REPORT NUMBER: 208-MGA-2006-014

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

HYUNDAI MOTOR COMPANY
2006 HMC TUCSON MPV
NHTSA NO.: C60510

PREPARED BY:
MGA RESEARCH CORPORATION
5000 WARREN ROAD
BURLINGTON, WI 53105

Test Dates: June 9, 2006 – March 26, 2007

Final Report Date: May 4, 2007

FINAL REPORT

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
MAIL CODE: NVS-220
400 SEVENTH STREET, SW, ROOM 6115
WASHINGTON, D.C. 20590

This final test report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, in response to Contract Number DTNH22-03-D-11002.

Prepared by: Jeff Lewandowski Date: May 4, 2007
Jeff Lewandowski, Project Engineer

Reviewed by: David Winkelbauer Date: May 4, 2007
David Winkelbauer, Facility Director

FINAL REPORT ACCEPTED BY OVSC:

Accepted By: Charles R. Carr

Acceptance Date: May 4, 2007

Technical Report Documentation Page

1. Report No. 208-MGA-2006-014	*2. Government Accession No.*	*3. Recipient's Catalog No.*	
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		6. Performing Organization Code MGA	
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12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Enforcement Office of Vehicle Safety Compliance 400 Seventh St., S.W., Room 6115 NVS-220 Washington, D.C. 20590		*13. Type of Report and Period Covered* 6/9/06 - 5/4/07	
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15. Supplementary Notes			
16. Abstract Compliance tests were conducted on the subject 2006 HMC Tucson in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP208-13 for the determination of FMVSS 208 compliance. Test failures identified were as follows: TEST FAILURES: The neck tension-extension (Nte) was more than the maximum allowed (1.0) for the position 2, chin on rim, 5th percentile driver low risk deployment test. (S25.4(a)(5))			
17. Key Words Frontal Impact 40 kmph Vehicle Safety Compliance Testing FMVSS 208, “Occupant Crash Protection” FMVSS 212, “Windshield Mounting” FMVSS 219, (partial), “Windshield Zone Intrusion” FMVSS 301, “Fuel System Integrity”		*18. Distribution Statement* Copies of this report are available from the following: NHTSA Technical Information Services (TIS), Mail Code: NPO-230 400 Seventh Street, S.W., Room 5108 Washington, D.C. 20590 Tel. No.: (202) 366-4946	
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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 2006 HMC Tucson, NHTSA No. C60510, 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. TP208-13 dated July 27, 2005.

SECTION 2

TESTS PERFORMED

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance

NHTSA No.: C60510
Test Dates: 6/9/06 - 3/26/07

The following checked items indicate the tests that were performed:

- [X] 1. Rear outboard seating position seat belts (S4.1.1.2(b) & (S4.2.4)
- [X] 2. Air bag labels (S4.5.1)
- [X] 3. Readiness indicator (S4.5.2)
- [X] 4. Passenger air bag manual cut-off device (S4.5.4)
- [X] 5. Lap belt lockability (S7.1.1.5)
- [X] 6. Seat belt warning system (S7.3)
- [X] 7. Seat belt contact force (S7.4.4)
- [X] 8. Seat belt latch plate access (S7.4.4)
- [X] 9. Seat belt retraction (S7.4.5)
- [X] 10. Seat belt guides and hardware (S7.4.6)
- [X] 11. Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart R)
- [X] 12. Suppression tests with newborn infant (Part 572, Subpart K)
- [X] 13. Suppression tests with 3-year-old dummy (Part 572, Subpart P)
- [X] 14. Suppression tests with 6-year-old dummy (Part 572, Subpart N)
- [X] 15. Test of reactivation of the passenger air bag system with an unbelted 5th percentile female dummy
- [ ] 16. Low risk deployment test with 12-month-old dummy (Part 572, Subpart 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)
- [X] 19. Low risk deployment test with 5th female dummy (Part 572, Subpart O)
- [X] 20. Impact Tests
    - [ ] Frontal Oblique
        - [ ] Belted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.1(a))
        - [ ] Unbelted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a)(1))
        - [ ] Unbelted 50th male dummy driver and passenger (32 to 40 kmph) (S5.1.2(a) (1) or S5.1.2(b))
    - [X] Frontal 0°
        - [ ] Belted 50th male dummy driver (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a))
        - [ ] Belted 50th male dummy passenger (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a))
        - [ ] Belted 5th female dummy driver (0 to 48 kmph) (S16.1(a))
        - [ ] Belted 5th female dummy passenger (0 to 48 kmph) (S16.1(a))
        - [ ] Belted 50th male dummy driver and passenger (0 to 56 kmph) (S5.1.1.(b)(2))
        - [ ] Unbelted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a) (1))
        - [ ] Unbelted 50th male dummy driver (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b))
        - [ ] Unbelted 50th male dummy passenger (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b))

[X] Unbelted 5th female dummy driver (32 to 40 kmph) (S16.1(b))
[X] Unbelted 5th female dummy passenger (32 to 40 kmph) (S16.1(b))
[ ] 40% Offset 0° Belted 5th male dummy driver and passenger (0 to 40 kmph) (S18.1)

[ ] 21. Sled Test: unbelted 50th 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 Frontal Indicant 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 appear to meet the performance requirements to which it was tested.

The neck tension-extension (Nte) was more than the maximum allowed (1.0) for the position 2, chin on rim, 5th percentile driver low risk deployment test. (S25.4(a)(5))

SECTION 3

INJURY RESULT SUMMARY FOR FMVSS 208 TESTS

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance

NHTSA No.: C60510
Test Dates: 2/8/07 & 7/10/06

5th Percentile Female Low Risk Deployments

5th Percentile Female SN 125 Position 1 (Chin On Module) 2-08-07

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	19
Peak Nij (Nte)	1.0	0.5
Time (ms)	NA	23.4
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	5.9
Peak Nij (Nce)	1.0	0.0
Time (ms)	NA	275.0
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	226.1
Neck Tension	2070 N	1135
Neck Compression	2520 N	163
Chest g	60 g	15
Chest Displacement	52 mm	5
Left Femur	6805 N	54
Right Femur	6805 N	64

Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

5th Percentile Female SN 505 Position 2 (Chin On Rim) 7-10-06 Trial 1

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	23
Peak Nij (Nte)	1.0	1.0 (0.969)
Time (ms)	NA	19.0
Peak Nij (Ntf)	1.0	0.1
Time (ms)	NA	69.2
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	166.7
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	81.0
Neck Tension	2070 N	992
Neck Compression	2520 N	94
Chest g	60 g	23
Chest Displacement	52 mm	19
Left Femur	6805 N	45
Right Femur	6805 N	58

Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms
The steering column and steering wheel were not replaced after an invalid position 1 driver low risk deployment test.

SECTION 3

INJURY RESULT SUMMARY FOR FMVSS 208 TESTS

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance

NHTSA No.: C60510
Test Dates: 7/20/06 & 7/28/06

5th Percentile Female Low Risk Deployments

5th Percentile Female SN 505 Position 2 (Chin On Rim) 7-20-06 Trial 2

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	27
Peak Nij (Nte)	1.0	1.2 (1.168)
Time (ms)	NA	17.4
Peak Nij (Ntf)	1.0	0.1
Time (ms)	NA	60.1
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	167.2
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	77.2
Neck Tension	2070 N	994
Neck Compression	2520 N	98
Chest g	60 g	26
Chest Displacement	52 mm	21
Left Femur	6805 N	201
Right Femur	6805 N	159

Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

5th Percentile Female SN 505 Position 2 (Chin On Rim) 7-28-06 Trial 3

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	39
Peak Nij (Nte)	1.0	1.0 (0.969)
Time (ms)	NA	20.0
Peak Nij (Ntf)	1.0	0.3
Time (ms)	NA	65.2
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	176.0
Peak Nij (Ncf)	1.0	0.2
Time (ms)	NA	68.2
Neck Tension	2070 N	1154
Neck Compression	2520 N	184
Chest g	60 g	29
Chest Displacement	52 mm	22
Left Femur	6805 N	65
Right Femur	6805 N	46

Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

SECTION 3

INJURY RESULT SUMMARY FOR FMVSS 208 TESTS

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
NHTSA No.: C60510
Test Dates: 9/14/06 & 9/15/06

5th Percentile Female Low Risk Deployments

5th Percentile Female SN 507 Position 2 (Chin On Rim) 9-14-06 Trial 4

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	33
Peak Nij (Nte)	1.0	1.0 (0.963)
Time (ms)	NA	18.1
Peak Nij (Ntf)	1.0	0.1
Time (ms)	NA	58.3
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	157.6
Peak Nij (Ncf)	1.0	0.2
Time (ms)	NA	80.6
Neck Tension	2070 N	1223
Neck Compression	2520 N	192
Chest g	60 g	35
Chest Displacement	52 mm	22
Left Femur	6805 N	126
Right Femur	6805 N	66

Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

5th Percentile Female SN 511 Position 2 (Chin On Rim) 9-15-06 Trial 5

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	16
Peak Nij (Nte)	1.0	0.4
Time (ms)	NA	19.7
Peak Nij (Ntf)	1.0	0.1
Time (ms)	NA	73.9
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	173.2
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	80.8
Neck Tension	2070 N	771
Neck Compression	2520 N	93
Chest g	60 g	18
Chest Displacement	52 mm	20
Left Femur	6805 N	5
Right Femur	6805 N	62

Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

SECTION 3

INJURY RESULT SUMMARY FOR FMVSS 208 TESTS

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance

NHTSA No.: C60510
Test Date: 9/15/06

5th Percentile Female Low Risk Deployments

5th Percentile Female SN 510 Position 2 (Chin On Rim) 9-15-06 Trial 6

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	26
Peak Nij (Nte)	1.0	1.1 (1.064)
Time (ms)	NA	17.1
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	72.2
Peak Nij (Nce)	1.0	0.0
Time (ms)	NA	7.2
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	79.0
Neck Tension	2070 N	1120
Neck Compression	2520 N	104
Chest g	60 g	25
Chest Displacement	52 mm	21
Left Femur	6805 N	53
Right Femur	6805 N	53

Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

5th Percentile Female SN 510 Position 2 (Chin On Rim) 9-15-06 Trial 7

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	46
Peak Nij (Nte)	1.0	1.2 (1.197)
Time (ms)	NA	14.2
Peak Nij (Ntf)	1.0	0.1
Time (ms)	NA	59.3
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	133.2
Peak Nij (Ncf)	1.0	0.2
Time (ms)	NA	63.8
Neck Tension	2070 N	1427
Neck Compression	2520 N	170
Chest g	60 g	32
Chest Displacement	52 mm	21
Left Femur	6805 N	181
Right Femur	6805 N	328

Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

SECTION 3

INJURY RESULT SUMMARY FOR FMVSS 208 TESTS

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance

NHTSA No.: C60510
Test Date: 2/8/07

5th Percentile Female Low Risk Deployments

5th Percentile Female SN 124 Position 2 (Chin On Rim) 2-8-07 Trial 8

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	64
Peak Nij (Nte)	1.0	0.7
Time (ms)	NA	17.3
Peak Nij (Ntf)	1.0	0.3
Time (ms)	NA	56.3
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	183.4
Peak Nij (Ncf)	1.0	0.3
Time (ms)	NA	60.05
Neck Tension	2070 N	1344
Neck Compression	2520 N	261
Chest g	60 g	20
Chest Displacement	52 mm	20
Left Femur	6805 N	23
Right Femur	6805 N	18

Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

SECTION 3

INJURY RESULT SUMMARY FOR FMVSS 208 TESTS

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 3/26/07

40 kmph Frontal Crash

Impact Angle: Zero degrees

Belted Dummies: ___Yes _X_ No
Speed Range: ___ 0 to 40 kmph _X_ 32 to 40 kmph
___ 0 to 48 kmph ___ 0 to 56 kmph

Test Speed: 39.8 kmph Test Weight: 1687.8 kg

Driver Dummy: _X_ 5th female ___ 50th male
Passenger Dummy: _X_ 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	31	208
N_{te}	1.0	0.5	0.5
N_{tf}	1.0	0.1	0.3
N_{ce}	1.0	0.0	0.6
N_{cf}	1.0	0.2	0.2
Neck Tension	2620 N	851	1074
Neck Compression	2520 N	77	133
Chest g	60 g	42	34
Chest Displacement	52 mm	26	35
Left Femur	6805 N	3008	3856
Right Femur	6805 N	2798	3383

SECTION 4

DISCUSSION OF TESTS

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance

NHTSA No.: C60510
Test Dates: 6/9/06 - 3/26/07

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

The neck tension-extension (Nte) was more than the maximum allowed (1.0) for the position 2, chin on rim, 5th percentile driver low risk deployment test. (S25.4(a)(5)). Eight position 2 low risk deployment tests were performed on NHTSA's test vehicle for this investigation. Three of the eight trials had neck tension-extension injury measures that exceeded 1.000. These trials were: Trial 2 = 1.168, Trial 6 = 1.064, and Trial 7 = 1.197. Trial 1 on 7/10/06 was performed with a steering column and steering wheel that had been used on an invalid position 1 low risk deployment test. All other trials used a new steering column and steering wheel.

Hyundai issued a recall (NHTSA recall no. 06V445, Hyundai recall no. 79) to remedy this situation. Low risk deployment position 2 trial 8 and low risk deployment position 1 were conducted with the recall remedy and passed all the injury measure requirements.

SECTION 5

TEST DATA SHEETS

Test Vehicle:	2006 HMC Tucson	NHTSA No.:	C60510
Test Program:	FMVSS 208 Compliance	Test Dates:	6/9/06 - 3/26/07

DATA SHEET 1

COTR VEHICLE WORK ORDER

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance

NHTSA No.: C60510
Test Dates: 6/9/06 - 3/26/07

COTR Signature: Charles R. Case

Test to be performed for this vehicle are checked below:

X	1.	Rear Outboard Seating Position Seat Belts (S4.1.2(b)) & (S4.2.4)
X	2.	Air Bag Labels (S4.5.1)
X	3.	Readiness Indicator (S4.5.2)
X	4.	Passenger Air Bag Manual Cut-off Device (S4.5.4)
X	5.	Lap Belt Lockability (S7.1.1.5)
X	6.	Seat Belt Warning System (S7.3)
X	7.	Seat Belt Contact Force (S7.4.4)
X	8.	Seat Belt Latch Plate Access (S7.4.4)
X	9.	Seat Belt Retraction (S7.4.5)
X	10.	Seat Belt Guides and Hardware (S7.4.6)
X	11.	Suppression tests with 12-month-old CRABI dummy (Part 572, Subpart R) using the following indicated child restraints.

Section B

X	Britax Handle with Care 191	X	Full Rearward	X	Mid Position	X	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
X	Evenflo First Choice 204	X	Full Rearward	X	Mid Position	X	Full Forward
	Evenflo On My Way Position Right V 282		Full Rearward		Mid Position		Full Forward
X	Graco Infant 8457	X	Full Rearward	X	Mid Position	X	Full Forward

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

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

Section A

X	Cosco Dream Ride 02-719	X	Full Rearward	X	Mid Position	X	Full Forward

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

Section C

X	Britax Roundabout 161	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 5th percentile female dummy (S20.3, 22.3, S24.3). Perform this test after the following suppression tests: After each restraint.
	22.	Test of Reactivation of the passenger air bag system with a representative 5th percentile female (S20.3, 22.3, S24.3). Perform this test after the following suppression 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
- [X] 26. Low risk deployment test with 5th percentile female dummy (Part 572, Subpart O) in the following positions
  - [X] Position 1
  - [X] Position 2
- [X] 27. Impact Tests
  - [ ] Frontal Oblique – Test Speed:
    - [ ] Belted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.1(a))
    - [ ] Unbelted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a)(1))
    - [ ] Unbelted 50th male dummy driver and passenger (32 to 40 kmph) (S5.1.2(a) (1) or S5.1.2(b))
  - [X] Frontal 0° - Test Speed: 39.8 kmph
    - [ ] Belted 50th male dummy driver (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a))
    - [ ] Belted 50th male dummy passenger (0 to 48 kmph) (S5.1.1.(b)(1) or S5.1.1(a))
    - [ ] Belted 5th female dummy driver (0 to 48 kmph) (S16.1(a))
    - [ ] Belted 5th female dummy passenger (0 to 48 kmph) (S16.1(a))
    - [ ] Belted 50th male dummy driver and passenger (0 to 56 kmph) (S5.1.1.(b)(2))
    - [ ] Unbelted 50th male dummy driver and passenger (0 to 48 kmph) (S5.1.2(a) (1))
    - [ ] Unbelted 50th male dummy driver (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b))
    - [ ] Unbelted 50th male dummy passenger (32 to 40 kmph) (S5.1.2.(a)(2) or S5.1.2(b))
    - [X] Unbelted 5th female dummy driver (32 to 40 kmph) (S16.1(b))
    - [X] Unbelted 5th female dummy passenger (32 to 40 kmph) (S16.1(b))
  - [ ] 40% Offset 0° Belted 5th male dummy driver and passenger (0 to 40 kmph) (S18.1) – Test Speed:
- [ ] 28. Sled Test: Unbelted 50th male dummy driver and passenger (S13)
- [ ] 29. FMVSS 204 Indicant Test
- [X] 30. FMVSS 212 Indicant Test
- [X] 31. FMVSS 219 Indicant Test
- [X] 32. FMVSS 301 Frontal Indicant Test

DATA SHEET 2

REPORT OF VEHICLE CONDITION

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
NHTSA No.: C60510
Test Dates: 6/9/06 - 3/26/07

CONTRACT NO.: DTNH22-03-D-11002 Date: 05/19/06
FROM (Lab and rep name): MGA Research Corporation
TO: NHTSA, OVSC (NVS-220)

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

MODEL YEAR/MAKE/MODEL/BODY STYLE:	2006 HMC Tucson 4 Door		
MANUFACTURE DATE:	1/07/06		
NHTSA NO.	C60510	GVWR:	2030 kg (4475 lbs)
BODY COLOR:	Blue	GAWR (Fr):	1150 kg (2535 lbs)
VIN:	KM8JM12B16U378533	GAWR (Rr):	1100 kg (2425 lbs)

ODOMETER READINGS: ARRIVAL (miles): 9 DATE: 5/19/06
COMPLETION (miles): 49 DATE: 3/26/07

PURCHASE PRICE: ($) 18,110

DEALER'S NAME: Dennis Mitsubishi; 2900 Morse Road; Columbus OH 43231

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: 2006 HMC Tucson NHTSA NO. C60510

REMARKS:

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

Spare tire, jack and tools

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: 3/30/2007

APPROVED BY: David Winkelbauer DATE: 3/30/2007

########## ##########

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: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Jamie Aide

NHTSA No.: C60510
Test Date: 3/26/07

Certification Label	
Manufacturer:	Hyundai Motor Company
Date of Manufacture:	1/07/06
VIN:	KM8JM12B16U378533
Vehicle Certified As (Pass. Car/MPV/Truck/Bus):	MPV
Front Axle GVWR:	1150 kg (2535 lbs)
Rear Axle GVWR:	1100 kg (2425 lbs)
Total GVWR:	2030 kg (4475 lbs)

Tire Placard	
Not applicable, vehicle is not a passenger car and does not have a tire placard.	YES (MPV)
This is not a passenger car, but all or part of this information is still contained on a vehicle label and is reported here.	YES (MPV)
Vehicle Capacity Weight:	390 kg (860 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:	P215/65R16

Signature: 

Date: 3/26/07

DATA SHEET 4

REAR OUTBOARD SEATING POSITION SEAT BELTS

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Wayne Dahlke

NHTSA No.: C60510
Test Date: 6/9/06

	Yes	No
Do all rear outboard seating positions have Type 2 seat belts?	X	

If NO, describe the seat belt installed, the seat location, and any other information about the seat that would explain why a Type 2 seat belt was not installed.

REMARKS:

Signature: Wayne Dahlke

Date: 6/9/06

DATA SHEET 5

AIR BAG LABELS (S4.5.1)

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Wayne Dahlke

NHTSA No.: C60510
Test Date: 6/9/06

[X] 1. Air bag maintenance label and owner's manual instructions: (S4.5.1(a))

[X] 1.1 Does the manufacturer recommend periodic maintenance or replacement of the air bag?

[ ] Yes, go to 1.2
[X] No – go to 2

[ ] 1.2 Does the vehicle have a label specifying air bag maintenance or replacement?

[ ] Yes – Pass
[ ] No – Fail

[ ] 1.3 Does the label contain one of the following?

[ ] Yes – Pass
[ ] No – Fail

Check applicable schedule:

Schedule on label specifies month and year (Record date_____)

__ Schedule on label specified vehicle mileage (Record mileage_____)

__ Schedule on label specifies interval measured from date on certification label (Record interval_____)

[ ] 1.4 Is the label permanently affixed within the passenger compartment such that it cannot be removed without destroying or defacing the label or the sunvisor? (3/19/01 legal interpretation to Todd Mitchell)

[ ] Yes – Pass
[ ] No – Fail

[ ] 1.5 Is the label lettered in English?

[ ] Yes – Pass
[ ] No – Fail

[ ] 1.6 Is the label in block capitals and numerals?

[ ] Yes – Pass
[ ] No – Fail

[ ] 1.7 Are the letters and numerals at least 3/32 inches high?

[ ] Yes – Pass
[ ] No – Fail

[ ] 1.8 Does the owner's manual set forth the recommended schedule for maintenance or replacement?

[X] 2. Does the owner's manual: (S4.5.1(f))

[X] 2.1 Include a description of the vehicle's air bag system in an easily understandable format?

[X] Yes – Pass
[ ] No – Fail

[X] 2.2 Include a statement that the vehicle is equipped with an air bag and a lap/shoulder belt at the front outboard seating position?

[X] Yes – Pass
[ ] No – Fail

[X] 2.3 Include a statement that the air bag is a supplemental restraint at the front outboard seating position?

[X] Yes – Pass
[ ] No – Fail

[X] 2.4 Emphasize that all occupants, including the driver, should always wear their seat belts whether or not an air bag is also provided at their seating positions to minimize the risk of severe injury or death in the event of a crash?

[X] Yes – Pass
[ ] No – Fail

[X] 2.5 Provide any necessary precautions regarding the proper positioning of occupants, including children, at seating positions equipped with air bags to ensure maximum safety protection for those occupants?

[X] Yes – Pass
[ ] No – Fail

[X] 2.6 Explain that no objects should be placed over or near the air bag on the steering wheel or on the instrument panel, because any such objects could cause harm if the vehicle is in a crash severe enough to cause the air bag to inflate?

[X] Yes – Pass
[ ] No – Fail

[X] 2.7 Is the vehicle certified to meet the requirements of S14.5, S15, S17, S19, S21, S23, and S25? (Obtain answer from COTR) (S4.5.1(f)(2))

[X] Yes – (Go to 2.7.1)
[ ] No – (Go to 3.)

[X] 2.7.1 Explain the proper functioning of the advanced air bag system? (S4.5.1(f)(2))

[X] Yes – Pass
[ ] No – Fail

[X] 2.7.2 Provide a summary of the actions that may affect the proper functioning of the system? (S4.5.1(f)(2))

[X] Yes – Pass
[ ] No – Fail

[X] 2.7.3 Present and explain the main components of the advanced passenger air bag system? (S4.5.1(f)(2)(i))

[X] Yes – Pass
[ ] No – Fail

[X] 2.7.4 Explain how the components function together as part of the advanced passenger air bag system? (S4.5.1(f)(2)(ii))

[X] Yes – Pass
[ ] No – Fail

[X] 2.7.5 Contain the basic requirements for proper operation, including an explanation of the actions that may affect the proper functioning of the system? (S4.5.1(f)(2)(iii))

[X] Yes – Pass
[ ] No – Fail

[X] 2.7.6 Is the vehicle certified to the requirements of S19.2, S21.2, or 23.2 (automatic suppression)?

[X] Yes, continue with 2.7.6
[ ] No, go to 2.7.7

[X] 2.7.6.1 Contain a complete description of the passenger air bag suppression system installed in the vehicle, including a discussion of any suppression zone? (S4.5.1(f)(2)(iv))

[X] Yes – Pass
[ ] No – Fail

[X] 2.7.6.2 Discuss the telltale light, specifying its location in the vehicle and explaining when the light is illuminated?

[X] Yes – Pass
[ ] No – Fail

[X] 2.7.7 Explain the interaction of the advanced passenger air bag system with other vehicle components, such as seat belts, seats or other components? (S4.5.1(f)(2)(v))

[X] Yes – Pass
[ ] No – Fail

[X] 2.7.8 Summarize the expected outcomes when child restraint systems, children and small teenagers or adults are both properly and improperly positioned in the passenger seat, including cautionary advice against improper placement of child restraint systems? (S4.5.1(f)(2)(vi))

[X] Yes – Pass
[ ] No – Fail

[X] 2.7.9 Provide information on how to contact the vehicle manufacturer concerning modifications for persons with disabilities that my affect the advanced air bag system? (S4.5.1(f)(2)(vii))

[X] Yes – Pass
[ ] No – Fail

[X] 3. Sun Visor Air Bag Warning Label (S4.5.1(b)) Check only one of the following:

[ ] The vehicle is not certified to meet the requirements of S19, S21, and S23 (Obtain answer from COTR) (S4.5.1(b)(1)) Go to 3.1 and skip 3.2

[X] The vehicle is certified to meet the requirements of S19, S21, and S23 on 9/1/03 or later. (Obtain answer from COTR) (S4.5.1(b)(3)) Go to 3.2 and skip 3.1

[ ] 3.1 Vehicles not certified to meet the requirements of S19, S21, and S23.

[ ] 3.1.1 Is the label permanently affixed (including permanent marking on the visor material or molding into the visor material) to either side of the sun visor at each front outboard seating position such that it cannot be removed without destroying or defacing the label or sun visor? (S4.5.1(b)(1)) (3/19/01 legal interpretation to Todd Mitchell)

[ ] Driver Side, Yes – Pass
[ ] Driver Side, No – Fail
[ ] Passenger Side, Yes – Pass
[ ] Passenger Side, No – Fail

3.1.2 Does the label conform in content to the label shown in either Figure 6A or 6B (Figure 6b is for vehicles with passenger air bag on-off switches), as appropriate, at each front outboard seating position? (S4.5.1(b)(1)) (Vehicles without back seats may omit the statement: "The back seat is the safest place for children." (S4.5.1(b)(1)(iv))

Figure 6a. Sun Visor Label Visible When Visor is in Down Position.

Figure 6b. Sun Visor Label Visible When Visor is in Down Position.

- Driver Side, Yes – Pass
- Driver Side, No – Fail
- Passenger Side, Yes – Pass
- Passenger Side, No – Fail

3.1.3 Is the label heading area yellow with the word "WARNING" and the alert symbol in black? (S4.5.1(b)(1)(i))

- Driver Side, Yes – Pass
- Driver Side, No – Fail
- Passenger Side, Yes – Pass
- Passenger Side, No – Fail

3.1.4 Is the message area white with black text? (S4.5.1(b)(1)(ii))

- Driver Side, Yes – Pass
- Driver Side, No – Fail
- Passenger Side, Yes – Pass
- Passenger Side, No – Fail

	3.1.5	Is the message area at least 30 cm^2? (S4.5.1(b)(1)(ii)) **The message area consists of the total label area minus the yellow heading area and the pictogram. The pictogram is enclosed on the left side and bottom by the edge of the label and on the top by line that borders the yellow heading area. The right side of the pictogram is defined by a vertical line midway between the rightmost edge of the pictogram and the left most edge of the text, including any bullets. (See 5/6/03 interpretation to Gerald Plante on behalf of Subaru)** Driver Side: Length_____, Width_____ Passenger Side: Length_____, Width_____ Actual message area _____ cm^2 ☐ Driver Side, Yes – Pass ☐ Driver Side, No – Fail ☐ Passenger Side, Yes – Pass ☐ Passenger Side, No – Fail
	3.1.6	Is the pictogram black with a red circle and slash on a white background? (S4.5.1(b)(2)(iii)) ☐ Driver Side, Yes – Pass ☐ Driver Side, No – Fail ☐ Passenger Side, Yes – Pass ☐ Passenger Side, No – Fail
	3.1.7	Is the pictogram at least 30 mm in diameter? (S4.5.1(b)(2)(iii)) Actual diameter_____mm ☐ Driver Side, Yes – Pass ☐ Driver Side, No – Fail ☐ Passenger Side, Yes – Pass ☐ Passenger Side, No – Fail
X	3.2	Vehicles certified to meet the requirements of S19, S21, and S23 on 9/1/03 and later. (S4.5.1(b)(3))
X	3.2.1	Is the label permanently affixed (including permanent marking on the visor material or molding into the visor material) to either side of the sun visor at each front outboard seating position such that it cannot be removed without destroying or defacing the label or the sun visor? (S4.5.1(b)(3)) (3/19/01 legal interpretation to Todd Mitchell) X Driver Side, Yes – Pass ☐ Driver Side, No – Fail X Passenger Side, Yes – Pass ☐ Passenger Side, No – Fail

X 3.2.2 Does the label conform in content to the label shown in Figure 11 at each front outboard seating position? (S4.5.1(b)(2)) (Vehicles without back seats may omit the statement: “The back seat is the safest place for children.” (S4.5.1(b)(3)(iv)) Vehicles without back seats or the back seat is too small to accommodate a rear-facing child restraint may omit the statement “Never put a rear-facing child seat in the front.”(S4.5.1(b)(3)(v))

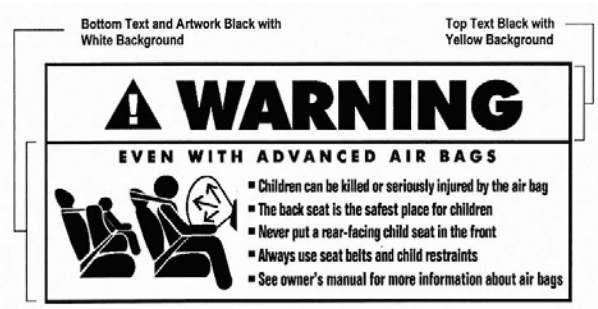


Figure 11. Sun Visor Label Visible when Visor is in Down Position.

X Driver Side, Yes – Pass
☐ Driver Side, No – Fail
X Passenger Side, Yes – Pass
☐ Passenger Side, No – Fail

X 3.2.3 Is the label heading area yellow with the word “WARNING” and the alert symbol in black? (S4.5.1(b)(3)(i))

X Driver Side, Yes – Pass
☐ Driver Side, No – Fail
X Passenger Side, Yes – Pass
☐ Passenger Side, No – Fail

X 3.2.4 Is the message area white with black text? (S4.5.1(b)(3)(ii))

X Driver Side, Yes – Pass
☐ Driver Side, No – Fail
X Passenger Side, Yes – Pass
☐ Passenger Side, No – Fail

X 3.2.5 Is the message area at least 30 cm^2? (S4.5.1(b)(3)(ii)) The message area consists of the total label area minus the yellow heading area and the pictogram. The pictogram is enclosed on the left side and bottom by the edge of the label. The top edge of the pictogram area is defined by a horizontal line midway between the uppermost edge of the pictogram and the lowermost edge of the text. The right side of the pictogram is defined by a vertical line midway between the rightmost edge of the pictogram and the left most edge of the text, including any bullets. (See 5/6/03 interpretation to Gerald Plante on behalf of Subaru)

Driver Side: Length 12.4 cm, Width 3.9 cm

Passenger Side: Length 12.4 cm, Width 3.9 cm

Actual message area 48.4 cm^2

X	Driver Side, Yes – Pass
	Driver Side, No – Fail
X	Passenger Side, Yes – Pass
	Passenger Side, No – Fail

X 3.2.6 Is the pictogram black on a white background? (S4.5.1(b)(3)(iii)

X	Driver Side, Yes – Pass
	Driver Side, No – Fail
X	Passenger Side, Yes – Pass
	Passenger Side, No – Fail

X 3.2.7 Is the pictogram at least 30 mm (1.2 inches) in length? (S4.5.1(b)(3)(iii))

Driver Side: Length 33 mm

Passenger Side: Length 33 mm

X	Driver Side, Yes – Pass
	Driver Side, No – Fail
X	Passenger Side, Yes – Pass
	Passenger Side, No – Fail

X 3.3 Is the same side of the sun visor that contains the air bag warning label free of other information with the exception of the air bag maintenance label and/or the rollover-warning label? (S4.5.1(b)(5)(i))

X	Driver Side, Yes – Pass
	Driver Side, No – Fail
X	Passenger Side, Yes – Pass
	Passenger Side, No – Fail

X 3.4 Is the sun visor free of other information about air bags or the need to wear seat belts with the exception of the air bag alert label and/or the rollover-warning label? (S4.5.1(b)(5)(ii))

X	Driver Side, Yes – Pass
	Driver Side, No – Fail
X	Passenger Side, Yes – Pass
	Passenger Side, No – Fail

X 3.5 Does the driver side visor contain a rollover-warning label on the same side of the visor as the air bag warning label?

X Yes, go to 3.5.1

__ No, go to 4 (skipping 3.5.1 through 3.5 3)

X 3.5.1 Are both the rollover-warning label and the air bag warning label surrounded by a continuous solid-lined border?

X Yes, go to 3.5.2 and skip 3.5.3

__ No, go to 3.5.3 and skip 3.5.2

X 3.5.2 Is the shortest distance from the border of the rollover label to the border of the air bag warning label at least 1 cm? (575.105 (d)(1)(iv)(B))

1.6 cm actual distance

3.5.3 Is the shortest distance from any of the lettering or graphics on the rollover-warning label to any of the lettering or graphics of the air bag warning label at least 3 cm? (575.105 (d)(1)(iv)(A))

____ actual distance
__Yes-Pass __**No-FAIL**

X 4. Air Bag Alert Label (S4.5.1(c) (A "Rollover Warning Label" or "Rollover Alert Label" may be on the same side of the driver's sun visor as the "Air Bag Alert Label." 575.105(d))

X 4.1 Is the sun visor warning label visible when the sun visor is in the stowed position?

X **If yes for driver and passenger, go to 5**.
X Driver Side, Yes
Driver Side, No
X Passenger Side, Yes
Passenger Side, No

4.2 Is the air bag alert label permanently affixed (including permanent marking on the visor material or molding into the visor material) to the sun visor at each front outboard seating position such that it cannot be removed without destroying or defacing the label or the sun visor? (S4.5.1(c)) (3/19/01 legal interpretation to Todd Mitchell)

Driver Side, Yes – Pass
Driver Side, No – **Fail**
Passenger Side, Yes – Pass
Passenger Side, No – Fail

4.3 Is the air bag alert label visible when the visor is in the stowed position? (S4.5.1(c))

Driver Side, Yes – Pass
Driver Side, No – Fail
Passenger Side, Yes – Pass
Passenger Side, No – Fail

☐ 4.4 Does the label conform in content to the label shown in Figure 6C? (S4.5.1(c))

Figure 6c. Sun Visor Label Visible When Visor is in Up Position.

- ☐ Driver Side, Yes – Pass
- ☐ Driver Side, No – Fail
- ☐ Passenger Side, Yes – Pass
- ☐ Passenger Side, No – Fail

☐ 4.5 Is the message area black with yellow text? (S4.5.1(c)(1)

- ☐ Driver Side, Yes – Pass
- ☐ Driver Side, No – Fail
- ☐ Passenger Side, Yes – Pass
- ☐ Passenger Side, No – Fail

☐ 4.6 Is the message area at least 20 cm^2? (S4.5.1(c)(1)) The message area consists of the black part of the label.

Driver Side: Length ____, Width ____
Passenger Side: Length ____, Width ____
Actual message area ____

- ☐ Driver Side, Yes – Pass
- ☐ Driver Side, No – Fail
- ☐ Passenger Side, Yes – Pass
- ☐ Passenger Side, No – Fail

☐ 4.7 Is the pictogram black with a red circle and slash on a white background? (S4.5.1(c)(2))

- ☐ Driver Side, Yes – Pass
- ☐ Driver Side, No – Fail
- ☐ Passenger Side, Yes – Pass
- ☐ Passenger Side, No – Fail

☐ 4.8 Is the pictogram at least 20 mm in diameter? (S4.5.1(c)(2))
Driver Side Diameter ___mm
Passenger Side Diameter ____mm

- ☐ Driver Side, Yes – Pass
- ☐ Driver Side, No – Fail
- ☐ Passenger Side, Yes – Pass
- ☐ Passenger Side, No – Fail

X 5. Label on the Dashboard

X 5.1 Is the vehicle certified to meet the requirements of S19, S21, and S23? (Obtain answer from COTR) (S4.5.1(e)(3))

X Yes, go to 5.1.1 and **skip 5.2**

No, go to 5.2, skipping 5.1.1 through 5.1.6

X 5.1.1 Does the vehicle have a label on the dash or steering wheel hub? (S4.5.1(e)(3))

X Yes – Pass

No – Fail

X 5.1.2 Is the label clearly visible from all front seating positions? (S4.5.1(e)(3))

X Yes – Pass

No – Fail

X 5.1.3 Does the label conform in content to the label shown in Figure 12? (S4.5.1(e)(3)) **Vehicles without back seats may omit the statement: "The back seat is the safest place for children." Vehicles without back seats or too small to accommodate a rear-facing child restraint consistent with S4.5.4.1 as determined in DATA SHEET 7 may omit the statement "Never put a rear-facing child seat in the front." (S4.5.1(e)(3)(iii)))**

X Yes – Pass

No – Fail

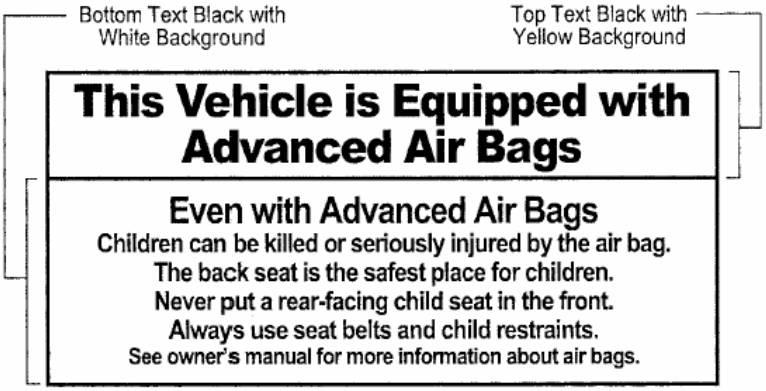


Figure 12. Removable Label on Dash.

X 5.1.4 Is the heading area yellow with black text? (S4.5.1(e)(3)(i))

X Yes – Pass

No – Fail

X 5.1.5 Is the message white with black text? (S4.5.1(e)(3)(ii))

X Yes – Pass

No – Fail

X 5.1.6 Is the message area at least 30 cm^2? (S4.5.1(e)(3)(ii)) The message area consists of the total label area minus the yellow heading area. (See 5/6/03 interpretation to Gerald Plante on behalf of Subaru)

Length 11.5 cm Width 3.3 cm

Actual message area 38.0 cm^2

X Yes – Pass

No – Fail

5.2 Does the vehicle have a label on the dash or steering wheel hub? (S4.5.1(e)(1))

Yes – Pass

No – Fail

5.2.1 Is the label clearly visible from all front seating positions? (S4.5.1(e)(1))

Yes – Pass

No – Fail

5.2.2 Does the label conform in content to the label shown in Figure 7? (S4.5.1(e)(1)(iii)) Vehicles without back seats may omit the statement: "The back seat is the safest place for children." (S4.5.1(e)(1)(iii))

Yes – Pass

No – Fail

Figure 7. Removable Label on Dash.

5.2.3 Is the heading area yellow with the word "WARNING" and the alert symbol in black? (S4.5.1(e)(1)(i)

Yes – Pass

No – Fail

5.2.4 Is the message white with black text? (S4.5.1(e)(1)(ii))

Yes – Pass

No – Fail

5.2.5 Is the message area at least 30 cm^2? (S4.5.1(e)(1)(ii)) The message area consists of the total label area minus the yellow heading area. (See 5/6/03 interpretation to Gerald Plante on behalf of Subaru)

Length_____, Width_____

Actual message area _____ cm^2

Yes – Pass

No – Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: 

Date: 6/9/06

DATA SHEET 6

FMVSS 208 READINESS INDICATOR (S4.5.2)

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Wayne Dahlke

NHTSA No.: C60510
Test Date: 6/9/06

An occupant restraint system that deploys in the event of a crash shall have a monitoring system with a readiness indicator. A totally mechanical system is exempt from this requirement. (11/8/94 legal interpretation to Lawrence F. Hennegerger on behalf of Breed)

[X] 1. Is the system totally mechanical? If Yes, this data sheet is complete.
- [ ] Yes
- [X] No

[X] 2. Describe the location of the readiness indicator: *Center Left of Instrument Cluster*

[X] 3. Is the readiness indicator clearly visible to the driver?
- [X] Yes – Pass
- [ ] No - Fail

[X] 4. Is a list of the elements in the occupant restraint system, being monitored by the readiness indicator, provided on a label or in the owner's manual?
- [X] Yes – Pass
- [ ] No - Fail

[X] 5. Does the vehicle have an on-off switch for the passenger air bag?
- [ ] If Yes, go to 6
- [X] If No, this form is complete.

[ ] 6. Is the air bag readiness indicator off when the passenger air bag switch is in the off position?
- [ ] Yes – Pass
- [ ] No - Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Dahlke

Date: 6/9/06

DATA SHEET 7

PASSENGER AIR BAG MANUAL CUT-OFF DEVICE (S4.5.4)

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Wayne Dahlke

NHTSA No.: C60510
Test Date: 6/9/06

[X] 1. Is the vehicle equipped with an on-off switch that deactivates the air bag installed at the right front outboard seating position?

- [ ] Yes, go to 2
- [X] No, this sheet is complete

[ ] 2. Does the vehicle have any forward-facing rear designated seating positions? (S4.5.4.1(a))

- [ ] Yes, go to 3
- [ ] No, go to 4

[ ] 3. Verification there is room for a child restraint in the rear seat behind the driver's seat. (S4.5.4.1(b))

[ ] 3.1 Using all the controls that affect the fore-aft movement of the seat, move the seat to the rearmost position. Mark this position.

- [ ] N/A, the seat does not have fore-aft adjustment

[ ] 3.2 Using all the controls that affect the fore-aft movement of the seat, move the seat to the foremost position. Mark this position.

- [ ] N/A, the seat does not have fore-aft adjustment

[ ] 3.3 Move the seat to the middle of the foremost and rearmost positions. (S8.1.2)

- [ ] N/A, the seat does not have a fore-aft adjustment

[ ] 3.4 If the driver's seat height is adjustable, use all the controls that affect height to put it in the lowest position while maintaining the middle fore-aft position. (S8.1.2)

- [ ] N/A, No seat height adjustment

[ ] 3.5 Position the driver's seat adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)

- [ ] N/A, No lumbar adjustment

[ ] 3.6 The driver's seat back angle, if adjustable, is set at the manufacturer's nominal design riding position for a 50th percentile adult male in the manner specified by the manufacturer. (S4.5.4.1(b) and S8.1.3)

- [ ] N/A, No seat back angle adjustment
- [ ] Manufacturer's design driver's seat back angle _____
- [ ] Tested driver's seat back angle _____

[ ] 3.7 Is the driver seat a bucket seat?

[ ] __ Yes, go to 3.7.1 and skip 3.7.2.
[ ] __ No, go to 3.7.2 and skip 3.7.1.

[ ] 3.7.1 Bucket seats:

[ ] 3.7.1.1 Locate and mark a vertical Plane B through the longitudinal centerline of the driver's seat cushion. The longitudinal centerline of a bucket seat cushion is determined at SgRP. (S16.3.1.10) (S4.5.4.1(b)(1))

3.7.1.2 Locate the longitudinal horizontal line in plane B that is tangent to the highest point of the rear seat cushion behind the driver's seat. Measure along this line from the front of the seat back of the rear seat to the rear of the seat back of the driver's seat.

____ mm distance
__less than 720 mm – Pass
__more than 720 mm – **FAIL**
Go to 4

3.2 Bench seats (including split bench seats):

3.7.2.1 Locate and mark a vertical Plane B through the center of the steering wheel parallel to the vehicle longitudinal centerline. (S4.5.4.1(b)(2))

3.7.2.2 Locate the longitudinal horizontal line in plane B that is tangent to the highest point of the rear seat cushion. Measure along this line from the front of the seat back of the rear seat to the rear of the seat back of the front seat.

____ mm distance
__less than 720 mm – Pass
__more than 720 mm - **FAIL**
Go to 4

4. Does the device turn the air bag on and off using the vehicle's ignition key? (S4.5.4.2)

Yes – Pass
No – Fail

5. Is the on-off device separate from the ignition switch? (S4.5.4.2)

Yes – Pass
No – Fail

6. Is there a telltale light that comes on when the passenger air bag is turned off? (S4.5.4.2)

Yes – Pass
No – Fail

7. Telltale light (S4.5.4.3)

7.1 Is the light yellow? S4.5.4.3(a))

Yes – Pass
No – Fail

7.2 Are the words "PASSENGER AIR BAG OFF" or "PASS AIR BAG OFF" (S4.5.4.3(b))

7.2.1 on the telltale?

Yes – Pass, go to 7.3
No – go to 7.2.2

7.2.2 within 25 mm of the telltale?

Measurement from the edge of the telltale light (mm):

Yes – Pass
No – Fail

7.3 Does the telltale remain illuminated while the air bag is turned off? (S4.5.4.3c)) (Leave the air bag off for 5 minutes.)

Yes – Pass
No – Fail

7.4 Is the telltale illuminated while the air bag is turned on? (S4.5.4.3(d))

- Yes – Fail
- No – Pass

7.5 Is the telltale combined with the air bag readiness indicator? (S4.5.4.3(e))

- Yes – Fail
- No – Pass

8. Owner's Manual

8.1 Does the owner's manual contain complete instructions on the operation of the on-off switch? (S4.5.4.4(a))

- Yes – Pass
- No – Fail

8.2 Does the owner's manual contain a statement that the on-off switch should only be used when a member of one of the following risk groups is occupying the right front passenger seating position? (S4.5.4.4(b))

Infants:	there is no back seat
	the rear seat is too small to accommodate a child restraint
	there is a medical condition that must be monitored constantly
Children aged 1 to 12:	there is no back seat
	space is not always available in the rear seat
	there is a medical condition that must be monitored constantly
Medical condition:	medical risk causes special risk for passenger
	greater risk for harm than with the air bag on

- Yes – Pass
- No – Fail

8.3 Does the owner's manual contain a warning about the safety consequences of using the on-off switch at other times?

- Yes – Pass
- No – Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Dahlen

Date: 6/9/06

DATA SHEET 8

LAP BELT LOCKABILITY
Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 6/9/06
Test Technician: Wayne Dahlke

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), **and** that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DESIGNATED SEATING POSITION:	Front Passenger

		N/A – no retractor is at this position
		N/A – the retractor is an automatic locking retractor ONLY
X	1.	Record test fore-aft seat position: FULL AFT (S7.1.1.5(c)(1)) (Any position is acceptable)
X	2.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a))
		X Yes – Pass
		No – Fail
X	3.	Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))
		X Yes – Pass
		No – Fail
X	4.	Place any adjustable seat belt anchorage in the lowest adjustment position.
		N/A The anchorage is not adjustable.
X	5.	Buckle the seat belt. (S7.1.1.5(c)(1))
X	6.	Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))
X	7.	Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))
X	8.	Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?
		X Yes, go to 8.1
		No, go to 9.
X	8.1	Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))
		X Yes – Pass
		No – Fail

X 9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

X 10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

X Measured distance between A and B (inches): 70 ¾ inches

X 11. Readjust the belt system so that the webbing between points A and B is at 1/2 the maximum length of the webbing. (S7.1.1.5(c)(3))

X 12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

X Measured force application angle (Spec. 5-15 degrees): 9°

X 13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

X Measured distance between A and B (inches): 30 ¼ inches

X 14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

X Record onset rate (lb/sec) (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)): 35lbs./sec

X Measured distance between A and B (inches) (S7.1.1.5(c)(6)): 30 3/8 inches

X 15. Let the seat belt webbing retract to its minimum length with the seat belt still buckled

X 16. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle 8.5° spec. 5 - 15 degrees)

X 17. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B 22 inches

[X] 18. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate 35lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))

Measured distance between A and B 28 1/8 inches (S7.1.1.5(c)(6))

[X] 19. Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? (S7.1.1.5(c)(7))

[X] 14-13 = 30 3/8 - 30 ¼ = 1/8 inch

[X] 18-17 = 22 1/8 - 22 = 1/8 inch

[X] Yes – Pass

[ ] No – Fail

[X] 20. Subtract the measurement in 14 from the measurement in 10 and the measurement in 18 from the measurement in 10. Is the difference 3 inches or more for both? (S7.1.1.5(c)(8))

[X] 10-14 = 70 ¾ - 30 3/8 = 40 3/8 inches

[X] 10-18 = 70 ¾ - 28 1/8 = 42 5/8 inches

[X] Yes – Pass

[ ] No – Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Dahl

Date: 6/9/06

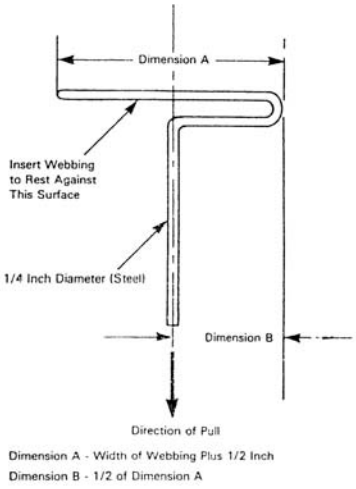


Figure 5. - Webbing Tension Pull Device

DATA SHEET 8

LAP BELT LOCKABILITY
Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 6
Test Technician: Wayne Dahlke

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), **and** that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DESIGNATED SEATING POSITION:	Left Rear Passenger

[ ] N/A – no retractor is at this position

[ ] N/A – the retractor is an automatic locking retractor ONLY

[X] 1. Record test fore-aft seat position: (S7.1.1.5(c)(1)) (Any position is acceptable) FIXED

[X] 2. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a))

[X] Yes – Pass

[ ] No – Fail

[X] 3. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))

[X] Yes – Pass

[ ] No – Fail

[X] 4. Place any adjustable seat belt anchorage in the lowest adjustment position.

[X] N/A The anchorage is not adjustable.

[X] 5. Buckle the seat belt. (S7.1.1.5(c)(1))

[X] 6. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

[X] 7. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

[X] 8. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?

[X] Yes, go to 8.1

[ ] No, go to 9.

[X] 8.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))

[X] Yes – Pass

[ ] No – Fail

X 9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

X 10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

X Measured distance between A and B (inches): 62 inches

X 11. Readjust the belt system so that the webbing between points A and B is at 1/2 the maximum length of the webbing. (S7.1.1.5(c)(3))

X 12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

X Measured force application angle (Spec. 5-15 degrees): 8.1°

X 13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

X Measured distance between A and B (inches): 24 ½ inches

X 14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

X Record onset rate (lb/sec) (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)): 30 lbs/sec

X Measured distance between A and B (inches) (S7.1.1.5(c)(6)): 24 ½ inches

X 15. Let the seat belt webbing retract to its minimum length with the seat belt still buckled

X 16. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle 8.5° (spec. 5 - 15 degrees)

X 17. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B 10 ½ inches

X 18. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate 30 lbs/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))

Measured distance between A and B 11 inches (S7.1.1.5(c)(6))

[X] 19. Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? (S7.1.1.5(c)(7))

[X] 14-13 = 24 ½ – 24 ½ = 0 inches

[X] 18-17 = 11 – 10 ½ = ½ inch

[X] Yes – Pass

[ ] No – Fail

[X] 20. Subtract the measurement in 14 from the measurement in 10 and the measurement in 18 from the measurement in 10. Is the difference 3 inches or more for both? (S7.1.1.5(c)(8))

[X] 10-14 = 62 – 24 ½ = 37 ½ inches

[X] 10-18 = 62 - 11 = 51 inches

[X] Yes – Pass

[ ] No – Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Fahl

Date: 6/9/06

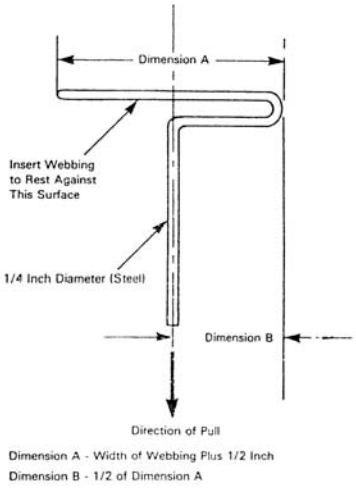


Figure 5. - Webbing Tension Pull Device

DATA SHEET 8

LAP BELT LOCKABILITY
Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 6/9/06
Test Technician: Wayne Dahlke

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), **and** that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DESIGNATED SEATING POSITION:	Center Rear Passenger

[ ] N/A – no retractor is at this position

[ ] N/A – the retractor is an automatic locking retractor ONLY

[X] 1. Record test fore-aft seat position: FIXED (S7.1.1.5(c)(1)) (Any position is acceptable)

[X] 2. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a))

- [X] Yes – Pass
- [ ] No – Fail

[X] 3. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))

- [X] Yes – Pass
- [ ] No – Fail

[X] 4. Place any adjustable seat belt anchorage in the lowest adjustment position.

- [X] N/A The anchorage is not adjustable.

[X] 5. Buckle the seat belt. (S7.1.1.5(c)(1))

[X] 6. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

[X] 7. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

[X] 8. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?

- [X] Yes, go to 8.1
- [ ] No, go to 9

[X] 8.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))

- [X] Yes – Pass
- [ ] No – Fail

X 9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

X 10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

X Measured distance between A and B (inches): 56 ¾ inches

X 11. Readjust the belt system so that the webbing between points A and B is at 1/2 the maximum length of the webbing. (S7.1.1.5(c)(3))

X 12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

X Measured force application angle (Spec. 5-15 degrees): 8.8°

X 13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

X Measured distance between A and B (inches): 24 ¼ inches

X 14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

X Record onset rate (lb/sec) (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)): 40lbs/sec

X Measured distance between A and B (inches) (S7.1.1.5(c)(6)): 24 ¼ inches

X 15. Let the seat belt webbing retract to its minimum length with the seat belt still buckled

X 16. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle 9° (spec. 5 - 15 degrees)

X 17. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B 2 ¾ inches

X
X

18. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate 40lb/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))

Measured distance between A and B 3 inches (S7.1.1.5(c)(6))

X

19. Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? (S7.1.1.5(c)(7))

X
X

14-13 = 24 ¼ - 24 ¼ = 0 inches

18-17 = 3 - 2 ¾ = ¼ inch

X Yes – Pass

No – Fail

X

20. Subtract the measurement in 14 from the measurement in 10 and the measurement in 18 from the measurement in 10. Is the difference 3 inches or more for both? (S7.1.1.5(c)(8))

X
X

10-14 = 56 ¾ - 24 ¼ = 32 ½ inches

10-18 = 56 ¾ - 3 = 53 ¾ inches

X Yes – Pass

No – Fail

I certify that I have read and performed each instruction.

Signature: Wayne Dahl

Date: 6/9/06

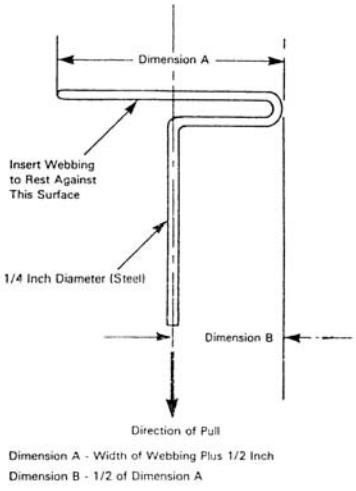


Figure 5. - Webbing Tension Pull Device

DATA SHEET 8

LAP BELT LOCKABILITY
Passenger cars, trucks, buses, and multipurpose passenger Vehicles with a GVWR of 10,000 pounds or less. (S7.1.1.5)

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 6/9/06
Test Technician: Wayne Dahlke

Complete one of these forms for **each** designated seating position that can be adjusted to forward-facing or that is a forward-facing seat, other than the driver's seat (S7.1.1.5(a), **and** that has seat belt retractors that are not solely automatic locking retractors. (S7.1.1.5(c))

DESIGNATED SEATING POSITION:	Right Rear Passenger

[ ] N/A – no retractor is at this position

[ ] N/A – the retractor is an automatic locking retractor ONLY

[X] 1. Record test fore-aft seat position: FIXED (S7.1.1.5(c)(1)) (Any position is acceptable)

[X] 2. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** have to be attached by the vehicle user to the seat belt webbing, retractor, or any other part of the vehicle. (S7.1.1.5 (a))

- [X] Yes – Pass
- [ ] No – Fail

[X] 3. Does the lap belt portion of the seat belt in the forward-facing seat or seat that can be adjusted to forward-facing consist of a locking device that does **NOT** require inverting, twisting or deforming of the belt webbing. (S7.1.1.5 (a))

- [X] Yes – Pass
- [ ] No – Fail

[X] 4. Place any adjustable seat belt anchorage in the lowest adjustment position.

- [X] N/A The anchorage is not adjustable.

[X] 5. Buckle the seat belt. (S7.1.1.5(c)(1))

[X] 6. Locate a reference point A on the seat belt buckle. (S7.1.1.5(c)(2))

[X] 7. Locate a reference point B on the attachment hardware or retractor assembly at the other end of the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

[X] 8. Does the vehicle user need to take some action to activate the locking feature on the lap belt portion of the seat belt in any forward-facing seat or seat that can be adjusted to forward-facing?

- [X] Yes, go to 8.1
- [ ] No, go to 9.

[X] 8.1 Does the vehicle owner's manual include a description in words and/or diagrams describing how to activate the locking feature so that the seat belt assembly can tightly secure a child restraint system and how to deactivate the locking feature to remove the child restraint system. (S7.1.1.5(b))

- [X] Yes – Pass
- [ ] No – Fail

X 9. Adjust the lap belt or lap belt portion of the seat belt assembly according to any procedures recommended in the vehicle owner's manual to activate any locking feature so that the webbing between points A and B is at the maximum length allowed by the belt system. (S7.1.1.5(c)(2) & S7.1.1.5(c)(1))

X 10. Measure and record the distance between points A and B along the longitudinal centerline of the webbing for the lap belt or lap belt portion of the seat belt assembly. (S7.1.1.5(c)(2))

X Measured distance between A and B (inches): 61 ½ inches

X 11. Readjust the belt system so that the webbing between points A and B is at 1/2 the maximum length of the webbing. (S7.1.1.5(c)(3))

X 12. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

X Measured force application angle (Spec. 5-15 degrees): 11°

X 13. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

X Measured distance between A and B (inches): 26 ¼ inches

X 14. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

X Record onset rate (lb/sec) (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5)): 40lbs/sec

X Measured distance between A and B (inches) (S7.1.1.5(c)(6)): 26 ½ inches

X 15. Let the seat belt webbing retract to its minimum length with the seat belt still buckled

X 16. To the lap belt or lap belt portion of the seat belt assembly, apply a preload of 10 pounds using the webbing tension pull device in Figure 5. Apply the load in a vertical plane parallel to the longitudinal axis of the vehicle and passing through the seating reference point of the designated seating position. Apply the preload in a horizontal direction toward the front of the vehicle with a force application angle of not less than 5 degrees nor more than 15 degrees above the horizontal. (S7.1.1.5(c)(4))

Measured force application angle 10° (spec. 5 - 15 degrees)

X 17. Measure the length between points A and B along the longitudinal centerline of the webbing while the preload is being applied. (S7.1.1.5(c)(4))

Measured distance between A and B 10 ¾ inches

X 18. Increase the load to 50 pounds at a rate of no more than 50 pounds per second. Attain the load in not more than 5 seconds. (If webbing sensitive emergency locking retractors are installed as part of the lap belt or lap belt portion of the seat belt assembly, apply the load at a rate less than the threshold value for lock-up specified by the manufacturer.) Maintain the load for at least 5 seconds. Measure and record the distance between points A and B along the longitudinal centerline of the webbing. (S7.1.1.5(c)(5))

Record onset rate 45lbs/sec (spec. 10 to 50 lb/sec) (S7.1.1.5(c)(5))

Measured distance between A and B 11 ¼ inches (S7.1.1.5(c)(6))

X 19. Subtract the measurement in 13 from the measurement in 14 and the measurement in 17 from the measurement in 18. Is the difference 2 inches or less for both? (S7.1.1.5(c)(7))

X 14-13 = 26 ½ - 26 ¼ = ¼ inch

X 18-17 = 11 ¼ - 10 ¾ = ½ inch

X Yes – Pass

No – Fail

X 20. Subtract the measurement in 14 from the measurement in 10 and the measurement in 18 from the measurement in 10. Is the difference 3 inches or more for both? (S7.1.1.5(c)(8))

X 10-14 = 61 ½ - 26 ½ = 35 inches

X 10-18 = 61 ½ - 11 ¼ = 50 ¼ inches

X Yes – Pass

No – Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Gahlen

Date: 6/9/06

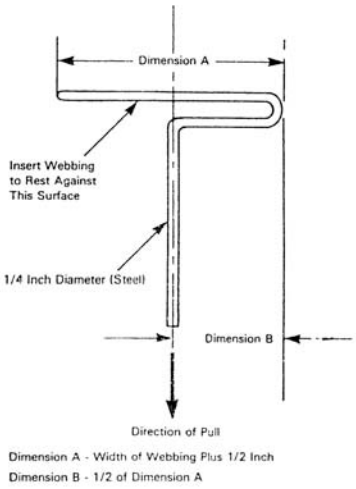


Figure 5. - Webbing Tension Pull Device

DATA SHEET 9

FMVSS 208 SEAT BELT WARNING SYSTEM CHECK (S7.3)

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 6/9/06
Test Technician: Wayne Dahlke

X	1.	The occupant is in the driver's seat.
X	2.	The seat belt is in the stowed position.
X	3.	The key is in the "on" or "start" position.
X	4.	The time duration of the audible signal beginning with key "on" or "start" is
X		Seconds: 5
X	5.	The occupant is in the driver's seat.
X	6.	The seat belt is in the stowed position.
X	7.	The key is in the "on" or "start" position.
X	8.	The time duration of the warning light beginning with key "on" or "start" is
X		Seconds: Stays On
X	9.	The occupant is in the driver's seat.
X	10.	The seat belt is in the latched position and with at least 4 inches of belt webbing extended.
X	11.	The key is in the "on" or "start" position.
X	12.	The time duration of the warning light beginning with key "on" or "start" is
X		Seconds: 0
X	13.	Complete the following table with the data from 4, 8, and 12 to determine which option is used.

		Warning light	Warning light specification	Audible signal	Audible signal specification*
S7.3 (a)(1)	Belt stowed & key on or start	Item 8: Stays On	60 seconds minimum	Item 4: 5	4 to 8 seconds
S7.3 (a)(2)	Belt latched & key on or start	Item 12: 0	4 to 8 seconds		
	Belt stowed & key on or start	Item 8: Stays On	4 to 8 seconds	Item 4: 5	4 to 8 seconds

* 49 USCS @ 30124 does NOT allow an audible signal to operate for more than 8 seconds.
A voluntary audible signal after the 4 to 8 second required signal may be provided. It must be differentiated from the required signal (5/25/2001 legal interpretation to Longacre and Associates).

[X] 14. The seat belt warning system meets the requirements of (manufacturers may comply with either section)

- [X] S7.3 (a)(1)
- [ ] S7.3 (a)(2)
- [ ] FAIL – does not meet the requirements of either option

[X] 15. Note wording of visual warning: (S7.3(a)(1) and S7.3(a)(2))

- [ ] Fasten seat belts
- [ ] Fasten belts
- [X] Symbol 101 - 
- [ ] FAIL – does not use any of the above wording or symbol

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Dahl

Date: 6/9/06

DATA SHEET 10

BELT CONTACT FORCE (S7.4.3)

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 6/9/06
Test Technician: Wayne Dahlke

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Left Front Driver

[X] 1. Does the vehicle incorporate a webbing tension-relieving device?
- [ ] Yes, this form is complete
- [X] No, continue with this check sheet

[X] 2. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
- [ ] N/A, no lumbar adjustment

[X] 3. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
- [X] N/A, no additional support adjustment

[X] 4. Is the fore-aft position of the seat adjustable?
- [ ] No- go to 5
- [X] Yes – Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2

[X] 5. Is the seat back angle adjustable?
- [ ] No- go to 6
- [X] Yes-Use the seat back angle determined in Data Sheet 14.2

[X] 6. Position the test dummies according to dummy position placement instructions in Appendix F. **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**

[X] 7. Fasten the seat belt latch.

[X] 8. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

[X] 9. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

[X] Contact Force (lb):
- [X] 0.0 to 0.7 pounds – Pass 0.4 lbs.
- [ ] Greater than 0.7 pounds - Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: 

Date: 6/9/06

DATA SHEET 10

BELT CONTACT FORCE (S7.4.3)

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 6/9/06
Test Technician: Wayne Dahlke

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Right Front Passenger

X 1. Does the vehicle incorporate a webbing tension-relieving device?
- [ ] Yes, this form is complete
- [X] No, continue with this check sheet

X 2. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
- [X] N/A, no lumbar adjustment

X 3. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
- [X] N/A, no additional support adjustment

X 4. Is the fore-aft position of the seat adjustable?
- [ ] No- go to 5
- [X] Yes – Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2

X 5. Is the seat back angle adjustable?
- [ ] No- go to 6
- [X] Yes-Use the seat back angle determined in Data Sheet 14.2

X 6. Position the test dummies according to dummy position placement instructions in Appendix F. **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**

X 7. Fasten the seat belt latch.

X 8. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

X 9. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

X Contact Force (lb):
- [X] 0.0 to 0.7 pounds – Pass 0.4 lbs.
- [ ] Greater than 0.7 pounds - Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: 

Date: 6/9/06

DATA SHEET 10

BELT CONTACT FORCE (S7.4.3)

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 6/9/06
Test Technician: Wayne Dahlke

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Left Rear Passenger

X 1. Does the vehicle incorporate a webbing tension-relieving device?

- [ ] Yes, this form is complete
- [X] No, continue with this check sheet

X 2. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)

- [X] N/A, no lumbar adjustment

X 3. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)

- [X] N/A, no additional support adjustment

X 4. Is the fore-aft position of the seat adjustable?

- [X] No- go to 5
- [ ] Yes – Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2

X 5. Is the seat back angle adjustable?

- [X] No- go to 6
- [ ] Yes-Use the seat back angle determined in Data Sheet 14.2

X 6. Position the test dummies according to dummy position placement instructions in Appendix F. **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**

X 7. Fasten the seat belt latch.

X 8. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

X 9. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

X Contact Force (lb):

- [X] 0.0 to 0.7 pounds – Pass 0.5 lbs.
- [ ] Greater than 0.7 pounds - Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: 

Date: 6/9/06

DATA SHEET 10

BELT CONTACT FORCE (S7.4.3)

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 6/9/06
Test Technician: Wayne Dahlke

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Center Rear Passenger

X 1. Does the vehicle incorporate a webbing tension-relieving device?

- [ ] Yes, this form is complete
- [X] No, continue with this check sheet

X 2. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)

- [X] N/A, no lumbar adjustment

X 3. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)

- [X] N/A, no additional support adjustment

X 4. Is the fore-aft position of the seat adjustable?

- [X] No- go to 5
- [ ] Yes – Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2

X 5. Is the seat back angle adjustable?

- [X] No- go to 6
- [ ] Yes-Use the seat back angle determined in Data Sheet 14.2

X 6. Position the test dummies according to dummy position placement instructions in Appendix F. **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**

X 7. Fasten the seat belt latch.

X 8. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

X 9. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

X Contact Force (lb):

- [X] 0.0 to 0.7 pounds – Pass 0.4 lbs.
- [ ] Greater than 0.7 pounds - Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: 

Date: 6/9/06

DATA SHEET 10

BELT CONTACT FORCE (S7.4.3)

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 6/9/06
Test Technician: Wayne Dahlke

Test all Type 2 seat belts other than those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Right Rear Passenger

X 1. Does the vehicle incorporate a webbing tension-relieving device?
- [ ] Yes, this form is complete
- [X] No, continue with this check sheet

X 2. Position the seat's adjustable lumbar supports so that the lumbar support is in its lowest, retracted or deflated adjustment position. (S8.1.3)
- [X] N/A, no lumbar adjustment

X 3. Position any adjustable parts of the seat that provide additional support so that they are in the lowest or most open adjustment position. (S16.2.10.2)
- [X] N/A, no additional support adjustment

X 4. Is the fore-aft position of the seat adjustable?
- [X] No- go to 5
- [ ] Yes – Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2

X 5. Is the seat back angle adjustable?
- [X] No- go to 6
- [ ] Yes-Use the seat back angle determined in Data Sheet 14.2

X 6. Position the test dummies according to dummy position placement instructions in Appendix F. **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**

X 7. Fasten the seat belt latch.

X 8. Pull either 12 inches of belt webbing or the maximum available amount of belt webbing, whichever is less, from the retractor and then release it, allowing the belt webbing to return to the dummy's chest.

X 9. Locate the point where the centerline of the upper torso belt webbing crosses the midsagittal line on the dummy's chest. At that point pull the belt webbing out 3 inches from the dummy's chest and release until it is within one inch from the dummy's chest. (S10.8) Using a force measuring gage with a full scale range of no more than 1.5 pounds, measure the contact force perpendicular to the dummy's chest exerted by the belt webbing.

X Contact Force (lb):
- [X] 0.0 to 0.7 pounds – Pass 0.4 lbs.
- [ ] Greater than 0.7 pounds - Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: 

Date: 6/9/06

DATA SHEET 11

LATCH PLATE ACCESS (S7.4.4)

Test Vehicle:	2006 HMC Tucson	NHTSA No.:	C60510
Test Program:	FMVSS 208 Compliance	Test Date:	6/9/06
Test Technician:	Wayne Dahlke		

Test all front outboard seat belts **other than those in** walk-in van-type vehicles and those at front outboard designated seating positions in **passenger cars**. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Left Front Driver

X	1.	Put the seat in the forwardmost fore-aft and full down height position determined in Data Sheet 14.2. (S10.7)
X	2.	Put the seat back angle in the position determined in Data Sheet 14.2.
X	3.	Position the test dummy using the procedures in Appendix F. (Some modifications to the positioning procedure may need to be made because the seat is in its forward most position. Note on the Appendix F positioning check sheet any deviations necessary to position the Part 572, Subpart E dummy.) **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**
X	4.	Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50th percentile adult male occupant.
X	5.	Attach the inboard reach string to the base of the head following the instructions on Figure 3.
X	6.	Attach the outboard reach string to the torso sheath following the instructions on Figure 3.
X	7.	Place the latch plate in the stowed position.
X	8.	Extend inboard reach string in front of the dummy and then backward and outboard to the latch plate to generate an arc of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?
		X Yes – Pass No
X	9.	Extend outboard reach string in front of the dummy and then backward and outboard to the latch plate to generate arcs of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?
		X Yes – Pass No
X	10.	Is the latch plate within the inboard (item 10) or outboard (item 11) reach envelope?
		X Yes – Pass No – Fail
X	11.	Using the clearance test block, specified in Figure 4, is there sufficient clearance between the vehicle seat and the side of vehicle interior to allow the test block to move unhindered to the latch plate or buckle?
		X Yes – Pass No – Fail

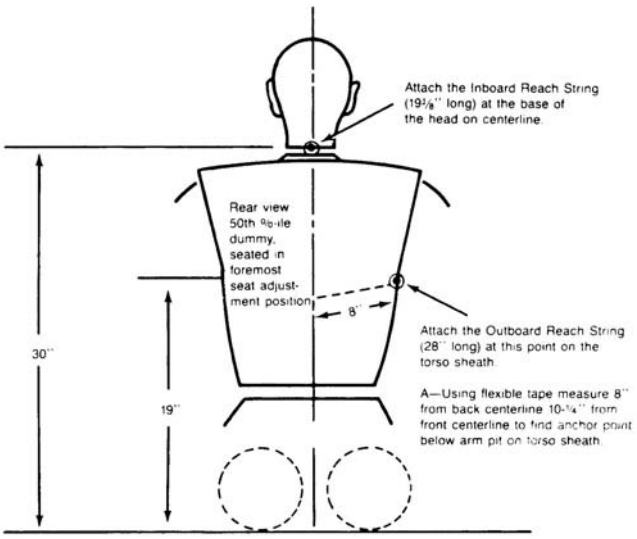


Figure 3. Location of Anchoring Points for Latchplate Reach Limiting Chains or Strings to Test for Latchplate Accessibility Using Subpart E Test Device

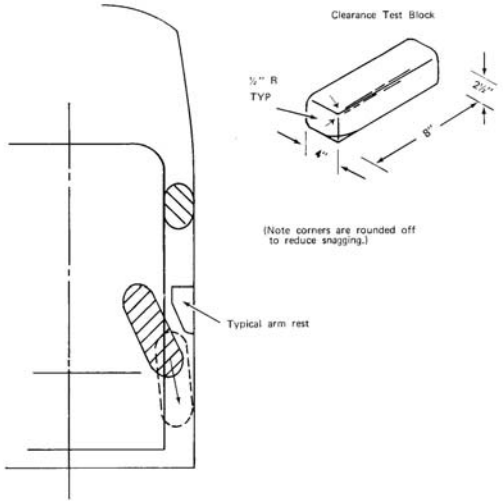


Figure 4—USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Fahlen

Date: 6/9/06

DATA SHEET 11

LATCH PLATE ACCESS (S7.4.4)

Test Vehicle:	2006 HMC Tucson	NHTSA No.:	C60510
Test Program:	FMVSS 208 Compliance	Test Date:	6/9/06
Test Technician:	Wayne Dahlke		

Test all front outboard seat belts **other than those in** walk-in van-type vehicles and those at front outboard designated seating positions in **passenger cars**. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Right Front Passenger

X	1.	Put the seat in the forwardmost fore-aft and full down height position determined in Data Sheet 14.2. (S10.7)
X	2.	Put the seat back angle in the position determined in Data Sheet 14.2.
X	3.	Position the test dummy using the procedures in Appendix F. (Some modifications to the positioning procedure may need to be made because the seat is in its forward most position. Note on the Appendix F positioning check sheet any deviations necessary to position the Part 572, Subpart E dummy.) **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**
X	4.	Position the adjustable seat belt anchorage in the manufacturer's nominal design position for a 50th percentile adult male occupant.
X	5.	Attach the inboard reach string to the base of the head following the instructions on Figure 3.
X	6.	Attach the outboard reach string to the torso sheath following the instructions on Figure 3.
X	7.	Place the latch plate in the stowed position.
X	8.	Extend inboard reach string in front of the dummy and then backward and outboard to the latch plate to generate an arc of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?
		X Yes – Pass No
X	9.	Extend outboard reach string in front of the dummy and then backward and outboard to the latch plate to generate arcs of the reach envelope of the test dummy's arms. Is the latch plate within the reach envelope?
		X Yes – Pass No
X	10.	Is the latch plate within the inboard (item 10) or outboard (item 11) reach envelope?
		X Yes – Pass No – Fail
X	11.	Using the clearance test block, specified in Figure 4, is there sufficient clearance between the vehicle seat and the side of vehicle interior to allow the test block to move unhindered to the latch plate or buckle?
		X Yes – Pass No – Fail

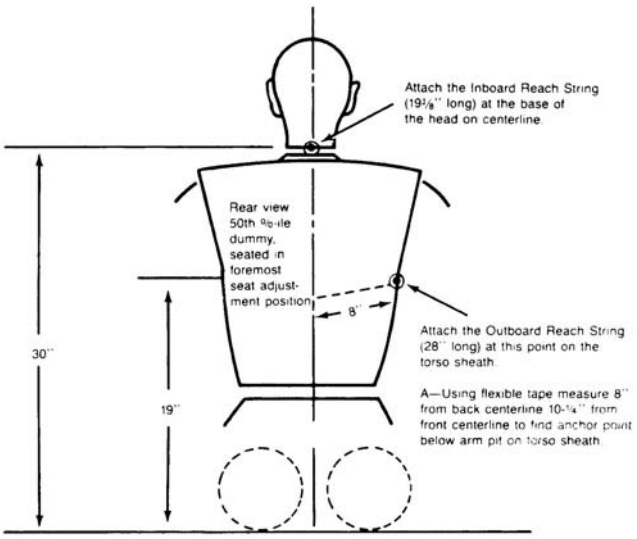


Figure 3. Location of Anchoring Points for Latchplate Reach Limiting Chains or Strings to Test for Latchplate Accessibility Using Subpart E Test Device

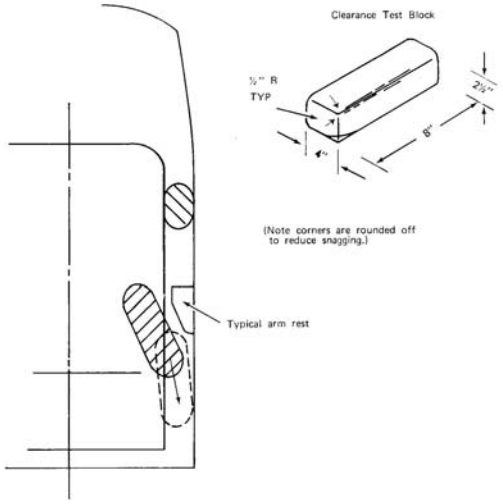


Figure 4—USE OF CLEARANCE TEST BLOCK TO DETERMINE HAND/ARM ACCESS

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Fahlen

Date: 6/9/06

DATA SHEET 12

SEAT BELT RETRACTION (S7.4.5)

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Wayne Dahlke

NHTSA No.: C60510
Test Date: 6/9/06

Test all front outboard seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Left Front Driver

[X] 1. Is the vehicle a passenger car or walk-in van-type vehicle?

- [ ] Yes, this form is complete
- [X] No

[X] 2. Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2. (S8.1.2)

[X] 3. Put the seat back angle in the position determined in Data Sheet 14.2. (8.1.3)

[X] 4. Position the Part 572 Subpart E test dummy according to dummy position placement instructions in Appendix F. **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**

[X] 5. Fasten the seat belt around the dummy.

[X] 6. Remove all slack from the lap belt portion. (S10.9)

- [ ] N/A, the seat does not have a fore-aft adjustment

[X] 7. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this four times. (S10.9)

[X] 8. Apply a 2 to 4 pound tension load to the lap belt. (S10.9)

[X] **Pound load applied:** 3

[X] 9. Is the belt system equipped with a tension relieving device?

- [ ] __Yes, continue
- [X] **__No, go to 12**

[ ] 10. Introduce the maximum amount of slack into the upper torso bet that is recommended by the vehicle manufacturer in the vehicle owner's manual. (S10.9).

[ ] 11. Check the statement that applies to this test vehicle:

[ ] 11.1 The torso and lap belt webbing of the seat belt system automatically retracts to a stowed position when the adjacent vehicle door is in an open position and the seat belt latch plate is released.

- [ ] Yes – Pass go to 12
- [ ] No – go to 11.2

11.2 The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt latch plate is released.

- [ ] Yes – Pass go to 12
- [ ] No – go to 11.3

11.3

- [ ] Neither 11.1 nor 11.2 apply.
- [ ] Fail

[X] 12. With the webbing and hardware in the stowed position are the webbing and hardware prevented from being pinched when the door is closed?

- [X] Yes – Pass
- [ ] No – Fail

[X] 13. If this test vehicle has an open body (without doors) and has a belt system with a tension-relieving device, does the belt system fully retract when the tension-relieving device is deactivated?

- [X] N/A – Not an open body vehicle
- [ ] Yes – Pass
- [ ] No – Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Dahl

Date: 6/9/06

DATA SHEET 12

SEAT BELT RETRACTION (S7.4.5)

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Wayne Dahlke

NHTSA No.: C60510
Test Date: 6/9/06

Test all front outboard seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Right Front Passenger

[X] 1. Is the vehicle a passenger car or walk-in van-type vehicle?

- [ ] Yes, this form is complete
- [X] No

[X] 2. Put the seat in the mid fore-aft and full down height position determined in Data Sheet 14.2. (S8.1.2)

[X] 3. Put the seat back angle in the position determined in Data Sheet 14.2. (8.1.3)

[X] 4. Position the Part 572 Subpart E test dummy according to dummy position placement instructions in Appendix F. **Complete the Appendix F check sheets, but include them in the test report ONLY if there is a test failure.**

[X] 5. Fasten the seat belt around the dummy.

[X] 6. Remove all slack from the lap belt portion. (S10.9)

- [ ] N/A, the seat does not have a fore-aft adjustment

[X] 7. Pull the upper torso webbing out of the retractor and allow it to retract; repeat this four times. (S10.9)

[X] 8. Apply a 2 to 4 pound tension load to the lap belt. (S10.9)

[X] **Pound load applied:** 3

[X] 9. Is the belt system equipped with a tension relieving device?

- [ ] __Yes, continue
- [X] **__No, go to 12**

[ ] 10. Introduce the maximum amount of slack into the upper torso bet that is recommended by the vehicle manufacturer in the vehicle owner's manual. (S10.9).

[ ] 11. Check the statement that applies to this test vehicle:

[ ] 11.1 The torso and lap belt webbing of the seat belt system automatically retracts to a stowed position when the adjacent vehicle door is in an open position and the seat belt latch plate is released.

- [ ] Yes – Pass go to 12
- [ ] No – go to 11.2

11.2 The torso and lap belt webbing of the seat belt system automatically retracts when the seat belt latch plate is released.

- [ ] Yes – Pass go to 12
- [ ] No – go to 11.3

11.3

- [ ] Neither 11.1 nor 11.2 apply.
- [ ] Fail

[X] 12. With the webbing and hardware in the stowed position are the webbing and hardware prevented from being pinched when the door is closed?

- [X] Yes – Pass
- [ ] No – Fail

[X] 13. If this test vehicle has an open body (without doors) and has a belt system with a tension-relieving device, does the belt system fully retract when the tension-relieving device is deactivated?

- [X] N/A – Not an open body vehicle
- [ ] Yes – Pass
- [ ] No – Fail

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Dahl

Date: 6/9/06

DATA SHEET 13

SEAT BELT GUIDES AND HARDWARE (S7.4.6)

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Wayne Dahlke

NHTSA No.: C60510
Test Date: 6/9/06

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Left Front Driver

[X] 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))
- [ ] Yes, this form is complete
- [X] No, go to 2

[X] 2. Is the seat removable? (S7.4.6.1(b))
- [ ] Yes, this form is complete
- [X] No, go to 3

[X] 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
- [ ] Yes, this form is complete
- [X] No, go to 4

[X] 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
- [ ] Yes, go to 5
- [X] No, this form is complete

[ ] 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))
- [ ] Yes – Pass
- [ ] No – Fail

Identify the part(s) on top or above the seat.
- [ ] Seat belt latch plate
- [ ] Buckle
- [ ] Seat belt webbing

[ ] 6. Are the remaining two seat belt parts accessible under normal conditions?
- [ ] Yes – Pass
- [ ] No – Fail

[ ] 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)
- [ ] Yes – Pass
- [ ] No – Fail

8. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)

- Yes – Pass
- No – Fail

9. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)

- Yes – Pass
- No – Fail

10. Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)

- Yes – Pass
- No – Fail
- N/A – Rear seat

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Fahl

Date: 6/9/06

DATA SHEET 13

SEAT BELT GUIDES AND HARDWARE (S7.4.6)

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Wayne Dahlke

NHTSA No.: C60510
Test Date: 6/9/06

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Right Front Passenger

[X] 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))
- [ ] Yes, this form is complete
- [X] No, go to 2

[X] 2. Is the seat removable? (S7.4.6.1(b))
- [ ] Yes, this form is complete
- [X] No, go to 3

[X] 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
- [ ] Yes, this form is complete
- [X] No, go to 4

[X] 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
- [ ] Yes, go to 5
- [X] No, this form is complete

[ ] 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))
- [ ] Yes – Pass
- [ ] No – Fail

Identify the part(s) on top or above the seat.
- [ ] Seat belt latch plate
- [ ] Buckle
- [ ] Seat belt webbing

[ ] 6. Are the remaining two seat belt parts accessible under normal conditions?
- [ ] Yes – Pass
- [ ] No – Fail

[ ] 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)
- [ ] Yes – Pass
- [ ] No – Fail

☐ 8. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)

- ☐ Yes – Pass
- ☐ No – Fail

☐ 9. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)

- ☐ Yes – Pass
- ☐ No – Fail

☐ 10. Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)

- ☐ Yes – Pass
- ☐ No – Fail
- ☐ N/A – Rear seat

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Fahlk

Date: 6/9/06

DATA SHEET 13

SEAT BELT GUIDES AND HARDWARE (S7.4.6)

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Wayne Dahlke

NHTSA No.: C60510
Test Date: 6/9/06

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Left Rear Passenger

[X] 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))
- [ ] Yes, this form is complete
- [X] No, go to 2

[X] 2. Is the seat removable? (S7.4.6.1(b))
- [ ] Yes, this form is complete
- [X] No, go to 3

[X] 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
- [ ] Yes, this form is complete
- [X] No, go to 4

[X] 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
- [X] Yes, go to 5
- [ ] No, this form is complete

[X] 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))
- [X] Yes – Pass
- [ ] No – Fail

Identify the part(s) on top or above the seat.
- [X] Seat belt latch plate
- [X] Buckle
- [X] Seat belt webbing

[X] 6. Are the remaining two seat belt parts accessible under normal conditions?
- [X] Yes – Pass
- [ ] No – Fail

[X] 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)
- [X] Yes – Pass
- [ ] No – Fail

[X] 8. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)

- [X] Yes – Pass
- [ ] No – Fail

[X] 9. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)

- [X] Yes – Pass
- [ ] No – Fail

[X] 10. Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)

- [ ] Yes – Pass
- [ ] No – Fail
- [X] N/A – Rear seat

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Fahlk

Date: 6/9/06

DATA SHEET 13

SEAT BELT GUIDES AND HARDWARE (S7.4.6)

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 6/9/06
Test Technician: Wayne Dahlke

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Center Rear Passenger

[X] 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))
- [ ] Yes, this form is complete
- [X] No, go to 2

[X] 2. Is the seat removable? (S7.4.6.1(b))
- [ ] Yes, this form is complete
- [X] No, go to 3

[X] 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))
- [ ] Yes, this form is complete
- [X] No, go to 4

[X] 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))
- [X] Yes, go to 5
- [ ] No, this form is complete

[X] 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))
- [X] Yes – Pass
- [ ] No – Fail

Identify the part(s) on top or above the seat.
- [X] Seat belt latch plate
- [X] Buckle
- [X] Seat belt webbing

[X] 6. Are the remaining two seat belt parts accessible under normal conditions?
- [X] Yes – Pass
- [ ] No – Fail

[X] 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)
- [X] Yes – Pass
- [ ] No – Fail

X 8. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)

- X Yes – Pass
- ☐ No – Fail

X 9. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)

- X Yes – Pass
- ☐ No – Fail

X 10. Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)

- ☐ Yes – Pass
- ☐ No – Fail
- X N/A – Rear seat

REMARKS:

I certify that I have read and performed each instruction.

Signature: 

Date: 6/9/06

DATA SHEET 13

SEAT BELT GUIDES AND HARDWARE (S7.4.6)

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Wayne Dahlke

NHTSA No.: C60510
Test Date: 6/9/06

Test seat belts except those in walk-in van-type vehicles and those at front outboard designated seating positions in passenger cars. Complete a form for each applicable seat belt.

DESIGNATED SEATING POSITION:	Right Rear Passenger

[X] 1. Is the seat cushion movable so that the seat back serves a function other than seating? (S7.4.6.1 (b))

- [ ] Yes, this form is complete
- [X] No, go to 2

[X] 2. Is the seat removable? (S7.4.6.1(b))

- [ ] Yes, this form is complete
- [X] No, go to 3

[X] 3. Is the seat movable so that the space formerly occupied by the seat can be used for a secondary function? (S7.4.6.1(b))

- [ ] Yes, this form is complete
- [X] No, go to 4

[X] 4. Is the webbing designed to pass through the seat cushion or between the seat cushion and seat back? (S7.4.6.1(a))

- [X] Yes, go to 5
- [ ] No, this form is complete

[X] 5. Does one of the following three parts, the seat belt latch plate, the buckle, or the seat belt webbing, stay on top of or above the seat cushion under normal conditions (i.e., conditions other than when belt hardware is intentionally pushed behind the seat by a vehicle occupant)? (S7.4.6.1(a))

- [X] Yes – Pass
- [ ] No – Fail

Identify the part(s) on top or above the seat.

- [X] Seat belt latch plate
- [X] Buckle
- [X] Seat belt webbing

[X] 6. Are the remaining two seat belt parts accessible under normal conditions?

- [X] Yes – Pass
- [ ] No – Fail

[X] 7. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the belt is completely retracted or, if the belt is nonretractable, the belt is unlatched. (S7.4.6.2)

- [X] Yes – Pass
- [ ] No – Fail

[X] 8. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat is moved to any position to which it is designed to be adjusted. (S7.4.6.2)

- [X] Yes – Pass
- [ ] No – Fail

[X] 9. The buckle and latch plate do not pass through the guides or conduits provided and fall behind the seat when the seat back, if foldable, is folded forward as far as possible and then moved backward into position. (S7.4.6.2)

- [X] Yes – Pass
- [ ] No – Fail

[X] 10. Is the inboard receptacle end of the seat belt assembly, installed in the front outboard designated seating position, accessible with the center armrest in any position to which it can be adjusted (without moving the armrest)? (S7.4.6.2)

- [ ] Yes – Pass
- [ ] No – Fail
- [X] N/A – Rear seat

REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Dahlen

Date: 6/9/06

DATA SHEET 14

MARKING OF REFERENCE POINTS FOR VARIOUS TEST POSITIONS AND POINTS

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 7/10/06
Test Technician: Kathryn Attocchi

DATA SHEET 14.1

MARKING OF REFERENCE POINTS FOR 5th FEMALE

X 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)
__ 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 6.4 Nose Up
Minimum angle 2.2 Nose Down
Mid-angle 2.1 Nose Up

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 21.0 Degrees

X 1.19. Is the seat a bucket seat?

X Yes, go to 1.20 and skip 1.21

__No, go to 1.21 and skip 1.20

X 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

X 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)

X 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)

X 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 230 mm

Mid-point height 115 mm

Kathryn Attrodi _____ 7/10/06

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

DATA SHEET 14.1

MARKING OF REFERENCE POINTS FOR 5th FEMALE

__Driver Seat X 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) NO ADJUSTMENT
Maximum angle Zero
Minimum angle Zero
Mid-angle 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 21.0 Degrees

X 1.19. Is the seat a bucket seat?

X Yes, go to 1.20 and skip 1.21

__No, go to 1.21 and skip 1.20

X 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

X 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)

X 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)

X 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 230 mm

Mid-point height 115 mm

Brian Roach _____ 6/14/06

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

DATA SHEET 14.3

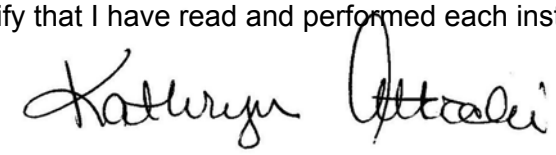
MARKING OF REFERENCE POINTS FOR STEERING WHEEL

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.



7/10/06

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

DATA SHEET 14.4

MARKING OF REFERENCE POINTS FOR DRIVER LOW RISK DEPLOYMENT

X Position 1 X Position 2

X 1. Position the steering wheel so the front wheels are in the straight-ahead position. (S26.2.1)

X 2. Position any adjustable parts of the steering controls to the mid-position as determined in Data Sheet 14.3 above. If a mid-position adjustment is not achievable, position the controls to the next lowest detent position. (S26.2.1)

X 3. Locate and **mark** the point that is defined by the intersection of the steering wheel cover and a line between the volumetric center of the smallest volume that can encompass the folded undeployed air bag and the volumetric center of the static fully inflated air bag. The vertical plane parallel to the vehicle longitudinal centerline through this point is referred to as "Plane E." (Check determination method below.) (S26.2.2)
Measurements with respect to measurement reference points:

The longitudinal centerline of the air bag was used.

__Point determined using manufacturer's information supplied by the COTR .
(Include manufacturer's information in the test report.)
OR
X Point determined by test lab personnel and approved by the COTR.
(Include supporting documentation in the test report.)

X 4. Locate the highest point of the air bag module cover. The horizontal plane through this point is referred to as "Plane F." (Check determination method below.) (S26.2.6)
Measurements with respect to measurement reference points:

The top of the air bag module cover was used.

__Point determined using manufacturer's information supplied by the COTR .
(Include manufacturer's information in the test report.)
OR
X Point determined by test lab personnel and approved by the COTR.
(Include supporting documentation in the test report.)

Kathryn Attardi 7/10/06

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

DATA SHEET 16

AIR BAG SUPPRESSION TELLTALE (S19.2.2)

Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 6/14/06
Test Technician: Jim Hansen

X 1. Is the vehicle certified to any suppression performance standards of FMVSS 208?
X Yes – go to 2
__No – this form is complete

X 2. Does telltale emit yellow light when the air bag is suppressed? (S19.2.2(a))
X Yes - Pass ___**NO – FAIL**

X 3. Are the words "PASSENGER AIR BAG OFF" or "PASS AIR BAG OFF" (S19.2.2(b))

X 3.1 on the telltale? (S19.2.2(b))
X Yes – Pass, go to 4
__No – go to 3.2

__3.2 within 25 mm of the telltale? (S19.2.2(b)) _____mm from the edge of the telltale light
___Yes - Pass ___**NO – FAIL**

X 4. Is the telltale separate from the air bag readiness indicator? (S19.2.2(c))
X Yes - Pass ___**NO – FAIL**

X 5. Is the telltale within the interior of the vehicle? (S19.2.2(d))
X Yes - Pass ___**NO – FAIL**

X 6 Is the telltale forward of and above the design H-point of both the driver's and the front outboard passenger's seat when the seats are in their forwardmost seating positions? (S19.2.2(d))
X Yes - Pass ___**NO – FAIL**

X 7. Is the telltale away from surfaces that can be used for temporary or permanent storage of objects that could obscure the telltale from either the driver's or front outboard passenger's view? (S19.2.2(d))
X Yes - Pass ___**NO – FAIL**

X 8. Is the telltale located so that it is not obscured from the driver or front outboard passenger by a rear-facing child restraint in Appendix A installed in the front outboard passenger seat? (S19.2.2(d))
X Yes - Pass ___**NO – FAIL**

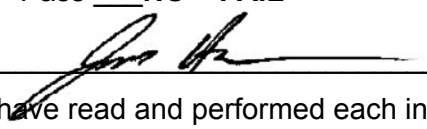
X 9. Is the telltale visible or recognizable during the night? (S19.2.2(e))
X Yes - Pass ___**NO – FAIL**

X 10. Is the telltale visible or recognizable during the day? (S19.2.2(e))
X Yes - Pass ___**NO – FAIL**

X 11. If there is a visibility adjustment, do all the adjustment levels make the telltale visible and recognizable? (S19.2.2(g))
X N/A-No visibility adjustment
___Yes - Pass ___**NO – FAIL**

X 12. Does the telltale remain illuminated while the air bag is suppressed? (S19.2.2(h)) (Leave the air bag suppressed for 5 minutes.)
X Yes - Pass ___**NO – FAIL**

X 13. Is the telltale off while the air bag is activated? (S19.2.2(h)) (Leave the air bag activated for 5 minutes.)
X Yes - Pass ___**NO – FAIL**



I certify that I have read and performed each instruction. 6/14/06 Date

DATA SHEET 17 SUMMARY

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

NHTSA No.:	C60510	TEST DATE:	6/14/06
LABORATORY:	MGA	TECHNICIANS:	JH
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	084

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: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
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 weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Rear Facing	Forward 3 *	133	Suppressed
	Middle	129	Suppressed
	Rearward	132	Suppressed
Unbelted Rear Facing	Forward 3 *	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Unbelted Forward Facing	Forward 6 *	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)

* 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 17 SUMMARY

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

NHTSA No.:	C60510	TEST DATE:	6/14/06
LABORATORY:	MGA	TECHNICIANS:	JH
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	084

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: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
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 weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Rear Facing	Forward 11 *	127	Suppressed
	Middle	129	Suppressed
	Rearward	132	Suppressed
Unbelted Rear Facing	Forward 12 *	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Unbelted Forward Facing	Forward 6 *	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)

* 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 17 SUMMARY

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

NHTSA No.:	C60510	TEST DATE:	6/14/06
LABORATORY:	MGA	TECHNICIANS:	JH
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	084

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: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
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 weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Rear Facing	Forward 10 *	127	Suppressed
	Middle	129	Suppressed
	Rearward	133	Suppressed
Unbelted Rear Facing	Forward 11 *	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Unbelted Forward Facing	Forward 10 *	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	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 17 SUMMARY

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

NHTSA No.:	C60510	TEST DATE:	6/14/06
LABORATORY:	MGA	TECHNICIANS:	JH
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	084

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

Base: __On _X_Off __N/A-Restraint does not have a removable base

Manufacturer's design seat back angle: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
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 weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Rear Facing	Forward 10 *	133	Suppressed
	Middle	127	Suppressed
	Rearward	129	Suppressed
Unbelted Rear Facing	Forward 10 *	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Unbelted Forward Facing	Forward 6 *	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)

* 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 17 SUMMARY

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

NHTSA No.:	C60510	TEST DATE:	6/14/06
LABORATORY:	MGA	TECHNICIANS:	JH
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	084

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: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
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 weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Forward Facing	Forward	129	Suppressed
	Middle	133	Suppressed
	Rearward	131	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Belted Rear Facing	Forward 4 *	131	Suppressed
	Middle	127	Suppressed
	Rearward	127	Suppressed
Unbelted Rear Facing	Forward 5 *	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)

* 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 17 SUMMARY

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

NHTSA No.:	C60510	TEST DATE:	6/14/06
LABORATORY:	MGA	TECHNICIANS:	JH
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	084

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

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

Manufacturer's design seat back angle: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
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 weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Forward Facing	Forward	128	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 4 *	131	Suppressed
	Middle	133	Suppressed
	Rearward	130	Suppressed
Unbelted Rear Facing	Forward 4 *	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)

* 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 17 SUMMARY

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

NHTSA No.:	C60510	TEST DATE:	6/14/06
LABORATORY:	MGA	TECHNICIANS:	JH
DUMMY TYPE:	12 Month Old	DUMMY SERIAL NO.:	084

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: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
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 weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Forward Facing	Forward	128	Suppressed
	Middle	132	Suppressed
	Rearward	127	Suppressed
Unbelted Forward Facing	Forward	N/A	Suppressed
	Middle	N/A	Suppressed
	Rearward	N/A	Suppressed
Belted Rear Facing	Forward 4 *	129	Suppressed
	Middle	127	Suppressed
	Rearward	131	Suppressed
Unbelted Rear Facing	Forward 4 *	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)

* 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

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

NHTSA No.:	C60510	TEST DATE:	6/14/06
LABORATORY:	MGA	TECHNICIANS:	JH
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 _X_N/A-Restraint does not have a removable base
(A car bed with a removable base shall be treated as two separate models, i.e. this form and test procedure will be completed with the base on and then repeated on a new form with the base off.

Manufacturer's design seat back angle: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
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 weight sensing system used on the vehicle.

Test Summary

Seat Belt	Seat Slide	Result
Belted	Forward	Suppressed
	Middle	Suppressed
	Rearward	Suppressed

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

DATA SHEET 19 SUMMARY

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

NHTSA No.:	C60510	TEST DATE:	6/15/06
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: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Forward Facing Without Harness	Forward	9	Suppressed
	Middle	16	Suppressed
	Rearward	13	Suppressed
Belted Forward Facing Cinched With Harness	Forward	130	Suppressed
	Middle	131	Suppressed
	Rearward	127	Suppressed

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

DATA SHEET 19 SUMMARY

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.:	C60510	TEST DATE:	6/15/06
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: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted Forward Facing Without Harness	Forward	14	Suppressed
	Middle	18	Suppressed
	Rearward	12	Suppressed
Belted Forward Facing Cinched With Harness	Forward	127	Suppressed
	Middle	131	Suppressed
	Rearward	131	Suppressed

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

DATA SHEET 20 SUMMARY

Suppression Test Using 3 Year Old Dummy And Convertible Restraints (Part 572, Subpart P)
Section C Forward Facing Convertible CRS

NHTSA No.:	C60510	TEST DATE:	6/14/06
LABORATORY:	MGA	TECHNICIANS:	JH
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: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Cinch Load (N)	Result
Belted	Forward 7 *	127	Suppressed
	Middle	133	Suppressed
	Rearward	132	Suppressed

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

DATA SHEET 20 SUMMARY

Suppression Test Using 3 Year Old Dummy And Convertible Restraints (Part 572, Subpart P)
Section C Forward Facing Convertible CRS

NHTSA No.:	C60510	TEST DATE:	6/14/06
LABORATORY:	MGA	TECHNICIANS:	JH
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: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
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	128	Suppressed
	Rearward	133	Suppressed

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

DATA SHEET 20 SUMMARY

Suppression Test Using 3 Year Old Dummy And Convertible Restraints (Part 572, Subpart P)
Section C Forward Facing Convertible CRS

NHTSA No.:	C60510	TEST DATE:	6/14/06
LABORATORY:	MGA	TECHNICIANS:	JH
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: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
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 *	127	Suppressed
	Middle	128	Suppressed
	Rearward	133	Suppressed

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

DATA SHEET 21 SUMMARY

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

NHTSA No.:	C60510	TEST DATE:	6/15/06
LABORATORY:	MGA	TECHNICIANS:	JH
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	21.0°	Suppressed
	Middle	21.0°	Suppressed
	Rearward	21.0°	Suppressed
Position 2 Sitting on seat with back against reclined seat back	Forward	45.0°	Suppressed
	Middle	45.0°	Suppressed
	Rearward	45.0°	Suppressed
Position 3 Sitting on seat with back not against seat back	Forward	21.0°	Suppressed
	Middle	21.0°	Suppressed
	Rearward	21.0°	Suppressed
Position 4 Sitting on seat edge, spine vertical, hands at dummy's sides	Forward	21.0°	Suppressed
	Middle	21.0°	Suppressed
	Rearward	21.0°	Suppressed
Position 5 Standing on seat, facing forward	Forward	21.0°	Suppressed
	Middle	21.0°	Suppressed
	Rearward	21.0°	Suppressed
Position 6 Kneeling on seat, facing forward	Forward	21.0°	Suppressed
	Middle	21.0°	Suppressed
	Rearward	21.0°	Suppressed
Position 7 Kneeling on seat, facing rearward	Forward	21.0°	Suppressed
	Middle	21.0°	Suppressed
	Rearward	21.0°	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 22 SUMMARY

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.:	C60510	TEST DATE:	6/15/06
LABORATORY:	MGA	TECHNICIANS:	JH
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: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Belt Load (N)	Result
Belted	Forward	11	Suppressed
	Middle	17	Suppressed
	Rearward	12	Suppressed

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

DATA SHEET 22 SUMMARY

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.:	C60510	TEST DATE:	6/15/06
LABORATORY:	MGA	TECHNICIANS:	JH
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: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Belt Load (N)	Result
Belted	Forward	10	Suppressed
	Middle	9	Suppressed
	Rearward	18	Suppressed

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

DATA SHEET 22 SUMMARY

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.:	C60510	TEST DATE:	6/15/06
LABORATORY:	MGA	TECHNICIANS:	JH
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: 21.0° On Seat Back
Tested seat back angle: 21.0° On Seat Back
Manufacturer's specified anchorage position: 2nd Down
Tested anchorage position: 2nd Down

Test Summary

Seat Belt	Seat Slide	Belt Load (N)	Result
Belted	Forward	9	Suppressed
	Middle	17	Suppressed
	Rearward	11	Suppressed

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

DATA SHEET 23 SUMMARY

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

NHTSA No.:	C60510	TEST DATE:	6/15/06
LABORATORY:	MGA	TECHNICIANS:	JH
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	21.0°	Suppressed
	Middle	21.0°	Suppressed
	Rearward	21.0°	Suppressed
Position 2 Sitting on seat with back against reclined seat back	Forward	45.0°	Suppressed
	Middle	45.0°	Suppressed
	Rearward	45.0°	Suppressed
Position 3 Sitting on seat edge, spine vertical, hands at dummy's sides	Forward	21.0°	Suppressed
	Middle	21.0°	Suppressed
	Rearward	21.0°	Suppressed
Position 4 Sitting on seat with back against seat back then leaning on the door	Forward	21.0°	Suppressed
	Middle	21.0°	Suppressed
	Rearward	21.0°	Suppressed

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

DATA SHEET 29 SUMMARY

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

NHTSA No.:	C60510	TEST DATE:	2/8/07
LABORATORY:	MGA	TECHNICIANS:	JH/KA
DUMMY TYPE:	5th Percentile Female	DUMMY SERIAL NO.:	125

Manufacturer's design seat back angle: 21.0° seat back angle
Tested seat back angle: 21.3° seat back angle
Tested seat position: Full Aft

Tested steering wheel angle: 27.7°
Thorax cavity angle: 33.7°
Bottom of chin height: 0 mm

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	150.0	150.1

5th Percentile Female SN 124 Position 1 (Chin On Module) 2-8-07

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	19
Peak Nij (Nte)	1.0	0.5
Time (ms)	NA	23.4
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	5.9
Peak Nij (Nce)	1.0	0.0
Time (ms)	NA	275.0
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	226.1
Neck Tension	2070 N	1135
Neck Compression	2520 N	163
Chest g	60 g	15
Chest Displacement	52 mm	5
Left Femur	6805 N	54
Right Femur	6805 N	64

Calculated on data recorded for 125 ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(d))
Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

DATA SHEET 30 SUMMARY TRIAL 1

Low Risk Deployment Tests Using an Unbelted 5th Percentile Female
Dummy (Part 572, Subpart O) (S26)
Position 2 - Chin On Rim (S26.3)

NHTSA No.:	C60510	TEST DATE:	7/10/06
LABORATORY:	MGA	TECHNICIANS:	JH/KA
DUMMY TYPE:	5th Percentile Female	DUMMY SERIAL NO.:	505

Manufacturer's design seat back angle: 21.0° seat back angle
Tested seat back angle: 21.3° seat back angle
Tested seat position: Full Aft

Tested steering wheel angle: 27.8°
Thorax cavity angle: 33.5°
Chin Point height: 1 mm Below Steering Wheel Target
Note: The chin on rim steering wheel target is 10 mm below the highest point on the steering wheel

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	150.0	150.0

5th Percentile Female SN 505 Position 2 (Chin On Rim) 7-10-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	23
Peak Nij (Nte)	1.0	1.0 (0.969)
Time (ms)	NA	19.0
Peak Nij (Ntf)	1.0	0.1
Time (ms)	NA	69.2
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	166.7
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	81.0
Neck Tension	2070 N	992
Neck Compression	2520 N	94
Chest g	60 g	23
Chest Displacement	52 mm	19
Left Femur	6805 N	45
Right Femur	6805 N	58

Calculated on data recorded for 125ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(d))
Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

The steering column and steering wheel were not replaced after an invalid position 1 driver low risk deployment test.

DATA SHEET 30 SUMMARY TRIAL 2

Low Risk Deployment Tests Using an Unbelted 5th Percentile Female
Dummy (Part 572, Subpart O) (S26)
Position 2 - Chin On Rim (S26.3)

NHTSA No.:	C60510	TEST DATE:	7-20-06
LABORATORY:	MGA	TECHNICIANS:	JH/KA
DUMMY TYPE:	5th Percentile Female	DUMMY SERIAL NO.:	505

Manufacturer's design seat back angle: 21.0° seat back angle
Tested seat back angle: 21.3° seat back angle
Tested seat position: Full Aft

Tested steering wheel angle: 27.3°
Thorax cavity angle: 33.4°
Chin Point height: 1 mm Below Steering Wheel Target
Note: The chin on rim steering wheel target is 10 mm below the highest point on the steering wheel

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	150.0	150.0

5th Percentile Female SN 505 Position 2 (Chin On Rim) 7-20-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	27
Peak Nij (Nte)	1.0	1.2 (1.168)
Time (ms)	NA	17.4
Peak Nij (Ntf)	1.0	0.1
Time (ms)	NA	60.1
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	167.2
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	77.2
Neck Tension	2070 N	994
Neck Compression	2520 N	98
Chest g	60 g	26
Chest Displacement	52 mm	21
Left Femur	6805 N	201
Right Femur	6805 N	159

Calculated on data recorded for 125ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(d))
Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

DATA SHEET 30 SUMMARY TRIAL 3

Low Risk Deployment Tests Using an Unbelted 5th Percentile Female
Dummy (Part 572, Subpart O) (S26)
Position 2 - Chin On Rim (S26.3)

NHTSA No.:	C60510	TEST DATE:	7-28-06
LABORATORY:	MGA	TECHNICIANS:	JH/KA
DUMMY TYPE:	5th Percentile Female	DUMMY SERIAL NO.:	505

Manufacturer's design seat back angle: 21.0° seat back angle
Tested seat back angle: 21.3° seat back angle
Tested seat position: Full Aft

Tested steering wheel angle: 28.1°
Thorax cavity angle: 34.1°
Chin Point height: 0 mm From Steering Wheel Target
Note: The chin on rim steering wheel target is 10 mm below the highest point on the steering wheel

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	150.0	150.1

5th Percentile Female SN 505 Position 2 (Chin On Rim) 7-28-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	39
Peak Nij (Nte)	1.0	1.0 (0.969)
Time (ms)	NA	20.0
Peak Nij (Ntf)	1.0	0.3
Time (ms)	NA	65.2
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	176.0
Peak Nij (Ncf)	1.0	0.2
Time (ms)	NA	68.2
Neck Tension	2070 N	1154
Neck Compression	2520 N	184
Chest g	60 g	29
Chest Displacement	52 mm	22
Left Femur	6805 N	65
Right Femur	6805 N	46

Calculated on data recorded for 125ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(d))
Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

DATA SHEET 30 SUMMARY TRIAL 4

Low Risk Deployment Tests Using an Unbelted 5th Percentile Female
Dummy (Part 572, Subpart O) (S26)
Position 2 - Chin On Rim (S26.3)

NHTSA No.:	C60510	TEST DATE:	9/14/06
LABORATORY:	MGA	TECHNICIANS:	JH/KA
DUMMY TYPE:	5th Percentile Female	DUMMY SERIAL NO.:	507

Manufacturer's design seat back angle: 21.0° seat back angle
Tested seat back angle: 21.3° seat back angle
Tested seat position: Full Aft

Tested steering wheel angle: 27.7°
Thorax cavity angle: 33.7°
Chin Point height: 4 mm Below Steering Wheel Target
Note: The chin on rim steering wheel target is 10 mm below the highest point on the steering wheel

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	150.0	150.0

5th Percentile Female SN 507 Position 2 (Chin On Rim) 9-14-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	33
Peak Nij (Nte)	1.0	1.0 (0.963)
Time (ms)	NA	18.1
Peak Nij (Ntf)	1.0	0.1
Time (ms)	NA	58.3
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	157.6
Peak Nij (Ncf)	1.0	0.2
Time (ms)	NA	80.6
Neck Tension	2070 N	1223
Neck Compression	2520 N	192
Chest g	60 g	35
Chest Displacement	52 mm	22
Left Femur	6805 N	126
Right Femur	6805 N	66

Calculated on data recorded for 125ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(d))
Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

DATA SHEET 30 SUMMARY TRIAL 5

Low Risk Deployment Tests Using an Unbelted 5th Percentile Female
Dummy (Part 572, Subpart O) (S26)
Position 2 - Chin On Rim (S26.3)

NHTSA No.:	C60510	TEST DATE:	9/15/06
LABORATORY:	MGA	TECHNICIANS:	BR/KA
DUMMY TYPE:	5th Percentile Female	DUMMY SERIAL NO.:	511

Manufacturer's design seat back angle: 21.0° seat back angle
Tested seat back angle: 21.4° seat back angle
Tested seat position: Full Aft

Tested steering wheel angle: 27.7°
Thorax cavity angle: 33.7°
Chin Point height: 0 mm From Steering Wheel Target
Note: The chin on rim steering wheel target is 10 mm below the highest point on the steering wheel

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	150.0	150.1

5th Percentile Female SN 511 Position 2 (Chin On Rim) 9-15-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	16
Peak Nij (Nte)	1.0	0.4
Time (ms)	NA	19.7
Peak Nij (Ntf)	1.0	0.1
Time (ms)	NA	73.9
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	173.2
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	80.8
Neck Tension	2070 N	771
Neck Compression	2520 N	93
Chest g	60 g	18
Chest Displacement	52 mm	20
Left Femur	6805 N	5
Right Femur	6805 N	62

Calculated on data recorded for 125ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(d))
Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

DATA SHEET 30 SUMMARY TRIAL 6

Low Risk Deployment Tests Using an Unbelted 5th Percentile Female
Dummy (Part 572, Subpart O) (S26)
Position 2 - Chin On Rim (S26.3)

NHTSA No.:	C60510	TEST DATE:	9/15/06
LABORATORY:	MGA	TECHNICIANS:	BR/KA
DUMMY TYPE:	5th Percentile Female	DUMMY SERIAL NO.:	510

Manufacturer's design seat back angle: 21.0° seat back angle
Tested seat back angle: 21.4° seat back angle
Tested seat position: Full Aft

Tested steering wheel angle: 28.1°
Thorax cavity angle: 34.1°
Chin Point height: 2 mm Above Steering Wheel Target
Note: The chin on rim steering wheel target is 10 mm below the highest point on the steering wheel

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	150.0	150.0

5th Percentile Female SN 510 Position 2 (Chin On Rim) 9-15-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	26
Peak Nij (Nte)	1.0	1.1 (1.064)
Time (ms)	NA	17.1
Peak Nij (Ntf)	1.0	0.2
Time (ms)	NA	72.2
Peak Nij (Nce)	1.0	0.0
Time (ms)	NA	7.2
Peak Nij (Ncf)	1.0	0.1
Time (ms)	NA	79.0
Neck Tension	2070 N	1120
Neck Compression	2520 N	104
Chest g	60 g	25
Chest Displacement	52 mm	21
Left Femur	6805 N	53
Right Femur	6805 N	53

Calculated on data recorded for 125ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(d))
Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

DATA SHEET 30 SUMMARY TRIAL 7

Low Risk Deployment Tests Using an Unbelted 5th Percentile Female
Dummy (Part 572, Subpart O) (S26)
Position 2 - Chin On Rim (S26.3)

NHTSA No.:	C60510	TEST DATE:	9/15/06
LABORATORY:	MGA	TECHNICIANS:	JH/KA
DUMMY TYPE:	5th Percentile Female	DUMMY SERIAL NO.:	510

Manufacturer's design seat back angle: 21.0° seat back angle
Tested seat back angle: 21.4° seat back angle
Tested seat position: Full Aft

Tested steering wheel angle: 27.6°
Thorax cavity angle: 33.6°
Chin Point height: 1 mm Below Steering Wheel Target
Note: The chin on rim steering wheel target is 10 mm below the highest point on the steering wheel

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	150.0	150.0

5th Percentile Female SN 510 Position 2 (Chin On Rim) 9-15-06

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	46
Peak Nij (Nte)	1.0	1.2 (1.197)
Time (ms)	NA	14.2
Peak Nij (Ntf)	1.0	0.1
Time (ms)	NA	59.3
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	133.2
Peak Nij (Ncf)	1.0	0.52
Time (ms)	NA	63.8
Neck Tension	2070 N	1427
Neck Compression	2520 N	170
Chest g	60 g	32
Chest Displacement	52 mm	21
Left Femur	6805 N	181
Right Femur	6805 N	328

Calculated on data recorded for 125ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(d))
Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

DATA SHEET 30 SUMMARY TRIAL 8

Low Risk Deployment Tests Using an Unbelted 5th Percentile Female
Dummy (Part 572, Subpart O) (S26)
Position 2 - Chin On Rim (S26.3)

NHTSA No.:	C60510	TEST DATE:	2/8/07
LABORATORY:	MGA	TECHNICIANS:	JH/KA
DUMMY TYPE:	5th Percentile Female	DUMMY SERIAL NO.:	124

Manufacturer's design seat back angle: 21.0° seat back angle
Tested seat back angle: 21.3° seat back angle
Tested seat position: Full Aft

Tested steering wheel angle: 27.6°
Thorax cavity angle: 33.6°
Chin Point height: 2 mm Below Steering Wheel Target
Note: The chin on rim steering wheel target is 10 mm below the highest point on the steering wheel

Air Bag Deployment Timing

Stage No.	Firing time (ms)	Recorded firing time (ms)
1	0.0	0.0
2	150.0	150.0

5th Percentile Female SN 124 Position 2 (Chin On Rim) 2-8-07

Injury Criteria	Max. Allowable Injury Assessment Values	Measured Value
HIC15	700	64
Peak Nij (Nte)	1.0	0.7
Time (ms)	NA	17.3
Peak Nij (Ntf)	1.0	0.3
Time (ms)	NA	56.3
Peak Nij (Nce)	1.0	0.1
Time (ms)	NA	183.4
Peak Nij (Ncf)	1.0	0.3
Time (ms)	NA	60.5
Neck Tension	2070 N	1344
Neck Compression	2520 N	261
Chest g	60 g	20
Chest Displacement	52 mm	20
Left Femur	6805 N	23
Right Femur	6805 N	18

Calculated on data recorded for 125ms after the initiation of the final stage of air bag deployment designed to deploy in any full frontal rigid barrier crash up to 26 km/h. (S4.11(d))
Second stage fire time of 150 ms; Injuries calculated on 0 ms to 275 ms

DATA SHEET 32

VEHICLE WEIGHT, FUEL TANK, AND ATTITUDE DATA

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Nick Kosinski

NHTSA No.: C60510
Test Date: 3/26/07

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_ 5th female	__ 50th male	
PASSENGER DUMMY:	_X_ 5th female	__ 50th male	

X	1.	Fill the transmission with transmission fluid to the satisfactory range.
X	2.	Drain fuel from vehicle
X	3.	Run the engine until fuel remaining in the fuel delivery system is used and the engine stops.
X	4.	Record the useable fuel tank capacity supplied by the COTR
X		Useable Fuel Tank Capacity supplied by COTR: 57.9 liters (15.3 gallons)
X	5.	Record the fuel tank capacity supplied in the owner's manual.
X		Useable Fuel Tank Capacity in owner's manual: 57.9 liters (15.3 gallons)
X	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.
X		Amount Added: 57.9 liters (15.3 gallons)
X	7.	Fill the coolant system to capacity.
X	8.	Fill the engine with motor oil to the Max. mark on the dip stick.
X	9.	Fill the brake reservoir with brake fluid to its normal level.
X	10.	Fill the windshield washer reservoir to capacity.
X	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

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

Right Front (kg):	464.0	Right Rear (kg):	310.3
Left Front (kg):	453.6	Left Rear (kg):	320.7
Total Front (kg):	917.6	Total Rear (kg):	631.0
% Total Weight:	59.3	% Total Weight:	40.7
UVW = TOTAL FRONT PLUS TOTAL REAR (KG):			1548.6

X 13. UVW Test Vehicle Attitude: (All dimensions in millimeters)

X 13.1 Mark a point on the vehicle above the center of each wheel.

X 13.2 Place the vehicle on a level surface.

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

RF:	752	LF:	753	RR:	784	LR:	776

X 14. Calculate the Rated Cargo and Luggage Weight (RCLW): 50 kg

X 14.1 Does the vehicle have the vehicle capacity weight (VCW) on the certification label or tire placard?

X X Yes, go to 14.3

No, go to 14.2

14.2 VCW = Gross Vehicle Weight – UVW

VCW = _____ - _____ = _____

X 14.3 VCW = 390 kg (860 lbs)

X 14.4 Does the certification or tire placard contain the Designated Seating Capacity (DSC)?

X Yes, go to 14.6

No, go to 14.5 and skip 14.6

14.5 DSC = Total number of seat belt assemblies = _____

X 14.6 DSC = 5

X 14.7 RCLW = VCW – (68 kg x DSC) = 390 kg - (68 kg x 5) = 50 kg

X 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)

X No, use the RCLW calculated in 14.7

X 15. Fully Loaded Weight (100% fuel fill): 1696.4 kg

X 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

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

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

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

Right Front (kg):	500.3	Right Rear (kg):	354.7
Left Front (kg):	479.9	Left Rear (kg):	361.5
Total Front (kg):	980.2	Total Rear (kg):	716.2
% Total Weight:	57.8	% Total Weight:	42.2
% GVW	56.6	% GVW	54.4
(% GVW = Axle GVW divided by Vehicle GVW)			
Fully Loaded Weight = Total Front Plus Total Rear (kg):			1696.4

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

X 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:	743	LF:	743	RR:	767	LR:	759

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 .94 = 57.9 liters (15.3 gallons) x .94 = 54.4 liters (14.4 gallons)

X Amount added 53.7 liters (14.2 gallons) 92.7%

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)

1696.6 kg = 1548.6 kg + 50.0 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 = 1692.1 kg
Min. Test Weight = Calculated Test Weight – 9 kg = 1687.6 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:
Spare tire, tools and jack

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.

N/A

X Weight of Ballast: 31.3 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):	495.3	Right Rear (kg):	351.1
Left Front (kg):	472.2	Left Rear (kg):	369.2
Total Front (kg):	967.5	Total Rear (kg):	720.3
% Total Weight:	57.3	% Total Weight:	42.7
% GVW	56.6	% GVW	54.4
(% GVW = Axle GVW divided by Vehicle GVW)			
TOTAL FRONT PLUS TOTAL REAR (kg):			1687.8

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

RF:	748	LF:	751	RR:	771	LR:	761

X 30. Summary of test attitude

X 30.1 AS DELIVERED:

RF:	752	LF:	753	RR:	784	LR:	776

AS TESTED:

RF:	748	LF:	751	RR:	771	LR:	761

FULLY LOADED:

RF:	743	LF:	743	RR:	767	LR:	759

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: Nick Yosinski

Date: 3/26/07

DATA SHEET 33

VEHICLE ACCELEROMETER LOCATION AND MEASUREMENT

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Nick Kosinski

NHTSA No.: C60510
Test Date: 3/26/07

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_ 5th female	__ 50th male	
PASSENGER DUMMY:	_X_ 5th female	__ 50th male	

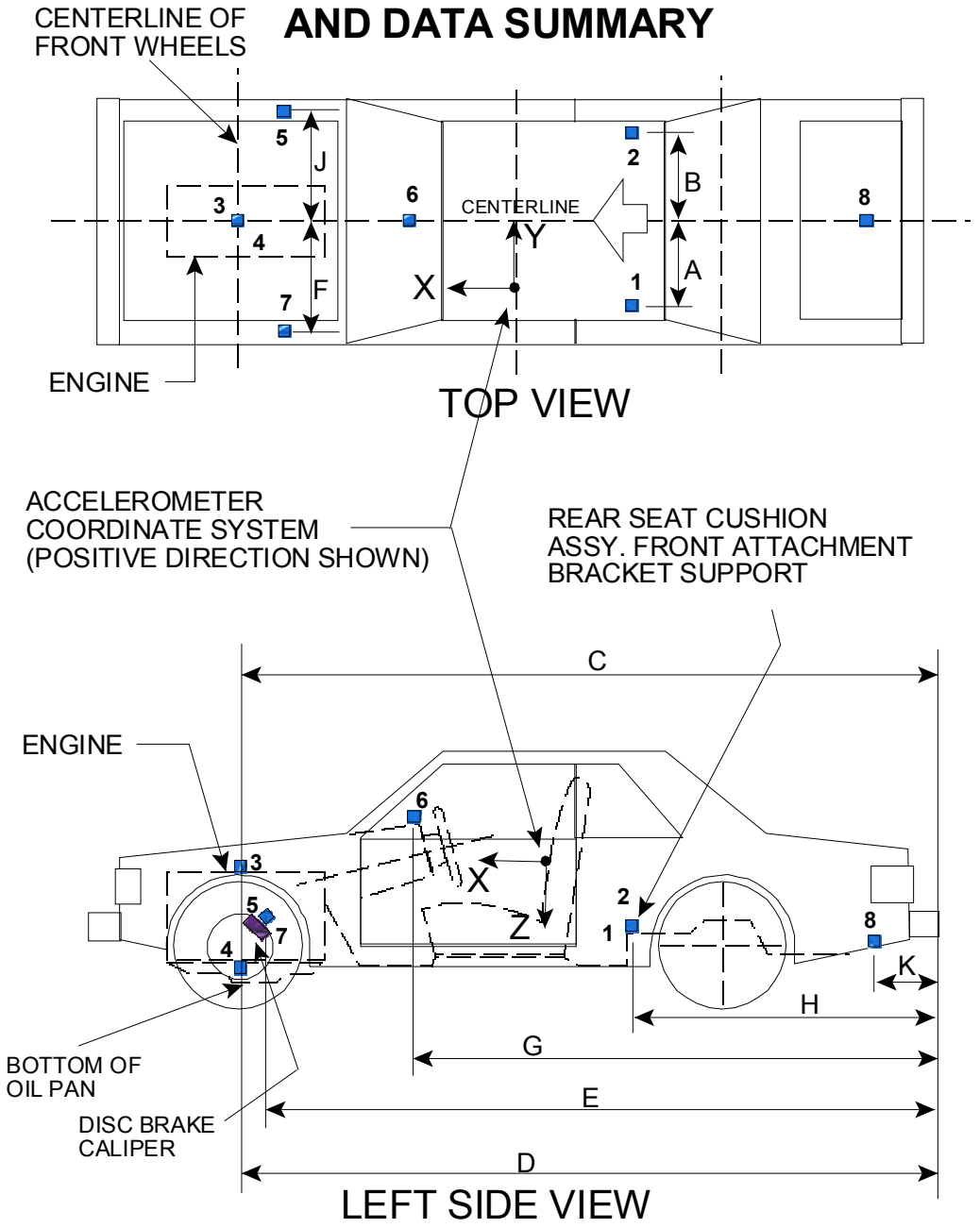
X	1.	Find the location where the vertical plane parallel to the longitudinal centerline of the vehicle and through the center of the left front outboard seating position intersects the left rear seat cross member. Install an accelerometer at this intersection on the rear seat cross member to record x-direction 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: Nick Kosinski Date: 3/26/07

VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY



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

DIMENSION	LENGTH (mm)	
PRETEST VALUES		
A (LH Rear Seat Xmbr)	326	
B (RH Rear Seat Xmbr)	349	
C (Engine Top)	3485	
D (Engine Bottom)	3721	
E (Caliper)	Right Side 3565	Left Side 3562
F (Left Caliper)	677	
G (IP)	2897	
H (Seat)	1628	
J (Right Caliper)	677	
K (Trunk)	880	
POST TEST VALUES		
A (LH Rear Seat Xmbr)	326	
B (RH Rear Seat Xmbr)	349	
C (Engine Top)	3335	
D (Engine Bottom)	3647	
E (Caliper)	Right Side 3480	Left Side 3539
F (Left Caliper)	706	
G (IP)	2895	
H (Seat)	1628	
J (Right Caliper)	706	
K (Trunk)	880	

DATA SHEET 34

PHOTOGRAPHIC TARGETS

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Nick Kosinski

NHTSA No.: C60510
Test Date: 3/26/07

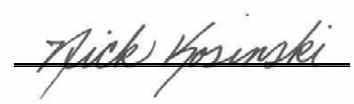
IMPACT ANGLE:	Zero Degrees		
BELTED DUMMIES (YES/NO):	No		
TEST SPEED:	_X_ 32 to 40 kmph	__ 0 to 48 kmph	__ 0 to 56 kmph
DRIVER DUMMY:	_X_ 5th female	__ 50th male	
PASSENGER DUMMY:	_X_ 5th female	__ 50th male	

X	1.	FMVSS 208 vehicle targeting requirements (See Figures 28A and 28B)
X	1.1	Targets A1 and A2 are on flat rectangular panels.
X	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.
X		Distance between targets (mm): 100 mm
X	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.
X		Distance between targets (mm): 100 mm
X	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.
X		Distance between the first and last circular targets (mm): 915 mm
X	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.
X	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.
X	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.
X		Distance between targets (mm): 613 mm
X	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.
X		Distance between targets (mm): 614 mm
X	1.9	Place tape with squares having alternating colors on the top portion of the steering wheel.
X	1.10	Chalk the bottom portion of the steering wheel
X	1.11	Is this an offset test?
		Yes, continue with this section
X		No, go to 2.
	1.12	Measure the width of the vehicle.
		Vehicle width (mm):

	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
X	2.	Barrier Targeting
X	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
X	2.2	Targets D1 and D2 are on a rectangular panel.
X	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.
X		Distance between circular targets on D1 (mm): 100 mm
X		Distance between circular targets on D2 (mm): 100 mm
X	3.	FMVSS 208 Dummy Targeting Requirements
X	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).
X	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).
X	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.
X	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.
X	4.	FMVSS 204 Targeting Requirements
X	4.1	Is an FMVSS 204 indicant test ordered on the “COTR Vehicle Work Order?”
		Yes, continue with this form.
X		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.

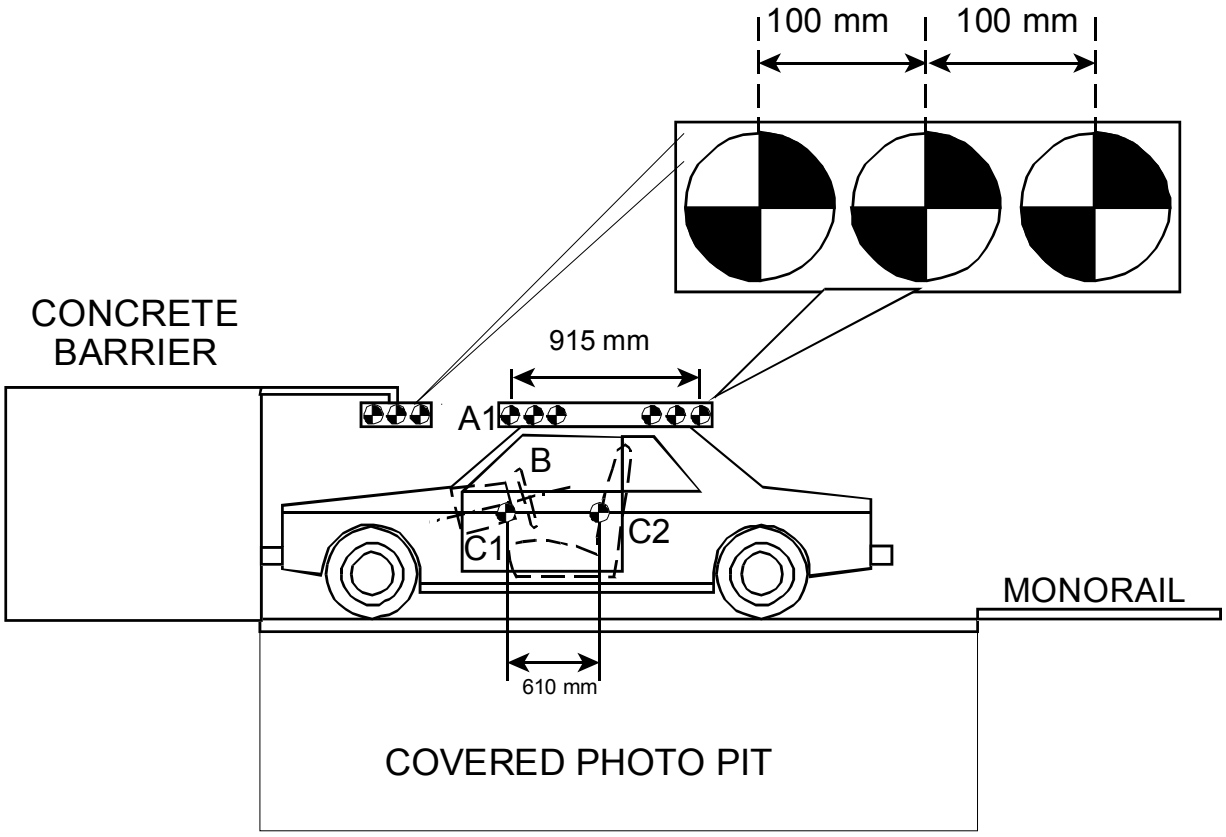
	4.3	Place a circular target at least 90 mm in diameter and with black and yellow quadrants on a material (cardboard, metal, etc.) that can be taped to the top of the steering column.
	4.4	Tape the target from 4.3 to the top of the steering column in a manner that does not interfere with the movement of the steering column in a crash

I certify that I have read and performed each instruction.

Signature: 

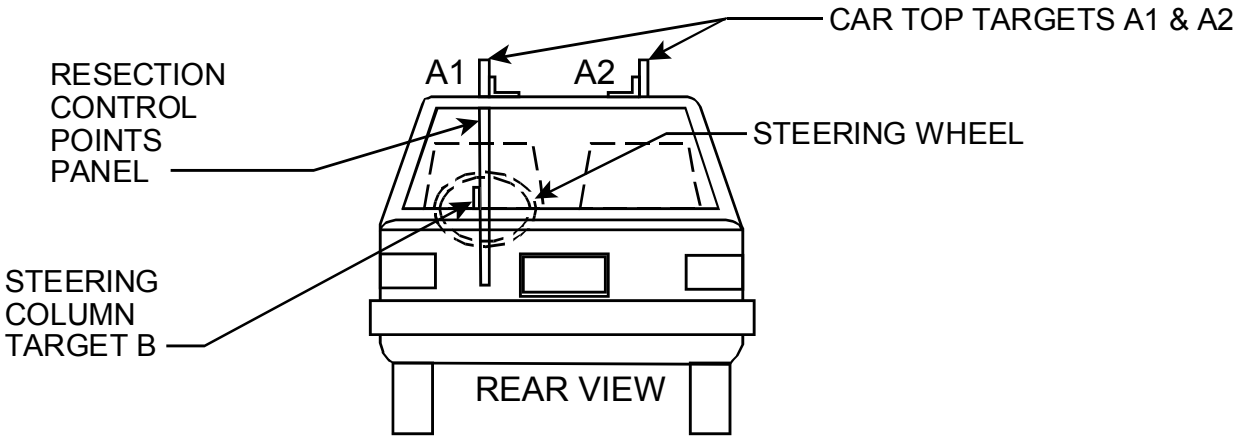
Date: 3/26/07

REFERENCE PHOTO TARGETS

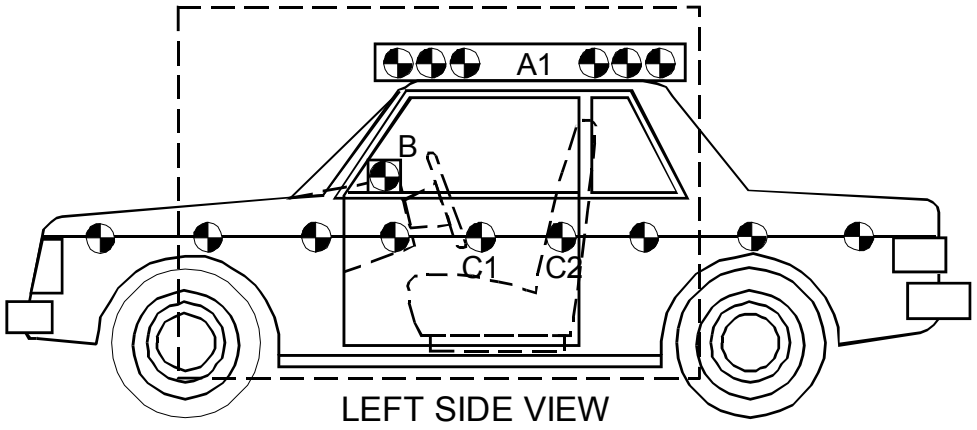


LEFT SIDE VIEW

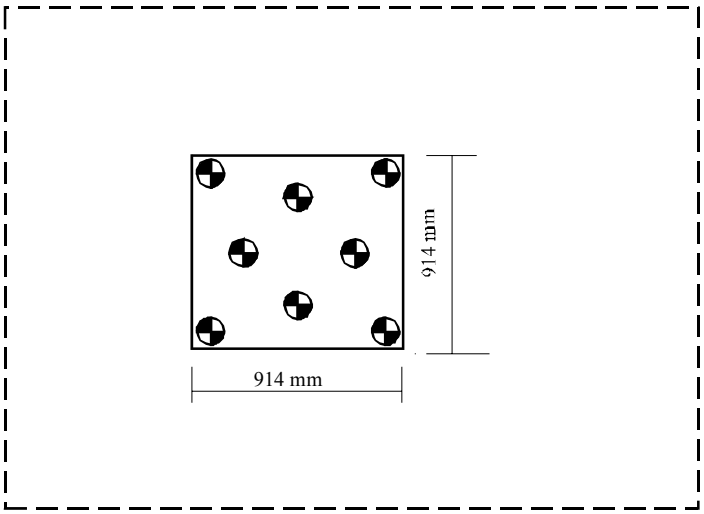
RESECTION PANEL TARGETING ALIGNMENT



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

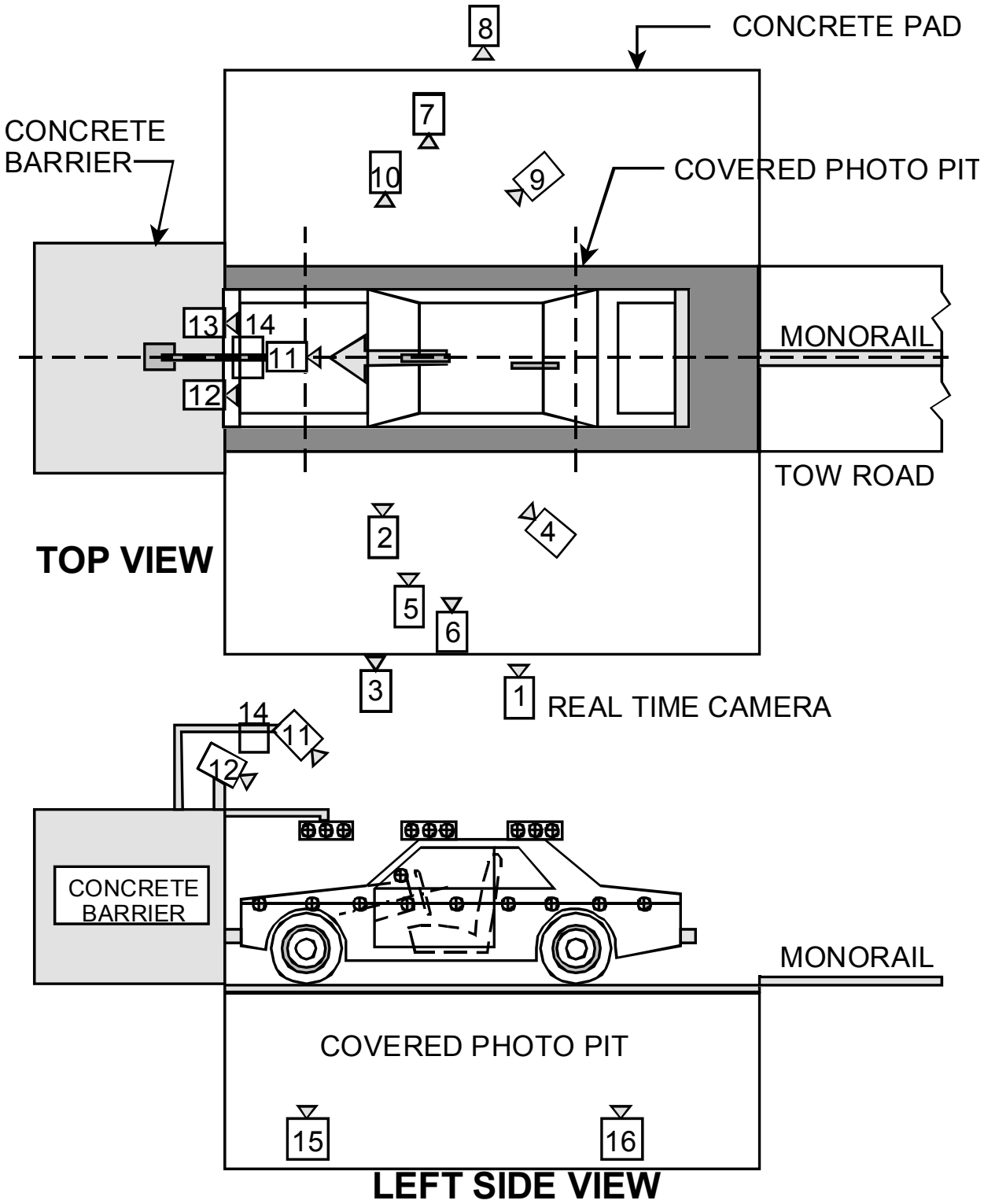
Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance

NHTSA No.: C60510
Test Date: 3/26/07
Time: 10:37 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)	1075	-5020	1180	24	1000
3	Left Side View (Driver)	1640	-6500	1250	35	1000
4	Left Side View (B-post aimed toward center of steering wheel)	6340	-5120	2100	50	1000
5	Left Side View (Steering Column)	1460	-5280	895	25	1000
6	Left Side View (Steering Column)	1465	-5270	1285	25	1000
7	Right Side View (Overall)	2155	7600	1250	19	1000
8	Right Side View (Passenger)	1565	6130	1170	35	1000
9	Right Side View (Angle)	6575	5420	2050	50	1000
10	Right Side View (Front door)	1230	5280	1190	25	1000
11	Front View Windshield	-285	0	2370	12.5	1000
12	Front View Driver	-150	-365	2190	24	1000
13	Front View Passenger	-155	500	2205	24	1000
14	Overhead Barrier Impact View	1195	0	5050	19	1000
15	Pit Camera Engine View	1095	0	-3160	24	1000
16	Pit Camera Fuel Tank View	3360	0	-3160	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: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 3/26/07
Test Technician: Joe Fleck

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_ 5th female	__ 50th male	
PASSENGER DUMMY:	_X_ 5th female	__ 50th 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 ± 5 degrees (approximately 51 mm (2 inches)) side-to-side three time. (S16.3.2.1.7)

X 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)

X 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)

X 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)

X 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)
X 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)

X 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)

X Head Level Achieved. (Check all that apply)

X Head leveled using the adjustable seat back

__Head leveled using the neck bracket.

Head Angle ____0.5____ 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 21. Verify the pelvis is not interfering with the seat bight. (S16.3.2.1.9)

X No interference

__Pelvis moved forward the minimum amount so that it is not caught in the seat bight.

X 22. Verify the dummy abdomen is properly installed. (S16.3.2.1.9)

X Abdomen still seated properly into dummy

__Abdomen was adjusted because it was not seated properly into dummy

X 23. Head Angle

X N/A, neither the pelvis nor the abdomen were adjusted.

X 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

X 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)
X 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.

X 25. Measure and set the pelvic angle using the pelvic angle gage TE-2504. The pelvic angle should be 20.0 degrees ± 2.5 degrees. If the pelvic angle cannot be set to 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)
X Pelvic angle set to 20.0 degrees ± 2.5 degrees.
__Pelvic angle of 20.0 degrees not achieved, the angular difference was minimized.
__Record the pelvic angle. ____21.2___ degrees

X 26. Check the dummy for contact with the interior after completing adjustments. (S16.3.2.1.12)
X No contact.
__Dummy in contact with interior.
__Seat moved aft ___ mm from the previous position.
__Seat moved aft ___ detent positions from the previous position.

X 27. Check the dummy to see if additional interior clearance is obtained, allowing the seat to be moved forward. (S16.3.2.1.12)
X 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.

X 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)

X 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.

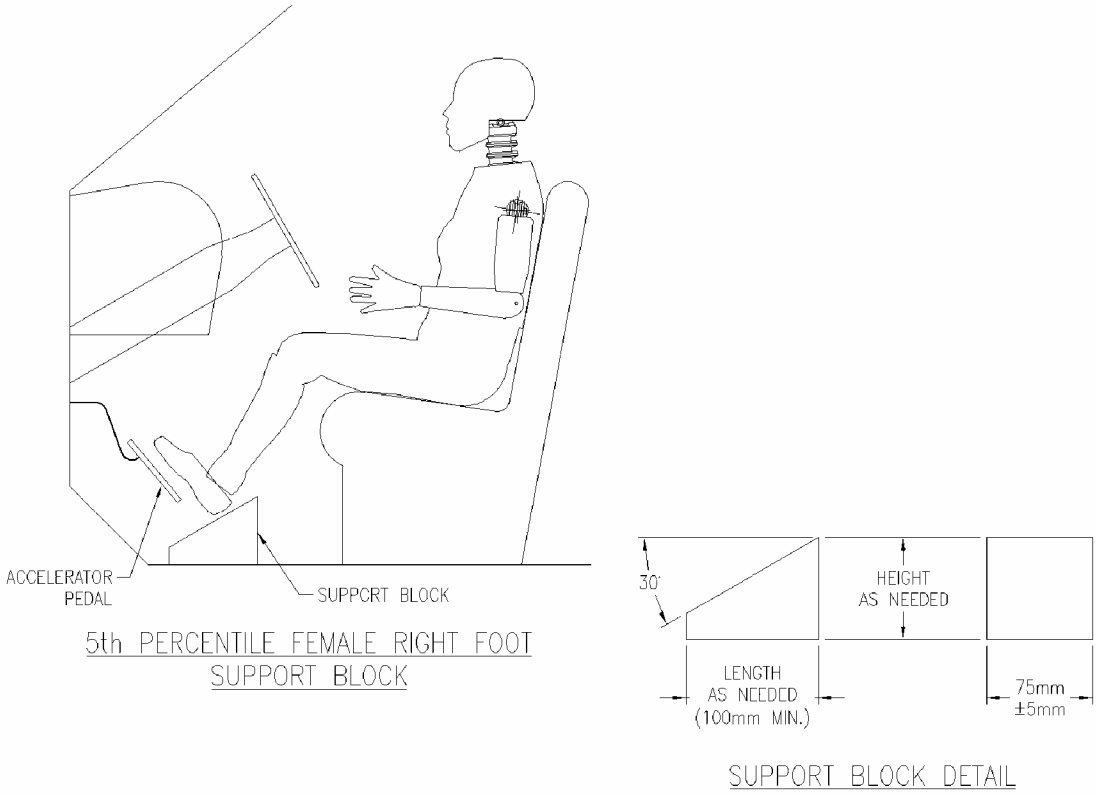


FIGURE G1

__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)

X 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

X 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)

REMARKS:

I certify that I have read and performed each instruction.

Signature: _____ Date: 3/26/07

APPENDIX G

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

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Jordan Haynes

NHTSA No.: C60510
Test Date: 3/26/07

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_ 5th female	__ 50th male	
PASSENGER DUMMY:	_X_ 5th female	__ 50th 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 ____165___

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)
X Pelvis contacted seat back.
__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 ____0.1____ 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 ± 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 ± 2.5 degrees.

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

X Record the pelvic angle. ____22.0____ 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 +/- 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 ____0.2_____ 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)

X 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)

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

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

X 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)

X 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
X Headrest set at nearest detent below the head CG

X 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)

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

REMARKS:
I certify that I have read and performed each instruction.

Signature: Jordan Hayes Date: 3/26/07

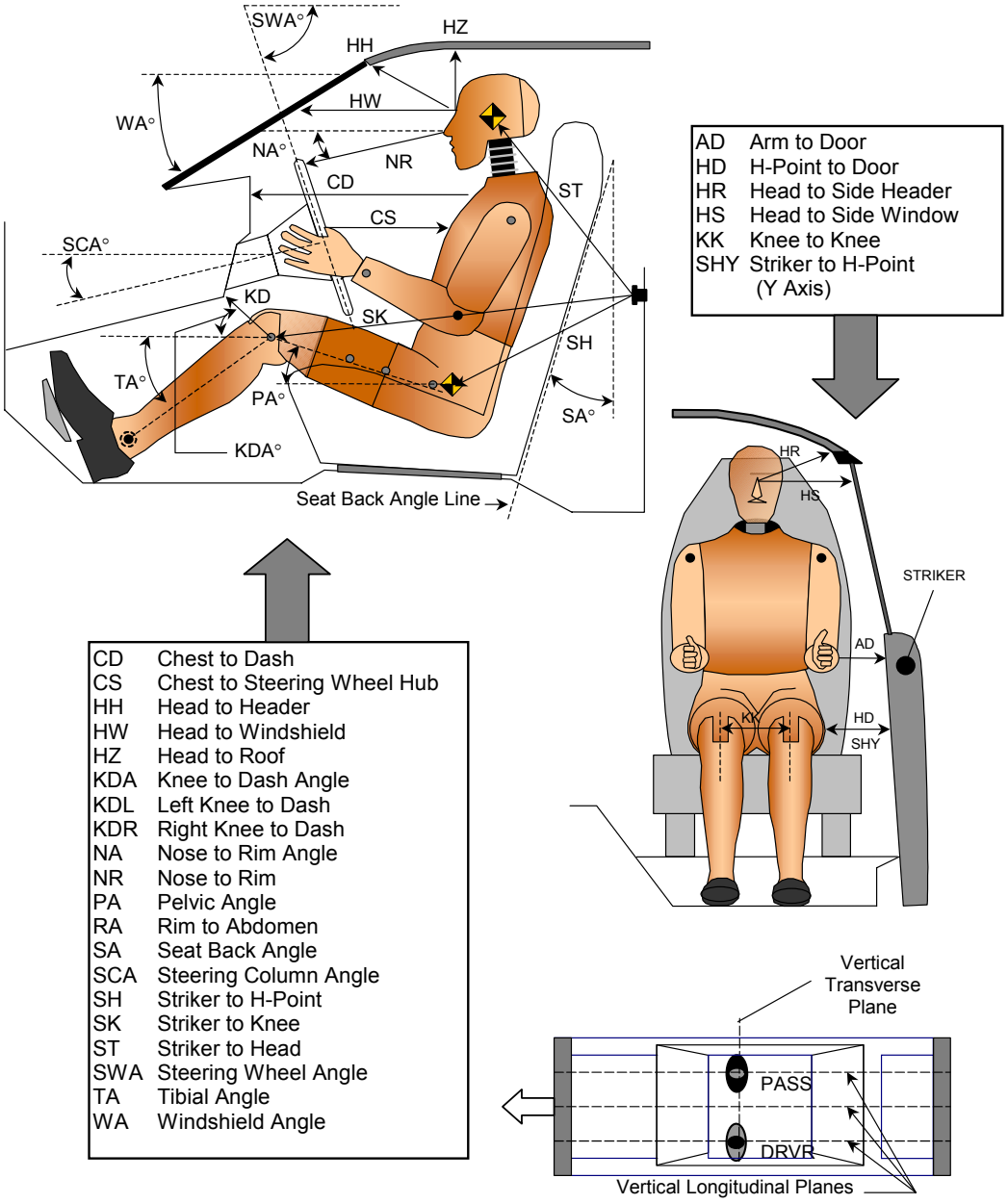
DATA SHEET 37

DUMMY MEASUREMENTS

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Joe Fleck

NHTSA No.: C60510
Test Date: 3/26/07

DUMMY MEASUREMENTS FOR FRONT SEAT OCCUPANTS



DATA SHEET 37

DUMMY MEASUREMENTS

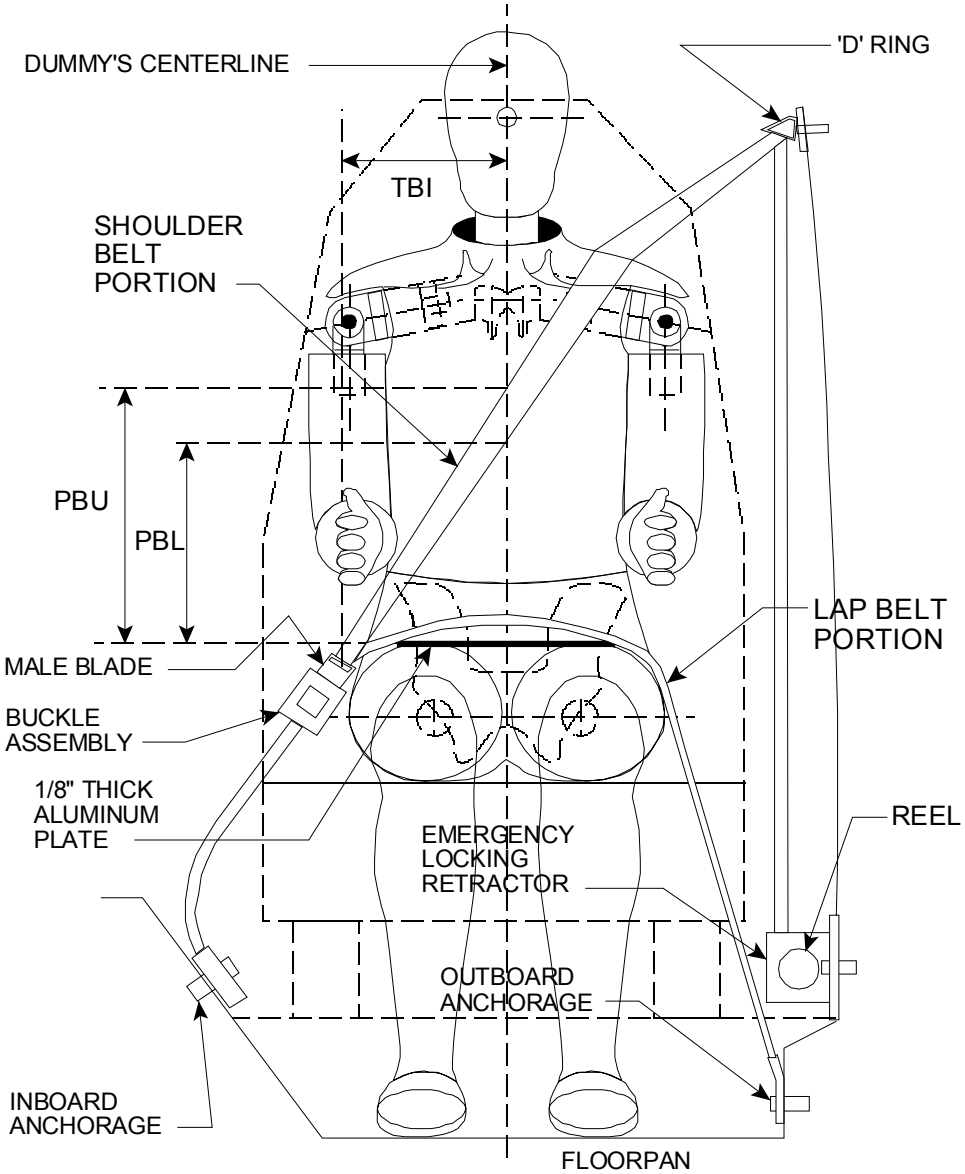
Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Joe Fleck

NHTSA No.: C60510
Test Date: 3/26/07

TEST DUMMY POSITION MEASUREMENTS

Code	Measurement Description	Driver SN 506		Passenger SN 516	
		Length (mm)	Angle (°)	Length (mm)	Angle (°)
WA	Windshield Angle		31.3		
SWA	Steering Wheel Angle		27.5		
SCA	Steering Column Angle		28.0		
SA	Seat Back Angle		21.7		20.7
HZ	Head to Roof (Z)	242		252	
HH	Head to Header	232	43.6	340	45.9
HW	Head to Windshield	637	0	664	0
HR	Head to Side Header (Y)	269		267	
NR	Nose to Rim	277	8.9		
CD	Chest to Dash	341		397	
CS	Chest to Steering Hub	179	4.1		
RA	Rim to Abdomen	63	0		
KDL	Left Knee to Dash	68	23.9	63	
KDR	Right Knee to Dash	54		60	35.0
PA	Pelvic Angle		21.2		22.0
TA	Tibia Angle		57.8		52.8
KK	Knee to Knee (Y)	305		215	
SK	Striker to Knee	687	93.0	707	94.6
ST	Striker to Head	552	21.5	541	24.3
SH	Striker to H-Point	347	98.0	383	103.8
SHY	Striker to H-Point (Y)	305		307	
HS	Head to Side Window	371		361	
HD	H-Point to Door (Y)	232		220	
AD	Arm to Door (Y)	176		95	
AA	Ankle to Ankle	260		180	

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 - Top surface of reference to belt lower edge	mm	N/A	N/A

DATA SHEET 38

CRASH TEST

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Eric Peschman

NHTSA No.: C60510
Test Date: 3/26/07

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_ 5th female	__ 50th male	
PASSENGER DUMMY:	_X_ 5th female	__ 50th male	

X 1. Vehicle underbody painted
X 2. The speed measuring devices are in place and functioning.
X 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)
X 4. Convertible top is in the closed position.
   X N/A, not a convertible
X 5. Instrumentation and wires are placed so the motion of the dummies during impact is not affected.
X 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.

210 kpa front left tire	210 kpa specified on tire placard or in owner information
210 kpa front right tire	210 kpa specified on tire placard or in owner information
210 kpa rear left tire	210 kpa specified on tire placard or in owner information
210 kpa rear right tire	210 kpa specified on tire placard or in owner information

X 7. Time zero contacts on barrier in place.
X 8. Pre test zero and shunt calibration adjustments performed and recorded
X 9. Dummy temperature meets requirements of section 12.2 of the test procedure.
X 10. Vehicle hood closed and latched
X 11. Transmission placed in neutral
X 12. Parking brake off
X 13. Ignition in the ON position
X 14. Doors closed and latched but not locked
X 15. Posttest zero and shunt calibration checks performed and recorded
X 16. Actual test speed 39.8 kmph
X 17. Vehicle rebound from the barrier 359 cm
X 18. Describe whether the doors open after the test and what method is used to open the doors.
   X Left Front Door: Door remained closed and latched; Door opened without tools
   X Right Front Door: Door remained closed and latched; Door opened without tools
   X Left Rear Door: Door remained closed and latched; Door opened without tools
   X Right Rear Door: Door remained closed and latched; Door opened without tools

X 19. Describe the contact points of the dummy with the interior of the vehicle.

X Driver Dummy: Head to Air Bag and Headrest; Chest to Air Bag; Knees to Knee Bolster

X Passenger Dummy: Head to Air Bag, Headliner, Head Rest; Chest to Air Bag; Knees to Glove Box

REMARKS:

I certify that I have read and performed each instruction.

Signature: 

Date: 3/26/07

DATA SHEET NO. 40

ACCIDENT INVESTIGATION MEASUREMENTS

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Wayne Dahlke

NHTSA No.: C60510
Test Date: 3/26/07

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_ 5th female	__ 50th male	
PASSENGER DUMMY:	_X_ 5th female	__ 50th male	

Vehicle Year/Make/Model/Body Style:	2006 HMC Tucson MPV
VIN:	KM8JM12B16U378533
Wheelbase:	2632 mm
Build Date:	1/07/06
Vehicle Size Category:	3
Test Weight:	1687.8 kg
Front Overhang:	897 mm
Overall Width:	1762 mm
Overall Length Center:	4313 mm

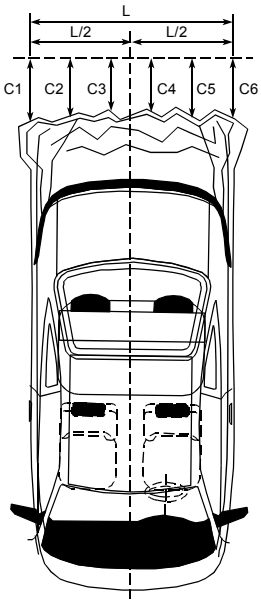
Accelerometer Data	
Location:	As per measurements on Data Sheet 33
Linearity:	>99.9%

Integration Algorithm:	Trapezoidal
Vehicle Impact Speed:	39.8 kmph
Time of Separation:	104.2 ms
Velocity Change:	45.7 kmph

CRUSH PROFILE

Collision Deformation Classification: 12FDEW6
Midpoint of Damage: Vehicle Longitudinal Centerline
Damage Region Length (mm): 1375
Impact Mode: Frontal Barrier

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush zone 1 at left side	mm	4204	3954	250
C2	Crush zone 2 at left side	mm	4270	3950	320
C3	Crush zone 3 at left side	mm	4301	3973	328
C4	Crush zone 4 at right side	mm	4299	3965	334
C5	Crush zone 5 at right side	mm	4268	3929	339
C6	Crush zone 6 at right side	mm	4200	3966	234



REMARKS:

I certify that I have read and performed each instruction.

Signature: Wayne Gahl

Date: 3/26/07

DATA SHEET 41

WINDSHIELD MOUNTING (FMVSS 212)

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Nick Kosinski

NHTSA No.: C60510
Test Date: 3/26/07

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_ 5th female	__ 50th male	
PASSENGER DUMMY:	_X_ 5th female	__ 50th male	

1. Pre-Crash

[X] 1.1 Describe from visual inspection how the windshield is mounted and describe any trim material.

Retained with glue
Rubber trim

[X] 1.2 Mark the longitudinal centerline of the windshield

[X] 1.3 Measure pre-crash A, B, and C for the left side and record in the chart below.

[X] 1.4 Measure pre-crash C, D, and E for the right side and record in the chart below.

[X] 1.5 Measure from the edge of the retainer or molding to the edge of the windshield.

[X] Dimension G (mm): 18 mm

2. Post Crash

[X] 2.1 Can a single thickness of copier type paper (as small a piece as necessary) slide between the windshield and the vehicle body?

[X] 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

[ ] 2.6 Is total left side percent retention less than 75%?

[ ] Yes, Fail

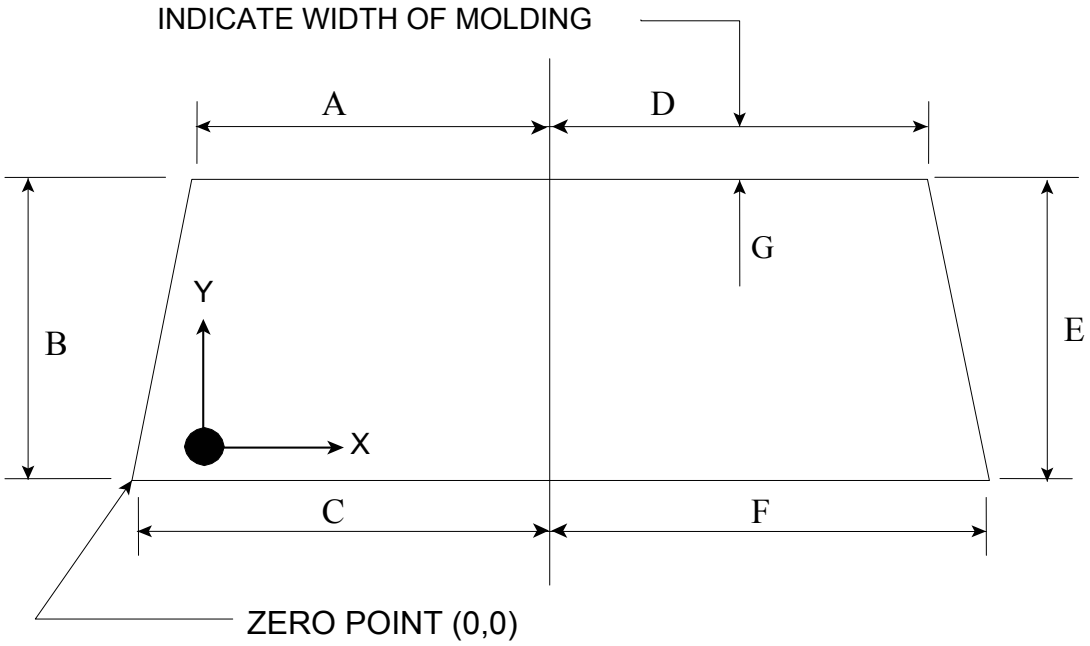
[ ] No, Pass

WINDSHIELD RETENTION MEASUREMENTS

	Dimension	Pre-Crash (mm)	Post-Crash (mm)	Percent Retention (Post-Test ÷ Pre-Crash)
Left Side	A	575	575	100%
	B	803	803	100%
	C	738	738	100%
	Total	2116	2116	100%
Right Side	D	575	575	100%
	E	803	803	100%
	F	738	738	100%
	Total	2116	2116	100%

Indicate area of mounting failure. NONE

FRONT VIEW OF WINDSHIELD



REMARKS:

I certify that I have read and performed each instruction.

Signature: Nick Kosinski

Date: 3/26/07

DATA SHEET 42

WINDSHIELD ZONE INTRUSION (FMVSS 219)

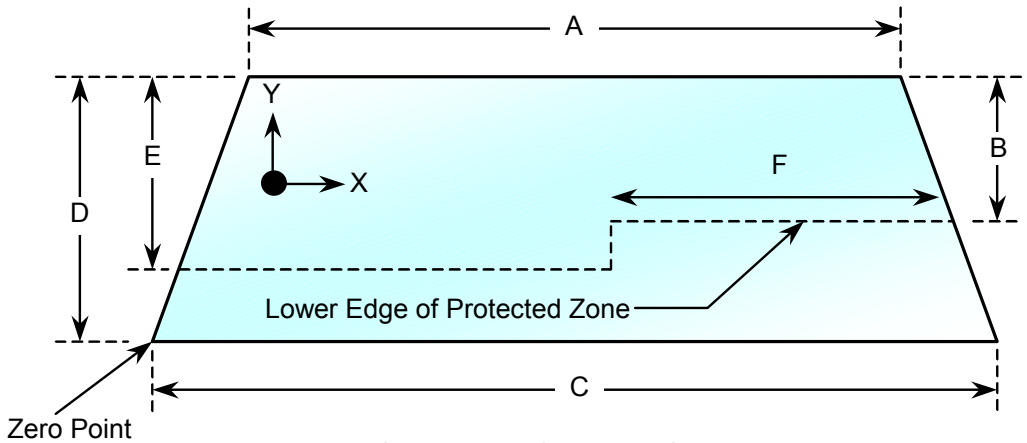
Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Nick Kosinski

NHTSA No.: C60510
Test Date: 3/26/07

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_ 5th female	__ 50th male	
PASSENGER DUMMY:	_X_ 5th female	__ 50th male	

X	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))
X	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))
X	3.	From the outermost contactable points on the windshield draw a horizontal line to the edges of the windshield. (571.219 S6.1(b))
X	4.	Draw a line on the inner surface of the windshield that is 13 mm below the line determined in items 2 and 3
X	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.



FRONT VIEW OF WINDSHIELD

WINDSHIELD DIMENSIONS

Item	Units	Value
A	mm	1150
B	mm	545
C	mm	1476
D	mm	803
E	mm	552
F	mm	570

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: Nick Kosinski Date: 3/26/07

DATA SHEET 43

FUEL SYSTEM INTEGRITY (FMVSS 301)

Test Vehicle: 2006 HMC Tucson
Test Program: FMVSS 208 Compliance
Test Technician: Daniel Sienko

NHTSA No.: C60510
Test Date: 3/26/07

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)

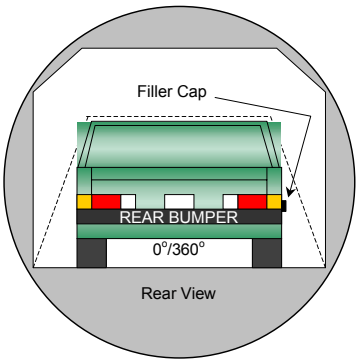
D. Spillage: NONE

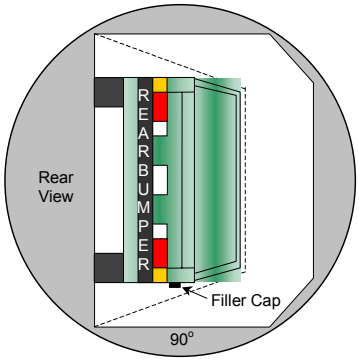
REMARKS: NO SPILLAGE

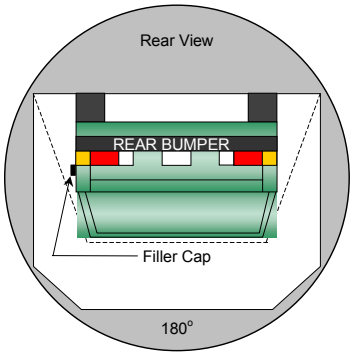
DATA SHEET NO. 43

FMVSS 301 STATIC ROLLOVER DATA

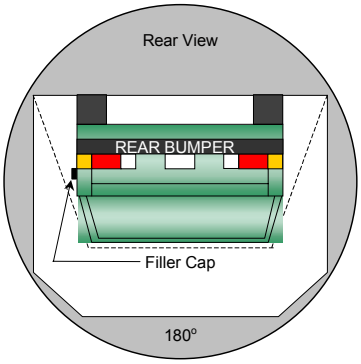
Test Vehicle: 2006 HMC Tucson NHTSA No.: C60510
Test Program: FMVSS 208 Compliance Test Date: 3/26/07

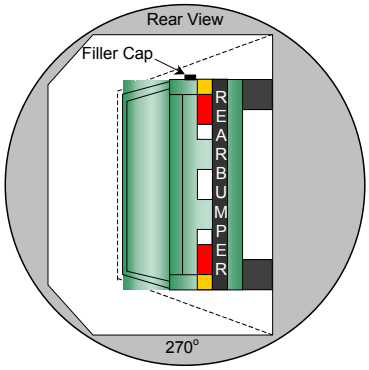


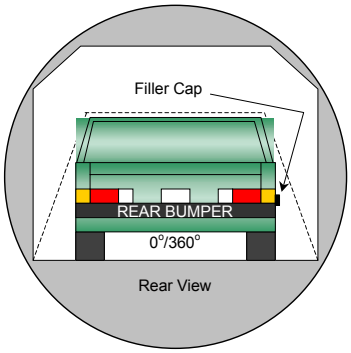




0° to 90° 90° to 180°







180° to 270° 270° to 360°

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°	120	305	0.0
90° to 180°	117	305	0.0
180° to 270°	118	305	0.0
270° to 360°	117	305	0.0

APPENDIX A

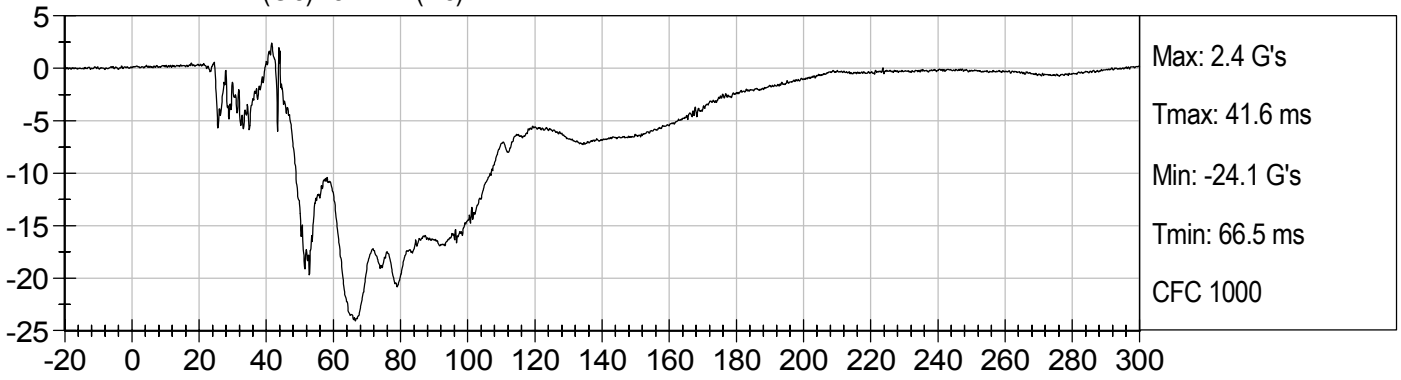
CRASH TEST DATA

TABLE OF DATA PLOTS

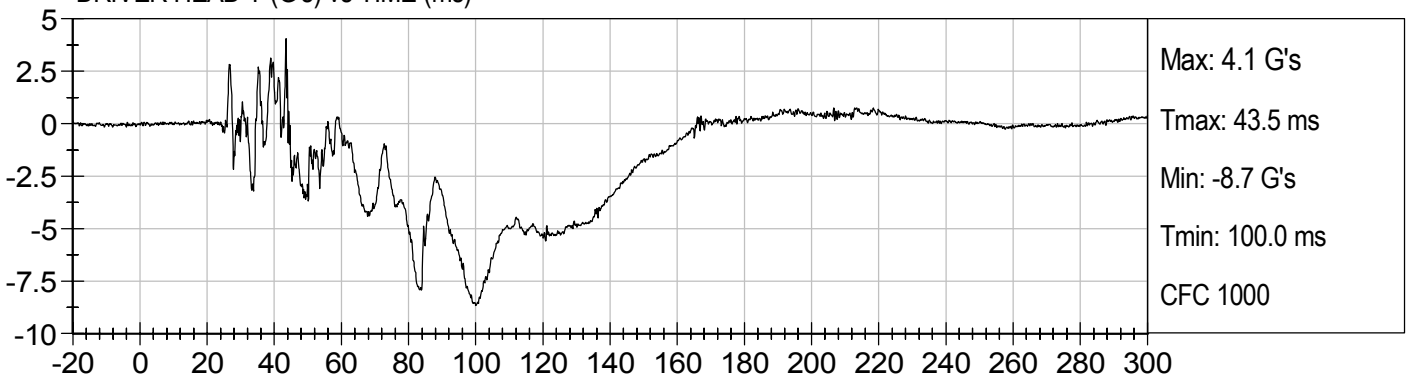
25 MPH FRONTAL UNBELTED
2006 HYUNDAI TUCSON

Test Date: 03/26/2007
Speed: 24.7 mph (39.8 km/h)

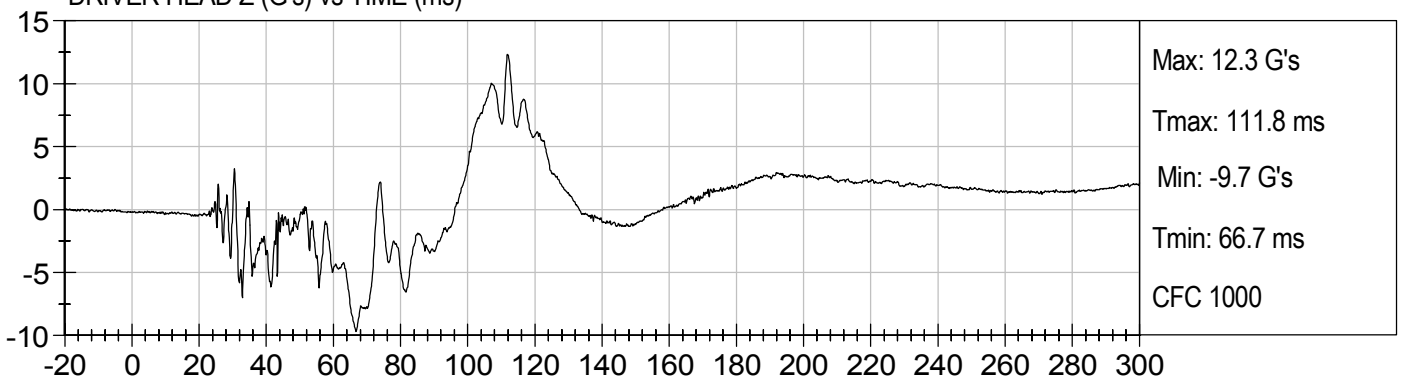
DRIVER HEAD X (G's) vs TIME (ms)



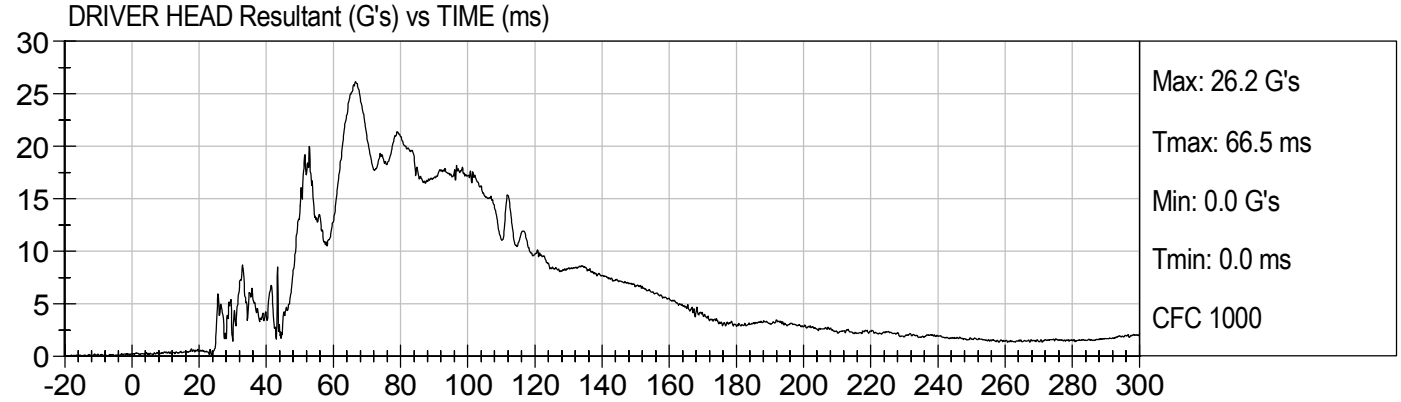
DRIVER HEAD Y (G's) vs TIME (ms)



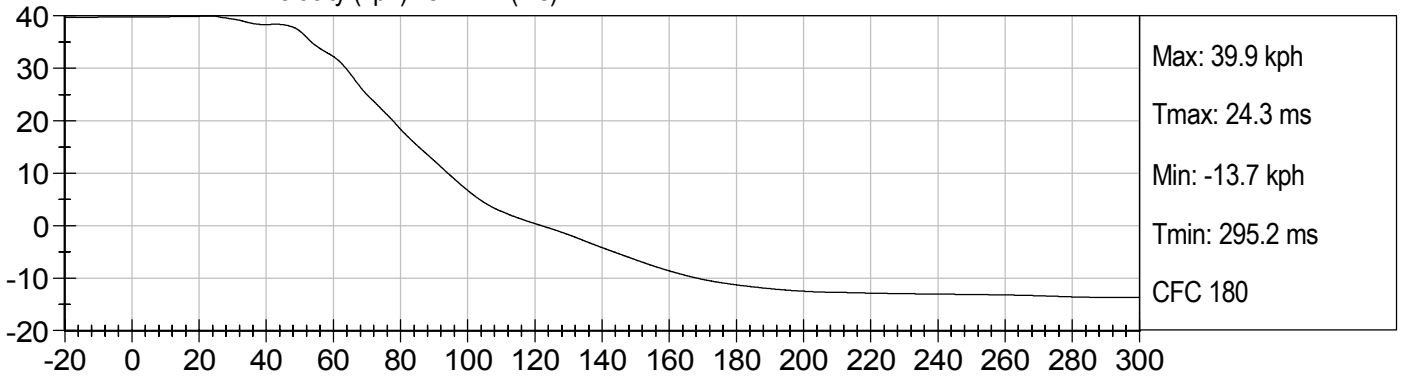
DRIVER HEAD Z (G's) vs TIME (ms)



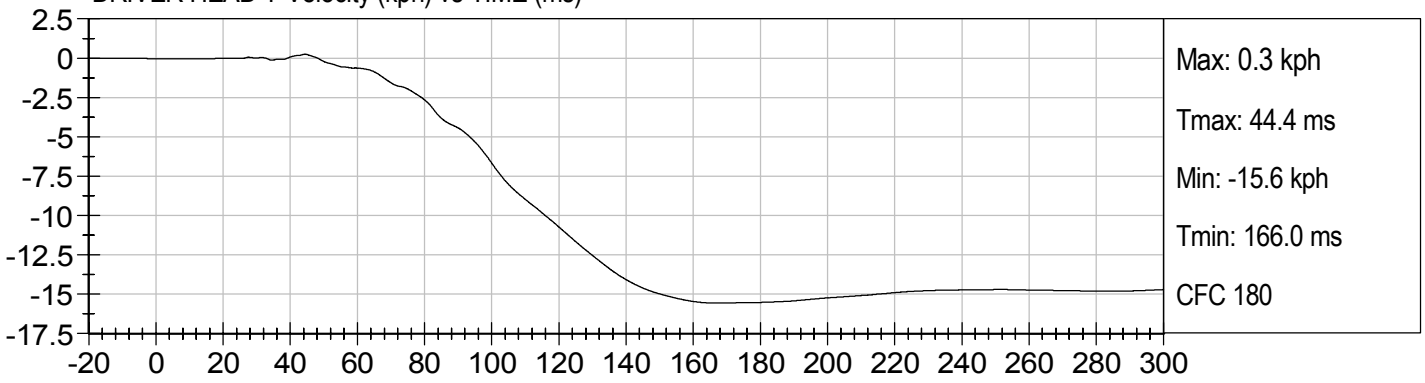
DRIVER HEAD Resultant (G's) vs TIME (ms)



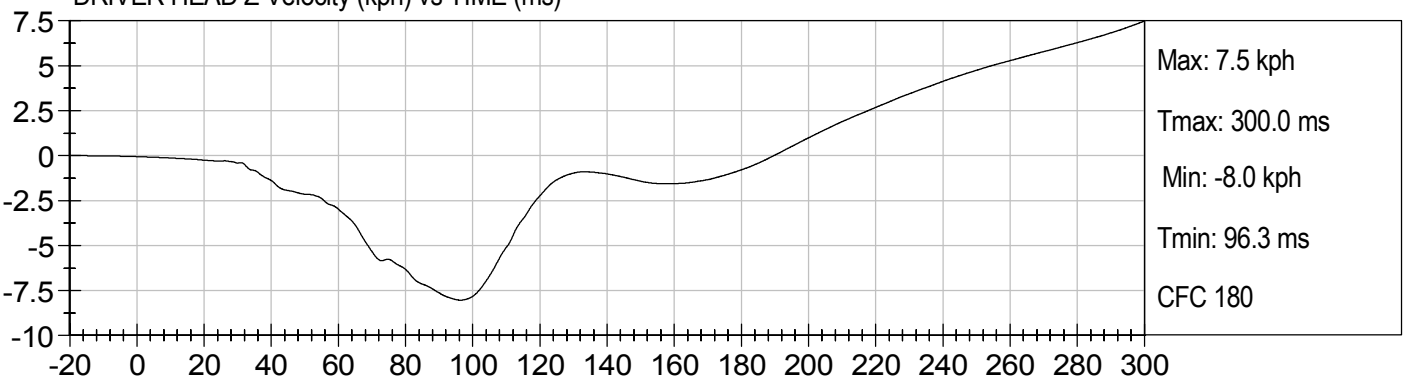
DRIVER HEAD X Velocity (kph) vs TIME (ms)



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



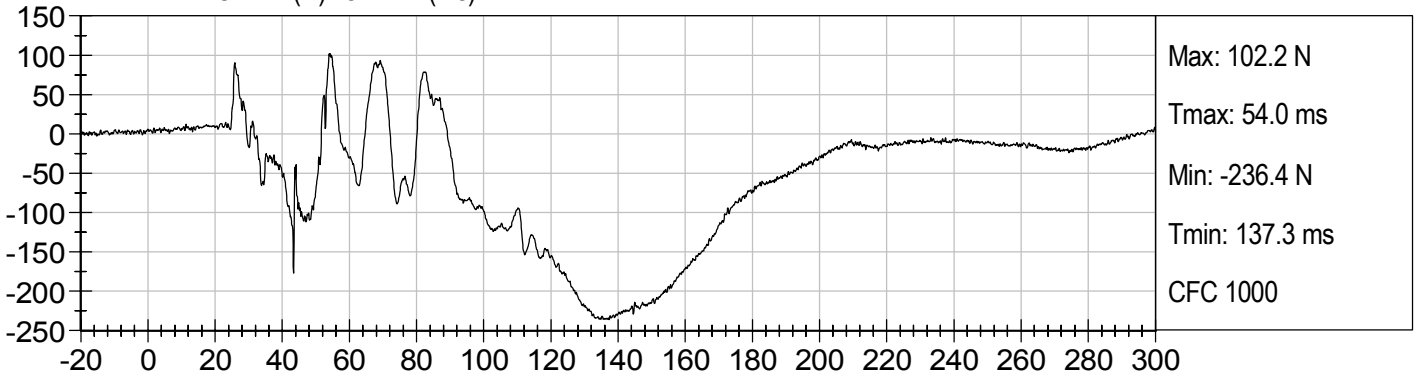
DRIVER HEAD Z Velocity (kph) vs TIME (ms)



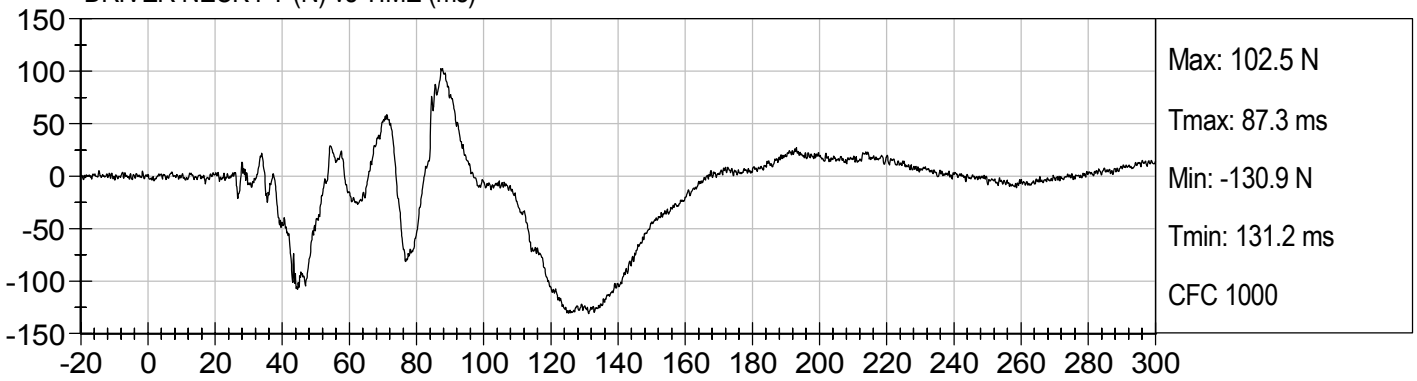
25 MPH FRONTAL UNBELTED
2006 HYUNDAI TUCSON

Test Date: 03/26/2007
Speed: 24.7 mph (39.8 km/h)

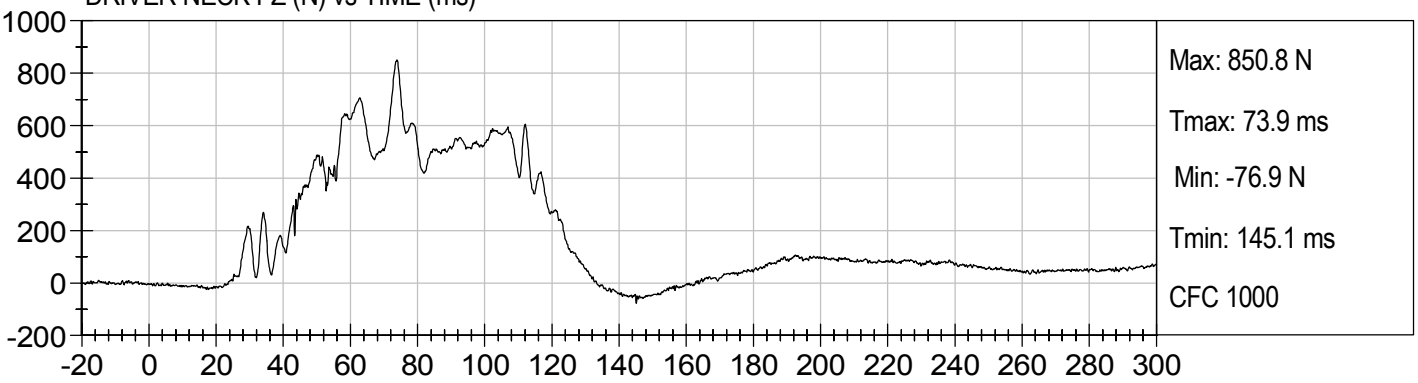
DRIVER NECK FX (N) vs TIME (ms)



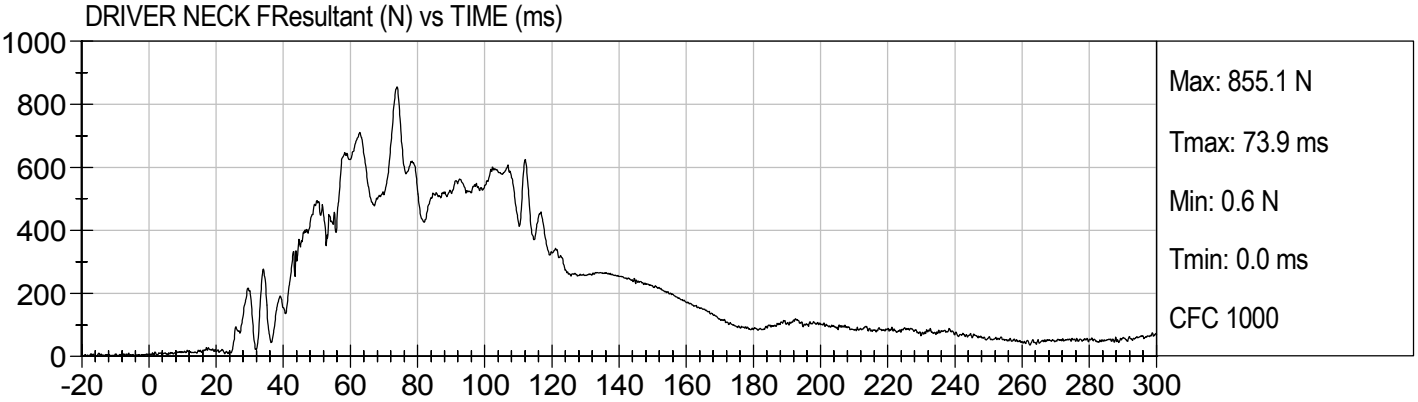
DRIVER NECK FY (N) vs TIME (ms)



DRIVER NECK FZ (N) vs TIME (ms)



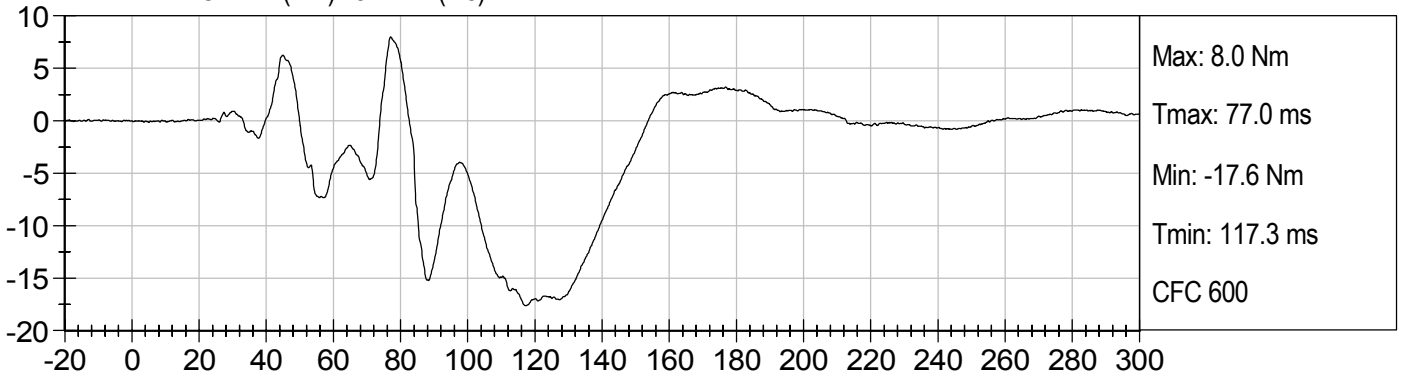
DRIVER NECK FResultant (N) vs TIME (ms)



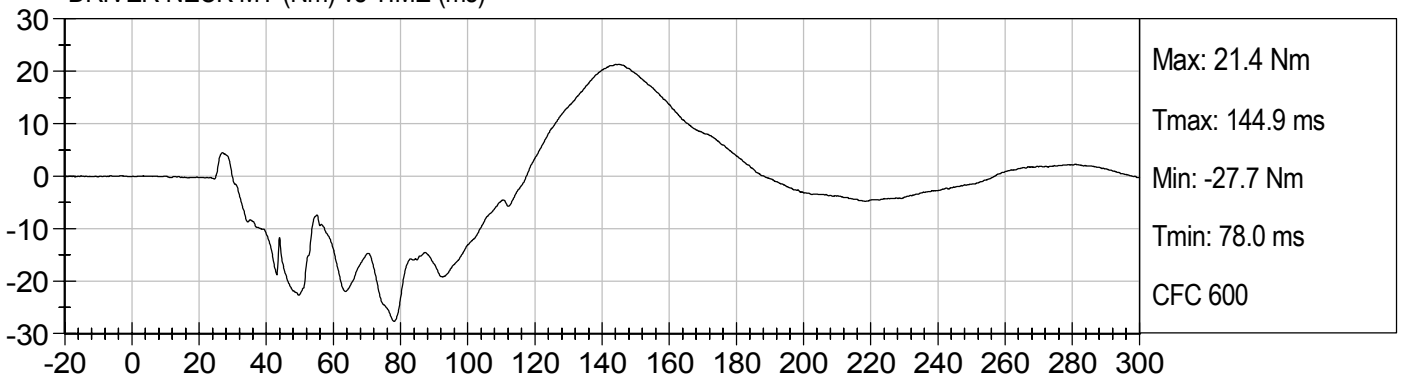
25 MPH FRONTAL UNBELTED
2006 HYUNDAI TUCSON

Test Date: 03/26/2007
Speed: 24.7 mph (39.8 km/h)

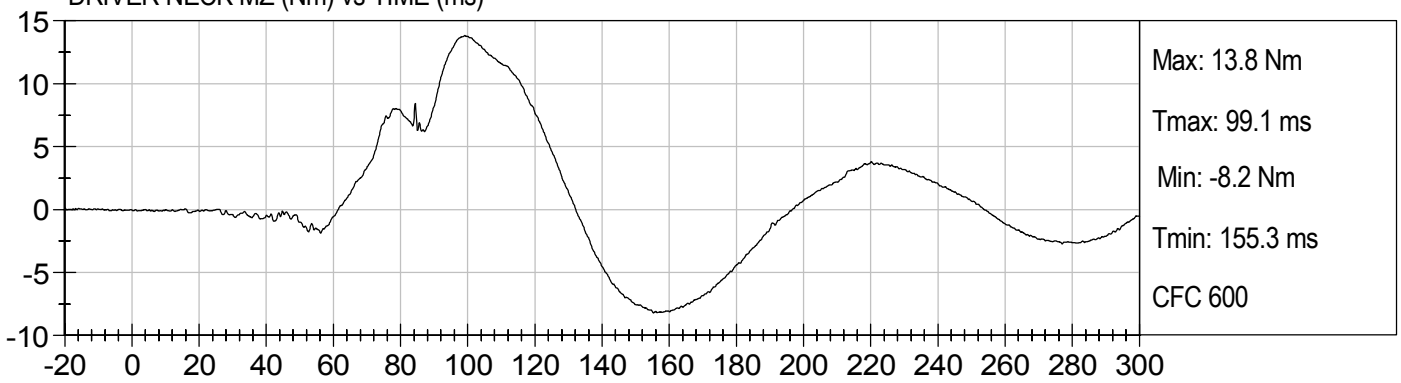
DRIVER NECK MX (Nm) vs TIME (ms)



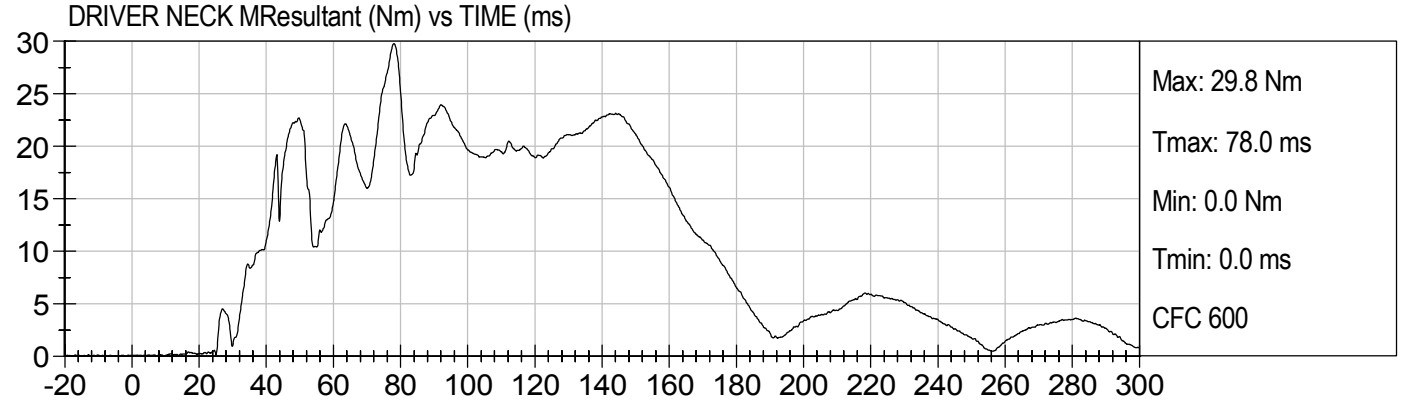
DRIVER NECK MY (Nm) vs TIME (ms)



DRIVER NECK MZ (Nm) vs TIME (ms)



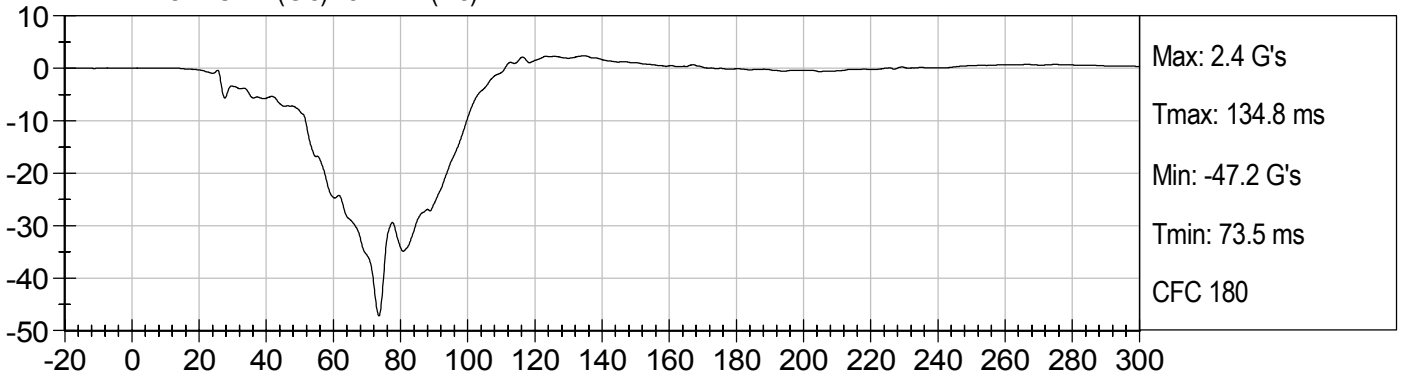
DRIVER NECK MResultant (Nm) vs TIME (ms)



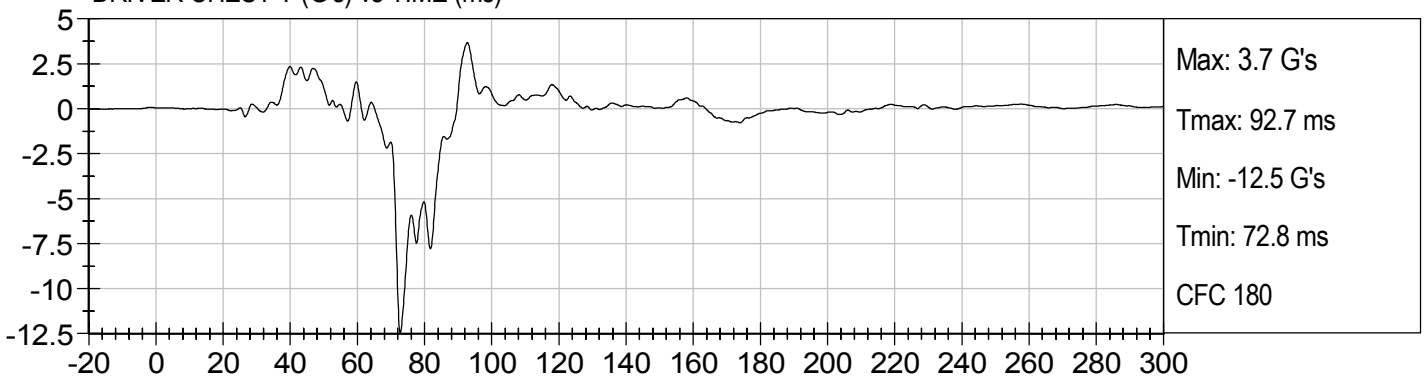
25 MPH FRONTAL UNBELTED
2006 HYUNDAI TUCSON

Test Date: 03/26/2007
Speed: 24.7 mph (39.8 km/h)

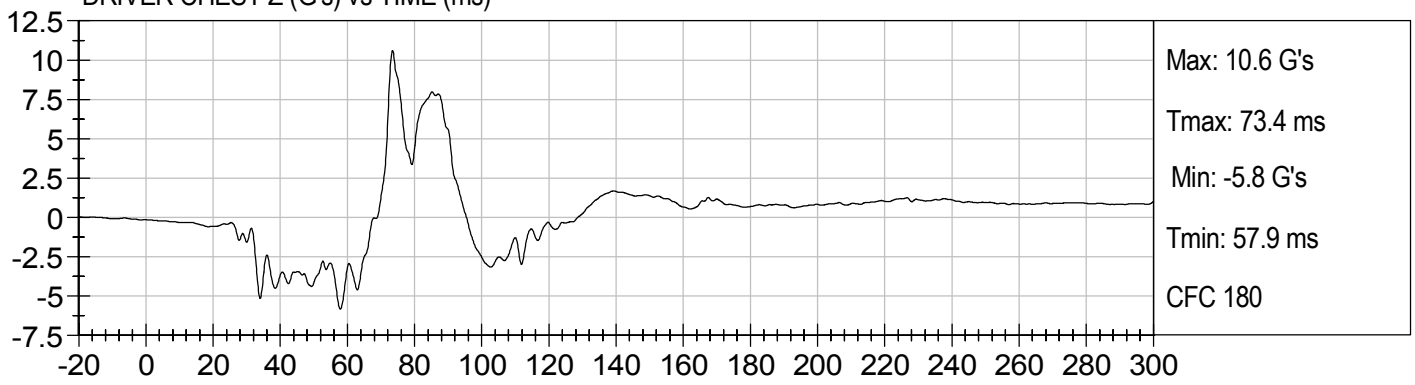
DRIVER CHEST X (G's) vs TIME (ms)



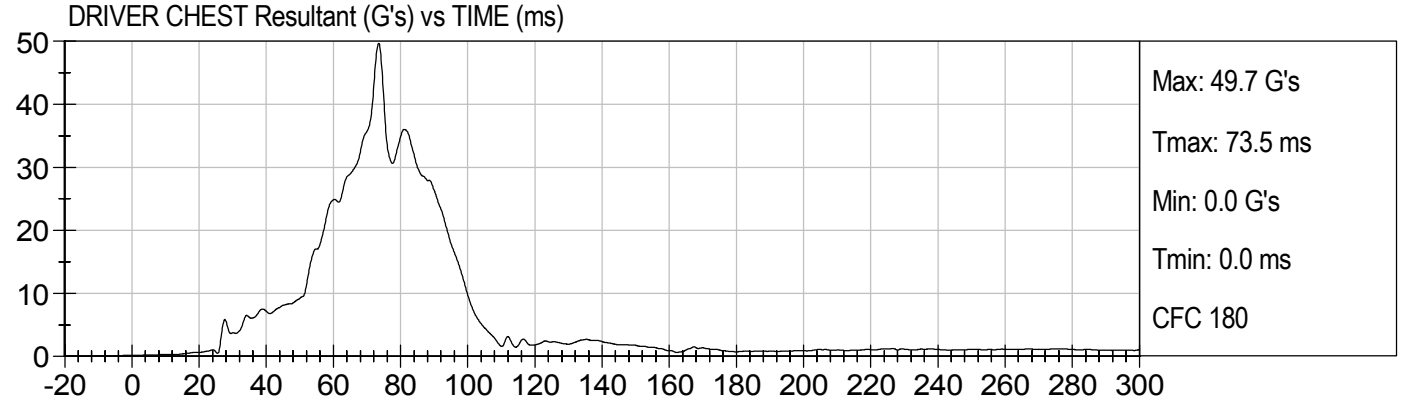
DRIVER CHEST Y (G's) vs TIME (ms)



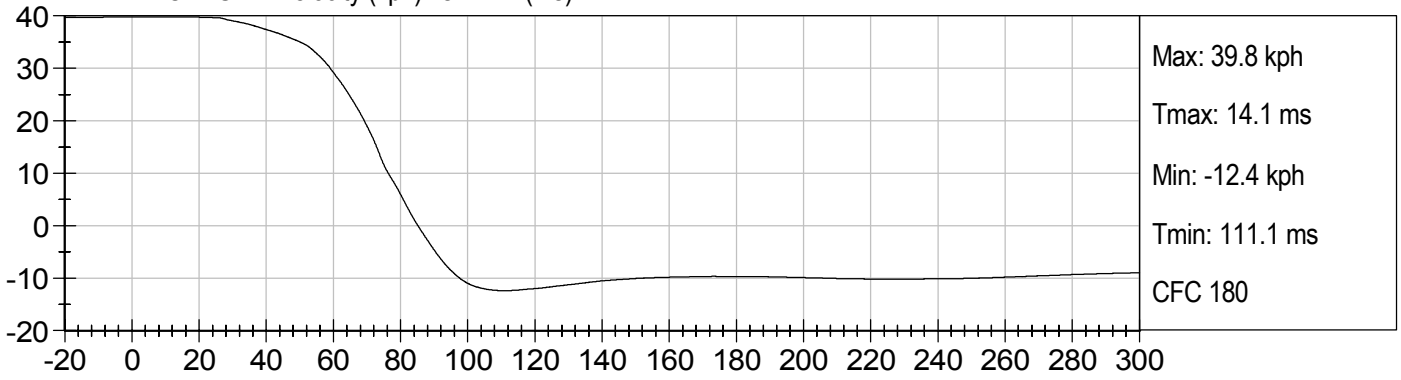
DRIVER CHEST Z (G's) vs TIME (ms)



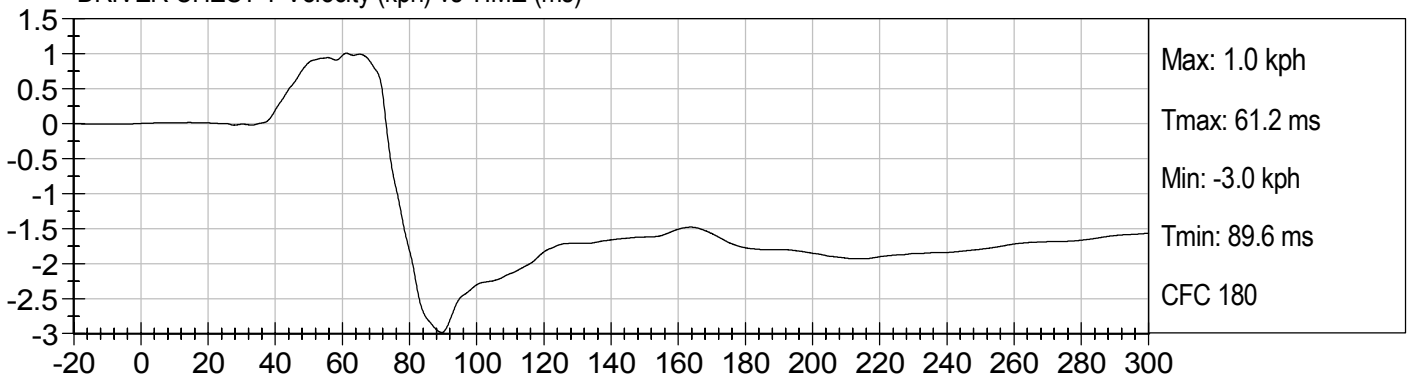
DRIVER CHEST Resultant (G's) vs TIME (ms)



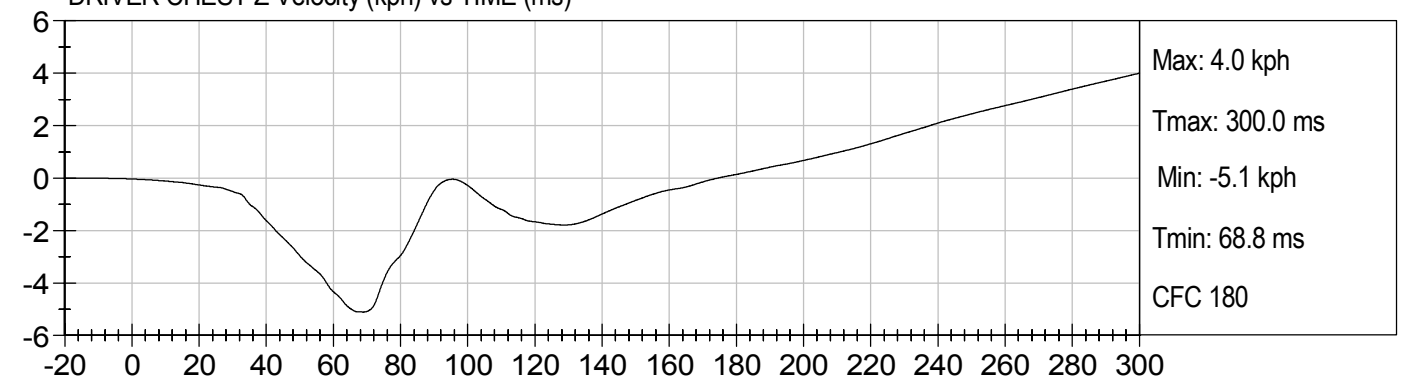
DRIVER CHEST X Velocity (kph) vs TIME (ms)



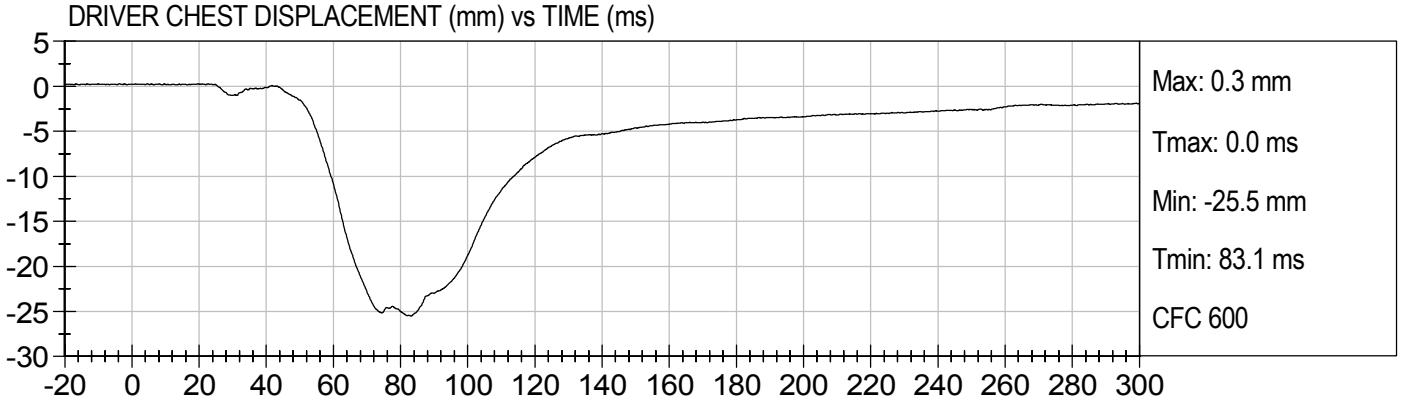
DRIVER CHEST Y Velocity (kph) vs TIME (ms)



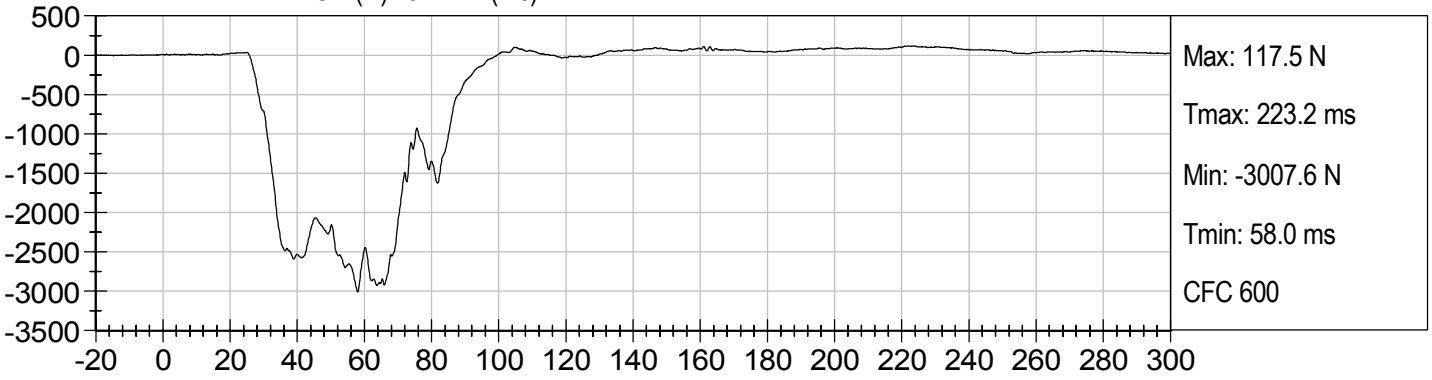
DRIVER CHEST Z Velocity (kph) vs TIME (ms)



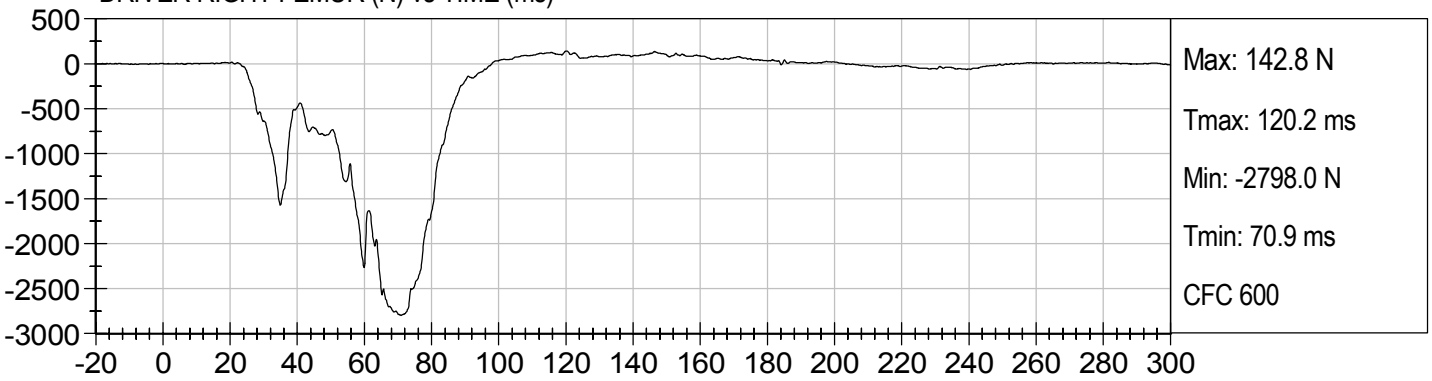
DRIVER CHEST DISPLACEMENT (mm) vs TIME (ms)



DRIVER LEFT FEMUR (N) vs TIME (ms)



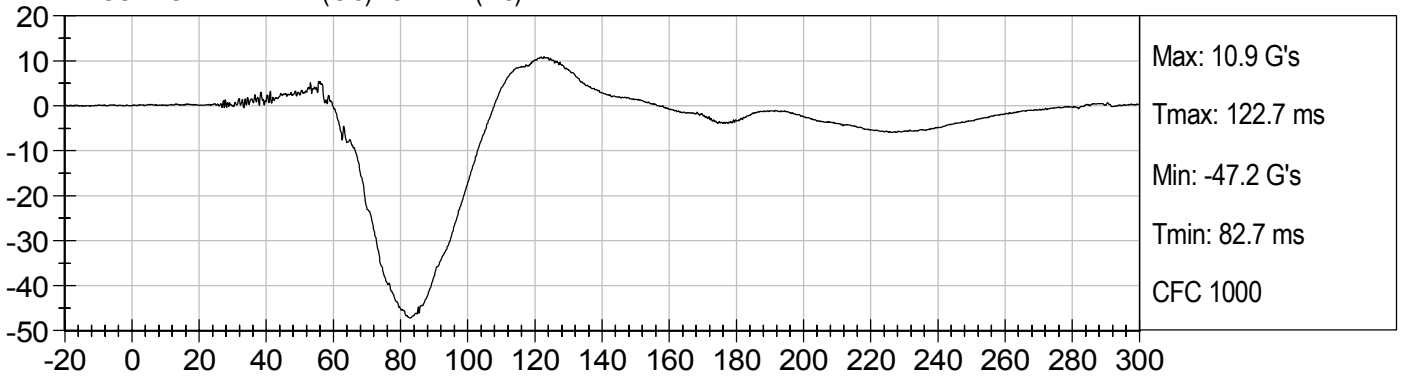
DRIVER RIGHT FEMUR (N) vs TIME (ms)



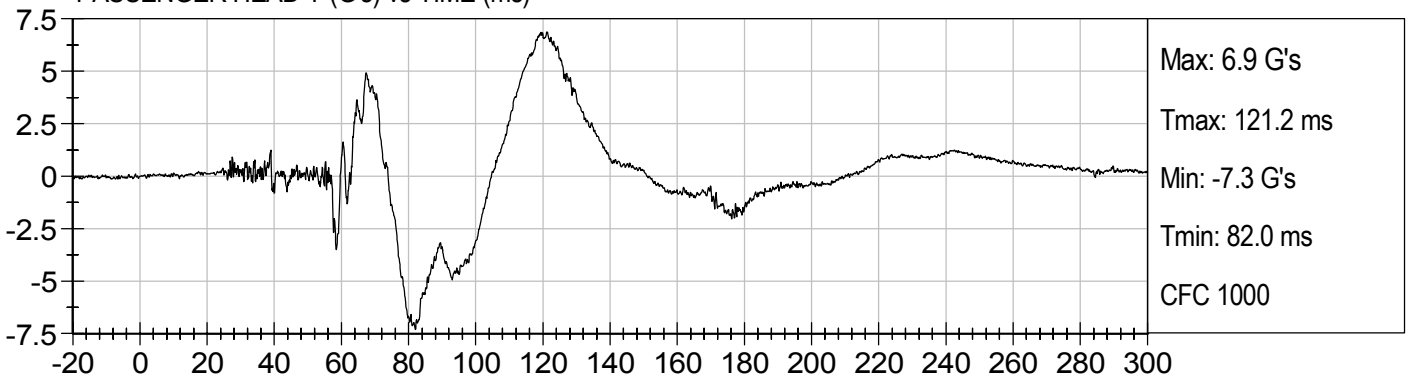
25 MPH FRONTAL UNBELTED
2006 HYUNDAI TUCSON

Test Date: 03/26/2007
Speed: 24.7 mph (39.8 km/h)

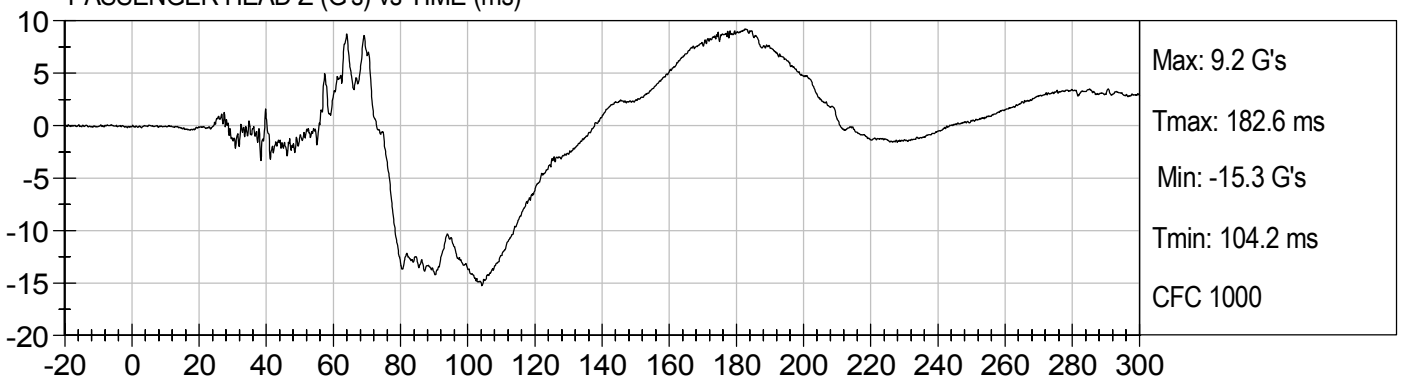
PASSENGER HEAD X (G's) vs TIME (ms)



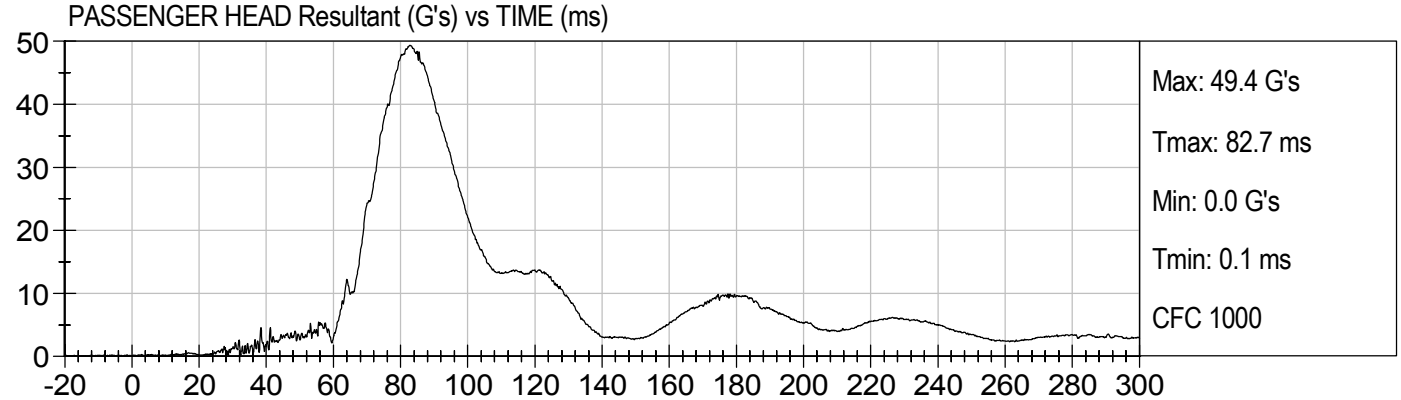
PASSENGER HEAD Y (G's) vs TIME (ms)



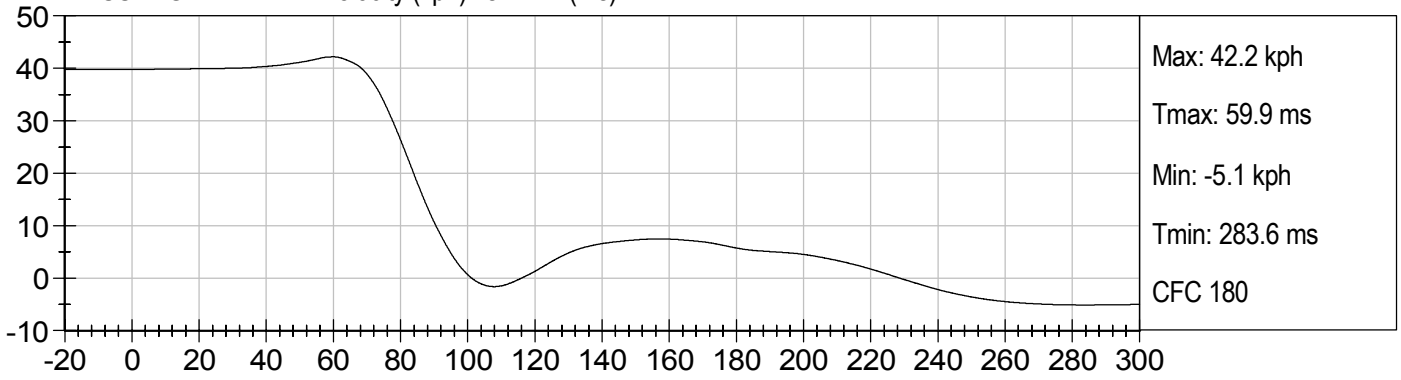
PASSENGER HEAD Z (G's) vs TIME (ms)



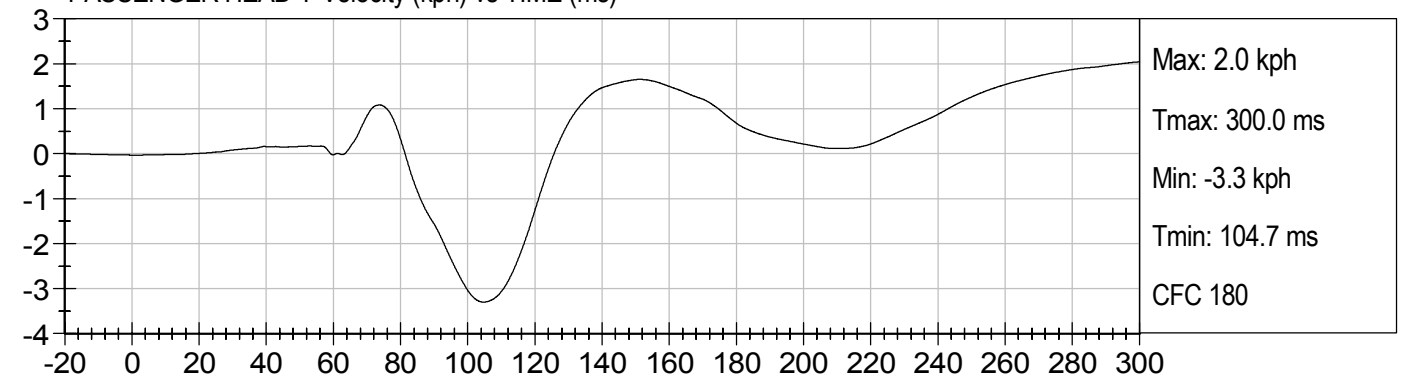
PASSENGER HEAD Resultant (G's) vs TIME (ms)



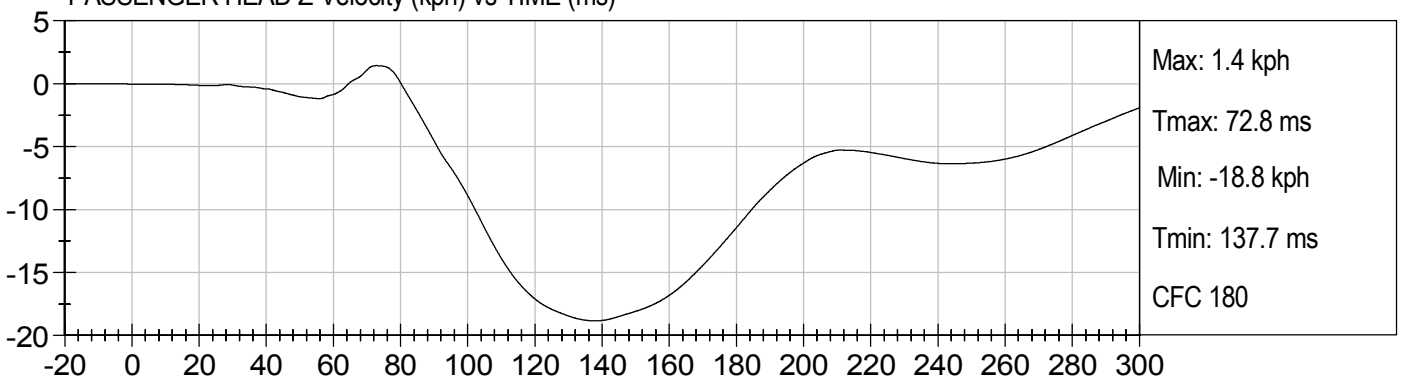
PASSENGER HEAD X Velocity (kph) vs TIME (ms)



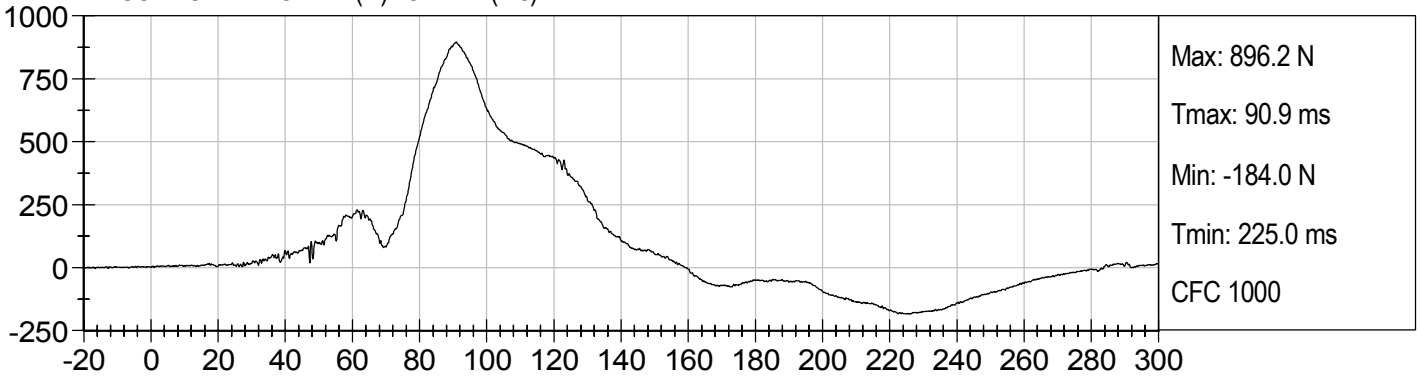
PASSENGER HEAD Y Velocity (kph) vs TIME (ms)



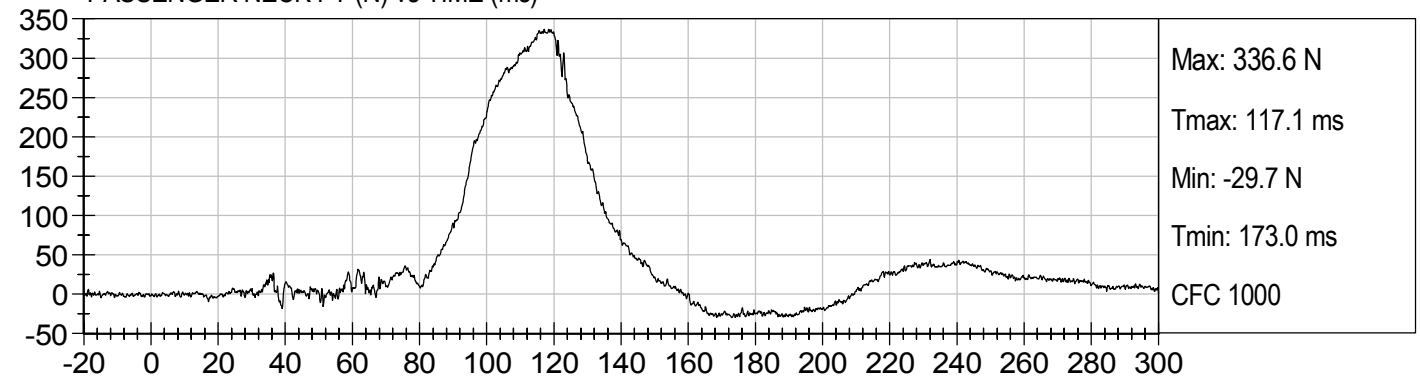
PASSENGER HEAD Z Velocity (kph) vs TIME (ms)



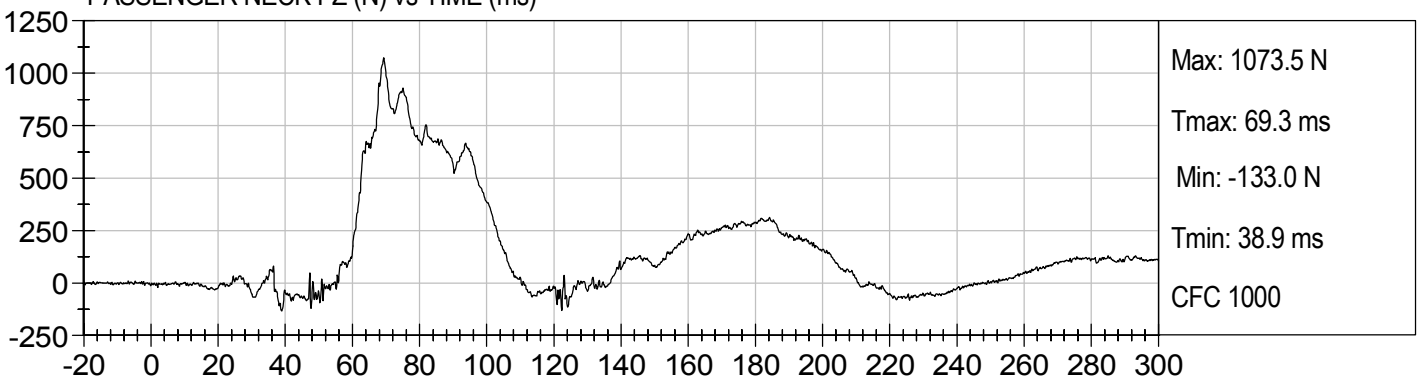
PASSENGER NECK FX (N) vs TIME (ms)



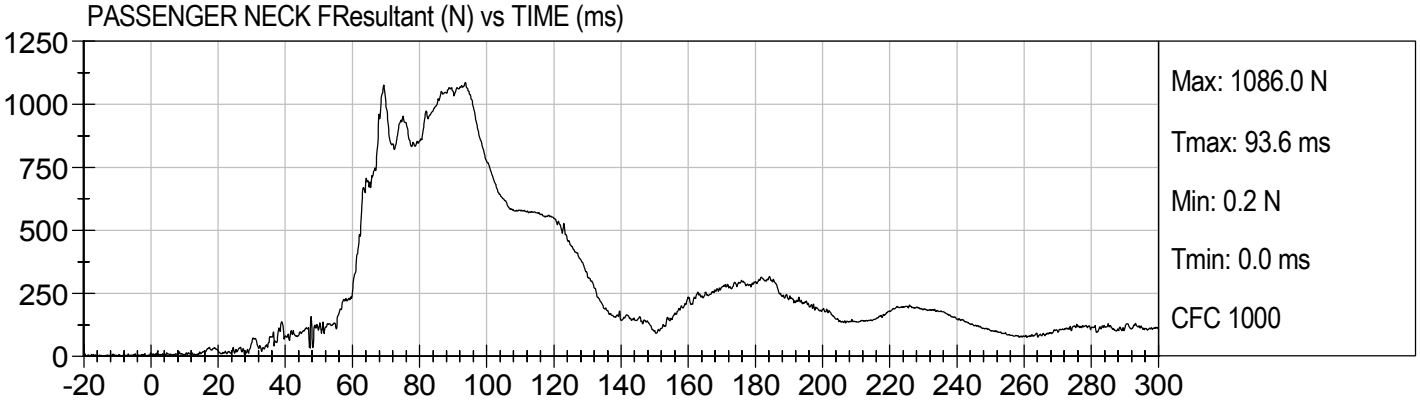
PASSENGER NECK FY (N) vs TIME (ms)



PASSENGER NECK FZ (N) vs TIME (ms)



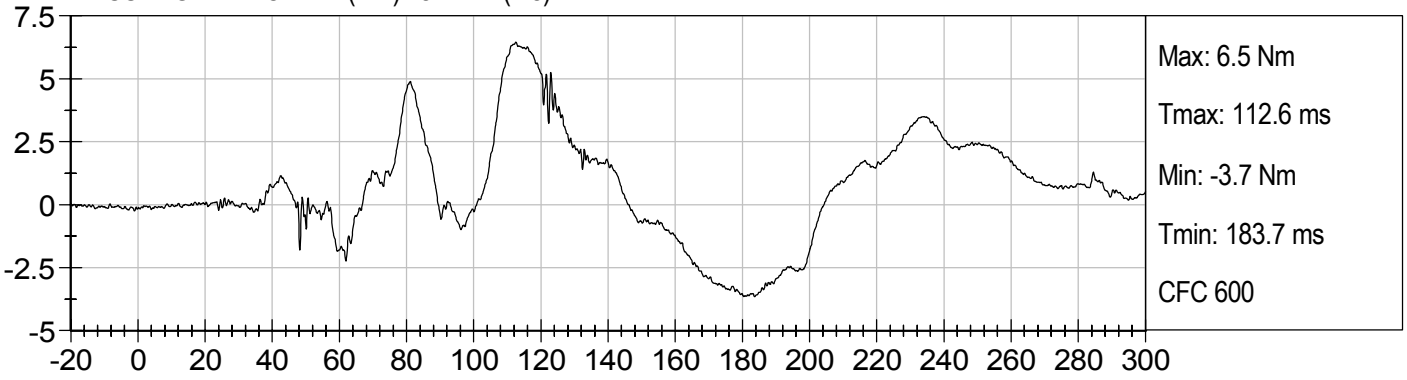
PASSENGER NECK FResultant (N) vs TIME (ms)



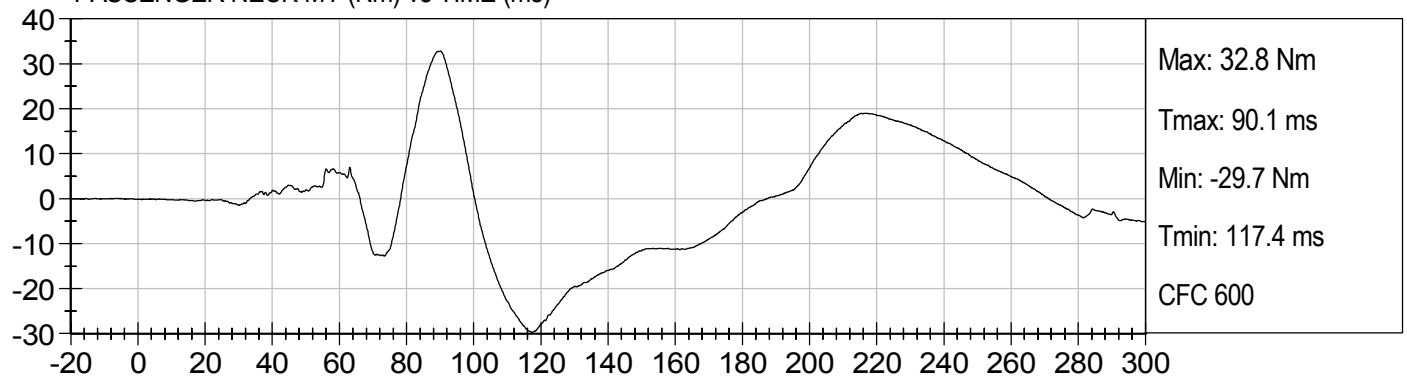
25 MPH FRONTAL UNBELTED
2006 HYUNDAI TUCSON

Test Date: 03/26/2007
Speed: 24.7 mph (39.8 km/h)

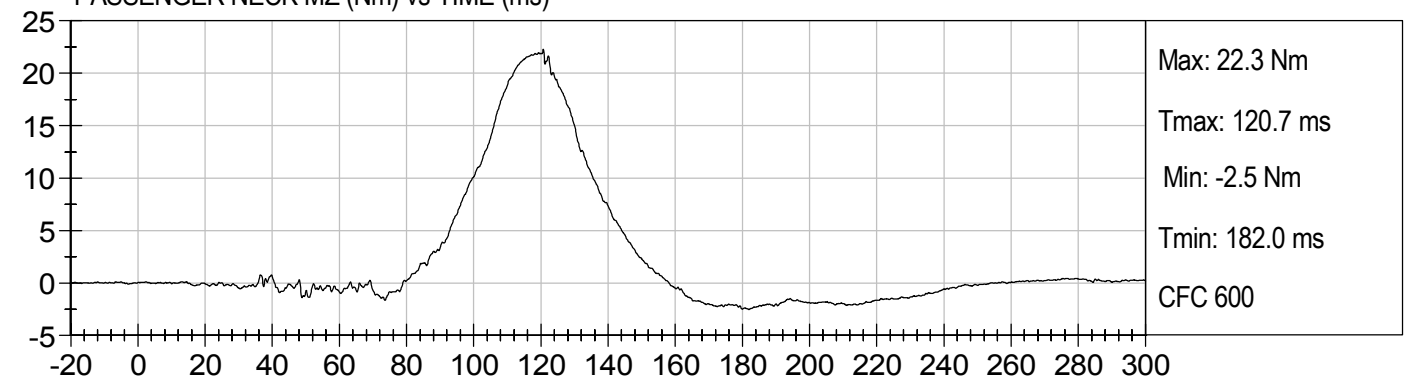
PASSENGER NECK MX (Nm) vs TIME (ms)



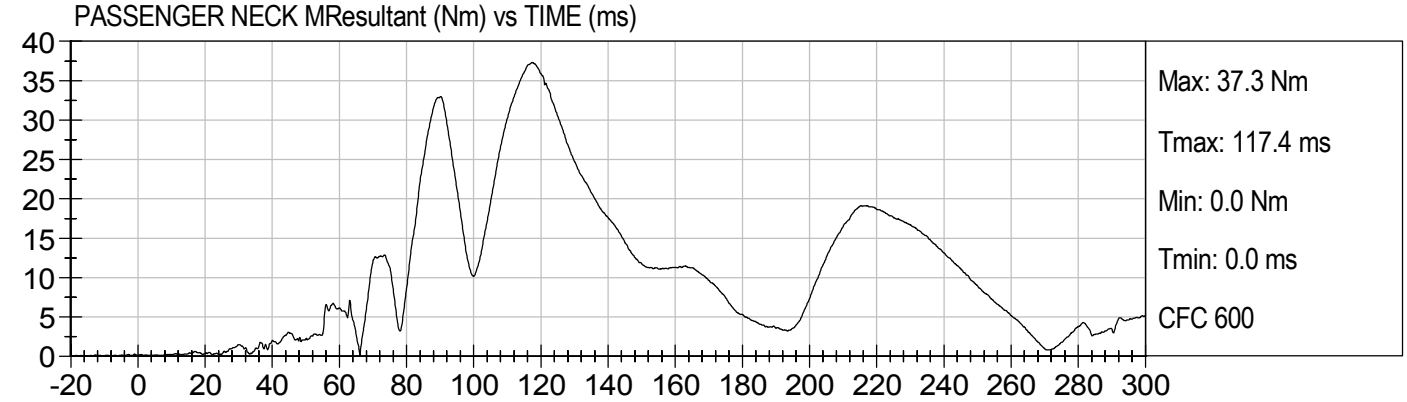
PASSENGER NECK MY (Nm) vs TIME (ms)



PASSENGER NECK MZ (Nm) vs TIME (ms)



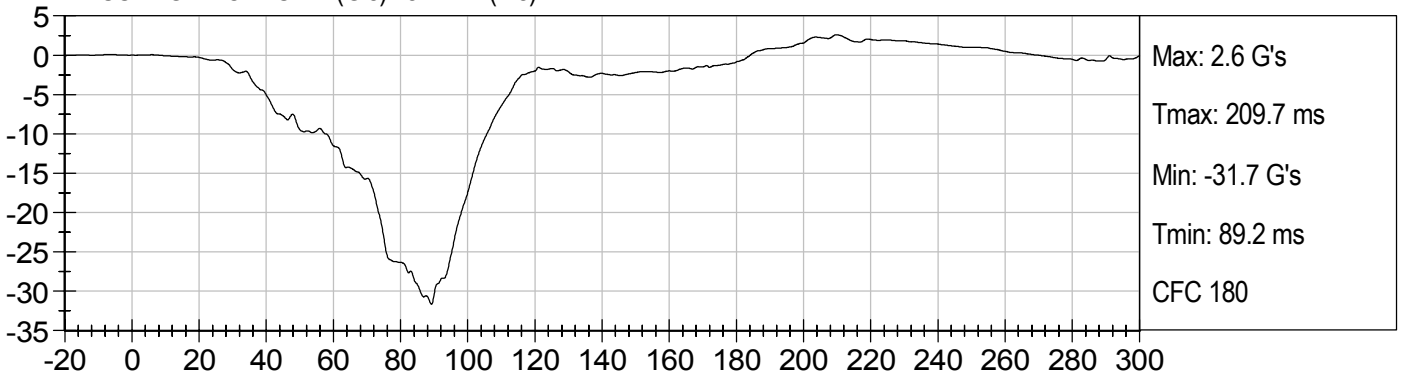
PASSENGER NECK MResultant (Nm) vs TIME (ms)



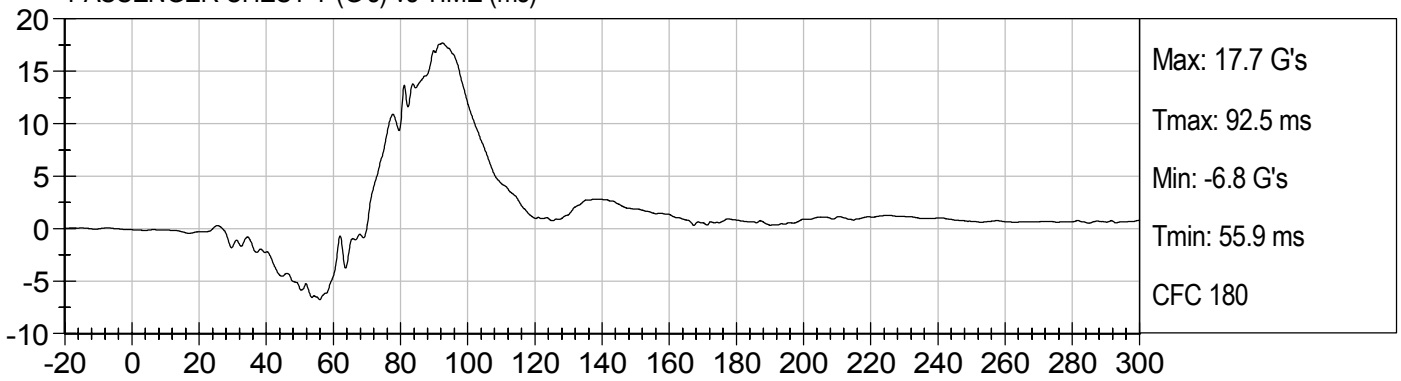
25 MPH FRONTAL UNBELTED
2006 HYUNDAI TUCSON

Test Date: 03/26/2007
Speed: 24.7 mph (39.8 km/h)

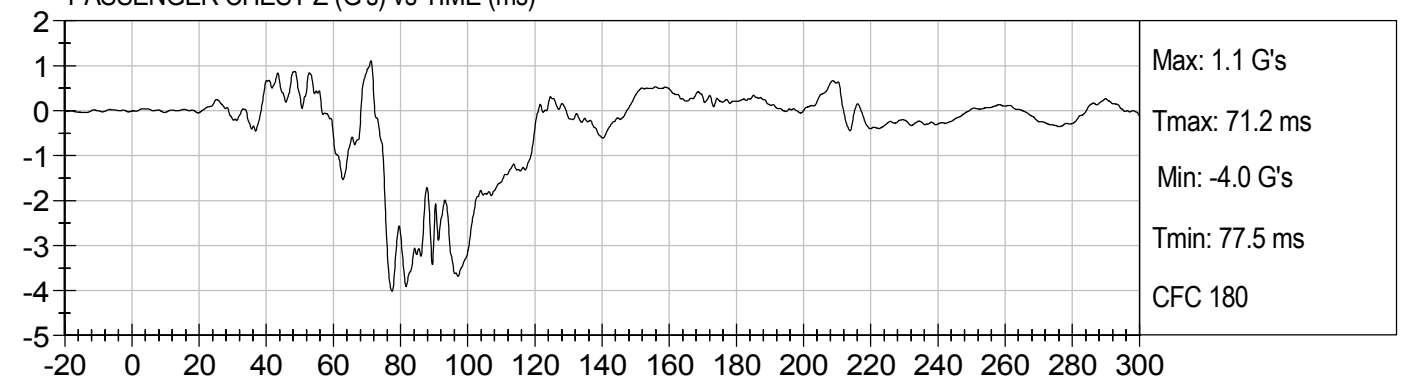
PASSENGER CHEST X (G's) vs TIME (ms)



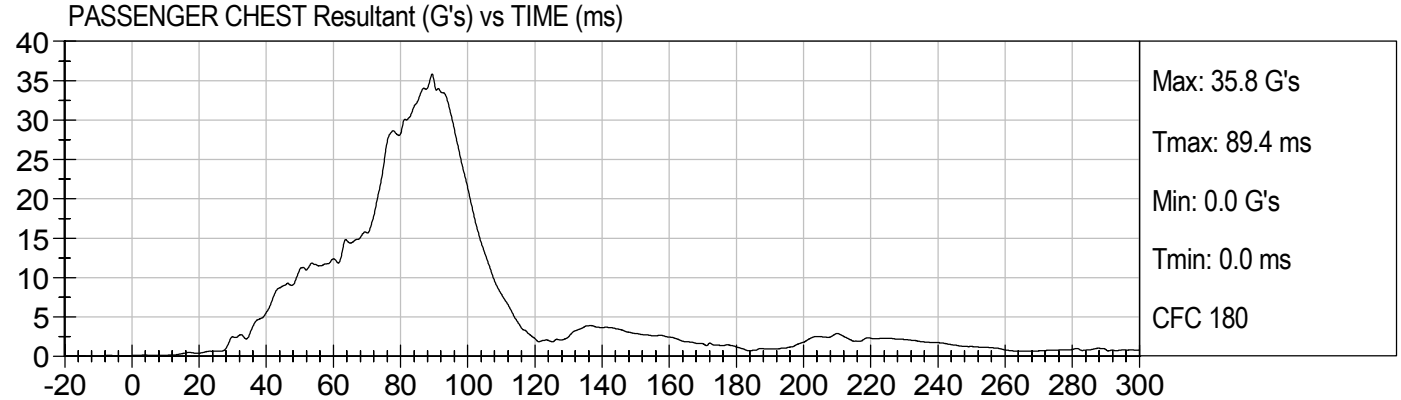
PASSENGER CHEST Y (G's) vs TIME (ms)



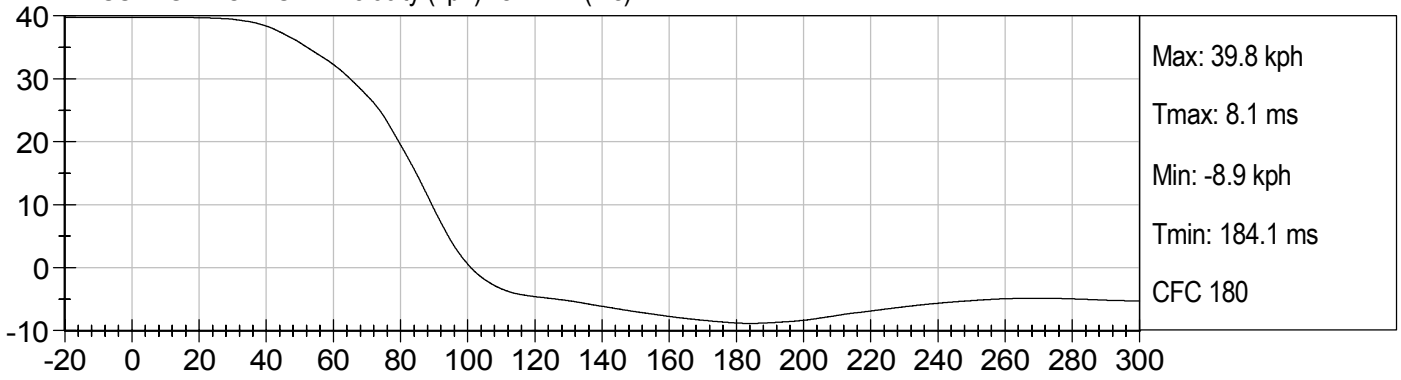
PASSENGER CHEST Z (G's) vs TIME (ms)



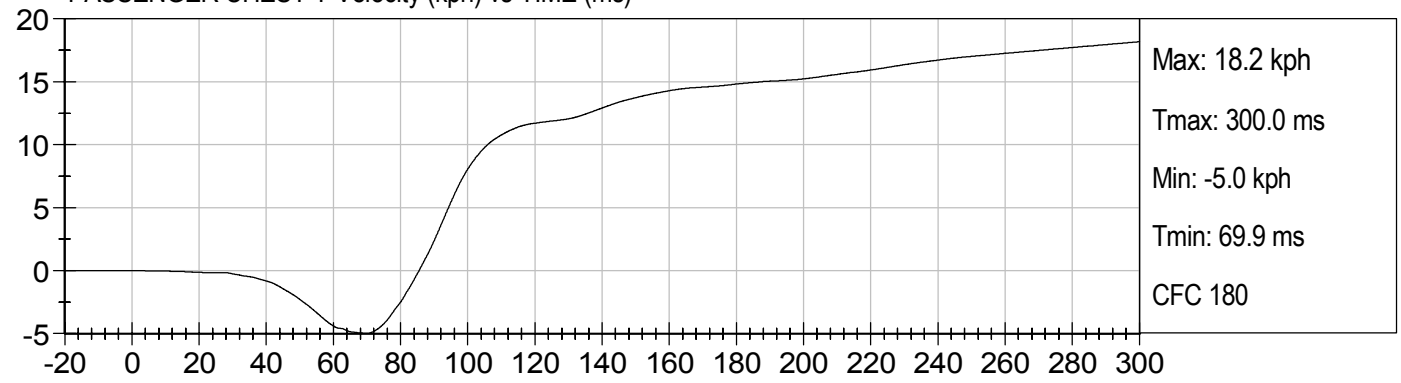
PASSENGER CHEST Resultant (G's) vs TIME (ms)



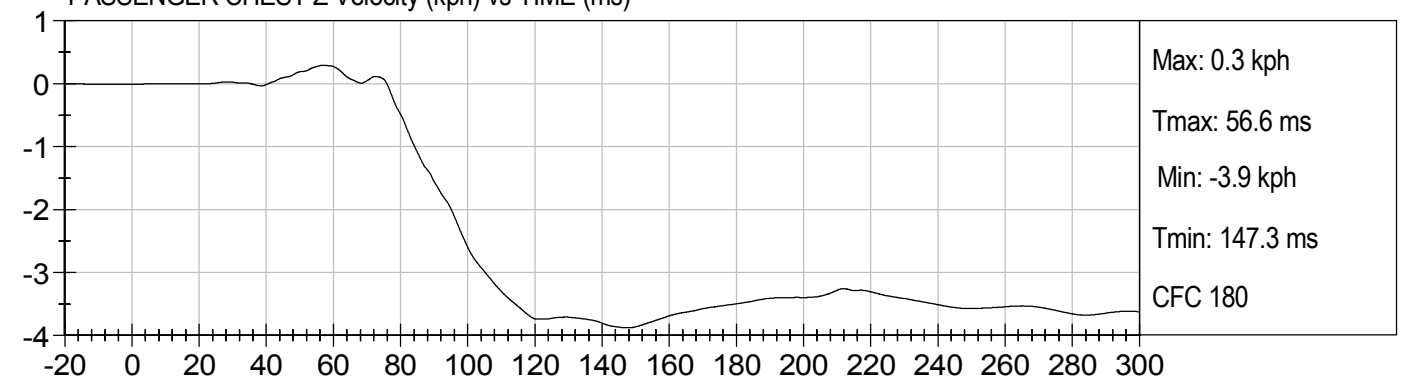
PASSENGER CHEST X Velocity (kph) vs TIME (ms)



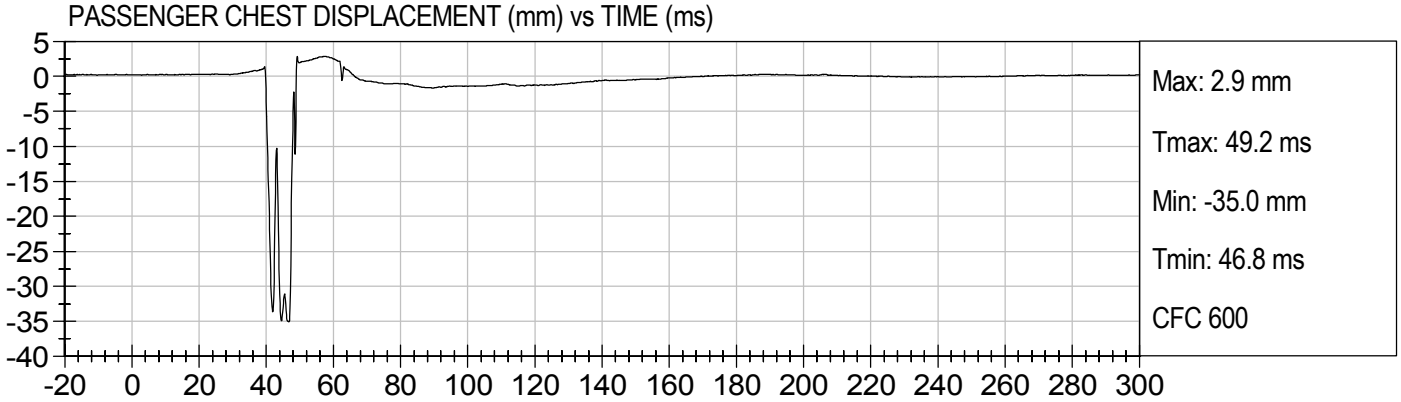
PASSENGER CHEST Y Velocity (kph) vs TIME (ms)



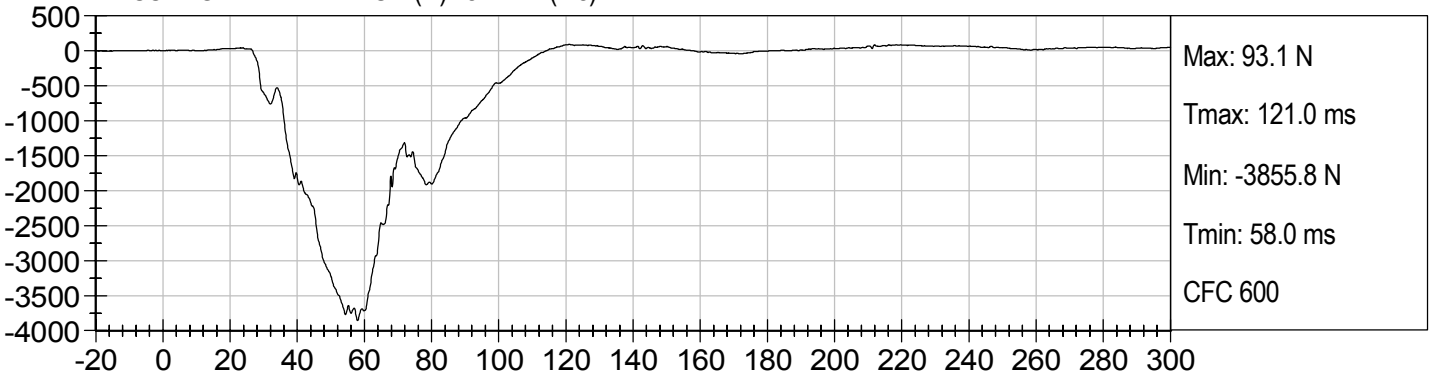
PASSENGER CHEST Z Velocity (kph) vs TIME (ms)



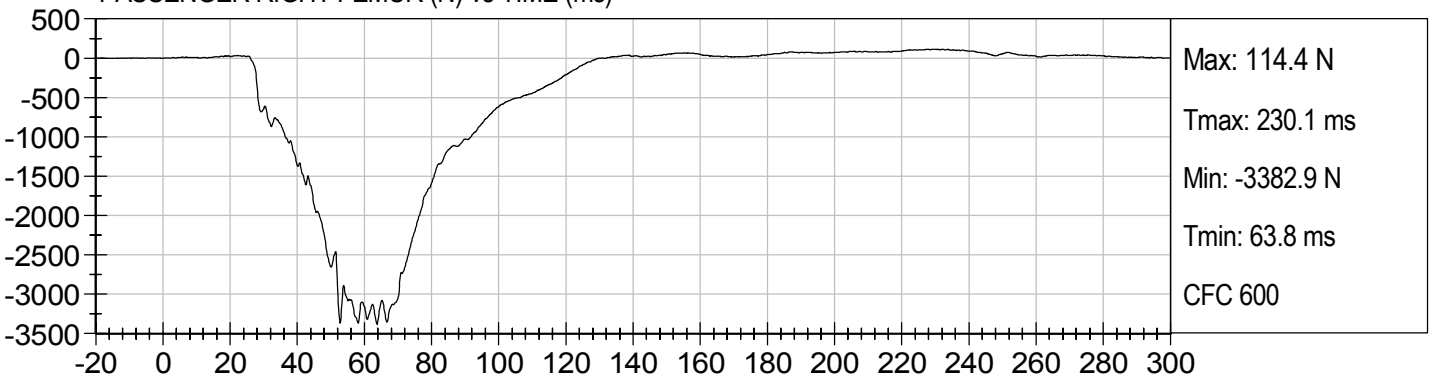
PASSENGER CHEST DISPLACEMENT (mm) vs TIME (ms)

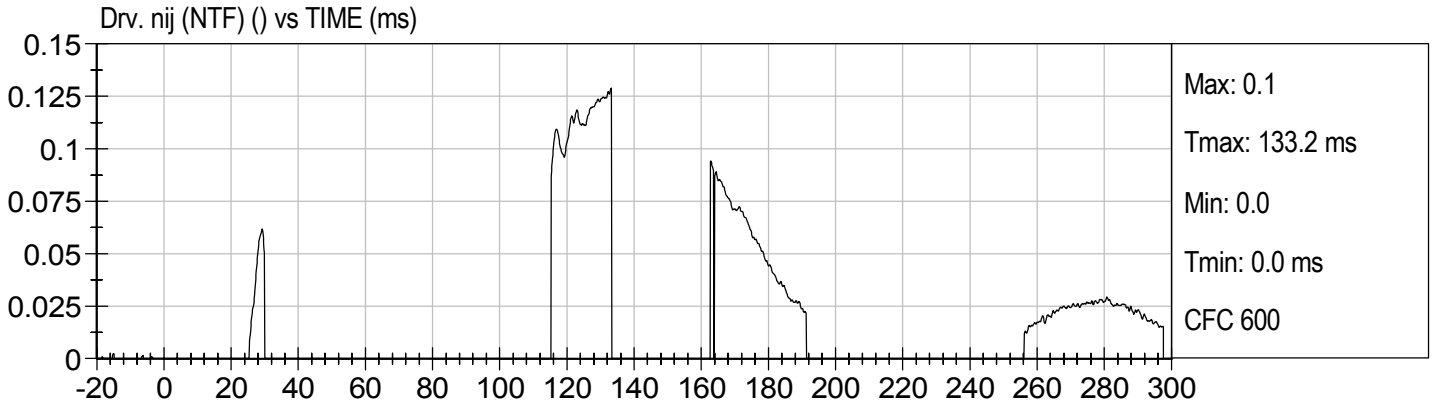


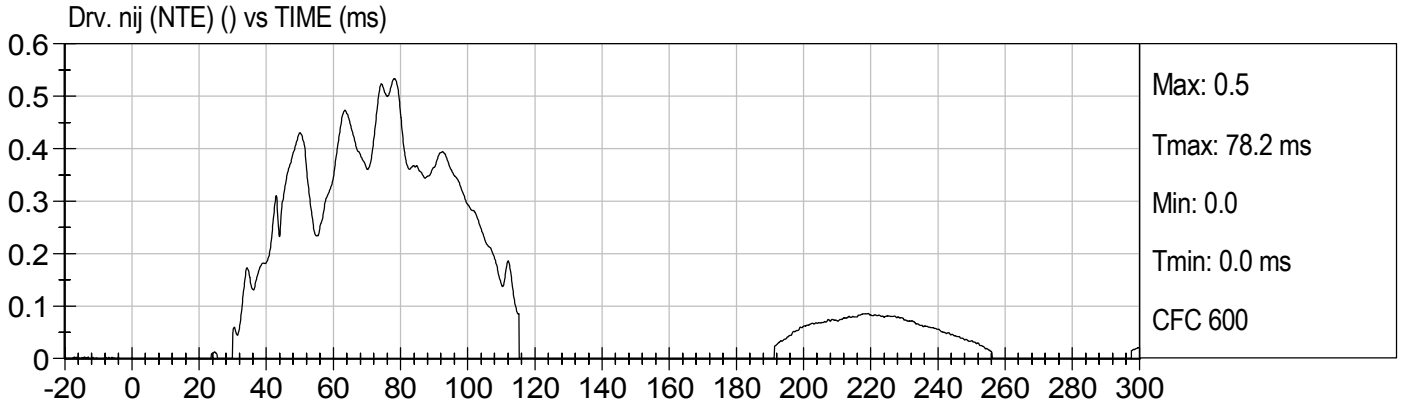
PASSENGER LEFT FEMUR (N) vs TIME (ms)

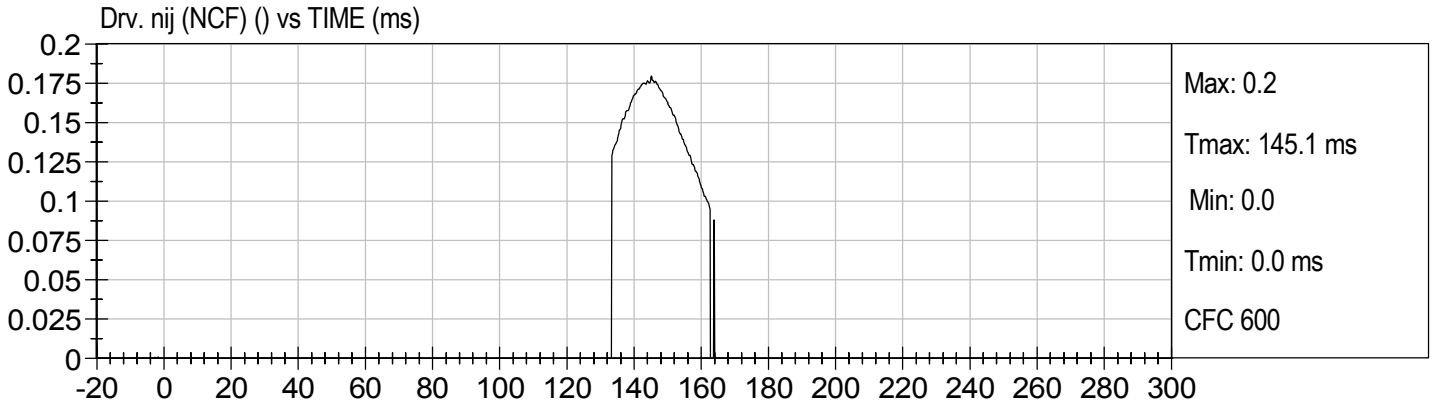


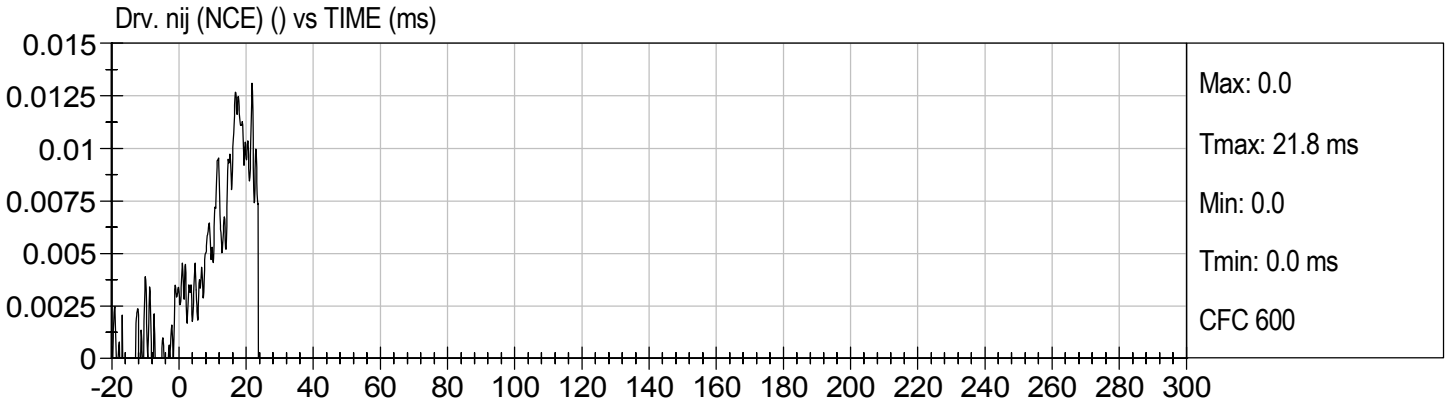
PASSENGER RIGHT FEMUR (N) vs TIME (ms)

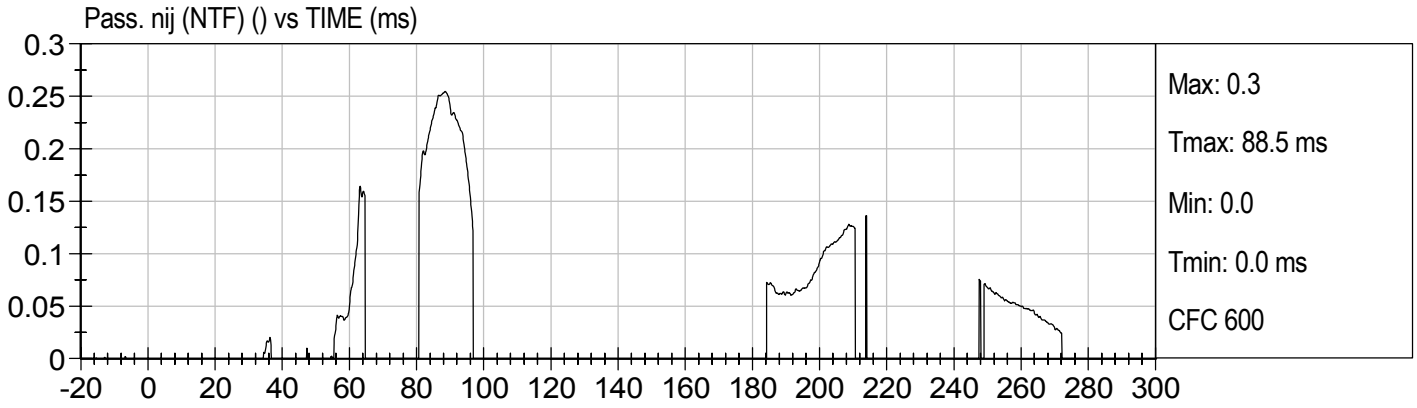


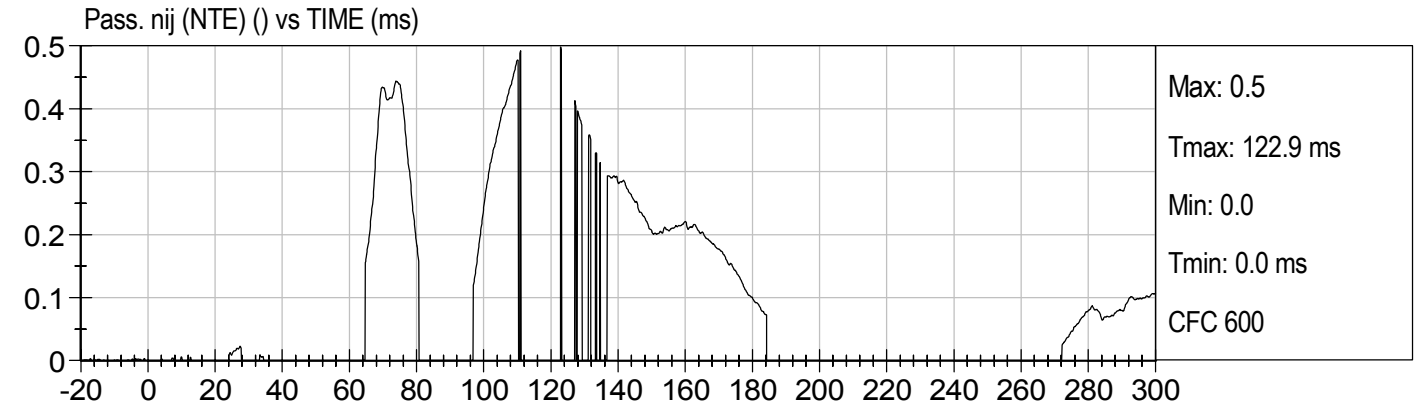

Drv. nij (NTF) () vs TIME (ms)
0.15
0.125
0.1
0.075
0.05
0.025
0
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 0.1
Tmax: 133.2 ms
Min: 0.0
Tmin: 0.0 ms
CFC 600

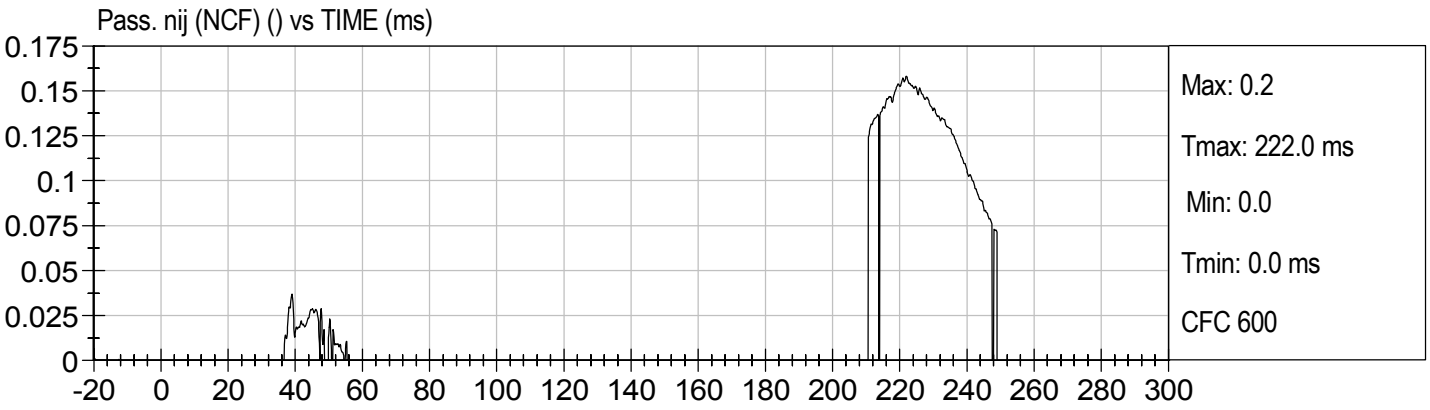

Drv. nij (NTE) () vs TIME (ms)
0.6
0.5
0.4
0.3
0.2
0.1
0
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 0.5
Tmax: 78.2 ms
Min: 0.0
Tmin: 0.0 ms
CFC 600

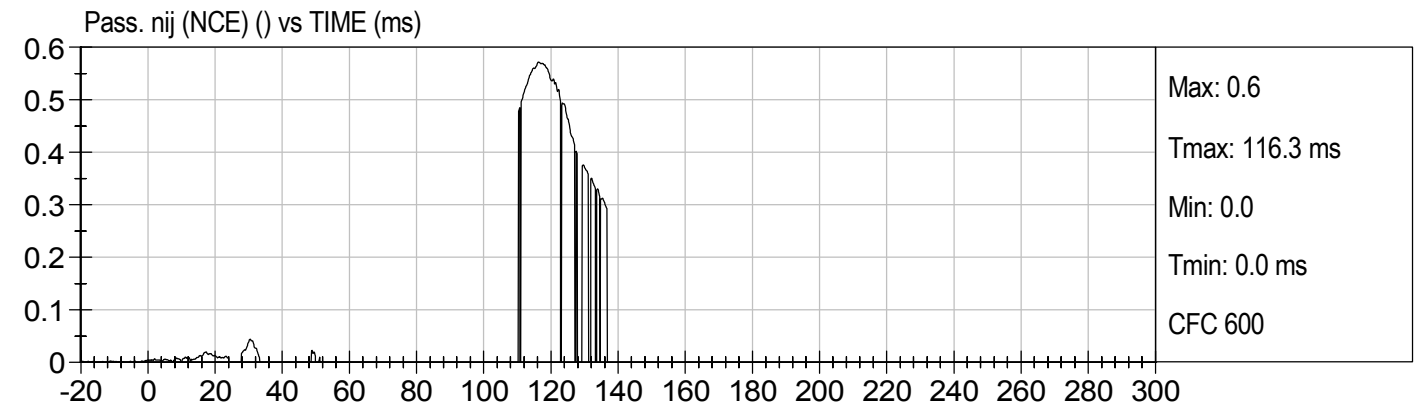

Drv. nij (NCF) () vs TIME (ms)
0.2
0.175
0.15
0.125
0.1
0.075
0.05
0.025
0
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 0.2
Tmax: 145.1 ms
Min: 0.0
Tmin: 0.0 ms
CFC 600


Drv. nij (NCE) () vs TIME (ms)
0.015
0.0125
0.01
0.0075
0.005
0.0025
0
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 0.0
Tmax: 21.8 ms
Min: 0.0
Tmin: 0.0 ms
CFC 600

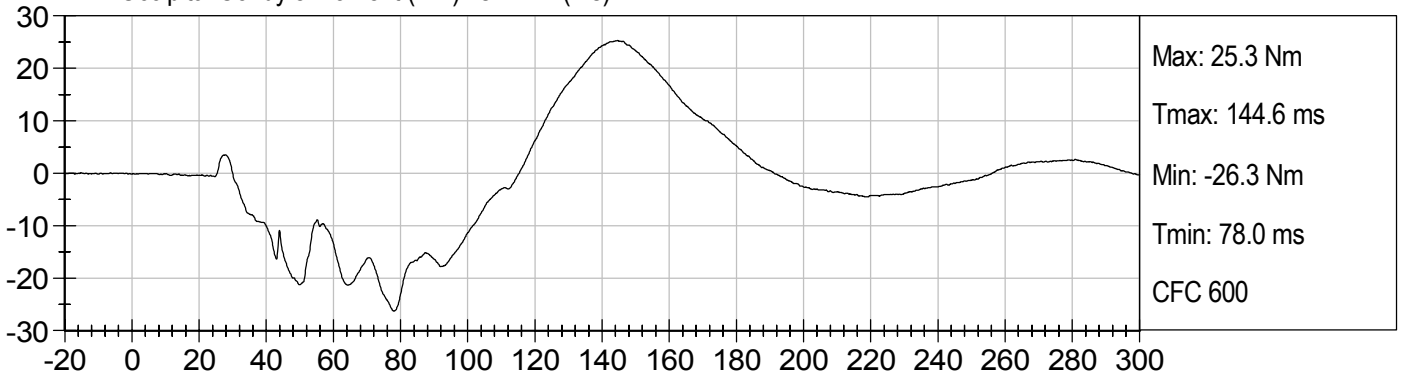

Pass. nij (NTF) () vs TIME (ms)
0.3
0.25
0.2
0.15
0.1
0.05
0
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 0.3
Tmax: 88.5 ms
Min: 0.0
Tmin: 0.0 ms
CFC 600


Pass. nij (NTE) () vs TIME (ms)
0.5
0.4
0.3
0.2
0.1
0
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 0.5
Tmax: 122.9 ms
Min: 0.0
Tmin: 0.0 ms
CFC 600

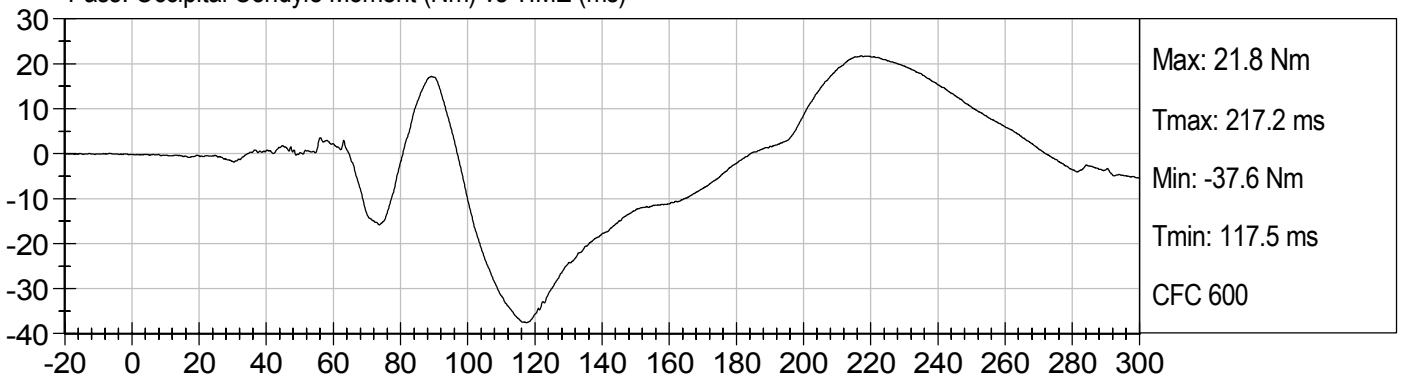

Pass. nij (NCF) () vs TIME (ms)
0.175
0.15
0.125
0.1
0.075
0.05
0.025
0
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 0.2
Tmax: 222.0 ms
Min: 0.0
Tmin: 0.0 ms
CFC 600


Pass. nij (NCE) () vs TIME (ms)
0.6
0.5
0.4
0.3
0.2
0.1
0
-20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280 300
Max: 0.6
Tmax: 116.3 ms
Min: 0.0
Tmin: 0.0 ms
CFC 600

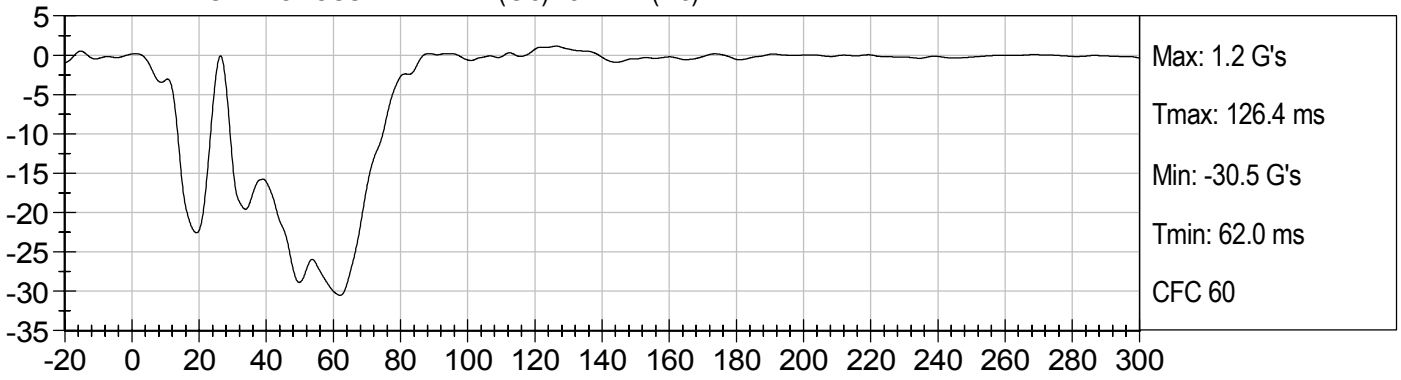
Drv. Occipital Condyle Moment (Nm) vs TIME (ms)



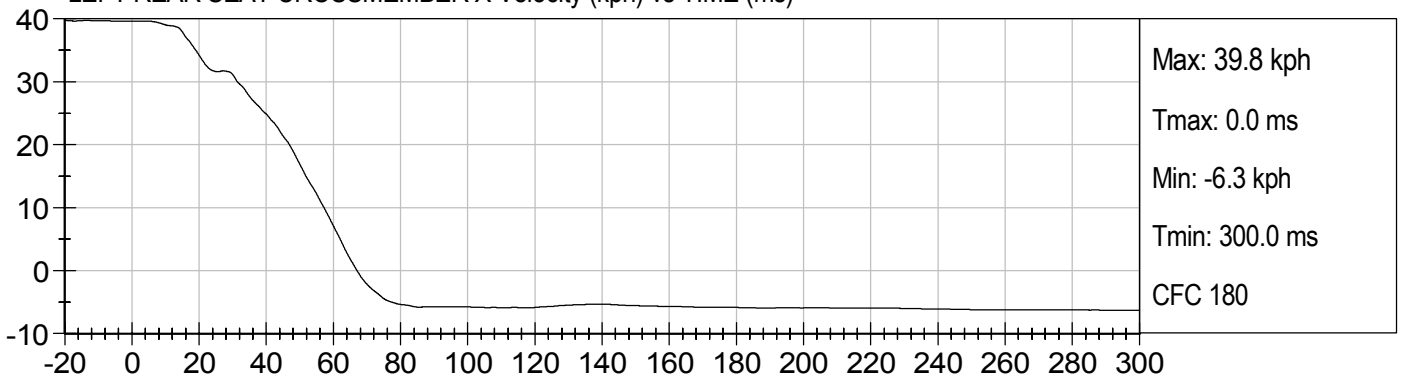
Pass. Occipital Condyle Moment (Nm) vs TIME (ms)



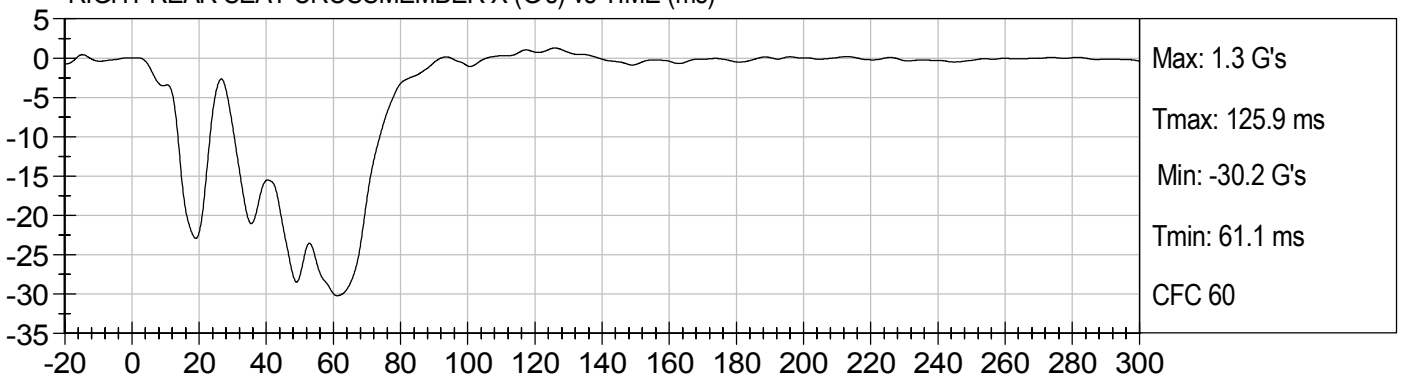
LEFT REAR SEAT CROSSMEMBER X (G's) vs TIME (ms)



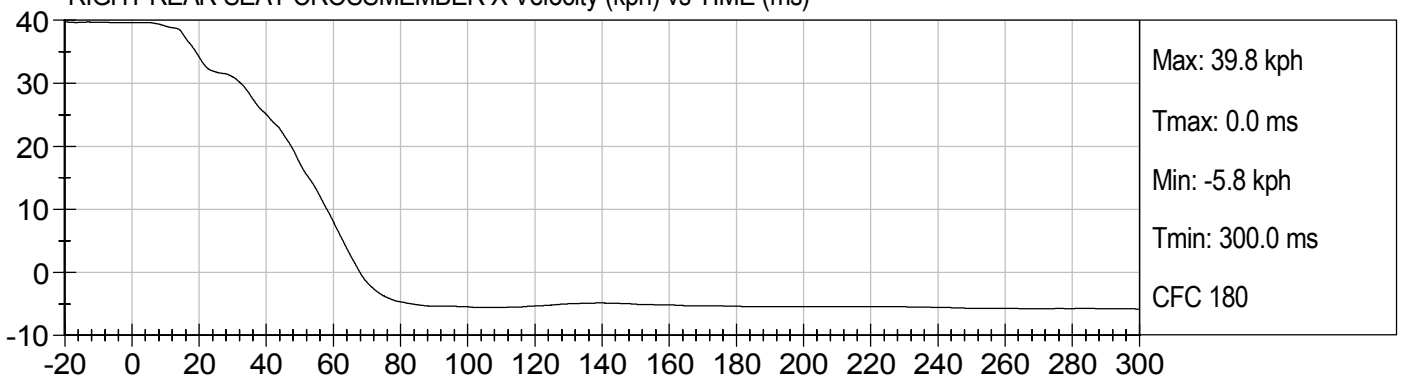
LEFT REAR SEAT CROSSMEMBER X Velocity (kph) vs TIME (ms)



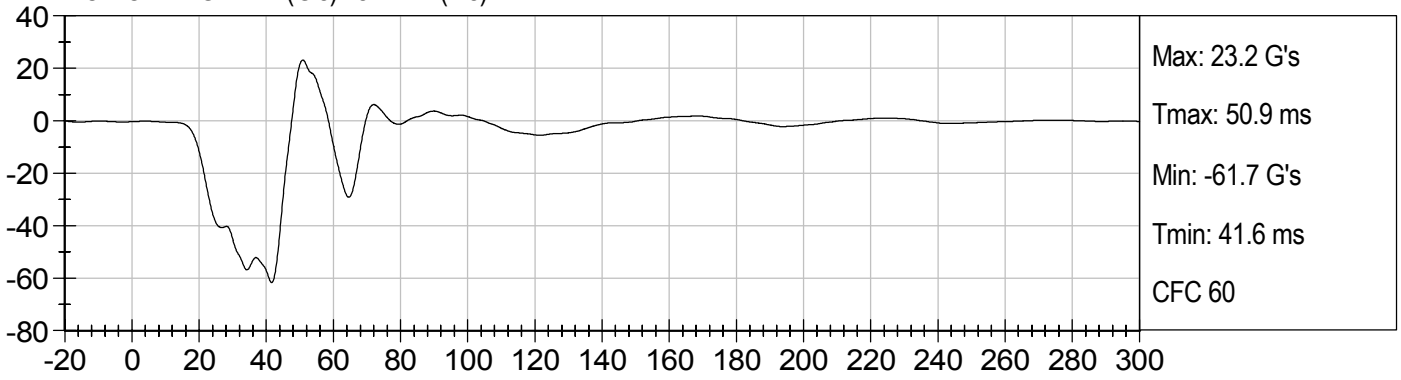
RIGHT REAR SEAT CROSSMEMBER X (G's) vs TIME (ms)



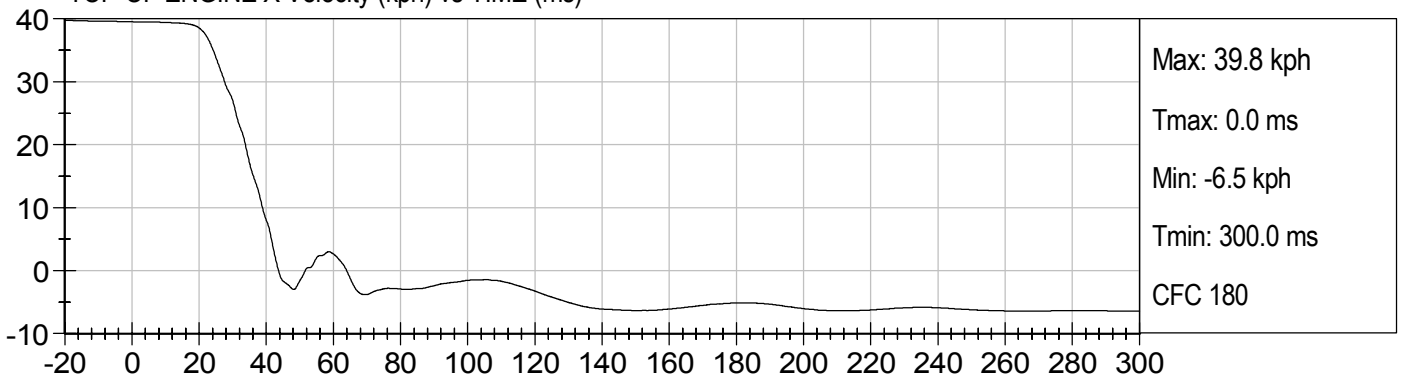
RIGHT REAR SEAT CROSSMEMBER X Velocity (kph) vs TIME (ms)



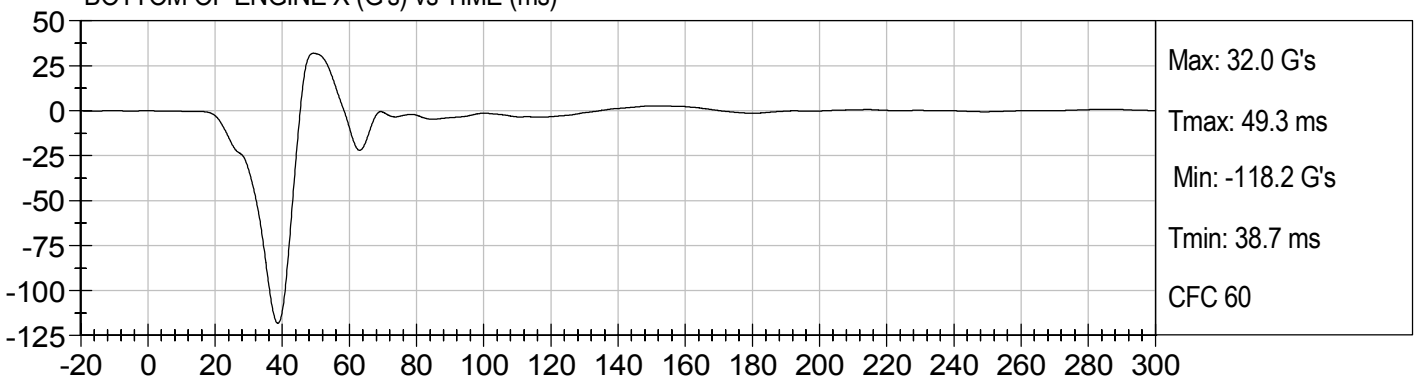
TOP OF ENGINE X (G's) vs TIME (ms)



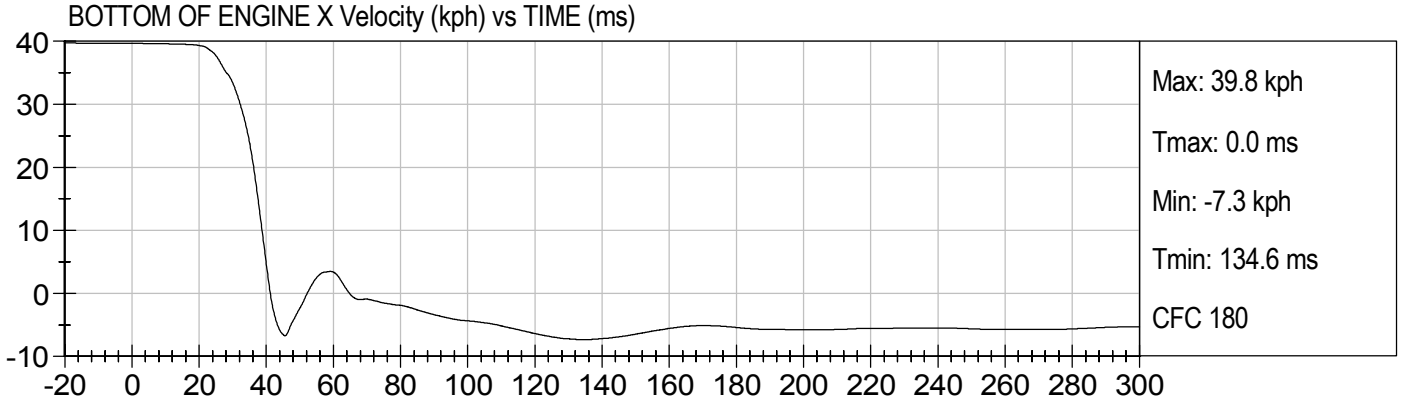
TOP OF ENGINE X Velocity (kph) vs TIME (ms)



BOTTOM OF ENGINE X (G's) vs TIME (ms)



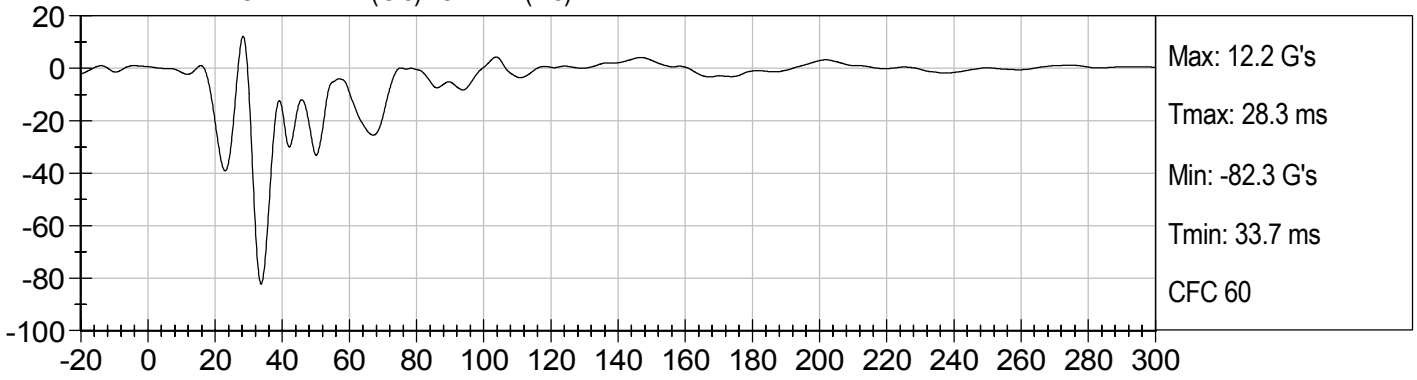
BOTTOM OF ENGINE X Velocity (kph) vs TIME (ms)



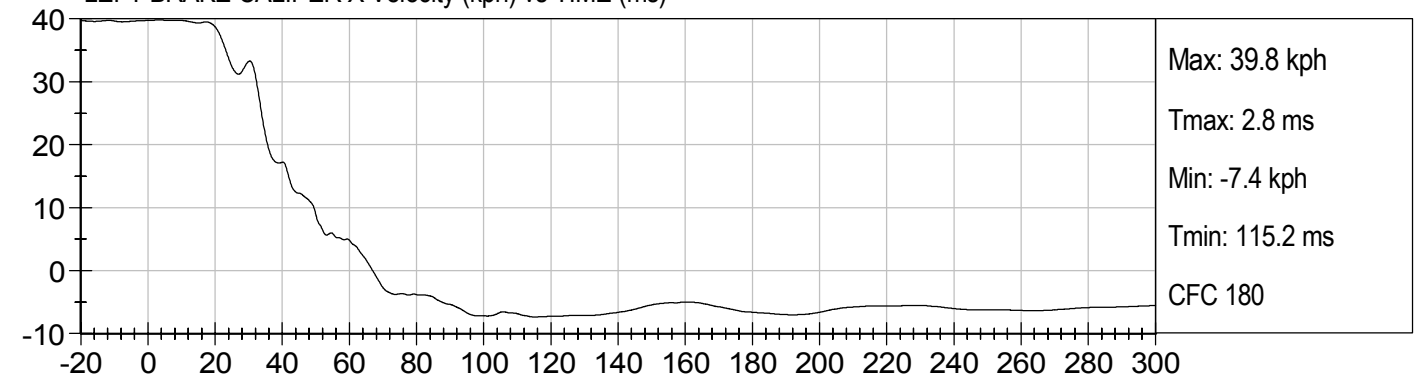
25 MPH FRONTAL UNBELTED
2006 HYUNDAI TUCSON

Test Date: 03/26/2007
Speed: 24.7 mph (39.8 km/h)

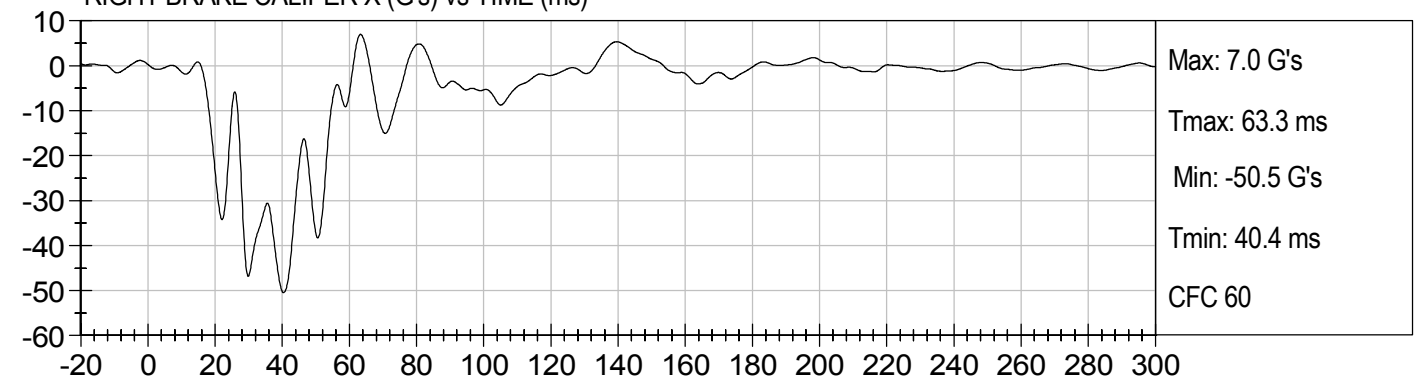
LEFT BRAKE CALIPER X (G's) vs TIME (ms)



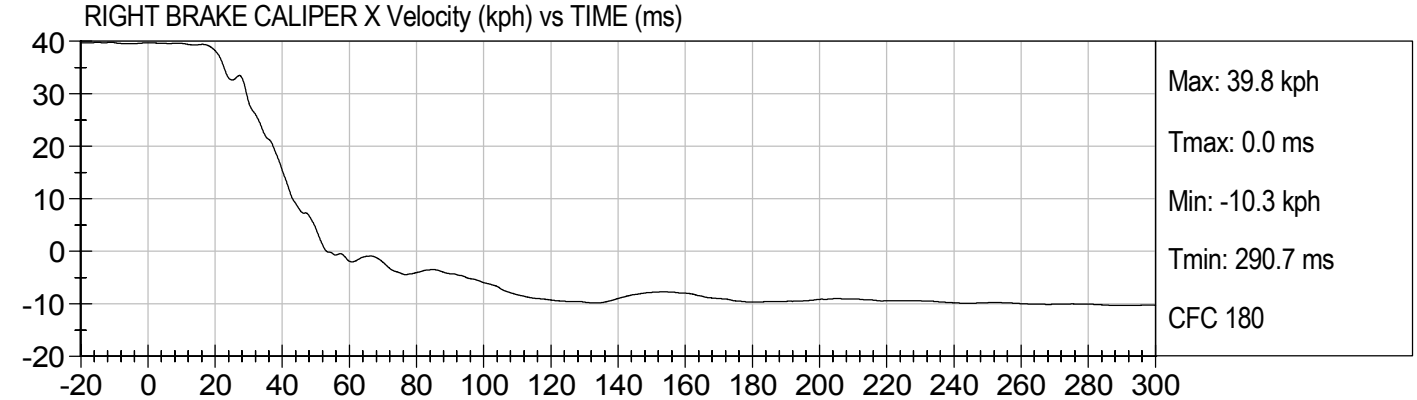
LEFT BRAKE CALIPER X Velocity (kph) vs TIME (ms)



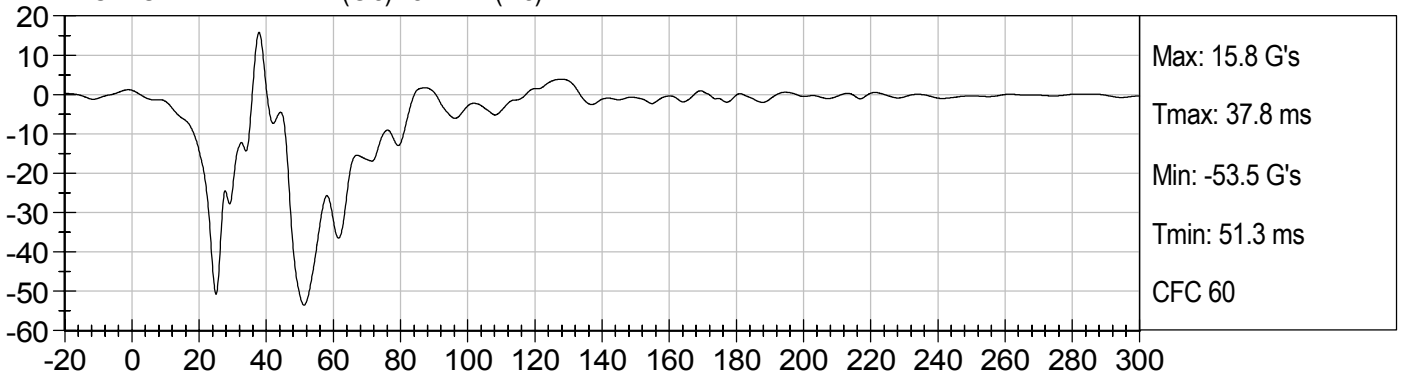
RIGHT BRAKE CALIPER X (G's) vs TIME (ms)



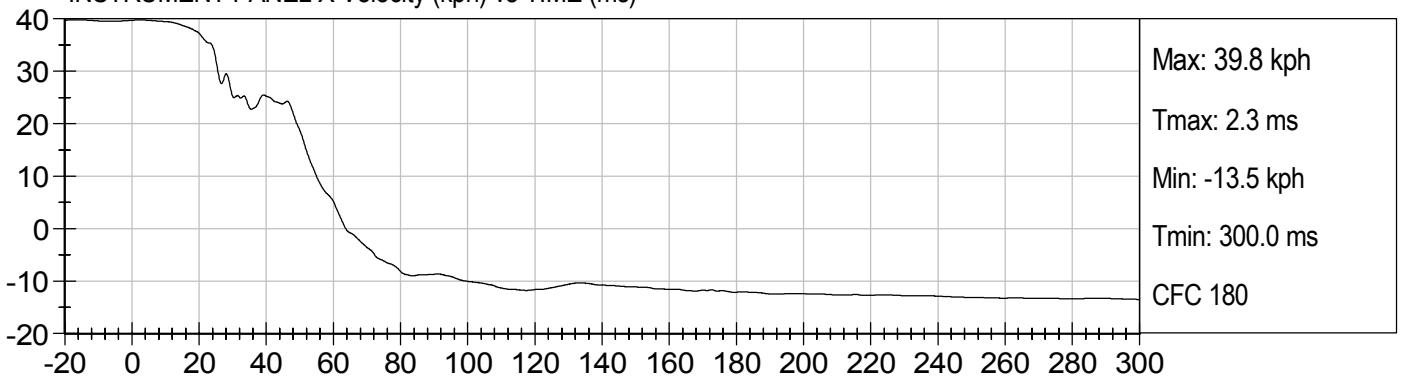
RIGHT BRAKE CALIPER X Velocity (kph) vs TIME (ms)



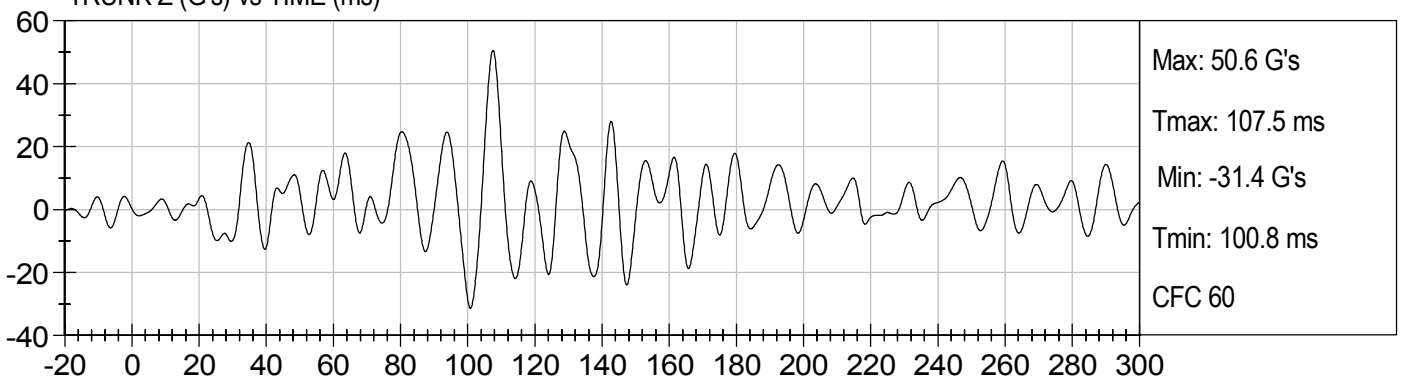
INSTRUMENT PANEL X (G's) vs TIME (ms)



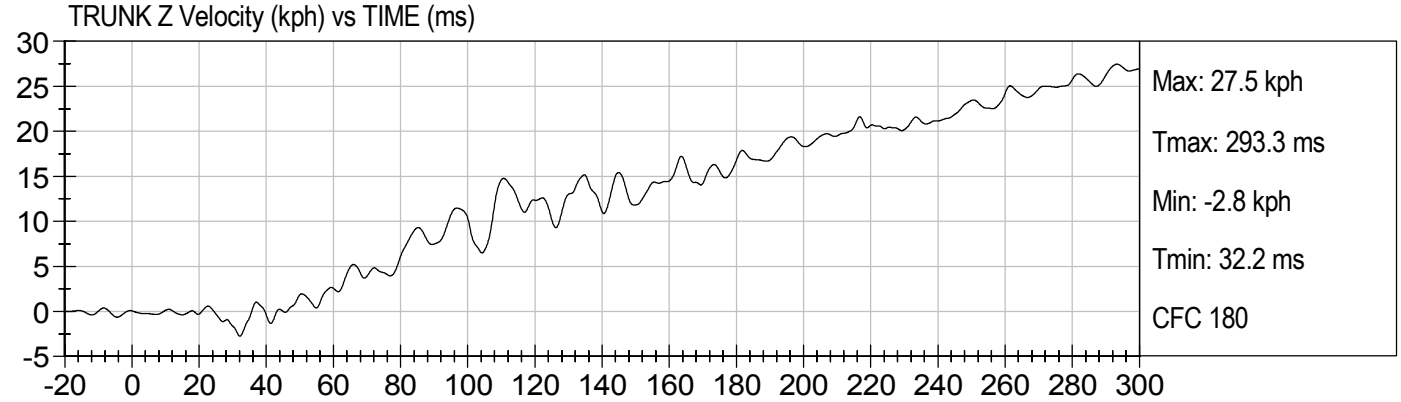
INSTRUMENT PANEL X Velocity (kph) vs TIME (ms)



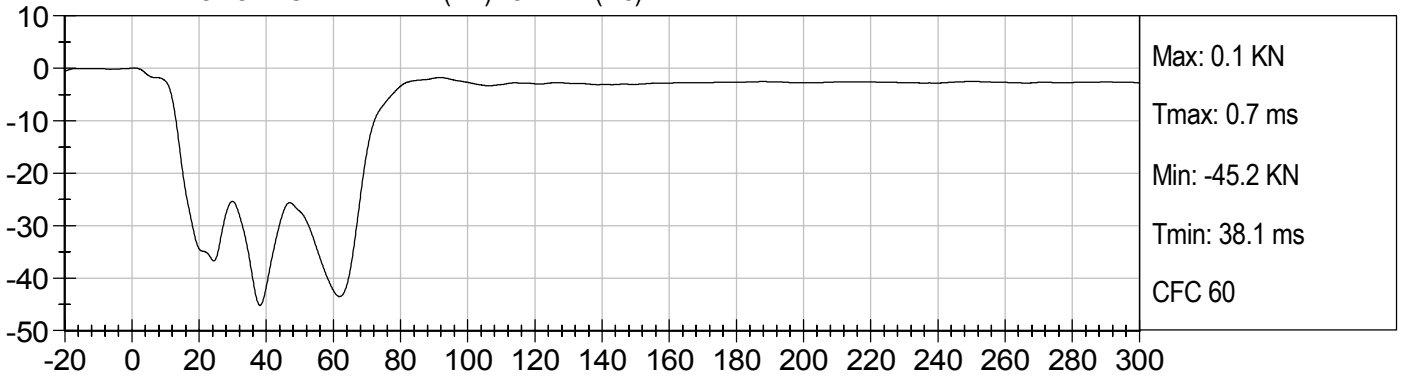
TRUNK Z (G's) vs TIME (ms)



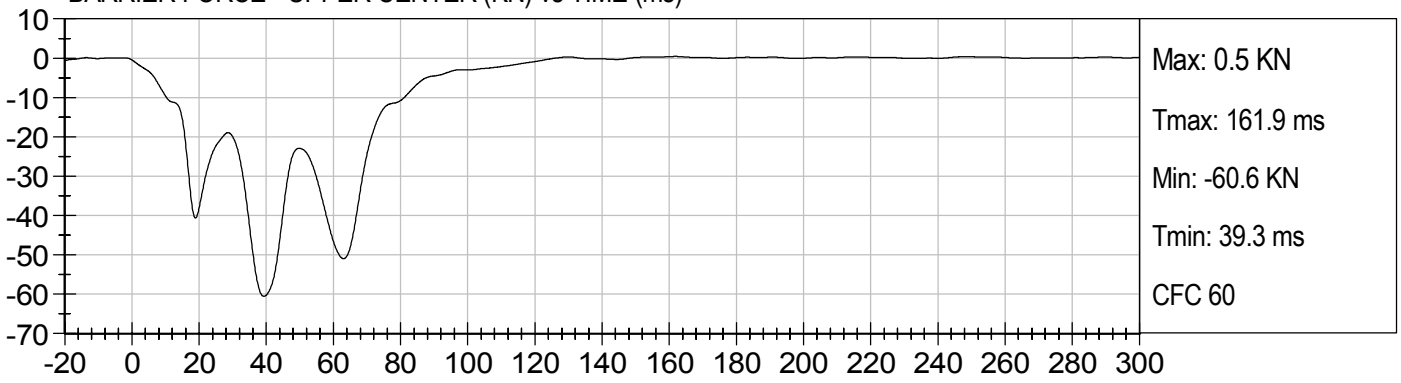
TRUNK Z Velocity (kph) vs TIME (ms)



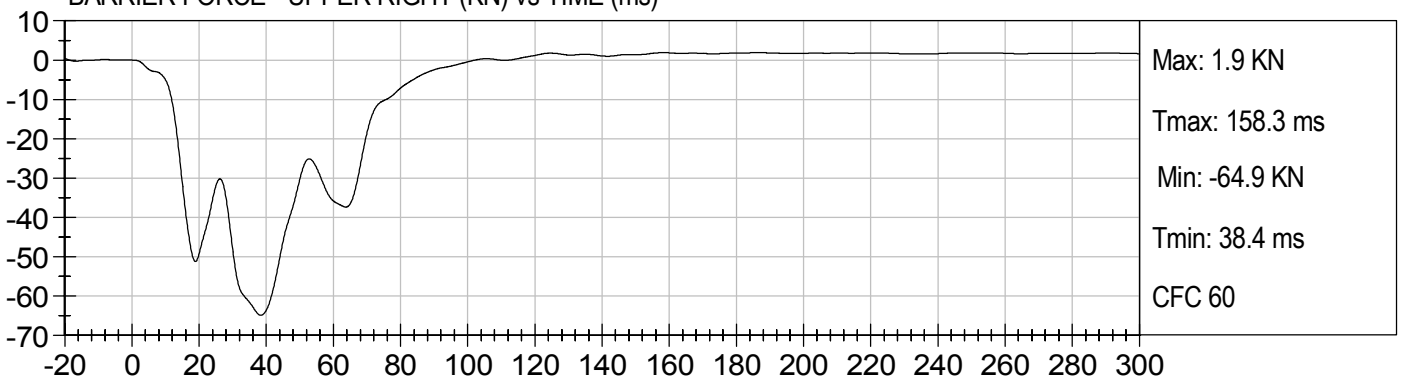
BARRIER FORCE - UPPER LEFT (KN) vs TIME (ms)



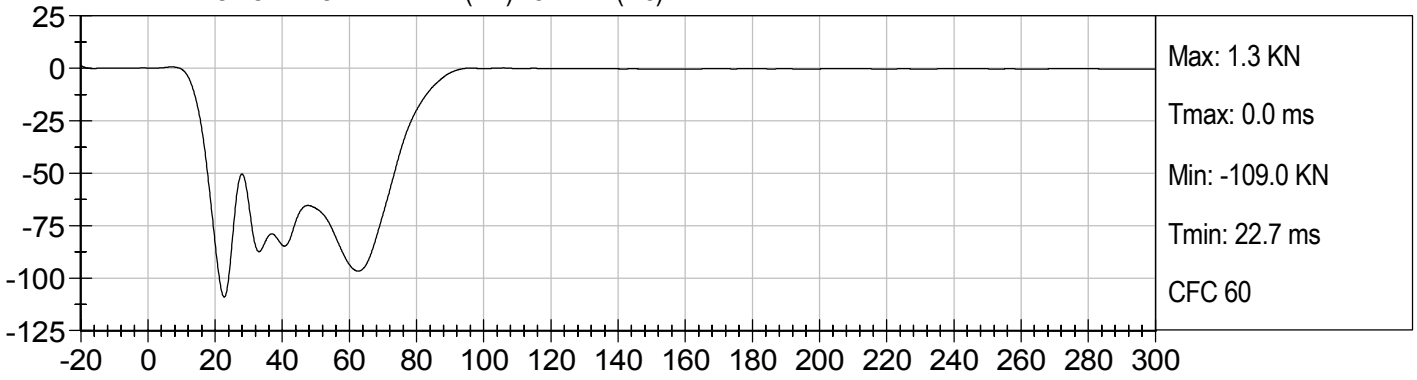
BARRIER FORCE - UPPER CENTER (KN) vs TIME (ms)



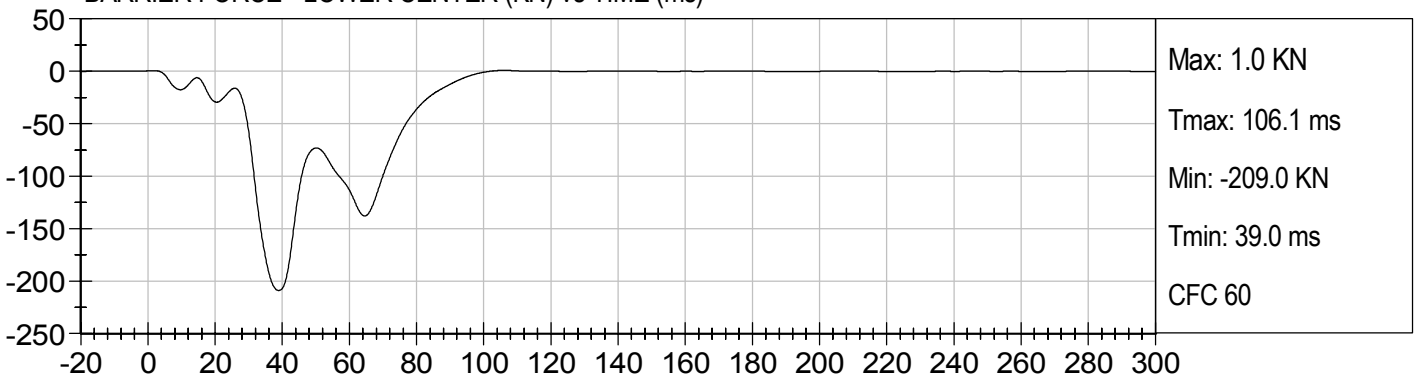
BARRIER FORCE - UPPER RIGHT (KN) vs TIME (ms)



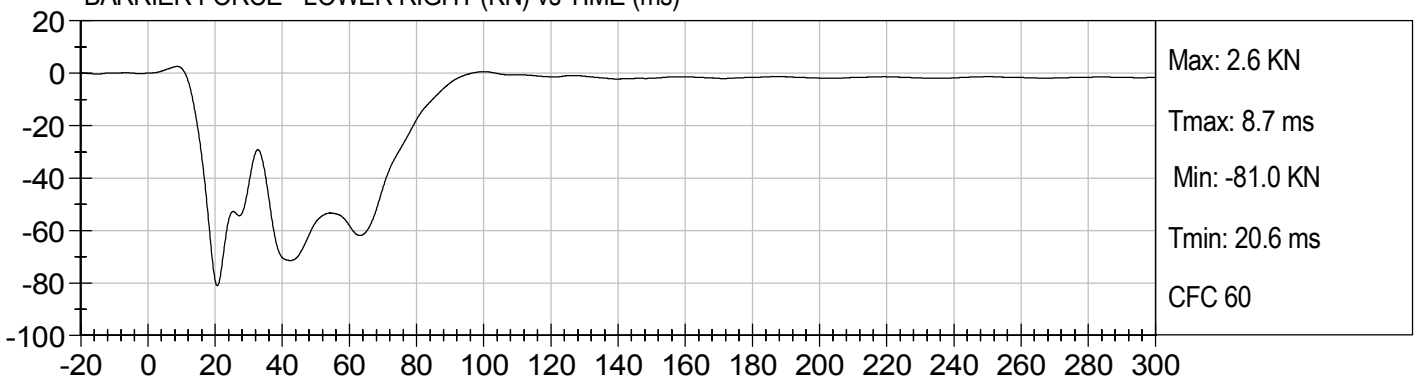
BARRIER FORCE - LOWER LEFT (KN) vs TIME (ms)



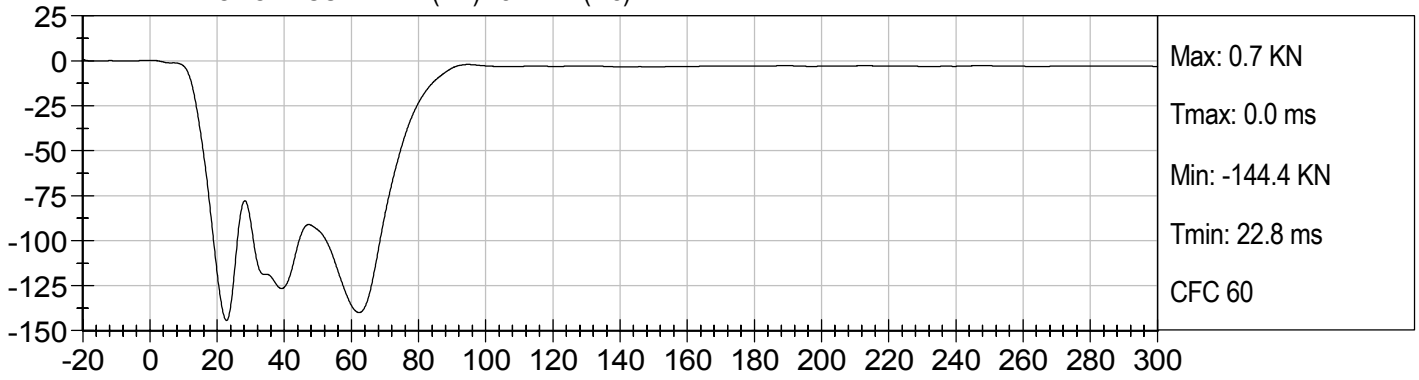
BARRIER FORCE - LOWER CENTER (KN) vs TIME (ms)



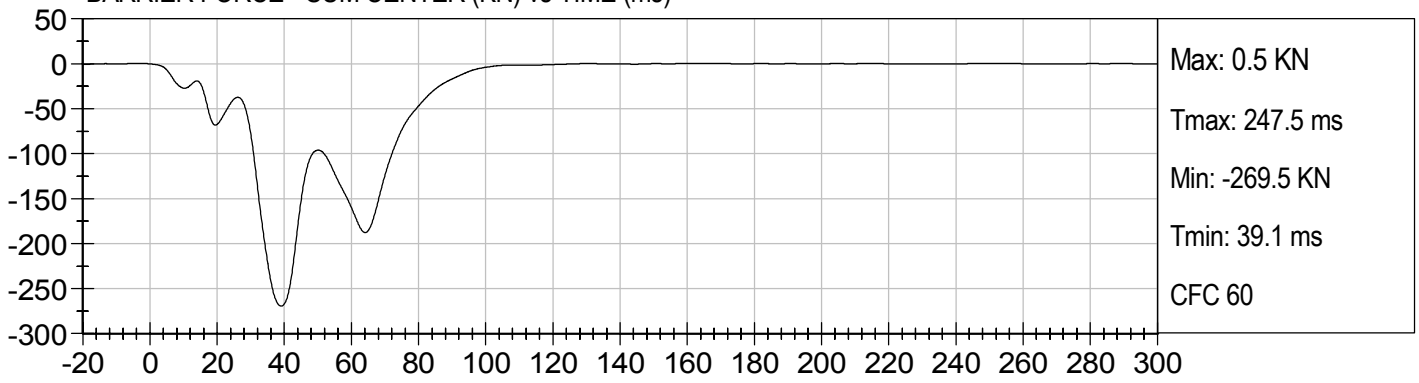
BARRIER FORCE - LOWER RIGHT (KN) vs TIME (ms)



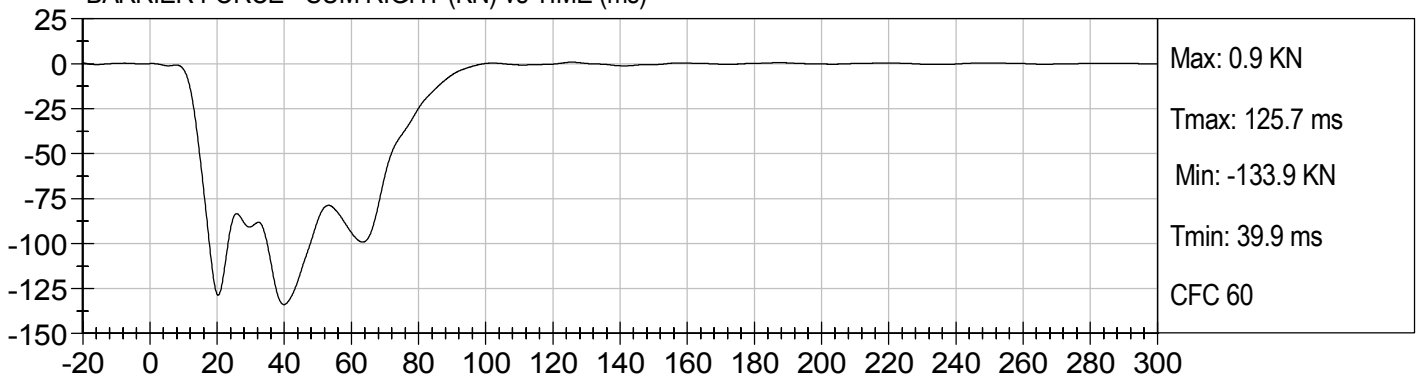
BARRIER FORCE - SUM LEFT (KN) vs TIME (ms)



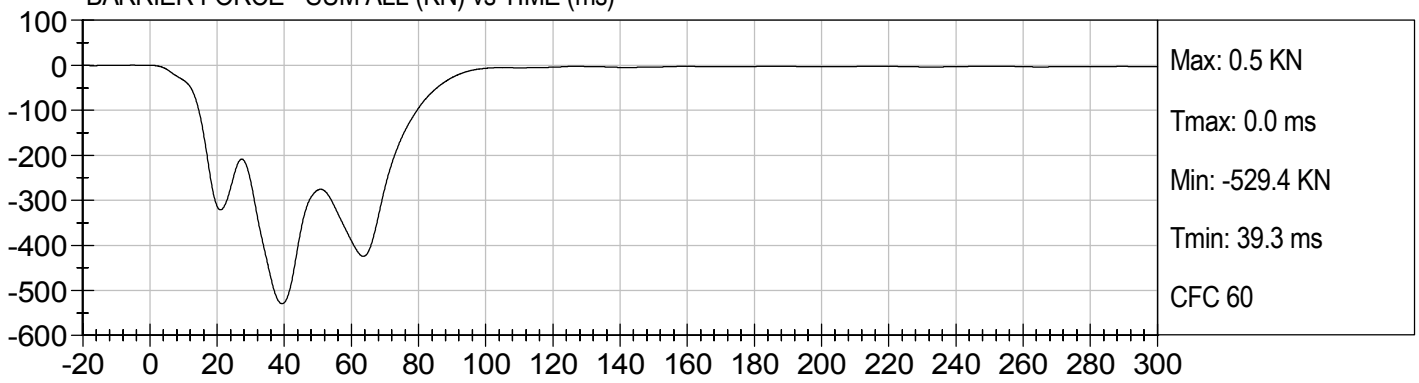
BARRIER FORCE - SUM CENTER (KN) vs TIME (ms)



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



BARRIER FORCE - SUM ALL (KN) vs TIME (ms)



APPENDIX B

LOW RISK TEST DATA

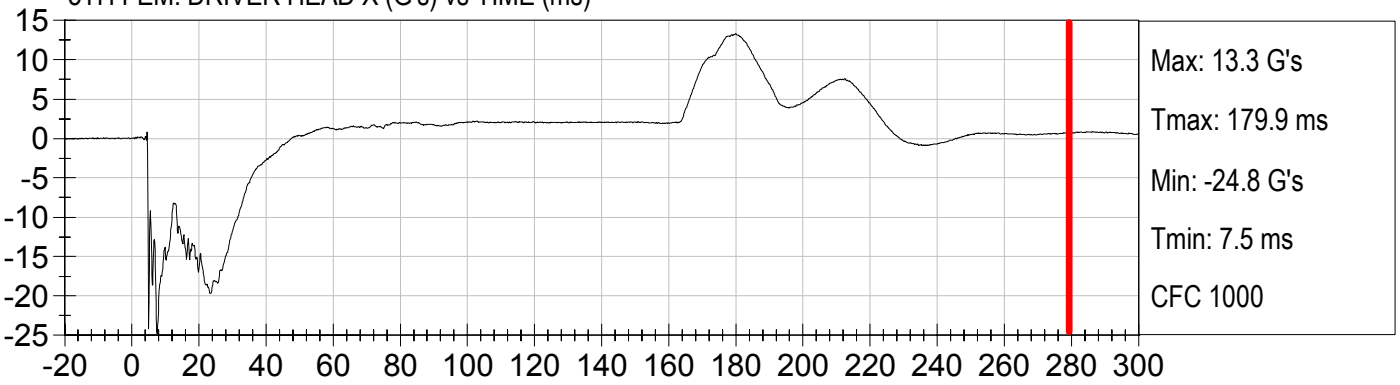
TABLE OF DATA PLOTS

LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P1)

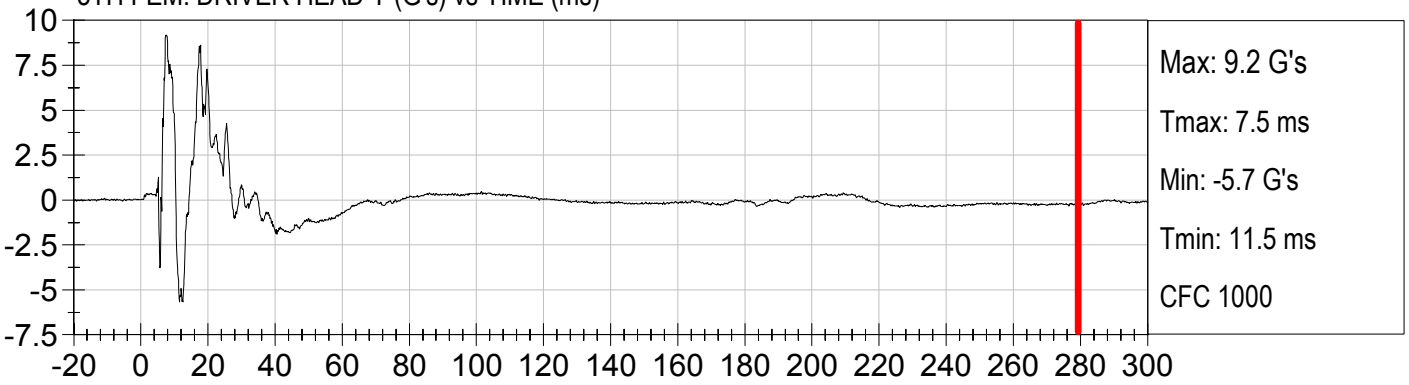
Test Date: 02/08/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

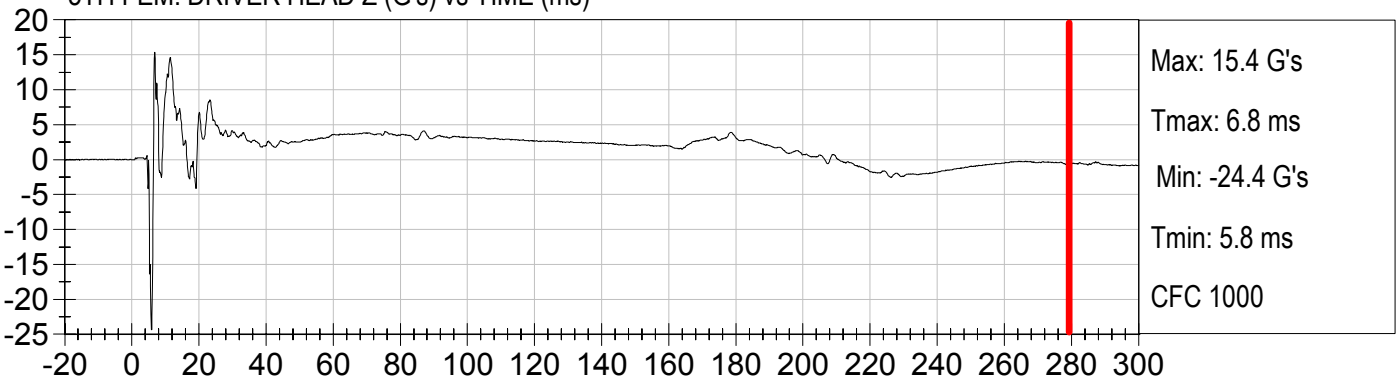
5TH FEM. DRIVER HEAD X (G's) vs TIME (ms)



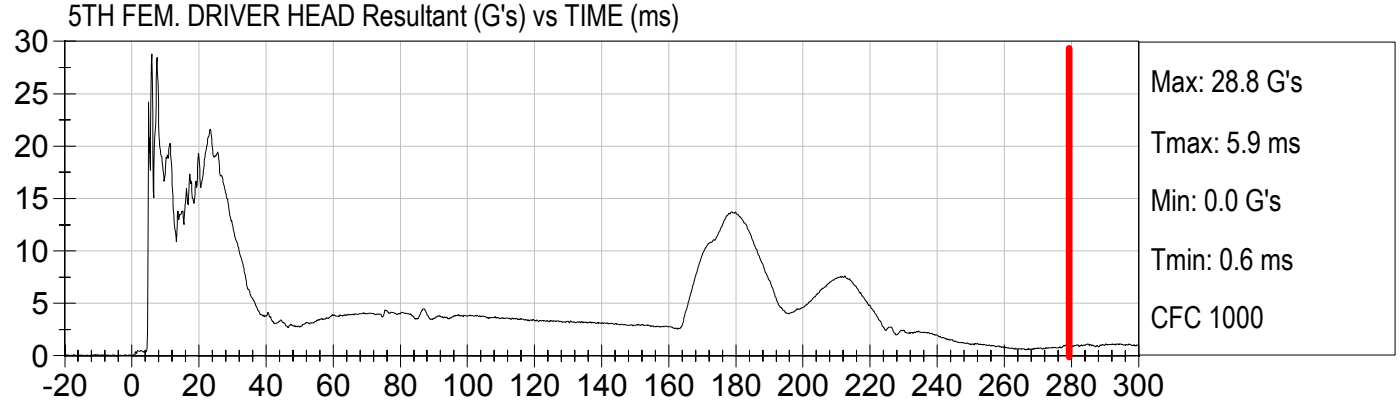
5TH FEM. DRIVER HEAD Y (G's) vs TIME (ms)



5TH FEM. DRIVER HEAD Z (G's) vs TIME (ms)



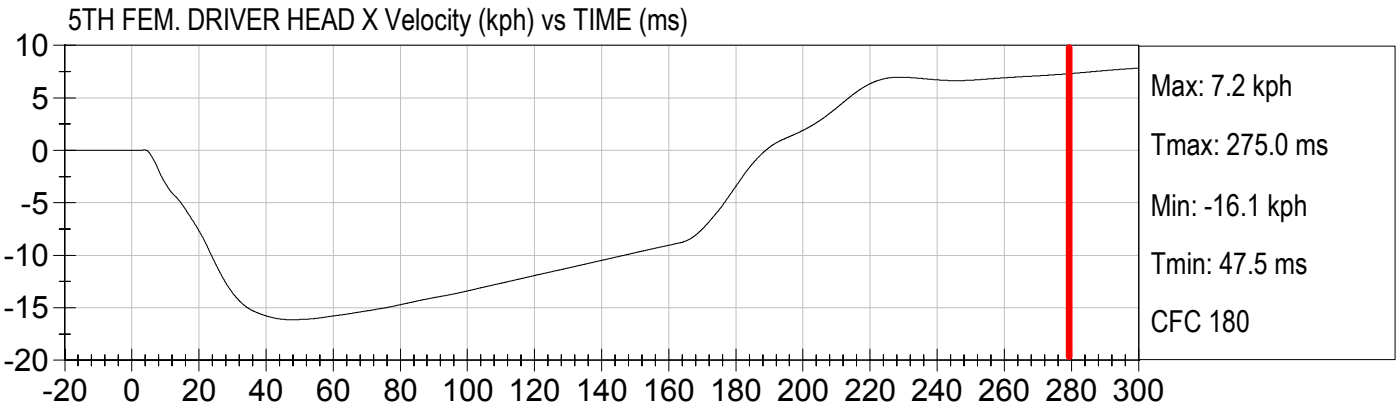
5TH FEM. DRIVER HEAD Resultant (G's) vs TIME (ms)

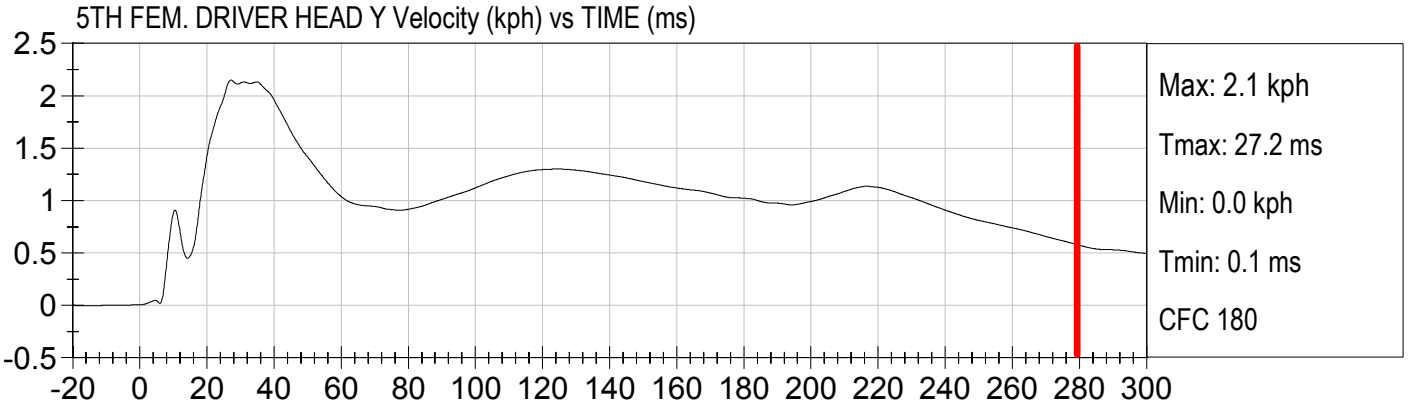


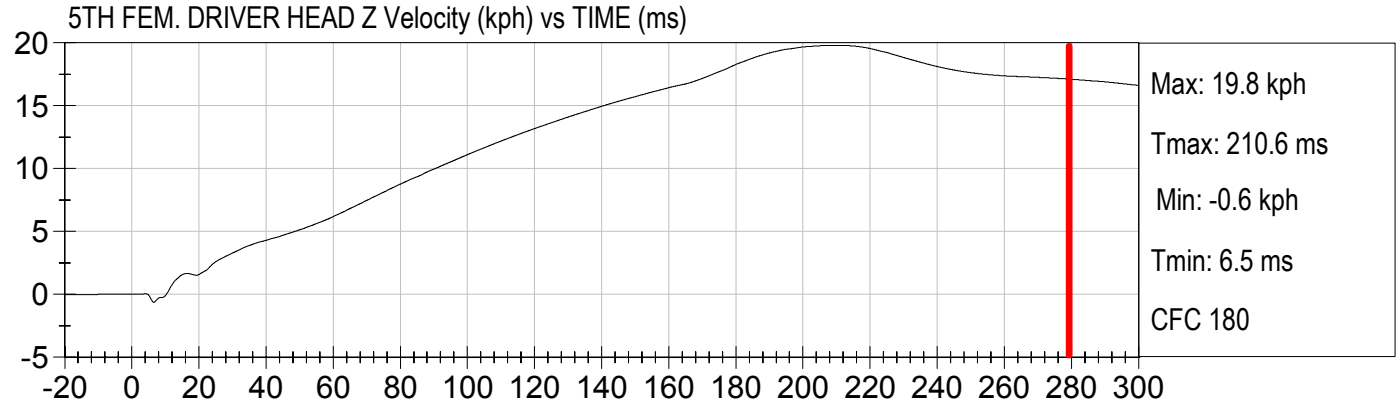
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P1)

Test Date: 02/08/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms





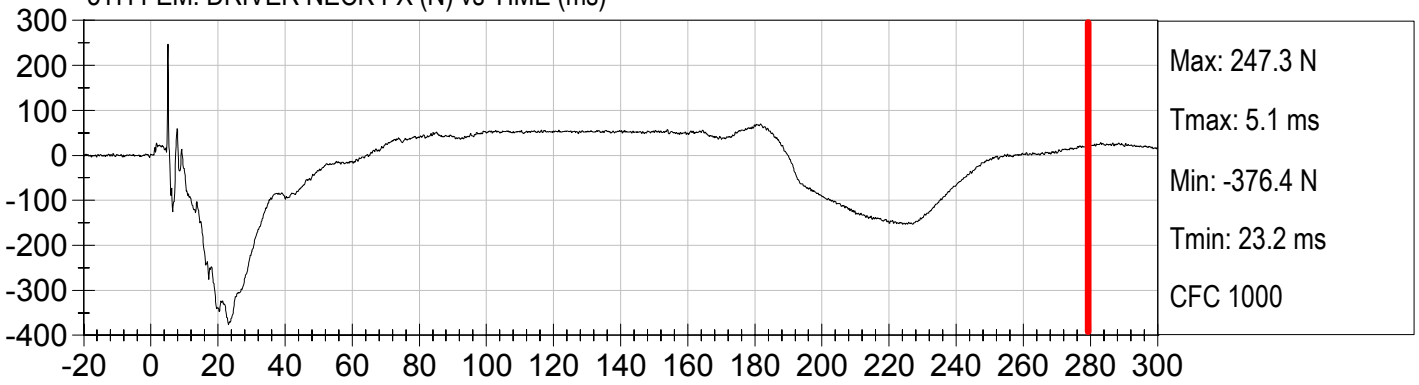


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P1)

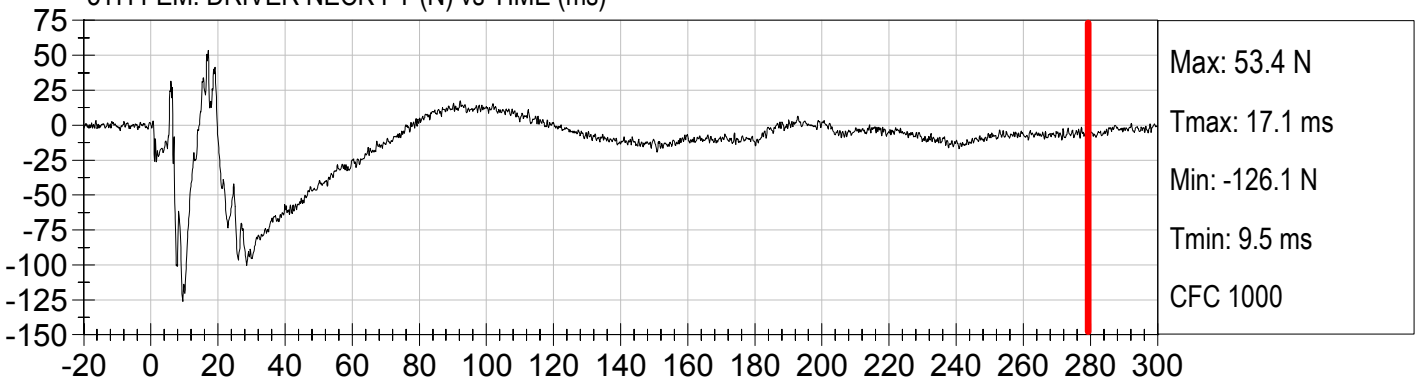
Test Date: 02/08/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

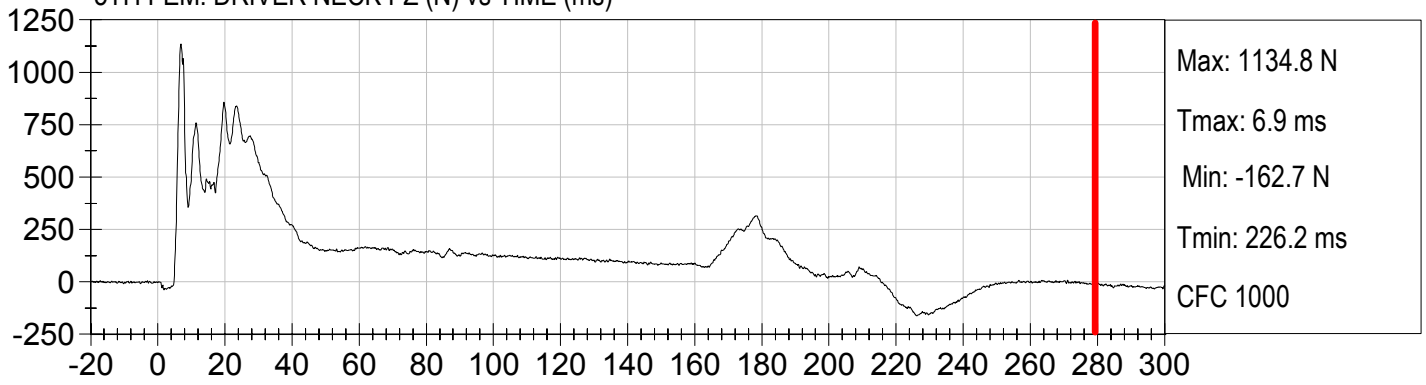
5TH FEM. DRIVER NECK FX (N) vs TIME (ms)



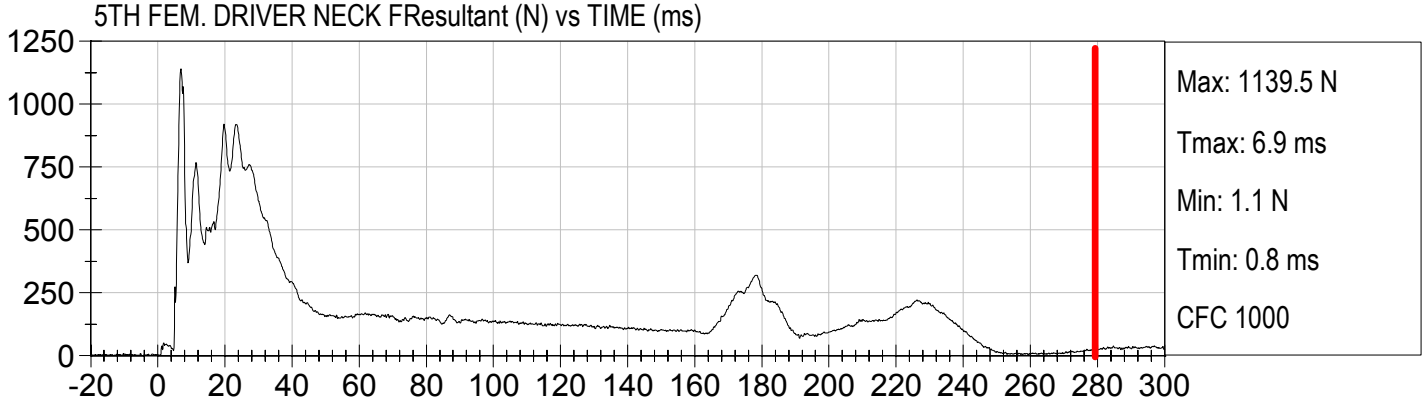
5TH FEM. DRIVER NECK FY (N) vs TIME (ms)



5TH FEM. DRIVER NECK FZ (N) vs TIME (ms)



5TH FEM. DRIVER NECK FResultant (N) vs TIME (ms)

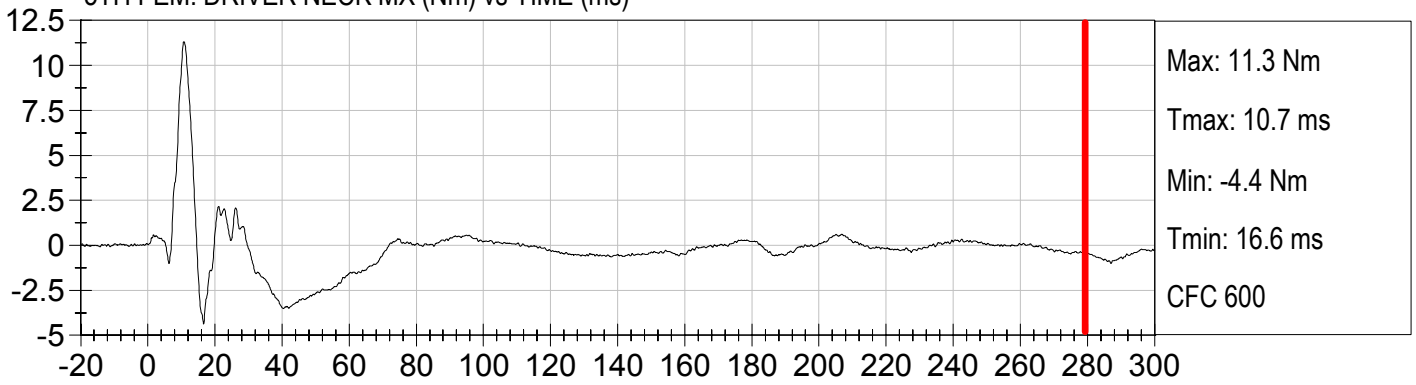


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P1)

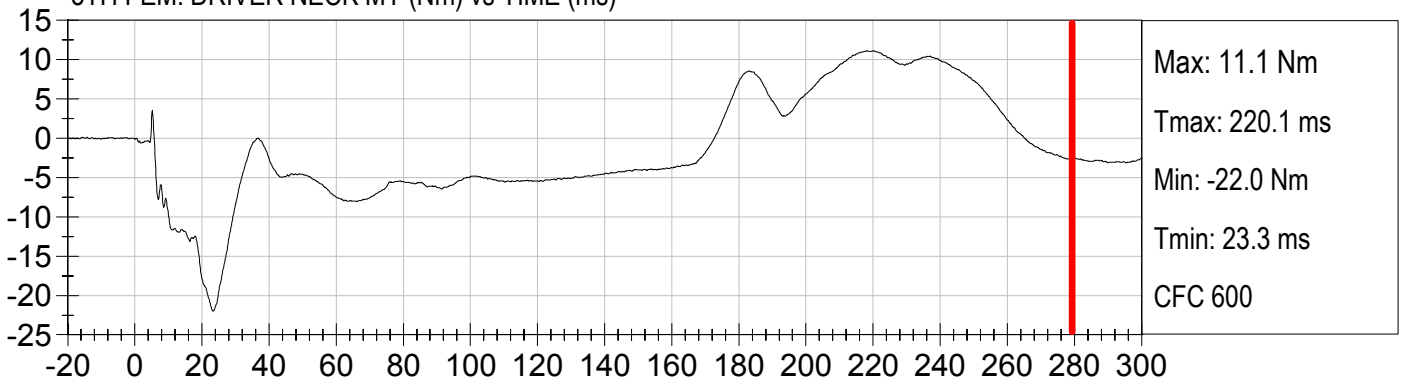
Test Date: 02/08/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

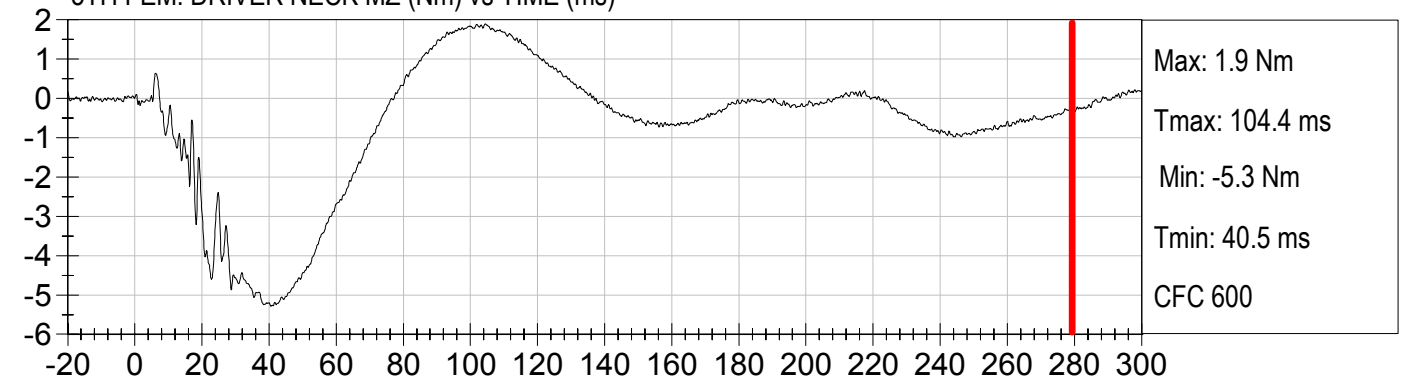
5TH FEM. DRIVER NECK MX (Nm) vs TIME (ms)



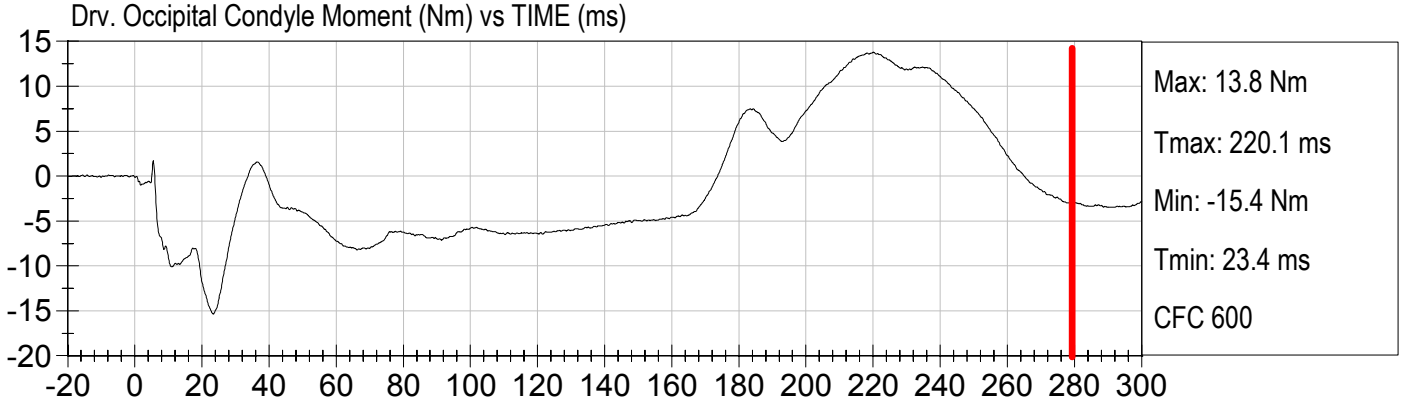
5TH FEM. DRIVER NECK MY (Nm) vs TIME (ms)



5TH FEM. DRIVER NECK MZ (Nm) vs TIME (ms)



Drv. Occipital Condyle Moment (Nm) vs TIME (ms)

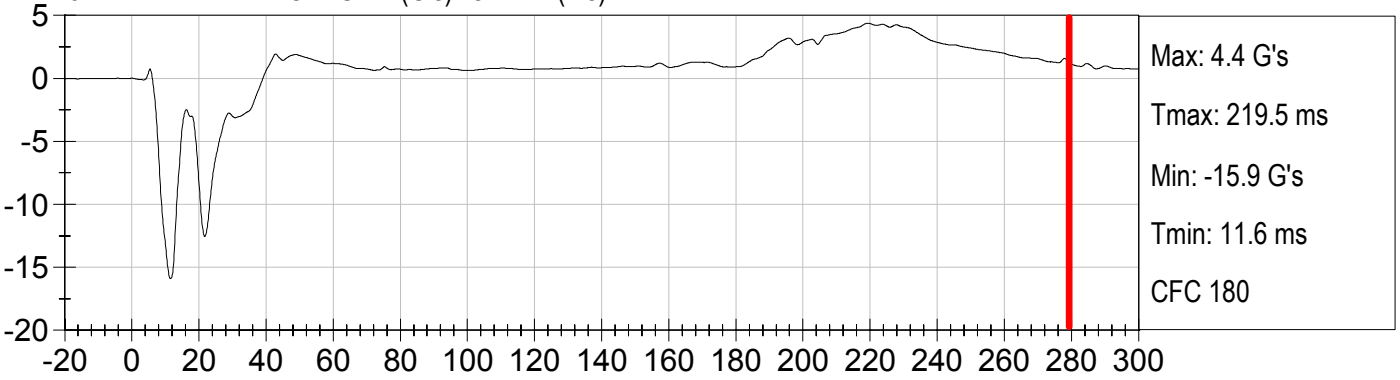


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P1)

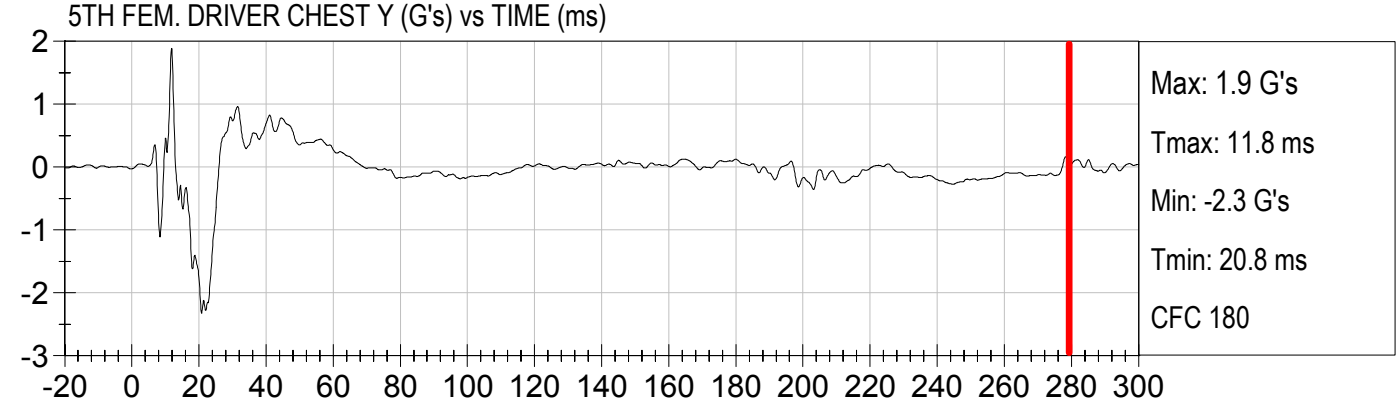
Test Date: 02/08/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

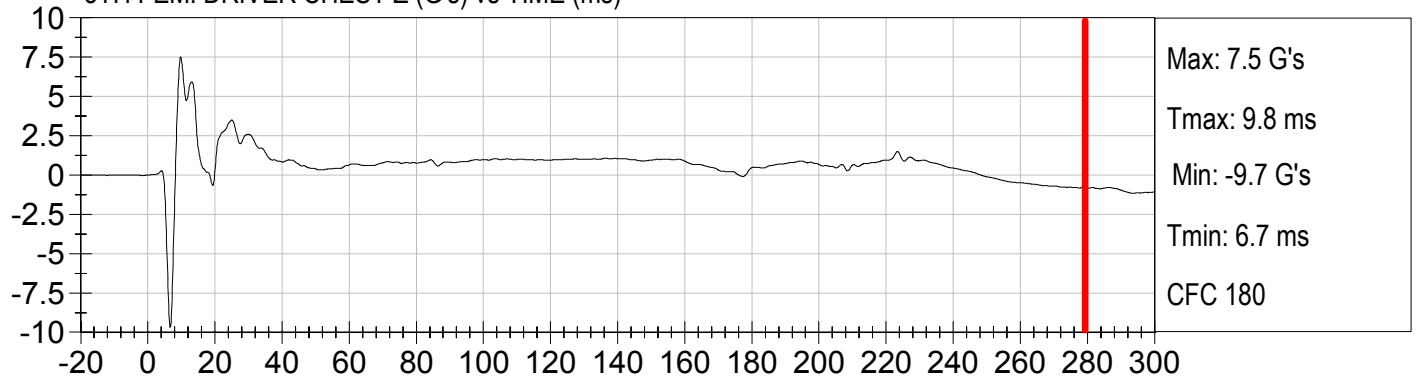
5TH FEM. DRIVER CHEST X (G's) vs TIME (ms)



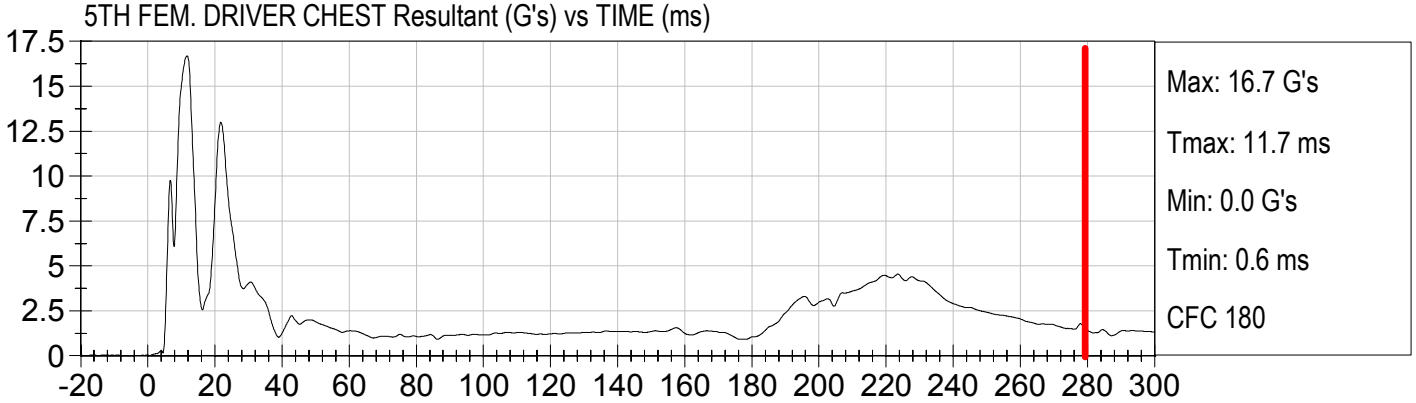
5TH FEM. DRIVER CHEST Y (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Z (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Resultant (G's) vs TIME (ms)

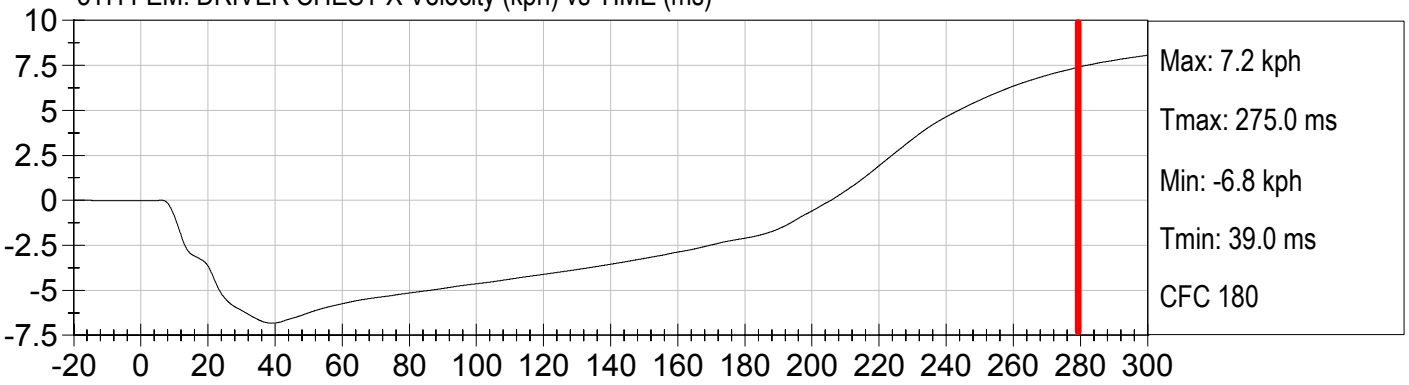


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P1)

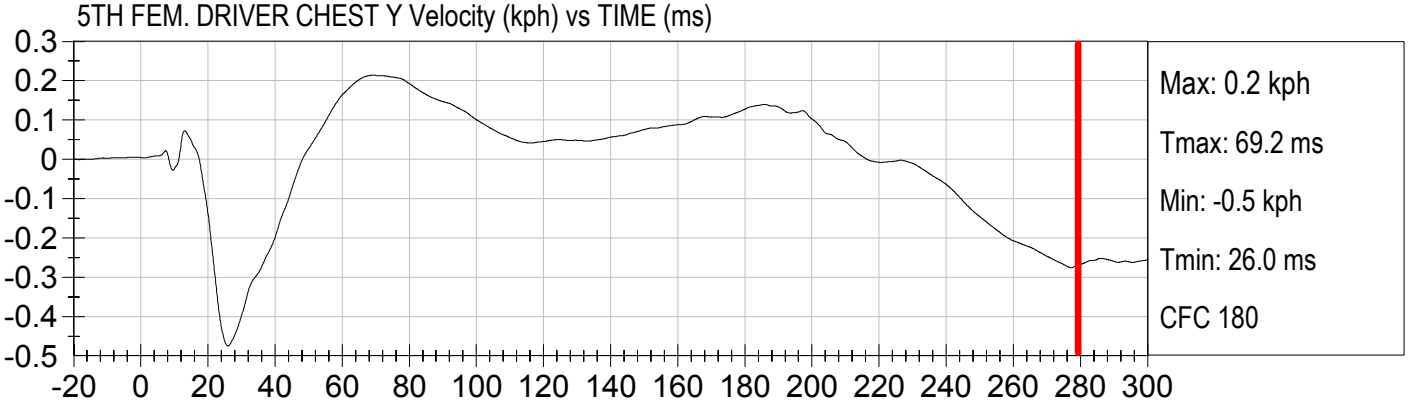
Test Date: 02/08/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

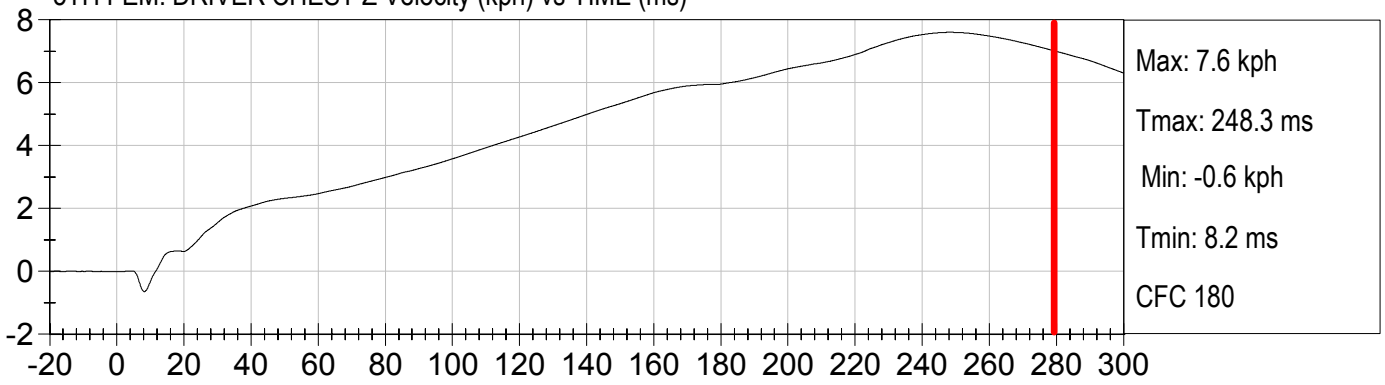
5TH FEM. DRIVER CHEST X Velocity (kph) vs TIME (ms)



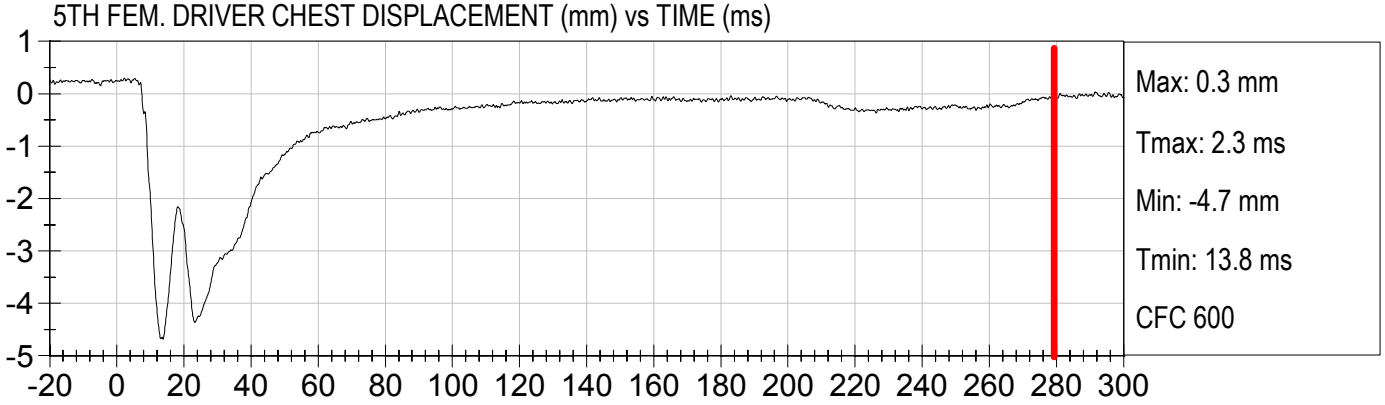
5TH FEM. DRIVER CHEST Y Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST Z Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST DISPLACEMENT (mm) vs TIME (ms)

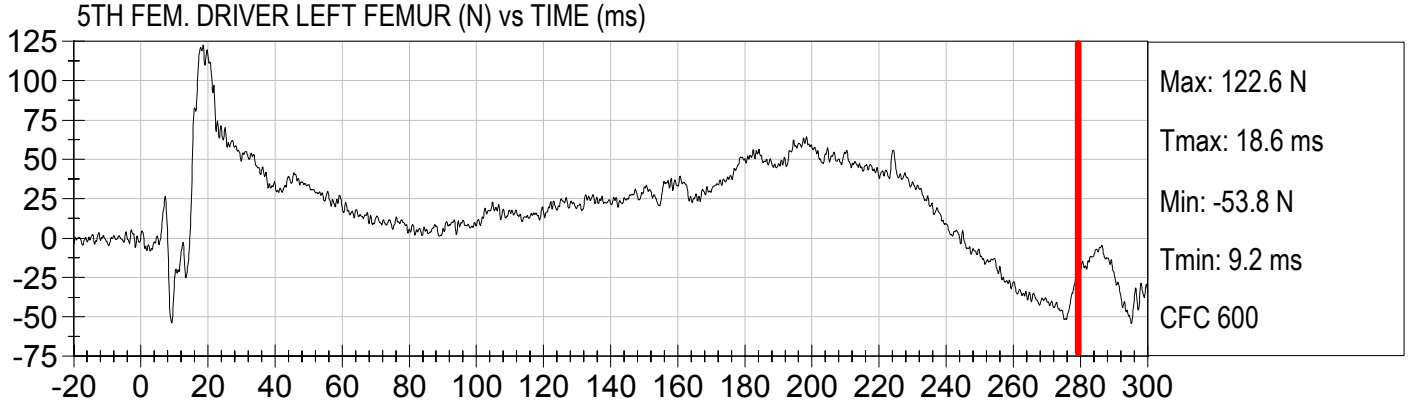


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P1)

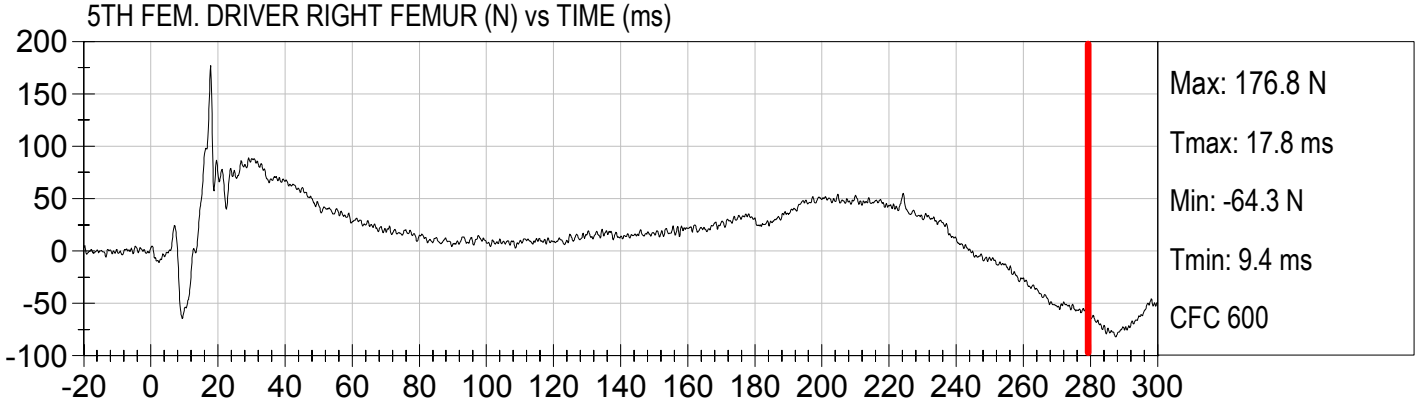
Test Date: 02/08/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

5TH FEM. DRIVER LEFT FEMUR (N) vs TIME (ms)



5TH FEM. DRIVER RIGHT FEMUR (N) vs TIME (ms)

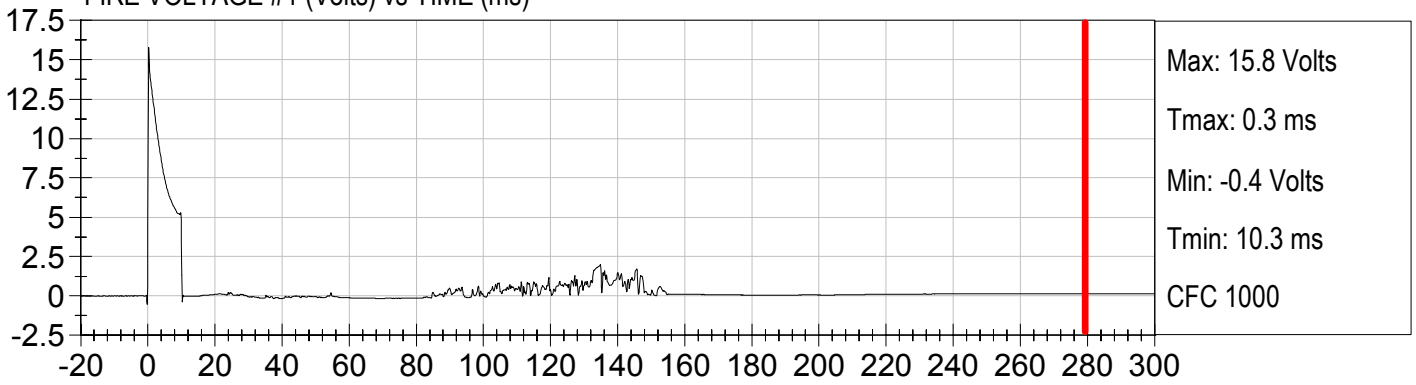


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P1)

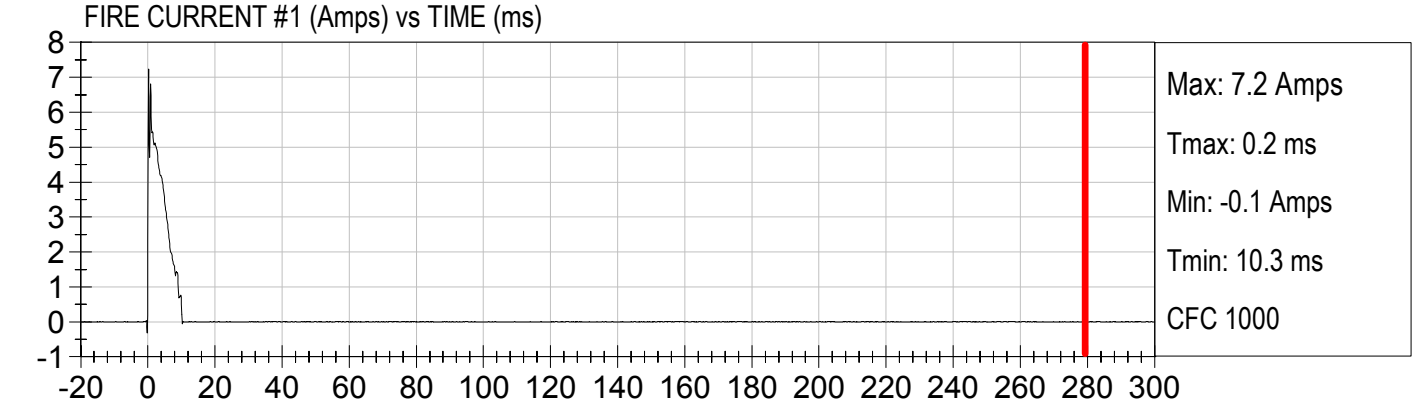
Test Date: 02/08/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

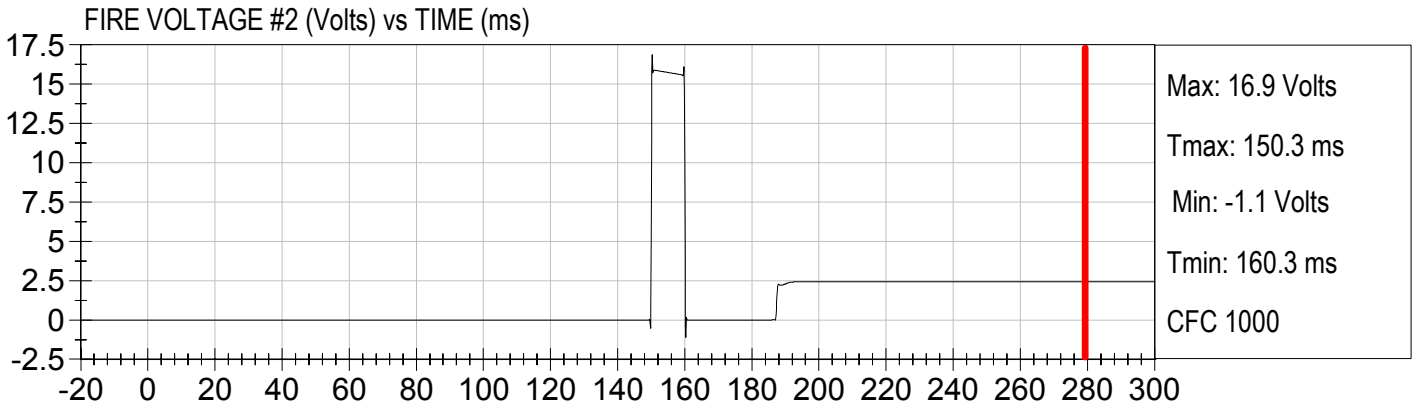
FIRE VOLTAGE #1 (Volts) vs TIME (ms)



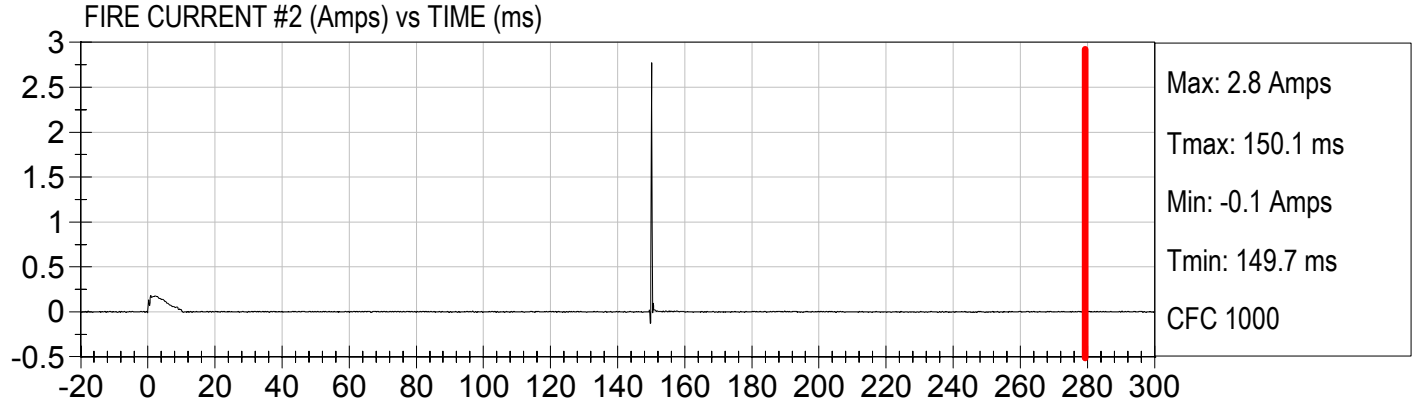
FIRE CURRENT #1 (Amps) vs TIME (ms)



FIRE VOLTAGE #2 (Volts) vs TIME (ms)

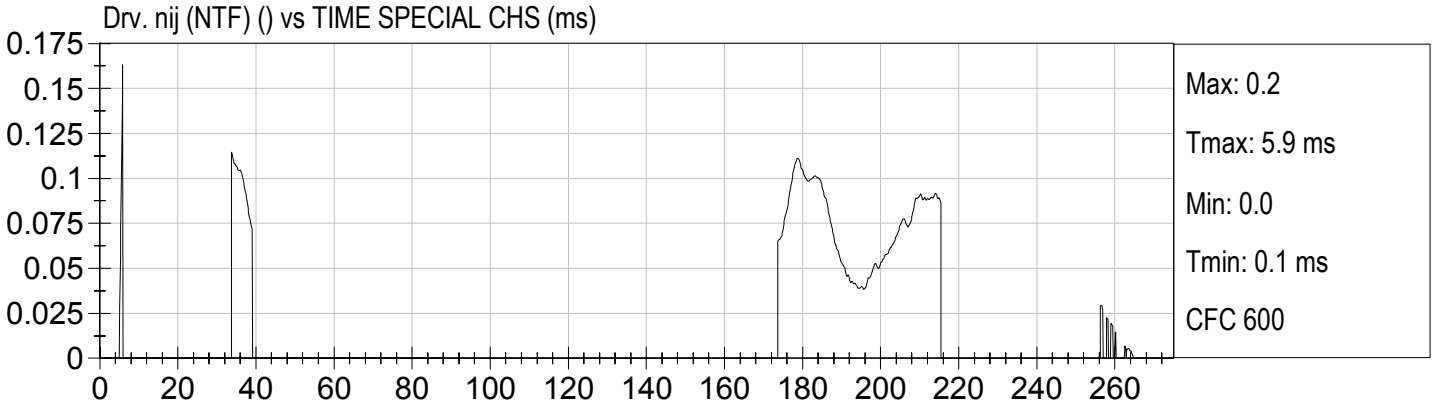


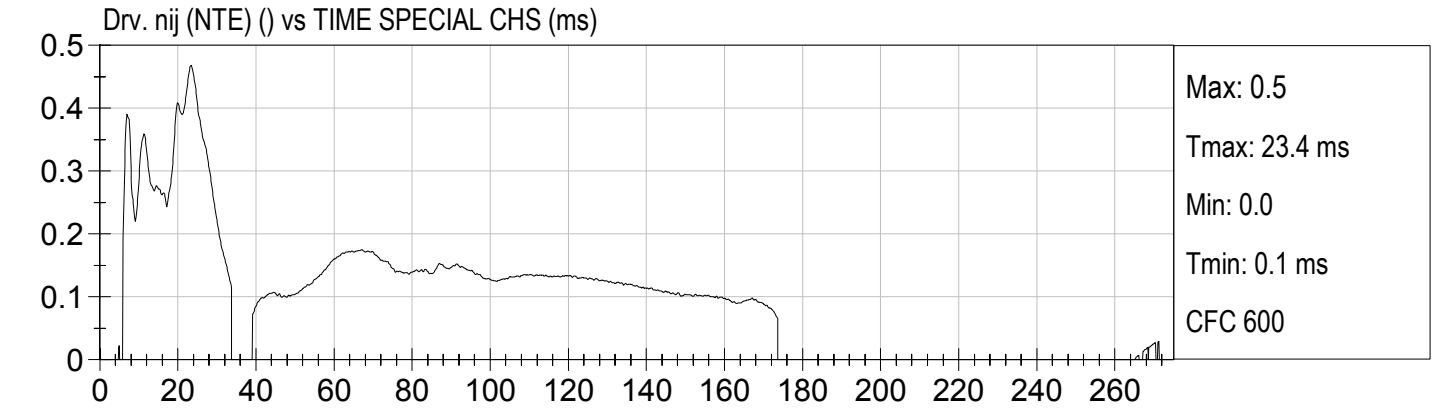
FIRE CURRENT #2 (Amps) vs TIME (ms)

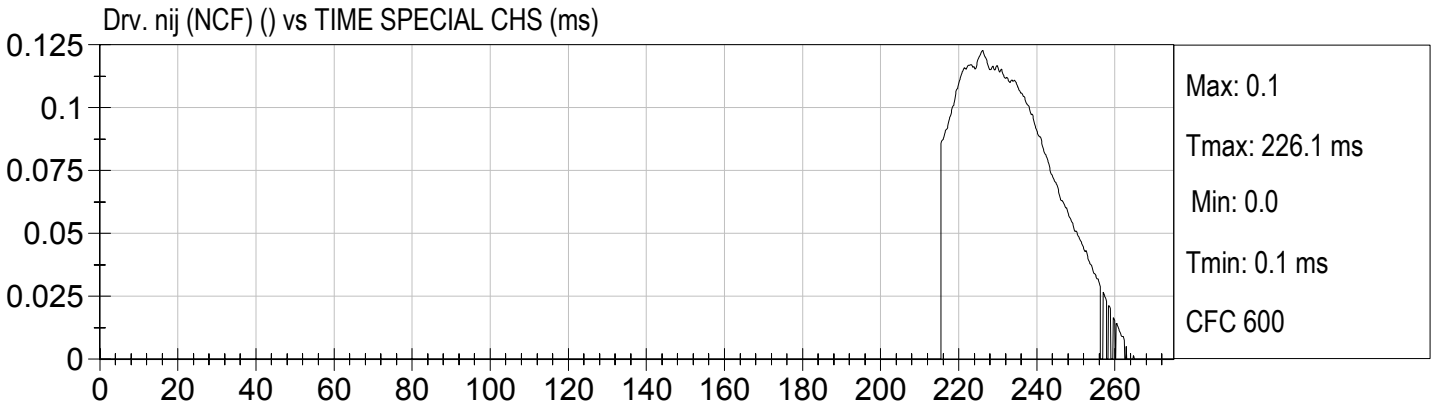


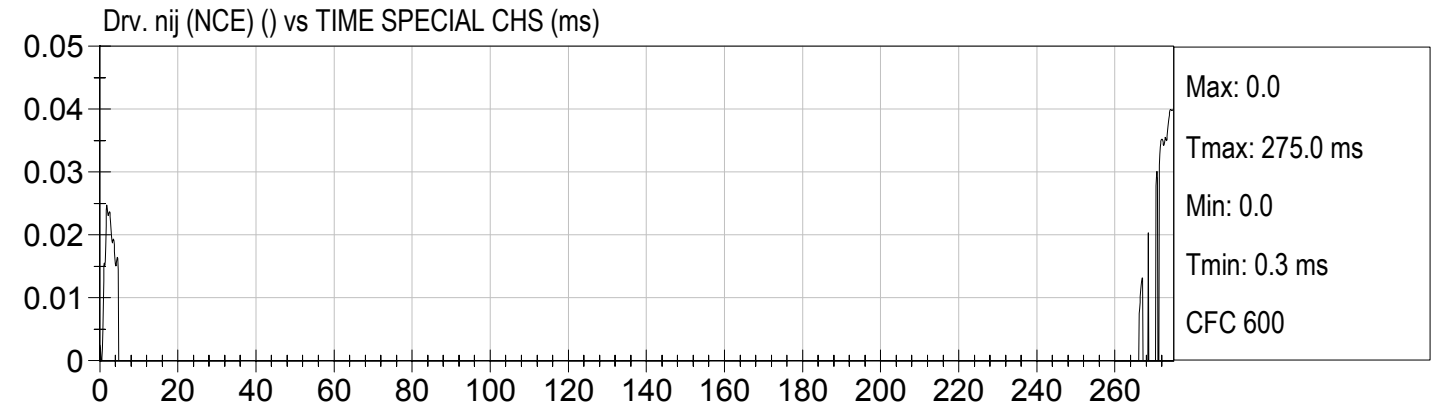
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P1)

Test Date: 02/08/07
Speed: 0.0 mph (0.0 km/h)







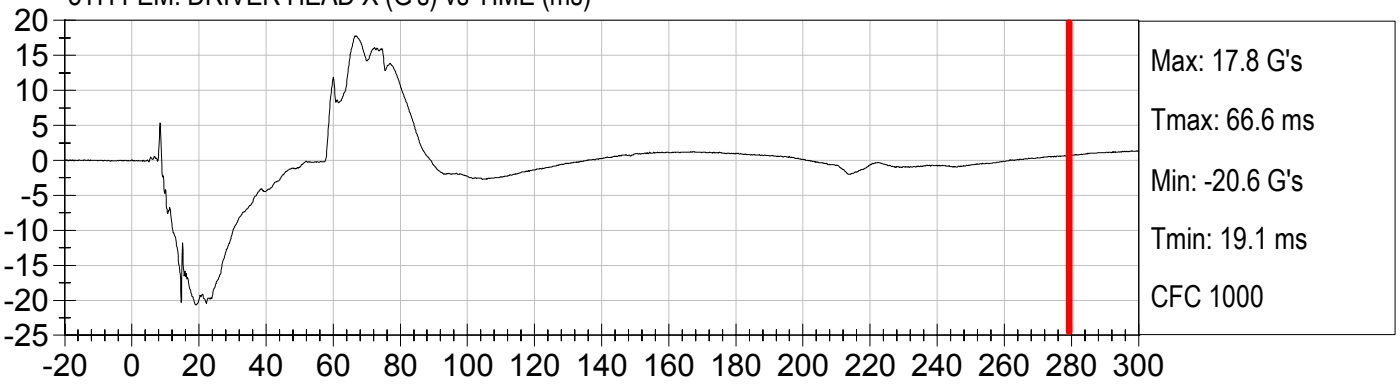


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2)

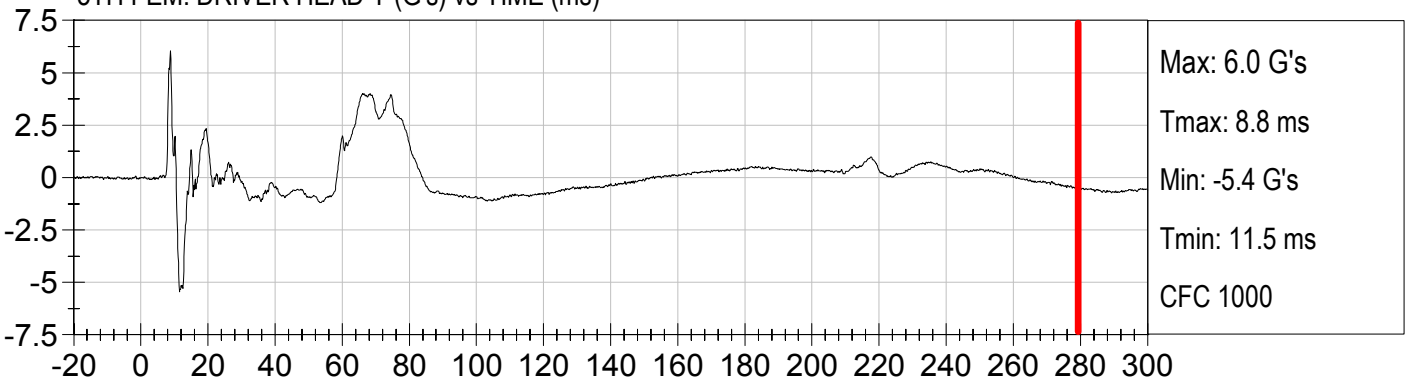
Test Date: 07/10/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

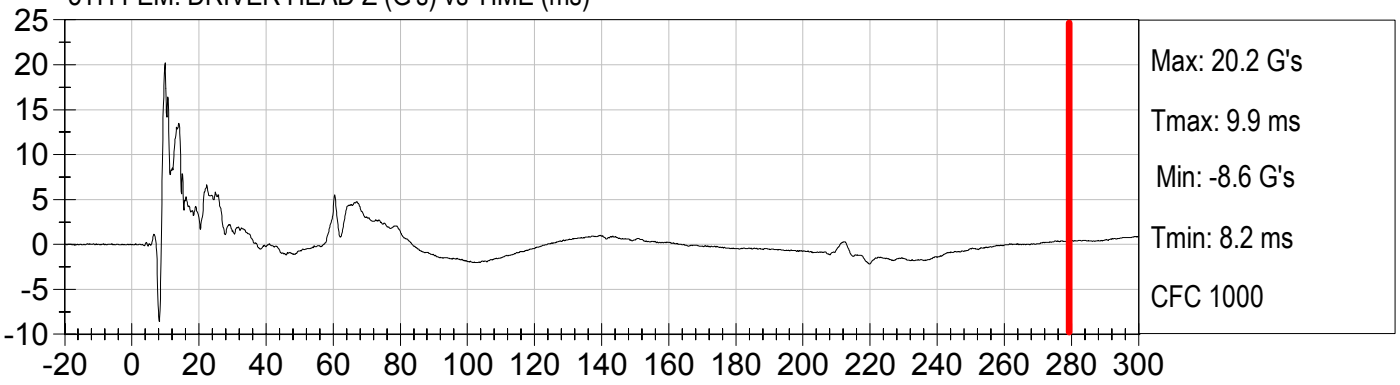
5TH FEM. DRIVER HEAD X (G's) vs TIME (ms)



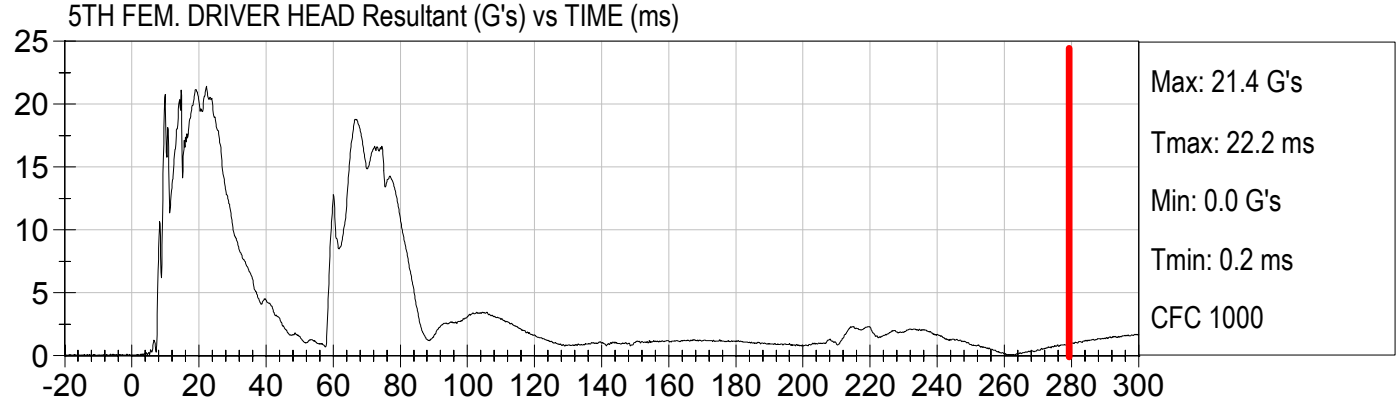
5TH FEM. DRIVER HEAD Y (G's) vs TIME (ms)



5TH FEM. DRIVER HEAD Z (G's) vs TIME (ms)



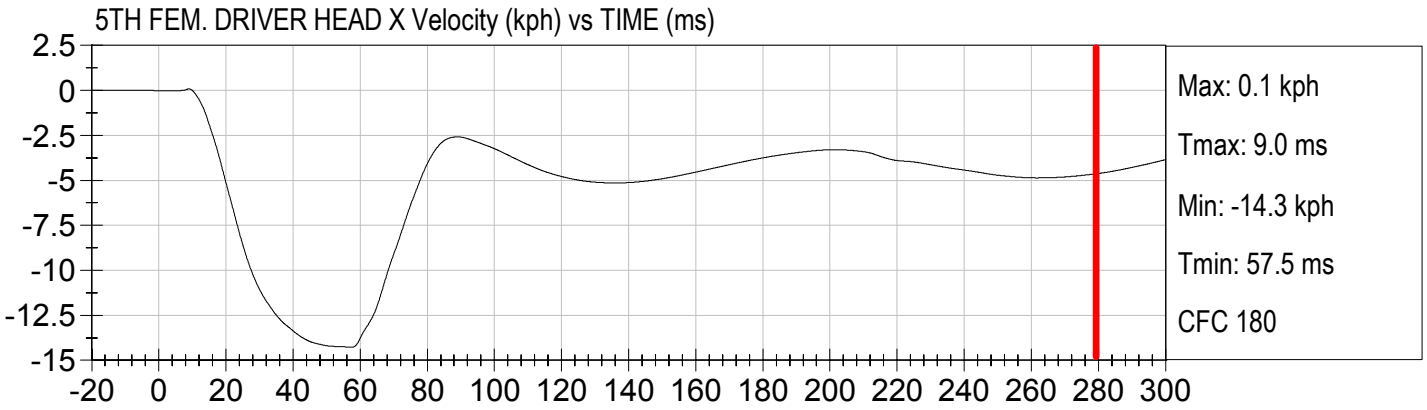
5TH FEM. DRIVER HEAD Resultant (G's) vs TIME (ms)

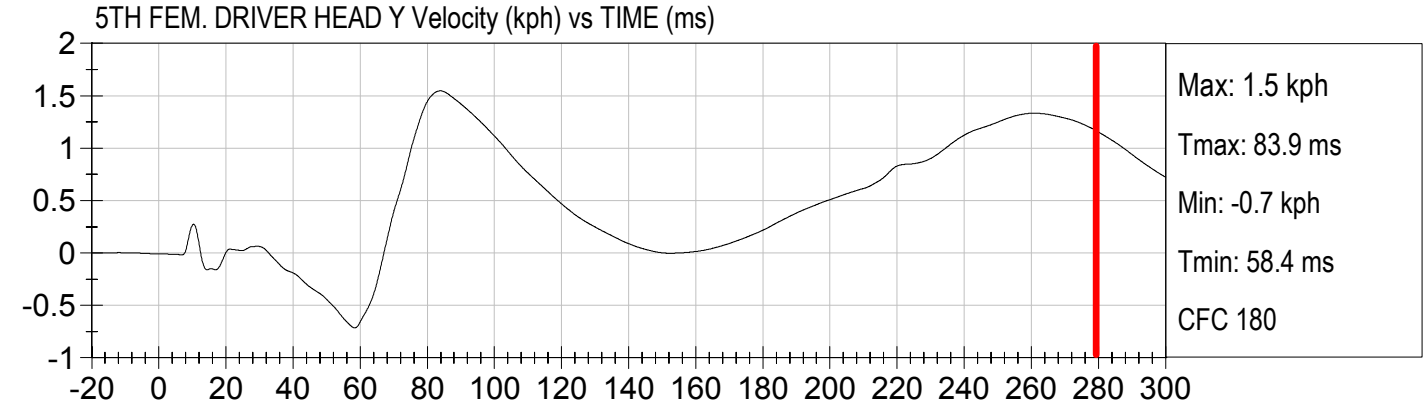


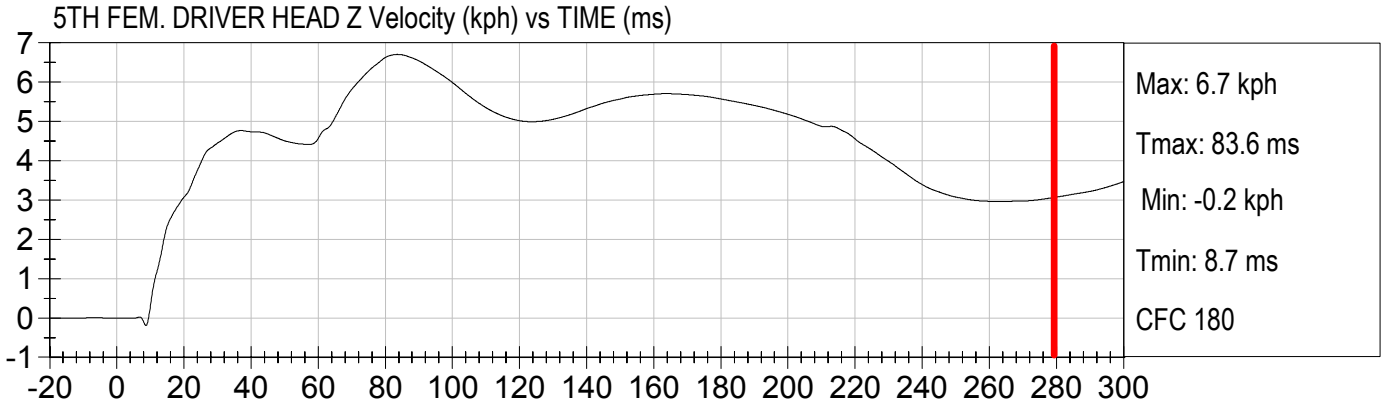
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2)

Test Date: 07/10/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms





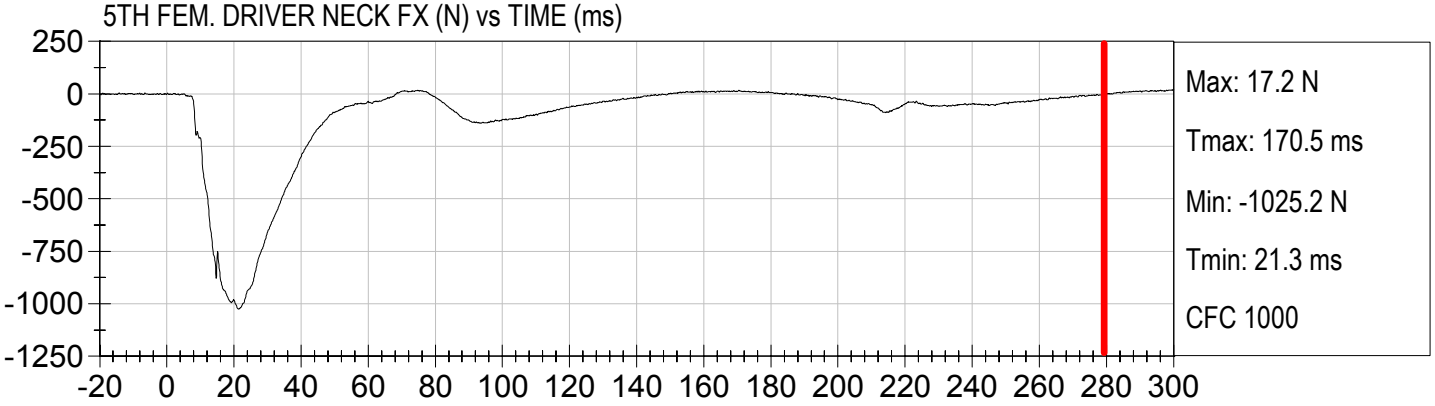


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2)

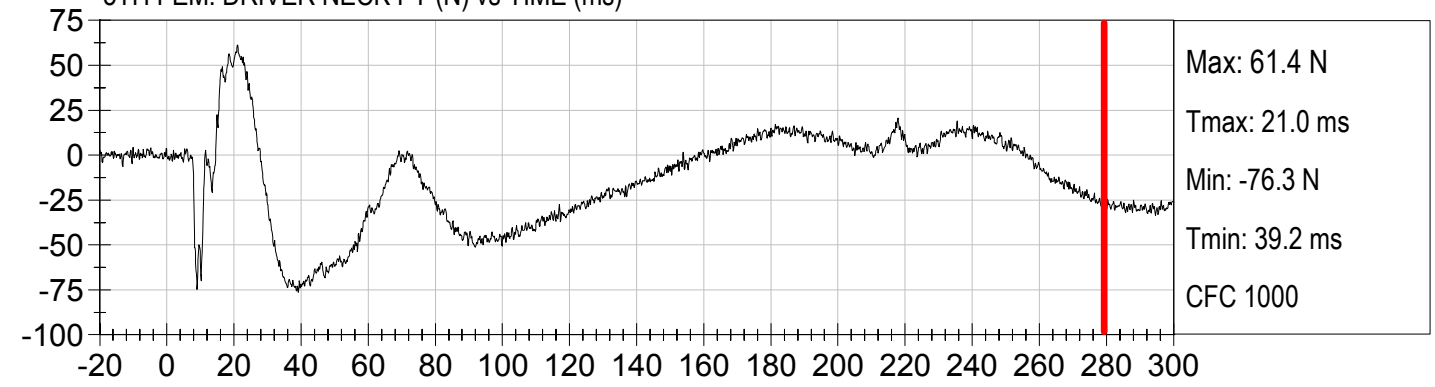
Test Date: 07/10/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

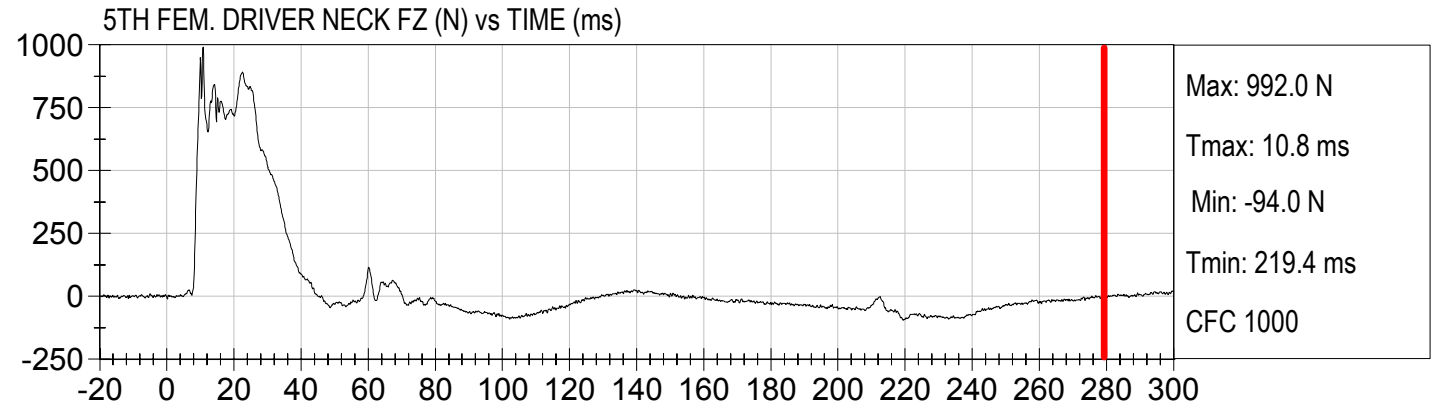
5TH FEM. DRIVER NECK FX (N) vs TIME (ms)



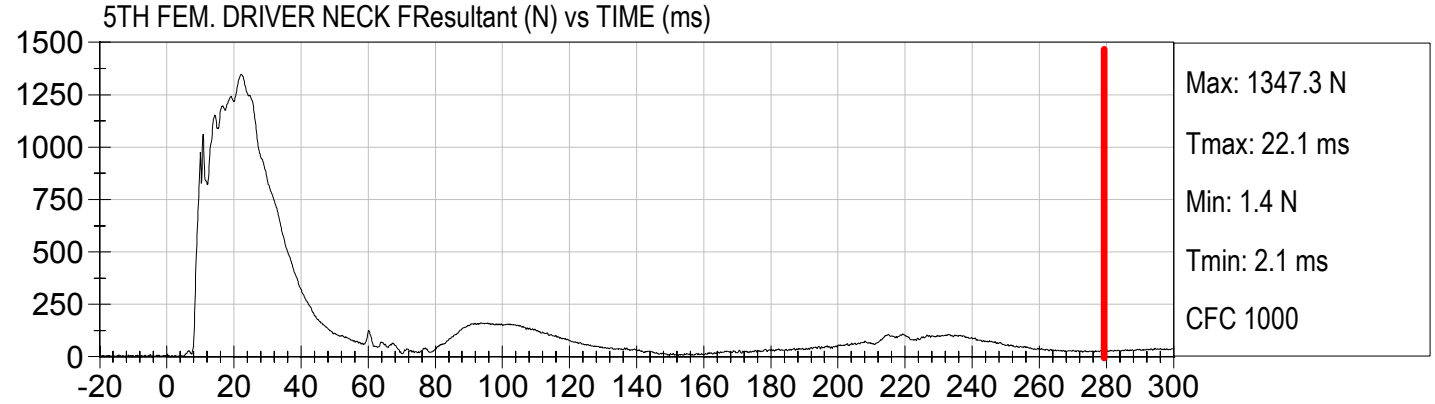
5TH FEM. DRIVER NECK FY (N) vs TIME (ms)



5TH FEM. DRIVER NECK FZ (N) vs TIME (ms)



5TH FEM. DRIVER NECK FResultant (N) vs TIME (ms)

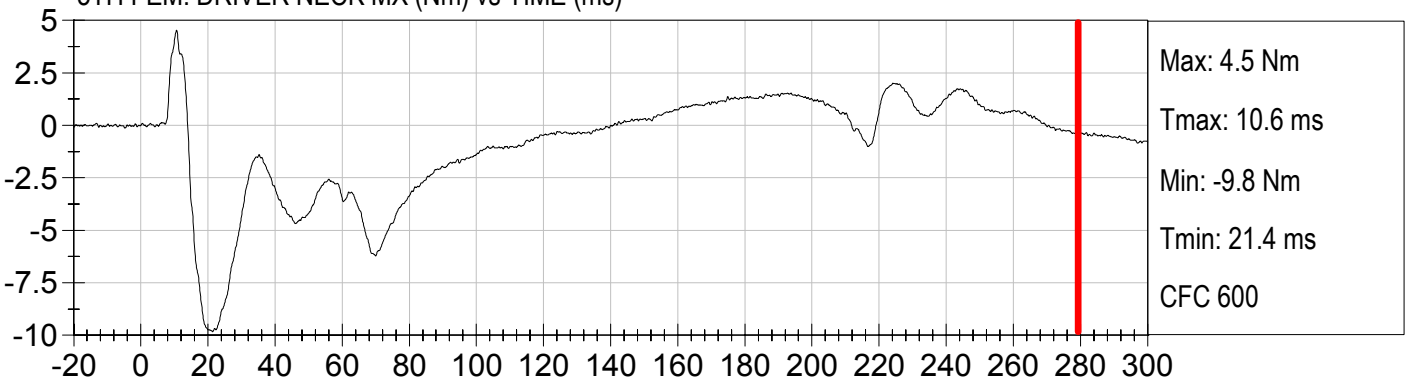


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2)

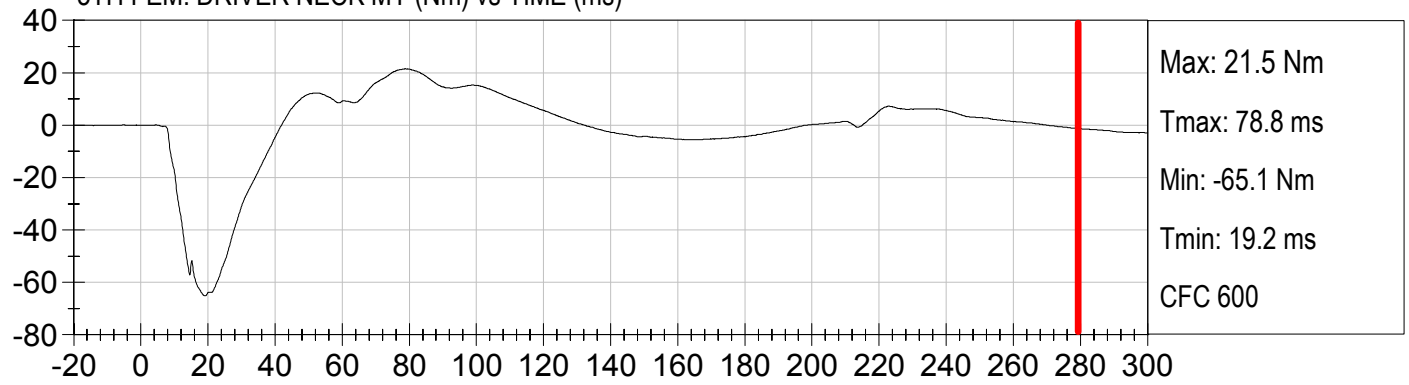
Test Date: 07/10/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

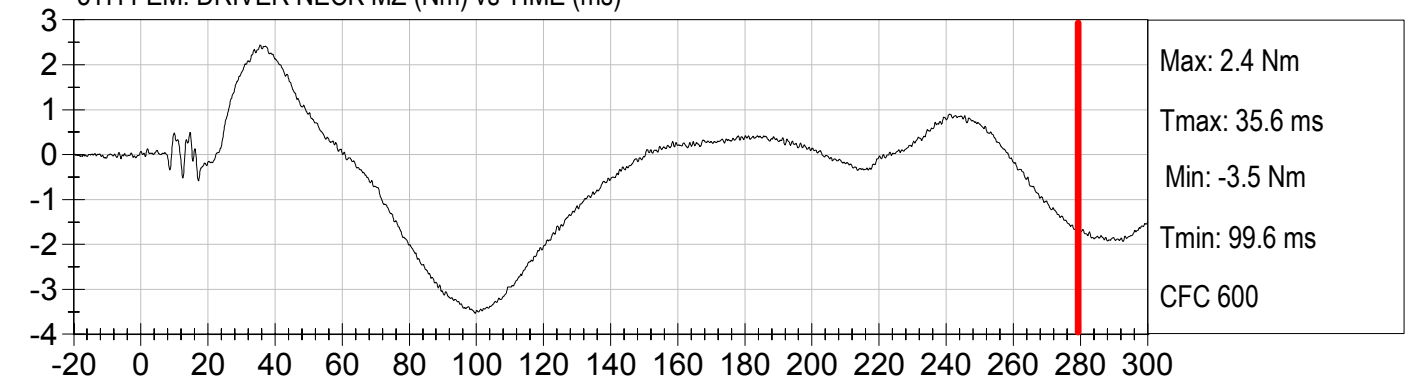
5TH FEM. DRIVER NECK MX (Nm) vs TIME (ms)



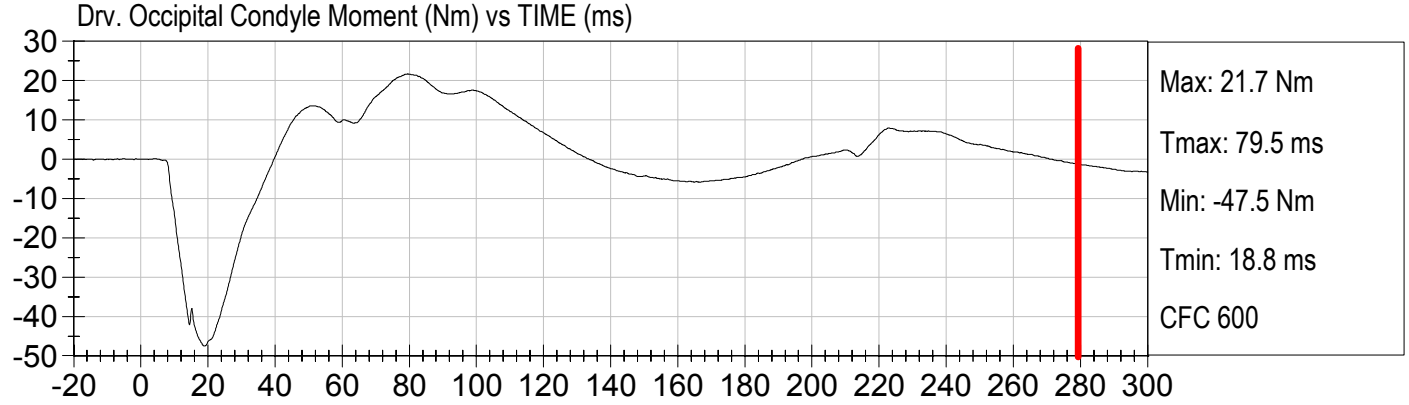
5TH FEM. DRIVER NECK MY (Nm) vs TIME (ms)



5TH FEM. DRIVER NECK MZ (Nm) vs TIME (ms)



Drv. Occipital Condyle Moment (Nm) vs TIME (ms)

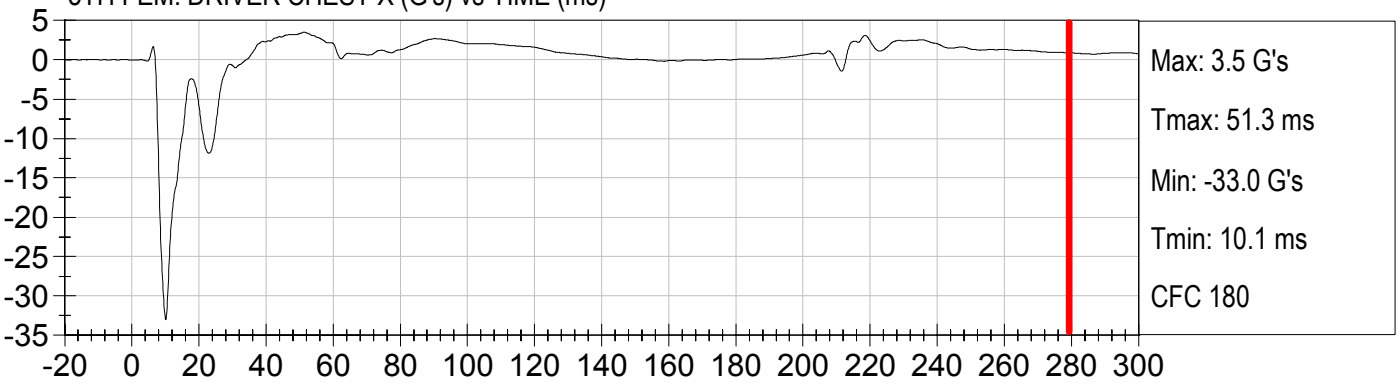


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2)

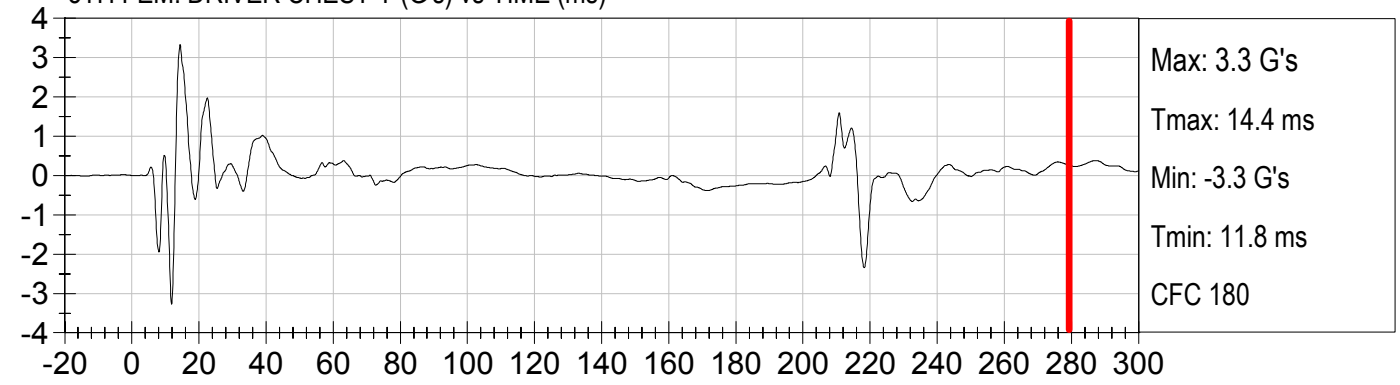
Test Date: 07/10/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

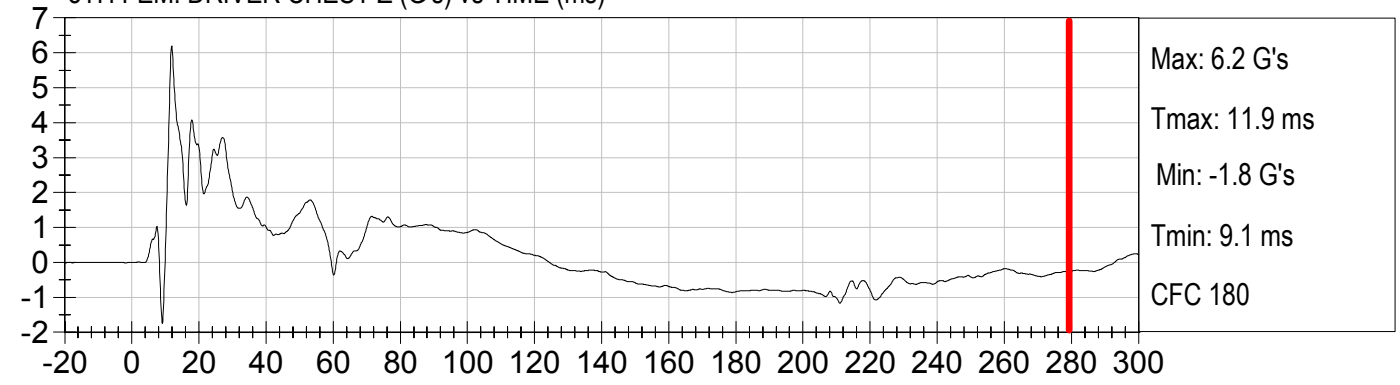
5TH FEM. DRIVER CHEST X (G's) vs TIME (ms)



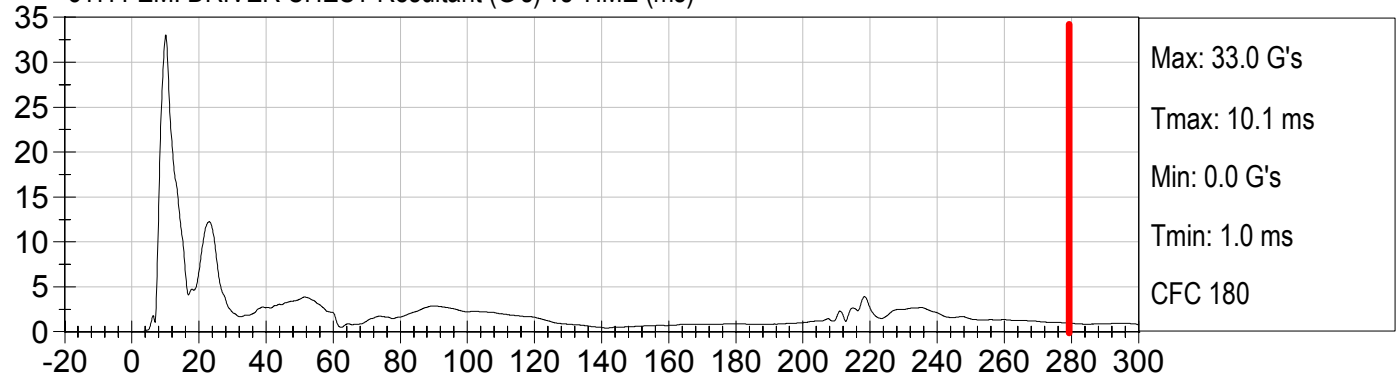
5TH FEM. DRIVER CHEST Y (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Z (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Resultant (G's) vs TIME (ms)

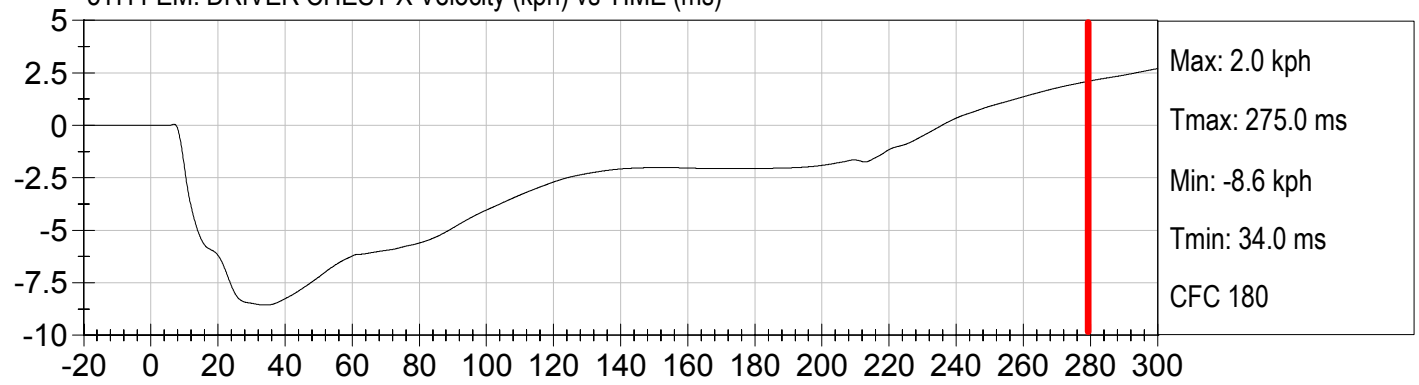


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2)

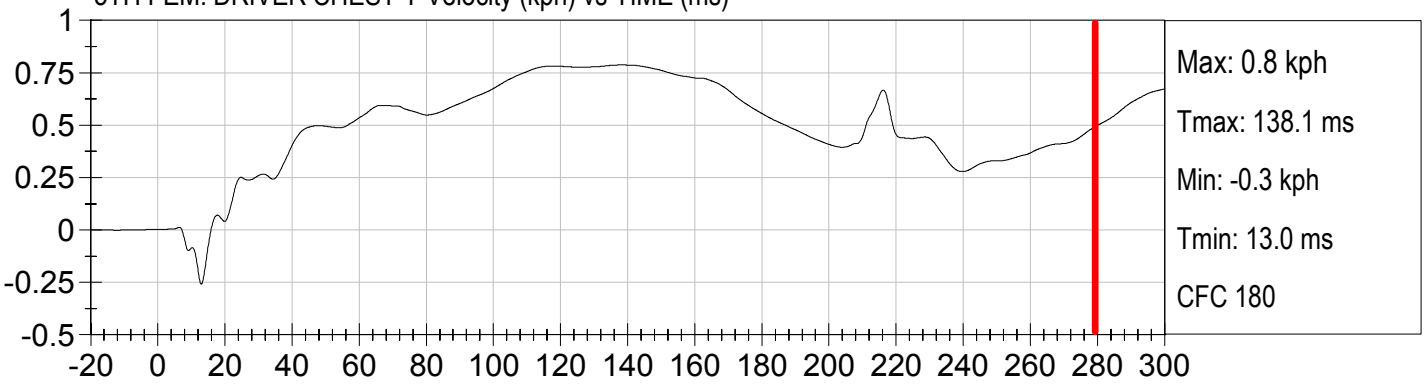
Test Date: 07/10/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

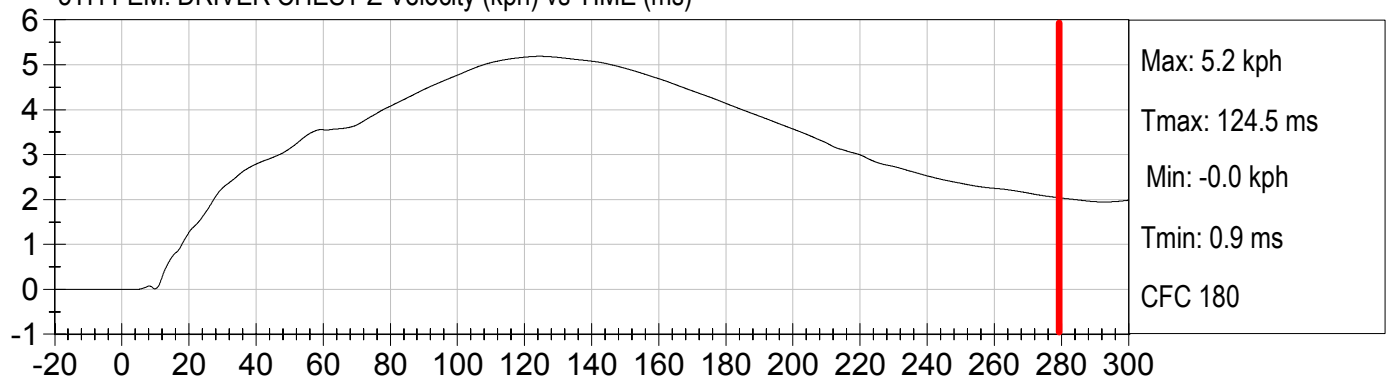
5TH FEM. DRIVER CHEST X Velocity (kph) vs TIME (ms)



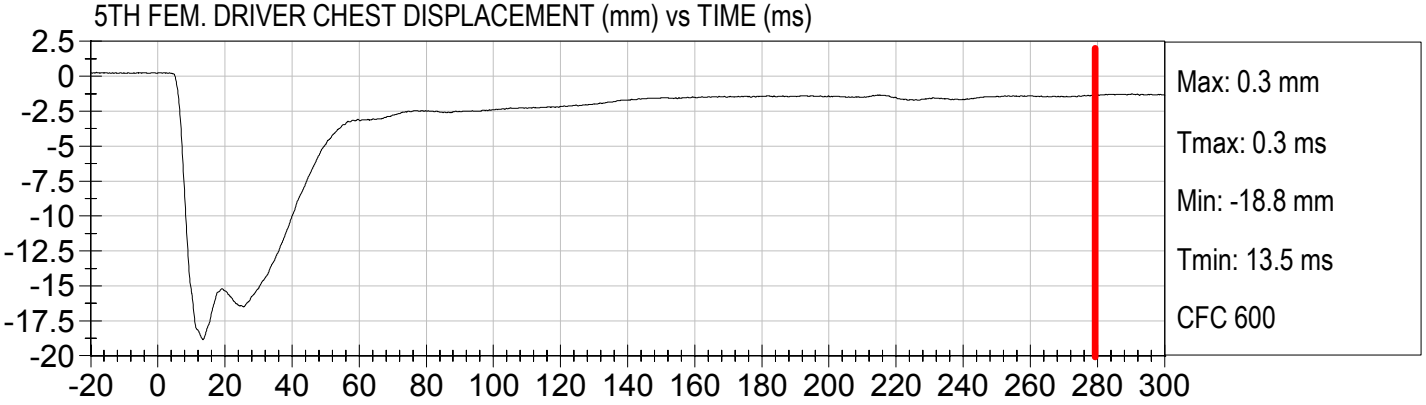
5TH FEM. DRIVER CHEST Y Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST Z Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST DISPLACEMENT (mm) vs TIME (ms)

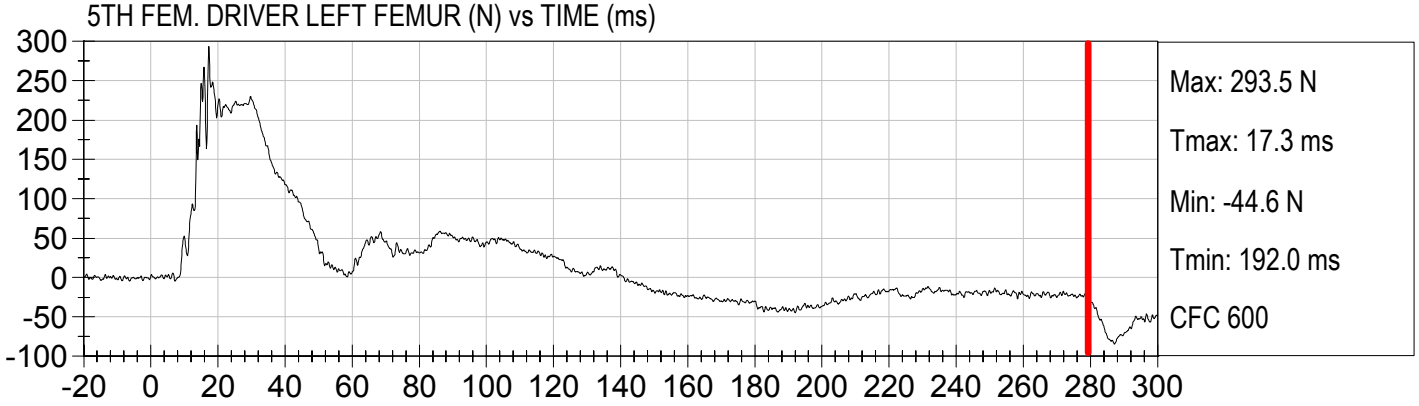


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2)

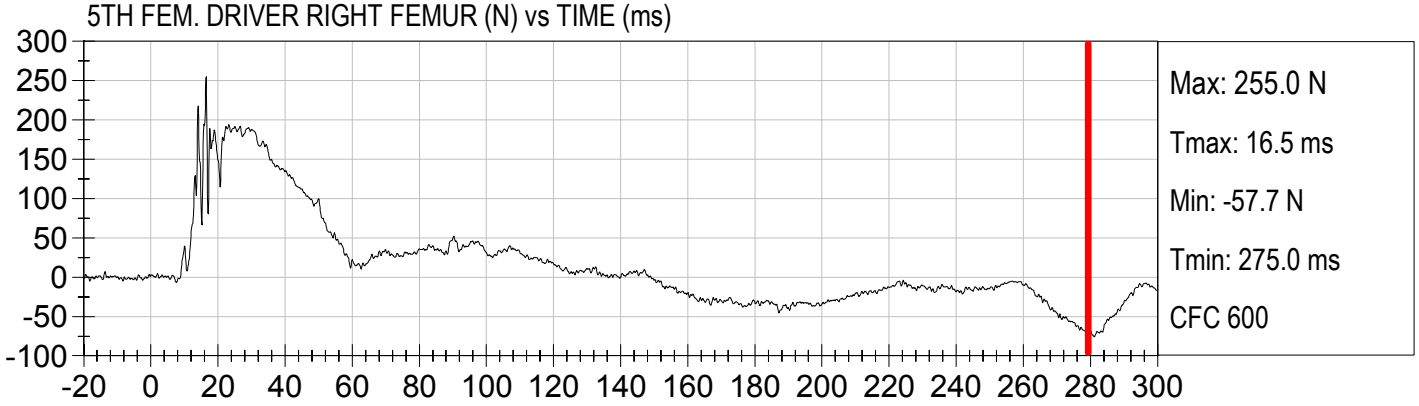
Test Date: 07/10/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

5TH FEM. DRIVER LEFT FEMUR (N) vs TIME (ms)



5TH FEM. DRIVER RIGHT FEMUR (N) vs TIME (ms)

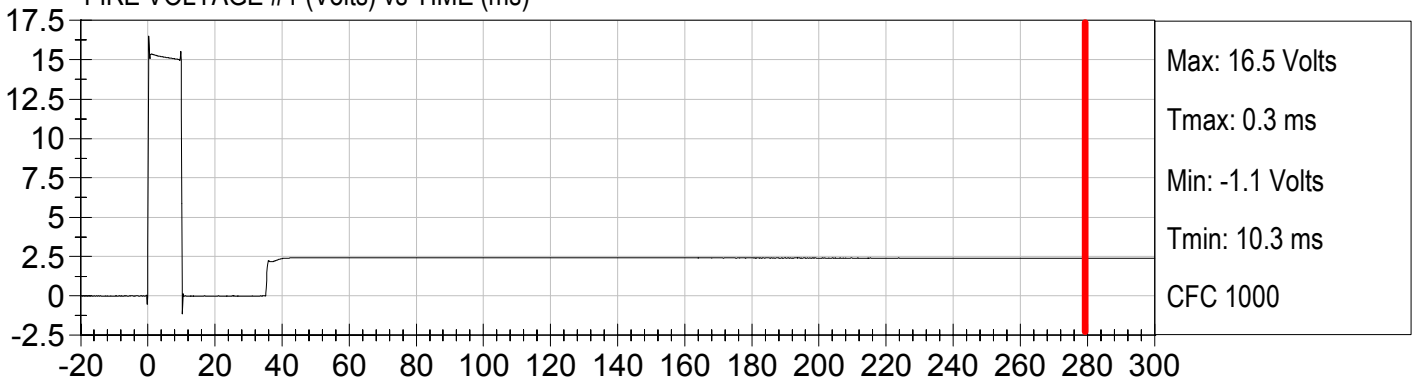


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2)

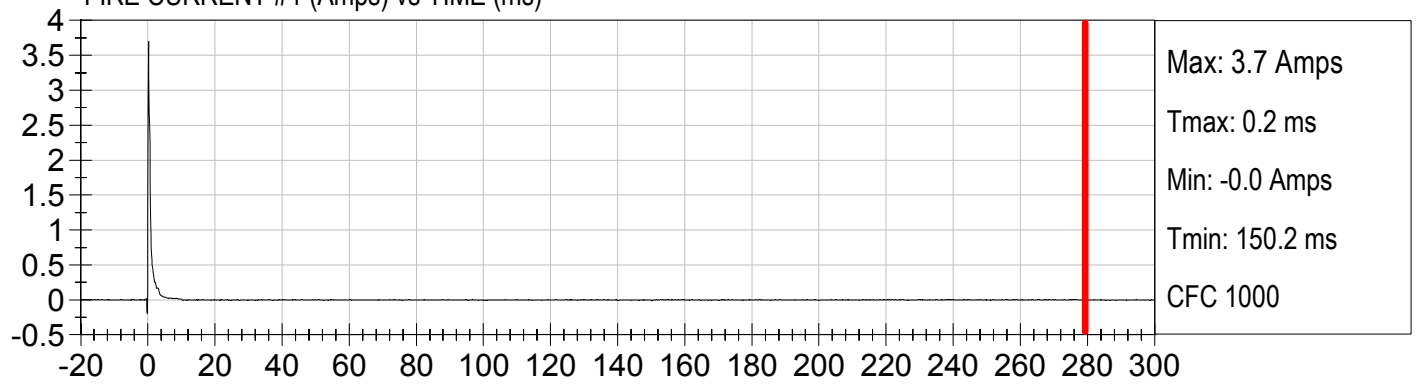
Test Date: 07/10/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

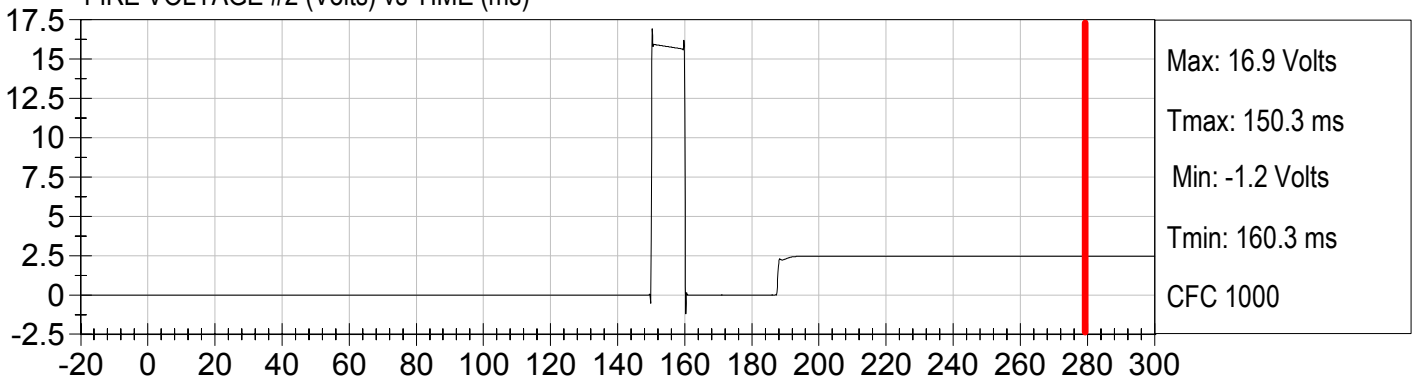
FIRE VOLTAGE #1 (Volts) vs TIME (ms)



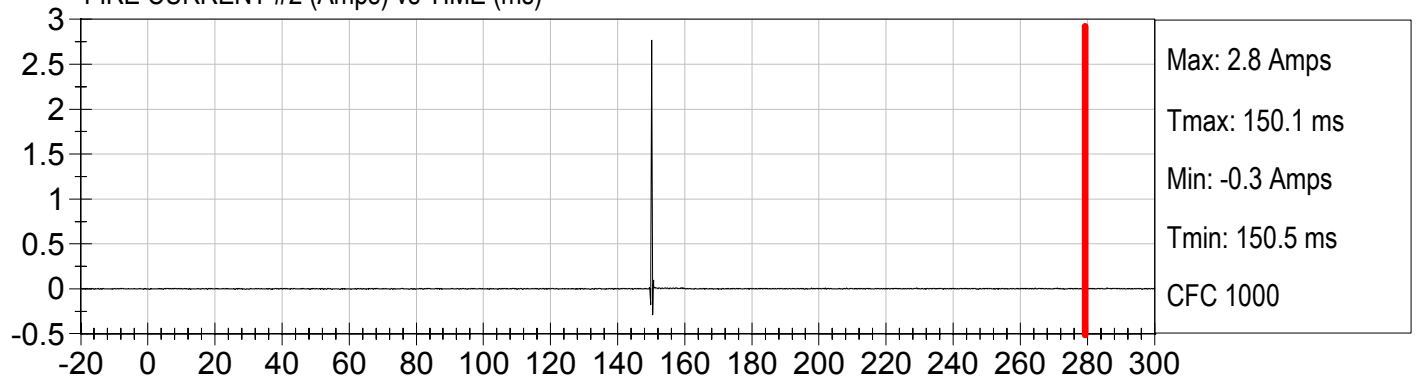
FIRE CURRENT #1 (Amps) vs TIME (ms)



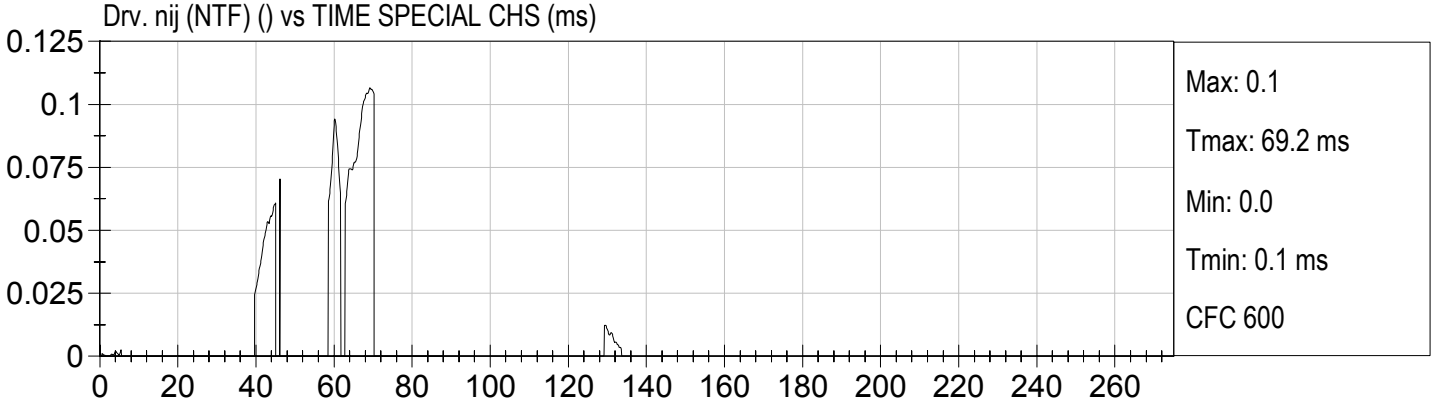
FIRE VOLTAGE #2 (Volts) vs TIME (ms)



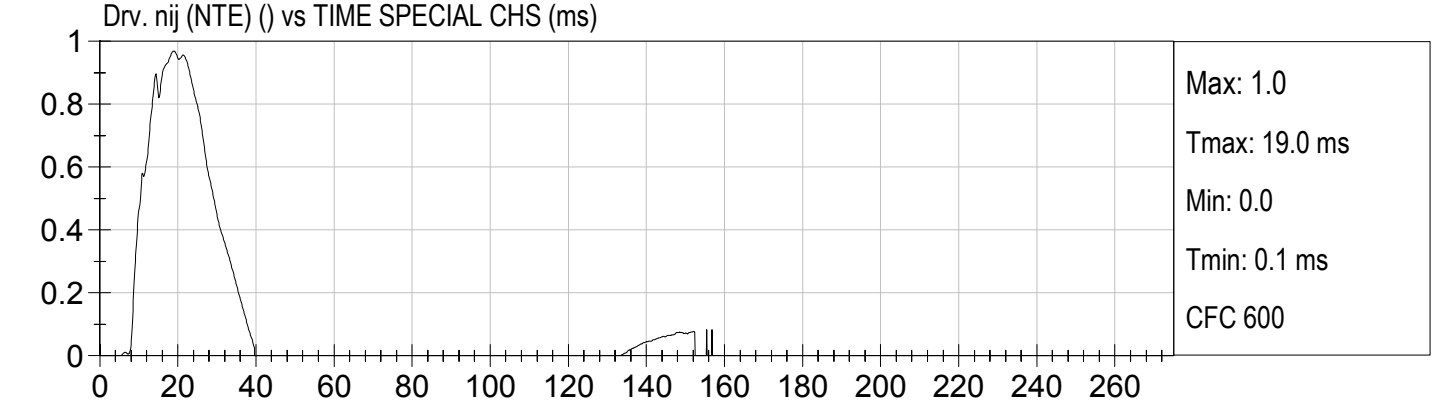
FIRE CURRENT #2 (Amps) vs TIME (ms)



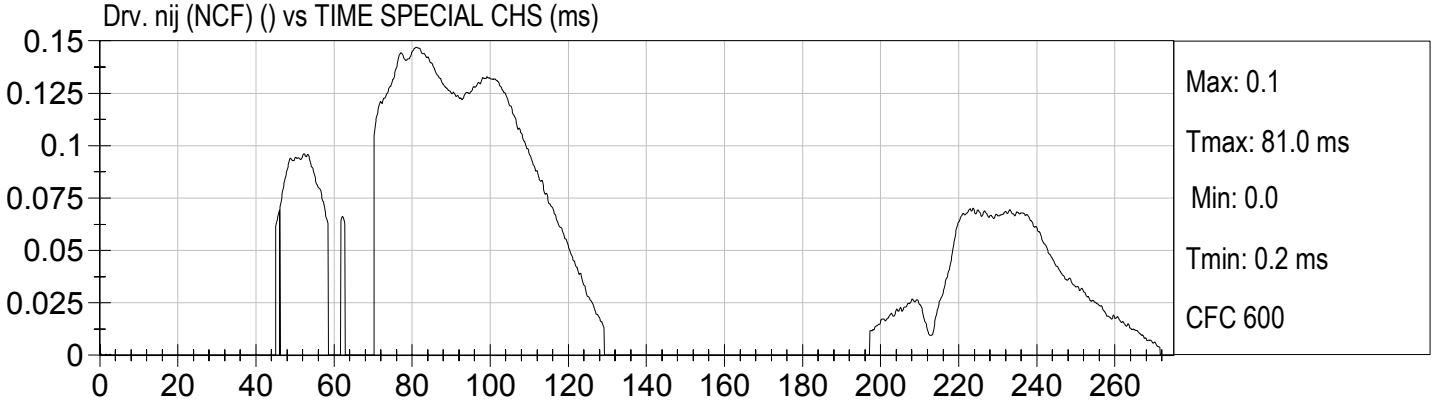
Drv. nij (NTF) () vs TIME SPECIAL CHS (ms)



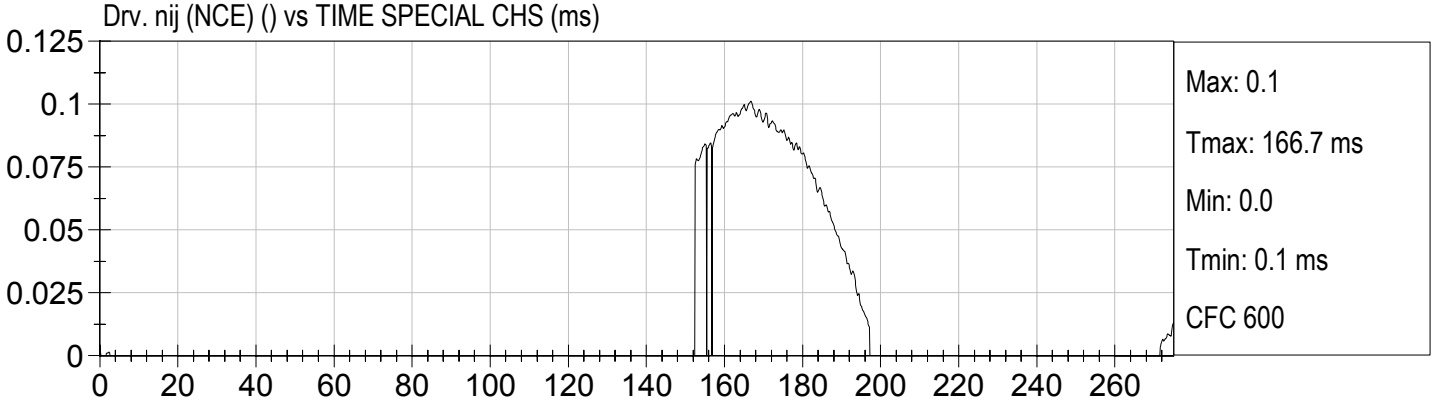
Drv. nij (NTE) () vs TIME SPECIAL CHS (ms)



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



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

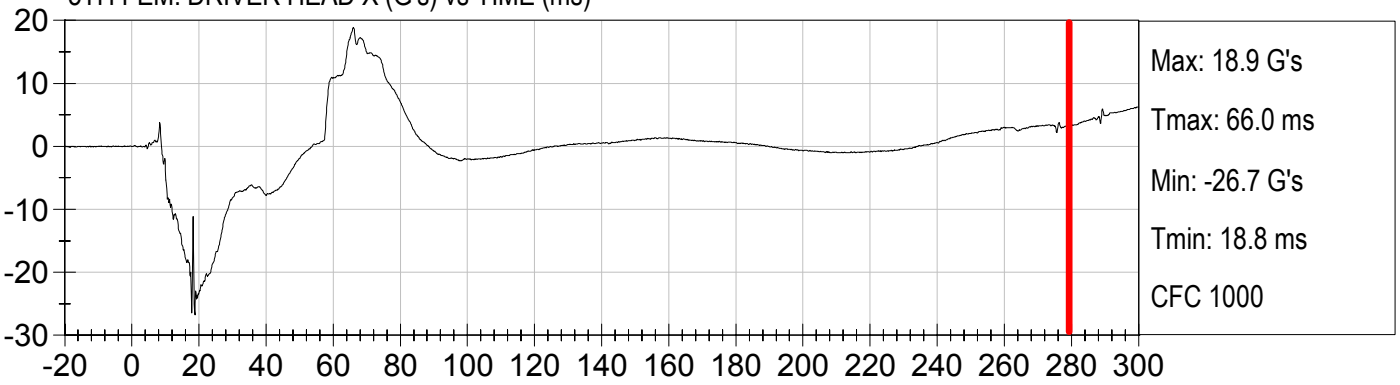


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 2)

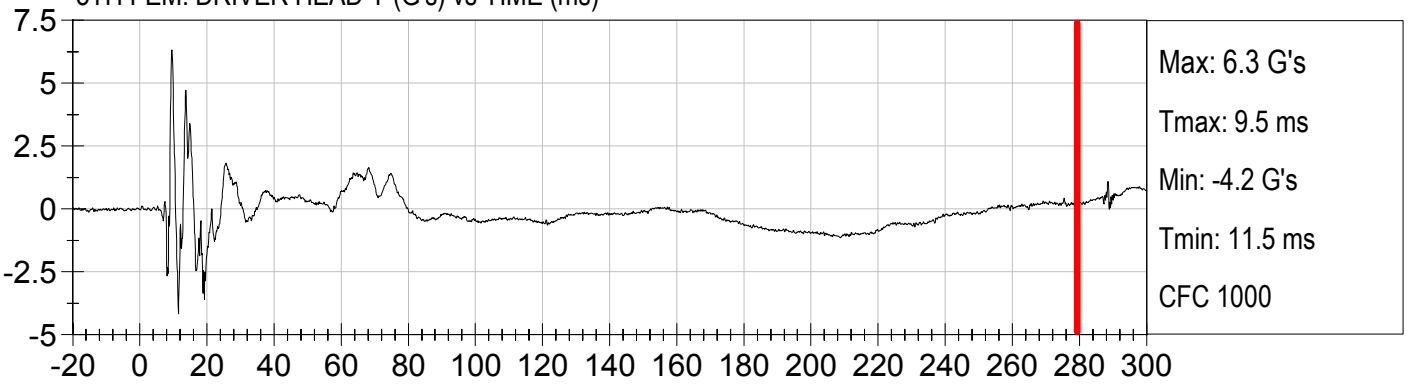
Test Date: 07/20/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

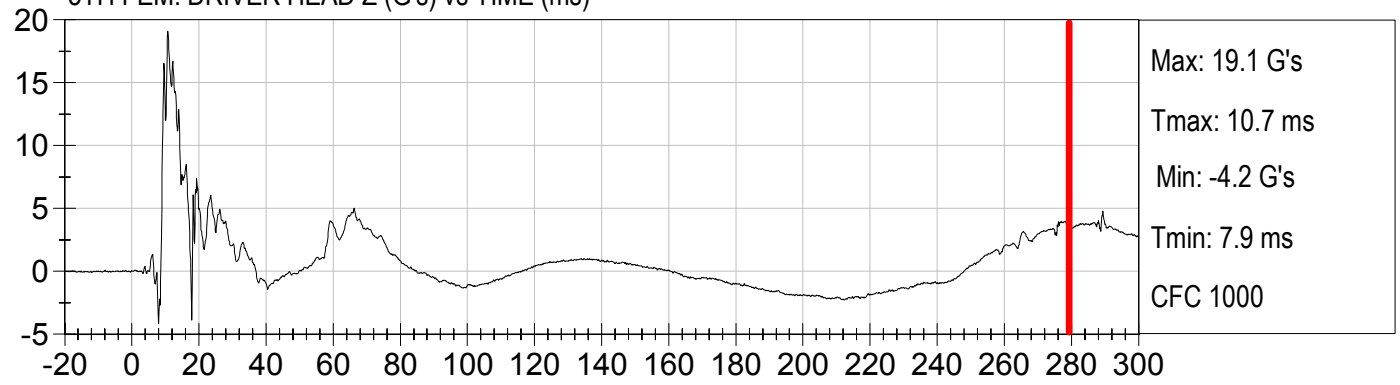
5TH FEM. DRIVER HEAD X (G's) vs TIME (ms)



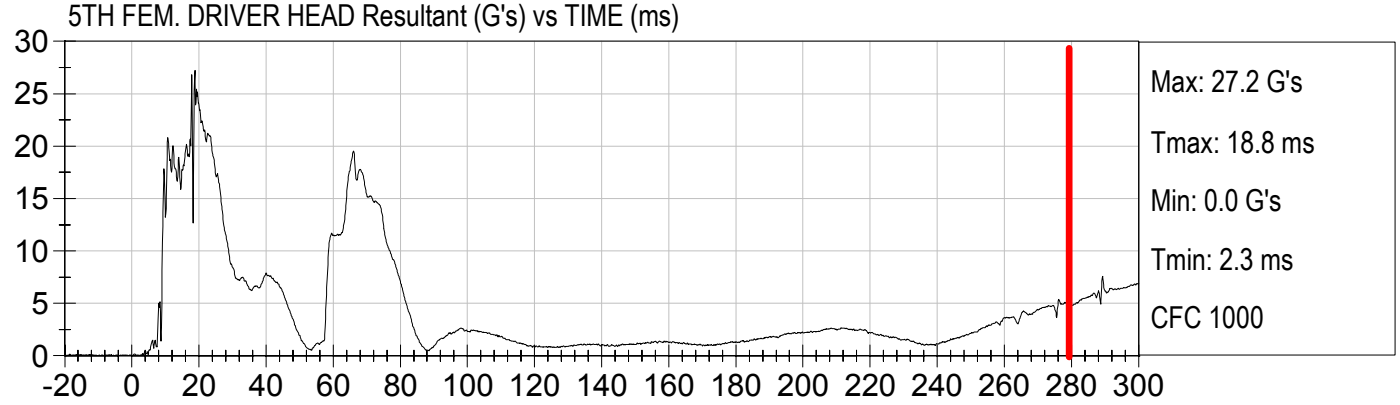
5TH FEM. DRIVER HEAD Y (G's) vs TIME (ms)



5TH FEM. DRIVER HEAD Z (G's) vs TIME (ms)



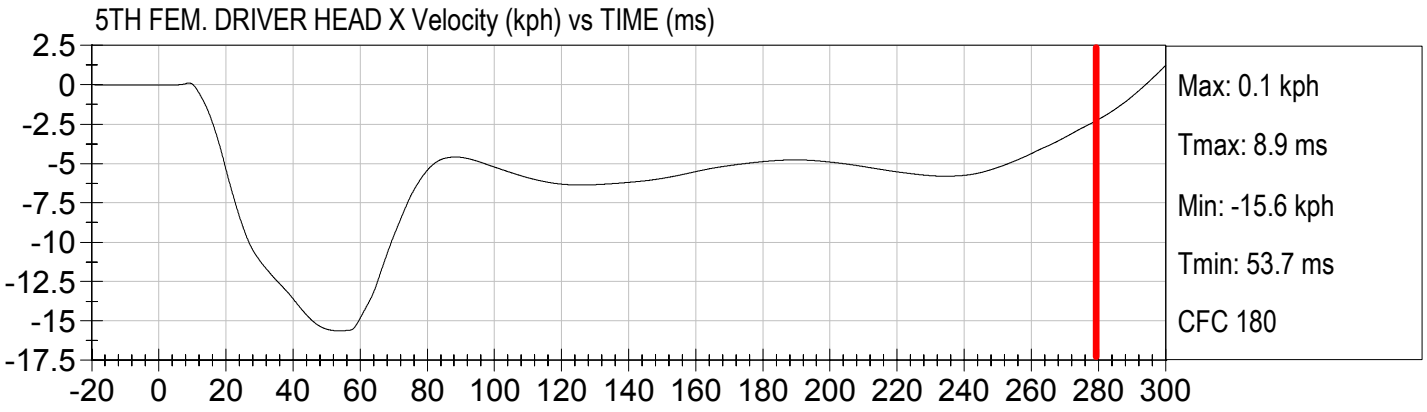
5TH FEM. DRIVER HEAD Resultant (G's) vs TIME (ms)

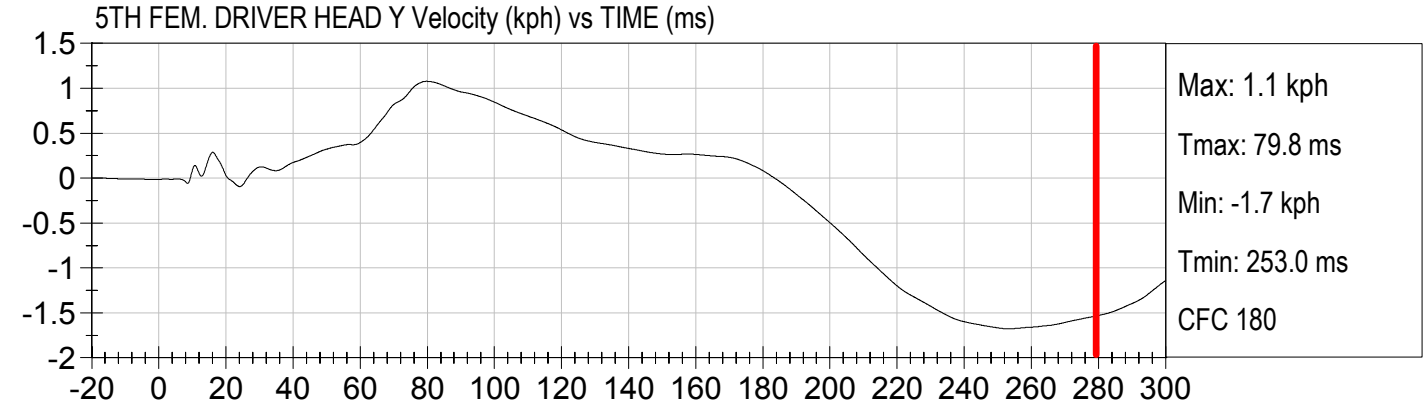


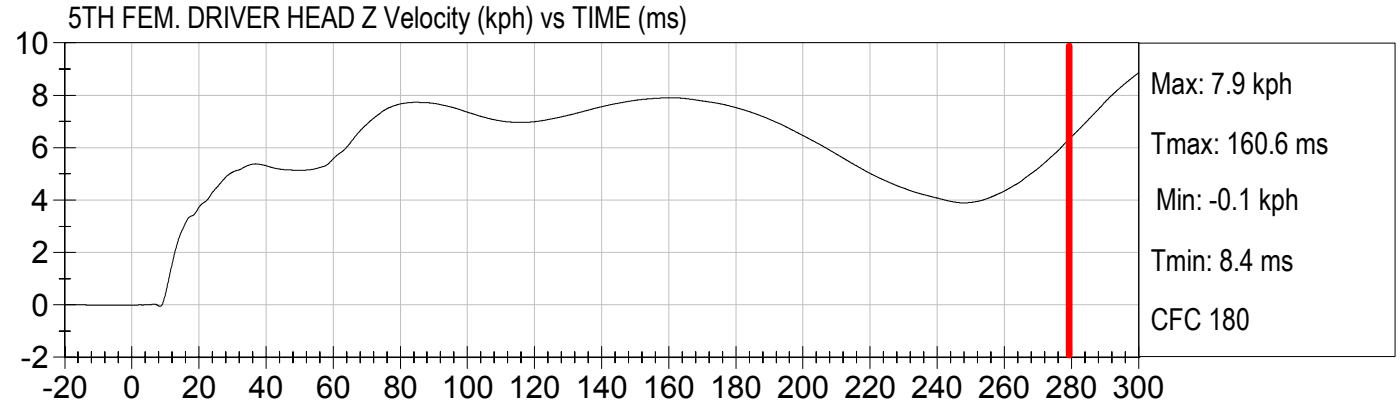
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 2)

Test Date: 07/20/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms





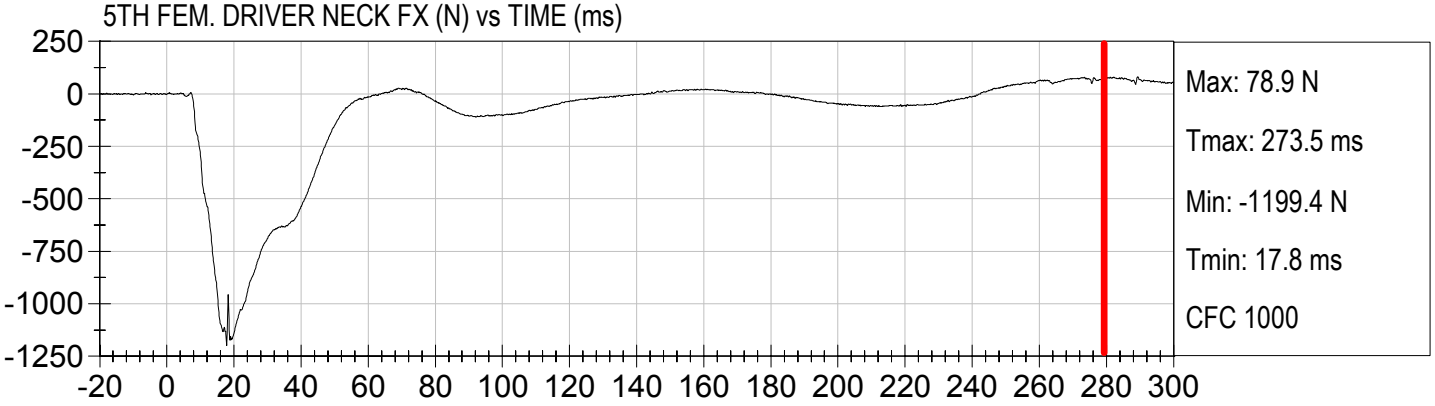


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 2)

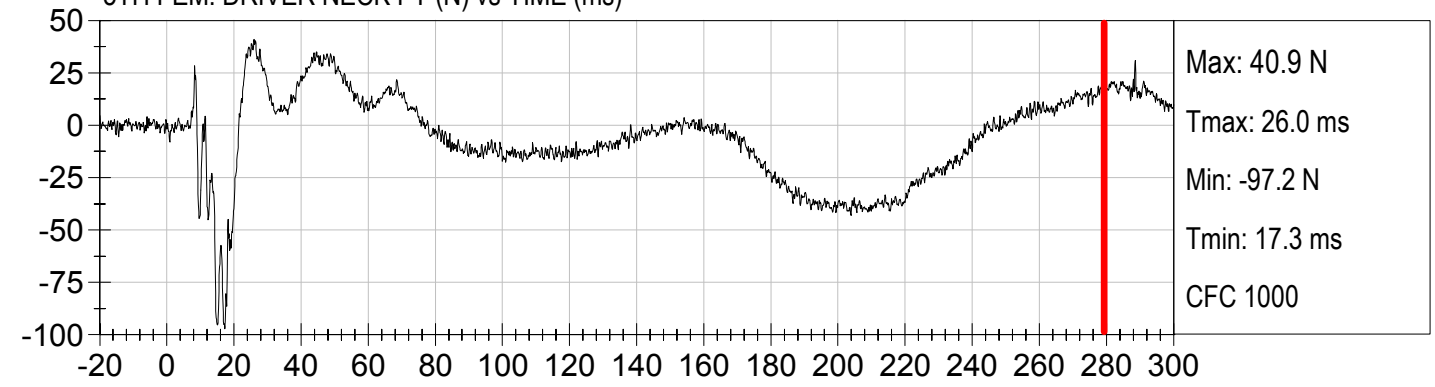
Test Date: 07/20/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

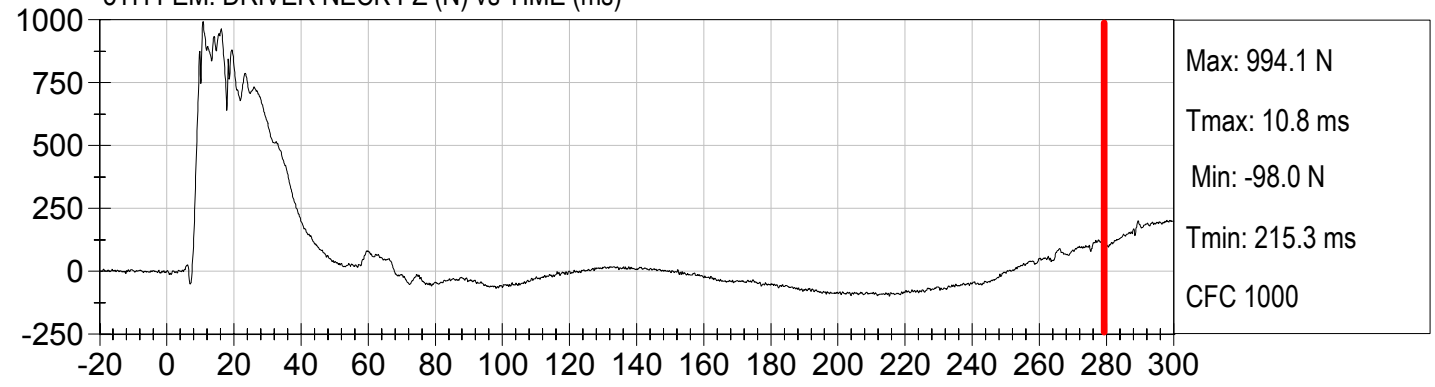
5TH FEM. DRIVER NECK FX (N) vs TIME (ms)



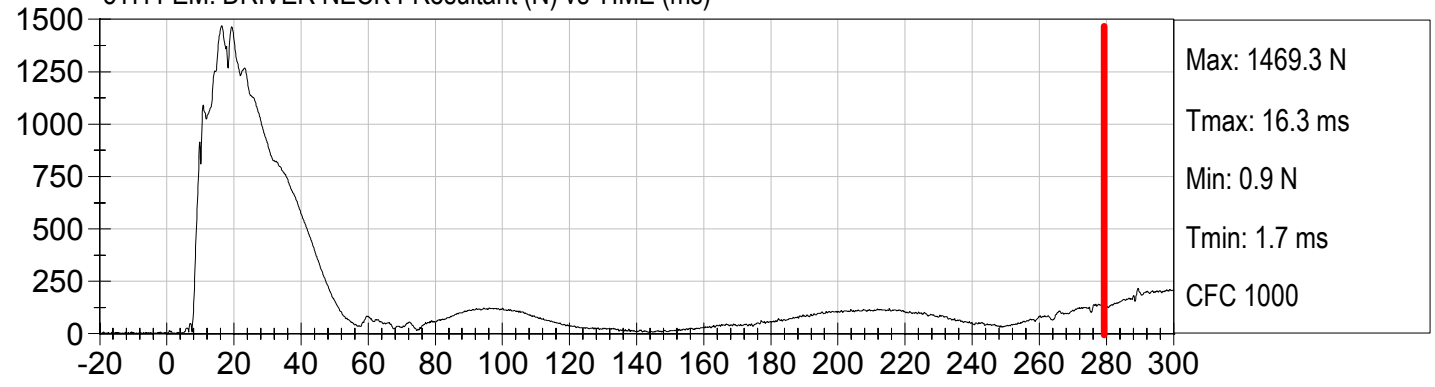
5TH FEM. DRIVER NECK FY (N) vs TIME (ms)



5TH FEM. DRIVER NECK FZ (N) vs TIME (ms)



5TH FEM. DRIVER NECK FResultant (N) vs TIME (ms)

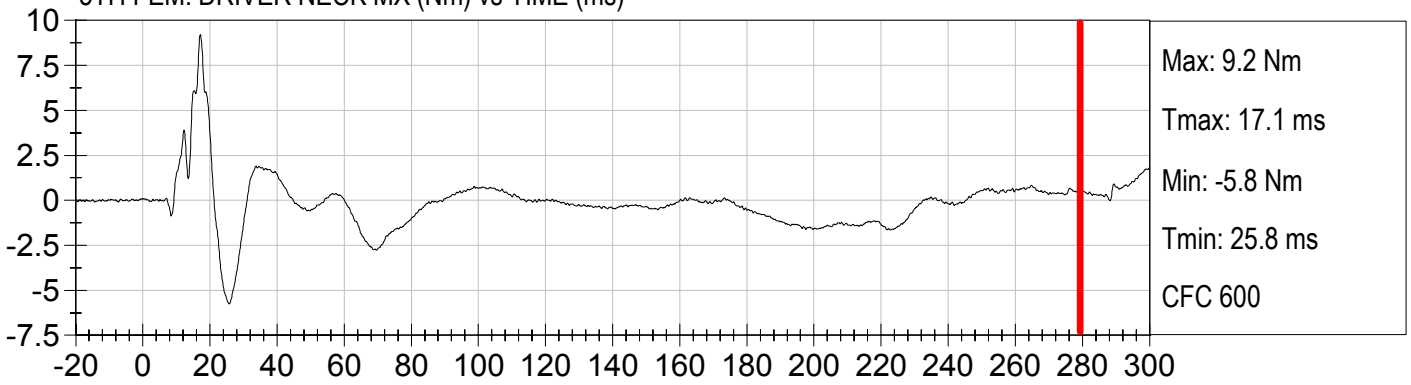


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 2)

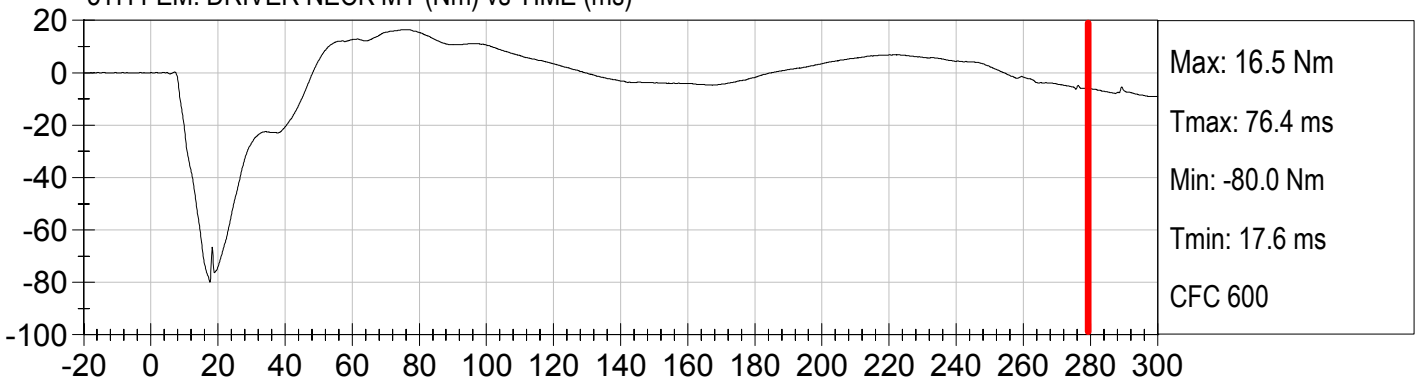
Test Date: 07/20/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

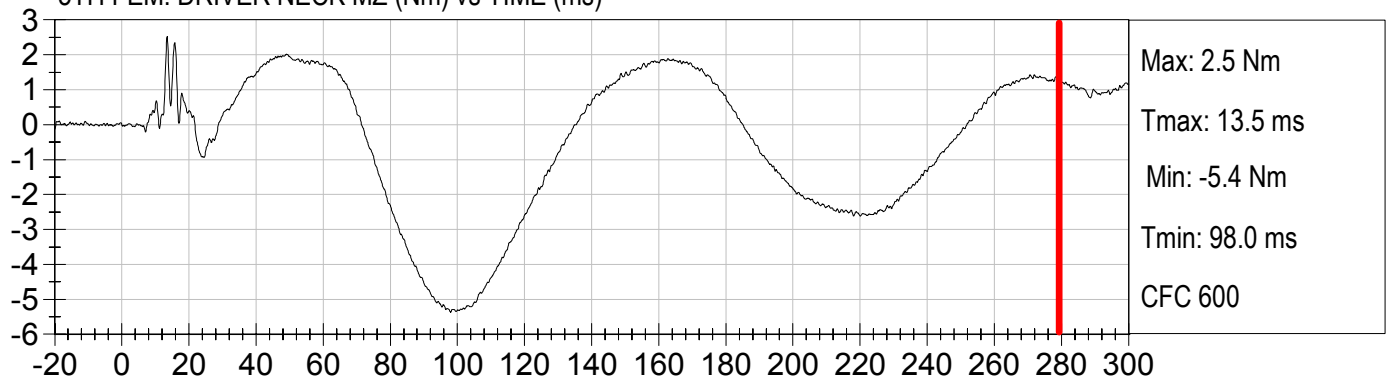
5TH FEM. DRIVER NECK MX (Nm) vs TIME (ms)



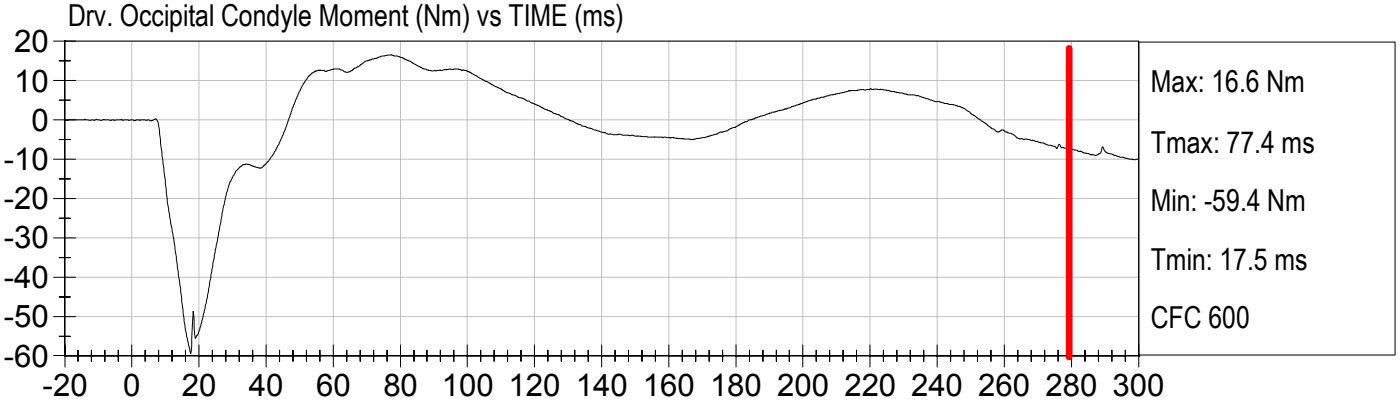
5TH FEM. DRIVER NECK MY (Nm) vs TIME (ms)



5TH FEM. DRIVER NECK MZ (Nm) vs TIME (ms)



Drv. Occipital Condyle Moment (Nm) vs TIME (ms)

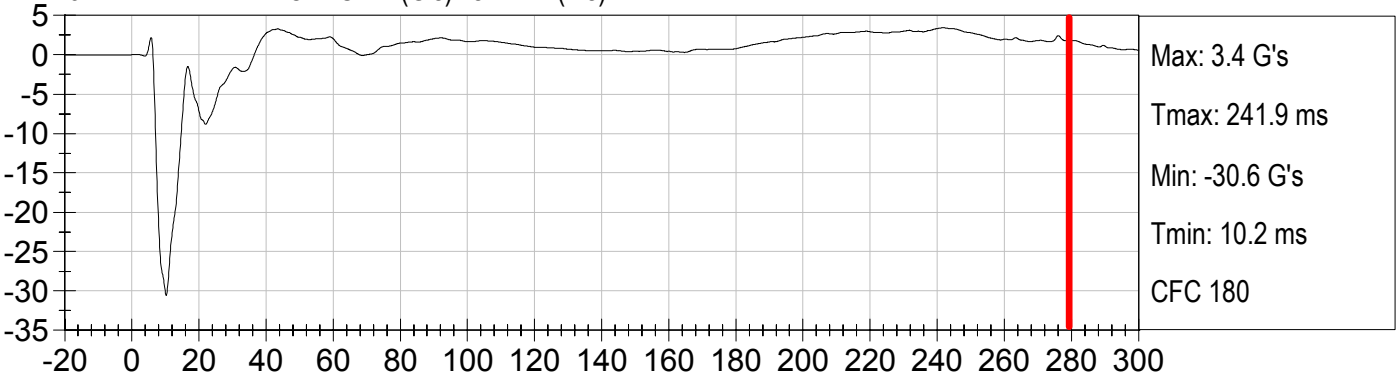


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 2)

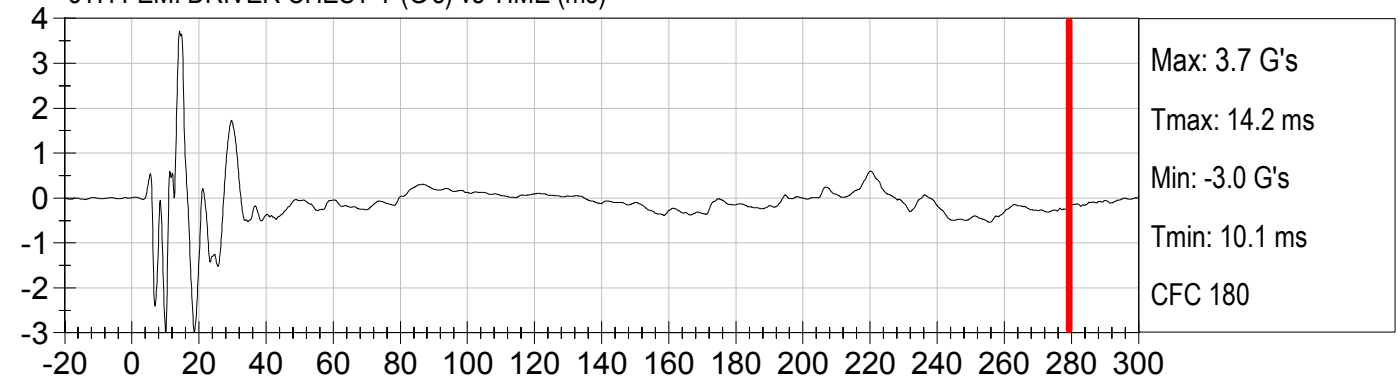
Test Date: 07/20/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

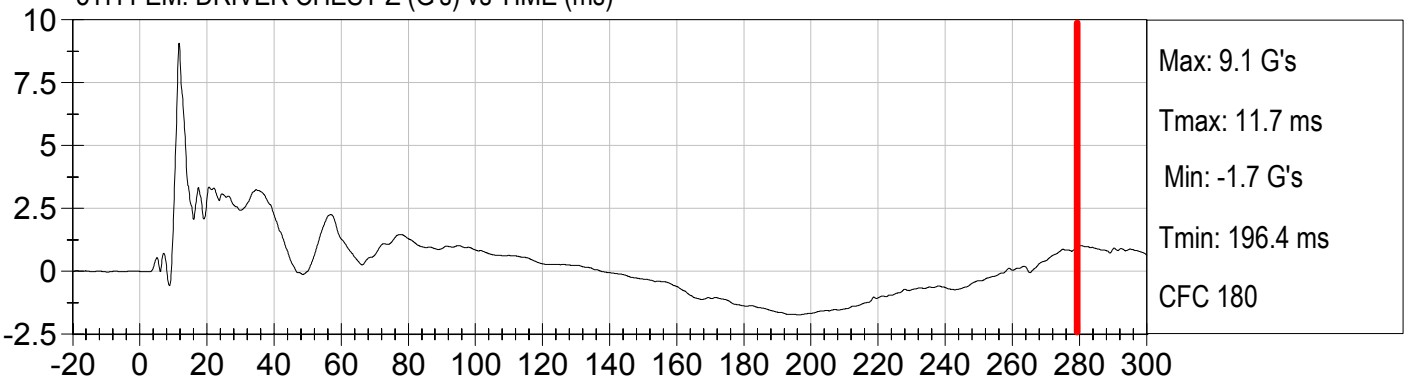
5TH FEM. DRIVER CHEST X (G's) vs TIME (ms)



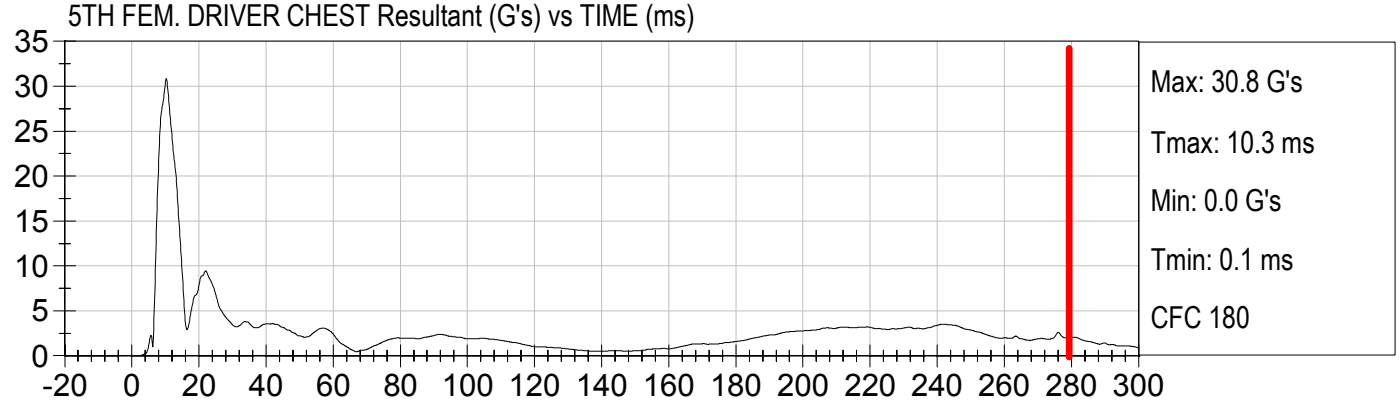
5TH FEM. DRIVER CHEST Y (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Z (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Resultant (G's) vs TIME (ms)

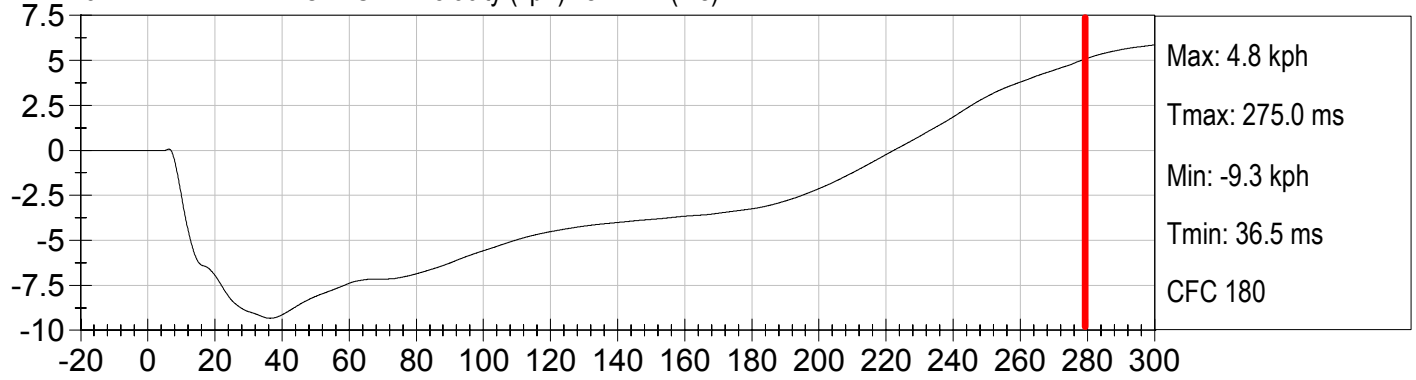


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 2)

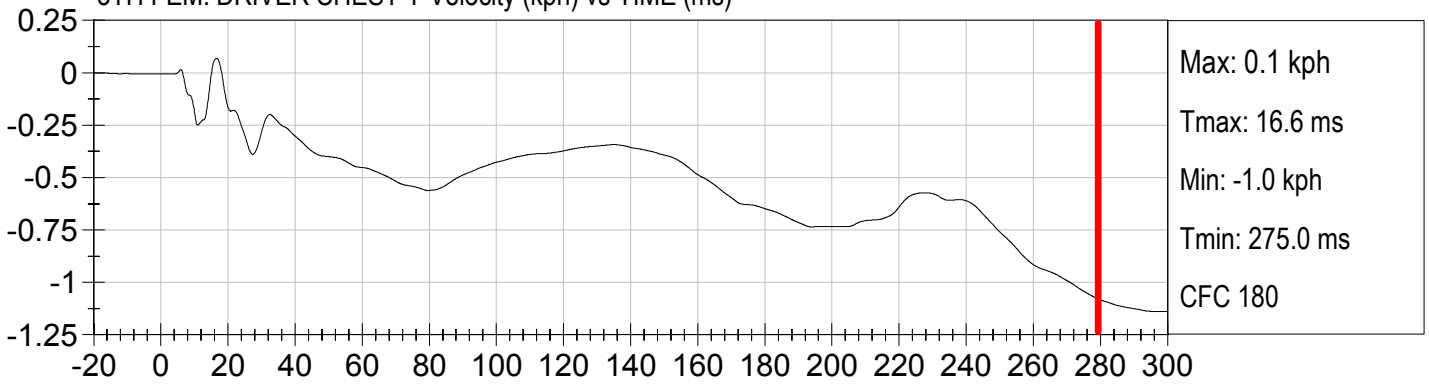
Test Date: 07/20/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

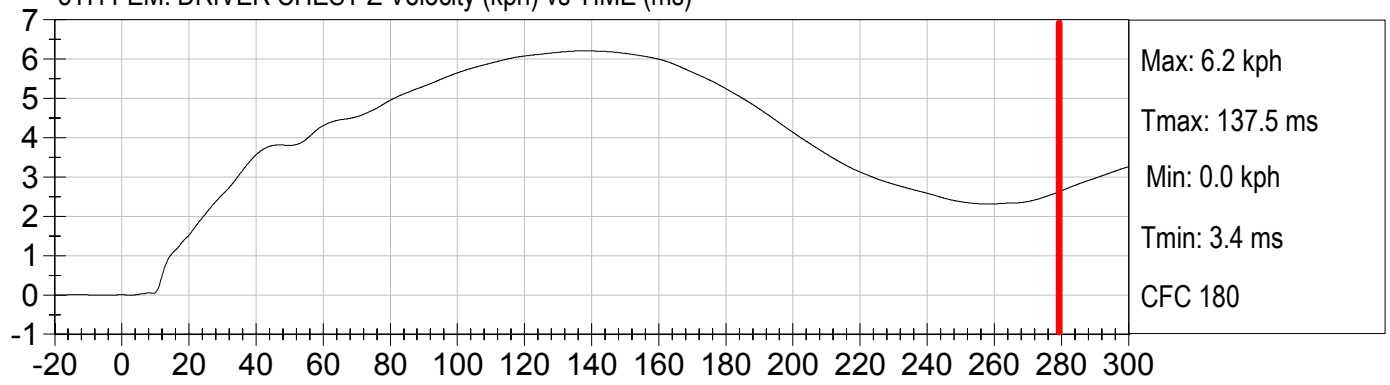
5TH FEM. DRIVER CHEST X Velocity (kph) vs TIME (ms)



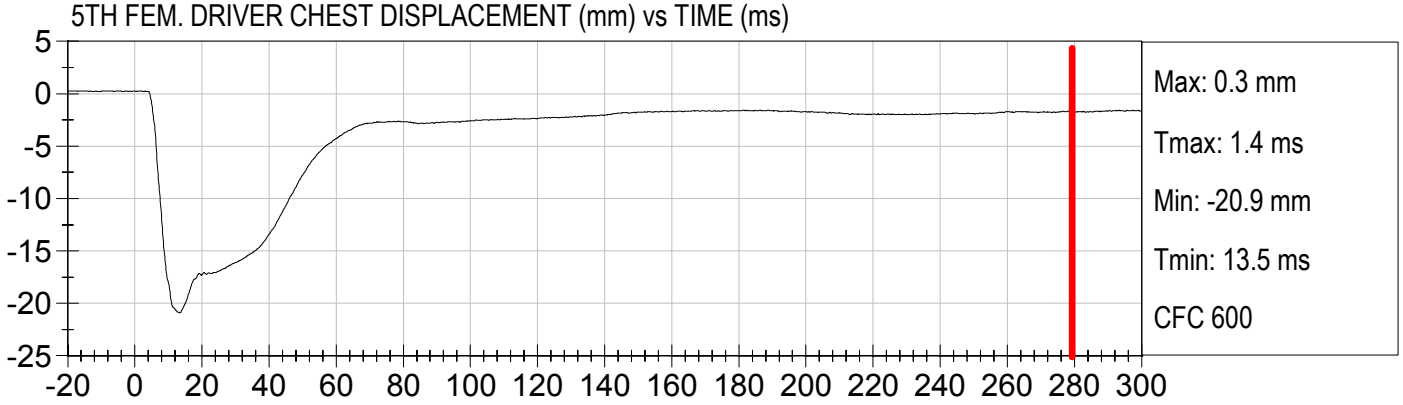
5TH FEM. DRIVER CHEST Y Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST Z Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST DISPLACEMENT (mm) vs TIME (ms)

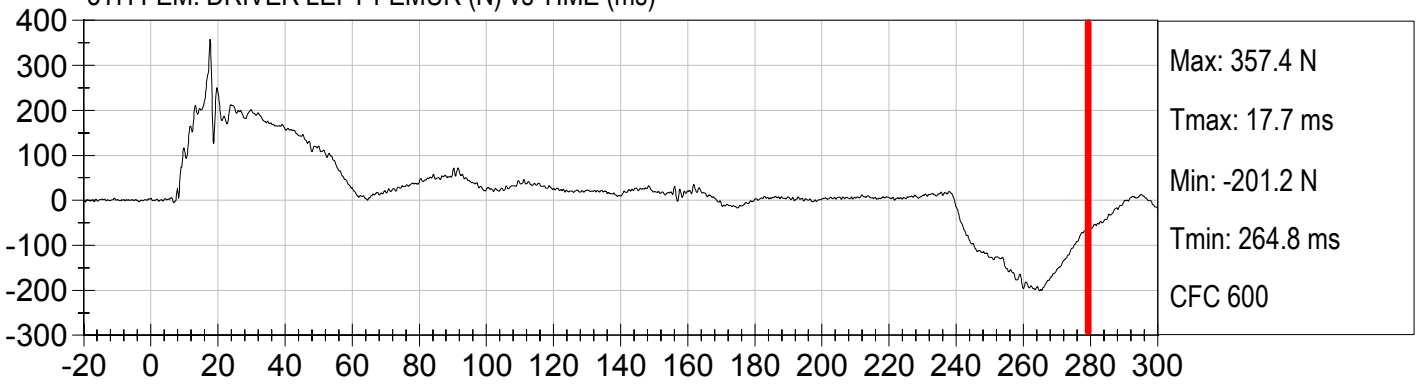


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 2)

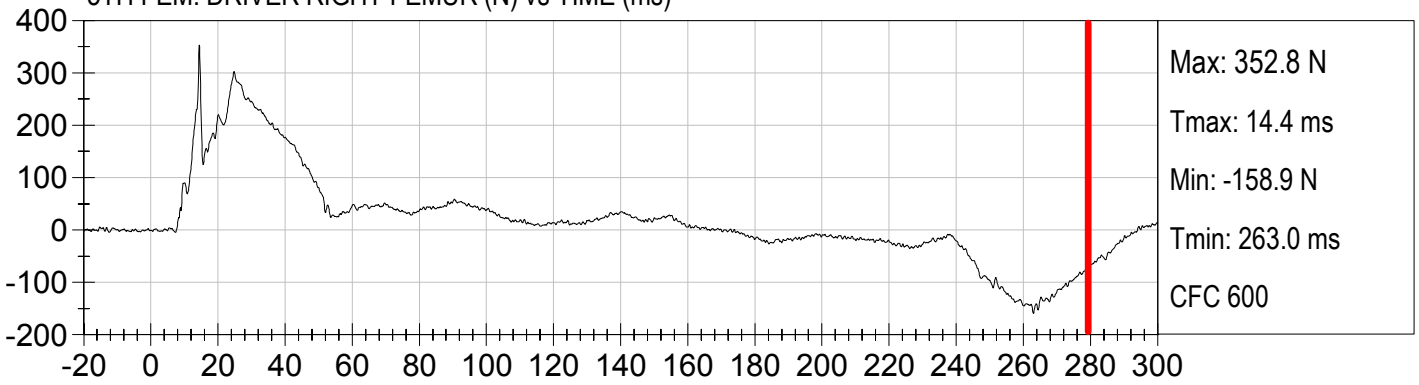
Test Date: 07/20/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

5TH FEM. DRIVER LEFT FEMUR (N) vs TIME (ms)



5TH FEM. DRIVER RIGHT FEMUR (N) vs TIME (ms)

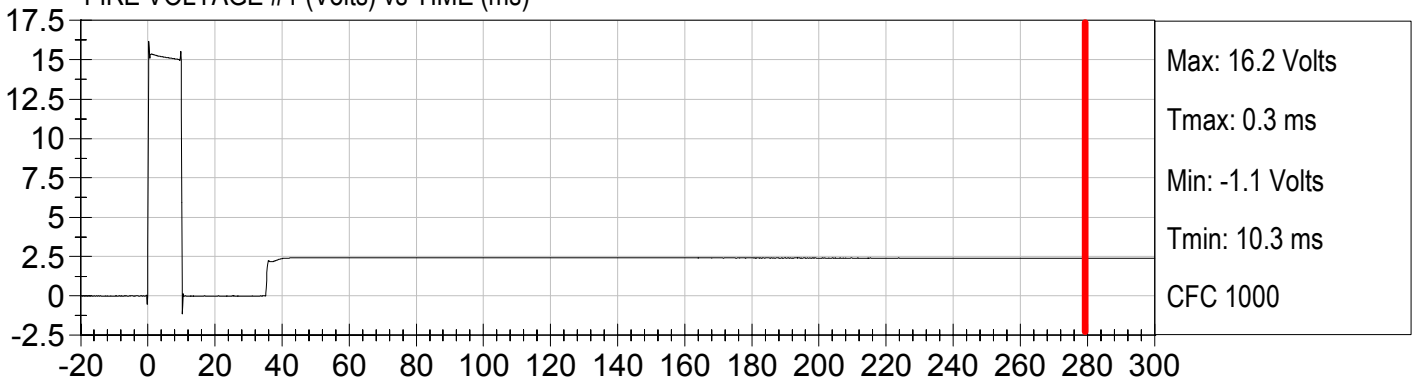


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 2)

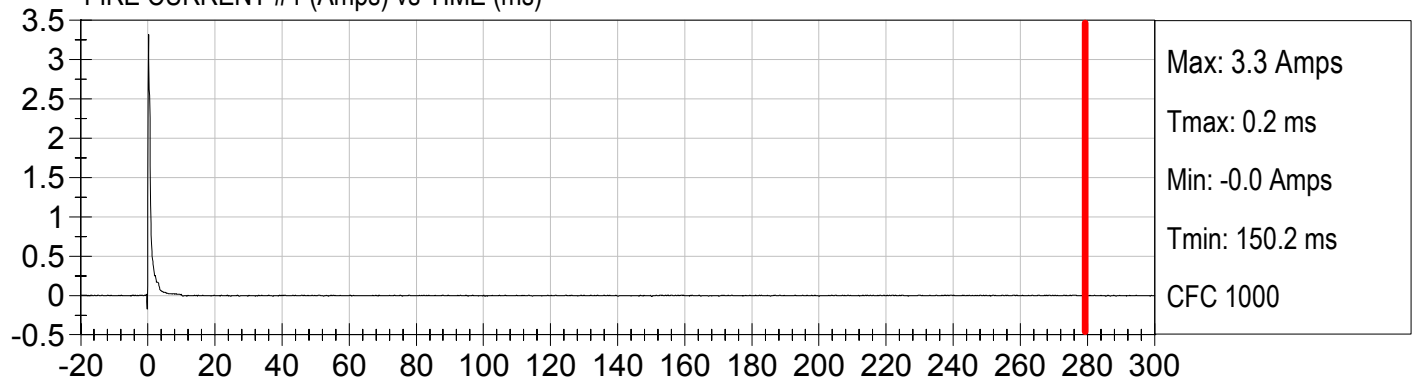
Test Date: 07/20/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

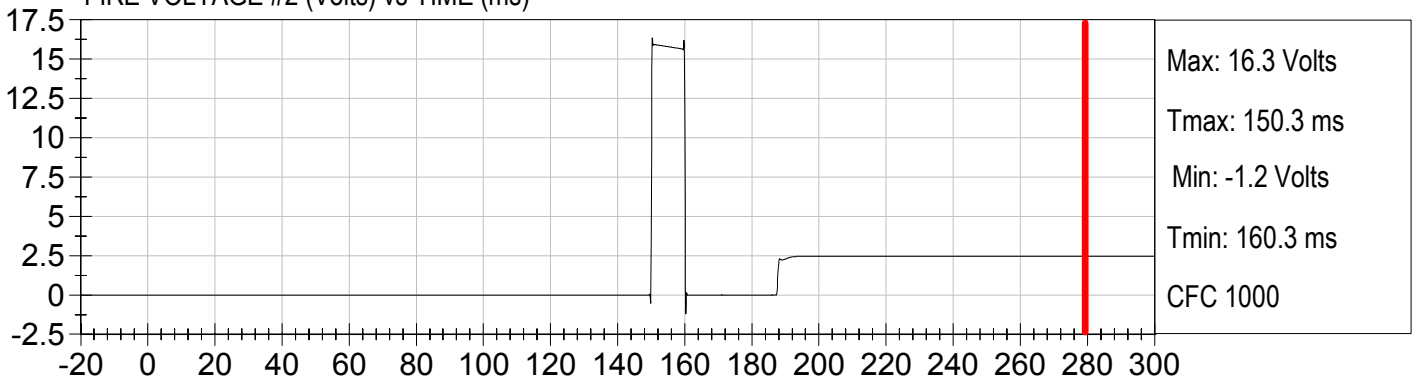
FIRE VOLTAGE #1 (Volts) vs TIME (ms)



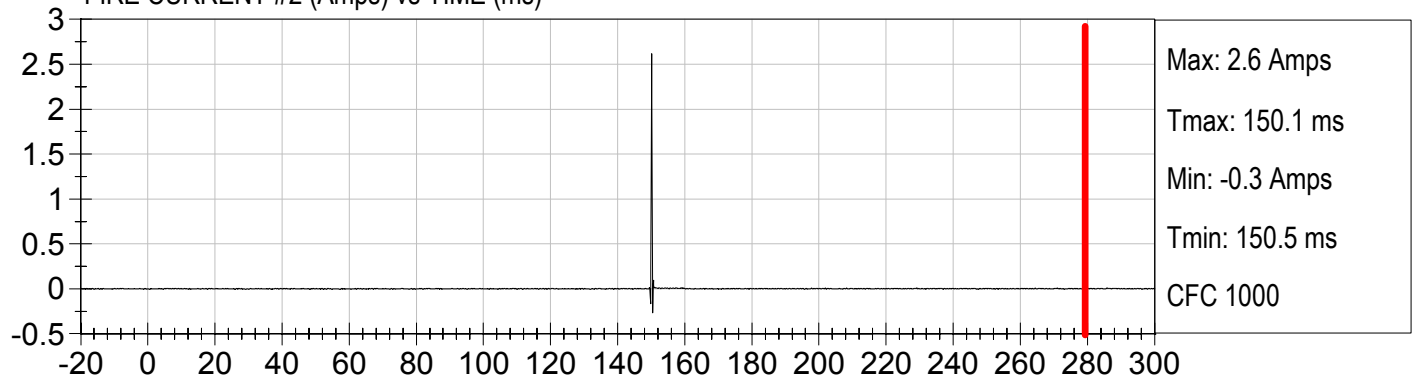
FIRE CURRENT #1 (Amps) vs TIME (ms)



FIRE VOLTAGE #2 (Volts) vs TIME (ms)



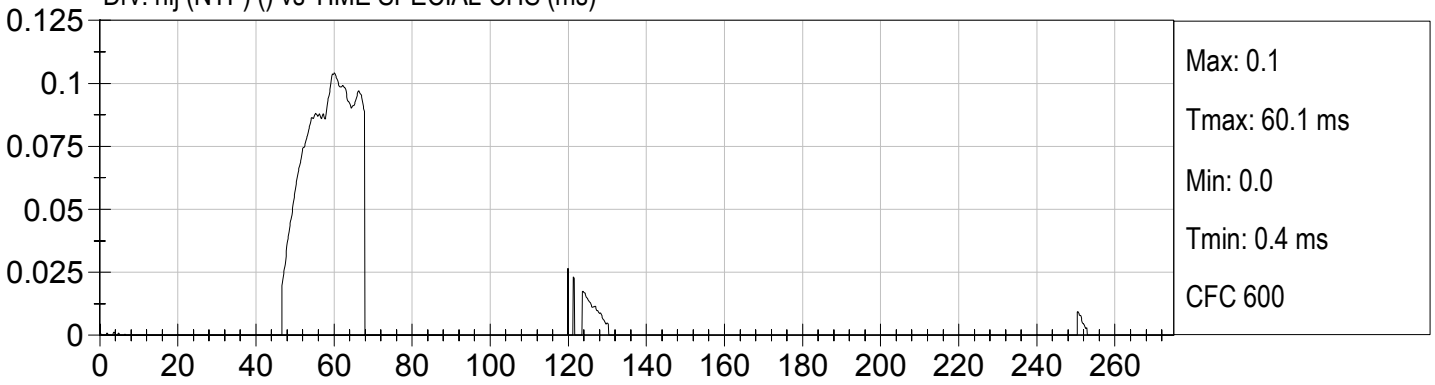
FIRE CURRENT #2 (Amps) vs TIME (ms)



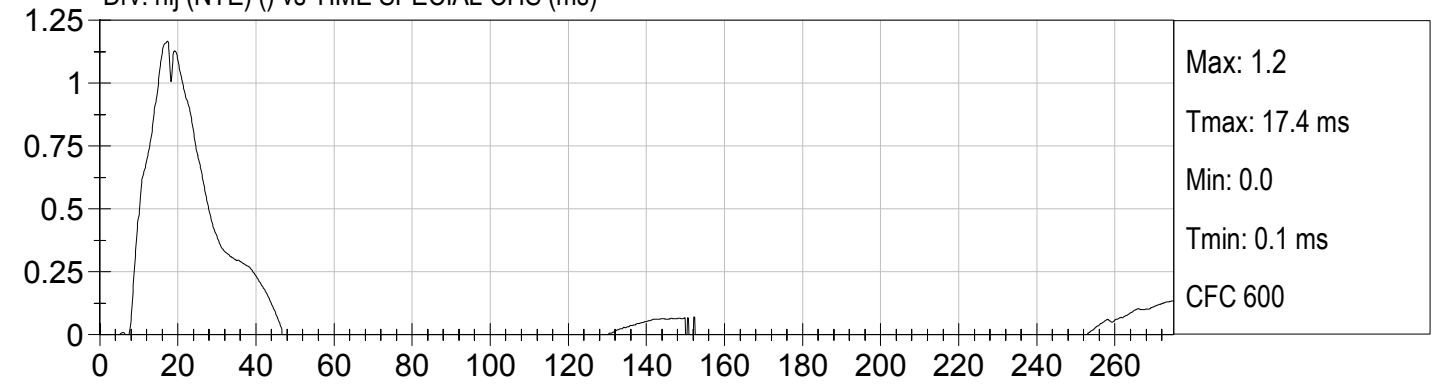
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 2)

Test Date: 07/20/06
Speed: 0.0 mph (0.0 km/h)

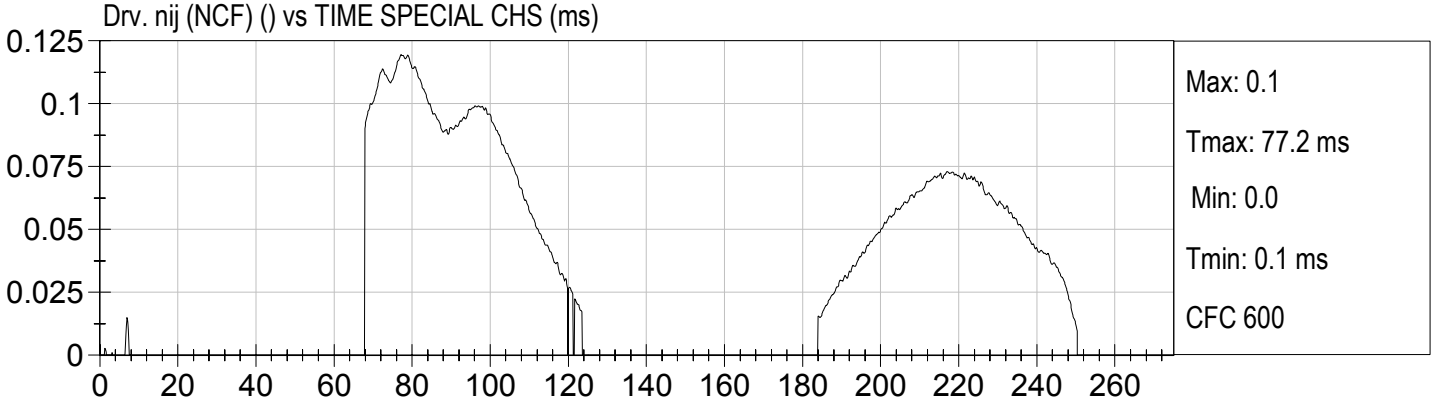
Drv. nij (NTF) () vs TIME SPECIAL CHS (ms)



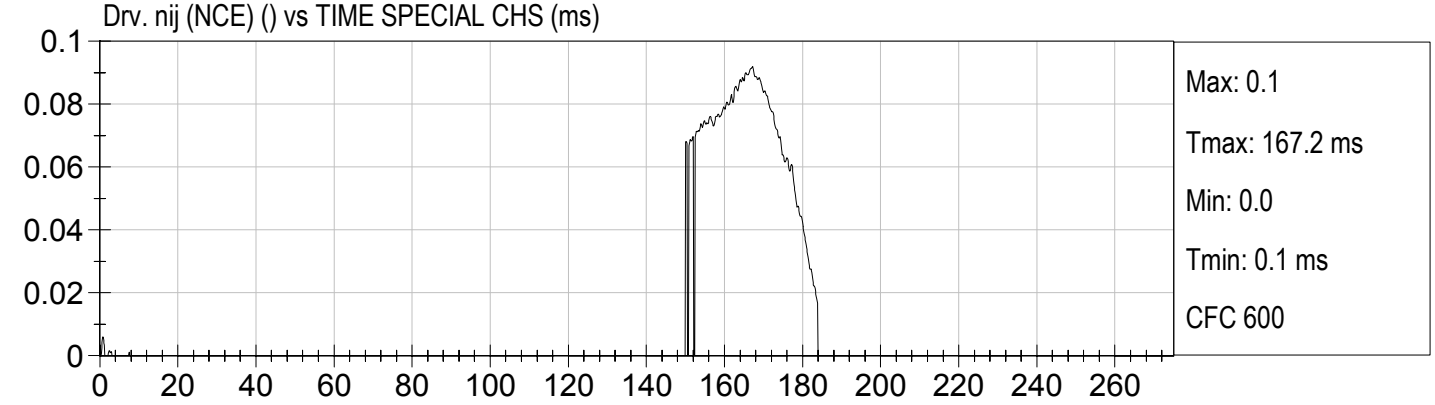
Drv. nij (NTE) () vs TIME SPECIAL CHS (ms)



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



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

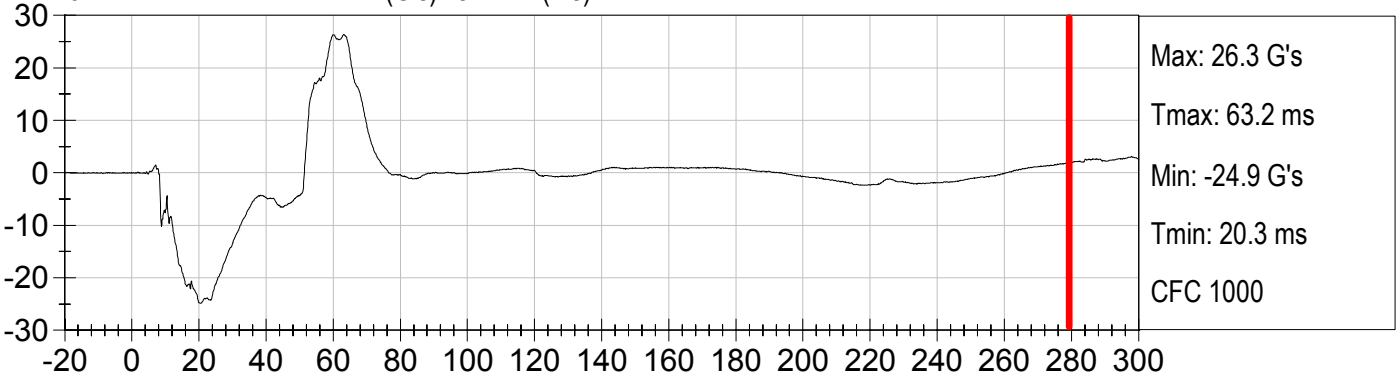


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 3)

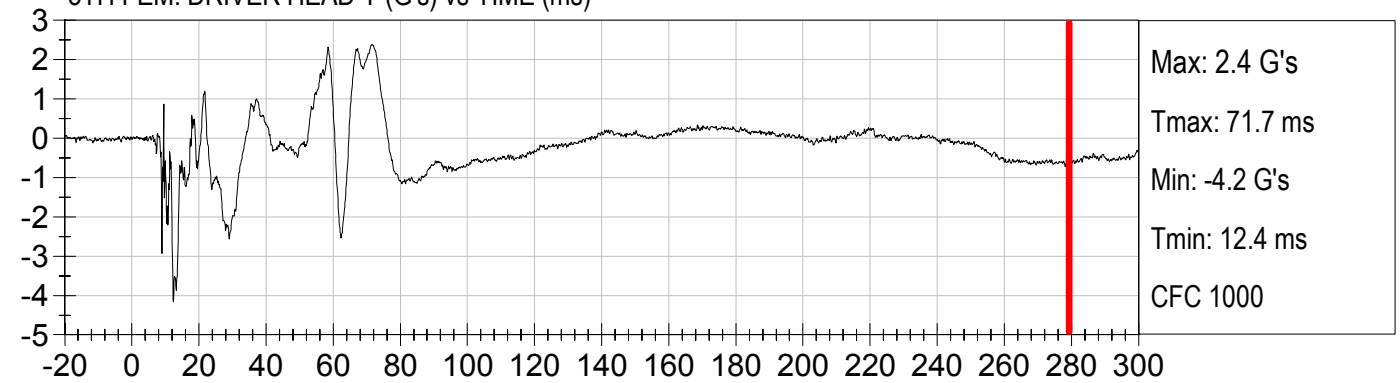
Test Date: 07/28/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

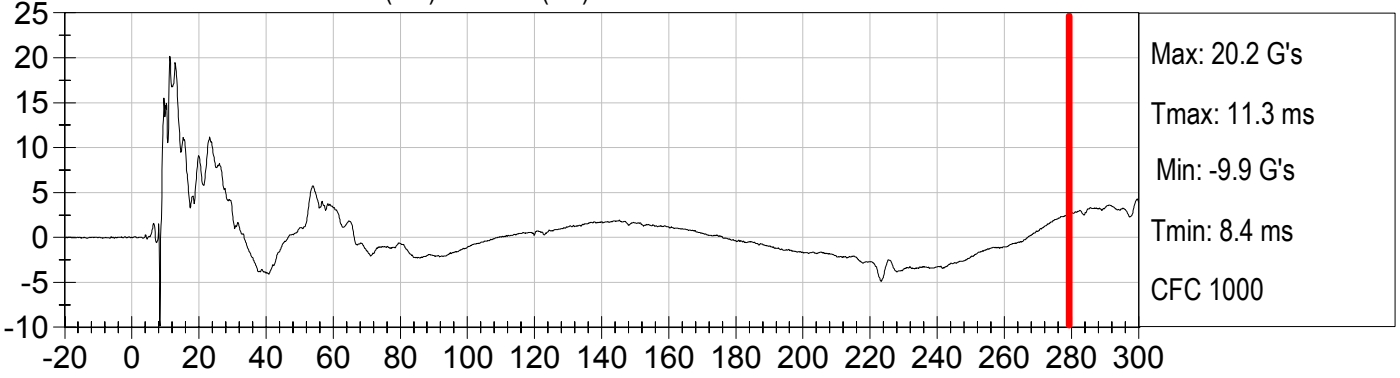
5TH FEM. DRIVER HEAD X (G's) vs TIME (ms)



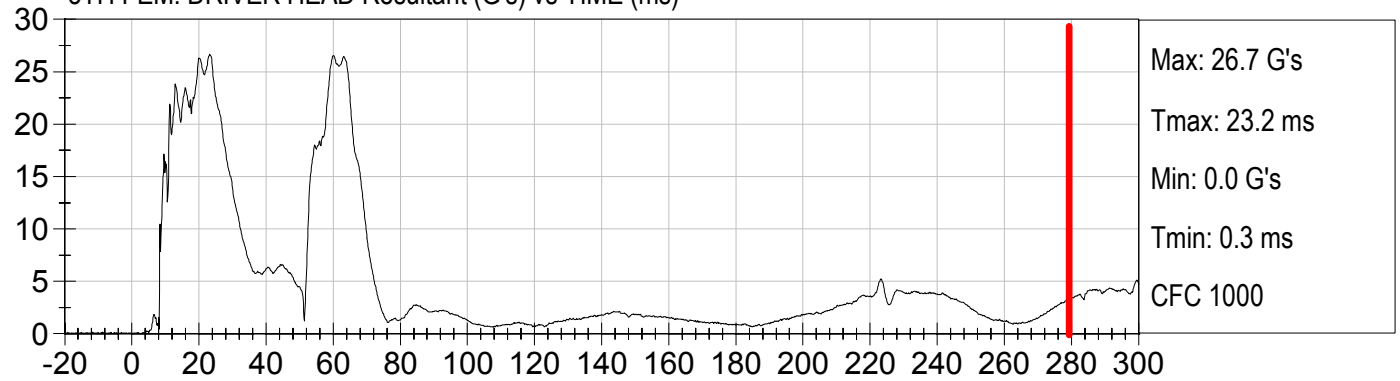
5TH FEM. DRIVER HEAD Y (G's) vs TIME (ms)



5TH FEM. DRIVER HEAD Z (G's) vs TIME (ms)



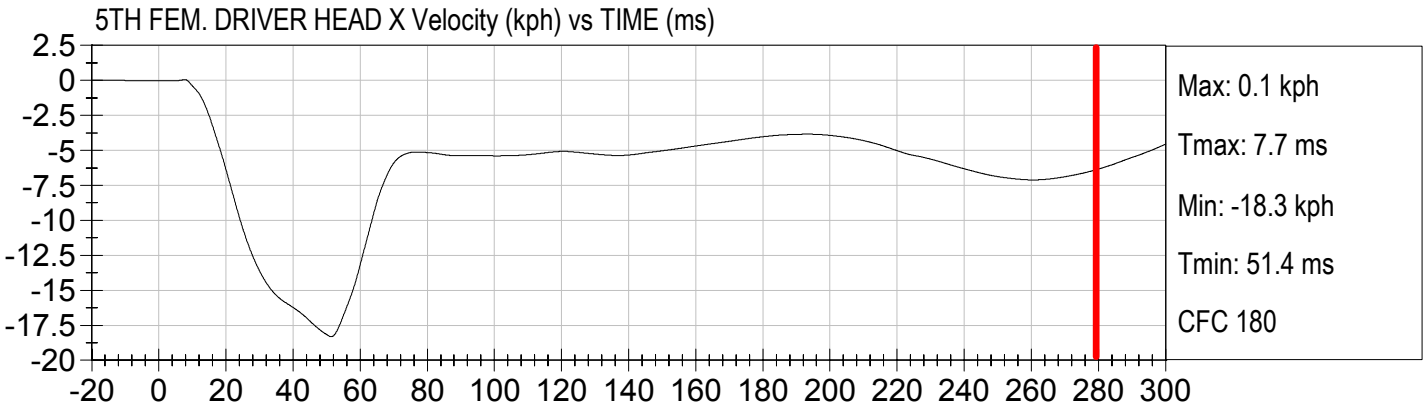
5TH FEM. DRIVER HEAD Resultant (G's) vs TIME (ms)

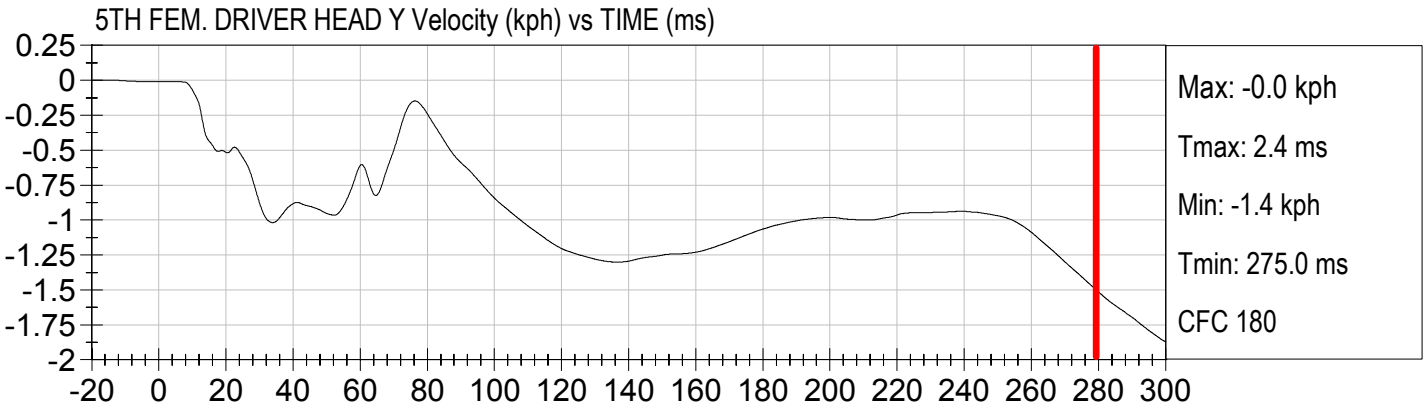


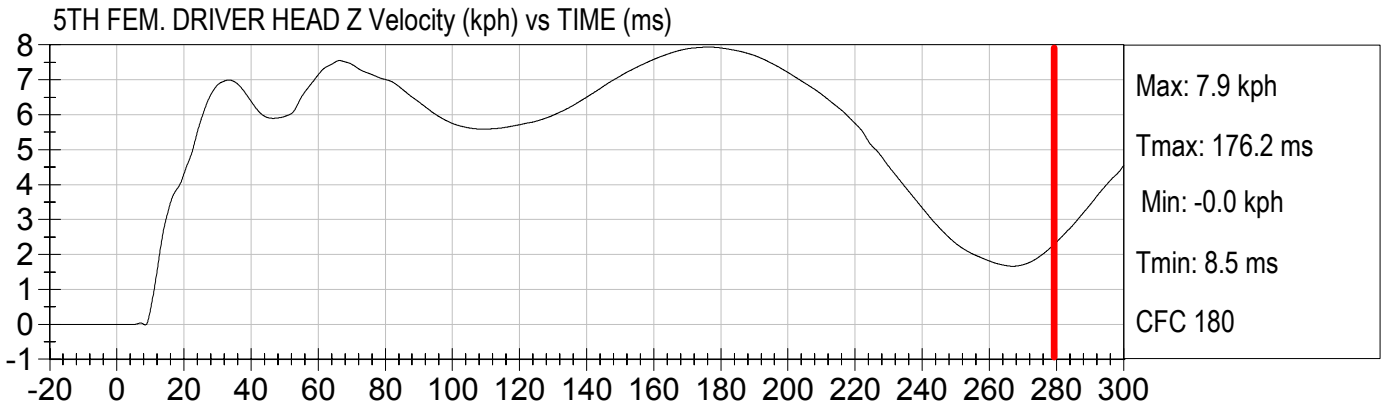
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 3)

Test Date: 07/28/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms





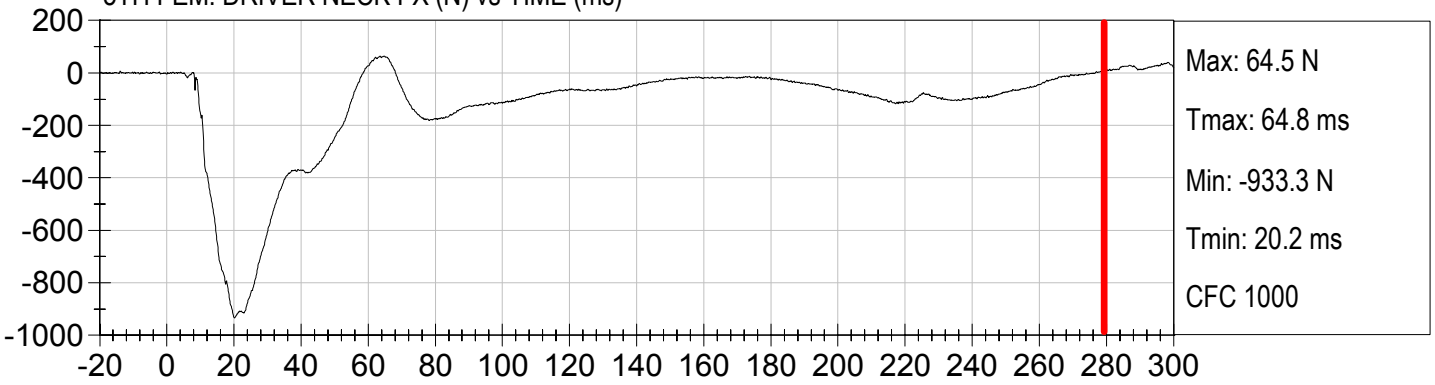


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 3)

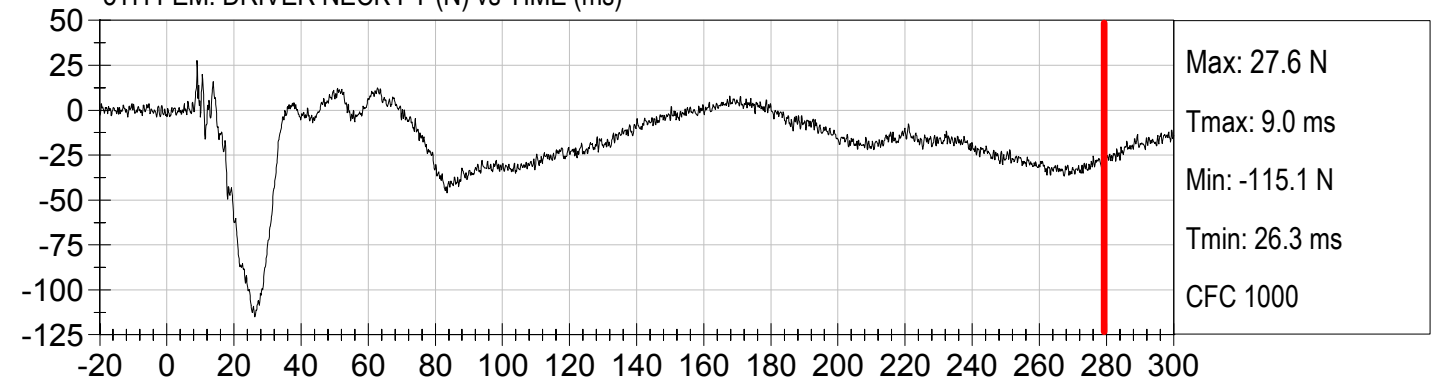
Test Date: 07/28/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

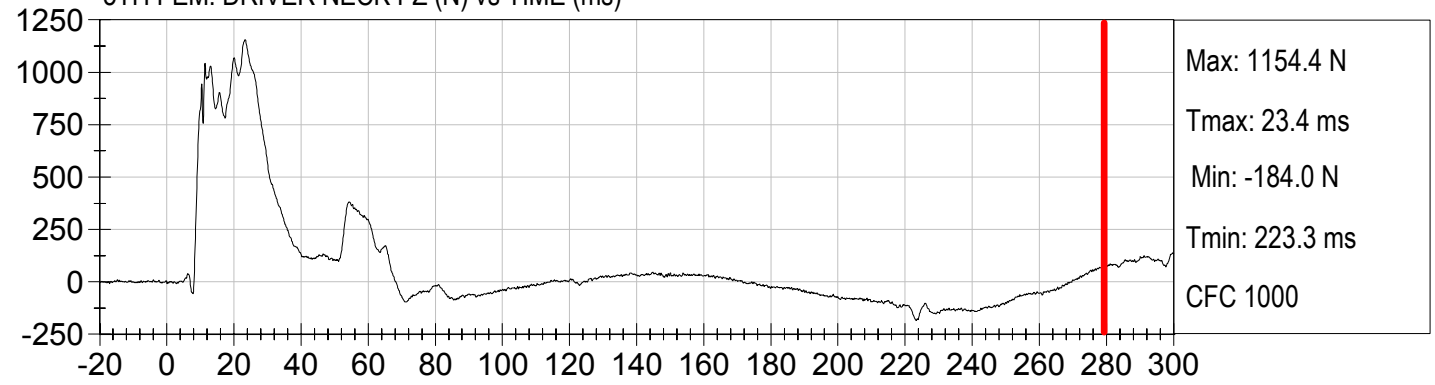
5TH FEM. DRIVER NECK FX (N) vs TIME (ms)



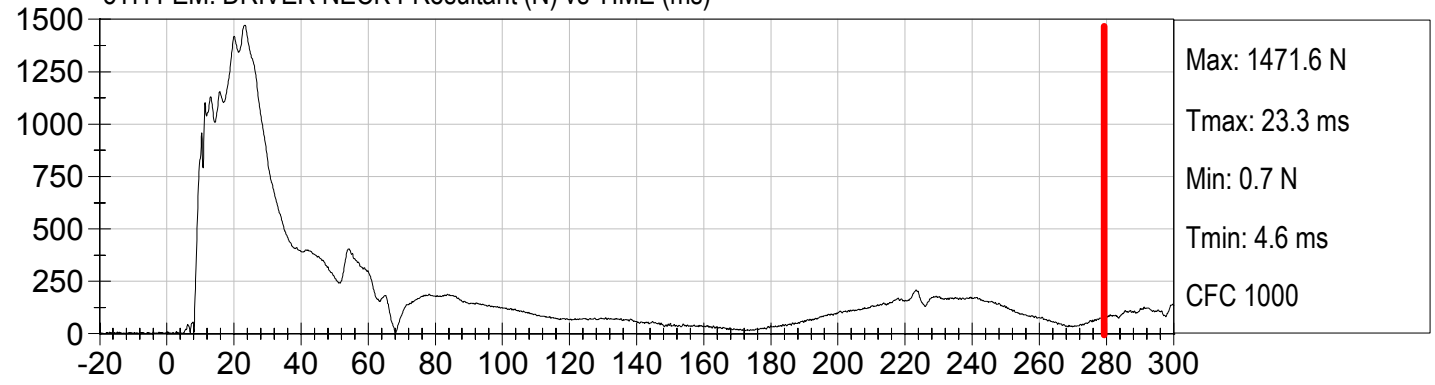
5TH FEM. DRIVER NECK FY (N) vs TIME (ms)



5TH FEM. DRIVER NECK FZ (N) vs TIME (ms)



5TH FEM. DRIVER NECK FResultant (N) vs TIME (ms)

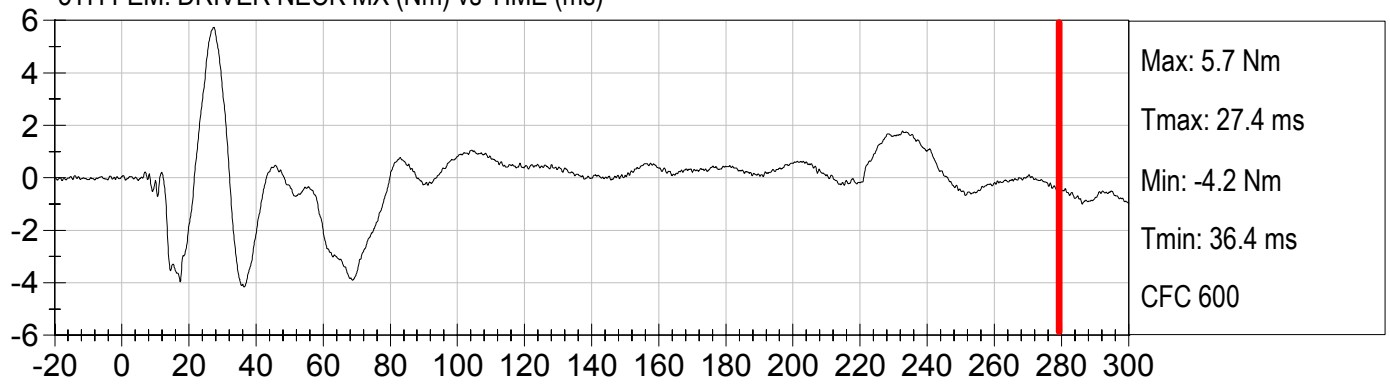


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 3)

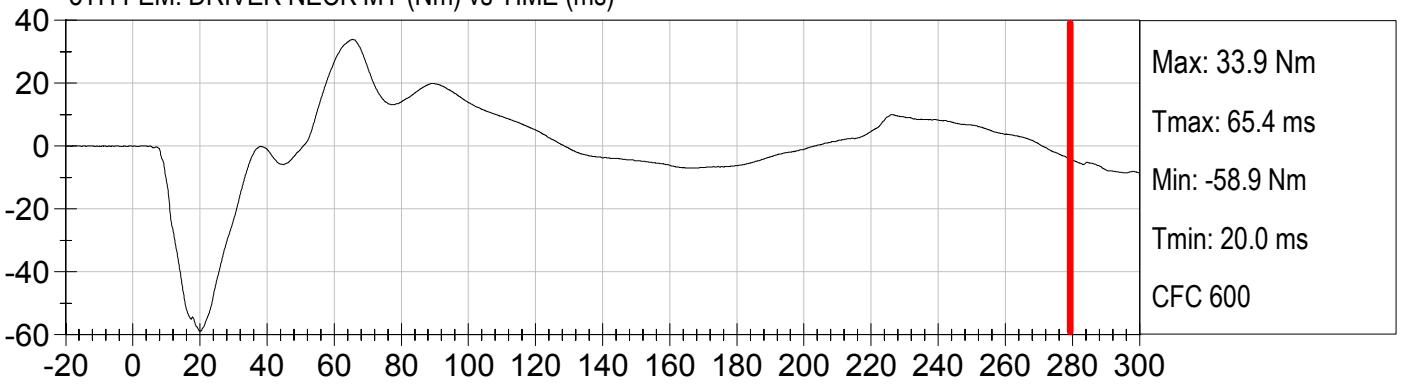
Test Date: 07/28/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

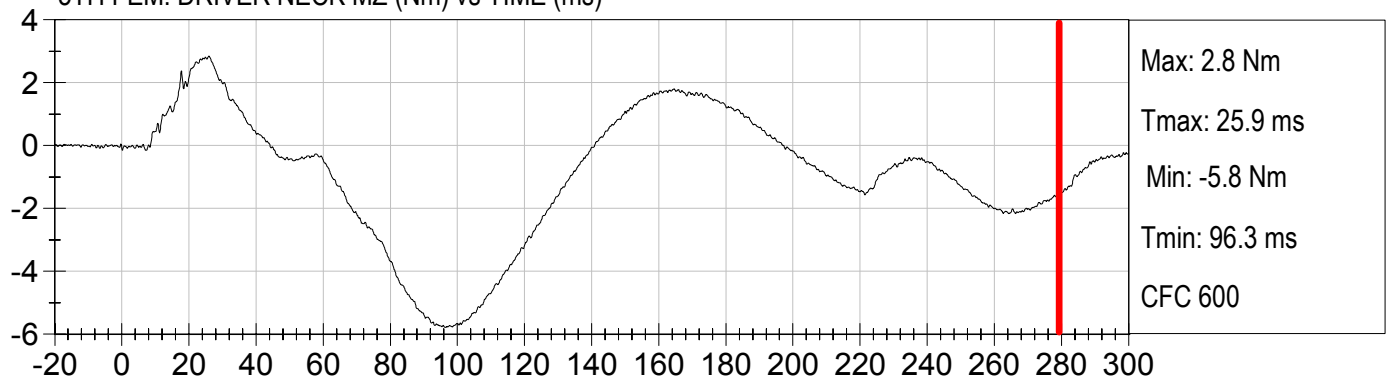
5TH FEM. DRIVER NECK MX (Nm) vs TIME (ms)



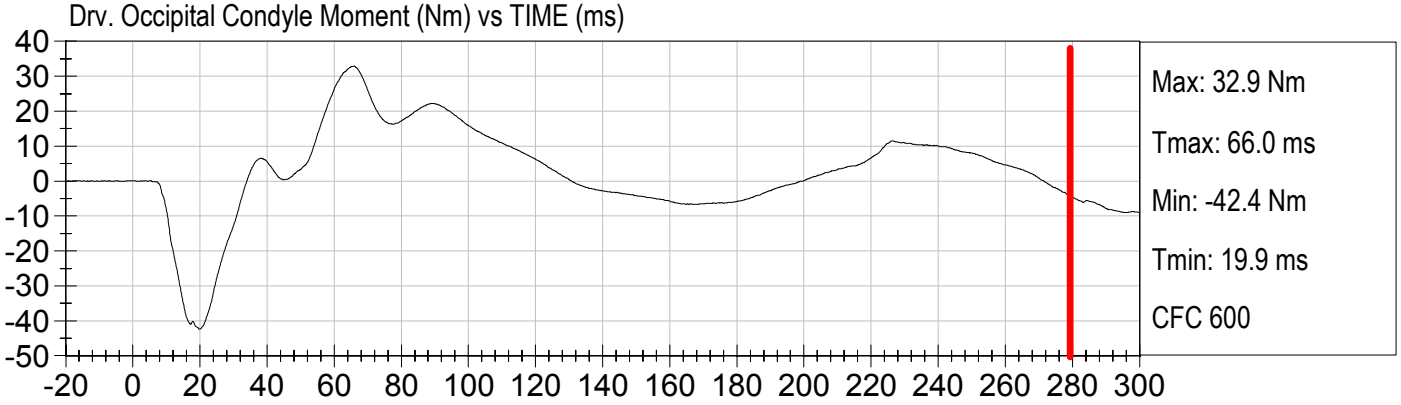
5TH FEM. DRIVER NECK MY (Nm) vs TIME (ms)



5TH FEM. DRIVER NECK MZ (Nm) vs TIME (ms)



Drv. Occipital Condyle Moment (Nm) vs TIME (ms)

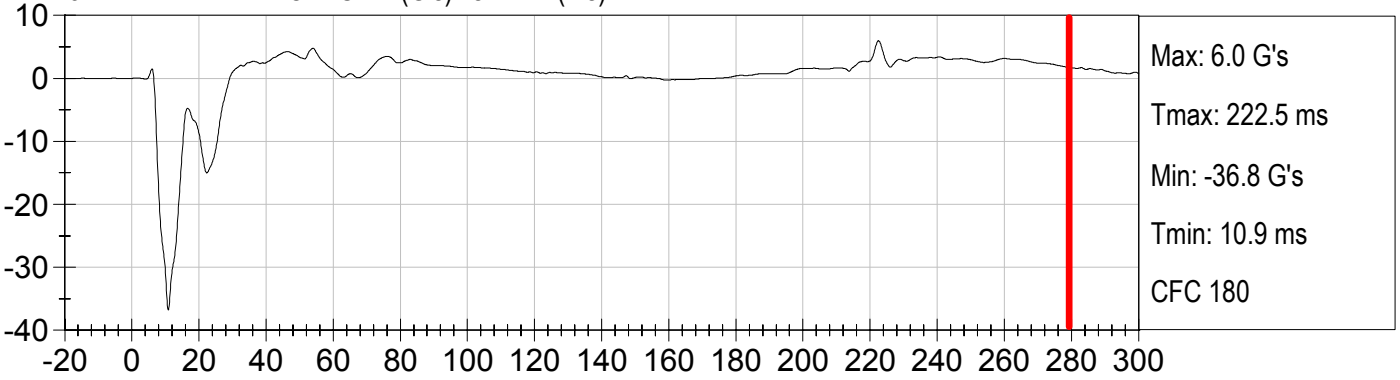


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 3)

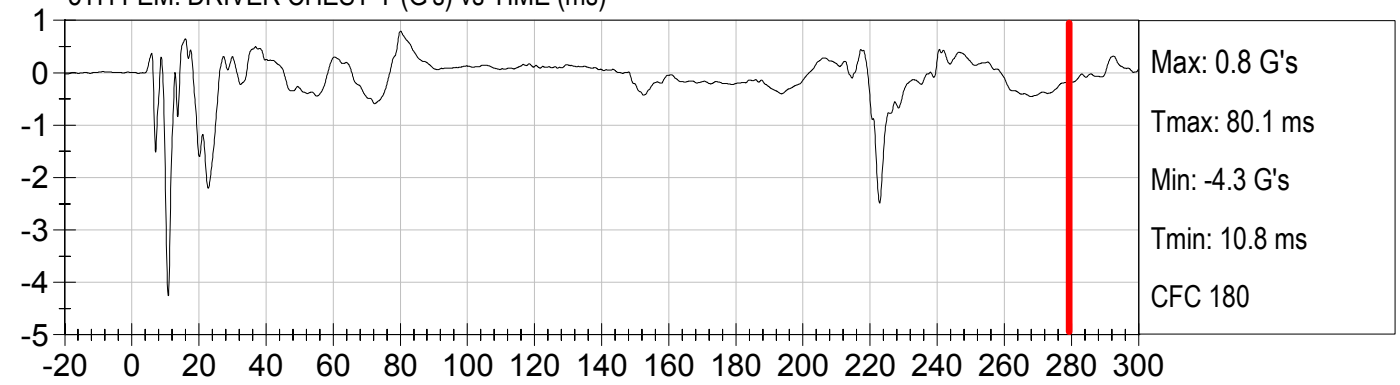
Test Date: 07/28/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

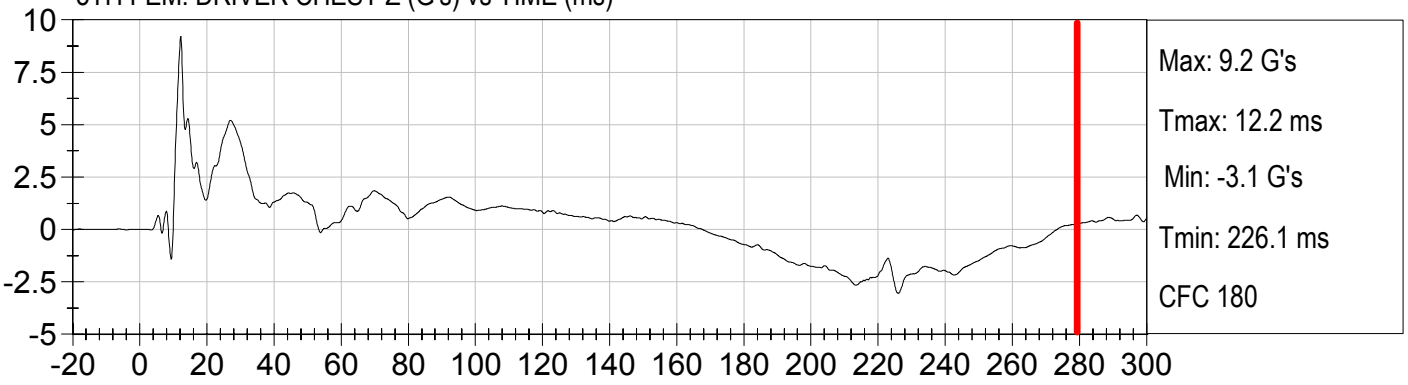
5TH FEM. DRIVER CHEST X (G's) vs TIME (ms)



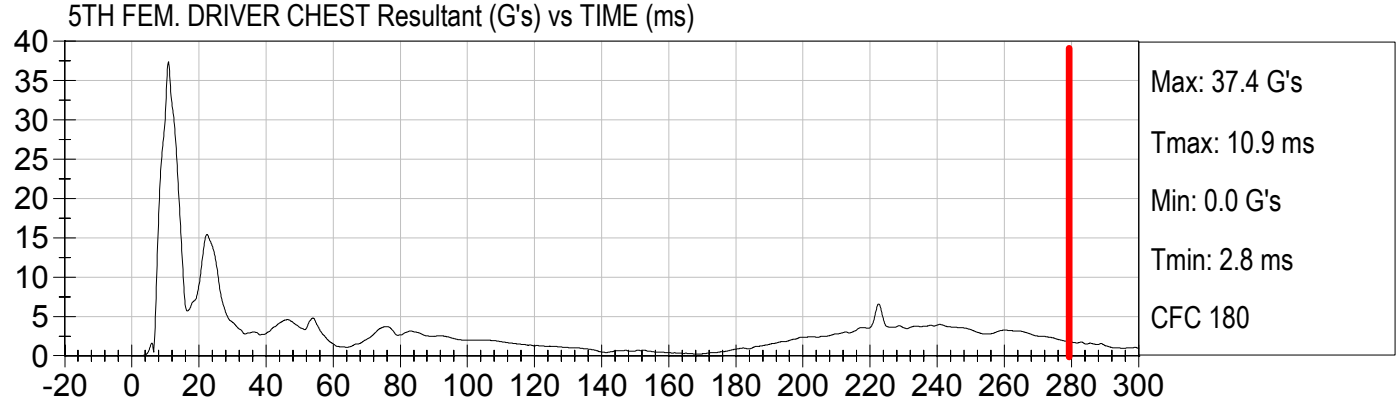
5TH FEM. DRIVER CHEST Y (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Z (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Resultant (G's) vs TIME (ms)

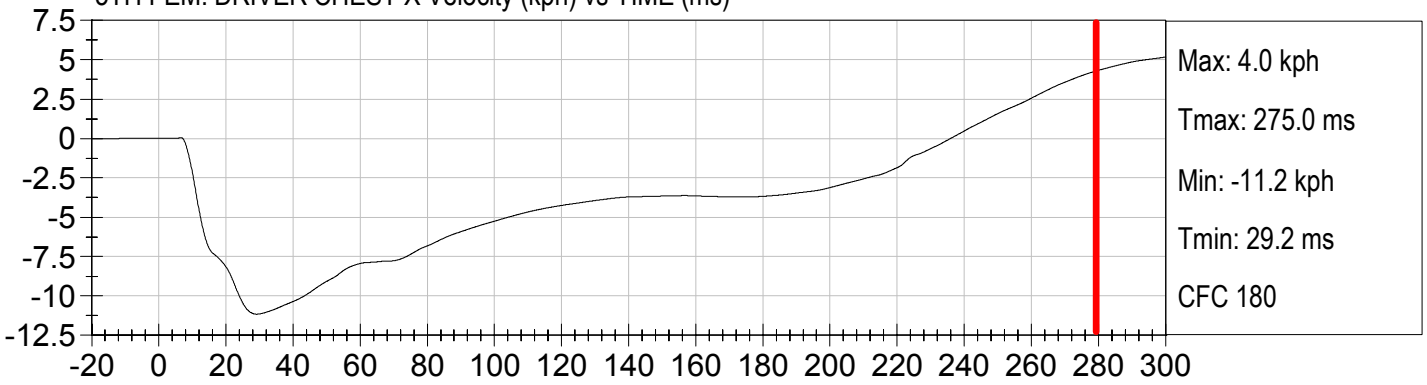


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 3)

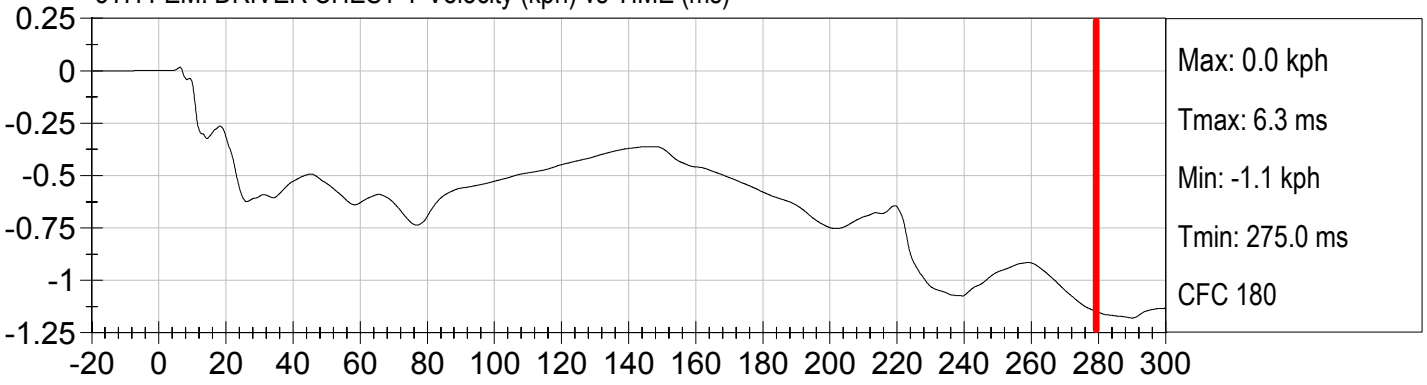
Test Date: 07/28/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

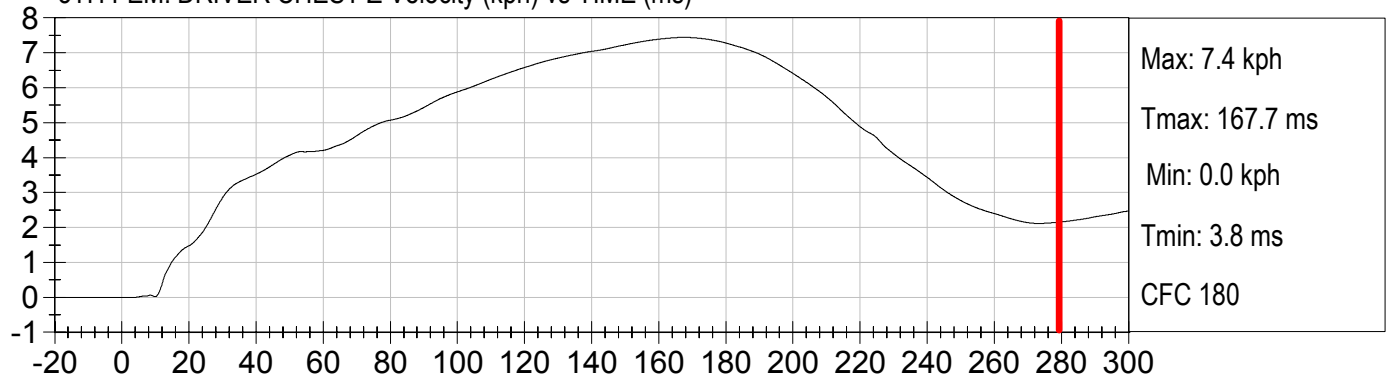
5TH FEM. DRIVER CHEST X Velocity (kph) vs TIME (ms)



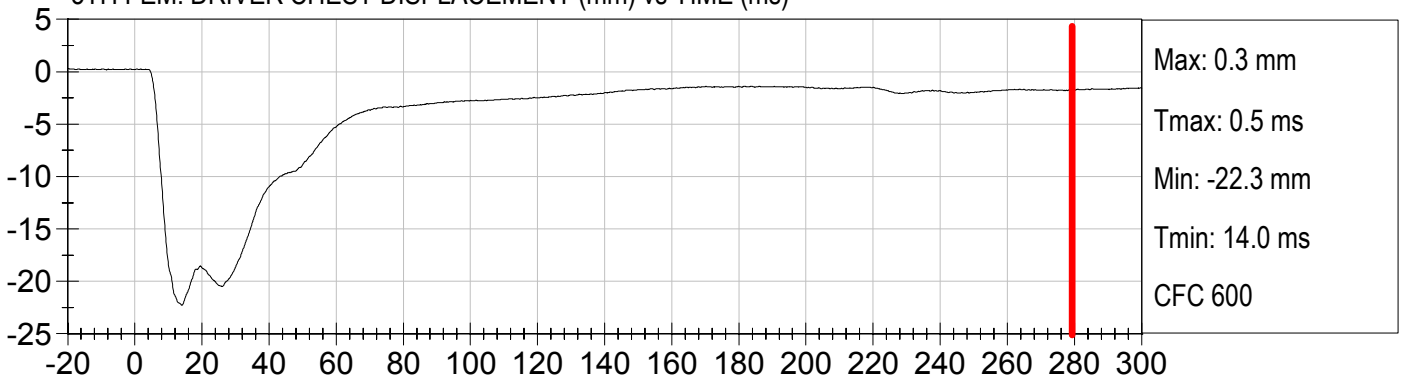
5TH FEM. DRIVER CHEST Y Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST Z Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST DISPLACEMENT (mm) vs TIME (ms)

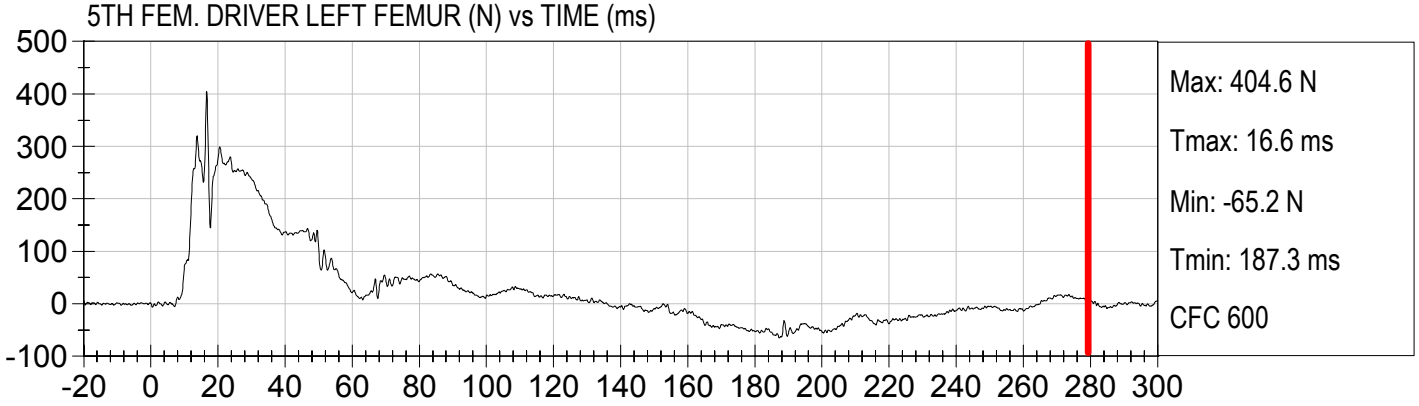


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 3)

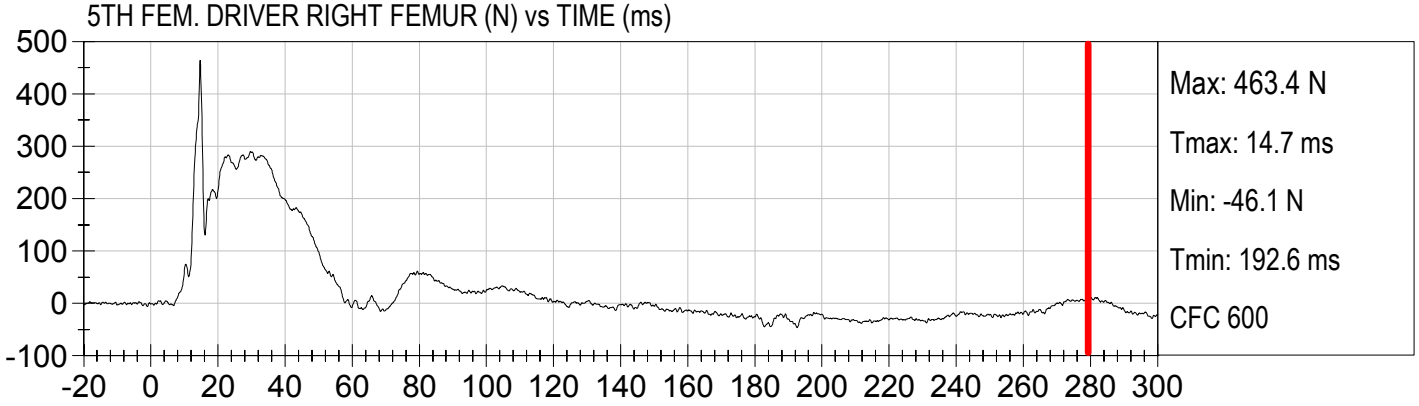
Test Date: 07/28/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

5TH FEM. DRIVER LEFT FEMUR (N) vs TIME (ms)



5TH FEM. DRIVER RIGHT FEMUR (N) vs TIME (ms)

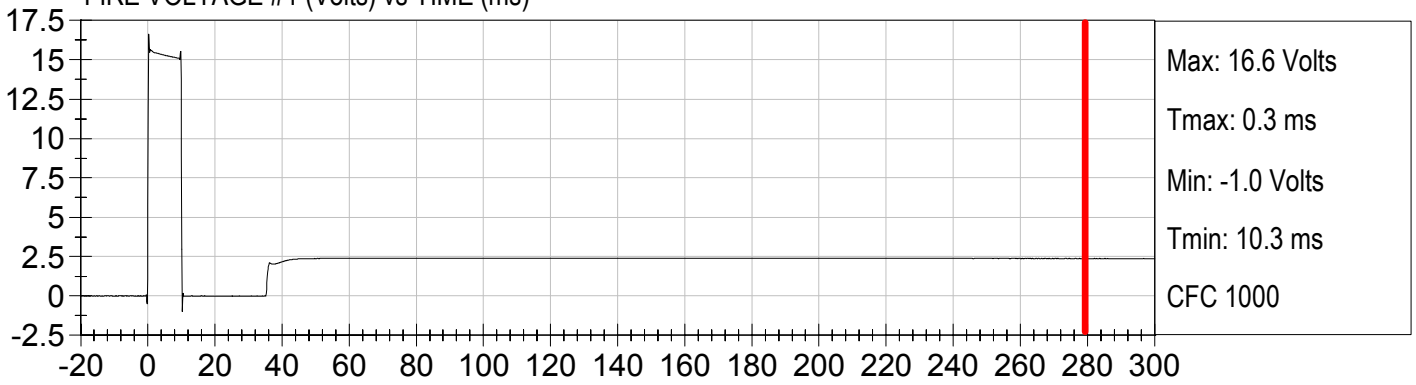


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 3)

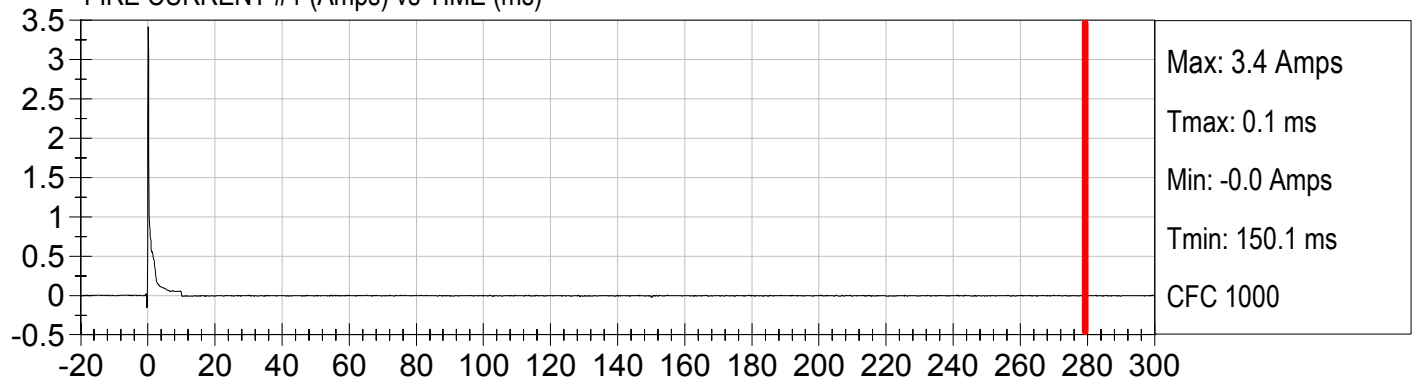
Test Date: 07/28/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

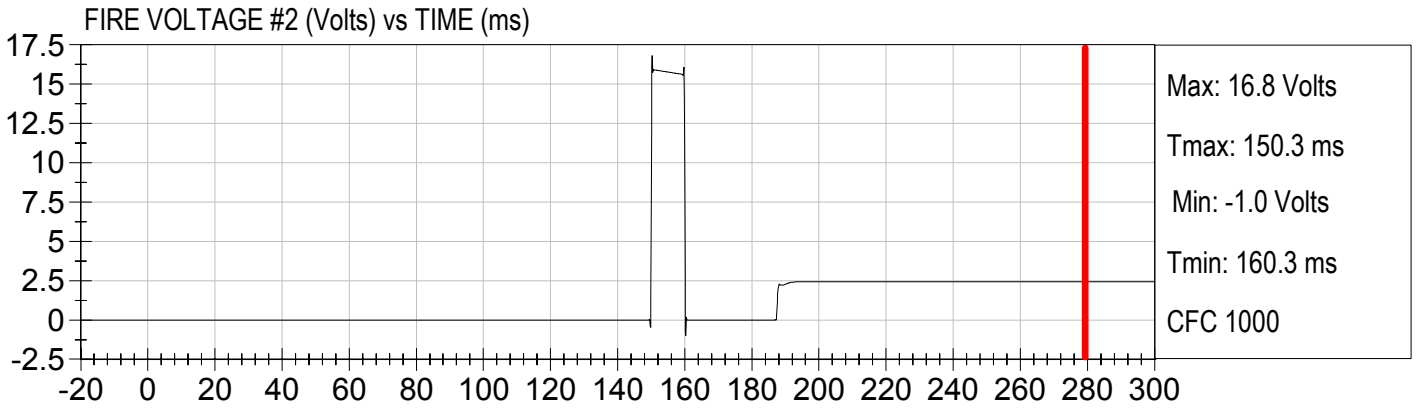
FIRE VOLTAGE #1 (Volts) vs TIME (ms)



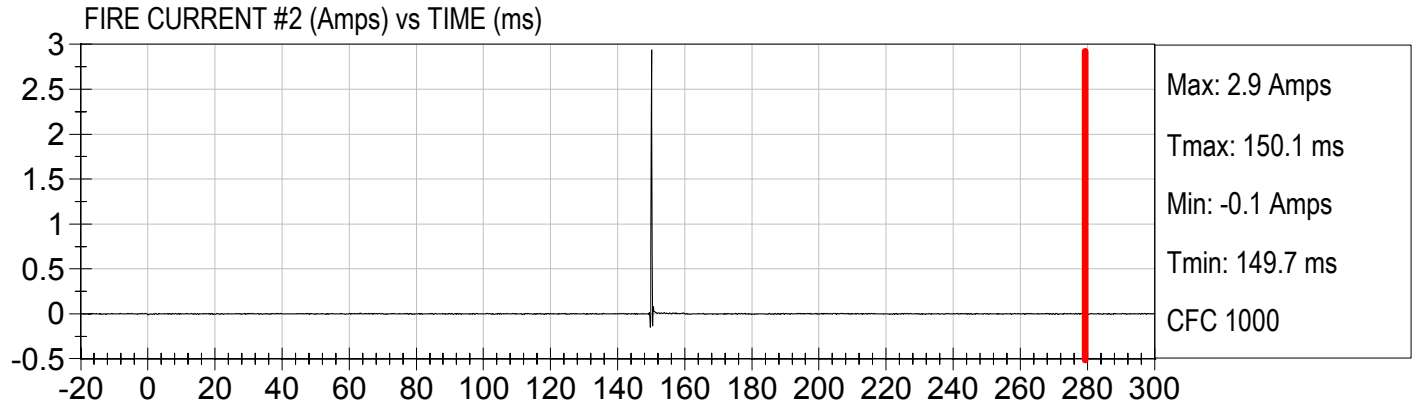
FIRE CURRENT #1 (Amps) vs TIME (ms)



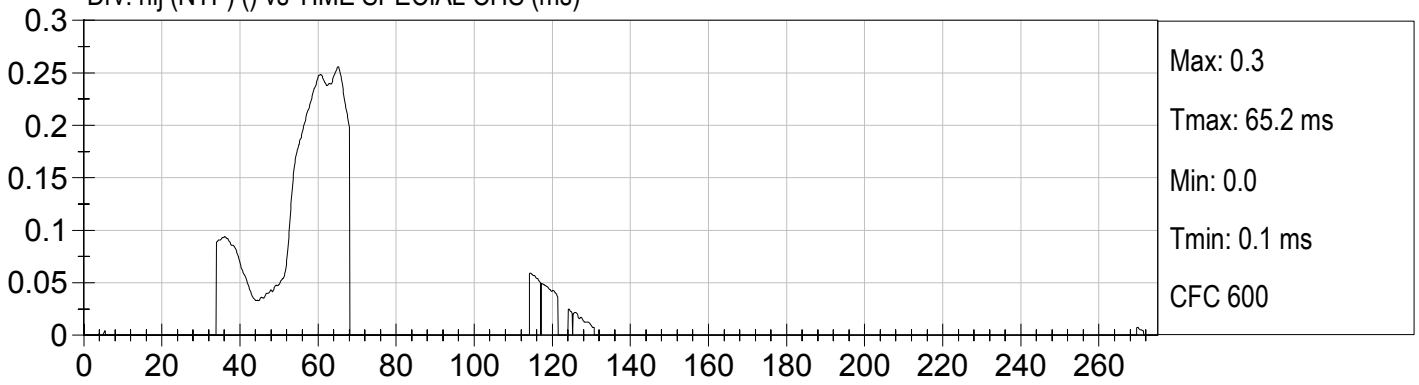
FIRE VOLTAGE #2 (Volts) vs TIME (ms)



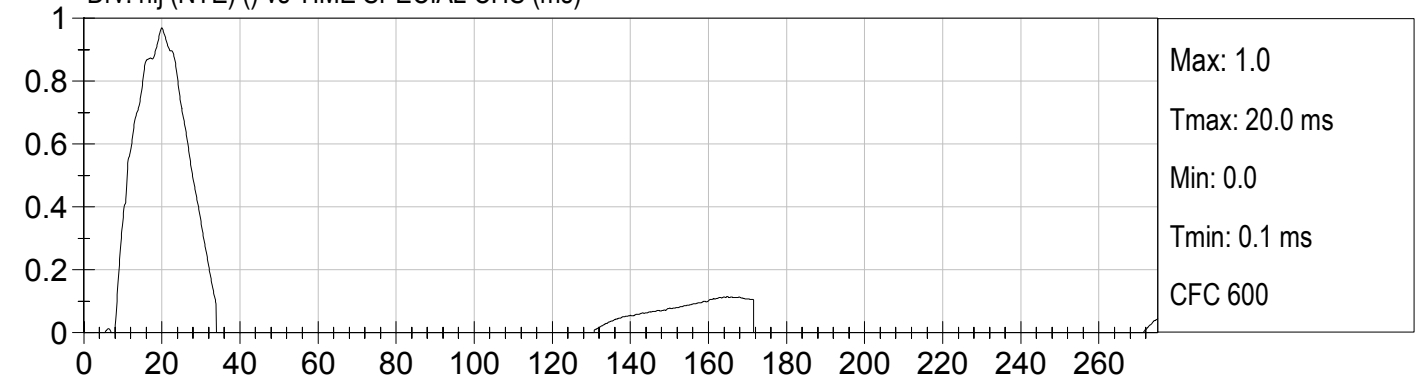
FIRE CURRENT #2 (Amps) vs TIME (ms)



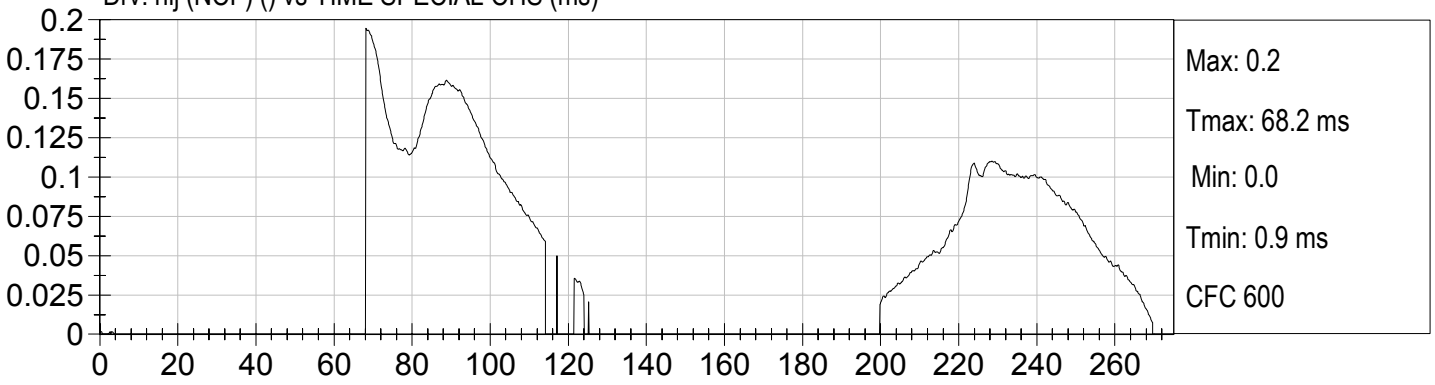
Drv. nij (NTF) () vs TIME SPECIAL CHS (ms)



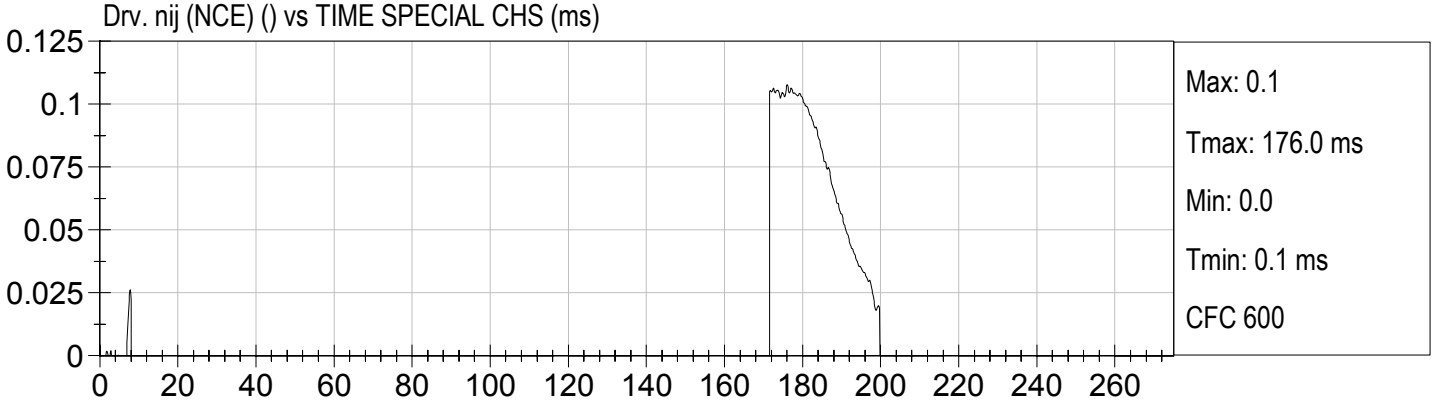
Drv. nij (NTE) () vs TIME SPECIAL CHS (ms)



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



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

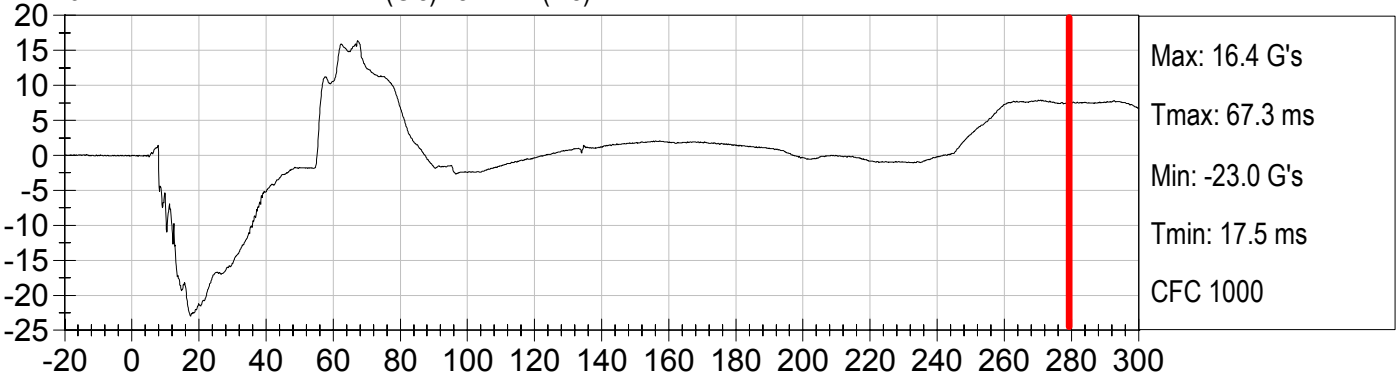


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 4)

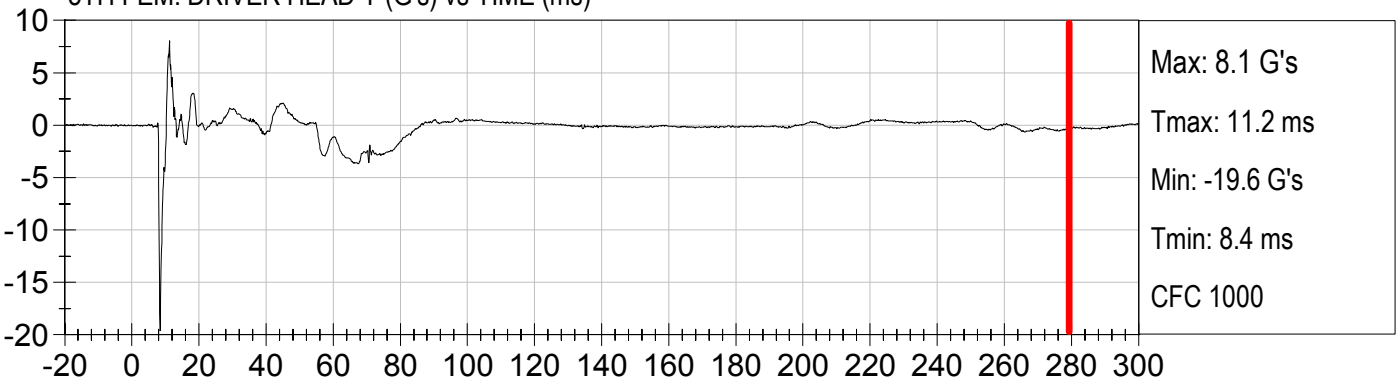
Test Date: 09/14/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

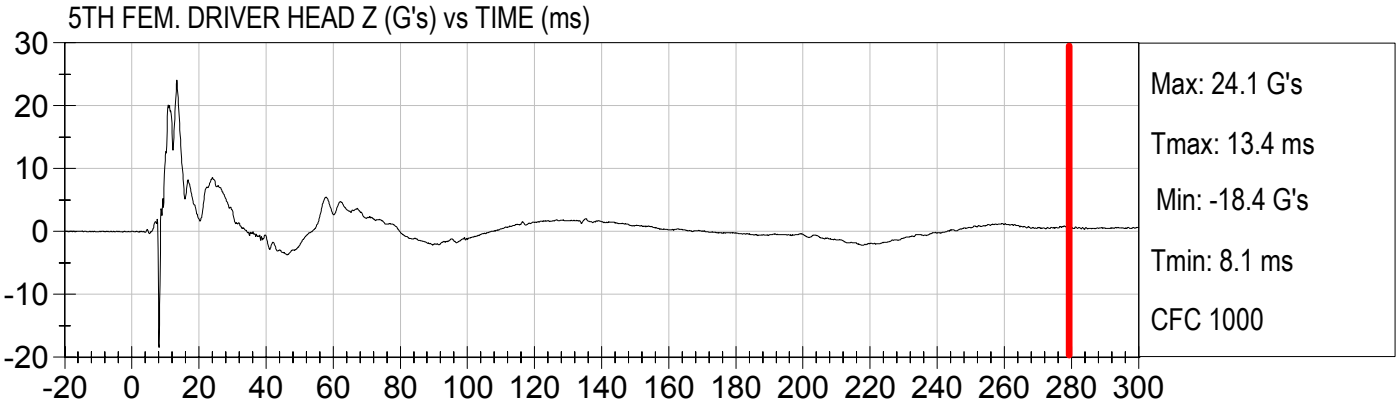
5TH FEM. DRIVER HEAD X (G's) vs TIME (ms)



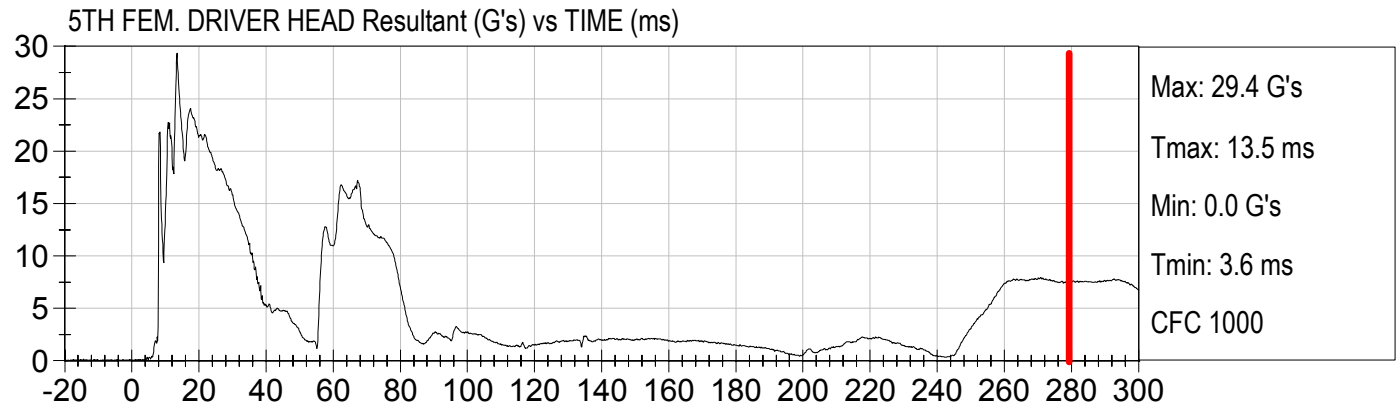
5TH FEM. DRIVER HEAD Y (G's) vs TIME (ms)



5TH FEM. DRIVER HEAD Z (G's) vs TIME (ms)



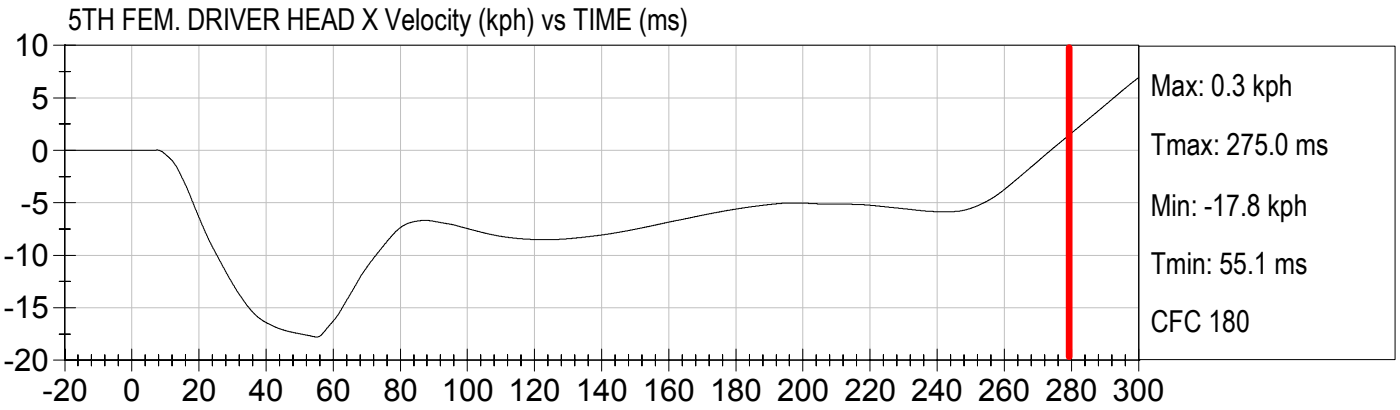
5TH FEM. DRIVER HEAD Resultant (G's) vs TIME (ms)

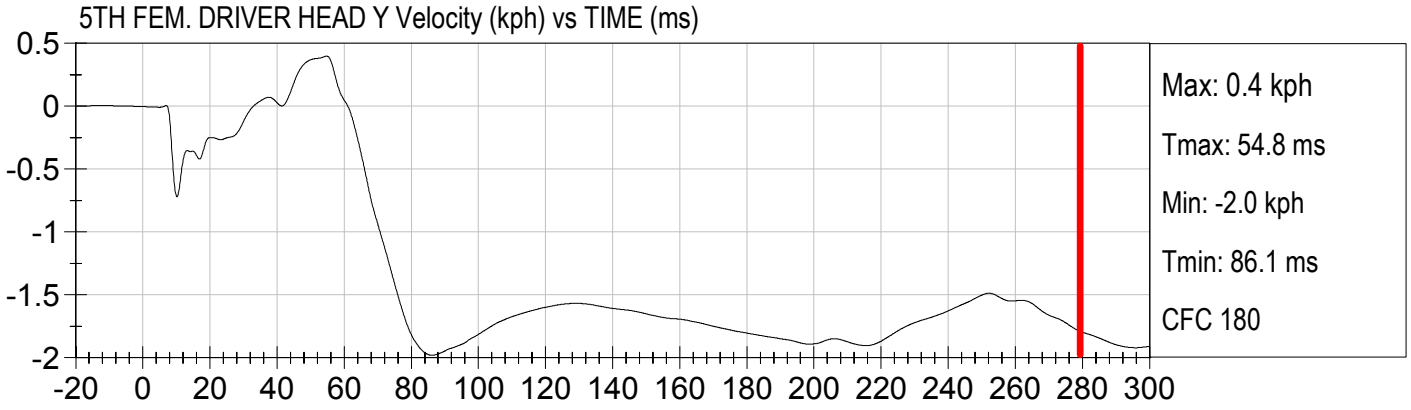


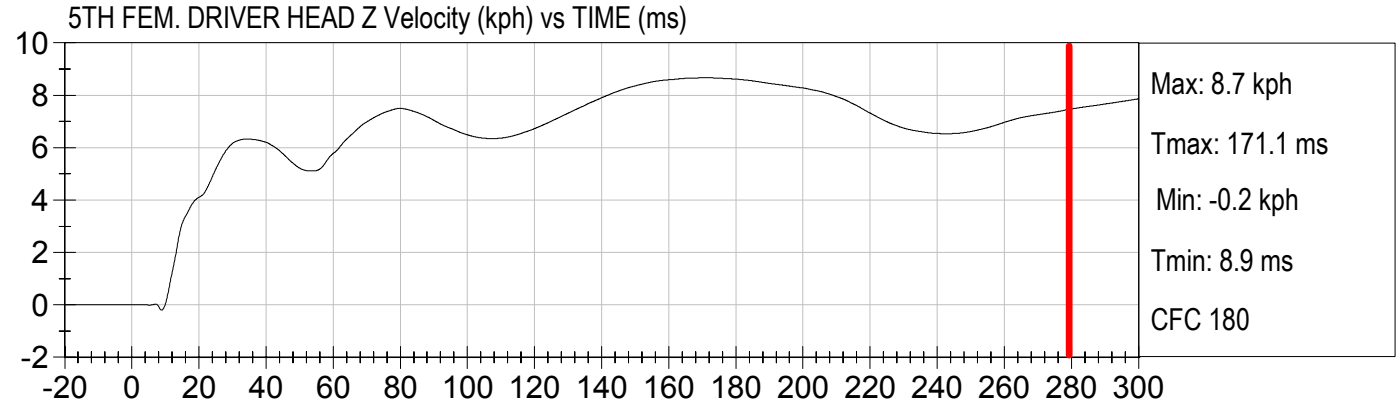
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 4)

Test Date: 09/14/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms





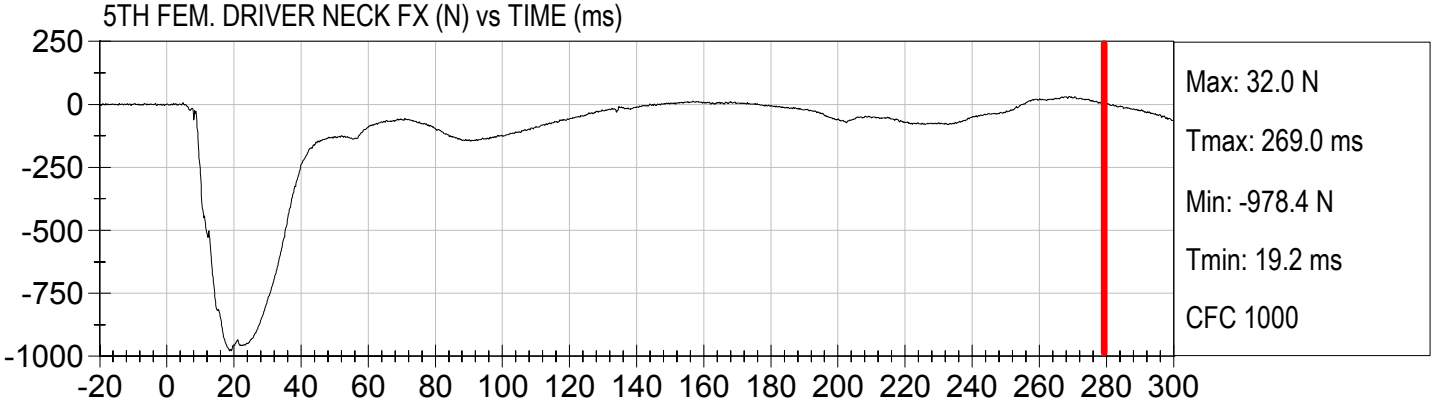


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 4)

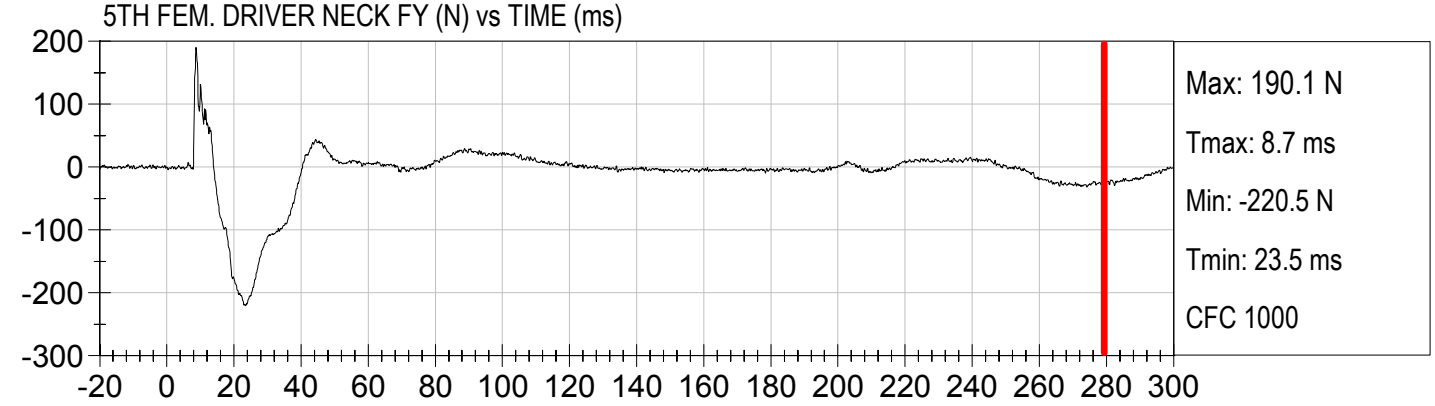
Test Date: 09/14/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

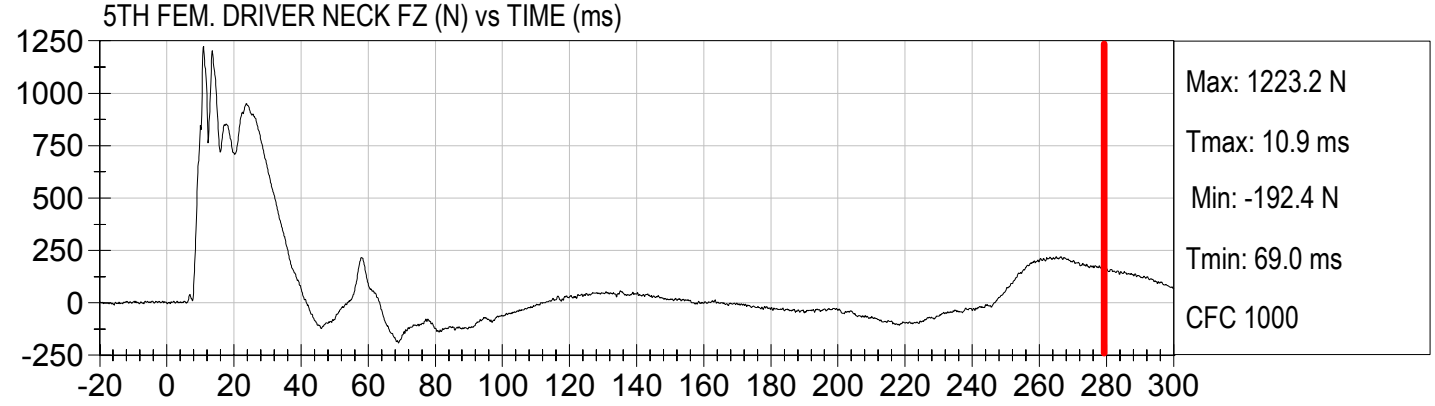
5TH FEM. DRIVER NECK FX (N) vs TIME (ms)



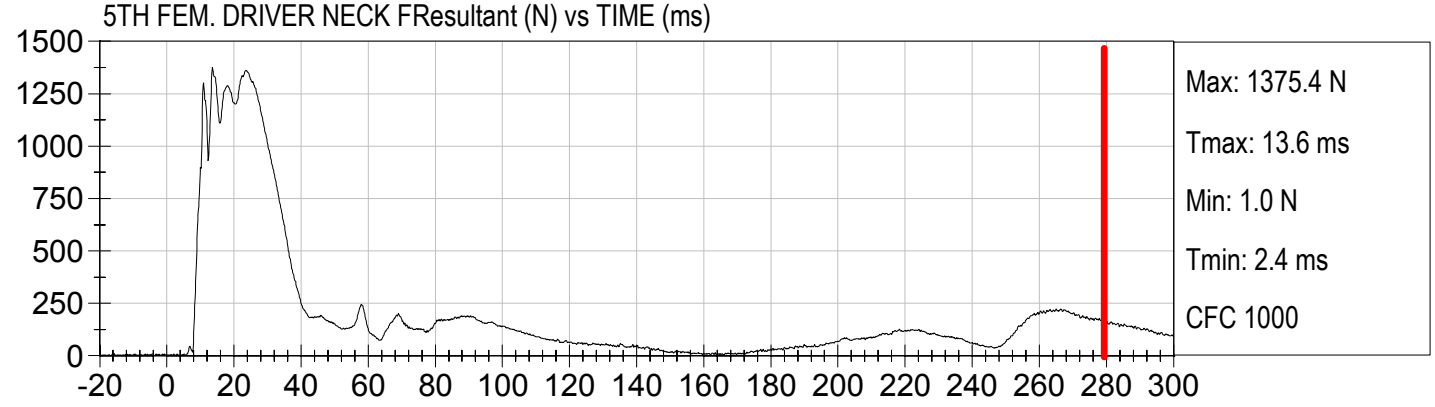
5TH FEM. DRIVER NECK FY (N) vs TIME (ms)



5TH FEM. DRIVER NECK FZ (N) vs TIME (ms)



5TH FEM. DRIVER NECK FResultant (N) vs TIME (ms)

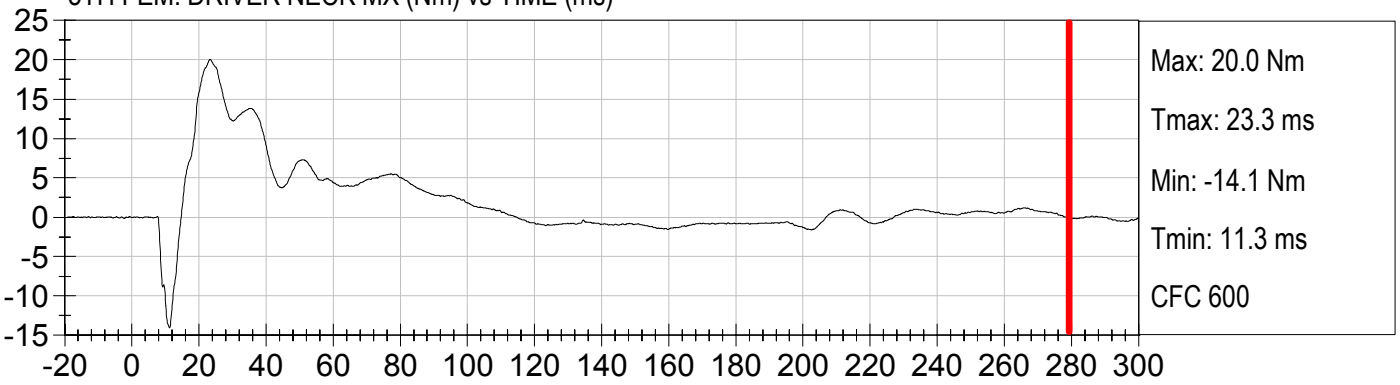


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 4)

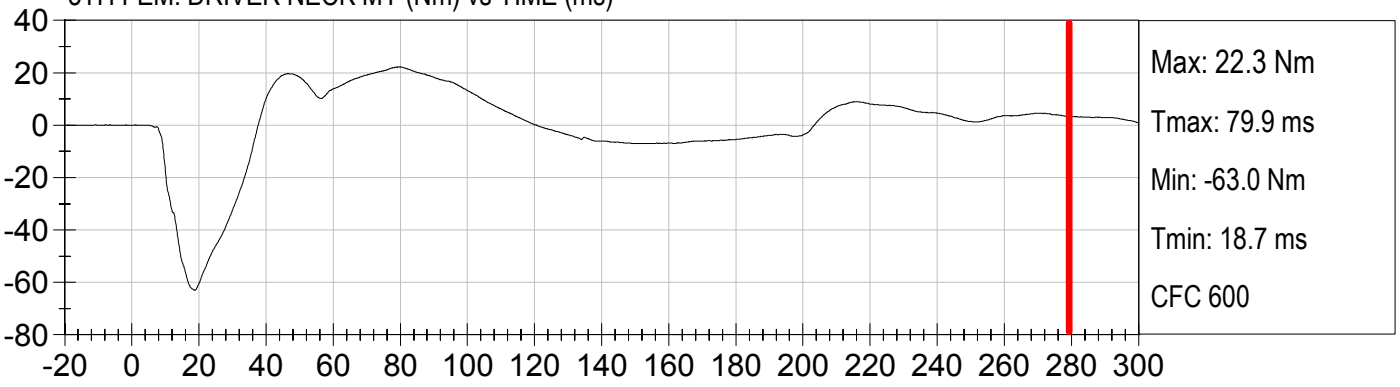
Test Date: 09/14/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

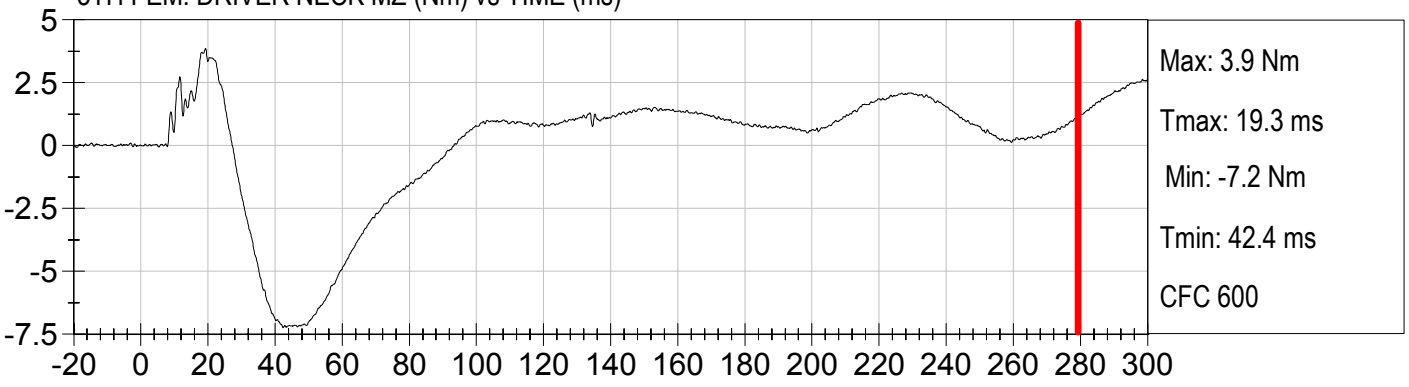
5TH FEM. DRIVER NECK MX (Nm) vs TIME (ms)



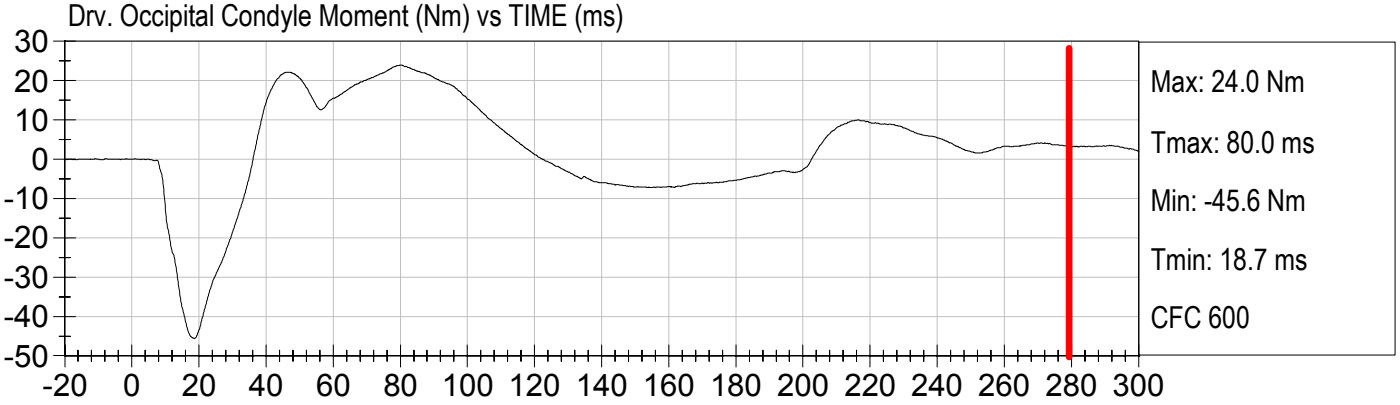
5TH FEM. DRIVER NECK MY (Nm) vs TIME (ms)



5TH FEM. DRIVER NECK MZ (Nm) vs TIME (ms)



Drv. Occipital Condyle Moment (Nm) vs TIME (ms)

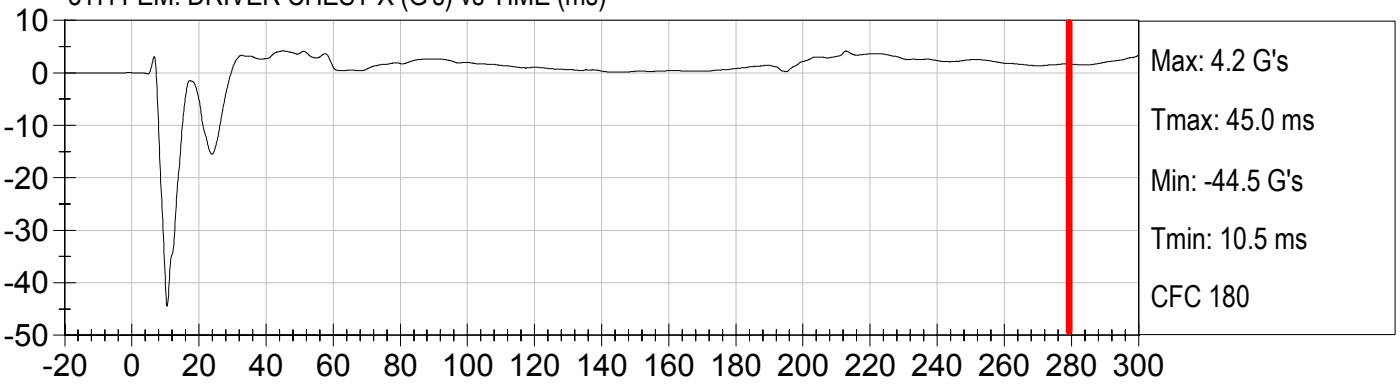


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 4)

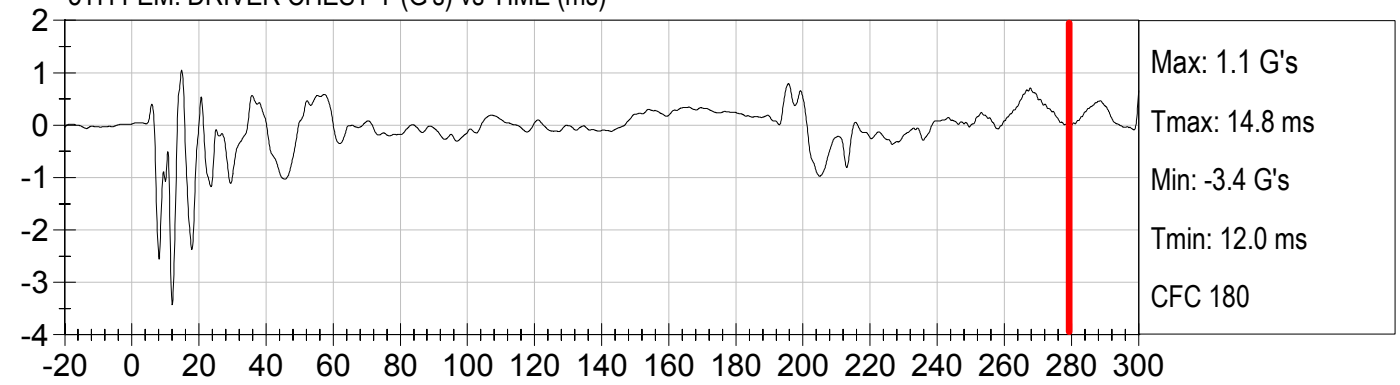
Test Date: 09/14/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

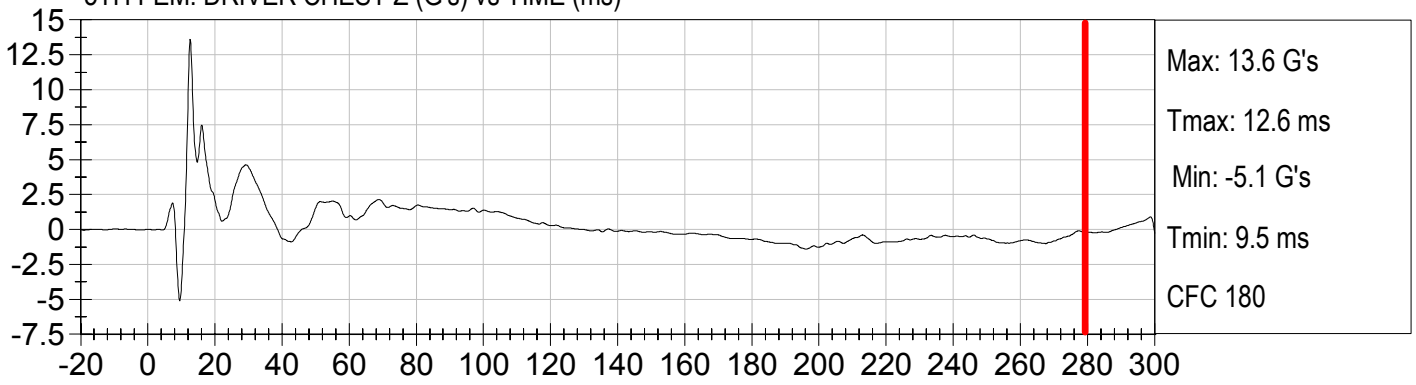
5TH FEM. DRIVER CHEST X (G's) vs TIME (ms)



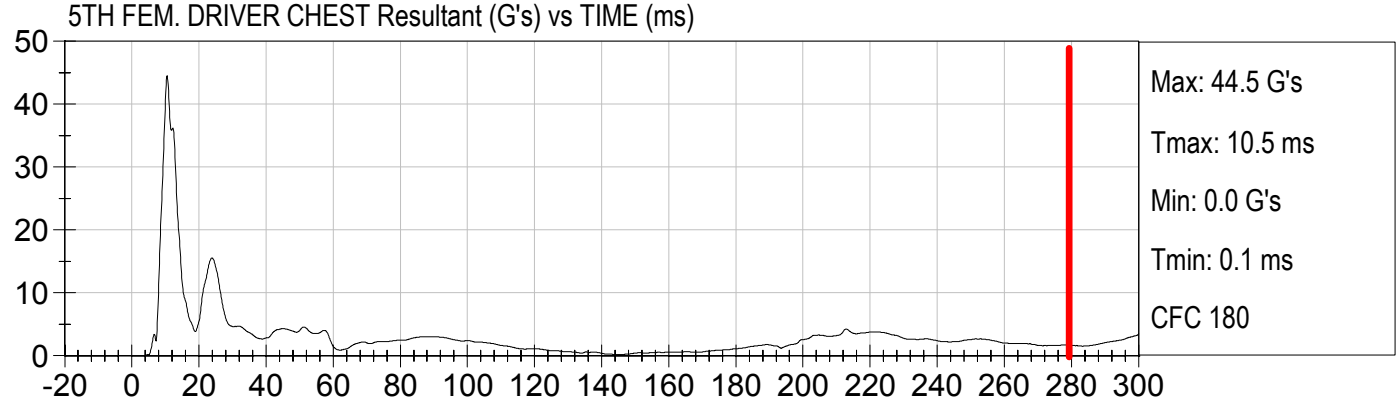
5TH FEM. DRIVER CHEST Y (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Z (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Resultant (G's) vs TIME (ms)

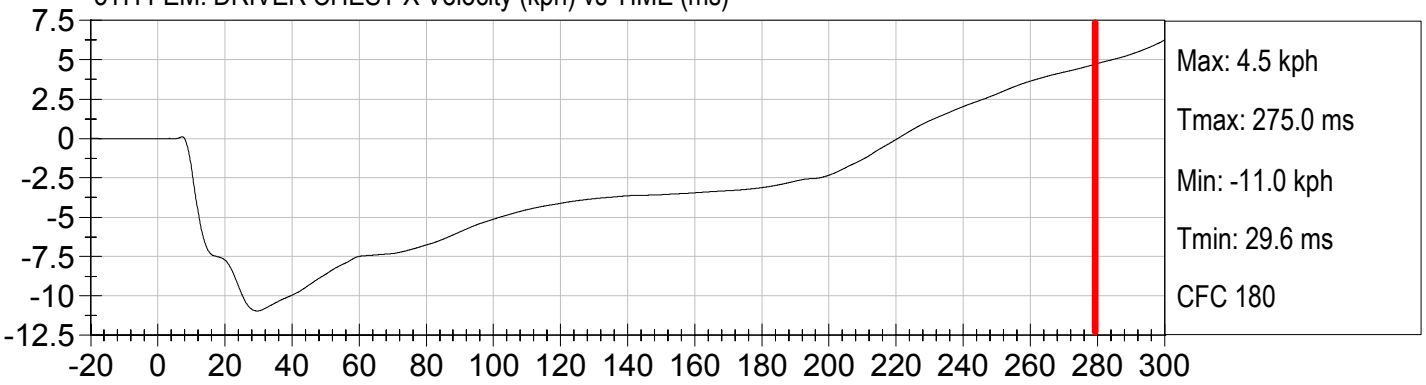


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 4)

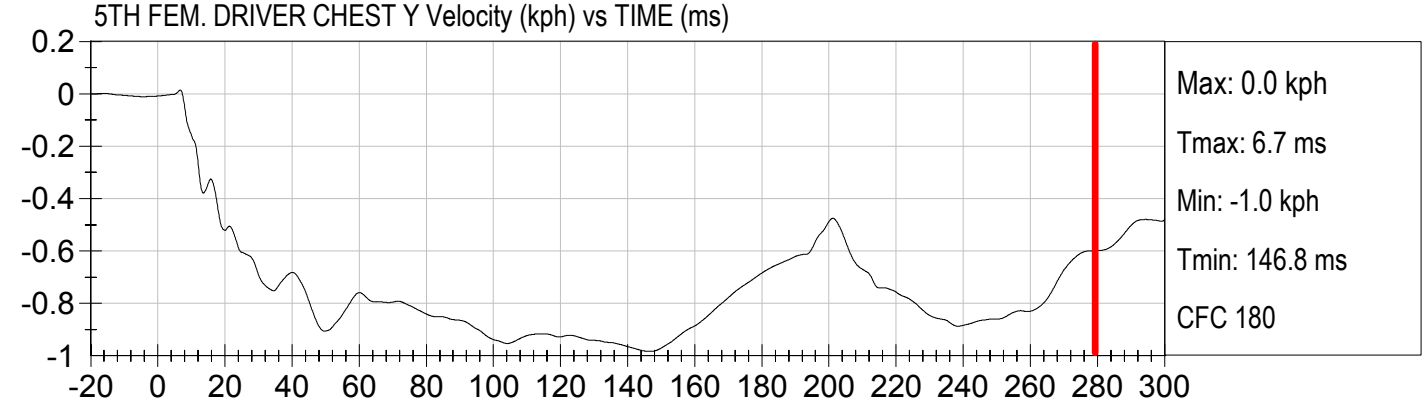
Test Date: 09/14/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

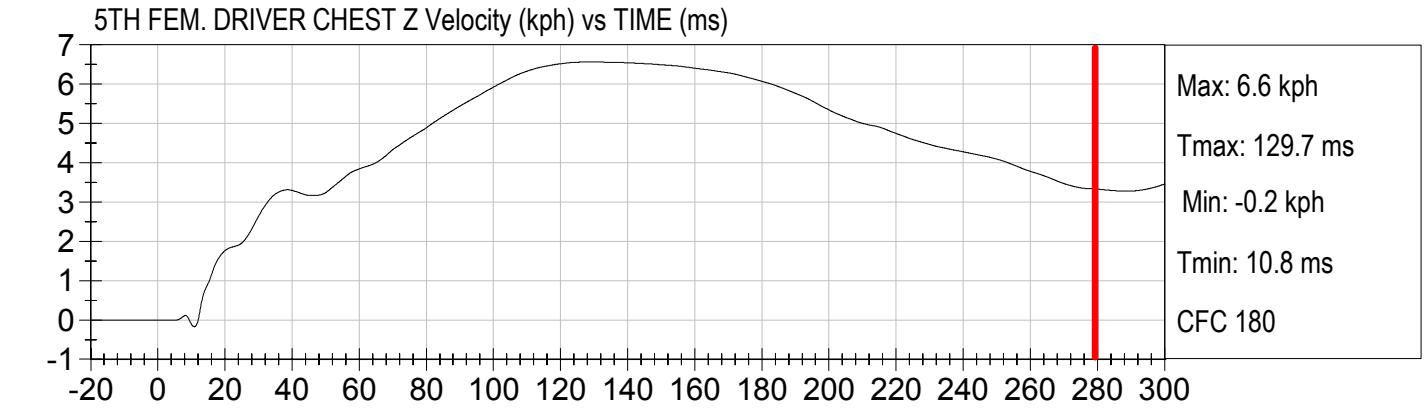
5TH FEM. DRIVER CHEST X Velocity (kph) vs TIME (ms)



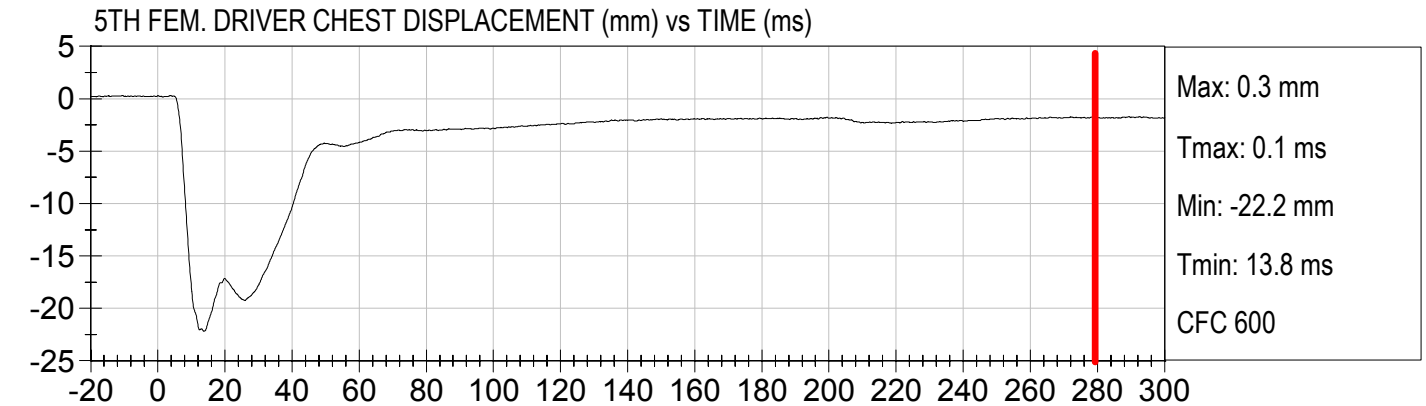
5TH FEM. DRIVER CHEST Y Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST Z Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST DISPLACEMENT (mm) vs TIME (ms)

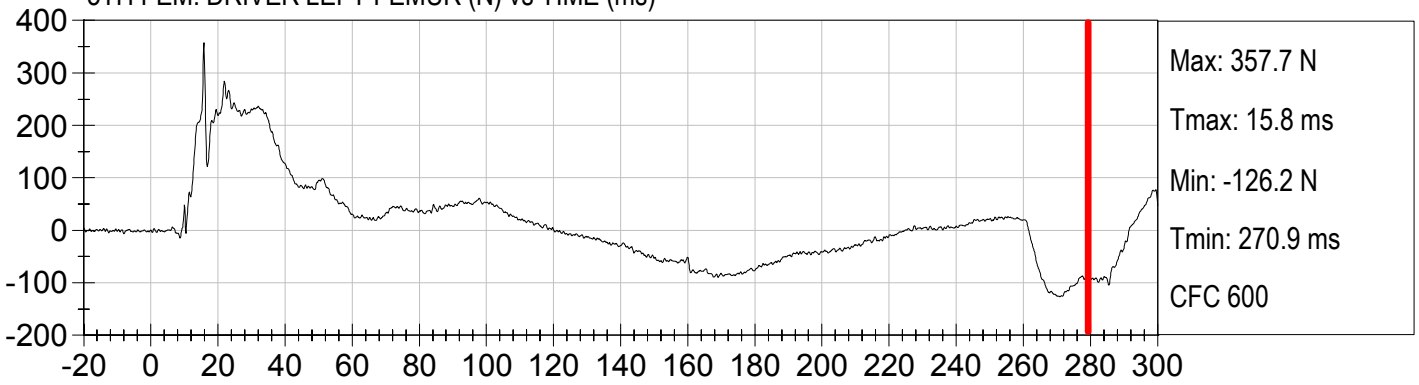


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 4)

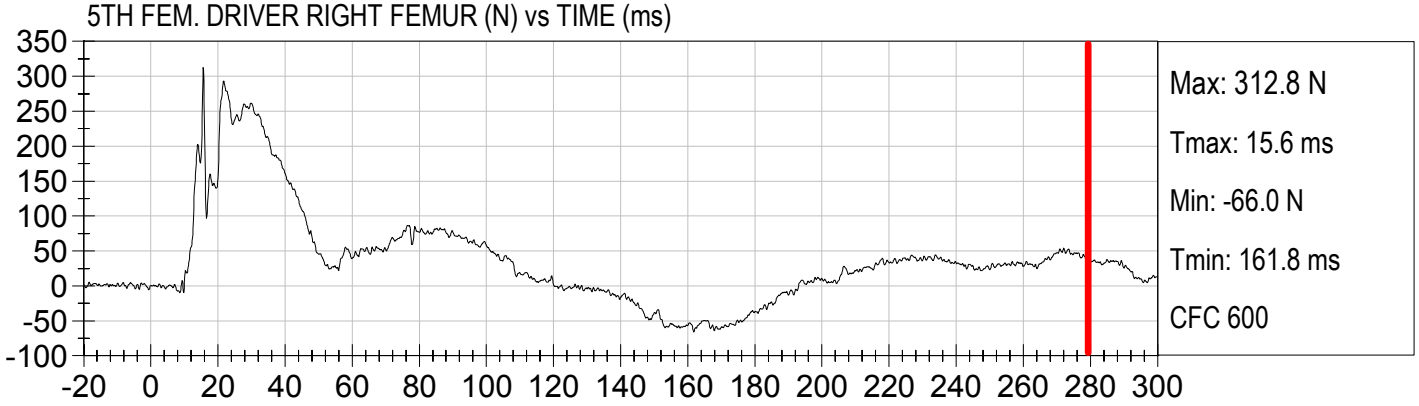
Test Date: 09/14/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

5TH FEM. DRIVER LEFT FEMUR (N) vs TIME (ms)



5TH FEM. DRIVER RIGHT FEMUR (N) vs TIME (ms)

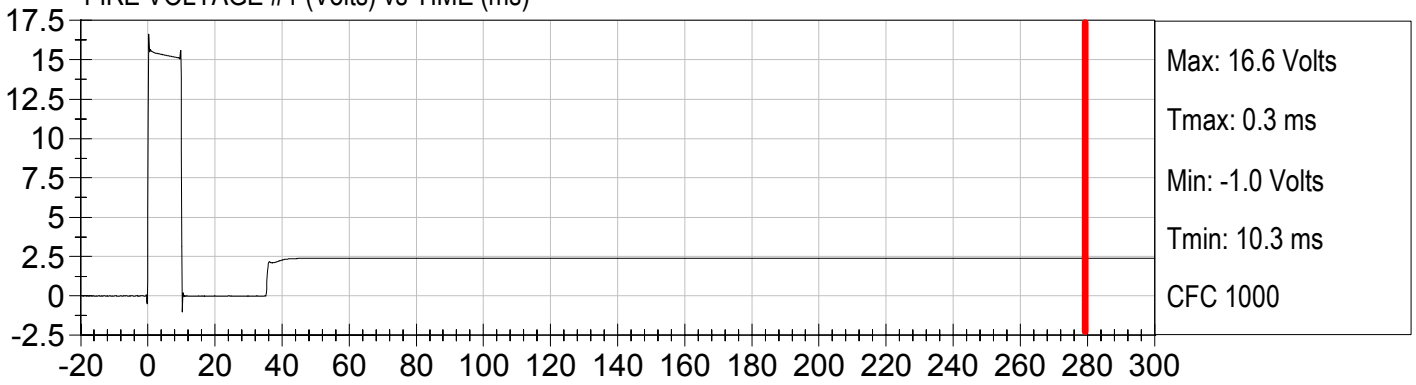


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 4)

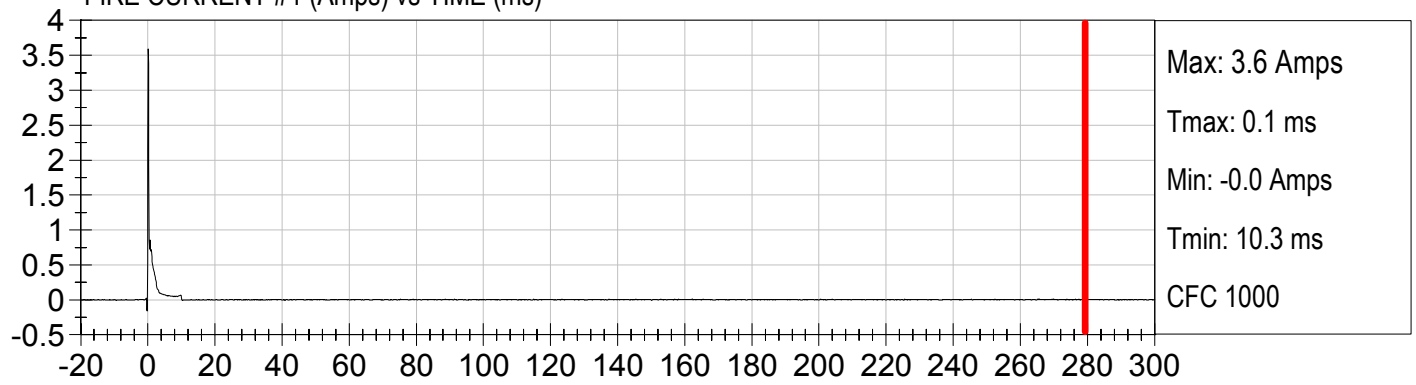
Test Date: 09/14/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

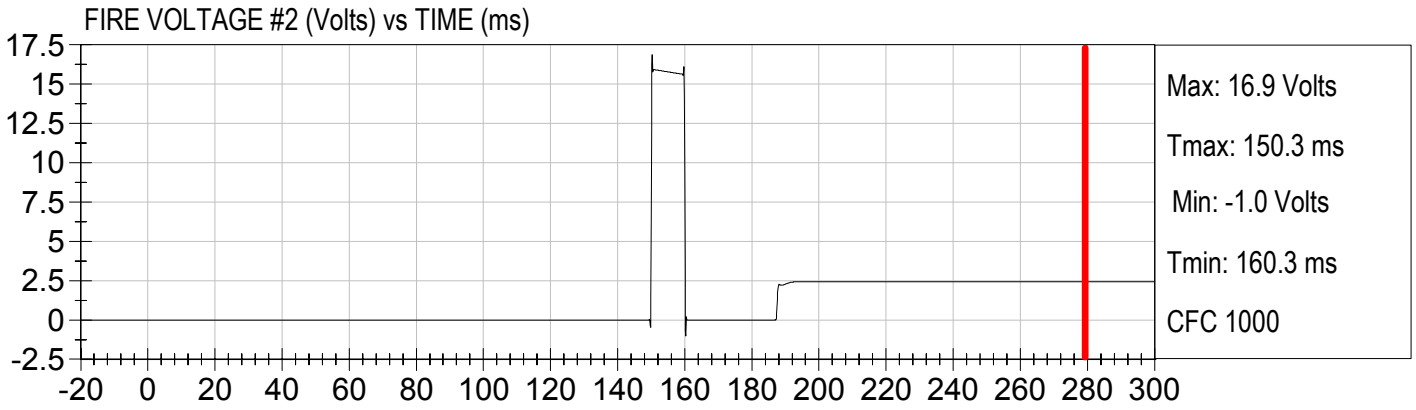
FIRE VOLTAGE #1 (Volts) vs TIME (ms)



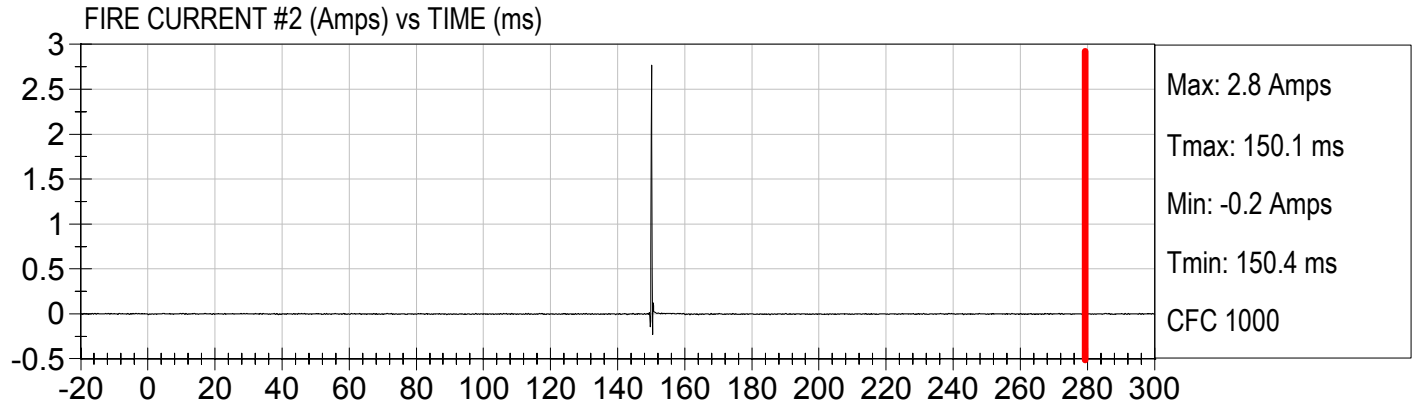
FIRE CURRENT #1 (Amps) vs TIME (ms)



FIRE VOLTAGE #2 (Volts) vs TIME (ms)

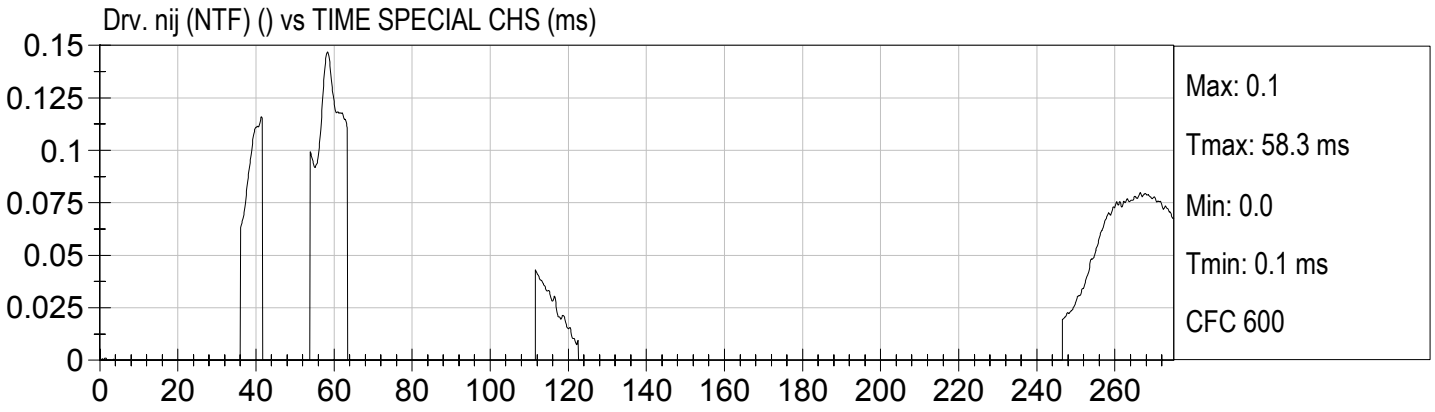


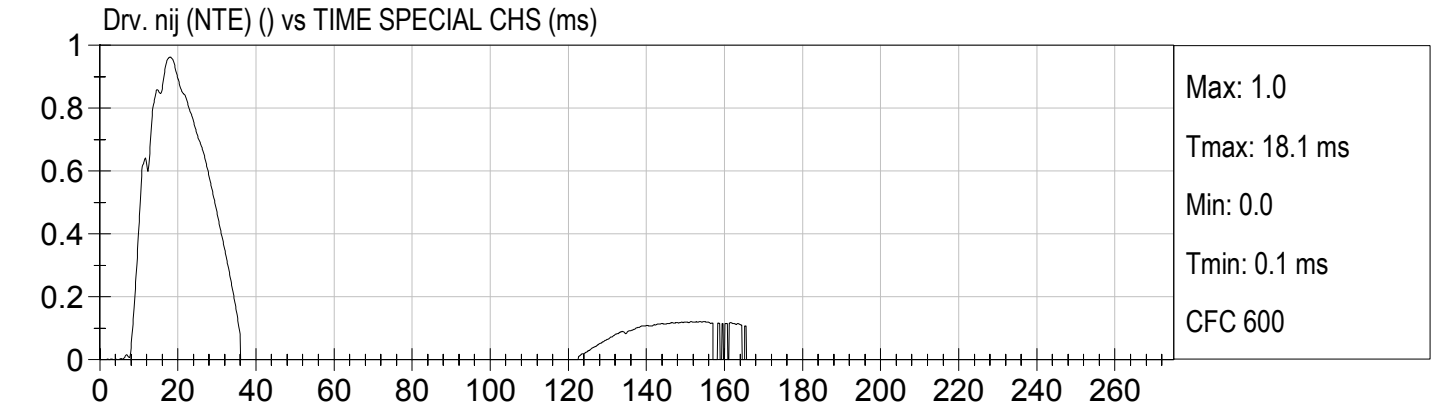
FIRE CURRENT #2 (Amps) vs TIME (ms)

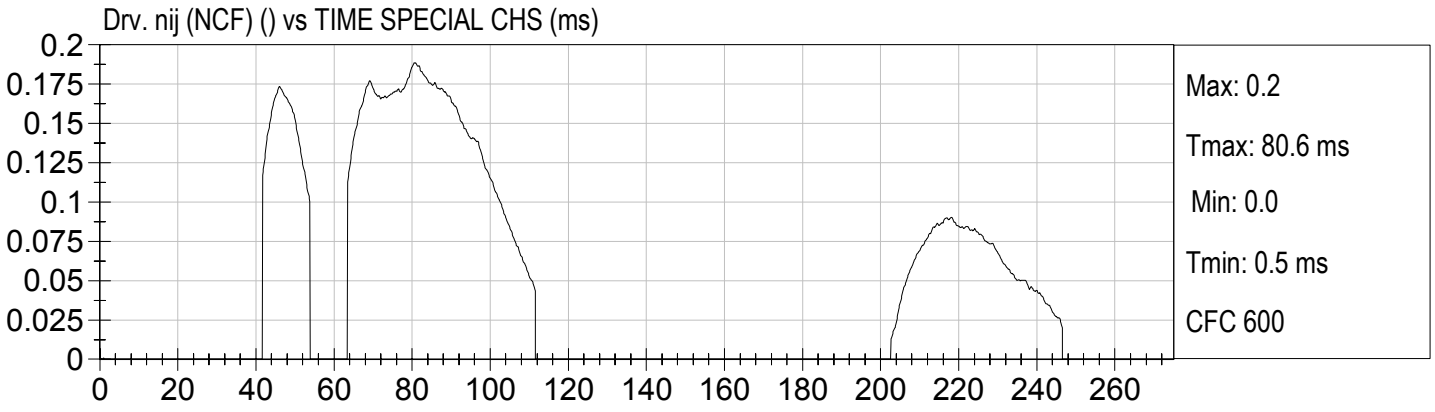


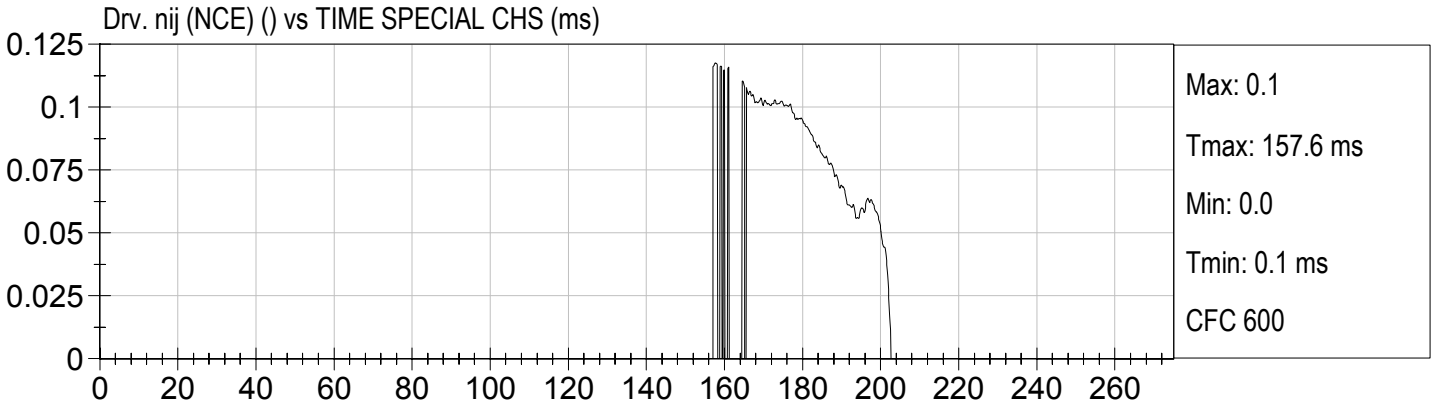
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 4)

Test Date: 09/14/06
Speed: 0.0 mph (0.0 km/h)







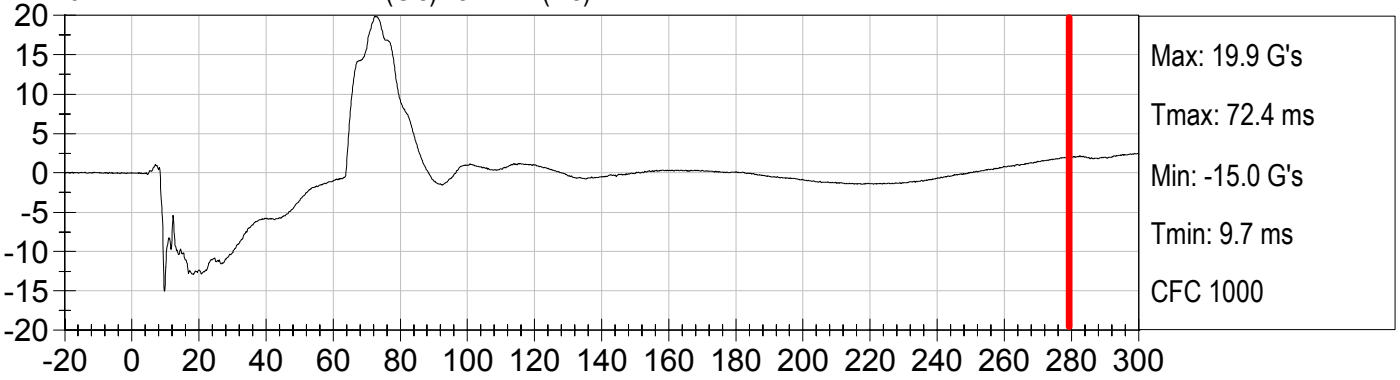


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 5)

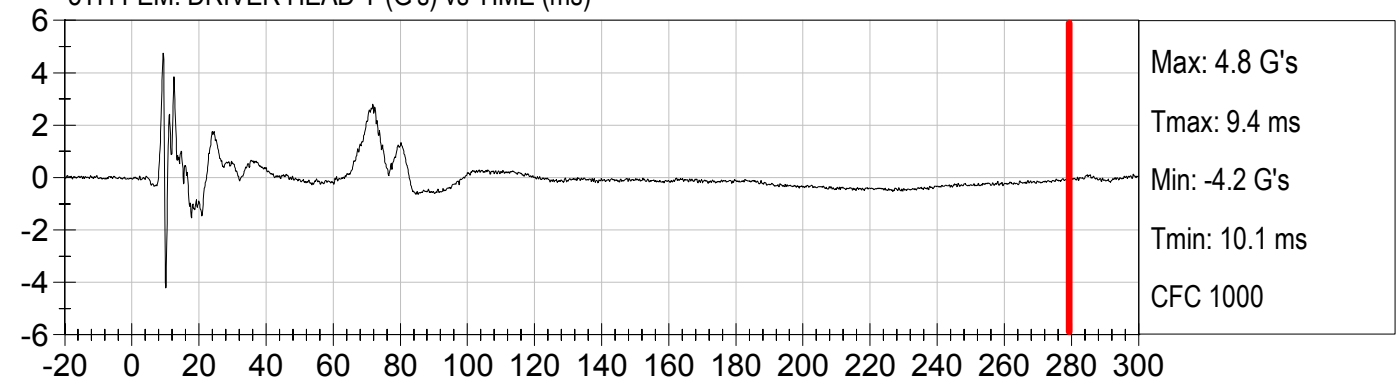
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

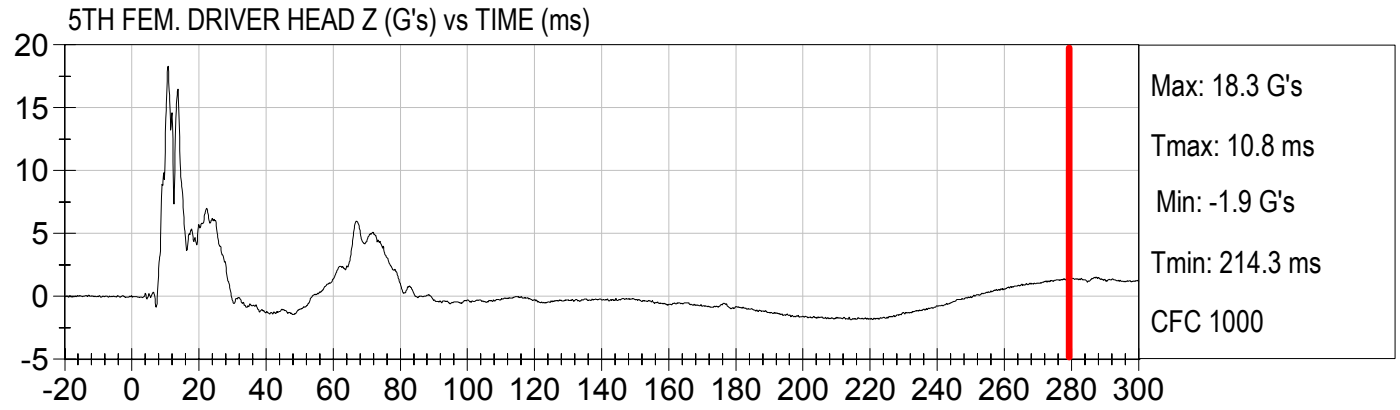
5TH FEM. DRIVER HEAD X (G's) vs TIME (ms)



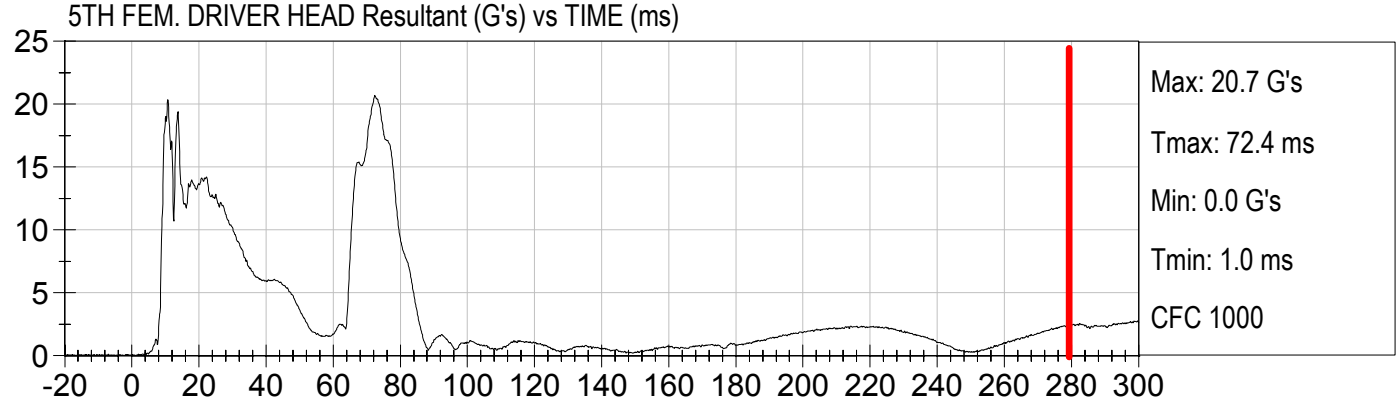
5TH FEM. DRIVER HEAD Y (G's) vs TIME (ms)



5TH FEM. DRIVER HEAD Z (G's) vs TIME (ms)



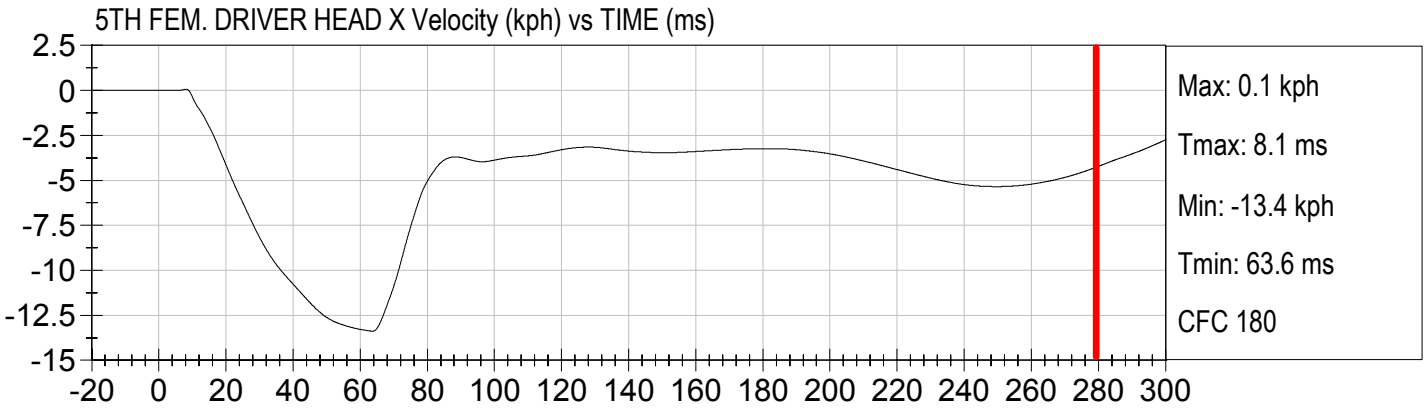
5TH FEM. DRIVER HEAD Resultant (G's) vs TIME (ms)

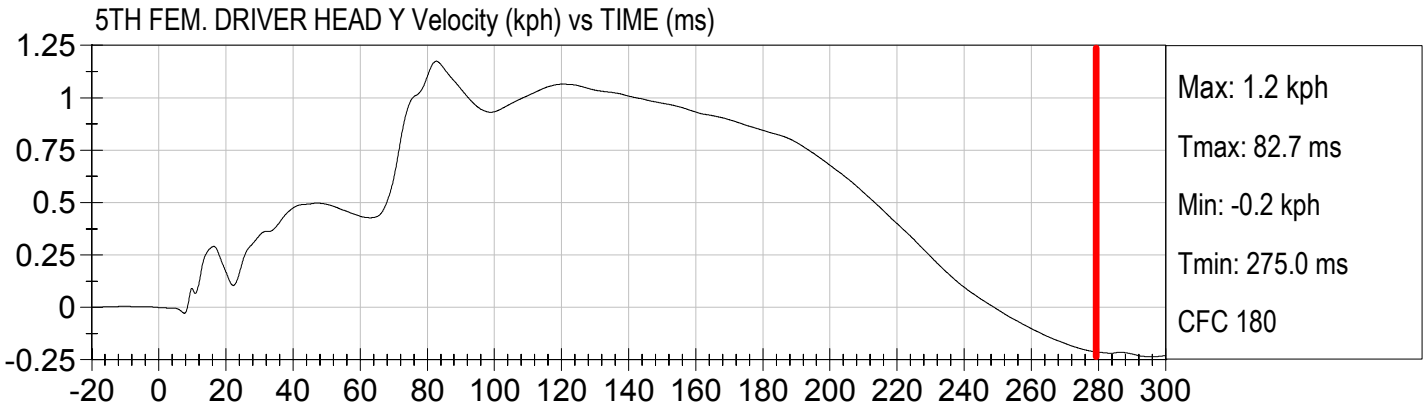


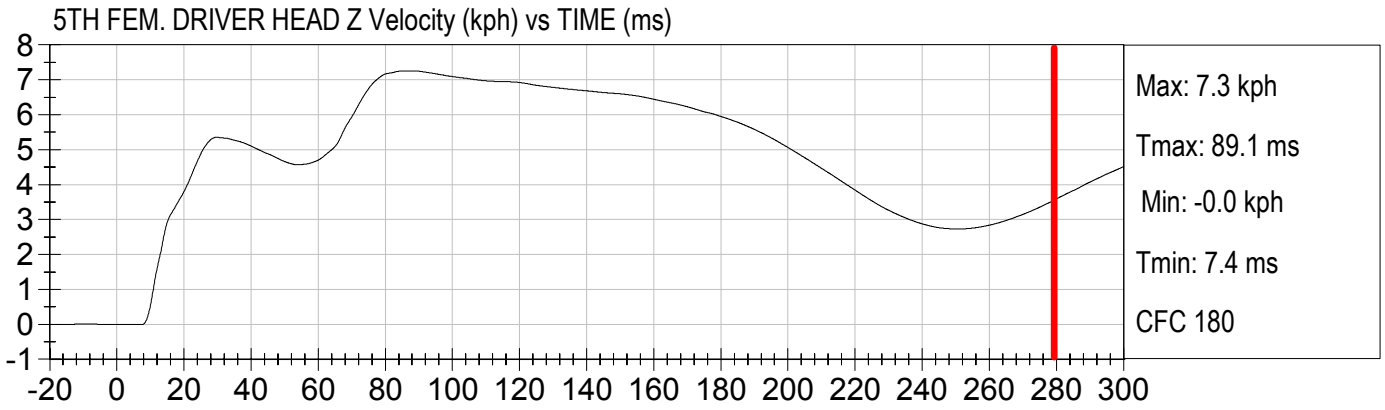
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 5)

Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms





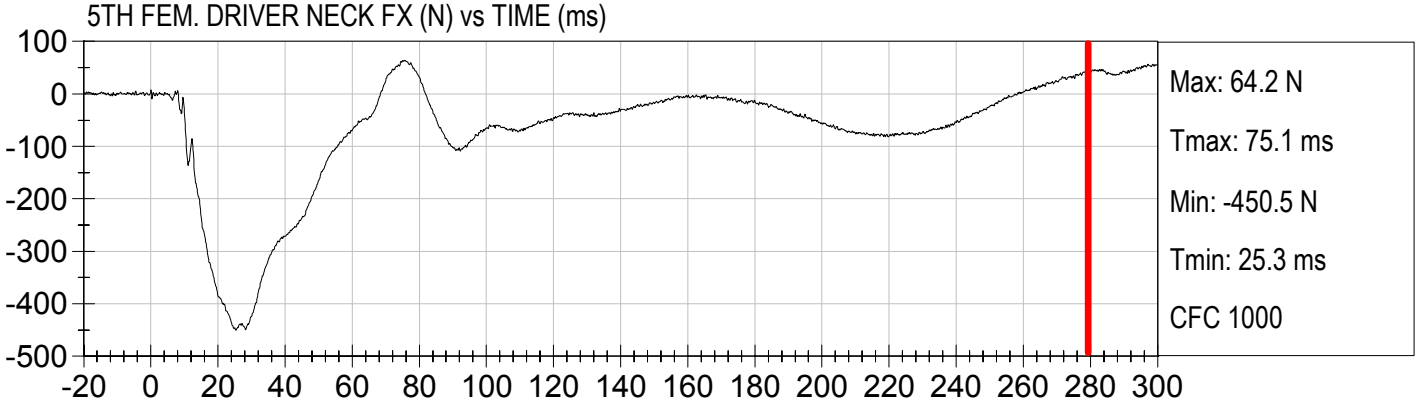


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 5)

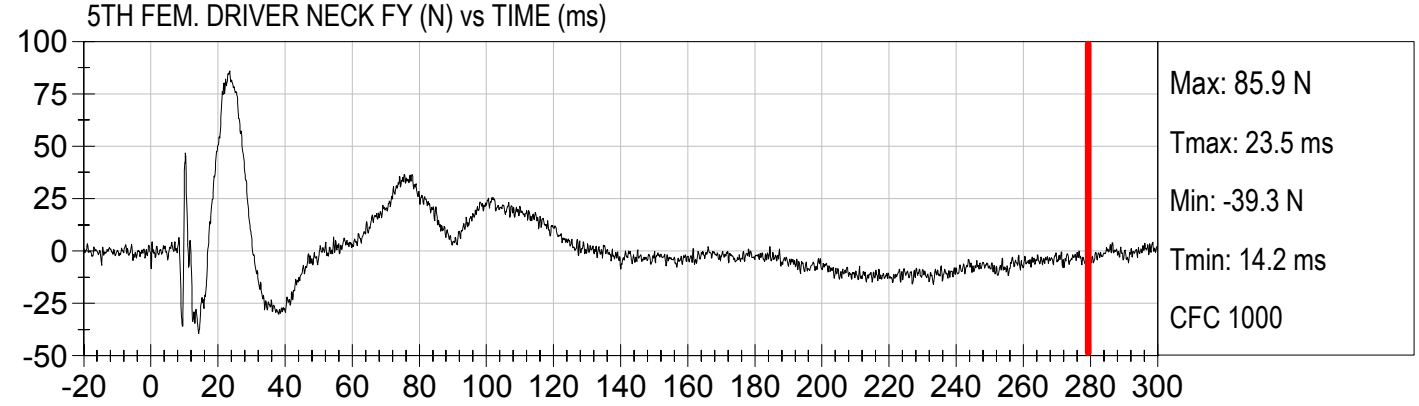
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

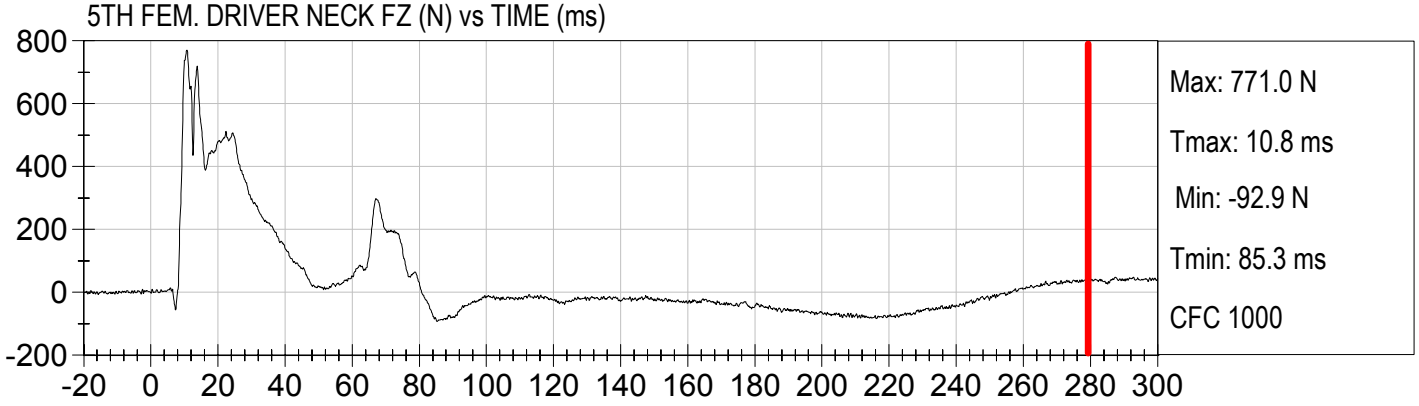
5TH FEM. DRIVER NECK FX (N) vs TIME (ms)



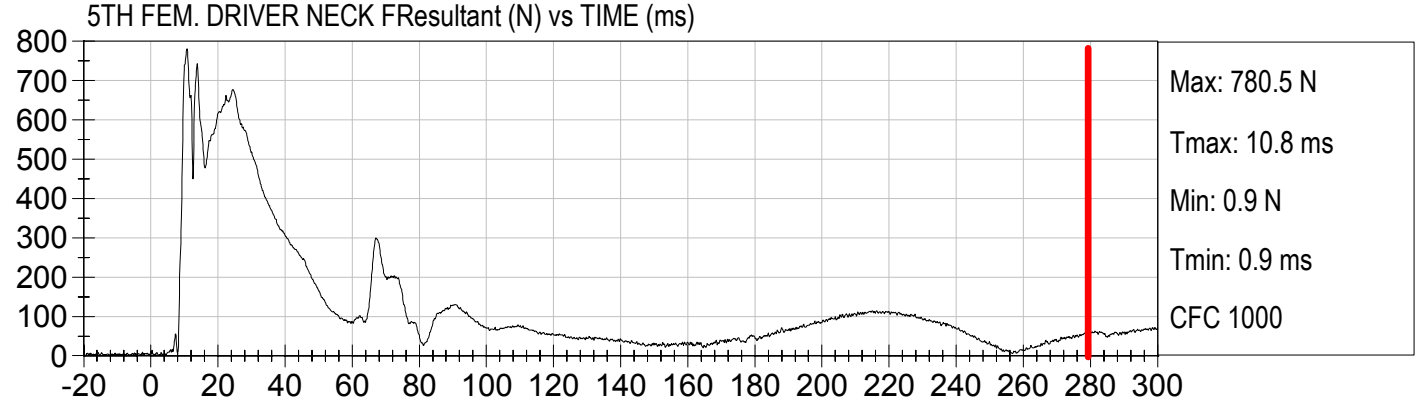
5TH FEM. DRIVER NECK FY (N) vs TIME (ms)



5TH FEM. DRIVER NECK FZ (N) vs TIME (ms)



5TH FEM. DRIVER NECK FResultant (N) vs TIME (ms)

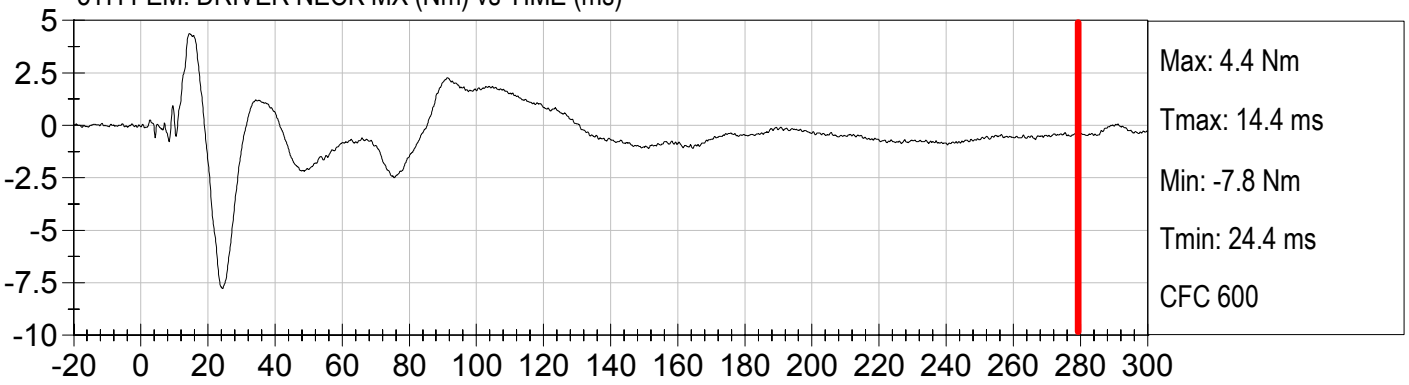


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 5)

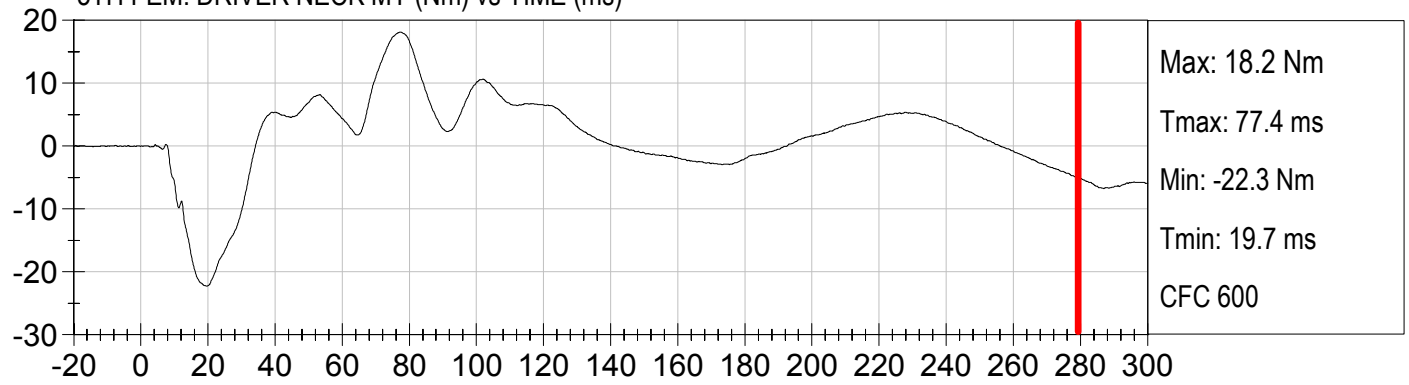
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

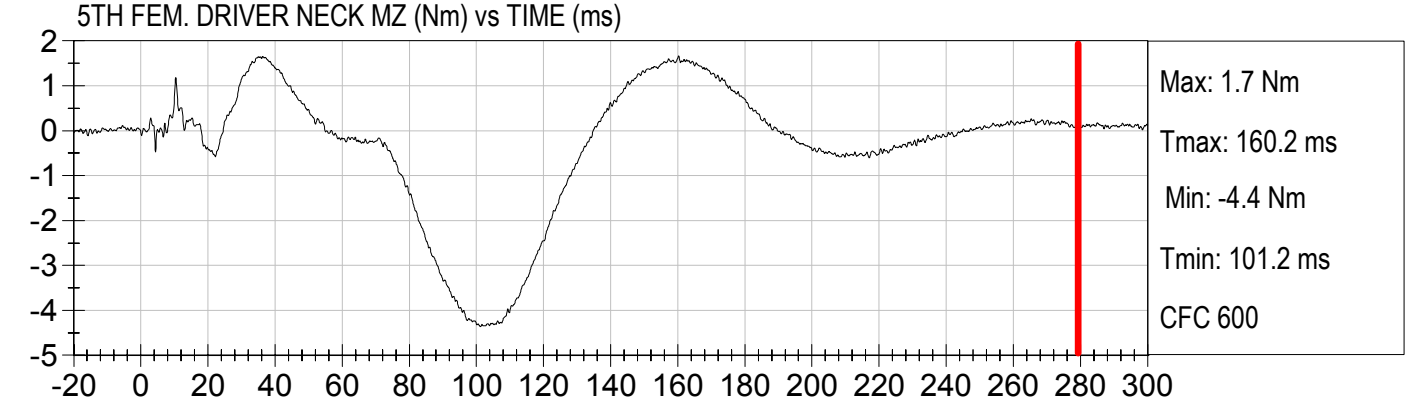
5TH FEM. DRIVER NECK MX (Nm) vs TIME (ms)



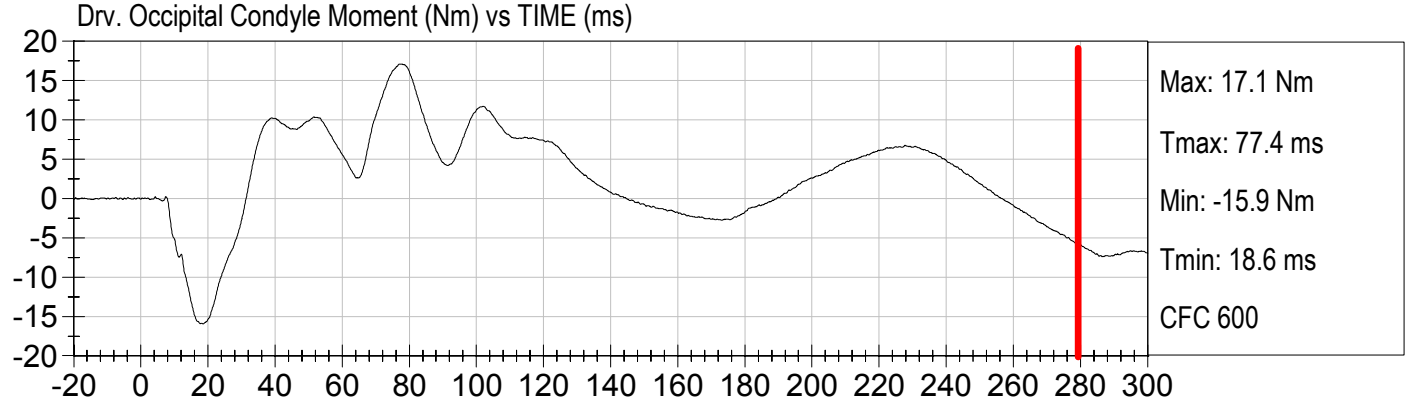
5TH FEM. DRIVER NECK MY (Nm) vs TIME (ms)



5TH FEM. DRIVER NECK MZ (Nm) vs TIME (ms)



Drv. Occipital Condyle Moment (Nm) vs TIME (ms)

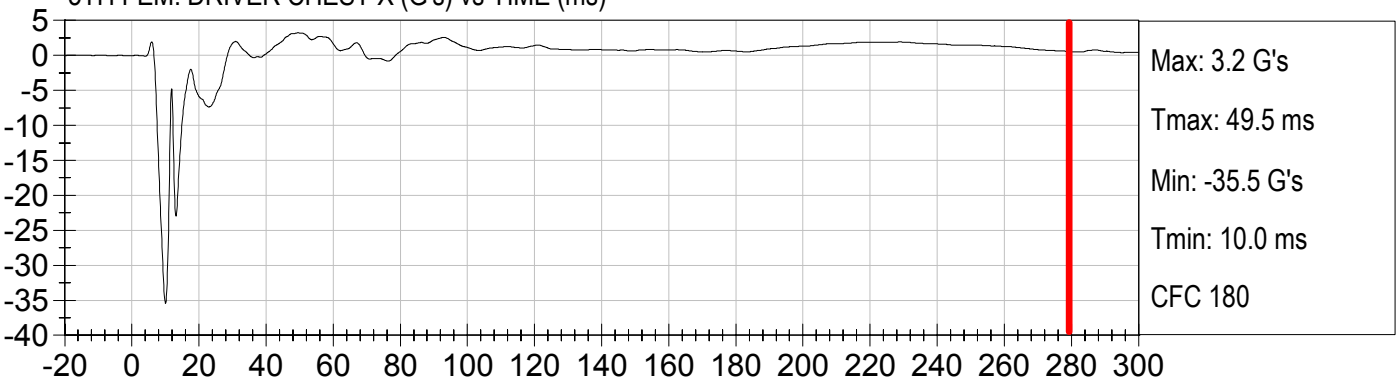


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 5)

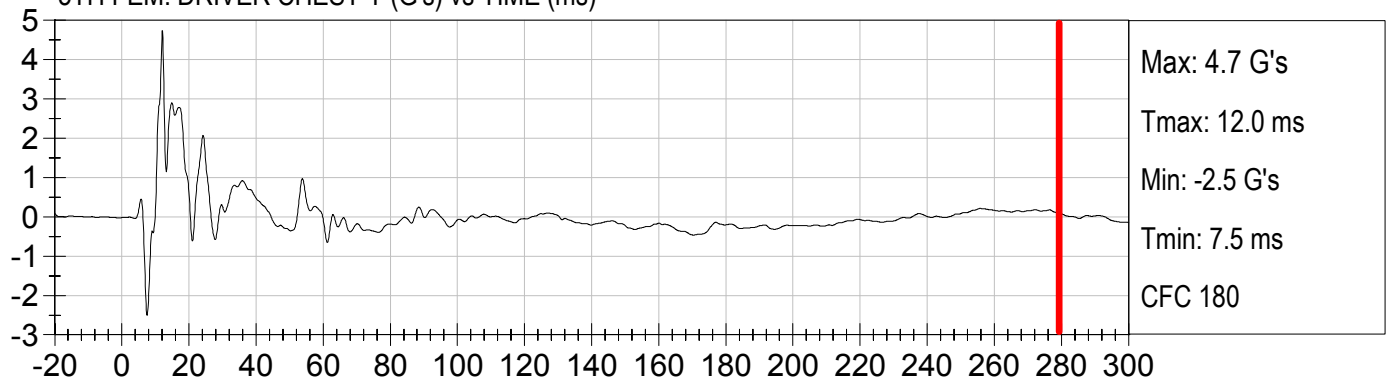
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

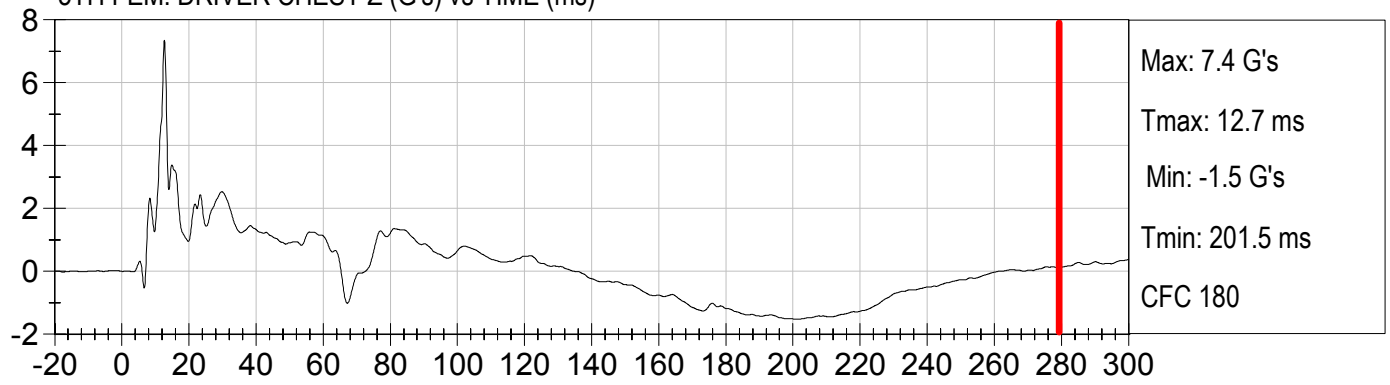
5TH FEM. DRIVER CHEST X (G's) vs TIME (ms)



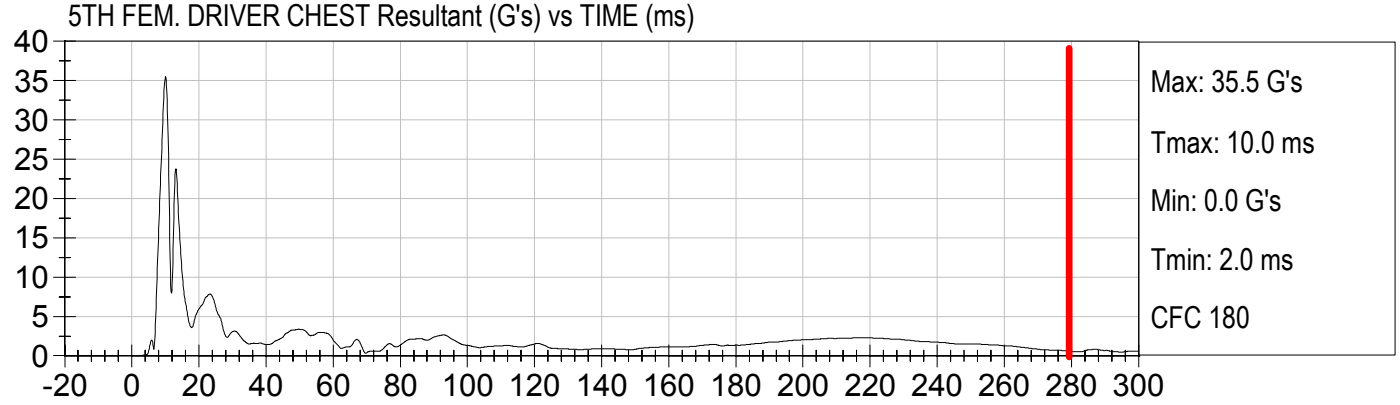
5TH FEM. DRIVER CHEST Y (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Z (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Resultant (G's) vs TIME (ms)

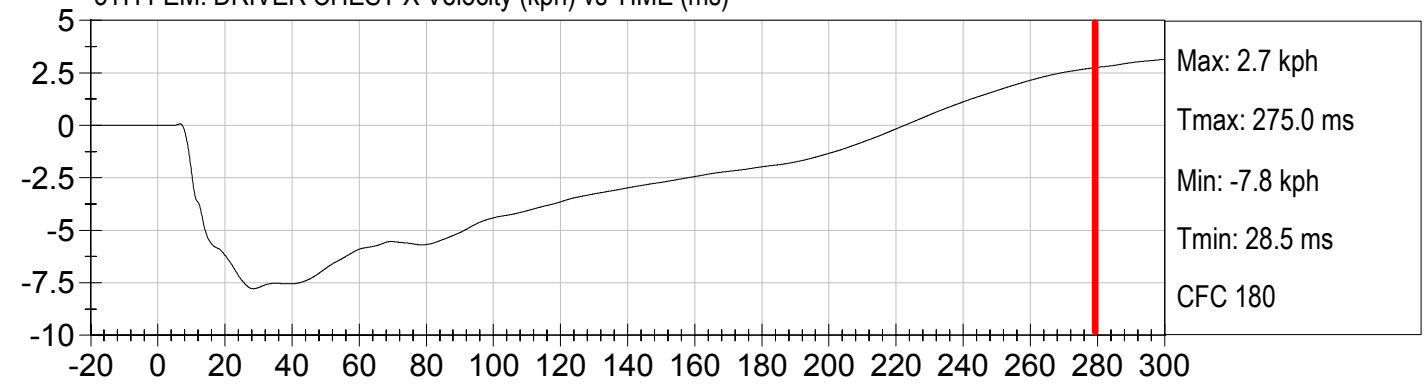


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 5)

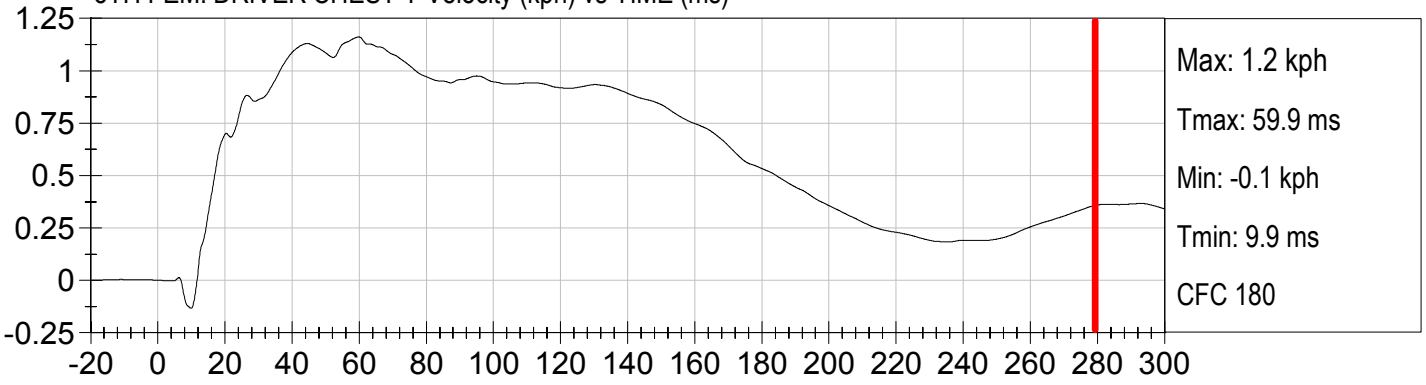
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

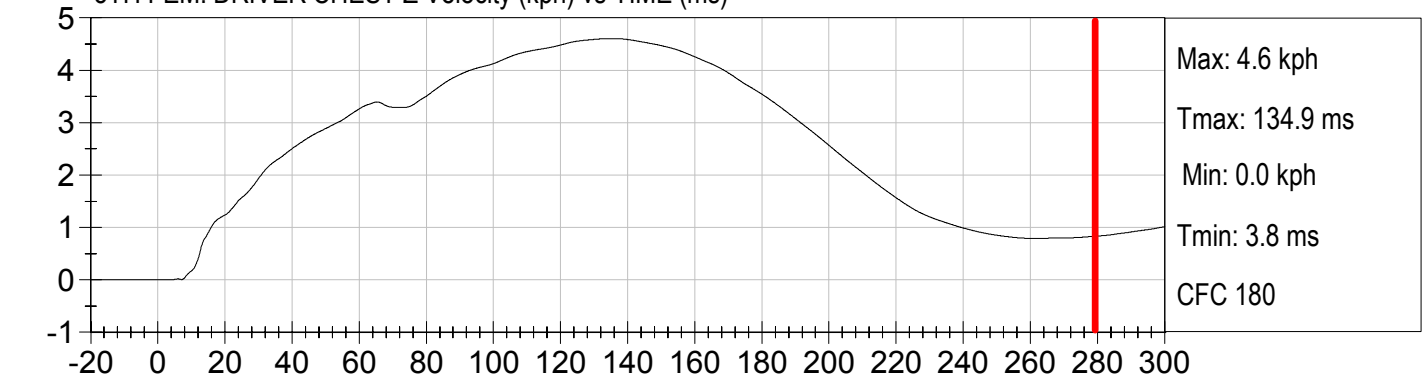
5TH FEM. DRIVER CHEST X Velocity (kph) vs TIME (ms)



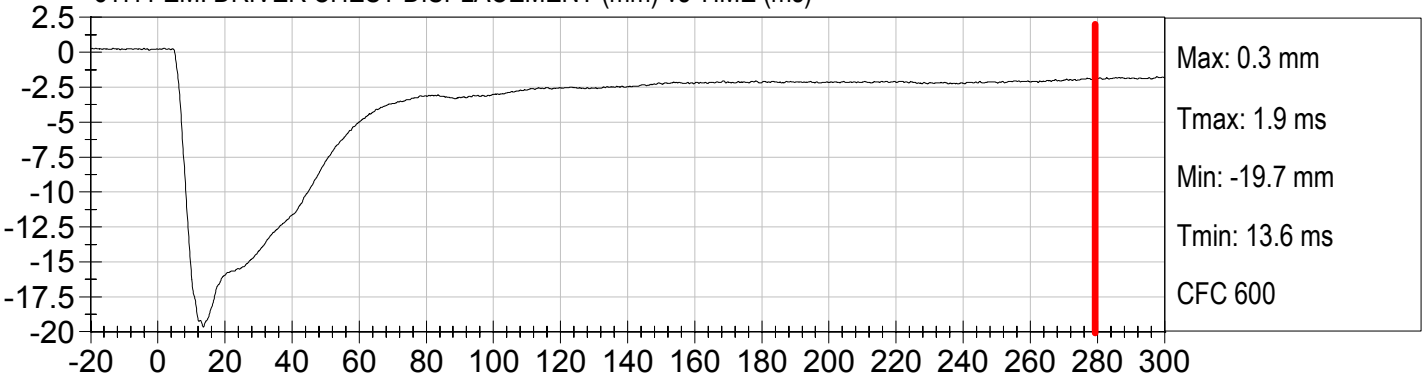
5TH FEM. DRIVER CHEST Y Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST Z Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST DISPLACEMENT (mm) vs TIME (ms)

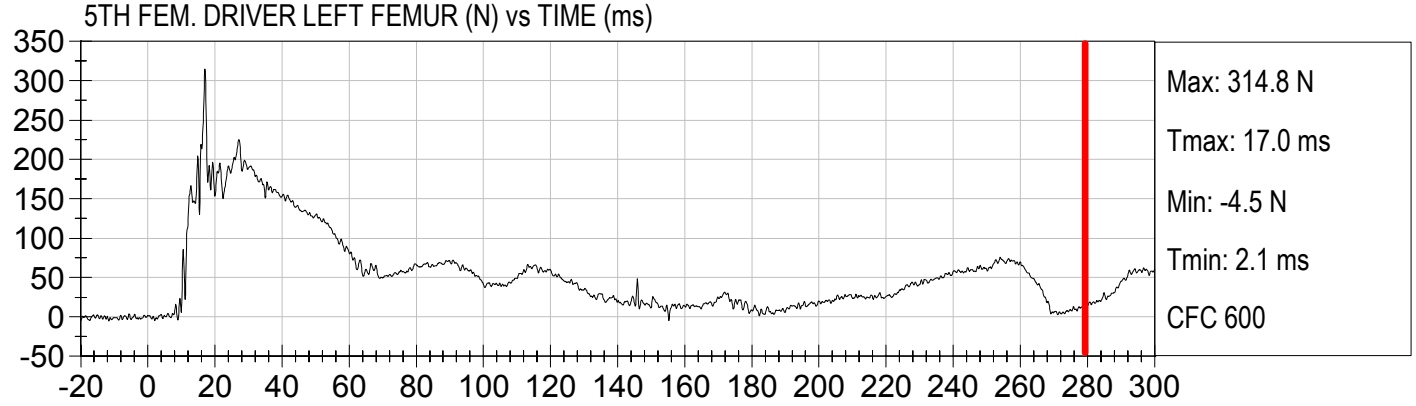


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 5)

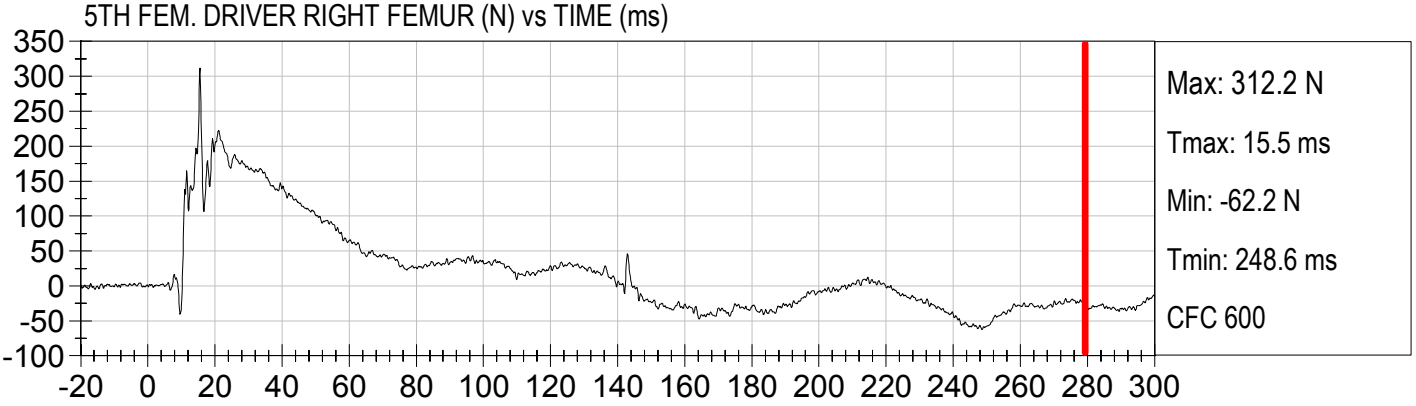
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

5TH FEM. DRIVER LEFT FEMUR (N) vs TIME (ms)



5TH FEM. DRIVER RIGHT FEMUR (N) vs TIME (ms)

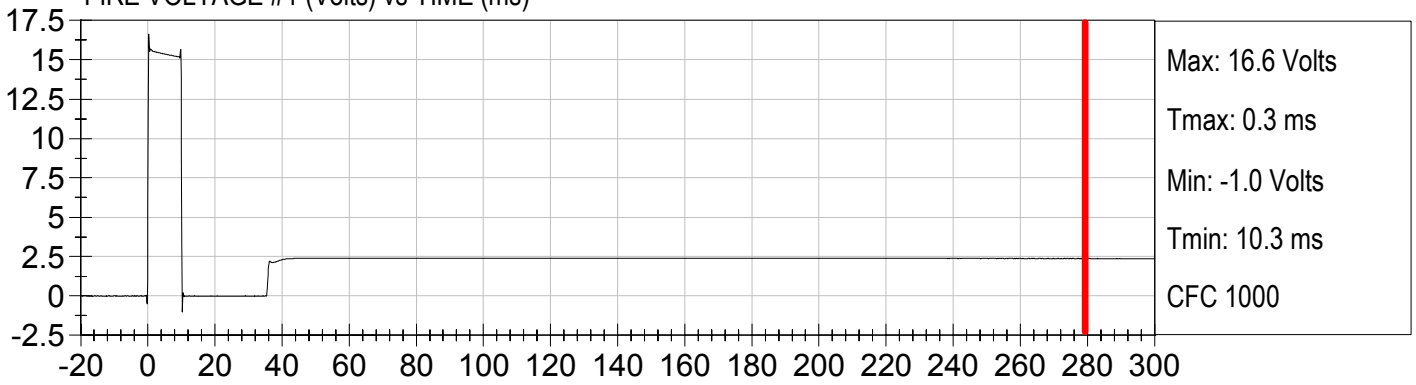


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 5)

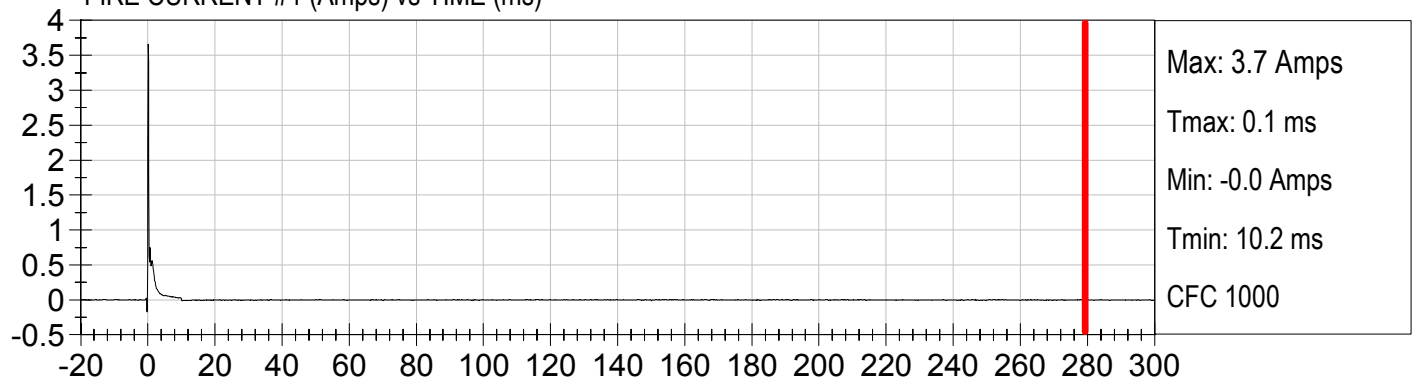
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

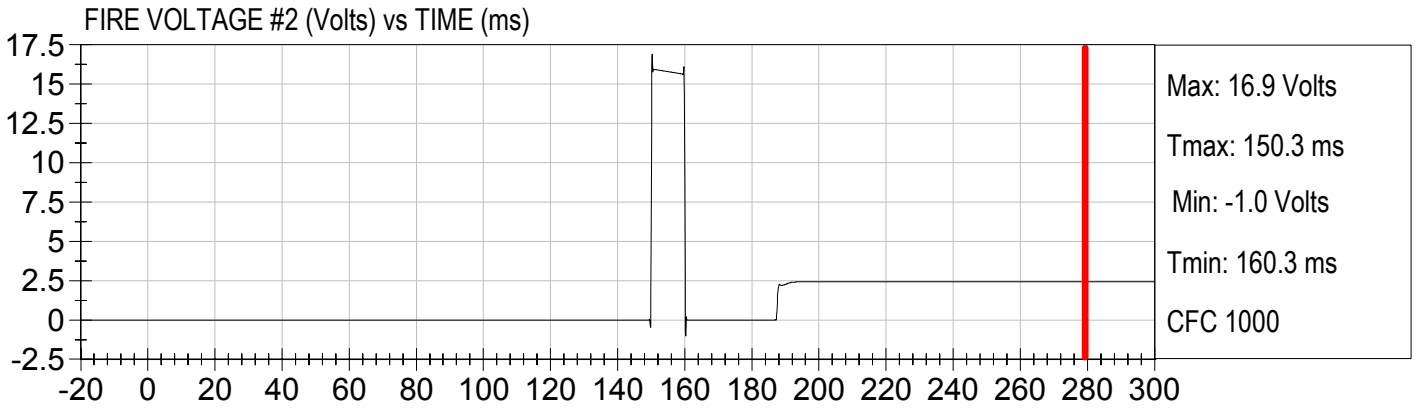
FIRE VOLTAGE #1 (Volts) vs TIME (ms)



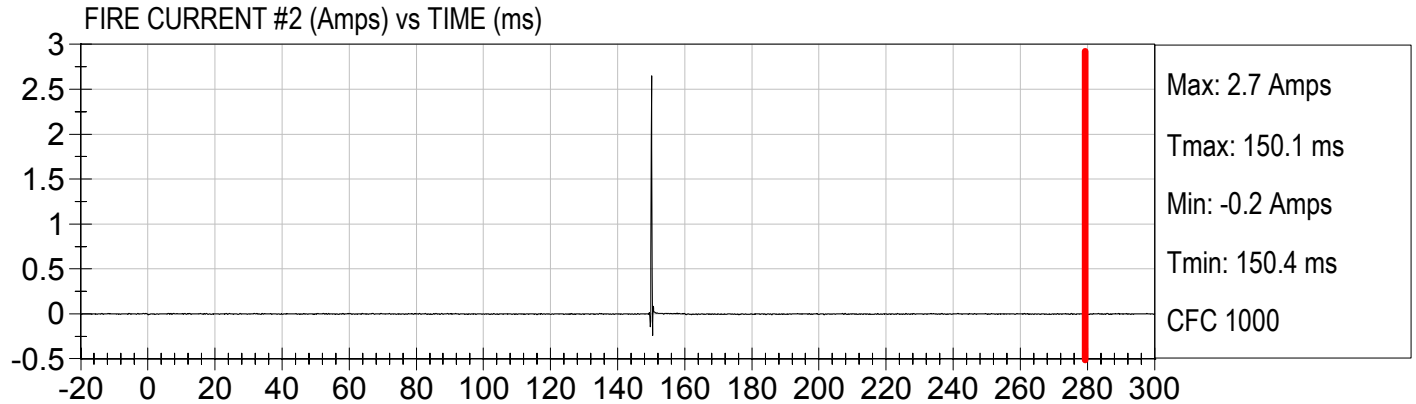
FIRE CURRENT #1 (Amps) vs TIME (ms)



FIRE VOLTAGE #2 (Volts) vs TIME (ms)



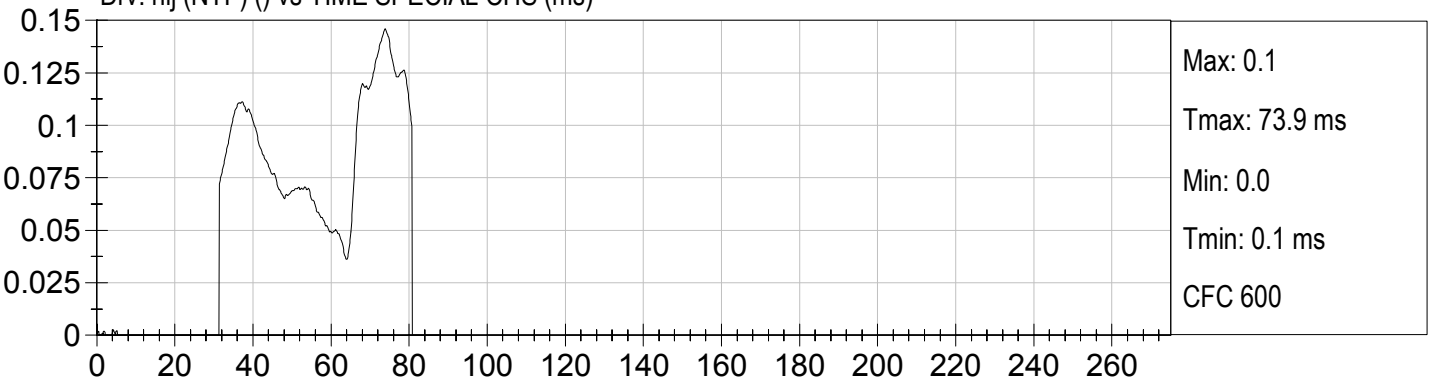
FIRE CURRENT #2 (Amps) vs TIME (ms)



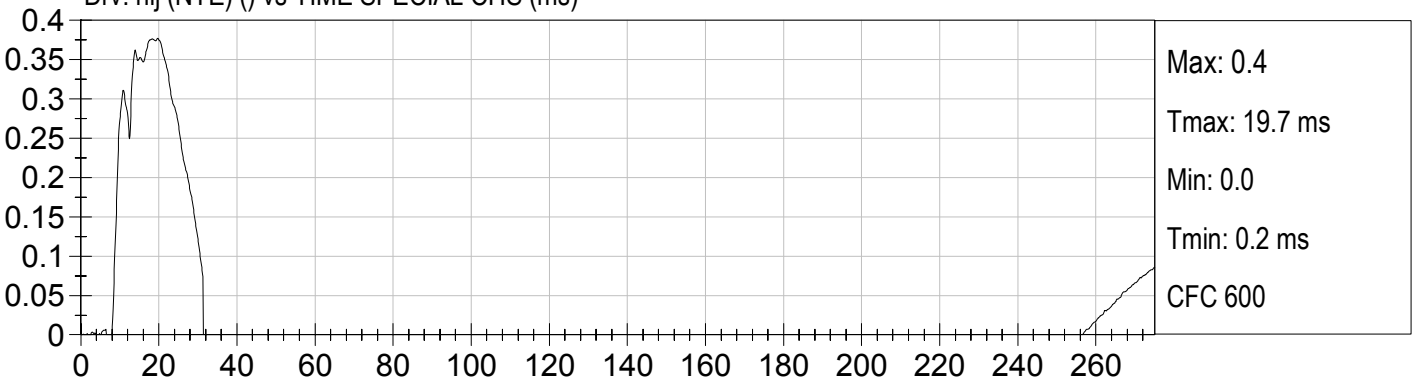
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 5)

Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

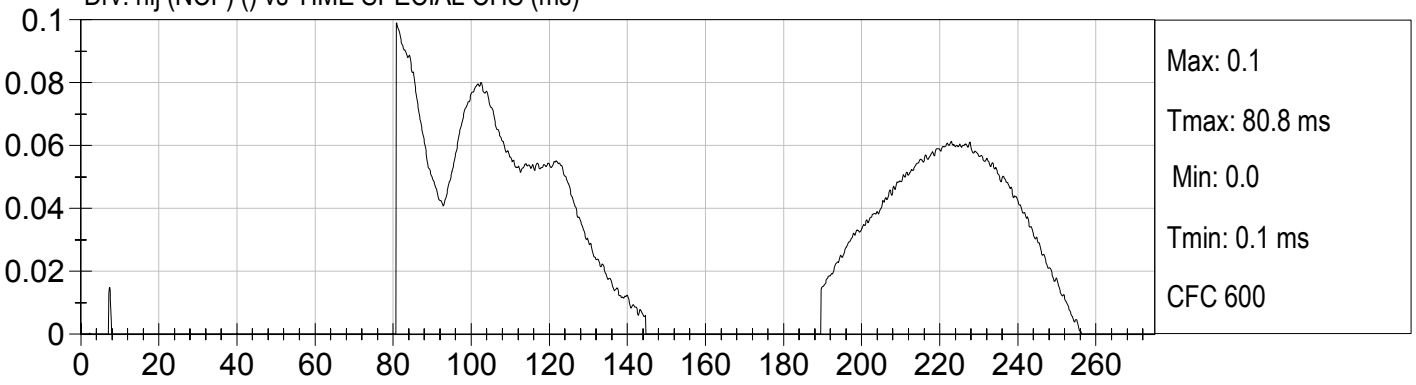
Drv. nij (NTF) () vs TIME SPECIAL CHS (ms)



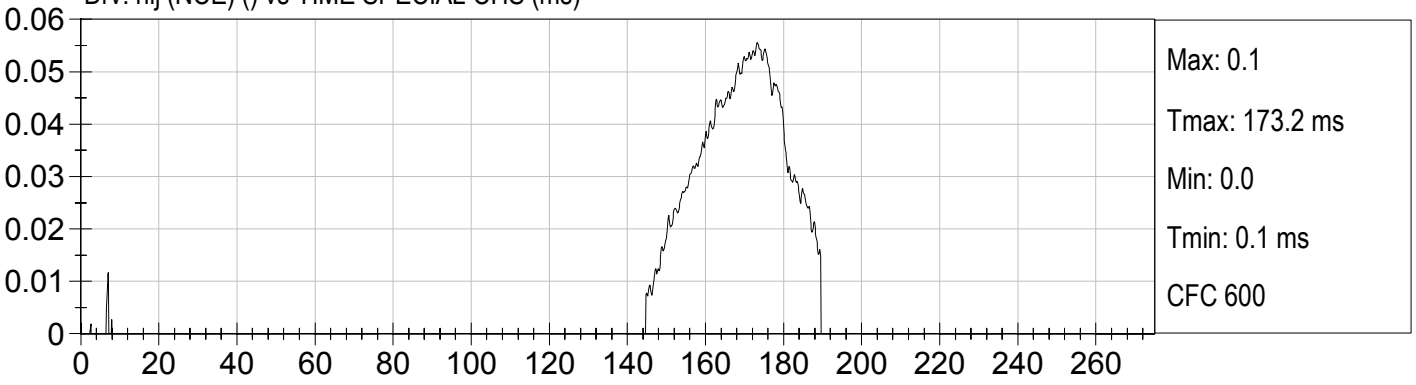
Drv. nij (NTE) () vs TIME SPECIAL CHS (ms)



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



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

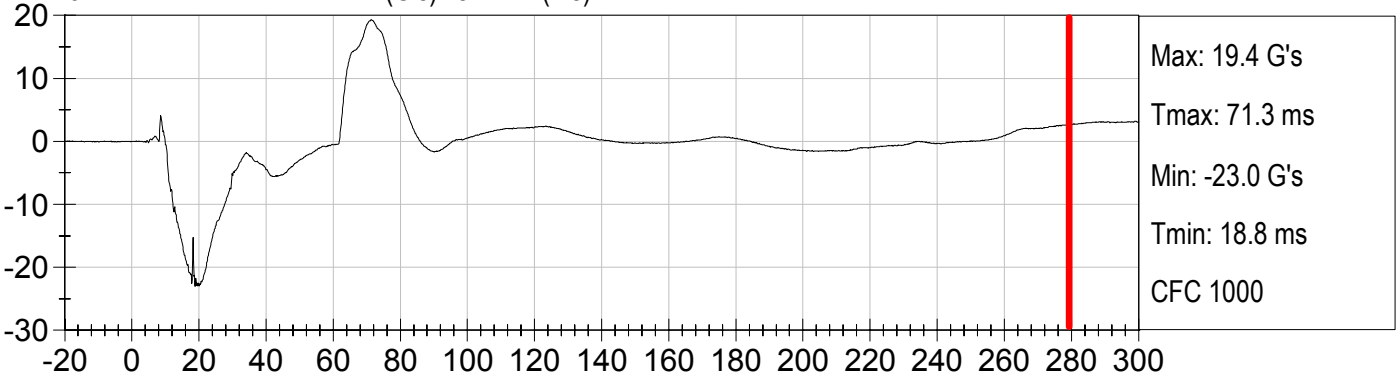


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 6)

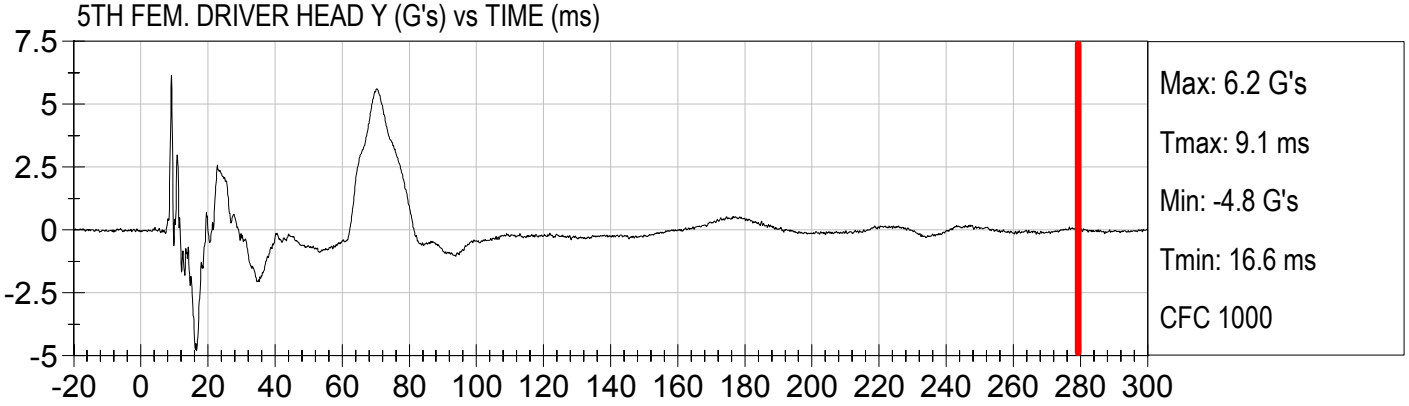
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

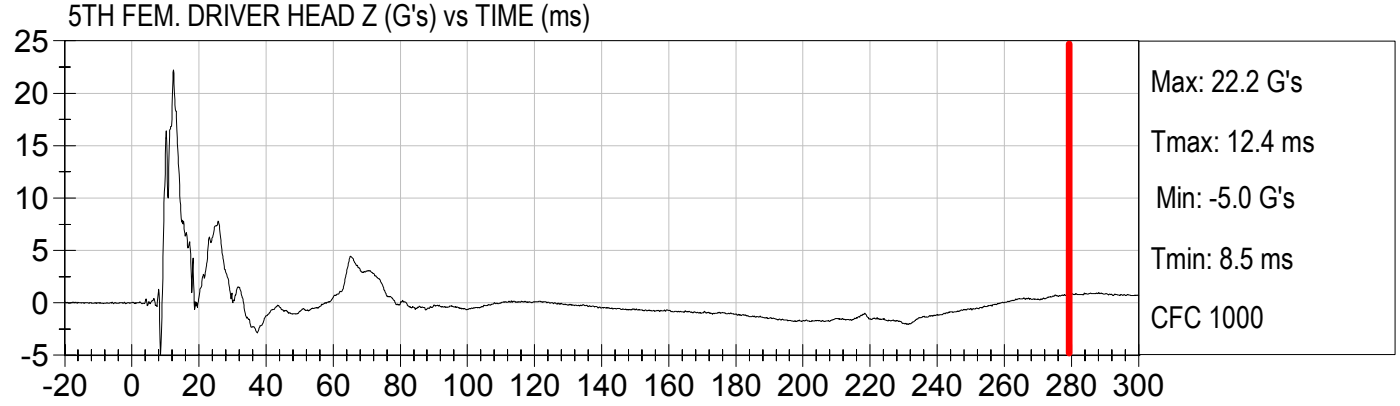
5TH FEM. DRIVER HEAD X (G's) vs TIME (ms)



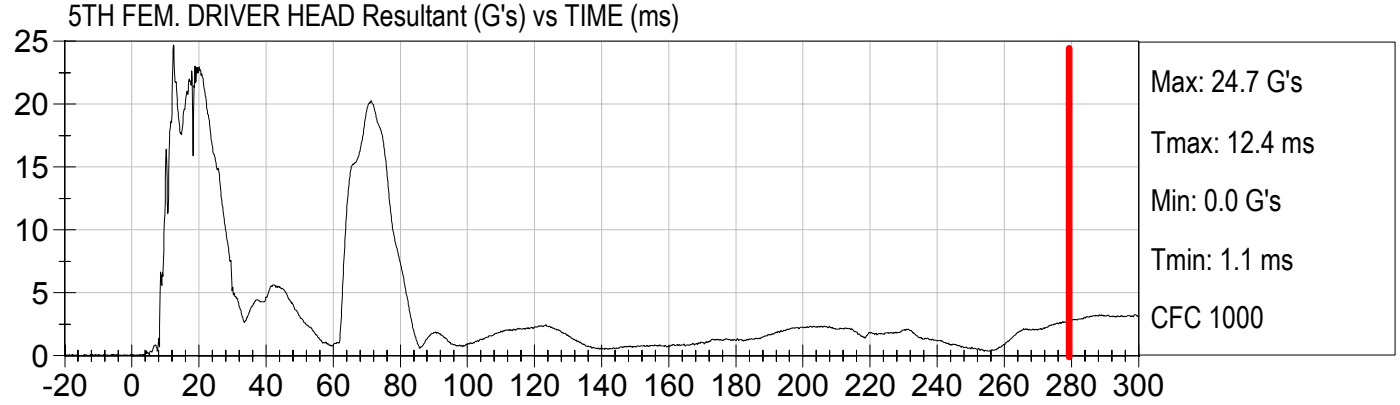
5TH FEM. DRIVER HEAD Y (G's) vs TIME (ms)



5TH FEM. DRIVER HEAD Z (G's) vs TIME (ms)



5TH FEM. DRIVER HEAD Resultant (G's) vs TIME (ms)

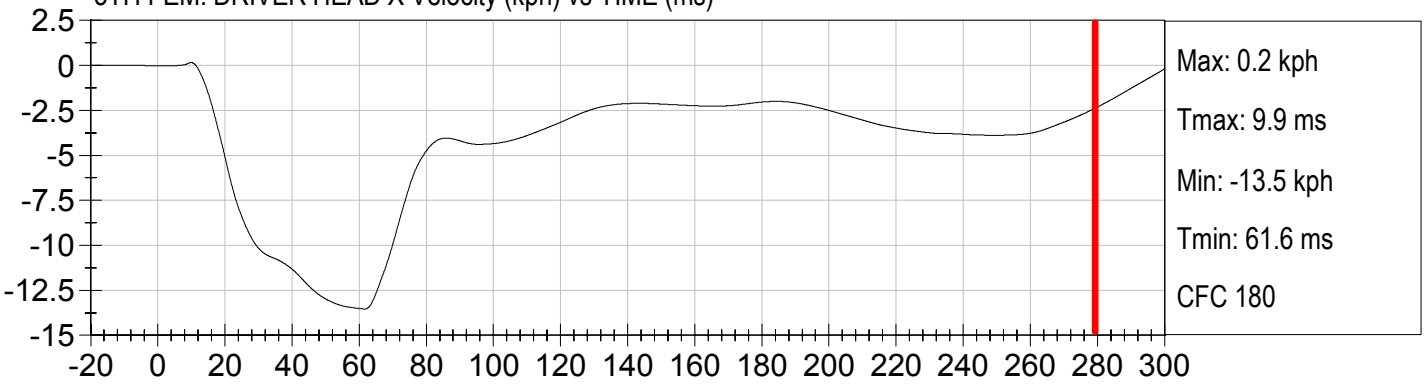


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 6)

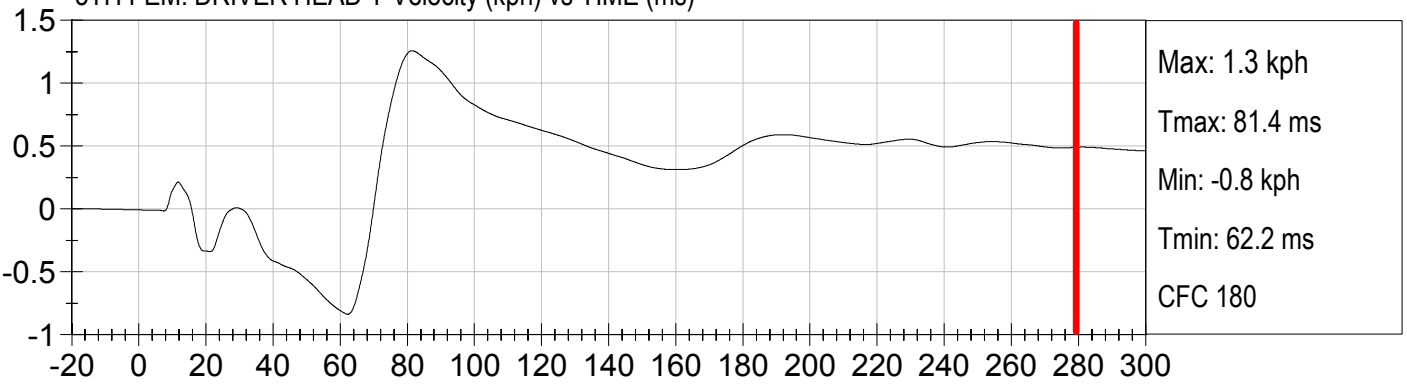
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

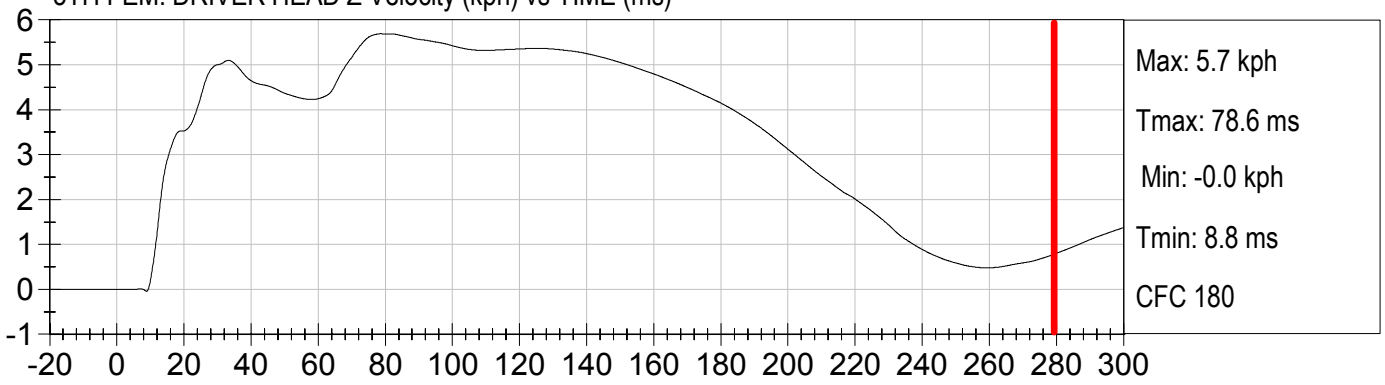
5TH FEM. DRIVER HEAD X Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER HEAD Y Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER HEAD Z Velocity (kph) vs TIME (ms)

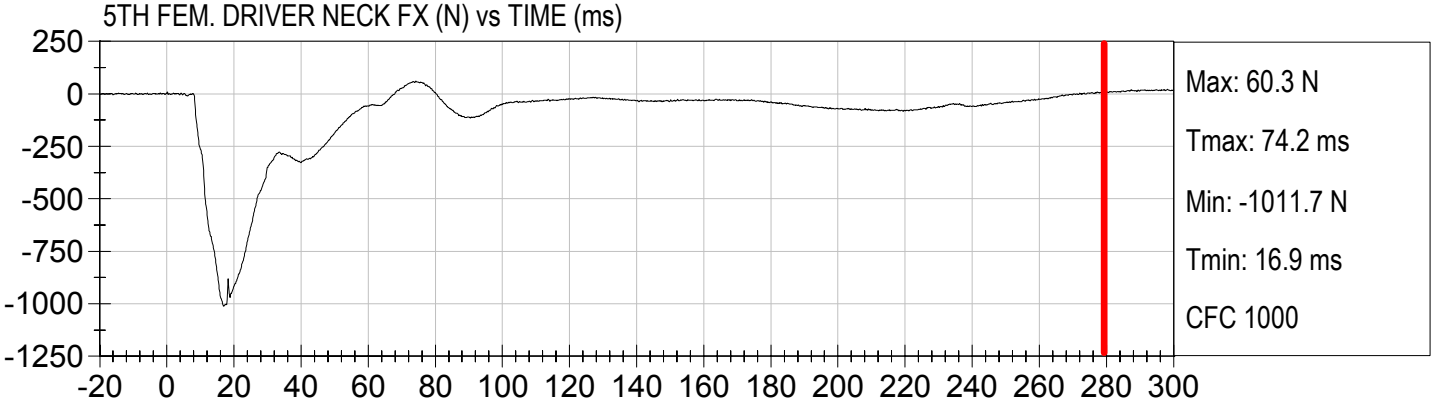


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 6)

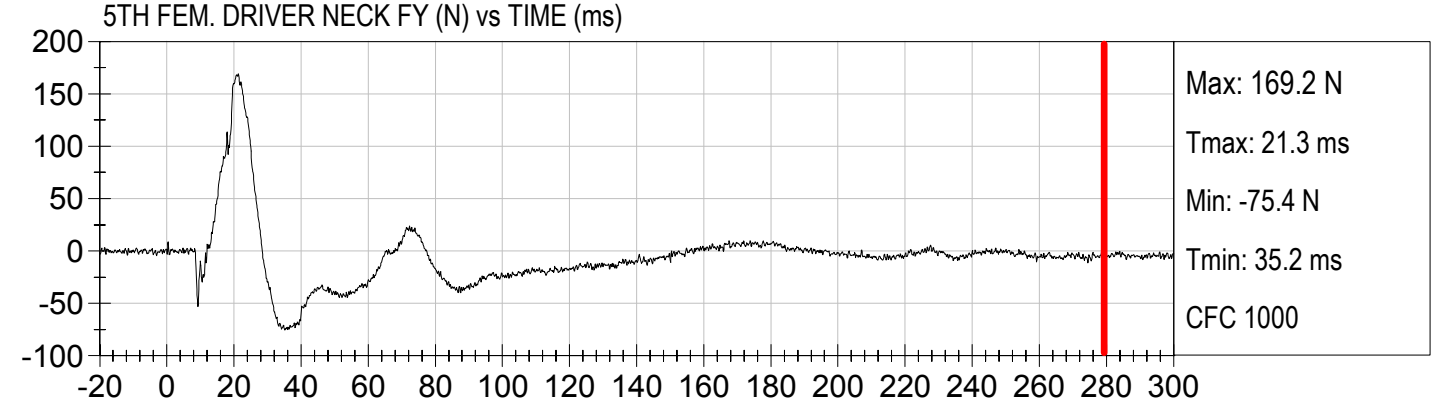
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

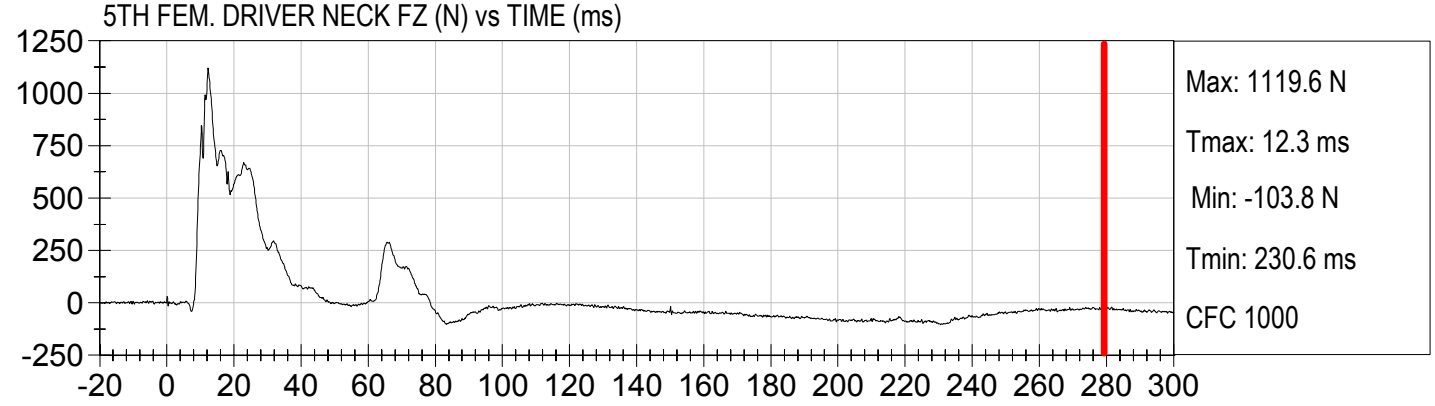
5TH FEM. DRIVER NECK FX (N) vs TIME (ms)



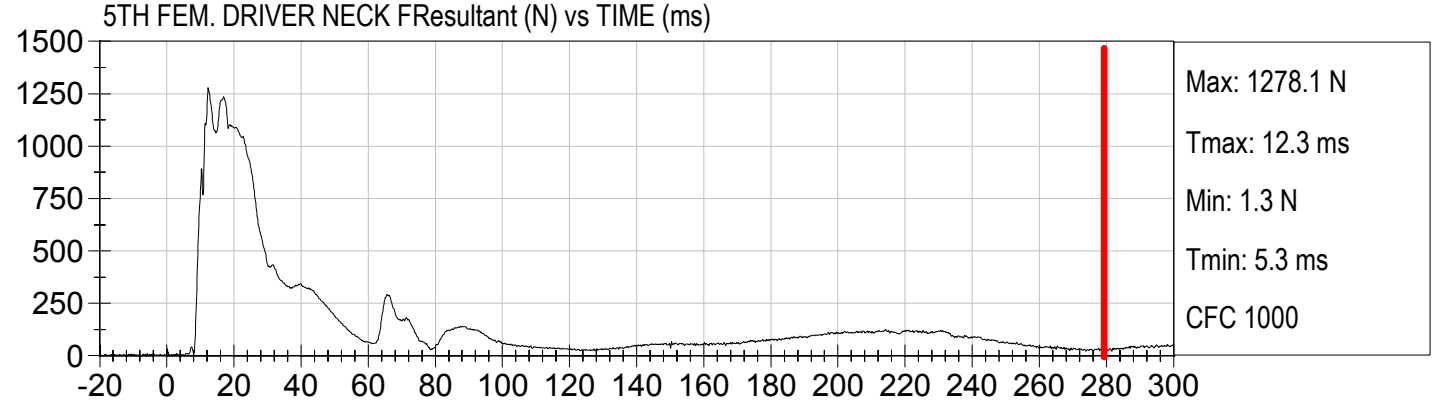
5TH FEM. DRIVER NECK FY (N) vs TIME (ms)



5TH FEM. DRIVER NECK FZ (N) vs TIME (ms)



5TH FEM. DRIVER NECK FResultant (N) vs TIME (ms)

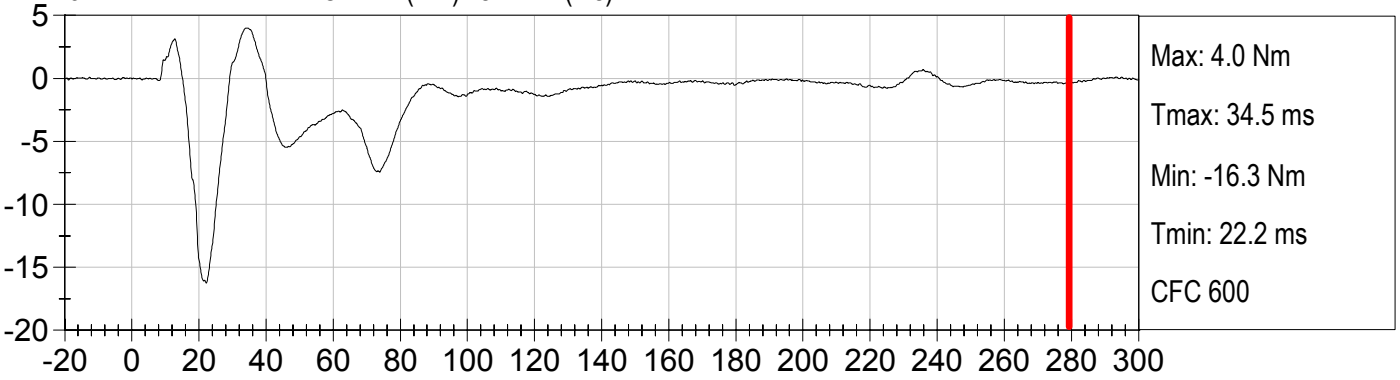


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 6)

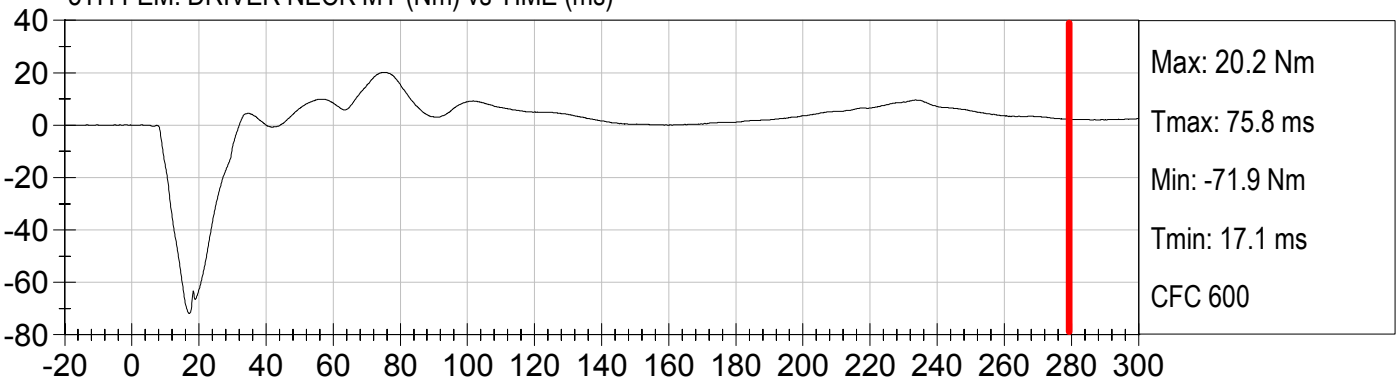
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

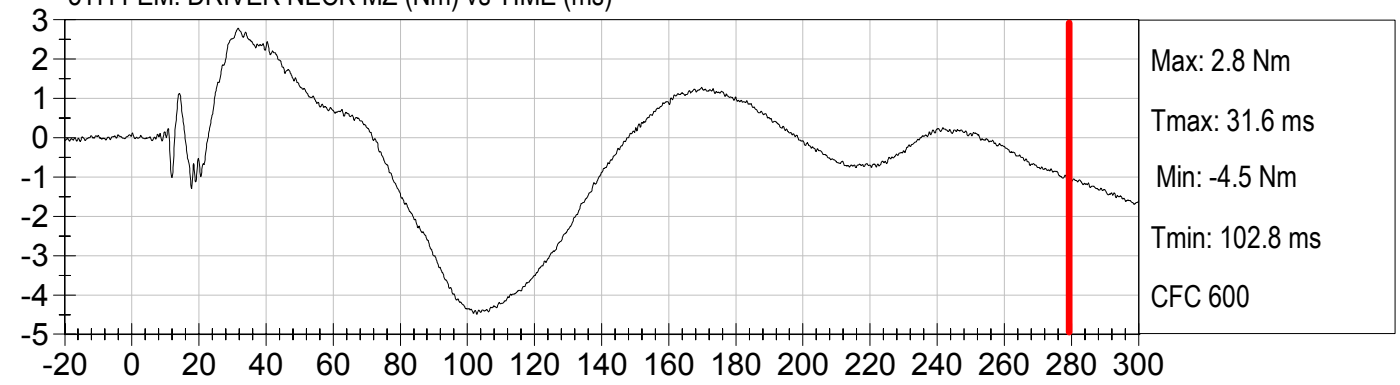
5TH FEM. DRIVER NECK MX (Nm) vs TIME (ms)



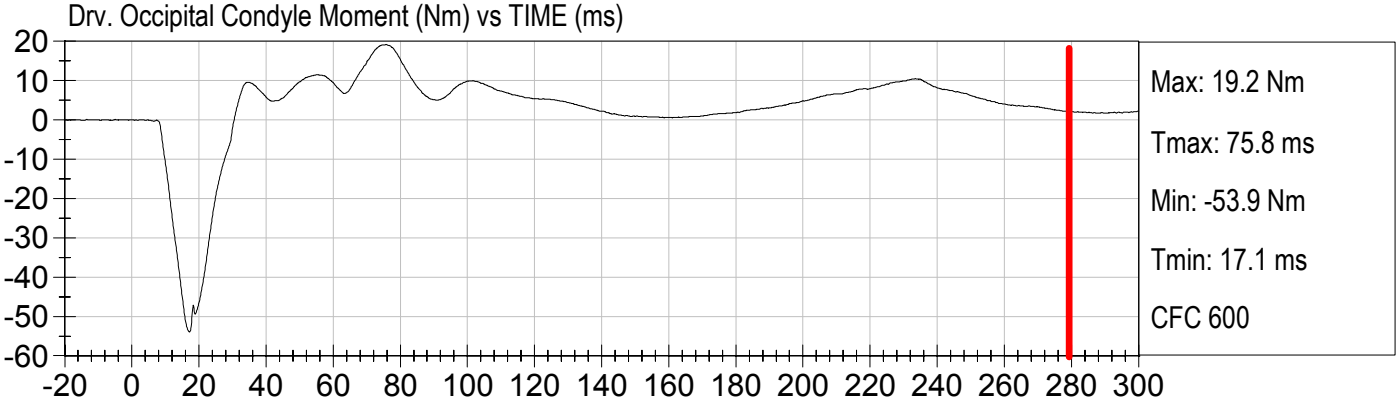
5TH FEM. DRIVER NECK MY (Nm) vs TIME (ms)



5TH FEM. DRIVER NECK MZ (Nm) vs TIME (ms)



Drv. Occipital Condyle Moment (Nm) vs TIME (ms)

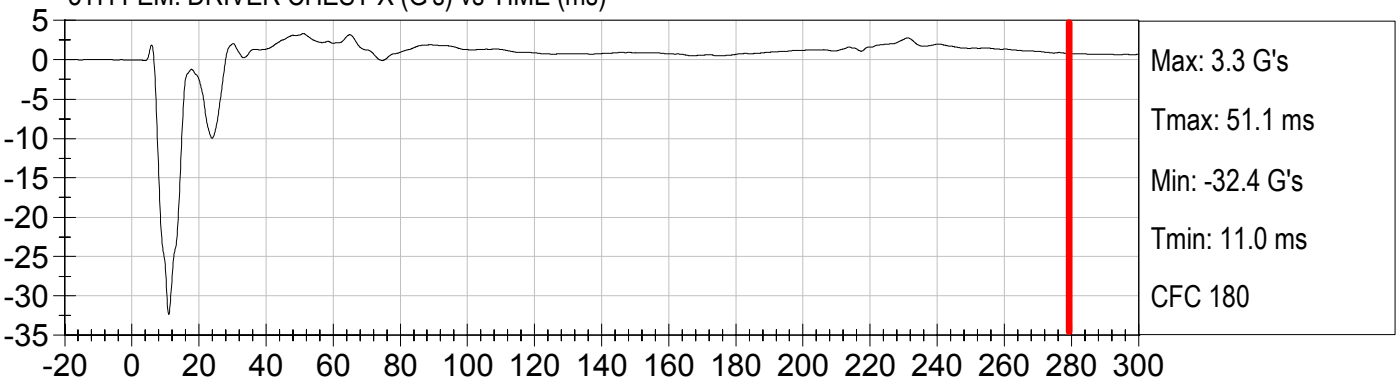


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 6)

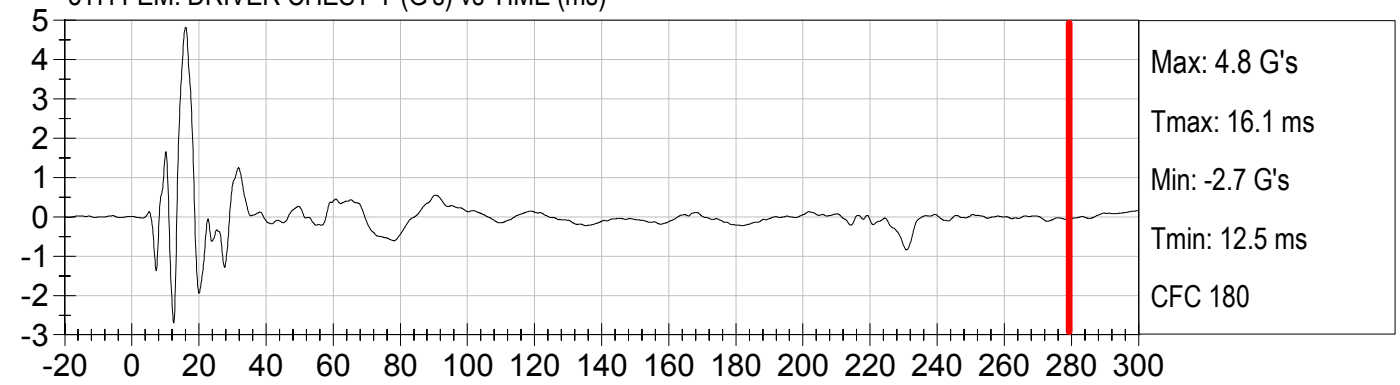
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

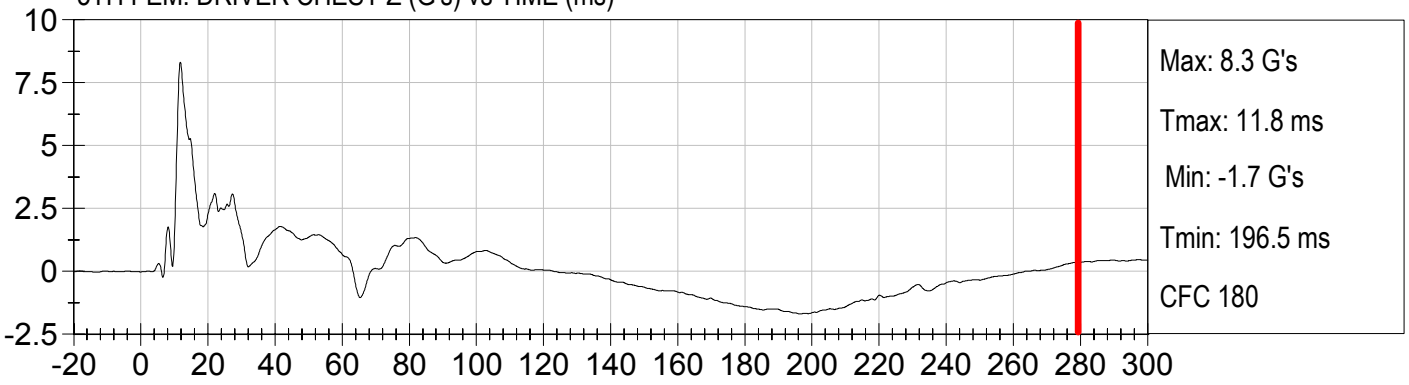
5TH FEM. DRIVER CHEST X (G's) vs TIME (ms)



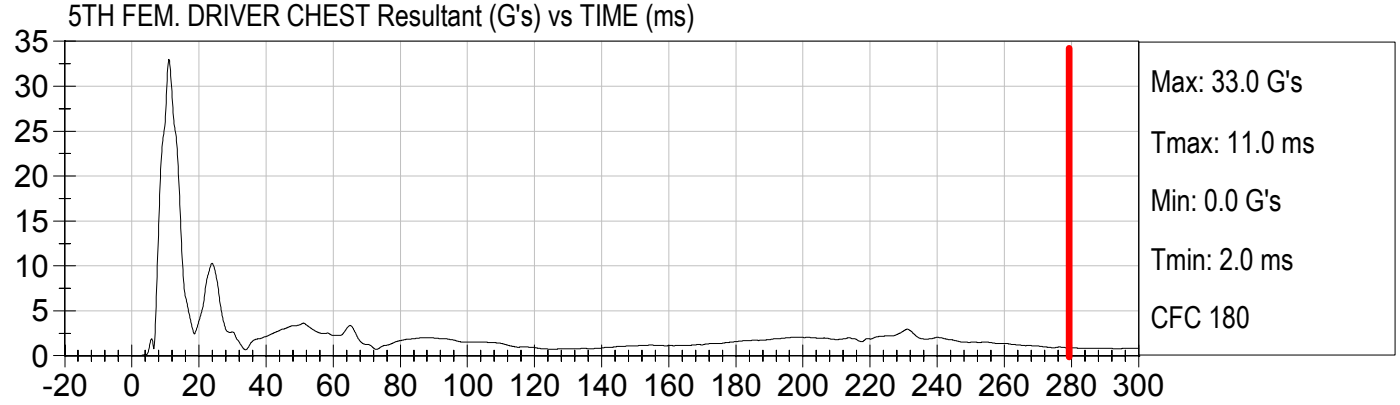
5TH FEM. DRIVER CHEST Y (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Z (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Resultant (G's) vs TIME (ms)

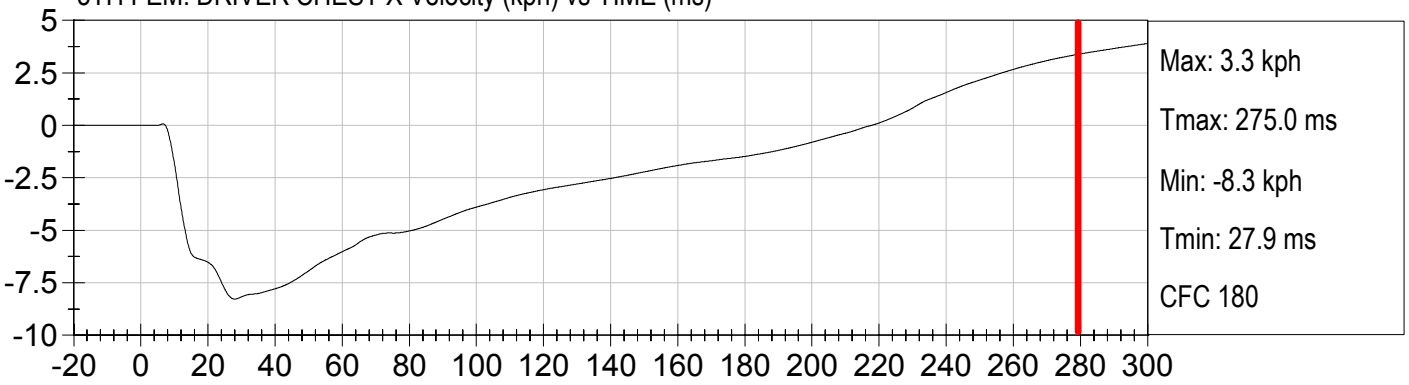


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 6)

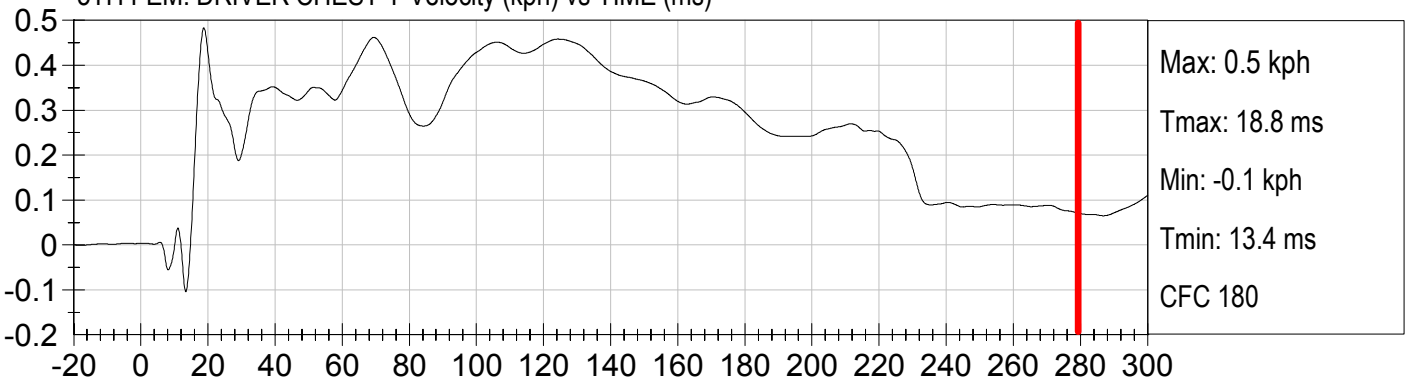
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

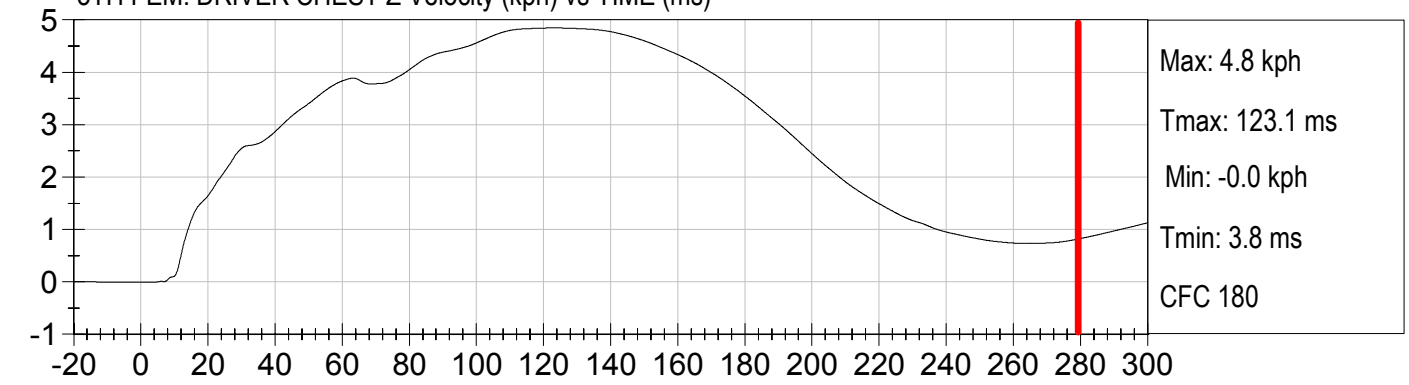
5TH FEM. DRIVER CHEST X Velocity (kph) vs TIME (ms)



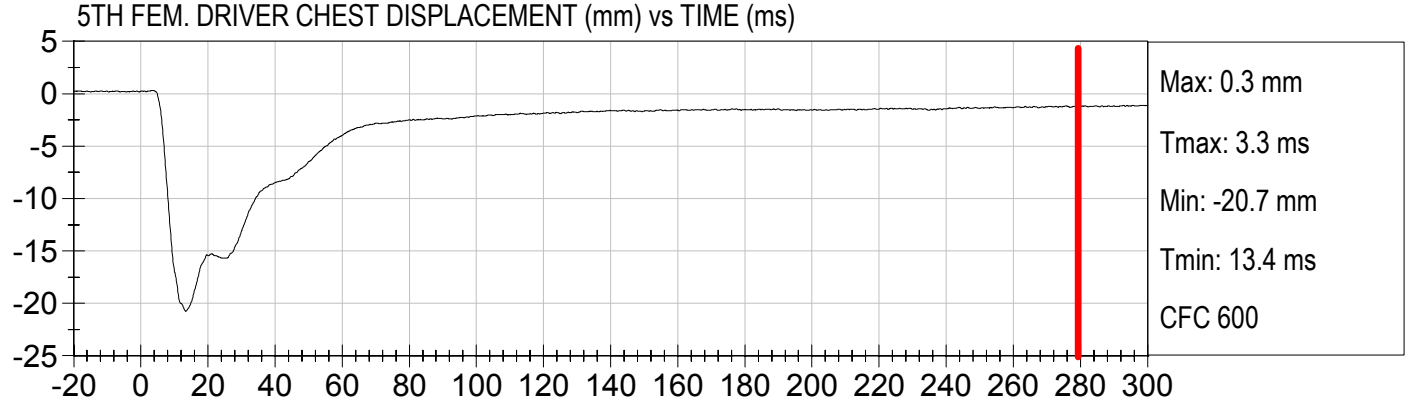
5TH FEM. DRIVER CHEST Y Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST Z Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST DISPLACEMENT (mm) vs TIME (ms)

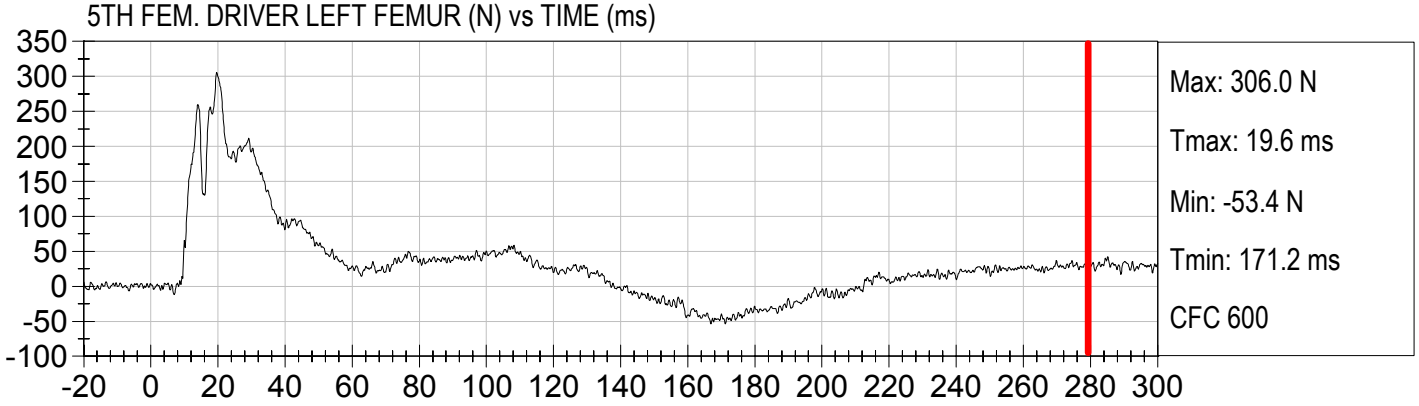


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 6)

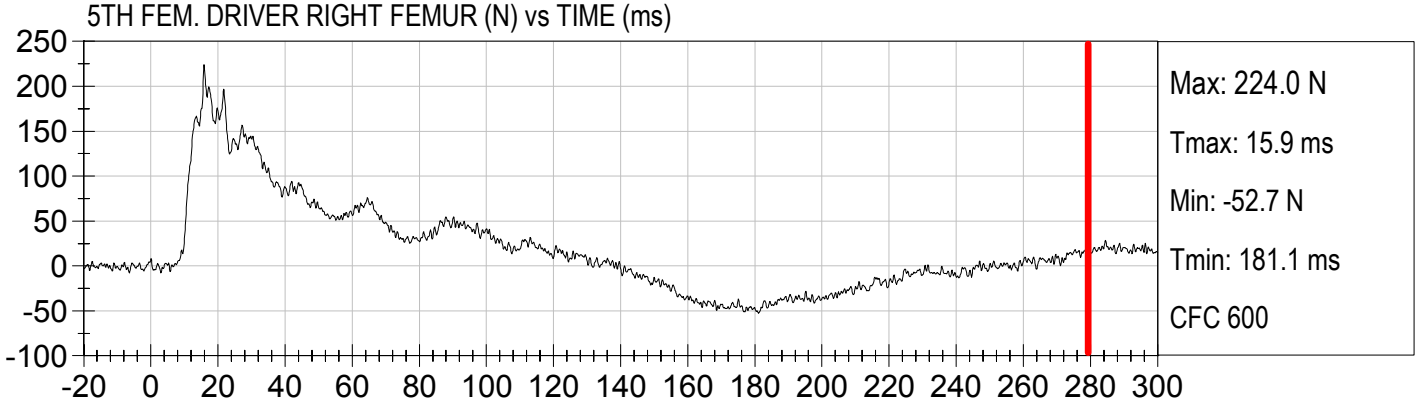
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

5TH FEM. DRIVER LEFT FEMUR (N) vs TIME (ms)



5TH FEM. DRIVER RIGHT FEMUR (N) vs TIME (ms)

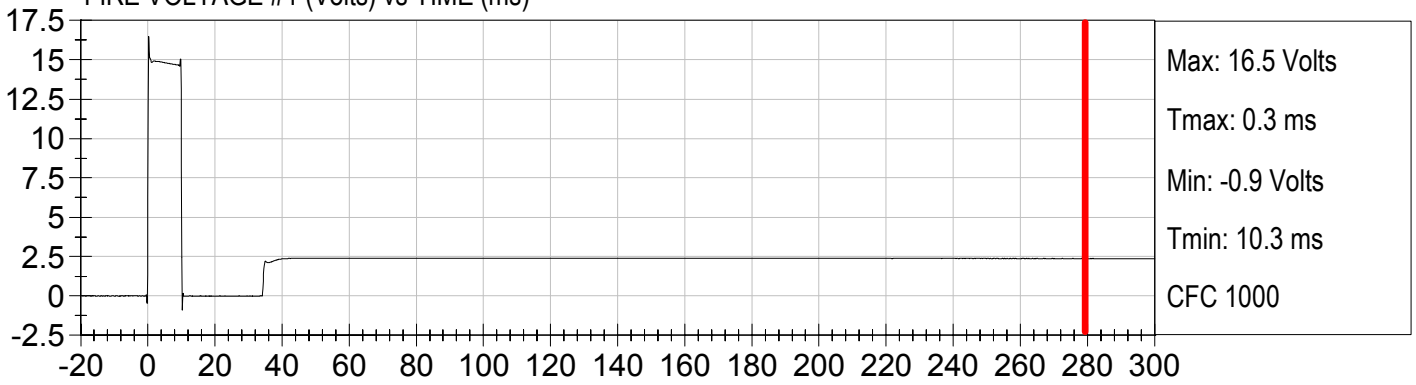


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 6)

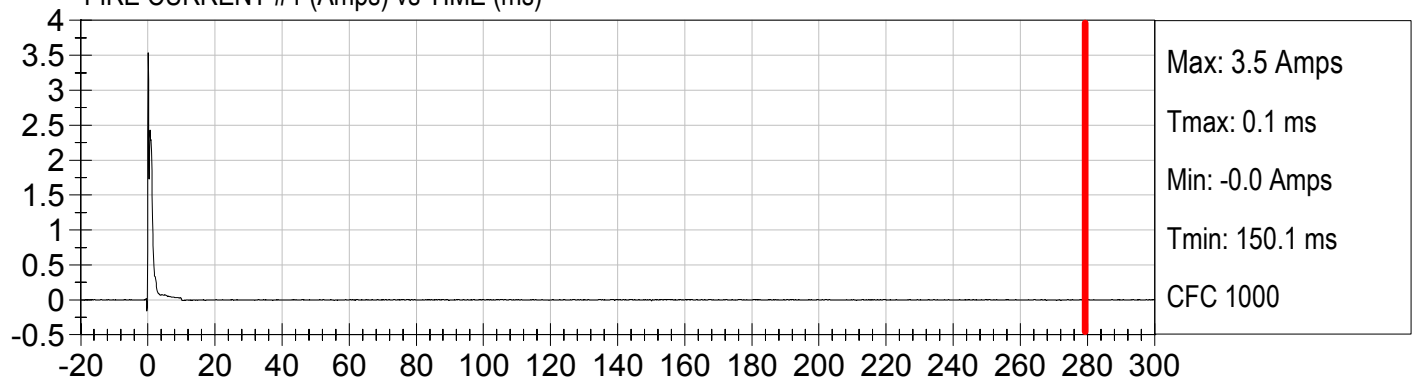
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

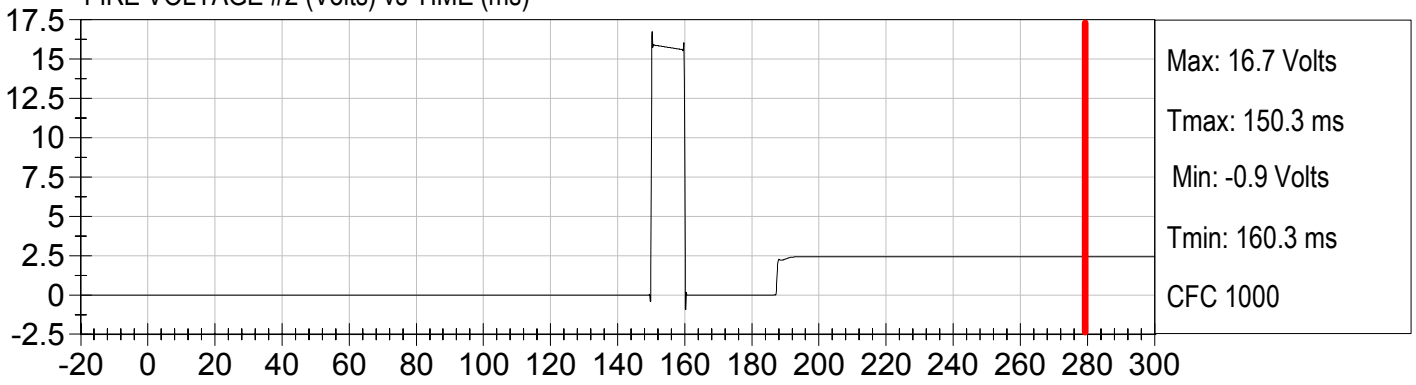
FIRE VOLTAGE #1 (Volts) vs TIME (ms)



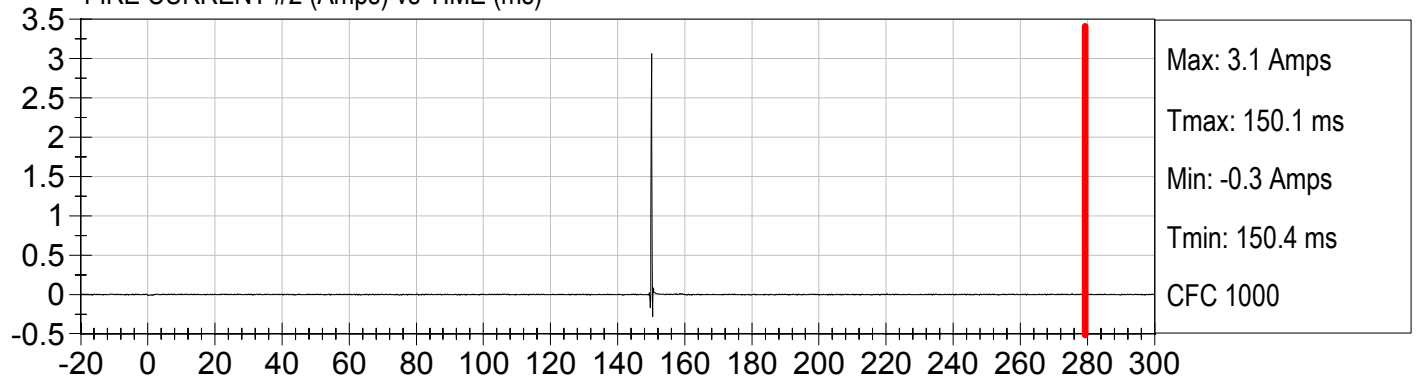
FIRE CURRENT #1 (Amps) vs TIME (ms)



FIRE VOLTAGE #2 (Volts) vs TIME (ms)



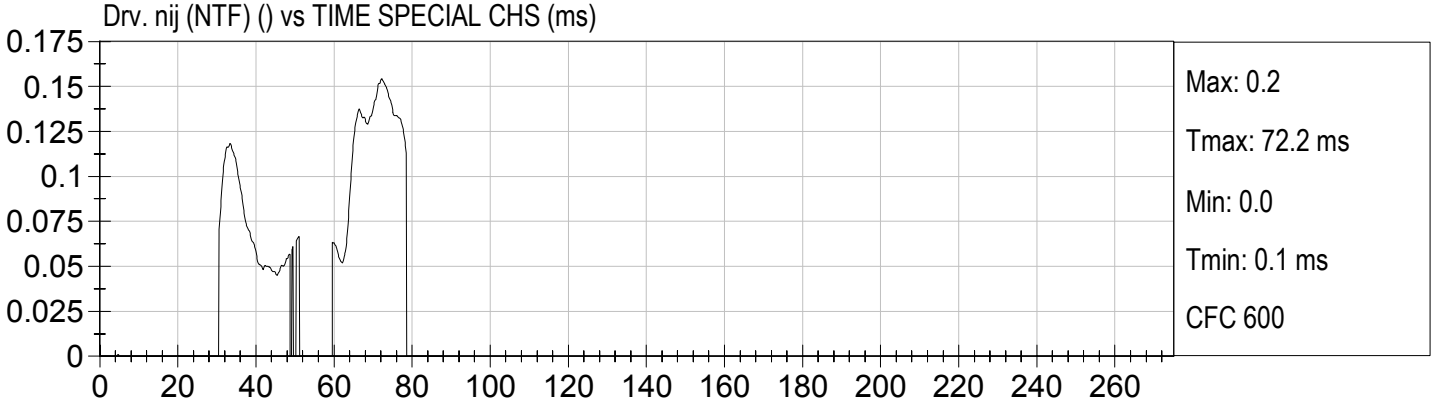
FIRE CURRENT #2 (Amps) vs TIME (ms)



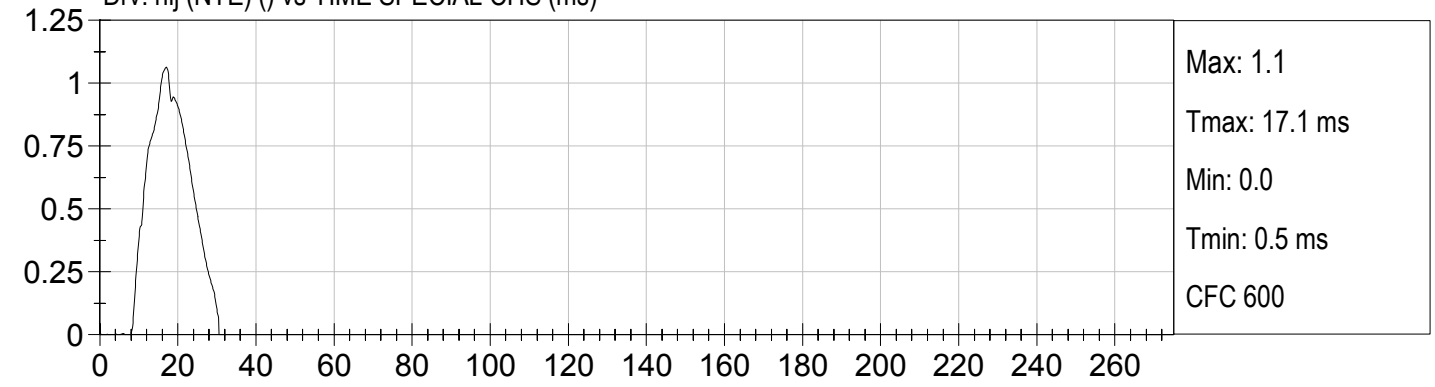
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 6)

Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

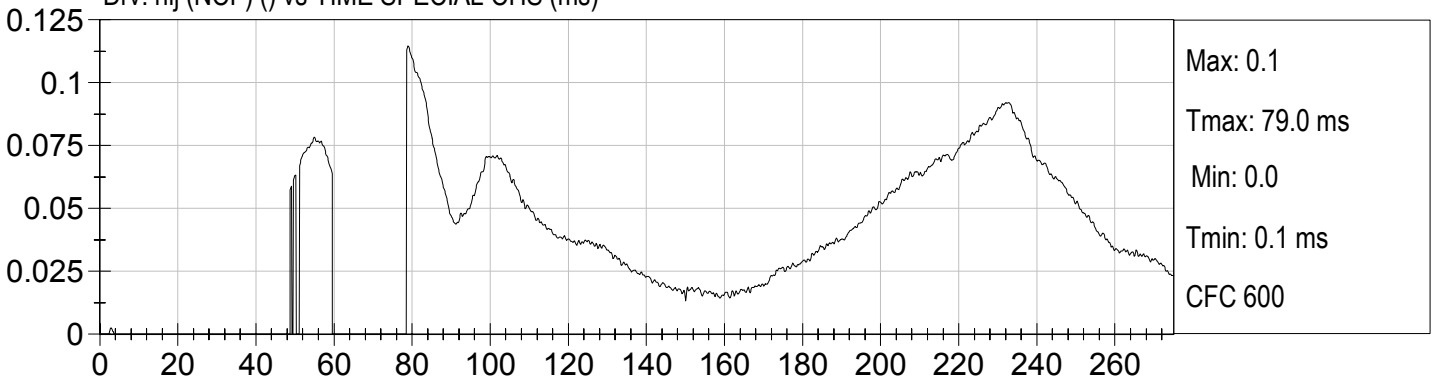
Drv. nij (NTF) () vs TIME SPECIAL CHS (ms)



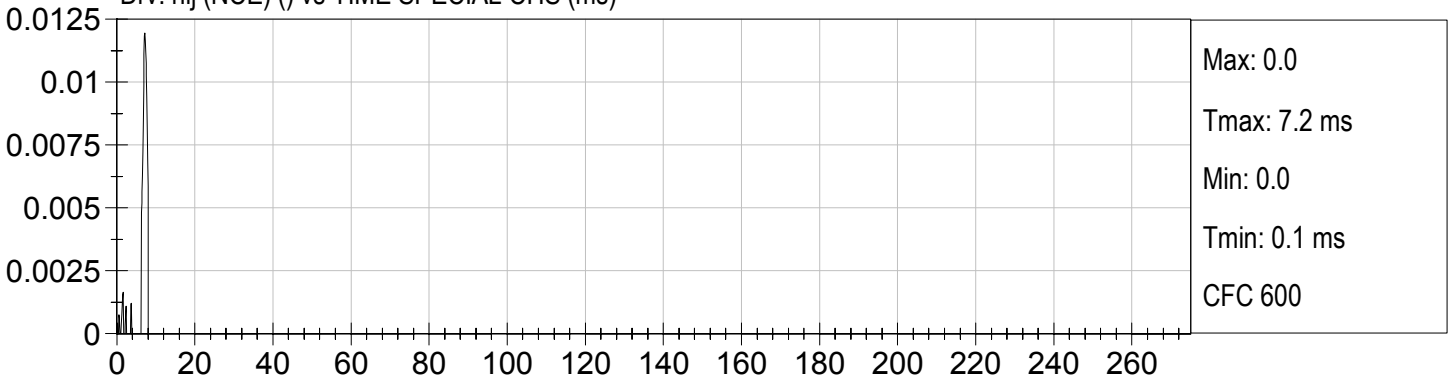
Drv. nij (NTE) () vs TIME SPECIAL CHS (ms)



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



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

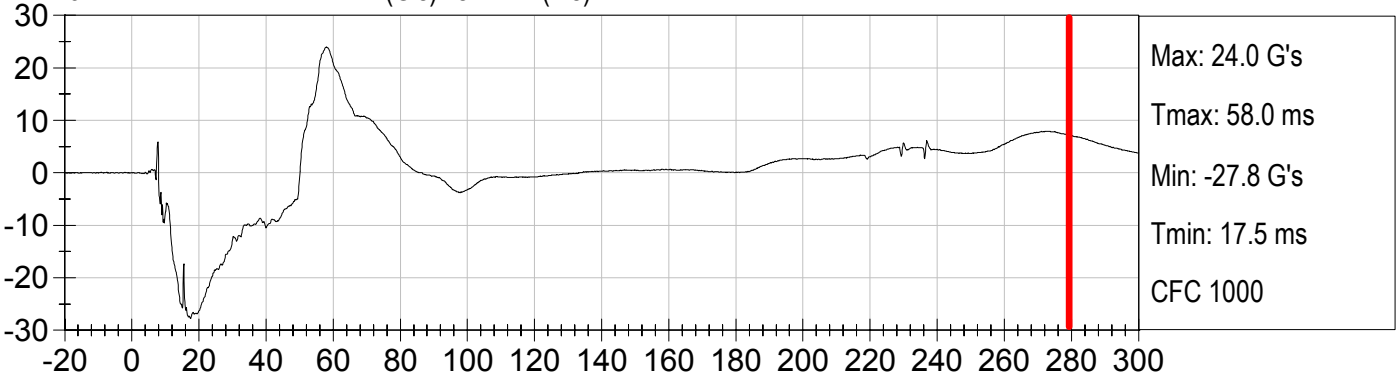


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 7)

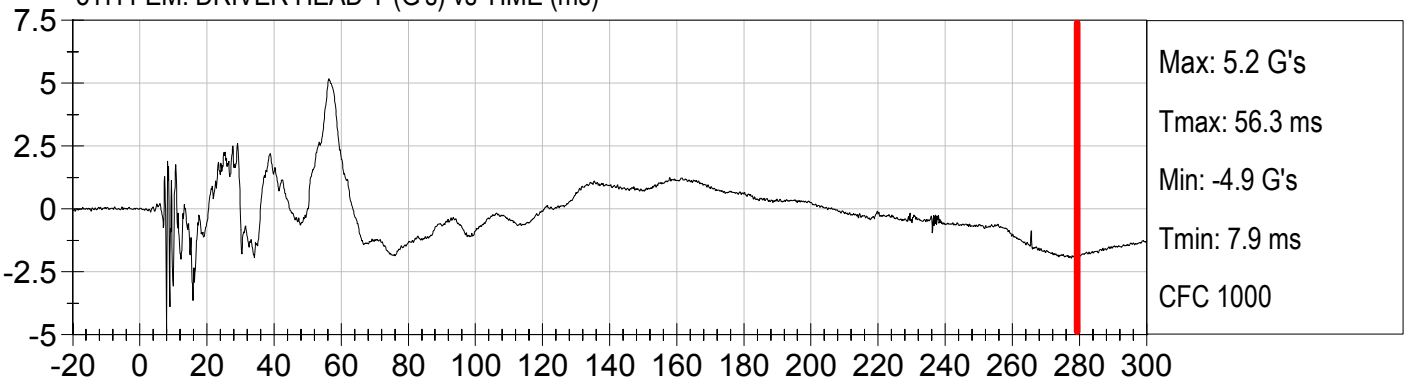
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

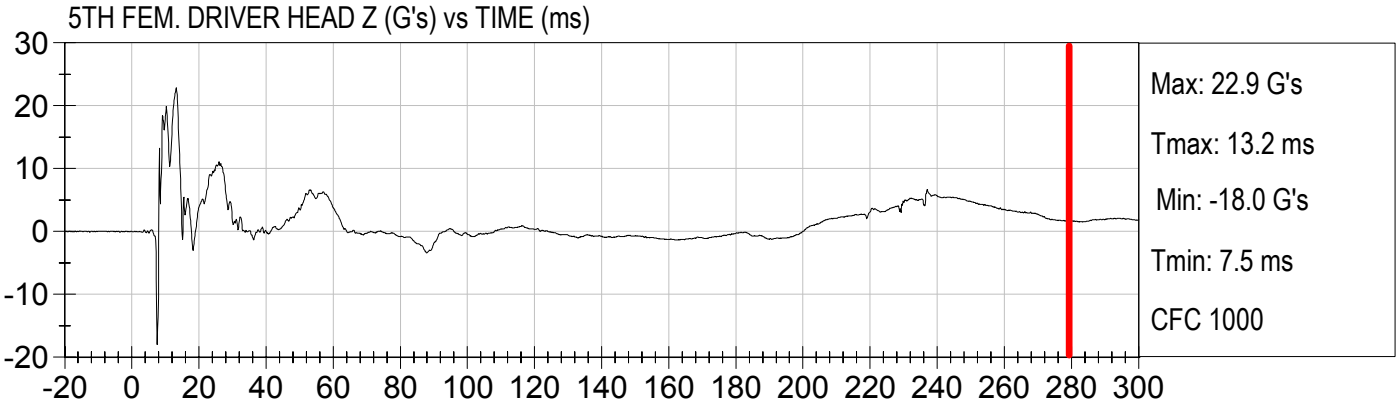
5TH FEM. DRIVER HEAD X (G's) vs TIME (ms)



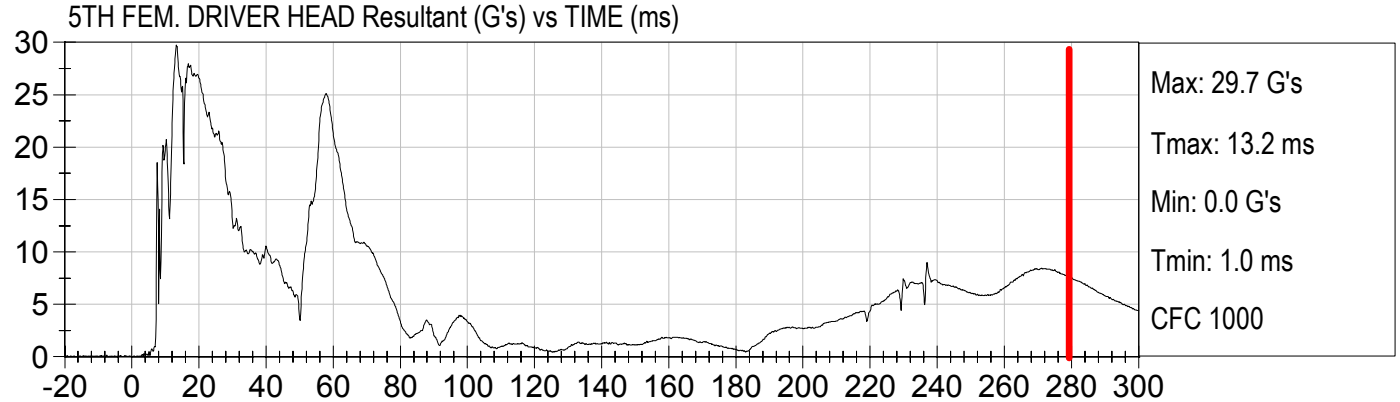
5TH FEM. DRIVER HEAD Y (G's) vs TIME (ms)



5TH FEM. DRIVER HEAD Z (G's) vs TIME (ms)



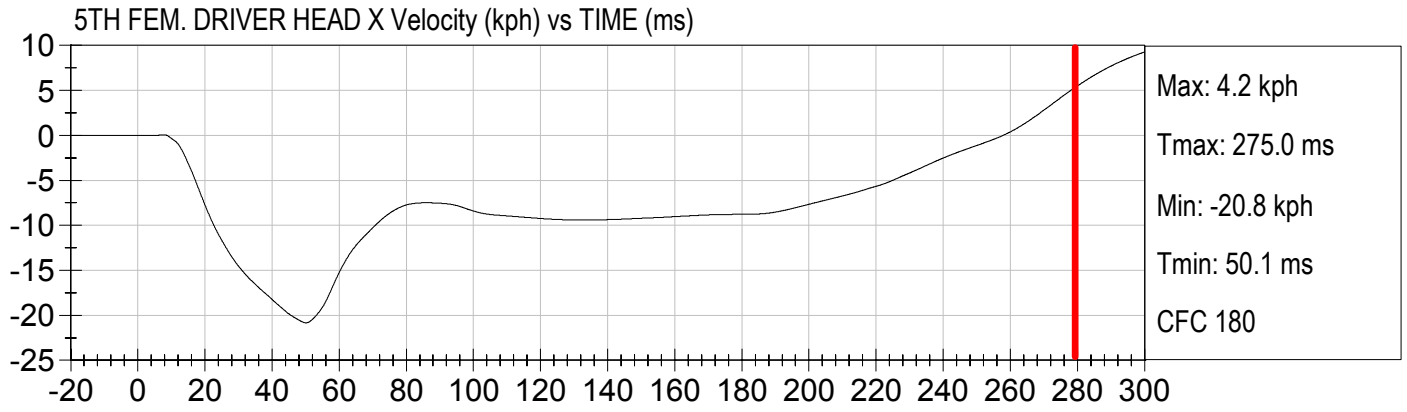
5TH FEM. DRIVER HEAD Resultant (G's) vs TIME (ms)

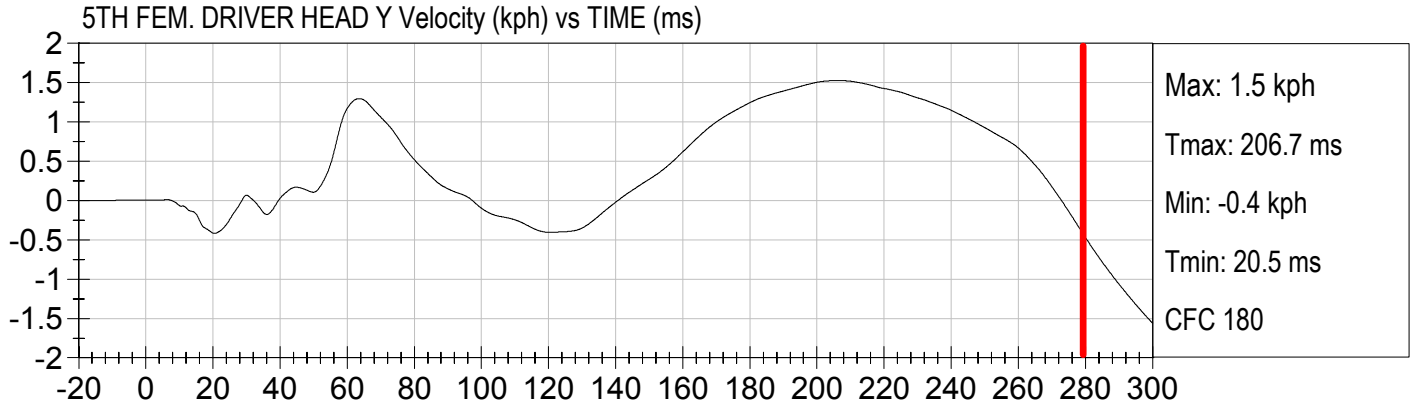


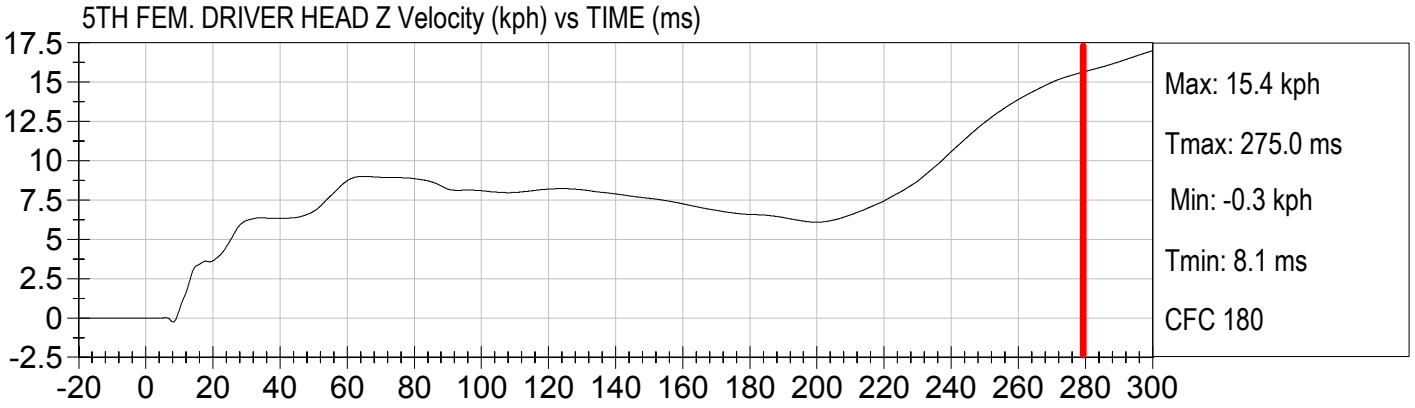
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 7)

Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms





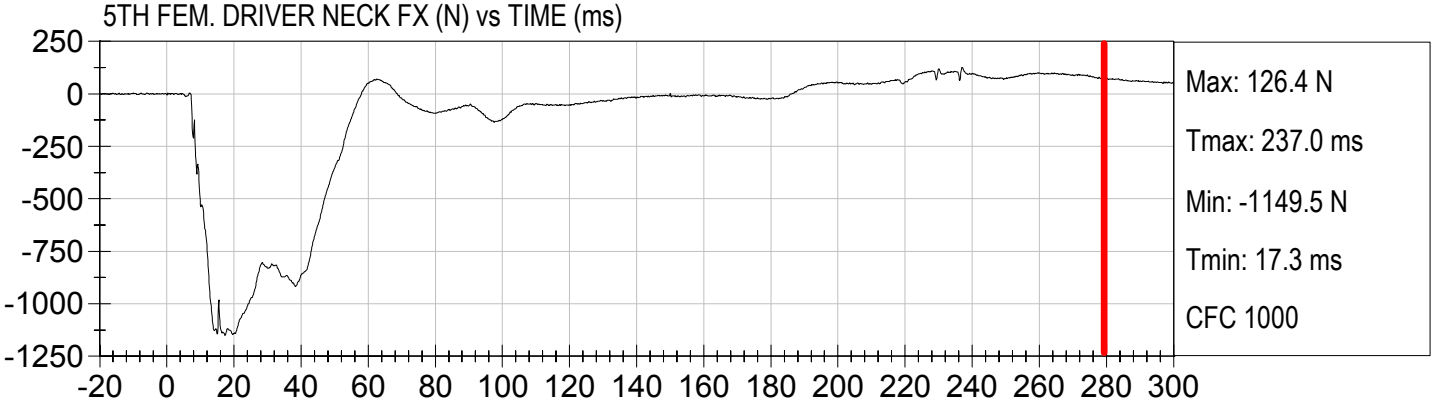


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 7)

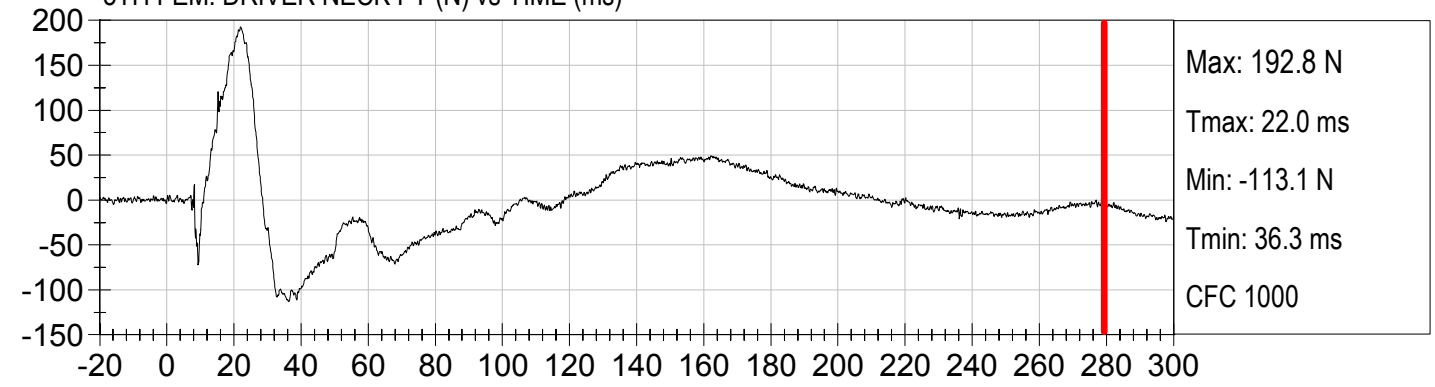
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

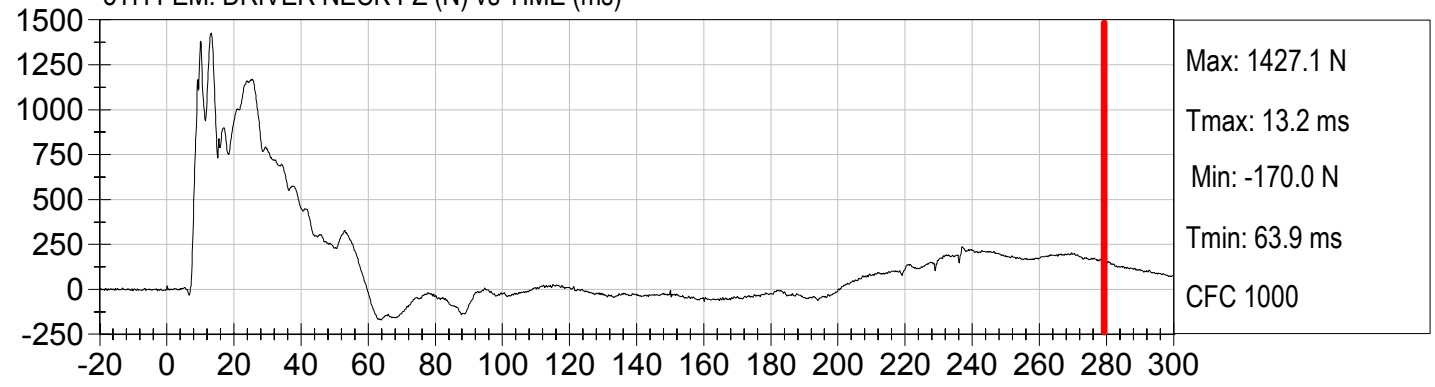
5TH FEM. DRIVER NECK FX (N) vs TIME (ms)



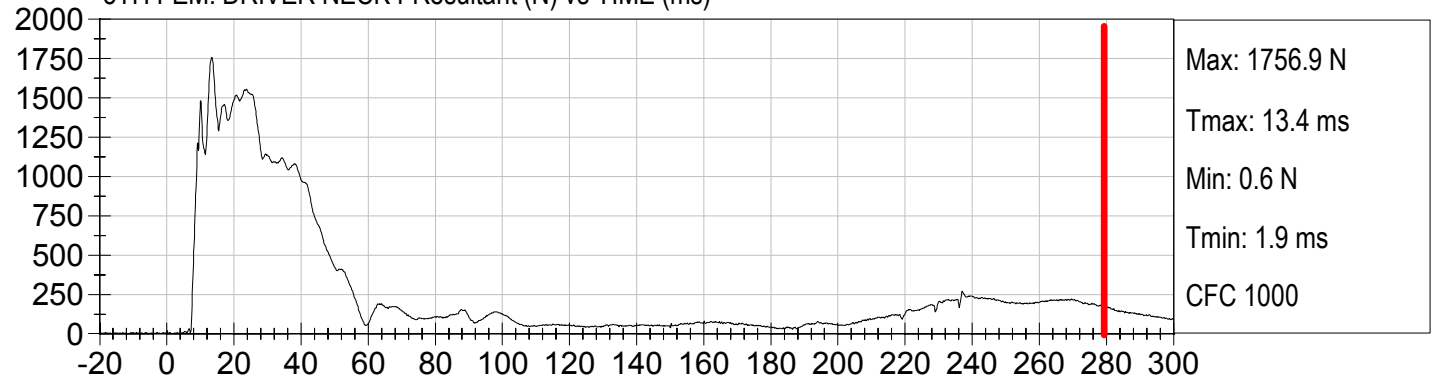
5TH FEM. DRIVER NECK FY (N) vs TIME (ms)



5TH FEM. DRIVER NECK FZ (N) vs TIME (ms)



5TH FEM. DRIVER NECK FResultant (N) vs TIME (ms)

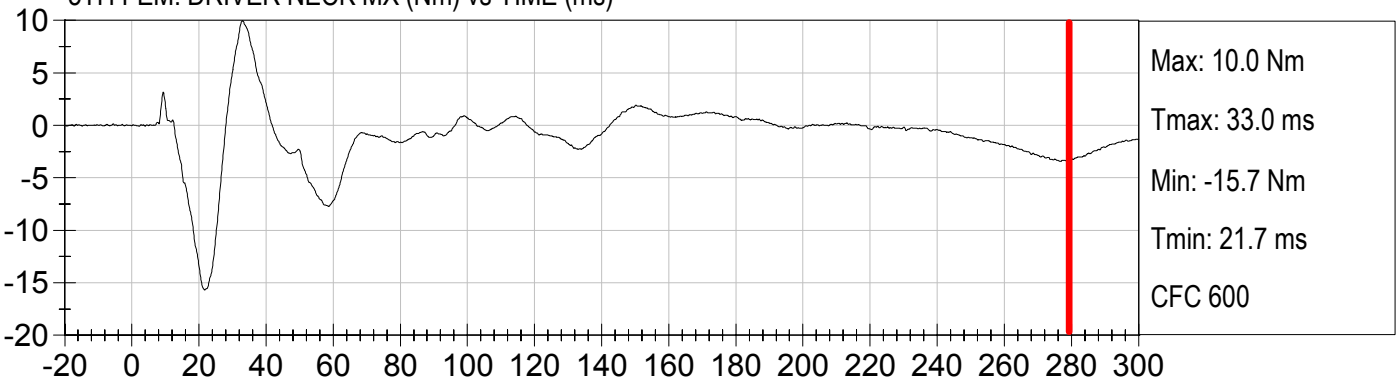


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 7)

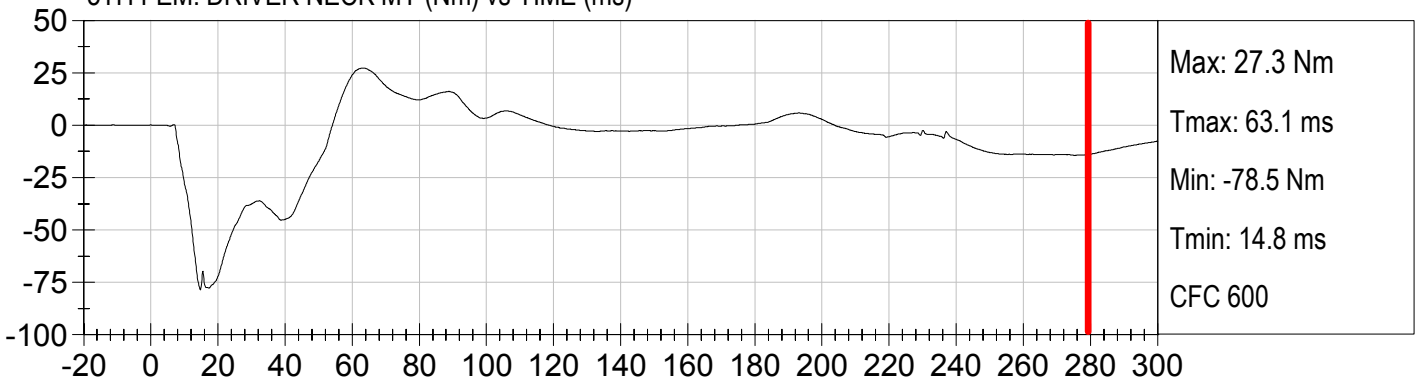
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

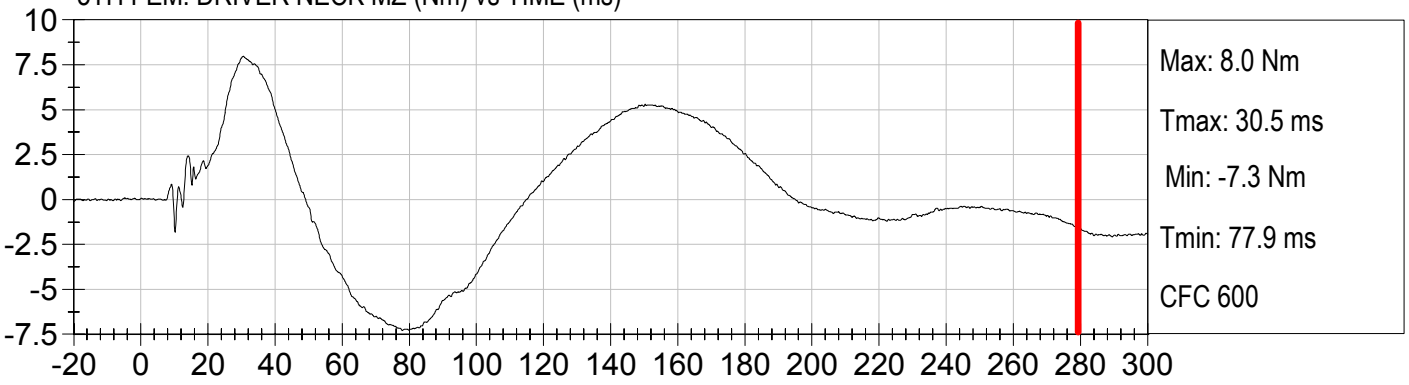
5TH FEM. DRIVER NECK MX (Nm) vs TIME (ms)



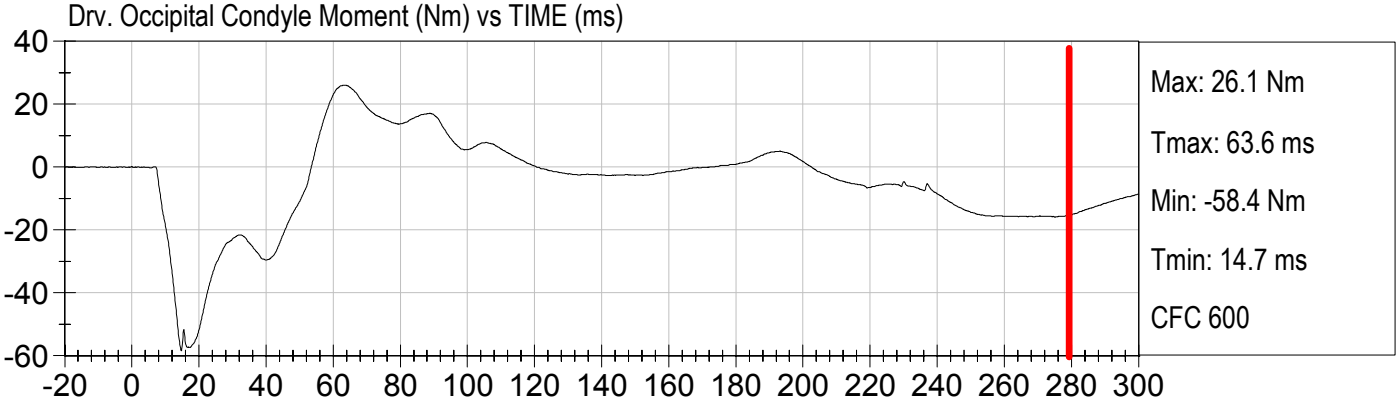
5TH FEM. DRIVER NECK MY (Nm) vs TIME (ms)



5TH FEM. DRIVER NECK MZ (Nm) vs TIME (ms)



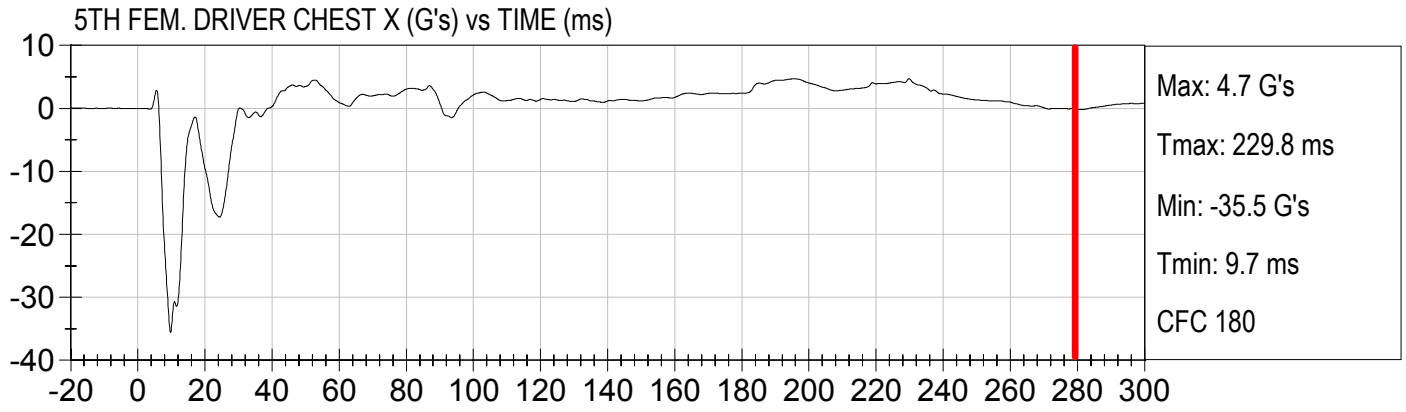
Drv. Occipital Condyle Moment (Nm) vs TIME (ms)

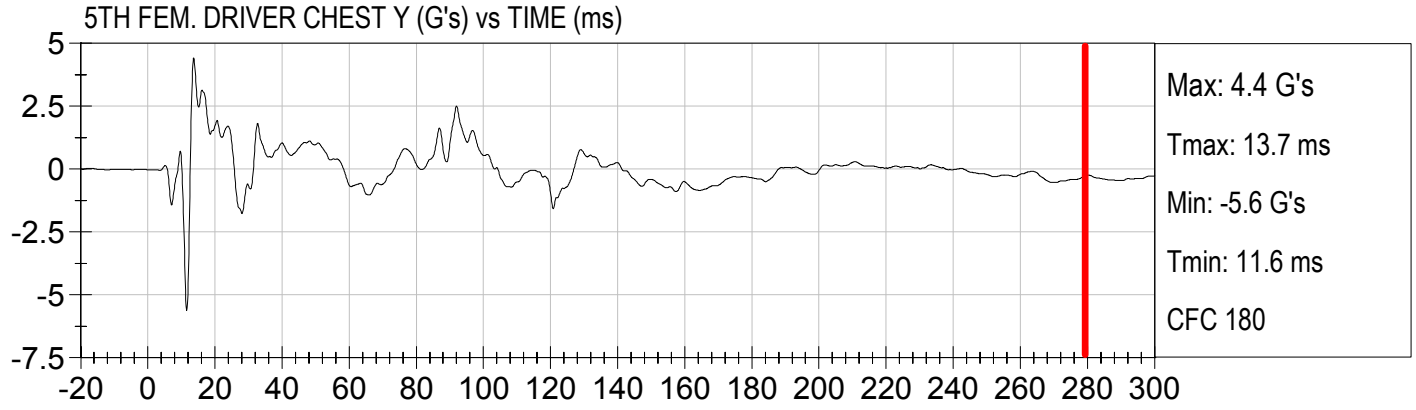


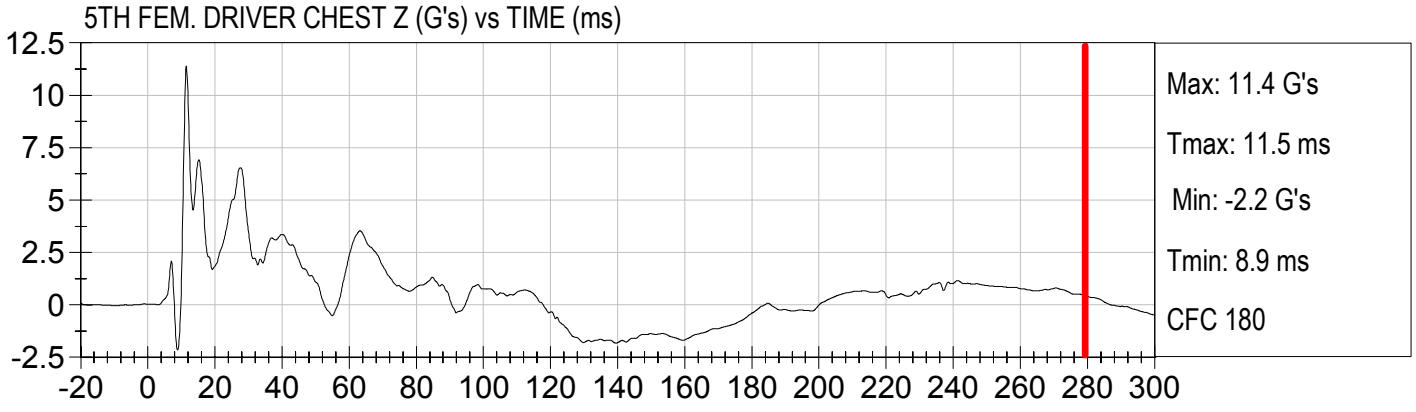
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 7)

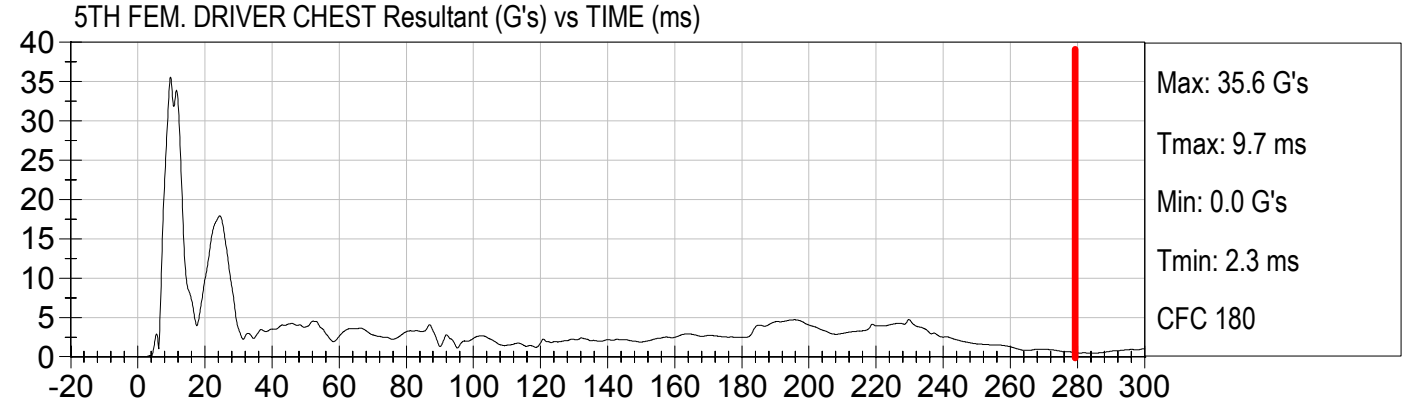
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms







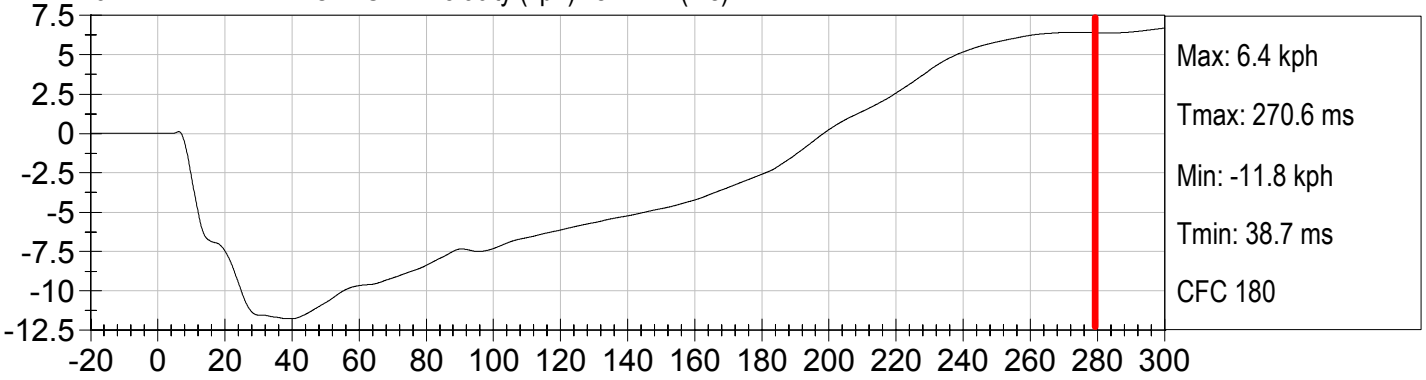


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 7)

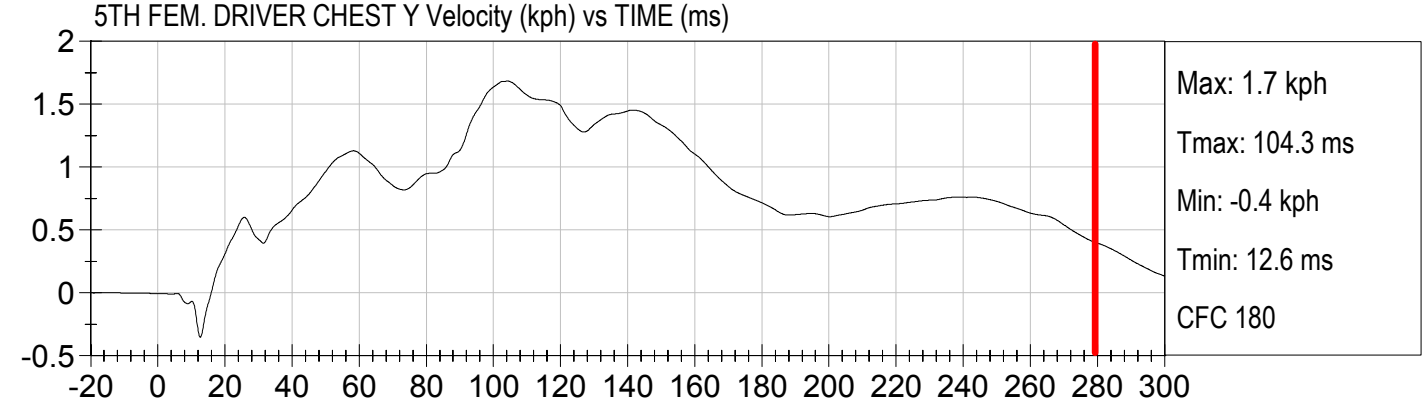
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

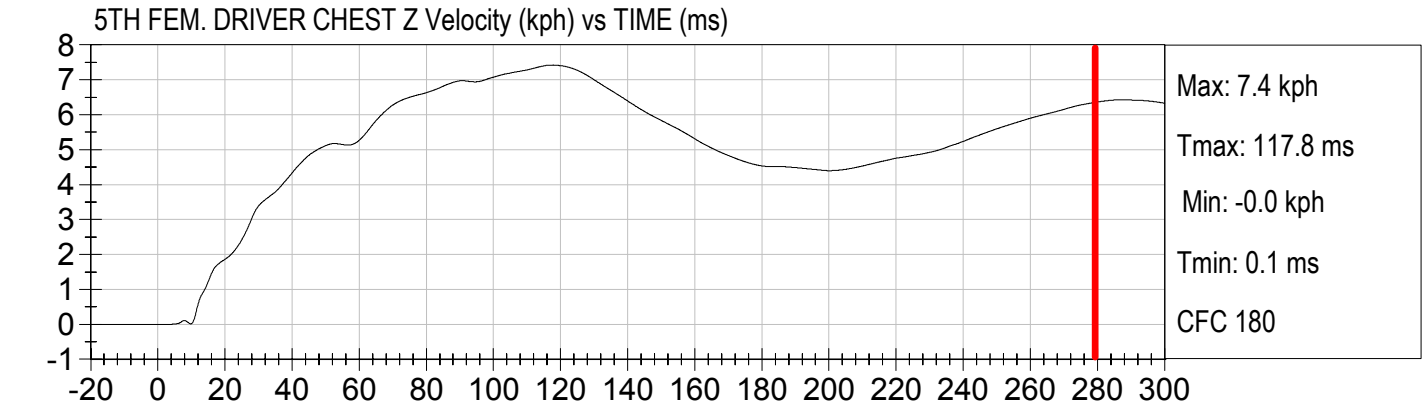
5TH FEM. DRIVER CHEST X Velocity (kph) vs TIME (ms)



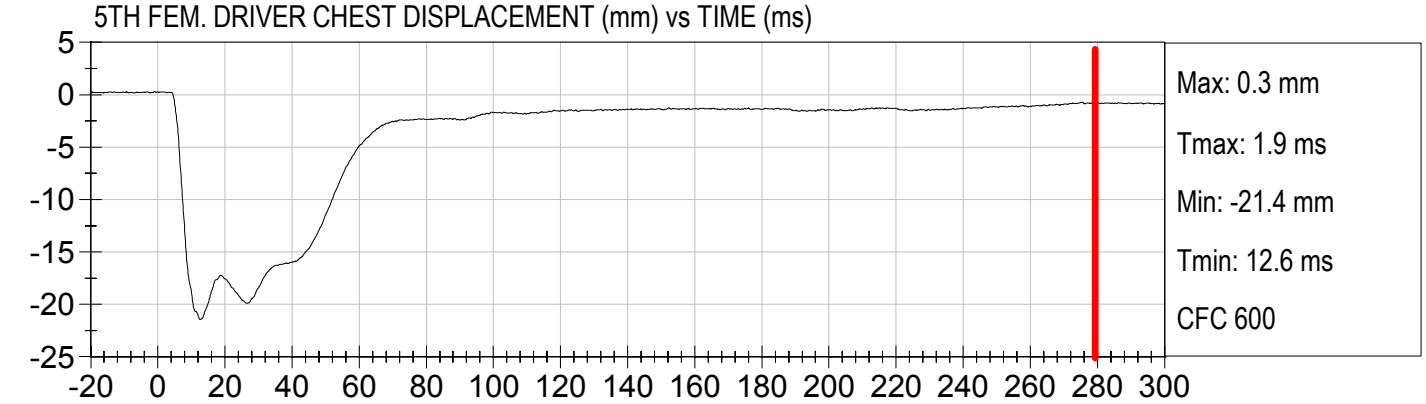
5TH FEM. DRIVER CHEST Y Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST Z Velocity (kph) vs TIME (ms)



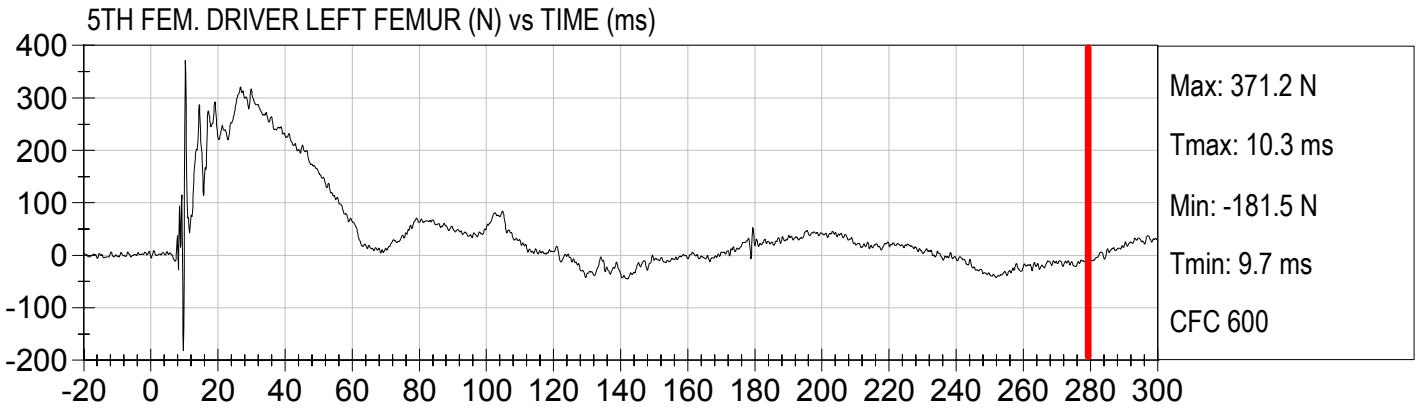
5TH FEM. DRIVER CHEST DISPLACEMENT (mm) vs TIME (ms)

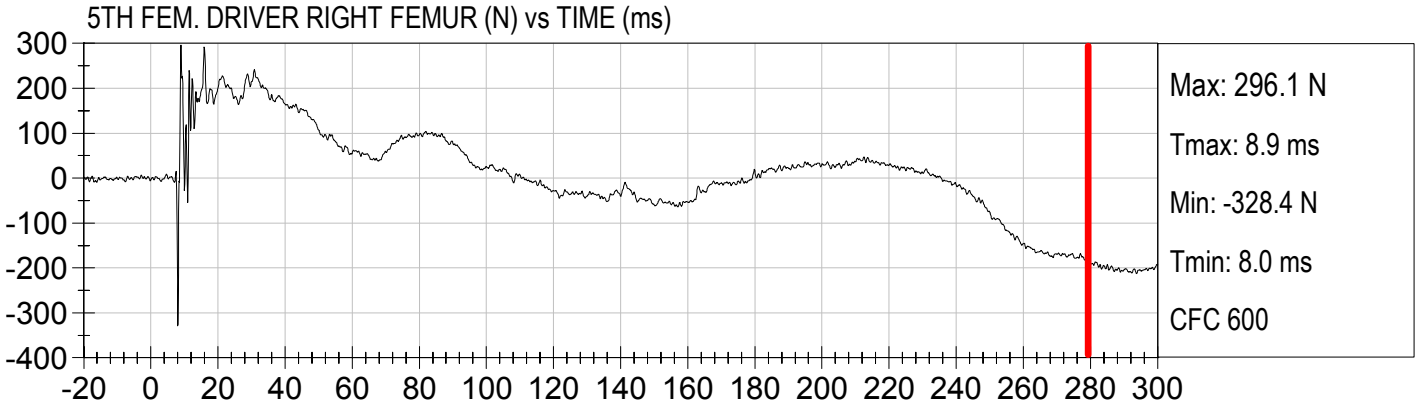


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 7)

Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms



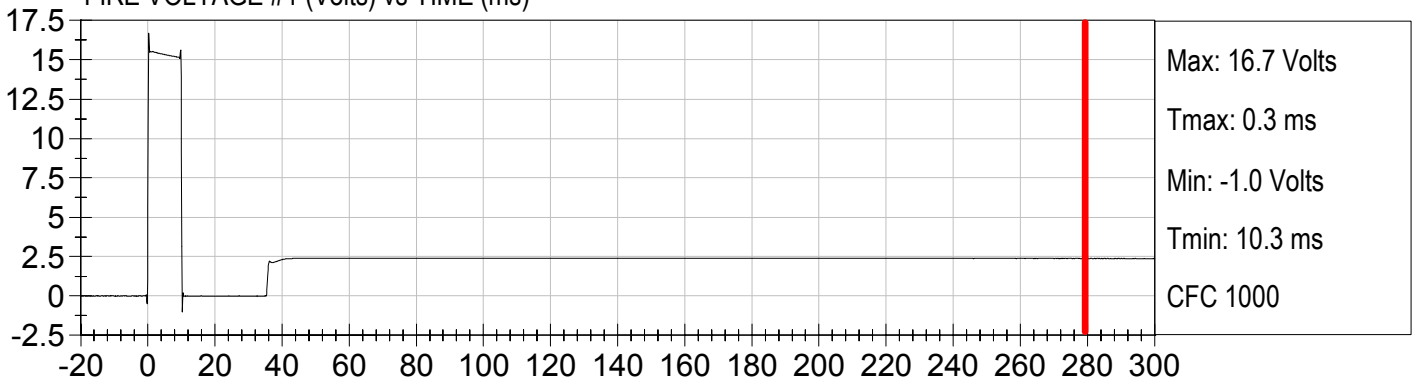


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 7)

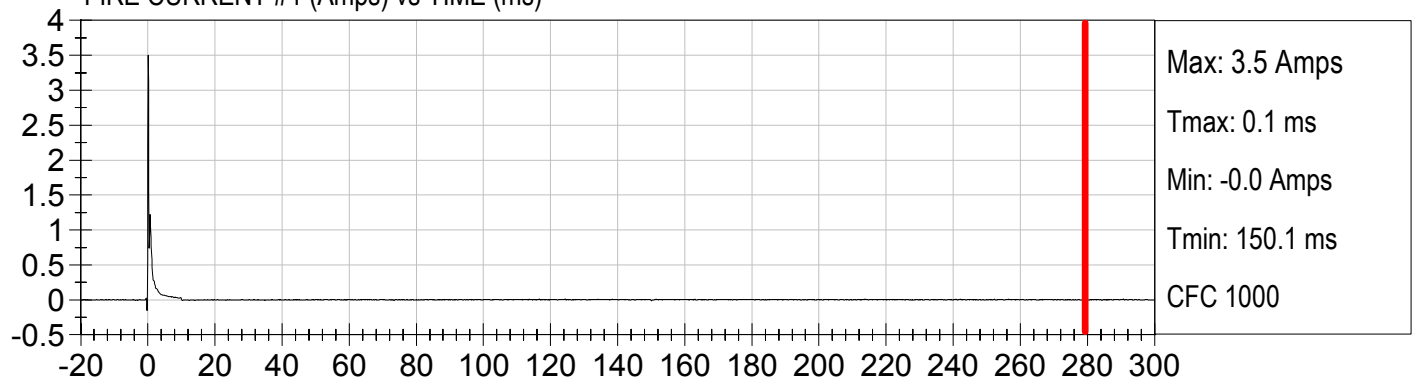
Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

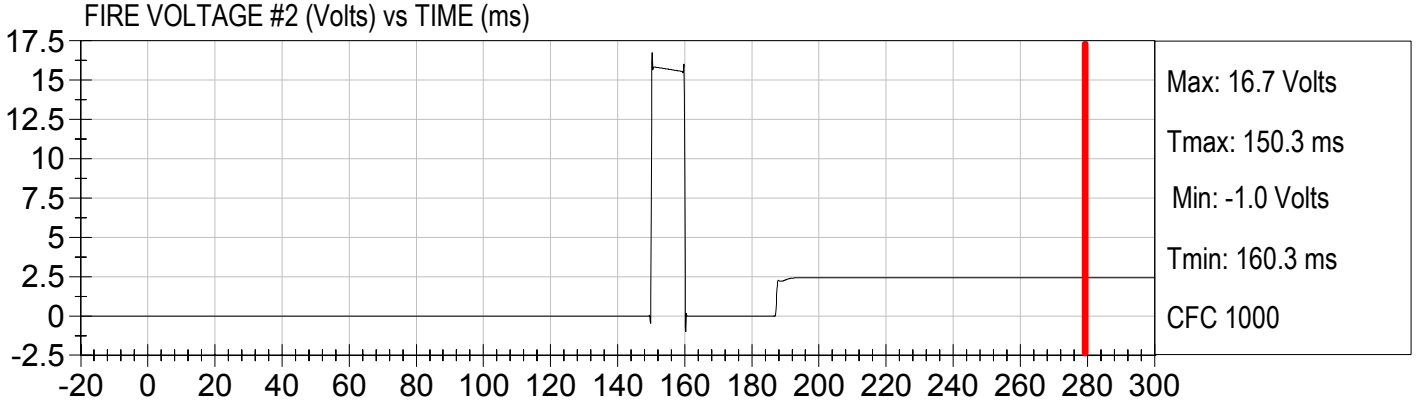
FIRE VOLTAGE #1 (Volts) vs TIME (ms)



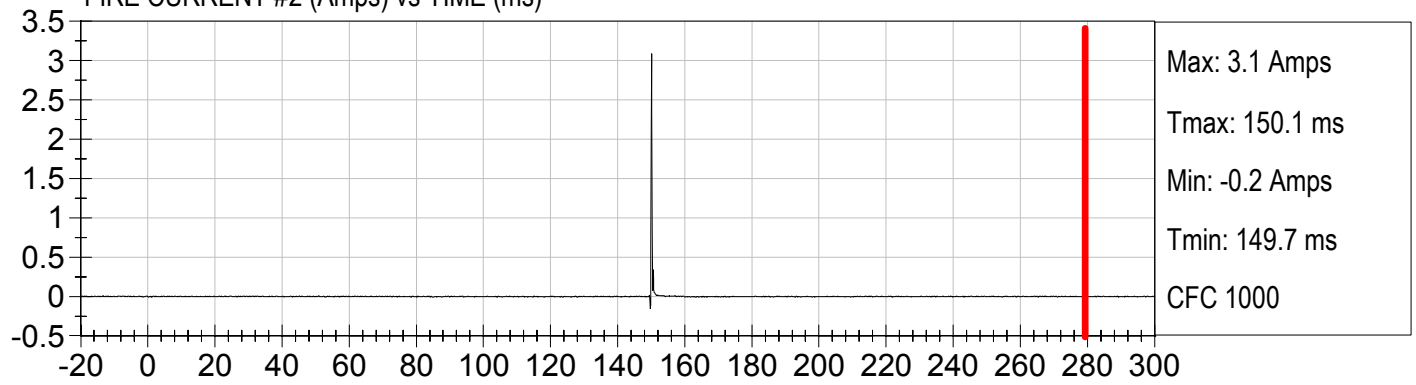
FIRE CURRENT #1 (Amps) vs TIME (ms)



FIRE VOLTAGE #2 (Volts) vs TIME (ms)



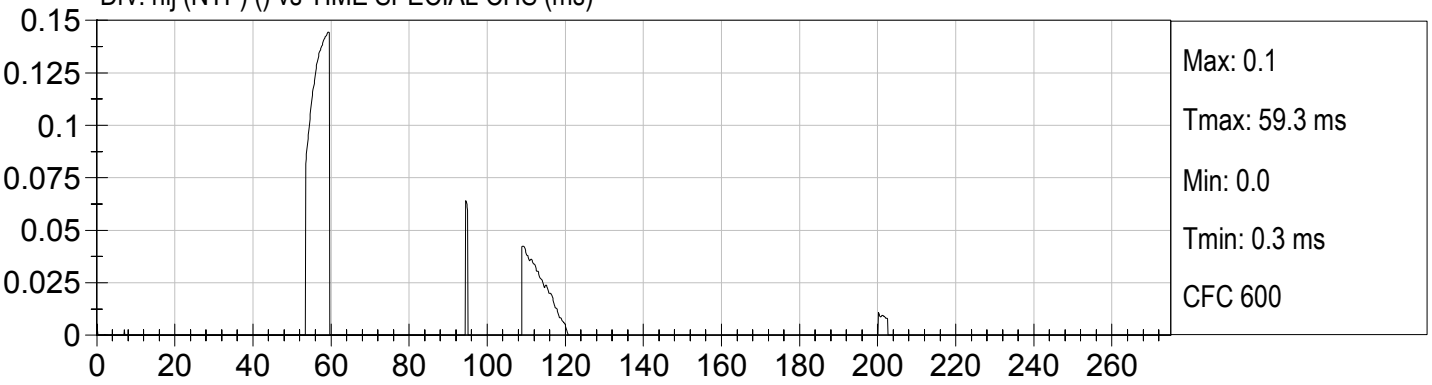
FIRE CURRENT #2 (Amps) vs TIME (ms)



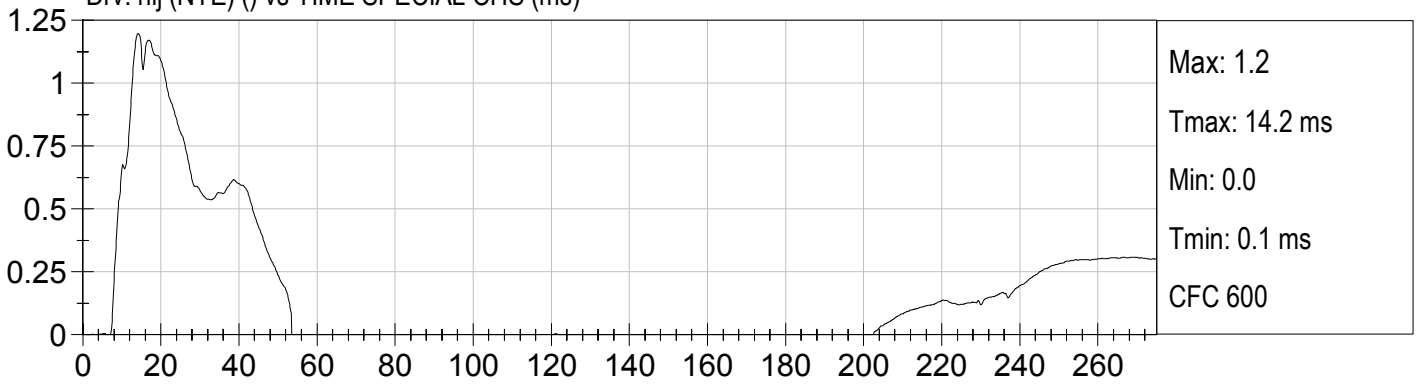
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 7)

Test Date: 09/15/06
Speed: 0.0 mph (0.0 km/h)

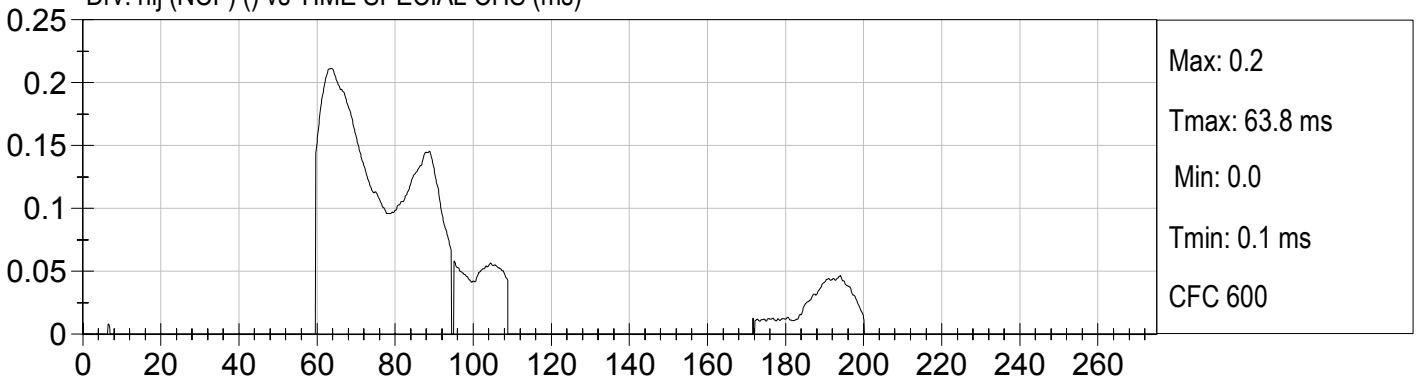
Drv. nij (NTF) () vs TIME SPECIAL CHS (ms)



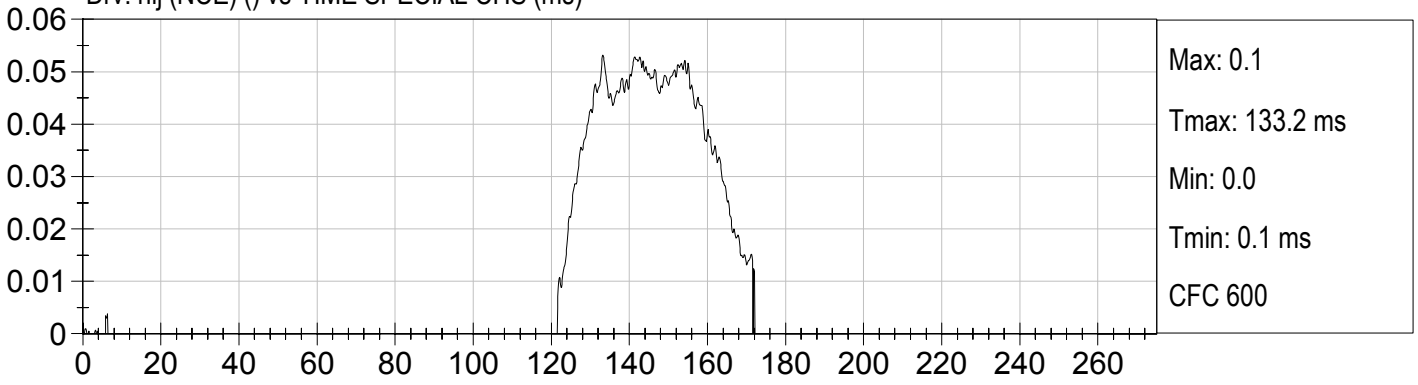
Drv. nij (NTE) () vs TIME SPECIAL CHS (ms)



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



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

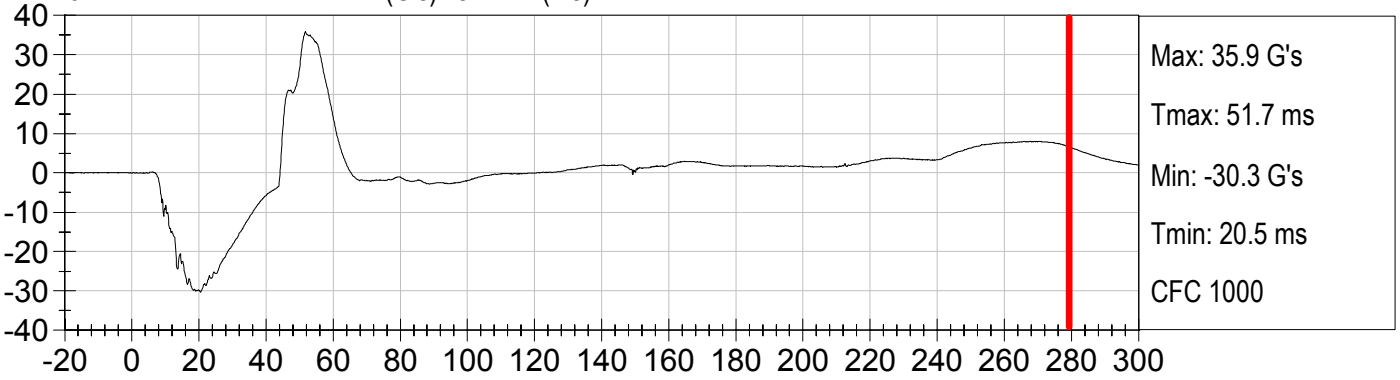


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 8)

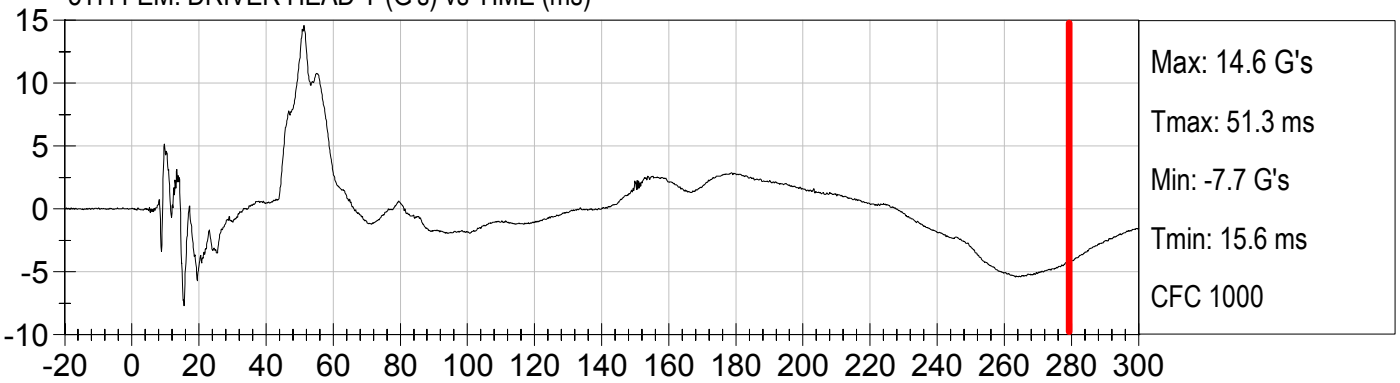
Test Date: 2/8/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

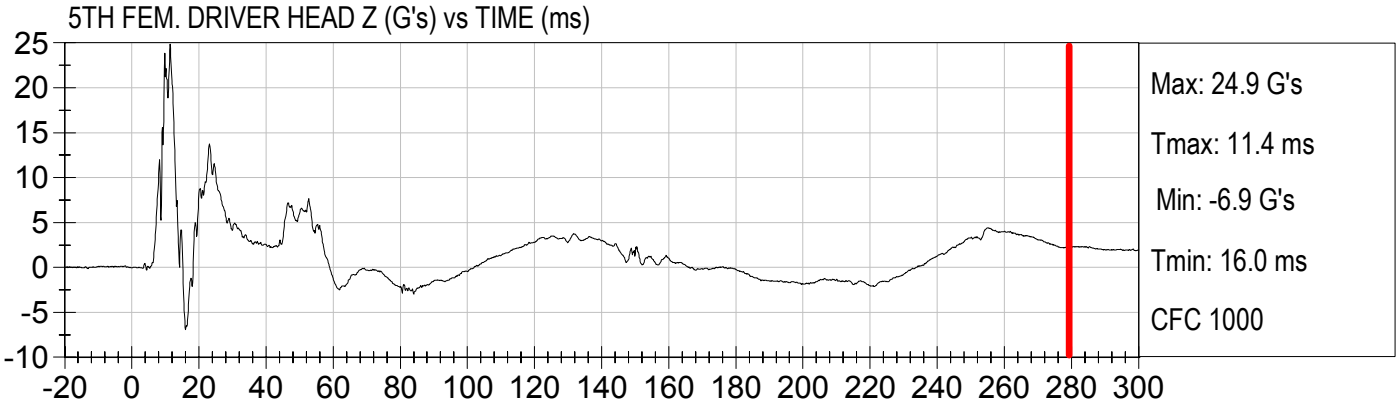
5TH FEM. DRIVER HEAD X (G's) vs TIME (ms)



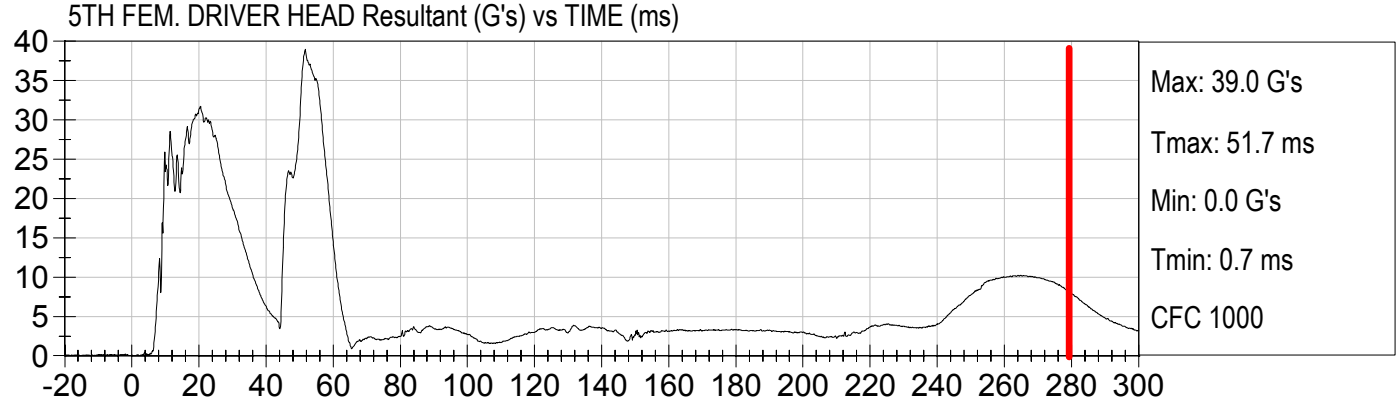
5TH FEM. DRIVER HEAD Y (G's) vs TIME (ms)



5TH FEM. DRIVER HEAD Z (G's) vs TIME (ms)



5TH FEM. DRIVER HEAD Resultant (G's) vs TIME (ms)

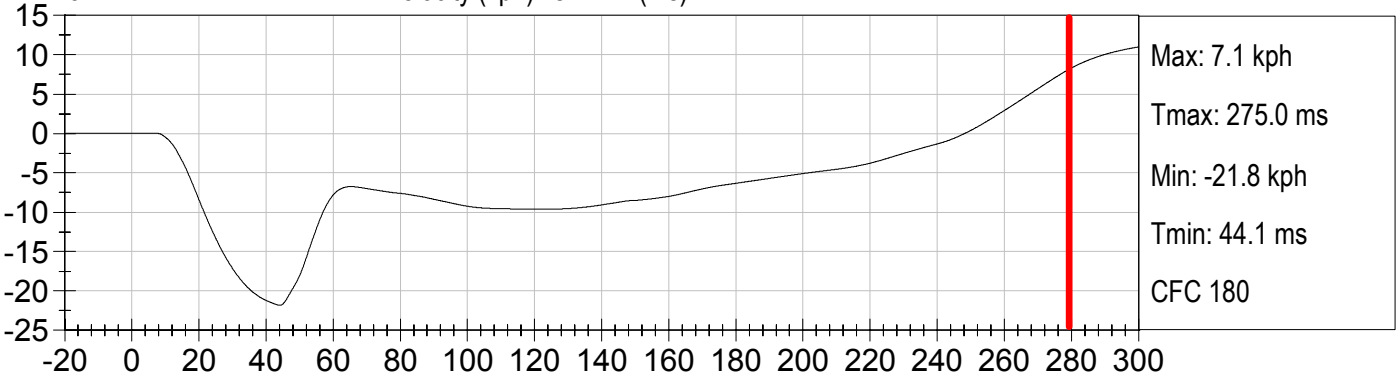


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 8)

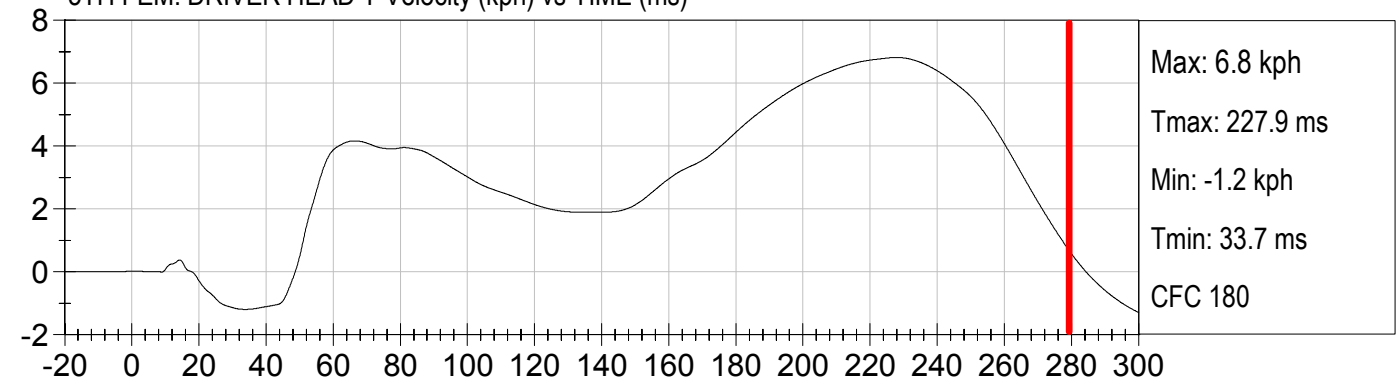
Test Date: 2/8/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

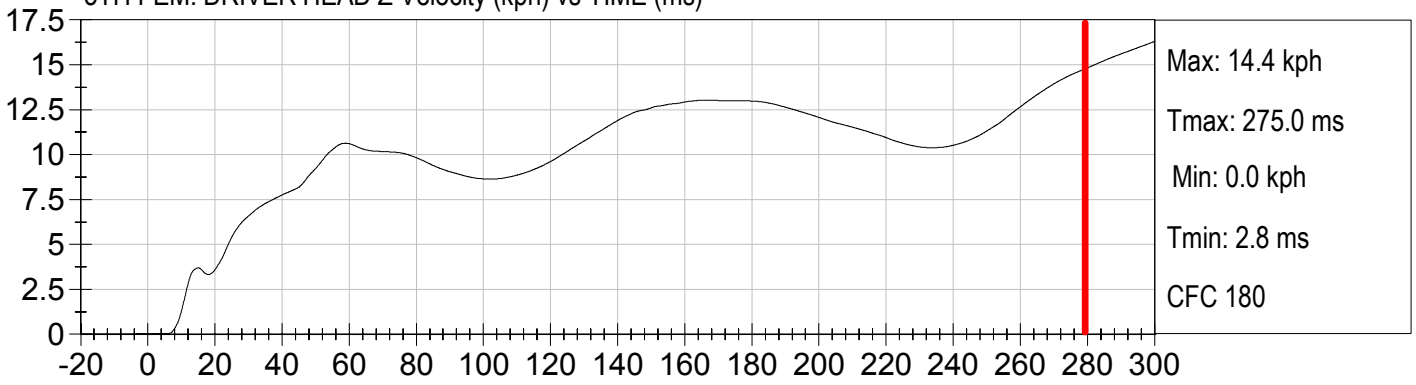
5TH FEM. DRIVER HEAD X Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER HEAD Y Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER HEAD Z Velocity (kph) vs TIME (ms)

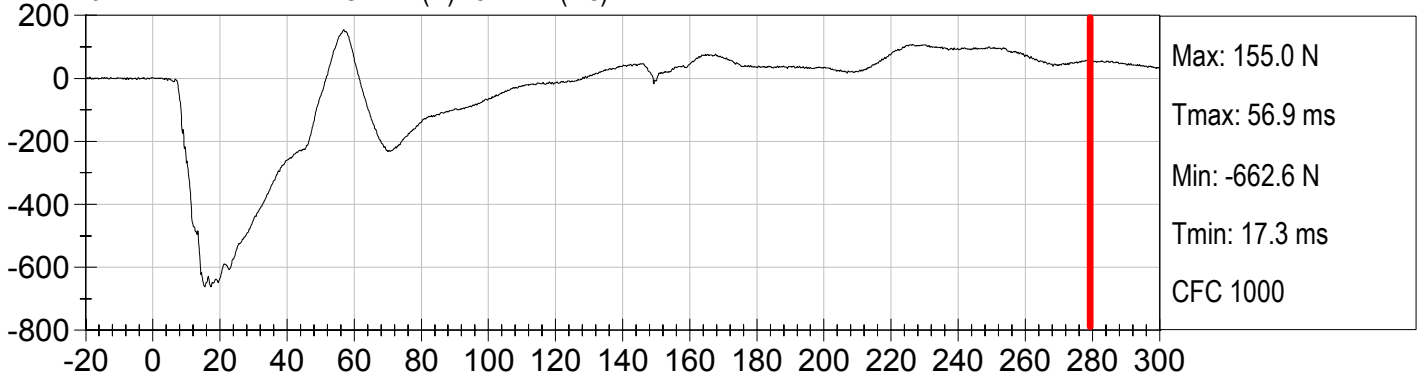


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 8)

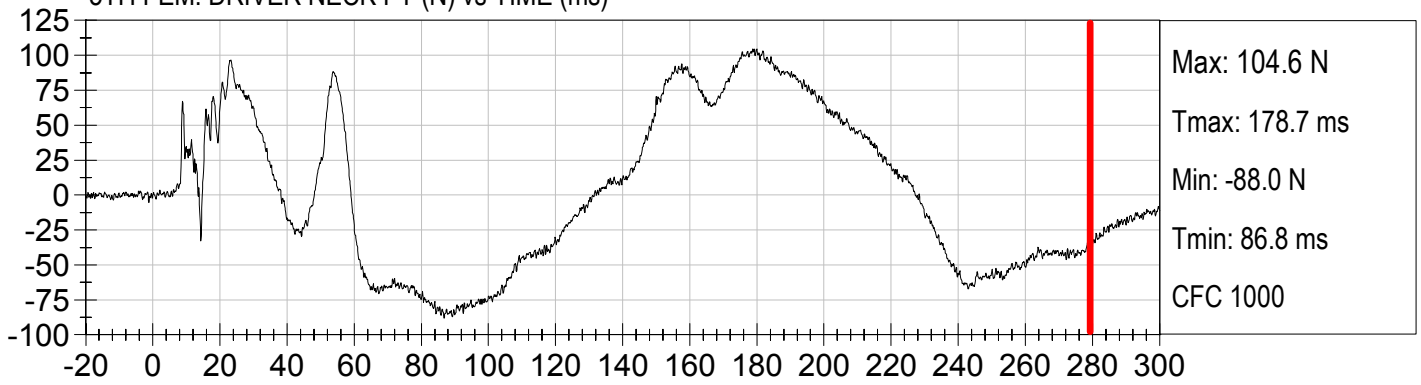
Test Date: 2/8/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

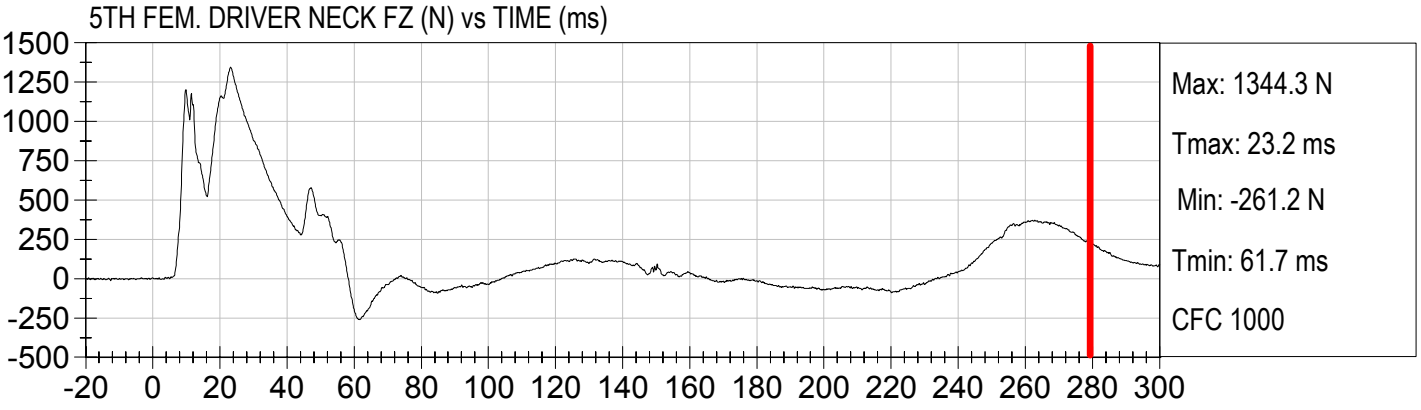
5TH FEM. DRIVER NECK FX (N) vs TIME (ms)



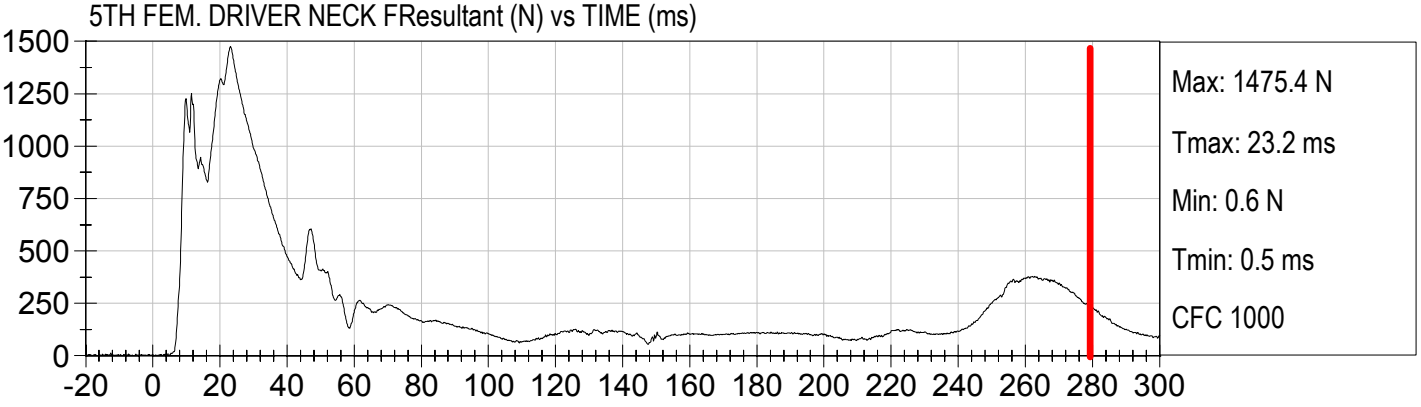
5TH FEM. DRIVER NECK FY (N) vs TIME (ms)



5TH FEM. DRIVER NECK FZ (N) vs TIME (ms)



5TH FEM. DRIVER NECK FResultant (N) vs TIME (ms)

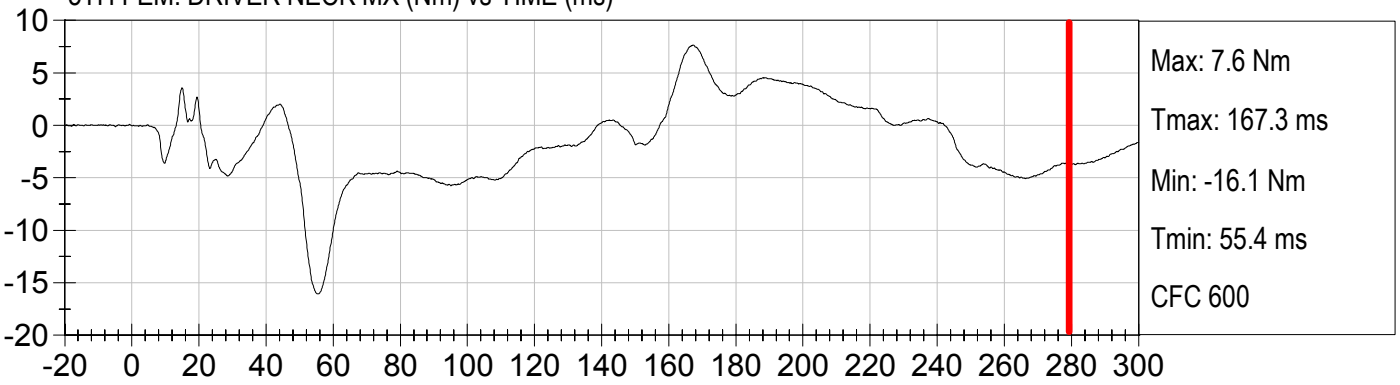


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 8)

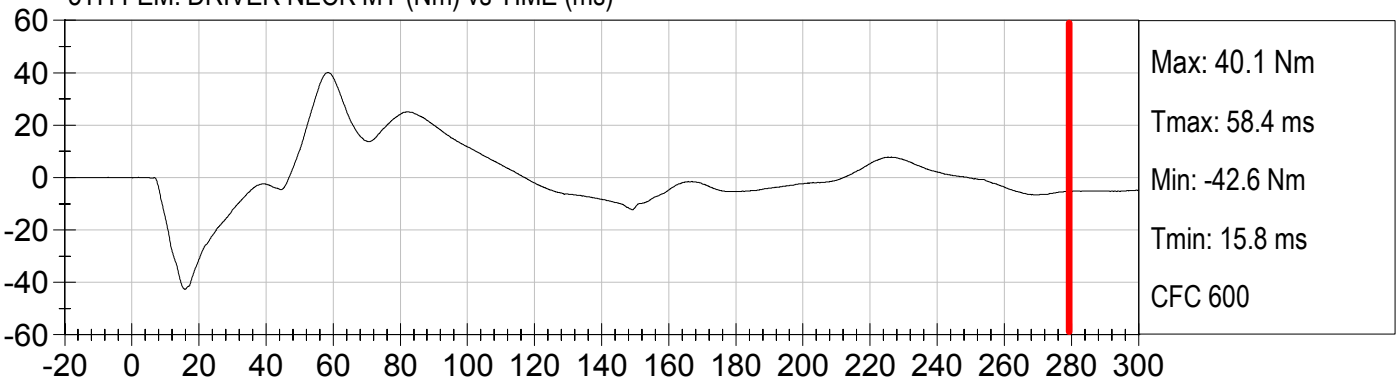
Test Date: 2/8/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

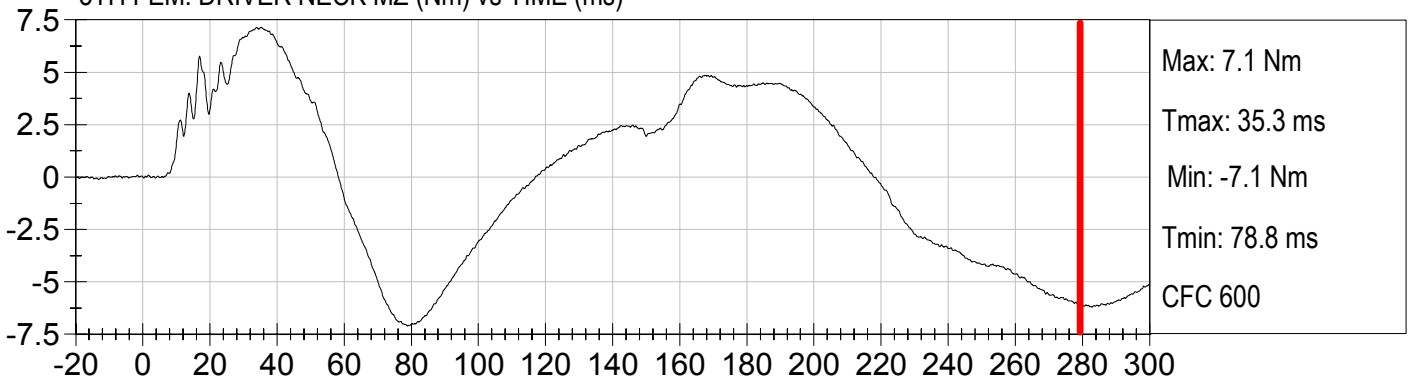
5TH FEM. DRIVER NECK MX (Nm) vs TIME (ms)



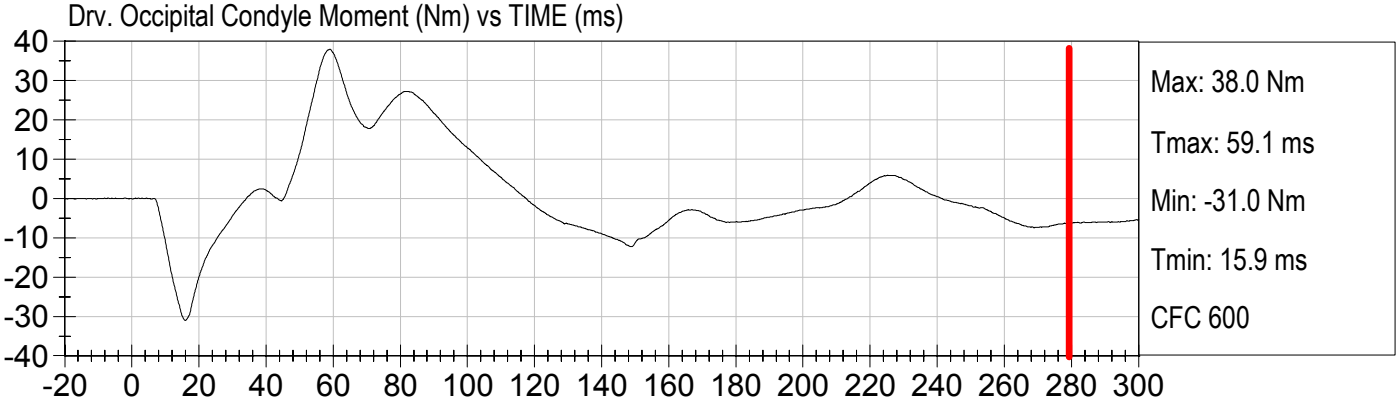
5TH FEM. DRIVER NECK MY (Nm) vs TIME (ms)



5TH FEM. DRIVER NECK MZ (Nm) vs TIME (ms)



Drv. Occipital Condyle Moment (Nm) vs TIME (ms)

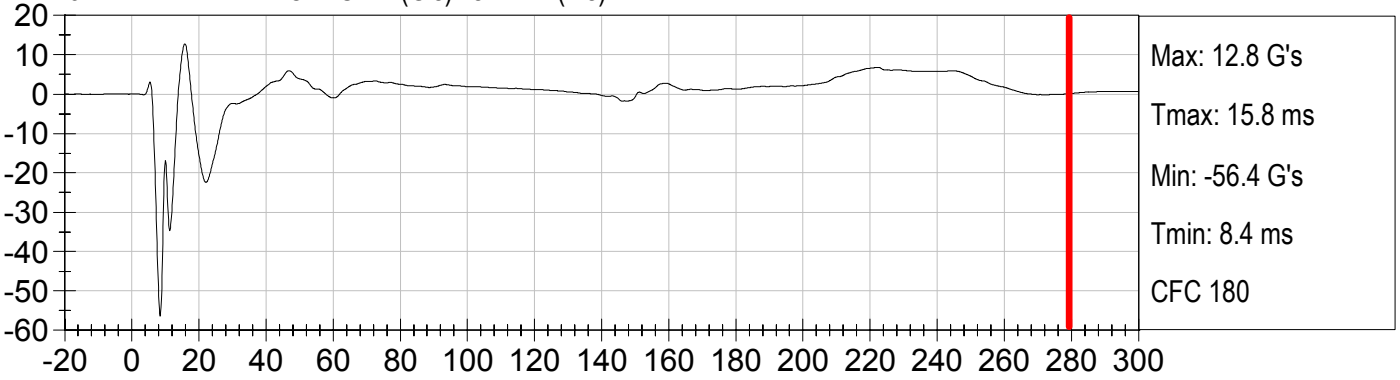


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 8)

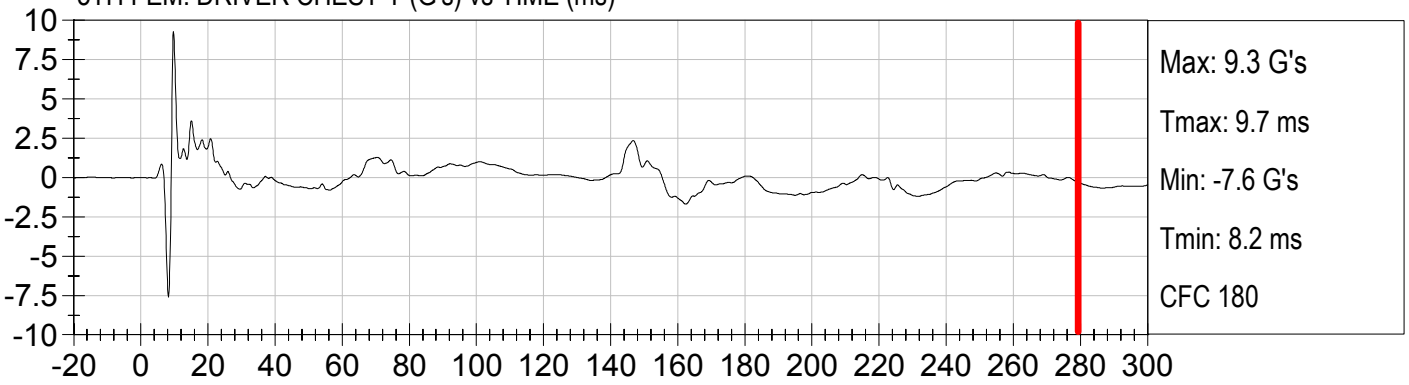
Test Date: 2/8/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

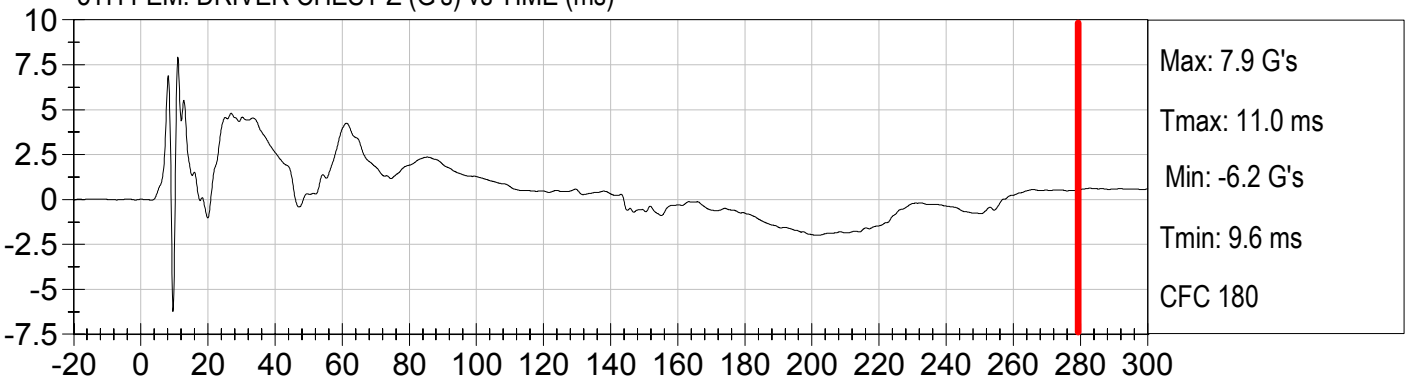
5TH FEM. DRIVER CHEST X (G's) vs TIME (ms)



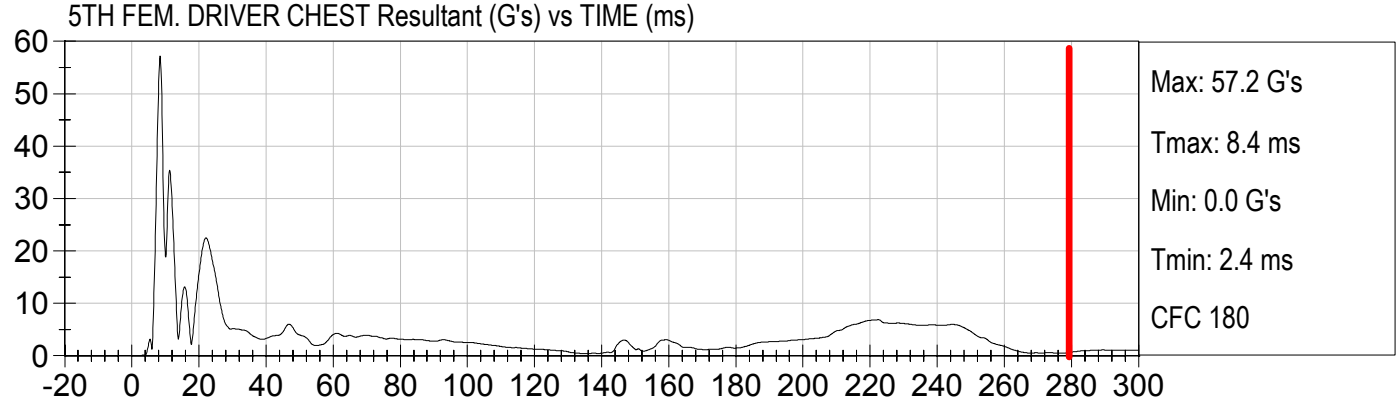
5TH FEM. DRIVER CHEST Y (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Z (G's) vs TIME (ms)



5TH FEM. DRIVER CHEST Resultant (G's) vs TIME (ms)

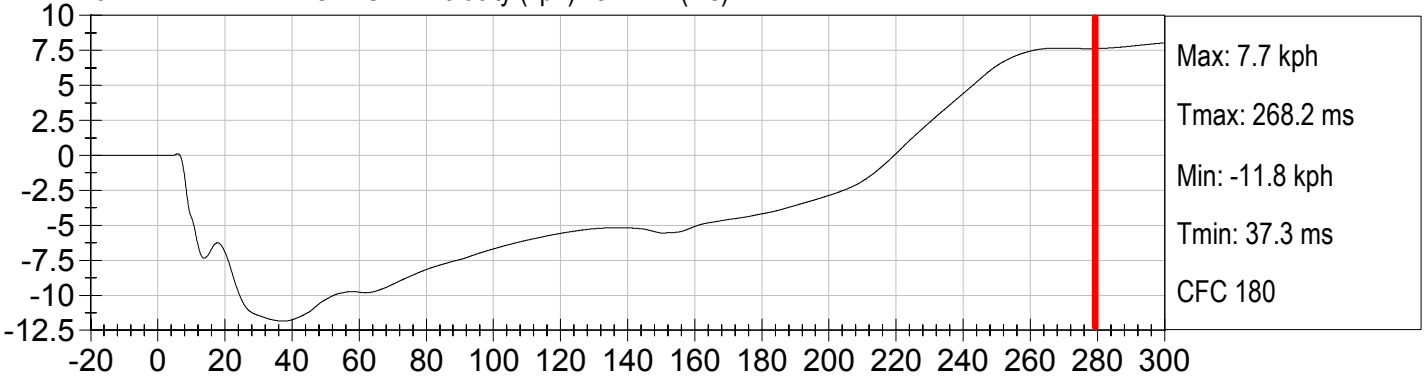


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 8)

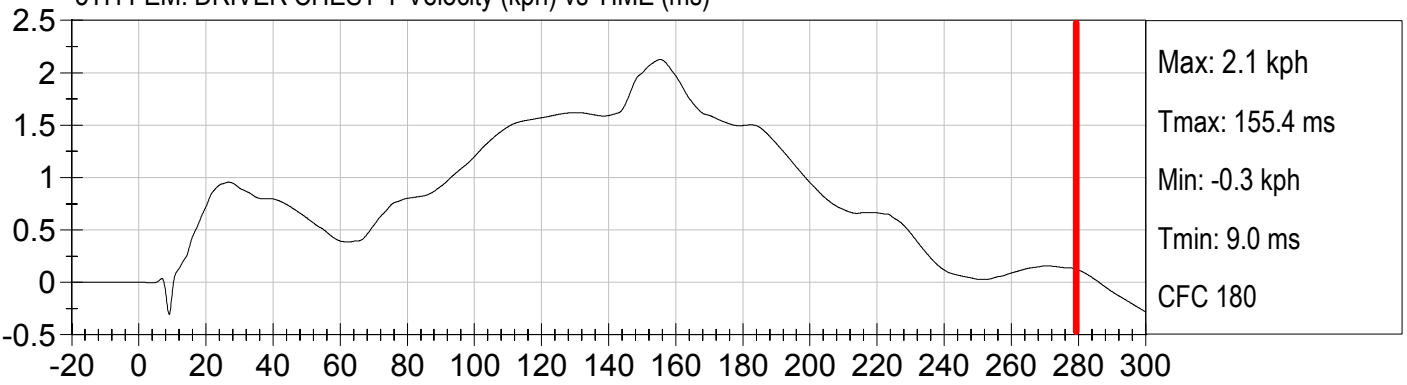
Test Date: 2/8/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

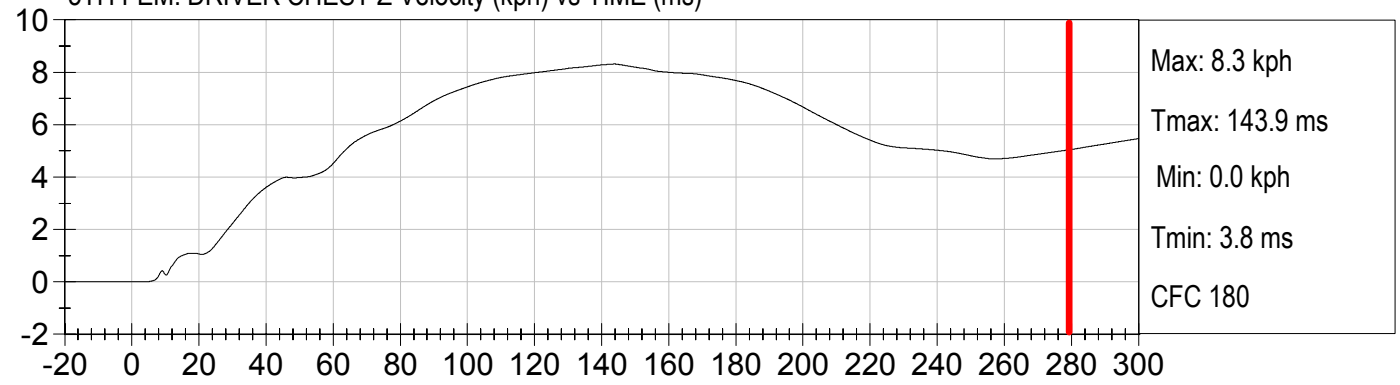
5TH FEM. DRIVER CHEST X Velocity (kph) vs TIME (ms)



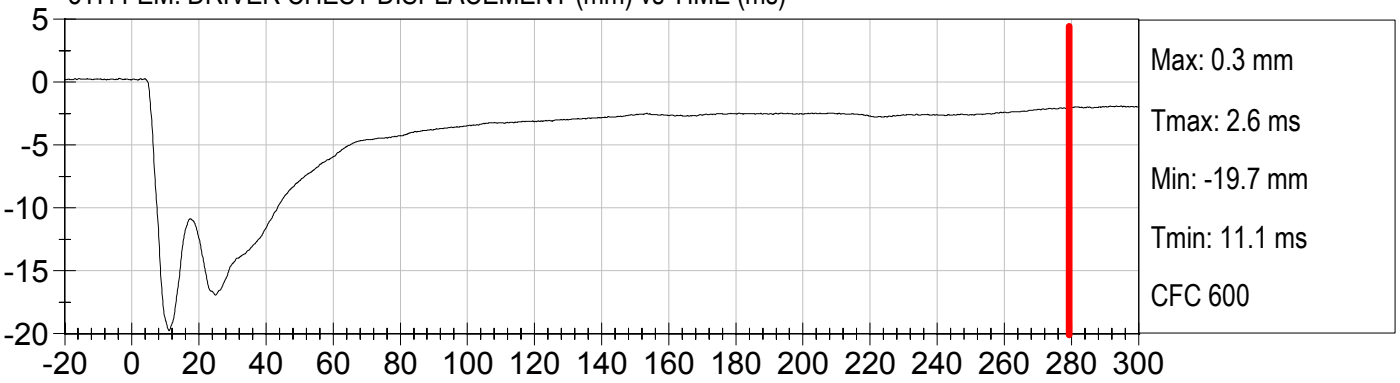
5TH FEM. DRIVER CHEST Y Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST Z Velocity (kph) vs TIME (ms)



5TH FEM. DRIVER CHEST DISPLACEMENT (mm) vs TIME (ms)

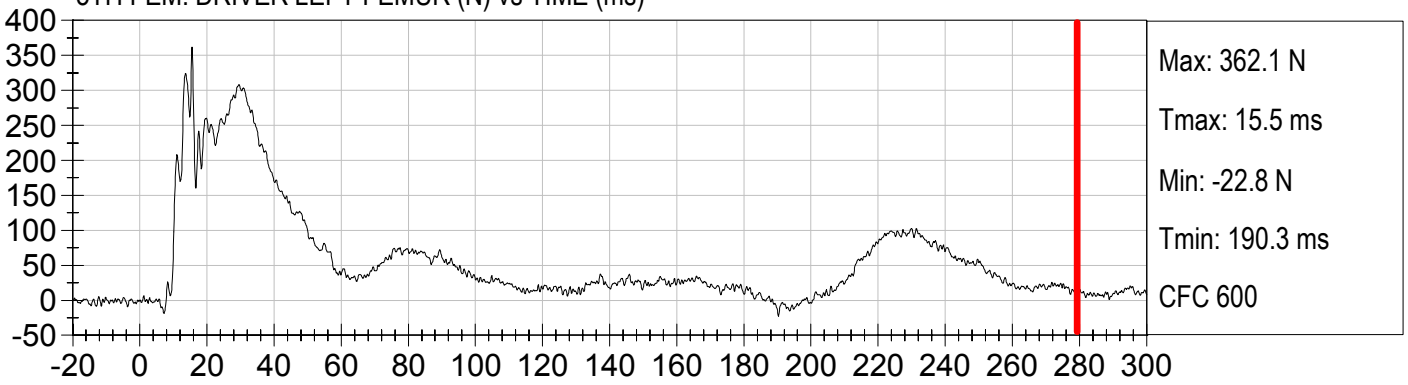


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 8)

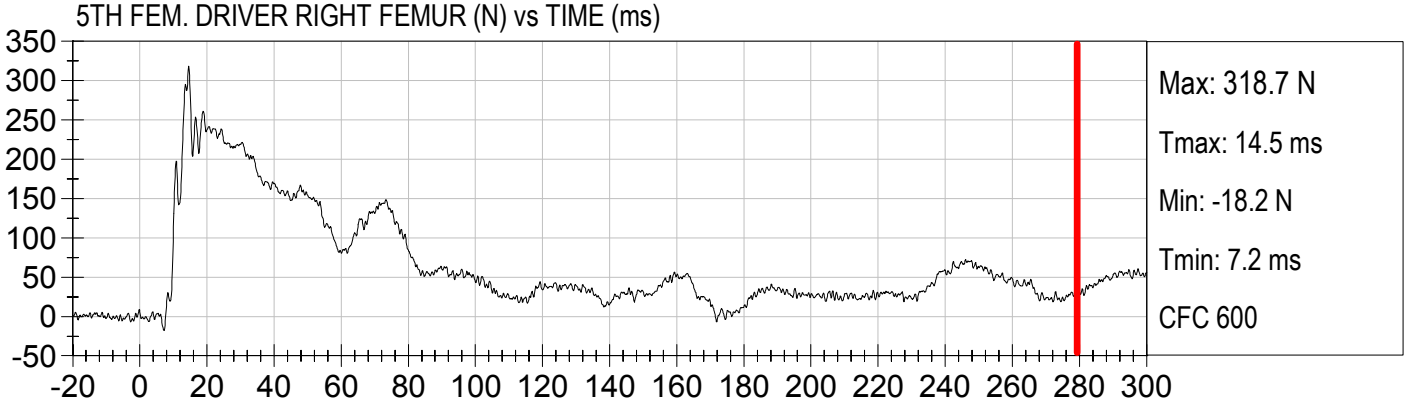
Test Date: 2/8/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

5TH FEM. DRIVER LEFT FEMUR (N) vs TIME (ms)



5TH FEM. DRIVER RIGHT FEMUR (N) vs TIME (ms)

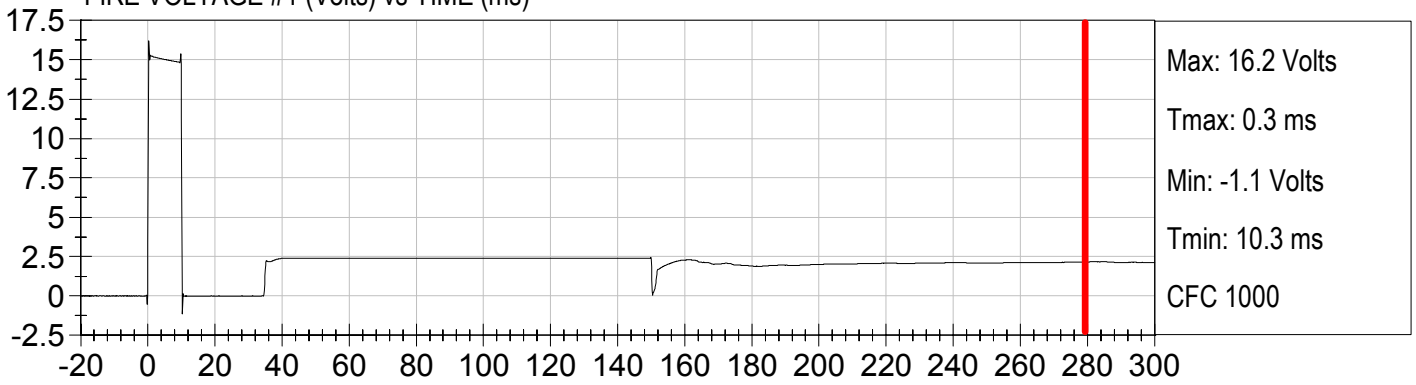


LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 8)

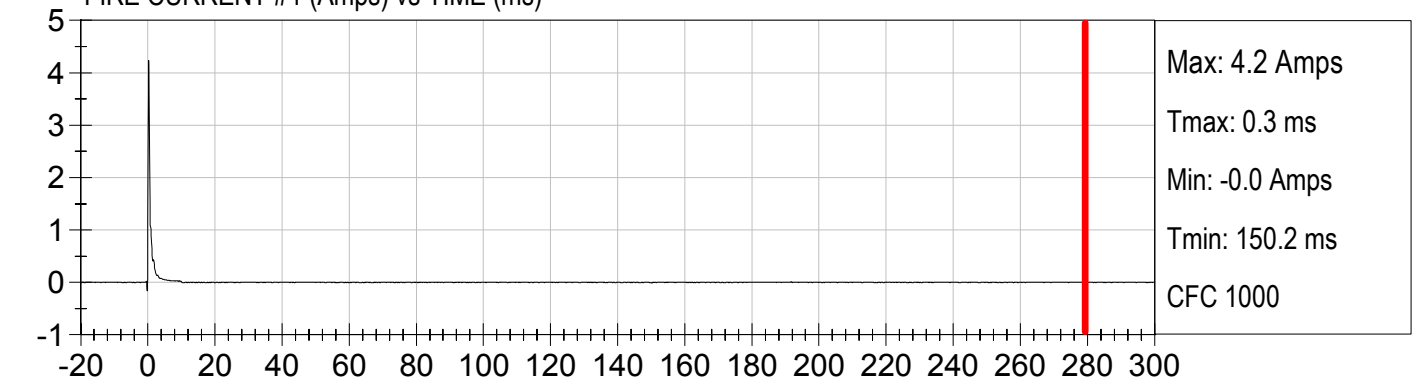
Test Date: 2/8/07
Speed: 0.0 mph (0.0 km/h)

Injury Values Calculated between 0ms and 275ms

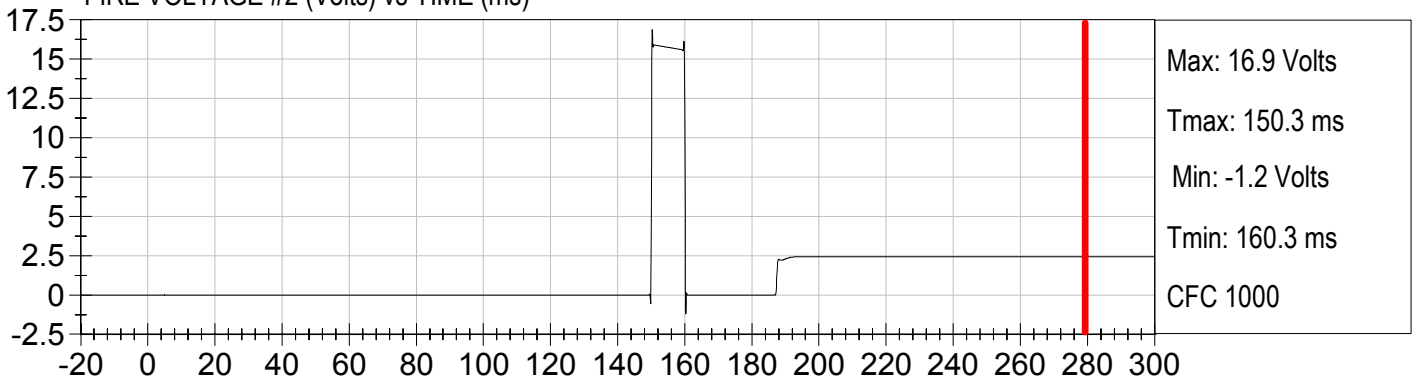
FIRE VOLTAGE #1 (Volts) vs TIME (ms)



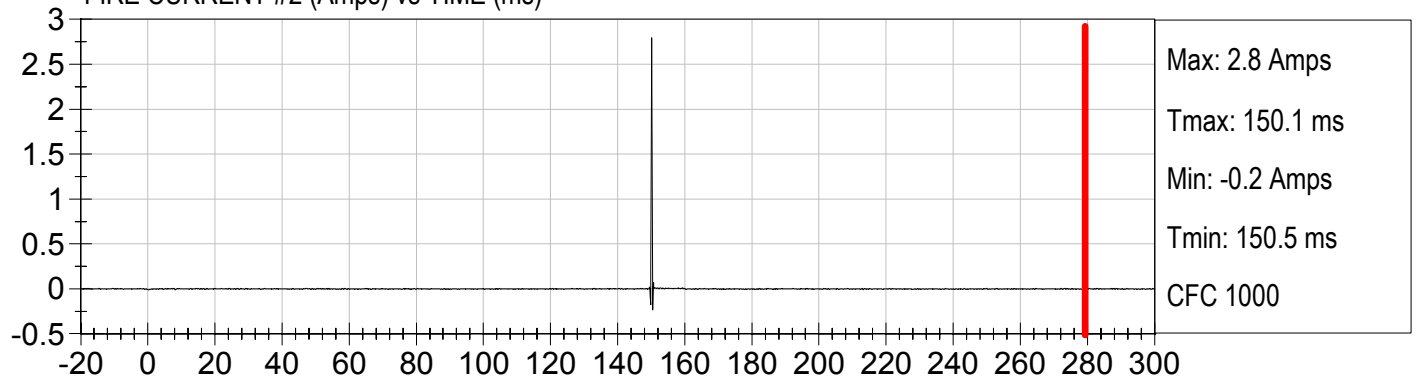
FIRE CURRENT #1 (Amps) vs TIME (ms)



FIRE VOLTAGE #2 (Volts) vs TIME (ms)



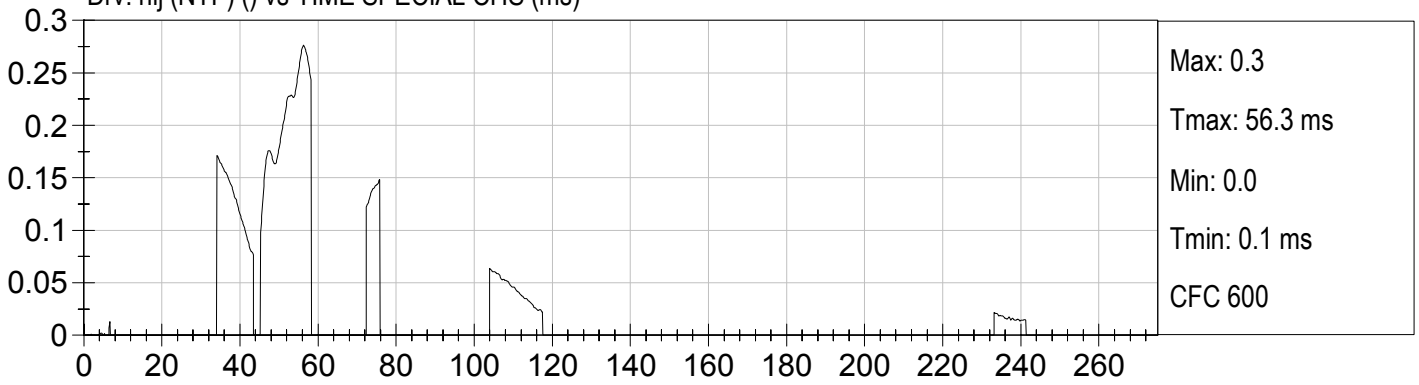
FIRE CURRENT #2 (Amps) vs TIME (ms)



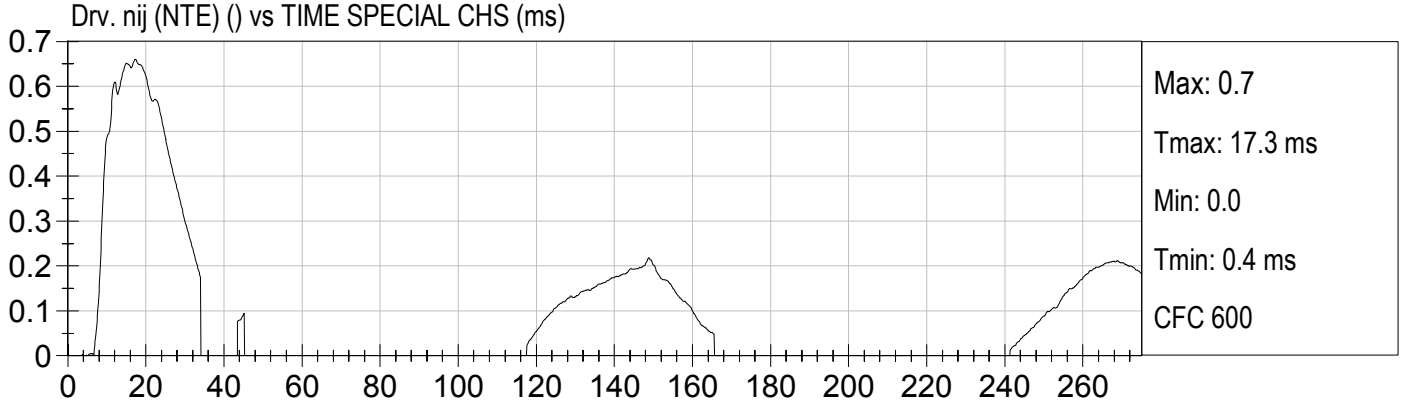
LOW RISK DEPLOYMENT
2006 Hyundai Tucson (C60510) (5th P2 Trial 8)

Test Date: 2/8/07
Speed: 0.0 mph (0.0 km/h)

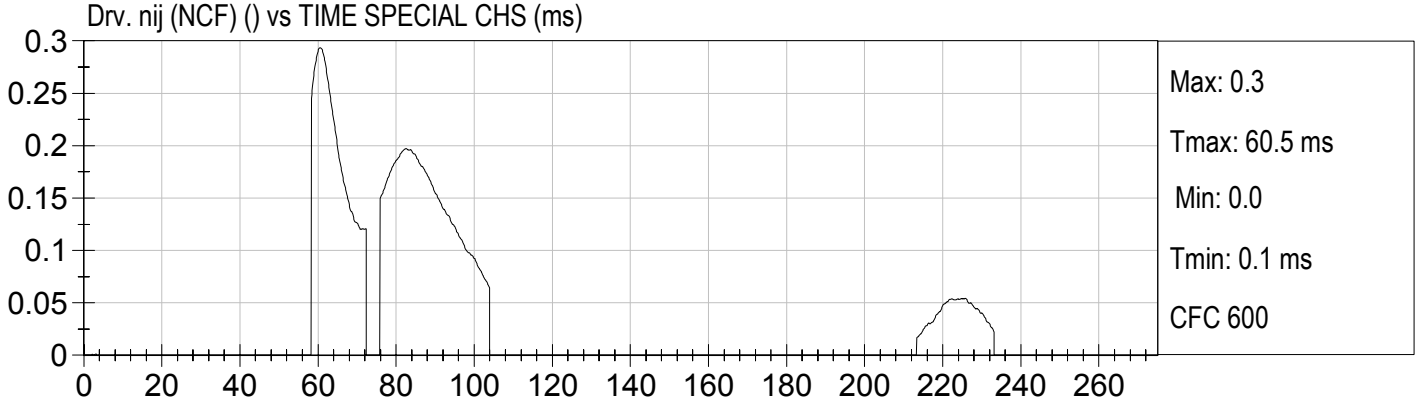
Drv. nij (NTF) () vs TIME SPECIAL CHS (ms)



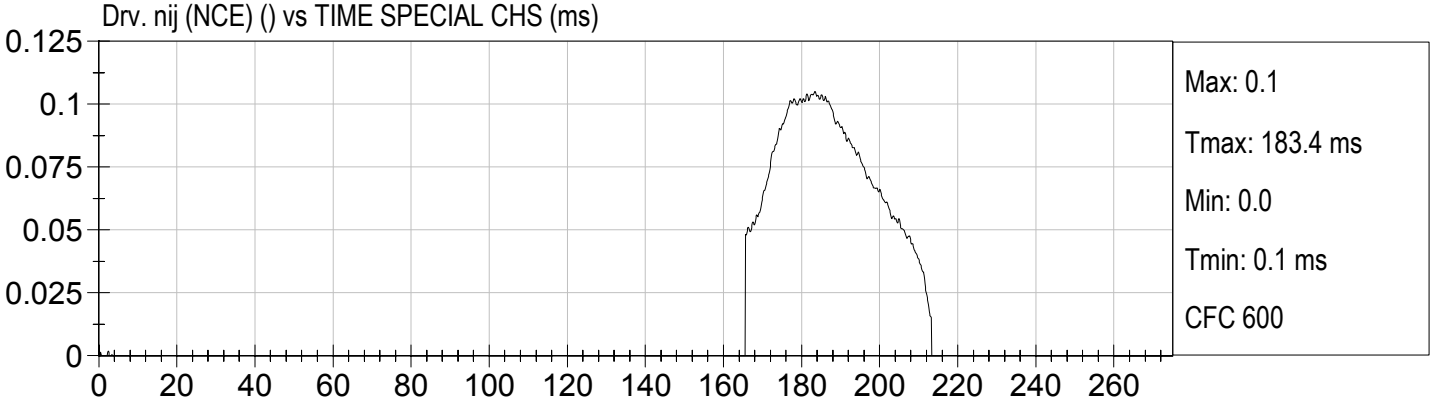
Drv. nij (NTE) () vs TIME SPECIAL CHS (ms)



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



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



APPENDIX C

CRASH TEST PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

Vehicle Certification Label

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

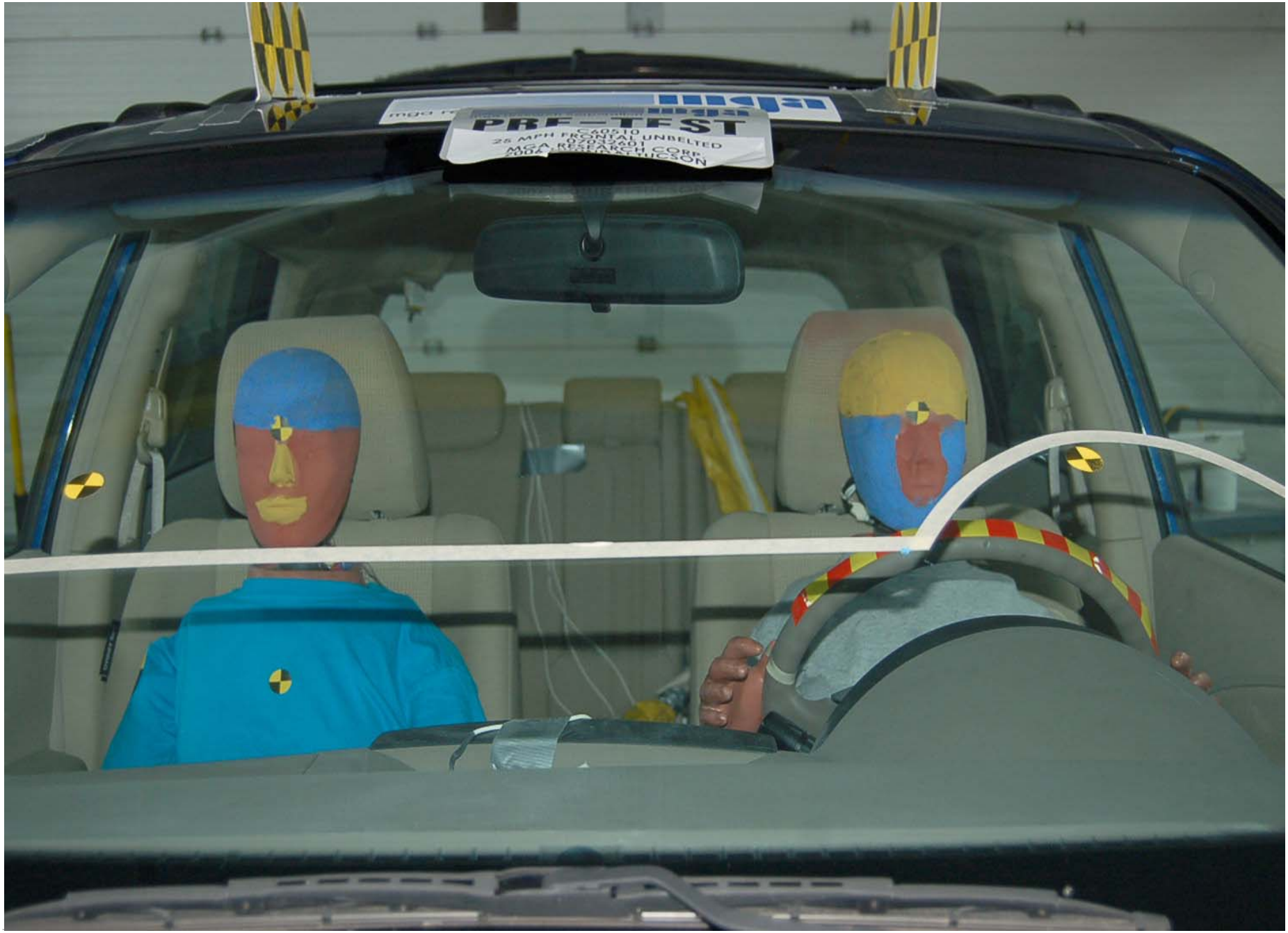
Post-Test Right Rear Three-Quarter View of Test Vehicle

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

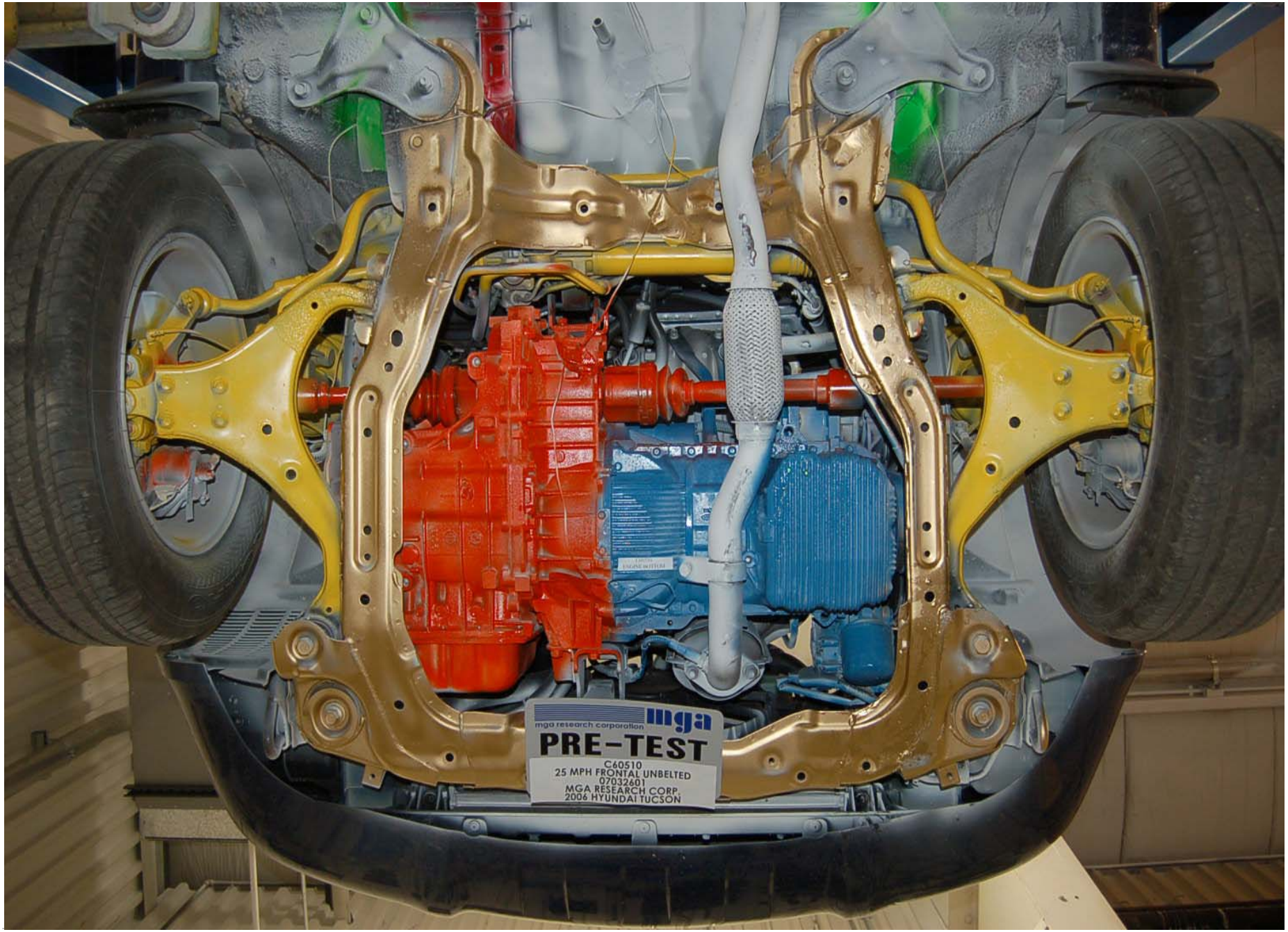
Post-Test Windshield View

Pre-Test Engine Compartment View

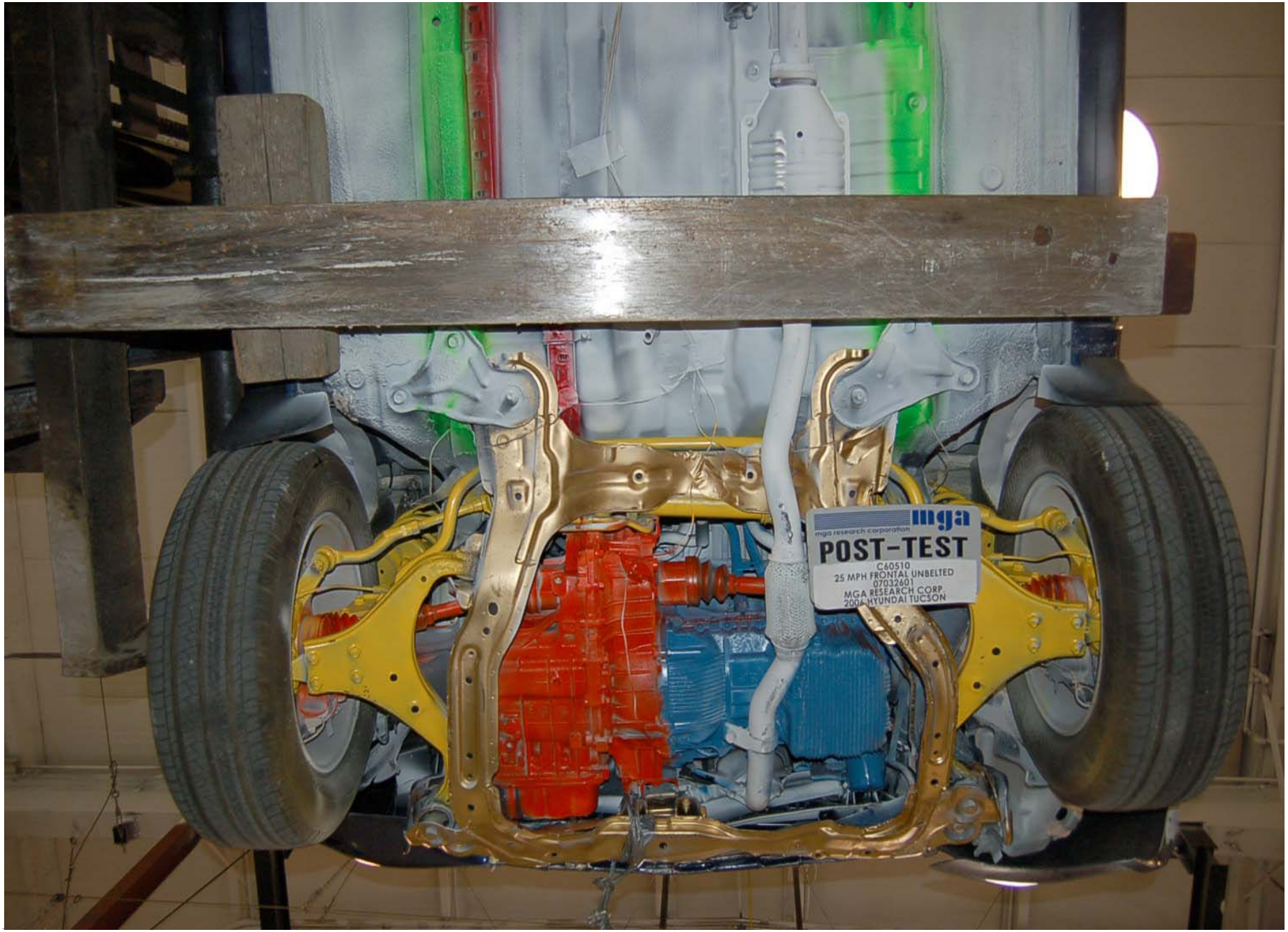
Post-Test Engine Compartment View

Pre-Test Fuel Filler Cap View

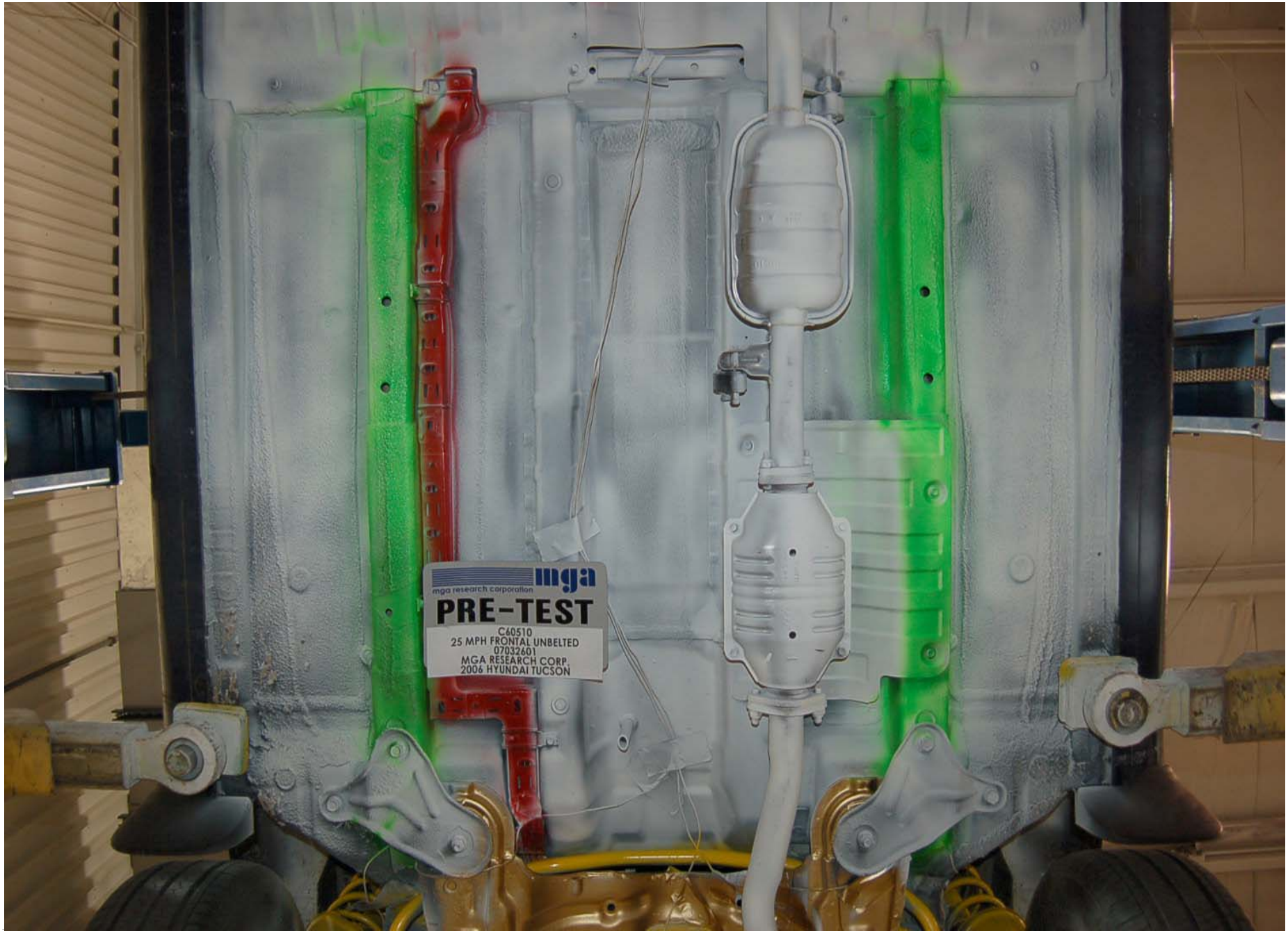
Post-Test Fuel Filler Cap View



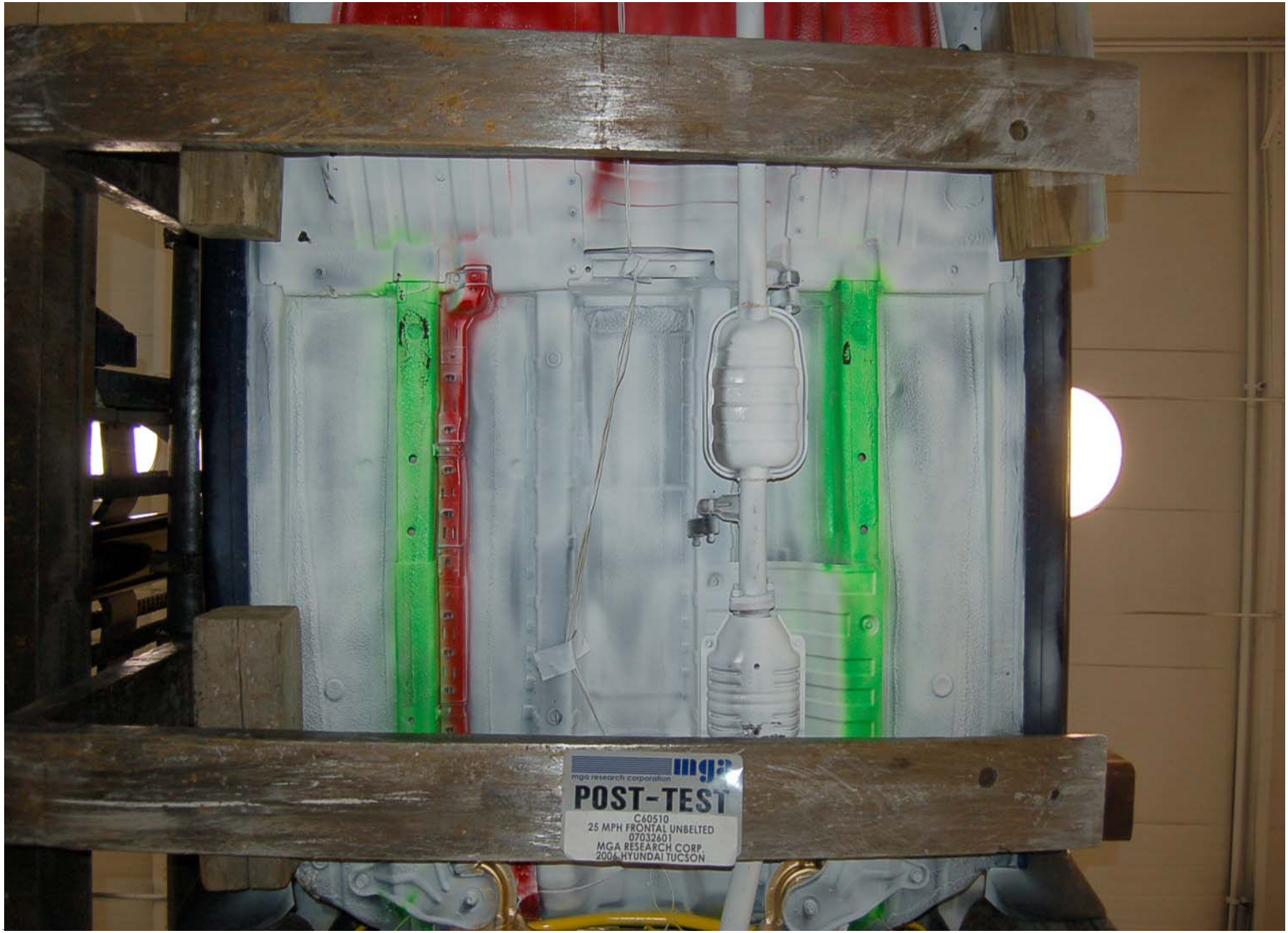
Pre-Test Front Underbody View



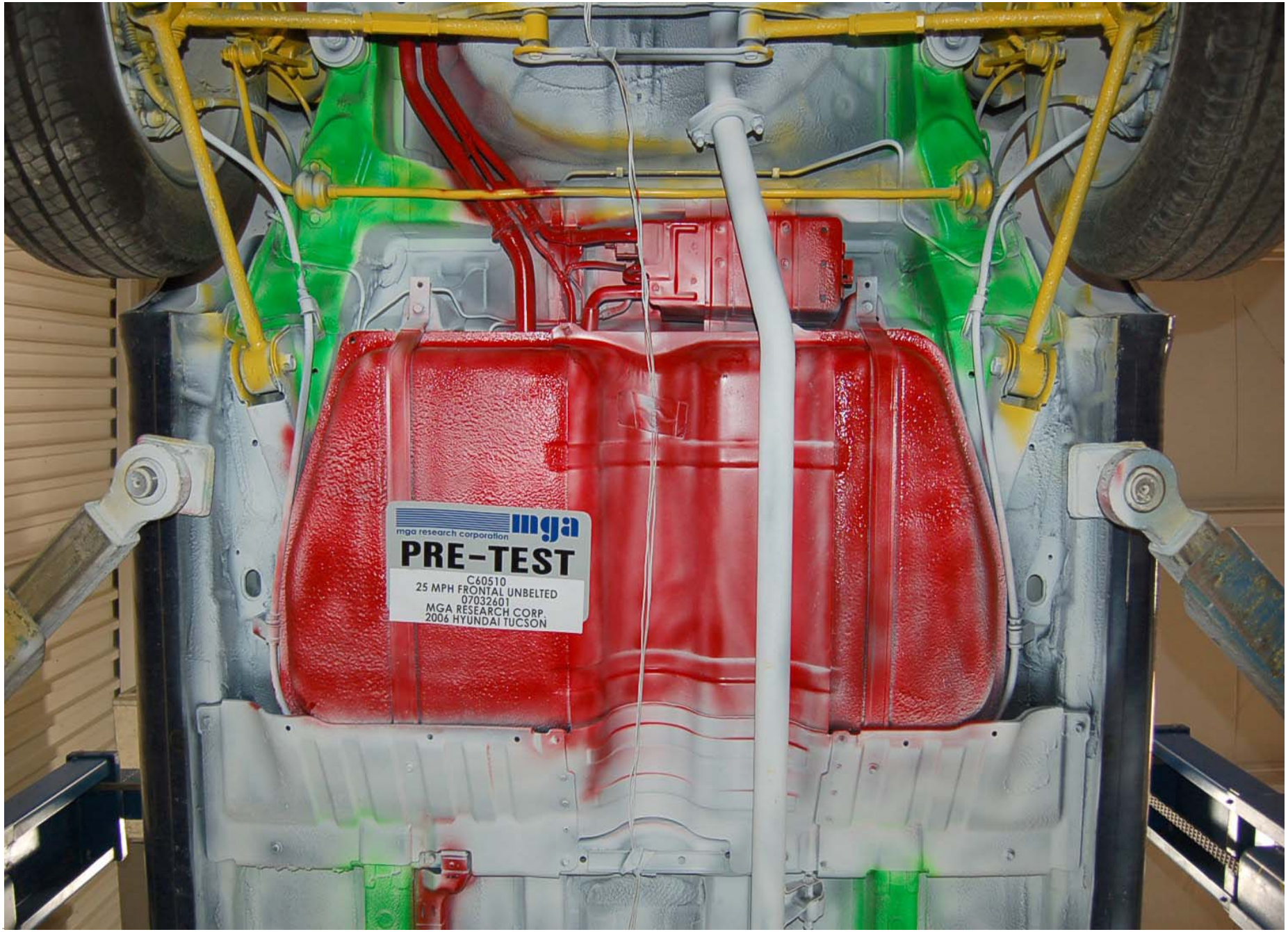
Post-Test Front Underbody View



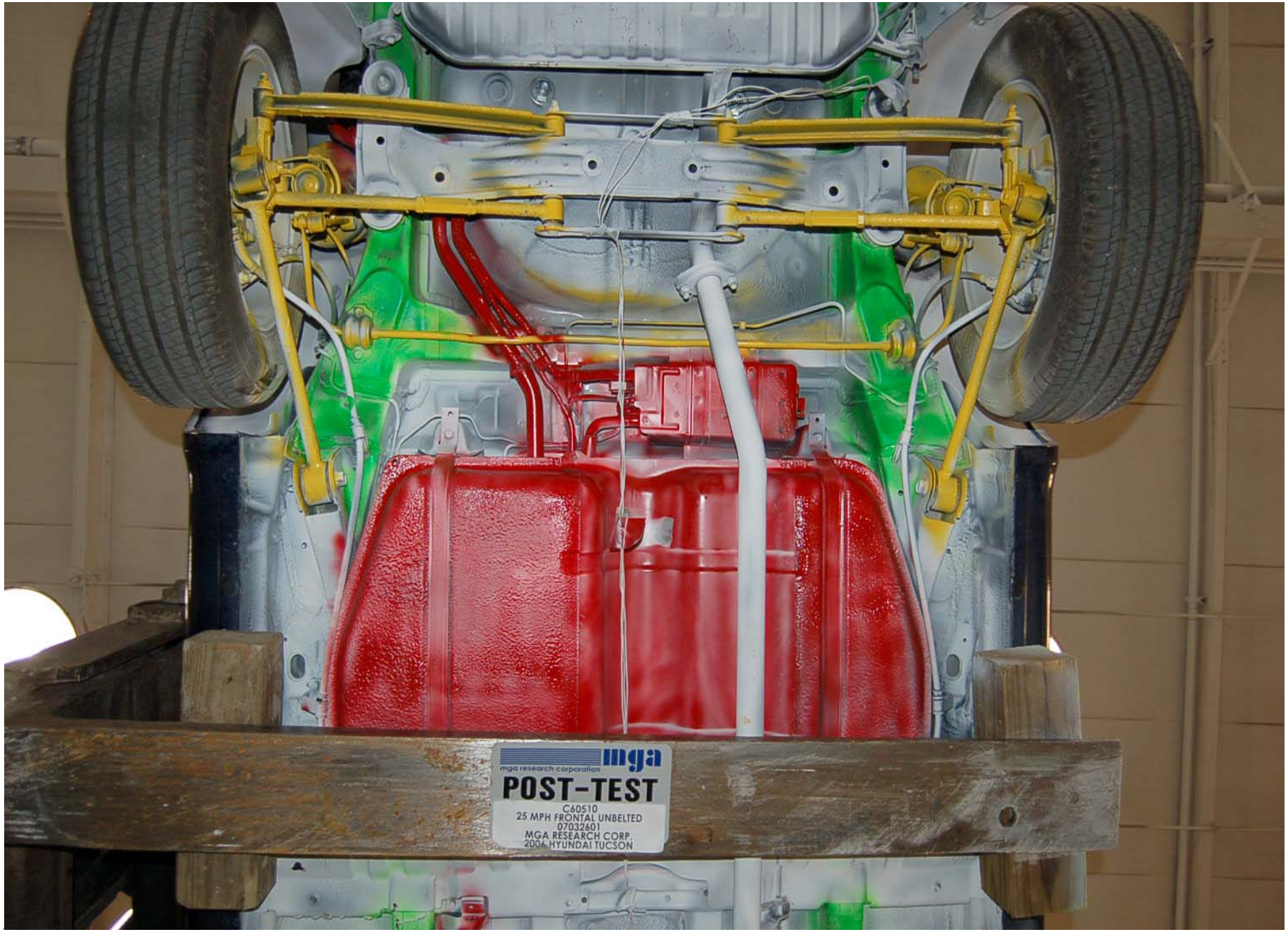
Pre-Test Mid Underbody View



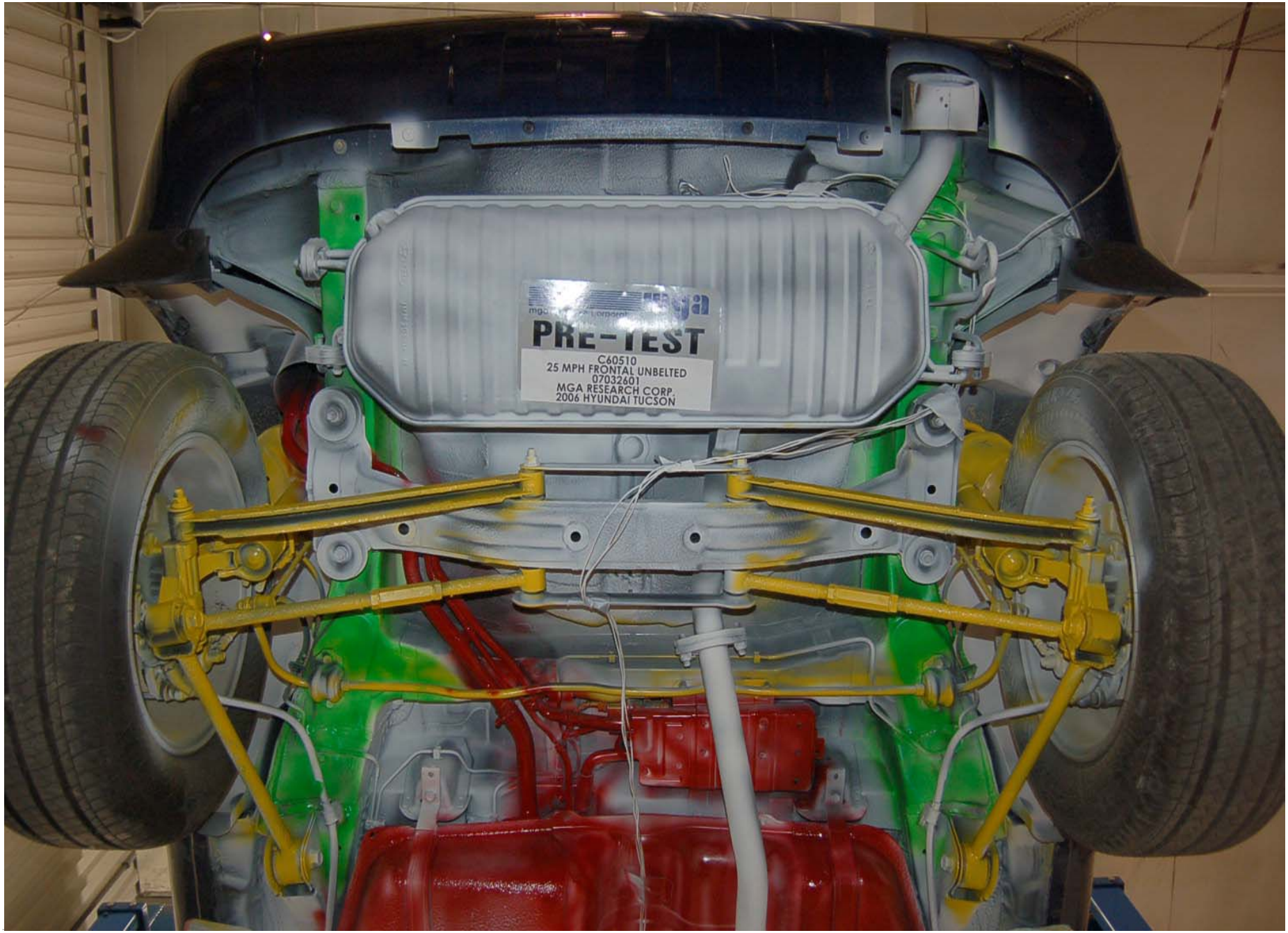
Post-Test Mid Underbody View



Pre-Test Mid Rear Underbody View



Post-Test Mid Rear 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

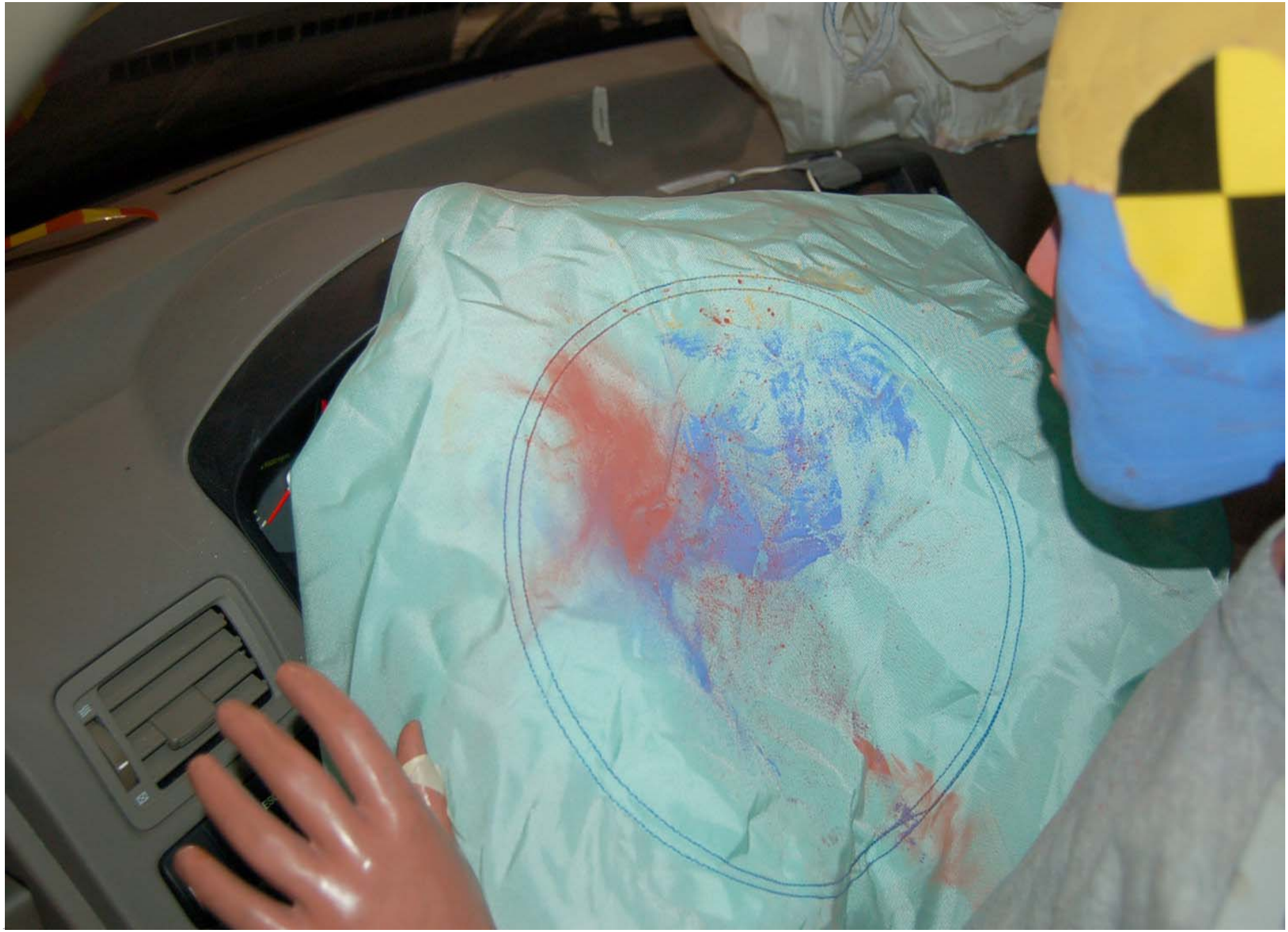
Post-Test Driver Dummy Feet Position

Pre-Test Driver Side Knee Bolster View

Post-Test Driver Side Knee Bolster View

Post-Test Driver Dummy Head Contact (head rest)

Post-Test Driver Dummy Knee Contact



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

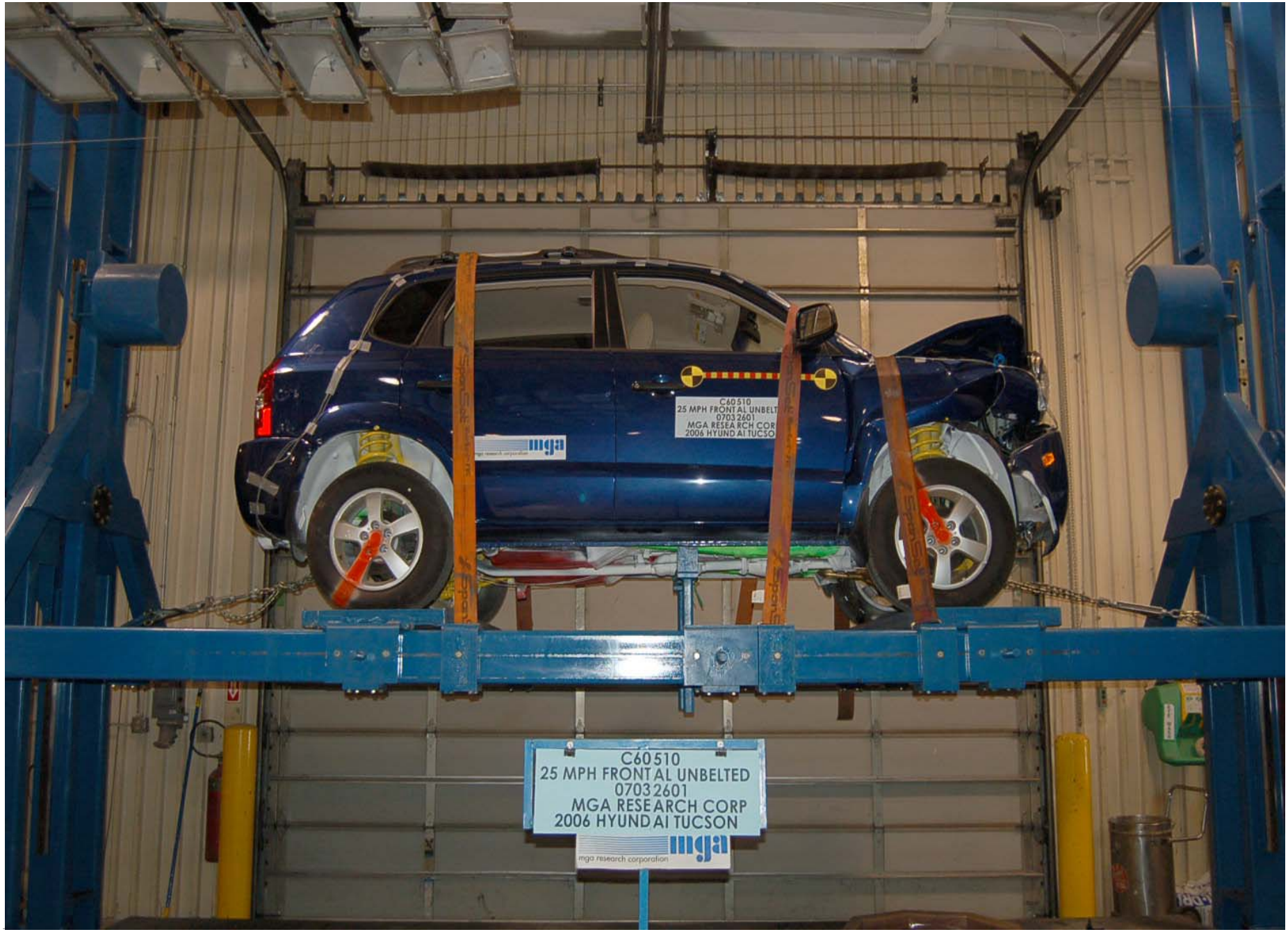
Post-Test Passenger Dummy Knee Contact

Post-Test Passenger Dummy Airbag Contact

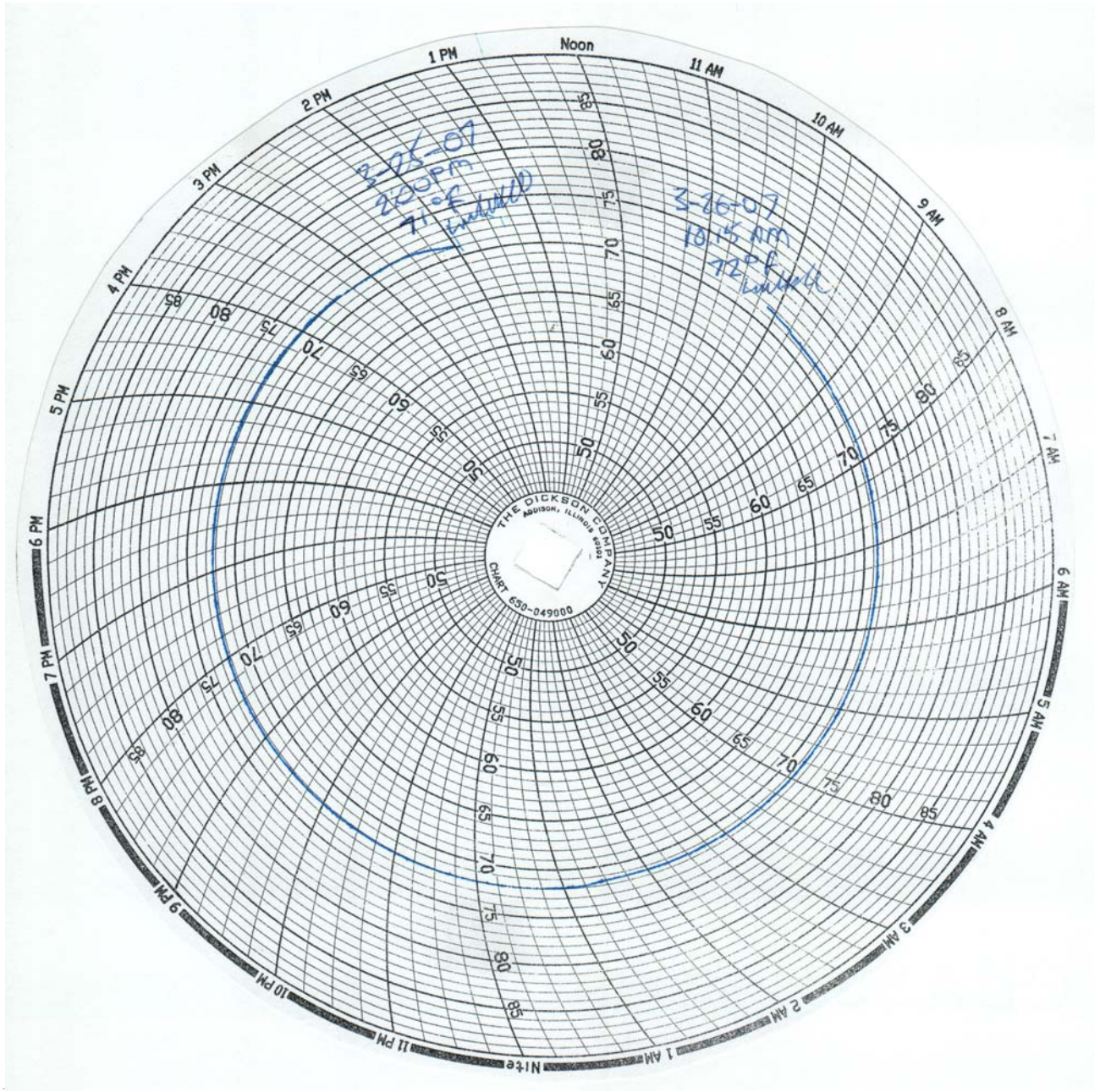
Rollover 90 Degrees

Rollover 180 Degrees

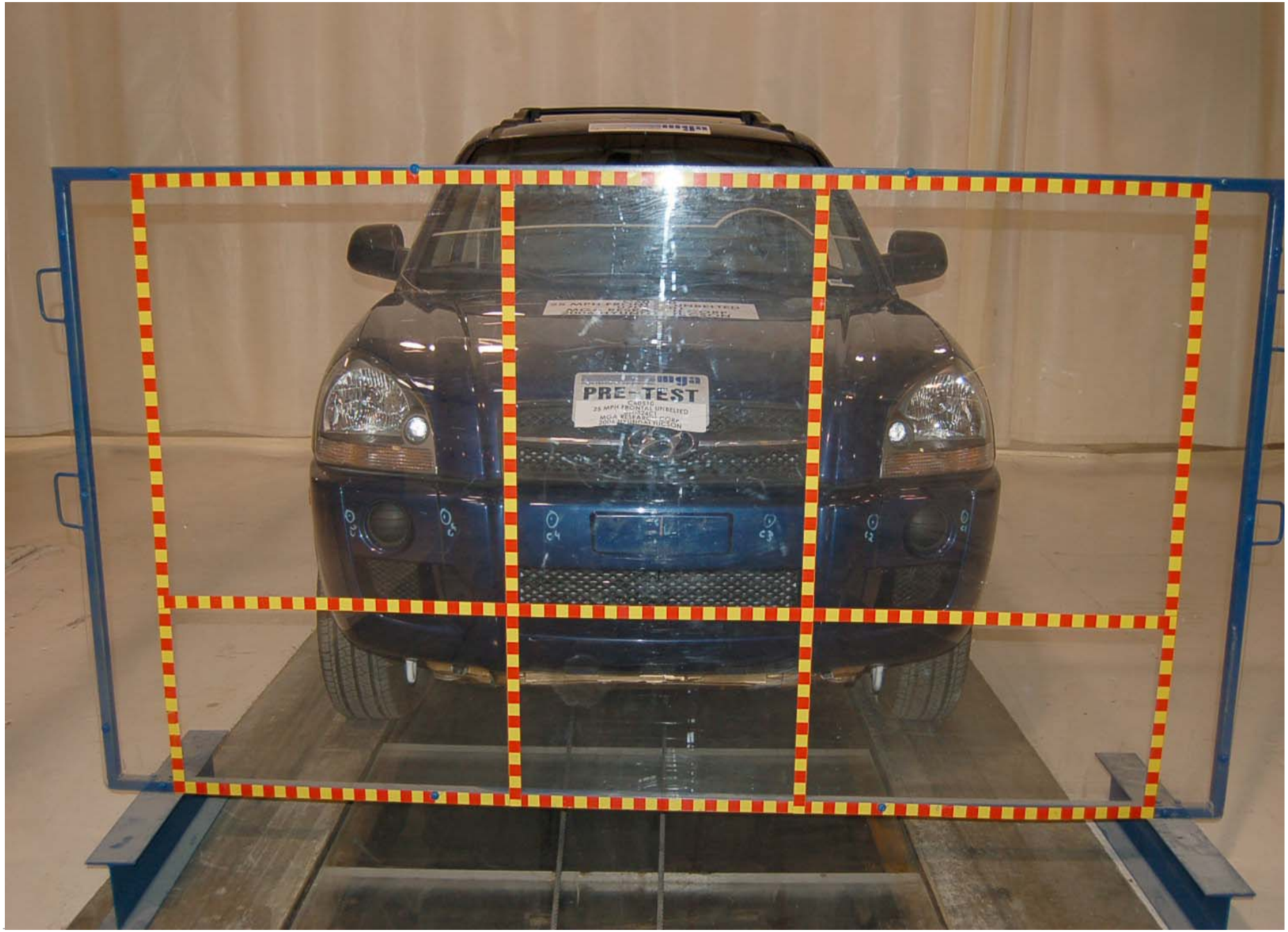
Rollover 270 Degrees



Rollover 360 Degrees



Temperature Plot



Vehicle in Relation to The Load Cell Grid

APPENDIX D

LOW RISK PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

Pre-Test 5th Fem. P1 Driver Dummy Left Side View (Door Open)

Post-Test 5th Fem. P1 Driver Dummy Left Side View (Door Open)

Pre-Test 5th Fem. P1 Driver Dummy Right Side View (Door Open)

Post-Test 5th Fem. P1 Driver Dummy Right Side View (Door Open)

Post-Test 5th Fem. P1 Driver Dummy Airbag Left View

Post-Test 5th Fem. P1 Driver Dummy Airbag Right View

Pre-Test 5th Fem. P2 Trial 1 Driver Dummy Left Side View (Door Open)

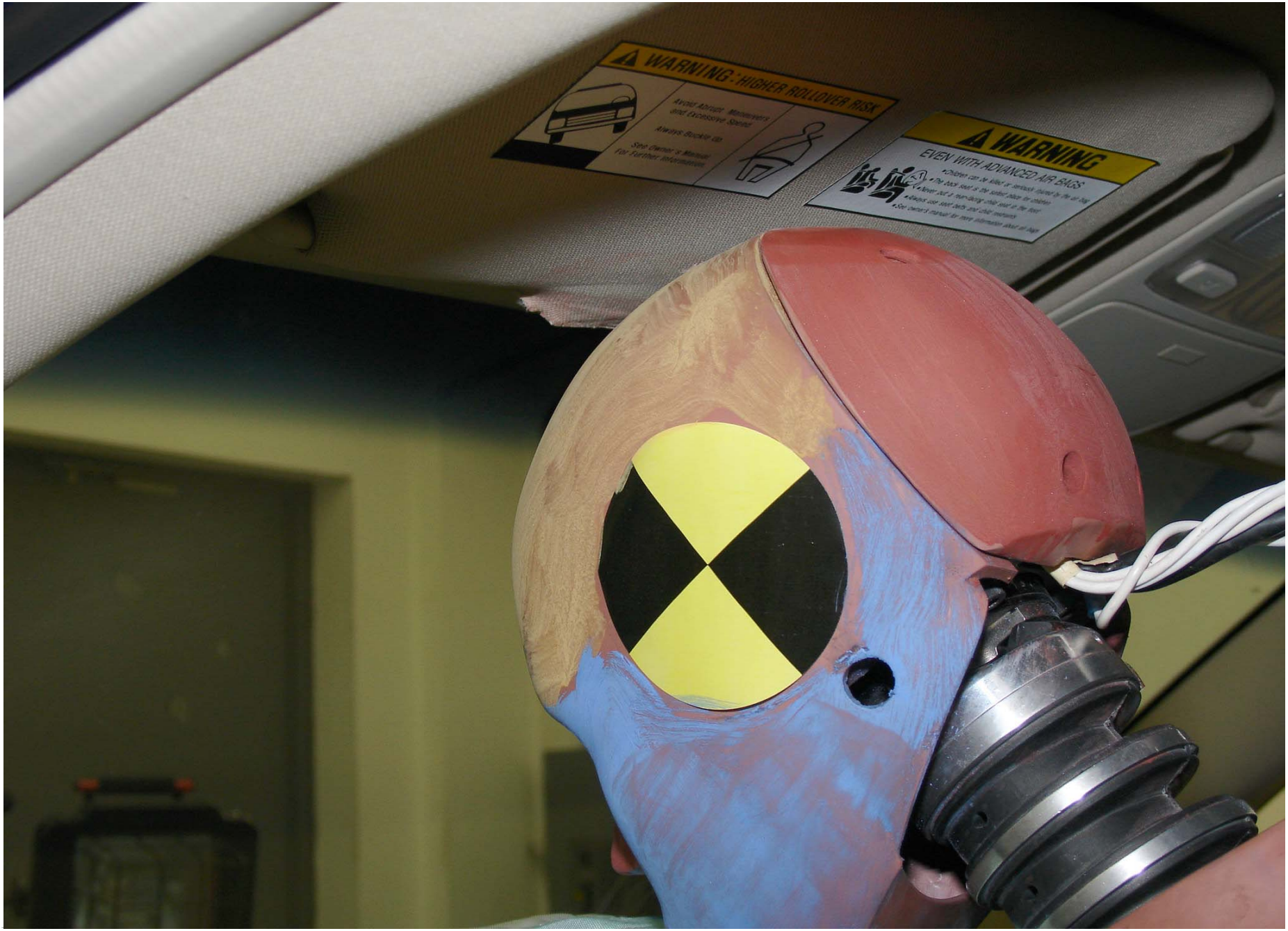
Post-Test 5th Fem. P2 Trial 1 Driver Dummy Left Side View (Door Open)

Pre-Test 5th Fem. P2 Trial 1 Driver Dummy Right Side View (Door Open)

Post-Test 5th Fem. P2 Trial 1 Driver Dummy Right Side View (Door Open)

Post-Test 5th Fem. P2 Trial 1 Driver Dummy Airbag Left View

Post-Test 5th Fem. P2 Trial 1 Driver Dummy Airbag Right View



Post-Test 5th Fem. P2 Trail 1 Driver Dummy Head Contact View (visor)

Pre-Test 5th Fem. P2 Trial 2 Driver Dummy Left Side View (Door Open)

Post-Test 5th Fem. P2 Trial 2 Driver Dummy Left Side View (Door Open)

Pre-Test 5th Fem. P2 Trial 2 Driver Dummy Right Side View (Door Open)

Post-Test 5th Fem. P2 Trial 2 Driver Dummy Right Side View (Door Open)

Post-Test 5th Fem. P2 Trial 2 Driver Dummy Airbag Left View

Post-Test 5th Fem. P2 Trial 2 Driver Dummy Airbag Right View

Pre-Test 5th Fem. P2 Trial 3 Driver Dummy Left Side View (Door Open)

Post-Test 5th Fem. P2 Trial 3 Driver Dummy Left Side View (Door Open)

Pre-Test 5th Fem. P2 Trial 3 Driver Dummy Right Side View (Door Open)

Post-Test 5th Fem. P2 Trial 3 Driver Dummy Right Side View (Door Open)

Post-Test 5th Fem. P2 Trial 3 Driver Dummy Airbag Left View

Post-Test 5th Fem. P2 Trial 3 Driver Dummy Airbag Right View

Post-Test 5th Fem. P2 Trial 3 Driver Dummy Head Contact View (visor)

Pre-Test 5th Fem. P2 Trial 4 Driver Dummy Left Side View (Door Open)

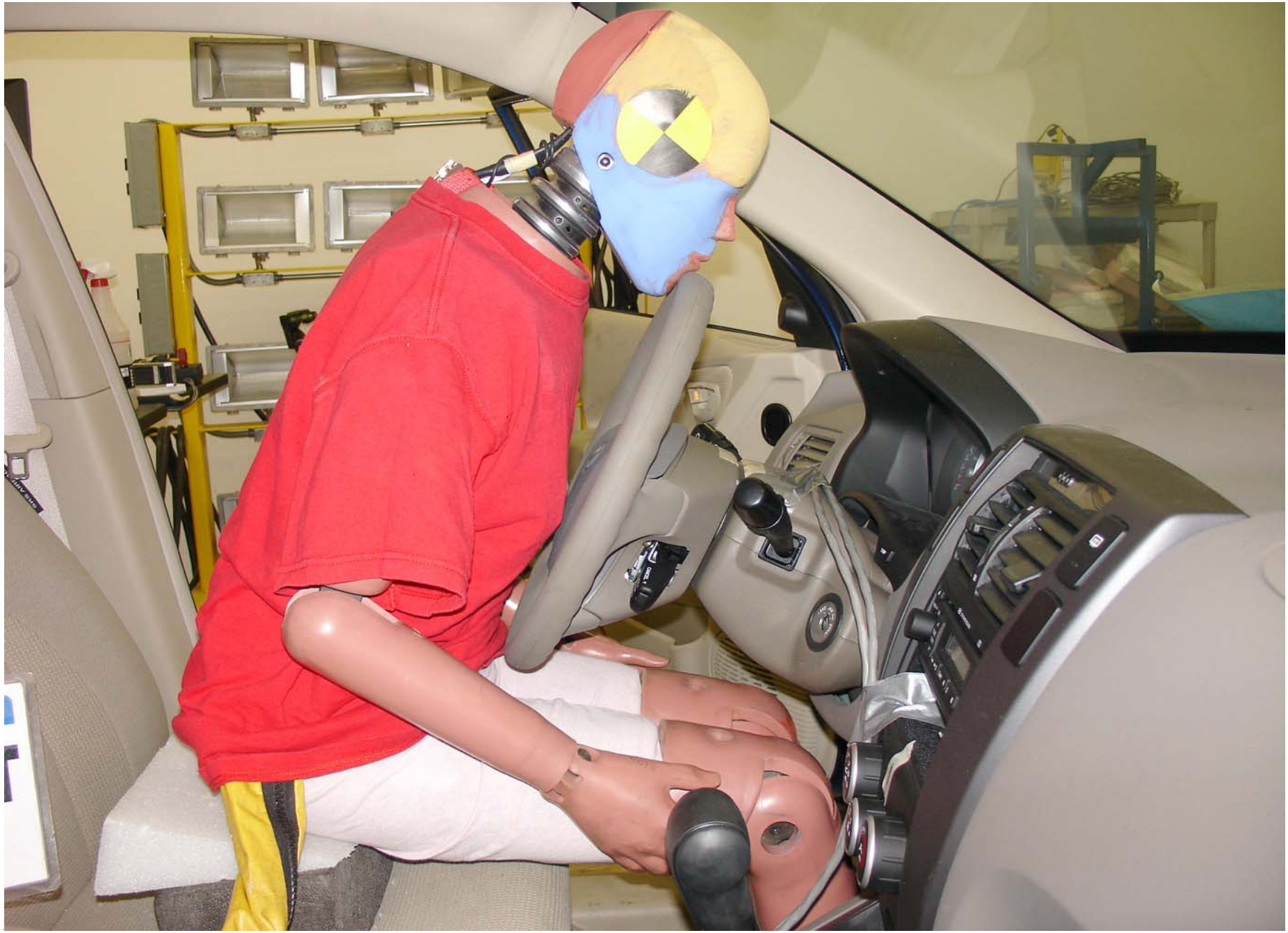
Post-Test 5th Fem. P2 Trial 4 Driver Dummy Left Side View (Door Open)

Pre-Test 5th Fem. P2 Trial 4 Driver Dummy Right Side View (Door Open)

Post-Test 5th Fem. P2 Trial 4 Driver Dummy Right Side View (Door Open)

Pre-Test 5th Fem. P2 Trial 4 Driver Dummy Left Side Mid Position View

Post-Test 5th Fem. P2 Trial 4 Driver Dummy Left Side Mid Position View



Pre-Test 5th Fem. P2 Trial 4 Driver Dummy Right Side Mid Position View

Post-Test 5th Fem. P2 Trial 4 Driver Dummy Right Side Mid Position View

Post-Test 5th Fem. P2 Trial 4 Driver Dummy Airbag Left View

Post-Test 5th Fem. P2 Trial 4 Driver Dummy Airbag Right View

Pre-Test 5th Fem. P2 Trial 5 Driver Dummy Left Side View (Door Open)

Post-Test 5th Fem. P2 Trial 5 Left Side View (Door Open)

Pre-Test 5th Fem. P2 Trial 5 Driver Dummy Right Side View (Door Open)

Post-Test 5th Fem. P2 Trial 5 Right Side View (Door Open)

Post-Test 5th Fem. P2 Trial 5 Driver Dummy Left Side Head Position View

Post-Test 5th Fem. P2 Trial 5 Driver Dummy Right Side Head Position View

Pre-Test 5th Fem. P2 Trial 5 Driver Dummy Left Side Mid Position View

Pre-Test 5th Fem. P2 Trial 5 Driver Dummy Right Side Mid Position View

Post-Test 5th Fem. P2 Trial 5 Driver Dummy Airbag Left View

Post-Test 5th Fem. P2 Trial 5 Driver Dummy Airbag Right View

Post-Test 5th Fem. P2 Trial 5 Driver Dummy View 1

Post-Test 5th Fem. P2 Trial 5 Driver Dummy View 2

Pre-Test 5th Fem. P2 Trial 6 Driver Dummy Left Side View (Door Open)

Post-Test 5th Fem. P2 Trial 6 Driver Dummy Left Side View (Door Open)

Pre-Test 5th Fem. P2 Trial 6 Driver Dummy Right Side View (Door Open)

Post-Test 5th Fem. P2 Trial 6 Driver Dummy Right Side View (Door Open)

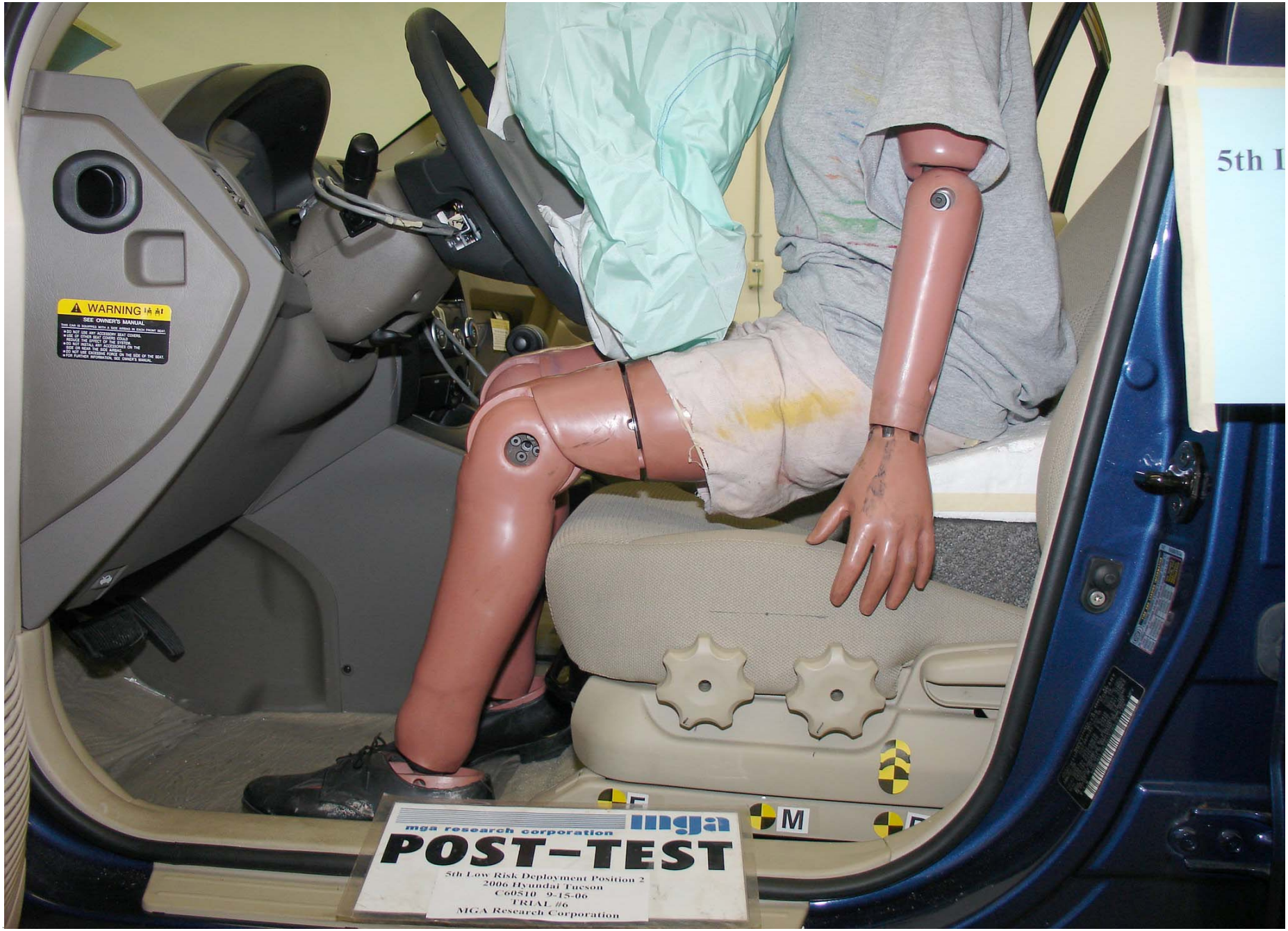
Pre-Test 5th Fem. P2 Trial 6 Driver Dummy Left Side Head Position View

Post-Test 5th Fem. P2 Trial 6 Driver Dummy Left Side Head Position View

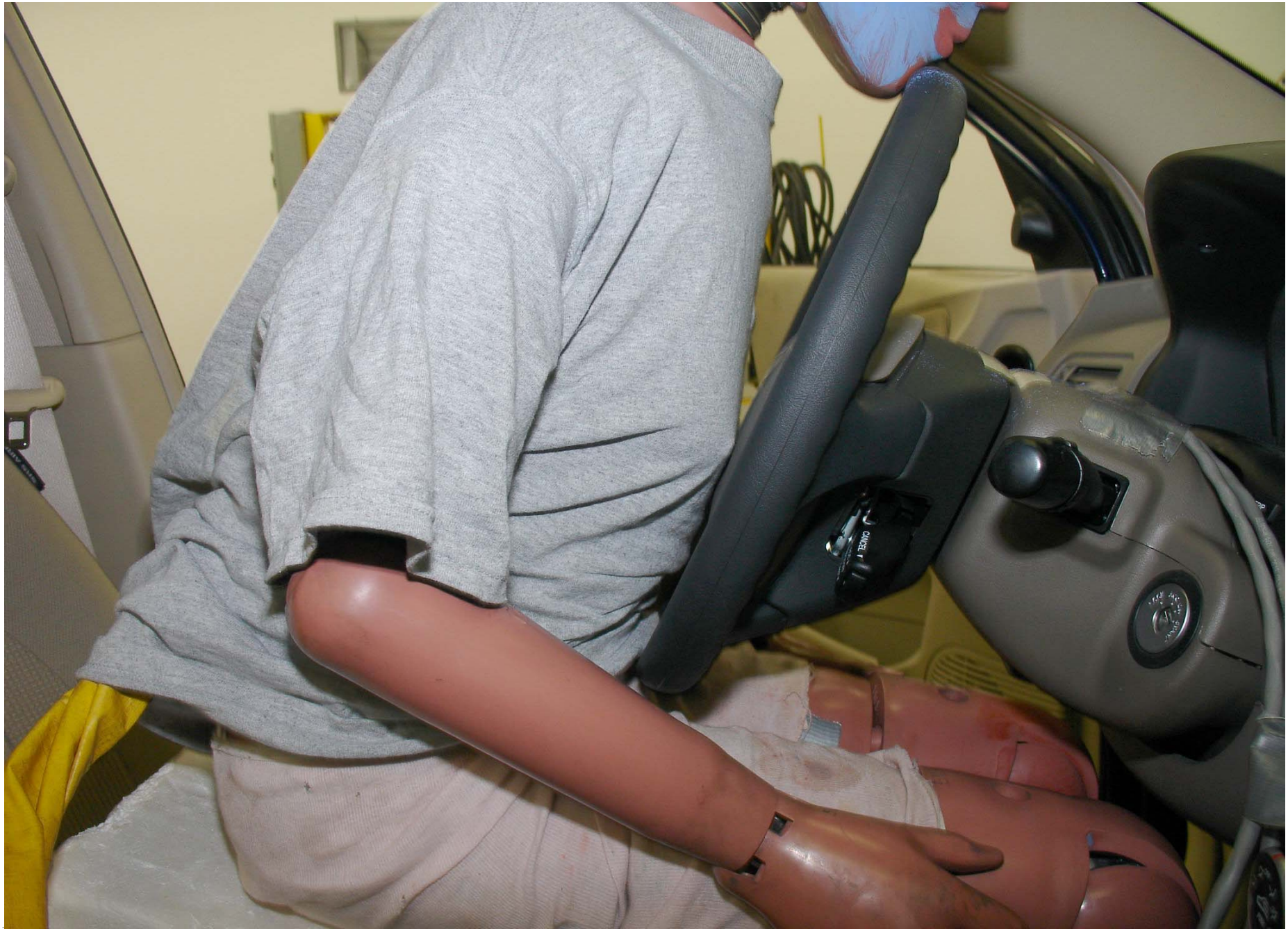
Pre-Test 5th Fem. P2 Trial 6 Driver Dummy Right Side Head Position View

Post-Test 5th Fem. P2 Trial 6 Driver Dummy Right Side Head Position View

Pre-Test 5th Fem. P2 Trial 6 Driver Dummy Left Side Mid Position View



Post-Test 5th Fem. P2 Trial 6 Driver Dummy Left Side Mid Position View



Pre-Test 5th Fem. P2 Trial 6 Driver Dummy Right Side Mid Position View

Post-Test 5th Fem. P2 Trial 6 Driver Dummy Right Side Mid Position View

Post-Test 5th Fem. P2 Trial 6 Driver Dummy Airbag Left View

Post-Test 5th Fem. P2 Trial 6 Driver Dummy Airbag Right View

Pre-Test 5th Fem. P2 Trial 7 Driver Dummy Left Side View (Door Open)

Post-Test 5th Fem. P2 Trial 7 Driver Dummy Left Side View (Door Open)

Pre-Test 5th Fem. P2 Trial 7 Driver Dummy Right Side View (Door Open)

Post-Test 5th Fem. P2 Trial 7 Driver Dummy Right Side View (Door Open)

Pre-Test 5th Fem. P2 Trial 7 Driver Dummy Left Side Head Position View

Post-Test 5th Fem. P2 Trial 7 Driver Dummy Left Side Head Position View

Pre-Test 5th Fem. P2 Trial 7 Driver Dummy Right Side Head Position View

Post-Test 5th Fem. P2 Trial 7 Driver Dummy Right Side Head Position View

Pre-Test 5th Fem. P2 Trial 7 Driver Dummy Left Side Mid Position View

Post-Test 5th Fem. P2 Trial 7 Driver Dummy Left Side Mid Position View

Pre-Test 5th Fem. P2 Trial 7 Driver Dummy Right Side Mid Position View

Post-Test 5th Fem. P2 Trial 7 Driver Dummy Right Side Mid Position View

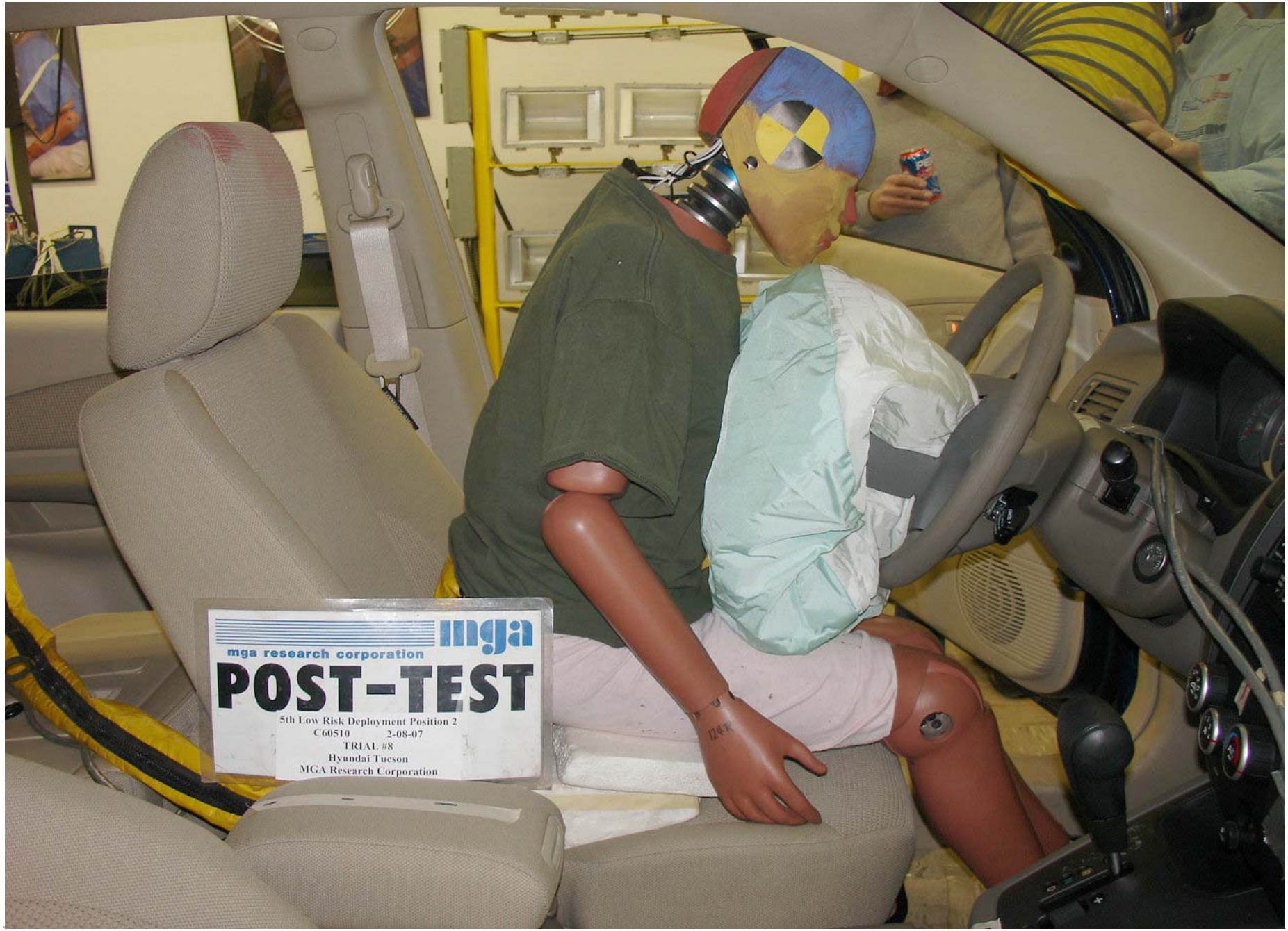
Post-Test 5th Fem. P2 Trial 7 Driver Dummy Airbag Left View

Post-Test 5th Fem. P2 Trial 7 Driver Dummy Airbag Right View

Pre-Test 5th Fem. P2 Trial 8 Driver Dummy Left Side View (Door Open)

Post-Test 5th Fem. P2 Trial 8 Driver Dummy Left Side View (Door Open)

Pre-Test 5th Fem. P2 Trial 8 Driver Dummy Right Side View (Door Open)



Post-Test 5th Fem. P2 Trial 8 Driver Dummy Right Side View (Door Open)

Pre-Test 5th Fem. P2 Trial 8 Driver Dummy Left Side Head Position View

Pre-Test 5th Fem. P2 Trial 8 Driver Dummy Right Side Head Position View

Post-Test 5th Fem. P2 Trial 8 Driver Dummy Airbag Left View

Post-Test 5th Fem. P2 Trial 8 Driver Dummy Airbag Right View

APPENDIX E
SUPPRESSION PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

Cosco Dream Ride Car Bed With Belt,
Forward Seat Track Handle Down

Cosco Dream Ride Car Bed With Belt,
Middle Seat Track Handle Down

Cosco Dream Ride Car Bed With Belt,
Rearward Seat Track Handle Down

Unbelted 5th Percentile Female Reactivation,
Rearward 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,
Forward Seat Track

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 Down

Evenflo First Choice 204 With Belt,
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

DOT/NHTSA 208 Suppression Test – 2006 Hyundai Tucson (C60510)

12 Month Section B Rear Facing CRS

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

Unbelted 5th Percentile Female Reactivation,
Middle Seat Track

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 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 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,
Rearward Seat Track

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,
Forward 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

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

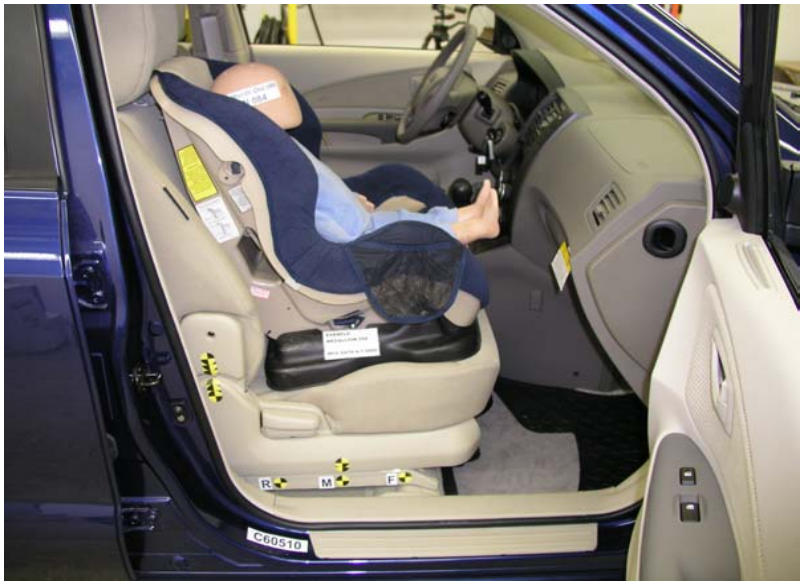
Unbelted 5th Percentile Female Reactivation,
Middle Seat Track

Evenflo Medallion 254 Forward Facing With Belt,
Forward Seat Track

Evenflo Medallion 254 Forward Facing With Belt,
Middle Seat Track

Evenflo Medallion 254 Forward Facing With Belt,
Rearward Seat Track

Evenflo Medallion 254 Forward Facing Unbelted,
Forward Seat Track



Evenflo Medallion 254 Forward Facing Unbelted,
Middle Seat Track

Evenflo Medallion 254 Forward Facing Unbelted,
Rearward Seat Track

Evenflo Medallion 254 Rearward Facing With Belt,
Forward Seat Track

Evenflo Medallion 254 Rearward Facing With Belt,
Middle Seat Track

Evenflo Medallion 254 Rearward Facing With Belt, Rearward Seat Track

Evenflo Medallion 254 Rearward Facing Unbelted, Forward Seat Track

Evenflo Medallion 254 Rearward Facing Unbelted, Middle Seat Track

Evenflo Medallion 254 Rearward Facing Unbelted, Rearward Seat Track

Unbelted 5th Percentile Female Reactivation,
Rearward 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,
Forward 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,
Middle 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,
Rearward 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,
Rearward 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, 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

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

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

DOT/NHTSA 208 Suppression Test – 2006 Hyundai Tucson (C60510)
3 Year Old No CRS

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 – 2006 Hyundai Tucson (C60510)
3 Year Old No CRS

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

DOT/NHTSA 208 Suppression Test – 2006 Hyundai Tucson (C60510)
3 Year Old No CRS

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

DOT/NHTSA 208 Suppression Test – 2006 Hyundai Tucson (C60510)
3 Year Old No CRS

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

DOT/NHTSA 208 Suppression Test – 2006 Hyundai Tucson (C60510)
3 Year Old No CRS

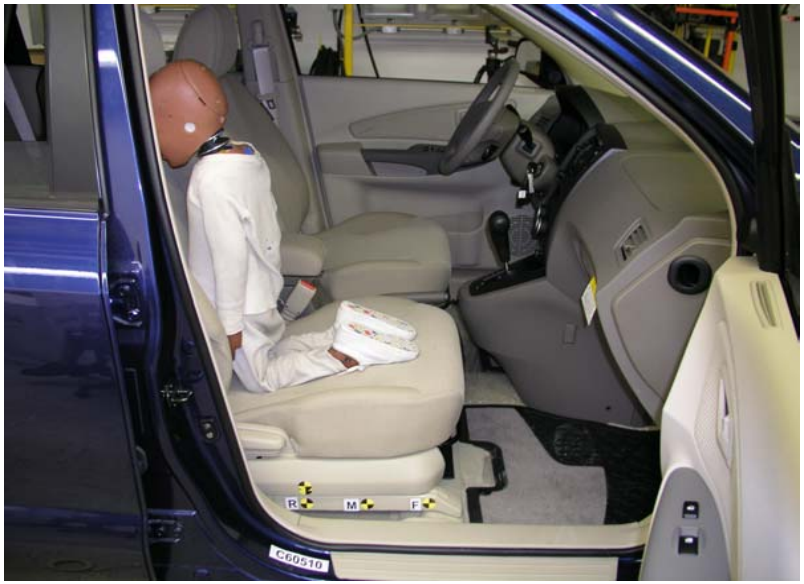
3-Year-Old Unbelted, Rearward Seat Track, Position 3

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 – 2006 Hyundai Tucson (C60510)
3 Year Old No CRS



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

Unbelted 5th Percentile Female Reactivation, Middle Seat Track

DOT/NHTSA 208 Suppression Test – 2006 Hyundai Tucson (C60510)
6 Year Old No CRS

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

DOT/NHTSA 208 Suppression Test – 2006 Hyundai Tucson (C60510)
6 Year Old No CRS


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

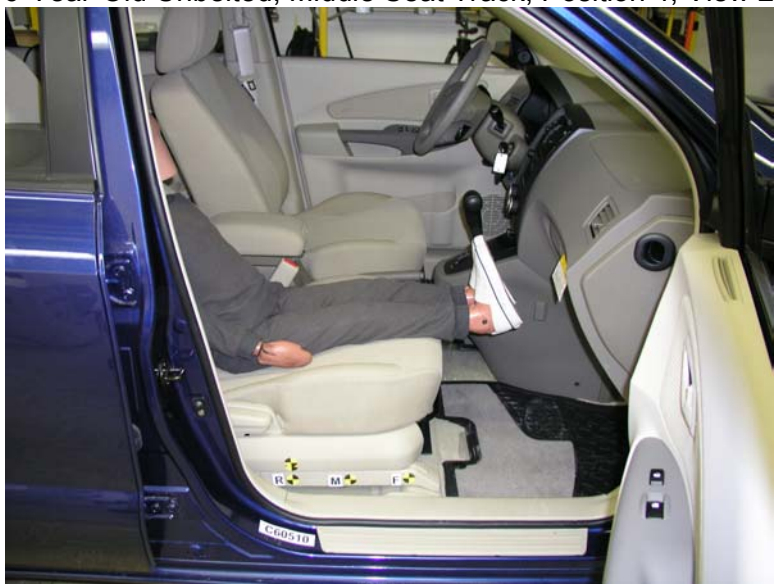
6-Year-Old Unbelted, Middle Seat Track, Position 3

DOT/NHTSA 208 Suppression Test – 2006 Hyundai Tucson (C60510)
6 Year Old No CRS


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

DOT/NHTSA 208 Suppression Test – 2006 Hyundai Tucson (C60510)
6 Year Old No CRS

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

APPENDIX F

INSTRUMENTATION CALIBRATION

INSTRUMENTS FOR DRIVER DUMMY NO. 506

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	P47891	Endevco	03/12/07
Head Y	P47892	Endevco	03/12/07
Head Z	P47893	Endevco	03/12/07
Neck Load Cell	252	Denton	01/24/07
Chest X	P47888	Endevco	03/12/07
Chest Y	P47889	Endevco	03/12/07
Chest Z	P47890	Endevco	03/12/07
Chest Displacement	506	Servo	03/15/07
Left Femur Load Cell	992	Denton	03/13/07
Right Femur Load Cell	988	Denton	03/13/07

INSTRUMENTS FOR PASSENGER DUMMY NO. 516

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	J25-R13	Entran	03/12/07
Head Y	J25-R15	Entran	03/12/07
Head Z	J26-H01	Entran	03/12/07
Neck Load Cell	253	Denton	01/25/07
Chest X	A05-A20	Entran	03/12/07
Chest Y	A07-J01	Entran	03/12/07
Chest Z	A05-A21	Entran	03/12/07
Chest Displacement	516	Servo	03/15/07
Left Femur Load Cell	996	Denton	03/13/07
Right Femur Load Cell	994	Denton	03/13/07

INSTRUMENTS FOR LOW RISK 5TH FEMALE DUMMY NO. 125 (P1)

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	P47305	Endevco	09/07/06
Head Y	P47898	Endevco	09/07/06
Head Z	P47897	Endevco	09/07/06
Neck Load Cell	253	Denton	01/25/07
Chest X	P47880	Endevco	09/07/06
Chest Y	P47879	Endevco	09/07/06
Chest Z	P47881	Endevco	09/07/06
Chest Displacement	125	Servo	02/05/07
Left Femur Load Cell	992	Denton	10/04/06
Right Femur Load Cell	988	Denton	10/04/06

INSTRUMENTS FOR LOW RISK 5TH FEMALE DUMMY NO. 505 (P2) TRIAL 1

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	A07-J05	Entran	04/11/06
Head Y	G22-L04	Entran	04/26/06
Head Z	J23-M09	Entran	04/26/06
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	1362	Denton	04/10/06
Right Femur Load Cell	1361	Denton	04/10/06

INSTRUMENTS FOR LOW RISK 5TH FEMALE DUMMY NO. 505 (P2) TRIAL 2

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	A07-J05	Entran	04/11/06
Head Y	G22-L04	Entran	04/26/06
Head Z	J23-M09	Entran	04/26/06
Neck Load Cell	1021	Denton	04/25/06
Chest X	J13709	Endevco	05/24/06
Chest Y	J17709	Endevco	05/24/06
Chest Z	J13541	Endevco	05/24/06
Chest Displacement	505	Servo	02/08/06
Left Femur Load Cell	84	Denton	07/14/06
Right Femur Load Cell	83	Denton	07/14/06

INSTRUMENTS FOR LOW RISK 5TH FEMALE DUMMY NO. 505 (P2) TRIAL 3

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	A07-J05	Entran	04/11/06
Head Y	G22-L04	Entran	04/26/06
Head Z	J23-M09	Entran	04/26/06
Neck Load Cell	252	Denton	07/17/06
Chest X	J13709	Endevco	05/24/06
Chest Y	J17709	Endevco	05/24/06
Chest Z	J13541	Endevco	05/24/06
Chest Displacement	505	Servo	02/08/06
Left Femur Load Cell	84	Denton	07/14/06
Right Femur Load Cell	83	Denton	07/14/06

INSTRUMENTS FOR LOW RISK 5TH FEMALE DUMMY NO. 507 (P2) TRIAL 4

	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	1748	Denton	04/12/06
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	08/11/06
Left Femur Load Cell	1360	Denton	06/08/06
Right Femur Load Cell	1359	Denton	06/08/06

INSTRUMENTS FOR LOW RISK 5TH FEMALE DUMMY NO. 511 (P2) TRIAL 5

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	P49475	Endevco	04/04/06
Head Y	P49477	Endevco	04/04/06
Head Z	P49476	Endevco	04/04/06
Neck Load Cell	1703	Denton	06/05/06
Chest X	P49478	Endevco	04/04/06
Chest Y	P49470	Endevco	04/04/06
Chest Z	P49506	Endevco	04/04/06
Chest Displacement	511	Servo	04/11/06
Left Femur Load Cell	1362	Denton	04/10/06
Right Femur Load Cell	1361	Denton	04/10/06

INSTRUMENTS FOR LOW RISK 5TH FEMALE DUMMY NO. 510 (P2) TRIALS 6 & 7

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	P47891	Endevco	09/07/06
Head Y	P47892	Endevco	09/07/06
Head Z	P47893	Endevco	09/07/06
Neck Load Cell	1562	Denton	05/10/06
Chest X	J23-M06	Entran	04/04/06
Chest Y	J23-M07	Entran	04/04/06
Chest Z	J23-M03	Entran	04/04/06
Chest Displacement	510	Servo	08/10/06
Left Femur Load Cell	9426	GSE	08/23/06
Right Femur Load Cell	9425	GSE	08/23/06

INSTRUMENTS FOR LOW RISK 5TH FEMALE DUMMY NO. 124 (P2) TRIAL 8

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Head X	G29-X14	Entran	12/28/06
Head Y	G29-X39	Entran	12/28/06
Head Z	G16-Z11	Entran	12/28/06
Neck Load Cell	1021	Denton	11/13/06
Chest X	P49450	Endevco	12/28/06
Chest Y	P49452	Endevco	12/28/06
Chest Z	P49451	Endevco	12/28/06
Chest Displacement	124	Servo	01/29/07
Left Femur Load Cell	9428	GSE	10/05/06
Right Femur Load Cell	9427	GSE	10/05/06

VEHICLE INSTRUMENTS

	SERIAL NO.	MANUFACTURER	CALIBRATION DATE
Left Rear Seat Crossmember X	C09-Y09	Entran	03/02/07
Right Rear Seat Crossmember X	H07-X03	Entran	03/02/07
Top of Engine X	AN8D5	Endevco	01/25/07
Bottom of Engine X	AP2D7	Endevco	11/15/06
Left Brake Caliper X	AJ4J0	Endevco	03/02/07
Right Brake Caliper X	J12471	Endevco	03/02/07
Instrument Panel X	C29-L17	Entran	03/02/07
Trunk Z	B28-Z17	Entran	03/02/07

APPENDIX G

NOTICE OF TEST FAILURE

LABORATORY NOTICE OF APPARENT TEST FAILURE TO OVSC

FMVSS NO. 208 TEST DATE: July 20, 2006

LABORATORY: MGA Research Corporation

CONTRACT NO.: DTNH22-03-D-11002 DELV. ORDER NO.: #12

LABORATORY PROJECT ENGINEER'S NAME: Jeff Lewandowski

TEST SPECIMEN DESCRIPTION: 2006 Hyundai Tucson MPV

VEHICLE NHTSA NO.: C60510 VIN: KM8JM12B16U378533

MFR: Hyundai Motor Company

APPARENT TEST FAILURE DESCRIPTION: The 5th% Driver Dummy had a Tension Extension Neck Injury of 1.168 at a 17.4 ms time during a Position 2 (Chin on Rim) Low Risk Deployment test.

FMVSS REQUIREMENT, PARAGRAPH S: S.25.3 / S.25.4 Neck Injury (Critical values: Tension = 3880N; Extension = 61Nm) The Neck Injury value shall not exceed 1.0 at any time during the low risk deployment event.

NOTIFICATION TO NHTSA (COTR): Charles Case

DATE: 7-20-2006 BY: Jeff Lewandowski

REMARKS: