

REPORT NUMBER: SNCAP-CAL-07-04

**NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST**

**MERCEDES-BENZ U.S. INTL., INC.
2007 MERCEDES-BENZ ML350
FOUR-DOOR MPV**

NHTSA NUMBER: E80500

**PREPARED BY:
CALSPAN CORPORATION
P.O. BOX 400
BUFFALO, NEW YORK 14225**



Test Date: September 27, 2007

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
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OFFICE OF CRASHWORTHINESS STANDARDS
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Technical Report Documentation Page

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16. Abstract A 55/28 kph 90° Impact Moving Deformable Barrier NCAP Side Impact Test was conducted on the subject 2007 Mercedes-Benz ML350 Four-Door MPV in accordance with the specifications of the Office of Crashworthiness Standards Test Procedure for the generation of consumer information on vehicle side crash protection. This test was conducted at the Calspan Corporation Crash Test Facility in Buffalo, New York, on September 27, 2007. The impact velocity of the Moving Deformable Barrier (MDB) was 61.80 km/h, and the ambient temperature at the struck side (driver side) of the vehicle was 21°C. The target vehicle's maximum post test static crush was 203 mm at level 3. The test vehicle's occupant performance is as follows: <table style="margin-left: auto; margin-right: auto; border: none;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>DRIVER</u></th> <th style="text-align: center;"><u>PASS.</u></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib (LUR) Accel., g</td> <td style="text-align: center;">11.4</td> <td style="text-align: center;">15.7</td> </tr> <tr> <td>Left Lower Rib (LLR) Accel., g</td> <td style="text-align: center;">14.7</td> <td style="text-align: center;">18.6</td> </tr> <tr> <td>Lower Spine (T₁₂) Accel., g</td> <td style="text-align: center;">20.5</td> <td style="text-align: center;">29.4</td> </tr> <tr> <td>Thoracic Trauma Index (TTI)</td> <td style="text-align: center;">18</td> <td style="text-align: center;">24</td> </tr> <tr> <td>Pelvis (PEV) Accel., g</td> <td style="text-align: center;">27</td> <td style="text-align: center;">39</td> </tr> <tr> <td>HIC</td> <td style="text-align: center;">24.4</td> <td style="text-align: center;">39.2</td> </tr> </tbody> </table> The doors on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.					<u>DRIVER</u>	<u>PASS.</u>	Left Upper Rib (LUR) Accel., g	11.4	15.7	Left Lower Rib (LLR) Accel., g	14.7	18.6	Lower Spine (T ₁₂) Accel., g	20.5	29.4	Thoracic Trauma Index (TTI)	18	24	Pelvis (PEV) Accel., g	27	39	HIC	24.4	39.2
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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

The purpose of this test was to evaluate side impact protection in a 2007 Mercedes-Benz ML350 Four-Door MPV manufactured by Mercedes-Benz U.S. Intl., Inc.. The side impact test was conducted in accordance with the Laboratory Test Procedure for New Car Assessment Program Side Impact Testing dated July 1997.

SECTION 2

SUMMARY OF NCAP SIDE IMPACT TEST

A model year 2007 Mercedes-Benz ML350 Four-Door MPV 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 61.80 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 2528.5 kg and the test weight of the MDB was 1362.5 kg. The test was conducted at the Calspan Corporation Transportation Sciences Center on September 27, 2007.

One (1) real-time motion picture camera and ten (10) 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 Dummies (SID/HIIs) can be found in Appendix A.

Two 50th percentile adult male SID/HII's were placed in the driver (P1) and left rear passenger (P4) designated seating positions according to instructions specified in the Laboratory Test Procedure for New Car Assessment Program Side Impact Testing dated July 1997. Each SID/HII 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-one (21) structural accelerometers and the MDB was instrumented with five (5) accelerometers.

2.2 GENERAL COMMENTS

The test vehicle sustained a maximum static crush of 203 mm at level 3, 1590 mm rearward of the left vertical impact point. The driver and passenger SID/HII's, Serial Nos. 270 and 269 respectively, were calibrated just prior to this test.

Test data and observations are presented in this section of the report. Appendix A contains the still photograph prints. Appendix B contains the driver and passenger SID/HII's, vehicle, and MDB response data traces. Appendix C contains the SID/HII's configuration and performance verification data. Appendix D contains the test equipment information.

The occupant data is summarized below:

ATD position	HIC(36)	T ₁	T ₂	TTI (G's)	Peak Pelvis (G's)
Driver	24.4	48.7	84.7	18	27
Passenger	39.2	49.2	85.2	24	39

SUPPLEMENTAL RESTRAINT INFORMATION

Restraint Type	Left Front (Driver)		Left Rear (Passenger)	
	Installed	Deployed	Installed	Deployed
Front Airbag	Yes	No	NA	NA
Side Torso Airbag	Yes	Yes	Yes	Yes
Side Head/Torso Combination Airbag	No	No	NA	NA
Curtain Airbag	Yes	Yes	Yes	Yes

The test instrumentation data listed in Appendix B can be found on the NHTSA website:
www.nhtsa.dot.gov.

DATA SHEET NO. 1**GENERAL TEST AND VEHICLE PARAMETER DATA**

Test Vehicle:	2007 Mercedes-Benz ML350	NHTSA No.	E80500
Test Program:	NCAP Side Impact	Test Date:	September 27, 2007

TEST VEHICLE INFORMATION AND VEHICLE OPTIONS

Make	Mercedes-Benz U.S. Intl., Inc.	Driver Front Airbag	Yes
Model	ML350	Driver Side Curtain Airbag	Yes
Body Style	Four-Door MPV	Driver Side Torso Airbag	Yes
NHTSA No.	E80500	Driver Pretensioners	Yes
VIN	4JGBB86E57A285623	Driver Load Limiters	Yes
Color	Silver	Driver Power Seats	Yes
Engine Disp.(L)	3.5	Rear Pass. Side Curtain Airbag	Yes
Engine Cylinders	6	Rear Pass. Side Torso Airbag	Yes
Engine Placement	Longitudinal	Rear Pass. Pretensioners	Yes
Transmission Type	Automatic	Rear Pass. Load Limiters	Yes
Transmission Speeds	7	Rear Pass. Power Seats	NA
Final Drive	4 Wheel	Tilt Wheel	Yes
Air Conditioning	Yes	Anti-lock Brakes	Yes
Power Steering	Yes	Traction Control	Yes
Power Brakes	Yes	Power Windows	Yes
Delivery Date	9/20/2007	Power Door Locks	Yes
Odometer Reading (km)	319	Automatic Door Locks (ADL)	Yes
Dealer	Smith Company Motor Cars	Owner's Manual Details Instructions on Disabling ADLs	Yes

DATA FROM CERTIFICATION LABEL

Manufactured By	Mercedes-Benz US Intl, Inc.	GVWR (kg)	2830
Date of Manufacture	06/07	GAWR Front (kg)	1400
		GAWR Rear (kg)	1600

VEHICLE CAPACITY DATA

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket	Split Bench		
Number Of Occupants	2	3		5
Capacity Wt. (VCW) (kg)				530.0
Cargo Wt. (RCLW) (kg)				189.8

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

Test Vehicle:	2007 Mercedes-Benz ML350	NHTSA No.	E80500
Test Program:	NCAP Side Impact	Test Date:	September 27, 2007

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW) (Axle)			Fully Loaded (Axle)			As Tested (ATW) (Axle)		
		Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Left	kg	574.0	546.0		623.0	685.0		624.5	675.0	
Right	kg	597.0	522.0		598.0	636.0		615.5	613.5	
Ratio	%	52.3	47.7		48.0	52.0		49.0	51.0	
Totals	kg	1171.0	1068.0	2239.0	1221.0	1321.0	2542.0	1240.0	1288.5	2528.5

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	2239.0
Weight of 2 P572E ATDs (81.2 kg each)	kg	162.4
Rated Cargo/Luggage Weight (RCLW)	kg	136.1
Calculated Vehicle Target Weight (TVTW)	kg	2537.5

* Actual As Tested Weight (ATW) will be TVTW -4.5/-9.1 kg

Weight of Ballast (including instrumentation package and cameras): 180.8 kg

TEST VEHICLE ATTITUDES

	Units	LF	RF	LR	RR
As Delivered	mm	855	887	860	889
Fully Loaded	mm	838	839	849	848
As Tested	mm	838	840	849	849

TEST VEHICLE VERTICAL IMPACT LINE AND CG

Measurement Description	Units	Value
Test Vehicle Wheel Base	mm	2915
Target Impact Point Aft of Front Axle	mm	2407
Actual Impact Point Aft of Front Axle	mm	2407
As Tested CG (aft of front axle)	mm	1485

DATA SHEET NO. 2

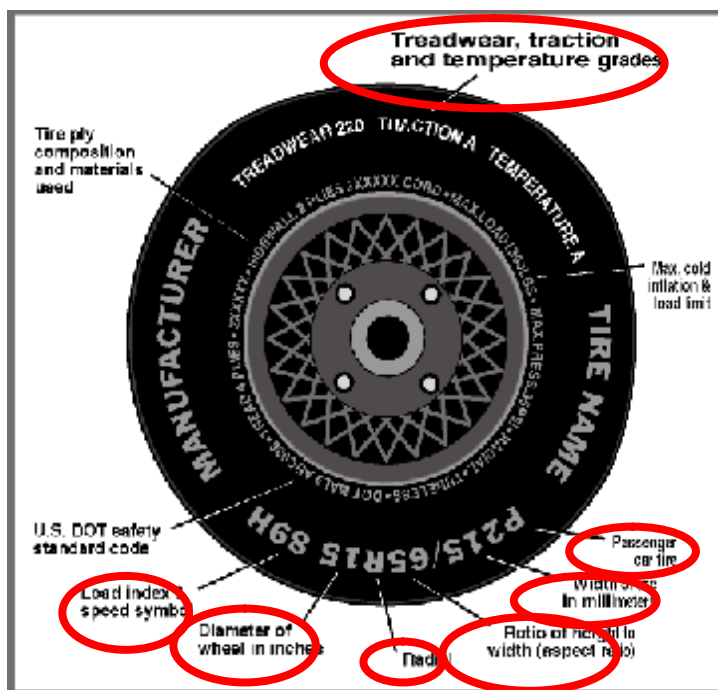
TEST VEHICLE TIRE INFORMATION

Test Vehicle: 2007 Mercedes-Benz ML350

NHTSA No. E80500

Test Program: NCAP Side Impact

Test Date: September 27, 2007



DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	340	340
Cold / Test Pressure (kPa)	220	220
Recommended Tire Size	255/50R19	255/50R19
Tire Size on Vehicle	255/50R19	255/50R19
Tire Manufacturer	Michelin	Michelin
Tire Name	Latitude Tour HP	Latitude Tour HP
Tire Type	M+S	M+S
Tire Width (mm)	255	255
Ratio of Height to Width (aspect ratio)	50	50
Radial	Yes	Yes
Wheel Diameter	19	19
Load Index & Speed Symbol	107 H	107 H
Treadwear	440	440
Traction Grade	A	A
Temperature Grade	A	A

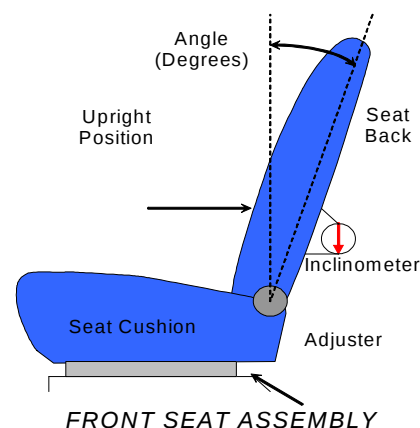
DATA SHEET NO. 3

TEST VEHICLE INFORMATION

Test Vehicle:	2007 Mercedes-Benz ML350	NHTSA No.	E80500
Test Program:	NCAP Side Impact	Test Date:	September 27, 2007

NORMAL DESIGN RIDING POSITION

The driver and passenger seat back is positioned to the manufacturer's designated angle.

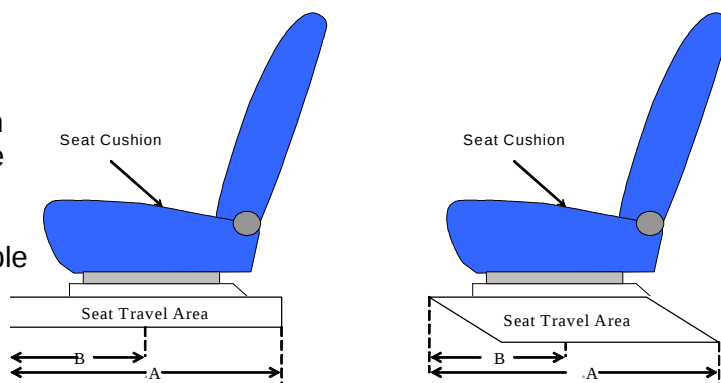


SEAT BACK POSITION

	Driver Seat	Rear Seat
Test Detent (forward-most detent defined as 0)	Electronic	Fixed
Angle (deg. from forward-most locking position)	25.3	Fixed
Alternative Measurements to Verify Test Position	Recline seat back 21.9° back from vertical	NA

SEAT FORE/AFT POSITIONS

The total seat travel was measured from forward most position to rearmost position irrespective of vertical seat height in those positions. The seat was set at the longitudinal mid position with vertical adjustment at the lowest position obtainable for both the driver and passenger.



SEAT FORE/AFT POSITION

	Driver Seat	Rear Seat
Total Fore/Aft Travel (A) (mm)	340	0
Test Position (B) (mm)	170	0
Test Detent (forward-most detent defined as 0)	Electronic	Fixed
Total Number of Detents (including 0)	Electronic	Fixed

DATA SHEET NO. 3 (CONTINUED)

TEST VEHICLE INFORMATION

Test Vehicle: 2007 Mercedes-Benz ML350

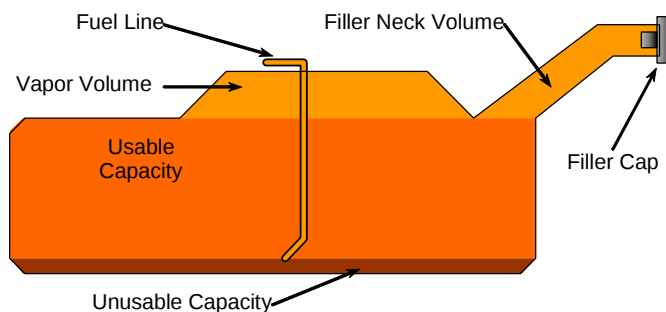
NHTSA No. E80500

Test Program: NCAP Side Impact

Test Date: September 27, 2007

FUEL SYSTEM INFORMATION

The test vehicle is equipped with an electric fuel pump. The fuel pump operates for approximately two seconds after the ignition is placed in the "ON" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the left rear fender. The standard fuel tank occupies the area under the rear seat.



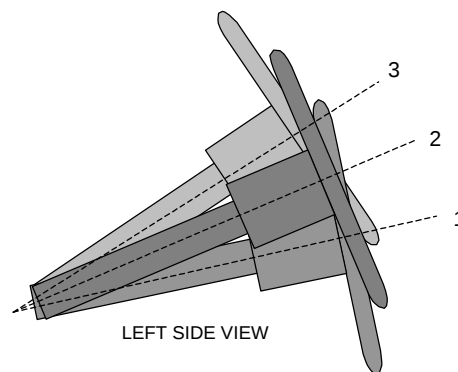
VEHICLE FUEL TANK ASSEMBLY

FUEL TANK CAPACITY

	Liters
Usable Capacity of "Standard" Fuel Tank	95
Usable Capacity of "Optional" Fuel Tank	-
Stoddard Used For Test (92%-94% of Fuel Tank Usable Capacity)	87.4

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 Position (mm)	Tilt (degrees)	Tilt (detent)
Lowermost Position No. 1	NA	21	-
Geometric Center Position No. 2 *	NA	23	-
Uppermost Position No. 3	NA	25	-

* Test position

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

Test Vehicle:	2007 Mercedes-Benz ML350	NHTSA No.	E80500
Test Program:	NCAP Side Impact	Test Date:	September 27, 2007

MDB SPECIFICATIONS

Measurement Description	Length (mm)
Overall Width of Framework Carriage	1250
Overall Length Including Honeycomb Face	4120
Wheel base of Framework Carriage	2590
Tread of Framework Carriage (front & rear)	1875
C.G. Location aft of Front Axle	1104

MDB WEIGHTS

	Units	Front Axle	Rear Axle	Total
Left	kg	409.5	281.5	
Right	kg	372.5	299.0	
Ratio	%	57.4	42.6	
Totals	kg	782.0	580.5	1362.5

MDB SPEED AND IMPACT ANGLE DATA

Measured Parameter	Units	Requirement	Value
Trap No. 1 Velocity (Primary)	km/h	61.1 to 62.7	61.8
Trap No. 2 Velocity (Redundant)	km/h	61.1 to 62.7	61.8

POST TEST OBSERVATIONS**MDB LEFT EDGE IMPACT POINT DATA**

Measured Parameter	Units	Requirement	Value
Horizontal Offset	mm	+/- 50	0 mm
Vertical Offset	mm	+/-20	7mm above

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

Test Vehicle: 2007 Mercedes-Benz ML350

NHTSA No. E80500

Test Program: NCAP Side Impact

Test Date: September 27, 2007

TEST DUMMY INFORMATION AND CONTACT POINTS

Description	Front Seat SID/HIII	Rear Seat SID/HIII
Dummy Type / Serial No.	SID/HIII / 270	SID/HIII / 269
Head Contact	The side of the head to the side curtain airbag	The side of the head to the side curtain airbag
Upper Torso Contact	Side torso airbag	Side torso airbag
Lower Torso Contact	Side torso airbag and door arm rest	Side torso airbag
Left Knee Contact	Side door panel	Side door panel
Right Knee Contact	Left Knee	Left Knee

POST TEST DOOR OPENING AND SEAT TRACK INFORMATION

Description	Front	Rear
Locked/Unlocked Doors	Doors were unlocked	Doors were unlocked
Left Side Door Opening	Door remained closed and latched	Door remained closed and latched
Right Side Door Opening	Door remained closed and latched	Door remained closed and latched; Door opened without tools
Seat Movement	0	0
Seat Back Failure	None	None

POST TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	No Separation
Sill Separation	None
Windshield Damage	None
Window Damage	None
Other Notable Effects	None

SUPPLEMENTAL RESTRAINT INFORMATION

Restraint Type	Left Front (Driver)		Left Rear (Passenger)	
	Installed	Deployed	Installed	Deployed
Front Airbag	Yes	No	NA	NA
Side Torso Airbag	Yes	Yes	Yes	Yes
Side Head/Torso Combination Airbag	NA	NA	NA	NA
Curtain Airbag	Yes	Yes	Yes	Yes

DATA SHEET NO. 6

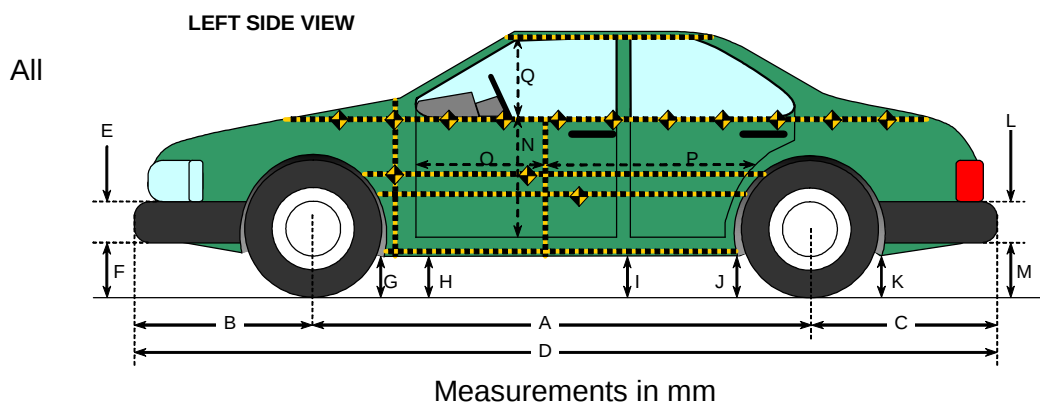
VEHICLE PRE-TEST AND POST-TEST MEASUREMENTS

Test Vehicle: 2007 Mercedes-Benz ML350

NHTSA No. E80500

Test Program: NCAP Side Impact

Test Date: September 27, 2007



Code	Measurement Description	Pre-Test (delivered)	Pre-Test (as tested)	Post-Test (as tested)	Difference
A	Wheelbase	2917	2915	2904	11
B	Front Axle to FSOV	861	861	880	-19
C	Rear Axle to RSOV	1004	1006	1010	-4
D	Total Length at Centerline	4782	4782	4795	-13
E	Front Bumper Thickness	180	180	180	0
F	Front Bumper Bottom to Ground	477	473	497	-24
G	Sill Height at Front Wheel Well	239	215	235	-20
H	Sill Height at Front Door Leading Edge	244	220	247	-27
I	Sill Height at "B" Pillar	269	237	262	-25
J1	Sill Height at Rear Wheel Well	268	231	238	-7
J2	Pinch Weld Height at Rear Wheel Well	282	245	263	-18
K	Sill Height Aft of Rear Wheel Well	362	313	314	-1
L	Rear Bumper Thickness	260	260	260	0
M	Rear Bumper Bottom to Ground	458	409	491	-82
N	Sill Height to Window Bottom Sill	791	791	757	34
O	Front Door Leading Edge to Impact CL	756	756	750	6
P	Rear Door Trailing Edge to Impact CL	1211	1211	1141	70
Q	Front Window Opening	489	489	488	1
R	Right Side Length	4649	4649	4663	-14
S	Left Side Length	4648	4648	4650	-2
T	Vehicle Width at "B" Post	1876	1876	1766	110

DATA SHEET NO. 7

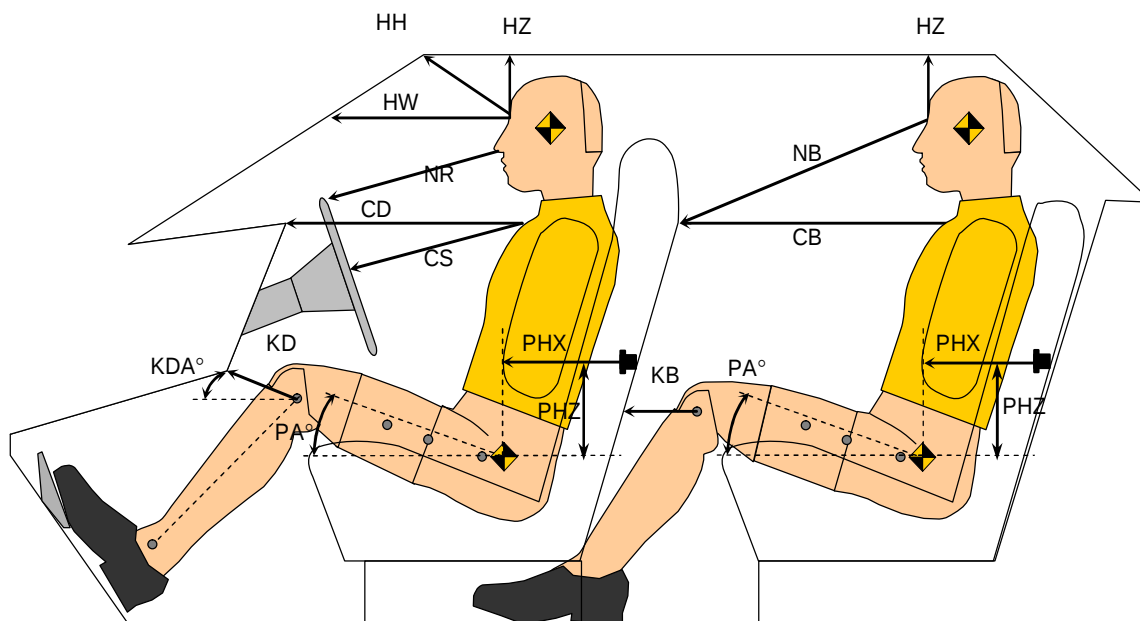
SID/HIII LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2007 Mercedes-Benz ML350

NHTSA No. E80500

Test Program: NCAP Side Impact

Test Date: September 27, 2007

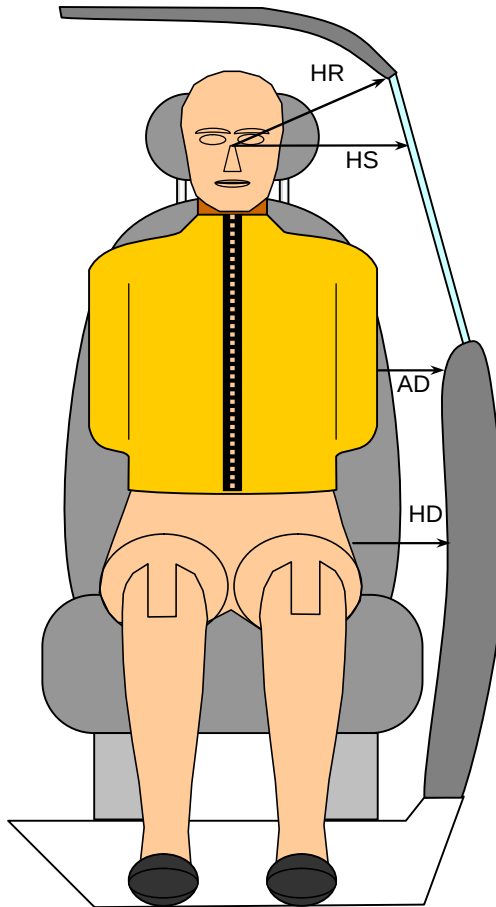


Driver Code	Pass. Code	Measurement Description	Driver S/N 270		Passenger S/N 269	
			Length(mm)	Angle(°)	Length(mm)	Angle(°)
HH		Head to Header	412			
HW		Head to Windshield	720			
HZ	HZ	Head to Roof	195		190	
NR	NB	Nose to Rim/Nose to Seatback	455		578	
CD	CB	Chest to Dash or Seatback	559		507	
CS		Chest to Steering Wheel	336			
KDL	KBL	Left Knee to Dash or Seatback	197	21.8	246	22.0
KDR	KBR	Right Knee to Dash or Seatback	150	25.0	248	22.5
PA	PA	Pelvic Angle		24.0		23.2
PHX	PHX	H-Point to Striker (X-Axis)	180		169	
PHZ	PHZ	H-Point to Striker (Z-Axis)	128		135	

DATA SHEET NO. 8

SID/HIII LATERAL CLEARANCE DIMENSIONS

Test Vehicle:	2007 Mercedes-Benz ML350	NHTSA No.	E80500
Test Program:	NCAP Side Impact	Test Date:	September 27, 2007



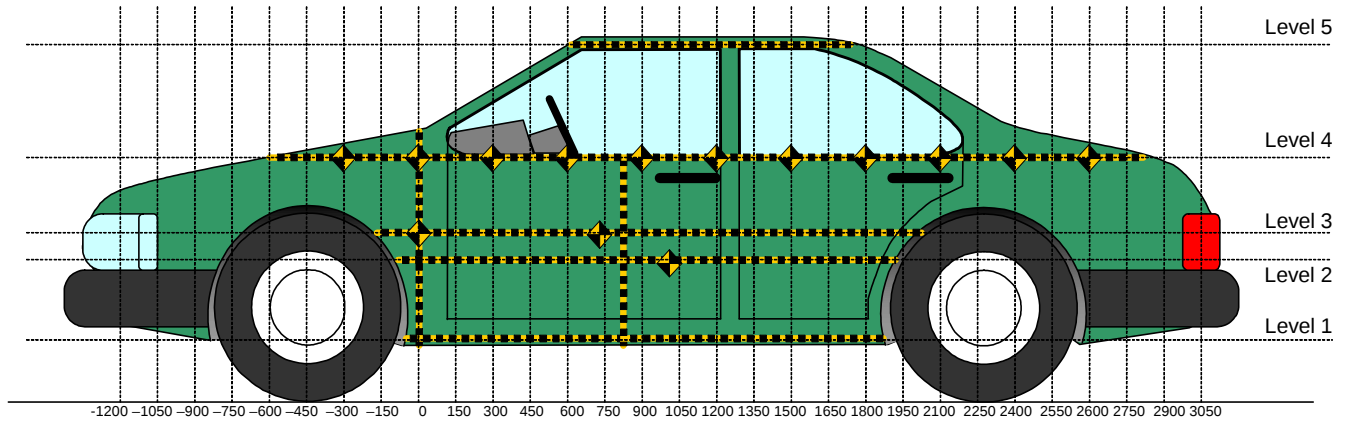
FRONT VIEW OF DUMMY

Code	Measurement Description	Units	Driver S/N 270	Passenger S/N 269
HR	Head to Side Header	mm	132	217
HS	Head to Side Window	mm	334	335
AD ₁	Arm to Door (at upper rib level)	mm	105	99
AD ₂	Arm to Door (at lower rib level)	mm	113	109
HD	H-Point to Door	mm	182	151

DATA SHEET NO. 9

VEHICLE SIDE MEASUREMENTS

Test Vehicle:	2007 Mercedes-Benz ML350	NHTSA No.	E80500
Test Program:	NCAP Side Impact	Test Date:	September 27, 2007



All Measurements Shown in mm

LEFT SIDE VIEW

Measurements are taken with vehicle in the as tested condition.
 Measurements along the vertical 750 mm.
 All measurements below in mm.

Level	Measurement Description	Maximum Exterior Static Crush	Height Above Ground	Distance From Impact
1	Sill Top	39	324	1500
2	Occupant H-Point	195	718	1650
3	Mid Door	203	760	1650
4	Window Sill	90	1026	1350
5	Window	12	1657	1350
	Maximum Penetration	203		

DATA SHEET NO. 10

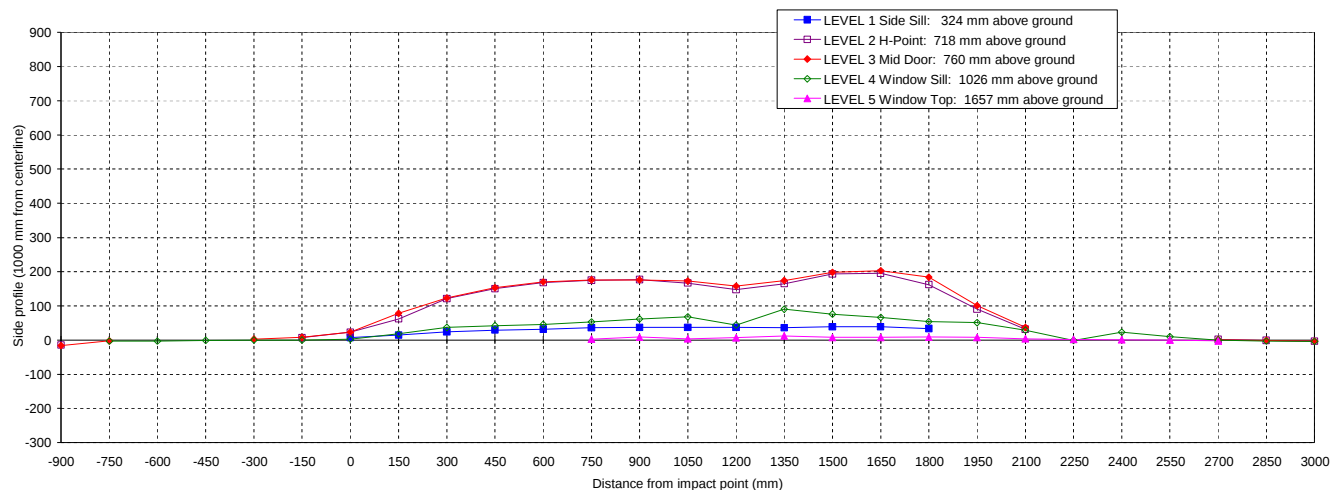
VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2007 Mercedes-Benz ML350

NHTSA No. E80500

Test Program: NCAP Side Impact

Test Date: September 27, 2007



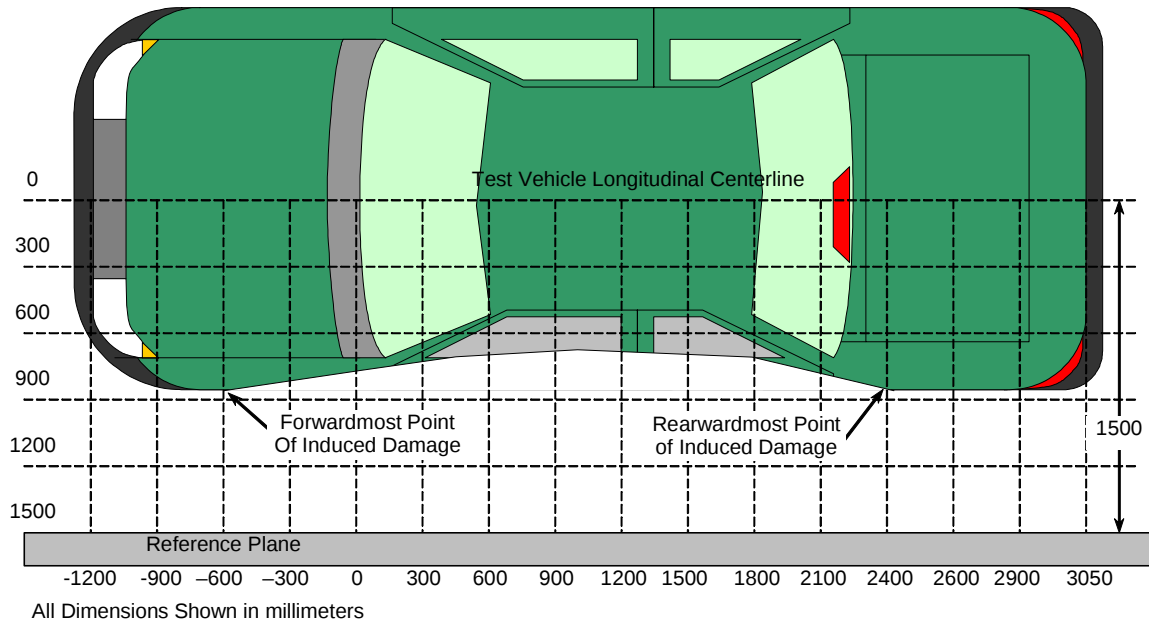
NOTE: All dimensions are in millimeters with a tolerance of ± 3 mm

NOTE: All dimensions are in millimeters with a tolerance of ±3 mm																														
		DISTANCE IN MILLIMETERS (mm) FROM IMPACT POINT																												
LEVEL	HEIGHT (mm)		-900	-750	-600	-450	-300	-150	0	150	300	450	600	750	900	1050	1200	1350	1500	1650	1800	1950	2100	2250	2400	2550	2700	2850	3000	
LEVEL 1 SIDE SILL	324	PRE	--	--	--	--	--	--	91	121	128	131	132	132	133	133	133	135	133	132	122	--	--	--	--	--	--	--	--	
		POST	--	--	--	--	--	--	98	136	152	160	164	168	170	170	170	171	172	171	156	--	--	--	--	--	--	--	--	
		CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	7	15	24	29	32	36	37	37	37	36	39	39	34	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
LEVEL 2 H POINT	718	PRE	76	--	--	--	--	49	60	66	67	69	70	71	71	70	67	64	60	59	59	58	53	--	--	--	53	86	130	
		POST	62	--	--	--	--	56	83	128	188	219	238	246	248	237	215	229	253	254	221	148	85	--	--	--	55	85	127	
		CRUSH	-14	N/A	N/A	N/A	N/A	7	23	62	121	150	168	175	177	167	148	165	193	195	162	90	32	N/A	N/A	N/A	2	-1	-3	
LEVEL 3 MID DOOR	760	PRE	93	55	--	--	51	52	61	65	66	67	68	69	71	72	73	74	74	71	69	58	53	--	--	--	54	95	146	
		POST	77	53	--	--	54	60	84	143	189	220	238	245	247	245	231	248	272	274	253	159	90	--	--	--	55	94	143	
		CRUSH	-16	-2	N/A	N/A	3	8	23	78	123	153	170	176	176	173	158	174	198	203	184	101	37	N/A	N/A	N/A	1	-1	-3	
LEVEL 4 WINDOW SILL	1026	PRE	--	209	166	147	135	127	120	112	105	97	90	84	81	80	79	81	83	86	90	94	108	104	106	119	139	158	185	
		POST	--	206	163	146	135	127	123	130	142	139	136	137	143	148	123	171	159	152	144	145	137	103	129	129	139	155	181	
		CRUSH	N/A	-3	-3	-1	0	0	3	18	37	42	46	53	62	68	44	90	76	66	54	51	29	-1	23	10	0	-3	-4	
LEVEL 5 WINDOW TOP	1657	PRE	--	--	--	--	--	--	--	--	--	--	--	--	734	364	347	343	342	346	348	350	355	362	373	388	413	459	--	--
		POST	--	--	--	--	--	--	--	--	--	--	--	--	737	373	351	350	354	354	356	359	363	366	375	389	413	457	--	--
		CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3	9	4	7	12	8	8	9	8	4	2	1	0	-2	N/A	N/A

DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle:	2007 Mercedes-Benz ML350	NHTSA No.	E80500
Test Program:	NCAP Side Impact	Test Date:	September 27, 2007



TOP VIEW

DAMAGE PROFILE DISTANCES

DPD	Distance from Impact Point in mm	Level	Pre-Test (mm)	Post-Test (mm)	Max Static Crush (mm)
1 (LR)	2850	1026	158	155	-3
2	2220	1026	105	110	5
3	1590	760	72	273	201
4	960	760	71	246	175
5	330	760	66	195	129
6 (LF)	-300	760	51	54	3

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

DATA SHEET NO. 12

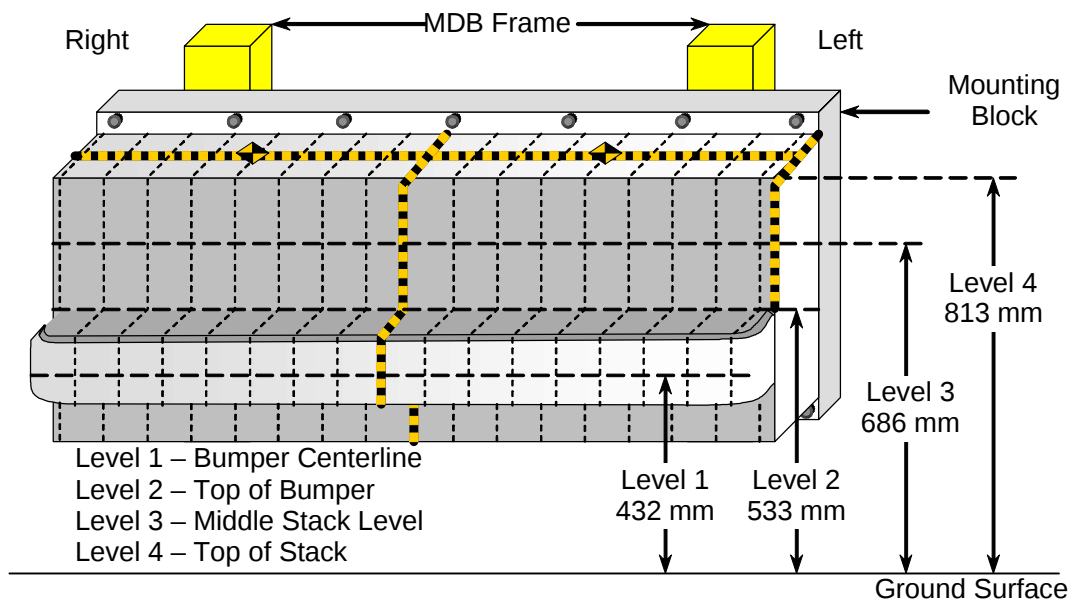
DEFORMABLE BARRIER HONEYCOMB FACE STATIC CRUSH

Test Vehicle: 2007 Mercedes-Benz ML350

NHTSA No. E80500

Test Program: NCAP Side Impact

Test Date: September 27, 2007



NOTE: All dimensions are in millimeters with a tolerance of ± 3 mm

LEVEL	HEIGHT AT CL (mm)*		DISTANCE RIGHT OF CENTER (mm)									DISTANCE LEFT OF CENTER (mm)							
			800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800
LEVEL 4 TOP STACK	813	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
		POST	1328	1335	1336	1324	1313	1303	1318	1332	1343	1342	1329	1327	1318	1299	1274	1243	1212
		CRUSH	709	716	717	705	694	684	699	713	724	723	710	708	699	680	655	624	593
LEVEL 3 MID LEVEL	686	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
		POST	1318	1323	1321	1309	1288	1284	1303	1326	1339	1345	1350	1351	1346	1334	1311	1270	1238
		CRUSH	699	704	702	690	669	665	684	707	720	726	731	732	727	715	692	651	619
LEVEL 2 TOP BUMPER	533	PRE	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619	619
		POST	1250	1249	1251	1253	1257	1255	1259	1262	1262	1262	1265	1267	1267	1266	1267	1260	1245
		CRUSH	631	630	632	634	638	636	636	640	643	643	646	648	648	647	648	641	626
LEVEL 1 MID BUMPER	432	PRE	535	519	518	518	518	518	518	518	518	518	518	518	518	518	518	519	535
		POST	1267	1286	1287	1287	1288	1290	1291	1293	1296	1300	1302	1304	1305	1307	1307	1302	1288
		CRUSH	732	767	769	769	770	772	773	775	778	782	784	786	787	789	789	783	753

*Heights measured above ground level.

DATA SHEET NO. 13

VEHICLE ACCELEROMETER LOCATIONS

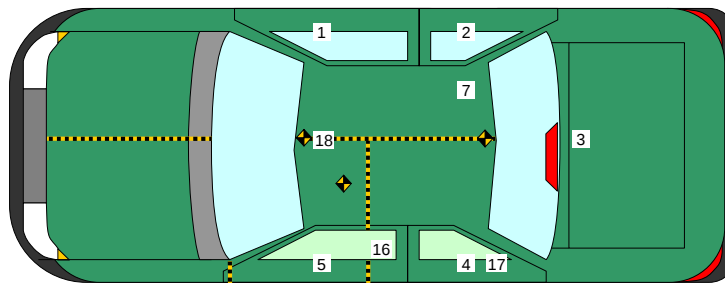
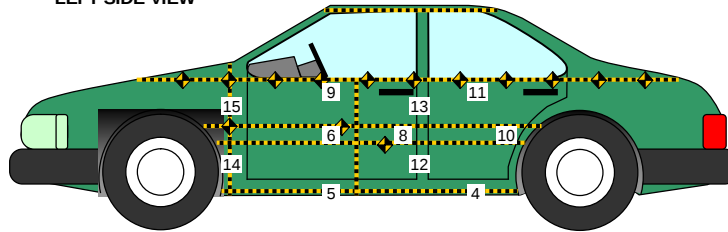
Test Vehicle: 2007 Mercedes-Benz ML350

NHTSA No. E80500

Test Program: NCAP Side Impact

Test Date: September 27, 2007

LEFT SIDE VIEW



Loc. No.	Accelerometer Location	Measurements (mm)		
		X	Y	Z
1	Right Sill at Front Seat	2999	671	-440
2	Right Sill at Rear Seat	2027	652	-426
3	Rear Floorpan Above Axle	1276	116	-713
4	Left Sill at Rear Door	2199	-624	-422
5	Left Sill at Front Door	3158	-699	-489
6	Left Front Door C/L**	-	-	-
7	Rear Occupant Compartment	2029	433	-423
8	Left Front Door Mid-Rear**	-	-	-
9	Left Front Door Upper C/L**	-	-	-
10	Left Rear Door Mid-Rear**	-	-	-
11	Left Rear Door Upper C/L**	-	-	-
12	Left Lower B-Post	2156	-702	-498
13	Left Middle B-Post	2126	-713	-884
14	Left Lower A-Post	3235	-698	-556
15	Left Middle A-Post	3141	-680	-1194
16	Front Seat Track	2266	-562	-466
17	Rear Seat Track or Structure	1860	-499	-547
18	Vehicle CG	2647	14	-685

Reference Points X - Test Vehicle Rear Bumper (+ forward)

Y - Test Vehicle Centerline (+ to right)

Z - Ground Plane (+ down)

** Accelerometer was not requested by the COTR.

DATA SHEET NO. 14

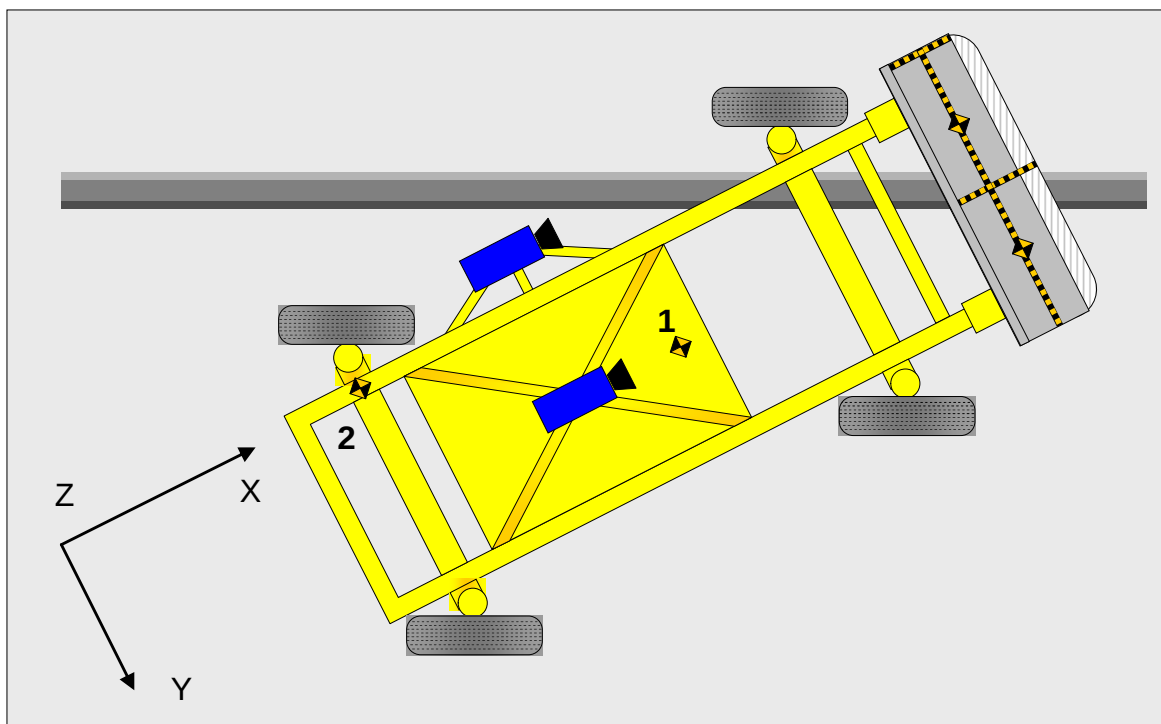
MDB ACCELEROMETER LOCATIONS

Test Vehicle: 2007 Mercedes-Benz ML350

NHTSA No. E80500

Test Program: NCAP Side Impact

Test Date: September 27, 2007



Loc. No.	Accelerometer Location	Measurements (mm)		
		X	Y	Z
1	MDB CG	1859	0	-330
2	MDB Rear	386	-660	-660

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

DATA SHEET NO. 15**VEHICLE STRUCTURAL MEASUREMENTS**

Test Vehicle:	2007 Mercedes-Benz ML350	NHTSA No.	E80500
Test Program:	NCAP Side Impact	Test Date:	September 27, 2007

	Elements	Pre-Test (mm)
1	Total Length	4782
2	Total Width	1876
3	Bumper Top Height	662
4	Bumper Bottom Height	442
5	Longitudinal Member Top Height	570
6	Distance between Longitudinal Members	937
7	Longitudinal Member Width	82
8	Engine Top Height	1018
9	Engine Bottom Height	207
10	Engine and gearbox width	708
11	Front bumper-engine distance	555
12	Front shock absorber fixing height	986
13	Bonnet leading edge height	931
14	Front shock absorber fixing width	963
15	Front bumper – front axle distance	861
16	Front axle – a pillar distance	1299
17	A-pillar – B-pillar distance	412
18	B-Pillar – rear axle distance	1206
19	B-pillar – C-pillar distance	1154
20	Roof sill bottom height	1648
21	Roof sill top height	1705
22	Floor sill bottom height	226
23	Floor sill top height	373

DATA SHEET NO. 16

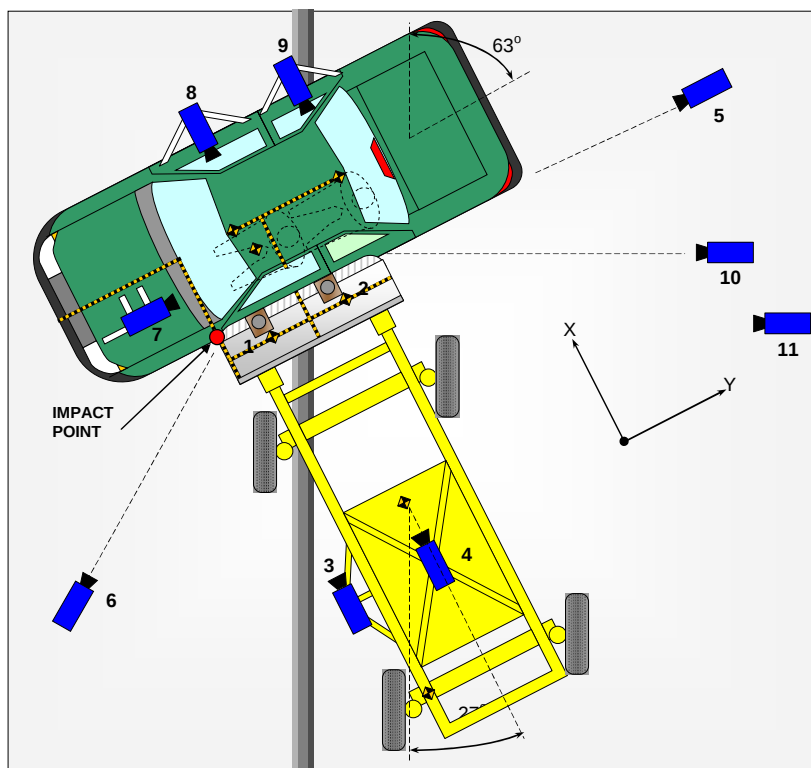
HIGH SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2007 Mercedes-Benz ML350

NHTSA No. E80500

Test Program: NCAP Side Impact

Test Date: September 27, 2007



No.	Camera View	Location (mm)			Angle (deg)	Lens (mm)	Film Speed (fps)
		X	Y	Z			
1	Overhead Overall	72	812	-4880	-90	20	500
2	Overhead Close-up	195	855	-4880	-90	28	1000
3	MDB Onboard, Impact Point Close-up	-1470	0	-847	0	25	500
4	MDB Onboard, Centerline of Impact	-1140	838	-1587	-17	12.5	500
5	Right Side, Ground Level, Overall	0	10430	-966	1.6	50	1000
6	Left Side, Ground Level, Overall	-2256	-1843	-981	4.3	28	1000
7	Vehicle Onboard Front SID/HIII, Front	469	-539	-1442	7.5	25	1000
8	Vehicle Onboard Front SID/HIII, Side	1811	849	-1191	-6.4	13	1000
9	Vehicle Onboard Rear SID/HIII, Side	1811	1814	-1306	4.7	12.5	1000
10	Secondary Impact Point	-5189	2778	-1041	2.7	50	500
11	Real Time Coverage						30

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

DATA SHEET NO. 17
SUMMARY OF FMVSS 301 DATA

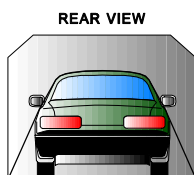
Test Vehicle:	2007 Mercedes-Benz ML350	NHTSA No.	E80500
Test Program:	NCAP Side Impact	Test Date:	September 27, 2007

FUEL SYSTEM INTEGRITY POST IMPACT DATA

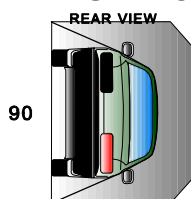
Time Interval	FMVSS 301 Maximum Allowable Spillage	Spillage (g)
Impact Until Motion Ceases	28 g	0
First Five Minutes Following Impact	142 g	0
Next 25 Minutes	28 g / 1 minute	0

Spillage Location(s)	None
----------------------	------

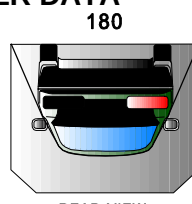
STATIC ROLLOVER DATA



0/360

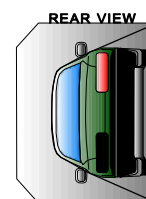


90



180

REAR VIEW



270

Rollover Stage	Rotation Time (spec. 1 -3 min)				FMVSS 301 Hold Time		Total Time				Next Whole Minute Interval	
0° - 90°	1	minutes	14	seconds	5	minutes	6	minutes	14	seconds	7	minutes
90° - 180°	1	minutes	08	seconds	5	minutes	6	minutes	8	seconds	7	minutes
180°-270°	1	minutes	03	seconds	5	minutes	6	minutes	3	seconds	7	minutes
270°-360°	1	minutes	09	seconds	5	minutes	6	minutes	9	seconds	7	minutes

Rollover Stage	Spillage (g)			
	First 5 min. from onset of rotation	6 th min.	7 th min.	8 th min. (if required)
0° - 90°	0	0	0	0
90° - 180°	0	0	0	0
180°-270°	0	0	0	0
270°-360°	0	0	0	0
FMVSS 301 Maximum Allowable (for each 90° stage)	142	28	28	28

Rollover Stage	Spillage Location(s)
0° - 90°	None
90° - 180°	None
180°-270°	None
270°-360°	None

APPENDIX A
PHOTOGRAPHS

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Figure A-1: As Received Left Front $\frac{3}{4}$ View



Figure A-2: As Received Right Rear $\frac{3}{4}$ View



Figure A-3: Vehicle Certification Label

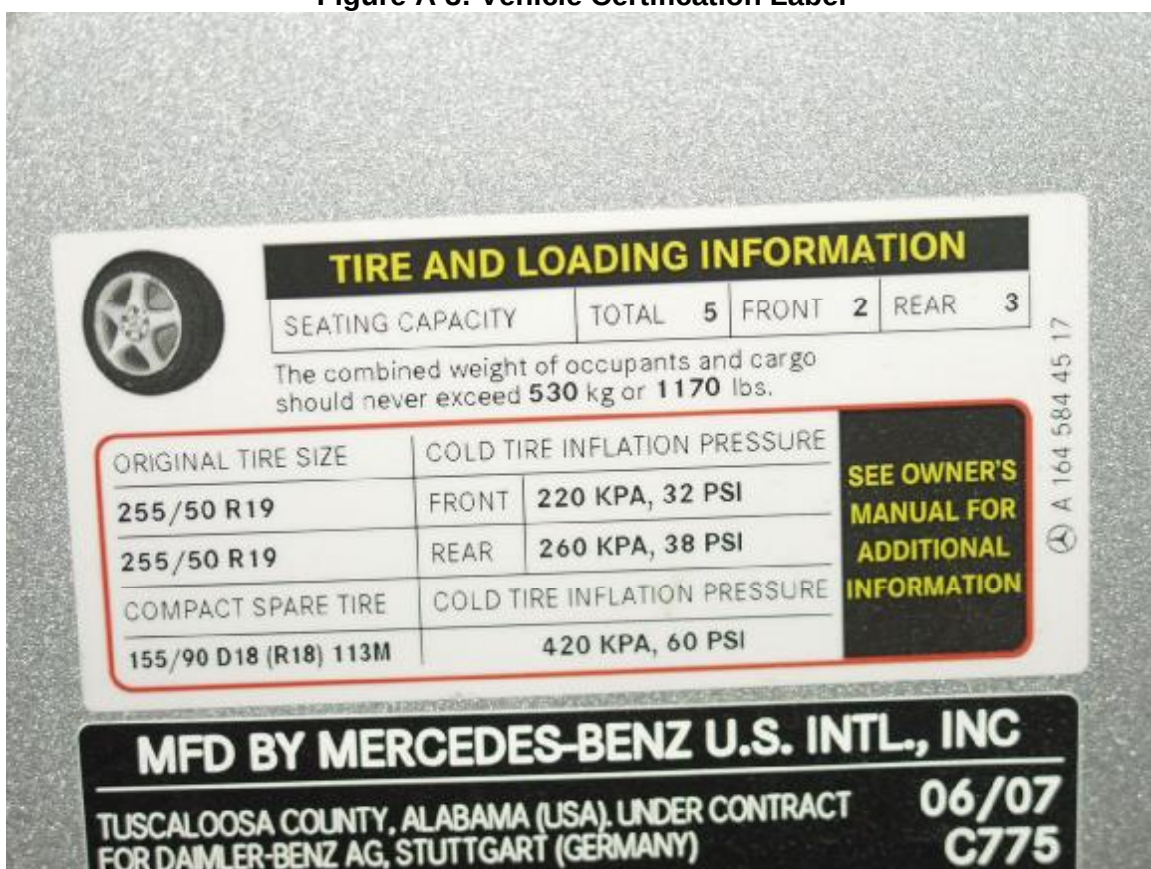


Figure A-4: Vehicle Tire Placard Label



Figure A-5: Pre-Test Front View



Figure A-6: Post-Test Front View



Figure A-7: Pre-Test Left Front $\frac{3}{4}$ View



Figure A-8: Post-Test Left Front $\frac{3}{4}$ View



Figure A-9: Pre-Test Left Side View



Figure A-10: Post-Test Left Side View



Figure A-11: Pre-Test Left Rear $\frac{3}{4}$ View



Figure A-12: Post-Test Left Rear $\frac{3}{4}$ View



Figure A-13: Pre-Test Rear View



Figure A-14: Post-Test Rear View



Figure A-15: Pre-Test Right Rear $\frac{3}{4}$ View



Figure A-16: Post-Test Right Rear $\frac{3}{4}$ View





Figure A-19: Pre-Test Right Front $\frac{3}{4}$ View

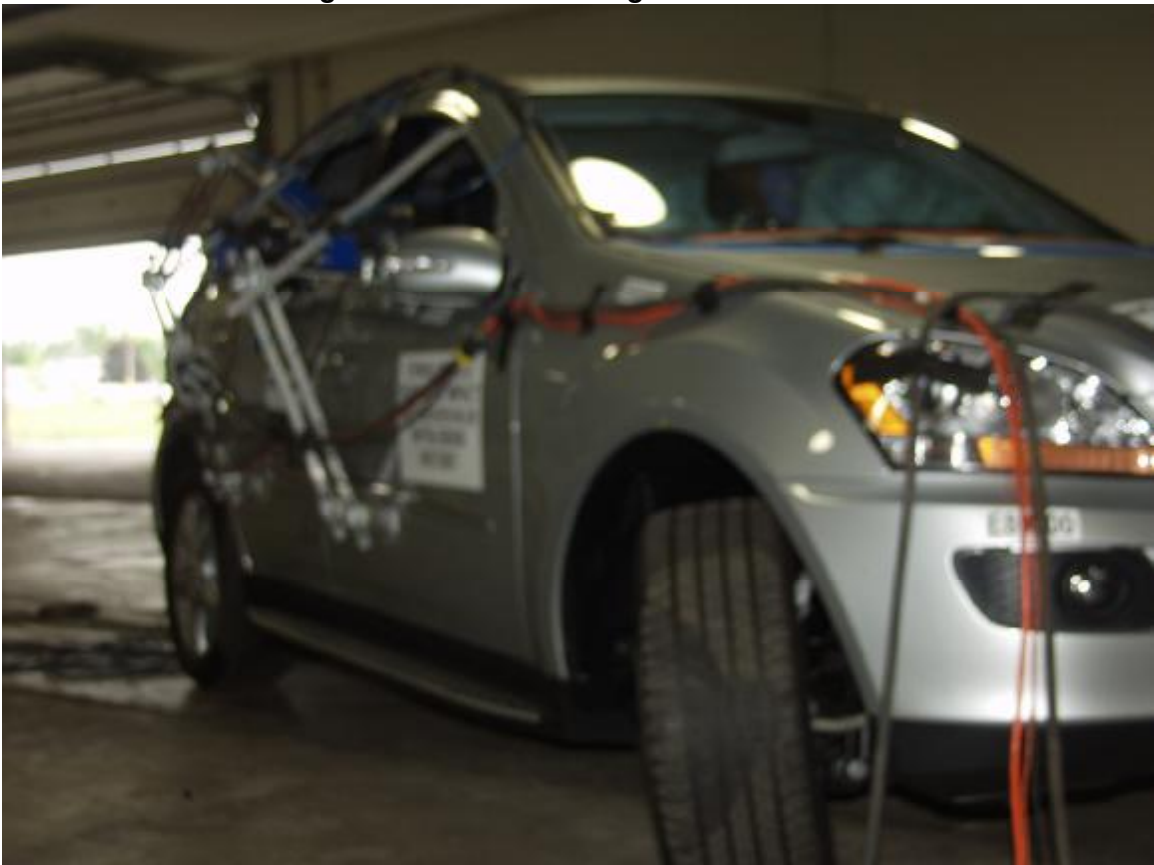


Figure A-20: Post-Test Right Front $\frac{3}{4}$ View



Figure A-21: Pre-Test Frontal View of MDB Impactor Face



Figure A-22: Post-Test Frontal View of MDB Impactor Face



Figure A-23: Pre-Test Left Side View of MDB Impactor Face



Figure A-24: Post-Test Left Side View of MDB Impactor Face



Figure A-25: Pre-Test Right Side View of MDB Impactor Face



Figure A-26: Post-Test Right Side View of MDB Impactor Face



Figure A-27: Pre-Test Top View of MDB Impactor Face



Figure A-28: Post-Test Top View of MDB Impactor Face



Figure A-29: Pre-Test Left Side View of Aligned MDB and Vehicle



Figure A-30: Pre-Test Right Side View of Aligned MDB and Vehicle

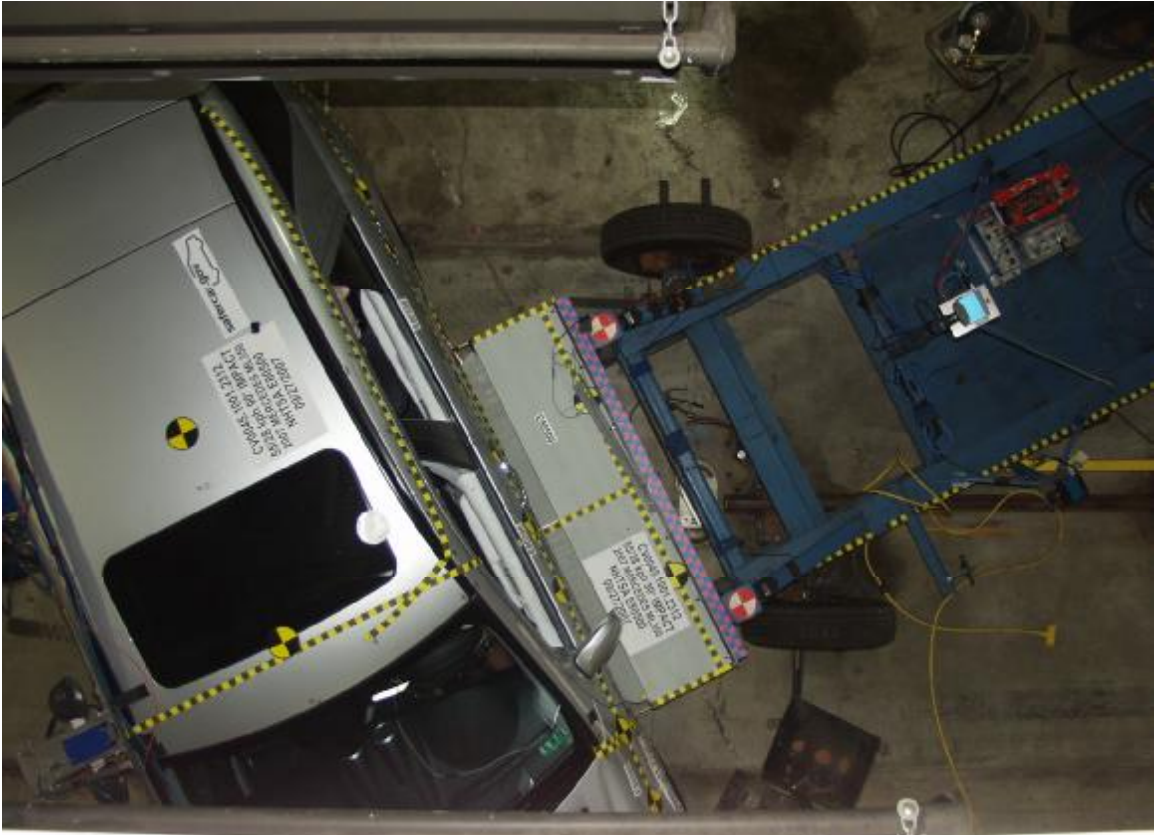


Figure A-31: Pre-Test Overhead View of Aligned MDB and Vehicle



Figure A-32: Post-Test Overhead View of MDB and Vehicle



Figure A-33: Pre-Test Close-Up View of Impact Point Target



Figure A-34: Post-Test Close-Up View of Impact Point Target



Figure A-35: Pre-Test Right Occupant Compartment View of Driver



Figure A-36: Post-Test Right Occupant Compartment View of Driver



Figure A-37: Pre-Test Right Occupant Compartment View of Passenger



Figure A-38: Post-Test Right Occupant Compartment View of Passenger



Figure A-39: Pre-Test Left Occupant Compartment View of Driver



Figure A-40: Post-Test Left Occupant Compartment View of Driver



Figure A-41: Pre-Test Left Occupant Compartment View of Passenger



Figure A-42: Post-Test Left Occupant Compartment View of Passenger



Figure A-43: Pre-Test Left Front Interior Trim



Figure A-44: Post-Test Left Front Interior Trim



Figure A-45: Pre-Test Left Rear Interior Trim



Figure A-46: Post-Test Left Rear Interior Trim



Figure A-47: Pre-Test Left Front $\frac{3}{4}$ View of Left Side Doors



Figure A-48: Post-Test Left Front $\frac{3}{4}$ View of Left Side Doors



Figure A-49: Pre-Test Left Rear $\frac{3}{4}$ View of Left Side Doors



Figure A-50: Post-Test Left Rear $\frac{3}{4}$ View of Left Side Doors



Figure A-51: Rollover 90 Degrees



Figure A-52: Rollover 180 Degrees

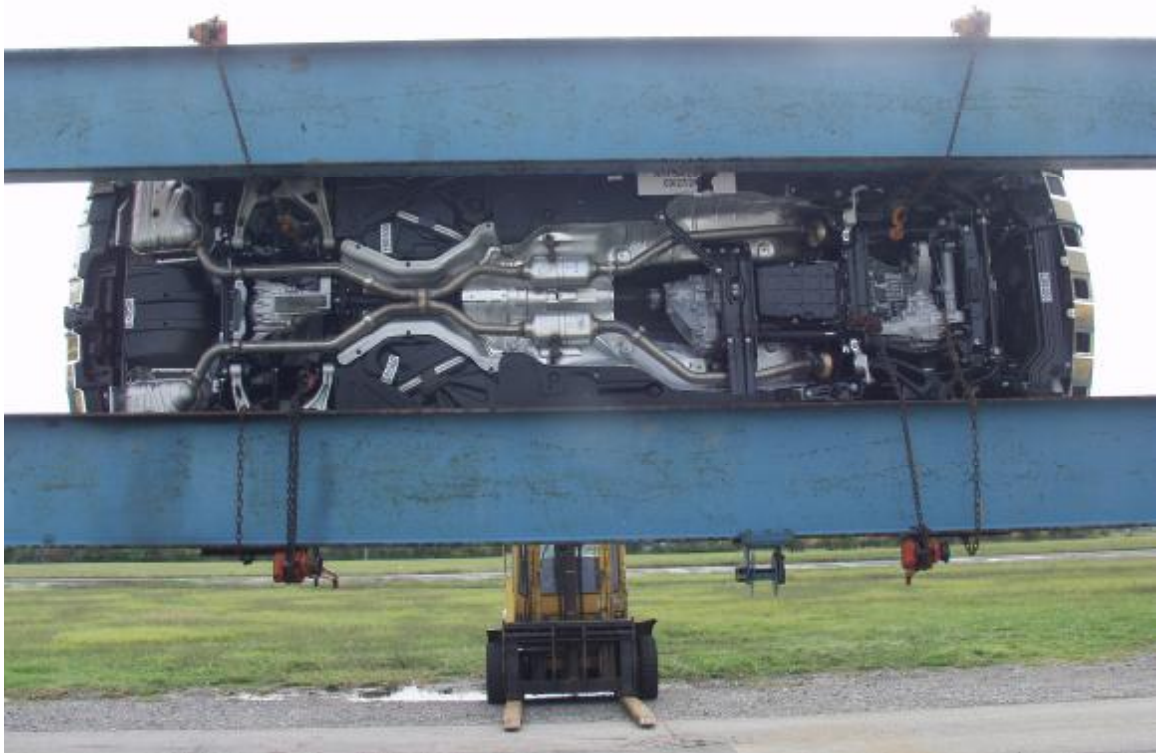


Figure A-53: Rollover 270 Degrees



Figure A-54: Rollover 360 Degrees

APPENDIX B
SID/HIII, VEHICLE AND MDB RESPONSE DATA
(SAE sign convention)

DATA CHANNEL FILTER CLASS SUMMARY

Data Type	SAE Filter Class
Dummy Head Accelerations	CFC 1000
Rib Accelerations	FIR 100
Spine Accelerations	FIR 100
Pelvis Accelerations	FIR 100

DATA CHANNEL TITLE KEY

Prefix	Suffix
V1 = Vehicle 1 (Moving Barrier)	Ax = Acceleration, X-direction
V2 = Vehicle 2 (Test Vehicle)	Ay = Acceleration, Y-direction
P1 = Left Front Seating Position (Driver)	Az = Acceleration, Z-direction
P4 = Left Second Row Seating Position (Passenger)	Fx = Force, X-direction
A1-A18 = Accelerometer Location Number	Fy = Force, Y-direction
	Fz = Force, Z-direction
	Mx = Moment about X
	My = Moment about Y
	Mz = Moment about Z

TABLE OF DATA PLOTS

PLOT	PLOT NAME[UNITS, CHANNEL FILTER CLASS]	PAGE
1	V2P1 Head Ax [g, CFC_1000]	B-5
2	V2P1 Head Ay [g, CFC_1000]	B-5
3	V2P1 Head Az [g, CFC_1000]	B-5
4	V2P1 Head Ar [g, CFC_1000]	B-5
5	V1P1 Upper Rib Ay [g, FIR_100]	B-6
6	V1P1 Lower Rib Ay [g, FIR_100]	B-6
7	V1P1 Lower Spine Ay [g, FIR_100]	B-6
8	V1P1 Pelvic Ay [g, FIR_100]	B-6
9	V2P4 Head Ax [g, CFC_1000]	B-7
10	V2P4 Head Ay [g, CFC_1000]	B-7
11	V2P4 Head Az [g, CFC_1000]	B-7
12	V2P4 Head Ar [g, CFC_1000]	B-7
13	V1P4 Upper Rib Ay [g, FIR_100]	B-8
14	V1P4 Lower Rib Ay [g, FIR_100]	B-8
15	V1P4 Lower Spine Ay [g, FIR_100]	B-8
16	V1P4 Pelvic Ay [g, FIR_100]	B-8

The following dummy, vehicle and load cell response data can be found in the research and development section of the NHTSA website at: www.nhtsa.dot.gov

V2P1 Head Ax	V2A1 Right Front Sill Ax
V2P1 Head Ay	V2A1 Right Front Sill Ay
V2P1 Head Az	V2A1 Right Front Sill Az
V2P1 Upper Neck Fx	V2A2 Right Rear Sill Ax
V2P1 Upper Neck Fy	V2A2 Right Rear Sill Ay
V2P1 Upper Neck Fz	V2A2 Right Rear Sill Az
V2P1 Upper Neck Mx	V2A3 Rear Floorpan Ax
V2P1 Upper Neck My	V2A3 Rear Floorpan Ay
V2P1 Upper Neck Mz	V2A3 Rear Floorplan Az
V2P1 Upper Rib Ay	V2A4 Left Rear Sill Ay
V2P1 Upper Rib Redundant Ay	V2A5 Left Front Sill Ay
V2P1 Lower Rib Ay	V2A7 Right Rear Compartment Ay
V2P1 Lower Rib Redundant Ay	V2A12 Left Lower B Post Ay
V2P1 Lower Spine Ay	V2A13 Left Mid B Post Ay
V2P1 Lower Spine Redundant Ay	V2A14 Left Lower A Post Ay
V2P1 Pelvic Ay	V2A15 Left Mid A Post Ay
V2P1 Pelvic Redundant Ay	V2A16 Front Seat Track Ay
V2P4 Head Ax	V2A17 Rear Seat Track Ay
V2P4 Head Ay	V2A18 Target CG Ax
V2P4 Head Az	V2A18 Target CG Ay
V2P4 Upper Neck Fx	V2A18 Target CG Az
V2P4 Upper Neck Fy	V1 Moving Barrier CG Ax
V2P4 Upper Neck Fz	V1 Moving Barrier CG Ay
V2P4 Upper Neck Mx	V1 Moving Barrier CG Az
V2P4 Upper Neck My	V1 Moving Barrier Left Rail Ax
V2P4 Upper Neck Mz	V1 Moving Barrier Left Rail Ay
V2P4 Upper Rib Ay	
V2P4 Upper Rib Redundant Ay	
V2P4 Lower Rib Ay	
V2P4 Lower Rib Redundant Ay	
V2P4 Lower Spine Ay	
V2P4 Lower Spine Redundant Ay	
V2P4 Pelvic Ay	
V2P4 Pelvic Redundant Ay	

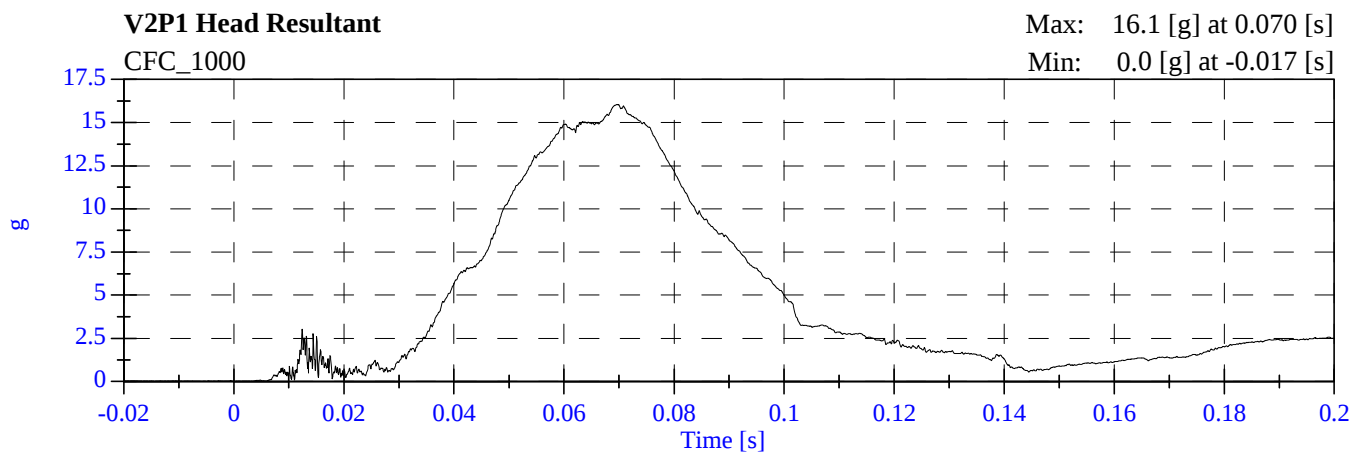
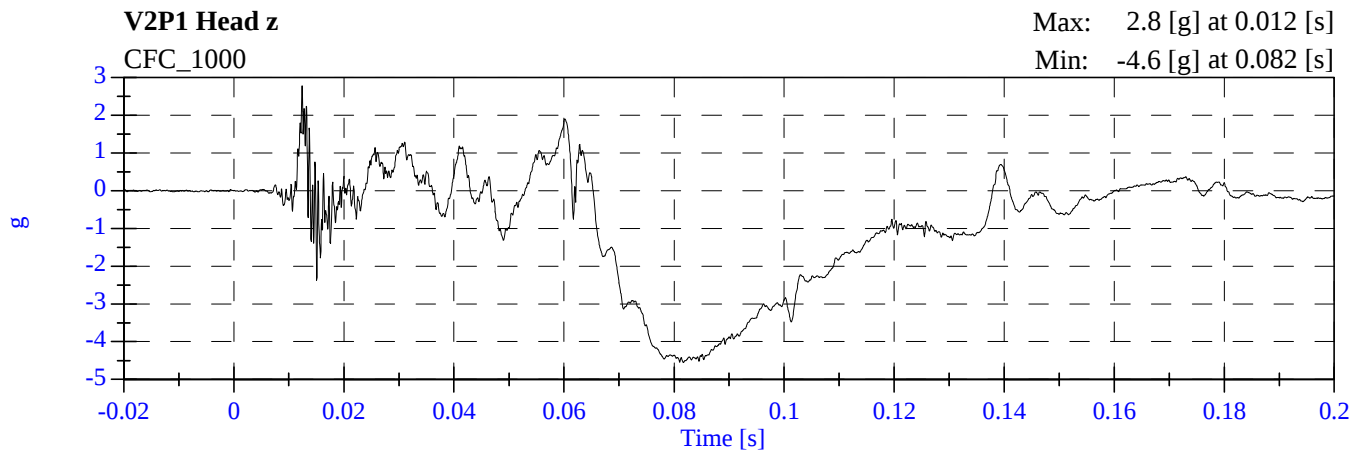
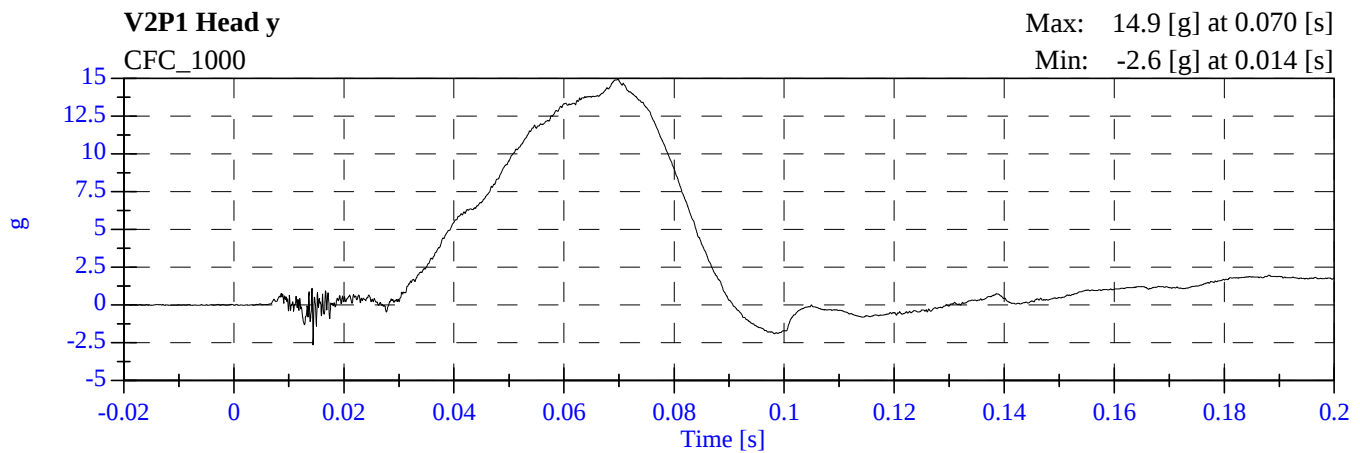
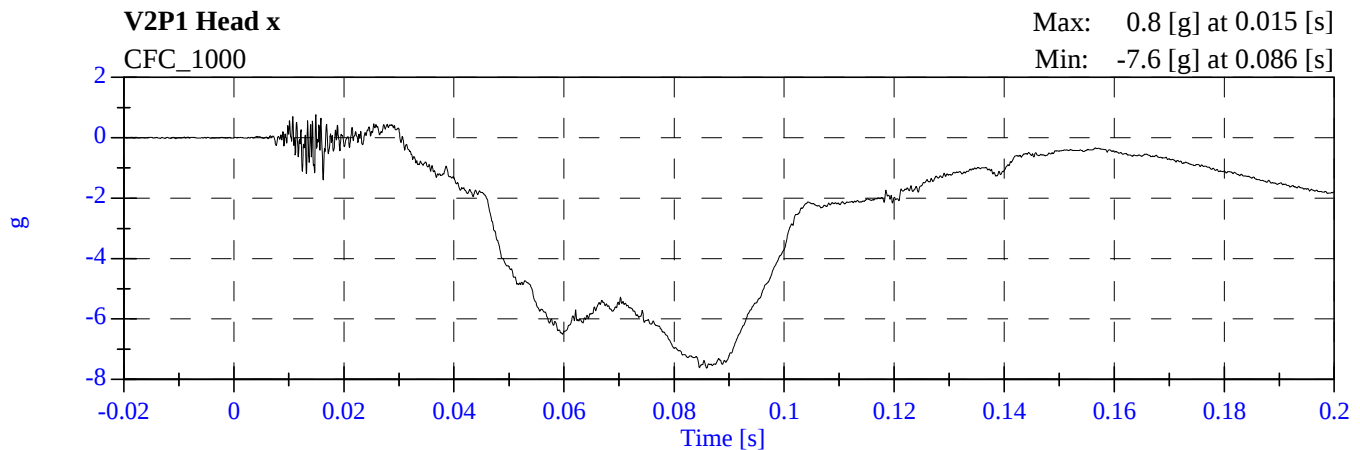
TEST NOTES

The following data anomalies occurred:

None

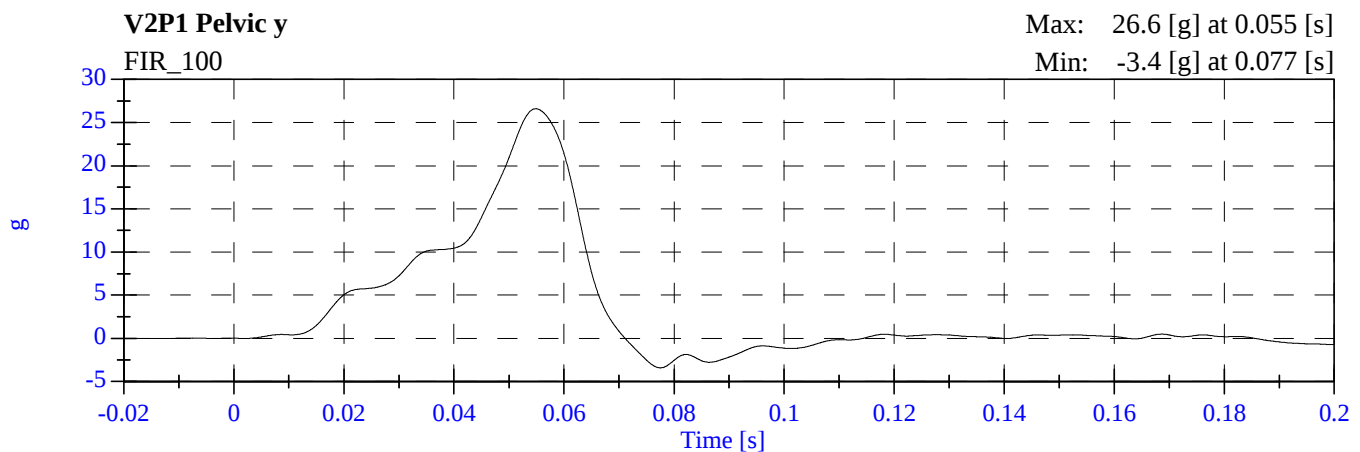
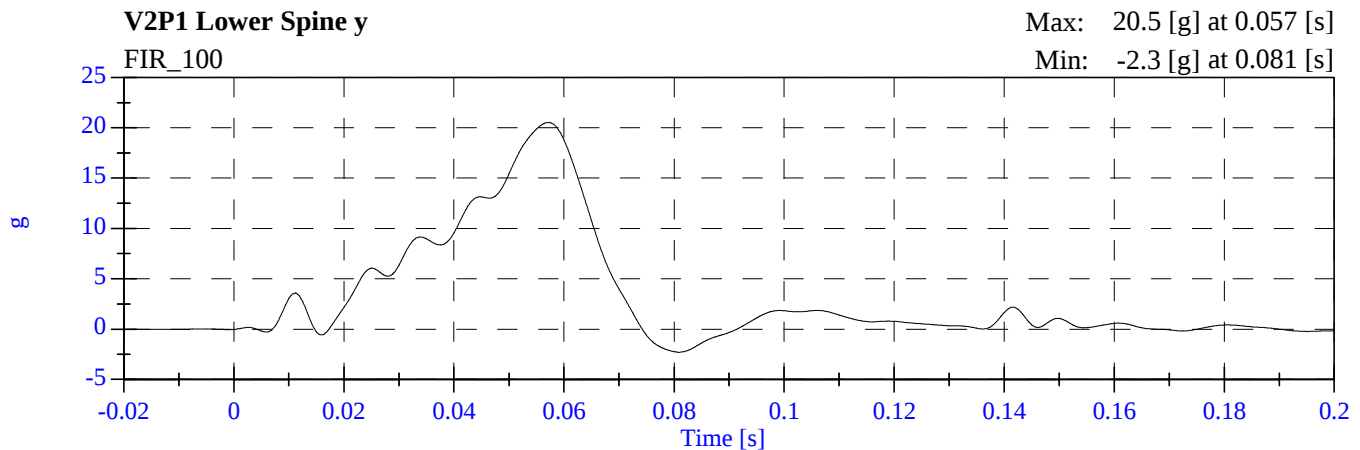
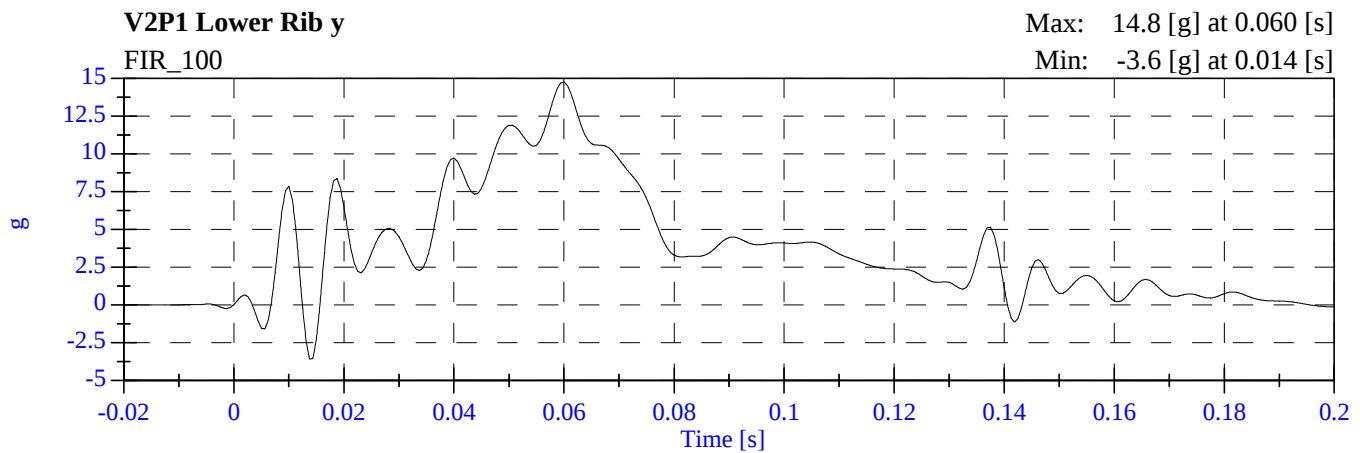
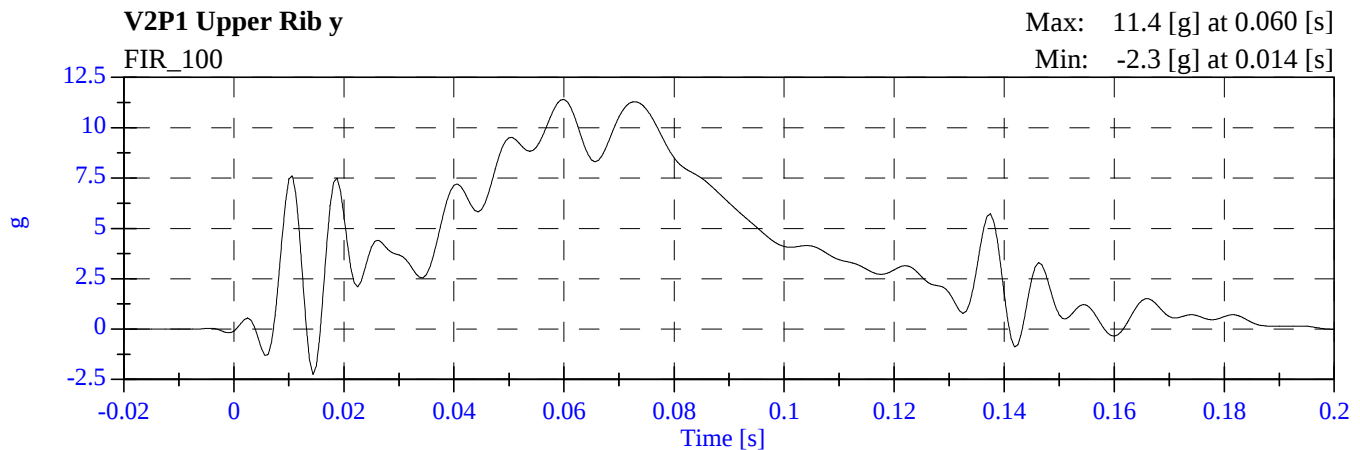
2008 Mercedes OPT SNCAP Test 1

E80500 - September 27, 2007



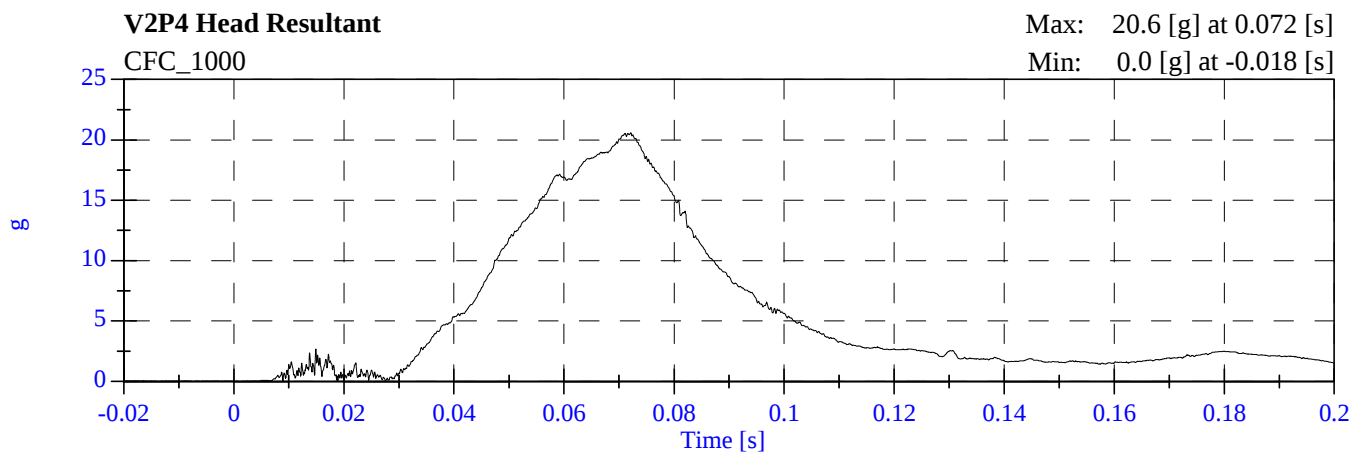
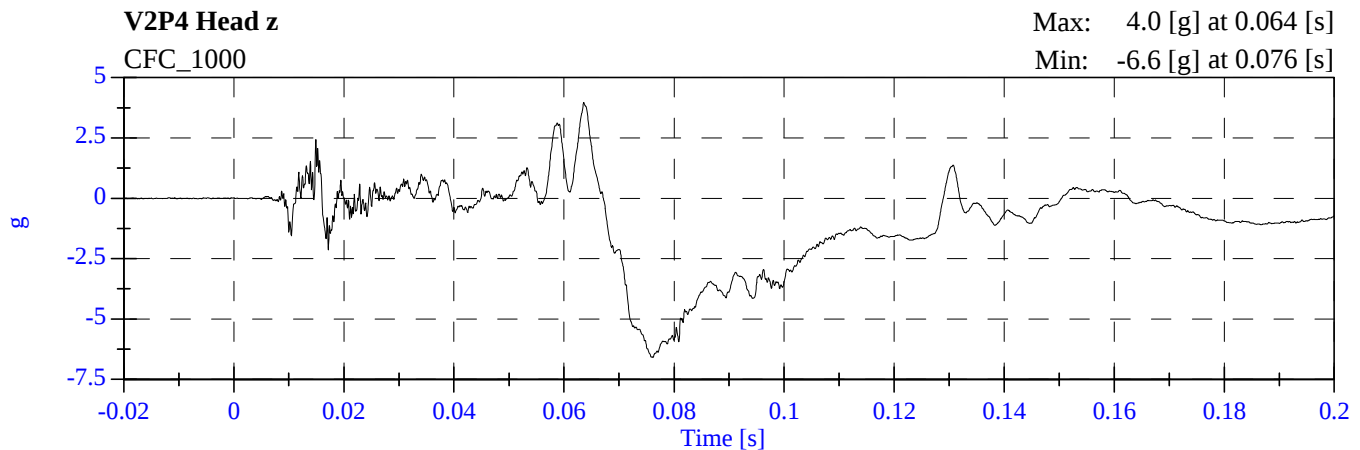
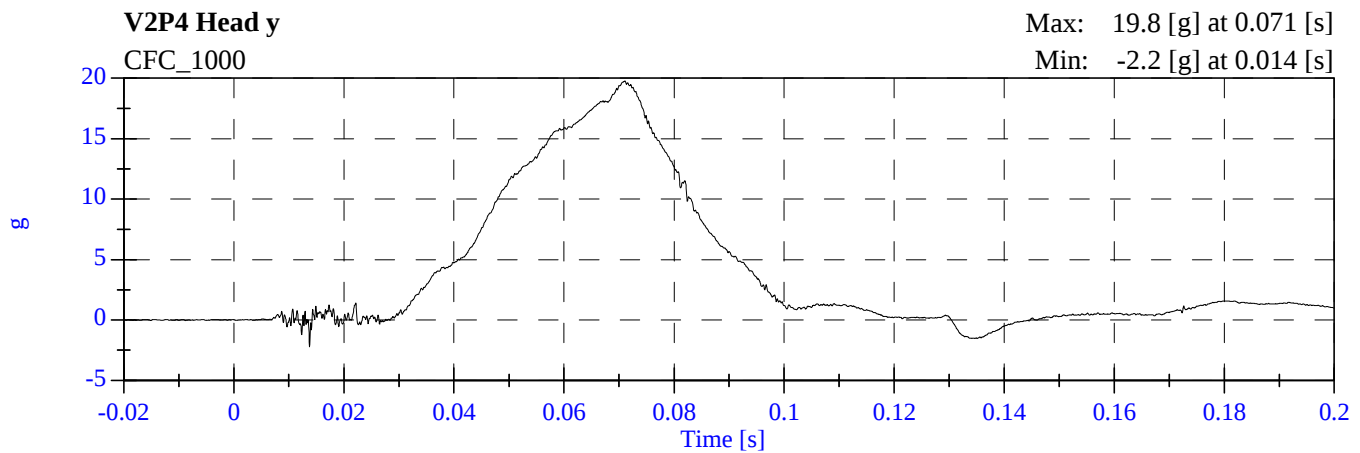
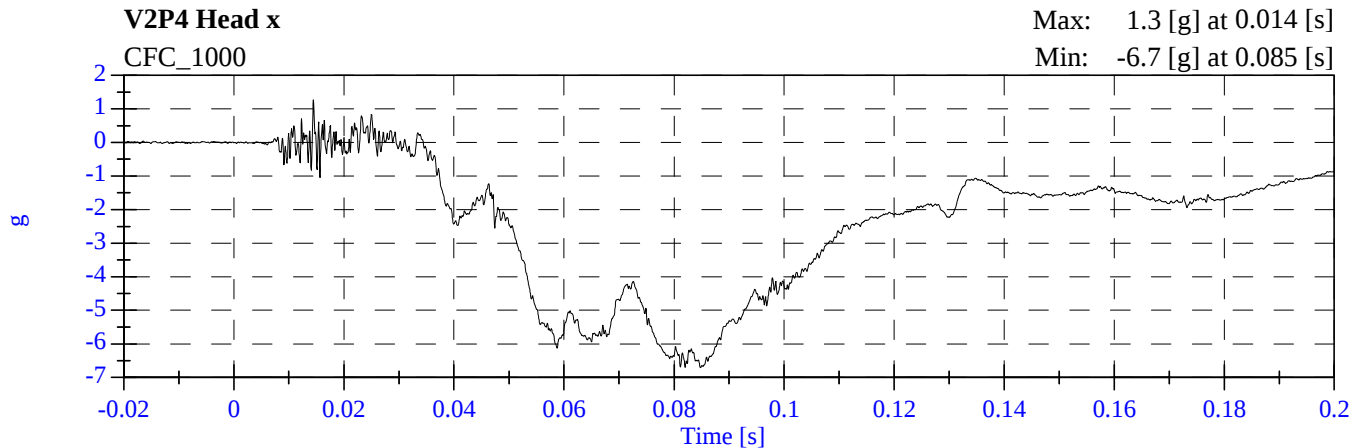
2008 Mercedes OPT SNCAP Test 1

E80500 - September 27, 2007



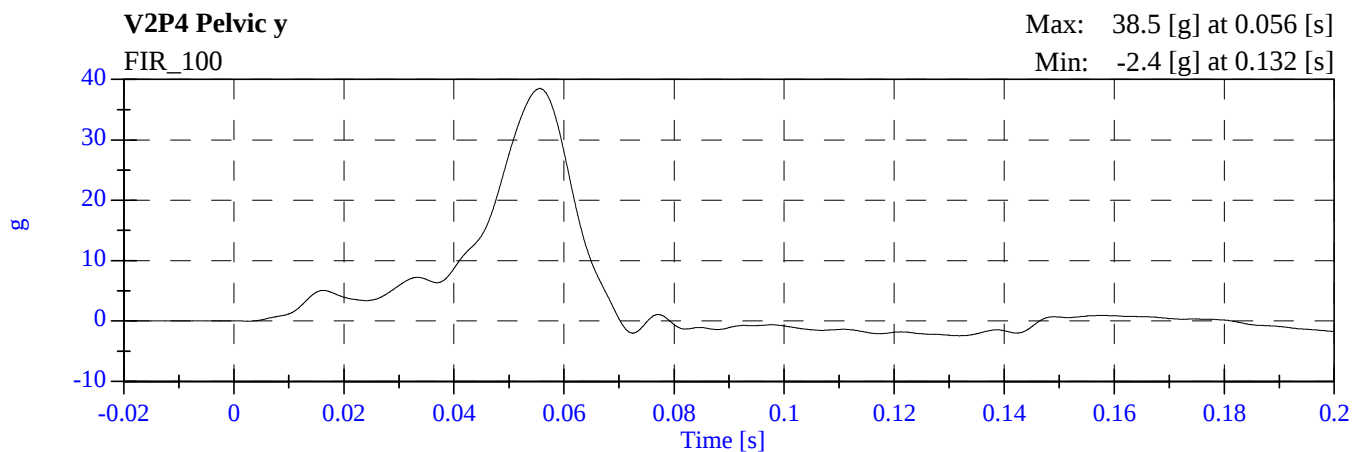
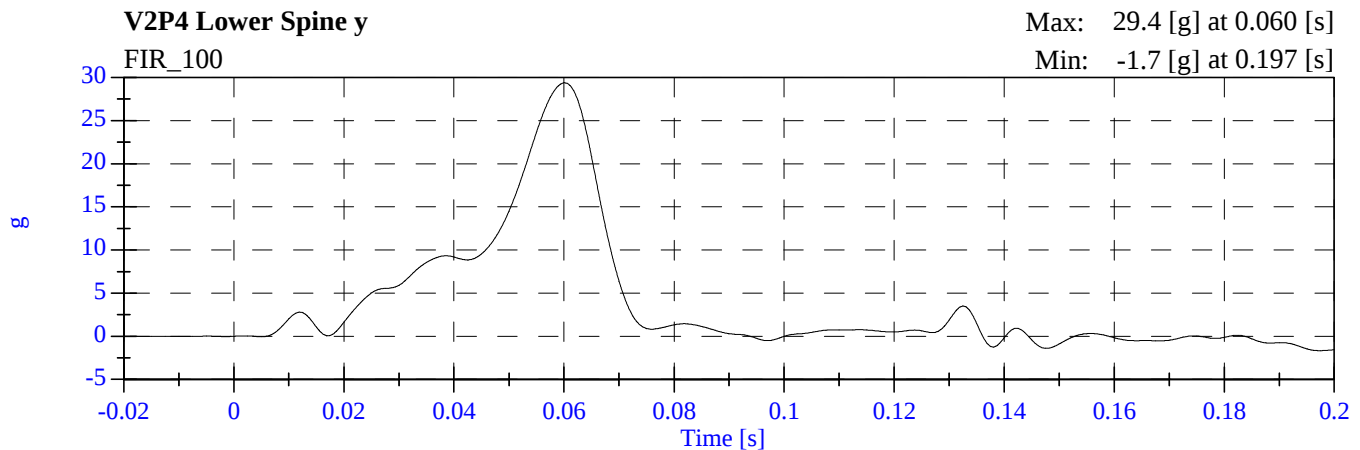
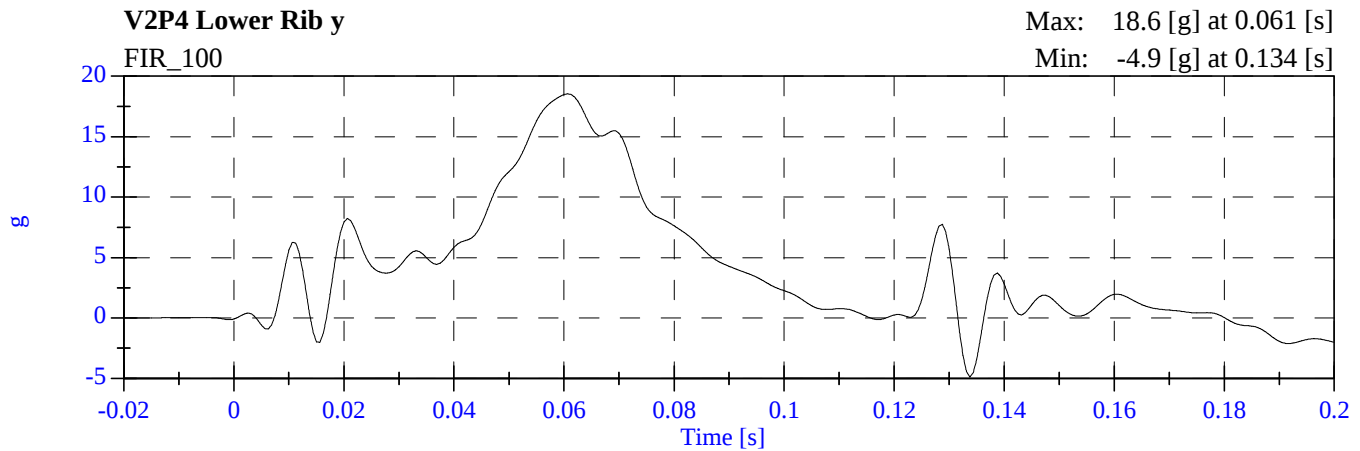
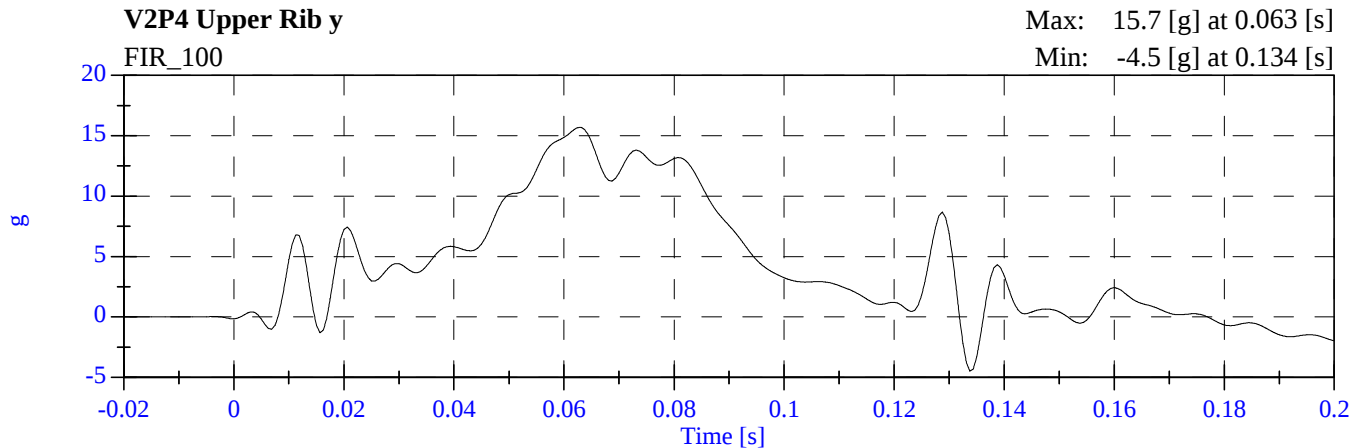
2008 Mercedes OPT SNCAP Test 1

E80500 - September 27, 2007



2008 Mercedes OPT SNCAP Test 1

E80500 - September 27, 2007



APPENDIX C

DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

SUMMARY
SID H3 PRE & POST TEST CALIBRATION

CONFIGURED FOR LEFT SIDE IMPACT

Date: September 25, 2007; October 19, 2007 Sequential Test Number: 3,4
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	SID H3 NO.: 270		SID H3 NO.: 269	
		PRE TEST	POST TEST	PRE TEST	POST TEST
SH- Seated Height (mm)	889 - 909	899	899	899	899
RH- Rib Height (mm)	501 - 521	505	505	505	505
HP- Hip Pivot Height (mm)	99 ref.	99	99	99	99
RD- Rib from Back Line (mm)	229 - 241	234	234	234	234
KV- Knee Pivot from Back Line (mm)	511 - 526	518	518	518	518
SW- Knee Pivot to Floor (mm)	490 - 505	495	493	493	493
HW- Hip Width (mm)	356 - 391	384	386	384	384
THORAX IMPACTS					
TEMPERATURE (• C)	18.9 - 25.5	21.1	21.1	21.1	21.1
RELATIVE HUMIDITY (%)	10 - 70	35.00	39.00	35.00	37.00
PROBE SPEED (m/s)	4.27 - 4.33	4.28	4.30	4.30	4.30
UPPER RIB (g's)	37 - 46	38.83	37.01	40.38	40.72
LOWER RIB (g's)	37 - 46	40.21	38.90	40.33	39.57
LOWER SPINE (g's)	15 - 22	20.91	19.62	17.96	17.46
PELVIS IMPACT					
TEMPERATURE (• C)	18.9 - 25.5	21.1	21.1	21.1	21.1
RELATIVE HUMIDITY (%)	10 - 70	36.00	38.00	35.00	38.00
PROBE SPEED (m/s)	4.27 - 4.33	4.29	4.30	4.33	4.30
PELVIS (g's)	40 - 60	43.12	48.16	49.49	40.34

REMARKS: None

CALIBRATION TEST RESULTS

PRE-TEST

SID H3 NO.: 270

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 270 Sequential Test Number: 3
Date: September 25, 2007 Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
THORACIC SHOCK ABSORBER TEST	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
LATERAL NECK BEND TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 270 Sequential Test Number: 3
Date: September 25, 2007 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 – 909	899
RH- Rib Height (mm)	502 – 520	505
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 – 241	234
KH- Knee Pivot from Back Line (mm)	511 – 526	518
KV- Knee Pivot to Floor (mm)	490 – 505	495
HW- Hip Width (mm)	356 - 391	384

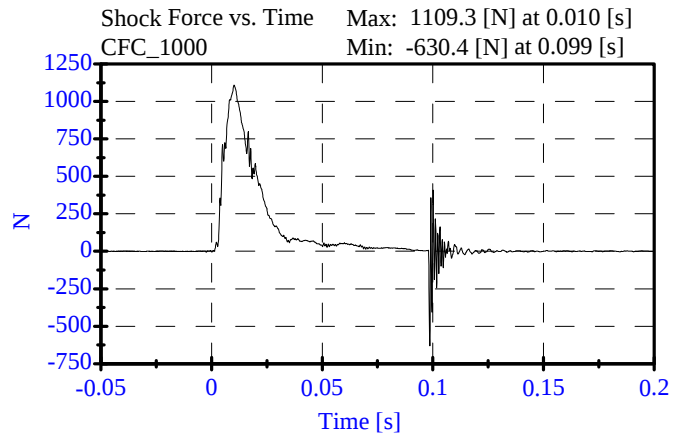
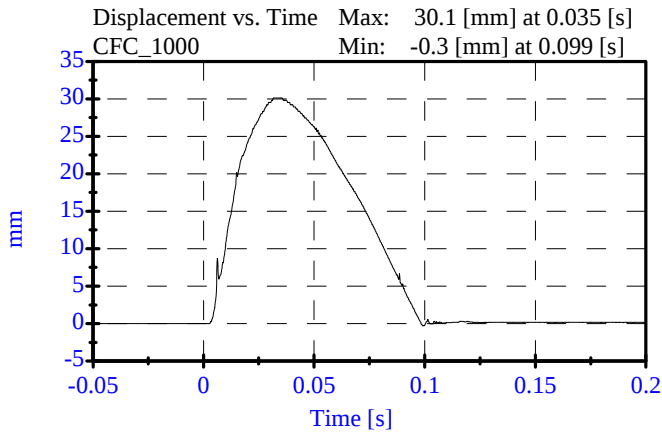
REMARKS: None

Shock Low (3.05 m/s)
PRE TEST
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 07-18-07

Sequential Test Number: 1 File: 270-10 07-18-07
Laboratory Technician: B. Swiecicki

<u>TEST PARAMETER</u>	<u>SPECIFICATION</u>	<u>TEST RESULTS</u>	<u>STATUS</u>
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	38.00 %	Passed
Displacement:	30.00-35.00 mm	30.14 mm	Passed
Maximum Force:	836.00-1125.00 N	1109.32 N	Passed
Impact Test Velocity:	3.05 m/s		
Damper Identification:	270		
Damper Setting:	5		

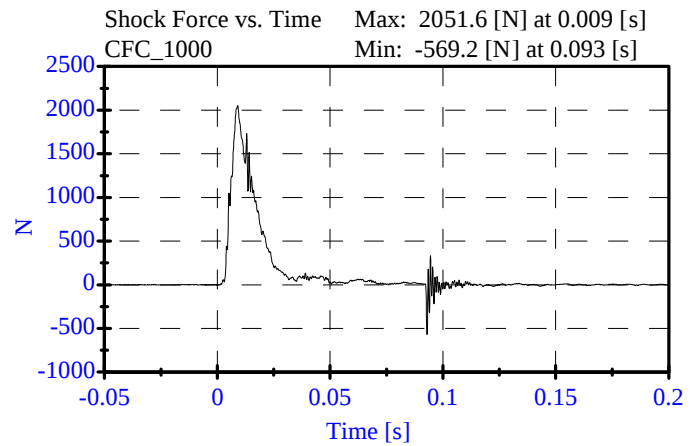
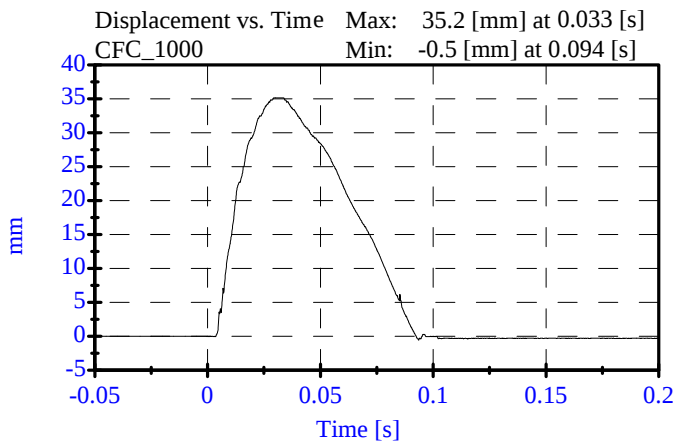


Shock Med (4.27 m/s)
PRE TEST
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 07-18-07

Sequential Test Number: 1 File: 270-14a 07-18-07
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	38.00 %	Passed
Displacement:	32.00-37.00 mm	35.15 mm	Passed
Maximum Force:	1730.00-2099.00 N	2051.64 N	Passed
Impact Test Velocity:	4.27 m/s		
Damper Identification:	270		
Damper Setting:	5		

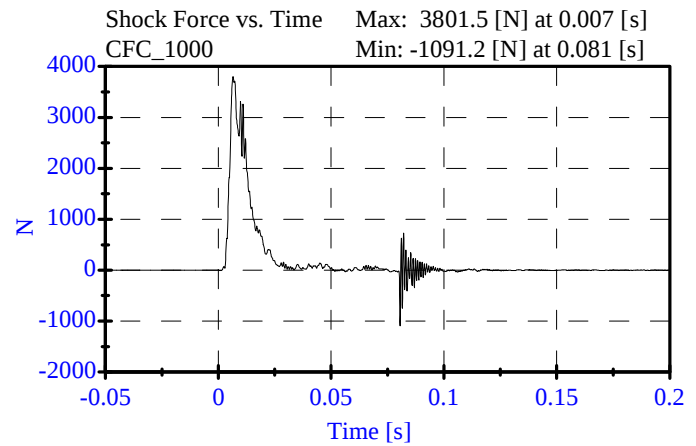
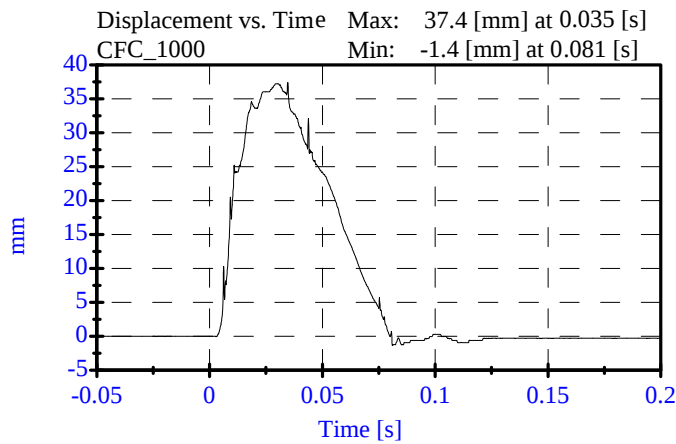


Shock High (6.10 m/s)
PRE TEST
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 07-19-07

Sequential Test Number: 1 File: 270-20a 07-19-07
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	31.00 %	Passed
Displacement:	33.00-40.00 mm	37.41 mm	Passed
Maximum Force:	3741.00-4448.00 N	3801.46 N	Passed
Impact Test Velocity:	6.10 m/s		
Damper Identification:	270		
Damper Setting:	5		

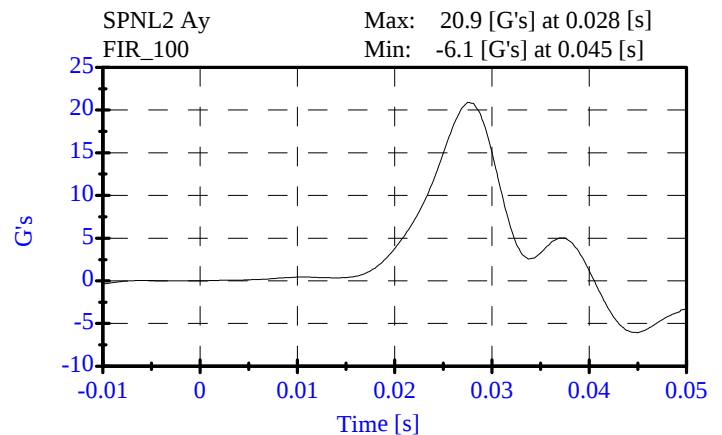
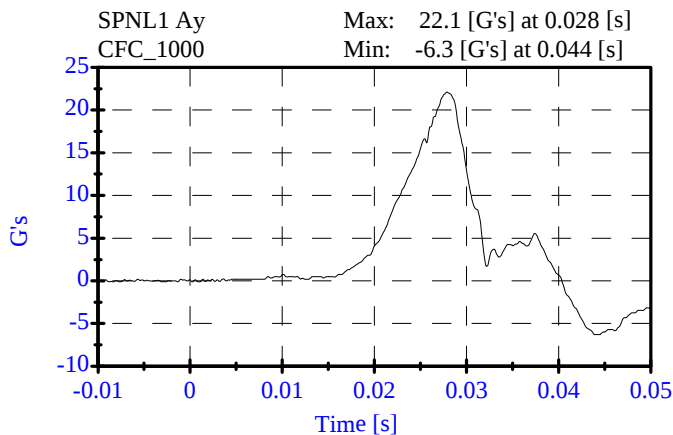
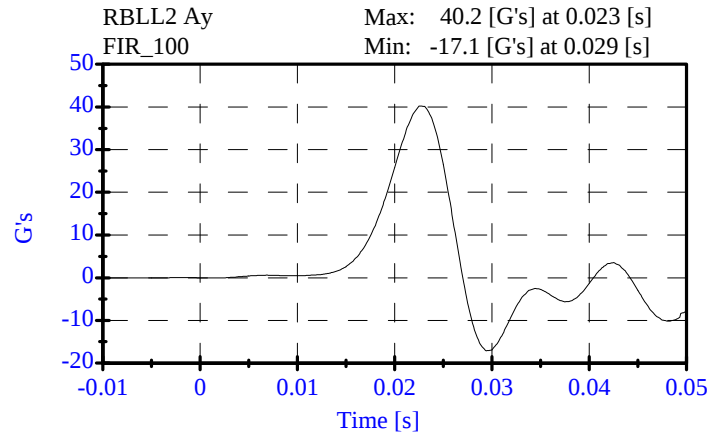
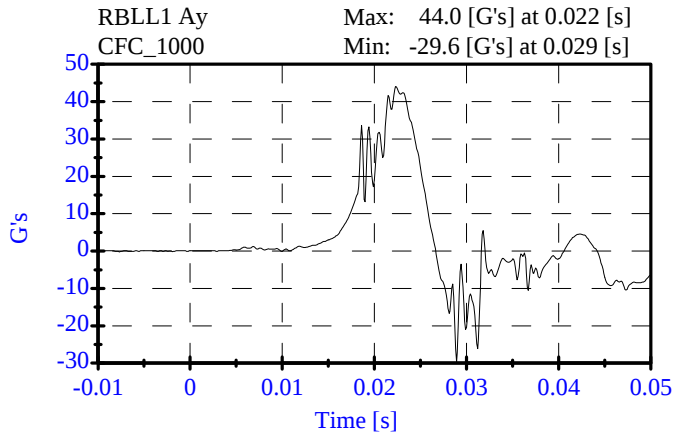
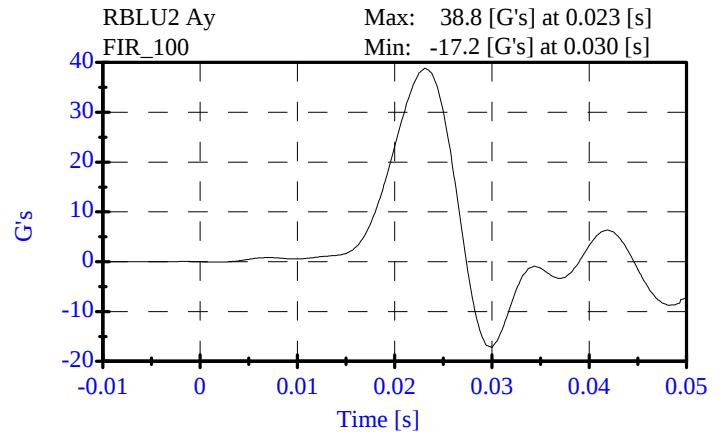
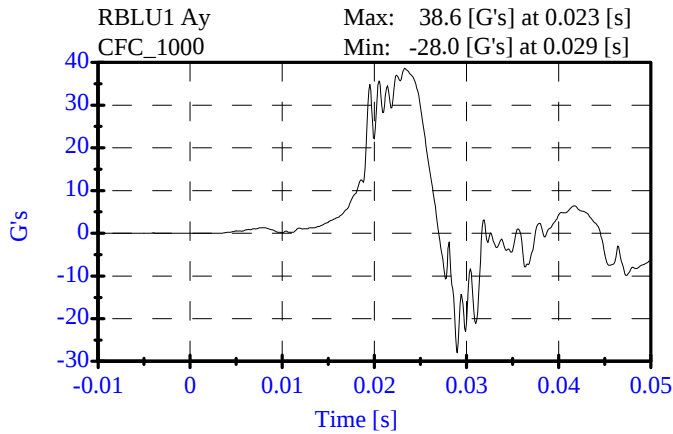


Thorax Impact
Pre-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 09-25-07

Sequential Test Number: 1 File: 270T1 09-25-07
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.28 m/s	Passed
Upper Rib Acceleration:	37.00-46.00 G's	38.83 G's	Passed
Lower Rib Acceleration:	37.00-46.00 G's	40.21 G's	Passed
Lower Spine Acceleration:	15.00-22.00 G's	20.91 G's	Passed



Pelvic Impact

Pre-Test

CONFIGURED FOR LEFT SIDE IMPACT

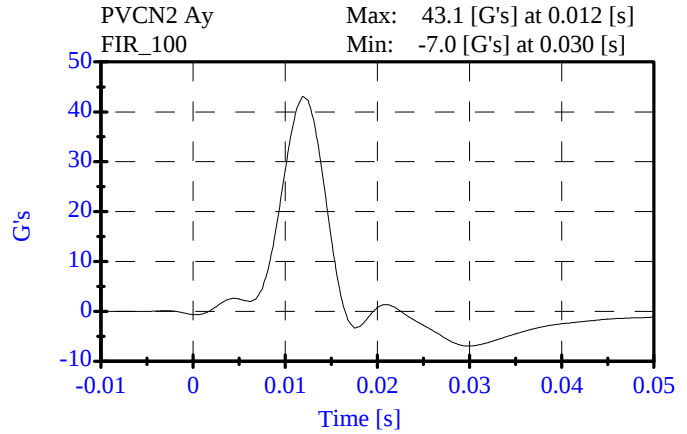
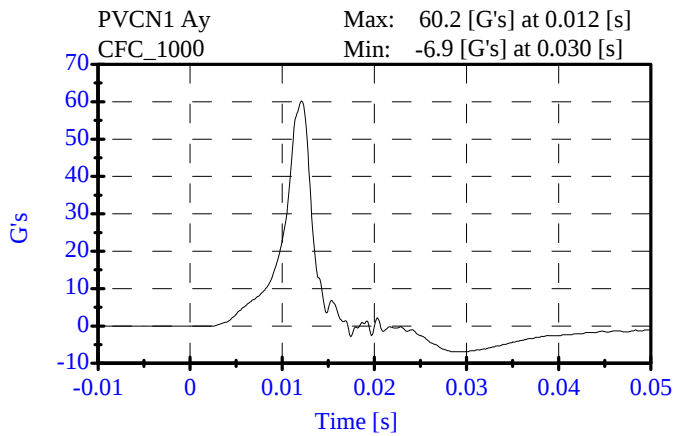
ATD Serial No: 270

Date: 09-25-07

Sequential Test Number: 1 File: 270P2 09-25-07

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	36.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.29 m/s	Passed
Pelvis Y Acceleration:	40.00-60.00 G's	43.12 G's	Passed
Time Above 20 Gs	3.0-7.0 ms	5.3 ms	Passed

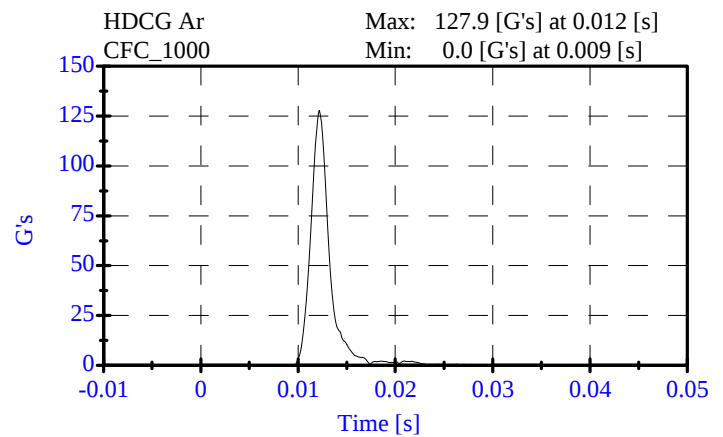
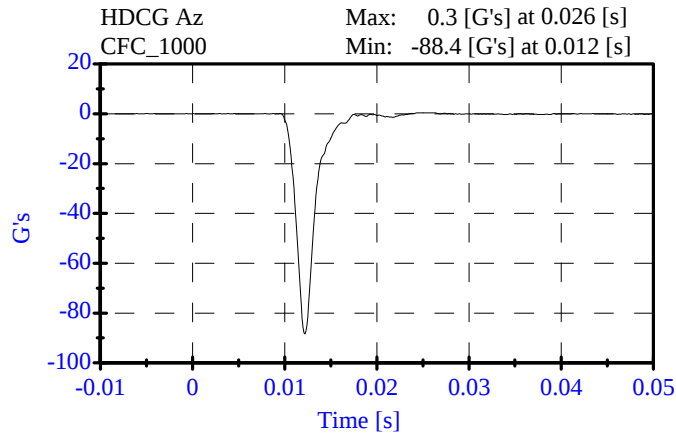
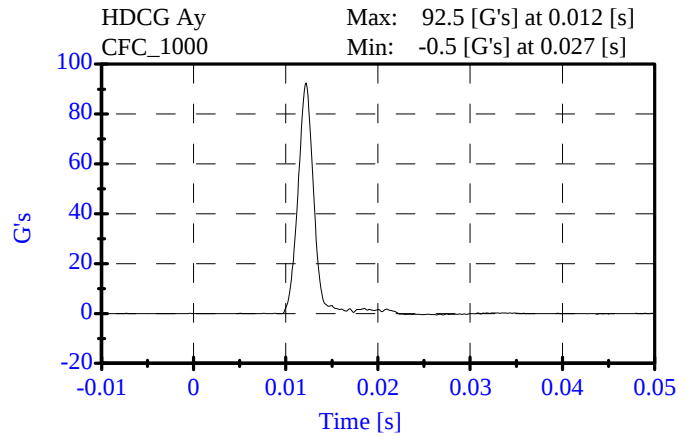
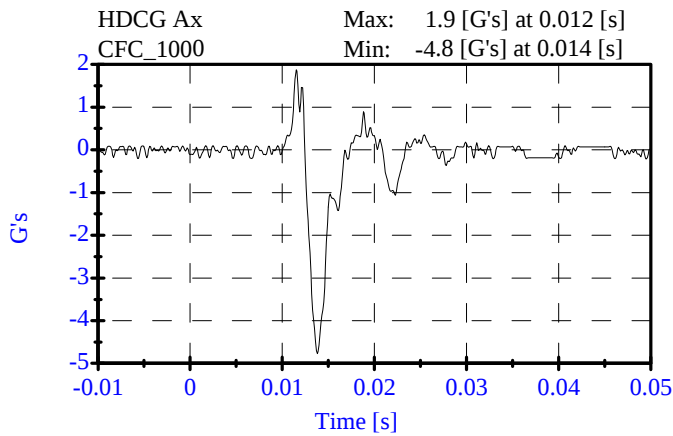


Head Drop **Pre-Test** **CONFIGURED FOR LEFT SIDE IMPACT**

ATD Serial No: 270
Date: 09-20-07

Sequential Test Number: 1 File: 270HD1 09-20-07
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.6 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Peak Resultant Accel.:	120-150 Gs	127.91 Gs	Passed
Peak Lateral Accel.:	15 Gs Max	1.87 Gs	Passed
Curve PerCent NonModal:	< 15%	1.72 %	Passed



Neck Test**Pre-Test****CONFIGURED FOR LEFT SIDE IMPACT**

ATD Serial No: 270

Date: 09-24-07

Sequential Test Number: 1 File: 270N2 09-24-07

Laboratory Technician: B. Swiecicki

<u>TEST PARAMETER</u>	<u>SPECIFICATION</u>	<u>TEST RESULTS</u>	<u>STATUS</u>
Lab Temperature:	20.6-22.2 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Impact Velocity:	6.89- 7.13 m/s	6.95 m/s	Passed
PENDULUM DELTA V			
Delta V at 10 ms:	1.96- 2.55 m/s	1.98 m/s	Passed
Delta V at 20 ms:	4.12- 5.10 m/s	4.15 m/s	Passed
Delta V at 30 ms:	5.73- 7.01 m/s	6.11 m/s	Passed
Delta V between 40-70 ms:	6.27- 7.64 m/s	7.28 m/s	Passed
D PLANE ROTATION			
Maximum Rotation:	66.0-82.0 Deg	70.01 Deg	Passed
Rotation Angle Decay:	58.0-67.0 ms	59.90 ms	Passed
MOMENT ABOUT THE OCCIPITAL CONDYLE			
Max Occipital Moment:	73.00- 88.00 N-m	85.86 N-m	Passed
Occipital Moment Decay:	49.0-64.0 ms	55.80 ms	Passed
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT			
Moment to Rotation Peak:	2.0-16.0 ms	9.30 ms	Passed

Neck Test
Pre-Test
CONFIGURED FOR LEFT SIDE IMPACT

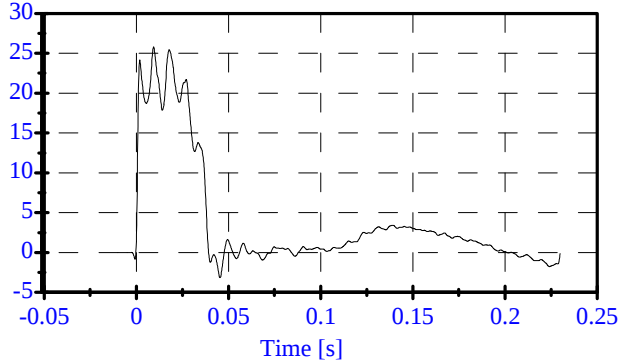
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Date: 09-24-07

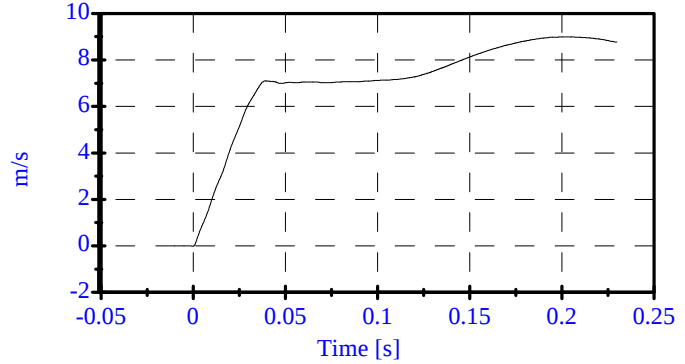
Sequential Test Number: 1 File: 270N2 09-24-07

Laboratory Technician: B. Swiecicki

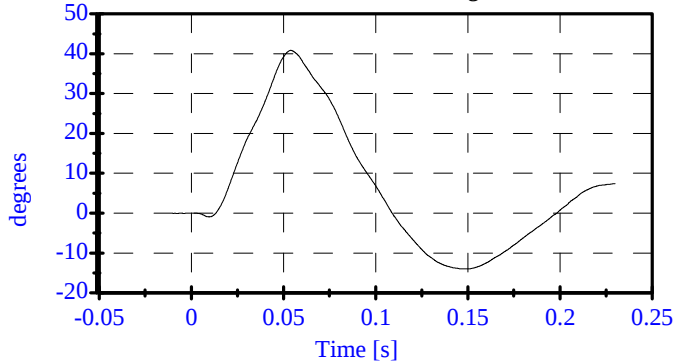
Pend Ax
CFC_180
Max: 25.8 [] at 0.009 [s]
Min: -3.1 [] at 0.045 [s]



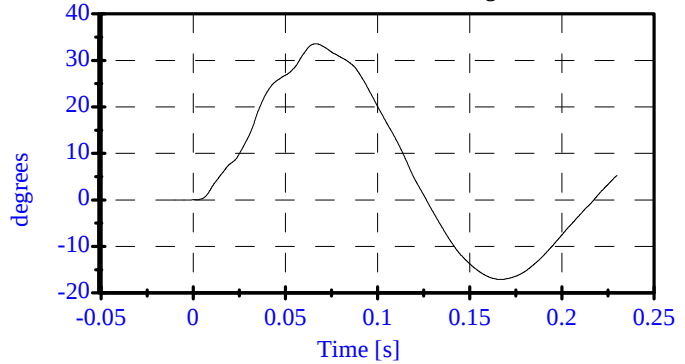
Pend Vx
CFC_180
Max: 9.0 [m/s] at 0.201 [s]
Min: -0.0 [m/s] at -0.000 [s]



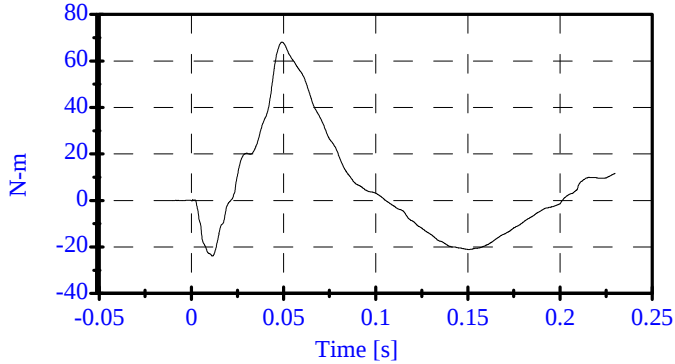
Head Rot
CFC_180
Max: 40.9 [degrees] at 0.054 [s]
Min: -14.0 [degrees] at 0.148 [s]



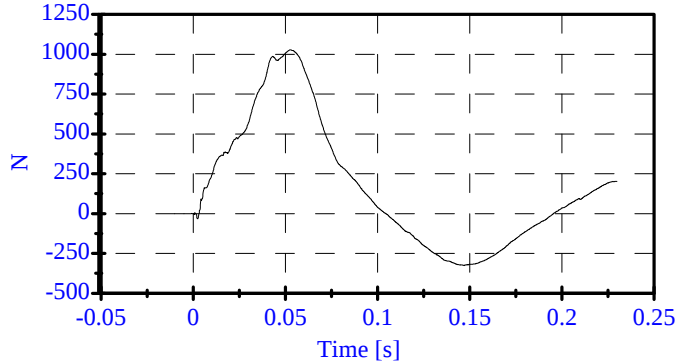
Arm Rot
CFC_180
Max: 33.6 [degrees] at 0.067 [s]
Min: -17.1 [degrees] at 0.167 [s]



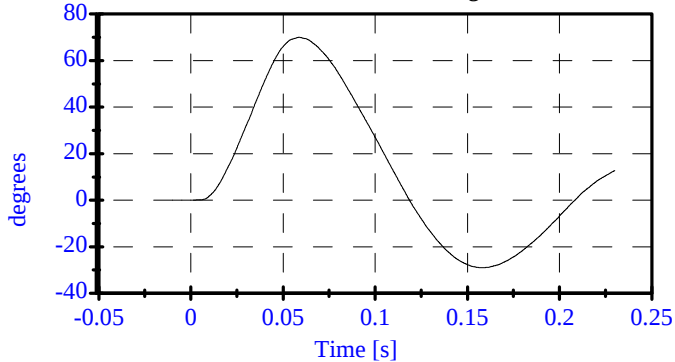
Neck Mx
CFC_600
Max: 68.1 [N-m] at 0.049 [s]
Min: -24.0 [N-m] at 0.011 [s]



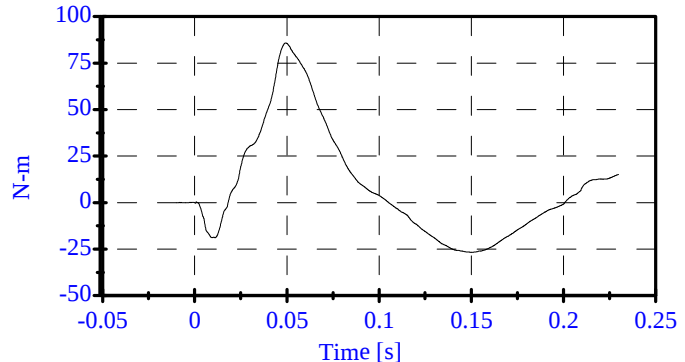
Neck Fy
CFC_1000
Max: 1027.4 [N] at 0.053 [s]
Min: -323.8 [N] at 0.147 [s]



Tot Rot
CFC_180
Max: 70.0 [degrees] at 0.059 [s]
Min: -29.0 [degrees] at 0.158 [s]



MOCX
Max: 85.9 [N-m] at 0.049 [s]
Min: -26.7 [N-m] at 0.150 [s]



Abdomen Test

Pre-Test

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270

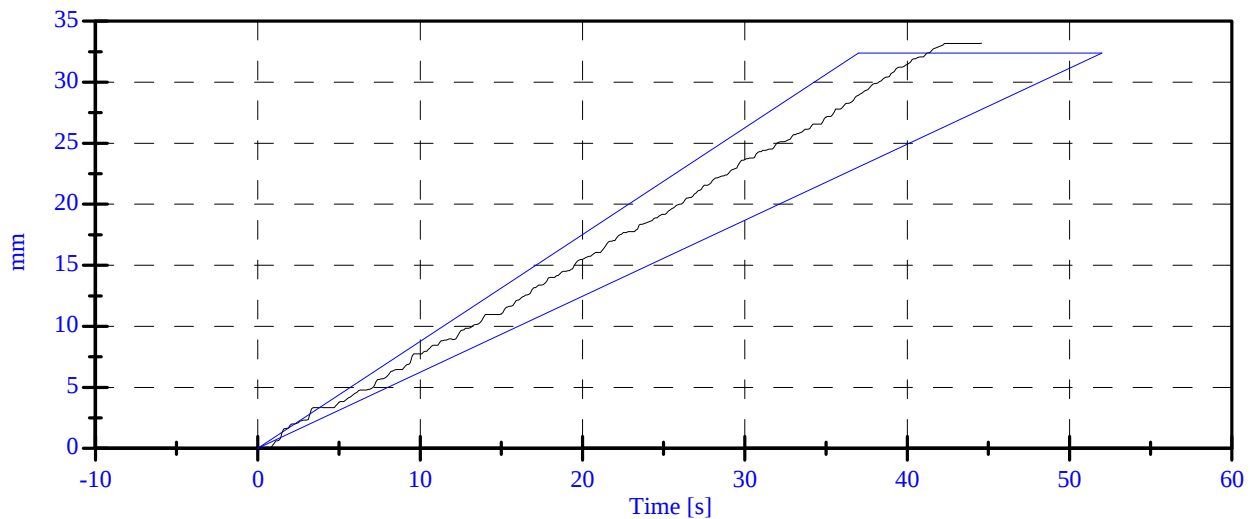
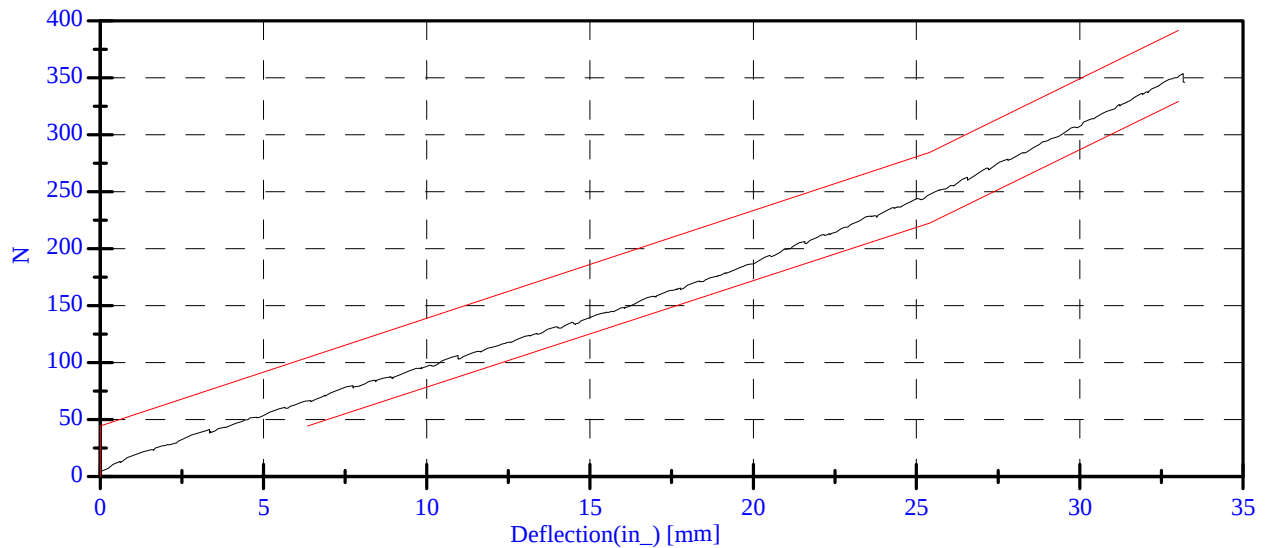
Date: 09-25-07

Sequential Test Number: 1 File: 270ab 09-25-07

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	36.00 %	Passed
Force at 12.95 mm :	104.00-162.00 N	123.05 N	Passed
Force at 19.05 mm :	162.98-220.99 N	176.69 N	Passed
Force at 25.40 mm :	221.97-280.02 N	246.65 N	Passed
Force at 33.02 mm :	324.99-391.00 N	350.32 N	Passed

ABDOMINAL COMPRESSION TEST



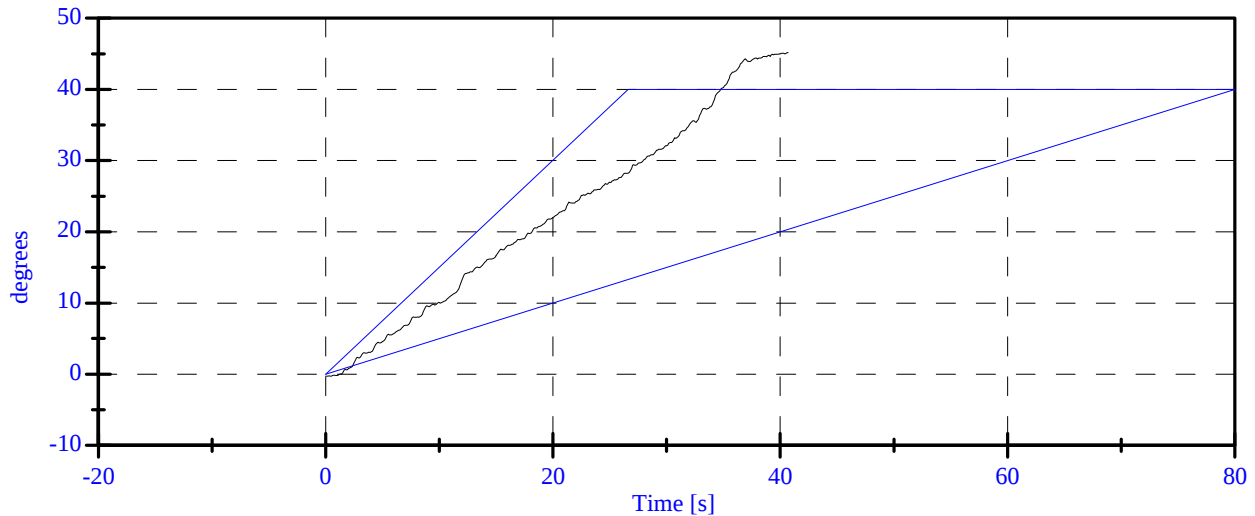
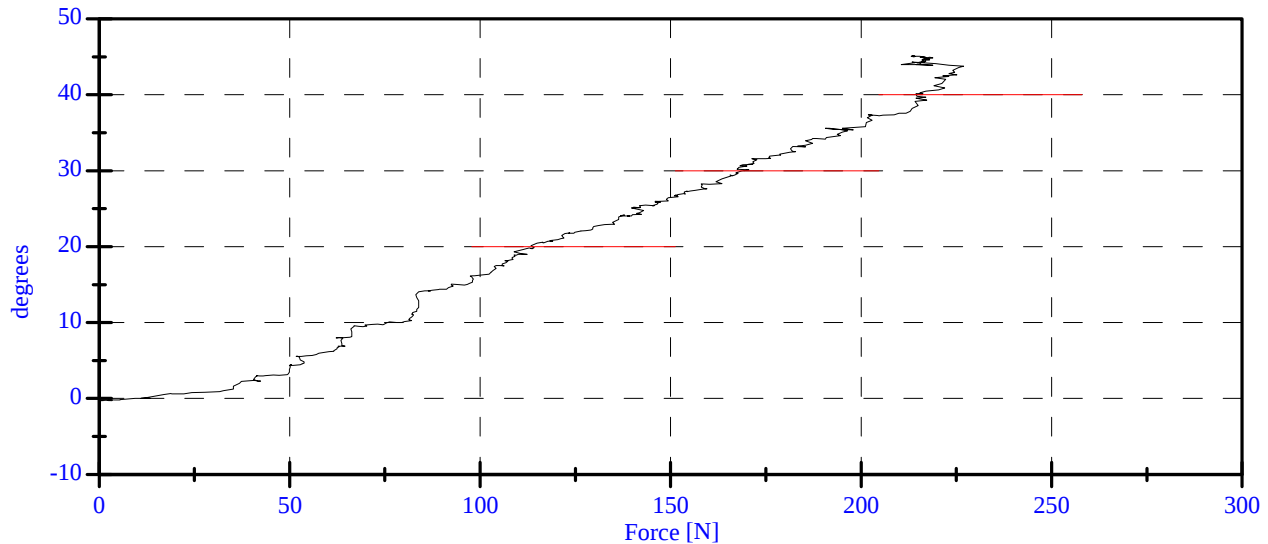
**Lumbar Spine
Pre-Test
CONFIGURED FOR LEFT SIDE IMPACT**

ATD Serial No: 270
Date: 09-19-07

Sequential Test Number: 1 File: 270sp 09-19-07
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Force at 0 Deg:	0.00-26.69 N	9.40 N	Passed
Force at 20 Deg:	97.86-151.24 N	113.34 N	Passed
Force at 30 Deg	151.24-204.62 N	168.44 N	Passed
Force at 40 Deg	204.62-258.00 N	214.41 N	Passed
Return Angle	12 Deg Max	4.35 deg	Passed

LUMBAR SPINE FLEXION TEST



PRE-TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 270 Sequential Test Number: 3
Date: September 25, 2007 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

CALIBRATION TEST RESULTS

PRE-TEST

SID H3 NO.: 269

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 269	Sequential Test Number: 3
Date: September 25, 2007	Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
THORACIC SHOCK ABSORBER TEST	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
LATERAL NECK BEND TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
PRE-TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 269 Sequential Test Number: 3
Date: September 25, 2007 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	899
RH- Rib Height (mm)	502 - 520	505
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	234
KH- Knee Pivot from Back Line (mm)	511 - 526	518
KV- Knee Pivot to Floor (mm)	490 - 505	493
HW- Hip Width (mm)	356 - 391	384

REMARKS: None

Shock Low (3.05 m/s)

PRE TEST

CONFIGURED FOR LEFT SIDE IMPACT

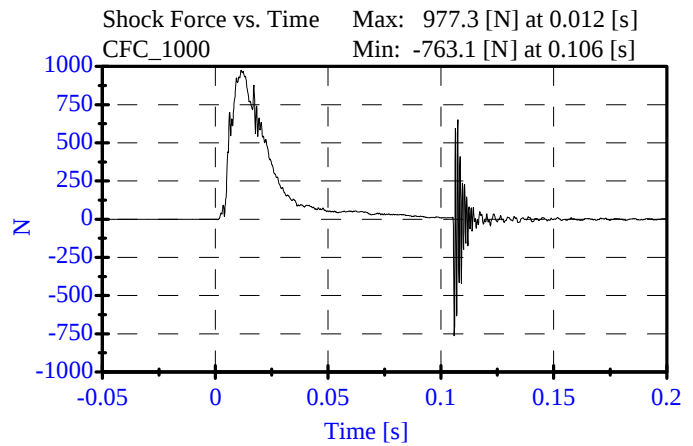
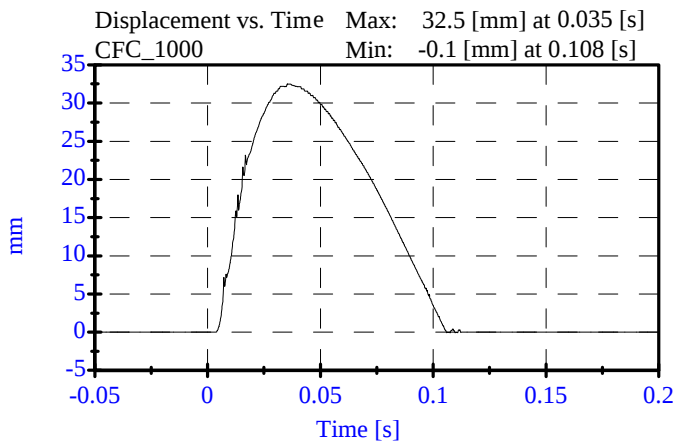
ATD Serial No: 269

Date: 07-19-07

Sequential Test Number: 1 File: 269-10 07-19-07

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	31.00 %	Passed
Displacement:	30.00-35.00 mm	32.51 mm	Passed
Maximum Force:	836.00-1125.00 N	977.33 N	Passed
Impact Test Velocity:	3.05 m/s		
Damper Identification:	269		
Damper Setting:	5		

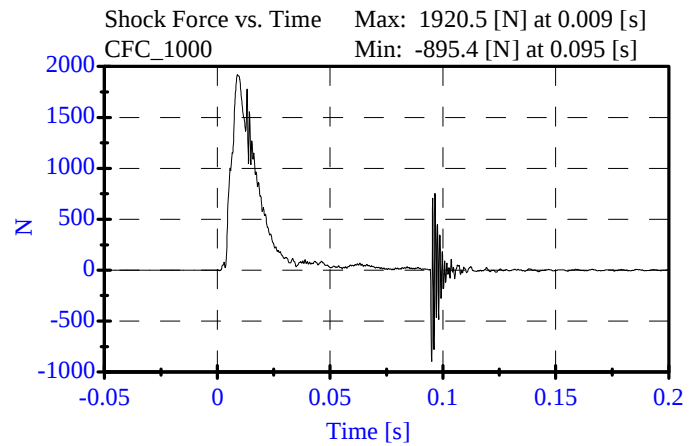
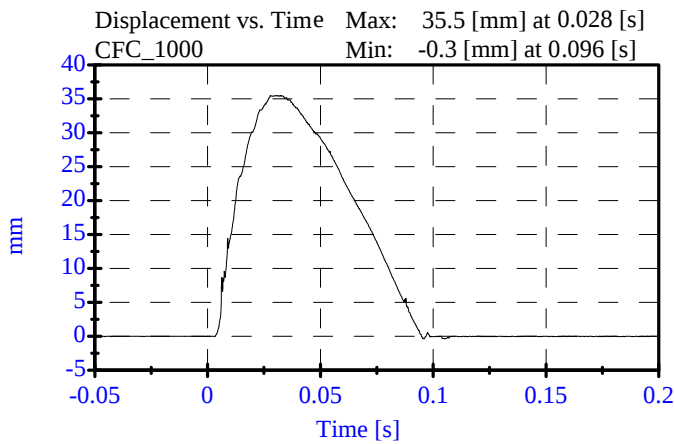


Shock Med (4.27 m/s)
PRE TEST
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 07-19-07

Sequential Test Number: 1 File: 269-14 07-19-07
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	31.00 %	Passed
Displacement:	32.00-37.00 mm	35.46 mm	Passed
Maximum Force:	1730.00-2099.00 N	1920.51 N	Passed
Impact Test Velocity:	4.27 m/s		
Damper Identification:	269		
Damper Setting:	5		

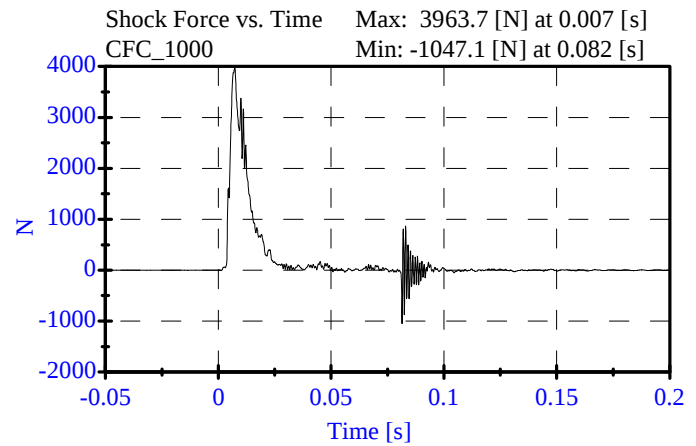
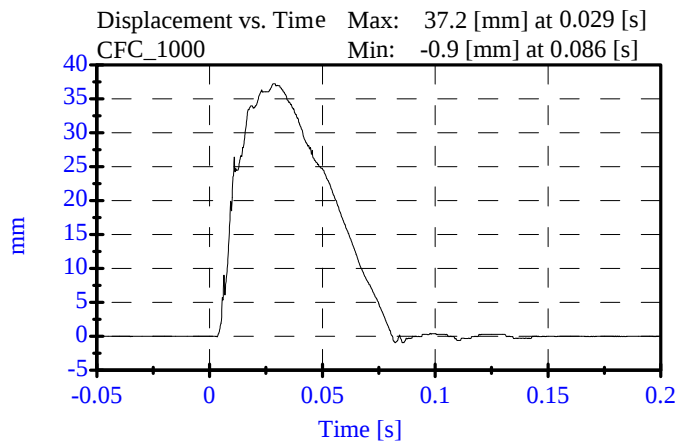


Shock High (6.10 m/s)
PRE TEST
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 07-19-07

Sequential Test Number: 1 File: 269-20 07-19-07
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	31.00 %	Passed
Displacement:	33.00-40.00 mm	37.23 mm	Passed
Maximum Force:	3741.00-4448.00 N	3963.68 N	Passed
Impact Test Velocity:	6.10 m/s		
Damper Identification:	269		
Damper Setting:	5		

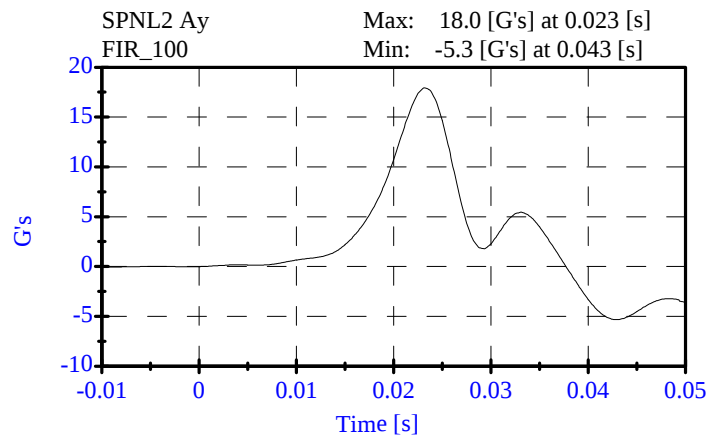
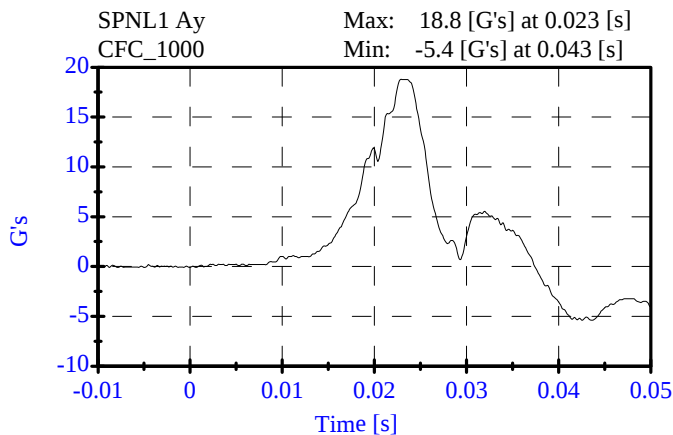
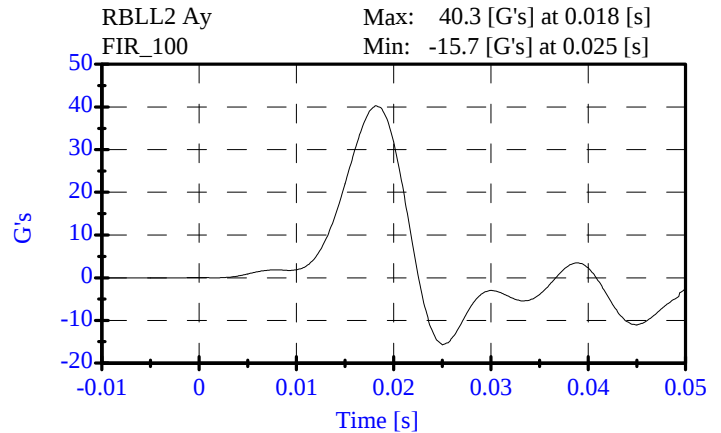
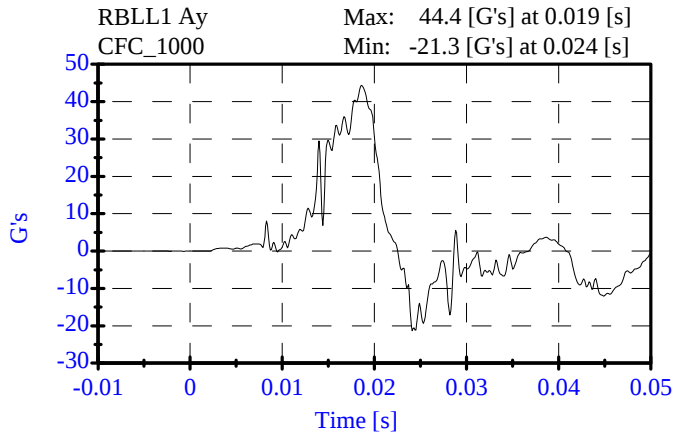
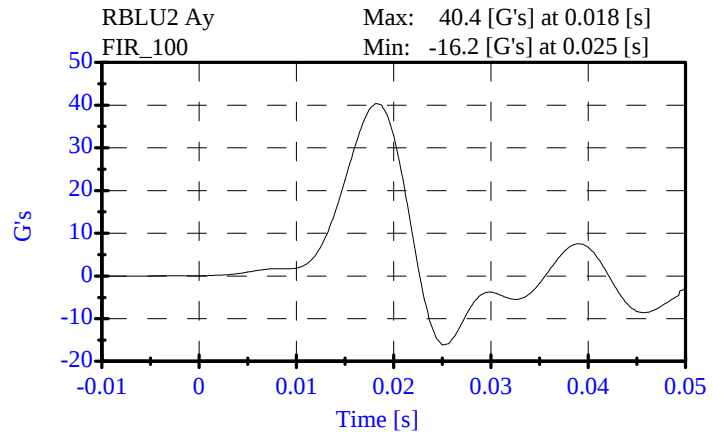
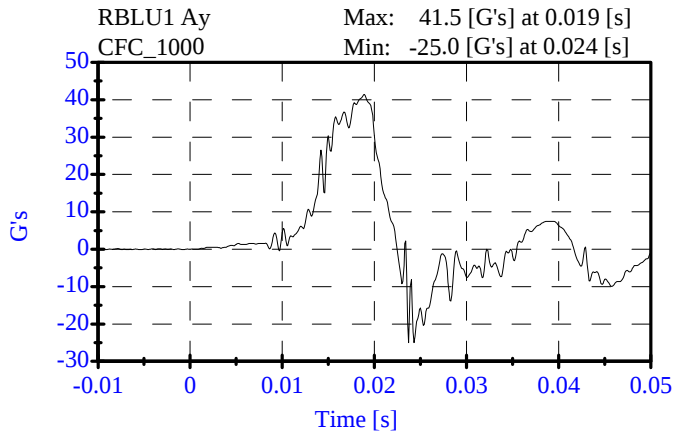


Thorax Impact
Pre-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 09-24-07

Sequential Test Number: 1 File: 269T 09-24-07
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.30 m/s	Passed
Upper Rib Acceleration:	37.00-46.00 G's	40.38 G's	Passed
Lower Rib Acceleration:	37.00-46.00 G's	40.33 G's	Passed
Lower Spine Acceleration:	15.00-22.00 G's	17.96 G's	Passed

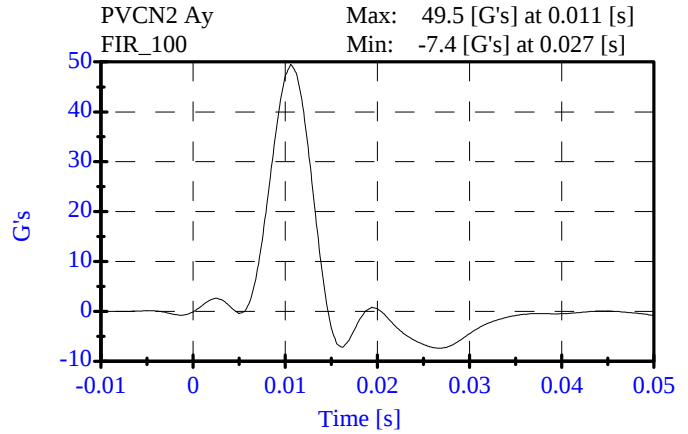
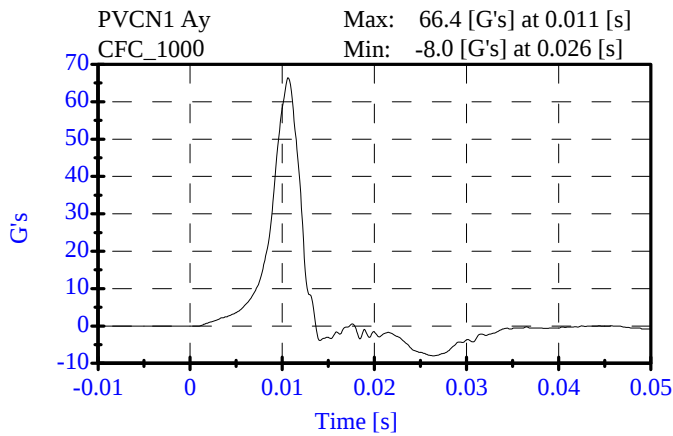


Pelvic Impact
Pre-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 09-25-07

Sequential Test Number: 1 File: 269P 09-25-07
Laboratory Technician: B. Swiecicki

<u>TEST PARAMETER</u>	<u>SPECIFICATION</u>	<u>TEST RESULTS</u>	<u>STATUS</u>
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.33 m/s	Passed
Pelvis Y Acceleration:	40.00-60.00 G's	49.49 G's	Passed
Time Above 20 Gs	3.0-7.0 ms	5.3 ms	Passed

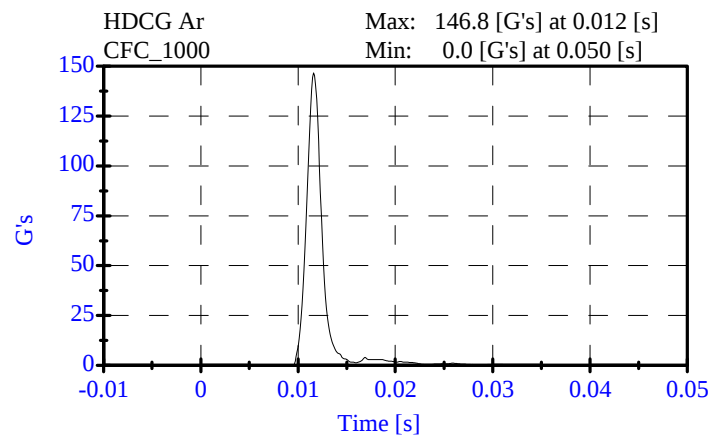
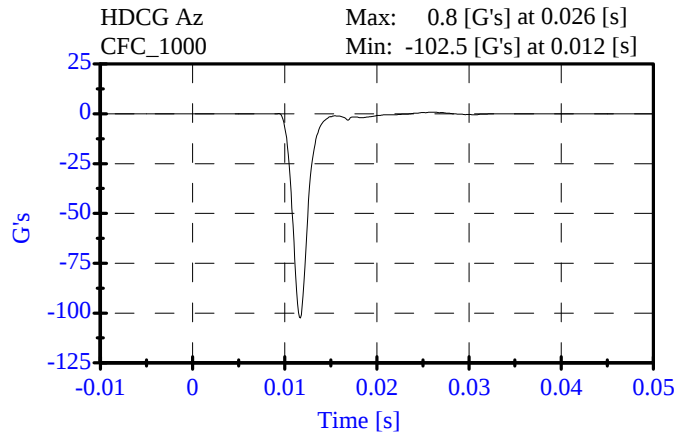
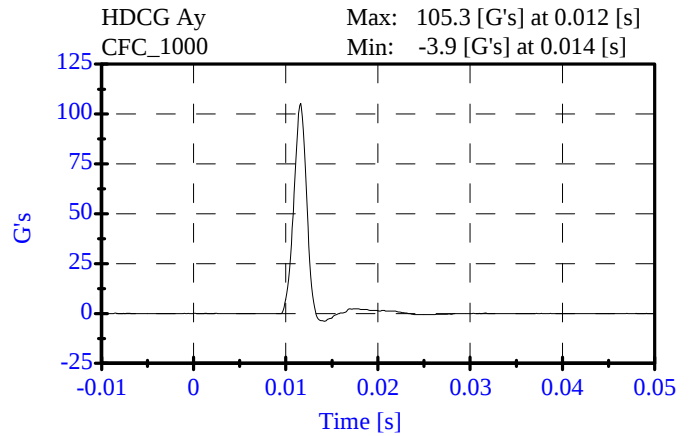
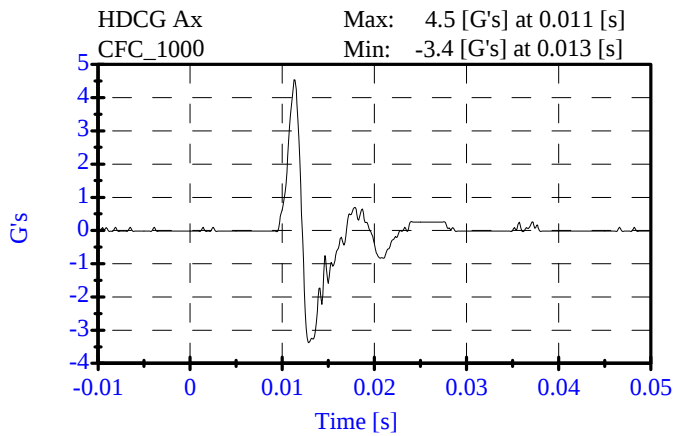


Head Drop **Pre-Test** **CONFIGURED FOR LEFT SIDE IMPACT**

ATD Serial No: 269
Date: 09-20-07

Sequential Test Number: 1 File: 269HD 09-20-07
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.6 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Peak Resultant Accel.:	120-150 Gs	146.77 Gs	Passed
Peak Lateral Accel.:	15 Gs Max	4.53 Gs	Passed
Curve PerCent NonModal:	< 15%	2.71 %	Passed



Neck Test**Pre-Test****CONFIGURED FOR LEFT SIDE IMPACT**

ATD Serial No: 269

Date: 09-21-07

Sequential Test Number: 1 File: 269N2 09-21-07

Laboratory Technician: B. Swiecicki

<u>TEST PARAMETER</u>	<u>SPECIFICATION</u>	<u>TEST RESULTS</u>	<u>STATUS</u>
Lab Temperature:	20.6-22.2 C	21.1 C	Passed
Lab Humidity:	10-70 %	33.00 %	Passed
Impact Velocity:	6.89- 7.13 m/s	7.00 m/s	Passed
PENDULUM DELTA V			
Delta V at 10 ms:	1.96- 2.55 m/s	2.04 m/s	Passed
Delta V at 20 ms:	4.12- 5.10 m/s	4.16 m/s	Passed
Delta V at 30 ms:	5.73- 7.01 m/s	5.88 m/s	Passed
Delta V between 40-70 ms:	6.27- 7.64 m/s	6.44	Passed
D PLANE ROTATION			
Maximum Rotation:	66.0-82.0 Deg	71.44 Deg	Passed
Rotation Angle Decay:	58.0-67.0 ms	60.40 ms	Passed
MOMENT ABOUT THE OCCIPITAL CONDYLE			
Max Occipital Moment:	73.00- 88.00 N-m	86.10 N-m	Passed
Occipital Moment Decay:	49.0-64.0 ms	56.50 ms	Passed
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT			
Moment to Rotation Peak:	2.0-16.0 ms	8.70 ms	Passed

Neck Test
Pre-Test

CONFIGURED FOR LEFT SIDE IMPACT

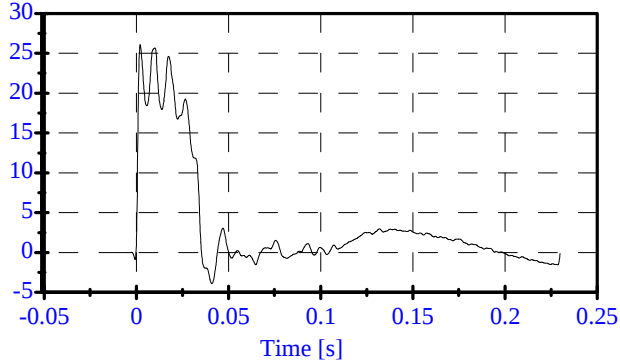
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Date: 09-21-07

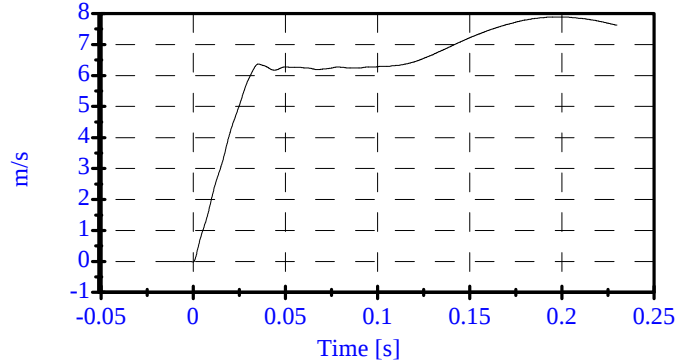
Sequential Test Number: 1 File: 269N2 09-21-07

Laboratory Technician: B. Swiecicki

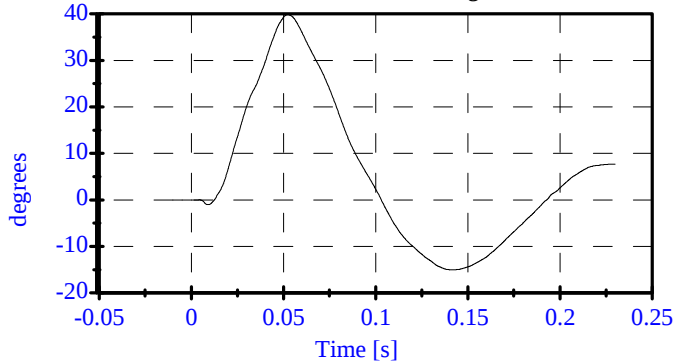
Pend Ax
CFC_180
Max: 26.1 [] at 0.002 [s]
Min: -3.9 [] at 0.041 [s]



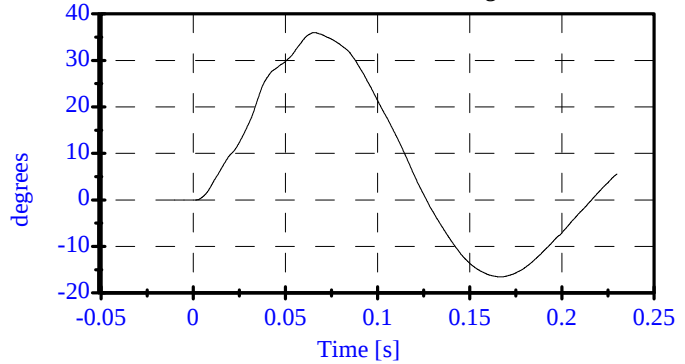
Pend Vx
CFC_180
Max: 7.9 [m/s] at 0.199 [s]
Min: -0.0 [m/s] at -0.000 [s]



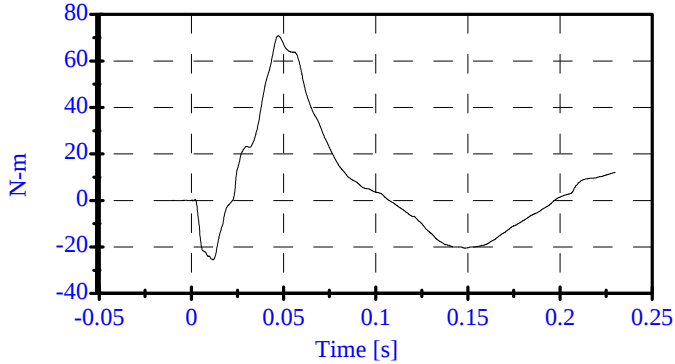
Head Rot
CFC_180
Max: 39.8 [degrees] at 0.052 [s]
Min: -15.0 [degrees] at 0.142 [s]



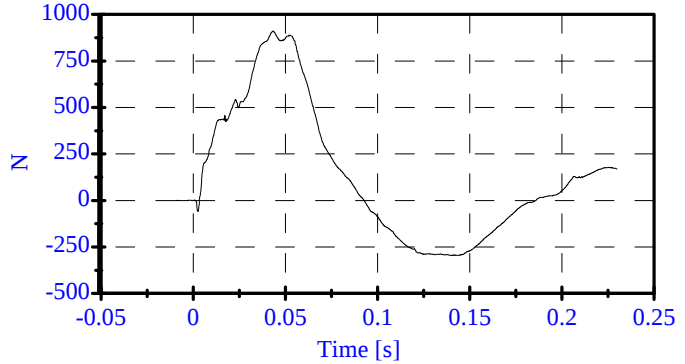
Arm Rot
CFC_180
Max: 36.0 [degrees] at 0.066 [s]
Min: -16.5 [degrees] at 0.168 [s]



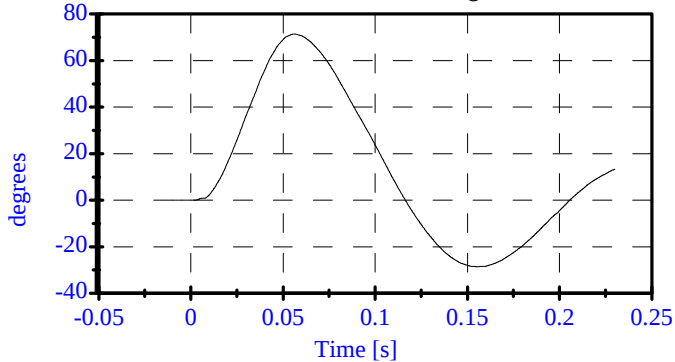
Neck Mx
CFC_600
Max: 70.8 [N-m] at 0.047 [s]
Min: -25.6 [N-m] at 0.012 [s]



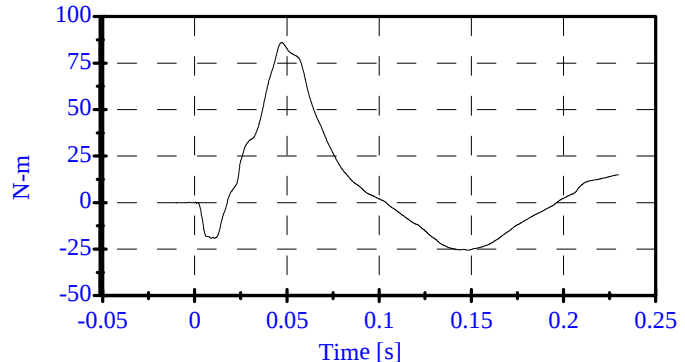
Neck Fy
CFC_1000
Max: 910.1 [N] at 0.043 [s]
Min: -296.3 [N] at 0.140 [s]



Tot Rot
CFC_180
Max: 71.4 [degrees] at 0.056 [s]
Min: -28.6 [degrees] at 0.156 [s]



MOCX
Max: 86.1 [N-m] at 0.047 [s]
Min: -25.5 [N-m] at 0.148 [s]



Abdomen Test

Pre-Test

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269

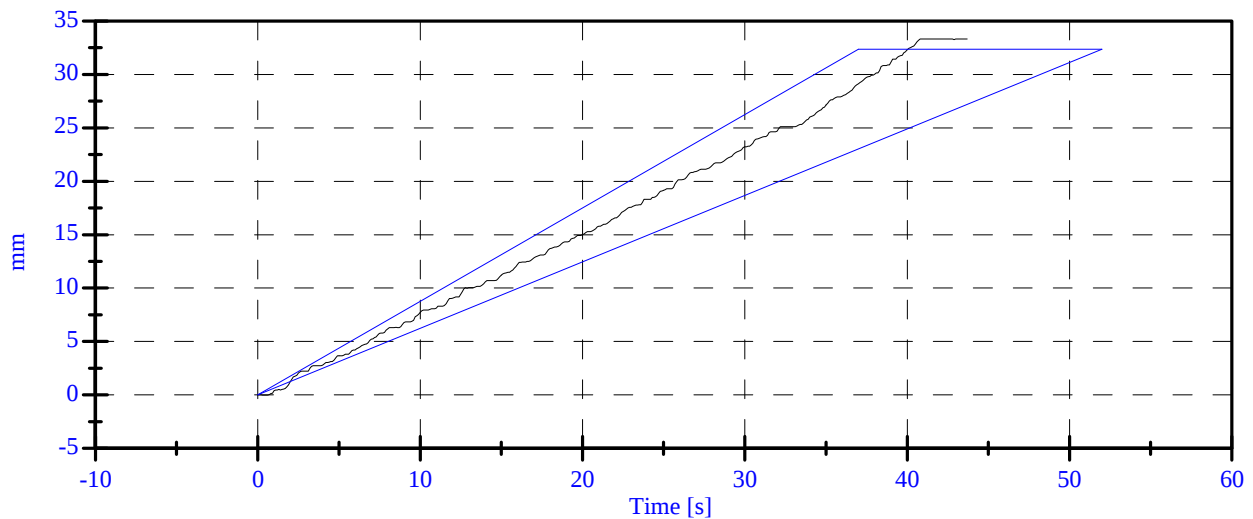
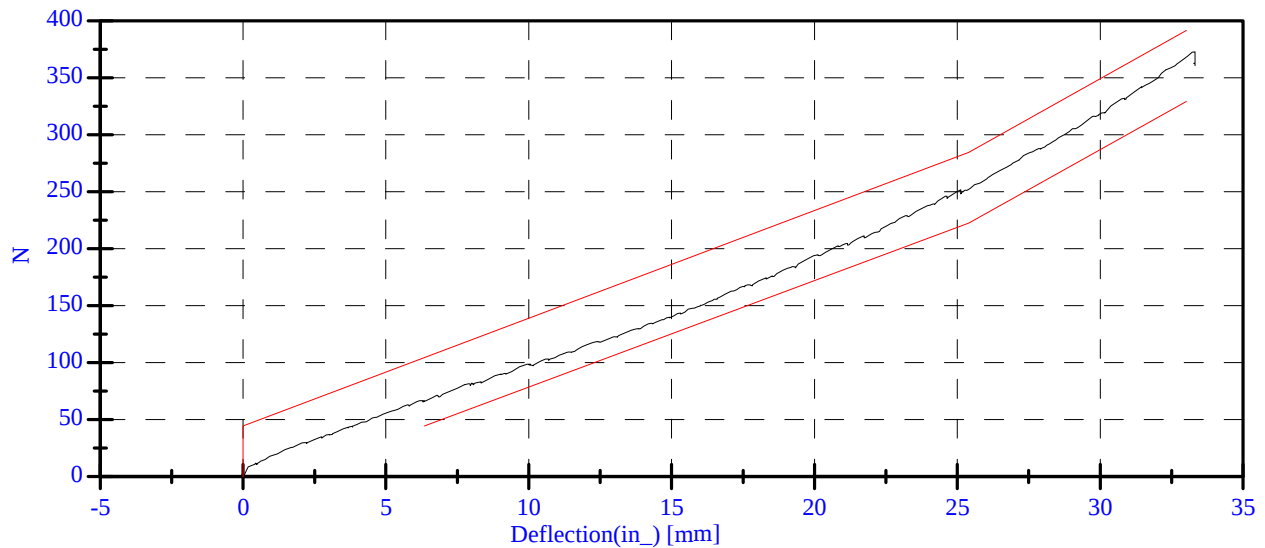
Date: 09-25-07

Sequential Test Number: 1 File: 269ab 09-25-07

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	36.00 %	Passed
Force at 12.95 mm :	104.00-162.00 N	122.32 N	Passed
Force at 19.05 mm :	162.98-220.99 N	182.86 N	Passed
Force at 25.40 mm :	221.97-280.02 N	252.82 N	Passed
Force at 33.02 mm :	324.99-391.00 N	368.81 N	Passed

ABDOMINAL COMPRESSION TEST



Lumbar Spine

PRE TEST

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269

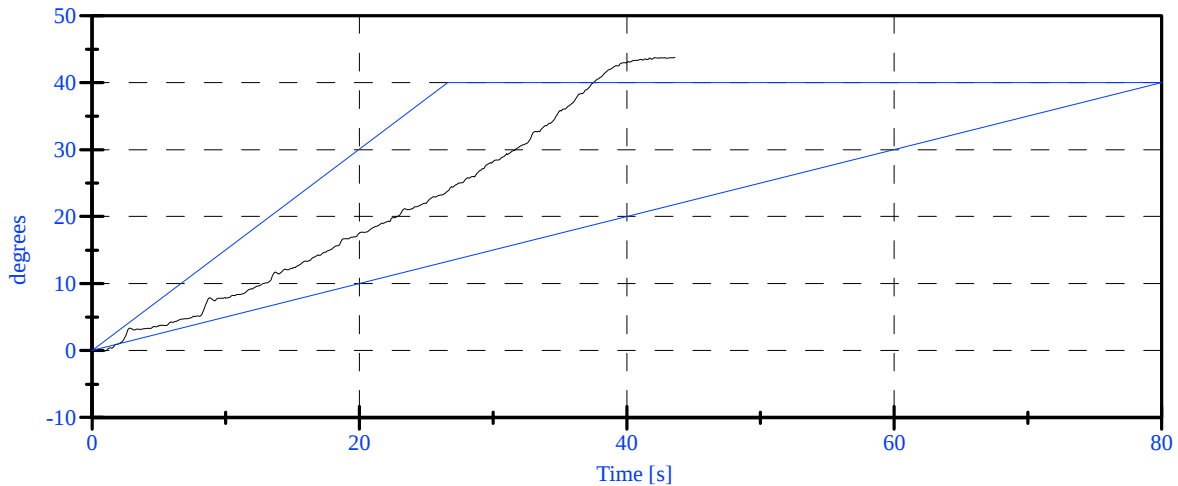
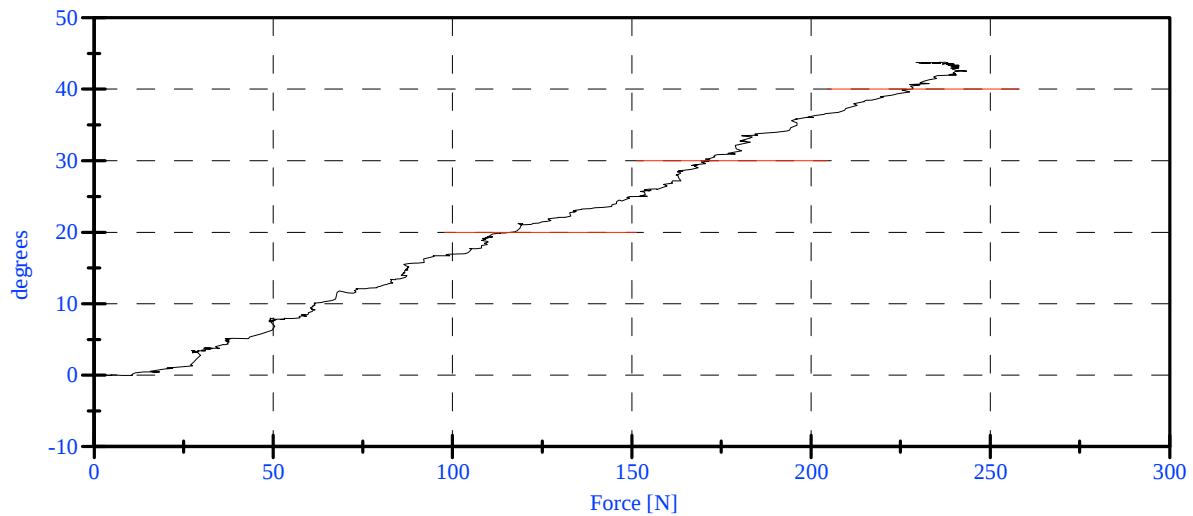
Date: 09-19-07

Sequential Test Number: 1 File: 269sp 09-19-07

Laboratory Technician: B. Swiecicki

<u>TEST PARAMETER</u>	<u>SPECIFICATION</u>	<u>TEST RESULTS</u>	<u>STATUS</u>
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Force at 0 Deg:	0.00-26.69 N	4.70 N	Passed
Force at 20 Deg:	97.86-151.24 N	117.52 N	Passed
Force at 30 Deg	151.24-204.62 N	170.27 N	Passed
Force at 40 Deg	204.62-258.00 N	228.25 N	Passed
Return Angle	12 Deg Max	5.91 deg	Passed

LUMBAR SPINE FLEXION TEST



PRE-TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 269 Sequential Test Number: 3
 Date: September 25, 2007 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

CALIBRATION TEST RESULTS

POST TEST

SID H3 NO.: 270

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 270	Sequential Test Number: 4
Date: October 19, 2007	Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
LATERAL NECK BEND TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 270 Sequential Test Number: 4
Date: October 19, 2007 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	899
RH- Rib Height (mm)	502 - 520	505
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	234
KH- Knee Pivot from Back Line (mm)	511 - 526	518
KV- Knee Pivot to Floor (mm)	490 - 505	493
HW- Hip Width (mm)	356 - 391	386

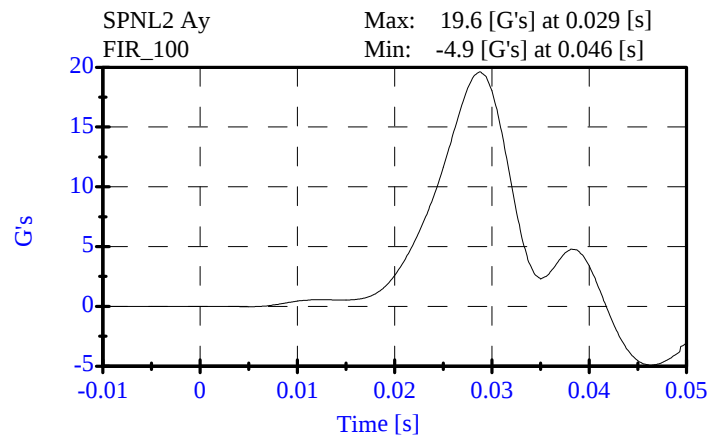
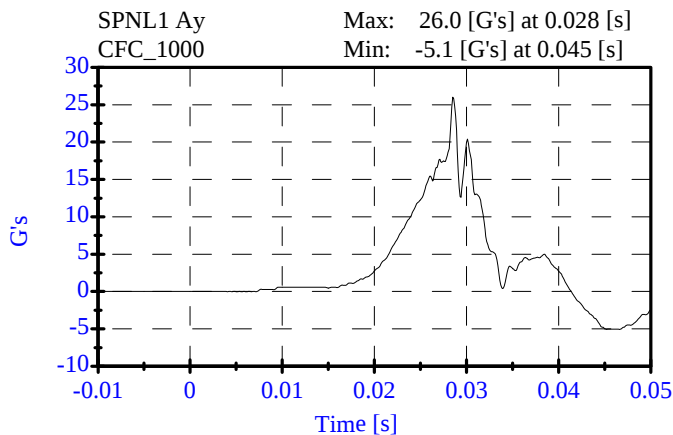
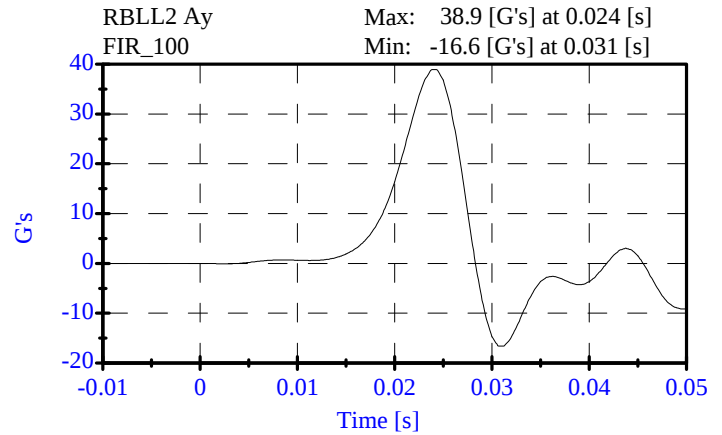
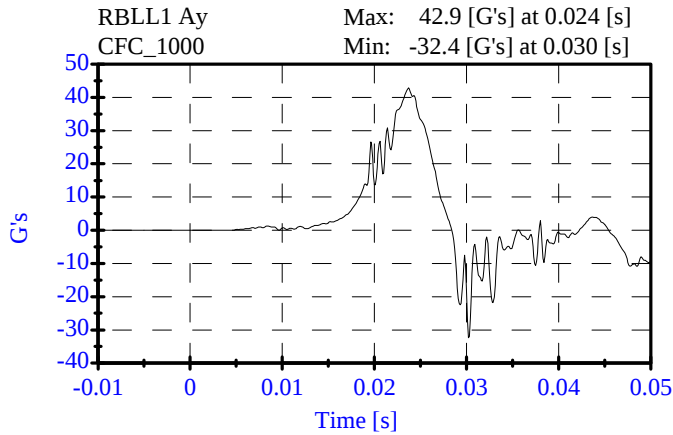
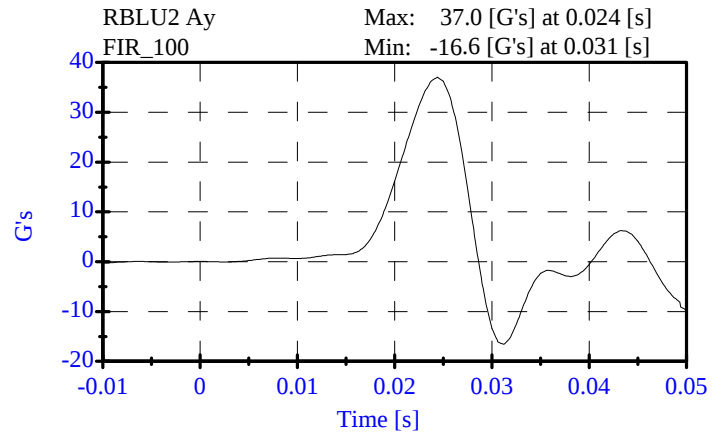
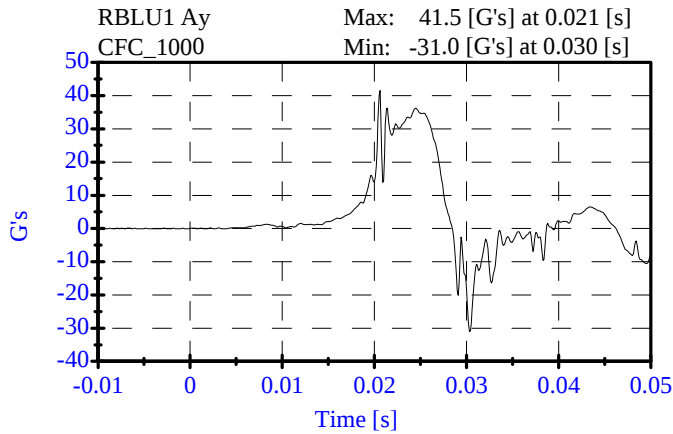
REMARKS: None

Thorax Impact
Post-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 10-17-07

Sequential Test Number: 1 File: 270T 10-17-07
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	39.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.30 m/s	Passed
Upper Rib Acceleration:	37.00-46.00 G's	37.01 G's	Passed
Lower Rib Acceleration:	37.00-46.00 G's	38.90 G's	Passed
Lower Spine Acceleration:	15.00-22.00 G's	19.62 G's	Passed



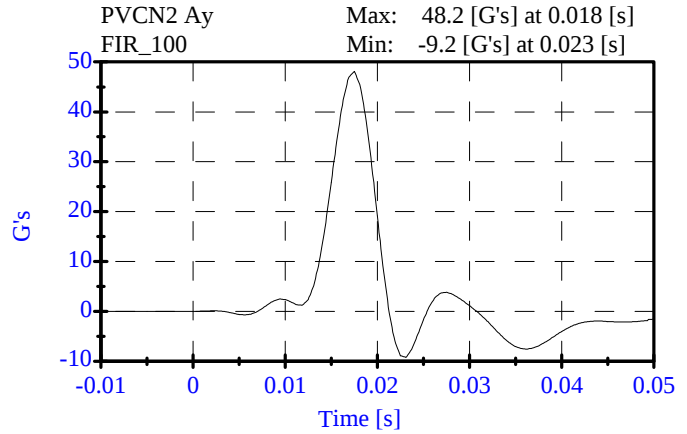
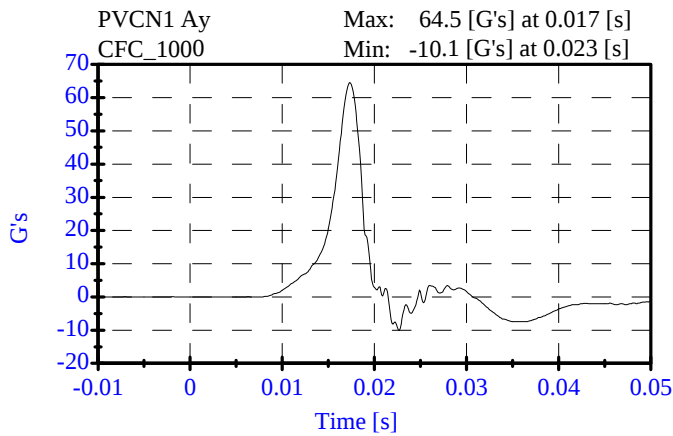
**Pelvic Test
Post-Test**

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 10-17-07

Sequential Test Number: 1 File: 270P1 10-17-07
Laboratory Technician: B. Swiecicki

<u>TEST PARAMETER</u>	<u>SPECIFICATION</u>	<u>TEST RESULTS</u>	<u>STATUS</u>
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	38.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.30 m/s	Passed
Pelvis Y Acceleration:	40.00-60.00 G's	48.16 G's	Passed
Time Above 20 Gs	3.0-7.0 ms	5.4 ms	Passed



Head Drop

Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

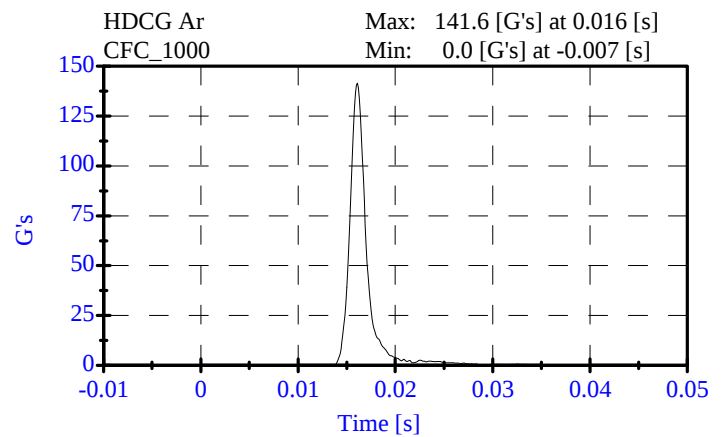
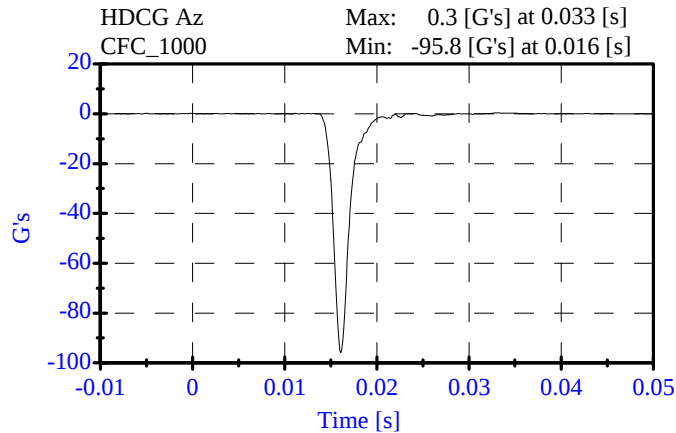
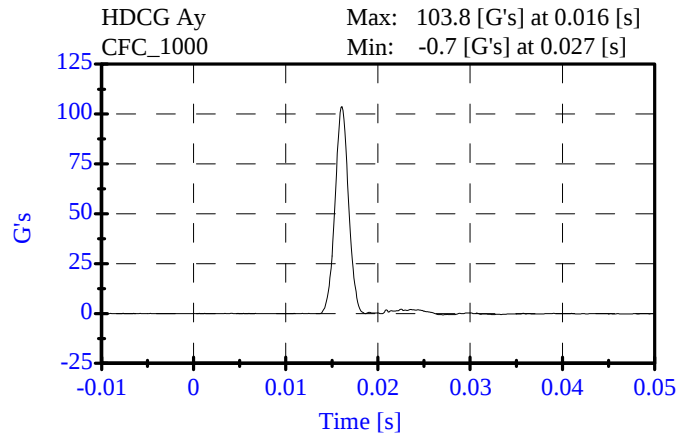
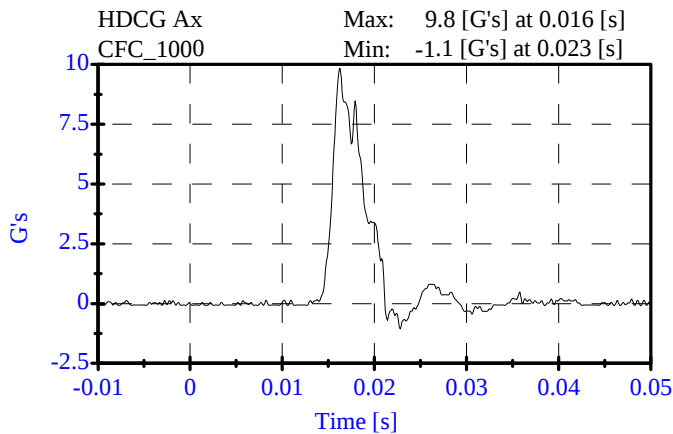
ATD Serial No: 270

Date: 10-05-07

Sequential Test Number: 1 File: 270H 10-05-07

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.6 C	21.1 C	Passed
Lab Humidity:	10-70 %	31.00 %	Passed
Peak Resultant Accel.:	120-150 Gs	141.56 Gs	Passed
Peak Lateral Accel.:	15 Gs Max	9.84 Gs	Passed
Curve PerCent NonModal:	< 15%	2.16 %	Passed



Neck Test**Post-Test****CONFIGURED FOR LEFT SIDE IMPACT**

ATD Serial No: 270

Date: 10-16-07

Sequential Test Number: 1 File: 270N4 10-16-07

Laboratory Technician: B. Swiecicki

<u>TEST PARAMETER</u>	<u>SPECIFICATION</u>	<u>TEST RESULTS</u>	<u>STATUS</u>
Lab Temperature:	20.6-22.2 C	21.1 C	Passed
Lab Humidity:	10-70 %	35.00 %	Passed
Impact Velocity:	6.89- 7.13 m/s	7.00 m/s	Passed
PENDULUM DELTA V			
Delta V at 10 ms:	1.96- 2.55 m/s	1.99 m/s	Passed
Delta V at 20 ms:	4.12- 5.10 m/s	4.12 m/s	Passed
Delta V at 30 ms:	5.73- 7.01 m/s	6.02 m/s	Passed
Delta V between 40-70 ms:	6.27- 7.64 m/s	7.52 m/s	Passed
D PLANE ROTATION			
Maximum Rotation:	66.0-82.0 Deg	67.72 Deg	Passed
Rotation Angle Decay:	58.0-67.0 ms	59.40 ms	Passed
MOMENT ABOUT THE OCCIPITAL CONDYLE			
Max Occipital Moment:	73.00- 88.00 N-m	86.92 N-m	Passed
Occipital Moment Decay:	49.0-64.0 ms	51.40 ms	Passed
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT			
Moment to Rotation Peak:	2.0-16.0 ms	7.90 ms	Passed

Neck Test

Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

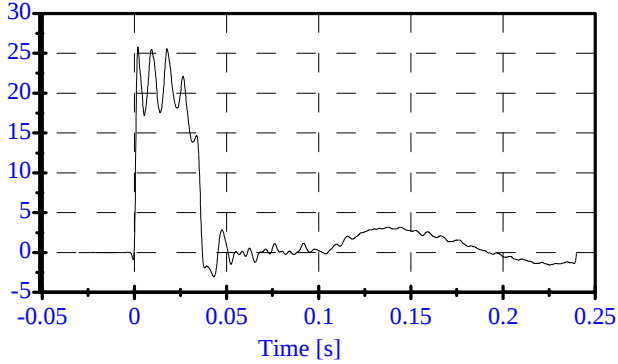
ATD Serial No: 270

Date: 10-16-07

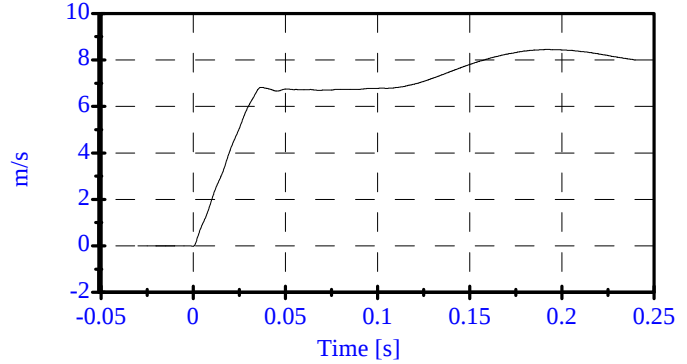
Sequential Test Number: 1 File: 270N4 10-16-07

Laboratory Technician: B. Swiecicki

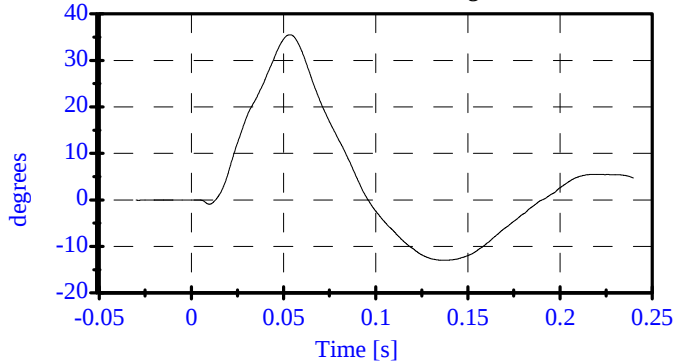
Pend Ax
CFC_180
Max: 25.8 [] at 0.002 [s]
Min: -3.0 [] at 0.043 [s]



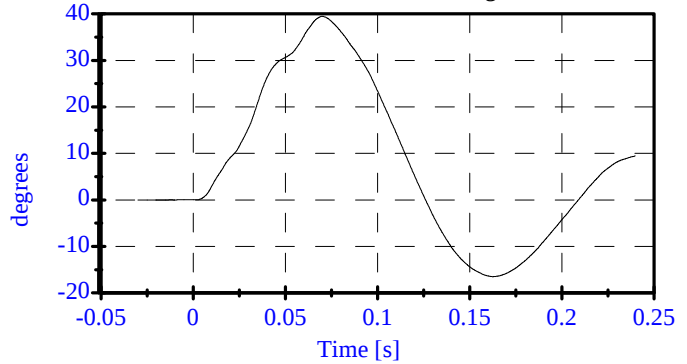
Pend Vx
CFC_180
Max: 8.4 [m/s] at 0.192 [s]
Min: -0.0 [m/s] at -0.000 [s]



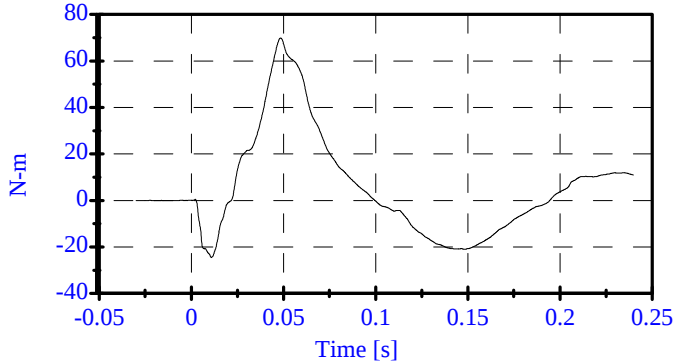
Head Rot
CFC_180
Max: 35.5 [degrees] at 0.054 [s]
Min: -13.0 [degrees] at 0.136 [s]



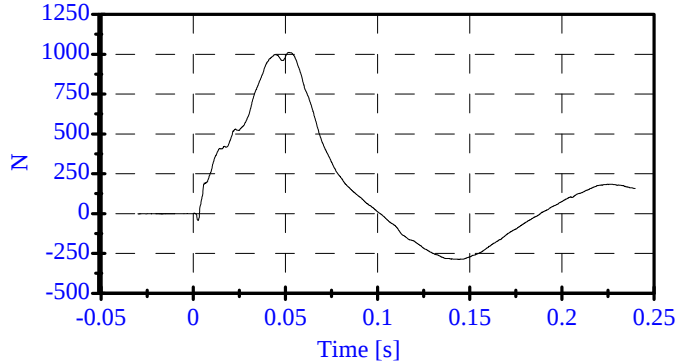
Arm Rot
CFC_180
Max: 39.5 [degrees] at 0.070 [s]
Min: -16.5 [degrees] at 0.163 [s]



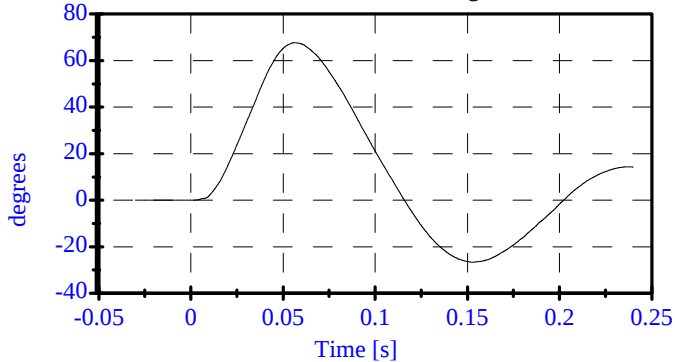
Neck Mx
CFC_600
Max: 69.8 [N-m] at 0.049 [s]
Min: -24.5 [N-m] at 0.011 [s]



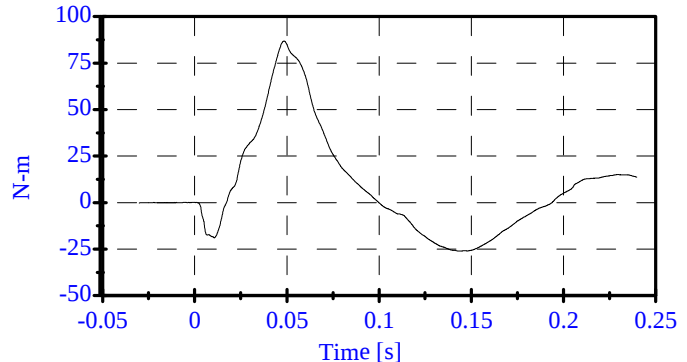
Neck Fy
CFC_1000
Max: 1012.1 [N] at 0.052 [s]
Min: -286.9 [N] at 0.144 [s]



Tot Rot
CFC_180
Max: 67.7 [degrees] at 0.056 [s]
Min: -26.6 [degrees] at 0.153 [s]



MOCX
Max: 86.9 [N-m] at 0.049 [s]
Min: -25.9 [N-m] at 0.144 [s]



Abdomen Test

Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270

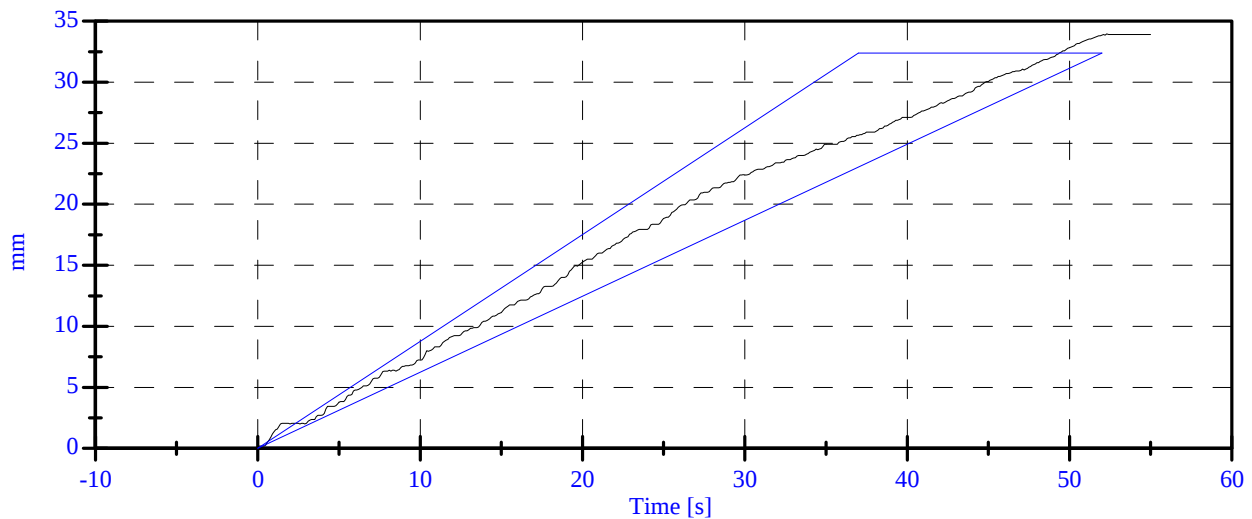
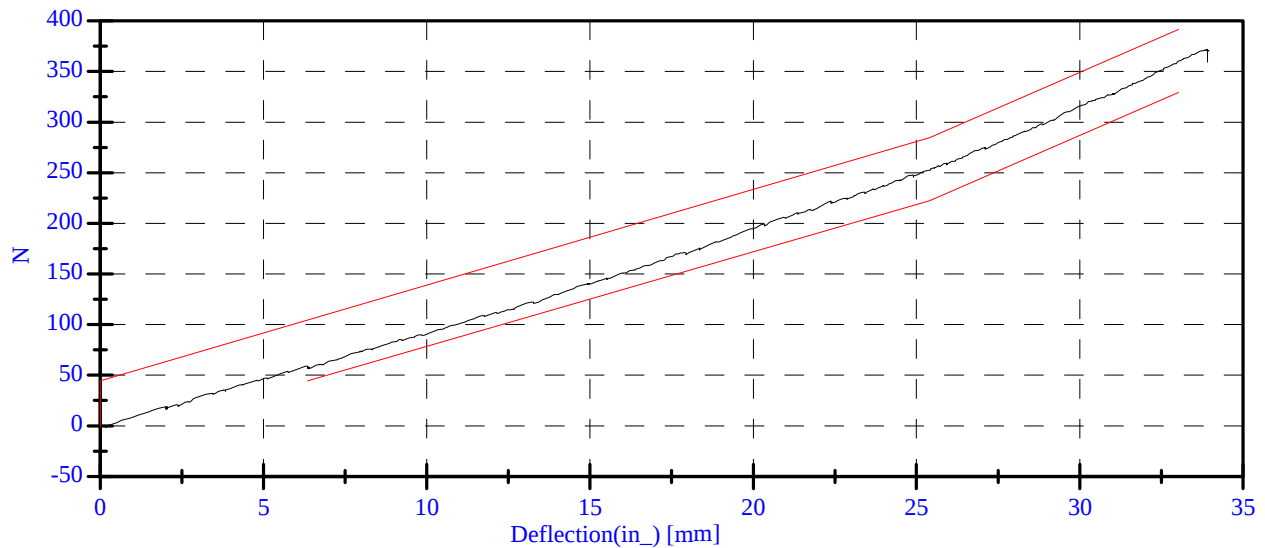
Date: 10-19-07

Sequential Test Number: 1 File: 270Ab 10-19-07

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	33.00 %	Passed
Force at 12.95 mm :	104.00-162.00 N	121.23 N	Passed
Force at 19.05 mm :	162.98-220.99 N	183.94 N	Passed
Force at 25.40 mm :	221.97-280.02 N	252.45 N	Passed
Force at 33.02 mm :	324.99-391.00 N	359.75 N	Passed

ABDOMINAL COMPRESSION TEST



Lumbar Spine

Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270

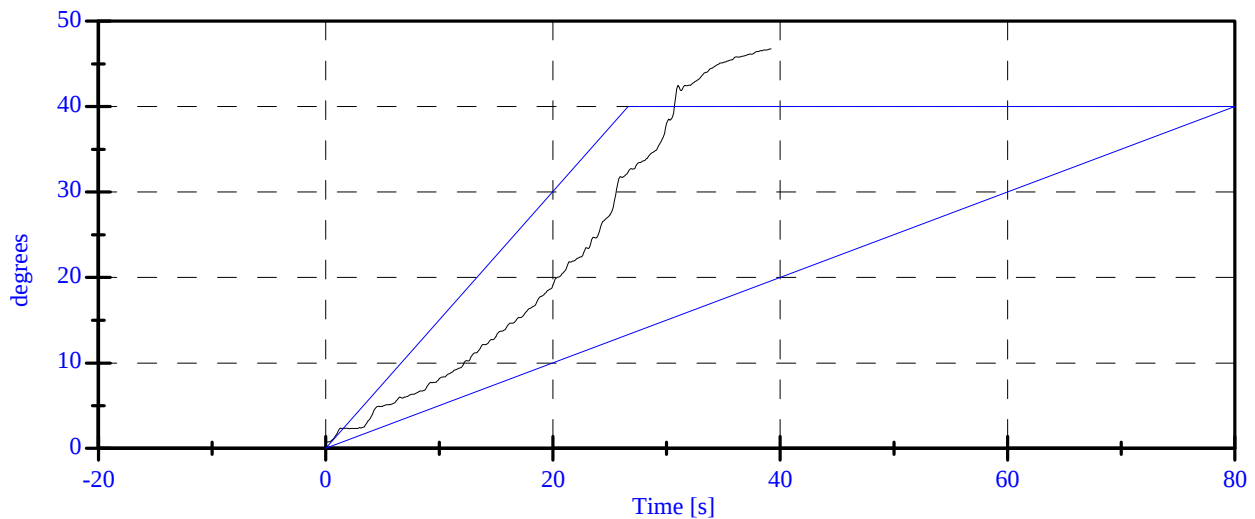
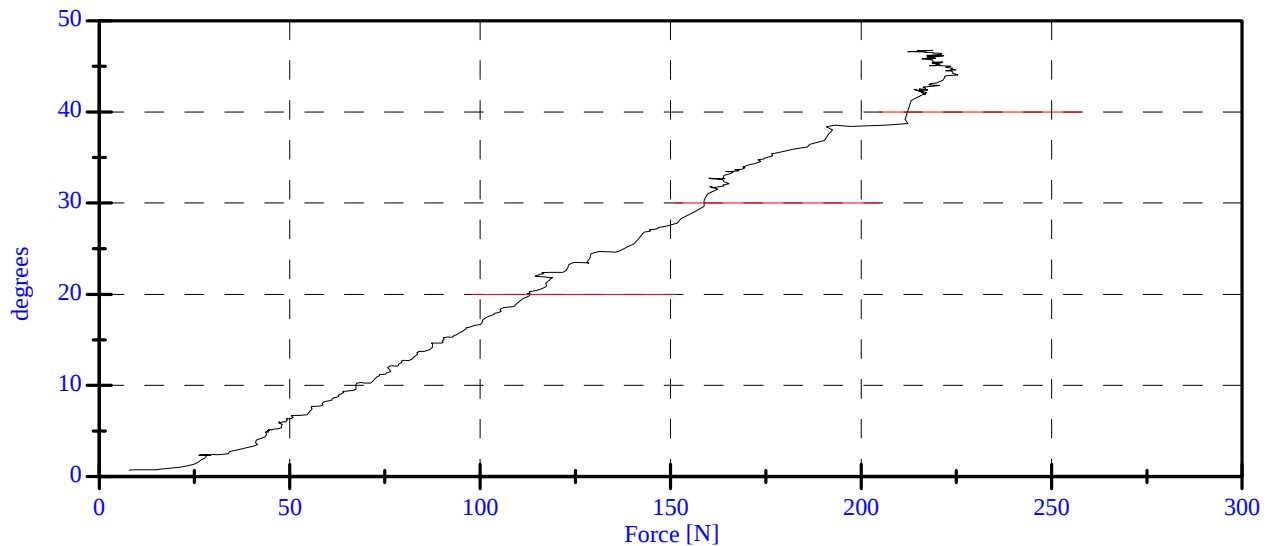
Date: 10-19-07

Sequential Test Number: 1 File: 270SP 10-19-07

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	33.00 %	Passed
Force at 0 Deg:	0.00-26.69 N	7.83 N	Passed
Force at 20 Deg:	97.86-151.24 N	113.08 N	Passed
Force at 30 Deg	151.24-204.62 N	158.78 N	Passed
Force at 40 Deg	204.62-258.00 N	212.32 N	Passed
Return Angle	12 Deg Max	1.11 deg	Passed

LUMBAR SPINE FLEXION TEST



POST TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 270 Sequential Test Number: 4
 Date: October 4, 2007 Laboratory Technician: B. Swiecicki

PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

CALIBRATION TEST RESULTS

POST TEST

SID H3 NO.: 269

CONFIGURED FOR LEFT SIDE IMPACT

**CALIBRATION TEST RESULTS SUMMARY
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 269	Sequential Test Number: 4
Date: October 19, 2007	Laboratory Technician: B. Swiecicki

TEST	COMMENTS
EXTERNAL DIMENSIONS	Passed all requirements.
LATERAL THORAX IMPACT TEST	Passed all requirements.
LATERAL PELVIS IMPACT TEST	Passed all requirements.
HEAD DROP TEST*	Passed all requirements.
LATERAL NECK BEND TEST*	Passed all requirements.
ABDOMINAL COMPRESSION TEST*	Passed all requirements.
LUMBAR FLEXION TEST*	Passed all requirements.

* Test not required for SID certification.

REMARKS: None

**EXTERNAL DIMENSIONS
POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 269 Sequential Test Number: 4
Date: October 19, 2007 Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS
SH- Seated Height (mm)	889 - 909	899
RH- Rib Height (mm)	502 - 520	508
HP- Hip Pivot Height (mm)	99 ref.	99
RD- Rib from Back Line (mm)	229 - 241	234
KH- Knee Pivot from Back Line (mm)	511 - 526	518
KV- Knee Pivot to Floor (mm)	490 - 505	493
HW- Hip Width (mm)	356 - 391	386

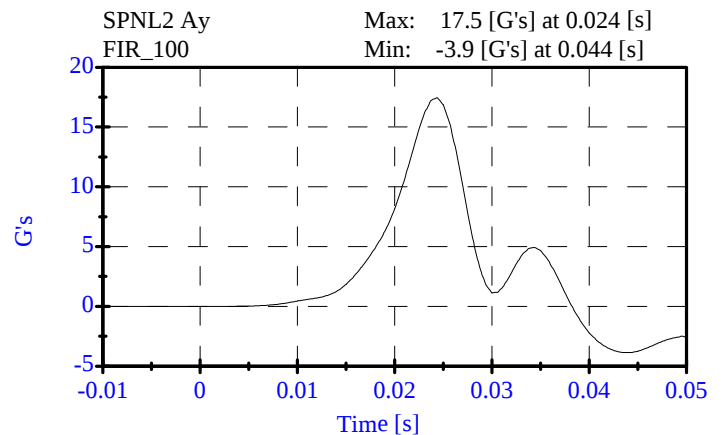
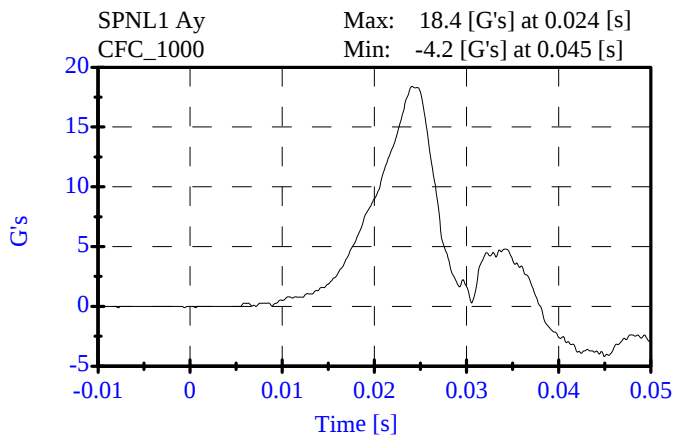
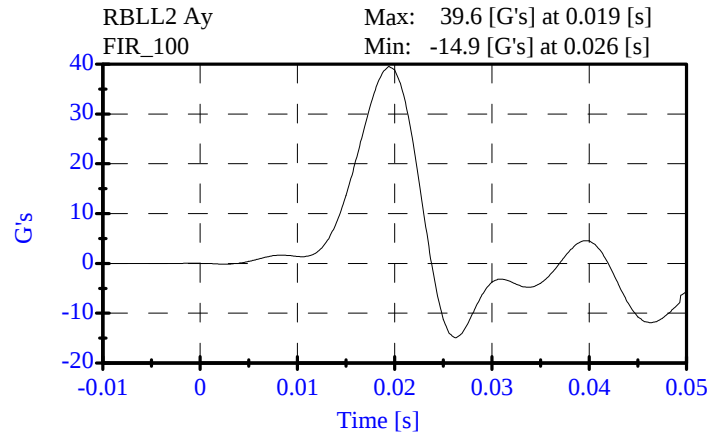
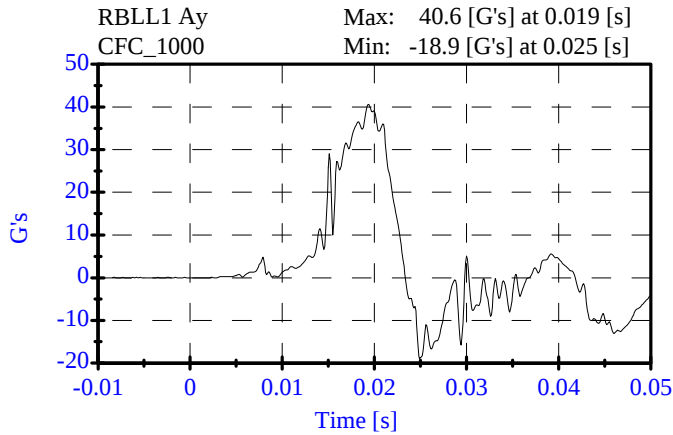
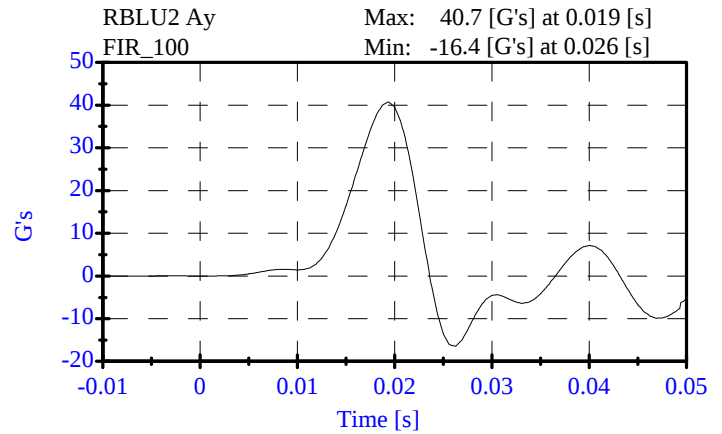
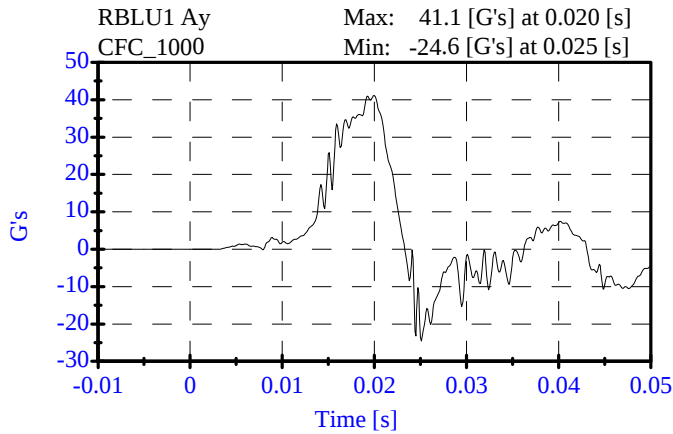
REMARKS: None

Thorax Impact
Post-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 10-16-07

Sequential Test Number: 1 File: 269T 10-16-07
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	37.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.30 m/s	Passed
Upper Rib Acceleration:	37.00-46.00 G's	40.72 G's	Passed
Lower Rib Acceleration:	37.00-46.00 G's	39.57 G's	Passed
Lower Spine Acceleration:	15.00-22.00 G's	17.46 G's	Passed



Pelvic Impact

Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

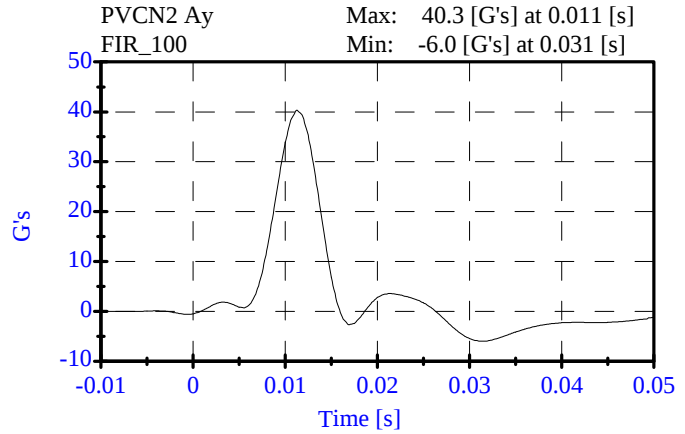
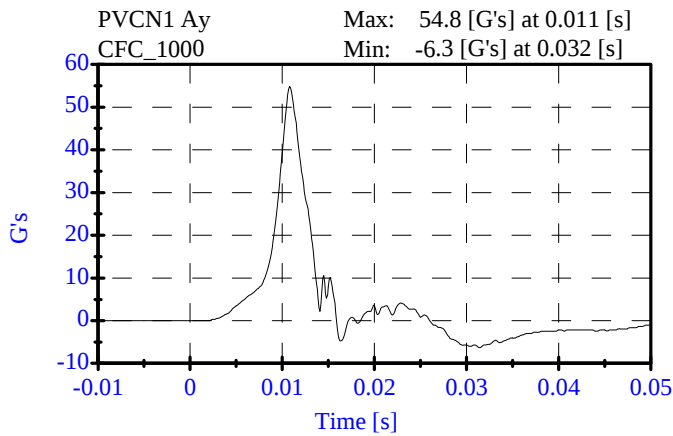
ATD Serial No: 269

Date: 10-17-07

Sequential Test Number: 1 File: 269P3 10-17-07

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	38.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.30 m/s	Passed
Pelvis Y Acceleration:	40.00-60.00 G's	40.34 G's	Passed
Time Above 20 Gs	3.0-7.0 ms	5.1 ms	Passed



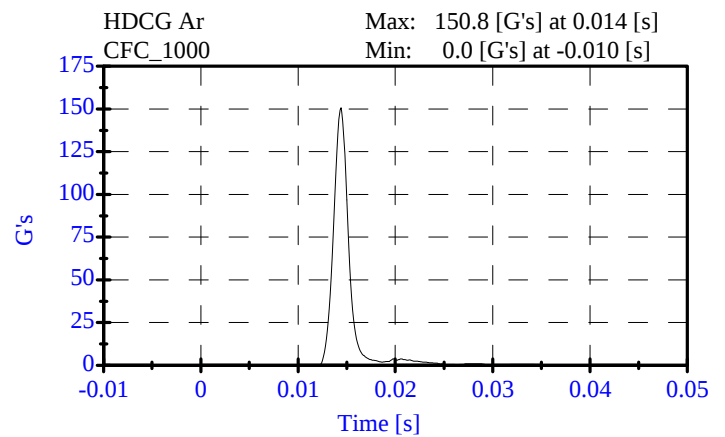
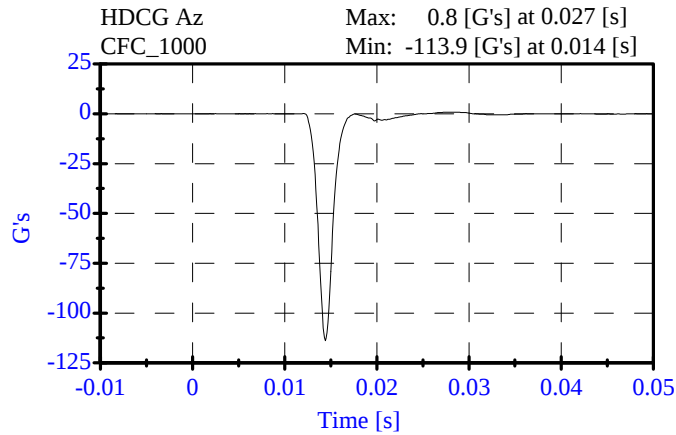
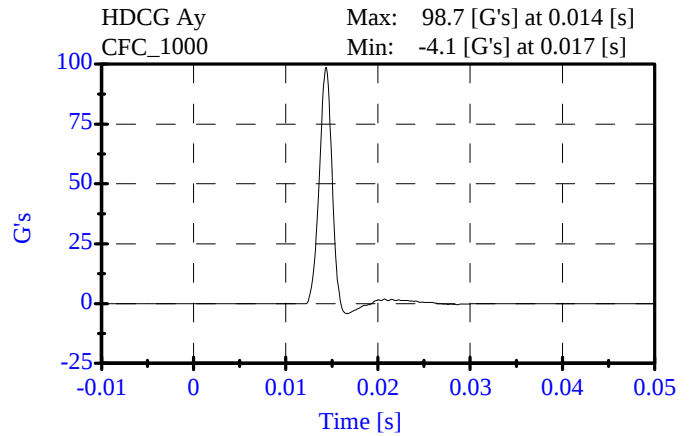
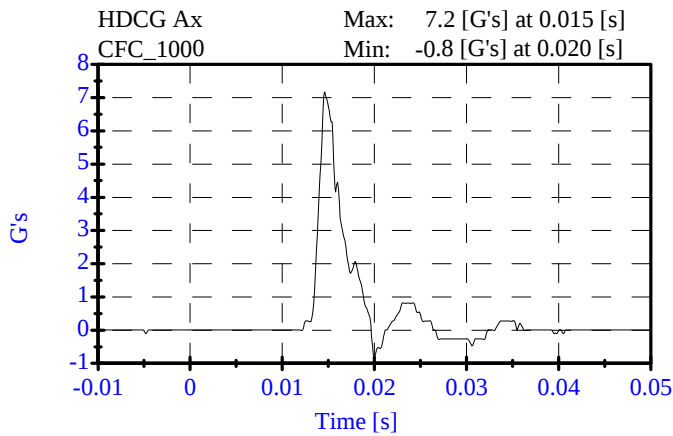
Head Drop **Post-Test**

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 10-05-07

Sequential Test Number: 1 File: 269HD 10-05-07
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.6 C	21.1 C	Passed
Lab Humidity:	10-70 %	31.00 %	Passed
Peak Resultant Accel.:	120-150 Gs	150.81 Gs	Failed
Peak Lateral Accel.:	15 Gs Max	7.17 Gs	Passed
Curve PerCent NonModal:	< 15%	2.54 %	Passed



Neck Test**Post-Test****CONFIGURED FOR LEFT SIDE IMPACT**

ATD Serial No: 269

Date: 10-16-07

Sequential Test Number: 1 File: 269N 10-16-07

Laboratory Technician: B. Swiecicki

<u>TEST PARAMETER</u>	<u>SPECIFICATION</u>	<u>TEST RESULTS</u>	<u>STATUS</u>
Lab Temperature:	20.6-22.2 C	21.1 C	Passed
Lab Humidity:	10-70 %	36.00 %	Passed
Impact Velocity:	6.89- 7.13 m/s	7.00 m/s	Passed
PENDULUM DELTA V			
Delta V at 10 ms:	1.96- 2.55 m/s	2.04 m/s	Passed
Delta V at 20 ms:	4.12- 5.10 m/s	4.26 m/s	Passed
Delta V at 30 ms:	5.73- 7.01 m/s	6.25 m/s	Passed
Delta V between 40-70 ms:	6.27- 7.64 m/s	7.52 m/s	Passed
D PLANE ROTATION			
Maximum Rotation:	66.0-82.0 Deg	67.97 Deg	Passed
Rotation Angle Decay:	58.0-67.0 ms	59.70 ms	Passed
MOMENT ABOUT THE OCCIPITAL CONDYLE			
Max Occipital Moment:	73.00- 88.00 N-m	83.66 N-m	Passed
Occipital Moment Decay:	49.0-64.0 ms	56.40 ms	Passed
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT			
Moment to Rotation Peak:	2.0-16.0 ms	9.80 ms	Passed

Neck Test

Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

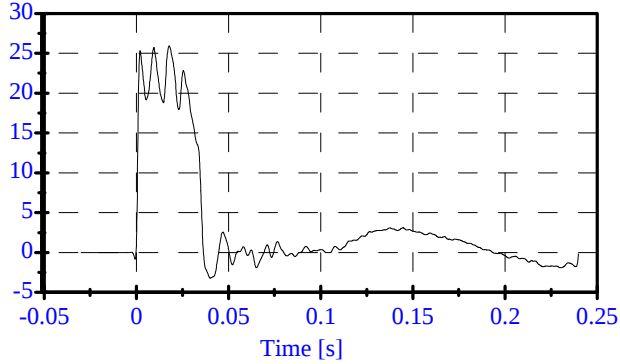
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Date: 10-16-07

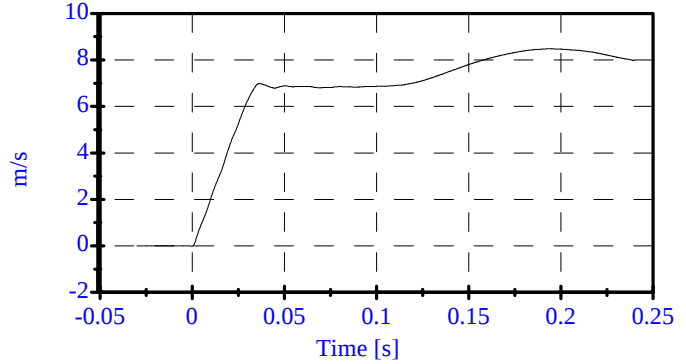
Sequential Test Number: 1 File: 269N 10-16-07

Laboratory Technician: B. Swiecicki

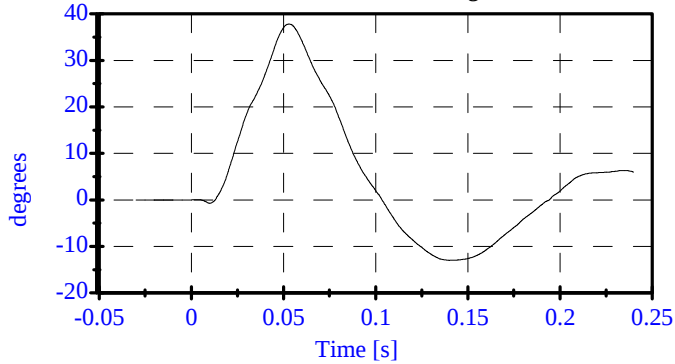
Pend Ax
CFC_180
Max: 25.9 [] at 0.018 [s]
Min: -3.2 [] at 0.040 [s]



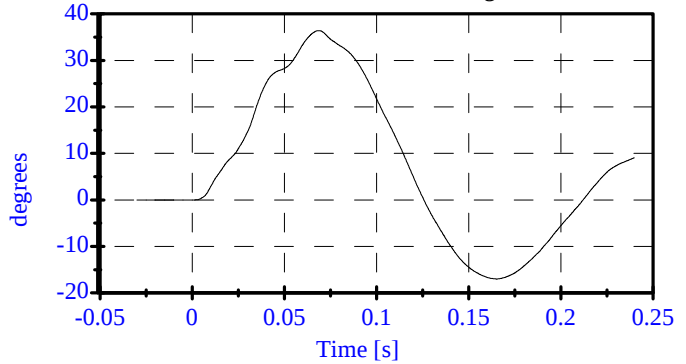
Pend Vx
CFC_180
Max: 8.5 [m/s] at 0.194 [s]
Min: -0.0 [m/s] at -0.000 [s]



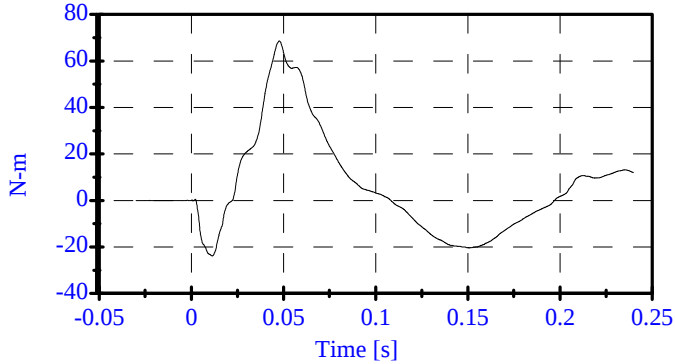
Head Rot
CFC_180
Max: 37.8 [degrees] at 0.053 [s]
Min: -13.0 [degrees] at 0.140 [s]



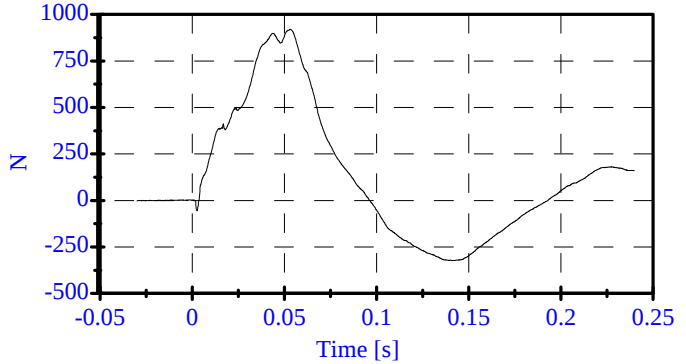
Arm Rot
CFC_180
Max: 36.4 [degrees] at 0.069 [s]
Min: -17.0 [degrees] at 0.165 [s]



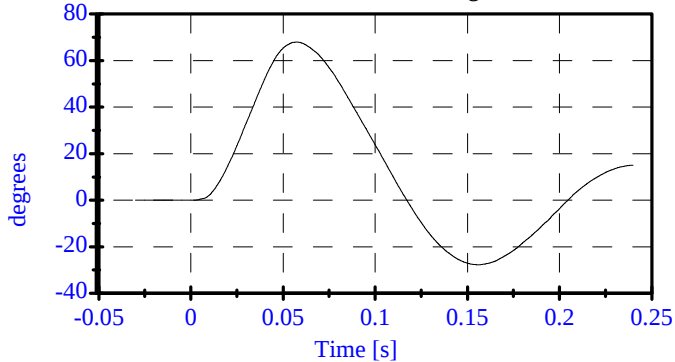
Neck Mx
CFC_600
Max: 68.6 [N-m] at 0.048 [s]
Min: -23.9 [N-m] at 0.012 [s]



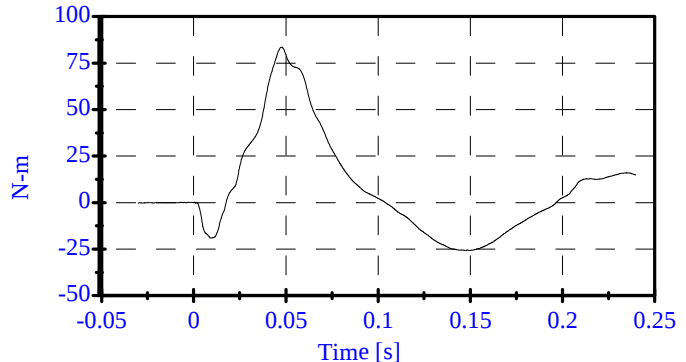
Neck Fy
CFC_1000
Max: 919.5 [N] at 0.053 [s]
Min: -323.3 [N] at 0.141 [s]



Tot Rot
CFC_180
Max: 68.0 [degrees] at 0.057 [s]
Min: -27.7 [degrees] at 0.156 [s]



MOCX
Max: 83.7 [N-m] at 0.048 [s]
Min: -25.7 [N-m] at 0.150 [s]



Abdomen Test

Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269

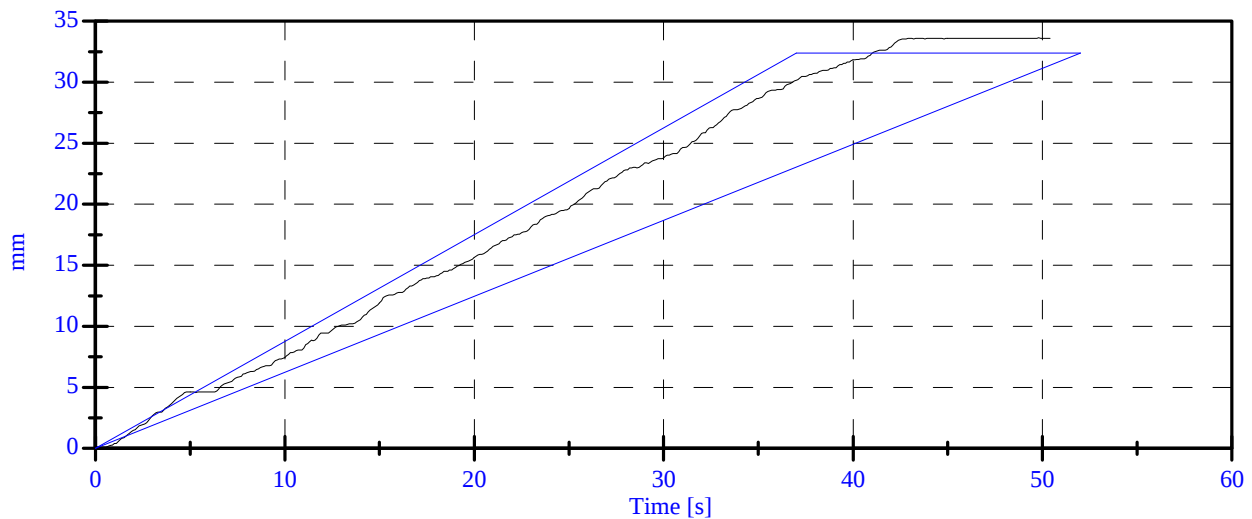
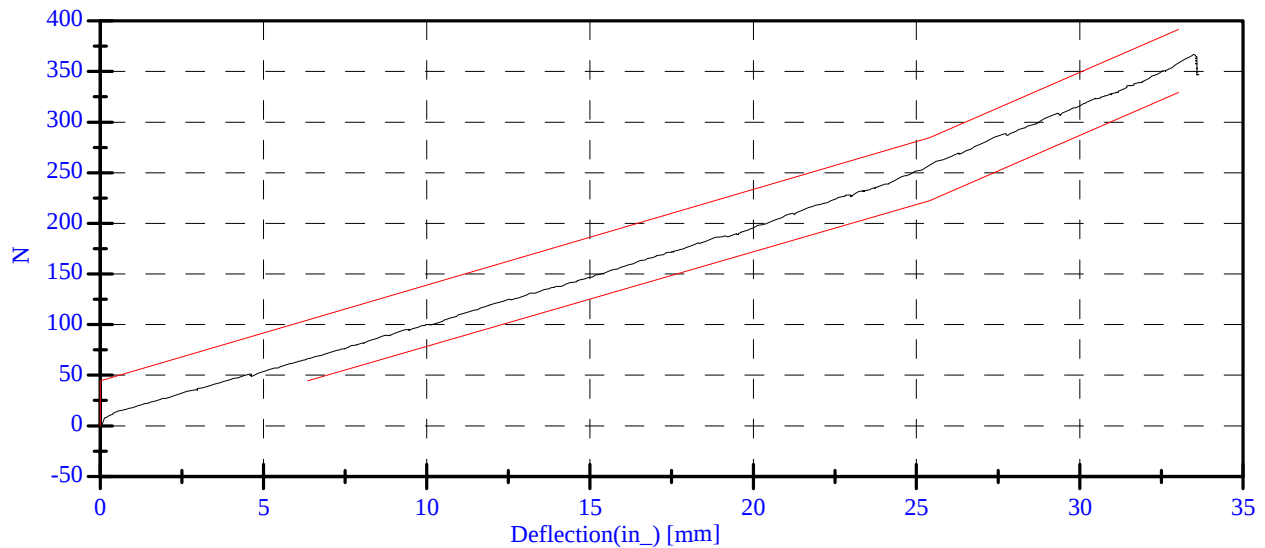
Date: 10-19-07

Sequential Test Number: 1 File: 269Ab 10-19-07

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	33.00 %	Passed
Force at 12.95 mm :	104.00-162.00 N	127.40 N	Passed
Force at 19.05 mm :	162.98-220.99 N	186.84 N	Passed
Force at 25.40 mm :	221.97-280.02 N	257.16 N	Passed
Force at 33.02 mm :	324.99-391.00 N	359.02 N	Passed

ABDOMINAL COMPRESSION TEST



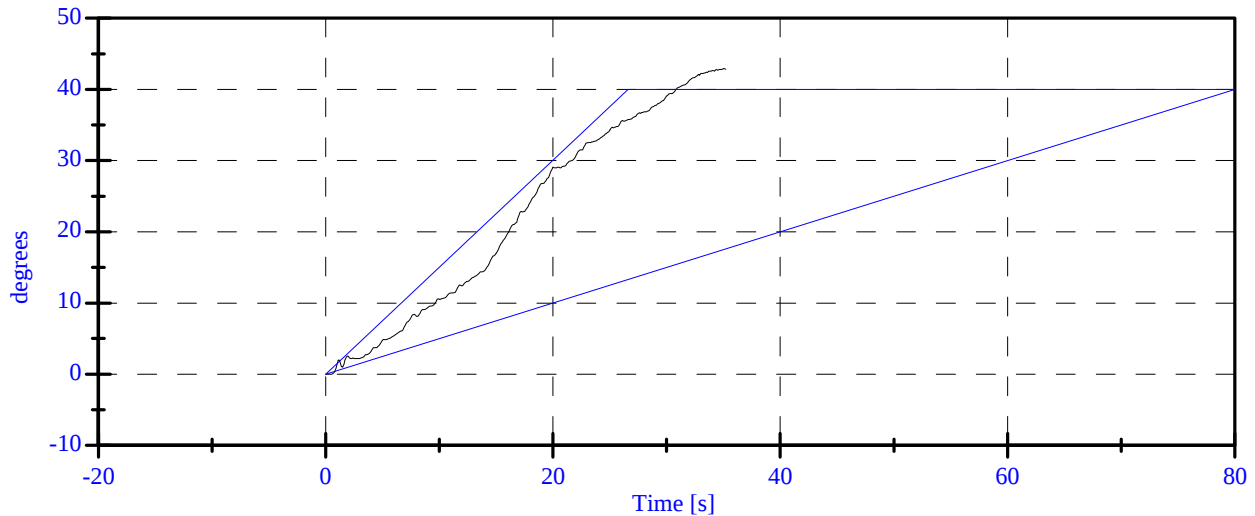
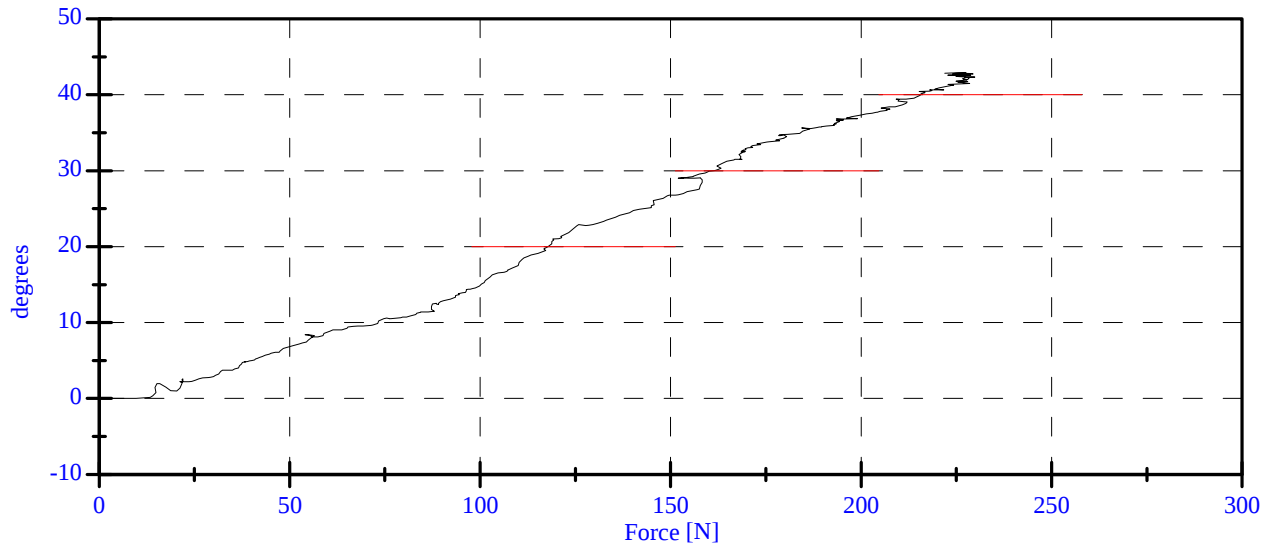
**Lumbar Spine
Post-Test
CONFIGURED FOR LEFT SIDE IMPACT**

ATD Serial No: 269
Date: 10-19-07

Sequential Test Number: 1 File: 269SP 10-19-07
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.1 C	Passed
Lab Humidity:	10-70 %	33.00 %	Passed
Force at 0 Deg:	0.00-26.69 N	1.30 N	Passed
Force at 20 Deg:	97.86-151.24 N	117.78 N	Passed
Force at 30 Deg:	151.24-204.62 N	160.87 N	Passed
Force at 40 Deg:	204.62-258.00 N	215.45 N	Passed
Return Angle	12 Deg Max	4.44 deg	Passed

LUMBAR SPINE FLEXION TEST



POST TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 269 Sequential Test Number: 4
 Date: October 4, 2007 Laboratory Technician: B. Swiecicki

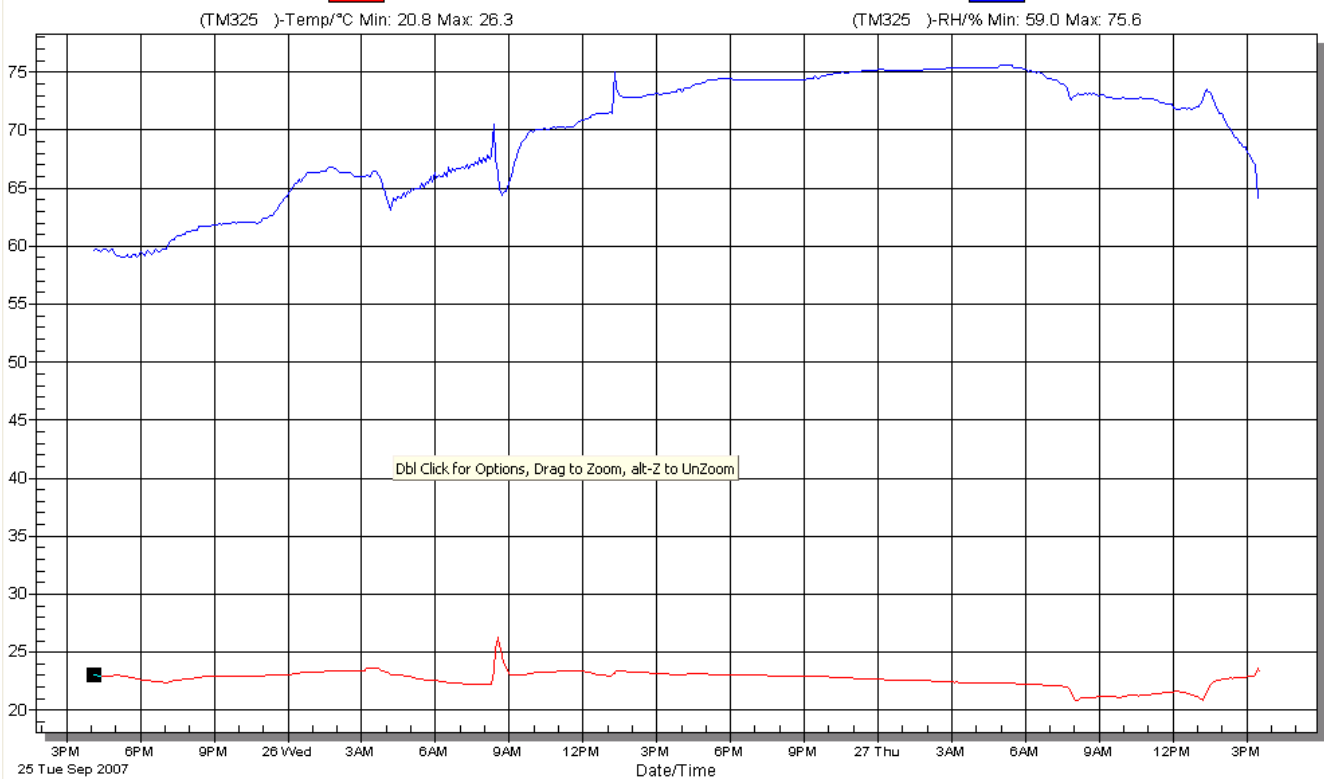
PART	ITEMS CHECKED	COMMENTS
SKIN	VISUAL INSPECTION	OK
HEAD	VISUAL, BALLAST, ACCELEROMETER MOUNT	OK
NECK	VISUAL, CABLE TORQUE	OK
SPINE BOX	VISUAL, BALLAST, WELDMENT, ACCELEROMETER MOUNT	OK
RIB CAGE	VISUAL, MEASURE, STIFFENERS	OK
STERNUM	VISUAL	OK
LUMBAR SPINE	VISUAL	OK
ABDOMEN	VISUAL	OK
PELVIS	VISUAL, PALPATE, ACCELEROMETER MOUNT	OK
UPPER LEGS	VISUAL	OK
KNEES	VISUAL, STOPS, INSERTS	OK
LOWER LEGS	VISUAL, RANGE OF MOTION	OK
ANKLES	VISUAL, RANGE OF MOTION	OK
FEET	VISUAL, RANGE OF MOTION	OK
JOINTS	1 TO 2 g RANGE	OK
OTHER	NONE	-

REMARKS: None

TEMPERATURE TRACE

9/26/2007 4:16, 44.2

Downloaded Data - Thursday, September 27, 2007



APPENDIX D

TEST EQUIPMENT AND CALIBRATION INFORMATION

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

SID/HIII INSTRUMENTATION

	FRONT SID/HIII NO.: 270		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	AC-P35812	ENDEVCO	11-Jul-07
HEAD AY	AC-P35761	ENDEVCO	09-Aug-07
HEAD AZ	AC-P19212	ENDEVCO	11-Jul-07
UPPER NECK FX	LC-1629Fx	DENTON	08-Nov-06
UPPER NECK FY	LC-1629Fy	DENTON	08-Nov-06
UPPER NECK FZ	LC-1629Fz	DENTON	08-Nov-06
UPPER NECK MX	LC-1629Mx	DENTON	08-Nov-06
UPPER NECK MY	LC-1629My	DENTON	08-Nov-06
UPPER NECK MZ	LC-1629Mz	DENTON	08-Nov-06
UPPER RIB	AC-P18558	ENDEVCO	11-Jul-07
LOWER RIB	AC-P18537	ENDEVCO	12-Jul-07
LOWER SPINE	AC-P18639	ENDEVCO	11-Jul-07
PELVIS	AC-P21171	ENDEVCO	11-Jul-07
UPPER RIB REDUNDANT	AC-P35818	ENDEVCO	11-Jul-07
LOWER RIB REDUNDANT	AC-P19222	ENDEVCO	12-Jul-07
LOWER SPINE REDUNDANT	AC-P16576	ENDEVCO	11-Jul-07
PELVIS REDUNDANT	AC-P22639	ENDEVCO	12-Jul-07

	REAR SID/HIII NO.: 269		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	AC-P22943	ENDEVCO	11-Jul-07
HEAD AY	AC-P35789	ENDEVCO	11-Jul-07
HEAD AZ	AC-P35803	ENDEVCO	09-Aug-07
UPPER NECK FX	LC-442Fx	DENTON	08-Nov-06
UPPER NECK FY	LC-442Fy	DENTON	08-Nov-06
UPPER NECK FZ	LC-442Fz	DENTON	08-Nov-06
UPPER NECK MX	LC-442Mx	DENTON	08-Nov-06
UPPER NECK MY	LC-442My	DENTON	08-Nov-06
UPPER NECK MZ	LC-442Mz	DENTON	08-Nov-06
UPPER RIB	AC-P39731	ENDEVCO	11-Jul-07
LOWER RIB	AC-P38896	ENDEVCO	11-Jul-07
LOWER SPINE	AC-P38188	ENDEVCO	11-Jul-07
PELVIS	AC-P38132	ENDEVCO	11-Jul-07
UPPER RIB REDUNDANT	AC-P39740	ENDEVCO	11-Jul-07
LOWER RIB REDUNDANT	AC-P35786	ENDEVCO	11-Jul-07
LOWER SPINE REDUNDANT	AC-P38216	ENDEVCO	11-Jul-07
PELVIS REDUNDANT	AC-P35757	ENDEVCO	11-Jul-07

REMARKS: None

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

VEHICLE AND MDB INSTRUMENTATION

	VEHICLE AND MDB INSTRUMENTS		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
RIGHT FRONT SILL (X)	AC-P16625	ENDEVCO	09-Aug-07
RIGHT FRONT SILL (Y)	AC-P17237	ENDEVCO	09-Aug-07
RIGHT FRONT SILL (Z)	AC-J32838	ENDEVCO	09-Aug-07
RIGHT REAR SILL (X)	AC-P18785	ENDEVCO	09-Aug-07
RIGHT REAR SILL (Y)	AC-P23926	ENDEVCO	09-Aug-07
RIGHT REAR SILL (Z)	AC-P32218	ENDEVCO	09-Aug-07
REAR FLOORPAN ABOVE AXLE (X)	AC-P23174	ENDEVCO	10-Aug-07
REAR FLOORPAN ABOVE AXLE (Y)	AC-J31101	ENDEVCO	10-Aug-07
REAR FLOORPAN ABOVE AXLE (Z)	AC-J31059	ENDEVCO	10-Aug-07
LEFT REAR SILL (Y)	AC-P18728	ENDEVCO	10-Aug-07
LEFT FRONT SILL (Y)	AC-P17242	ENDEVCO	09-Aug-07
LEFT FRONT DOOR CENTERLINE (Y)	-	-	-
RIGHT REAR SEAT OCCUPANT COMP. (Y)	AC-P16845	ENDEVCO	24-Apr-07
MID REAR OF LEFT FRONT DOOR (Y)	-	-	-
LEFT FRONT DOOR UPPER C/L (Y)	-	-	-
MID REAR OF LEFT REAR DOOR (Y)	-	-	-
LEFT REAR DOOR UPPER C/L (Y)	-	-	-
LOWER LEFT B- PILLAR (Y)	AC-P23960	ENDEVCO	03-Apr-07
MIDDLE LEFT B-PILLAR (Y)	AC-P23288	ENDEVCO	24-Apr-07
LOWER LEFT A-PILLAR (Y)	AC-FA2486	ICS	09-Jul-07
UPPER LEFT A-PILLAR (Y)	AC-P23788	ENDEVCO	24-Apr-07
FRONT SEAT TRACK (Y)	AC-P23358	ENDEVCO	10-Aug-07
REAR SEAT TRACK (Y)	AC-P26266	ENDEVCO	10-Aug-07
VEHICLE CG (X)	AC-P23939	ENDEVCO	09-Aug-07
VEHICLE CG (Y)	AC-P23993	ENDEVCO	09-Aug-07
VEHICLE CG (Z)	AC-P23999	ENDEVCO	09-Aug-07
MDB CG (X)	AC-C15007	ENDEVCO	12-Sep-07
MDB CG (Y)	AC-C16416	ENDEVCO	12-Sep-07
MDB CG (Z)	AC-C16499	ENDEVCO	12-Sep-07
MDB REAR FRAME MEMBER (X)	AC-C14948	ENDEVCO	12-Sep-07
MDB REAR FRAME MEMBER (Y)	AC-C16680	ENDEVCO	12-Sep-07

REMARKS: None