

Report Number: 208-VRTC-03-003

Safety Compliance Testing for FMVSS 208

Occupant Crash Protection

CRAI and 3-Year Old Suppression and Six-Year Old and Driver Low Risk

Deployment Tests

Honda Manufacturing of Alabama, LLC

2003 Honda Odyssey

NHTSA Number: C35306

Vehicle Research and Test Center

10820 State Route 347

East Liberty, OH 43319



Report Date: December 16, 2003

Final Report

Prepared By:

U. S. Department of Transportation

National Highway Traffic Safety Administration

Office of Enforcement

Office of Vehicle Safety Compliance (NVS-220)

400 Seventh Street, S.W., Room No. 6115

Washington, DC 20590

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16. Abstract Suppression and Low Risk Deployment compliance tests were conducted on a 2003 Honda Odyssey, NHTSA No. C35306, in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP208-12 for the determination of FMVSS 208 compliance. Possible test failures identified were as follows. None		
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Section I

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 DFNH22-02-12-08067, Task Order VRTC-DCE2525. The purpose of the test was to determine whether the subject vehicle, a 2003 Honda Odyssey, NHTSA No. C35306, meets the suppression and low risk deployment performance requirements of FMVSS 208, "Occupant Crash Protection". The compliance tests were conducted in accordance with OVSC Laboratory Test Procedure No. TP-208-12 dated January 14, 2003.

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)
- X 11. Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart N)
- X 12. Suppression tests with Newborn infant Subpart K dummy (Part 572, Subpart N)
- X 13. Suppression tests with 3-year-old dummy (Part 572, Subpart P)
- _____ 14. Suppression tests with 6-year-old dummy (Part 572, Subpart R)
- X 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)
- X 18. Low risk deployment test with 6-year-old dummy (Part 572, Subpart R)
- X 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(c))
 - _____ 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 6" Belted 5th female dummy driver and passenger (0 to 40 km/h) (S18.1)
- _____ 21. Sled test: Unbelted 56th 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

NHTSA No.: C35306

Test Date: 5/13-6/3/2003

VIN: 5FNRL186C31084369

Frontal Crash ☐ Offset Crash ☐ Low Risk Deployment ☒

Impact Angle: 0

Belted Dummies ☐ Yes ☒ No

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

Test Speed: N/A

Driver Dummy: ☒ 5th female ☐ 50th male

Passenger Dummy: ☐ 5th female ☐ 50th male ☐ 12-month ☐ 3-year
☒ 6-year

Test weight: N/A

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

Injury Criteria	Max. Allowable Injury Assessment Values	Position 1 Chin on Module* 6/3/03	Position 2 Chin on Rim** 5/11/03
HIC15	700	30	26
N ₁₂	1.0	0.5	0.4
N ₁₅	1.0	0.4	0.3
N ₂₅	1.0	0.0	0.0
N ₅₀	1.0	0.1	0.1
Neck tension	2070 N	761	798
Neck compression	2520 N	19	81
Chest g	60 g	16	24
Chest displacement	52 mm	9	28
Left femur	6805 N	24	14
Right femur	6805 N	22	12

* Data truncated at 155 ms

** Data truncated at 157 ms

6-Year Old Low Risk Deployment Test:
Vehicles certified to S24.4

Injury Criteria	Max. Allowable Injury Assessment Values	Position 1 Chest on IP*	Position 2 Head on IP*
HIC15	700	13	7
N_{te}	1.0	0.0	0.4
N_{tr}	1.0	0.2	0.0
N_{ra}	1.0	0.0	0.5
N_{rt}	1.0	0.4	0.2
Neck tension	1490 N	51	504
Neck compression	1820 N	429	667
Chest g	60 g	13	9
Chest displacement	40 mm	ND	0

*Data truncated at 100 ms

Section 4

Discussion of Test

DISCUSSION OF TEST

Suppression Tests

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

1. Britax Handle with Care 191
2. Britax Roundabout 161
3. Century Encore 4617
4. Century Next Step 4920
5. Cosco Dream Ride 02-719
6. Cosco High Back Booster 02-442
7. Evenflo First Choice 204
8. Evenflo Medallion 254
9. Evenflo Right Fit 245
10. Graco Infant 8457

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	1
Total	23	22	10

The suppression system in this vehicle 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. Therefore, it was not necessary to perform suppression test in all 3 seat track positions on this vehicle nor to use the blanket, sun shield and handle variations.

Low Risk Deployment Tests

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

Section 5

Test Data Sheets

DATA SHEET 1
COTR Vehicle Work Order

Vehicle model year, make, and model 2003 Honda Odyssey

NHTSA no. C35306 Date 4/3/03

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

Section E

<u>X</u> Britax Handle with Care 19	<u>X</u> Full rearward	<u>X</u> Mid position	<u>X</u> Full forward
Century Assura 4553	Full rearward	Mid position	Full forward
Century Avaria SE 41530	Full rearward	Mid position	Full forward
Century Smart Fit 4543	Full rearward	Mid position	Full forward
Cosco Arriva 02727	Full rearward	Mid position	Full forward
Cosco Opus 55 02603	Full rearward	Mid position	Full forward
Evenflo Discovery Adjust			
Right 212	Full rearward	Mid position	Full forward
<u>X</u> Evenflo First Choice 204	<u>X</u> Full rearward	<u>X</u> Mid position	<u>X</u> Full forward
Evenflo On My Way Position			
Right V 282	Full rearward	Mid position	Full forward
<u>X</u> Graco Infant 8457	Full rearward	Mid position	<u>X</u> Full forward

Section C

<u>X</u> Britax Roundabout 161	Full rearward	Mid position	<u>X</u> Full forward
<u>X</u> Century Encore 4612	Full rearward	Mid position	<u>X</u> 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
<u>X</u> Evenflo Medallion 254	Full rearward	Mid position	<u>X</u> Full forward

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

Section A

<u>X</u> Cosco Dream Ride 02-719	Full rearward	Mid position	<u>X</u> Full forward
----------------------------------	---------------	--------------	-----------------------

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

Section C

<u>X</u> Britax Roundabout 161	Full rearward	Mid position	<u>X</u> Full forward
<u>X</u> Century Encore 4612	Full rearward	Mid position	<u>X</u> 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

- | | | | |
|---------------------------------|-------------------|--------------|-----------------------|
| ___Eventflo Horizon V 425 | Full rearward | Mid position | Full forward |
| <u>X</u> Eventflo Medallion 254 | ___ Full rearward | Mid position | <u>X</u> Full forward |
- Section D
- | | | | |
|---------------------------------|-------------------|--------------|-----------------------|
| Britax Roadster 9004 | ___ Full rearward | Mid position | ___ Full forward |
| <u>X</u> Century Next Step 4920 | ___ Full rearward | Mid position | <u>X</u> Full forward |
| <u>X</u> Cosco High Back | | | |
| Booster 02-442 | ___ Full rearward | Mid position | <u>X</u> Full forward |
| ___Eventflo Right Fit 245 | ___ Full rearward | Mid position | ___ Full forward |
- ___14. Suppression tests with Representative 3-year-old child using the following indicated child restraints where a child restraint is required. (Appendix H, Data Sheet 16H and 17H)
- Section C
- | | | | |
|---------------------------|-------------------|--------------|------------------|
| Britax Roundabout 101 | ___ Full rearward | Mid position | ___ Full forward |
| Century Encore 4612 | ___ Full rearward | Mid position | ___ Full forward |
| Century STE 1000 441E | ___ Full rearward | Mid position | ___ Full forward |
| Cosco Olympian 02803 | ___ Full rearward | Mid position | ___ Full forward |
| ___Cosco Touriva 02519 | Full rearward | Mid position | ___ Full forward |
| ___Everflo Horizon V 425 | Full rearward | Mid position | ___ Full forward |
| ___Eventflo Medallion 254 | ___ Full rearward | Mid position | ___ Full forward |
- Section D
- | | | | |
|---------------------------|-------------------|------------------|------------------|
| ___Britax Roadster 9004 | Full rearward | ___ Mid position | ___ Full forward |
| ___Century Next Step 4920 | Full rearward | ___ Mid position | ___ Full forward |
| ___Cosco High Back | | | |
| Booster 02-442 | ___ Full rearward | ___ Mid position | Full forward |
| Eventflo Right Fit 245 | ___ Full rearward | ___ Mid position | Full forward |
- X 15. Suppression tests with 3-year-old dummy (Part 572, Subpart P) in the following positions
- X Sitting on seat with back against seat back (S22.2.2.1)
- X Sitting on seat with back against reclined seat back (S22.2.2.2)
- X Sitting on seat with back not against seat back (S22.2.2.3)
- X Sitting on seat edge, spine vertical, hands by the child's side (S22.2.2.4)
- X Standing on seat, facing forward (S22.2.2.5)
- X Kneeling on seat facing forward (S22.2.2.6)
- X Kneeling on seat facing rearward (S22.2.2.7)
- ___ Lying on seat (S22.2.2.8)
- ___16. 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)
- ___17. 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
- | | | | |
|------------------------|-------------------|------------------|------------------|
| Britax Roadster 9004 | Full rearward | Mid position | ___ Full forward |
| Century Next Step 4920 | ___ Full rearward | ___ Mid position | ___ Full forward |
| Cosco High Back | | | |
| Booster 02-442 | Full rearward | Mid position | ___ Full forward |
| Eventflo Right Fit 245 | Full rearward | ___ Mid position | ___ Full forward |
- ___18. Suppression tests with representative 6-year-old child using the following indicated child restraints where a child restraint is required.
- Section D
- | | | | |
|---------------------------|-------------------|------------------|------------------|
| ___Britax Roadster 9004 | ___ Full rearward | ___ Mid position | ___ Full forward |
| ___Century Next Step 4920 | ___ Full rearward | ___ Mid position | ___ Full forward |
| ___Cosco High Back | | | |

- | | | | | |
|--|---------------------------|-------------------|------------------|------------------|
| | Booster 02-442 | ___ Full rearward | ___ Mid position | ___ Full forward |
| | ___ Evenflo Right Fit 245 | ___ Full rearward | ___ Mid position | ___ Full forward |
- __19. Suppression tests with 6-year-old dummy (Part 572, Subpart N) in the following positions
- ___ Sitting on seat with back against seat back (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. 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)
- X 21. Test of Reactivation of the Passenger Air Bag System with an Unbelled 5th Percentile Female Dummy (S20.3, 22.3, S24.3) Perform this test after the following suppression test(s):
- ___ Evenflo Medallion with CRABBI, Cosco High Back Booster with 3 year old
- _____
- _____
- _____
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 12-month-old dummy (Part 572, Subpart I); using the following indicated child restraints.
- Section B
- | | | | |
|-----------------------------|-------------------|------------------|------------------|
| Britax Handle with Care 191 | ___ Full rearward | ___ Mid position | ___ Full forward |
| Century Assure 4553 | ___ Full rearward | ___ Mid position | ___ Full forward |
| Century Avanta SF 41530 | ___ Full rearward | ___ Mid position | ___ Full forward |
| Century Smart Fit 4543 | ___ 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 294 | ___ Full rearward | ___ Mid position | ___ Full forward |
| Evenflo On My Way Position | | | |
| Right V 282 | ___ Full rearward | ___ Mid position | ___ Full forward |
| ___ Grace 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 |
- __24. Low risk deployment test with 3-year-old dummy (Part 572, Subpart P) in the following positions
- Position 1
 - Position 2

- X 25. Low risk deployment test with 6-year-old dummy (Part 572, Subpart N) in the following positions
- X Position 1
 - X Position 2
- X 26. Low risk deployment test with 5th female dummy (Part 572, Subpart O) in the following positions
- X Position 1
 - X Position 2
- __ 27. Impact tests
- __ Frontal Oblique Test Speed _____
 - Belted 50th male dummy driver and passenger ((0 to 48 kmph) (S5.1.1(a))
 - Unbelted 50th male dummy driver and passenger ((0 to 48 kmph) (S5.1.2(a)(1))
 - Unbelted 50th male dummy driver and passenger ((32 to 40 kmph) (S5.1.2(a)(1) or S5.1.2(b))
 - __ Frontal Test Speed _____
 - Belted 50th male dummy driver ((0 to 48 kmph) (S5.1.1(b)(1) or S5.1.1(a))
 - Belted 50th male dummy passenger ((0 to 48 kmph) (S5.1.1(b)(1) or S5.1.1(a))
 - Belted 5th female dummy driver ((0 to 48 kmph) (S16.1(a))
 - Belted 5th female dummy passenger ((0 to 48 kmph) (S16.1(a))
 - Belted 50th male dummy driver and passenger ((0 to 56 kmph) (S5.1.1(b)(2))
 - Unbelted 50th male dummy driver and passenger ((0 to 48 kmph) (S5.1.2(a)(1))
 - Unbelted 50th male dummy driver ((32 to 40 kmph) (S5.1.2(a)(2) or S5.1.2(b))
 - Unbelted 50th male dummy passenger (32 to 40 kmph) (S5.1.2(a)(2) or S5.1.2(b))
 - Unbelted 5th female dummy driver (32 to 40 kmph) (S16.1(b))
 - Unbelted 5th female dummy passenger (32 to 40 kmph) (S16.1(b))
 - __ 40% Offset 0th Belted 5th female dummy driver and passenger (0 to 40 kmph) (S18.1)
28. Sled test. Unbelted 50th male dummy driver and passenger (S13)
- __ 29. FMVSS 204 indicant test
- __ 30. FMVSS 212 test
- __ 31. FMVSS 219 indicant test
- __ 32. FMVSS 301 frontal test

DATA SHEET 14
MARKING OF REFERENCE POINTS FOR VARIOUS TEST POSITIONS AND POINTS

NHTSA No. C35306

Test Date 5/05/03

Laboratory: VRTC

Test Technician(s) C. Case, B. Smith

1. Driver Designated Seating Position
 - ☒ 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions. (S16.2.10.1)
 N/A -- No lumbar adjustment
 - ☒ 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
 N/A -- No additional support adjustment
 - ☒ 1.3 **Mark** a point (seat cushion reference point) on the side of the seat cushion that is between 150 mm and 250 mm from the front edge of the seat cushion.
 - ☒ 1.4 Draw a line (seat cushion reference line) through the seat cushion reference point.
 - ☒ 1.5 Using only the controls that primarily move the seat in the fore-aft direction, move the seat cushion reference point to the rearmost position.
 - ☒ 1.6 If the seat cushion adjusts fore-aft, independent of the seat back, use only the controls that primarily move the seat cushion in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3)
 N/A -- No independent fore-aft seat cushion adjustment
 - ☒ 1.7 Using any part or any control other than the parts just used for fore-aft positioning, determine the range of angles of the seat cushion reference line and set the seat cushion reference line at the mid-angle.
 Maximum angle 10.2° nose up
 Minimum angle 1.3° nose down
 Mid-angle 4.5° nose up
 - ☒ 1.8 If the seat and/or seat cushion height is adjustable, use any part of any control other than those which primarily move the seat or seat cushion fore-aft, to put the seat cushion reference point in its lowest position with the seat cushion reference line angle at the mid-angle found in 1.7.
 N/A -- No seat height adjustment
 - ☒ 1.9 Using only the controls that primarily move the seat in the fore-aft direction, verify the seat is in the rearmost position.
 - ☒ 1.10 Using only the controls that primarily move the seat in the fore-aft direction, **mark** for future reference the fore-aft seat positions. **Mark** each position so that there is a visual indication when the seat is at a particular position. For manual seats, move the seat forward one detent at a time and **mark** each detent. For power seats, **mark** only the rearmost, middle, and foremost positions. Label three of the positions with the following: F for foremost, M for mid-position (if there is no mid-position, label the closest adjustment position to the rear of the mid-point), and R for rearmost.
 - ☒ 1.11 Use only the controls that primarily move the seat in the fore-aft direction to place the seat in the rearmost position.
 - ☒ 1.12 Using any controls, other than the controls that primarily move the seat and/or seat cushion in the fore-aft direction, find and visually mark for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.7.
 N/A -- No seat height adjustment. Go to 1.17.
 - ☒ 1.13 Using only the controls that primarily move the seat and/or seat cushion in the fore-aft direction, place the seat in the mid-fore-aft position.

- N/A 1.14 Using any controls, other than the controls that primarily move the seat in the fore-aft direction, find and visually **mark** for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.7.
- X 1.15 Using only the controls that change the seat in the fore-aft direction, place the seat in the foremost position.
- X 1.16 Using any controls, other than the controls that primarily move the seat in the fore-aft direction, find and visually **mark** for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 1.7.
 12 1/16 inches low
 14 3/16 inches high
 13 7/16 inches mid
- X 1.17 Visually **mark** for future reference the seat back angle, if adjustable, at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer.
 ___ N/A – No seat back angle adjustment
 Manufacturer's design seat back angle 535 mm from the sun visor screw to the head rest post
- 1.18 Is the seat a bucket seat?
 Yes, go to 1.18.1 and skip 1.18.2
 No, go to 1.18.2 and skip 1.18.1
- 1.18.1 Bucket seats:
 Locate and mark for future reference the longitudinal centerline of the seat cushion. The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle. (S16.3.1.10)
 Record the width of the seat cushion. 21.5 inches
 One half the width of the seat cushion is 10.75 inches
 Record the distance from the edge of the seat cushion to the seat mark 5 3/8 inches
- 1.18.2 Bench seats:
 Locate and **mark** for future reference the longitudinal line on the seat cushion that marks the longitudinal vertical plane through the centerline of the steering wheel.
2. Passenger Designated Seating Position
- X 2.1 Is the seat adjustable independent of the driver seating position?
X Yes-go to 2.2
 ___ No-go to 2.18
- X 2.2 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions. (S16.2.10.1, S20.1.9.1, S22.1.7.1)
 N/A – No lumbar adjustment
- X 2.3 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2, S20.1.9.2, S22.1.7.2)
X N/A – No additional support adjustment
- X 2.4 **Mark** a point (seat cushion reference point) on the side of the seat cushion that is between 150 mm and 250 mm from the front edge of the seat cushion.
- X 2.5 Draw a line (seat cushion reference line) through the seat cushion reference point.
- X 2.6 Using only the controls that primarily move the seat in the fore-aft direction, move the seat cushion reference point to the rearmost position.
- X 2.7 If the seat cushion adjusts fore-aft independent of the seat back, use only the controls that primarily move the seat cushion in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3, S20.1.9.3, S22.1.7.3)
 X N/A – No independent fore-aft seat cushion adjustment
- N/A 2.8 Using any part of any control, other than the parts just used for fore-aft positioning, determine the range of angles of the seat cushion reference line and set the seat cushion reference line at the mid-angle.
 Maximum angle

Minimum angle

Mid-angle

NO ANGLE ADJUSTMENTS

- ☒ 2.9 If the seat and/or seat cushion height is adjustable, use any part of any control other than those which primarily move the seat or seat cushion fore-aft to put the seat cushion reference point in its lowest position with the seat cushion reference line angle at the mid-range angle.
N/A – No seat height adjustment
- ☒ 2.10 Using only the controls that primarily move the seat and/or seat cushion in the fore-aft direction, verify the seat is in the rearmost position.
- ☒ 2.11 Using only the controls that primarily move the seat in the fore-aft direction, **mark** for future reference the fore-aft seat positions. **Mark** each position so that there is a visual indication when the seat is at a particular position. For manual seats, move the seat forward one detent at a time and **mark** each detent. For power seats, **mark** only the rearmost, middle, and foremost positions. Label three of the positions with the following: F for foremost, M for mid-position (if there is no mid-position, label the closest adjustment position to the rear of the mid-point) and R for rearmost.
- ☐ 2.12 Using only the controls that primarily move the seat in the fore-aft direction, place the seat in the rearmost position.
- ☒ 2.13 Using any controls, other than the controls that primarily move the seat in the fore-aft direction, find and visually **mark** for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 2.8.
☒ N/A – No seat height adjustment. Go to 2.18.
- ☐ 2.14 Using only the controls that primarily move the seat in the fore-aft direction, place the seat in the mid-fore-aft position.
- ☒ 2.15 Using any controls, other than the controls that primarily move the seat in the fore-aft direction, find and visually **mark** for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 2.8.
☒ N/A
- ☒ 2.16 Using only the controls that change the seat in the fore-aft direction, place the seat in the foremost position.
- ☐ 2.17 Using any controls, other than the controls that primarily move the seat in the fore-aft direction, find and visually **mark** for future reference the maximum, minimum, and middle height of the seat cushion reference point with the seat cushion reference line at the mid-angle determined in 2.8.
☒ N/A
- ☒ 2.18. Visually **mark** for future reference the seat back angle if adjustable, at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer.
___ N/A – No seat back angle adjustment
___ N/A – The seat back angle adjustment is controlled by the setting of the driver seat back angle.
Manufacturer's design seat back angle: 1detent rearward of 1st locking position
Actual seat back angle: 1detent rearward of 1st locking position

- X 2.19 Is the seat a bucket seat?
- X Yes, go to 2.19.1 and skip 2.19.2
- No, go to 2.19.2 and skip 2.19.1
- 2.19.1 Bucket seats.
- Locate and **mark** for future reference the longitudinal centerline of the seat cushion. (S20.2.1.3, S22.2.1.3) The longitudinal centerline of a bucket seat cushion is determined at the widest part of the seat cushion. Measure perpendicular to the longitudinal centerline of the vehicle. (S20.1.10)
- Record the width of the seat cushion. 21.5 inches
- One half the width of the seat cushion is 10.75 inches
- Record the distance from the edge of the seat cushion to the longitudinal centerline of the seat cushion. (The vertical plane through this longitudinal centerline is Plane B for suppression.) 10.75 inches
- 2.19.2 Bench seats
- Locate and **mark** for future reference the longitudinal centerline of the passenger seat cushion. The longitudinal centerline is the same distance from the longitudinal centerline of the vehicle as the center of the steering wheel. (S20.2.1.3, S22.2.1.3)
- Record the distance from the longitudinal centerline of the vehicle to the center of the steering wheel.
- Record the distance from the longitudinal centerline of the vehicle to the longitudinal centerline of the seat cushion. (The vertical plane through this longitudinal centerline is Plane B for suppression.)
- 3 Head Restraints
- N/A Vehicle contains automatic head restraints.
- N/A, there is no head restraint adjustment
- X 3.1 Left outboard
- X 3.1.1 Adjust the head restraint to its lowest position. (S16.3.4.2)
- 3.1.2 Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible. **Mark** the foremost position.
- X N/A
- X 3.1.3 Measure the vertical distance from the top most point of the head restraint to the bottom most point. Locate and **mark** a horizontal plane through the midpoint of this distance.
- Vertical height of head restraint mm 7.3 inches
- Mid-point height mm 3.65 inches
- X 3.2 Right outboard
- X 3.2.1 Adjust the head restraint to its lowest position. (S16.3.4.2)
- 3.2.2 Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible. **Mark** the foremost position.
- X N/A
- X 3.2.3 Measure the vertical distance from the top most point of the head restraint to the bottom most point. Locate and **mark** a horizontal plane through the midpoint of this distance.
- Vertical height of head restraint mm 7.3 inches
- Mid-point height mm 3.65 inches
- 4 Steering Wheel
- X 4.1 Is the steering wheel adjustable up and down and/or in and out?
- X Yes – go to 4.2
- No – this form is complete
- X 4.2 Find and **mark** for future reference each up and down position. Label three of the positions with the following: H for highest, M for mid-position (if there is no mid-position, label the next lowest adjustment position), and L for lowest.
- N/A – steering wheel is not adjustable up and down

- X 4.3 Find and mark for future references each in and out position. Label three of the positions with the following: F for foremost, M for mid-position (if there is no mid-position, label the next rearmost adjustment position), and R for rearmost.

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

5 Driver Low Risk Deployment -

N/A no low risk deployment tests scheduled

- X 5.1 Position the steering wheel so the front wheels are in the straight ahead position. (S26.2.1)
- X 5.2 Position any adjustable parts of the steering controls to the mid-position as determined in item 3 above. If a mid-position adjustment is not achievable, position the controls to the next lowest detent position. (S26.2.1)
- X 5.3 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)
- X 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)	Centerline of steering wheel	Centerline of steering wheel	Yes

- X 5.4 Locate the horizontal plane through the highest point of the air bag module cover. This is referred to as "Plane F." (Check determination method below.) (S26.2.6)

X 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)	4.6 mm above the bottom of the emblem on the steering wheel	4.6 mm above the bottom of the emblem on the steering wheel	Yes

6. Passenger Low Risk Deployment - Planes C and D

N/A no low risk deployment tests scheduled

- X 6.1 Locate the horizontal plane through the geometric center of the opening through which the right front air bag deploys into the occupant compartment. This is referred to as "Plane C." (Check location method below.) (S22.4.1.3)

X Plane C located using manufacturer's information supplied by the COTR. (Include manufacturer's information in the test report.)

OR

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

(Include supporting documentation in the test report.)

"Plane C" Measurements	Measured	Specified	Verify Measured equals Specified +/- 6mm
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Cz (mm)	70.8 mm from edge of air bag cover	70.8 mm from edge of air bag cover	Yes
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X 6.2 Locate the vertical plane parallel to the vehicle longitudinal centerline through the geometric center of the opening through which the right front air bag deploys into the occupant compartment. This is referred to as "Plane D." (Check determination method below.) (S22.4.1.3)

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

OK

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

"Plane D" Measurements	Measured	Specified	Verify Measured equals Specified +/- 6mm
Dy (mm)	191.4 mm from bottom left corner of air bag cover	191.4 mm from bottom left corner of air bag cover	Yes

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

X 7. 5th Female Dummy Done on 5/13/03

Mark a point on the chin of the dummy 40 mm below the center of the mouth. (Chin Point) (S23.2.6)

X 8. 6-Year-Old Dummy

Locate and **mark** a point on the front of the dummy's chest jacket on the midsagittal plane which is 139 mm (5.5 in) $\pm$ 3 mm ($\pm$ 0.1 in) along the surface of the skin down from the top of the skin at the neck line. Designate this point as "Point 1." (S24.4.1.1)

"Point 1" measurement Not recorded mm

X 9. 3 Year Old Dummy

X N/A – no low risk deployment tests

Locate and **mark** a point on the front of the dummy's chest jacket on the midsagittal plane which is 114 mm (4.5 in) $\pm$ 3 mm ($\pm$ 0.1 in) along the surface of the skin down from the top of the skin at the neck line. Designate this point as "Point 1." (S22.4.1.1)

"Point 1" measurement mm +/- 3mm

C. Case, B. Smith

5/5/03

I certify that I have read and performed each instruction.

Date

DATA SHEET 16

Suppression Test Using Newborn Infant Dummy (Part 572, Subpart K)(S20)

(Car beds listed in Appendix A, section A)

NHTSA No. C35306 Test Date 5/5/03Laboratory: VRFC Test Technician(s): C. Case, B. Smith, A. LoudenCar Bed Name, Model, and Manufacture Date: Cosco Dream RideBase: On Off X N/A-Restraint does not have a removable base

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

Seat Position Rearmost, mid-height Mid-position, mid-height X Foremost, mid-height (Use a separate sheet for each of the three fore-aft positions.)X The child restraint has NO visible damage (S20.1.1)

f. Belted suppression tests with car beds. (S20.2.3) (Car beds listed in Appendix A, section A)

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions. (S20.1.9.1)X N/A - No lumbar adjustmentX 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S20.1.9.2)X N/A - No additional support adjustmentX 1.3 If the seat cushion adjusts fore and aft independent of the seat back, set this adjustment to the full rearward position. (S20.1.9.3)X N/A - No independent fore-aft seat cushion adjustmentX 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angleX 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S20.1.9.5 and S8.1.3)

N/A - No seat back angle adjustment

Manufacturer's design seat back angle 1st detent backTested seat back angle 1st detent backX 1.6 If adjustable, set the head restraint at the full down and full forward position. (S20.1.9.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.X N/A - No head restraint adjustmentX 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant. (S20.2.3.2 (b))

N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position Highest PositionTested anchorage position Highest PositionX 1.8 Read the car bed owner's manual for installation instructions.X 1.9 Secure the car bed with the seat belt by following, to the extent possible, the car bed manufacturer's directions regarding proper installation of the restraint. (S20.2.3.2 (a)) Do NOT use any positioning devices such as towes. If the vehicle has FMVSS 225 anchorages do not attach the car bed to these anchorages. (S20.1.6) Do NOT attach any toppers. (S20.1.8)X 1.10 Position the 49 CFR Part 572 Subpart K Newborn Infant dummy in the car bed by following, to the extent possible, the car bed manufacturer's instructions provided with the car bed. (S20.2.3.2 (c))

If the seat must be moved rearward because of contact with the instrument panel

describe the final location of the seat:

X N/A - No contact with the instrument panel

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

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

- X 1.11 Complete rows 1 through 12 in Table 2 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed.
- 2 Unhelmed suppression tests using FMVSS 225 Anchorages with car bed. (Car beds listed in Appendix A, section A) Car beds are not required by FMVSS 213 to have devices to mate to FMVSS 225 anchorages.
- X N/A - Vehicle does not have FMVSS 225 anchorages or car bed does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- 2.1 Keep the same seat position as in 1.1 through 1.7 above.
- 2.2 Read the car bed owner's manual and the vehicle owner's manual for installation instructions.
- 2.3 Attach the car bed to the FMVSS 225 anchorages according to the instructions in the car bed owner's manual and the vehicle owner's manual. Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)
- __2.4 Position the 43 CFR Part 572 Subpart K Newborn Infant dummy in the car bed by following, to the extent possible, the car bed manufacturer's instructions provided with the car bed. (S20.2.3.2(c))
- If the seat must be moved rearward because of contact with the instrument panel, describe the final location of the seat:
- ___ N/A - No contact with the instrument panel.
- Manual seat adjuster: ___ detent(s) rearward of the forward-most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: ___ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- __2.5 Complete rows 13 through 24 in Table 2 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.3.2(d))

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

5/5/03
Date

DATA SHEET 15

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart N)(S20)
 NHTSA No. 035305 Test Date 5/5/03

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

Child Restraint Name, Model, Date of Manufacture: Britax Handle with Care, 5/26/03

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

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

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

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

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

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

☐ N/A – No lumbar adjustment

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

☐ N/A – No additional support adjustment

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

☐ N/A – No independent fore-aft seat cushion adjustment

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

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

☐ N/A – No seat back angle adjustment

Manufacturer's design seat back angle 1st defect back

Tested seat back angle 1st defect back

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

☐ N/A – No head restraint adjustment

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

☐ N/A – No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position: full up position

Tested anchorage position: full up position

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

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

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

☒ 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the rear-facing mode. (S20.2.1.4(a)) Do NOT use any positioning devices such as towels. (FR 65 30711 footnote 23, 5/12/2000) If the

- vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
- X 1.12 Place a load cell with a maximum full scale loading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.4(c))
- Is there a sheath around the seat belt that interferes with the load cell? ☐ Yes ☐ No
If yes, cut off all or part of the sheath. ☐ All ☐ Part
- X 1.13 Cinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
Record seat belt tension 28.4 lb
- X 1.14 Position the 49 CFR Part 572 Subpart R 12-month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint (S20.2.1.4(d)) (The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- ☒ N/A – No dummy contact with the instrument panel.
- Manual seat adjuster: ☐ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: ☐ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- Recinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
Record seat belt tension
- X 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed (S20.2.1.4(e))
- X 2. Unbelled tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.2.4) – If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
- Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
- Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.4(c))
- 3 Unbelled tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4) – Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)
- ☒ N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- 3 3.1. Keep the same seat position as in 1.1 through 1.7 above
- 3 3.2. Read the child restraint owner's manual for installation instructions.
- 3 3.3. Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as towels. (FR 65 30711 footnote 23, 5/12/2000) Do NOT attach any tethers. (S20.1.7)
- 3 3.4. Position the 49 CFR Part 572 Subpart R 12-month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint (S20.2.1.4(d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- ☒ N/A – No dummy contact with the instrument panel.

- Manual seat adjuster: ___ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: ___ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- __3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds and then check whether the air bag is suppressed. (S20.2.1.4(e))
4. Belted tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5 (a)(1)) Do NOT attach any tethers. (S20.1.8)
- X N/A - Not a convertible restraint
- 4.1 Keep the same seat position as in 1.1 through 1.7 above.
- 4.2 Read the child restraint owner's manual for installation instructions.
- 4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14) (S20.2.1.5(a)(1))
- 4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward-facing mode. (S20.2.1.5(b)) Do NOT use any positioning devices such as towels. (16 CFR 607.11, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any tethers. (S20.1.8)
- 4.5 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor on vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.5(c))
- Is there a sheath around the seat belt that interferes with the load cell? Yes No
If yes, out of all or part of the sheath. All Part
- 4.6 Cinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.5(c))
Record seat belt tension
- 4.7 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)) (The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- ___ N/A - No dummy contact with the instrument panel
- Manual seat adjuster: ___ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: ___ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- Recinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.5(c))
Record seat belt tension
- __4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))
5. Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode. (Appendix A, sections B and C) (S20.2.2.5) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any tethers. (S20.1.8) Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

Complete rows 49 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.5(c))

X N/A Not a convertible restraint

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

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

X N/A – Not a convertible restraint

- 6.1 Keep the same seat position as in 1.1 through 1.7 above.
- 6.2 Read the child restraint owner's manual for installation instructions.
- 6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tethers. (S20.1.3) Do NOT use any positioning devices such as lowels. (FR 65 3U/11, footnote 23, 5/12/2000)
- 6.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- N/A – No dummy contact with the instrument panel.
- Manual seat adjuster: detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 6 mm.)
- 6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(a))

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

____5/5/03
 Date

Table 1

NHTSA No. C35306

Test Date: 5/5/03

Child Restraint Name, Model, Date of Manufacture: Britax Handle with Care 5/25/03Base: ☐ On ☐ Off ☒ N/A-Restraint does not have a removable baseSeat Position: Rearmost, mid-height: ☐ Mid-position, mid-height: ☒ Foremost, mid-height: ☐

	Belted/ Unbelted, FMVSS 225	Rear facing Forward facing	Handle (S20.1.3)	Sunshield (S20.1.4)	Blanket Position 1 (S20.1.5(a))	Blanket Position 2 (S20.1.5(b))	Suppressed FAIL, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	Not done
2	Belted	Rear	Down	Stowed	None	N/A	Suppressed
3	Belted	Rear	Upright	In-use	None	N/A	Not done
4	Belted	Rear	Upright	Stowed	None	N/A	Not done
5	Belted	Rear	Down	In-use	On	N/A	Not done
6	Belted	Rear	Down	Stowed	On	N/A	Not done
7	Belted	Rear	Upright	In-use	On	N/A	Not done
8	Belted	Rear	Upright	Stowed	On	N/A	Not done
9	Belted	Rear	Down	In-use	N/A	On	Not done
10	Belted	Rear	Down	Stowed	N/A	On	Not done
11	Belted	Rear	Upright	In-use	N/A	On	Not done
12	Belted	Rear	Upright	Stowed	N/A	On	Not done
13	Unbelted	Rear	Down	In-use	None	N/A	Not done
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	Not done
16	Unbelted	Rear	Upright	Stowed	None	N/A	Not done
17	Unbelted	Rear	Down	In-use	Or	N/A	Not done
18	Unbelted	Rear	Down	Stowed	Or	N/A	Not done
19	Unbelted	Rear	Upright	In-use	Or	N/A	Not done
20	Unbelted	Rear	Upright	Stowed	Or	N/A	Not done
21	Unbelted	Rear	Down	In-use	N/A	On	Not done
22	Unbelted	Rear	Down	Stowed	N/A	On	Not done
23	Unbelted	Rear	Upright	In-use	N/A	On	Not done
24	Unbelted	Rear	Upright	Stowed	N/A	On	Not done
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 ¹ (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	Down	In-use	None	N/A	N/A
38	Belted	Forward ⁴	Down	Stowed	None	N/A	N/A
39	Belted	Forward ⁴	Upright	In-use	None	N/A	N/A
40	Belted	Forward ⁴	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ⁴	Down	In-use	On	N/A	N/A
42	Belted	Forward ⁴	Down	Stowed	On	N/A	N/A
43	Belted	Forward ⁴	Upright	In-use	On	N/A	N/A
44	Belted	Forward ⁴	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ⁴	Down	In-use	N/A	On	N/A
46	Belted	Forward ⁴	Down	Stowed	N/A	On	N/A
47	Belted	Forward ⁴	Upright	In-use	N/A	On	N/A
48	Belted	Forward ⁴	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 ⁴	Down	In-use	None	N/A	N/A
62	225	Forward ⁴	Down	Stowed	None	N/A	N/A
63	225	Forward ⁴	Upright	In-use	None	N/A	N/A
64	225	Forward ⁴	Upright	Stowed	None	N/A	N/A
65	225	Forward ⁴	Down	In-use	On	N/A	N/A
66	225	Forward ⁴	Down	Stowed	On	N/A	N/A
67	225	Forward ⁴	Upright	In-use	On	N/A	N/A
68	225	Forward ⁴	Upright	Stowed	On	N/A	N/A
69	225	Forward ⁴	Down	In-use	N/A	On	N/A
70	225	Forward ⁴	Down	Stowed	N/A	On	N/A
71	225	Forward ⁴	Upright	In-use	N/A	On	N/A
72	225	Forward ⁴	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. Converticle 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).)

(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.): The handle, sunshield, and blanket do not affect the system so these items were not done.

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

5/5/03
Date

DATA SHEET 15

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

NHTSA No. C35306

Test Date: 11/3/03

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

Child Restraint Name, Model, Date of Manufacture: Britax Handle with Care, 5/26/03

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

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

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

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

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

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

X N/A - No lumbar adjustment

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

X N/A - No additional support adjustment

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

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

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

☒ 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S20.1.9.5 and S5.1.3)

N/A - No seat back angle adjustment

Manufacturer's design seat back angle 1st detect back

Tested seat back angle 1st detect back

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

N/A - No head restraint adjustment

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

N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position: Full up position

Tested anchorage position: Full up position

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

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

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

☒ 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the rear facing mode. (S20.2.1.4(b)) Do NOT use any positioning devices such as towels. (F.R. 85.30/11 footnote 23, 5/12/2000) If the

- vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
- N/A 1.12 Place a load cell with a maximum full-scale reading of 225 N (50.5 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.4(c))
- Is there a sheath around the seat belt that interferes with the load cell? Yes No
if yes, cut off all or part of the sheath. All Part
- N/A 1.13 Crank the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
Record seat belt tension
- X 1.14 Position the 49 CFR Part 572 Subpart K 12-month old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d)) (The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- X N/A – No dummy contact with the instrument panel.
- Manual seat adjuster: _____ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: _____ mm between instrument panel and child restraint (max allowed is 5 mm.)
- Recrunch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
Record seat belt tension
- N/A 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
- X 2. Unbelted tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.2.4) If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
- Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
- Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.4(c))
3. Unbelted tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4) Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)
- X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- 3.1 Keep the same seat position as in 1.1 through 1.7 above
- 3.2 Read the child restraint owner's manual for installation instructions
- __ 3.3 Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as towels. (FR 65 30711 footnote 23, 5/12/2000) Do NOT attach any tethers. (S20.1.8)
- __ 3.4 Position the 49 CFR Part 572 Subpart K 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4 (d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- N/A – No dummy contact with the instrument panel

- Manual seat adjuster: __ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- __3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
4. Belted tests with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5 (a)(1)) Do NOT attach any tethers. (S20.1.8)
- X N/A – Not a convertible restraint
- 4.1 Keep the same seat position as in 1.1 through 1.7 above.
- 4.2 Read the child restraint owner's manual for installation instructions.
- 4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S20.2.1.5(a)(1))
- __4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward facing mode. (S20.2.1.5(b)) Do NOT use any positioning devices such as towels. (F11.65.30711, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any tethers. (S20.1.8)
- 4.5 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor on vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.5(c))
- Is there a sheath around the seat belt that interferes with the load cell? __ Yes __ No
- If yes, cut off all or part of the sheath. __ All __ Part
- 4.6 Cinch the seat belt to a tension load of 130 N + 3N (29.2 lb + 0.7 lb) (S20.2.1.5(c))
- Record seat belt tension
- 4.7 Position the 49 CFR Part 572 Subpart B 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)) (The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- __ N/A – No dummy contact with the instrument panel.
- Manual seat adjuster: __ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- Recinch the seat belt to a tension load of 130 N + 3N (29.2 lb + 0.7 lb) (S20.2.1.5(c))
- Record seat belt tension
- __4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, rattle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))
5. Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode (Appendix A, sections B and C) (S20.2.2.5) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any tethers. (S20.1.8) Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

Complete rows 49 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(c))
X N/A Not a convertible restraint

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

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

X N/A Not a convertible restraint

- 6.1 Keep the same seat position as in 1.1 through 1.7 above
 6.2 Read the child restraint owner's manual for installation instructions
 6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tellers. (S20.1.8) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000)
 6.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))
 If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.
 N/A - No dummy contact with the instrument panel.
 Manual seat adjuster: detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: mm between instrument panel and child restraint (max. allowed is 5 mm.)
 6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))

C.Case, B.Smith, A. Loucen
 I certify that I have read and performed each instruction.

5/5/05
 Date

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).)

(S20 1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.). The handle, sunshield, and blanket do not affect the system so these items were not core.

The seat belt was not used in the mid position.

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

5/5/03
Date

DATA SHEET 15

Suppression Test Using 12 month old CRAB Dummy (Part 572, Subpart N)(S20)
 NHISA No. C36306 Test Data: 5/5/03

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

Child Restraint Name, Model, Date of Manufacture Britax Handle with Care, 5/26/03

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

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

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

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

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

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

 N/A - No lumbar adjustment

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

 N/A - No additional support adjustment

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

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

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

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

 N/A - No seat back angle adjustment

Manufacturer's design seat back angle 1st detent back

Tested seat back angle 1st detent back

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

 N/A - No head restraint adjustment

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

 N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position. Full up position

Tested anchorage position Full up position

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

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

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

X 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the rear facing mode. (S20.2.1.4(b)) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23 5/12/2000) If the

- vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
- N/A1.12 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.4(c))
- Is there a sheath around the seat belt that interferes with the load cell? Yes No
If yes, cut off all or part of the sheath. All Part
- N/A1.13 Cinch the seat belt to a tension load of $\pm 30 \text{ N} \pm 3 \text{ N}$ (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
Record seat belt tension
- X 1.14 Position the 49 CFR Part 572 Subpart R 12-month old CRAB dummy in the child restraint by following to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d)) (The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- X N/A No dummy contact with the instrument panel.
- Manual seat adjuster: detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: mm between instrument panel and child restraint (max allowed is 5 mm)
- Recincho the seat belt to a tension load of $\pm 30 \text{ N} \pm 3 \text{ N}$ (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
Record seat belt tension
- N/A1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
- X 2. Unbelted tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.2.4) – If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
- Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
- Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.4(c))
3. Unbelted tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4) – Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)
- X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S&S devices to mate to the FMVSS 225 anchorages.
- 3.1 Keep the same seat position as in 1.1 through 1.7 above.
- 3.2 Read the child restraint owner's manual for installation instructions.
- 3.3 Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000) Do NOT attach any tethers. (S20.1.8)
- 3.4 Position the 49 CFR Part 572 Subpart R 12-month old CRAB dummy in the child restraint by following to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- N/A - No dummy contact with the instrument panel

- Manual seat adjuster: ___ detent(s) rearward of the forward most position. (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: ___ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- 3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
4. Belted tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) – If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5 (a)(1)). Do NOT attach any leathers. (S20.1.8)
- X N/A – Not a convertible restraint
- ___ 4.1 Keep the same seat position as in 1.1 through 1.7 above.
- ___ 4.2 Read the child restraint owner's manual for installation instructions.
- ___ 4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14) (S20.2.1.5(a)(1)).
- ___ 4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward-facing mode. (S20.2.1.5(b)). Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000). If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)). Do NOT attach any leathers. (S20.1.8)
- 4.5 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.5(c))
- Is there a sheath around the seat belt that interferes with the load cell? Yes No
 If yes, cut off all or part of the sheath. All Part
- 4.6 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.5(c)). Record seat belt tension.
- ___ 4.7 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)). (The tons on in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
 ___ N/A – No dummy contact with the instrument panel.
- Manual seat adjuster: ___ detent(s) rearward of the forward most position. (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: ___ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- Recinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.5(c)). Record seat belt tension.
- ___ 4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))
5. Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode. (Appendix A, sections Band C) (S20.2.2.5) – If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any leathers. (S20.1.8). Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

Complete rows 49 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.5(c))

X N/A - Not a convertible restraint

5. Unbelted tests using FMVSS 225 Anchorages with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) -- Do NOT attach seat belts (S20.1.6) Do NOT attach any leathers. (S20.1.8)

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

X N/A -- Not a convertible restraint

- 6.1 Keep the same seat position as in 1.1 through 1.7 above.
- 6.2 Read the child restraint owner's manual for installation instructions.
- 6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any leathers. (S20.1.8) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000)
- 6.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.
- N/A -- No dummy contact with the instrument panel.
- Manual seat adjuster: -- detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: -- mm between instrument panel and child restraint (max allowed is 5 mm.)
- 6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(n))

C. Case, B. Smith, A. Loudon
I certify that I have read and performed each instruction.

5/5/03
Date

Table 1

NHISA No. C35306Test Date: 5/5/03Child Restraint Name, Model, Date of Manufacture Britax Handle with Care 5/26/03Base: On Off X N/A-Restraint does not have a removable baseSeat Position: X Rearmost, mid height Mid position, mid height Foremost, mid height

	Belted, Unbelted, FMVSS 225	Rear facing Forward facing	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	Rear	Down	In-use	None	N/A	Not done
2	Belted	Rear	Down	Stowed	None	N/A	Not done
3	Belted	Rear	Upright	In-use	None	N/A	Not done
4	Belted	Rear	Upright	Stowed	None	N/A	Not done
5	Belted	Rear	Down	In-use	Or	N/A	Not done
6	Belted	Rear	Down	Stowed	Or	N/A	Not done
7	Belted	Rear	Upright	In-use	Or	N/A	Not done
8	Belted	Rear	Upright	Stowed	Or	N/A	Not done
9	Belted	Rear	Down	In-use	N/A	Or	Not done
10	Belted	Rear	Down	Stowed	N/A	Or	Not done
11	Belted	Rear	Upright	In-use	N/A	Or	Not done
12	Belted	Rear	Upright	Stowed	N/A	Or	Not done
13	Unbelted	Rear	Down	In-use	None	N/A	Not done
14	Unbelted	Rear	Down	Stowed	None	N/A	Suppressed
15	Unbelted	Rear	Upright	In-use	None	N/A	Not done
16	Unbelted	Rear	Upright	Stowed	None	N/A	Not done
17	Unbelted	Rear	Down	In-use	Or	N/A	Not done
18	Unbelted	Rear	Down	Stowed	Or	N/A	Not done
19	Unbelted	Rear	Upright	In-use	Or	N/A	Not done
20	Unbelted	Rear	Upright	Stowed	Or	N/A	Not done
21	Unbelted	Rear	Down	In-use	N/A	Or	Not done
22	Unbelted	Rear	Down	Stowed	N/A	Or	Not done
23	Unbelted	Rear	Upright	In-use	N/A	Or	Not done
24	Unbelted	Rear	Upright	Stowed	N/A	Or	Not done
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	Or	N/A	N/A
30	225	Rear	Down	Stowed	Or	N/A	N/A
31	225	Rear	Upright	In-use	Or	N/A	N/A
32	225	Rear	Upright	Stowed	Or	N/A	N/A
33	225	Rear	Down	In-use	N/A	Or	N/A
34	225	Rear	Down	Stowed	N/A	Or	N/A
35	225	Rear	Upright	In-use	N/A	Or	N/A
36	225	Rear	Upright	Stowed	N/A	Or	N/A

	Belted, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle ¹ (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	Bolted	Forward ⁴	Down	In-use	None	N/A	N/A
38	Belted	Forward ⁴	Down	Stowed	None	N/A	N/A
39	Belted	Forward ⁴	Upright	In-use	None	N/A	N/A
40	Belted	Forward ⁴	Upright	Stowed	None	N/A	N/A
41	Belted	Forward ⁴	Down	In-use	On	N/A	N/A
42	Belted	Forward ⁴	Down	Stowed	On	N/A	N/A
43	Bolted	Forward ⁴	Upright	In-use	On	N/A	N/A
44	Bolted	Forward ⁴	Upright	Stowed	On	N/A	N/A
45	Belted	Forward ⁴	Down	In-use	N/A	On	N/A
46	Belted	Forward ⁴	Down	Stowed	N/A	On	N/A
47	Belted	Forward ⁴	Upright	In-use	N/A	On	N/A
48	Belted	Forward ⁴	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 ⁴	Down	In-use	None	N/A	N/A
62	225	Forward ⁴	Down	Stowed	None	N/A	N/A
63	225	Forward ⁴	Upright	In-use	None	N/A	N/A
64	225	Forward ⁴	Upright	Stowed	None	N/A	N/A
65	225	Forward ⁴	Down	In-use	On	N/A	N/A
66	225	Forward ⁴	Down	Stowed	On	N/A	N/A
67	225	Forward ⁴	Upright	In-use	On	N/A	N/A
68	225	Forward	Upright	Stowed	On	N/A	N/A
69	225	Forward ⁴	Down	In-use	N/A	On	N/A
70	225	Forward ⁴	Down	Stowed	N/A	On	N/A
71	225	Forward ⁴	Upright	In-use	N/A	On	N/A
72	225	Forward ⁴	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).)

.....
(S20.1.5)

Comments (Record any position readjustments or problems by first stating the row number to which the comment applies.): The handle, sunshield, and blanket do not affect the system so these items were not cons......

The seat belt was not used in the rearmost position.

.....

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

5/5/03
Date

DATA SHEET 15

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

NHTSA No. Q35306

Test Date: 5/5/03

Laboratory: VRFC Test Technician(s): C.Case, B.Smith, A. Joudon

Child Restraint Name, Model, Date of Manufacture: Evenflo First Choice, 6/20/00

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

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

Seat Position: ☐ Rearmost, mid-height ☐ Mid position, mid-height ☒ Foremost, mid-height (Use a separate sheet for each of the three fore-aft positions.) ☐ 6 dots rear of full forward Because of contact with the interior

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

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

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

☒ N/A - No lumbar adjustment

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

☒ N/A - No additional support adjustment

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

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

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

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

☒ N/A - No seat back angle adjustment

Manufacturer's design seat back angle ☒ deflect rearward

Tested seat back angle ☒ deflect rearward

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

☐ N/A - No head restraint adjustment

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

☒ N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position ☒ Full Up

Tested anchorage position ☒ Full Up

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

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

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

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

- regarding proper installation of the restraint in the rear-facing mode. (S20.2.1.4(c)) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to those anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
- ☒ 1.12 Place a load cell with a maximum full-scale reading of 225 N (50.6 'lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.4(c))
- Is there a sheath around the seat belt that interferes with the load cell? ☐ Yes ☐ No
If yes, cut off all or part of the sheath. ☐ All ☐ Part
- ☒ 1.13 Cinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
Record seat belt tension 29.7 lb _____
- ☒ 1.14 Position the 49 CFR Part 572 Subpart K 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d)) (The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the forward position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
N/A -- No dummy contact with the instrument panel.
- Manual seat adjuster ☐ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster ☐ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- Recin the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
Record seat belt tension _____
- ☒ 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
- ☒ 2. Unbelted tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.2.4) If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to those anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
- Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
- Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.4(c))
3. Unbelted tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4) Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)
- ☒ N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- 3.1 Keep the same seat position as in 1.1 through 1.7 above.
- 3.2 Read the child restraint owner's manual for installation instructions.
- 3.3 Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000) Do NOT attach any tethers. (S20.1.7)
- ☐ 3.4 Position the 49 CFR Part 572 Subpart K 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4 (d))
- If the seat must be moved rearward because of dummy contact with the instrument

panel, describe the final location of the seat.

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

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

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

- 3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
4. Belted tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5 (a)(1)) Do NOT attach any tethers. (S20.1.8)
- X N/A – Not a convertible restraint
- 4.1 Keep the same seat position as in 1.1 through 1.7 above.
- 4.2 Read the child restraint owner's manual for installation instructions.
- 4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S20.2.1.5(a)(1))
- 4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward-facing mode. (S20.2.1.5(b)) Do NOT use any positioning devices such as towels. (FR 65.30711, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any tethers. (S20.1.8)
- 4.5 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.5(c))
- Is there a sheath around the seat belt that interferes with the load cell? ___ Yes ___ No
If yes, cut off all or part of the sheath. All Part
- 4.6 Circle the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.5(c))
Record seat belt tension
- ___ 4.7 Position the 49 CFR Part 572 Subpart R 12-month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)) (The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.
- ___ N/A – No dummy contact with the instrument panel.
- Manual seat adjuster: ___ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: ___ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- Recinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.5(c))
Record seat belt tension
- 4.5 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))
5. Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode. (Appendix A, sections Band C) (S20.2.2.5) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any tethers. (S20.1.8)

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

Complete rows 49 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.5(c))

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

(S20.1.6) Do NOT attach any tethers. (S20.1.8)

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

N/A - Not a convertible restraint

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

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

- ☐ 6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tethers. (S20.1.3) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000)

- ☐ 6.4 Position the 43 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))

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

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

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

Power seat adjuster: ☐ mm between instrument panel and child restraint (max. allowed is 6 mm.)

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

C Case, B. Smith, A. Loudon
I certify that I have read and performed each instruction

5/5/03
Date

Table 1

NHTSA No. C55306

Test Date 5/5/06

Child Restraint Name, Model, Date of Manufacture, Eventile First Choice 6/20/00

Base: ☐ On ☐ Off ☒ N/A-Restraint does not have a removable baseSeat Position: ☐ Rearmost, mid-height ☐ Mid-position, mid-height ☒ Foremost, mid height

	Bolted 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 Fall, Or N/A
1	Bolted	Rear	Down	In-use	None	N/A	N/A
2	Bolted	Rear	Down	Stowed	None	N/A	Not done
3	Bolted	Rear	Upright	In-use	None	N/A	N/A
4	Bolted	Rear	Upright	Stowed	None	N/A	Suppressed
5	Bolted	Rear	Down	In-use	On	N/A	N/A
6	Bolted	Rear	Down	Stowed	On	N/A	Not done
7	Bolted	Rear	Upright	In-use	On	N/A	N/A
8	Bolted	Rear	Upright	Stowed	On	N/A	Not done
9	Bolted	Rear	Down	In-use	N/A	On	N/A
10	Bolted	Rear	Down	Stowed	N/A	On	Not done
11	Bolted	Rear	Upright	In-use	N/A	On	N/A
12	Bolted	Rear	Upright	Stowed	N/A	On	Not done
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Not done
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	Not done
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	Not done
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Not done
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	Not done
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 ¹ (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 ⁵	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 ⁵	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 ⁵	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 ⁵	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 ⁵	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 ⁵	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))

(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 seconds rear of full forward because of seat contact with the interior.

___C___Case, B. Smith, A. Allison, ..

I certify that I have read and performed each instruction.

5/5/03

Date

DATA SHEET 15

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart N)(S20)
 NHTSA No. C35306 Test Date 5/5/03

Laboratory: VRIQ Test Technician(s): C.Case, B.Smith, A.Louden

Child Restraint Name, Model, Date of Manufacture: Evenflo First Choice 6:20:00, ...

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

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

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

1. Bolter tests with rearward facing child restraints and convertible restraints in the rearward-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4)
 - X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions. (S20.1.9.1)
 - X N/A - No lumbar adjustment
 - X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S20.1.9.2)
 - X N/A - No additional support adjustment
 - X 1.3 If the seat cushion adjusts fore and aft independent of the seat back, set this adjustment to the full rearward position. (S20.1.9.3)
 - X N/A - No independent fore-aft seat cushion adjustment
 - X 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angle.
 - X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S20.1.9.5 and S8.1.3)
 - N/A - No seat back angle adjustment
 - Manufacturer's design seat back angle 1st detent rearward
 Tested seat back angle 1st detent rearward
 - X 1.6 If adjustable, set the head restraint at the full down and full forward position. (S20.1.9.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible
 - N/A - No head restraint adjustment
 - X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (S20.2.1.4(c))
 - N/A - No adjustable upper seat belt anchorage
 - Manufacturer's specified anchorage position Full Up _____
 Tested anchorage position Full Up _____
 - X 1.8 Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint (S20.2.1.2)
 - X 1.9 Read the child restraint owner's manual for installation instructions.
 - X 1.10 Place the child restraint facing rearward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14.) (S20.2.1.4(a)(1))
 - X 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the rear-facing mode. (S20.2.1.4(b)) Do NOT use any positioning devices such as towels. (FR 65-36711, footnote 23, 5/12/2006) If the

- vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
- X 1.12 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.4(c))
- Is there a sheath around the seat belt that interferes with the load cell? ☐ Yes ☐ No
- If yes, cut off all or part of the sheath. ☐ All ☐ Part
- X 1.13 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.4(c))
- Record seat belt tension 30.2 lb
- X 1.14 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d)) (The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- N/A - No dummy contact with the instrument panel.
- Manual seat adjuster: ☐ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: ☐ mm between instrument panel and child restraint (max allowed is 5 mm.)
- Recinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.4(c))
- Record seat belt tension
- X 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
- X 2 Unbelted tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.2.4) If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
- Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
- Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.4(c))
- 3 Unbelted tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C)
- (S20.2.1.4) - Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)
- X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- 3.1. Keep the same seat position as in 1.1 through 1.7 above.
- 3.2. Read the child restraint owner's manual for installation instructions.
- 3.3. Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000) Do NOT attach any tethers. (S20.1.7)
- 3.4. Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4 (c))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- N/A - No dummy contact with the instrument panel.

- Manual seat adjuster: __ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: ____ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- __3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
4. Belted tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) – If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any tethers. (S20.1.8)
- X N/A – Not a convertible restraint.
- 4.1 Keep the same seat position as in 1.1 through 1.7 above.
- 4.2 Read the child restraint owner's manual for installation instructions.
- 4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S20.2.1.5(a)(1))
- __4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward-facing mode. (S20.2.1.5(b)) Do NOT use any positioning devices such as towes. (FR 65 30711, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any tethers. (S20.1.8)
- 4.5 Place a load cell with a maximum full scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.5(c))
- | | | |
|--|-----|------|
| Is there a sheath around the seat belt that interferes with the load cell? | Yes | No |
| If yes, cut off all or part of the sheath. | All | Part |
- 4.6 Cinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.5(c)).
 Record seat belt tension: _____
- 4.7 Position the 49 CFR Part 572 Subpart K 12-month old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)) (The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the forward position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
 __ N/A - No dummy contact with the instrument panel.
- Manual seat adjuster: __ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: ____ mm between instrument panel and child restraint (max. allowed is 5 mm.)
 Recinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.5(c)).
 Record seat belt tension: _____
- __4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))
5. Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode. (Appendix A, sections Band C) (S20.2.2.5) – If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any tethers. (S20.1.8) Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

- Complete rows 49 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.5(c))
6. Unbelted tests using FMVSS 225 Anchorages with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)
- ☒ N/A Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages
- ☐ N/A Not a convertible restraint
- ☐ 6.1 Keep the same seat position as in 1.1 through 1.7 above.
- ☐ 6.2 Read the child restraint owner's manual for installation instructions.
- ☐ 6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tethers. (S20.1.8) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000)
- ☐ 6.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- N/A – No dummy contact with the instrument panel.
- Manual seat adjuster: detent(s) rearward of the forward most position. (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: mm between instrument panel and child restraint (max. allowed is 5 mm.)
- ☐ 6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(c))

C.Case, D.Smith, A.Jorden
I certify that I have read and performed each instruction.

5/5/03
Date

Table 1

NHISA No. C25396

Test Date: 5/5/03

Child Restraint Name, Model, Date of Manufacture: Evenflo First Choice 6/20/00

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

Seat Position: Rearmost, mid height: X, Mid position, mid height: Forcmost, mid height

	Belted, Unbelted, FMVSS 225	Rear Facing, Forward Facing	Handle (S20.1.3)	Sunshield (S20.1.4)	Blanket, Position 1 (S20.1.5(a))	Blanket, Position 2 (S20.1.5(b))	Suppressed, I All, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	N/A
2	Belted	Rear	Down	Stowed	None	N/A	Not done
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	Not done
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	Not done
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Not done
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	Not done
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Not done
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	Not done
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	Not done
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Not done
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	Not done
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	Down	In-use	None	N/A	N/A
38	Belted	Forward	Down	Stowed	None	N/A	N/A
39	Belted	Forward	Upright	In-use	None	N/A	N/A
40	Belted	Forward	Upright	Stowed	None	N/A	N/A
41	Belted	Forward	Down	In-use	Or	N/A	N/A
42	Belted	Forward	Down	Stowed	Or	N/A	N/A
43	Belted	Forward	Upright	In-use	Or	N/A	N/A
44	Belted	Forward	Upright	Stowed	Or	N/A	N/A
45	Belted	Forward	Down	In-use	N/A	On	N/A
46	Belted	Forward	Down	Stowed	N/A	On	N/A
47	Belted	Forward	Upright	In-use	N/A	On	N/A
48	Belted	Forward	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	Or	N/A	N/A
54	Unbelted	Forward	Down	Stowed	Or	N/A	N/A
55	Unbelted	Forward	Upright	In-use	Or	N/A	N/A
56	Unbelted	Forward	Upright	Stowed	Or	N/A	N/A
57	Unbelted	Forward	Down	In-use	N/A	Or	N/A
58	Unbelted	Forward	Down	Stowed	N/A	Or	N/A
59	Unbelted	Forward	Upright	In-use	N/A	Or	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	Or	N/A
61	225	Forward	Down	In-use	None	N/A	N/A
62	225	Forward	Down	Stowed	None	N/A	N/A
63	225	Forward	Upright	In-use	None	N/A	N/A
64	225	Forward	Upright	Stowed	None	N/A	N/A
65	225	Forward	Down	In-use	Or	N/A	N/A
66	225	Forward	Down	Stowed	Or	N/A	N/A
67	225	Forward	Upright	In-use	Or	N/A	N/A
68	225	Forward	Upright	Stowed	Or	N/A	N/A
69	225	Forward	Down	In-use	N/A	Or	N/A
70	225	Forward	Down	Stowed	N/A	Or	N/A
71	225	Forward	Upright	In-use	N/A	Or	N/A
72	225	Forward	Upright	Stowed	N/A	Or	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 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))

(S20.1.5)

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

____C. Case, B. Smith, A. Allison

I certify that I have read and performed each instruction.

5/5/03 _____

Date

DATA SHEET 15

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

NHTSA No. Q35306

Test Date: 5/5/03

Laboratory: VRFC Test Technician(s): C. Case, B. Smith, A. Iouden

Child Restraint Name, Model: Evenflo First Choice Date of Manufacture: 6/20/00

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

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

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

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

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

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

☒ N/A - No lumbar adjustment

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

☒ N/A - No additional support adjustment

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

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

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

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

☒ N/A - No seat back angle adjustment

Manufacturer's design seat back angle 1° defent rearward

Tested seat back angle 1° defent rearward

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

☒ N/A - No head restraint adjustment

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

☒ N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position: Full Up

Tested anchorage position: Full Up

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

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

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

☒ 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the rear-facing mode. (S20.2.1.4(b)) Do NOT use any positioning devices such as towels. (FR 65 50711, footnote 23, 5/12/2000) If the

- vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tether. (S20.1.8)
- ☒ 1.12 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.4(c))
- Is there a sheath around the seat belt that interferes with the load cell? Yes No
If yes, cut off all or part of the sheath. ☐ All ☐ Part
- ☒ 1.13 Cinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
Record seat belt tension 27.5 lb
- ☒ 1.14 Position the 49 CFR Part 572 Subpart R 12-month old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d)) (The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.
N/A – No dummy contact with the instrument panel
- Manual seat adjuster: detent(s) rearward of the forward most position. (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: ☐ mm between instrument panel and child restraint (max. allowed is 5 mm.)
Recinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
Record seat belt tension _____
- ☒ 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
- ☒ 2. Unbolted tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.2.4) If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to those anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.4(c))
3. Unbolted tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4) Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)
- ☒ N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages
- 3.1. Keep the same seat position as in 1.1 through 1.7 above.
- 3.2. Read the child restraint owner's manual for installation instructions.
- ☐ 3.3 Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as lowels. (FR 65 30711 footnote 23, 5/12/2000) Do NOT attach any tethers. (S20.1.8)
- 3.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4 (d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.
N/A – No dummy contact with the instrument panel.

- Manual seat adjuster: ___ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: ___ mm between instrument panel and child restraint (max allowed is 5 mm.)
- ___3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(b))
4. Belted tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) – If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5 (a)(1)) Do NOT attach any tethers. (S20.1.8)
- X N/A – Not a convertible restraint
- 4.1 Keep the same seat position as in 1.1 through 1.7 above
- 4.2 Read the child restraint owner's manual for installation instructions.
- 4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S20.2.1.5(a)(1))
- ___4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward-facing mode. (S20.2.1.5(b)) Do NOT use any positioning devices such as towels. (FR 63-30/11, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any tethers. (S20.1.8)
- 4.5 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.5(c))
- Is there a sheath around the seat belt that interferes with the load cell? ___ Yes ___ No
- If yes, cut off all or part of the sheath. ___ All ___ Part
- ___4.6 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.5(c))
- Record seat belt tension: _____
- 4.7 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)) (The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.
- ___ N/A – No dummy contact with the instrument panel
- Manual seat adjuster: ___ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: ___ mm between instrument panel and child restraint (max allowed is 5 mm.)
- Re-cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.5(c))
- Record seat belt tension: _____
- ___4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))
5. Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode. (Appendix A, sections Band C) (S20.2.2.5) – If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any tethers. (S20.1.8)
- Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

- Complete rows 49 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.5(c))
6. Unbelted tests using FMVSS 225 Anchorages with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) Do NOT attach seat belts (S20.1.6) Do NOT attach any leathers. (S20.1.8)
- X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages
- N/A - Not a convertible restraint
- 6.1 Keep the same seat position as in 1.1 through 1.7 above.
- 6.2 Read the child restraint owner's manual for installation instructions
- 6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any leathers. (S20.1.6) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000)
- 6.4 Position the 49 CFR Part 572 Subpart K 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- N/A - No dummy contact with the instrument panel.
- Manual seat adjuster: detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: mm between instrument panel and child restraint (max. allowed is 5 mm.)
- 6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))

C.Case, B.Smith, A.Louden

I certify that I have read and performed each instruction.

5/5/03

Date

Table 1

NHTSA No. C35306

Test Date: 5/5/03

Child Restraint Name, Model, Date of Manufacture: Everflo First Choice 6/20/00Base: On ☐ Off ☒ N/A Restraint does not have a removable baseSeat Position: ☒ Rearmost, mid-height ☐ Mid-position, mid-height ☐ Foremost, mid-height

	Belted Unbelted, FMVSS 225	Rear facing Forward facing Rear	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	Not done
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	Not done
7	Belted	Rear	Upright	In-use	On	N/A	N/A
8	Belted	Rear	Upright	Stowed	On	N/A	Not done
9	Belted	Rear	Down	In-use	N/A	On	N/A
10	Belted	Rear	Down	Stowed	N/A	On	Not done
11	Belted	Rear	Upright	In-use	N/A	On	N/A
12	Belted	Rear	Upright	Stowed	N/A	On	Not done
13	Unbelted	Rear	Down	In-use	None	N/A	N/A
14	Unbelted	Rear	Down	Stowed	None	N/A	Not done
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	Not done
19	Unbelted	Rear	Upright	In-use	On	N/A	N/A
20	Unbelted	Rear	Upright	Stowed	On	N/A	Not done
21	Unbelted	Rear	Down	In-use	N/A	On	N/A
22	Unbelted	Rear	Down	Stowed	N/A	On	Not done
23	Unbelted	Rear	Upright	In-use	N/A	On	N/A
24	Unbelted	Rear	Upright	Stowed	N/A	On	Not done
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 ⁵	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 ⁵	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 ⁵	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 ⁵	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 ⁵	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 ⁵	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 restaurants ONLY (S29.2.1.b) (Appendix A, section C)

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

(S20.1.5)

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

[illegible][illegible]

— — —

___C. Case, B. Smith, A. Allison...

I certify that I have read and performed each instruction.

51503 _____

Date _____

DATA SHEET 15

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

NHTSA No. Q35306

Test Date: 5/5/03

Laboratory: VRI Test Technician(s) C. Case, B. Smith, A. Louden

Child Restraint Name, Model, Date of Manufacture: Graco Infant 8457 (Snuggly Ride) 8/31/00

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

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

Seat Position ☐ Rearmost, mid-height ☐ Mid-position, mid-height ☒ Foremost, mid-height (Use a separate sheet for each of the three fore-aft positions.)
5 detents rear of full forward
Because of contact with the interior

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

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

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

☒ N/A - No lumbar adjustment

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

☒ N/A - No additional support adjustment

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

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

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

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

☐ N/A - No seat back angle adjustment

Manufacturer's design seat back angle 1st detent rearward

Tested seat back angle 1st detent rearward

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

☐ N/A - No head restraint adjustment

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

☐ N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position, Full Up

Tested anchorage position Full Up

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

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

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

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

- regarding proper installation of the restraint in the rear-facing mode. (S20.2.1.4(b)) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
- X 1.12 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor on vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.4(c))
- Is there a sheath around the seat belt that interferes with the load cell? Yes No
If yes, cut off all or part of the sheath All Part
- X 1.13 Cinch the seat belt to a tension load of 130 N + 3N (29.2 lb + 0.7 lb) (S20.2.1.4(c))
Record seat belt tension: 28.5 lb
- X 1.14 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d)) (The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
N/A - No dummy contact with the instrument panel.
Manual seat adjuster: detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: mm between instrument panel and child restraint (max. allowed is 5 mm.)
Recinch the seat belt to a tension load of 130 N + 3N (29.2 lb + 0.7 lb) (S20.2.1.4(c))
Record seat belt tension: _____
- X 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
- X 2. Unbelted tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.2.4) If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.4(c))
3. Unbelted tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4) - Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)
- X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- 3 1. Keep the same seat position as in 1.1 through 1.7 above.
- 3 2. Read the child restraint owner's manual for installation instructions.
- 3 3. Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000) Do NOT attach any tethers. (S20.1.8)
- 3 4. Position the 49 CFR Part 572 Subpart R 12-month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4 (d))
- If the seat must be moved rearward because of dummy contact with the instrument

panel, describe the final location of the seat:

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

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

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

- 3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
- 4 Belted tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5 (a)(1)) Do NOT attach any tethers. (S20.1.8)
- ☒ N/A – Not a convertible restraint
- ___ 4.1 Keep the same seat position as in 1.1 through 1.7 above
- ___ 4.2 Read the child restraint owner's manual for installation instructions.
- ___ 4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S20.2.1.5(a)(1))
- ___ 4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward-facing mode. (S20.2.1.5(b)) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any tethers. (S20.1.8)
- ___ 4.5 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor on vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.5(c))
- Is there a sheath around the seat belt that interferes with the load cell? ___ Yes ___ No
If yes, cut off all or part of the sheath. ___ All ___ Part
- ___ 4.6 Cinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.5(c))
Record seat belt tension
- 4.7 Position the 49 CFR Part 572 Subpart R 12-month-old CRABt dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)) (The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- ___ N/A – No dummy contact with the instrument panel
- Manual seat adjuster: ___ detent(s) rearward of the forward-most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: ___ mm between instrument panel and child restraint (max allowed is 5 mm.)
- Recinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.5(c))
Record seat belt tension
- 4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))
- 5 Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode (Appendix A, sections B and C) (S20.2.2.3) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any tethers. (S20.1.8)

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

Complete rows 49 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.5(c))

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

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

N/A - Not a convertible restraint

- ☐ C.1 Keep the same seat position as in 1.1 through 1.7 above.
- ☐ 6.2 Read the child restraint owner's manual for installation instructions.
- ☐ 6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tethers. (S20.1.8) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2006)
- 6.4 Position the 40 CFR Part 572 Subpart E 12-month-old CRABI dummy in the child restraint by following to the extent possible the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.
- ☐ N/A - No dummy contact with the instrument panel
- Manual seat adjuster: detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: mm between instrument panel and child restraint (max. allowed is 5 mm.)
- 6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))

C. Case, B. Smith, A. Loudon
I certify that I have read and performed each instruction.

5/5/03
Date

Table 1

NI-TSA No. C35306

Test Date: 5/5/03

Child Restraint Name, Model, Date of Manufacture: Graco Infant 8457 (Snugg Ride) 8/31/00Base: ☒ On ☐ Off ☐ N/A-Restraint does not have a removable baseSeat Position: ☐ Rearmost, mid-height ☐ Mid-position, mid-height ☒ Foremost, mid height

	Belted, Unbelted, FMVSS 225	Rear-facing, Forward-facing	Handle (S20 1.3)	Sunshield ² (S20 1.4)	Blanket Position 1 (S20 1.5(a))	Blanket Position 2 (S20 1.5(b))	Suppressed, Fail, Or N/A
1	Belted	Rear	Down	In-use	None	N/A	Not done
2	Belted	Rear	Down	Stowed	None	N/A	Not done
3	Belted	Rear	Upright	In-use	None	N/A	Not done
4	Belted	Rear	Upright	Stowed	None	N/A	Suppressed
5	Belted	Rear	Down	In-use	On	N/A	Not done
6	Belted	Rear	Down	Stowed	On	N/A	Not done
7	Belted	Rear	Upright	In-use	On	N/A	Not done
8	Belted	Rear	Upright	Stowed	On	N/A	Not done
9	Belted	Rear	Down	In-use	N/A	On	Not done
10	Belted	Rear	Down	Stowed	N/A	On	Not done
11	Belted	Rear	Upright	In-use	N/A	On	Not done
12	Belted	Rear	Upright	Stowed	N/A	On	Not done
13	Unbelted	Rear	Down	In-use	None	N/A	Not done
14	Unbelted	Rear	Down	Stowed	None	N/A	Not done
15	Unbelted	Rear	Upright	In-use	None	N/A	Not done
16	Unbelted	Rear	Upright	Stowed	None	N/A	Suppressed
17	Unbelted	Rear	Down	In-use	On	N/A	Not done
18	Unbelted	Rear	Down	Stowed	On	N/A	Not done
19	Unbelted	Rear	Upright	In-use	On	N/A	Not done
20	Unbelted	Rear	Upright	Stowed	On	N/A	Not done
21	Unbelted	Rear	Down	In-use	N/A	On	Not done
22	Unbelted	Rear	Down	Stowed	N/A	On	Not done
23	Unbelted	Rear	Upright	In-use	N/A	On	Not done
24	Unbelted	Rear	Upright	Stowed	N/A	On	Not done
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 ⁵	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 ⁵	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 ⁵	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 ⁵	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 ⁵	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 ⁵	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).)

(S20.1.5)

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

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

5/5/03
Date

DATA SHEET 15

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

NHISA No. C36306Test Date: 5/5/03Laboratory: VRIC Test Technician(s): C.Case, B.Smith, A.LoudenChild Restraint Name/Model/Date of Manufacture: Britax Roundabout 7/21/00Base: On Off X N/A- Restraint does not have a removable base

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

Seat Position: Rearmost, mid-height Mid-position, mid-height X Foremost, mid-height (Use a separate sheet for each of the three fore-aft positions.)X The child restraint has NO visible damage (S20.1.1)X Belted tests with rearward-facing child restraints and convertible restraints in the rearward-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4)X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions. (S20.1.9.1)X N/A - No lumbar adjustmentX 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S20.1.9.2)X N/A - No additional support adjustmentX 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S20.1.9.3)X N/A - No independent fore-aft seat cushion adjustmentX 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angle.X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S20.1.9.5 and S8.1.3)X N/A - No seat back angle adjustmentManufacturer's design seat back angle 1st detent rearwardTested seat back angle ...1st detent rearwardX 1.6 If adjustable, set the head restraint at the full down and full forward position. (S20.1.9.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible. N/A - No head restraint adjustmentX 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (S20.2.1.4(c)) N/A - No adjustable upper seat belt anchorageManufacturer's specified anchorage position: Full UpTested anchorage position: Full UpX 1.8 Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint. (S20.2.1.2)X 1.9 Read the child restraint owner's manual for installation instructions.X 1.10 Place the child restraint facing rearward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14) (S20.2.1.4(a)(1))X 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the rear-facing mode. (S20.2.1.4(b)) Do NOT use any positioning devices such as towels. (FR 65 30711 footnote 23, 5/12/2000) If the

- vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
- X 1.12 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor on vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.4(c))
- Is there a sheath around the seat belt that interferes with the load cell? ☐ Yes ☐ No
If yes, out of all or part of the sheath. ☐ All ☐ Part
- X 1.13 Cinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
Record seat belt tension 20.8 lb
- X 1.14 Position the 49 CFR Part 572 Subpart R 12-month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d)) (The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
☐ N/A - No dummy contact with the instrument panel
Manual seat adjuster: ☐ detent(s) rearward of the forward most position. (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
Power seat adjuster: ☐ mm between instrument panel and child restraint (max. allowed is 5 mm.)
Recinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
Record seat belt tension
- X 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
- X 2. Unbelted tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.2.4) If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.4(c))
3. Unbelted tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4) Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)
X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- 3.1. Keep the same seat position as in 1.1 through 1.7 above.
- 3.2. Read the child restraint owner's manual for installation instructions.
- 3.3. Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as lowels. (FR 65 30711, footnote 23, 5/12/2000) Do NOT attach any tethers. (S20.1.7)
- ☐ 3.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
☐ N/A - No dummy contact with the instrument panel

- Manual seat adjuster: ___ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: ___ mm between instrument panel and child restraint (max allowed is 5 mm.)
- ___3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
4. Belted tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5 (a)(1)) Do NOT attach any tethers. (S20.1.8)
- ___ N/A – Not a convertible restraint
- X 4.1 Keep the same seat position as in 1.1 through 1.7 above.
- X 4.2 Read the child restraint owner's manual for installation instructions.
- X 4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14) (S20.2.1.5(a)(1))
- X 4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward-facing mode. (S20.2.1.5(b)) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any tethers. (S20.1.8)
- X 4.5 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor on vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.5(c))
- Is there a sheath around the seat belt that interferes with the load cell? Yes No
 If yes, cut off all or part of the sheath. All Part
- X 4.6 Cinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.5(d))
 Record seat belt tension: 30.8 lb
- X 4.7 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)) (The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- (If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
 ___ N/A – No dummy contact with the instrument panel.)
- Manual seat adjuster: ___ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: ___ mm between instrument panel and child restraint (max allowed is 5 mm.)
 Recinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.5(e))
 Record seat belt tension: _____
- X 4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))
- X 5. Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode (Appendix A, sections B and C) (S20.2.2.5) – If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any tethers. (S20.1.8) Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

- Complete rows 49 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.5(c))
6. Unlabeled tests using FMVSS 225 Anchorages with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) Do NOT attach seat belts (S20.1.6) Do NOT attach any tethers. (S20.1.8)
- X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- N/A – Not a convertible restraint
- __6.1 Keep the same seat position as in 1.1 through 1.7 above.
- __6.2 Read the child restraint owner's manual for installation instructions.
- __6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tethers. (S20.1.8) Do NOT use any positioning devices such as towels. (FR 65 30/11, footnote 23, 5/12/2000)
- __6.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- N/A – No dummy contact with the instrument panel.
- Manual seat adjuster: _____ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: _____ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- __6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(c))

C.Case, B.Smith, A.Louden
I certify that I have read and performed each instruction

5/5/03, _____
Date

Table 1

NHISA No. C35306

Test Date. 5/5/03

Child Restraint Name, Model, Date of Manufacture: Britax Roundabout 7/21/00Base: On Off ☒ N/A-Restraint does not have a removable baseSeat Position: ☐ Rearmost mid-height ☐ Mid-position mid-height ☒ Foremost mid-height

	Belted, Unbelted, FMVSS 225	Rear facing Forward facing	Handle ¹ (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	Not done
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	Not done
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	Not done
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	Not done
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 Position 1 (S20.1.5(a))	Blanket ³ Position 2 (S20.1.5(b))	Suppressed FAIL, Or N/A
37	Belted	Forward ⁵	Down	In-use	None	N/A	N/A
38	Belted	Forward ⁵	Down	Stowed	None	N/A	Suppressed
39	Belted	Forward ⁵	Upright	In-use	None	N/A	N/A
40	Belted	Forward ⁵	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	Not done
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 ⁵	Down	Stowed	N/A	On	Not done
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	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	Not done
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	Not done
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ⁵	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 ⁵	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 ⁵	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).)

(S20.1.5)

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

____ C. Case, B. Smith, A. Allison

I certify that I have read and performed each instruction.

5/5/03

Date

DATA SHEET 15

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

NHTSA No. C35306

Test Date: 6/5/03

Laboratory VRTC

Test Technician(s): C. Case, B. Smith, A. Loudon

Child Restraint Name, Model, Date of Manufacture: Century Encore 811 6/00

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

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

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

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

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

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

X N/A - No lumbar adjustment

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

X N/A - No additional support adjustment

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

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

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

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

 N/A - No seat back angle adjustment

Manufacturer's design seat back angle 1st detent rearward

Tested seat back angle 1st detent rearward

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

 N/A - No head restraint adjustment

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

 N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position: Full Up

Tested anchorage position: Full Up

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

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

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

X 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the rear facing mode. (S20.2.1.4(b)) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000) If the

- vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
- X 1.12 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.4(c))
- Is there a sheath around the seat belt that interferes with the load cell? Yes ☒ No ☐
 If yes, cut off all or part of the sheath. ☐ All ☐ Part
- X 1.13 Cinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
 Record seat belt tension 29.5 lb
- X 1.14 Position the 49 CFR Part 572 Subpart E 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d)) (The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
☒ N/A No dummy contact with the instrument panel.
 Manual seat adjuster: ☐ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: ☐ mm between instrument panel and child restraint (max. allowed is 5 mm.)
 Recinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S20.2.1.4(c))
 Record seat belt tension
- X 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
- X 2. Unbelted tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.2.4) If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.4(a)(1)) Do NOT attach any tethers. (S20.1.8)
 Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
 Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.4(c))
3. Unbelted tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4) – Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)
☒ N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- 3.1 Keep the same seat position as in 1.1 through 1.7 above.
- 3.2 Read the child restraint owner's manual for installation instructions.
- 3.3 Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as towels. (FR 65 38711, footnote 23, 5/12/2000) Do NOT attach any tethers. (S20.1.7)
- ☐ 3.4 Position the 49 CFR Part 572 Subpart E 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4 (d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
☐ N/A No dummy contact with the instrument panel.

- Manual seat adjuster: ___ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: ___ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- 2.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds and then check whether the air bag is suppressed. (S20.2.1.4(c))
4. Belted tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) – If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5 (a)(1)) Do NOT attach any tethers (S20.1.8)
 ___ N/A – Not a convertible restraint
- X 4.1 Keep the same seat position as in 1.1 through 1.7 above.
- X 4.2 Read the child restraint owner's manual for installation instructions.
- X 4.3 Place the child restraint facing forward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S20.2.1.5(a)(1))
- X 4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward-facing mode. (S20.2.1.5(b)) Do NOT use any positioning devices such as towels. (FR 65 30/11, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to those anchorages. (S20.2.1.5(a)(1)) Do NOT attach any tethers. (S20.1.8)
- X 4.5 Place a load cell with a maximum full scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.5(c))
 Is there a sheath around the seat belt that interferes with the load cell? Yes X No
 If yes, cut off all or part of the sheath. All Part
- X 4.6 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.5(c))
 Record seat belt tension: ___ 30.4 lb ___
- X 4.7 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)) (The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
 If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
 ___ N/A – No dummy contact with the instrument panel.
 Manual seat adjuster: ___ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: ___ mm between instrument panel and child restraint (max. allowed is 5 mm.)
 Recinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.5(c))
 Record seat belt tension: _____
- X 4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds and then check whether the air bag is suppressed. (S20.2.1.5(c))
- X 5. Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode (Appendix A, sections Band C) (S20.2.2.5) – If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any tethers. (S20.1.8) Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

- Complete rows 48 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(c))
6. Unpelled tests using FMVSS 225 Anchorages with convertible child restraints in the forward facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) – Do NOT attach seat belts (S20.1.6). Do NOT attach any tethers. (S20.1.8)
- X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- N/A – Not a convertible restraint
- 6.1 Keep the same seat position as in 1.1 through 1.7 above.
- 6.2 Read the child restraint owner's manual for installation instructions.
- __6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tethers. (S20.1.8). Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000)
- __6.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- __ N/A – No dummy contact with the instrument panel
- Manual seat adjuster: _____ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: _____ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- 6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))

C.Case, B.Smith, A.Louden _____
 I certify that I have read and performed each instruction.

 5/5/03
 Date

Table 1

NHTSA No. C35306

Test Date: 5/5/03

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

Base: ☐ On ☒ N/A-Restraint does not have a removable baseSeat Position: ☐ Rearmost, mid height ☐ Mid position, mid height ☒ Foremost, mid-height

	Restraint, Unbelted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshield (S20.1.4)	Blanket ² Position 1 (S20.1.5(a))	Blanket ¹ 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	Not done
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	Not done
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	Not done
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	Not done
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 ¹ (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	Down	In-use	None	N/A	N/A
38	Belted	Forward	Down	Stowed	None	N/A	Suppressed
39	Belted	Forward	Upright	In-use	None	N/A	N/A
40	Belted	Forward	Upright	Stowed	None	N/A	N/A
41	Belted	Forward	Down	In-use	On	N/A	N/A
42	Belted	Forward	Down	Stowed	On	N/A	Not done
43	Belted	Forward	Upright	In-use	On	N/A	N/A
44	Belted	Forward	Upright	Stowed	On	N/A	N/A
45	Belted	Forward	Down	In-use	N/A	On	N/A
46	Belted	Forward	Down	Stowed	N/A	On	Not done
47	Belted	Forward	Upright	In-use	N/A	On	N/A
48	Belted	Forward	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	Not done
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	Not done
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward	Down	In-use	None	N/A	N/A
62	225	Forward	Down	Stowed	None	N/A	N/A
63	225	Forward	Upright	In-use	None	N/A	N/A
64	225	Forward	Upright	Stowed	None	N/A	N/A
65	225	Forward	Down	In-use	On	N/A	N/A
66	225	Forward	Down	Stowed	On	N/A	N/A
67	225	Forward	Upright	In-use	On	N/A	N/A
68	225	Forward	Upright	Stowed	On	N/A	N/A
69	225	Forward	Down	In-use	N/A	On	N/A
70	225	Forward	Down	Stowed	N/A	On	N/A
71	225	Forward	Upright	In-use	N/A	On	N/A
72	225	Forward	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).)

(S20.1.5)

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

C. Case, B. Smith, A. Allison

I certify that I have read and performed each instruction.

5/5/03

Date

DATA SHEET 15

Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart N)(S20)
 NHTSA No. C35306 Test Date: 5/5/03

Laboratory: VRFC Test Technician(s): C.Case, B.Smith, A.Loucon

Child Restraint Name/Model, Date of Manufacture: Evenflo Modellon V 6/1/00

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

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

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

1. Belled tests with rearward facing child restraints and convertible restraints in the rearward-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4)
- X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest retracted or deflated adjustment positions. (S20.1.9.1)
☒ N/A - No lumbar adjustment
- X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S20.1.9.2)
☒ N/A - No additional support adjustment
- X 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S20.1.9.3)
☒ N/A - No independent fore-aft seat cushion adjustment
- X 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angle
- X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S20.1.9.5 and S8.1.3)
☐ N/A - No seat back angle adjustment
 Manufacturer's design seat back angle 1st defent rearward
 Tested seat back angle 1st defent rearward
- X 1.6 If adjustable, set the head restraint at the full down and full forward position. (S20.1.9.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
☐ N/A - No head restraint adjustment
- X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design position for a 50th percentile adult male occupant (S20.2.1.4(c))
☐ N/A - No adjustable upper seat belt anchorage
 Manufacturer's specified anchorage position Full Up
 Tested anchorage position Full Up
- X 1.8 Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint. (S20.2.1.2)
- X 1.9 Read the child restraint owner's manual for installation instructions
- X 1.10 Place the child restraint facing rearward in the seat such that Plane A (item 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14.) (S20.2.1.4(a)(1))
- X 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the rear facing mode. (S20.2.1.4(h)) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 20, 5/12/2000) If the

- vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to those anchorages. (S20.2.1.4(a)(1)) Do NOT attach any leathers. (S20.1.8)
- X 1.12 Place a load cell with a maximum full scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.4(c))
- Is there a sheath around the seat belt that interferes with the load cell? Yes ☒ No ☐
 If yes, cut off all or part of the sheath. ☐ All ☐ Part
- X 1.13 Cinch the seat belt to a tension load of 130 N + 3N (29.2 lb ± 0.7 lb) (S20.2.1.4(c))
 Record seat belt tension 28.8 lb
- X 1.14 Position the 49 CFR Part 572 Subpart R 12-month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d)) (The tension in the seat belt may change from item 1.13. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.
 X N/A – No dummy contact with the instrument panel.
- Manual seat adjuster: ☐ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: ☐ mm between instrument panel and child restraint (max allowed is 5 mm.)
- Recinch the seat belt to a tension load of 130 N + 3N (29.2 lb ± 0.7 lb) (S20.2.1.4(c))
 Record seat belt tension
- X 1.15 Complete rows 1 through 12 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
- X 2. Unbelted tests with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.2.4) – If the vehicle has FMVSS 225 anchorages, do NOT attach (S20.1.6) the child restraint to those anchorages. (S20.2.1.4(a)(1)) Do NOT attach any leathers. (S20.1.8)
- Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.
- Complete rows 13 through 24 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.4(e))
3. Unbelted tests using FMVSS 225 Anchorages with rear-facing child restraints and convertible child restraints in the rear-facing mode. (Child restraints listed in Appendix A, sections B and C) (S20.2.1.4) – Do NOT attach seat belts. (S20.1.6) Do NOT attach any leathers. (S20.1.8)
- X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S6.9 devices to mate to the FMVSS 225 anchorages.
- ☐ 3.1. Keep the same seat position as in 1.1 through 1.7 above.
- ☐ 3.2. Read the child restraint owner's manual for installation instructions.
- ☐ 3.3. Attach the child restraint, facing rearward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT use any positioning devices such as towels. (FR 65 50711, footnote 23, 5/12/2000) Do NOT attach any leathers. (S20.1.7)
- 3.4. Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.4(d))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat.
 N/A – No dummy contact with the instrument panel.

- Manual seat adjuster: _____ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: _____ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- ___ 3.5 Complete rows 25 through 36 in Table 1 without changing the position of the child restraint or dummy. For each position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.4(e))
4. Belted tests with convertible child restraints in the forward-facing mode. (Child restraints listed in Appendix A, section C) (S20.2.1.5) – If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.5) the child restraint to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any tethers. (S20.1.8)
 N/A – Not a convertible restraint
- X 4.1 Keep the same seat position as in 1.1 through 1.7 above.
- X 4.2 Read the child restraint owner's manual for installation instructions.
- X 4.3 Place the child restraint facing forward in the seat such that Plane A (from 1.8 above) is aligned with Plane B (determined and marked during the completion of Data Sheet 14). (S20.2.1.5(a)(1))
- X 4.4 While maintaining the child restraint position with Plane A aligned with Plane B, secure the child restraint by following, to the extent possible, the child restraint manufacturer's directions regarding proper installation of the restraint in the forward-facing mode. (S20.2.1.5(b)) Do NOT use any positioning devices such as towels. (FR 65 3071*, footnote 23, 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. (S20.2.1.5(a)(1)) Do NOT attach any tethers. (S20.1.8)
- X 4.5 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S20.2.1.5(c))
 Is there a sheath around the seat belt that interferes with the load cell? Yes X No
 If yes, cut off all or part of the sheath. ___ All ___ Part
- X 4.6 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.5(c))
 Record seat belt tension: 30.3 lb
- X 4.7 Position the 49 CFR Part 572 Subpart R 12-month-old CRABI dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d)) (The tension in the seat belt may change from item 4.6. Do NOT readjust the tension unless the fore-aft position of the seat changes because of dummy contact.)
 If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
 ___ N/A – No dummy contact with the instrument panel.
 Manual seat adjuster: _____ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: _____ mm between instrument panel and child restraint (max. allowed is 5 mm.)
 Recinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S20.2.1.5(c))
 Record seat belt tension: _____
- X 4.8 Complete rows 37 through 48 in Table 1 below without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(e))
- X 5. Unbelted tests with rear-facing and convertible child restraints in the forward-facing mode. (Appendix A, sections Band C) (S20.2.2.5) – If the vehicle has FMVSS 225 anchorages, do not attach (S20.1.6) the child restraint to these anchorages. Do NOT attach any tethers. (S20.1.8) Without changing the position of the child restraint or dummy, disconnect the seat belt and return it to its stowed position.

- Complete rows 49 through 60 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.2.5(c))
6. Unbelted tests using FMVSS 225 Anchorages with convertible child restraints in the forward facing mode (Child restraints listed in Appendix A, section C) (S20.2.1.5) - Do NOT attach seat belts. (S20.1.6) Do NOT attach any tethers. (S20.1.8)
- X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- __ N/A - Not a convertible restraint
- __ 6.1 Keep the same seat position as in 1.1 through 1.7 above
- __ 6.2 Read the child restraint owner's manual for installation instructions.
- __ 6.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tethers. (S20.1.8) Do NOT use any positioning devices such as towels. (TR 65 307/11, footnote 23, 6/12/2000)
- __ 6.4 Position the 49 CFR Part 572 Subpart R 12-month-old CRAB dummy in the child restraint by following, to the extent possible, the manufacturer's instructions provided with the child restraint. (S20.2.1.5(d))
- if the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- N/A - No dummy contact with the instrument panel
- Manual seat adjuster: detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: mm between instrument panel and child restraint (max. allowed is 6 mm.)
- __ 6.5 Complete rows 61 through 72 in Table 1 without changing the position of the child restraint or dummy. For each variation of blanket, handle and sunshield position, start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. Wait 10 seconds, and then check whether the air bag is suppressed. (S20.2.1.5(c))

C.Case, B.Smith, A.J. Ouden _____

I certify that I have read and performed each instruction

5/5/03

Date

NHTSA No. C35303

Table 1

Test Date: 5/5/03

Child Restraint Name: Model, Date of Manufacture: Evenflo Medallion V 6/1/00

Base: Or Of X N/A-Restraint does not have a removable base

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

	Belted, L-belted, FMVSS 225	Rear facing, Forward facing	Handle (S20.1.3)	Sunshade (S20.1.4)	Blanket Position 1 (S20.1.5(a))	Blanket 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	Not done
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	Not done
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	Not done
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	Not done
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 ⁵	Down	In-use	None	N/A	N/A
38	Belted	Forward ⁵	Down	Stowed	None	N/A	Suppressed
39	Belted	Forward ⁵	Upright	In-use	None	N/A	N/A
40	Belted	Forward ⁵	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	Not done
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 ⁵	Down	Stowed	N/A	On	Not done
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	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	Not done
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	Not done
59	Unbelted	Forward	Upright	In-use	N/A	On	N/A
60	Unbelted	Forward	Upright	Stowed	N/A	On	N/A
61	225	Forward ⁵	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 ⁵	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 ⁵	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).)

(S20.1.5)

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

____ C. Case, B. Smith, A. Allison _____

I certify that I have read and performed each instruction.

5/5/03

Date

DATA SHEET 29

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

NHTSA No. C35306 Test Date 5/5/03

Laboratory: VRIC Test Technician(s): C. Case, B. Smith, A. Loudon

Seat Position: ☒ Rearmost ☐ Mid position ☐ Foremost (S20.3.1, 22.3.1, S24.3.1)

Do NOT use seat belts for these tests.

1. This reactivation test is being performed after the following suppression test:
 - ☒ Suppression Test Using 12 Month-Old CRAB Dummy (S20)
After section ___ of data sheet 15
 - Suppression Test Using Newborn Infant Dummy (S20)
After section ___ of data sheet 16
 - ☐ Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section ___ of data sheet 17
 - Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section ___ of data sheet 18
 - ☐ Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section ___ of data sheet 19
 - ☐ Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section ___ of data sheet 20
 - ☐ Suppression Test Using 6 Year-Old-Dummy (S24.2.1)
After section ___ of data sheet 21
- ☒ 2. Leave the seat in the fore-aft position, seat height, and seat cushion angle used for the suppression test.
- ☒ 3. Fully recline the seat back. (S16.3.3.1.2)
☐ N/A seat back not adjustable.
- ☒ 4. 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)
- ☒ 5. Position the dummy midsagittal plane vertical and coincident with the seating position centerline determined in Data Sheet 14. (S16.3.3.1.3 or S16.3.3.1.4)
- ☒ 6. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
- ☒ 7. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
- ☒ 8. Set the transverse distance between the centers of the front of the knees at 160 to 170 mm (6.3 to 6.7 inches). Center the knee separation with respect to the seat centerline. (S16.3.3.1.6)

Record Knee Separation: 165 mm
- ☒ 9. Push rearward on the dummy's knees until the pelvis contacts the seat back, or the backs of the calves contact the seat cushion, whichever occurs first. (S16.3.3.1.6)

☐ Pelvis contacted seat back.

☐ Calves contacted seat cushion.
- ☒ 10. Gently rock the upper torso 14-5 degrees (approximately 51 mm (2 inches)) side to side three times to reduce the friction between the dummy and the seat. (S16.3.3.1.7)
- ☒ 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 that does not cause dummy contact. (S16.3.3.1.8) 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)
☒ 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 belt. (S16.3.3.1.9)
- ☒ 13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
- ☒ 14. If the seat back is adjustable, rotate the seat back forward while holding the thighs in place. Continue rotating the seat back forward until the transverse instrument platform of the dummy head is level ± 0.5 degrees. If the head cannot be leveled using the seat back adjustment, or the seat back is not adjustable, use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.3.1.9 and S16.3.3.1.10)
(Check All That Apply)
 ☐ Seat back not adjustable
 ☐ Seat back not independent of driver side seat back
☒ Head Level Achieved. (Check all that apply)
 ☒ Head leveled using the adjustable seat back
 ☐ Head leveled using the neck bracket.
 Head Angle _____ degrees
☐ Head Level NOT Achieved. (Check all that apply)
 ☐ Head leveled using the adjustable seat back
 ☐ Head leveled using the neck bracket.
 Head Angle _____ degrees
- ☒ 15. 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
- ☒ 16. Verify the transverse instrument platform of the dummy head is level ± 0.5 degrees. Use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.3.1.9, S16.3.3.1.10, and S16.3.3.1.11)
 ☒ Head Level Achieved
 Head Angle _____ degrees
☐ Head Level NOT Achieved.
 Head Angle _____ degrees
- ☒ 17. Check the dummy for contact with interior after completing adjustments. (S16.3.3.1.12)
☒ No contact
☐ Dummy in contact with interior.
 ☐ Seat moved At _____ mm from the previous position.
 ☐ Seat moved At _____ distort positions from the previous position.
- ☒ 18. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
 18.1 Place feet flat on the toe board. OR
☒ 18.2 If the feet 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
 18.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
- ☒ 19. Passenger arm/hand positioning. (S16.3.3.3)
☒ 19.1 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)
☒ 19.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)
☒ 19.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
- ☒ 20. Adjustable head restraints
 20.1 If the head restraint has an automatic adjustment, leave it where the system positions the restraint after the dummy is placed in the seat. (S16.3.4.1)
☒ N/A Vehicle does not contain automatic head restraints
☒ 20.2 Adjust the head restraint to its lowest position. (S16.3.4.2)
☒ 20.3 (See Data Sheet 14) Measure the vertical distance from the top most point of the head restraint to the bottom most point. Locate a horizontal plane through the

midpoint of this distance. Adjust the head restraint vertically so that this horizontal plane is aligned with the center of gravity (CG) of the dummy head. (S16 3.4.3)

Vertical height of head restraint _____ mm

Mid-point height _____ mm

__20.4 If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG. (S16 3.4.3)

__N/A midpoint position attained in previous step

Head rest set at nearest detent below the head CG

20.5 If the head restraint has a fore and aft adjustment, place the restraint in the foremost position or until contact with the head is made, whichever occurs first. (S16.3.4.4)

☒ 21. 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**

☒ 22. Return the ignition switch to the "off" position.

C.Case, B.Smith, A.Louden

5/5/03

DATA SHEET 18

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

NHTSA No. C35306

Test Date: 5/6/03

Laboratory: VRTC

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

Child Restraint Name, Model, and Manufacture Date: Britax Roundabout 7/21/03

Seat Position: Rearmost, mid-height Mid-position, mid-height ☒ Foremost, mid-height (Use
a separate sheet for each of the three fore-aft positions.) 14 detents rear of foremost because
of contact with the interior

☒ The forward facing child restraint seat has NO visible damage. (S22.1.1)

1. Belled tests with a forward facing child restraint. (Child restraints listed in Appendix A, section C)

☒ 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest,
retracted or deflated adjustment positions. (S22.1.7.1)

☒ N/A - No lumbar adjustment

☒ 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the
lowest or most open adjustment position. (S22.1.7.2)

☒ N/A - No additional support adjustment

☒ 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to
the full rearward position. (S22.1.7.3)

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

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

☒ 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position
for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and
S5.1.3)

N/A - No seat back angle adjustment

Manufacturer's design seat back angle 1 detent rearward

Tested seat back angle 1 detent rearward

☒ 1.6 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any
adjustment of the head restraint shall be used to position it 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

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

☒ 1.8 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design
position for a 50th percentile adult male occupant (S22.2.1.5.1)

N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position: Full up

Tested anchorage position: Full up

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

☒ 1.10 Place the child restraint facing forward in the seat such that Plane A (item 1.7 above) is
aligned with Plane B (determined and marked during the completion of Data Sheet 14).
(S22.2.1.4 (a)(1))

☒ 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the
child restraint by following, to the extent possible, the child restraint manufacturer's directions
regarding proper installation of the restraint in the forward facing mode. Do NOT use any
positioning devices such as lowers. (FR 65 30711, footnote 23, 5/12/2000) If the vehicle has
FMVSS 225 anchorages, do not attach (S22.1.3) the child restraint to these anchorages.
(S22.2.1.4 (a)) Do NOT attach any toppers. (S22.1.4)

- X 1.12 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S22.2.1.5.1)
- Is there a sheath around the seat belt that interferes with the load cell?
- Yes X No
- If necessary, cut off all or part of the sheath. None All Part
- X 1.13 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S22.2.1.5.1)
- Record seat belt tension: 27.1 lb
- X 1.14 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the child restraint such that the dummy's lower torso is centered on the child restraint and the dummy's spine is against the seat back of the child restraint. Place the arms at the dummy's sides. (S22.2.1.5.2)
- X 1.15 Attach all belts that come with the child restraint that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3'-1", 34 lb), if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the child restraint. (S22.2.1.5.3)
- X 1.16 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
- X Air Bag Suppressed - Pass
- Air Bag Not Suppressed - **FAIL**
- X 1.17 Return the ignition switch to the "off" position.
- X 2. Unbelted tests using FMVSS 225 Anchorages with a forward facing convertible child restraint. (Child restraint seats listed in Appendix A, sections C) - Do NOT attach seat belts. (S22.2.1.4 (b)) Do NOT attach any tethers. (S22.1.4)
- X N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- 2.1 Keep the same seat position as in 1.1 through 1.7 above
- 2.2 Read the child restraint and vehicle owner's manuals for installation instructions
- 2.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any tethers. (S22.1.4) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000)
- 2.4 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the child restraint such that the dummy's lower torso is centered on the child restraint and the dummy's spine is against the seat back of the child restraint. Place the arms at the dummy's sides. (S22.2.1.5.2)
- 2.5 Attach all belts that come with the child restraint that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3'-1", 34 lb), if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the child restraint. (S22.2.1.5.3)
- 2.6 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
- Air Bag Suppressed - Pass
- Air Bag Not Suppressed - **FAIL**
- 2.7 Return the ignition switch to the "off" position.

C Case, B Smith, A Foudier _____
 I certify that I have read and performed each instruction.

5/6/03
 Date

DATA SHEET 18

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

NHTSA No. QC35303

Test Date: 5/6/03

Laboratory: VRTC

Test Technician(s): C. Case, B. Smith, A. London

Child Restraint Name, Model, and Manufacture Date: Century Encore 8/16/03

Seat Position: Rearmost, mid-height Mid-position, mid-height X Foremost, mid-height: (Use
a separate sheet for each of the three fore-aft positions.) 8 detents rear of foremost because
of

with the interior contact

X The forward facing child restraint seat has NO visible damage (S22.1.1)

1. Belted tests with a forward facing child restraint. (Child restraints listed in Appendix A, section C)

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest
retracted or detented adjustment positions. (S22.1.7.1)

X N/A – No lumbar adjustment

X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the
lowest or most open adjustment position. (S22.1.7.2)

X N/A – No additional support adjustment

X 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to
the full rearward position. (S22.1.7.3)

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

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

X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position
for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and
S22.1.3)

X N/A – No seat back angle adjustment

Manufacturer's design seat back angle 1 detent rearward

Tested seat back angle

1 detent rearward

X 1.6 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any
adjustment of the head restraint shall be used to position it full forward. For example, if it
rotates, rotate it such that the head restraint extends as far forward as possible.

X N/A – No head restraint adjustment

X 1.7 Locate and mark a vertical Plane A through the longitudinal centerline of the child restraint
(S22.2.1.2)

X 1.8 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design
position for a 50th percentile adult male occupant (S22.2.1.5.1)

X N/A – No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position,

Full up

Tested anchorage position

Full up

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

X 1.10 Place the child restraint facing forward in the seat such that Plane A (item 1.7 above) is
aligned with Plane B (determined and marked during the completion of Data Sheet 14).
(S22.2.1.4 (a)(1))

X 1.11 While maintaining the child restraint position with Plane A aligned with Plane B, secure the
child restraint by following, to the extent possible, the child restraint manufacturer's directions
regarding proper installation of the restraint in the forward facing mode. Do NOT use any
positioning devices such as towels. (F.R. 65.20711, footnote 23, 5/12/2000) If the vehicle has

- FMVSS 225 anchorages, do not attach (S22.1.3) the child restraint to these anchorages. (S22.2.1.4 (a)) Do NOT attach any leathers. (S22.1.4)
- ☒ 1.12 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the child restraint belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S22.2.1.5.1)
- Is there a sheath around the seat belt that interferes with the load cell?
- ☐ Yes ☒ No
- If necessary, cut off all or part of the sheath. ☐ None, ☐ All, ☐ Part
- ☒ 1.13 Cinch the seat belt to a tension load of $130\text{ N} \pm 3\text{ N}$ (29.2 lb $\pm$ 0.7 lb) (S22.2.1.5.1)
- Record seat belt tension 27.5 lb
- ☒ 1.14 Position the 49 CFR Part 572 Subpart P 3-year old dummy in the child restraint such that the dummy's lower torso is centered on the child restraint and the dummy's spine is against the seat back of the child restraint. Place the arms at the dummy's sides. (S22.2.1.5.2)
- ☒ 1.15 Attach all belts that come with the child restraint that are appropriate for a child of the same height and weight as the 3-year old child dummy (3'-1", 34 lb), if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the child restraint. (S22.2.1.5.3)
- ☒ 1.16 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
- ☒ Air Bag Suppressed – Pass
- ☐ Air Bag Not Suppressed – **FAIL**
- ☒ 1.17 Return the ignition switch to the "off" position.
- ☒ 2. Unbelted tests using FMVSS 225 Anchorages with a forward facing convertible child restraint. (Child restraint seats listed in Appendix A, sections C) Do NOT attach seat belts. (S22.2.1.4 (b)) Do NOT attach any leathers. (S22.1.4)
- ☒ N/A - Vehicle does not have FMVSS 225 anchorages or child restraint does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- ☐ 2.1 Keep the same seat position as in 1.1 through 1.7 above
- ☐ 2.2 Read the child restraint and vehicle owner's manuals for installation instructions
- ☐ 2.3 Attach the child restraint, facing forward, to the FMVSS 225 anchorages according to the instructions in the child restraint owner's manual and the vehicle owner's manual. Do NOT attach any leathers. (S22.1.4) Do NOT use any positioning devices such as towels. (FR 65 30/11, footnote 23, 5/12/2000)
- ☐ 2.4 Position the 49 CFR Part 572 Subpart P 3-year old dummy in the child restraint such that the dummy's lower torso is centered on the child restraint and the dummy's spine is against the seat back of the child restraint. Place the arms at the dummy's sides. (S22.2.1.5.2)
- ☐ 2.5 Attach all belts that come with the child restraint that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3'-1", 34 lb), if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the child restraint. (S22.2.1.5.3)
- ☐ 2.6 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
- ☐ Air Bag Suppressed – Pass
- ☐ Air Bag Not Suppressed – **FAIL**
- ☐ 2.7 Return the ignition switch to the "off" position

C.Case, B.Smith, A.Louden
I certify that I have read and performed each instruction.

5/6/03
Date

- ☒ Yes – complete item 1.12
 No – skip item 1.12
- Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the booster seat belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt.) (S22.2.1.6.1)
- Is there a sheath around the seat belt that interferes with the load cell? ☐ Yes ☒ No
 If yes, cut off all or part of the sheath. ☐ All ☐ Part
- X 1.13 Circle the seat belt to a tension load of 150 N + 3N (29.2 lb ± 0.7 lb) (S22.2.1.6.1)
 Record seat belt tension 27.4 lb
 N/A – The booster seat is not designed to be secured to the vehicle seat even when empty
- X 1.14 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the booster seat such that the dummy's lower torso is centered on the booster seat cushion and the dummy's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back. Place the arms at the dummy's sides. (S22.2.1.6.2)
- ☒ 1.15 Attach all belts that come with the booster seat that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3'-1", 34 lb), if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)
☒ N/A – Unnecessary for this weight based sensing system.
- ☒ 1.16 Place the Type 2 manual belt around the test dummy and fasten the latch. Remove all slack from the lap belt portion. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this four times. Apply a 9 to 18 N (2 to 4 lb) tension load to the lap belt. Allow the excess webbing in the upper torso belt to be retracted by the retractive force of the retractor. (S22.2.1.6.4)
☒ N/A – Booster seat belts that come with the booster seat are used to secure the dummy and the booster seat is secured with the vehicle's seat belt. (See 1.15)
- X 1.17 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
☒ Air Bag Suppressed – Pass
 Air Bag Not Suppressed – **FAIL**
- ☒ 1.18 Return the ignition switch to the "off" position.
2. Unbelted tests using FMVSS 225 Anchorages with a booster seat (Booster seats listed in Appendix A, sections D) – Do NOT attach seat belts. (S22.2.1.4 (b)) Do NOT attach any tethers. (S22.1.4)
 X N/A - Vehicle does not have FMVSS 225 anchorages or booster seat does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- 2.1 Keep the same seat position as in 1.1 through 1.7 above.
- 2.2 Read the booster seat and vehicle owner's manuals for installation instructions.
- 2.3 Attach the booster seat to the FMVSS 225 anchorages according to the instructions in the booster seat and the vehicle owner's manuals. Do NOT attach any tethers. (S22.1.4(a)) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000)
- 2.4 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the booster seat such that the dummy's lower torso is centered on the booster seat cushion and the dummy's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back. Place the arms at the dummy's sides. (S22.2.1.6.2)
- 2.5 Attach all belts that come with the booster seat that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3'-1", 34 lb), if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)
- 2.18 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)

Air Bag Suppressed – Pass

___Air Bag Not Suppressed – **FAIL**

___2.19 Return the ignition switch to the "off" position.

C. Case, B. Smith, A. Louden,

I certify that I have read and performed each instruction.

5/6/03 _____

Date

DATA SHEET 17

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

NHTSA No. C35306

Test Date: 5/6/03

Laboratory: VRTC

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

Booster Seat Name, Model, and Manufacture Date: Century Next Step 8/16/03

Seat Position: Rearmost mid-height Mid-position, mid-height X Foremost mid-height (Use
a separate sheet for each of the three fore-aft positions.) 3 detents rear of foremost because
of

contact with the interior

X The booster seat has NO visible damage. (S22.1.1)

1. Belled tests with a booster seat (Booster seats listed in Appendix A, section D)

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest,
retracted or deflated adjustment positions. (S22.1.7.1)

X N/A - No lumbar adjustment

X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the
lowest or most open adjustment position. (S22.1.7.2)

X N/A - No additional support adjustment

X 1.3 If the seat cushion adjusts fore and aft independent of the seat back, set this adjustment to
the full rearward position. (S22.1.7.3)

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

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

X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position
for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and
S8.1.3)

N/A - No seat back angle adjustment

Manufacturer's design seat back angle 1 detent rearward

Tested seat back angle 1 detent rearward

X 1.6 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any
adjustment of the head restraint shall be used to position it full forward. For example, if it
rotates, rotate it such that the head restraint extends as far forward as possible.

 N/A - No head restraint adjustment

X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design
position for a 50th percentile adult male occupant. (S22.2.1.6.1)

 N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position full up

Tested anchorage position full up

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

X 1.9 Read the booster seat owner's manual for installation instructions

X 1.10 Place the booster seat in the seat such that Plane A (item 1.8 above) is aligned with Plane B
(determined and marked during the completion of Data Sheet 14). (S22.2.1.4(a);1)

X 1.11 While maintaining the booster seat with Plane A aligned with Plane B, secure the booster
seat by following, to the extent possible, the booster seat manufacturer's directions regarding
proper installation of the booster seat. Do NOT use any positioning devices such as towels.
(FR 65 30711, footnote 23 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not
attach (S22.1.3) the booster seat to these anchorages. (S22.2.1.4(a)) Do NOT attach any
others. (S22.1.4)

- X 1.12 Is the booster seat designed to be secured to the vehicle seat even when empty?
 X Yes – complete item 1.12
 No -- skip item 1.12
 Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the booster seat belt path and the contact point with the belt anchor on vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S22.2.1.6.1)
 Is there a sheath around the seat belt that interferes with the load cell? __ Yes X No
 If yes, cut off all or part of the sheath: __ All __ Part
- X 1.13 Cinch the seat belt to a tension load of 130 N ± 3N (29.2 lb ± 0.7 lb) (S22.2.1.6.1)
 Record seat belt tension _____
 X N/A – For this test, the booster seat and dummy is secured with the vehicle seat belt.
- X 1.14 Position the 49 CFR Part 572 Subpart F 3-year old dummy in the booster seat such that the dummy's lower torso is centered on the booster seat cushion and the dummy's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back. Place the arms at the dummy's sides. (S22.2.1.6.2)
- X 1.15 Attach all belts that come with the booster seat that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3'-1", 34 lb) if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)
 X N/A – The vehicle seat belts were used to secure the seat and the dummy.
- X 1.16 Place the Type 2 manual belt around the test dummy and fasten the latch. Remove all slack from the lap belt portion. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this four times. Apply a 9 to 18 N (2 to 4lb) tension load to the lap belt. Allow the excess webbing in the upper torso belt to be retracted by the retractive force of the retractor. (S22.2.1.6.4)
 16.9 N
 _ N/A – Booster seat belts that come with the booster seat are used to secure the dummy and the booster seat is secured with the vehicle's seat belt. (See 1.15)
- X 1.17 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
 X Air Bag Suppressed - Pass
 Air Bag Not Suppressed **FAIL**
- X 1.18 Return the ignition switch to the "off" position.
- X 2 Unbelled tests using FMVSS 225 Anchorages with a booster seat (Booster seats listed in Appendix A, sections D) -- Do NOT attach seat belts. (S22.2.1.4 (b)) Do NOT attach any tethers (S22.1.4)
 X N/A - Vehicle does not have FMVSS 225 anchorages or booster seat does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- 2.1 Keep the same seat position as in 1.1 through 1.7 above
- 2.2 Read the booster seat and vehicle owner's manuals for installation instructions
- 2.3 Attach the booster seat to the FMVSS 225 anchorages according to the instructions in the booster seat and the vehicle owner's manuals. Do NOT attach any tethers. (S22.1.4(a)) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23 5/12/2000)
- 2.4 Position the 49 CFR Part 572 Subpart F 3-year old dummy in the booster seat such that the dummy's lower torso is centered on the booster seat cushion and the dummy's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back. Place the arms at the dummy's sides. (S22.2.1.6.2)
- 2.5 Attach all belts that come with the booster seat that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3'-1", 34 lb), if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)
- 2.18 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)

Air Bag Suppressed – Pass

Air Bag Not Suppressed – **FAIL**

___2.19 Return the ignition switch to the "off" position

___ C.Case, B.Smith, A.Louden

I certify that I have read and performed each instruction

.. ____

Date

___5/6/03

DATA SHEET 17

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

NHTSA No. CJ5306

Test Date 5/6/03

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

Booster Seat Name, Model, and Manufacture Date: Cosco High Back Booster, 5/1/00

Seat Position: Rearmost, mid-height Mid-position, mid-height X Foremost, mid-height (Use
a separate sheet for each of the three fore-aft positions) 8 detents rear of foremost because
of

contact with the interior

X The booster seat has NO visible damage. (S22.1.1)

1. Before tests with a booster seat (Booster seats listed in Appendix A, section D)

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest,
retracted or deflated adjustment positions. (S22.1.7.1)

X N/A - No lumbar adjustment

X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the
lowest or most open adjustment position. (S22.1.7.2)

X N/A - No additional support adjustment

X 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to
the full rearward position. (S22.1.7.3)

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

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

X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position
for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and
S8.1.3)

N/A - No seat back angle adjustment

Manufacturer's design seat back angle 1 detent rearward

Tested seat back angle 1 detent rearward

X 1.6 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any
adjustment of the head restraint shall be used to position it full forward. For example, if it
rotates, rotate it such that the head restraint extends as far forward as possible

N/A - No head restraint adjustment

X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design
position for a 50th percentile adult male occupant (S22.2.1.6.1)

N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position: full up

Tested anchorage position: full up

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

X 1.9 Read the booster seat owner's manual for installation instructions

X 1.10 Place the booster seat in the seat such that Plane A (item 1.8 above) is aligned with Plane B
(determined and marked during the completion of Data Sheet 14). (S22.2.1.4(a)(1))

X 1.11 While maintaining the booster seat with Plane A aligned with Plane B, secure the booster
seat by following, to the extent possible, the booster seat manufacturer's directions regarding
proper installation of the booster seat. Do NOT use any positioning devices such as towels.
(FR 6030711, footnote 23 5/12/2000) If the vehicle has FMVSS 225 anchorages, do not
attach (S22.1.3) the booster seat to these anchorages. (S22.2.1.4(a)) Do NOT attach any
tethers. (S22.1.4)

X 1.12 Is the booster seat designed to be secured to the vehicle seat even when empty?

- ☒ Yes – complete item 1.12
☐ No – skip item 1.12
- Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the booster seat belt path and the contact point with the belt anchor or vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S22.2.1.6.1)
- Is there a sheath around the seat belt that interferes with the load cell? ☐ Yes ☒ No
 If yes, cut off all or part of the sheath. ☐ All ☐ Part
- X 1.13 Cinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S22.2.1.6.1)
 Record seat belt tension on 29.6 lb
 N/A – The booster seat is not designed to be secured to the vehicle seat even when empty.
- ☒ 1.14 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the booster seat such that the dummy's lower torso is centered on the booster seat cushion and the dummy's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back. Place the arms at the dummy's sides. (S22.2.1.6.2)
- ☒ 1.15 Attach all belts that come with the booster seat that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3'-1", 34 lb), if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)
 X N/A – Unnecessary for this weight based sensing system.
- X 1.16 Place the Type 2 manual belt around the test dummy and fasten the latch. Remove all slack from the lap belt portion. Pull the upper torso webbing out of the retractor and allow it to retract, repeat this four times. Apply a 9 to 18 N (2 to 4lb) tension load to the lap belt. Allow the excess webbing in the upper torso belt to be retracted by the retractive force of the retractor. (S22.2.1.6.4)
☒ N/A – Booster seat belts that come with the booster seat are used to secure the dummy and the booster seat is secured with the vehicle's seat belt. (See 1.15)
- X 1.17 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
☒ Air Bag Suppressed – Pass
☐ Air Bag Not Suppressed – **FAIL**
- X 1.18 Return the ignition switch to the "off" position.
2. Unbelted tests using FMVSS 225 Anchorages with a booster seat. (Booster seats listed in Appendix A, sections 13) Do NOT attach seat belts. (S22.2.1.4 (b)) Do NOT attach any tethers. (S22.1.4)
- ☒ N/A - Vehicle does not have FMVSS 225 anchorages or booster seat does not have FMVSS 213 S5.9 devices to mate to the FMVSS 225 anchorages.
- 2.1 Keep the same seat position as in 1.1 through 1.7 above.
- 2.2 Read the booster seat and vehicle owner's manuals for installation instructions.
- 2.3 Attach the booster seat to the FMVSS 225 anchorages according to the instructions in the booster seat and the vehicle owner's manuals. Do NOT attach any tethers. (S22.1.4(a)) Do NOT use any positioning devices such as towels. (FR 65 30711, footnote 23, 5/12/2000)
- 2.4 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the booster seat such that the dummy's lower torso is centered on the booster seat cushion and the dummy's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back. Place the arms at the dummy's sides. (S22.2.1.6.2)
- 2.5 Attach all belts that come with the booster seat that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3'-1", 34 lb), if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)
- 2.18 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)

___Air Bag Suppressed – Pass

Air Bag Not Suppressed – **FAIL**

2.19 Return the ignition switch to the "off" position.

C:\Case_B.Smith A Louden

5/6/03

I certify that I have read and performed each instruction.

Date

DATA SHEET 17

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

NHTSA No. C35308

Test Date: 5/6/03

Laboratory VRTC

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

Booster Seat Name, Model, and Manufacture Date: Cosco High Back Booster 5/1/00

Seat Position Rearmost, mid-height Mid-position, mid-height X Foremost, mid-height (Use
a separate sheet for each of the three fore-aft positions) 8 detents rear of foremost because
of contact with the interior

X The booster seat has NO visible damage (S22.1.1)

1. Belted tests with a booster seat. (Booster seats listed in Appendix A, section D)

X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest,
retracted or deflated adjustment positions. (S22.1.7.1)

X N/A - No lumbar adjustment

X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the
lowest or most open adjustment position. (S22.1.7.2)

X N/A - No additional support adjustment

X 1.3 If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to
the full rearward position. (S22.1.7.3)

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

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

X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position
for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and
S8.1.3)

 N/A - No seat back angle adjustment

Manufacturer's design seat back angle 1 detent rearward

Tested seat back angle 1 detent rearward

X 1.6 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any
adjustment of the head restraint shall be used to position it full forward. For example, if it
rotates, rotate it such that the head restraint extends as far forward as possible

N/A - No head restraint adjustment

X 1.7 Place any adjustable seat belt anchorages at the vehicle manufacturer's nominal design
position for a 50th percentile adult male occupant (S22.2.1.6.1)

 N/A - No adjustable upper seat belt anchorage

Manufacturer's specified anchorage position: full up

Tested anchorage position full up

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

X 1.9 Read the booster seat owner's manual for installation instructions

X 1.10 Place the booster seat in the seat such that Plane A (item 1.8 above) is aligned with Plane B
(determined and marked during the completion of Data Sheet 14). (S22.2.1.4(a)(1))

X 1.11 While maintaining the booster seat with Plane A aligned with Plane B, secure the booster
seat by following, to the extent possible, the booster seat manufacturer's directions regarding
proper installation of the booster seat. Do NOT use any positioning devices such as towels
(FR 65 36711 footnote 23, 5/12/2000). If the vehicle has FMVSS 225 anchorages, do not
attach (S22.1.3) the booster seat to these anchorages. (S22.2.1.4(a)) Do NOT attach any
tethers. (S22.1.4)

X 1.12 Is the booster seat designed to be secured to the vehicle seat even when empty?

X Yes - complete item 1.12

No - skip item 1.12

Place a load cell with a maximum full-scale reading of 225 N (50.6 lb) on a flat, straight section of the lap belt between the booster seat bolt path and the contact point with the belt anchor on vehicle seat, on the side away from the buckle (to avoid interference from the shoulder portion of the belt). (S22.2.1.6.1)

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

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

X 1.13 Cinch the seat belt to a tension load of 130 N $\pm$ 3N (29.2 lb $\pm$ 0.7 lb) (S22.2.1.6.1)

Record seat belt tension _____

X N/A – For this test, the booster seat and dummy is secured with the vehicle seat belt.

X 1.14 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the booster seat such that the dummy's lower torso is centered on the booster seat cushion and the dummy's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back. Place the arms at the dummy's sides. (S22.2.1.6.2)

X 1.15 Attach all belts that come with the booster seat that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3' 1", 34 lb), if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)

X N/A – The vehicle seat belts were used to secure the seat and the dummy.

X 1.16 Place the Type 2 manual belt around the test dummy and fasten the latch. Remove all slack from the lap belt portion. Pull the upper torso webbing out of the retractor and allow it to retract, repeat this four times. Apply a 9 to 18 N (2 to 4lb) tension load to the lap belt. Allow the excess webbing in the upper torso belt to be retracted by the retractive force of the retractor. (S22.2.1.6.4)

17.8 N

☐ N/A – Booster seat belts that come with the booster seat are used to secure the dummy and the booster seat is secured with the vehicle's seat belt. (See 1.15)

X 1.17 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)

X Air Bag Suppressed – Pass

Air Bag Not Suppressed – **FAIL**

X 1.18 Return the ignition switch to the "off" position.

X 2. Unbolted tests using FMVSS 225 Anchorages with a booster seat. (Booster seats listed in Appendix A, sections D) Do NOT attach seat belts. (S22.2.1.4 (b)) Do NOT attach any tethers. (S22.1.4)

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

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

2.2 Read the booster seat and vehicle owner's manuals for installation instructions.

2.3 Attach the booster seat to the FMVSS 225 anchorages according to the instructions in the booster seat and the vehicle owner's manuals. Do NOT attach any tethers. (S22.1.4(a)) Do NOT use any positioning devices such as towels. (FR 65 30/11, footnote 23, 5/12/2000)

☐ 2.4 Position the 49 CFR Part 572 Subpart P 3-year-old dummy in the booster seat such that the dummy's lower torso is centered on the booster seat cushion and the dummy's back is against the seat back of the booster seat or if there is no booster seat back, the vehicle seat back. Place the arms at the dummy's sides. (S22.2.1.6.2)

2.5 Attach all belts that come with the booster seat that are appropriate for a child of the same height and weight as the 3-year-old child dummy (3' 1", 34 lb), if any, by following, to the extent possible, the manufacturer's instructions for seating children provided with the booster seat. (S22.2.1.6.3)

2.18 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.1.7) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)

☐ Air Bag Suppressed – Pass

☐ Air Bag Not Suppressed – **FAIL**

☐ 2.19 Return the ignition switch to the "off" position

C.Case, B.Smith, A.Loudon
certify that I have read and performed each instruction

..... 5/6/03
Date

DATA SHEET 29

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

NHTSA No. C35306 _____ Test Date 5/6/03 _____

Laboratory: VRIC _____ Test Technician(s): C. Case, B. Smith, A. Louden

Seat Position: ☐ Rearmost ☐ Mid-position ☒ Foremost (S20.3.1, 22.3.1, S24.3.1)
8 detents rear of foremost because of vehicle

contact

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 data sheet 15
Suppression Test Using Newborn Infant Dummy (S20)
After section ___ of data sheet 16
 - ☒ Suppression Test Using 3-Year-Old Dummy and Booster Seats (S22)
After section 1 of data sheet 17
 - ☐ Suppression Test Using 3-Year-Old Dummy and Forward Facing Convertible Child Restraints (S22)
After section __ of data sheet 18
Suppression Test Using an Unbelted 3-Year-Old Dummy (S22)
After section ___ of data sheet 19
Suppression Test Using 6 Year-Old-Dummy and Booster Seats (S24.2.1)
After section ___ of data sheet 20
Suppression Test Using 6 Year Old-Dummy (S24.2.1)
After section ___ of data sheet 21
- ☒ 2. Leave the seat in the forward position, seat height, and seat cushion angle used for the suppression test.
- ☒ 3. Fully recline the seat back. (S16.3.3.1.2)
N/A seat back not adjustable
- ☒ 4. 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)
- ☒ 5. Position the dummy midsagittal plane vertical and coincident with the seating position centerline determined in Data Sheet 14. (S16.3.3.1.3 or S16.3.3.1.4)
- ☒ 6. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
- ☒ 7. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.3)
- ☒ 8. Set the transverse distance between the centers of the front of the knees at 160 to 170 mm (6.3 to 6.7 inches). Center the knee separation with respect to the seat centerline. (S16.3.3.1.6)
Record Knee Separation 155.1 mm
- ☒ 9. Push rearward on the dummy's knees until the pelvis contacts the seat back, or the backs of the calves contact the seat cushion, whichever occurs first. (S16.3.3.1.6)
Pelvis contacted seat back.
Calves contacted seat cushion
- ☒ 10. 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)
- ☒ 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 that does not cause dummy contact. (S16.3.3.1.8) If needed, extended the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (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)
- X 12. Verify the pelvis is not interfering with the seat belt. (S16.3.3.1.9)
- X 13. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
- X 14. If the seat back is adjustable, rotate the seat back forward while holding the thighs in place. Continue rotating the seat back forward until the transverse instrument platform of the dummy head is level ± 0.5 degrees. If the head cannot be leveled using the seat back adjustment, or the seat back is not adjustable, use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.3.1.9 and S16.3.3.1.10)
(Check All That Apply)
- ☐ Seat back not adjustable
- ☐ Seat back not independent of driver side seat back
- X Head Level Achieved. (Check all that apply)
- ☒ Head leveled using the adjustable seat back
- ☐ Head leveled using the neck bracket.
- Head Angle _____ degrees
- Head Level NOT Achieved (Check all that apply)
- ☐ Head leveled using the adjustable seat back
- ☐ Head leveled using the neck bracket.
- Head Angle _____ degrees
- X 15. Measure and set the pelvic angle using the pelvic angle gage TF-2504. The pelvic angle should be 20.0 degrees ± 2.5 degrees. If the pelvic angle cannot be set to 20 degrees, minimize the angular difference. (S16.3.3.1.11)
- X 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
- Iterations were performed to achieve pelvic angle and head level.
- X 16. Verify the transverse instrument platform of the dummy head is level ± 0.5 degrees. Use the lower neck bracket adjustment to level the head. If a level position cannot be achieved, minimize the angle. (S16.3.3.1.9, S16.3.3.1.10, and S16.3.3.1.11)
- ☐ Head Level Achieved _____ using the seat back adjuster
- Head Angle _____ degrees
- ☐ Head Level NOT Achieved.
- Head Angle _____ degrees
- X 17. Check the dummy for contact with interior after completing adjustments. (S16.3.3.1.12)
- X No contact.
- ☐ Dummy in contact with interior.
- ☐ Seat moved Aft _____ mm from the previous position.
- ☐ Seat moved Aft _____ detent positions from the previous position.
- X 18. Foot positioning. (Indicate final position achieved) (S16.3.3.2)
- ☐ 18.1 Place feet flat on the toe board. OR
- X 18.2 If the feet cannot be placed flat on the toe board, set the feet perpendicular to the lower leg, and rest the feet as far forward on the floor pan as possible. OR
- ☐ 18.3 If the heels do not touch the floor pan, set the legs to vertical and set the feet parallel to the floor pan.
- X 19. Passenger arm/hand positioning. (S16.3.3.3)
- X 19.1 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)
- X 19.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.2.2)
- X 19.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)
- X 20. Adjustable head restraints
- ☐ 20.1 If the head restraint has an automatic adjustment, leave it where the system positions the restraint after the dummy is placed in the seat. (S16.3.4.1)
- ☒ N/A Vehicle does not contain automatic head restraints.
- X 20.2 Adjust the head restraint to its lowest position. (S16.3.4.2)

- X 20.3 (See Data Sheet 14) Measure the vertical distance from the top most point of the head restraint to the bottom most point. Locate a horizontal plane through the midpoint of this distance. Adjust the head restraint vertically so that this horizontal plane is aligned with the center of gravity (CG) of the dummy head. (S16.3.4.3)
 Vertical height of head restraint mm
 Mid-point height mm
- X 20.4 If the above position is not attainable, move the vertical center of the head restraint to the closest detent below the center of the head CG. (S16.3.4.3)
 __N/A midpoint position attained in previous step
X Head rest set at nearest detent below the head CG
- __20.5 If the head restraint has a fore and aft adjustment, place the restraint in the foremost position or until contact with the head is made, whichever occurs first. (S16.3.4.4)
- X 21. Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.17) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.1.8)
 __Air Bag Suppressed – **FAIL**
 X Air Bag Not Suppressed – Pass
- X 22. Return the ignition switch to the "off" position.

C.Case, B.Smith, A.Louden

5/6/03

DATA SHEET 19

Suppression Tests Using an Unlabelled 3-Year-Old Dummy (Part 572, Subpart P) (S22)
 NHTSA No. C35306 Test Date: 5/6/03

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

Dummy Serial No. 038

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

Do NOT use seat belts for these tests. (S22.2.2)

- *. Sitting on seat with back against seat back (S22.2.2.1)
- X 1.1 Position the seat's adjustable lumbar supports so that the lumbar supports are in the lowest, retracted or deflated adjustment positions. (S22.1.7.1)
X N/A – No lumbar adjustment
- X 1.2 Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S22.1.7.2)
X N/A – No additional support adjustment
- X 1.3 If the seat cushion adjusts fore and aft independent of the seat back, set this adjustment to the full rearward position. (S22.1.7.3)
 N/A – No independent fore-aft seat cushion adjustment
- X 1.4 Place the seat in the position specified in the header information. Use the seat markings determined during the completion of Data Sheet 14 to set the fore-aft position, mid-height position and the seat cushion angle.
- X 1.5 The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and S8.1.3)
 N/A – No seat back angle adjustment
 Manufacturer's design seat back angle 1 detent rearward
 Tested seat back angle 1 detent rearward
- X 1.6 If adjustable, set the head restraint at the full down and full forward position. (S22.1.7.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
 N/A – No head restraint adjustment
- X 1.7 Position the dummy in the seated position and place it on the right front outboard seat. (S22.2.2.1(a))
- X 1.8 Position the dummy such that its midsagittal plane is coincident with Plane B (determined and marked during the completion of Data Sheet 14). (S22.2.2.1(b))
- X 1.9 Position the dummy's torso against the seat back. (S22.2.2.1(b))
- X 1.10 Position the dummy's thighs against the seat cushion. (S22.2.2.1(c))
- X 1.11 Allow the legs of the dummy to extend off the surface of the seat. (S22.2.2.1(c))
 If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
X N/A – No dummy contact with the instrument panel.
 Manual seat adjuster: detent(s) rearward of the forward most position
 (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: mm between instrument panel and child restraint
 (max. allowed is 5 mm.)
- X 1.12 Rotate the dummy's upper arms until they contact the seat back. (S22.2.2.1(c))
- X 1.13 Rotate the dummy's lower arms until the dummy's hands contact the seat cushion. (S22.2.2.1(e))

- X 1.14 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.1(f)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.1(g))
X Air Bag Suppressed – Pass
 __ Air Bag Not Suppressed – **FAIL**
- X 1.15 Return the ignition switch to the "off" position.
 2 Sitting on seat with back against reclined seat back (S22.2.2.2)
 N/A – No seat back angle adjustment
- X 2.1 Keep the dummy and the seat in the same position as item 1 above.
- X 2.2 Recline the seat back an additional 25 degrees or the closest position that does not exceed 25 degrees. (S22.2.2.2)
 Initial seat back angle 17 degrees
 Final seat back angle 42 degrees
- X 2.3 Verify the dummy's midsagittal plane is coincident with Plane B (determined and marked during the completion of Data Sheet 14). (S22.2.2.1(h))
- X 2.4 Verify the dummy's torso is against the seat back. (S22.2.2.1(h))
- X 2.5 Verify the dummy's thighs are against the seat cushion. (S22.2.2.1(h))
- X 2.6 Allow the legs of the dummy to extend off the surface of the seat. (S22.2.2.1(c))
 If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
 X N/A – No dummy contact with the instrument panel.
 Manual seat adjuster: detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: __ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- X 2.7 Verify the dummy's upper arms contact the seat back. (S22.2.2.1(d))
- X 2.8 Verify the dummy's hands contact the seat cushion. (S22.2.2.1(e))
- X 2.9 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.1(f)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.1(g))
X Air Bag Suppressed – Pass
 __ Air Bag Not Suppressed – **FAIL**
- X 2.10 Return the ignition switch to the "off" position.
 3 Sitting on seat with back not against seat back (S22.2.2.3)
- X 3.1 Keep the dummy and the seat in the same position as item 2 above.
- X 3.2 Incline the seat back to the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.7.5 and S8.1.3)
 N/A – No seat back angle adjustment
 Manufacturer's design seat back angle 1 detent rearward
 Tested seat back angle 1 detent rearward
- X 3.3 Verify the dummy's midsagittal plane is coincident with Plane B (determined and marked during the completion of Data Sheet 14). (S22.2.2.3(h))
- X 3.4 Verify the dummy's torso is against the seat back.
- X 3.5 Verify the dummy's thighs are against the seat cushion. (S22.2.2.3(c))
- X 3.6 Rotate the dummy forward until the spine is vertical. (S22.2.2.3(b))
- X 3.7 Keeping the spine vertical, move the dummy fore or aft to position the dummy's back 25 to 150 mm from the seat back as measured horizontally from the dummy's midsagittal plane at the mid-sternum level. (S22.2.2.3(b))
 Distance measured from seat back 51 mm (25 to 150 mm)
- X 3.8 Allow the legs of the dummy to extend off the surface of the seat. (S22.2.2.3(d))
 If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
 X N/A – No dummy contact with the instrument panel.
 Manual seat adjuster: detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
 Power seat adjuster: __ mm between instrument panel and child restraint (max.

- allowed is 5 mm.)
- ☒ 3.9 If necessary, hold the dummy in position with a material that has a maximum breaking strength of 311 N. (S22.2.2.3 (b))
- ___ N/A - Dummy did not need to be supported
- ☒ 3.10 Position the dummy's upper arms parallel to the spine. (S22.2.2.3 (e))
- ☒ 3.11 Rotate the dummy's lower arms until the hands contact the seat cushion. (S22.2.2.3 (e))
- ☒ 3.12 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.3 (f)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.3 (g))
- ☒ Air Bag Suppressed - Pass
- ___ Air Bag Not Suppressed - **FAIL**
- ☒ 3.13 Return the ignition switch to the "off" position.
4. Sitting on seat edge, spine vertical, hands by the dummy's side (S22.2.2.4)
- ☒ 4.1 Keep the seat in the end position used for 3 above
- ☒ 4.2 Position the dummy in the seated position and place it on the right front outboard seat. (S22.2.2.4(a))
- ☒ 4.3 Position the dummy such that its midsagittal plane is coincident with Plane B (determined and marked during the completion of Data Sheet 14). (S22.2.2.4(a))
- ☒ 4.4 Position the dummy in the seated position forward in the seat such that the legs are vertical and the back of the legs rest against the front of the seat with the spine vertical. If the dummy's feet contact the floor pan raising part of the thighs off the seat cushion, rotate the legs forward until the dummy's thighs are resting on the seat cushion with the feet positioned flat on the floor pan and the dummy spine vertical. (S22.2.2.4(b))
- If the seat must be moved rearward because of dummy contact with the instrument panel, describe the final location of the seat:
- ☒ N/A - No dummy contact with the instrument panel
- Manual seat adjuster: ___ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the instrument panel.)
- Power seat adjuster: ___ mm between instrument panel and child restraint (max. allowed is 5 mm.)
- ☒ 4.5 Position the dummy's upper arms parallel to the spine. (S22.2.2.4(c))
- ☒ 4.6 Rotate the dummy's lower arms until the hands contact the seat cushion. (S22.2.2.4(d))
- ☒ 4.7 If necessary, hold the dummy in position with a material that has a maximum breaking strength of 311 N. (S22.2.2.4(b))
- ☒ 4.8 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.4(e)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.4(f))
- ☒ Air Bag Suppressed - Pass
- ___ Air Bag Not Suppressed - **FAIL**
- ☒ 4.9 Return the ignition switch to the "off" position
5. Standing on seat, facing forward (S22.2.2.5)
- ☒ 5.1 Keep the seat in the end position used for 4 above
- ☒ 5.2 Position the dummy in a standing position on the right front outboard seat cushion facing the front of the vehicle with the midsagittal plane coincident with Plane B (determined and marked during the completion of Data Sheet 14) and with the heels of the dummy's feet in contact with the seat back. (S22.2.2.5(a))
- ☒ 5.3 Rest the dummy against the seat back, with the arms parallel to the spine. (S22.2.2.5(b))
- ☒ 5.4 If the seat back must be reclined because of dummy contact with the roof, describe the final location of the seat.
- ☒ N/A - No dummy contact with the roof.
- Manual seat back recliner: ___ detent(s) rearward of the forward most position (Move the seat the minimum number of detents to eliminate contact with the roof.)
- Power seat adjuster: ___ mm between roof and dummy head (max. allowed is 5 mm.)
- ☒ 5.5 If necessary, hold the dummy in position using a material that has a maximum breaking strength of 311 N or spacer blocks. (S22.2.2.5 (d))

- N/A – Dummy did not need to be supported.
- ☒ 5.6 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.5(e)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.6(f))
- ☒ Air Bag Suppressed – Pass
- ☐ Air Bag Not Suppressed – **FAIL**
- ☒ 5.7 Return the ignition switch to the "off" position.
6. Kneeling on seat facing forward (S22.2.2.6)
- ☒ 6.1 Keep the seat in the end position used for 5 above.
- ☒ 6.2 If the seat back angle was changed in 5.4 above, reset it to the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S22.1.1.5 and S8.1.3)
- ☐ N/A – No seat back angle adjustment
- ☐ N/A – The seat back angle was not adjusted in 5.4 above.
- Manufacturer's design seat back angle
- Tested seat back angle
- ☒ 6.3 Position the dummy in a kneeling position on the right front outboard seat cushion facing the front of the vehicle with the midsagittal plane coincident with Plane B (determined and marked during the completion of Data Sheet 14) with the toes at the intersection of the seat back and seat cushion and with the spine vertical. (S22.2.2.6(a) and (b))
- ☒ 6.4 Push down on the legs so that they contact the seat as much as possible and then release. (S22.2.2.6(b))
- ☒ 6.5 Place the arms parallel to the spine. (S22.2.2.6(b))
- ☒ 6.6 If necessary, hold the dummy in position using a material that has a maximum breaking strength of 311 N or spacer blocks. (S22.2.2.6(c))
- ☐ N/A – Dummy did not need to be supported.
- ☒ 6.7 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.6(d)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.6(e))
- ☒ Air Bag Suppressed – Pass
- ☐ Air Bag Not Suppressed – **FAIL**
- ☒ 6.8 Return the ignition switch to the "off" position.
7. Kneeling on seat facing rearward (S22.2.2.7)
- ☒ 7.1 Keep the seat in the end position used for 6 above.
- ☒ 7.2 Position the dummy in a kneeling position on the right front outboard seat cushion facing the rear of the vehicle with the midsagittal plane coincident with Plane B (determined and marked during the completion of Data Sheet 14) with the head and torso in contact with the seat back. (S22.2.2.7 (a) and (b))
- ☒ 7.3 Push down on the legs so that they contact the seat as much as possible and then release. (S22.2.2.7(b))
- ☒ 7.4 Place the arms parallel to the spine. (S22.2.2.7(b))
- ☒ 7.5 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.7(c)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.7(d))
- ☒ Air Bag Suppressed – Pass
- ☐ Air Bag Not Suppressed – **FAIL**
- ☒ 7.6 Return the ignition switch to the "off" position.
8. Lying on seat (S22.2.2.8)
- ☐ 8.1 Does the front seat have 3 or more designated seating positions?
- ☒ Yes ☐ No, this form is complete.
- ☐ 8.2 Keep the seat in the end position used for 7 above.
- ☐ 8.3 Lay the dummy on the right front outboard seat with the spine perpendicular to the vehicle's longitudinal axis, with the dummy facing forward and the head towards the right front door. (S22.2.2.8(a)(2), & S22.2.2.8(a)(5), and S22.2.2.8(a)(6))
- ☐ 8.4 Position the dummy so that the midsagittal plane is horizontal and a plane passing through the two shoulder joints of the dummy is vertical. (S22.2.2.8(a)(1) and S22.2.2.8(a)(4))

- 8.5 Position the dummy's arms parallel to the spine. (S22.2.2.8(a)(3))
- 8.6 Position the dummy so that it is as far back in the seat as possible. (S22.2.2.8(a)(8))
- 8.7 Position the dummy so that the foremost point of the dummy's head is 50 to 100 mm from the vehicle door. (S22.2.2.8(a)(7))
- 8.8 Rotate both thighs as much as possible toward the chest of the dummy and rotate the legs as much as possible against the thighs. (S22.2.2.8(b))
- 8.9 Position the dummy's lower left arm perpendicular to the longitudinal centerline of the vehicle and rotate the lower left arm about the elbow joint and toward the dummy's head until movement is obstructed. (S22.2.2.8(c))
- 8.10 Start the vehicle engine or place the ignition in the "on" position, whichever will turn on the suppression system, and close all vehicle doors. (S22.2.2.8(c)) Wait 10 seconds, and then check whether the air bag is suppressed. (S22.2.2.8(e))
 - Air Bag Suppressed – Pass
 - Air Bag Not Suppressed – FAIL
- 8.11 Return the ignition switch to the "off" position.

C. Case, B. Smith, A. Louder
 I certify that I have read and performed each instruction.

5/6/03
 Date

DATA SHEET 25

Low Risk Deployment Tests Using an Unbolted 6-Year-Old Dummy (Part 572, Subpart N) (S24)

Position 1 - Chest On Instrument Panel (S24.4.2)

NHTSA No. C35306

Test Date: 5/13/03

Laboratory: VRTC

Test Technician(s) G. Fout, A. Loefer

Dummy Serial No. 127

- X 1. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest retracted or deflated adjustment position. (S24.4.2.1)
X N/A - No lumbar adjustment
- X 2. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S24.4.2.1)
X N/A - No additional support adjustment
- X 3. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S24.4.2.1)
X N/A - No independent fore-aft seat cushion adjustment
- X 4. Use the seat markings determined during the completion of Data Sheet 14 to set the rearmost fore-aft position, lowest height position and the seat cushion angle. (S24.4.2.1)
- X 5. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S24.4.2.1 and S8.1.3)
N/A - No seat back angle adjustment:
Manufacturer's design seat back angle 5 detents rearward
Tested seat back angle 5 detents rearward
- X 6. If adjustable, set the head restraint at the full down and full forward position. (S24.4.2.1 and S22.1.7.6) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
X N/A - No Head restraint adjustment
- X 7. Remove the dummy legs at the pelvic interface. (S24.4.2.2)
- X 8. Position a calibrated Part 572 Subpart N six year old dummy in the seated position and place it on the front passenger outboard seat. (S24.4.2.3)
- X 9. Position the dummy such that its midsagittal plane is coincident with Plane D. (S24.4.2.3(a))
- X 10. Position the upper arms parallel to the torso and place the hands in contact with the thighs. (S24.4.2.3(b))
- X 11. Position the dummy torso so the rear face angle of the thorax instrument cavity is 6 degrees forward of vertical. (S24.4.2.3(c))
Thorax instrument cavity angle _____
- X 12. Move the dummy forward on the seat, maintaining the thorax instrument cavity angle, until the dummy head/torso contacts the instrument panel. If the dummy loses contact with the seat maintain the height and angle until head/torso contact with the instrument panel occurs. (S24.4.2.3(c))
- X 13. Adjust the dummy position vertically until Point 1 lies with Plane C. Adjust the foreaft position of the dummy to maintain contact with the instrument panel. If the head of the dummy contacts the windshield before point 1 reaches Plane C, lower the dummy to achieve a maximum clearance of 5mm (0.2 inches) between the head and the windshield (S24.4.2.3(c))

X Point 1 Lies within Plane C Height of Point 1 _____ mm

X Head Contacted Windshield Height of Point 1 _____ mm

Head/Windshield

Clearance _____ mm

- X 14. 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. (S22.4.2.4)

Photograph final setup and record position.

Thorax Cavity Angle 6 degrees
Point 1 Height mm

- X 15. Record the Airbag deployment and timing requirements in the chart below.

Number of stages for test 2

Stage No	Firing Time (msec) *	Recorded Firing Time (msec)
1	0.0 msec (Time Zero)	0.0
2	130 msec	131 msec

* Firing time is measured from Time Zero for all stages

- X 16. Connect dummy instrumentation to the test data acquisition system and verify channel operation.
- X 17. Connect the airbag to the airbag firing system per the manufacturer's instructions, provided by the CCTR.
- X 18. Prepare the high-speed video/film cameras.
- X 19. Fire the airbag per the table above and record the data from the dummy instrumentation.
- X 20. Photograph the post-test results.
- X 21. Verify recorded firing times match specified firing times ± 2 milliseconds.
- X 22. Record injury values for this test.

	FMVSS 208 Maximum Allowable Injury Assessment Value	Measured Value* Dummy Serial No. 127
HIC ₁₅	700	13
Chest Acceleration	60 g	13
Chest Displacement	40 mm	ND
Nte	1.0	0.0
Nlf	1.0	0.2
Nce	1.0	0.0
Ncf	1.0	0.2
Neck Tension (Fz)	1490 N	51
Neck Compression (Fz)	1820 N	429

*Calculated on data recorded for 100 ms after the initial deployment of the air bag. (S4.11(b))

G. Post, A. Loudon

I certify that I have read and performed each instruction.

5/13/03

Date

DATA SHEET 26

Low Risk Deployment Tests Using an Unbelted 6 Year-Old Dummy (Part 572, Subpart N) (S24)

Position 2 - Head On Instrument Panel (S24.4.3)

NHTSA No. C39306

Test Date 5/28/03

Laboratory: VRTC Test Technician(s) G.Fout

Dummy Serial No. 127

- ☒ 1. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S24.4.3.1)
X N/A - No lumbar adjustment
- ☒ 2. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S24.4.3.1)
X N/A - No additional support adjustment
- ☒ 3. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S24.4.3.1)
N/A - No independent fore-aft seat cushion adjustment
- ☒ 4. Use the seat markings determined during the completion of Data Sheet 14 to set the rearmost fore-aft position, mid-height position and the seat cushion angle. (S24.4.3.1)
- ☒ 5. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S24.4.3.1 and S8.1.3)
N/A - No seat back angle adjustment
Manufacturer's design seat back angle 5 detents rearward
Tested seat back angle 5 detents rearward
- ☒ 6. If adjustable, set the head restraint at the full down and full forward position. (S24.4.3.1) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
N/A - No head restraint adjustment
- ☒ 7. Position a calibrated Part 572 Subpart N six-year-old dummy in the seated position and place it on the right front outboard passenger seat. (S24.4.3.2)
- ☒ 8. Position the dummy such that its midsagittal plane is coincident with Plane D. (S24.4.3.2(a))
- ☒ 9. Position the dummy's legs in a vertical orientation and place the back of the legs in contact with the seat cushion. (S24.4.3.2(b))
- ☒ 10. If the thighs do not rest fully on the seat cushion, position the legs by rotating them forward and placing the feet flat on the floor pan until the thighs rest fully on the seat cushion.
- ☒ 11. Set the transverse distance between the longitudinal centerlines at the front of the knees at 112 to 117 mm (4.4 to 4.6 inches). Maintain the legs and thighs in a vertical plane. (S24.4.3.2(b))
Knee Separation Distance 114 mm
Thigh Angle 4.2
- ☒ 12. Position the dummy Torso so the rear face of the thorax instrument cavity is 6 degrees forward of vertical. (S24.4.3.2(c))
Thorax instrument cavity angle Not recorded
- ☒ 13. Position the upper arms parallel to the torso and place the hands in contact with the thighs. (S24.4.3.2(c))
- ☒ 14. Move the seat forward while maintaining the thorax instrument cavity angle until any part of the dummy contacts the instrument panel. (S24.4.3.3)
X - No contact. Proceed to step 15
Contact - Proceed to step 16
- ☒ 15. Move the dummy forward on the seat, maintaining the thorax instrument cavity and thigh angles, and dummy height until any part of the dummy contacts the instrument panel. (S24.4.3.4)
- ☒ 16. Verify contact between the instrument panel and the head or torso. If necessary, rotate the torso forward until the head or torso contacts the instrument panel. Achieve this position by

maintaining the thighs at their present angle and apply a forward force to the spine between the shoulder joints. (S24.4.3.5)

- X_17. Using material with a maximum breaking strength of 311 N (70 lb) and spacer blocks. Support the dummy so that there is minimum interference with the full rotational and translational freedom for the upper torso of the dummy. The material should support the torso rather than the head and should not interfere with the airbag. (S24.4.3.6)

__ Photograph final setup and record position.

Thorax Cavity Angle 35.7 degrees

Thigh Angle 10.9 degrees

- X_18. Record the Airbag deployment and timing requirements in the chart below.

Number of stages for this test. 2

Stage No.	Firing Time (msec) *	Recorded Firing Time (msec)
1	0.0 msec (Time Zero)	0
2	130 msec	*29

* Firing time is measured from Time Zero for all stages

- X_19. Connect dummy instrumentation to the test data acquisition system and verify channel operation.
- X_20. Connect the airbag to the airbag firing system per the manufacturer's instructions, provided by the GOHIC.
- X_21. Prepare the high-speed video/film cameras.
- X_22. Fire the airbag per the table above and record the data from the dummy instrumentation.
- X_23. Photograph the post-test results.
- X_24. Verify recorded firing times match specified firing times +/- 2 milliseconds
- X_25. Record injury values for this test.

	FMVSS 208 Maximum Allowable Injury Assessment Value	Measured Value[*] Dummy Serial No. <u>127</u>
HIC ₁₅	700	7
Chest Acceleration	60 g	9
Chest Displacement	40 mm	0
N _{te}	1.0	0.4
N _{tl}	1.0	0.0
N _{ce}	1.0	0.5
N _{ct}	1.0	0.2
Neck Tension (l-z)	1490 N	504
Neck Compression (l-z)	1820 N	667

* Calculated on data recorded for 100 ms after the initial deployment of the air bag. (S24.11(b))

__ G. Foot
I certify that I have read and performed each instruction.

5/28/03
Date

DATA SHEET 27

Low Risk Deployment Tests Using an Uncolled 5th Percentile Female
Dummy (Part 572, Subpart O) (S26)
Position 1 - Chin On Module (S26.2)

NHTSA No. C35306

Test Date: __6/03/03

Laboratory: VRIO

Test Technician(s): G Fout, A. Loudon

Dummy Serial No. 421

- X 1. Position the steering wheel so the front wheels are in the straight ahead position. (S26.2.1)
- X 2. Position any adjustable parts of the steering controls to the mid position. If a mid-position adjustment is not achievable, position the controls to the next lowest extent position. (S26.2.1)
- X 3. Position the seat's adjustable umcbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S26.2.3)
N/A - No umcbar adjustment
- X 4. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S26.2.3)
X N/A - No additional support adjustment
- X 5. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S26.2.3)
X N/A - No independent fore-aft seat cushion adjustment
- X 6. Use the seat markings determined during the completion of Data Sheet 14 to set the seat in the rearmost fore-aft position, mid-height position and the seat cushion angle. (S26.2.3)
- X 7. 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: __21°
Tested seat back angle: __21°
- X 8. If adjustable, set the head restraint at the full down and full forward position. (S26.2.3) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
N/A - No head restraint adjustment
- X 9. Position a calibrated Part 572 Subpart O 5th percentile female dummy in the driver's seat. (S26.2.4)
- X 10. Position the dummy such that its midsagittal plane is coincident with Plane E (determined during the completion of Data Sheet 14). (S26.2.4.1)
- X 11. Position the dummy's legs in a vertical orientation and place the back of the legs in contact with the seat cushion. (S26.2.4.2)
- X 12. Position the dummy's thorax instrument cavity rear face 6 degrees forward (toward the front of the vehicle) of the steering wheel angle (i.e., if the steering wheel angle is 25 degrees from vertical, the thorax instrument cavity rear face angle is 31 degrees.) (S26.2.4.3)
- X 13. Set the initial transverse distance between the longitudinal 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)
- X 14. Position the upper arms parallel to the torso, and place the hands in contact with the thighs. (S26.2.4.5)
- X 15. Move the dummy forward on the seat, maintaining the thorax instrument cavity angle, until the dummy head/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)
____eg adjustments needed
- X 16. Adjust the dummy position vertically until the bottom of the chin coincides with Plane F (the highest point of the air bag module cover as determined during the completion of Data Sheet

14). 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

X Seal interfered with positioning. Height of Chin Point. mm

- X 17. Using material with a maximum breaking strength of 311 N (70 lb) and spacer blocks, support the dummy so that there is minimum interference with the full rotational and translational freedom 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)

X Photograph final setup and record position.

Thorax Cavity Angle. degrees

Chin Point Height. mm

- X 18. Record the Airbag deployment and timing requirements in the chart below
Number of stages for this test. 2

Stage No	Firing Time (msec) *	Recorded Firing Time (msec)
1	0.0 msec (Time Zero)	0
2	30 msec	30 msec

* Firing time is measured from Time Zero for all stages

- X 19. Connect dummy instrumentation to the test data acquisition system and verify channel operation.
- X 20. Connect the airbag to the airbag firing system per the manufacturer's instructions, provided by the COTR.
- X 21. Prepare the high-speed video/film cameras.
- X 22. Fire the airbag per the table above and record the data from the dummy instrumentation.
- X 23. Photograph the post-test results.
- X 24. Verify recorded firing times match specified firing times ± 2 milliseconds.
- X 25. Record injury values for this test.

	FMVSS 208 Maximum Allowable Injury Assessment Value	Measured Value* Dummy Serial No. 621
HIC ₁₅	700	30
Chest Acceleration	60 g	16
Chest Displacement	52 mm	9
Nte	1.0	0.5
Ntf	1.0	0.4
Nce	1.0	0.0
Ncf	1.0	0.1
Neck Tension (Fz)	2070 N	761
Neck Compression (Fz)	2520 N	19
Left Femur	6805 N	24
Right Femur	6805 N	22

* Calculated on data recorded for 125 ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(c)) Data truncated at 57 ms.

G. Foat, A. J. Cuden
I certify that I have read and performed each instruction.

6/3/03
Date

DATA SHEET 28

Low Risk Deployment Tests Using an Unbelted 5th Percentile Female

Dummy (Part 572, Subpart O) (S26)

Position 2 - Chin On Film (S26.3)

NHTSA No. CJ5306

Test Date: ...5/13/03

Laboratory: VRIC

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

Dummy Serial No. 505

- X 1. Position the steering wheel so the front wheels are in the straight-ahead position. (S26.3.2)
- X 2. Position any adjustable parts of the steering controls to the mid position. If a mid-position adjustment is not achievable, position the controls to the next lowest detent position. (S26.3.2)
- X 3. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S26.3.1)
X N/A - No lumbar adjustment
- X 4. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S26.3.1)
X N/A - No additional support adjustment
- X 5. If the seat cushion adjusts fore and aft, independent of the seat back, set this adjustment to the full rearward position. (S26.3.1)
X N/A - No independent fore-aft seat cushion adjustment
- X 6. Use the seat markings determined during the completion of Data Sheet 14 to set the seat in the rearmost fore-aft position, mid-height position and the seat cushion angle. (S26.3.1)
- X 7. The seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S26.3.1 and S8.1.3)
 N/A - No seat back angle adjustment
Manufacturer's design seat back angle 715 mm from sun visor bolt to outer head restraint hole
Tested seat back angle 715 mm from sun visor bolt to outer head restraint hole
- X 8. If adjustable, set the head restraint at the full down and full forward position. (S26.3.1) Any adjustment of the head restraint shall be used to position it full forward. For example, if it rotates, rotate it such that the head restraint extends as far forward as possible.
 N/A - No head restraint adjustment
- X 9. Position a calibrated Part 572 Subpart O 5th percentile female dummy in the driver's seat. (S26.3.4)
- X 10. Position the dummy such that its midsagittal plane is coincident with Plane E (determined during the completion of Data Sheet 14). (S26.3.4.1)
- X 11. 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)
- X 12. Position the dummy's thorax instrument cavity rear face 6 degrees forward (toward the front of the vehicle) of the steering wheel angle (i.e., if the steering wheel angle is 25 degrees from vertical, the thorax instrument cavity rear face angle is 31 degrees.) (S26.3.4.3.) 30.7 degree steering wheel angle
- X 13. 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)
- X 14. Position the upper arms parallel to the torso and place the hands in contact with the thighs. (S26.3.4.5)
- X 15. 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)

☒ Leg adjustments needed

- ☒ 16. Adjust the dummy position vertically until the Chin Point (determined during the completion of Data Sheet 14) contacts the upper rim of the steering wheel. Adjust the fore/aft position of the dummy to maintain contact with the steering wheel. If this step is completed, proceed to step 19. If the seat prevents placing the Chin Point coincident the upper steering wheel rim proceed to 17. If the dummy contacts the windshield or upper interior, proceed to step 18. (S26.3.6)

☒ Chin Point contacts upper steering wheel rim
Height of Chin Point not recorded

☐ Vehicle restarted with positioning.

- N/A 17. If the steering controls can be adjusted, adjust the steering controls to raise the upper steering wheel rim the necessary amount to bring the Chin Point coincident with the upper steering wheel rim. Adjust the rear thorax cavity along with the steering wheel angle per step 12. If contact is still not achieved, position the Chin Point as close as possible to the upper steering wheel rim. Proceed to step 19. (S26.3.7)

Steering Wheel Angle _____ mm
Thorax Cavity angle _____ degree

Chin Point is coincident with the upper steering wheel rim.

Height of Chin Point _____ mm
Height of upper rim _____ mm

Chin point is not coincident with the upper steering wheel rim.

Height of Chin Point _____ mm
Height of upper rim _____ mm

- N/A 18. If the steering controls can be adjusted, adjust the steering controls to lower the upper steering wheel rim the necessary amount to bring the Chin Point coincident with the upper steering wheel rim. Adjust the rear thorax cavity along with the steering wheel angle per step 12. If contact is still not achieved, position the Chin Point as close as possible to the upper steering wheel rim. If contact with upper interior or windshield cannot be avoided, lower the dummy to allow a maximum of 5 mm (0.2 inches) between the dummy and the windshield or upper interior. Proceed to step 19. (S26.3.6 and S26.3.7)

Steering Wheel Angle _____ mm
Thorax Cavity angle _____ degree

Chin Point is coincident with the upper steering wheel rim.

Height of Chin Point _____ mm
Height of upper rim _____ mm

☐ Chin point is not coincident with the upper steering wheel rim.

Height of Chin Point _____ mm
Height of upper rim _____ mm

- ☒ 19. Using material with a maximum breaking strength of 311 N (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 37.7 degrees
Chin Point Height not recorded mm

An angle of 54.4 degrees was measured at the top of the neck and is equivalent to 37.7 degrees thorax cavity angle.

X_20. Record the Airbag deployment and timing requirements in the chart below

Number of stages for this test: 2

Stage No	Firing Time (msec) *	Recorded Firing Time (msec)
1	0.0 msec (Time Zero)	0
2	30 msec	30

* Firing time is measured from Time Zero for all stages

X_21. Connect dummy instrumentation to the test data acquisition system and verify channel operation

X_22. Connect the airbag to the airbag firing system per the manufacturer's instructions, provided by the COTR.

X_23. Prepare the high-speed video/film cameras

X_24. Fire the airbag per the table above and record the data from the dummy instrumentation.

X_25. Photograph the post-test results

X_26. Verify recorded firing times match specified firing times +/- 2 mill seconds.

X_27. Record injury values for this test

	FMVSS 208 Maximum Allowable Injury Assessment Value	Measured Value* Dummy Serial No. <u>505</u>
HIC ₁₅	700	26
Chest Acceleration	60 g	24
Chest Displacement	52 mm	28
Peak N _y (Nte)	1.0	0.4
Peak N _{ij} (NF)	1.0	0.3
Peak N _j (Nce)	1.0	0.0
Peak N _{ij} (Nc)	1.0	0.1
Neck Tension (F _z)	2070 N	798
Neck Compression (F _z)	2520 N	81
Left Femur	6805 N	14
Right Femur	6805 N	42

* Calculated on data recorded for 125 ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(c)) Data truncated at 155 ms.

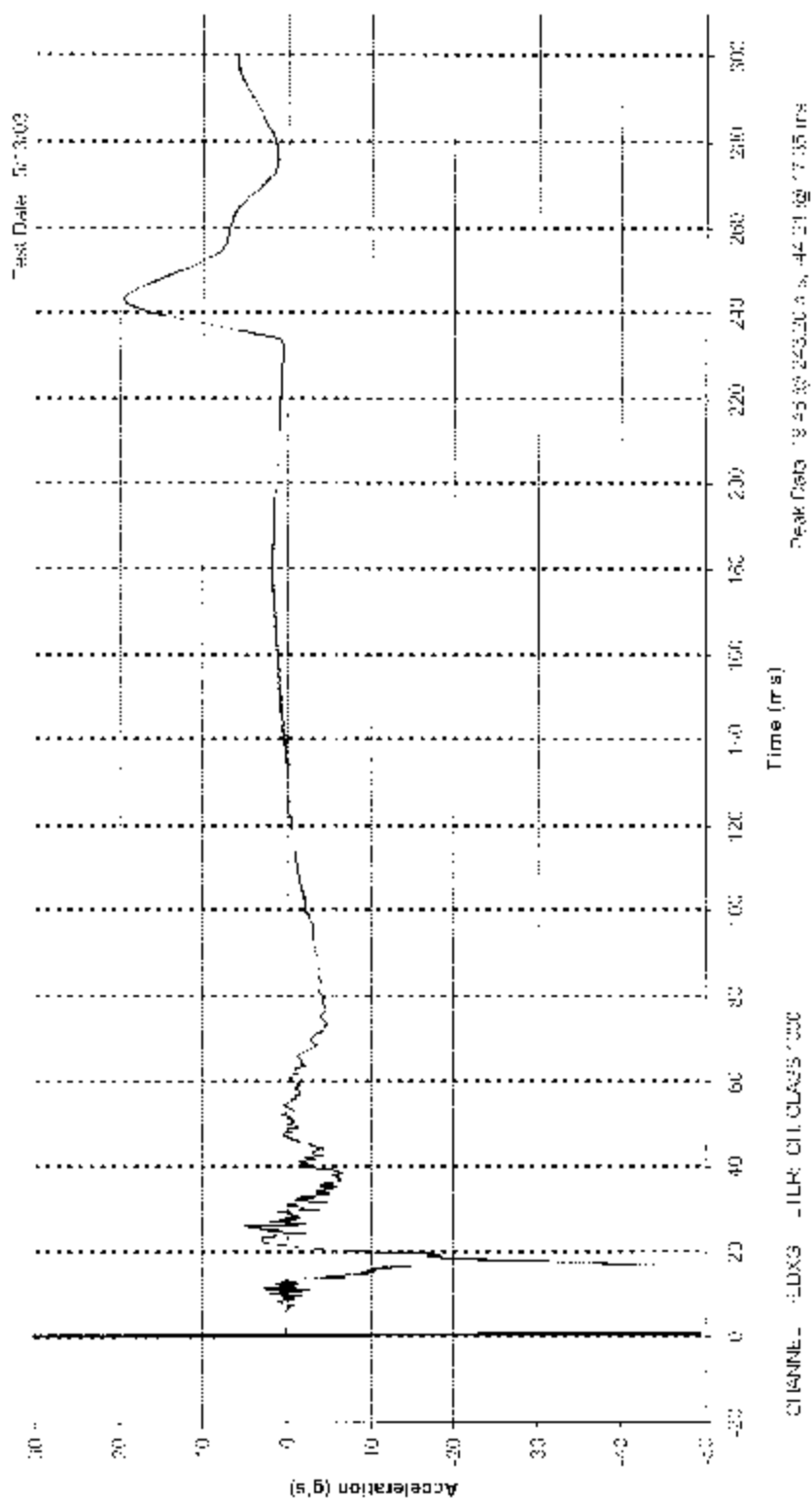
G Four _____
I certify that I have read and performed each instruction

5/13/03
Date

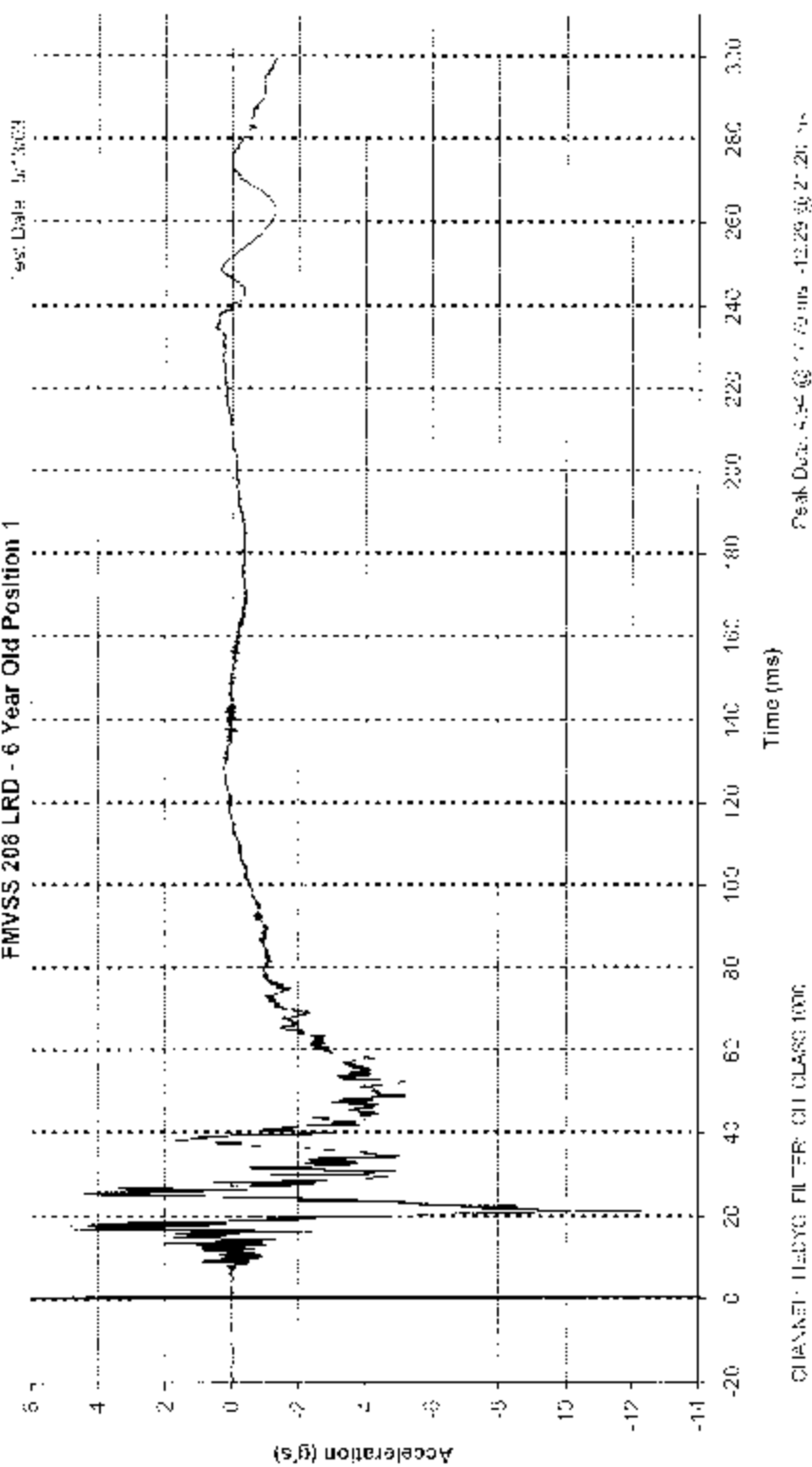
Section 6

Test Data

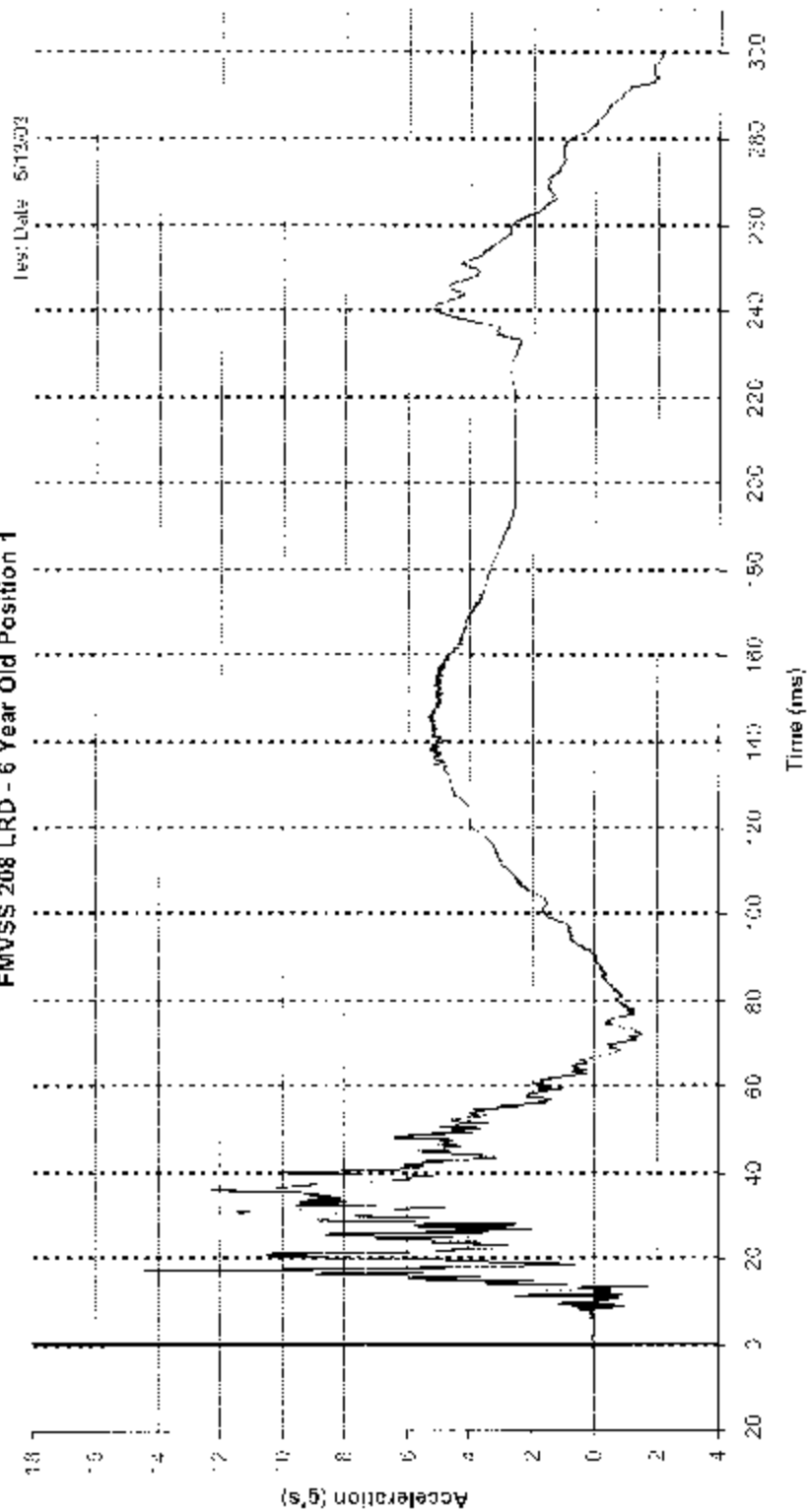
C35306 / 2003 Honda Odyssey
 Head X-Axis Acceleration - HEDXG
 FMVSS 208 LRD - 6 Year Old Position 1



C35306 / 2003 Honda Odyssey
Head Y-Axis Acceleration - HEDYG
FMVSS 208 LRD - 6 Year Old Position 1



C35306 / 2003 Honda Odyssey
Head Z-Axis Acceleration - HEDZG
FMVSS 208 LRD - 6 Year Old Position 1

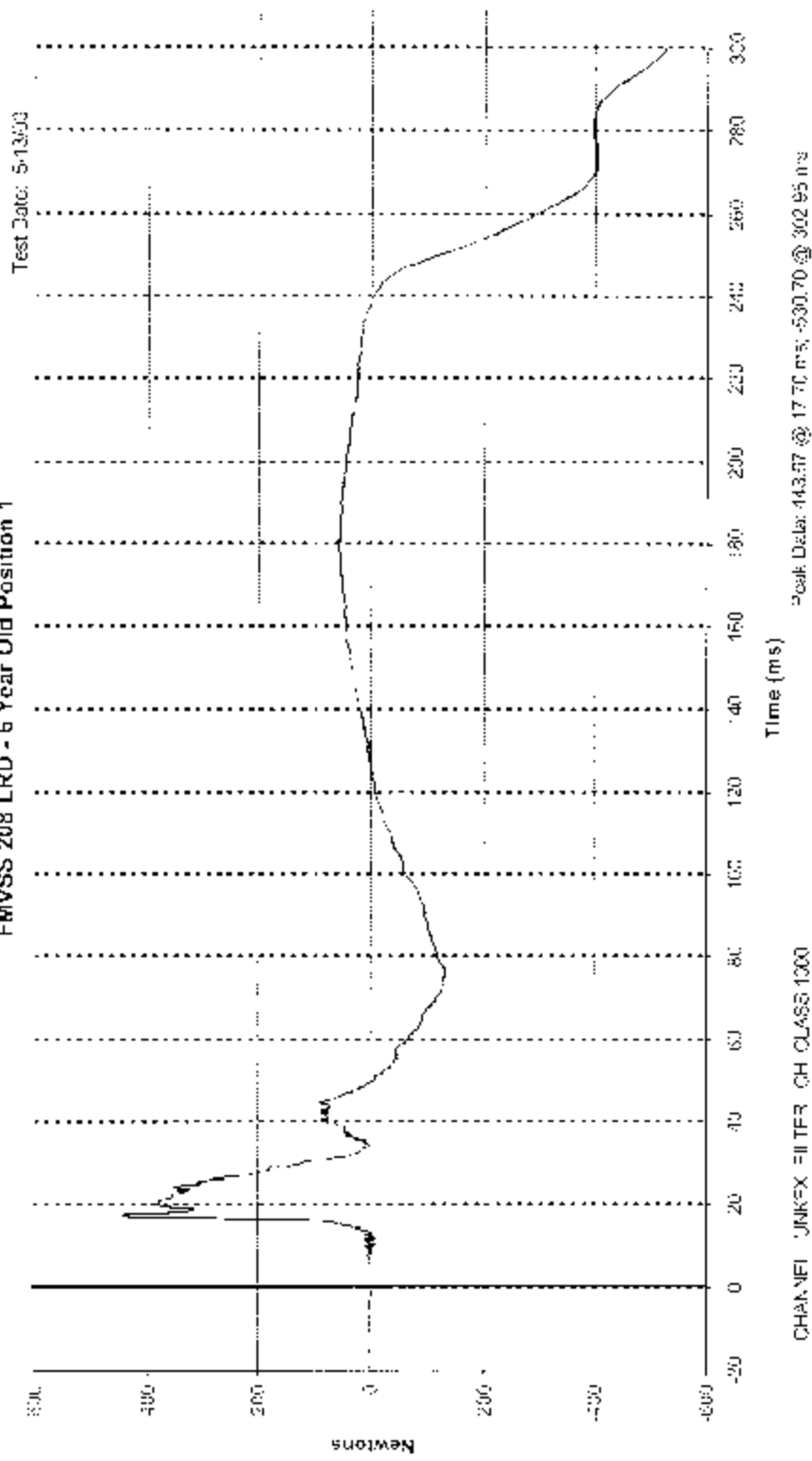


CHANNEL HEDZG FILTER ON CLASS 1000

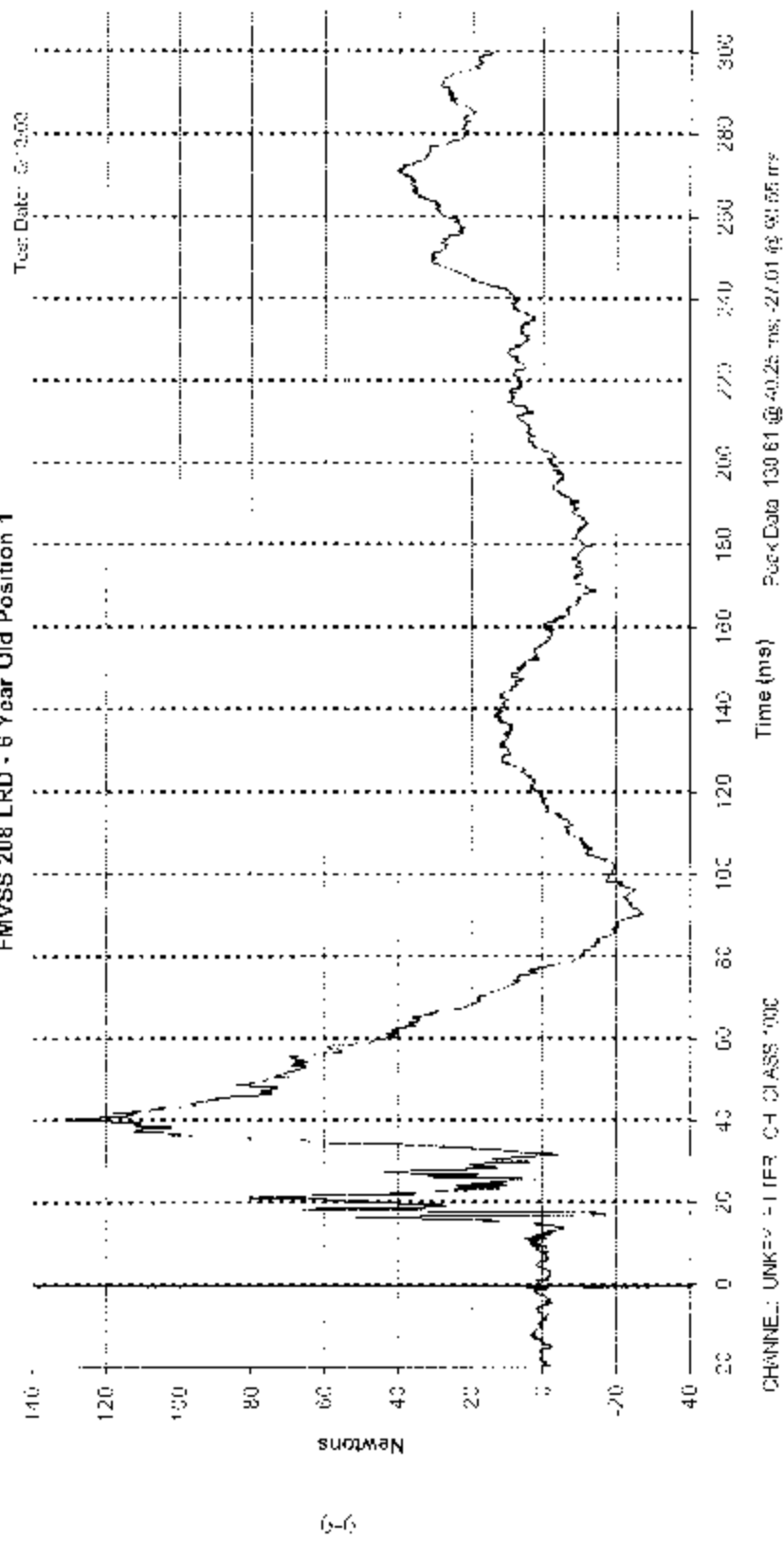
Plot < Data 15.10 @ 7.40 ms -> 2.51 @ 304.45 ms

Test Date 5/12/03

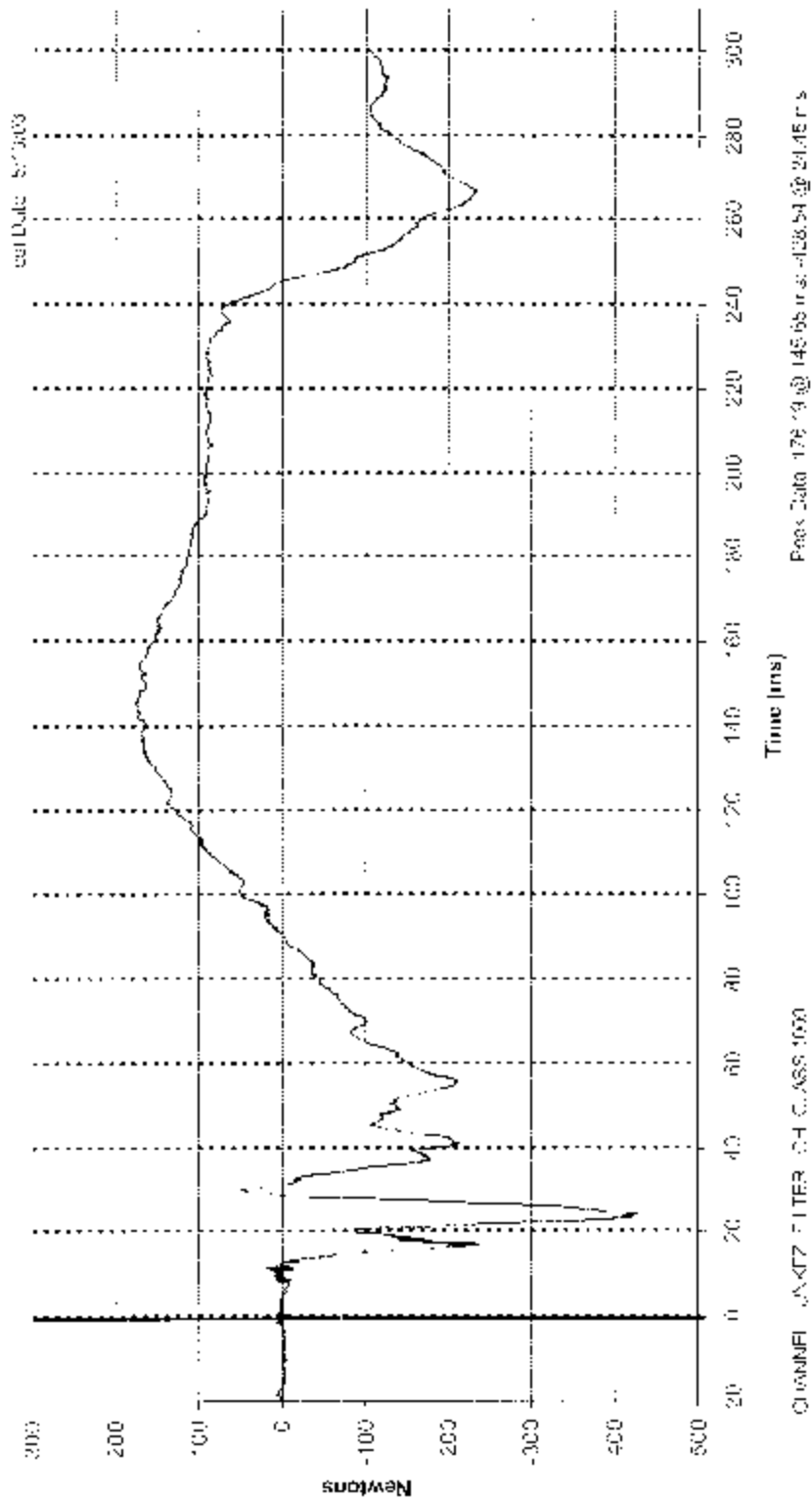
C35306 / 2003 Honda Odyssey
Upper Neck FX - UNKFX
FMVSS 208 LRD - 6 Year Old Position 1



C35306 / 2003 Honda Odyssey
Upper Neck FY - UNKEY
FMVSS 208 LRD - 6 Year Old Position 1



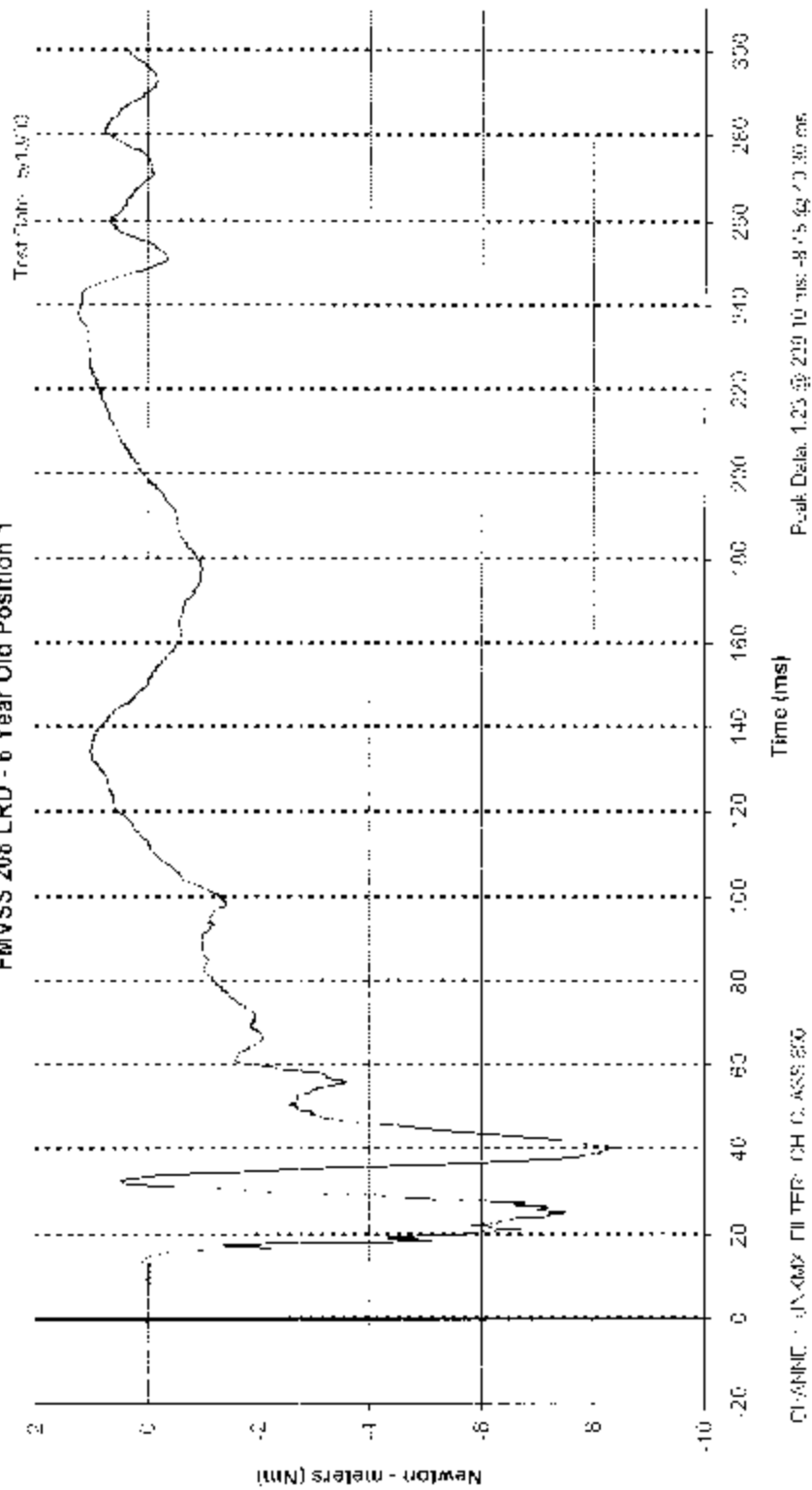
C35306 / 2003 Honda Odyssey
 Upper Neck FZ - UNKEZ
 FMVSS 208 LRD - 6 Year Old Position 1



CHANNEL 1A-KT7 FILTER CH CLASS 1000

Pres Data 178.79 @ 145.66 ms; -128.54 @ 214.67 s

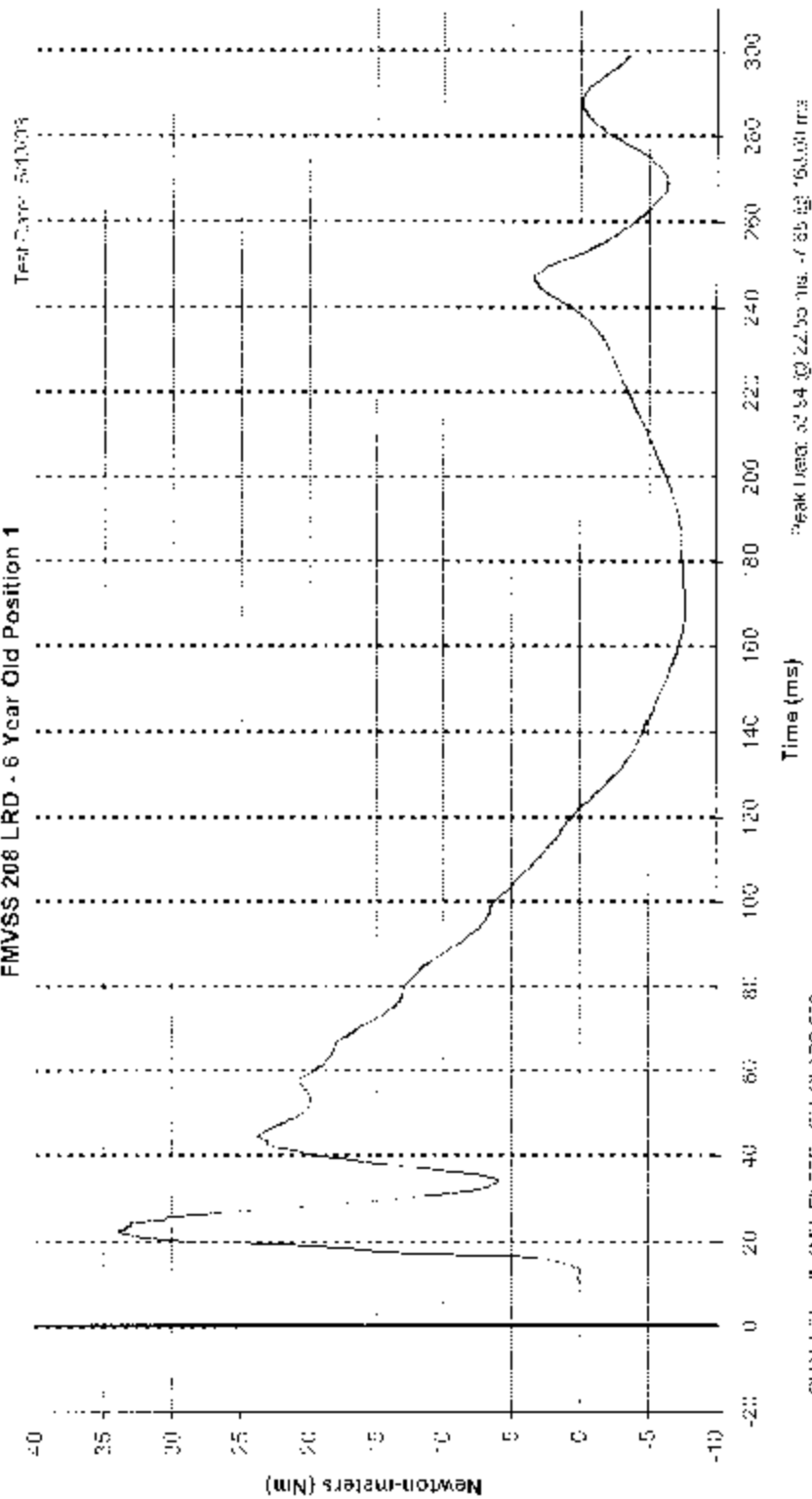
C35306 / 2003 Honda Odyssey
Upper Neck MX - UNKMX
FMVSS 208 LRD - 6 Year Old Position 1



C35306 / 2003 Honda Odyssey

Upper Neck MY - UNKMY

FMVSS 208 LRD - 6 Year Old Position 1

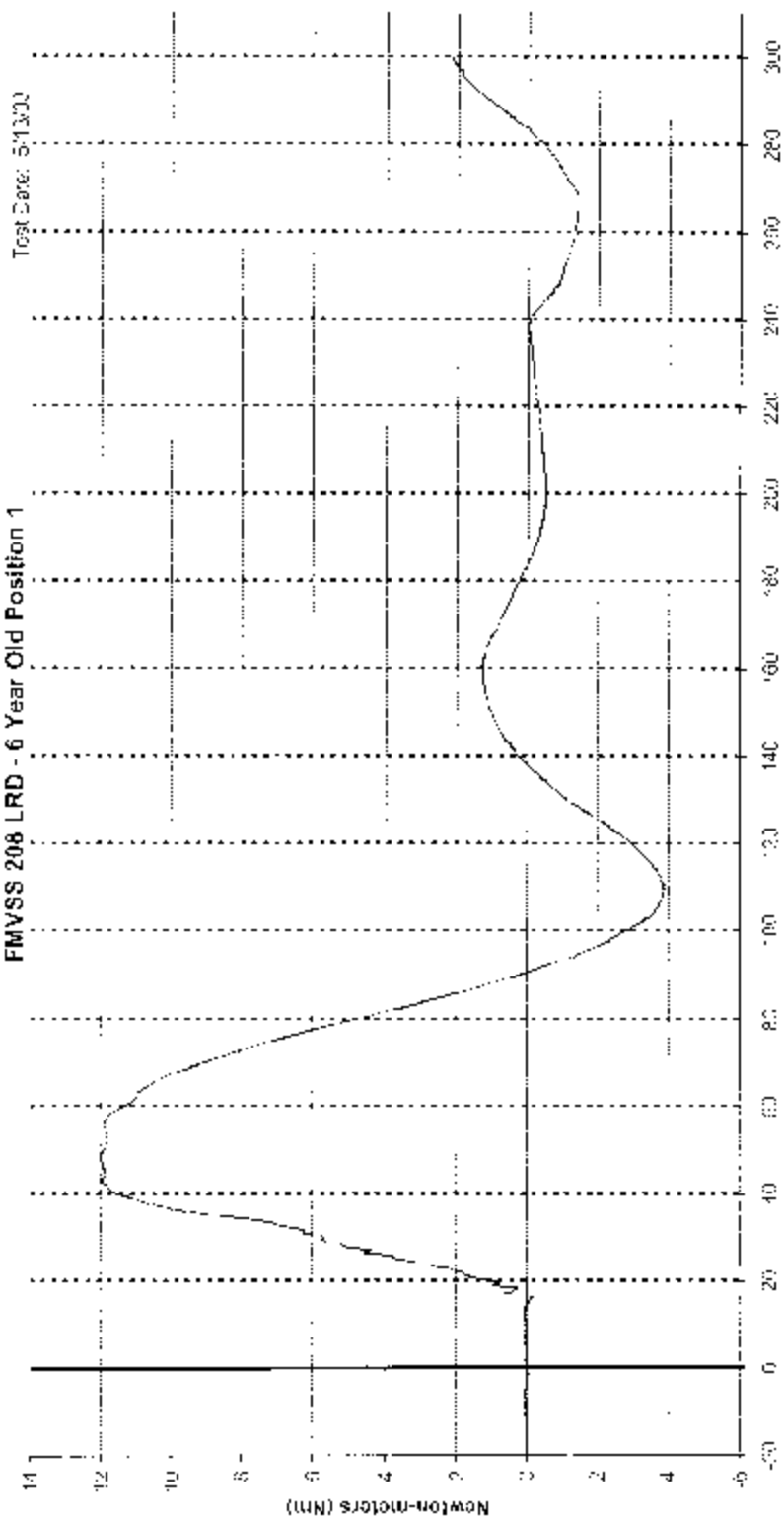


CHANNEL: UNKMY FILTER: CH CLASS: 000

C35306 / 2003 Honda Odyssey

Upper Neck MZ - UNKMZ

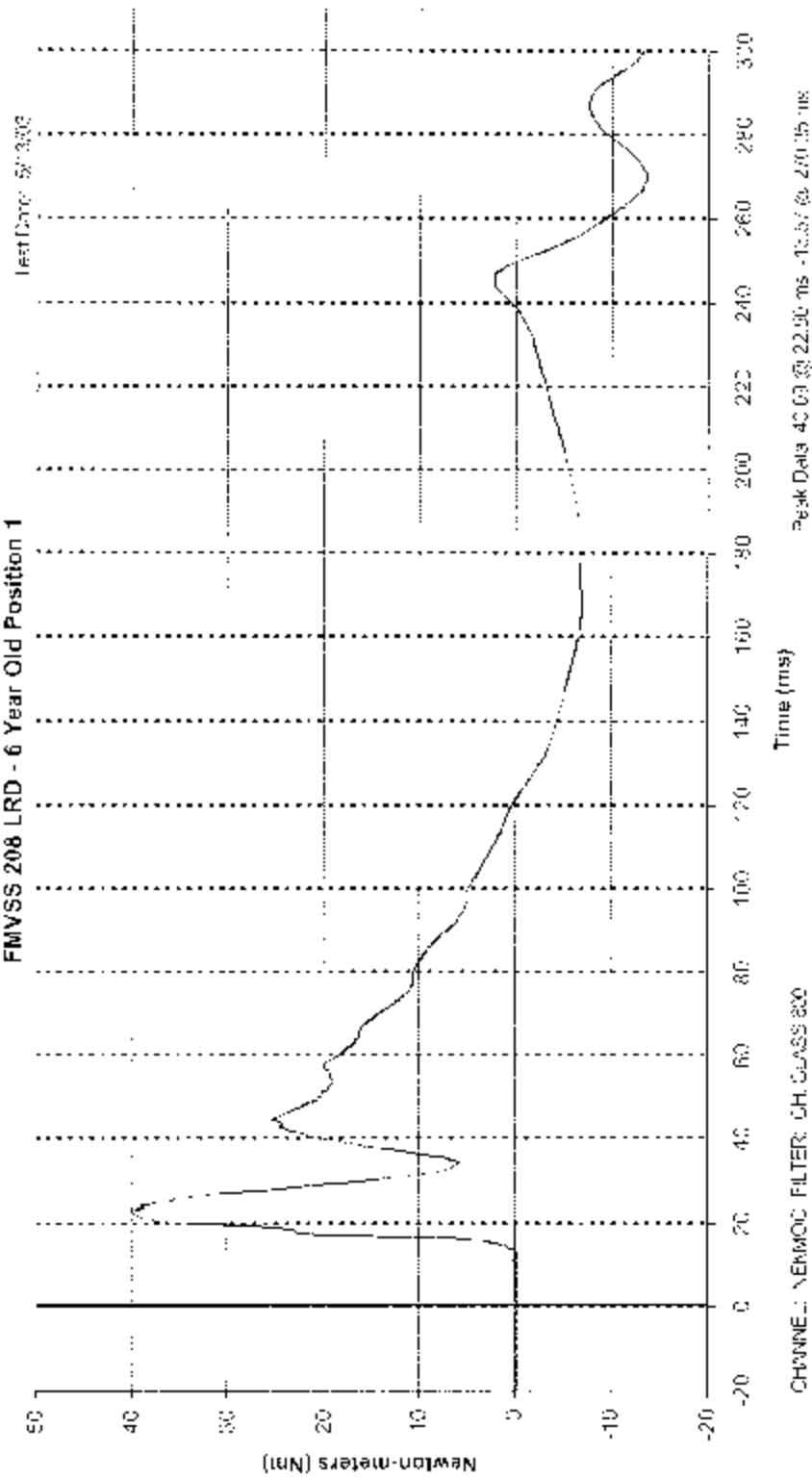
FMVSS 208 LRD - 6 Year Old Position 1



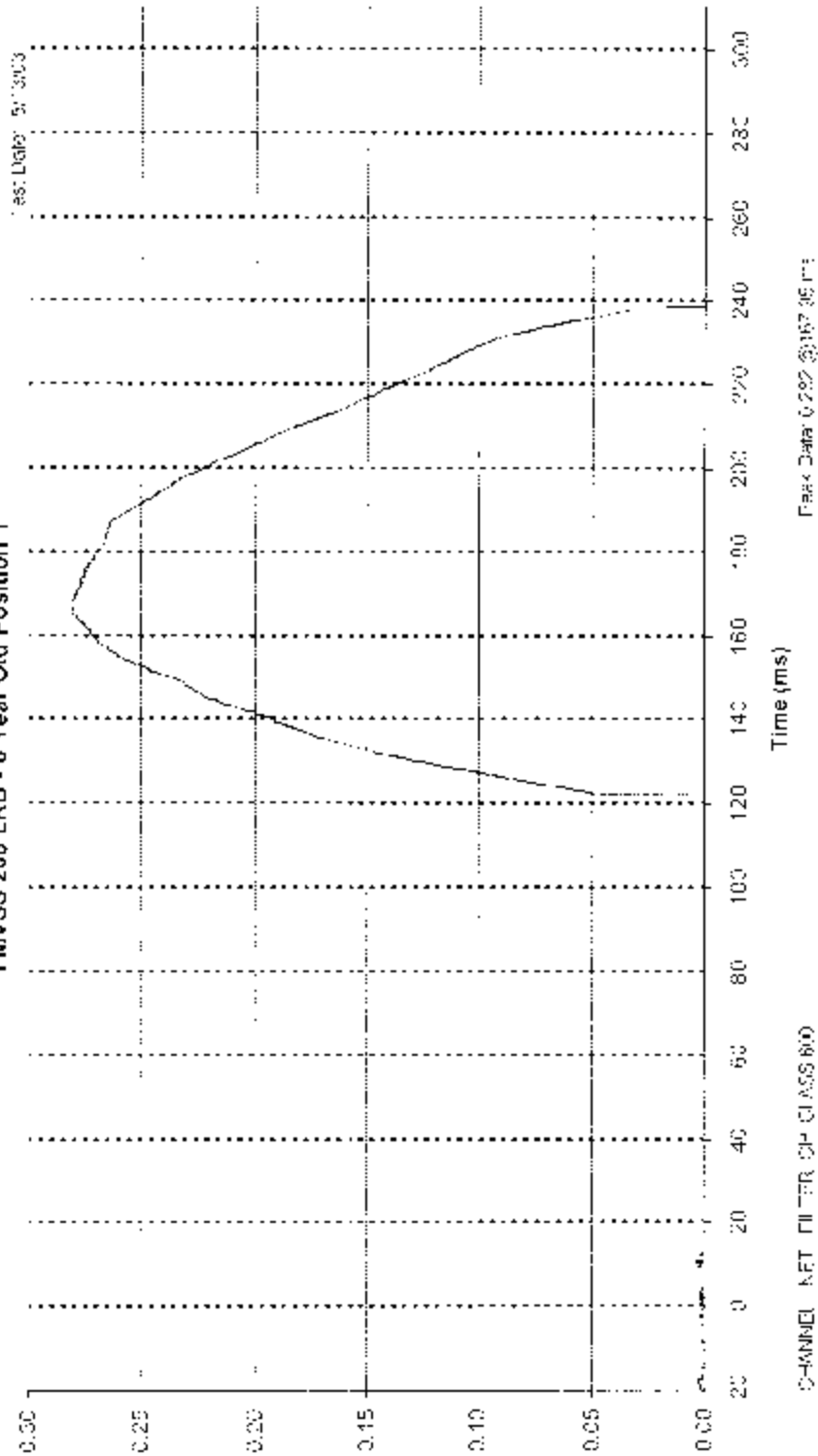
CUMMINS UNKMZ UPPER CH CLASS 190

Peak Data 12.05 @ 48.93 ms 3.69 @ 109.80 ms

C35306 / 2003 Honda Odyssey
 Upper Neck Occipital - NEKMOC
 FMVSS 208 LRD - 6 Year Old Position 1



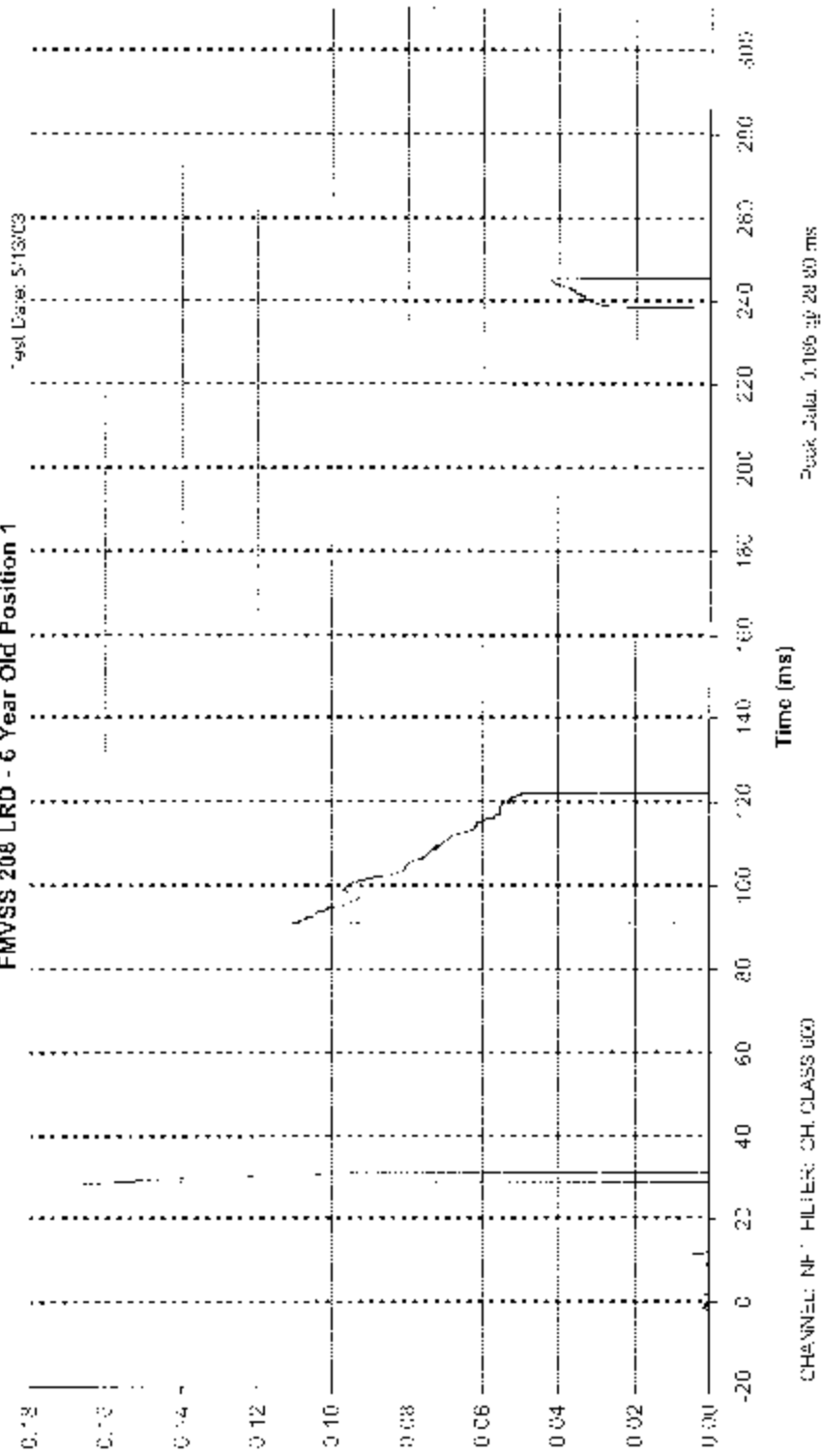
C35306 / 2003 Honda Odyssey
 Neck Tension / Extension
 FMVSS 208 LRD - 6 Year Old Position 1



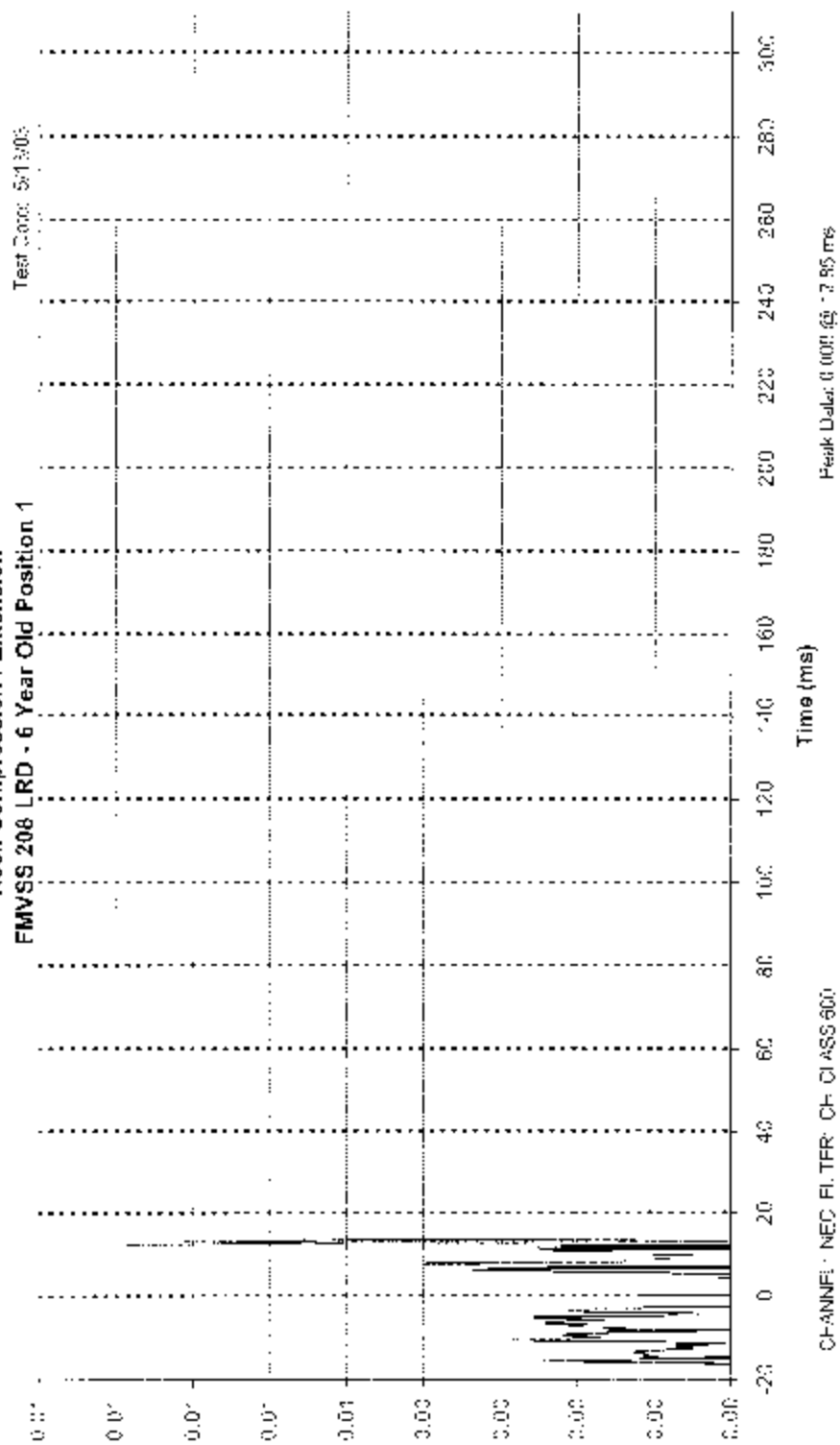
C3530G / 2003 Honda Odyssey

Neck Flexion / Tension

FMVSS 208 LRD - 6 Year Old Position 1



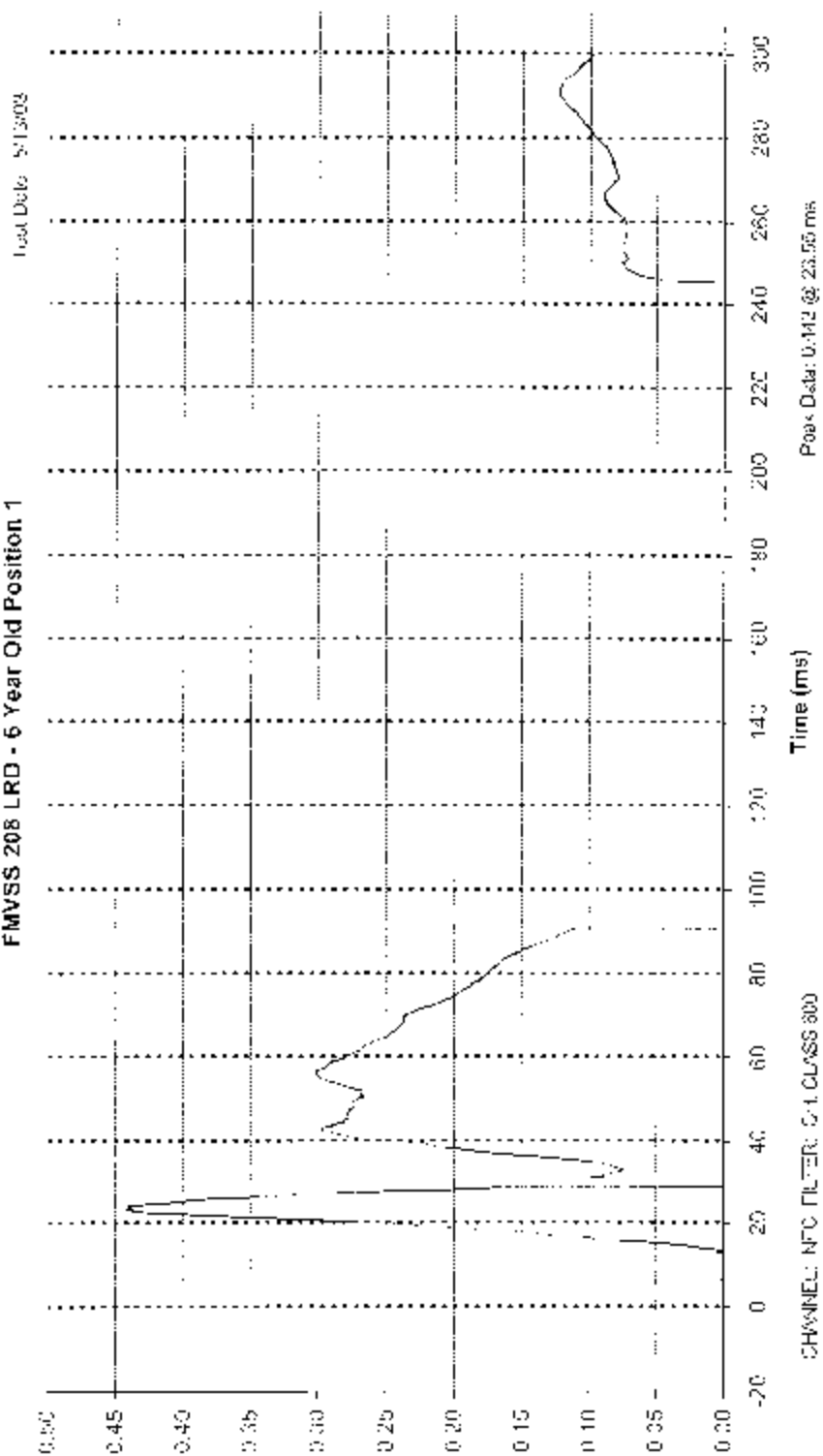
C35306 / 2003 Honda Odyssey
 Neck Compression / Extension
 FMVSS 208 LRD - 6 Year Old Position 1



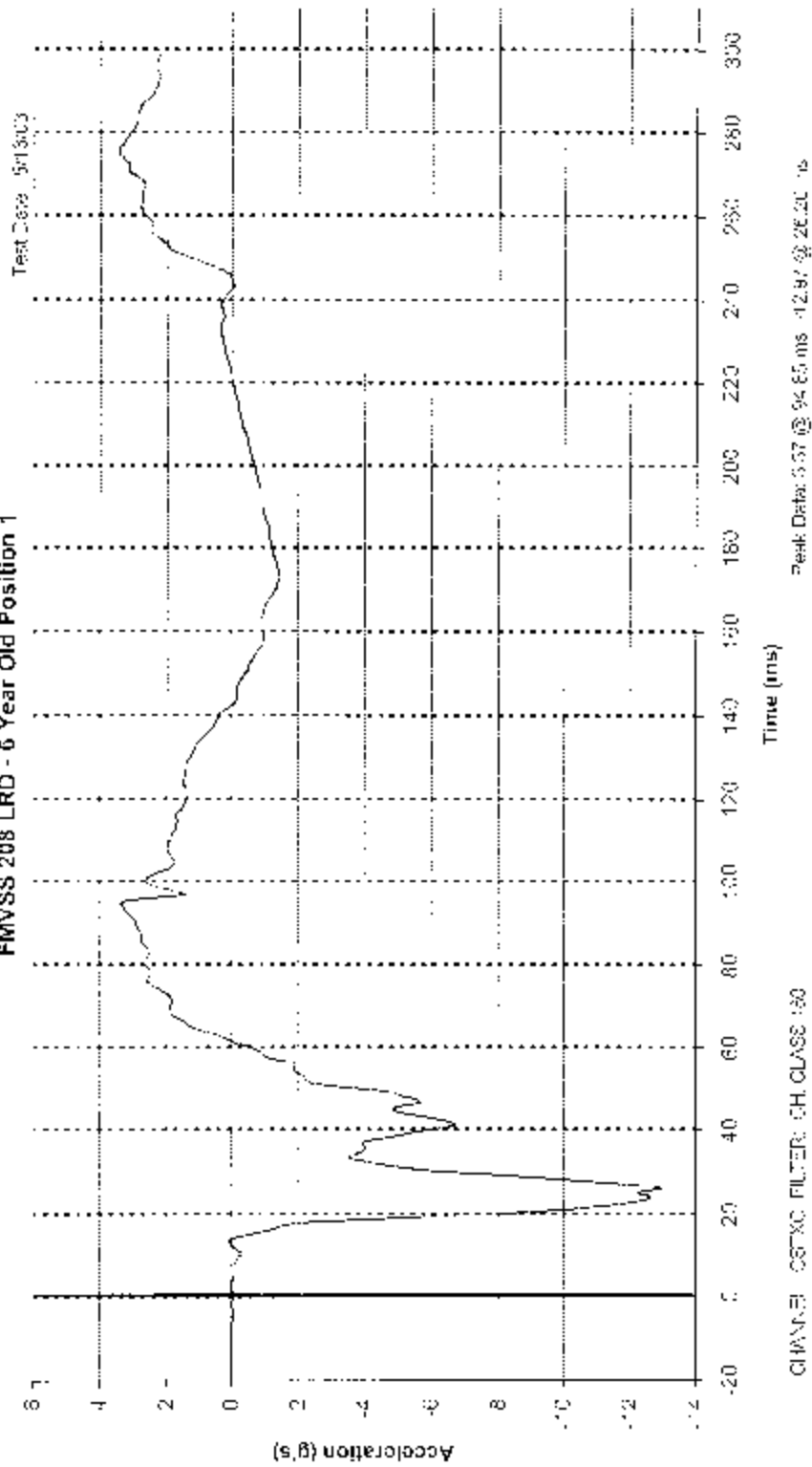
C35306 / 2003 Honda Odyssey

Neck Flexion / Compression

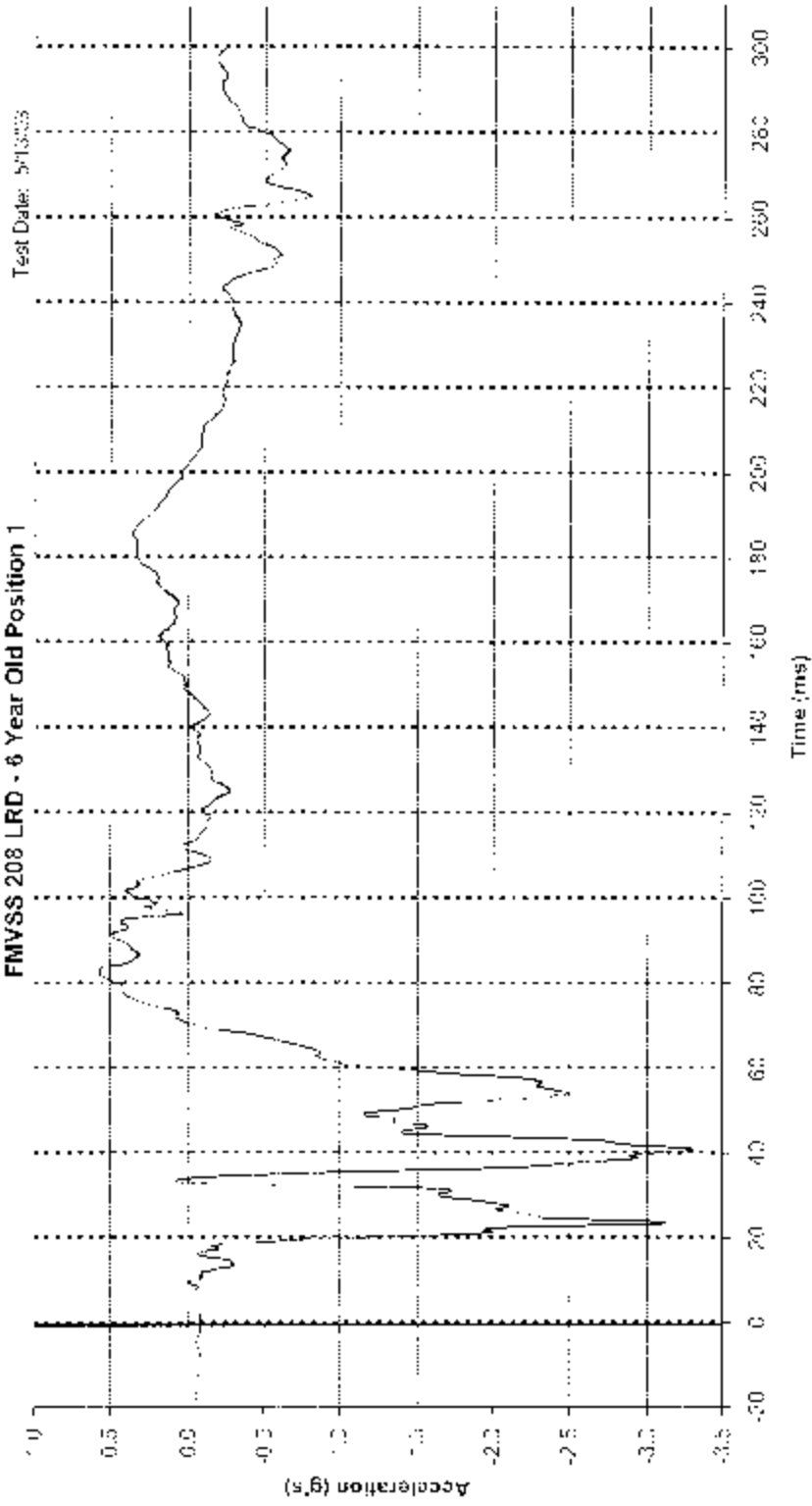
FMVSS 208 LRD - 6 Year Old Position 1



C35306 / 2003 Honda Odyssey
 Chest X-Axis Acceleration - CSTXG
 FMVSS 208 LRD - 6 Year Old Position 1

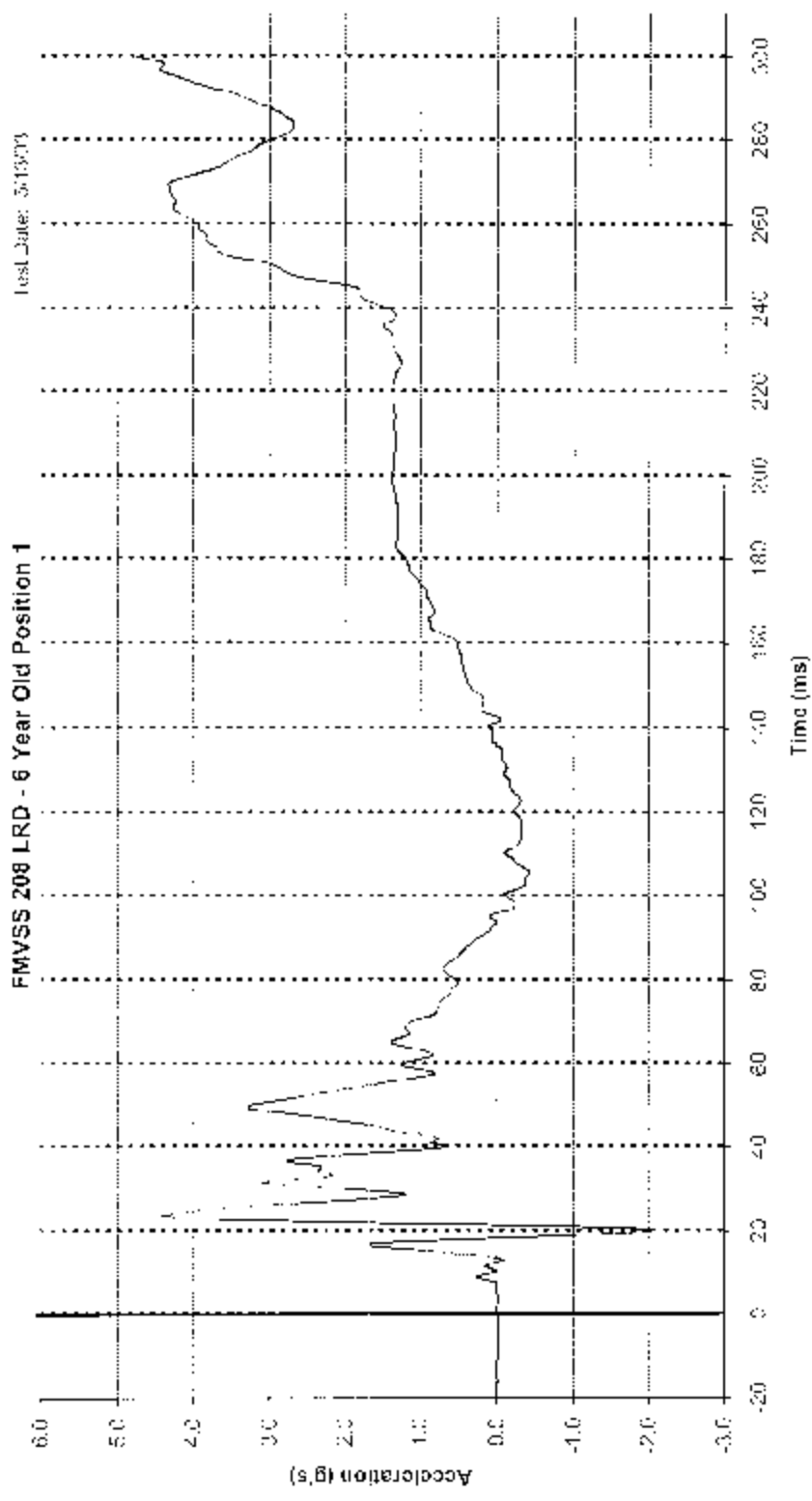


C35306 / 2003 Honda Odyssey
 Chest Y-Axis Acceleration - CSTYG
 FMVSS 208 LRD - 6 Year Old Position 1



CHANNEL: CSTYG FILTER: CH CLASS: 180

C35306 / 2003 Honda Odyssey
 Chest Z-Axis Acceleration - CSTZG
 FMVSS 208 LRD - 6 Year Old Position 1



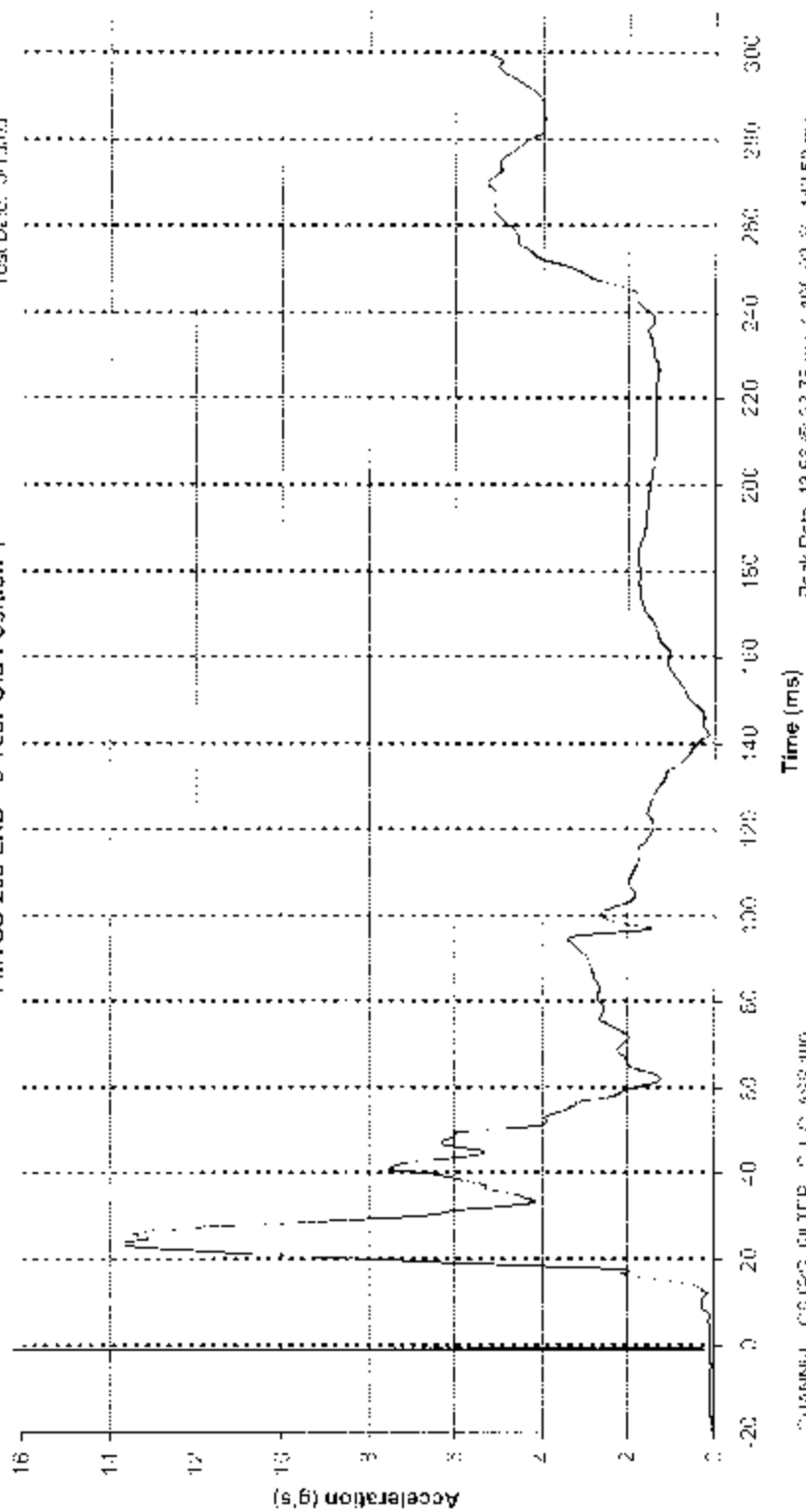
C-ANNE - CSTZG FILTER: OIL CLASH *50

C35306 / 2003 Honda Odyssey

Chest Resultant - CSTRG

FMVSS 208 LRD - 6 Year Old Position 1

Test Date: 5/13/03

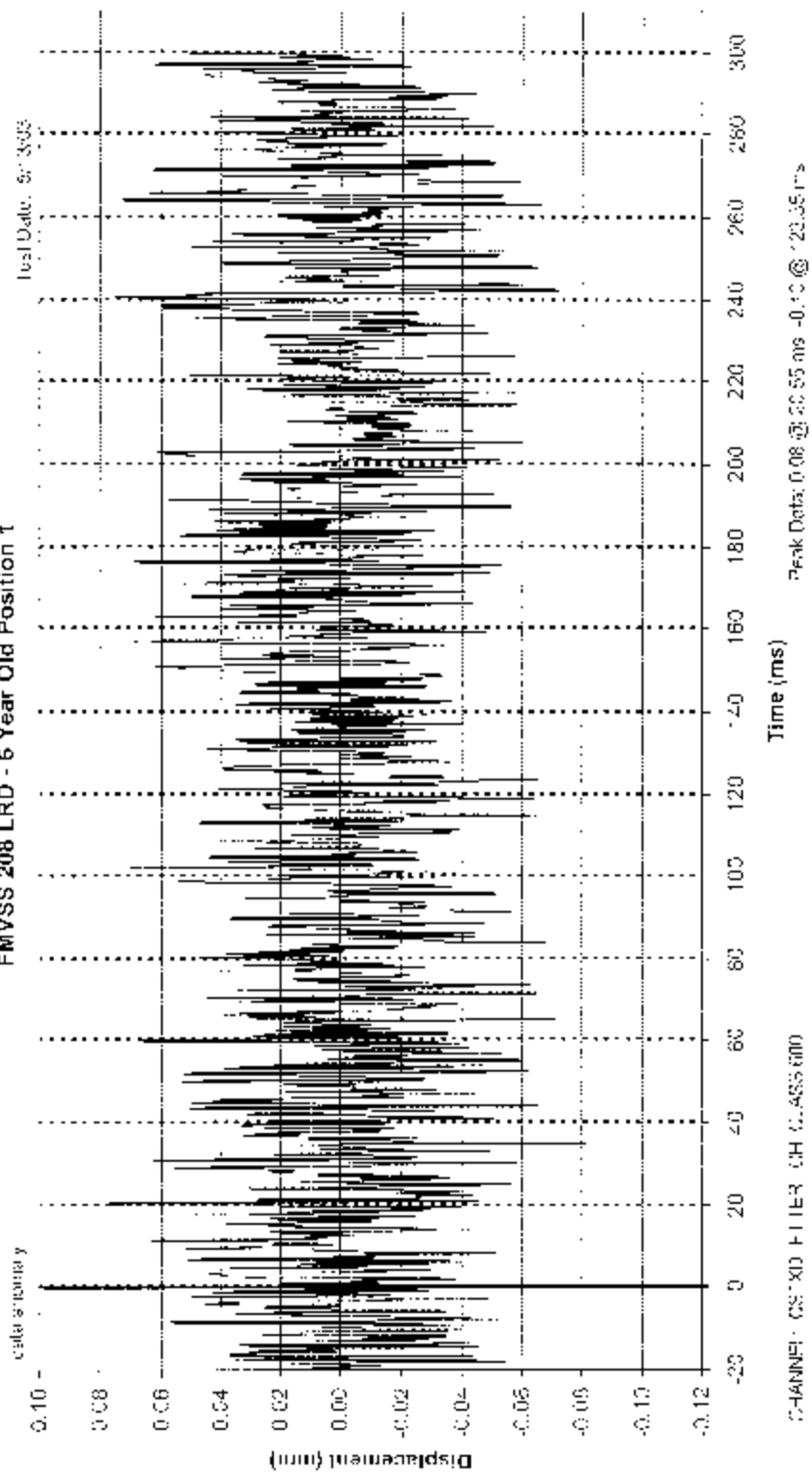


CHANNEL CSTRG FILTER: 0.1 CLASS 100

C35306 / 2003 Honda Odyssey

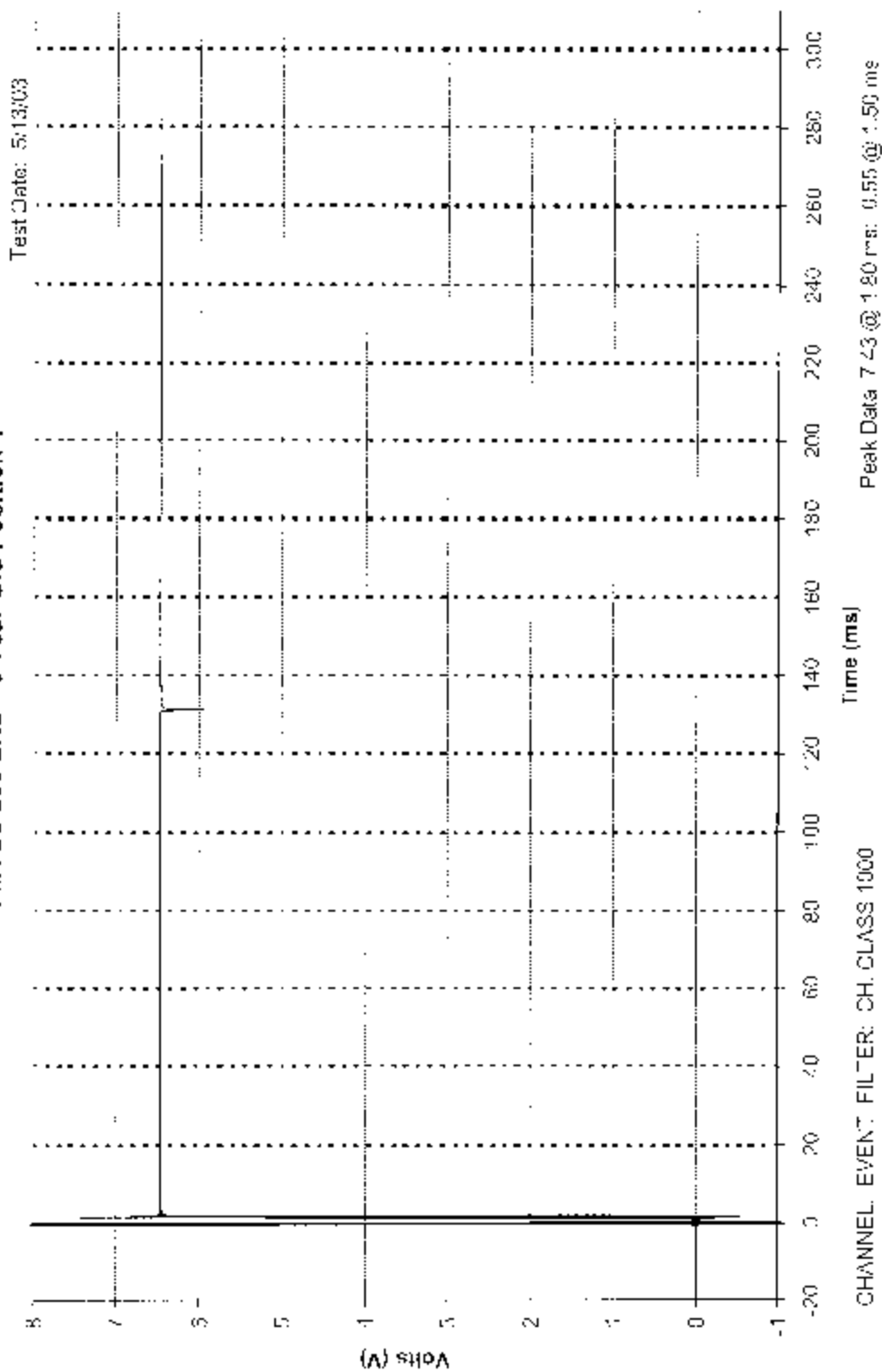
Chest Deflection - CSTXD

FMVSS 208 LRD - 6 Year Old Position 1

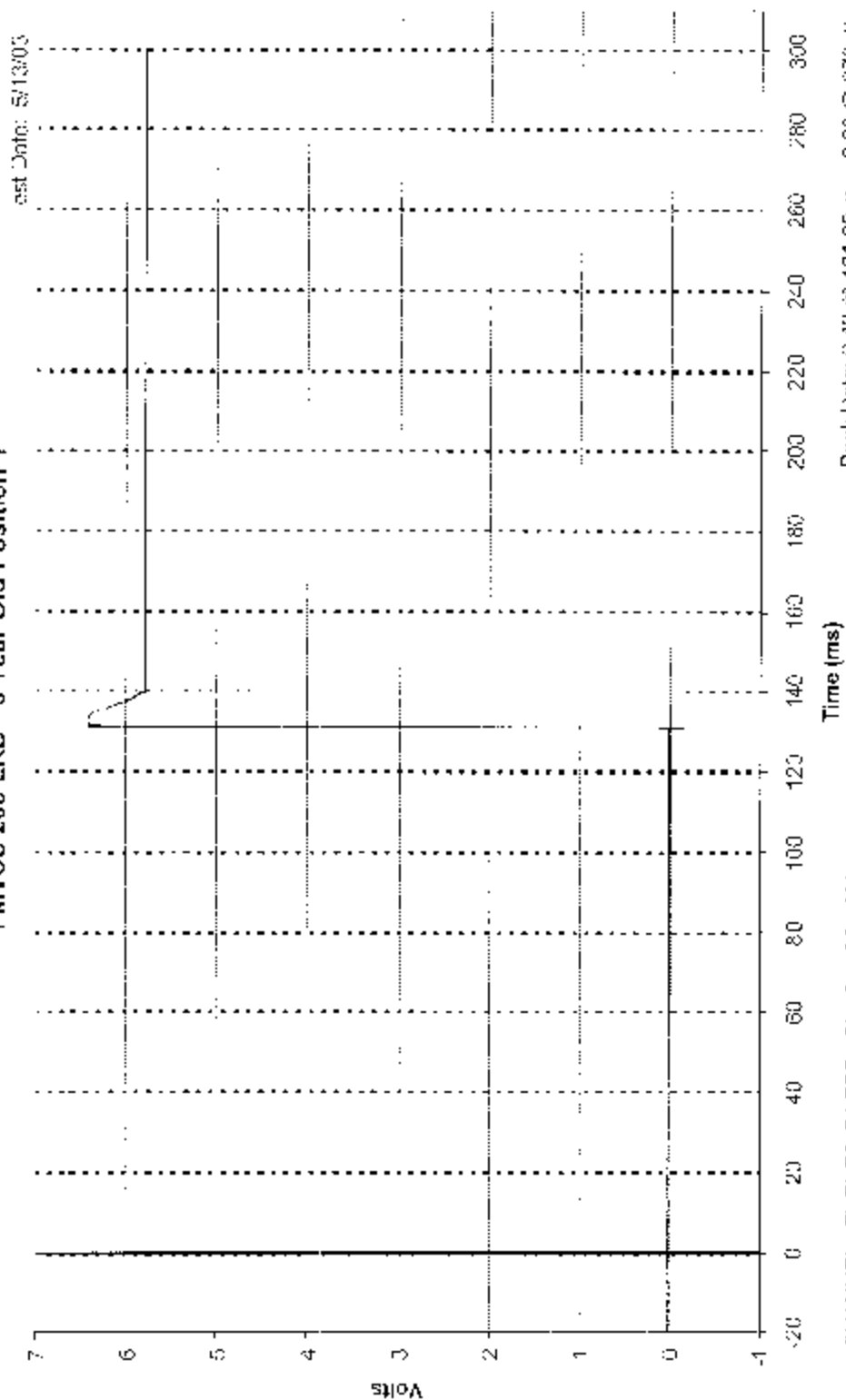


CHANNEL: CSTXD FILTER: CH CLASS:000

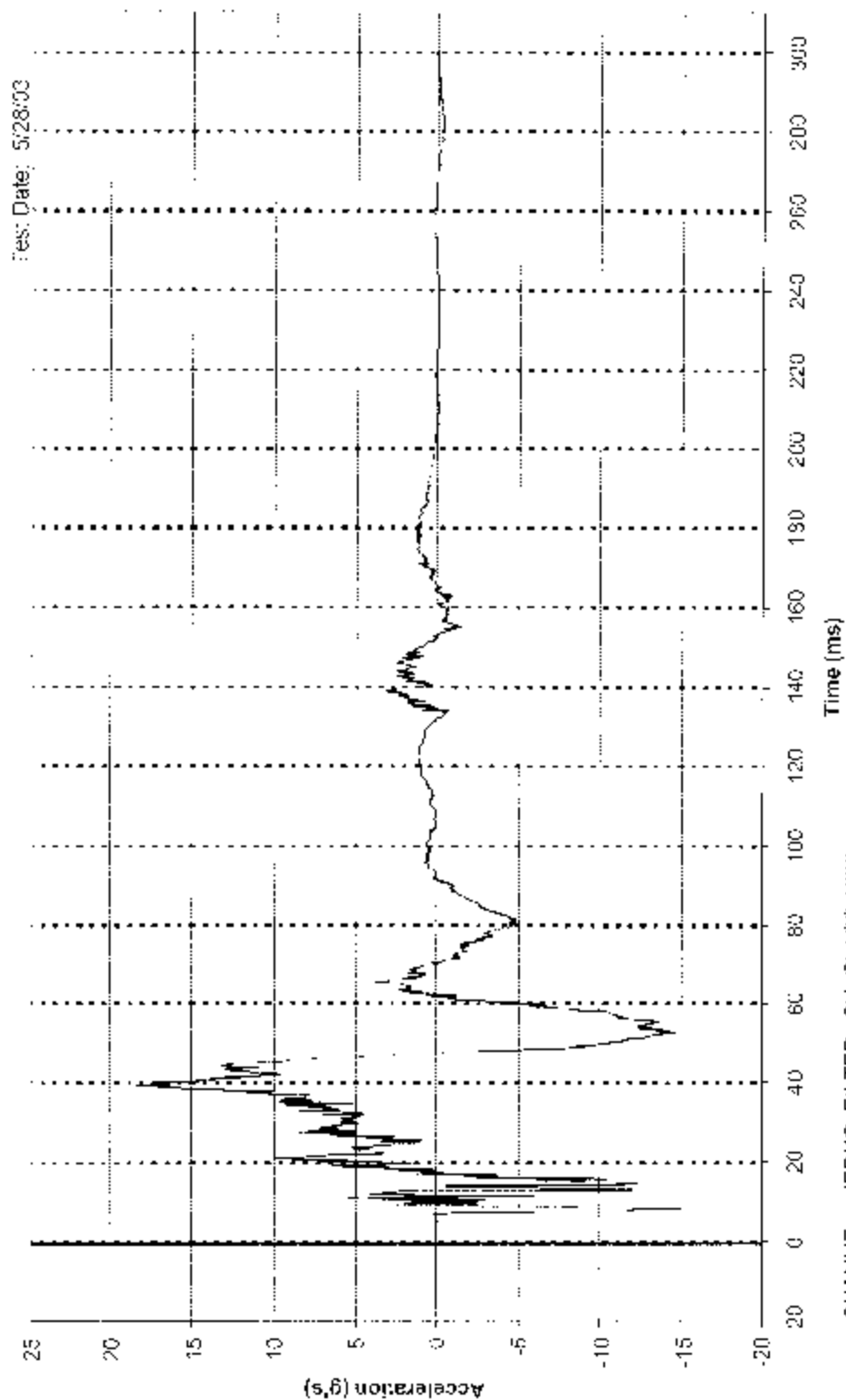
C35306 / 2003 Honda Odyssey
EVENT Channel - EVENT
FMVSS 208 LRD - 6 Year Old Position 1



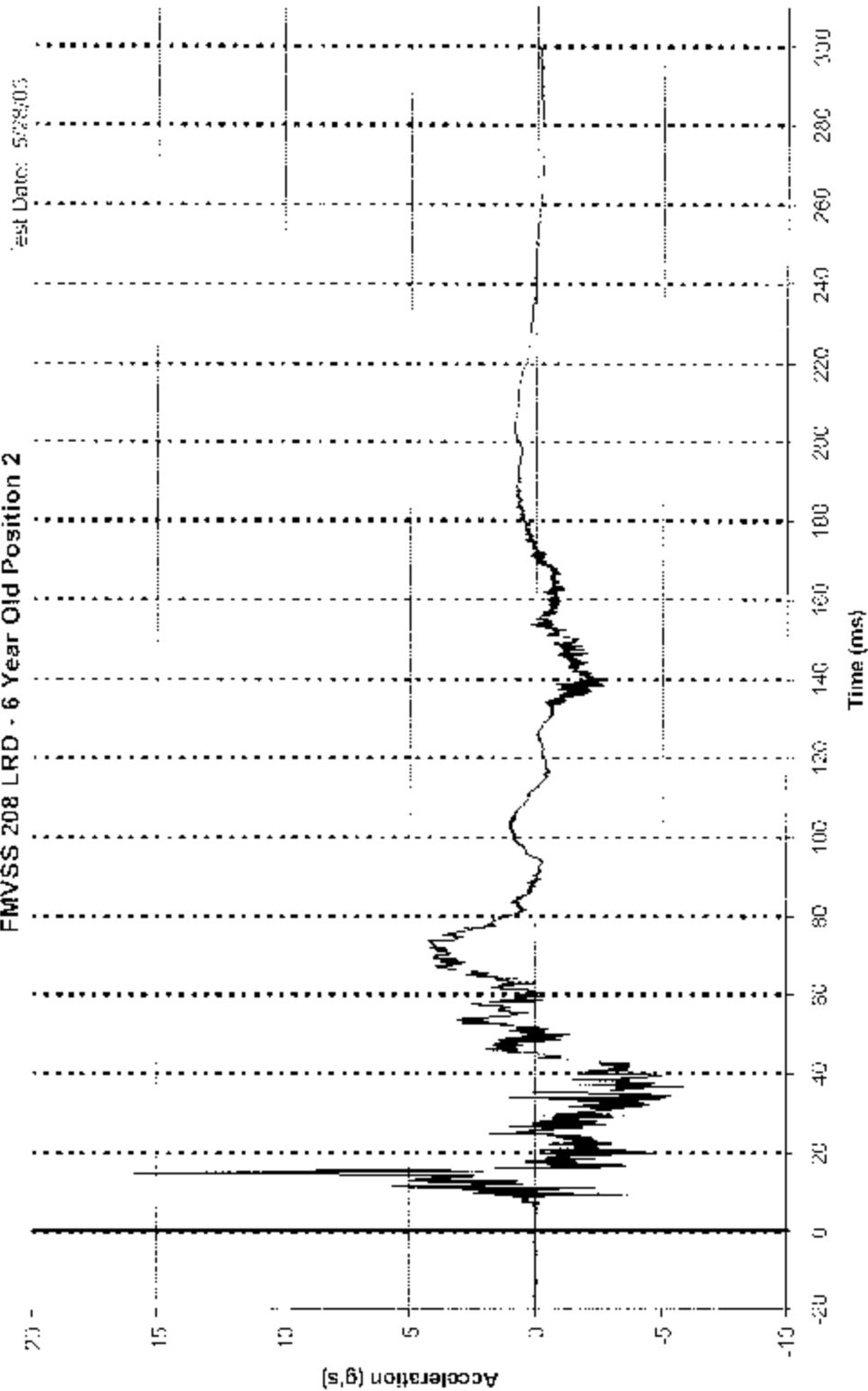
C35306 / 2003 Honda Odyssey
Delay Event Channel - EVENT2
FMVSS 208 LRD - 6 Year Old Position 1



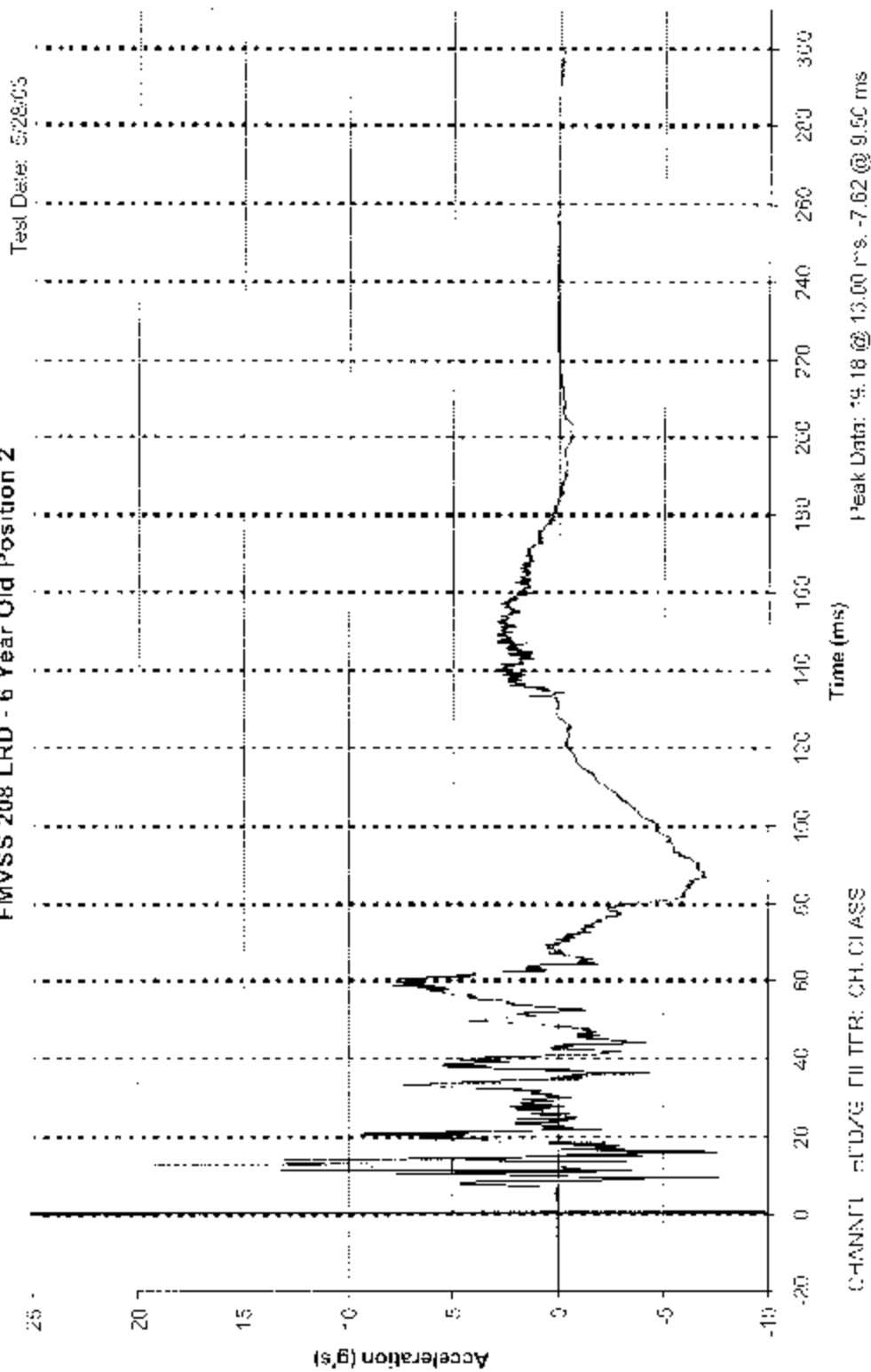
C35306 / 2003 Honda Odyssey
Head X-Axis Acceleration - HEDXG
FMVSS 208 LRD - 6 Year Old Position 2



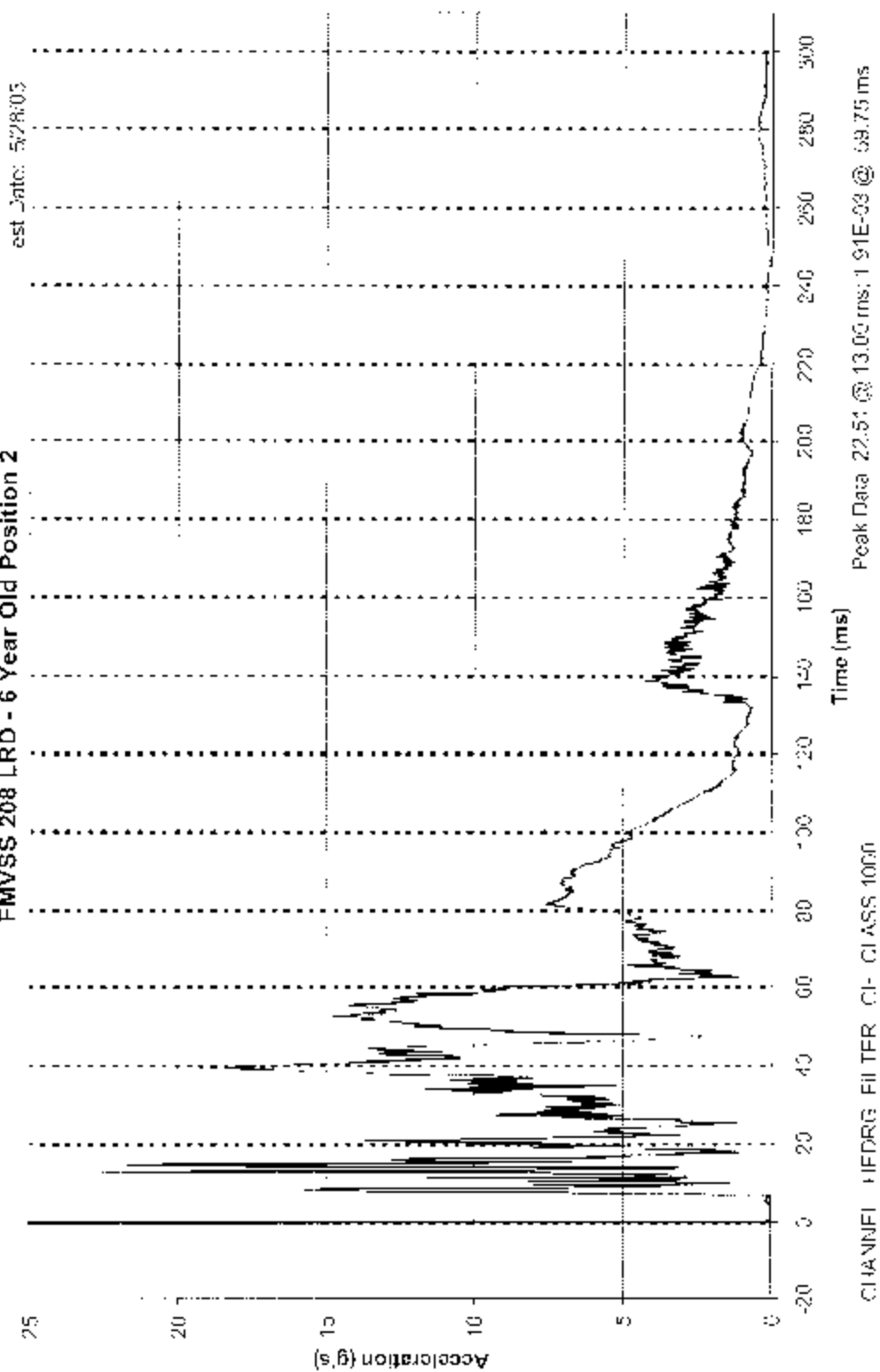
C35306 / 2003 Honda Odyssey
Head Y-Axis Acceleration - HEDYG
FMVSS 208 LRD - 6 Year Old Position 2



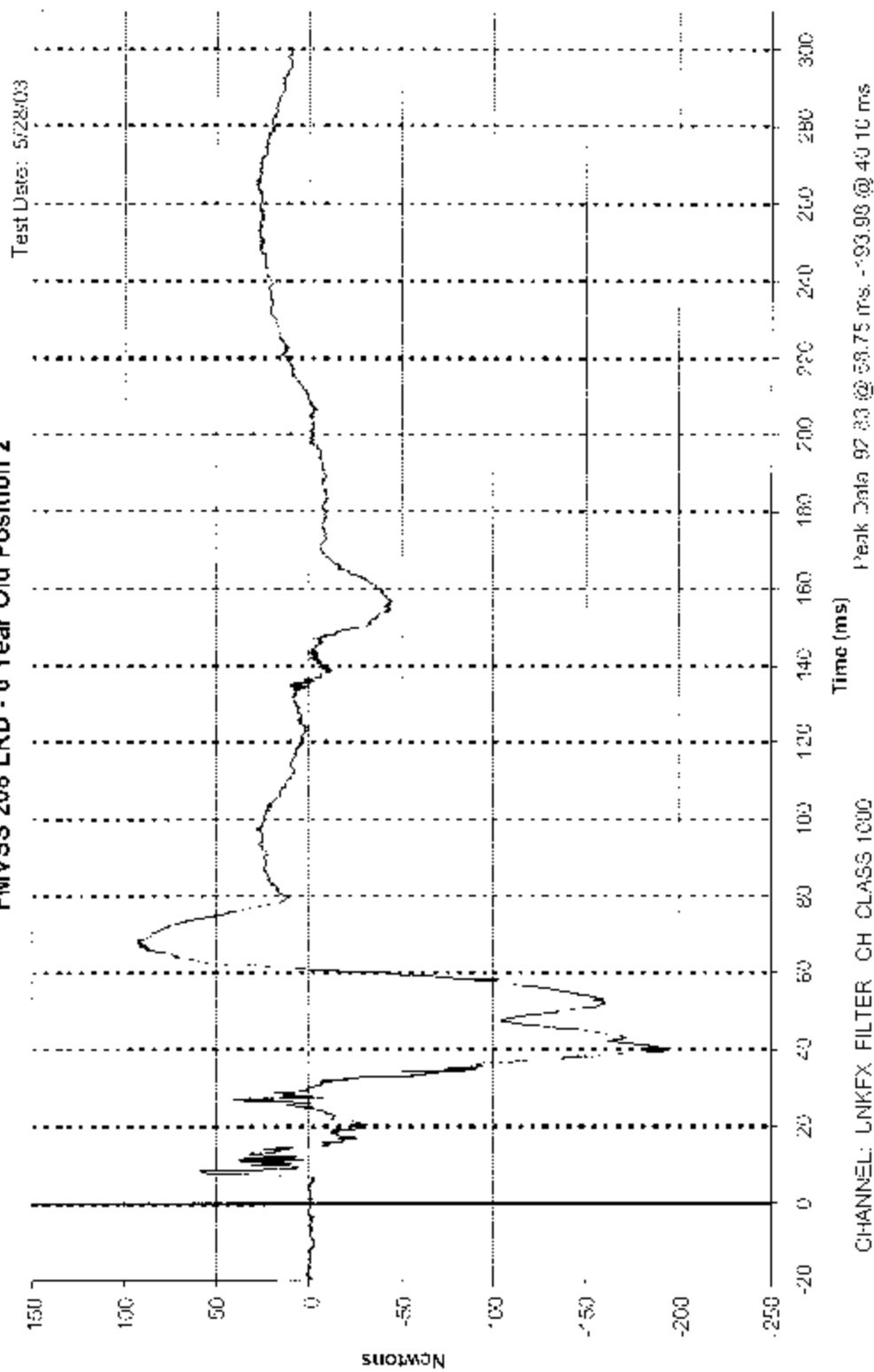
C35306 / 2003 Honda Odyssey
Head Z-Axis Acceleration - HEDZG
FMVSS 208 LRD - 6 Year Old Position 2



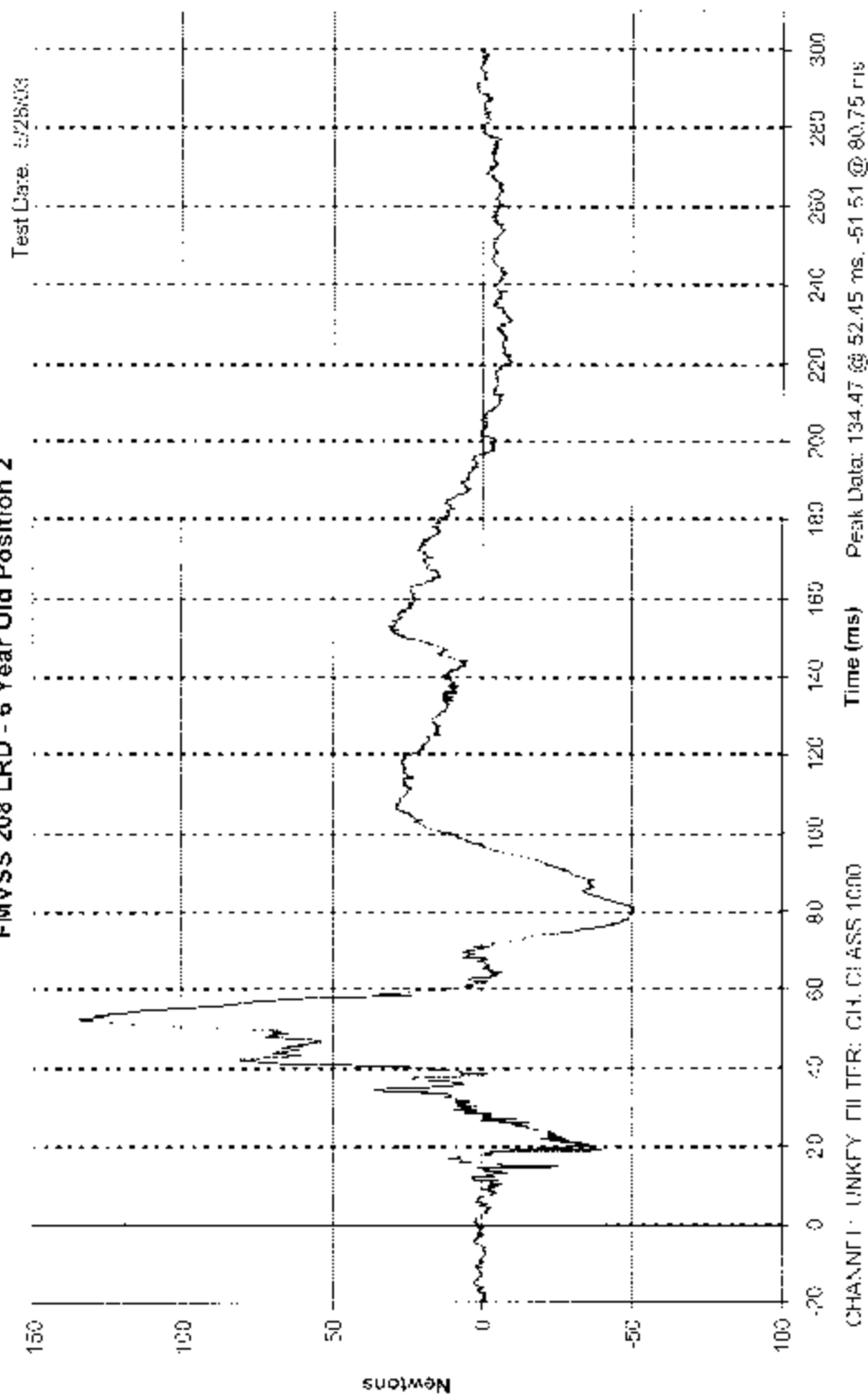
C35306 / 2003 Honda Odyssey
Head Resultant - HEDRG
FMVSS 208 LRD - 6 Year Old Position 2



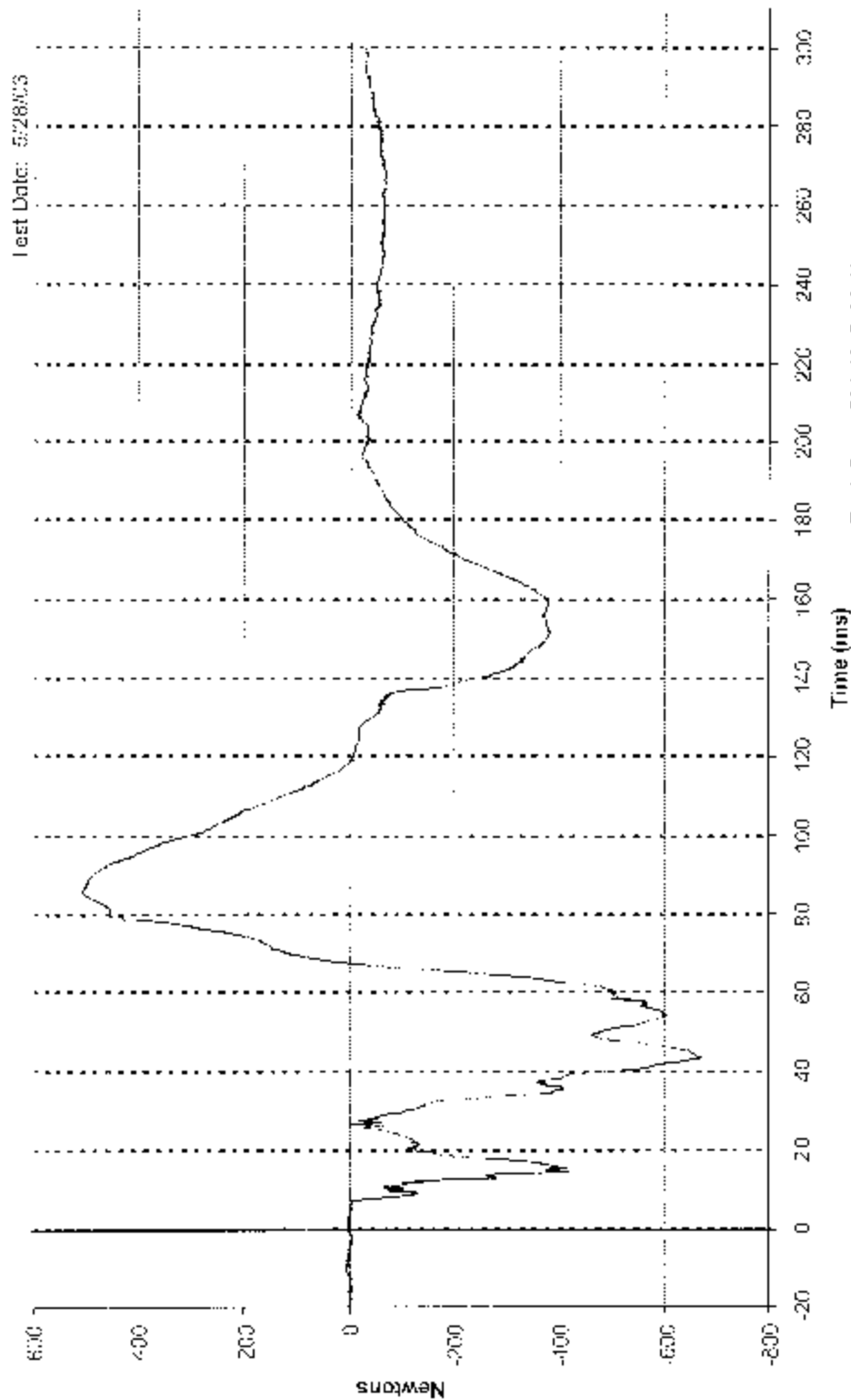
C35306 / 2003 Honda Odyssey
Upper Neck FX - UNKFX
FMVSS 208 LRD - 6 Year Old Position 2



C35306 / 2003 Honda Odyssey
Upper Neck FY - UNKFY
FMVSS 208 LRD - 6 Year Old Position 2



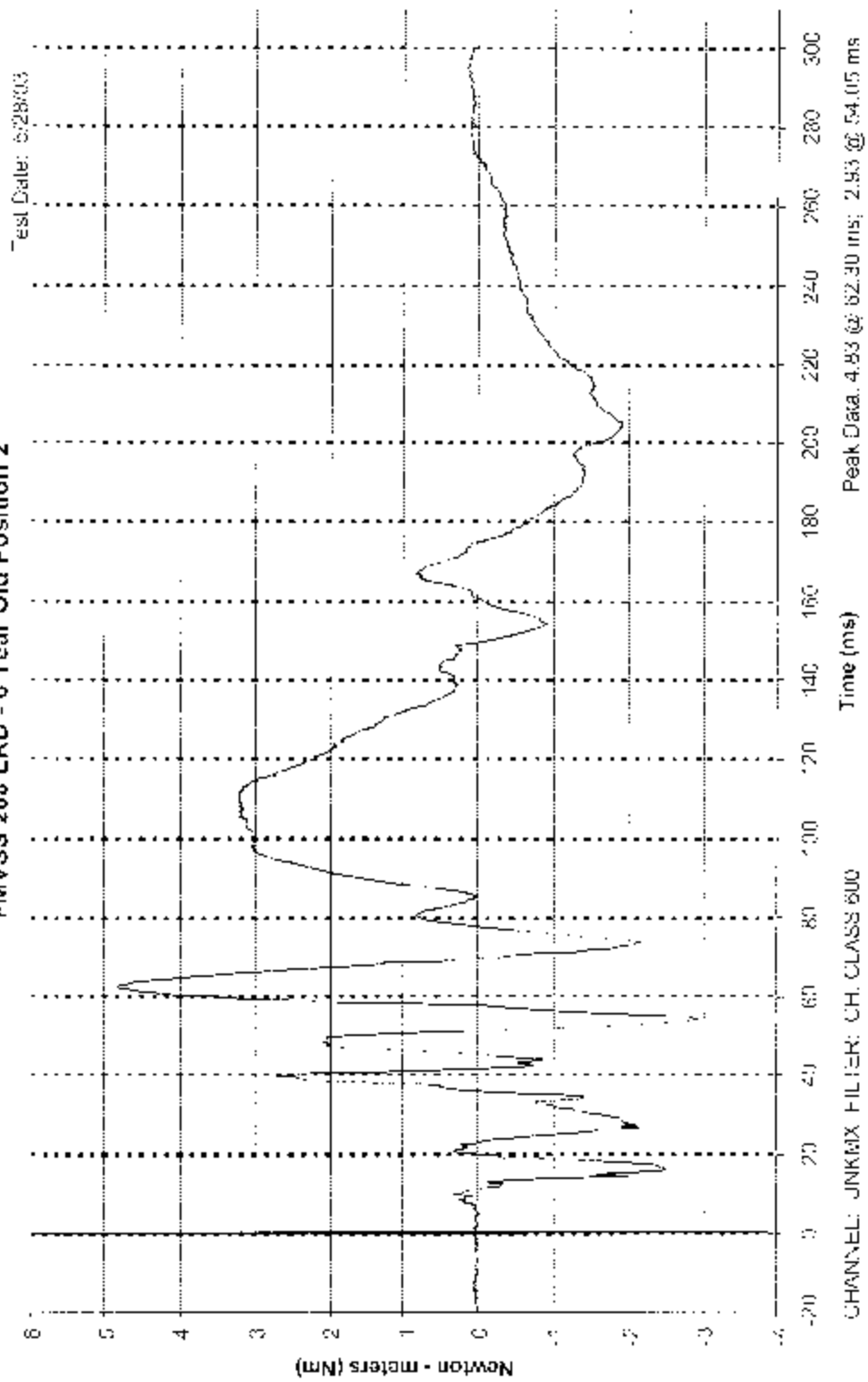
C35306 / 2003 Honda Odyssey
Upper Neck FZ - UNKFZ
FMVSS 208 LRD - 6 Year Old Position 2



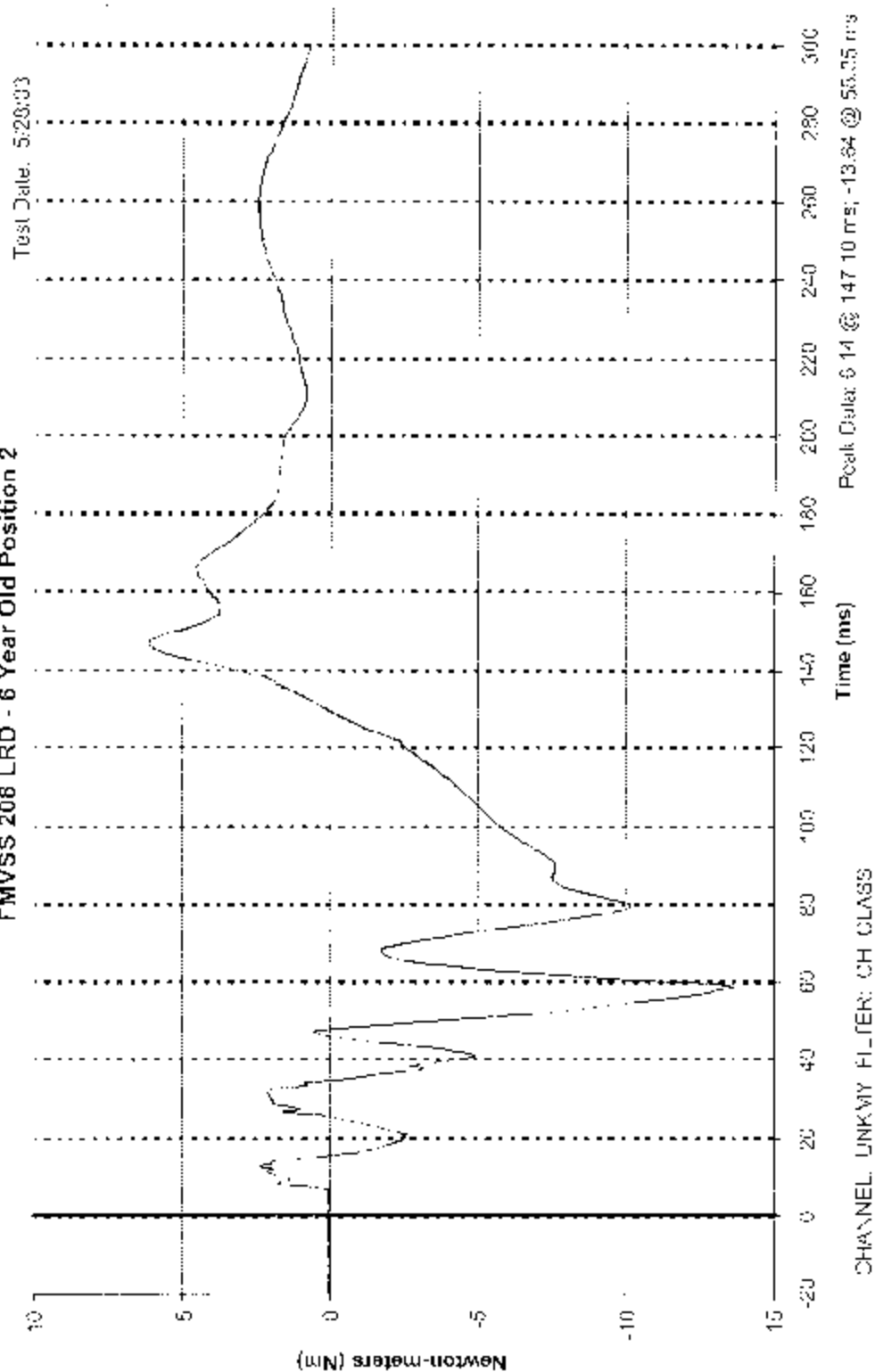
CI-ANFEL: UNKFZ FILTER: CII CLASS 1000

Peak Data: 504.18 @ 86.15 ms; -667.35 @ 23.55 ms

C35306 / 2003 Honda Odyssey
Upper Neck MX - UNKMX
FMVSS 208 LRD - 6 Year Old Position 2

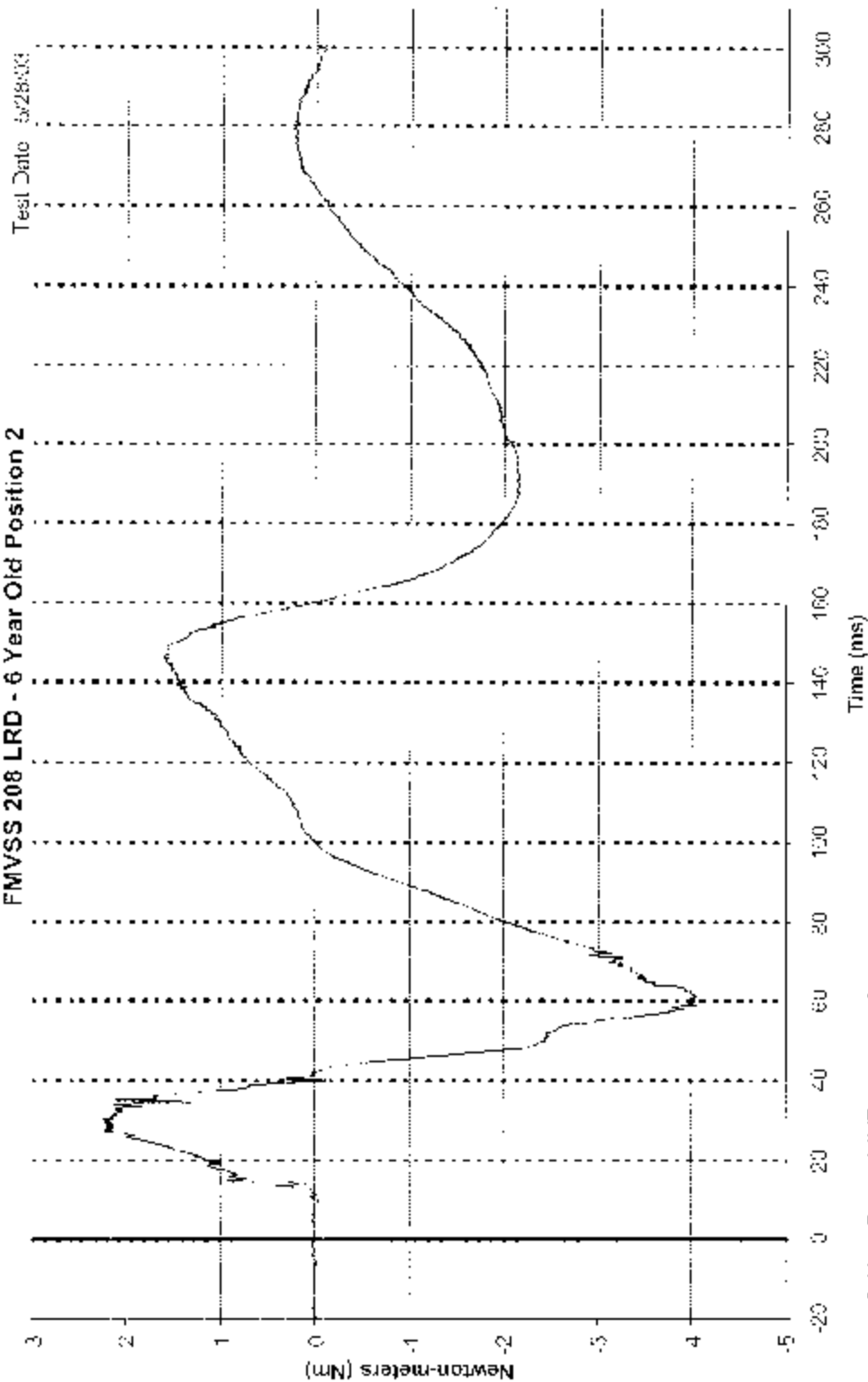


C35306 / 2003 Honda Odyssey
Upper Neck MY - UNKMY
FMVSS 208 LRD - 6 Year Old Position 2



C35306 / 2003 Honda Odyssey
Upper Neck MZ - UNKMZ

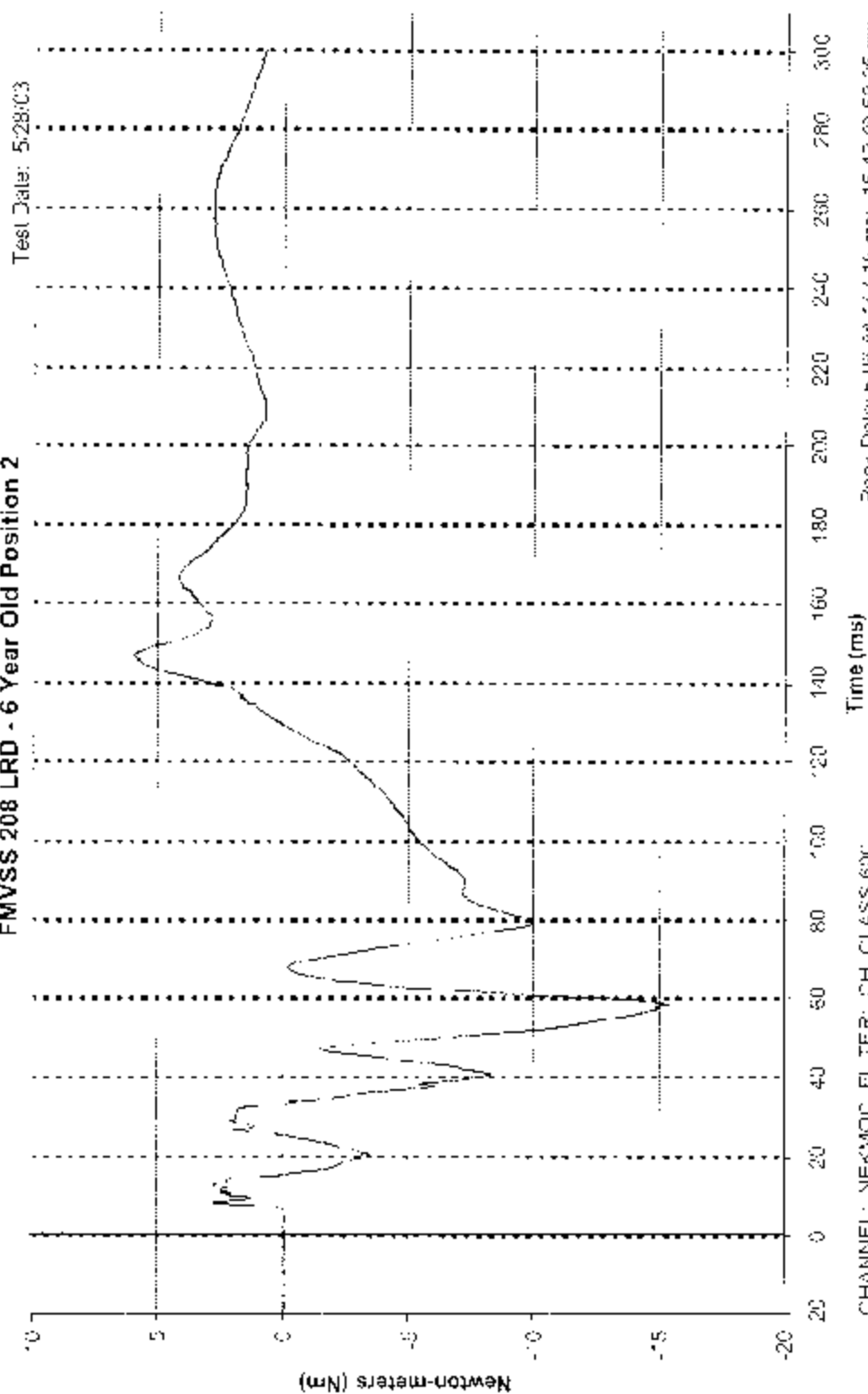
FMVSS 208 LRD - 6 Year Old Position 2



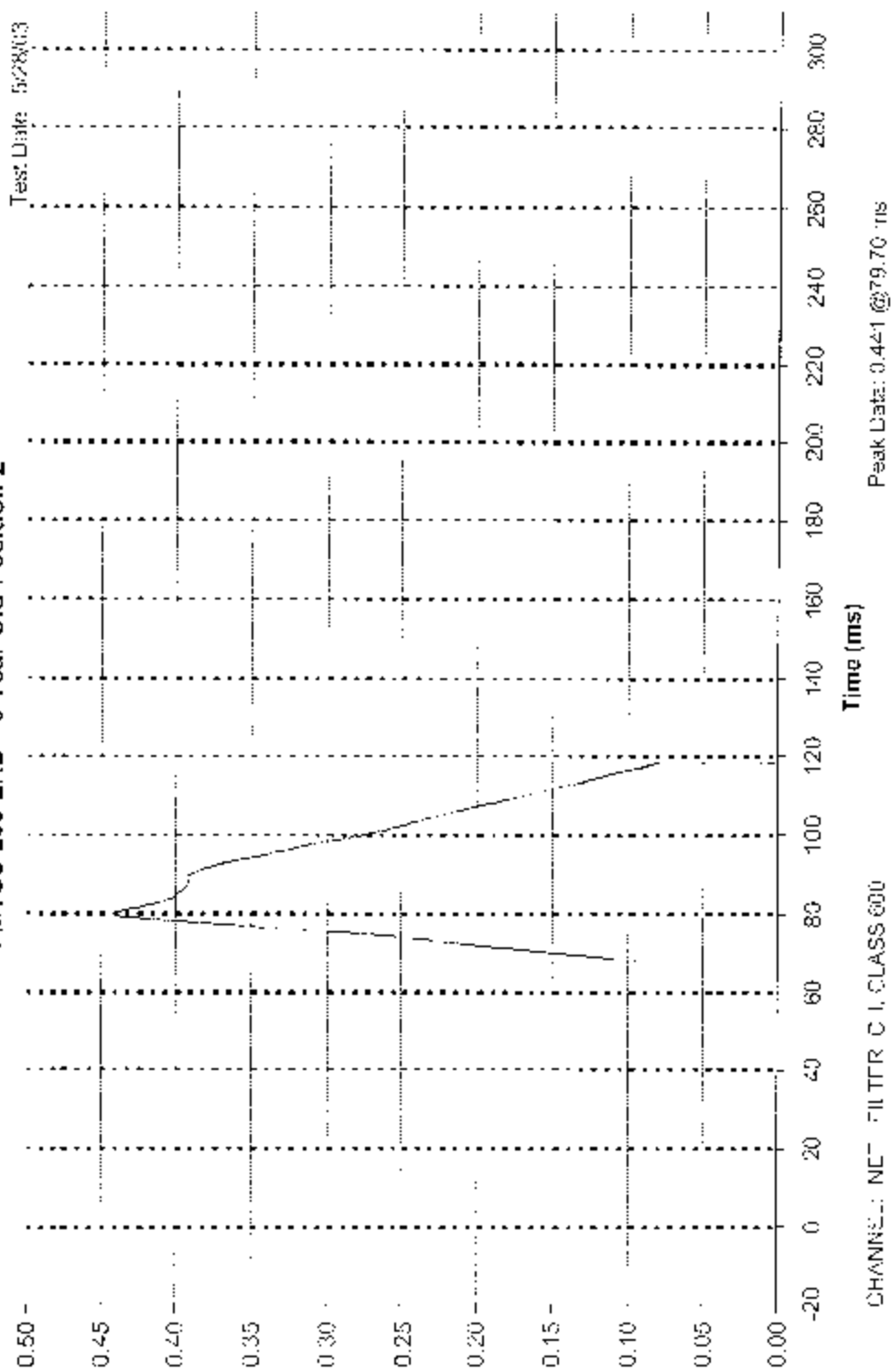
CHANNEL: UNKMZ FILTER: OFF CLASS: 800

Peak Data: 2.27 @ 34.70 ms -4.06 @ 61.25 ms

C35306 / 2003 Honda Odyssey
Upper Neck Occipital - NEKMOC
FMVSS 208 LRD - 6 Year Old Position 2



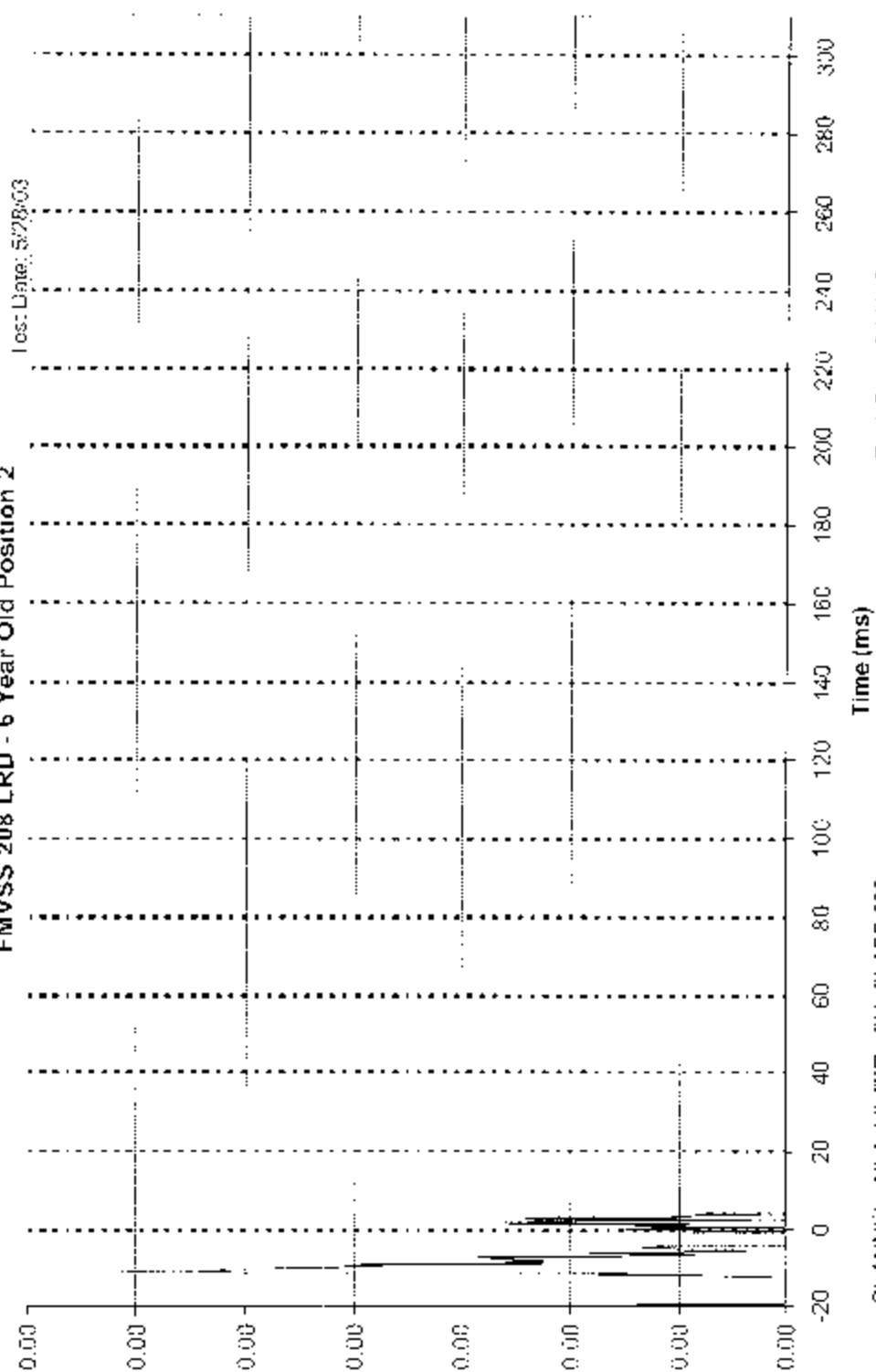
C35306 / 2003 Honda Odyssey
Neck Tension / Extension
FMVSS 208 LRD - 6 Year Old Position 2



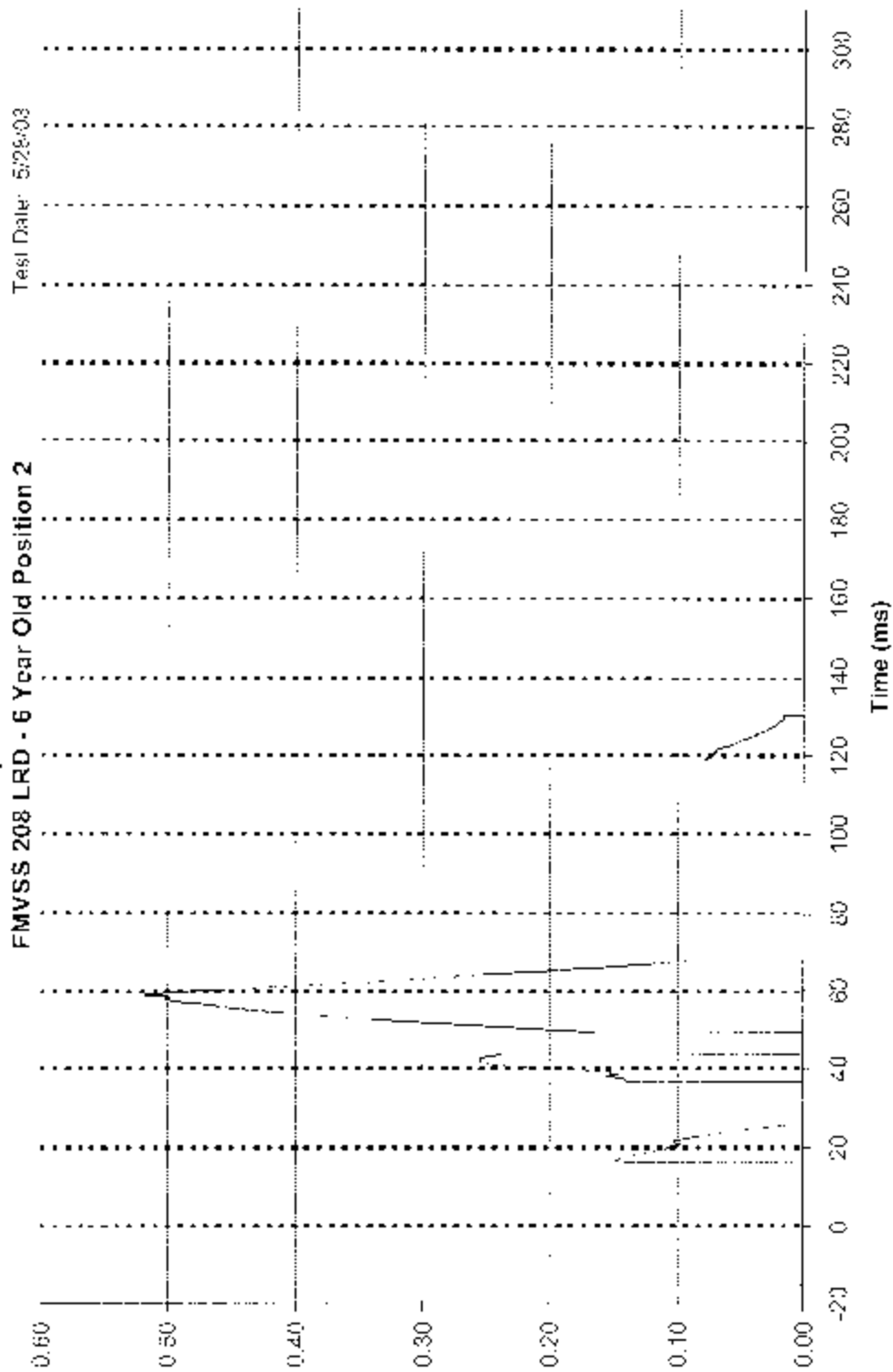
C35306 / 2003 Honda Odyssey

Neck Flexion / Tension

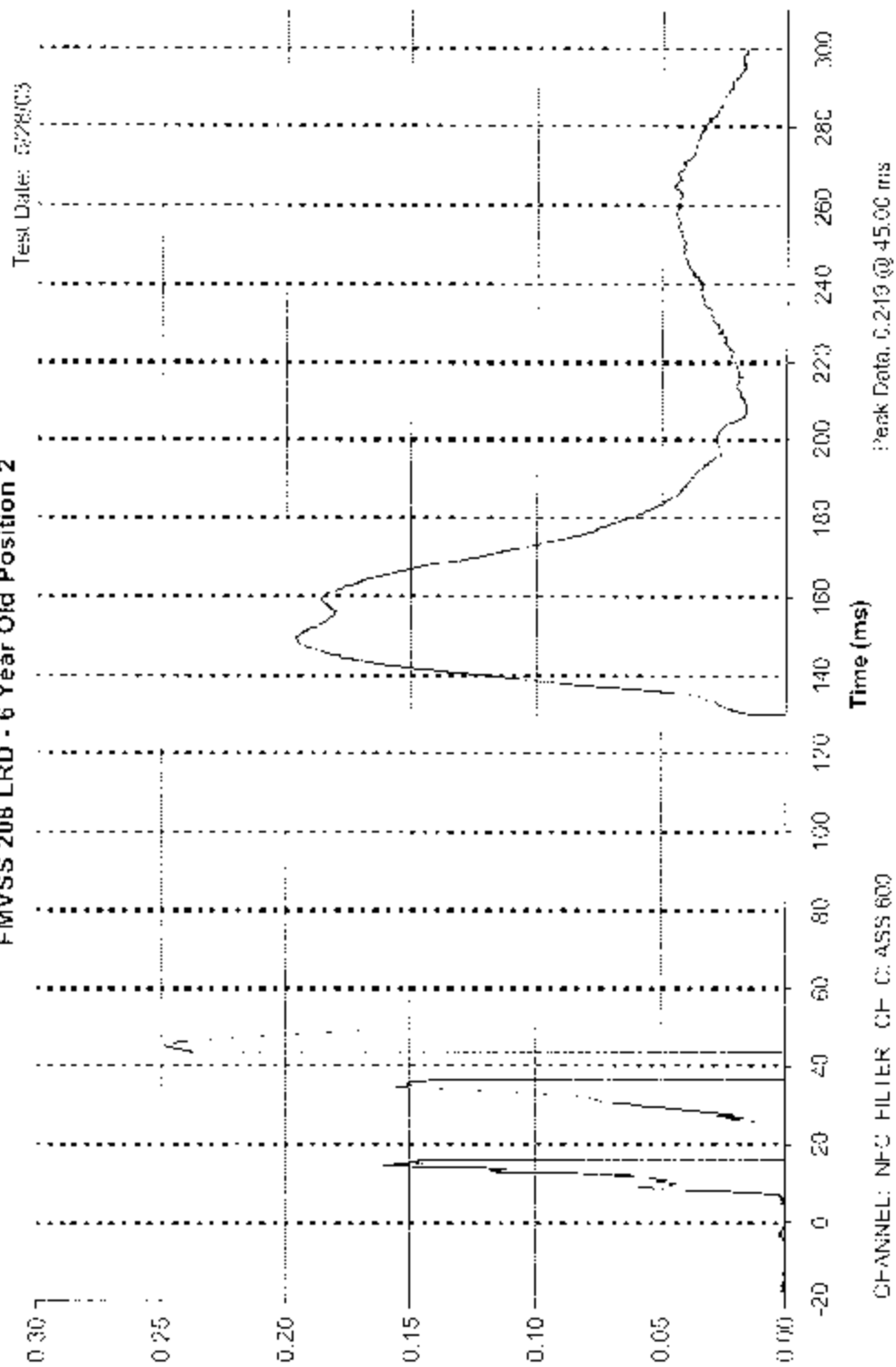
FMVSS 208 LRD - 6 Year Old Position 2



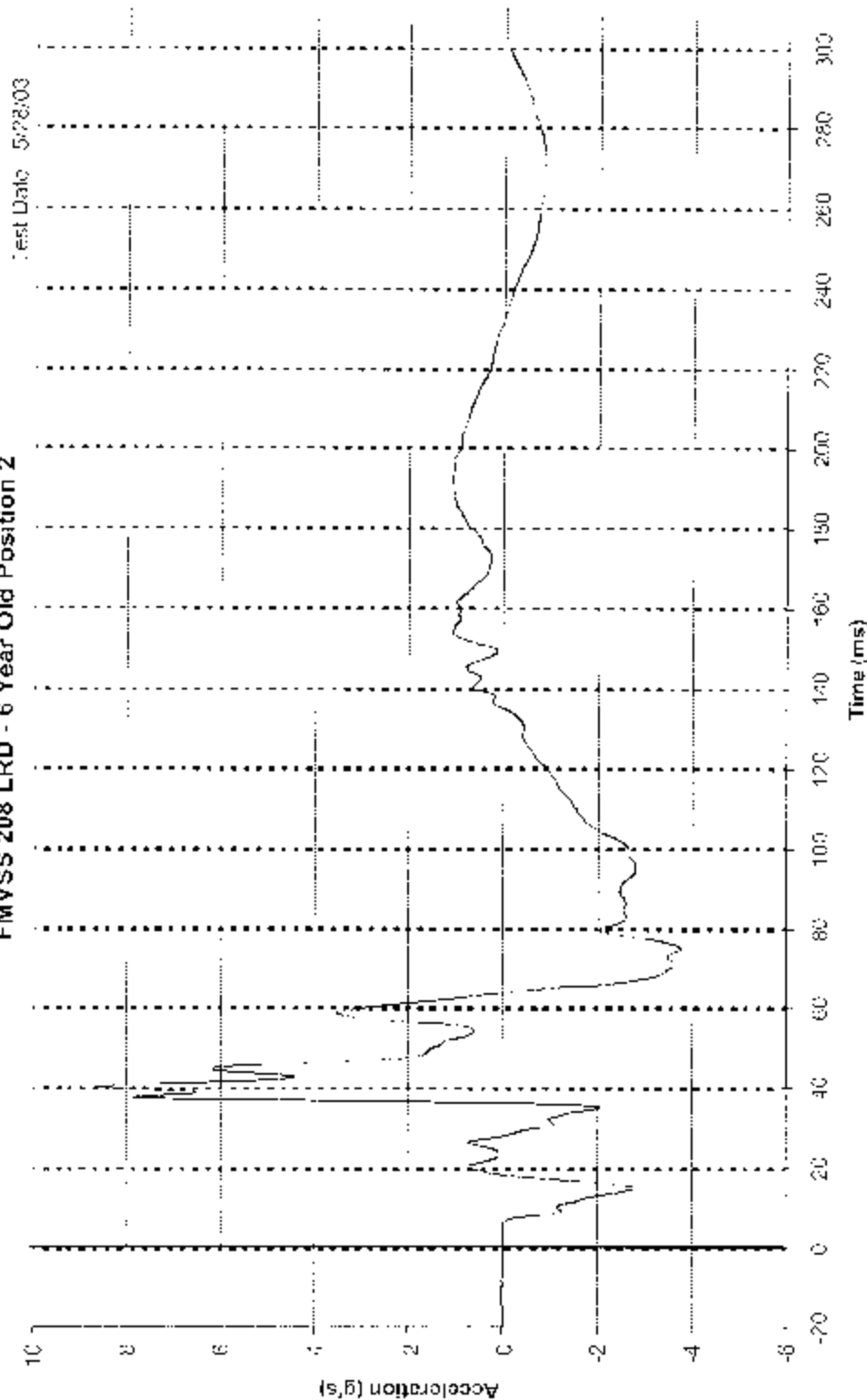
C35306 / 2003 Honda Odyssey
 Neck Compression / Extension
 FMVSS 208 LRD - 6 Year Old Position 2



C35306 / 2003 Honda Odyssey
Neck Flexion / Compression
FMVSS 208 LRD - 6 Year Old Position 2



C35306 / 2003 Honda Odyssey
 Chest X-Axis Acceleration - CSTXG
 FMVSS 208 LRD - 6 Year Old Position 2

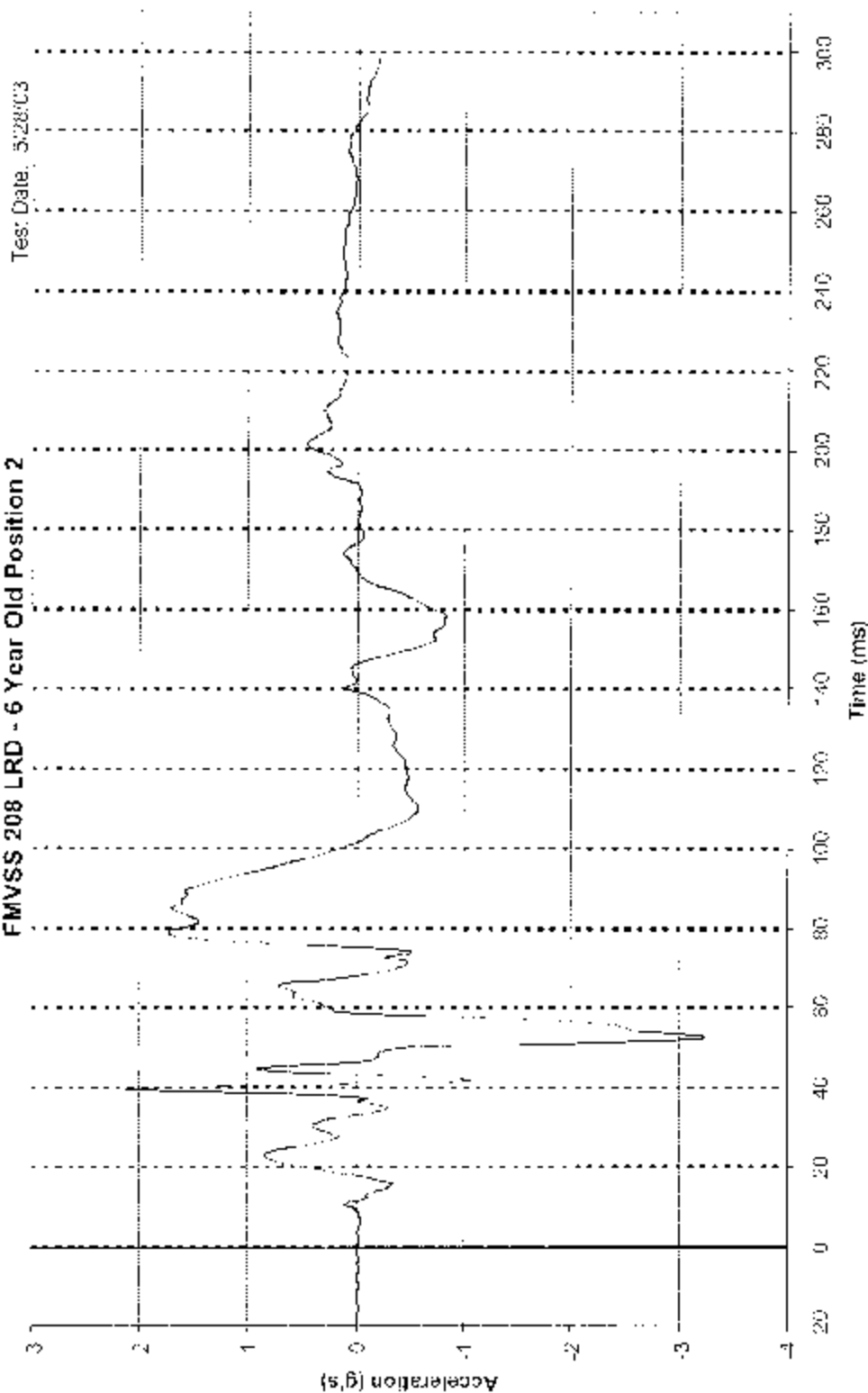


CHANNEL: CSTXG FILTER: CF CLASS 180

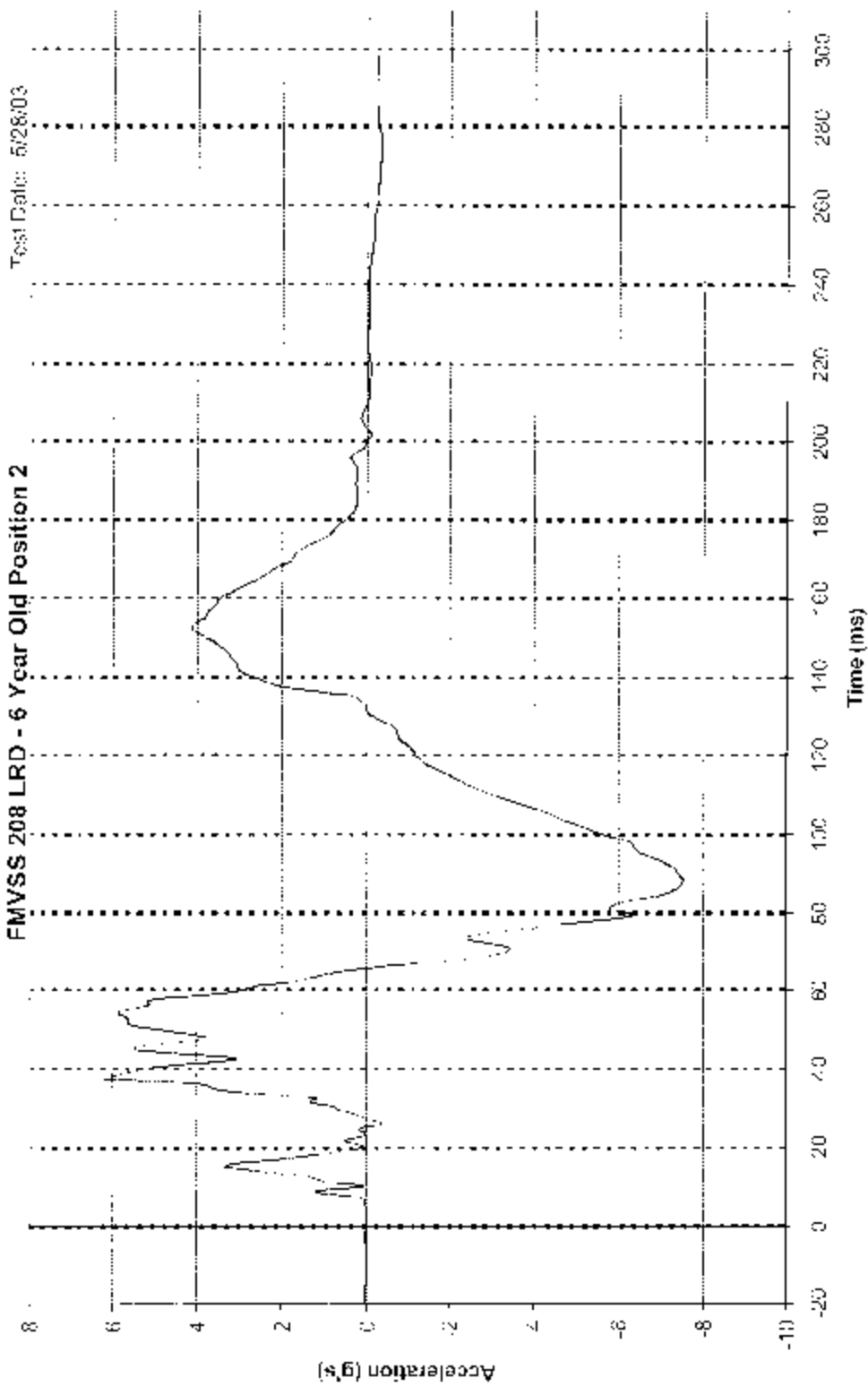
Peak Data: 8.62 @ 40.25 ms; -3.18 @ 15.25 ms

Test Date: 5/28/03

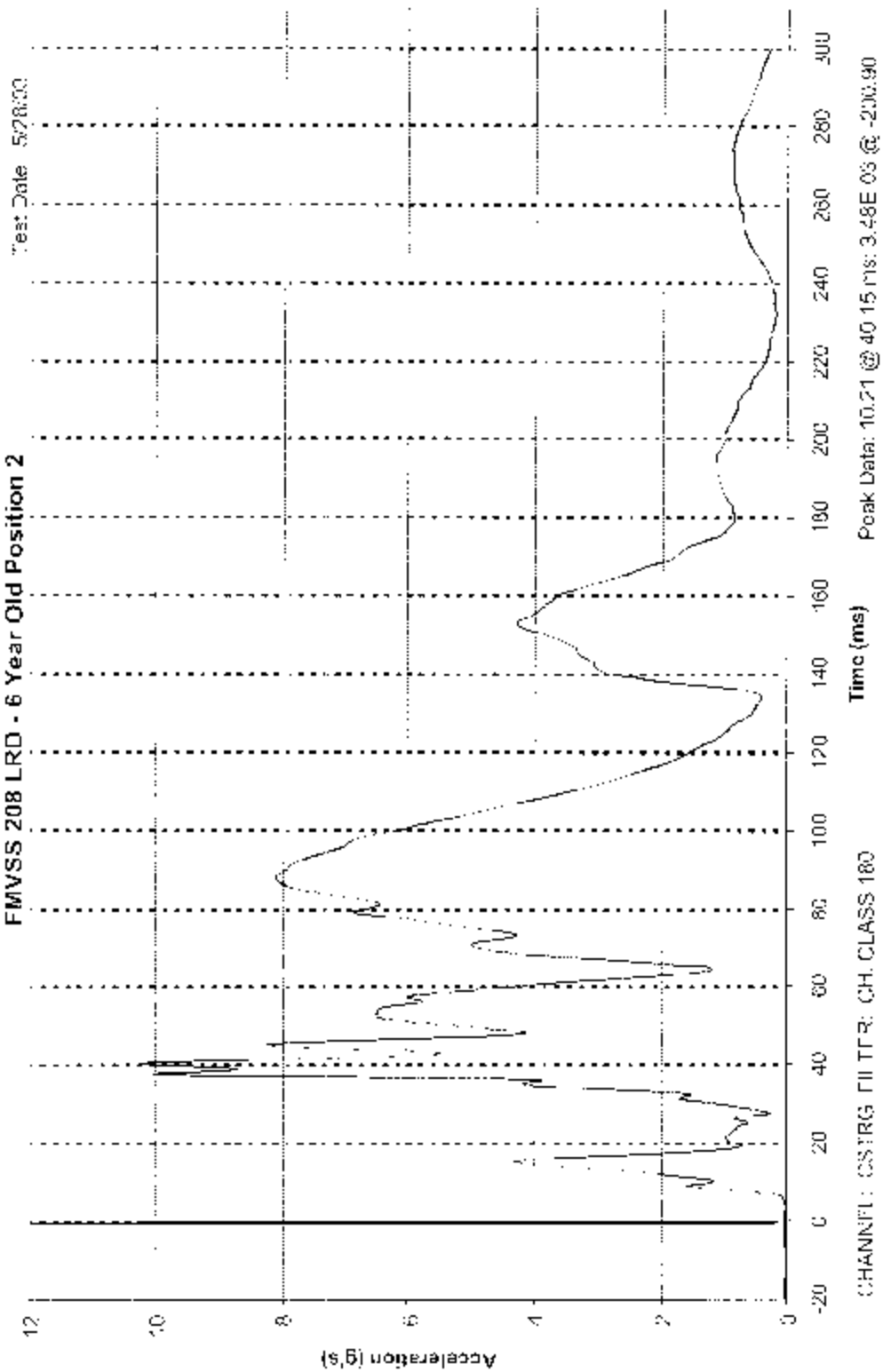
C35306 / 2003 Honda Odyssey
Chest Y-Axis Acceleration - CSTYG
FMVSS 208 LRD - 6 Year Old Position 2



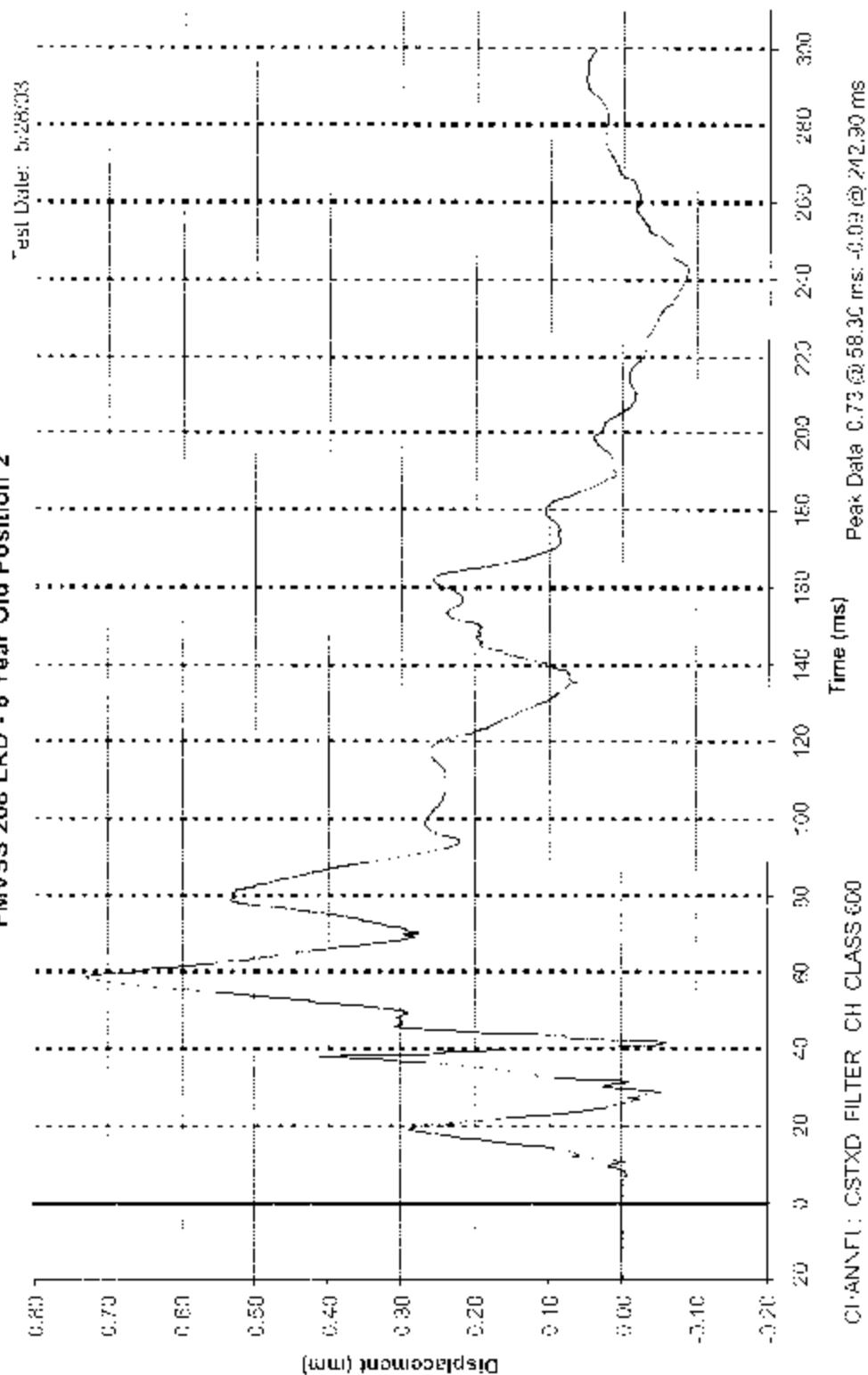
C35306 / 2003 Honda Odyssey
Chest Z-Axis Acceleration - CSTZG
FMVSS 208 LRD - 6 Year Old Position 2



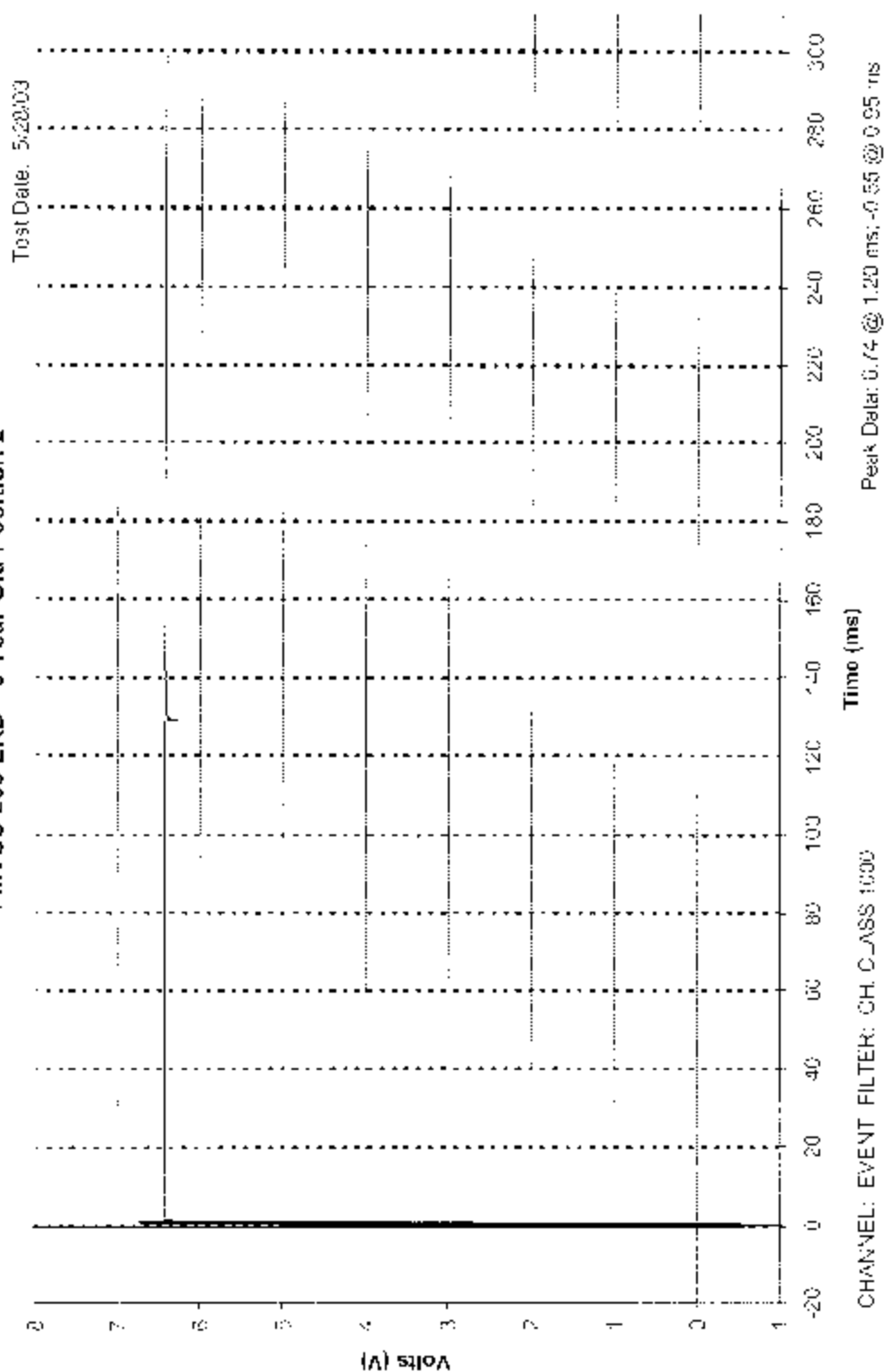
C35306 / 2003 Honda Odyssey
Chest Resultant - CSTRG
FMVSS 208 LRD - 6 Year Old Position 2



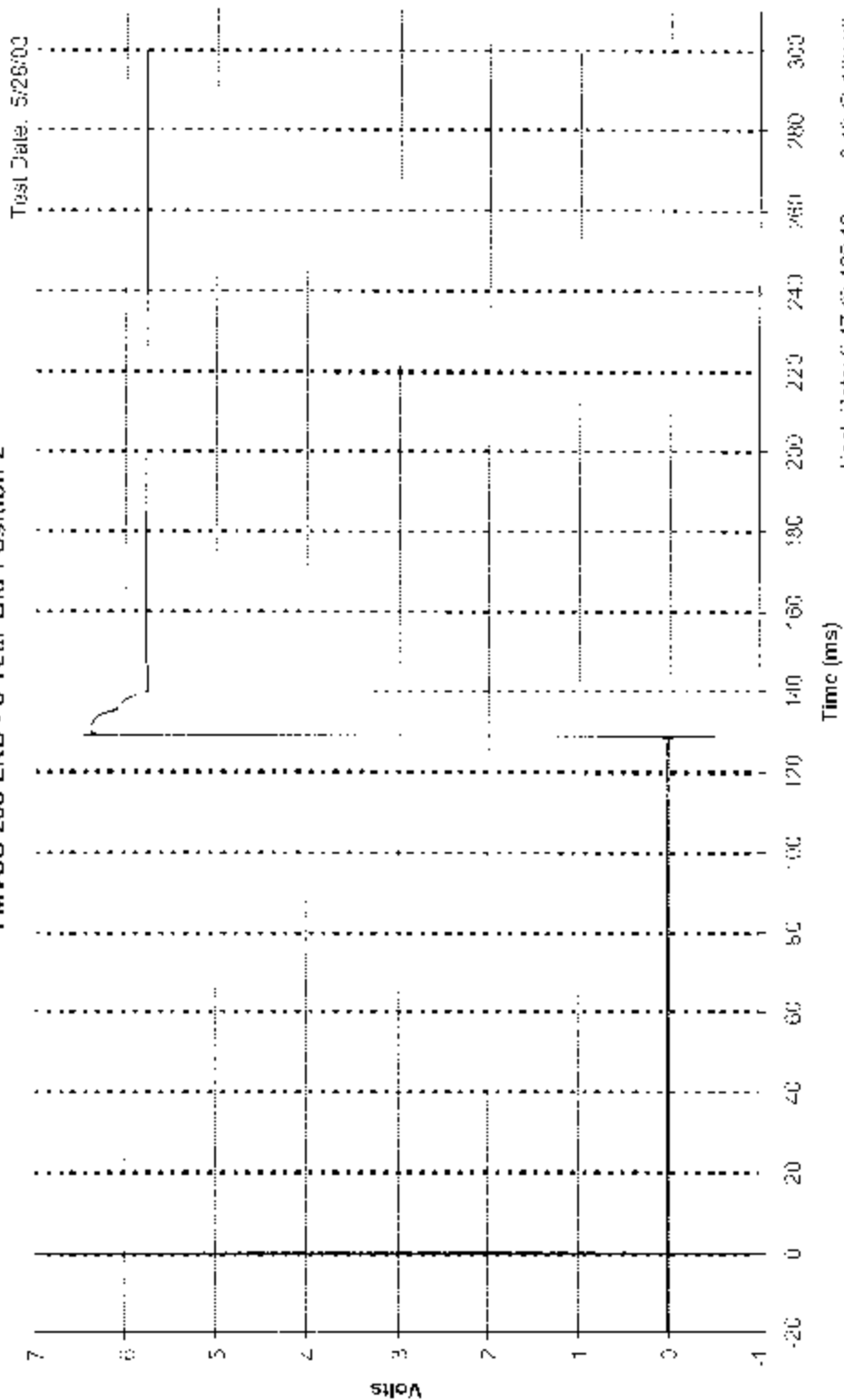
C35306 / 2003 Honda Odyssey
 Chest Deflection - CSTXD
 FMVSS 208 LRD - 6 Year Old Position 2



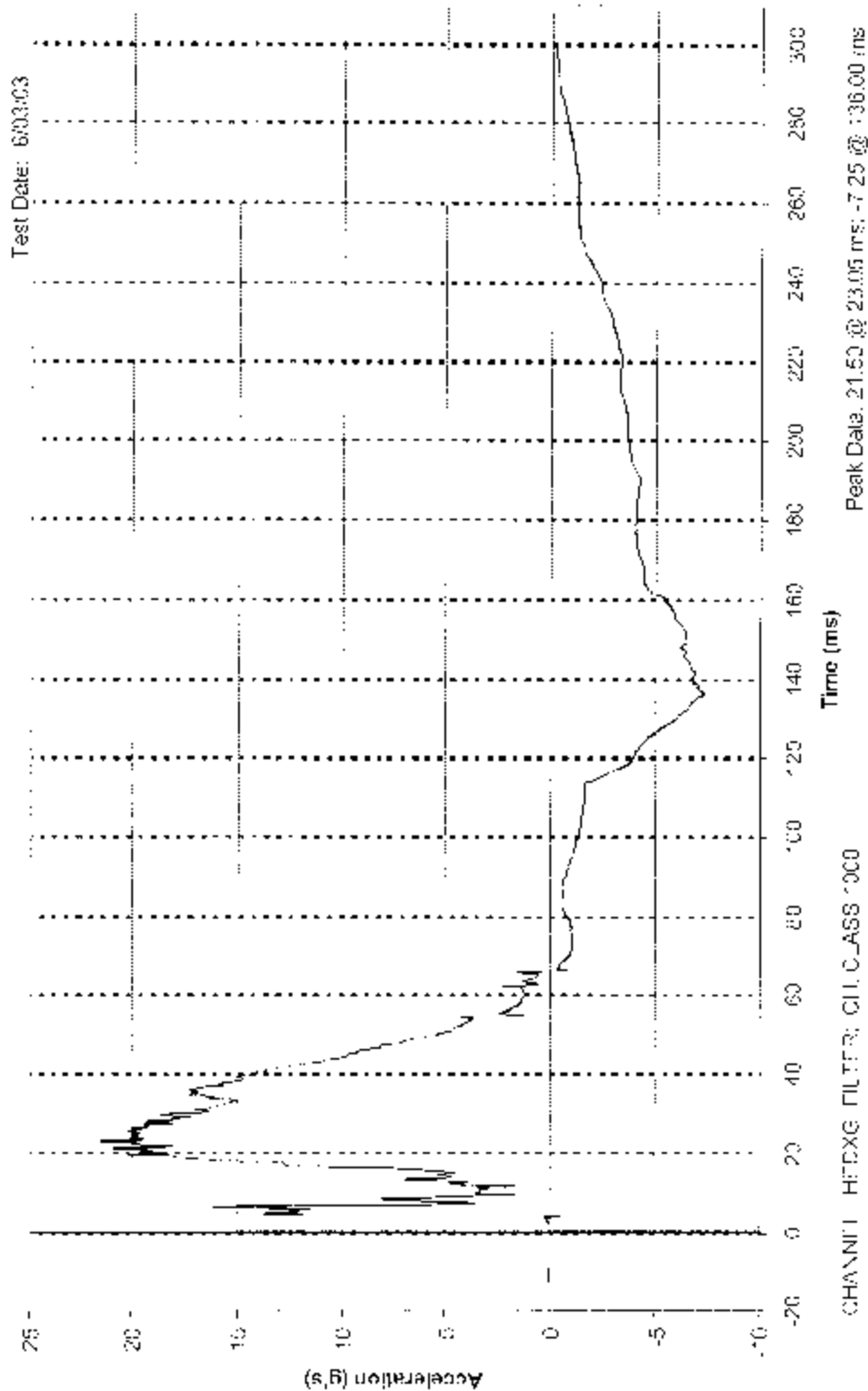
C35306 / 2003 Honda Odyssey
EVENT Channel - EVENT
FMVSS 208 LRD - 6 Year Old Position 2



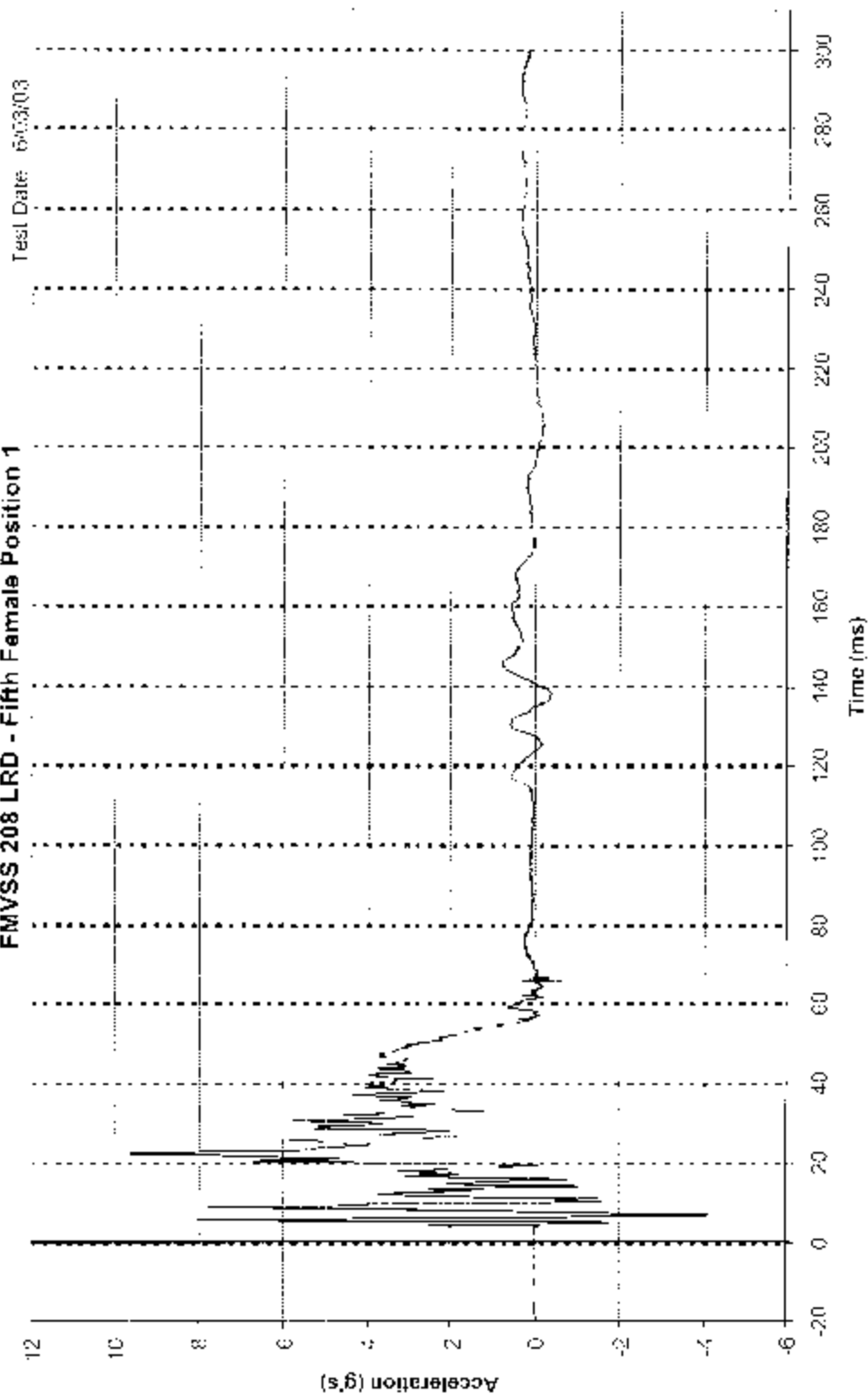
C35306 / 2003 Honda Odyssey
Delay Event Channel - EVENT2
FMVSS 208 LRD - 6 Year Old Position 2



C35306 / 2003 Honda Odyssey
 Head X-Axis Acceleration - HEDXG
 FMVSS 208 LRD - Fifth Female Position 1



C35306 / 2003 Honda Odyssey
Head Y-Axis Acceleration - HEDYG
FMVSS 208 LRD - Fifth Female Position 1

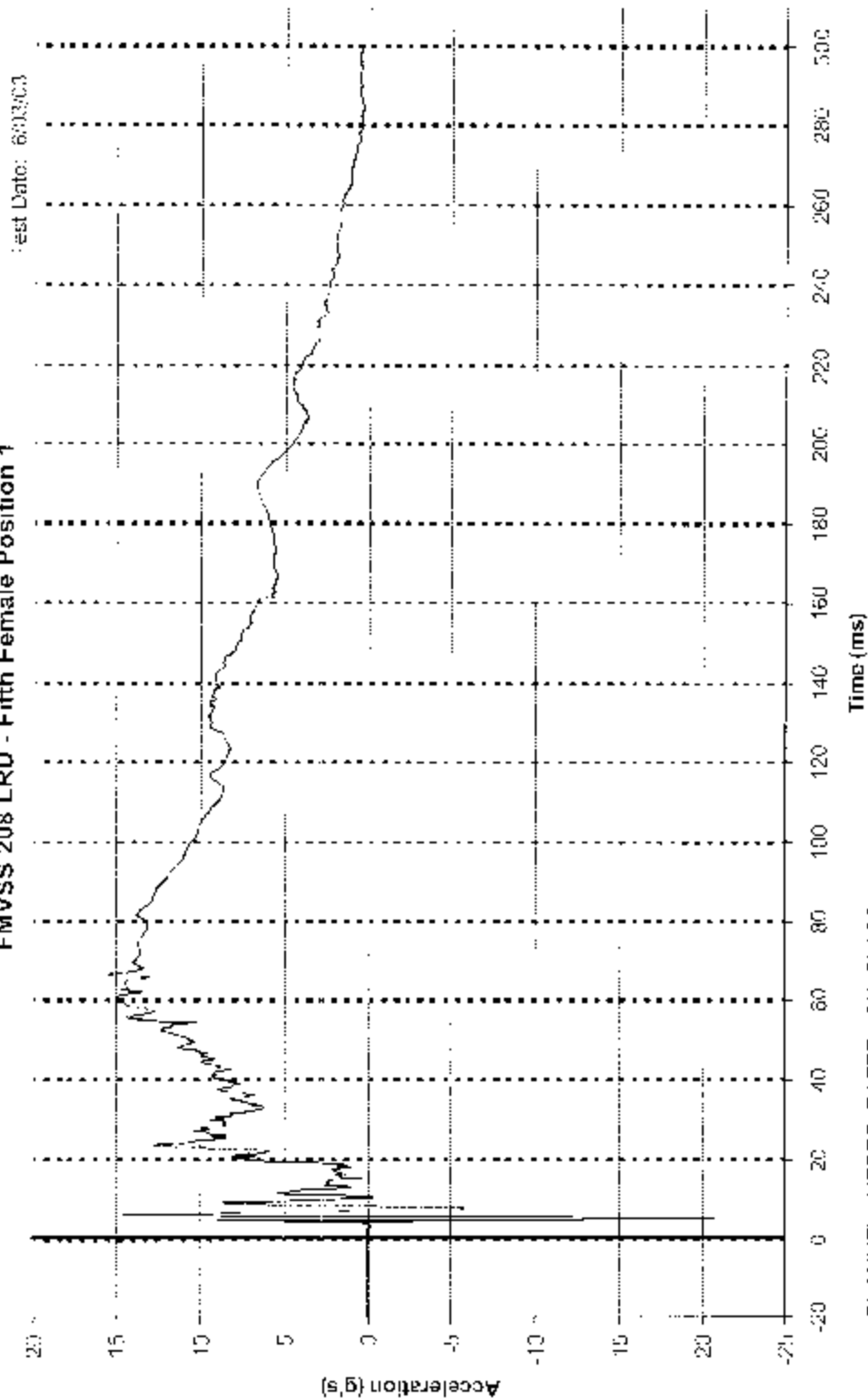


CHANNEL: HEDYG FILTER: CH CLASS *000

Peak Data: 9.61 @ 22.50 ms; -4.11 @ 7.35 ms

Test Date: 6/03/03

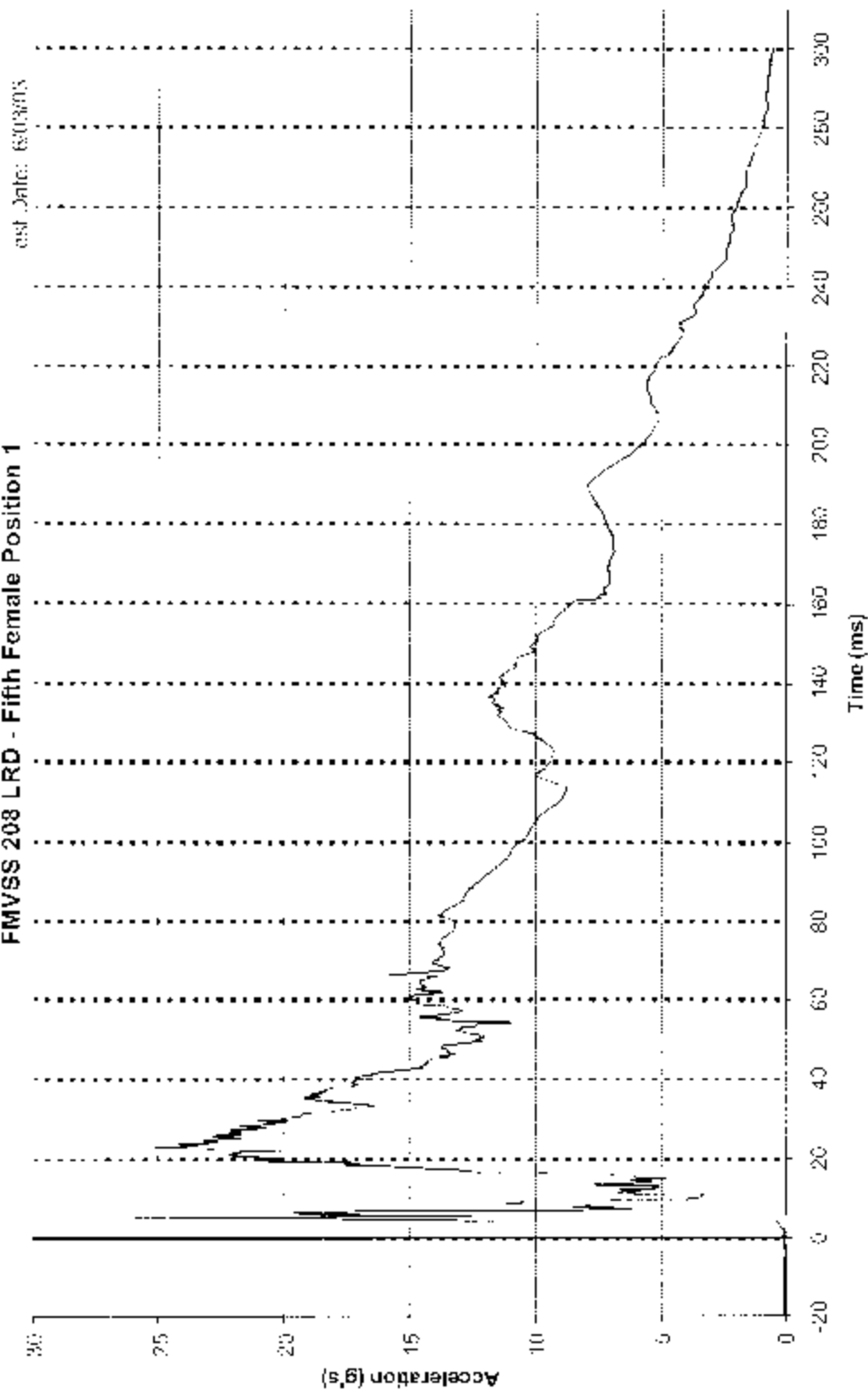
C35306 / 2003 Honda Odyssey
Head Z-Axis Acceleration - HEDZG
FMVSS 208 LRD - Fifth Female Position 1



C35306 / 2003 Honda Odyssey

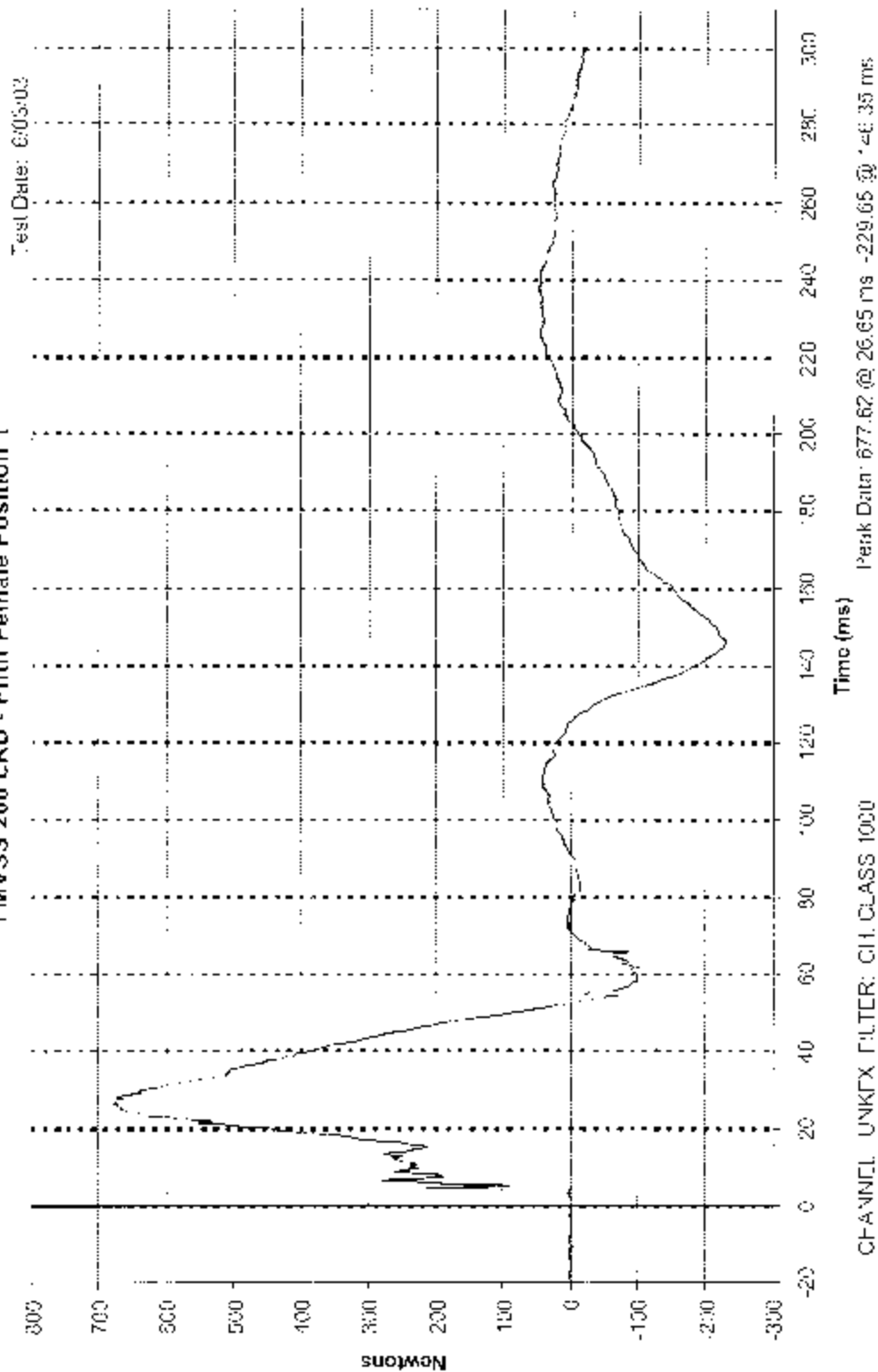
Head Resultant - HEDRG

FMVSS 208 LRD - Fifth Female Position 1

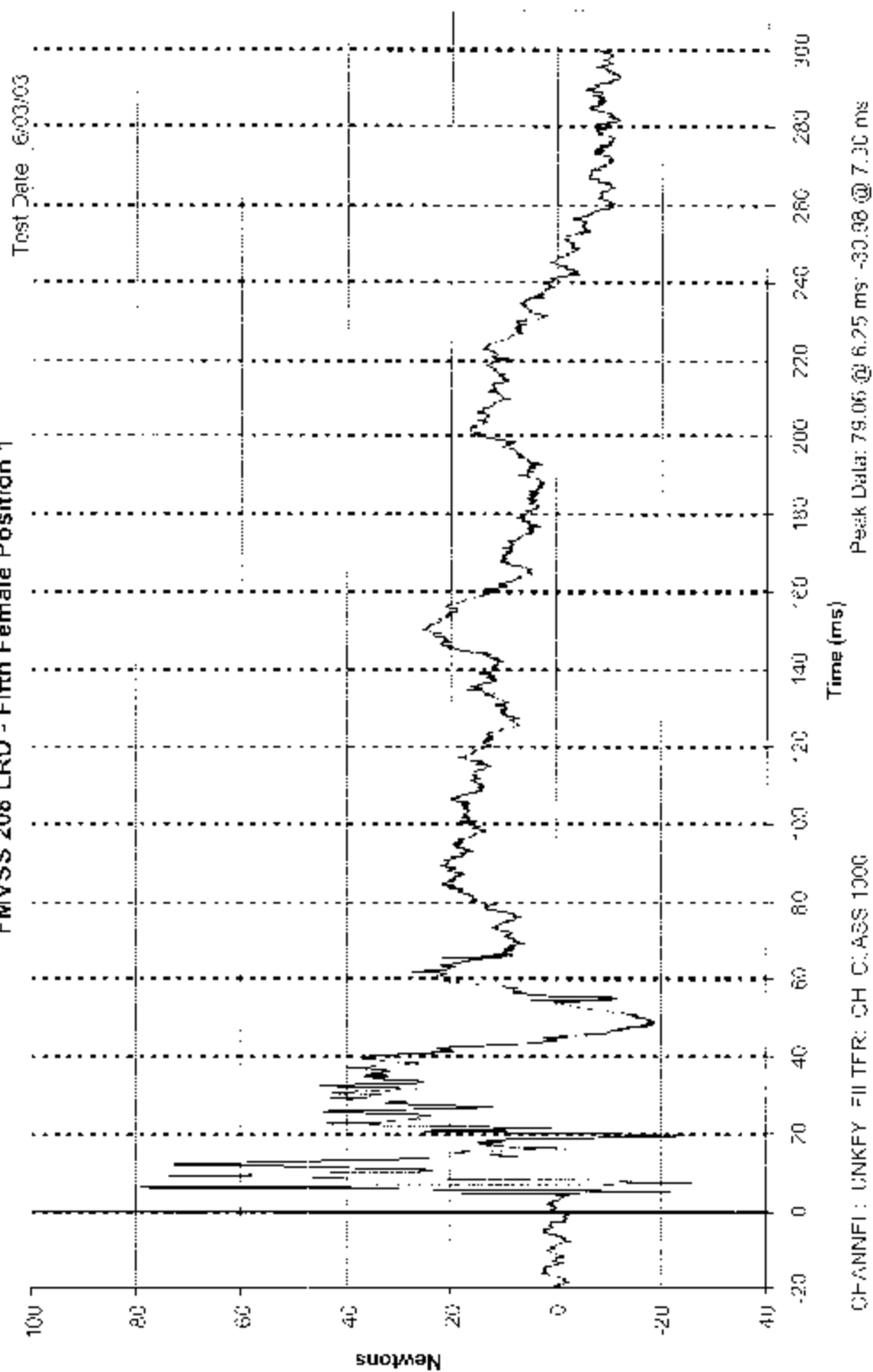


0-48

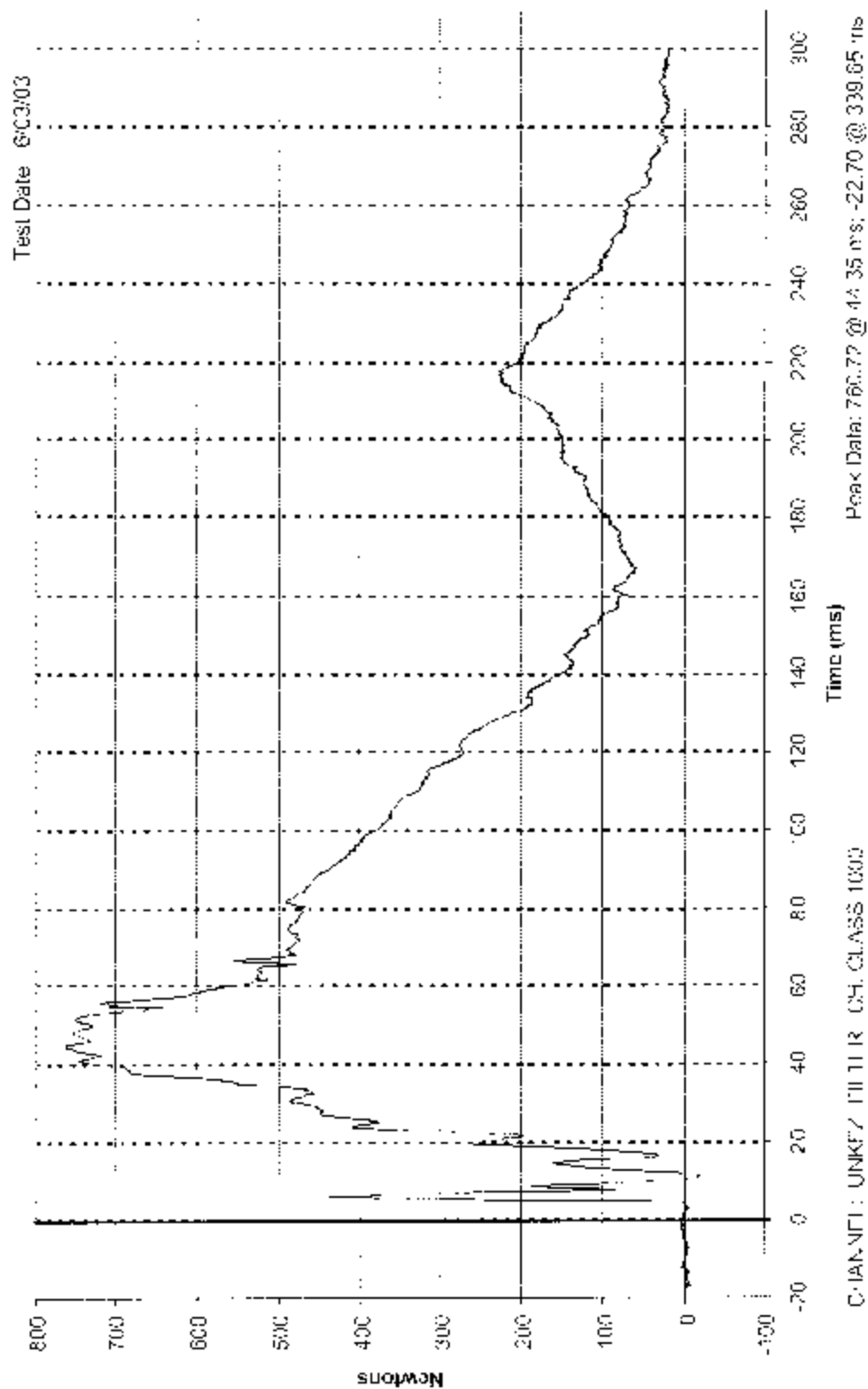
C35306 / 2003 Honda Odyssey
Upper Neck FX - UNKFX
FMVSS 208 LRD - Fifth Female Position 1



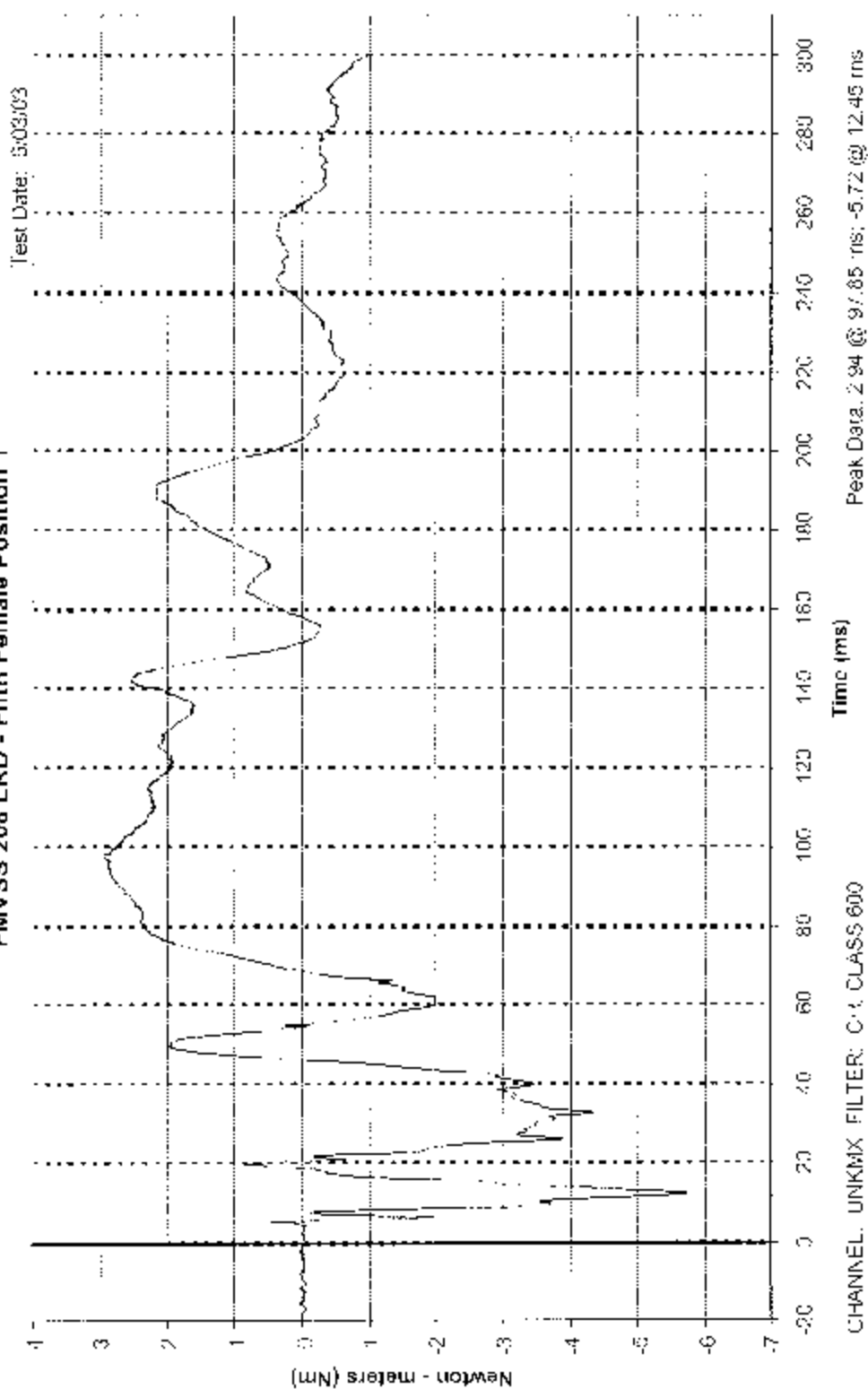
C35306 / 2003 Honda Odyssey
 Upper Neck FY - UNKFY
 FMVSS 208 LRD - Fifth Female Position 1



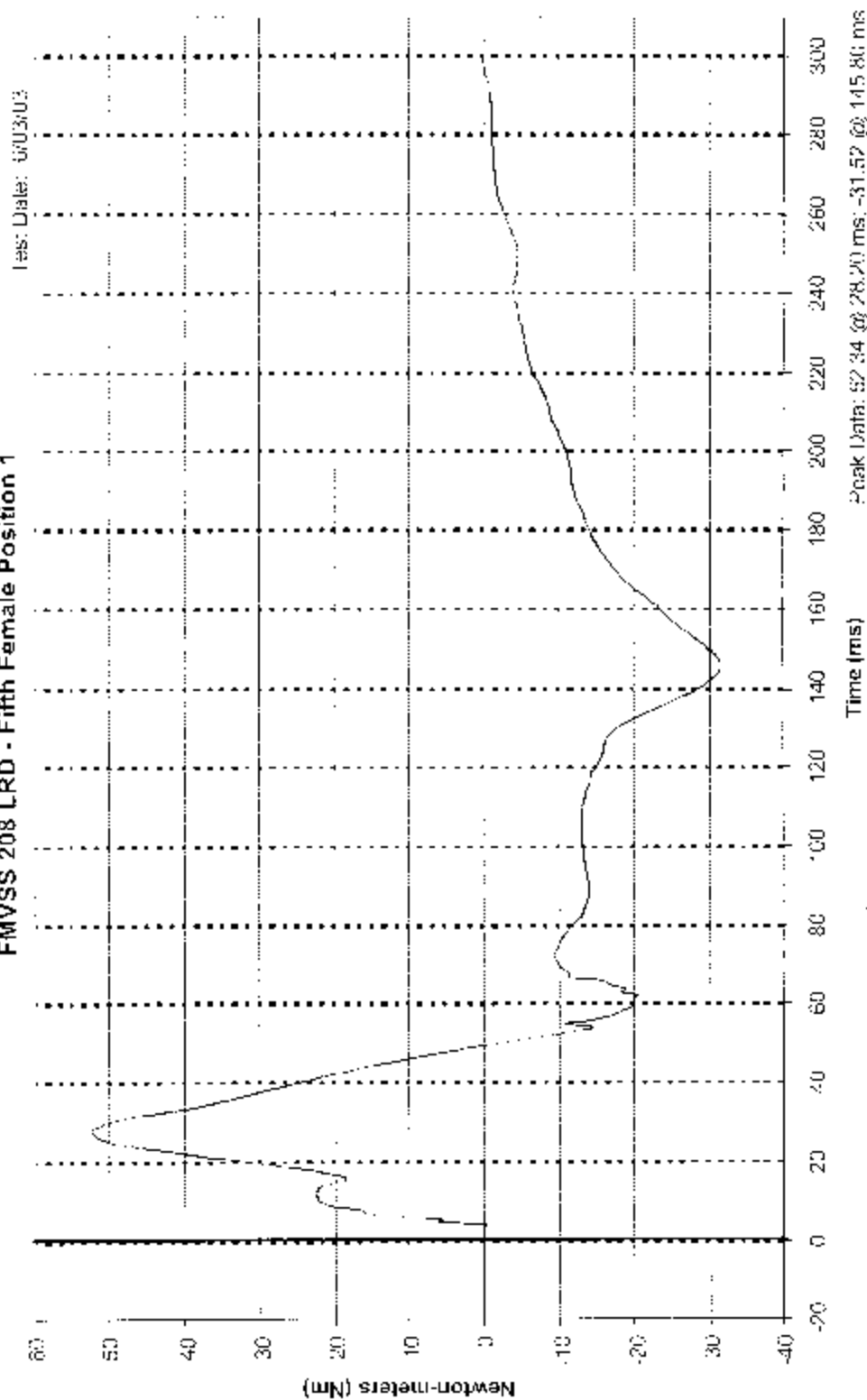
C35306 / 2003 Honda Odyssey
 Upper Neck FZ - UNKFZ
 FMVSS 208 LRD - Fifth Female Position 1



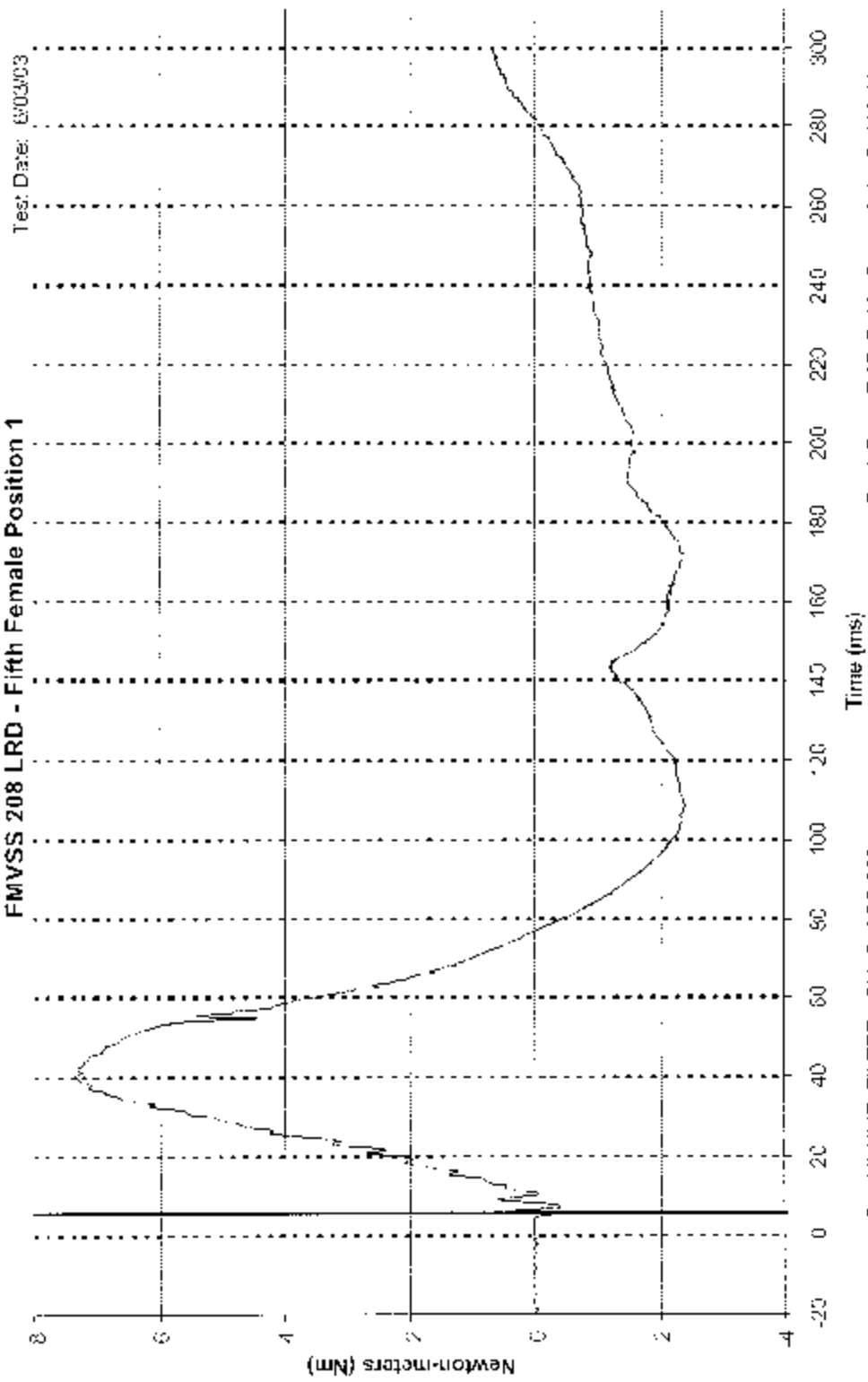
C35306 / 2003 Honda Odyssey
Upper Neck MX - UNKMX
FMVSS 208 LRD - Fifth Female Position 1



C35306 / 2003 Honda Odyssey
Upper Neck MY - UNKMY
FMVSS 208 LRD - Fifth Female Position 1

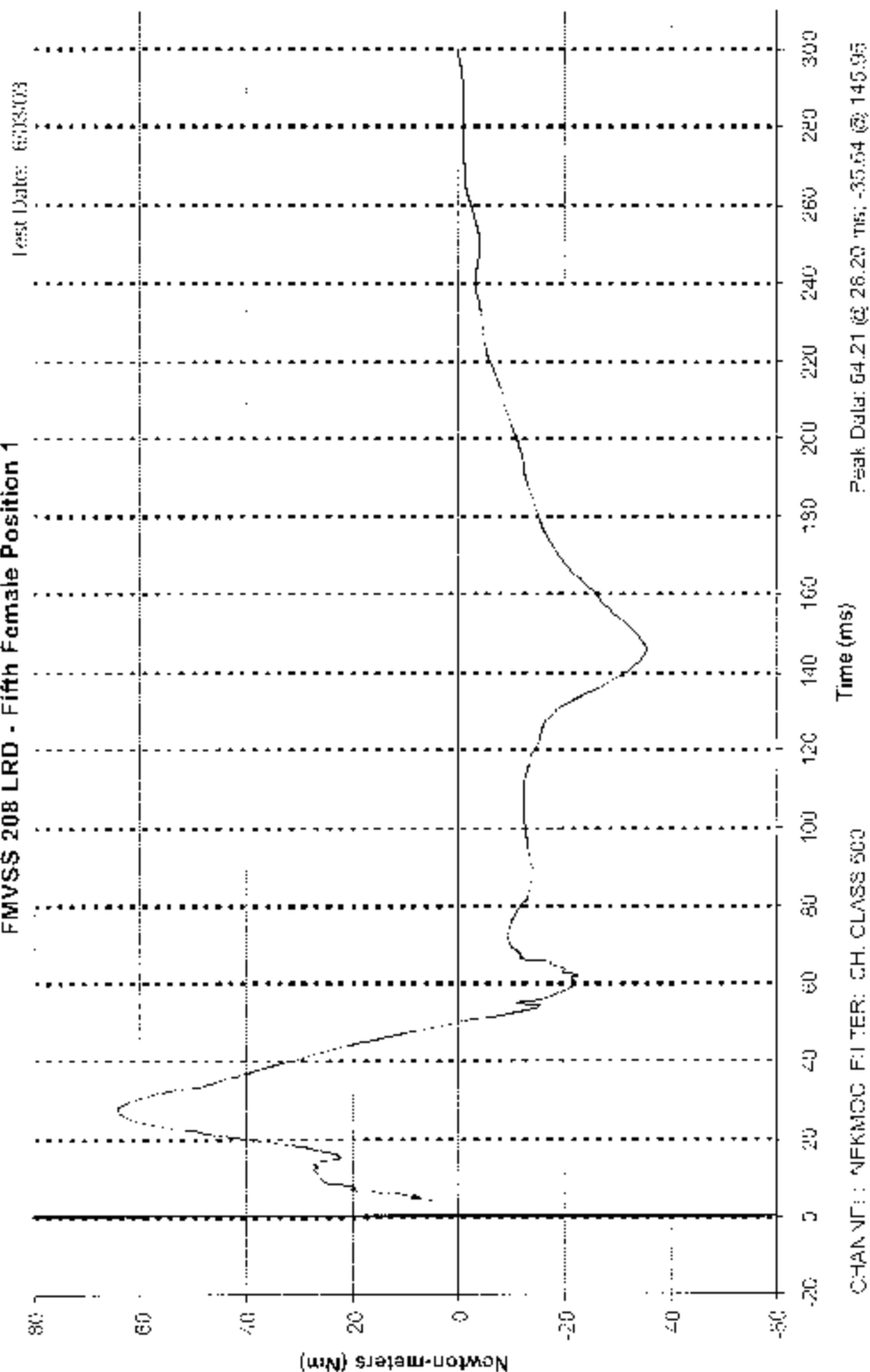


C35306 / 2003 Honda Odyssey
Upper Neck MZ - UNKMZ
FMVSS 208 LRD - Fifth Female Position 1

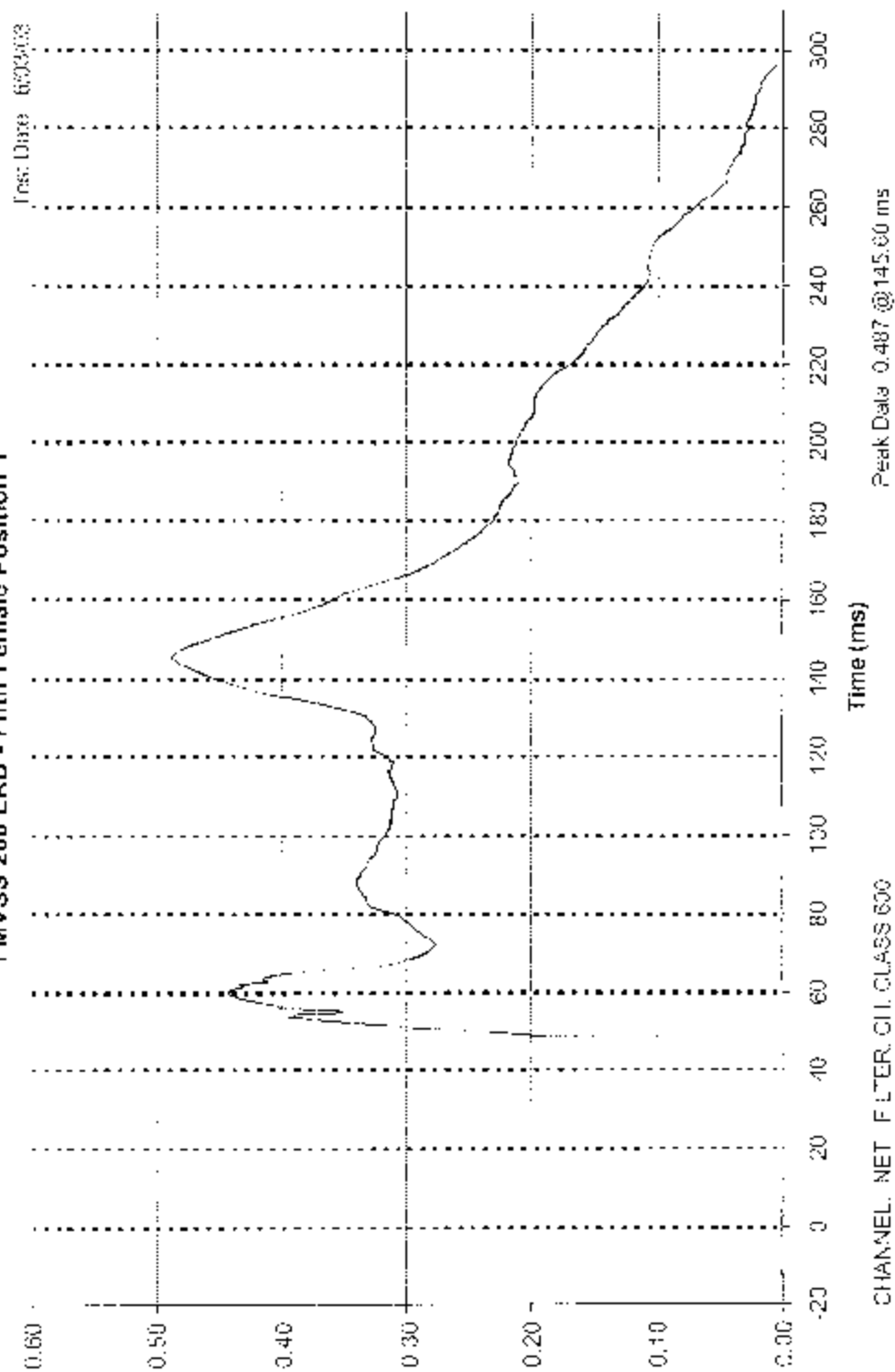


CHANNEL: UNKMZ FILTER: CH. CASS 600

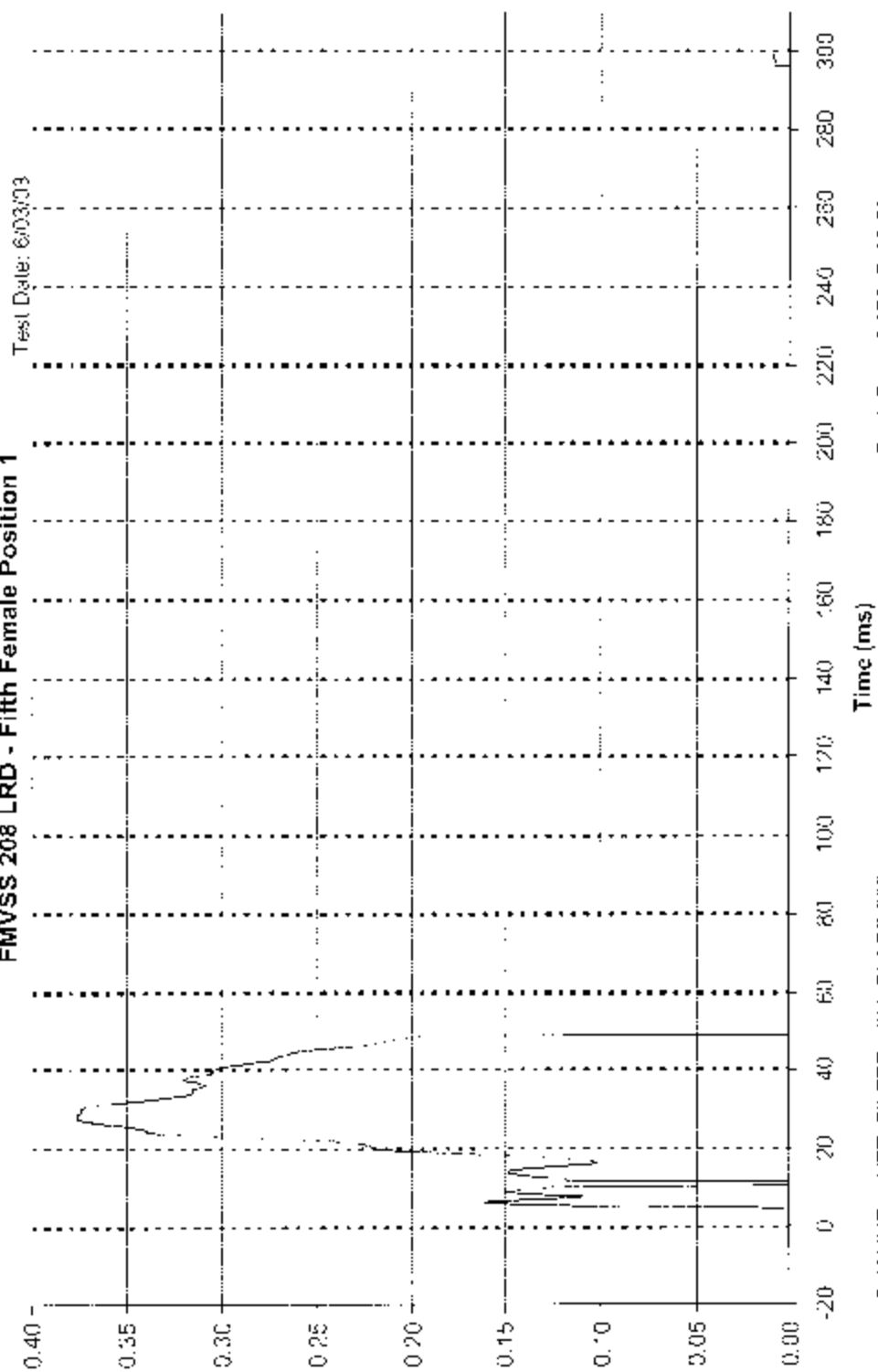
C35306 / 2003 Honda Odyssey
Upper Neck Occipital - NEKMOC
FMVSS 208 LRD - Fifth Female Position 1



C35306 / 2003 Honda Odyssey
Neck Tension / Extension
FMVSS 208 LRD - Fifth Female Position 1

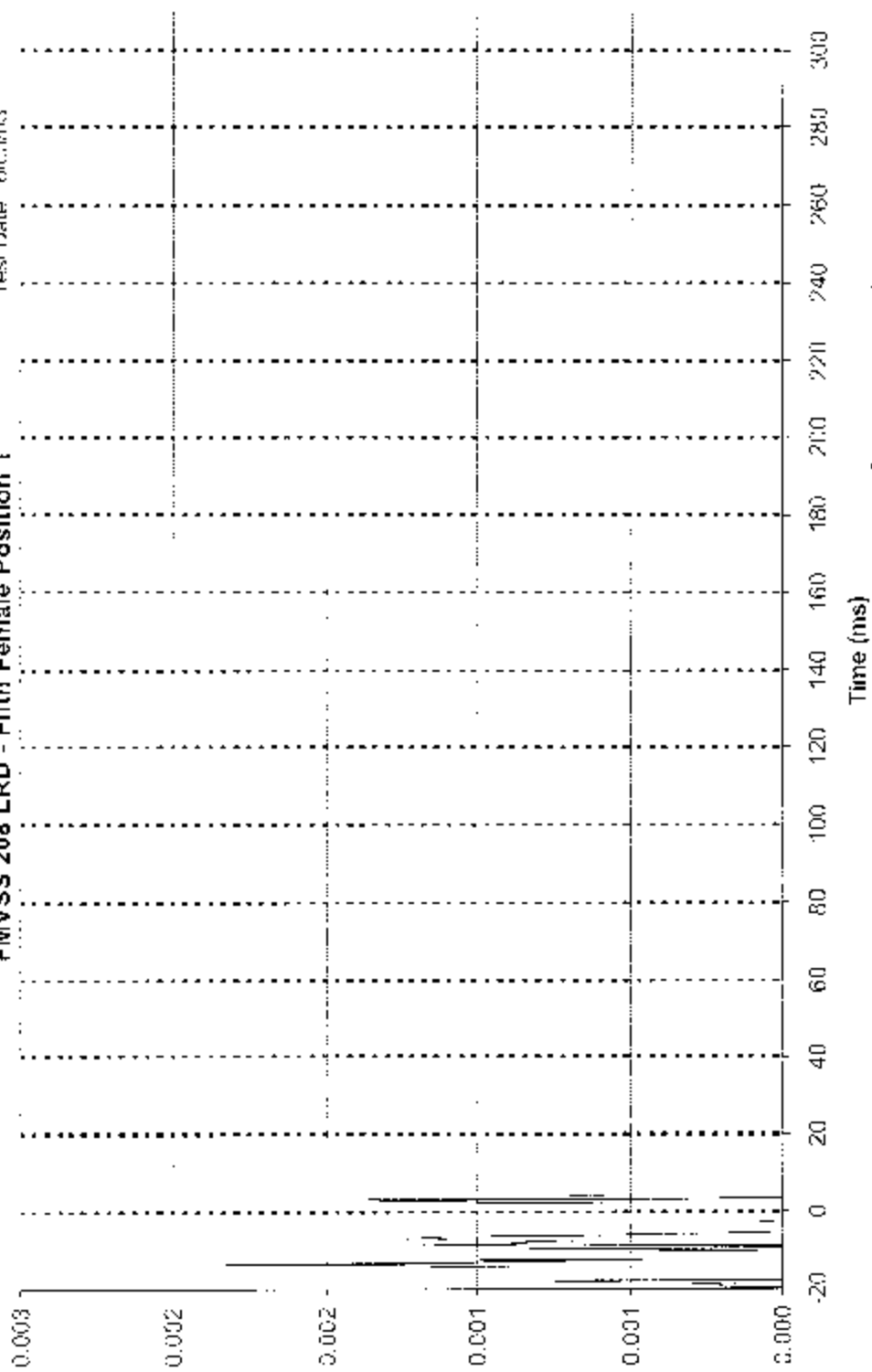


C35306 / 2003 Honda Odyssey
Neck Flexion / Tension
FMVSS 208 LRD - Fifth Female Position 1

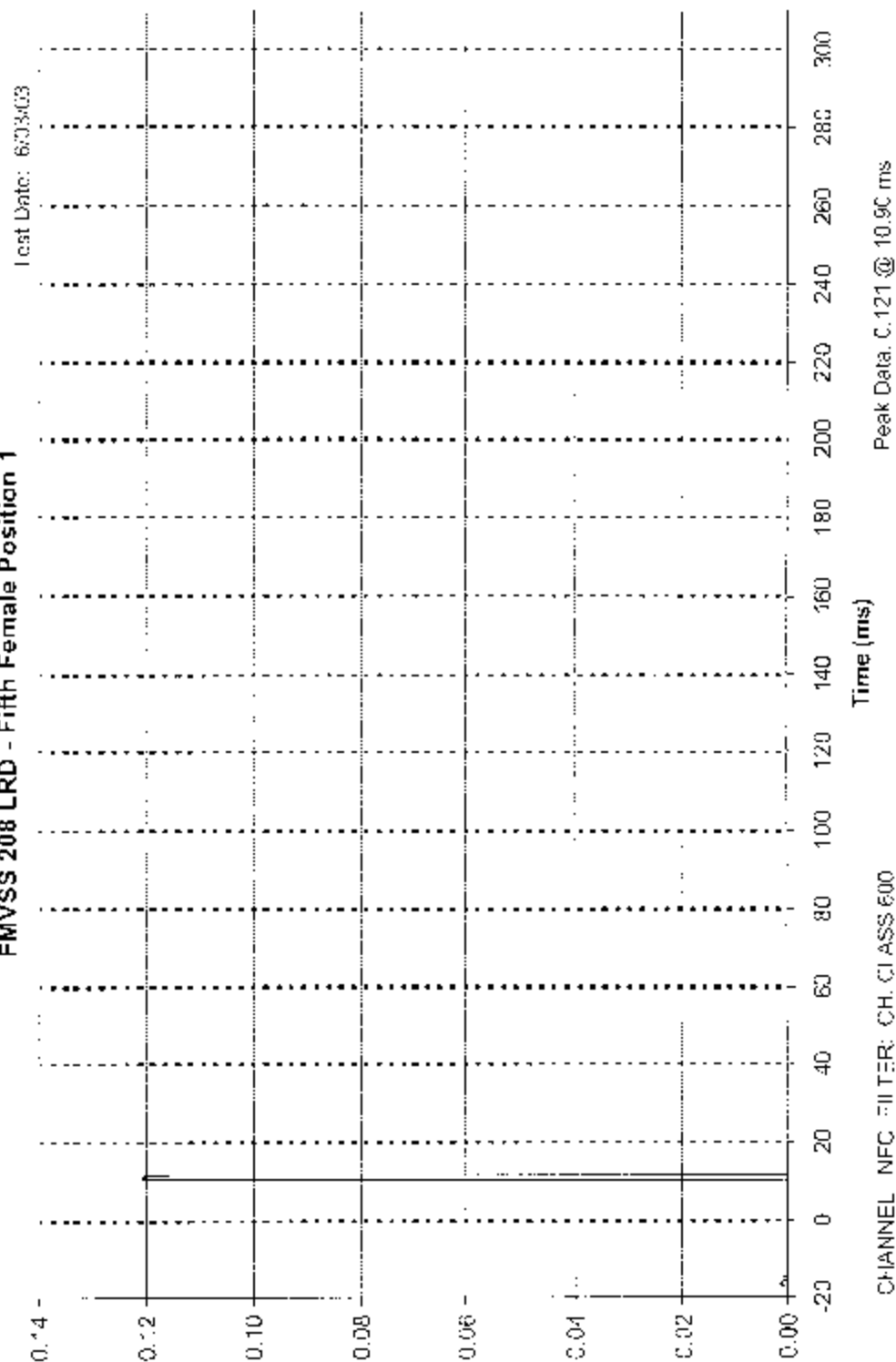


C35306 / 2003 Honda Odyssey
Neck Compression / Extension
FMVSS 208 LRD - Fifth Female Position 1

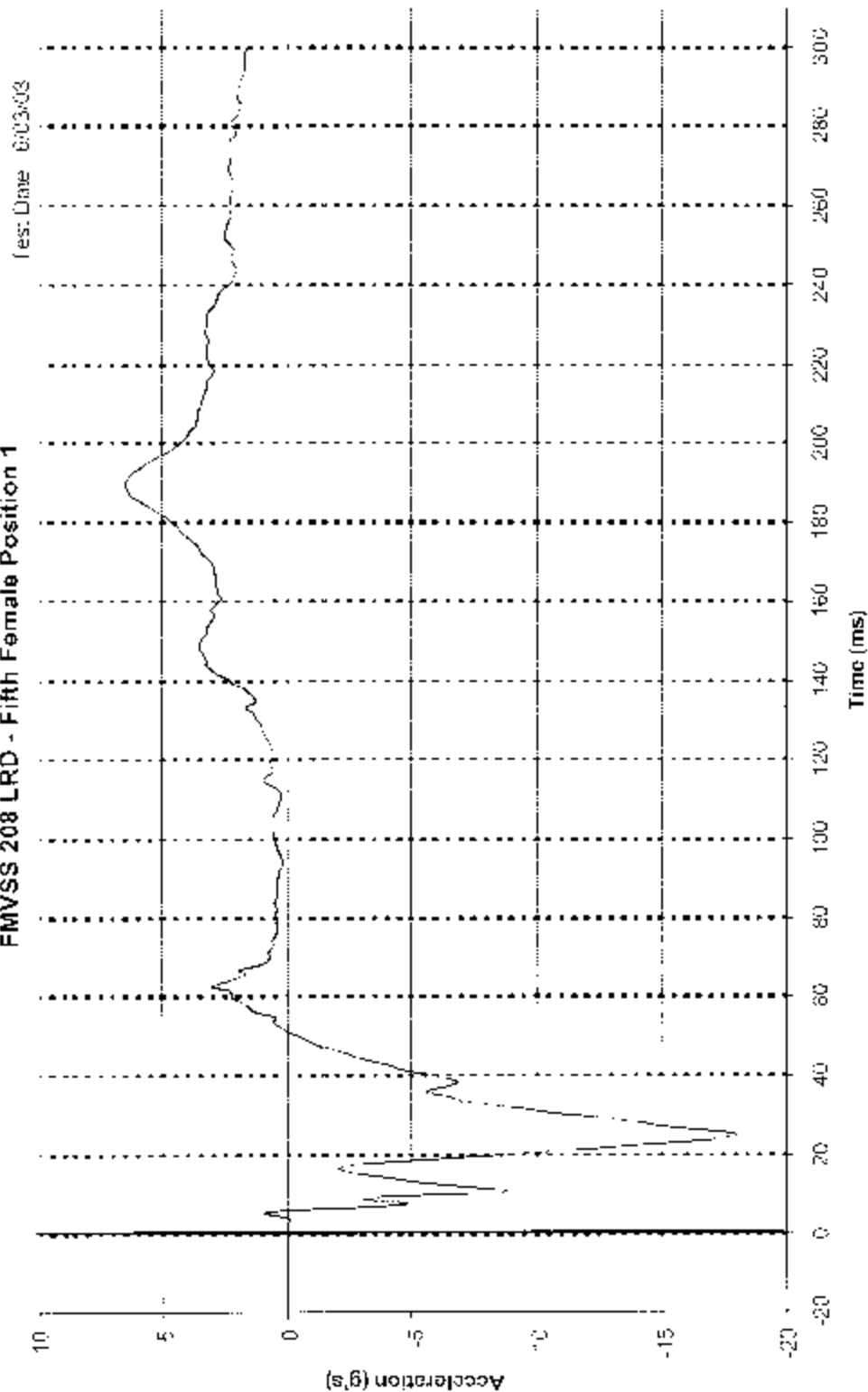
Test Date: 6/13/03



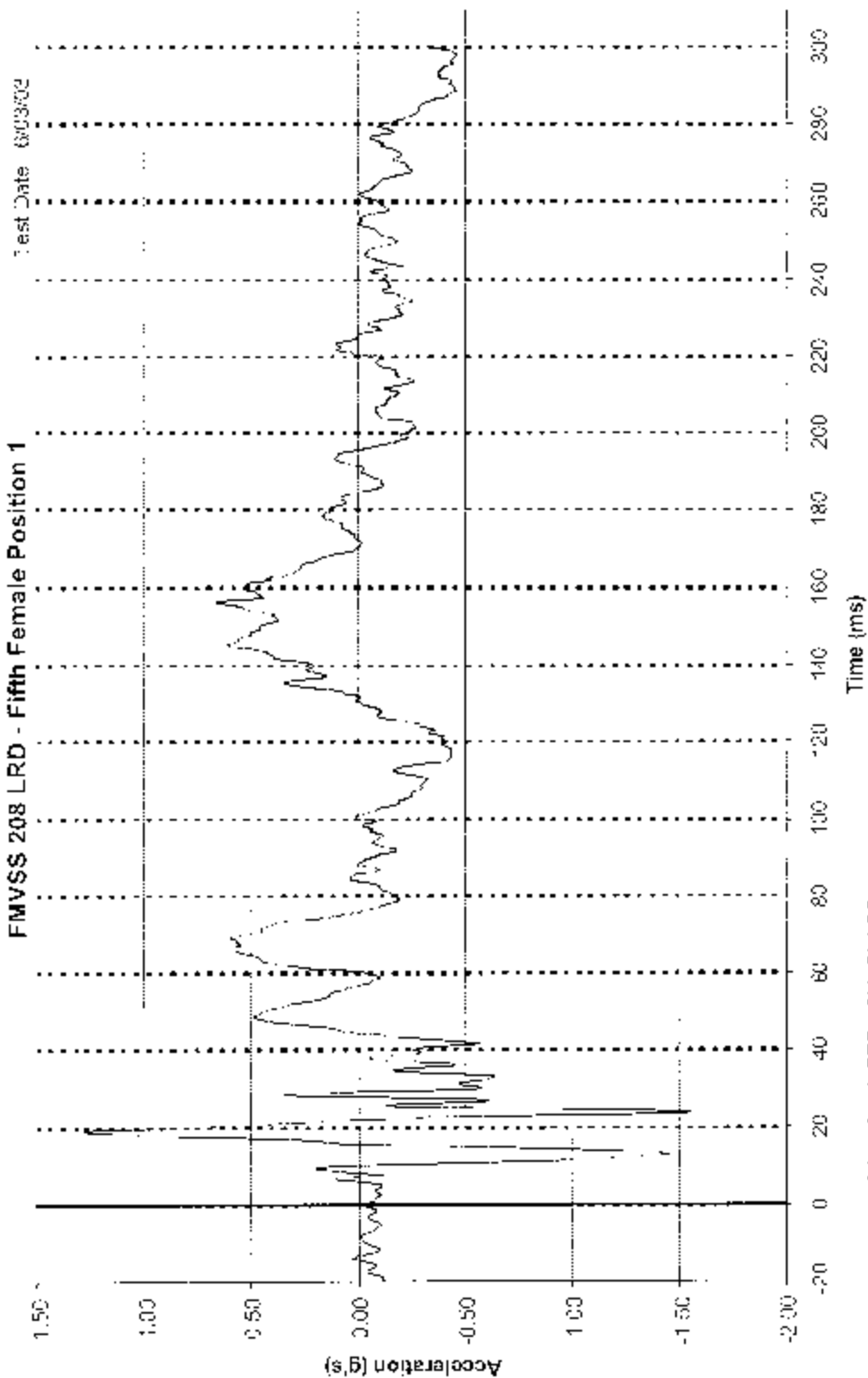
C35306 / 2003 Honda Odyssey
 Neck Flexion / Compression
 FMVSS 208 LRD - Fifth Female Position 1



C35306 / 2003 Honda Odyssey
Chest X-Axis Acceleration - CSTXG
FMVSS 208 LRD - Fifth Female Position 1



C35306 / 2003 Honda Odyssey
Chest Y-Axis Acceleration - CSTYG
FMVSS 208 LRD - Fifth Female Position 1

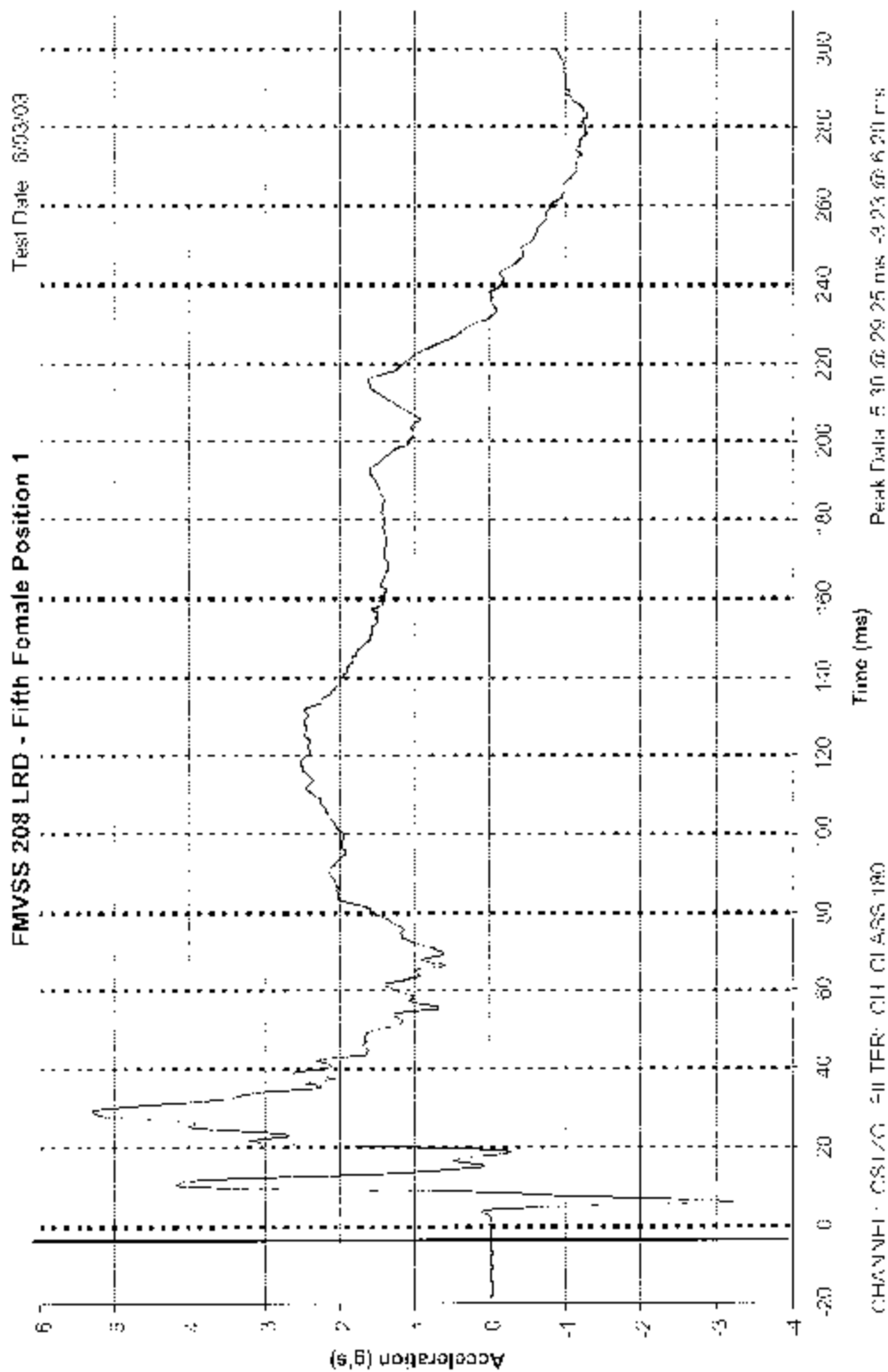


Peak Data: 1.27 @ 19.20 ms; -1.55 @ 23.85 ms

CHANNEL: CSTYG FILTER: CH. CLASS

Test Date: 05/03/02

C35306 / 2003 Honda Odyssey
 Chest Z-Axis Acceleration - CSTZG
 FMVSS 208 LRD - Fifth Female Position 1



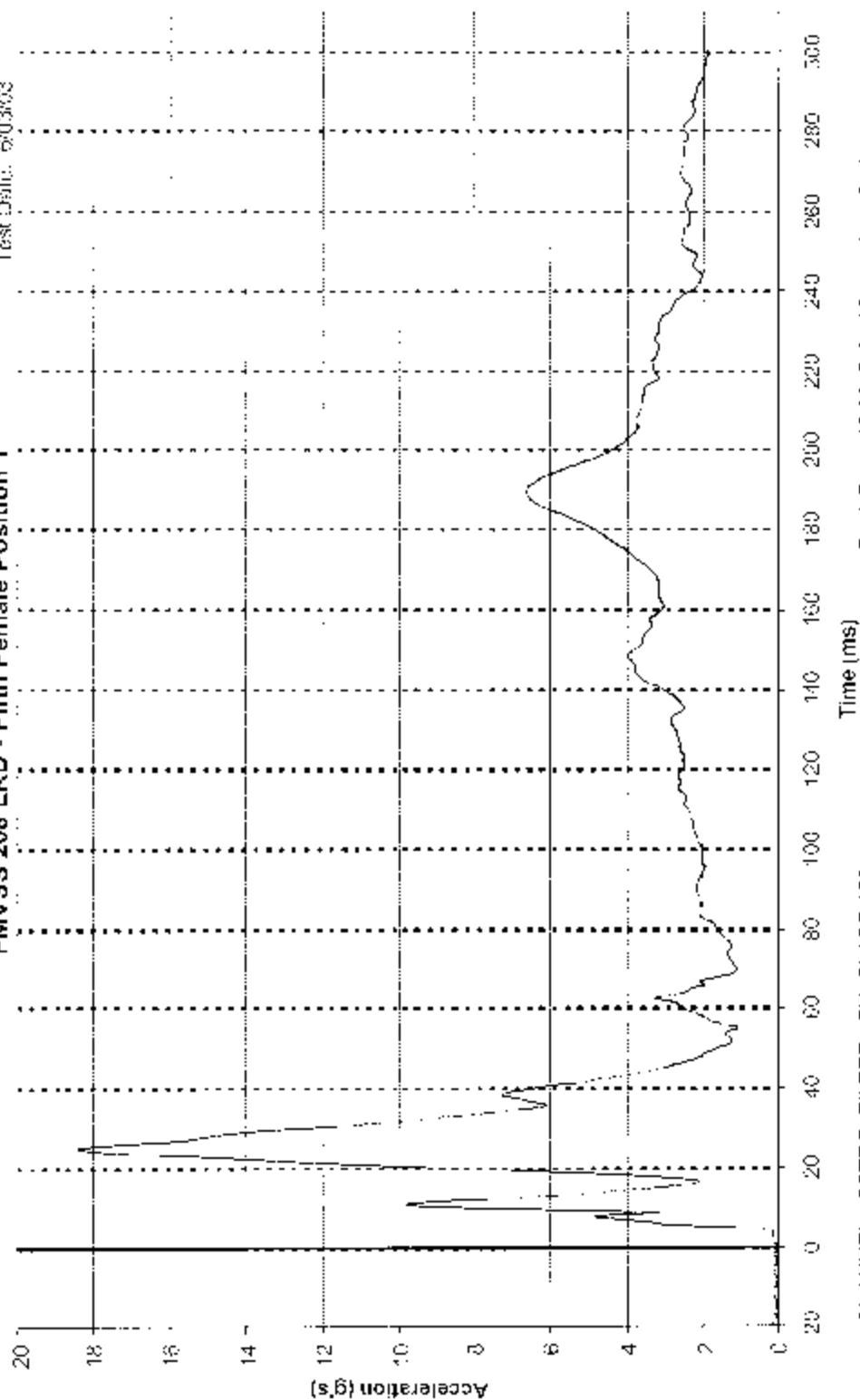
CHANN1: CSTZG FILTER: CH CLASS: 180

C35306 / 2003 Honda Odyssey

Chest Resultant - CSTRG

FMVSS 208 LRD - Fifth Female Position 1

Test Date: 6/03/03

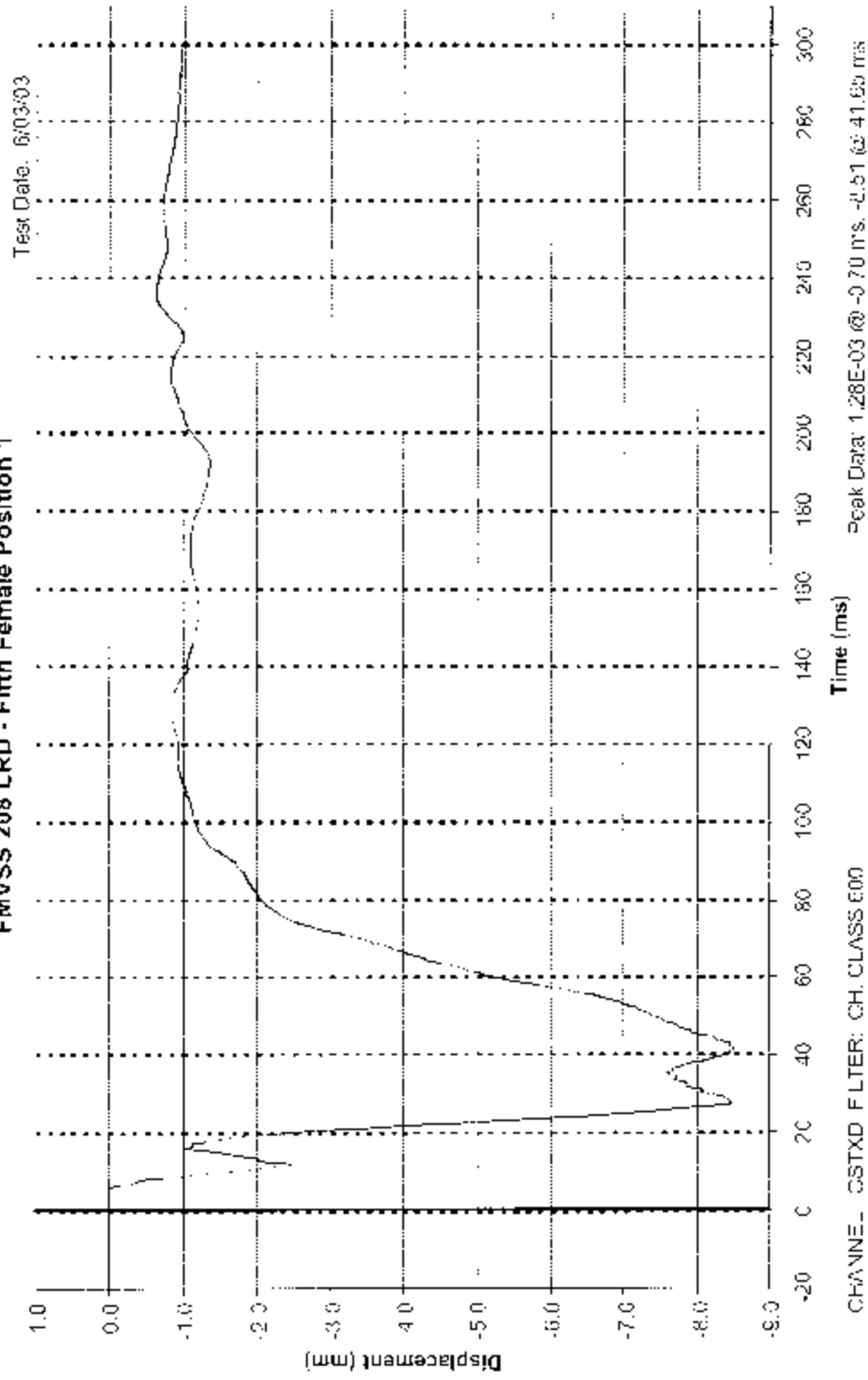


CHANNEL: CSTRG FILTER: CH. CLASS 180

Time (ms)

Peak Data: 18.38 (24.95 ms, 0.15 @ 8.05 ms)

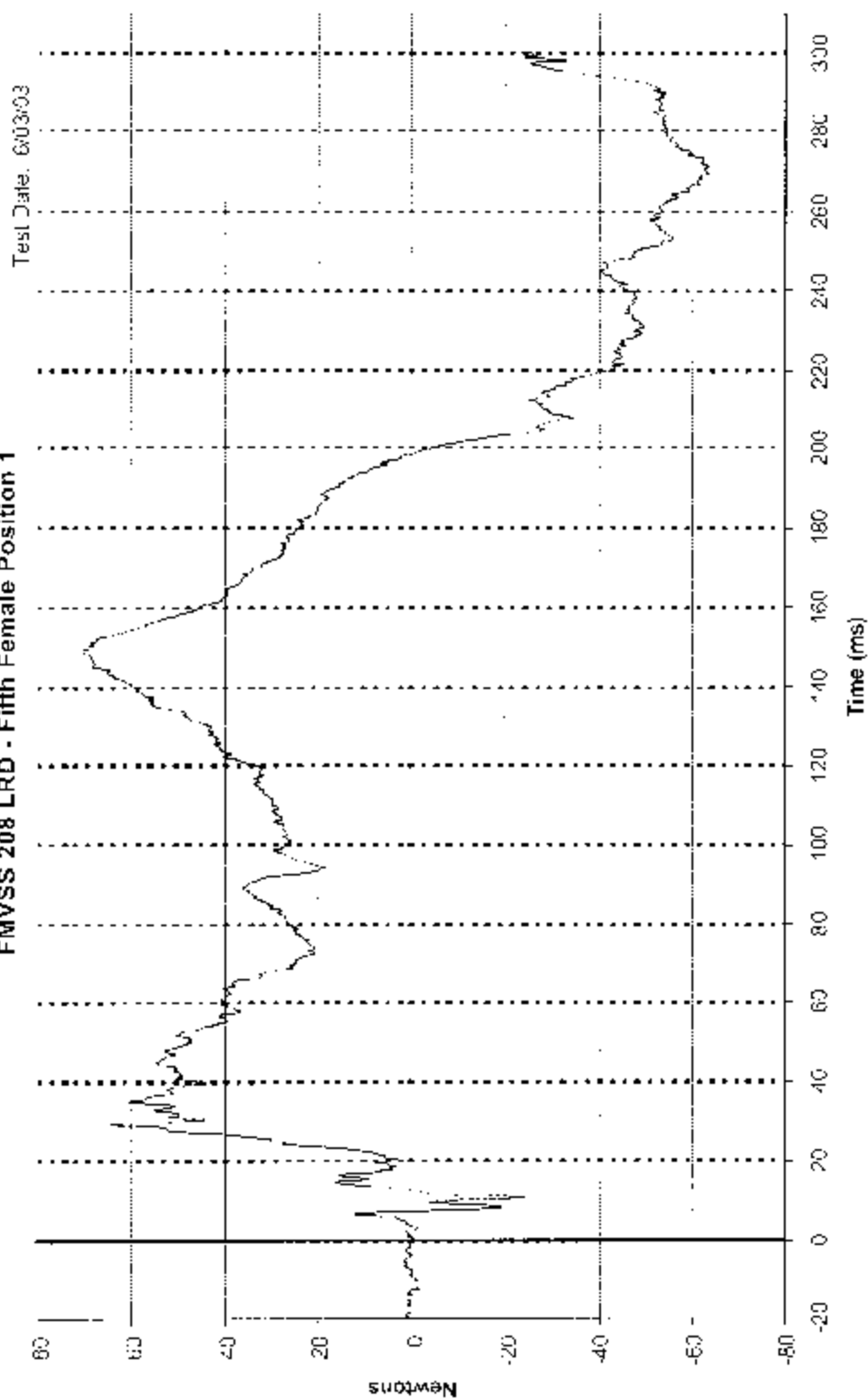
C35306 / 2003 Honda Odyssey
Chest Deflection - CSTXD
FMVSS 208 LRD - Fifth Female Position 1



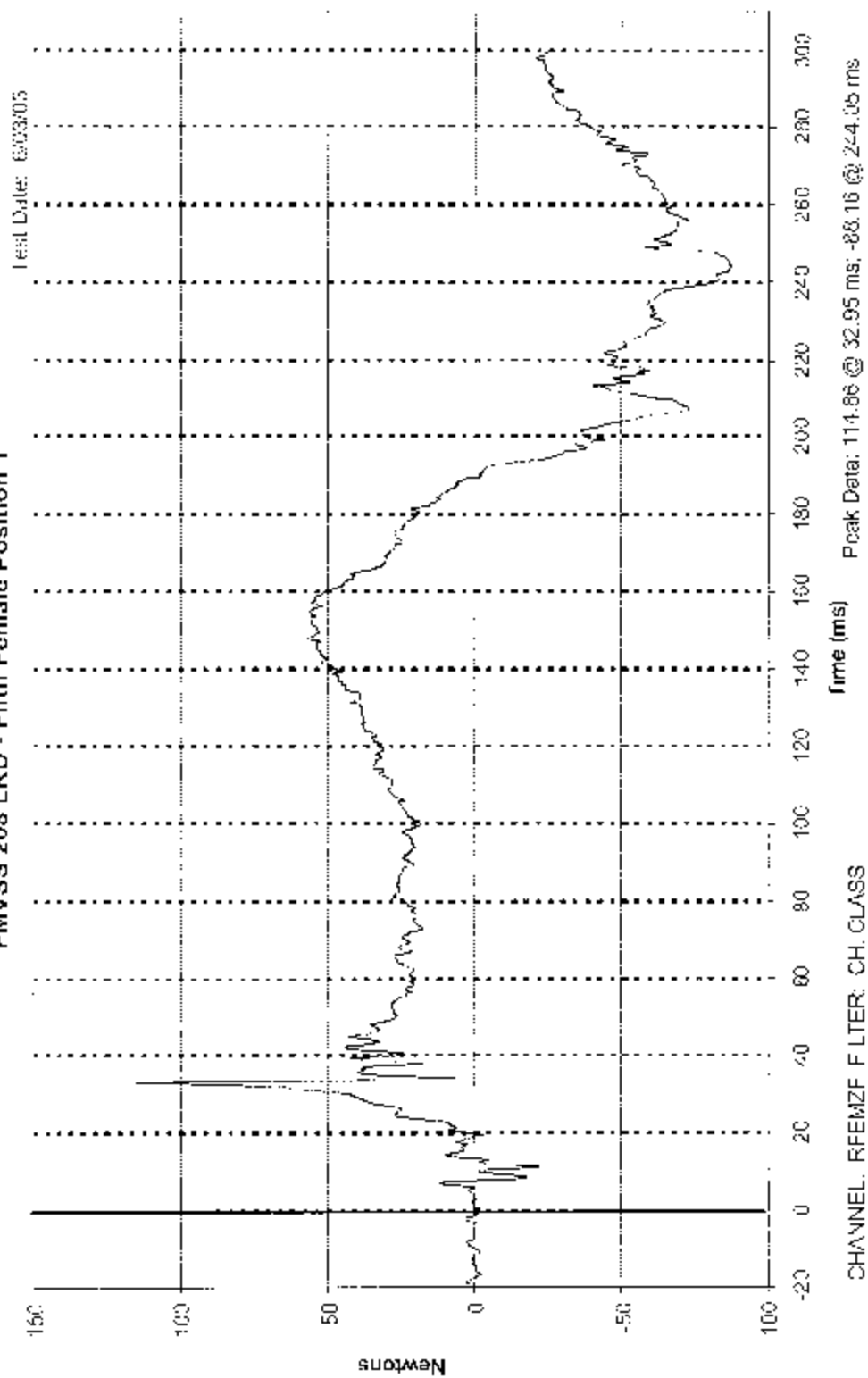
C35306 / 2003 Honda Odyssey

Left Femur FZ - LFEMZF

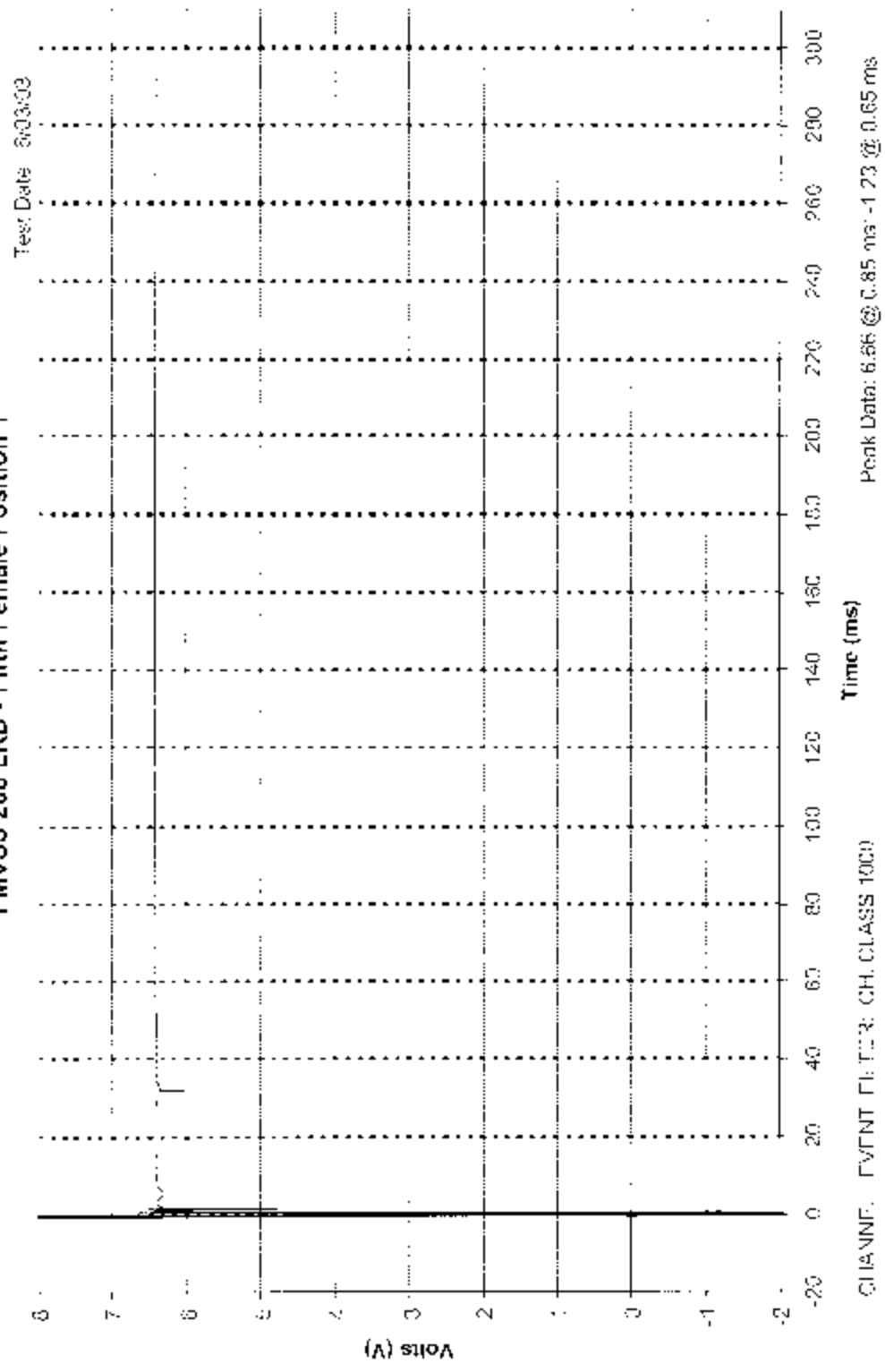
FMVSS 208 LRD - Fifth Female Position 1



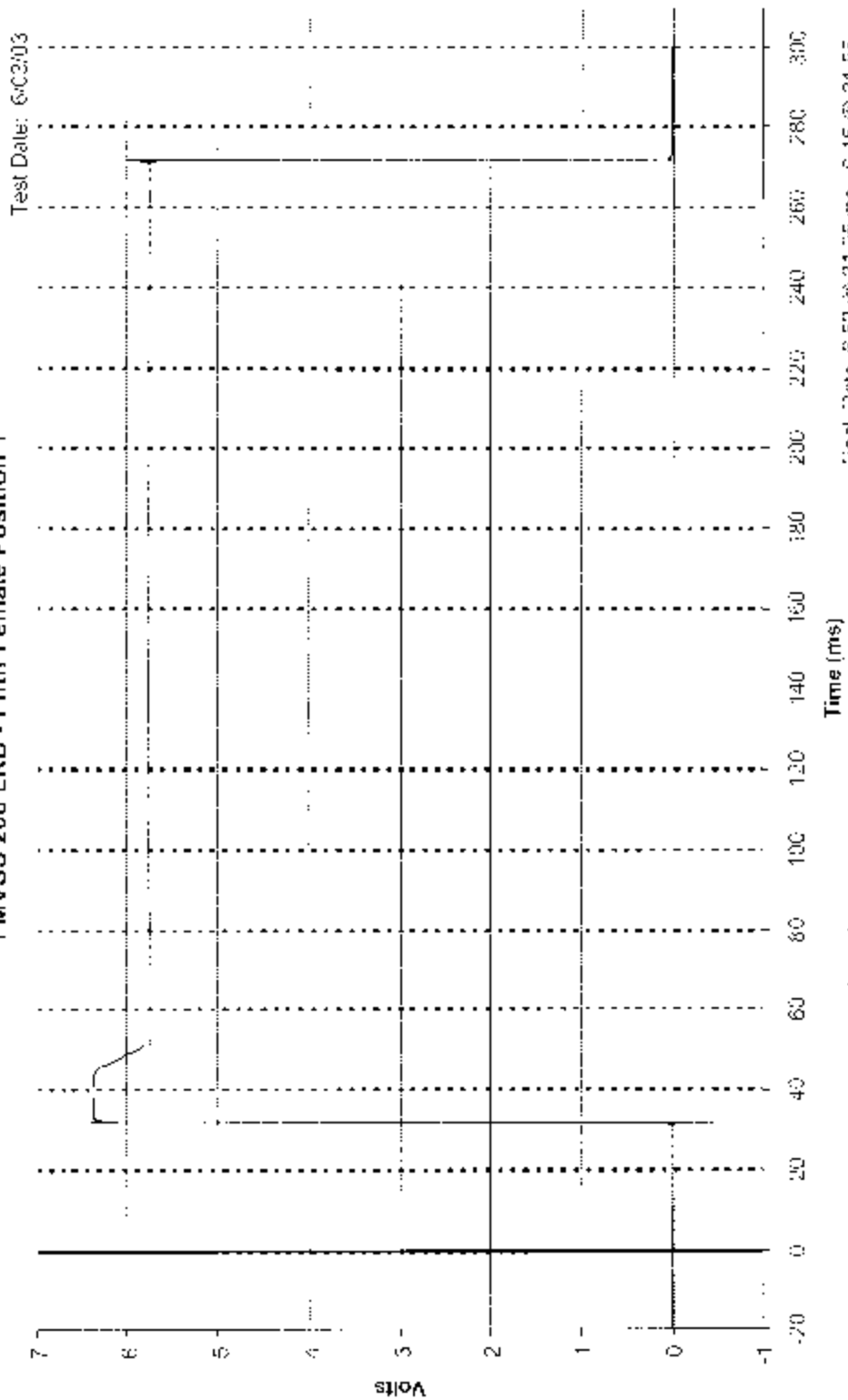
C35306 / 2003 Honda Odyssey
Right Femur Force FZ - RFEMZF
FMVSS 208 LRD - Fifth Female Position 1



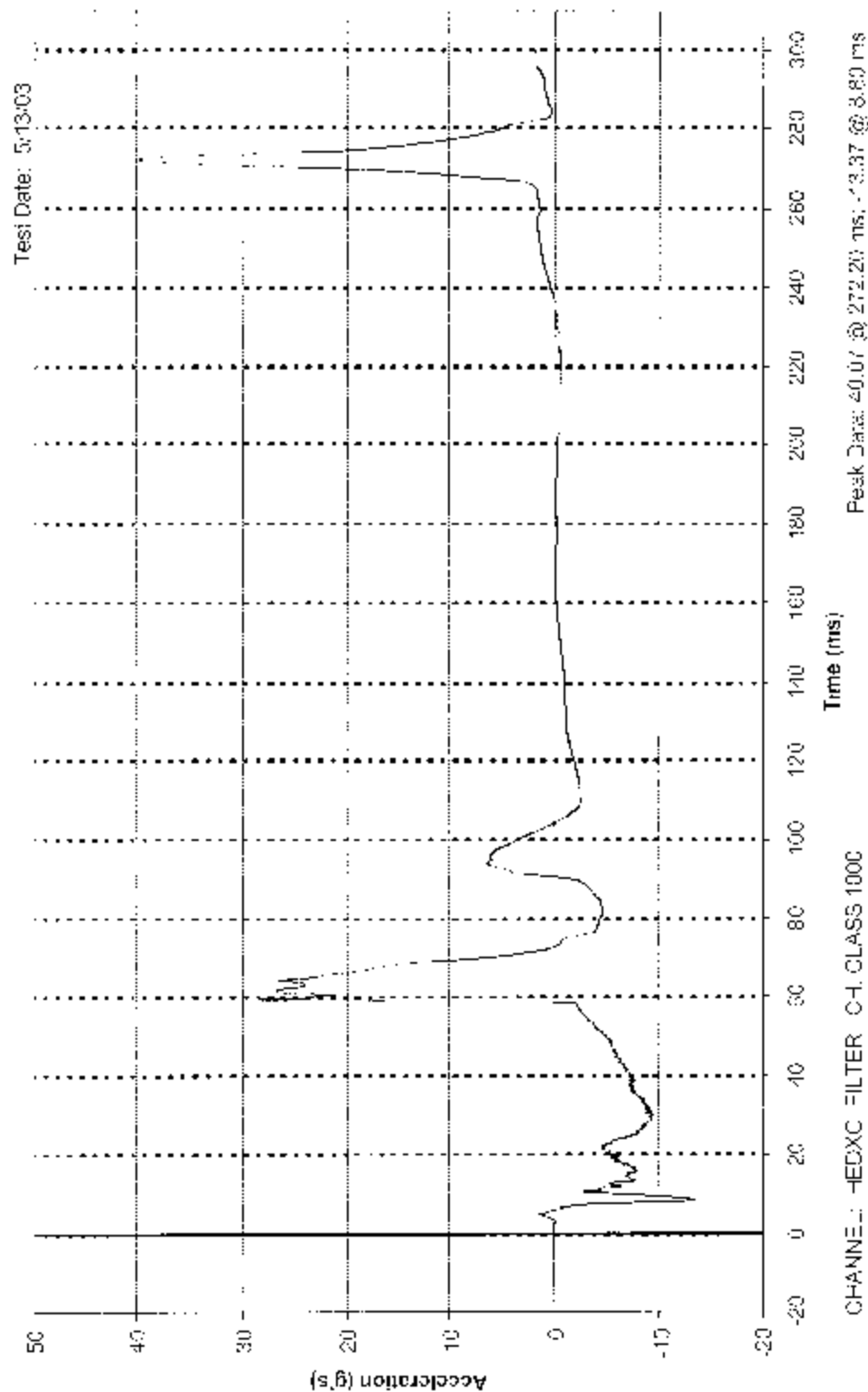
C35306 / 2003 Honda Odyssey
EVENT Channel - EVENT
FMVSS 208 LRD - Fifth Female Position 1



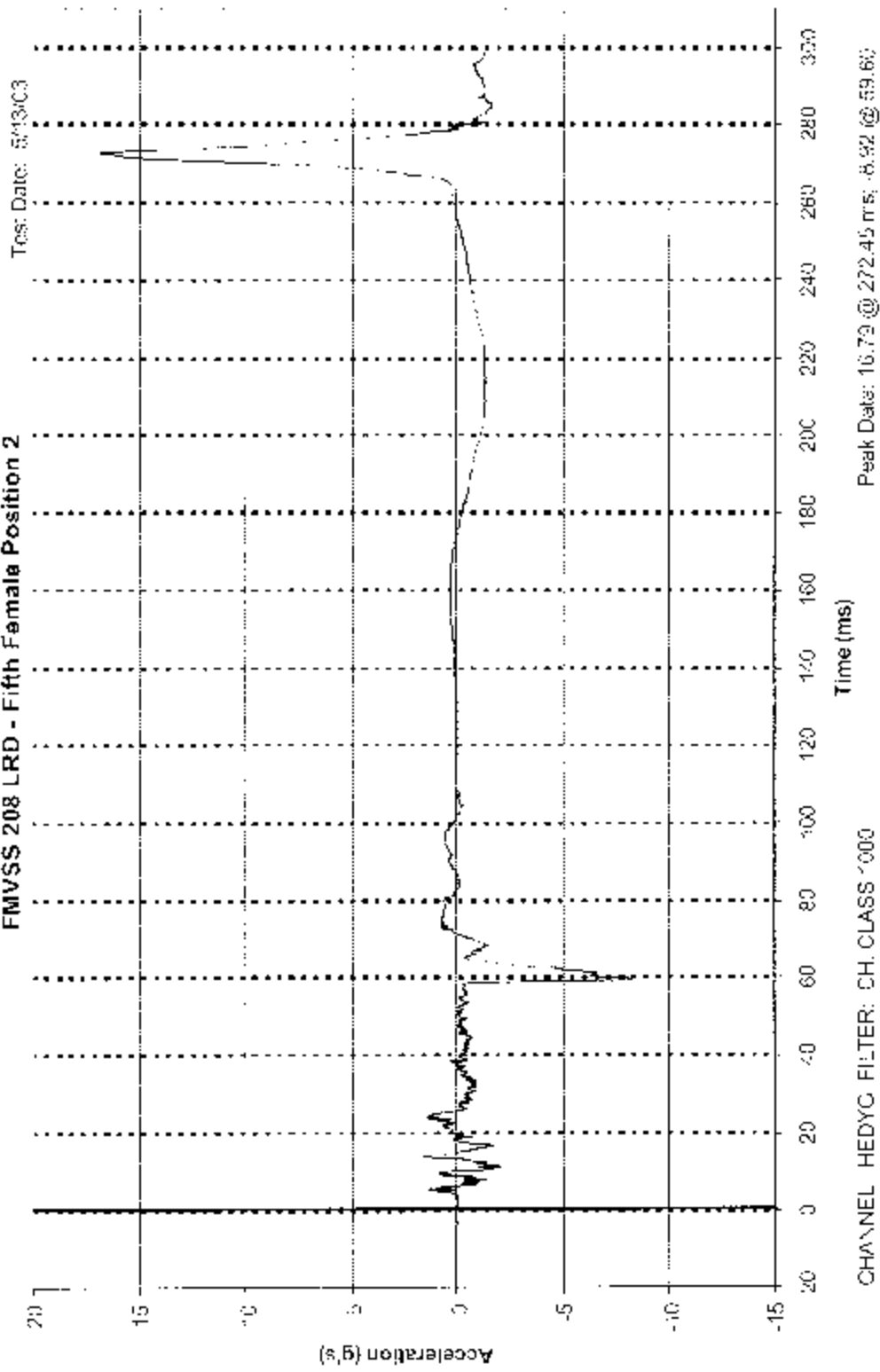
C35306 / 2003 Honda Odyssey
Delay Event Channel - EVENT2
FMVSS 208 LRD - Fifth Female Position 1



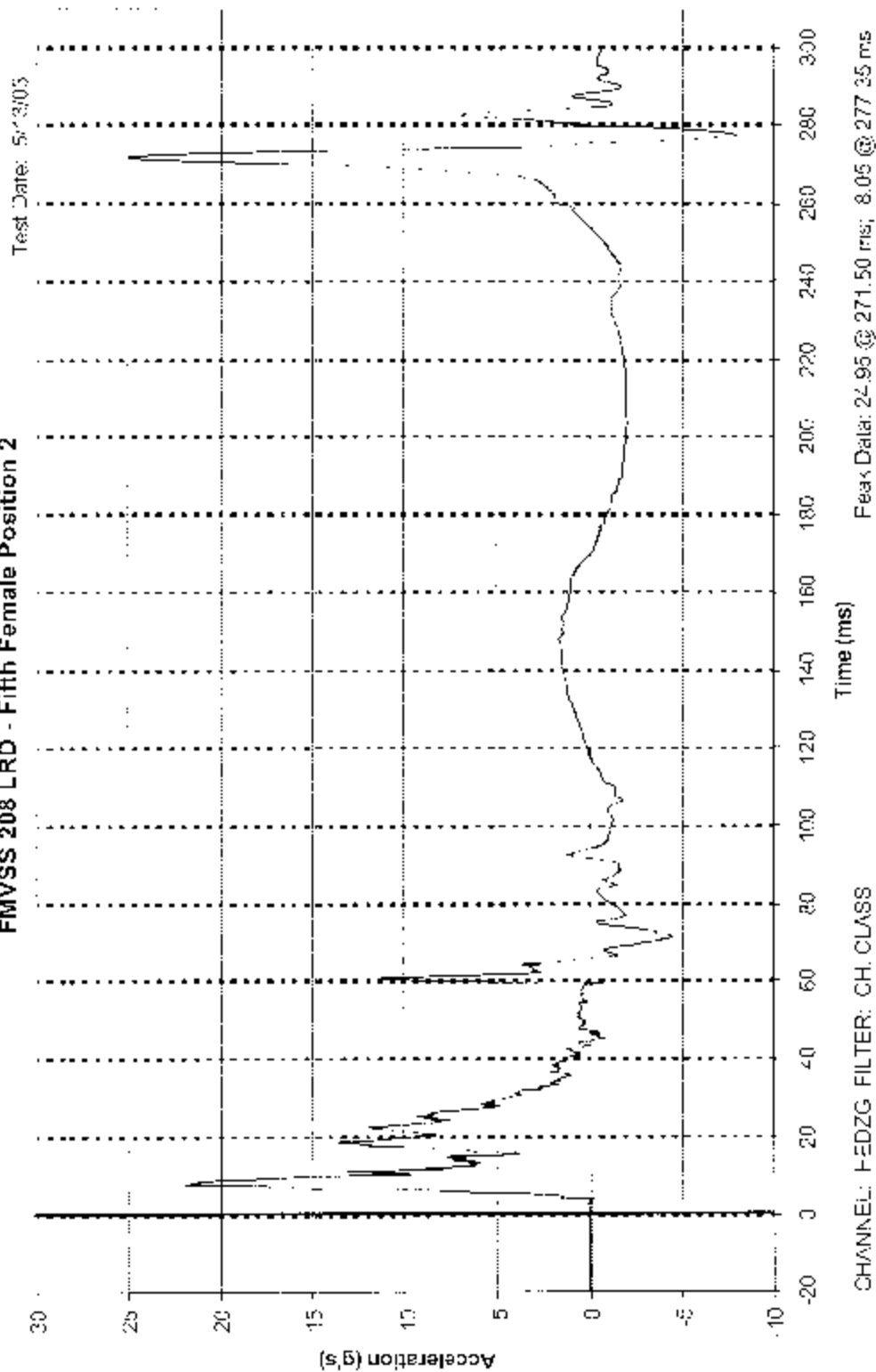
C35306 / 2003 Honda Odyssey
Head X-Axis Acceleration - HEDXG
FMVSS 208 LRD - Fifth Female Position 2



C35306 / 2003 Honda Odyssey
Head Y-Axis Acceleration - HEDYG
FMVSS 208 LRD - Fifth Female Position 2



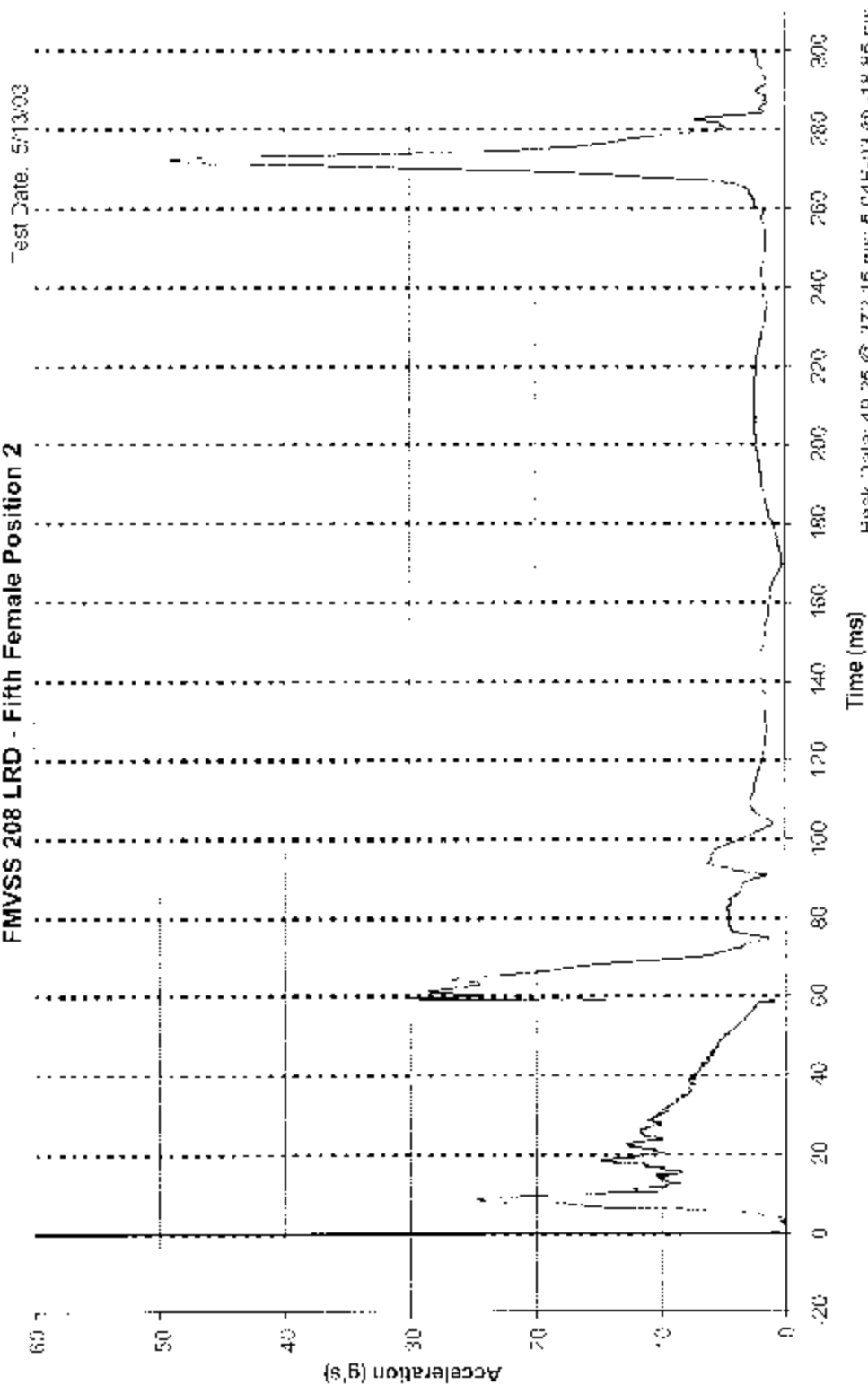
C35306 / 2003 Honda Odyssey
 Head Z-Axis Acceleration - HEDZG
 FMVSS 208 LRD - Fifth Female Position 2



C35306 / 2003 Honda Odyssey

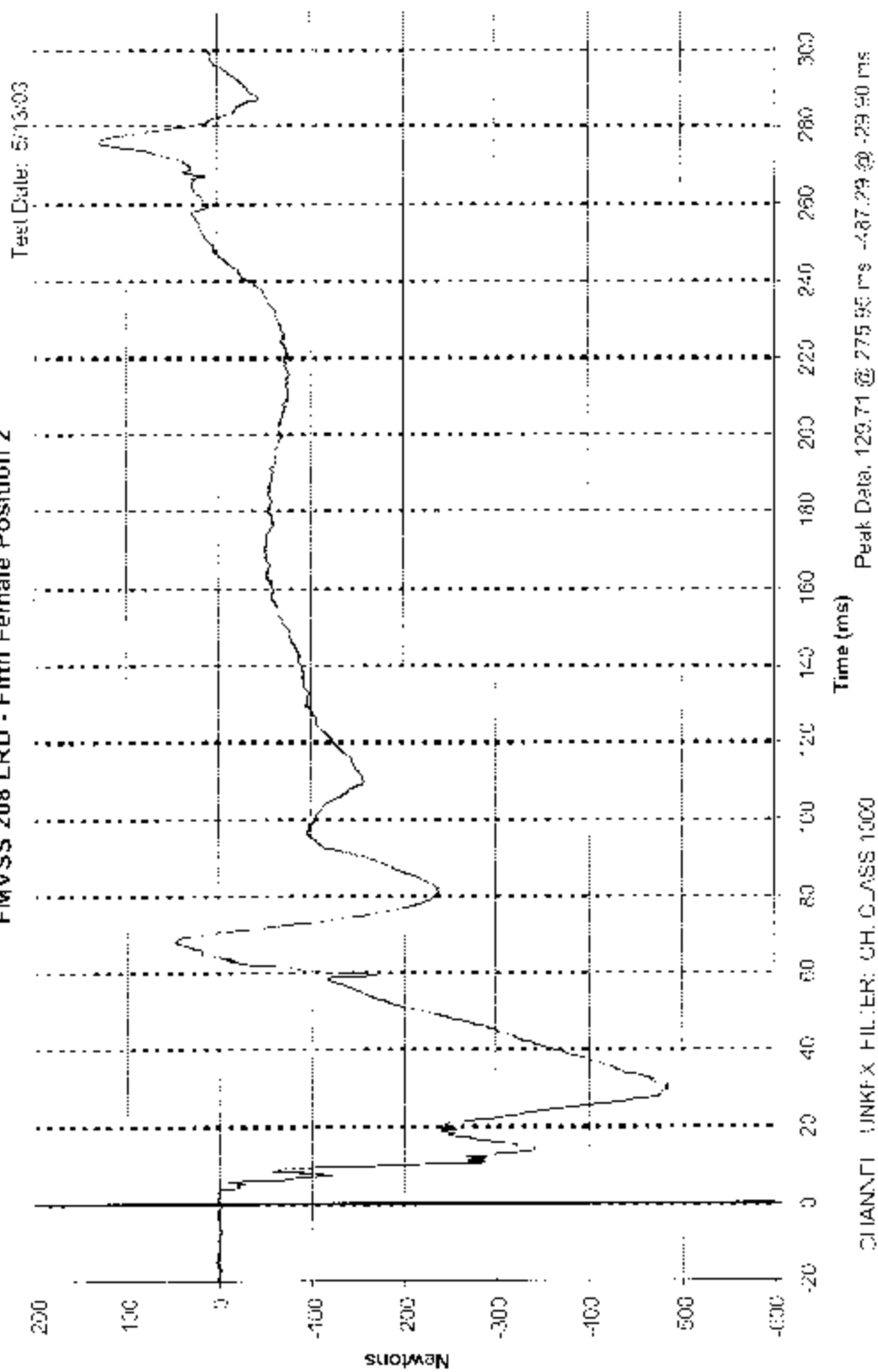
Head Resultant - HEDRG

FMVSS 208 LRD - Fifth Female Position 2

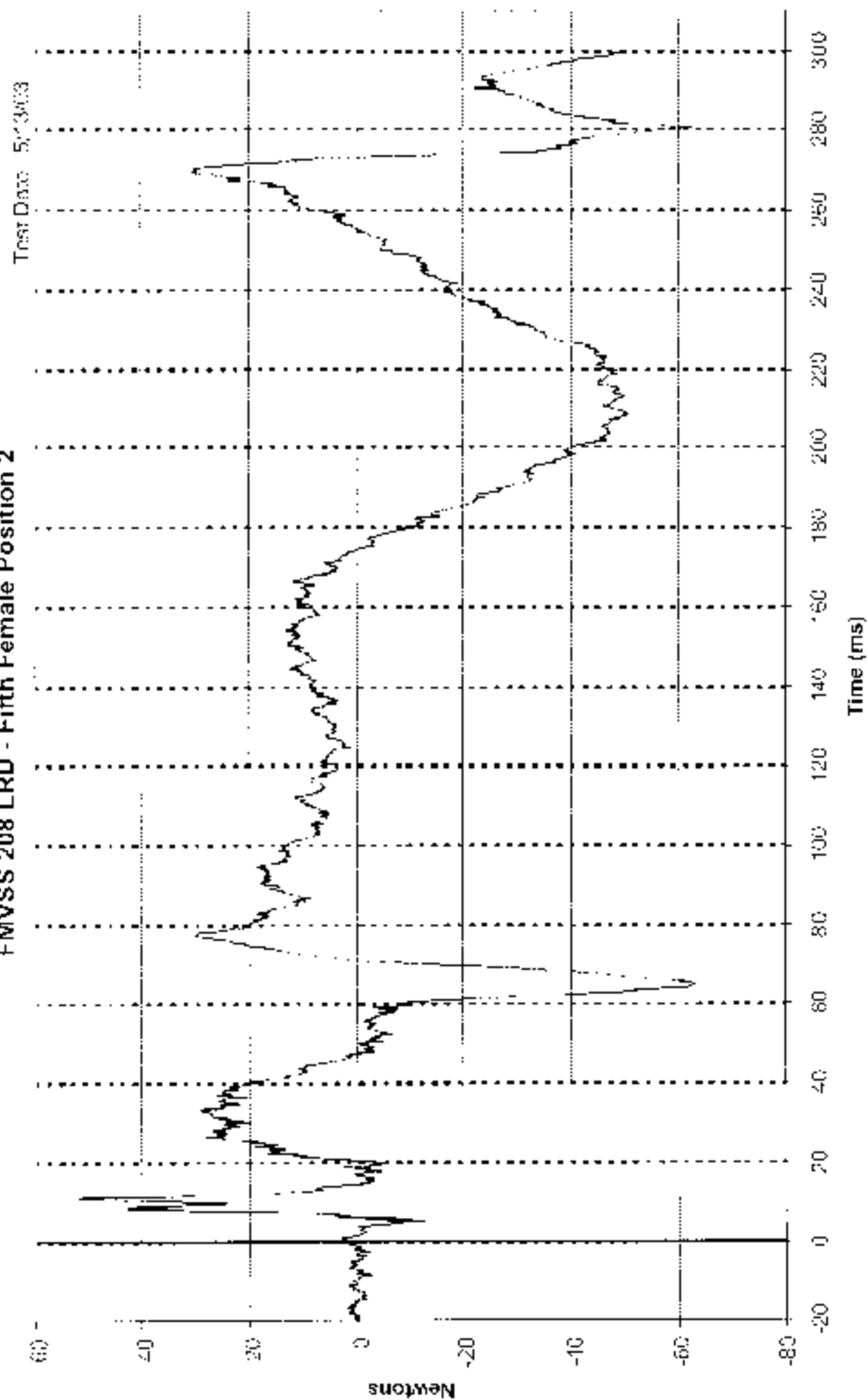


CHANNEL: HEDRG FILTER: CH1 CLASS: 1000

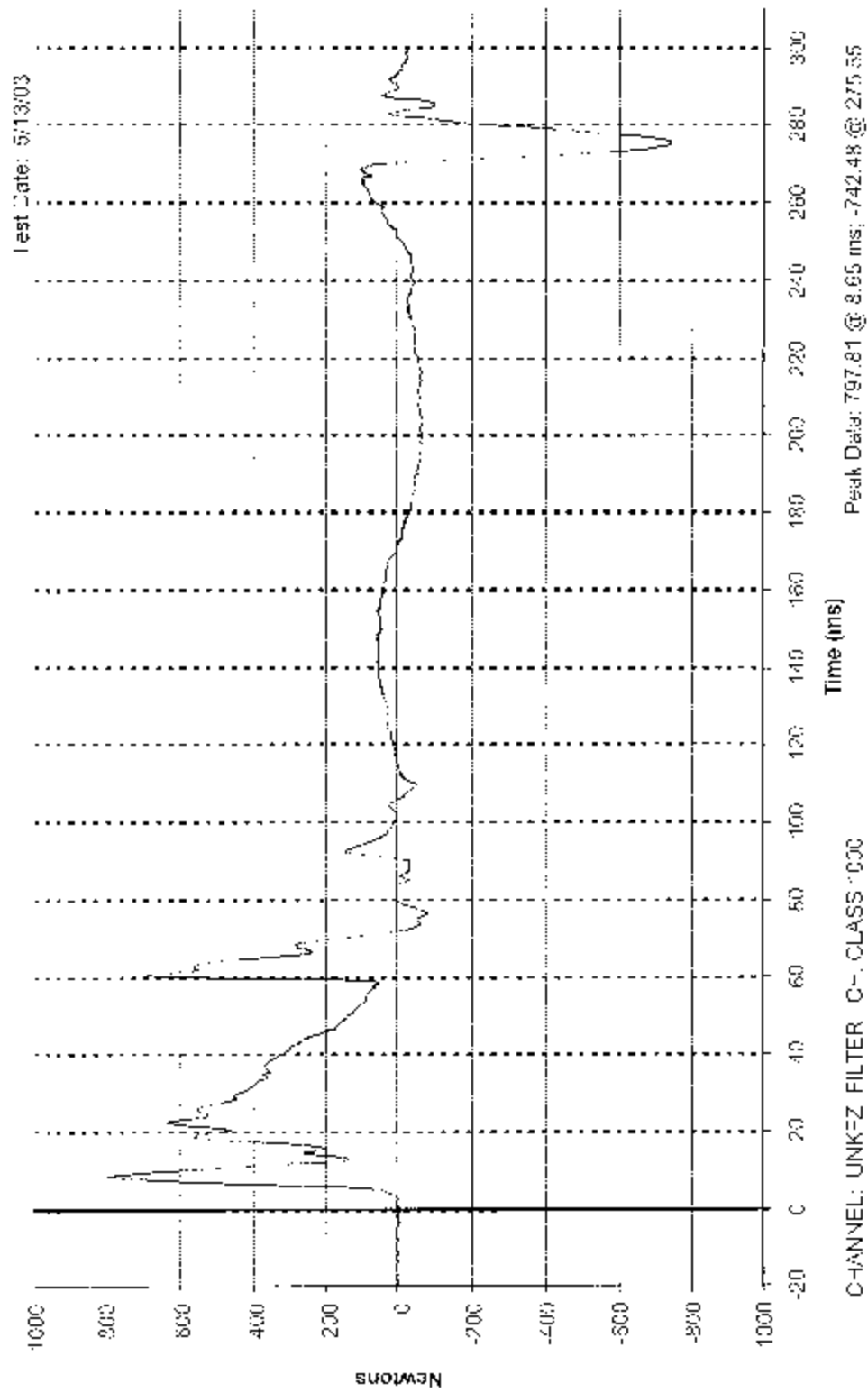
C35306 / 2003 Honda Odyssey
 Upper Neck FX - UNKFX
 FMVSS 208 LRD - Fifth Female Position 2



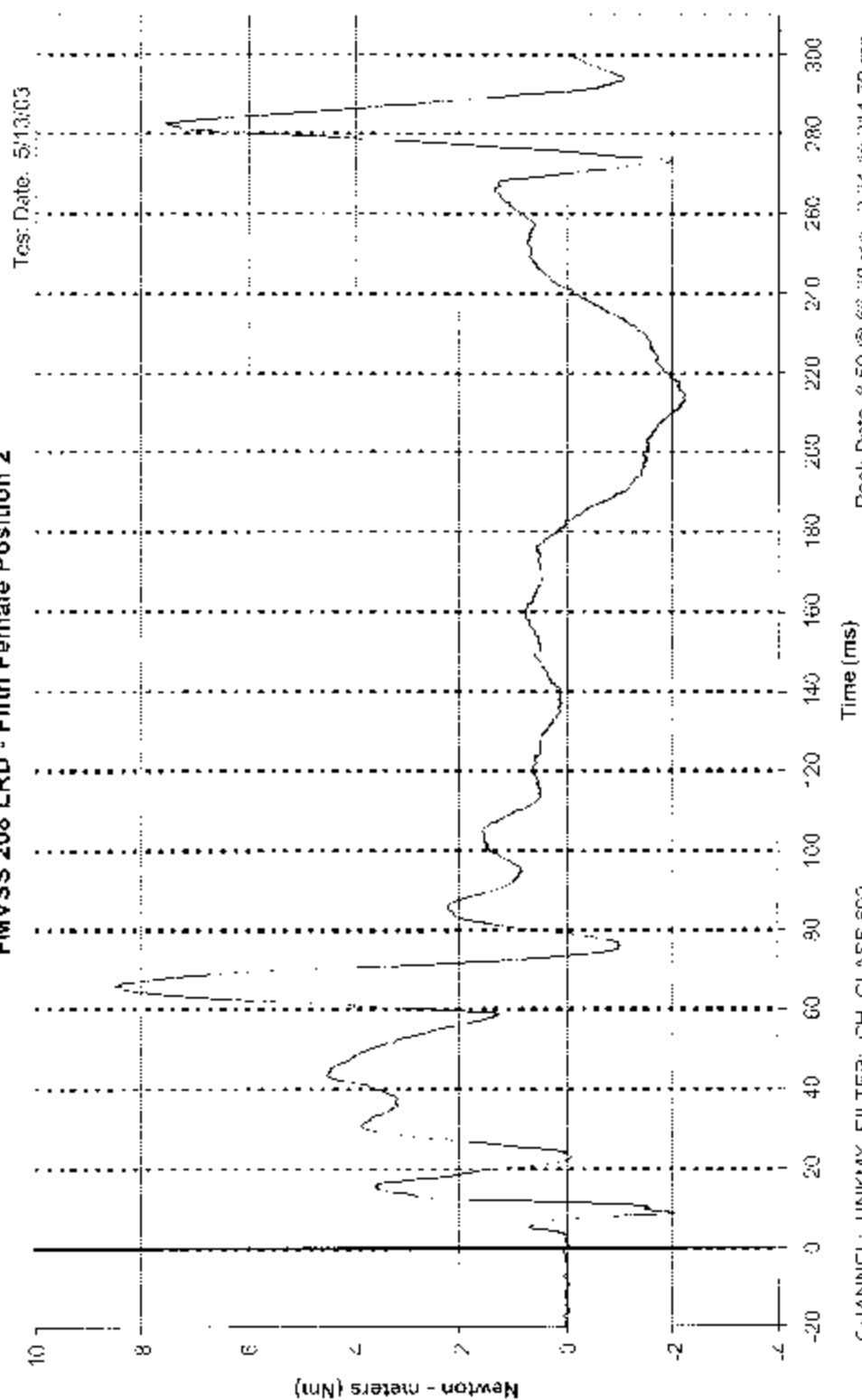
C35306 / 2003 Honda Odyssey
Upper Neck FY - UNKFY
FMVSS 208 LRD - Fifth Female Position 2



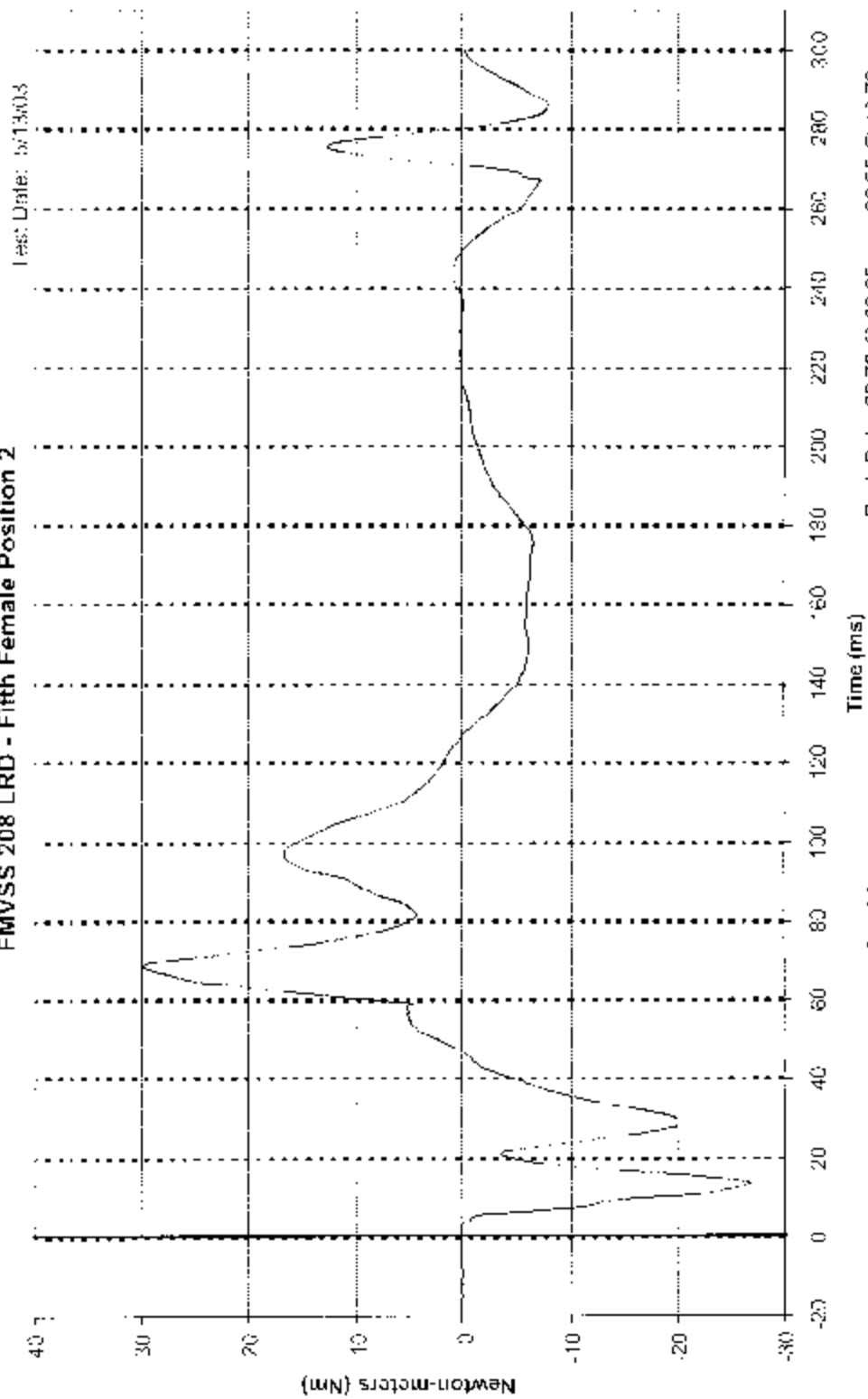
C35306 / 2003 Honda Odyssey
Upper Neck FZ - UNKFZ
FMVSS 208 LRD - Fifth Female Position 2



C35306 / 2003 Honda Odyssey
Upper Neck MX - UNKMX
FMVSS 208 LRD - Fifth Female Position 2



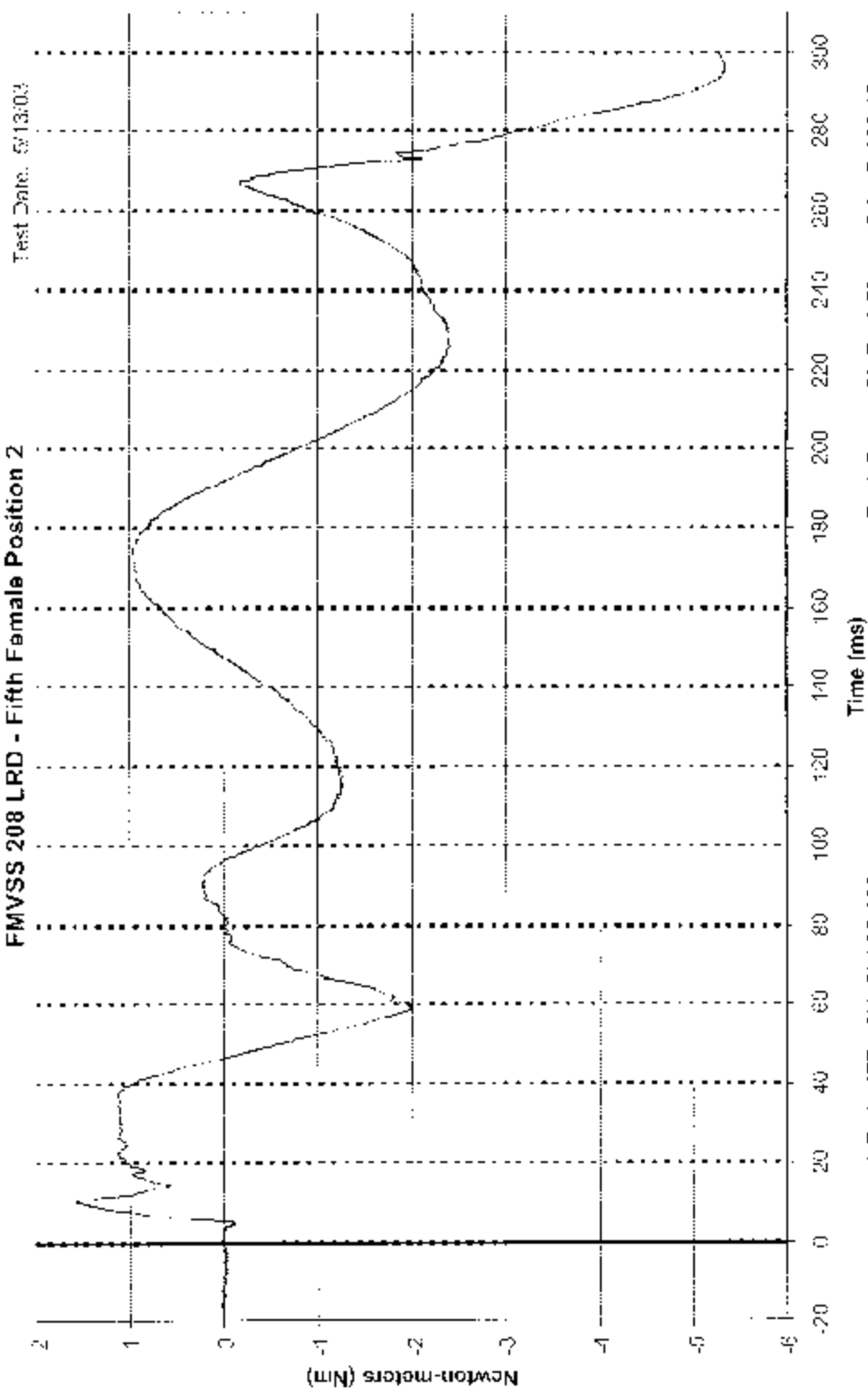
C35306 / 2003 Honda Odyssey
Upper Neck MY - UNKMY
FMVSS 208 LRD - Fifth Female Position 2



C35306 / 2003 Honda Odyssey

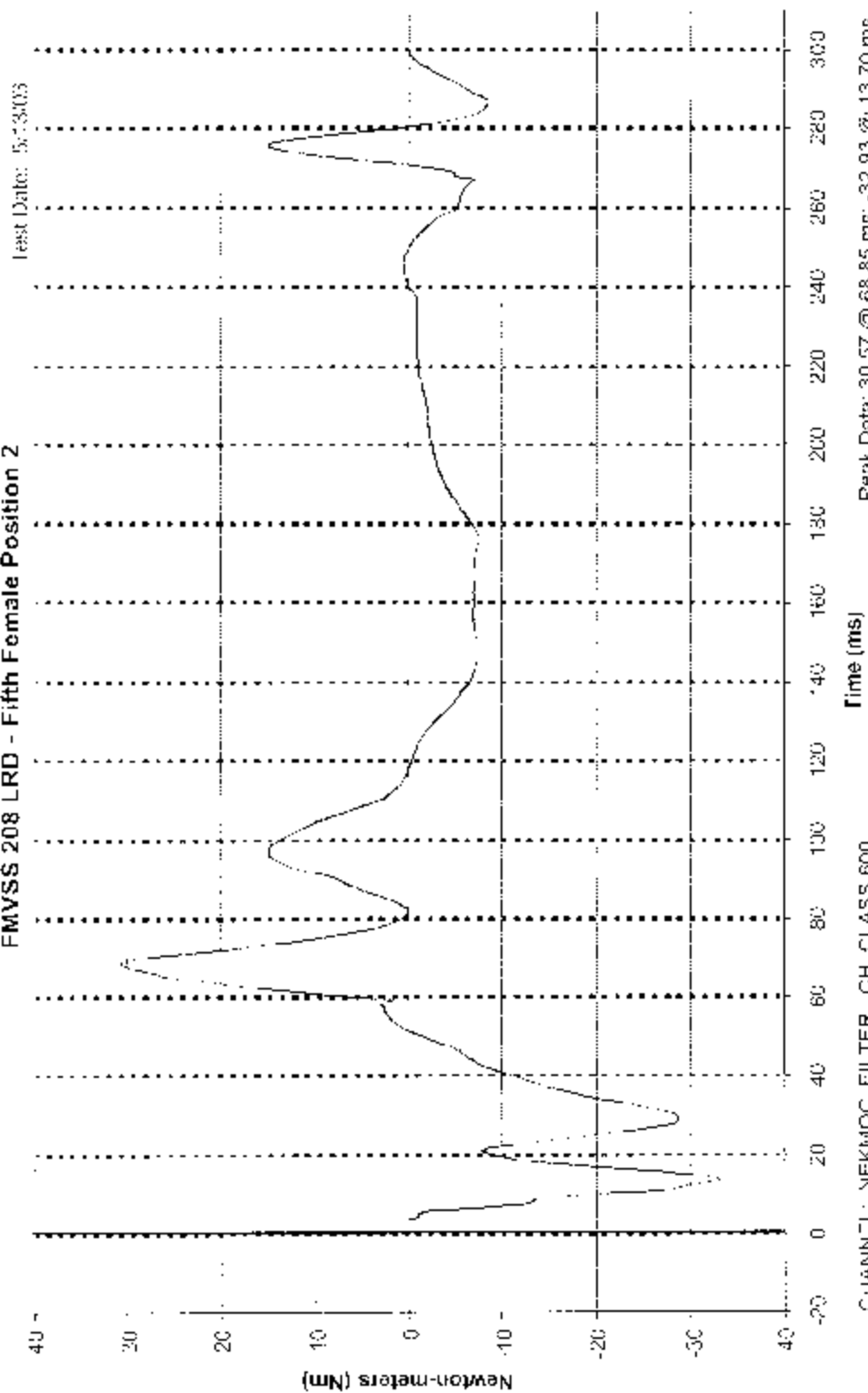
Upper Neck MZ - UNKMZ

FMVSS 208 LRD - Fifth Female Position 2



(8/-9)

C35306 / 2003 Honda Odyssey
 Upper Neck Occipital - NEKMOC
 FMVSS 208 LRD - Fifth Female Position 2

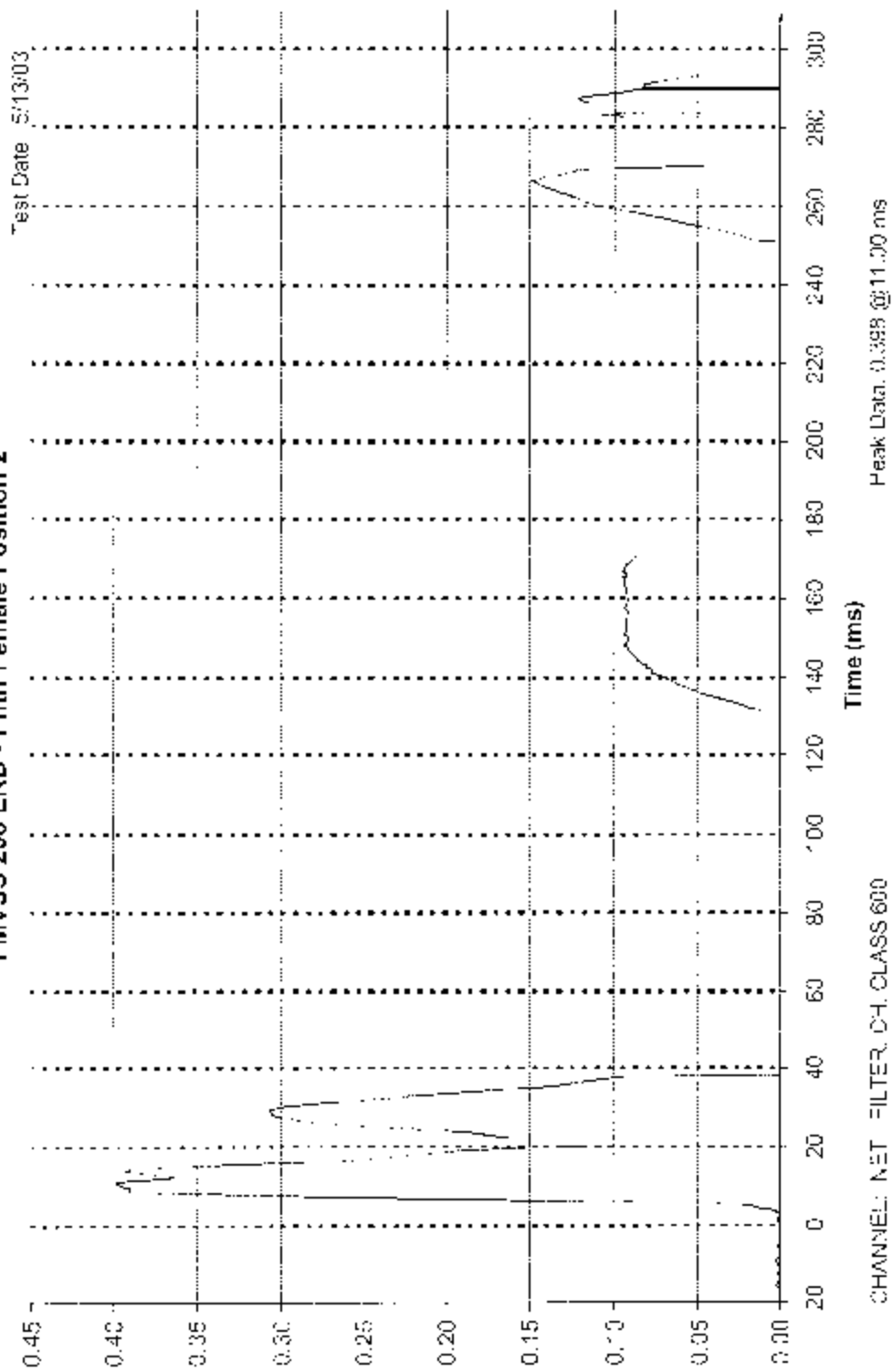


CHANNEL: NEKMOC Filt TFR CH CLASS 600

Peak Data: 30.57 @ 68.85 ms; -32.93 @ 13.70 ms

Test Date: 5/13/03

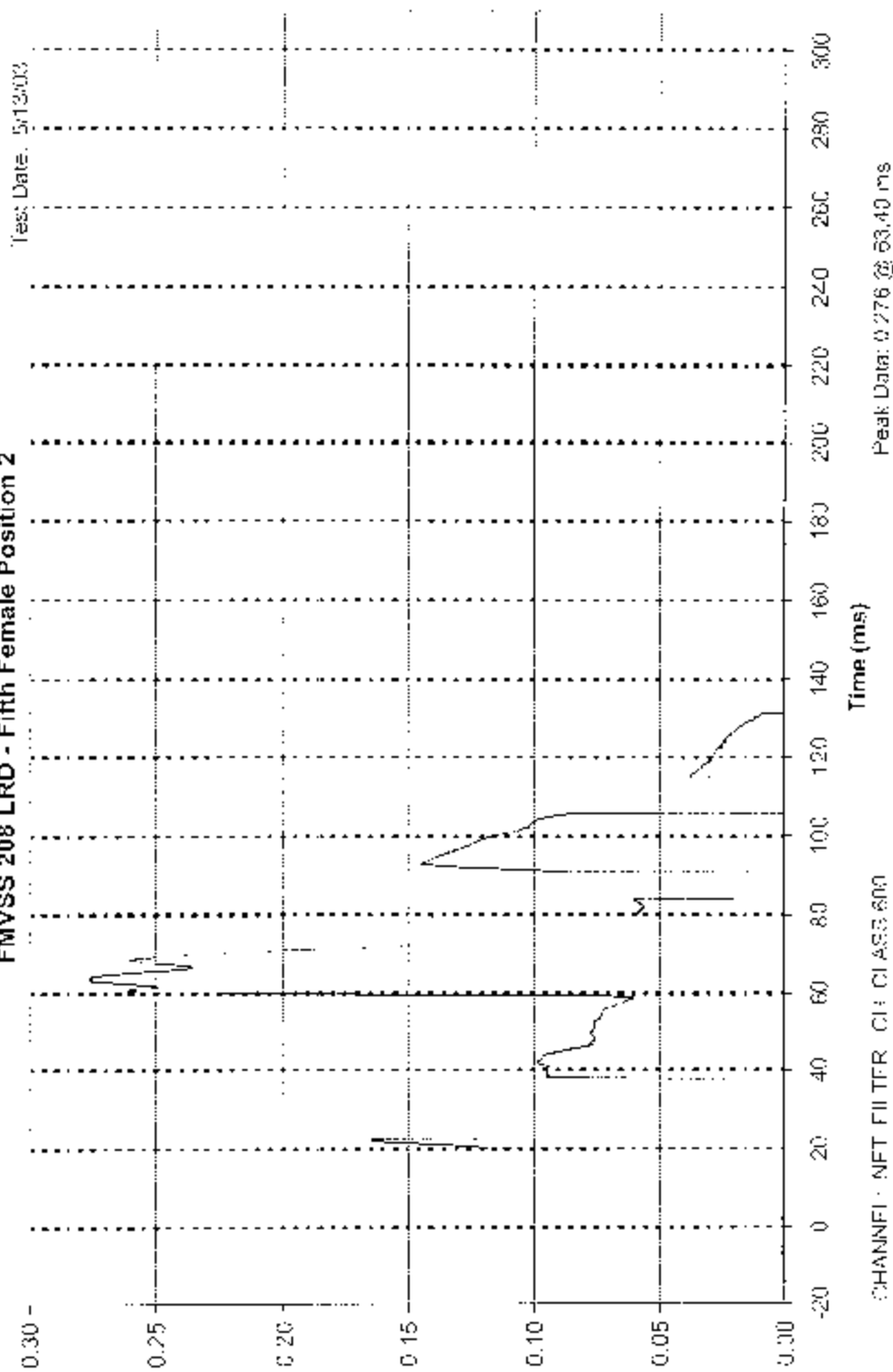
C35306 / 2003 Honda Odyssey
Neck Tension / Extension
FMVSS 208 LRD - Fifth Female Position 2



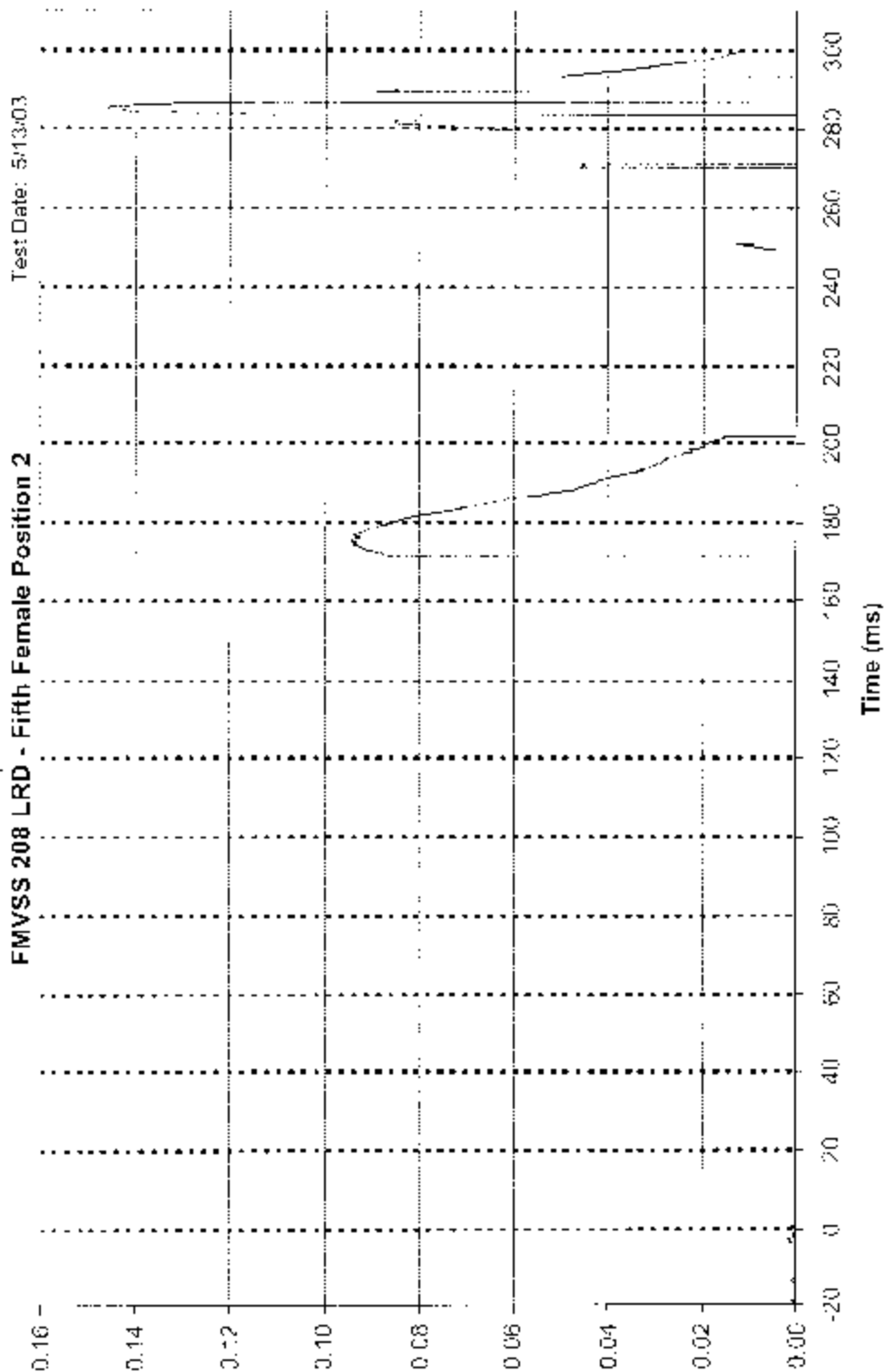
C35306 / 2003 Honda Odyssey

Neck Flexion / Tension

FMVSS 208 LRD - Fifth Female Position 2

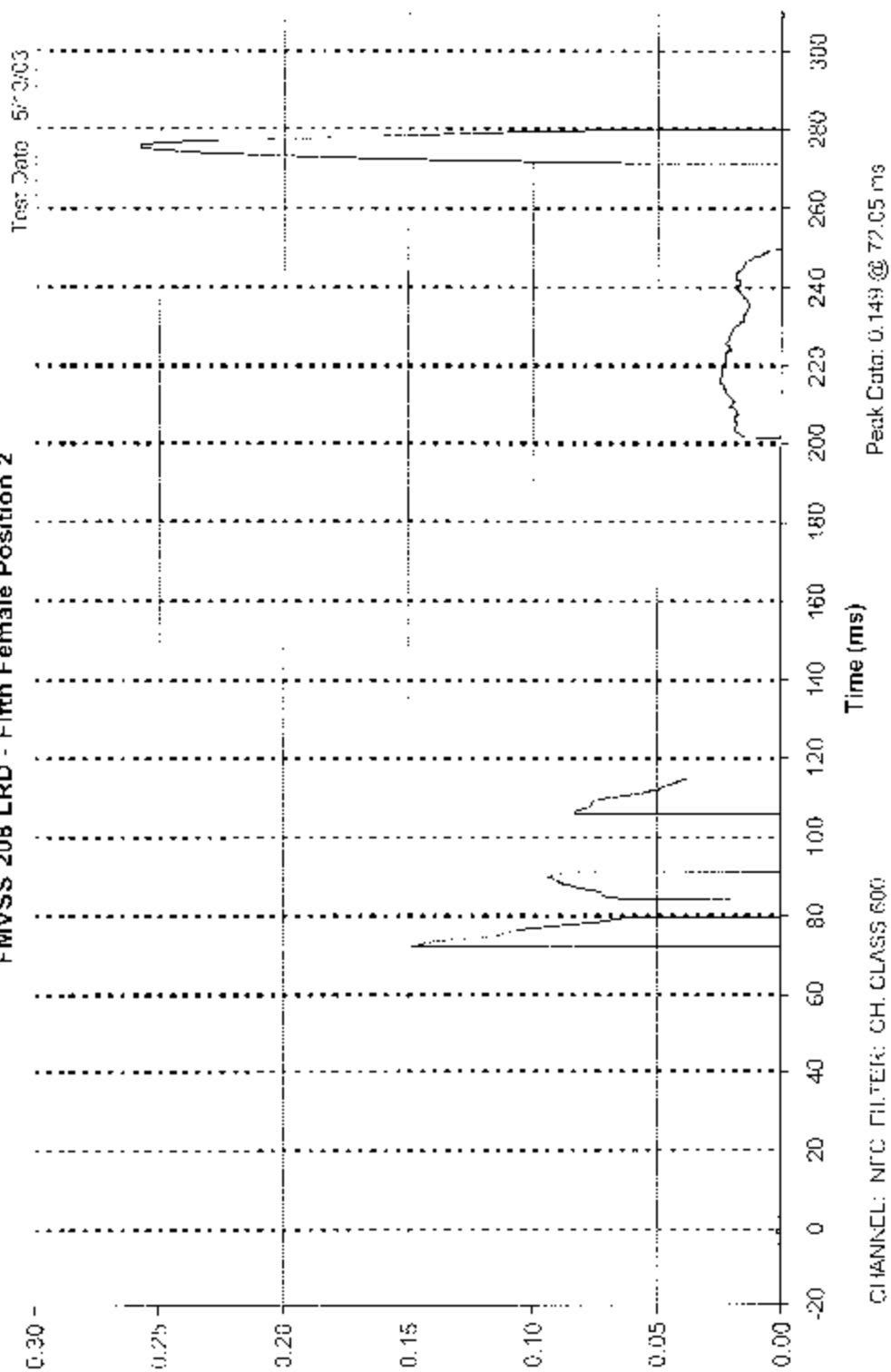


C35306 / 2003 Honda Odyssey
 Neck Compression / Extension
 FMVSS 208 LRD - Fifth Female Position 2

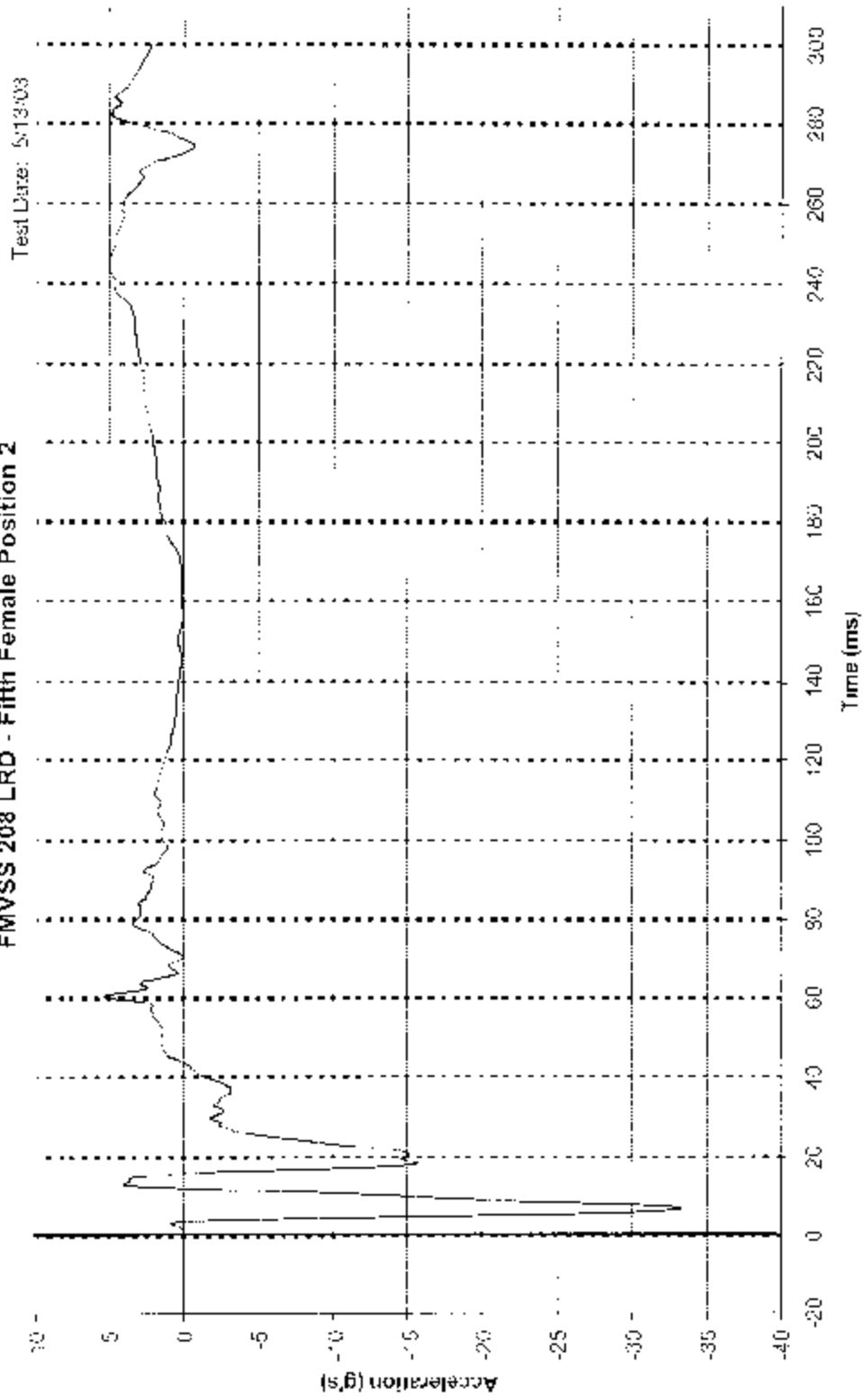


CHANNEL: NEC FILTER CH: CLASS 500

C35306 / 2003 Honda Odyssey
Neck Flexion / Compression
FMVSS 208 LRD - Fifth Female Position 2

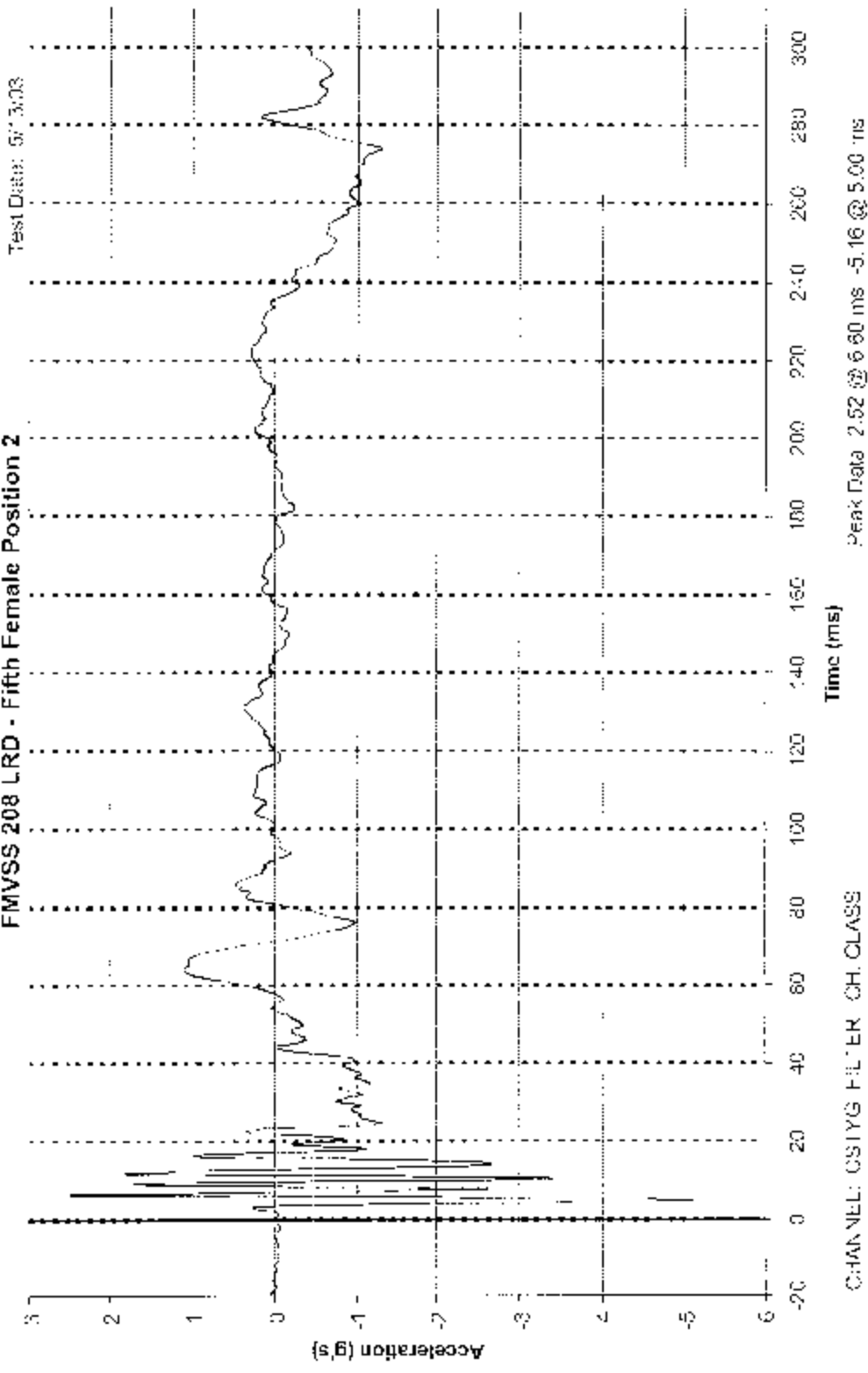


C35306 / 2003 Honda Odyssey
 Chest X-Axis Acceleration - CSTXG
 FMVSS 208 LRD - Fifth Female Position 2

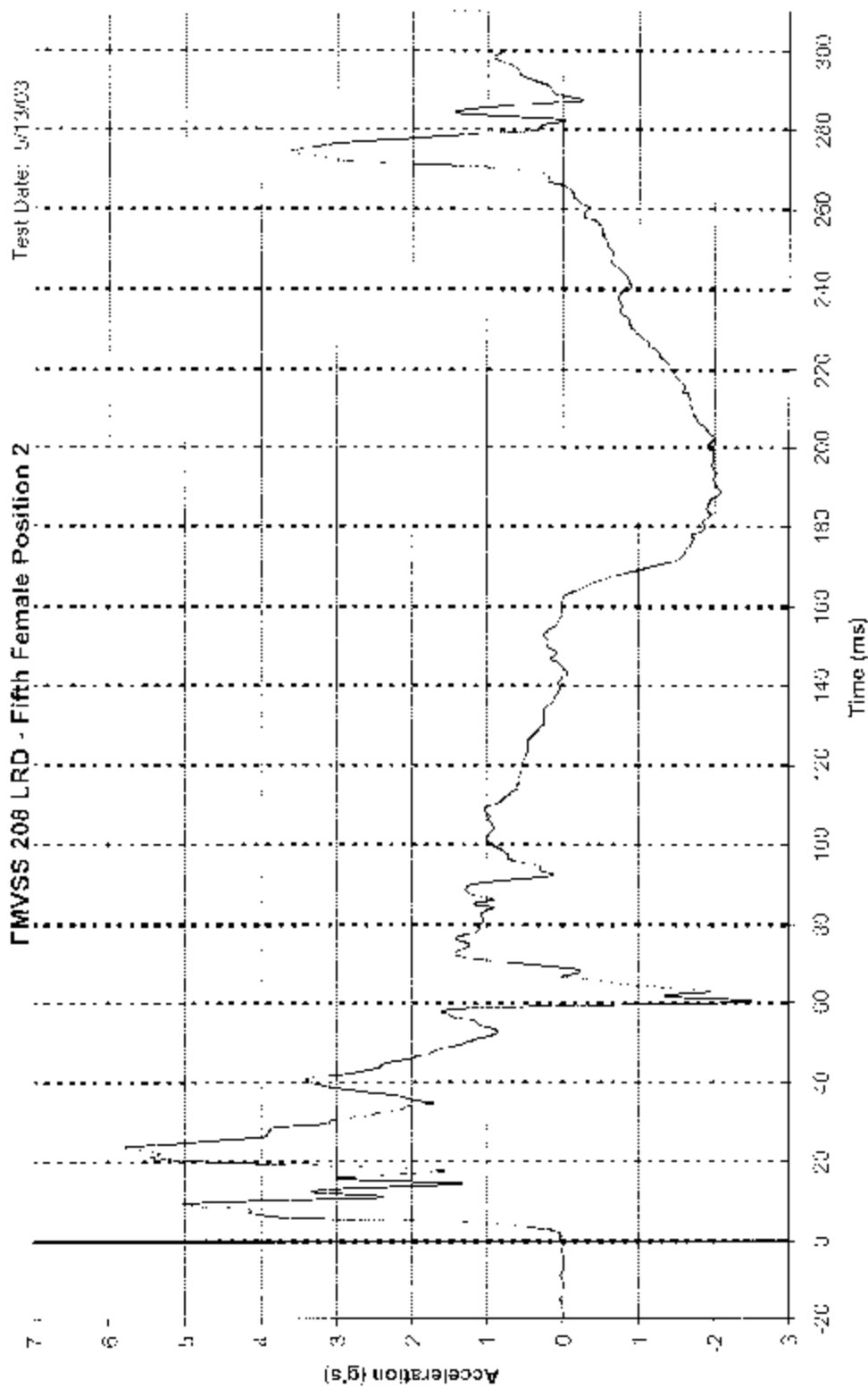


CHANNEL: CSTXG FILTER: CII, CLASS 180

C35306 / 2003 Honda Odyssey
Chest Y-Axis Acceleration - CSTYG
FMVSS 208 LRD - Fifth Female Position 2



C35306 / 2003 Honda Odyssey
Chest Z-Axis Acceleration - CSTZG
FMVSS 208 LRD - Fifth Female Position 2



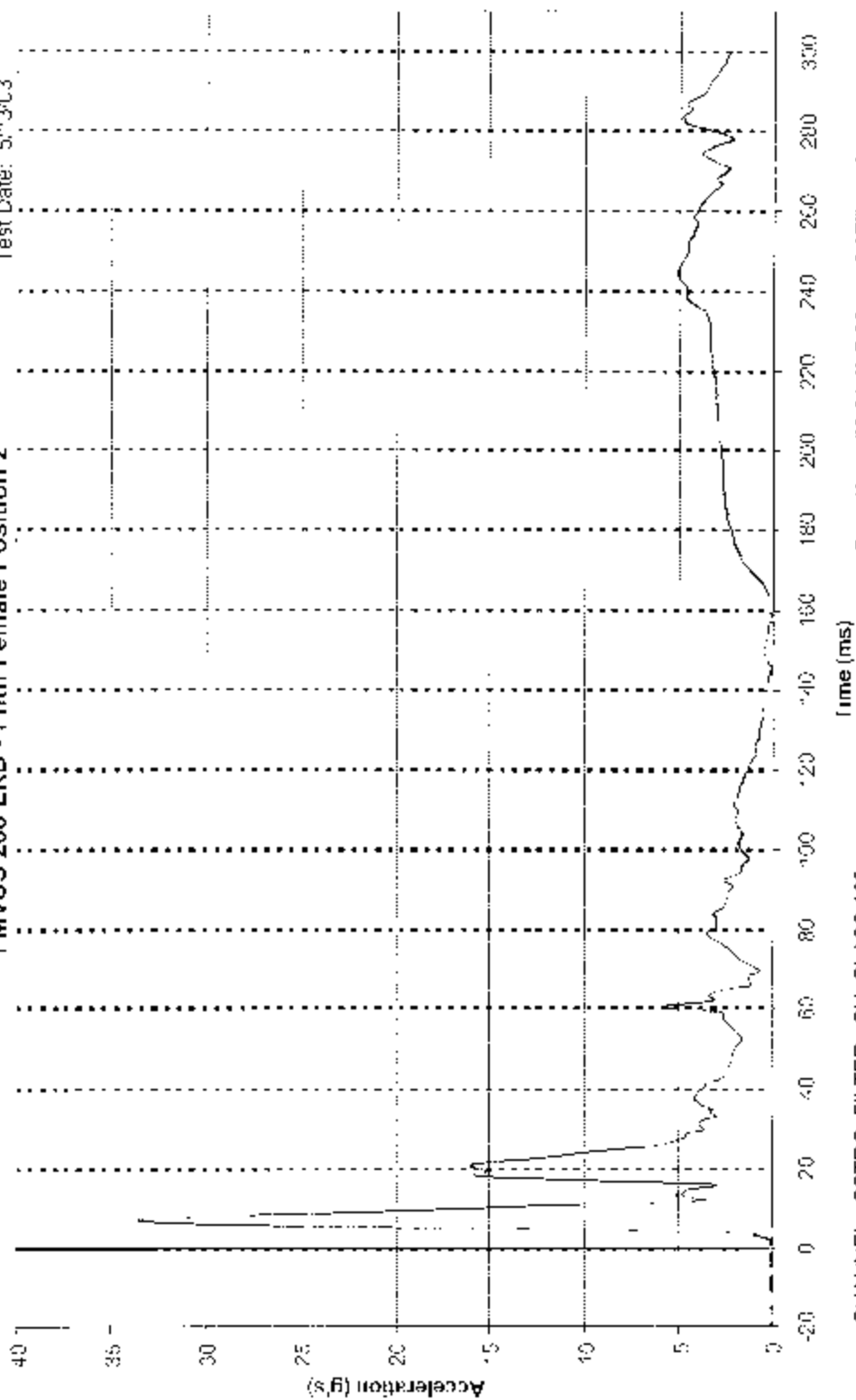
CHAN\HI CSTZG FIFTH CH CLASS 180

C35306 / 2003 Honda Odyssey

Chest Resultant - CSTRG

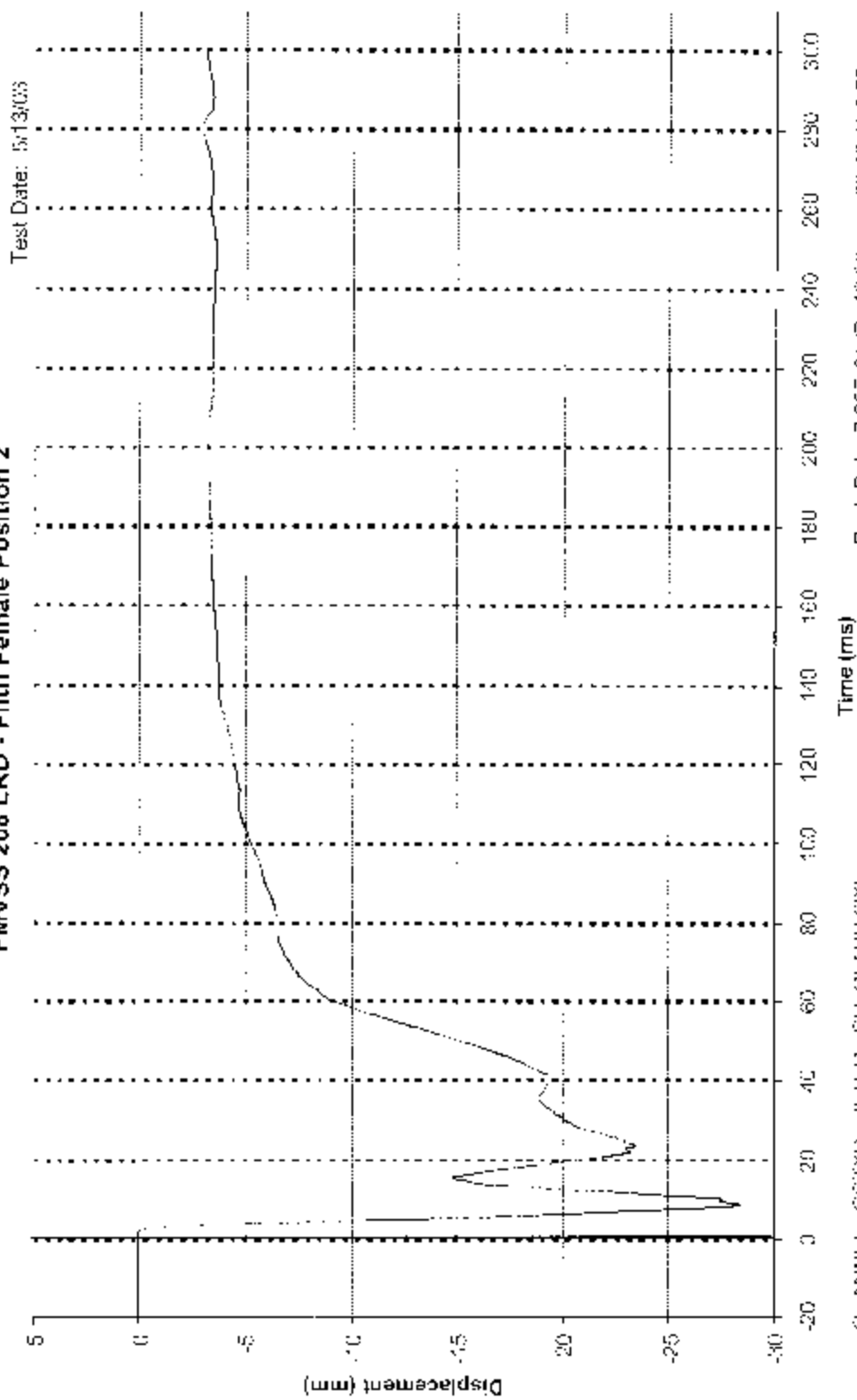
FMVSS 208 LRD - Fifth Female Position 2

Test Date: 5/13/03

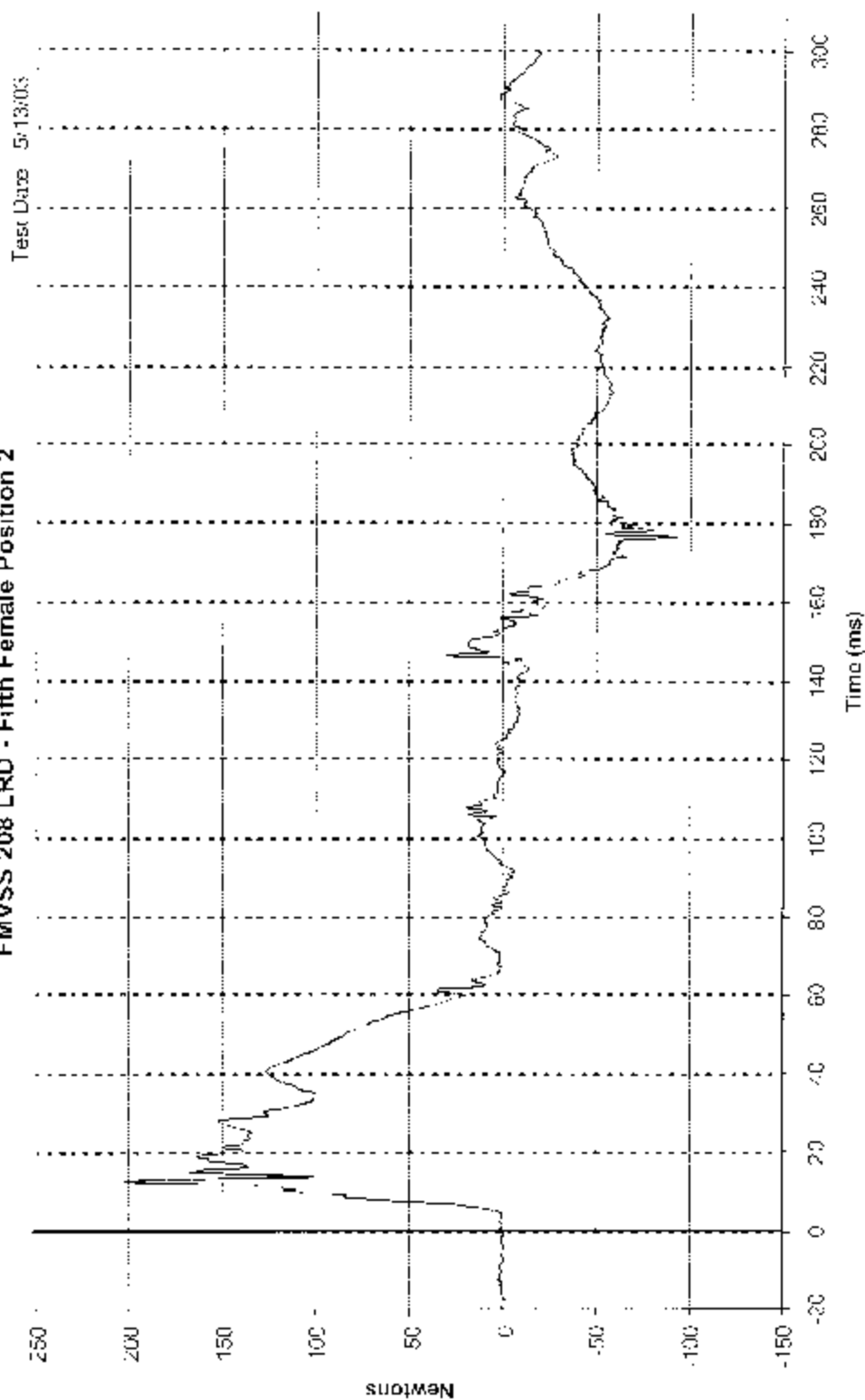


CHANNEL: CSTRG FILTER: CH: CLASS 180

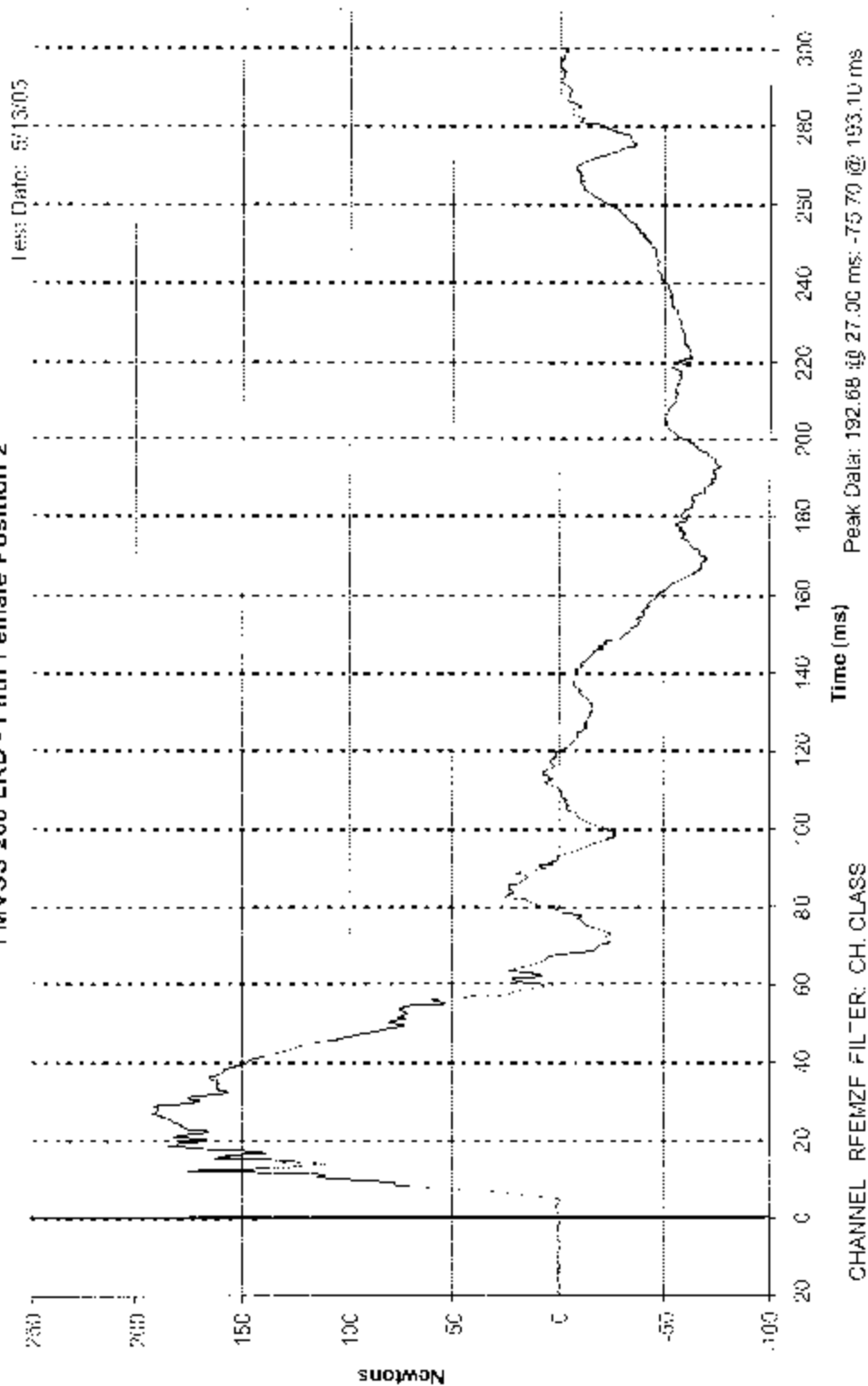
C35306 / 2003 Honda Odyssey
Chest Deflection - CSTXD
FMVSS 208 LRD - Fifth Female Position 2



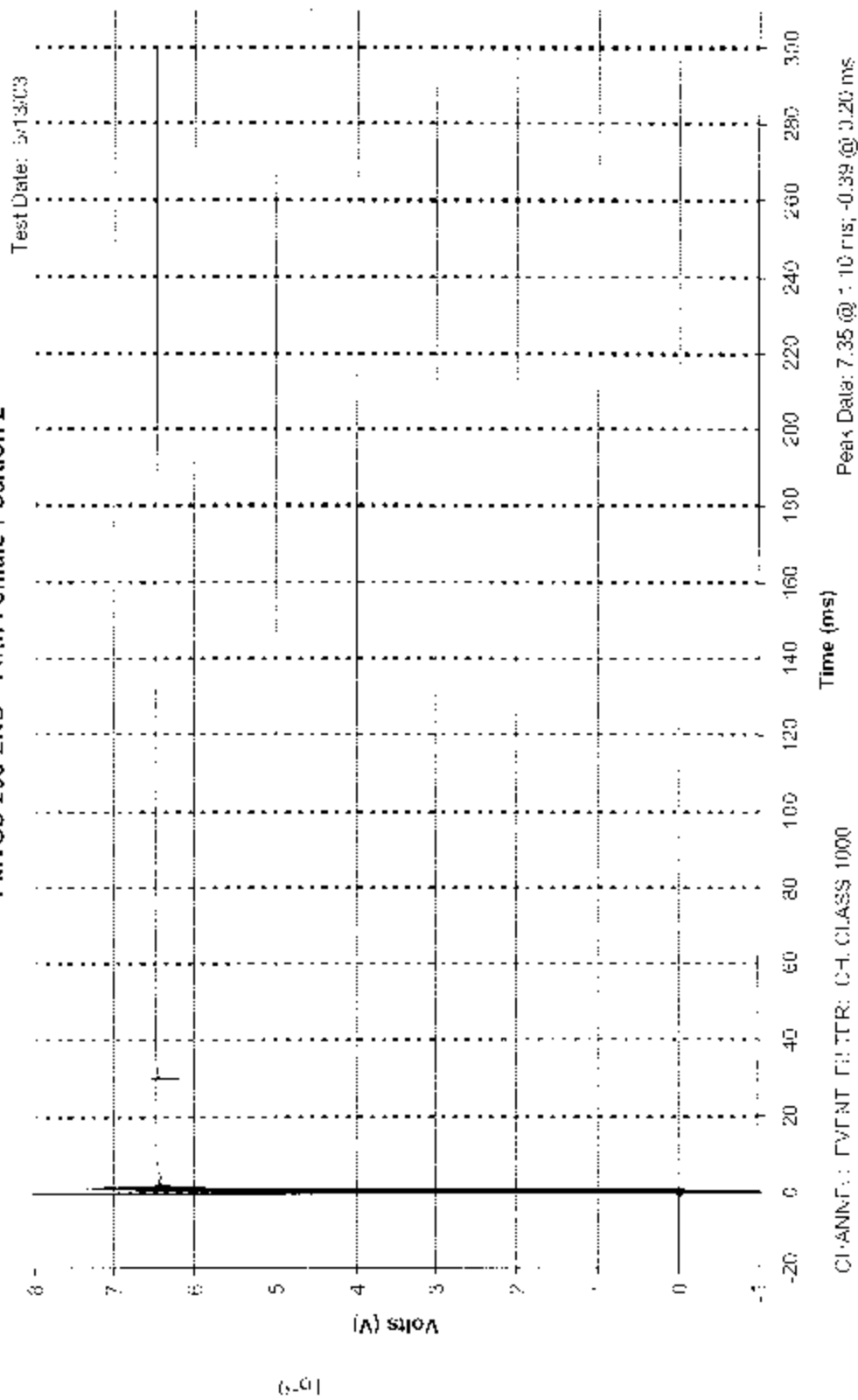
C35306 / 2003 Honda Odyssey
Left Femur FZ - LFEMZF
FMVSS 208 LRD - Fifth Female Position 2



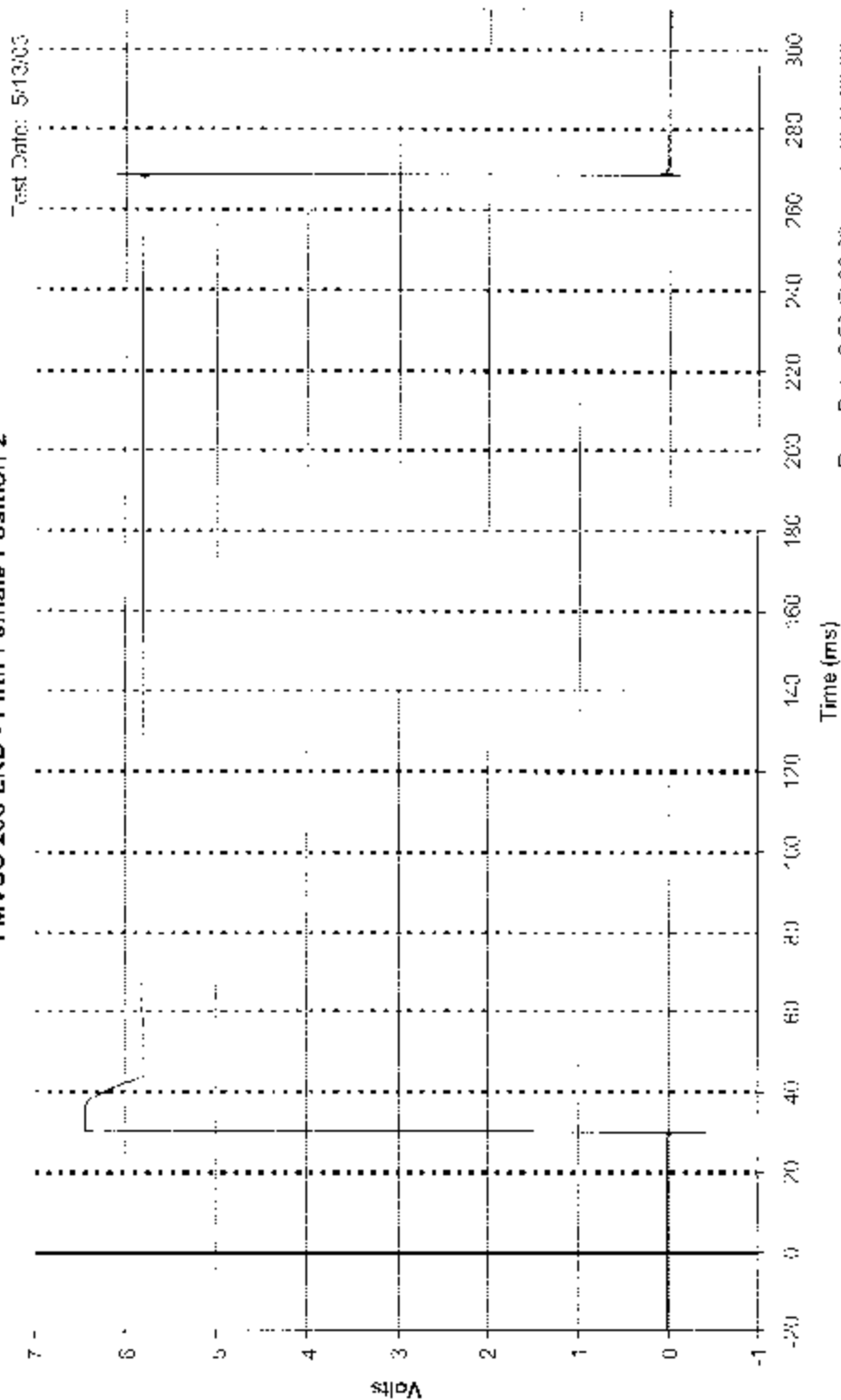
C35306 / 2003 Honda Odyssey
Right Femur Force FZ - RFEMZF
FMVSS 208 LRD - Fifth Female Position 2



C35306 / 2003 Honda Odyssey
EVENT Channel - EVENT
FMVSS 208 LRD - Fifth Female Position 2



C35306 / 2003 Honda Odyssey
Delay Event Channel - EVENT2
FMVSS 208 LRD - Fifth Female Position 2



CHANNEL: EVENT2 FILTER: C1 - CLASS 1000

Peak Data: 6.53 @ 30.00 ms; -0.42 @ 29.90

Section 7

Photographs

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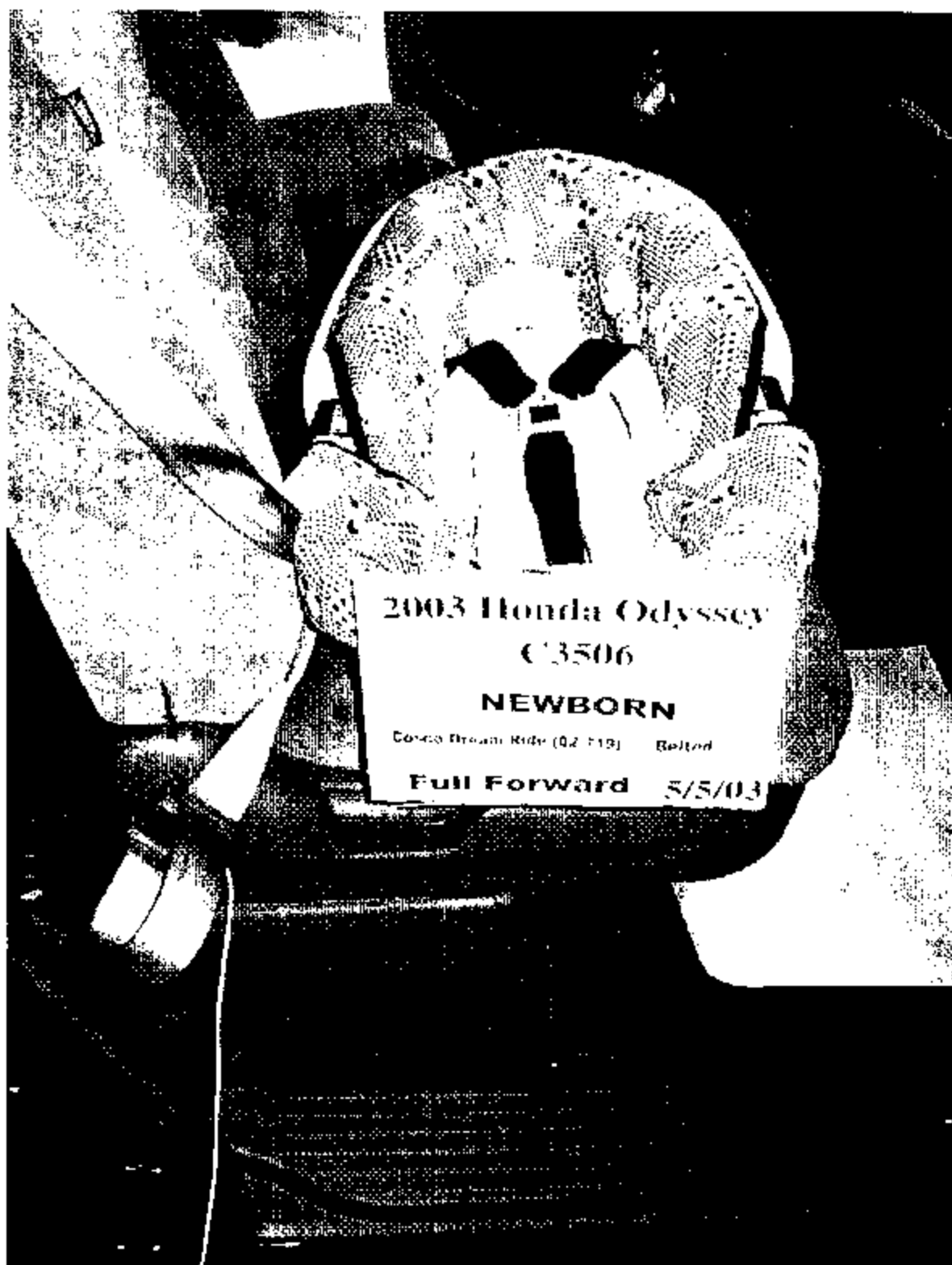


Figure 7-1: Cosco Dream Ride, Full Forward Seat Position



Figure 7-2: Britax Handle with Care. Handle Down, Sunshield Stowed, Belted, Full Forward



Figure 7-3: Britax Handle2 with Care, Handle Down, Sun Shield Stowed, Unbelted, Full Forward Seat Position



Figure A-4: Eventto First Choice, Handle Up, Deited, Full Forward as Possible Seat Position



Figure 7-3: Event: First Choice, Handle Up, Unbelted, Full Forward as Possible Seat Position

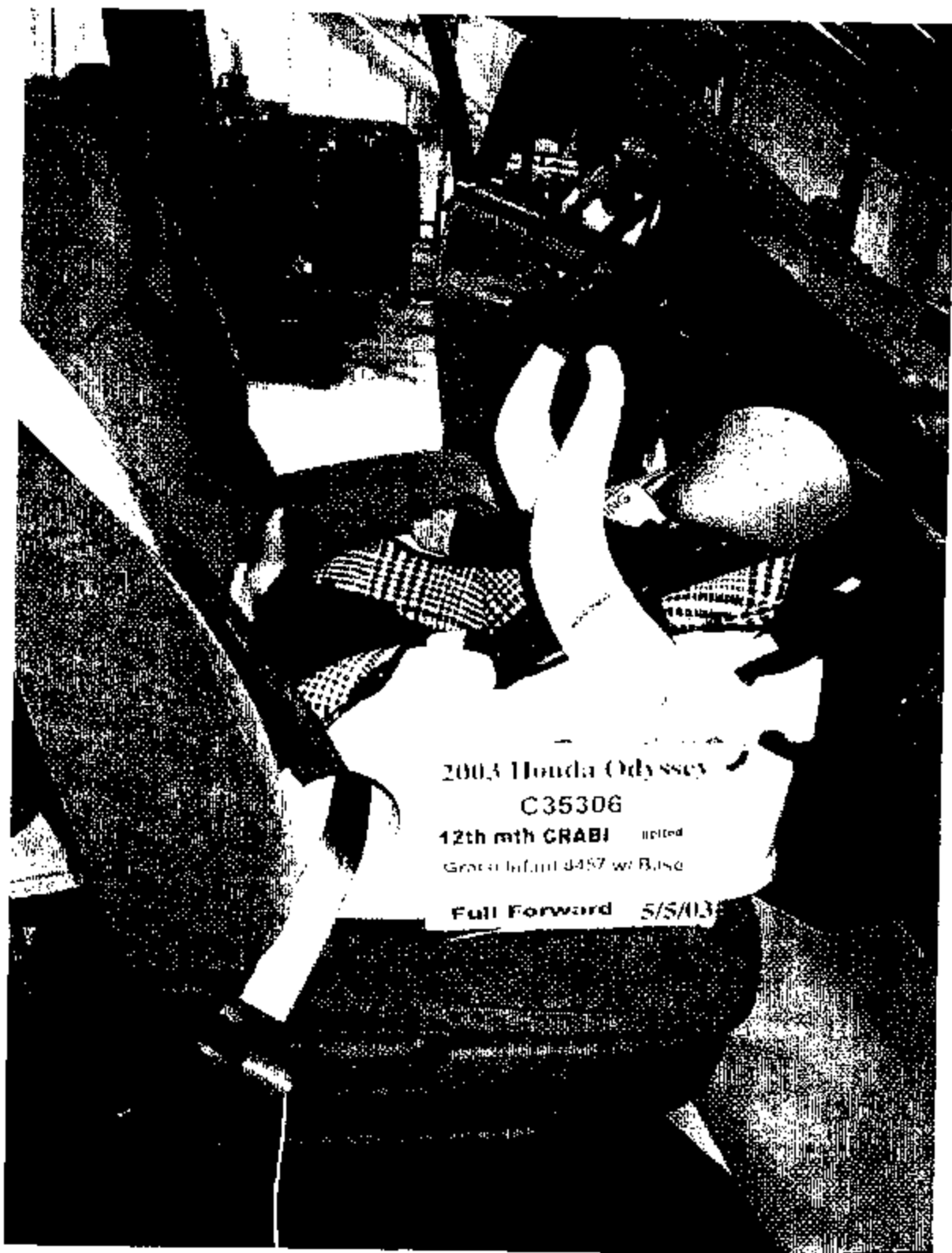


Figure 7-6 Graco Infant with base, Handle Up, Reclined, Full Forward as Possible Seat Position

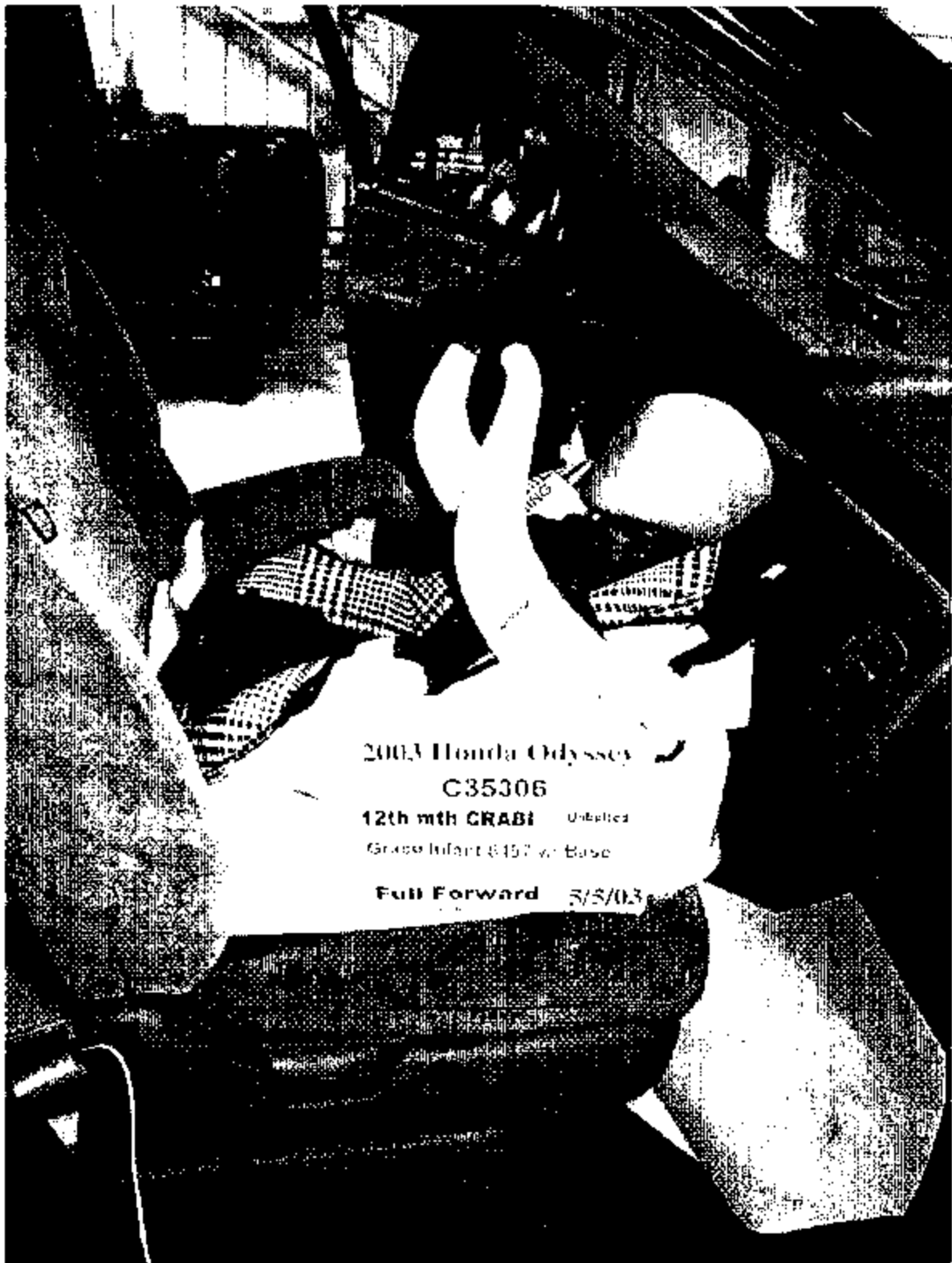


Figure 7-7. Graco Infant with base, Handle Up, Unbelted, Full Forward as Possible Seat Position

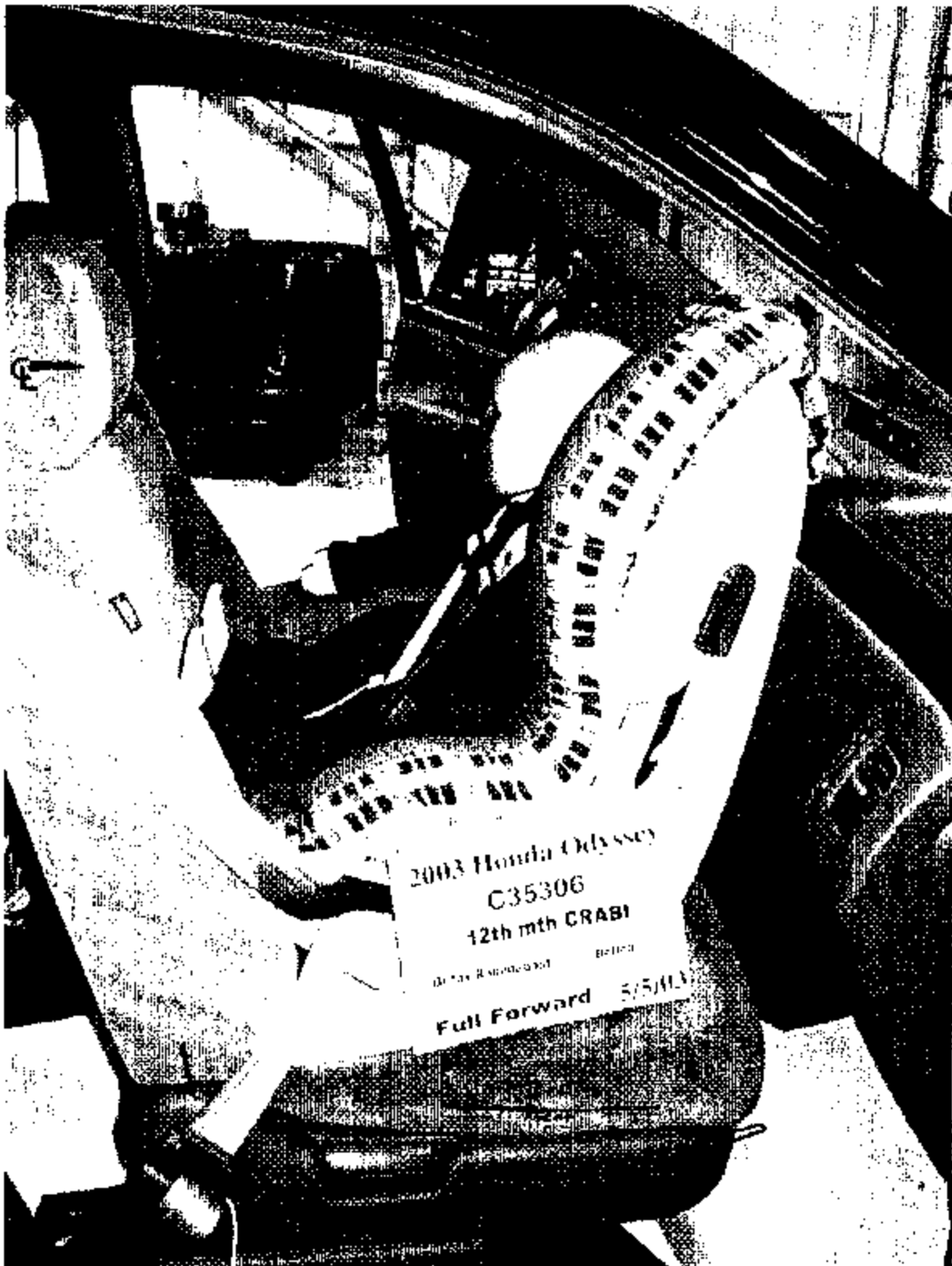


Figure 7-8: Britax Roundabout Belted-In Forward Seat Position

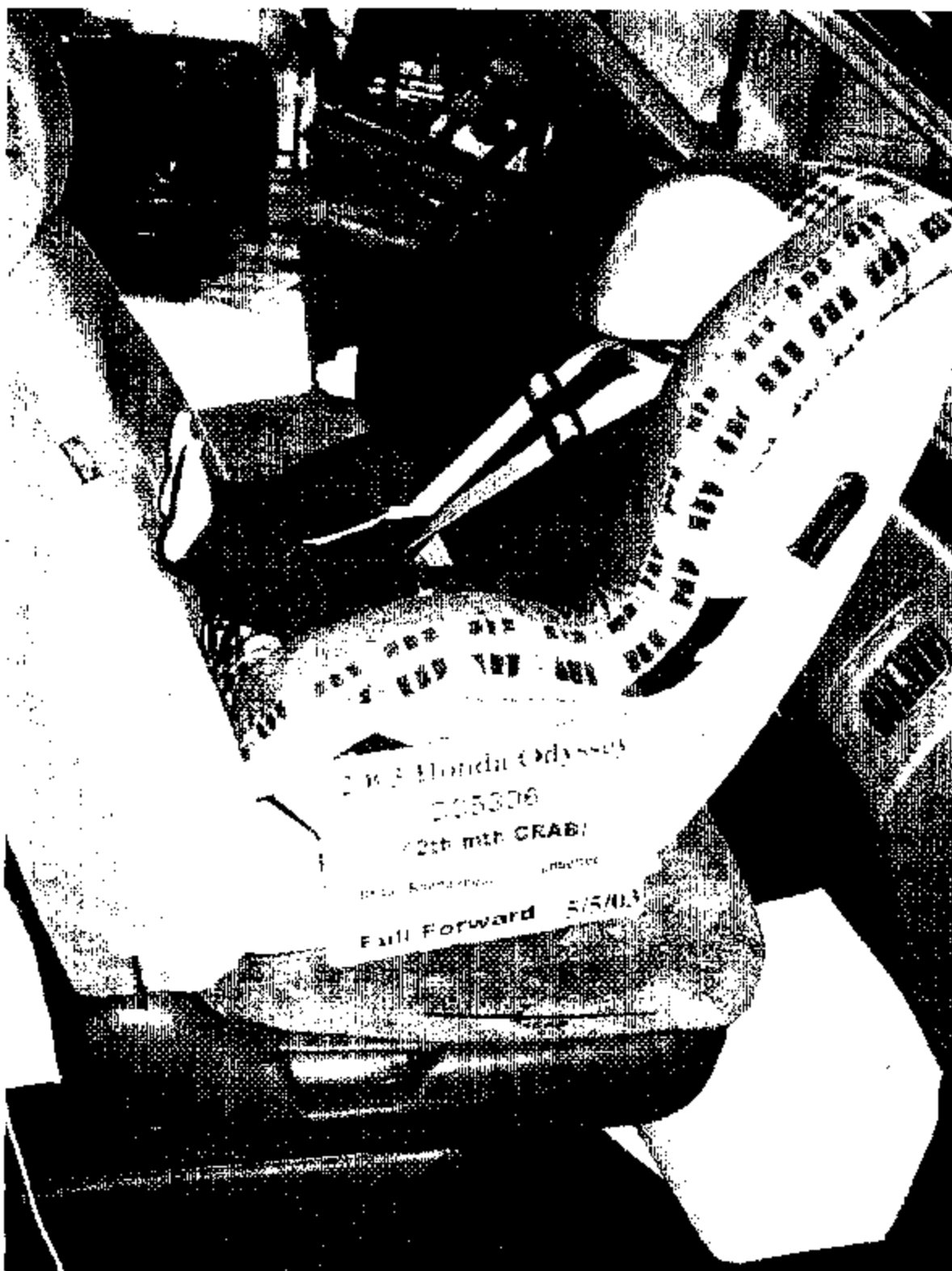


Figure 7-9: Atlas Roundabout, Unbelted, Full Forward Seat Position

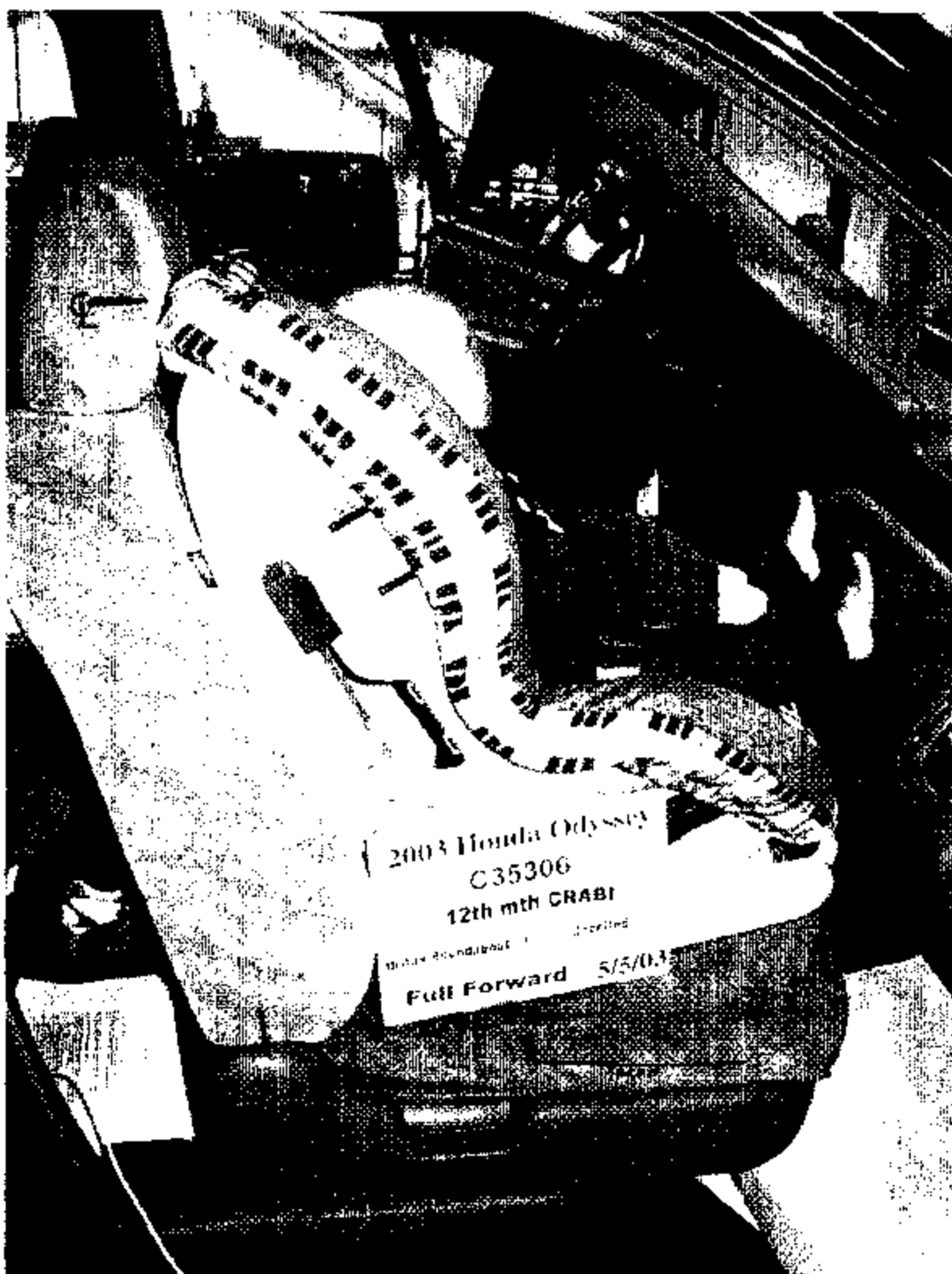


Figure 7-10: Brake Roundabout, Forward Facing, Unlabeled, Full Forward Seat Position



Figure 7-1. Before Forward (Lower View) - 1.3. Forward Scan Position



Figure 2-1. Control Room, Rear View, Port, Full Forward Sea, Position



Figure 7-13: Century Engine, Rear Facing, Unbelted, Full Forward Seat Position



Figure 7-14: Century Encore, Forward Facing, Unbelted, Full Forward Seat Position

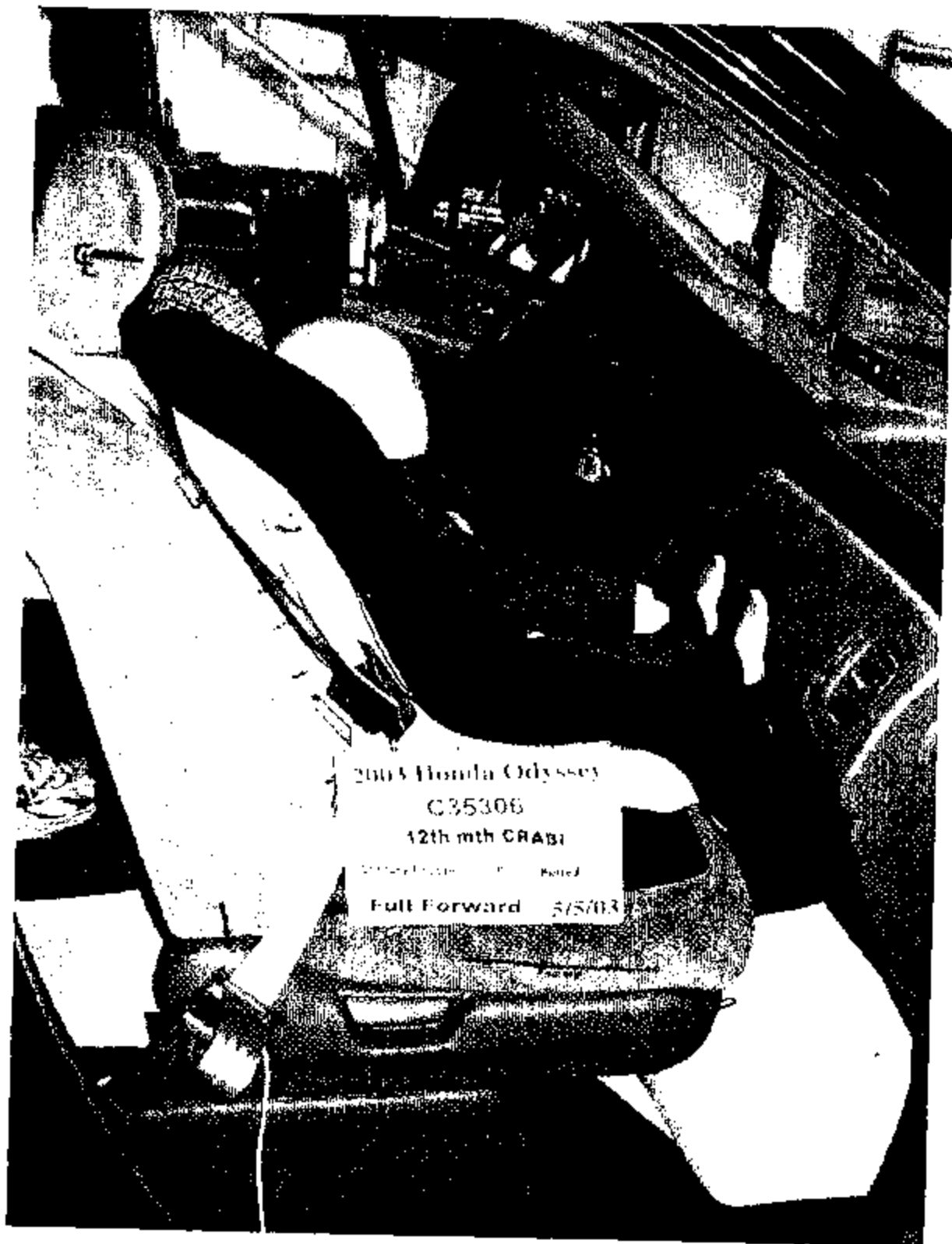


Figure 7-15 Entry Frame, Forward Facing Belted, Full Forward Seat Position



Figure 7-6 Juvenile Medallion, Rear Facing, Belted, Full Forward Seat Position

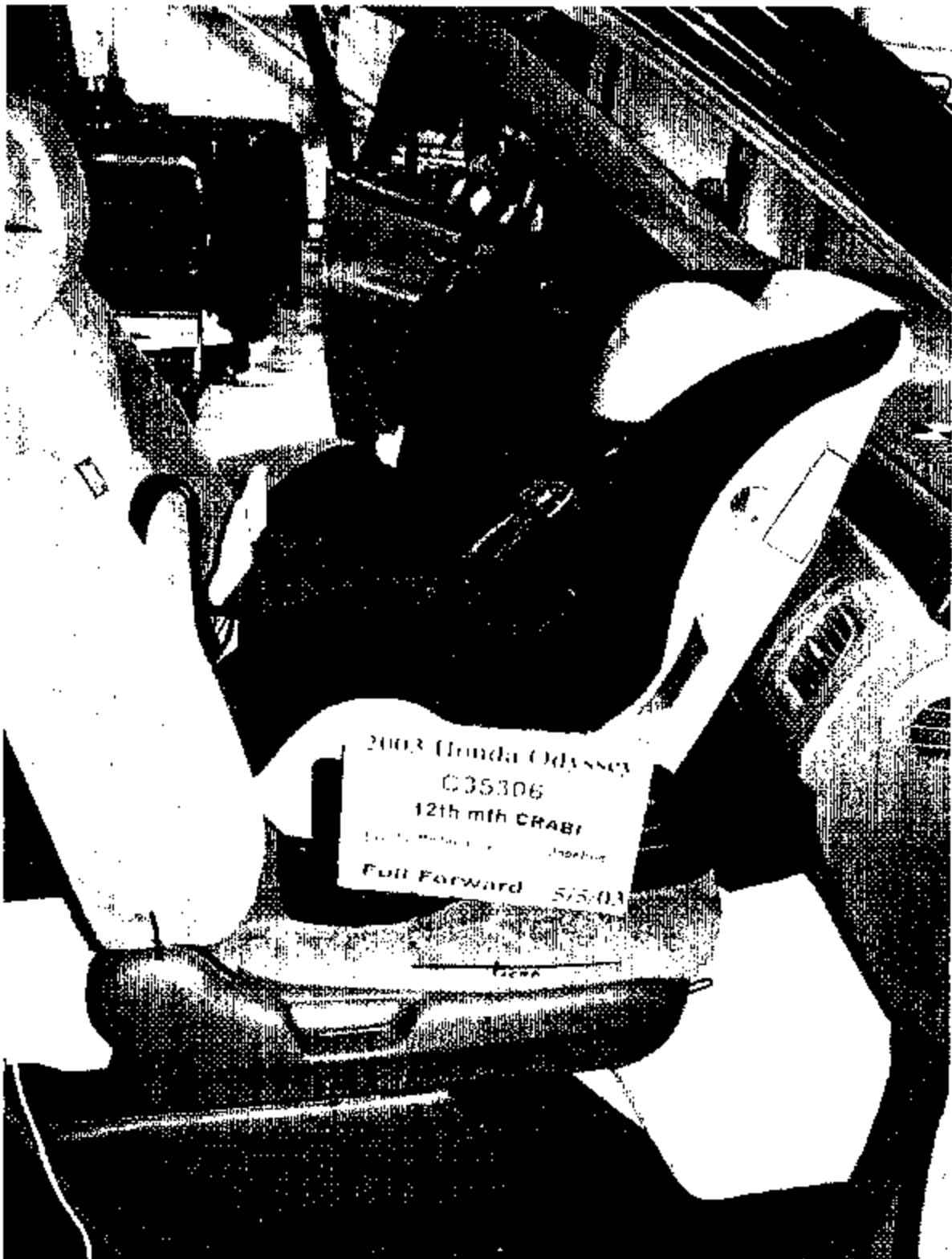


Figure 7-17: Honda Medallion, Rear Facing, Labeled, Full Forward Seat Position



Figure 7- 8: Evesha Multi-Pass - Forward Facing, Unbelted, Full Forward Seat Position



Figure 7-19: Evenflo Modification, Forward Facing, Hinged, Full Forward Seat Position

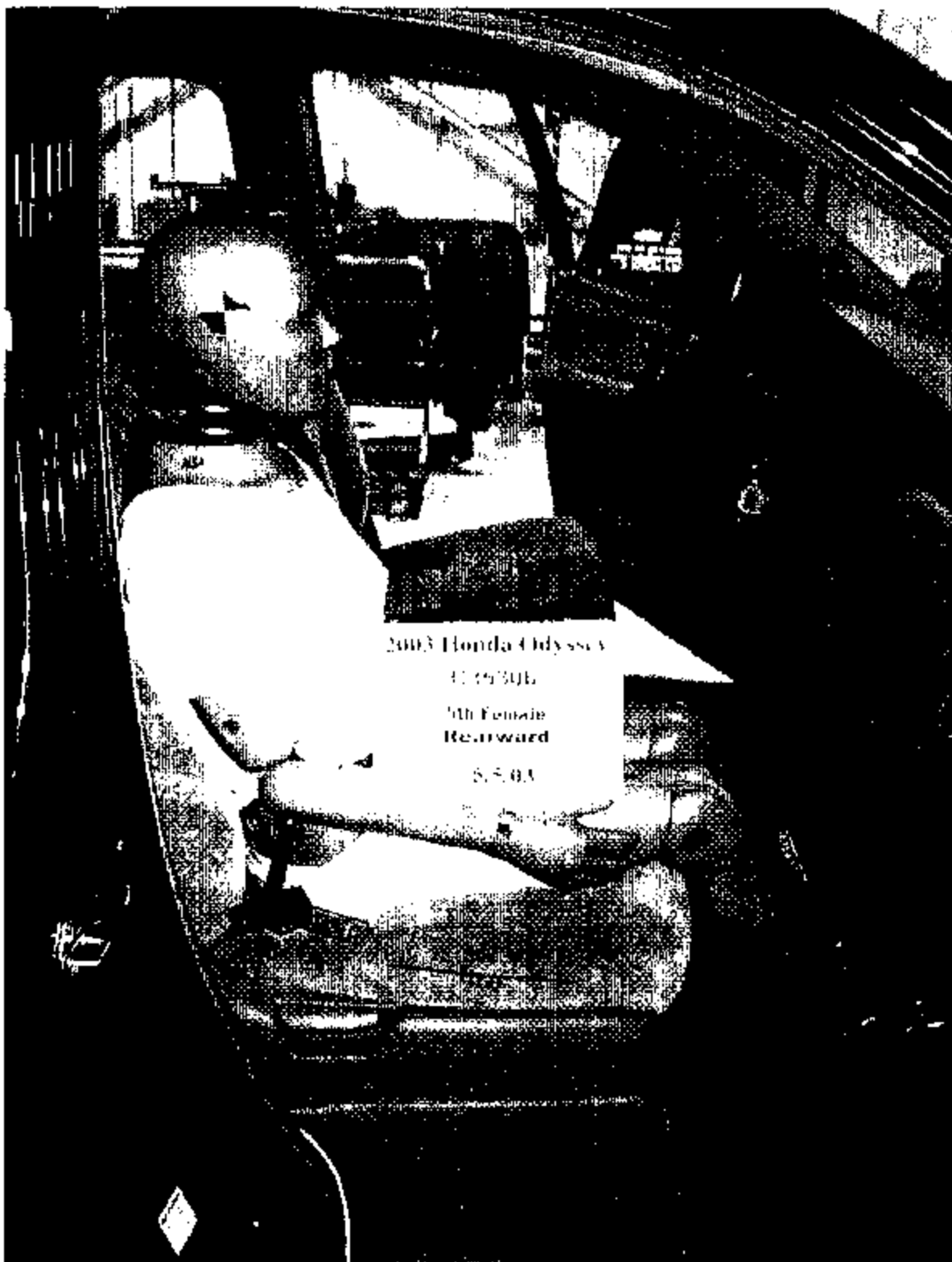


Figure A-20: 5th Female Reactivation, Full Rearward Seat Position

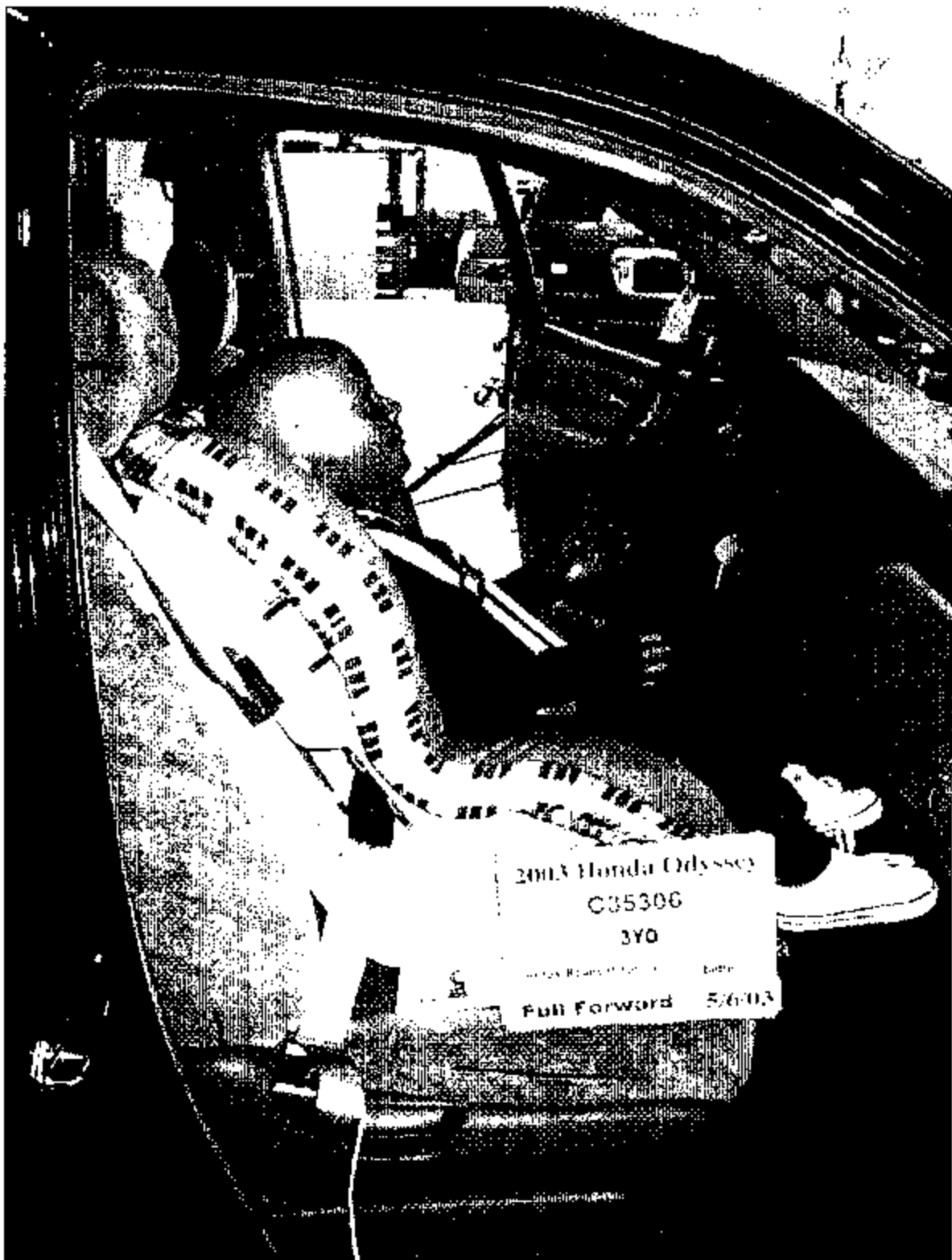


Figure 7-21. Britax Roundabout Forward Facing, Belted, Full Forward as Possible Seat Position

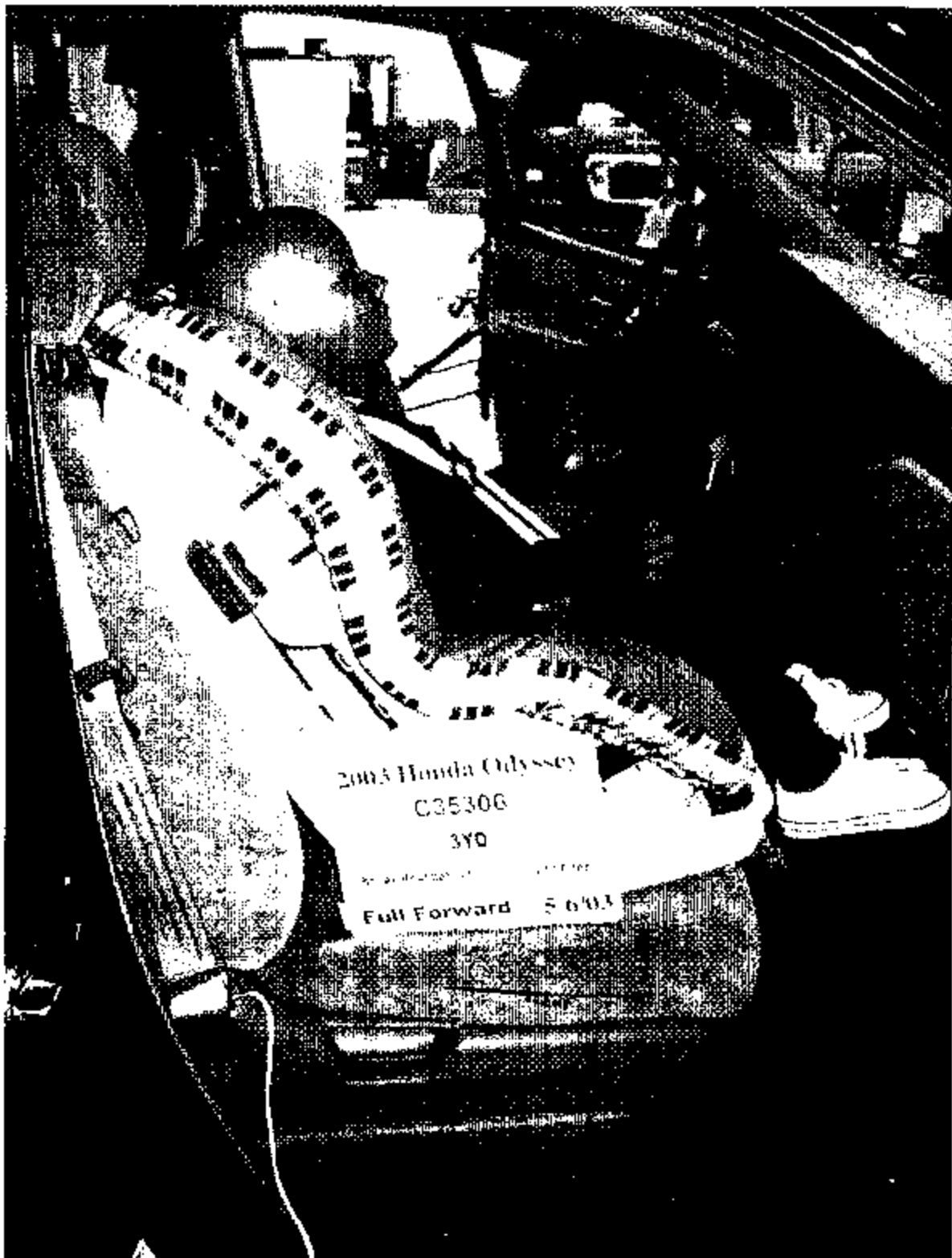


Figure 7-22: Bronx Roundabout, Thruway Facing, Unbelted, Full Forward as Possible Seat Position



Figure 1. Subject in Driver's Seat of Vehicle. (A) Post-Full Forward as Possible Seat Position



Figure 7-74: Century Encore, Forward Facing, Unlabeled, Full Forward as Possible Seat Position



Figure 7-25: In-vehicle Modalities, Forward Facing, Behind Full Forward as Possible Seat Position



Figure 7-26: Event's Medallion, Forward Facing, Unaltered, Full Forward as Possible Seat Position



Figure 7-27: Century Next Step Booster, Belted, w/o Booster Harness, Full Forward as Possible Seat Position



Figure 7-28: Century Next Step, Unbelted, w/o Booster Harness, Full Forward as Possible Seat Position



Figure 7-29: Century Next Step, Belted, w/ a Booster Harness, Full Forward as Possible Seat Position



Figure 6. Cisco IP in Back Seat, w/ Driver Harness, Full Forward as Possible Seat Position



Figure 7-31. Coseo High Back, Unbelted, w/o Booster Harness, Full Forward as Possible Seat Position



Figure 3. A 2003 Honda Odyssey with a Backseat Booster Harness, Full Forward as Possible Seat Position

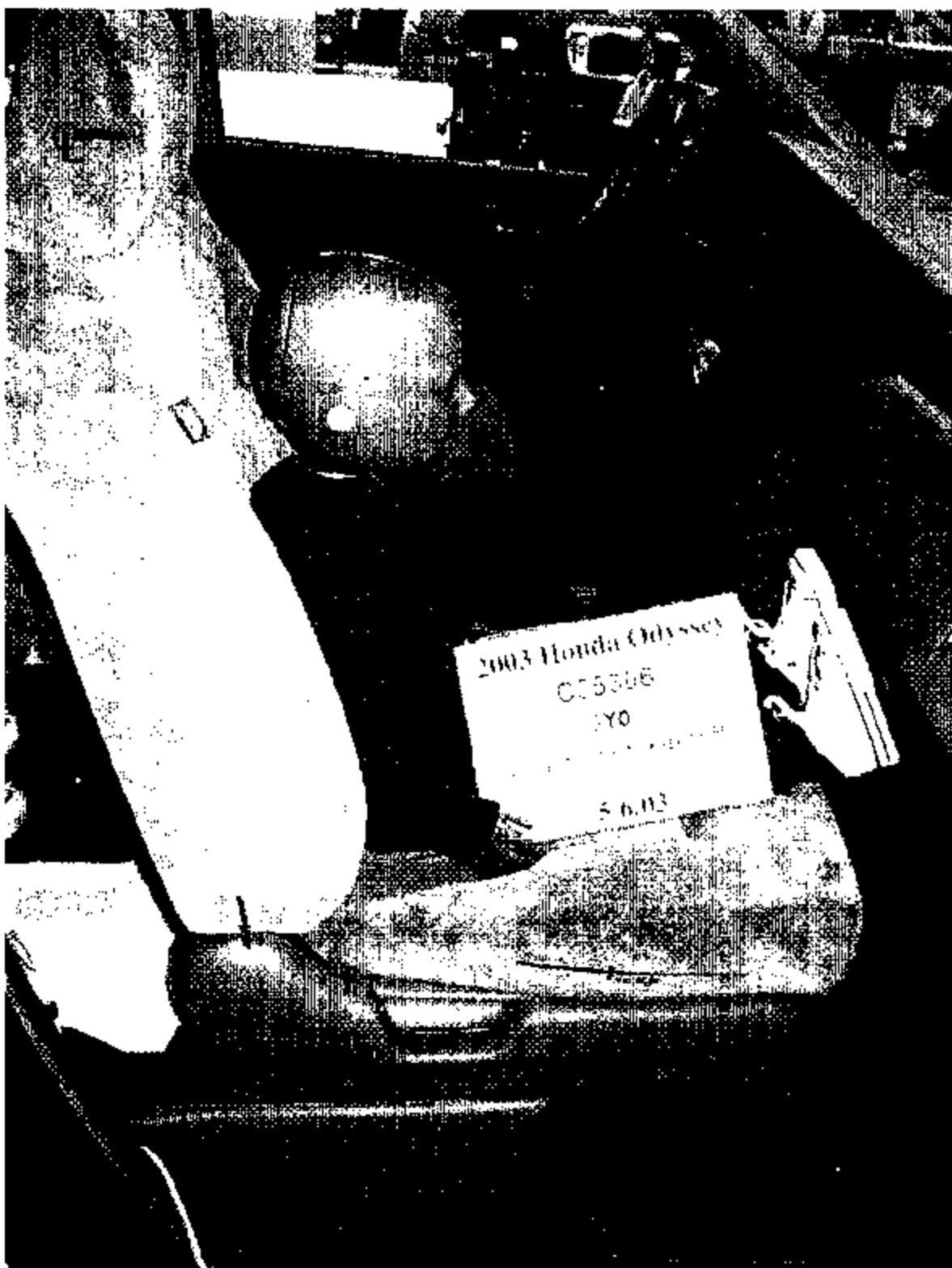


Figure 7-33: 5-Year Old Lying On Seat with Back Against the Seat Back, Full Forward Seat Position

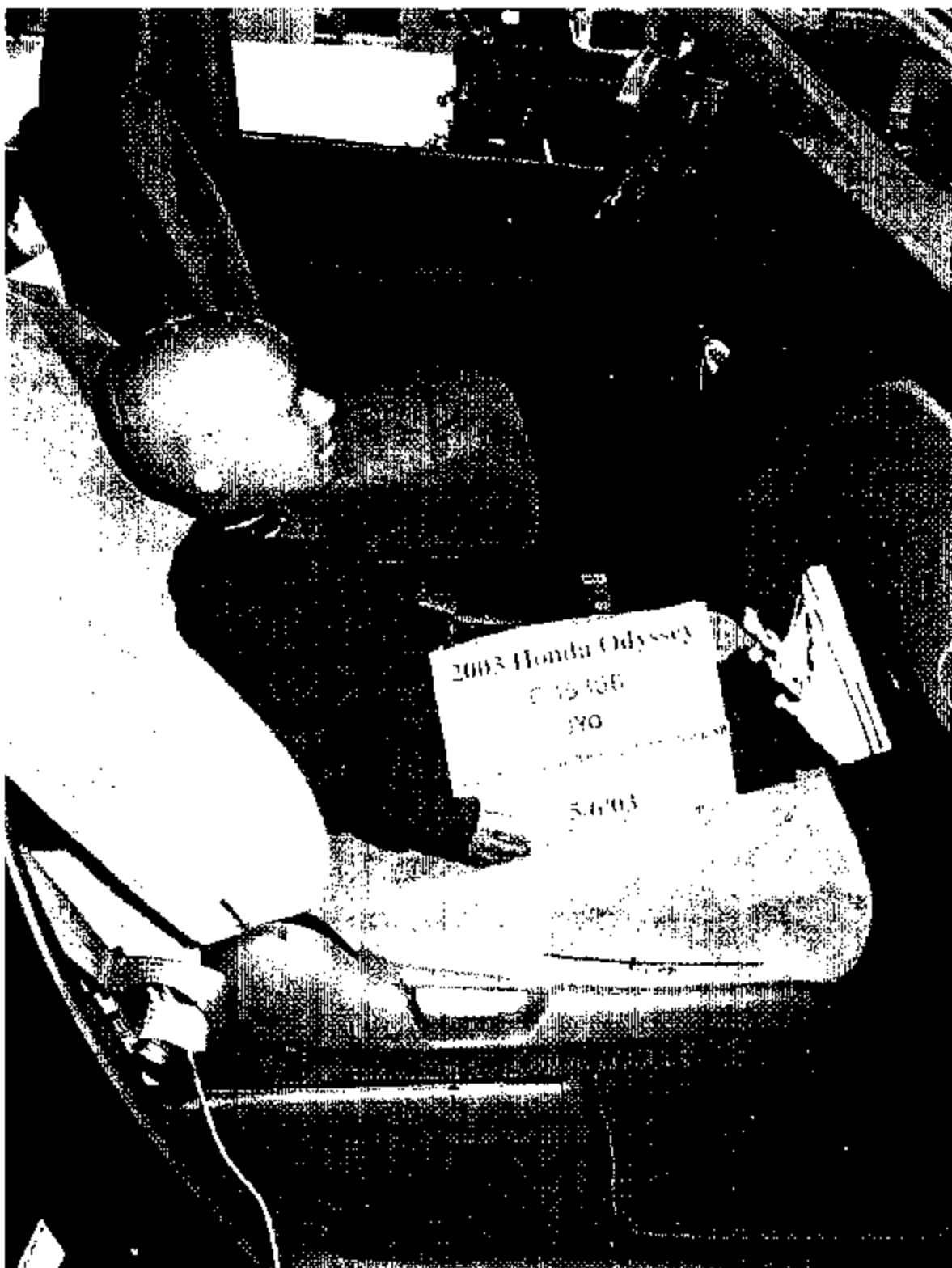


Figure 7-34. 3 Year Old Sitting On Seat with Back Against the Reclined Seat Back, Full Forward Seat Position

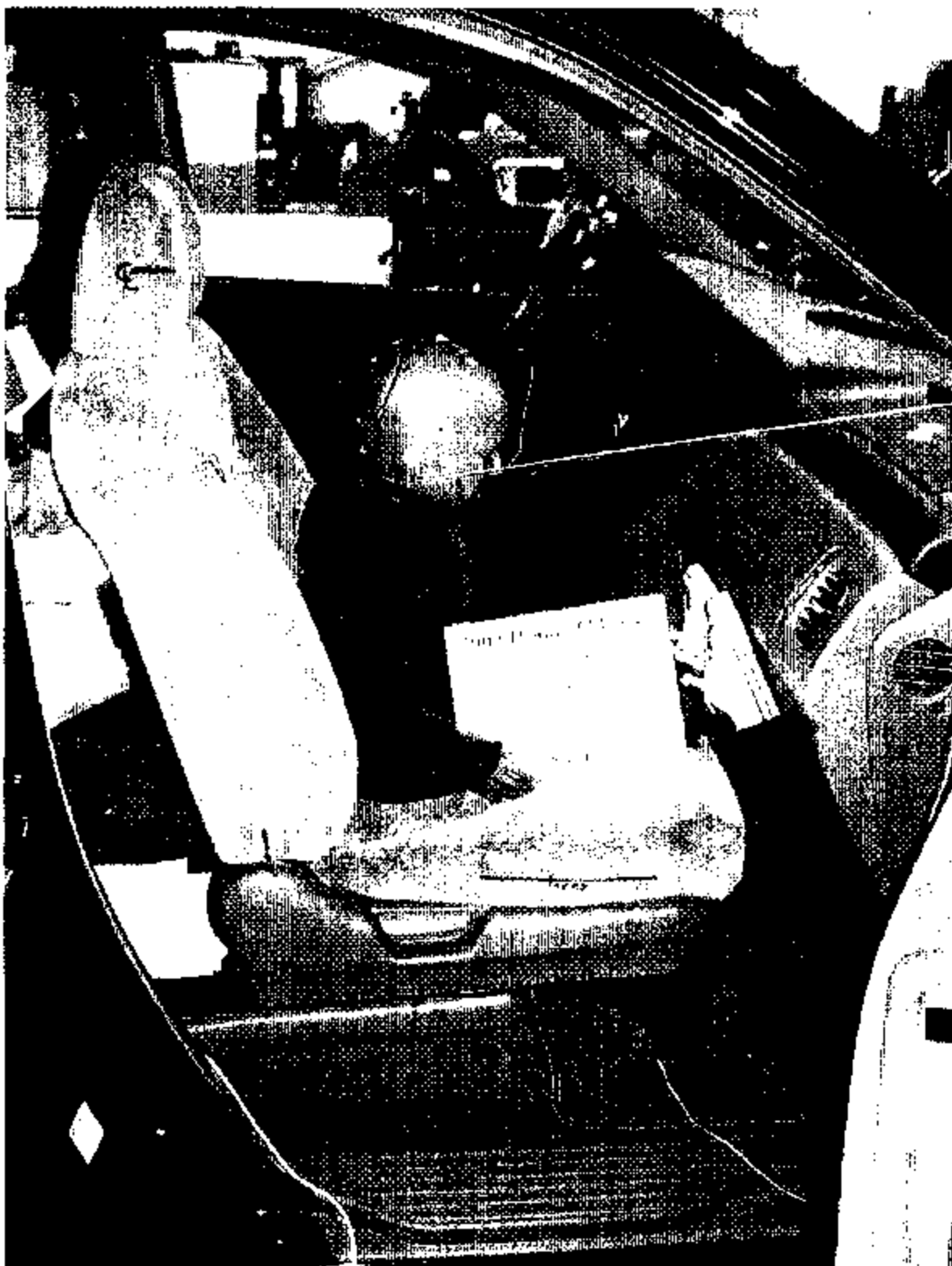


Figure 7-35. 3 Year Old Sitting On Seat with Back Not Against the Seat Back, Fall Forward Seat Position



Figure 7-36: 3 Year Old Sitting On Seat Edge, Spine Vertical, Full Forward Seat Position.

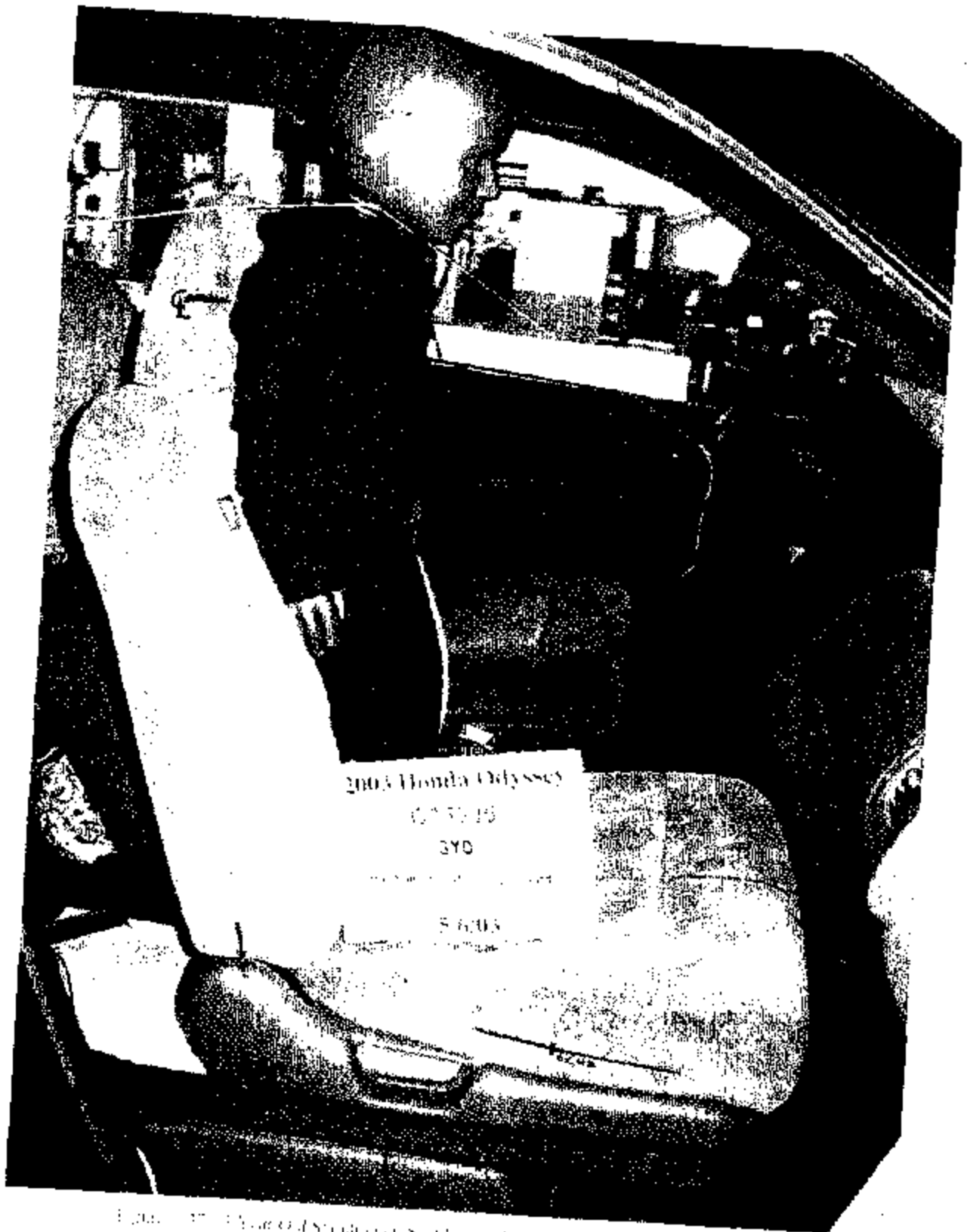


Figure 37. 37-Year Old Seated in Seat Facing Forward, Full Forward Seat Position

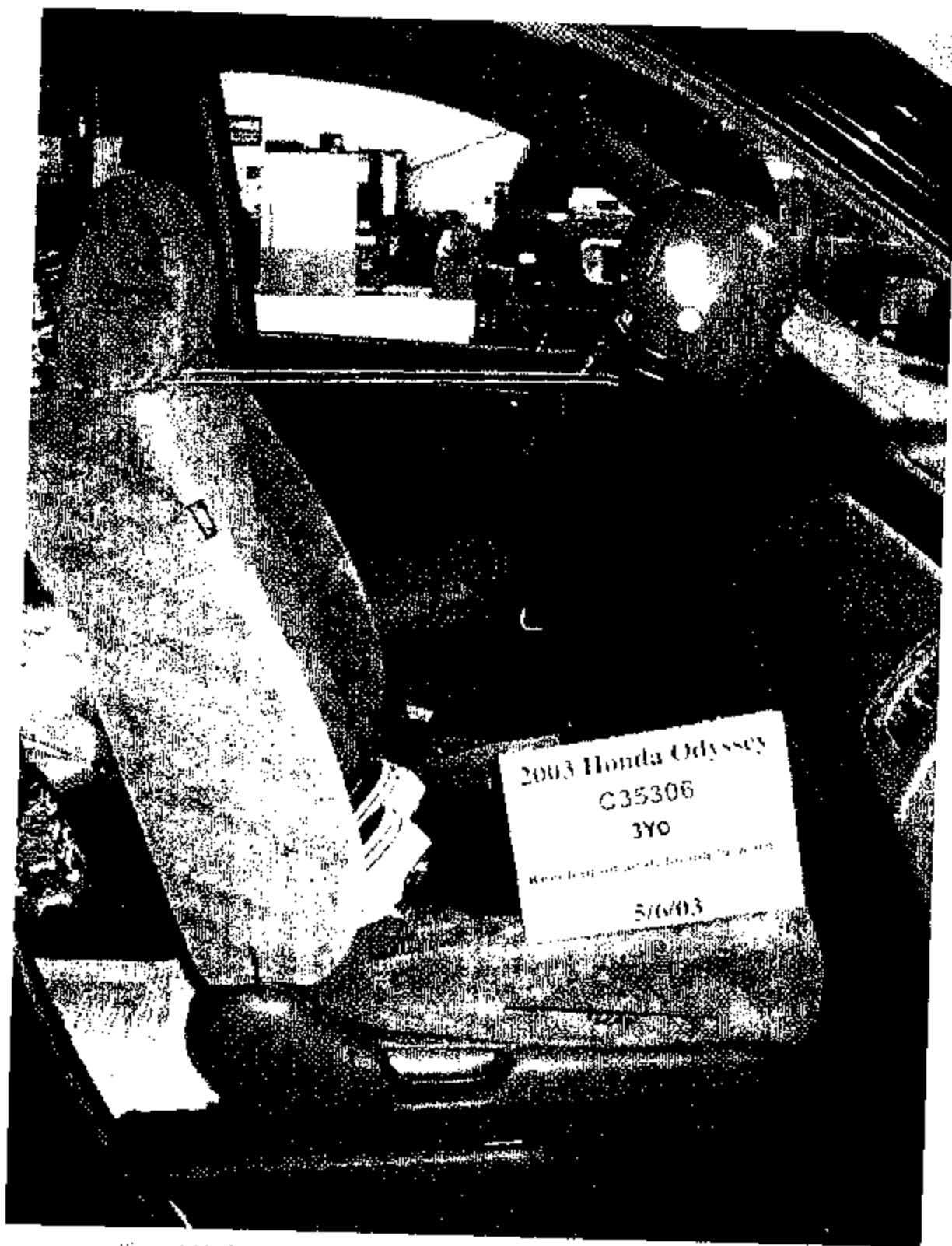


Figure A-38: 3-Year Old Kneeling on Seat Facing Forward (FEL Forward Seat Position)

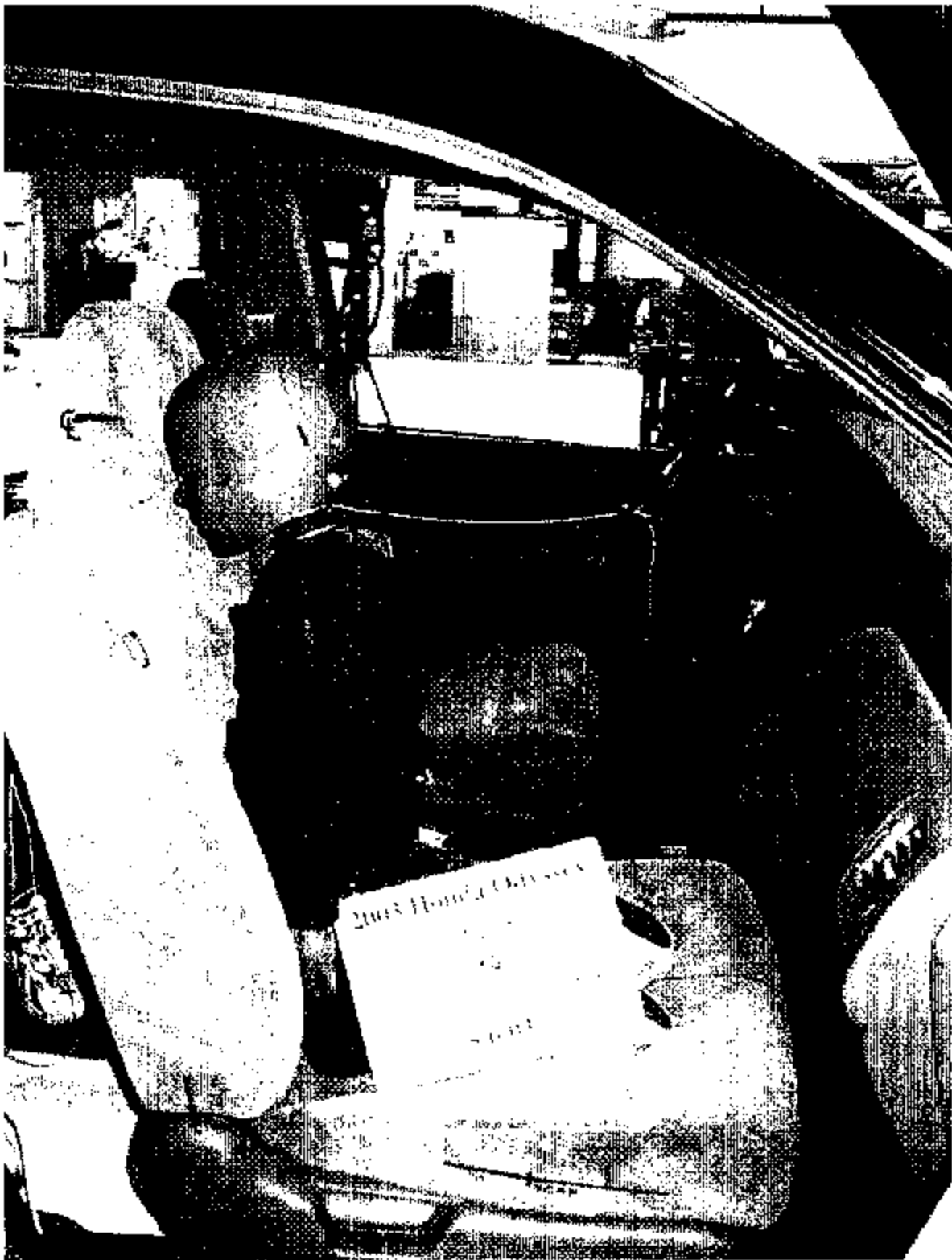


Figure 7-39: 3 Year Old Kneeling on Seat Facing Rearward, Full Forward Seat Position



Figure 7-40 Pre-Test 6 Year Old Low Risk Deployment Position 1 Chest on Module



Figure 7-41: Post-Test 6-Year Old Low Risk Deployment Position 1- Chest on Module



Figure 7-42: Pre-Test 6-Year OLD Low Risk Deployment Position 2- Head on IP

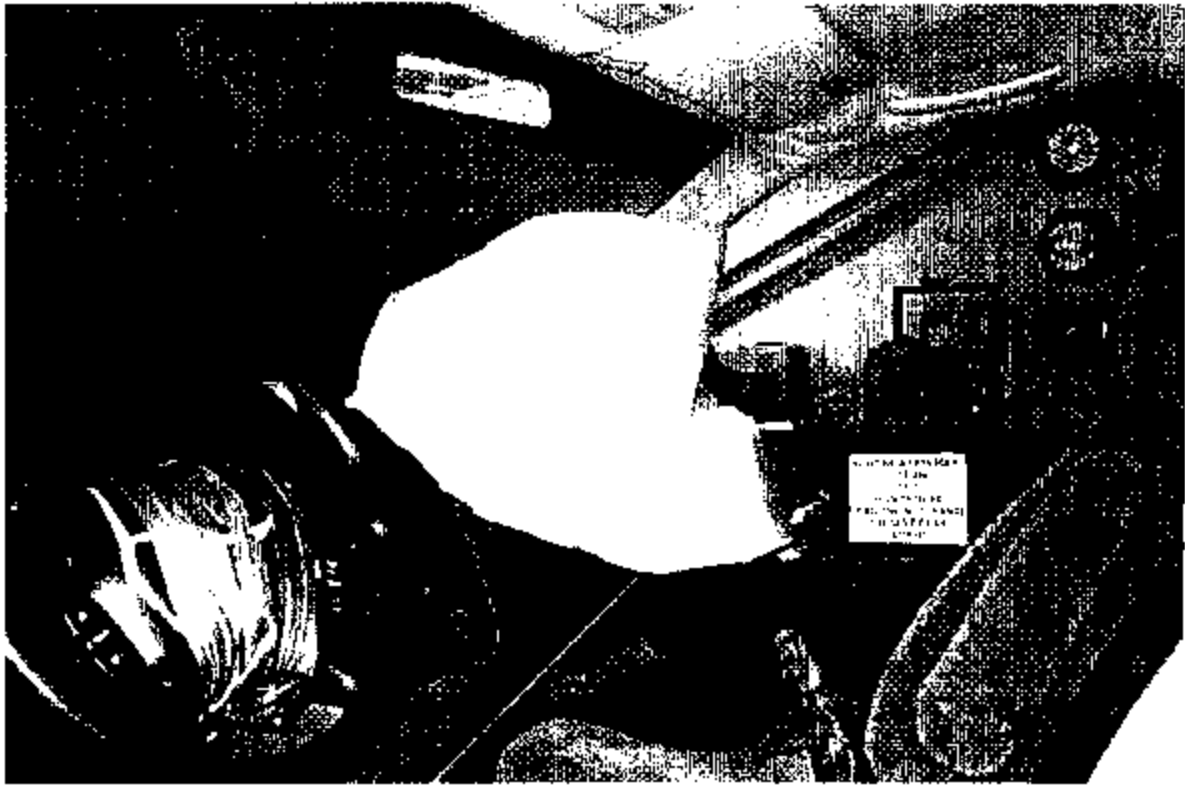


Figure 7-43: Pre Test 6-Year-Old Low Risk Deployment Position 2- Head on IP



Figure 7-44: Pre-Test Driver Low Risk Deployment Test Position – Clear on Module



Figure 7-45. Post-Test Driver Low Risk Deployment Test Position 1 – Chin on Module



Figure 7-46: Pre-Tes Driver Low Risk Deployment Position 2, Chin on Rim

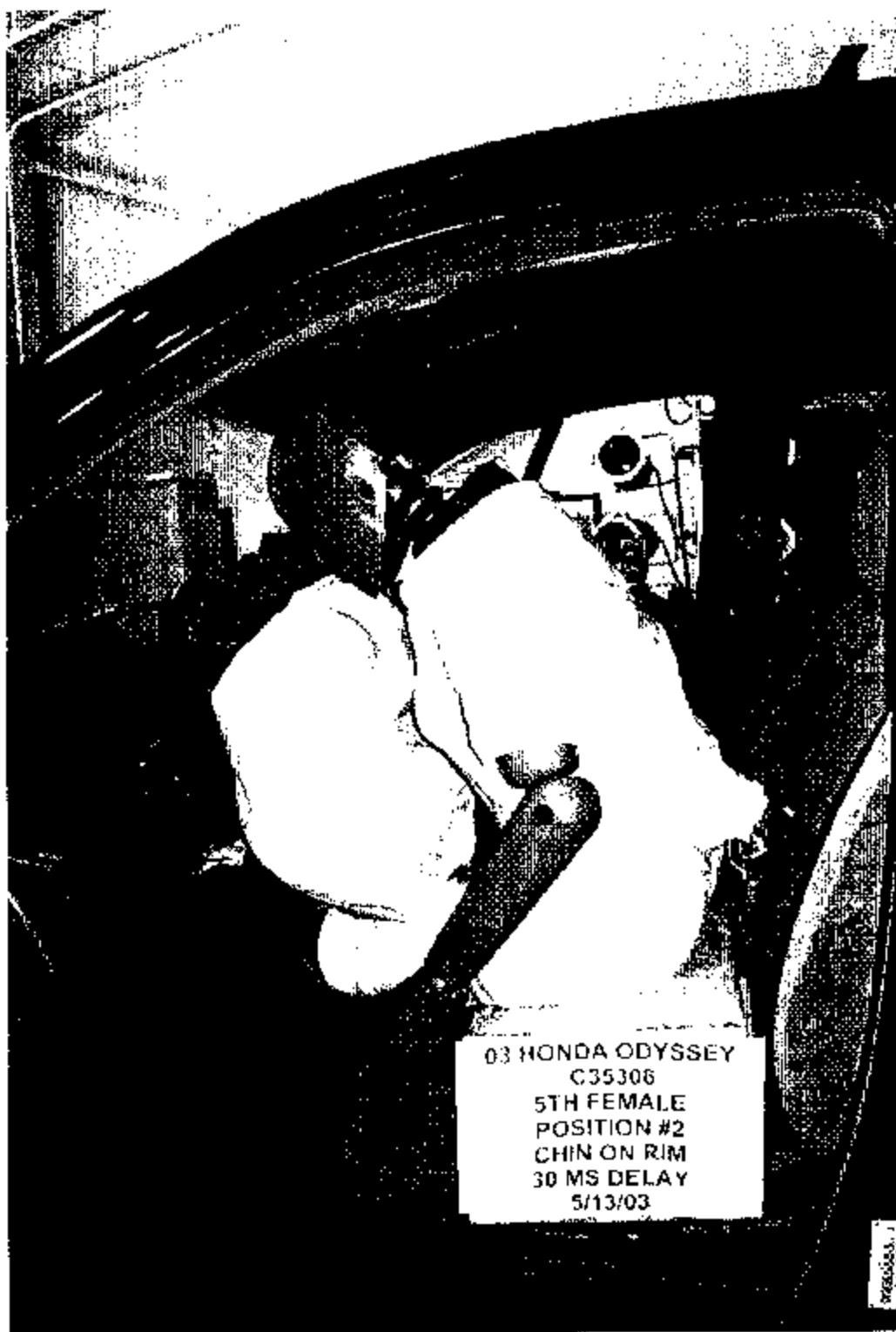


Figure 7-47: Post-Test Driver Low-Risk Deployment, Position 2, Chin on Rim