

Report Number: 208-VRTC-03-001

Safety Compliance Testing for FMVSS 208

Occupant Crash Protection

Suppression and Driver Low Risk Deployment Tests

General Motors Corporation

2003 Chevrolet Silverado

NHTSA Number: C30102

Vehicle Research and Test Center

10820 State Route 347

East Liberty, OH 43319



Report Date: April 14, 2003

Final Report

Prepared For:

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National Highway Traffic Safety Administration

Safety Assurance

Office of Vehicle Safety Compliance (NVS-220)

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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 DTNH22-02-D-08062, Task Order VRTC-DCF2525. The purpose of the test was to determine whether the subject vehicle, a 2003 Chevrolet Silverado, NHTSA No. C30102, meets the suppression and low risk deployment performance requirements of FMVSS 208, "Occupant Crash Protection". The compliance test was conducted in accordance with OVSC Laboratory Test Procedure No. TP-208-11 dated August 22, 2002.

Section 2

Tests Performed

TESTS PERFORMED

The following checked items indicate the tests that were performed:

- 1. Rear outboard seating position 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 (S7.1.1.5)
- 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 retraction (S7.4.5)
- 10. Seat belt guides and hardware (S7.4.6)
- 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 5th 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 5th female dummy (Part 572, Subpart O)
- 20. Impact tests
 - Frontal Oblique
 - Belted 50th male dummy driver and passenger (0 to 48 km/h) (S5.1.1(a))
 - Unbelted 50th male dummy driver and passenger (0 to 48 km/h) (S5.1.2(a)(1))
 - Unbelted 50th male dummy driver and passenger (32 to 40 km/h) (S5.1.2(a)(1) or S5.1.2(b))
 - Frontal 0°
 - Belted 50th male dummy driver (0 to 48 km/h) (S5.1.1(b)(1) or S5.1.1(a))
 - Belted 50th male dummy passenger (0 to 48 km/h) (S5.1.1(b)(1) or S5.1.1(a))
 - Belted 5th female dummy driver (0 to 48 km/h) (S16.1(a))
 - Belted 5th female dummy passenger (0 to 48 km/h) (S16.1(a))
 - Belted 50th male dummy driver and passenger (0 to 56 km/h) (S5.1.1(b)(2))
 - Unbelted 50th male dummy driver and passenger (0 to 48 km/h) (S5.1.2(a)(1))
 - Unbelted 50th male dummy driver (32 to 40 km/h) (S5.1.2(a)(2) or S5.1.2(b))
 - Unbelted 50th male dummy passenger (32 to 40 km/h) (S5.1.2(a)(2) or S5.1.2(b))
 - Unbelted 5th female dummy driver (32 to 40 km/h) (S16.1(b))
 - Unbelted 5th female dummy passenger (32 to 40 km/h) (S16.1(b))
- 40% Offset 0° Belted 5th female dummy driver and passenger (0 to 40 km/h) (S18.1)
- 21. Sled test: Unbelted 50th male dummy driver and passenger (S13)

- ___ 22. FMVSS 204 indicant test
- ___ 23. FMVSS 212 test
- ___ 24. FMVSS 219 indicant test
- ___ 25 FMVSS 301 frontal test

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, S4.13

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 RESULT SUMMARY FOR CRASH TESTS AND/OR
LOW RISK DEPLOYMENT TESTS**

NIITSA No.: C30102

Test Date: 10/28/02

VIN: 3GNEC16Z53G108730

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

Test weight: N/A

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

Injury Criteria	Max. Allowable Injury Assessment Values	Position 1	Position 2*
HIC15	700	25	N/A
N_{lc}	1.0	0.1	N/A
N_{lr}	1.0	0.3	N/A
N_{cc}	1.0	0.0	N/A
N_{cr}	1.0	0.3	N/A
Neck tension	2070 N	249	N/A
Neck compression	2520 N	225	N/A
Chest g	60 g	12	N/A
Chest displacement	52 mm	3	N/A
Left femur	6805 N	59	N/A
Right femur	6805 N	53	N/A

*Position 2 not tested

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. Where the suppression testing required use of a child restraint, these ten restraints were the ones used. The following is a list of those restraints:

1. Britax Handle with Care 191 (Rear facing)
2. Britax Roundabout 161 (Convertible)
3. Century Encore 4612 (Convertible)
4. Century Next Step 4920 (Booster)
5. Cosco Dream Ride 02-719 (Car bed)
6. Cosco High Back Booster 02-442 (Booster)
7. Evenflo First Choice 204 (Rear facing)
8. Evenflo Medallion 254 (Convertible)
9. Evenflo Right Fit 245 (Booster)
10. Graco Infant 8457 (Rear Facing)

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

	May 12	December 18	Tested
Car bed	1	1	1
Convertibles	11	10	3
Forward Facing	7	7	3
Boosters	4	4	3
Total	23	22	10

The suppression system in this truck was weight based. Therefore, neither the fore-aft seat position nor the child seat variations (blanket, handle, and sun shield) had an effect on suppression of the air bag. In addition, since the vehicle had seat belts integral to the seat, the seat belt load did not have to be adjusted after the original setting when the seat was moved to a different fore-aft seat position. The seat belt tension is stated at the end of each summary table.

The child restraint and child suppression tests were performed using data sheets from test procedure TP208-11. These data sheets are up to 16 pages in length. Considering that there were no suppression test failures it would only add volume to the report to include each page of the data sheet. In addition, some efficiencies in the procedure were found during these tests, and some part of the forms were not always applicable. (These efficiencies have been incorporated into the most current version of the test procedure, TP208-12.) Therefore, only a summary of the results is included in the data sheet section of this report. The full forward seat track position could not always be attained. These situations are noted at the end of each summary table.

5th Female Driver Low Risk Deployment Tests

There are two 5th female driver low risk deployment tests specified for advanced air bags. Position 1 is chin on module and position 2 is chin on rim. Position 1 was the position used for this vehicle. After the low risk deployment test, the vehicle was repaired at a dealership and then 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 Chevrolet Silverado

NHTSA No. C30102 Test Date 10/07/02 to 10/28/02

COTR signature: Charles R. Case

Tests to be performed for this vehicle are checked below.

- 1. Rear outboard seating position 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 (S7.1.1.5)
- 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 retraction (S7.4.5)
- 10. Seat belt guides and hardware (S7.4.6)
- 11. Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart R) using the following indicated child restraints

Section A

Cosco Dream Ride 02-719 Full rearward Mid position Full forward

Section B

Britax Handle with Care 191 Full rearward Mid position Full forward

Century Assura 4553 Full rearward Mid position Full forward

Century Avanta SE 41530 Full rearward Mid position Full forward

Century Smart Fit 1543 Full rearward Mid position Full forward

Cosco Ariva 02727 Full rearward Mid position Full forward

Cosco Opus 35 02603 Full rearward Mid position Full forward

Evenflo Discovery Adjust Right 212 Full rearward Mid position Full forward

Evenflo First Choice 204 Full rearward Mid position Full forward

Evenflo On My Way Position Right V 282 Full rearward Mid position Full forward

Graco Infant 8457 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 STE 1000 4416 Full rearward Mid position Full forward

Cosco Olympian 02803 Full rearward Mid position Full forward

Cosco Touriva 02519 Full rearward Mid position Full forward

Evenflo Horizon V 425 Full rearward Mid position Full forward

Evenflo Medallion 254 Full rearward Mid position Full forward

- 12. 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

Britax Roundabout 161 Full rearward Mid position Full forward

Century Encore 4612 Full rearward Mid position Full forward

Century STE 1000 4416 Full rearward Mid position Full forward

Cosco Olympian 02803 Full rearward Mid position Full forward

Cosco Touriva 02519 Full rearward Mid position Full forward

Evenflo Horizon V 425 Full rearward Mid position Full forward

Evenflo Medallion 254 Full rearward Mid position Full forward

Section D

<input type="checkbox"/> Britax Roadster 9004	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input checked="" type="checkbox"/> Century Next Step 4920	<input checked="" type="checkbox"/> Full rearward	<input checked="" type="checkbox"/> Mid position	<input checked="" type="checkbox"/> Full forward
<input checked="" type="checkbox"/> Cosco High Back Booster 02-412	<input checked="" type="checkbox"/> Full rearward	<input checked="" type="checkbox"/> Mid position	<input checked="" type="checkbox"/> Full forward
<input checked="" type="checkbox"/> Evenflo Right Fit 245	<input checked="" type="checkbox"/> Full rearward	<input checked="" type="checkbox"/> Mid position	<input checked="" type="checkbox"/> Full forward

13. Suppression tests with Representative 3-year-old child using the following indicated child restraints where a child restraint is required. (Laboratory Test Procedure Appendix H, Data Sheet 16H and 17H)

Section C

<input type="checkbox"/> Britax Roundabout 161	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input type="checkbox"/> Century Encore 4612	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input type="checkbox"/> Century STE 1000 4416	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input type="checkbox"/> Cosco Olympian 02803	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input type="checkbox"/> Cosco Touriva 02519	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input type="checkbox"/> Evenflo Horizon V 425	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input type="checkbox"/> Evenflo Medallion 254	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward

Section D

<input type="checkbox"/> Britax Roadster 9004	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input type="checkbox"/> Century Next Step 4920	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input type="checkbox"/> Cosco High Back Booster 02-442	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input type="checkbox"/> Evenflo Right Fit 245	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward

14. Suppression tests with 3-year-old dummy (Part 572, Subpart P) 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 not against seat back (S22.2.2.3)
- Sitting on seat edge, spine vertical, hands by the 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 rearward (S22.2.2.7)
- Lying on seat (S22.2.2.8)

15. 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 not against seat back (S22.2.2.3)
- Sitting on seat edge, spine vertical, hands by the 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 rearward (S22.2.2.7)
- Lying on seat (S22.2.2.8)

16. Suppression tests with 6-year-old dummy (Part 572, Subpart N) using the following indicated child restraints where a child restraint is required.

Section D

<input type="checkbox"/> Britax Roadster 9004	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input checked="" type="checkbox"/> Century Next Step 4920	<input checked="" type="checkbox"/> Full rearward	<input checked="" type="checkbox"/> Mid position	<input checked="" type="checkbox"/> Full forward
<input checked="" type="checkbox"/> Cosco High Back Booster 02-442	<input checked="" type="checkbox"/> Full rearward	<input checked="" type="checkbox"/> Mid position	<input checked="" type="checkbox"/> Full forward
<input checked="" type="checkbox"/> Evenflo Right Fit 245	<input checked="" type="checkbox"/> Full rearward	<input checked="" type="checkbox"/> Mid position	<input checked="" type="checkbox"/> Full forward

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

Section D

<input type="checkbox"/> Britax Roadster 9004	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input type="checkbox"/> Century Next Step 4920	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input type="checkbox"/> Cosco High Back Booster 02-442	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward
<input type="checkbox"/> Evenflo Right Fit 245	<input type="checkbox"/> Full rearward	<input type="checkbox"/> Mid position	<input type="checkbox"/> Full forward

18. Suppression tests with 6-year-old dummy (Part 572, Subpart N) 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 edge, spine vertical, hands by the dummy's side (S22.2.2.4)

- Sitting back in the seat and leaning on the right front passenger door (S24.2.3)
19. Suppression tests with representative 6-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 edge, spine vertical, hands by the dummy's side (S22.2.2.4)
 Sitting back in the seat and leaning on the right front passenger door (S24.2.3)
20. Low risk deployment test with 12-month-old dummy (Part 572, Subpart R) using the following indicated child restraints
- Section B
- | | | | |
|---|--|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> Britax Handle with Care 191 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Century Assura 4553 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Century Avanta SE 41530 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Century Smart Fit 4543 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Cosco Ariva 02727 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Cosco Opus 35 02603 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Evenflo Discovery Adjust Right 212 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Evenflo First Choice 204 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Evenflo On My Way Position Right V 282 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Graco Infant 8457 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
- Section C
- | | | | |
|--|--|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> Britax Roundabout 161 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Century Encore 4612 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Century STE 1000 4416 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Cosco Olympian 02803 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Cosco Touriva 02519 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Evenflo Horizon V 425 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
| <input type="checkbox"/> Evenflo Medallion 254 | <input type="checkbox"/> Full rearward | <input type="checkbox"/> Mid position | <input type="checkbox"/> Full forward |
21. Test of Reactivation of the Passenger Air Bag System with an Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3) Perform this test after the following suppression test(s): _____
- _____
- _____
22. Test of Reactivation of the Passenger Air Bag System with a representative 5th Percentile Female (S20.3, 22.3, S24.3) Perform this test after the following suppression test(s): _____
- _____
- _____
23. Low risk deployment test with 3-year-old dummy (Part 572, Subpart P) in the following positions
 Position 1
 Position 2
24. Low risk deployment test with 6-year-old dummy (Part 572, Subpart N) in the following positions
 Position 1
 Position 2
25. Low risk deployment test with 5th female dummy (Part 572, Subpart C) in the following positions
 Position 1
 Position 2
26. Impact tests
- | | |
|---|------------------|
| <input type="checkbox"/> Frontal Oblique | Test Speed _____ |
| <input type="checkbox"/> Belted 50th male dummy driver and passenger ((0 to 48 km/h) (S5.1.1.(a)) | |
| <input type="checkbox"/> Unbelted 50th male dummy driver and passenger ((0 to 48 km/h) (S5.1.2(a)(1)) | |
| <input type="checkbox"/> Unbelted 50th male dummy driver and passenger ((32 to 40 km/h) (S5.1.2(a)(1) or S5.1.2(b)) | |
| <input type="checkbox"/> Frontal 0° | Test Speed _____ |
| <input type="checkbox"/> Belted 50th male dummy driver ((0 to 48 km/h) (S5.1.1(b)(1) or S5.1.1(a)) | |
| <input type="checkbox"/> Belted 50th male dummy passenger ((0 to 48 km/h) (S5.1.1(b)(1) or S5.1.1(a)) | |
| <input type="checkbox"/> Belted 5th female dummy driver ((0 to 48 km/h) (S16.1(a)) | |
| <input type="checkbox"/> Belted 5th female dummy passenger ((0 to 48 km/h) (S16.1(a)) | |

- _____ Belted 50th male dummy driver and passenger (0 to 56 km/h) (S5.1.1(b)(2))
- _____ Unbelted 50th male dummy driver and passenger (0 to 48 km/h) (S5.1.2(a)(1))
- _____ Unbelted 50th male dummy driver (32 to 40 km/h) (S5.1.2(a)(2) or S5.1.2(b))
- _____ Unbelted 50th male dummy passenger (32 to 40 km/h) (S5.1.2(a)(2) or S5.1.2(b))
- _____ Unbelted 5th female dummy driver (32 to 40 km/h) (S16.1(b))
- _____ Unbelted 5th female dummy passenger (32 to 40 km/h) (S16.1(b))
- _____ 40% Offset 0° Belted 5th female dummy driver and passenger (0 to 40 km/h) (S18.1)
 - Test Speed _____ 40 km/h see test procedure for speed tolerance
- _____ 27. Sled test: Unbelted 50th male dummy driver and passenger (S13)
- _____ 28. FMVSS 204 indicant test
- _____ 29. FMVSS 212 test
- _____ 30. FMVSS 219 indicant test
- _____ 31. FMVSS 301 frontal test

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/07/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Britax Handle with Care

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	Suppressed
4	Belted	Rear	Upright	Stowed	None	N/A	Suppressed
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	Suppressed
8	Belted	Rear	Upright	Stowed	On	N/A	Suppressed
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	Suppressed
12	Belted	Rear	Upright	Stowed	N/A	On	Suppressed
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	Suppressed
16	Unbelted	Rear	Upright	Stowed	None	N/A	Suppressed
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	Suppressed
20	Unbelted	Rear	Upright	Stowed	On	N/A	Suppressed
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	Suppressed
24	Unbelted	Rear	Upright	Stowed	N/A	On	Suppressed
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ⁴ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ⁵	Down	Stowed	None	N/A	N/A
39	Belted	Forward ⁵	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ⁵	Down	In-use	On	N/A	N/A
42	Belted	Forward ⁵	Down	Stowed	On	N/A	N/A
43	Belted	Forward ⁵	Upright	In-use	On	N/A	N/A
44	Belted	Forward ⁵	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ⁵	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	N/A
47	Belted	Forward ⁵	Upright	In-use	N/A	On	N/A
48	Belted	Forward ⁵	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	N/A
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	N/A
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	N/A
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ⁵	Down	Stowed	None	N/A	N/A
63	225	Forward ⁵	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ⁵	Down	In-use	On	N/A	N/A
66	225	Forward ⁵	Down	Stowed	On	N/A	N/A
67	225	Forward ⁵	Upright	In-use	On	N/A	N/A
68	225	Forward ⁵	Upright	Stowed	On	N/A	N/A
69	225	Forward ⁵	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ⁵	Upright	In-use	N/A	On	N/A
72	225	Forward ⁵	Upright	Stowed	N/A	On	N/A

- 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 (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.2 kg for
lines 6,7,8,11, and 12. 0.3kg for all other blanket positions. (S20.1.5)

Comments (Record any position readjustments or problems by first stating the row
number to which the comment applies.): The seat was 2 detents back from full forward.
The seat belt tension was 120.5 N for all belted positions

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/07/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Britax Handle with Care

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	Suppressed
4	Belted	Rear	Upright	Stowed	None	N/A	Suppressed
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	Suppressed
8	Belted	Rear	Upright	Stowed	On	N/A	Suppressed
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	Suppressed
12	Belted	Rear	Upright	Stowed	N/A	On	Suppressed
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	Suppressed
16	Unbelted	Rear	Upright	Stowed	None	N/A	Suppressed
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	Suppressed
20	Unbelted	Rear	Upright	Stowed	On	N/A	Suppressed
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	Suppressed
24	Unbelted	Rear	Upright	Stowed	N/A	On	Suppressed
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ⁴ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ⁵	Down	Stowed	None	N/A	N/A
39	Belted	Forward ⁵	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ⁵	Down	In-use	On	N/A	N/A
42	Belted	Forward ⁵	Down	Stowed	On	N/A	N/A
43	Belted	Forward ⁵	Upright	In-use	On	N/A	N/A
44	Belted	Forward ⁵	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ⁵	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	N/A
47	Belted	Forward ⁵	Upright	In-use	N/A	On	N/A
48	Belted	Forward ⁵	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	N/A
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	N/A
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	N/A
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ⁵	Down	Stowed	None	N/A	N/A
63	225	Forward ⁵	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ⁵	Down	In-use	On	N/A	N/A
66	225	Forward ⁵	Down	Stowed	On	N/A	N/A
67	225	Forward ⁵	Upright	In-use	On	N/A	N/A
68	225	Forward ⁵	Upright	Stowed	On	N/A	N/A
69	225	Forward ⁵	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ⁵	Upright	In-use	N/A	On	N/A
72	225	Forward ⁵	Upright	Stowed	N/A	On	N/A

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 (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

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

The seat belt tension was 120.5 N for all belted positions

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102 Test Date: 10/07/02
 Laboratory: VRTC Test Technician(s): C. Case, B. Smith, G. Fout
 Child Restraint Name, Model, Date of Manufacture: Britax Handle with Care
 Base: On Off N/A-Restraint does not have a removable base
 Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height
 There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	Suppressed
4	Belted	Rear	Upright	Stowed	None	N/A	Suppressed
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	Suppressed
8	Belted	Rear	Upright	Stowed	On	N/A	Suppressed
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	Suppressed
12	Belted	Rear	Upright	Stowed	N/A	On	Suppressed
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	Suppressed
16	Unbelted	Rear	Upright	Stowed	None	N/A	Suppressed
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	Suppressed
20	Unbelted	Rear	Upright	Stowed	On	N/A	Suppressed
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	Suppressed
24	Unbelted	Rear	Upright	Stowed	N/A	On	Suppressed
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ⁴ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ⁵	Down	Stowed	None	N/A	N/A
39	Belted	Forward ⁵	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ⁵	Down	In-use	On	N/A	N/A
42	Belted	Forward ⁵	Down	Stowed	On	N/A	N/A
43	Belted	Forward ⁵	Upright	In-use	On	N/A	N/A
44	Belted	Forward ⁵	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ⁵	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	N/A
47	Belted	Forward ⁵	Upright	In-use	N/A	On	N/A
48	Belted	Forward ⁵	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	N/A
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	N/A
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	N/A
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ⁵	Down	Stowed	None	N/A	N/A
63	225	Forward ⁵	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ⁵	Down	In-use	On	N/A	N/A
66	225	Forward ⁵	Down	Stowed	On	N/A	N/A
67	225	Forward ⁵	Upright	In-use	On	N/A	N/A
68	225	Forward ⁵	Upright	Stowed	On	N/A	N/A
69	225	Forward ⁵	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ⁵	Upright	In-use	N/A	On	N/A
72	225	Forward ⁵	Upright	Stowed	N/A	On	N/A

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 (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.): The seat belt tension was 120.5 N for all belted positions

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/07/02

Laboratory: VRTC Test Technician(s): C. Case, B. Smith, G. Fout

Seat Position: Full rearward Mid position Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (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 test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section 1 of the data sheet (This was performed after all the belted suppression tests on the Britax Handle with Care in the rear, mid, and forward positions.)
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
3. Place 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)
4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
7. 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 165.1 mm
8. 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.
9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.

Seat position ___ detent positions rearward of full forward
(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 21.4 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft ___ mm from the previous position.
- Seat moved Aft ___ detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, B. Smith, G. Fout
I certify that I have read and performed each instruction.

10/07/02
Date

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/07/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Evenflo First Choice

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	N/A
4	Belted	Rear	Upright	Stowed	None	N/A	Suppressed
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	Suppressed
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	Suppressed
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	N/A
16	Unbelted	Rear	Upright	Stowed	None	N/A	Suppressed
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	Suppressed
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	Suppressed
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ⁴ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ^b	Down	Stowed	None	N/A	N/A
39	Belted	Forward ^b	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ^b	Down	In-use	On	N/A	N/A
42	Belted	Forward ^b	Down	Stowed	On	N/A	N/A
43	Belted	Forward ^o	Upright	In-use	On	N/A	N/A
44	Belted	Forward ^o	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ^b	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	N/A
47	Belted	Forward ^b	Upright	In-use	N/A	On	N/A
48	Belted	Forward ^h	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	N/A
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	N/A
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	N/A
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ^b	Down	Stowed	None	N/A	N/A
63	225	Forward ^b	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ^b	Down	In-use	On	N/A	N/A
66	225	Forward ^b	Down	Stowed	On	N/A	N/A
67	225	Forward ^o	Upright	In-use	On	N/A	N/A
68	225	Forward ^o	Upright	Stowed	On	N/A	N/A
69	225	Forward ^b	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ^b	Upright	In-use	N/A	On	N/A
72	225	Forward ^h	Upright	Stowed	N/A	On	N/A

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 (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.): The seat belt tension was 66.2 N for all belted positions. Rows 2, 6, & 10 the seat was 13 detents back from full forward. Rows 4, 8, & 12 the seat was 2 detents back from full forward. Rows 14, 18, & 22 the seat was 16 detents back from full forward. Rows 16, 20, & 24 the seat was 7 detents back from full forward.

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/07/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Evenflo First Choice

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	N/A
3	Belted	Rear	Upright	In-use	None	N/A	N/A
4	Belted	Rear	Upright	Stowed	None	N/A	Suppressed
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	N/A
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	Suppressed
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	N/A
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	Suppressed
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	N/A
15	Unbelted	Rear	Upright	In-use	None	N/A	N/A
16	Unbelted	Rear	Upright	Stowed	None	N/A	Suppressed
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	N/A
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	Suppressed
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	N/A
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	Suppressed
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ⁴ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ⁵	Down	Stowed	None	N/A	N/A
39	Belted	Forward ⁵	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ⁵	Down	In-use	On	N/A	N/A
42	Belted	Forward ⁵	Down	Stowed	On	N/A	N/A
43	Belted	Forward ⁵	Upright	In-use	On	N/A	N/A
44	Belted	Forward ⁵	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ⁵	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	N/A
47	Belted	Forward ⁵	Upright	In-use	N/A	On	N/A
48	Belted	Forward ⁵	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	N/A
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	N/A
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	N/A
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ⁵	Down	Stowed	None	N/A	N/A
63	225	Forward ⁵	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ⁵	Down	In-use	On	N/A	N/A
66	225	Forward ⁵	Down	Stowed	On	N/A	N/A
67	225	Forward ⁵	Upright	In-use	On	N/A	N/A
68	225	Forward ⁵	Upright	Stowed	On	N/A	N/A
69	225	Forward ⁵	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ⁵	Upright	In-use	N/A	On	N/A
72	225	Forward ⁵	Upright	Stowed	N/A	On	N/A

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 (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.): The seat belt tension was 66.2 N for all belted positions.

Rows 2, 6, and 10 are N/A because with the handle down the seat was 2 detents behind the mid-position which was almost the same as the full forward tests for these configurations.

Rows 14, 18 and 22 are N/A because the handle contacts the instrument panel.

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/07-08/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Evenflo First Choice

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	N/A
4	Belted	Rear	Upright	Stowed	None	N/A	Suppressed
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	Suppressed
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	Suppressed
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	N/A
16	Unbelted	Rear	Upright	Stowed	None	N/A	Suppressed
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	Suppressed
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	Suppressed
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ⁴ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ⁵	Down	Stowed	None	N/A	N/A
39	Belted	Forward ⁵	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ⁵	Down	In-use	On	N/A	N/A
42	Belted	Forward ⁵	Down	Stowed	On	N/A	N/A
43	Belted	Forward ⁵	Upright	In-use	On	N/A	N/A
44	Belted	Forward ⁵	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ⁵	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	N/A
47	Belted	Forward ⁵	Upright	In-use	N/A	On	N/A
48	Belted	Forward ⁵	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	N/A
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	N/A
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	N/A
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ⁵	Down	Stowed	None	N/A	N/A
63	225	Forward ⁵	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ⁵	Down	In-use	On	N/A	N/A
66	225	Forward ⁵	Down	Stowed	On	N/A	N/A
67	225	Forward ⁵	Upright	In-use	On	N/A	N/A
68	225	Forward ⁵	Upright	Stowed	On	N/A	N/A
69	225	Forward ⁵	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ⁵	Upright	In-use	N/A	On	N/A
72	225	Forward ⁵	Upright	Stowed	N/A	On	N/A

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 (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.): The seat belt tension was 66.2 N for all belted positions.

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/08/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Seat Position: Full rearward X Mid position Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (S20.3.1, 22.3.1, S24.3.1)

Do NOT use seat belts for these tests.

2. This reactivation test is being performed after the following suppression test:

- X Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section 2 of the data sheet
- Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
- Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
- Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section of the data sheet
- Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
- Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
- Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
- X 2 . Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
- X 3 . Place 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 4 . Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
- X 5 . Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
- X 6 . Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
- X 7 . 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 162.6 mm
- X 8 . 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.
 X Calves contacted seat cushion.
- X 9 . 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
- 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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 X N/A No contact
 Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward

(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 21.2 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, B. Smith, G. Fout

I certify that I have read and performed each instruction.

10/07/02

Date

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/08/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Graco Snugg Ride (Infant 8457)

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	Suppressed
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	Suppressed
4	Belted	Rear	Upright	Stowed	None	N/A	Suppressed
5	Belted	Rear	Down	In-use	On	N/A	Suppressed
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	Suppressed
8	Belted	Rear	Upright	Stowed	On	N/A	Suppressed
9	Belted	Rear	Down	In-use	N/A	On	Suppressed
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	Suppressed
12	Belted	Rear	Upright	Stowed	N/A	On	Suppressed
13	Unbelted	Rear	Down	In-use	None	N/A	Suppressed
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	Suppressed
16	Unbelted	Rear	Upright	Stowed	None	N/A	Suppressed
17	Unbelted	Rear	Down	In-use	On	N/A	Suppressed
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	Suppressed
20	Unbelted	Rear	Upright	Stowed	On	N/A	Suppressed
21	Unbelted	Rear	Down	In-use	N/A	On	Suppressed
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	Suppressed
24	Unbelted	Rear	Upright	Stowed	N/A	On	Suppressed
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ⁴ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ⁵	Down	Stowed	None	N/A	N/A
39	Belted	Forward ⁵	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ⁵	Down	In-use	On	N/A	N/A
42	Belted	Forward ⁵	Down	Stowed	On	N/A	N/A
43	Belted	Forward ⁵	Upright	In-use	On	N/A	N/A
44	Belted	Forward ⁵	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ⁵	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	N/A
47	Belted	Forward ⁵	Upright	In-use	N/A	On	N/A
48	Belted	Forward ⁵	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	N/A
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	N/A
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	N/A
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ⁵	Down	Stowed	None	N/A	N/A
63	225	Forward ⁵	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ⁵	Down	In-use	On	N/A	N/A
66	225	Forward ⁵	Down	Stowed	On	N/A	N/A
67	225	Forward ⁵	Upright	In-use	On	N/A	N/A
68	225	Forward ⁵	Upright	Stowed	On	N/A	N/A
69	225	Forward ⁵	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ⁵	Upright	In-use	N/A	On	N/A
72	225	Forward ⁵	Upright	Stowed	N/A	On	N/A

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 (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.): The seat belt tension was 133 N for all belted positions.

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102 Test Date: 10/08/02
Laboratory: VRTC Test Technician(s): C. Case, B. Smith, G. Fout
Child Restraint Name, Model, Date of Manufacture: Graco Snugg Ride (Infant 8457)
Base: On Off N/A-Restraint does not have a removable base
Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height
There was no height adjustment.

Same as Foremost position because of the child restraint contact with the instrument panel.

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/08/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Graco Snugg Ride (Infant 8457)

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	Suppressed
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	Suppressed
4	Belted	Rear	Upright	Stowed	None	N/A	Suppressed
5	Belted	Rear	Down	In-use	On	N/A	Suppressed
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	Suppressed
8	Belted	Rear	Upright	Stowed	On	N/A	Suppressed
9	Belted	Rear	Down	In-use	N/A	On	Suppressed
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	Suppressed
12	Belted	Rear	Upright	Stowed	N/A	On	Suppressed
13	Unbelted	Rear	Down	In-use	None	N/A	Suppressed
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	Suppressed
16	Unbelted	Rear	Upright	Stowed	None	N/A	Suppressed
17	Unbelted	Rear	Down	In-use	On	N/A	Suppressed
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	Suppressed
20	Unbelted	Rear	Upright	Stowed	On	N/A	Suppressed
21	Unbelted	Rear	Down	In-use	N/A	On	Suppressed
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	Suppressed
24	Unbelted	Rear	Upright	Stowed	N/A	On	Suppressed
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ^b	Down	Stowed	None	N/A	N/A
39	Belted	Forward ^b	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ^b	Down	In-use	On	N/A	N/A
42	Belted	Forward ^b	Down	Stowed	On	N/A	N/A
43	Belted	Forward ^o	Upright	In-use	On	N/A	N/A
44	Belted	Forward ^o	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ^b	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	N/A
47	Belted	Forward ^b	Upright	In-use	N/A	On	N/A
48	Belted	Forward ^h	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	N/A
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	N/A
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	N/A
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ^b	Down	Stowed	None	N/A	N/A
63	225	Forward ^b	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ^b	Down	In-use	On	N/A	N/A
66	225	Forward ^b	Down	Stowed	On	N/A	N/A
67	225	Forward ^o	Upright	In-use	On	N/A	N/A
68	225	Forward ^o	Upright	Stowed	On	N/A	N/A
69	225	Forward ^b	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ^b	Upright	In-use	N/A	On	N/A
72	225	Forward ^h	Upright	Stowed	N/A	On	N/A

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.
6. **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.
7. Convertible restraints ONLY (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.): The seat belt tension was 133 N for all belted positions.

Rows 1, 2, 5, 6, 9, & 10: The seat was set 14 detents back from full forward because of child restraint contact with the instrument panel.

Rows 3, 4, 7, 8, 11, & 12: The seat was set 10 detents back from full forward because of child restraint contact with the instrument panel.

Rows 13, 14, 17, 18, 21, & 22: The seat was set 15 detents back from full forward because of child restraint contact with the instrument panel.

Rows 15, 16, 19, 20, 23, & 24: The seat was set 10 detents back from full forward because of child restraint contact with the instrument panel.

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/08/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Graco Snugg Ride (Infant 8457)

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	Suppressed
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	Suppressed
4	Belted	Rear	Upright	Stowed	None	N/A	Suppressed
5	Belted	Rear	Down	In-use	On	N/A	Suppressed
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	Suppressed
8	Belted	Rear	Upright	Stowed	On	N/A	Suppressed
9	Belted	Rear	Down	In-use	N/A	On	Suppressed
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	Suppressed
12	Belted	Rear	Upright	Stowed	N/A	On	Suppressed
13	Unbelted	Rear	Down	In-use	None	N/A	Suppressed
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	Suppressed
16	Unbelted	Rear	Upright	Stowed	None	N/A	Suppressed
17	Unbelted	Rear	Down	In-use	On	N/A	Suppressed
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	Suppressed
20	Unbelted	Rear	Upright	Stowed	On	N/A	Suppressed
21	Unbelted	Rear	Down	In-use	N/A	On	Suppressed
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	Suppressed
24	Unbelted	Rear	Upright	Stowed	N/A	On	Suppressed
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ⁴ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ⁵	Down	Stowed	None	N/A	N/A
39	Belted	Forward ⁵	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ⁵	Down	In-use	On	N/A	N/A
42	Belted	Forward ⁵	Down	Stowed	On	N/A	N/A
43	Belted	Forward ⁵	Upright	In-use	On	N/A	N/A
44	Belted	Forward ⁵	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ⁵	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	N/A
47	Belted	Forward ⁵	Upright	In-use	N/A	On	N/A
48	Belted	Forward ⁵	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	N/A
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	N/A
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	N/A
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ⁵	Down	Stowed	None	N/A	N/A
63	225	Forward ⁵	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ⁵	Down	In-use	On	N/A	N/A
66	225	Forward ⁵	Down	Stowed	On	N/A	N/A
67	225	Forward ⁵	Upright	In-use	On	N/A	N/A
68	225	Forward ⁵	Upright	Stowed	On	N/A	N/A
69	225	Forward ⁵	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ⁵	Upright	In-use	N/A	On	N/A
72	225	Forward ⁵	Upright	Stowed	N/A	On	N/A

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.
8. **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.
9. Convertible restraints ONLY (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.): The seat belt tension was 106.3 N for all belted positions.

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/08/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Graco Snugg Ride (Infant 8457)

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	Suppressed
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	Suppressed
4	Belted	Rear	Upright	Stowed	None	N/A	Suppressed
5	Belted	Rear	Down	In-use	On	N/A	Suppressed
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	Suppressed
8	Belted	Rear	Upright	Stowed	On	N/A	Suppressed
9	Belted	Rear	Down	In-use	N/A	On	Suppressed
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	Suppressed
12	Belted	Rear	Upright	Stowed	N/A	On	Suppressed
13	Unbelted	Rear	Down	In-use	None	N/A	Suppressed
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	Suppressed
16	Unbelted	Rear	Upright	Stowed	None	N/A	Suppressed
17	Unbelted	Rear	Down	In-use	On	N/A	Suppressed
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	Suppressed
20	Unbelted	Rear	Upright	Stowed	On	N/A	Suppressed
21	Unbelted	Rear	Down	In-use	N/A	On	Suppressed
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	Suppressed
24	Unbelted	Rear	Upright	Stowed	N/A	On	Suppressed
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ^b	Down	Stowed	None	N/A	N/A
39	Belted	Forward ^b	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ^b	Down	In-use	On	N/A	N/A
42	Belted	Forward ^b	Down	Stowed	On	N/A	N/A
43	Belted	Forward ^o	Upright	In-use	On	N/A	N/A
44	Belted	Forward ^o	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ^b	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	N/A
47	Belted	Forward ^b	Upright	In-use	N/A	On	N/A
48	Belted	Forward ^h	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	N/A
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	N/A
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	N/A
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ^b	Down	Stowed	None	N/A	N/A
63	225	Forward ^b	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ^b	Down	In-use	On	N/A	N/A
66	225	Forward ^b	Down	Stowed	On	N/A	N/A
67	225	Forward ^o	Upright	In-use	On	N/A	N/A
68	225	Forward ^o	Upright	Stowed	On	N/A	N/A
69	225	Forward ^b	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ^b	Upright	In-use	N/A	On	N/A
72	225	Forward ^h	Upright	Stowed	N/A	On	N/A

- 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.
10. **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.
11. Convertible restraints ONLY (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.): The seat belt tension was 106.3 N for all belted positions.

Rows 1, 2, 5, 6, 9, and 10: The seat was 6 detents rear of full forward.

Rows 13, 14, 17, 18, 21, and 22: The seat was 14 detents rear of full forward.

Rows 15, 16, 19, 20, 23, and 24: The seat was 10 detents rear of full forward.

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/08/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Graco Snugg Ride (Infant 8457)

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

Seat Position: Rearmost, mid-height X Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	Suppressed
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	Suppressed
4	Belted	Rear	Upright	Stowed	None	N/A	Suppressed
5	Belted	Rear	Down	In-use	On	N/A	Suppressed
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	Suppressed
8	Belted	Rear	Upright	Stowed	On	N/A	Suppressed
9	Belted	Rear	Down	In-use	N/A	On	Suppressed
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	Suppressed
12	Belted	Rear	Upright	Stowed	N/A	On	Suppressed
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	N/A
15	Unbelted	Rear	Upright	In-use	None	N/A	Suppressed
16	Unbelted	Rear	Upright	Stowed	None	N/A	Suppressed
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	N/A
19	Unbelted	Rear	Upright	In-use	On	N/A	Suppressed
20	Unbelted	Rear	Upright	Stowed	On	N/A	Suppressed
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	N/A
23	Unbelted	Rear	Upright	In-use	N/A	On	Suppressed
24	Unbelted	Rear	Upright	Stowed	N/A	On	Suppressed
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ^b	Down	Stowed	None	N/A	N/A
39	Belted	Forward ^b	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ^b	Down	In-use	On	N/A	N/A
42	Belted	Forward ^b	Down	Stowed	On	N/A	N/A
43	Belted	Forward ^o	Upright	In-use	On	N/A	N/A
44	Belted	Forward ^o	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ^b	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	N/A
47	Belted	Forward ^b	Upright	In-use	N/A	On	N/A
48	Belted	Forward ^h	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	N/A
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	N/A
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	N/A
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ^b	Down	Stowed	None	N/A	N/A
63	225	Forward ^b	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ^b	Down	In-use	On	N/A	N/A
66	225	Forward ^b	Down	Stowed	On	N/A	N/A
67	225	Forward ^o	Upright	In-use	On	N/A	N/A
68	225	Forward ^o	Upright	Stowed	On	N/A	N/A
69	225	Forward ^b	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ^b	Upright	In-use	N/A	On	N/A
72	225	Forward ^h	Upright	Stowed	N/A	On	N/A

- 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.
12. **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.
13. Convertible restraints ONLY (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.): The seat belt tension was 106.3 N for all belted positions.

Rows 13, 14, 17, 18, 21, and 22: The child restraint handle contacts the instrument panel. After adjustment the seat position was the same as was used for the full forward tests. Therefore, these were not repeated.

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/08/02

Laboratory: VRTC

Test Technician(s): C. Case, G. Foul

Seat Position: Full rearward Mid position Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (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 test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section 2 of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
3. Place 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)
4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
7. 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 162.6 mm
8. 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.
9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward

(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 22 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout

I certify that I have read and performed each instruction.

10/08/02

Date

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/08/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Britax Roundabout 161

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	N/A
4	Belted	Rear	Upright	Stowed	None	N/A	N/A
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	N/A
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	N/A
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	N/A
16	Unbelted	Rear	Upright	Stowed	None	N/A	N/A
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	N/A
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	N/A
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ^b	Down	Stowed	None	N/A	Suppressed
39	Belted	Forward ^b	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ^b	Down	In-use	On	N/A	N/A
42	Belted	Forward ^b	Down	Stowed	On	N/A	Suppressed
43	Belted	Forward ^o	Upright	In-use	On	N/A	N/A
44	Belted	Forward ^o	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ^b	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	Suppressed
47	Belted	Forward ^b	Upright	In-use	N/A	On	N/A
48	Belted	Forward ^h	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	Suppressed
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	Suppressed
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	Suppressed
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ^b	Down	Stowed	None	N/A	N/A
63	225	Forward ^b	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ^b	Down	In-use	On	N/A	N/A
66	225	Forward ^b	Down	Stowed	On	N/A	N/A
67	225	Forward ^o	Upright	In-use	On	N/A	N/A
68	225	Forward ^o	Upright	Stowed	On	N/A	N/A
69	225	Forward ^b	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ^b	Upright	In-use	N/A	On	N/A
72	225	Forward ^h	Upright	Stowed	N/A	On	N/A

- 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.
14. 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.
15. Convertible restraints ONLY (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies. Rows 1 through 12: The seat belt tension was 131.7 N for belted positions.

Rows 37 through 48: The seat belt tension was 125.4 N for belted positions.

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/08/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Britax Roundabout 161

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	N/A
4	Belted	Rear	Upright	Stowed	None	N/A	N/A
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	N/A
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	N/A
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	N/A
16	Unbelted	Rear	Upright	Stowed	None	N/A	N/A
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	N/A
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	N/A
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ^b	Down	Stowed	None	N/A	Suppressed
39	Belted	Forward ^b	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ^b	Down	In-use	On	N/A	N/A
42	Belted	Forward ^b	Down	Stowed	On	N/A	Suppressed
43	Belted	Forward ^o	Upright	In-use	On	N/A	N/A
44	Belted	Forward ^o	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ^b	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	Suppressed
47	Belted	Forward ^b	Upright	In-use	N/A	On	N/A
48	Belted	Forward ^h	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	Suppressed
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	Suppressed
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	Suppressed
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ^b	Down	Stowed	None	N/A	N/A
63	225	Forward ^b	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ^b	Down	In-use	On	N/A	N/A
66	225	Forward ^b	Down	Stowed	On	N/A	N/A
67	225	Forward ^o	Upright	In-use	On	N/A	N/A
68	225	Forward ^o	Upright	Stowed	On	N/A	N/A
69	225	Forward ^b	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ^b	Upright	In-use	N/A	On	N/A
72	225	Forward ^h	Upright	Stowed	N/A	On	N/A

- 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.
16. **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.
17. Convertible restraints ONLY (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies. Rows 1 through 12: The seat belt tension was 131.7 N for belted positions.

Rows 14, 18, and 22: The seat is positioned 9 degrees to the rear of full forward because of seat contact with the instrument panel.

Rows 37 through 48: The seat belt tension was 125.4 N for belted positions.

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/08/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Britax Roundabout 161

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	N/A
4	Belted	Rear	Upright	Stowed	None	N/A	N/A
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	N/A
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	N/A
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	N/A
16	Unbelted	Rear	Upright	Stowed	None	N/A	N/A
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	N/A
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	N/A
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ^b	Down	Stowed	None	N/A	Suppressed
39	Belted	Forward ^b	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ^b	Down	In-use	On	N/A	N/A
42	Belted	Forward ^b	Down	Stowed	On	N/A	Suppressed
43	Belted	Forward ^o	Upright	In-use	On	N/A	N/A
44	Belted	Forward ^o	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ^b	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	Suppressed
47	Belted	Forward ^b	Upright	In-use	N/A	On	N/A
48	Belted	Forward ^h	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	Suppressed
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	Suppressed
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	Suppressed
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ^b	Down	Stowed	None	N/A	N/A
63	225	Forward ^b	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ^b	Down	In-use	On	N/A	N/A
66	225	Forward ^b	Down	Stowed	On	N/A	N/A
67	225	Forward ^o	Upright	In-use	On	N/A	N/A
68	225	Forward ^o	Upright	Stowed	On	N/A	N/A
69	225	Forward ^b	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ^b	Upright	In-use	N/A	On	N/A
72	225	Forward ^h	Upright	Stowed	N/A	On	N/A

- 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.
18. **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.
19. Convertible restraints ONLY (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies. Rows 1 through 12: The seat belt tension was 131.7 N for belted positions.

Rows 37 through 48: The seat belt tension was 125.4 N for belted positions.

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/08/02

Laboratory: VRTC

Test Technician(s): C. Case, G. Fout, B. Smith

Seat Position: Full rearward Mid position Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (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 test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section 5 of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
3. Place 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)
4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
7. 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 167.6 mm
8. 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.
9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward

(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 21.6 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout, B. Smith

I certify that I have read and performed each instruction.

10/08/02

Date

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/08-09/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Century Encore

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	N/A
4	Belted	Rear	Upright	Stowed	None	N/A	N/A
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	N/A
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	N/A
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	N/A
16	Unbelted	Rear	Upright	Stowed	None	N/A	N/A
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	N/A
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	N/A
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ^b	Down	Stowed	None	N/A	Suppressed
39	Belted	Forward ^b	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ^b	Down	In-use	On	N/A	N/A
42	Belted	Forward ^b	Down	Stowed	On	N/A	Suppressed
43	Belted	Forward ^o	Upright	In-use	On	N/A	N/A
44	Belted	Forward ^o	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ^b	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	Suppressed
47	Belted	Forward ^b	Upright	In-use	N/A	On	N/A
48	Belted	Forward ^h	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	Suppressed
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	Suppressed
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	Suppressed
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ^b	Down	Stowed	None	N/A	N/A
63	225	Forward ^b	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ^b	Down	In-use	On	N/A	N/A
66	225	Forward ^b	Down	Stowed	On	N/A	N/A
67	225	Forward ^o	Upright	In-use	On	N/A	N/A
68	225	Forward ^o	Upright	Stowed	On	N/A	N/A
69	225	Forward ^b	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ^b	Upright	In-use	N/A	On	N/A
72	225	Forward ^h	Upright	Stowed	N/A	On	N/A

- 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.
20. 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.
21. Convertible restraints ONLY (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies. Rows 1 through 12: The seat belt tension was 128.1 N for belted positions.

Rows 37 through 48: The seat belt tension was 128.1 N for belted positions.

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/08-09/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Century Encore

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	N/A
4	Belted	Rear	Upright	Stowed	None	N/A	N/A
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	N/A
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	N/A
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	N/A
16	Unbelted	Rear	Upright	Stowed	None	N/A	N/A
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	N/A
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	N/A
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ^b	Down	Stowed	None	N/A	Suppressed
39	Belted	Forward ^b	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ^b	Down	In-use	On	N/A	N/A
42	Belted	Forward ^b	Down	Stowed	On	N/A	Suppressed
43	Belted	Forward ^o	Upright	In-use	On	N/A	N/A
44	Belted	Forward ^o	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ^b	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	Suppressed
47	Belted	Forward ^b	Upright	In-use	N/A	On	N/A
48	Belted	Forward ^h	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	Suppressed
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	Suppressed
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	Suppressed
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ^b	Down	Stowed	None	N/A	N/A
63	225	Forward ^b	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ^b	Down	In-use	On	N/A	N/A
66	225	Forward ^b	Down	Stowed	On	N/A	N/A
67	225	Forward ^o	Upright	In-use	On	N/A	N/A
68	225	Forward ^o	Upright	Stowed	On	N/A	N/A
69	225	Forward ^b	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ^b	Upright	In-use	N/A	On	N/A
72	225	Forward ^h	Upright	Stowed	N/A	On	N/A

- 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.
22. **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.
23. Convertible restraints ONLY (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies. Rows 1 through 12 and 37 through 48: The seat belt tension was 128.1 N for belted positions.

Rows 2, 6, and 10: The seat position was 6 detents rear of foremost because of restraint contact with the instrument panel.

Rows 14, 18, and 22: The seat position was 11 detents rear of foremost because of restraint contact with the instrument panel.

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/08-09/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Century Encore

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	N/A
4	Belted	Rear	Upright	Stowed	None	N/A	N/A
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	N/A
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	N/A
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	N/A
15	Unbelted	Rear	Upright	In-use	None	N/A	N/A
16	Unbelted	Rear	Upright	Stowed	None	N/A	N/A
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	N/A
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	N/A
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	N/A
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	N/A
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ⁴ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ^b	Down	Stowed	None	N/A	Suppressed
39	Belted	Forward ^b	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ^b	Down	In-use	On	N/A	N/A
42	Belted	Forward ^b	Down	Stowed	On	N/A	Suppressed
43	Belted	Forward ^o	Upright	In-use	On	N/A	N/A
44	Belted	Forward ^o	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ^b	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	Suppressed
47	Belted	Forward ^b	Upright	In-use	N/A	On	N/A
48	Belted	Forward ^h	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	Suppressed
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	Suppressed
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	Suppressed
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ^b	Down	Stowed	None	N/A	N/A
63	225	Forward ^b	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ^b	Down	In-use	On	N/A	N/A
66	225	Forward ^b	Down	Stowed	On	N/A	N/A
67	225	Forward ^o	Upright	In-use	On	N/A	N/A
68	225	Forward ^o	Upright	Stowed	On	N/A	N/A
69	225	Forward ^b	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ^b	Upright	In-use	N/A	On	N/A
72	225	Forward ^h	Upright	Stowed	N/A	On	N/A

- 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.
24. 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.
25. Convertible restraints ONLY (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies. Rows 1 through 12 and 37 through 48: The seat belt tension was 128.1 N for belted positions.

Rows 14, 18, and 22: These positions were the same as those required for foremost. See the data sheet for the foremost position to see the results.

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC

Test Technician(s): C. Case, G. Fout, B. Smith

Seat Position: Full rearward Mid position X Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (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 test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section 4 of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
3. Place 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)
4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
7. 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 165.1 mm
8. 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.
9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward

(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 21.6 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout, B. Smith

I certify that I have read and performed each instruction.

10/09/02

Date

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Evenflo Medalion

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	N/A
4	Belted	Rear	Upright	Stowed	None	N/A	N/A
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	N/A
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	N/A
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	N/A
16	Unbelted	Rear	Upright	Stowed	None	N/A	N/A
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	N/A
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	N/A
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ^b	Down	Stowed	None	N/A	Suppressed
39	Belted	Forward ^b	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ^b	Down	In-use	On	N/A	N/A
42	Belted	Forward ^b	Down	Stowed	On	N/A	Suppressed
43	Belted	Forward ^o	Upright	In-use	On	N/A	N/A
44	Belted	Forward ^o	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ^b	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	Suppressed
47	Belted	Forward ^b	Upright	In-use	N/A	On	N/A
48	Belted	Forward ^h	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	Suppressed
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	Suppressed
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	Suppressed
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ^b	Down	Stowed	None	N/A	N/A
63	225	Forward ^b	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ^b	Down	In-use	On	N/A	N/A
66	225	Forward ^b	Down	Stowed	On	N/A	N/A
67	225	Forward ^o	Upright	In-use	On	N/A	N/A
68	225	Forward ^o	Upright	Stowed	On	N/A	N/A
69	225	Forward ^b	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ^b	Upright	In-use	N/A	On	N/A
72	225	Forward ^h	Upright	Stowed	N/A	On	N/A

- 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.
26. 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.
27. Convertible restraints ONLY (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies. Rows 1 through 12: The seat belt tension was 127.7 N for belted positions.

Rows 37 through 48: The seat belt tension was 121 N for belted positions.

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Evenflo Medalion

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	N/A
4	Belted	Rear	Upright	Stowed	None	N/A	N/A
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	N/A
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	N/A
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	N/A
16	Unbelted	Rear	Upright	Stowed	None	N/A	N/A
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	N/A
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	N/A
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ^b	Down	Stowed	None	N/A	Suppressed
39	Belted	Forward ^b	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ^b	Down	In-use	On	N/A	N/A
42	Belted	Forward ^b	Down	Stowed	On	N/A	Suppressed
43	Belted	Forward ^o	Upright	In-use	On	N/A	N/A
44	Belted	Forward ^o	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ^b	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	Suppressed
47	Belted	Forward ^b	Upright	In-use	N/A	On	N/A
48	Belted	Forward ^h	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	Suppressed
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	Suppressed
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	Suppressed
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ^b	Down	Stowed	None	N/A	N/A
63	225	Forward ^b	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ^b	Down	In-use	On	N/A	N/A
66	225	Forward ^b	Down	Stowed	On	N/A	N/A
67	225	Forward ^o	Upright	In-use	On	N/A	N/A
68	225	Forward ^o	Upright	Stowed	On	N/A	N/A
69	225	Forward ^b	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ^b	Upright	In-use	N/A	On	N/A
72	225	Forward ^h	Upright	Stowed	N/A	On	N/A

- 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.
28. 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.
29. Convertible restraints ONLY (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies. Rows 1 through 12: The seat belt tension was 127.7 N for belted positions.

Rows 37 through 48: The seat belt tension was 121 N for belted positions.

RESULTS FROM DATA SHEET 14

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

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Child Restraint Name, Model, Date of Manufacture: Evenflo Medalion

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

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

There was no height adjustment.

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	N/A
4	Belted	Rear	Upright	Stowed	None	N/A	N/A
5	Belted	Rear	Down	In-use	On	N/A	N/A
6	Belted	Rear	Down	Stowed	On	N/A	Suppressed
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	N/A
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Suppressed
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	N/A
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	N/A
16	Unbelted	Rear	Upright	Stowed	None	N/A	N/A
17	Unbelted	Rear	Down	In-use	On	N/A	N/A
18	Unbelted	Rear	Down	Stowed	On	N/A	Suppressed
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	N/A
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Suppressed
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	N/A
25	225	Rear	Down	In-use	None	N/A	N/A
26	225	Rear	Down	Stowed	None	N/A	N/A
27	225	Rear	Upright	In-use	None	N/A	N/A
28	225	Rear	Upright	Stowed	None	N/A	N/A
29	225	Rear	Down	In-use	On	N/A	N/A
30	225	Rear	Down	Stowed	On	N/A	N/A
31	225	Rear	Upright	In-use	On	N/A	N/A
32	225	Rear	Upright	Stowed	On	N/A	N/A
33	225	Rear	Down	In-use	N/A	On	N/A
34	225	Rear	Down	Stowed	N/A	On	N/A
35	225	Rear	Upright	In-use	N/A	On	N/A
36	225	Rear	Upright	Stowed	N/A	On	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield ² (S20.1.4)	Blanket ³ Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
37	Belted	Forward ¹	Down	In-use	None	N/A	N/A
38	Belted	Forward ^b	Down	Stowed	None	N/A	Suppressed
39	Belted	Forward ^b	Upright	In-use	None	N/A	N/A
40	Belted	Forward ¹	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ^b	Down	In-use	On	N/A	N/A
42	Belted	Forward ^b	Down	Stowed	On	N/A	Suppressed
43	Belted	Forward ^o	Upright	In-use	On	N/A	N/A
44	Belted	Forward ^o	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ^b	Down	In-use	N/A	On	N/A
46	Belted	Forward ¹	Down	Stowed	N/A	On	Suppressed
47	Belted	Forward ^b	Upright	In-use	N/A	On	N/A
48	Belted	Forward ^h	Upright	Stowed	N/A	On	N/A
49	Unbelted	Forward	Down	In-use	None	N/A	N/A
50	Unbelted	Forward	Down	Stowed	None	N/A	Suppressed
51	Unbelted	Forward	Upright	In-use	None	N/A	N/A
52	Unbelted	Forward	Upright	Stowed	None	N/A	N/A
53	Unbelted	Forward	Down	In-use	On	N/A	N/A
54	Unbelted	Forward	Down	Stowed	On	N/A	Suppressed
55	Unbelted	Forward	Upright	In-use	On	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	On	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	On	N/A
58	Unbelted	Forward	Down	Stowed	N/A	On	Suppressed
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ¹	Down	In-use	None	N/A	N/A
62	225	Forward ^b	Down	Stowed	None	N/A	N/A
63	225	Forward ^b	Upright	In-use	None	N/A	N/A
64	225	Forward ¹	Upright	Stowed	None	N/A	N/A
65	225	Forward ^b	Down	In-use	On	N/A	N/A
66	225	Forward ^b	Down	Stowed	On	N/A	N/A
67	225	Forward ^o	Upright	In-use	On	N/A	N/A
68	225	Forward ^o	Upright	Stowed	On	N/A	N/A
69	225	Forward ^b	Down	In-use	N/A	On	N/A
70	225	Forward ¹	Down	Stowed	N/A	On	N/A
71	225	Forward ^b	Upright	In-use	N/A	On	N/A
72	225	Forward ^h	Upright	Stowed	N/A	On	N/A

- 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.
30. 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.
31. Convertible restraints ONLY (S20.2.1.5) (Appendix A, section C)

Record the weight of the blanket. (Cannot be more than 1 kg (2.2 lb).) 0.3 kg
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies. Rows 1 through 12: The seat belt tension was 127.7 N for belted positions.

Rows 37 through 48: The seat belt tension was 121 N for belted positions.

Rows 14, 18, and 22: The seat position was 5 detents rear of foremost because of restraint contact with the instrument panel.

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC Test Technician(s): C. Case, G. Fout

Seat Position: Full rearward Mid position X Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (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 test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section 4 of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
3. Place 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)
4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
7. 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 165.1 mm
8. 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.
9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward

(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 21.7 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout,

I certify that I have read and performed each instruction.

10/09/02

Date

RESULTS FROM DATA SHEET 15

Suppression Test Using Newborn Infant Dummy (Part 572, Subpart K)(S20)
(Car beds listed in Appendix A, section A)

NHTSA No. C30102 Test Date: 10/09/02

Laboratory: VRTC Test Technician(s): B. Smith, G. Fout, C. Case

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

Base: On Off N/A—Restraint does not have a removable base

Seat Position: Rearmost, mid-height Mid-position, mid-height Foremost, mid-height

	Belted, FMVSS 225	Handle (S20.1.3)	Sunshield (S20.1.4)	Blanket ¹ Position 1 (S20.1.5(a))	Blanket ² Position 2 (S20.1.5(b))	Suppressed, FAIL, Or N/A
1	Belted	Down	Fully Open	None	N/A	N/A
2	Belted	Down	Fully Closed	None	N/A	Suppressed
3	Belted	Upright	Fully Open	None	N/A	N/A
4	Belted	Upright	Fully Closed	None	N/A	Suppressed
5	Belted	Down	Fully Open	On	N/A	N/A
6	Belted	Down	Fully Closed	On	N/A	Suppressed
7	Belted	Upright	Fully Open	On	N/A	N/A
8	Belted	Upright	Fully Closed	On	N/A	Suppressed
9	Belted	Down	Fully Open	N/A	On	N/A
10	Belted	Down	Fully Closed	N/A	On	Suppressed
11	Belted	Upright	Fully Open	N/A	On	N/A
12	Belted	Upright	Fully Closed	N/A	On	Suppressed
13	225	Down	Fully Open	None	N/A	N/A
14	225	Down	Fully Closed	None	N/A	N/A
15	225	Upright	Fully Open	None	N/A	N/A
16	225	Upright	Fully Closed	None	N/A	N/A
17	225	Down	Fully Open	On	N/A	N/A
18	225	Down	Fully Closed	On	N/A	N/A
19	225	Upright	Fully Open	On	N/A	N/A
20	225	Upright	Fully Closed	On	N/A	N/A
21	225	Down	Fully Open	N/A	On	N/A
22	225	Down	Fully Closed	N/A	On	N/A
23	225	Upright	Fully Open	N/A	On	N/A
24	225	Upright	Fully Closed	N/A	On	N/A

- 1 If there is no handle, place N/A in the Suppressed /FAIL column in the rows marked "Upright." "Down," means the car bed 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 car bed so that all edges of the restraint are covered. The vehicle seat shall not support the blanket.
- 3 **Blanket position 2 (S20.1.5 (b)):** Place a blanket on the car bed so that it rests on the top of the vehicle's seat back and the forward most (towards the instrument panel) edge of the car bed.

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.): It was not necessary to perform other seat track positions because even when belted the car bed applied very little weight to the seat. Therefore, the suppression system would not detect sufficient weight to activate the air bag.

RESULTS FROM DATA SHEET 17

Suppression Test Using 3-Year-Old Dummy (Part 572, Subpart P) and
Forward Facing Convertible Child Restraints (S22)

NHTSA No. C30102 Test Date: 10/09/02

Laboratory: VRTC Test Technician(s): B. Smith, C. Case, G. Fout

Child Restraint Name, Model, and Manufacture Date: Britax Roundabout

	Seat Belt Tension	Suppressed, FAIL, Or N/A
Foremost seat position	130.8 N	Suppressed
Mid seat position	130.8 N	Suppressed
Rearmost seat position	130.8 N	Suppressed

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC Test Technician(s): C. Case, G. Fout

Seat Position: Full rearward Mid position Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (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 test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section 1 of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
3. Place 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)
4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
7. 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 165.1 mm
8. 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.
9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance _____ mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward

(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 21.4 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout,

I certify that I have read and performed each instruction.

10/09/02

Date

RESULTS FROM DATA SHEET 17

Suppression Test Using 3-Year-Old Dummy (Part 572, Subpart P) and
Forward Facing Convertible Child Restraints (S22)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC

Test Technician(s): B. Smith, C. Case, G. Fout

Child Restraint Name, Model, and Manufacture Date: Century Encore

	Seat Belt Tension	Suppressed, FAIL, Or N/A
Foremost seat position*	127.7 N	Suppressed
Mid seat position	127.7 N	Suppressed
Rearmost seat position	127.7 N	Suppressed

*The passenger seat was 1 detent rear of the foremost position because of dummy foot contact with the IP.

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC Test Technician(s): C. Case, G. Fout

Seat Position: Full rearward Mid position X* Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (S20.3.1, 22.3.1, S24.3.1)

*1 detent rear of full forward

Do NOT use seat belts for these tests.

1. This reactivation test is being performed after the following suppression test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
 - X Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section 1 of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
- X 2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
- X 3. Place 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 4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
- X 5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
- X 6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
- X 7. 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 165.1 mm
- X 8. 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.
 - X Calves contacted seat cushion.
- X 9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
- 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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - X N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward

(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 21.3 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout,

I certify that I have read and performed each instruction.

10/09/02

Date

RESULTS FROM DATA SHEET 17

Suppression Test Using 3-Year-Old Dummy (Part 572, Subpart P) and
Forward Facing Convertible Child Restraints (S22)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC

Test Technician(s): B. Smith, C. Case, G. Fout

Child Restraint Name, Model, and Manufacture Date: Evenflo Medallion

	Seat Belt Tension	Suppressed, FAIL, Or N/A
Foremost seat position	130.8 N	Suppressed
Mid seat position	130.8 N	Suppressed
Rearmost seat position	130.8 N	Suppressed

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC

Test Technician(s): C. Case, G. Fout

Seat Position: Full rearward X Mid position Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (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 test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
 - X Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section 1 of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
- X 2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
- X 3. Place 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 4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
- X 5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
- X 6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
- X 7. 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 165.1 mm
- X 8. 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.
 - X Calves contacted seat cushion.
- X 9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
- 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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - X N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward
(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 21.8 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout.
 I certify that I have read and performed each instruction.

10/09/02
 Date

RESULTS FROM DATA SHEET 16

Suppression Test Using 3-Year-Old Dummy (Part 572, Subpart P) and
Booster Seats (S22)

NHTSA No. C30102 Test Date: 10/09/02

Laboratory: VRTC Test Technician(s): B. Smith, C. Case, G. Fout

Child Restraint Name, Model, and Manufacture Date: Centrury Next Step

	Seat Belt Tension	Suppressed, FAIL, Or N/A
Foremost seat position	129.4 N	Suppressed
Mid seat position	129.4 N	Suppressed
Rearmost seat position	129.4 N	Suppressed
Foremost seat position	N/A	Suppressed
Mid seat position	N/A	Suppressed
Rearmost seat position	N/A	Suppressed

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC

Test Technician(s): C. Case, G. Fout

Seat Position: Full rearward Mid position Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (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 test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section 1 of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
3. Place 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)
4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
7. 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 165.1 mm
8. 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.
9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward
(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 21.2 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout, B. Smith
 I certify that I have read and performed each instruction.

10/09/02
 Date

RESULTS FROM DATA SHEET 16

Suppression Test Using 3-Year-Old Dummy (Part 572, Subpart P) and
Booster Seats (S22)

NHTSA No. C30102 Test Date: 10/09/02

Laboratory: VRTC Test Technician(s): B. Smith, C. Case, G. Fout

Child Restraint Name, Model, and Manufacture Date: Cosco High Back Booster

	Seat Belt Tension	Suppressed, FAIL, Or N/A
Foremost seat position	132.6 N	Suppressed
Mid seat position	132.6 N	Suppressed
Rearmost seat position	132.6 N	Suppressed
Foremost seat position	N/A	Suppressed
Mid seat position	N/A	Suppressed
Rearmost seat position	N/A	Suppressed

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC Test Technician(s): C. Case, G. Fout

Seat Position: Full rearward X Mid position Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (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 test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - X Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section 1 of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
- X 2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
- X 3. Place 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 4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
- X 5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
- X 6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
- X 7. 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 165.1 mm
- X 8. 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.
 - X Calves contacted seat cushion.
- X 9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
- 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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - X N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward
(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 22.5 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout.
 I certify that I have read and performed each instruction.

10/09/02
 Date

RESULTS FROM DATA SHEET 18

Suppression Tests Using an Unbelted 3-Year-Old Dummy (Part 572, Subpart P) (S22)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Dummy Serial No. 038

		Foremost seat position	Mid seat position	Rearmost seat position
1	Sitting on seat with back against seat back	Suppressed	Suppressed	Suppressed
2	Sitting on seat with back against reclined seat back	Suppressed	N/A ²	N/A ²
3	Sitting on seat with back not against seat back	Suppressed	Suppressed	Suppressed ³
4	Sitting on seat edge, spine vertical, hands by the dummy's side	Suppressed ¹	Suppressed	Suppressed ³
5	Standing on seat, facing forward	Suppressed	Suppressed	Suppressed ²
6	Kneeling on seat facing forward	Suppressed	Suppressed	Suppressed ²
7	Kneeling on seat facing rearward	Suppressed	Suppressed	Suppressed ²
8	Lying on seat	Suppressed	Suppressed	Suppressed ²

1 5 detents rearward of full forward

2 Not done because seat back angle was worst case in foremost position

3 Dummy serial no. 038

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC

Test Technician(s): C. Case, G. Fout

Seat Position: Full rearward Mid position Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (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 test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section 8 of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
3. Place 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)
4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
7. 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 162.5 mm
8. 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.
9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward
(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 21.3 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout.
 I certify that I have read and performed each instruction.

10/09/02
 Date

RESULTS FROM DATA SHEET 19

Suppression Test Using 6-Year-Old Dummy (Part 572, Subpart N) and
Booster Seats (S24.2.1)

NHTSA No. C30102 Test Date: 10/09/02

Laboratory: VRTC Test Technician(s): B. Smith, C. Case, G. Fout

Child Restraint Name, Model, and Manufacture Date: Centrury Next Step

	Seat Belt Tension	Suppressed, FAIL, Or N/A
Foremost seat position	N/A	Suppressed
Mid seat position	N/A	Suppressed
Rearmost seat position	N/A	Suppressed

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC

Test Technician(s): C. Case, G. Fout

Seat Position: Full rearward Mid position Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (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 test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section 1 of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
3. Place 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)
4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
7. 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 165.1 mm
8. 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.
9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward
(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 22.4 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout.
 I certify that I have read and performed each instruction.

10/09/02
 Date

RESULTS FROM DATA SHEET 19

Suppression Test Using 6-Year-Old Dummy (Part 572, Subpart N) and
Booster Seats (S24.2.1)

NHTSA No. C30102 Test Date: 10/09/02

Laboratory: VRTC Test Technician(s): B. Smith, C. Case, G. Fout

Child Restraint Name, Model, and Manufacture Date: Cosco High Back Booster

	Seat Belt Tension	Suppressed, FAIL, Or N/A
Foremost seat position	N/A	Suppressed
Mid seat position	N/A	Suppressed
Rearmost seat position	N/A	Suppressed

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC Test Technician(s): C. Case, G. Fout

Seat Position: Full rearward Mid position X Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (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 test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - X Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
- X 2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
- X 3. Place 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 4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
- X 5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
- X 6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
- X 7. 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 165.1 mm
- X 8. 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.
 - X Calves contacted seat cushion.
- X 9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
- 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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - X N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward
(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 19.8 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout.
 I certify that I have read and performed each instruction.

10/09/02
 Date

RESULTS FROM DATA SHEET 19

Suppression Test Using 6-Year-Old Dummy (Part 572, Subpart N) and
Booster Seats (S24.2.1)

NHTSA No. C30102 Test Date: 10/09/02

Laboratory: VRTC Test Technician(s): B. Smith, C. Case, G. Fout

Child Restraint Name, Model, and Manufacture Date: Evenflo Right Fit

	Seat Belt Tension	Suppressed, FAIL, Or N/A
Foremost seat position	N/A	Suppressed
Mid seat position	N/A	Suppressed
Rearmost seat position	N/A	Suppressed

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC

Test Technician(s): C. Case, G. Fout, B. Smith

Seat Position: Full rearward Mid position Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (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 test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section 1 of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section of the data sheet
2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
3. Place 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)
4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
7. 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 165.1 mm
8. 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.
9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward
(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 22.1 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout.
 I certify that I have read and performed each instruction.

10/09/02
 Date

RESULTS FROM DATA SHEET 18

Suppression Tests Using an Unbelted 6-Year-Old Dummy (Part 572, Subpart P) (S22)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, G. Fout

Dummy Serial No. 027

		Foremost seat position	Mid seat position	Rearmost seat position
1	Sitting on seat with back against seat back	Suppressed ¹	Suppressed	Suppressed
2	Sitting on seat with back against reclined seat back	Suppressed ²	N/A ⁴	N/A ⁴
3	Sitting on seat edge, spine vertical, hands by the dummy's side	Suppressed	Suppressed	Suppressed
4	Sitting back in the seat and leaning on the right front passenger door	Suppressed ³	ND ⁵	Suppressed

1 3 detents rearward of full forward

2 5 detents rearward of full forward

3 14 detents rearward of full forward

4 Not done because seat back angle was worst case in foremost position

5 Not done because seat position made no difference for this suppression system

DATA SHEET 25

Test of Reactivation of the Passenger Air Bag System with an
Unbelted 5th Percentile Female Dummy (S20.3, 22.3, S24.3)

NHTSA No. C30102

Test Date: 10/09/02

Laboratory: VRTC Test Technician(s): C. Case, G. Fout, B. Smith

Seat Position: Full rearward Mid position Full forward (Use a separate sheet for each of the three fore-aft positions tested.) (S20.3.1, 22.3.1, S24.3.1)

*14 detents rear of full forward

Do NOT use seat belts for these tests.

1. This reactivation test is being performed after the following suppression test:
 - Suppression Test Using 12-Month-Old CRABI Dummy (S20)
After section of the data sheet
 - Suppression Test Using Newborn Infant Dummy (S20)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section of the data sheet
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section of the data sheet
 - Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section of the data sheet
 - Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section 4 of the data sheet
2. Leave the seat in the position used for the suppression test. (Do NOT recline the seat back as it would be for positioning for a crash test.)
3. Place 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)
4. Position the dummy midsagittal plane vertical and coincident with the seating position centerline. (S16.3.3.1.3 or S16.3.3.1.4)
5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
7. 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 165.1 mm
8. 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.
9. 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)
- N/A 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
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 detent position which does not cause dummy contact. (S16.3.3.1.8)
 - N/A No contact
 - Dummy contact. Clearance set at maximum of 5mm
Measured Clearance mm
 - Dummy Contact. Seat set at nearest detent position.
Seat position detent positions rearward of full forward

(full forward is position zero)

12. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
14. Measure and set the pelvic angle using the pelvic angle gage 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. (S16.3.3.1.11)
- 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. 21.3 degrees
15. Check the dummy for contact with the interior after completing adjustments. (S16.3.3.1.12)
- No contact.
- Dummy in contact with interior.
- Seat moved Aft mm from the previous position.
- Seat moved Aft detent positions from the previous position.
16. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- 16.1 Place feet flat on the toe board. OR
- 16.2 If the feet will not cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the heel as far forward on the floor pan as possible. OR
- 16.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
17. Passenger arm/hand positioning. (S16.3.3.3)
- 17.1 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)
- 17.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
- 17.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
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 – FAIL
- Air Bag Not Suppressed – Pass
19. Return the ignition switch to the "off" position.

C. Case, G. Fout,

I certify that I have read and performed each instruction.

10/09/02

Date

DATA SHEET 24

Low Risk Deployment Tests Using an Unbelted 5th Percentile Female
Dummy (Part 572, Subpart O) (S26)

NHTSA No. C30102

Test Date: 10/28/02

Laboratory: VRTC

Test Technician(s): G. Fout, A. Louden, B. Smith, C. Case

Dummy Serial No. 421

Reference Points and Planes. (S26)

- 1.1 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)
- 1.2 Position the steering wheel to the straight-ahead position. (S26.2.1)
- 1.3 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)
 - Plane E determined using manufacturer's information supplied by the COTR .
(Include manufacturer's information in the test report.)
 - OR
 - Plane E determined by test lab personnel and approved by the COTR.
(Include supporting documentation in the test report.)

"Plane E" Measurement	Measured	Specified	Verify Measured equals Specified +/- 6mm
Ey (mm)			

- 1.4 Locate the horizontal plane through the geometric center of the opening through which the driver air bag deploys into the occupant compartment. This is referred to as "Plane F." (Check determination method below.) (S26.2.6)
 - Plane F determined using manufacturer's information supplied by the COTR .
(Include manufacturer's information in the test report.)
 - OR
 - Plane F determined by test lab personnel and approved by the COTR.
(Include supporting documentation in the test report.)

"Plane F" Measurement	Measured	Specified	Verify Measured equals Specified +/- 6mm
Fz (mm)			

- 1.5 Mark a point on the chin of the dummy 40 mm below the center of the mouth. (Chin Point) (S26.2.6)

2.0 Position 1. Chin On Module. (S26.2)

- 2.1. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S26.2.3)
 N/A – No lumbar adjustment
- 2.2. 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
- 2.3. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S26.2.3)
 N/A – No independent fore-aft seat cushion adjustment
- 2.4. If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position.
 N/A – No independent seat cushion height adjustment.
- 2.5. If the seat cushion angle adjusts independent of the seat back, set this adjustment to the mid-point angle. (S26.2.3)
 N/A – No independent seat cushion angle adjustment.
- 2.6. Put the seat in its full rearward position. (S26.2.3)
 N/A - the seat does not have a fore-aft adjustment
- 2.7. If the seat height is adjustable, put it in the mid-height position. (S26.2.3)
 N/A – No seat height adjustment
- 2.8. 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. (S26.2.3 and S8.1.3)
 N/A – No seat back angle adjustment
- | | |
|---------------------------------------|-------------|
| Manufacturer's design seat back angle | <u>15.5</u> |
| Tested seat back angle | <u>15.9</u> |
- 2.9. If adjustable, set the head restraint at the full down and full forward position. (S26.2.3 and S16.3.4.4) 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
- 2.10. Position a calibrated Part 572 Subpart O 5th percentile female dummy in the driver's seat (S26.2.4)
- 2.11. Position the dummy such that its midsagittal plane is coincident with Plane E. (S26.2.4.1)
- 2.12. Position the dummy's legs to a vertical orientation and place the back of the legs in contact with the seat cushion. (S26.2.4.2) THE HEELS HIT THE RAISED FLOOR PAN SO THE LEGS WERE NOT QUITE VERTICAL.
- 2.13. 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.) THE STEERING WHEEL ANGLE WAS 22.9 DEGREES.
- 2.14. Set the initial transverse distance between the longitudinal centerlines at the front of the dummy's knees at 160 to 170 mm (6.3 to 6.7 in), with the thighs and legs of the dummy in vertical planes. (S26.2.4.4) THE SET DISTANCE WAS 165.1 MM.
- 2.15. Position the upper arms parallel to the torso, and place the hands in contact with the thighs. (S26.2.4.5)
- 2.16. Move the dummy forward on the seat, maintaining the thorax instrument cavity angle, until the dummy head/torso contacts the steering wheel. (S26.2.5) Adjust the dummy legs the minimum amount necessary to ensure torso/head contact with the steering wheel when the dummy is moved forward. (S26.2.4.2)
 Leg adjustments needed

2.17 Adjust the dummy position vertically until Chin Point coincides with Plane F. Adjust the fore/aft 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)

Chin Point Lies within Plane F. Height of Chin Point. _____ mm

____ Seat interfered with positioning. Height of Chin Point. _____ mm

____ 2.18 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 for the upper torso of the dummy. The material should support the torso rather than the head and should not interfere with the airbag (S26.2.7)

____ Photograph final setup and record position.

Thorax Cavity Angle 53 degrees

Chin Point Height 9 mm

____ 2.19 Record the Airbag deployment and timing requirements in the chart below.

Number of stages for this test. 1

Stage No.	Firing Time (msec) *	Recorded Firing Time (msec)
1	0.0 msec (Time Zero)	
2	N/A	

* Firing time is measured from Time Zero for all stages

2.20 Connect dummy instrumentation to the test data acquisition system and verify channel operation.

2.21 Connect the airbag to the airbag firing system per the manufacturer's instructions, provided by the COTR.

2.22 Prepare the high-speed video/film cameras.

2.23 Fire the airbag per the table above and record the data from the dummy instrumentation.

2.24 Photograph the post-test results

NA 2.25 Verify recorded firing times match specified firing times +/- 2 milliseconds.

2.26 Record injury values for this test.

	FMVSS 208 Maximum Allowable Injury Assessment Value	Measured Value Dummy Serial No. <u>421</u>
HIC ₁₅	700	25
Chest Acceleration	60 g	12
Chest Displacement	52 mm	4
Peak Nij (Nte)	1.0	0.1
Peak Nij (Ntf)	1.0	0.3
Peak Nij (Nce)	1.0	0.0
Peak Nij (Ncf)	1.0	0.3
Neck Tension (Fz)	2070 N	249
Neck Compression (Fz)	2520 N	225
Left femur	6805	70
Right femur	6805	62

3.0 Position 2. Chin On Rim. (S26.3)
NOT PERFORMED ON THIS VEHICLE

- 3.1. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S26.3.1)
 N/A – No lumbar adjustment
- 3.2. 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)
 N/A – No additional support adjustment
- 3.3. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S26.3.1)
 N/A – No independent fore-aft seat cushion adjustment
- 3.4. If the seat cushion height adjusts independent of the seat back, set this adjustment to the full down position.
 N/A – No independent seat cushion height adjustment.
- 3.5. If the seat cushion angle adjusts independent of the seat back, set this adjustment to the mid-point angle. (S26.3.1)
 N/A – No independent seat cushion angle adjustment.
- 3.6. Put the seat in its full rearward position. (S26.3.1)
 N/A – the seat does not have a fore-aft adjustment
- 3.7. If the seat height is adjustable, put it in the mid-height position. (S26.3.1)
 N/A – No seat height adjustment
- 3.8. 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 _____
 Tested seat back angle _____
- 3.9. If adjustable, set the head restraint at the full down and full forward position. (S26.3.1 and S16.3.4.4)
 N/A – No head restraint adjustment
- 3.10. Position a calibrated Part 572 Subpart O 5th percentile female dummy in the driver's seat (S26.3.4)
- 3.11. Position the dummy such that its midsagittal plane is coincident with Plane E. (S26.3.4.1)
- 3.12. Position the dummy's legs to a vertical orientation and place the back of the legs in contact with the seat cushion. (S26.3.4.2)
- 3.13. 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.) (S26.3.4.3.)
 Steering wheel angle _____ degrees
 Thorax cavity angle _____ degrees
- 3.14. Set the initial transverse distance between the longitudinal centerlines at the front of the dummy's knees at 160 to 170 mm (6.3 to 6.7 in), with the thighs and legs of the dummy in vertical planes. (S26.3.4.4)
- 3.15. Position the upper arms parallel to the torso, and place the hands in contact with the thighs. (S26.3.4.5)
- 3.16. Move the dummy forward on the seat, maintaining the thorax instrument cavity angle, until the dummy head/torso 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. (S26.3.4.2)
 Log adjustments needed

- ___ 3.17 Adjust the dummy position vertically until the Chin Point 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 3.20. If the seat prevents placing the Chin Point coincident the upper steering wheel rim proceed to 3.18. If the dummy contacts the windshield or upper interior, proceed to step 3.19. (S26.3.6)

___ Chin Point contacts upper steering wheel rim.

Height of Chin Point _____mm

___ Vehicle interfered with positioning.

- ___ 3.18 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 3.13. If contact is still not achieved, position the chin point as close as possible to the upper steering wheel rim. Proceed to step 3.20. (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

- ___ 3.19 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 3.13. 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 maximum of 5 mm (0.2 inches) between the dummy and the windshield or upper interior. Proceed to step 3.20. (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

- ___ 3.20 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 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 _____degrees

Chin Point Height _____mm

- ___ 3.21 Record the Airbag deployment and timing requirements in the chart below.

Number of stages for this test. _____

Stage No.	Firing Time (msec) *	Recorded Firing Time (msec)
1	0.0 msec (Time Zero)	

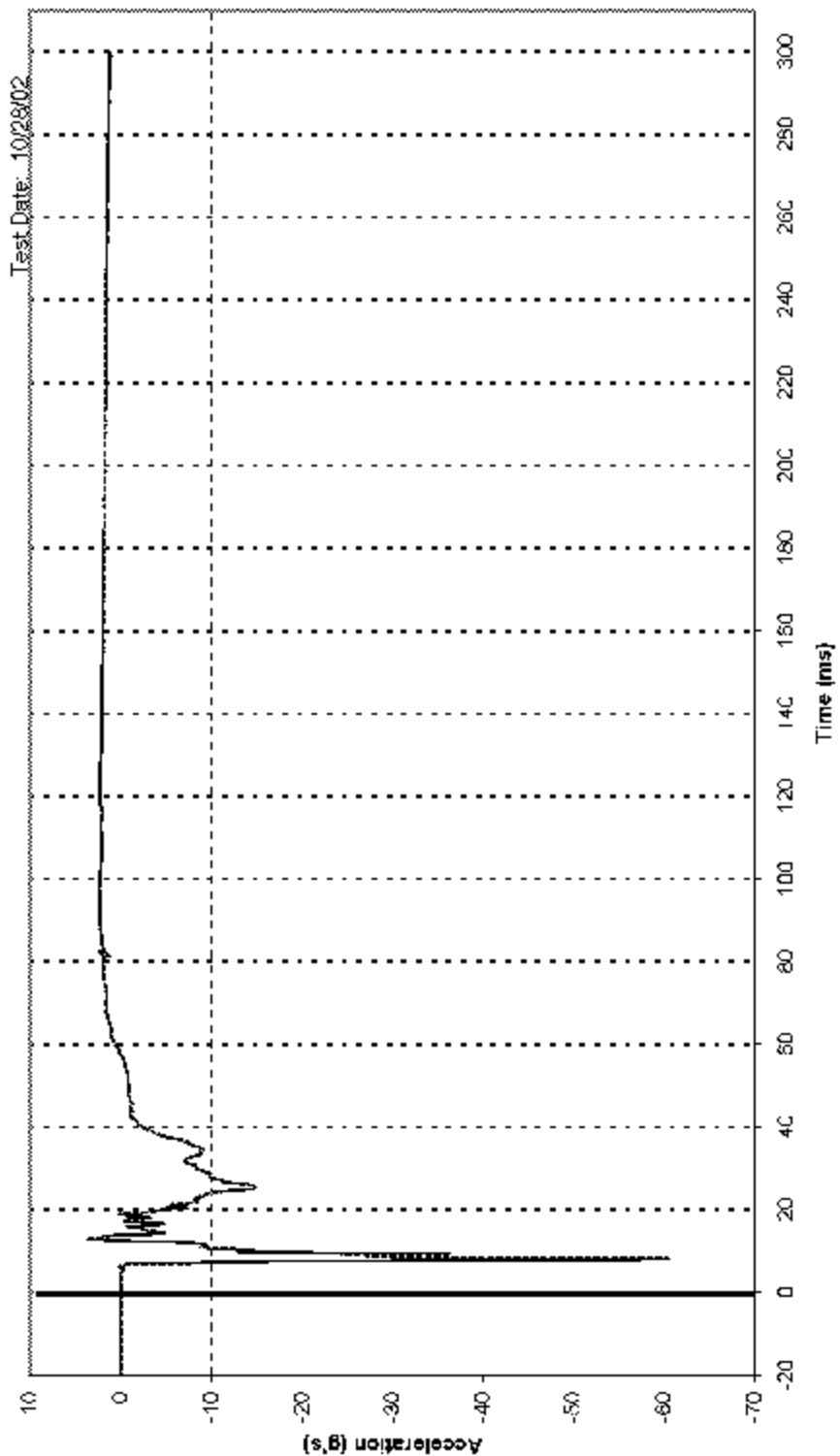
* Firing time is measured from Time Zero for all stages

- ___ 3.22 Connect dummy instrumentation to the test data acquisition system and verify channel operation.
- ___ 3.23 Connect the airbag to the airbag firing system per the manufacturer's instructions, provided by the COTR.
- ___ 3.24 Prepare the high-speed video/film cameras.
- ___ 3.25 Fire the airbag per the table above and record the data from the dummy instrumentation.
- ___ 3.26 Photograph the post-test results
- ___ 3.27 Verify recorded firing times match specified firing times +/- 2 milliseconds.
- ___ 3.28 Record injury values for this test.

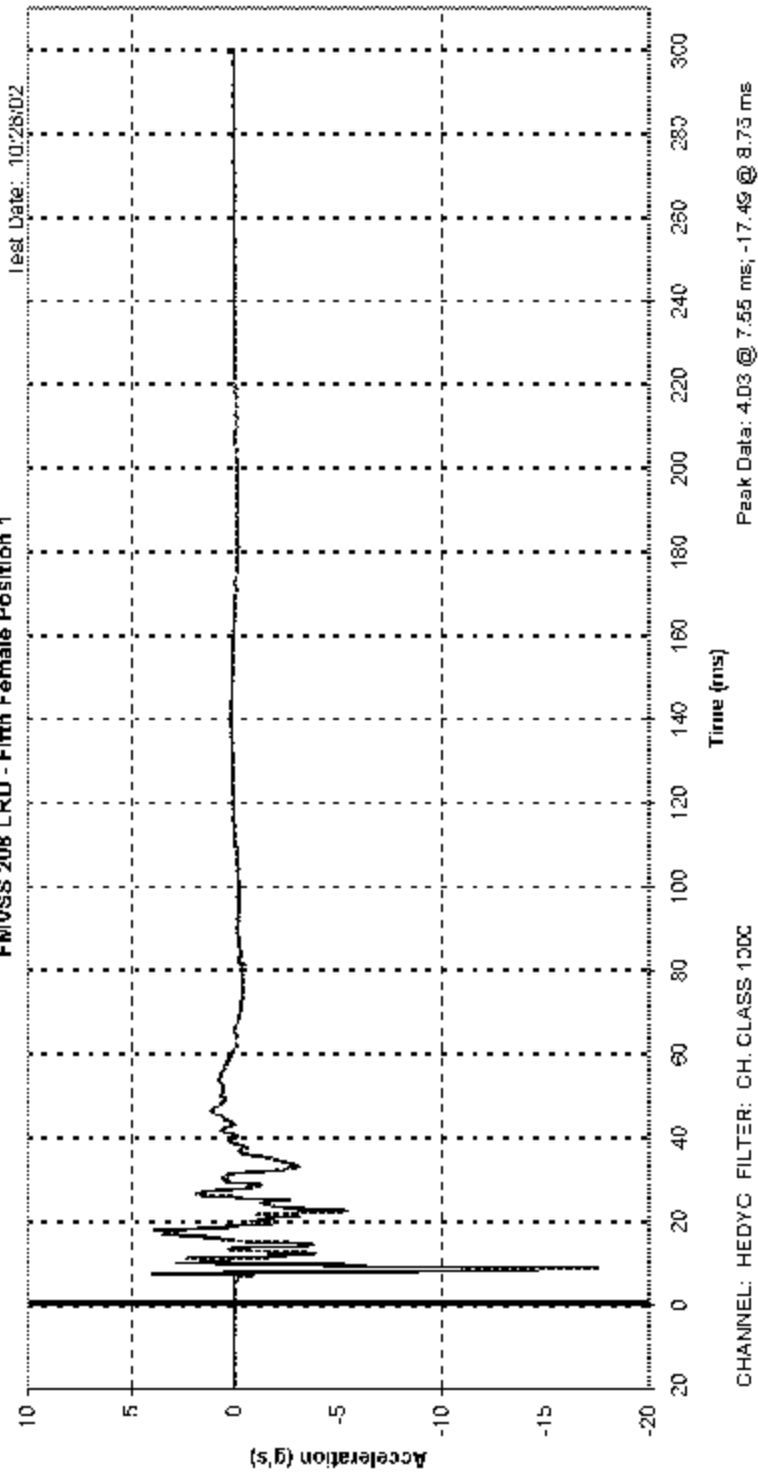
	FMVSS 208 Maximum Allowable Injury Assessment Value	Measured Value Dummy Serial No.
HIC ₁₅	700	
Chest Acceleration	60 g	
Chest Displacement	52 mm	
Peak Nij (Nte)	1.0	
Time (ms)	NA	
Peak Nij (Ntf)	1.0	
Time (ms)	NA	
Peak Nij (Nce)	1.0	
Time (ms)	NA	
Peak Nij (Ncf)	1.0	
Time (ms)	NA	
Neck Tension (Fz)	2070 N	
Neck Compression (Fz)	2520 N	

Section 6
Test Data

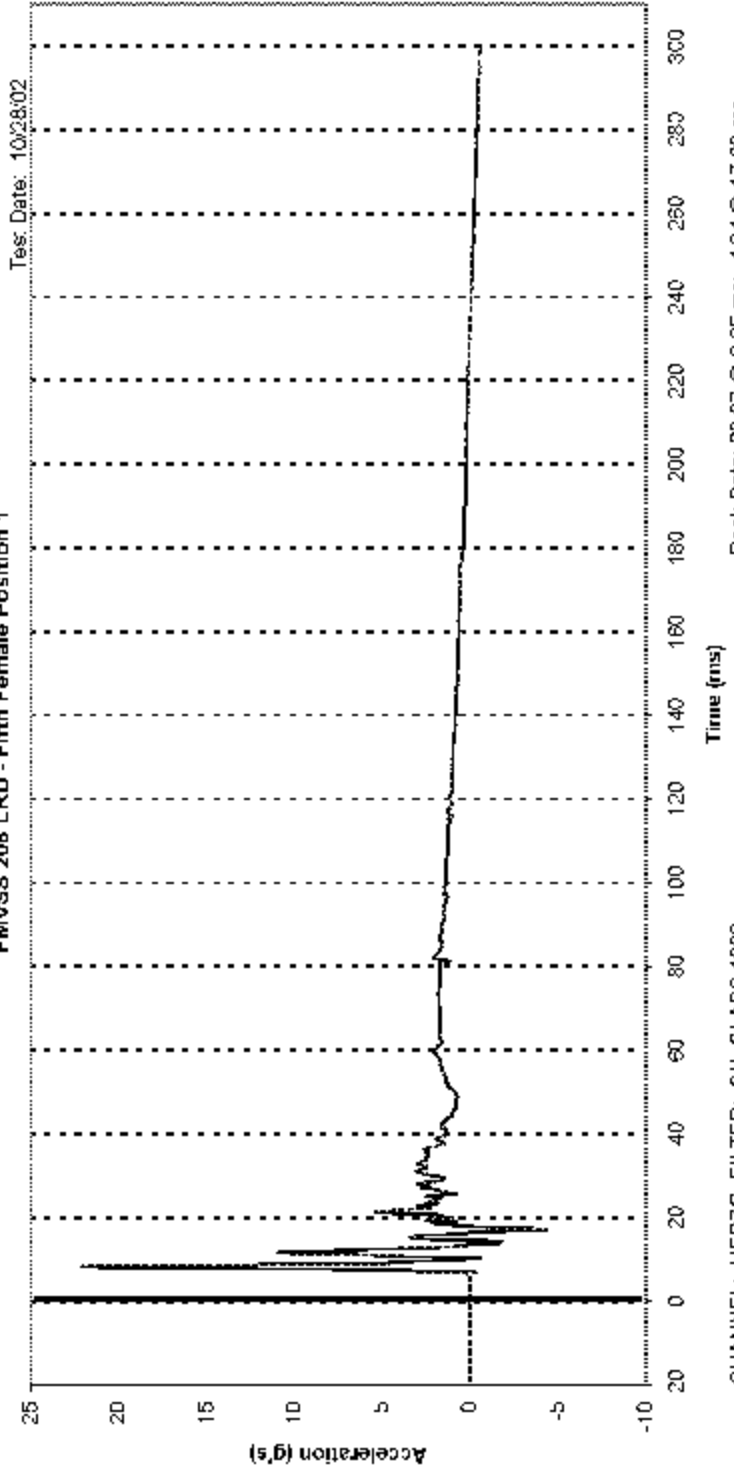
C30102 / 2003 Chevrolet Silverado
Head X-Axis Acceleration - HEDXG
FMVSS 208 LRD - Fifth Female Position 1



C30102 | 2003 Chevrolet Silverado
Head Y-Axis Acceleration - HEDYG
FMVSS 208 LRD - Fifth Female Position 1



C30102 | 2003 Chevrolet Silverado
Head Z-Axis Acceleration - HEDZG
FMVSS 208 LRD - Fifth Female Position 1



CHANNEL: HEDZG FILTER: CH. CLASS 1000

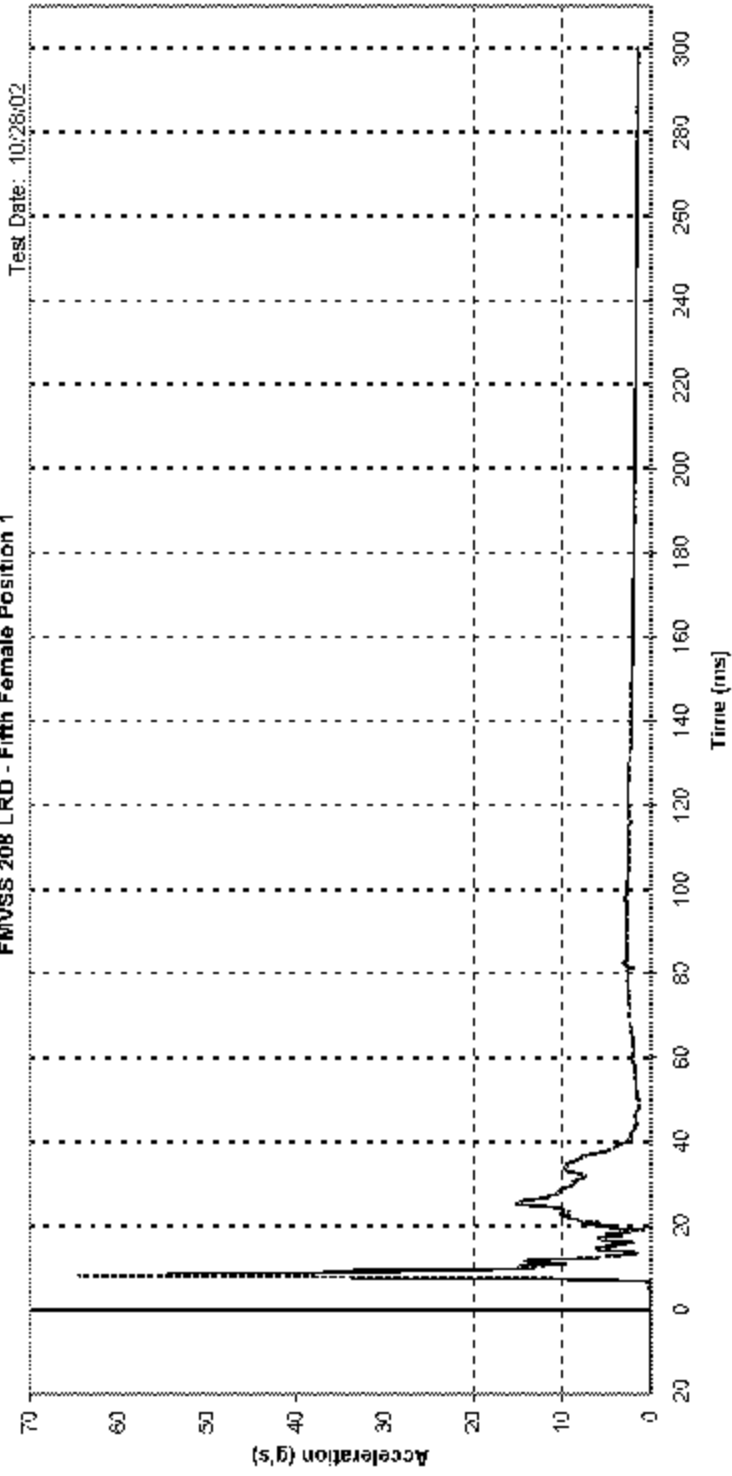
Peak Data: 22.07 @ 8.25 ms: -4.34 @ 17.00 ms

Test Date: 10/28/02

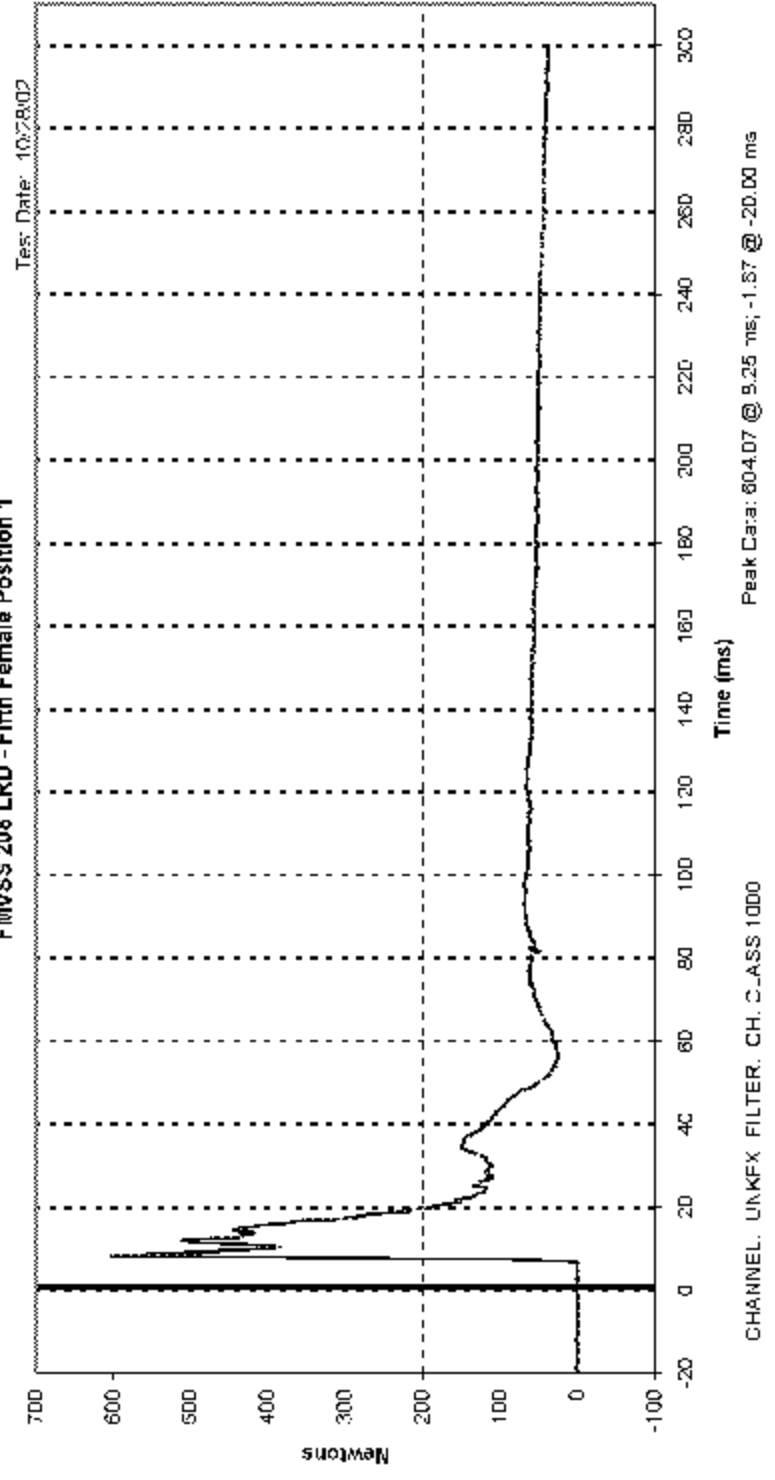
C30102 | 2003 Chevrolet Silverado

Head Resultant - HEDRG

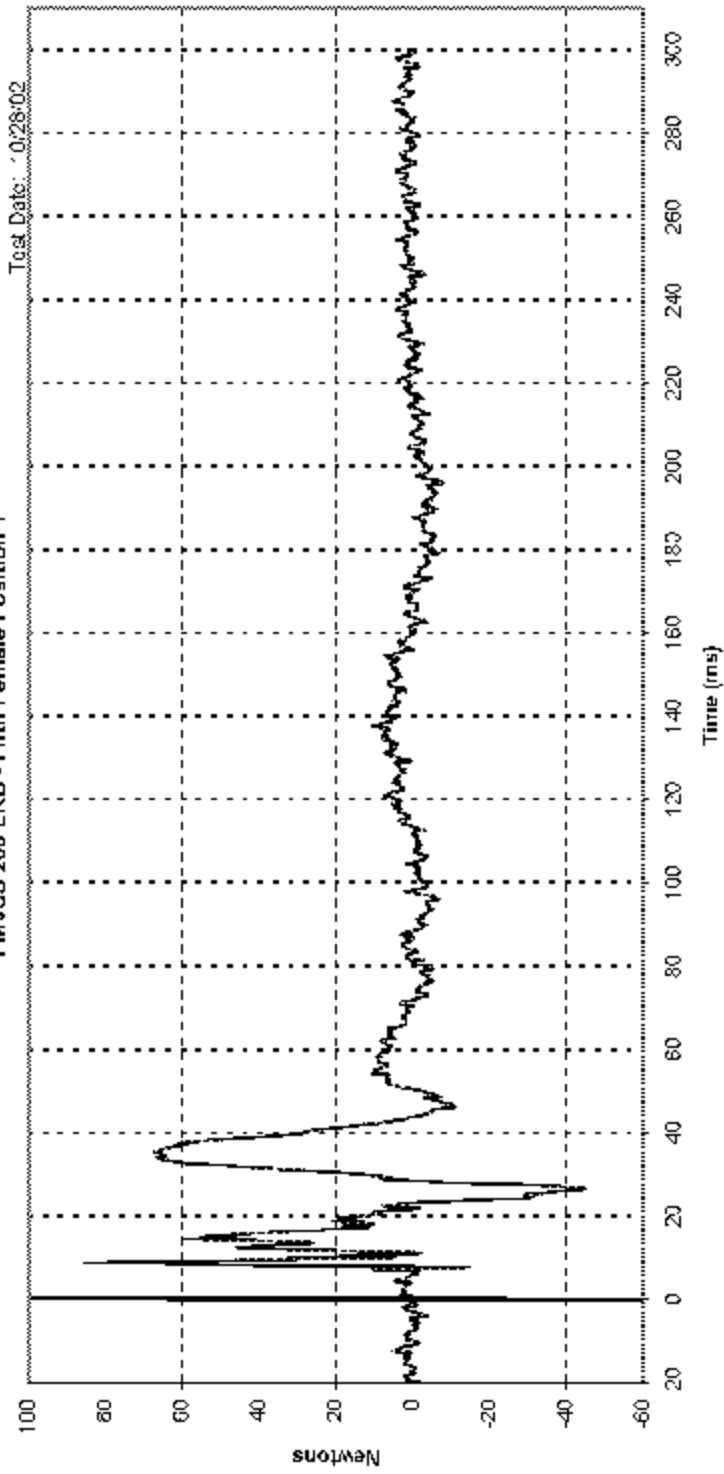
FMVSS 208 LRD - Fifth Female Position 1



C30102 / 2003 Chevrolet Silverado
Upper Neck FX - UNKFX
FIMVSS 208 LRD - Fifth Female Position 1



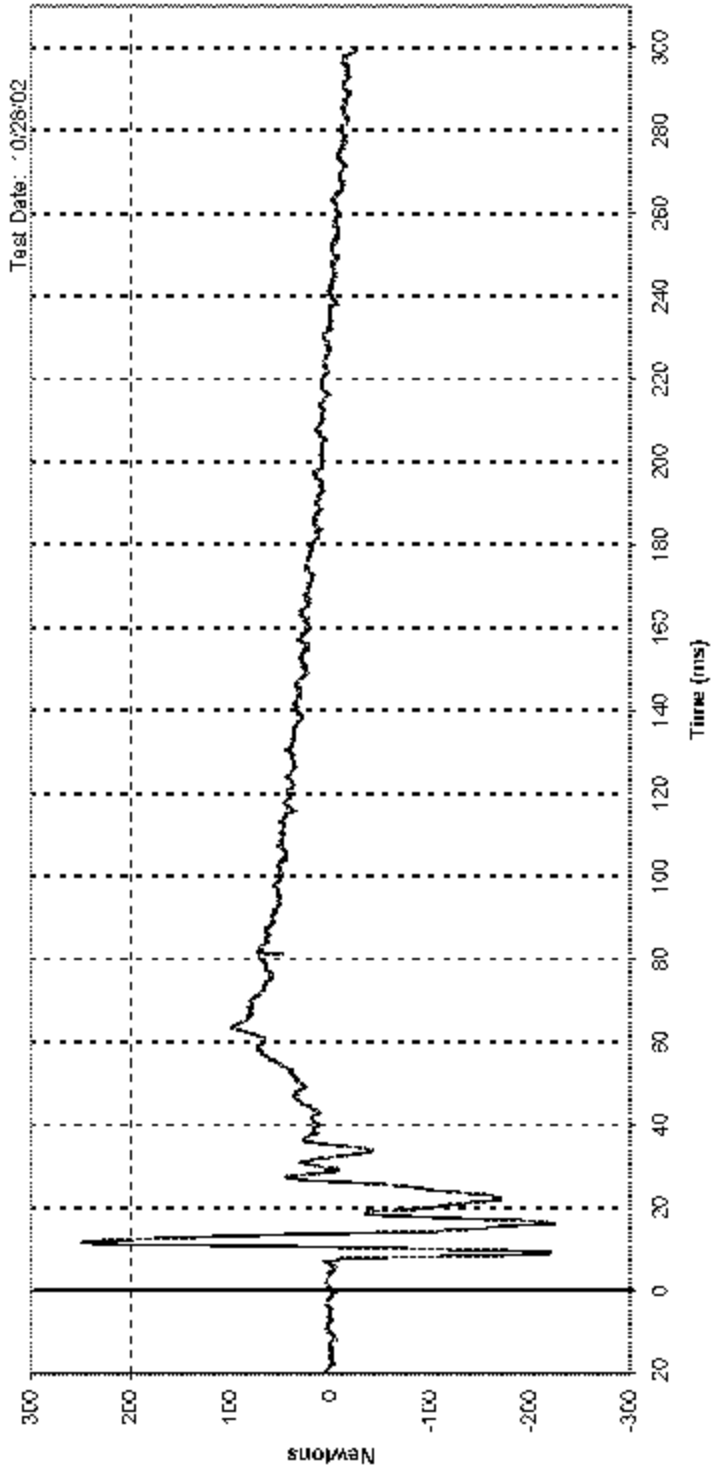
C30102 / 2003 Chevrolet Silverado
Upper Neck FY - UNKFY
FMVSS 208 LRD - Fifth Female Position 1



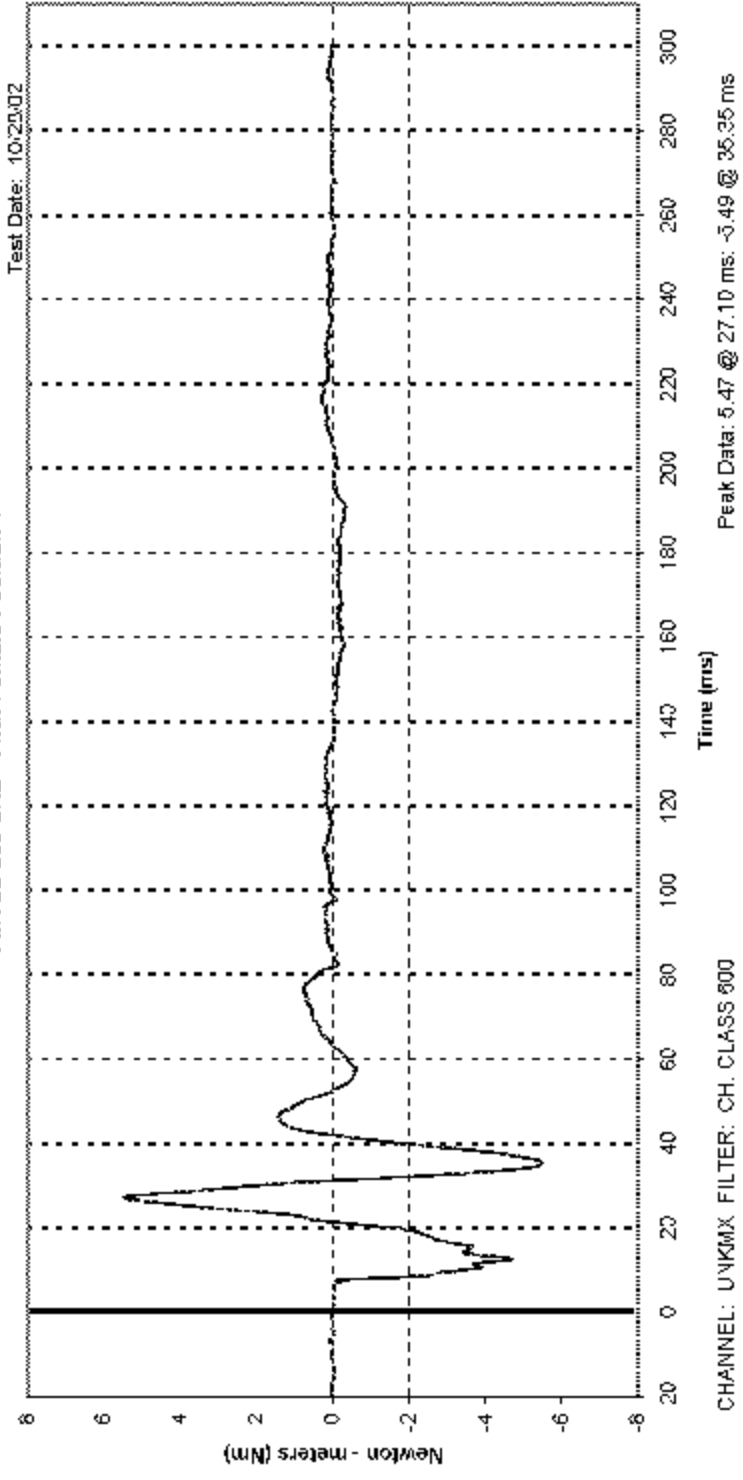
Peak Data: 65.46 @ 8.80 ms: -44.85 @ 26.50 ms

CHANNEL: UNKFY FILTER: CF. CLASS 1000

C30102 / 2003 Chevrolet Silverado
Upper Neck FZ - UNKFZ
FMVSS 208 LRD - Fifth Female Position 1



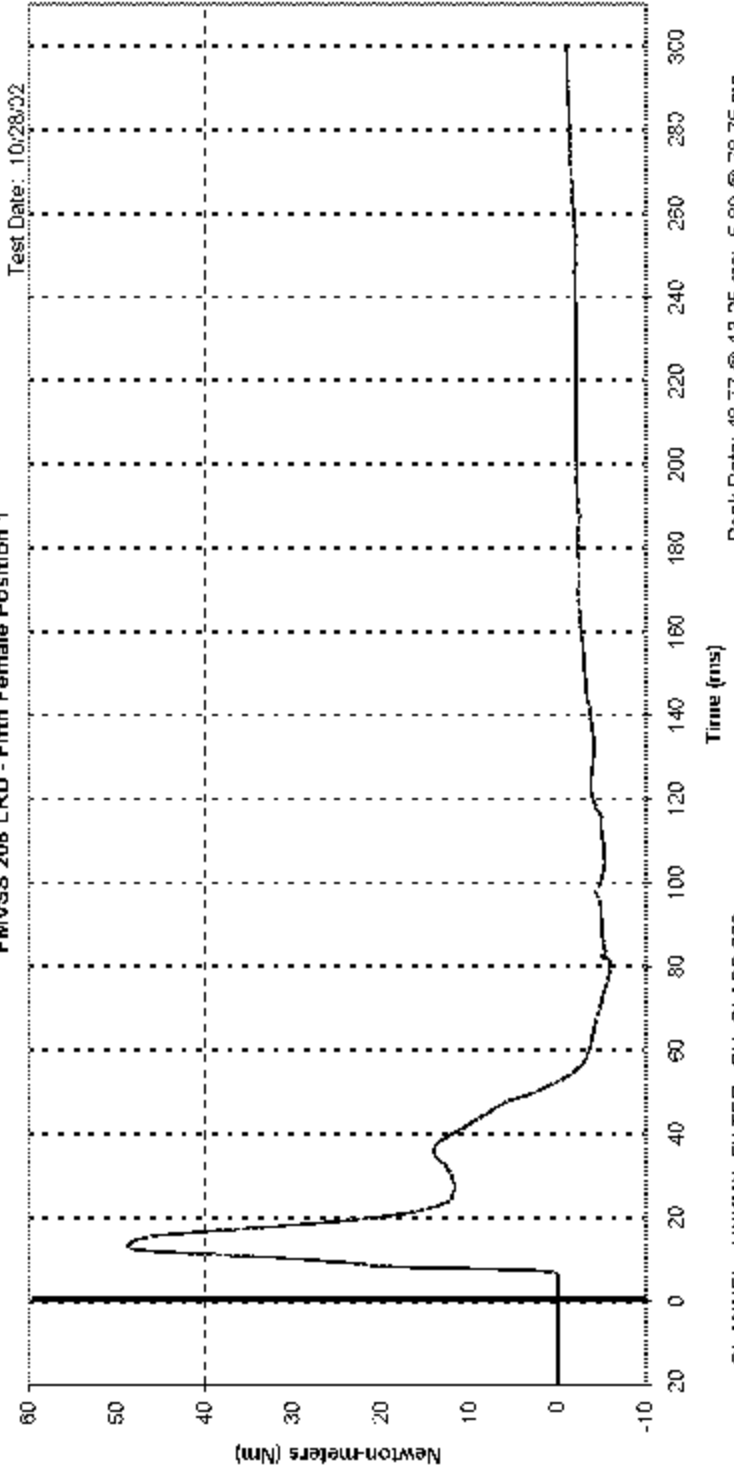
C30102 | 2003 Chevrolet Silverado
Upper Neck IMX - UNKMX
FMVSS 208 LRD - Fifth Female Position 1



C30102 | 2003 Chevrolet Silverado

Upper Neck MY - UNIKMY

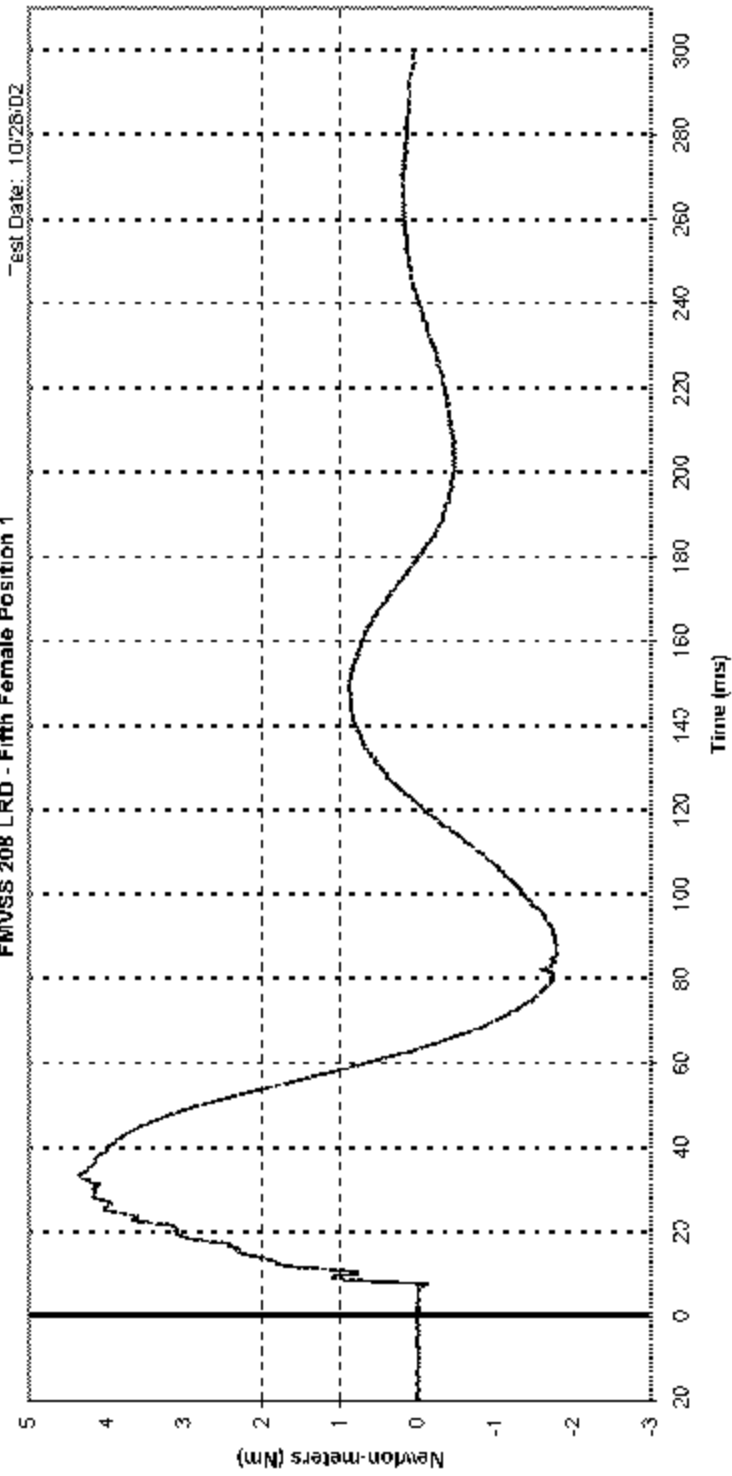
FMVSS 208 LRD - Fifth Female Position 1



C330102 / 2003 Chevrolet Silverado

Upper Neck MZ - UNKMZ

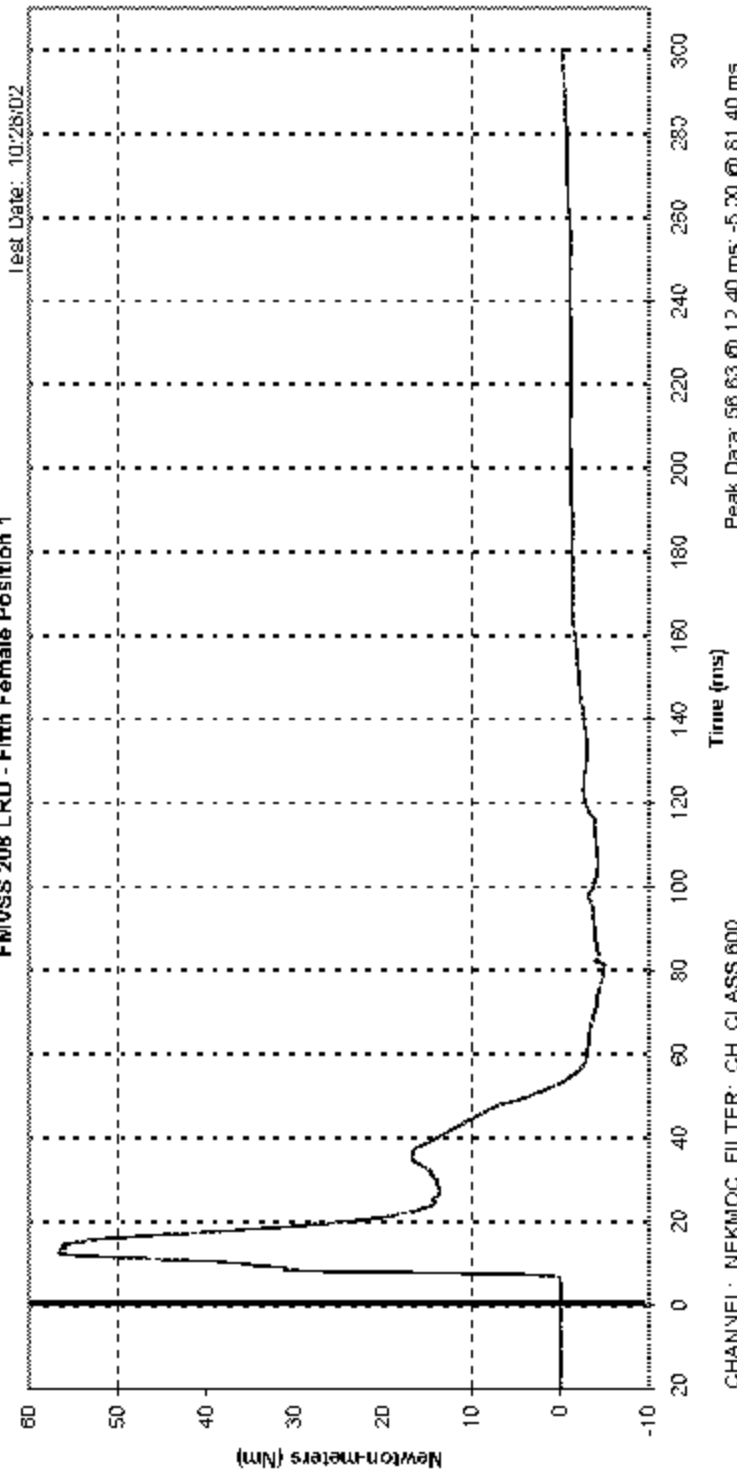
FMVSS 208 LRD - Fifth Female Position 1



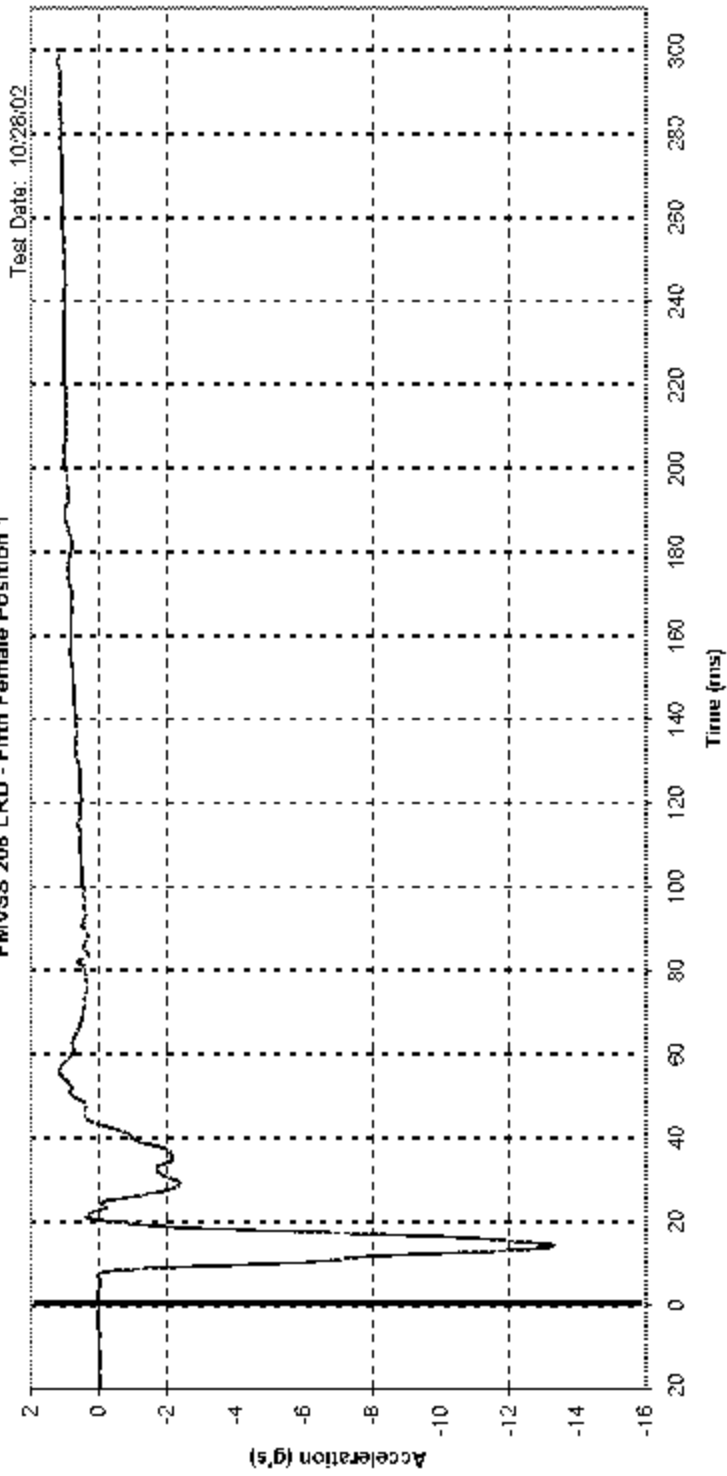
CHANNEL: UNKMZ FILTER: CH. CLASS 600

Peak Data: 4.35 @ 33.50 ms; -1.79 @ 85.80 ms

C30102 | 2003 Chevrolet Silverado
Upper Neck Occipital - NEKMOC
FMVSS 208 LRD - Fifth Female Position 1



C30102 / 2003 Chevrolet Silverado
Chest X-Axis Acceleration - CSTXC
FMVSS 208 LRD - Fifth Female Position 1

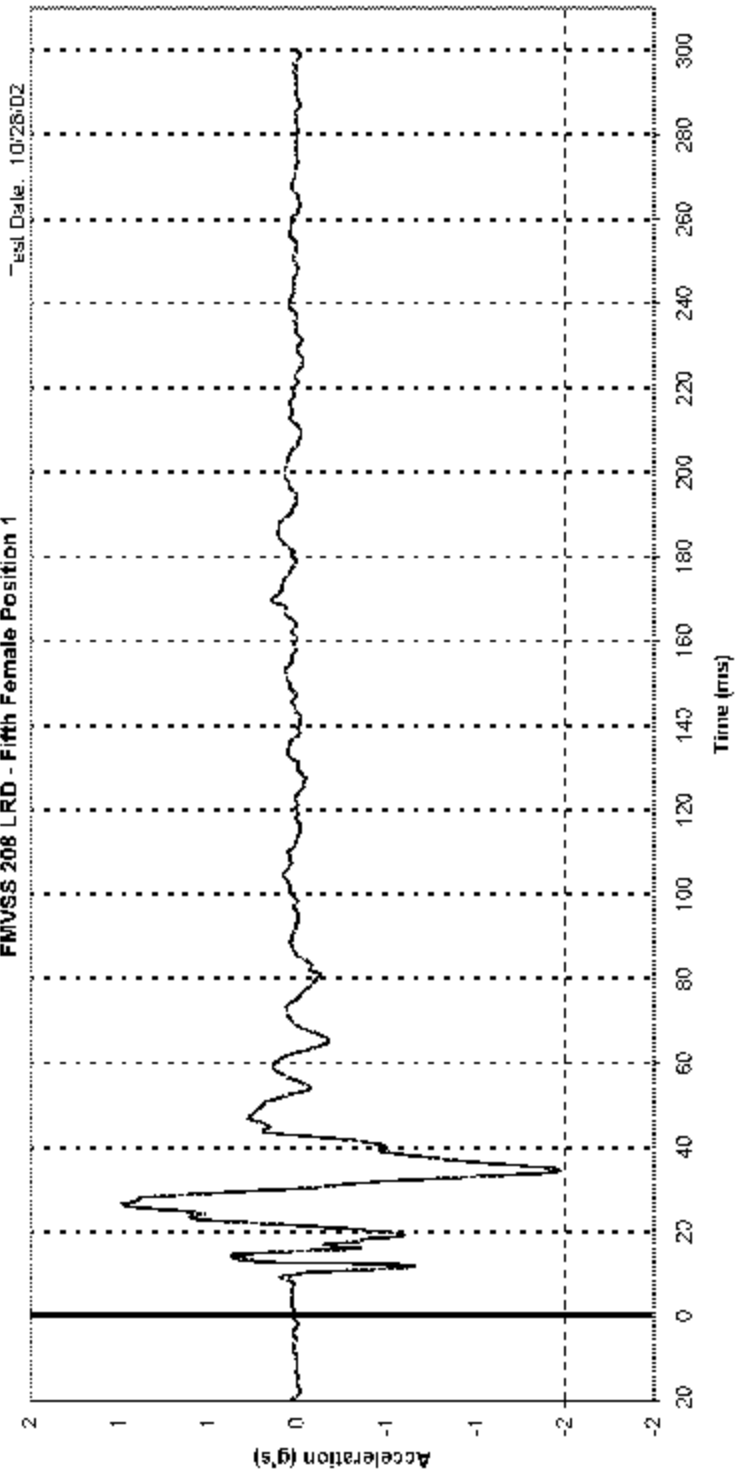


CHANNEL CSTXC FILTER: CH. CLASS 180

Peak Data: 1.21 @ 201.25 ms; -13.30 @ 14.25 ms

Test Date: 10/28/02

C30102 / 2003 Chevrolet Silverado
Chest Y-Axis Acceleration - CSTYG
FMVSS 208 LRD - Fifth Female Position 1

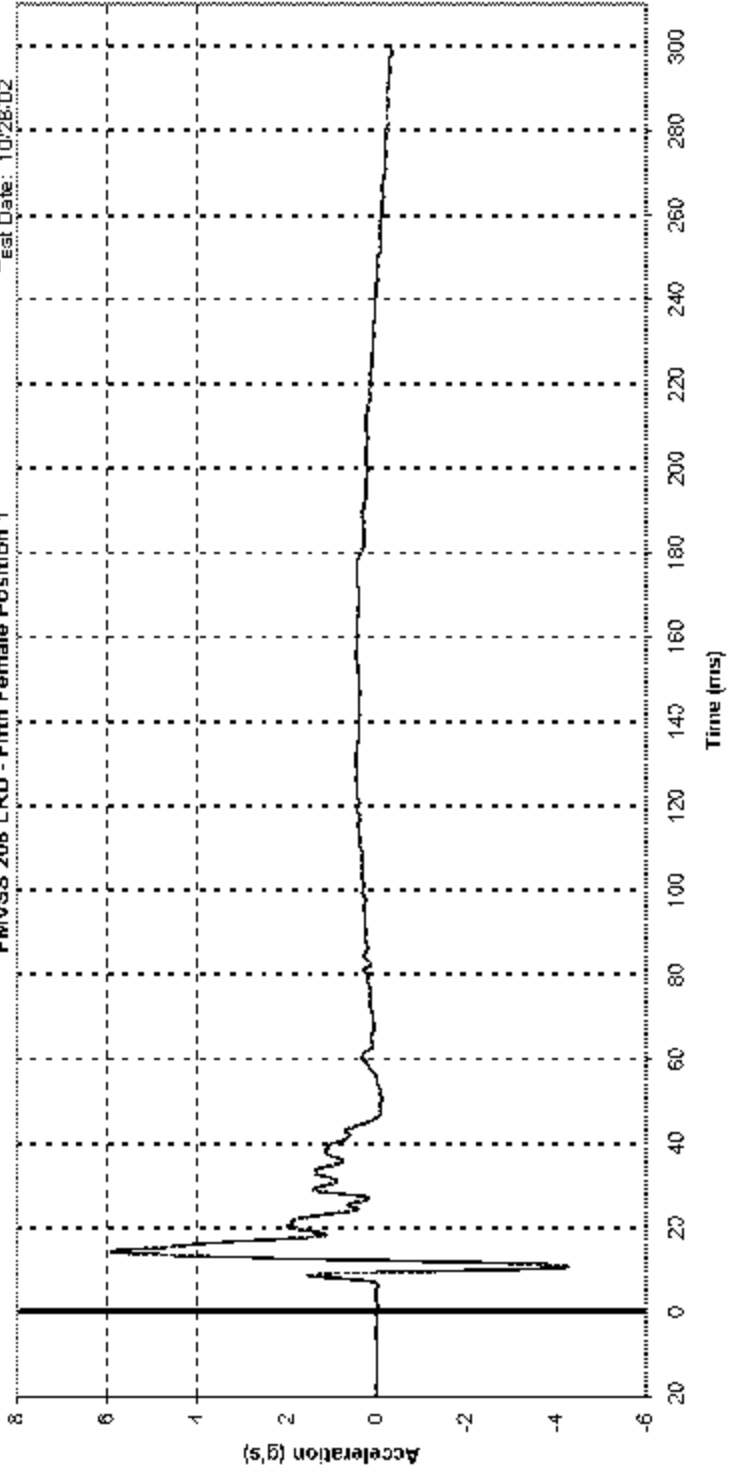


C30102 / 2003 Chevrolet Silverado

Chest Z-Axis Acceleration - CSTZG

FMVSS 208 LRD - Fifth Female Position 1

Test Date: 10/28/02

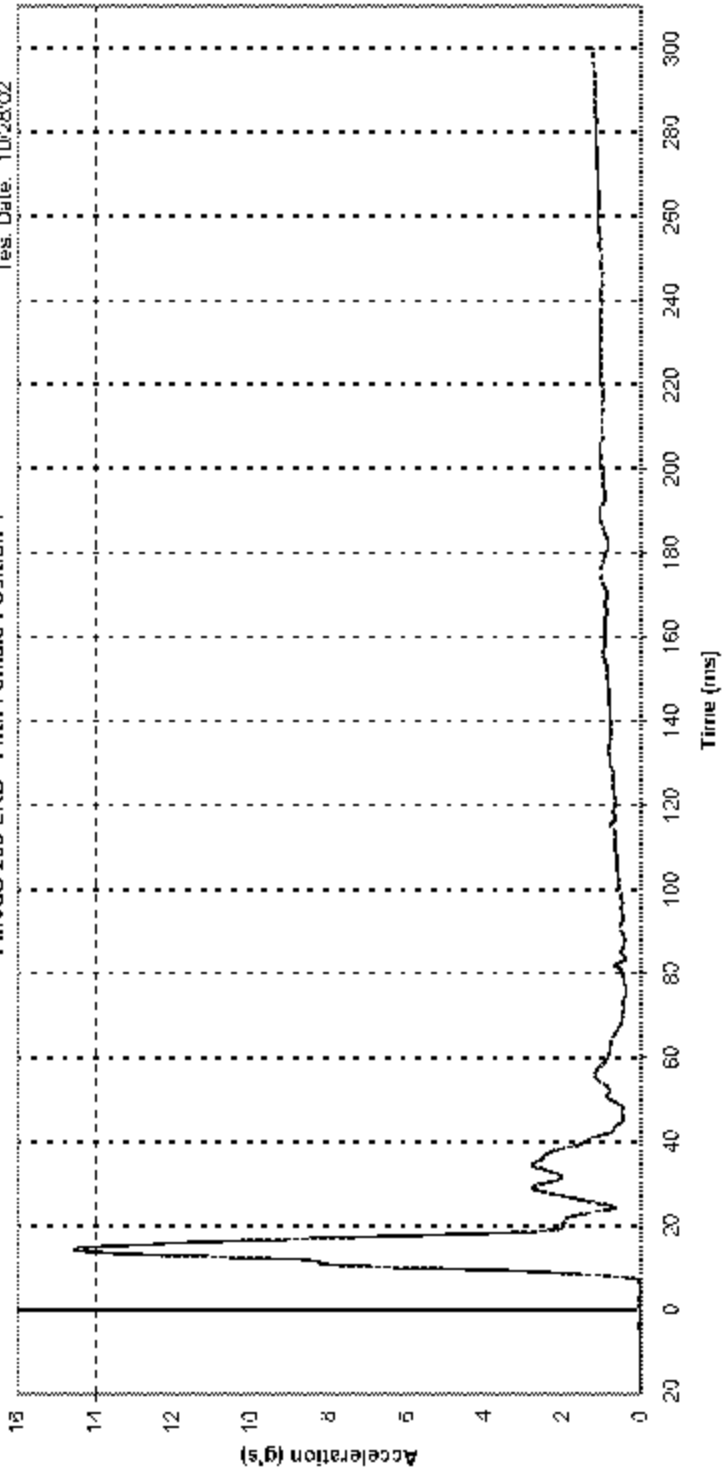


C30102 / 2003 Chevrolet Silverado

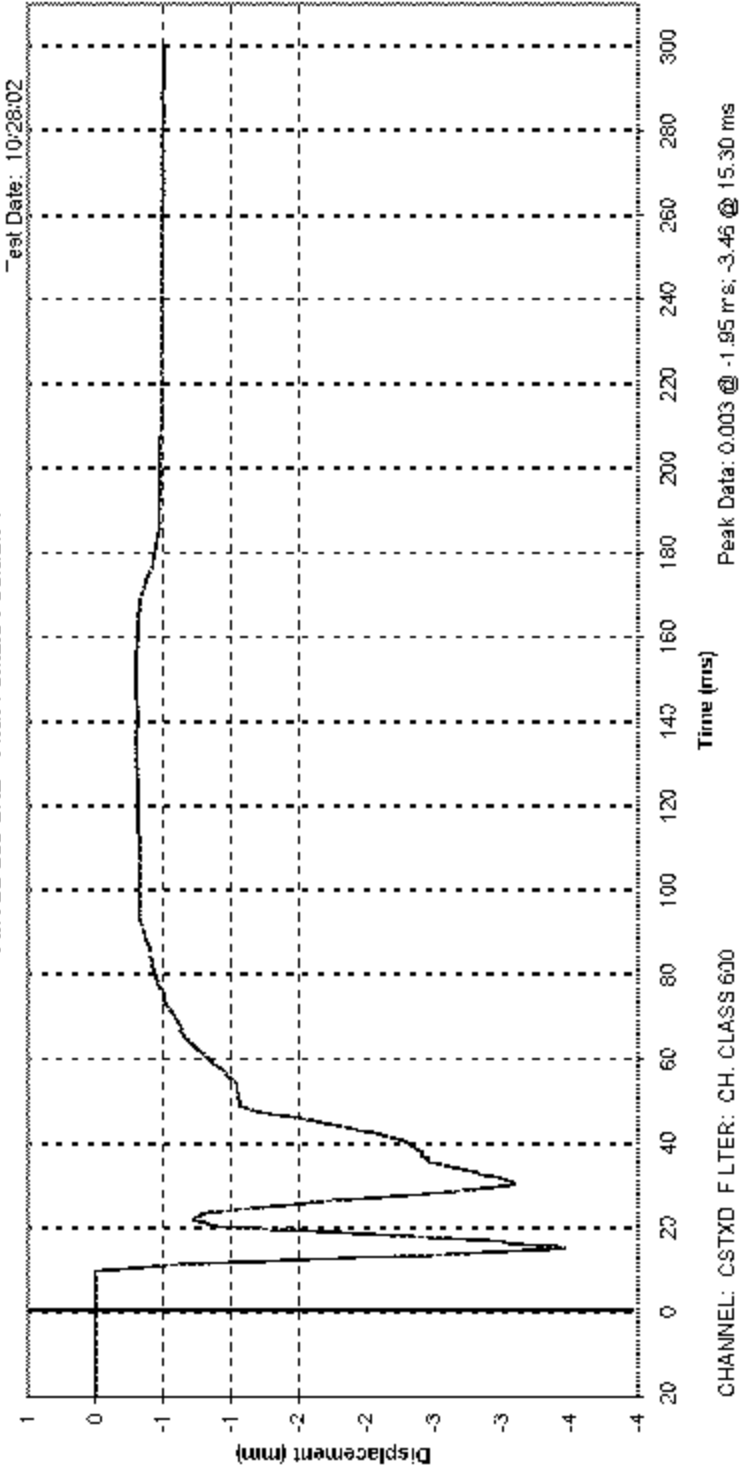
Chest Resultant - CSTRG

FMVSS 208 LRD - Fifth Female Position 1

Test Date: 10/28/02



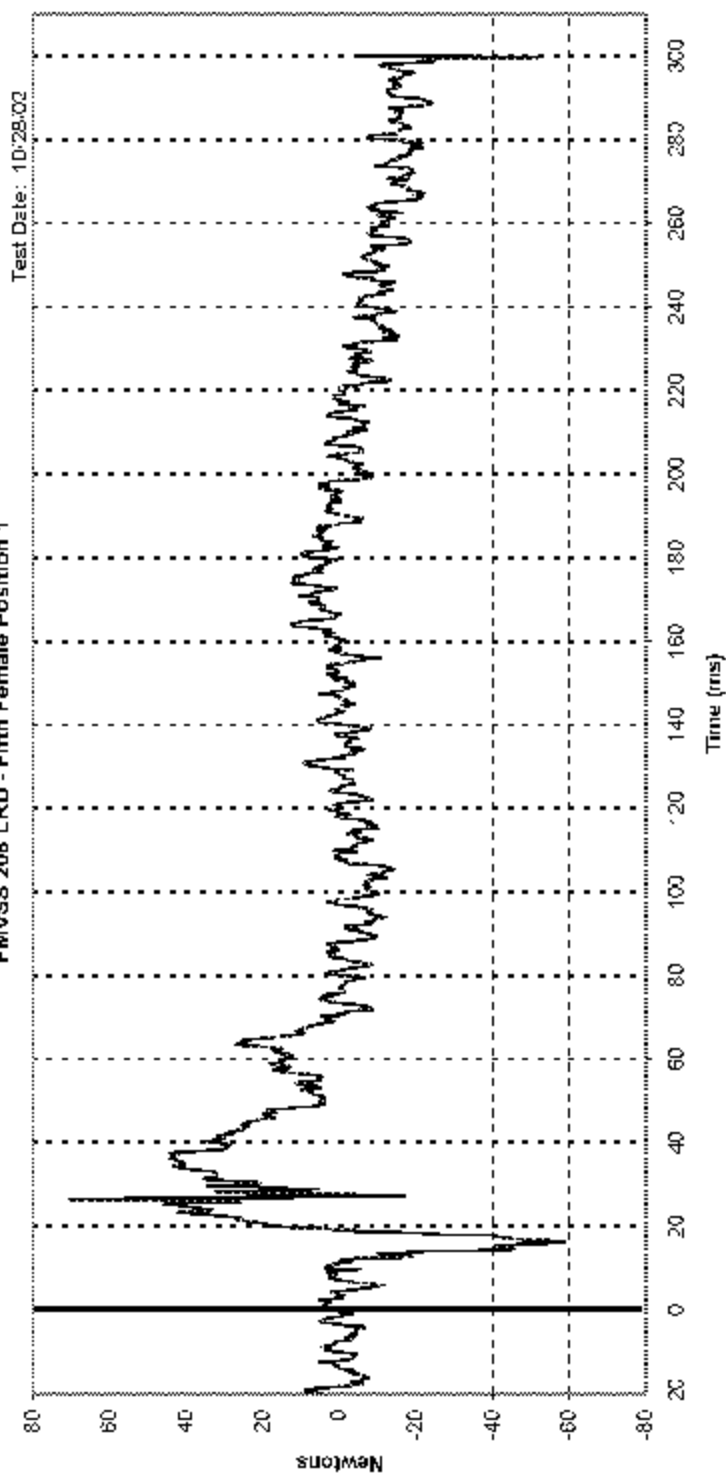
C30102 / 2003 Chevrolet Silverado
Chest Deflection - CSTXD
FMVSS 208 LRD - Fifth Female Position 1



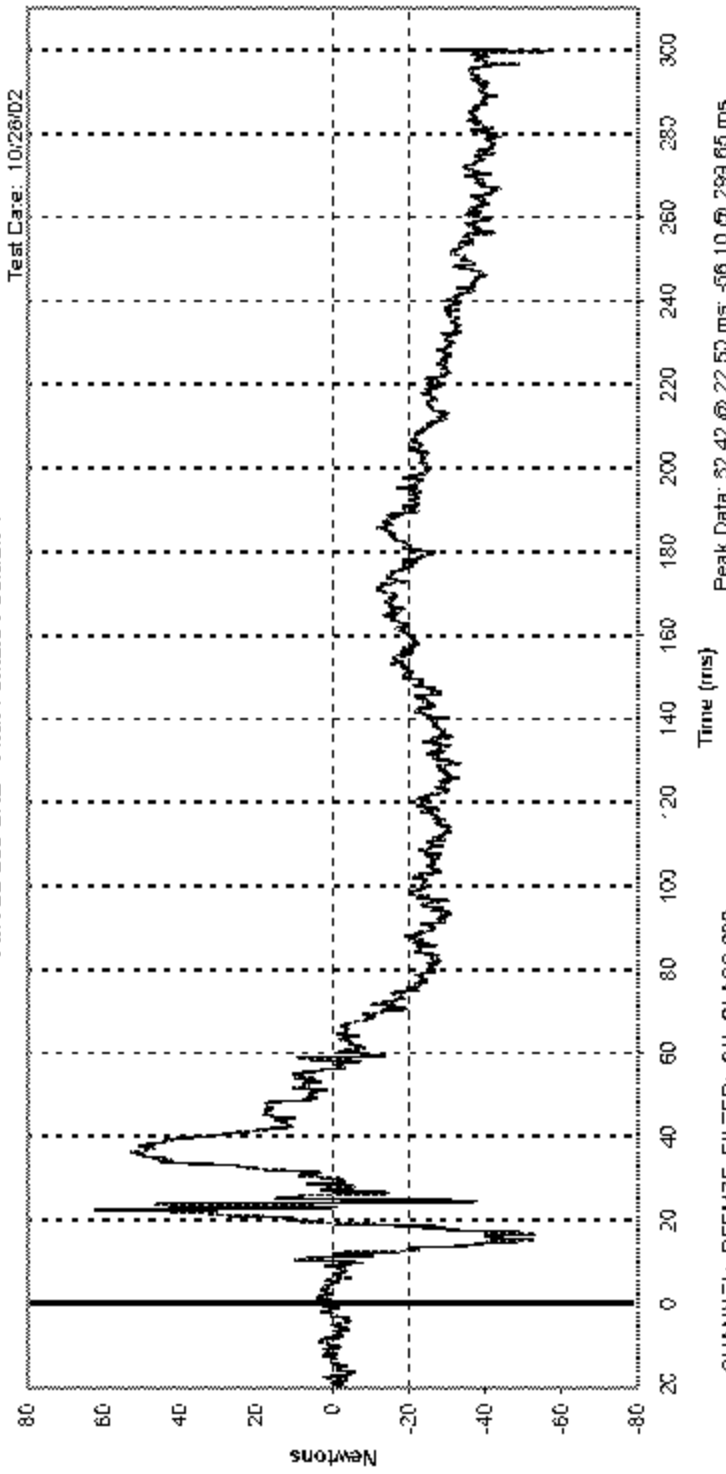
C330102 / 2003 Chevrolet Silverado

Left Femur FZ - LFEMZF

FMVSS 208 LRD - Fifth Female Position 1



C30102 | 2003 Chevrolet Silverado
Right Femur Force FZ - RFEMZF
FMVSS 208 LRD - Fifth Female Position 1



Section 7

Photographs

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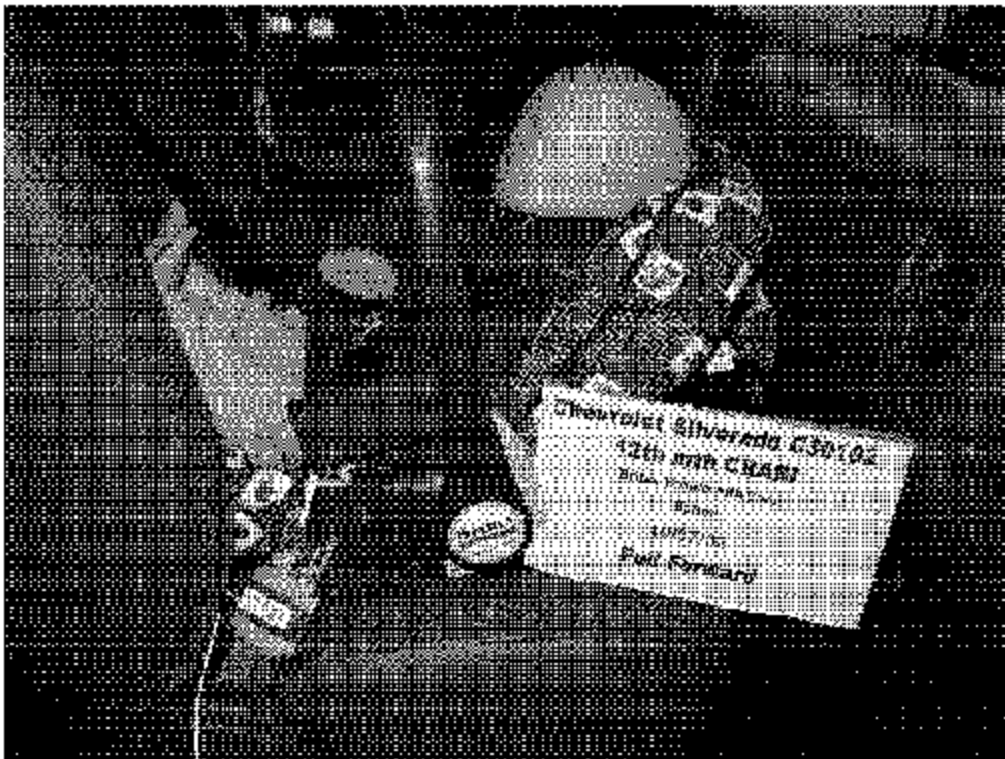


Figure 7-1: Britax Handle with Care, Handle Up, Belted, Full Forward Seat Position



Figure 7-2: Britax Handle with Care, Handle Down, Belted, Full Forward Seat Position

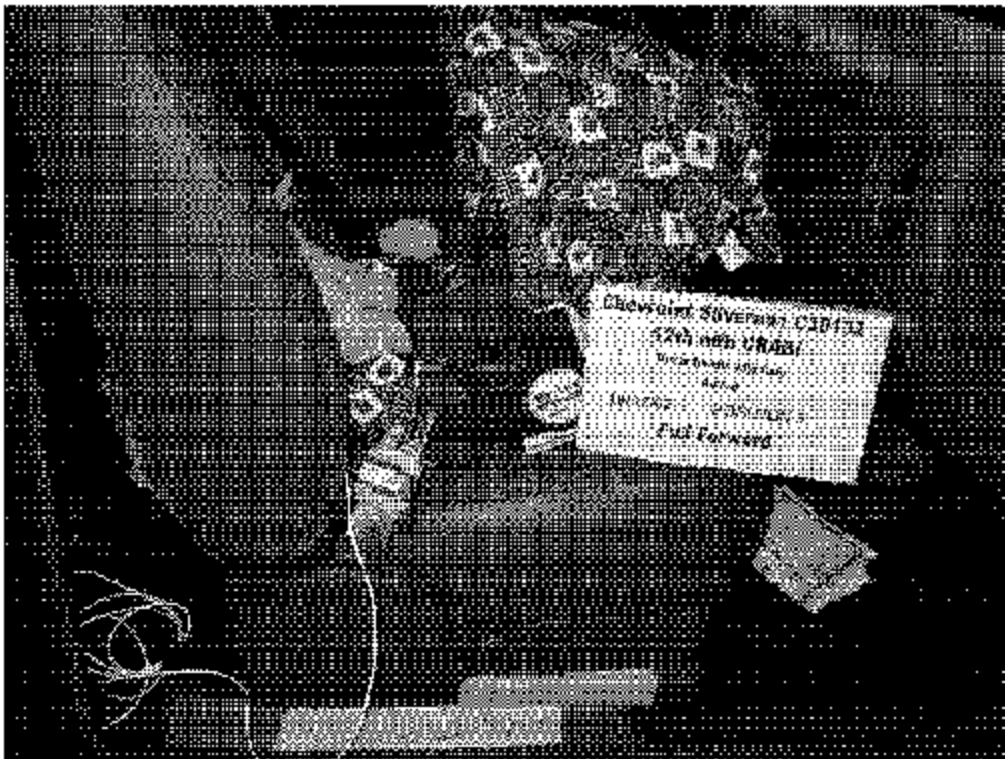


Figure 7-3: Britax Handle with Care. Sun Shield Up, Belted, Full Forward Seat Position



Figure 7-4. Britax Handle with Care. Sun Shield Up. Blanket Position I, Belted, Full Forward Seat Position

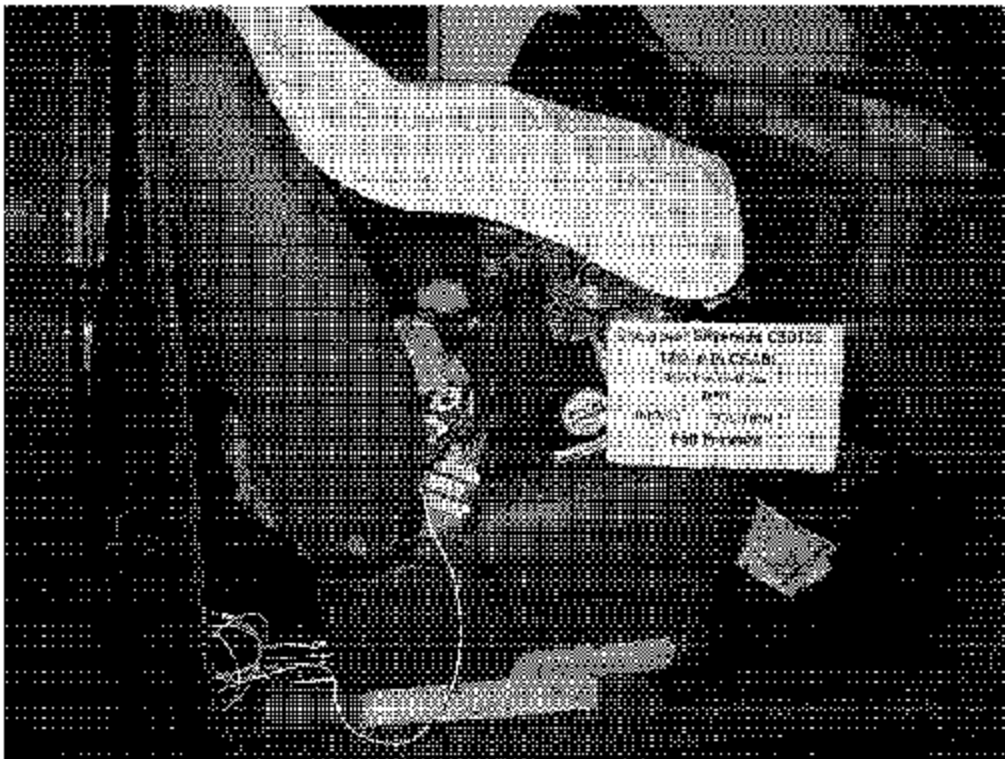


Figure 7-5. Britax Handle with Care, Sun Shield Up, Blanket Position 2, Belted, Full Forward Seat Position

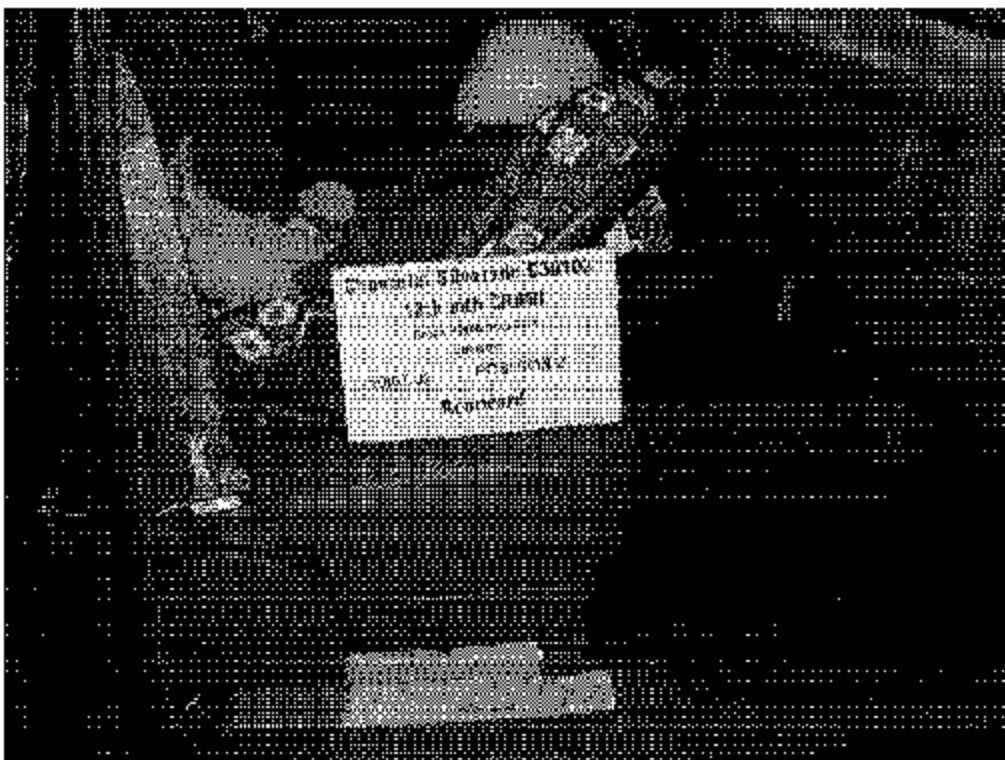


Figure 7-6. Britax Handle with Care, Sun Shield and Handle Down. Unbelted, Full Rearward Seat Position

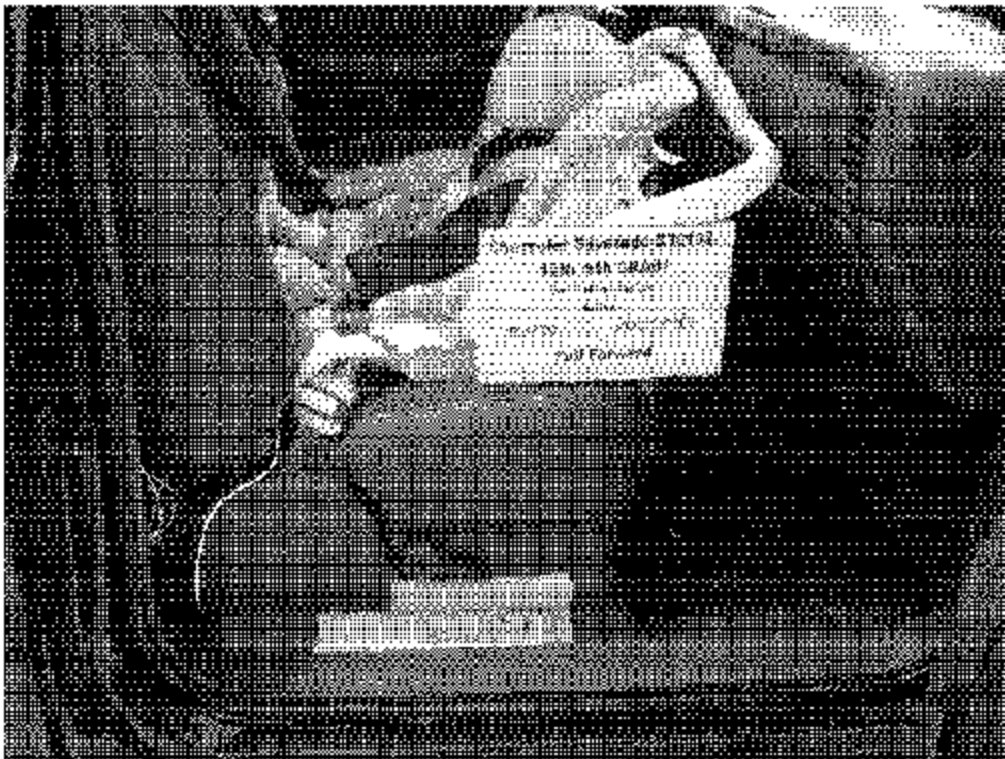


Figure 7-7: Evenflo First Choice, Base Off, Handle Down, Belted, Full Forward as Possible Seat Position

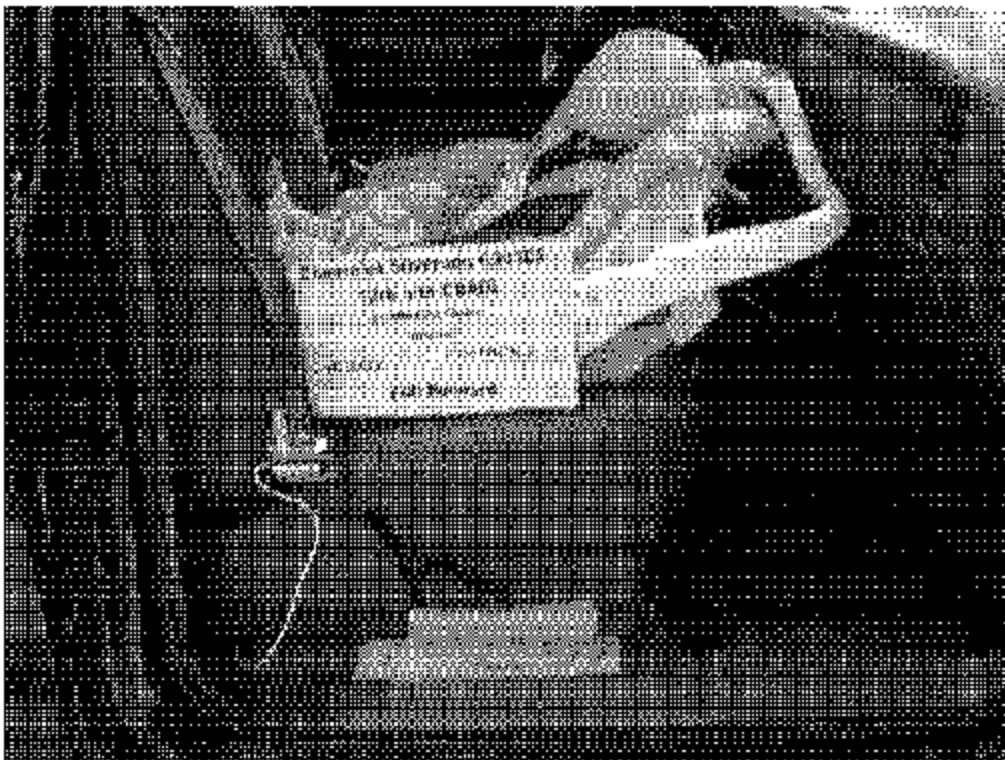


Figure 7-8: Evenflo First Choice, Base Off, Handle Down, Unbelted, Full Forward as Possible Seat Position

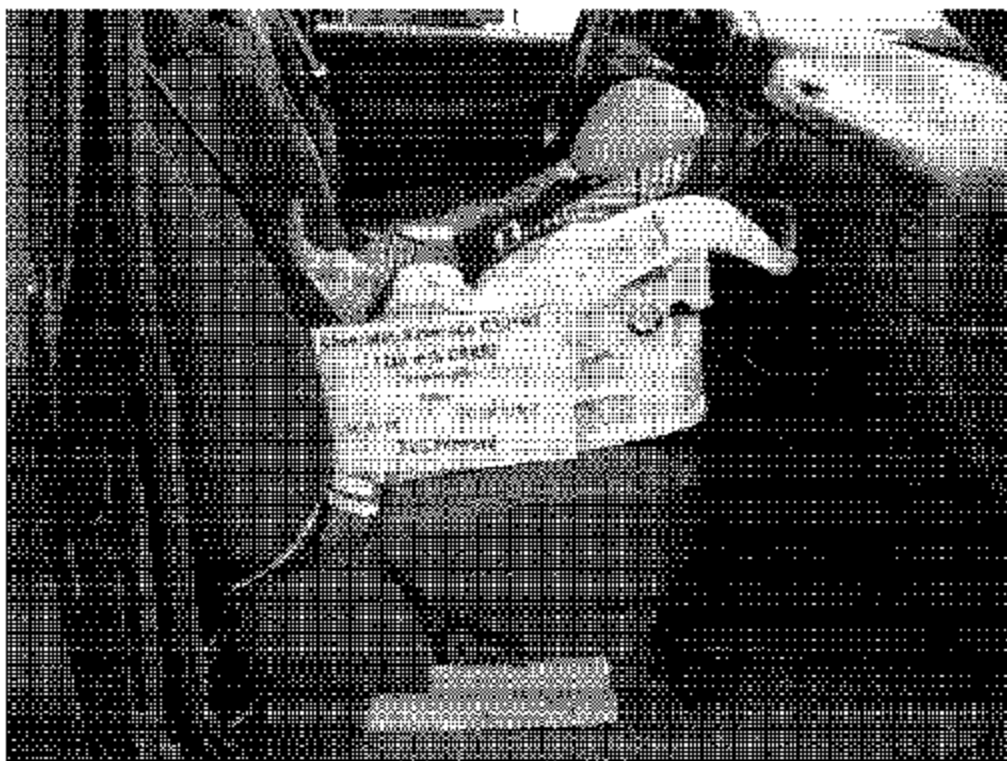


Figure 7-9: Eventlo First Choice, Base On, Handle Down, Belted, Full Forward as Possible Seat Position

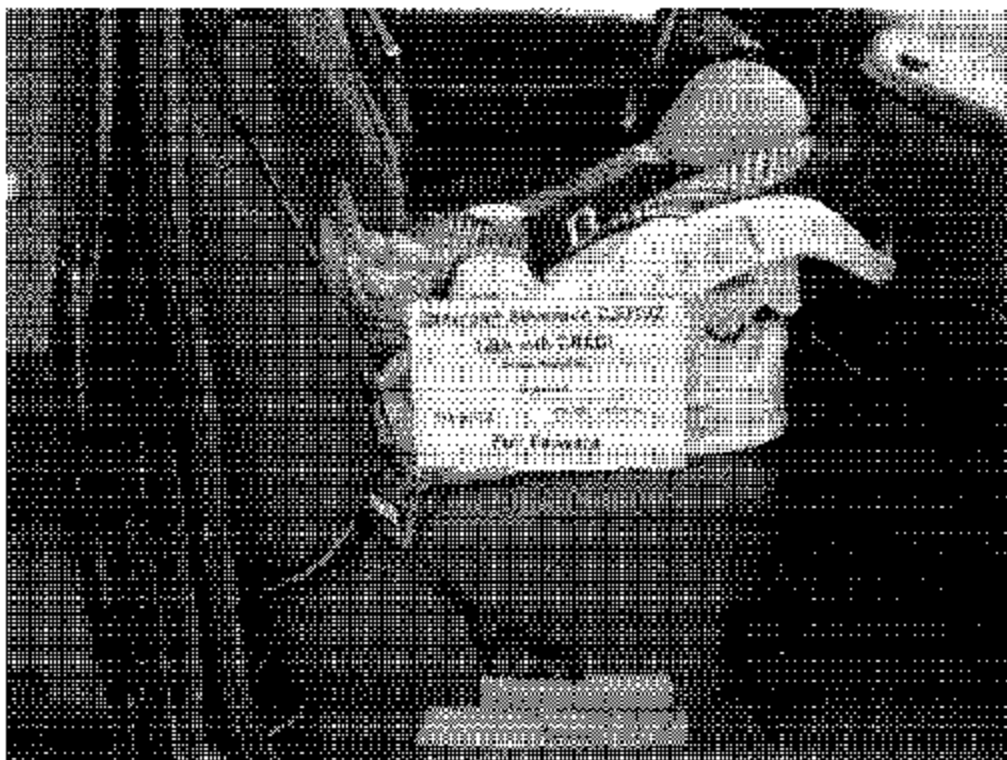


Figure 7-10: Eventlo First Choice, Base On, Handle Down, Unbelted, Full Forward as Possible Seat Position



Figure 7-11: Graco Snugg Ride, Belted, Full Forward as Possible Seat



Figure 7-12: Graco Snugg Ride, Unbelted, Full Forward as Possible Seat

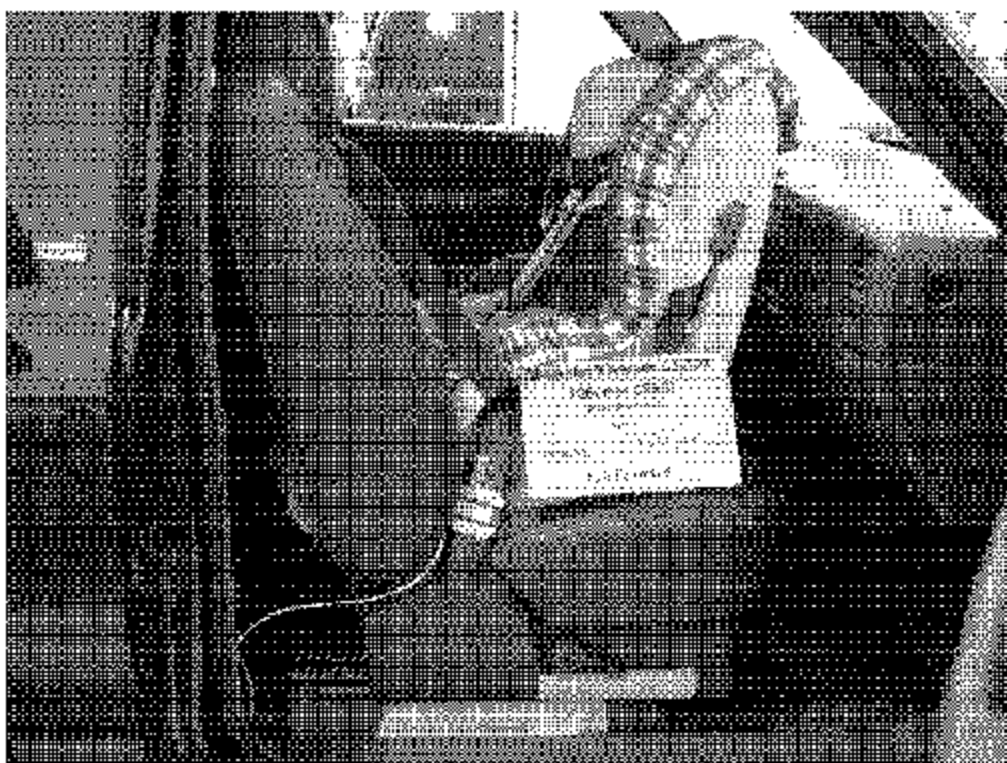


Figure 7-13: Britax Roundabout, Rear Facing, Belted, Full Forward Seat Position

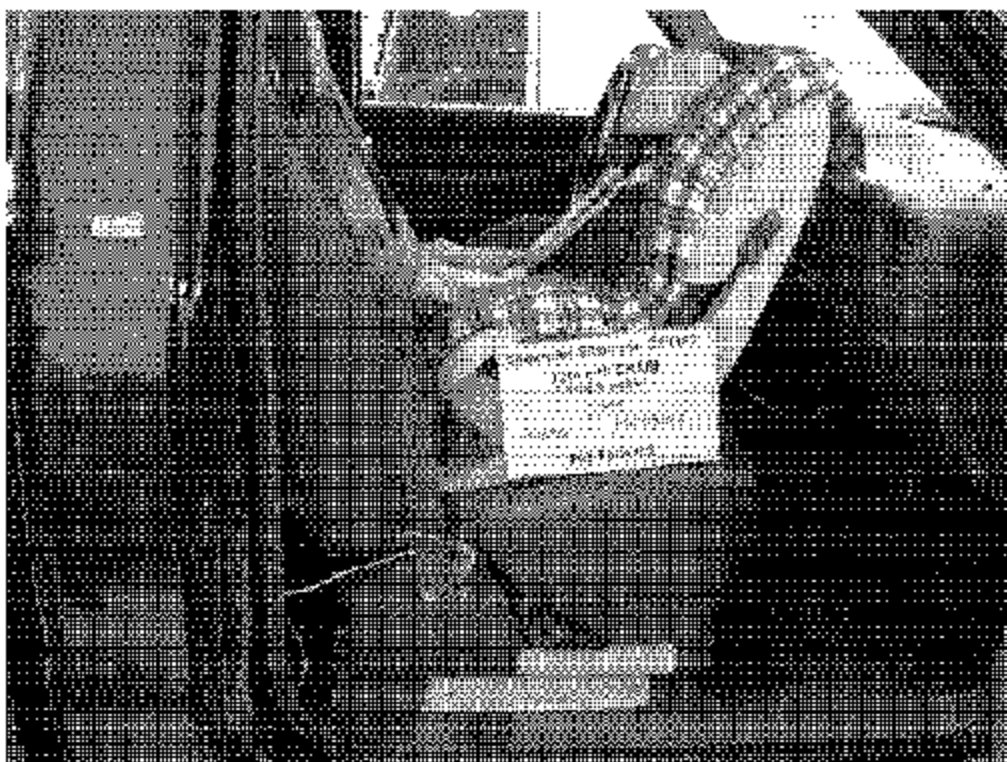


Figure 7-14. Britax Roundabout, Rear Facing, Unbelted, Full Forward as Possible Seat Position



Figure 7-15- Britax Roundabout, Forward Facing, Belted, Full Forward Seat Position

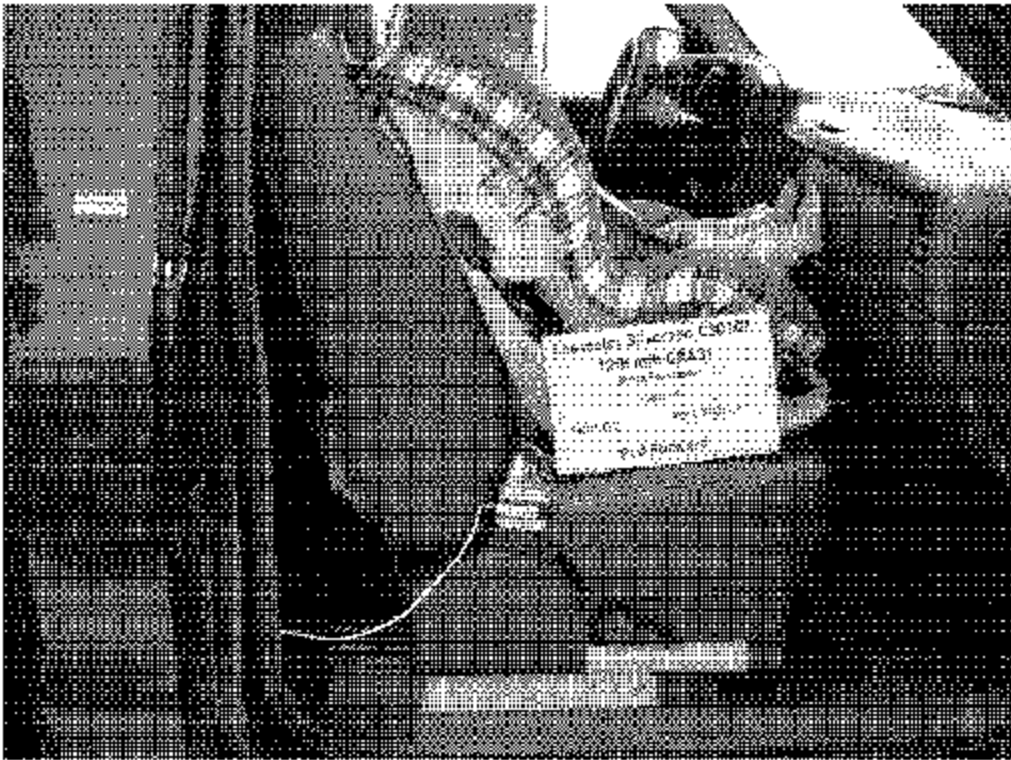


Figure 7-16. Britax Roundabout, Forward Facing, Unbelted, Full Forward Seat Position

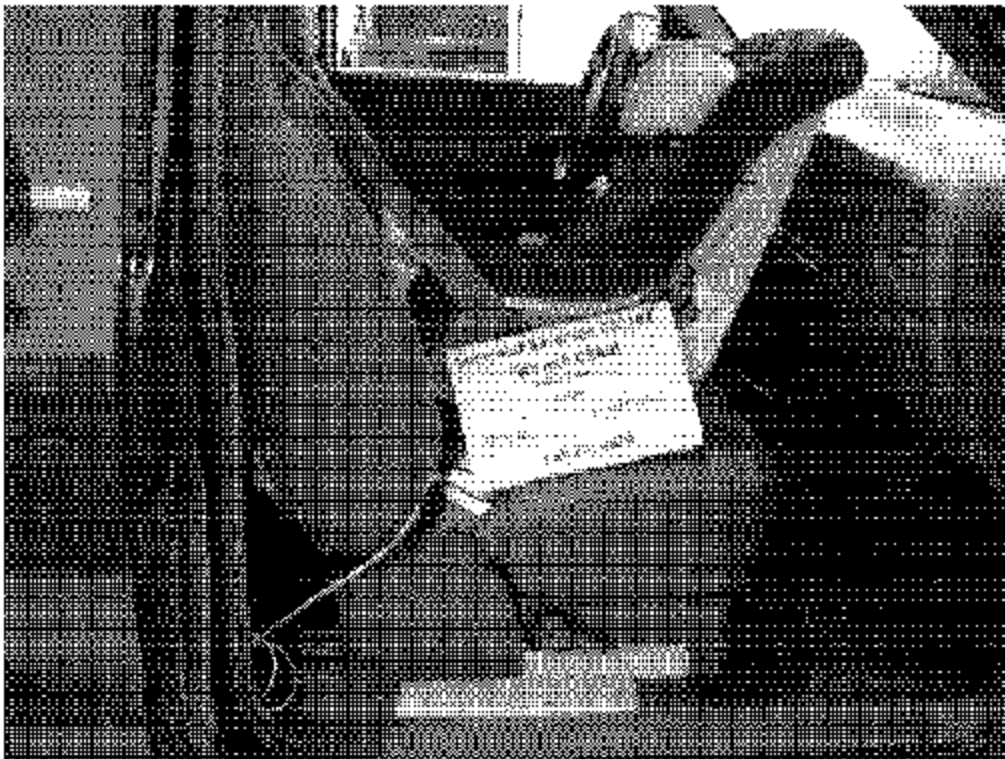


Figure 7-17: Century Encore, Belted, Full Forward as Possible Seat Position



Figure 7-18: Century Encore, Unbelted, Full Forward as Possible Seat Position

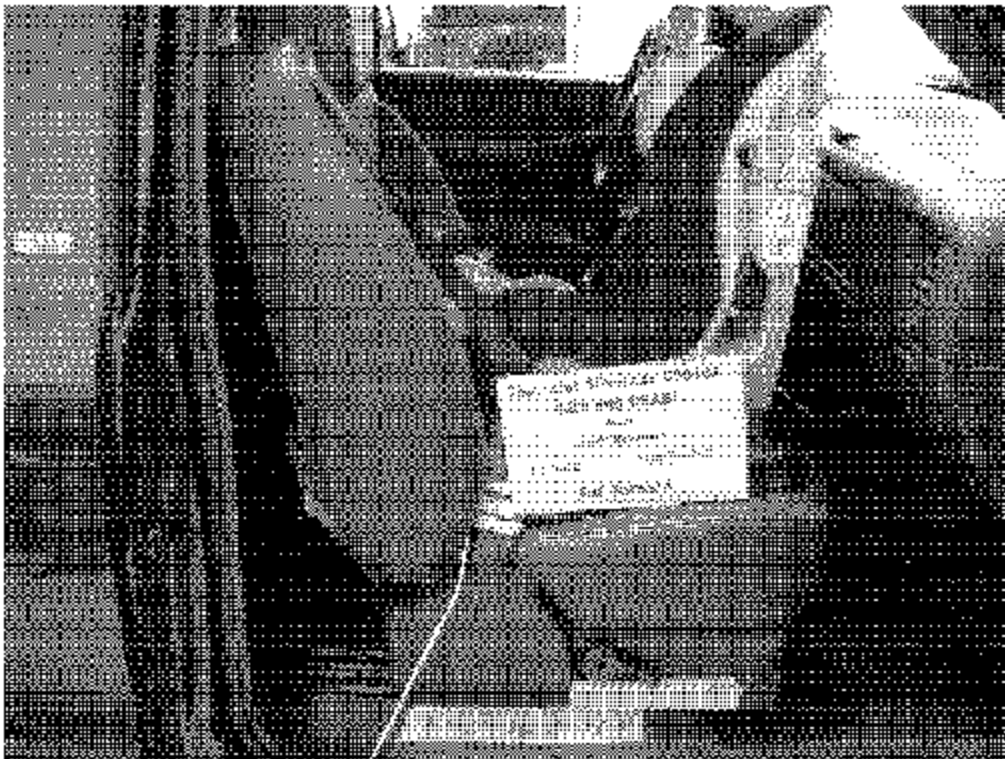


Figure 7-19: Evenflo Medallion V, Rear-Facing, Belted, Full Forward Seat Position

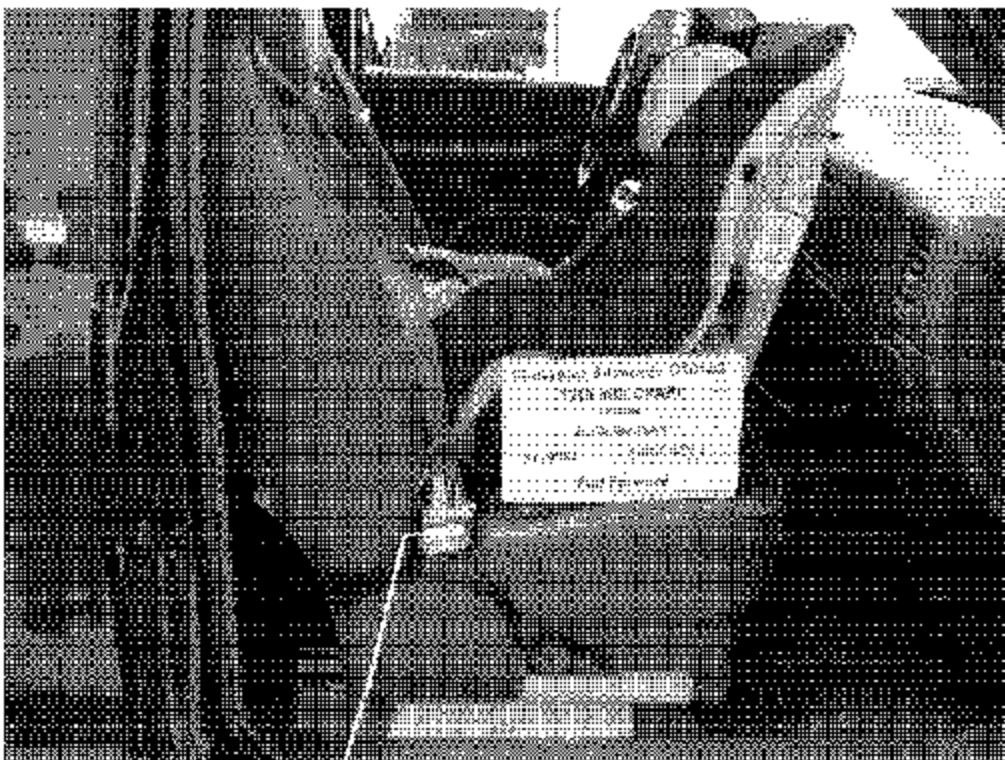


Figure 7-20: Evenflo Medallion V, Rear-Facing, Unbelted, Full Forward as Possible Seat Position



Figure 7-21: Evenflo Medallion V, Forward Facing, Unbelted, Full Forward Seat Position

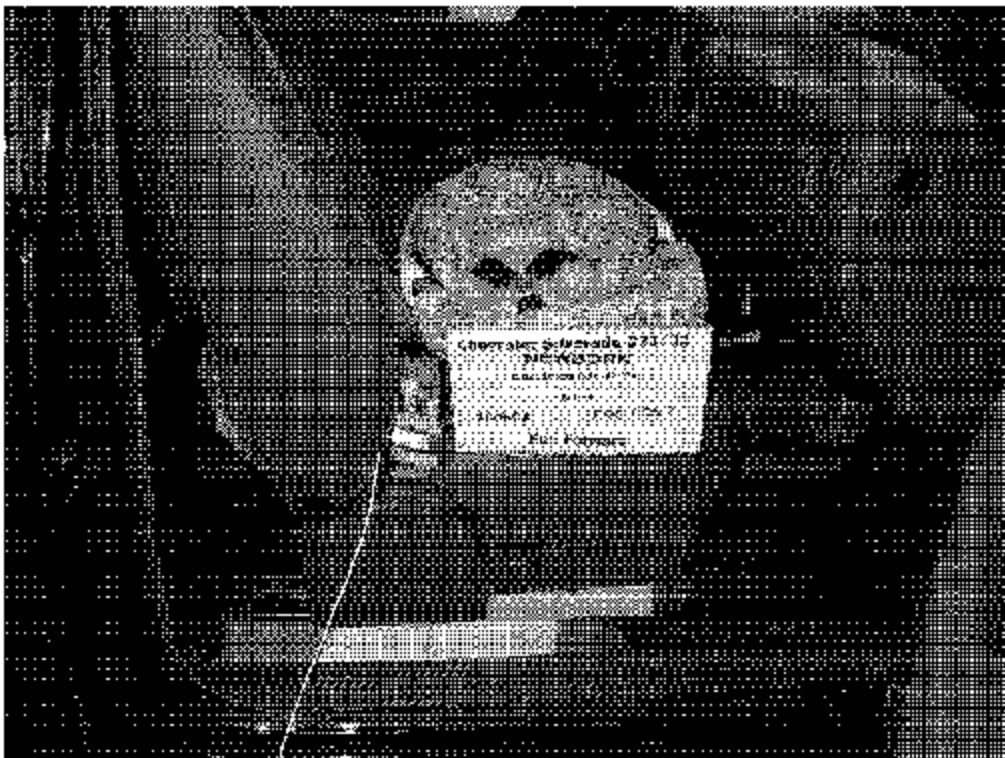


Figure 7-22. Cosco Dream Ride, Belted, Full Forward Seat Position



Figure 7-23: Briarx Roundabout, Forward Facing, Belted, Full Forward Seat Position



Figure 7-24: Century Encore, Belted, Full Forward as Possible Seat Position



Figure 7-25: Evenflo Medallion, Belted, Full Forward Seat Position

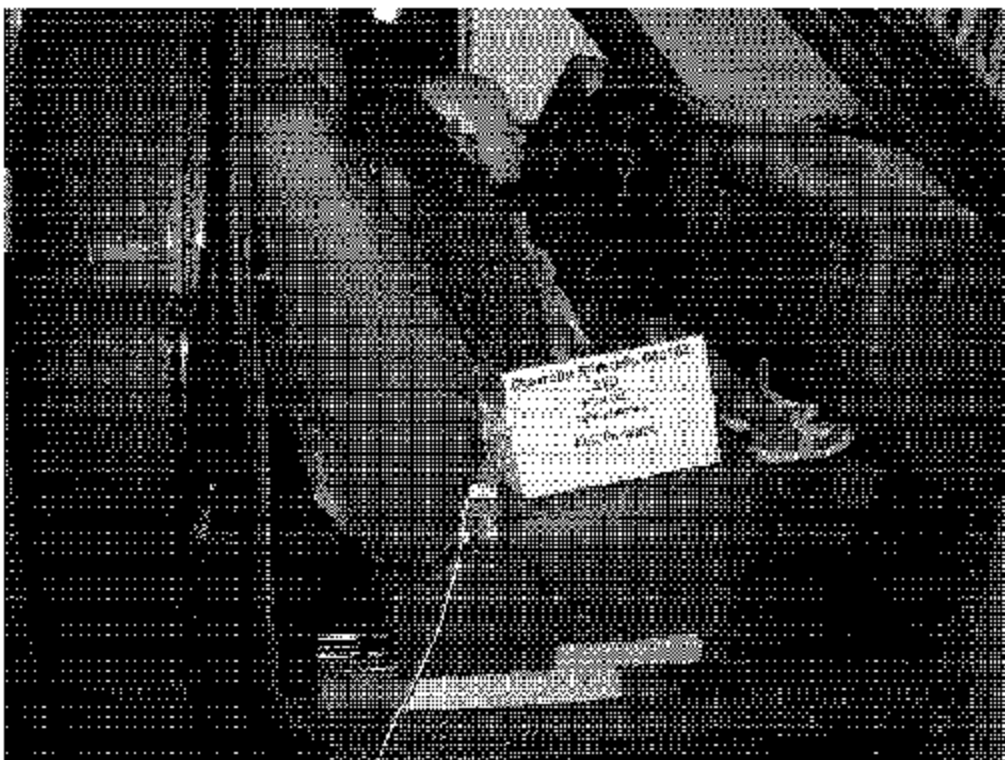


Figure 7-26: Century Next Step, Belted, Full Forward Seat Position

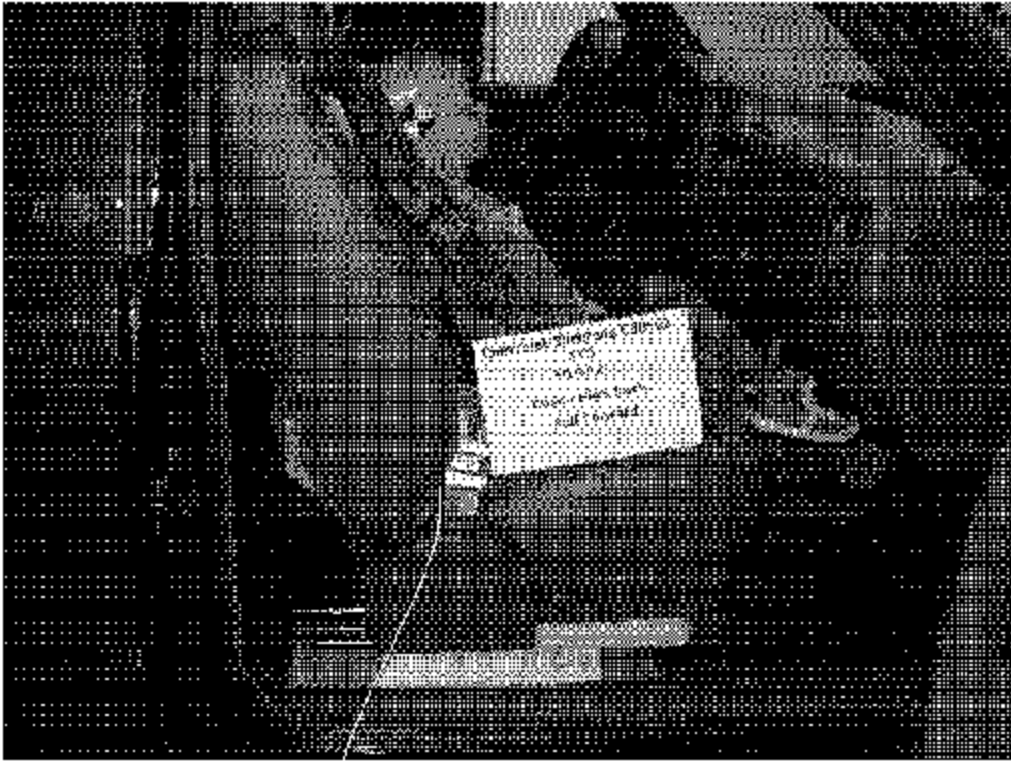


Figure 7-27: Cosco High Back, Belted, Full Forward Seat Position



Figure 7-28: Cosco High Back, Belted, Full Forward Seat Position

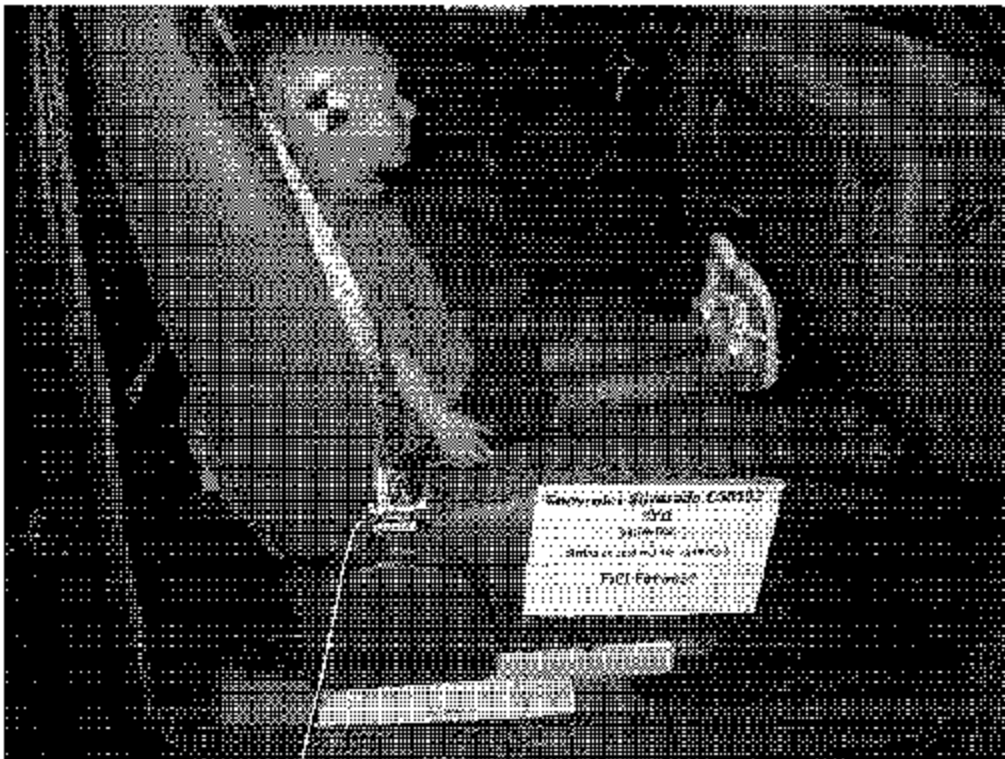


Figure 7-29: 3-Year Old Sitting On Seat With Back Against Seat Back. Full Forward Seat Position

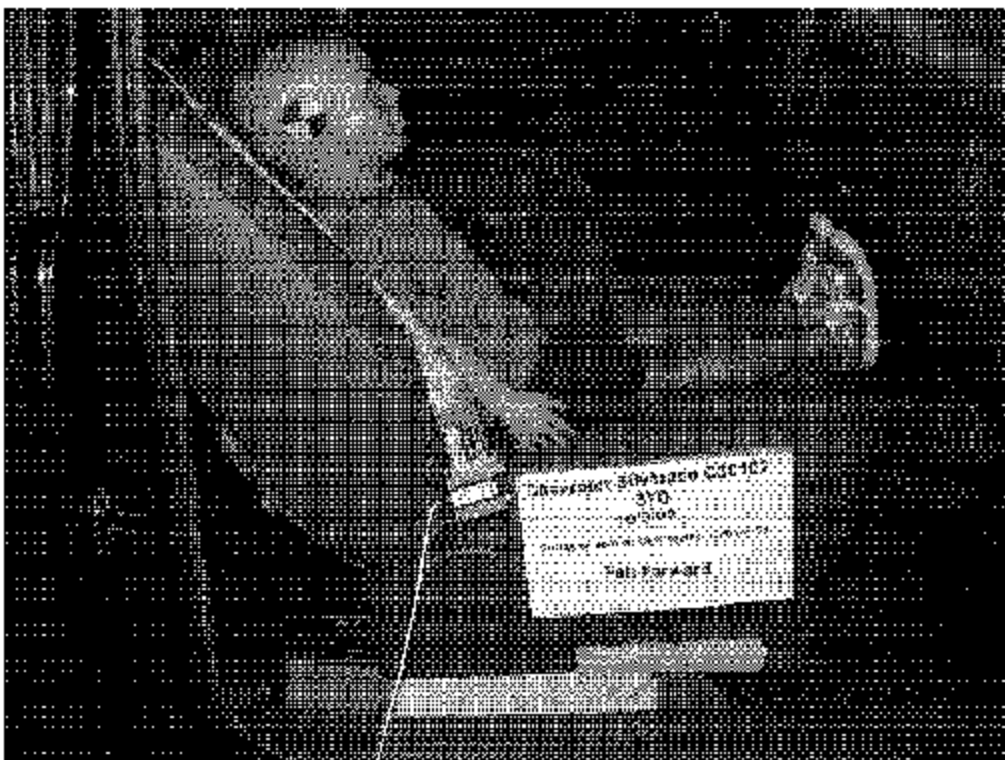


Figure 7-30: 3-Year Old Sitting On Seat With Back Against Reclined Seat Back. Full Forward Seat Position

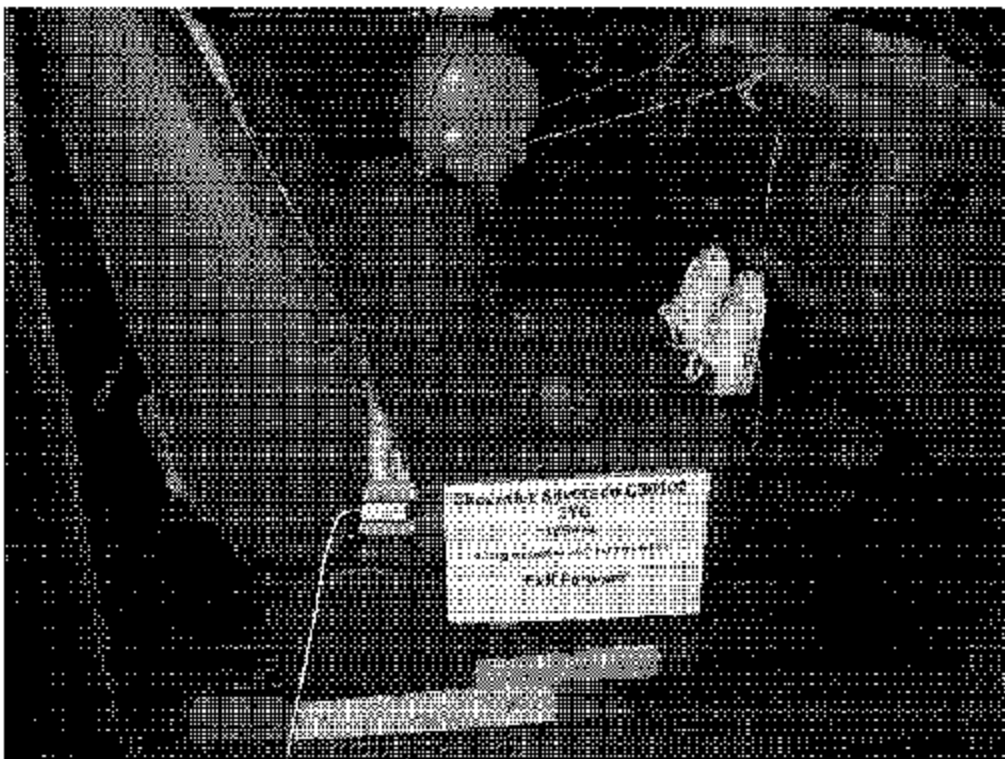


Figure 7-31: 3-Year Old Sitting On Seat With Back Not Against Seat Back, Full Forward Seat Position

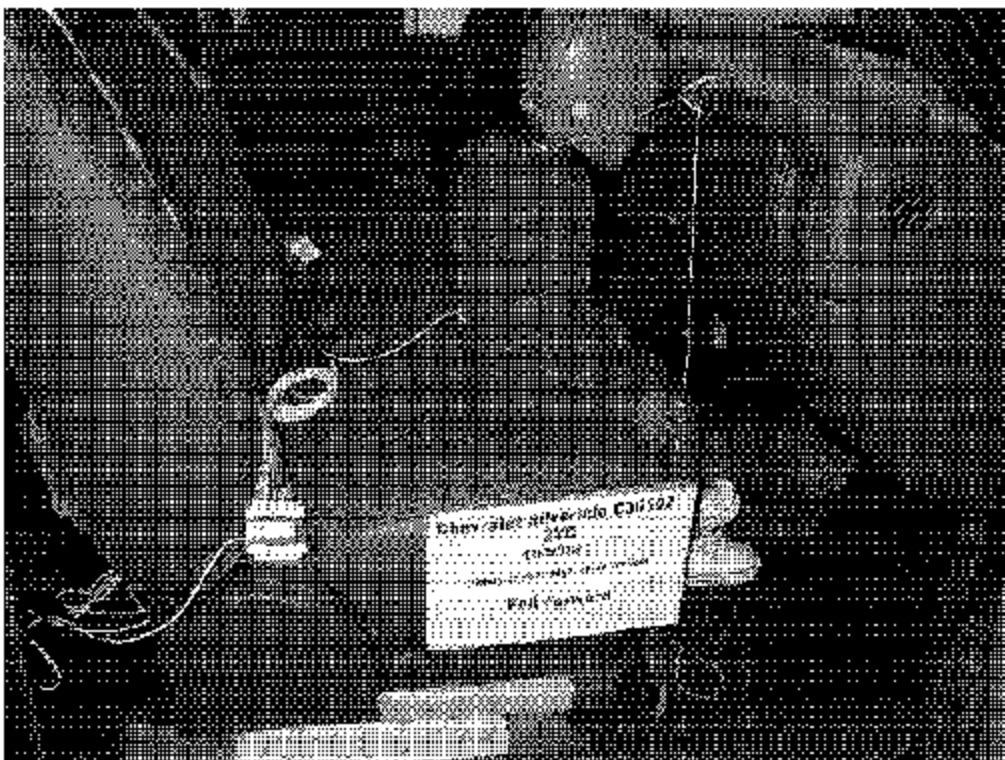


Figure 7-32: 3-Year Old Sitting On Seat Edge. Spine Vertical, Hands By The Child's Side, Seat Position As Full Forward As Possible

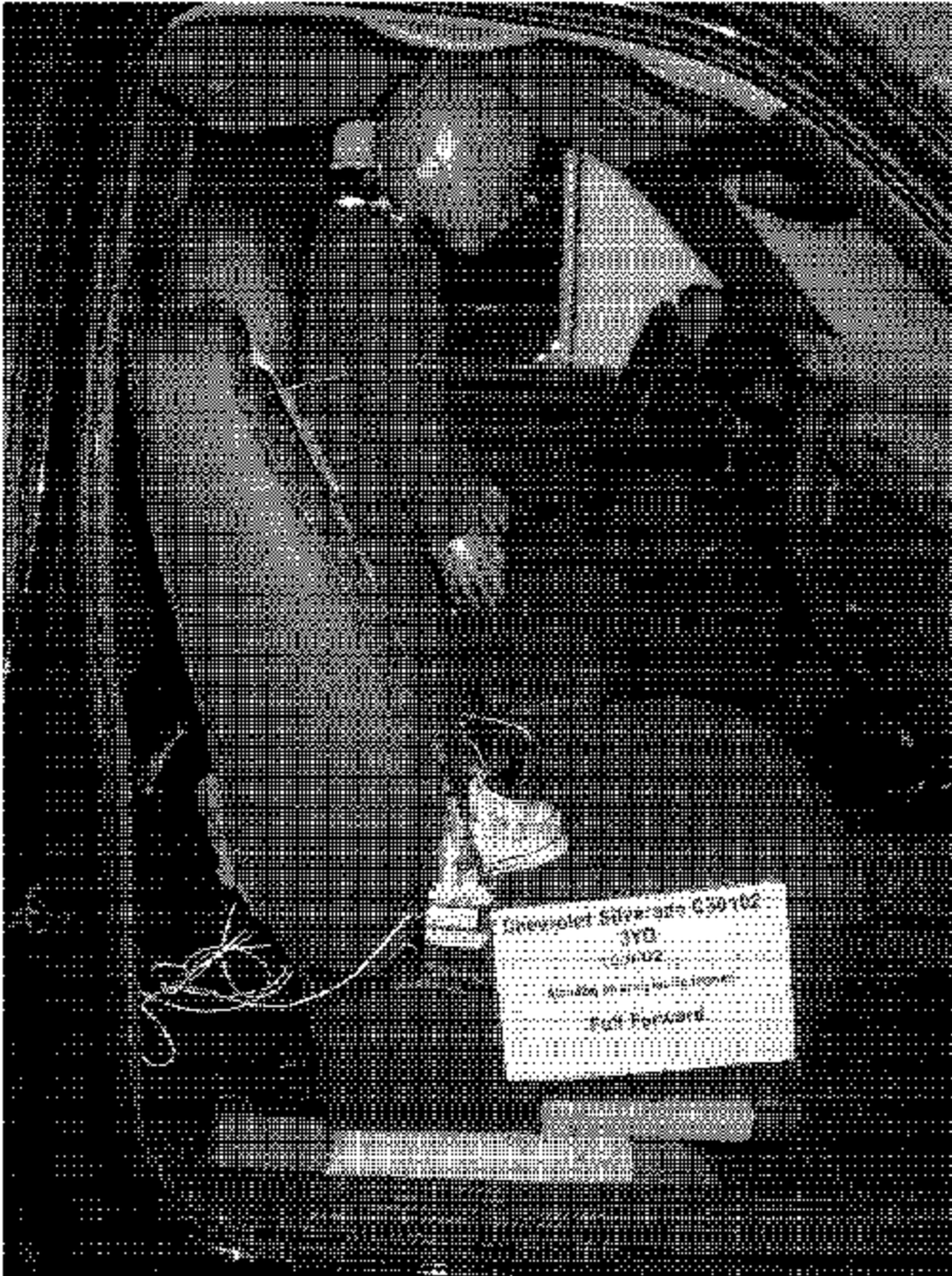


Figure 7-33: Standing On Seat Facing Forward, Full Forward Seat Position

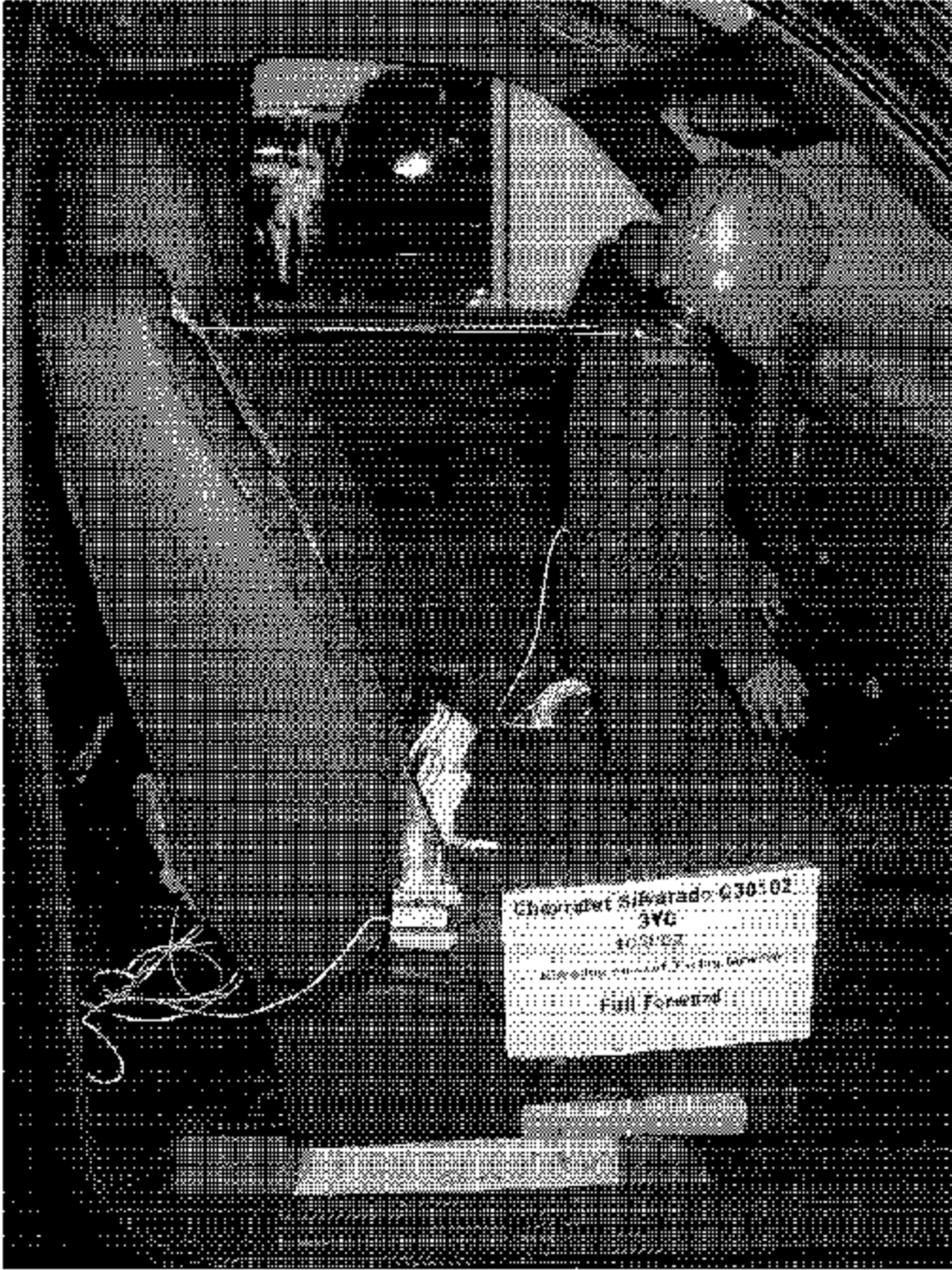


Figure 7-34: Kneeling On Seat Facing Forward. Full Forward Seat Position



Figure 7-35: Kneeling On Seat Facing Rearward, Full Forward Seat Position

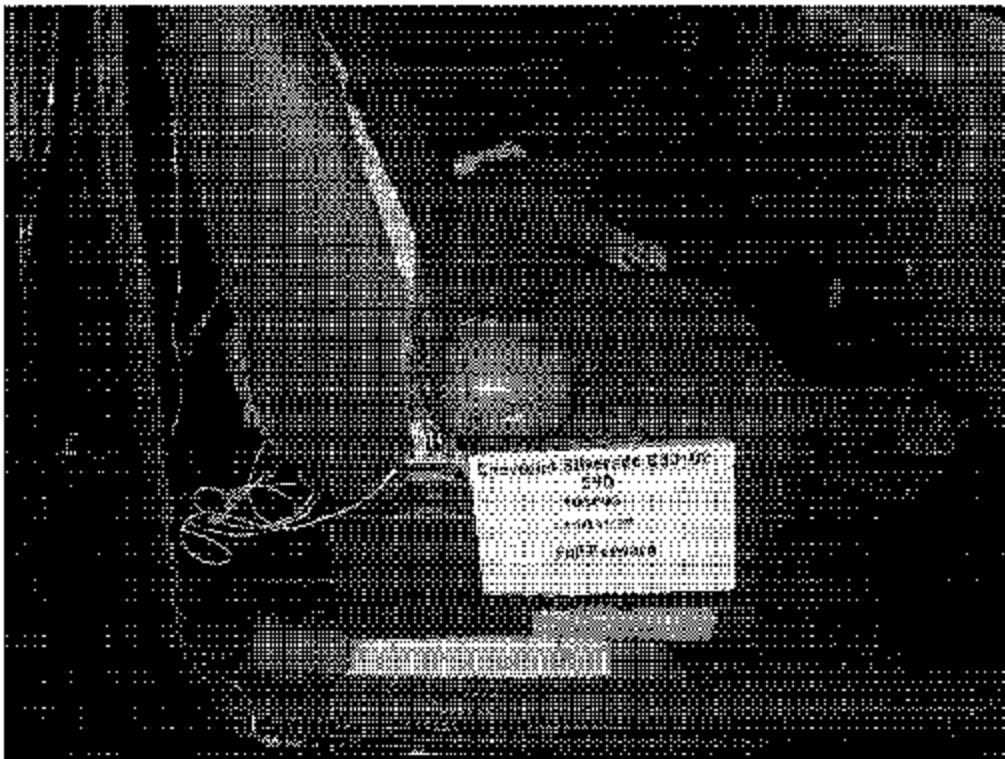


Figure 7-36: 3-Year Old Lying On Seat, Full Forward Seat Position



Figure 7-37: 6-Year Old, Century Next Step, Belted, Full Forward Seat Position

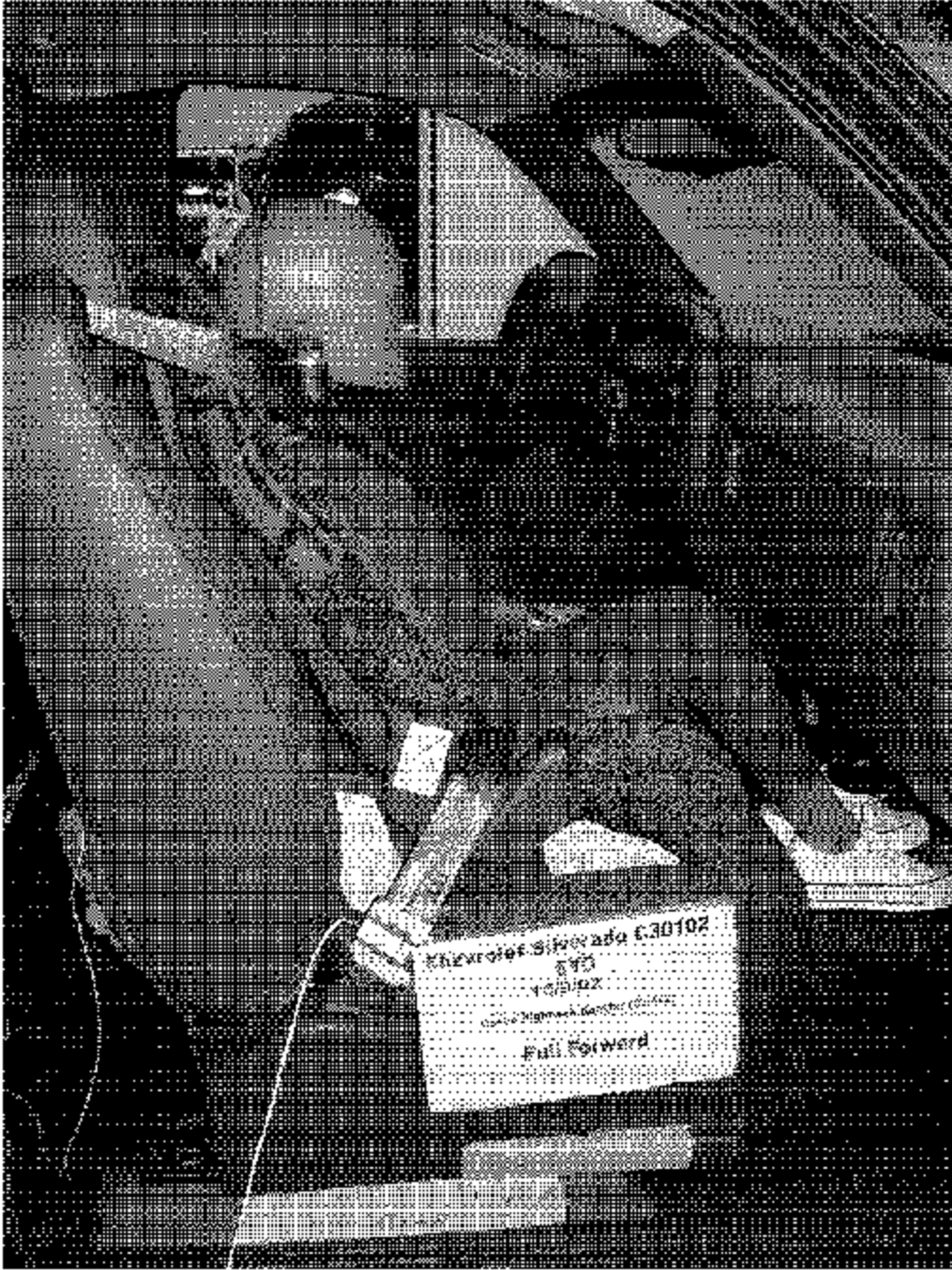


Figure 7-38: 6-Year Old, Cosco High Back Booster, Belted, Full Forward Seat Position

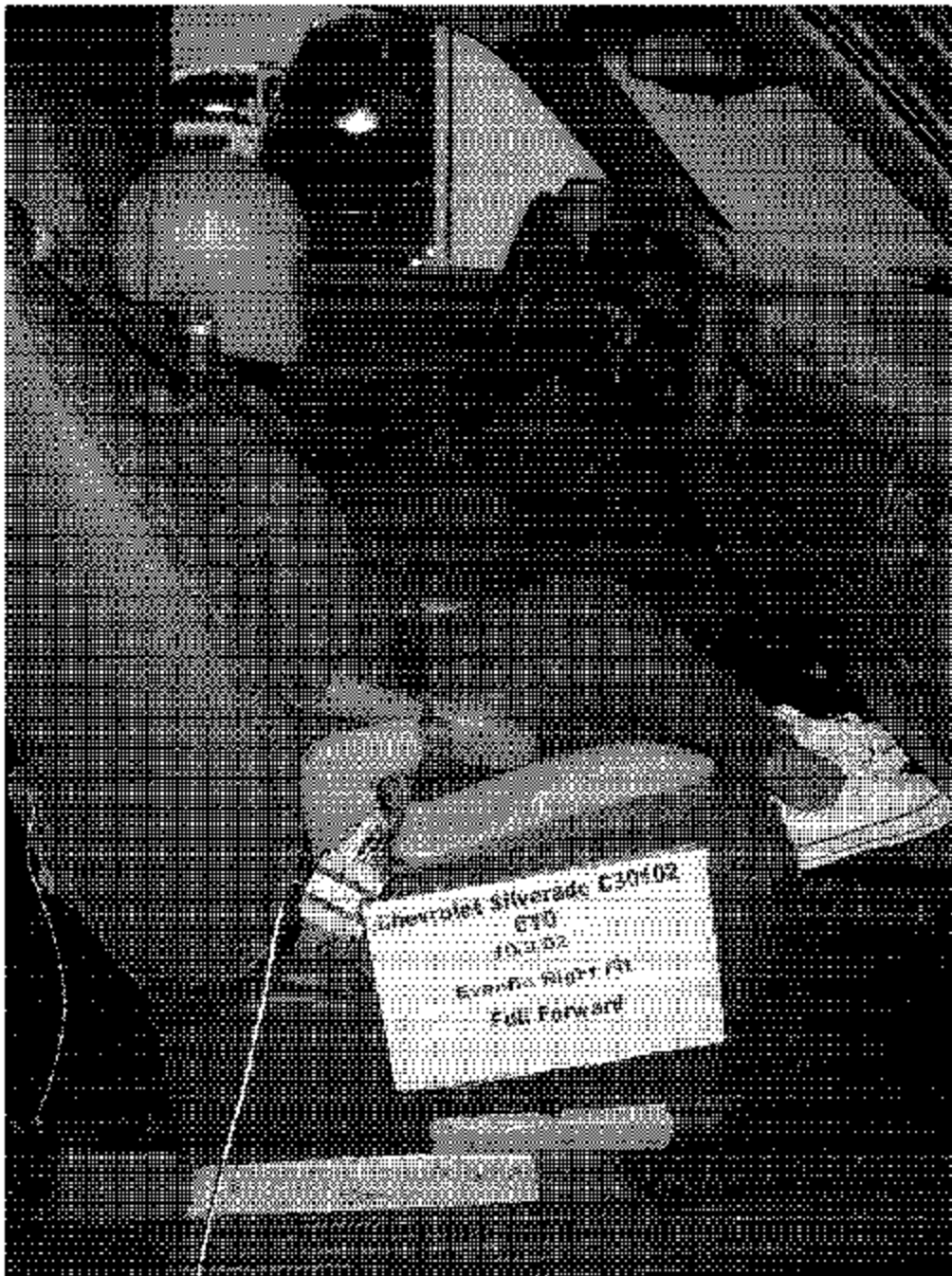


Figure 7-39: 6-Year Old, Evenflo Right Fit, Belted, Full Forward Seat Position

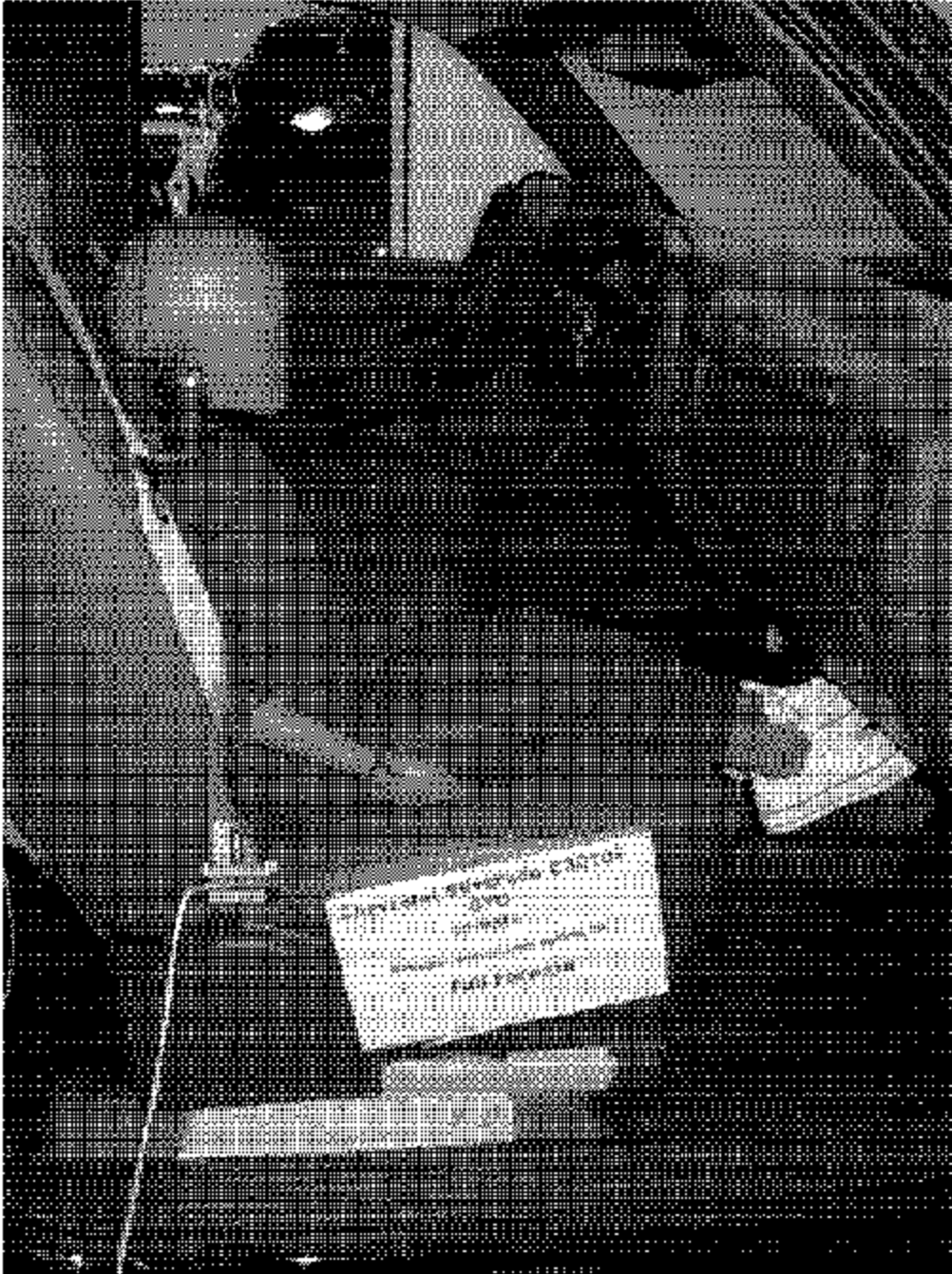


Figure 7-40: 6-Year Old Sitting On Seat With Back Against Seat Back, As Full Forward As Possible Seat Position

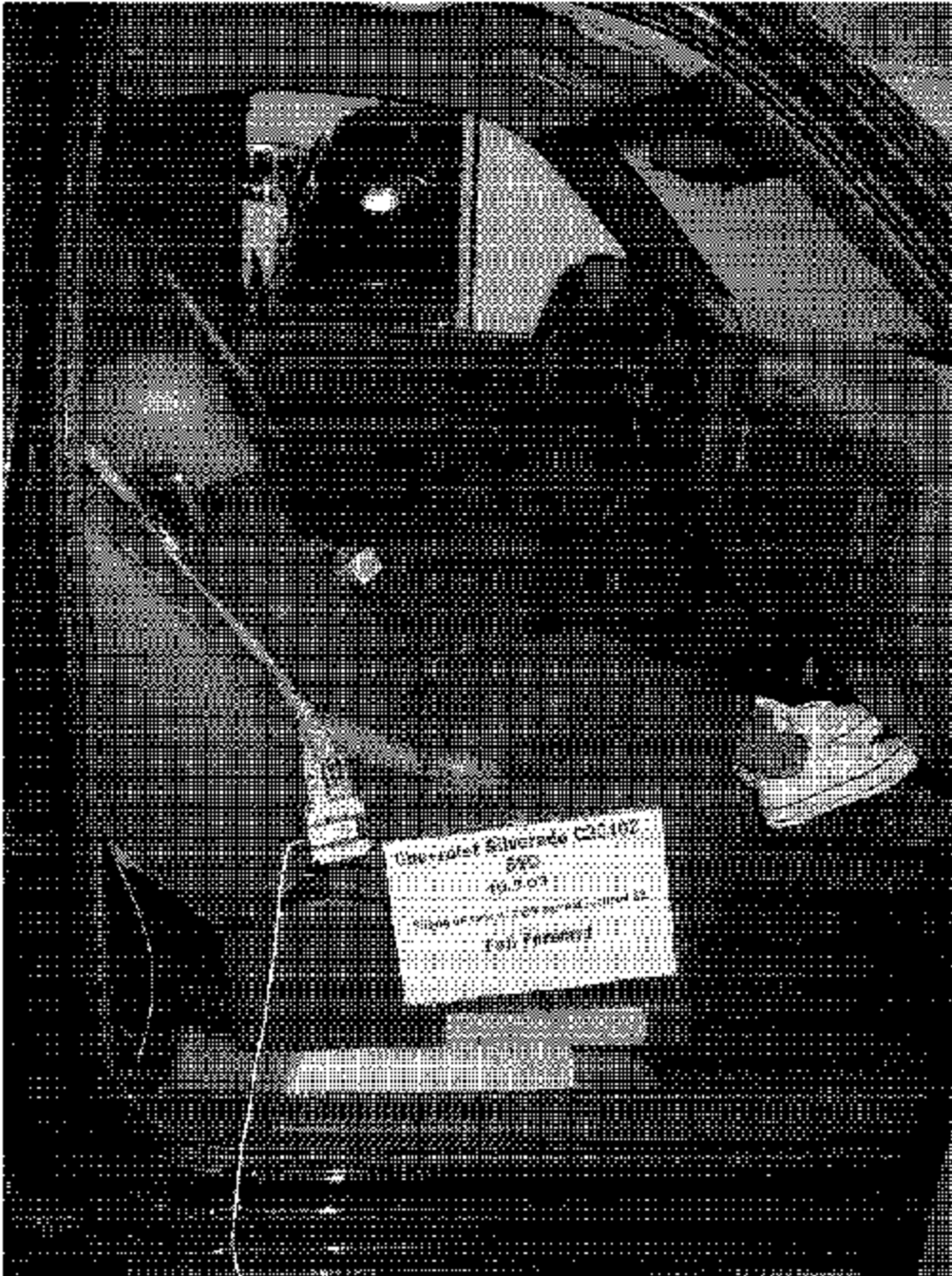


Figure 7-41: 6-Year Old Sitting On Seat With Back Against Reclined Seat Back, As Full Forward As Possible Seat Position

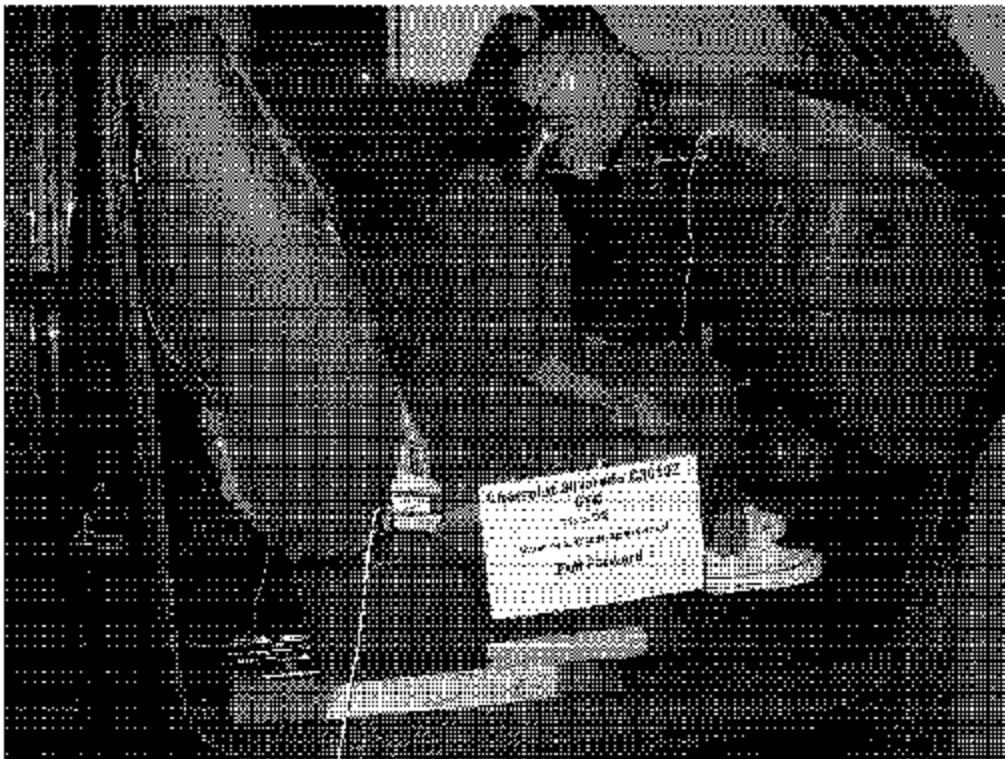


Figure 7-42: 6-Year Old Sitting On Seat Edge, Spine Vertical, Hands By The Dummy's Side, Full Forward Seat Position



Figure 7-43: 6-Year Old Back In The Seat And Leaning On The Right Front Passenger Door, Full Forward Seat Position



Figure 7-44: 5¹ Female Reactivation Test

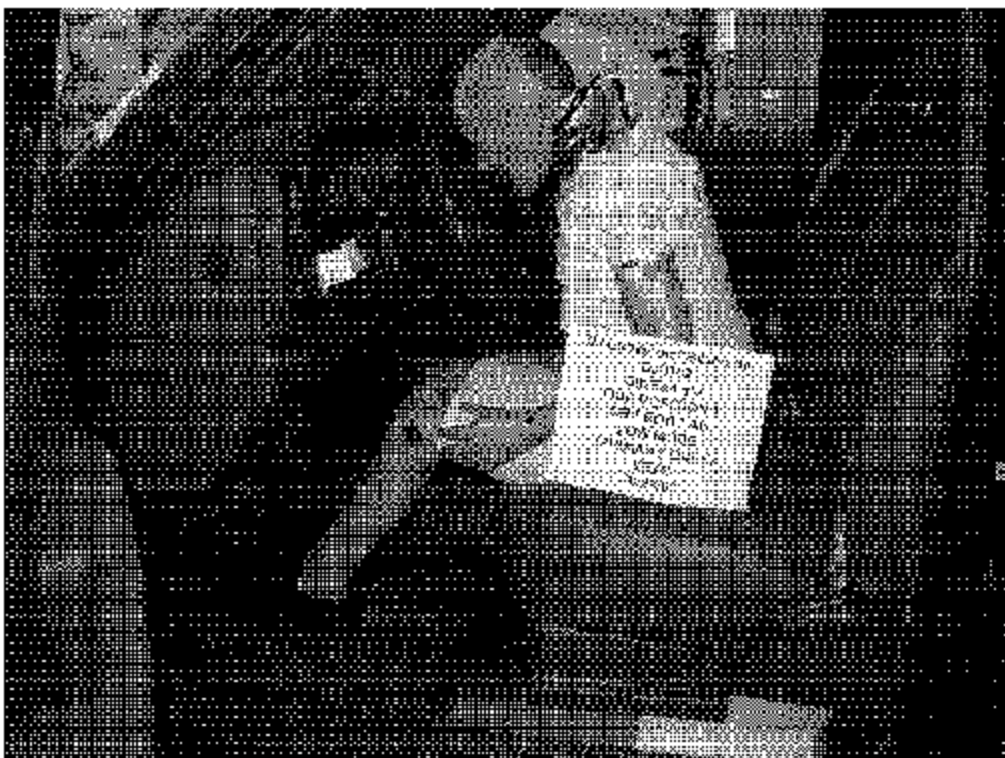


Figure 7-45: Pre-Test Driver Low Risk Deployment, Position One, Climb on Module

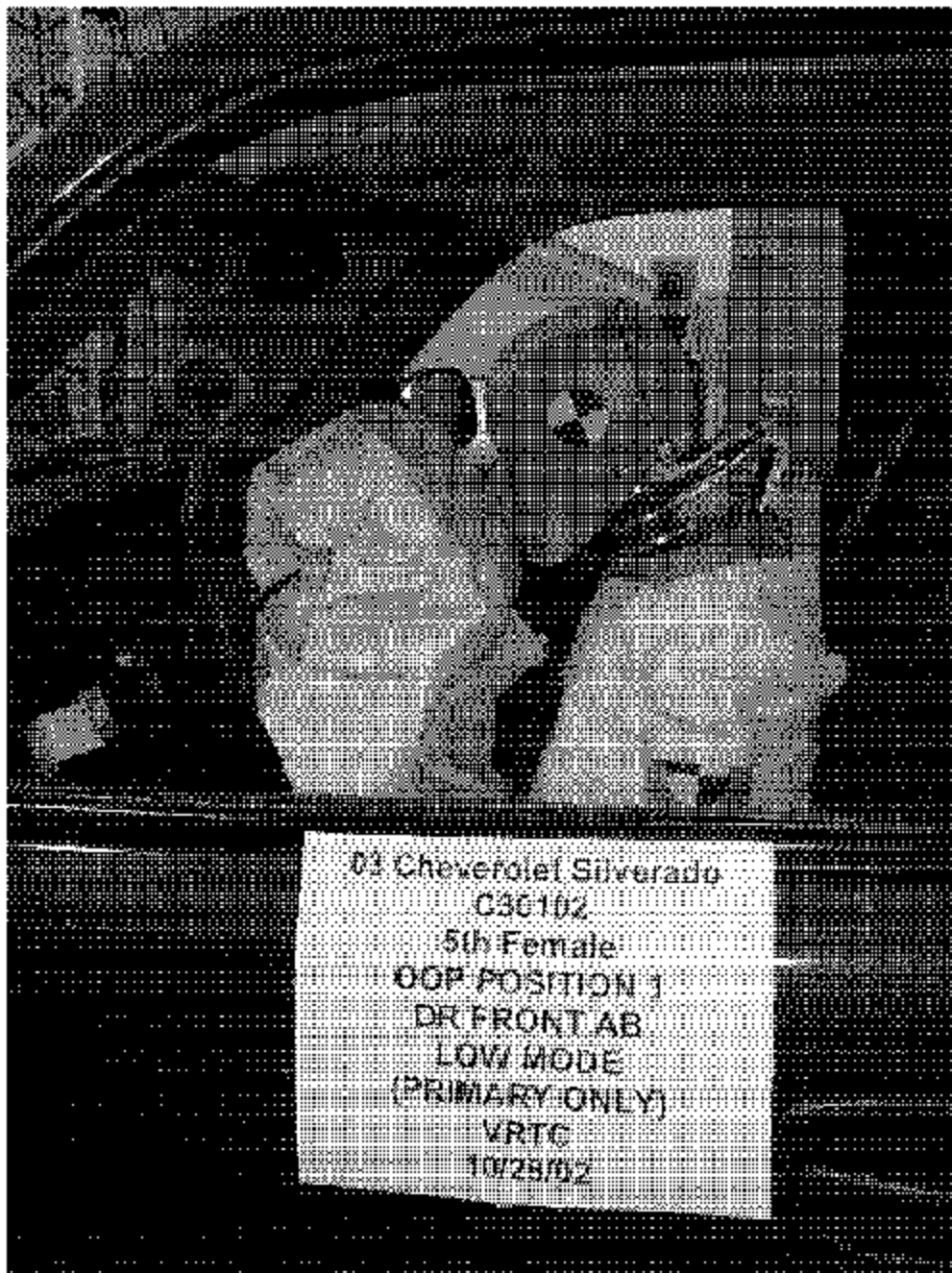


Figure 7-46. Post-Test Driver Low Risk Deployment. Position One. Chin on Module