

REPORT NUMBER: NCAPSIDE-MGA-2010-007

**NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST**

**GENERAL MOTORS COMPANY
2010 CHEVROLET COLORADO EXTENDED CAB
NHTSA NUMBER: MA0122**

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



Test Date: November 3, 2009

Report Date: November 24, 2009

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
RULEMAKING
OFFICE OF CRASHWORTHINESS STANDARDS
1200 NEW JERSEY AVENUE, SE, ROOM W43-410
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 DTNH22-09-D-00124.

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Date: 11/24/2009

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David Winkelbauer, Director of Operations

Date: 11/24/2009

Technical Report Documentation Page

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16. Abstract A 55/28 km/h 90° Moving Deformable Barrier NCAP side impact was conducted on the subject 2010 Chevrolet Colorado Extended Cab to obtain new car assessment and research data indicant of FMVSS No. 214D performance. The test was conducted at MGA Research Corporation, in Burlington, Wisconsin, on November 3, 2009. The impact velocity of the Moving Deformable Barrier (MDB) was 62.1 km/h, and the ambient temperature at the struck side (drivers) of the vehicle was 21°C. The target vehicle's maximum post test static crush was 398 mm at level 3. The test vehicle's occupant performance is as follows: <table style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>DRIVER</u></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib (LUR) Accel., g</td> <td style="text-align: center;">54.4</td> </tr> <tr> <td>Left Lower Rib (LLR) Accel., g</td> <td style="text-align: center;">49.0</td> </tr> <tr> <td>Lower Spine (T₁₂) Accel., g</td> <td style="text-align: center;">94.0</td> </tr> <tr> <td>Thoracic Trauma Index (TTI)</td> <td style="text-align: center;">74</td> </tr> <tr> <td>Pelvis (PEV) Accel., g</td> <td style="text-align: center;">130.8</td> </tr> <tr> <td>HIC</td> <td style="text-align: center;">154</td> </tr> </tbody> </table>					<u>DRIVER</u>	Left Upper Rib (LUR) Accel., g	54.4	Left Lower Rib (LLR) Accel., g	49.0	Lower Spine (T ₁₂) Accel., g	94.0	Thoracic Trauma Index (TTI)	74	Pelvis (PEV) Accel., g	130.8	HIC	154
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Pelvis (PEV) Accel., g	130.8																
HIC	154																
The door on the struck side of the vehicle did not separate from the body at the hinges or latch and the opposite door did not open during the side impact event.																	
17. Key Words New Car Assessment Program (NCAP) Side Impact Side Impact Hybrid III Dummy (SID/HIII) Occupant Side Impact Protection		18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Adm. Technical Ref. Division, 1200 New Jersey Ave, SE Washington, D.C. 20590															
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SECTION 1

PURPOSE AND TEST PROCEDURE

PURPOSE

This side impact test was conducted as part of the test program sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-09-D-00124. The purpose of this test was to evaluate side impact protection in a 2010 Chevrolet Colorado Extended Cab manufactured by General Motors Company.

TEST PROCEDURE

The side impact test was conducted in accordance with the Laboratory Test Procedure for New Car Assessment Program Side Impact Testing dated November 2002 and the corresponding MGA Research Corporation Test Procedure MGA-NHTSA5. The procedures for receiving, inspection, testing, and reporting of test results are described in the test procedures and are not repeated in this report.

MGA does not endorse or certify products. The manufacturer's name appears solely for identification purposes.

SECTION 2

SUMMARY OF NCAP SIDE IMPACT TEST

A model year 2010 Chevrolet Colorado Extended Cab was impacted on the left (driver's) side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 62.1 km/h. The specified impact velocity range is from 61.1 to 62.7 km/h. The test (target) vehicle was stationary and positioned 63° to the line of forward motion. The weight of the vehicle as tested was 1844.3 kg and the test weight of the MDB was 1361.5 kg. The test was conducted at MGA Research Corporation in Burlington, Wisconsin, on November 3, 2009.

One (1) real-time motion picture camera and eight (8) high-speed motion picture cameras were used to document the impact event. The pre-test and post-test conditions were recorded by one (1) real-time motion picture camera. Camera locations and pertinent camera information are documented in the data sheets. Pre- and post-test photographs of the vehicle and Side Impact Dummy (SID/HIII) can be found in Appendix A. One 50th percentile adult male SID/HIII was placed in the driver designated seating position according to instructions specified in the Laboratory Test Procedure for New Car Assessment Program Side Impact Testing dated November 2002. The SID/HIII was instrumented in the following locations:

- Left Upper Rib (LUR) uni-axial accelerometer (Y-axis primary and redundant)
- Left Lower Rib (LLR) uni-axial accelerometer (Y-axis primary and redundant)
- Lower Thoracic Spine (T12) uni-axial accelerometer (Y-axis primary and redundant)
- Pelvic (PEV) section uni-axial accelerometer (Y-axis primary and redundant)
- Head Center of Gravity (CG) tri-axial accelerometers (X, Y and Z axes primary and redundant)
- Upper Neck load cell (Fx, Fy, Fz, Mx, My, Mz)

The test vehicle was instrumented with twenty (20) structural accelerometers and the MDB was instrumented with five (5) accelerometers and two (2) contact switches on the bumper to compare left side to right side bumper impact timing. All data channels were recorded with a fully self contained on-board DTS TDAS Pro Data Acquisition System. The data was digitally sampled at 10,000 samples per second and processed per Appendix V of the Test Procedure.

2.2 GENERAL COMMENTS

The test vehicle sustained a maximum static crush of 398 mm at level 3, 1500 mm rearward of the vertical impact point. The driver SID/HIII, Serial No. 271 was calibrated just prior to this test.

Appendix A contains the still photograph prints. Appendix B contains the SID/HIII response data traces. Appendix C contains the dummy calibration data.

The occupant data is summarized below:

ATD position	HIC	T ¹	T ²	TTI (G's)	Peak Pelvis (G's)
Driver	154	32.4	68.4	74	130.8

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Information	Left Front (Driver)	
	Installed	Deployed
Front Airbag	Yes	No
Side Torso Airbag	No	
Curtain Airbag	Yes	Yes

The test data can be found on the NHTSA website at www.nhtsa.dot.gov.

TEST NOTES

There was no valid data collected for:

- Left Mid B-Post Y after 10 msec.
- Left Lower A-Post Y after 5 msec.
- Left Mid A-Post Y
- Driver Seat Track Y after 5 msec.

The left rear occupant was omitted for this test.
The test vehicle lacks a rear seating position.

MGA does not endorse or certify products. The manufacturer's name appears solely for identification purposes.

DATA SHEET NO. 1

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

NHTSA No. MA0122
 Test Date: 11/03/2009

TEST VEHICLE INFORMATION

Make	Chevrolet
Model	Colorado
Body Style	Extended Cab Pickup
NHTSA No.	MA0122
VIN	1GCESBD94A8100576
Color	Summit White
Delivery Date	10/19/09
Odometer Reading (mile)	51 miles
Dealer	Boucher Fleet Group
Transmission	Automatic
Final Drive	Rear
Number of Cylinders	4
Engine Displacement (L)	2.9
Engine Placement	Longitudinal
Automatic Door Locks (ADL)	No
Owner's Manual Details Instructions on Disabling ADLs	N/A

TEST VEHICLE OPTIONS

Driver Front Airbag	Yes
Driver Side Curtain Airbag	Yes
Driver Side Torso Airbag	No
Rear Passenger Side Curtain Airbag	Yes
Rear Passenger Side Torso Airbag	No
Power Steering	Yes
Power Door Locks	Yes
Tilt Wheel	Yes
Anti-lock Brakes	Yes
Traction Control	Yes
All Wheel Drive	No
Power Seats	No
Pretensioners	Yes
Load Limiters	Yes
Bucket Seats	No

DATA FROM CERTIFICATION LABEL

Manufactured By	General Motors Company
Date of Manufacture	08/09

GVWR (kg)	2268
GAWR Front (kg)	1194
GAWR Rear (kg)	1314

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Split Bench			
Number Of Occupants	3	0		3
Capacity Wt. (VCW) (kg)				602
Cargo Wt. (RCLW) (kg)				398

DATA SHEET NO. 1 (continued)**GENERAL TEST AND VEHICLE PARAMETER DATA**

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

NHTSA No. MA0122
 Test Date: 11/03/2009

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW) (Axle)			As Tested (ATW) (Axle)		
		Front	Rear	Total	Front	Rear	Total
Left	kg	468.1	369.7		506.2	460.4	
Right	kg	443.2	353.3		445.0	432.7	
Ratio	%	55.8	44.2		51.6	48.4	
Totals	kg	911.3	723.0	1634.3	951.2	893.1	1844.3

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1634.3
Weight of 1 P572M ATD	kg	80.7
Rated Cargo/Luggage Weight (RCLW)	kg	136
Calculated Vehicle Target Weight (TVTW)	kg	1851.0

* Actual As Tested Weight (ATW) will be TVTW -5/-10 kg

Weight of Ballast in Truck Bed (kg): 88.5

TEST VEHICLE ATTITUDES AND CG

	Units	LF	RF	LR	RR	CG (aft of front axle)
As Delivered	mm	824	841	851	871	1417
As Tested	mm	819	838	823	847	1551
Fully Loaded	mm	816	831	819	846	

TEST VEHICLE VERTICAL IMPACT LINE DATA

Measurement Description	Units	Value
Test Vehicle Wheel Base	mm	3202
Target Impact Point Aft of Front Axle	mm	508
Actual Impact Point Aft of Front Axle	mm	497

TEST VEHICLE TIRE INFORMATION

NHTSA No. MA0122
Test Date: 11/03/2009



Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	300	300
Cold Test Pressure (kPa)	240	240
Recommended Tire Size	P215/70R16	P215/70R16
Tire Size on Vehicle	P215/70R16	P215/70R16
Tire Manufacturer	General	General
Tire Name	Grabber HTS	Grabber HTS
Tire Type	Passenger	Passenger
Tire Width (mm)	215	215
Ratio of Height to Width (aspect ratio)	70	70
Radial	R	R
Wheel Diameter	16	16
Load Index & Speed Symbol	99S	99S
Treadwear	640	640
Traction Grade	A	A
Temperature Grade	B	B

DATA SHEET NO. 3 **TEST VEHICLE INFORMATION**

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

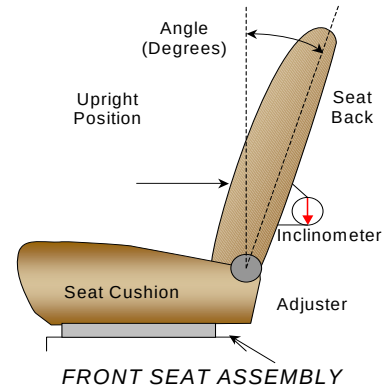
NHTSA No. MA0122
 Test Date: 11/03/2009

NOMINAL DESIGN RIDING POSITION

The driver and passenger seat back is positioned to the manufacturer's designated angle. The procedure is as follows:
 For the driver's seat, set seat back at 22.5 degrees measured on the tubular seat frame structure. The left rear passenger's seat is not adjustable.

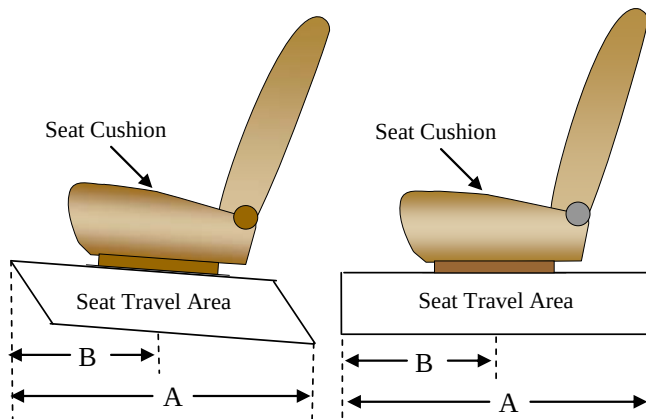
Driver seat back angle: 22.5 degrees at seat frame

Passenger seat back angle: fixed



SEAT FORE/AFT POSITIONS

	Total Fore/Aft Travel	Placed in position #
Driver Seat	25 detents	12 th detent (forward-most as 0)
Rear Seat	Fixed	Fixed



DATA SHEET NO. 3 (CONTINUED)

TEST VEHICLE INFORMATION

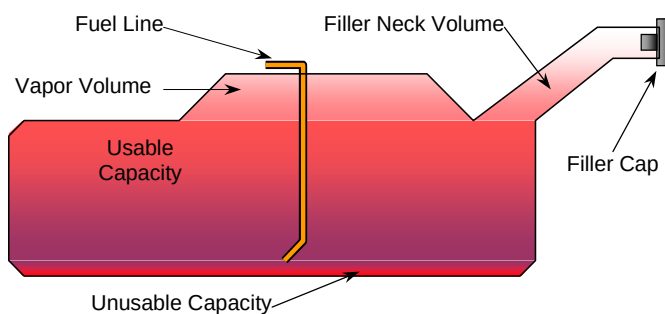
Test Vehicle: 2010 Chevrolet Colorado Ext Cab
Test Program: NCAP Side Impact

NHTSA No. MA0122
Test Date: 11/03/2009

FUEL TANK CAPACITY

	Liters
Usable Capacity of "Standard Tank"	73.8
Usable Capacity of "Optional" Tank	
92-94% of Usable Capacity	67.9 to 69.4
Actual Amount of Solvent used	68.5
1/3 of Usable Capacity	24.6

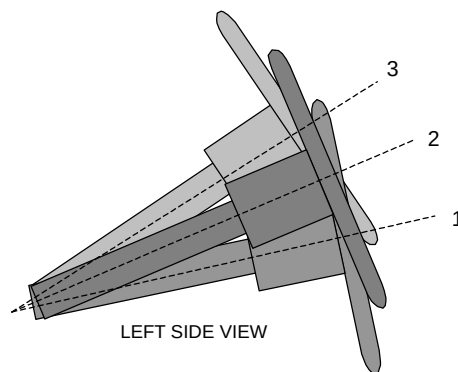
The test vehicle is equipped with an electric fuel pump. When the vehicle is turned to the "on" position, the pump will run for 2 to 3 seconds. When the vehicle is started, the pump will run until the key-off.



VEHICLE FUEL TANK ASSEMBLY

STEERING COLUMN ADJUSTMENT

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when moved through its full range of motion. An aluminum plate is placed across the rim of the steering wheel, an inclinometer is placed on the plate and the angle is measured.



STEERING COLUMN ASSEMBLY

STEERING COLUMN POSITION

	Fore/Aft (mm)	Degrees
Lowermost position No. 1		73.8
Geometric center position No. 2		67.5
Uppermost position No. 3		61.3
Test Position (2 nd detent, top as 0)		69.5

DATA SHEET NO. 4**MOVING DEFORMABLE BARRIER (MDB) SUMMARY OF RESULTS**

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

NHTSA No. MA0122
 Test Date: 11/03/2009

MDB SPECIFICATIONS

Measurement Description	Length (mm)
Overall Width of Framework Carriage	1252
Overall Length Including Honeycomb Face	4115
Wheel base of Framework Carriage	2592
C.G. Location aft of Front Axle	1129

MDB WEIGHTS

	Units	Front Axle	Rear Axle	Total
Left	kg	411.8	281.6	
Right	kg	356.8	311.3	
Ratio	%	56.5	43.5	
Totals	kg	768.6	592.9	1361.5

SPEED AND IMPACT ANGLE DATA

Measured Parameter	Units	Requirement	Value
Trap No. 1 Velocity (Primary)	km/h	61.1 to 62.7	62.1
Trap No. 2 Velocity (Redundant)	km/h	61.1 to 62.7	62.3
MDB CL to Target Vehicle CL	degrees	88.5 to 91.5	89.9

POST TEST OBSERVATIONS
MDB LEFT EDGE IMPACT POINT DATA

Measured Parameter	Units	Requirement	Value
Horizontal Offset	mm	+/- 50	11 forward
Vertical Offset	mm	+/-20	3 down

DATA SHEET NO. 5**POST TEST OBSERVATIONS**

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

NHTSA No. MA0122
 Test Date: 11/03/2009

TEST DUMMY INFORMATION AND CONTACT POINTS

Description	Front Seat SID/HIII
Dummy Type / Serial No.	SID HIII / 271
Head Contact	Curtain Airbag
Upper Torso Contact	Door Panel
Lower Torso Contact	Door Panel
Left Knee Contact	Door Panel
Right Knee Contact	Left Knee

POST TEST DOOR OPENING AND SEAT TRACK INFORMATION

Description	Front	Rear
Locked/Unlocked Doors	Struck side door was unlocked; Non-struck side door was unlocked	
Left Side Door Opening	Door remained closed and latched	
Right Side Door Opening	Door remained closed and latched; Door opened without tools	
Seat Movement	0	
Seat Back Failure	None	

POST TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	No Separation
Sill Separation	None
Windshield Damage	None
Window Damage	Left Front Door, Left Rear Window, Back Window Broken
Other Notable Effects	None

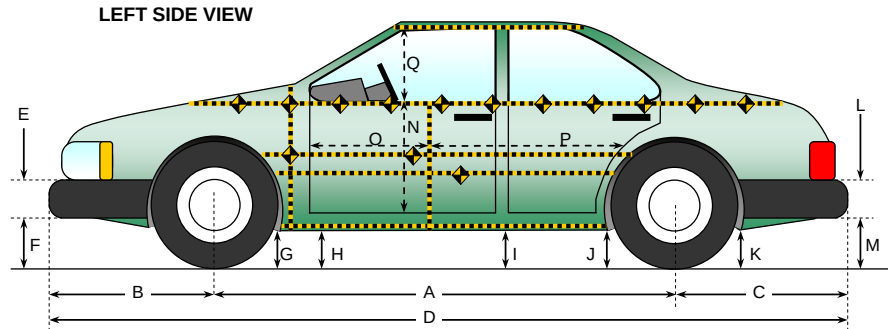
SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Information	Left Front (Driver)	
	Installed	Deployed
Front Airbag	Yes	No
Side Torso Airbag	No	
Curtain Airbag	Yes	Yes

DATA SHEET NO. 6
VEHICLE PRE-TEST AND POST-TEST MEASUREMENTS

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

NHTSA No. MA0122
 Test Date: 11/03/2009



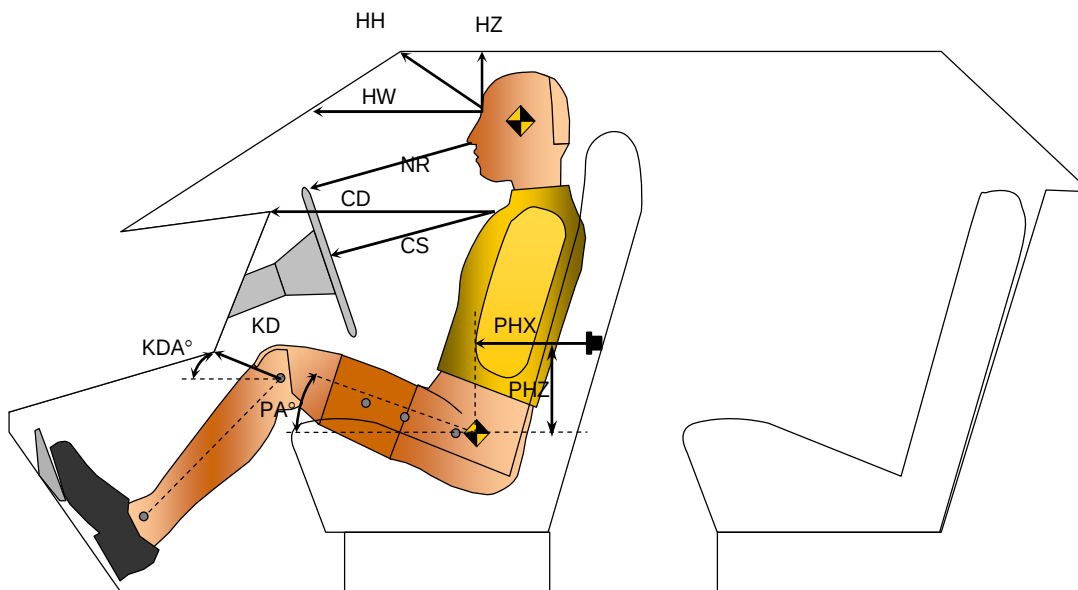
All Measurements in mm

Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	3202	3191	11
B	Front Axle to FSOV	880	895	-15
C	Rear Axle to RSOV	1182	1163	19
D	Total Length at Centerline	5264	5249	15
E	Front Bumper Thickness	127	127	0
F	Front Bumper Bottom to Ground	370	362	8
G	Sill Height at Front Wheel Well	290	328	-38
H	Sill Height at Front Door Leading Edge	292	320	-28
I	Sill Height at "B" Pillar	301	311	-10
J1	Sill Height at Rear Wheel Well	312	340	-28
J2	Pinch Weld Height at Rear Wheel Well	326	318	8
K	Sill Height Aft of Rear Wheel Well	361	385	-24
L	Rear Bumper Thickness	292	292	0
M	Rear Bumper Bottom to Ground	365	395	-30
N	Sill Height to Window Bottom Sill	710	620	90
O	Front Door Leading Edge to Impact CL	817	800	17
P	Rear Door Trailing Edge to Impact CL	946	910	36
Q	Front Window Opening	439	453	-14
R	Right Side Length	4580	4651	-71
S	Left Side Length	4580	4500	80
T	Vehicle Width at "B" Post	1712	1465	247

DATA SHEET NO. 7
SID/HII LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

NHTSA No. MA0122
 Test Date: 11/03/2009

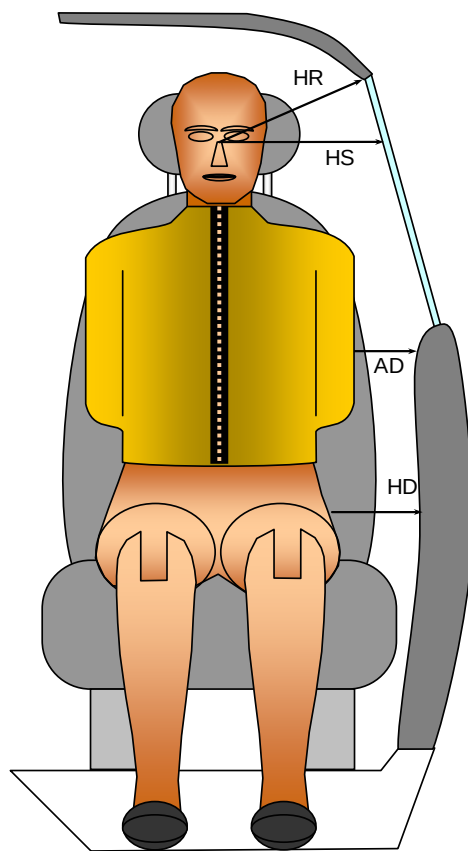


Driver Code	Pass. Code	Measurement Description	Driver S/N 271	
			Length(mm)	Angle(°)
HH		Head to Header	446	
HW		Head to Windshield	612	
HZ	HZ	Head to Roof	168	
NR	NB	Nose to Rim/Nose to Seatback	473	
CD	CB	Chest to Dash or Seatback	587	
CS		Chest to Steering Wheel	393	
KDL	KBL	Left Knee to Dash or Seatback	189	20.1
KDR	KBR	Right Knee to Dash or Seatback	187	18.9
PA	PA	Pelvic Angle		22.5
PHX	PHX	H-Point to Striker (X-Axis)	252	
PHZ	PHZ	H-Point to Striker (Z-Axis)	92	

DATA SHEET NO. 8
SID/HIII LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
Test Program: NCAP Side Impact

NHTSA No. MA0122
Test Date: 11/03/2009



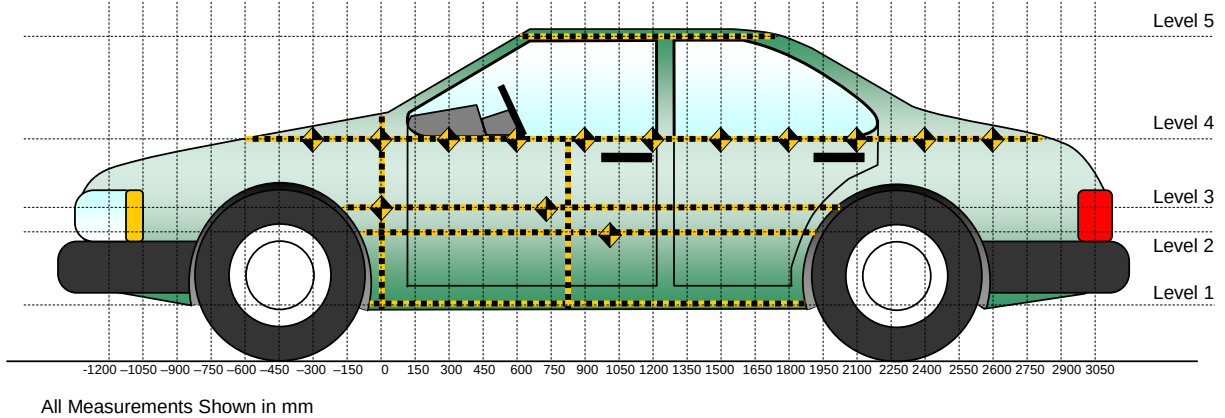
FRONT VIEW OF DUMMY

Code	Measurement Description	Units	Driver S/N 271
HR	Head to Side Header	mm	195
HS	Head to Side Window	mm	320
AD	Arm to Door	mm	116
HD	H-Point to Door	mm	160

DATA SHEET NO. 9 **VEHICLE SIDE MEASUREMENTS**

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

NHTSA No. MA0122
 Test Date: 11/03/2009



LEFT SIDE VIEW

Measurements are taken with vehicle in the as tested condition.
 Measurements along the vertical 800 mm.
 All measurements below in mm.

Level	Measurement Description	Maximum Exterior Static Crush	Distance From Impact	Height Above Ground
5	Window	122	1350	1560
4	Window Sill	280	1350	1060
3	Mid Door	398	1500	750
2	Occupant H-Point	397	1350	695
1	Sill Top	281	1500	385
	Maximum Penetration	398		

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
Test Program: NCAP Side Impact

NHTSA No. MA0122
Test Date: 11/03/2009

	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900				331					341					10	
-750				319					347					28	
-600				310					359					49	
-450				304					368					64	
-300				298					376					78	
-150			241	295				295	374				54	79	
0	281	254	252	293		369	360	355	381		88	106	103	88	
150	298	255	251	290		484	520	499	421		186	265	248	131	
300	296	252	250	288		503	549	522	436		207	297	272	148	
450	295	250	248	285		513	570	538	443		218	320	290	158	
600	295	249	247	284		526	579	557	450		231	330	310	166	
750	295	249	246	284	470	540	578	569	459	456	245	329	323	175	-14
900	294	248	245	283	471	547	592	581	471	476	253	344	336	188	5
1050	294	248	245	283	472	557	601	590	495	498	263	353	345	212	26
1200	295	247	245	281	474	566	603	597	539	518	271	356	352	258	44
1350	296	249	246	284	477	574	646	641	564	599	278	397	395	280	122
1500	296	250	247	283	479	577	639	645	557	589	281	389	398	274	110
1650	298	251	248	284	483	560	610	587	499	587	262	359	339	215	104
1800	301					363					62				
1950	301	254	250	290		348	311	309	341		47	57	59	51	
2100	296	251	249	291		329	285	282	339		33	34	33	48	
2250		242	244	292			267	270	343			25	26	51	
2400				293					341					48	
2550				295					345					50	
2700				296					339					43	
2850				297					338					41	
3000				300					335					35	
3150				303					334					31	

Reference plane is parallel to test vehicle longitudinal centerline.

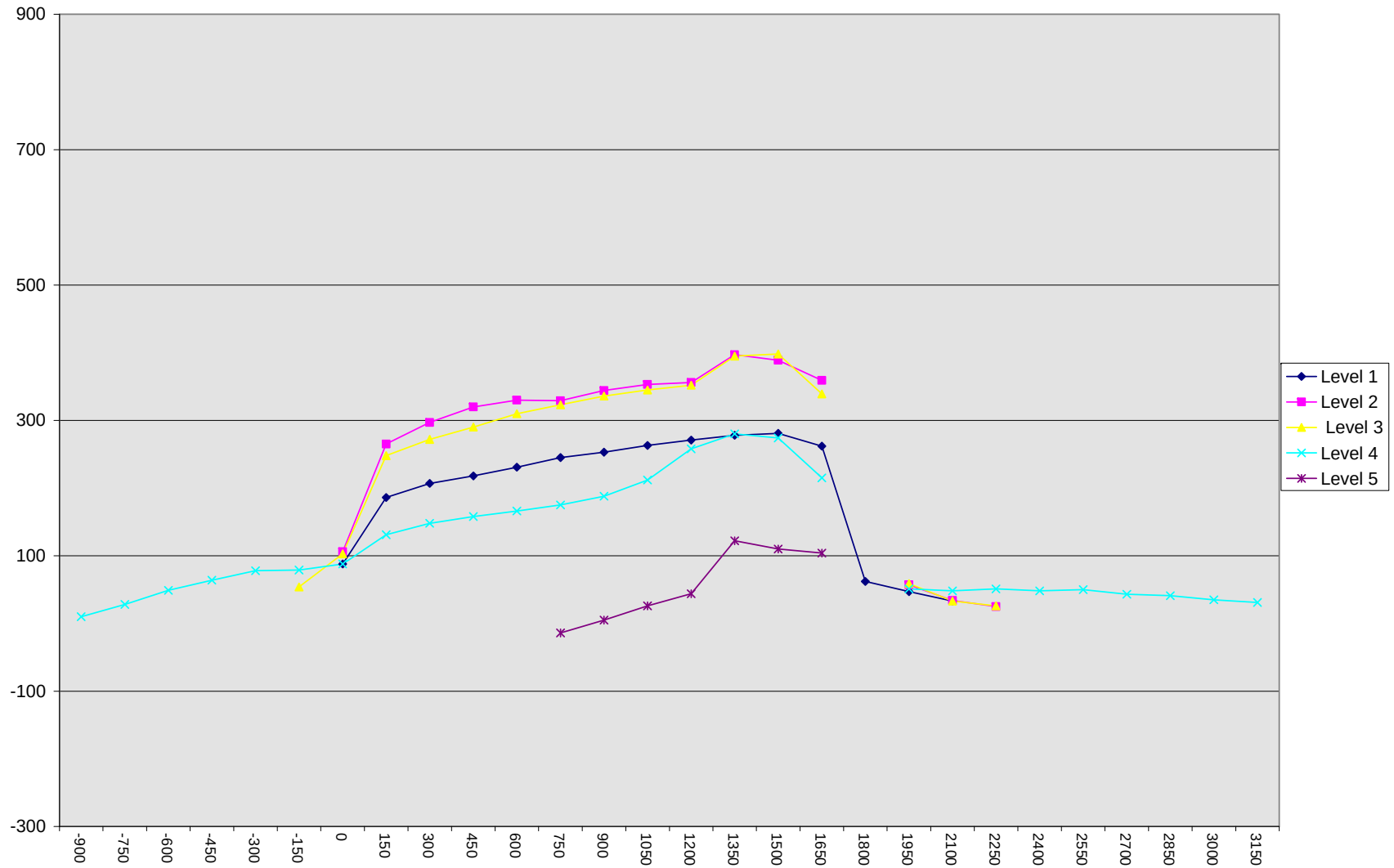
Given dimensions = Reference plane to car body

DATA SHEET NO. 10... (continued)
VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
Test Program: NCAP Side Impact

NHTSA No. MA0122
Test Date: 11/03/2009

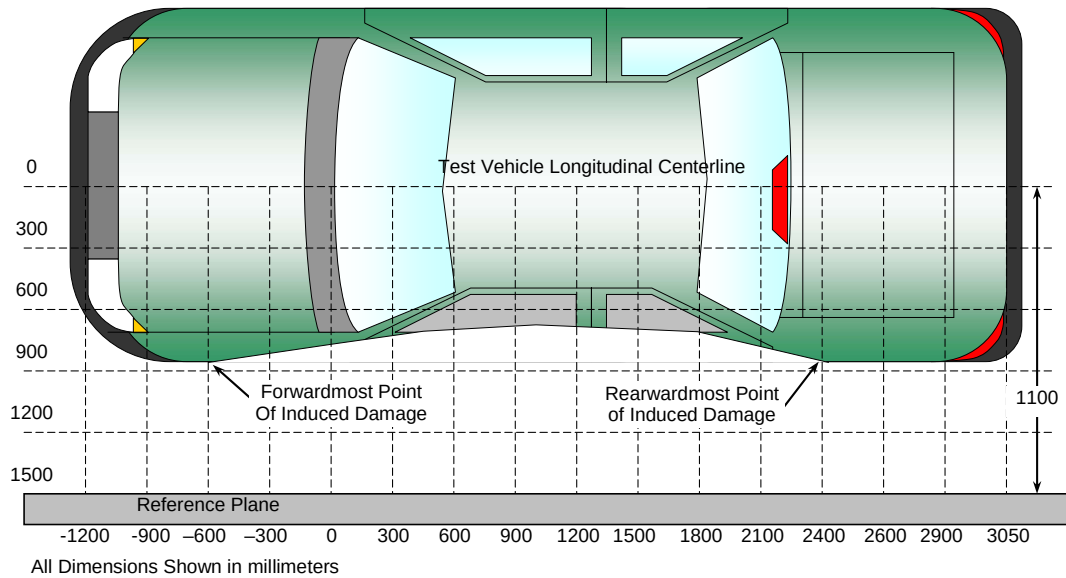
16



DATA SHEET NO. 11
VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

NHTSA No. MA0122
 Test Date: 11/03/2009



TOP VIEW

DAMAGE PROFILE DISTANCES

DPD	Distance from Impact Point in mm	Level	Pre-Test (mm)	Post-Test (mm)	Max Static Crush (mm)
1	3150	4	303	334	31
2	2340	4	292	342	50
3	1530	2	250	633	383
4	720	2	249	578	329
5	-90	3	244	314	70
6	-900	4	331	341	10

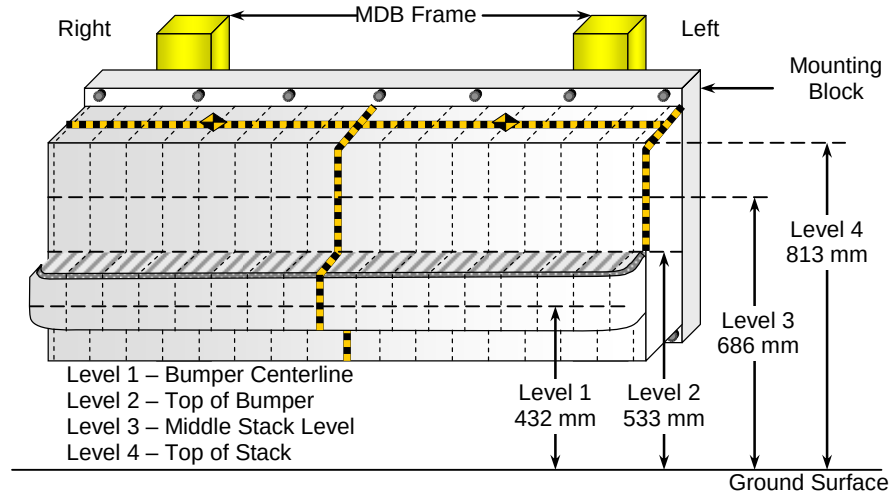
Reference plane is parallel to test vehicle longitudinal centerline.
 Given dimensions = Reference plane to car body.

DATA SHEET NO. 12

DEFORMABLE BARRIER HONEYCOMB FACE STATIC CRUSH

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

NHTSA No. MA0122
 Test Date: 11/03/2009



DEFORMABLE BARRIER STATIC CRUSH

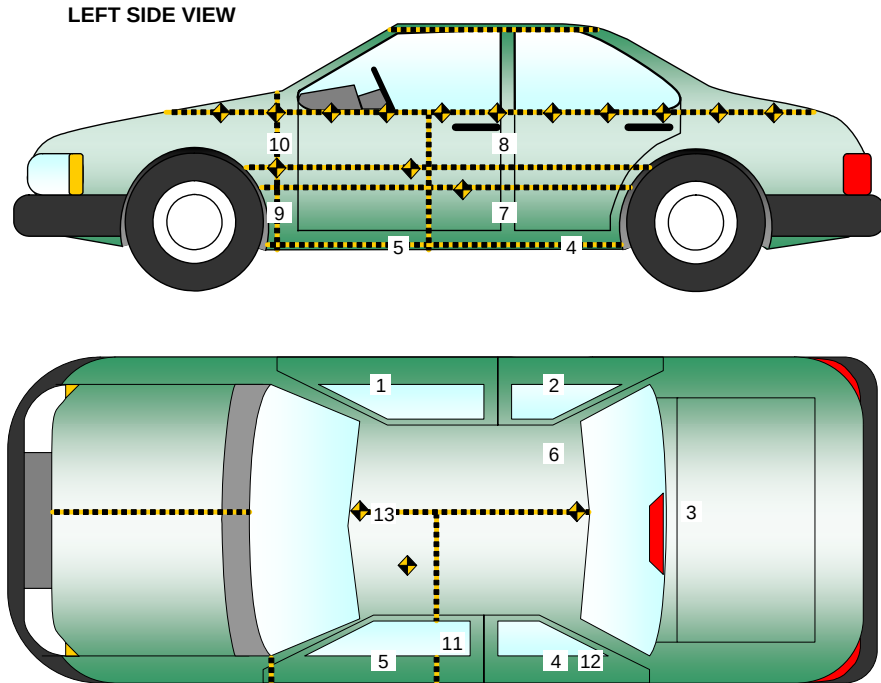
Stack Level	Distance Right of Center								C _L	Distance Left of Center							
	800	700	600	500	400	300	200	100		100	200	300	400	500	600	700	800
1	119	138	129	113	109	113	107	112	113	112	117	115	116	117	119	122	125
2	61	48	32	26	24	23	21	21	20	21	21	22	20	24	25	38	45
3	117	61	19	2	1	3	3	0	1	1	3	4	4	11	27	50	87
4	171	103	37	18	15	31	29	17	13	14	20	28	39	59	82	107	145

All Dimensions in mm

DATA SHEET NO. 13
VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

NHTSA No. MA0122
 Test Date: 11/03/2009



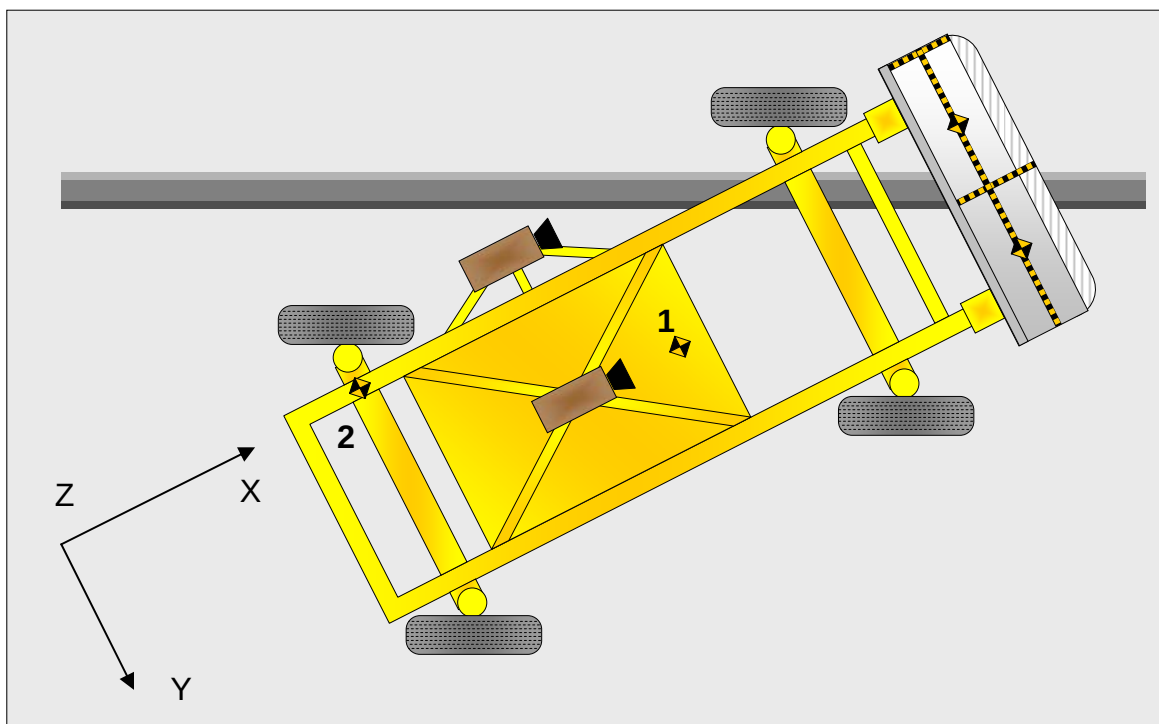
Loc. No.	Accelerometer Location	Measurements (mm)		
		X	Y	Z
1	Right Sill at Front Seat	3326	710	-338
2	Right Sill at Rear Seat	2385	700	-343
3	Rear Floorpan Above Axle	1195	0	-711
4	Left Sill at Rear Door	2385	-700	-333
5	Left Sill at Front Door	3326	-710	-318
6	Rear Occupant Compartment	2398	286	-553
7	Left Lower B-Post	2743	-705	-680
8	Left Middle B-Post	2724	-709	-895
9	Left Lower A-Post	3803	-724	-673
10	Left Middle A-Post	3853	-798	-820
11	Front Seat Track	2899	-496	-501
12	Rear Seat Track or Structure			
13	Vehicle CG	2872	0	-496

Reference Points X - Test Vehicle Rear Bumper (+ forward)
 Y - Test Vehicle Centerline (+ to right)
 Z - Ground Plane (+ down)

DATA SHEET NO. 14
MDB ACCELEROMETER LOCATIONS

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

NHTSA No. MA0122
 Test Date: 11/03/2009



Loc. No.	Accelerometer Location	Measurements (mm)		
		X	Y	Z
1	MDB CG	-1105	0	-330
2	MDB Rear	-2580	-650	-625

Reference Points X - MDB Front Axle (+ forward)
 Y - MDB Centerline (+ to right)
 Z - Ground Plane (+ down)

DATA SHEET NO. 15
VEHICLE STRUCTURAL MEASUREMENTS

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
Test Program: NCAP Side Impact

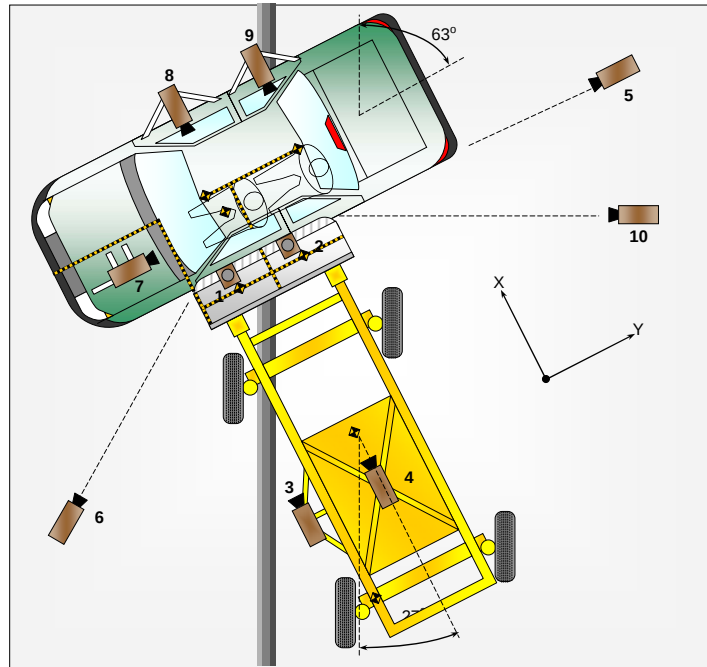
NHTSA No. MA0122
Test Date: 11/03/2009

	Elements	Pre-Test (mm)
1	Total Length	5264
2	Total Width	1712
3	Bumper Top Height	610
4	Bumper Bottom Height	465
5	Longitudinal Member Top Height	464
6	Distance between Longitudinal Members	675
7	Longitudinal Member Width	68
8	Engine Top Height	1060
9	Engine Bottom Height	251
10	Engine and gearbox width	585
11	Front bumper-engine distance	655
12	Front shock absorber fixing height	706
13	Bonnet leading edge height	943
14	Front shock absorber fixing width	790
15	Front bumper – front axle distance	880
16	Front axle – a pillar distance	533
17	A-pillar – B-pillar distance	1180
18	B-Pillar – rear axle distance	1490
19	B-pillar – C-pillar distance	535
20	Roof sill bottom height	1521
21	Roof sill top height	1626
22	Floor sill bottom height	320
23	Floor sill top height	450

DATA SHEET NO. 16
HIGH SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

NHTSA No. MA0122
 Test Date: 11/03/2009



No.	Camera View	Location (mm)			Lens (mm)	Film Speed (fps)
		X	Y	Z		
1	Overhead Close-up	-530	-280	-5055	50	1000
2	Overhead Overall	645	1260	-5050	14	1000
3	MDB Onboard, Impact Point Close-up				50	1000
4	MDB Onboard, Centerline of Impact				16	1000
5	Right Side, Ground Level, Overall	55	7220	-1215	24	1000
6	Left Side, Ground Level, Overall	-1435	-5260	-1230	24	1000
7	Vehicle Onboard Front SID/HIII, Front				12.5	1000
8	Vehicle Onboard Front SID/HIII, Side				8	1000
9	Vehicle Onboard Rear SID/HIII, Side				8	1000
10	Real Time Coverage				13	24

Reference Points X - Impact Line
 Y - MDB Left Edge Impact Point
 Z - Ground Plane

DATA SHEET NO. 17
SUMMARY OF FMVSS 301 DATA

Test Vehicle: 2010 Chevrolet Colorado Ext Cab
 Test Program: NCAP Side Impact

NHTSA No. MA0122
 Test Date: 11/03/2009

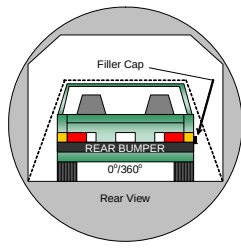
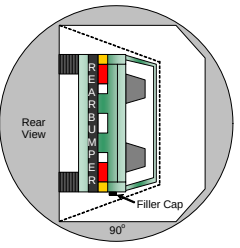
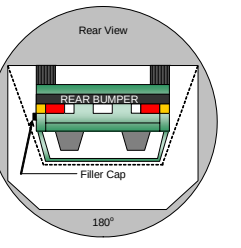
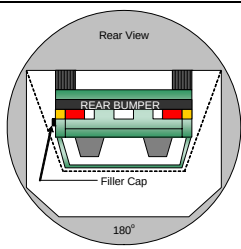
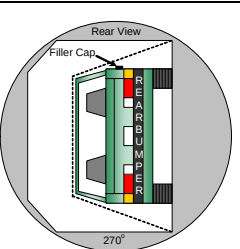
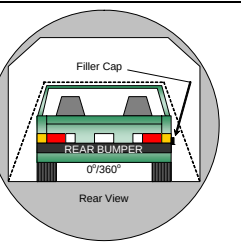
FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

Temperature at Time of Impact: 21° C Test Time: 11:09 am

Stoddard Solvent Spillage Measurements

- A. From impact until vehicle motion ceases: 0 oz.
 (Maximum Allowable = 1 ounce)
- B. For the 5 minute period after motion ceases: None
 (Maximum allowable = 5 ounces)
- C. For the following 25 minutes: None
 (Maximum allowable = 1 oz./minute)
- D. Spillage Details: None

FMVSS 301 STATIC ROLLOVER DATA

			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	
0° to 90°		90° to 180°		
				
180° to 270°		270° to 360°		

Test Phase	Rotation Time (sec.)	Hold Time (sec.)	Spillage Collection Time (min)	Spillage (oz.)
0° to 90°	112	300	First 5	0
90° to 180°	111	300	First 5	0
180° to 270°	107	300	First 5	0
270° to 360°	116	300	First 5	0

APPENDIX A
PHOTOGRAPHS

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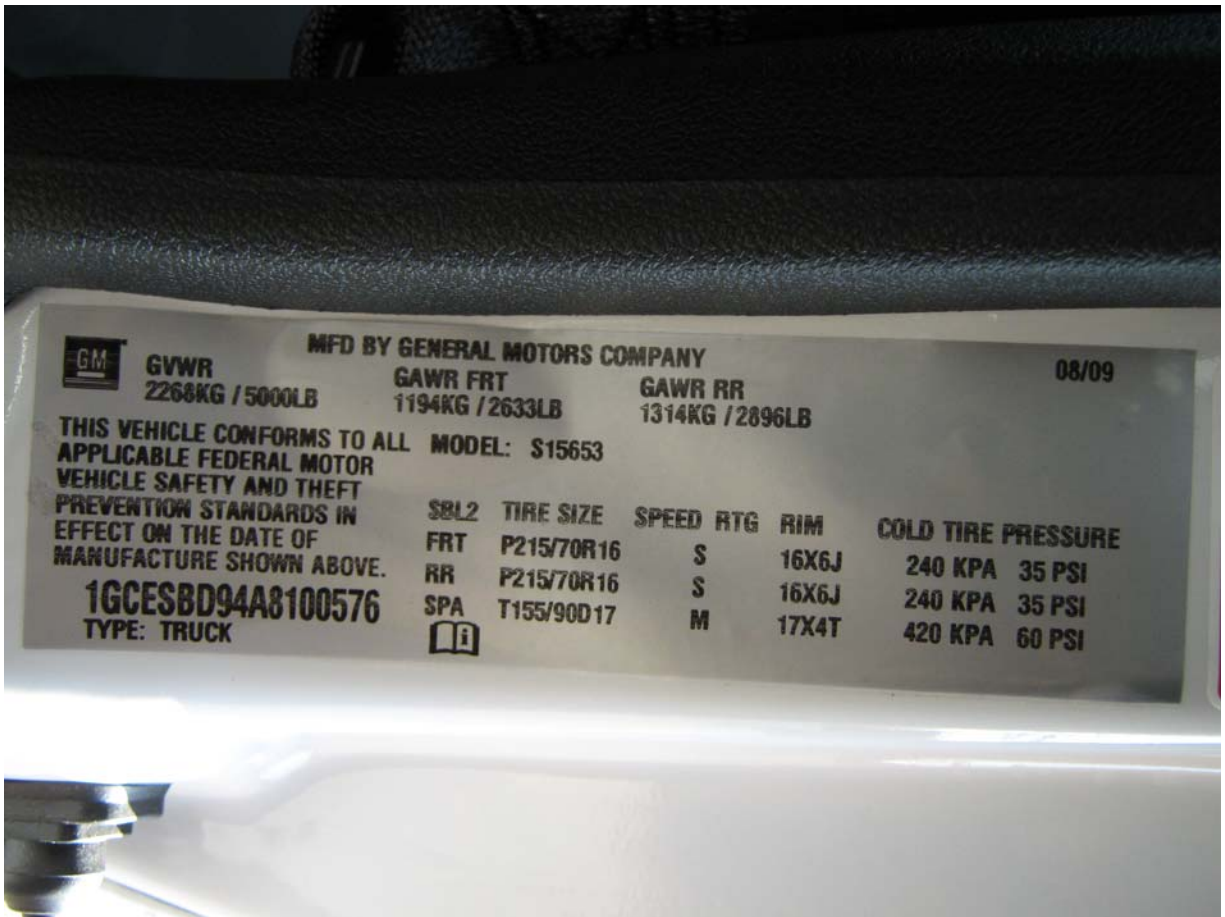
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Right Front $\frac{3}{4}$ View, As Received



Left Rear $\frac{3}{4}$ View, As Received



Manufacturer's Label



Tire Placard



Pre-Test Front View



Post-Test Front View



Pre-Test Left Front $\frac{3}{4}$ View



Post-Test Left Front $\frac{3}{4}$ View



Pre-Test Left Side View



Post-Test Left Side View



Pre-Test Left Rear $\frac{3}{4}$ View



Post-Test Left Rear $\frac{3}{4}$ View



Pre-Test Rear View



Post-Test Rear View



Pre-Test Right Rear $\frac{3}{4}$ View



Post-Test Right Rear $\frac{3}{4}$ View



Pre-Test Right Side View



Post-Test Right Side View



Pre-Test Right Front $\frac{3}{4}$ View



Post-Test Right Front $\frac{3}{4}$ View



Pre-Test Left Impact Point



Post-Test Left Impact Point



Pre-Test Front $\frac{3}{4}$ View of Left Side Doors



Post-Test Front $\frac{3}{4}$ View of Left Side Doors



Pre-Test Rear $\frac{3}{4}$ View of Left Side Doors



Post-Test Rear $\frac{3}{4}$ View of Left Side Doors



Pre-Test Left Side Impact Close-up



Post-Test Left Side Impact Close-up



Pre-Test Overhead View



Post-Test Overhead View



Pre-Test Overhead Close-up View



Post-Test Overhead Close-up View



Pre-Test Driver Dummy (Door Open)



Pre-Test Driver Dummy Clearance From Door



Post-Test Driver Dummy Clearance From Door



Pre-Test Driver Dummy (Through Window)



Post-Test Driver Dummy (Through Window)



Pre-Test Driver Dummy Right Side View



Post-Test Driver Dummy Right Side View



Pre-Test Front View of Deformable Barrier



Post-Test Front View of Deformable Barrier



Pre-Test Top View of Deformable Barrier



Post-Test Top View of Deformable Barrier



Pre-Test Right Side View of Deformable Barrier



Post-Test Right Side View of Deformable Barrier



Pre-Test Left Side View of Deformable Barrier



Post-Test Left Side View of Deformable Barrier



Vehicle on Rollover Device (90 Degrees)



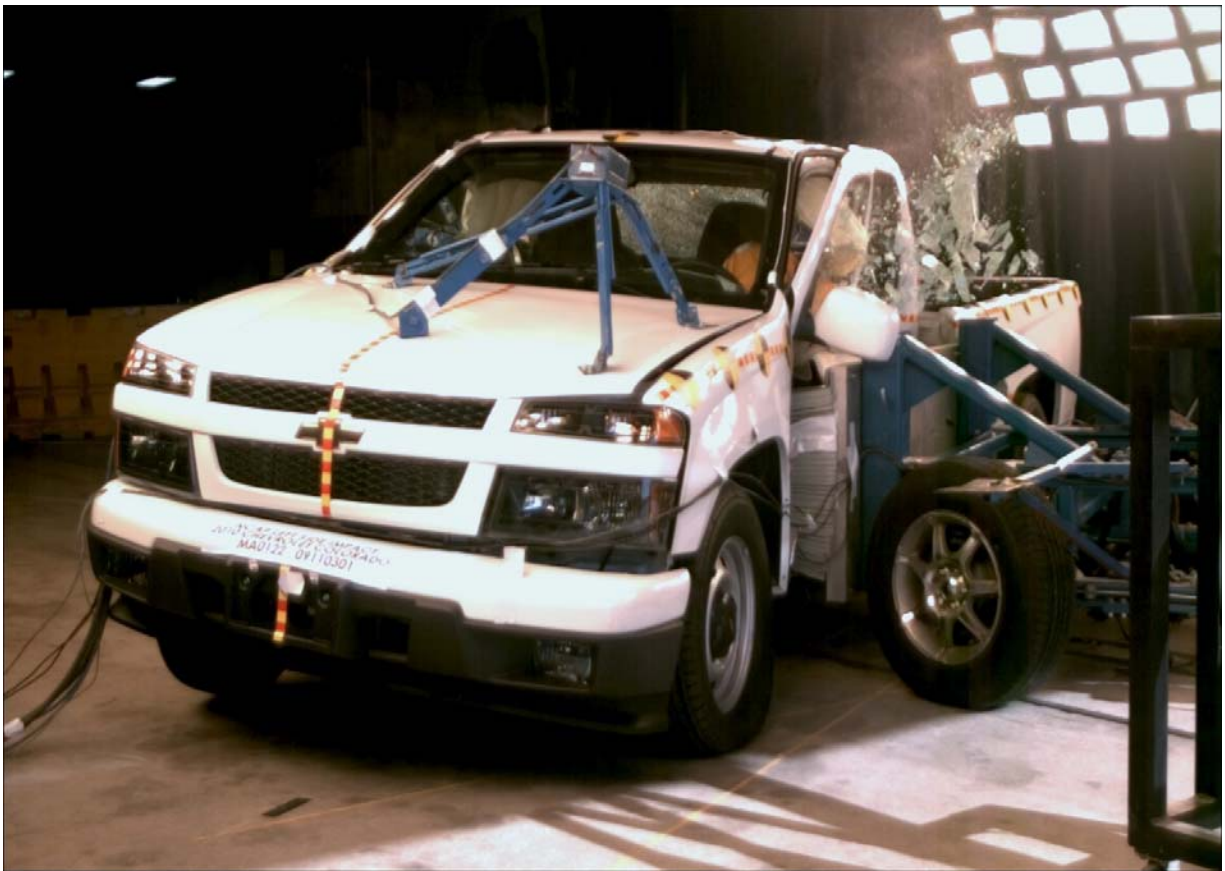
Vehicle on Rollover Device (180 Degrees)



Vehicle on Rollover Device (270 Degrees)



Vehicle on Rollover Device (360 Degrees)



Vehicle Impact



Post-Test Driver Dummy Head Contact View



Post-Test Driver Dummy Torso Contact



Post-Test Driver Dummy Contact

APPENDIX B

SID/HIII RESPONSE DATA TRACES

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The following dummy and vehicle response data can be found in the R&D section of the NHTSA website at www.nhtsa.dot.gov

Driver Head X Primary

Driver Head Y Primary

Driver Head Z Primary

Driver Head X Redundant

Driver Head Y Redundant

Driver Head Z Redundant

Driver Upper Neck Force X

Driver Upper Neck Force Y

Driver Upper Neck Force Z

Driver Upper Neck Moment X

Driver Upper Neck Moment Y

Driver Upper Neck Moment Z

Driver Upper Rib Redundant Y

Driver Lower Rib Redundant Y

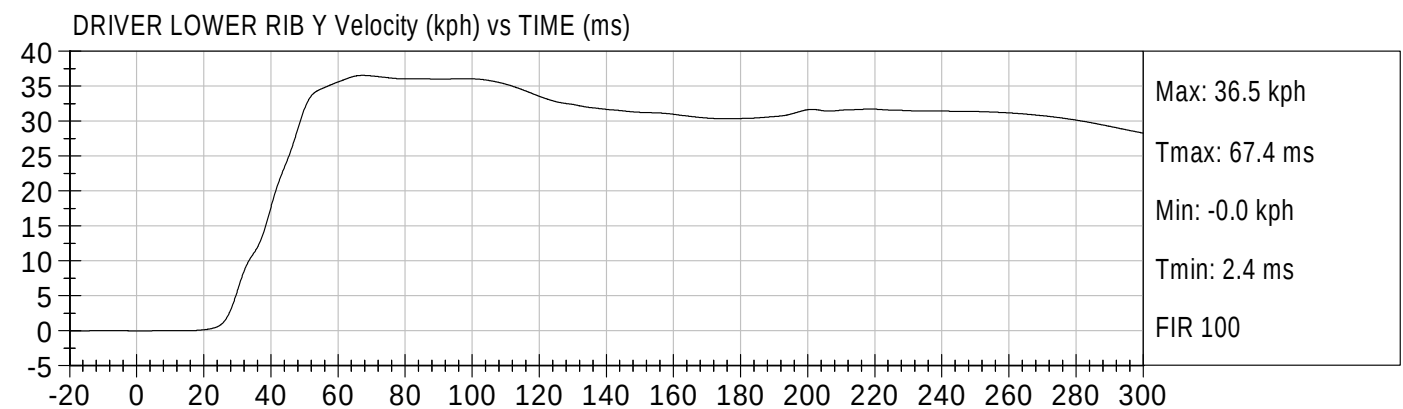
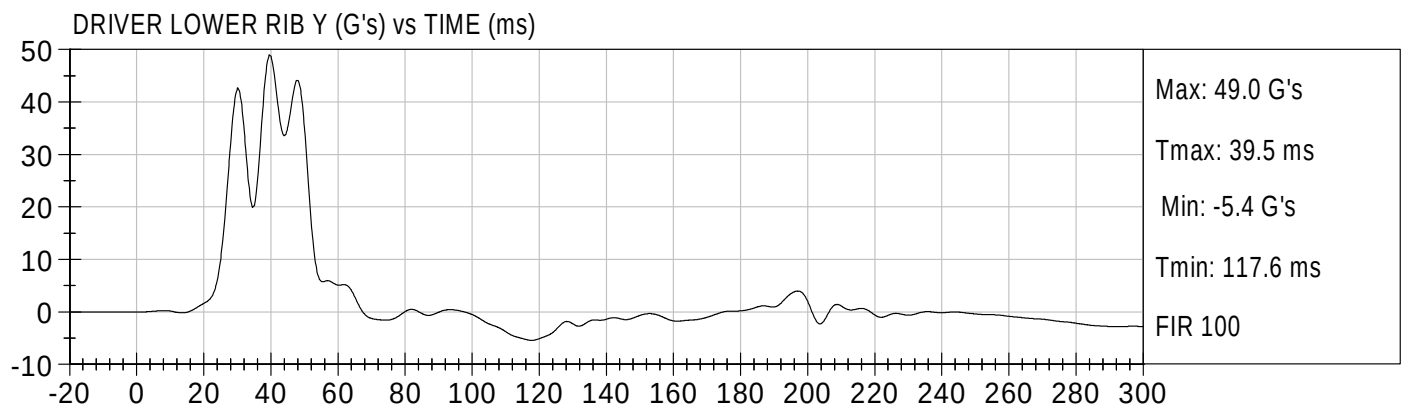
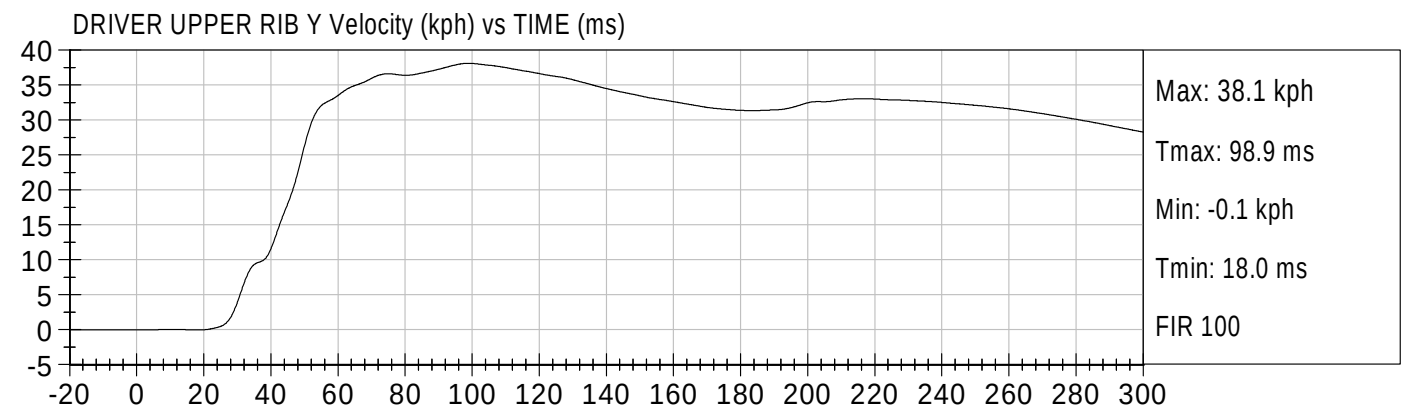
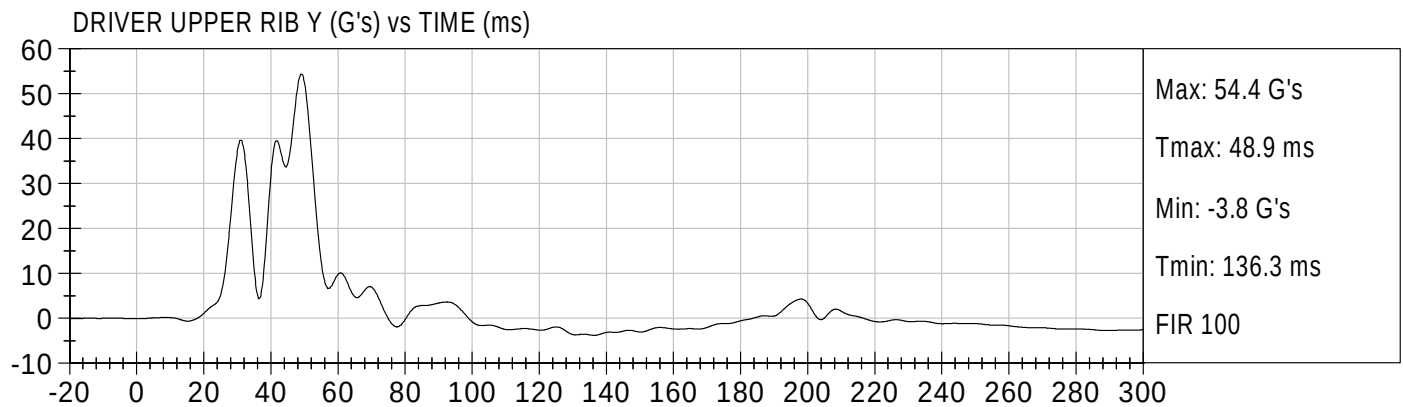
Driver Lower Spine Redundant Y

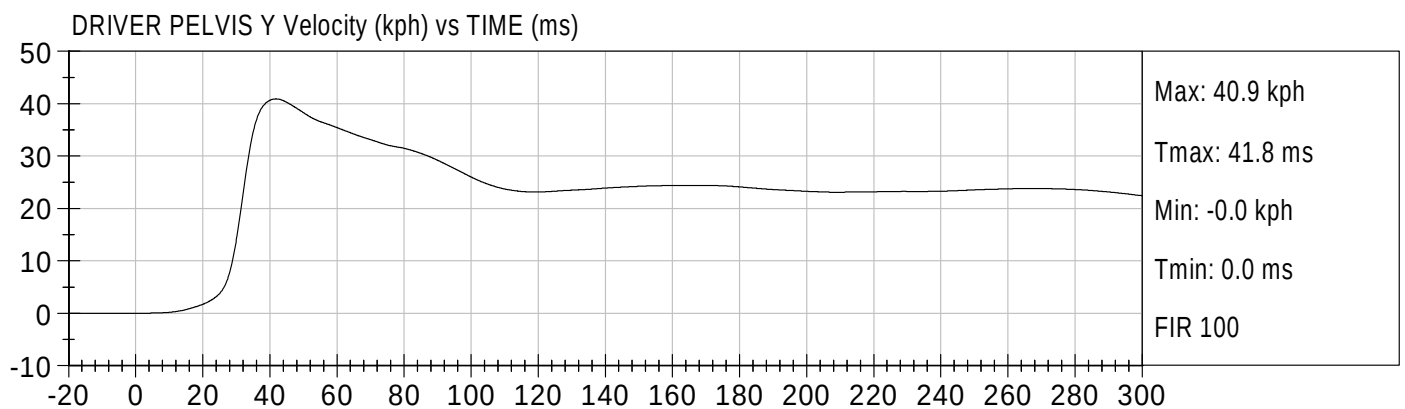
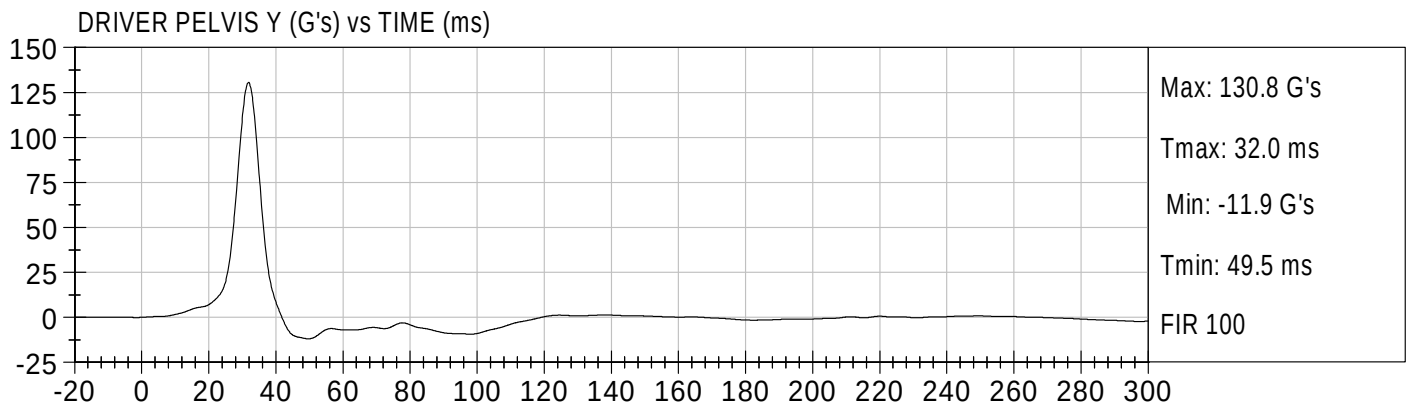
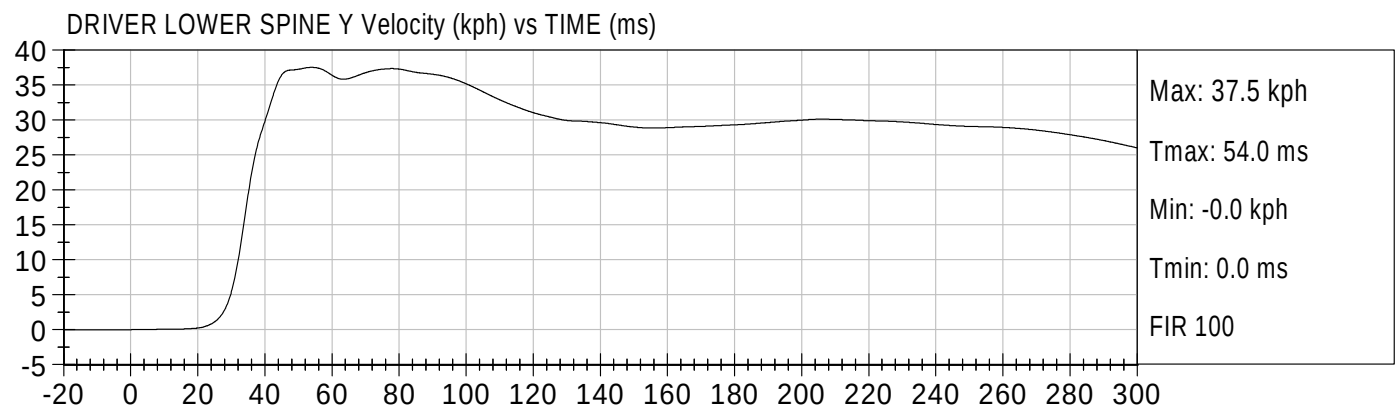
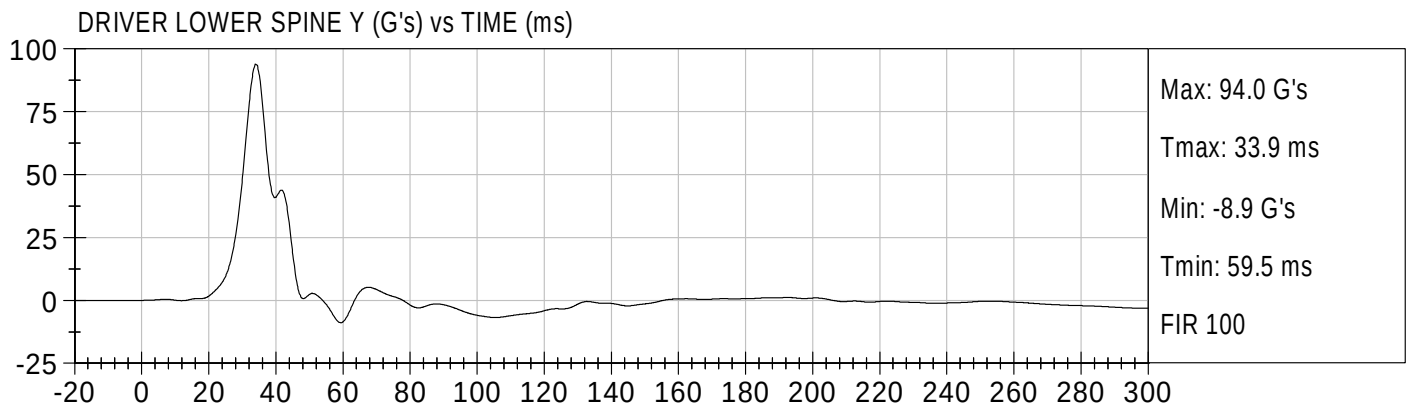
Driver Pelvis Redundant Y

Driver Thorax Contact

Driver Pelvis Contact

Vehicle Right Sill at Front Seat X
Vehicle Right Sill at Front Seat Y
Vehicle Right Sill at Front Seat Z
Vehicle Right Sill at Rear Seat X
Vehicle Right Sill at Rear Seat Y
Vehicle Right Sill at Rear Seat Z
Vehicle Rear Floor Above Axle X
Vehicle Rear Floor Above Axle Y
Vehicle Rear Floor Above Axle Z
Vehicle Left Sill at Rear Door Y
Vehicle Left Sill at Front Door Y
Vehicle Right Rear Occupant Compartment
Vehicle B-Post Lower Y
Vehicle B-Post Middle Y
Vehicle A-Post Lower Y
Vehicle A-Post Middle Y
Vehicle Left Front Seat Track
Vehicle CG X
Vehicle CG Y
Vehicle CG Z
MDB CG X
MDB CG Y
MDB CG Z
MDB Rear X
MDB Rear Y
MDB Left Bumper Contact
MDB Right Bumper Contact





APPENDIX C
DUMMY CALIBRATION DATA

CERTIFICATION DATA

Dummy Serial Number: 271

Calibration Test Results Summary

Dummy Serial Number: 271

Pre-Test Calibration

External Dimensions:	The dummy passed all external dimension requirements.
Head Drop Test:	The head passed all drop test requirements.
Neck Pendulum Test:	The neck passed all pendulum test requirements.
Thorax Impact Test:	The thorax passed all impact test requirements.
Pelvic Impact Test:	The pelvis passed all impact test requirements.
Abdominal Compression Test:	The abdomen passed all compression test requirements.
Lumbar Flexion Test:	The lumbar passed all flexion test requirements.

SID Calibration Data Sheet
Side Impact Dummy
External Measurements

ATD Serial No: 271

Test I.D: D09278

Tested Parameter	Units	Specification	Result	Pass/Fail
SH - Seated Height	mm	889 - 909	905	Pass
RH - Rib Height	mm	501 - 521	502	Pass
HP - Hip Pivot Height	mm	99 ref.	99	Pass
RD - Rib from Back Line	mm	229 - 241	239	Pass
KV - Knee Pivot to Back Line	mm	511 - 526	526	Pass
SW - Knee Pivot to Floor	mm	490 - 505	497	Pass
HW - Hip Width	mm	356 - 391	371	Pass
Overall Test Results			Pass	

Jessica Hall
Laboratory Technician

David Winkelbauer
Approved By

11/2/2009
Test Date

SID/HIII Calibration Data Sheet
Side Impact Dummy
Head Drop Calibration (Lateral)

ATD Serial No: 271

Test I.D: D092781

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 to 25.5	21.9	Pass
Laboratory Relative Humidity	%	10 to 70	33	Pass
Peak Resultant Acceleration	G's	120 to 150	144	Pass
Is Resultant Curve Unimodal?	N/A	15% of peak	Yes	Pass
Peak Longitudnal Acceleration	G's	+/- 15	7.3	Pass
			Overall Test Results	Pass



Laboratory Technician



Approved By

11/2/09
Test Date



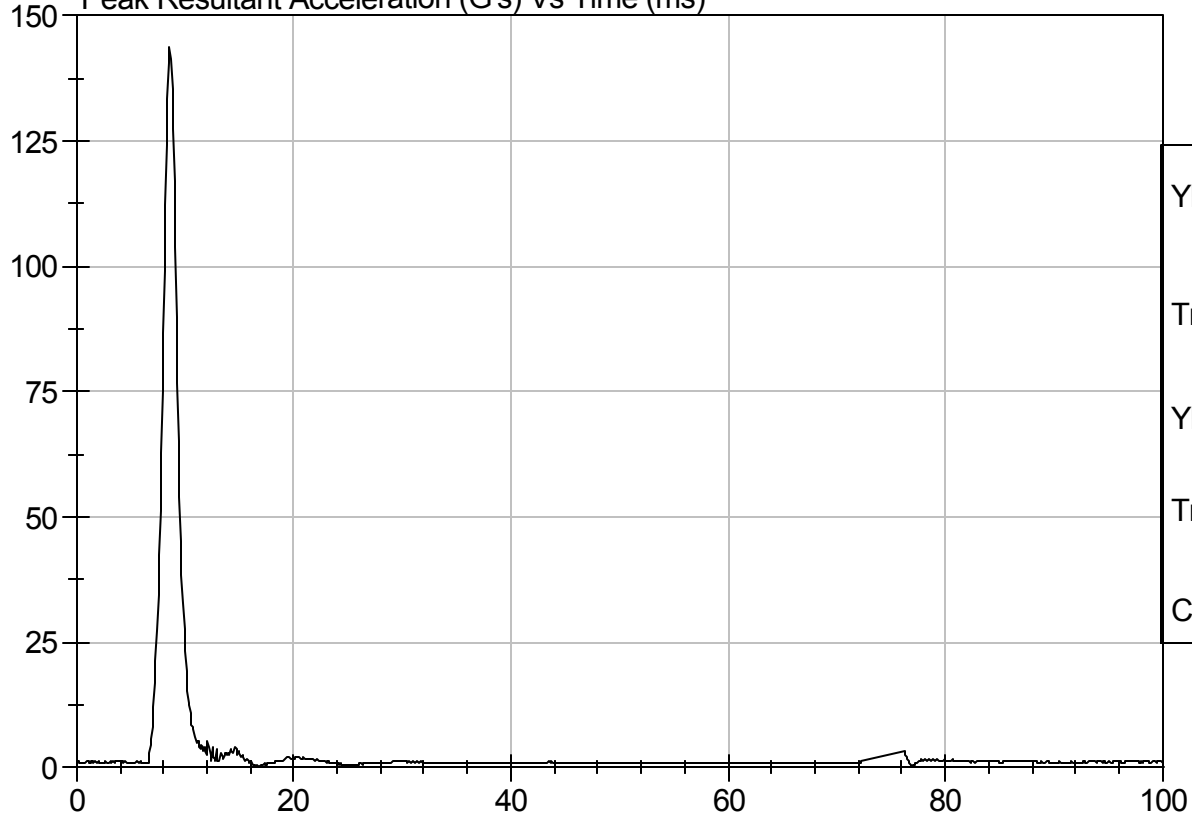
Test Description: Head Drop

Test Date: 11/2/09

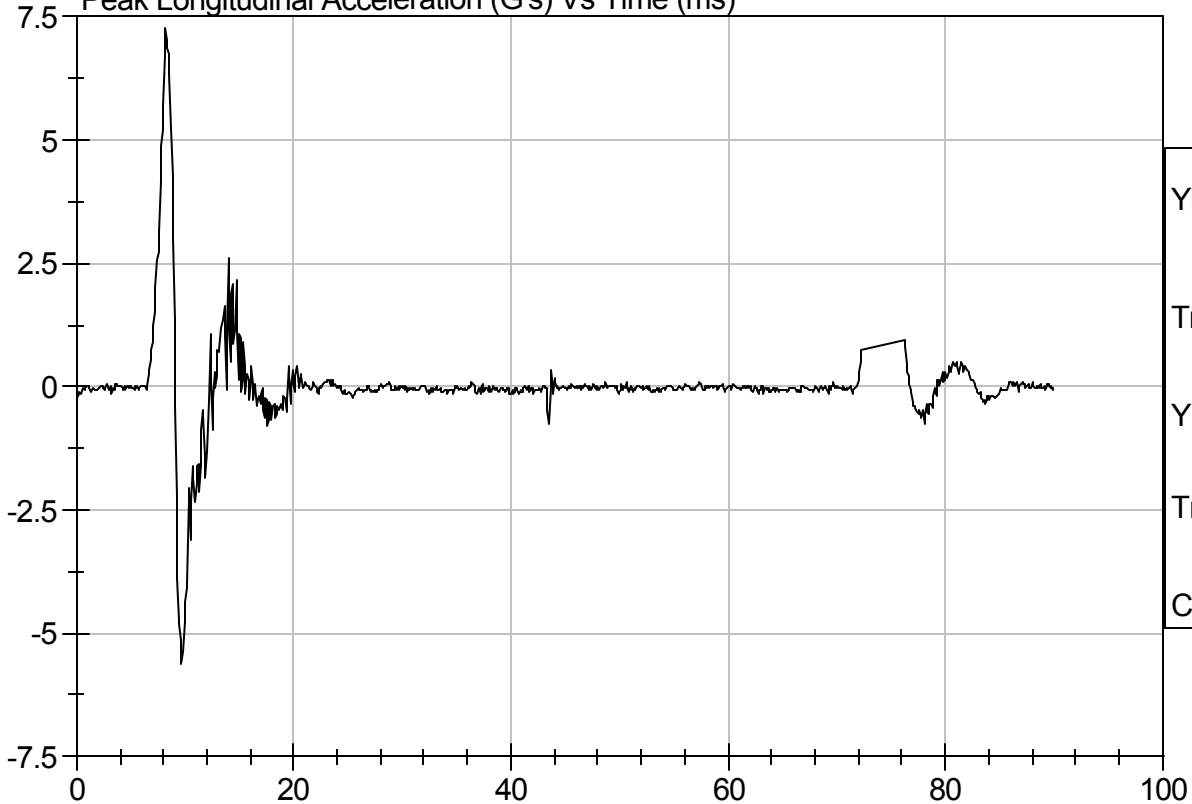
Component: D092781

Speed: 0 ft/s, 0 m/s

Peak Resultant Acceleration (G's) Vs Time (ms)



Peak Longitudinal Acceleration (G's) Vs Time (ms)



SID/HIII Calibration Data Sheet
Side Impact Dummy
Thorax Impact Test

ATD Serial No: 271

Test I.D: D092782

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 - 25.5	21.8	Pass
Laboratory Relative Humidity	%	10 to 70	35	Pass
Probe Velocity	m/s	4.22 - 4.31	4.30	Pass
Upper Rib	G's	37 - 46	39	Pass
Lower Rib	G's	37 - 46	39	Pass
Lower Spine	G's	15 - 22	19	Pass
Overall Test Results				Pass


Laboratory Technician

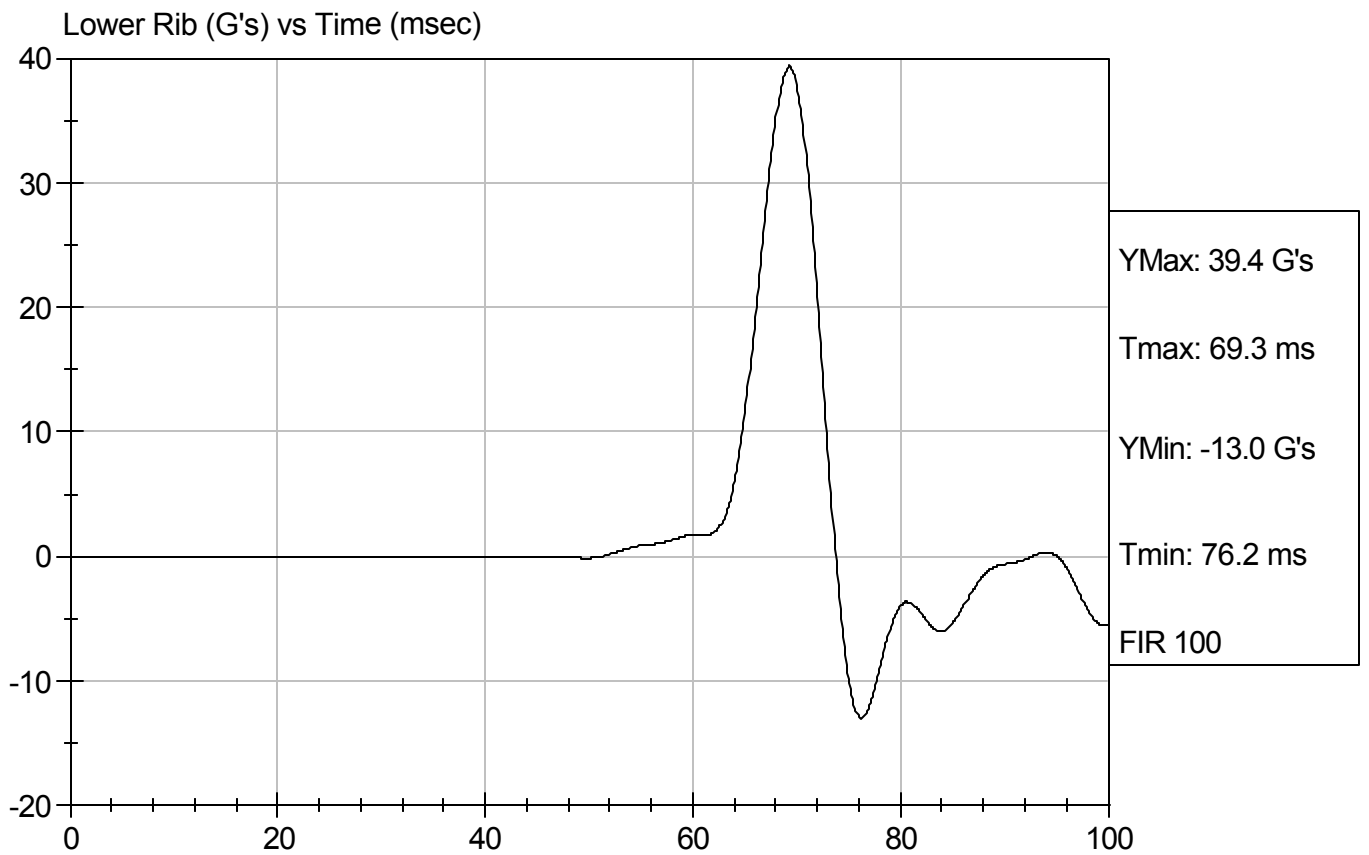
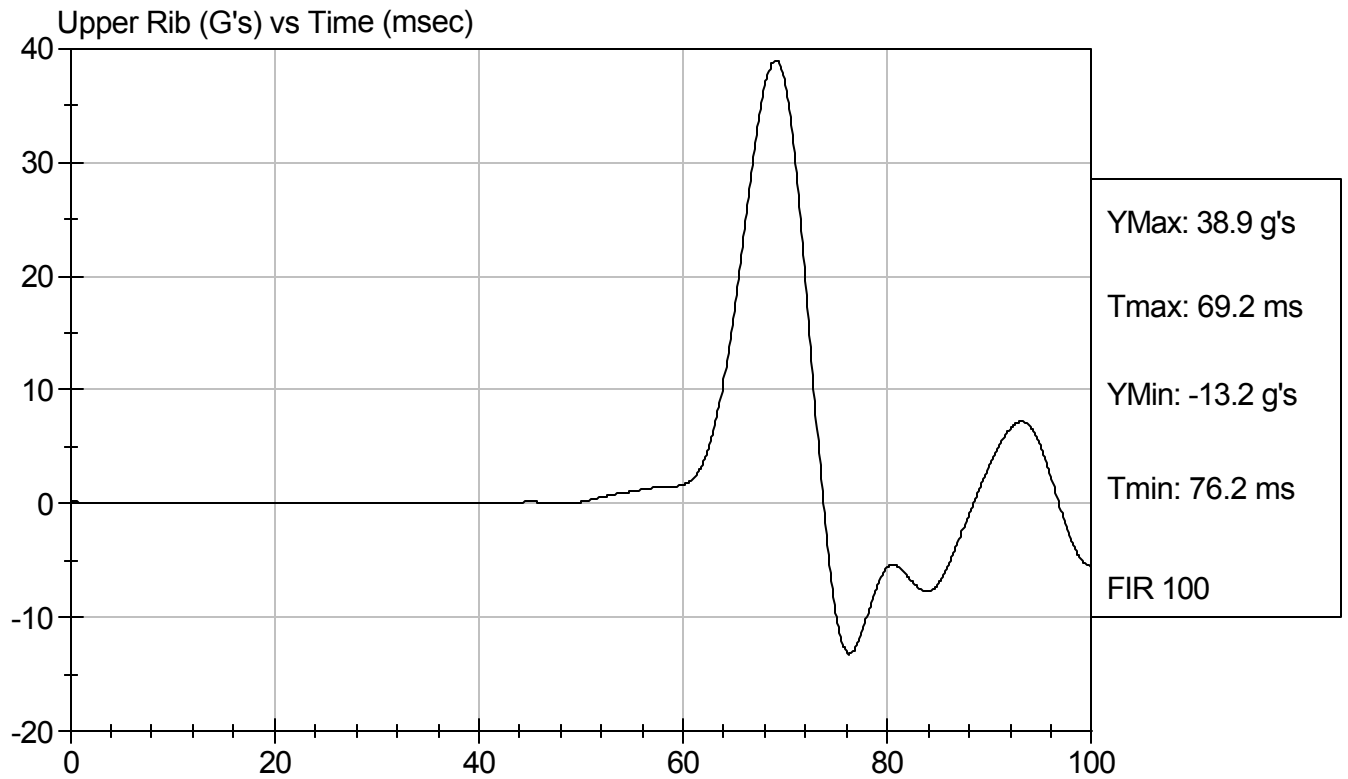

Approved By

11/2/09
Test Date



Test Desc: Thorax Impact
Component ID: D092782

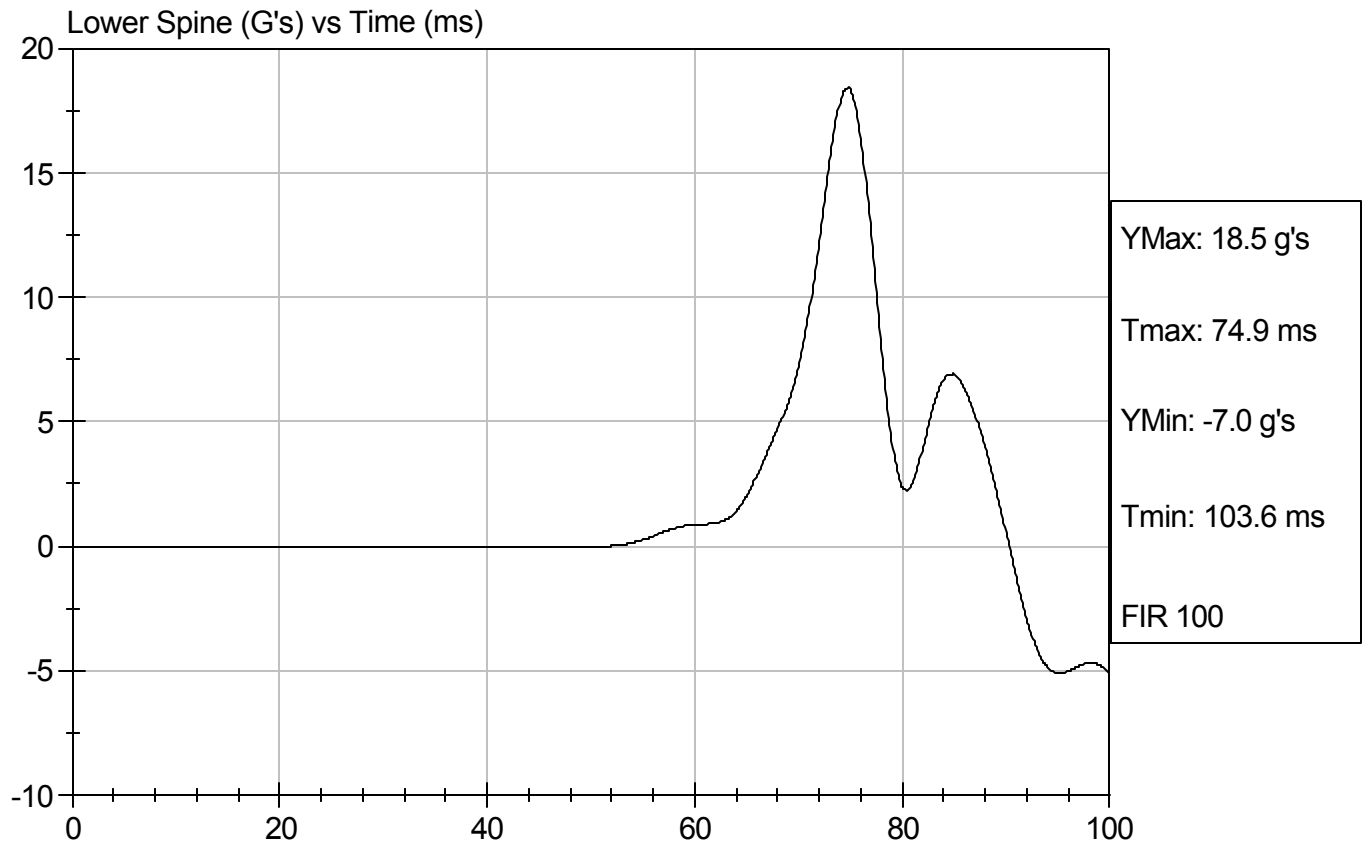
Test Date: 11/2/09
Speed: 14.12 ft/s, 4.30 m/s





Test Desc: Thorax Impact
Component ID: D092782

Test Date: 11/2/09
Speed: 14.12 ft/s, 4.30 m/s



SID/HIII Calibration Data Sheet
Side Impact Dummy
Pelvis Impact Test

ATD Serial No: 271

Test I.D: D092783

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 to 25.5	21.8	Pass
Laboratory Relative Humidity	%	10 to 70	35	Pass
Probe Velocity	m/s	4.27 - 4.33	4.30	Pass
Pelvis Acceleration	G's	40 - 60	49	Pass
			Overall Test Results	Pass

Jessica Hall
Laboratory Technician

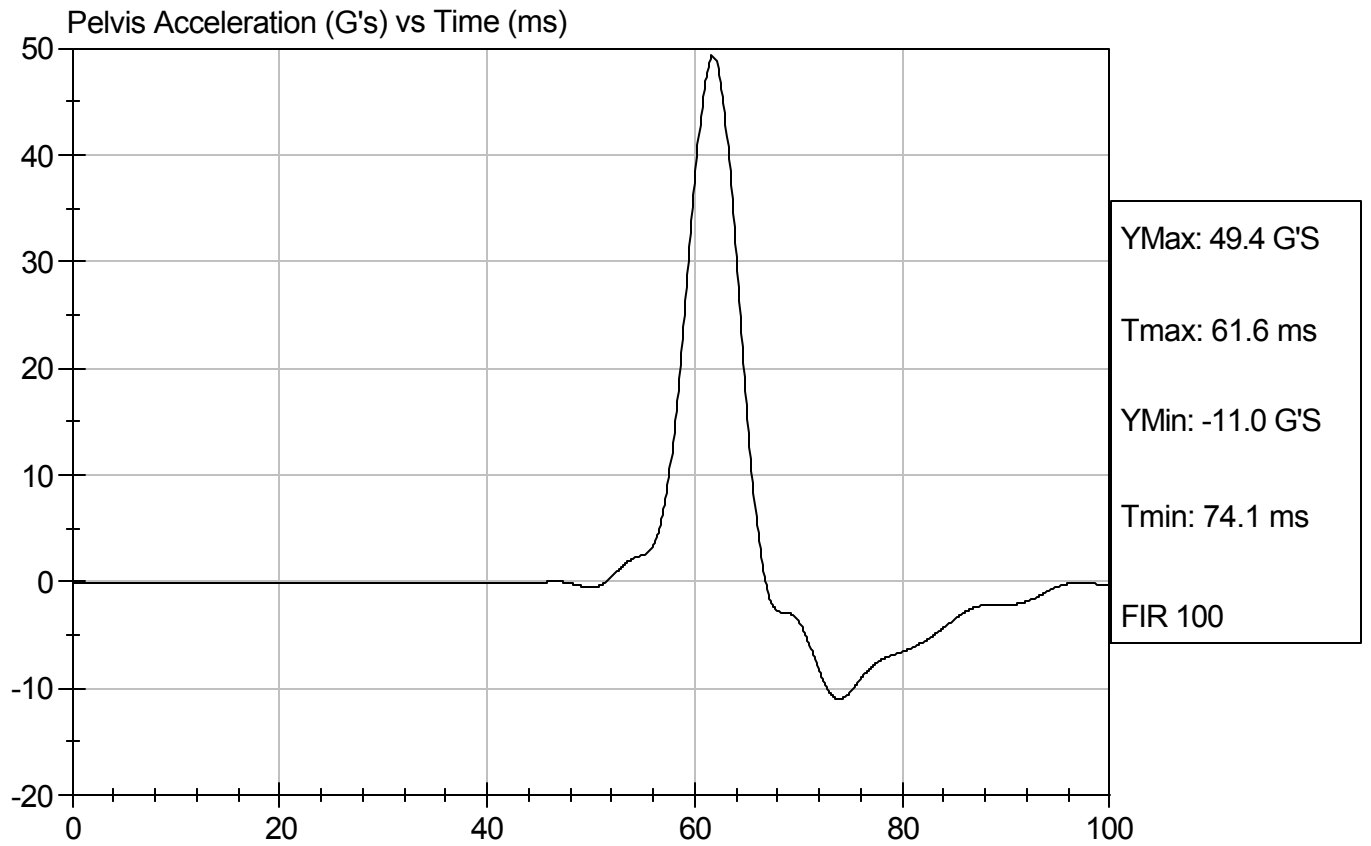
11/2/09
Test Date

David Winkelbauer
Approved By



Test Desc: Pelvis Impact
Component ID: D092783

Test Date: 11/2/09
Speed: 14.12 ft/s, 4.30 m/s



SID/HIII Calibration Data Sheet
Side Impact Dummy
Abdominal Compression Calibration (Pre-Load = 10 lbs)

ATD Serial No: 271

Test I.D: D092784

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 - 25.5	21.9	Pass
Laboratory Relative Humidity	%	10 to 70	33	Pass
Force At 12.7 mm	N	104 -162	144	Pass
Force At 19 mm	N	163 - 222	202	Pass
Force At 25.4 mm	N	222 - 280	273	Pass
Force At 33 mm	N	325 - 391	379	Pass
Overall Test Results				Pass

Jessica Hall
Laboratory Technician

David Winkelbauer
Approved By

11/2/09
Test Date

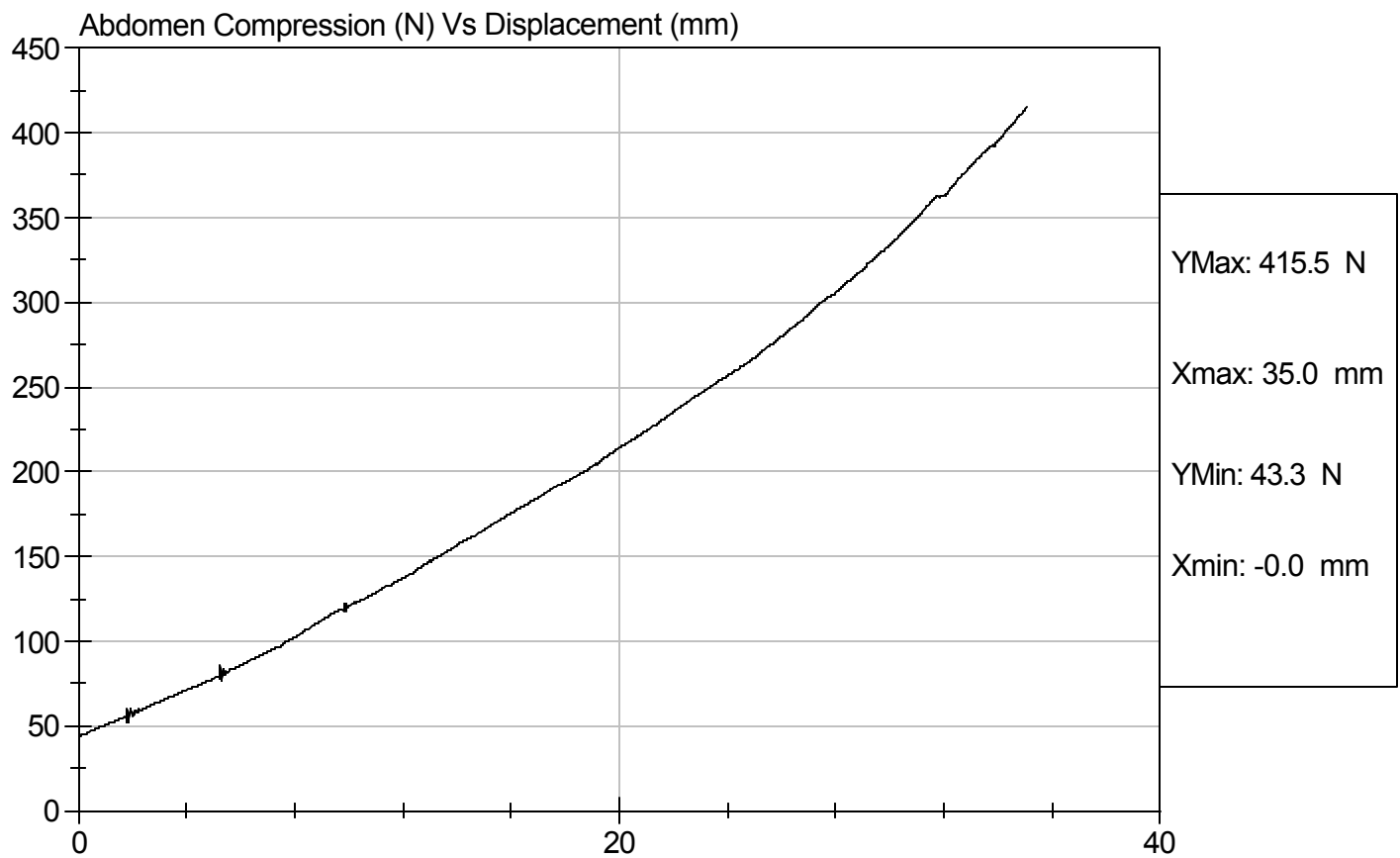


Test Description: Abdomen Compression

Test Date: 11/2/09

Component: D092784

Speed: 0 ft/s, 0 m/s



SID/HIII Calibration Data Sheet
Side Impact Dummy
Lumbar Flexion Calibration

ATD Serial No: 271

Test I.D: D092785

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 - 25.5	21.9	Pass
Laboratory Relative Humidity	%	10 to 70	33	Pass
Force At 0 deg	N	0 - 26.7	0	Pass
Force At 20 deg	N	97.9 - 151.2	147.6	Pass
Force At 30 deg	N	151.2 - 204.6	193.3	Pass
Force At 40 deg	N	204.6 - 258.0	239.4	Pass
Return Angle	Deg	12 Maximum	5	Pass
Overall Test Results			Pass	

Jessica Hall
Laboratory Technician

David Winkelbauer
Approved By

11/2/09
Test Date

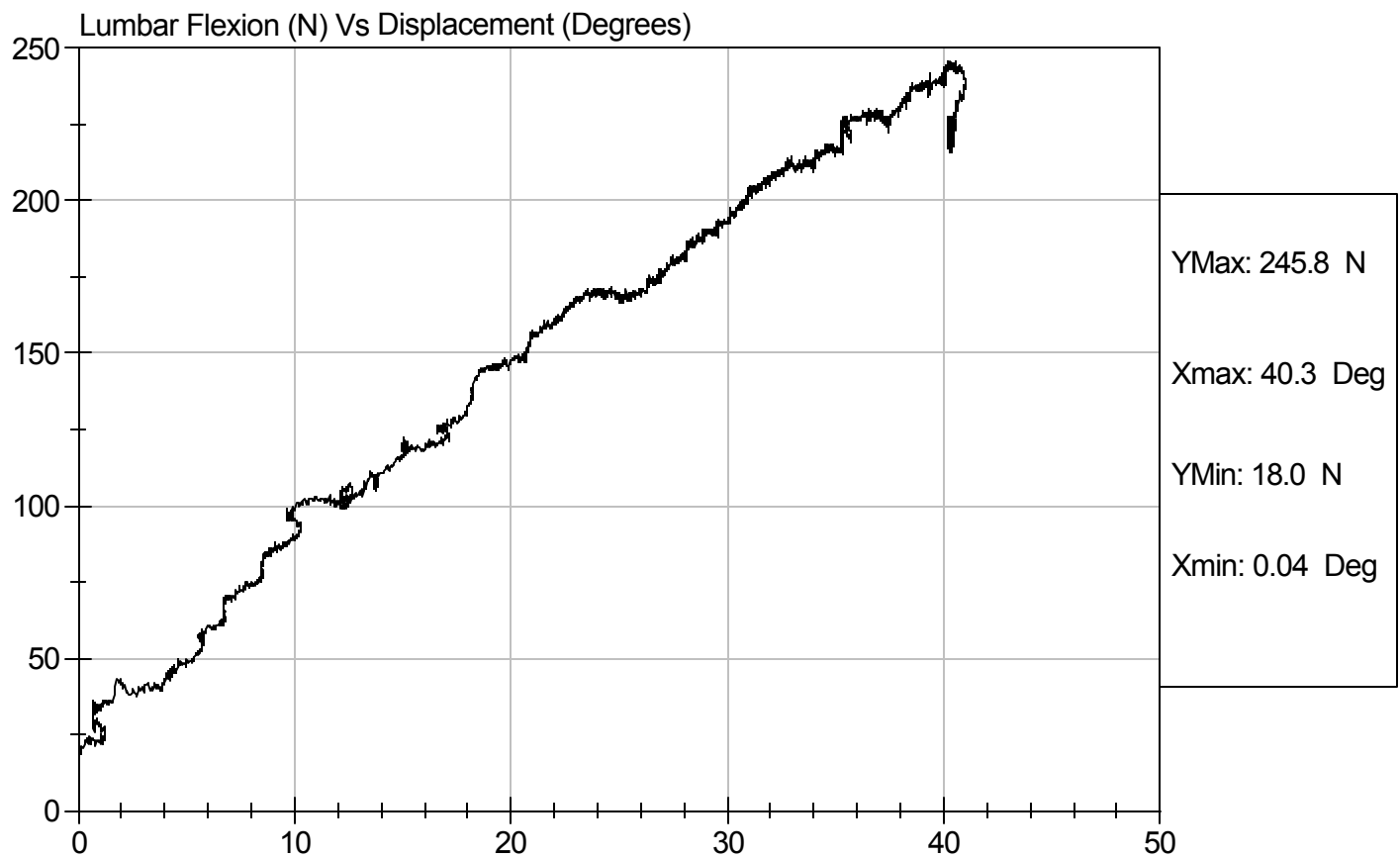


Test Description: Lumbar Flexion

Test Date: 11/2/09

Component: D092785

Speed: 0 ft/s, 0 m/s



SID/HIII Calibration Data Sheet
Side Impact Dummy
Neck Pendulum Test

ATD Serial No: 271

Test I.D: D092789

Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		deg C	20.6 to 22.2	21.7	Pass
Laboratory Relative Humidity		%	10 to 70	33	Pass
Impact Velocity		m/s	6.89 to 7.13	7.05	Pass
Pendulum Deceleration	10 ms	m/s	1.96 to 2.55	2.22	Pass
	20 ms	m/s	4.12 to 5.10	4.43	Pass
	30 ms	m/s	5.73 to 7.01	6.31	Pass
	40 to 70 ms	m/s	6.27 to 7.64	6.93	Pass
Midsagittal Plane Max Rotation		deg	66 to 82	73	Pass
Head Rotation Peak to Zero - Decay Time		ms	58 to 67	63	Pass
Max. Mx at Occipital Condyles		Nm	73 to 88	74	Pass
Mx Peak To Zero - Decay Time		ms	49 to 64	60	Pass
Mx Peak to Max. Head Rotation		ms	2 to 16	12	Pass


 Laboratory Technician

11/2/09

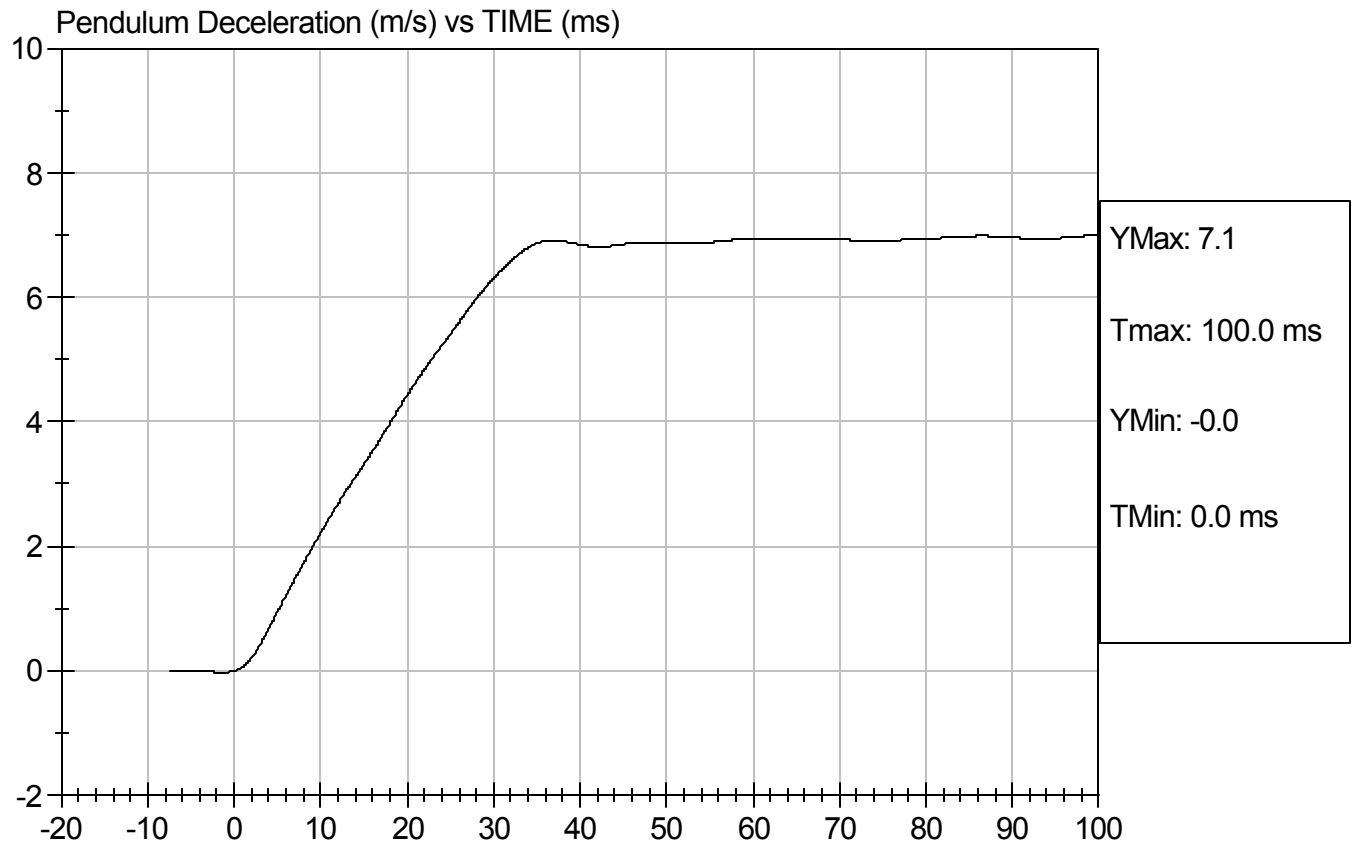
Test Date


 Approved By



Test Desc: Neck Bending
Component ID: D092789

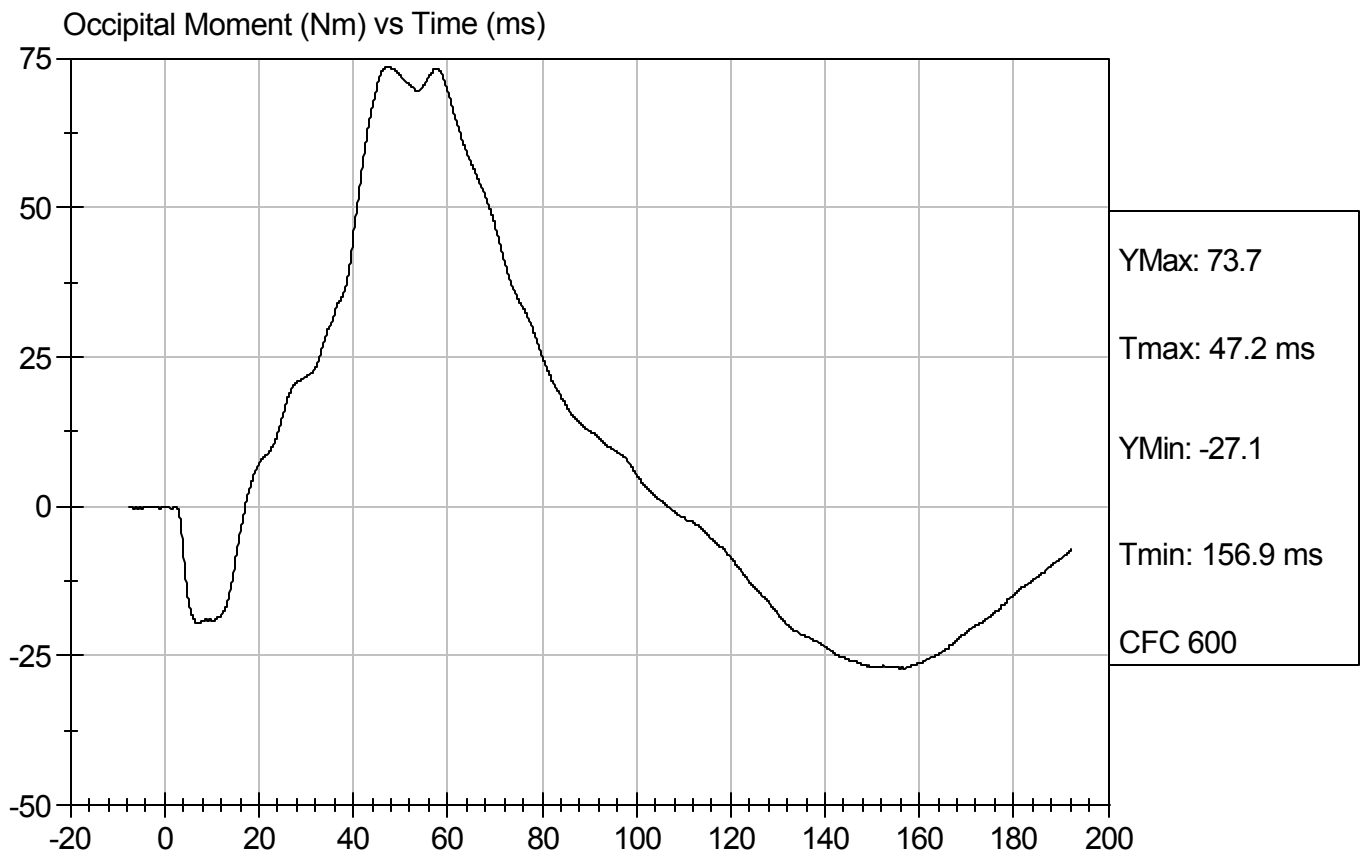
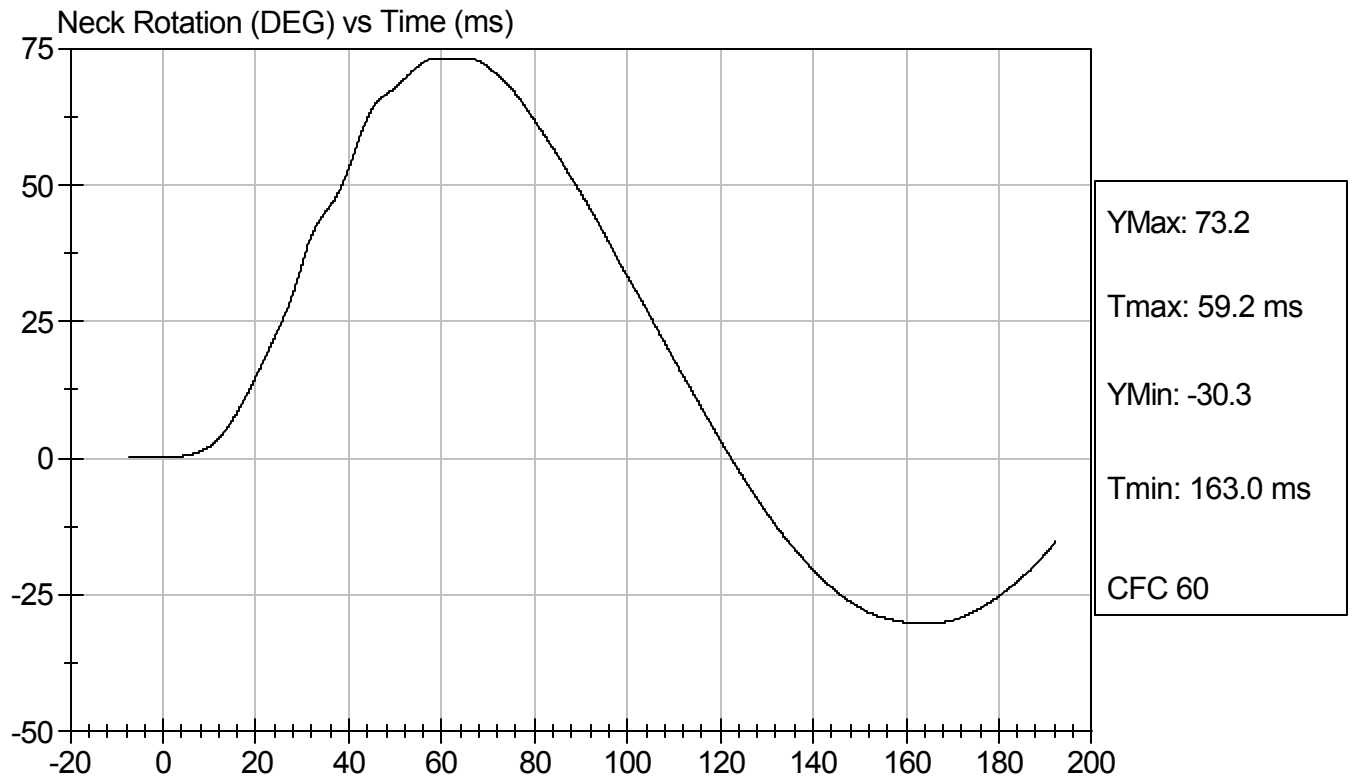
Test Date: 11/2/09
Speed: 23.14 ft/sec, 7.05 m/sec





Test Desc: Neck Bending
Component ID: D092789

Test Date: 11/2/09
Speed: 23.14 ft/s, 7.05 m/s



Calibration Test Results Summary

Dummy Serial Number: 271

Post-Test Calibration

External Dimensions:	The dummy passed all external dimension requirements.
Head Drop Test:	The head passed all drop test requirements.
Neck Pendulum Test:	The neck passed all pendulum test requirements.
Thorax Impact Test:	The thorax passed all impact test requirements.
Pelvic Impact Test:	The pelvis passed all impact test requirements.
Abdominal Compression Test:	The abdomen passed all compression test requirements.
Lumbar Flexion Test:	The lumbar passed all flexion test requirements.

SID/HIII Calibration Data Sheet
Side Impact Dummy
Head Drop Calibration (Lateral)

ATD Serial No: 271

Test I.D: D092801

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 to 25.5	21.9	Pass
Laboratory Relative Humidity	%	10 to 70	28	Pass
Peak Resultant Acceleration	G's	120 to 150	143	Pass
Is Resultant Curve Unimodal?	N/A	15% of peak	Yes	Pass
Peak Longitudnal Acceleration	G's	+/- 15	8.8	Pass
			Overall Test Results	Pass

Jessica Hall
Laboratory Technician

11/3/09
Test Date

David Winkelbauer
Approved By



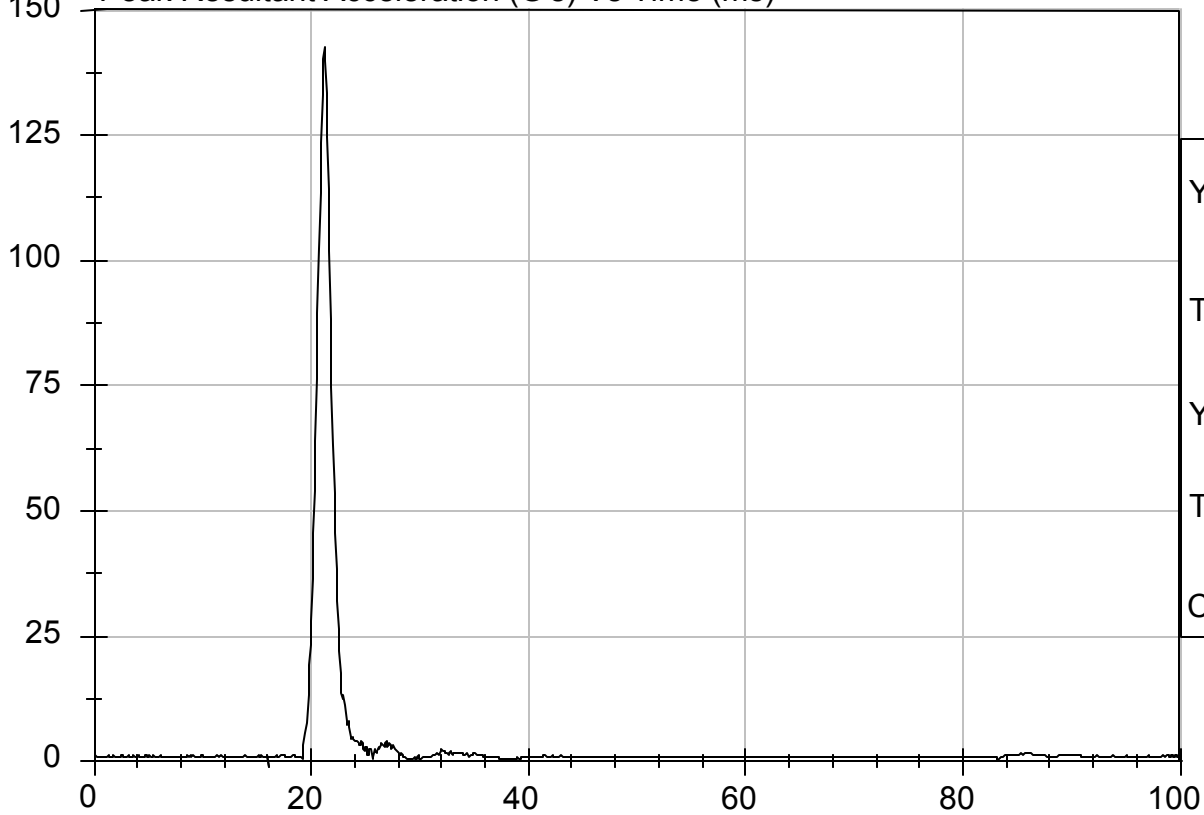
Test Description: Head Drop

Test Date: 11/3/09

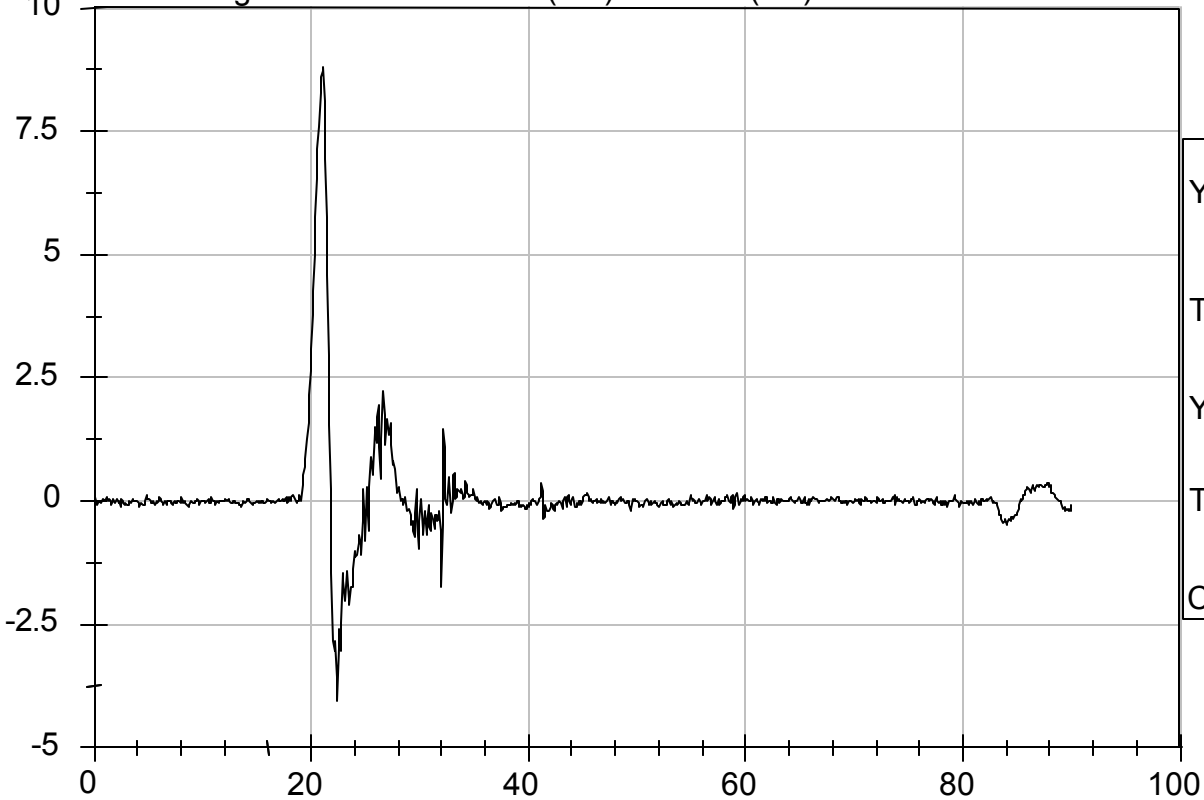
Component: D092801

Speed: 0 ft/s, 0 m/s

Peak Resultant Acceleration (G's) Vs Time (ms)



Peak Longitudinal Acceleration (G's) Vs Time (ms)



SID/HIII Calibration Data Sheet
Side Impact Dummy
Thorax Impact Test

ATD Serial No: 271

Test I.D: D092802

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 - 25.5	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	31	Pass
Probe Velocity	m/s	4.22 - 4.31	4.30	Pass
Upper Rib	G's	37 - 46	40	Pass
Lower Rib	G's	37 - 46	40	Pass
Lower Spine	G's	15 - 22	20	Pass
Overall Test Results				Pass

Jessica Hall
Laboratory Technician

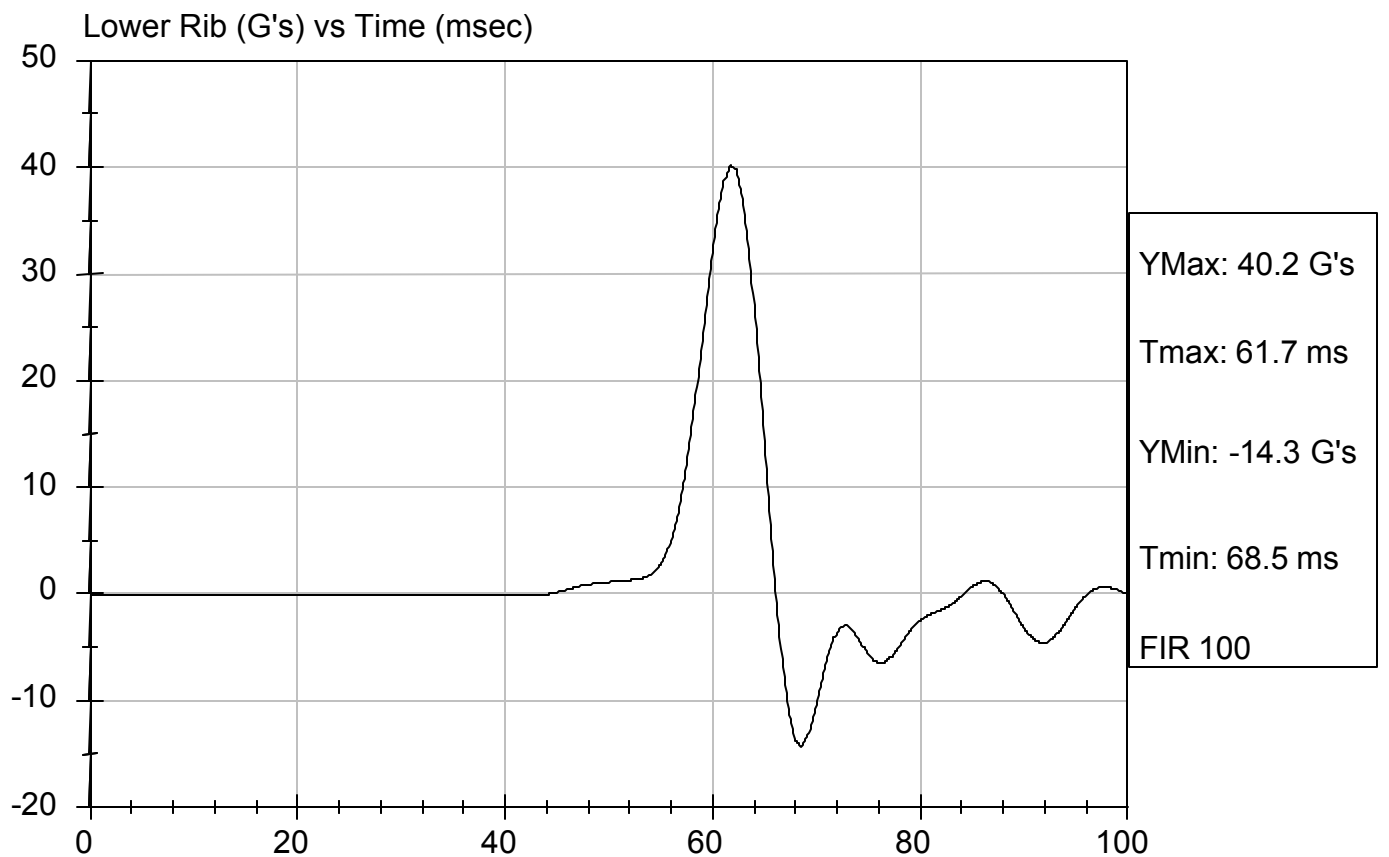
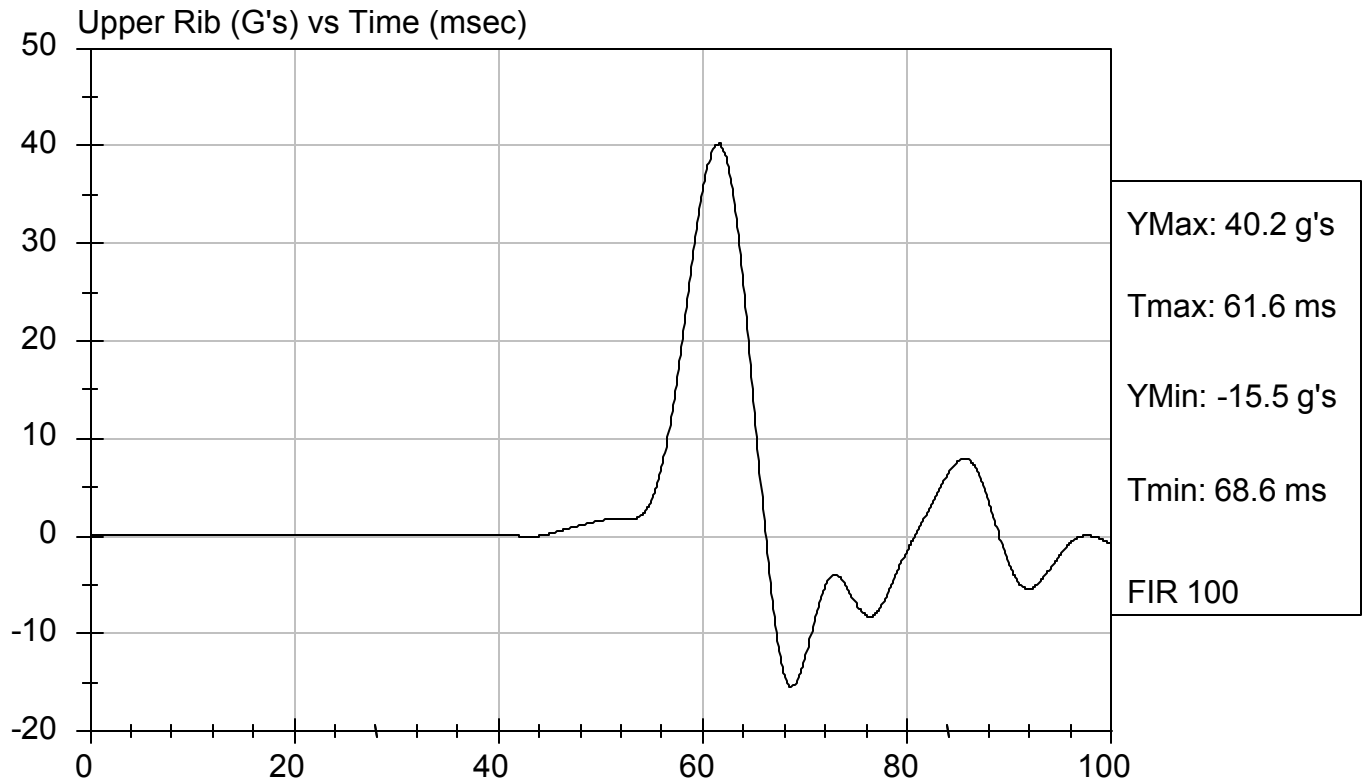
David Winkelbauer
Approved By

11/3/09
Test Date



Test Desc: Thorax Impact
Component ID: D092802

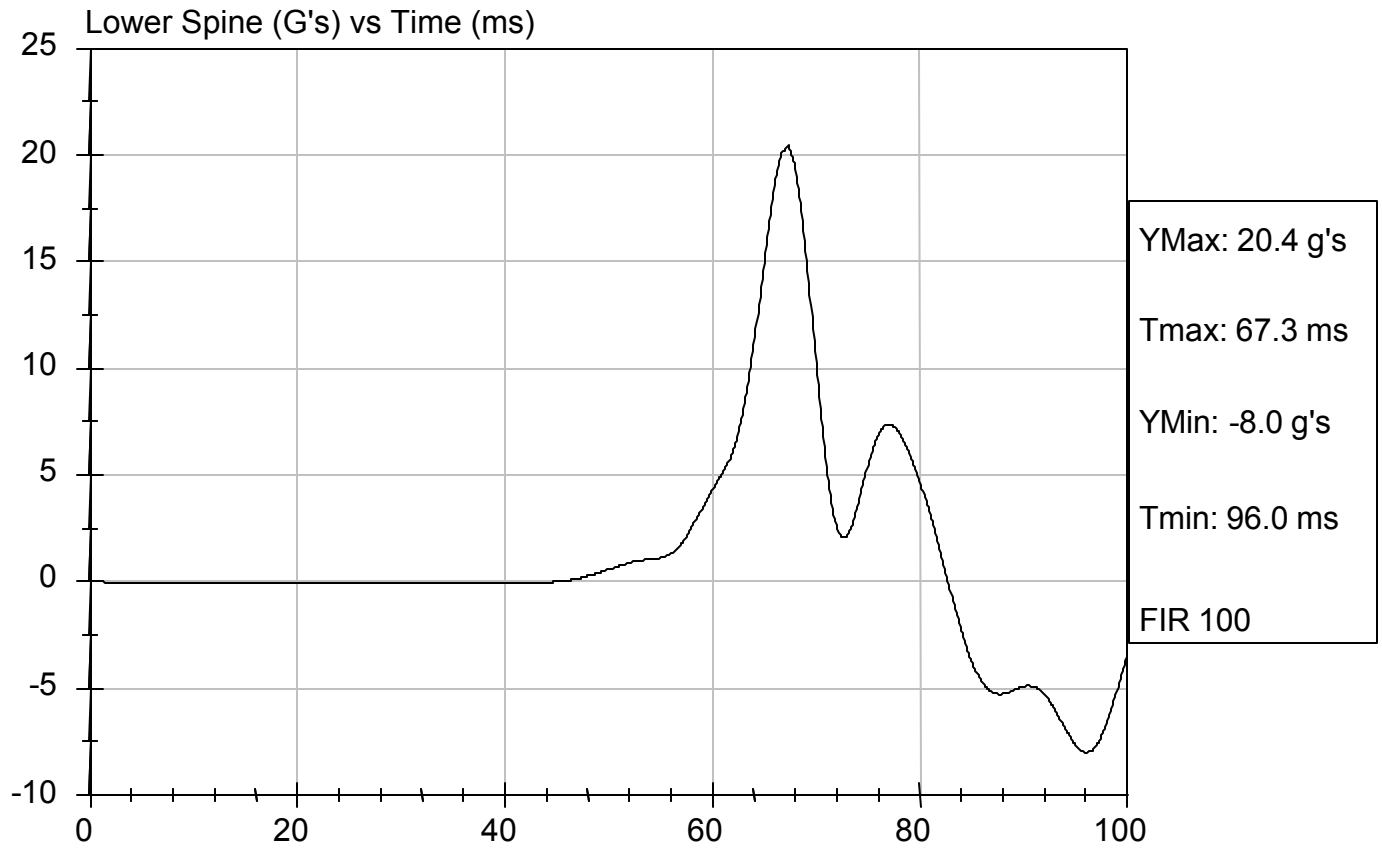
Test Date: 11/3/09
Speed: 14.12 ft/s, 4.30 m/s





Test Desc: Thorax Impact
Component ID: D092802

Test Date: 11/3/09
Speed: 14.12 ft/s, 4.30 m/s



SID/HIII Calibration Data Sheet
Side Impact Dummy
Pelvis Impact Test

ATD Serial No: 271

Test I.D: D092803

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 to 25.5	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	31	Pass
Probe Velocity	m/s	4.27 - 4.33	4.27	Pass
Pelvis Acceleration	G's	40 - 60	46	Pass
			Overall Test Results	Pass

Jessica Hall
Laboratory Technician

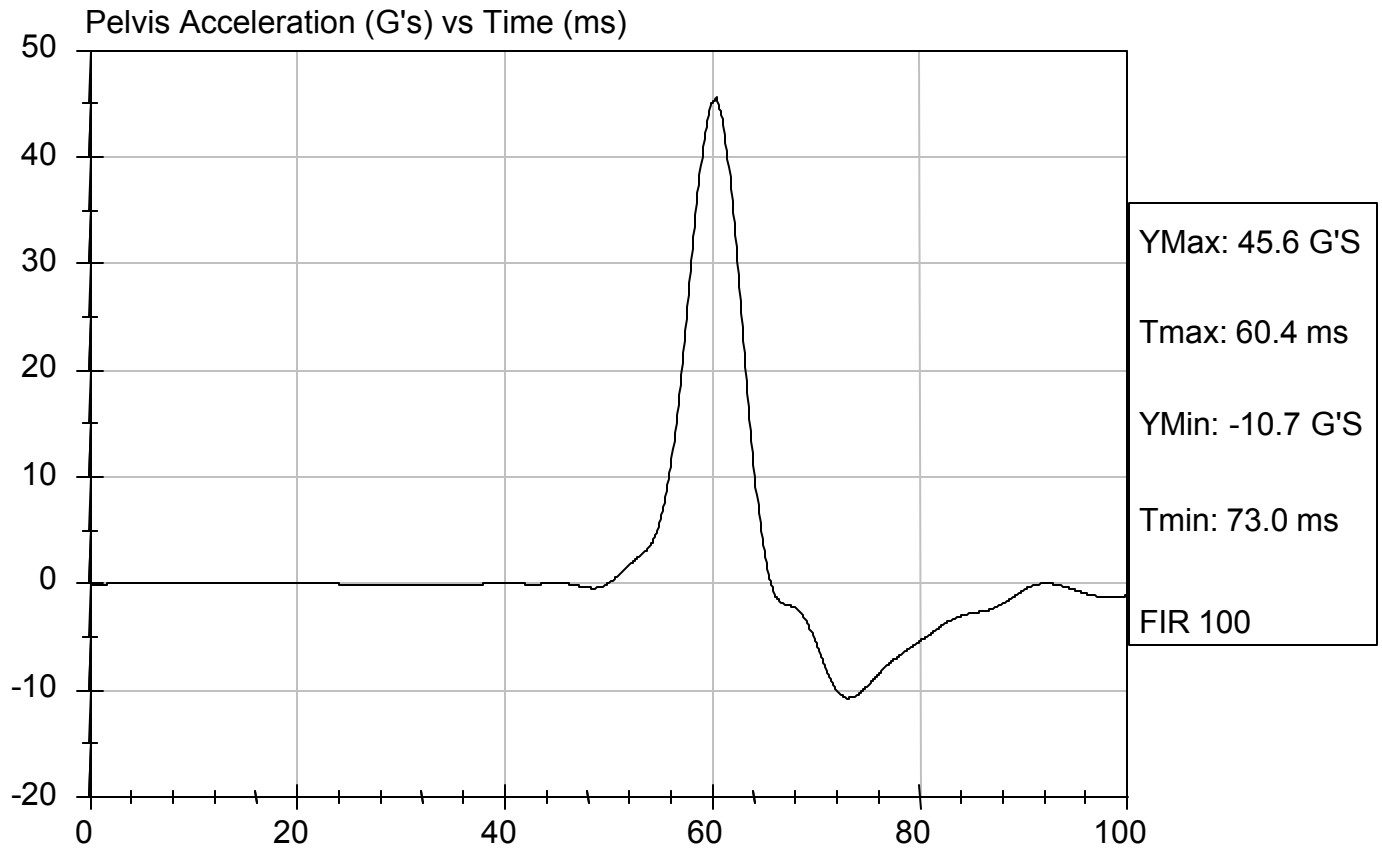
David Winkelbauer
Approved By

11/3/09
Test Date



Test Desc: Pelvis Impact
Component ID: D092803

Test Date: 11/3/09
Speed: 14.01 ft/s, 4.27 m/s



SID/HIII Calibration Data Sheet
Side Impact Dummy
Abdominal Compression Calibration (Pre-Load = 10 lbs)

ATD Serial No: 271

Test I.D: D092804

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 - 25.5	21.9	Pass
Laboratory Relative Humidity	%	10 to 70	25	Pass
Force At 12.7 mm	N	104 -162	143	Pass
Force At 19 mm	N	163 - 222	203	Pass
Force At 25.4 mm	N	222 - 280	274	Pass
Force At 33 mm	N	325 - 391	376	Pass
Overall Test Results				Pass

Jessica Hall
Laboratory Technician

11/3/09
Test Date

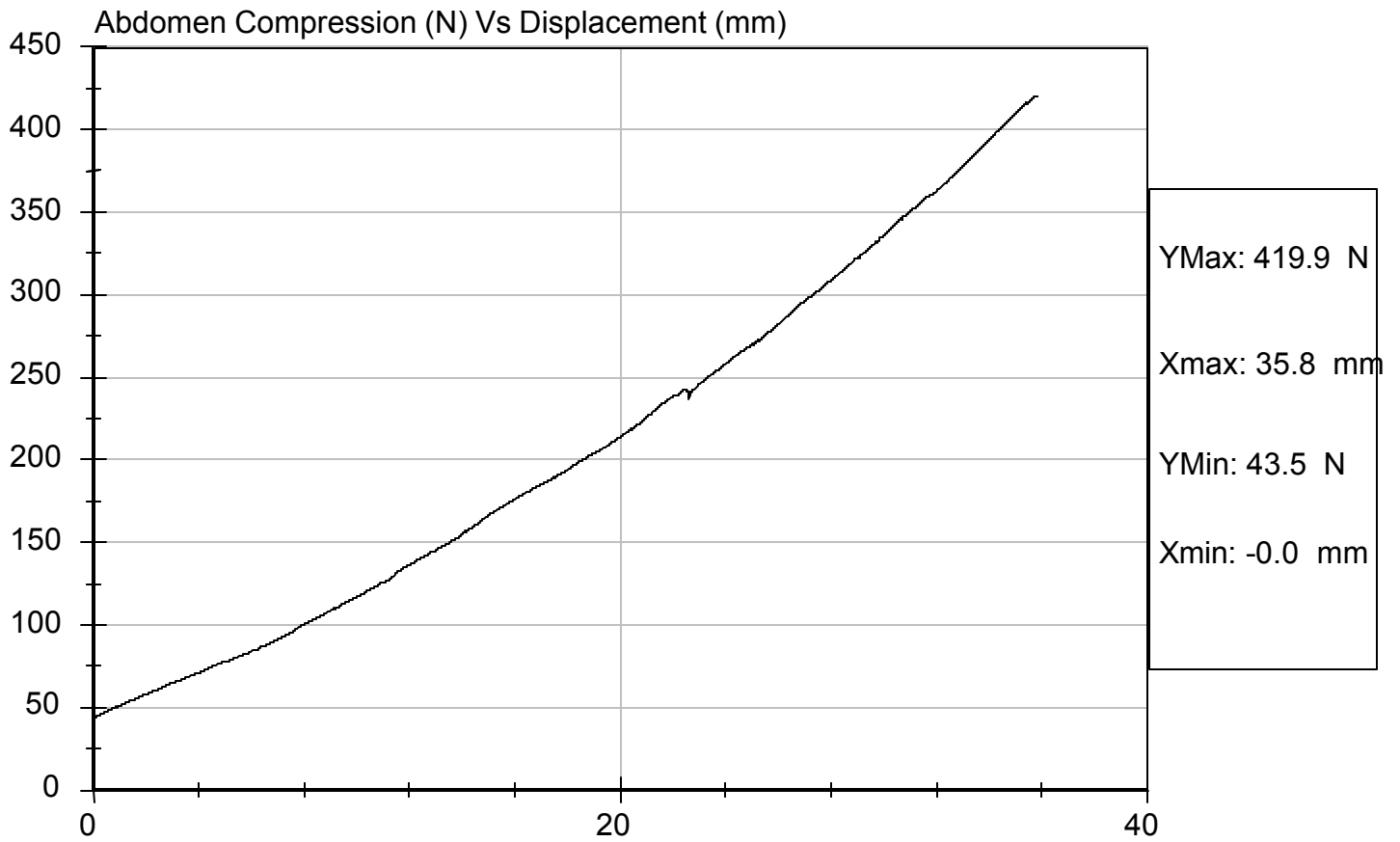
David Winkelbauer
Approved By



Test Description: Abdomen Compression Test Date: 11/3/09

Component: D092804

Speed: 0 ft/s, 0 m/s



SID/HIII Calibration Data Sheet
Side Impact Dummy
Lumbar Flexion Calibration

ATD Serial No: 271

Test I.D: D092805

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	18.9 - 25.5	21.9	Pass
Laboratory Relative Humidity	%	10 to 70	25	Pass
Force At 0 deg	N	0 - 26.7	0	Pass
Force At 20 deg	N	97.9 - 151.2	113.1	Pass
Force At 30 deg	N	151.2 - 204.6	159.5	Pass
Force At 40 deg	N	204.6 - 258.0	212.3	Pass
Return Angle	Deg	12 Maximum	5	Pass
Overall Test Results			Pass	


Laboratory Technician


Approved By

11/3/09
Test Date

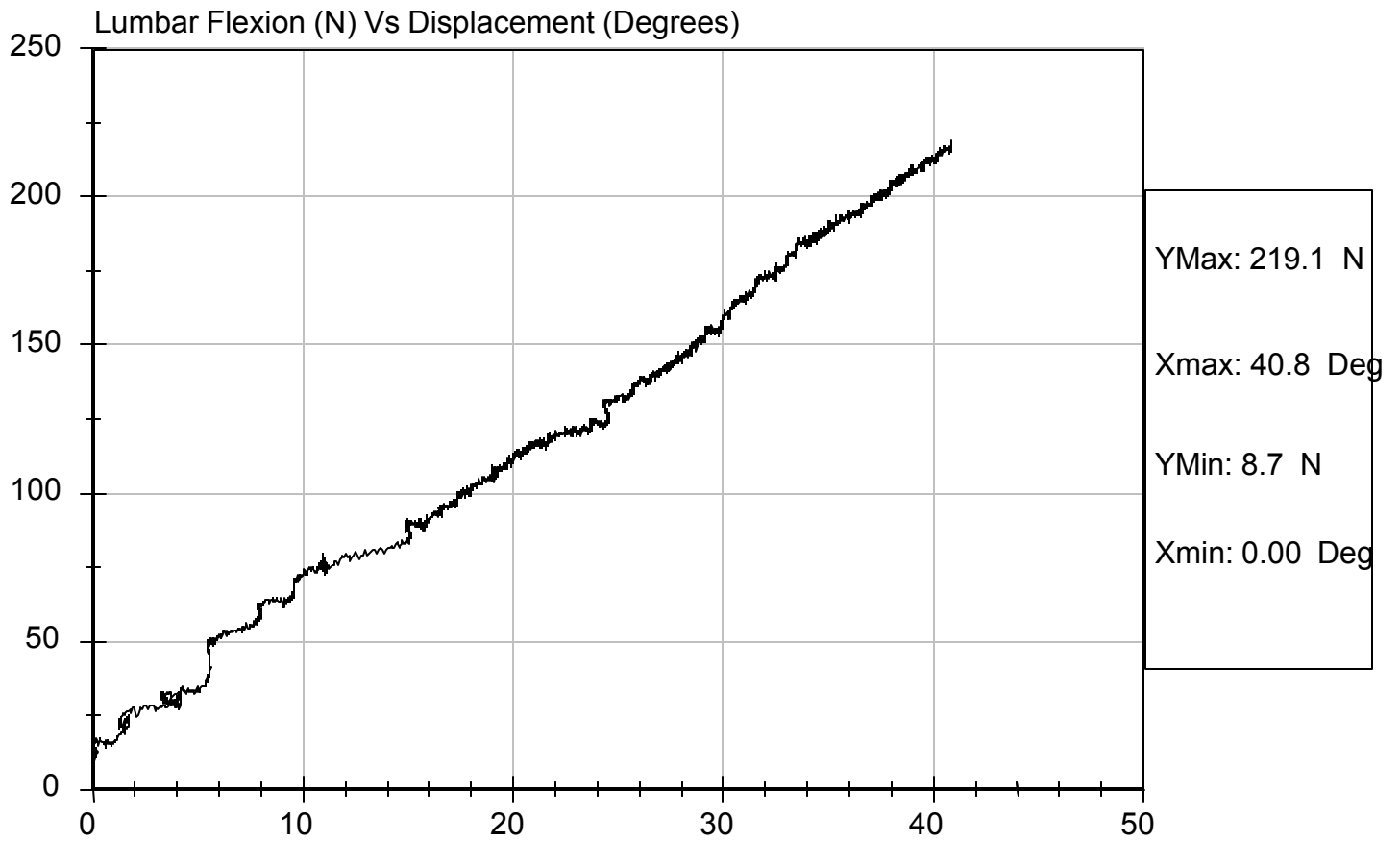


Test Description: Lumbar Flexion

Test Date: 11/3/09

Component: D092805

Speed: 0 ft/s, 0 m/s



SID/HIII Calibration Data Sheet
Side Impact Dummy
Neck Pendulum Test

ATD Serial No: 271

Test I.D: D092809

Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		deg C	20.6 to 22.2	21.9	Pass
Laboratory Relative Humidity		%	10 to 70	25	Pass
Impact Velocity		m/s	6.89 to 7.13	7.05	Pass
Pendulum Deceleration	10 ms	m/s	1.96 to 2.55	2.35	Pass
	20 ms	m/s	4.12 to 5.10	4.54	Pass
	30 ms	m/s	5.73 to 7.01	6.34	Pass
	40 to 70 ms	m/s	6.27 to 7.64	6.71	Pass
Midsaggital Plane Max Rotation		deg	66 to 82	72	Pass
Head Rotation Peak to Zero - Decay Time		ms	58 to 67	62	Pass
Max. Mx at Occipital Condyles		Nm	73 to 88	82	Pass
Mx Peak To Zero - Decay Time		ms	49 to 64	62	Pass
Mx Peak to Max. Head Rotation		ms	2 to 16	2	Pass


 Laboratory Technician

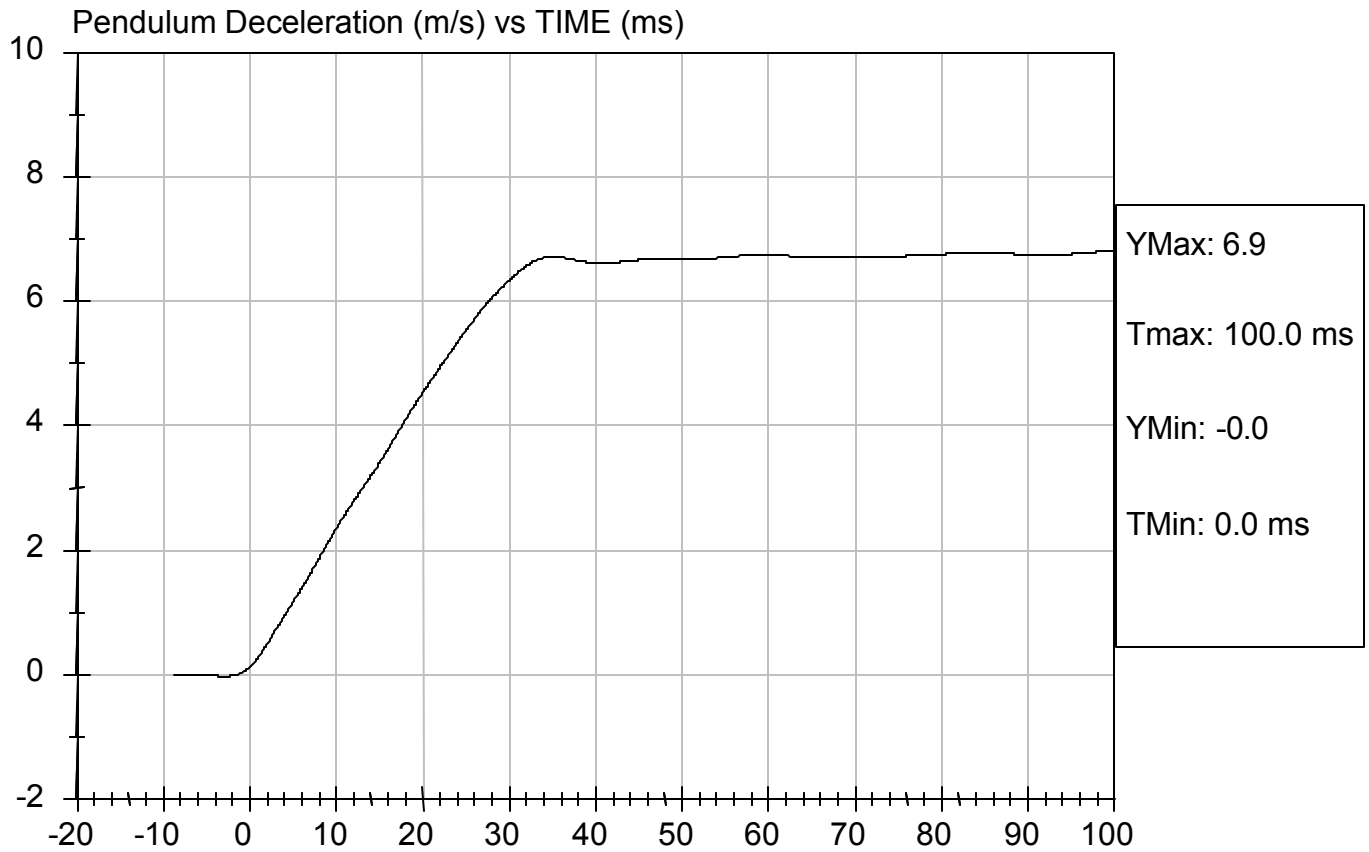
11/3/09
 Test Date


 Approved By



Test Desc: Neck Bending
Component ID: D092809

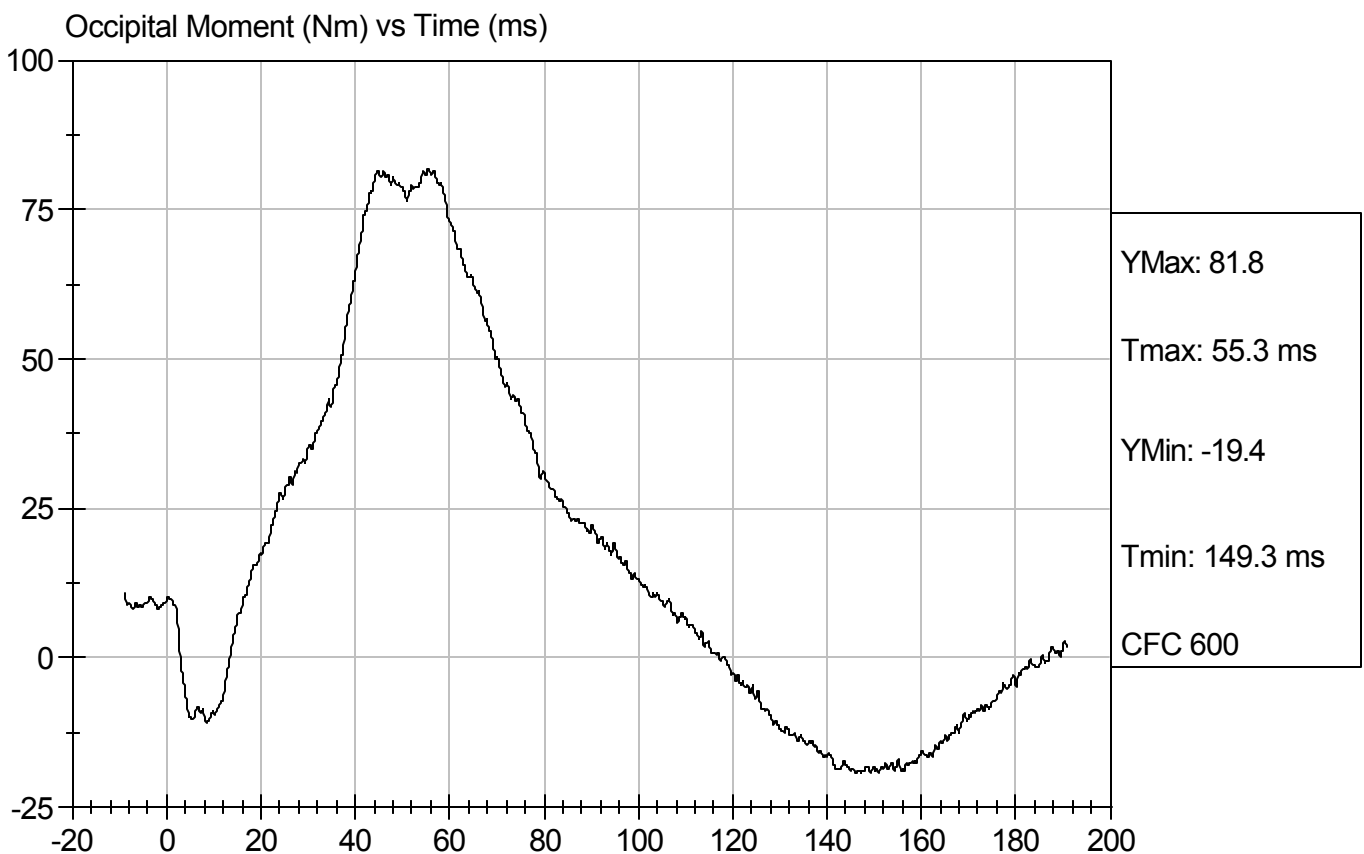
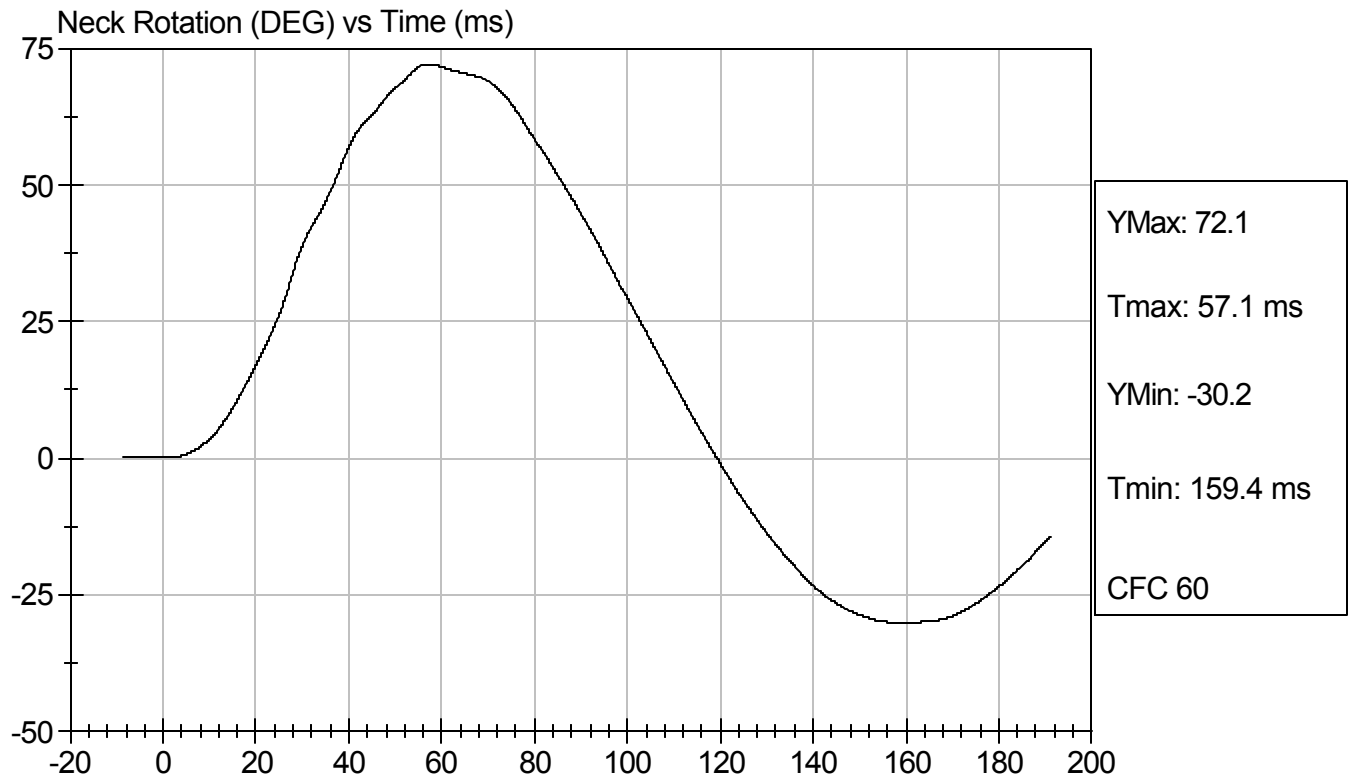
Test Date: 11/3/09
Speed: 23.14 ft/sec, 7.05 m/sec





Test Desc: Neck Bending
Component ID: D092809

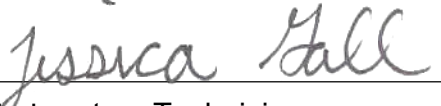
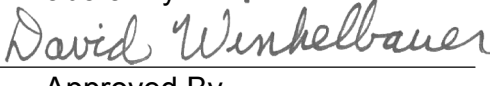
Test Date: 11/3/09
Speed: 23.14 ft/sec, 7.05 m/sec



SID Calibration Data Sheet
Side Impact Dummy
Inspection Checklist

ATD Serial No: 271

Test Part	Items Checked	Result
Skin	Visual inspection	Pass
Head	Visual, ballast, accelerometer mount	Pass
Neck	Visual	Pass
Spine Box	Visual, ballast, accelerometer mount	Pass
Rib Cage	Visual, measure	Pass
Sternum	Visual	Pass
Lumbar Spine	Visual	Pass
Abdomen	Visual	Pass
Pelvis	Visual, palpate, accelerometer mount	Pass
Upper Legs	Visual	Pass
Knees	Visual	Pass
Lower Legs	Visual, range of motion	Pass
Ankles	Visual, range of motion	Pass
Feet	Visual, range of motion	Pass
Joints	1 to 2 g range	Pass
Other		Pass


Laboratory Technician

Approved By

11/3/2009
Test Date