

REPORT NUMBER: 208-MGA-2005-018

**VEHICLE SAFETY COMPLIANCE TESTING
FOR
FMVSS 208, OCCUPANT CRASH PROTECTION
FMVSS 212, WINDSHIELD MOUNTING
FMVSS 219, WINDSHIELD INTRUSION (PARTIAL)
FMVSS 301, FUEL SYSTEM INTEGRITY**

**Hyundai Motor Company
2004 Hyundai Elantra 4 Door
NHTSA No.: C40513**

**PREPARED BY:
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Test Dates: April 11, 2005 – June 5, 2006

Final Report Date: October 30, 2006

FINAL REPORT

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16. <i>Abstract</i> Compliance tests were conducted on the subject 2004 Hyundai Elantra 4 Door in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP208-12 and TP208-13 for the determination of FMVSS 208 compliance. Test failures identified were as follows: TEST FAILURES: The vehicle did not meet all of the performance requirements. Complete details are available in Section 4, Page 6, Discussion of Tests. The 2004 Hyundai Elantra would not change the passenger classification from child to adult or adult to child without a key on cycle with the passenger seat empty. Thus the air bag could be active or inactive for children and adults depending on how the operator used the vehicle. If the air bag is active for children and/or inactive for adults, there is a violation of the advanced air bag suppression requirements of FMVSS 208 (S19.2.1, S21.2.1, and S23.2.1). Hyundai issued recall 073 (NHTSA recall number 05V395000) to remedy this noncompliance.					
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SECTION 1
PURPOSE OF COMPLIANCE TEST

The tests performed are part of a program conducted for the National Highway Traffic Safety Administration (NHTSA) by MGA Research Corporation (MGA) under Contract No. DTNH22-03-D-11002. The purpose of this test was to determine whether the subject vehicle, a 2004 Hyundai Elantra 4 Door, NHTSA No. C40513, meets certain performance requirements of FMVSS 208, "Occupant Crash Protection"; FMVSS 212, "Windshield Mounting"; FMVSS 219, "Windshield Zone Intrusion"; and FMVSS 301, "Fuel System Integrity". The compliance test was conducted in accordance with OVSC Laboratory Test Procedure No. TP208-12 dated January 14, 2003 and TP208-13 dated July 27, 2005.

SECTION 2

TESTS PERFORMED

Test Vehicle: 2004 Hyundai Elantra 4 Door
 Test Program: FMVSS 208 Compliance

NHTSA No.: C40513
 Test Dates: 4/11/05-6/5/06

The following checked items indicate the tests that were performed:

- | | | |
|-------------------------------------|-----|---|
| ☐ | 1. | Rear outboard seating position seat belts (S4.1.1.2(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 (S7.4.4) |
| ☐ | 8. | Seat belt latch plate access (S7.4.4) |
| ☐ | 9. | Seat belt retraction (S7.4.5) |
| ☐ | 10. | Seat belt guides and hardware (S7.4.6) |
| ☒ | 11. | Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart R) |
| ☒ | 12. | Suppression tests with newborn infant (Part 572, Subpart K) |
| ☒ | 13. | Suppression tests with 3-year-old dummy (Part 572, Subpart P) |
| ☒ | 14. | Suppression tests with 6-year-old dummy (Part 572, Subpart N) |
| ☒ | 15. | Test of reactivation of the passenger air bag system with an unbelted 5 th percentile female dummy |
| ☐ | 16. | Low risk deployment test with 12-month-old dummy (Part 572, Subpart R) |
| ☐ | 17. | Low risk deployment test with 3-year-old dummy (Part 572, Subpart P) |
| ☐ | 18. | Low risk deployment test with 6-year-old dummy (Part 572, Subpart N) |
| ☐ | 19. | Low risk deployment test with 5 th female dummy (Part 572, Subpart O) |
| ☒ | 20. | Impact Tests |
| ☐ | | Frontal Oblique |
| ☐ | | Belted 50 th male dummy driver and passenger (0 to 48 kmph) (S5.1.1(a)) |
| ☐ | | Unbelted 50 th male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a)(1)) |
| ☐ | | Unbelted 50 th male dummy driver and passenger (32 to 40 kmph) (S5.1.2(a) (1) or S5.1.2(b)) |
| ☒ | | Frontal 0° |
| ☐ | | Belted 50 th male dummy driver (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a)) |
| ☐ | | Belted 50 th male dummy passenger (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a)) |
| ☐ | | Belted 5 th female dummy driver (0 to 48 kmph) (S16.1(a)) |
| ☐ | | Belted 5 th female dummy passenger (0 to 48 kmph) (S16.1(a)) |
| ☐ | | Belted 50 th male dummy driver and passenger (0 to 56 kmph) (S5.1.1.(b)(2)) |
| ☐ | | Unbelted 50 th male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a) (1)) |
| ☐ | | Unbelted 50 th male dummy driver (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b)) |

		Unbelted 50 th male dummy passenger (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b))
	X	Unbelted 5 th female dummy driver (32 to 40 kmph) (S16.1(b))
	X	Unbelted 5 th female dummy passenger (32 to 40 kmph) (S16.1(b))
		40% Offset 0° Belted 5 th male dummy driver and passenger (0 to 40 kmph) (S18.1)
	21.	Sled Test: unbelted 50 th male dummy driver and passenger (S13)
	22.	FMVSS 204 Indicant Test
X	23.	FMVSS 212 Indicant Test
X	24.	FMVSS 219 Indicant Test
X	25.	FMVSS 301 Indicant Frontal Test

For the crash tests, the vehicle was instrumented with 8 accelerometers. The accelerometer data from the vehicle and dummies were sampled at 10,000 samples per second and processed as specified in SAE J211/1 MAR95 and FMVSS 208, S4.13.

The dynamic tests were recorded using high speed film and high speed digital video.

The vehicle did not meet all of the performance requirements. Complete details are available in Section 4, Page 6, Discussion of Tests.

SECTION 3
INJURY RESULT SUMMARY FOR FMVSS 208 TESTS

Test Vehicle: 2004 Hyundai Elantra 4 Door
 Test Program: FMVSS 208 Compliance

NHTSA No.: C40513
 Test Dates: 6/5/06

40 kmph Frontal Crash

Impact Angle: Zero degrees

Belted Dummies: Yes No
 Speed Range: 0 to 40 kmph 32 to 40 kmph
 0 to 48 kmph 0 to 56 kmph

Test Speed: 39.8 kmph Test Weight: 1465.7 kg

Driver Dummy: 5th female 50th male
 Passenger Dummy: 5th female 50th male

5th Percentile Female Frontal Crash Test *
Vehicles certified to S16.1(a), S16.1(b), or S18.1

Injury Criteria	Max. Allowable Injury Assessment Values	Driver	Passenger
HIC15	700	91	394
N _{te}	1.0	0.4	0.7
N _{tf}	1.0	0.2	0.4
N _{ce}	1.0	0.0	0.7
N _{cf}	1.0	0.2	0.2
Neck Tension	2620 N	660	756
Neck Compression	2520 N	466	318
Chest g	60 g	42	45
Chest Displacement	52 mm	22	5
Left Femur	6805 N	3801	5019
Right Femur	6805 N	2723	2984

SECTION 4

DISCUSSION OF TESTS

Test Vehicle: 2004 Hyundai Elantra 4 Door
Test Program: FMVSS 208 Compliance

NHTSA No.: C40513
Test Date: 4/11/05-6/5/06

The vehicle did not meet all performance requirements.

Due to problems with the vehicle suppression system, multiple suppression tests were conducted. Hyundai certified using dummies, therefore these tests were conducted using dummies.

Because of consumer complaints about the suppression system, an initial limited number of suppression and reactivation tests were conducted on April 11, 2005. These tests were conducted using dummies and human subjects for air bag reactivation as shown in the Table below:

1-12-month-old suppression with Britax Roundabout 161 child restraint w/ human 5th female reactivation in the full rear seat track position
1-3-year-old suppression with Century Next Step booster seat w/ dummy 5th female reactivation in the mid track seat position
1-6-year-old suppression with Century Next Step booster seat w/ human 5th female reactivation in the full forward seat track position
1-6-year-old suppression Cosco High Back Booster seat w/ 120 to 130 lb human reactivation in the full forward seat track position

The supplemental suppression testing exhibited a passenger occupant classification lock where each time an active passenger air bag classification was made the suppression system locked that classification until the key was cycled with the passenger seat empty. Hyundai conducted a recall (NHTSA Recall 05V395000; Hyundai Recall 073) to fix this problem.

Prior to having the above recall performed on the test vehicle, the same initial limited number of suppression and reactivation tests were conducted on January 11, 2006 to verify the current status of the passenger occupant classification system. These tests were conducted using dummies and human subjects for air bag reactivation as shown in the Table below:

1-12-month-old suppression with Britax Roundabout 161 child restraint w/ human 5th female reactivation in the full rear seat track position
1-3-year-old suppression with Century Next Step booster seat w/ dummy 5th female reactivation in the mid track seat position
1-6-year-old suppression with Century Next Step booster seat w/ human 5th female reactivation in the full forward seat track position
1-6-year-old suppression Cosco High Back Booster seat w/ 120 to 130 lb human reactivation in the full forward seat track position

Following service for Hyundai Recall 073, a more extensive sequence of suppression tests were conducted from January 19 to January 25, 2006. These tests were conducted using dummies and human subjects for air bag reactivation as shown in the Table below:

1-12-month-old suppression with Britax Roundabout 161 child restraint w/ human 5th female reactivation in the full rear seat track position
1-3-year-old suppression with Century Next Step booster seat w/ dummy 5th female reactivation in the mid track seat position
1-6-year-old suppression with Century Next Step booster seat w/ human 5th female reactivation in the full forward seat track position
1-6-year-old suppression Cosco High Back Booster seat w/ 120 to 130 lb human reactivation in the full forward seat track position

The system no longer exhibited a passenger occupant classification lock.

The vehicle was then sent to a Hyundai dealer for Technical Service Bulletin (TSB) passenger Occupant Classification System software change (Service Bulletin Number 0590003) and driver air bag customer service action software change (Service Bulletin Number 0501002). The Technical Service Bulletin (TSB) passenger Occupant Classification System software change was performed at Hyundai & Kia Motors Design & Technical Center in California. Following service for Hyundai Service Bulletin Number 0590003, a sequence of suppression tests were conducted from May 2 to May 3, 2006. These tests were conducted using dummies and human subjects for air bag reactivation as shown in the Table below:

1-12-month-old suppression with Britax Roundabout 161 child restraint w/ human 5th female reactivation in the full rear seat track position
1-3-year-old suppression with Century Next Step booster seat w/ dummy 5th female reactivation in the mid track seat position
1-6-year-old suppression with Century Next Step booster seat w/ human 5th female reactivation in the full forward seat track position
1-6-year-old suppression Cosco High Back Booster seat w/ 120 to 130 lb human reactivation in the full forward seat track position

There were no apparent issues. In addition the system successfully classified four representative 5th percentile human subject females and one representative human subject female. These photos are shown in the suppression appendix.

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

The Cosco Dream Ride Car Bed was tested for suppression in the Middle and Rearward Seat Slide position. The CRS would not fit in the Forward Seat Slide position due to interference with the transmission shifter.

During the frontal impact, there was no valid data on the Bottom of Engine (X) after 60 milliseconds.

Due to the length of time needed for testing, the tests were conducted in accordance with OVSC Laboratory Test Procedure No. TP208-12 dated January 14, 2003 and TP208-13 dated July 27, 2005 as appropriate for their test date.

SECTION 5
TEST DATA SHEETS

Test Vehicle: 2004 Hyundai Elantra 4 Door
Test Program: FMVSS 208 Compliance

NHTSA No.: C40513
Test Dates: 4/11/05-6/5/06

DATA SHEET 1

COTR VEHICLE WORK ORDER

Test Vehicle: 2004 Hyundai Elantra 4 Door
 Test Program: FMVSS 208 Compliance

NHTSA No.: C40513
 Test Dates: 4/11/05-6/5/06

COTR Signature: Charles R. Case

Test to be performed for this vehicle are checked below:

☐	1.	Rear Outboard Seating Position Seat Belts (S4.1.2(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 (S7.4.4)
☐	8.	Seat Belt Latch Plate Access (S7.4.4)
☐	9.	Seat Belt Retraction (S7.4.5)
☐	10.	Seat Belt Guides and Hardware (S7.4.6)
☒	11.	Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart R) using the following indicated child restraints.

Section B

☒	Britax Handle with Care 191	☒	Full Rearward	☒	Mid Position	☒	Full Forward
☐	Century Assura 4553	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Century Avanta SE 41530	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Century Smart Fit 4543	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Cosco Arriva 02727	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Cosco Opus 35 02603	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Evenflo Discovery Adjust Right 212	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☒	Evenflo First Choice 204	☒	Full Rearward	☒	Mid Position	☒	Full Forward
☐	Evenflo On My Way Position Right V 282	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☒	Graco Infant 8457	☒	Full Rearward	☒	Mid Position	☒	Full Forward

Section C

☒	Britax Roundabout 161	☒	Full Rearward	☒	Mid Position	☒	Full Forward
☒	Century Encore 4612	☒	Full Rearward	☒	Mid Position	☒	Full Forward
☐	Century STE 1000 4416	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Cosco Olympian 02803	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Cosco Touriva 02519	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Evenflo Horizon V 425	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☒	Evenflo Medallion 254	☒	Full Rearward	☒	Mid Position	☒	Full Forward

☒	12.	Suppression tests with newborn infant (Part 572, Subpart K) using the following indicated child restraints.
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Section A

☒	Cosco Dream Ride 02-719	☒	Full Rearward	☒	Mid Position	☒	Full Forward
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☒	13.	Suppression tests with 3-year-old dummy (Part 572, Subpart P) using the following indicated child restraints where a child restraint is required.
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Section C

X	Britax Roundabout 161	X	Full Rearward	X	Mid Position	X	Full Forward
X	Century Encore 4612	X	Full Rearward	X	Mid Position	X	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
X	Evenflo Medallion 254	X	Full Rearward	X	Mid Position	X	Full Forward

Section D

	Britax Roadster 9004		Full Rearward		Mid Position		Full Forward
X	Century Next Step 4920	X	Full Rearward	X	Mid Position	X	Full Forward
X	Cosco High Back Booster 02-442	X	Full Rearward	X	Mid Position	X	Full Forward
	Evenflo 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 161		Full Rearward		Mid Position		Full Forward
	Century Encore 4612		Full Rearward		Mid Position		Full Forward
	Century STE 1000 4416		Full Rearward		Mid Position		Full Forward
	Cosco Olympian 02803		Full Rearward		Mid Position		Full Forward
	Cosco Touriva 02519		Full Rearward		Mid Position		Full Forward
	Evenflo Horizon V 425		Full Rearward		Mid Position		Full Forward
	Evenflo Medallion 254		Full Rearward		Mid Position		Full Forward

Section D

	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

- X** **15.** Suppression tests with 3-year-old dummy (Part 572, Subpart P) in the following Forward, Middle, and Rearward seat track 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)

- X** **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
X	Century Next Step 4920	X	Full Rearward	X	Mid Position	X	Full Forward
X	Cosco High Back Booster 02-442	X	Full Rearward	X	Mid Position	X	Full Forward
X	Evenflo Right Fit 245	X	Full Rearward	X	Mid Position	X	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
X	19. Suppression tests with 6-year-old dummy (Part 572, Subpart N) in the following Forward, Middle, and Rearward seat track 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 edge, spine vertical, hands by the child's side (S22.2.2.4)						
	X 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 child'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 Unbelted 5 th percentile female dummy (S20.3, 22.3, S24.3). Perform this test after the following suppression tests: After each restraint.						
X	22. Test of Reactivation of the passenger air bag system with a representative 5 th percentile female (S20.3, 22.3, S24.3). Perform this test after the following suppression tests:						
	23. Low risk deployment test with 12-month-old dummy (Part 572, Subpart R) using the following indicated child restraints.						

Section B

	Britax Handle with Care 191		Full Rearward		Mid Position		Full Forward
	Century Assura 4553		Full Rearward		Mid Position		Full Forward
	Century Avanta SE 41530		Full Rearward		Mid Position		Full Forward
	Century Smart Fit 4543		Full Rearward		Mid Position		Full Forward
	Cosco Arriva 02727		Full Rearward		Mid Position		Full Forward
	Cosco Opus 35 02603		Full Rearward		Mid Position		Full Forward
	Evenflo Discovery Adjust Right 212		Full Rearward		Mid Position		Full Forward
	Evenflo First Choice 204		Full Rearward		Mid Position		Full Forward
	Evenflo On My Way Position Right V 282		Full Rearward		Mid Position		Full Forward
	Graco Infant 8457		Full Rearward		Mid Position		Full Forward

Section C

☐	Britax Roundabout 161	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Century Encore 4612	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Century STE 1000 4416	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Cosco Olympian 02803	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Cosco Touriva 02519	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Evenflo Horizon V 425	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	Evenflo Medallion 254	☐	Full Rearward	☐	Mid Position	☐	Full Forward
☐	24. Low risk deployment test with 3-year-old dummy (Part 572, Subpart P) in the following positions						
☐	Position 1						
☐	Position 2						
☐	25. Low risk deployment test with 6-year-old dummy (Part 572, Subpart N) in the following positions						
☐	Position 1						
☐	Position 2						
☐	26. Low risk deployment test with 5 th percentile female dummy (Part 572, Subpart O) in the following positions						
☐	Position 1						
☐	Position 2						
☒	27. Impact Tests						
☐	Frontal Oblique – Test Speed:						
☐	Belted 50 th male dummy driver and passenger (0 to 48 kmph) (S5.1.1(a))						
☐	Unbelted 50 th male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a)(1))						
☐	Unbelted 50 th male dummy driver and passenger (32 to 40 kmph) (S5.1.2(a) (1) or S5.1.2(b))						
☒	Frontal 0° - Test Speed: 39.8 kmph						
☐	Belted 50 th male dummy driver (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a))						
☐	Belted 50 th male dummy passenger (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a))						
☐	Belted 5 th female dummy driver (0 to 48 kmph) (S16.1(a))						
☐	Belted 5 th female dummy passenger (0 to 48 kmph) (S16.1(a))						
☐	Belted 50 th male dummy driver and passenger (0 to 56 kmph) (S5.1.1.(b)(2))						
☐	Unbelted 50 th male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a) (1))						
☐	Unbelted 50 th male dummy driver (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b))						
☐	Unbelted 50 th male dummy passenger (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b))						
☒	Unbelted 5 th female dummy driver (32 to 40 kmph) (S16.1(b))						
☒	Unbelted 5 th female dummy passenger (32 to 40 kmph) (S16.1(b))						
☐	40% Offset 0° Belted 5 th male dummy driver and passenger (0 to 40 kmph) (S18.1) – Test Speed:						
☐	28. Sled Test: Unbelted 50 th male dummy driver and passenger (S13)						
☐	29. FMVSS 204 Indicant Test						
☒	30. FMVSS 212 Indicant Test						
☒	31. FMVSS 219 Indicant Test						
☒	32. FMVSS 301 Indicant Frontal Test						

DATA SHEET 2
REPORT OF VEHICLE CONDITION

Test Vehicle: 2004 Hyundai Elantra 4 Door NHTSA No.: C40513
Test Program: FMVSS 208 Compliance Test Dates: 4/11/05-6/5/06

CONTRACT NO. DTNH22- 03-D-11002 Date: 6/19/06
FROM (Lab and rep name): MGA Research Corporation
TO: NHTSA, OVSC (NVS-220)

PURPOSE: () Initial Receipt () Received via Transfer (X) Present vehicle condition

MODEL YEAR/MAKE/MODEL/BODY STYLE: 2004 Hyundai Elantra 4 Door
MANUFACTURE DATE: 10/8/03
NHTSA NO. C40513 GVWR: 1760 kg (3880 lbs)
BODY COLOR: White GAWR (Fr): 960 kg (2116 lbs)
VIN: KMHDN46D34U769199 GAWR (Rr): 840 kg (1852 lbs)

ODOMETER READINGS: ARRIVAL (miles): 98 DATE: 9/30/04
COMPLETION (miles): 109 DATE: 6/5/06
PURCHASE PRICE: (\$) 12,500.00
DEALER'S NAME: Gurnee Motors, 100 Old Skokie Rd, Park City IL 60085

- A. All options listed on window sticker are present on the test vehicle:
X Yes ___ No
- B. Tires and wheel rims are new and the same as listed: X Yes ___ No
- C. There are no dents or other interior or exterior flaws: X Yes ___ No
- D. The vehicle has been properly prepared and is in running condition:
X Yes ___ No
- E. Keyless remote is available and working: X Yes ___ No
- F. The glove box contains an owner's manual, warranty document, consumer information, and extra set of keys: X Yes ___ No
- G. Proper fuel filler cap is supplied on the test vehicle: X Yes ___ No
- H. Using permanent marker, identify vehicle with NHTSA number and FMVSS test type(s) on roof line above driver door or for school buses, place a placard with NHTSA number inside the windshield and to the exterior front and rear side of bus:
X Yes ___ No
- I. Place vehicle in storage area: X Yes ___ No
- J. Inspect the vehicle's interior and exterior, including all windows, seats, doors, etc. to confirm that each system is complete and functional per the manufacturer's specifications. Any damage, misadjustment, or other unusual condition that could influence the test program or test results shall be recorded. Report any abnormal condition to the NHTSA COTR before beginning any test:
X Vehicle OK ___ Conditions reported below

REPORT OF VEHICLE CONDITION AT THE COMPLETION OF TESTING

LIST OF FMVSS TESTS PERFORMED BY THIS LAB: FMVSS 208, 212, 219, 301

VEHICLE: 2004 Hyundai Elantra 4 Door NHTSA NO. C40513

REMARKS:

Equipment that is no longer on the test vehicle as noted on previous page:

Right rear tail light, tool & jack, trunk interior, spare tire

Explanation for equipment removal:

Components removed for instrumentation installation and to meet target weight.

Test Vehicle Condition:

25 mph frontal impact damage- front suspension & structure damaged, hood & front quarter panels damaged, radiator damaged, air bags & pretensioners deployed, Stoddard in fuel system

RECORDED BY: Jeff Lewandowski DATE: 6/19/06

APPROVED BY: David Winkelbauer DATE: 6/19/06

#####

RELEASE OF TEST VEHICLE

The vehicle described above is released from MGA to be delivered to:

Date: Time: Odometer:

Lab Rep's Signature:

Title:

Carrier/Customer Rep:

Date:

DATA SHEET 3

CERTIFICATION LABEL AND TIRE PLACARD INFORMATION

Test Vehicle: 2004 Hyundai Elantra 4 Door
Test Program: FMVSS 208 Compliance
Test Technician: Wayne Dahlke

NHTSA No.: C40513
Test Date: 6/5/06

Certification Label	
Manufacturer:	Hyundai Motor Company
Date of Manufacture:	10/8/03
VIN:	KMHDN46D34U769199
Vehicle Certified As (Pass. Car/MPV/Truck/Bus):	Passenger Car
Front Axle GVWR:	960 kg (2116 lbs)
Rear Axle GVWR:	840 kg (1852 lbs)
Total GVWR:	1760 kg (3880 lbs)

Tire Placard	
Not applicable, vehicle is not a passenger car and does not have a tire placard.	Passenger Car
This is not a passenger car, but all or part of this information is still contained on a vehicle label and is reported here.	Passenger Car
Vehicle Capacity Weight:	385 kg (850 lbs)
Designated Seating Capacity Front:	2
Designated Seating Capacity Rear:	3
Total Designated Seating Capacity:	5
Recommended Cold Tire Inflation Pressure Front:	210 kpa (30 psi)
Recommended Cold Tire Inflation Pressure Rear:	210 kpa (30 psi)
Recommended Tire Size:	P185/60R15

Signature: _____

Wayne Dahlke

Date: 6/5/06

DATA SHEET 14

MARKING OF REFERENCE POINTS FOR VARIOUS TEST POSITIONS AND POINTS

Test Vehicle: 2004 Hyundai Elantra 4 Door
Test Program: FMVSS 208 Compliance
Test Technician: Joe Fleck

NHTSA No.: C40513
Test Date: 6/5/06

DATA SHEET 14.1

Marking of REFERENCE POINTS FOR 5th female

☒ Driver Seat	☐ Passenger Seat
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1. Seat 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, S20.1.9.1, S20.4.1, 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. (S16.2.10.2, S20.1.9.2, S20.4.1, S22.1.7.1, S22.4.2.1, S22.4.3.1, S24.4.2.1, S26.2.3, S26.3.1)
☒ N/A – No additional support adjustment
- ☒ 1.3 Position an adjustable leg support system in its rearmost position. (8/27/04 interpretation to Toyota)
☒ N/A – No adjustable leg support system
- ☒ 1.4 **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. (S16.3.1.12)
- ☒ 1.5 Draw a line (seat cushion reference line) through the seat cushion reference point. (S16.3.1.13)
- ☒ 1.6 Use only the controls that primarily move the seat in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S22.1.7.3)
- ☒ 1.7 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. (S16.2.10.3.1, S20.1.9.3)
☒ N/A – No independent fore-aft seat cushion adjustment
- ☒ 1.8 Use any part of any control, other than the parts just used for fore-aft positioning, to determine the range of angles of the seat cushion reference line and to set the seat cushion reference line at the mid-angle. (S16.2.10.3.1)
Maximum angle 11.6° Nose Down
Minimum angle 0.2° Nose Down
Mid-angle 5.7° Nose Down

- X 1.9 If the seat and/or seat cushion height is adjustable, use any part of any control other than the parts 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 1.8. (S16.2.10.3.1)
 ___ N/A – No seat height adjustment
- X 1.10 Use only the controls that primarily move the seat in the fore-aft direction to verify the seat is in the rearmost position.
- X 1.11 Use only the controls that primarily move the seat in the fore-aft direction to **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.
- X 1.12 Use only the controls that primarily move the seat in the fore-aft direction to place the seat in the rearmost position.
- X 1.13 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to 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 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S22.4.3.1, S24.1.2, S24.3.1, S24.4.3.1, S26.2.3, S26.3.1)
 ___ N/A – No seat height adjustment. Go to 1.18
- X 1.14 Use only the controls that primarily move the seat and/or seat cushion in the fore-aft direction to place the seat in the mid-fore-aft position.
- X 1.15 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to 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 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)
- X 1.16 Use only the control that change the seat in the fore-aft direction to place the seat in the foremost position. (S16.2.10.3.2)
- X 1.17 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to 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 1.8. (S16.2.10.3.3, S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)
- X 1.18. Visually **mark** for future reference the seat back angle at the manufacturer's nominal design riding position for a **50th percentile adult male** in the manner specified by the manufacturer for the rearmost, mid, and foremost seat positions. (S20.1.9.5, S22.1.7.5, S22.4.2.1, S22.4.3.1, S24.1.2, S24.4.2.1, S26.2.3, S26.3.1)
 ___ N/A – No seat back angle adjustment
 Manufacturer's design seat back angle 22.5°

☒ 1.19. Is the seat a bucket seat?

☒ Yes, go to 1.20 and **skip 1.21**

☐ No, go to 1.21 and skip 1.20

☒ 1.20 Bucket seats:

Locate and **mark** for future reference the longitudinal centerline of the seat cushion. The intersection of the vertical longitudinal plane that passes through the SgRP and the seat cushion upper surface determines the longitudinal centerline of a bucket seat cushion. (S16.3.1.10 & S20.1.10)

☐ 1.21 Bench seats (complete ONLY the one that is applicable to the seat being marked):

☐ 1.21.1 Driver Seat

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

☐ 1.21.2 Passenger Seat

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, S24.2.3, S20.4.4, S22.2.2.1(b), S22.2.2.3(b), S22.2.2.4(a), S22.2.2.5(a), S22.2.2.6(a), S22.2.2.7(a), S24.2.3(a))

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.) _____

2. Head Restraint Position

☐ N/A Vehicle contains automatic head restraints.

☐ N/A, there is no head restraint adjustment

☒ 2.1 Adjust the head restraint to its lowest position. (S16.2.10.2, S20.1.9.6 S20.4.1, S22.1.7.6, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)

☒ 2.2 All adjustments 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. (S16.2.10.2 & S16.3.4.4 & S20.1.9.6, S20.4.1, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)

☒ 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. (S16.3.4.3)

Vertical height of head restraint 180 mm

Mid-point height 90 mm

REMARKS:

I certify that I have read and performed each instruction.

Signature: 

Date: 6/5/06

DATA SHEET 14

MARKING OF REFERENCE POINTS FOR VARIOUS TEST POSITIONS AND POINTS

Test Vehicle: 2004 Hyundai Elantra 4 Door
Test Program: FMVSS 208 Compliance
Test Technician: Joe Fleck

NHTSA No.: C40513
Test Date: 6/5/06

DATA SHEET 14.1

Marking of REFERENCE POINTS FOR 5th female

☐ Driver Seat	☒ Passenger Seat
--------------------------------------	--

1. Seat Position

- X 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, S20.1.9.1, S20.4.1, 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. (S16.2.10.2, S20.1.9.2, S20.4.1, S22.1.7.1, S22.4.2.1, S22.4.3.1, S24.4.2.1, S26.2.3, S26.3.1)
X N/A – No additional support adjustment
- X 1.3 Position an adjustable leg support system in its rearmost position. (8/27/04 interpretation to Toyota)
X N/A – No adjustable leg support system
- X 1.4 **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. (S16.3.1.12)
- X 1.5 Draw a line (seat cushion reference line) through the seat cushion reference point. (S16.3.1.13)
- X 1.6 Use only the controls that primarily move the seat in the fore-aft direction to move the seat cushion reference point to the rearmost position. (S16.2.10.3.1, S22.1.7.3)
- X 1.7 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. (S16.2.10.3.1, S20.1.9.3)
X N/A – No independent fore-aft seat cushion adjustment
- X 1.8 Use any part of any control, other than the parts just used for fore-aft positioning, to determine the range of angles of the seat cushion reference line and to set the seat cushion reference line at the mid-angle. (S16.2.10.3.1)
Maximum angle No Adjustment - Zero
Minimum angle No Adjustment - Zero
Mid-angle No Adjustment - Zero

- X 1.9 If the seat and/or seat cushion height is adjustable, use any part of any control other than the parts 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 1.8. (S16.2.10.3.1)
X N/A – No seat height adjustment
- X 1.10 Use only the controls that primarily move the seat in the fore-aft direction to verify the seat is in the rearmost position.
- X 1.11 Use only the controls that primarily move the seat in the fore-aft direction to **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.
- X 1.12 Use only the controls that primarily move the seat in the fore-aft direction to place the seat in the rearmost position.
- X 1.13 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to 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 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S22.4.3.1, S24.1.2, S24.3.1, S24.4.3.1, S26.2.3, S26.3.1)
X N/A – No seat height adjustment. Go to 1.18
- X 1.14 Use only the controls that primarily move the seat and/or seat cushion in the fore-aft direction to place the seat in the mid-fore-aft position.
- X 1.15 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to 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 1.8. (S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)
- X 1.16 Use only the control that change the seat in the fore-aft direction to place the seat in the foremost position. (S16.2.10.3.2)
- X 1.17 Use any part of any control, other than the parts which primarily move the seat or seat cushion fore-aft, to 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 1.8. (S16.2.10.3.3, S20.1.9.4, S22.1.2, S22.1.7.4, S22.3.1, S24.1.2, S24.3.1)
- X 1.18. Visually **mark** for future reference the seat back angle at the manufacturer's nominal design riding position for a **50th percentile adult male** in the manner specified by the manufacturer for the rearmost, mid, and foremost seat positions. (S20.1.9.5, S22.1.7.5, S22.4.2.1, S22.4.3.1, S24.1.2, S24.4.2.1, S26.2.3, S26.3.1)
 N/A – No seat back angle adjustment
Manufacturer's design seat back angle 22.5°

☒ 1.19. Is the seat a bucket seat?

☒ Yes, go to 1.20 and **skip 1.21**

☐ No, go to 1.21 and skip 1.20

☒ 1.20 Bucket seats:

Locate and **mark** for future reference the longitudinal centerline of the seat cushion. The intersection of the vertical longitudinal plane that passes through the SgRP and the seat cushion upper surface determines the longitudinal centerline of a bucket seat cushion. (S16.3.1.10 & S20.1.10)

☐ 1.21 Bench seats (complete ONLY the one that is applicable to the seat being marked):

☐ 1.21.1 Driver Seat

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

☐ 1.21.2 Passenger Seat

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, S24.2.3, S20.4.4, S22.2.2.1(b), S22.2.2.3(b), S22.2.2.4(a), S22.2.2.5(a), S22.2.2.6(a), S22.2.2.7(a), S24.2.3(a))

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.) _____

2. Head Restraint Position

☐ N/A Vehicle contains automatic head restraints.

☐ N/A, there is no head restraint adjustment

☒ 2.1 Adjust the head restraint to its lowest position. (S16.2.10.2, S20.1.9.6, S20.4.1, S22.1.7.6, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)

☒ 2.2 All adjustments 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. (S16.2.10.2 & S16.3.4.4 & S20.1.9.6, S20.4.1, S22.4.2.1, S22.4.3.1, S24.4.3.1, S26.2.3, S26.3.1)

☒ 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. (S16.3.4.3)

Vertical height of head restraint 180 mm

Mid-point height 90 mm

REMARKS:

I certify that I have read and performed each instruction.

Signature:  _____

Date: 6/5/06

DATA SHEET 14

MARKING OF REFERENCE POINTS FOR VARIOUS TEST POSITIONS AND POINTS

Test Vehicle: 2004 Hyundai Elantra 4 Door
Test Program: FMVSS 208 Compliance
Test Technician: Joe Fleck

NHTSA No.: C40513
Test Date: 6/5/06

DATA SHEET 14.3

MARKING OF REFERENCE POINTS FOR STEERING WHEEL

- X 1. Is the steering wheel adjustable up and down and/or in and out?
X Yes – go to 2
___ No – this form is complete
- X 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 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.

I certify that I have read and performed each instruction.

Signature: 

Date: 6/5/06

DATA SHEET 15 SUMMARY

Supplemental Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	4/11/05
LABORATORY:	MGA	TECHNICIANS:	AJH
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	082

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Roundabout 161
DATE OF MANUFACTURE:	7-21-2000

Base: __On __Off X N/A-Constraint does not have a removable base

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket was not used in the suppression testing because it did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing	Forward	130	Suppressed
	Middle	129	Suppressed
	Rearward	132	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Belted Rear Facing	Forward	128	Suppressed
	Middle	133	Suppressed
	Rearward	133	Suppressed
Unbelted Rear Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

Successful Unbelted 5th Percentile Female Reactivation was performed with the seat in the Rearward position. (Human Identification Code 013; 49.4 kg 149.9 cm)

DATA SHEET 17 SUMMARY

Supplemental Suppression Test Using 3 Year Old Dummy And Booster Seats
(Part 572, Subpart P)

Section D Forward Facing Belt Positioning Booster

NHTSA No.:	C40513	TEST DATE:	4/11/05
LABORATORY:	MGA	TECHNICIANS:	AJH
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

BOOSTER SEAT NAME:	Century
BOOSTER SEAT MODEL:	Next Step 4920
DATE OF MANUFACTURE:	8-16-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing Without Harness	Forward 2 *	10	Not Suppressed
	Middle	13	Not Suppressed
	Rearward	14	Not Suppressed
Belted Forward Facing Cinched With Harness	Forward 2 *	127	Suppressed
	Middle	133	Suppressed
	Rearward	132	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN081)

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

DATA SHEET 20 SUMMARY

Supplemental Suppression Test Using 6 Year Old Dummy And Booster Seats
(Part 572, Subpart N)

Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA No.:	C40513	TEST DATE:	4/11/05
LABORATORY:	MGA	TECHNICIANS:	AJH
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

BOOSTER SEAT NAME:	Century
BOOSTER SEAT MODEL:	Next Step 4920
DATE OF MANUFACTURE:	8-16-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	15	Not Suppressed
	Middle	18	Not Suppressed
	Rearward	12	Not Suppressed

Successful Unbelted 5th Percentile Female Reactivation was performed with the seat in the Forward position. (Human Identification Code 013; 49.4 kg 149.9 cm)

DATA SHEET 20 SUMMARY

Supplemental Suppression Test Using 6 Year Old Dummy And Booster Seats
(Part 572, Subpart N)

Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA No.:	C40513	TEST DATE:	4/11/05
LABORATORY:	MGA	TECHNICIANS:	AJH
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

BOOSTER SEAT NAME:	Cosco
BOOSTER SEAT MODEL:	High Back Booster 02-442
DATE OF MANUFACTURE:	4-28-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	16	Suppressed
	Middle	11	Suppressed
	Rearward	16	Suppressed

Successful Unbelted Representative Female Human Reactivation was performed with the seat in the Forward position. (Human Identification Code 031; 54.4 kg 170.2 cm)

DATA SHEET 15 SUMMARY

Initial Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	1/11/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Roundabout 161
DATE OF MANUFACTURE:	7-21-2000

Base: __On __Off X N/A-Constraint does not have a removable base

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket was not used in the suppression testing because it did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing	Forward	130	Suppressed
	Middle	130	Suppressed
	Rearward	133	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Belted Rear Facing	Forward	127	Suppressed
	Middle	128	Suppressed
	Rearward	131	Suppressed
Unbelted Rear Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

Successful Unbelted Representative Female Human Reactivation was performed with the seat in the Rearward position. (Human Identification Code 031; 54.4 kg 170.2 cm)

DATA SHEET 17 SUMMARY

Initial Suppression Test Using 3 Year Old Dummy And Booster Seats
(Part 572, Subpart P)

Section D Forward Facing Belt Positioning Booster

NHTSA No.:	C40513	TEST DATE:	1/11/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

BOOSTER SEAT NAME:	Century
BOOSTER SEAT MODEL:	Next Step 4920
DATE OF MANUFACTURE:	8-16-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing Without Harness	Forward 2 *	9	Suppressed
	Middle	12	Suppressed
	Rearward	13	Suppressed
Belted Forward Facing Cinched With Harness	Forward 2 *	127	Suppressed
	Middle	128	Suppressed
	Rearward	131	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN081)

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

DATA SHEET 20 SUMMARY

Initial Suppression Test Using 6 Year Old Dummy And Booster Seats
(Part 572, Subpart N)

Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA No.:	C40513	TEST DATE:	1/11/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

BOOSTER SEAT NAME:	Century
BOOSTER SEAT MODEL:	Next Step 4920
DATE OF MANUFACTURE:	8-16-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	11	Suppressed
	Middle	14	Suppressed
	Rearward	18	Suppressed

Successful Unbelted Representative Female Human Reactivation was performed with the seat in the Forward position. (Human Identification Code 031; 54.4 kg 170.2 cm)

DATA SHEET 20 SUMMARY

Initial Suppression Test Using 6 Year Old Dummy And Booster Seats
(Part 572, Subpart N)

Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA No.:	C40513	TEST DATE:	1/11/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

BOOSTER SEAT NAME:	Cosco
BOOSTER SEAT MODEL:	High Back Booster 02-442
DATE OF MANUFACTURE:	4-28-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	10	Suppressed
	Middle	11	Suppressed
	Rearward	17	Suppressed

Successful Unbelted Representative Female Human Reactivation was performed with the seat in the Forward position. (Human Identification Code 030; 56.7 kg 165.1 cm)

DATA SHEET 15 SUMMARY

Post Recall Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA No.:	C40513	TEST DATE:	1/20/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Handle With Care 191
DATE OF MANUFACTURE:	5-26-2000

Base: __On __Off X N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Handle Down	Handle Up
Belted Rear Facing	Forward	130	Suppressed	Not Done
	Middle	133	Suppressed	Not Done
	Rearward	127	Suppressed	Not Done
Unbelted Rear Facing	Forward	N/A	Suppressed	Not Done
	Middle	N/A	Suppressed	Not Done
	Rearward	N/A	Suppressed	Not Done
Unbelted Forward Facing	Forward	N/A	Suppressed	Not Done
	Middle	N/A	Suppressed	Not Done
	Rearward	N/A	Suppressed	Not Done

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN081)

DATA SHEET 15 SUMMARY

Post Recall Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA No.:	C40513	TEST DATE:	1/20/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Evenflo
CHILD RESTRAINT MODEL:	First Choice 204
DATE OF MANUFACTURE:	6-20-2000

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

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Handle Down	Handle Up
Belted Rear Facing	Forward 8 *	128	Not Done	Suppressed
	Middle	129	Not Done	Suppressed
	Rearward	132	Suppressed	Not Done
Unbelted Rear Facing	Forward 10 *	N/A	Not Done	Suppressed
	Middle	N/A	Not Done	Suppressed
	Rearward	N/A	Suppressed	Not Done
Unbelted Forward Facing	Forward 6 *	N/A	Not Done	Suppressed
	Middle	N/A	Not Done	Suppressed
	Rearward	N/A	Not Done	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN081)

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

DATA SHEET 15 SUMMARY

Post Recall Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R) Section B Rear Facing CRS

NHTSA No.:	C40513	TEST DATE:	1/20/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Graco
CHILD RESTRAINT MODEL:	Infant 8457
DATE OF MANUFACTURE:	8-31-2000

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

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Handle Down	Handle Up
Belted Rear Facing	Forward 8 *	129	Not Done	Suppressed
	Middle	128	Not Done	Suppressed
	Rearward	131	Suppressed	Not Done
Unbelted Rear Facing	Forward 10 *	N/A	Not Done	Suppressed
	Middle	N/A	Not Done	Suppressed
	Rearward	N/A	Suppressed	Not Done
Unbelted Forward Facing	Forward 8 *	N/A	Not Done	Suppressed
	Middle	N/A	Not Done	Suppressed
	Rearward	N/A	Not Done	Suppressed

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

DATA SHEET 15 SUMMARY

Post Recall Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA No.:	C40513	TEST DATE:	1/20/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Graco
CHILD RESTRAINT MODEL:	Infant 8457
DATE OF MANUFACTURE:	8-31-2000

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

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Handle Down	Handle Up
Belted Rear Facing	Forward 5 *	131	Not Done	Suppressed
	Middle	130	Not Done	Suppressed
	Rearward	131	Suppressed	Not Done
Unbelted Rear Facing	Forward 7 *	N/A	Not Done	Suppressed
	Middle	N/A	Not Done	Suppressed
	Rearward	N/A	Suppressed	Not Done
Unbelted Forward Facing	Forward 8 *	N/A	Not Done	Suppressed
	Middle	N/A	Not Done	Suppressed
	Rearward	N/A	Not Done	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the 5th Forward position. (SN081)

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

DATA SHEET 15 SUMMARY

Post Recall Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	1/19/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Roundabout 161
DATE OF MANUFACTURE:	7-21-2000

Base: __On __Off X N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket was not used in the suppression testing because it did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing	Forward	130	Suppressed
	Middle	131	Suppressed
	Rearward	127	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Belted Rear Facing	Forward	128	Suppressed
	Middle	129	Suppressed
	Rearward	133	Suppressed
Unbelted Rear Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN081)

Successful Unbelted 5th Percentile Female Reactivation was performed with the seat in the Rearward position. (Human Identification Code 013; 49.4 kg 149.9 cm)

DATA SHEET 15 SUMMARY

Post Recall Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	1/19/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Century
CHILD RESTRAINT MODEL:	Encore 4612
DATE OF MANUFACTURE:	8-16-2000

Base: __On __Off X N/A-Constraint does not have a removable base

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket was not used in the suppression testing because it did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing	Forward	133	Suppressed
	Middle	127	Suppressed
	Rearward	127	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Belted Rear Facing	Forward	132	Suppressed
	Middle	131	Suppressed
	Rearward	129	Suppressed
Unbelted Rear Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN081)

DATA SHEET 15 SUMMARY

Post Recall Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	1/19/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Evenflo
CHILD RESTRAINT MODEL:	Medallion 254
DATE OF MANUFACTURE:	6-1-2000

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

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket was not used in the suppression testing because it did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing	Forward	127	Suppressed
	Middle	129	Suppressed
	Rearward	131	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Belted Rear Facing	Forward	130	Suppressed
	Middle	129	Suppressed
	Rearward	132	Suppressed
Unbelted Rear Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Forward position. (SN081)

DATA SHEET 16 SUMMARY

Post Recall Suppression Test Using Newborn Infant Dummy (Part 572, Subpart K) Section A Car Bed

NHTSA No.:	C40513	TEST DATE:	1/25/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	Newborn Infant	DUMMY SERIAL NO.:	003

CAR BED NAME:	Cosco
CAR BED MODEL:	Dream Ride 02-719
DATE OF MANUFACTURE:	6-16-2000

Base: ☐ On ☐ Off ☒ N/A-Constraint 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.

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Handle Down	Handle Up
Belted	Forward 7 *	Suppressed	Not Done
	Middle	Suppressed	Not Done
	Rearward	Suppressed	Not Done

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the 7th Forward position. (SN081)

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

The CRS would not fit in the Forward Seat Slide position due to interference with the transmission shifter.

The CRS was orientated at 30° to fit in the Rearward Seat Slide position due to interference with the center console.

DATA SHEET 17 SUMMARY

Post Recall Suppression Test Using 3 Year Old Dummy And Booster Seats
(Part 572, Subpart P)

Section D Forward Facing Belt Positioning Booster

NHTSA No.:	C40513	TEST DATE:	1/20/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

BOOSTER SEAT NAME:	Century
BOOSTER SEAT MODEL:	Next Step 4920
DATE OF MANUFACTURE:	8-16-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing Without Harness	Forward	9	Suppressed
	Middle	11	Suppressed
	Rearward	14	Suppressed
Belted Forward Facing Cinched With Harness	Forward	131	Suppressed
	Middle	128	Suppressed
	Rearward	127	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN081)

DATA SHEET 17 SUMMARY

Post Recall Suppression Test Using 3 Year Old Dummy And Booster Seats
(Part 572, Subpart P)

Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA No.:	C40513	TEST DATE:	1/20/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

BOOSTER SEAT NAME:	Cosco
BOOSTER SEAT MODEL:	High Back Booster 02-442
DATE OF MANUFACTURE:	4-28-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing Without Harness	Forward 3 *	14	Suppressed
	Middle	17	Suppressed
	Rearward	12	Suppressed
Belted Forward Facing Cinched With Harness	Forward 6 *	130	Suppressed
	Middle	133	Suppressed
	Rearward	131	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN081)

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

DATA SHEET 18 SUMMARY

Post Recall Suppression Test Using 3 Year Old Dummy And Convertible Restraints
(Part 572, Subpart P)

Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	1/19/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Roundabout 161
DATE OF MANUFACTURE:	7-21-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	128	Suppressed
	Middle	132	Suppressed
	Rearward	131	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN081)

DATA SHEET 18 SUMMARY

Post Recall Suppression Test Using 3 Year Old Dummy And Convertible Restraints
(Part 572, Subpart P)

Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	1/25/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

CHILD RESTRAINT NAME:	Century
CHILD RESTRAINT MODEL:	Encore 4612
DATE OF MANUFACTURE:	8-16-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	129	Suppressed
	Middle	127	Suppressed
	Rearward	133	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN081)

DATA SHEET 18 SUMMARY

Post Recall Suppression Test Using 3 Year Old Dummy And Convertible Restraints
(Part 572, Subpart P)

Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	1/25/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

CHILD RESTRAINT NAME:	Evenflo
CHILD RESTRAINT MODEL:	Medallion 254
DATE OF MANUFACTURE:	6-1-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	129	Suppressed
	Middle	127	Suppressed
	Rearward	131	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Forward position. (SN081)

DATA SHEET 19 SUMMARY

Post Recall Suppression Test Using An Unbelted 3 Year Old Dummy (Part 572, Subpart P)
No CRS

NHTSA No.:	C40513	TEST DATE:	1/20/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

Test Summary

Position	Seat Slide	Seat Back Angle	Result
Position 1 Sitting on seat with back against seat back	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 2 Sitting on seat with back against reclined seat back	Forward	46.7	Suppressed
	Middle	46.7	Suppressed
	Rearward	46.7	Suppressed
Position 3 Sitting on seat with back not against seat back	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 4 Sitting on seat edge, spine vertical, hands at dummy's sides	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 5 Standing on seat, facing forward	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 6 Kneeling on seat, facing forward	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 7 Kneeling on seat, facing rearward	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 8 Lying on seat. (Three designated seating positions only)	Forward	N/A	N/A
	Middle	N/A	N/A
	Rearward	N/A	N/A

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Forward position. (SN081)

DATA SHEET 20 SUMMARY

Post Recall Suppression Test Using 6 Year Old Dummy And Booster Seats
(Part 572, Subpart N)

Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA No.:	C40513	TEST DATE:	1/20/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

BOOSTER SEAT NAME:	Century
BOOSTER SEAT MODEL:	Next Step 4920
DATE OF MANUFACTURE:	8-16-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	12	Suppressed
	Middle	12	Suppressed
	Rearward	16	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN081)

Successful Unbelted 5th Percentile Female Reactivation was performed with the seat in the Forward position. (Human Identification Code 013; 49.4 kg 149.9 cm)

DATA SHEET 20 SUMMARY

Post Recall Suppression Test Using 6 Year Old Dummy And Booster Seats
(Part 572, Subpart N)

Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA No.:	C40513	TEST DATE:	1/20/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

BOOSTER SEAT NAME:	Cosco
BOOSTER SEAT MODEL:	High Back Booster 02-442
DATE OF MANUFACTURE:	4-28-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	14	Suppressed
	Middle	15	Suppressed
	Rearward	17	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN081)

Successful Unbelted Representative Female Human Reactivation was performed with the seat in the Forward position. (Human Identification Code 030; 56.7 kg 165.1 cm)

DATA SHEET 20 SUMMARY

Post Recall Suppression Test Using 6 Year Old Dummy And Booster Seats
(Part 572, Subpart N)

Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA No.:	C40513	TEST DATE:	1/20/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

BOOSTER SEAT NAME:	Evenflo
BOOSTER SEAT MODEL:	Right Fit 245
DATE OF MANUFACTURE:	6-26-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	13	Suppressed
	Middle	13	Suppressed
	Rearward	16	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN081)

DATA SHEET 21 SUMMARY

Post Recall Suppression Test Using An Unbelted 6 Year Old Dummy (Part 572, Subpart N)
No CRS

NHTSA No.:	C40513	TEST DATE:	1/20/06
LABORATORY:	MGA	TECHNICIANS:	JL
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

Test Summary

Position	Seat Slide	Seat Back Angle	Result
Position 1 Sitting on seat with back against seat back	Forward 6 *	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 2 Sitting on seat with back against reclined seat back	Forward 6 *	46.7	Suppressed
	Middle	46.7	Suppressed
	Rearward	46.7	Suppressed
Position 3 Sitting on seat edge, spine vertical, hands at dummy's sides	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 4 Sitting on seat with back against seat back then leaning on the door	Forward 6 *	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN081)

* The ATD would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

DATA SHEET 15 SUMMARY

Post TSB Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA No.:	C40513	TEST DATE:	5/02/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Handle With Care 191
DATE OF MANUFACTURE:	5-26-2000

Base: __On __Off X N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Handle Down	Handle Up
Belted Rear Facing	Forward	127	Suppressed	Not Done
	Middle	129	Suppressed	Not Done
	Rearward	129	Suppressed	Not Done
Unbelted Rear Facing	Forward	N/A	Suppressed	Not Done
	Middle	N/A	Suppressed	Not Done
	Rearward	N/A	Suppressed	Not Done
Unbelted Forward Facing	Forward	N/A	Suppressed	Not Done
	Middle	N/A	Suppressed	Not Done
	Rearward	N/A	Suppressed	Not Done

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN516)

DATA SHEET 15 SUMMARY

Post TSB Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA No.:	C40513	TEST DATE:	5/02/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Evenflo
CHILD RESTRAINT MODEL:	First Choice 204
DATE OF MANUFACTURE:	6-20-2000

Base: __On __Off X N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Handle Down	Handle Up
Belted Rear Facing	Forward 8 *	127	Not Done	Suppressed
	Middle	127	Not Done	Suppressed
	Rearward	129	Not Done	Suppressed
Unbelted Rear Facing	Forward 10 *	N/A	Not Done	Suppressed
	Middle	N/A	Not Done	Suppressed
	Rearward	N/A	Not Done	Suppressed
Unbelted Forward Facing	Forward 6 *	N/A	Not Done	Suppressed
	Middle	N/A	Not Done	Suppressed
	Rearward	N/A	Not Done	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN516)

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

DATA SHEET 15 SUMMARY

Post TSB Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA No.:	C40513	TEST DATE:	5/02/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Graco
CHILD RESTRAINT MODEL:	Infant 8457
DATE OF MANUFACTURE:	8-31-2000

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

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Handle Down	Handle Up
Belted Rear Facing	Forward 8 *	133	Not Done	Suppressed
	Middle	133	Not Done	Suppressed
	Rearward	133	Not Done	Suppressed
Unbelted Rear Facing	Forward 10 *	N/A	Not Done	Suppressed
	Middle	N/A	Not Done	Suppressed
	Rearward	N/A	Not Done	Suppressed
Unbelted Forward Facing	Forward 8 *	N/A	Not Done	Suppressed
	Middle	N/A	Not Done	Suppressed
	Rearward	N/A	Not Done	Suppressed

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

DATA SHEET 15 SUMMARY

Post TSB Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section B Rear Facing CRS

NHTSA No.:	C40513	TEST DATE:	5/02/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Graco
CHILD RESTRAINT MODEL:	Infant 8457
DATE OF MANUFACTURE:	8-31-2000

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

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Handle Down	Handle Up
Belted Rear Facing	Forward 5 *	129	Not Done	Suppressed
	Middle	127	Not Done	Suppressed
	Rearward	127	Not Done	Suppressed
Unbelted Rear Facing	Forward 7 *	N/A	Not Done	Suppressed
	Middle	N/A	Not Done	Suppressed
	Rearward	N/A	Not Done	Suppressed
Unbelted Forward Facing	Forward 8 *	N/A	Not Done	Suppressed
	Middle	N/A	Not Done	Suppressed
	Rearward	N/A	Not Done	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the 5th Forward position. (SN516)

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

DATA SHEET 15 SUMMARY

Post TSB Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	5/02/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Roundabout 161
DATE OF MANUFACTURE:	7-21-2000

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

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket was not used in the suppression testing because it did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing	Forward	130	Suppressed
	Middle	132	Suppressed
	Rearward	133	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Belted Rear Facing	Forward	128	Suppressed
	Middle	129	Suppressed
	Rearward	127	Suppressed
Unbelted Rear Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN516)

DATA SHEET 15 SUMMARY

Post TSB Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	5/03/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Century
CHILD RESTRAINT MODEL:	Encore 4612
DATE OF MANUFACTURE:	8-16-2000

Base: __On __Off X N/A-Constraint does not have a removable base

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket was not used in the suppression testing because it did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing	Forward	133	Suppressed
	Middle	133	Suppressed
	Rearward	132	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Belted Rear Facing	Forward	129	Suppressed
	Middle	127	Suppressed
	Rearward	129	Suppressed
Unbelted Rear Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN516)

DATA SHEET 15 SUMMARY

Post TSB Suppression Test Using 12-month-old CRABI Dummy (Part 572, Subpart R)
Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	5/03/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	083

CHILD RESTRAINT NAME:	Evenflo
CHILD RESTRAINT MODEL:	Medallion 254
DATE OF MANUFACTURE:	6-1-2000

Base: __On __Off X N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket was not used in the suppression testing because it did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing	Forward	128	Suppressed
	Middle	132	Suppressed
	Rearward	128	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Belted Rear Facing	Forward	129	Suppressed
	Middle	131	Suppressed
	Rearward	131	Suppressed
Unbelted Rear Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Forward position. (SN516)

DATA SHEET 16 SUMMARY

Post TSB Suppression Test Using Newborn Infant Dummy (Part 572, Subpart K) Section A Car Bed

NHTSA No.:	C40513	TEST DATE:	5/03/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	Newborn Infant	DUMMY SERIAL NO.:	003

CAR BED NAME:	Cosco
CAR BED MODEL:	Dream Ride 02-719
DATE OF MANUFACTURE:	6-16-2000

Base: ☐ On ☐ Off ☒ 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.

Manufacturer's design seat back angle: 22.5°
 Tested seat back angle: 22.5°
 Manufacturer's specified anchorage position: 2nd Down
 Tested anchorage position: 2nd Down

A blanket and visor were not used in the suppression testing because they did not affect the sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Handle Down	Handle Up
Belted	Forward 7 *	Suppressed	Not Done
	Middle	Suppressed	Not Done
	Rearward	Suppressed	Not Done

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN516)

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

The CRS would not fit in the Forward Seat Slide position due to interference with the transmission shifter.

The CRS was orientated at 30° to fit in the Rearward Seat Slide position due to interference with the center console.

DATA SHEET 17 SUMMARY

Post TSB Suppression Test Using 3 Year Old Dummy And Booster Seats (Part 572, Subpart P)
Section D Forward Facing Belt Positioning Booster

NHTSA No.:	C40513	TEST DATE:	5/03/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

BOOSTER SEAT NAME:	Century
BOOSTER SEAT MODEL:	Next Step 4920
DATE OF MANUFACTURE:	8-16-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing Without Harness	Forward	12	Suppressed
	Middle	9	Suppressed
	Rearward	14	Suppressed
Belted Forward Facing Cinched With Harness	Forward	127	Suppressed
	Middle	127	Suppressed
	Rearward	128	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN516)

DATA SHEET 17 SUMMARY

Post TSB Suppression Test Using 3 Year Old Dummy And Booster Seats
(Part 572, Subpart P)

Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA No.:	C40513	TEST DATE:	5/03/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

BOOSTER SEAT NAME:	Cosco
BOOSTER SEAT MODEL:	High Back Booster 02-442
DATE OF MANUFACTURE:	4-28-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	No Blanket
Belted Forward Facing Without Harness	Forward 3 *	17	Suppressed
	Middle	16	Suppressed
	Rearward	12	Suppressed
Belted Forward Facing Cinched With Harness	Forward 6 *	127	Suppressed
	Middle	127	Suppressed
	Rearward	127	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN516)

* The CRS would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

DATA SHEET 18 SUMMARY

Post TSB Suppression Test Using 3 Year Old Dummy And Convertible Restraints
(Part 572, Subpart P)

Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	5/03/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

CHILD RESTRAINT NAME:	Britax
CHILD RESTRAINT MODEL:	Roundabout 161
DATE OF MANUFACTURE:	7-21-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	133	Suppressed
	Middle	132	Suppressed
	Rearward	128	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN516)

DATA SHEET 18 SUMMARY

Post TSB Suppression Test Using 3 Year Old Dummy And Convertible Restraints
(Part 572, Subpart P)

Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	5/03/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

CHILD RESTRAINT NAME:	Century
CHILD RESTRAINT MODEL:	Encore 4612
DATE OF MANUFACTURE:	8-16-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	132	Suppressed
	Middle	133	Suppressed
	Rearward	131	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN516)

DATA SHEET 18 SUMMARY

Post TSB Suppression Test Using 3 Year Old Dummy And Convertible Restraints
(Part 572, Subpart P)

Section C Forward Facing Convertible CRS

NHTSA No.:	C40513	TEST DATE:	5/03/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

CHILD RESTRAINT NAME:	Evenflo
CHILD RESTRAINT MODEL:	Medallion 254
DATE OF MANUFACTURE:	6-1-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	127	Suppressed
	Middle	128	Suppressed
	Rearward	131	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Forward position. (SN516)

DATA SHEET 19 SUMMARY

Post TSB Suppression Test Using An Unbelted 3 Year Old Dummy (Part 572, Subpart P)
No CRS

NHTSA No.:	C40513	TEST DATE:	5/03/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	3 Year Old	DUMMY SERIAL NO.:	031

Test Summary

Position	Seat Slide	Seat Back Angle	Result
Position 1 Sitting on seat with back against seat back	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 2 Sitting on seat with back against reclined seat back	Forward	46.7	Suppressed
	Middle	46.7	Suppressed
	Rearward	46.7	Suppressed
Position 3 Sitting on seat with back not against seat back	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 4 Sitting on seat edge, spine vertical, hands at dummy's sides	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 5 Standing on seat, facing forward	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 6 Kneeling on seat, facing forward	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 7 Kneeling on seat, facing rearward	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 8 Lying on seat. (Three designated seating positions only)	Forward	N/A	N/A
	Middle	N/A	N/A
	Rearward	N/A	N/A

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN516)

DATA SHEET 20 SUMMARY

Post TSB Suppression Test Using 6 Year Old Dummy And Booster Seats (Part 572, Subpart N)
Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA No.:	C40513	TEST DATE:	5/03/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

BOOSTER SEAT NAME:	Century
BOOSTER SEAT MODEL:	Next Step 4920
DATE OF MANUFACTURE:	8-16-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	12	Suppressed
	Middle	14	Suppressed
	Rearward	16	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rearward position. (SN516)

DATA SHEET 20 SUMMARY

Post TSB Suppression Test Using 6 Year Old Dummy And Booster Seats (Part 572, Subpart N)
Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA No.:	C40513	TEST DATE:	5/03/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

BOOSTER SEAT NAME:	Cosco
BOOSTER SEAT MODEL:	High Back Booster 02-442
DATE OF MANUFACTURE:	4-28-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	16	Suppressed
	Middle	13	Suppressed
	Rearward	9	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Forward position. (SN516)

DATA SHEET 20 SUMMARY

Post TSB Suppression Test Using 6 Year Old Dummy And Booster Seats (Part 572, Subpart N)
Section D Forward Facing Toddler Belt Positioning Booster Seat

NHTSA No.:	C40513	TEST DATE:	5/03/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

BOOSTER SEAT NAME:	Evenflo
BOOSTER SEAT MODEL:	Right Fit 245
DATE OF MANUFACTURE:	6-26-2000

Manufacturer's design seat back angle: 22.5°
Tested seat back angle: 22.5°
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward	9	Suppressed
	Middle	17	Suppressed
	Rearward	16	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Middle position. (SN516)

DATA SHEET 21 SUMMARY

Post TSB Suppression Test Using An Unbelted 6 Year Old Dummy (Part 572, Subpart N)
No CRS

NHTSA No.:	C40513	TEST DATE:	5/03/06
LABORATORY:	MGA	TECHNICIANS:	TM
DUMMY TYPE:	6 Year Old	DUMMY SERIAL NO.:	153

Test Summary

Position	Seat Slide	Seat Back Angle	Result
Position 1 Sitting on seat with back against seat back	Forward 6 *	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 2 Sitting on seat with back against reclined seat back	Forward 6 *	46.7	Suppressed
	Middle	46.7	Suppressed
	Rearward	46.7	Suppressed
Position 3 Sitting on seat edge, spine vertical, hands at dummy's sides	Forward	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed
Position 4 Sitting on seat with back against seat back then leaning on the door	Forward 6 *	22.5	Suppressed
	Middle	22.5	Suppressed
	Rearward	22.5	Suppressed

Successful Unbelted 5th percentile Female Dummy Reactivation was performed with the seat in the Rear position. (SN516)

* The ATD would not fit in this Forward Seat Slide position. If there is a number in the Seat Slide column, it indicates the fore-aft detent position with respect to the foremost position. (1 = Full Forward; 25 = Full Rearward; 25 total Seat Slide detents)

Successful Unbelted Representative Female Human Reactivation was performed with the seat in the Forward, Middle, and Rearward position. (Human Identification Code 030; 56.7 kg 165.1 cm)

Successful Unbelted 5th Percentile Female Human Reactivation was performed with the seat in the Forward, Middle, and Rearward position. (Human Identification Code 032; 50.3 kg 149.9 cm)

Successful Unbelted 5th Percentile Female Human Reactivation was performed with the seat in the Forward, Middle, and Rearward position. (Human Identification Code 037; 46.7 kg 148.6 cm)

Successful Unbelted 5th Percentile Female Reactivation was performed with the seat in the Forward, Middle, and Rearward position. (Human Identification Code 013; 49.4 kg 149.9 cm)

Successful Unbelted 5th Percentile Female Human Reactivation was performed with the seat in the Forward, Middle, and Rearward position. (Human Identification Code 036; 46.7 kg 149.9 cm)

DATA SHEET 32

VEHICLE WEIGHT, FUEL TANK, AND ATTITUDE DATA

Test Vehicle: 2004 Hyundai Elantra 4 Door
 Test Program: FMVSS 208 Compliance
 Test Technician: Wayne Dahlke

NHTSA No.: C40513
 Test Date: 6/5/06

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	☒ 32 to 40 kmph	☐ 0 to 48 kmph	☐ 0 to 56 kmph
DRIVER DUMMY:	☒ 5 th female		☐ 50 th male
PASSENGER DUMMY:	☒ 5 th female		☐ 50 th male

- | | | |
|-------------------------------------|-----|---|
| ☒ | 1. | Fill the transmission with transmission fluid to the satisfactory range. |
| ☒ | 2. | Drain fuel from vehicle |
| ☒ | 3. | Run the engine until fuel remaining in the fuel delivery system is used and the engine stops. |
| ☒ | 4. | Record the useable fuel tank capacity supplied by the COTR |
| ☒ | | Useable Fuel Tank Capacity supplied by COTR: 55 liters (14.5 gallons) |
| ☒ | 5. | Record the fuel tank capacity supplied in the owner's manual. |
| ☒ | | Useable Fuel Tank Capacity in owner's manual: 55 liters (14.5 gallons) |
| ☒ | 6. | Using purple dyed Stoddard solvent having the physical and chemical properties of Type 1 solvent or cleaning fluid, Table 1, ASTM Standard D484-71, "Standard Specifications for Hydrocarbon Dry-cleaning Solvents," or gasoline, fill the fuel tank. |
| ☒ | | Amount Added: 55 liters (14.5 gallons) |
| ☒ | 7. | Fill the coolant system to capacity. |
| ☒ | 8. | Fill the engine with motor oil to the Max. mark on the dip stick. |
| ☒ | 9. | Fill the brake reservoir with brake fluid to its normal level. |
| ☒ | 10. | Fill the windshield washer reservoir to capacity. |
| ☒ | 11. | Inflate the tires to the tire pressure on the tire placard. If no tire placard is available, inflate the tires to the recommended pressure in the owner's manual. |

Tire placard pressure:	RF:	30 psi	LF:	30 psi	RR:	30 psi	LR:	30 psi
Owner's manual pressure:	RF:	30 psi	LF:	30 psi	RR:	30 psi	LR:	30 psi
Actual inflated pressure:	RF:	30 psi	LF:	30 psi	RR:	30 psi	LR:	30 psi

- | | | |
|-------------------------------------|-----|--|
| ☒ | 12. | Record the vehicle weight at each wheel to determine the unloaded vehicle weight (UVW), i.e. "as delivered" weight). |
|-------------------------------------|-----|--|

Right Front (kg):	416.4	Right Rear (kg):	239.0
Left Front (kg):	416.9	Left Rear (kg):	256.7
Total Front (kg):	833.3	Total Rear (kg):	495.7
% Total Weight:	62.7	% Total Weight:	37.3
UVW = TOTAL FRONT PLUS TOTAL REAR (KG):		1329.0	

- | | | |
|-------------------------------------|------|---|
| ☒ | 13. | UVW Test Vehicle Attitude: (All dimensions in millimeters) |
| ☒ | 13.1 | Mark a point on the vehicle above the center of each wheel. |
| ☒ | 13.2 | Place the vehicle on a level surface. |

- ☒ 13.3 Measure perpendicular to the level surface to the 4 points marked on the body and record the measurements

RF:	667	LF:	667	RR:	668	LR:	667
-----	-----	-----	-----	-----	-----	-----	-----

- ☒ 14. Calculate the Rated Cargo and Luggage Weight (RCLW).
- ☒ 14.1 Does the vehicle have the vehicle capacity weight (VCW) on the certification label or tire placard?
- ☒ Yes, go to 14.3 On inside left front door frame
- ☐ No, go to 14.2
- ☐ 14.2 VCW = Gross Vehicle Weight – UVW

$$VCW = \underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

- ☒ 14.3 VCW = 385 kg (850 lbs)
- ☒ 14.4 Does the certification or tire placard contain the Designated Seating Capacity (DSC)?

- ☒ Yes, go to 14.6
- ☐ No, go to 14.5 and skip 14.6

- ☐ 14.5 DSC = Total number of seat belt assemblies =

- ☒ 14.6 DSC = 5

- ☒ 14.7 RCLW = VCW – (68 kg x DSC) = 385 kg - (68 kg x 5) = 45 kg

- ☒ 14.8 Is the vehicle certified as a truck, MPV or bus (see the certification label on the door jamb)?

- ☐ Yes, if the calculated RCLW is greater than 136 kg, use 136 kg as the RCLW. (S8.1.1)
- ☒ No, use the RCLW calculated in 14.7

- ☒ 15. Fully Loaded Weight (100% fuel fill)

- ☒ 15.1 Place the appropriate test dummy in both front outboard seating positions.

Driver: X 5th female 50th male
 Passenger: X 5th female 50th male

- ☒ 15.2 Load the vehicle with the RCLW from 14.7 or 14.8 whichever is applicable.

- ☒ 15.3 Place the RCLW in the cargo area. Center the load over the longitudinal centerline of the vehicle. (S8.1.1 (d))

- ☒ 15.4 Record the vehicle weight at each wheel to determine the Fully Loaded Weight.

Right Front (kg):	439.5	Right Rear (kg):	288.0
Left Front (kg):	439.5	Left Rear (kg):	305.3
Total Front (kg):	879.0	Total Rear (kg):	593.3
% Total Weight:	59.7	% Total Weight:	40.3
% GVW	54.5	% GVW	47.7
Fully Loaded Weight = Total Front Plus Total Rear (kg):		1472.3	

- ☒ 16. Fully Loaded Test Vehicle Attitude: (All dimensions in millimeters)

- ☒ 16.1 Place the vehicle on a level surface.

- X** 16.2 Measure perpendicular to the level surface to the 4 points marked on the body (see 13.1 above) and record the measurements
- | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|
| RF: | 650 | LF: | 653 | RR: | 638 | LR: | 633 |
|-----|-----|-----|-----|-----|-----|-----|-----|
- X** 17. Drain the fuel system
- X** 18. Using purple dyed Stoddard solvent having the physical and chemical properties of Type 1 solvent or cleaning fluid, Table 1, ASTM Standard D484-71, "Standard Specifications for Hydrocarbon Dry-cleaning Solvents," fill the fuel tank to 92 - 94 percent of useable capacity.
- X** Fuel tank capacity x .92 = 55.0 liters (14.5 gallons) x .92 = 50.6 liters (13.4 gallons)
- X** Amount added 50.6 liters (13.4 gallons) 92%
- X** 19. Crank the engine to fill the fuel delivery system with Stoddard solvent
- X** 20. Calculate the test weight range.
- X** 20.1 Calculated Weight = UVW (see 12 above) + RCLW (see 14 above) + 2x(dummy weight)
- 1472.0 kg = 1329.0 kg + 45.0 kg + 98.0 kg
- X** 20.2 Test Weight Range = Calculated Weight (- 4.5 kg, - 9 kg.)
 Max. Test Weight = Calculated Test Weight – 4.5 kg = 1467.5 kg
 Min. Test Weight = Calculated Test Weight – 9 kg = 1463.0 kg
- X** 21. Remove the RCLW from the cargo area.
- X** 22. Drain transmission fluid, engine coolant, motor oil, and windshield washer fluid from the test vehicle so that Stoddard solvent leakage from the fuel system will be evident.
- X** 23. Vehicle Components Removed For Weight Reduction:
Right rear tail light, tool & jack, trunk interior, and spare tire
- X** 24. Secure the equipment and ballast in the load carrying area and distribute it, as nearly as possible, to obtain the proportion of axle weight indicated by the gross axle weight ratings and center it over the longitudinal centerline of the vehicle.
- X** 25. If necessary, add ballast to achieve the actual test weight.
- X** N/A
- X** Weight of Ballast: 29.5 kg
- X** 26. Ballast, including test equipment, must be contained so that it will not shift during the impact event or interfere with data collection or interfere with high-speed film recordings or affect the structural integrity of the vehicle or do anything else to affect test results. Care must be taken to assure that any attachment hardware added to the vehicle is not in the vicinity of the fuel tank or lines.
- X** 27. Record the vehicle weight at each wheel to determine the actual test weight.

Right Front (kg):	435.5	Right Rear (kg):	280.8
Left Front (kg):	440.0	Left Rear (kg):	309.4
Total Front (kg):	875.5	Total Rear (kg):	590.2
% Total Weight:	59.7	% Total Weight:	40.3
% GVW	54.5	% GVW	47.7
(% GVW = Axle GVW divided by Vehicle GVW)			
TOTAL FRONT PLUS TOTAL REAR (kg):			1465.7

X	28.	Is the test weight between the Max. Weight and the Min. Weight (See 20.2)?								
		X Yes								
		No, explain why not.								
X	29.	Test Weight Vehicle Attitude: (all dimensions in millimeters)								
X	29.1	Place the vehicle on a level surface								
X	29.2	Measure perpendicular to the level surface to the 4 points marked on the body (see 13 above) and record the measurements								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">RF:</td> <td style="width: 25%; text-align: center;">658</td> <td style="width: 25%;">LF:</td> <td style="width: 25%; text-align: center;">655</td> <td style="width: 25%;">RR:</td> <td style="width: 25%; text-align: center;">647</td> <td style="width: 25%;">LR:</td> <td style="width: 25%; text-align: center;">637</td> </tr> </table>	RF:	658	LF:	655	RR:	647	LR:	637
RF:	658	LF:	655	RR:	647	LR:	637			
X	30.	Summary of test attitude								
X	30.1	AS DELIVERED:								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">RF:</td> <td style="width: 25%; text-align: center;">667</td> <td style="width: 25%;">LF:</td> <td style="width: 25%; text-align: center;">667</td> <td style="width: 25%;">RR:</td> <td style="width: 25%; text-align: center;">668</td> <td style="width: 25%;">LR:</td> <td style="width: 25%; text-align: center;">667</td> </tr> </table>	RF:	667	LF:	667	RR:	668	LR:	667
RF:	667	LF:	667	RR:	668	LR:	667			
		AS TESTED:								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">RF:</td> <td style="width: 25%; text-align: center;">658</td> <td style="width: 25%;">LF:</td> <td style="width: 25%; text-align: center;">655</td> <td style="width: 25%;">RR:</td> <td style="width: 25%; text-align: center;">647</td> <td style="width: 25%;">LR:</td> <td style="width: 25%; text-align: center;">637</td> </tr> </table>	RF:	658	LF:	655	RR:	647	LR:	637
RF:	658	LF:	655	RR:	647	LR:	637			
		FULLY LOADED:								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">RF:</td> <td style="width: 25%; text-align: center;">650</td> <td style="width: 25%;">LF:</td> <td style="width: 25%; text-align: center;">653</td> <td style="width: 25%;">RR:</td> <td style="width: 25%; text-align: center;">638</td> <td style="width: 25%;">LR:</td> <td style="width: 25%; text-align: center;">633</td> </tr> </table>	RF:	650	LF:	653	RR:	638	LR:	633
RF:	650	LF:	653	RR:	638	LR:	633			
X	30.2	Is the "as tested" test attitude equal to or between the "fully loaded" and "as delivered" attitude?								
		X Yes								
		No, explain why not.								

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Gahl

Date: 6/5/06

DATA SHEET 33

VEHICLE ACCELEROMETER LOCATION AND MEASUREMENT

Test Vehicle: 2004 Hyundai Elantra 4 Door
 Test Program: FMVSS 208 Compliance
 Test Technician: Wayne Dahlke

NHTSA No.: C40513
 Test Date: 6/5/06

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	X 32 to 40 kmph	0 to 48 kmph	0 to 56 kmph
DRIVER DUMMY:	X 5 th female		50 th male
PASSENGER DUMMY:	X 5 th female		50 th male

- X

 1. Find the location where the vertical plane parallel to the longitudinal centerline of the vehicle and through the center of the left front outboard seating position intersects the left rear seat cross member. Install an accelerometer at this intersection on the rear seat cross member to record x-direction accelerations. Record the location on the following chart.
- X

 2. Find the location where the vertical plane parallel to the longitudinal centerline of the vehicle and through the center of the right front outboard seating position intersects the right rear seat cross member. Install an accelerometer at this intersection on the rear seat cross member to record x-direction accelerations. Record the location on the following chart.
- X

 3. Find the location where a vertical plane through the longitudinal centerline of the vehicle and a vertical transverse plane through the center of the two wheels on opposite sides of the engine intersect at the top of the engine. Install an accelerometer at this intersection to record x-direction accelerations. Record the location on the following chart.
- X

 4. Find the location where a vertical plane through the longitudinal centerline of the vehicle and a vertical transverse plane through the center of the two wheels on opposite sides of the engine intersect the bottom of the engine. Install an accelerometer at this intersection to record x-direction accelerations. Record the location on the following chart.
- X

 5. Install an accelerometer on the right front brake caliper to record x-direction accelerations. Record the location on the following chart.
- X

 6. Find the location where a vertical plane through the longitudinal centerline of the vehicle intersects the top of the instrument panel. Install an accelerometer at this intersection to record x-direction accelerations. Record the location on the following chart.
- X

 7. Install an accelerometer on the left front brake caliper to record x-direction accelerations. Record the location on the following chart.
- X

 8. Find the location where a vertical plane through the longitudinal centerline of the vehicle intersects the floor of the trunk. Install an accelerometer on the trunk floor at this intersection to record z-direction accelerations. Record the location on the following chart.

REMARKS:

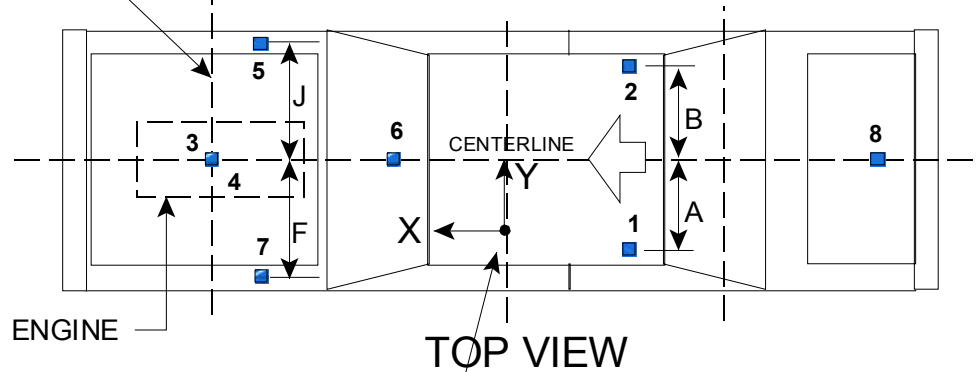
I certify that I have read and performed each instruction.

Signature: Wayne Dahlke

Date: 11/12/04

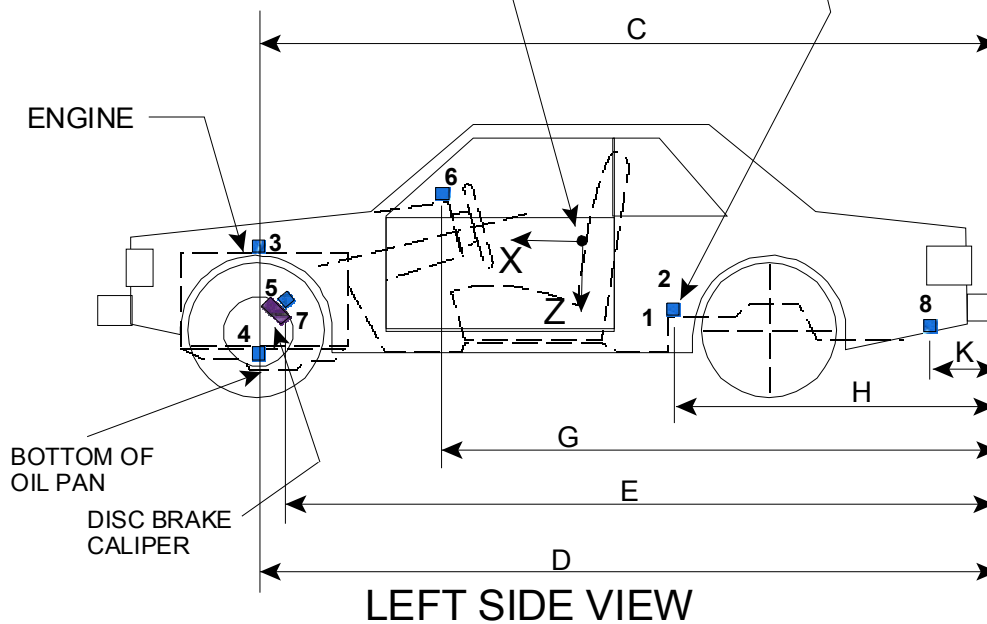
VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

CENTERLINE OF
FRONT WHEELS



ACCELEROMETER
COORDINATE SYSTEM
(POSITIVE DIRECTION SHOWN)

REAR SEAT CUSHION
ASSY. FRONT ATTACHMENT
BRACKET SUPPORT



Dimensions Corresponding To The Letters "A" Through "K" (Excluding "I") Are
Recorded In The Table On The Following Page.
Accelerometers Corresponding To The Numbers 1 Through 8 Are Specified On The
Preceding Page.

DATA SHEET 33
VEHICLE ACCELEROMETER LOCATION AND MEASUREMENTS

<u>DIMENSION</u>	<u>LENGTH (mm)</u>			
<u>PRETEST VALUES</u>				
<u>A</u> (LH Rear Seat Xmbr)	392			
<u>B</u> (RH Rear Seat Xmbr)	392			
<u>C</u> (Engine Top)	3695			
<u>D</u> (Engine Bottom)	3664			
<u>E</u> (Caliper)	Right Side	3680	Left Side	3680
<u>F</u> (Left Caliper)	668			
<u>G</u> (IP)	3015			
<u>H</u> (Seat)	1700			
<u>J</u> (Right Caliper)	668			
<u>K</u> (Trunk)	950			
<u>POST TEST VALUES</u>				
<u>A</u> (LH Rear Seat Xmbr)	392			
<u>B</u> (RH Rear Seat Xmbr)	392			
<u>C</u> (Engine Top)	3671			
<u>D</u> (Engine Bottom)	3621			
<u>E</u> (Caliper)	Right Side	3673	Left Side	3643
<u>F</u> (Left Caliper)	656			
<u>G</u> (IP)	3011			
<u>H</u> (Seat)	1710			
<u>J</u> (Right Caliper)	690			
<u>K</u> (Trunk)	950			

DATA SHEET 34

PHOTOGRAPHIC TARGETS

Test Vehicle: 2004 Hyundai Elantra 4 Door
 Test Program: FMVSS 208 Compliance
 Test Technician: Wayne Dahlke

NHTSA No.: C40513
 Test Date: 6/5/06

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	<u>X</u> 32 to 40 kmph	<u> </u> 0 to 48 kmph	<u> </u> 0 to 56 kmph
DRIVER DUMMY:	<u>X</u> 5 th female	<u> </u> 50 th male	
PASSENGER DUMMY:	<u>X</u> 5 th female	<u> </u> 50 th male	

- | | | |
|--|------|--|
| <div>☒</div> | 1. | FMVSS 208 vehicle targeting requirements (See Figures 28A and 28B) |
| <div>☒</div> | 1.1 | Targets A1 and A2 are on flat rectangular panels. |
| <div>☒</div> | 1.2 | Three circular targets at least 90 mm in diameter and with black and yellow quadrants are mounted at the front on the outboard sides of A1 and A2. The center of each circular target is 100 mm from the one next to it. |
| <div>☒</div> | | Distance between targets (mm): 100 mm |
| <div>☒</div> | 1.3 | Three circular targets at least 90 mm in diameter and with black and yellow quadrants are mounted at the back on the outboard sides of on A1 and A2. The center of each circular target is 100 mm from the one next to it. |
| <div>☒</div> | | Distance between targets (mm): 100 mm |
| <div>☒</div> | 1.4 | The distance between the first circular target at the front of A1 and A2 and the last circular target at the back of A1 and A2 is at least 915 mm. |
| <div>☒</div> | | Distance between the first and last circular targets (mm): 915 mm |
| <div>☒</div> | 1.5 | Firmly fix target A1 on the vehicle roof in the vertical longitudinal plane that is coincident with the midsagittal plane of the driver dummy. |
| <div>☒</div> | 1.6 | Firmly fix target A2 on the vehicle roof in the vertical longitudinal plane that is coincident with the midsagittal plane of the passenger dummy. |
| <div>☒</div> | 1.7 | Two circular targets (C1 and C2) at least 90 mm in diameter and with black and yellow quadrants are mounted on the outside of the driver door. The centers of each circular target are at least 610 mm apart. |
| <div>☒</div> | | Distance between targets (mm): 610 mm |
| <div>☒</div> | 1.8 | Two circular targets (C1 and C2) at least 90 mm in diameter and with black and yellow quadrants are mounted on the outside of the passenger door. The centers of each circular target are at least 610 mm apart. |
| <div>☒</div> | | Distance between targets (mm): 609 mm |
| <div>☒</div> | 1.9 | Place tape with squares having alternating colors on the top portion of the steering wheel. |
| <div>☒</div> | 1.10 | Chalk the bottom portion of the steering wheel |
| <div>☒</div> | 1.11 | Is this an offset test? |
| | | <div>☐ Yes, continue with this section</div> |
| | | <div>☒ No, go to 2.</div> |
| <div>☐</div> | 1.12 | Measure the width of the vehicle. |
| <div>☐</div> | | Vehicle width (mm): |
| <div>☐</div> | 1.13 | Find the centerline of the vehicle. (½ of the vehicle width) |

☐	1.14	Find the line parallel to the centerline of the vehicle and 0.1 x vehicle width from the centerline of the vehicle.
☐	1.15	Apply 25 mm wide tape with alternating black and yellow squares parallel to and on each side of the line found in 1.14. The edge of each tape shall be 50 mm from the line found in 1.14. The tape shall extend from the bottom of the bumper to the front edge of the windshield. (Figure 28D)
☒	2.	Barrier Targeting
☒	2.1	Fix two stationary targets D1 and D2 to the barrier as shown in the Figure 28A. One target is in the vertical longitudinal plane that is coincident with the midsagittal plane of the driver dummy. The other is in the vertical longitudinal plane that is coincident with the midsagittal plane of the passenger dummy
☒	2.2	Targets D1 and D2 are on a rectangular panel.
☒	2.3	Three circular targets at least 90 mm in diameter and with black and yellow quadrants are mounted on the sides of the rectangular panel away from the longitudinal centerline of the vehicle. The center of each circular target is 100 mm from the one next to it.
☒		Distance between circular targets on D1 (mm): 100 mm
☒		Distance between circular targets on D2 (mm): 100 mm
☒	3.	FMVSS 208 Dummy Targeting Requirements
☒	3.1	Place a circular target with black and yellow quadrants on both sides of the driver dummy head as close as possible to the center of gravity of the head in the x and z direction (relative to the measuring directions of the accelerometers).
☒	3.2	Place a circular target with black and yellow quadrants on both sides of the passenger dummy head as close as possible to the center of gravity of the head in the x and z direction (relative to the measuring directions of the accelerometers).
☒	3.3	Place a circular target with black and yellow quadrants on the outboard shoulder of the driver dummy. Place the target as high up on the arm as possible at the intersection of the arm and shoulder. The sleeve of the shirt on the dummy may be cut to make the target visible, but do not remove any material.
☒	3.4	Place a circular target with black and yellow quadrants on the outboard shoulder of the passenger dummy. Place the target as high up on the arm as possible at the intersection of the arm and shoulder. The sleeve of the shirt on the dummy may be cut to make the target visible, but do not remove any material.
☒	4.	FMVSS 204 Targeting Requirements
☒	4.1	Is an FMVSS 204 indicant test ordered on the "COTR Vehicle Work Order?"
☐		Yes, continue with this form.
☒		No, this form is complete.
☐	4.2	Resection panel (Figure 28C)
☐	4.2.1	The panel deviates no more than 6 mm from perfect flatness when suspended vertically
☐	4.2.2	The 8 targets on the panel are circular targets at least 90 mm in diameter and with black and yellow quadrants.
☐	4.2.3	The center of each of the 4 outer targets are placed within 1 mm of the corners of a square measuring 914 mm on each side.
☐	4.2.4	Locate another square with 228 mm sides and with the center of this square coincident with the center of the 914 mm square.
☐	4.2.5	The center of the 4 inner targets are placed at the midpoints of each of the 228 mm sides.
☐	4.3	Place a circular target at least 90 mm in diameter and with black and yellow quadrants on a material (cardboard, metal, etc.) that can be taped to the top of the steering column.



- 4.4 Tape the target from 4.3 to the top of the steering column in a manner that does not interfere with the movement of the steering column in a crash

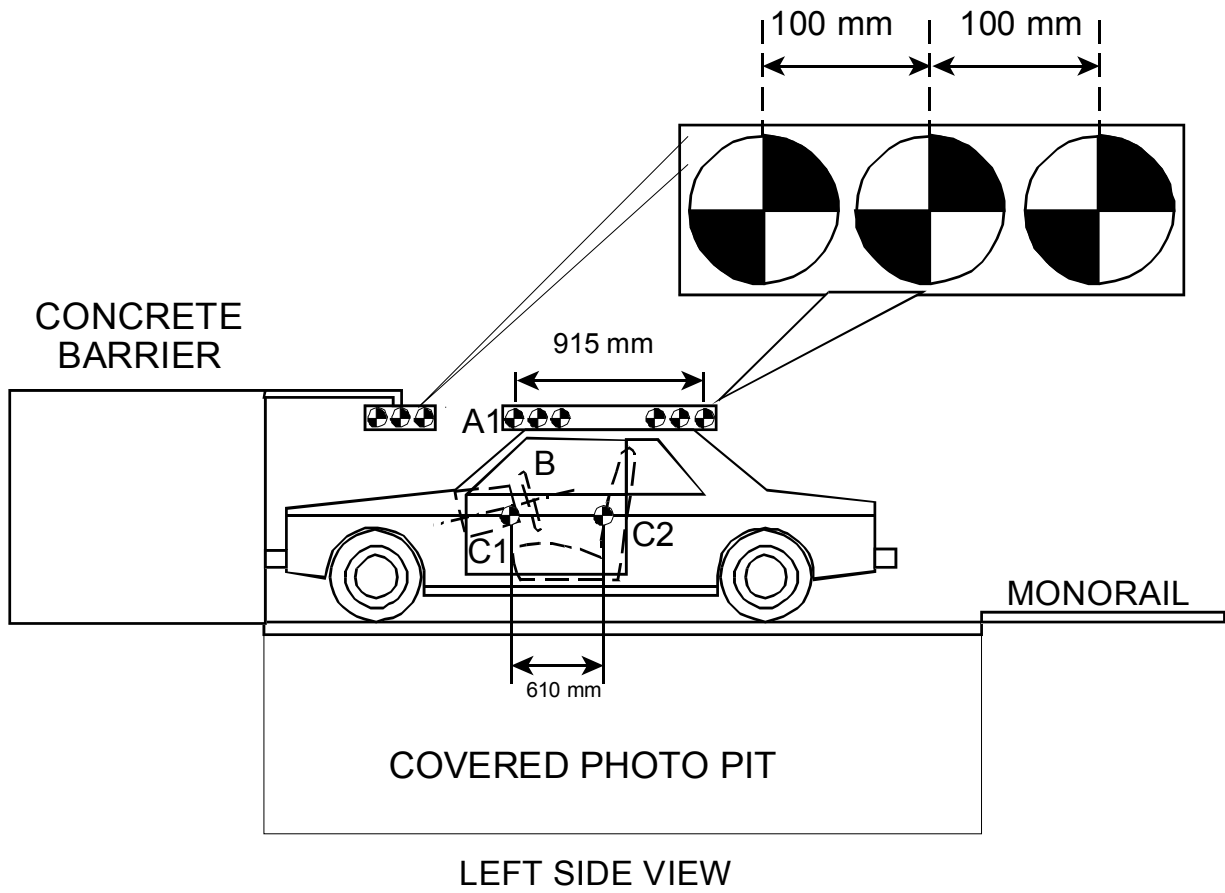
REMARKS:

I certify that I have read and performed each instruction.

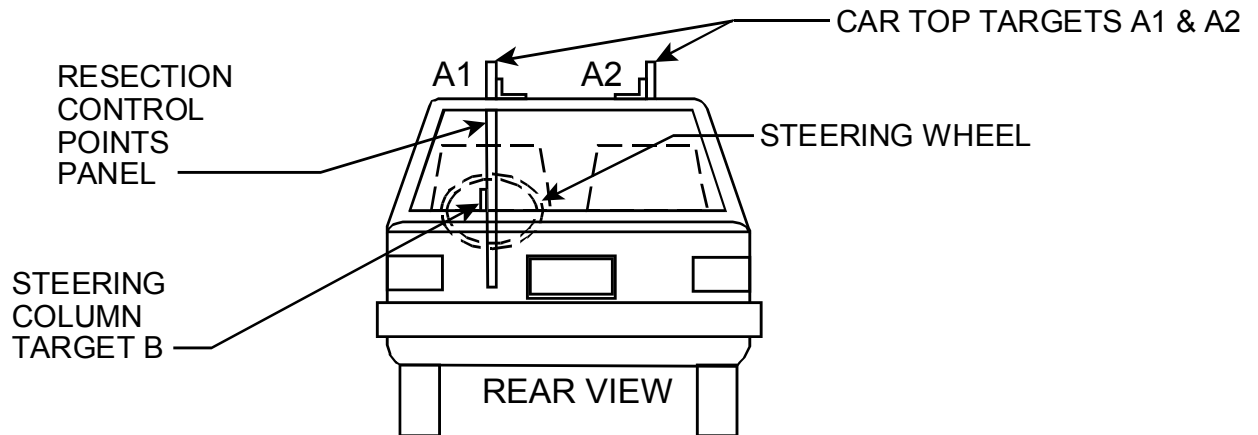
Signature: Wayne Gahl

Date: 6/5/06

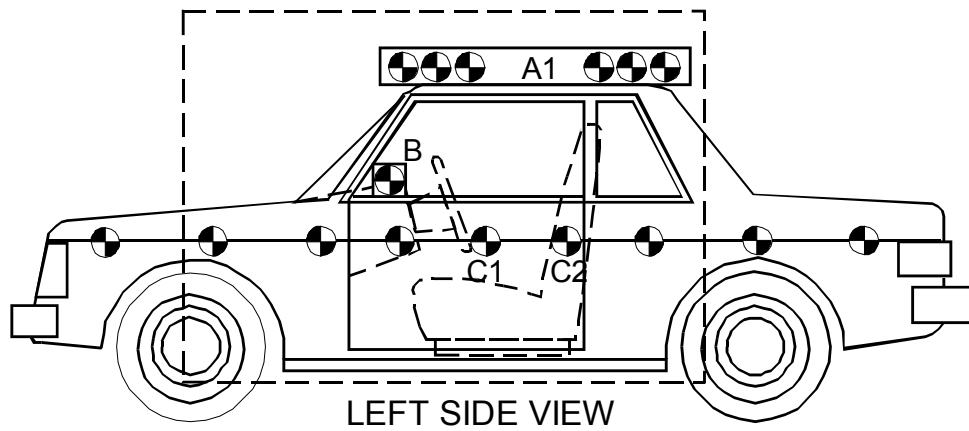
REFERENCE PHOTO TARGETS



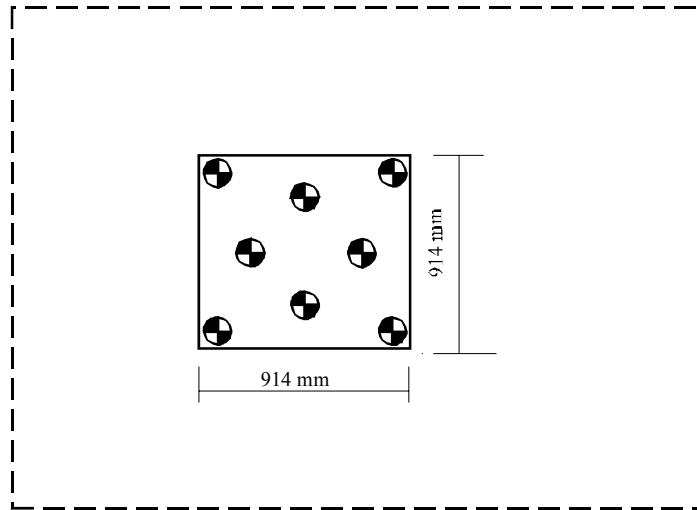
RESECTION PANEL TARGETING ALIGNMENT



TEST RUN STEERING COLUMN CAMERA VIEW OF TYPICAL TIME ZERO VEHICLE POSITION



PRE-RUN STEERING COLUMN HIGH SPEED CAMERA VIEW



LEFT SIDE VIEW

DATA SHEET 35
CAMERA LOCATIONS

Test Vehicle: 2004 Hyundai Elantra 4 Door
Test Program: FMVSS 208 Compliance

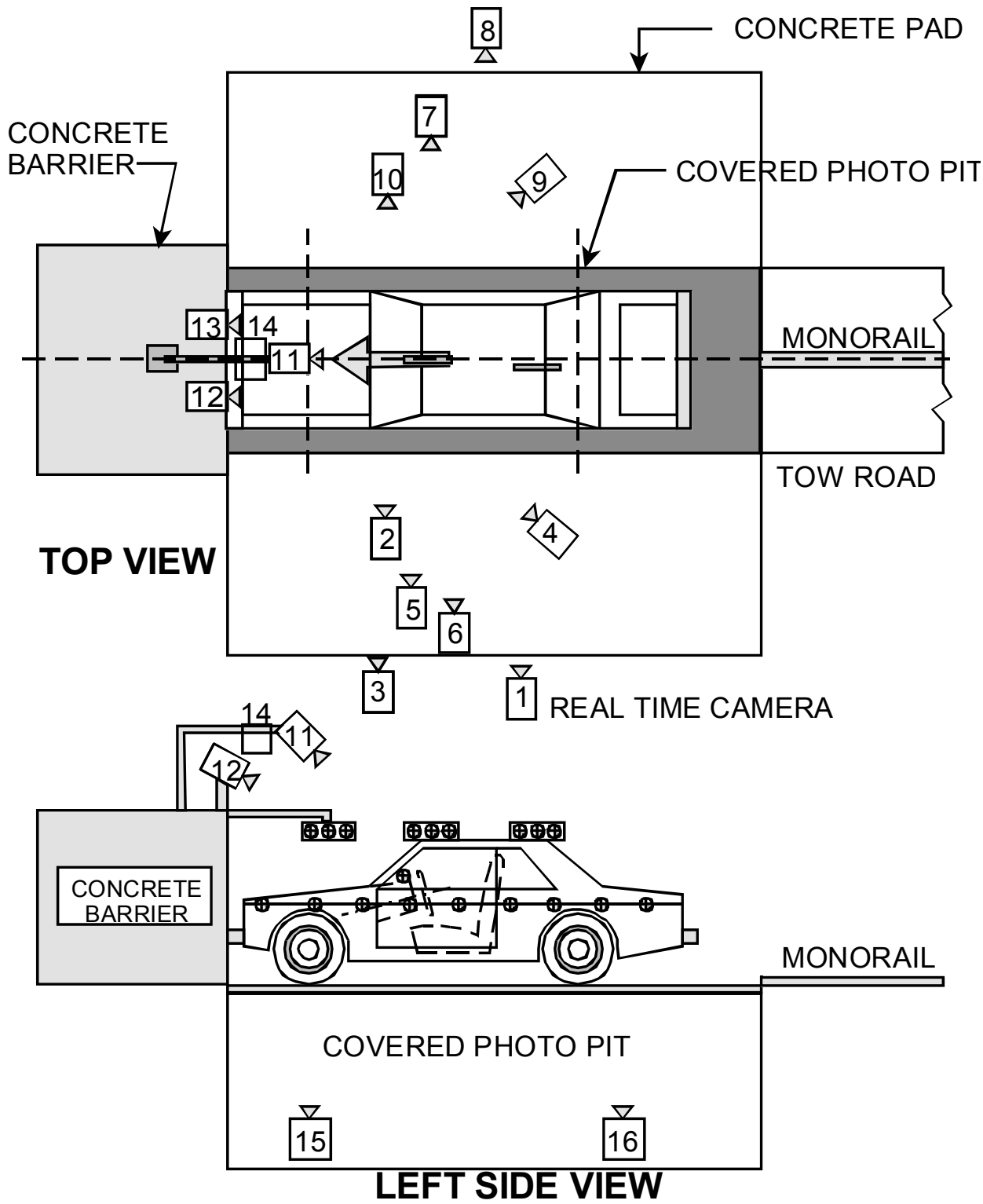
NHTSA No.: C40513
Test Date: 6/5/06
Time: 11:45 am

CAMERA NO.	VIEW	CAMERA POSITIONS (mm) *			LENS (mm)	SPEED (fps)
		X	Y	Z		
1	Real Time Left Side View				13	24
2	Left Side View (Barrier face to front seat backs)	1005	-4850	1245	24	1000
3	Left Side View (Driver)	1380	-5535	1470	35	1000
4	Left Side View (B-post aimed toward center of steering wheel)	6900	-5460	2090	50	1000
5	Left Side View (Steering Column)	1430	-4950	1460	25	1000
6	Left Side View (Steering Column)	1440	-4900	1015	25	1000
7	Right Side View (Overall)	2000	6160	1410	19	1000
8	Right Side View (Passenger)	1530	5660	1470	35	1000
9	Right Side View (Angle)	6350	5420	2070	50	1000
10	Right Side View (Front door)	1030	4770	1270	24	1000
11	Front View Windshield	-285	0	2370	12.5	1000
12	Front View Driver	-145	-430	2220	24	1000
13	Front View Passenger	-155	475	2230	24	1000
14	Overhead Barrier Impact View	1375	0	5050	19	1000
15	Pit Camera Engine View	1010	0	-3150	24	1000
16	Pit Camera Fuel Tank View	2985	0	-3150	24	1000

***COORDINATES**

+X – forward of impact plane
+Y – right of monorail centerline
+Z – above ground level

CAMERA POSITIONS FOR FMVSS 208



DATA SHEET 36

APPENDIX G DUMMY POSITIONING PROCEDURES FOR 5th% DRIVER TEST DUMMY CONFORMING TO SUBPART O OF PART 572

Test Vehicle: 2004 Hyundai Elantra 4 Door
Test Program: FMVSS 208 Compliance
Test Technician: Joe Fleck

NHTSA No.: C40513
Test Date: 6/5/06

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	☒ 32 to 40 kmph	☐ 0 to 48 kmph	☐ 0 to 56 kmph
DRIVER DUMMY:	☒ 5 th female	☐ 50 th male	
PASSENGER DUMMY:	☒ 5 th female	☐ 50 th male	

- X 1. Using the markings made from data sheet 14.3 (If not done previously or steering repairs have been made, complete data sheet 14.3 at this time.) to position the steering controls in the mid-position or if applicable next lowest detent position. (S16.2.9)
- X 2. Place the SCRP in the full rearward, mid-height position, and mid-seat cushion angle, determined during the completion of Data Sheet 14.1. (S16.3.2.1.1)
- X 3. If the vehicle has an adjustable accelerator pedal, place it in the full forward position. (S16.3.2.2.1)
X N/A accelerator pedal not adjustable
- X 4. Fully recline the seat back. (S16.3.2.1.2)
☐ N/A seat back not adjustable.
- X 5. 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. (S16.3.2.1.2)
- X 6. Position the dummy in the seat such that the midsagittal plane is coincident with the longitudinal seat cushion markings as determined in Data Sheet 14.1. (S16.3.2.1.3 and S16.3.2.1.4)
- X 7. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.2.1.5)
- X 8. Set the angle between the legs and the thighs to 120 degrees. (S16.3.2.1.6)
- X 9. 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 longitudinal seat cushion marking as determined Data Sheet 14.1. (S16.3.2.1.6)
Record Knee Separation 165
- X 10. 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. (S16.3.2.1.6)
☐ Pelvis contacted seat back.
X Calves contacted seat cushion.
- X 11. Gently rock the upper torso $\pm$ 5 degrees (approximately 51 mm (2 inches)) side-to-side three time. (S16.3.2.1.7)

- ☒ 12. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.2.1.8)
- ☒ 13. Position the right foot until the foot is in line with a longitudinal vertical plane passing through the center of the accelerator pedal. Maintain the leg and thigh in a vertical plane. (S16.3.2.1.8)
- ☒ 14. Rotate the left leg and thigh laterally to equalize the distance between each knee and the longitudinal seat cushion marking as determined in Data Sheet 14.1. (S16.3.2.1.8)
- ☒ 15. Attempt to return the seat to the foremost fore-aft position, mid-height, and seat cushion mid-angle as determined in Data Sheet 14.2. The foot may contact and depress the accelerator and/or change the angle of the foot with respect to the leg. (S16.3.2.1.8)
- ☒ Foremost position achieved. Proceed to step 20.
- ☐ Foremost not achieved because of foot interference. Proceed to step 17.
- ☐ Foremost not achieved because of steering wheel contact.
- ☐ 16. If either of the dummy's legs contact the steering wheel, move the steering wheel up the minimum amount required to avoid contact. If the steering wheel is not adjustable separate the knees the minimum required to avoid contact. (S16.3.2.1.8)
- ☐ N/A- there was no leg contact
- ☐ Steering wheel repositioned
- ☐ Knees separated
- ☐ 17. If the left foot interferes with the clutch or brake pedals, rotate the left foot about the leg to provide clearance. If this is not sufficient, rotate the thigh outboard at the hip the minimum amount required for clearance. (S16.3.2.1.8)
- ☐ N/A, No foot interference with pedals.
- ☐ Foot adjusted to provide clearance.
- ☐ Foot and Thigh adjusted to provide clearance.
- ☐ 18. Continue to move the seat. Use seat controls to line up the seat markings determined during the completion of Data Sheet 14.1 to set the foremost fore-aft position, mid-height position and the seat cushion mid-angle. 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. (S16.3.2.1.8)
- ☐ Foremost, mid-height position and the seat cushion mid-angle reached
- ☐ Dummy contact. Clearance set at maximum of 5mm
- Measured Clearance _____
- ☐ Dummy Contact. Seat set at nearest detent position.
- Seat position ____ detent positions rearward of foremost
(foremost is position zero)

- ☐ 19. If the steering wheel was repositioned in step 16, return the steering wheel to the original position. If the steering wheel contacts the dummy before reaching the original position, position the wheel until a maximum clearance of 5mm (.2 inches) is achieved, or the steering wheel is in the closest detent position that does not cause dummy contact. (S16.3.2.1.8)
- ☐ N/A Steering wheel was not repositioned.
- ☐ Original position achieved.
- ☐ Dummy contact. Clearance set at maximum of 5mm
Measured Clearance _____
- ☐ Dummy Contact. Steering wheel set at nearest detent position.
Steering wheel position _____ detent positions upward of original position.
(Original position is position zero)
- ☒ 20. 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. (S16.3.2.1.9)
- ☒ Head Level Achieved. (Check all that apply)
- ☒ Head leveled using the adjustable seat back
- ☐ Head leveled using the neck bracket.
Head Angle 0.3 degrees
- ☐ Head Level NOT Achieved. (Check all that apply)
- ☐ Head adjusted using the adjustable seat back
- ☐ Head adjusted using the neck bracket.
Head Angle _____ degrees
- ☒ 21. Verify the pelvis is not interfering with the seat bight. (S16.3.2.1.9)
- ☒ No interference
- ☐ Pelvis moved forward the minimum amount so that it is not caught in the seat bight.
- ☒ 22. Verify the dummy abdomen is properly installed. (S16.3.2.1.9)
- ☒ Abdomen still seated properly into dummy
- ☐ Abdomen was adjusted because it was not seated properly into dummy
- ☒ 23. Head Angle
- ☒ N/A, neither the pelvis nor the abdomen were adjusted.
- ☒ 23.1 Head still level (Go to 24)
- ☐ 23.2 Head level adjusted
- ☐ 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 level adjusted using the adjustable seat back
- ☐ Head level adjusted using the neck bracket.
Head Angle _____ degrees

- ☒ 24. If the dummy torso contacts the steering wheel while performing step 20, reposition the steering wheel in the following order to eliminate contact. (S16.3.2.1.9)
☒ N/A, No dummy torso contact with the steering wheel.
- ☐ 24.1 Adjust telescoping mechanism.
☐ N/A No telescoping adjustment.
☐ Adjustment performed (fill in appropriate change)
Steering wheel moved _____ detent positions in the forward direction.
Steering wheel moved _____ mm in the forward direction.
- ☐ 24.2 Adjust tilt mechanism.
☐ N/A No tilt adjustment.
☐ No adjustment performed.
☐ Adjustment performed.
Steering wheel moved _____ detent positions Upward/Downward.
(circle one)
Steering wheel moved _____ degrees Upward/Downward
- ☐ 24.3 Adjust Seat in the aft direction.
☐ No Adjustment performed.
☐ Seat moved aft _____ mm from original position.
☐ Seat moved aft _____ detent positions from the original position.
- ☒ 25. Measure and set the pelvic angle using the pelvic angle gage TE-2504. The pelvic angle should be 20.0 degrees $\pm$ 2.5 degrees. If the pelvic angle cannot be set to the specified range because the head will not be level or because the dummy will have need major repositioning, adjust the pelvis as closely as possible to the angle range, but keep the head level. (S16.3.2.1.11)
☒ Pelvic angle set to 20.0 degrees $\pm$ 2.5 degrees.
☐ Pelvic angle of 20.0 degrees not achieved, the angular difference was minimized.
☐ Record the pelvic angle. 20.1 degrees
- ☒ 26. Check the dummy for contact with the interior after completing adjustments. (S16.3.2.1.12)
☒ No contact.
☐ Dummy in contact with interior.
☐ Seat moved aft _____ mm from the previous position.
☐ Seat moved aft _____ detent positions from the previous position.
- ☒ 27. Check the dummy to see if additional interior clearance is obtained, allowing the seat to be moved forward. (S16.3.2.1.12)
☒ N/A, Seat already at foremost position.
☐ Clearance unchanged. No adjustments required.
☐ Additional clearance available
☐ Seat moved Forward _____ mm from the previous position.
☐ Seat moved Forward _____ detent positions from the previous position.
- ☒ 28. Driver's foot positioning, right foot. Place the foot perpendicular to the leg and determine if the heel contacts the floor pan at any leg position. If the heel contacts the floor pan proceed to step 29 otherwise, proceed to step 30. (S16.3.2.2.1)
- ☒ 29. Perform the following steps until either all steps are completed, or the foot contacts the accelerator pedal. Step 29.6 shall be completed in all cases. (S16.3.2.2.1(a))

X 29.1 With the rear of the heel contacting the floor pan, move the foot forward until pedal contact occurs or the foot is at the full forward position.

___ 29.2 If the vehicle has an adjustable accelerator pedal, move the pedals rearward until pedal contact occurs or the pedals reach the full rearward position.

___ 29.3 Extend the leg, allowing the heel to lose contact with the floor until the foot contacts the pedal. Do not raise the toe of the foot higher than the top of the accelerator pedal. If the foot does not contact the pedal, proceed to the next step. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)

___ 29.4 Angle the foot to achieve contact between the foot and the pedal. If the foot does not contact the pedal, return the foot to the perpendicular orientation. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)

___ 29.5 Align the centerline of the foot with the vertical-longitudinal plane passing through the center of the accelerator pedal. Place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)

X 29.6 Record foot position

X Pedal Contact achieved. Contact occurred at step 29.1.

X Heel contacts floor pan

___ Heel set _____ mm from floor pan.

___ Pedal Contact not achieved. Heel set _____ mm from the floor pan.

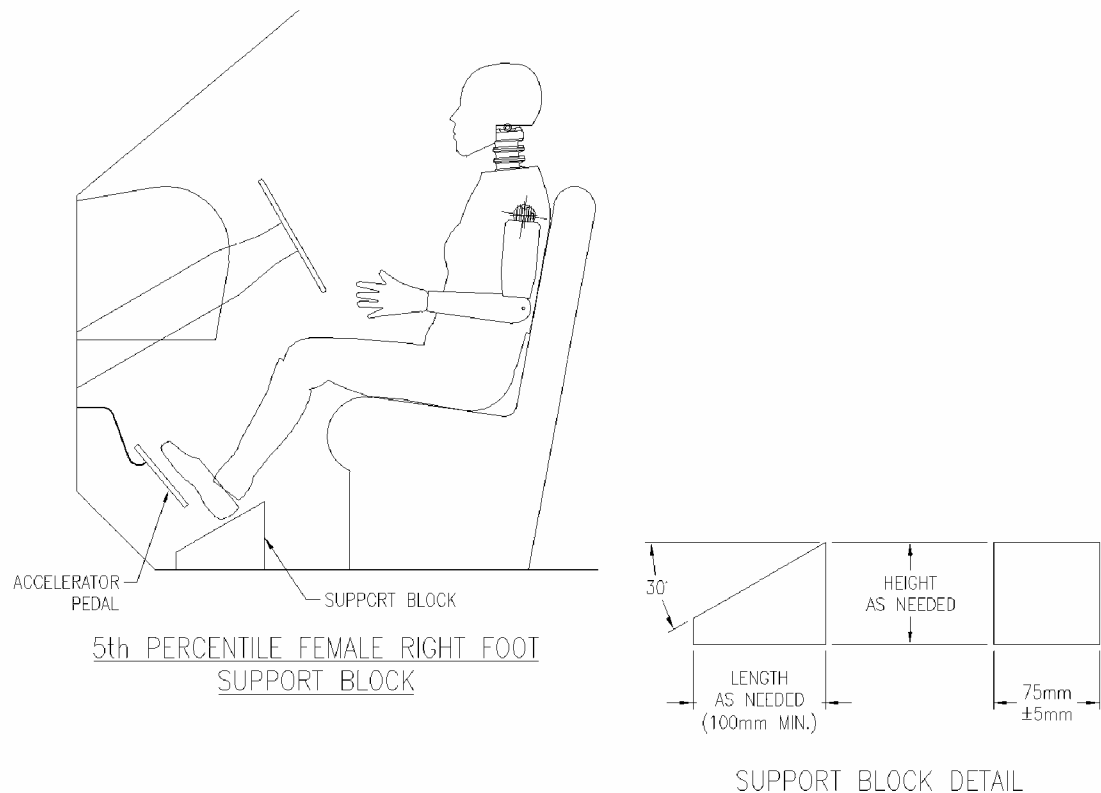


FIGURE G1

- ___30. Perform the following steps until either all steps are completed, or the foot contacts the accelerator pedal. Step 30.5 shall be completed in all cases.
 - ___30.1 Extend the leg until the foot contacts the pedal. Do not raise the toe of the foot higher than the top of the accelerator pedal. If the foot does not contact the pedal, proceed to the next step. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.1(b) & S16.3.2.2.3)
 - ___30.2 If the vehicle has an adjustable accelerator pedal, move the pedals rearward until pedal contact occurs or the pedals reach the full rearward position. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.1(b) & S16.3.2.2.3)
 - ___N/A No pedal adjustment
 - ___30.3 Angle the foot to achieve contact between the foot and the pedal. If the foot does not contact the pedal, return the foot to the perpendicular orientation. If pedal contact does occur, place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.2 & S16.3.2.2.3)
 - ___30.4 Align the centerline of the foot in the same horizontal plane as the centerline of the accelerator pedal. Place a tapered foam block as shown in Figure G1 under the heel with the shallow part of the taper facing forward. (S16.3.2.2.3)

30.5 Record foot position

 Pedal Contact achieved. Contact occurred at step .

 Heel set mm from floor pan.

 Pedal Contact not achieved. Heel set mm from the floor pan.

X 31. Driver's foot positioning, left foot.

X 31.1 Place the foot perpendicular to the leg and determine if the heel contacts the floor pan at any leg position. If the heel contacts the floor pan proceed to step 31.2, otherwise position the leg as perpendicular to the thigh as possible with the foot parallel to the floor pan. (S16.2.2.6)

X 31.2 Place the foot on the toe board with the heel resting on the floor pan as close to the intersection of the floor pan and the toe board as possible. Adjust the angle of the foot if necessary to contact the toe board. If the foot will not contact the toe board, set the foot perpendicular to the leg, and set the heel on the floor pan as far forward as possible. Avoid contact with the brake pedal, clutch pedal, wheel well projection, and footrest. To avoid this contact use the following three manipulations in the order listed, with each subsequent option incorporating the previous, until contact is avoided: rotate the foot about the lower leg (abduction/adduction), plantar flex the foot, rotate the leg outboard about the hip. Movement should be the minimum amount necessary. If it is not possible to avoid all foot contact, give priority to avoiding brake or clutch pedal contact. (S16.2.2.4 & S16.2.2.5 & S16.2.2.7)

X No contact

 Foot rotated about the leg (abduction/adduction)

 Foot rotated about the leg, and foot plantar flexed

 Foot rotated about the leg, foot plantar flexed, and the leg rotated about the hip.

X 31.3 Record foot position.

 Heel does not contact floor pan.

 Heel on floor pan and foot on toe board.

X Heel on floor pan and foot not on toe board.

X 32. Driver arm/hand positioning.

X 32.1 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 32.2 Place the palms of the dummy in contact with the outer part of the steering wheel rim at its horizontal centerline with the thumbs over the steering wheel rim. (S16.3.2.3.2)

X 32.3 If it is not possible to position the thumbs inside the steering wheel rim at its horizontal centerline, then position them above and as close to the horizontal centerline of the steering wheel rim as possible. (S16.3.2.3.3)

X 32.4 Lightly tape the hands to the steering wheel rim so that if the hand of the test dummy is pushed upward by a force of not less than 9 N (2 lb) and not more than 22 N (5 lb), the tape releases the hand from the steering wheel rim. S16.3.2.3.4

X 33. Adjustable head restraints

 N/A, there is no head restraint adjustment

- ☐ 33.1 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) Go to 34.
- ☐ 33.2 Adjust each head restraint vertically so that the mid-horizontal plane determined in Data Sheet 14.1 is aligned with the center of gravity (CG) of the dummy head. (S16.3.4.3)
- ☒ 33.3 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
☒ Headrest set at nearest detent below the head CG
- ☐ 33.4 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)
- ☐ 34. Driver and passenger manual belt adjustment (for tests conducted with a belted dummy). (S16.3.5) UNBELTED TEST
- ☐ 34.1 If an adjustable seat belt D-ring anchorage exists, place it in the manufacturer's design position for a 5th percentile adult female. (S16.3.5.1) **This information will be supplied by the COTR.**
Manufacturer's specified position _____
Actual Position _____
- ☐ 34.2 Place the Type 2 manual belt around the test dummy and fasten the latch. (S16.3.5.2)
- ☐ 34.3 Ensure that the dummy's head remains as level as possible. (S16.3.5.3)
- ☐ 34.4 Remove all slack from the lap belt. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this operation four times. Apply a 9 N (2 lbf) to 18 N (4 lbf) tension load to the lap belt. If the belt system is equipped with a tension-relieving device, introduce the maximum amount of slack into the upper torso belt that is recommended by the manufacturer. If the belt system is not equipped with a tension-relieving device, allow the excess webbing in the shoulder belt to be retracted by the retractive force of the retractor. (S16.3.5.4)

I certify that I have read and performed each instruction.

Signature: 

Date: 6/5/06

FOR 5th% PASSENGER TEST DUMMY CONFORMING TO SUBPART O OF PART 572

NHTSA No.: C40513
Test Date: 6/5/06

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	<u>X</u> 32 to 40 kmph	<u> </u> 0 to 48 kmph	<u> </u> 0 to 56 kmph
DRIVER DUMMY:	<u>X</u> 5 th female	<u> </u> 50 th male	
PASSENGER DUMMY:	<u>X</u> 5 th female	<u> </u> 50 th male	

(Check this item ONLY if it applies to this vehicle.)

__The passenger seat adjustments are controlled by the adjustments made to the driver's seat. Therefore, positioning of the passenger dummy is made simultaneously with the driver dummy. Adjustments made to the seat to position the driver will over ride any adjustments that would normally be made to position the passenger. (S16.2.10.3)

- X 1. Place the SCRP in the full rearward, mid-height position, and mid-seat cushion angle, determined during the completion of Data Sheet 14.1. (S16.3.3.1.1)
- X 2. Fully recline the seat back. (S16.3.3.1.2)
___ N/A seat back not adjustable.
- X 3. Place the dummy in the seat with the legs at an angle of 120 degrees to the thighs. The calves should not be touching the seat cushion. (S16.3.3.1.2)
- X 4. Position the dummy in the seat such that the midsagittal plane is coincident with the longitudinal seat cushion marking that was determined in Data Sheet 14.1. (S16.3.3.1.3 and S16.3.3.1.4)
- X 5. Hold down the dummy's thighs and push rearward on the upper torso to maximize the pelvic angle. (S16.3.3.1.5)
- X 6. Set the angle between the legs and the thighs to 120 degrees. (S16.3.3.1.6)
- X 7. Set the transverse distance between the centers of the front of the knees at 160 to 170 mm. (6.3 to 6.7 inches). Center the knee separation with respect to the longitudinal seat cushion marking that was determined Data Sheet 14.1. (S16.3.3.1.6)
Record Knee Separation 160
- X 8. Push rearward on the dummy's knees until the pelvis contacts the seat back, or the backs of the calves contact the seat cushion, whichever occurs first. (S16.3.3.1.6)
___ Pelvis contacted seat back.
X Calves contacted seat cushion.
- X 9. Gently rock the upper torso ± 5 degrees (approximately 51 mm (2 inches)) side-to-side three times. (S16.3.3.1.7)

- X 10. If needed, extend the legs until the feet do not contact the floor pan. The thighs should be resting on the seat cushion. (S16.3.3.1.8)
- X 11. Use seat controls to line up the seat markings determined during the completion of Data Sheet 14.1 to set the foremost fore-aft position, mid-height position and the seat cushion mid-angle. 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)
- X Foremost, mid-height position and the seat cushion mid-angle reached
- ___ Dummy contact. Clearance set at maximum of 5mm
Measured Clearance _____
- ___ Dummy Contact. Seat set at nearest detent position.
Seat position ___ detent positions rearward of foremost
(foremost is position zero)
- X 12. 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 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, adjust the head as closely as possible to the ± 0.5 degree range. (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)
- X Head leveled using the adjustable seat back
- ___ Head leveled using the neck bracket.
Head Angle 0.3 degrees
- ___ Head Level NOT Achieved. (Check all that apply)
- ___ Head adjusted using the adjustable seat back
- ___ Head adjusted using the neck bracket.
Head Angle _____ degrees
- X 13. Verify the pelvis is not interfering with the seat bight. (S16.3.3.1.9)
- X No interference
- ___ Pelvis moved forward the minimum amount so that it is not caught in the seat bight.
- X 14. Verify the dummy abdomen is properly installed. (S16.3.3.1.9)
- X Abdomen still seated properly into dummy
- ___ Abdomen was adjusted because it was not seated properly into dummy
- X 15. Head Angle
- X N/A, neither the pelvis nor the abdomen were adjusted.
- X 15.1 Head still level (Go to 16)

15.2 Head level adjusted

 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 adjusted using the adjustable seat back

 Head adjusted using the neck bracket.

Head Angle degrees

X 16. Measure and set the pelvic angle using the pelvic angle gage TE-2504. The pelvic angle should be 20.0 degrees $\pm$ 2.5 degrees. If the pelvic angle cannot be set to the specified range because the head will not be level or because the dummy will have need major repositioning, adjust the pelvis as closely as possible to the angle range, but keep the head level.

X Pelvic angle set to 20.0 degrees $\pm$ 2.5 degrees.

 Pelvic angle of 20.0 degrees not achieved, the angular difference was minimized.

X Record the pelvic angle. 18.4 degrees

X 17. Check the dummy for contact with the interior after completing adjustments.

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. Verify the transverse instrument platform of the dummy head is level $\pm$ 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)

X Head Level Achieved

Head Angle 0.3 degrees

 Head Level NOT Achieved.

Head Angle degrees

X 19. Check the dummy to see if additional interior clearance is obtained, allowing the seat to be moved forward. (S16.3.3.1.12)

 N/A Bench Seat

X N/A Seat already at full forward position.

 Clearance unchanged. No adjustments required.

 Additional clearance available

 Seat moved Forward mm from the previous position.

 Seat moved Forward detent positions from the previous position.

 Seat moved Forward, Full Forward position reached.

X 20. Passenger foot positioning. (Indicate final position achieved) (S16.3.3.2)

 20.1 Place feet flat on the toe board; OR (S16.3.3.2.1)

X 20.2 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 (S16.3.3.2.2)

 20.3 If the heels do not touch the floor pan, set the legs as perpendicular to the thighs as possible and set the feet parallel to the floor pan. (S16.3.3.2.2)

X 21. Passenger arm/hand positioning. (S16.3.3.3)

☒ 21.1 Place the dummy's upper arms adjacent to the torso with the arm centerlines as close to a vertical longitudinal plane as possible. (S16.3.3.3.1)

☒ 21.2 Place the palms of the dummy in contact with the outer part of the thighs (S16.3.3.3.2)

☒ 21.3 Place the little fingers in contact with the seat cushion. (S16.3.3.3.3)

☒ 22. Adjustable head restraints (S16.3.4)

☐ N/A, there is no head restraint adjustment

☐ 22.1 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) Go to 23.

☐ 22.2 Adjust each head restraint vertically so that the horizontal plane determined in Data Sheet 14.1 is aligned with the center of gravity (CG) of the dummy head. (S16.3.4.3)

☒ 22.3 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

☒ Headrest set at nearest detent below the head CG

☒ 22.4 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)

☒ 23. Manual belt adjustment (for tests conducted with a belted dummy) S16.3.5

☒ N/A, Unbelted test

☐ 23.1 If an adjustable seat belt D-ring anchorage exists, place it in the manufacturer's design position for a 5th percentile adult female. **This information will be supplied by the COTR.** (S16.3.5.1)

Manufacturer's specified position _____

Actual Position _____

☐ 23.2 Place the Type 2 manual belt around the test dummy and fasten the latch. (S16.3.5.2)

☐ 23.3 Ensure that the dummy's head remains as level as possible. (S16.3.5.3)

☐ 23.4 Remove all slack from the lap belt. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this operation four times. Apply a 9 N (2 lbf) to 18 N (4 lbf) tension load to the lap belt. If the belt system is equipped with a tension-relieving device, introduce the maximum amount of slack into the upper torso belt that is recommended by the manufacturer. If the belt system is not equipped with a tension-relieving device, allow the excess webbing in the shoulder belt to be retracted by the retractive force of the retractor. (S16.3.5.4)

I certify that I have read and performed each instruction.

Signature: 

Date: 6/5/06

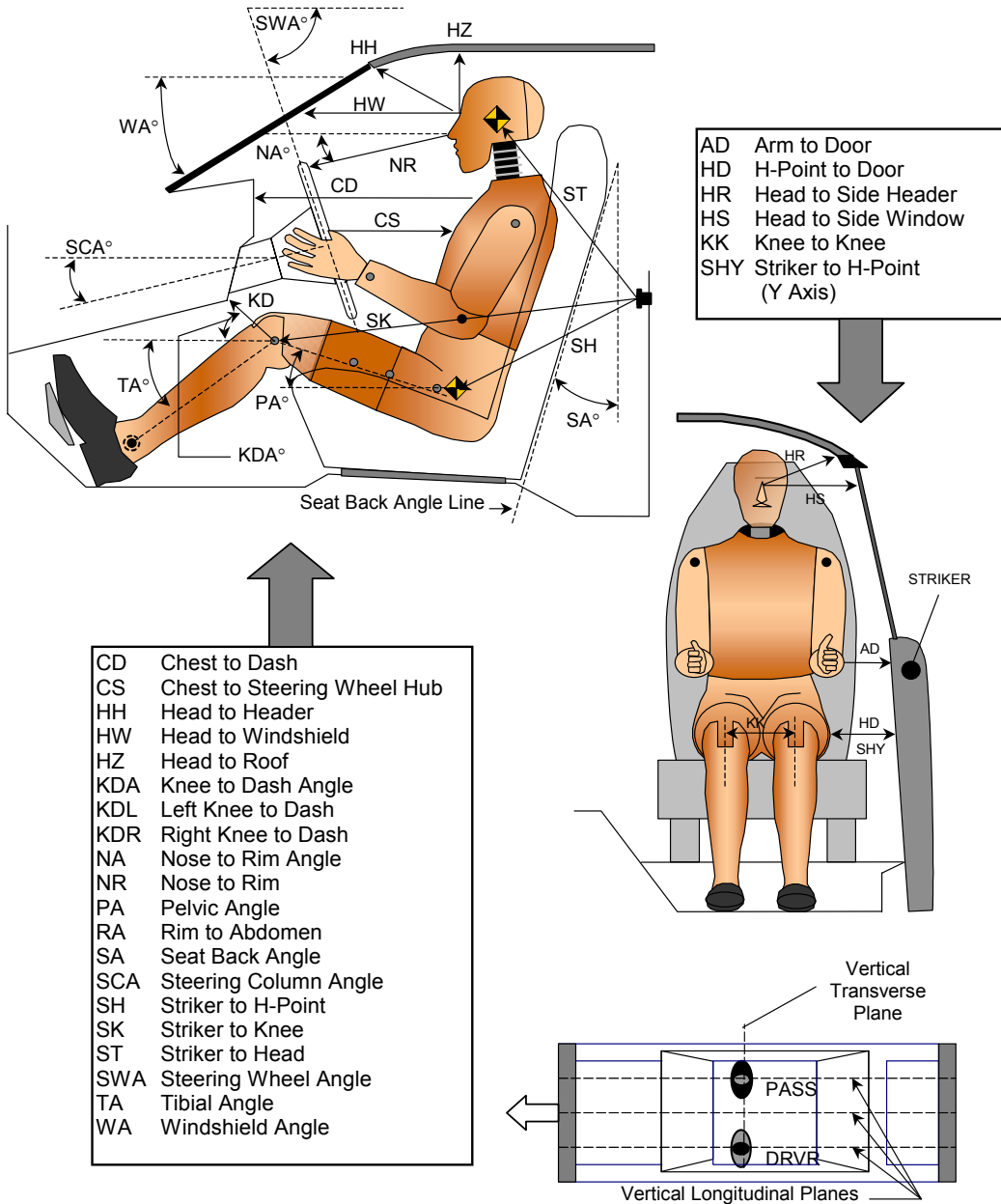
DATA SHEET 37

DUMMY MEASUREMENTS

Test Vehicle: 2004 Hyundai Elantra 4 Door
 Test Program: FMVSS 208 Compliance
 Test Technician: Eric Peschman

NHTSA No.: C40513
 Test Date: 6/5/06

DUMMY MEASUREMENTS FOR FRONT SEAT OCCUPANTS



DATA SHEET 37
DUMMY MEASUREMENTS

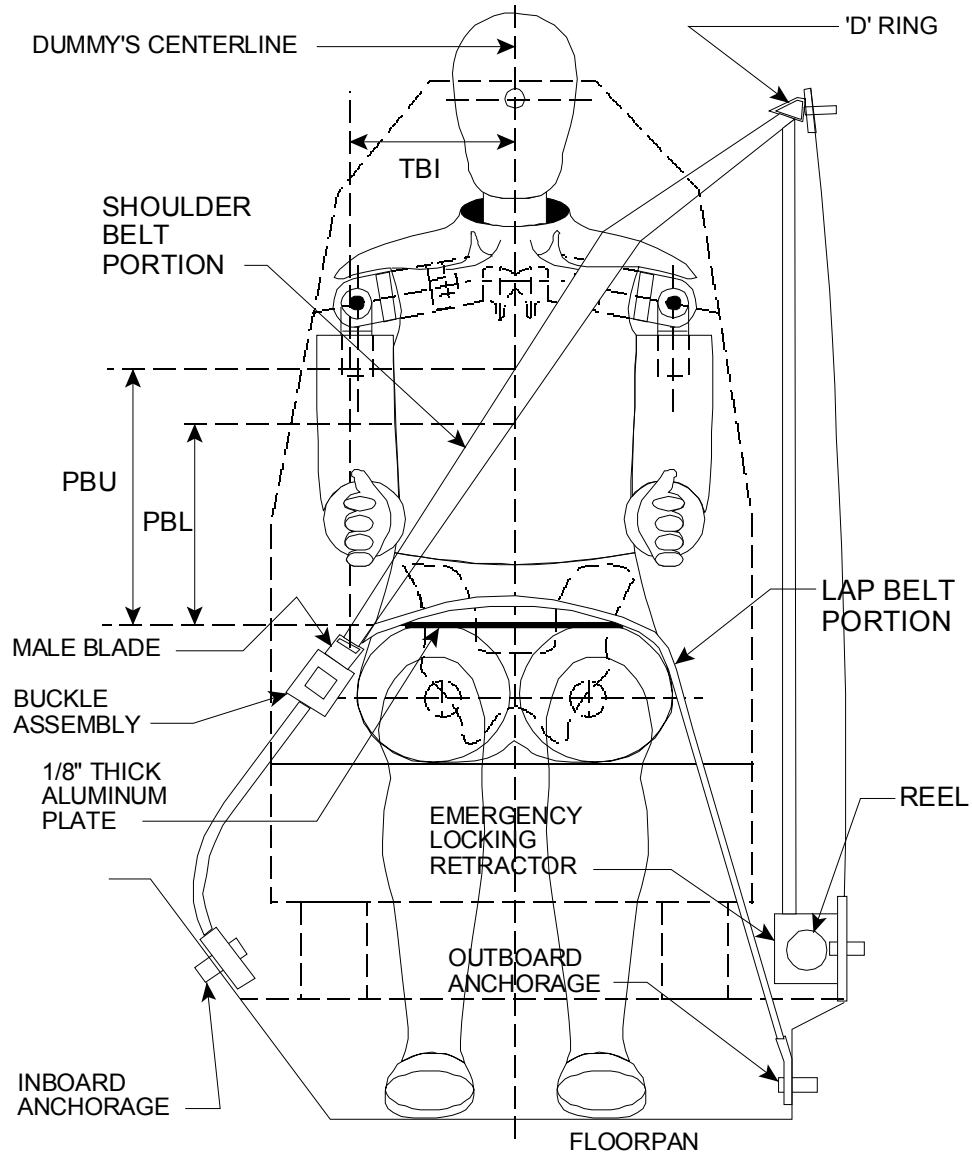
Test Vehicle: 2004 Hyundai Elantra 4 Door
Test Program: FMVSS 208 Compliance
Test Technician: Eric Peschman

NHTSA No.: C40513
Test Date: 6/5/06

TEST DUMMY POSITION MEASUREMENTS

Code	Measurement Description	Driver SN 505		Passenger SN 507	
		Length (mm)	Angle (°)	Length (mm)	Angle (°)
WA	Windshield Angle		30.8		
SWA	Steering Wheel Angle		65.9		
SCA	Steering Column Angle		24.3		
SA	Seat Back Angle (On headrest post)		3.3		4.8
HZ	Head to Roof (Z)	213		211	
HH	Head to Header	266		265	
HW	Head to Windshield	511		523	
HR	Head to Side Header (Y)	252		240	
NR	Nose to Rim	277	5.7		
CD	Chest to Dash	456		439	
CS	Chest to Steering Hub	201			
RA	Rim to Abdomen	87			
KDL	Left Knee to Dash	103	35.5	112	
KDR	Right Knee to Dash	109		118	38.9
PA	Pelvic Angle		20.1		18.4
TA	Tibia Angle		45.6		42.2
KK	Knee to Knee (Y)	265		209	
SK	Striker to Knee	679	97.8	667	98.1
ST	Striker to Head	492	26.4	472	26.4
SH	Striker to H-Point	369	109.3	369	112.5
SHY	Striker to H-Point (Y)	263		263	
HS	Head to Side Window	339		336	
HD	H-Point to Door (Y)	218		221	
AD	Arm to Door (Y)	185		157	
AA	Ankle to Ankle	260		176	

SEAT BELT POSITIONING DATA



FRONT VIEW OF DUMMY

SEAT BELT POSITIONING MEASUREMENTS

Measurement Description	Units	Driver	Passenger
PBU - Top surface of reference to belt upper edge	mm	N/A	N/A
PBL - To surface of reference to belt lower edge	mm	N/A	N/A

DATA SHEET 38

CRASH TEST

Test Vehicle: 2004 Hyundai Elantra 4 Door
 Test Program: FMVSS 208 Compliance
 Test Technician: Eric Peschman

NHTSA No.: C40513
 Test Date: 6/5/06

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	<u>X</u> 32 to 40 kmph	<u> </u> 0 to 48 kmph	<u> </u> 0 to 56 kmph
DRIVER DUMMY:	<u>X</u> 5 th female	<u> </u> 50 th male	
PASSENGER DUMMY:	<u>X</u> 5 th female	<u> </u> 50 th male	

- ☒ 1. Vehicle underbody painted
- ☒ 2. The speed measuring devices are in place and functioning.
- ☒ 3. The speed measuring devices are 1.0 m from the barrier (spec. 1.5m) and 30 cm from the barrier (spec. is 30 cm)
- ☒ 4. Convertible top is in the closed position.
- ☒ N/A, not a convertible
- ☒ 5. Instrumentation and wires are placed so the motion of the dummies during impact is not affected.
- ☒ 6. Tires inflated to pressure on tire placard or if it does not have a tire placard because it is not a passenger car, then inflated to the tire pressure specified in the owner information.

<u>210</u> kpa front left tire	<u>210</u> kpa specified on tire placard or in owner information
<u>210</u> kpa front right tire	<u>210</u> kpa specified on tire placard or in owner information
<u>210</u> kpa rear left tire	<u>210</u> kpa specified on tire placard or in owner information
<u>210</u> kpa rear right tire	<u>210</u> kpa specified on tire placard or in owner information

- ☒ 7. Time zero contacts on barrier in place.
- ☒ 8. Pre test zero and shunt calibration adjustments performed and recorded
- ☒ 9. Dummy temperature meets requirements of section 12.2 of the test procedure.
- ☒ 10. Vehicle hood closed and latched
- ☒ 11. Transmission placed in neutral
- ☒ 12. Parking brake off
- ☒ 13. Ignition in the ON position
- ☒ 14. Doors closed and latched but not locked
- ☒ 15. Posttest zero and shunt calibration checks performed and recorded
- ☒ 16. Actual test speed 39.8 kmph
- ☒ 17. Vehicle rebound from the barrier 166 cm
- ☒ 18. Describe whether the doors open after the test and what method is used to open the doors.
 - ☒ Left Front Door: Door remained closed and latched; Door opened without tools
 - ☒ Right Front Door: Door remained closed and latched; Door opened without tools
 - ☒ Left Rear Door: Door remained closed and latched; Door opened without tools
 - ☒ Right Rear Door: Door remained closed and latched; Door opened without tools

- ☒ 19. Describe the contact points of the dummy with the interior of the vehicle.
- | | |
|-------------------------------------|--|
| ☒ | Driver Dummy: Head to Air Bag, Front Header; Chest and Abdomen to Air Bag; Knees to Knee Bolster |
| ☒ | Passenger Dummy: Head to Air Bag and Headrest; Knees to Glove Box |

REMARKS:

I certify that I have read and performed each instruction.

Signature: 

Date: 6/5/06

DATA SHEET NO. 40

ACCIDENT INVESTIGATION DIVISION DATA

Test Vehicle: 2004 Hyundai Elantra 4 Door
 Test Program: FMVSS 208 Compliance
 Test Technician: Wayne Dahlke

NHTSA No.: C40513
 Test Date: 6/5/06

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	☒ 32 to 40 kmph	☐ 0 to 48 kmph	☐ 0 to 56 kmph
DRIVER DUMMY:	☒ 5 th female	☐ 50 th male	
PASSENGER DUMMY:	☒ 5 th female	☐ 50 th male	

Vehicle Year/Make/Model/Body Style:	2004 Hyundai Elantra Passenger Car
VIN:	KMHDN46D34U769199
Wheelbase:	2614 mm
Build Date:	10/8/03
Vehicle Size Category:	3
Test Weight:	1465.7 kg
Front Overhang:	909 mm
Overall Width:	1721 mm
Overall Length Center:	4496 mm

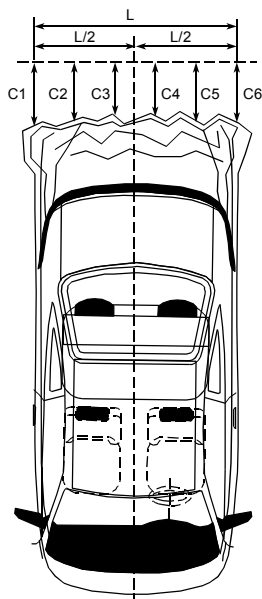
Accelerometer Data	
Location:	As per measurements on Data Sheet 31
Linearity:	>99.9%

Integration Algorithm:	Trapezoidal
Vehicle Impact Speed:	39.8 kmph
Time of Separation:	109.2 ms
Velocity Change:	45.5 kmph

CRUSH PROFILE

Collision Deformation Classification: 12FDEW6
 Midpoint of Damage: Vehicle Longitudinal Centerline
 Damage Region Length (mm): 1380
 Impact Mode: Frontal Barrier

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush zone 1 at left side	mm	4338	4154	184
C2	Crush zone 2 at left side	mm	4424	4150	274
C3	Crush zone 3 at left side	mm	4475	4130	345
C4	Crush zone 4 at right side	mm	4475	4144	331
C5	Crush zone 5 at right side	mm	4425	4151	274
C6	Crush zone 6 at right side	mm	4340	4139	201



REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Gahl

Date: 6/5/06

DATA SHEET 41

WINDSHIELD MOUNTING (FMVSS 212)

Test Vehicle: 2004 Hyundai Elantra 4 Door
 Test Program: FMVSS 208 Compliance
 Test Technician: Wayne Dahlke

NHTSA No.: C40513
 Test Date: 6/5/06

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	☒ 32 to 40 kmph	☐ 0 to 48 kmph	☐ 0 to 56 kmph
DRIVER DUMMY:	☒ 5 th female	☐ 50 th male	
PASSENGER DUMMY:	☒ 5 th female	☐ 50 th male	

1. Pre-Crash
 - ☒ 1.1 Describe from visual inspection how the windshield is mounted and describe any trim material.

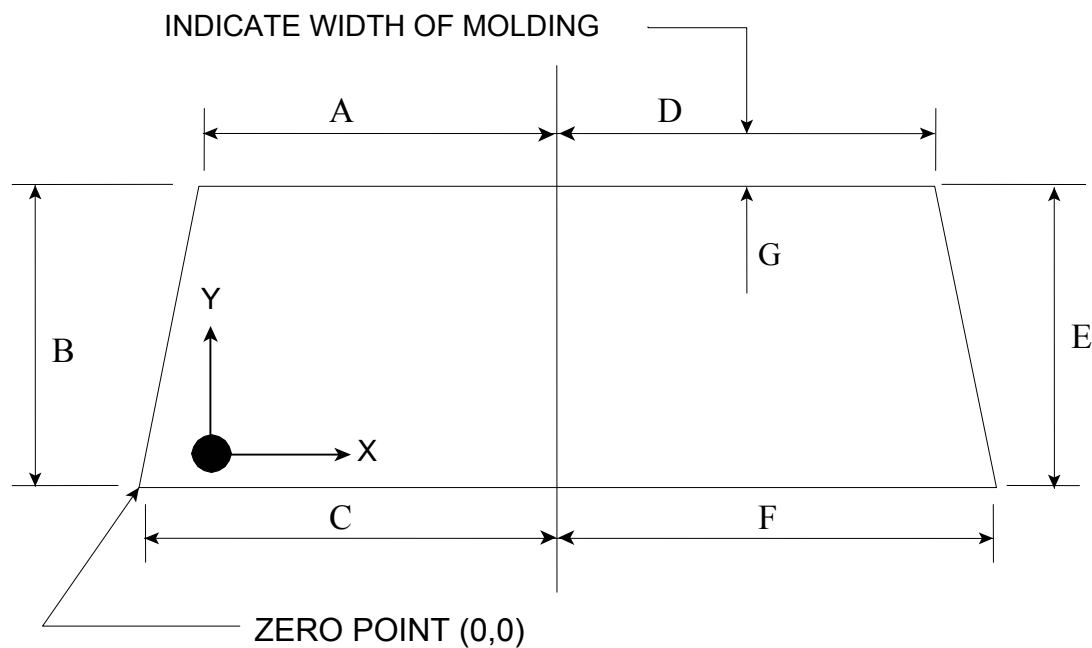
Retained with glue
Plastic and Rubber trim
 - ☒ 1.2 Mark the longitudinal centerline of the windshield
 - ☒ 1.3 Measure pre-crash A, B, and C for the left side and record in the chart below.
 - ☒ 1.4 Measure pre-crash C, D, and E for the right side and record in the chart below.
 - ☒ 1.5 Measure from the edge of the retainer or molding to the edge of the windshield.
Dimension G (mm): 18
2. Post Crash
 - ☒ 2.1 Can a single thickness of copier type paper (as small a piece as necessary) slide between the windshield and the vehicle body?
 - ☒ No – Pass. Skip to the table of measurements, complete it by repeating the pre-crash measurements in the post crash column, and calculate the retention percentage, which will be 100%.
 - ☐ Yes, go to 2.2
 - ☐ 2.2 Visibly mark the beginning and end of the portions of the periphery where the paper slides between the windshield and the vehicle body.
 - ☐ 2.3 Measure and record post-crash A, B, C, D, E, and F such that the measurements do not include any of the parts of the windshield where the paper slides between the windshield and the vehicle body.
 - ☐ 2.4 Calculate and record the percent retention for the right and left side of the windshield.
 - ☐ 2.5 Is total right side percent retention less than 75%?
 - ☐ Yes, Fail
 - ☐ No, Pass
 - ☐ 6. Is total left side percent retention less than 75%?
 - ☐ Yes, Fail
 - ☐ No, Pass

WINDSHIELD RETENTION MEASUREMENTS

	Dimension	Pre-Crash (mm)	Post-Crash (mm)	Percent Retention (Post-Test ÷ Pre-Crash)
Left Side	A	546	546	100%
	B	780	780	100%
	C	722	722	100%
	Total	2048	2048	100%
Right Side	D	546	546	100%
	E	780	780	100%
	F	722	722	100%
	Total	2048	2048	100%

Indicate area of mounting failure. NONE

FRONT VIEW OF WINDSHIELD



REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Zoller

Date: 6/5/06

DATA SHEET 42
WINDSHIELD ZONE INTRUSION (FMVSS 219)

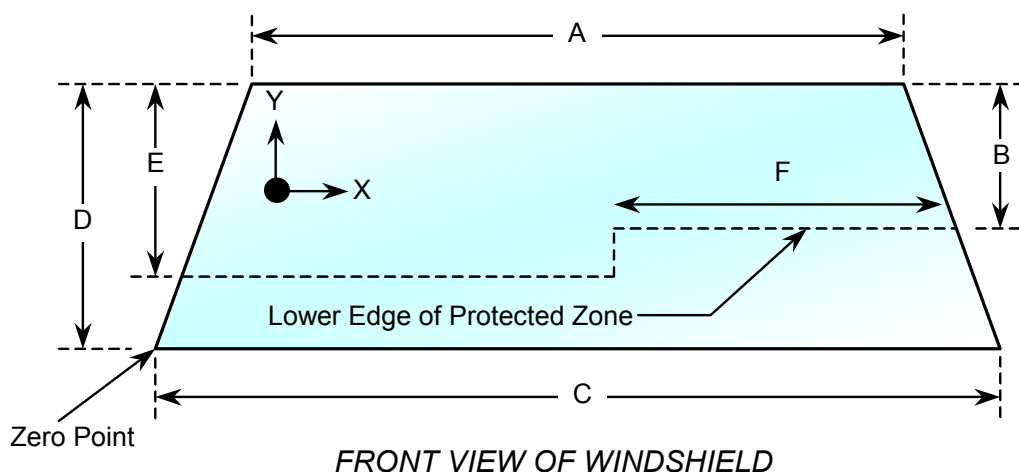
Test Vehicle: 2004 Hyundai Elantra 4 Door
 Test Program: FMVSS 208 Compliance
 Test Technician: Wayne Dahlke

NHTSA No.: C40513
 Test Date: 6/5/06

IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	☒ 32 to 40 kmph	☐ 0 to 48 kmph	☐ 0 to 56 kmph
DRIVER DUMMY:	☒ 5 th female	☐ 50 th male	
PASSENGER DUMMY:	☒ 5 th female	☐ 50 th male	

- ☒ 1. Place a 165 mm diameter rigid sphere, with a mass of 6.8 kg on the instrument panel so that it is simultaneously touching the instrument panel and the windshield. (571.219 S6.1(a))
- ☒ 2. Roll the sphere from one side of the windshield to the other while marking on the windshield where the sphere contacts the windshield. (571.219 S6.1(b))
- ☒ 3. From the outermost contactable points on the windshield draw a horizontal line to the edges of the windshield. (571.219 S6.1(b))
- ☒ 4. Draw a line on the inner surface of the windshield that is 13 mm below the line determined in items 2 and 3
- ☒ 5. After the crash test, record any points where a part of the exterior of the vehicle has marked, penetrated, or broken the windshield.

Provide all dimensions necessary to reproduce the protected area.



WINDSHIELD DIMENSIONS

Item	Units	Value
A	mm	1092
B	mm	485
C	mm	1444
D	mm	780
E	mm	512
F	mm	707

AREA OF PROTECTED ZONE FAILURES:

- B. Provide coordinates of the area that the protected zone was penetrated more than 0.25 inches by a vehicle component other than one which is normally in contact with the windshield.

X	Y
NONE	

- C. Provide coordinates of the area beneath the protected zone template that the inner surface of the windshield was penetrated by a vehicle component.

X	Y
NONE	

REMARKS:

I certify that I have read and performed each instruction.

Signature:

Wayne Zuhl

Date:

6/5/06

DATA SHEET 43

FUEL SYSTEM INTEGRITY (FMVSS 301)

Test Vehicle: 2004 Hyundai Elantra 4 Door
Test Program: FMVSS 208 Compliance
Test Technician: Eric Peschman

NHTSA No.: C40513
Test Date: 6/5/06

TYPE OF IMPACT:	25 mph Unbelted Flat Frontal
-----------------	------------------------------

Stoddard Solvent Spillage Measurements

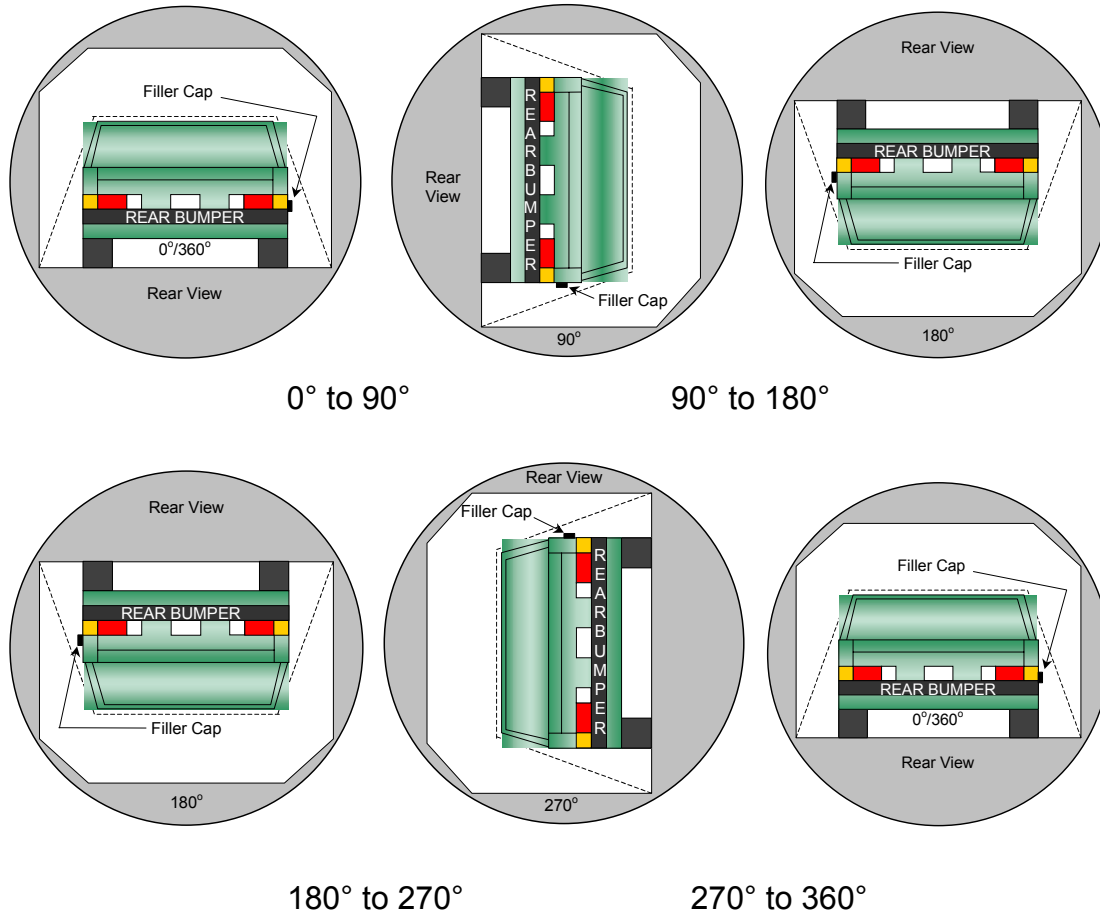
- A. From impact until vehicle motion ceases: 0.0 grams
(Maximum Allowable = 28 grams)
- B. For the 5 minute period after motion ceases: 0.0 grams
(Maximum Allowable = 142 grams)
- C. For the following 25 minutes: 0.0 grams
(Maximum Allowable = 28 grams/minute)
- D. Spillage: None

REMARKS:

DATA SHEET NO. 41
FMVSS 301 STATIC ROLLOVER DATA

Test Vehicle: 2004 Hyundai Elantra 4 Door
 Test Program: FMVSS 208 Compliance

NHTSA No.: C40513
 Test Date: 6/5/06



1. The specified fixture rollover rate for each 90° of rotation is 60 to 180 seconds.
2. The position hold time at each position is 300 seconds (minimum).
3. Details of Stoddard Solvent spillage locations: None

Test Phase	Rotation Time (sec.)	Hold Time (sec.)	Spillage (grams)
0° to 90°	116	300	0.0
90° to 180°	109	300	0.0
180° to 270°	107	300	0.0
270° to 360°	109	300	0.0

APPENDIX A
CRASH TEST DATA

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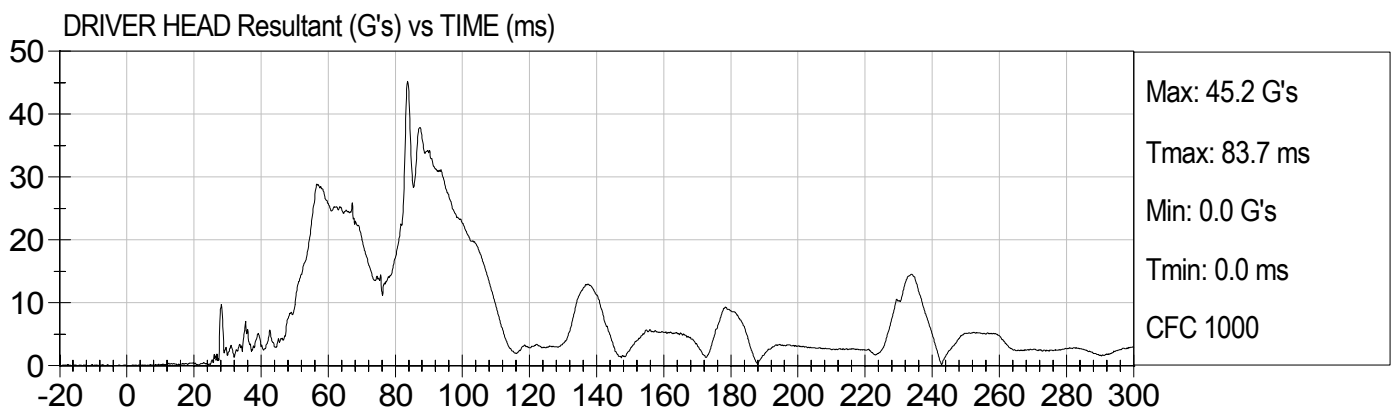
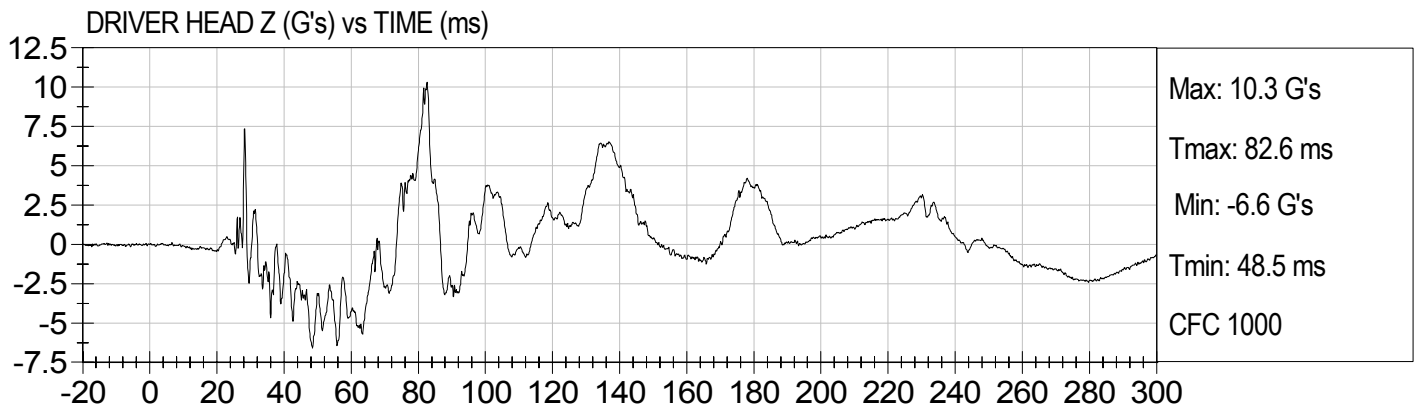
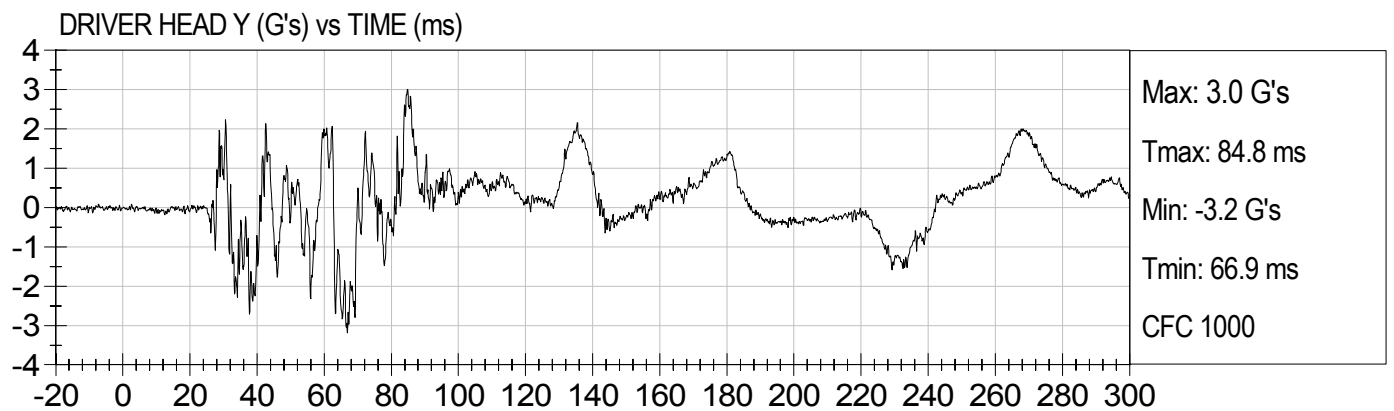
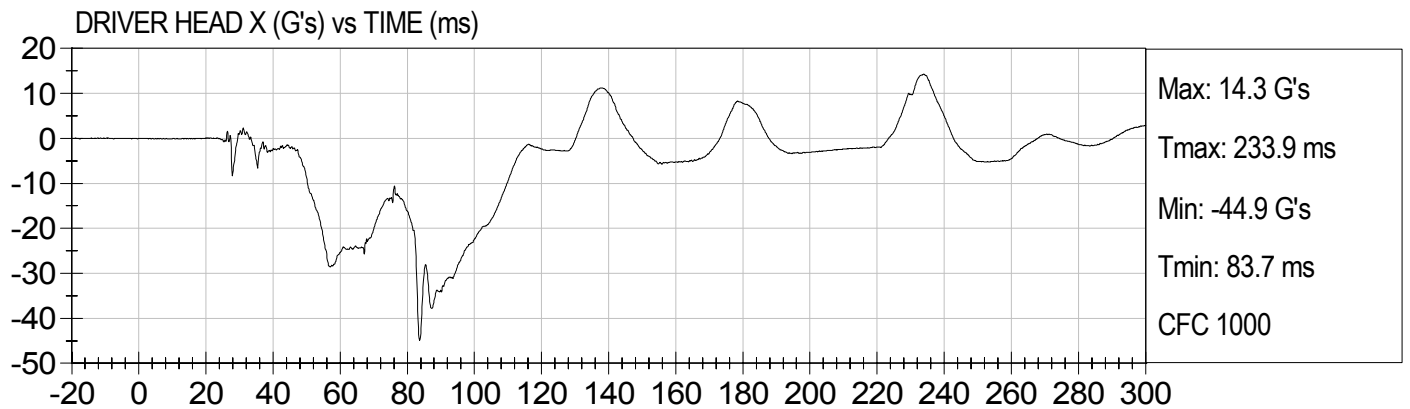
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25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

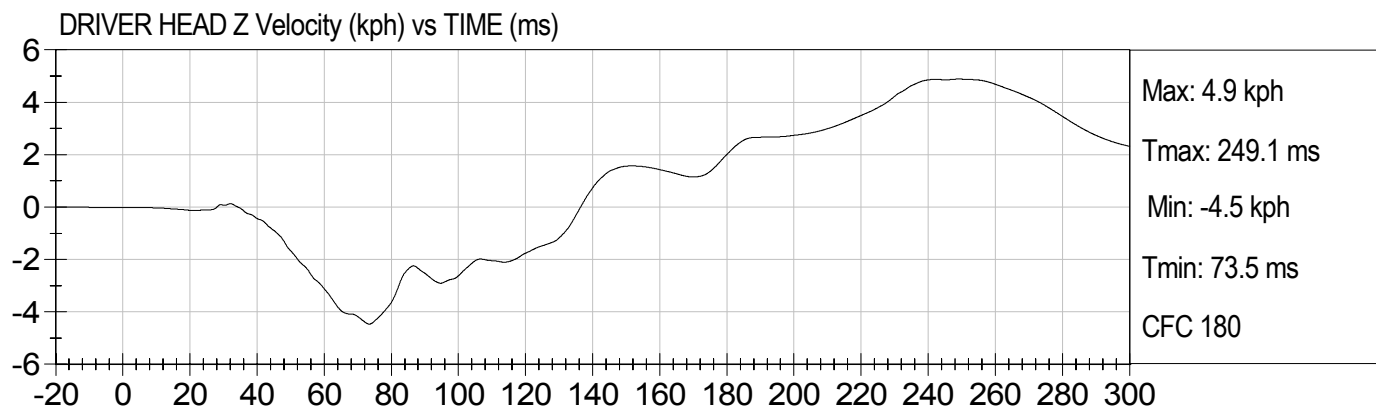
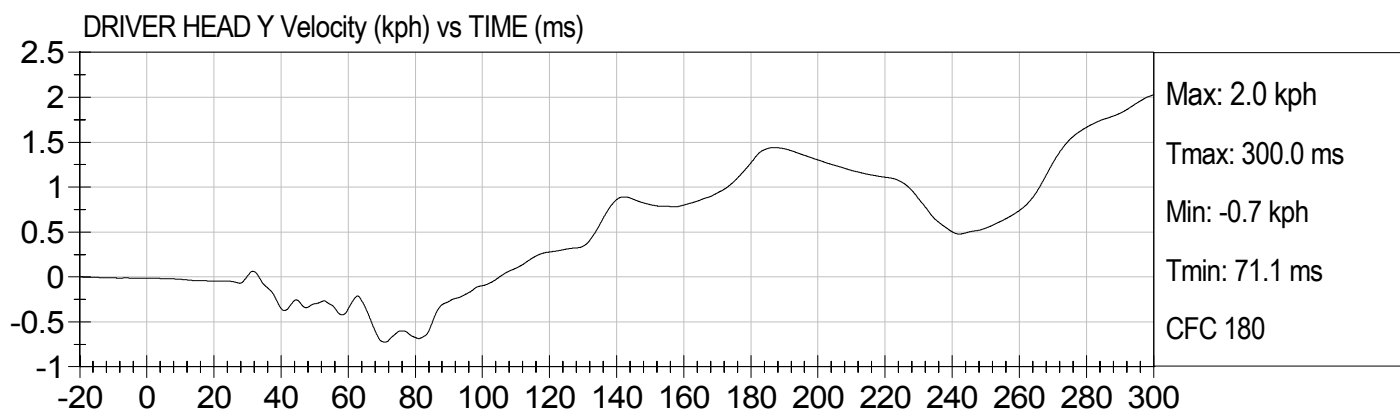
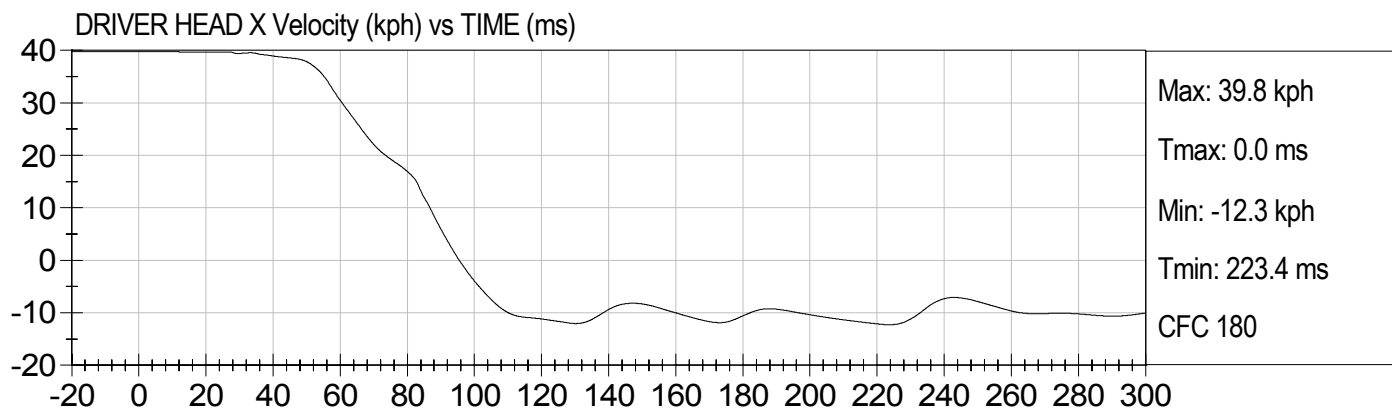
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

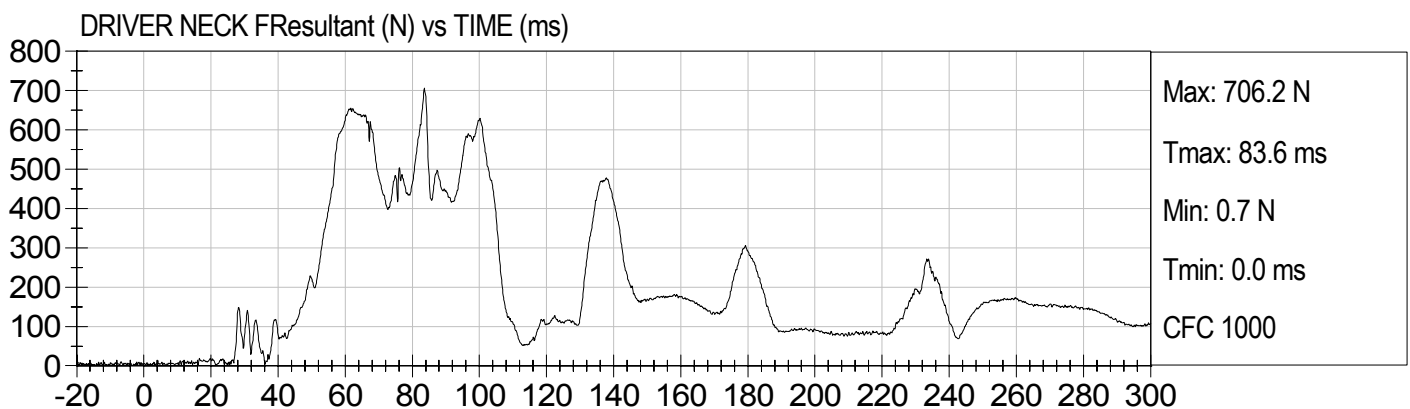
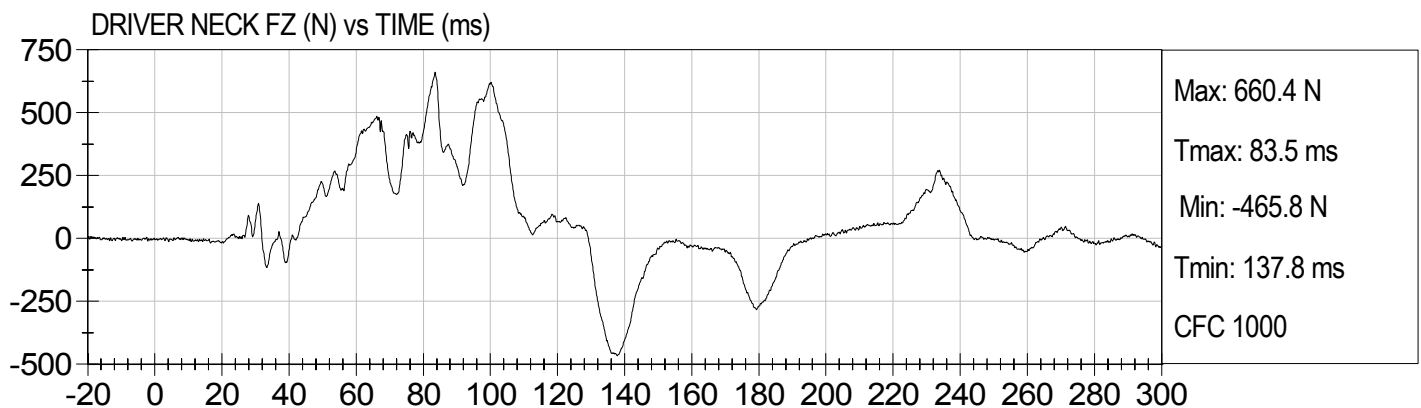
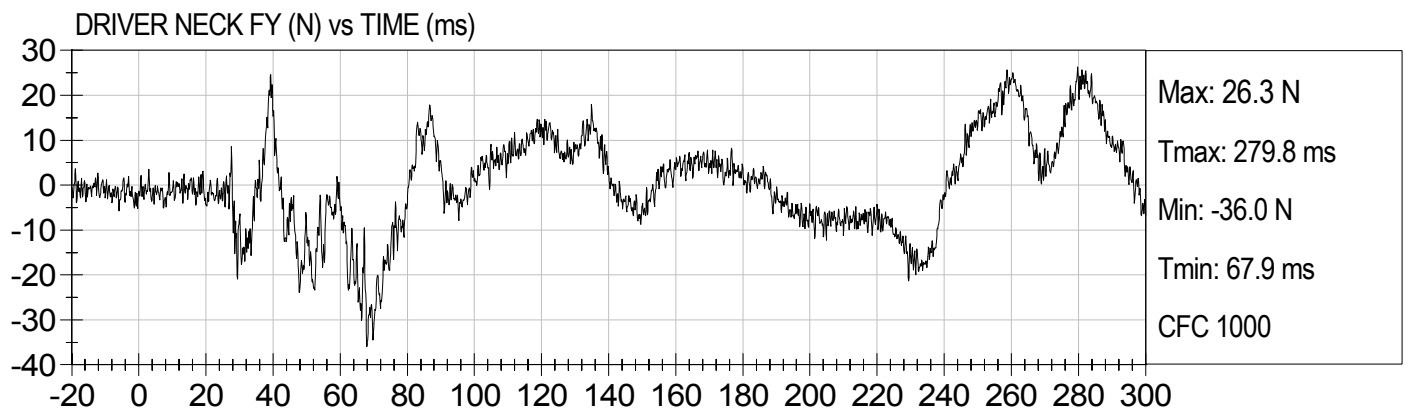
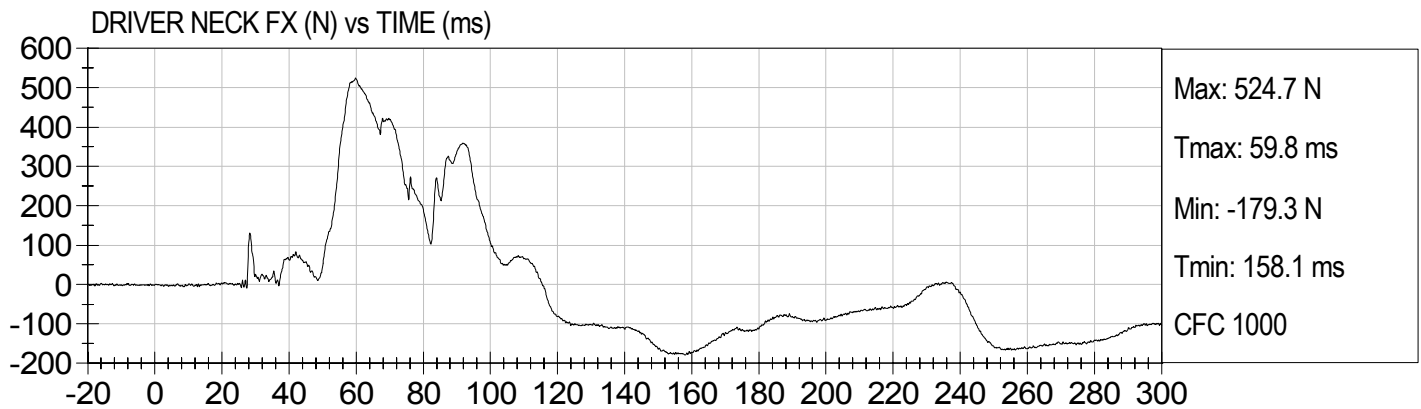
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

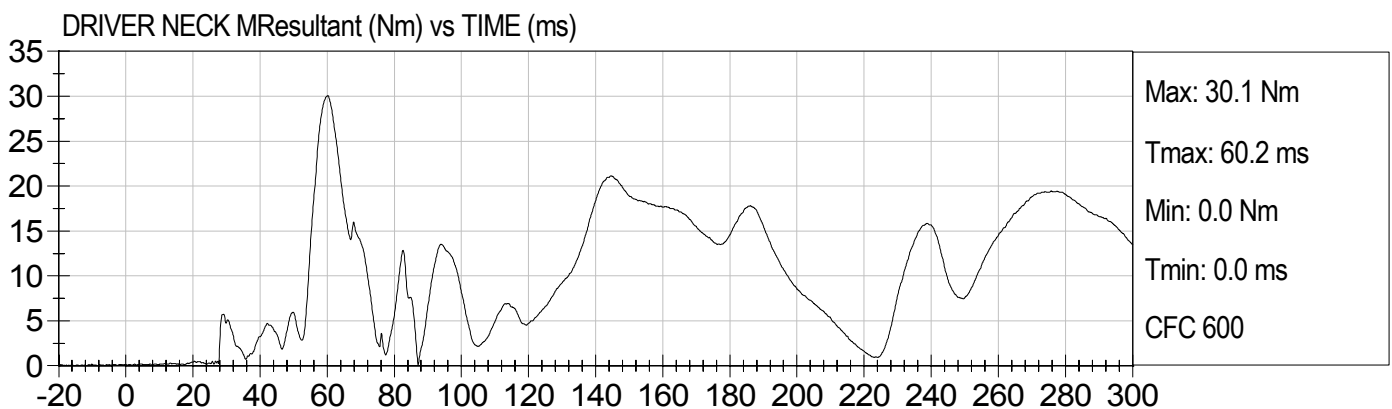
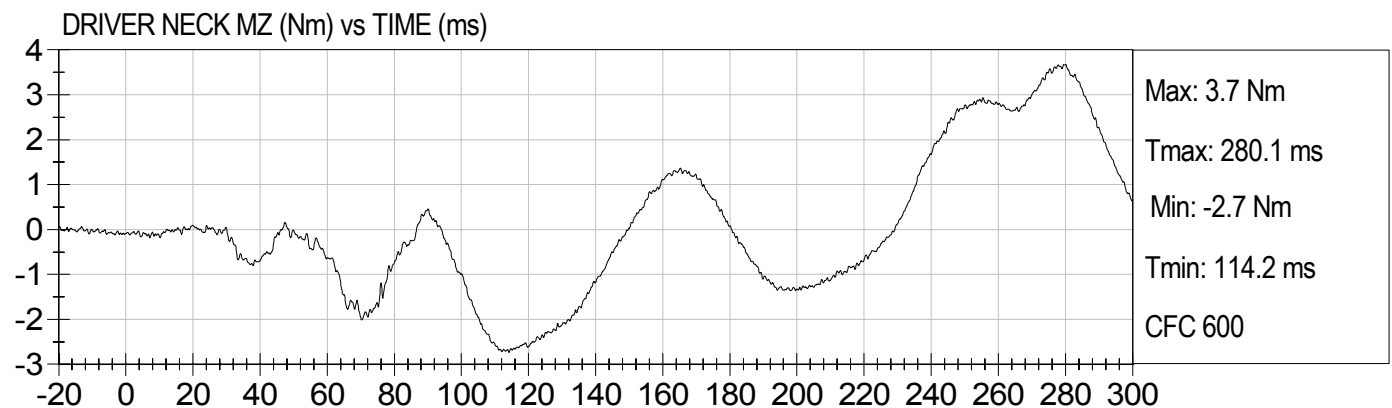
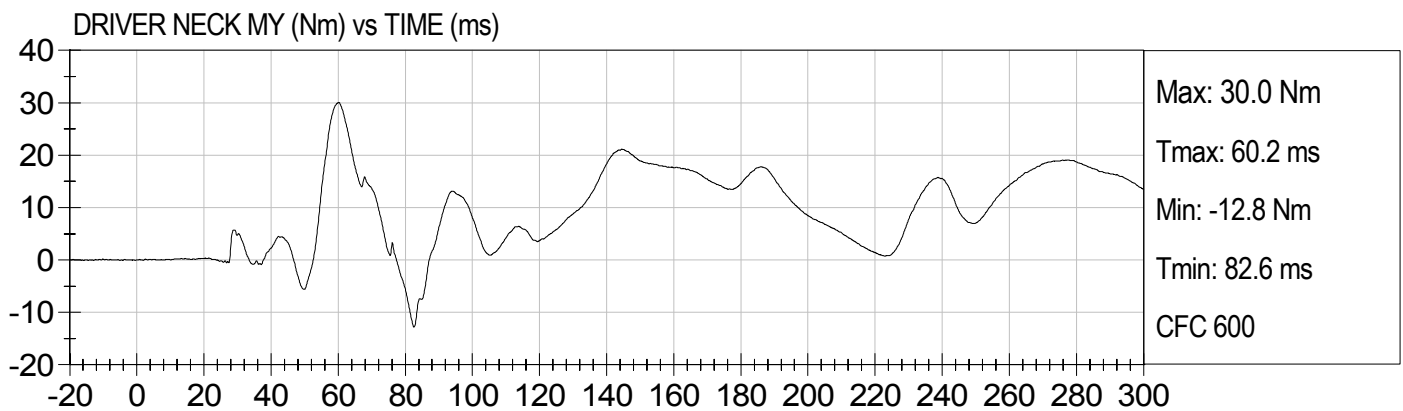
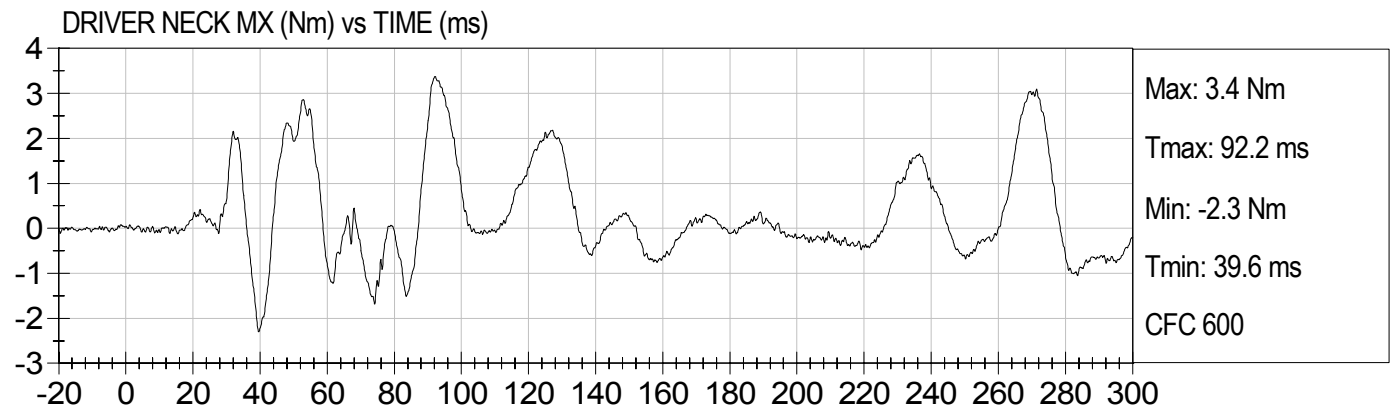
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

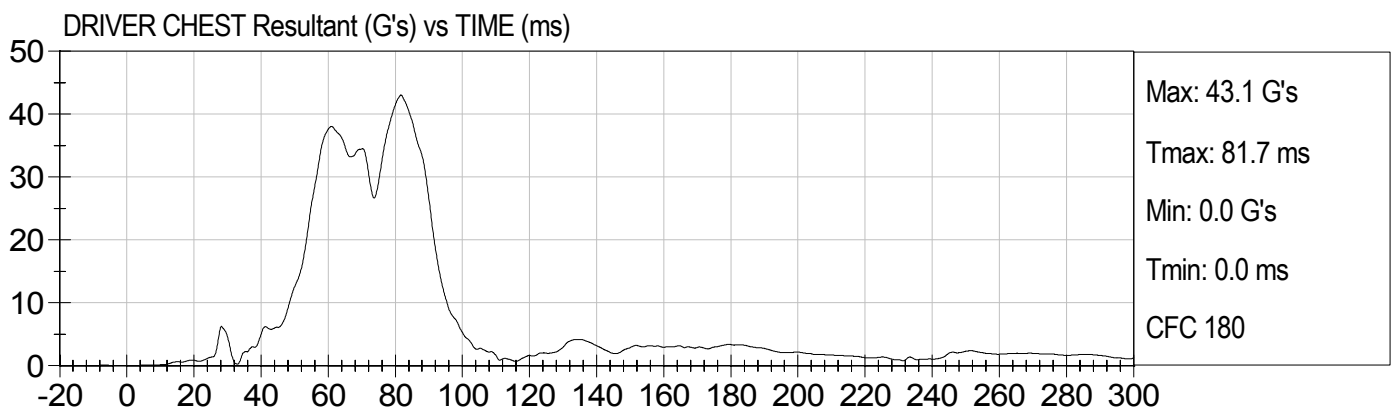
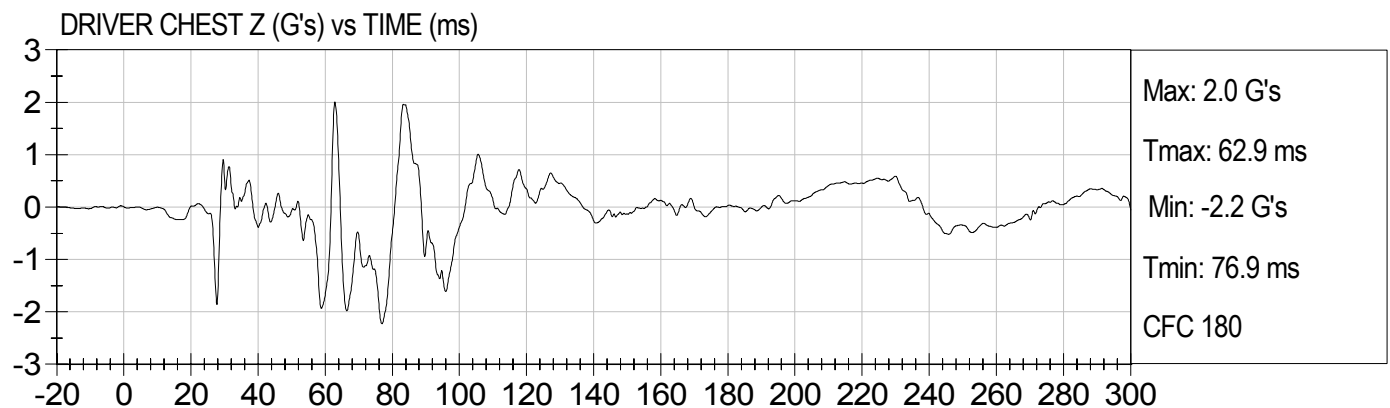
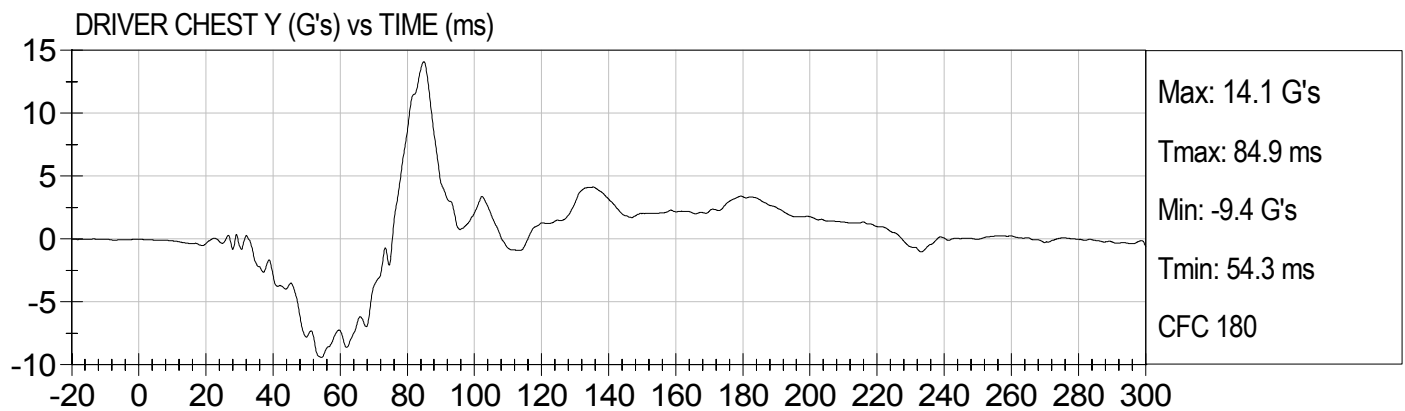
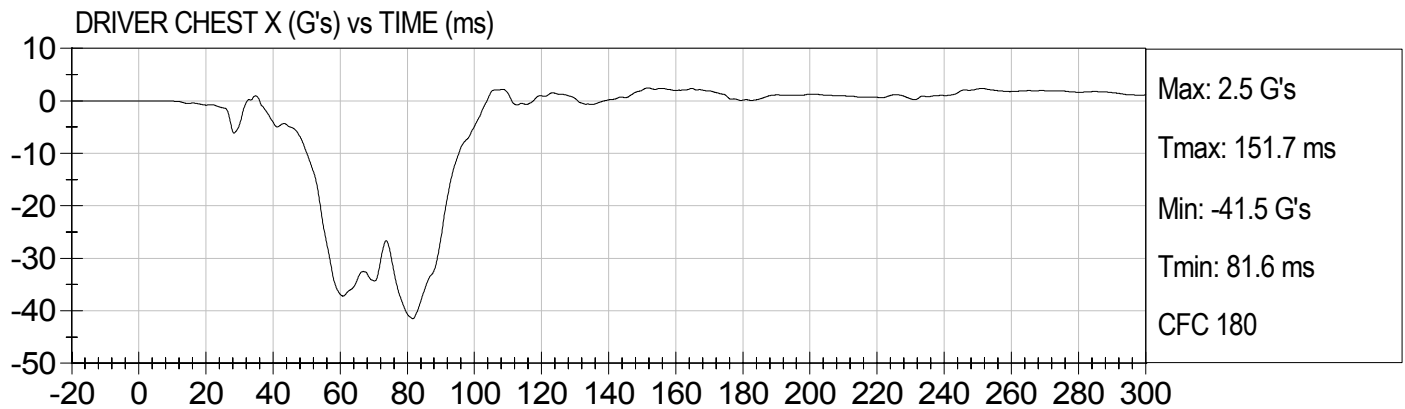
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)

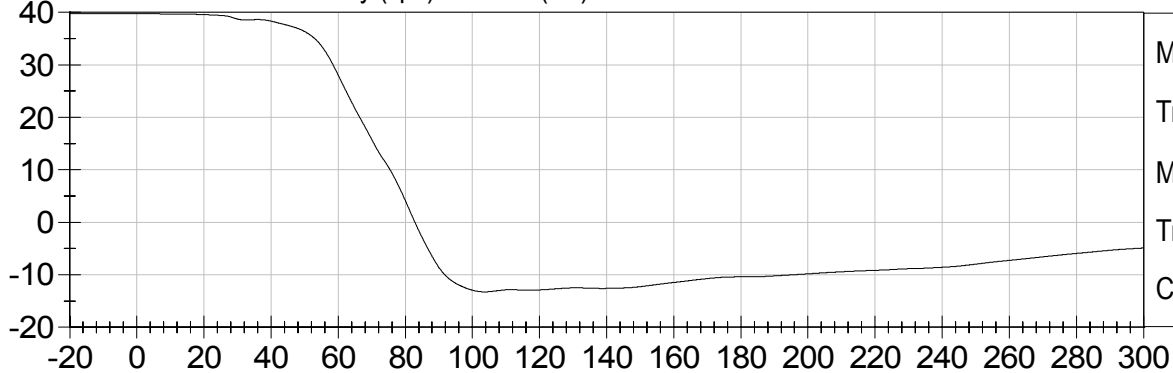




25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

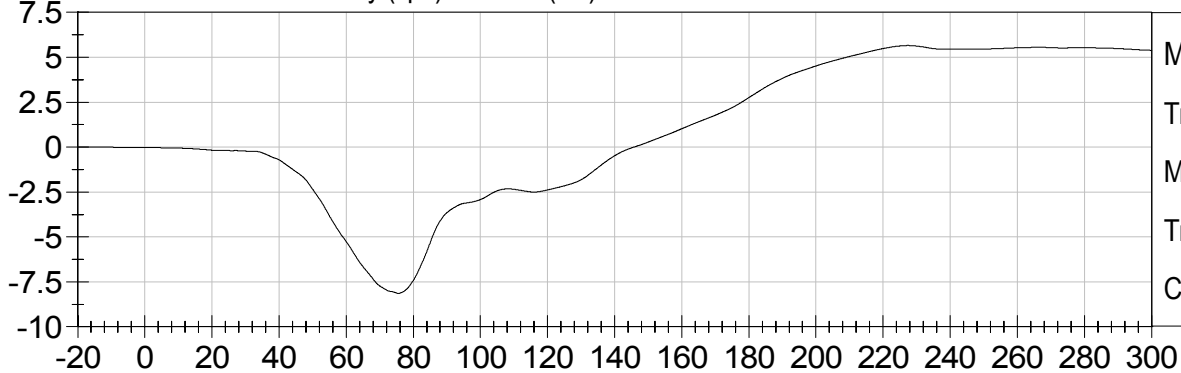
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)

DRIVER CHEST X Velocity (kph) vs TIME (ms)



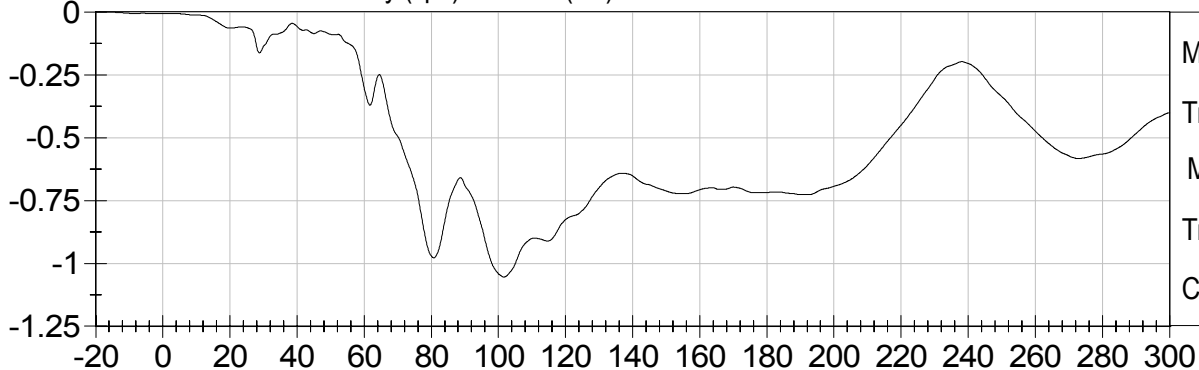
Max: 39.8 kph
Tmax: 0.0 ms
Min: -13.3 kph
Tmin: 103.7 ms
CFC 180

DRIVER CHEST Y Velocity (kph) vs TIME (ms)



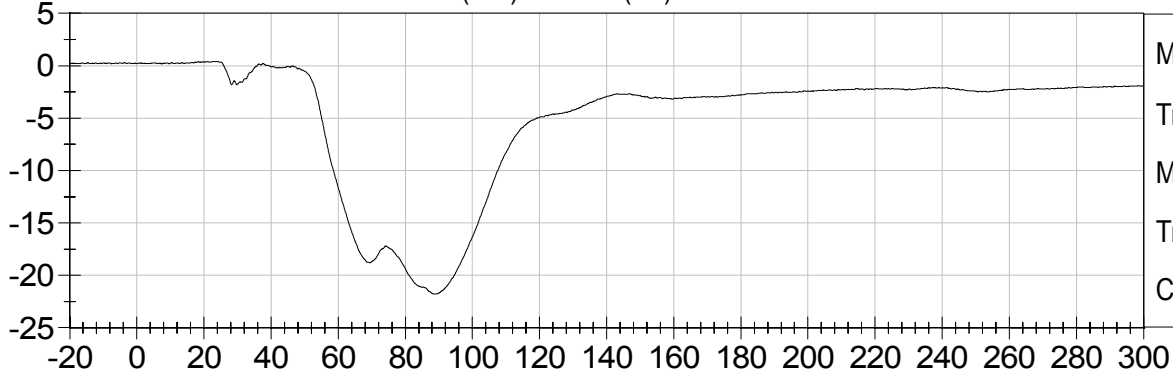
Max: 5.7 kph
Tmax: 227.4 ms
Min: -8.1 kph
Tmin: 75.5 ms
CFC 180

DRIVER CHEST Z Velocity (kph) vs TIME (ms)



Max: 0.0 kph
Tmax: 0.0 ms
Min: -1.1 kph
Tmin: 101.7 ms
CFC 180

DRIVER CHEST DISPLACEMENT (mm) vs TIME (ms)

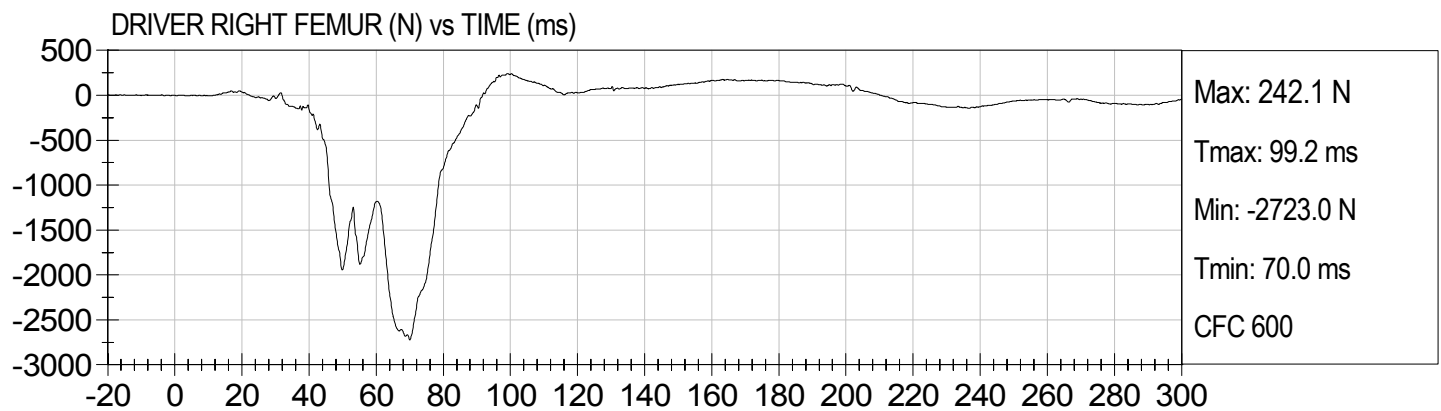
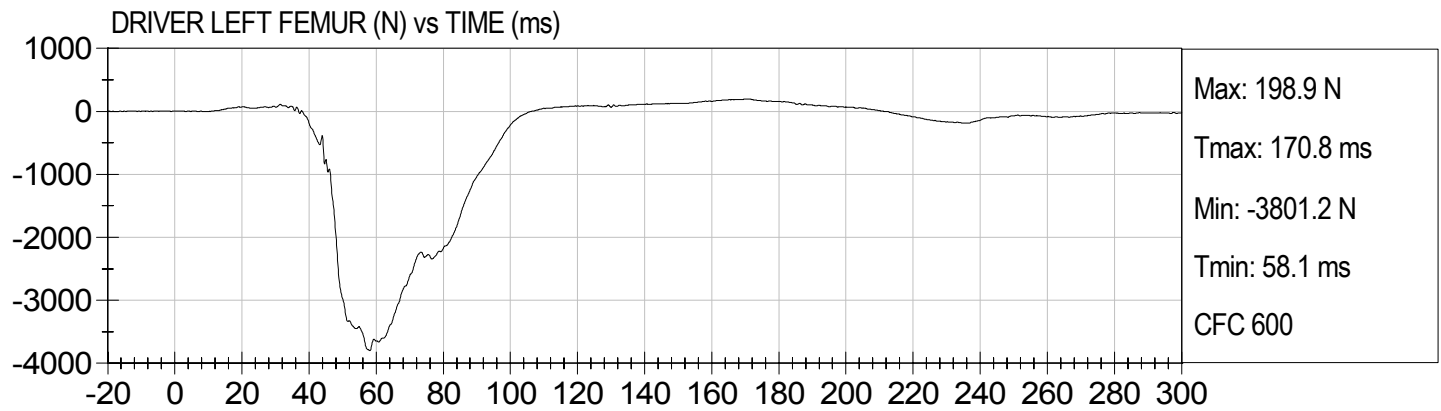


Max: 0.4 mm
Tmax: 22.8 ms
Min: -21.8 mm
Tmin: 89.0 ms
CFC 600



25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

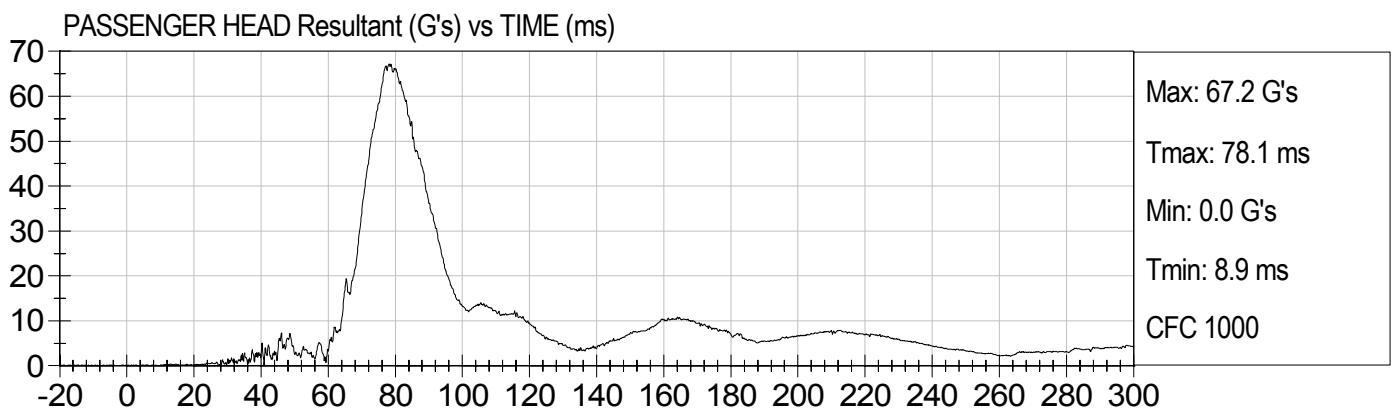
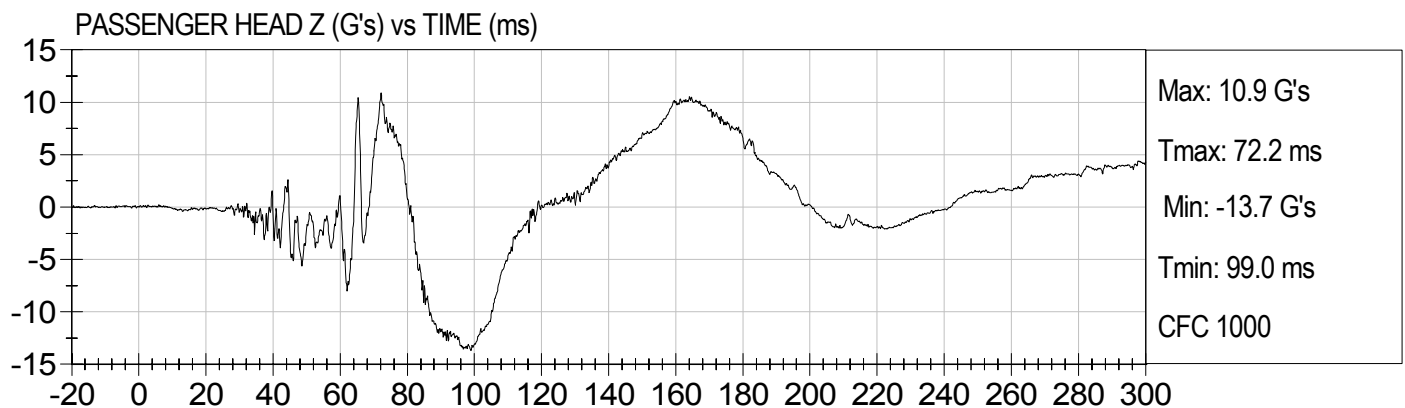
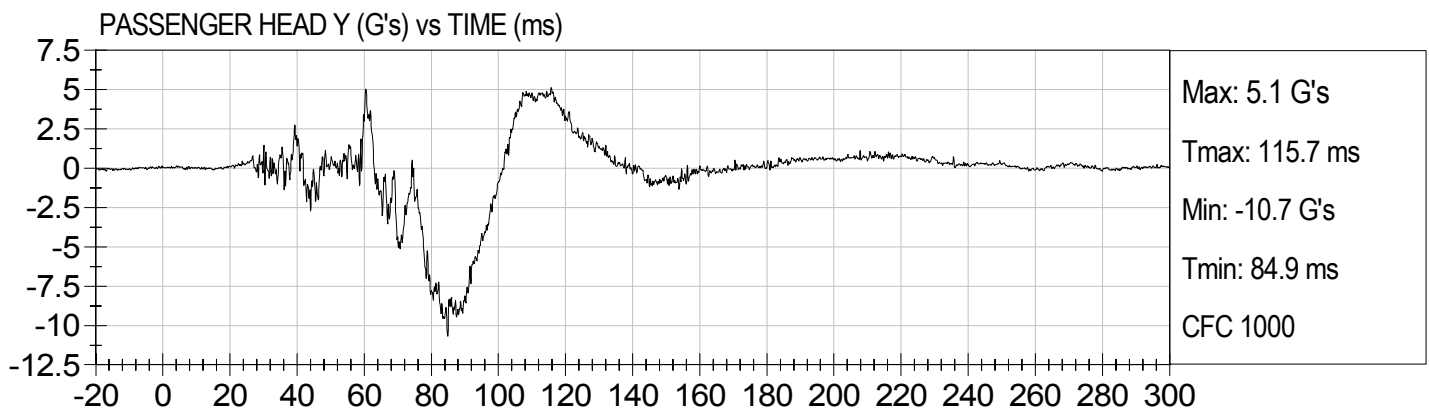
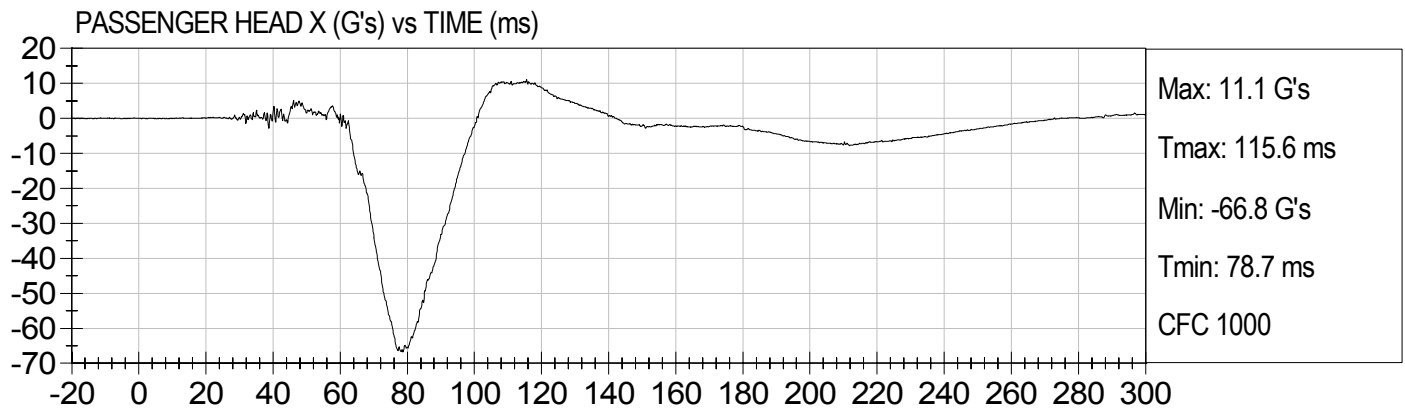
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

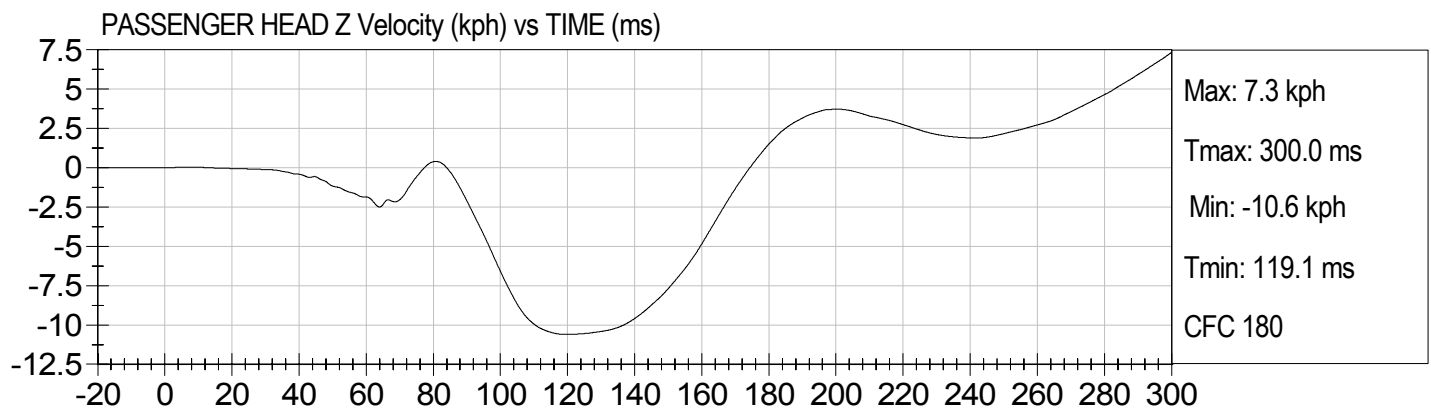
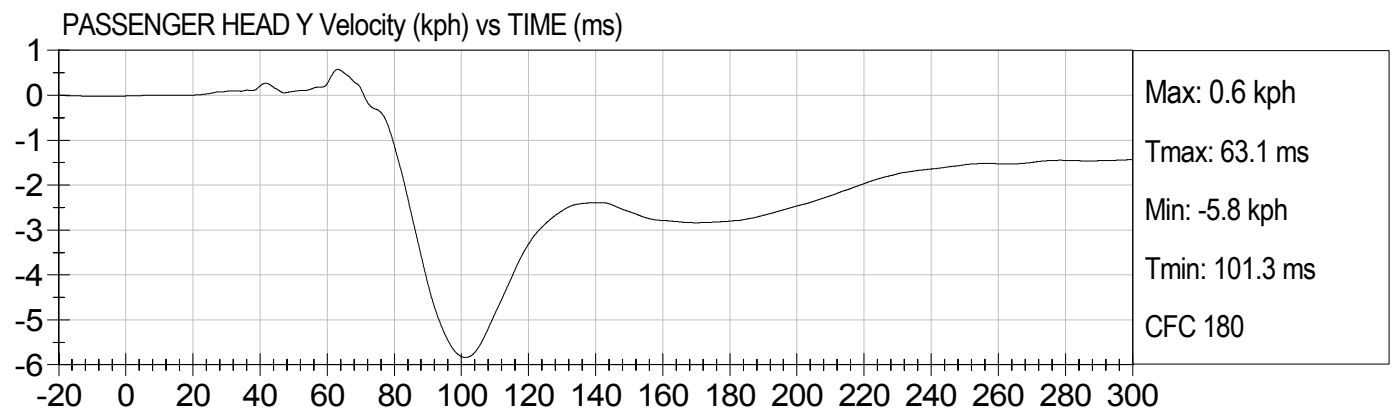
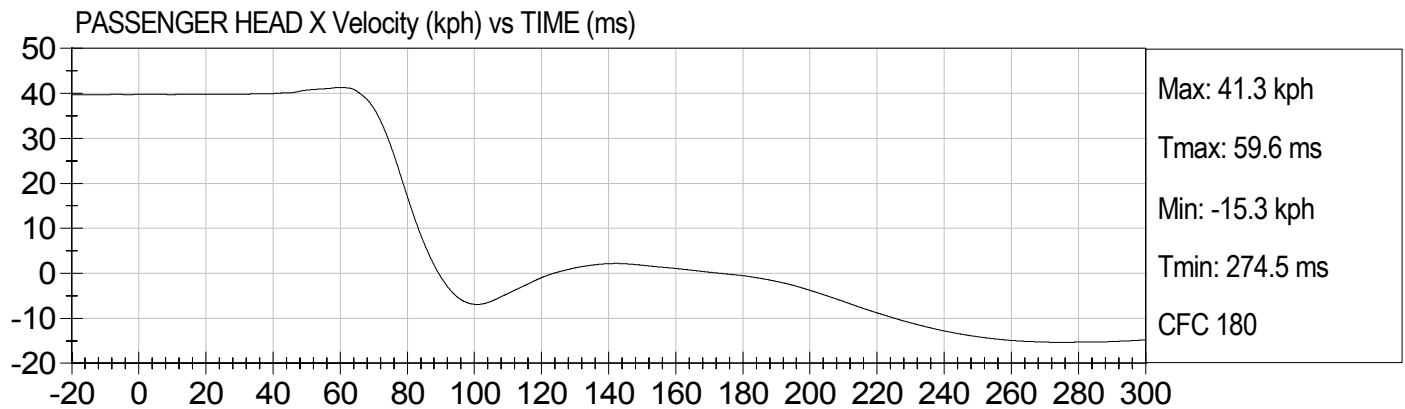
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)

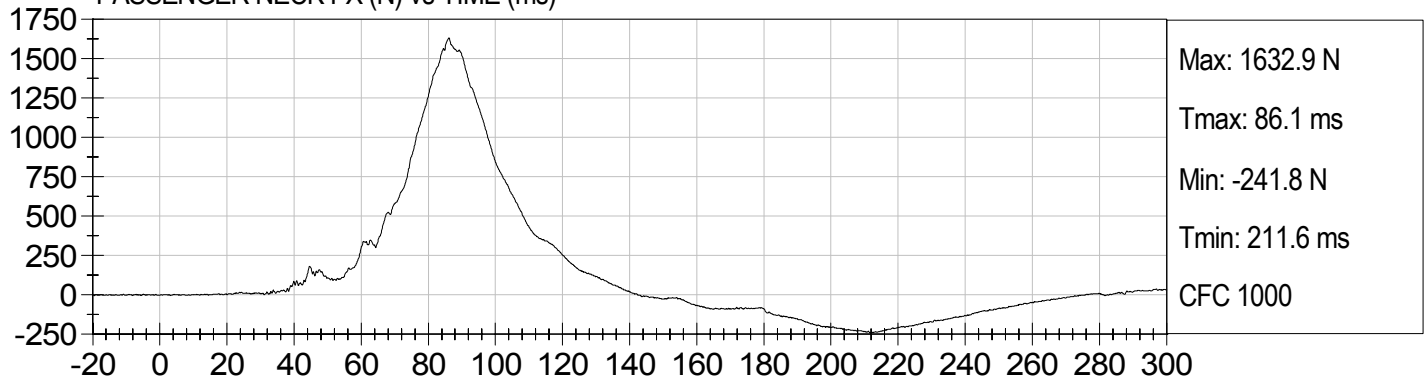




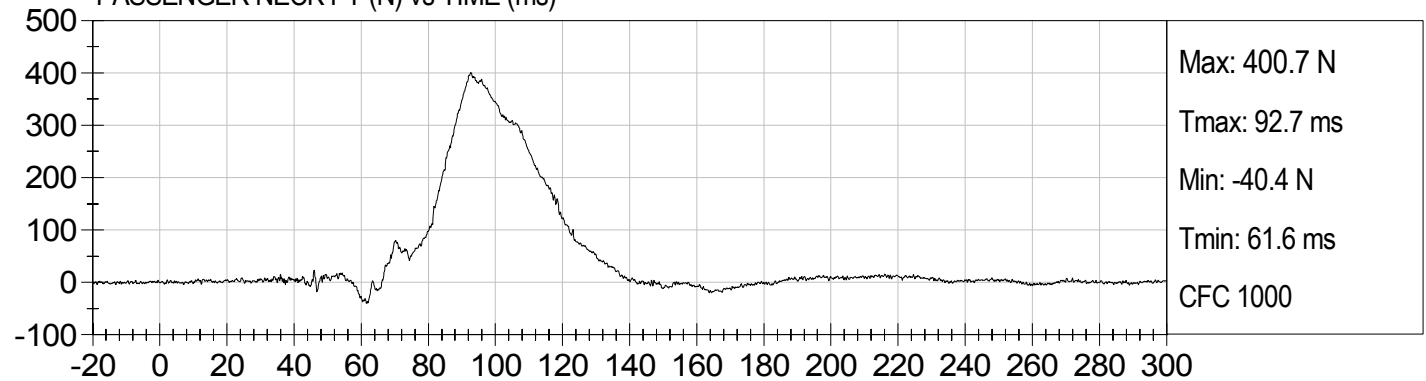
25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)

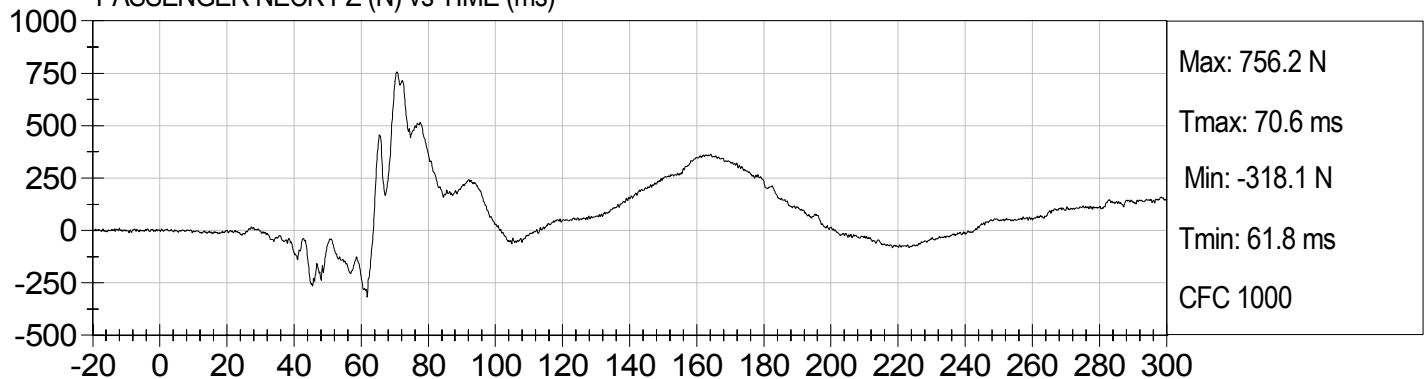
PASSENGER NECK FX (N) vs TIME (ms)



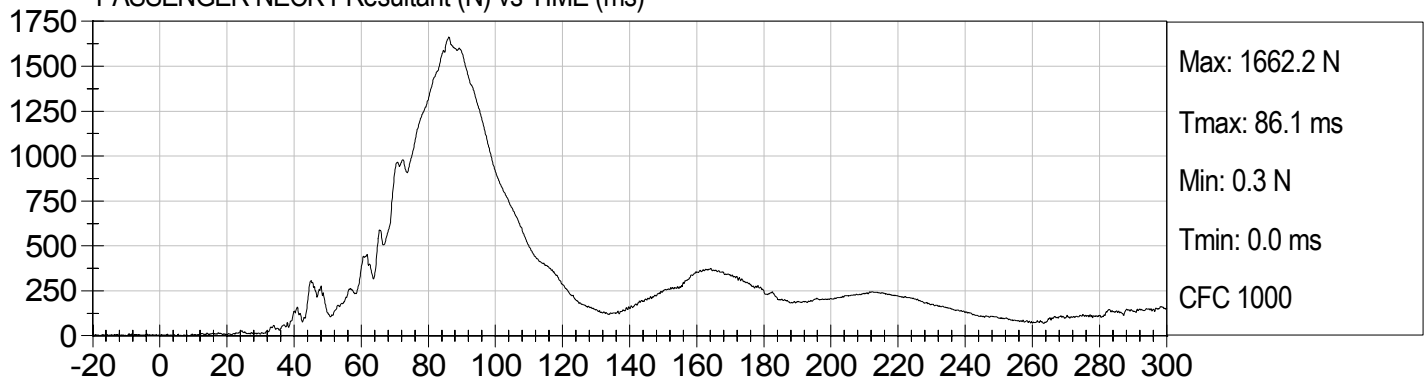
PASSENGER NECK FY (N) vs TIME (ms)



PASSENGER NECK FZ (N) vs TIME (ms)



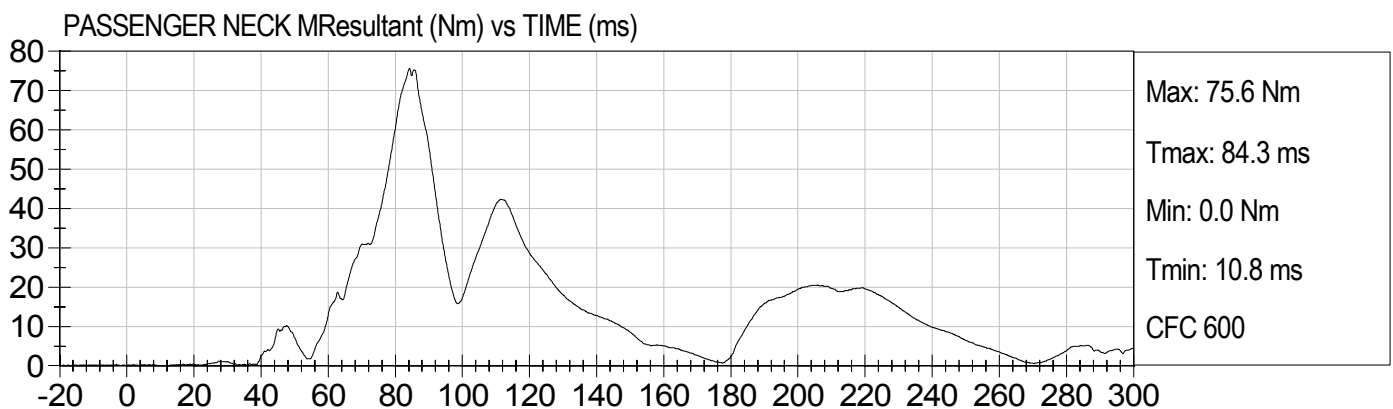
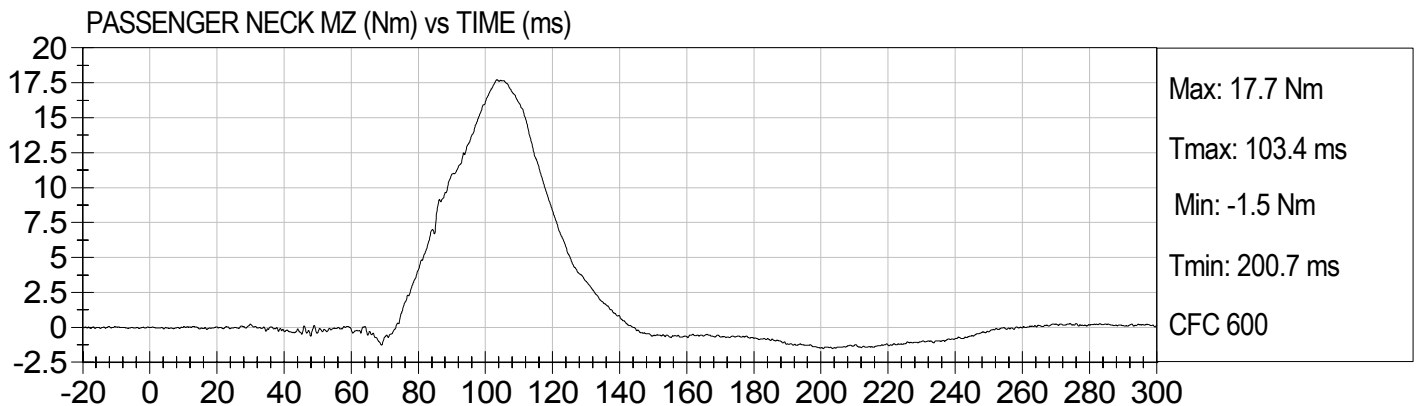
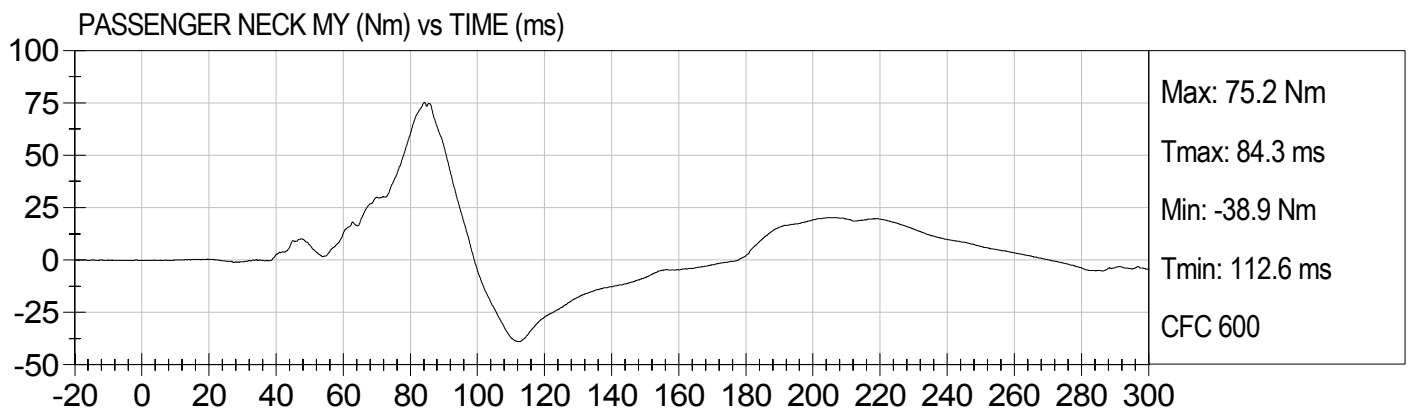
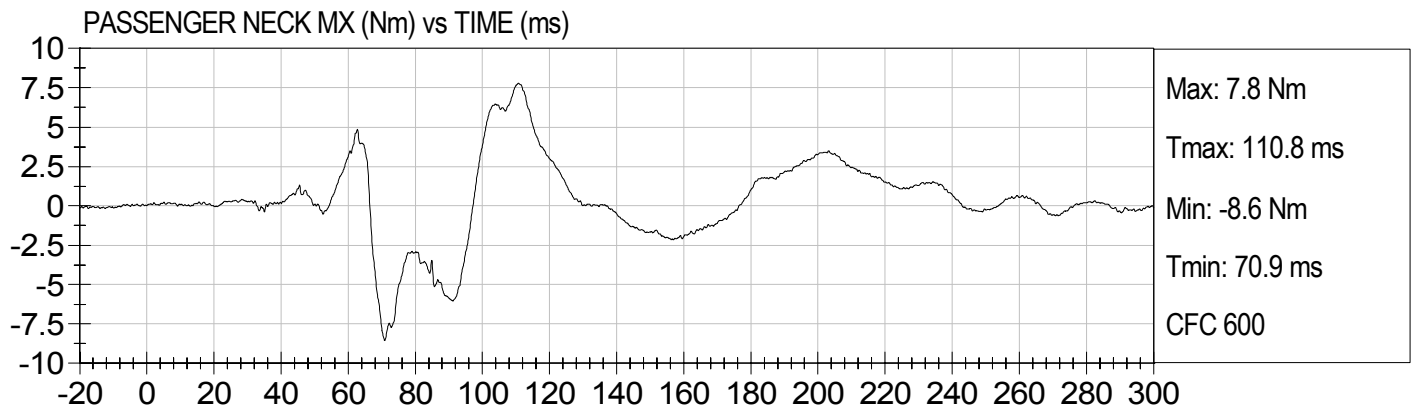
PASSENGER NECK FResultant (N) vs TIME (ms)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

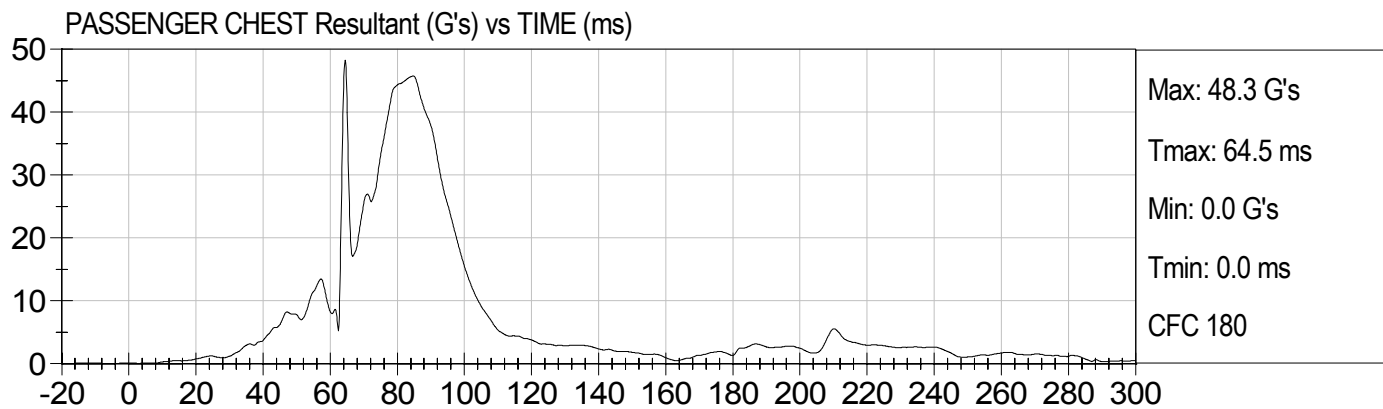
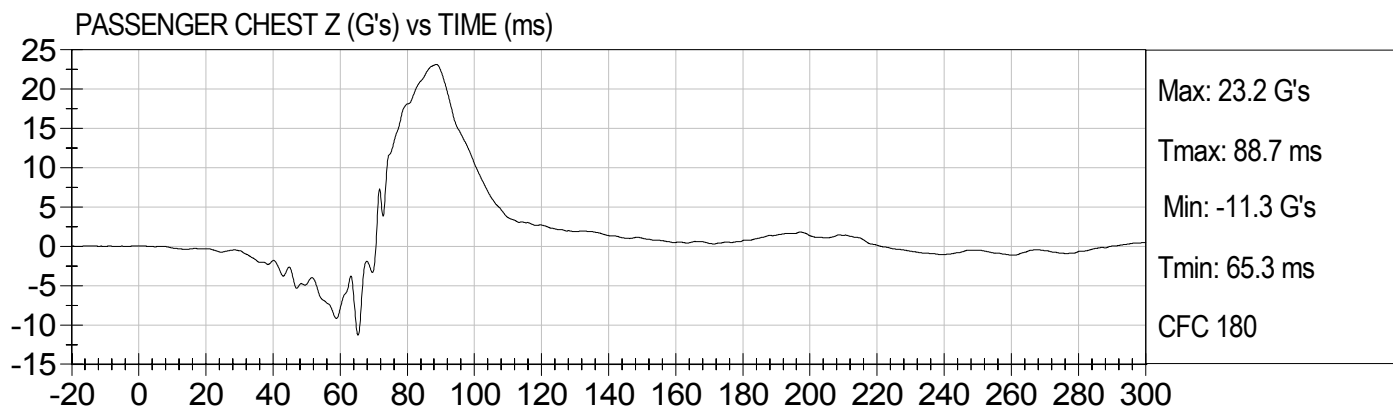
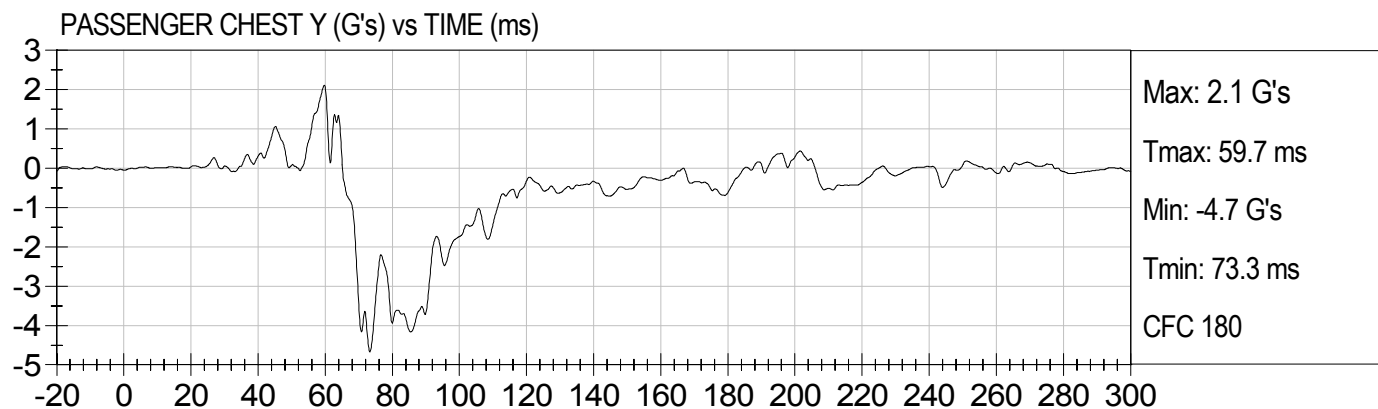
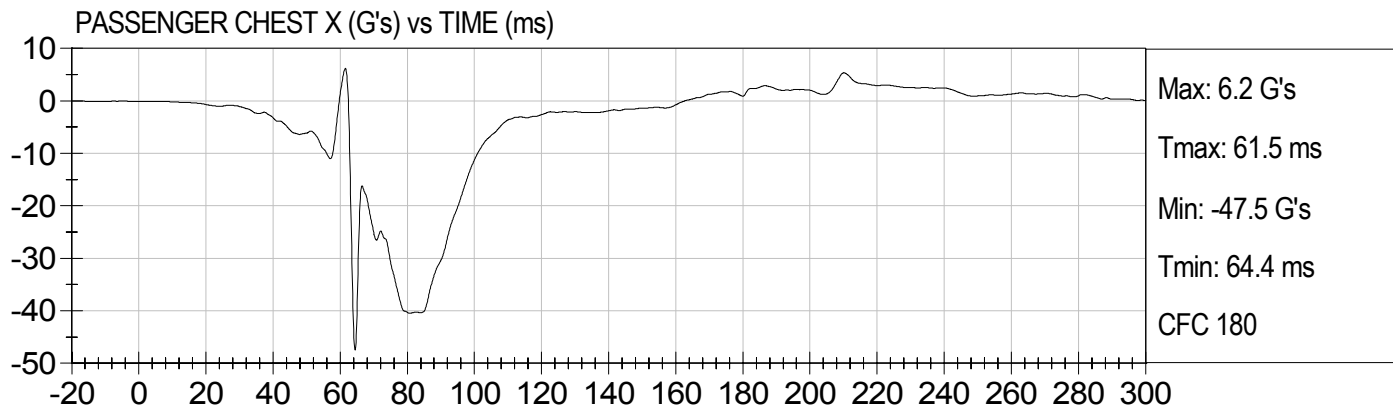
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

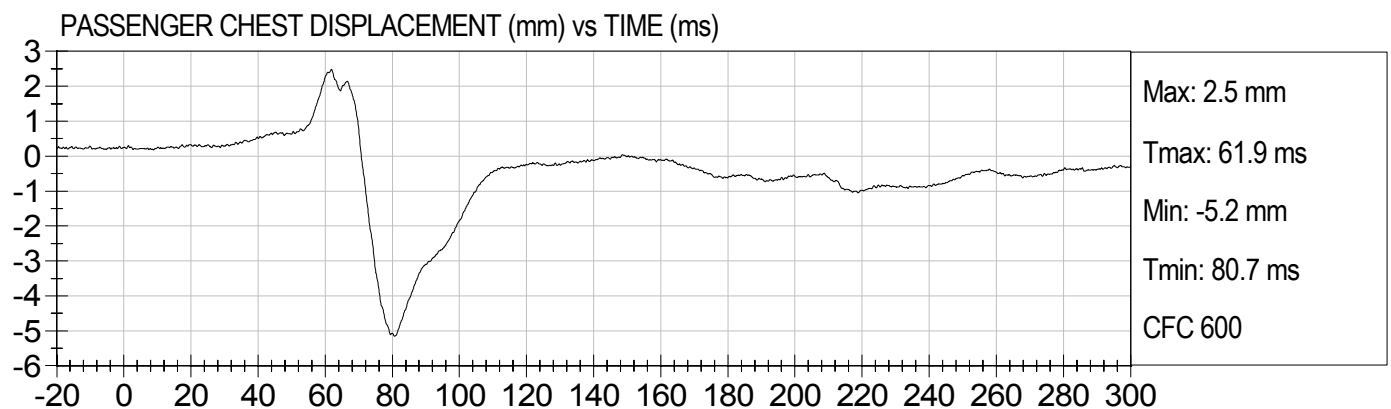
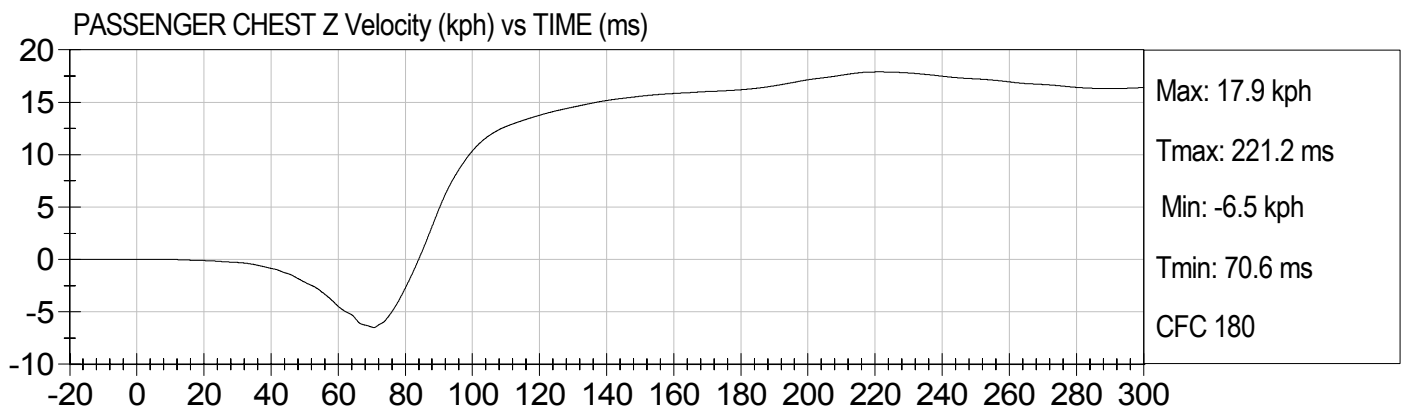
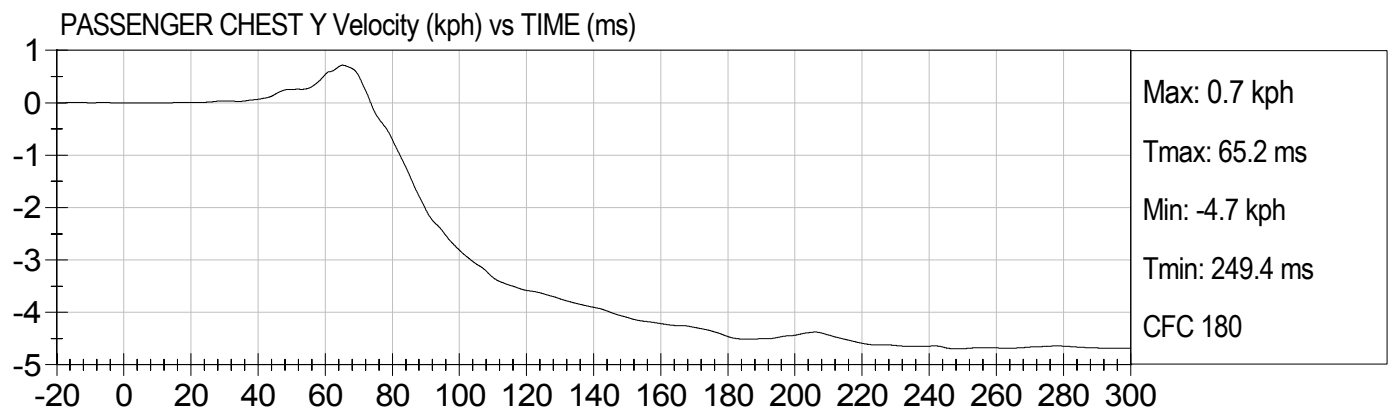
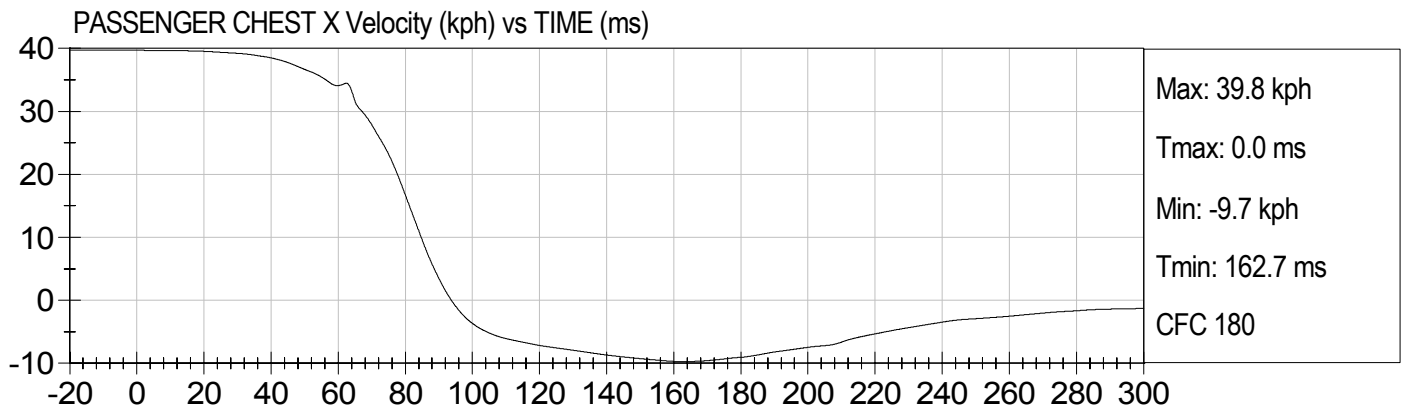
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

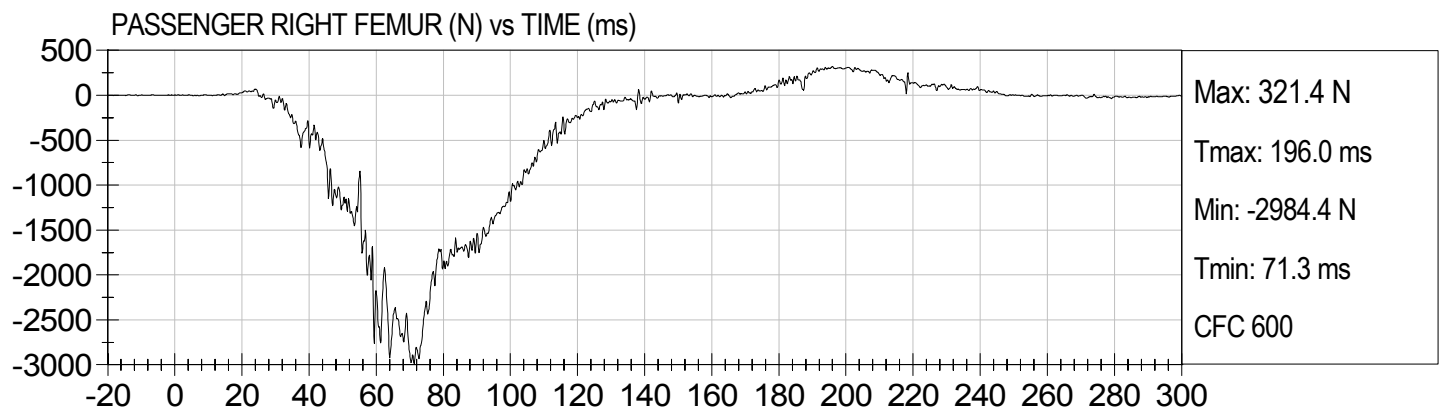
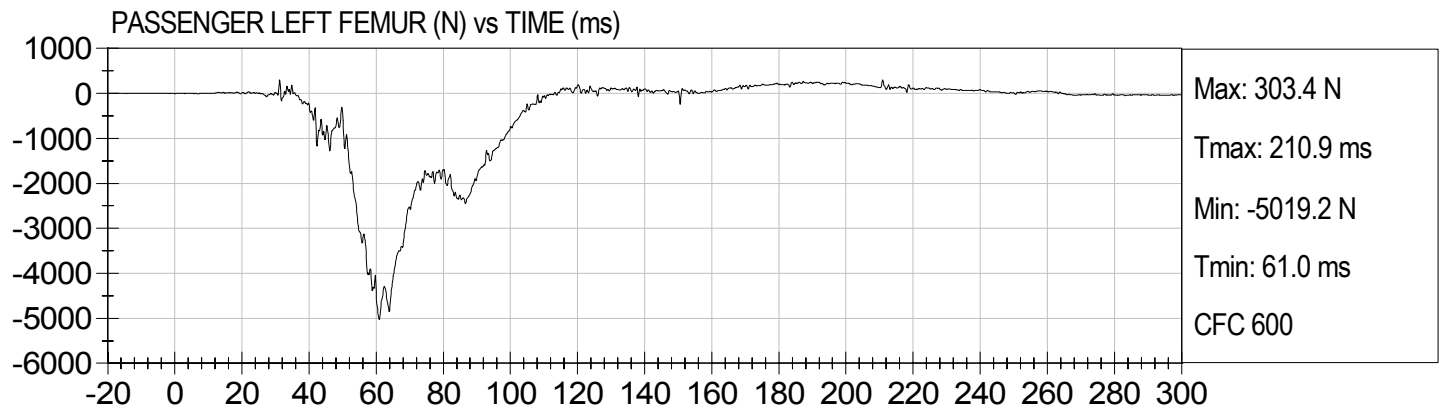
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)

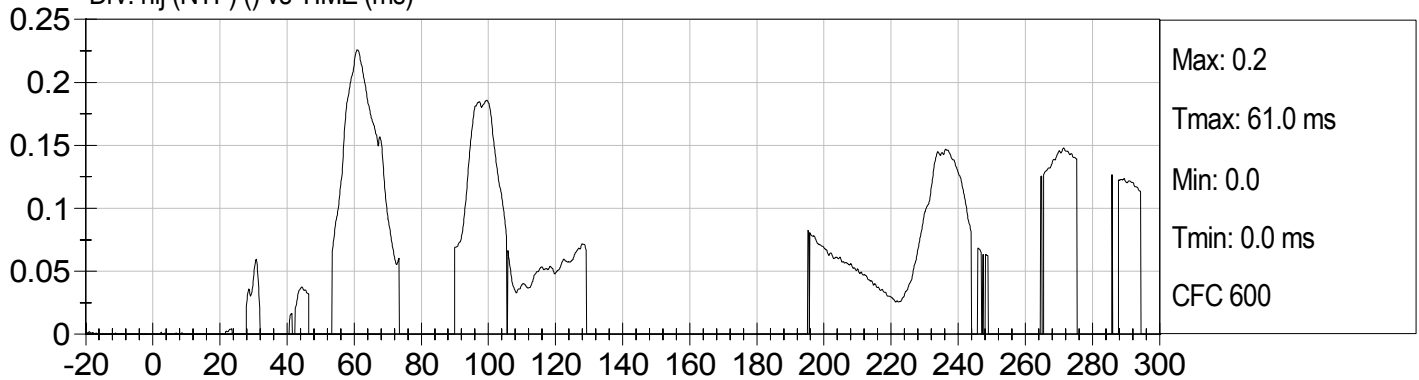




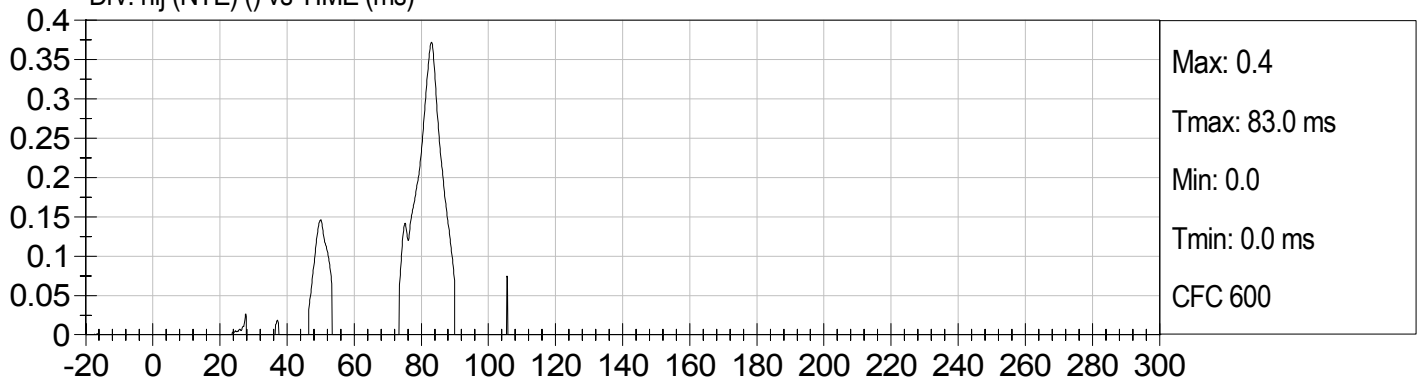
25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)

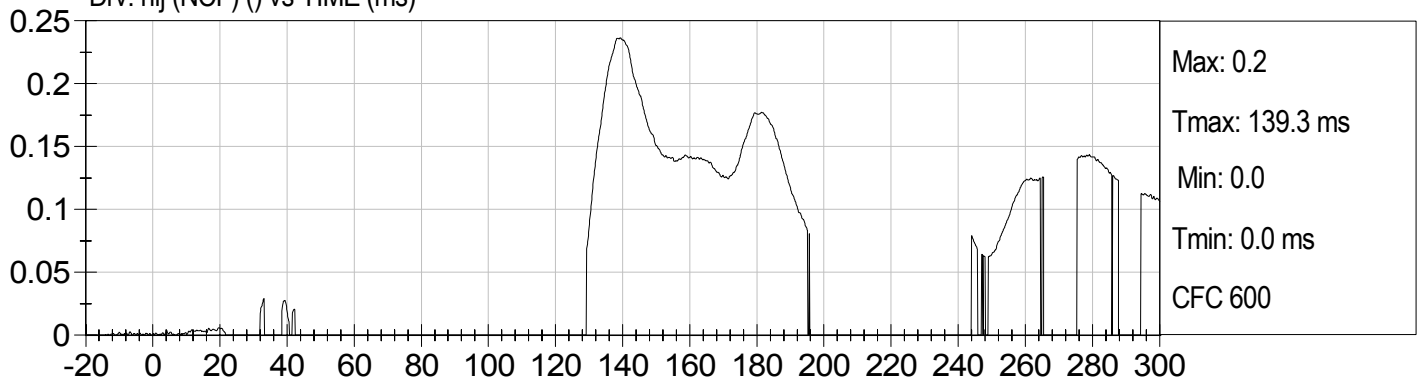
Drv. nij (NTF) () vs TIME (ms)



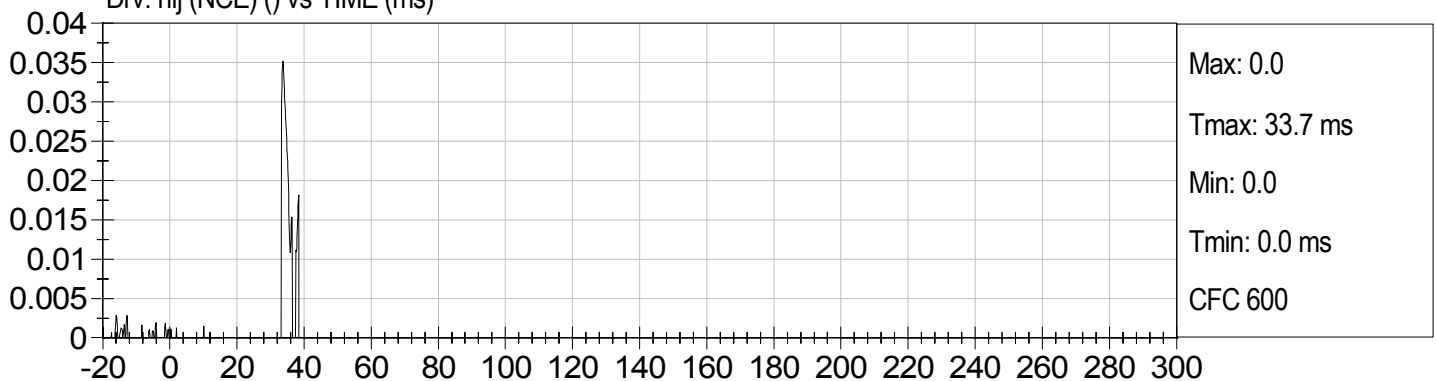
Drv. nij (NTE) () vs TIME (ms)



Drv. nij (NCF) () vs TIME (ms)



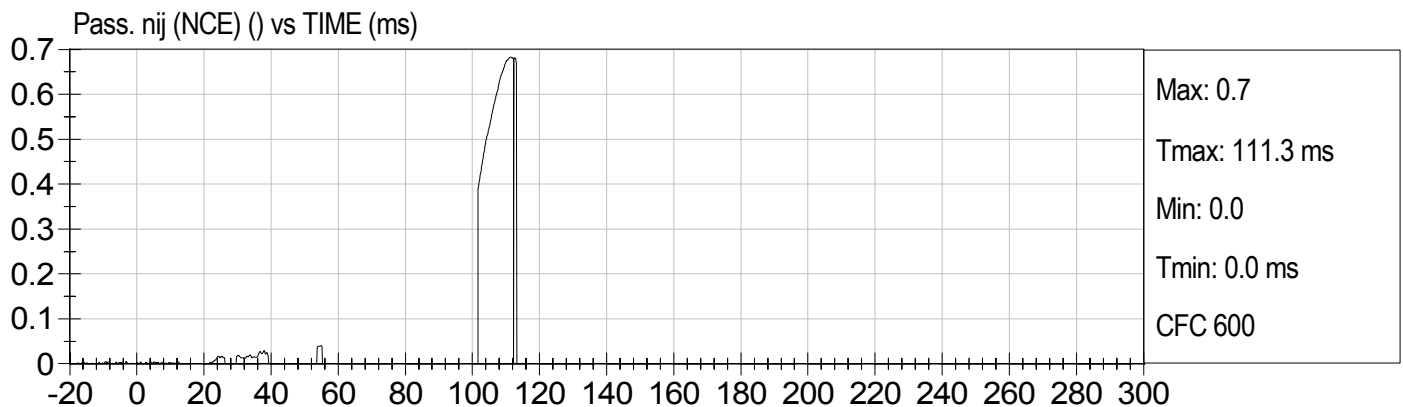
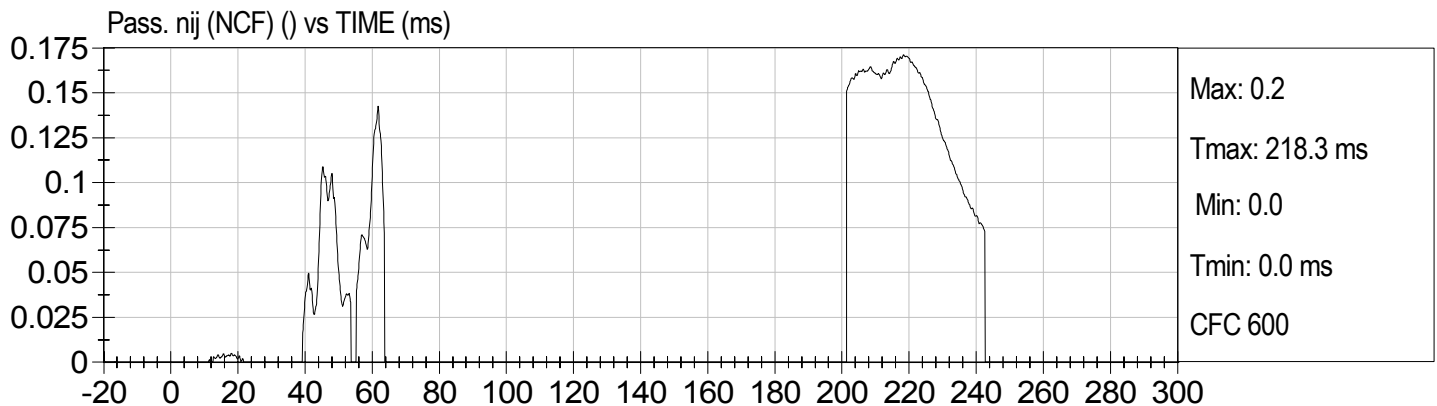
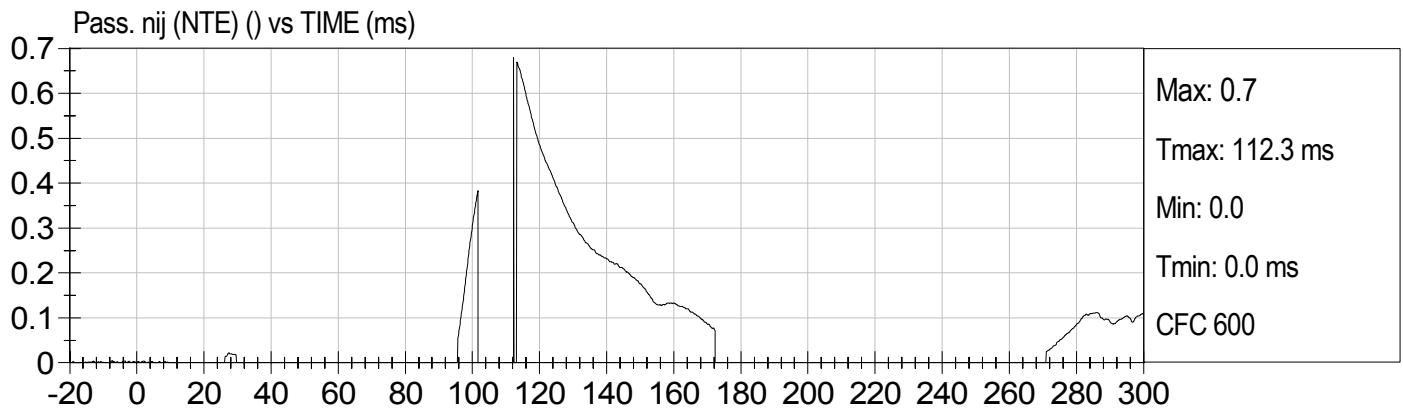
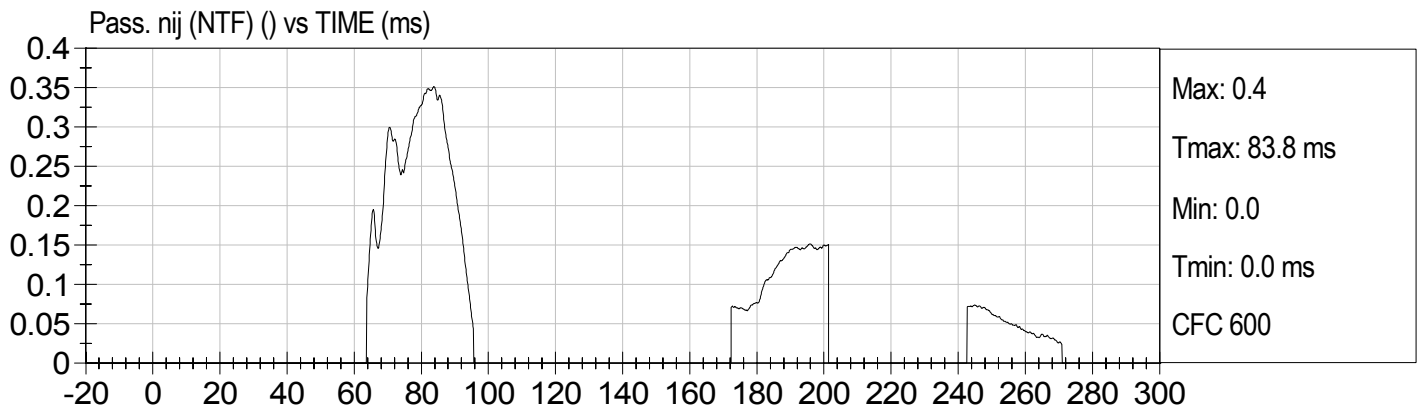
Drv. nij (NCE) () vs TIME (ms)





25 MPH FRONTAL UNBELTED
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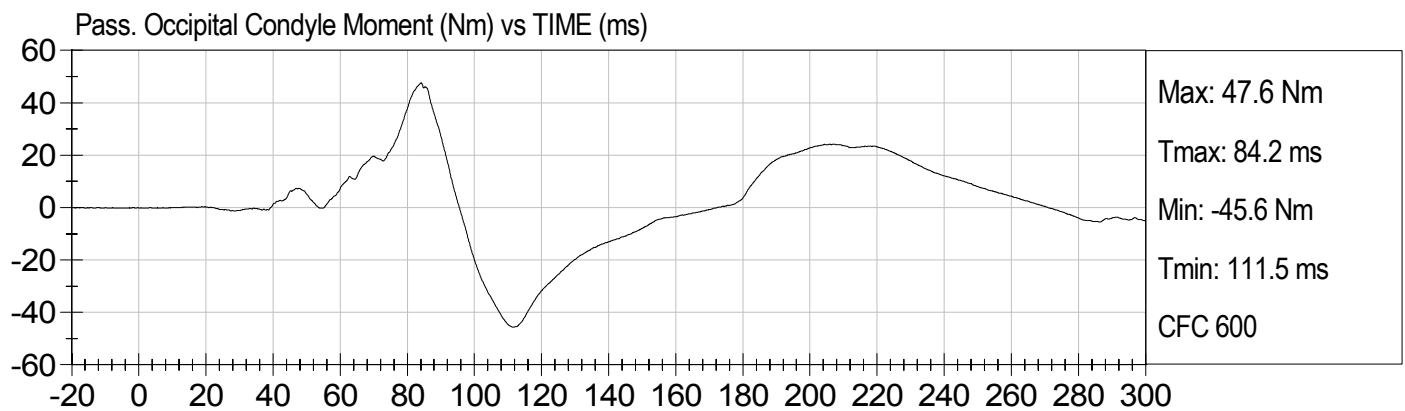
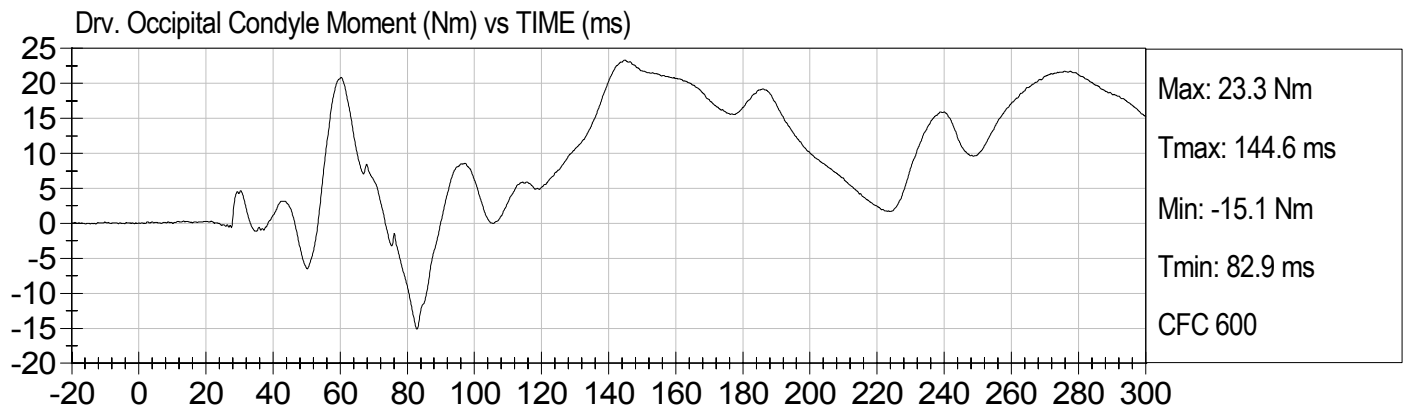
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

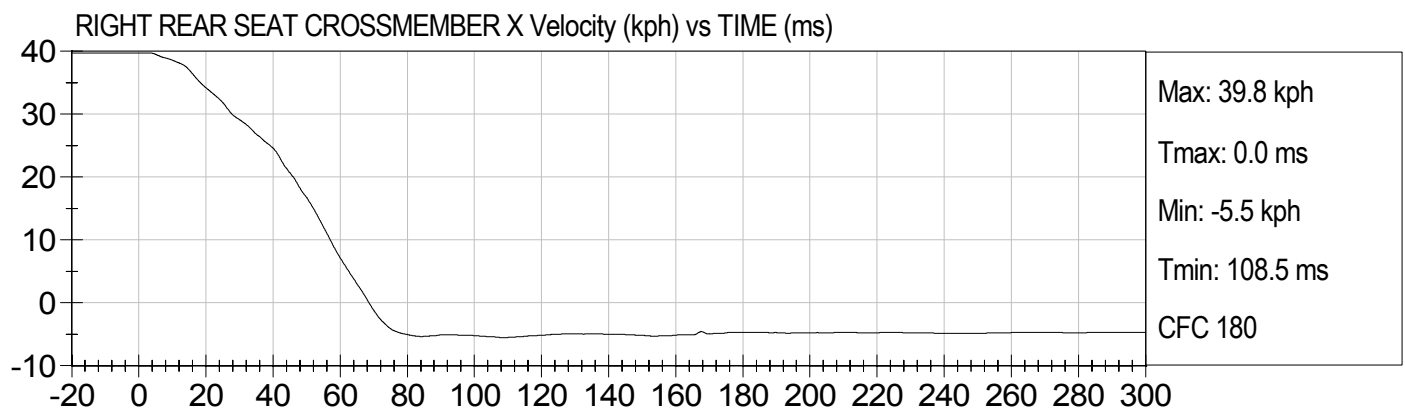
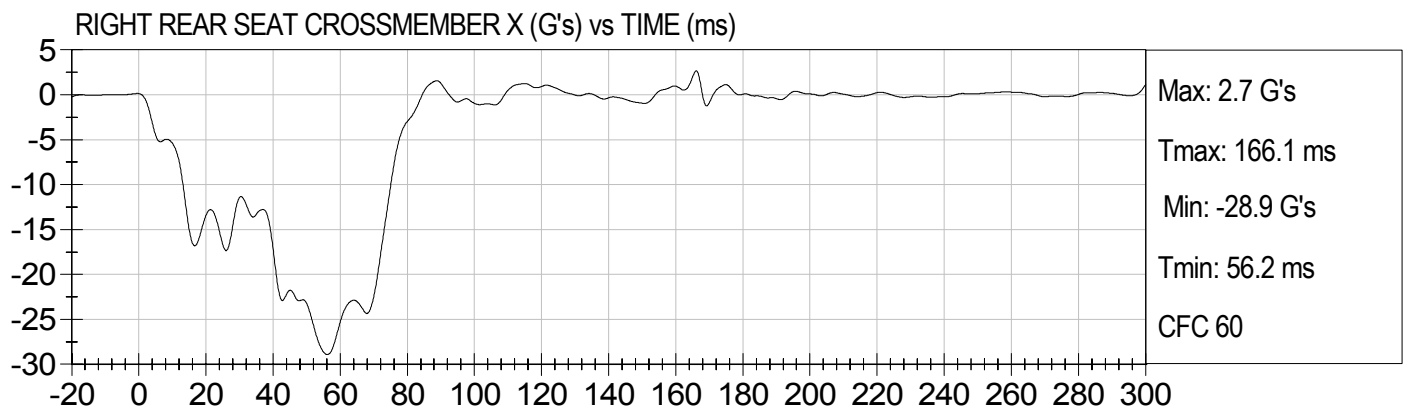
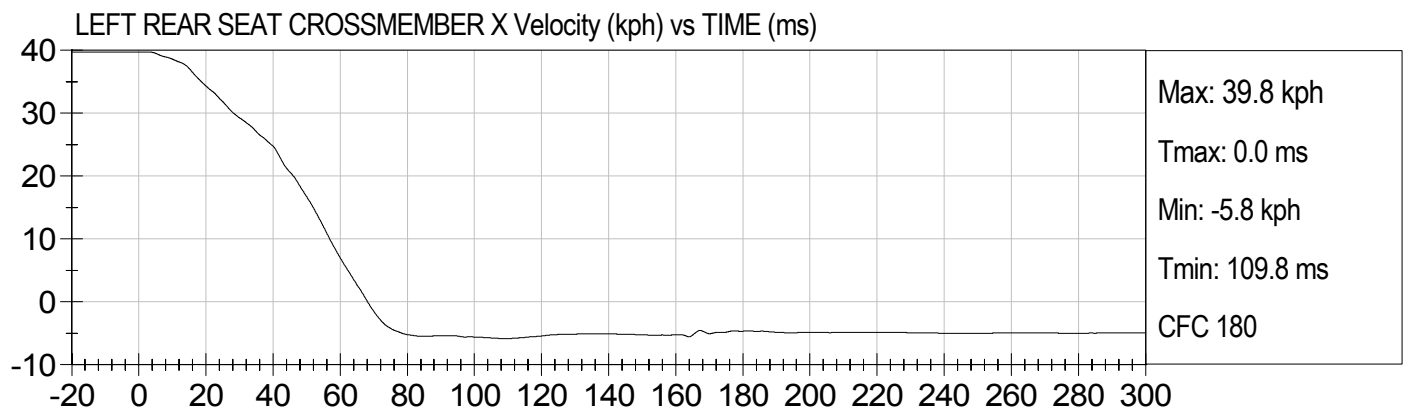
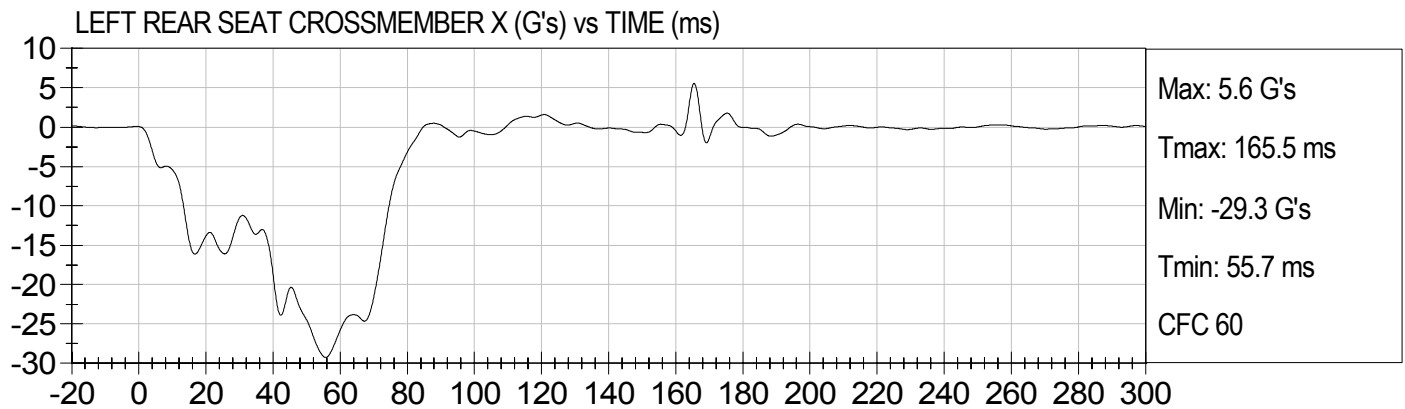
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

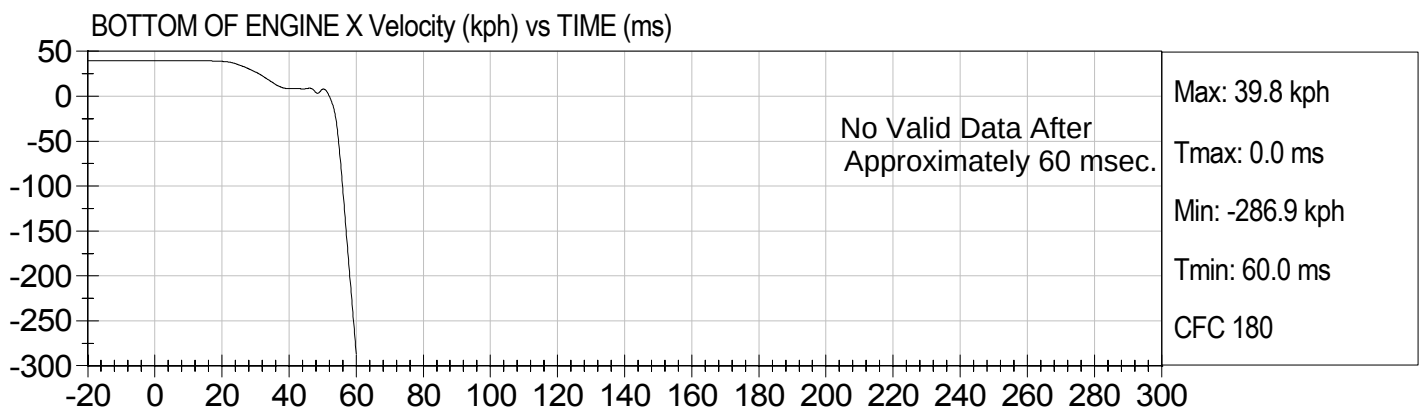
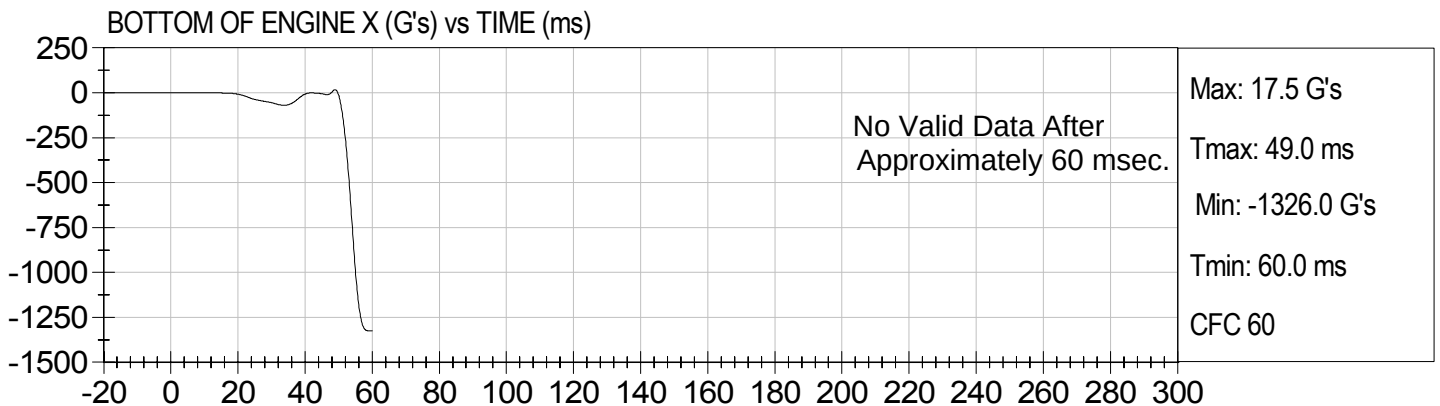
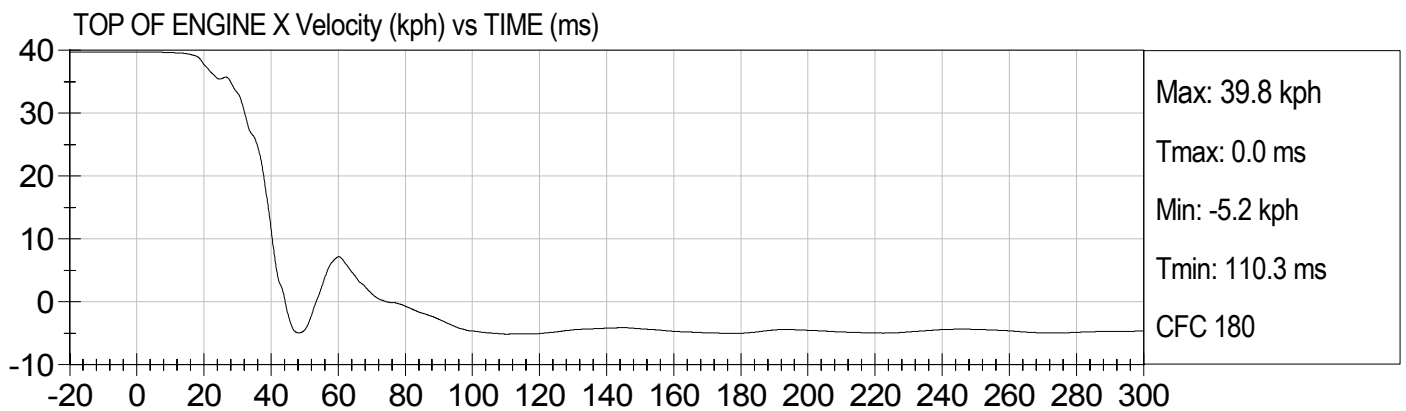
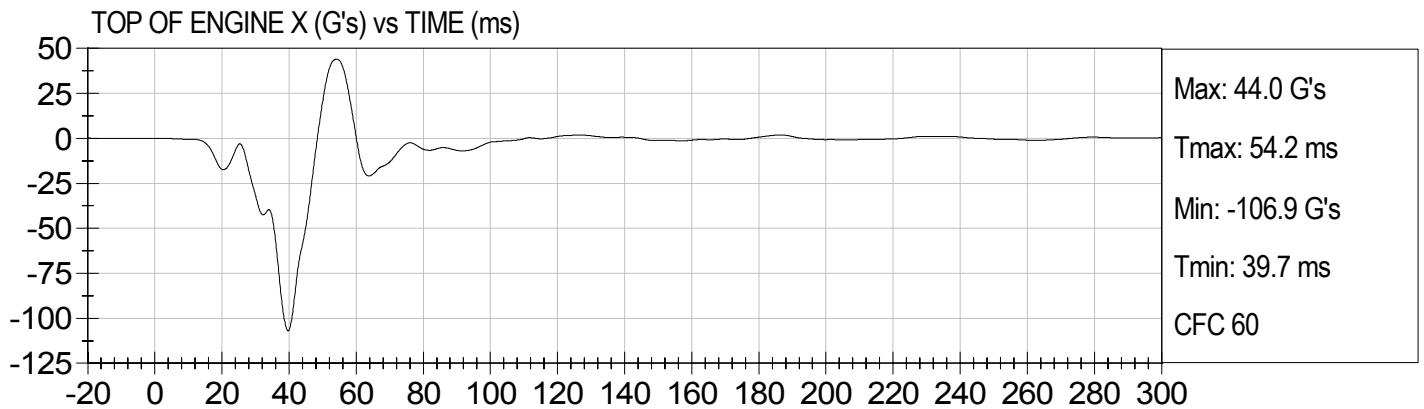
Test Date: 06/05/2006
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25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

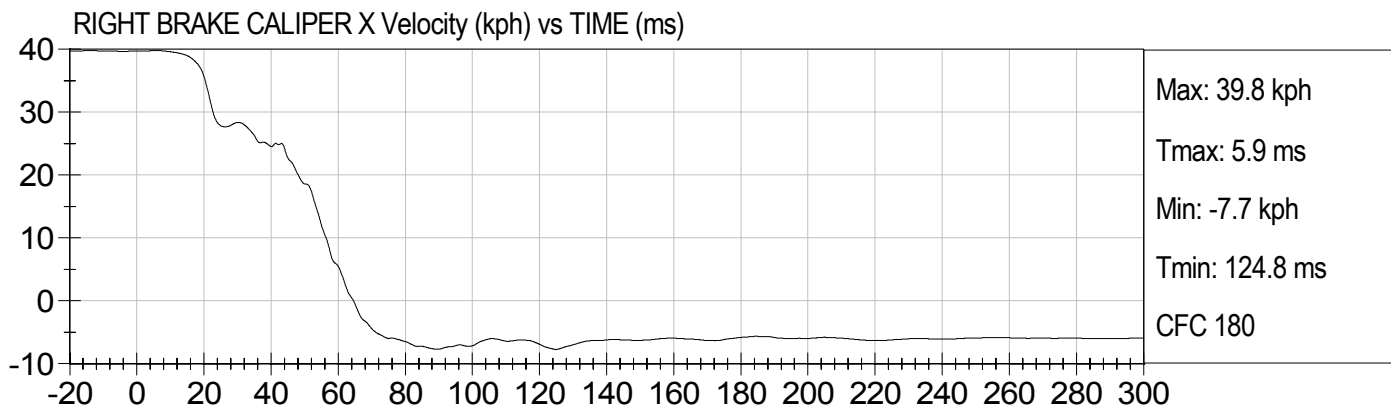
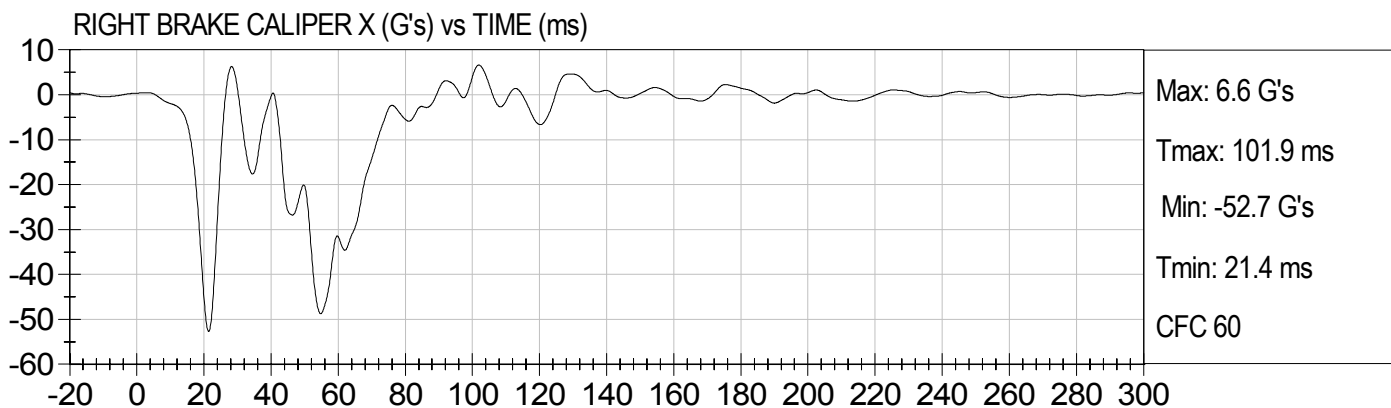
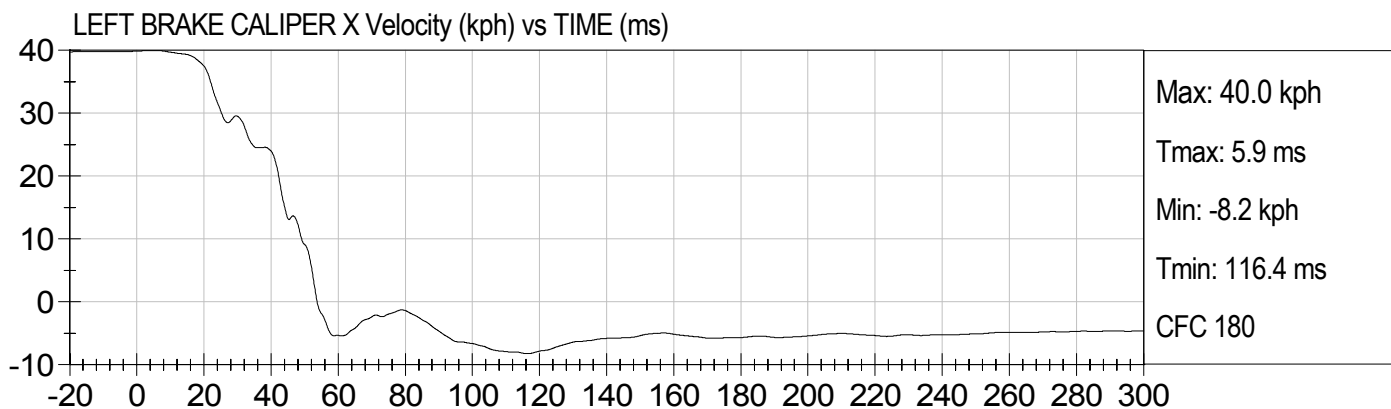
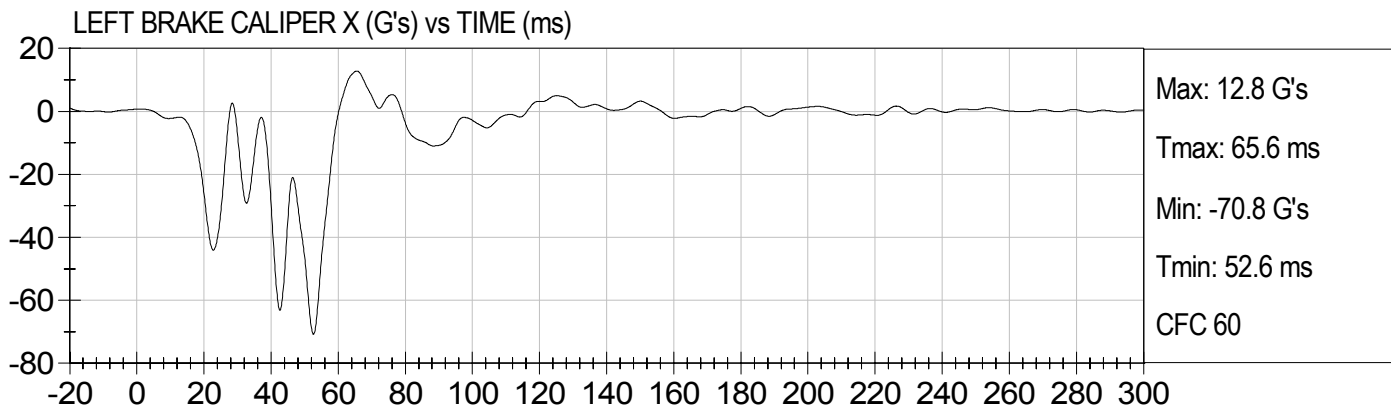
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Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
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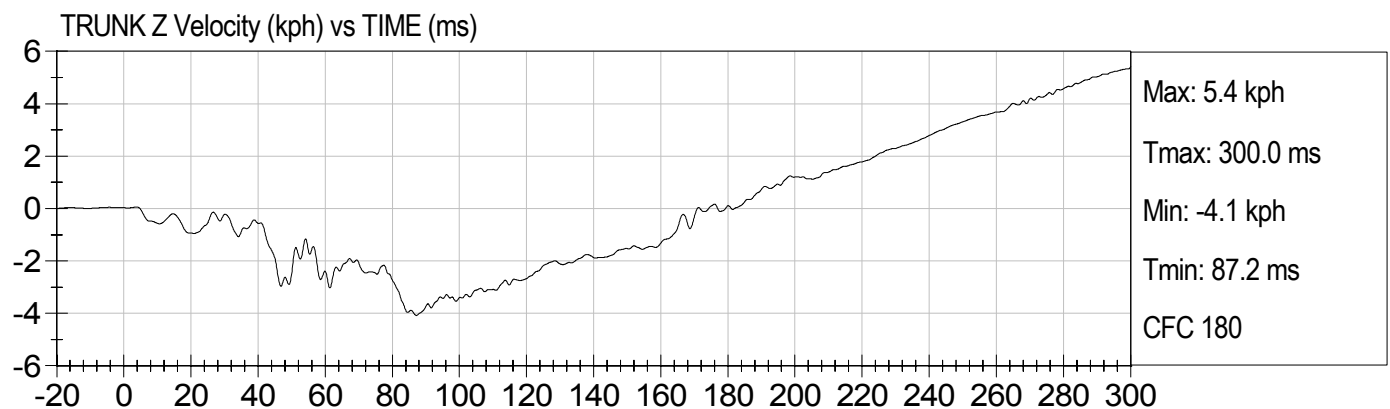
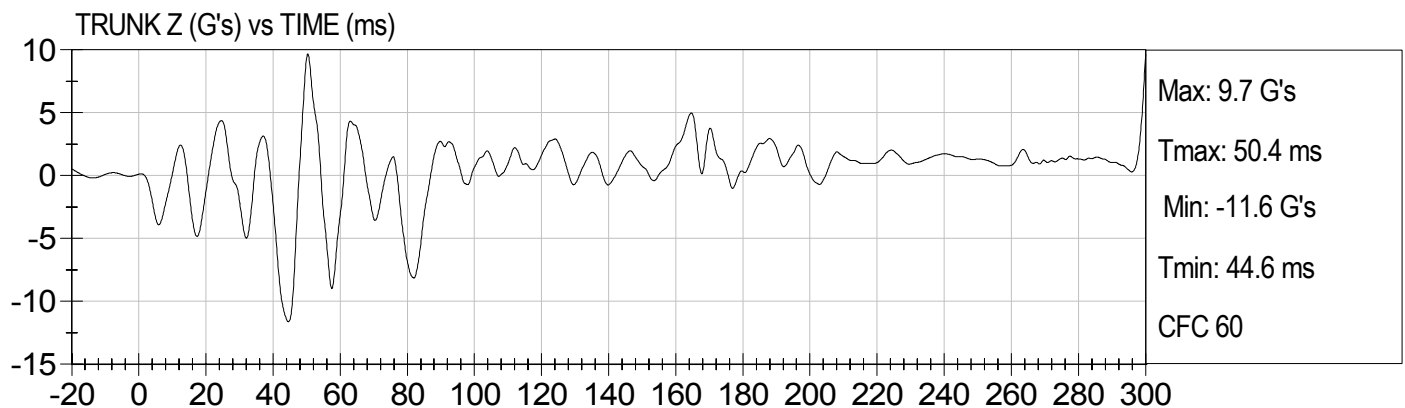
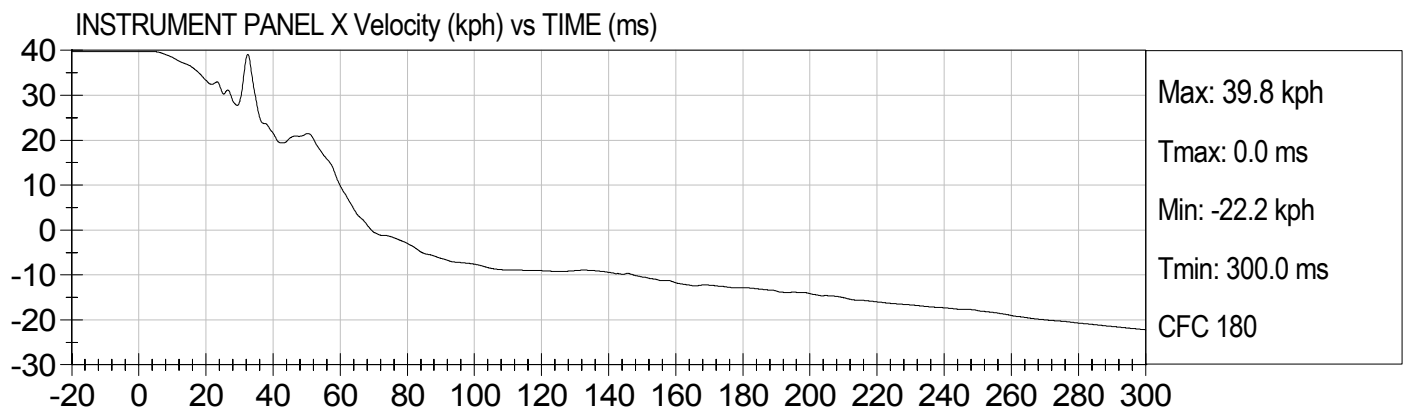
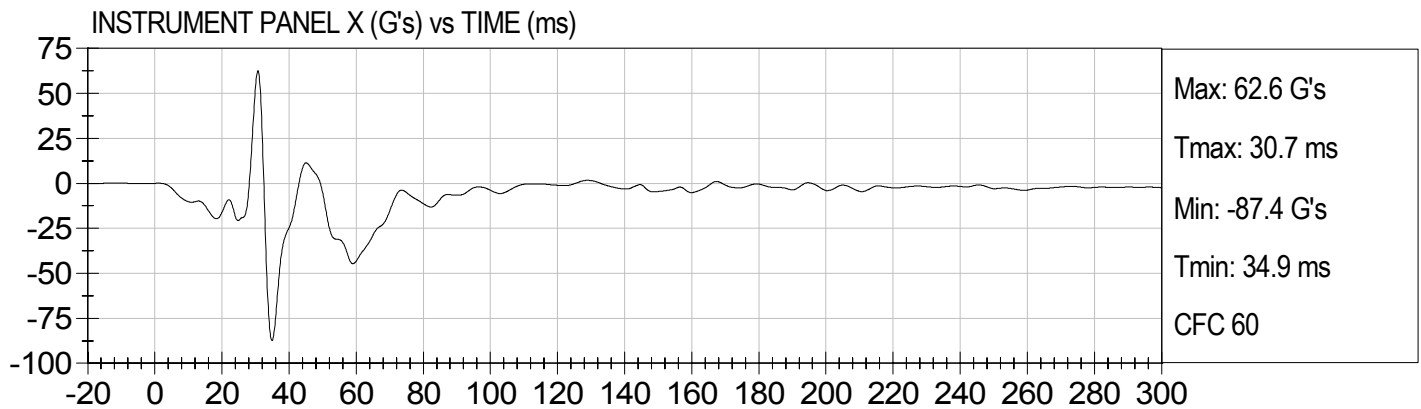
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)

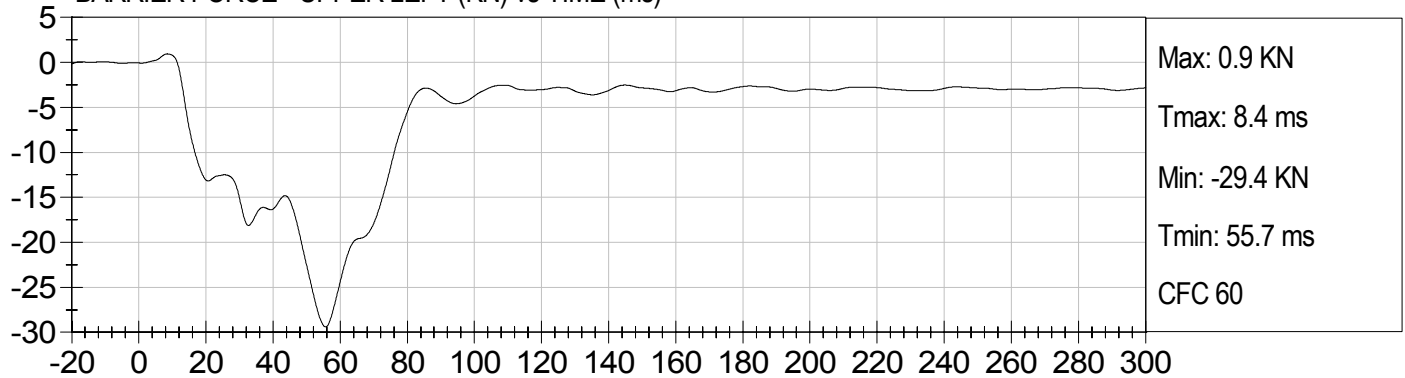




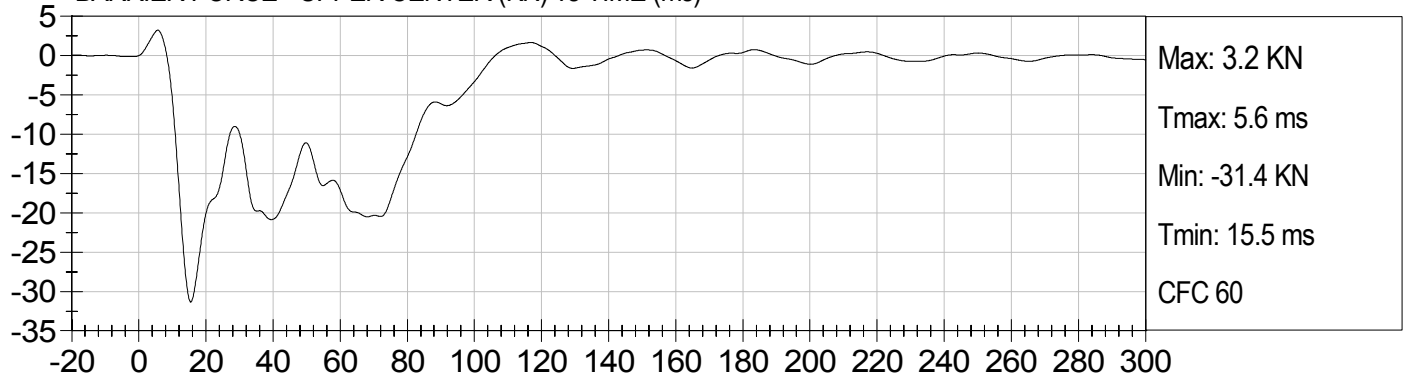
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2004 HYUNDAI ELANTRA (C40513)

Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)

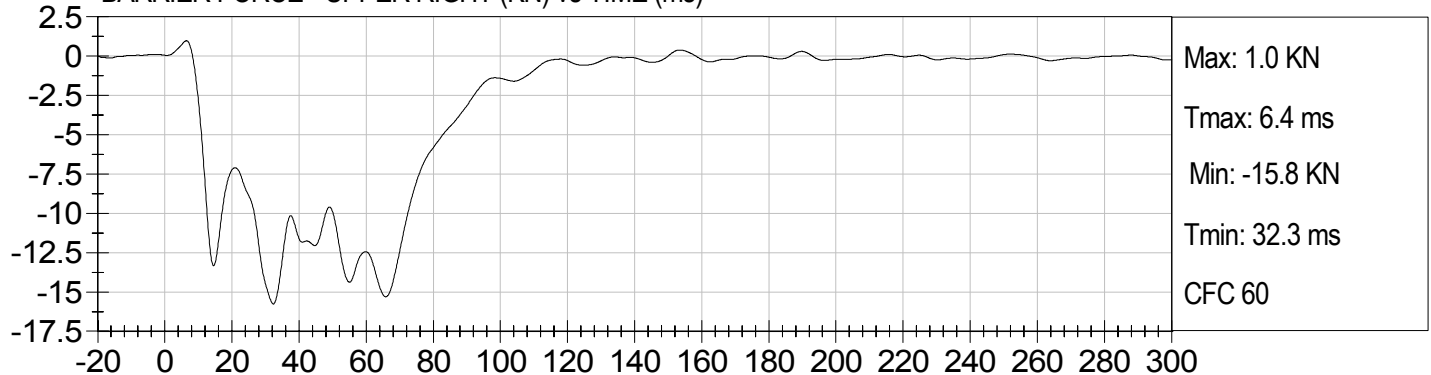
BARRIER FORCE - UPPER LEFT (KN) vs TIME (ms)



BARRIER FORCE - UPPER CENTER (KN) vs TIME (ms)



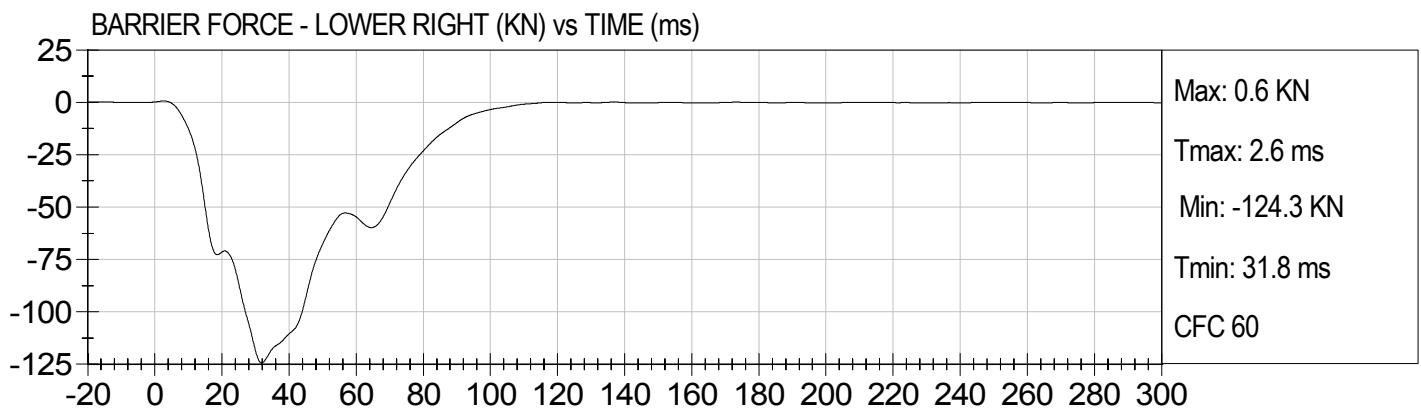
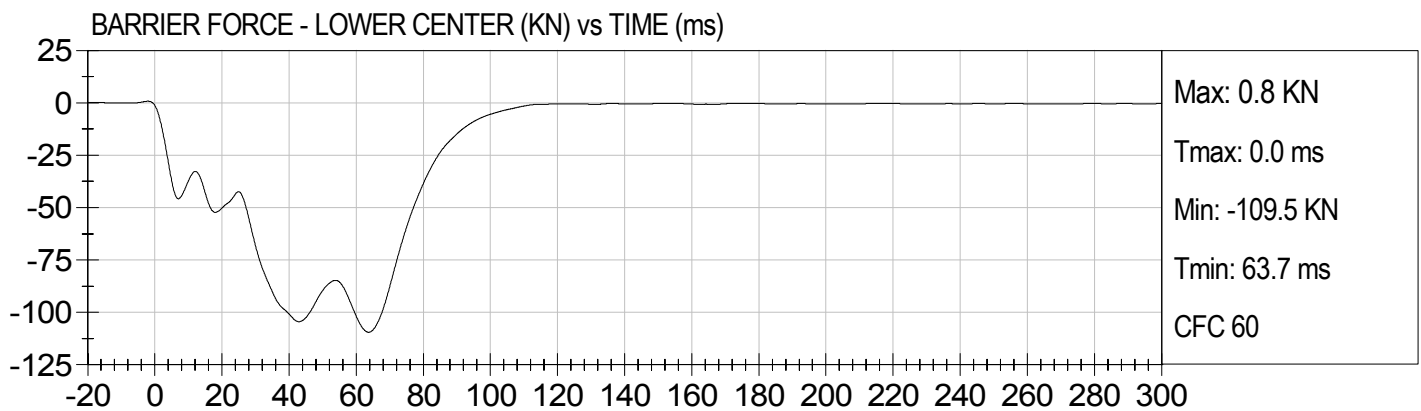
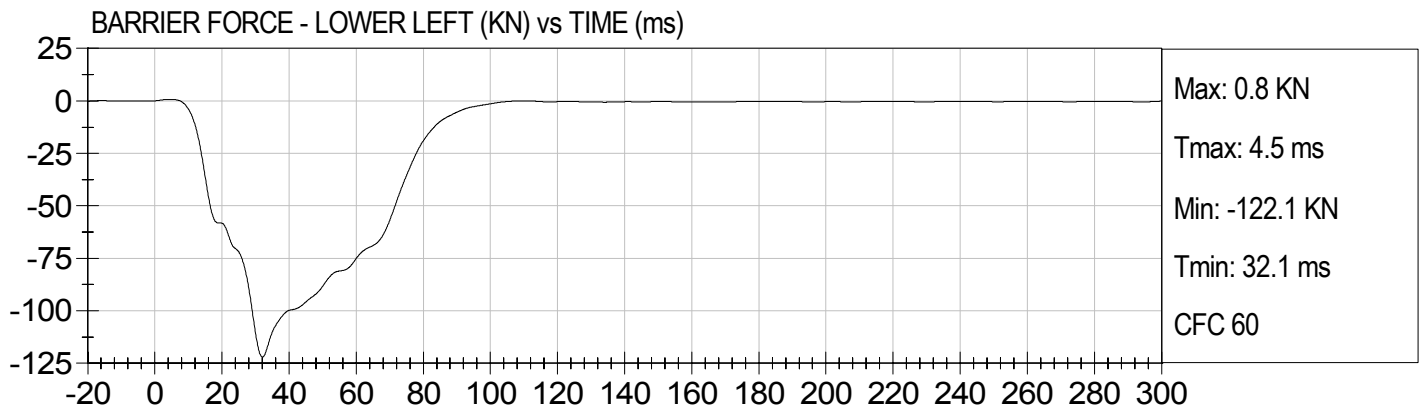
BARRIER FORCE - UPPER RIGHT (KN) vs TIME (ms)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

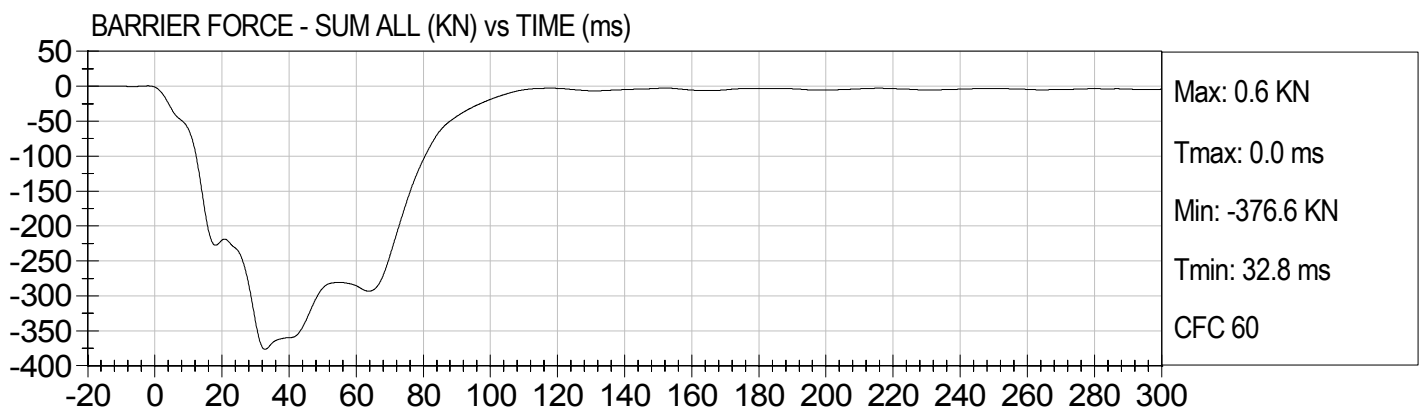
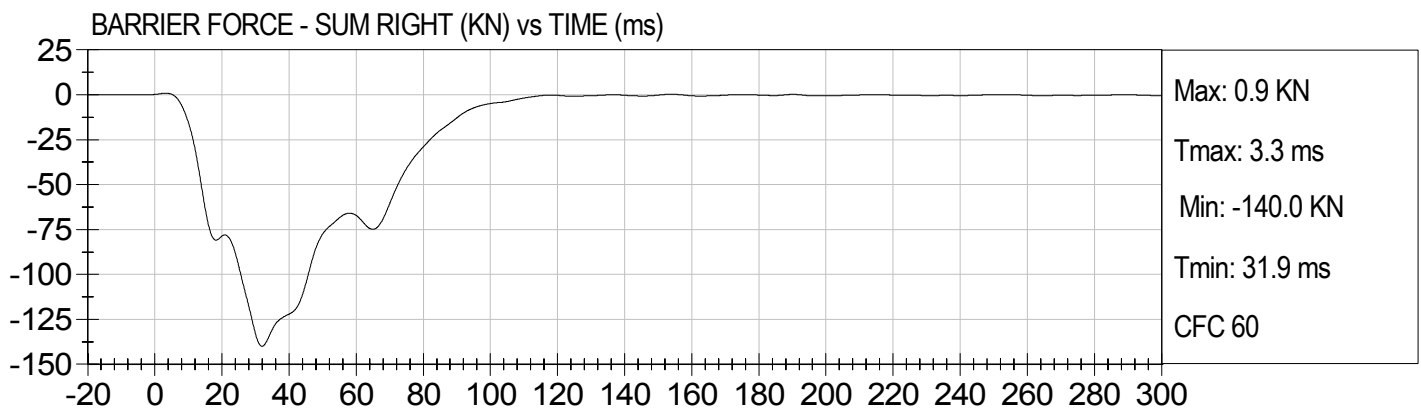
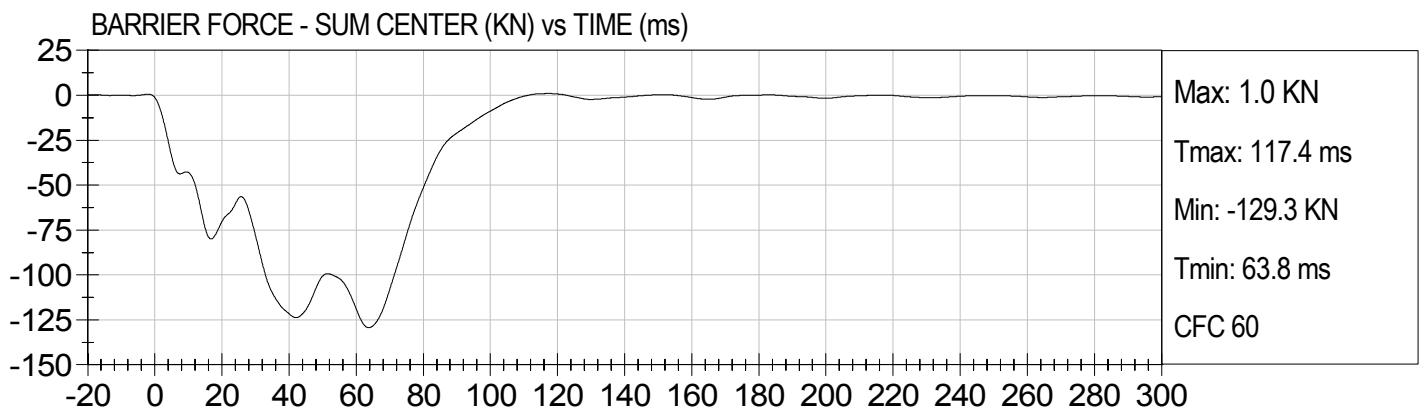
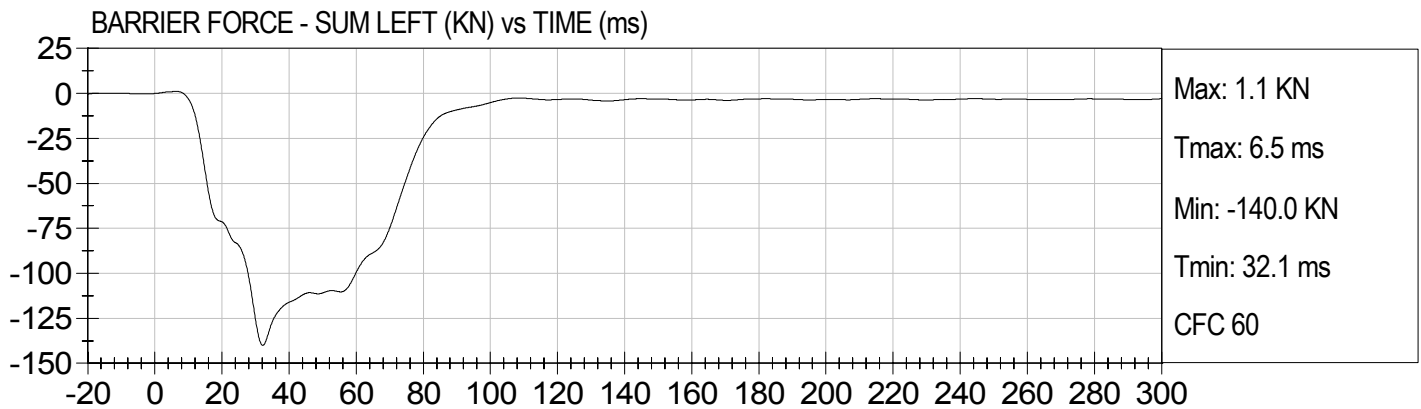
Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)





25 MPH FRONTAL UNBELTED
2004 HYUNDAI ELANTRA (C40513)

Test Date: 06/05/2006
Speed: 24.7 mph (39.8 km/h)



APPENDIX B
CRASH TEST PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

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MANUFACTURED IN KOREA BY
HYUNDAI MOTOR COMPANY
OCT/08/03

GVWR 3880 lbs

PAINT NW

GAWR 2116 lbs
FRONT

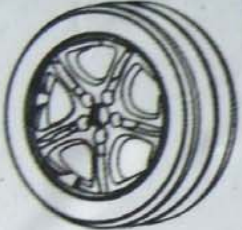
GAWR 1852 lbs
REAR

TRIM ZE

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

V.I.N. KMHDN46D34U769199
PASSENGER CAR

1



TIRE AND LOADING INFORMATION

SEATING CAPACITY	TOTAL 5	FRONT 2	REAR 3
------------------	---------	---------	--------

The combined weight of occupants and cargo should never exceed 385 kg or 850 lbs.

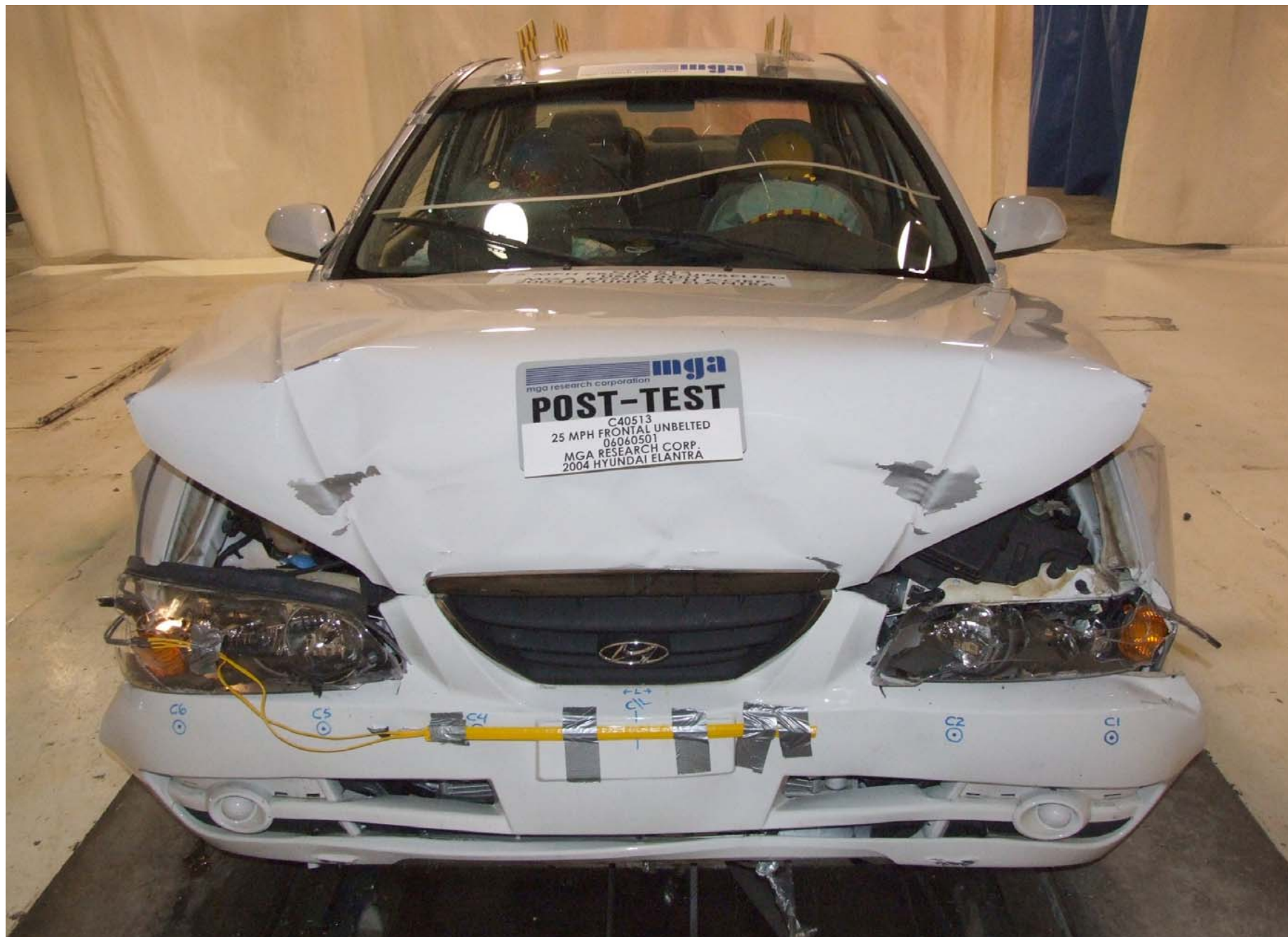
ORIGINAL TIRE SIZE	COLD TIRE INFLATION PRESSURE	
P185/65R15	FRONT	210kPa, 30PSI
P195/60R15	REAR	210kPa, 30PSI
COMPACT SPARE TIRE	COLD TIRE INFLATION PRESSURE	
T125/70D15	420kPa, 60PSI	
T125/70R15		

SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION

Tire Placard



Pre-Test Front View of Test Vehicle



Post-Test Front View of Test Vehicle



Pre-Test Left Side View of Test Vehicle



Post-Test Left Side View of Test Vehicle



Pre-Test Right Side View of Test Vehicle



Post-Test Right Side View of Test Vehicle



Pre-Test Right Front Three-Quarter View of Test Vehicle



Post-Test Right Front Three-Quarter View of Test Vehicle



Pre-Test Left Front Three-Quarter View of Test Vehicle



Post-Test Left Front Three-Quarter View of Test Vehicle



Pre-Test Right Rear Three-Quarter View of Test Vehicle



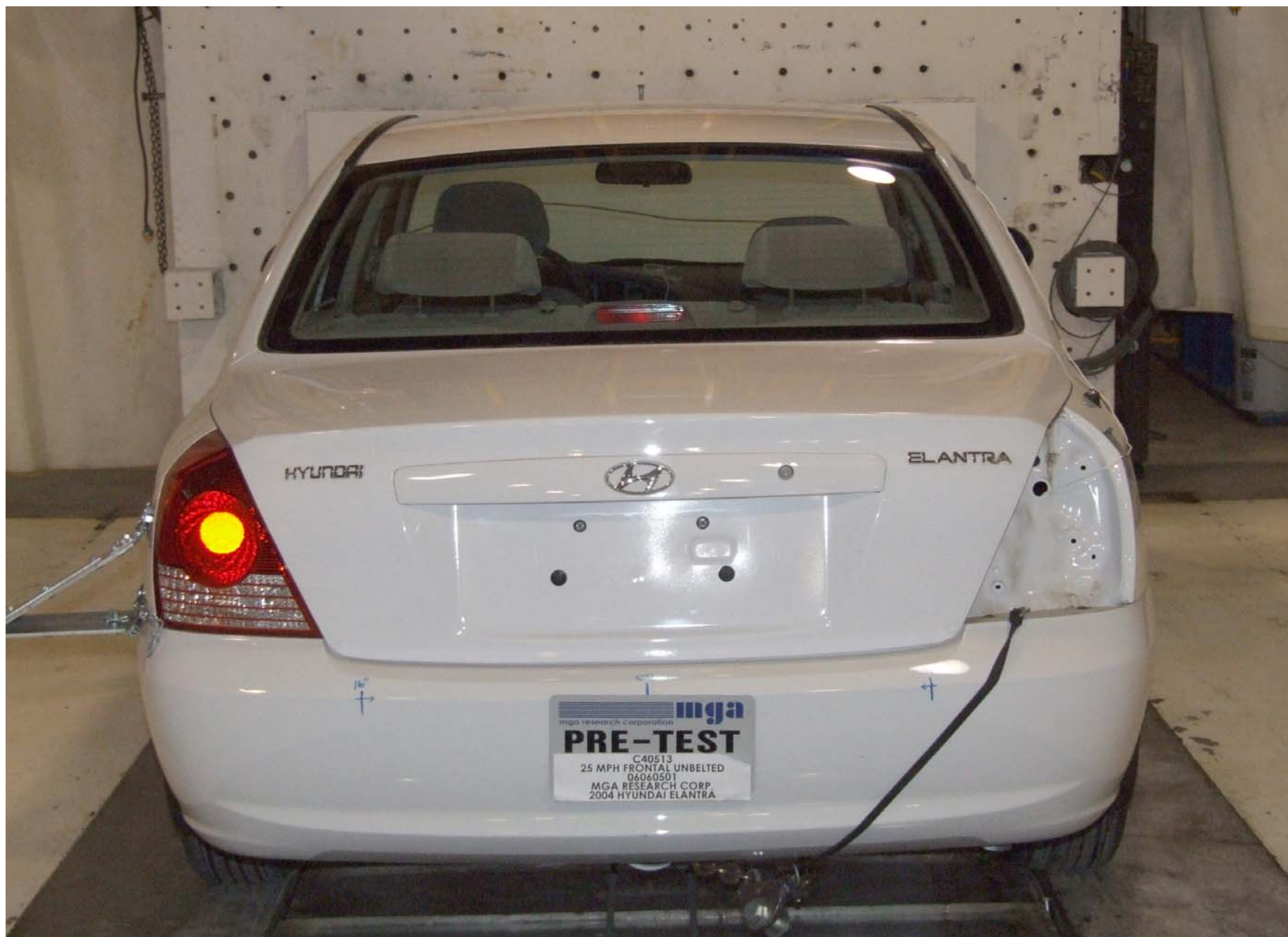
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Pre-Test Left Rear Three-Quarter View of Test Vehicle



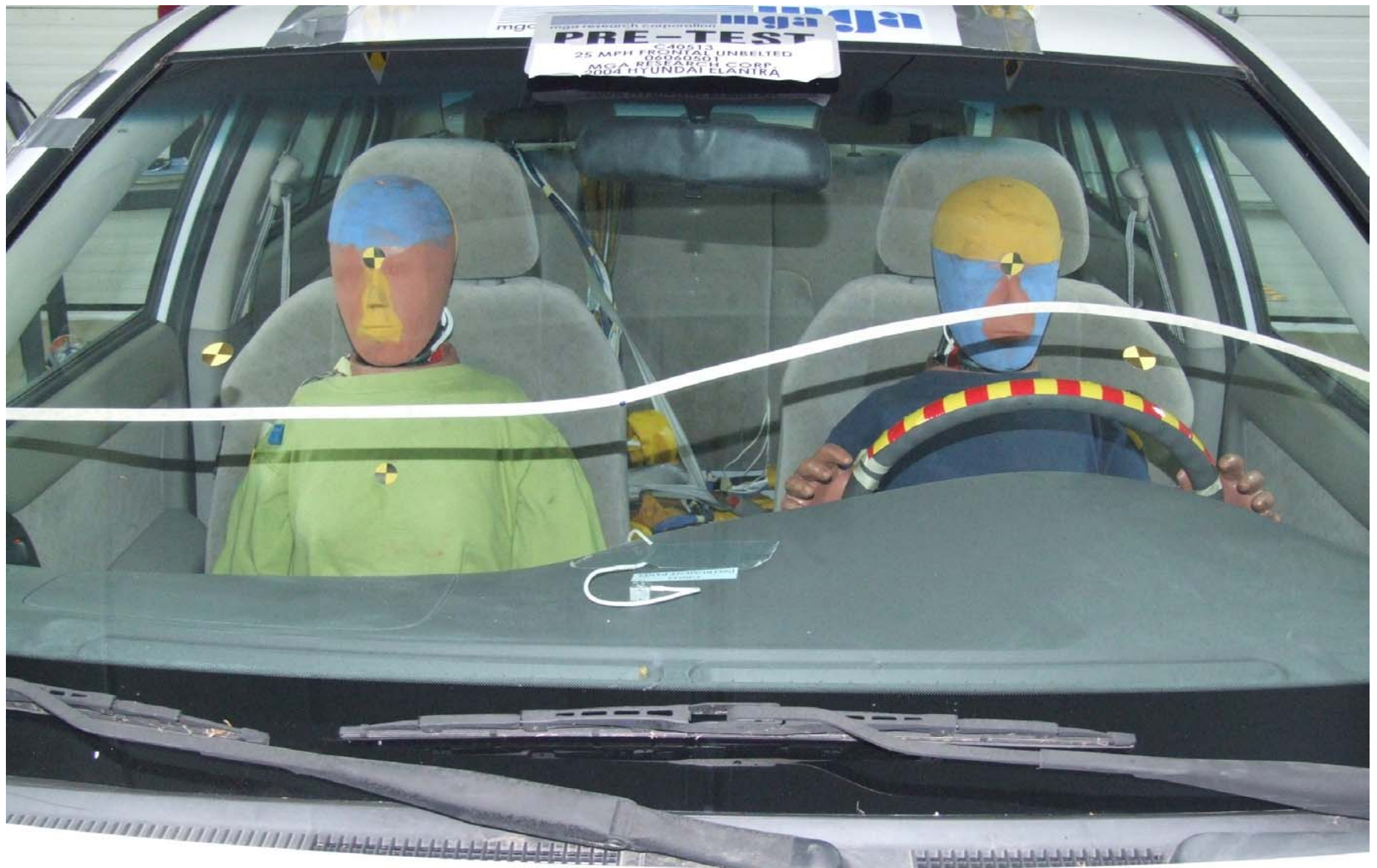
Post-Test Left Rear Three-Quarter View of Test Vehicle



Pre-Test Rear View of Test Vehicle



Post-Test Rear View of Test Vehicle



Pre-Test Windshield View



C40 513
25 MPH FRONTAL UNBELTED

Post-Test Windshield View



Pre-Test Engine Compartment View



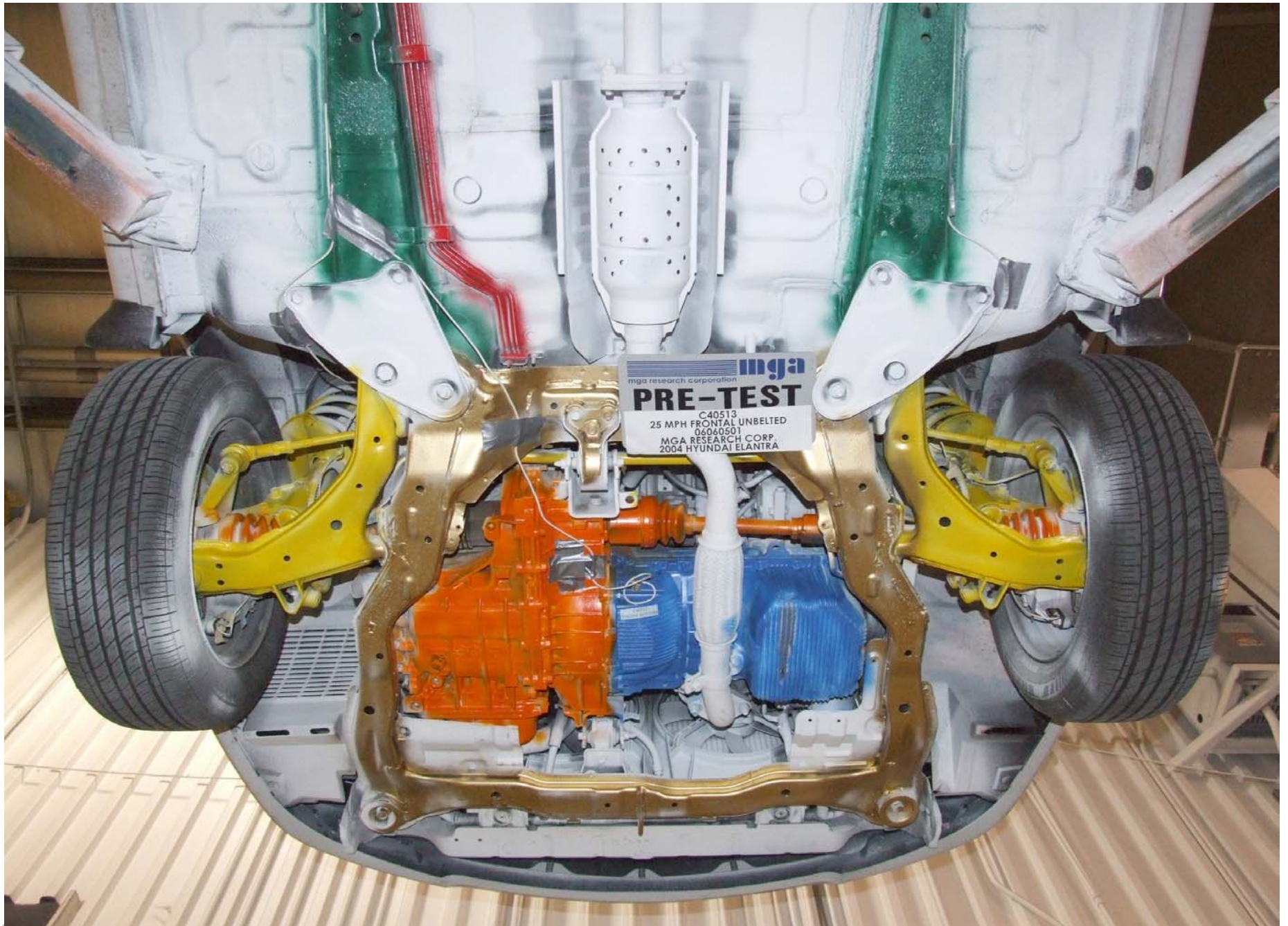
Post-Test Engine Compartment View



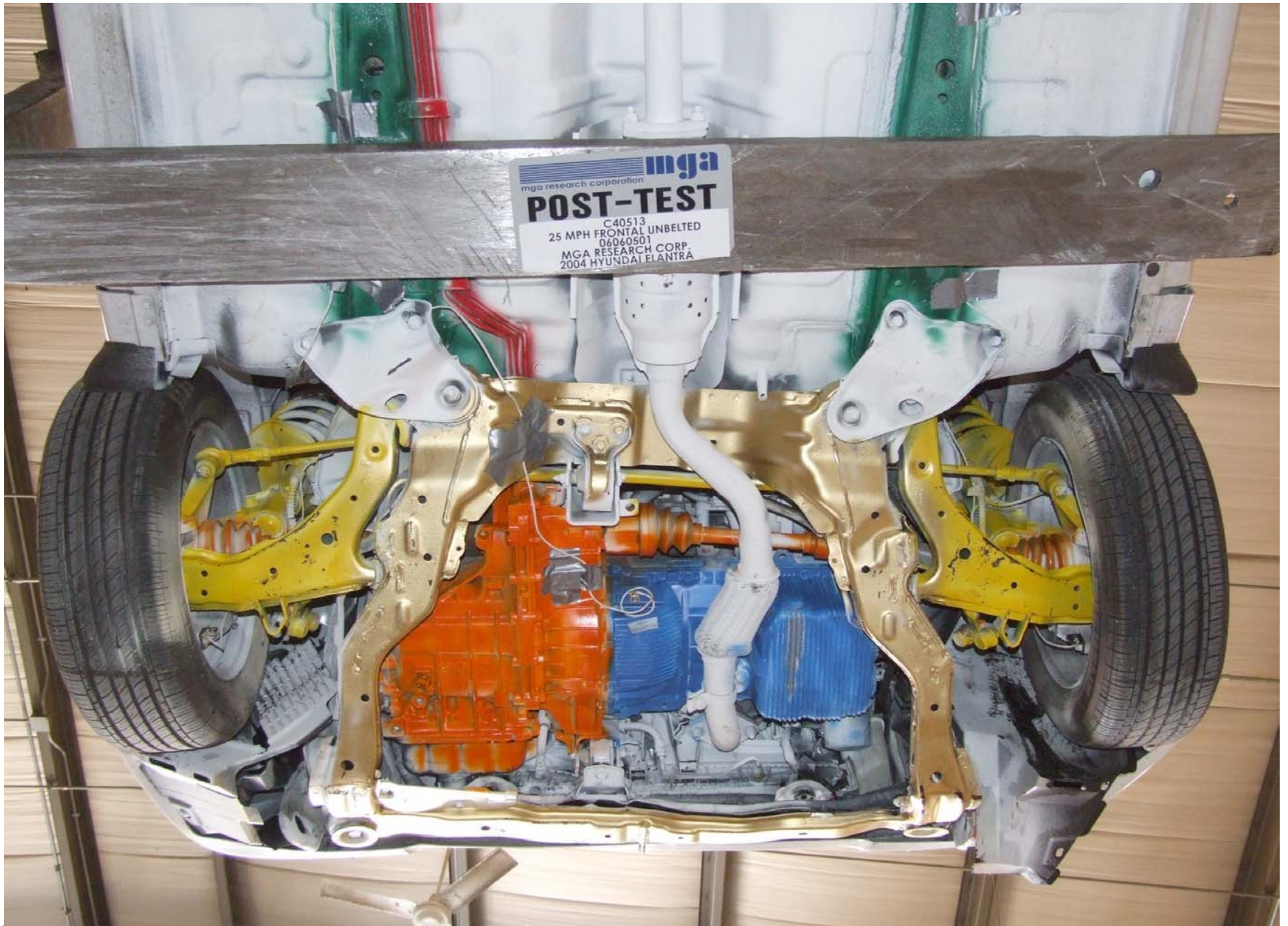
Pre-Test Fuel Filler Cap View



Post-Test Fuel Filler Cap View



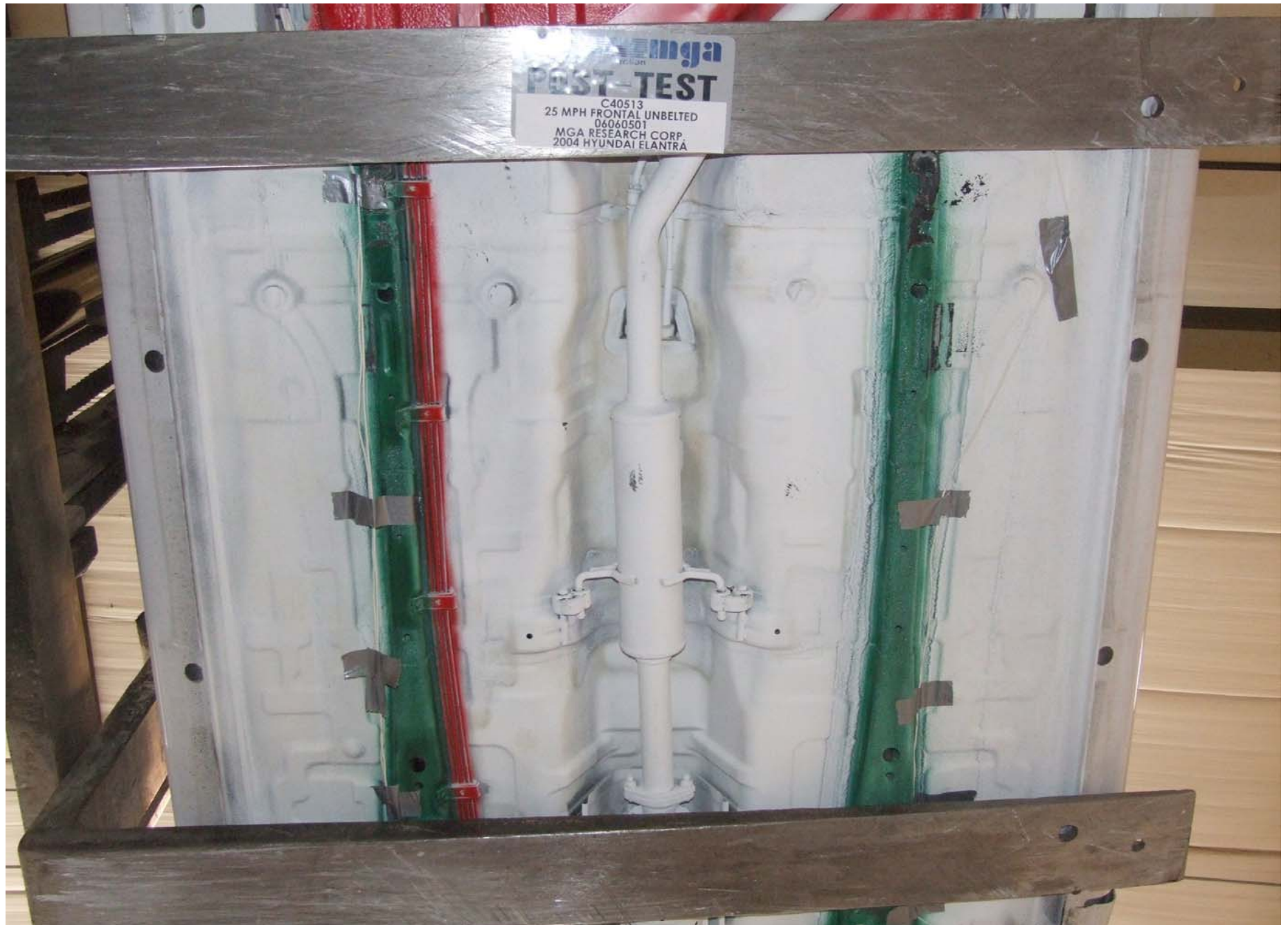
Pre-Test Front Underbody View



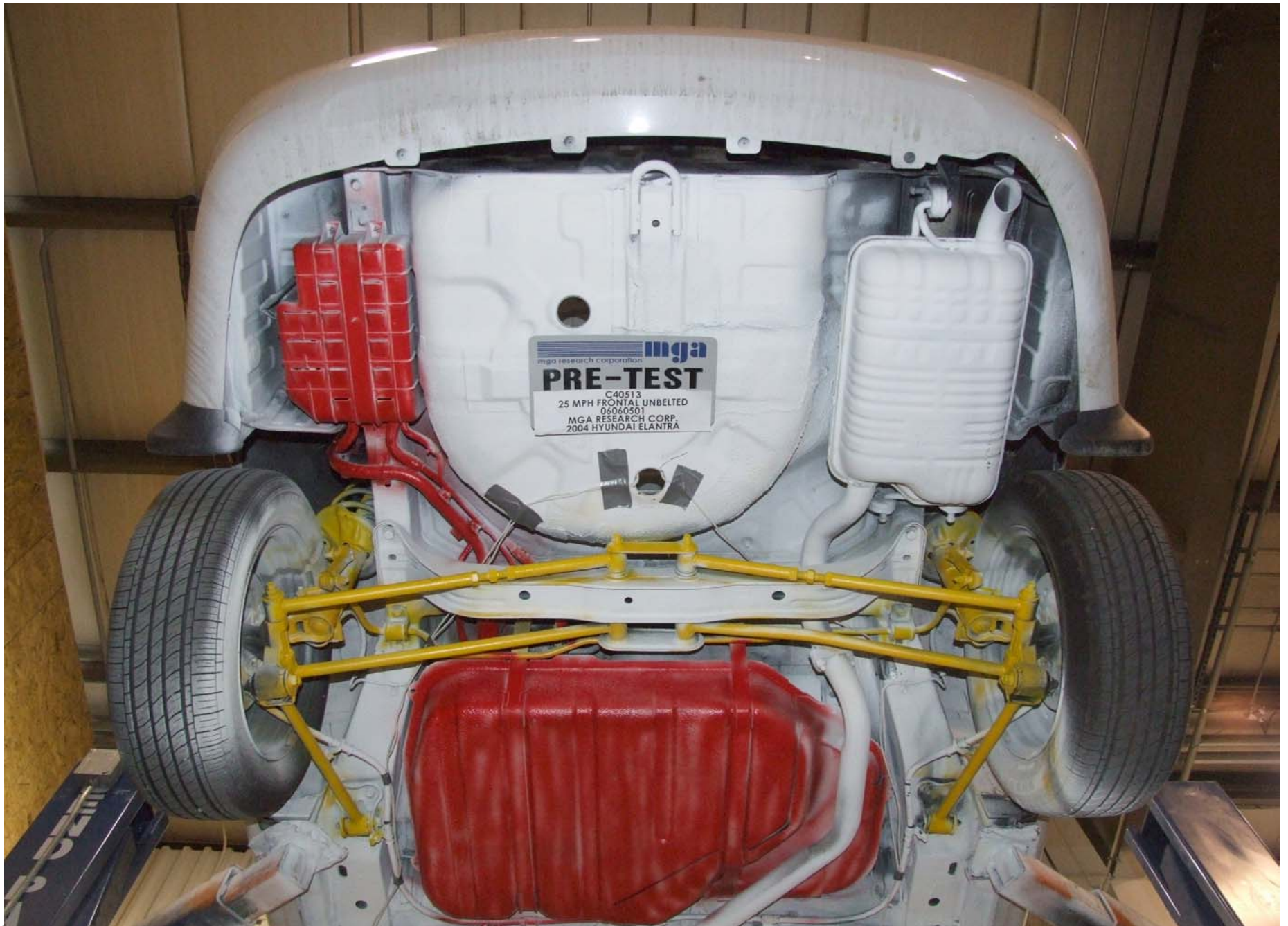
Post-Test Front Underbody View



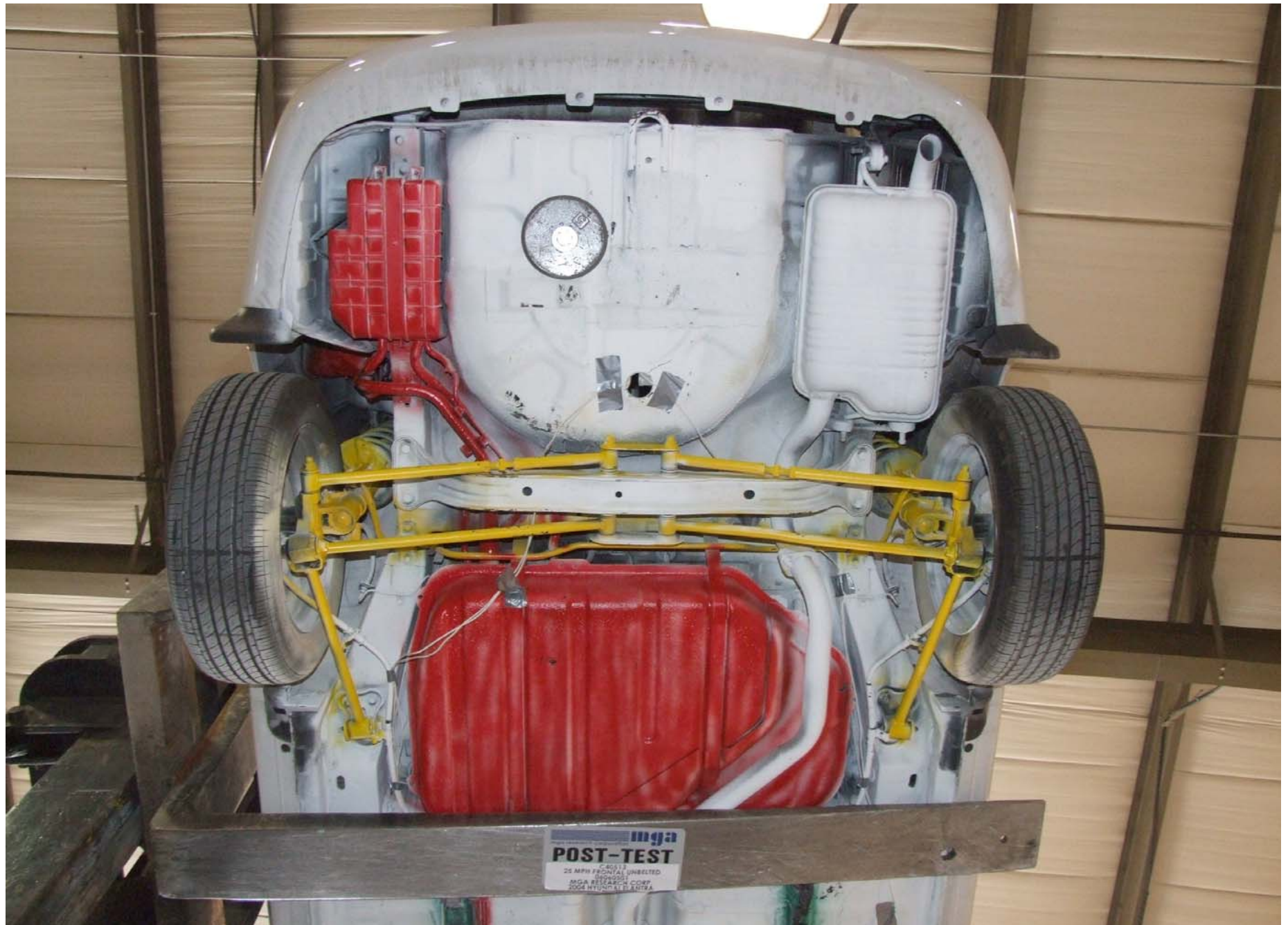
Pre-Test Mid Underbody View



Post-Test Mid Underbody View



Pre-Test Rear Underbody View



Post-Test Rear Underbody View



Pre-Test Driver Dummy Front View (head position)



Post-Test Driver Dummy Front View (head position)



Pre-Test Driver Dummy Position Left Side View



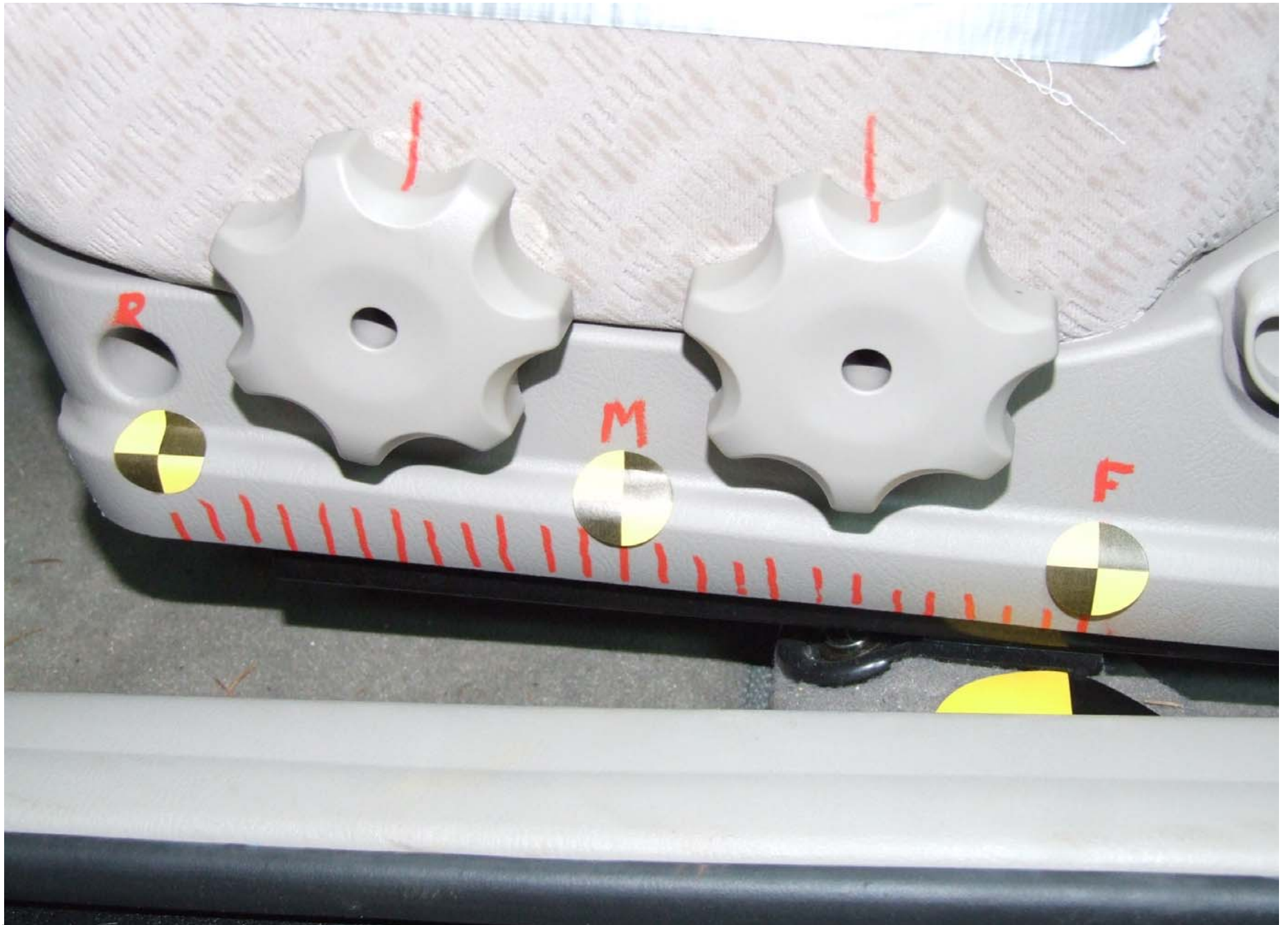
Post-Test Driver Dummy Position Left Side View



Pre-Test Driver Dummy Position Left Side View (Door Open)



Post-Test Driver Dummy Position Left Side View (Door Open)



Pre-Test Driver Dummy Seat Position



Post-Test Driver Dummy Seat Position



Pre-Test Driver Dummy Feet Position



Post-Test Driver Dummy Feet Position



Pre-Test Driver Side Knee Bolster View



Post-Test Driver Side Knee Bolster View



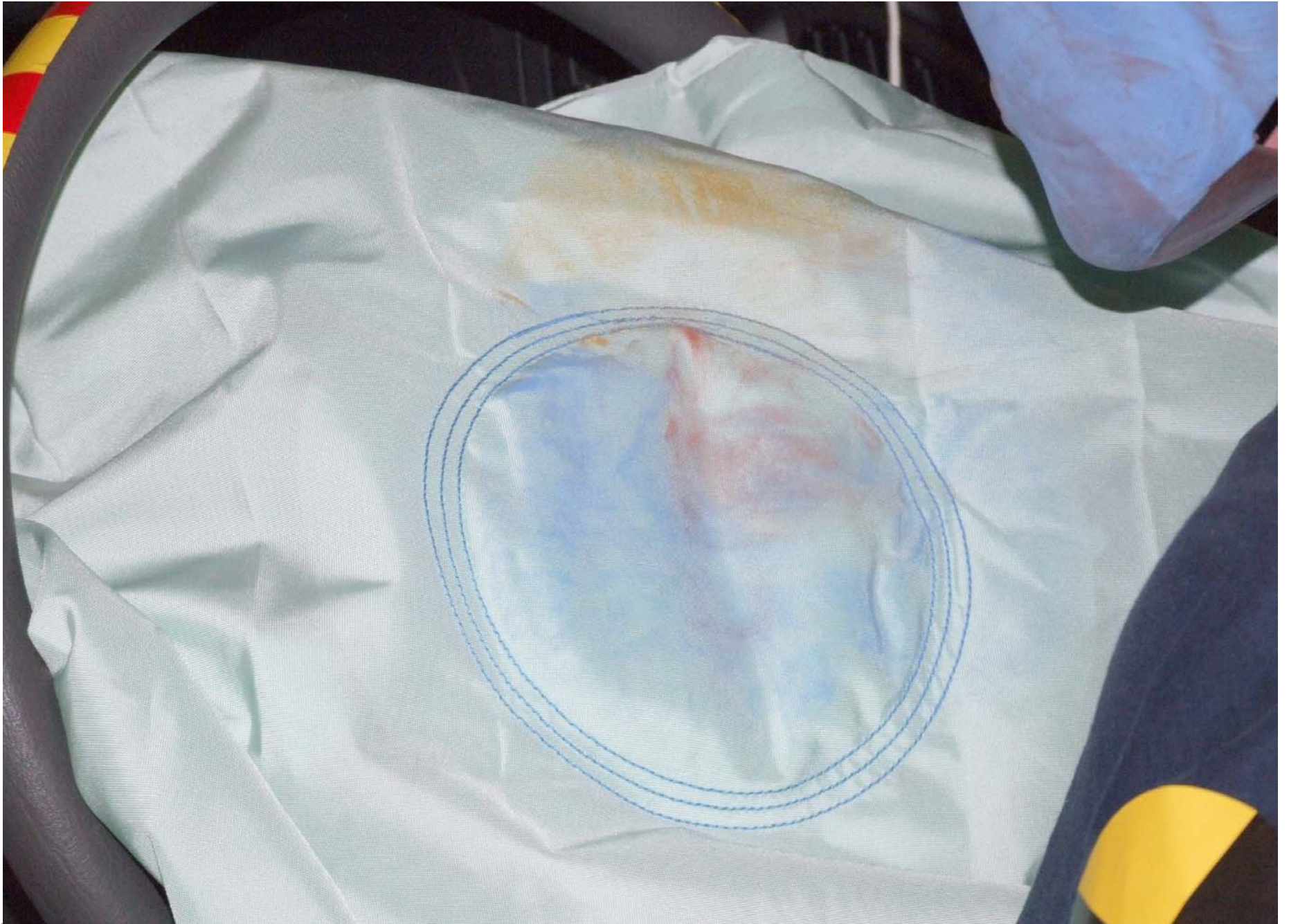
Post-Test Driver Dummy Head Contact (header)



Post-Test Driver Dummy Knee Contact (left side view)



Post-Test Driver Dummy Knee Contact (right side view)



Post-Test Driver Dummy Airbag Contact



Pre-Test Passenger Dummy Front View (head position)



Post-Test Passenger Dummy Front View (head position)



Pre-Test Passenger Dummy Position Right Side View



Post-Test Passenger Dummy Position Right Side View



Pre-Test Passenger Dummy Position Right Side View (Door Open)



Post-Test Passenger Dummy Position Right Side View (Door Open)



Pre-Test Passenger Dummy Seat Position



Post-Test Passenger Dummy Seat Position



Pre-Test Passenger Dummy Feet Position



Post-Test Passenger Dummy Feet Position



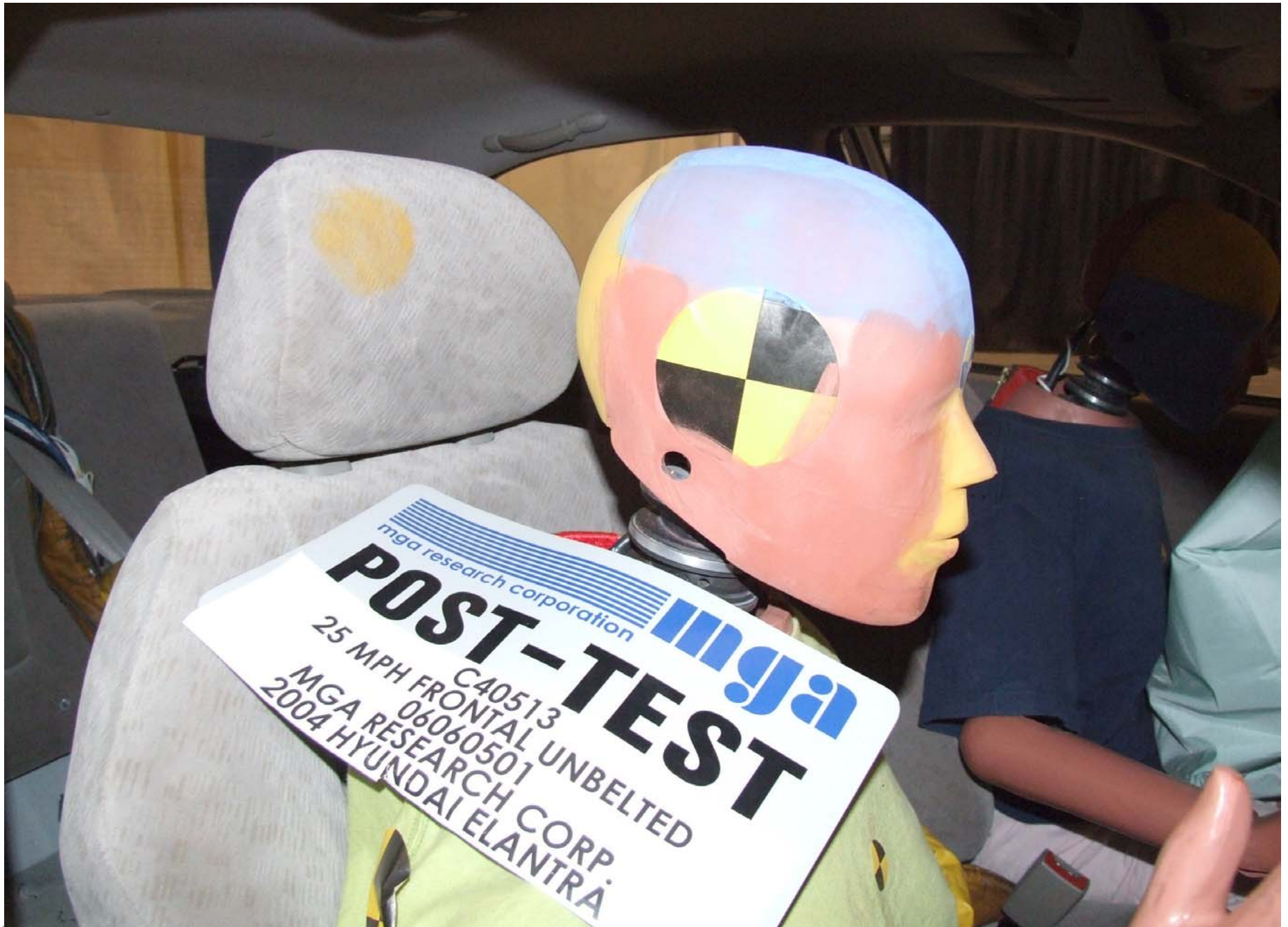
Pre-Test Passenger Side Knee Bolster View



Post-Test Passenger Side Knee Bolster View



Post-Test Passenger Dummy Head Contact View (visor)



Post-Test Passenger Dummy Head Contact View (headrest)



Post-Test Passenger Dummy Knee Contact



Post-Test Passenger Dummy Airbag Contact



Rollover 90 Degrees



Rollover 180 Degrees



Rollover 270 Degrees



Rollover 360 Degrees



Vehicle Impact

Temperature Plot



Vehicle in Relation to The Load Cell Grid

APPENDIX C1
SUPPRESSION PHOTOGRAPHS

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Britax Roundabout 161 Fwd Facing With Belt,
Forward Seat Track



Britax Roundabout 161 Fwd Facing With Belt,
Middle Seat Track



Britax Roundabout 161 Fwd Facing With Belt,
Rearward Seat Track



Britax Roundabout 161 Fwd Facing Unbelted,
Forward Seat Track

C1-2



Britax Roundabout 161 Fwd Facing Unbelted,
Middle Seat Track



Britax Roundabout 161 Fwd Facing Unbelted,
Rearward Seat Track



Britax Roundabout 161 Rear Facing With Belt,
Forward Seat Track



Britax Roundabout 161 Rear Facing With Belt,
Middle Seat Track

C1-3



Britax Roundabout 161 Rear Facing With Belt,
Rearward Seat Track



Britax Roundabout 161 Rear Facing Unbelted,
Forward Seat Track



Britax Roundabout 161 Rear Facing Unbelted,
Middle Seat Track



Britax Roundabout 161 Rear Facing Unbelted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track, Human Subject 013

C1-5



3-Year-Old Century Next Step Belted, Forward Seat Track



3-Year-Old Century Next Step Belted, Middle Seat Track



3-Year-Old Century Next Step Belted,
Rearward Seat Track



3-Year-Old Century Next Step Cinched With Harness,
Forward Seat Track



3-Year-Old Century Next Step Cinched With Harness,
Middle Seat Track



3-Year-Old Century Next Step Cinched With Harness,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation, Middle Seat Track



6-Year-Old Century Next Step Belted, Forward Seat Track



6-Year-Old Century Next Strap Belted, Middle Seat Track



6-Year-Old Century Next Step Belted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track, Human Subject 013



6-Year-Old Cosco High Back Booster Belted,
Forward Seat Track



6-Year-Old Cosco High Back Booster Belted,
Middle Seat Track



6-Year-Old Cosco High Back Booster Belted,
Rearward Seat Track



Unbelted Female Representative Reactivation,
Forward Seat Track, Human Subject 031

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DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month Section A

Initial Suppression
Forward Facing Convertible CRS



Britax Roundabout 161 Fwd Facing With Belt,
Forward Seat Track



Britax Roundabout 161 Fwd Facing With Belt,
Middle Seat Track



Britax Roundabout 161 Fwd Facing With Belt,
Rearward Seat Track



Britax Roundabout 161 Fwd Facing Unbelted,
Forward Seat Track



Britax Roundabout 161 Fwd Facing Unbelted,
Middle Seat Track



Britax Roundabout 161 Fwd Facing Unbelted,
Rearward Seat Track



Britax Roundabout 161 Rear Facing With Belt,
Forward Seat Track



Britax Roundabout 161 Rear Facing With Belt,
Middle Seat Track



Britax Roundabout 161 Rear Facing With Belt,
Rearward Seat Track



Britax Roundabout 161 Rear Facing Unbelted,
Forward Seat Track



Britax Roundabout 161 Rear Facing Unbelted,
Middle Seat Track



Britax Roundabout 161 Rear Facing Unbelted,
Rearward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month

Section A

Initial Suppression
Forward Facing Convertible CRS



Unbelted Female Representative Reactivation,
Rearward Seat Track, Human Subject 031

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
3 Year Old Section B

Initial Suppression
Belt Positioning Booster Seat



3-Year-Old Century Next Step Belted, Forward Seat Track



3-Year-Old Century Next Step Belted, Middle Seat Track



3-Year-Old Century Next Step Belted,
Rearward Seat Track



3-Year-Old Century Next Step Cinched With Harness,
Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
3 Year Old
Section B

Initial Suppression
Belt Positioning Booster Seat



3-Year-Old Century Next Step Cinched With Harness,
Middle Seat Track



3-Year-Old Century Next Step Cinched With Harness,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation, Middle Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
6 Year Old
Section C

Initial Suppression
Belt Positioning Booster Seat



6-Year-Old Century Next Step Belted, Forward Seat Track



6-Year-Old Century Next Strap Belted, Middle Seat Track



6-Year-Old Century Next Step Belted,
Rearward Seat Track



Unbelted Female Representative Reactivation,
Rearward Seat Track, Human Subject 031

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
6 Year Old
Section C

Initial Suppression
Belt Positioning Booster Seat



6-Year-Old Cosco High Back Booster Belted,
Forward Seat Track



6-Year-Old Cosco High Back Booster Belted,
Middle Seat Track



6-Year-Old Cosco High Back Booster Belted,
Rearward Seat Track



Unbelted Female Representative Reactivation,
Forward Seat Track, Human Subject 030

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Newborn
Section A

Post Recall FIX Suppression
Car Bed



Cosco Dream Ride Car Bed With Belt, Forward Seat Track



Cosco Dream Ride Car Bed With Belt, Middle Seat Track



Cosco Dream Ride Car Bed With Belt,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month
Section B

Post Recall FIX Suppression
Rear Facing CRS



Britax Handle With Care 191 With Belt, Forward Seat Track,
Handle Down



Britax Handle With Care 191 With Belt, Middle Seat Track,
Handle Down



Britax Handle With Care 191 With Belt, Rearward Seat Track,
Handle Down



Britax Handle With Care 191 Unbelted, Forward Seat Track,
Handle Down



Britax Handle With Care 191 Unbelted, Middle Seat Track,
Handle Down



Britax Handle With Care 191 Unbelted, Rearward Seat Track,
Handle Down



Britax Handle With Care 191 Fwd Facing Unbelted,
Forward Seat Track, Handle Down



Britax Handle With Care 191 Fwd Facing Unbelted,
Middle Seat Track, Handle Down



Britax Handle With Care 191 Fwd Facing Unbelted,
Rearward Seat Track, Handle Down



Unbelted 5th Percentile Female Reactivation,
Middle Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month

Section B

Post Recall FIX Suppression
Rear Facing CRS



Evenflo First Choice 204 With Belt, Forward Seat Track,
Handle Up



Evenflo First Choice 204 With Belt, Middle Seat Track,
Handle Up



Evenflo First Choice 204 With Belt, Rearward Seat Track,
Handle Up



Evenflo First Choice 204 Unbelted, Forward Seat Track,
Handle Up

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month

Section B

Post Recall FIX Suppression
Rear Facing CRS



Evenflo First Choice 204 Unbelted, Middle Seat Track,
Handle Up



Evenflo First Choice 204 Unbelted, Rearward Seat Track,
Handle Up



Evenflo First Choice 204 Fwd Facing Unbelted,
Forward Seat Track, Handle Up



Evenflo First Choice 204 Fwd Facing Unbelted,
Middle Seat Track, Handle Up



Evenflo First Choice 204 Fwd Facing Unbelted,
Rearward Seat Track, Handle Up



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month
Section B

Post Recall FIX Suppression
Rear Facing CRS



Graco Infant W/ Base With Belt, Forward Seat Track, Handle Up

Graco Infant W/ Base With Belt, Middle Seat Track, Handle Up



Graco Infant W/ Base With Belt, Rearward Seat Track, Handle Down

Graco Infant W/ Base Unbelted, Forward Seat Track, Handle Up

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month
Section B

Post Recall FIX Suppression
Rear Facing CRS



Graco Infant W/ Base Unbelted, Middle Seat Track,
Handle Up



Graco Infant W/ Base Unbelted, Rearward Seat Track,
Handle Down



Graco Infant W/ Base Fwd Facing Unbelted, Forward Seat Track,
Handle Up



Graco Infant W/ Base Fwd Facing Unbelted, Middle Seat Track,
Handle Up



Graco Infant W/ Base Fwd Facing Unbelted,
Rearward Seat Track, Handle Up



Graco Infant W/O Base With Belt,
Forward Seat Track, Handle Up



Graco Infant W/O Base With Belt, Middle Seat Track,
Handle Up



Graco Infant W/O Base With Belt, Rearward Seat Track,
Handle Up



Graco Infant W/O Base Unbelted, Forward Seat Track,
Handle Up



Graco Infant W/O Base Unbelted, Middle Seat Track,
Handle Up



Graco Infant W/O Base Unbelted,
Rearward Seat Track, Handle Up



Graco Infant W/O Base Fwd Facing Unbelted,
Forward Seat Track, Handle Up

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month
Section B

Post Recall FIX Suppression
Rear Facing CRS



Graco Infant W/O Base Fwd Facing Unbelted,
Middle Seat Track, Handle Up



Graco Infant W/O Base Fwd Facing Unbelted,
Rearward Seat Track, Handle Up



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month
Section C

Post Recall FIX Suppression
Forward Facing Convertible CRS



Britax Roundabout 161 Fwd Facing With Belt,
Forward Seat Track



Britax Roundabout 161 Fwd Facing With Belt,
Middle Seat Track



Britax Roundabout 161 Fwd Facing With Belt,
Rearward Seat Track



Britax Roundabout 161 Fwd Facing Unbelted,
Forward Seat Track



Britax Roundabout 161 Fwd Facing Unbelted,
Middle Seat Track



Britax Roundabout 161 Fwd Facing Unbelted,
Rearward Seat Track



Britax Roundabout 161 Rear Facing With Belt,
Forward Seat Track



Britax Roundabout 161 Rear Facing With Belt,
Middle Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month
Section C

Post Recall FIX Suppression
Forward Facing Convertible CRS



Britax Roundabout 161 Rear Facing With Belt,
Rearward Seat Track



Britax Roundabout 161 Rear Facing Unbelted,
Forward Seat Track



Britax Roundabout 161 Rear Facing Unbelted,
Middle Seat Track



Britax Roundabout 161 Rear Facing Unbelted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track, Human Subject 013

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month Section C

Post Recall FIX Suppression
Forward Facing Convertible CRS



Century Encore Fwd Facing With Belt, Forward Seat Track



Century Encore Fwd Facing With Belt, Middle Seat Track



Century Encore Fwd Facing With Belt, Rearward Seat Track



Century Encore Fwd Facing Unbelted, Forward Seat Track

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12 Month Section C

Post Recall FIX Suppression
Forward Facing Convertible CRS



Century Encore Fwd Facing Unbelted, Middle Seat Track



Century Encore Fwd Facing Unbelted, Rearward Seat Track



Century Encore Rear Facing With Belt, Forward Seat Track



Century Encore Rear Facing With Belt, Middle Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month

Section C

Post Recall FIX Suppression
Forward Facing Convertible CRS



Century Encore Rear Facing With Belt, Rearward Seat Track



Century Encore Rear Facing Unbelted, Forward Seat Track



Century Encore Rear Facing Unbelted, Middle Seat Track



Century Encore Rear Facing Unbelted, Rearward Seat Track

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12 Month Section C

Post Recall FIX Suppression
Forward Facing Convertible CRS



Unbelted 5th Percentile Female Reactivation, Middle Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month
Section C

Post Recall FIX Suppression
Forward Facing Convertible CRS



Evenflo Medallion 254 Fwd Facing With Belt, Forward Seat Track



Evenflo Medallion 254 Fwd Facing With Belt, Middle Seat Track



Evenflo Medallion 254 Fwd Facing With Belt,
Rearward Seat Track



Evenflo Medallion 254 Fwd Facing Unbelted,
Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month

Section C

Post Recall FIX Suppression
Forward Facing Convertible CRS



Evenflo Medallion 254 Fwd Facing Unbelted,
Middle Seat Track



Evenflo Medallion 254 Fwd Facing Unbelted,
Rearward Seat Track



Evenflo Medallion 254 Rear Facing With Belt,
Forward Seat Track



Evenflo Medallion 254 Rear Facing With Belt,
Middle Seat Track



Evenflo Medallion 254 Rear Facing With Belt,
Rearward Seat Track



Evenflo Medallion 254 Rear Facing Unbelted,
Forward Seat Track



Evenflo Medallion 254 Rear Facing Unbelted,
Middle Seat Track



Evenflo Medallion 254 Rear Facing Unbelted,
Rearward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month

Section C

Post Recall FIX Suppression
Forward Facing Convertible CRS



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
3 Year Old
Section C

Post Recall FIX Suppression
Forward Facing Convertible CRS



3-Year-Old Fwd Facing Britax Roundabout Belted,
Forward Seat Track



3-Year-Old Fwd Facing Britax Roundabout Belted,
Middle Seat Track



3-Year-Old Fwd Facing Britax Roundabout Belted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
3 Year Old
Section C

Post Recall FIX Suppression
Forward Facing Convertible CRS



3-Year-Old Fwd Facing Century Encore Belted,
Forward Seat Track



3-Year-Old Fwd Facing Century Encore Belted,
Middle Seat Track



3-Year-Old Fwd Facing Century Encore Belted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Middle Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
3 Year Old
Section C

Post Recall FIX Suppression
Forward Facing Convertible CRS



3-Year-Old Fwd Facing Evenflo Medallion Belted,
Forward Seat Track



3-Year-Old Fwd Facing Evenflo Medallion Belted,
Middle Seat Track



3-Year-Old Fwd Facing Evenflo Medallion Belted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
3 Year Old
Section D

Post Recall FIX Suppression
Belt Positioning Booster Seat



3-Year-Old Century Next Step Belted, Forward Seat Track



3-Year-Old Century Next Step Belted, Middle Seat Track



3-Year-Old Century Next Step Belted,
Rearward Seat Track



3-Year-Old Century Next Step Cinched With Harness,
Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
3 Year Old
Section D

Post Recall FIX Suppression
Belt Positioning Booster Seat



3-Year-Old Century Next Step Cinched With Harness,
Middle Seat Track



3-Year-Old Century Next Step Cinched With Harness,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
3 Year Old
Section D

Post Recall FIX Suppression
Belt Positioning Booster Seat



3-Year-Old Cosco High Back Booster Belted,
Forward Seat Track



3-Year-Old Cosco High Back Booster Belted,
Middle Seat Track



3-Year-Old Cosco High Back Booster Belted,
Rearward Seat Track



3-Year-Old Cosco High Back Booster Cinched With Harness,
Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
3 Year Old
Section D

Post Recall FIX Suppression
Belt Positioning Booster Seat



3-Year-Old Cosco High Back Booster Cinched With Harness,
Middle Seat Track



3-Year-Old Cosco High Back Booster Cinched With Harness,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation, Middle Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
6 Year Old
Section D

Post Recall FIX Suppression
Belt Positioning Booster Seat



6-Year-Old Century Next Step Belted, Forward Seat Track



6-Year-Old Century Next Strap Belted, Middle Seat Track



6-Year-Old Century Next Step Belted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
6 Year Old

Section D

Post Recall FIX Suppression
Belt Positioning Booster Seat



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track, Human Subject 013

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
6 Year Old
Section D

Post Recall FIX Suppression
Belt Positioning Booster Seat



6-Year-Old Cosco High Back Booster Belted,
Forward Seat Track



6-Year-Old Cosco High Back Booster Belted,
Middle Seat Track



6-Year-Old Cosco High Back Booster Belted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Middle Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
6 Year Old

Section D

Post Recall FIX Suppression
Belt Positioning Booster Seat



Unbelted Female Representative Reactivation,
Forward Seat Track, Human Subject 013

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
6 Year Old
Section D

Post Recall FIX Suppression
Belt Positioning Booster Seat



6-Year-Old Evenflo Right Fit Belted, Forward Seat Track



6-Year-Old Evenflo Right Fit Belted, Middle Seat Track



6-Year-Old Evenflo Right Fit Belted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track



3-Year-Old Unbelted, Forward Seat Track, Position 1



3-Year-Old Unbelted, Forward Seat Track, Position 2



3-Year-Old Unbelted, Forward Seat Track, Position 3



3-Year-Old Unbelted, Forward Seat Track, Position 4

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
3 Year Old
No CRS

Post Recall FIX Suppression



3-Year-Old Unbelted, Forward Seat Track, Position 5



3-Year-Old Unbelted, Forward Seat Track, Position 6



3-Year-Old Unbelted, Forward Seat Track, Position 7



3-Year-Old Unbelted, Middle Seat Track, Position 1



3-Year-Old Unbelted, Middle Seat Track, Position 2



3-Year-Old Unbelted, Middle Seat Track, Position 3



3-Year-Old Unbelted, Middle Seat Track, Position 4



3-Year-Old Unbelted, Middle Seat Track, Position 5



3-Year-Old Unbelted, Middle Seat Track, Position 6



3-Year-Old Unbelted, Middle Seat Track, Position 7



3-Year-Old Unbelted, Rearward Seat Track, Position 1



3-Year-Old Unbelted, Rearward Seat Track, Position 2



3-Year-Old Unbelted, Rearward Seat Track, Position 3



3-Year-Old Unbelted, Rearward Seat Track, Position 4



3-Year-Old Unbelted, Rearward Seat Track, Position 5



3-Year-Old Unbelted, Rearward Seat Track, Position 6

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
3 Year Old
No CRS

Post Recall FIX Suppression



3-Year-Old Unbelted, Rearward Seat Track,
Position 7



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track



6-Year-Old Unbelted, Forward Seat Track, Position 1



6-Year-Old Unbelted, Forward Seat Track, Position 2



6-Year-Old Unbelted, Forward Seat Track, Position 3



6-Year-Old Unbelted, Forward Seat Track, Position 4

C3-44



6-Year-Old Unbelted, Forward Seat Track, Position 4, View 2



6-Year-Old Unbelted, Middle Seat Track, Position 1



6-Year-Old Unbelted, Middle Seat Track, Position 2



6-Year-Old Unbelted, Middle Seat Track, Position 3



6-Year-Old Unbelted, Middle Seat Track, Position 4



6-Year-Old Unbelted, Middle Seat Track, Position 4, View 2



6-Year-Old Unbelted, Rearward Seat Track, Position 1



6-Year-Old Unbelted, Rearward Seat Track, Position 2



6-Year-Old Unbelted, Rearward Seat Track, Position 3



6-Year-Old Unbelted, Rearward Seat Track, Position 4



6-Year-Old Unbelted, Rearward Seat Track,
Position 4, View 2



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track

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SUPPRESSION PHOTOGRAPHS

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Cosco Dream Ride Car Bed With Belt, Forward Seat Track



Cosco Dream Ride Car Bed With Belt, Middle Seat Track



Cosco Dream Ride Car Bed With Belt, Rearward Seat Track



Unbelted 5th Percentile Female Reactivation, Middle Seat Track



Britax Handle With Care 191 With Belt, Forward Seat Track, Handle Down



Britax Handle With Care 191 With Belt, Middle Seat Track, Handle Down



Britax Handle With Care 191 With Belt, Rearward Seat Track, Handle Down



Britax Handle With Care 191 Unbelted, Forward Seat Track, Handle Down



Britax Handle With Care 191 Unbelted, Middle Seat Track, Handle Down



Britax Handle With Care 191 Unbelted, Rearward Seat Track, Handle Down



Britax Handle With Care 191 Fwd Facing Unbelted, Forward Seat Track, Handle Down



Britax Handle With Care 191 Fwd Facing Unbelted, Middle Seat Track, Handle Down



Britax Handle With Care 191 Fwd Facing Unbelted,
Rearward Seat Track, Handle Down



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track



Evenflo First Choice 204 With Belt, Forward Seat Track,
Handle Up



Evenflo First Choice 204 With Belt, Middle Seat Track,
Handle Down



Evenflo First Choice 204 With Belt, Rearward Seat Track,
Handle Down



Evenflo First Choice 204 Unbelted, Forward Seat Track,
Handle Up



Evenflo First Choice 204 Unbelted, Middle Seat Track,
Handle Up



Evenflo First Choice 204 Unbelted, Rearward Seat Track,
Handle Down



Evenflo First Choice 204 Fwd Facing Unbelted,
Forward Seat Track, Handle Up



Evenflo First Choice 204 Fwd Facing Unbelted,
Middle Seat Track, Handle Up



Evenflo First Choice 204 Fwd Facing Unbelted,
Rearward Seat Track, Handle Up



Unbelted 5th Percentile Female Reactivation,
Middle Seat Track

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Graco Infant W/ Base With Belt, Forward Seat Track,
Handle Up



Graco Infant W/ Base With Belt, Middle Seat Track,
Handle Down



Graco Infant W/ Base With Belt, Rearward Seat Track,
Handle Down



Graco Infant W/ Base Unbelted, Forward Seat Track,
Handle Up



Graco Infant W/ Base Unbelted, Middle Seat Track,
Handle Up



Graco Infant W/ Base Unbelted, Rearward Seat Track,
Handle Up



Graco Infant W/ Base Fwd Facing Unbelted, Forward Seat Track,
Handle Up



Graco Infant W/ Base Fwd Facing Unbelted, Middle Seat Track,
Handle Up



Graco Infant W/ Base Fwd Facing Unbelted,
Rearward Seat Track, Handle Up



Graco Infant W/O Base With Belt,
Forward Seat Track, Handle Up



Graco Infant W/O Base With Belt, Middle Seat Track,
Handle Up



Graco Infant W/O Base With Belt, Rearward Seat Track,
Handle Down



Graco Infant W/O Base Unbelted, Forward Seat Track, Handle Up



Graco Infant W/O Base Unbelted, Middle Seat Track, Handle Up



Graco Infant W/O Base Unbelted, Rearward Seat Track, Handle Down



Graco Infant W/O Base Fwd Facing Unbelted, Forward Seat Track, Handle Up



Graco Infant W/O Base Fwd Facing Unbelted,
Middle Seat Track, Handle Up



Graco Infant W/O Base Fwd Facing Unbelted,
Rearward Seat Track, Handle Up



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month

Section C

Post TSB Suppression
Forward Facing Convertible CRS



Britax Roundabout 161 Fwd Facing With Belt,
Forward Seat Track



Britax Roundabout 161 Fwd Facing With Belt,
Middle Seat Track



Britax Roundabout 161 Fwd Facing With Belt,
Rearward Seat Track



Britax Roundabout 161 Fwd Facing Unbelted,
Forward Seat Track



Britax Roundabout 161 Fwd Facing Unbelted,
Middle Seat Track



Britax Roundabout 161 Fwd Facing Unbelted,
Rearward Seat Track



Britax Roundabout 161 Rear Facing With Belt,
Forward Seat Track



Britax Roundabout 161 Rear Facing With Belt,
Middle Seat Track



Britax Roundabout 161 Rear Facing With Belt,
Rearward Seat Track



Britax Roundabout 161 Rear Facing Unbelted,
Forward Seat Track



Britax Roundabout 161 Rear Facing Unbelted,
Middle Seat Track



Britax Roundabout 161 Rear Facing Unbelted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month

Section C

Post TSB Suppression
Forward Facing Convertible CRS



Century Encore Fwd Facing With Belt, Forward Seat Track



Century Encore Fwd Facing With Belt, Middle Seat Track



Century Encore Fwd Facing With Belt, Rearward Seat Track



Century Encore Fwd Facing Unbelted, Forward Seat Track



Century Encore Fwd Facing Unbelted, Middle Seat Track



Century Encore Fwd Facing Unbelted, Rearward Seat Track



Century Encore Rear Facing With Belt, Forward Seat Track



Century Encore Rear Facing With Belt, Middle Seat Track



Century Encore Rear Facing With Belt, Rearward Seat Track



Century Encore Rear Facing Unbelted, Forward Seat Track



Century Encore Rear Facing Unbelted, Middle Seat Track



Century Encore Rear Facing Unbelted, Rearward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month Section C

Post TSB Suppression
Forward Facing Convertible CRS



Unbelted 5th Percentile Female Reactivation, Middle Seat Track



Evenflo Medallion 254 Fwd Facing With Belt, Forward Seat Track



Evenflo Medallion 254 Fwd Facing With Belt, Middle Seat Track



Evenflo Medallion 254 Fwd Facing With Belt,
Rearward Seat Track



Evenflo Medallion 254 Fwd Facing Unbelted,
Forward Seat Track



Evenflo Medallion 254 Fwd Facing Unbelted,
Middle Seat Track



Evenflo Medallion 254 Fwd Facing Unbelted,
Rearward Seat Track



Evenflo Medallion 254 Rear Facing With Belt,
Forward Seat Track



Evenflo Medallion 254 Rear Facing With Belt,
Middle Seat Track



Evenflo Medallion 254 Rear Facing With Belt,
Rearward Seat Track



Evenflo Medallion 254 Rear Facing Unbelted,
Forward Seat Track



Evenflo Medallion 254 Rear Facing Unbelted,
Middle Seat Track



Evenflo Medallion 254 Rear Facing Unbelted,
Rearward Seat Track

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
12 Month

Section C

Post TSB Suppression
Forward Facing Convertible CRS



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track



3-Year-Old Fwd Facing Britax Roundabout Belted,
Forward Seat Track



3-Year-Old Fwd Facing Britax Roundabout Belted,
Middle Seat Track



3-Year-Old Fwd Facing Britax Roundabout Belted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track



3-Year-Old Fwd Facing Century Encore Belted,
Forward Seat Track



3-Year-Old Fwd Facing Century Encore Belted,
Middle Seat Track



3-Year-Old Fwd Facing Century Encore Belted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track



3-Year-Old Fwd Facing Evenflo Medallion Belted,
Forward Seat Track



3-Year-Old Fwd Facing Evenflo Medallion Belted,
Middle Seat Track



3-Year-Old Fwd Facing Evenflo Medallion Belted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track



3-Year-Old Century Next Step Belted, Forward Seat Track



3-Year-Old Century Next Step Belted, Middle Seat Track



3-Year-Old Century Next Step Belted,
Rearward Seat Track



3-Year-Old Century Next Step Cinched With Harness,
Forward Seat Track



3-Year-Old Century Next Step Cinched With Harness,
Middle Seat Track



3-Year-Old Century Next Step Cinched With Harness,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation, Middle Seat Track



3-Year-Old Cosco High Back Booster Belted,
Forward Seat Track



3-Year-Old Cosco High Back Booster Belted,
Middle Seat Track



3-Year-Old Cosco High Back Booster Belted,
Rearward Seat Track



3-Year-Old Cosco High Back Booster Cinched With Harness,
Forward Seat Track



3-Year-Old Cosco High Back Booster Cinched With Harness,
Middle Seat Track



3-Year-Old Cosco High Back Booster Cinched With Harness,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track



6-Year-Old Century Next Step Belted, Forward Seat Track



6-Year-Old Century Next Strap Belted, Middle Seat Track



6-Year-Old Century Next Step Belted,
Rearward Seat Track



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track



C4-33



C4-33



C4-33



C4-33



6-Year-Old Evenflo Right Fit Belted, Forward Seat Track



6-Year-Old Evenflo Right Fit Belted, Middle Seat Track



6-Year-Old Evenflo Right Fit Belted, Rearward Seat Track



Unbelted 5th Percentile Female Reactivation, Middle Seat Track



3-Year-Old Unbelted, Forward Seat Track, Position 1



3-Year-Old Unbelted, Forward Seat Track, Position 2



3-Year-Old Unbelted, Forward Seat Track, Position 3



3-Year-Old Unbelted, Forward Seat Track, Position 4



3-Year-Old Unbelted, Forward Seat Track, Position 5



3-Year-Old Unbelted, Forward Seat Track, Position 6



3-Year-Old Unbelted, Forward Seat Track, Position 7



3-Year-Old Unbelted, Middle Seat Track, Position 1



3-Year-Old Unbelted, Middle Seat Track, Position 2



3-Year-Old Unbelted, Middle Seat Track, Position 3



3-Year-Old Unbelted, Middle Seat Track, Position 4



3-Year-Old Unbelted, Middle Seat Track, Position 5



3-Year-Old Unbelted, Middle Seat Track, Position 6



3-Year-Old Unbelted, Middle Seat Track, Position 7



3-Year-Old Unbelted, Rearward Seat Track, Position 1



3-Year-Old Unbelted, Rearward Seat Track, Position 2



3-Year-Old Unbelted, Rearward Seat Track, Position 3



3-Year-Old Unbelted, Rearward Seat Track, Position 4



3-Year-Old Unbelted, Rearward Seat Track, Position 5



3-Year-Old Unbelted, Rearward Seat Track, Position 6

DOT/NHTSA 208 Suppression Test – 2004 Hyundai Elantra (C40513)
3 Year Old
No CRS

Post TSB Suppression



3-Year-Old Unbelted, Rearward Seat Track, Position 7



Unbelted 5th Percentile Female Reactivation, Middle Seat Track



6-Year-Old Unbelted, Forward Seat Track, Position 1



6-Year-Old Unbelted, Forward Seat Track, Position 2



6-Year-Old Unbelted, Forward Seat Track, Position 3



6-Year-Old Unbelted, Forward Seat Track, Position 4

C4-42



6-Year-Old Unbelteed, Forward Seat Track, Position 4, View 2



6-Year-Old Unbelteed, Middle Seat Track, Position 1



6-Year-Old Unbelteed, Middle Seat Track, Position 2



6-Year-Old Unbelteed, Middle Seat Track, Position 3



6-Year-Old Unbelted, Middle Seat Track, Position 4



6-Year-Old Unbelted, Middle Seat Track, Position 4, View 2



6-Year-Old Unbelted, Rearward Seat Track, Position 1



6-Year-Old Unbelted, Rearward Seat Track, Position 2



6-Year-Old Unbelted, Rearward Seat Track, Position 3



6-Year-Old Unbelted, Rearward Seat Track, Position 4



6-Year-Old Unbelted, Rearward Seat Track,
Position 4, View 2



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track

C4-45



Unbelted Female Representative Reactivation,
Forward Seat Track, Human Subject 030



Unbelted Female Representative Reactivation,
Middle Seat Track, Human Subject 030



Unbelted Female Representative Reactivation,
Rearward Seat Track, Human Subject 030



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track, Human Subject 032



Unbelted 5th Percentile Female Reactivation,
Middle Seat Track, Human Subject 032



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track, Human Subject 032



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track, Human Subject 037



Unbelted 5th Percentile Female Reactivation,
Middle Seat Track, Human Subject 037



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track, Human Subject 037



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track, Human Subject 013



Unbelted 5th Percentile Female Reactivation,
Middle Seat Track, Human Subject 013



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track, Human Subject 013



Unbelted 5th Percentile Female Reactivation,
Forward Seat Track, Human Subject 036



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track, Human Subject 036



Unbelted 5th Percentile Female Reactivation,
Rearward Seat Track, Human Subject 036

APPENDIX D
INSTRUMENTATION CALIBRATION

INSTRUMENTS FOR DRIVER DUMMY NO. 505

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	G29-X58	Entran	05/24/06
Head Y	G04-Z34	Entran	05/24/06
Head Z	G29-X12	Entran	05/24/06
Neck Load Cell	650	Denton	04/27/06
Chest X	J13709	Endevco	05/24/06
Chest Y	J13541	Endevco	05/24/06
Chest Z	J17709	Endevco	05/24/06
Chest Displacement	505	Servo	02/08/06
Left Femur Load Cell	86	Denton	12/23/05
Right Femur Load Cell	85	Denton	12/23/05

INSTRUMENTS FOR PASSENGER DUMMY NO. 507

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	P49526	Endevco	04/04/06
Head Y	P49473	Endevco	04/04/06
Head Z	P49472	Endevco	04/04/06
Neck Load Cell	252	Denton	01/04/06
Chest X	ET21315	Entran	05/31/06
Chest Y	ET21183	Entran	05/31/06
Chest Z	ET21159	Entran	05/31/06
Chest Displacement	507	Servo	02/08/06
Left Femur Load Cell	1362	Denton	04/10/06
Right Femur Load Cell	1361	Denton	04/10/06

VEHICLE INSTRUMENTS

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Left Rear Seat Crossmember X	D03-Z19	Entran	04/10/06
Right Rear Seat Crossmember X	L02-Z37	Entran	01/20/06
Top of Engine X	L02-Z40	Entran	02/02/06
Bottom of Engine X	H10-M15	Entran	12/07/05
Left Brake Caliper X	F29-X11	Entran	01/18/06
Right Brake Caliper X	H06-L16	Entran	12/16/05
Instrument Panel X	H10-M18	Entran	12/07/05
Trunk Z	D11-Z12	Entran	01/13/06