered. The vehicle seat shall not support the blanket.
4. Blanket position 2 (20.1.5(b)). Place a blanket on the child restraint so that it rests on the top of the vehicle seat back and the forward most (towards the instrument panel) edge of the child restraint.
5. Convertible restraints ONLY (S2021.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot exceed more than 1 kg (2.2 lb).)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.)

The handle, sunshade, and blanket do not affect the system so these items were not done.

______________________________

______________________________

C. Case, B. Smith, A. Allison

5/5/03

Verified that I have read and performed each instruction.

Date
DATA SHEET 15

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart N) (S20)

NHTSA No: C05306
Test Date: __________

Lab: __________
Test Technician(s): __________

Child Restraint Name, Model, Date of Manufacture: __________

Base: X, Off; N/A: Restraint does not have a removable base
(A child restraint with a removable base shall be treated as two separate models, i.e., the foam and
procedure will be completed with the base on and then repeated with the base off. (S20.1.7))

Seat Position: Rearmost, mid-height X, Md position, mid-height _ Foremost, mid-height (Use
a separate sheet for each of the three fore=att positions.)

X: The child restraint has NO visible damage (S20.1.1)

1. Belted tests with rearward facing child restraints and convertible restraints in the rearward facing
   mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4)
   X: 1. Position the child’s adjustable lumbar supports so that the lumbar supports are in the lowest,
       retracted or retracted adjustment positions. (S20.1.9.1)
       X: N/A: No lumbar adjustment
   X: 2. Position any adjustable parts of the seat that provide additional support so that they are in the
       lowest or most open adjustment position. (S20.1.9.2)
       X: N/A: No additional support adjustment
   X: 3. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to
       the full rearward position. (S20.1.9.3)
       X: N/A: No independent fore=att seat cushion adjustment
   X: 4. Place the seat in the position specified in the header information. Use the seat markings
       determined during the completion of Data Sheet 14 to set the fore=att position, mid=height
       position and the seat cushion angle
   X: 5. The seat back angle is adjustable, set at the manufacturer's nominal design riding position
       for a 50th percentile adult male in the manner specified by the manufacturer. (S20.1.9.5 and
       S20.1.9.6)
       X: N/A: No seat back angle adjustment
   X: 6. If adjustable, set the head restraint at the full down and full forward position. (S20.1.9.6) Any
       adjustment of the head restraint shall be set to position it full forward. For example, if it
       reclines, rotate it such that the head restraint extends as far forward as possible.
       X: N/A: No head restraint adjustment
   X: 7. Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design
       position for a 50th percentile adult male occupant (S20.2.1.4(c))
       X: N/A: No adjustable upper seat belt anchorages
   Manufacturer's specified anchorage position: Full-up position
   Tethered anchorage position: Full-up position
   X: 8. Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint.
       (S20.2.1.2)
   X: 9. Read the child restraint owner's manual for installation instructions.
   X: 10. Place the child restraint facing rearward in the seat such that Plane A (item 18 above) is
       aligned with Plane B (determined and marked during the completion of Data Sheet 14.)
       (S20.2.1.4(e)(1))
   X: 11. While maintaining the child restraint position with Plane A aligned with Plane B, secure the
       child restraint by following to the extent possible the child restraint manufacturer's directions
       regarding proper installation of the restraint in the rear facing mode. (S20.2.1.4(b)) Do not
       use any positioning devices such as towers. (14.69.30/1775 footnote 21, b(2)(i)); if the

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vehicle has FMVSS 225 anchorages, do not attach (20.1.5) known to be in restraint to these anchorages. (20.2.1.4(a)(1)) Do NOT attach any latches. (20.1.8)

N1A1.12 Place a load cell with a maximum load rating of 225 N (50.5 lb) on a flat, straight section of the lap belt between the child restraint bolt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle to avoid interference from the shoulder portion of the belt. (20.2.1.4(e))

Is there a strap around the seat belt that interferes with the load cell? Yes  No

N1A1.15 Connect the seat belt to a tension load of 130 N - 3N (29.2 lb - 0.7 lb) (20.2.1.4(c))

Record seat belt tension

1 14 Position the 49 CFR Part 572 Subpart H 12-month-old CRAB dummy in the child restraint by following the instructions provided with the child restraint. (20.2.1.4(d)) (The tension in the seat belt may change from Item 113. Do NOT record the tension unless the fore/aft position of the seat changes because of dummy contact.)

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:

X  N/A - No dummy contact with the instrument panel.

Manual seat adjuster: ________ inch (decimal) rearward of the forward most position (Move the seat the minimum number of inches to eliminate contact with the instrument panel.)

Power seat adjuster: ___ mm between instrument panel and child restraint. [Max allowed is 5 mm.]

Record seat belt tension

N1A1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle, and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (20.2.1.4(a))

X 2 Unbuckled tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraint listed in Appendix A, sections B and C) (20.2.2.4) If the vehicle has FMVSS 225 anchorages, do NOT attach (20.1.6) the child restraint to these anchorages. (20.2.1.4(a)(1)) Do NOT attach any latches. (20.1.6)

Without changing the position of the child restraint or dummy, disconnect the seat belt and record its stored position.

Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle, and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (20.2.2.4(c))

3. Unbuckled tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraint listed in Appendix A, sections B and C) (20.2.1.4) Do NOT attach seat belts. (20.1.5) Do NOT attach any latches. (20.1.8)
X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 225 anchorages.

3.1 Keep the same seat position as in 1.1 through 1.7 above.

3.2 Read the child restraint owner's manual for instructions.

3.3 Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as towels. (FR 65 30711 footnote 23, 5/12/2000) Do NOT attach any latches. (20.1.7)

3.4 Position the 49 CFR Part 572 Subpart H 12-month-old CRAB dummy in the child restraint by following the instructions provided with the child restraint. (20.2.1.4(a))

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:

N/A - No dummy contact with the instrument panel.
Manual seat adjuster: ... rearward of the forward most position. (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: ... mm between instrument panel and child restraint. (max. allowed is 5 mm.)

3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(a))

4. Belted tests with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, sect. 6(c)) (S20.2.1.5). If the vehicle has FMVSS 225 anchorages do not attach; S20.1.6: the child restraint to these anchorages. (S20.2.1.5 (a)(1)). Do NOT attach any tether. (S20.1.8)

NA - Non-converting restraint

4.1 Keep the same seat position as in 1.1 through 1.7 above.

4.2 Read the child restraint owner's manual for installation instructions.

4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S20.2.1.5(a)(1))

4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward facing mode. (S20.2.1.5(a)) Do NOT use any positioning devices such as locals. (F1.65 3071, footnotes 2.3, 5/27/2000). If the vehicle has FMVSS 225 anchorages, do not attach S20.1.6: the child restraint to these anchorages. (S20.2.1.5(a)(1)). Do NOT attach any tether. (S20.1.8)

4.5 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight surface of the lap belt between the child restraint belt path and the contact point with the seat anchor or vehicle seat, on the side furthest from the buckle to avoid interference from the shoulder portion of the belt. (S20.2.1.5(c))

Is there a sheath around the seat belt: that interferes with the load cell? _Yes_ _No_ If yes, cut all or part of the sheath. _NA_ _Part_ _All_ Part

4.6 Cinch the seat belt to a tension load of 130 N + 3N (29.2 lb + 6.7 lb) (S20.2.1.5(c)).

Record seat belt tension

4.7 Position Inf. 49 CFR Part 572 Subpart R 12-month-old CRABR dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)). (The tension in the seat belt may vary from item 4.6. Do NOT readjust the tension unless the forward position of the seat changes because of dummy contact.)

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the new location of the seat. __NA_ __No dummy contact with the instrument panel__

Manual seat adjuster: ... rearward of the forward most position. (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: ... mm between instrument panel and child restraint. (max. allowed is 5 mm.)

Record the seat belt tension of 130 N + 3N (29.2 lb + 6.7 lb) (S20.2.1.5(c))

Record seat belt tension

4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, cradle, and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))

5. Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode. (Appendix A, sect. C) (S20.2.2.5). If the vehicle has FMVSS 225 anchorages, do not attach. (S20.1.6): the child restraint to these anchorages. Do NOT attach any tether. (S20.1.8)

Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
6. Unbuckled tests using FMVSS 225 Anchorage with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) -- Do NOT attach seat belts (S20.1.6) Do NOT attach any tellers (S20.1.8)

N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.

X. N/A Not a convertible restraint.

6.1 Keep the same seat position as in 1.1 through 1.7 above

6.2 Read the child restraint /owner's manual for installation instructions

6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tellers. (S20.1.8) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 2), S5.9 (2010)

6.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.6(d))

If the seat must be moved rearward because of dummy contact with the instrument panel, document the final location of the seat

N/A – No dummy contact with the instrument panel.

Manual seat adjustment: detent(s) rearward of the forward most position (Move the seat to the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjustment: gap between instrument panel and child restraint (max. allowed is 5 cm)

6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the on position, which ever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the airbag is suppressed. (S20.2.1.5(e))

G. Casey B. Smith A. Louwen

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

5/2005
5 Convertible restraints ONLY (520.2.1.5) (Appendix A, section C)
   Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).)

________________________

(S20 1.5)
Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.) The handle, sash, belt, and blanket do not affect the system so these items were not done. The seat belt was not used in the mid position.

________________________

C. Casey, B. Smith, A. Allison  5/5/03  Date
I certify that I have read and performed each instruction.
DATA SHEET 15

Suppression Test Using 12 month old CIRAB Dummy (Part 572, Subpart N); 5/03

Laboratory: VRTC
Test Technician(s): C. Case, B. Smith, A. Lawden

Child Restraint Name, Model, Date of Manufacture: Britax Marathon w/ Base, 5/26/02

Base: _Or__X N/A - Restraint does not have a removable base
(If a child restraint with a removable base shall be treated as two separate models - the front and test procedure will be completed with the base on and then repeated with the base off.) (S201.17)

Seat Position: X Rearmost mid height Mid-position mid height Foremost mid height (Use a separate sheet for each of the three fore/aft positions.)

X The child restraint has NO visible damage (S201.1)

1. Bolted tests will rearward facing child restraint and convertible restraints in the rearward facing mode. (Child restraints listed in Appendix A, sections B and C) (S202.1.4)

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions. (S201.9.1)
X N/A No lumbar adjustment
X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S201.9.2)
X N/A No additional support adjustment
X 1.3 Fill the seat cushion with foam and set the back rest in the adjustment to the full rearward position. (S201.9.3)
X N/A No independent rear of seat cushion adjustment
X 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore/aft position, mid-height position and the seat cushion angle
X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. S201.3.5 and S8.1.3)
X N/A No seat back angle adjustment.
Manufacturer's design seat back angle: 1st detent back
Tested seat back angle: 1st detent back
X 1.6 If adjustable, set the head restraint at the full down and full forward position (S201.3.6) Any adjustment of the head restraint should be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
X N/A No head restraint adjustment
X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (S202.1.4(c))
X N/A No adjustable upper seat belt anchorage
Manufacturer's specified anchorage position: Full up position
Tested anchorage position: Full up position
X 1.8 Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint (S202.1.2)
X 1.9 Read the child restraint owner's manual for installation instructions.
X 1.10 Place the child restraint facing rearward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14) (S202.1.4(b)(i))
X 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's instructions regarding proper installation of the restraint in the rear facing mode (S202.1.4(b)) Do NOT use any positioning devices such as towels.) (FHWA 07/11, footnote 23 5/12/2006)
vehicle has FMVSS 225 anchorages, do not attach (20.1.5) the child restraint to these anchorages. (20.2.1.4(b)(11)) Do NOT attach any laterals. (20.1.6)

N/A 1.7 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) or a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt. (20.2.1.4(c))

Is there a strain around the seat belt that interferes with the load cell? Yes No If yes, cut off all or part of the sheath. __ All. __ Part

N/A 1.8 Check the seat belt to a tension load of 130 N \( \pm \) 3N (29.2 lb \( \pm \) 0.7 lb) (20.2.1.4(c))

Record seat belt tension __ X __ N/A

Record seat belt tension __ X __ N/A

K 1.14 Position the 49 CFR Part 572 Subpart R 12-month old GRAB dummy in the child restraint by following to the extent possible, the manufacturer’s instructions provided with the child restraint. (20.2.1.4(d)) The tension in the seat belt may change from item 1.13. Do NOT readjust: the tension unless the fore-aft position of the seat changes because of dummy contact.

If the seat must be moved rearward because of dummy contact with the instrument panel. describe the final location of the seat:

X N/A No dummy contact with the instrument panel.

Manual seat adjuster: __ detent(s) rearward of the forward most position. (Move the seat to the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: __ mm between instrument panel and child restraint [max allowed is 5 mm].

Record the seat belt to a tension load of 130 N \( \pm \) 3N (29.2 lb \( \pm \) 0.7 lb) (20.2.1.4(c))

Record seat belt tension __ X __ N/A

N/A 1.5 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshade position, start the vehicle engine or place the ignition in the “on” position, whichever will turn on the suppression system, and close all vehicle doors. Wall 10 seconds, and then check whether the air bag is suppressed (20.2.1.4(c)).

X 2. Unbuckled tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A sections B and C) (20.2.1.4(a)) – If the vehicle has FMVSS 225 anchorages do NOT attach (20.1.5) the child restraint to these anchorages. (20.2.1.4(a)(11)) Do NOT attach any laterals. (20.1.6)

Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshade position, start the vehicle engine or place the ignition in the “on” position, whichever will turn on the suppression system, and close all vehicle doors. Wall 10 seconds, and then check whether the air bag is suppressed. (20.2.1.4(a)).

3. Unbuckled tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A sections B and C) (20.2.1.4) – Do NOT attach seat belts. (20.1.5) Do NOT attach any laterals. (20.1.6)

KN/A – Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 SS 9 devices to mate to the FMVSS 225 anchorages.

__ 3.1 Keep the same seat position as in 1.1 through 1.7 above.

__ 3.2 Read the child restraint owner’s manual for installation instructions.

__ 3.3 Attach the child restraint, facing rearward to the FMVSS 225 anchorages according to the instructions in the child restraint owner’s manual and the vehicle owner’s manual. Do NOT use any positioning devices such as bowls. (FR 85 30711 footnote 23, 12/2000) Do NOT attach any laterals. (20.1.6)

3.4 Position the 49 CFR Part 572 Subpart R 12-month old GRAB dummy in the child restraint by following to the extent possible, the manufacturer’s instructions provided with the child restraint. (20.2.1.4(c))

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:

N/A – No dummy contact with the instrument panel.
Manual seat adjuster: detents) rearward of the forward most position. (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: ___ in between instrument panel and child restraint (max allowed is 5 in.)

3.5 Complete rows 25 through 30 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))

4. Retest with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) - If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any tethers (S20.1.8);

X N/A - Not a convertible restraint

- 4.1 Keep the same seat position as in 1.1 through 1.7 above.
- 4.2 Read the child restraint owner’s manual for installation instructions.
- 4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 11) (S20.2.1.5(a)(1))

- 4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer’s directions regarding proper installation of the restraint in the forward facing mode. (S20.2.1.5(c)) Do NOT use any positioning devices such as towels, (FR 65 36711, footnote 23, 5:12:2000). If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages (S20.2.1.5(a)(1)). Do NOT attach any tethers. (S20.1.8)

4.5 Place a load cell with a maximum full-scale reading of 225 N (50 lbf) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat on the side away from the buckle (to avoid interference from the shoulder portion of the belt) (S20.2.1.5(c)). Is there a sheath around the seat belt that interferes with the load cell? Yes ___ No ___

If yes, cut off all or part of the sheath. All ___ Part ___

4.6 Cinch the seat belt to a tension load of 130 N (29.2 lbf or 0.7 in) (S20.2.1.5(c))

Record seat belt tension

- 4.7 Position the 49 CFR Part 572 Subpart R 12-month-old CRABl dummy in the child restraint by following, to the extent possible, the manufacturer’s instructions provided with the child restraint. (S20.2.1.5(d)) The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore all position of the seat changes because of dummy contact.

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:

X N/A - No dummy contact with the instrument panel

Manual seat adjuster: ___ detent(s) rearward of the forward most position. (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: ___ in between instrument panel and child restraint (max. allowed is 5 in.)

Reinch the seat belt to a tension load of 130 N (29.2 lbf or 0.7 in) (S20.2.1.5(c))

Record seat belt tension

- 4.8 Complete rows 31 through 41 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshade position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))

5. Unbuckle tests with rear-facing and convertible child restraints in the forward-facing mode.

(Appendix A, sections B and C) (S20.2.2.5) - If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any tethers (S20.1.8). Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

5-39
Complete rows 48 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle, and shield position, start the vehicle engine or place the ignition in the “on” position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.6(c))

X N/A Not a convertible restraint

5. Unbelted tests using FMVSS 225 Anchorages with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) - Do NOT attach seat belts (S20.1.6) Do NOT attach any restraints.(S20.1.8)  
   __ N/A: Vehicle does not have FMVSS 225 Anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.  
   X N/A: Not a convertible restraint

6.1 Keep the same seat position as in 1.1 through 1.7 above.

6.2 Read the child restraint owner’s manual for installation instructions.

6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner’s manual and the vehicle owner’s manual. Do NOT attach any restraints. (S20.1.8) Do NOT use any positioning devices such as towels. (FR-65 30711, footnote 23, S4/12/2000)

6.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer’s instructions provided with the child restraint. (S20.2.1.5(d))

   If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.
   __ N/A: No dummy contact with the instrument panel.
   Manual seat adjuster __ inch(s) rearward of the forward most position (Move the seat to minimum number of inches to eliminate contact with the instrument panel.)
   Power seat adjuster __ mm, between instrument panel and child restraint (max. allowable is 5 mm.)

6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle, and shield position, start the vehicle engine or place the ignition in the “on” position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))

C. Case, R. Smith, A. London

I certify that I have read and performed each instruction. 5/5/03

Date
<table>
<thead>
<tr>
<th>Child Restraint Name, Model, Date of Manufacture</th>
<th>Britax Handle w/ Care 5/26/03</th>
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<tr>
<td>Base: <em>On__OF</em> X N/A Restraint does not have a removable base</td>
<td></td>
</tr>
<tr>
<td>Seat Position: X, rearmost, midheight _ Mid position, midheight _ Foremost, midheight</td>
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<tr>
<th></th>
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<th>Sunshield</th>
<th>Blanket 1</th>
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</tr>
<tr>
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</tr>
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<td>Or</td>
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</tr>
<tr>
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</tr>
<tr>
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</tr>
<tr>
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</tr>
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</tr>
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<td>Belted or Unbelted, FMVSS 225</td>
<td>Year</td>
<td>Handle</td>
<td>Sunshade</td>
<td>Blanket (Position 1)</td>
<td>Blanket (Position 2)</td>
<td>Suppressed, FAIL, Or N/A</td>
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</tr>
<tr>
<td>69 Unbelted Forward Down In-use N/A On N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>70 Unbelted Forward Down Slowed N/A On N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>71 Unbelted Forward Upright In-use N/A On N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>72 Unbelted Forward Upright Slowed N/A On N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 If there is no handle, place N/A in the Suppressed/FAIL column in the rows marked "Upright." "Down" means the child restraint manufacturer's recommended position or there is no handle.
2 If there is no sunshade, place N/A in the Suppressed/FAIL column in the rows marked "In-use."
3 Blanket position 1 (S20 1.5(a)): Place a blanket on the child restraint so that the top and side edges of the restraint area covered. The vehicle seat shall not support the blanket.
4 Blanket position 2 (S20 1.5(b)): Place a blanket on the child restraint so that it rests on the top of the vehicle's seat bank and the forward most (towards the instrument panel) edge of the child restraint.
5 Convertible restraints ONLY (§20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb)).

(§20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies): The handle, shield, and blanket did not affect the system so these items were not complete. The seat belt was not used in the rearmost position.

___ C. Case, B. Smith, A. Allison ___________________________ 6/5/03
I certify that I have read and performed each instruction. Date
DATA SHEET 15

Suppression Test Using 12 month-old CHABI Dummy (Part 573), Subpart N (§ 573)

NHTSA No. ...CS335506__________________________ Test Date. 5/5/03

Laboratory: VRFC __________ Test Technician(s): G. G. Case, B. Smith, A. Cudder

Chic Reentrant Name, Model, Date of Manufacture: Evolfin First Choice, 6/29/00

Base: On O Off X N/A-Restraint does not have a removable base

(A child restraint with a removable base shall be treated as two separate models, i.e., the form and test procedure will be completed with the base on and then repeated with the base off (§ 208.17).)

Seat Position: Rearmost, mid-height Mid position, mid-height X Foremost, mid-height (Use a separate sheet for each of the three fore- aft positions.)

A deflection rear of full frontward because of contact with the interior.

X 1. The child restraint has NO visible damage (§ 208.14)

1. Detach tests with forward-facing child restraints and convertible restraints in the rearward-facing mode. (Child restraints listed in Appendix A, sections B and C) (§ 208.2.1.4)

X 1.1 The seat is adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deleted adjustment positions. (§ 208.2.1.4.1)

X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most rear adjustment position. (§ 208.2.1.4.2)

X 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (§ 208.2.1.4.3)

X 1.4 Place the seat in the position specified in the header information. Use the seat markers determined during the occupant of Data Sheet 14 to set the fore- aft position, mid-height position and the seat cushion angle.

X 1.5 The rear seat been, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer (§ 208.2.1.4.4 and § 208.2.1.6.3)

X 1.6 If adjustable, set the head restraint at the full down and full forward position. (§ 208.2.1.6.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it retracts, rotate it such that the head restraint extends as far forward as possible.

X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (§ 208.2.1.4(c))

X 1.8 Locate and mark a vertical Plane A through the longitudinal centroid line of the child restraint. (§ 208.2.2)

X 1.9 Read the child restraint owner's manual for installation instructions.

X 1.10 Place the child restraint facing rearward in the seat such that Plane A (labeled rearward) is aligned with Plane B (determined and marked during the completion of Data Sheet 14.) (§ 208.2.1.4(a)(1))

X 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following to the extent possible the child restraint manufacturer's directions...
regarding proper installation of the restraint in the rear facing mode. (S20.2.1.4(e)) Do NOT use any positioning devices such as tethers. (FR 65 30711, footnote 23, 5/12/2000) The vehicle has FMVSS 225 anchorages do not attach (S20.1.5) the child restraint to these anchorages. (S20.2.1.4(a)(3)) Do NOT attach any tethers. (S20.1.6)

X 1.12 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint seat path and the contact point with the seat anchor or vehicle seat on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.4(c))

Is there a sheath around the seat belt that interferes with the load cell? __ Yes __ No
If yes, cut off all or part of the sheath. __ All __ Part

X 1.13 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.4(c)); Record seat belt tension __ 29.7 lb __

X 1.14 Position the 49 CFR Part 572 Subpart N 12 month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d)) (The tension in the seat belt may change from day 1-13. Do NOT readjust the tension unless the loose all position of the seat changes because of dummy contact.) If the seat must be moved rearward because of dummy contact, describe the final location of the seat:

N/A __ Dummy contact with the instrument panel.

Manual seat adjuster __ Do not adjust the forward most position (Move the seat to the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster __ Do not adjust the instrument panel and child restraint (max. allowed is 5 mm.)

Record the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.4(c)); Record seat belt tension __

X 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and shoulder position, start the vehicle engine or place the ignition in the on position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))

X 2. Unbelted tests with rear-facing child restraints and convertible child restraints in the rear facing mode. (Child restrain listed in Appendix A, sections B and C) (S20.2.2.4) If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(3)) Do NOT attach any tethers. (S20.1.8)

We will change the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and shoulder position, start the vehicle engine or place the ignition in the on position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.4(e))

X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 225 anchorages.

2. Unbelted tests using FMVSS 225 Anchorages, with rear-facing child restraints and convertible child restraints in the rear facing mode. (Child restraint listed in Appendix A, sections B and C) (S20.2.1.4) Do NOT attach seat belts (S20.1.6.6) Do NOT attach any tethers. (S20.1.8)

X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 225 anchorages.

3.1 Keep the same seat position as in 1.1 through 1.7 above.

3.2 Read the child restraint owner's manual for installation instructions.

3.3 Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as tethers. (FR 65 30711, footnote 23, 5/12/2000) Do NOT attach any tethers. (S20.1.7)

3.4 Position the 49 CFR Part 572 Subpart N 12 month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d))

If the seat must be moved rearward because of dummy contact with the instrument
panel, describe the final location of the seat.
   ... N/A = No dummy contact with the instrument panel.
Manual seat adjuster: ... deflection(s) rearward of the forward most position (Move the seat the minimum number of deflections to eliminate contact with the instrument panel.)
Power seat adjuster: ... mm between instrument panel and child restraint (max. allowed is 5 mm.)

3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))

4. Belted tests with convertible child restraint in the forward-facing mode (Child restraint listed in Appendix A, section C) (S22.2.1.5) If the vehicle has FMVSS 225 anchorages do not attach (S20.1.8) the child restraint to these anchorages. (S20.2.1.5(a)(c)). Do NOT attach any tethers. (S20.2.1.8)
   X N/A = Not a convertible restraint

4.1 Keep the same seat position as in 1.1 through 1.7 above.
4.2 Read the child restraint owner's manual for installation instructions.
4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S20.2.1.5(a)(1))

4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward facing mode. (S20.2.1.5(b)); Do NOT use any positioning devices such as towels. (TR 65.30711, footnote 33, 5’2’2(2000). If the vehicle has FMVSS 225 anchorages do not attach (S20.2.1.5(c)); the child restraint to these anchorages. (S20.2.1.5(a)(c)). Do NOT attach any tethers. (S20.2.1.8)

4.5 Place a load cell with a maximum 1 lbf-scale reading of 225 N (50 lbf) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.5(c))
   Is there a sheath around the seat belt that interferes with the load cell? __ Yes __ No
   If yes, cut off all or part of the sheath. All Part

4.6 Circum: the seat belt to a tension load of 130 N (29.2 lbf = 0.7 lbf) (S20.2.1.5(c))
   Record seat belt tension

4.7 Position the 49 CFR Part 572 Subpart R 13-month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer’s instructions provided with the child restraint. (S20.2.1.5(d)); The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.

   If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.
   ... N/A = No dummy contact with the instrument panel.
Manual seat adjuster: ... deflection(s) rearward of the forward most position (Move the seat the minimum number of deflections to eliminate contact with the instrument panel.)
Power seat adjuster: ... mm between instrument panel and child restraint (max. allowed is 5 mm.)
   Reanchor the seat belt to a tension load of 130 N (29.2 lbf = 0.7 lbf) (S20.2.1.5(c))
   Record seat belt tension

4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and vouchette position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))

5. U-belted tests with rear-facing and convertible child restraint in the forward-facing mode.
   (Appendix A, sections B and C) (S22.2.2.3) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.8) the child restraint to these anchorages. Do NOT attach any tethers (S20.1.8)
Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

Complete rows 49 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle, and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (§206.2.2(c))

6. Un部署 tests using FMVSS 225 Anchorage, with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (§20.2.1.5) Do NOT attach seat belts. (§20.1.6) Do NOT attach any tethers. (§20.1.3)

NA: Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 Sr. 1.3 devices to mate to the FMVSS 225 anchorages.

N/A: Not a convertible restraint.

6.1 Keep the same seat position as in 1.1 through 1.7 above.

6.2 Read the child restraint owner's manual for installation instructions.

6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tethers. (§20.1.3) Do NOT use any positioning devices such as towels. (FR 65 30711, I/cnote 23, 5/12/2000)

6.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (§20.2.1.5(d))

If the seat must be moved rearward because of dummy contact with the instrument panel describe the final location of the seat.

NA: No dummy contact with the instrument panel.

Manual seat adjuster: Bump seat(s) rearward or the forward most position. Move the seat to the minimum number of inches to eliminate contact with the instrument panel.

Power seat adjuster: __ in. between instrument panel and child restraint (max. allowed is __ in.)

6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (§20.2.1.5(e))

C. Case, B. Smith, A. Louden ___________________________ 5/5/03

I certify that I have read and performed each instruction ________________ Date
<table>
<thead>
<tr>
<th>NHTSA No.</th>
<th>Test Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>C5506</td>
<td>3-39</td>
</tr>
</tbody>
</table>

**Table 1**

<table>
<thead>
<tr>
<th>Restraint</th>
<th>Position</th>
<th>Handle</th>
<th>Sunshield</th>
<th>Blanket</th>
<th>Suppressed</th>
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<tr>
<td>Bolted</td>
<td>Rear</td>
<td>Down</td>
<td>In-use</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>Unbolted</td>
<td>Rear</td>
<td>Down</td>
<td>In-use</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>FMVSS</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>225</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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</tr>
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</tr>
<tr>
<td>3</td>
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</tr>
<tr>
<td>4</td>
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</tr>
<tr>
<td>5</td>
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<td>In-use</td>
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</tr>
<tr>
<td>6</td>
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<td>Slowed</td>
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</tr>
<tr>
<td>7</td>
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<td>Upright</td>
<td>In-use</td>
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</tr>
<tr>
<td>8</td>
<td>Bolted</td>
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<td>Slowed</td>
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</tr>
<tr>
<td>9</td>
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<td>Slowed</td>
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</tr>
<tr>
<td>10</td>
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<td>Down</td>
<td>Slowed</td>
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</tr>
<tr>
<td>11</td>
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</tr>
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<td>Slowed</td>
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</tr>
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</tr>
<tr>
<td>14</td>
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<td>Slowed</td>
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</tr>
<tr>
<td>15</td>
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</tr>
<tr>
<td>16</td>
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</tr>
<tr>
<td>17</td>
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</tr>
<tr>
<td>18</td>
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</tr>
<tr>
<td>19</td>
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</tr>
<tr>
<td>20</td>
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<td>Slowed</td>
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</tr>
<tr>
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<td>Slowed</td>
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</tr>
<tr>
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<td>None</td>
</tr>
<tr>
<td>23</td>
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<td>Upright</td>
<td>Slowed</td>
<td>None</td>
</tr>
<tr>
<td>24</td>
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<td>Down</td>
<td>Slowed</td>
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</tr>
<tr>
<td>25</td>
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<td>Down</td>
<td>Slowed</td>
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</tr>
<tr>
<td>26</td>
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<td>Rear</td>
<td>Upright</td>
<td>In-use</td>
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</tr>
<tr>
<td>27</td>
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<td>Rear</td>
<td>Upright</td>
<td>Slowed</td>
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</tr>
<tr>
<td>28</td>
<td>Unbolted</td>
<td>Rear</td>
<td>Down</td>
<td>Slowed</td>
<td>None</td>
</tr>
<tr>
<td>29</td>
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<td>Slowed</td>
<td>None</td>
</tr>
<tr>
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<td>Rear</td>
<td>Upright</td>
<td>In-use</td>
<td>None</td>
</tr>
<tr>
<td>31</td>
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<td>Slowed</td>
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</tr>
<tr>
<td>32</td>
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<td>Slowed</td>
<td>None</td>
</tr>
<tr>
<td>33</td>
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<td>Rear</td>
<td>Down</td>
<td>Slowed</td>
<td>None</td>
</tr>
<tr>
<td>34</td>
<td>Unbolted</td>
<td>Rear</td>
<td>Upright</td>
<td>In-use</td>
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</tr>
<tr>
<td>35</td>
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<td>Rear</td>
<td>Upright</td>
<td>Slowed</td>
<td>None</td>
</tr>
<tr>
<td>36</td>
<td>Unbolted</td>
<td>Rear</td>
<td>Upright</td>
<td>Slowed</td>
<td>None</td>
</tr>
</tbody>
</table>

5 Convertible restraints ONLY (5.20.2.1.5) (Appendix A, section C)
   Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb) ;
(5.20.1.5)
   Comments (Record any position readjustments or problems by first stating the row
   number to which the comment applies). The seat was 2 ceters rear of full forward
   because of seat contact with the interior.

_ C. Case, B. Smith, A. Allman_ 5/5/03
I certify that I have read and performed each instruction.  Date

5-41
DATA SHEET 15

Suppression test using 12 month-old GRABi Dummy (Part 572, Subpart N)(S26)

NHTSA No. G35308 Test Date 5/5/03

Laboratory: VRTC Test Technician(s): G. Case, B. Smith, A. Louden

Child Restraint Name, Model, Date of Manufacture: Evenflo First Choice 6/2/2000 ...

Base: _On__ Of X WA-Restraint does not have a removable base
(A child restraint with a removable base shall be treated as two separate models. i.e. this form and test procedure will be completed with the base on and then repeated with the base off. (S20.1.7).)

Seat Position: Rearward mid-height X Mid-position mid-height X Forward mid-height (Use a separate sheet for each of the three forward positions)

X The child restraint has NO visible damage (S20.1.1)

1. Belted tests with rearward facing child restraints and convertible restraints in the rearward-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4)
   X 1.1 Position the seat with adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deleted adjustment positions. (S20.1.9.1)
       X NA - No lumbar adjustment
   X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S20.1.9.2)
       X NA - No additional support adjustment
   X 1.3 If the seat cushion adjusts, find an independent of the seat back, set this adjustment to the full rearward position. (S20.1.9.4)
       X NA - No independent forward seat cushion adjustment
   X 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angle.
   X 1.5 The seat back angle is adjustable, is set at the manufacturer's normal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S20.1.9.5 and S2.1.3)
       X NA - No seat back angle adjustment

       Manufacturer's design seat back angle

       1stdeg. rearward

       Taped seat back angle

       1stdeg. rearward

   X 1.6 If adjustable, set the head restraint at the full down and most forward position. (S20.1.8.8) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
       X NA - No head restraint adjustment

   X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's normal design position for a 50th percentile adult male occupant (S20.2.1.4(a))
       X NA - No adjustable upper seat belt anchorages

       Manufacturer's specified anchorage position

       Full Up

       Taped anchorage position

       Full Up

   X 1.8 Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint (S20.2.1.2).
   X 1.9 Read the child restraint owner's manual for installation instructions.

   X 1.10 Place the child restraint facing rearward in the seat such that Plane A (item 1.8) is aligned with Plane B (determined and marked during the completion of Data Sheet 14.)(S20.2.1.4(a)(ii))

   X 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following to the extent possible the child restraint manufacturer's directions regarding proper installation of the restraint in the rear facing mode. (S20.2.1.4(b)). Do NOT use any positioning devices such as towels. (MR 05-36711, footnote 27, 5-27-2000) If the
vehicle has FMVSS 225 anchorages, do not attach (S20.1.8) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any fenders (S20.18).

X 1.12 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt) (S20.2.1.4(c)).

Is there a sheath around the seat belt that interferes with the load cell? — Yes — No

If yes, cut off all or part of the sheath.

X 1.13 Cinch the seat belt to a tension load of 130 N ± 5 N (29.2 lb ± 0.7 lb) (S20.2.1.4(c))

Recalibrate belt tension 30 lb

X 1.14 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint (S20.2.1.4(d)). (The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:

N/A — No dummy contact with the instrument panel.

Manual seat adjuster: — (detent) rearward of the forward most position (Move the seat to the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: — mm between instrument panel and child restraint (max allowed is 5 mm.)

Recalibrate the seat belt to a tension load of 130 N ± 5 N (29.2 lb ± 0.7 lb) (S20.2.1.4(c))

Recalibrate belt tension

X 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshade position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(c))

X 2 Unbuckled tests using FMVSS 225 anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.1.8). If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.8) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any fenders. (S20.1.8)

Without changing the position of the child restraint or dummy, for each variation of blanket, handle and sunshade position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(c))

X 3 Unbuckled tests, using FMVSS 225 anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4(c)). Do NOT attach seat belts. (S20.1.8); Do NOT attach any fenders. (S20.1.8)

X N/A — Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.

3.1 Keep the same seat position as in 1.1 through 1.7 above.

3.2 Read the seat belt owner's manual or installation instructions.

3.3 Attach the child restraint facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual. Do NOT use any positioning devices such as blankets. (FR 65 307.11, footnote 23, 5/12/2000). Do NOT attach any fenders. (S20.1.7)

3.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(c))

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:

N/A — No dummy contact with the instrument panel.

N/A — No dummy contact with the instrument panel.

S-13
Manual seat adjuster: if detent(s) retracted at the forwardmost position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: 5mm between instrument panel and child restraint (max allowed is 5 mm.)

5.5 Complete rows 25 through 26 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, then check whether the air bag is suppressed. (S20.2.1.4(e))

4. Detach tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) - If the vehicle has FMVSS 225 anchorages, do not attach to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any LATCH system to these anchorages. (S20.2.1.5(a)(2))

X N/A - Not a convertible restraint.

4.1 Keep the same seat position as in 4.1 through 4.4 above.
4.2 Read the child restraint owner's manual for installation instructions.
4.3 Place the child restraint facing forward in the seat such that Plane A (item 1 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 1.4). (S20.2.1.5(a)(1))

4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's instructions regarding proper installation of the restraint in the forward-facing mode. (S20.2.1.5(b)) Do NOT use any positioning devices such as tow hooks or tie-downs. (See 39507.11, footnote 13, 5/12/2020). If the vehicle has FMVSS 223 anchorages, do NOT attach to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any LATCH system to these anchorages. (S20.2.1.5(a)(2))

4.5 Place a load cell with a maximum full-scale reading of 220 lb (100 kg) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat on the side away from the back seat to avoid interference from the shoulder or part of the seat. (S20.2.1.5(c))

Is there a strap around the seat belt that interferes with the load cell? Yes No "Yes, cut off all part of the sheath."

4.6 Cinch the seat belt to a tension load of 130 N ± 3N. (S20.2.1.5(c))

Record seat belt tension...

4.7 Position the 49 CFR Part 572 subpart H 12-month old ORAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions proceed with the child restraint. (S20.2.1.5(d)) The tension in the seat belt may change from item 4.6. Do NO: request the tension unless the fore-aft position of the seat changes because of dummy contact.

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.

X N/A - No dummy contact with the instrument panel.

Manual seat adjuster: if detent(s) retracted at the forwardmost position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: 5mm between instrument panel and child restraint (max. allowed is 5 mm.)

Record seat belt tension...

4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshade position start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, then check whether the air bag is suppressed. (S20.2.1.5(e))

5. Detach tests with rear-facing and convertible child restraints in the forward-facing mode. (Appendix A, section B, 3.1) (S20.2.2.5) - If the vehicle has FMVSS 225 anchorages, do not attach to these anchorages. Do NOT attach any LATCH system to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any LATCH system to these anchorages. (S20.2.1.5(a)(2))

Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
Complete rows 19 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle, and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.6(c)).

6. Unbelted tests using FMVSS 225 Anchors with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) Do NOT attach seat belts.

- N/A: Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 57.9 devices to mate to the FMVSS 225 anchorages
- N/A: Not a convertible restraint

6.1 Keep the same seat position as in 1.1 through 1.7 above.

6.2 Read the child restraint owner's manual for installation instructions.

6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any seat belts. (S20.1.8) Do NOT use any positioning devices such as towels. (FR 85-20711, footnote 23, 5-12-2000)

6.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))

- The seat must be moved forward because of dummy contact with the instrument panel, descbe the final location of the seat:
- N/A: No dummy contact with the instrument panel

- Manual seat adjuster
- Power seat adjuster

6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.3(c)).

C:Case, D:Smith, A:order

I certify that I have read and performed each instruction. 5/25/03

Date
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<thead>
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<th>Belted</th>
<th>Rear</th>
<th>Unbelted</th>
<th>Forward</th>
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<th>Handle</th>
<th>Sunshield</th>
<th>Blanket Position</th>
<th>Bucket Suppression</th>
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<td>Blanket (2) Position 2</td>
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<td>Down</td>
<td>Slowest</td>
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<td>N/A</td>
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<tr>
<td>50</td>
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<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
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<td>N/A</td>
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<tr>
<td>51</td>
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<td>Upright</td>
<td>In-use</td>
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<td>N/A</td>
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<td>52</td>
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<td>Forward</td>
<td>In-use</td>
<td>Slowest</td>
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<td>53</td>
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<td>Forward</td>
<td>Down</td>
<td>In-use</td>
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<td>N/A</td>
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<td>54</td>
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<td>Forward</td>
<td>Down</td>
<td>Slowest</td>
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<td>N/A</td>
<td></td>
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<tr>
<td>55</td>
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<td>Forward</td>
<td>Upright</td>
<td>In-use</td>
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<td>56</td>
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<td>Upright</td>
<td>Slowest</td>
<td>On</td>
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<td>Slowest</td>
<td>On</td>
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<td>Slowest</td>
<td>On</td>
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<tr>
<td>61</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>In-use</td>
<td>None</td>
<td>None</td>
<td>N/A</td>
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<tr>
<td>62</td>
<td>225</td>
<td>Forward</td>
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<td>Slowest</td>
<td>None</td>
<td>N/A</td>
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<td>225</td>
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<td>Slowest</td>
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<td>N/A</td>
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<td>Down</td>
<td>In-use</td>
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<td>N/A</td>
<td>N/A</td>
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<tr>
<td>66</td>
<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>Slowest</td>
<td>On</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
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<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>In-use</td>
<td>On</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>68</td>
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<td>Down</td>
<td>Slowest</td>
<td>On</td>
<td>N/A</td>
<td>N/A</td>
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<td>Slowest</td>
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<td>On</td>
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<td>On</td>
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<td>72</td>
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<td>Slowest</td>
<td>N/A</td>
<td>On</td>
<td>N/A</td>
<td></td>
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</tbody>
</table>

1. If there is no hand or place N/A in the Suppressed/Fail column in the rows marked "Upright." "Down" means the child restraint manufacturer's recommended position or there is no handle.
2. If there is no sunshield, place N/A in the Suppressed/Fail column in the rows marked "In-use."
3. Blanket position 1 (S20.1.5(a)): Place a blanket on the child restraint so that the top and side edges of the restraint are covered. The vehicle seat shall not support the blanket.
4. Blanket position 2 (S20.1.5(b)): Place a blanket on the child restraint so that it rests on the top of the vehicle seat back and the forward most (towards the instrument panel) edge of the child restraint.
5. Convertible restraints ONLY (§20.201-5) (Appendix A, section C)
   Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb) !

(§20.1.5)
   Comments (Record any position readjustments or problems by first stating the row
   number to which the comment applies.)

   ________________________________
   ________________________________
   ________________________________
   ________________________________

   ---
   ---
   ---
   ---

   C. Case, B. Smith, A. Allison
   I certify that I have read and performed each instruction.     5/5/03     Date
DATA SHEET 15
Suppression Test Using 12-month-old CRABI Dummy (Par. 572, Subpart N)(S20)
NHTSA No. _______ C35306 ______ Test Date 5/5/03
Laboratory: _______ VRFC ________ Test Technician(s): C. Case, B. Smith, A. Louden

Child Restraint Name, Model Date of Manufacture: First Choice 6/2000

Base: On __ Off X N/A- Restraint does not have a removable base
(A child restraint with a removable base shall be treated as two separate models, i.e., this form and test procedure will be completed with the base on and then repeated with the base off. (S20.1.7))

Seat Position: X Rearmost, mid-height Mid-position, mid-height Foremost, mid-height (Use a separate sheet for each of the three fore-aft positions)

X The child restraint has NO visible damage (S20.1.1)

1. Belted tests will rearward facing child restraints and convertible restraints in the rearward facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4)

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions (S20.1.9.1)

X N/A - No lumbar adjustment

X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S20.1.9.2)

X N/A - No additional support adjustment

X 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S20 1.9.3)

X N/A - No independent fore-aft seat cushion adjustment

X 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angle.

X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S20.1.3.5 and SB.3.3)

N/A - No seat back angle adjustment

Manufacturer's design seat back angle 12°, reclined forward

Tested seat back angle 12°, reclined forward

X 1.6 If adjustable, set the head restraint at the full down and full forward position. (S20 1.9.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.

X N/A - No head restraint adjustment

X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (S20.2.1.4(c))

N/A - No adjustable upper seat belt anchorages

Manufacturer's specified anchorage position __ Full Up ___ Full Up

Tested anchorage position __ Full Up ___ Full Up

X 1.8 Locate and mark a vertical Plane A通过 the longitudinal centline of the child restraint (S20.2.1.2)

X 1.9 Read the child restraint owner's manual for installation instructions

X 1.10 Place the child restraint facing rearmward in the seat such that Plane A (form 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14).

(S20.2.1.4(a)(1))

X 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the rear facing mode. (S20.2.1.4(b)) Do NOT use any positioning devices such as tethers. (FR 69 6/711, Testicle 25, 5/12/2000) If the
vehicle has FMVSS 225 anchorages, do not attach (§20.1.8) the child restraint to these
anchorages. (§20.2.1.4(a)(1)) Do NOT attach any testers. (§20.1.8)

X. 12 Place a load cell with a maximum full-scale reading of 225 N (50 lb) on a flat, straight
section of the lap belt. B. the child restraint belt path and the contact point with the belt
anchor or vehicle seat, on the side away from the buckle (to avoid interference from the
shoulder section of the belt). (§20.2.1.4(g))
Is there a sheath around the seat belt that interferes with the load cell? Yes No
If yes, cut off all or part of the sheath. __ All __ Part

X. 13 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb). (§20.2.1.4(c))
Record seat belt tension 27.5 lb

X. 14 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by
following, to the extent possible, the manufacturer's instructions provided with the child
 restraint (§20.2.1.4(d)). (The tension in the seat belt may change from item 1.13. Do NOT
redistribute the tension unless the fore-aft position of the seat changes because of dummy
contact.)

If the seat belt must be moved rearward because of dummy contact with the instrument
panel, describe the final location of the seat.

N/A — No dummy contact with the instrument panel

Manual seat adjuster: __ detent(s) rearward of the forward most position. (Move the
seat to the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: __ mm between instrument panel and child restraint (max.
allowed is 5 mm.)

Reinforcement the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb). (§20.2.1.4(c))
Record seat belt tension

X. 15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or
dummy. For each variation of blanket, handle, and sunshield position, start the vehicle engine
or place the ignition in the 'on' position, whichever will turn on the suppression system, and
close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed.
(§20.2.1.4(a))

X. 2 Unbelted tests using rear-facing child restraints and convertible child restraints in the
rear-facing mode. (Child restraints listed in Appendix A, sections 5 and 6). (§20.2.2.4) If the
vehicle has FMVSS 225 anchorages, do NOT attach (§20.1.8) the child restraint to those
anchorages. (§20.2.1.4(a)(1)) Do NOT attach any testers. (§20.1.8)
Without changing the position of the child restraint or dummy, disconnect the seat belt and return it
to its stowed position.

Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or
dummy. For each variation of blanket, handle, and sunshield position, start the vehicle engine
or place the ignition in the 'on' position, whichever will turn on the suppression system, and close all
vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (§20.2.2.4(c))

3 Unbelted tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child
restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections 5 and 6),
(§20.2.1.4)). Do NOT attach seat belts. (§20.1.6) Do NOT attach any testers. (§20.1.8)

X N/A — Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS
225 SRS devices to mate to the FMVSS 225 anchorages

3.1. Keep the same seat position as in 1.1 through 1.7 above.
3.2. Read the child restraint owner's manual or installation instructions
3.3. Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the
instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT
use any positioning devices such as hoses. (§20.3.1.1 footnote 23, 6/12/2000). Do NOT
attach any testers. (§20.1.1)

3.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by
following, to the extent possible, the manufacturer's instructions provided with the child
 restraint (§20.2.1.4(d)).

If the seat belt must be moved rearward because of dummy contact with the instrument
panel, describe the final location of the seat.

N/A — No dummy contact with the instrument panel.
Manual seat adjuster: __ meter(s) rearward of the forward most position. (Move the seat to the maximum number of deflections to eliminate contact with the instrument panel.) 

Lower seat adjuster: __ meter between instrument panel and child restraint (max allowed is 5 mm.)

3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (202.1.4.9)

4. Detach tests with convertible child restraints in the forward-facing mode. (Child restraint listed in Appendix A, section C) (202.1.5) If the vehicle has FMVSS 225 anchors, do not attach (202.1.5) the child restraint to these anchorages. (202.2.1.5(a)(1)) Do NOT attach any harnesses. (202.1.8)

X N/A – Not a convertible restraint

1. Keep the same seat position as in 1.1 through 1.7 above

2. Read the child restraint owners manual for installation instructions.

3. Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (202.1.5(a)(1))

4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following the extent possible, the child restraint manufacturers directions regarding proper installation of the restraint in the forward facing mode. (202.1.5(b)) Do NOT use any positioning devices such as towels. (FHWA-07-011, Section 23.8/22900). If the vehicle has FMVSS 225 anchors, do not attach (202.2.1.5) the child restraint to these anchorages. (202.2.1.5(a)(1)) Do NOT attach any harnesses. (202.1.8)

4.5 Install a load cell with a maximum pull-out rating of 275 lbf (50.8 kg) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the inside away from the buckle (to avoid interference from the shoulder portion of the belt). (202.2.1.5(c))

Is there a seam around the seat belt that interferes with the load cell? __ Yes __ No

If yes, cut all or part of the seam.

4.6 Catch the seat belt to a tension load of 130 N + 3N (29.2 lb ± 0.7 lb) (202.2.1.5(c))

Record seat belt tension.

1.7 Position the 48 CR Part 572, Subpart R 1.4-year-old ORIG dummy in the child restraint by following the extent possible, the manufacturers instructions provided with the child restraint. (202.2.1.5(d)) (The tension in the seat belt may change from test to test. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.

X N/A – No dummy contact with the instrument panel

Manual seat adjuster: __ meter(s) rearward of the forward most position. (Move the seat to the maximum number of deflections to eliminate contact with the instrument panel.)

Lower seat adjuster: __ meter between instrument panel and child restraint (max allowed is 5 mm.)

Record the seat belt tension to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (202.2.1.5(c))

Record seat belt tension.

4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (202.2.1.5(e))

5. Detach tests with rear facing and convertible child restraints in the forward-facing mode. (Appendix A, sections B and C) (202.2.2.5) – If the vehicle has FMVSS 225 anchorages, do not attach (202.2.5) the child restraint to these anchorages. Do NOT attach any harnesses. (202.1.8)

Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
Complete rows 40 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or close the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.5(c))

6. Unbuckled tests using FMVSS 225 Anchorages with convertible child restraints in the forward facing mode: (Child restraints listed in Appendix A, section C) (S20.2.1.5) Do NOT attach seat belt (S20.1.6) Do NOT attach any tethers. (S20.1.8)

X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 SS.9 devices to mate to the FMVSS 225 anchorages

N/A - Not a convertible restraint

6.1 Keep the same seat position as in 1.1 through 1.7 above.

6.2 Read the child restraint owner's manual for installation instructions

6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tethers. (S20.1.8) Do NOT use any positioning devices such as towels. (H-05 30711, footnote 23, 5/12/2000)

--- 6.4 Position the 49 CFR Part 572 Subpart B 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions, provided with the child restraint. (S20.2.1.5(d))

- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.

- N/A - No dummy contact with the instrument panel

- Manual seat adjuster: \[ \text{move} \] forward of the forward most position to allow the seat the minimum number of detents to eliminate contact with the instrument panel.

- Power seat adjuster: \[ \text{move} \] mm between instrument panel and child restraint (max allowed is 5 mm)

6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or close the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(a))

---

C. Case B Smith Accident

I certify that I have read and performed each instruction. Date: 5/5/03

5-5-2
<table>
<thead>
<tr>
<th>NHTSA No.</th>
<th>N033036</th>
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**Table 1**

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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Sunshade Position 1 In-use</td>
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**Legend:**
- **Belted:** Yes
- **Unbelted:** No
- **Rear Facing:** Yes
- **Forward Facing:** No
- **Head-Brake Position:** 1
- **Sunshade Position:** 1
- **Blanket Position:** 1
- **Blanket Position:** 2
- **Blanket Position:** 3
- **Blanket Position:** 4
- **Blanket Position:** 5
- **Blanket Position:** 6
- **Blanket Position:** 7
- **Blanket Position:** 8
- **Blanket Position:** 9
- **Blanket Position:** 10
- **Blanket Position:** 11
- **Blanket Position:** 12
- **Blanket Position:** 13
- **Blanket Position:** 14
- **Blanket Position:** 15
- **Blanket Position:** 16
- **Blanket Position:** 17
- **Blanket Position:** 18
- **Blanket Position:** 19
- **Blanket Position:** 20
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- **Blanket Position:** 22
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- **Blanket Position:** 25
- **Blanket Position:** 26
- **Blanket Position:** 27
- **Blanket Position:** 28
- **Blanket Position:** 29
- **Blanket Position:** 30
- **Blanket Position:** 31
- **Blanket Position:** 32
- **Blanket Position:** 33
- **Blanket Position:** 34
- **Blanket Position:** 35
- **In-use:** Yes
- **Not in-use:** No
- **Position 1:** None
- **Position 2:** Suppressed
- **Position 3:** Suppressed
- **Position 4:** Suppressed
- **Position 5:** Suppressed
- **Position 6:** Suppressed
- **Position 7:** Suppressed
- **Position 8:** Suppressed
- **Position 9:** Suppressed
- **Position 10:** Suppressed
- **Position 11:** Suppressed
- **Position 12:** Suppressed
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- **Position 14:** Suppressed
- **Position 15:** Suppressed
- **Position 16:** Suppressed
- **Position 17:** Suppressed
- **Position 18:** Suppressed
- **Position 19:** Suppressed
- **Position 20:** Suppressed
- **Position 21:** Suppressed
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- **Position 23:** Suppressed
- **Position 24:** Suppressed
- **Position 25:** Suppressed
- **Position 26:** Suppressed
- **Position 27:** Suppressed
- **Position 28:** Suppressed
- **Position 29:** Suppressed
- **Position 30:** Suppressed
- **Position 31:** Suppressed
- **Position 32:** Suppressed
- **Position 33:** Suppressed
- **Position 34:** Suppressed
- **Position 35:** Suppressed

**Notes:**
- **Position 1:** None
- **Position 2:** Suppressed
- **Position 3:** Suppressed
- **Position 4:** Suppressed
- **Position 5:** Suppressed
- **Position 6:** Suppressed
- **Position 7:** Suppressed
- **Position 8:** Suppressed
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- **Position 28:** Suppressed
- **Position 29:** Suppressed
- **Position 30:** Suppressed
- **Position 31:** Suppressed
- **Position 32:** Suppressed
- **Position 33:** Suppressed
- **Position 34:** Suppressed
- **Position 35:** Suppressed

**Test Results:**
- **Position 1:** None
- **Position 2:** Suppressed
- **Position 3:** Suppressed
- **Position 4:** Suppressed
- **Position 5:** Suppressed
- **Position 6:** Suppressed
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- **Position 29:** Suppressed
- **Position 30:** Suppressed
- **Position 31:** Suppressed
- **Position 32:** Suppressed
- **Position 33:** Suppressed
- **Position 34:** Suppressed
- **Position 35:** Suppressed

**Additional Information:**
- **Rear Facing:** Yes
- **Forward Facing:** No
- **Head-Brake Position:** 1
- **Sunshade Position:** 1
- **Blanket Position:** 1
- **Blanket Position:** 2
- **Blanket Position:** 3
- **Blanket Position:** 4
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- **Blanket Position:** 30
- **Blanket Position:** 31
- **Blanket Position:** 32
- **Blanket Position:** 33
- **Blanket Position:** 34
- **Blanket Position:** 35

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<th>Rear</th>
<th>Handle</th>
<th>Sunshield</th>
<th>Blanket&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Blanket&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Suppressed, Fail or N/A</th>
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<tr>
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<td>Down</td>
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<td>N/A</td>
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<tr>
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<td>Down</td>
<td>Slowed</td>
<td>None</td>
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<td>N/A</td>
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<td>On</td>
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<td>N/A</td>
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<td>N/A</td>
<td>N/A</td>
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<tr>
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<td>Slowed</td>
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<td>On</td>
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<td>On</td>
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<tr>
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<td>Upright</td>
<td>Slowed</td>
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<td>On</td>
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<td>Or</td>
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<td>In-use</td>
<td>Or</td>
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<td>On</td>
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<td>Slowed</td>
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<tr>
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</tr>
<tr>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
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<td>On</td>
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</tr>
<tr>
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<tr>
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<td>On</td>
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<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
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<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
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<td>N/A</td>
<td>N/A</td>
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<td>Upright</td>
<td>In-use</td>
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<td>N/A</td>
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<td>225</td>
<td>Forward</td>
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<td>Slowed</td>
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<td>On</td>
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<td>N/A</td>
</tr>
<tr>
<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>In-use</td>
<td>N/A</td>
<td>On</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

1. If there is no handle, place N/A in the Suppressed/Fail column in the rows marked "Upright." "Down" means the child restraint manufacterer's recommended position or there is no handle.
2. If there is no sunshield, place N/A in the Suppressed/Fail column in the rows marked "In-use."
3. Blanket position 1 ($S20.1.5(a)) - Place a blanket on the child restraint so that the top and side edges of the restraint are covered. The vehicle seat shall not support the blanket.
4. Blanket position 2 ($S20.1.5(b)) - Place a blanket on the child restraint so that it rests on the top of the vehicle's seat back and the forward most (towards the instrument panel) edge of the child restraint.
Convertible restraints ONLY (S20.2.1.1) (Appendix A, section C)
Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).)

(S20.4.5)
Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.)

______________________________

______________________________

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______________________________

______________________________

C. Casey, B. Smith, A. Allison...
I certify that I have read and performed each instruction.

5/9/13
Date
DATA SHEET 15

Suppression Test Using 12-month-old CHAIDI Dummy (Part 572, Subpart N) (520)
NHTSA No: C35656 Test Date: 5/5/03

Laboratory: VAEIC Test Technician(s): J. Caso, R. Smith, A. London

Child Restraint Name, Model, Date of Manufacture: Graco Infant SnugRide 8/31/06

Base: X On - NA - Restraint does not have a removable base

(A child restraint with a removable base shall be treated as two separate models, i.e. the child restraint and test procedure will be completed with the base on and then repeated with the base off. (520 1.7))

Seat Position: Rear most, mid-height, mid height X Foremost, mid-height (Use a separate sheet for each of the three fore-aft positions) X delents rear off full forward

Because of contact with the interior

X The child restraint has NO visible damage (520 1.1)

1. Bitted tests with rearward facing child restraints and convertible restraints in the rearward-facing mode (Child restraints listed in Appendix A, section B and C: (520 2.1.4)

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest retracted or deflated adjustment positions. (520 1.9.1)

X NA No lumbar adjustment

X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (520 1.9.2)

X NA No additional support adjustment

X 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (520 1.9.3)

X NA No independent fore-aft seat cushion adjustment

X 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angle.

X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male or the manner specified by the manufacturer. (520 1.9.5 and 86.1.3)

X NA No seat back angle adjustment

Manufacturer's design seat back angle 1st detent rearward

Tested seat back angle 1st detent rearward

X 1.6 If adjustable, set the head restraint at the full down and full forward position. (520 1.9.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.

NA No head restraint adjustment

X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant. (520 2.1.4)

NA No adjustable upper seat belt anchorages

Manufacturer's specified anchorage position

Tested anchorage position

X 1.8 I record and mark a vertical plane A through the longitudinal centerline of the child restraint. (520 2.1.2)

X 1.9 Read the child restraint owner's manual for installation instructions.

X 1.10 Place the child restraint facing rearward in the seat such that Plane A (from 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14) (520 2.1.4.1)

X 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's instructions.

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regarding proper installation of the restraint in the rear-facing mode (S20.2.14(b)). Do NOT use any positioning devices such as towels. (FR 65.307.11.1, footnote 25, 5.2-2000) If the vehicle has MVSS 225 anchorages, do not attach (S20.1.5) the child restraint to these anchorages. (S20.2.14(g); 11) Do NOT attach any fixtures. (S20.1.8)

X 1.12 Place a load cell with a maximum full-scale reading of 225 N (500 lb) on a flat, straight section of the top belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.14(c))
Is there a sheath around the seat belt that interferes with the load cell?  Yes  No
If yes, cut off all or part of the sheath  All  Part

X 1.13 Check the seat belt at a tension load of 130 N + 3N (29.2 lb + 0.7 lb) (S20.2.14(c));
Record seat belt tension  28.5 lb

X 1.14 Position the 49 CFR Part 20 Subpart R 12-month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.14(d)) (The tension in the seat belt may change from item 1.3. Do NOT redetermine the tension unless the free-end position of the seat belt changes because of dummy contact.)

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
N/A  No dummy contact with the instrument panel.
Manual seat adjuster: ___ detent(s) rearward of the forward most position. (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Lower seat adjuster: ___ mm between instrument panel and child restraint (max. allowed is 5 mm.).

Recalculate the seat belt to a tension load of 130 N + 3N (29.2 lb + 0.7 lb) (S20.2.14(c))
Record seat belt tension  

X 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.14(c))

X 2. Unbelted tests with rear-facing child restraints and convertible child restraints in the rear-facing mode (Child restraints listed in Appendix A, sections B and C) (S20.2.2.4). If the vehicle has MVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to these anchorages. (S20.2.14(a); 11) Do NOT attach any fixtures. (S20.1.8)
Without changing the position of the dummy, disconnect the seat belt and return it to its stowed position.

Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.4(c))

3. Unbelted tests using MVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.14): Do NOT attach seat belts (S20.1.6) Do NOT attach any fixtures. (S20.1.5)
X N/A  Vehicle does not have MVSS 225 anchorages or child restraint does not have MVSS 213-3.0 covers to mate to the MVSS 225 anchorages.

3.5 1 Keep the same seat position as in 1.1 through 1.7 above.

3.5 2 Read the child restraint owner's manual for installation instructions.

3.5 3 Attach the child restraint, facing rearward, to the MVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as towels. (FR 65.307.1, footnote 25, 5.2-2000) Do NOT attach any fixtures. (S20.1.4)

3.5 4 Position the 49 CFR Part 20 Subpart R 12-month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.14(c))
If the seat must be moved rearward because of dummy contact with the instrument panel,
panel describe the final location of the seat:

**NA** - No dummy contact with the instrument panel

Manual seat adjuster: -- center(s) rearward of the forward most position. (Move the seat the minimum number of dots to eliminate contact with the instrument panel.)

Power seat adjuster: ___ mm between instrument panel and child restraint (max allowed is 5 mm.)

3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppressor system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(a))

4. Belted tests with convertible child restraints in the forward-facing mode. (Child restraint listed in Appendix A, section C) (S20.2.2.3) If the vehicle has FMVSS 225 anchors, do not attach iS20.1.8) the child restraint to these anchors. (S20.2.1.5(a)(4)) Do NOT attach any tether. (S20.1.8)

**X** NA - Not a convertible restraint

__ 4.1 Keep the same seat position as in 11 through 17 above

__ 4.2 Read the child restraint owner's manual for installation instructions.

__ 4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S20.2.1.5(a)(4))

__ 4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward facing mode. (S20.2.1.5(a)) Do NOT use any priming devices such as towels. (FR 65 3711, footnote 23, 5/9/85)(0). If the vehicle has FMVSS 225 anchors, do not attach to these anchors. (S20.2.1.5(a)(4)) Do NOT attach any tether. (S20.1.8)

__ 4.5 Place a load cell with a maximum full-scale reading of 225 N (50 lb) on a flat straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle. (To avoid interference from the shoulder portion of the belt.) (S20.2.1.5(c))

Is there a sheath around the seat belt that interferes with the load cell? ___ Yes ___ No

If yes, cut off all or part of the sheath. ___ Al ___ Part

__ 4.6 Crisscross the seat belt to a tension load of 130 N 13N (29.7 lb 0.7 lb) (S20.2.1.5(c))

Record seat belt tension

4.7 Position the 49 CHF Part 572 Subpart R 12-month-old CRABE dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)) (The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)

- The seat must be moved rearward because of dummy contact with the instrument panel. Describe the final location of the seat:

__ NA - No dummy contact with the instrument panel

Manual seat adjuster: ___ center(s) rearward of the forward most position. (Move the seat the minimum number of dots to eliminate contact with the instrument panel.)

Power seat adjuster: ___ mm between instrument panel and child restraint (max allowed is 5 mm.)

Read the seat belt to a tension load of 130 N 13N (29.7 lb 0.7 lb) (S20.2.1.5(c))

Record seat belt tension

4.8 Complete rows 37 through 43 in Table 1 below without changing the position of the child restraint or dummy. For each variation of all seats and vehicle position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppressor system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(c))

5. Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode (Appendix A, sections B and C) (S20.2.2.3) If the vehicle has FMVSS 225 anchors, do not attach to these anchors. Do NOT attach any tether. (S20.1.8)
Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

Complete rows 48 through 50 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 15 seconds, and then check whether the air bag is suppressed. (SEC 2.2)(c)

6. Unbuckle tests using FMVSS 225 anchorages with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)

X: N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 SS 9 devices to mate to the FMVSS 225 anchorages.

N/A - Not a convertible restraint

C.1 Keep the same seat position as in 1.1 through 1.7 above.

C.2 Read the child restraint owner's manual for installation instructions.

C.3 Attach the child restraint, facing forward to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tethers. (S20.1.3) Do NOT use any positioning devices such as towels. (ICK 65 30711, Instruction 23, 5/2/2010)

C.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABY dummy in the child restraint by following to the extent possible the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)

If the seat must be moved forward because of dummy contact with the instrument panel describe the final location of the seat.

... N/A - No dummy contact with the instrument panel

Manual seat adjustment - (defects) rearward of the forward most position. Move the seat to the maximum number of defects to eliminate contact with the instrument panel

Power seat adjuster - (defects) between instrument panel and child restraint (max allowed is 5 mm)

6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 15 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))

C. Case, B. Smith, A. Lincoln, ........... ........... 5/5/03

I certify that I have read and performed each instruction. Date: 5/5/03
<table>
<thead>
<tr>
<th>NIHS No.</th>
<th>C35306</th>
<th>Test Date: 2/5/83</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Restraint Name, Model, Date of Manufacture: Graco Infant 8467 (Snug Ride); 6/31/00</td>
<td></td>
<td></td>
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<tr>
<td>Base: X_On, U_NA; NA-Restraint does not have a removable base</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seat Position: Rear; mid-right; mid-position, mid-height; X - optional, mid-height</td>
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<table>
<thead>
<tr>
<th>Belted, Unbelted, Rear, Forward, Facing</th>
<th>Handle (S20.3)</th>
<th>Sunshield (S20.1.4)</th>
<th>Blanket Position 1 (S20.1.5(n))</th>
<th>Blanket Position 2 (S20.1.5(b))</th>
<th>Suppressed, All, On, N/A</th>
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<tr>
<td>1</td>
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<td>r usage</td>
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</tr>
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<td>11</td>
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<tr>
<td>12</td>
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<td>18</td>
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<td>19</td>
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<tr>
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<tr>
<td>26</td>
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<tr>
<td>27</td>
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<tr>
<td>28</td>
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<tr>
<td>30</td>
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</tr>
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5-6)
<table>
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<tr>
<th>Belts</th>
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<th>Handle</th>
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<th>Blanket 1</th>
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<td>Down</td>
<td>Slowed</td>
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<td>N/A</td>
</tr>
<tr>
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<td>Upright</td>
<td>In-use</td>
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<tr>
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<td>Slowed</td>
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<td>Slowed</td>
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</tr>
<tr>
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<td>Slowed</td>
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<tr>
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<td>Slowed</td>
<td>None</td>
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<td>Slowed</td>
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<tr>
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<td>Slowed</td>
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<tr>
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<td>Upright</td>
<td>Slowed</td>
<td>None</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Belted</td>
<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
<td>None</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Belted</td>
<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
<td>None</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

1. If there is no handle, place N/A in the Suppressed/Fail column in the rows marked “Upright.”
2. If there is no sunshield, place N/A in the Suppressed/Fail column in the rows marked “In-use.”
3. Blanket position 1 (S20.1.5(a)) Place a blanket on the child restraint so that the top and side edges of the restraint are covered. The vehicle seat shall not support the blanket.
4. Blanket position 2 (S20.1.5(b)) Place a blanket on the child restraint so that it rests on top of the vehicle’s seat back and the forward most (towards the instrument panel) edge of the child restraint.
5. Convertible restraints ONLY (520.2.1.5) (Appendix A, section C)
   Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).)

   NOTE

   (520.1.5)
   Comments (Record any position readjustments or problems by first stating the row
   number to which the comment applies.) Vehicle seat was 6 inches rearward of full
   forward because of contact with the vehicle interior.

   ____________ ____________ ____________
   C. Case, R. Smith, A. Allison
   I certify that I have read and performed each instruction.

   ___ 8/5/03.
   Date
DATA SHEET 15

Suppression Test Using 12-month-old CRABI Dummy (Part 572 Subpart N(S20)

NHSPA No. C26936
Test Date: 5/5/03

Laboratory: VTC
Test Technician(s): C. Case, B. Smith, A. Lauden

Child Restraint Name: Model Date of Manufacture: Britax Roundabout 7/21/00

Base: ______ On ______ Of ______ X N/A - Restraint does not have a removable base.

A child restraint with a removable base shall be treated as two separate models; i.e., this form and test procedure will be completed with the base on and then repeated with the base off (S20.1.7).

Seat Position: Rearward, mid-height X Mid-position, mid-height X Foremost, mid-height (Use separate sheet for each of the three fore/aft positions.)

X. The child restraint has NO visible damage (S20.1.1)

X. Belted tests with rearward facing child restraints and convertible restraints in the rearward facing mode. (Child restrains listed in Appendix A, sections B and C) (S20.2.1.4)

X. 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or default adjustment positions. (S20.1.9)
X. N/A - No lumbar adjustment

X. 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S20.1.9.2)
X. N/A - No additional support adjustment

X. 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S20.3.3.3)
X. N/A - No independent fore/aft seat cushion on adjustment

X. 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore/aft position, mid-height position and the seat cushion angle.

X. 1.5 The seat back angle, if adjustable, is at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer (S20.1.9.5 and S8.1.3)
X. N/A - No seat back angle adjustment

Manufacturer's design seat back angle __________ 1st. defect rearward
Tested seat back angle __________ 1st. defect rearward

X. 1.6 If adjustable, set the head restraint at the 'full down' and full forward position. (S20.1.9.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
X. N/A - No head restraint adjustment

X. 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant. (S20.2.1.4(c))
X. N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position __________ Full Up __________
Tested anchorage position __________ Full Up __________

X. 1.8 Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint. (S22.2.1.2)

X. 1.9 Read the child restraint owner's manual for installation instructions.

X. 1.10 Place the child restraint facing rearward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14) (S20.2.1.5(a)(1))

X. 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the rigid facing mode. (S20.2.1.4(b)). Do NOT use any positioning devices such as towels. (FR 85-0711 "Annex A") S12(2000). If the
vehicle has MVSS 225 anchorages, do not attach (S20.1(6)) the child restraint to those anchorages. (S20.2.4(a)(1)) Do NOT attach any tethers. (S20.1(8))

X 1.17 Place a head belt with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the top belt between the child restraint belt path and the contact point with the seat anchor or vehicle seat on the side away from the buckle (to avoid interference with the shoulder portion of the belt) (S20.2.1.4(c)).

Is there a sheath around the seat belt that interferes with the head belt? ... Yes ... No

If yes, cut off all or part of the sheath.

X 1.13 Check the seat belt to a tension load of 130 N ± 3 N (29.2 lb ± 0.7 lb) (S20.2.1.4(c))

Record seat belt tension

X 1.14 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint (S20.2.1.4(d)) ('The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.')

If the seat must be moved rearward because of dummy contact with the instrument panel describe the final location of the seat:

... N/A ... No dummy contact with the instrument panel

Manual seat adjustor: ... daton(s) rearward of the forward most position (Mowe the seat the minimum number of notches to eliminate contact with the instrument panel.)

Power seat adjustor: ... mm between instrument panel and child restraint (max. allowed is 5 mm.)

Reach the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.4(c))

Record seat belt tension

X 1.15 Complete rows 1 through 12 in Table 7 without changing the position of the child restraint or dummy. For each variation of blanket, handle, and sunshield position, start the vehicle engine, or place the ignition in the 'on' position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))

X 2 Unbuckled tests using rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.2.4): If the vehicle has MVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to those anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)

Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

Complete rows 5 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine, or place the ignition in the 'on' position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.1(c))

3. Unbuckled tests using MVSS 225 anchorages with rear facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C: (S20.2.1.4)) Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)

X N/A - Vehicle does not have MVSS 225 anchorages or child restraint does not have MVSS 225 anchorages to mate to the MVSS 225 anchorages.

3.1 Knob the same seat position as in 1.1 through 1.7 above.

3.2 Read the child restraint owner's manual for installation instructions.

3.3 Attach the child restraint, facing rearward, to the MVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices, e.g. as towels. (FR-25.1.1.11; footnote 23, 512:7008) Do NOT attach any tethers. (S20.1.7)

3.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d))

If the seat must be moved rearward because of dummy contact with the instrument panel describe the final location of the seat:

... N/A ... No dummy contact with the instrument panel...
Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(p))

4. Belted tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.6) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)): Do NOT attach any tether. (S20.1.8)

N/A - Not a convertible restraint

X 4.1 Keep the same seat position as in 1.1 through 1.7 above.

X 4.2 Read the child restraint owner's manual for installation instructions.

X 4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14) (S20.2.1.5(a)(1)).

X 4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward facing mode. (S20.2.1.5(b)): Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 30122000) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)): Do NOT attach any tether. (S20.1.8)

X 4.5 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the harness or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt); (S20.2.1.5(c)).

Is there a sheath around the seat belt that interferes with the load cell? Yes No If yes, cut off at or part of the sheath. (Part A 4.6)

X 4.6 Clip the seat belt to a tension load of 130 N ± 3N (29.2 ± 0.7 lb) (S20.2.1.5(c)).

Record seat belt tension: __________ N lb

X 4.7 Position the 49 CFR Part 572 Subpart B 12-month-old GRAB! dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)): The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.

The seat must be moved rearward because of dummy contact with the instrument panel; describe the final location of the seat; ________ NA: No dummy contact with the instrument panel.

Manual seat adjuster __________ detents rearward of the forward most position. (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster __________ mm between instrument panel and child restraint (max allowed is 5 mm).

X 4.8 Complete rows 37 through 43 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle, and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))

X 5. Unclothed tests with rear-facing and convertible child restraints in the forward-facing mode (Appendix A, sections B and C) (S20.2.2.5): If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any tether. (S20.1.8)

Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

5-65
Complete rows 49 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the 'on' position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.3(c))

6. Unbelted tests using FMVSS 225 Anchorages with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.b) Do NOT attach seat belts (S20.1.6) Do NOT attach any tether. (S20.1.8)

X: N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 §5.9 devices to mate to the FMVSS 225 anchorages.

N/A - Not a convertible restraint

-6.1 Keep the same seat position as in 1 through 1.7 above.

-6.2 Read the child restraint owner's manual for installation instructions.

-6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tether. (S20.1.8) Do NOT use any positioning devices such as towels. (R 65 30,711, footnote 23. 5/2/2000)

-6.4 Position the 49 CFR Part 572 Subpart R 12 month-old GRAB! dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.

N/A - No dummy contact with the instrument panel.

Manual seat adjuster: determine rearward position of forward-most position Move the seat the minimum number of detents to eliminate contact with the instrument panel.

Power seat adjuster move between instrument panel and child restraint (max. adjustment 5 in.)

-6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the 'on' position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.7.1.5(2))

C. Case  B. Smith  A. Louden

I certify that I have read and performed each instruction 5/5/03, 

Date

8-06
<table>
<thead>
<tr>
<th>NHSSA No.</th>
<th>C35326</th>
<th>Test Date</th>
<th>5/5/03</th>
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**Child Restraint Name, Model, Date of Manufacture:** Britax Roundabout 7/21/06  
**Base:** On  
**On X, N/A-Restraint does not have a removable base:**  
**Seat Position:** Rearmost, mid-height, Mid-position mid-height, Foremost mid-height

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<td>520.15(b)</td>
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<td></td>
</tr>
<tr>
<td>69</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>In-use</td>
<td>N/A</td>
<td>On/NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>70</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
<td>N/A</td>
<td>On/NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>71</td>
<td>225</td>
<td>Forward</td>
<td>Up-right</td>
<td>In-use</td>
<td>N/A</td>
<td>On/NA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>225</td>
<td>Forward</td>
<td>Up-right</td>
<td>Slowed</td>
<td>N/A</td>
<td>On/NA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

1. If there is no handle, place N/A in the Suppressed/Fail column in the rows marked "Upright."
2. "Down" means the child restraint manufacturer's recommended position or there is no handle.
3. If there is no sunshield, place N/A in the Suppressed/Fail column in the rows marked "In-use."
4. Blanket position 1 (§20.1.5(a)): Place a blanket on the child restraint so that the top and sides of the restraint are covered. The vehicle seat shall not support the blanket.
5. Blanket position 2 (§20.1.5(b)): Place a blanket on the child restraint so that it rests on the top of the vehicle's seat back and the forward most (towards the instrument panel) edge of the child restraint.
5. Convertible restraints ONLY (520 2.1.3) Appendix A, section C:
Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb)).

(520 1.3)
Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.)

__________________________

__________________________

C. Gann, B. Smith, A. Allison
I certify that I have read and performed each instruction. 5/3/03
Date

5-69
DATA SHEET 15

Suppression Test Using 12-month-old CRABI Dummy. (Part 572) Support N(26)

NHTSA No. C36566 Test Date: 5/5/93

Laboratory: VRTC Test Technician(s): C. Case, B. Smith, A. Loyden

Child Restraint Name, Model, Date of Manufacture: Century Encore 816/600

Base: On Off X NA-Restraint does not have a removable base.
(The child restraint with a removable base shall be treated as two separate models, i.e. this form and
the procedure will be completed with the base on and then repeated without the base off. (S201.7))

Seat Position: Rearmost, mid-height Mid-position mid-height X Foremost, mid-height (Use
a separate sheet for each of the three fore/all positions)

X The child restraint has NO visible damage (S20.1.1)

1. Belted tests with rearward facing child restraints and convertible restraints in the rearward-facing
   mode. (Child restraints listed in Appendix A, sections B and C) (S20.1.4)

X. 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest,
   retracted or detent adjustment positions. (S20.1.9.1)
X NA No lumbar adjustment

X. 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the
   lowest or most open adjustment position. (S20.1.9.2)
X NA No additional support adjustment

X. 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to
   the full forward position. (S20.1.9.3)
X NA No independent fore/aft seat cushion adjustment

X. 1.4 Place the seat in the position specified in the header information. Use the seat markings
determined during the completion of Data Sheet 14 to set the fore/aft position, mid-height
   position and the seat cushion angle.

X. 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position
   for a 50th percentile adult male in the manner specified by the manufacturer. (S20.1.3.5 and
   58.1.3)
   X NA No seat back angle adjustment
   Manufacturer's design seat back angle 1st detent rearward
   Second seat back angle 2nd detent rearward

X. 1.6 If adjustable, set the head restraint at the full down and full forward position. (S22.2.3.6) Any
   adjustment of the head restraint shall be used to position it full forward. For example if it
   rotates, rotate it such that the head restraint extends as far forward as possible.
   X NA No head restraint adjustment

X. 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's normal design
   position for a 50th percentile adult male occupant (S20.2.1.4(c))
   X NA No adjustable upper seat belt anchorages
   Manufacturer's specified anchorage position. Full Up Full Up
   Latched anchorage position. Full Up Full Up

X. 1.8 Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint.
   (S20.2.1.2)

X. 1.9 Read the child restraint owner's manual for installation instructions.

X. 1.10 Place the child restraint facing rearward in the seat such that Plane A (Item 1.8 below) is
   aligned with Plane B (ascent mod and marked during the completion of Data Sheet 14.)
   (S20.2.1.3(a)(1))

X. 1.11 While maintaining the child restraint in position with Plane A aligned with Plane B, secure the
   child restraint by following to the extent possible, the child restraint manufacturer's directions
   regarding proper installation of the restraint in the rear facing mode. (S20.1.4(b)). Do NOT
   use any positioning devices such as towels. (FR 65 30711. footnote 23, 58.2/50300) of the
X 1.12 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt and/or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.4(c))

Is there a shroud around the seat belt that interferes with the load cell? Yes X No

If yes, cut off all or part of the shroud. __/All __/Part

X 1.13 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb); (S20.2.1.4(c))

Record seat belt tension 29.5 lb...

X 1.14 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer’s instructions provided with the child restraint (S20.2.1.4(d)). (The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the fore-and-aft position of the seat belt changes because of dummy contact.)

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:

X N/A No dummy contact with the instrument panel.

Manual seat adjuster: __ cm (cm) rearward of the forwardmost position. (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: ___ mm between instrument panel and child restraint (max. allowed is 5 mm.)

Reach the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb); (S20.2.1.4(c))

Record seat belt tension...

X 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, hand, and suspended position, start the vehicle engine or place the ignition to the “on” position, whichever will turn on the airbag system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(c)).

X 2. Unbuckled tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.2.4) If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to these anchorages. (S20.2.14(a)(1)). Do NOT attach any tethers. (S20.1.6)

Without changing the position of the child restraint or dummy, disconnect the seat belt, and return it to its stowed position.

Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, hand, and suspended position, start the vehicle engine or place the ignition in the “on” position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.4(c))

3. Unbuckled tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, section B and C) (S20.2.1.4) Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.6)

X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 55.9 devices to mount to the FMVSS 225 anchorages.

3.1 Keep the same seat position as in 1.1 through 1.7 above.

3.2 Read the child restraint owner’s manual for installation instructions.

3.3 Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner’s manual and the vehicle owner’s manual. Do NOT use any positioning devices such as tethers. (IFR 65.307-11, footnote 25, 5/12/2000) Do NOT attach any tethers. (S20.1.7)

3.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer’s instructions provided with the child restraint. (S20.2.1.4(d))

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:

X N/A No dummy contact with the instrument panel.
Manual seat adjuster: \text{detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)}

Power seat adjuster: \text{mm between instrument panel and child restraint (max. allowed is 5 mm.)}

\text{Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds and then check whether the air bag is suppressed. (S20.2.1.4.)}

4. Belted tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C (S20.2.1.5). If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a.1)). Do NOT attach any tethers (S20.1.8).}

\text{N/A - Not a convertible restraint}

\text{X: Keep the same seat position as in 1.1 through 1.7 above.}

\text{X: Read the child restraint owner's manual for installation instructions.}

\text{X: Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S20.2.1.5(a.1))}

\text{X: While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the manufacturer's directions regarding proper installation of the restraint in the forward facing mode. (S20.2.1.5.) Do NOT use any positioning devices such as towels (FR 65 33/111, footnote 23. 5/12/2000). If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a.1)); Do NOT attach any tethers. (S20.1.8).}

\text{X: Place a load cell with a maximum full scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, or the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.5(c))}

\text{Is there a shafet around the seat belt that interferes with the load cell? Yes X No}

\text{If yes, cut off all or part of the shafet. (S20.2.1.5(c))}

\text{X: Cinch the seat belt to a tension load of 130 N (29.2 lb or 0.7 Ib) (S20.2.1.5(c)).}

\text{Record seat belt tension \text{_30.4 lb} \ldots} \text{Part}

\text{\text{X: Position the 49 CFR Part 571 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5.) (18 lbs on it the seat belt may change from item 4.5. Do NOT readjust the tension unless the fore aft position of the seat changes because of dummy contact.)}}

\text{If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:}

\text{\text{Manual seat adjuster: \text{detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)}}} \text{Power seat adjuster: \text{mm between instrument panel and child restraint (max. allowed is 5 mm.)}}

\text{Resoich the seat belt to a tension load of 130 N (29.2 lb or 0.7 lb) (S20.2.1.5(c))}

\text{Record seat belt tension \text{\ldots}} \text{Part}

\text{\text{X: Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds and then check whether the air bag is suppressed. (S20.2.1.5.)}}

\text{\text{X: Unbelted tests with rear facing and convertible child restraints in the forward-facing mode. (Appendix A, section B (20.2.2.5). If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any tethers (S20.1.8).}}}

\text{Without changing the position of the child restraint or dummy, disconnect the seat belt, and return it to its stowed position.}
Complete rows 48 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the 'on' position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.7(c))

6.6.1 Properly test using FMVSS 225 Anchorage with convertible child restraints in the forward facing mode. (Child restraints rated in Appendix A, section C) (S20.2.1.5) — Do NOT attach seat belts (S20.1.6). Do NOT attach any testers. (S20.1.8)

X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 SS.9 devices to match to the FMVSS 225 anchorages.

N/A – Not a convertible restraint

6.1 Keep the same seat position as in 1.1 through 1.7 above.

6.2 Read the child restraint owner's manual for installation instructions.

6.3 Attach the child restraint facing forward to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any testers. (S20.1.8) Do NOT use any positioning devices such as towels. (E95 07/11, footnote 23, S12/2006)

6.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRAB! dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:

___ N/A — No dummy contact with the instrument panel

Manual seat adjustment: detent(s) rearward of the forward most position. (Move the seat to the maximum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: minimum position instrument panel and child restraint (max. allowed 3 M1W1).

6.5 Complete rows 61 through 77 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the 'on' position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))

Casie J. Smith, A. Loudon ............................... 5/5/03

I certify that I have read and performed each instruction. ............................... Date
<table>
<thead>
<tr>
<th>NHTSA No</th>
<th>C35306</th>
<th>Test Date</th>
<th>9/5/03</th>
</tr>
</thead>
</table>

Child Restraint Name, Model, Date of Manufacture: Century Encore 8/16/00

Base: On

"X" N/A-Restraint does not have a removable base

Seat Position:

<table>
<thead>
<tr>
<th>Restraint</th>
<th>Rear</th>
<th>Handle (§20.1.3)</th>
<th>Sunshield (§20.1.4)</th>
<th>Blanket Position 1</th>
<th>Blanket Position 2</th>
<th>Suppressed, F/I</th>
<th>Suppressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Belted</td>
<td>Rear Down In-use None</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Belted</td>
<td>Rear Down Slowed None</td>
<td>N/A</td>
<td>Suppressed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Belted</td>
<td>Rear Upright In-use None</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Belted</td>
<td>Rear Upright Slowed None</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Belted</td>
<td>Rear Down In-use Down</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Belted</td>
<td>Rear Down Slowed Down</td>
<td>N/A</td>
<td>Not done</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Belted</td>
<td>Rear Upright In-use Down</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Belted</td>
<td>Rear Upright Slowed Down</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Belted</td>
<td>Rear Down In-use Down</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Belted</td>
<td>Rear Down Slowed None</td>
<td>N/A</td>
<td>Not done</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Belted</td>
<td>Rear Upright In-use Down</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
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<td>N/A</td>
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<td></td>
</tr>
<tr>
<td>13</td>
<td>Unbelted</td>
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<td>Suppressed</td>
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<td></td>
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</tr>
<tr>
<td>14</td>
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<td>N/A</td>
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<td></td>
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</tr>
<tr>
<td>15</td>
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<td>Rear Upright In-use None</td>
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<td>N/A</td>
<td></td>
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</tr>
<tr>
<td>16</td>
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<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
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<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
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<td>Rear Upright Slowed Down</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
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<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
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<td>N/A</td>
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</tr>
<tr>
<td>22</td>
<td>Unbelted</td>
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<td>N/A</td>
<td>Not done</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
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<td>N/A</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>24</td>
<td>Unbelted</td>
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<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>225</td>
<td>Rear Down In-use None</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>225</td>
<td>Rear Down Slowed None</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>225</td>
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<td>N/A</td>
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<td></td>
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<tr>
<td>28</td>
<td>225</td>
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<td>N/A</td>
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<td>29</td>
<td>225</td>
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<td>N/A</td>
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<tr>
<td>30</td>
<td>225</td>
<td>Rear Down Slowed None</td>
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<td>N/A</td>
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<td></td>
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<tr>
<td>31</td>
<td>225</td>
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<tr>
<td>32</td>
<td>225</td>
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<td>N/A</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
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</tr>
<tr>
<td>34</td>
<td>225</td>
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<td>N/A</td>
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<td></td>
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<td>35</td>
<td>225</td>
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<tr>
<td>36</td>
<td>225</td>
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</tr>
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</table>

5-74
<table>
<thead>
<tr>
<th>Belted</th>
<th>Rear Halo</th>
<th>Sunshield</th>
<th>Blanket</th>
<th>Blanket</th>
<th>Suppressed</th>
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<td>Down</td>
<td>In-use</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>37</td>
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</tr>
<tr>
<td>38</td>
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<td>Upright</td>
<td>In-use</td>
<td>Dr</td>
</tr>
<tr>
<td>39</td>
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<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
<td>On</td>
</tr>
<tr>
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<td>On</td>
</tr>
<tr>
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<td>Down</td>
<td>Slowed</td>
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</tr>
<tr>
<td>42</td>
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<td>In-use</td>
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</tr>
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<td>43</td>
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<td>Upright</td>
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<td>Down</td>
<td>Slowed</td>
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</tr>
<tr>
<td>46</td>
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<td>Upright</td>
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</tr>
<tr>
<td>47</td>
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<td>Slowed</td>
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</tr>
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<td>48</td>
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<td>Slowed</td>
<td>On</td>
</tr>
<tr>
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<td>Forward</td>
<td>Upright</td>
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<td>Dr</td>
</tr>
<tr>
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<td>Slowed</td>
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</tr>
<tr>
<td>52</td>
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<td>Down</td>
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<td>On</td>
</tr>
<tr>
<td>53</td>
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<td>Slowed</td>
<td>On</td>
</tr>
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</tr>
<tr>
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<tr>
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</tr>
<tr>
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<td>Upright</td>
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</tr>
<tr>
<td>61</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>In-use</td>
<td>None</td>
</tr>
<tr>
<td>62</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
<td>None</td>
</tr>
<tr>
<td>63</td>
<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>In-use</td>
<td>None</td>
</tr>
<tr>
<td>64</td>
<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
<td>None</td>
</tr>
<tr>
<td>65</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>In-use</td>
<td>On</td>
</tr>
<tr>
<td>66</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
<td>On</td>
</tr>
<tr>
<td>67</td>
<td>225</td>
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<td>Upright</td>
<td>In-use</td>
<td>Dr</td>
</tr>
<tr>
<td>68</td>
<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
<td>Dr</td>
</tr>
<tr>
<td>69</td>
<td>225</td>
<td>Forward</td>
<td>Down</td>
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<td>Dr</td>
</tr>
<tr>
<td>70</td>
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<td>Forward</td>
<td>Down</td>
<td>Slowed</td>
<td>Dr</td>
</tr>
<tr>
<td>71</td>
<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>In-use</td>
<td>Dr</td>
</tr>
<tr>
<td>72</td>
<td>225</td>
<td>Forward</td>
<td>Upright</td>
<td>Slowed</td>
<td>Dr</td>
</tr>
</tbody>
</table>

1. If there is no handle, place N/A in the Suppressed/Fall column in the rows marked "Upright." Down means the child restraint manufacturer's recommended position or there is no handle.
2. If there is no sunshield, place N/A in the Suppressed/Fall column in the rows marked "In use." Blanket position 1: Place a blanket on the child restraint so that the top and side edges of the restraint are covered. The vehicle seat shall not support the blanket.
3. Blanket position 1 (S20.1.5a): Place a blanket on the child restraint so that the top and side edges of the restraint are covered. The vehicle seat shall not support the blanket.
4. Blanket position 2 (S20.1.5b): Place a blanket on the child restraint so that the top of the vehicle's seat back and the forward most (towards the instrument panel edge) of the child restraint.
5 Convertible restraints ONLY (\$20.2.1.5) (Appendix A, section C).
Record the weight of the blanket (Cannot be more than 1 kg (2.2 lb)).

\(\$20.1.3\)
Comments (Record any position readjustments or problems by first stating the row number to which the comment applies):

____________________________________

C. Casey, B. Smith, A. Allison

I certify that I have read and performed each instruction. 

Date: 5/5/03
DATA SHEET 15

Suppressor test using 12-month-old CRABI dummy (Part 572, Subpart H)/(S20)
NHTSA No. C35308 Test Date: 5/5/03

Lab: VIITA Test Technicians: C. Case, B. Smith, A. Luschen

Child Restraint Name: Model, Date of Manufacture: Carseat Modellor V8.1/06

Base: On X Off X NA Restraint does not have a removable base

(A child restraint with a removable base shall be tested as two separate models, i.e., this form and test procedure will be completed with the base on and then repeated with the base off. (S20.1.7))

Seat Position: Foremost, mid-height X Mid-position, mid-height X Foremost, mid-height (Use a separate sheet for each of the three fore-aft positions.)

X The child restraint has no visible damage (S20.1.1)

Tested seat belt latch plate:

- Belt tests with rearward-facing child restraint and convertible restraints in the rearward-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4)

- Position the seat at adjustable lumbar supports so that the lumbar supports are in the lowest retracted or defeated adjustment positions. (S20.1.9.1)

- X NA - No lumbar adjustment

- Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S20.1.9.2)

- X NA - No additional support adjustment

- If the seat cushion adjusts fore and aft, independently of the seat back, set this adjustment to the full rearward position. (S20.1.9.3)

- X NA - No independent fore-aft seat cushion adjustment

- Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angle.

- The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S20.1.9.5 and S8.1.3)

- X NA - No seat back angle adjustment

- Manufacturer's design seat back angle

- Tested seat back angle

- 1st defeated rearward

- 1st defeated rearward

- If adjustable, set the head restraint at the full down and full upward position. (S20.1.8.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.

- X NA - No head restraint adjustment

- Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (S20.2.1.4(c))

- X NA - No adjustable upper seat belt anchorage

- Manufacturer's specified anchorage position

- Tested anchorage position

- Full Up

- Full Up

- Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint. (S20.2.1.2)

- X 1.9 Read the child restraint owner's manual for installation instructions

- X 1.10 Place the child restraint facing rearward in the seat such that Plane A (determined and marked during the completion of Data Sheet 14) (S20.2.1.4(3)(1))

- While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the rear-facing mode. (S20.2.1.4(b)) Do NOT use any positioning devices such as laws. (FR 99-30711, footnote 23.5/2/2000) If the

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vehicle has FMVSS 225 anchorages, do not attach. (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any letters. (S20.1.8)

X 1.12 Place a load cell with a maximum full scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat on the side away from the buckle. To avoid interference from the shoulder section of the belt. (S20.2.1.4(c))

Is there a sheath around the seat belt that interferes with the load cell? Yes X. No.

If yes, cut off all or part of the sheath. (S20.2.1.4(c))

X 1.13 Cinch the seat belt to a tension load of 130 N \cdot 3N (29.2 lb \cdot 0.7 lb) (S20.2.1.4(c))

Record seat belt tension.

X 1.14 Position the 49 CFR Part 578 Subpart R 3-month-old GRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d)) The tension in the seat belt may change from ram 1.13. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.

X N/A - No dummy contact with the instrument panel.

Manual seat adjuster: center(s) rearward of the forward most position. Move the seat the minimum number of detents to eliminate contact with the instrument panel.

Power seat adjuster: trim between instrument panel and child restraint (max allowed is 5 mm).

Reinchant the seat belt to a tension load of 130 N \cdot 3N (29.2 lb \cdot 0.7 lb) (S20.2.1.4(c))

Record seat belt tension.

X 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(a))

X 2. Unbelted tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child rest ay is listed in Appendix A, sections B and C) (S20.2.2.1) - If the vehicle has FMVSS 225 anchorages, do NOT attach. (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any letters. (S20.1.8)

Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

Complete rows 3 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.1(d))

3. Unbelted tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraint is listed in Appendix A, sections B and C) (S20.2.1.4) - Do NOT attach seat belts. (S20.1.8) Do NOT attach any letters. (S20.1.8)

X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 SC9 devices to mate to the FMVSS 225 anchorages.

3.1 Keep the same seat position as in 1.1 through 1.7 above.

3.2 Read the child restraint owner's manual for installation instructions.

3.3 Attach the child restraint forward, rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as tethers. (FR 65.3 (0711), footnote 23.5/12/2000) Do NOT attach any letters. (S20.1.7)

3.4 Position the 49 CFR Part 578 Subpart R 3-month-old GRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(c))

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.

N/A - No dummy contact with the instrument panel.
Manual seat adjuster: dents (tentative) rearward of the forward most position (Move the seat to the minimum number of detents to eliminate contact with the instrument panel.)
Lower seat adjuster: __ mm between instrument panel and child restraint (max allowed is 5 mm.)

3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the airbag is suppressed. (S20.2.14(e))

4. Belted tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) — If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.3) the child restraint to these anchorages. (S20.2.1.5(a)(1): DO NOT attach any letters. (S20.1.8)
N/A — Not a convertible restraint

X 4.1 Keep the same seat position as in 1.1 through 1.7 above.

X 4.2 Read the child restraint owner's manual for installation instructions.

X 4.3 Place the child restraint facing "forward" in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S20.2.1.5(a)(1))

X 4.4 While maintaining the child restraint position with Plane B aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the "forward facing mode." (S20.2.1.5(b)): Do NOT use any positioning devices such as towels. (FR 65.3079, footnote 23, 5/12/2000). If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(c)(1): DO NOT attach any letters. (S20.1.8)

X 4.5 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) or a flat, straight section of the lap belt between the child restraint seat belt and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.5(c))
Is there a sheath around the seat belt that interferes with the load cell? Yes: No. If yes, cut off all or part of the sheet. __ All __ Part

X 4.6 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.5(c))
Record seat belt tension: __ G.3 b. _____

X 4.7 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)): (The tension in the seat belt may change from item 18. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)

If the seat must be moved rearward because of dummy contact with the instrument panel or the panel describing the final location of the seat:
NA: No dummy contact with the instrument panel.
Manual seat adjuster: dents (tentative) rearward of the forward most position (Move the seat to the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: __ mm between instrument panel and child restraint (max allowed is 5 mm.)

X 4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshine, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the airbag is suppressed. (S20.2.1.5(e))

X 4.9 Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode. (Appendix A, sections B and C) (S20.2.2.5) — If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.3) the child restraint to these anchorages. (DO NOT attach any letters. (S20.1.8)
Without changing the position of the child restraint or dummy, disconnect the seat belt and return to its stowed position.

5-20
Complete rows 49 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.3(c))

6. Unbuckle tests using FMVSS 225 anchorages with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) - Do NOT attach seat belts.

X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 225 55.9 devices to mate to the FMVSS 225 anchorages.

N/A - Not a convertible restraint

6.1 Keep the same seat position as in 1.7 through 1.7 above

6.2 Read the child restraint owner's manual for installation instructions.

6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any seat belts. (S20.1.8) Do NOT use any positioning devices such as towels. (FMVSS 208 301/11, reforerence 23, S12/2000)

6.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))

the seat must be moved forward because of dummy contact with the instrument panel. Describe the final location of the seat.

N/A - No dummy contact with the instrument panel

Manual seat adjuster: Determine movement of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)

Front seat adjuster: Minimal movement instrument panel and child restraint (max allowed is 5 mm).

6.5 Complete rows 51 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(c))

C. Case, B. Smith, A. Lo, den _______________________. 5/5/03

I certify that I have read and performed each instruction _______________________. Date
<table>
<thead>
<tr>
<th>Seat Position</th>
<th>Rearmost mid-height Drop-down</th>
<th>Mid-position</th>
<th>Foremost mid-height Drop-down</th>
<th>Sunshade of Blanket</th>
<th>Blanket Position 1</th>
<th>Blanket Position 2</th>
<th>Left-hand, Forward</th>
<th>Right-hand, Forward</th>
<th>Left-hand, Rearward</th>
<th>Right-hand, Rearward</th>
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<td>In-use</td>
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<td>N/A</td>
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<td>N/A</td>
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<td>Blanket 2 (Position 2)</td>
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</table>

1. If there is no handle, place N/A in the Suppressed/Fail column in the rows marked "Upright." "Down" means the child restraint manufacturer's recommended position or there is no handle.
2. If there is no sunshield, place N/A in the Suppressed/Fail column in the rows marked "In-use.”
3. Blanket position 1 (S20.1.5(a)): Place a blanket on the child restraint so that the top and side edges of the restraint are covered. The vehicle seat shall not support the blanket.
4. Blanket position 2 (S20.1.5(b)): Place a blanket on the child restraint so that it rests on the top of the vehicle's seat back and the forward most (towards the instrument panel) edge of the child restraint.
5  Convertible restraints ONLY (520.2.1.5) (Appendix A, section C).

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).)

(520.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies):

_____________________________  ________________________________

_____________________________  ________________________________

_____________________________  ________________________________

C. Case, B. Smith, A. Allison  5/5/03
I certify that I have read and performed each instruction.  Date
DATA SHEET 29
Test of Reactivation of the Passenger Air Bag System with an
Unbelted 9th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C35306
Test Date 5/03

Laboratory: __VHI:2__________ Test Technician(s): C.Case, B.Smith, A.Louden

Seat Position: X Rearmost ___ Mid position ___ Foremost (S20.3 1, 22.3 1, S24.3 1)

Do NOT use seat belts for these tests.

1. This reactivation test is being performed after the following suppression tests:

   X Suppression Test Using 12 Month-Old CRAB Dummy (S20)
   After section ___ of data sheet 16
   Suppression Test Using Newborn Infant Dummy (S20)
   After section ___ of data sheet 16
   __ Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
   After section ___ of data sheet 17
   Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
   After section ___ of data sheet 18
   __ Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
   After section ___ of data sheet 19
   __ Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
   After section ___ of data sheet 20
   __ Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
   After section ___ of data sheet 21

X 2. Leave the seat in the forward position, seat height, and seat cushion angle used for the suppression test.

X 2. Fully recline the seat back. (S13.3.3.1.2)

   ___ Seat back not adjustable.

X 4. Place the dummy in the seat with the legs at an angle of 120 degrees to the thighs. The
   canes should not be touching the seat cushion. (S16.3.3.1.2)

X 5. Position the dummy midspine plane, vertical and coincident with the seating position
   centerline determined in Data Sheet 14. (S16.3.3.1.5 or S16.3.3.1.4)

X 6. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic
   angle. (S16.3.3.1.5)

X 7. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)

X 8. Set the transverse distance between the centers of the front of the knees at 160 to 170 mm
   (6.3 to 6.7 inches) Center the knee separation with respect to the seat centerline. (S16.3.3.1.6)

Record Knee Separation 165 mm

X 9. Push rearward on the dummy's knees until the pelvis contacts the seat back, or the backs of the
   calves contact the seat cushion, whichever occurs first. (S16.3.3.1.6)

X 10. Gently rock the upper torso 14-5 degrees (approximately 51 mm (2 inches) side to side three
   times to reduce the friction between the dummy and the seat. (S16.3.3.1.7)

X 11. If the dummy contacts the interior move the seat rearward until a maximum clearance of 5
   mm (0.2 inches) is achieved or the seat is in the closest detect position that does not cause
dummy contact (S16.3.3.1.6). If needed, extended the legs until the feet do not contact the
   floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.6)

X 12. No contact

   Dummy contact Clearance set at maximum of 5 mm
   Measured Clearance _____ _____ mm
   Dummy Contact. Seat set at nearest detect position
   Seat position _____ detect positions rearward of full forward
17. Verify the pelvis is not interfering with the seat back. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. If the seat back is adjustable, rotate the seat back forward while holding the thighs in place. Continue rotating the seat back forward until the transverse instrument platform of the dummy head is level +/- 0.5 degrees. If the head cannot be leveled using the seat back adjustment, or the seat back is not adjustable, use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.3.1.9 and S16.3.3.1.10)

(Use All That Apply)
- Seat back not adjustable
- Seat back not independent of driver side seat back

Head Level Achieved. (Check all that apply)
- Head leveled using the adjustable seat back
  - Head Angle ______ degrees
- Head Level NOT Achieved. (Check all that apply)
  - Head leveled using the neck bracket

X 5 Measure and set the pelvic angle using the pelvic angle gauge TE 2504. The pelvic angle should be 20.0 degrees +/- 2.5 degrees. If the pelvic angle cannot be set to 20 degrees, minimize the angular difference. (S16.3.3.1.9)
  - Pelvic angle set to 20.0 degrees +/- 2.5 degrees.
  - Pelvic angle of 20.0 degrees not achieved, the angular difference was minimized.
  - Record the pelvic angle. ______ degrees

X 6 Verify the transverse instrument platform of the dummy head is level +/- 0.5 degrees. Use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.3.1.9, S16.3.1.10, and S16.3.3.1.11)
  - Head Level Achieved

X 7 Head Level NOT Achieved.
  - Head Angle ______ degrees

X 17 Check the dummy for contact with interior after completing adjustments. (S16.3.3.1.12)
  - Dummy in contact with interior.
  - Seat moved A__ mm from the previous position.
  - Seat moved A__ to the data position from the previous position.

X 18 Foot positioning. (Indicate final position achieved) (S16.3.3.2)
  - Feet flat on the floor board. OR
  - Feet cannot be placed flat on the floor board, set the foot perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
  - Heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.

X 19 Passenger arm/shoulder positioning. (S16.3.3.3)
  - Place the dummy's upper arms adjacent to the torso with the arm centerlines as close to a vertical, longitudinal plane as possible. (S16.3.2.3.1)
  - Place the palms of the dummy in contact with the outer part of the thighs. (S16.3.3.3.2)
  - Place the little finger in contact with the seat cushion. (S16.3.3.3.3)

X 20 Seat belt restraint:
  - If the head restraint has an automatic adjustment, move it where the system positions the restraint after the dummy is placed in the seat. (S16.3.4.1)
  - Vehicle does not contain automatic head restraint.
  - Adjust the head restraint to its lowest position. (S16.3.4.2)
  - (See Data Sheet 14) Measure the vertical distance from the top most point of the head restraint to the bottom most point. Locate a horizontal plane through the
midpoint of this distance. Adjust the head restraint vertically so that this horizontal plane is aligned with the center of gravity (CG) of the dummy head. (§16.3.4.3)
Vertical height of head restraint ___ mm
Mid-point height ___ mm

20.4 If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG. (§16.3.4.3)
N/A midpoint position attained in previous step.
Head rest set at nearest detent below the head CG.

20.5 If the head restraint has a fore and aft adjustment, place the restraint in the foremost position or until contact with the head is made, whichever occurs first. (§16.3.4.4)

X 21. Start the vehicle engine or place the ignition in the “on” position, whichever will turn on the suppressor system, and close all vehicle doors. (§22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (§22.2.1.8)
Air Bag Suppressed: FAIL
Air Bag Not Suppressed: Pass

X 22. Return the ignition switch to the “off” position.

C. Sarge, B. Smith, A. Louden
5/5/03
DATA SHEET 18

Suppression Test Using 3-Year-Old Dummy (Part 572, Subpart F) and Forward Facing Convertible Child Restraints (522)

NIHSA No: G336305

Test Date: __/__/__

Laboratory: VRTC

Test Technician(s): C. Casey, B. Smith, A. Louden

Child Restraint Name, Model, and Manufacturer Date: Britax Roundabout 7/21/03

Seat Position: Rightmost, mid-height - Mid-position, mid-height - Foremost, mid-height (Use a separate sheet for each of the three fore-aft positions.) 14 detent rear of foremost because of contact with the interior.

X The forward facing child restraint seat has NO visible damage. (522.1.1)

1. Belted tests with a forward facing child restraint. (Child restraints listed in Appendix A, section C)

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or detacted adjustment positions. (522.1.7.1)

X N/A - No lumbar adjustment

X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (522.1.7.2)

X N/A - No additional support adjustment

X 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the furthest rearward position (522.1.7.3)

X N/A - No independent fore-aft seat cushion adjustment

X 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angle.

X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (522.1.7.5 and 522.1.3)

X N/A - No seat back angle adjustment

Manufacturer's design seat back angle: _1 detent rearward

Tested seat back angle: _1 detent rearward

X 1.6 If adjustable, set the head restraint at the full down and full forward position. (522.1.7.6) Any adjustment of the head restraint shall be used to position it full forward. For example, rotate, rotate it such that the head restraint extends as far forward as possible.

X N/A - No head restraint adjustment

X 1.7 Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint. (522.2.2.2)

X 1.8 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant. (522.1.5.1)

X N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position: _Full up_ _Full up_ _Full up_

Tested anchorage position: _Full up_ _Full up_

X 1.9 Read the child restraint owner's manual for installation instructions.

X 1.10 Place the child restraint facing forward in the seat such that Plane A (item 1.7 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 1). (522.2.2.4 (a)(1))

X 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's instructions regarding proper installation of the restraint in the forward facing mode. Do NOT use any positioning devices such as towels. (FR 85-20711, Effective 23, 5/12/2005) If the vehicle has TNVS375 anchorages, do not attach (522.1.3) the child restraint to these anchorages. (522.1.4) Do NOT attach any tethers. (522.1.4)
X 1.12 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) or a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat on the side away from the buckle (to avoid interference from the shoulder portion of the belt) (S222 2.1.5.1)
   __ Is there a sheath around the seat belt that interferes with the load cell?
   __ Yes __ No
   If necessary, cut off all or part of the sheath. __ None __ All. Part
X 1.13 Circum the seat belt to a tension load of 130 N - 3N (29.2 lb + 0.7 lb) (S222 2.1.5 1)
   __ Record seat belt tension ______ 27.1 lb ______
X 1.14 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the child restraint such that the dummy's lower torso is centered on the child restraint and the dummy's spine is against the seat back of the child restraint. Place the arms of the dummy's sides (S222 2.1.5.2)
X 1.15 Attach all belts that come with the child restraint that are appropriate for a child of the same height and weight as the 3-year-old dummy (3'-1.34 lb), if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the child restraint (S222 2.1.5.3)
X 1.16 Start the vehicle engine or place the ignition in the 'on' position, whichever will turn on the suppression system, and close all vehicle doors. (S222 2.1.7) Wait 10 seconds and then check whether the air bag is suppressed. (S222 2.1.8)
   __ Air Bag Suppressed - Pass
   __ Air Bag Not Suppressed - FAIL
X 1.17 Return the ignition switch to the 'off' position.

X 2. Unbelted tests using FMVSS 225 Anchorage with a forward facing convertible child restraint. (Child restraint seats listed in Appendix A, sections 3) - Do NOT attach seat belts. (S222 2.1.4 (b)) Do NOT attach any belts. (S222 1.4)
X 2.1.1 Vehicle does not have FMVSS 225 anchors or child restraint does not have FMVSS 213 53.6 devices to mate to the FMVSS 225 anchors.
   __ Keep the same seat position as in 1.1 through 1.7 above
   __ Read the child restraint and vehicle owner's manuals for installation instructions
   __ Attach the child restraint, facing forward, to the FMVSS 225 anchors according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any belts. (S222 1.4) Do NOT use any positioning devices such as towels. (FR 65 36711, footnote 23, 5-17-2003)
X 2.2 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the child restraint such that the dummy's lower torso is centered on the child restraint and the dummy's spine is against the seat back of the child restraint. Place the arms of the dummy's sides (S222 2.1.5.2)
X 2.3 Attach all belts that come with the child restraint that are appropriate for a child of the same height and weight as the 3-year-old dummy (3'-1.34 lb), if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the child restraint (S222 2.1.5.3)
X 2.4 Start the vehicle engine or place the ignition in the 'on' position, whichever will turn on the suppression system, and close all vehicle doors. (S222 2.1.7) Wait 10 seconds and then check whether the air bag is suppressed. (S222 2.1.8)
   __ Air Bag Suppressed - Pass
   __ Air Bag Not Suppressed - FAIL
X 2.7 Return the ignition switch to the 'off' position.

C Case, J Smith, A Touzeau __________________________ 5/30/03 ______
I certify that I have read and performed each instruction. __________________________ __________________________
DATA SHEET 18
Suppressor Test Using 3-Year-Old Dummy (Part 572, Subpart E) and Forward Facing Convertible Child Restraints (S72)

NHTSA No. __C5303_____ Test Date: 5/8/03

Laboratory: VRTC_________ Test Technician(s): C. Case, R. Smith, A. Longden

Child Restraint: Name, Model, and Manufacture Date: Century Encore 8/16/03________

Seat Position: Rear most mid-height, mid-position, mid-height X Foremost, mid-height (Use a separate sheet for each of the three forward positions) 8 detents rear of foremost because of

with the interior contact

X The forward facing child restraint seat has NO visible damage (S22.1.1)

1. Belted tests with a forward facing child restraint, (Child restraints listed in Appendix A, section 6)

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or detainted adjustment positions. (S22.1.7)

X N/A - No lumbar adjustment

X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S22.1.7.2)

X N/A - No additional support adjustment

X 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S22.1.7.3)

X N/A - No independent fore-aft seat cushion adjustment

X 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angle.

X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and S22.1.3)

X N/A - No seat back angle adjustment

Manufacturer's design seat back angle ___1 detent forward

Tested seat back angle ___1 detent forward

X 1.6 If adjustable, set the head restraint at the full down and forward position. (S22.1.6.3) Any adjustment of the head restraint shall be used to position it full forward. For example, if 1 rotation of the head restraint extends as far forward as possible.

X N/A - No head restraint adjustment

X 1.7 Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint. (S22.2.1.1)

X 1.8 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant. (S22.2.1.5.1)

X N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position - Full up__________ - Full up

Tested anchorage position - Full up

X 1.9 Read the child restraint owner's manual for installation instructions

X 1.10 Place the child restraint facing forward in the seat such that Plane A (item 1.7 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S22.1.4 (a)(i))

X 1.11 Where maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward facing mode. Do NOT use any纵向 devices such as towels. (FR65 30711 test note 23, 5/12/2000) If the vehicle has

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FMVSS 225 anchorages, do not attach (§22.1.3) the child restraint to these anchorages. (§22.2.1.4 (a)) Do NOT attach any seatbelts. (§22.1.4)

1.1.2 Place a load cell with a maximum full-scale reading of 225 N (50.5 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the test anchor or vehicle seat. On the side away from the buckle (to avoid interference from the shoulder portion of the belt). (§22.2.1.5.1)

Is there a sheath around the seat belt that interferes with the load cell?

--- Yes X No

If necessary, cut off all or part of the sheath. ___ No No

1.1.3 Cinch the seat belt to a tension load of 150 N ± 15 N (22.2 lb ± 2.1 lb) (§22.2.1.5.1)

Record seat belt tension 27.5 lb

1.1.4 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the child restraint such that the dummy’s lower torso is centered on the child restraint and the dummy’s spine is against the seat back of the child restraint. Place the arms at the dummy’s sides. (§22.2.1.5.2)

1.1.5 Attach all belts that come with the child restraint that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3-1", 34 lb), if any, by following, to the extent possible, the manufacturer’s instructions for seating children provided with the child restraint. (§22.2.1.5.3)

1.1.6 Start the vehicle engine, or place the ignition in the “on” position, whichever will turn on the suppression system, and close all vehicle doors. (§22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (§22.2.1.8)

X Air Bag Suppressed = Pass

Air Bag Not Suppressed = FAIL

1.1.7 Return the ignition switch to the “off” position.

2.1 Unbuckle tests using FMVSS 225 Anchorages with a forward facing convertible child restraint. (Child restraint seats listed in Appendix A, sections C) Do NOT attach seat belts.

2.1.1 (b)) Do NOT attach any seatbelts. (§22.1.4)

X N/A - Vehicle does not have FMVSS 225 Anchorages or child restraint does not have FMVSS 213 seat belt devices to match to the FMVSS 225 Anchorages.

2.1.2 Keep the same seat position as in 1.1 through 1.7 above.

2.1.3 Read the child restraint and vehicle owner’s manuals for installation instructions.

2.1.4 Attach the child restraint, facing forward to the FMVSS 225 anchorages according to the instructions in the child restraint owner’s manual and the vehicle owner’s manual. Do NOT attach any seatbelts. (§22.1.4) Do NOT use any positioning devices such as swatches (FR 65 30/11, footnote 23, 5’-2-2000).

2.2.1 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the child restraint such that the dummy’s lower torso is centered on the child restraint and the dummy’s spine is against the seat back of the child restraint. Place the arms at the dummy’s sides. (§22.2.1.5.2)

2.2.2 Attach all belts that come with the child restraint that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3-1", 34 lb), if any, by following, to the extent possible, the manufacturer’s instructions for seating children provided with the child restraint. (§22.2.1.5.3)

2.2.3 Start the vehicle engine, or place the ignition in the “on” position, whichever will turn on the suppression system, and close all vehicle doors. (§22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (§22.2.1.8)

Air Bag Suppressed = Pass

Air Bag Not Suppressed = FAIL

2.2.4 Return the ignition switch to the “off” position.

______________________________
C. Case, B. Smith, A. Louden

5/6/03

I certify that I have read and performed each instruction.

Date

5-90
Yes - complete item 1.12
No - skip item 1.12
Place a load cell with a maximum 1:1 scale reading of 225 N (50.5 lb) on a 1 ft straight section of the lap belt between the booster seat belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S22.2.1.6.1)
Is there a sheath around the seat belt that interferes with the load cell?  ___ Yes  ___ No
If yes, cut off all or part of the sheath.  All  Part

X 1.13  Given the load to a tension load of 150 N + 3N (29.2 lb ± 0.7 lb) (S22.2.1.6.1)
Record seat belt tension  ___27.4 lb.  ___
N/A - The booster seat is not designed to be secured to the vehicle seat even when empty.

X 1.14  Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the booster seat such that the dummy's lower torso is centered on the booster seat cushion and the dummy's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back.  Place the arms at the dummy's sides. (S22.2.1.6.2)

X 1.15  Attach all belts that come with the booster seat that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3'-4", 34 lb), if any.  By following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat (S22.2.1.6.3)
X  N/A - Unnecessary for this weight based scoring system.

X 1.16  Place the type 2 manual belt around the test dummy and fasten the latch.  Remove all slack from the lap belt portion.  Pull the upper torso webbing out of the retractor and allow it to retract, repeat this four times.  Apply a 9 to 18 N (2 to 4 lb) tension load to the lap belt.  Allow the excess webbing in the upper torso belt to be retracted by the retractive force of the retractor. (S22.2.1.6.4)
X  N/A  Booster seat belts that come with the booster seat are used to secure the dummy and the booster seat is secured with the vehicle's seat belt. (See 1.15)

X 1.17  Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppressor system, and close all vehicle doors. (S22.2.1.7)  Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
X  Air Bag Suppressed = Pass
X  Air Bag Not Suppressed = FAIL

X 1.18  Return the ignition switch to the "off" position.

UNBOTTLED tests using FMVSS 225 Anchorage(s) with a booster seat (Booster seats listed in Appendix A sections D) - Do NOT attach seat belts (S22.2.1.4(b)).  Do NOT attach any harnesses (S22.2.1.4).
X  N/A - Vehicle does not have FMVSS 225 Anchorage(s) or booster seat does not have FMVSS 225.55.9 devices to mate to the FMVSS 225 Anchorage(s).

2. 1  Keep the same seat position as in 1.1 through 1.7 above.
2. 2  Read the booster seat and vehicle owner's manuals for installation instructions.
2. 3  Attach the booster seat to the FMVSS 225 Anchorage(s) according to the instructions in the booster seat and the vehicle owner's manuals.  Do NOT attach any harnesses. (S22.2.1.4(a)).  Do NOT use any positioning devices such as towels. (FR 65 30711 footnote 23, 5/12/2006)

2. 4  Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the booster seat such that the dummy's lower torso is centered on the booster seat cushion and the dummy's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back.  Place the arms at the dummy's sides. (S22.2.1.6.7)

2. 5  Attach all belts that come with the booster seat that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3'-4", 34 lb), if any.  By following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)

2. 8  Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppressor system, and close all vehicle doors. (S22.2.1.7)  Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)

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Air Bag Suppressed – Pass

Air Bag Not Suppressed - FAIL

2.19 Return the ignition switch to the “off” position.

C. Case, B. Smith, A. Longen
I certify that I have read and performed each instruction.

SIGNATURE

Date
DATA SHEET 17

Suppression Test Using 3-Year-Old Dummy (Part 572 Subpart P) and Booster Seats (S22)

NHTSA No. __G33306_________ Test Date: 9/5/03
Lab Test: __VRCA_________ Test Technicians: __C.Case, BSmith, A.Louden

Booster Seat Name, Model, and Manufacturer: __Century Next Step 8/16/03

Seat Position: __Rearmost mid-height __Mid-position mid-height X Foremost mid-height (Use a separate sheet for each of the three fore/aft positions.) __9 detent rear or foremost because of contact with the interior

X... The booster seat has NO visible damage. (S22.1.1)

1. Belted tests with a booster seat (Booster seats listed in Appendix A, section B)

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflected adjustment positions. (S22.1.7.1)
X NA – No lumbar adjustment
X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S22.1.7.2)
X NA – No additional support adjustment
X NA – No additional rearward seat cushion adjustment
X 1.3 If the seat cushion adjusts fore and aft, set the adjustment to the full rearward position. (S22.1.7.3)
X NA – No non-retractable seat cushion adjustment
X 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14: to set the fore-aft position, mid-height position, and the seat cushion angle.
X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer (S22.1.7.5 and S8.1.3):
X NA – No seat back angle adjustment
Manufacturer's design seat back angle __1 detent forward
Tested seat back angle __1 detent forward
X 1.6 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any adjustment of the head restraint shall be used to position it fully forward. For example if it rotates, rotate it such that the head restraint extends as far forward as possible.
X NA – No head restraint adjustment
X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant. (S22.1.7.6.1)
X NA – No adjustable upper seat belt anchorage
Manufacturer's specified anchorage position full up
Tested anchorage position full up
X 1.8 Locate and mark a vertical Plane A through the longitudinal centerline of the booster seat. (S22.2.1.2)
X 1.9 Read the booster seat owner's manual for installation instructions
X 1.10 Place the booster seat in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S22.2.1.4.a;11)
X 1.11 While maintaining the booster seat with Plane A aligned with Plane B, secure the booster seat by following, to the extent possible, the booster seat manufacturer's directions regarding proper installation of the booster seat. Do NOT use any positioning devices such as towels. (E5 307(11), footnote 23 01/2000) If the vehicle has FMVSS 235 anchorages, do not attach (S22.1.3) the booster seat to these anchorages (S22.2.1.4(a); Do NOT attach any

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X.12 Is the booster seat designed to be secured to the vehicle seat, even when empty?
   Yes — complete item X.12
   No — skip item X.12

   Place a load cell with a maximum full-scale reading of 225 N (50.0 lb) on a flat, straight
   section of the lap belt that passes between the booster seat bolt and the seat and contact point
   with the belt anchor or vehicle seat, on the side away from the buckle to avoid interference from
   the shoulder portion of the belt. (S22.2.1.6.1)
   Is there a sheath around the seat belt that interferes with the load cell? — Yes X No
   [ ] Yes, cut it off and part of the sheath
   [ ] All __ Part __

X.13 Cinch the seat belt to a tension load of 130 N ± 30 N (29.2 lb ± 6.7 lb). (S22.2.1.6.1)
   Record seat belt tension

X.14 Position the 49 CFR Part 572 Subpart F 3-year-old dummy in the booster seat such that the
   dummy’s lower torso is centered on the booster seat cushion and the dummy’s back is
   against the seat back of the booster seat or if there is no booster seat back, the vehicle seat
   back. Place the arms of the dummy’s sides. (S22.2.1.6.2)

X.15 Attach all belts that come with the booster seat that are appropriate for a child of the same
   height and weight as the 3-year-old child dummy (3’1”, 31 lb) if any, by following, to the
   extent possible, the manufacturer’s instructions for seating children provided with the booster
   seat. (S22.2.1.6.3)
   X: NA — The vehicle seat belts were used to secure the seat and the dummy.

X.16 Place the Type 2 manual latch around the test dummy and loosen the latch. Remove all slack
   from the lap belt portion. Pull the upper torso webbing out of the retractor and allow it to
   retract; repeat this four times. Apply a 9 to 16 N (2 to 4 lb) tension load to the lap belt. Allow
   the excess webbing in the upper torso belt to be restrained by the retractor force of the
   retractor. (S22.2.1.6.4)
   16.9 N
   X: NA — Booster seat belts that come with the booster seat are used to secure the dummy
   and the booster seat is secured with the vehicle seat belt. (Sec. 1.15)

X.17 Start the vehicle engine or place the ignition in the “on” position, whichever will turn on the
   “suppression” system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds and then
   check whether the air bag is suppressed. (S22.2.1.8)
   X Air Bag Not Suppressed — Pass
   X Air Bag Suppressed — Fail

X.18 Return the ignition switch to the “off” position.

X.2 Unbuckle tests using FMVSS 225 Anchorage with a booster seat (Booster seats listed in
   Appendix A, sections 1B) — Do NOT attach seat belts. (S22.2.1.4) Do NOT attach any others
   (S22.1.4)
   X: NA — Vehicle does not have FMVSS 225 anchorage or booster seat and does not have FMVSS
   213 SS.9 devices to mate to the FMVSS 225 anchorage.

   __ 1. Keep the same seat position as in 1.1 through 1.7 above
   __ 2. Read the booster seat and vehicle owner’s manuals for installation instructions

   __ 3. Attach the booster seat to the FMVSS 225 anchorage according to the instructions in the
      booster seat and the vehicle owner’s manuals. Do NOT attach any others. (S22.1.4)(a) Do
      NOT use any positioning devices such as lords. (FR 65 3711, footnote 23 5/12/2000)

   __ 4. Position the 49 CFR Part 572 Subpart F 3-year-old dummy in the booster seat such that the
      dummy’s lower torso is centered on the seat belt and the dummy’s back is
      against the seat back of the booster seat or if there is no booster seat back, the vehicle seat
      back. Place the arms of the dummy’s sides. (S22.2.1.6.7)

   __ 5. Attach all belts that come with the booster seat that are appropriate for a child of the same
      height and weight as the 3-year-old child dummy (3’1”, 31 lb) if any, by following, to the
      extent possible, the manufacturer’s instructions for seating children provided with the booster
      seat. (S22.2.1.6.8)

   __ 8. Start the vehicle engine or place the ignition in the “on” position, whichever will turn on the
      suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then
      check whether the air bag is suppressed. (S22.2.1.8)
Air Bag Suppressed – Pass
Air Bag Not Suppressed – FAIL

2.19 Return the ignition switch to the “off” position

C. Casey, B. Smith, A. Lauden
I certify that I have read and performed each instruction

5/16/?? Date
DATA SHEET 17
Suppression Test Using 3-Year-Old Dummy (Part 572, Subpart P) and Booster Seats (S72)

NHTSA No. C-35309 ___________________________ Test Date 8/3/03

Laboratory: __VRRC_________ Test Technician(s): C. Case, B. Smith, A. Loudon

Booster Seat Name, Model, and Manufacture Date: Cosco High Back Booster 572/200

Seat Position: Rearmost, mid-height $\times$ mid-position, mid-height $\times$ Foremost, mid-height (Use a separate sheet for each of the three fore-aft positions) $\times$ detent rear of foremost because of contact with the interior

$\times$ Inc booster seat has NO visible damage. (S22.1.1)

1. Be tested with a booster seat. (Booster seats listed in Appendix A, section D)
   $\times$ 1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or defeated adjustment positions. (S22.1.7.1)
   $\times$ N/A - No lumbar adjustment
   $\times$ 2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S22.1.7.2)
   $\times$ N/A - No adjustable support adjustment
   $\times$ 3 The seat cushion adjusts fore-and-aft, independent of the seat back, set this adjustment to the full rearward position. (S22.1.7.3)
   $\times$ N/A - No independent fore-aft seat cushion adjustment
   $\times$ 4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angle.
   $\times$ 5 The seat back angle is adjustable, is set at the manufacturer's normal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.5 and S8.5.3)
   N/A - No seat back angle adjustment
   Manufacturer's design seating back angle $\times$ 1 detent forward
   Tested seating back angle $\times$ 1 detent forward
   $\times$ 6 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
   N/A - No head restraint adjustment
   $\times$ 7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (S22.2.1.6.1)
   N/A - No adjustable upper seat belt anchorage
   Manufacturer's specified anchorage position $\times$ fill up
   Tested anchorage position $\times$ fill up
   $\times$ 8 Locate and mark a vertical Plane A through the longitudinal centerline of the booster seat. (S22.2.1.7)
   $\times$ 9 Read the booster seat owner's manual for installation instructions
   $\times$ 10 Place the booster seat in the seat such that Plane A (item 8 above) is aligned with Plane B (vertical plane and marked during the completion of Data Sheet 14) (S22.2.1.4(a)(1));
   $\times$ 11 While maintaining the booster seat with Plane A aligned with Plane B, secure the booster seat by following to the extent possible the booster seat manufacturer's instructions regarding proper installation of the booster seat. Do NOT use any positioning devices such as towels, etc. H 86-3611, feature 23-5.5(2000) If the vehicle was FMVSS 225 anchorages, do not attach (S22.1.3); the booster seat to those anchorages. (S22.2.1.4(a)) Do NOT attach any
   $\times$ 1.2 Is the booster seat designed to be secured to the vehicle seat even when empty.
X. Yes — complete item 1.12
   No — skip item 1.17

   Place a head bell with a maximum full-scale reading of 225 N (50.5 lb) on the upper straight
   section of the lap belt between the booster seat belt path and the contact point with the belt
   anchor or vehicle seat, or on the side away from the buckle (to avoid interference from the
   shoulder portion of the belt) (§222.2.1.6.1)

   Is there a sheath around the seat belt that interferes with the load cell? Yes X No
   If yes, cut off all or part of the sheath.

X 1.13 Given the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (§222.2.1.6)

   Record seat belt tension

   N/A - The booster seat is not designed to be secured to the vehicle seat even when
   empty.

X 1.14 Position the 49 CH-4 Part 572 Subpart P 3-year-old dummy in the booster seat such that the
   dummy’s lower torso is centered on the booster seat cushion and the dummy’s back is
   against the seat back of the booster seat or if there is no booster seat back, the vehicle seat
   back. Place the arms at the dummy’s sides. (§222.2.1.6.2)

X 1.15 Attach all harness that come with the booster seat that are appropriate for a child of the same
   height and weight as the 3-year-old child dummy (34” to 40”, 34 lb), if any, by following, to the
   extent possible, the manufacturer’s instructions for seating children provided with the booster
   seat. (§222.2.1.6.3)

X N/A - Unnecessary for this weight based sensing system.

X 1.16 Place the Type 2 manual belt around the test dummy and fasten the latch. Remove all slack
   from the lap belt portion. Pull the upper torso webbing out of the retractor and allow it to
   retract, repeat this four times. Apply 5 to 18 N (2 to 4 lb) tension load in the lap belt. A low
   stress does not retract in the upper torso belt to be retracted by the retractor force of the
   retractor. (§222.2.1.6.4)

X N/A - Booster seat belts that come with the booster seat are used to secure the dummy
   and the booster seat is secured with the vehicle seat belt. (See 1.15)

X 1.17 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the
   suppression system, and close all vehicle doors. (§222.2.1.7; Wait 10 seconds, and then
   check whether the air bag is suppressed. (§222.2.1.8)

X A: Bag Suppressed, Score

X B: Bag Not Suppressed, FAIL

X 1.18 Return the ignition switch to the "off" position.

2. Unbuckled isets using FMVSS 225 Anchorages with a booster seat. (Booster seats listed in
   Appendix A, sections 1) Do NOT attach seat belts. (§222.2.1.4 (b)) Do NOT attach any tethers
   (§222.1.4).

X N/A - Vehicle does not have FMVSS 225 anchorages or booster seat does not have FMVSS
   213 S5.3 devices to mate to the FMVSS 225 anchorages.

2.1 Keep the same test setup as in 1.1 through 1.7 above.

2.2 Read the booster seat and vehicle owner’s manuals for installation instructions.

2.3 Attach the booster seat to the FMVSS 225 anchorages according to the instructions in the
   booster seat and the vehicle owner’s manuals. Do NOT attach any tethers (§222.1.4(a)) Do
   NOT use any positioning devices such as towels. (FR 05 30711, footnote 23, 9/12/2000)

2.4 Position the 49 CH-4 Part 572 Subpart P 3-year-old dummy in the booster seat such that the
   dummy’s lower torso is centered on the booster seat cushion and the dummy’s back is
   against the seat back of the booster seat or if there is no booster seat back, the vehicle seat
   back. Place the arms at the dummy’s sides. (§222.2.1.6.7)

2.5 Attach all belts that come with the booster seat that are appropriate for a child of the same
   height and weight as the 3-year-old child dummy (34” to 40”, 34 lb), if any, by following, to the
   extent possible, the manufacturer’s instructions for seating children provided with the booster
   seat. (§222.2.1.6.3)

2.18 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the
   suppression system, and close all vehicle doors. (§222.2.1.7) Wait 10 seconds, and then
   check whether the air bag is suppressed. (§222.2.1.8)
Air Bag Suppressed: Pass
Air Bag No: Suppressed: FAIL

2.19 Return the ignition switch to the "off" position.

C. Casey, B. Smith, A.ouden

I certify that I have read and performed each instruction.

Date: 5/6/03
DATA SHEET 17
Suppression Test Using 3 Year-Old Dummy (Part 572, Support P) and Booster Seats (592)

NHSTA No. ____________ ___________________________ Test Date: ____________

Laboratory VRTC __________ Test Technician(s): C.Casas R. Smith, A. Layden

Booster Seat Name: Concor High Back Booster 54100

Seat Position __ Rearmost, mid-height __ Mid-position, mid-height X Foremost, mid-height (Use a separate sheet for each of the three fore-aft positions) 8 deftants rear of foremost because of contact with the interior

X The booster seat has NO visible damage (S221.1)

1. Belts tested with a booster seat. (Booster seats listed in Appendix A, section D)

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest
reflected or detialed adjustment positions. (S221.7.1)

X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the
lowest or most open adjustment position. (S221.7.2)

X 1.3 If the seat cushion adjusts fore-aft and tilt, independent of the seat back, set this adjustment to the
full rearward position. (S221.7.3)

X 1.4 Place the seat in the position specified in the header information. Use the seat markings
determined during the completion of Data Sheet 11 to set the fore-aft position, mid-height
position and the seat cushion angle

X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position
for a 50th percentile adult male in the manner specified by the manufacturer. (S221.7.5 and
S8.1.3)

__ N/A No seat back angle adjustment

Manufacturer's design seat back angle __ 1 defect rearward

Tested seat back angle 1 defect rearward

X 1.6 If adjustable, set the head restraint at the full down and full forward position. (S221.7.8) Any
adjustment of the head restraint shall be used to position it full forward. For example, if it
rotates, rotate it so that the head restraint extends as far forward as possible

X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design
position for a 50th percentile adult male occupant. (S222.1.8.1)

__ N/A No adjustable upper seat belt anchorage

Manufacturers specified anchorage position __ full up

Tested anchorage position __ full up

X 1.8 Locate and mark a vertical Plane A through the longitudinal centerline of the booster seat.
(S222.1.2)

X 1.9 Read the booster seat owner's manual for installation instructions;

X 1.10 Place the booster seat in the seat such that Plane A (item 1.8 above) is aligned with Plane B
(determined and marked during the completion of Data Sheet 14). (S222.1.4(a)(1))

X 1.11 When maintaining the booster seat with Plane A aligned with Plane B, secure the booster
seat by following. To the extent possible, the booster seat manufacturer's directions regarding
proper installation of the booster seat. Do NOT use any positioning devices such as towels
FR 85 30711, instruction 25, S12192098). If the vehicle has FMVSS 216 anchorages, do not attach
(S221.13) the booster seat to those anchorages. (S222.1.4(a)) Do NOT attach any
tethers. (S221.4)

X 1.12 Is the booster seat designed to be secured to the vehicle seat even when empty?

X Yes - complete item 1.12

No - skip item 1.12

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Place a load cell with a maximum full-scale reading of 225 N (50 lbf) on a flat, straight section of the lap belt between the booster seat bolt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S22.2.1.6.1)

Is there a strap around the seat belt that interferes with the load cell? __ Yes __ No If yes, cut off all or part of the strap. __ All ___ Part

X.1.13 Circum the seat belt to a tension load of 100 N ± 5N (22.5 lb ± 1 lbf) (S22.2.1.6.1); record seat belt tension.__ __

X.1.14 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the booster seat such that the dummy's lower torso is centered on the booster seat cushion and the dummy's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back. Place the arms at the dummy's sides: (S22.2.1.6.2)

X.1.15 Attach all belts that come with the booster seat that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3' 1", 34 lb); if any, by following to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)

X.1.16 Place the Type 2 manual belt around the test dummy and fasten the latch. Remove all slack from the lap belt portion. Pull the upper torso webbing out of the retractor and allow it to retract, repeat this four times. Apply a 9 to 16 N (2 to 4 lbf) tension load to the lap belt. Allow the excess webbing in the upper torso belt to be retracted by the retractive force of the retractor. (S22.2.1.6.4)

17.8 N __ N/A Booster seat belts that come with the booster seat are used to secure the dummy and the booster seat is secured with the vehicle's seat belt. (See 1.15)

X.1.17 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors: (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)

X. Air Bag Suppressed — Pass

Air Bag Not Suppressed — FAIL

X.1.18 Return the ignition switch to the "off" position.

X.2.2.1 Unbolted tests using FMVSS 225 Anchorage with a booster seat (Booster seat listed in Appendix A Section D) Do NOT attach seat belts. (S22.2.1.4(b)) Do NOT attach any tethers. (S22.2.1.4(a))

X.2.2.3 N/A - Vehicle does not have FMVSS 225 anchorage or booster seat does not have FMVSS 225 S5.9 devices to mate to the FMVSS 225 anchorage.

2.1 Keep the same test position as in 1.1 through 1.7 above.

2.2 Read the booster seat and vehicle owner's manual for installation instructions.

2.3 Attach the booster seat to the FMVSS 225 anchorage according to the instructions in the booster seat and the vehicle owner's manuals. Do NOT attach any tethers. (S22.1.4(a)) Do NOT use any positioning devices such as bowls. (FH 65 30/11, footnote 23.5/12/2000)

2.4 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the booster seat such that the dummy's lower torso is centered on the booster seat cushion and the dummy's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back. Place the arms at the dummy's sides. (S22.2.1.6.3)

2.5 Attach all belts that come with the booster seat that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3' 1", 34 lb); if any, by following to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)

2.18 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors: (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)

Air Bag Suppressed — Pass

Air Bag Not Suppressed — FAIL

2.19 Return the ignition switch to the "off" position.
C. Garcia, B. Smith, A. Louden

Certify that I have read and performed each instruction.

Date: 5/8/03
DATA SHEET 29

Test of Reactivation of the Passenger Air Bag System with an Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C03585
Test Date 5/8/92

Laboratory: VA 22
Test Technician(s): C. Agee, G. Smith

Seat Position: Rearmost Mid-position X Foremost (S20.3.1, 22.3.1, S24.3.1)

8 dentens rear of foremost because of vehicle contact

DO NOT use seat belts for these tests:

X Suppression Test Using 12 Month-Old GRABI Dummy (S20)
After section __ of data sheet 15

X Suppression Test Using Newborn Infant Dummy (S20)
After section __ of data sheet 16

X Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section __ of data sheet 17

X Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraint (S22)
After section __ of data sheet 18

X Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section __ of data sheet 19

X Suppression Test Using 6 Year-Old Dummy and Booster Seats (S24.7.3)
After section __ of data sheet 20

X Suppression Test Using 6 Year-Old Dummy (S24.2.1)
After section __ of data sheet 21

X Leave the seat in the forward position, seat height, and seat cushion angle used for the suppression test.

X Fully recline the seat back. (S16.3.3.1.2)
    N/A seat back not adjustable

X Position the dummy in the seat with the legs at an angle of 120 degrees to the thighs. The calves should not be touching the seat cushion. (S16.3.3.1.2)

X Position the dummy, such that the plane vertical and coincident with the seating position centerline determined in Data Sheet 14. (S16.3.3.1.3 or S16.3.3.1.4)

X Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)

X Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.3)

X Set the transverse distance between the centers of the fronts of the knees at 160 to 170 mm (6.3 to 6.7 inches). Center the knee separation with respect to the seat centerline. (S16.3.3.1.6)

X Record Knee Separation ___ 159.1 ___ mm

X Push rearward on the dummy's knees until the pelvis contacts the seat back, or the backs of the calves contact the seat cushion, whichever occurs first. (S16.3.3.1.6)
    Pelvis contacted seat back
    Calves contacted seat cushion

X Gently rock the upper torso 5 degrees (approximately 51 mm (2 inches)) side to side three times to reduce the friction between the dummy and the seat. (S16.3.3.1.7)

X If the dummy contacts the interior or move the seat rearward until a maximum clearance of 5 mm (0.2 inches) is achieved or the seat is in the closest denton position that does not cause dummy contact. (S16.3.3.1.8) If needed, extended the legs until the feet do not contact the floor pan. Thighs should be resting on the seat cushion. (S16.3.3.1.8)

X VIA No contact

X Dummy contact Clearance set at maximum of 5 mm
    Measured Clearance __________ mm
    Dummy Contact: Seat set at nearest denton position.
Seat position: detent positions rearward of full forward
(full forward is position zero)

X 12. Verify the pelvis is not interfering with the seat belt. (§16.3.3.1.9)
X 13. Verify the dummy abdomen is properly installe. (§16.3.3.1.9)
X 14. If the seat back is adjustable, rotate the seat back forward while holding the thighs in place. Continue rotating the seat back forward until the transverse instrument platform of the dummy head is level ± 0.5 degrees. If the head cannot be leveled using the seat back adjustment, or the seat back is not adjustable, use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (§16.3.3.1.9 and §16.3.3.1.10)
(Check All That Apply)
- Seat back not adjustable
- Seat back not independent of driver side seat back

X 15. Head Level Achieved. (Check all that apply)
X 16. Head leveled using the adjustable seat back
Head level using the neck bracket.

Head Angle __________ degrees

X 17. Measure and set the pelvis angle using the pelvic angle cage TF-2504. The pelvic angle should be 20.0 degrees ± 2.5 degrees. If the pelvic angle cannot be set to 20 degrees, minimize the angular difference. (§16.3.3.1.11)
X 18. Pelvic angle set to 20.0 degrees ± 2.5 degrees.

Pelvic angle of 20.0 degrees not achieved, the angular difference was minimized.

X 19. Record the pelvic angle. __________ degrees

X 20. Record any operations to achieve pelvic angle and head level.

X 21. Verify the transverse instrument platform of the dummy head is level ± 0.5 degrees. Use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (§16.3.3.1.9, §16.3.3.1.10, and §16.3.3.1.11)

- Head Level Achieved using the seat back adjuster

Head Angle __________ degrees

- Head Level NOT Achieved.

X 22. Check the dummy for contact with interior after completing adjustments. (§16.3.3.1.12)
X 23. No contact.

X 24. Dummy in contact with interior.

Seat moved A1 minimum from the previous position.
Seat moved A2 detent positions from the previous position.

X 25. Foot positioning. (Indicate final position achieved) (§16.3.3.2)

18.1 Place foot flat on the floor board OR
18.2 If the feet cannot be placed flat on the floor board, set the foot perpendicular to the floor, and rest the heel as far forward on the floor pan as possible. OR

X 26. If the feet do not touch the floor pan, set the legs to vertical and set the foot parallel to the floor pan.

X 27. Passenger arm/hand positioning. (§16.3.3.3)

X 28. Place the dummy’s upper arms adjacent to the torso with the arm centerlines as close to a vertical longitudinal plane as possible. (§16.3.3.1)

X 29. Place the palms of the dummy in contact with the outer part of the thighs

X 30. Place the little fingers in contact with the seat cushion. (§16.3.3.3)

X 31. Adjustable head restraints.

X 32. If the head restraints have an automatic adjustment, leave it where the system positions the restraint after the dummy is placed in the seat. (§16.3.4.1)

X 33. Vehicle does not contain automatic head restraints.

X 34. Adjust the head restraint to its lowest position. (§16.3.4.2)
X 20.3: (See Data Sheet 14) Measure the vertical distance from the top most point of the head restraint to the bottom most point. Locate a horizontal plane through the midpoint of this distance. Adjust the head restraint vertically so that this horizontal plane is aligned with the center of gravity (CG) of the dummy head. (S16 3.4.3) Vertical Height of head restraint: mm
Mid-point height: mm

X 20.4: If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG. (S16 3.4.3)
-- N/A; mid-point position attained in previous step
-- Head rest set at nearest detent below the head CG

X 20.5: If the head restraint has a form or an adjustment, place the restraint in the foremost position or until contact with the head is made, whichever occurs first. (S16 3.4.4)

X 21: Start the vehicle engine or place the ignition in the "off" position, whichever will turn on the suppression system, and close all vehicle doors. (S22 2.17) Wait 10 seconds, and then check whether the air bag is suppressed. (S22 2.18)

-- Air Bag Suppressed = FAIL
-- Air Bag Not Suppressed = Pass

X 22: Return the ignition switch to the "off" position.
DATA SHEET 19

Suppression Tests Using an Unbelted 3-Year-Old Dummy (Part 572, Subpart P) (S22)

NHTSA No. C35306

Test Date: 6/6/03

Laboratory: VRCO

Test Technician(s): C Case, B Smith, A Lueken

Dummy Serial No.: 038

Seat Position: Rearmost, mid-height, Mid-position, mid-height, X Foremost, mid-height (Use a separate sheet for each of the three fore-aft positions.)

Do NOT use seat belts for these tests. (S22.2.2)

X - Sitting on seat with back against seat back (S22.2.2.1)

X - Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, restricted or doltlated adjustment positions. (S22.1.7.4)

X - N/A - No lumbar adjustment

X - Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S22.1.7.5)

X - N/A - No additional support adjustment

X - If the seat cushion adjusts fore and aft independent of the seat back, set this adjustment to the full rearward position. (S22.1.7.3)

X - N/A - No independent fore-aft seat cushion adjustment

X - Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angle.

X - The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and 58.1.3)

X - N/A - No seat back angle adjustment;

- Manufacturer's design seat back angle
- Tested seat back angle

X - If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint excursion is as far forward as possible.

X - N/A - No head restraint adjustment

X - Position the dummy in the seated position and place it on the right front outboard seat. (S22.2.2.1(a))

X - Position the dummy such that its mid sagittal plane is consistent with Plane B (determined and marked during the completion of Data Sheet 14). (S22.2.2.1(b))

X - Position the dummy's torso against the seat back. (S22.2.2.1(b))

X - Position the dummy's thighs against the seat cushion. (S22.2.2.1(b))

X - Allow the legs of the dummy to extend off the surface of the seat. (S22.2.2.*(c))

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:

X - N/A - No dummy contact with the instrument panel;

- Manual seat adjuster: x detent(s) rearward of the forward most position
- Mloe the seat the minimum number of detents to eliminate contact with the instrument panel;
- Power seat adjuster: mm between instrument panel and child restraint (max. allowed is 5 mm.)

X - Rotate the dummy's upper arms until they contact the seat back. (S22.2.2.1(c))

X - Rotate the dummy's lower arms until the dummy's hands contact the seat cushion. (S22.2.2.1(c))

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Start the vehicle engine or place the key or in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S27.2.2.11(a)) Wait 10 seconds, and then check whether the air bag is suppressed. (S27.2.2.11g)

Air Bag Suppression = Pass
Air Bag Not Suppressed = FAIL

Return the ignition switch to the "off" position.

Sitting on seat with back against recumbent seat back (S27.2.2.2)

N/A - No seat back angle adjustment

Keep the dummy and the seat in the same position as item 1 above.

Redline the seat back an additional 25 degrees or the closest position that does not exceed 25 degrees. (S27.2.2.2)

Initial seat back angle 17 degrees
Final seat back angle 42 degrees

Verify the dummy's mid-sagittal plane is coincident with Plane B (determined and marked during the completion of Data Sheet 14). (S27.2.2.1(b))

Verify the dummy's torso is against the seat back. (S27.2.2.1(b))

Verify the dummy's thighs are against the seat cushion. (S27.2.2.1(b))

Allow the legs of the dummy to extend off of the surface of the seat. (S27.2.2.1(b))

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.

N/A - No dummy contact with the instrument panel.

Manual seat adjuster: ____ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: ____ mm between instrument panel and child restraint (max. allowed is 5 mm.)

Verify the dummy's upper arms contact the seat back. (S27.2.2.1(b))

Verify the dummy's hands contact the seat cushion. (S27.2.2.1(b))

Start the vehicle engine or place the key or in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S27.2.2.11(a)) Wait 10 seconds, and then check whether the air bag is suppressed. (S27.2.2.11g)

Air Bag Suppression = Pass
Air Bag Not Suppressed = FAIL

Return the ignition switch to the "off" position.

Sitting on seat with back not against seat back (S27.2.2.3)

Keep the dummy and the seat in the same position as item 2 above.

Inclining the seat back to the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S27.2.1 7.3 and S8.1.3)

N/A - No seat back angle adjustment

Max. factor of design seat back angle __1 detent forward
Tested seat back angle __1 detent forward

Verify the dummy's mid-sagittal plane is coincident with Plane B (determined and marked during the completion of Data Sheet 14). (S27.2.2.3(b))

Verify the dummy's torso is against the seat back.

Verify the dummy's thighs are against the seat cushion. (S27.2.2.3(c))

Rotate the dummy forward until the spine is vertical. (S27.2.2.3(b))

Keeping the spine vertical, move the dummy face or arm to position the dummy's back 25 to 150 mm from the seat back as measured horizontally from the dummy's mid-sagittal plane at the mid-sternum level. (S27.2.2.3(b))

Distance measured from seat back __5 mm ___, __25 to 150 mm

Allow the legs of the dummy to extend off of the surface of the seat. (S27.2.2.3(b))

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.

N/A - No dummy contact with the instrument panel.

Manual seat adjuster: ____ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)

Power seat adjuster: ____ mm between instrument panel and child restraint (max.
3.9 If necessary, hold the dummy in position with a material that has a maximum breaking strength of 311 N. (S22.2.2.3 (b))

_ N/A  Dummy did not need to be supported

3.10 Position the dummy's upper arms parallel to the spine. (S22.2.2.3 (c))

3.11 Rotate the dummy's lower arms until the hands contact the seat cushion. (S22.2.2.3 (d))

3.12 Start the vehicle engine or place the ignition on the 'on' position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.3 (f)) Wait 10 seconds and then check whether the air bag is suppressed. (S22.2.2.3 (g))

Air Bag Suppressed  Pass

Air Bag Not Suppressed  FAIL

3.13 Return the ignition switch to the 'off' position.

4. Sitting on seat edge, spine vertical, hands by the dummy's side (S22.2.2.4)

4.1 Keep the seat in the end position used for 3 above

4.2 Position the dummy in the seated position and place it on the right front outboard seat. (S22.2.2.4(a))

4.3 Position the dummy such that its midsagittal plane is coincident with Plane B (determined and marked during the completion of Data Sheet 1). (S22.2.2.4(a))

4.4 Position the dummy in the seated position forward in the seat such that the legs are vertical and the back of the legs rest against the front of the seat with the spine vertical. If the dummy's feet contact the floor pan raising part of the thighs off the seat cushion, rotate the legs forward until the dummy's thighs are resting on the seat cushion with the feet positioned flat on the floor pan and the dummy spine vertical. (S22.2.2.4(b))

If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.

N/A  No dummy contact with the instrument panel

Manual seat adjuster: Not detected. Rearward of the forward most position. (Move the seat the minimum number of detents to eliminate contact with the instrument panel)

Power seat adjuster: mm between instrument panel and child restraint (max. allowed ≤ 5 mm.)

4.5 Position the dummy's upper arms parallel to the spine. (S22.2.2.4(c))

4.6 Rotate the dummy's lower arms until the hands contact the seat cushion. (S22.2.2.4(d))

4.7 If necessary, hold the dummy in position with a material that has a maximum breaking strength of 311 N. (S22.2.2.4(b))

4.8 Start the vehicle engine or place the ignition in the 'on' position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.4(c)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.4(c))

Air Bag Suppressed  Pass

Air Bag Not Suppressed  FAIL

4.9 Return the ignition switch to the 'off' position.

5. Standing on seat, facing forward (S22.2.2.5)

5.1 Keep the seat in the end position used for 4 above

5.2 Position the dummy in a standing position on the right front outboard seat cushion facing the front of the vehicle with the midsagittal plane coincident with Plane B (determined and marked during the completion of Data Sheet 1) and with the heels of the dummy's feet in contact with the seat back. (S22.2.2.5(a))

5.3 Rest the dummy against the seat back with the arms parallel to the spine. (S22.2.2.5(b))

5.4 If the seat back must be reclined because of dummy contact with the seat, describe the final location of the seat.

N/A  No dummy contact with the seat.

Manual seat back recliner: Not detected. Rearward of the forward most position. (Move the seat the minimum number of detents to eliminate contact with the seat). Power seat adjuster: mm between seat and dummy head (max. allowed ≤ 5 mm.)

5.5 If necessary, hold the dummy in position using a material that has a maximum breaking strength of 311 N or spacer blocks (S22.2.2.5 (d)).
5.6 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S222.2.5(a)) Wait 10 seconds, and then check whether the air bag is suppressed. (S222.2.5(b))

- Air Bag Suppressed - Pass
- Air Bag Not Suppressed - FAIL

5.7 Return the ignition switch to the "off" position.

6. Keep the seat in the end position used for 5 above.

6.1 The seat back angle was changed in 5.4 above, reset it to the manufacturer's nominal design facing position for a 50th percentile adult male in the manner specified by the manufacturer. (S222.1.5 and S81.3)

- NIA - No seat back angle adjustment
- NIA - The seat back angle was not adjusted in 5.4 above

Manufacturer's design seat back angle
Tested seat back angle

6.2 Position the dummy in a kneeling position or the right front outboard seat cushion facing the front of the vehicle with the midsagittal plane coincident with plane B (determined and marked during the completion of Data Sheet 14) with the toes at the intersection of the seat back and seat cushion, and with the spine vertical (S222.2.6(a) and (b)).

6.3 Push down on the legs so that they contact the seat as much as possible, and then release (S222.2.6(b))

6.4 Place the arms parallel to the spine. (S222.2.6(c))

6.5 If necessary, inde the dummy in position using a material that has a maximum breaking strength of 314 N or greater blocks. (S222.2.6(d))

- NIA - Dummy did not need to be supported

6.6 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S222.2.6(e) and (f)) Wait 16 seconds, and then check whether the air bag is suppressed. (S222.2.6(f))

- Air Bag Suppressed - Pass
- Air Bag Not Suppressed - FAIL

6.8 Return the ignition switch to the "off" position.

7. Keep the seat in the end position used for 6 above.

7.1 The seat back angle was changed in 6.4 above, reset it to the manufacturer's nominal design facing position for a 50th percentile adult male in the manner specified by the manufacturer. (S222.1.5 and S81.3)

- NIA - No seat back angle adjustment
- NIA - The seat back angle was not adjusted in 6.4 above

Manufacturer's design seat back angle
Tested seat back angle

7.2 Position the dummy in a kneeling position or the right front outboard seat cushion facing the rear of the vehicle with the midsagittal plane coincident with plane B (determined and marked during the completion of Data Sheet 14) with the head and torso in contact with the seat back (S222.2.7(a) and (b)).

7.3 Push down on the legs so that they contact the seat as much as possible, and then release (S222.2.7(b))

7.4 Place the arms parallel to the spine. (S222.2.7(c))

7.5 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S222.2.7(d)) Wait 16 seconds, and then check whether the air bag is suppressed. (S222.2.7(d))

- Air Bag Suppressed - Pass
- Air Bag Not Suppressed - FAIL

7.6 Return the ignition switch to the "off" position.

8. Lying on seat: (S222.2.8)

8.1 Does the front seat have 3 or more designated seating positions?

- Yes & No, the test is complete.

8.2 Keep the seat in the end position used for 6 above.

8.3 Lay the dummy on the right front outboard seat with the spine perpendicular to the vehicle's longitudinal axis, with the dummy facing forward and the head towards the right front door (S222.2.8(a)(5), (6), (7), (8), and S222.2.8(b)(5), and S222.2.8(b)(6))

8.4 Position the dummy so that the midsagittal plane is horizontal and a plane passing through the two shoulder joints of the dummy is vertical (S222.2.8(e)) and S222.2.8(g))

5-111
8.5 Position the dummy's arms parallel to the spine. (S22.2.2.8(a)(3))
8.6 Position the dummy so that it is as far back in the seat as possible. (S22.2.2.8(a)(8))
8.7 Position the dummy so that the lowest point of the dummy's head is 50 to 100 mm from the vehicle door. (S22.2.2.8(a)(7))
8.8 Rotate both thighs as much as possible toward the chest of the dummy and rotate the legs as much as possible against the thighs. (S22.2.2.8(b))
8.9 Position the dummy's lower left arm perpendicular to the longitudinal centerline of the vehicle and rotate the lower left arm about the elbow joint and toward the dummy's head until movement is obstructed. (S22.2.2.8(c))
8.10 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system and close all vehicle doors. (S22.2.2.8(c)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.8(e))
   Air Bag Suppressed — Pass
   Air Bag Not Suppressed — FAIL
8.11 Return the ignition switch to the "off" position.

C. Case, B. Smith, A. Loyce

I certify that I have read and performed each instruction.

Date

5-112
DATA SHEET 25
Low Risk Deployment Tests Using an Unbelted 6-Year-Old Dummy (Part 572, Subpart N) (574)

Position 1 - Chest On Instrument Panel (S24.4.2)

NHTSA No. C35306 ____________________________ Test Date: __513/93

Laboratory: __VRE... __... Test Technician(s) __Jim, Al, Loucy...

Dummy Serial No. 127 __...

X.1. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest retracted or default adjustment position. (S24.4.2.1)
   X. NA - No lumbar adjustment

X.2. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S24.4.2.1)
   X. NA - No additional support adjustment

X.3. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the fully rearward position. (S24.4.2.1)
   X. NA - No independent fore/aft seat cushion adjustment

X.4. Use the seat markings determined during the completion of Data Sheet 14 to set the rearmost fore/aft position, lowest height position, and the seat cushion angle. (S24.4.2.1)

X.5. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S24.4.2.1 and S8.1.3)
   X. NA - No seat back angle adjustment
   Manufacturer's design seat back angle __5 degrees forward
   Tested seat back angle __5 degrees forward

X.6. If adjustable, set the head restraint at the fully down and fully forward position. (S24.4.2.1 and S22.1.7.6) Any adjustment of the head restraint shall be used to position it fully forward. For example, if it routes, route it such that the head restraint extends as far forward as possible.
   X. NA - No head restraint adjustment

X.7. Remove the dummy legs at the pelvic interface. (S24.4.2.2)

X.8. Position a calibrated Part 572 Subpart N 6 year old dummy in the seated position and place it in the front passenger seat forward seat. (S24.4.2.3)

X.9. Position the dummy such that its mid-sagittal plane is coincident with Plane D. (S24.4.2.3m)

X.10. Position the upper arms parallel to the torso, and place the hands in contact with the thighs. (S24.4.2.3(n))

X.11. Position the dummy torso so the rear face angle of the thorax instrument cavity is 6 degrees forward of vertical. (S24.4.2.3(c))

X.12. Move the dummy forward on the seat, maintaining the thorax instrument cavity angle, until the dummy headrest contacts the instrument panel. If the dummy loses contact with the seat maintain the height and angle until head/forehead contact with the instrument panel occurs. (S24.4.2.3(e))

X.13. Adjust the dummy position vertically until Part 1 lies with Plane C. Adjust the fore/aft position of the dummy to maintain contact with the instrument panel. If the head of the dummy contacts the windshield or moves past Plane C, lower the dummy to achieve a maximum clearance of 5mm (0.2 inches) between the head and the windshield. (S24.4.2.3(c))

X. Point 1 lies within Plane C ____________ Height of Point 1. ____________ mm

X. Head Contacted Windshield ____________ Height of Point 1 ____________ mm

Head windshield Clearance. ____________ mm
Using material with a maximum breaking strength of 311 N (70 lb) and spacer blocks. Support the dummy so that there is minimum interference with the full rotational and translational freedom of the upper torso of the dummy. The material should support the torso rather than the head and should not interfere with the airbag (S224 2.4).

Photograph final setup and record position.

<table>
<thead>
<tr>
<th>Thorax Camber Angle</th>
<th>degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point 1 Height</td>
<td>mm</td>
</tr>
</tbody>
</table>

X 15. Record the Airbag deployment and timing requirements in the chart below.

Number of stages for test: 2

<table>
<thead>
<tr>
<th>Stage No</th>
<th>Firing Time (mssec)</th>
<th>Recorded Firing Time (mssec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0 msec</td>
<td>0.0</td>
</tr>
<tr>
<td>2</td>
<td>131 msec</td>
<td>131</td>
</tr>
</tbody>
</table>

*Firing time is measured from Time Zero for all stages*

X 16. Connect dummy instrumentation to the test data acquisition system and verify channel operation.

X 17. Connect the airbag to the airbag firing system per the manufacturer's instructions, provided by the CCTR.

X 18. Prepare the high-speed video/Time cameras.

X 19. Fire the airbag per the table above and record the data from the dummy instrumentation.

X 20. Photograph the post-test results.

X 21. Verify recorded firing times match specified firing times +/- 2 milliseconds.

X 22. Record injury values for the test.

<table>
<thead>
<tr>
<th>FMVSS 208 Maximum Allowable Injury Assessment Value</th>
<th>Measured Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummy Serial No. 127</td>
<td></td>
</tr>
<tr>
<td>HIC-5</td>
<td>700</td>
</tr>
<tr>
<td>Chest Acceleration</td>
<td>80 g</td>
</tr>
<tr>
<td>Chest Displacement</td>
<td>49 mm</td>
</tr>
<tr>
<td>Nrs</td>
<td>0.0</td>
</tr>
<tr>
<td>Nff</td>
<td>1.0</td>
</tr>
<tr>
<td>Nce</td>
<td>1.0</td>
</tr>
<tr>
<td>Ncf</td>
<td>1.0</td>
</tr>
<tr>
<td>Neck Tension (Fz)</td>
<td>1430 N</td>
</tr>
<tr>
<td>Neck Compression (Fz)</td>
<td>429</td>
</tr>
</tbody>
</table>

*Calculated at time recorded for 1.0 m/s after the initial deployment of the airbag (S4.11(b)).

S 04/11/03
I certify that I have read and performed each instruction.

Date 5/13/03
DATA SHEET 26

Low Risk Deployment Tests Using an Unbelted 5 Year-Old Dummy (Part 572, Subpart N, §24)
Position 2 - Head On Instrument Panel (§24.4.3)

NHSA No. C36306

Test Date 5/28/82

Laboratory: VRTC
Test Technician: G. Fogg

Dummy Serial No. 127

X 1. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deleted adjustment position. (§24.4.3.1)
   X: NA - No lumbar adjustment

X 2. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (§24.4.3.1)
   X: NA - No additional support adjustment

X 3. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment in the full rearward position. (§24.4.3.1)
   X: NA - No independent fore-aft seat cushion adjustment

X 4. Use the seat markings determined during the completion of Data Sheet 14 to set the rearmost fore-aft position, midweight position, and the seat cushion angle. (§24.4.3.1)

X 5. The seat back angle, if adjustable, is set at the manufacturer's minimal design testing position for a 50th percentile adult male in the manner specified by the manufacturer. (§24.4.3.1 and 98.1.3)
   X: NA - No seat back angle adjustment
     Manufacturer's design seat back angle 5 detents rearward
     Tested seat back angle 5 detents rearward

X 6. If adjustable, set the head restraint at the full down and full forward position. (§24.4.3.1) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
   X: NA - No head restraint adjustment

X 7. Position a calibrated Part 572 Subpart N six-year-old dummy in the seated position and place it on the right front outboard passenger seat. (§24.4.3.2)

X 8. Post the dummy such that its mid-sagittal plane is coincident with Plane D. (§24.4.3.2(a))

X 9. Position the dummy's legs in a vertical orientation and place the back of the legs in contact with the seat cushion. (§24.4.3.2(b))

X 10. If the thighs do not rest fully on the seat cushion, post the legs by rotating them forward and closing the foot until the thighs rest fully on the seat cushion.

X 11. Set the transverse distance between the longituidinal centers at the front of the knees at 112 to 117 mm (4.4 to 4.6 inches). Maintain the legs and thighs in a vertical plane. (§24.4.3.2(b))

Knee Separation Distance 114 mm

Thigh Angle 42

X 12. Position the dummy Torso so the rear face of the thorax instrument cavity is 6 degrees forward of vertical. (§24.4.3.2(c))

Thorax instrument cavity angle Not reported

X 13. Position the upper arms parallel to the torso and place the hands in contact with the thighs. (§24.4.3.2(c))

X 14. Move the seat forward while maintaining the thorax instrument cavity angle until any part of the dummy contacts the instrument panel. (§24.4.3.3)
   X: No contact. Proceed to step 15

Contact: Proceed to step 16

X 15. Move the dummy forward on the seat, maintaining the thorax instrument cavity and thigh angles, and dummy height until any part of the dummy contacts the instrument panel. (§24.4.3.4)

X 16. Verify contact between the instrument panel and the head or Torso. If necessary, rotate the Torso forward until the head or Torso contacts the instrument panel. Achieve this position by
maintaining the thighs at their present angle and apply a forward force to the spine between the shoulder joints. (S74.4.3.5)

X 17 Using material with a maximum breaking strength of 111 N (25 lb) and spacer blocks. Support the dummy so that there is minimum interference with the full rotational and translational freedom for the upper torso of the dummy. The material should support the torso rather than the head and should not interfere with the airbag. (S74.4.3.6)

Photograph final setup and record position.
- Thorax Cavity Angle: 35.7° degrees
- High Angle: 10.9° degrees

X 18 Record the Airbag deployment and timing requirements in the chart below.

Number of stages for this test: 7

<table>
<thead>
<tr>
<th>Stage No.</th>
<th>Firing Time (msec) *</th>
<th>Recorded Firing Time (msec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0 msec (Time Zero)</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>130 msec</td>
<td>29</td>
</tr>
</tbody>
</table>

* Firing time is measured from Time Zero for all stages

X. 19 Correct dummy instrumentation to the test data acquisition system and verify channel operation.

X. 20 Connect the airbag to the airbag firing system per the manufacturer's instructions provided by the COG.

X. 21 Prepare the high-speed video film cameras.

X. 22 Fix the airbag for the table above and record the data from the dummy instrumentation.

X. 23 Photograph the post-test results.

X. 24 Verify recorded firing times match specified firing times +- 2 milliseconds

X. 25 Record injury values for this test

**FMVSS 208 Maximum Allowable Injury Assessment Value**

<table>
<thead>
<tr>
<th>Component</th>
<th>Measured Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummy Serial No.</td>
<td>127</td>
</tr>
<tr>
<td>HIC</td>
<td>700</td>
</tr>
<tr>
<td>Chest Acceleration</td>
<td>60 g</td>
</tr>
<tr>
<td>Chest Displacement</td>
<td>40 mm</td>
</tr>
<tr>
<td>N1</td>
<td>1.0</td>
</tr>
<tr>
<td>N2</td>
<td>1.0</td>
</tr>
<tr>
<td>N3</td>
<td>1.0</td>
</tr>
<tr>
<td>Neck Tension (1/2)</td>
<td>1490 N</td>
</tr>
<tr>
<td>Neck Compression</td>
<td>1820 N</td>
</tr>
</tbody>
</table>

*Calculated on data recorded for 100 ms after the initial deployment of the airbag. (S4.11(b))

I certify that I have read and performed each instruction. Date: 5/28/03

5.116
DATA SHEET 27
Low Risk Deployment Tests Using an Unbelled 5th Percentile Female
Dummy (Part 572, Subpart O) (S26)
Position 1 - Chin On Module (S26.2)

NHTSA No. 1630355
Test Date: 6/03/03

Laboratory: VERICO
Test Technicians: G. Foul, A. Lawren

Dummy Serial No. 421

X - 1 Position the steering wheel so the front wheels are in the straight ahead position. (S26.2.1)
X - 2 Position any adjustable parts of the steering controls to the mid position. If a mid-position adjustment is not achievable, position the controls to the next lowest detent position. (S26.2.1)
X - 3 Position the seat's adjustable lumbar support so that the lumbar support is in its lowest, retracted or defeated adjustment position. (S26.2.1)
   N/A - No lumbar adjustment
X - 4 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S26.2.3)
   N/A - No additional support adjustment
X - 5 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the "4" rearward position. (S26.2.3)
   N/A - No independent fore-aft seat cushion adjustment
X - 6 Use the seat markings determined during the completion of Data Sheet 14 to set the seat in the rearward farthest position, mid-eight position and the seat cushion angle. (S26.2.3)
X - 7 The seat back angle, if adjustable, is set at the manufacturer's normal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S26.2.3 and S8.1.3)
   N/A - No seat back angle adjustment
   Manufacturer's design seat back angle: 21°
   Tested seat back angle: 21°
X - 8 If adjustable, set the head restraint at the full down and full forward position. (S26.2.3) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
   N/A - No head restraint adjustment
X - 9 Position a calibrated Part 572 Subpart O 5th percentile female dummy in the driver's seat. (S26.2.4)
X - 10 Position the dummy such that the midsagittal plane of the dummy is coincident with Plane E (determined during the completion of Data Sheet 14). (S26.2.4.1)
X - 11 Position the dummy's legs in a vertical orientation and place the back of the legs in contact with the seat cushion. (S26.2.4.2)
X - 12 Position the dummy's thorax instrument cavity rear face 6 degrees forward (toward the front of the vehicle) of the steering wheel angle (i.e., if the steering wheel angle is 25 degrees from vertical, the thorax instrument cavity rear face angle is 31 degrees). (S26.2.4.3)
X - 13 Set the initial transverse distance between the longitudinal centers of the front of the dummy's torso at 160 to 170 mm (6.3 to 6.7 in), with the thighs and legs of the dummy in a vertical plane. (S26.2.4.4)
X - 14 Position the upper arms parallel to the torso, and place the hands in contact with the thighs. (S26.2.4.5)
X - 15 Move the dummy forward on the seat, maintaining the thorax instrument cavity angle, until the dummy head/face contacts the steering wheel. (S26.2.5) Adjust the dummy legs to the minimum amount necessary to ensure torso/face contact with the steering wheel when the dummy is moved forward. (S26.2.4.2)
   Adjustment needed
X - 16 Adjust the dummy position vertically until the bottom of the chin coincides with Plane F (the highest point of the airbag module cover as determined during the completion of Data Sheet 14). (S26.2.6)
14. Adj ust the foreaft position of the dummy to maintain contact with the steering wheel. If
the seat prevents placing the Chin Point coincident with Plane F, adjust the dummy position
to achieve the closest placement possible. The thorax cavity angle should be maintained
throughout the adjustment process. (S26.2.6)

<table>
<thead>
<tr>
<th>Chin Point Lies within Plane F</th>
<th>Height of Chin Point</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>X: Seat interfered with positioning</td>
<td>Height of Chin Point</td>
<td>mm</td>
</tr>
</tbody>
</table>

X 17. Using material with a maximum breaking strength of 311 N (70 lb) and spacer blocks,
support the dummy so that there is minimum interference with the full rotational and
translational freedom of the upper torso of the dummy. The material should support the
torso rather than the head and should not interfere with the airbag. (S26.2.7)

X Photograp h final setup and record position.

Thorax Cavity Angle: ___________ degrees

Chin Point Height: ___________ mm

X 18. Record the Airbag deployment and timing requirements in the chart below.

<table>
<thead>
<tr>
<th>Stage No</th>
<th>Firing Time (msec)</th>
<th>Recorded Firing Time (msec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0 mscs (Time Zone)</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>30 mscs</td>
<td>30 mscs</td>
</tr>
</tbody>
</table>

* Firing time is measured from Time Zone for all stages.

X 19. Connect dummy instrumentation to the test data acquisition system and verify channel
operation.

X 20. Connect the airbag to the airbag firing system per the manufacturer's instructions, provided
by the CCTR.


X 22. Fire the airbag per the table above and record the data from the dummy instrumentation.

X 23. Photograph the post-test results.

X 24. Verify recorded firing times match specified firing times within 2 milliseconds.

X 25. Record injury values for this test:

<table>
<thead>
<tr>
<th>FMVSS 208 Maximum Allowable Injury Assessment Value</th>
<th>Measured Value*</th>
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<th>2570 N</th>
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<td>Right Femur</td>
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<td>22</td>
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</table>

* Calculated on data recorded for 125 ms after the initiation of the final stage of airbag deployment
designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11f): Data truncated at
* 57 ms.

G. Foul, A. Cudgen 6/3/03
I certify that I have read and performed each instruction.  Date 21

5-118
DATA SHEET 28

Low Rink Deployment Tests Using an Unbelted 5th Percentile Female Dummy (Part 572, Subpar: 0) (S26)
Position 2 - Chin On Firm (S26.3)

NHTSA No.: C35326  Test Date: 10/13/03
Laboratory: VRIC  Test Technician(s): G. Fout, A. Loucen, C. Case

 Dummy Serial No. S05

X.1 Position the steering wheel so the front wheels are in the straight-ahead position. (S26.3.2)
X.2 Position any adjustable parts of the steering controls to the mid position. If a mid-position adjustment is not achievable, position the controls to the next lowest detent position. (S26.3.2)
X.3 Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S26.3.1)
X.4 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S26.3.1)
X.5 N/A - No lumbar adjuster.
X.6 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S26.3.1)
X.7 N/A - No additional seat support adjustment.
X.8 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S26.3.1)
X.9 N/A - No independent fore-aft seat cushion adjustment.
X.10 Use the seat markings determined during the completion of Data Sheet 14 to set the seat in the rearmost fore-aft position, mid-height position and the seat cushion angle. (S26.3.1)
X.11 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer (S26.3.1 and S8.1.3);
__ N/A - No seat back angle adjustment.

Manufacturer's design seat back angle _715 mm from sun visor bolt to outer head restraint hole
Tested seat back angle _715 mm from sun visor bolt to outer head restraint hole

X.12 If adjustable, set the head restraint at the full downward and full forward position. (S26.3.1) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
N/A - No head restraint adjustment.

X.13 Position a calibrated Part 572 Subpart O 5th percentile female dummy in the driver's seat. (S26.3.4.4)
X.14 Position the dummy so that its mid-sagittal plane is coincident with Plane E determined during the completion of Data Sheet 14. (S26.3.4.1)
X.15 Position the dummy's legs in a vertical orientation and place the back of the legs in contact with the seat cushion. (S26.3.4.2)
X.16 Position the dummy's thorax instrument cavity rear face 6 degrees forward (toward the front of the vehicle) of the steering wheel angle (i.e., if the steering wheel angle is 35 degrees from vertical, the thorax instrument cavity rear face angle is 31 degrees.) (S26.3.4.3) 30.7 degree steering wheel angle.

X.17 Set the initial transverse distance between the longitudinal centerlines at the front of the dummy's chest as 100 to 170 mm (6.0 to 6.7 in.) with the thighs and legs of the dummy in vertical planes. (S26.3.4.4)
X.18 Position the upper arms parallel to the torso and place the hands in contact with the thighs. (S26.3.4.5)
X.19 Move the dummy forward on the seat, maintaining the thorax instrument cavity angle, until the dummy's thorax contacts the steering wheel. (S26.3.5) Adjust the dummy legs the minimum amount necessary to ensure torso/head contact with the steering wheel when the dummy is moved forward. (S26.3.4.6)
16. Adjust the dummy position vertically until the Chin Point (determined during the completion of Data Sheet 12) contacts the upper rim of the steering wheel. Adjust the fore/aft position of the dummy to maintain contact with the steering wheel. If this step is completed, proceed to step 19. If the seat prevents placing the Chin Point coincident with the upper steering wheel rim, proceed to step 17. If the dummy contacts the windshield or upper interior, proceed to step 18. (S25.3.6)

Chin Point contacts upper steering wheel rim

Height of Chin Point not recorded

___ Vehicle repositioned with positioning.

N/A17. If the steering controls can be adjusted, adjust the steering controls to raise the upper steering wheel rim the necessary amount to bring the Chin Point coincident with the upper steering wheel rim. Adjust the rear thorax cavity along with the steering wheel angle per step 12. If contact is still not achieved, position the Chin Point as close as possible to the upper steering wheel rim. Proceed to step 19. (S26.3.7)

Steering Wheel Angle mm

Thorax Cavity angle ___ degree

Chin Point is coincident with the upper steering wheel rim.

Height of Chin Point ___ mm

Height of upper rim ___ mm

N/A18. If the steering controls can be adjusted, adjust the steering controls to lower the upper steering wheel rim the necessary amount to bring the Chin Point coincident with the upper steering wheel rim. Adjust the rear thorax cavity along with the steering wheel angle per step 12. If contact is still not achieved, position the Chin Point as close as possible to the upper steering wheel rim. If contact with upper interior or windshield cannot be avoided, lower the dummy to allow a minimum of 5 mm (0.2 inches) between the dummy and the windshield or upper interior. Proceed to step 19. (S26.3.6 and S26.3.7)

Steering Wheel Angle mm

Thorax Cavity angle ___ degree

Chin Point is coincident with the upper steering wheel rim.

Height of Chin Point ___ mm

Height of upper rim ___ mm

Chin point is not coincident with the upper steering wheel rim.

Height of Chin Point ___ mm

Height of upper rim ___ mm

19. Using material with a maximum breaking strength of 311 N (72 lb) andspacer blocks. Support the dummy so that there is minimum interference with the full rotational and translational freedom for the upper torso of the dummy. The material should support the torso rather than the head and should not interfere with the airbag. (S26.3.8)

Photograph final setup and record position.

Thorax Cavity Angle ___ 37.7 degrees

Chin Point Height not recorded mm

An angle of 54.4 degrees was measured at the top of the neck and is equivalent to 37.7 degrees thorax cavity angle.
X.20. Record the Airbag deployment and timing measurements in the chart below.

<table>
<thead>
<tr>
<th>Stage No</th>
<th>Firing Time (msec)</th>
<th>Recorded Firing Time (msec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.0 msec (Time Zero)</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>33 m sec</td>
<td>30</td>
</tr>
</tbody>
</table>

*Firing time is measured from Time Zero for all stages*

X.21. Connect dummy instrumentation to the test data acquisition system and verify channel operation.

X.22. Connect airbag to the airbag firing system per the manufacturer's instructions, provided by the COTR.

X.23. Prepare the high-speed video Im camera.

X.24. Fire the airbag per the table above and record the data from the dummy instrumentation.

X.25. Plot graph of the post-test results.

X.26. Verify recorded firing times match specified firing times ±2 milliseconds.

X.27. Record injury values for this test.

<table>
<thead>
<tr>
<th>FMVSS 208 Maximum Allowable Injury Assessment Value</th>
<th>Measured Value* Dummy Serial No. 5005</th>
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<tbody>
<tr>
<td>HIC15</td>
<td>700</td>
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<tr>
<td>Chest Acceleration</td>
<td>60 g</td>
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<td>Chest Displacement</td>
<td>32 mm</td>
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<tr>
<td>Peak Nj (Nfe)</td>
<td>1.0</td>
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<tr>
<td>Peak Nj (NF)</td>
<td>1.0</td>
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<tr>
<td>Peak Nj (Nee)</td>
<td>1.0</td>
</tr>
<tr>
<td>Peak Nj (Nee)</td>
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<tr>
<td>Neck Tension (Ft)</td>
<td>2075 N</td>
</tr>
<tr>
<td>Neck Compression (Ft)</td>
<td>2520 N</td>
</tr>
<tr>
<td>Left Femur</td>
<td>6805 N</td>
</tr>
<tr>
<td>Right Femur</td>
<td>6805 N</td>
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</tbody>
</table>

*Calculated or data recorded for 125 ms after the initiation of the final stage of airbag deployment designed to deploy in any full frontal rigid barrier crash at 26 km/h [54.111 (c)]. Data indicated at 155 ms.

G Fout

I certify that I have read and performed each instruction.

Date 5/13/03
Section 6

Test: Data
C35395 / 2003 Honda Odyssey
Delay Event Channel - EVENT2
FMVSS 208 LRD - 6 Year Old Position 1

Volts

Time (ms)

Channel: EVENT2 FILTER. Cl. CLASS 1000

Peak Data: 6.42 @ 131.00 ms, -0.20 @ 376 ms
C35306 / 2003 Honda Odyssey
Head X-Axis Acceleration - HEDXG
FMVSS 208 LRD - 6 Year Old Position 2

Test Date: 5/28/03

Acceleration (g's)

Time (ms)

Channel: HEDXG Filter: CH. CLASS 1000

Peak Data: 18.39 @ 39.30 ms, -15.11 @ 8.30 ms
C35306 / 2003 Honda Odyssey
Head Resultant - HEDRG
FMVSS 208 LRD - 6 Year Old Position 2

CHANNEL: HEDRG FILTER: CI- CLASS 1060

Peak Data: 22.51 @ 13.03 ms; 1.91E-03 @ 59.75 ms
C35306 / 2003 Honda Odyssey
Upper Neck FZ - UNKFZ
FMVSS 208 LRD - 6 Year Old Position 2

Test Date: 5/28/03

Peak Data: 504.18 @ 86.15 ms; -667.35 @ 43.35 ms
C35306 / 2003 Honda Odyssey
Upper Neck MX - UNKMX
FMVSS 208 LRD - 6 Year Old Position 2

Test Date: 5/29/03

Channel: UNKMX Filter: CH. CLASS 600

Time (ms) Peak Data: 4.83 @ 62.30 ms; 2.93 @ 54.05 ms
C35306 / 2003 Honda Odyssey
Neck Flexion / Compression
FMVSS 208 LRD - 6 Year Old Position 2

Test Date: 5/28/03

CHANNEL: NEC FILTER CF C: ASS 600

Peak Data: 6.210 @ 45.00 ms
C35306 / 2003 Honda Odyssey
Chest X-Axis Acceleration - CSTXG
FMVSS 208 LRD - 6 Year Old Position 2

Test Date: 5/28/03

Acceleration (g/s)

Time (ms)

Channel: CSTXG Filter: CF CLASS 180

Peak Data: 5.62 @ 10.25 ms; -3.37 @ 75.25 ms
C35306 / 2003 Honda Odyssey
Chest Y-Axis Acceleration - CSTYG
FMVSS 208 LRD - 6 Year Old Position 2

Test Date: 3/28/03

Peak Data: 2.16 @ 39.65 ms - 3.20 @ 52.45 ms

CHANNEL CSTYG FILTER: CH. CLASS
C35306 / 2003 Honda Odyssey
Chest Z-Axis Acceleration - CSTZG
FMVSS 208 LRD - 6 Year Old Position 2

Test Date: 5/28/03

Acceleration (g's) vs Time (ms)

CHANNEL: CSTZG FILTER CH CLASS 180

Peak Data: 6.26 g's at 60 ms; -7.55 g's at 88.4 ms
C35306 / 2003 Honda Odyssey
Neck Flexion / Compression
FMVSS 208 LRD - Fifth Female Position 1

Test Date: 6/23/03

Channel: NFC Flter: Ch. Class 600

Peak Data: C.121 @ 10.9C ms
C35306 / 2003 Honda Odyssey
Chest Resultant - CSTRG
FMVSS 208 LRD - Fifth Female Position 1

Test Date: 6/30/03

(channel: CSTRG filter: ch. class 180)

Peak Data: 18.38 @ 24.95 ms; 0.15 @ -8.95 ms
C35306 / 2003 Honda Odyssey
Delay Event Channel - EVENT2
FMVSS 208 LRD - Fifth Female Position 1

Test Date: 6/3/03

CHANNEL: EVENT2 - FILTER: CH. CLASS 1000
Peak Data: 8.57 @ 31.55 ms, -0.15 @ 31.65 ms
C35306 / 2003 Honda Odyssey
Head Y-Axis Acceleration - HEDYG
FMVSS 208 LRD - Fifth Female Position 2

Acceleration (g/s)

Time (ms)

CHANNEL HEDYG FILTER: CH. CLASS "000"

Peak Date: 16.73 @ 272.45 ms; 8.92 @ 59.80
C35306 / 2003 Honda Odyssey
Upper Neck FX - UNKFX
FMVSS 208 LRD - Fifth Female Position 2

Test Date: 5/13/03

Peak Data: 129.71 @ 775 ms - 487.79 @ -29.50 ms
C35306 / 2003 Honda Odyssey
Upper Neck Occipital - NEKMOC
FMVSS 208 LRD - Fifth Female Position 2

Test Date: 5/30/03

Peak Data: 30.57 @ 88.85 ms; -32.93 @ 13.70 ms
C35306 / 2003 Honda Odyssey

Neck Tension / Extension

FMVSS 208 LRD - Fifth Female Position 2

Test Date 5/13/03

Channel: NET FILTER, CH. CLASS 600

Peak Data: 0.385 @ 11.00 ms
C35306 / 2003 Honda Odyssey
Chest Resultant - CSTRG
FMVSS 208 LRD - Fifth Female Position 2

Test Date: 5/13/03

Acceleration [g/s]

-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Time (ms)

CHANNEL: CSTRG FILTER, CH. CLASS 180

Peak Data: 33.81 @ 7.30 ms; 2.37E03 @ -18.85 ms
Section 7

Photographs
List of Photographs

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<th>Description</th>
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<td>Britax Handle with Case, Handle Down, Belted, Sun Shield Stowed, Full</td>
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<td>Britax Handle with Case, Handle Down, Unbelted, Sun Shield Stowed, Full</td>
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<td>Britax Roundabout, Rear Facing, Belted, Full Forward Seat Position</td>
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<td>Britax Roundabout, Rear Facing, Unbelted, Full Forward Seat Position</td>
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<td>Century Encore, Rear Facing Unbelted, Full Forward Seat Position</td>
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<td>Britax Roundabout, Forward Facing, Belted, Full Forward as Possible Seat</td>
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<td>Century Encore, Forward Facing, Unbelted, Full Forward as Possible Seat</td>
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<td>Century Next Step, Belted, w/o Booster Harness, Full Forward as Possible</td>
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<td>7-30</td>
<td>Century Next Step, Belted, w/o Booster Harness, Full Forward Seat Position</td>
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<td>7-31</td>
<td>Cosco High Back, Belted, w/o Booster Harness, Full Forward Seat Position</td>
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<td>Cosco High Back, Belted, w/o Booster Harness, Full Forward as Possible Seat Position</td>
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<td>3-Year Old Sitting On Seat With Back Against Seat Back, Full Forward Seat Position</td>
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<td>3-Year Old Sitting On Seat With Back Against Reclined Seat Back, Full Forward Seat Position</td>
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<td>3-Year Old Sitting On Seat With Back Not Against Seat Back, Full Forward Seat Position</td>
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<td>3-Year Old Sitting On Seat Edge, Spine Vertical, Hands By The Child’s Side, Seat Position Full Forward</td>
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<td>3-Year Old Standing On Seat Facing Forward, Full Forward Seat Position</td>
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<td>3-Year Old Kneeling On Seat Facing Forward, Full Forward Seat Position</td>
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<td>3-Year Old Kneeling On Seat Facing Rearward, Full Forward Seat Position</td>
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<td>6-Year Old Pre-test Low Risk Deployment Position 1 - Chest on Module</td>
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<td>6-Year Old Post-test Low Risk Deployment Position 1 - Chest on Module</td>
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<td>7-42</td>
<td>6-Year Old Pre-test Low Risk Deployment Position 2 - Head on IP</td>
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