

REPORT NUMBER: SNCAP-CAL-09-03

**NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST**

**NISSAN MOTOR COMPANY
2009 NISSAN XTERRA
4-DOOR SUV**

NHTSA NUMBER: M95204

**PREPARED BY:
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Test Date: September 16, 2008

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
RULEMAKING
OFFICE OF CRASHWORTHINESS STANDARDS
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Date: November 3, 2008

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 2009 Nissan Xterra 4-Door SUV 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 16, 2008. The impact velocity of the Moving Deformable Barrier (MDB) was 62.39 km/h, and the ambient temperature at the struck side (driver side) of the vehicle was 22°C. The target vehicle's maximum post test static crush was 183 mm at level 1. 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;">18.6</td> <td style="text-align: center;">22.0</td> </tr> <tr> <td>Left Lower Rib (LLR) Accel., g</td> <td style="text-align: center;">19.4</td> <td style="text-align: center;">16.3</td> </tr> <tr> <td>Lower Spine (T₁₂) Accel., g</td> <td style="text-align: center;">14.9</td> <td style="text-align: center;">17.6</td> </tr> <tr> <td>Thoracic Trauma Index (TTI)</td> <td style="text-align: center;">17</td> <td style="text-align: center;">20</td> </tr> <tr> <td>Pelvis (PEV) Accel., g</td> <td style="text-align: center;">21</td> <td style="text-align: center;">28</td> </tr> <tr> <td>HIC</td> <td style="text-align: center;">48.9</td> <td style="text-align: center;">158.5</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	18.6	22.0	Left Lower Rib (LLR) Accel., g	19.4	16.3	Lower Spine (T ₁₂) Accel., g	14.9	17.6	Thoracic Trauma Index (TTI)	17	20	Pelvis (PEV) Accel., g	21	28	HIC	48.9	158.5
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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

This side impact test was conducted as part of the FY' 2007 test program sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-03-D-22005. The purpose of this test was to evaluate side impact protection in a 2009 Nissan Xterra 4-Door SUV manufactured by Nissan Motor Company. 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 2009 Nissan Xterra 4-Door SUV was impacted on the left (driver's) side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 62.39 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 2186.0 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 16, 2008.

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/HIIIs) can be found in Appendix A.

Two 50th percentile adult male SID/HIII'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/HIII was instrumented in the following locations:

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

The test vehicle was instrumented with twenty-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 183 mm at level 1, 1800 mm rearward of the left vertical impact point. The driver and passenger SID/HIII's, Serial Nos. 269 and 270 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/HIII's, vehicle, and MDB response data traces. Appendix C contains the SID/HIII'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	*48.9	*54.6	*85.8	17	21
Passenger	158.5	60.5	86.3	20	28

* HIC was calculated from the Redundant Head Resultant.

SUPPLEMENTAL RESTRAINT INFORMATION

Restraint Type	Left Front (Driver)		Left Rear (Passenger)	
	Installed	Deployed	Installed	Deployed
Front Airbag	Yes	Yes	NA	NA
Side Torso Airbag	Yes	Yes	NA	NA
Side Head/Torso Combination Airbag	NA	NA	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:	2009 Nissan Xterra	NHTSA No.	M95204
Test Program:	NCAP Side Impact	Test Date:	September 16, 2008

TEST VEHICLE INFORMATION AND VEHICLE OPTIONS

Make	Nissan Motor Company	Driver Front Airbag	Yes
Model	Xterra	Driver Side Curtain Airbag	Yes
Body Style	4-Door SUV	Driver Side Torso Airbag	Yes
NHTSA No.	M95204	Driver Pretensioners	Yes
VIN	5N1AN08WX9C501533	Driver Load Limiters	Yes
Color	Red	Driver Power Seats	No
Engine Disp.(L)	4.0	Rear Pass. Side Curtain Airbag	Yes
Engine Cylinders	6	Rear Pass. Side Torso Airbag	No
Engine Placement	Lateral	Rear Pass. Pretensioners	No
Transmission Type	Automatic	Rear Pass. Load Limiters	No
Transmission Speeds	5	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	August 28, 2008	Power Door Locks	Yes
Odometer Reading (km)	40	Automatic Door Locks (ADL)	Yes
Dealer	West-Herr Nissan Orchard Park, NY	Owner's Manual Details Instructions on Disabling ADLs	Yes

DATA FROM CERTIFICATION LABEL

Manufactured By	Nissan Motor Company	GVWR (kg)	2449
Date of Manufacture	07/08	GAWR Front (kg)	1214
		GAWR Rear (kg)	1344

VEHICLE CAPACITY DATA

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket	Bench		
Number Of Occupants	2	3		5
Capacity Wt. (VCW) (kg)				400
Cargo Wt. (RCLW) (kg)				59.8

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

Test Vehicle:	2009 Nissan Xterra	NHTSA No.	M95204
Test Program:	NCAP Side Impact	Test Date:	September 16, 2008

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	530.0	461.0		586.0	559.0		580.5	556.5	
Right	kg	527.0	453.0		524.0	525.0		520.5	528.5	
Ratio	%	53.6	46.4		50.6	49.4		50.4	49.6	
Totals	kg	1057.0	914.0	1971.0	1110.0	1084.0	2194.0	1101.0	1085.0	2186.0

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1971.0
Weight of 2 P572E ATDs (81.2 kg each)	kg	162.4
Rated Cargo/Luggage Weight (RCLW)	kg	59.8
Calculated Vehicle Target Weight (TVTW)	kg	2193.2

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

Weight of Ballast (including instrumentation package and cameras): 52.6 kg

TEST VEHICLE ATTITUDES

	Units	LF	RF	LR	RR
As Delivered	mm	880	883	919	917
Fully Loaded	mm	863	877	886	894
As Tested	mm	864	878	886	898

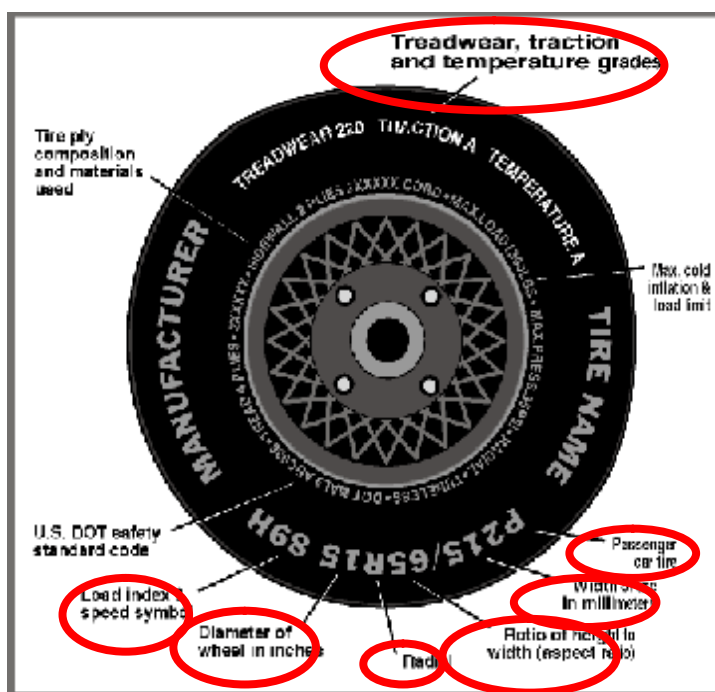
TEST VEHICLE VERTICAL IMPACT LINE AND CG

Measurement Description	Units	Value
Test Vehicle Wheel Base	mm	2700
Target Impact Point Aft of Front Axle	mm	410
Actual Impact Point Aft of Front Axle	mm	429
As Tested CG (aft of front axle)	mm	1340

DATA SHEET NO. 2

TEST VEHICLE TIRE INFORMATION

Test Vehicle:	2009 Nissan Xterra	NHTSA No.	M95204
Test Program:	NCAP Side Impact	Test Date:	September 16, 2008



DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	300	300
Cold / Test Pressure (kPa)	240	240
Recommended Tire Size	P265/70R16	P265/70R16
Tire Size on Vehicle	P265/70R16	P265/70R16
Tire Manufacturer	General	General
Tire Name	Grabber AW	Grabber AW
Tire Type	Passenger	Passenger
Tire Width (mm)	265	265
Ratio of Height to Width (aspect ratio)	70	70
Radial	Radial	Radial
Wheel Diameter	16	16
Load Index & Speed Symbol	111S	111S
Treadwear	420	420
Traction Grade	B	B
Temperature Grade	B	B

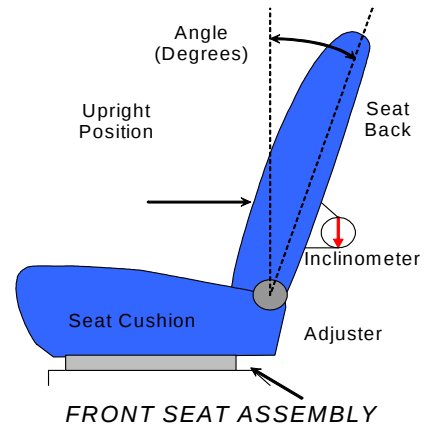
DATA SHEET NO. 3

TEST VEHICLE INFORMATION

Test Vehicle:	2009 Nissan Xterra	NHTSA No.	M95204
Test Program:	NCAP Side Impact	Test Date:	September 16, 2008

NORMAL DESIGN RIDING POSITION

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

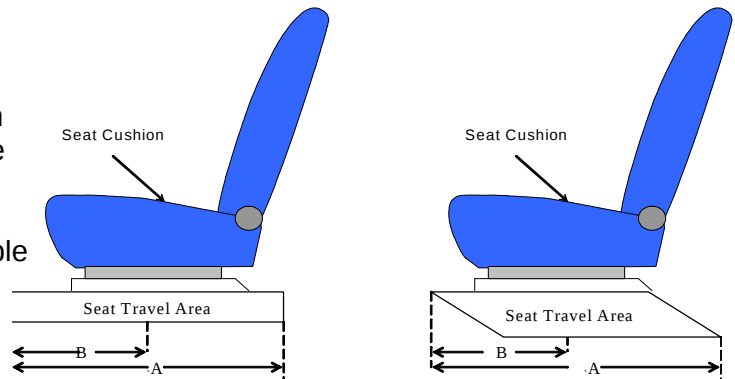


SEAT BACK POSITION

	Driver Seat	Rear Seat
Test Detent (forward-most detent defined as 0)	6	N/A
Angle (deg. from forward-most locking position)	--	N/A
Alternative Measurements to Verify Test Position	11 degrees from head restraint post	N/A

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)	240	N/A
Test Position (B) (mm)	120	N/A
Test Detent (forward-most detent defined as 0)	10	N/A
Total Number of Detents (including 0)	20	N/A

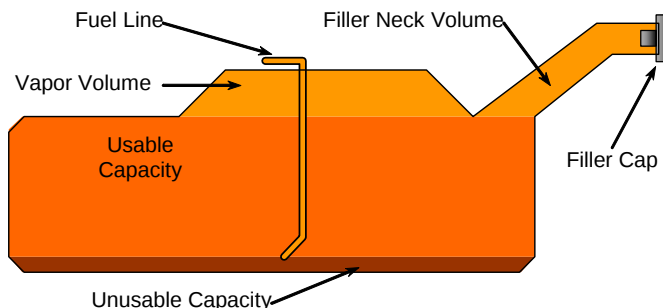
DATA SHEET NO. 3 (CONTINUED)

TEST VEHICLE INFORMATION

Test Vehicle: 2009 Nissan Xterra	NHTSA No. M95204
Test Program: NCAP Side Impact	Test Date: September 16, 2008

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.



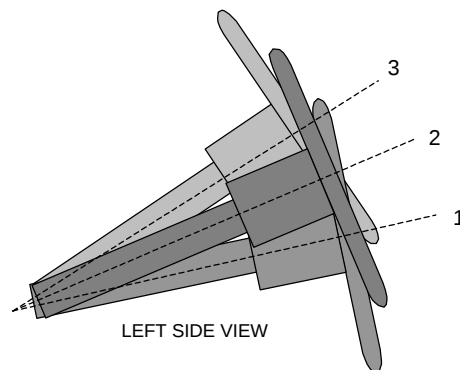
VEHICLE FUEL TANK ASSEMBLY

FUEL TANK CAPACITY

	Liters
Usable Capacity of "Standard" Fuel Tank	79.9
Usable Capacity of "Optional" Fuel Tank	N/A
Stoddard Used For Test (92%-94% of Fuel Tank Usable Capacity)	74.3

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	N/A	--	6
Geometric Center Position No. 2 *	N/A	24.5	3
Uppermost Position No. 3	N/A	33.3	0

* Test position

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

Test Vehicle:	2009 Nissan Xterra	NHTSA No.	M95204
Test Program:	NCAP Side Impact	Test Date:	September 16, 2008

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	62.39
Trap No. 2 Velocity (Redundant)	km/h	61.1 to 62.7	62.39
Impact angle with respect to impactor	°	88.5° to 91.5°	89.7

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

Measured Parameter	Units	Requirement	Value
Horizontal Offset	mm	+/- 50	19 mm rearward
Vertical Offset	mm	+/-20	10 mm above

DATA SHEET NO. 5
POST TEST OBSERVATIONS

Test Vehicle:	2009 Nissan Xterra	NHTSA No.	M95204
Test Program:	NCAP Side Impact	Test Date:	September 16, 2008

TEST DUMMY INFORMATION AND CONTACT POINTS

Description	Front Seat SID/HIII	Rear Seat SID/HIII
Dummy Type / Serial No.	SID/HIII / 269	SID/HIII / 270
Head Contact	Left Side Curtain Airbag	Left Side Curtain Airbag
Upper Torso Contact	Torso Airbag	Door Trim
Lower Torso Contact	Torso Airbag	Armrest
Left Knee Contact	No Contact	Door Trim
Right Knee Contact	No Contact	No Contact

POST TEST DOOR OPENING AND SEAT TRACK INFORMATION

Description	Front	Rear
Locked/Unlocked Doors	Unlocked	Unlocked
Left Side Door Opening	Closed, latched, and inoperable without tools	Closed, latched, and inoperable without tools
Right Side Door Opening	Closed, latched, and operable without tools	Closed, latched, and operable without tools
Seat Movement	None	None
Seat Back Failure	None	None

POST TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	The Left side B-Pillar was pushed inboard during test event
Sill Separation	No visible tears or separations
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	Yes	NA	NA
Side Torso Airbag	Yes	Yes	NA	NA
Side Head/Torso Combination Airbag	NA	NA	NA	NA
Curtain Airbag	Yes	Yes	Yes	Yes

DATA SHEET NO. 6

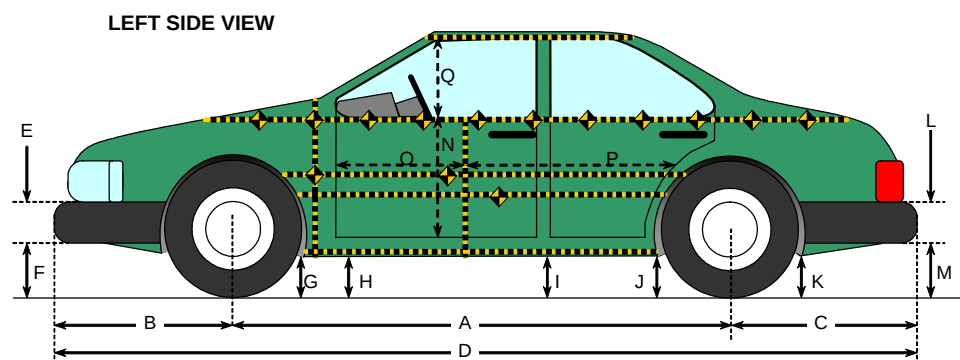
VEHICLE PRE-TEST AND POST-TEST MEASUREMENTS

Test Vehicle: 2009 Nissan Xterra

NHTSA No. M95204

Test Program: NCAP Side Impact

Test Date: September 16, 2008



All Measurements in mm

Code	Measurement Description	Pre-Test (delivered)	Pre-Test (as tested)	Post-Test (as tested)	Difference
A	Wheelbase	2700	2700	2700	0
B	Front Axle to FSOV	785	785	801	-16
C	Rear Axle to RSOV	1062	1062	1046	16
D	Total Length at Centerline	4547	4547	4547	0
E	Front Bumper Thickness	135	135	135	0
F	Front Bumper Bottom to Ground	392	382	390	-8
G	Sill Height at Front Wheel Well	342	322	323	-1
H	Sill Height at Front Door Leading Edge	379	359	351	8
I	Sill Height at "B" Pillar	396	369	372	-3
J1	Sill Height at Rear Wheel Well	378	350	362	-12
J2	Pinch Weld Height at Rear Wheel Well	400	372	375	-3
K	Sill Height Aft of Rear Wheel Well	388	352	347	5
L	Rear Bumper Thickness	230	230	230	0
M	Rear Bumper Bottom to Ground	488	454	452	2
N	Sill Height to Window Bottom Sill	733	733	737	-4
O	Front Door Leading Edge to Impact CL	641	641	635	6
P	Rear Door Trailing Edge to Impact CL	1187	1187	1158	29
Q	Front Window Opening	502	502	502	0
R	Right Side Length	4482	4482	4483	-1
S	Left Side Length	4483	4483	4481	2
T	Vehicle Width at "B" Post	1777	1777	1701	76

DATA SHEET NO. 7

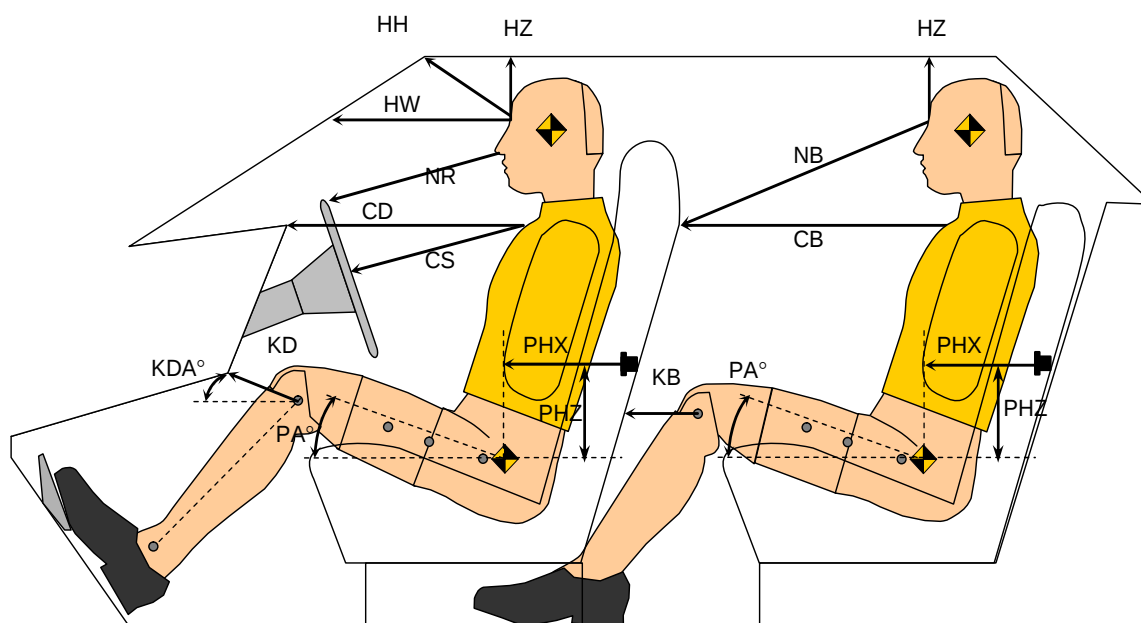
SID/HIII LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2009 Nissan Xterra

NHTSA No. M95204

Test Program: NCAP Side Impact

Test Date: September 16, 2008

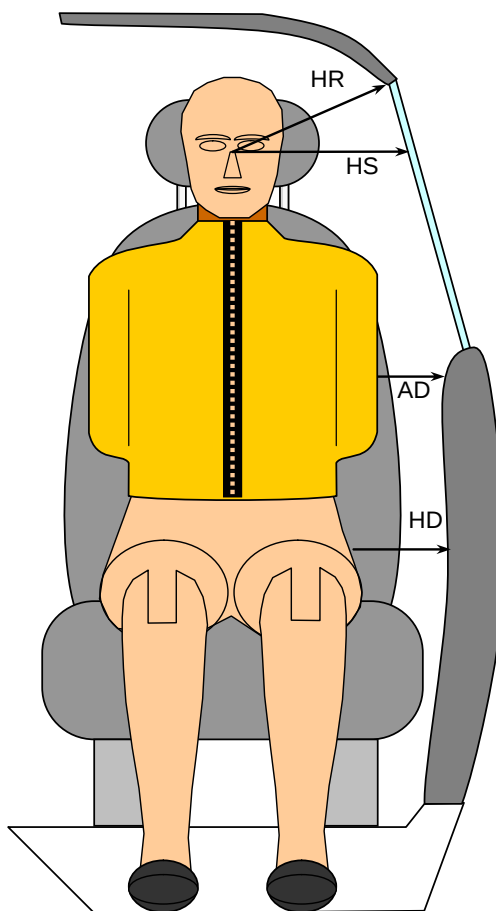


Driver Code	Pass. Code	Measurement Description	Driver S/N 269		Passenger S/N 270	
			Length(mm)	Angle(°)	Length(mm)	Angle(°)
HH		Head to Header	396			
HW		Head to Windshield	613			
HZ	HZ	Head to Roof	155		185	
NR	NB	Nose to Rim/Nose to Seatback	444		603	
CD	CB	Chest to Dash or Seatback	565		533	
CS		Chest to Steering Wheel	283			
KDL	KBL	Left Knee to Dash or Seatback	140	29	225	25
KDR	KBR	Right Knee to Dash or Seatback	130	25	215	30
PA	PA	Pelvic Angle		23.4		23.6
PHX	PHX	H-Point to Striker (X-Axis)	242		218	
PHZ	PHZ	H-Point to Striker (Z-Axis)	65		219	

DATA SHEET NO. 8

SID/HIII LATERAL CLEARANCE DIMENSIONS

Test Vehicle:	2009 Nissan Xterra	NHTSA No.	M95204
Test Program:	NCAP Side Impact	Test Date:	September 16, 2008



FRONT VIEW OF DUMMY

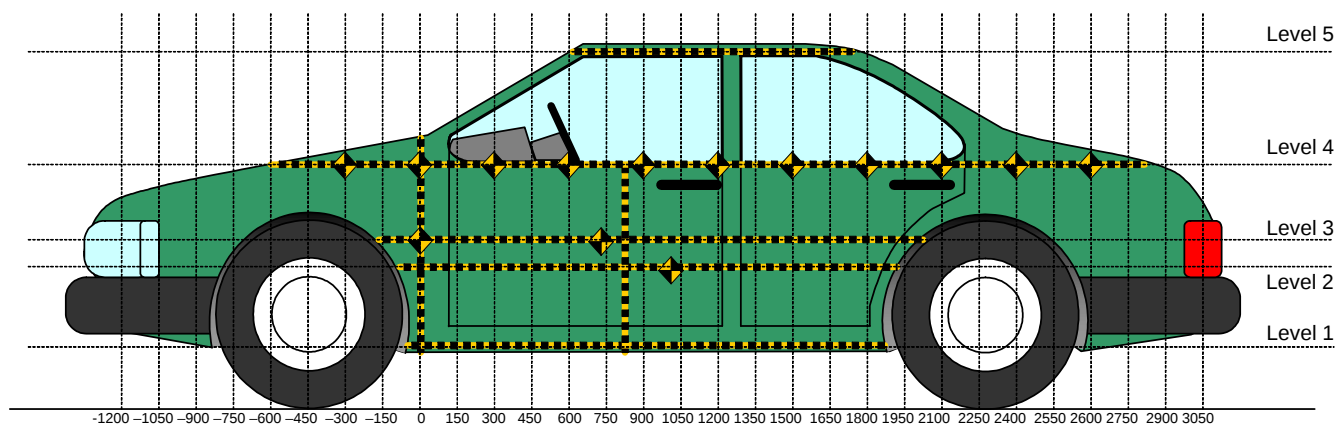
Code	Measurement Description	Units	Driver S/N 269	Passenger S/N 270
HR	Head to Side Header	mm	185	185
HS	Head to Side Window	mm	322	315
AD ₁	Arm to Door (at upper rib level)	mm	**	119
AD ₂	Arm to Door (at lower rib level)	mm	107	125
HD	H-Point to Door	mm	175	171

** Arm to Door at the upper rib level could not be measured.

DATA SHEET NO. 9

VEHICLE SIDE MEASUREMENTS

Test Vehicle:	2009 Nissan Xterra	NHTSA No.	M95204
Test Program:	NCAP Side Impact	Test Date:	September 16, 2008



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	183	413	1800
2	Occupant H-Point	165	722	900
3	Mid Door	149	820	750
4	Window Sill	55	1100	1350
5	Window	2	1779	2400
	Maximum Penetration	183		

DATA SHEET NO. 10

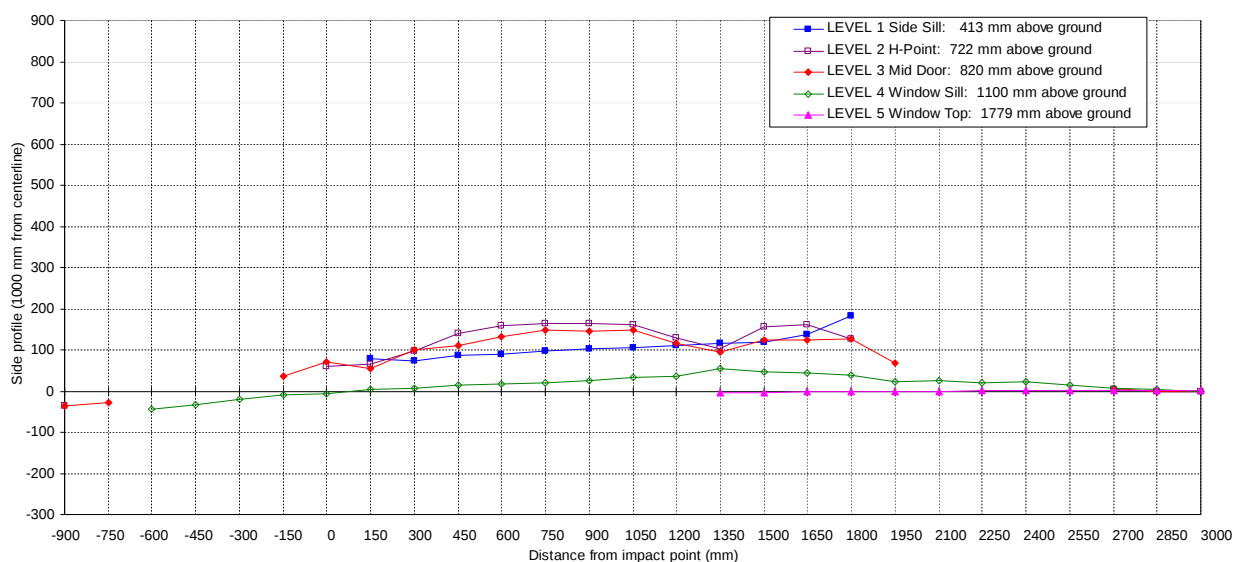
VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2009 Nissan Xterra

NHTSA No. M95204

Test Program: NCAP Side Impact

Test Date: September 16, 2008



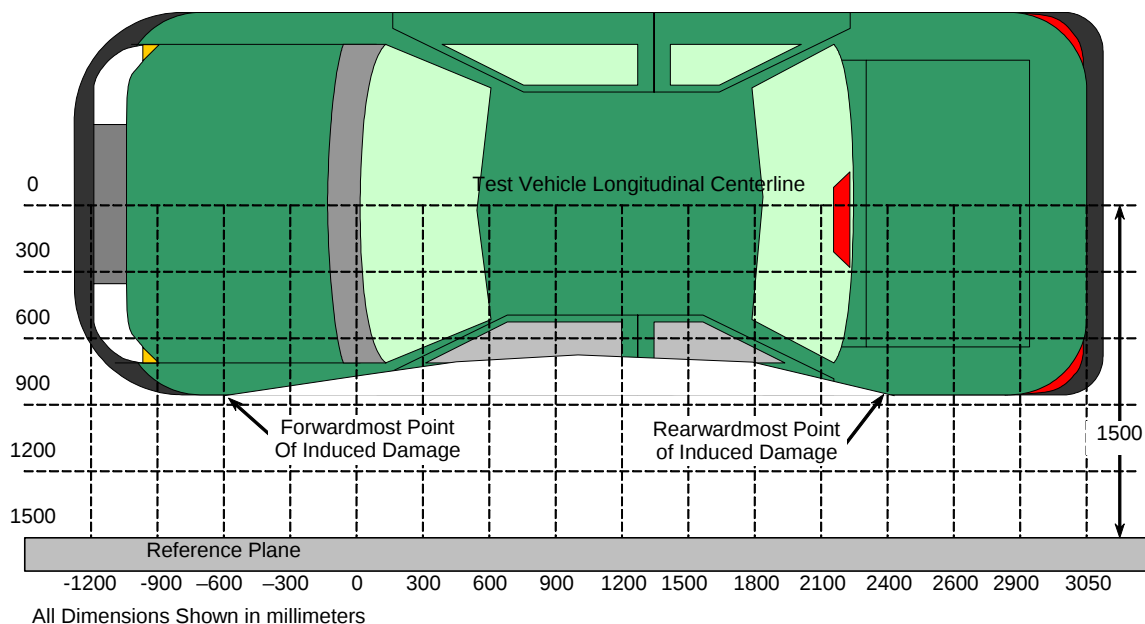
NOTE: All dimensions are in millimeters with a tolerance of ± 3 mm

			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	413	PRE	--	--	--	--	--	--	--	157	188	184	186	184	184	185	186	188	193	188	128	--	--	--	--	--	--	--	--	--		
SIDE		POST	--	--	--	--	--	--	--	235	261	270	276	281	286	291	298	304	313	325	311	--	--	--	--	--	--	--	--			
SILL		CRUSH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	78	73	86	90	97	102	106	112	116	120	137	183	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
LEVEL 2	722	PRE	99	--	--	--	--	--	81	116	122	119	117	116	115	114	114	114	113	113	91	--	--	--	--	--	83	92	222			
H		POST	64	--	--	--	--	--	140	182	220	259	277	280	280	275	244	218	268	274	219	--	--	--	--	--	87	90	220			
POINT		CRUSH	-35	N/A	N/A	N/A	N/A	N/A	59	66	98	140	160	164	165	161	130	104	155	161	128	N/A	N/A	N/A	N/A	N/A	N/A	4	-2	-2		
LEVEL 3	820	PRE	110	87	--	--	--	73	81	119	118	115	113	112	111	110	110	110	110	109	98	74	--	--	--	--	81	104	153			
MID		POST	74	58	--	--	--	110	153	173	218	225	245	261	257	259	225	205	235	234	226	142	--	--	--	--	88	104	153			
DOOR		CRUSH	-36	-29	N/A	N/A	N/A	37	72	54	100	110	132	149	146	149	115	95	125	125	128	68	N/A	N/A	N/A	N/A	N/A	7	0	0		
LEVEL 4	1100	PRE	--	--	198	181	167	157	149	145	141	139	137	134	133	131	130	131	131	131	129	99	90	88	89	121	171	185				
WINDOW		POST	--	--	154	148	146	148	143	148	149	153	154	155	159	165	167	186	179	175	169	152	124	110	110	104	127	174	185			
SILL		CRUSH	N/A	N/A	-44	-33	-21	-9	-6	3	8	14	17	21	26	34	37	55	48	44	38	23	25	20	22	15	6	3	0			
LEVEL 5	1779	PRE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	490	440	432	427	427	427	427	429	433	438	443	486			
WINDOW		POST	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	487	437	431	427	427	427	428	431	435	439	445	487			
TOP		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	N/A	N/A	N/A	-3	-3	-1	0	0	0	1	2	2	1	2	1			

DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle:	2009 Nissan Xterra	NHTSA No.	M95204
Test Program:	NCAP Side Impact	Test Date:	September 16, 2008



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)	2700	3	81	88	7
2	2130	4	97	121	24
3	1560	2	113	270	157
4	990	2	114	277	163
5	420	2	120	251	131
6 (LF)	-150	3	73	110	37

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

DATA SHEET NO. 12

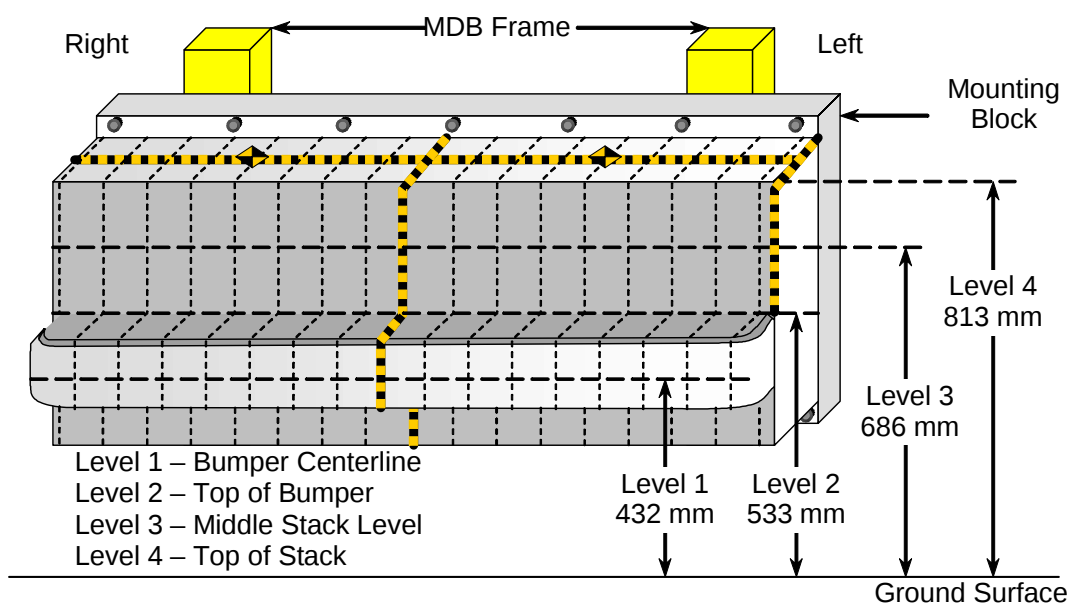
DEFORMABLE BARRIER HONEYCOMB FACE STATIC CRUSH

Test Vehicle: 2009 Nissan Xterra

NHTSA No. M95204

Test Program: NCAP Side Impact

Test Date: September 16, 2008



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 RIGHT OF CENTER (mm)									DISTANCE LEFT OF CENTER (mm)							
LEVEL	HEIGHT AT CL (mm)*		-800	-700	-600	-500	-400	-300	-200	-100	0	100	200	300	400	500	600	700	800
LEVEL 4 TOP STACK	811	PRE	411	412	412	412	412	412	413	413	413	413	413	413	413	413	413	413	412
		POST	246	274	285	287	243	267	295	329	332	334	335	336	320	307	286	262	221
		CRUSH	165	138	127	125	169	145	118	84	81	79	78	77	93	106	127	151	191
LEVEL 3 MID LEVEL	682	PRE	411	411	412	412	412	412	412	412	413	412	412	412	412	412	412	412	412
		POST	255	312	310	300	272	300	315	328	335	340	344	344	341	335	319	280	248
		CRUSH	156	99	102	112	140	112	97	84	78	72	68	68	71	77	93	132	164
LEVEL 2 TOP BUMPER	542	PRE	411	412	412	412	412	412	412	412	413	412	412	412	412	412	412	412	412
		POST	250	245	244	254	286	275	271	259	251	242	244	241	237	237	236	234	236
		CRUSH	161	167	168	158	126	137	141	153	162	170	168	171	175	175	176	178	176
LEVEL 1 MID BUMPER	430	PRE	501	513	513	513	513	513	513	514	514	514	514	514	514	514	514	514	505
		POST	326	344	342	339	338	337	336	335	335	334	333	332	331	329	325	318	305
		CRUSH	175	169	171	174	175	176	177	179	179	180	181	182	183	185	189	196	200

DATA SHEET NO. 13

VEHICLE ACCELEROMETER LOCATIONS

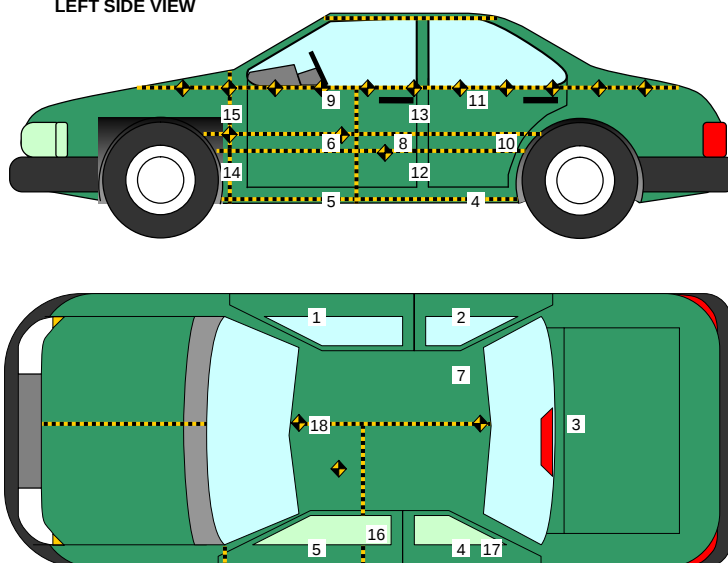
Test Vehicle: 2009 Nissan Xterra

NHTSA No. M95204

Test Program: NCAP Side Impact

Test Date: September 16, 2008

LEFT SIDE VIEW



Loc. No.	Accelerometer Location	Measurements (mm)		
		X	Y	Z
1	Right Sill at Front Seat	2815	678	480
2	Right Sill at Rear Seat	1956	699	529
3	Rear Floorpan Above Axle	1192	52	834
4	Left Sill at Rear Door	1960	-700	526
5	Left Sill at Front Door	2833	-679	472
6	Left Front Door C/L**	-	-	-
7	Rear Occupant Compartment	1911	546	534
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	2086	-686	643
13	Left Middle B-Post	2039	-697	1118
14	Left Lower A-Post	3149	-674	672
15	Left Middle A-Post	3006	-661	1313
16	Front Seat Track	2241	-594	622
17	Rear Seat Track or Structure	1148	-555	858
18	Vehicle CG	2463	33	721

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

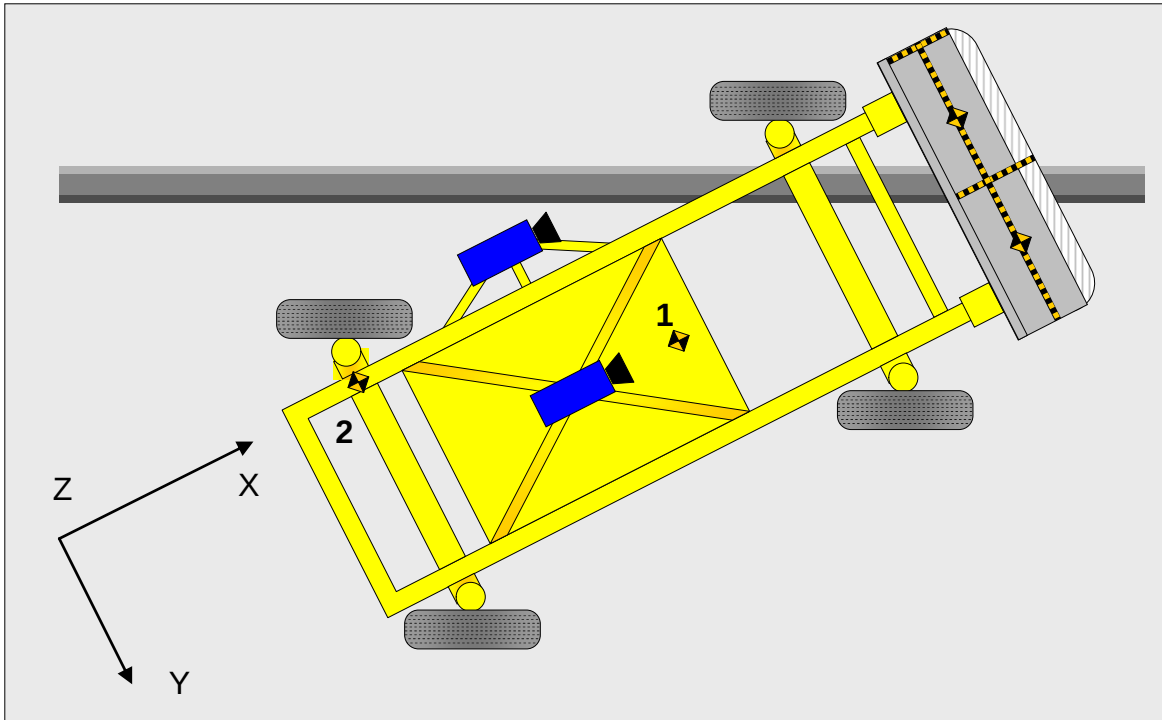
MDB ACCELEROMETER LOCATIONS

Test Vehicle: 2009 Nissan Xterra

NHTSA No. M95204

Test Program: NCAP Side Impact

Test Date: September 16, 2008



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:	2009 Nissan Xterra	NHTSA No.	M95204
Test Program:	NCAP Side Impact	Test Date:	September 16, 2008

	Elements	Pre-Test (mm)
1	Total Length	4547
2	Total Width	1777
3	Bumper Top Height	524
4	Bumper Bottom Height	383
5	Longitudinal Member Top Height	557
6	Distance between Longitudinal Members	882
7	Longitudinal Member Width	51
8	Engine Top Height	1125
9	Engine Bottom Height	259
10	Engine and gearbox width	--
11	Front bumper-engine distance	639
12	Front shock absorber fixing height	909
13	Bonnet leading edge height	1031
14	Front shock absorber fixing width	951
15	Front bumper – front axle distance	785
16	Front axle – a pillar distance	597
17	A-pillar – B-pillar distance	1127
18	B-Pillar – rear axle distance	976
19	B-pillar – C-pillar distance	937
20	Roof sill bottom height	1617
21	Roof sill top height	1716
22	Floor sill bottom height	481
23	Floor sill top height	491

DATA SHEET NO. 16

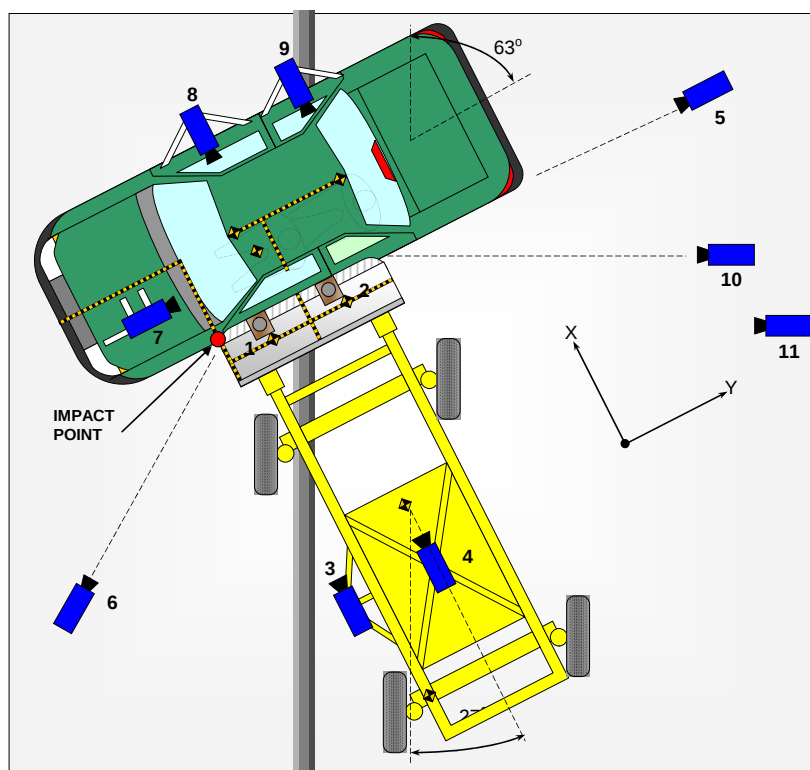
HIGH SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2009 Nissan Xterra

NHTSA No. M95204

Test Program: NCAP Side Impact

Test Date: September 16, 2008



No.	Camera View	Location (mm)			Angle (deg)	Lens (mm)	Film Speed (fps)
		X	Y	Z			
1	Overhead Overall	72	812	-4880	-90	8	1000
2	Overhead Close-up	195	855	-4880	-90	28	1000
3	MDB Onboard, Impact Point Close-up	-1470	0	-847	0	13	500
4	MDB Onboard, Centerline of Impact	-1140	838	-1587	-17	7.5	500
5	Right Side, Ground Level, Overall	-320	10980	1015	-1	50	1000
6	Left Side, Ground Level, Overall	-2310	-1810	910	-2	24	1000
7	Vehicle Onboard Front SID/HIII, Front	535	-255	1530	-10	25	500
8	Vehicle Onboard Front SID/HIII, Side	1595	935	1280	-6	12.5	500
9	Vehicle Onboard Rear SID/HIII, Side	1595	1825	1290	-8	12.5	500
10	Secondary Impact Point	-5100	2200	1010	-3	50	1000
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

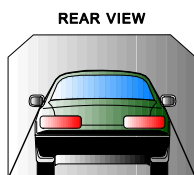
Test Vehicle:	2009 Nissan Xterra	NHTSA No.	M95204
Test Program:	NCAP Side Impact	Test Date:	September 16, 2008

FUEL SYSTEM INTEGRITY POST IMPACT DATA

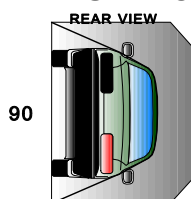
Time Interval	FMVSS 301 Maximum Allowable Spillage	Spillage (g)
Impact Until Motion Ceases	28 g	0
First Five Minutes Following Impact	142 g	0
Next 25 Minutes	28 g / 1 minute	0

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

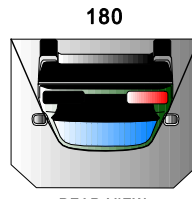
STATIC ROLLOVER DATA



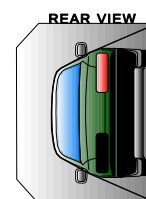
0/360



90



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	09	seconds	5	minutes	6	minutes	9	seconds	7	minutes
90° - 180°	1	minutes	07	seconds	5	minutes	6	minutes	7	seconds	7	minutes
180°-270°	1	minutes	03	seconds	5	minutes	6	minutes	3	seconds	7	minutes
270°-360°	1	minutes	05	seconds	5	minutes	6	minutes	5	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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A-4	Vehicle Tire Placard Label	A-5
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A-39	Pre-Test Left Occupant Compartment View of Driver	A-23
A-40	Post-Test Left Occupant Compartment View of Driver	A-23
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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-17: Pre-Test Right Side View



Figure A-18: Post-Test Right Side 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

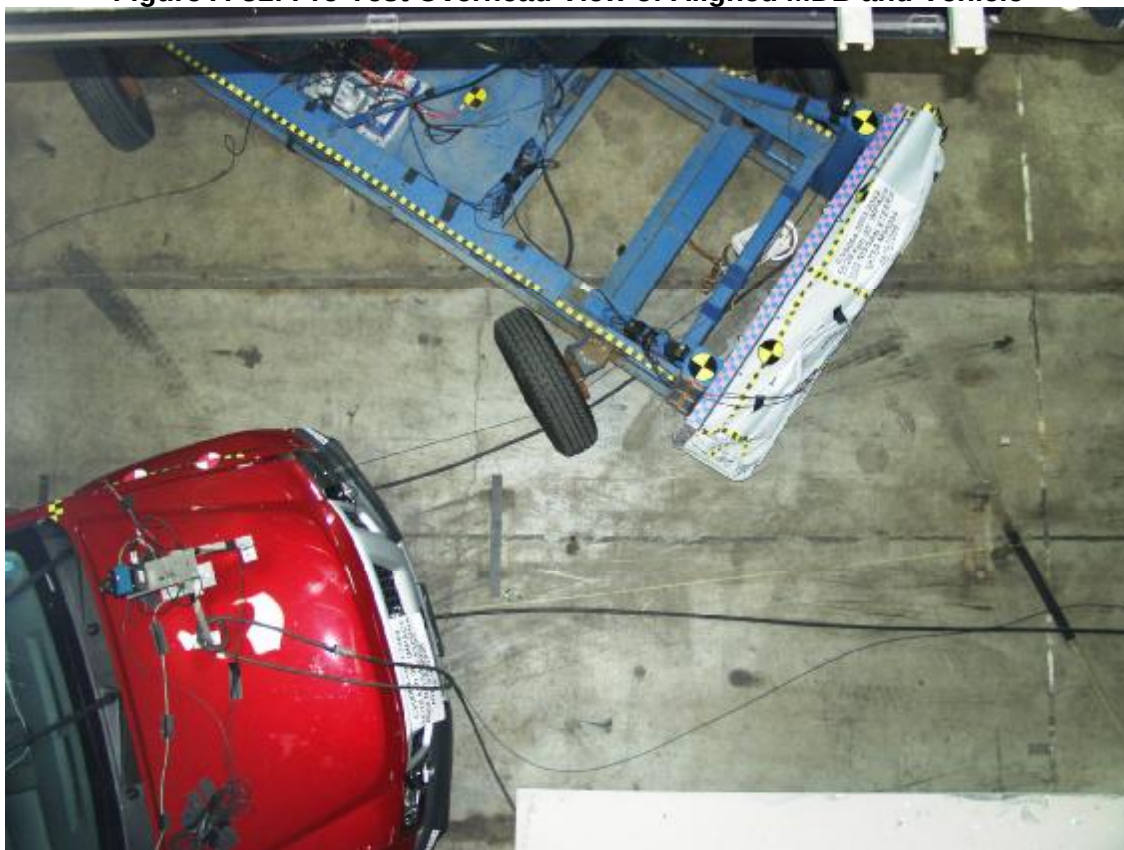


Figure A-32: Post-Test Overhead View of MDB and Vehicle



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



Figure A-55: Impact Photo

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
V2P1 Head Ay
V2P1 Head Az
V2P1 Head Ax Redundant
V2P1 Head Ay Redundant
V2P1 Head Az Redundant
V2P1 Upper Neck Fx
V2P1 Upper Neck Fy
V2P1 Upper Neck Fz
V2P1 Upper Neck Mx
V2P1 Upper Neck My
V2P1 Upper Neck Mz
V2P1 Upper Rib Ay
V2P1 Upper Rib Redundant Ay
V2P1 Lower Rib Ay
V2P1 Lower Rib Redundant Ay
V2P1 Lower Spine Ay
V2P1 Lower Spine Redundant Ay
V2P1 Pelvic Ay
V2P1 Pelvic Redundant Ay
V2P4 Head Ax
V2P4 Head Ay
V2P4 Head Az
V2P4 Head Ax Redundant
V2P4 Head Ay Redundant
V2P4 Head Az Redundant
V2P4 Upper Neck Fx
V2P4 Upper Neck Fy
V2P4 Upper Neck Fz
V2P4 Upper Neck Mx
V2P4 Upper Neck My
V2P4 Upper Neck Mz
V2P4 Upper Rib Ay
V2P4 Upper Rib Redundant Ay

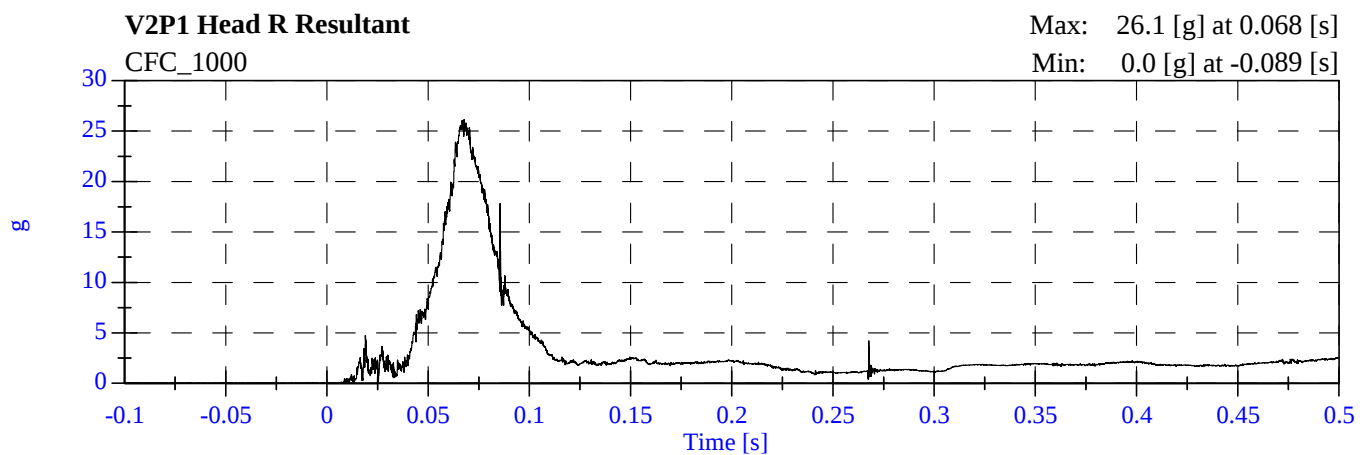
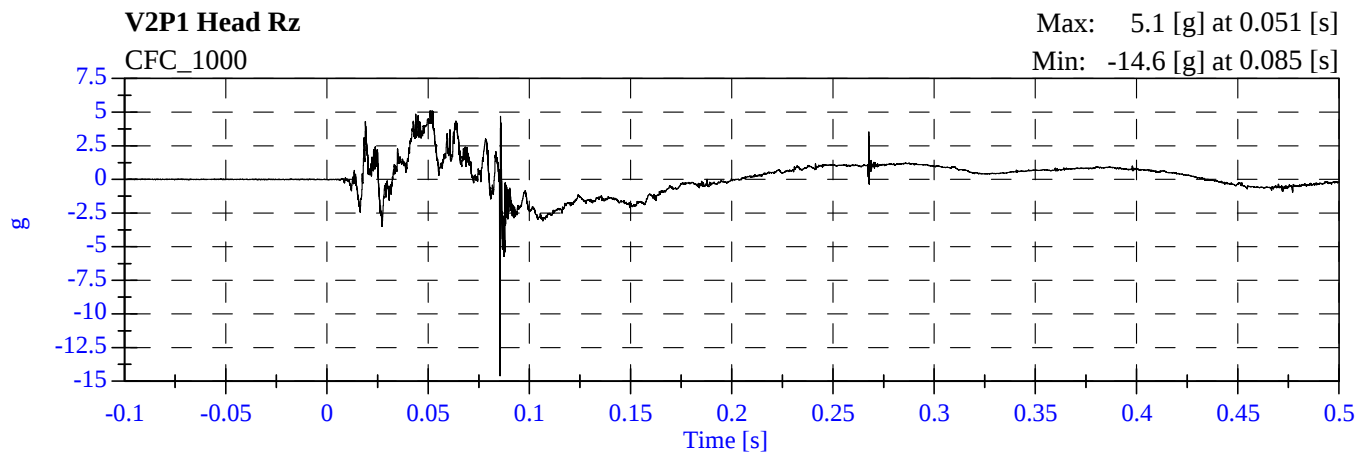
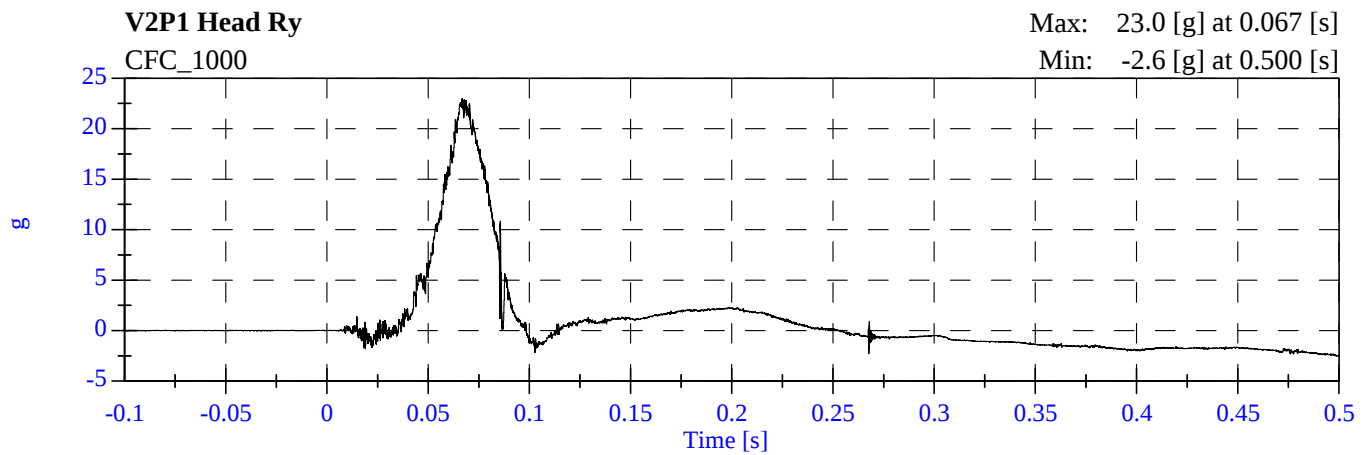
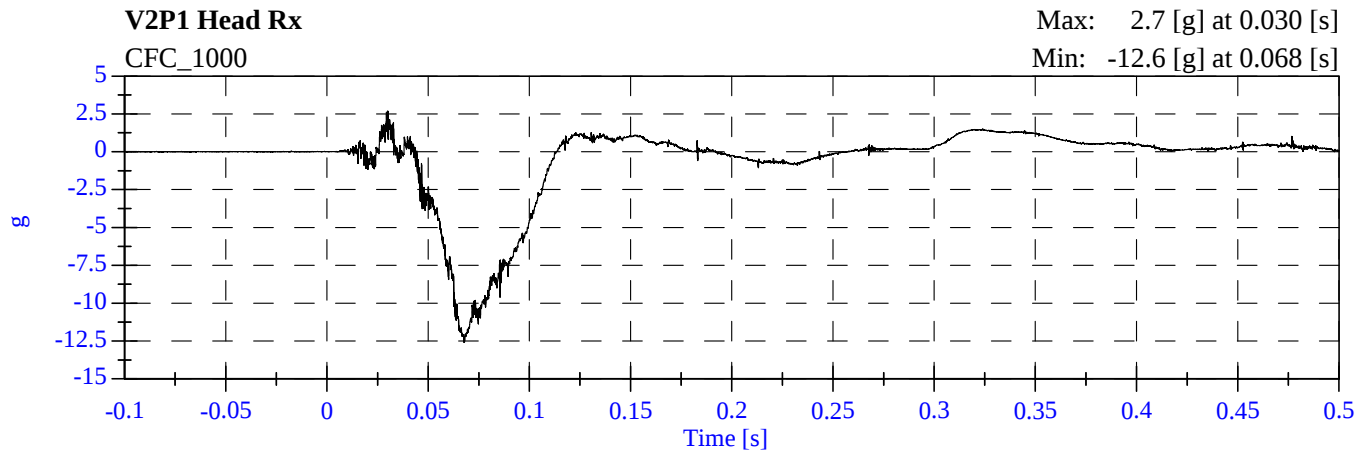
V2P4 Lower Rib Ay
V2P4 Lower Rib Redundant Ay
V2P4 Lower Spine Ay
V2P4 Lower Spine Redundant Ay
V2P4 Pelvic Ay
V2P4 Pelvic Redundant Ay
V2A1 Right Front Sill Ax
V2A1 Right Front Sill Ay
V2A1 Right Front Sill Az
V2A2 Right Rear Sill Ax
V2A2 Right Rear Sill Ay
V2A2 Right Rear Sill Az
V2A3 Rear Floorpan Ax
V2A3 Rear Floorpan Ay
V2A3 Rear Floorpan Az
V2A4 Left Rear Sill Ay
V2A5 Left Front Sill Ay
V2A7 Right Rear Compartment Ay
V2A12 Left Lower B Post Ay
V2A13 Left Mid B Post Ay
V2A14 Left Lower A Post Ay
V2A15 Left Mid A Post Ay
V2A16 Front Seat Track Ay
V2A17 Rear Seat Track Ay
V2A18 Target CG Ax
V2A18 Target CG Ay
V2A18 Target CG Az
V1 Moving Barrier CG Ax
V1 Moving Barrier CG Ay
V1 Moving Barrier CG Az
V1 Moving Barrier Left Rail Ax
V1 Moving Barrier Left Rail Ay

TEST NOTES

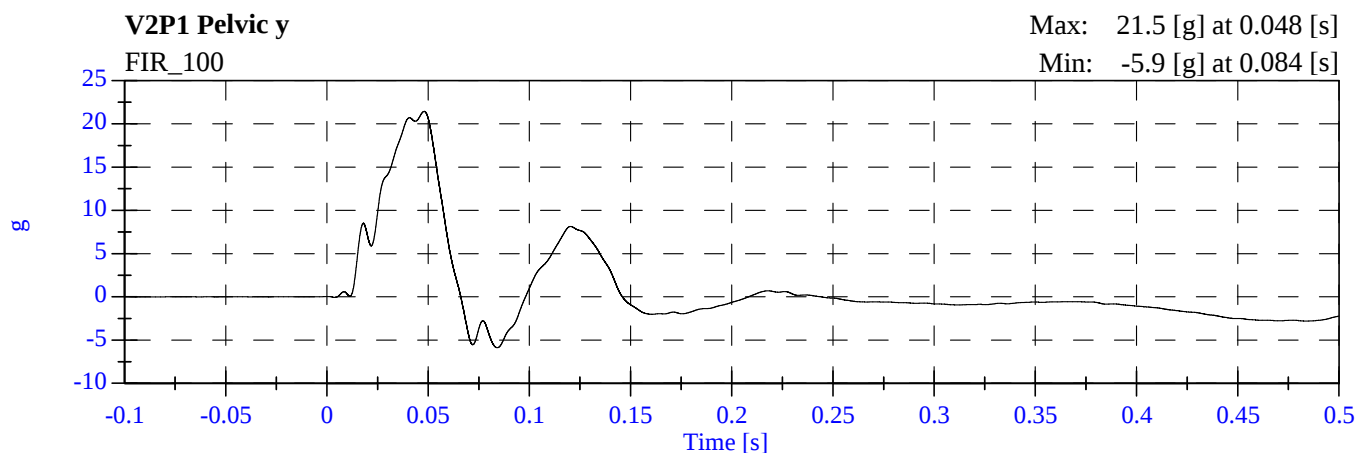
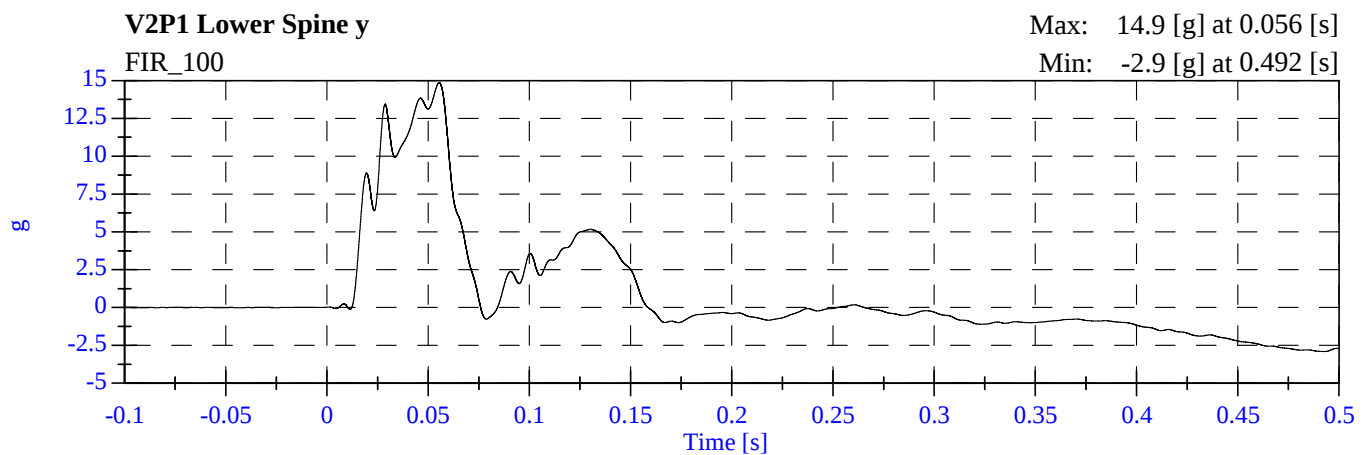
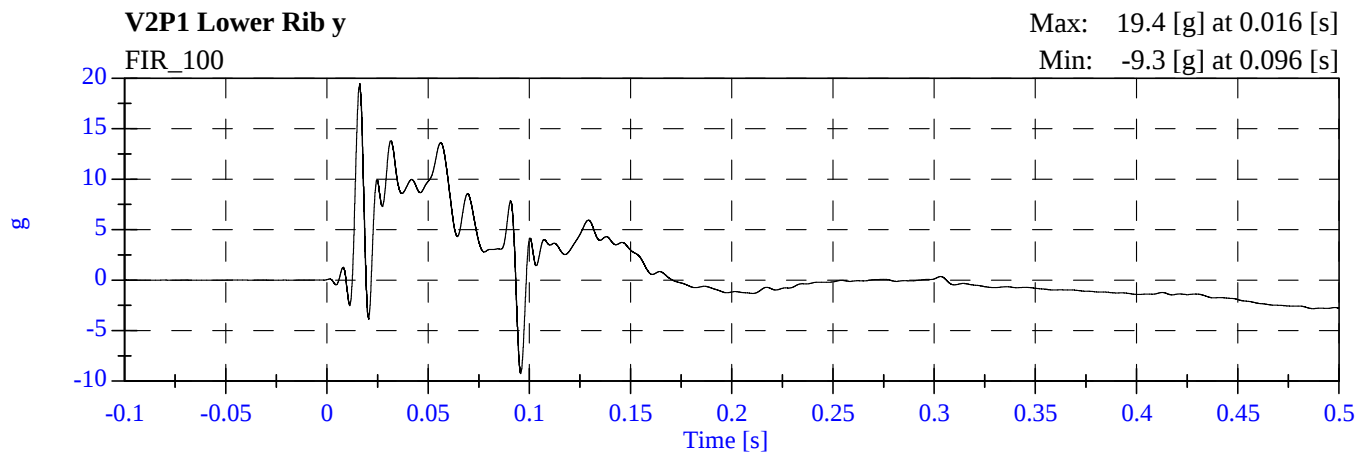
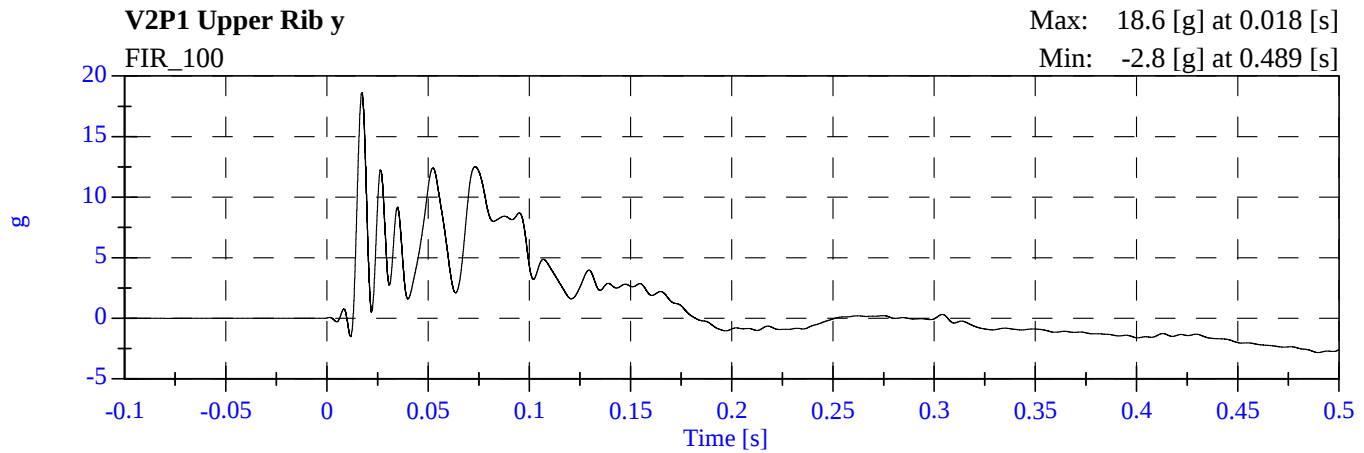
V2P1 Head Y
V2P1 Head Z
V2P1 Upper Neck Fx
V2P1 Upper Neck Fy
V2P1 Upper Neck Fz
V2P4 Upper Neck Fx
V2P4 Upper Neck Fy
V2P4 Upper Neck Fz
V2 Right Rear Sill X
V2 Right Rear Sill Y
V2 Right Rear Sill Z
V2 Left Rear Sill Y
V2 Left Front Sill Y
V2 Left Lower B Post Y
V2 Left Middle B Post Y
V2 Left Lower A Post Y

Questionable data 85 – 90 milliseconds
Questionable data 85 – 90 milliseconds
Sensor did not record properly
Sensor did not record properly
Sensor did not record properly
Questionable data
Questionable data
Questionable data
Noise Spikes
Noise spikes
Noise spikes
Accelerometer output saturated
Cut sensor cable at 17.5 milliseconds
Accelerometer output saturated
Accelerometer output saturated
Accelerometer output saturated

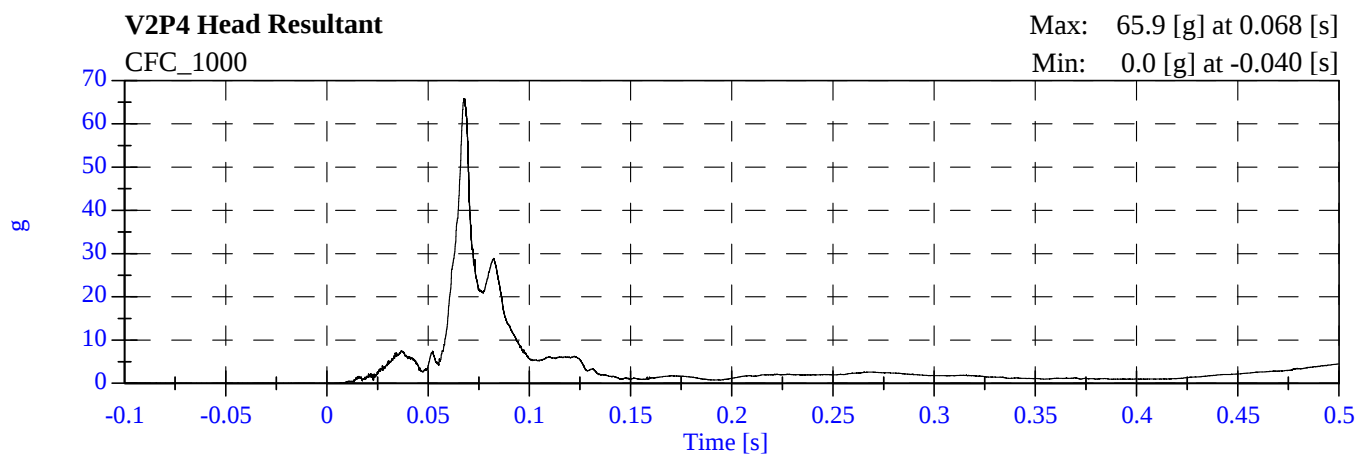
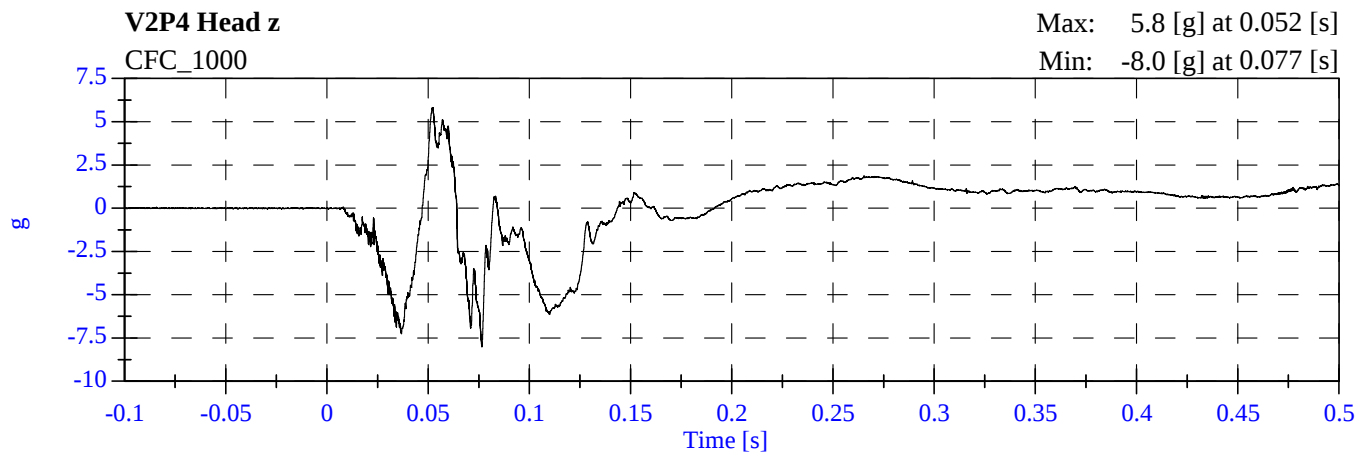
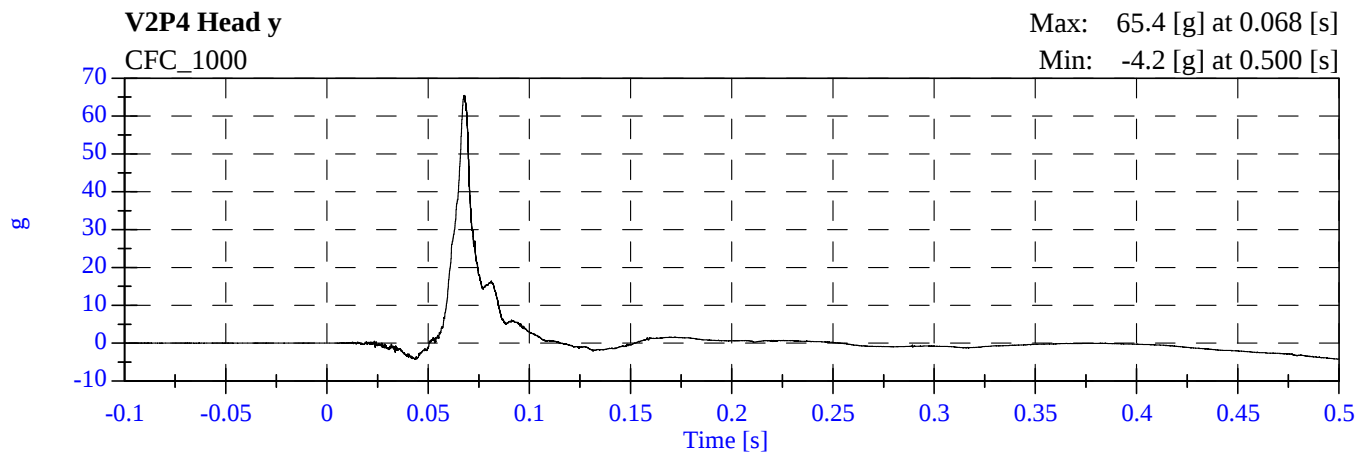
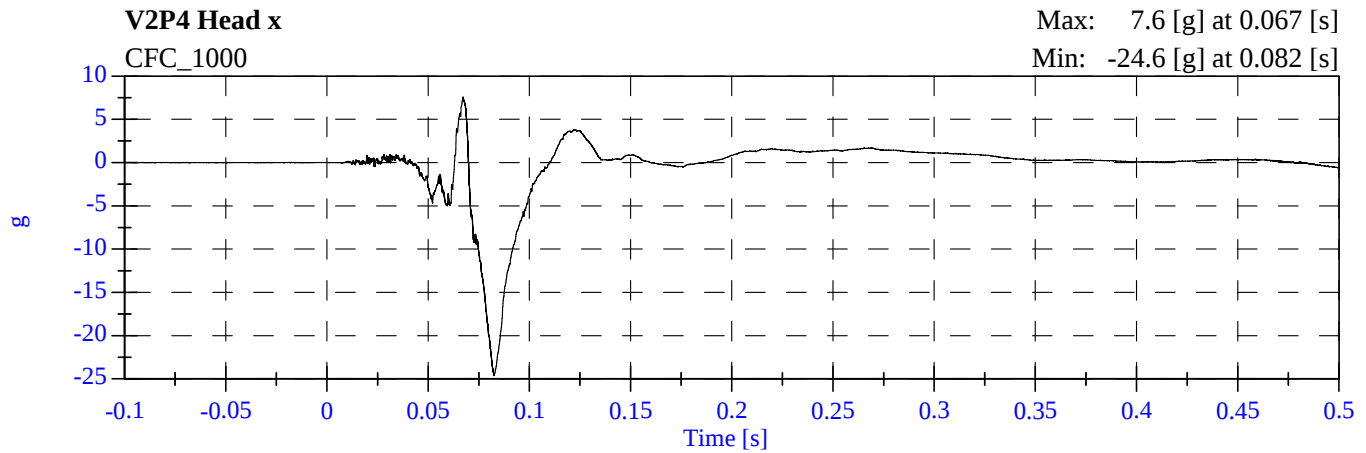
**2009 SNCAP Test 3 2009 Nissan Xterra
M95204 - September 16, 2008**



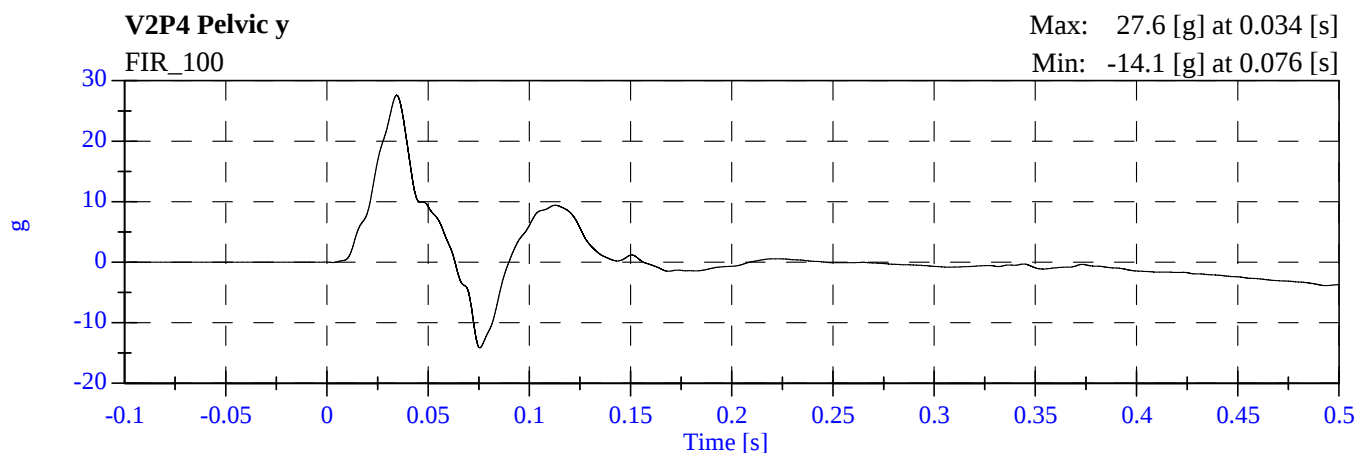
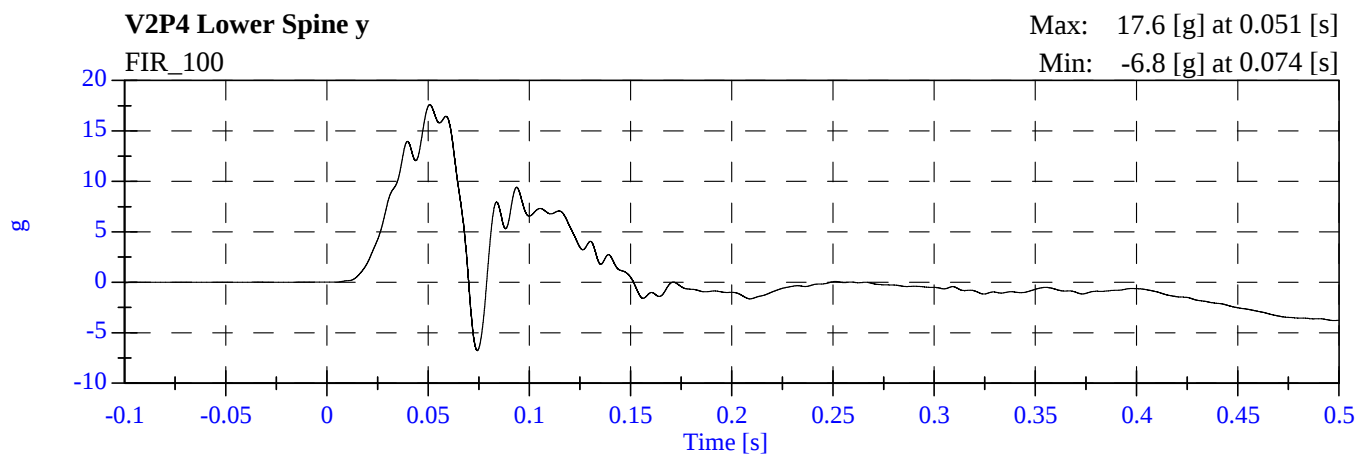
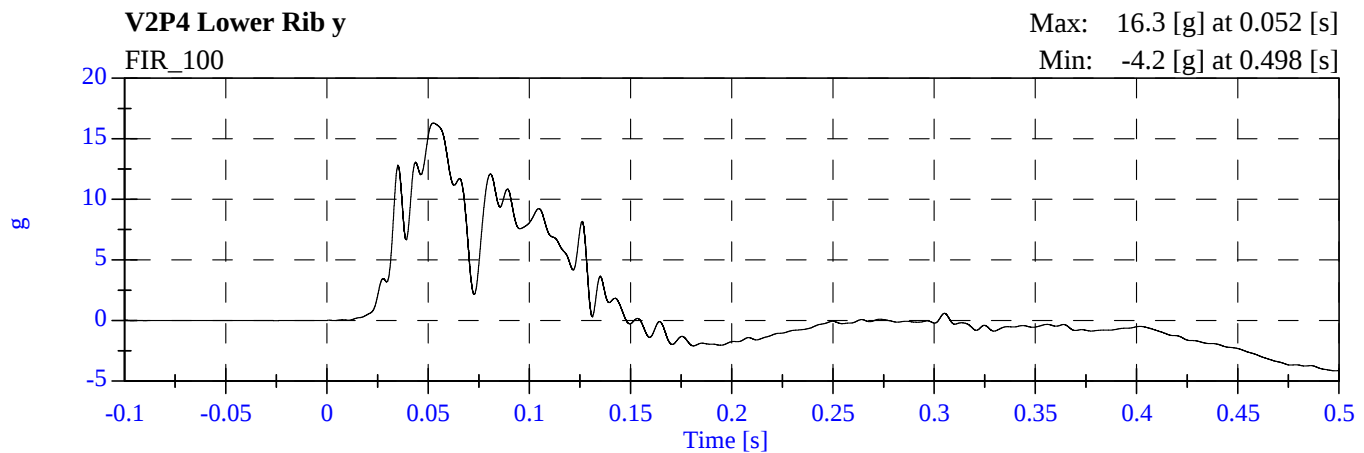
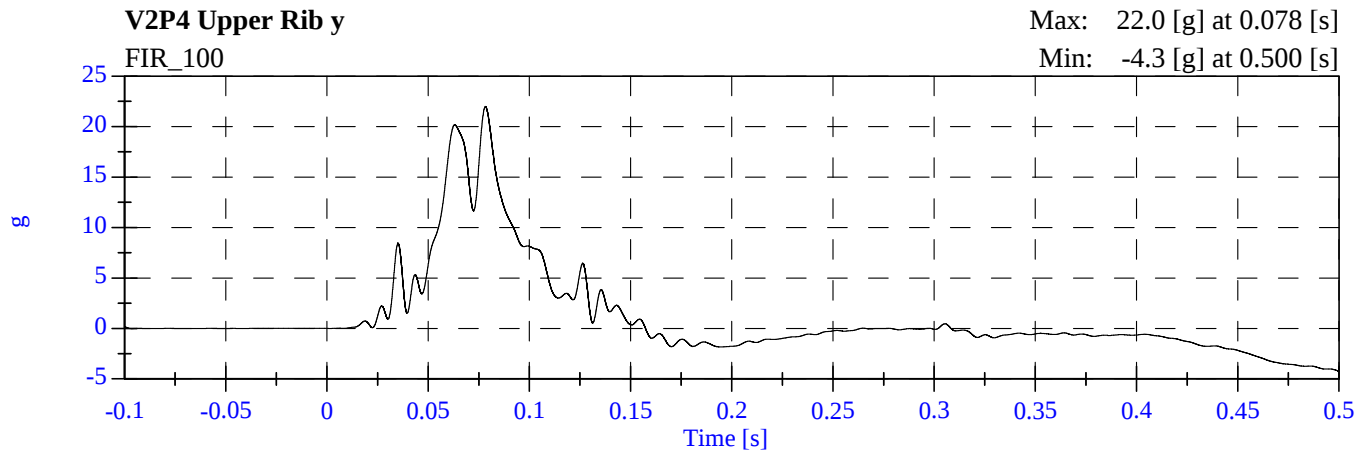
**2009 SNCAP Test 3 2009 Nissan Xterra
M95204 - September 16, 2008**



**2009 SNCAP Test 3 2009 Nissan Xterra
M95204 - September 16, 2008**



**2009 SNCAP Test 3 2009 Nissan Xterra
M95204 - September 16, 2008**



APPENDIX C

DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

SUMMARY
SID H3 PRE & POST TEST CALIBRATION

CONFIGURED FOR LEFT SIDE IMPACT

Date: September 10, 2008, October 24, 2008 Sequential Test Number: 1
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	SID H3 NO.: 269		SID H3 NO.: 270	
		PRE TEST	POST TEST	PRE TEST	POST TEST
SH- Seated Height (mm)	889 - 909	899	899	899	
RH- Rib Height (mm)	501 - 521	505	505	505	
HP- Hip Pivot Height (mm)	99 ref.	99	99	99	
RD- Rib from Back Line (mm)	229 - 241	234	234	234	
KV- Knee Pivot from Back Line (mm)	511 - 526	516	516	518	
SW- Knee Pivot to Floor (mm)	490 - 505	495	495	495	
HW- Hip Width (mm)	356 - 391	381	381	384	
THORAX IMPACTS					
TEMPERATURE (• C)	18.9 - 25.5	21.1	21.7	21.1	
RELATIVE HUMIDITY (%)	10 - 70	48	29	48	
PROBE SPEED (m/s)	4.27 - 4.33	4.30	4.27	4.28	
UPPER RIB (g's)	37 - 46	39.66	38.96	39.95	
LOWER RIB (g's)	37 - 46	38.37	40.23	38.65	
LOWER SPINE (g's)	15 - 22	18.11	18.67	19.59	
PELVIS IMPACT					
TEMPERATURE (• C)	18.9 - 25.5	21.1	21.7	21.1	
RELATIVE HUMIDITY (%)	10 - 70	48	25	46	
PROBE SPEED (m/s)	4.27 - 4.33	4.29	4.29	4.30	
PELVIS (g's)	40 - 60	59.96	54.59	43.40	

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: 1
Date: September 10, 2008 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: 1
Date: September 10, 2008 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	516
KV- Knee Pivot to Floor (mm)	490 – 505	495
HW- Hip Width (mm)	356 - 391	381

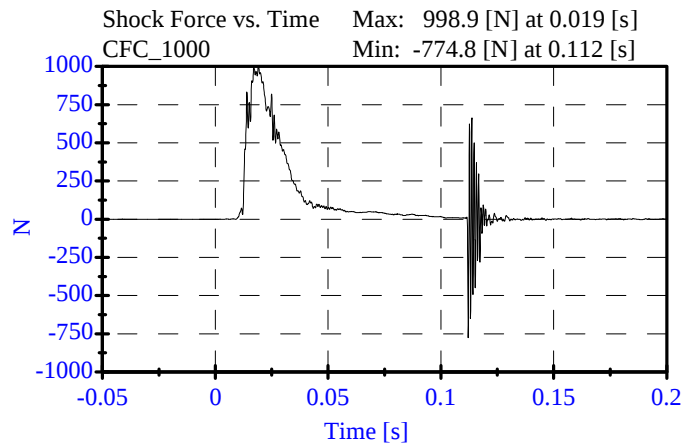
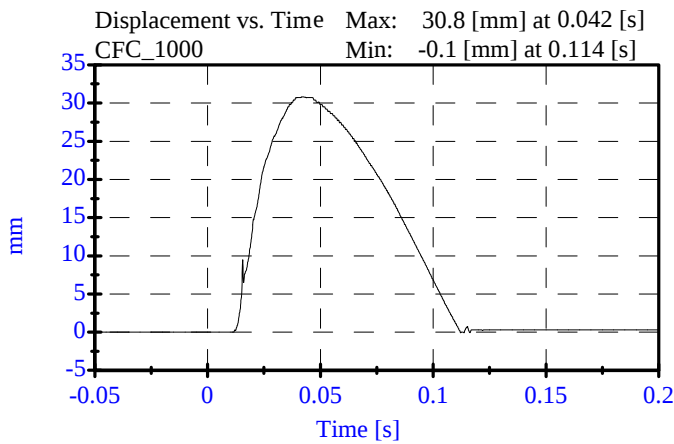
REMARKS: None

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

ATD Serial No: 269
Date: 06-25-08

Sequential Test Number: 1 File: 269 Shock10 06-25-08
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.7 C	Passed
Lab Humidity:	10-70 %	55.00 %	Passed
Displacement:	30.00-35.00 mm	30.82 mm	Passed
Maximum Force:	836.00-1125.00 N	998.86 N	Passed
Impact Test Velocity:	3.05 m/s		
Damper Identification:	269		
Damper Setting:	5		

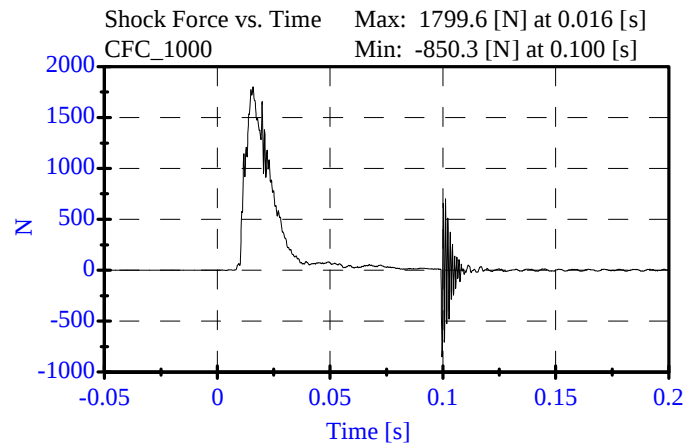
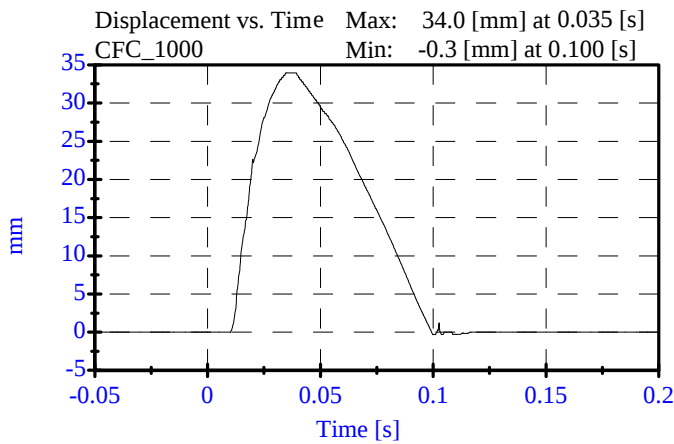


Shock Test (4.27 m/s)
PRE TEST
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 06-25-08

Sequential Test Number: 1 File: 269 Shock14 06-25-08
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.7 C	Passed
Lab Humidity:	10-70 %	55.00 %	Passed
Displacement:	32.00-37.00 mm	33.97 mm	Passed
Maximum Force:	1730.00-2099.00 N	1799.59 N	Passed
Impact Test Velocity:	4.27 m/s		
Damper Identification:	269		
Damper Setting:	5		

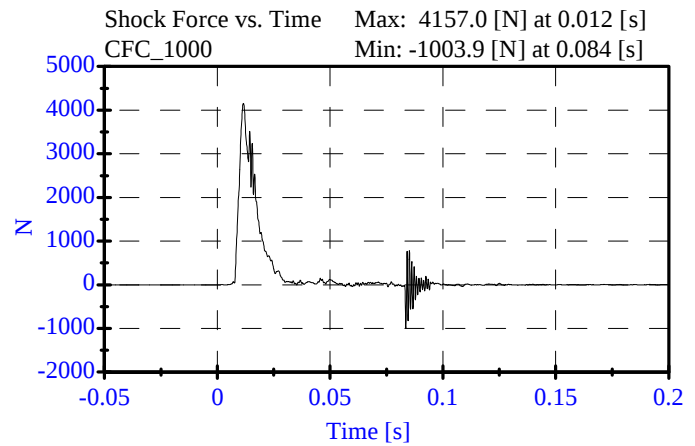
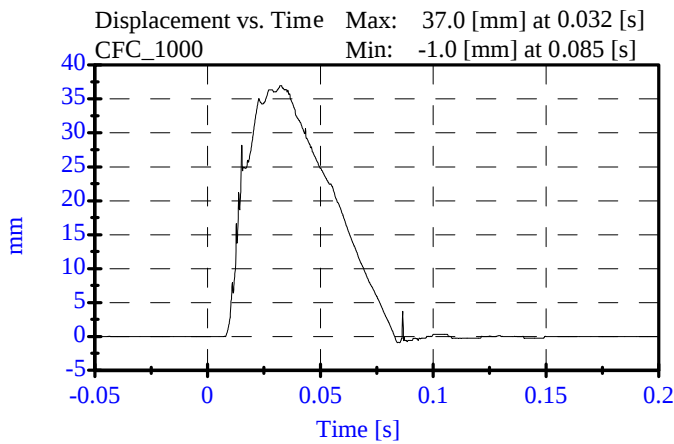


Shock Test (6.10 m/s)
PRE TEST
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 06-25-08

Sequential Test Number: 1 File: 269 Shock20 06-25-08
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	22.2 C	Passed
Lab Humidity:	10-70 %	55.00 %	Passed
Displacement:	33.00-40.00 mm	36.96 mm	Passed
Maximum Force:	3741.00-4448.00 N	4156.98 N	Passed
Impact Test Velocity:	6.10 m/s		
Damper Identification:	269		
Damper Setting:	5		

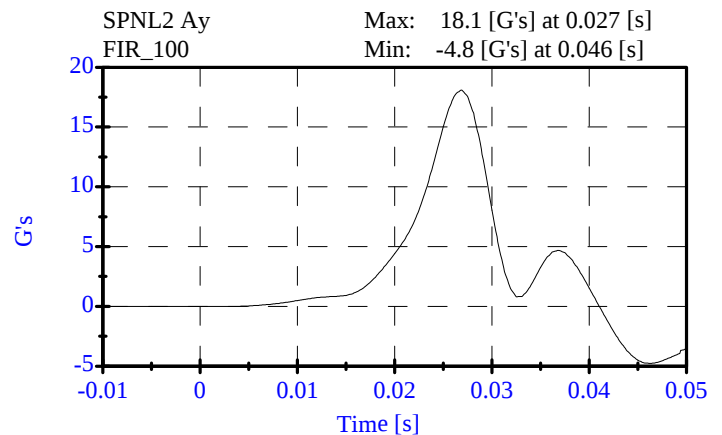
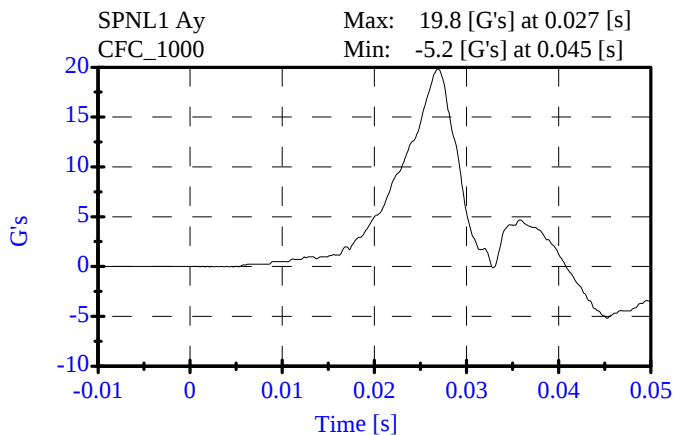
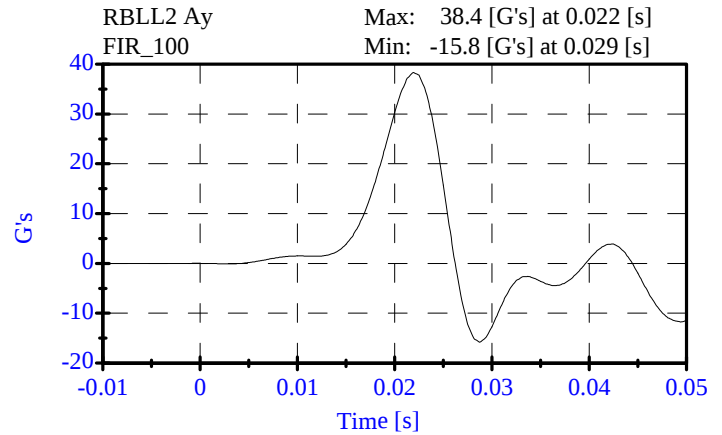
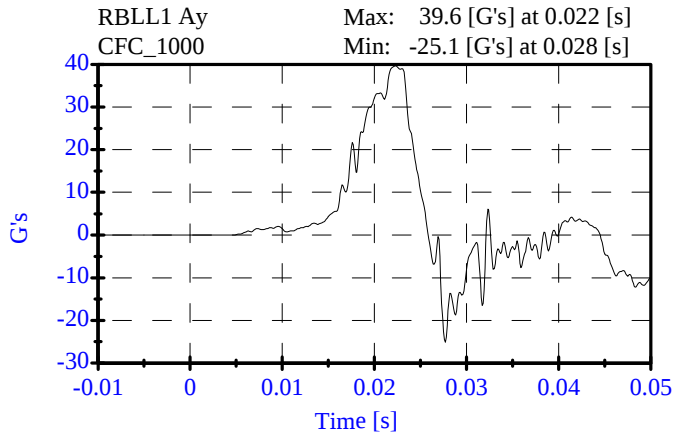
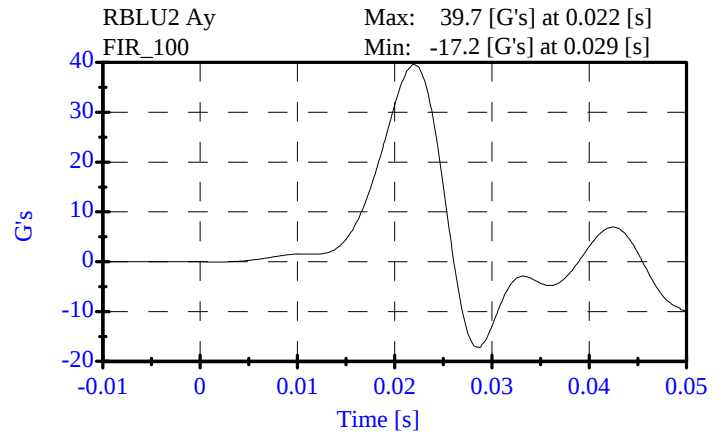
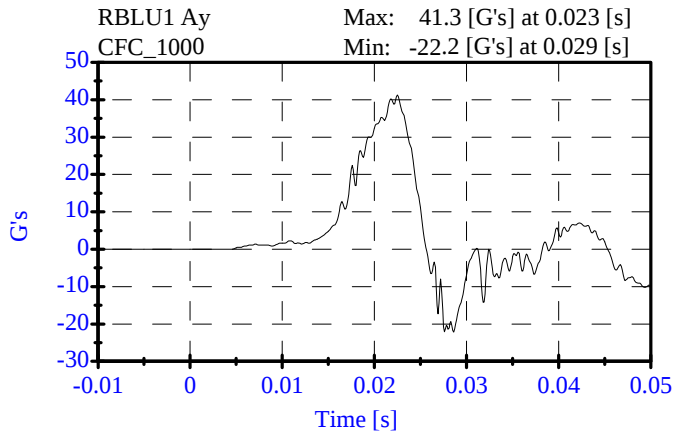


Thorax Impact
Pre-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 09-10-08

Sequential Test Number: 1 File: 269T1 09-10-08
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 %	48.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.30 m/s	Passed
Upper Rib Acceleration:	37.00-46.00 G's	39.66 G's	Passed
Lower Rib Acceleration:	37.00-46.00 G's	38.37 G's	Passed
Lower Spine Acceleration:	15.00-22.00 G's	18.11 G's	Passed



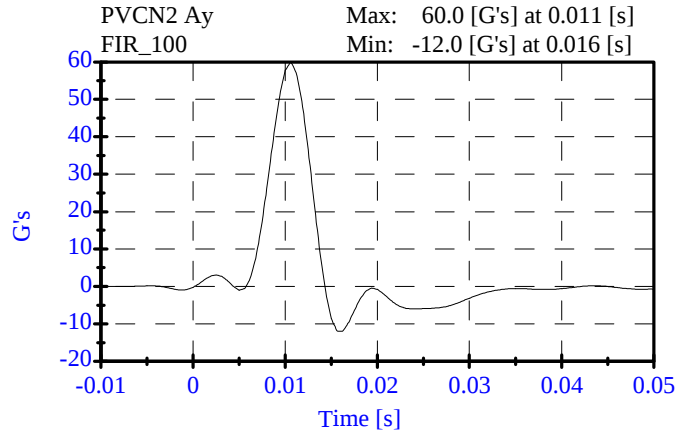
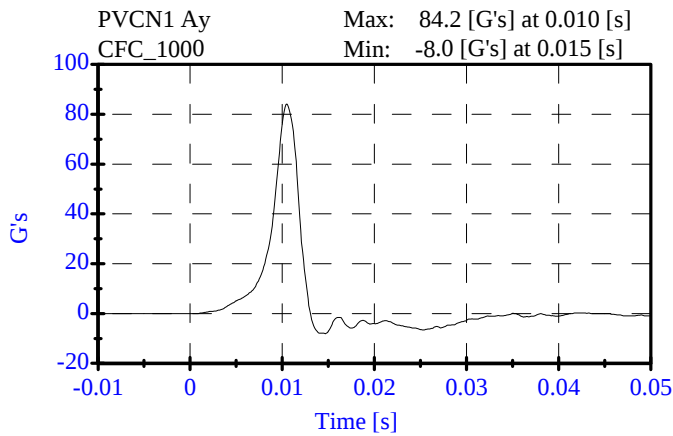
Pelvis Impact Pre-Test

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 09-10-08

Sequential Test Number: 1 File: 269P1 09-10-08
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 %	48.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.29 m/s	Passed
Pelvis Y Acceleration:	40.00-60.00 G's	59.96 G's	Passed
Time Above 20 Gs	3.0-7.0 ms	5.6 ms	Passed



Head Drop

Pre-Test

CONFIGURED FOR LEFT SIDE IMPACT

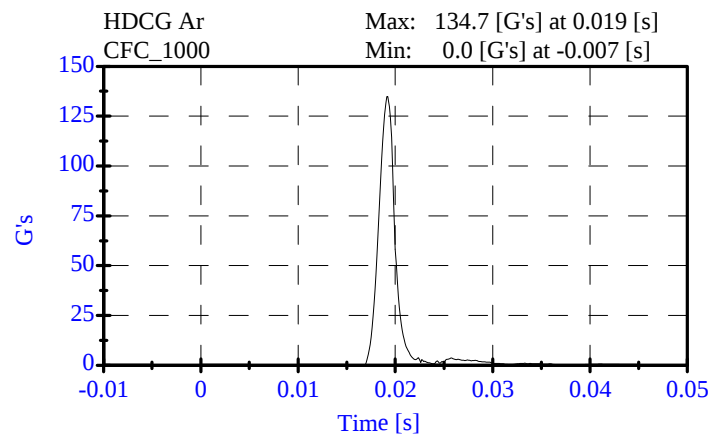
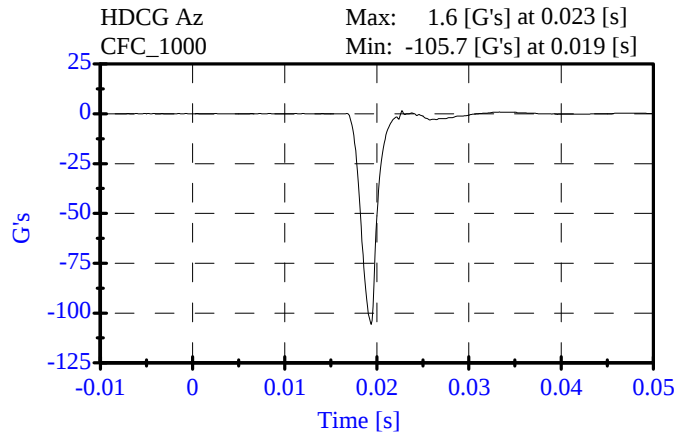
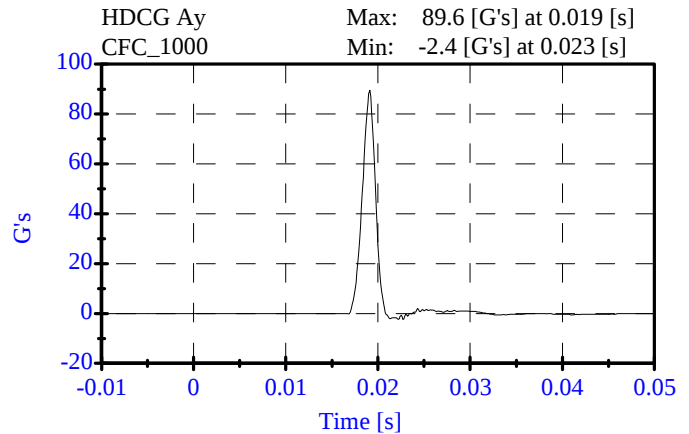
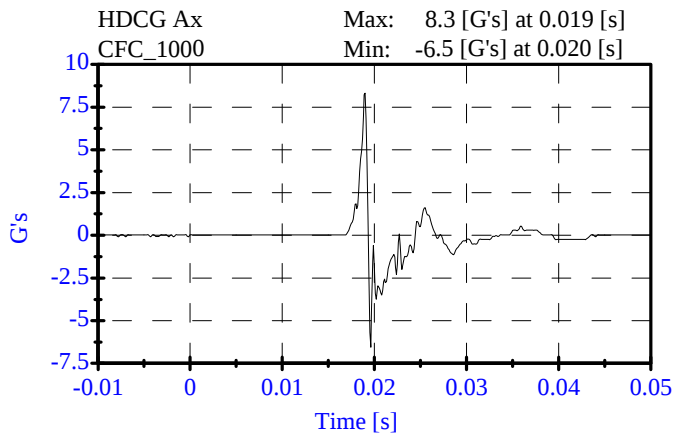
ATD Serial No: 269

Date: 09-05-08

Sequential Test Number: 1 File: 269HD 09-05-08

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 %	52.00 %	Passed
Peak Resultant Accel.:	120-150 Gs	134.72 Gs	Passed
Peak Lateral Accel.:	15 Gs Max	8.32 Gs	Passed
Curve PerCent NonModal:	< 15%	2.83 %	Passed



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

ATD Serial No: 269

Date: 09-09-08

Sequential Test Number: 1 File: 269N1 09-09-08

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	21.7 C	Passed
Lab Humidity:	10-70 %	56.00 %	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	2.17 m/s	Passed
Delta V at 20 ms:	4.12- 5.10 m/s	4.47 m/s	Passed
Delta V at 30 ms:	5.73- 7.01 m/s	6.29 m/s	Passed
Delta V between 40-70 ms:	6.27- 7.64 m/s	7.01 m/s	Passed
D PLANE ROTATION			
Maximum Rotation:	66.0-82.0 Deg	73.48 Deg	Passed
Rotation Angle Decay:	58.0-67.0 ms	61.80 ms	Passed
MOMENT ABOUT THE OCCIPITAL CONDYLE			
Max Occipital Moment:	73.00- 88.00 N-m	78.71 N-m	Passed
Occipital Moment Decay:	49.0-64.0 ms	57.90 ms	Passed
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT			
Moment to Rotation Peak:	2.0-16.0 ms	10.10 ms	Passed

Neck Test
Pre-Test
CONFIGURED FOR LEFT SIDE IMPACT

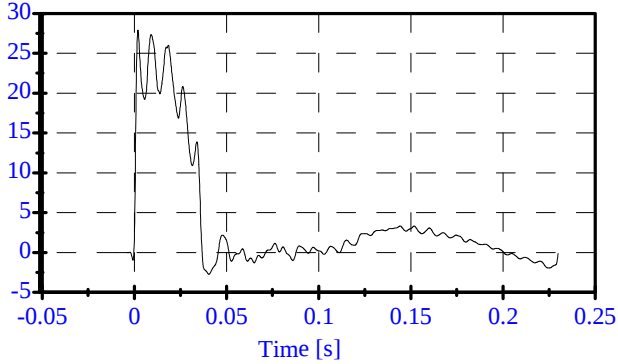
ATD Serial No: 269

Date: 09-09-08

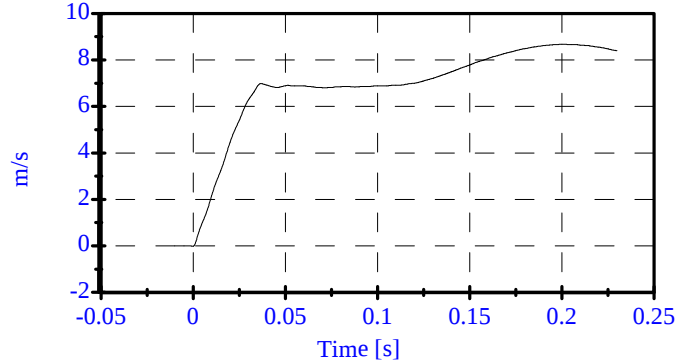
Sequential Test Number: 1 File: 269N1 09-09-08

Laboratory Technician: B. Swiecicki

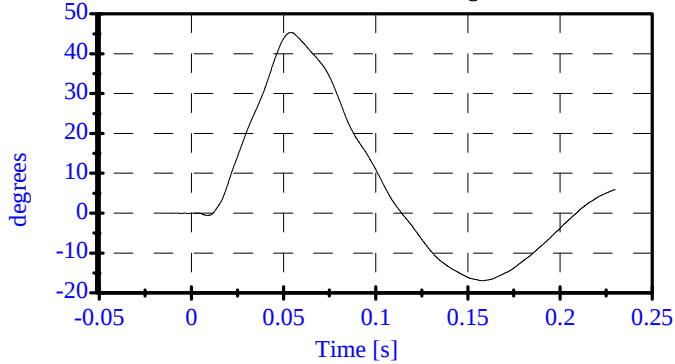
Pend Ax
CFC_180
Max: 27.9 [] at 0.002 [s]
Min: -2.7 [] at 0.040 [s]



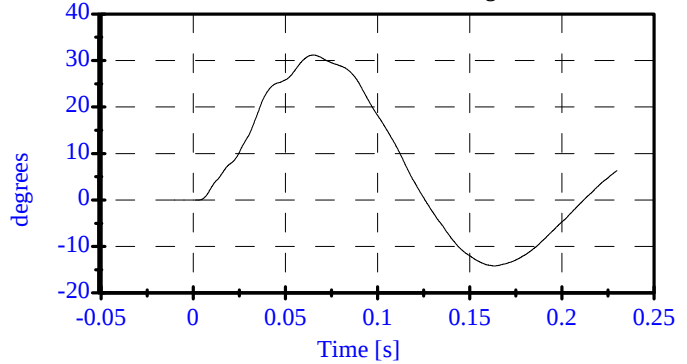
Pend Vx
CFC_180
Max: 8.7 [m/s] at 0.201 [s]
Min: -0.0 [m/s] at -0.000 [s]



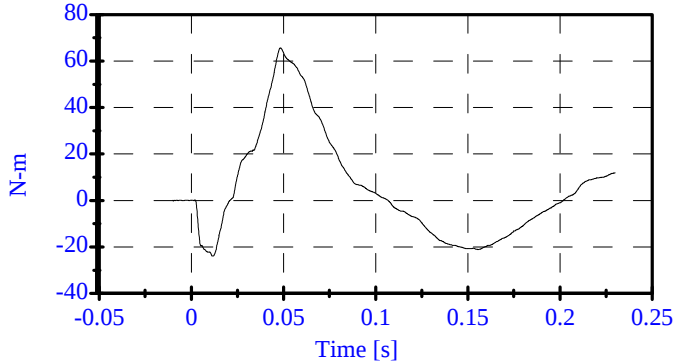
Head Rot
CFC_180
Max: 45.3 [degrees] at 0.054 [s]
Min: -16.9 [degrees] at 0.158 [s]



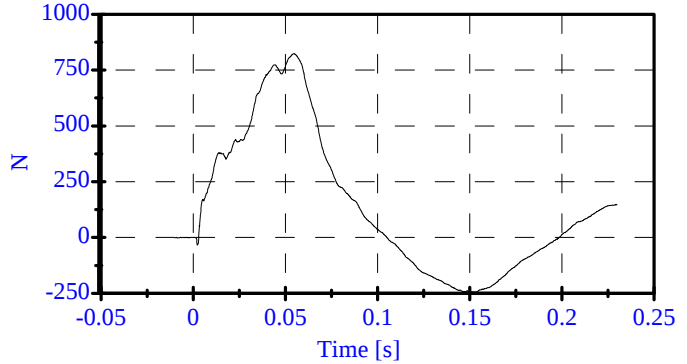
Arm Rot
CFC_180
Max: 31.2 [degrees] at 0.065 [s]
Min: -14.2 [degrees] at 0.163 [s]



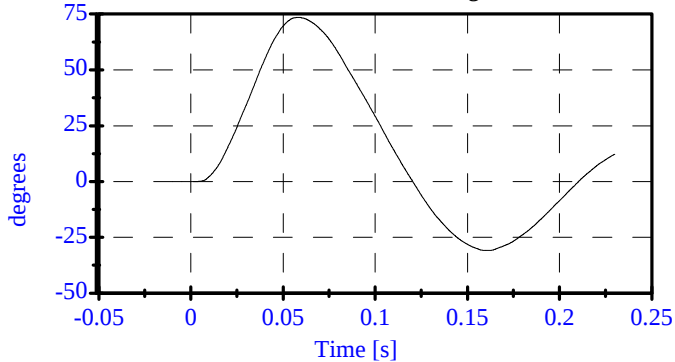
Neck Mx
CFC_600
Max: 65.6 [N-m] at 0.048 [s]
Min: -23.9 [N-m] at 0.012 [s]



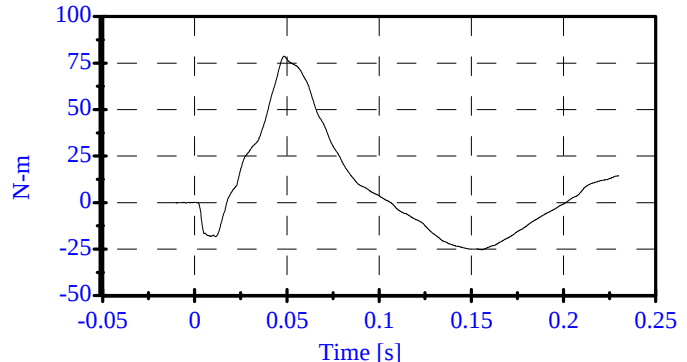
Neck Fy
CFC_1000
Max: 824.5 [N] at 0.054 [s]
Min: -244.0 [N] at 0.153 [s]



Tot Rot
CFC_180
Max: 73.5 [degrees] at 0.059 [s]
Min: -30.8 [degrees] at 0.159 [s]



MOCX
Max: 78.7 [N-m] at 0.049 [s]
Min: -25.4 [N-m] at 0.156 [s]



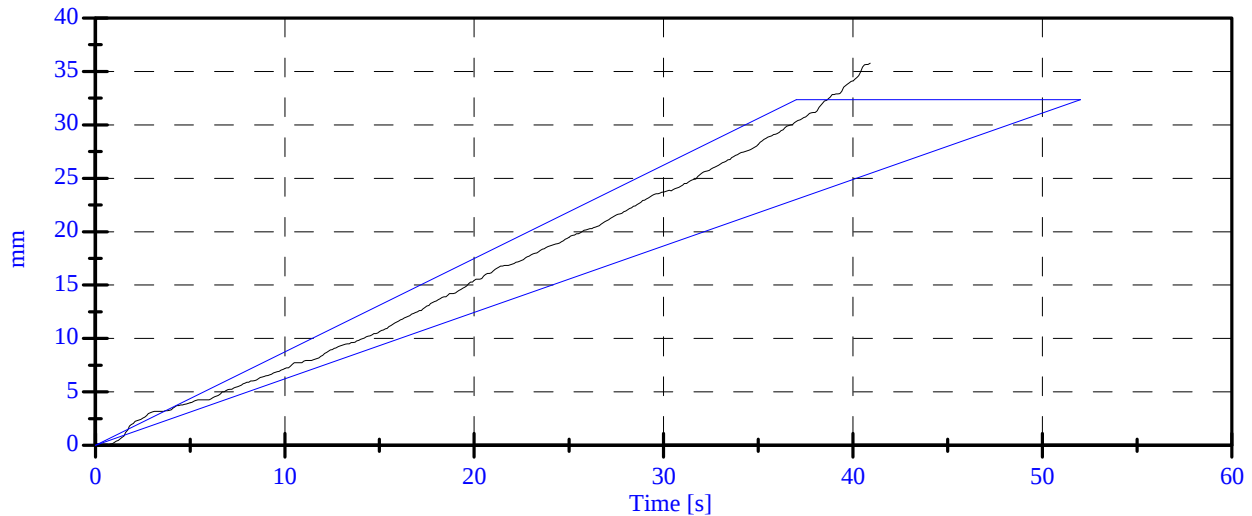
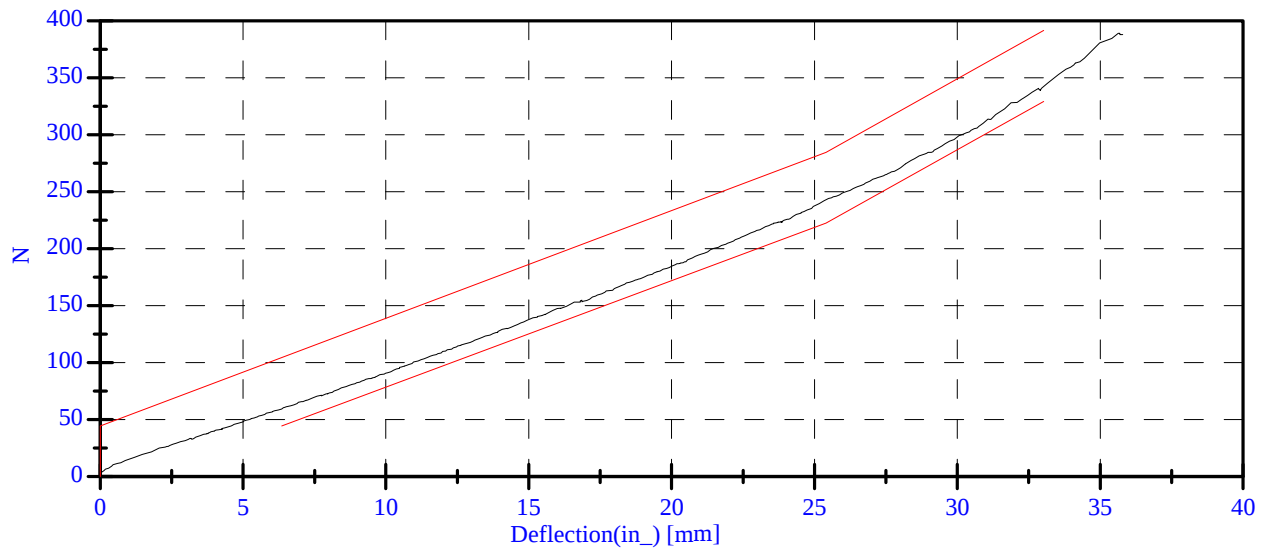
Abdominal Compression Test
Pre-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 09-10-08

Sequential Test Number: 1 File: 269 Ab 09-10-08
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.7 C	Passed
Lab Humidity:	10-70 %	49.00 %	Passed
Force at 12.95 mm :	104.00-162.00 N	117.71 N	Passed
Force at 19.05 mm :	162.98-220.99 N	175.38 N	Passed
Force at 25.40 mm :	221.97-280.02 N	242.19 N	Passed
Force at 33.02 mm :	324.99-391.00 N	340.75 N	Passed

ABDOMINAL COMPRESSION TEST



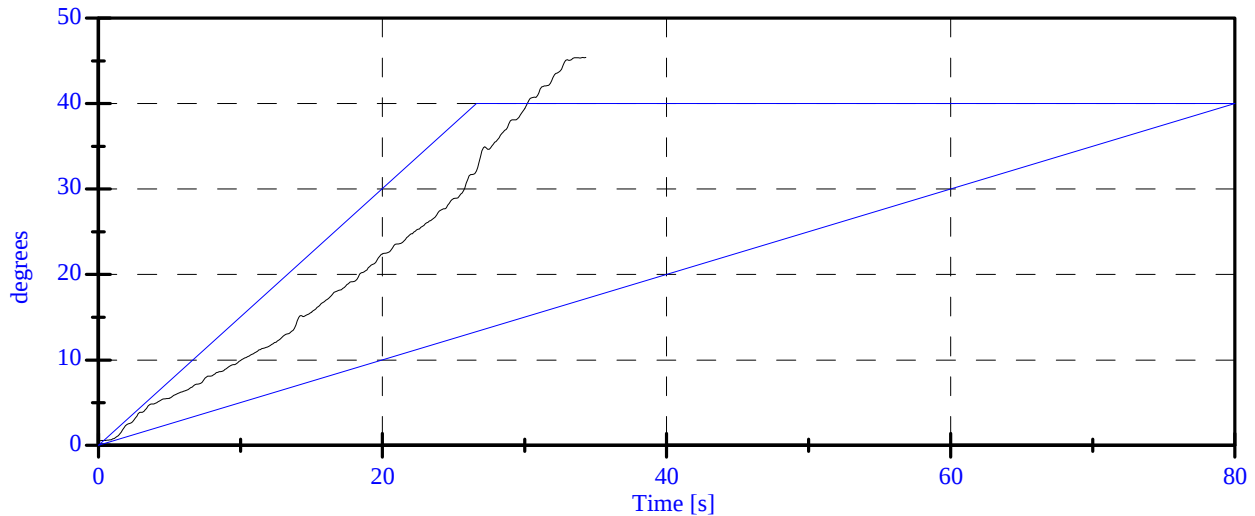
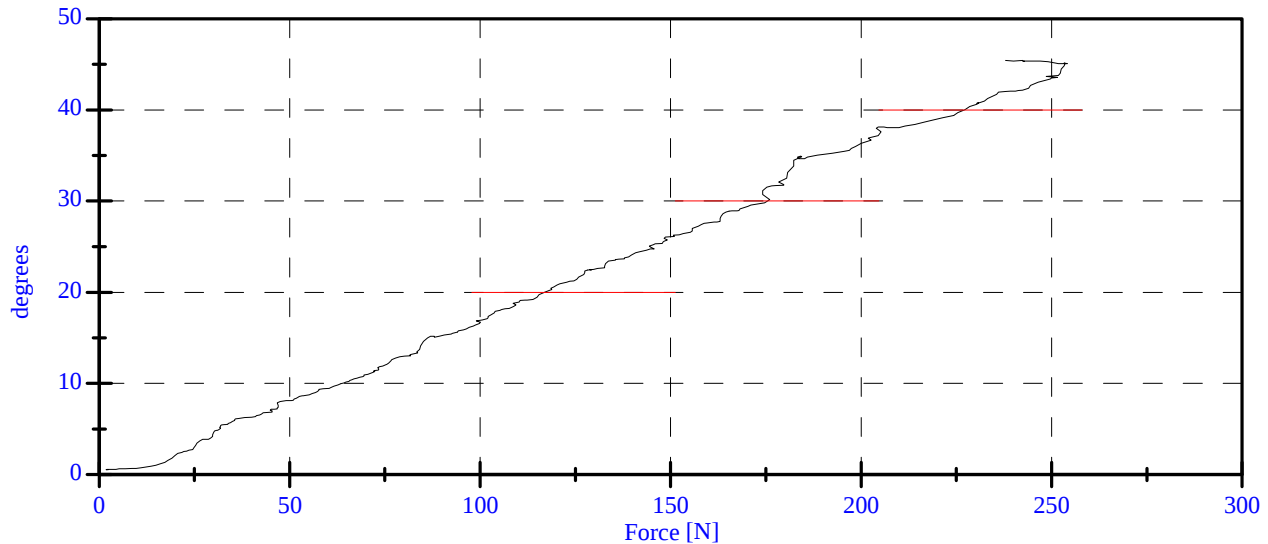
Lumbar Spine Test
Pre-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 09-10-08

Sequential Test Number: 1 File: 269 Spine 09-10-08
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 %	48.00 %	Passed
Force at 0 Deg:	0.00-26.69 N	2.35 N	Passed
Force at 20 Deg:	97.86-151.24 N	117.26 N	Passed
Force at 30 Deg	151.24-204.62 N	176.02 N	Passed
Force at 40 Deg	204.62-258.00 N	227.20 N	Passed
Return Angle	12 Deg Max	7.47 deg	Passed

LUMBAR SPINE FLEXION TEST



PRE-TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 269 Sequential Test Number: 1
 Date: September 5, 2008 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.: 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: 1
Date: September 10, 2008 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: 1
Date: September 10, 2008 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

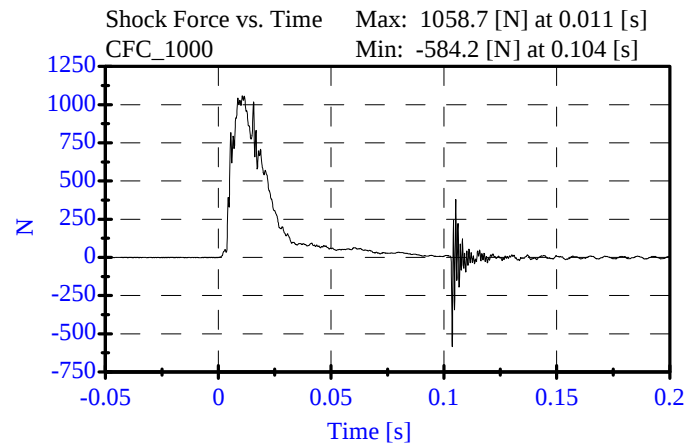
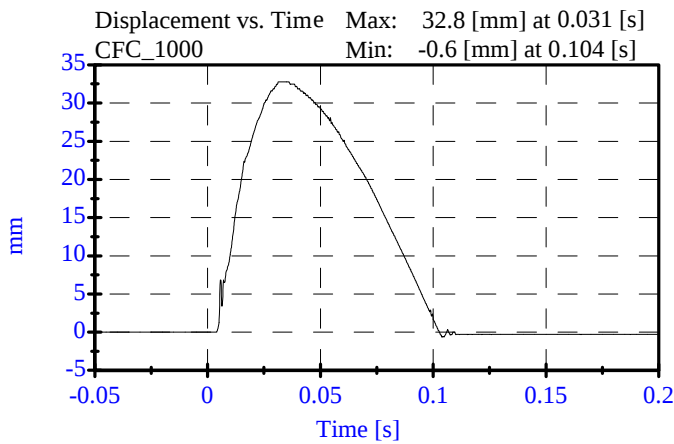
REMARKS: None

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

ATD Serial No: 270
Date: 07-25-08

Sequential Test Number: 1 File: 270 Shock10 07-25-08
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.7 C	Passed
Lab Humidity:	10-70 %	63.00 %	Passed
Displacement:	30.00-35.00 mm	32.78 mm	Passed
Maximum Force:	836.00-1125.00 N	1058.75 N	Passed
Impact Test Velocity:	3.05 m/s		
Damper Identification:	270		
Damper Setting:	5		



Shock Test Medium (4.27 m/s)

PRE TEST

CONFIGURED FOR LEFT SIDE IMPACT

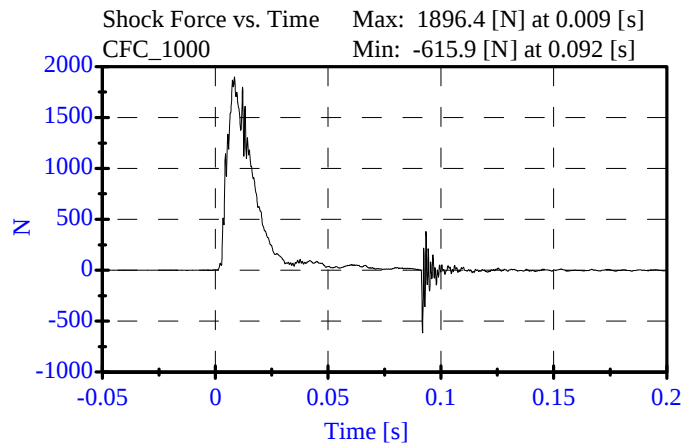
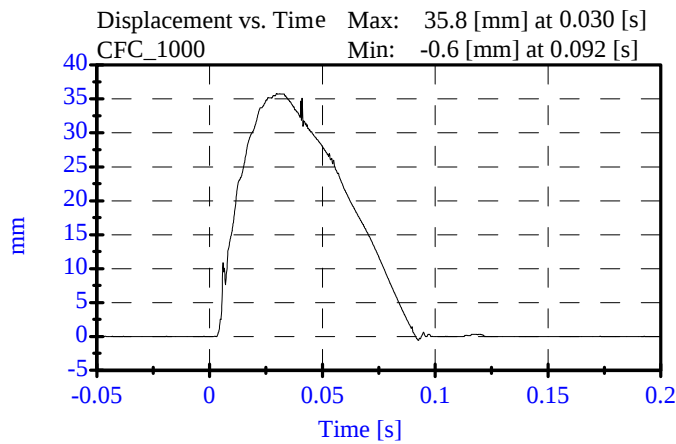
ATD Serial No: 270

Date: 07-25-08

Sequential Test Number: 1 File: 270 Shock14 07-25-08

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.7 C	Passed
Lab Humidity:	10-70 %	63.00 %	Passed
Displacement:	32.00-37.00 mm	35.79 mm	Passed
Maximum Force:	1730.00-2099.00 N	1896.42 N	Passed
Impact Test Velocity:	4.27 m/s		
Damper Identification:	270		
Damper Setting:	5		

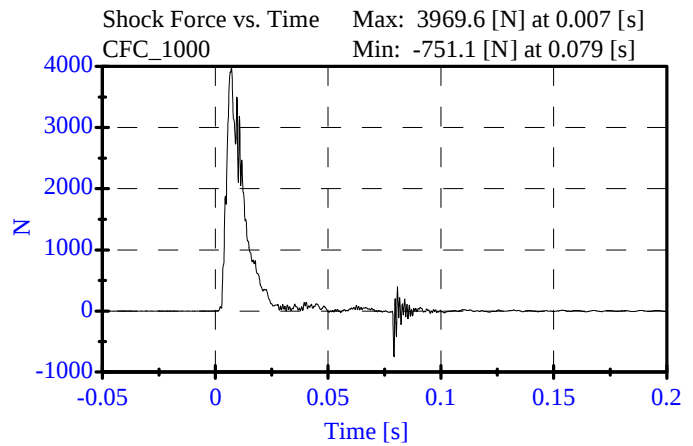
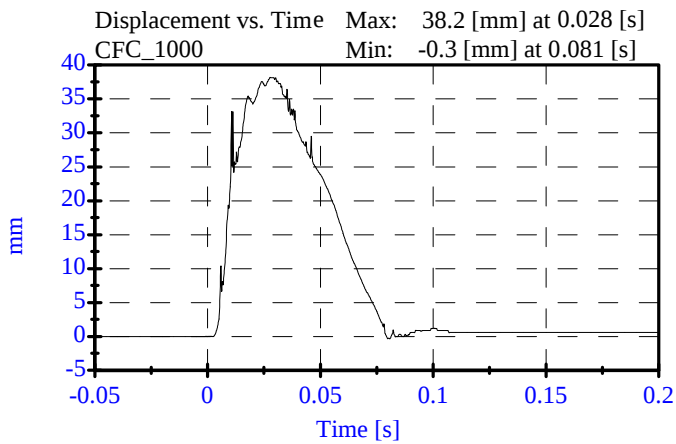


Shock Test High (6.10 m/s)
PRE TEST
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 07-25-08

Sequential Test Number: 1 File: 270 Shock20 07-25-08
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.7 C	Passed
Lab Humidity:	10-70 %	63.00 %	Passed
Displacement:	33.00-40.00 mm	38.17 mm	Passed
Maximum Force:	3741.00-4448.00 N	3969.63 N	Passed
Impact Test Velocity:	6.10 m/s		
Damper Identification:	270		
Damper Setting:	5		

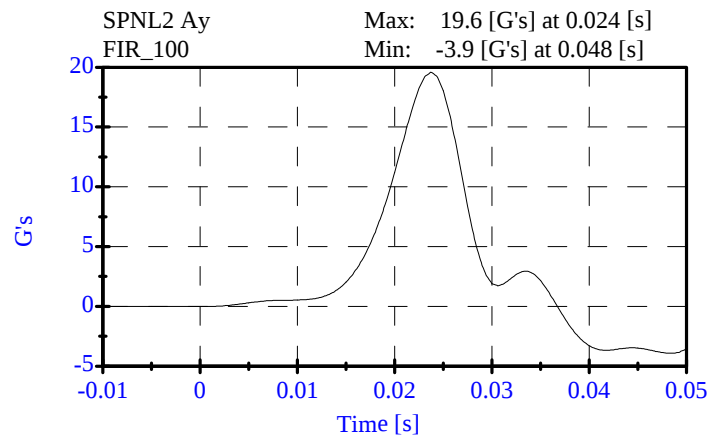
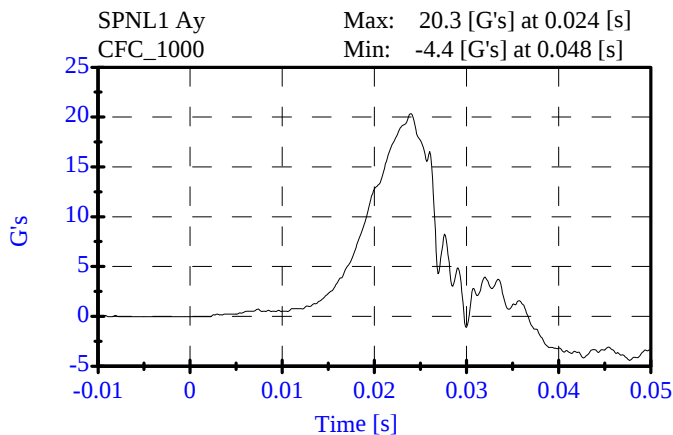
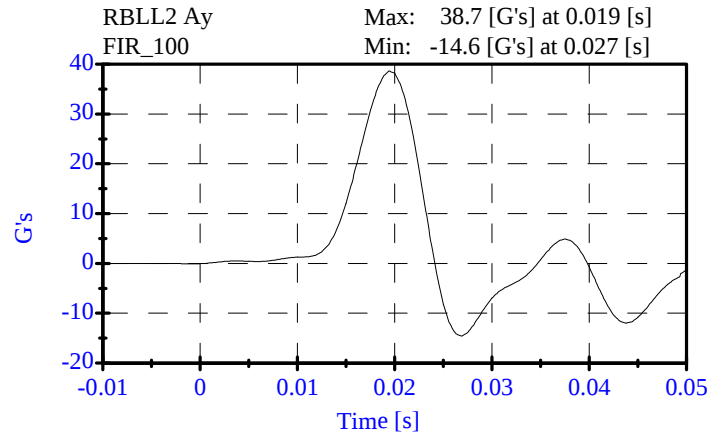
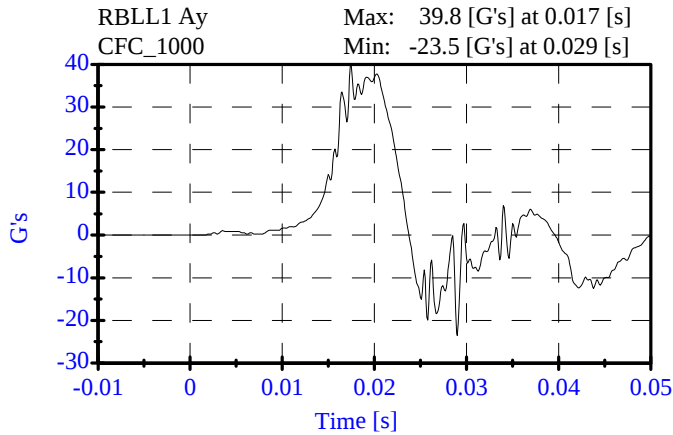
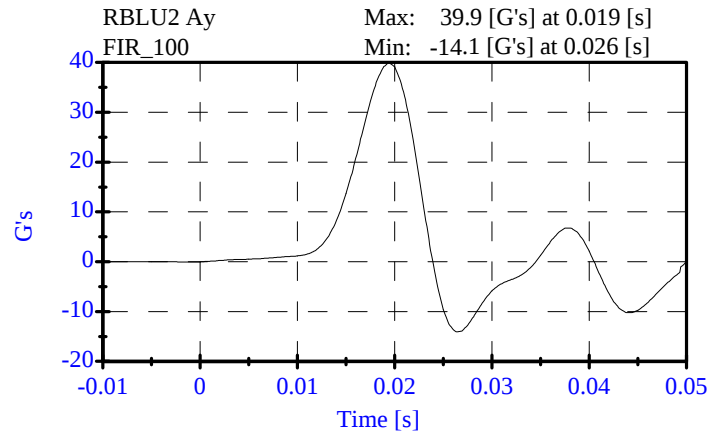
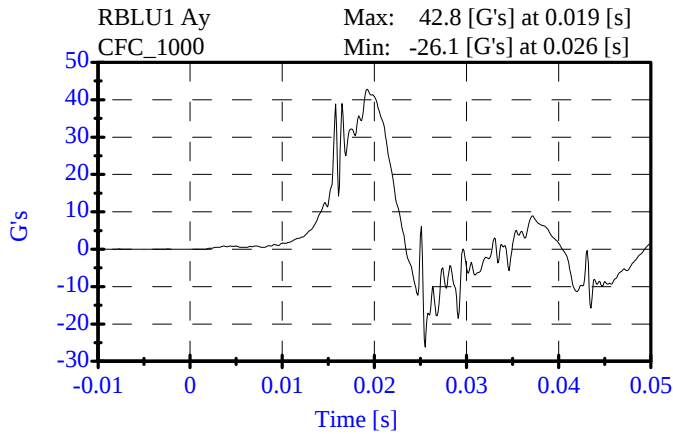


Thorax Impact
Pre-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 09-10-08

Sequential Test Number: 1 File: 270T 09-10-08
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 %	48.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.28 m/s	Passed
Upper Rib Acceleration:	37.00-46.00 G's	39.95 G's	Passed
Lower Rib Acceleration:	37.00-46.00 G's	38.65 G's	Passed
Lower Spine Acceleration:	15.00-22.00 G's	19.59 G's	Passed



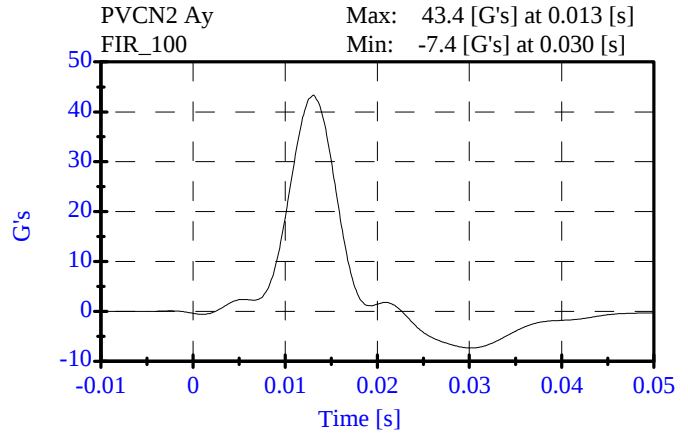
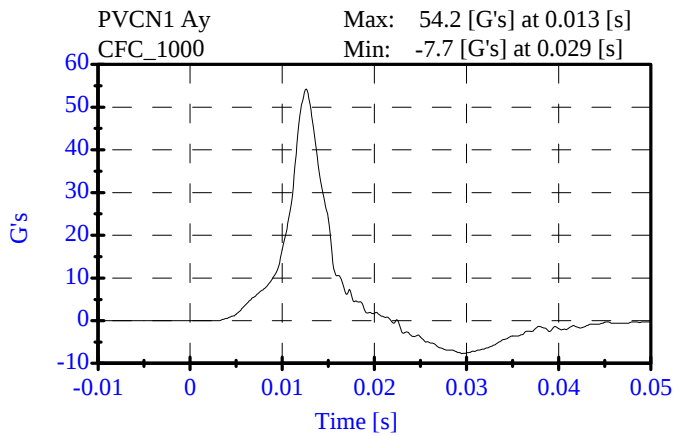
**Pelvis Impact
Pre-Test**

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 09-10-08

Sequential Test Number: 1 File: 270P 09-10-08
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 %	46.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.30 m/s	Passed
Pelvis Y Acceleration:	40.00-60.00 G's	43.40 G's	Passed
Time Above 20 Gs	3.0-7.0 ms	5.8 ms	Passed



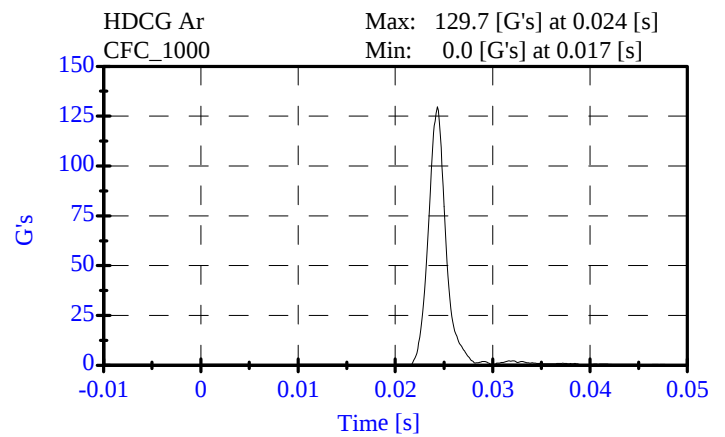
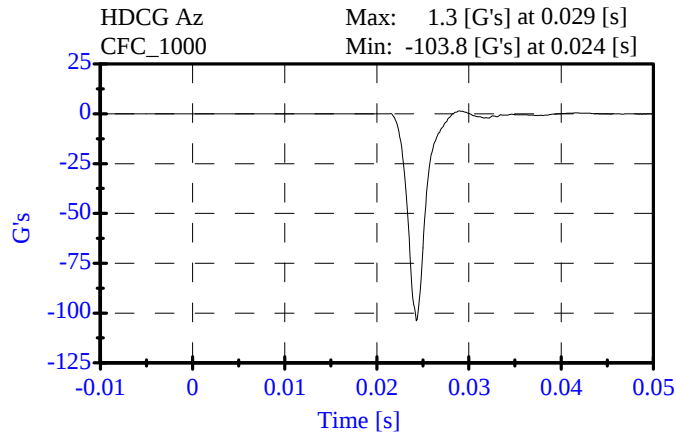
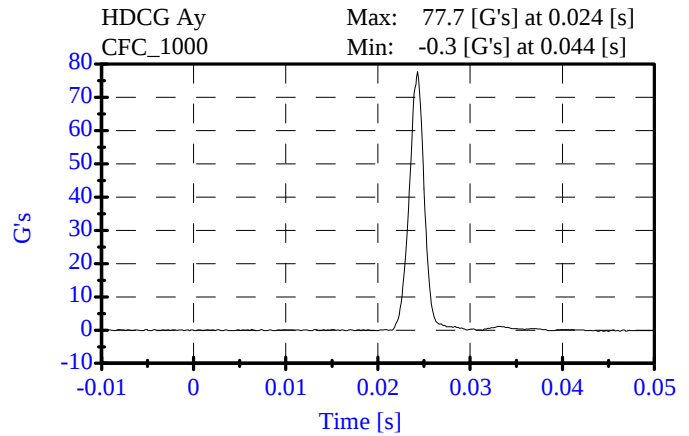
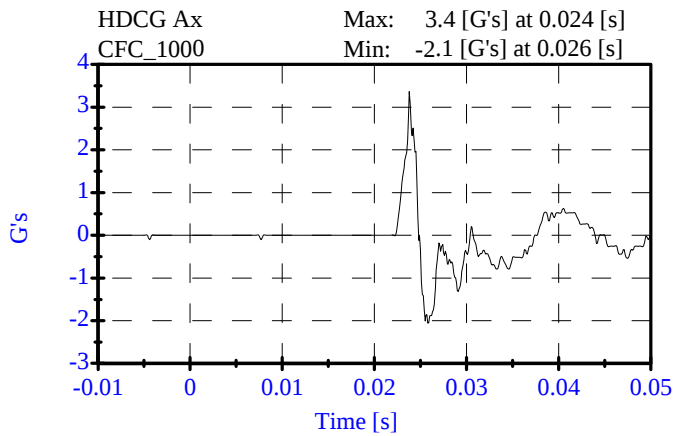
Head Drop **Pre-Test**

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 09-05-08

Sequential Test Number: 1 File: 270hd 09-05-08
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 %	52.00 %	Passed
Peak Resultant Accel.:	120-150 Gs	129.68 Gs	Passed
Peak Lateral Accel.:	15 Gs Max	3.36 Gs	Passed
Curve PerCent NonModal:	< 15%	1.77 %	Passed



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

ATD Serial No: 270

Date: 09-09-08

Sequential Test Number: 1 File: 270N 09-09-08

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	21.7 C	Passed
Lab Humidity:	10-70 %	58.00 %	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	2.12 m/s	Passed
Delta V at 20 ms:	4.12- 5.10 m/s	4.40 m/s	Passed
Delta V at 30 ms:	5.73- 7.01 m/s	6.37 m/s	Passed
Delta V between 40-70 ms:	6.27- 7.64 m/s	7.19 m/s	Passed
D PLANE ROTATION			
Maximum Rotation:	66.0-82.0 Deg	71.30 Deg	Passed
Rotation Angle Decay:	58.0-67.0 ms	59.10 ms	Passed
MOMENT ABOUT THE OCCIPITAL CONDYLE			
Max Occipital Moment:	73.00- 88.00 N-m	84.57 N-m	Passed
Occipital Moment Decay:	49.0-64.0 ms	52.80 ms	Passed
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT			
Moment to Rotation Peak:	2.0-16.0 ms	9.40 ms	Passed

Neck Test
Pre-Test
CONFIGURED FOR LEFT SIDE IMPACT

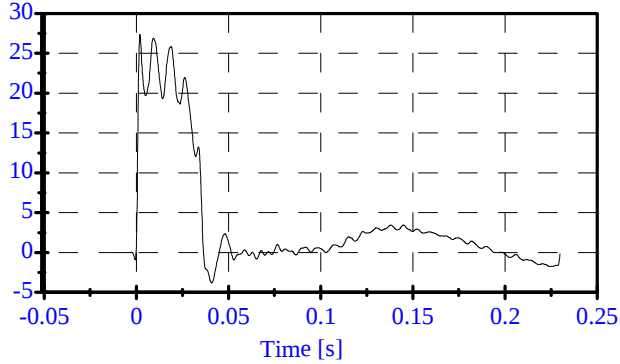
ATD Serial No: 270

Date: 09-09-08

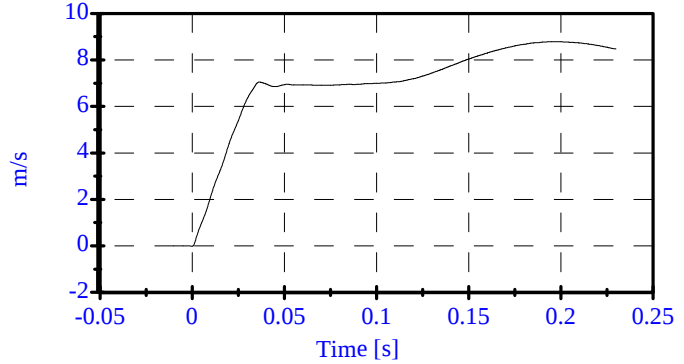
Sequential Test Number: 1 File: 270N 09-09-08

Laboratory Technician: B. Swiecicki

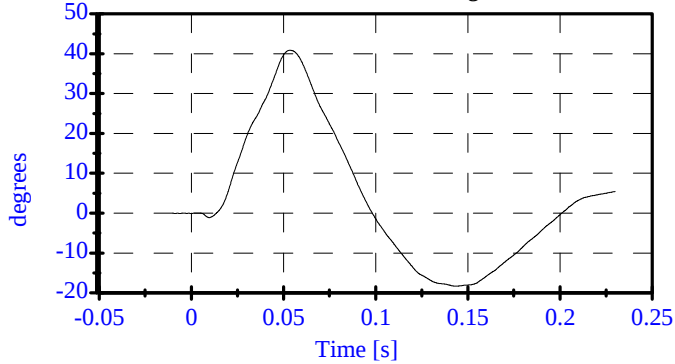
Pend Ax
CFC_180
Max: 27.4 [] at 0.002 [s]
Min: -3.8 [] at 0.041 [s]



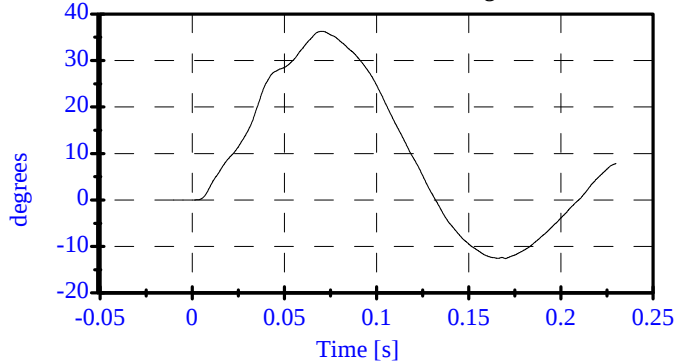
Pend Vx
CFC_180
Max: 8.8 [m/s] at 0.199 [s]
Min: -0.0 [m/s] at -0.000 [s]



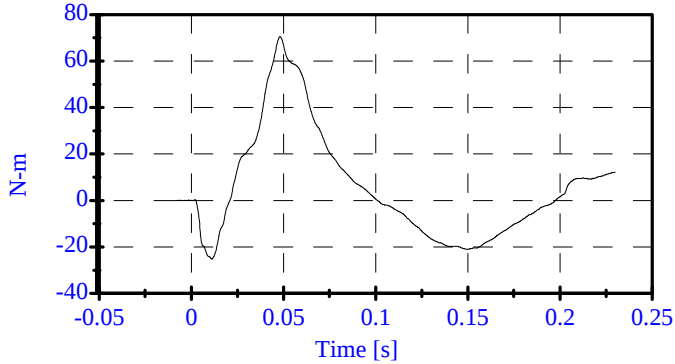
Head Rot
CFC_180
Max: 40.9 [degrees] at 0.054 [s]
Min: -18.3 [degrees] at 0.143 [s]



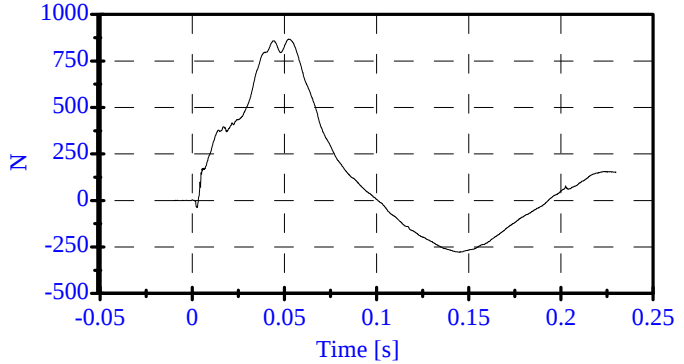
Arm Rot
CFC_180
Max: 36.3 [degrees] at 0.070 [s]
Min: -12.6 [degrees] at 0.170 [s]



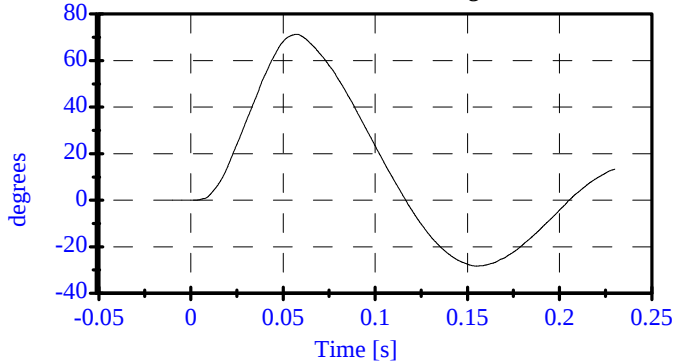
Neck Mx
CFC_600
Max: 70.4 [N-m] at 0.048 [s]
Min: -25.2 [N-m] at 0.011 [s]



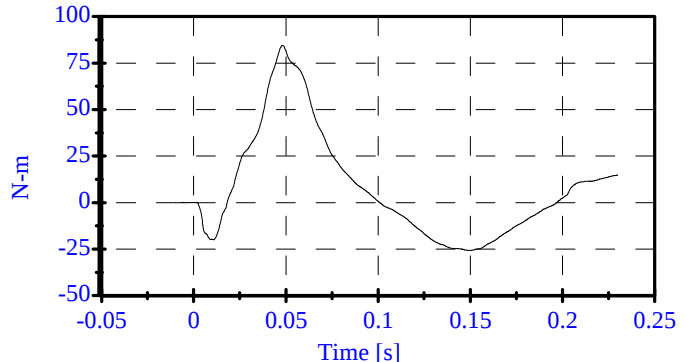
Neck Fy
CFC_1000
Max: 867.6 [N] at 0.052 [s]
Min: -278.1 [N] at 0.145 [s]



Tot Rot
CFC_180
Max: 71.3 [degrees] at 0.057 [s]
Min: -28.3 [degrees] at 0.155 [s]



MOCX
Max: 84.6 [N-m] at 0.048 [s]
Min: -25.7 [N-m] at 0.149 [s]



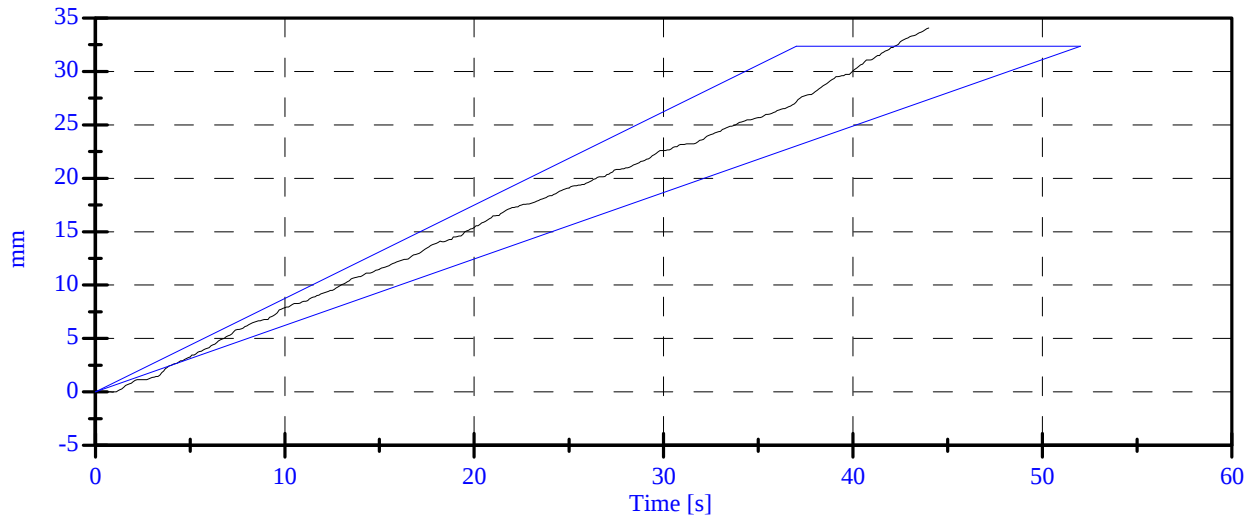
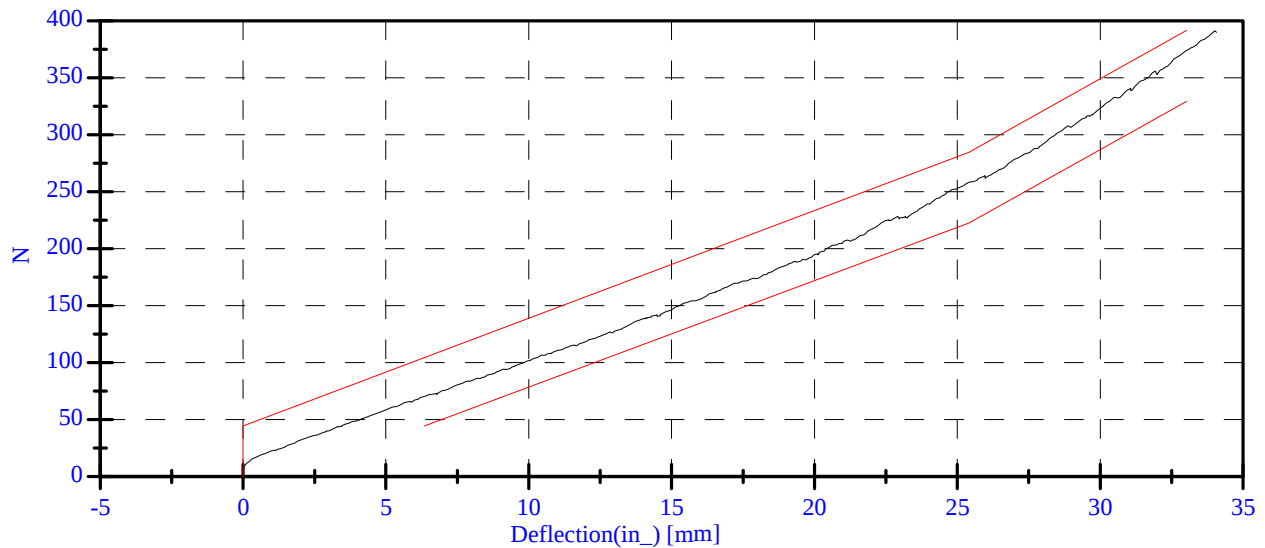
Abdominal Compression Test
Pre-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 09-10-08

Sequential Test Number: 1 File: 270 Ab 09-10-08
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.7 C	Passed
Lab Humidity:	10-70 %	49.00 %	Passed
Force at 12.95 mm :	104.00-162.00 N	126.47 N	Passed
Force at 19.05 mm :	162.98-220.99 N	185.97 N	Passed
Force at 25.40 mm :	221.97-280.02 N	258.25 N	Passed
Force at 33.02 mm :	324.99-391.00 N	373.60 N	Passed

ABDOMINAL COMPRESSION TEST



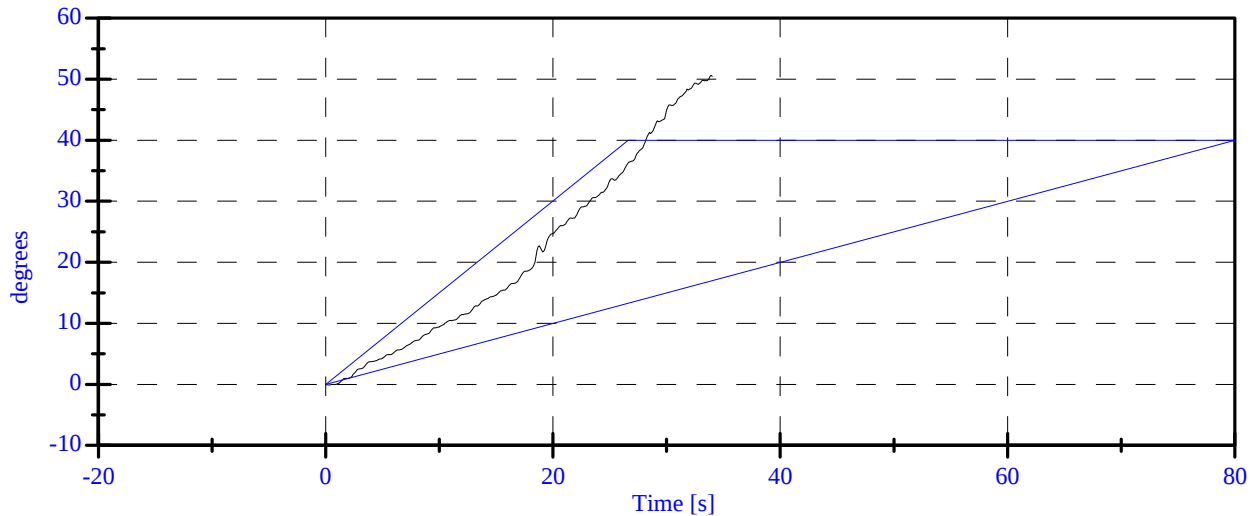
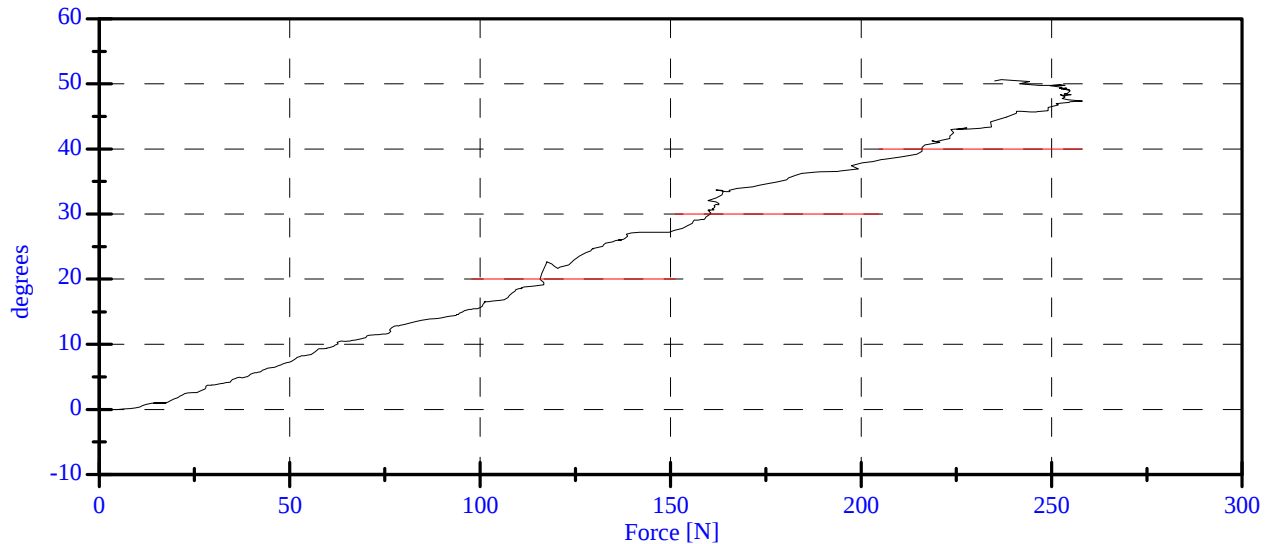
Lumbar Spine Test
Pre-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 09-10-08

Sequential Test Number: 1 File: 270 Spine 09-10-08
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 %	48.00 %	Passed
Force at 0 Deg:	0.00-26.69 N	1.30 N	Passed
Force at 20 Deg:	97.86-151.24 N	115.69 N	Passed
Force at 30 Deg:	151.24-204.62 N	160.35 N	Passed
Force at 40 Deg:	204.62-258.00 N	215.97 N	Passed
Return Angle	12 Deg Max	8.09 deg	Passed

LUMBAR SPINE FLEXION TEST



PRE-TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 270 Sequential Test Number: 1
 Date: September 5, 2008 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.:	<u>269</u>	Sequential Test Number:	<u>1</u>
Date:	<u>October 28, 2008</u>	Laboratory Technician:	<u>B. Swiecicki</u>

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: 1
Date: October 24, 2008 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	516
KV- Knee Pivot to Floor (mm)	490 - 505	495
HW- Hip Width (mm)	356 - 391	381

REMARKS: None

Thorax Impact

Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

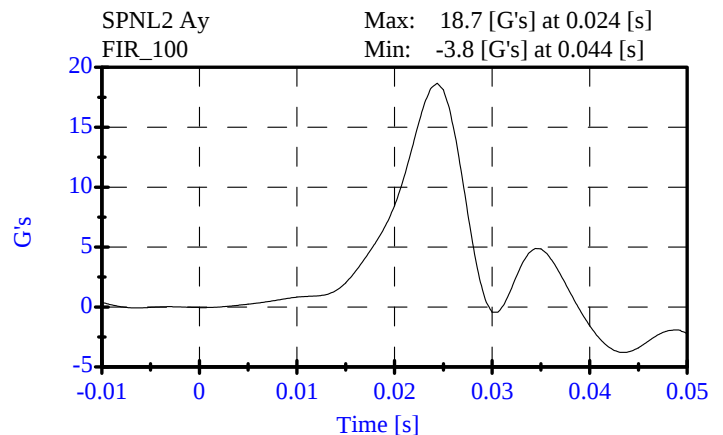
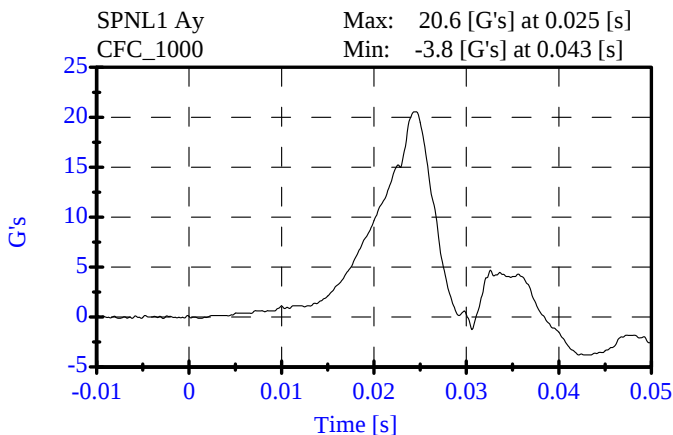
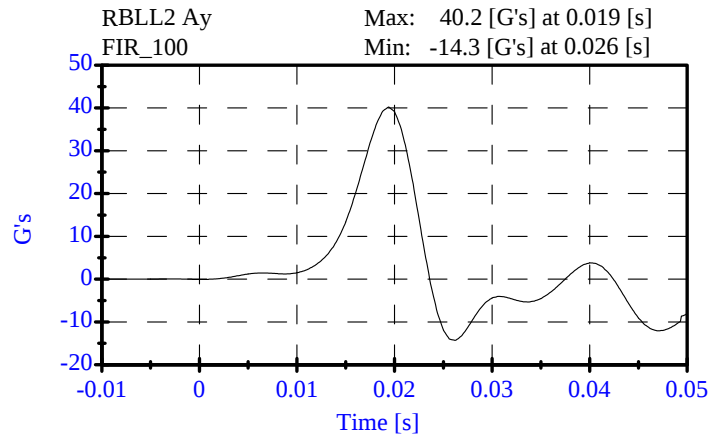
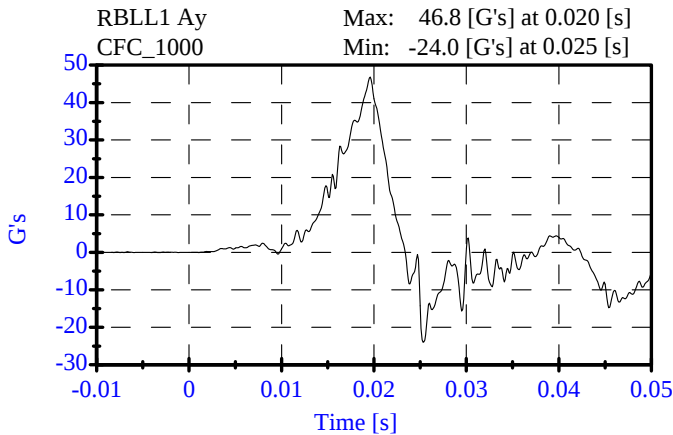
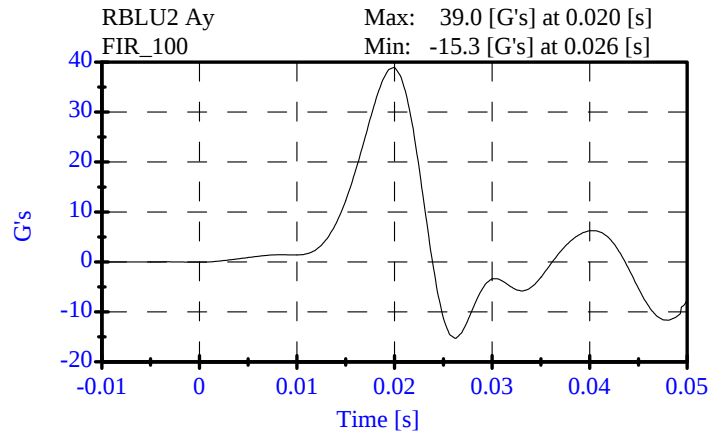
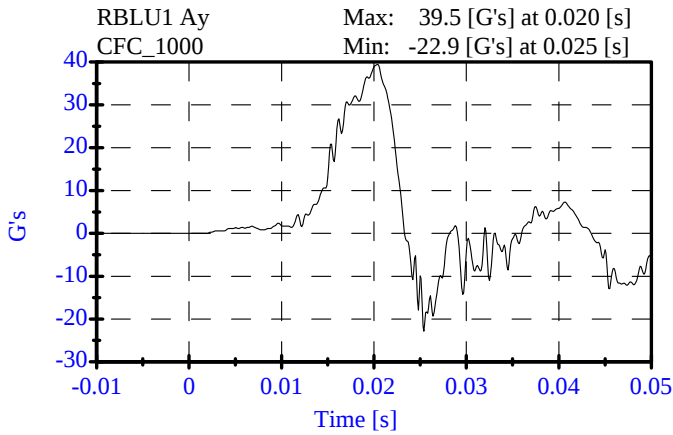
ATD Serial No: 269

Date: 10-27-08

Sequential Test Number: 1 File: 269T1 10-27-08

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.7 C	Passed
Lab Humidity:	10-70 %	29.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.27 m/s	Passed
Upper Rib Acceleration:	37.00-46.00 G's	38.96 G's	Passed
Lower Rib Acceleration:	37.00-46.00 G's	40.23 G's	Passed
Lower Spine Acceleration:	15.00-22.00 G's	18.67 G's	Passed



Pelvis Impact

Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

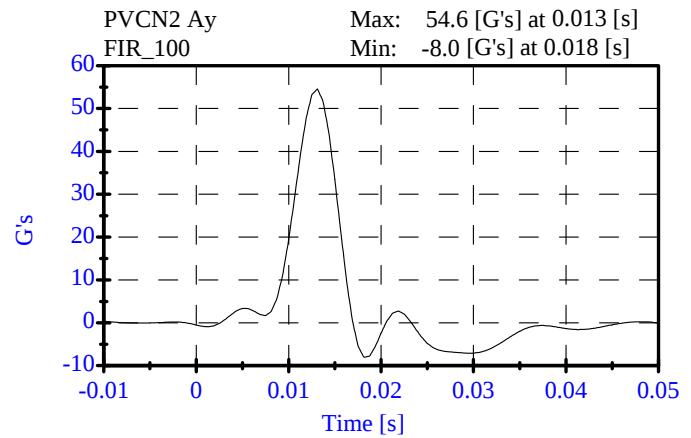
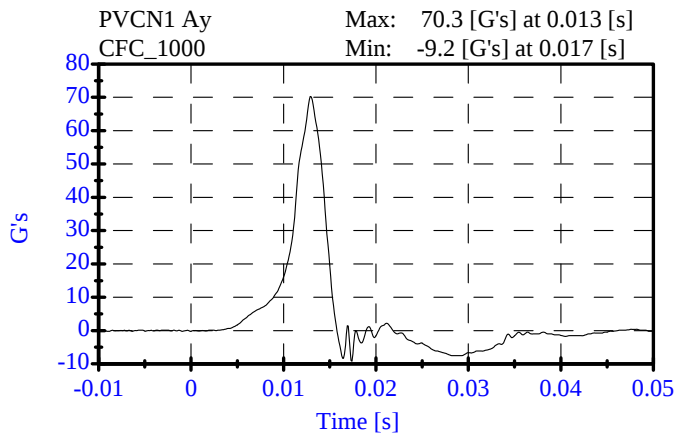
ATD Serial No: 269

Date: 10-24-08

Sequential Test Number: 1 File: 269P 10-24-08

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	21.7 C	Passed
Lab Humidity:	10-70 %	25.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.29 m/s	Passed
Pelvis Y Acceleration:	40.00-60.00 G's	54.59 G's	Passed
Time Above 20 Gs	3.0-7.0 ms	5.7 ms	Passed

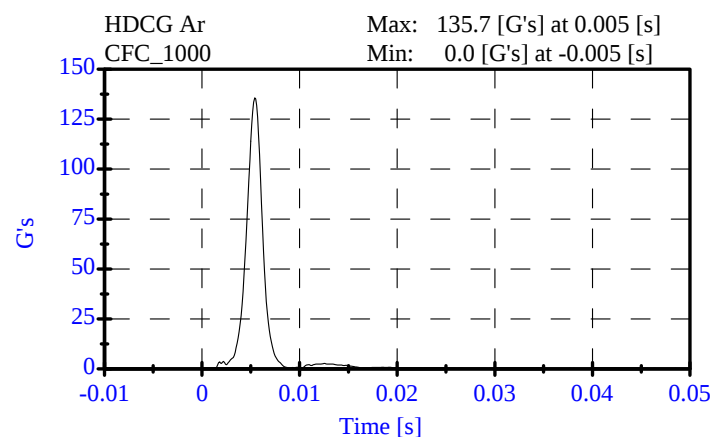
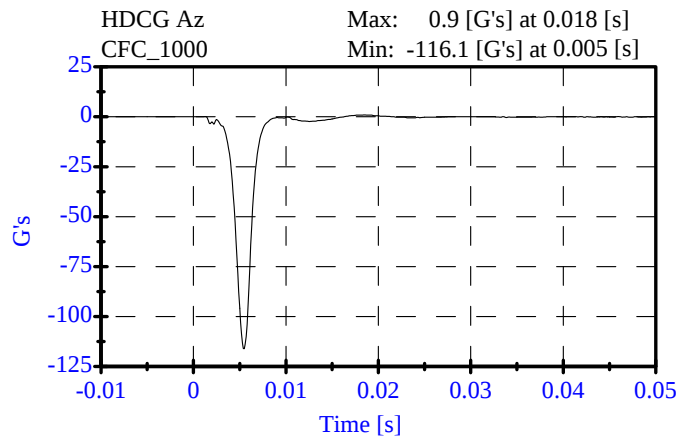
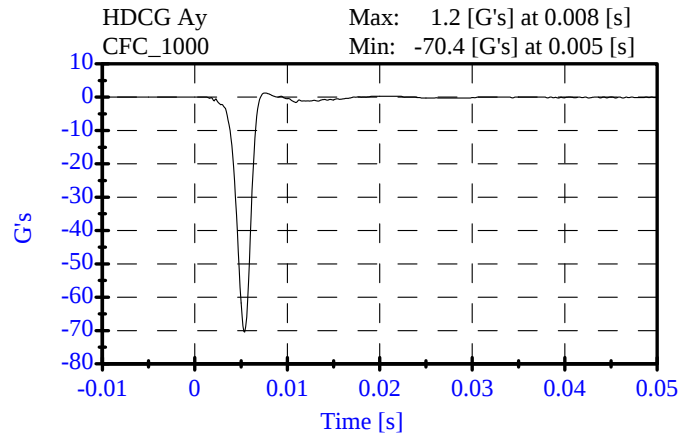
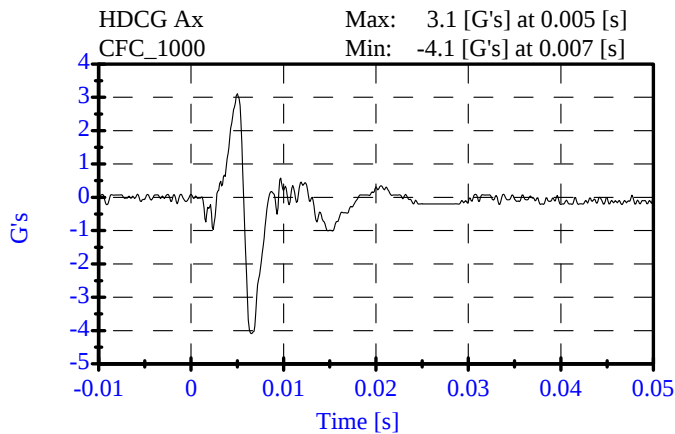


Head Drop Test **Post-Test** **CONFIGURED FOR LEFT SIDE IMPACT**

ATD Serial No: 269
Date: 10-23-08

Sequential Test Number: 1 File: 269H 10-23-08
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.6 C	21.7 C	Passed
Lab Humidity:	10-70 %	25.00 %	Passed
Peak Resultant Accel.:	120-150 Gs	135.67 Gs	Passed
Peak Lateral Accel.:	15 Gs Max	3.10 Gs	Passed
Curve PerCent NonModal:	< 15%	2.00 %	Passed



Neck Test
Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 10-24-08

Sequential Test Number: 1 File: 269N 10-24-08
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	21.7 C	Passed
Lab Humidity:	10-70 %	25.00 %	Passed
Impact Velocity:	6.89- 7.13 m/s	6.98 m/s	Passed
PENDULUM DELTA V			
Delta V at 10 ms:	1.96- 2.55 m/s	2.34 m/s	Passed
Delta V at 20 ms:	4.12- 5.10 m/s	4.72 m/s	Passed
Delta V at 30 ms:	5.73- 7.01 m/s	6.52 m/s	Passed
Delta V between 40-70 ms:	6.27- 7.64 m/s	7.06 m/s	Passed
D PLANE ROTATION			
Maximum Rotation:	66.0-82.0 Deg	72.35 Deg	Passed
Rotation Angle Decay:	58.0-67.0 ms	62.00 ms	Passed
MOMENT ABOUT THE OCCIPITAL CONDYLE			
Max Occipital Moment:	73.00- 88.00 N-m	76.73 N-m	Passed
Occipital Moment Decay:	49.0-64.0 ms	57.40 ms	Passed
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT			
Moment to Rotation Peak:	2.0-16.0 ms	11.80 ms	Passed

Neck Test
Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

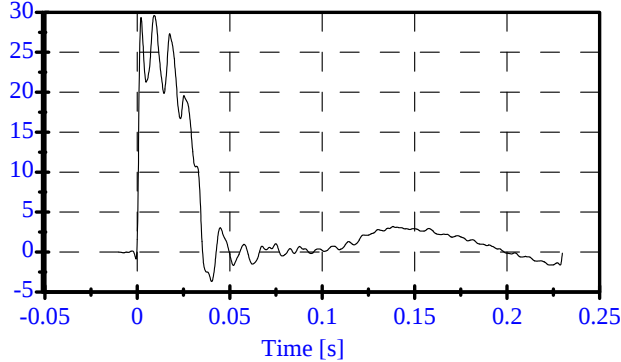
ATD Serial No: 269

Date: 10-24-08

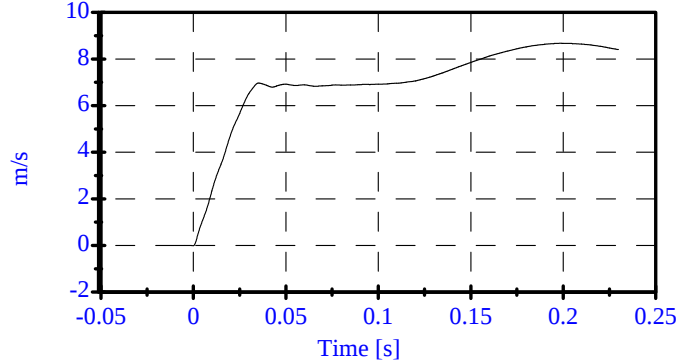
Sequential Test Number: 1 File: 269N 10-24-08

Laboratory Technician: B. Swiecicki

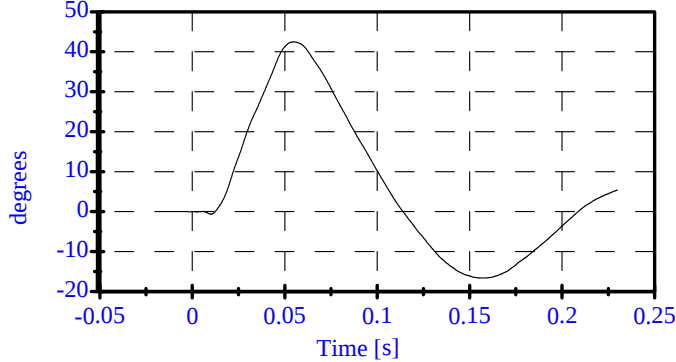
Pend Ax
CFC_180
Max: 29.6 [°] at 0.009 [s]
Min: -3.7 [°] at 0.040 [s]



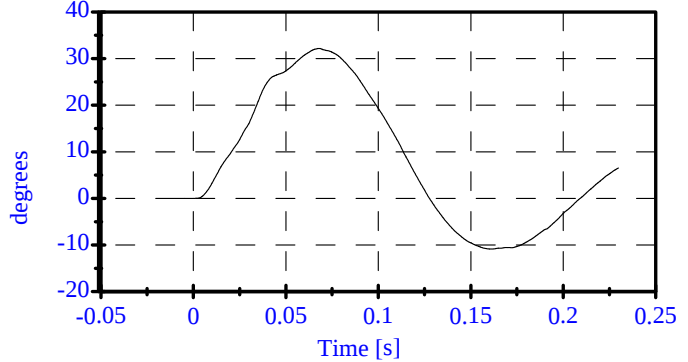
Pend Vx
CFC_180
Max: 8.7 [m/s] at 0.199 [s]
Min: -0.0 [m/s] at -0.000 [s]



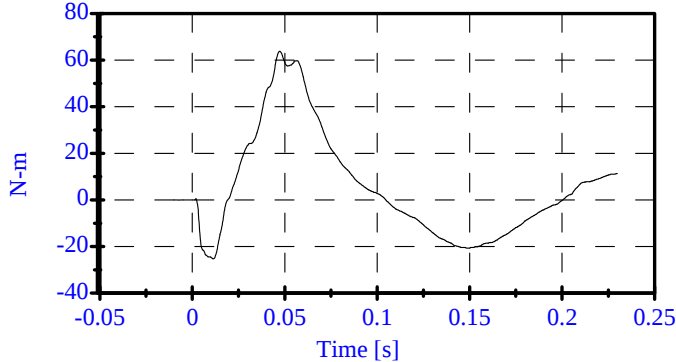
Head Rot
CFC_180
Max: 42.5 [degrees] at 0.055 [s]
Min: -16.6 [degrees] at 0.158 [s]



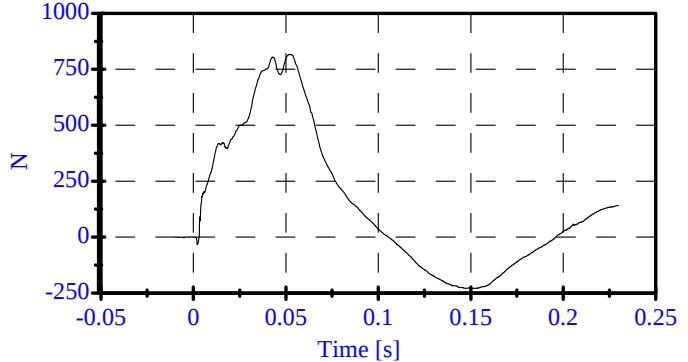
Arm Rot
CFC_180
Max: 32.2 [degrees] at 0.068 [s]
Min: -10.9 [degrees] at 0.161 [s]



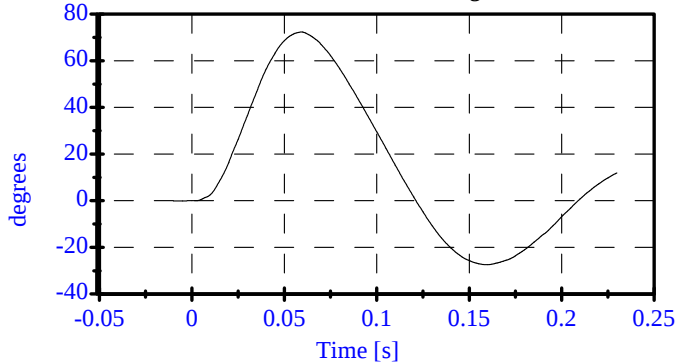
Neck Mx
CFC_600
Max: 63.8 [N-m] at 0.047 [s]
Min: -25.3 [N-m] at 0.011 [s]



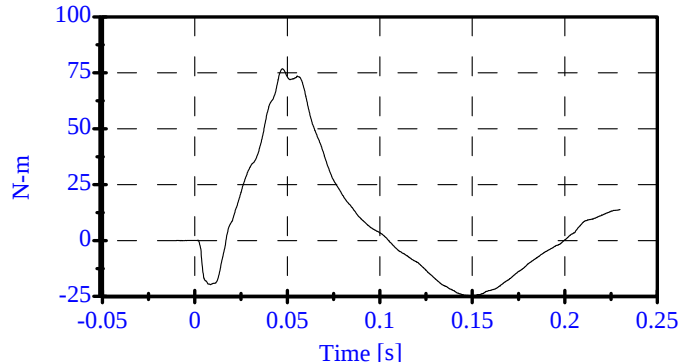
Neck Fy
CFC_1000
Max: 817.0 [N] at 0.052 [s]
Min: -229.4 [N] at 0.151 [s]



Tot Rot
CFC_180
Max: 72.3 [degrees] at 0.059 [s]
Min: -27.4 [degrees] at 0.159 [s]



MOCX
Max: 76.7 [N-m] at 0.047 [s]
Min: -24.7 [N-m] at 0.150 [s]



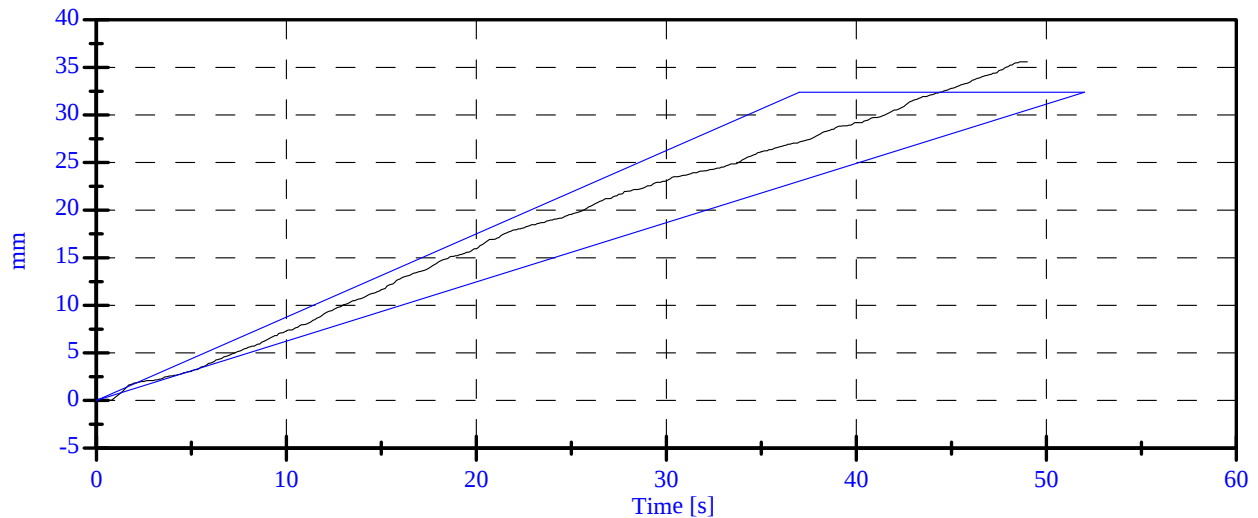
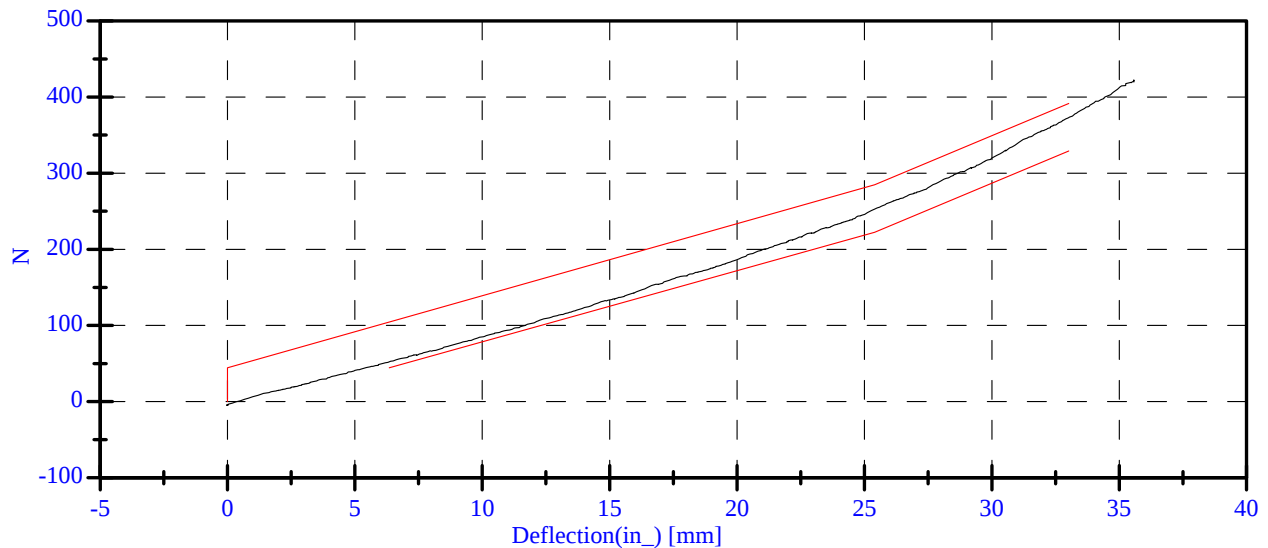
Abdominal Compression Test
Post-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269
Date: 10-28-08

Sequential Test Number: 1 File: 269 Ab 10-28-08
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.7 C	Passed
Lab Humidity:	10-70 %	28.00 %	Passed
Force at 12.95 mm :	104.00-162.00 N	112.96 N	Passed
Force at 19.05 mm :	162.98-220.99 N	175.38 N	Passed
Force at 25.40 mm :	221.97-280.02 N	252.77 N	Passed
Force at 33.02 mm :	324.99-391.00 N	372.50 N	Passed

ABDOMINAL COMPRESSION TEST



Lumbar Spine Test

Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 269

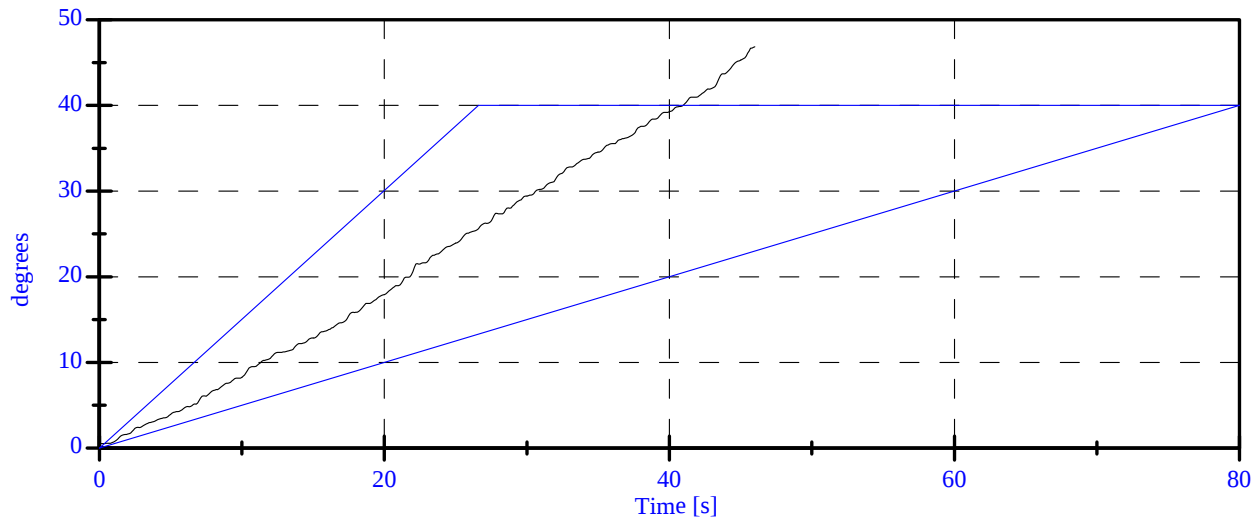
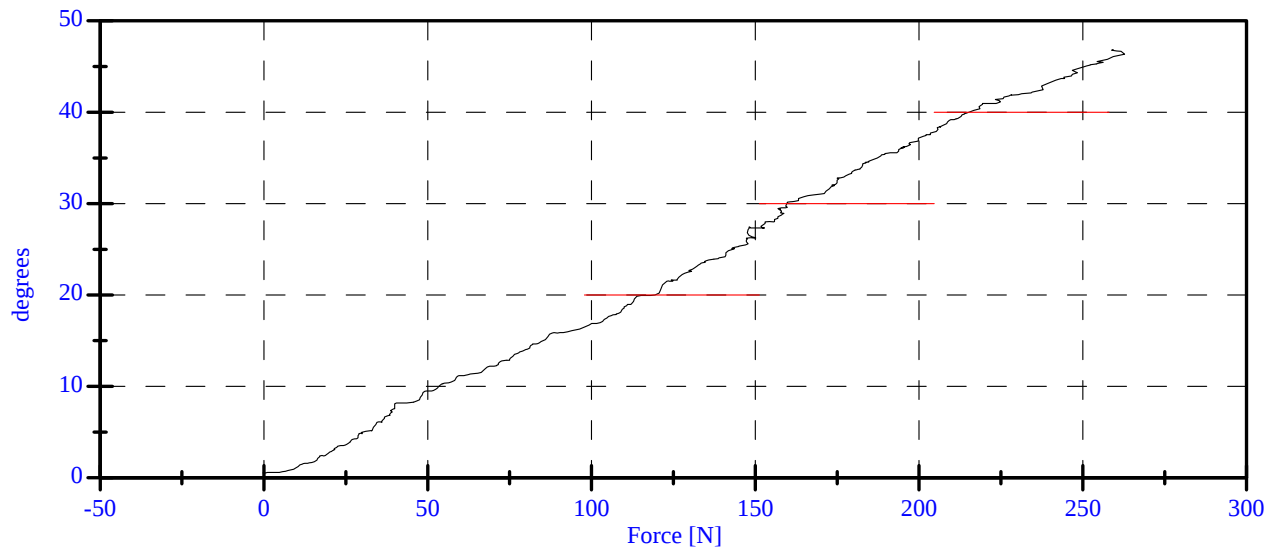
Date: 10-27-08

Sequential Test Number: 1 File: 269 Spine 10-27-08

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.7 C	Passed
Lab Humidity:	10-70 %	29.00 %	Passed
Force at 0 Deg:	0.00-26.69 N	0.26 N	Passed
Force at 20 Deg:	97.86-151.24 N	119.35 N	Passed
Force at 30 Deg:	151.24-204.62 N	159.56 N	Passed
Force at 40 Deg:	204.62-258.00 N	214.67 N	Passed
Return Angle	12 Deg Max	7.83 deg	Passed

LUMBAR SPINE FLEXION TEST



POST TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

SID H3 Serial No.: 269 Sequential Test Number: 1
 Date: October 14, 2008 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: 1
Date: November 3, 2008 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: 1
Date: November 3, 2008 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

Thorax Impact

Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

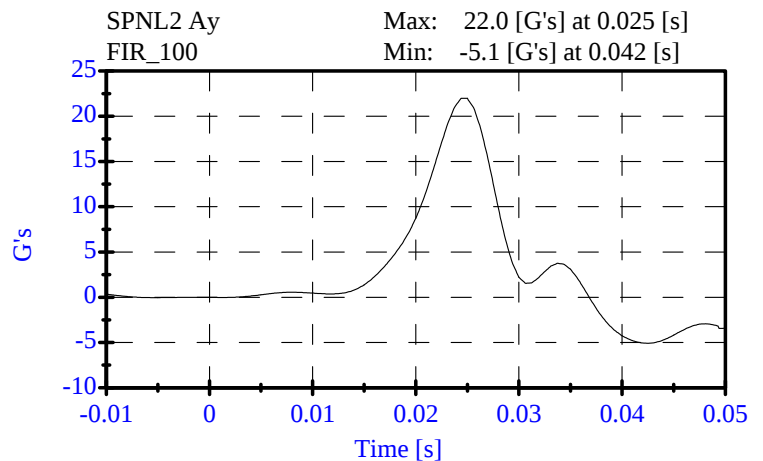
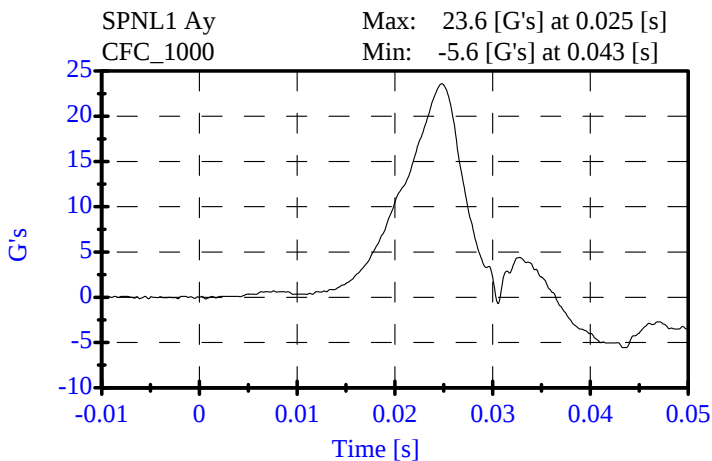
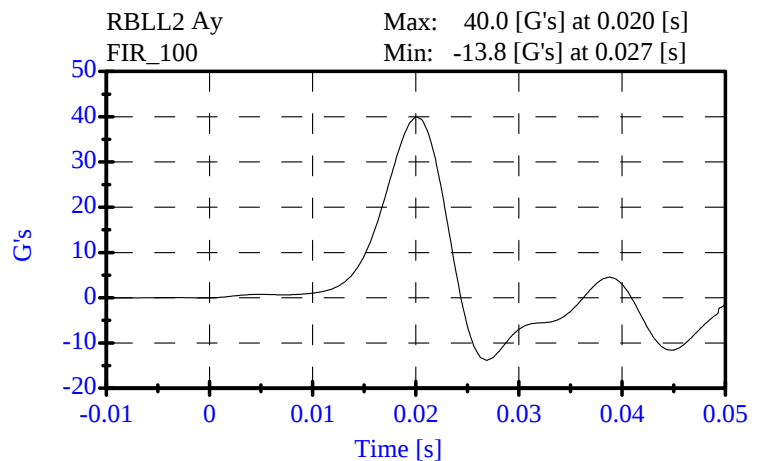
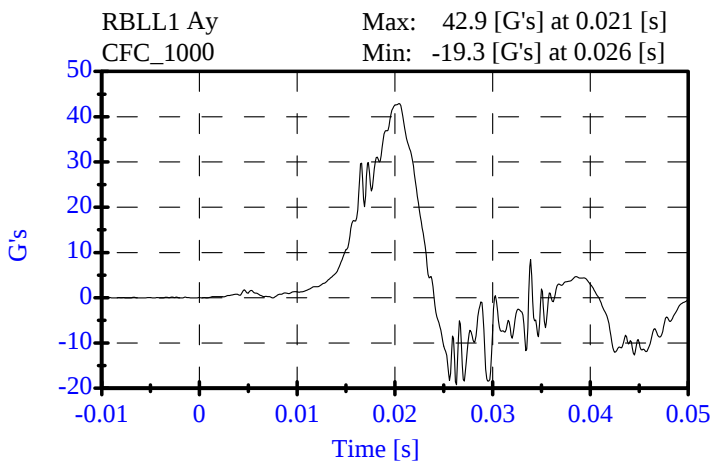
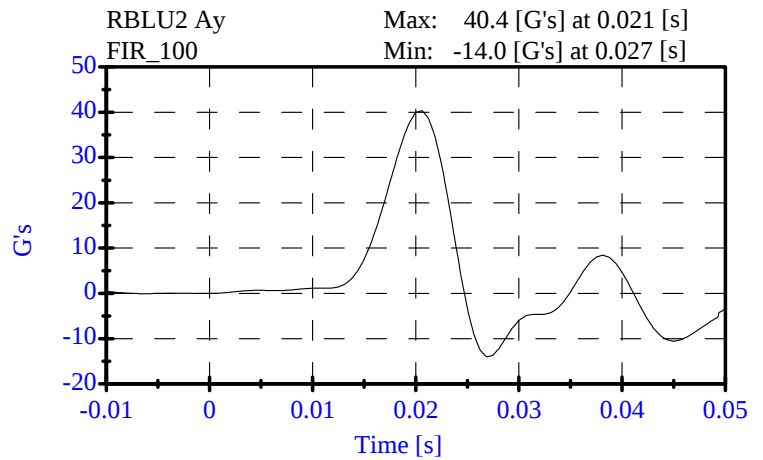
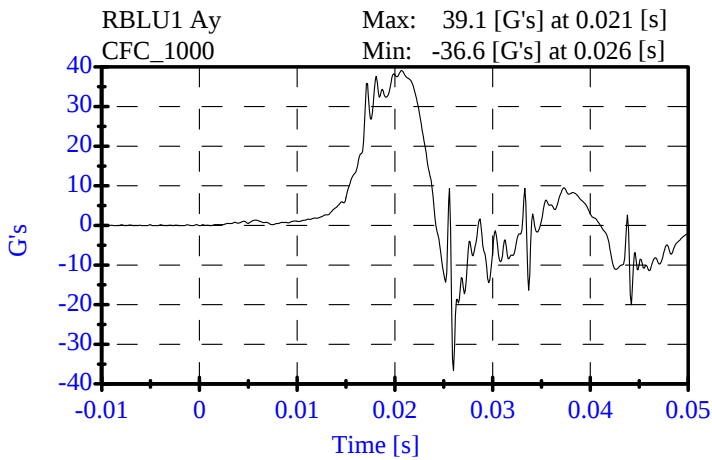
ATD Serial No: 270

Date: 10-31-08

Sequential Test Number: 1 File: 270T1 10-31-08

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 %	21.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.32 m/s	Passed
Upper Rib Acceleration:	37.00-46.00 G's	40.35 G's	Passed
Lower Rib Acceleration:	37.00-46.00 G's	40.03 G's	Passed
Lower Spine Acceleration:	15.00-22.00 G's	21.97 G's	Passed

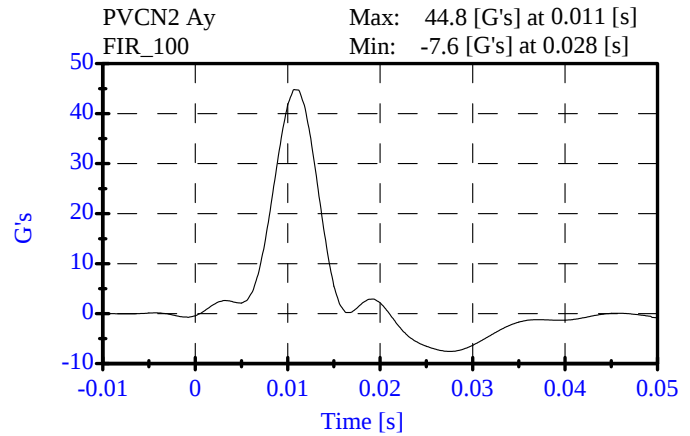
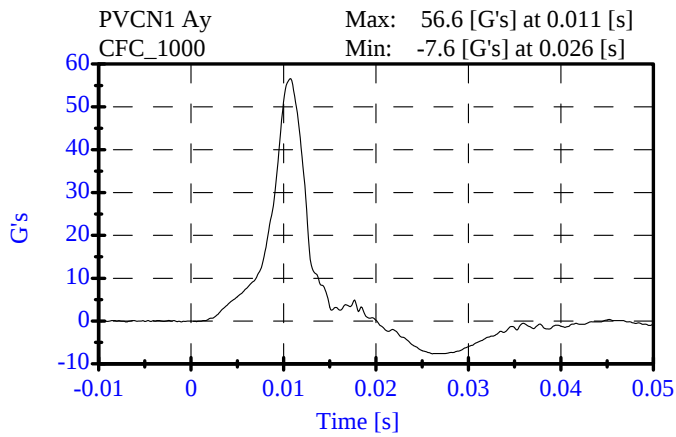


Pelvis Impact Test
Post-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 10-31-08

Sequential Test Number: 1 File: 270P 10-31-08
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	21.7 C	Passed
Lab Humidity:	10-70 %	21.00 %	Passed
Probe Velocity:	4.27- 4.33 m/s	4.27 m/s	Passed
Pelvis Y Acceleration:	40.00-60.00 G's	44.83 G's	Passed
Time Above 20 Gs	3.0-7.0 ms	5.6 ms	Passed



Head Drop Test

Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

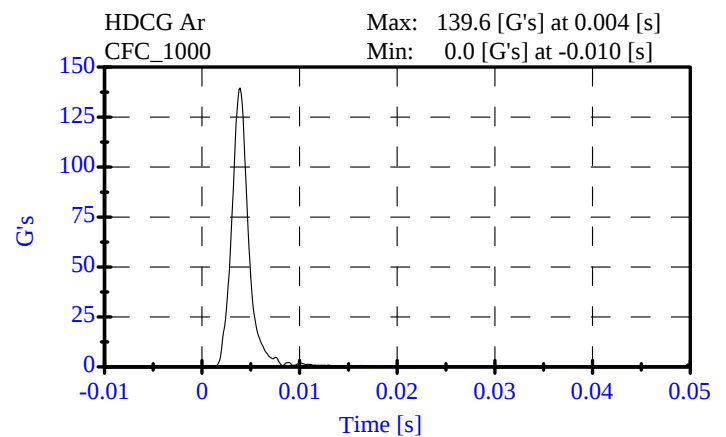
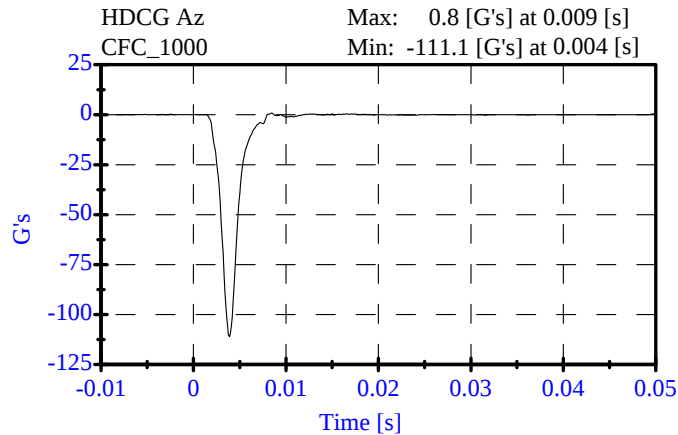
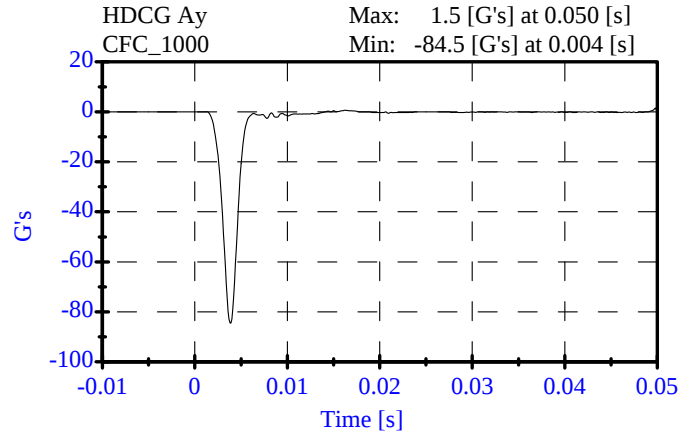
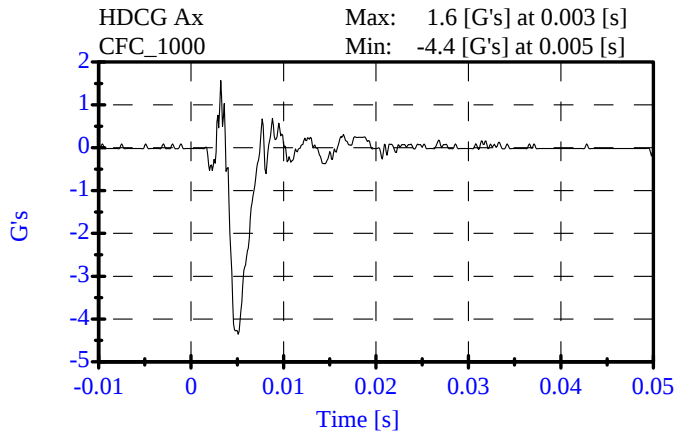
ATD Serial No: 270

Date: 10-30-08

Sequential Test Number: 1 File: 270H 10-30-08

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 %	20.00 %	Passed
Peak Resultant Accel.:	120-150 Gs	139.57 Gs	Passed
Peak Lateral Accel.:	15 Gs Max	1.57 Gs	Passed
Curve PerCent NonModal:	< 15%	3.41 %	Passed



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

ATD Serial No: 270

Sequential Test Number: 1 File: 270N 10-30-08

Date: 10-30-08

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 %	20.00 %	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	2.15 m/s	Passed
Delta V at 20 ms:	4.12- 5.10 m/s	4.44 m/s	Passed
Delta V at 30 ms:	5.73- 7.01 m/s	6.33 m/s	Passed
Delta V between 40-70 ms:	6.27- 7.64 m/s	7.08 m/s	Passed
D PLANE ROTATION			
Maximum Rotation:	66.0-82.0 Deg	70.53 Deg	Passed
Rotation Angle Decay:	58.0-67.0 ms	59.10 ms	Passed
MOMENT ABOUT THE OCCIPITAL CONDYLE			
Max Occipital Moment:	73.00- 88.00 N-m	79.72 N-m	Passed
Occipital Moment Decay:	49.0-64.0 ms	54.00 ms	Passed
HEAD ROTATION TIME WITH RESPECT TO THE OCCIPITAL CONDYLE MOMENT			
Moment to Rotation Peak:	2.0-16.0 ms	10.80 ms	Passed

Neck Test
Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

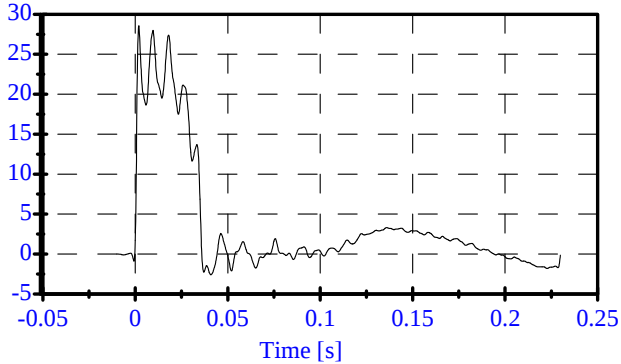
ATD Serial No: 270

Date: 10-30-08

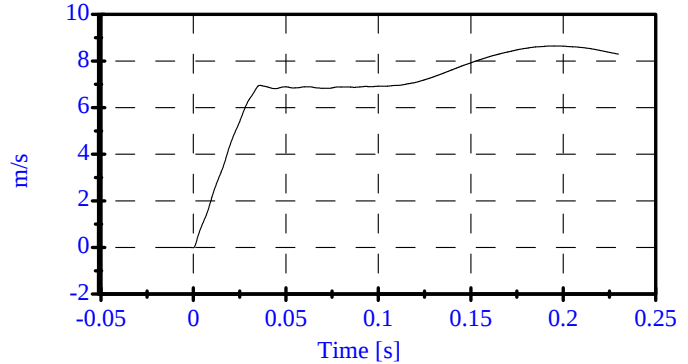
Sequential Test Number: 1 File: 270N 10-30-08

Laboratory Technician: B. Swiecicki

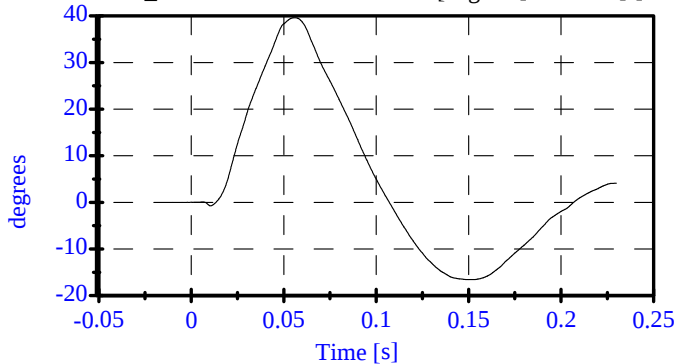
Pend Ax
CFC_180
Max: 28.6 [] at 0.002 [s]
Min: -2.6 [] at 0.041 [s]



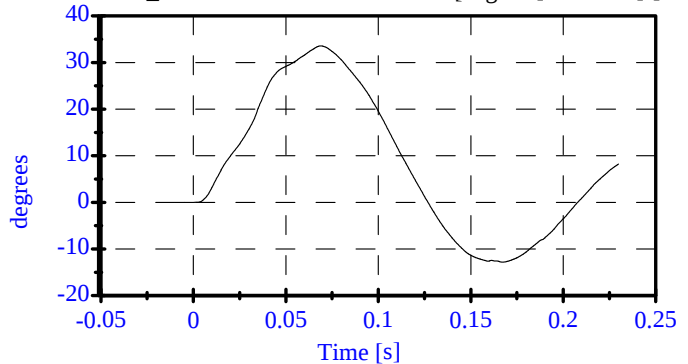
Pend Vx
CFC_180
Max: 8.6 [m/s] at 0.194 [s]
Min: -0.0 [m/s] at -0.000 [s]



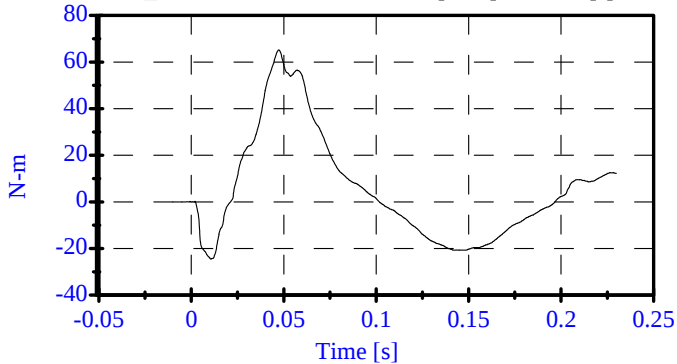
Head Rot
CFC_180
Max: 39.6 [degrees] at 0.056 [s]
Min: -16.6 [degrees] at 0.151 [s]



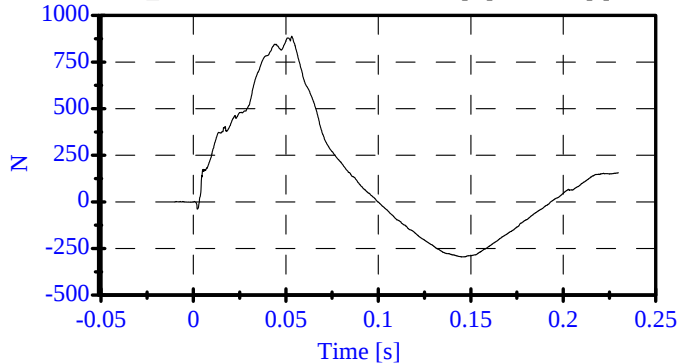
Arm Rot
CFC_180
Max: 33.6 [degrees] at 0.069 [s]
Min: -12.8 [degrees] at 0.167 [s]



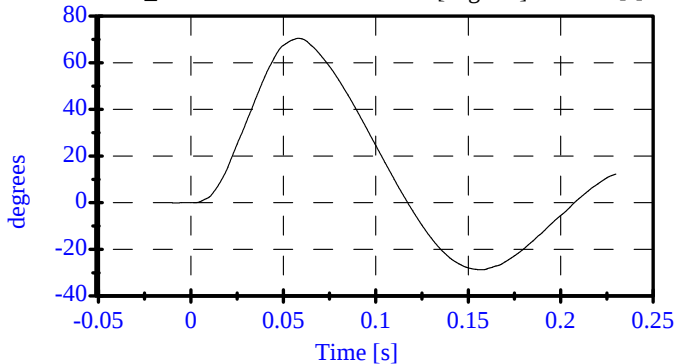
Neck Mx
CFC_600
Max: 65.2 [N-m] at 0.047 [s]
Min: -24.6 [N-m] at 0.011 [s]



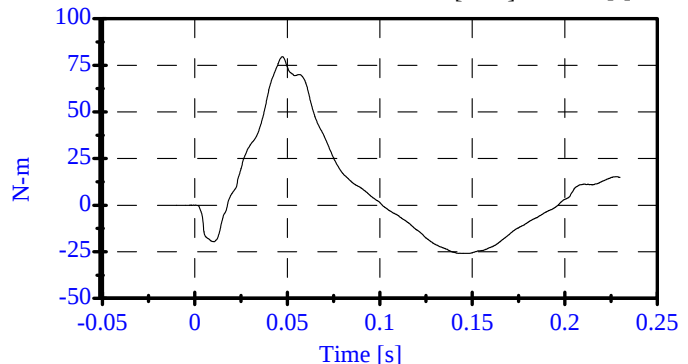
Neck Fy
CFC_1000
Max: 888.8 [N] at 0.053 [s]
Min: -295.2 [N] at 0.146 [s]



Tot Rot
CFC_180
Max: 70.5 [degrees] at 0.058 [s]
Min: -28.7 [degrees] at 0.157 [s]



MOCX
Max: 79.7 [N-m] at 0.047 [s]
Min: -25.9 [N-m] at 0.146 [s]



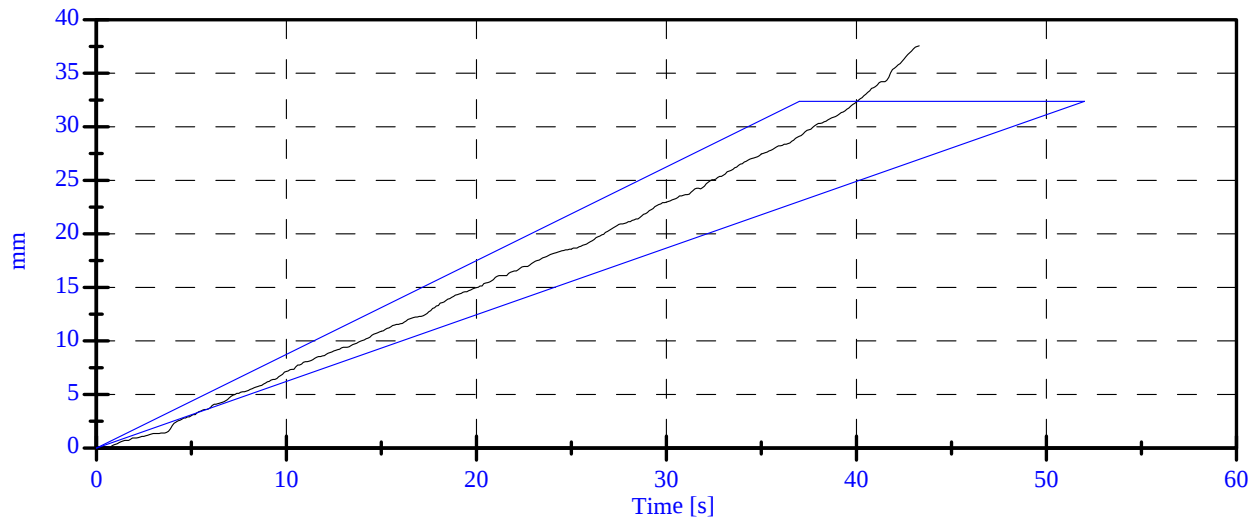
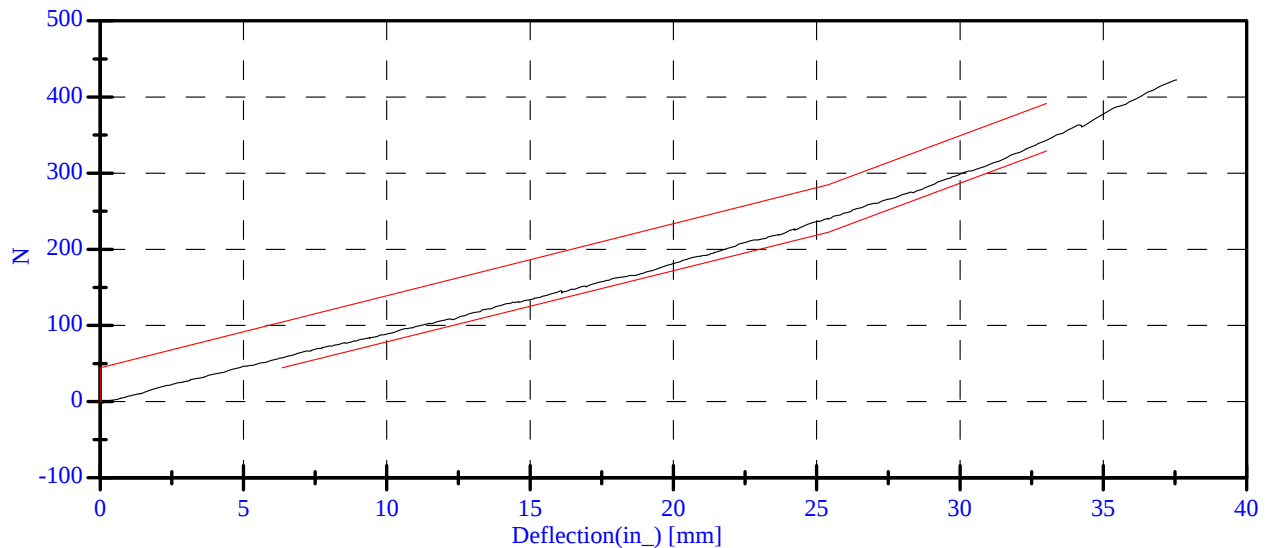
Abdominal Compression Test
Post-Test
CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270
Date: 11-03-08

Sequential Test Number: 1 File: 270 Ab 11-03-08
Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.7 C	Passed
Lab Humidity:	10-70 %	30.00 %	Passed
Force at 12.95 mm :	104.00-162.00 N	116.98 N	Passed
Force at 19.05 mm :	162.98-220.99 N	170.27 N	Passed
Force at 25.40 mm :	221.97-280.02 N	240.36 N	Passed
Force at 33.02 mm :	324.99-391.00 N	343.67 N	Passed

ABDOMINAL COMPRESSION TEST



Lumbar Spine Test

Post-Test

CONFIGURED FOR LEFT SIDE IMPACT

ATD Serial No: 270

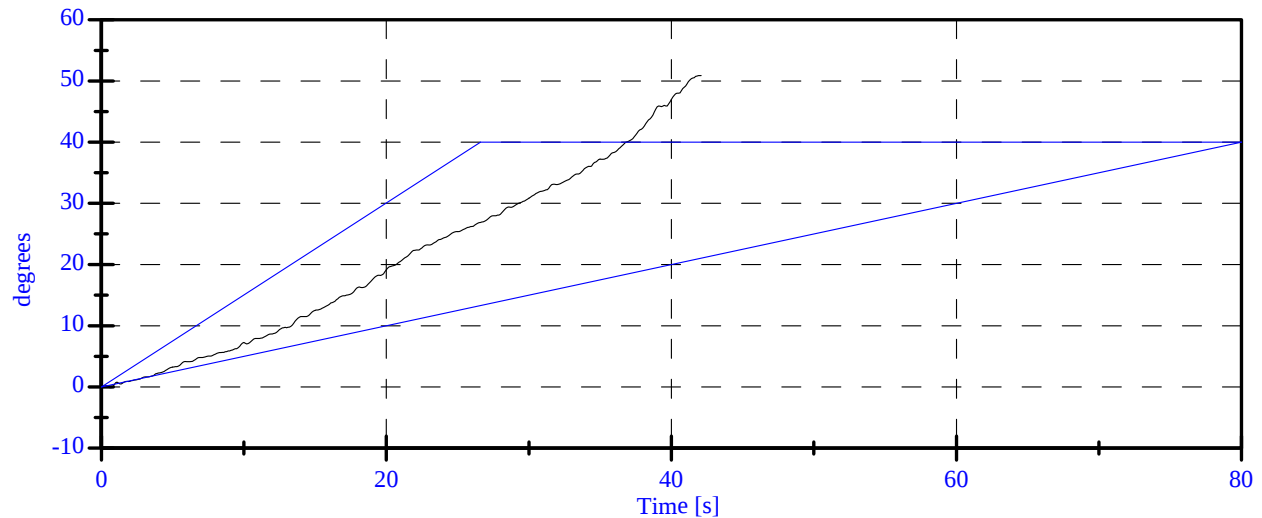
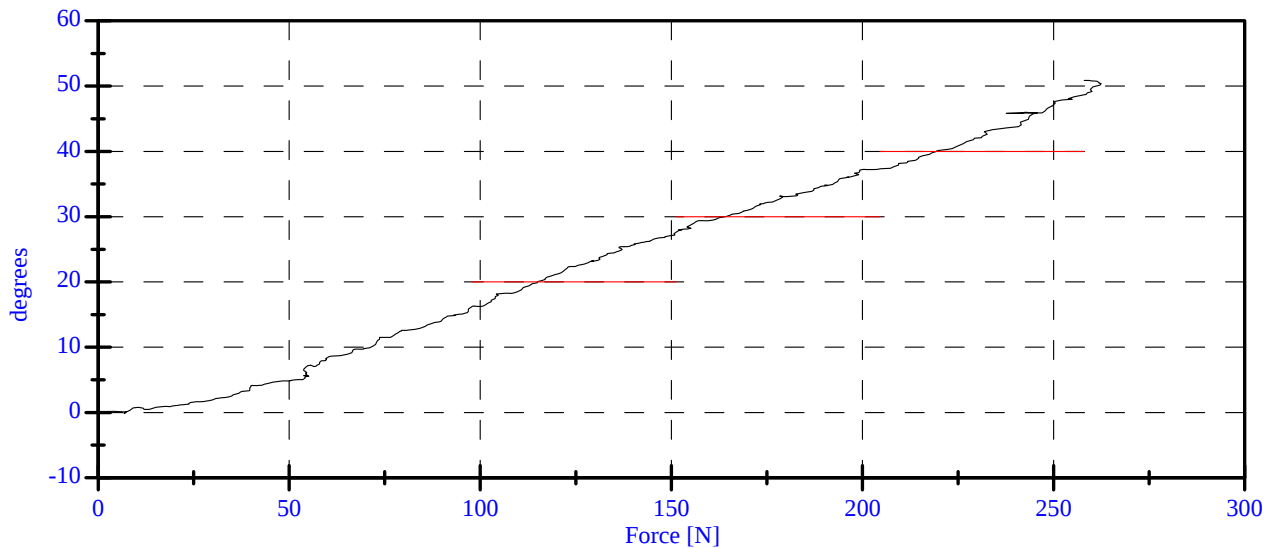
Date: 11-03-08

Sequential Test Number: 1 File: 270 Spine 11-03-08

Laboratory Technician: B. Swiecicki

TEST PARAMETER	SPECIFICATION	TEST RESULTS	STATUS
Lab Temperature:	18.9-25.5 C	21.7 C	Passed
Lab Humidity:	10-70 %	30.00 %	Passed
Force at 0 Deg:	0.00-26.69 N	7.05 N	Passed
Force at 20 Deg:	97.86-151.24 N	114.91 N	Passed
Force at 30 Deg:	151.24-204.62 N	164.26 N	Passed
Force at 40 Deg:	204.62-258.00 N	219.37 N	Passed
Return Angle	12 Deg Max	7.78 deg	Passed

LUMBAR SPINE FLEXION TEST



POST TEST DUMMY INSPECTION LIST
CONFIGURED FOR LEFT SIDE IMPACT

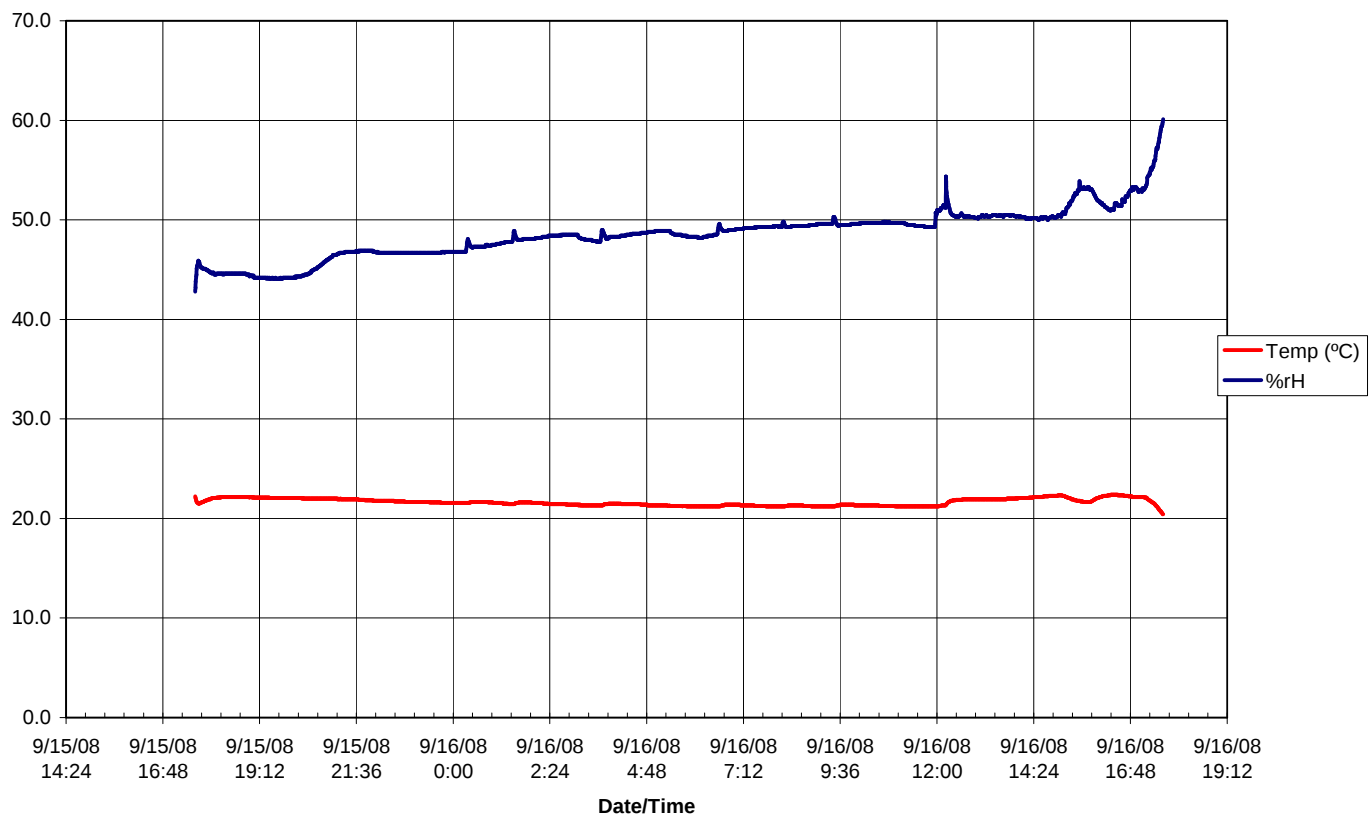
SID H3 Serial No.: 270 Sequential Test Number: 1
 Date: October 30, 2008 Laboratory Technician: B. Swiecicki

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

2009 Nissan Xterra M95204 Environmental Conditions



APPENDIX D

TEST EQUIPMENT AND CALIBRATION INFORMATION

TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

SID/HIII INSTRUMENTATION

	FRONT SID/HIII NO.: 269		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	AC-P52088	ENDEVCO	01-Aug-08
HEAD AY	AC-P52095	ENDEVCO	01-Aug-08
HEAD AZ	AC-P58986	ENDEVCO	01-Aug-08
HEAD AX REDUNDANT	AC-P58908	ENDEVCO	01-Aug-08
HEAD AY REDUNDANT	AC-P59021	ENDEVCO	01-Aug-08
HEAD AZ REDUNDANT	AC-P58794	ENDEVCO	01-Aug-08
UPPER NECK FX	LC-810Fx	DENTON	08-Nov-07
UPPER NECK FY	LC-810Fy	DENTON	08-Nov-07
UPPER NECK FZ	LC-810Fz	DENTON	08-Nov-07
UPPER NECK MX	LC-810Mx	DENTON	08-Nov-07
UPPER NECK MY	LC-810My	DENTON	08-Nov-07
UPPER NECK MZ	LC-810Mz	DENTON	08-Nov-07
UPPER RIB	AC-P49467	ENDEVCO	01-Aug-08
LOWER RIB	AC-P51734	ENDEVCO	01-Aug-08
LOWER SPINE	AC-P51689	ENDEVCO	01-Aug-08
PELVIS	AC-P58762	ENDEVCO	01-Aug-08
UPPER RIB REDUNDANT	AC-P51713	ENDEVCO	01-Aug-08
LOWER RIB REDUNDANT	AC-P59020	ENDEVCO	01-Aug-08
LOWER SPINE REDUNDANT	AC-P58776	ENDEVCO	01-Aug-08
PELVIS REDUNDANT	AC-P58905	ENDEVCO	01-Aug-08

	REAR SID/HIII NO.: 270		
	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD AX	AC-P58998	ENDEVCO	01-Aug-08
HEAD AY	AC-P58909	ENDEVCO	01-Aug-08
HEAD AZ	AC-P51279	ENDEVCO	01-Aug-08
HEAD AX REDUNDANT	AC-P58780	ENDEVCO	01-Aug-08
HEAD AY REDUNDANT	AC-P58997	ENDEVCO	01-Aug-08
HEAD AZ REDUNDANT	AC-P58912	ENDEVCO	01-Aug-08
UPPER NECK FX	LC-498Fx	DENTON	03-Apr-08
UPPER NECK FY	LC-498Fy	DENTON	03-Apr-08
UPPER NECK FZ	LC-498Fz	DENTON	03-Apr-08
UPPER NECK MX	LC-498Mx	DENTON	03-Apr-08
UPPER NECK MY	LC-498My	DENTON	03-Apr-08
UPPER NECK MZ	LC-498Mz	DENTON	03-Apr-08
UPPER RIB	AC-P51969	ENDEVCO	04-Aug-08
LOWER RIB	AC-P51950	ENDEVCO	01-Aug-08
LOWER SPINE	AC-P51970	ENDEVCO	04-Aug-08
PELVIS	AC-P51946	ENDEVCO	04-Aug-08
UPPER RIB REDUNDANT	AC-P51948	ENDEVCO	04-Aug-08
LOWER RIB REDUNDANT	AC-P51974	ENDEVCO	01-Aug-08
LOWER SPINE REDUNDANT	AC-P51965	ENDEVCO	04-Aug-08
PELVIS REDUNDANT	AC-P51945	ENDEVCO	04-Aug-08

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-P16656	ENDEVCO	11-Jul-08
RIGHT FRONT SILL (Y)	AC-P15526	ENDEVCO	11-Jul-08
RIGHT FRONT SILL (Z)	AC-P39575	ENDEVCO	11-Jul-08
RIGHT REAR SILL (X)	AC-P23164	ENDEVCO	05-Sep-08
RIGHT REAR SILL (Y)	AC-P23939	ENDEVCO	05-Sep-08
RIGHT REAR SILL (Z)	AC-P23993	ENDEVCO	05-Sep-08
REAR FLOORPAN ABOVE AXLE (X)	AC-P35803	ENDEVCO	11-Jul-08
REAR FLOORPAN ABOVE AXLE (Y)	AC-P35811	ENDEVCO	11-Jul-08
REAR FLOORPAN ABOVE AXLE (Z)	AC-P35789	ENDEVCO	11-Jul-08
LEFT REAR SILL (Y)	AC-P16866	ENDEVCO	04-Aug-08
LEFT FRONT SILL (Y)	AC-P21135	ENDEVCO	06-Aug-08
RIGHT REAR SEAT OCCUPANT COMP. (Y)	AC-P23960	ENDEVCO	30-Jun-08
LOWER LEFT B- PILLAR (Y)	AC-P38188	ENDEVCO	19-Jun-08
MIDDLE LEFT B-PILLAR (Y)	AC-P17285	ENDEVCO	06-Aug-08
LOWER LEFT A-PILLAR (Y)	AC-J29805	ENDEVCO	07-Apr-08
UPPER LEFT A-PILLAR (Y)	AC-P22639	ENDEVCO	05-Sep-08
FRONT SEAT TRACK (Y)	AC-P21516	ENDEVCO	18-Jun-08
REAR SEAT TRACK (Y)	AC-P19222	ENDEVCO	16-Jun-08
VEHICLE CG (X)	AC-P32455	ENDEVCO	05-Sep-08
VEHICLE CG (Y)	AC-P32464	ENDEVCO	05-Sep-08
VEHICLE CG (Z)	AC-P32139	ENDEVCO	05-Sep-08
MDB CG (X)	AC-C15007	ENDEVCO	05-Jun-08
MDB CG (Y)	AC-GE16	ENDEVCO	05-Jun-08
MDB CG (Z)	AC-C16499	ENDEVCO	05-Jun-08
MDB REAR FRAME MEMBER (X)	AC-C14948	ENDEVCO	05-Jun-08
MDB REAR FRAME MEMBER (Y)	AC-C16680	ENDEVCO	05-Jun-08

REMARKS: None