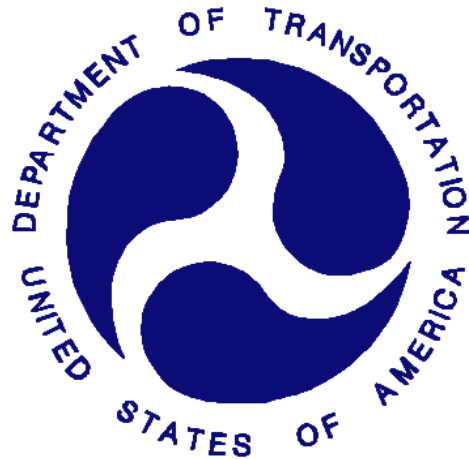


REPORT NUMBER: SPNCAP-MGA-2012-031

**NEW CAR ASSESSMENT PROGRAM (NCAP)
Side Impact Pole Test**

**NISSAN MOTOR CO., LTD.
2012 Nissan Maxima S 4-Dr Sedan
NHTSA No.: MC5204**

**MGA RESEARCH CORPORATION
5000 Warren Road
Burlington, WI 53105**



Test Date: November 28, 2011

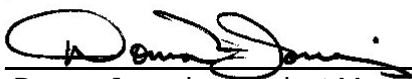
Final Report Date: January 3, 2012

FINAL REPORT

**U.S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Office of Crashworthiness Standards
Mail Code: NVS-111
1200 New Jersey Ave, SE
Room W43-410
Washington, DC 20590**

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If trade or manufacturers' names or products are mentioned, it is only because they are considered essential to the object of the publication and should not be construed as an endorsement. The United States Government does not endorse products or manufacturers.

Prepared by: 
Donna Janovicz, Project Manager

Approved by: 
Ben Fischer, Project Engineer

Approval Date: January 3, 2012

FINAL REPORT ACCEPTANCE BY OCWS:

Division Chief, New Car Assessment Program
NHTSA, Office of Crashworthiness Standards

Date: _____

COTR, New Car Assessment Program
NHTSA, Office of Crashworthiness Standards

Date: _____

Technical Report Documentation Page

1. Report No. SPNCAP-MGA-2012-031		2. Government Accession No.		3. Recipient's Catalog No.																												
4. Title and Subtitle Final Report of New Car Assessment Program Side Impact Pole Testing of a 2012 Nissan Maxima S 4-Dr Sedan, NHTSA No.: MC5204		5. Report Date January 3, 2012																														
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7. Author(s) Donna Janovicz, Project Manager Ben Fischer, Project Engineer		8. Performing Organization Report No. SPNCAP-MGA-2012-031																														
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		14. Sponsoring Agency Code NVS-111																														
15. Supplementary Notes																																
16. Abstract A 32.2 km/h (20 mph), 75° oblique impact Side NCAP Test was conducted on the subject 2012 Nissan Maxima S 4-Dr Sedan in accordance with the specifications of the Office of Crashworthiness Standards Side NCAP Pole Laboratory Test Procedure for the generation of consumer information on vehicle side pole crash protection. The test was conducted at MGA Research Corporation, in Burlington, Wisconsin, on November 28, 2011. The impact velocity was 32.1 km/h, and the ambient temperature at the struck (driver's) side of the target vehicle at the time of impact was 21.6°C. The test vehicle post-test maximum crush was 422 mm at level 3. The test vehicle's performance was as follows: <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Measurement Description</th> <th colspan="3">Driver ATD (SID-IIs)</th> </tr> <tr> <th>Units</th> <th>Threshold</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆)</td> <td>N/A</td> <td>1000</td> <td>270</td> </tr> <tr> <td>Resultant Lower Spine Acceleration</td> <td>Gs</td> <td>82</td> <td>40</td> </tr> <tr> <td>Total Pelvic Force (sum of acetabular and iliac forces)</td> <td>N</td> <td>5525</td> <td>3242</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>38*</td> <td>24</td> </tr> <tr> <td>Maximum Abdomen Rib Deflection</td> <td>mm</td> <td>45*</td> <td>18</td> </tr> </tbody> </table> * Proposed IARV 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.						Measurement Description	Driver ATD (SID-IIs)			Units	Threshold	Result	Head Injury Criteria (HIC ₃₆)	N/A	1000	270	Resultant Lower Spine Acceleration	Gs	82	40	Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	3242	Maximum Thoracic Rib Deflection	mm	38*	24	Maximum Abdomen Rib Deflection	mm	45*	18
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17. Key Words New Car Assessment Program (NCAP) Side Impact Pole Part 572V SID-IIs		18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Administration Technical Information Services Division, NPO-411 1200 New Jersey Ave, SE, Room E12-100 Washington, DC 20590 Email: tis@nhtsa.dot.gov FAX: 202-493-2833																														
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TABLE OF CONTENTS

<u>Section</u>	<u>Page No.</u>
----------------	-----------------

1	Test Purpose and Procedure	1
2	Summary of Test Results	2
3	Occupant and Vehicle Information	4

<u>Data Sheet No.</u>	<u>Page No.</u>
-----------------------	-----------------

1	General Test and Vehicle Parameter Data	5
2	Seat, Seat Belt, Steering Wheel Adjustment and Fuel System Data	8
3	Dummy Longitudinal Clearance Dimensions	11
4	Dummy Lateral Clearance Dimensions	12
5	Camera and Instrumentation Data	13
6	Test Vehicle Accelerometer Data	14
7	Rigid Pole Load Cell Data	15
8	Post Test Observations	16
9	Vehicle Profile Measurements	18
10	Vehicle Exterior Crush Measurements	19
11	FMVSS 301 Fuel System Integrity Post-Impact Data	22
12	Dummy/Vehicle Temperature Stabilization Data	23

Appendix

A	Photographs	A
B	Dummy Response Data Plots	B
C	Dummy Configuration and Performance Verification Data	C
D	Test Equipment and Instrumentation Calibration Data	D

SECTION 1

TEST PURPOSE AND PROCEDURE

This side impact test is part of the MY 2012 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-09-D-00124. The purpose of this test is to generate comparative side impact performance in a 2012 Nissan Maxima S 4-Dr Sedan. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Side NCAP Pole Laboratory Test Procedure, dated August 2011.

SECTION 2 SUMMARY OF TEST RESULTS

A rigid pole side impact test was conducted on a 2012 Nissan Maxima S 4-Dr Sedan. The subject vehicle was towed into the rigid pole at an angle of 75° and a velocity of 32.1 km/h. The test was conducted by MGA Research Corporation in Burlington, Wisconsin, on November 28, 2011. Pre-test and post-test photographs of the test vehicle and side impact dummy (SID-IIs) are included in Appendix A of this report.

One Part 572V (SID-IIs) dummy was placed in the driver designated seating position according to instructions specified in the OCWS Side NCAP Pole Laboratory Test Procedure dated August 2011. Camera locations and other pertinent camera information are included in this report.

The Part 572V (SID-IIs) dummy was instrumented accordingly:

Primary and Redundant Head CG Triaxial Accelerometers
Chest Upper Rib, Middle Rib, and Lower Rib Y-Axis Displacement Potentiometers
Abdomen Upper Rib and Lower Rib Y-Axis Displacement Potentiometers
Lower Spine (T12) Triaxial Accelerometers
Acetabulum and Iliac Wing Y-Axis Load Cells

Appendix B contains the dummy response data. Dummy configuration and performance verification data can be found in Appendix C of this report. Appendix D contains the test equipment and instrumentation calibration data.

Injury readings for the SID-IIs dummy were recorded as follows:

Measurement Description	Driver ATD (SID-IIs)		
	Units	Threshold	Result
Head Injury Criteria (HIC ₃₆)	N/A	1000	270
Resultant Lower Spine Acceleration	Gs	82	40
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	3242
Maximum Thoracic Rib Deflection	mm	38*	24
Maximum Abdomen Rib Deflection	mm	45*	18

*Proposed IARV

Supplemental restraint information is given below:

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Left Front (Driver) Occupant Location 1		Left Rear (Passenger) Occupant Location 4	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	No		
Knee Airbag	No			
Side Curtain Airbag	Yes	Yes	Yes	Yes
Side Torso/Abdomen/Pelvis Airbag	Yes	Yes	No	
Seat Belt Pretensioner	Yes	No	No	
Seat Belt Load Limiter	Yes		No	

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

GENERAL COMMENTS

There was no valid data collected for:

Left Mid A-Post Y after 21 msec.

Driver Seat Track Y after 27 msec.

Left Lower A-Post Y is questionable from 13-17 msec.

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

SECTION 3
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 1
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
Test Date: 11/28/2011

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	MC5204	Traction Control System (TCS)	Yes
Model Year	2012	Auto-Leveling System	No
Make	Nissan	Automatic Door Locks (ADL)	Yes
Model	Maxima	Power Window Auto-Reverse	Yes
Body Style	Sedan	Other Optional Feature	N/A
VIN	1N4AA5AP8CC808583	Driver Front Airbag	Yes
Body Color	Navy Blue	Driver Curtain Airbag	Yes
Odometer Reading (km/mi)	68 / 42	Driver Head/Torso Airbag	No
Engine Displacement (L)	3.5	Driver Torso Airbag	No
Type/No. Cylinders	6	Driver Torso/Pelvis Airbag	Yes
Engine Placement	Lateral	Driver Pelvis Airbag	No
Transmission Type	Automatic	Driver Knee Airbag	No
Transmission Speeds	CVT	Rear Pass. Curtain Airbag	Yes
Overdrive	No	Rear Pass. Head/Torso Airbag	No
Final Drive	Front	Rear Pass. Torso Airbag	No
Roof Rack	No	Rear Pass. Torso/Pelvis Airbag	No
Sunroof/T-Top	Yes	Rear Pass. Pelvis Airbag	No
Running Boards	No	Driver Seat Belt Pretensioner	Yes
Tilt Steering Wheel	Yes	Rear Pass. Seat Belt Pretensioner	No
Power Seats	Yes	Driver Load Limiter	Yes
Anti-Lock Brakes (ABS)	Yes	Rear Pass. Load Limiter	No
All Wheel Drive (AWD)	No	Other Safety Restraint	N/A
Does owner's manual provide instruction to turn off automatic door locks?			No

DATA FROM CERTIFICATION LABEL

Manufactured By	Nissan Motor Co., Ltd.	GVWR (kg)	2131
Date of Manufacture	10/11	GAWR Front (kg)	1140
Vehicle Type	Passenger Car	GAWR Rear (kg)	1000

VEHICLE SEATING AND WEIGHT CAPACITY DATA

Measured Parameter	Front	Rear	Third	Total	
Designated Seating Capacity (DSC)	2	3		5	
Capacity Weight (VCW) (kg)				408	(A)
DSC x 68.04 kg				340	(B)
Rated Cargo and Luggage Weight (RCLW)				68	(A-B)

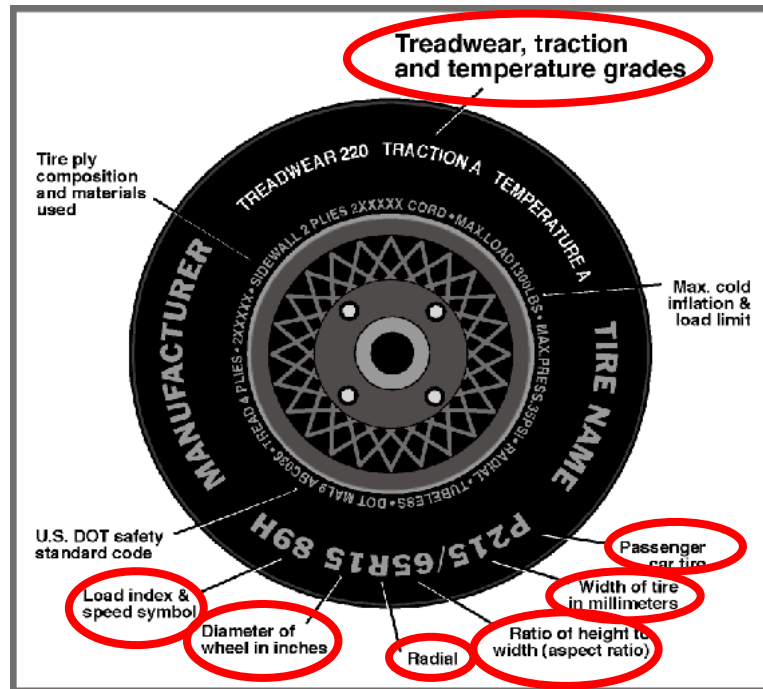
VEHICLE SEAT TYPE

Seating Location	Type of Seat Pan				Type of Seat Back		
	Bucket	Bench	Split Bench	Contoured	Fixed	Adjustable	
						Manual	Power
Front Seat	X						X
Rear or Second Row			X		X		
Third Row Seat							

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

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
 Test Date: 11/28/2011



TIRE PLACARD INFORMATION

Measured Parameter	Front	Rear
Recommended Cold Tire Pressure (kPa)	230	230
Recommended Tire Size	P245/45R18	P245/45R18

TIRE SIDEWALL INFORMATION

Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	300	300
Tire Size on Vehicle	P245/45R18	P245/45R18
Tire Manufacturer	Goodyear	Goodyear
Tire Name	Eagle	Eagle
Tire Type	Passenger	Passenger
Tire Width	245	245
Aspect Ratio	45	45
Radial	Yes	Yes
Wheel Diameter	18	18
Load Index/Speed Symbol	96V	96V
Treadwear	260	260
Traction Grade	A	A
Temperature Grade	A	A
Tire Material	Rubber	Rubber

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

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
 Test Date: 11/28/2011

TEST PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kpa	230	230	230	230
Tire Placard	kpa	230	230	230	230
Owner's Manual	kpa				
As Tested	kpa	230	230	230	230

TEST VEHICLE AXLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Left	kg	498.1	320.2		517.6	364.7		514.4	379.2	
Right	kg	489.4	308.5		503.0	344.3		488.1	354.7	
Ratio	%	61.1	38.9		59.0	41.0		57.7	42.3	
Totals	kg	987.5	628.7	1616.2	1020.6	709.0	1729.6	1002.5	733.9	1736.4

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total Delivered Weight (UVW)	kg	1616.2	(A)
Actual Weight of 1 P572V ATD (SID-IIs) ATD Used	kg	52.2	(B)
Rated Cargo/Luggage Weight (RCLW)	kg	68	(C)
Calculated Vehicle Target Weight (TVTW)	kg	1736.4	(A+B+C)

Does the measured As Tested Vehicle Weight lie within the required weight range (i.e. Calculated Test Vehicle Target Weight – 4.5 kg to 9 kg)? **YES**

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Weight of Ballast, if any	15.0
Right tail light, jack & tools, right side mirror, right rear speaker, trunk carpet, spare tire.	27.7

TEST VEHICLE ATTITUDES AND CG

	Units	As Delivered	As Tested	Fully Loaded	Meets Requirement***
Driver Door Sill Angle (front-to-rear)*	deg	-0.3	-0.1	0.3	Yes
Front Pass. Sill Angle (front-to-rear)*	deg	-0.3	-0.2	0.0	Yes
Front Bumper Angle (left-to-right)**	deg	0.0	-0.1	-0.3	Yes
Rear Bumper Angle (left-to-right)**	deg	0.1	0.0	-0.2	Yes
Vehicle CG (Aft of Front Axle)	mm	1080	1138	1173	
Vehicle CG (Left (+) / Right (-) from Longitudinal Centerline)	mm	10	16	23	

*ND=Nose Down (-), NU=Nose Up (+) ** LD=Left Down (-), LU=Left Up (+)

*** The "As Tested" vehicle attitude measurements must be equal to or between the "As Delivered" and "Fully Loaded" vehicle attitude measurements.

DATA SHEET NO. 2
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT AND FUEL SYSTEM DATA

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
 Test Date: 11/28/2011

SEAT POSITIONING

The driver's seat, front center seat (if applicable), and right front passenger's seat should be set to the forward-most, mid-height, mid-angle position. The struck-side rear passenger's seat, rear center seat, and non-struck side rear passenger's seats should be set to the rear-most, lowest, mid-angle position.

SCRL ANGLE RANGE

Seat	SCRL (°)		
	Max	Min	Mid
Driver Seat	27.1	9.1	18.1
Front Passenger Seat	Fixed	Fixed	Fixed
Front Center Seat			
Struck Side Rear Seat	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed

SEAT HEIGHT AND ANGLE

Seat	As Tested SCRL Angle (Mid) (°)	As Tested SCR Height (mm)	SCR Height Position	SCR Height (mm)		
				Rear- most	Mid- Fore/Aft	Forward- Most
Driver Seat	18.1	24	Max	47	47	47
	18.1	24	Mid	24	24	24
	18.1	24	Min	0	0	0
Front Passenger Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
	Fixed	Fixed	Mid	Fixed	Fixed	Fixed
	Fixed	Fixed	Min	Fixed	Fixed	Fixed
Front Center Seat			Max			
			Mid			
			Min			
Struck Side Rear Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
	Fixed	Fixed	Mid	Fixed	Fixed	Fixed
	Fixed	Fixed	Min	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
	Fixed	Fixed	Mid	Fixed	Fixed	Fixed
	Fixed	Fixed	Min	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
	Fixed	Fixed	Mid	Fixed	Fixed	Fixed
	Fixed	Fixed	Min	Fixed	Fixed	Fixed

DATA SHEET NO. 2 (CONTINUED)
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT, AND FUEL SYSTEM DATA

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

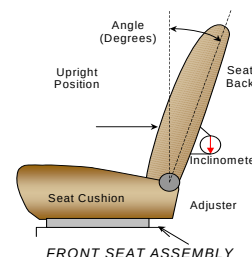
NHTSA No. MC5204
 Test Date: 11/28/2011

SEAT FORE/AFT POSITIONS

Seat	Total Fore/Aft Travel		Test Position from Forward-most Position	
	mm	Detents	mm	Detent
Driver Seat	240		0	
Front Passenger Seat	240		0	
Front Center Seat				
Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Non-Struck Side	Fixed	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed	Fixed

SEAT BACK ANGLE ADJUSTMENT

The driver's seat back is positioned such that the dummy's head is level. The front center and front passenger's seat backs are positioned in a similar manner as the driver's seat back. The struck-side rear passenger seat back is positioned in accordance with the information provided by the manufacturer on Form No. 1 for the 5th percentile female dummy in a Side NCAP MDB test. The rear center and non-struck side rear passenger's seat back is set to match the struck-side rear seat back.



Seat	Total Seat Back Angle Range		Test Position from Vertical	
	Degrees	Detents	Degrees	Detent
Driver Seat w/Seated Dummy	60.8		3.3	
Front Passenger Seat	60.9		3.7	
Front Center Seat				
Struck Side Rear Seat	Fixed		Fixed	Fixed
Non-Struck Side Rear Seat	Fixed		Fixed	Fixed
Rear Center Seat	Fixed		Fixed	Fixed

SEAT BELT ANCHORAGE ADJUSTMENT

Seat belt anchorages are adjusted in accordance with the information provided by the manufacturer on Form No. 1.

	Total # of Positions	Placed in Position #
Driver Seat	4 (1 st as 1)	0 (uppermost as 0)

HEAD RESTRAINT ADJUSTMENT

Head restraints are adjusted to the lowest and most full forward in-use position.

	Total # of Positions	Placed in Position #
Driver Seat	4	Lowest

DATA SHEET NO. 2 (CONTINUED)
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT, AND FUEL SYSTEM DATA

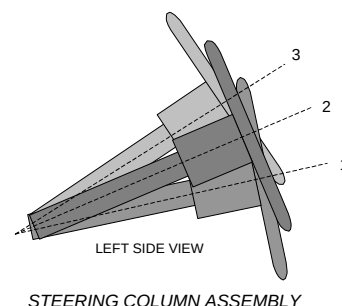
Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
 Test Date: 11/28/2011

STEERING COLUMN ADJUSTMENT

Steering wheel and column adjustments are made so that the steering wheel geometric locus is described when it moves through its full range of motion.

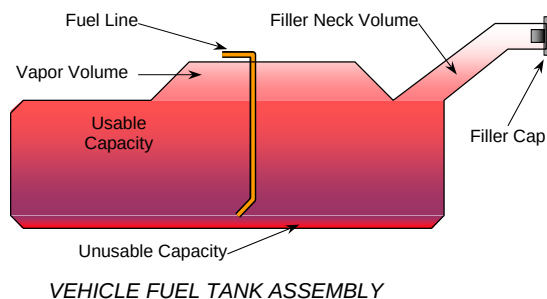
	Degrees	Fore/Aft Position (mm)
Lowermost, Position 1	73.8	253
Geometric Center, Position 2	66.3	233
Uppermost, Position 3	58.8	213
Telescoping Steering Wheel Travel		40
Test Position	67.6	233



FUEL PUMP

Describe the fuel pump type, details about how it operates and the location of the fuel filler pipe.

The vehicle is equipped with an electric fuel pump. The fuel pump will pump fuel for: 1) 1.0 seconds after the ignition is switched to "ON", 2) while the engine is running, and 3) for 1.5 seconds after the engine stops running. The fuel pipe is on the left side.



FUEL TANK CAPACITY DATA

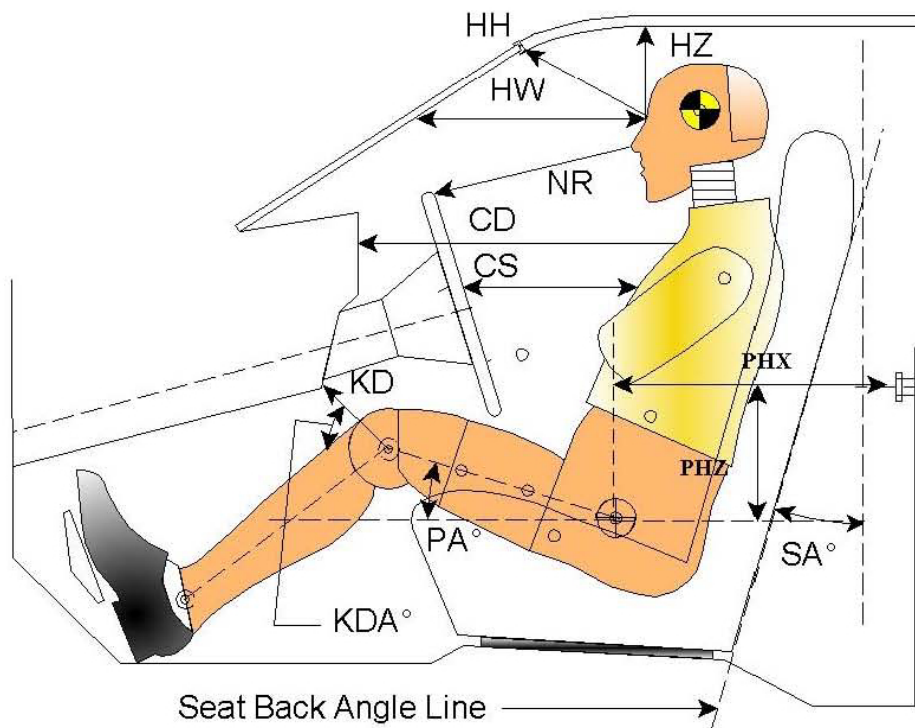
	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	71.9
Usable Capacity of "Optional Tank" (see Form No. 1)	
Usable Capacity of Standard Tank as Specified in Owner's Manual	75.6
Usable Capacity of Optional Tank as Specified in Owner's Manual	
93% of Usable Capacity	66.9
Actual Amount of Solvent Used	66.9
1/3 of Usable Capacity	24.0

Is the actual amount of solvent used in the test equal to 93% $\pm$ 1% of the Usable Capacity stated in Form No. 1? **YES**

.DATA SHEET NO. 3
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
 Test Date: 11/28/2011



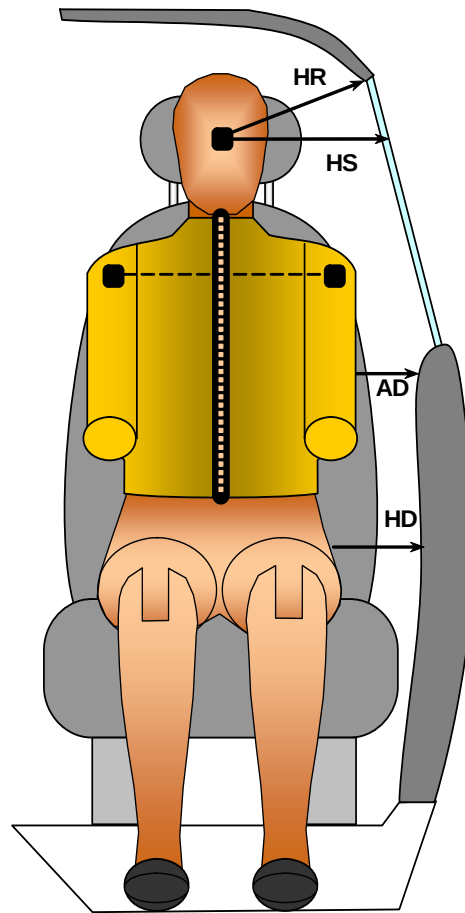
LEFT SIDE VIEW

Code	Measurement Description	Driver S/N 296	
		Length (mm)	Angle (°)
HH	Head to Header	242	
HW	Head to Windshield	599	
HZ	Head to Roof Liner	178	
NR	Nose to Rim	211	
CD	Chest to Dashboard	405	
CS	Chest to Steering Wheel	148	
KDL/KDAL°	Left Knee to Dash	136	40.1
KDR/KDAR°	Right Knee to Dash	133	34.3
PAX°	Pelvic Tilt Angle (X-Axis)		19.7
PAY°	Pelvic Tilt Angle (Y-Axis)		-0.8
PHX	Hip Point to Striker (X-Axis)	352	
PHZ	Hip Point to Striker (Z-Axis)	120	

DATA SHEET NO. 4
DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
 Test Date: 11/28/2011



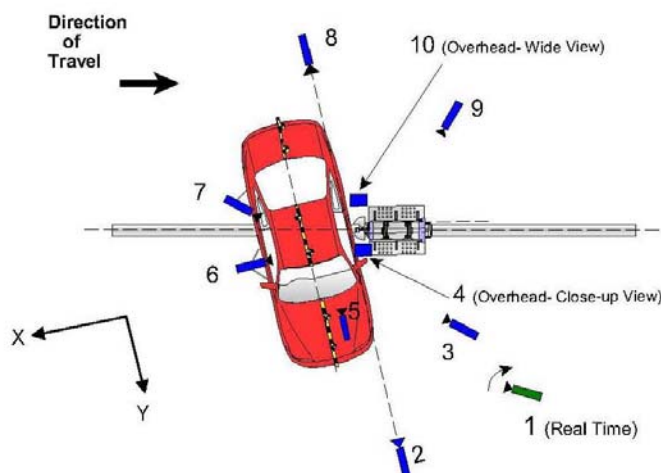
FRONT VIEW OF DUMMY

Code	Measurement Description	Driver S/N 296
		Length (mm)
HR	Head to Side Header	228
HS	Head to Side Window	362
AD	Arm to Door	196
HD	Hip Point to Door	170

DATA SHEET NO. 5 CAMERA AND INSTRUMENTATION DATA

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
Test Date: 11/28/2011



Reference: (from Point of Impact for X and Y; from Ground for Z):
+X = Forward of Impact, + Y = Right of Impact, +Z = Down

Camera No.	View	Coordinates (mm)			Lens (mm)	Film Speed (fps)
		X*	Y*	Z*		
1	Real-Time Pan View					30
2	Front Ground Level	-60	6200	-1810	24	1000
3	Impact Side 45° Forward	-2520	5290	-1930	20	1000
4	Overhead Closeup	100	0	-4420	50	1000
5	Onboard – Driver Front				16	1000
6	Onboard – Driver Side				8	1000
7	Onboard – Driver Rear				8	1000
8	Rear Ground Level	-70	-6790	-1830	24	1000
9	Impact Side 45° Rearward	-4330	-3960	-1950	20	1000
10	Overhead Wide View	310	0	-4610	14	1000
11	Real-Time Dummy Front View					30

* All measurements accurate to ± 6 mm

Note: Vehicle was at a 15° angle to the rigid pole.

Explain why camera(s) did not operate as intended: Not Applicable

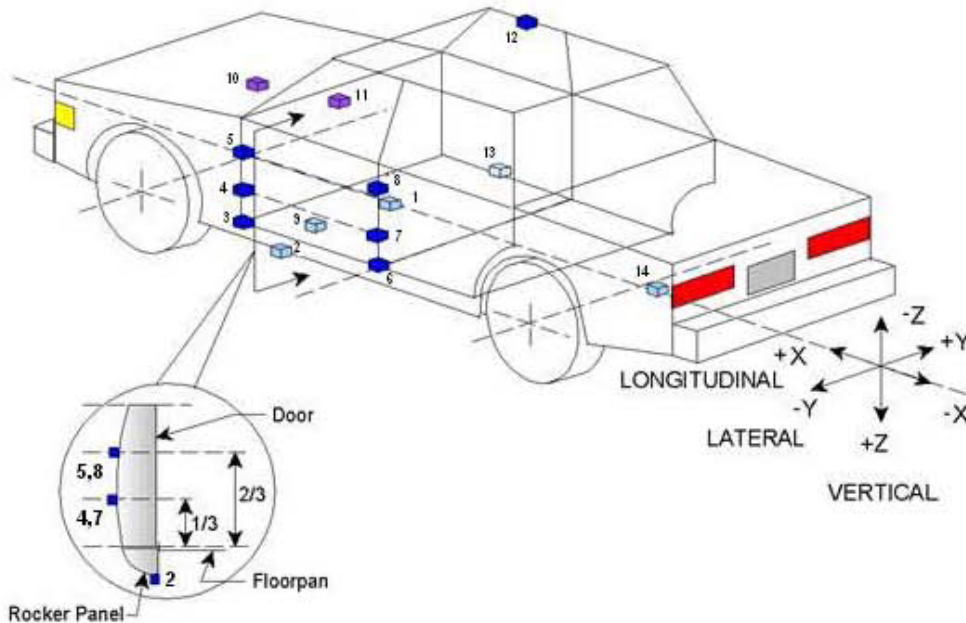
INSTRUMENTATION

	Number of Channels
Driver Dummy	16
Vehicle Structure	18
Pole Load Cells	8
TOTAL	42

DATA SHEET NO. 6
TEST VEHICLE ACCELEROMETER DATA

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
Test Date: 11/28/2011



	Accelerometer Location			
	ID	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	2694	-180	-162
2	Left Floor Sill	2943	-725	-220
3	A Pillar Sill	3421	-740	-224
4	A Pillar Low	3335	-725	-492
5	A Pillar Mid	3345	-824	-725
6	B Pillar Sill	2161	-723	-217
7	B Pillar Low	2126	-730	-547
8	B Pillar Mid	2152	-715	-780
9	Driver Seat Track	2644	-570	-305
10	Engine Top	3910	0	-945
11	Firewall	3802	0	-945
12	Right Roof	2099	495	-1462
13	Right Floor Sill	2198	725	-224
14	Rear Floorpan	2130	0	-305

Reference:

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

DATA SHEET NO. 7
RIGID POLE LOAD CELL DATA

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
Test Date: 11/28/2011



254 mm Diameter Rigid Pole

Load Cell Locations	
ID	Height From Impact Surface (mm)
1	182
2	470
3	698
4	986
5	1212
6	1641
7	1854
8	2053

DATA SHEET NO. 8
POST-TEST OBSERVATIONS

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
Test Date: 11/28/2011

TEST DUMMY INFORMATION AND CONTACT POINTS

Description	Driver SID-IIs Dummy
Face	Curtain Airbag
Top of Head	Curtain Airbag
Left Side of Head	Curtain Airbag
Back of Head	Curtain Airbag
Left Shoulder	Side Airbag, Door Panel, Seatback
Upper Torso	Side Airbag, Seatback
Lower Torso	Side Airbag, Seatback
Left Hip	Side Airbag, Seatback, Seat Cushion
Left Knee	Door Panel

POST-TEST DOOR PERFORMANCE

Description	Struck Side		Non-Struck Side		Rear Hatch/ Other Door
	Front	Rear	Front	Rear	
Remained Closed and Operational	No	No	Yes	Yes	Yes
Total Separation from Vehicle at Hinges or Latches	No	No	No	No	No
Latch or Hinge Systems Pulled Out of Their Anchorages	No	No	No	No	No
Disengaged from Latched Position	No	No	No	No	No
Latch Separated from Striker	No	No	No	No	No
Jammed Shut	Yes	Yes	No	No	No
If Door Opened at Striker, Record Width of Opening at Striker (mm)	N/A	N/A	N/A	N/A	N/A

POST-TEST SEAT PERFORMANCE

Description	Struck Side		Non-Struck Side	
	Front	Rear	Front	Rear
Seat Movement Along Seat Track	No	No	No	No
Seat Disengagement from Floor Pan	No	No	No	No
Seat Back Movement from Initial Position	No	No	No	No
Seat Back Collapse	No	No	No	No

POST-TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	No Separation
Sill Separation	None
Windshield Damage	Cracked
Side Window Damage	Left Front Window Broke, Sunroof Broke
Other Notable Effects	None

DATA SHEET NO. 8 (CONTINUED)
POST-TEST OBSERVATIONS

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
Test Date: 11/28/2011

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Left Front (Driver) Occupant Location 1		Left Rear (Passenger) Occupant Location 4	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	No		
Knee Airbag	No			
Side Curtain Airbag	Yes	Yes	Yes	Yes
Side Torso/Abdomen/Pelvis Airbag	Yes	Yes	No	
Seat Belt Pretensioner	Yes	No	No	
Seat Belt Load Limiter	Yes		No	

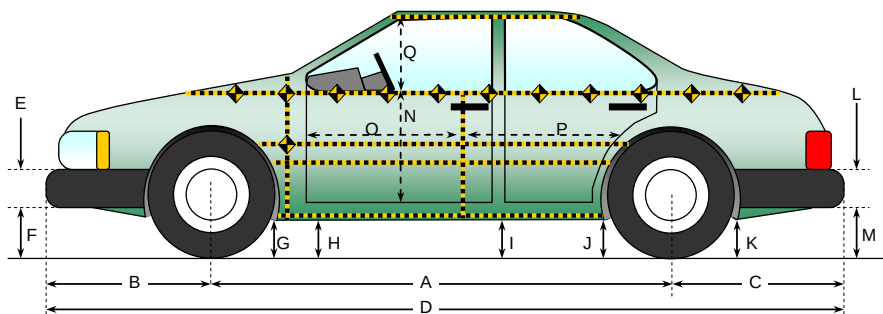
VEHICLE SPEED, VEHICLE ANGLE AT IMPACT, AND IMPACT POINT LOCATION DATA

Measured Parameter	Units	Tolerance	Value
Vertical Impact Reference Line (Aft of Front Axle) (Intended Impact Point)	mm		1142
Actual Impact Point (Aft of Front Axle)	mm		1138
Horizontal Offset (+forward / -rearward)	mm	+/- 38 of Intended Impact Point	+4
Angle Between Vehicle's Longitudinal Centerline and Line of Forward Motion	Deg	75 +/- 3	75
Trap No. 1 Velocity (Primary)	km/h	31.4 to 33.0	32.1
Trap No. 2 Velocity (Redundant)	km/h	31.4 to 33.0	32.1

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

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
 Test Date: 11/28/2011



All measurements in (mm) with tolerance of ± 3 mm

LEFT SIDE VIEW

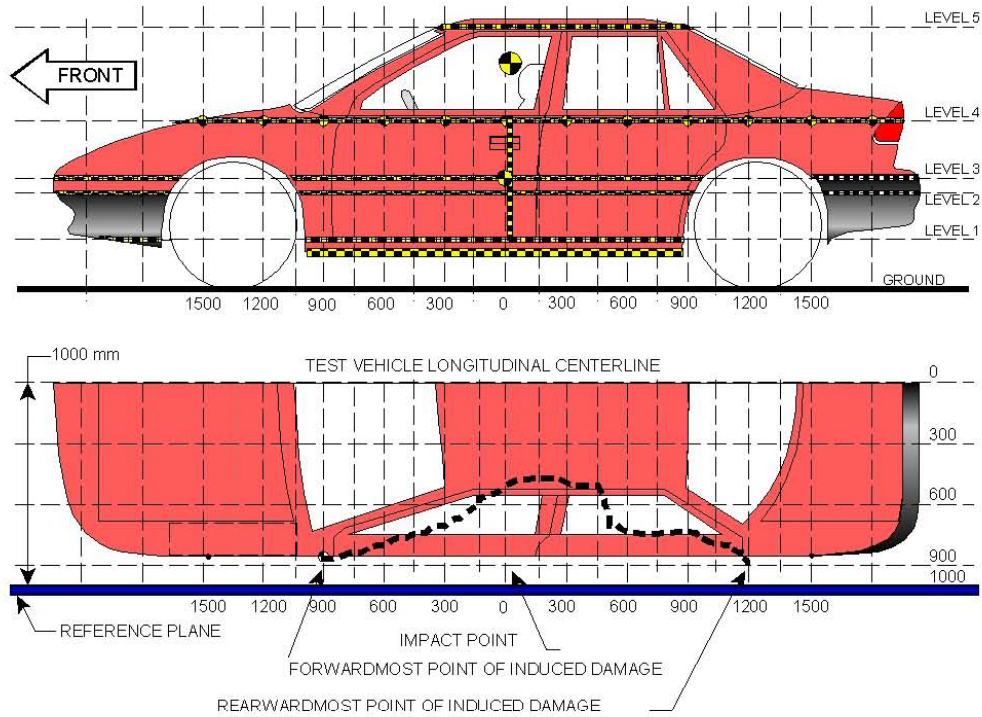
VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2776	2649	127
B	Front Axle to FSOV	964	955	9
C	Rear Axle to RSOV	1104	1110	-6
D	Total Vehicle Length at Centerline	4844	4714	130
E	Front Bumper Thickness	105	105	0
F	Front Bumper Bottom to Ground	228	263	-35
G	Sill Height at Front Wheel Well	215	185	30
H	Sill Height at Front Door Leading Edge	210	200	10
I	Sill Height at B Pillar	210	228	-18
J1	Sill Height at Rear Wheel Well	204	210	-6
J2	Pinch Weld Height at Rear Wheel Well	207	222	-15
K	Sill Height Aft of Rear Wheel Well	245	243	2
L	Rear Bumper Thickness	95	95	0
M	Rear Bumper Bottom to Ground	309	298	11
N	Sill Height to Bottom of Front Window Sill	693	690	3
O	Front Door Leading Edge to Impact CL	642	640	2
P	Rear Door Trailing Edge to Impact CL	1361	1382	-21
Q	Front Window Opening	419	355	64
R	Right Side Length	3603	3615	-12
S	Left Side Length	3603	3436	167
T	Vehicle Width at B-Pillars	1812	1640	172

DATA SHEET NO. 10 **VEHICLE EXTERIOR CRUSH MEASUREMENTS**

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
 Test Date: 11/28/2011



NOTE: The measurements are taken along the vertical impact reference line.
 Vehicle measurements forward of the vertical impact reference line are negative.

MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Measurement Description	Height Above Ground (mm)
1	Sill Top	305
2	Occupant Hip Point	560
3	Mid Door	630
4	Window Sill	945
5	Window Top	1378

DATA SHEET NO. 10 (CONTINUED)
VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
 Test Date: 11/28/2011

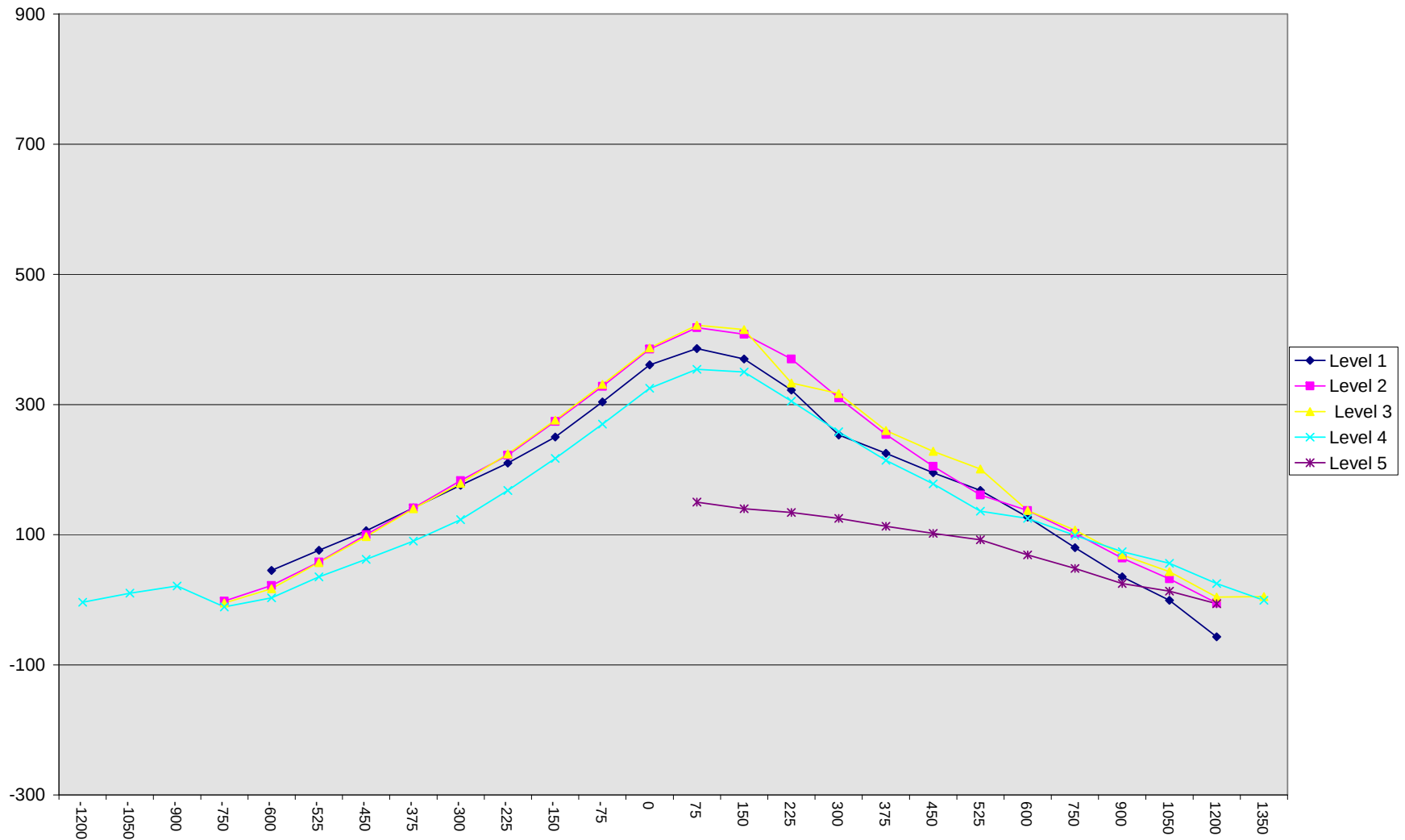
	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-1200				296					292					-4	
-1050				284					294					10	
-900				276					297					21	
-750		174	170	275			172	165	264			-2	-5	-11	
-600	204	185	185	274		249	207	202	277		45	22	17	3	
-525	210	194	192	275		286	252	249	310		76	58	57	35	
-450	213	196	195	275		319	296	292	337		106	100	97	62	
-375	216	196	195	275		357	337	335	365		141	141	140	90	
-300	216	195	195	274		392	378	374	397		176	183	179	123	
-225	217	195	195	272		427	416	419	440		210	221	224	168	
-150	217	194	194	270		467	468	470	487		250	274	276	217	
-75	215	193	192	269		519	521	523	539		304	328	331	270	
0	215	191	191	268		576	576	578	593		361	385	387	325	
75	214	192	190	266	505	600	610	612	620	655	386	418	422	354	150
150	214	192	190	265	505	584	600	605	615	645	370	408	415	350	140
225	214	191	190	264	502	536	561	523	569	636	322	370	333	305	134
300	214	191	190	263	502	467	501	507	521	627	253	310	317	258	125
375	215	191	190	260	504	440	445	450	474	617	225	254	260	214	113
450	215	191	190	259	506	410	396	418	437	608	195	205	228	178	102
525	214	191	191	257	507	382	352	392	393	599	168	161	201	136	92
600	214	191	191	258	509	341	328	328	383	578	127	137	137	125	69
750	216	194	193	255	511	296	296	300	354	559	80	102	107	99	48
900	216	195	195	250	513	251	259	264	324	538	35	64	69	74	25
1050	210	194	194	241	516	209	226	237	297	529	-1	32	43	56	13
1200	196	178	179	232	524	139	173	183	257	518	-57	-5	4	25	-6
1350			167	225				172	224				5	-1	

NOTE: Pre-test measurements are taken when the vehicle is in the "As Tested" weight condition. Vehicle measurements forward of the vertical impact reference line are negative. The crush profile grid is established prior to the test based on an estimated impact point. The final distance from impact is determined after the final dummy positioning and the pole is aligned with the center of gravity of the dummy's head.

DATA SHEET NO. 10 (CONTINUED)
VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
Test Date: 11/28/2011



DATA SHEET NO. 11
FMVSS 301 FUEL SYSTEM INTEGRITY POST-IMPACT DATA

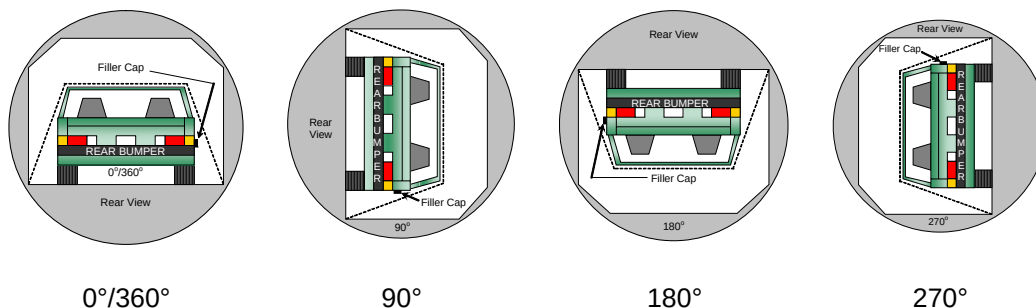
Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
 Test Date: 11/28/2011

Test Time: 11:47 am Temperature: 21.6° C

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

FMVSS 301 STATIC ROLLOVER DATA



ROLLOVER SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	116	300	416
90° to 180°	113	300	413
180° to 270°	108	300	408
270° to 360°	119	300	419

FMVSS 301 ROLLOVER SPILLAGE TABLE (units in ounces)

Test Phase	First 5 Minutes	Sixth Minute	Seventh Minute	Eight Minute
0° to 90°	0	0	0	0
90° to 180°	0	0	0	0
180° to 270°	0	0	0	0
270° to 360°	0	0	0	0

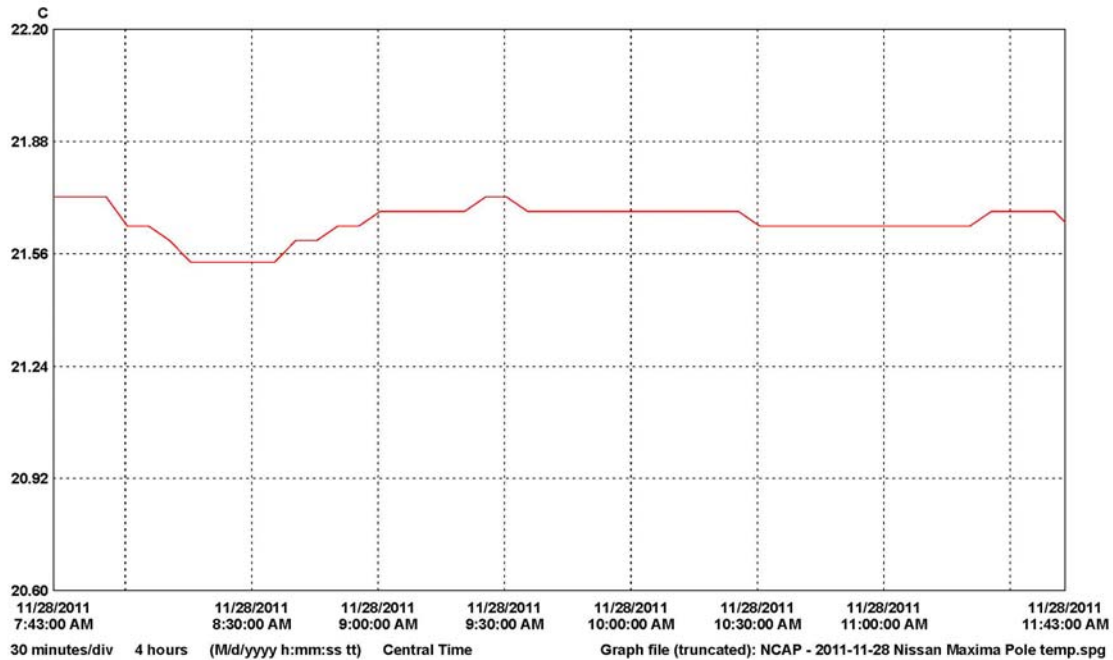
ROLLOVER SOLVENT SPILLAGE LOCATION TABLE

Test Phase	Spillage Location
0° to 90°	
90° to 180°	
180° to 270°	
270° to 360°	

DATA SHEET NO. 12
DUMMY/VEHICLE TEMPERATURE STABILIZATION DATA

Test Vehicle: 2012 Nissan Maxima S 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC5204
 Test Date: 11/28/2011



LN	Serial #	Description	CH	Value	Maximum	Average	Minimum	Units	CH description	Logger file
1	04042132	MGA logger	1		21.72	21.65	21.54	C	Temperature	04042132_MGA_logger.spl

APPENDIX A
PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

	<u>Page No.</u>
Photo No. 1. As Delivered Right Front $\frac{3}{4}$ View of Test Vehicle	A-1
Photo No. 2. As Delivered Left Rear $\frac{3}{4}$ View of Test Vehicle	A-1
Photo No. 3. Pre-Test Frontal View of Test Vehicle	A-2
Photo No. 4. Post-Test Frontal View of Test Vehicle	A-2
Photo No. 5. Pre-Test Left Front $\frac{3}{4}$ View of Test Vehicle	A-3
Photo No. 6. Post-Test Left Front $\frac{3}{4}$ View of Test Vehicle	A-3
Photo No. 7. Pre-Test Left Side View of Test Vehicle	A-4
Photo No. 8. Post-Test Left Side View of Test Vehicle	A-4
Photo No. 9. Pre-Test Left Rear $\frac{3}{4}$ View of Test Vehicle	A-5
Photo No. 10. Post-Test Left Rear $\frac{3}{4}$ View of Test Vehicle	A-5
Photo No. 11. Pre-Test Rear View of Test Vehicle	A-6
Photo No. 12. Post-Test Rear View of Test Vehicle	A-6
Photo No. 13. Pre-Test Right Side View of Test Vehicle	A-7
Photo No. 14. Post-Test Right Side View of Test Vehicle	A-7
Photo No. 15. Pre-Test Overhead View of Test Area	A-8
Photo No. 16. Post-Test Overhead View of Test Area	A-8
Photo No. 17. Pre-Test Left Side View of Pole Positioned Against Side of Vehicle	A-9
Photo No. 18. Pre-Test Right Side View of Pole Positioned Against Side of Vehicle	A-9
Photo No. 19. Pre-Test Close-Up View of Impact Point Target	A-10
Photo No. 20. Post-Test Close-Up View of Impact Point Target Showing Impact Location	A-10
Photo No. 21. Pre-Test Front Close-Up View of Dummy Head and Chest	A-11
Photo No. 22. Post-Test Front Close-Up View of Dummy	A-11
Photo No. 23. Pre-Test Left Side View of Dummy Showing Belt and Chalking	A-12
Photo No. 24. Pre-Test Left Side View of Dummy Shoulder and Door Top View	A-12

		<u>Page No.</u>
Photo No. 25.	Post-Test Left Side View of Dummy Shoulder and Door Top View	A-13
Photo No. 26.	Pre-Test Front View of Seat Back Prior to Dummy Positioning	A-13
Photo No. 27.	Pre-Test Front Close-Up View of Dummy Head and Shoulders in Relation to Head Restraint	A-14
Photo No. 28.	Pre-Test Front View of Seat Pan Prior to Dummy Positioning	A-14
Photo No. 29.	Pre-Test Overhead View of Dummy Thighs on Seat Pan	A-15
Photo No. 30.	Pre-Test Left Side View of Dummy's Neck Showing Position of Adjustable Neck Bracket	A-15
Photo No. 31.	Pre-Test Left Side View of Dummy's Head Showing Dummy's Head is Level	A-16
Photo No. 32.	Pre-Test Placement of Dummy's Feet	A-16
Photo No. 33.	Pre-Test View of Belt Anchorage for Dummy	A-17
Photo No. 34.	Pre-Test Left Side View of Steering Wheel	A-17
Photo No. 35.	Pre-Test View of Disengaged Parking Brake	A-18
Photo No. 36.	Pre-Test View of Parking Brake	A-18
Photo No. 37.	Pre-Test Close-Up Left Side View of Driver Seat Track	A-19
Photo No. 38.	Pre-Test Close-Up Left Side View of Driver Seat Back	A-19
Photo No. 39.	Pre-Test Close-Up View of Driver Seat Back or Head Restraint	A-20
Photo No. 40.	Pre-Test Dummy and Door Clearance View	A-20
Photo No. 41.	Post-Test Dummy and Door Clearance View	A-21
Photo No. 42.	Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment	A-21
Photo No. 43.	Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment	A-22
Photo No. 44.	Pre-Test Inner Door Panel View	A-22
Photo No. 45.	Post-Test Inner Door Panel View Showing Dummy Contact Location	A-23
Photo No. 46.	Post-Test Dummy Close-Up Head Contact with Vehicle Interior View	A-23
Photo No. 47.	Post-Test Dummy Close-Up Head Contact with Side Air Bag View	A-24
Photo No. 48.	Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View	A-24
Photo No. 49.	Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View	A-25
Photo No. 50.	Post-Test Dummy Close-Up Torso Contact with Side Air Bag View	A-25

		<u>Page No.</u>
Photo No. 51.	Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View	A-26
Photo No. 52.	Post-Test Dummy Close-Up Pelvis Contact with Side Air Bag View	A-26
Photo No. 53.	Pre-Test View of Fuel Filler Cap or Fuel Filler Neck	A-27
Photo No. 54.	Post-Test View of Fuel Filler Cap or Fuel Filler Neck	A-27
Photo No. 55.	Close-Up View of Vehicle's Certification Label	A-28
Photo No. 56.	Close-Up View of Vehicle's Tire Information Placard or Label	A-28
Photo No. 57.	Pre-Test Pole Barrier Front View	A-29
Photo No. 58.	Post-Test Pole Barrier Front View	A-29
Photo No. 59.	Pre-Test Pole Barrier Side View	A-30
Photo No. 60.	Post-Test Pole Barrier Side View	A-30
Photo No. 61.	Pre-Test Ballast View	A-31
Photo No. 62.	Post-Test Primary and Redundant Speed Trap Read-Out	A-31
Photo No. 63.	FMVSS No. 301 Static Rollover 0 Degrees	A-32
Photo No. 64.	FMVSS No. 301 Static Rollover 90 Degrees	A-32
Photo No. 65.	FMVSS No. 301 Static Rollover 180 Degrees	A-33
Photo No. 66.	FMVSS No. 301 Static Rollover 270 Degrees	A-33
Photo No. 67.	FMVSS No. 301 Static Rollover 360 Degrees	A-34
Photo No. 68.	Impact Event	A-34
Photo No. 69.	Monroney Label	A-35
Photo No. 70.	Head Restraint Use and Adjustment Information from Vehicle Owner's Manual	A-35
Photo No. 71.	Head Restraint Use and Adjustment Information from Vehicle Owner's Manual	A-36
Photo No. 72.	Head Restraint Use and Adjustment Information from Vehicle Owner's Manual	A-36
Photo No. 73.	Head Restraint Use and Adjustment Information from Vehicle Owner's Manual	A-37



As Delivered Right Front $\frac{3}{4}$ View of Test Vehicle



As Delivered Left Rear $\frac{3}{4}$ View of Test Vehicle



Pre-Test Frontal View of Test Vehicle



Post-Test Frontal View of Test Vehicle



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



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



Pre-Test Left Side View of Test Vehicle



Post-Test Left Side View of Test Vehicle



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



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



Pre-Test Rear View of Test Vehicle



Post-Test Rear View of Test Vehicle



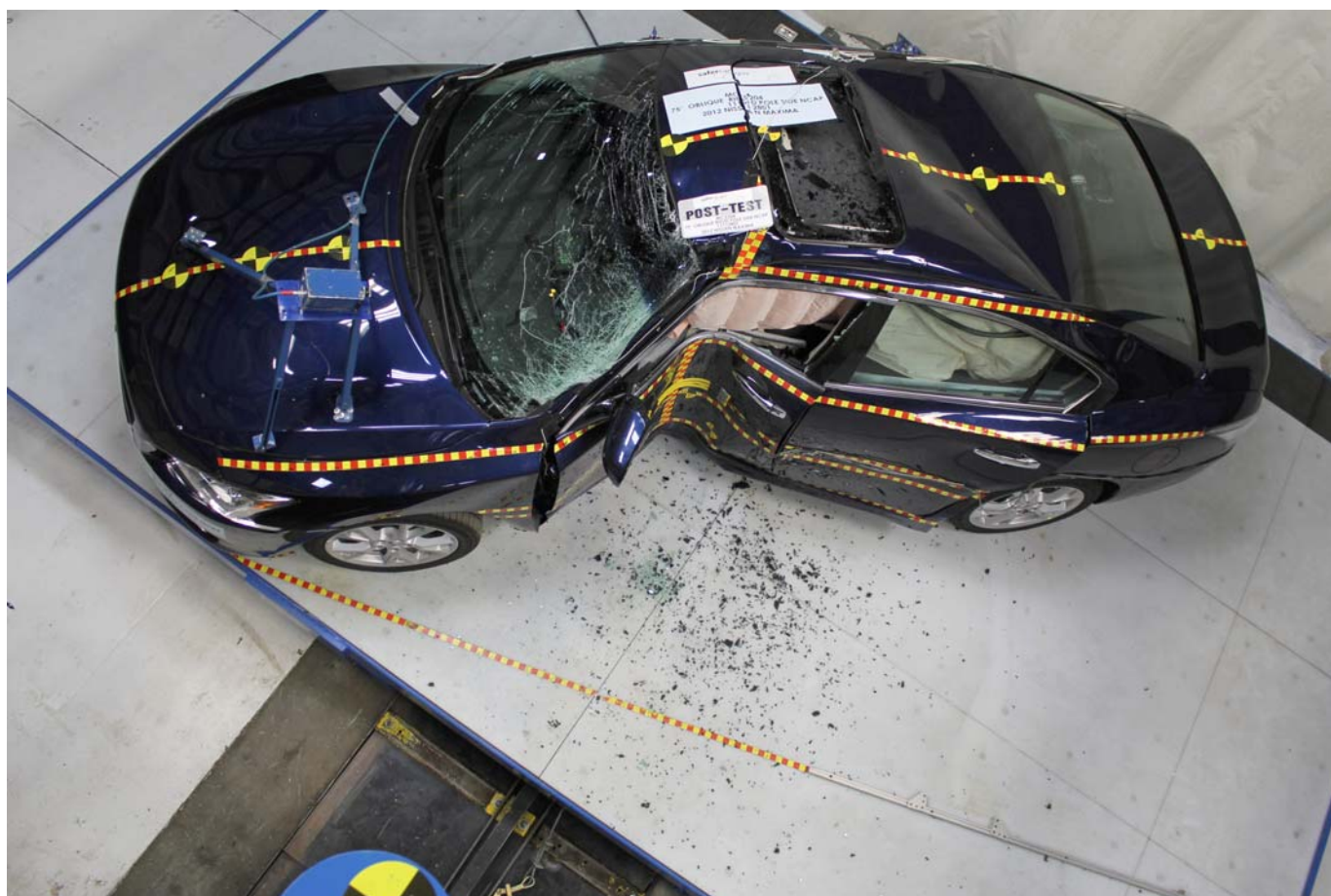
Pre-Test Right Side View of Test Vehicle



Post-Test Right Side View of Test Vehicle



Pre-Test Overhead View of Test Area



Post-Test Overhead View of Test Area



Pre-Test Left Side View of Pole Positioned Against Side of Vehicle



Pre-Test Right Side View of Pole Positioned Against Side of Vehicle



Pre-Test Close-Up View of Impact Point Target



Post-Test Close-Up View of Impact Point Target Showing Impact Location



Pre-Test Front Close-Up View of Dummy Head and Chest



Post-Test Front Close-Up View of Dummy



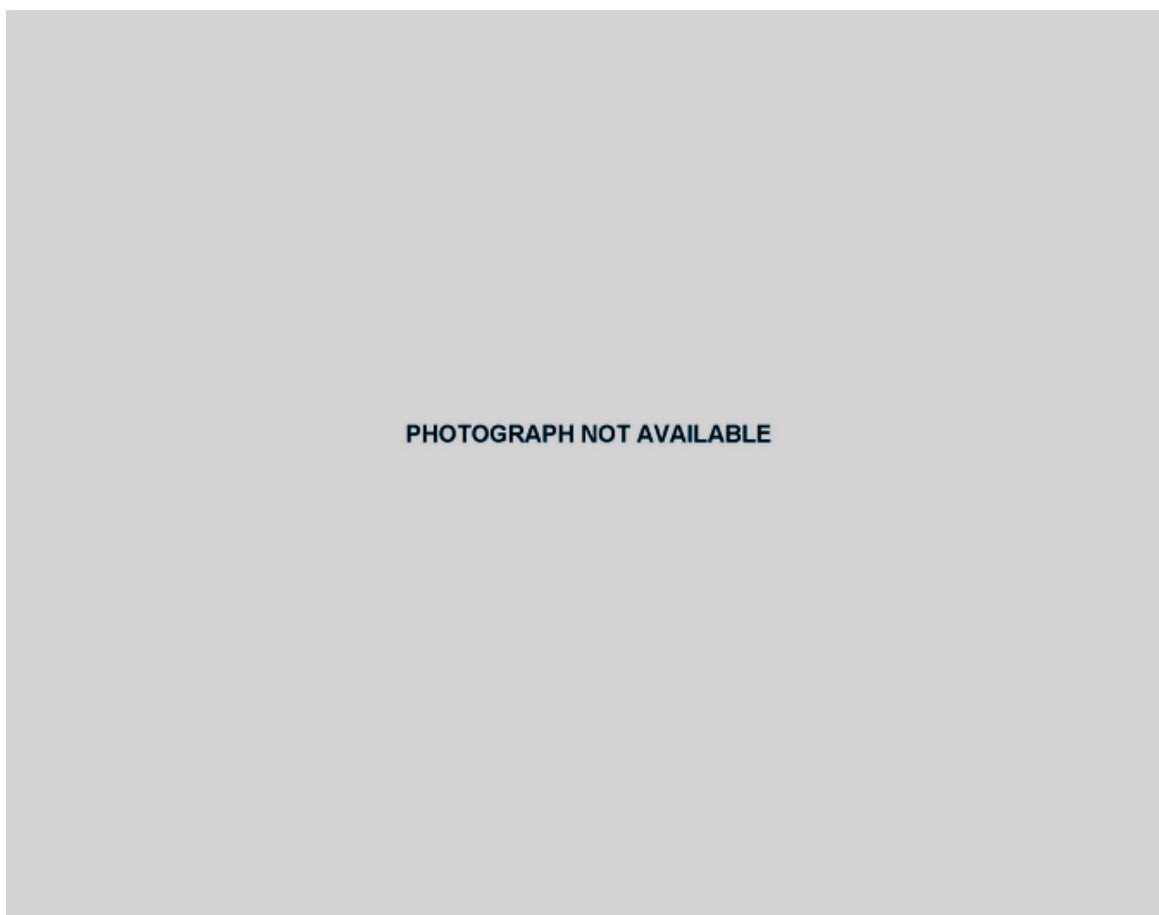
Pre-Test Left Side View of Dummy Showing Belt and Chalking



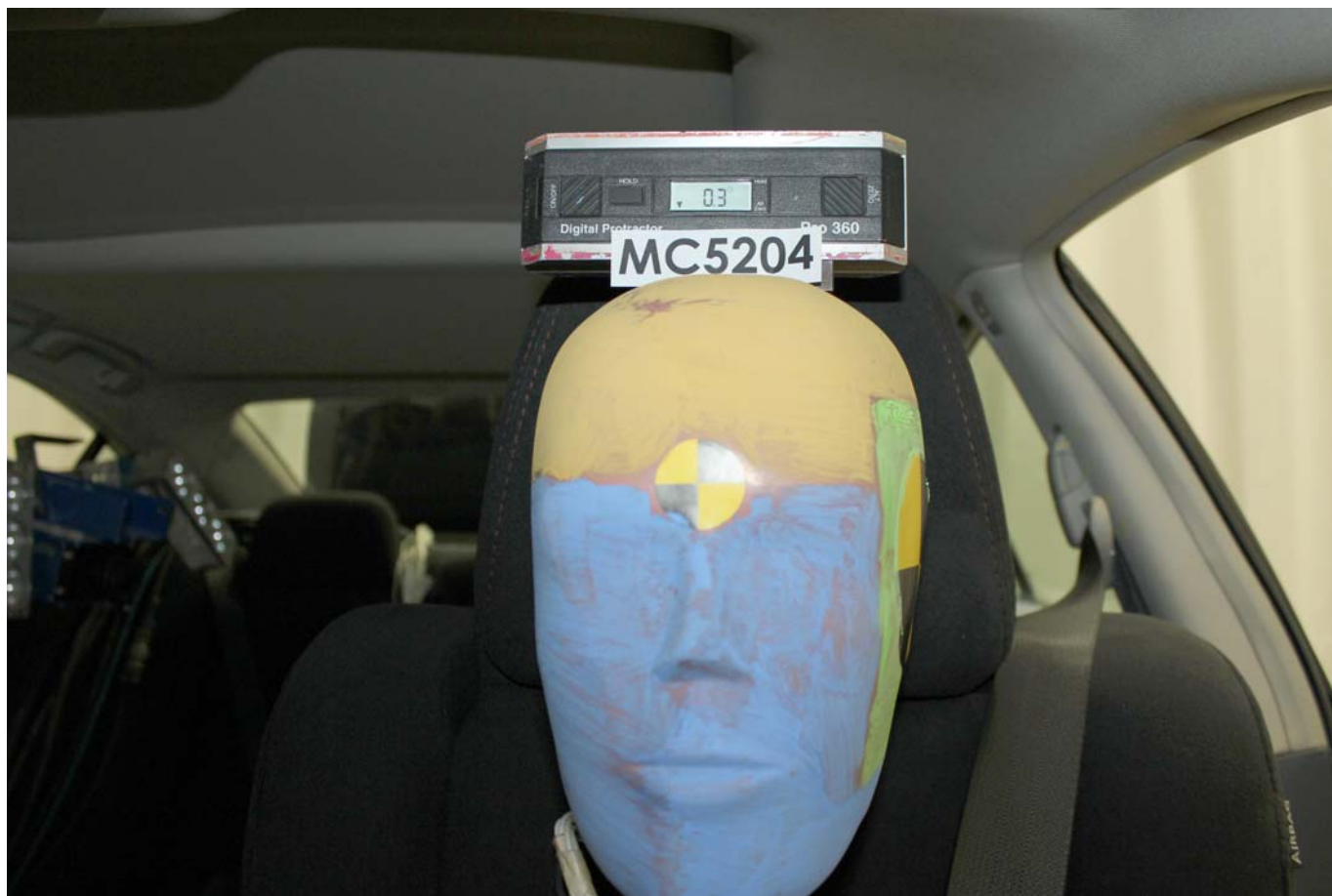
Pre-Test Left Side View of Dummy Shoulder and Door Top View



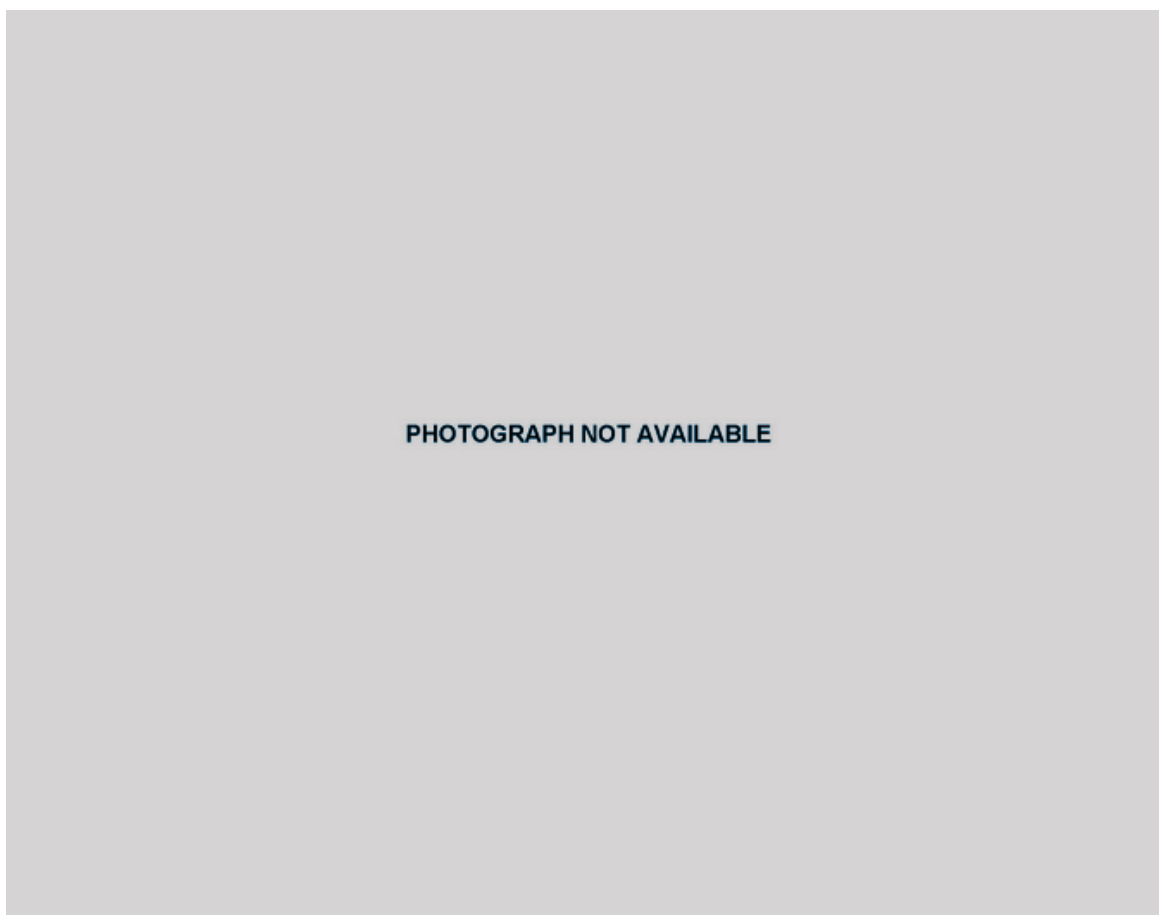
Post-Test Left Side View of Dummy Shoulder and Door Top View



Pre-Test Front View of Seat Back Prior to Dummy Positioning



Pre-Test Front Close-Up View of Dummy Head and Shoulders in Relation to Head Restraint



Pre-Test Front View of Seat Pan Prior to Dummy Positioning



Pre-Test Overhead View of Dummy Thighs on Seat Pan



Pre-Test Left Side View of Dummy's Neck Showing Position of Adjustable Neck Bracket



Pre-Test Left Side View of Dummy's Head Showing Dummy's Head is Level



Pre-Test Placement of Dummy's Feet



Pre-Test View of Belt Anchorage for Dummy



Pre-Test Left Side View of Steering Wheel



Pre-Test View of Disengaged Parking Brake



Pre-Test View of Parking Brake



Pre-Test Close-Up Left Side View of Driver Seat Track



Pre-Test Close-Up Left Side View of Driver Seat Back



Pre-Test Close-Up View of Driver Seat Back or Head Restraint



Pre-Test Dummy and Door Clearance View



Post-Test Dummy and Door Clearance View



Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment



Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment



Pre-Test Inner Door Panel View



Post-Test Inner Door Panel View Showing Dummy Contact Location

PHOTOGRAPH NOT APPLICABLE

Post-Test Dummy Close-Up Head Contact with Vehicle Interior View



Post-Test Dummy Close-Up Head Contact with Side Air Bag View



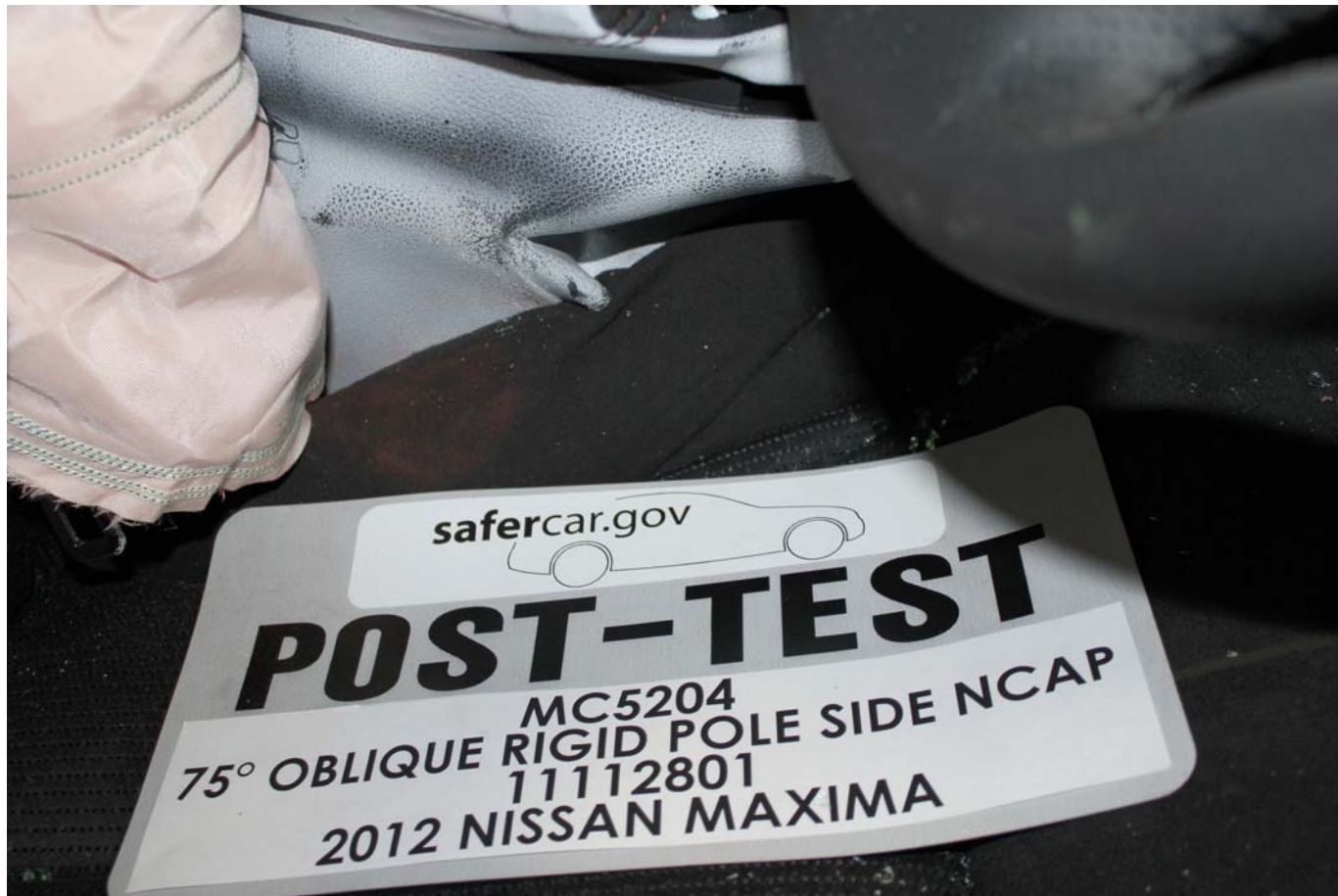
Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View



Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View



Post-Test Dummy Close-Up Torso Contact with Side Air Bag View



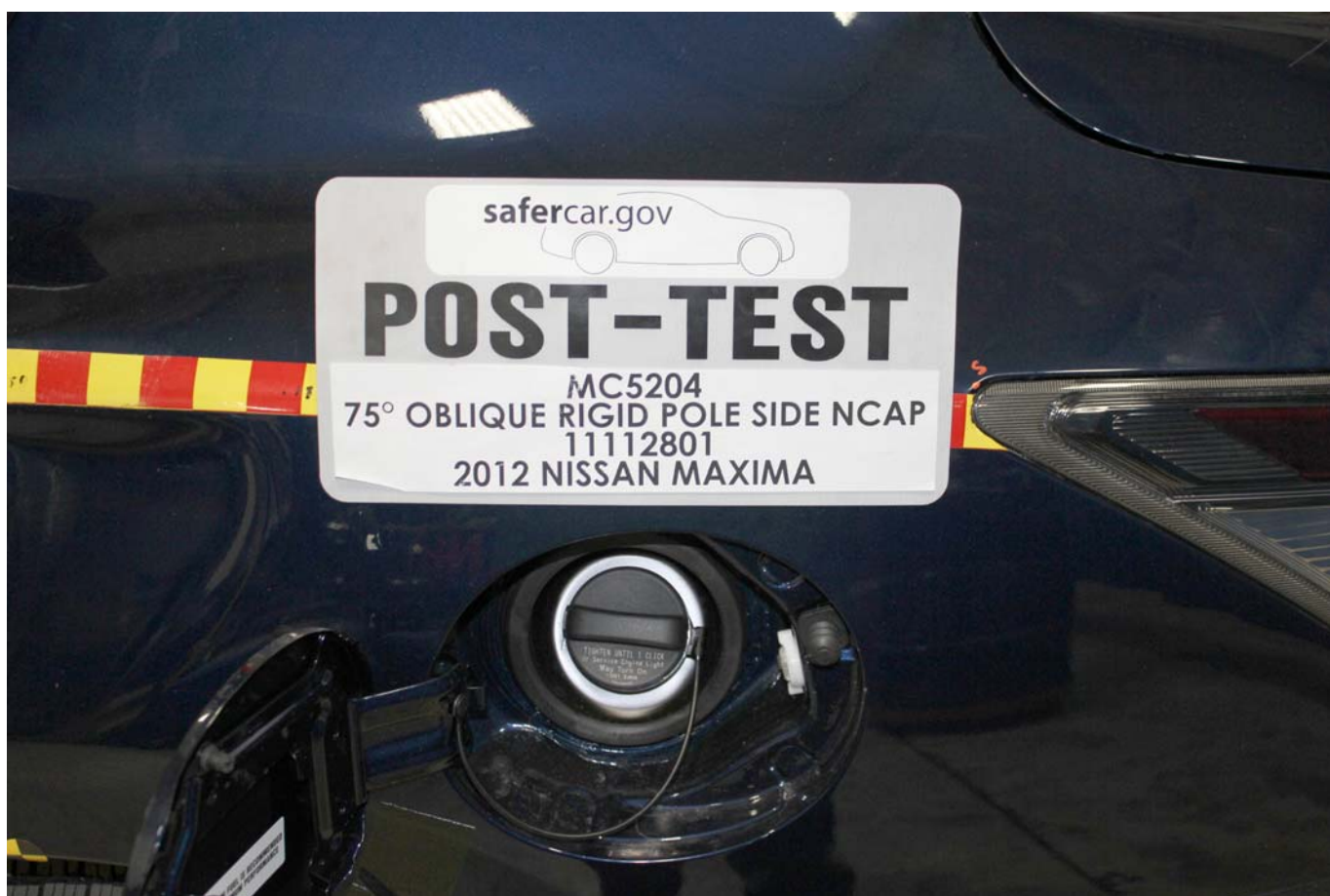
Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View



Post-Test Dummy Close-Up Pelvis Contact with Side Air Bag View



Pre-Test View of Fuel Filler Cap or Fuel Filler Neck



Post-Test View of Fuel Filler Cap or Fuel Filler Neck



Close-Up View of Vehicle's Certification Label



Close-Up View of Vehicle's Tire Information Placard or Label



Pre-Test Pole Barrier Front View



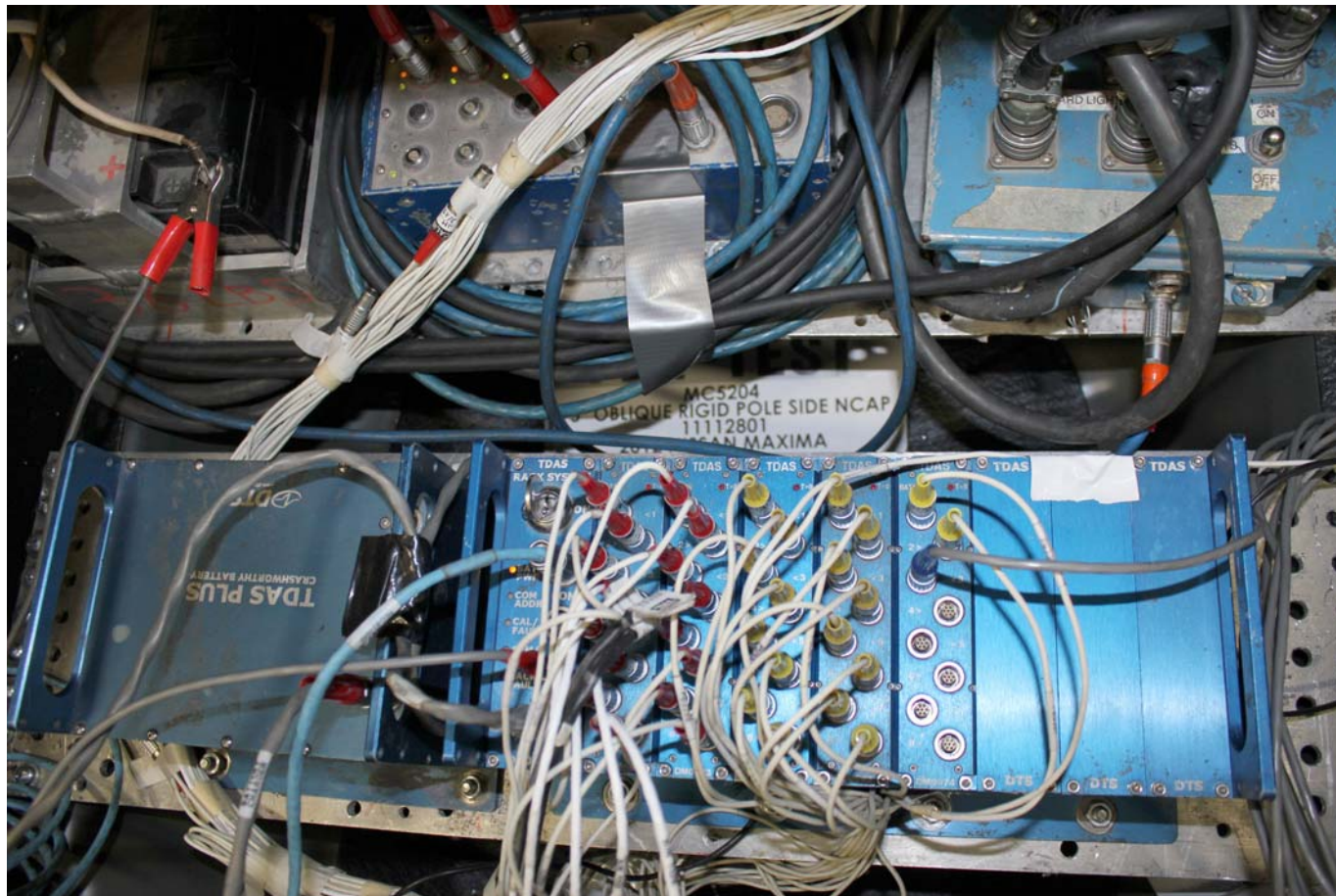
Post-Test Pole Barrier Front View



Pre-Test Pole Barrier Side View



Post-Test Pole Barrier Side View



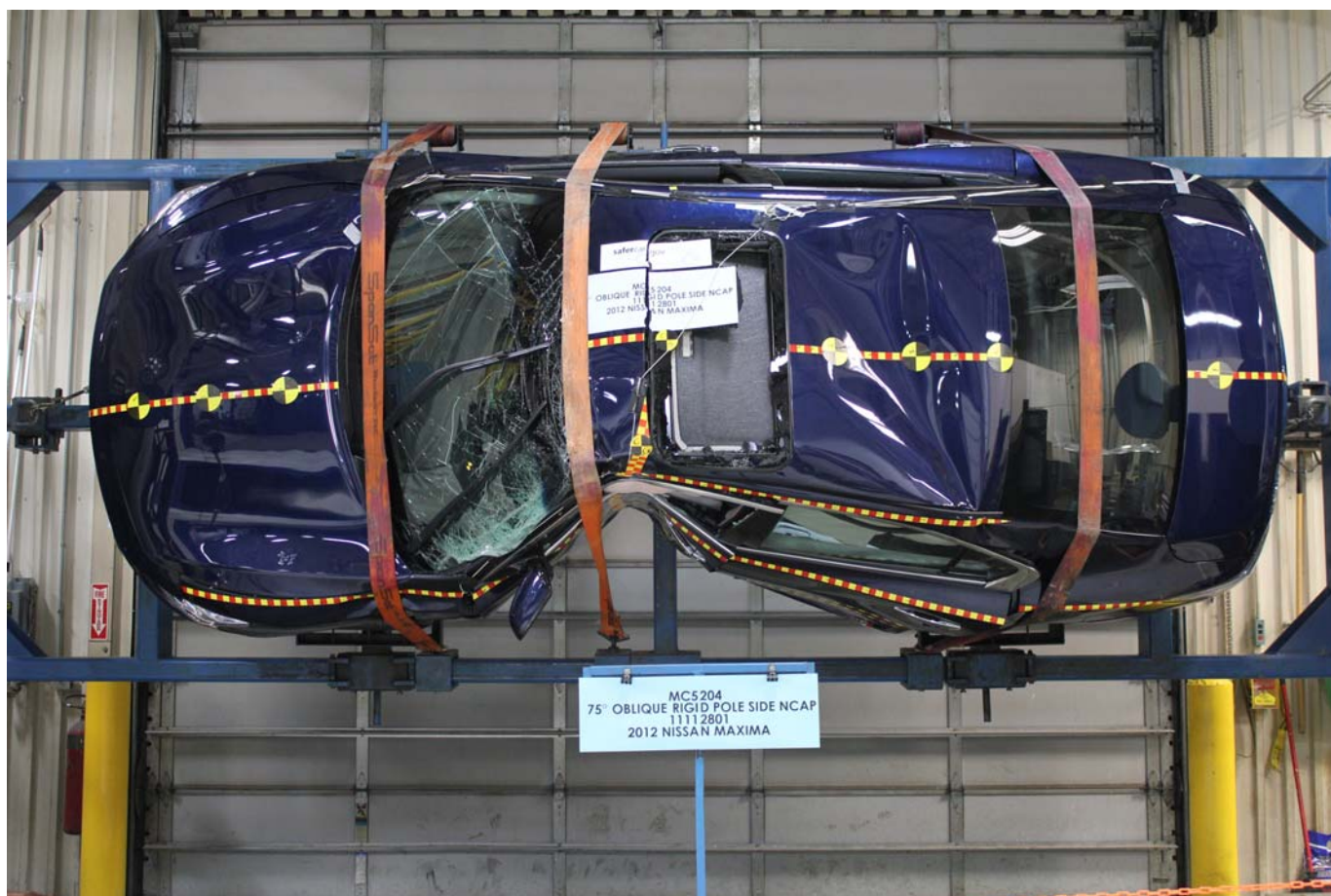
Pre-Test Ballast View



Post-Test Primary and Redundant Speed Trap Read-Out



FMVSS No. 301 Static Rollover 0 Degrees



FMVSS No. 301 Static Rollover 90 Degrees



FMVSS No. 301 Static Rollover 180 Degrees



FMVSS No. 301 Static Rollover 270 Degrees



FMVSS No. 301 Static Rollover 360 Degrees



Impact Event



2012 MAXIMA 3.5 S

THE 4-DOOR SPORTS CAR®

Standard Equipment Included at No Extra Charge

MECHANICAL & PERFORMANCE
3.5-liter DOHC 24-valve V6 Engine
250 Horsepower & 261 lb-ft Torque
Continuously Variable Transmission (CVT)
18" Alloy Wheels

SAFETY & SECURITY
Nissan Advanced Air Bag System (AABS)
Front Seat-mounted Side-impact
Supplemental Air Bags
Roof-mounted Curtain Side-impact
Supplemental Air Bags
Anti-lock Braking System (ABS)
Brake Assist (BA)
Electronic Brake-force Distribution (EBD)
Traction Control System (TCS)
Vehicle Dynamic Control (VDC)
Tire Pressure Monitoring System (TPMS)
Lower Anchors and Tethers
for Children (LATCH) System
Child Safety Rear Door Locks
Vehicle Security System (VSS)

COMFORT & CONVENIENCE
8-way Power Driver's Seat
Driver's Seat Manual Lumbar Support
4-way Power Front Passenger's Seat
60/40 Split Fold-down Rear Bench Seat
Leather-wrapped Steering Wheel
Leather-wrapped Shift Knob
Manual 10R/Telescopic Steering Column
Cruise Control
Steering Wheel-mounted Audio Controls
AM/FM/In-dash 6-CD Changer & MP3/WMA CD
; Playback Capability w/8 Speakers
Auxiliary Audio Input Jack
Bluetooth® Hands-free Phone System
Multi-function Trip Computer
Dual Zone Auto Temp Control (ATC)
; with Rear A/C Vents
Nissan Intelligent Key®
w/Push Button Ignition
Power Windows w/Driver & Front Passenger
One-touch Auto-up/Down With Auto-reverse
Power Sliding Moonroof
w/Tilt Feature and Manual Sliding Sunshade
Auto-dimming Inside Mirror
Auto On/Off Headlights
Sun Viscors w/Illuminated Vanity
Mirrors & Extensions

EXTERIOR FEATURES

Rear Combination Lamps With LED
Power Outside Mirrors

Manufacturer's Suggested Retail Base Price:	\$31,750.00
Options Included by Manufacturer FLOOR MATS & TRUNK MAT (5-piece set)	195.00
Destination Charges:	760.00
Total*	\$32,705.00

*Does not include dealer installed options and accessories, local taxes or license fees. This label has been applied pursuant to federal law. Do not remove prior to delivery to the ultimate purchaser.

EPA Fuel Economy Estimates

City MPG
19
Expected range
for most drivers
15 to 23 MPG

Estimated
Annual Fuel Cost
\$2,696
based on 15,000 miles
at \$3.96 per gallon

Highway MPG
26
Expected range
for most drivers
21 to 31 MPG

Your actual
mileage will vary
depending on how you
drive and maintain
your vehicle.



See the FREE Fuel Economy Guide at dealers or www.fueleconomy.gov



GOVERNMENT SAFETY RATINGS

Frontal Crash Driver Passenger To Be Rated To Be Rated
Star ratings based on the risk of injury in a frontal impact. Frontal ratings should ONLY be compared to other vehicles of similar size and weight.

Side Crash Front seat Rear seat To Be Rated To Be Rated
Star ratings based on the risk of injury in a side impact.

Rollover ★★★★★
Star ratings based on the risk of rollover in a single vehicle crash.

Star ratings range from 1 to 5 stars (★★★★★), with 5 being the highest. Source: National Highway Traffic Safety Administration (NHTSA).

www.safercar.gov or 1-888-327-4236

Security-Plus Vehicle Protection Plan

The only service agreement backed by Nissan!
Ask your dealer for details, or call 1-800-NISSAN-1 for more information

DELIVERY

VEHICLE COLORS:
EXT: NAVY BLUE
INT: CHARCOAL

FINAL ASSEMBLY POINT:
SMYRNA

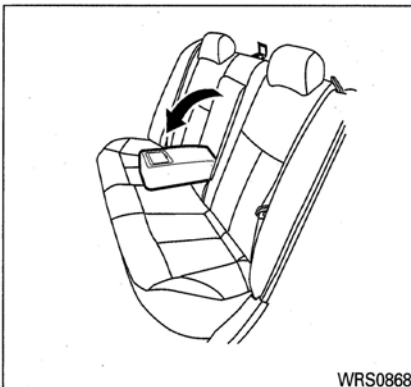
TRANSPORT METHOD:
TRUCK

DEALER:
ROSEN NISSAN OF GURNEE
7000 GRAND AVENUE
GURNEE IL
60031

VIN: 1N4AASAP8CC808583
EMS: 50 STATE EMISSIONS
MDL: 16112-808583 RAB-G
OPT: E-C03L92

20111014013253RF5033

Monroney Label



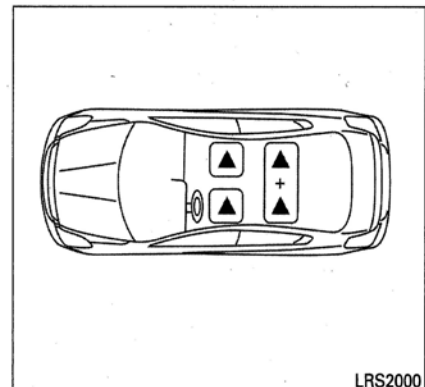
Center armrest

Pull the armrest down until it is horizontal.

HEAD RESTRAINTS

WARNING

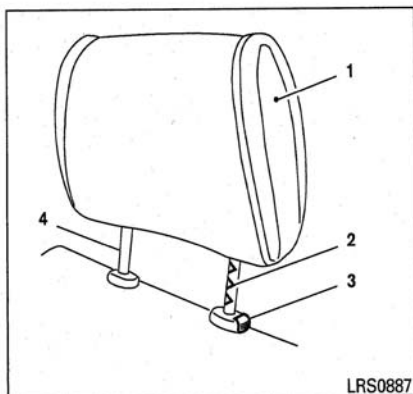
Head restraints supplement the other vehicle safety systems. They may provide additional protection against injury in certain rear end collisions. Adjust the head restraints properly, as specified in this section. Check the adjustment after someone else uses the seat. Do not attach anything to the head restraint stalks or remove the head restraint. Do not use the seat if the head restraint has been removed. If the head restraint was removed, reinstall and properly adjust the head restraint before an occupant uses the seating position. Failure to follow these instructions can reduce the effectiveness of the head restraints. This may increase the risk of serious injury or death in a collision.



The illustration shows the seating positions equipped with head restraints. All of the head restraints are adjustable.

▲ Indicates the seating position is equipped with a head restraint.

+ Indicates the seating position is not equipped with a head restraint.



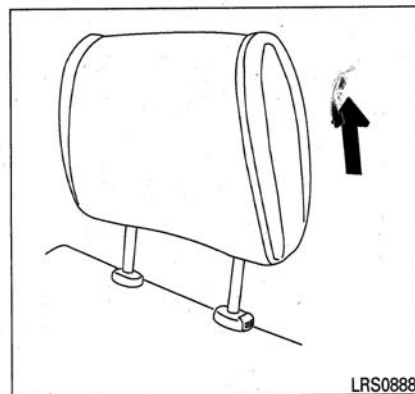
Components

1. Head restraint
2. Adjustment notches
3. Lock knob
4. Stalks



Adjustment

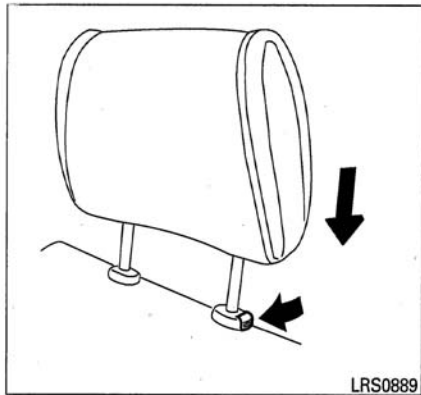
Adjust the head restraint so the center is level with the center of the seat occupant's ears.



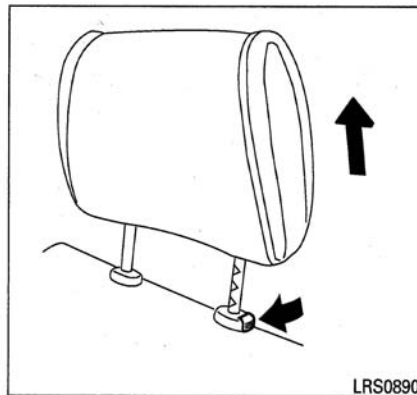
To raise the head restraint, pull it up.

1-8 Safety—Seats, seat belts and supplemental restraint system

Head Restraint Use and Adjustment Information from Vehicle Owner's Manual



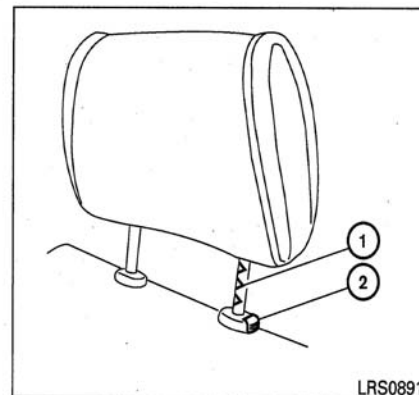
To lower, push and hold the lock knob and push the head restraint down.



Removal

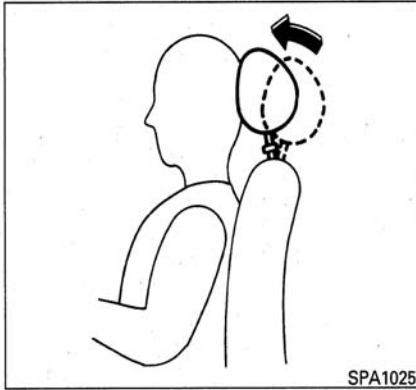
Use the following procedure to remove the adjustable head restraints.

1. Pull the head restraint up to the highest position.
2. Push and hold the lock knob.
3. Remove the head restraint from the seat.
4. Store the head restraint properly so it is not loose in the vehicle.
5. Reinstall and properly adjust the head restraint before an occupant uses the seating position.



Install

1. Align the head restraint stalks with the holes in the seat. Make sure the head restraint is facing the correct direction. The stalk with the adjustment notches ① must be installed in the hole with the lock knob ②.
2. Push and hold the lock knob and push the head restraint down.
3. Properly adjust the head restraint before an occupant uses the seating position.



Active Head Restraints operate only in certain rear-end collisions. After the collision, the head restraints return to their original position.

Adjust the Active Head Restraints properly as described in this section.

Front-seat Active Head Restraints

The Active Head Restraint moves forward utilizing the force that the seatback receives from the occupant in a rear-end collision. The movement of the head restraint helps support the occupant's head by reducing its backward movement and helping absorb some of the forces that may lead to whiplash-type injuries.

Active Head Restraints are effective for collisions at low to medium speeds in which it is said that whiplash injury occurs most.

1-10 Safety—Seats, seat belts and supplemental restraint system

Head Restraint Use and Adjustment Information from Vehicle Owner's Manual

APPENDIX B

VEHICLE AND DUMMY RESPONSE DATA PLOTS

TABLE OF DATA PLOTS
Driver Dummy Instrumentation Plots

		<u>Page No.</u>
Figure No. 1.	Driver Head Acceleration (X) Primary vs. Time	B-1
Figure No. 2.	Driver Head Acceleration (Y) Primary vs. Time	B-1
Figure No. 3.	Driver Head Acceleration (Z) Primary vs. Time	B-1
Figure No. 4.	Driver Head Resultant Primary Acceleration vs. Time	B-1
Figure No. 5.	Driver Lower Spine T12 Acceleration (X) vs. Time	B-2
Figure No. 6.	Driver Lower Spine T12 Acceleration (Y) vs. Time	B-2
Figure No. 7.	Driver Lower Spine T12 Acceleration (Z) vs. Time	B-2
Figure No. 8.	Driver Lower Spine T12 Resultant Acceleration vs. Time	B-2
Figure No. 9.	Driver Iliac Wing Force on Impact Side (Y) vs. Time	B-3
Figure No. 10.	Driver Acetabulum Force on Impact Side (Y) vs. Time	B-3
Figure No. 11.	Driver Total Pelvis Force on Impact Side (Y) vs. Time	B-3

The following additional data for this test can be obtained from the Research and Development section of the NHTSA website. The website can be found at
www.NHTSA.dot.gov

Additional Driver Dummy Instrumentation Data

Driver Head Acceleration (X) Redundant
Driver Head Acceleration (Y) Redundant
Driver Head Acceleration (Z) Redundant
Driver Upper Thorax Rib Deflection (Y)
Driver Middle Thorax Rib Deflection (Y)
Driver Lower Thorax Rib Deflection (Y)
Driver Upper Abdomen Rib Deflection (Y)
Driver Lower Abdomen Rib Deflection (Y)

Vehicle Instrumentation Data

Vehicle Center of Gravity Acceleration (X)

Vehicle Center of Gravity Acceleration (Y)

Vehicle Center of Gravity Acceleration (Z)

Left Floor Sill Acceleration (Y)

Left A-Pillar Sill Acceleration (Y)

Left Lower A-Pillar Acceleration (Y)

Left Mid A-Pillar Acceleration (Y)

Left B-Pillar Sill Acceleration (Y)

Left Lower B-Pillar Acceleration (Y)

Left Mid B-Pillar Acceleration (Y)

Driver Seat Track at Dummy Hip Point Acceleration (Y)

Engine Top Acceleration (X)

Engine Top Acceleration (Y)

Firewall Center Acceleration (Y)

Right Roof at Vertical Impact Reference Line Acceleration (Y)

Right Sill at Vertical Impact Reference Line Acceleration (Y)

Rear Floorpan Behind Rear Axle at Centerline Acceleration (X)

Rear Floorpan Behind Rear Axle at Centerline Acceleration (Y)

Pole Instrumentation Data

Load Cell Pole Barrier #1 Force (Y)

Load Cell Pole Barrier #2 Force (Y)

Load Cell Pole Barrier #3 Force (Y)

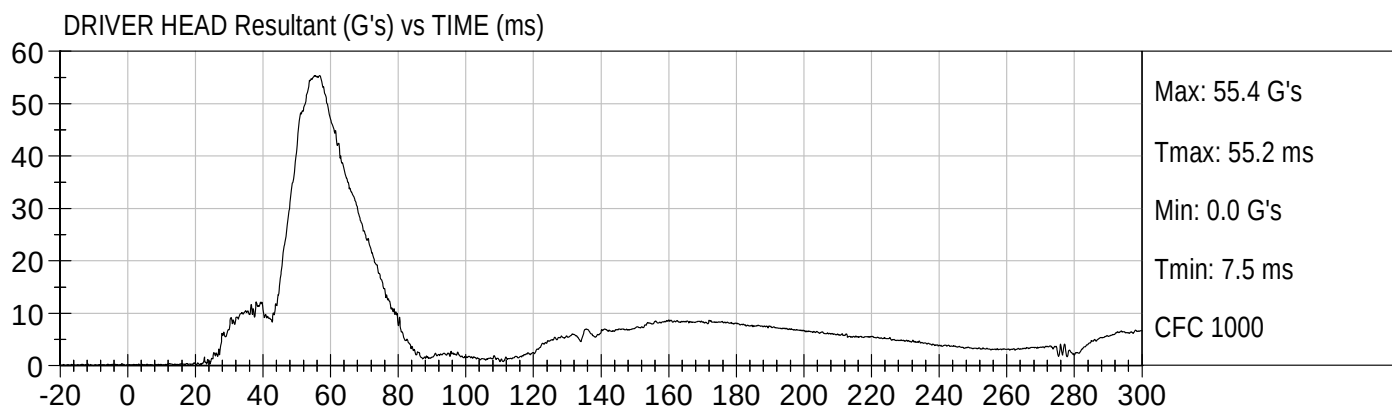
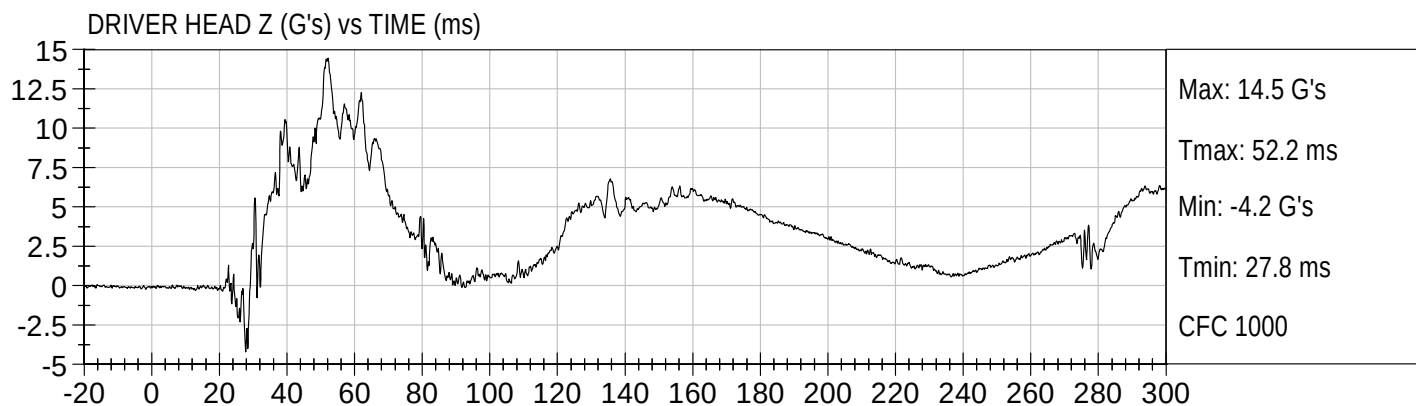
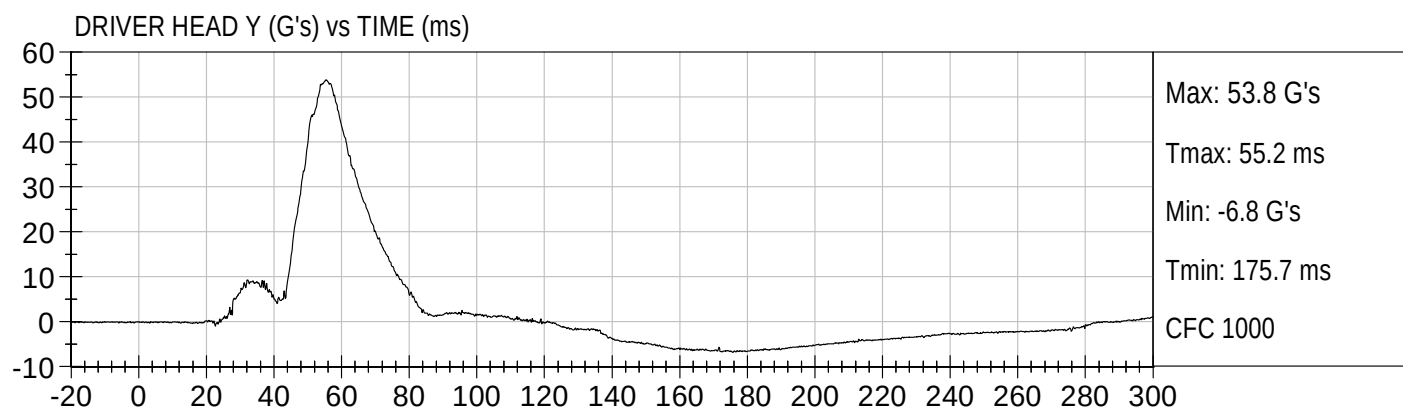
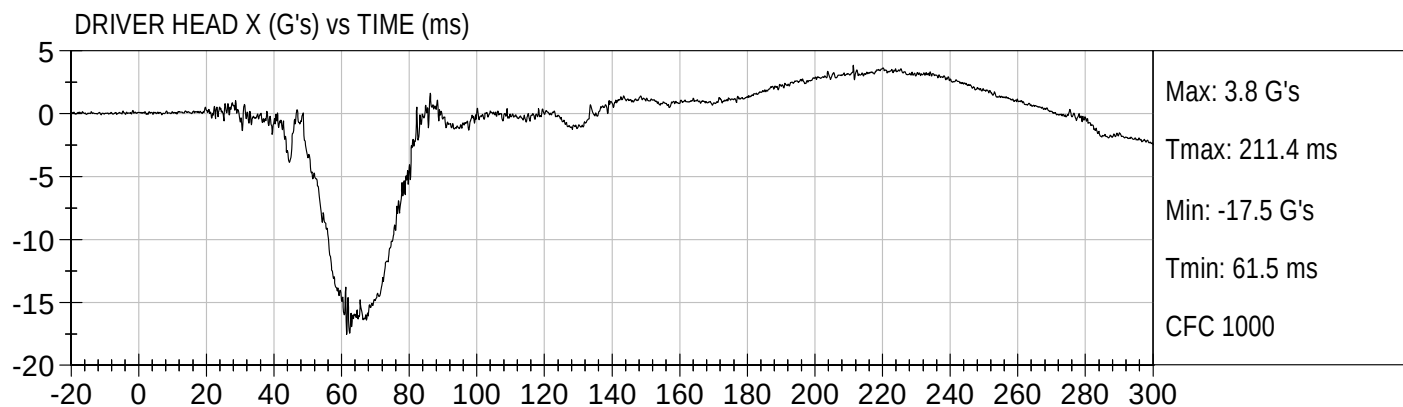
Load Cell Pole Barrier #4 Force (Y)

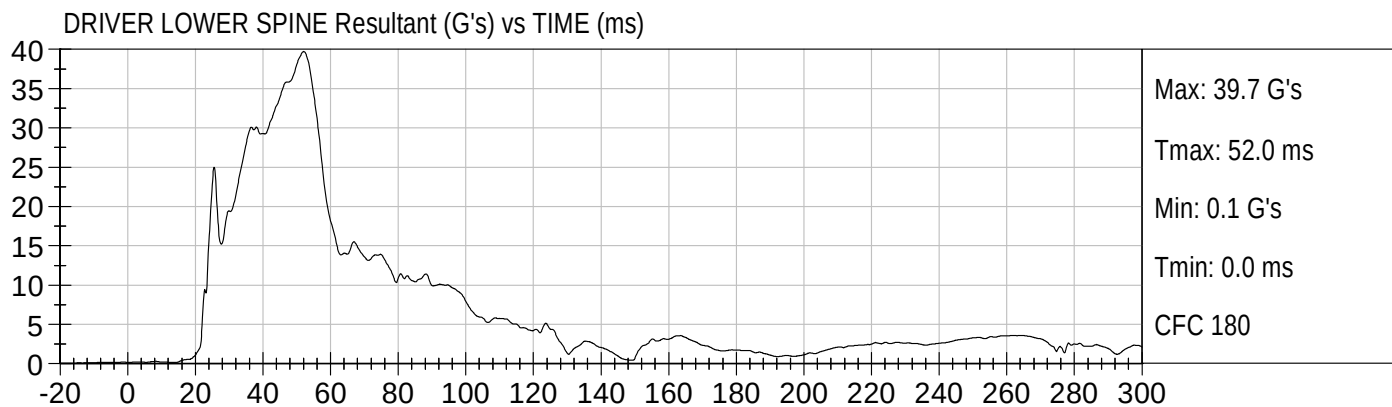
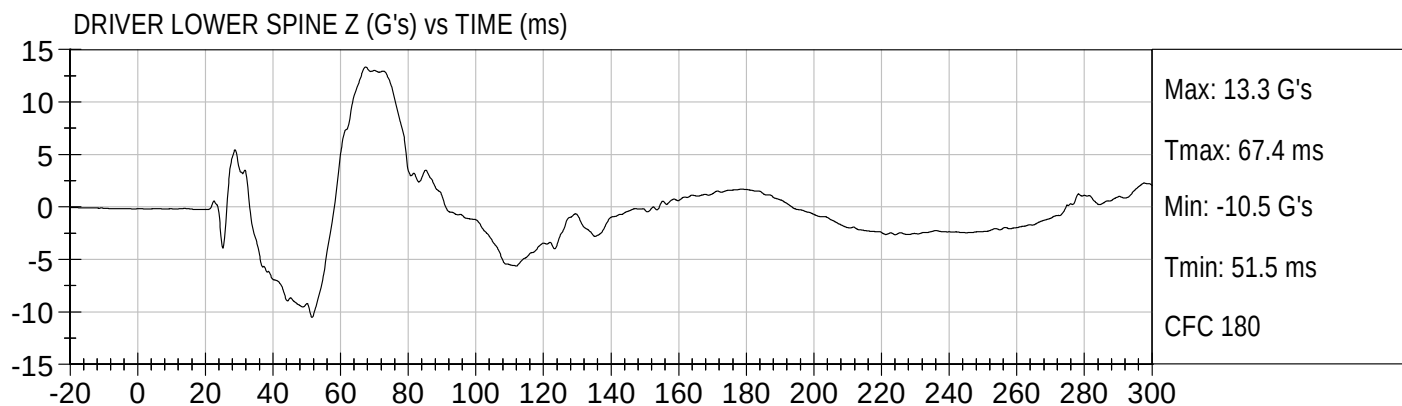
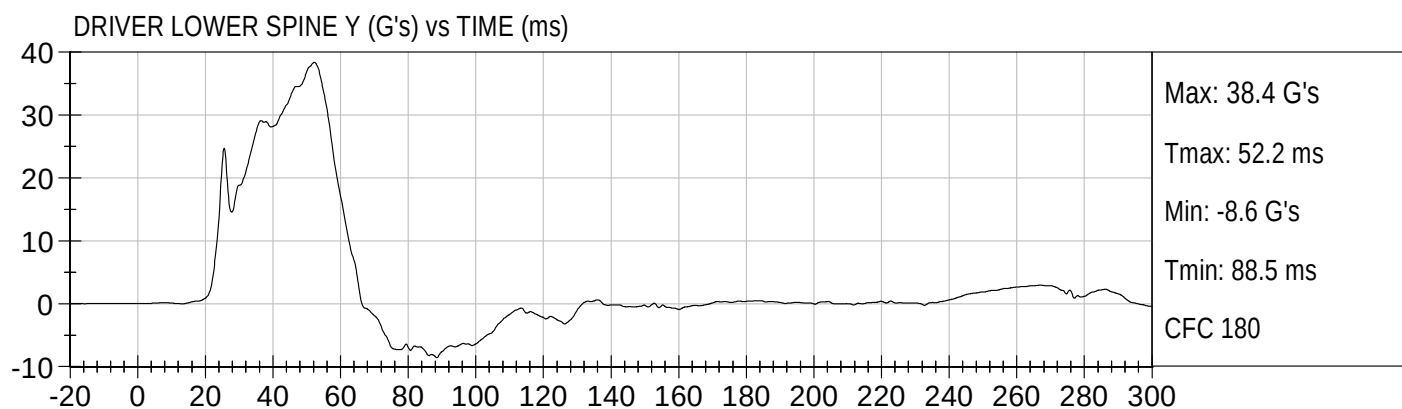
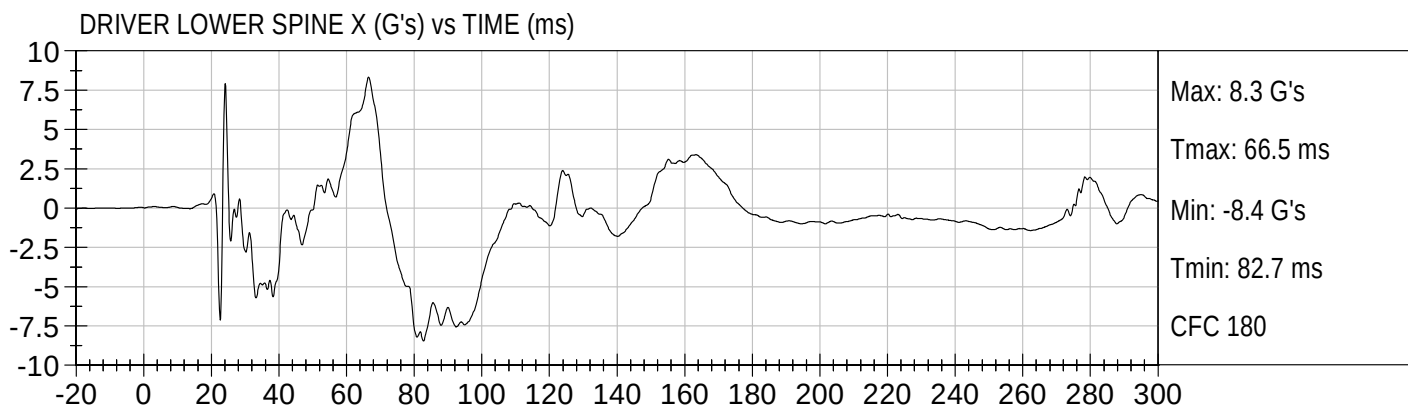
Load Cell Pole Barrier #5 Force (Y)

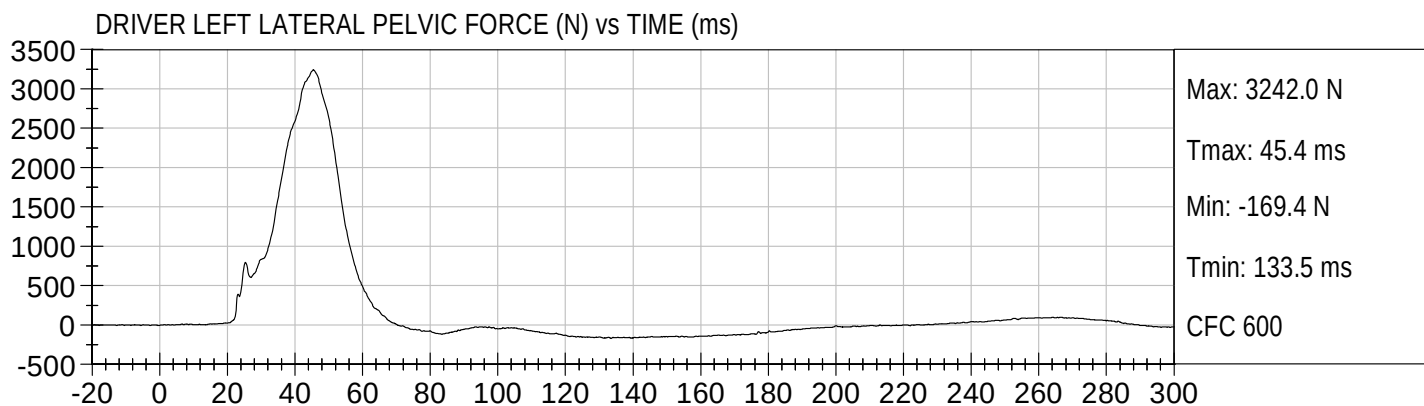
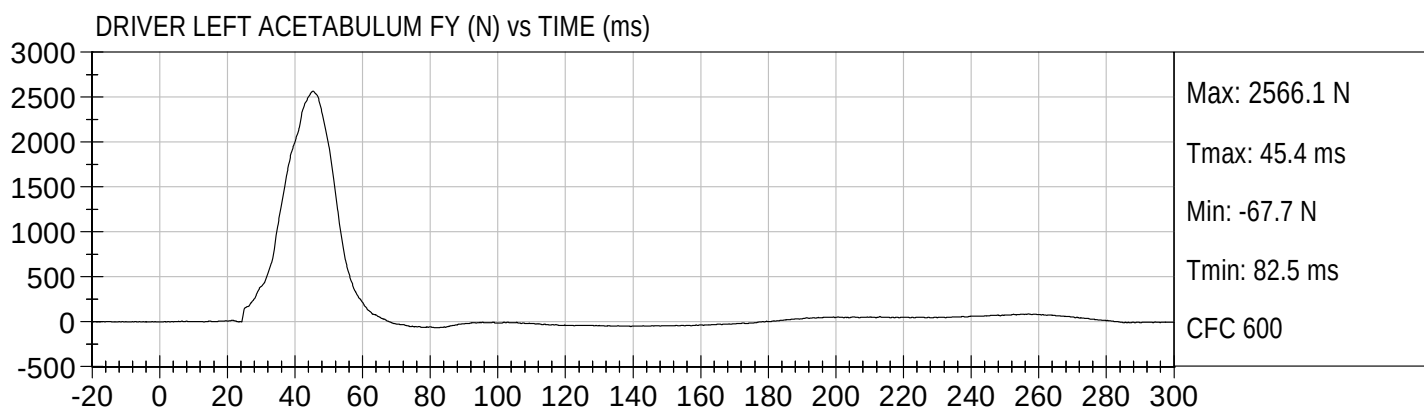
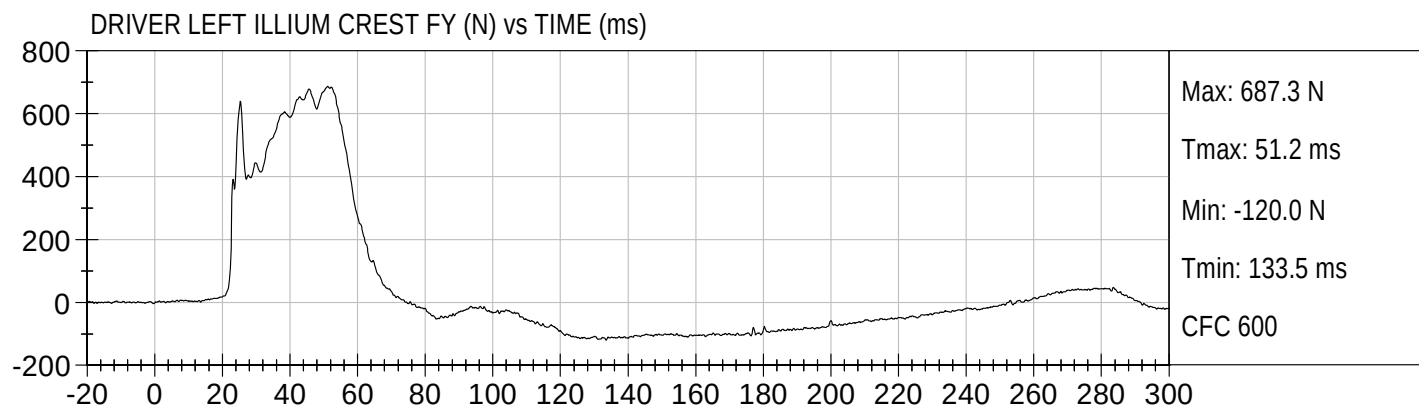
Load Cell Pole Barrier #6 Force (Y)

Load Cell Pole Barrier #7 Force (Y)

Load Cell Pole Barrier #8 Force (Y)







APPENDIX C

DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

SID-IIsD External Measurements
SN: 296

No.	Name	Spec. (mm)	Result	Pass/Fail
A	Sitting Height	772 - 788	784	Pass
B	Shoulder Pivot Height	437 - 453	442	Pass
C	H-point Height	79 - 89	83	Pass
D	H-point from Seatback	141 - 151	145	Pass
E	Shoulder Pivot from Backline	97 - 107	99	Pass
F	Thigh Clearance	119 -135	121	Pass
G	Head Breadth	140 - 148	142	Pass
H	Head Back from Backline	40 - 46	45	Pass
I	Head Depth	178 - 188	180	Pass
J	Head Circumference	541 - 551	548	Pass
K	Buttock to Knee Length	514 - 540	535	Pass
L	Popliteal Height	343 - 369	358	Pass
M	Knee Pivot to Floor Height	392 - 409	404	Pass
N	Buttock Popliteal Length	416 - 442	435	Pass
O	Chest Depth w/o Jacket	195 - 211	206	Pass
P	Foot Length	216 - 232	219	Pass
Q	Hip Breadth (w/ pelvic plugs)	313 - 323	316	Pass
R	Arm Length	249 - 259	250	Pass
S	Knee Joint to Seatback	477 - 493	481	Pass
V	Shoulder Width	341 - 357	346	Pass
W	Foot Width	78 - 94	85	Pass
Y	Chest Circumference w/ jacket	851 - 881	870	Pass
Z	Waist Circumference	761 - 791	772	Pass

MGA RESEARCH CORPORATION
HEAD DROP TEST
SID-Its BUILD LEVEL D DUMMY

ATD Serial No: 296

Test ID: D113851

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	20.6 to 22.2	21.6	Pass
Laboratory Relative Humidity	%	10 to 70	18	Pass
Peak Resultant Acceleration	G's	115 to 137	122	Pass
Peak Lateral Acceleration	G's	+/- 15	-5.1	Pass
Unimodal	N/A	<15%	Yes	Pass
Overall Test Results				Pass



Laboratory Technician

11/16/11
Test Date

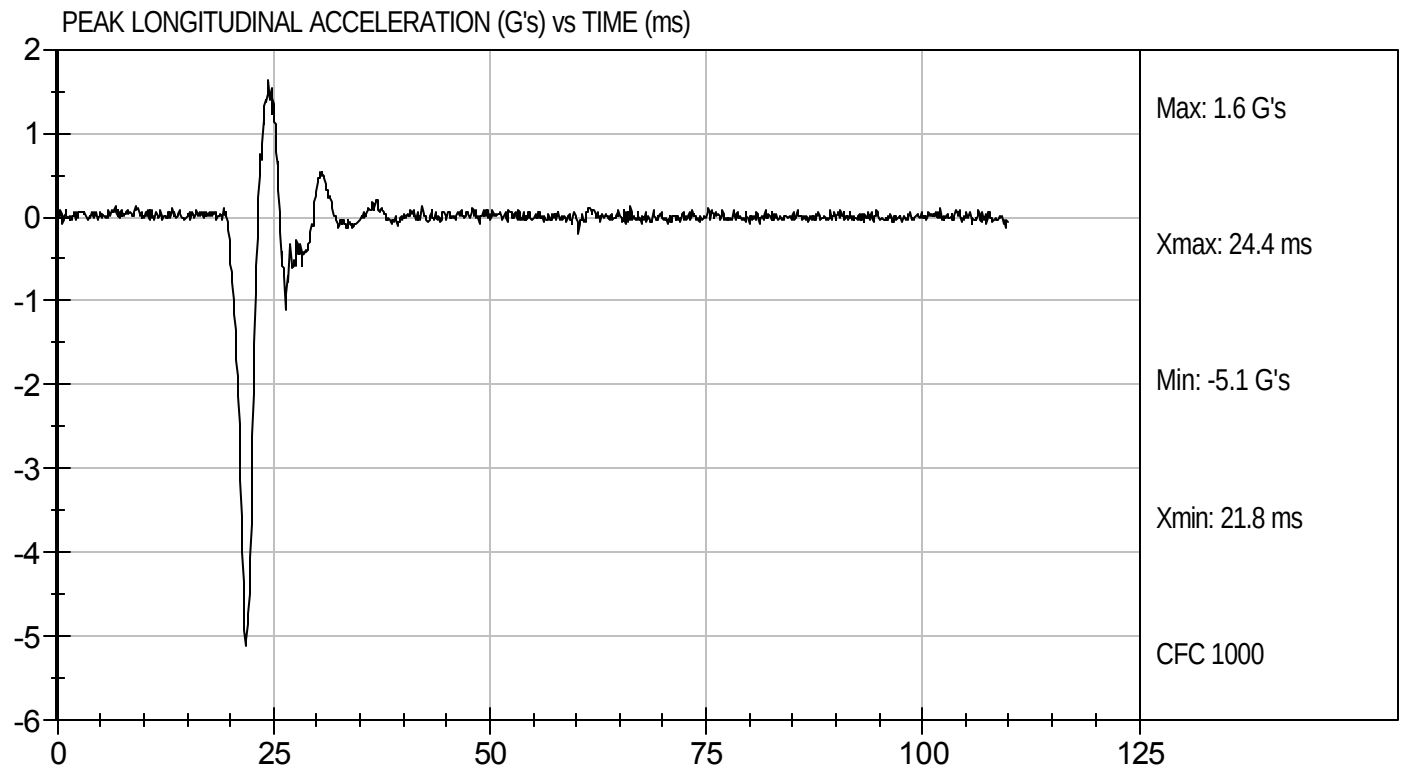
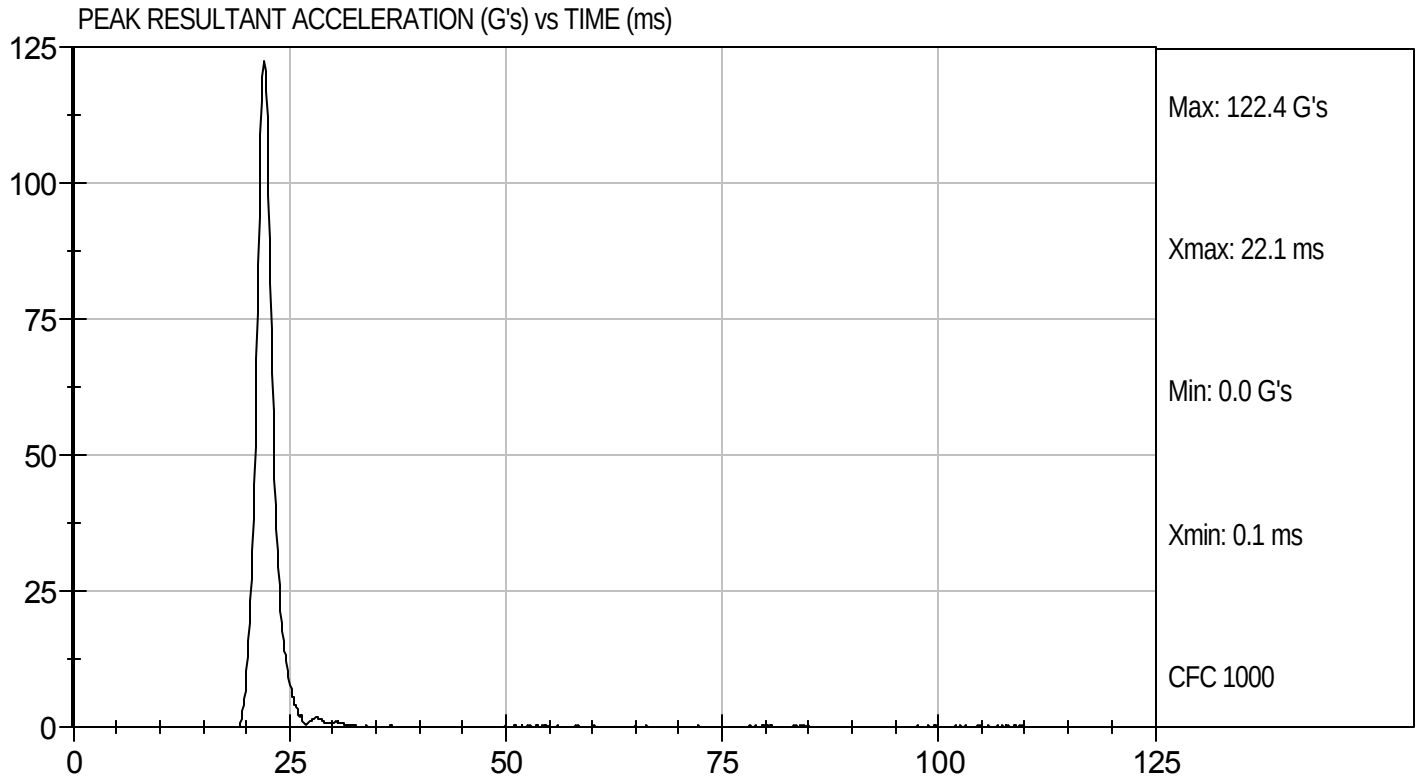


Approved By



Test Desc: Head Drop
Component ID: D113851

Test Date: 11/16/11
Velocity: 0 ft/s, 0 m/s



MGA RESEARCH CORPORATION
LATERAL NECK PENDULUM TEST
SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

Test I.D: D113852

Tested Parameter		Units	Specification	Result	Pass/Fail
Temperature		deg C	20.6 to 22.2	21.4	Pass
Humidity		%	10 to 70	18	Pass
Impact Velocity		m/s	5.51 to 5.63	5.58	Pass
Delta Velocity	10 ms	m/s	2.20 to 2.80	2.37	Pass
	15 ms	m/s	3.30 to 4.10	3.41	Pass
	20 ms	m/s	4.40 to 5.40	4.55	Pass
	25 ms	m/s	5.40 to 6.10	5.44	Pass
	25-100 ms	m/s	5.50 to 6.20	5.66	Pass
Maximum D-Plane Rotation		deg	71 to 81	72	Pass
Time of Maximum D-Plane Rotation		ms	50 to 70	59	Pass
Maximum Occipital Condyle Moment during Rotation Interval Nm			-44 to -36	-41	Pass
Time of Moment Decay to 0 Nm		ms	102 to 126	115	Pass
Overall Test Results				Pass	


 Laboratory Technician

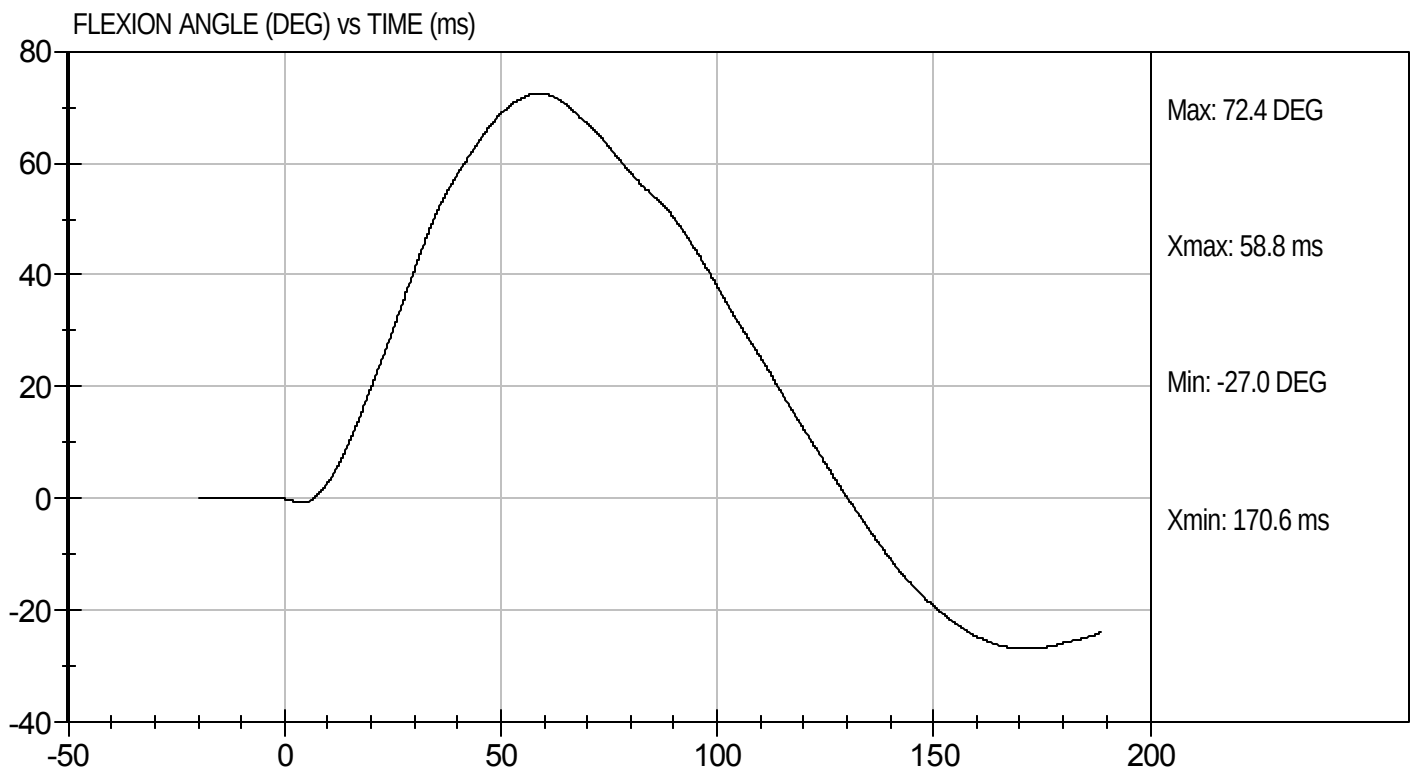
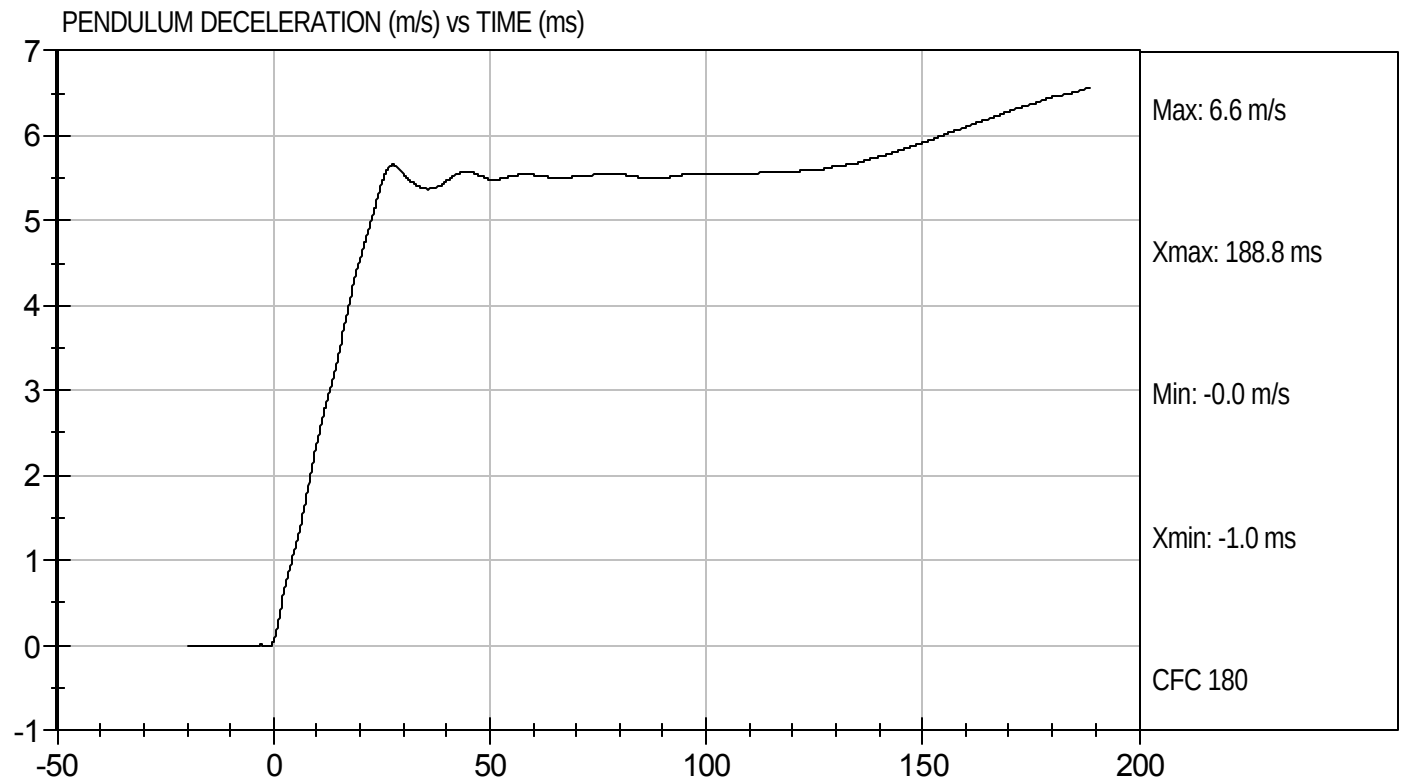
11/16/11
 Test Date


 Approved By



Test Desc: Neck Bending
Component ID: D113852

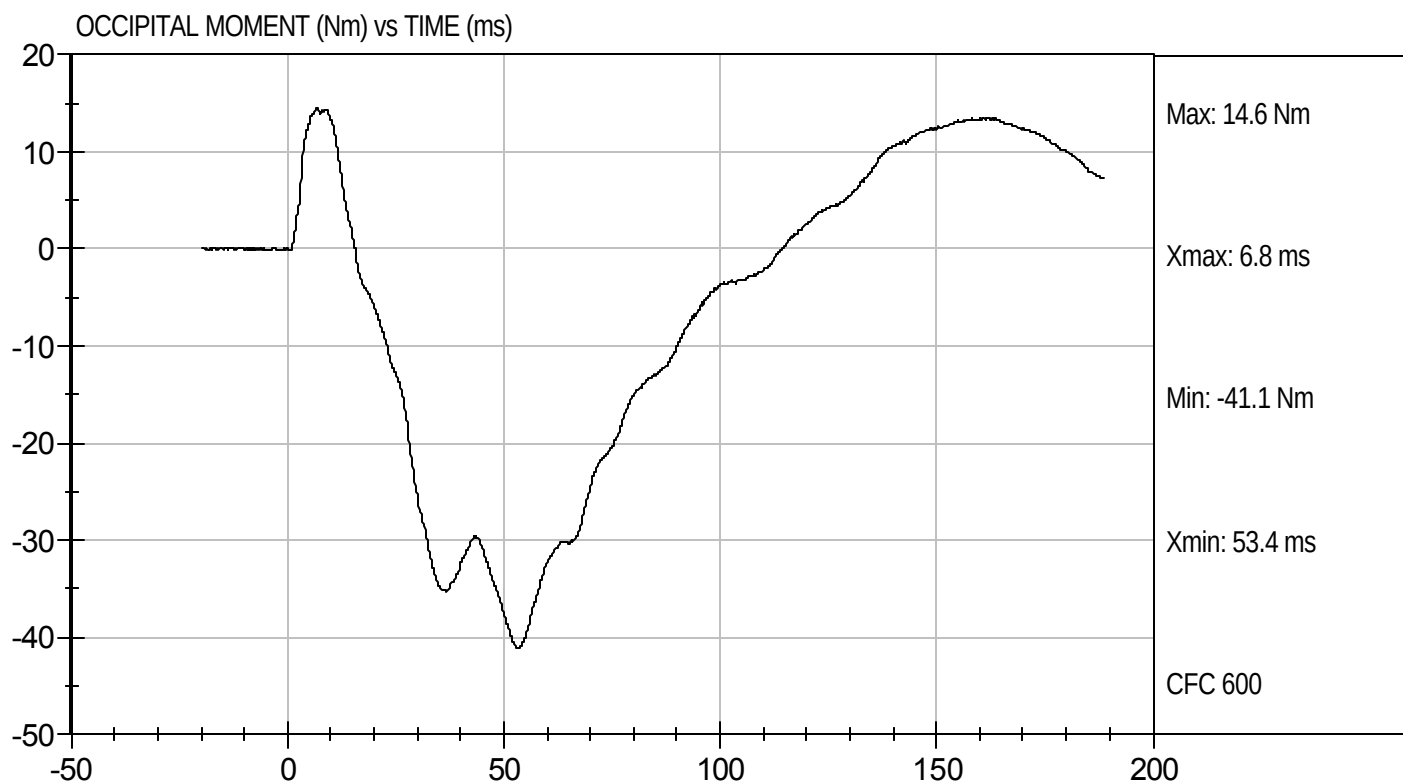
Test Date: 11/16/11
Velocity: 18.31 ft/s, 5.58 m/s





Test Desc: Neck Bending
Component ID: D113852

Test Date: 11/16/11
Velocity: 18.31 ft/s, 5.58 m/s



MGA RESEARCH CORPORATION
SHOULDER IMPACT TEST
SID-Its BUILD LEVEL D DUMMY

ATD Serial No: 296

Test ID: D113853

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	20.6 to 22.2	21.5	Pass
Laboratory Relative Humidity	%	10 to 70	18	Pass
Impact Velocity	m/s	4.20 to 4.40	4.38	Pass
Maximum Probe Acceleration	G's	13 to 18	15	Pass
Shoulder Displacement	mm	28 to 37	30	Pass
Upper Spine (T1) Y Acceleration	G's	17 to 22	18	Pass
Overall Test Results				Pass

Jessica Hall
Laboratory Technician

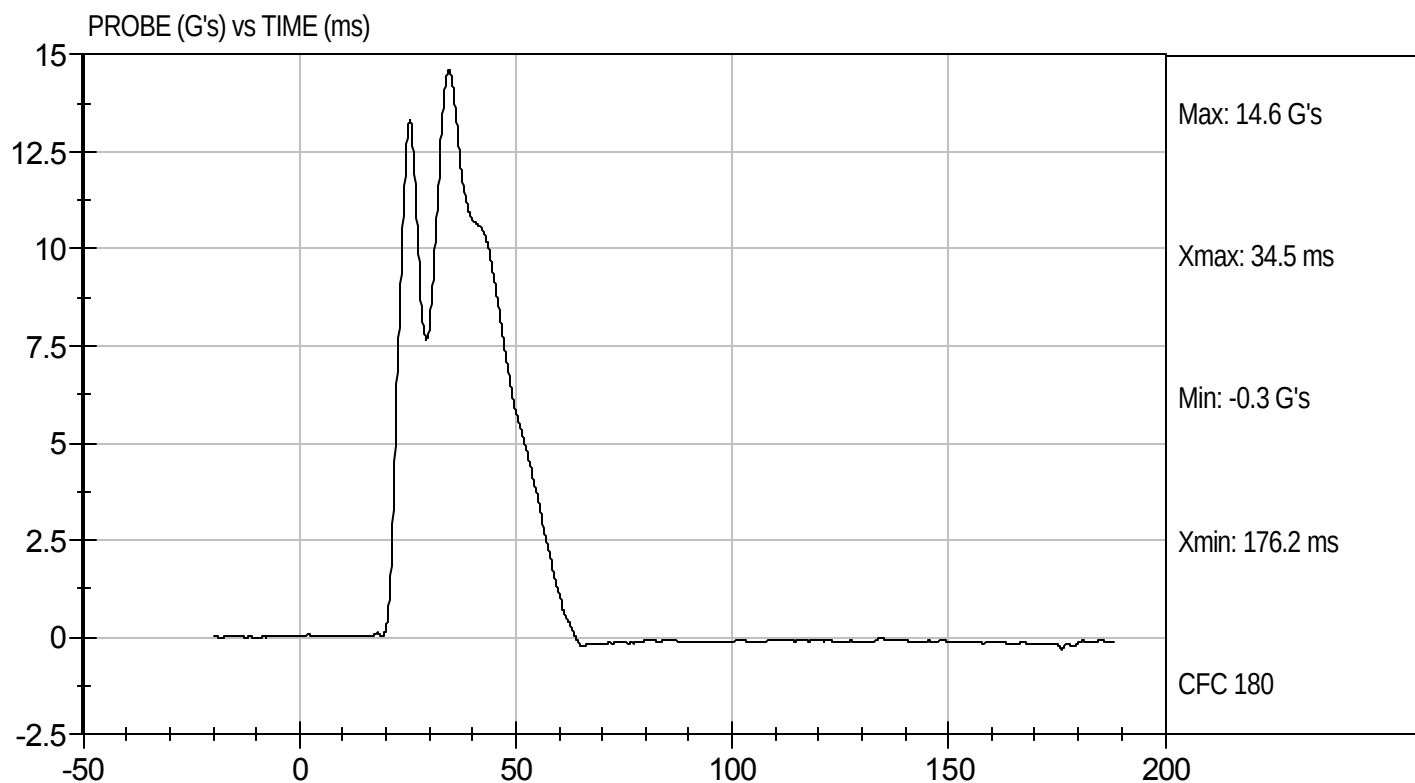
11/16/11
Test Date

David Winkelbauer
Approved By



Test Desc: Shoulder Impact
Component ID: D113853

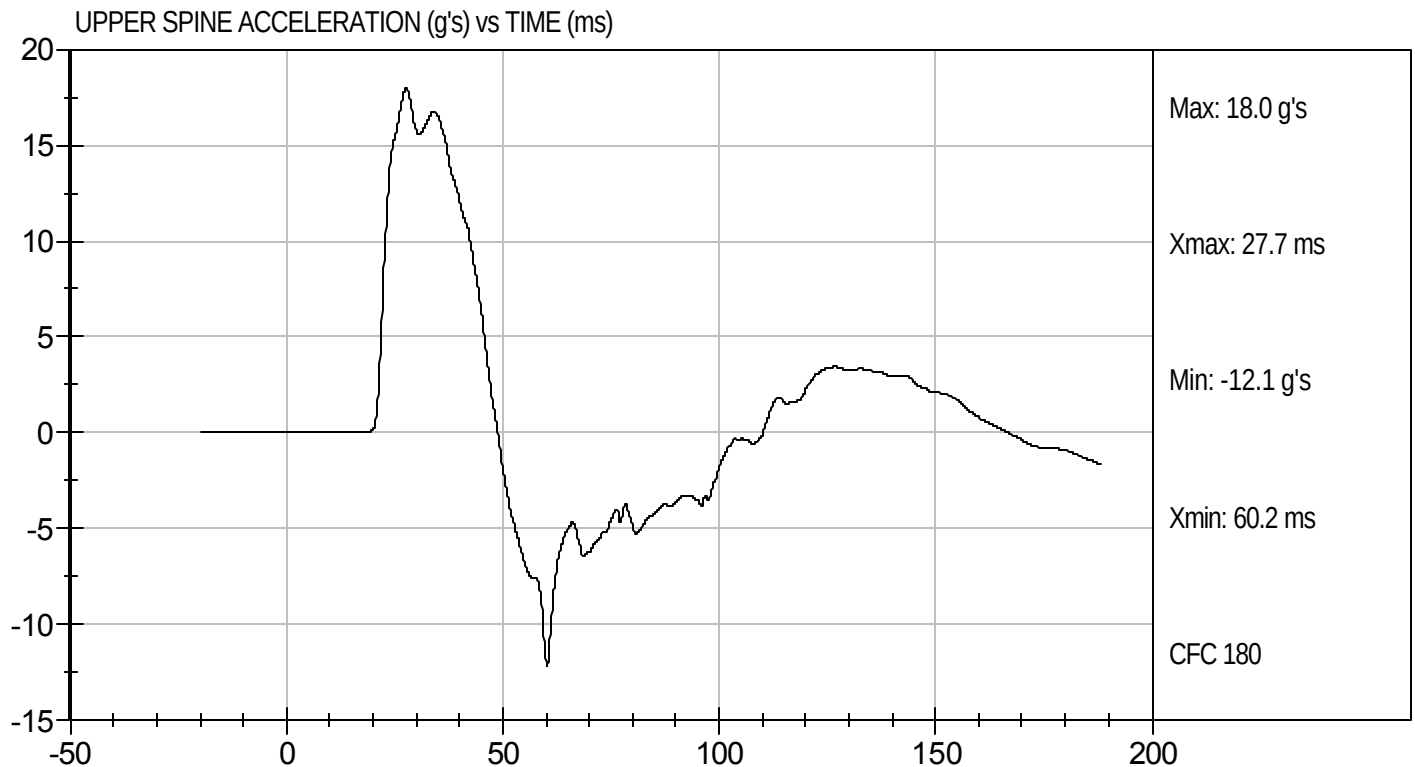
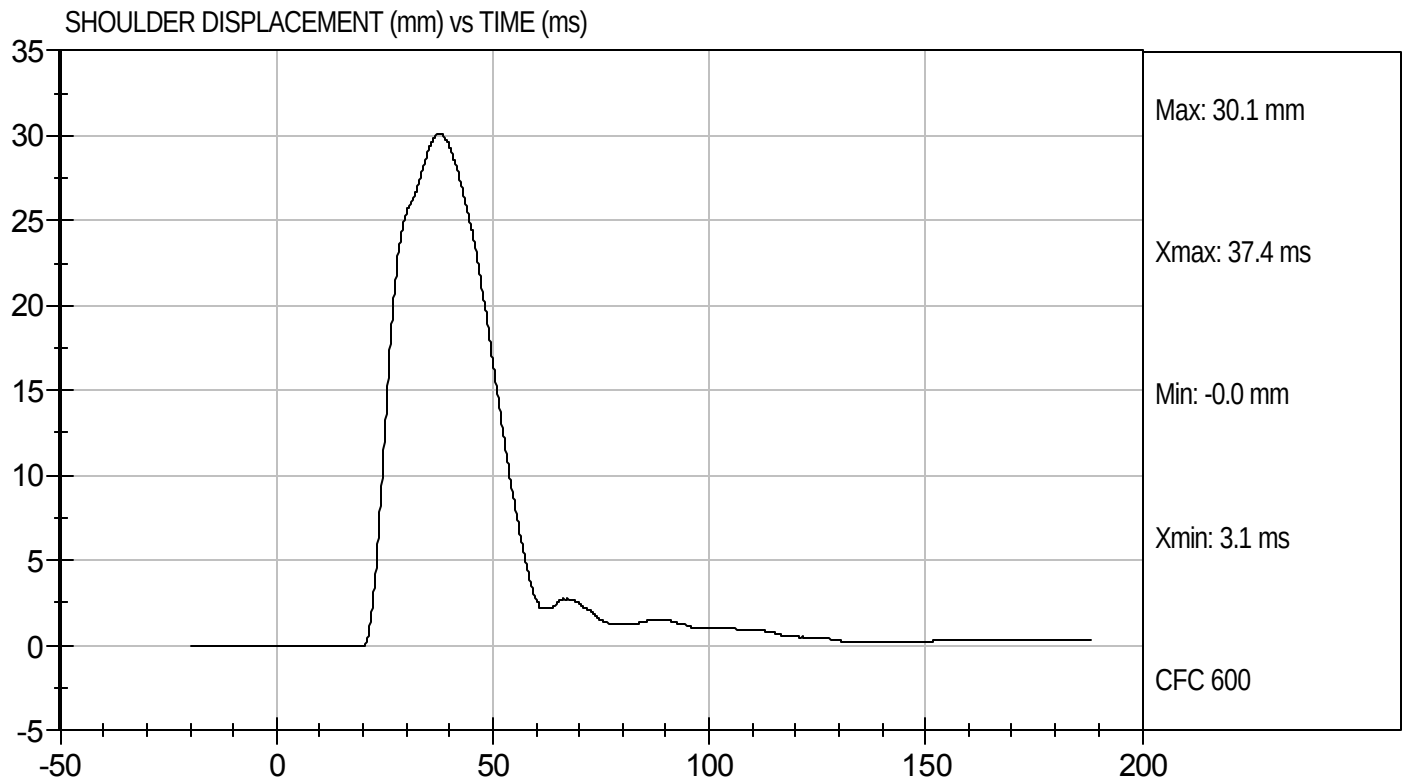
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Velocity: 14.36 ft/s, 4.38 m/s





Test Desc: Shoulder Impact
Component ID: D113853

Test Date: 11/16/11
Velocity: 14.36 ft/s, 4.38 m/s



MGA RESEARCH CORPORATION
THORAX (WITH ARM) IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

Test I.D: D113854

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.6	Pass
Humidity	%	10 to 70	18	Pass
Impact Velocity	m/s	6.60 to 6.80	6.77	Pass
Peak Impactor Acceleration	G's	30 to 36	32	Pass
Shoulder Displacement	mm	31 to 40	33	Pass
Upper Rib Displacement	mm	25 to 32	27	Pass
Middle Rib Displacement	mm	30 to 36	32	Pass
Lower Rib Displacement	mm	32 to 38	35	Pass
Upper Spine (T1) Y Acceleration	G's	34 to 43	37	Pass
Lower Spine (T12) Y Acceleration	G's	29 to 37	29	Pass
Overall Test Results			Pass	


Laboratory Technician

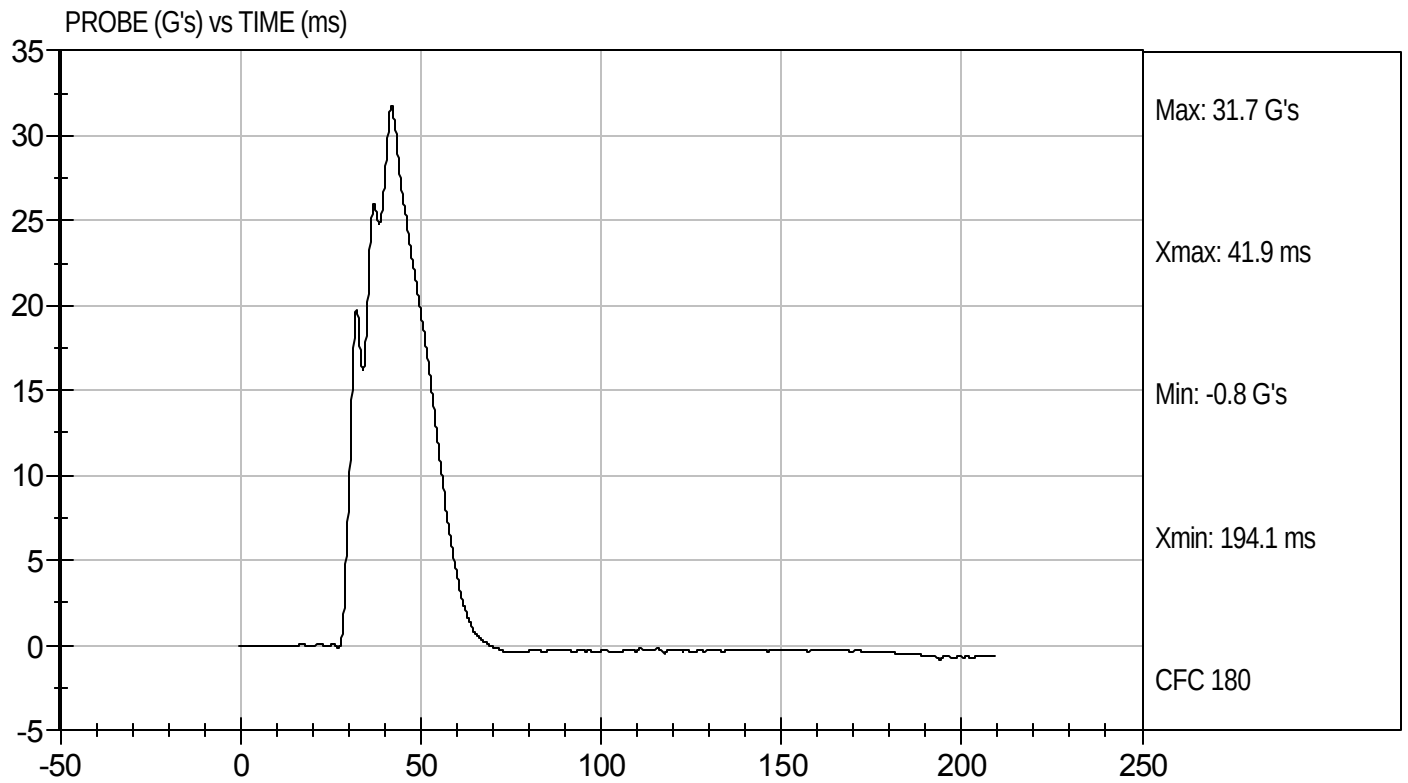
11/16/11
Test Date


Approved By



Test Desc: Thorax With Arm
Component ID: D113854

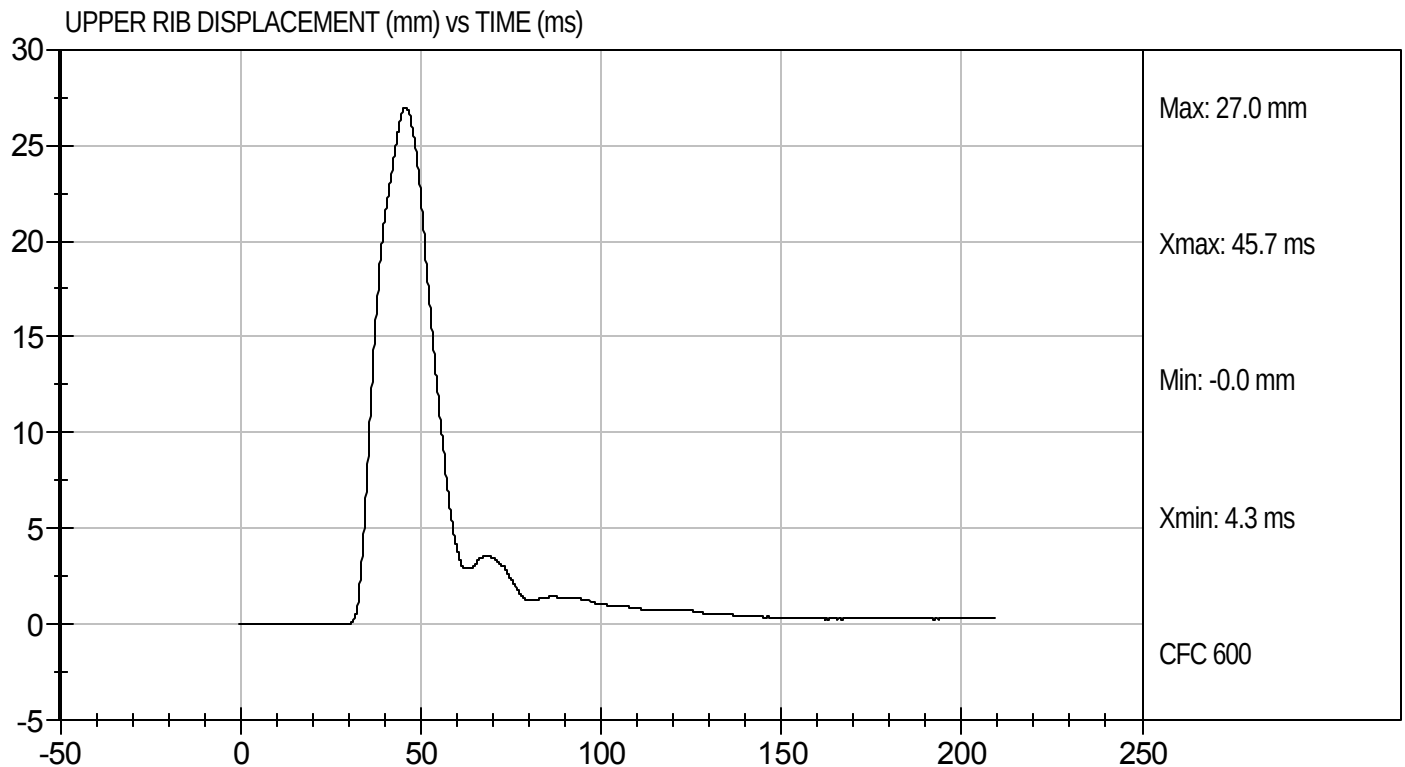
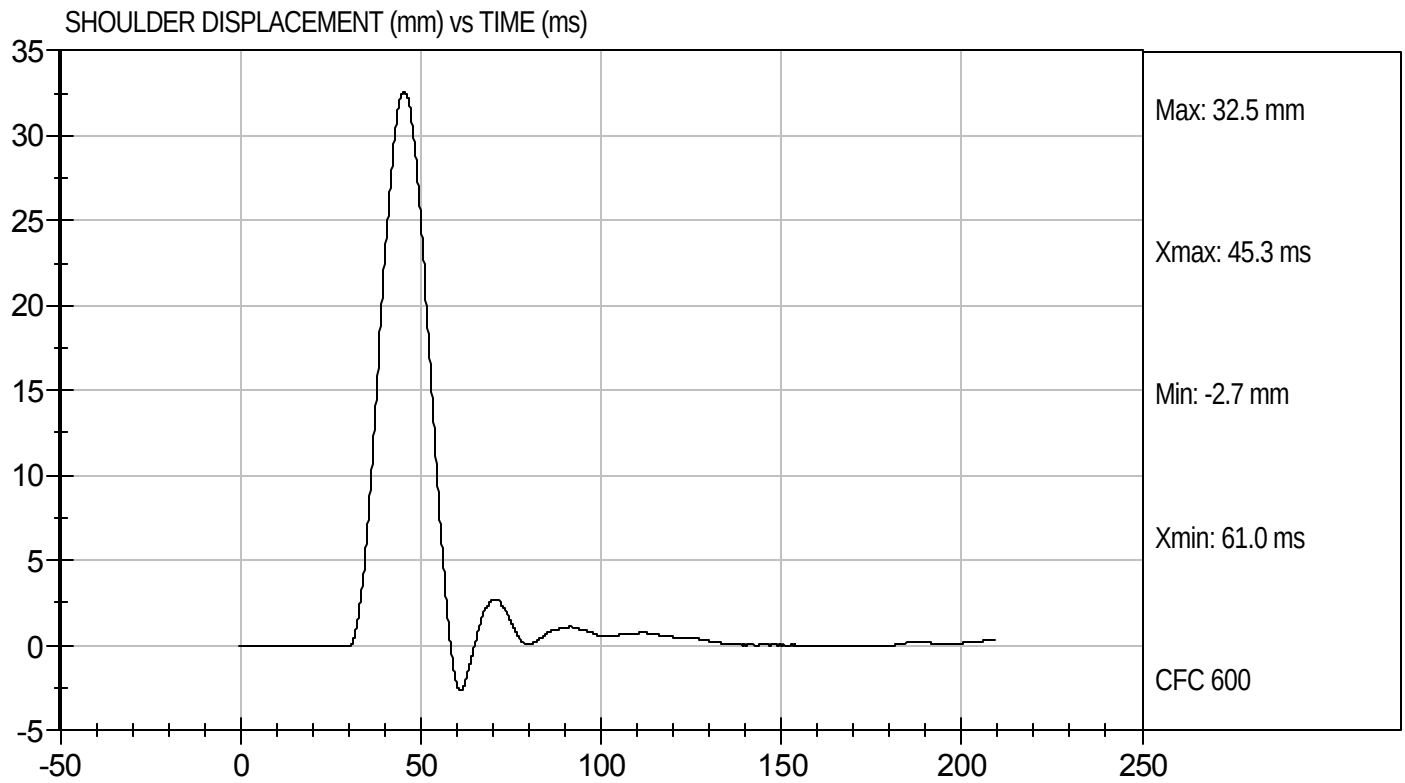
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Velocity: 22.22 ft/s, 6.77 m/s





Test Desc: Thorax With Arm
Component ID: D113854

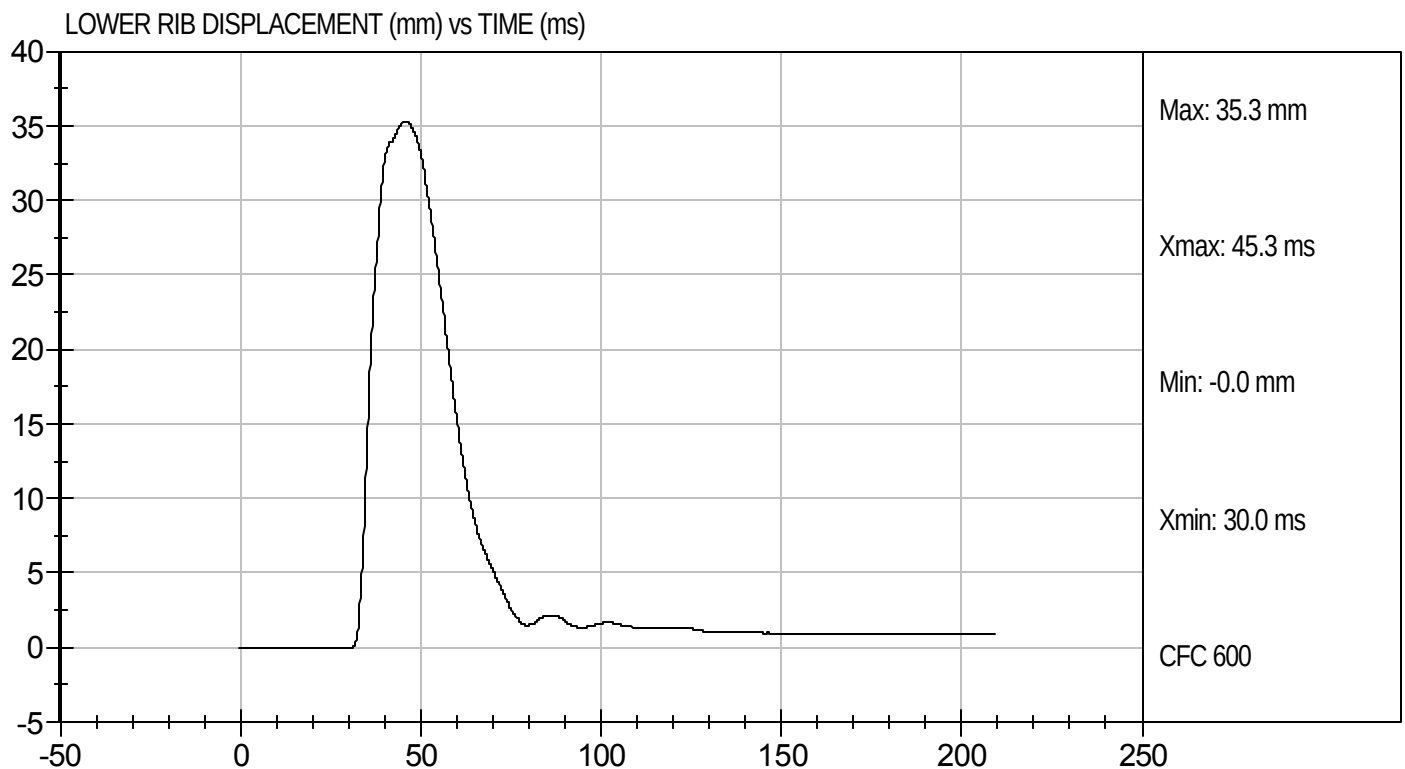
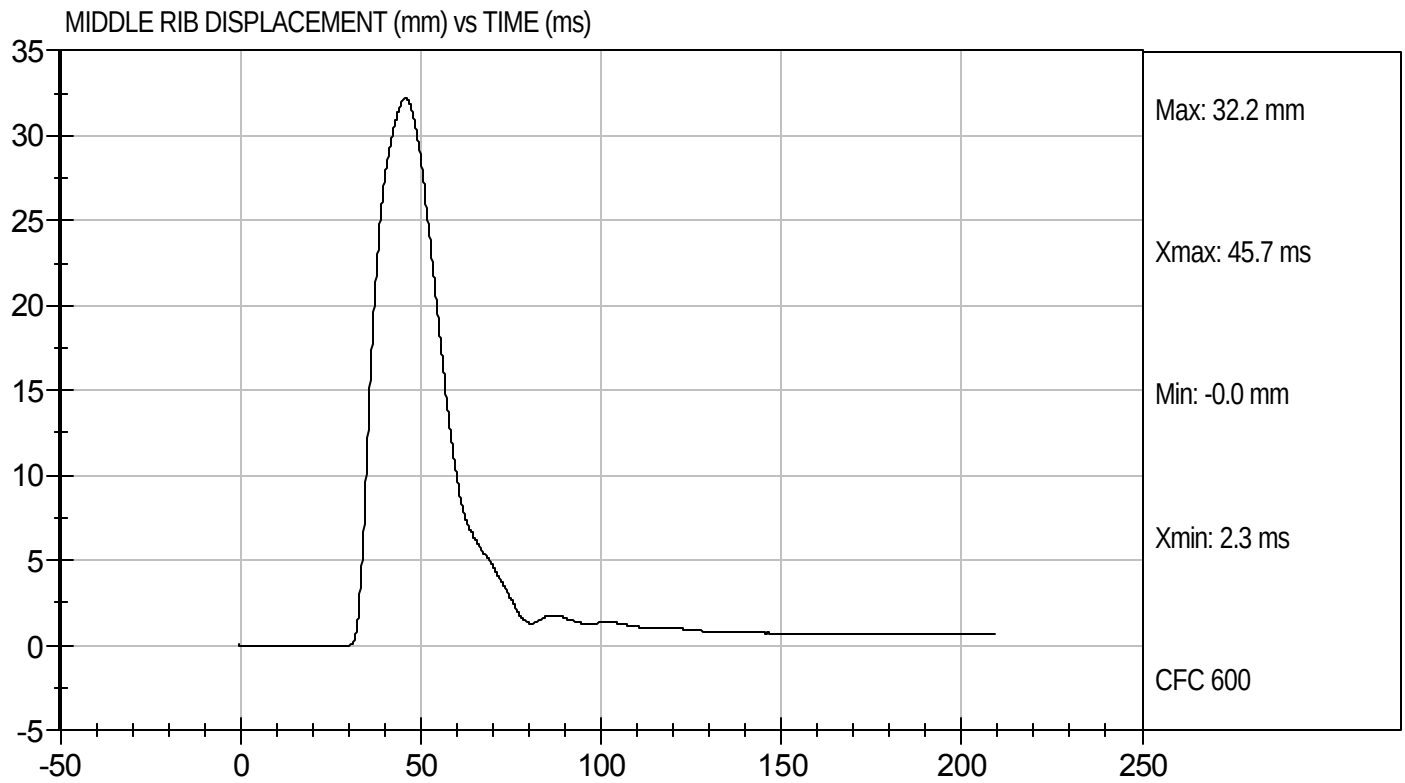
Test Date: 11/16/11
Velocity: 22.22 ft/s, 6.77 m/s





Test Desc: Thorax With Arm
Component ID: D113854

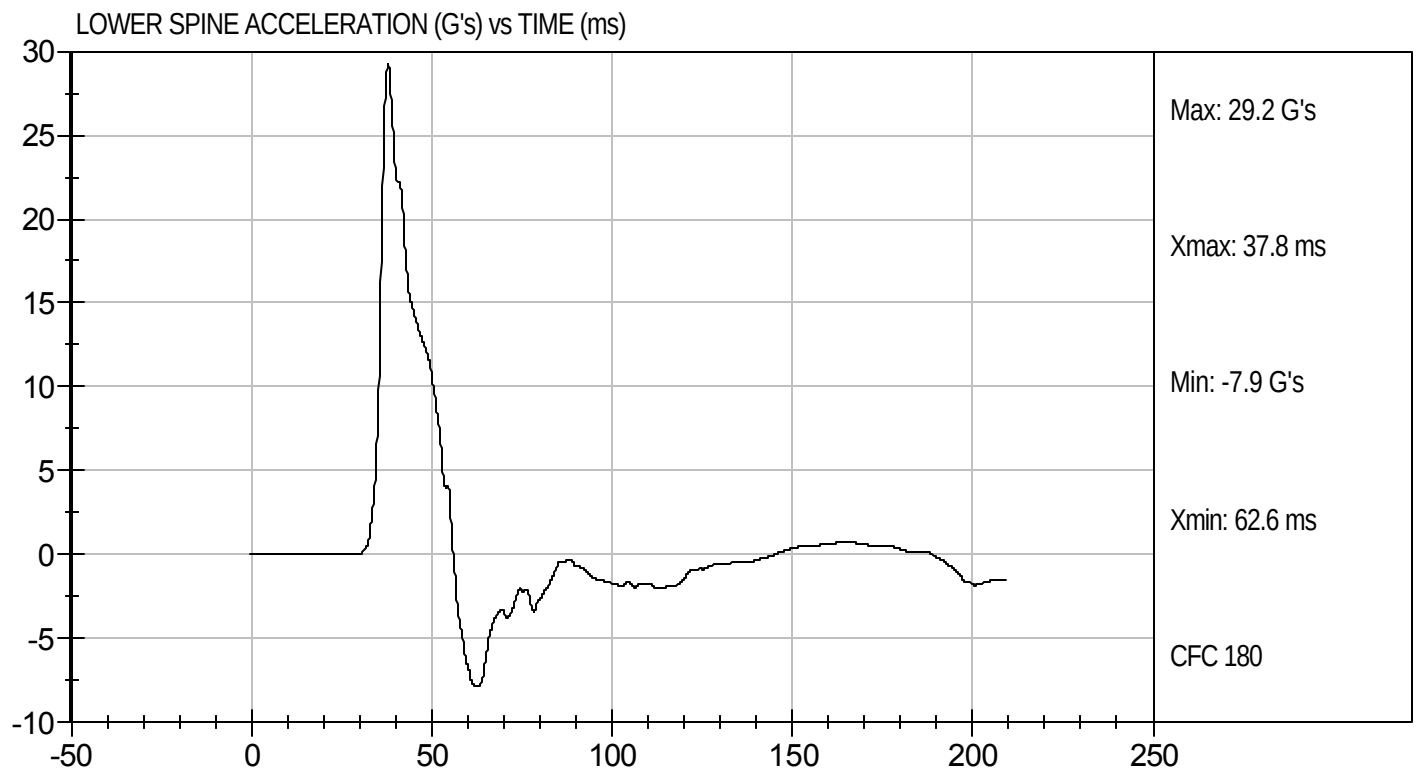
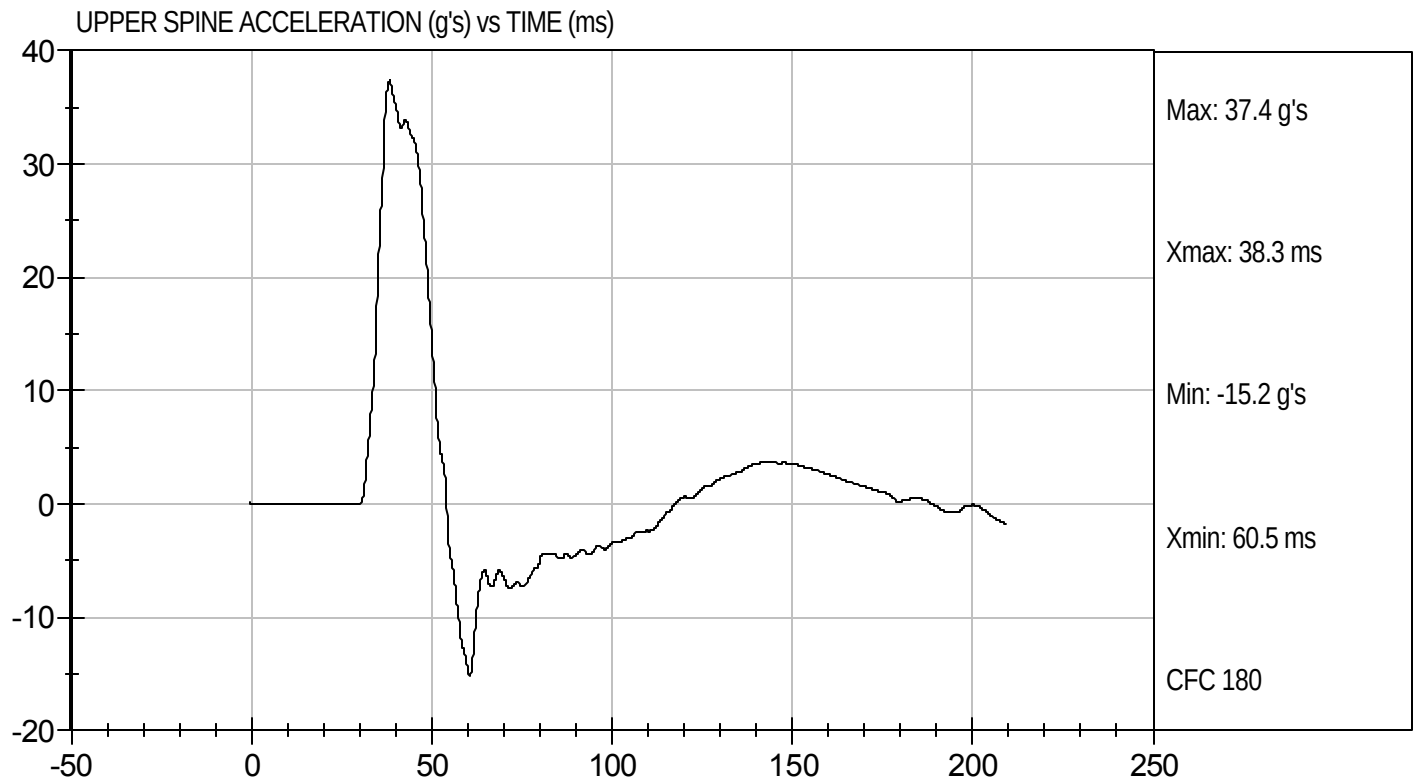
Test Date: 11/16/11
Velocity: 22.22 ft/s, 6.77 m/s





Test Desc: Thorax With Arm
Component ID: D113854

Test Date: 11/16/11
Velocity: 22.22 ft/s, 6.77 m/s



MGA RESEARCH CORPORATION
THORAX (WITHOUT ARM) IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

Test I.D: D113855

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.6	Pass
Humidity	%	10 to 70	19	Pass
Impact Velocity	m/s	4.20 to 4.40	4.34	Pass
Peak Impactor Force	G's	14 to 18	15	Pass
Upper Rib Displacement	mm	32 to 40	35	Pass
Middle Rib Displacement	mm	39 to 45	42	Pass
Lower Rib Displacement	mm	35 to 43	39	Pass
Upper Spine (T1) Y Acceleration	G's	13 to 17	14	Pass
Lower Spine (T12) Y Acceleration	G's	7 to 11	9	Pass
Overall Test Results			Pass	


Laboratory Technician

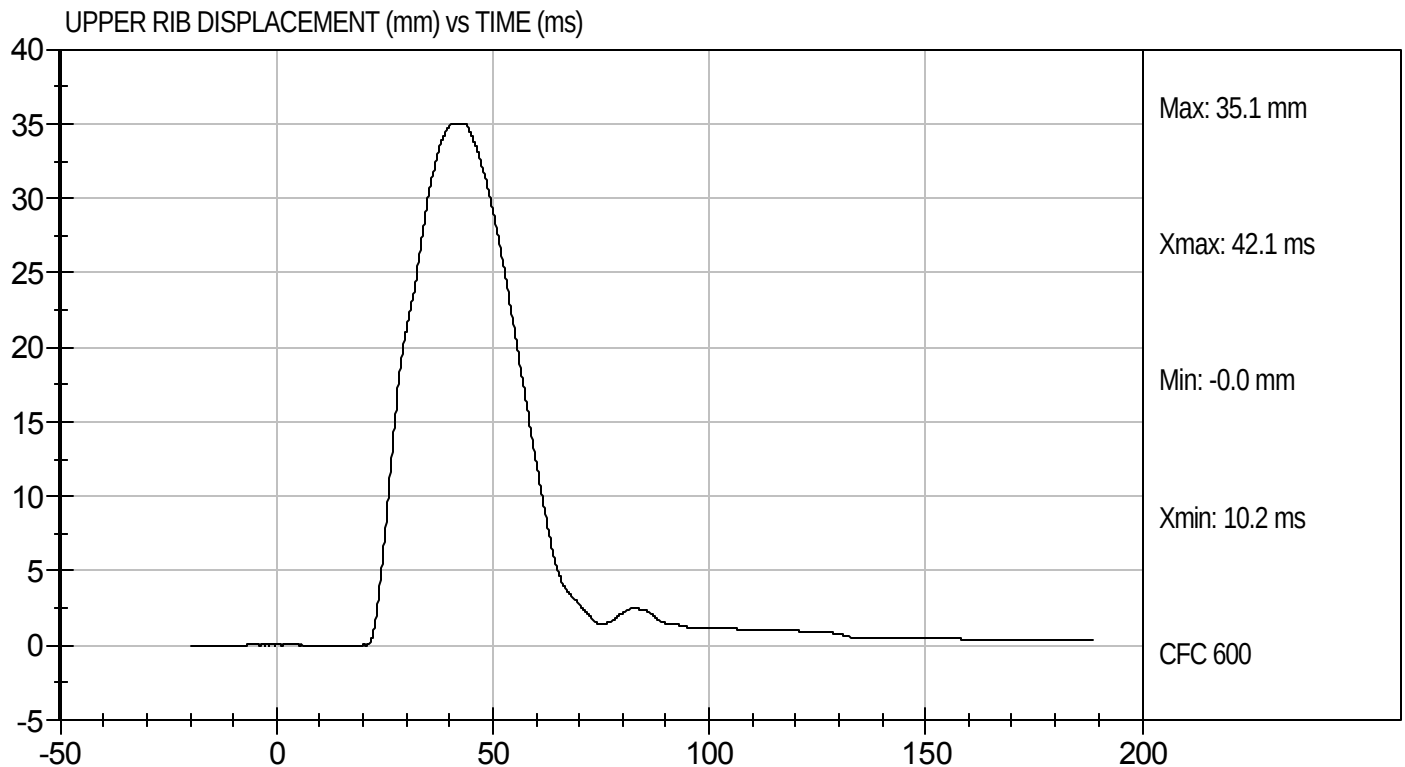
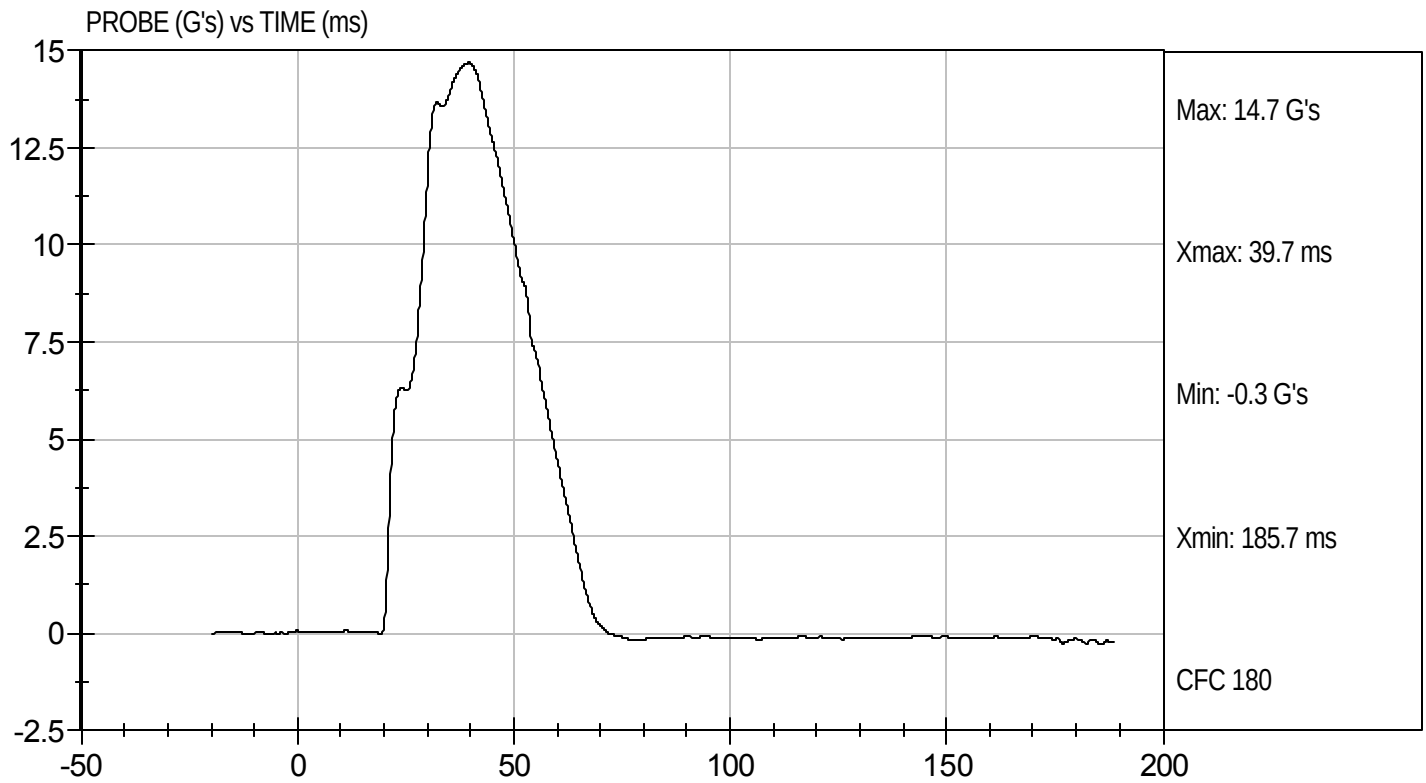
11/16/11
Test Date


Approved By



Test Desc: Thorax Without Arm
Component ID: D113855

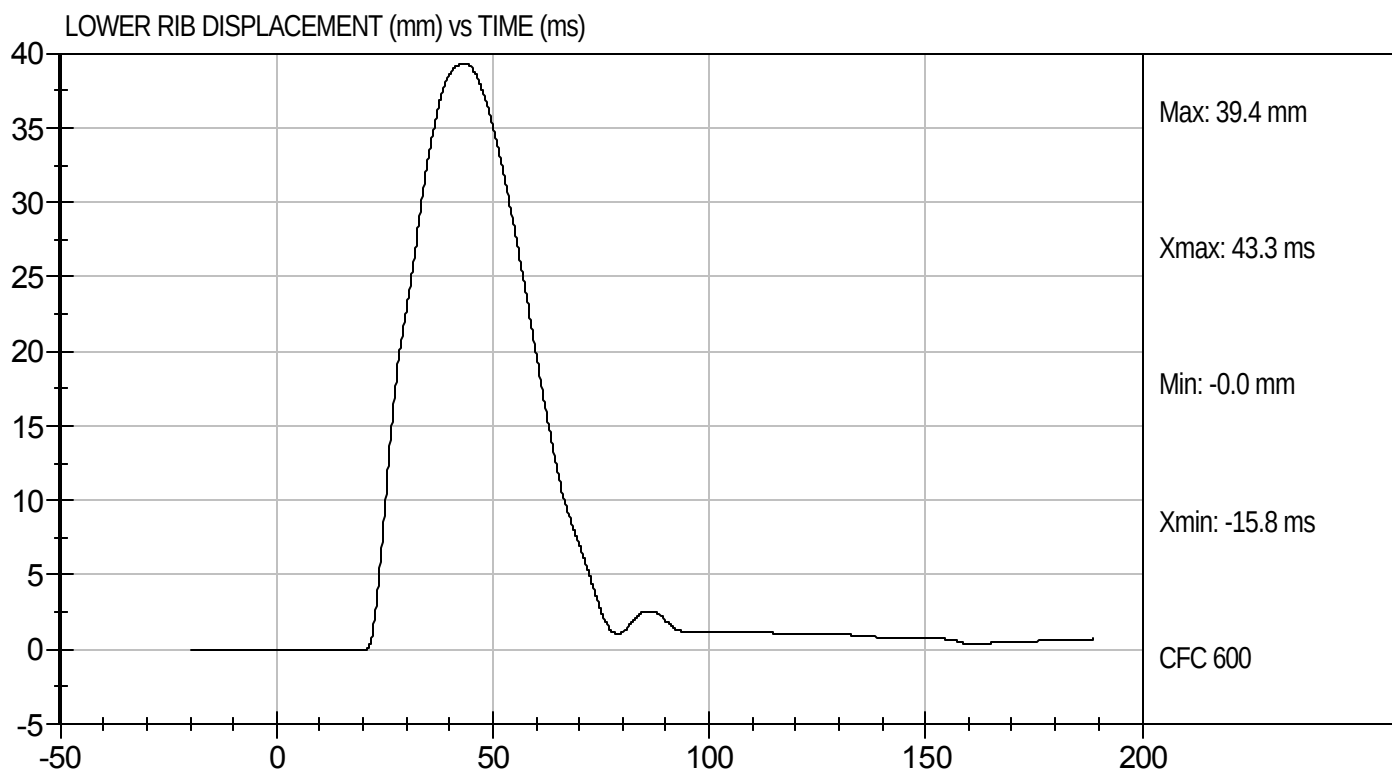
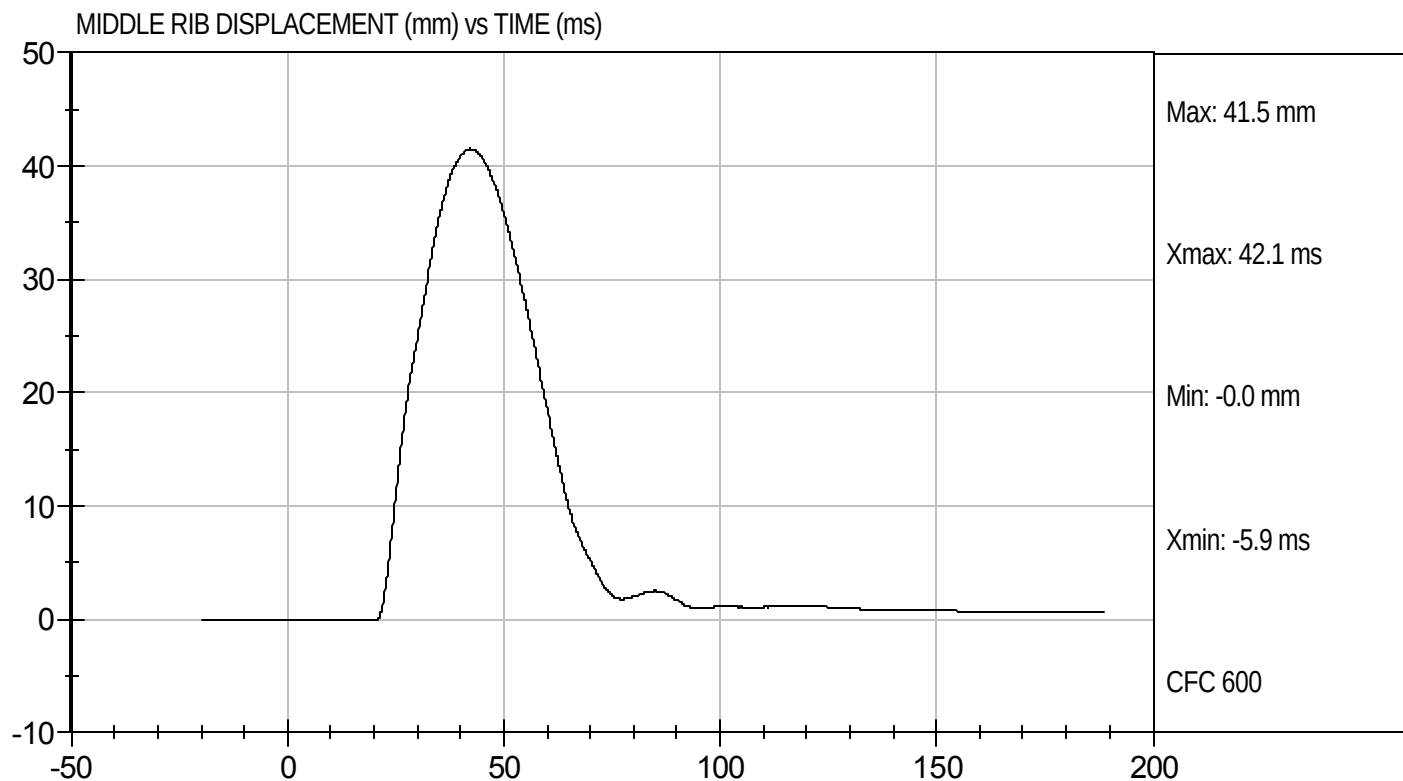
Test Date: 11/16/11
Velocity: 14.25 ft/s, 4.34 m/s





Test Desc: Thorax Without Arm
Component ID: D113855

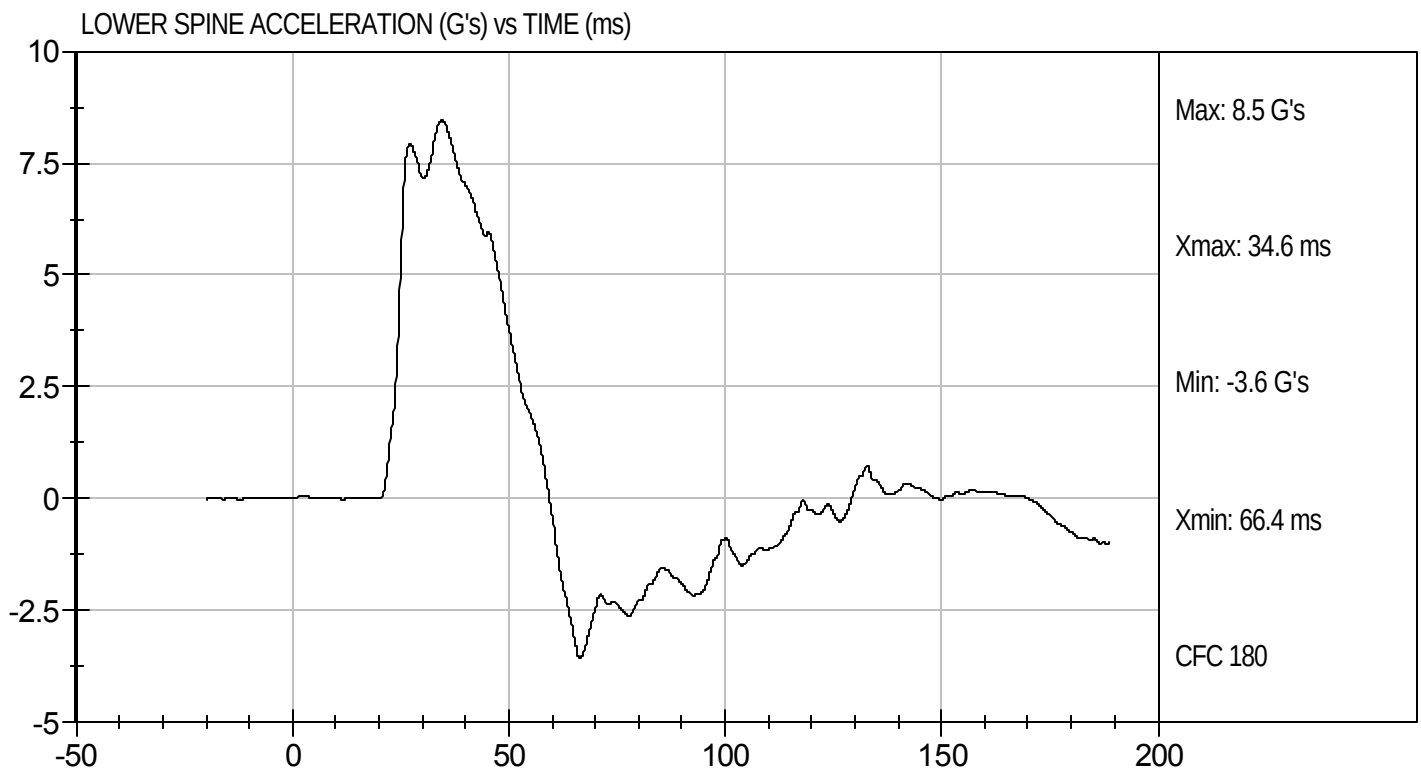
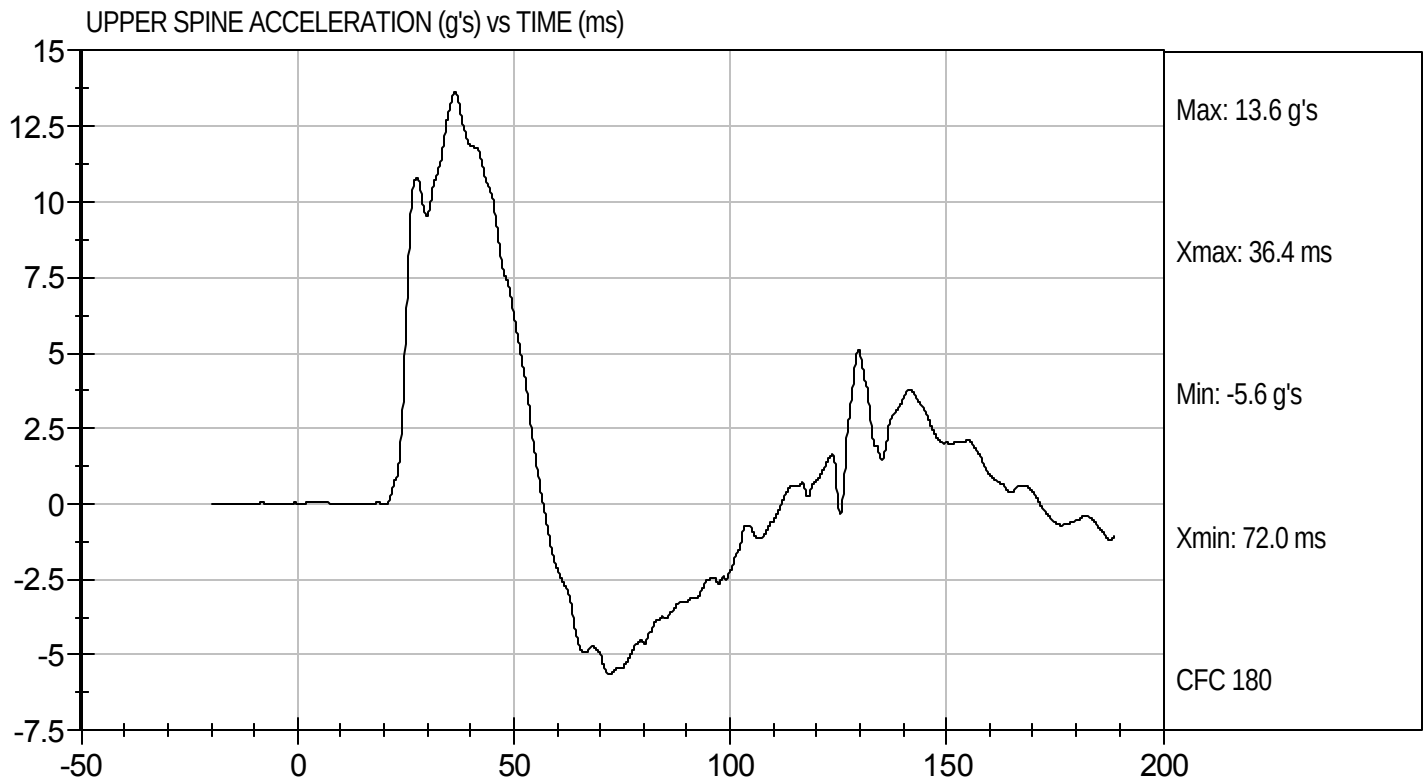
Test Date: 11/16/11
Velocity: 14.25 ft/s, 4.34 m/s





Test Desc: Thorax Without Arm
Component ID: D113855

Test Date: 11/16/11
Velocity: 14.25 ft/s, 4.34 m/s



MGA RESEARCH CORPORATION
ABDOMINAL IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

Test I.D: D113856

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.7	Pass
Humidity	%	10 to 70	19	Pass
Impact Velocity	m/s	4.20 to 4.40	4.34	Pass
Peak Impactor Acceleration	G's	12 to 16	14	Pass
Upper Rib Displacement	mm	36 to 47	43	Pass
Lower Rib Displacement	mm	33 to 44	37	Pass
Lower Spine (T12) Y Acceleration	G's	9 to 14	10	Pass
Overall Test Results			Pass	


Laboratory Technician

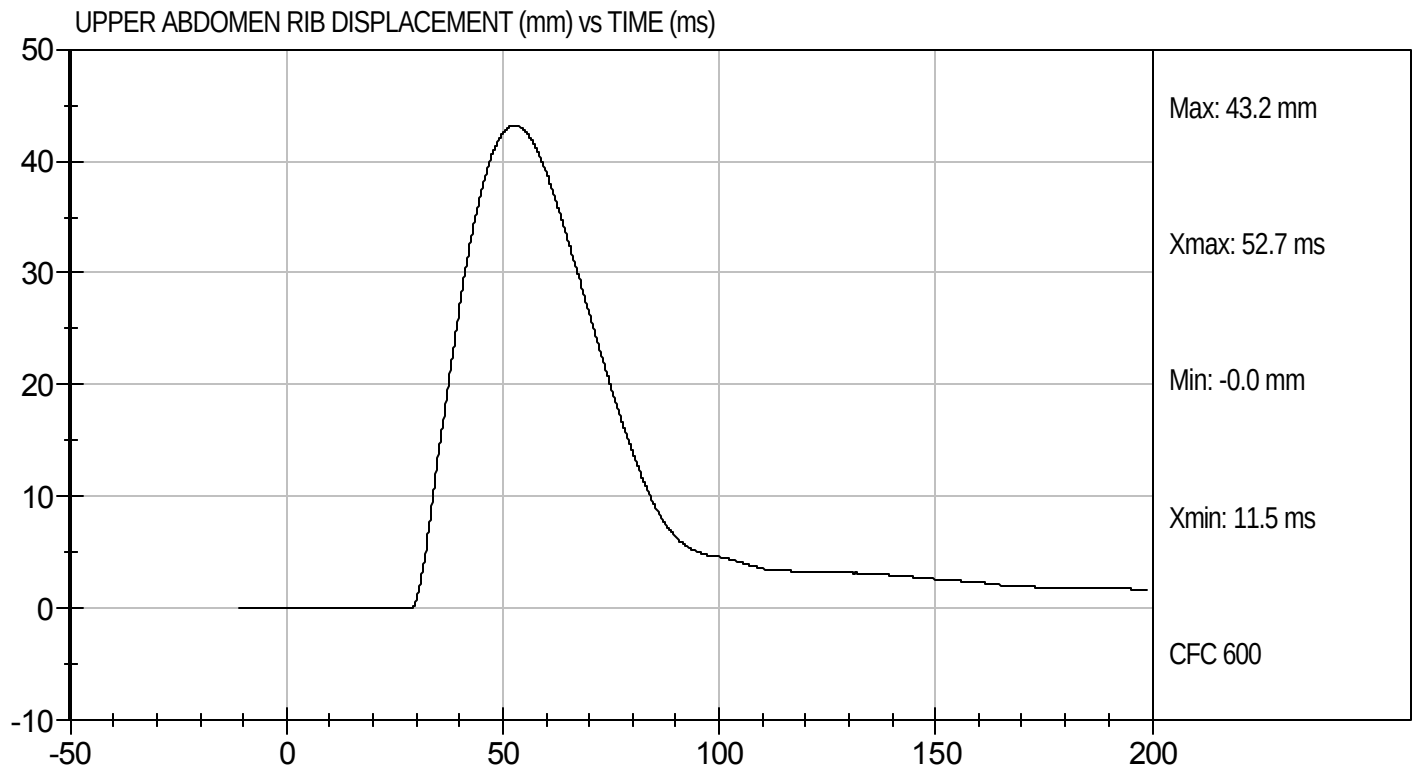
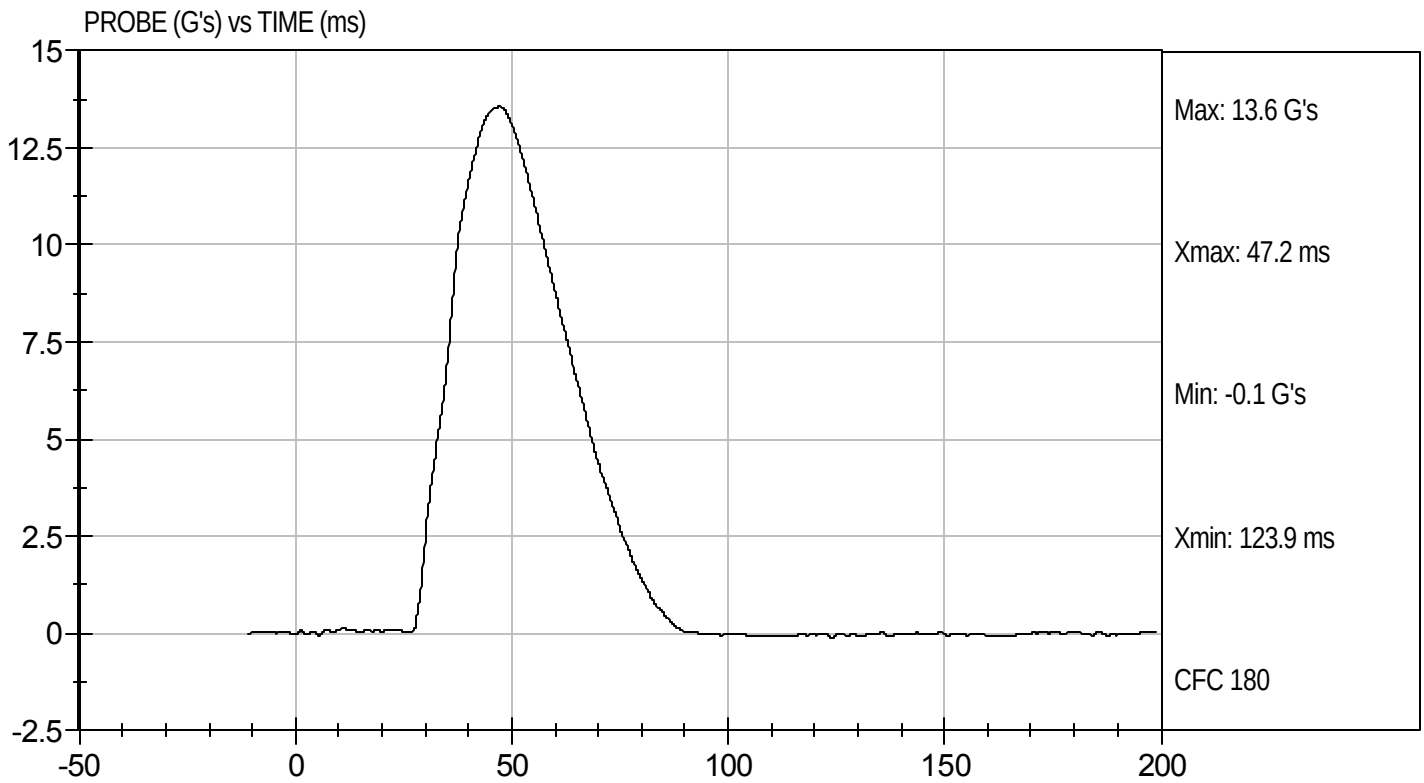
11/16/11
Test Date


Approved By



Test Desc: Abdomen Impact
Component ID: D113856

Test Date: 11/16/11
Velocity: 14.25 ft/s, 4.34 m/s

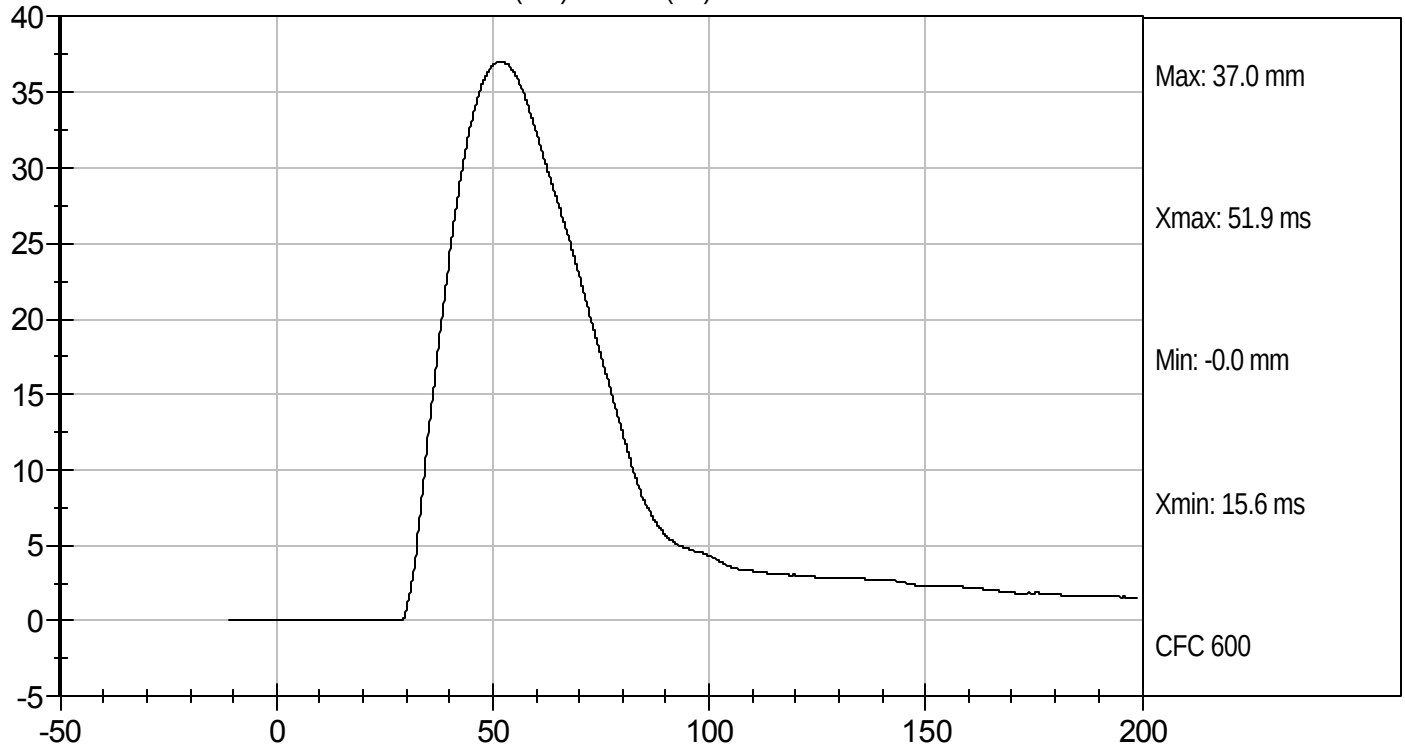




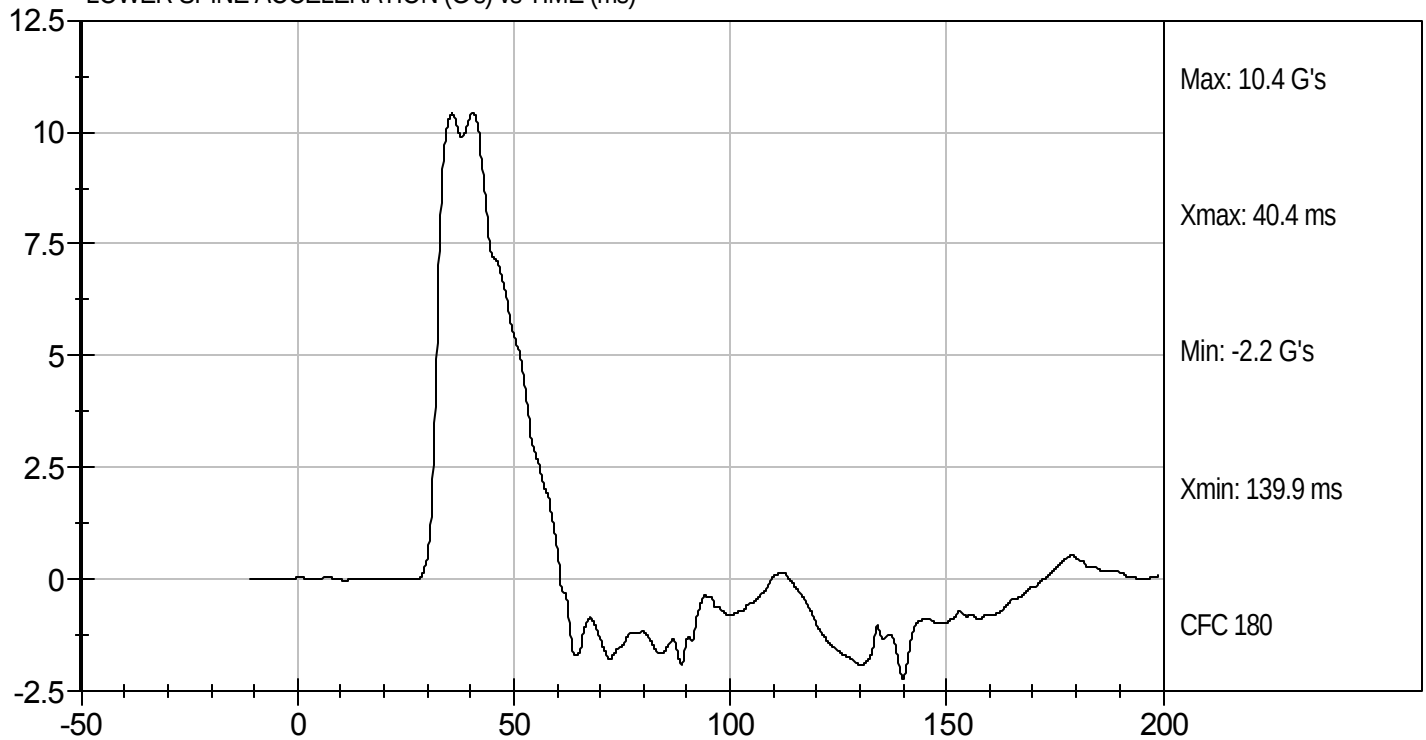
Test Desc: Abdomen Impact
Component ID: D113856

Test Date: 11/16/11
Velocity: 14.25 ft/s, 4.34 m/s

LOWER ABDOMEN RIB DISPLACEMENT (mm) vs TIME (ms)



LOWER SPINE ACCELERATION (G's) vs TIME (ms)



MGA RESEARCH CORPORATION
PELVIS IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

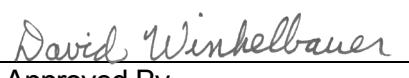
ATD Serial No: 296

Test I.D: D113857

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.7	Pass
Humidity	%	10 to 70	19	Pass
Impact Velocity	m/s	6.60 to 6.80	6.74	Pass
Peak Impactor Acceleration	G's	38 to 47	43	Pass
Pelvis Y Acceleration after 6 ms	G's	34 to 42	40	Pass
Peak Acetabulum Force	N	3600 to 4300	4021	Pass
Overall Test Results			Pass	


Laboratory Technician

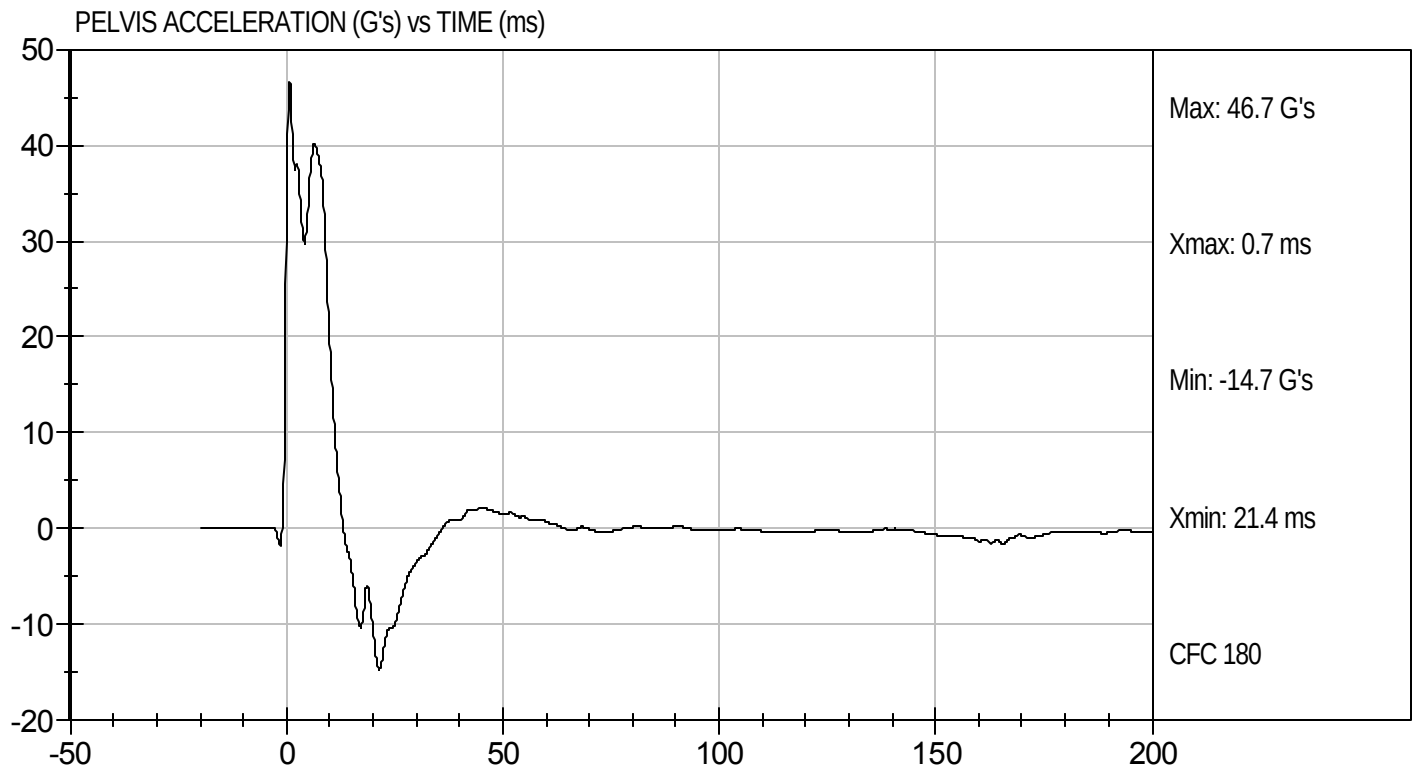
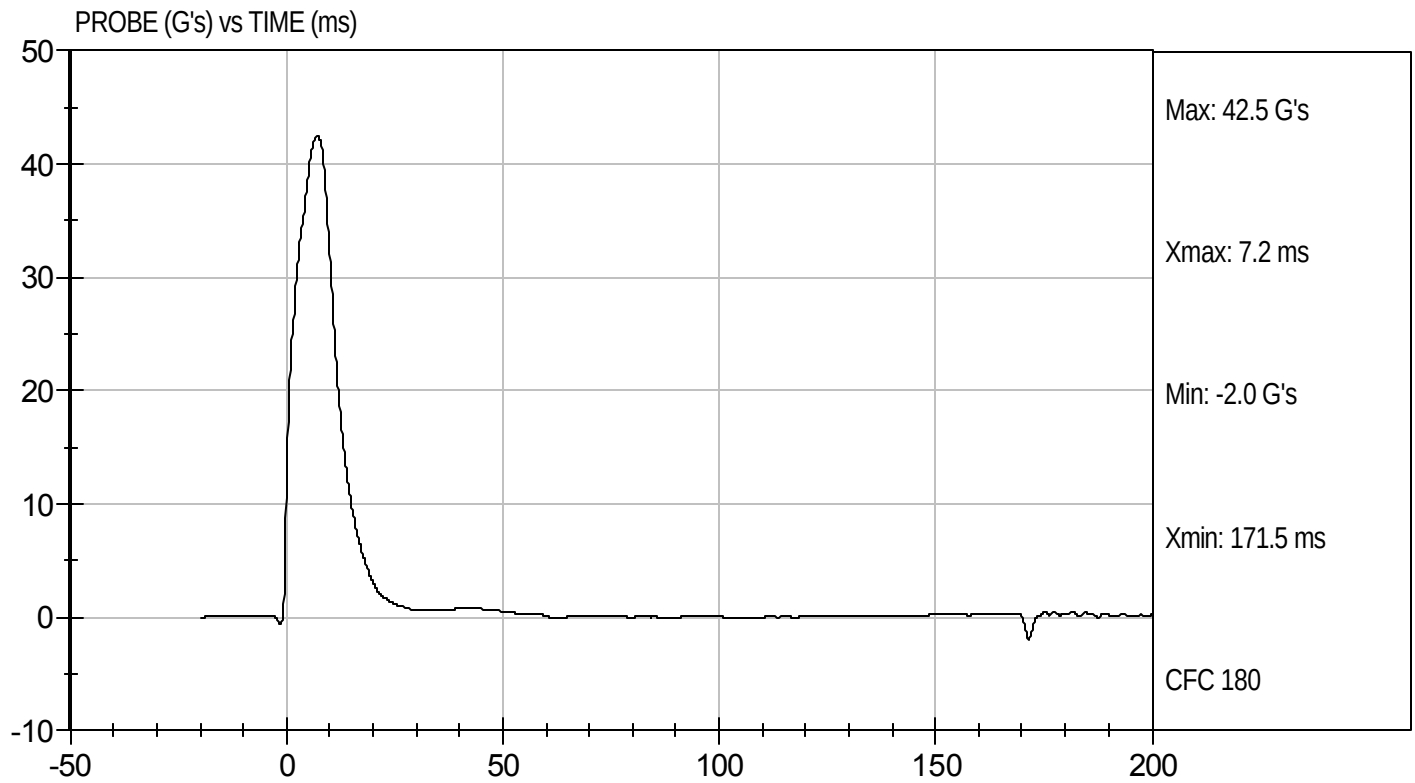
11/16/11
Test Date


Approved By



Test Desc: Pelvis Impact
Component ID: D113857

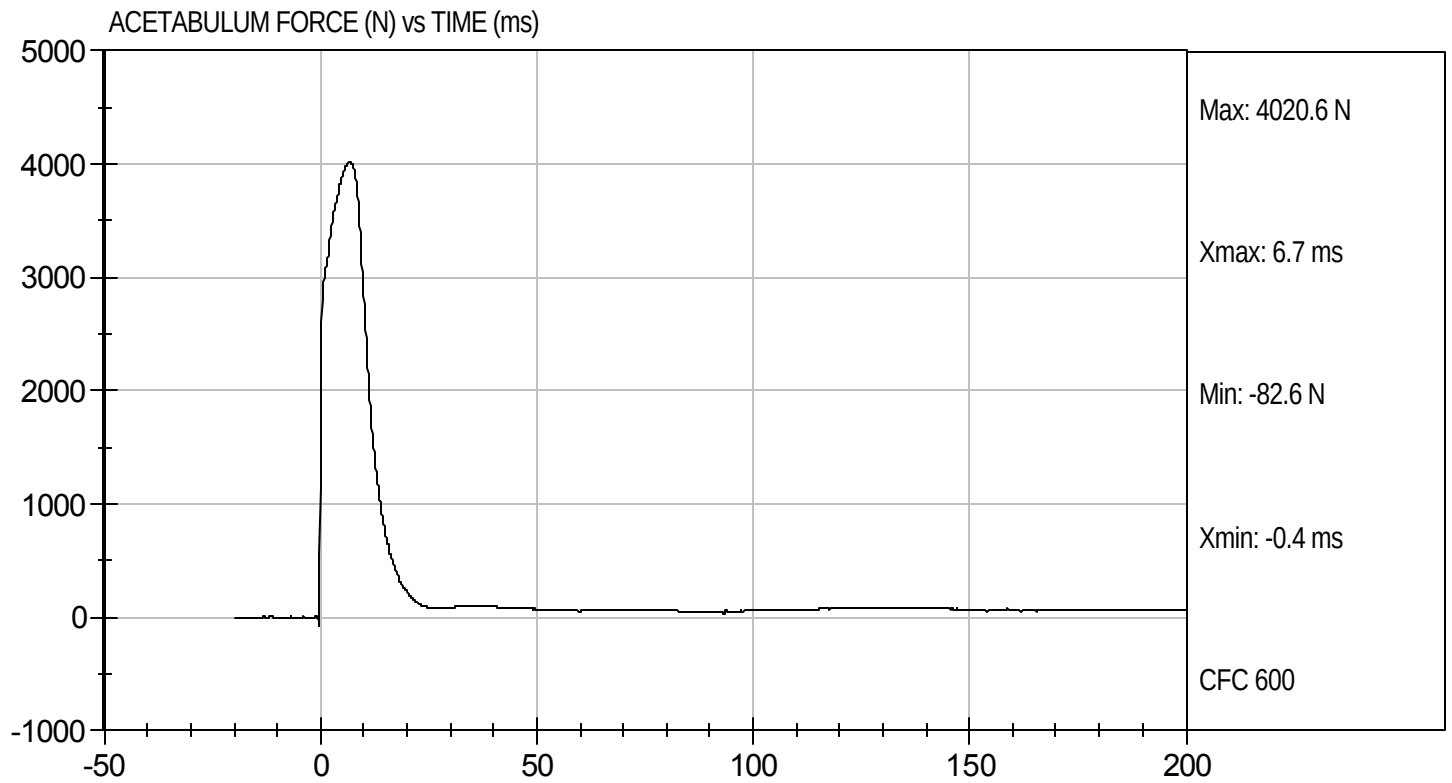
Test Date: 11/16/11
Velocity: 22.11 ft/s, 6.74 m/s





Test Desc: Pelvis Impact
Component ID: D113857

Test Date: 11/16/11
Velocity: 22.11 ft/s, 6.74 m/s



MGA RESEARCH CORPORATION
ILIAC IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

Test I.D: D113858

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.5	Pass
Humidity	%	10 to 70	18	Pass
Impact Velocity	m/s	4.20 to 4.40	4.38	Pass
Peak Impactor Acceleration	G's	36 to 45	39	Pass
Pelvis Y Acceleration	G's	28 to 39	34	Pass
Peak Pelvis Iliac Force	N	4100 to 5100	4925	Pass
Overall Test Results				Pass


Laboratory Technician

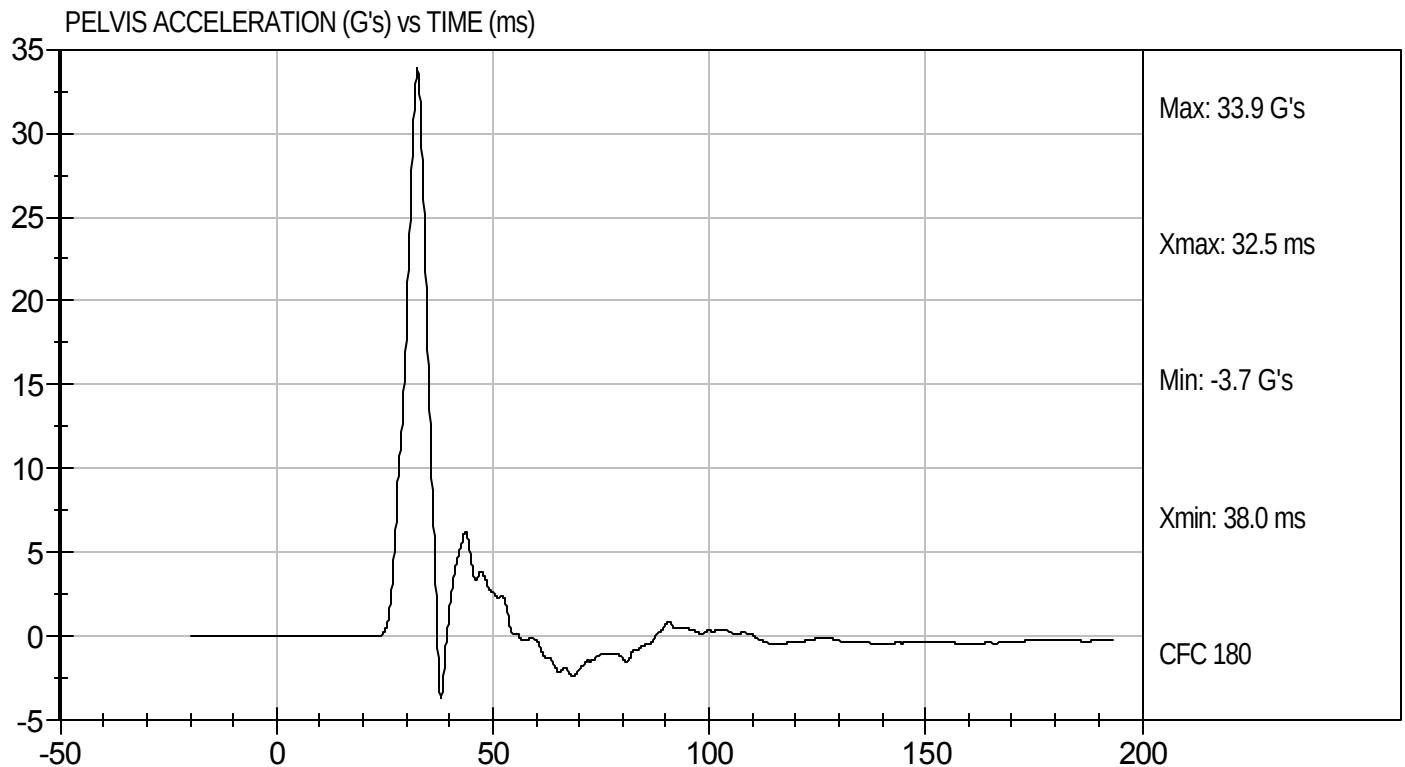
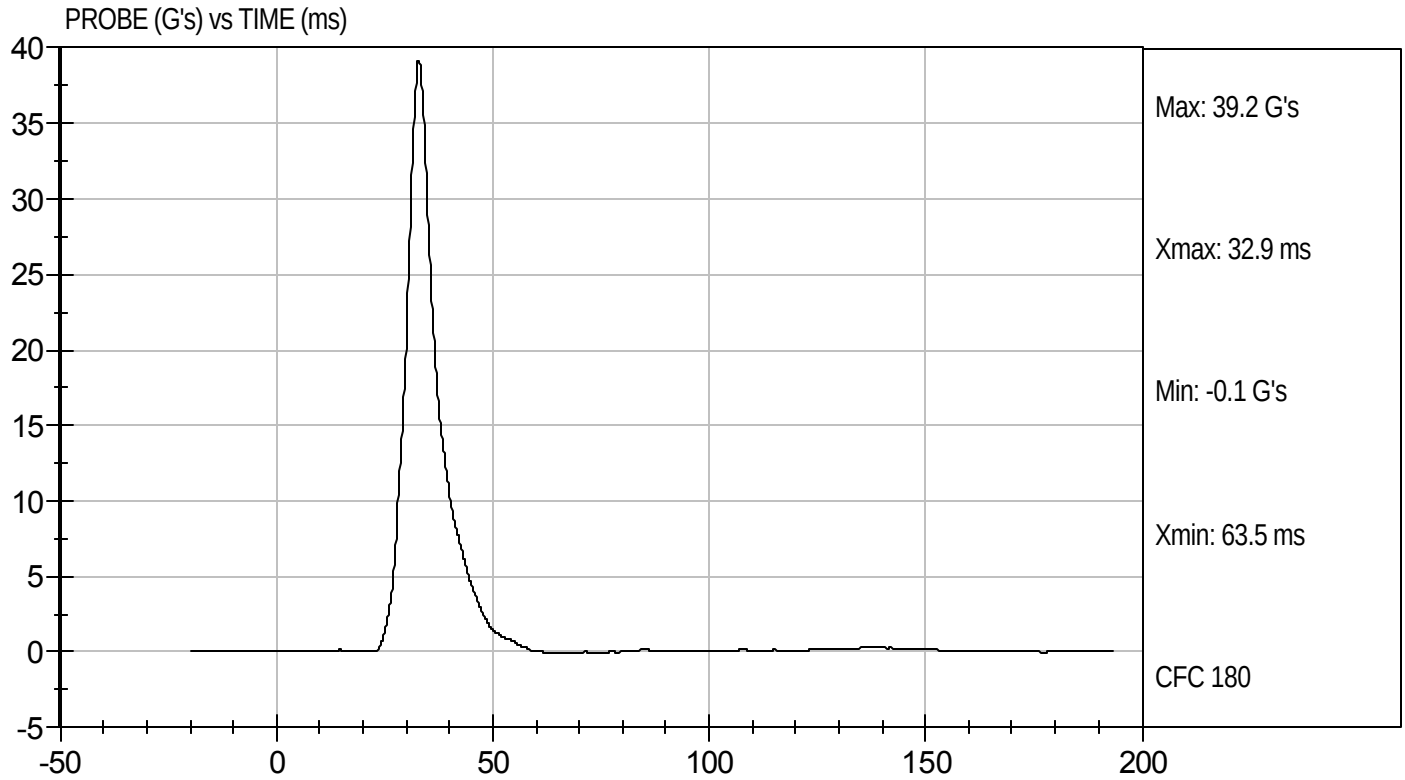
11/16/11
Test Date


Approved By



Test Desc: Iliac Impact
Component ID: D113858

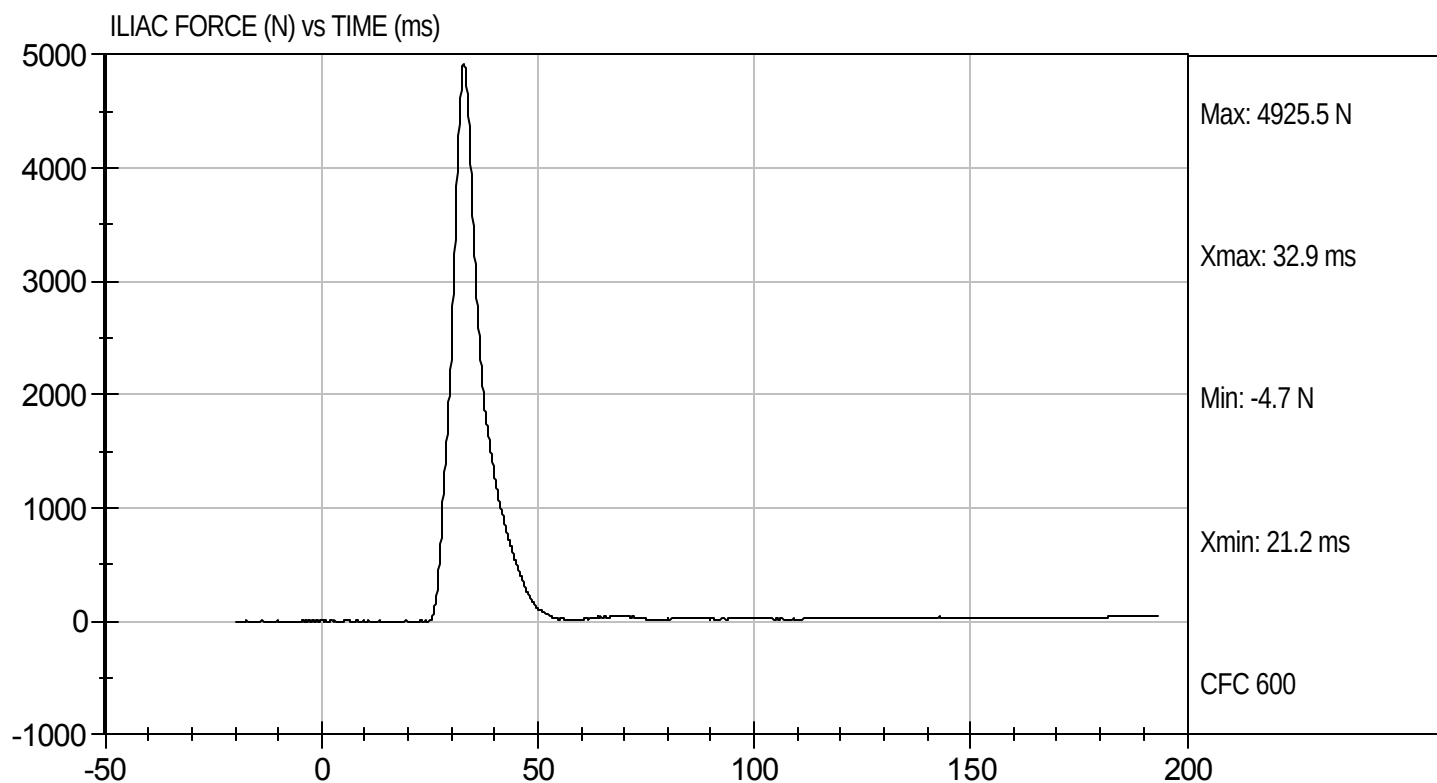
Test Date: 11/16/11
Velocity: 14.36 ft/s, 4.38 m/s





Test Desc: Iliac Impact
Component ID: D113858

Test Date: 11/16/11
Velocity: 14.36 ft/s, 4.38 m/s



MGA RESEARCH CORPORATION
HEAD DROP TEST
SID-Its BUILD LEVEL D DUMMY

ATD Serial No: 296

Test ID: D113951

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	20.6 to 22.2	21.9	Pass
Laboratory Relative Humidity	%	10 to 70	27	Pass
Peak Resultant Acceleration	G's	115 to 137	124	Pass
Peak Lateral Acceleration	G's	+/- 15	2.8	Pass
Unimodal	N/A	<15%	Yes	Pass
Overall Test Results				Pass

Jessica Gall
Laboratory Technician

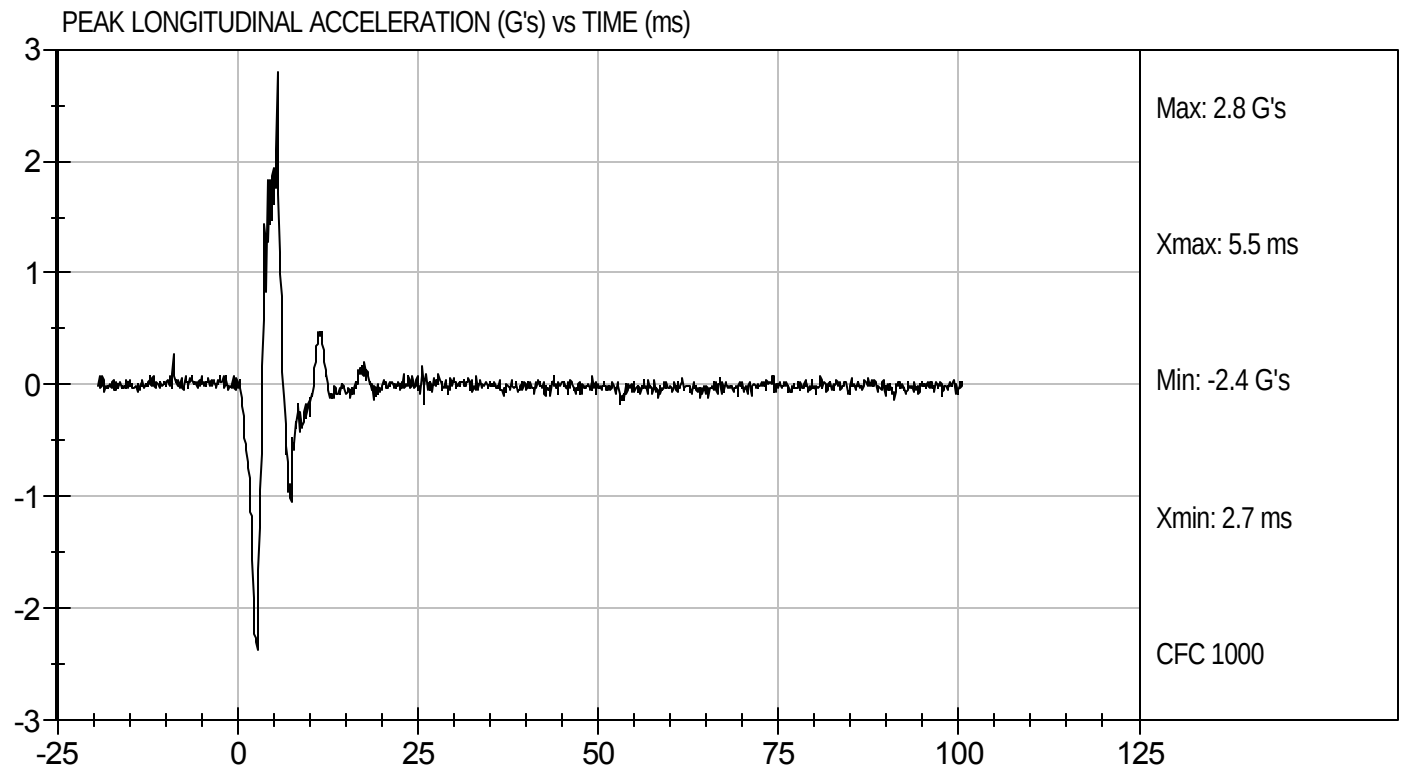
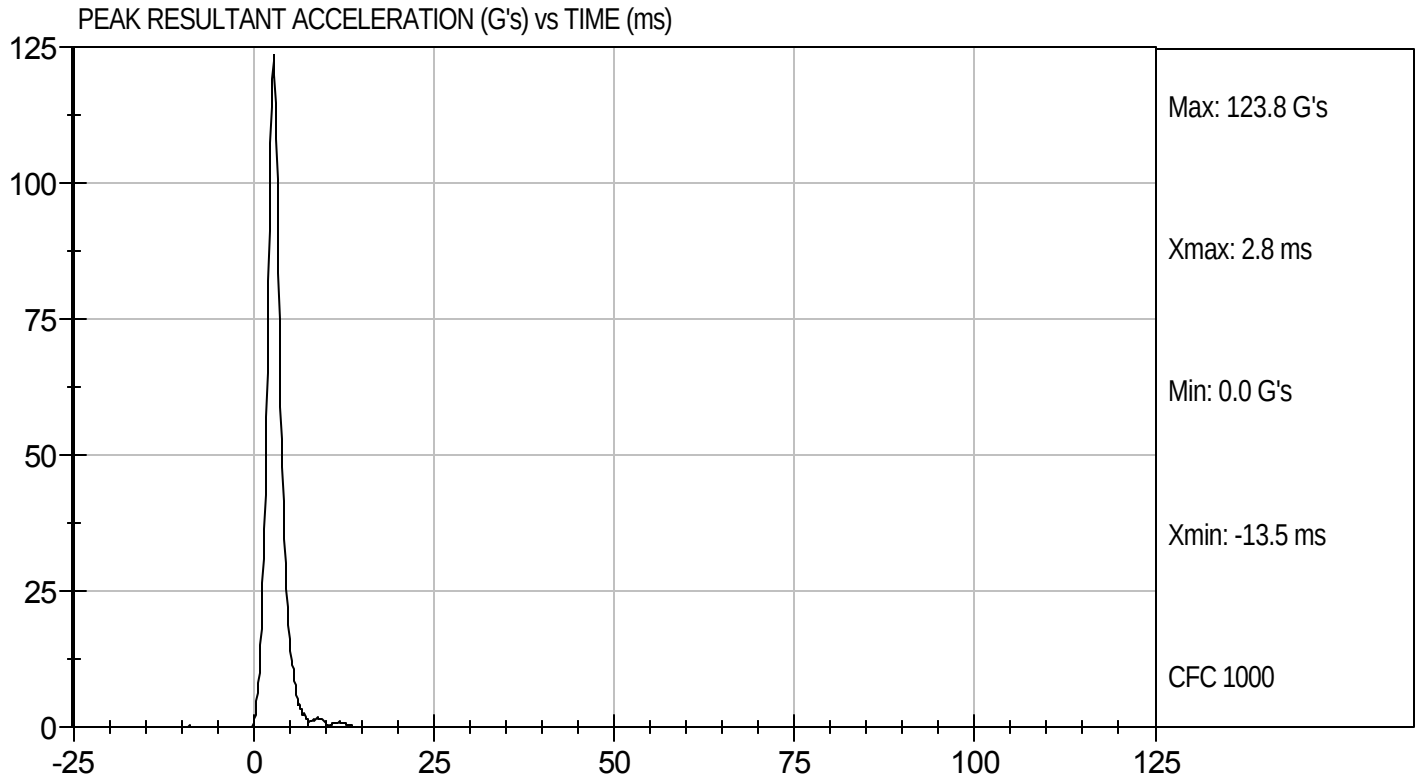
11/28/11
Test Date

David Winkelbauer
Approved By



Test Desc: Head Drop
Component ID: D113951

Test Date: 11/28/11
Velocity: 0 ft/s, 0 m/s



MGA RESEARCH CORPORATION
LATERAL NECK PENDULUM TEST
SID-IIs BUILD LEVEL D DUMMY

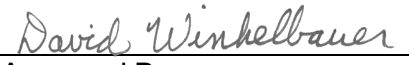
ATD Serial No: 296

Test I.D: D113952

Tested Parameter		Units	Specification	Result	Pass/Fail
Temperature		deg C	20.6 to 22.2	21.7	Pass
Humidity		%	10 to 70	25	Pass
Impact Velocity		m/s	5.51 to 5.63	5.58	Pass
Delta Velocity	10 ms	m/s	2.20 to 2.80	2.56	Pass
	15 ms	m/s	3.30 to 4.10	3.67	Pass
	20 ms	m/s	4.40 to 5.40	4.85	Pass
	25 ms	m/s	5.40 to 6.10	5.43	Pass
	25-100 ms	m/s	5.50 to 6.20	5.51	Pass
Maximum D-Plane Rotation		deg	71 to 81	74	Pass
Time of Maximum D-Plane Rotation		ms	50 to 70	58	Pass
Maximum Occipital Condyle Moment during Rotation Interval Nm			-44 to -36	-43	Pass
Time of Moment Decay to 0 Nm		ms	102 to 126	115	Pass
Overall Test Results				Pass	


 Laboratory Technician

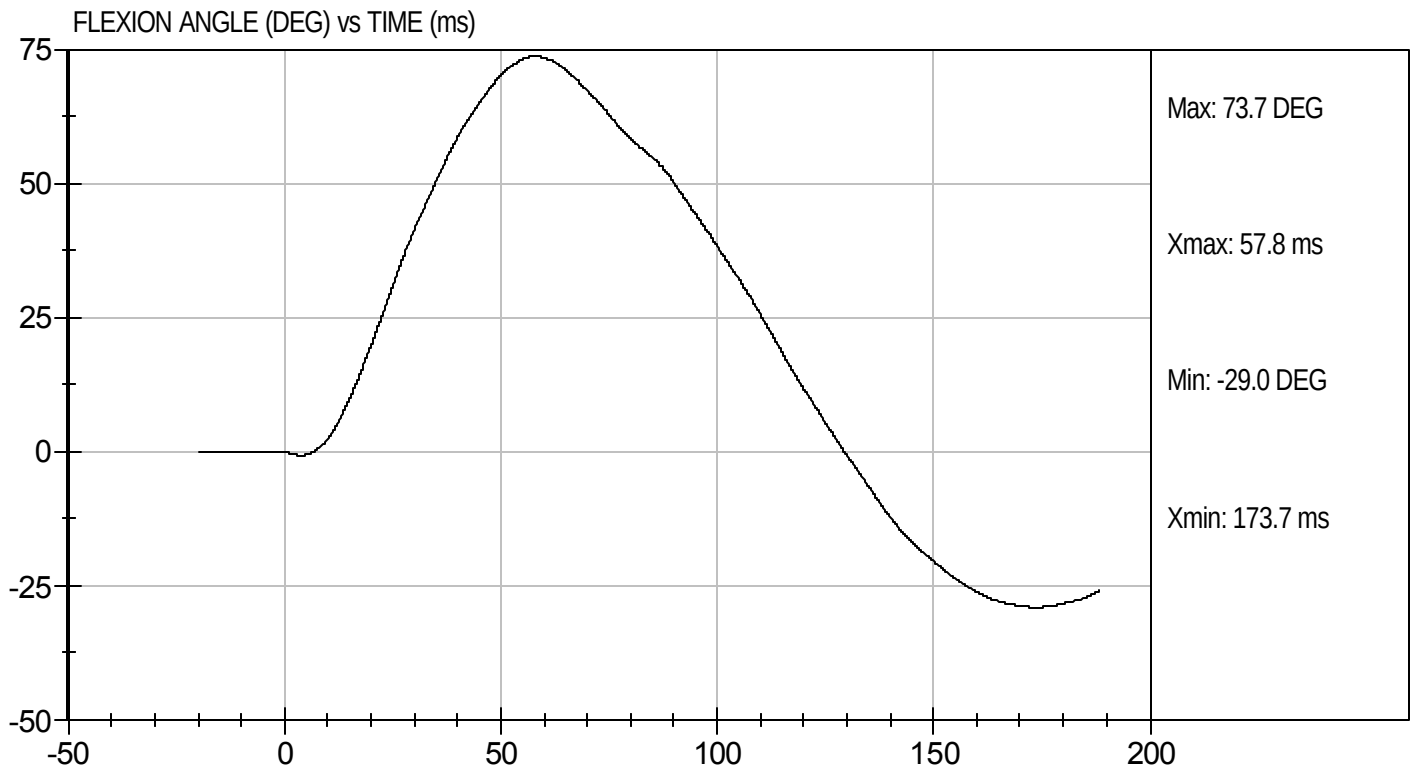
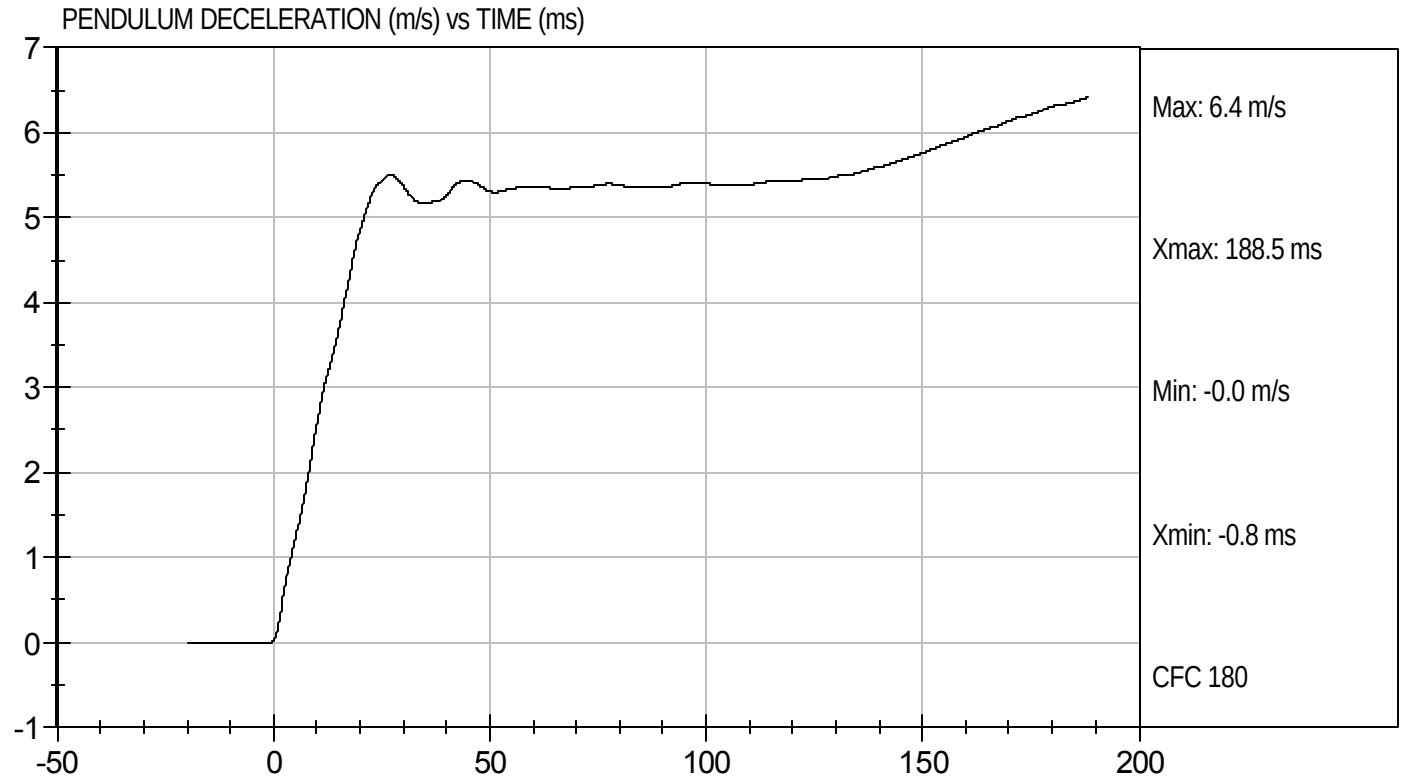
11/28/11
 Test Date


 Approved By



Test Desc: Neck Bending
Component ID: D113952

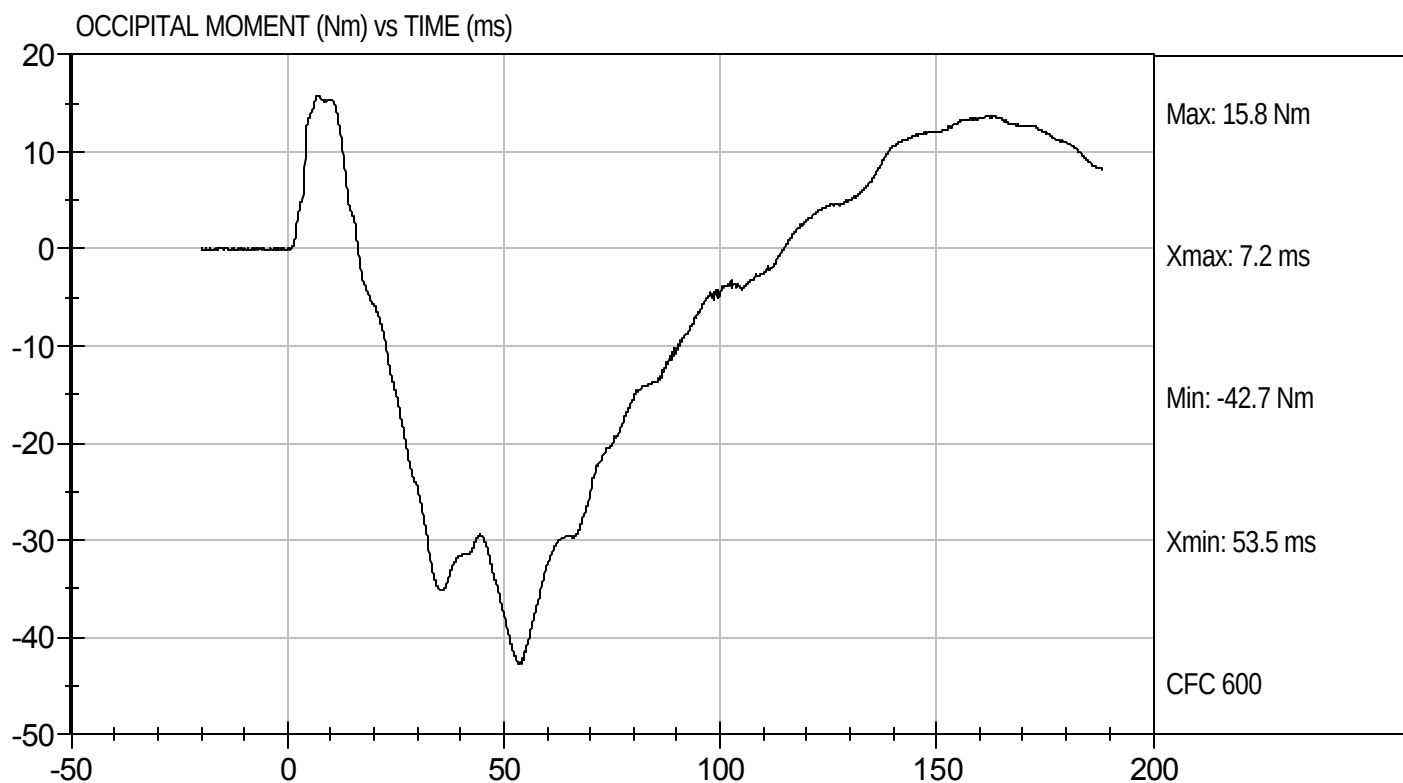
Test Date: 11/28/11
Velocity: 18.32 ft/s, 5.58 m/s





Test Desc: Neck Bending
Component ID: D113952

Test Date: 11/28/11
Velocity: 18.32 ft/s, 5.58 m/s



MGA RESEARCH CORPORATION
SHOULDER IMPACT TEST
SID-11s BUILD LEVEL D DUMMY

ATD Serial No: 296

Test ID: D113953

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	20.6 to 22.2	21.7	Pass
Laboratory Relative Humidity	%	10 to 70	25	Pass
Impact Velocity	m/s	4.20 to 4.40	4.38	Pass
Maximum Probe Acceleration	G's	13 to 18	15	Pass
Shoulder Displacement	mm	28 to 37	31	Pass
Upper Spine (T1) Y Acceleration	G's	17 to 22	18	Pass
Overall Test Results				Pass

Jessica Hall
Laboratory Technician

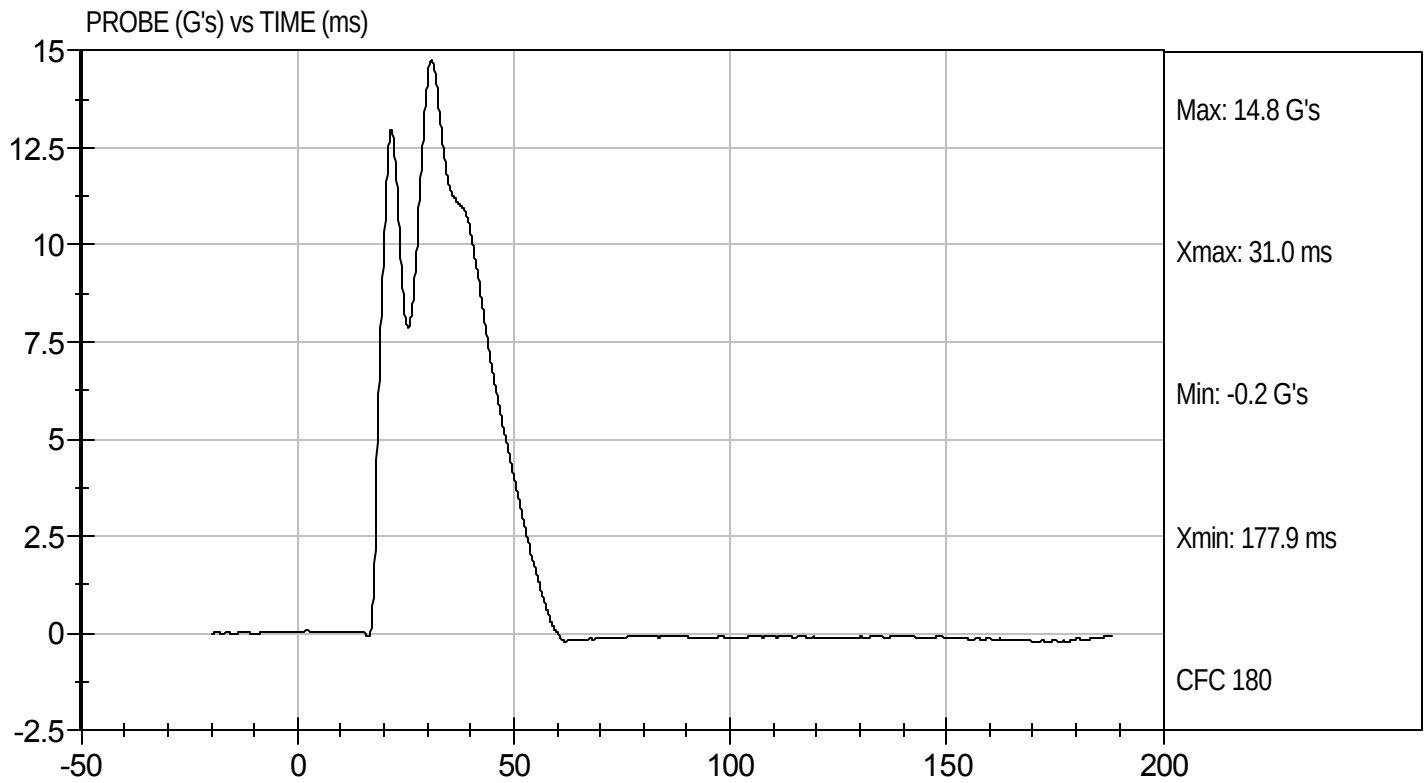
11/28/11
Test Date

David Winkelbauer
Approved By



Test Desc: Shoulder Impact
Component ID: D113953

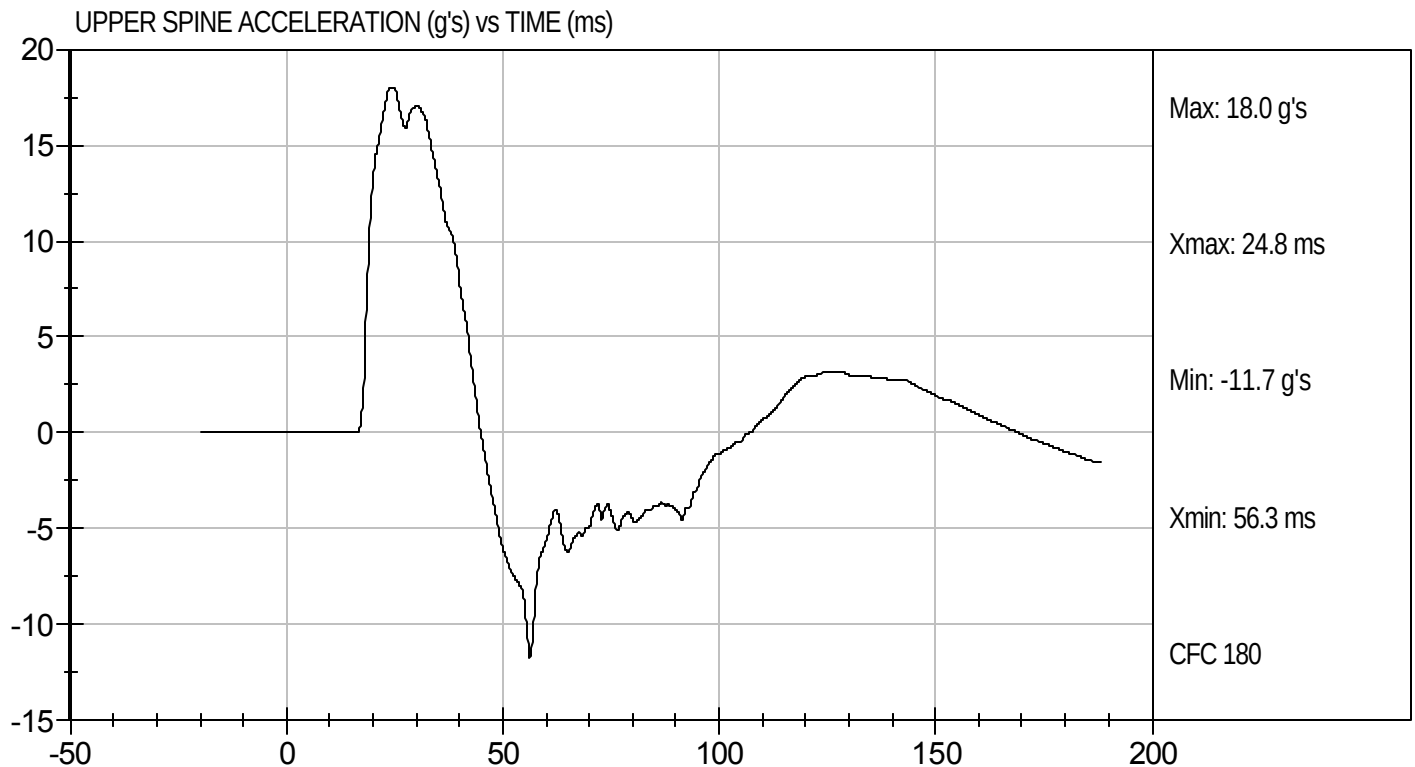
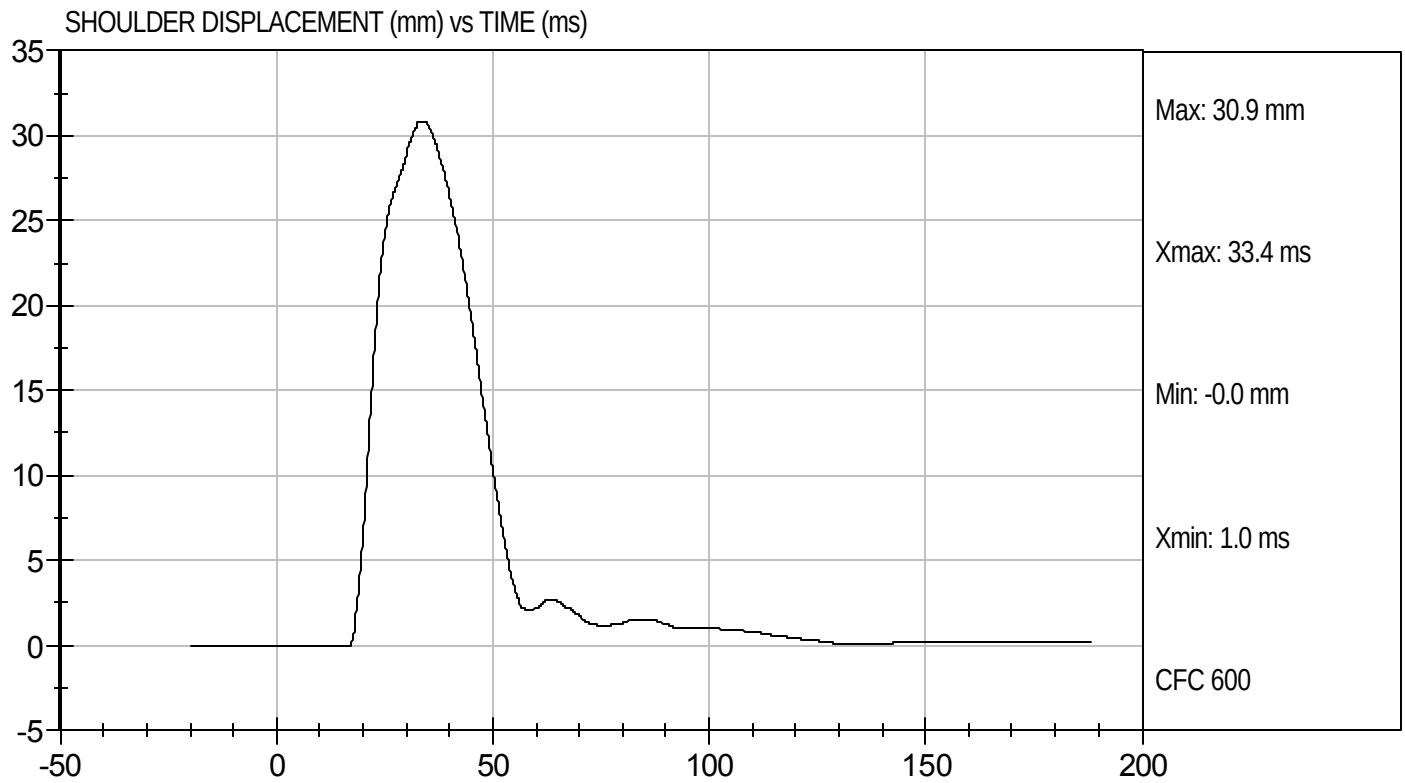
Test Date: 11/28/11
Velocity: 14.36 ft/s, 4.38 m/s





Test Desc: Shoulder Impact
Component ID: D113953

Test Date: 11/28/11
Velocity: 14.36 ft/s, 4.38 m/s



MGA RESEARCH CORPORATION
THORAX (WITH ARM) IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

Test I.D: D113954

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.6	Pass
Humidity	%	10 to 70	25	Pass
Impact Velocity	m/s	6.60 to 6.80	6.77	Pass
Peak Impactor Acceleration	G's	30 to 36	32	Pass
Shoulder Displacement	mm	31 to 40	36	Pass
Upper Rib Displacement	mm	25 to 32	28	Pass
Middle Rib Displacement	mm	30 to 36	32	Pass
Lower Rib Displacement	mm	32 to 38	34	Pass
Upper Spine (T1) Y Acceleration	G's	34 to 43	38	Pass
Lower Spine (T12) Y Acceleration	G's	29 to 37	33	Pass
Overall Test Results				Pass


Laboratory Technician

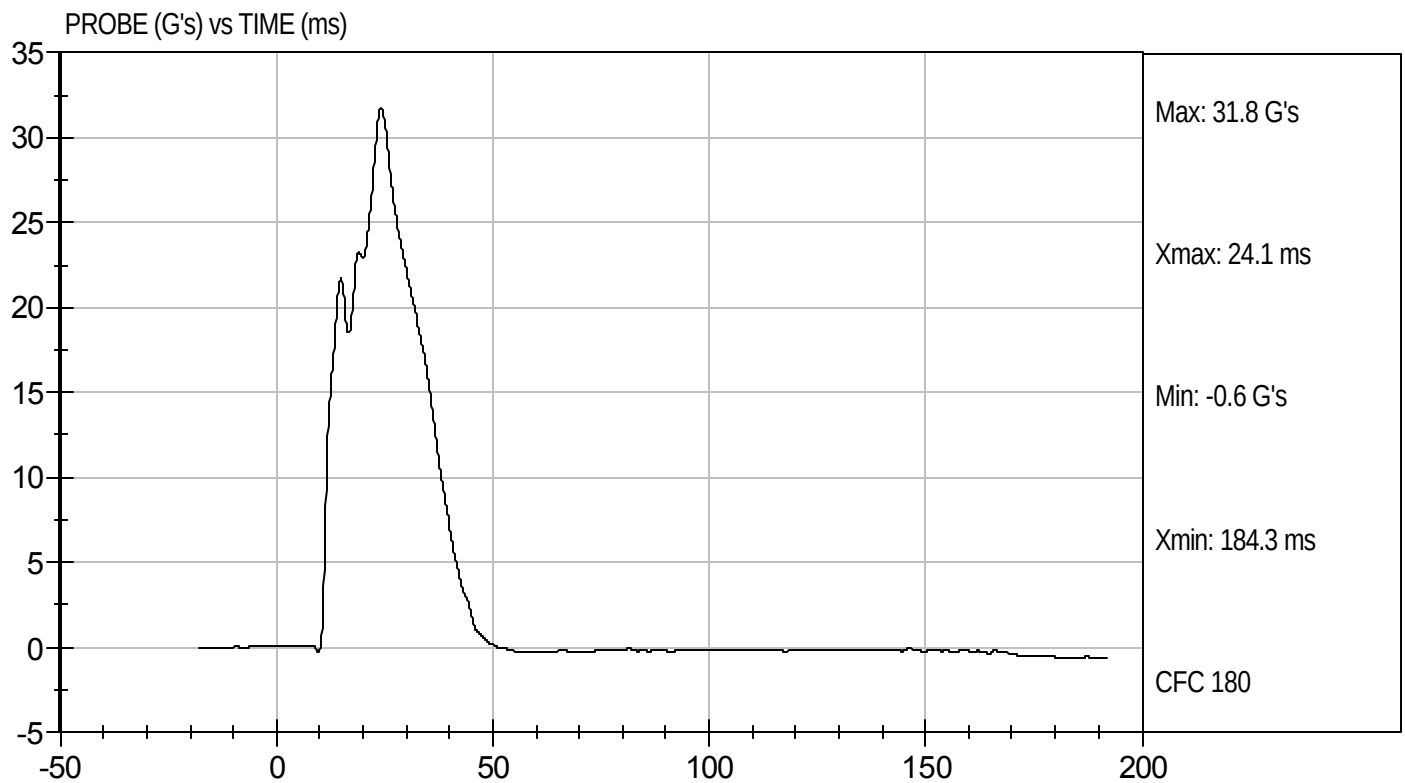
11/28/11
Test Date


Approved By



Test Desc: Thorax With Arm
Component ID: D113954

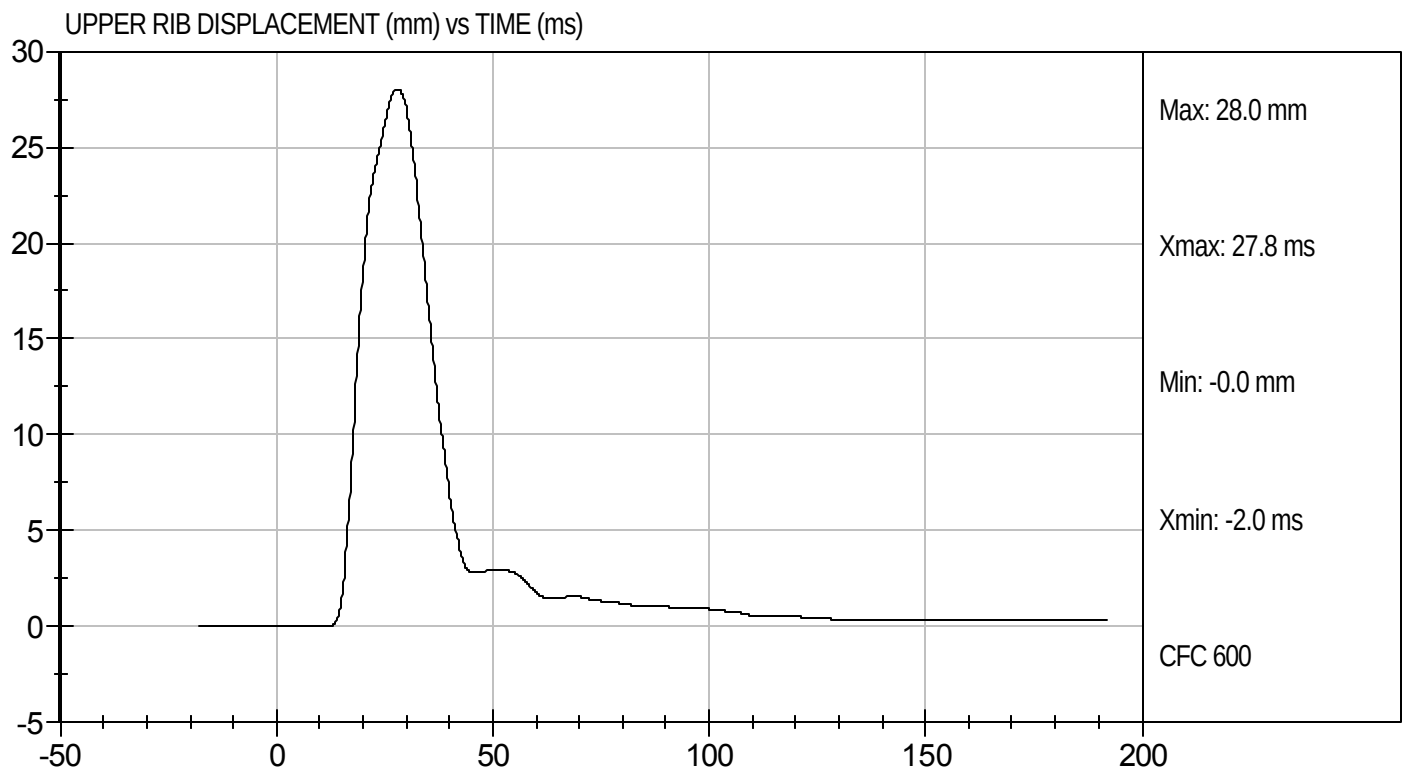
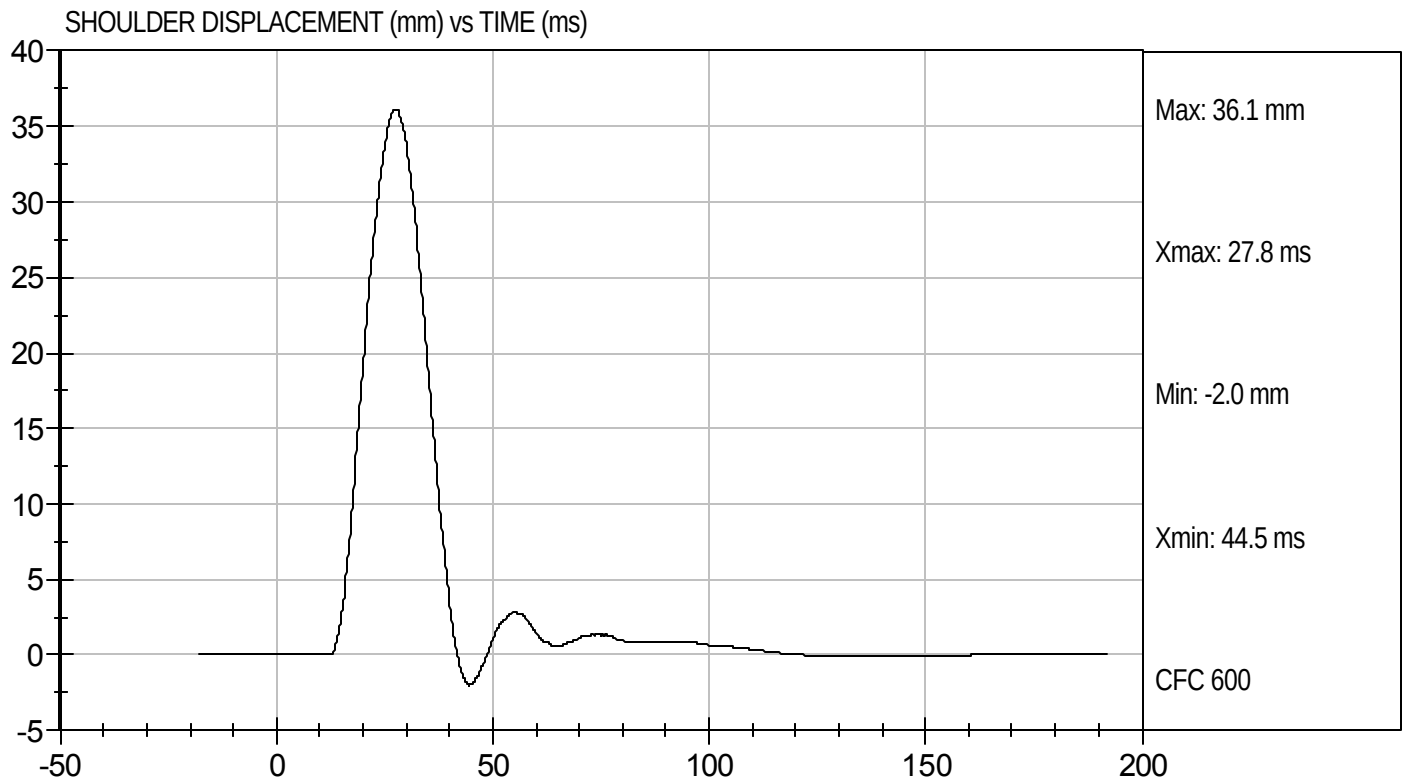
Test Date: 11/28/11
Velocity: 22.22 ft/s, 6.77 m/s





Test Desc: Thorax With Arm
Component ID: D113954

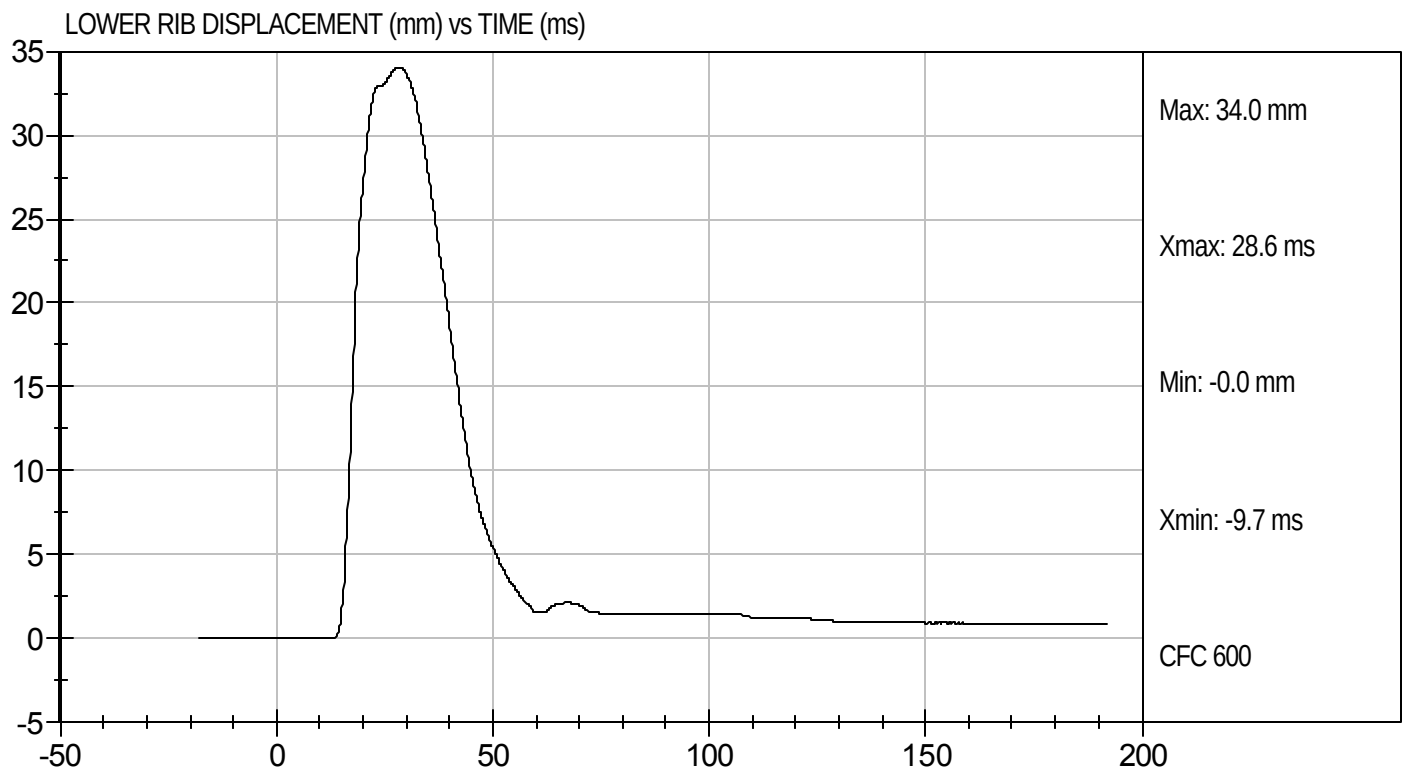
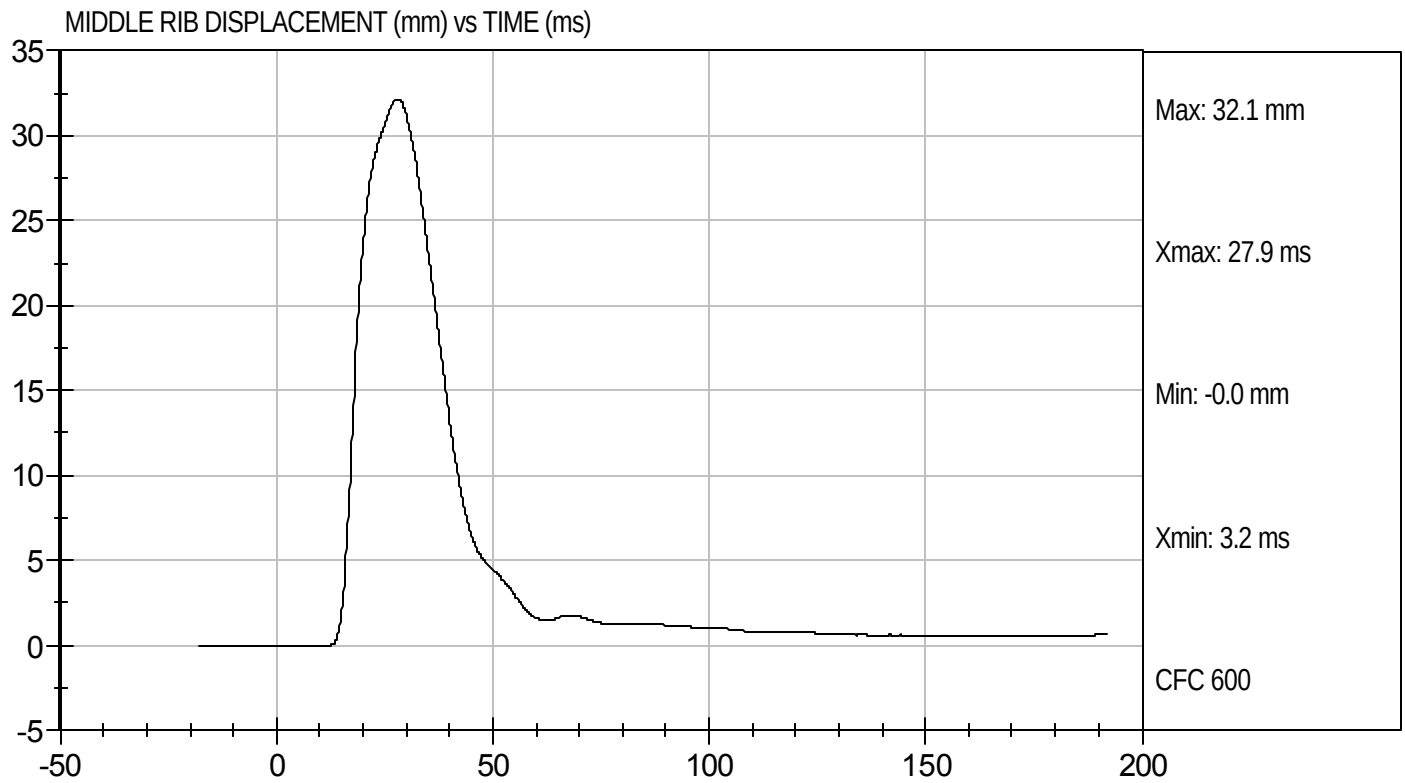
Test Date: 11/28/11
Velocity: 22.22 ft/s, 6.77 m/s





Test Desc: Thorax With Arm
Component ID: D113954

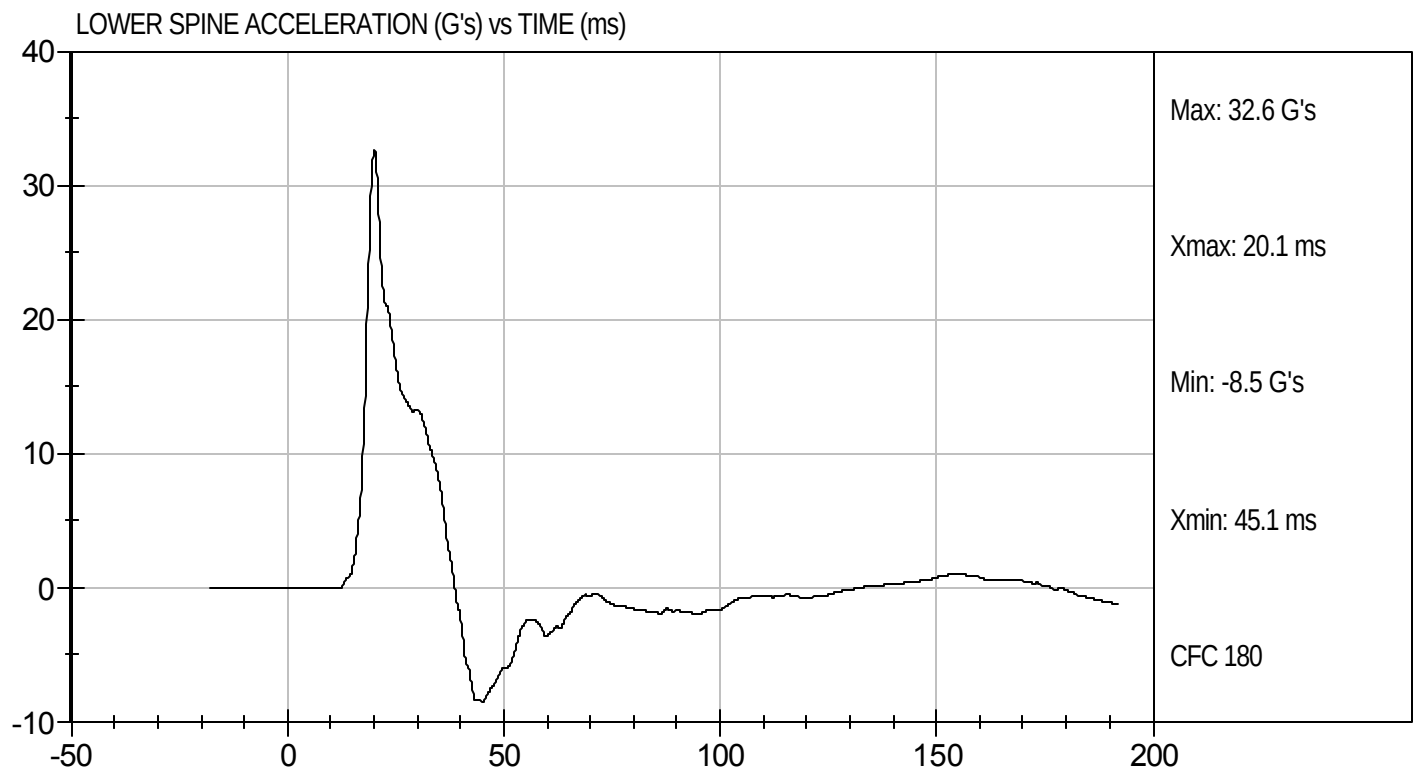
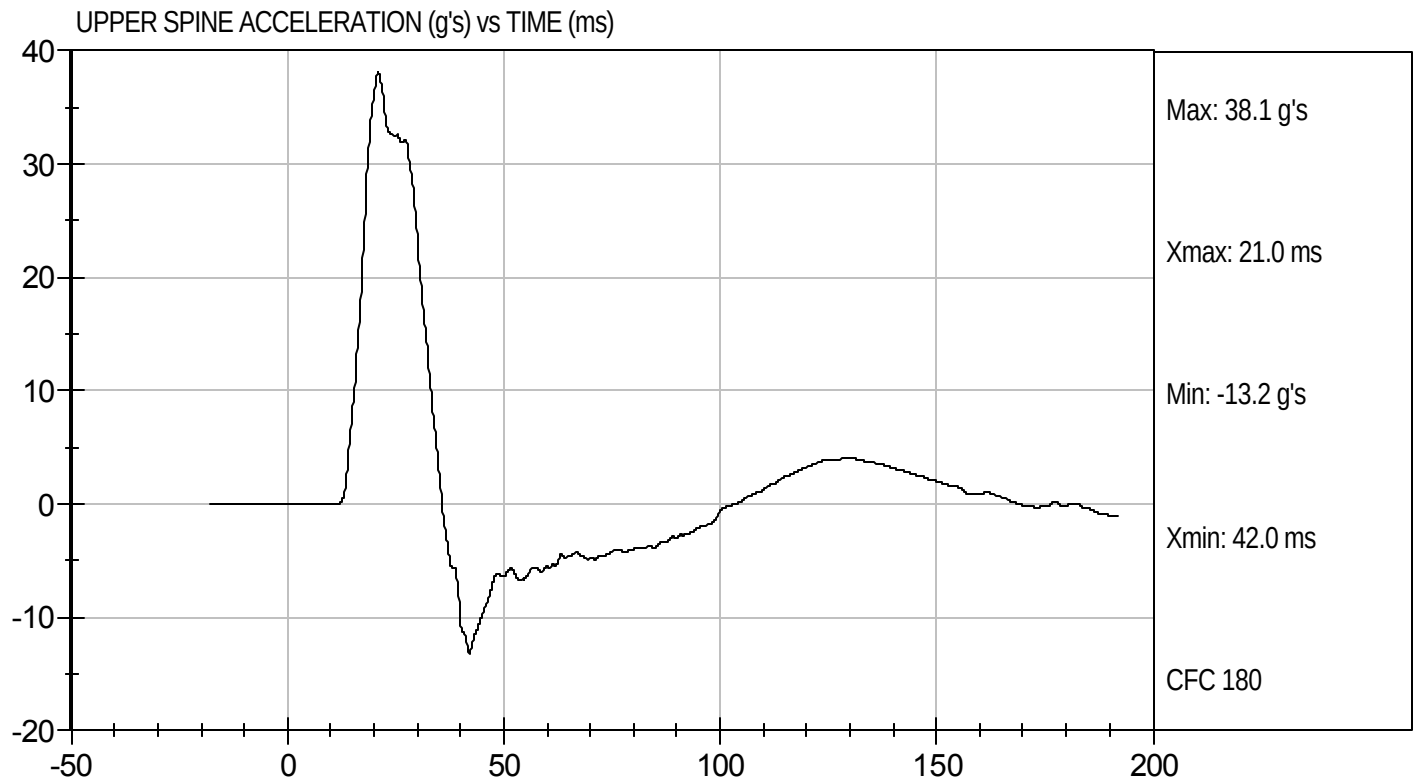
Test Date: 11/28/11
Velocity: 22.22 ft/s, 6.77 m/s





Test Desc: Thorax With Arm
Component ID: D113954

Test Date: 11/28/11
Velocity: 22.22 ft/s, 6.77 m/s

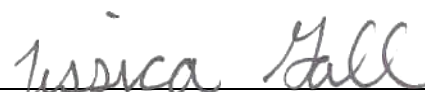


MGA RESEARCH CORPORATION
THORAX (WITHOUT ARM) IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

Test I.D: D113955

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.6	Pass
Humidity	%	10 to 70	26	Pass
Impact Velocity	m/s	4.20 to 4.40	4.38	Pass
Peak Impactor Force	G's	14 to 18	15	Pass
Upper Rib Displacement	mm	32 to 40	36	Pass
Middle Rib Displacement	mm	39 to 45	42	Pass
Lower Rib Displacement	mm	35 to 43	40	Pass
Upper Spine (T1) Y Acceleration	G's	13 to 17	13	Pass
Lower Spine (T12) Y Acceleration	G's	7 to 11	9	Pass
Overall Test Results			Pass	


Laboratory Technician

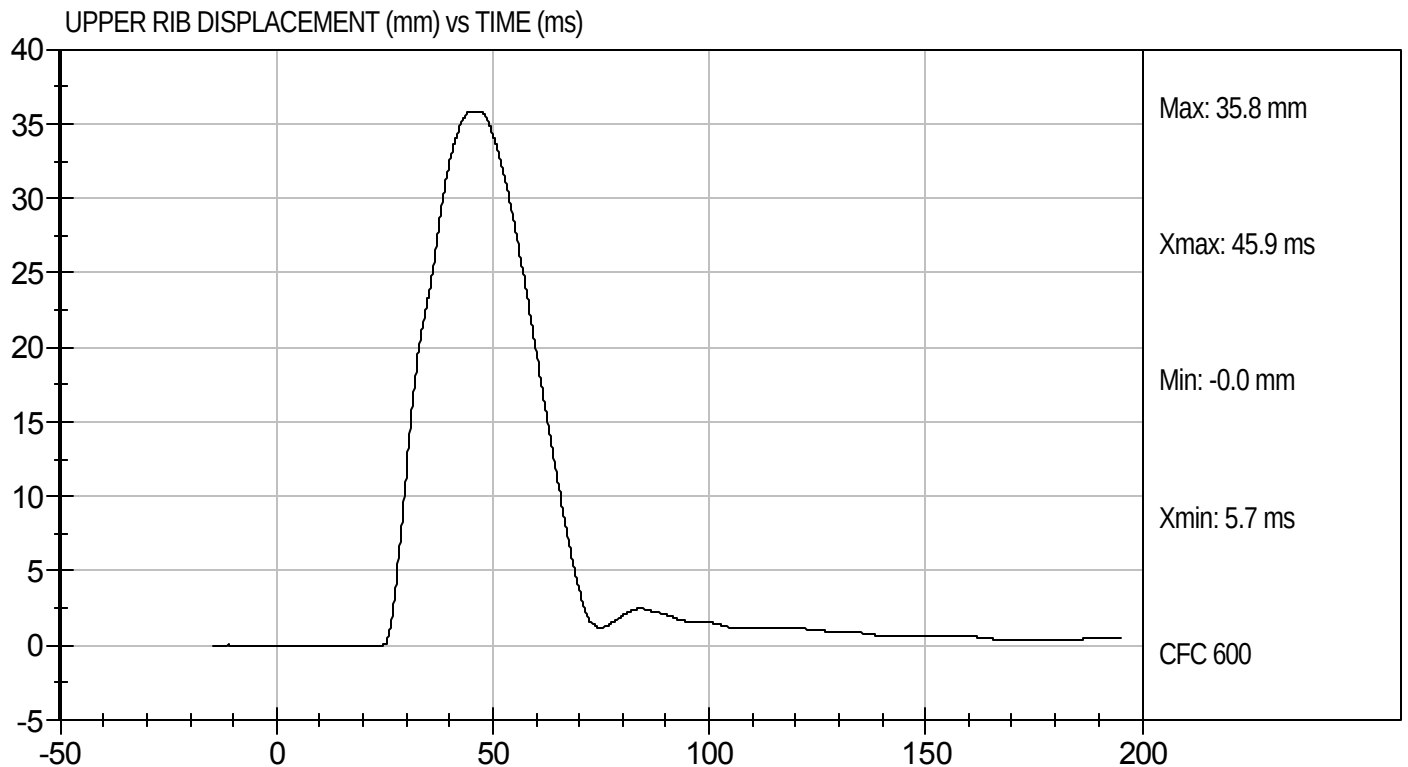
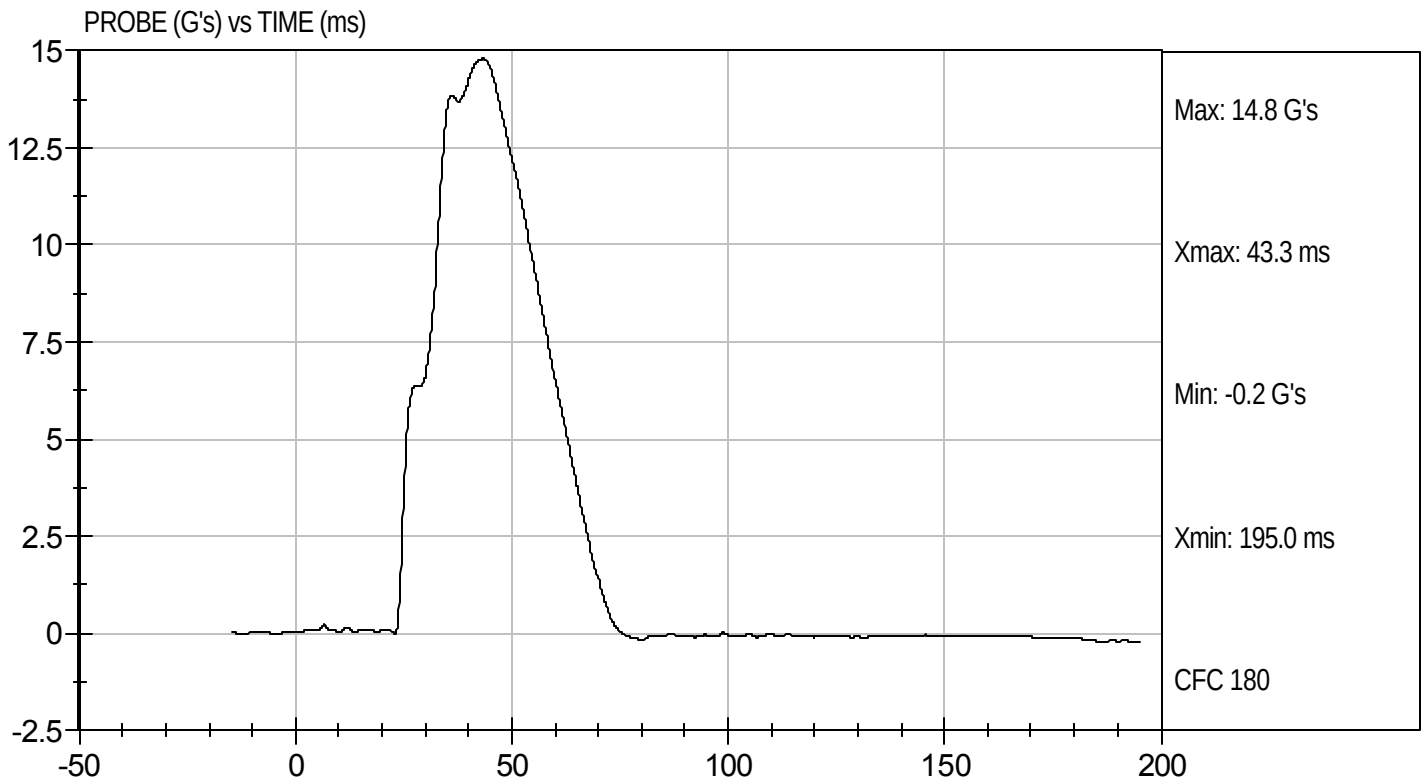
11/28/11
Test Date


Approved By



Test Desc: Thorax Without Arm
Component ID: D113955

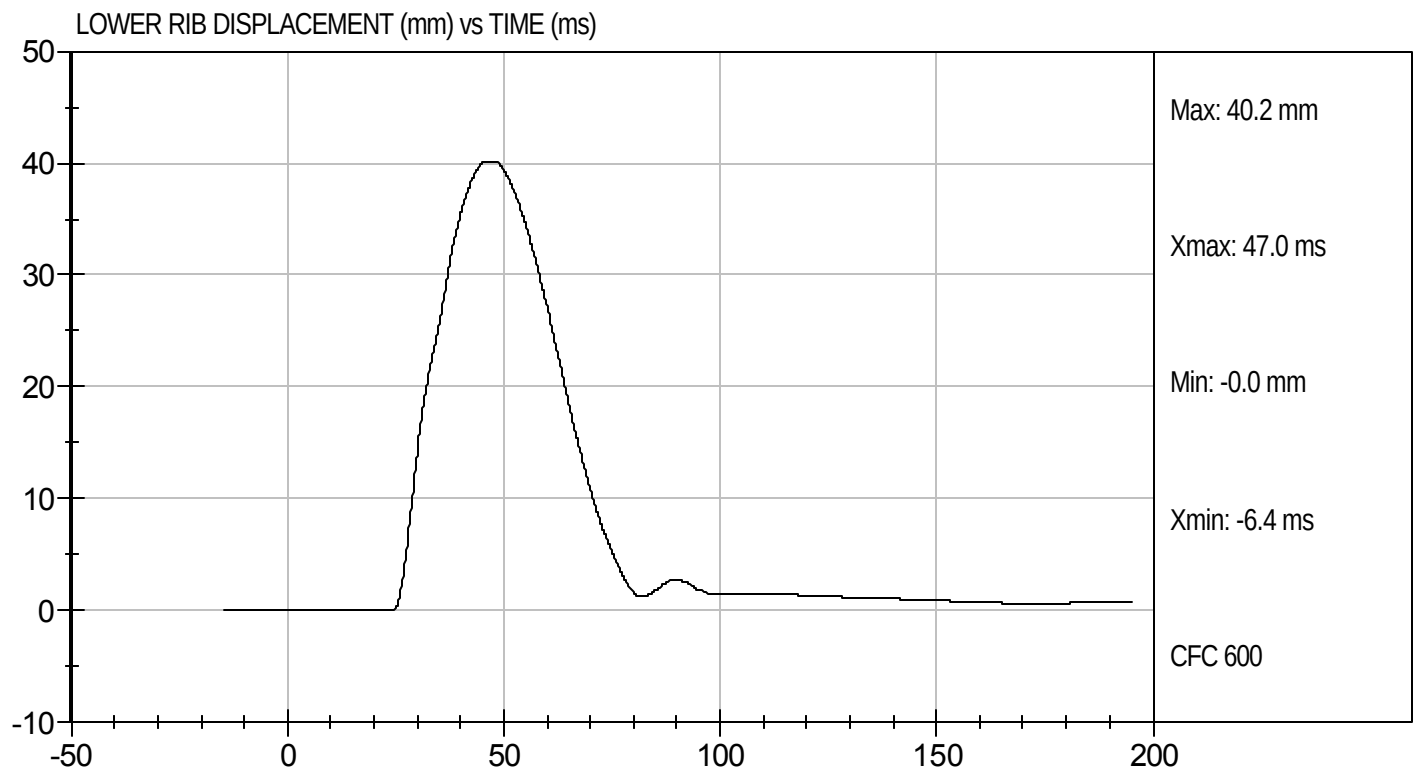
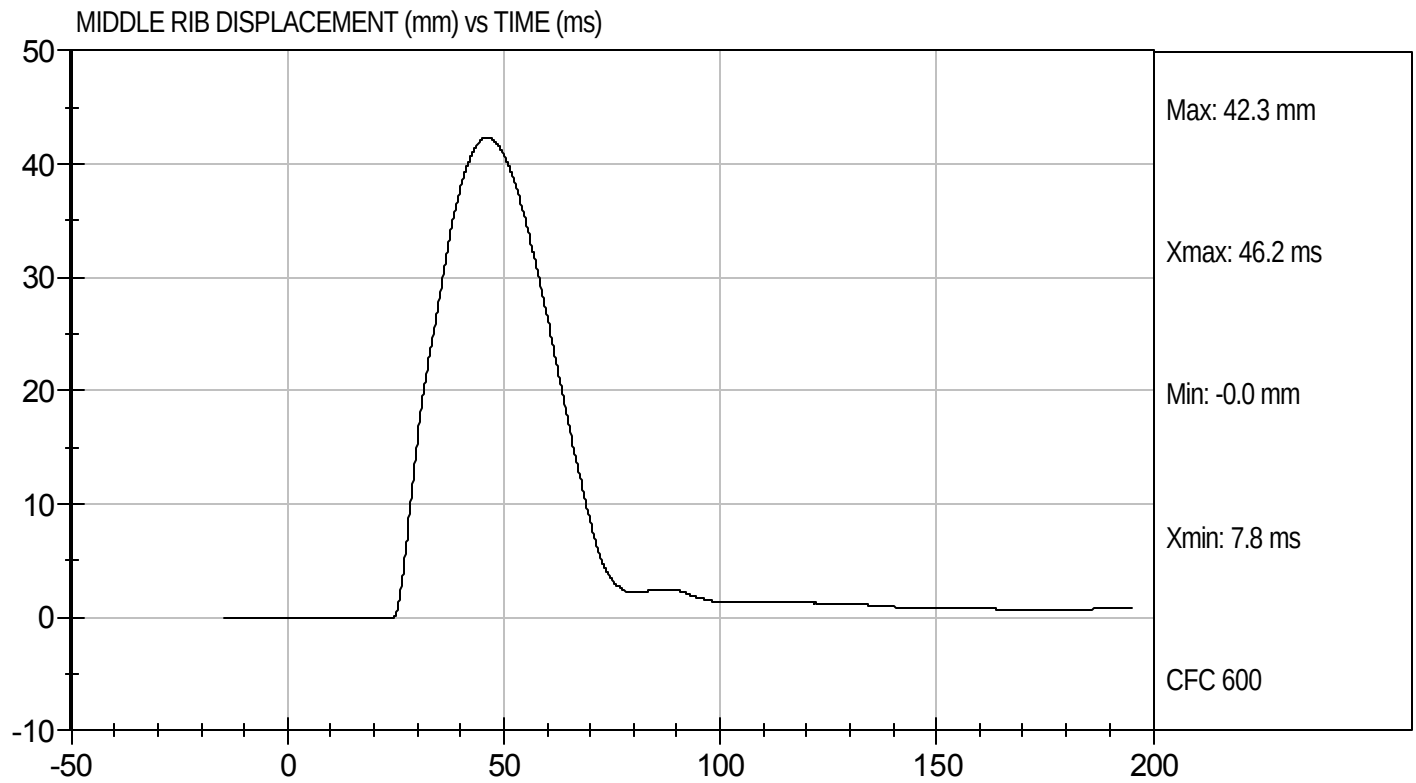
Test Date: 11/28/11
Velocity: 14.36 ft/s, 4.38 m/s





Test Desc: Thorax Without Arm
Component ID: D113955

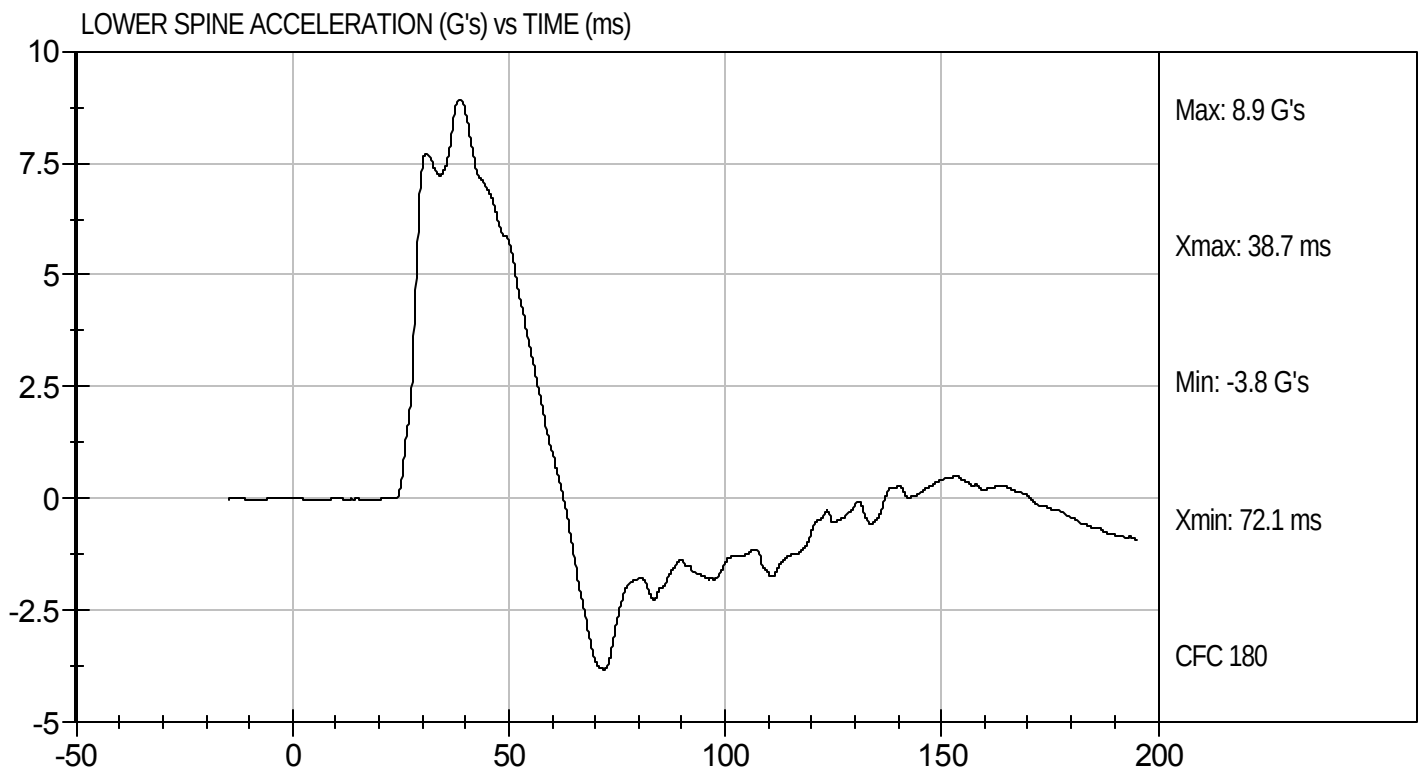
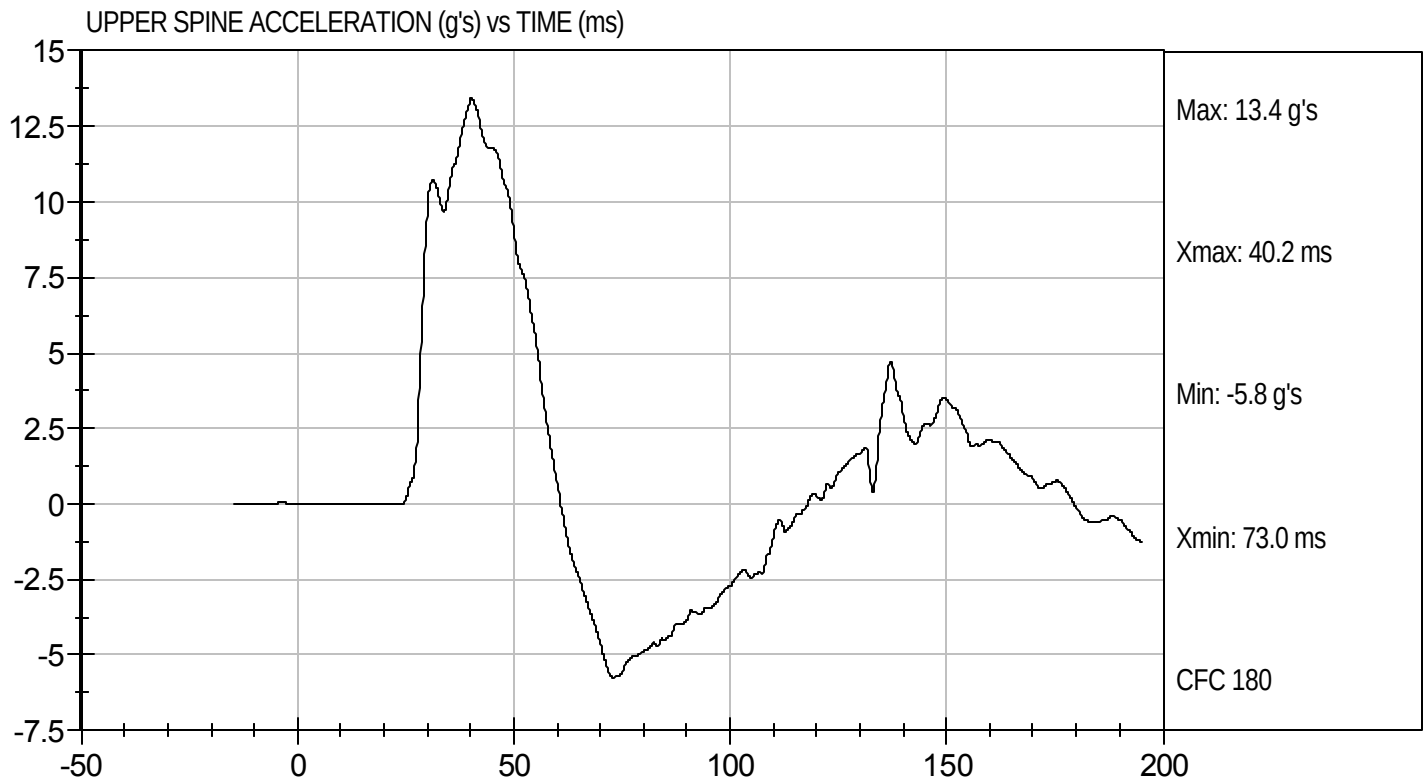
Test Date: 11/28/11
Velocity: 14.36 ft/s, 4.38 m/s





Test Desc: Thorax Without Arm
Component ID: D113955

Test Date: 11/28/11
Velocity: 14.36 ft/s, 4.38 m/s



MGA RESEARCH CORPORATION
ABDOMINAL IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

Test I.D: D113956

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.7	Pass
Humidity	%	10 to 70	26	Pass
Impact Velocity	m/s	4.20 to 4.40	4.34	Pass
Peak Impactor Acceleration	G's	12 to 16	13	Pass
Upper Rib Displacement	mm	36 to 47	41	Pass
Lower Rib Displacement	mm	33 to 44	40	Pass
Lower Spine (T12) Y Acceleration	G's	9 to 14	10	Pass
Overall Test Results			Pass	


Laboratory Technician

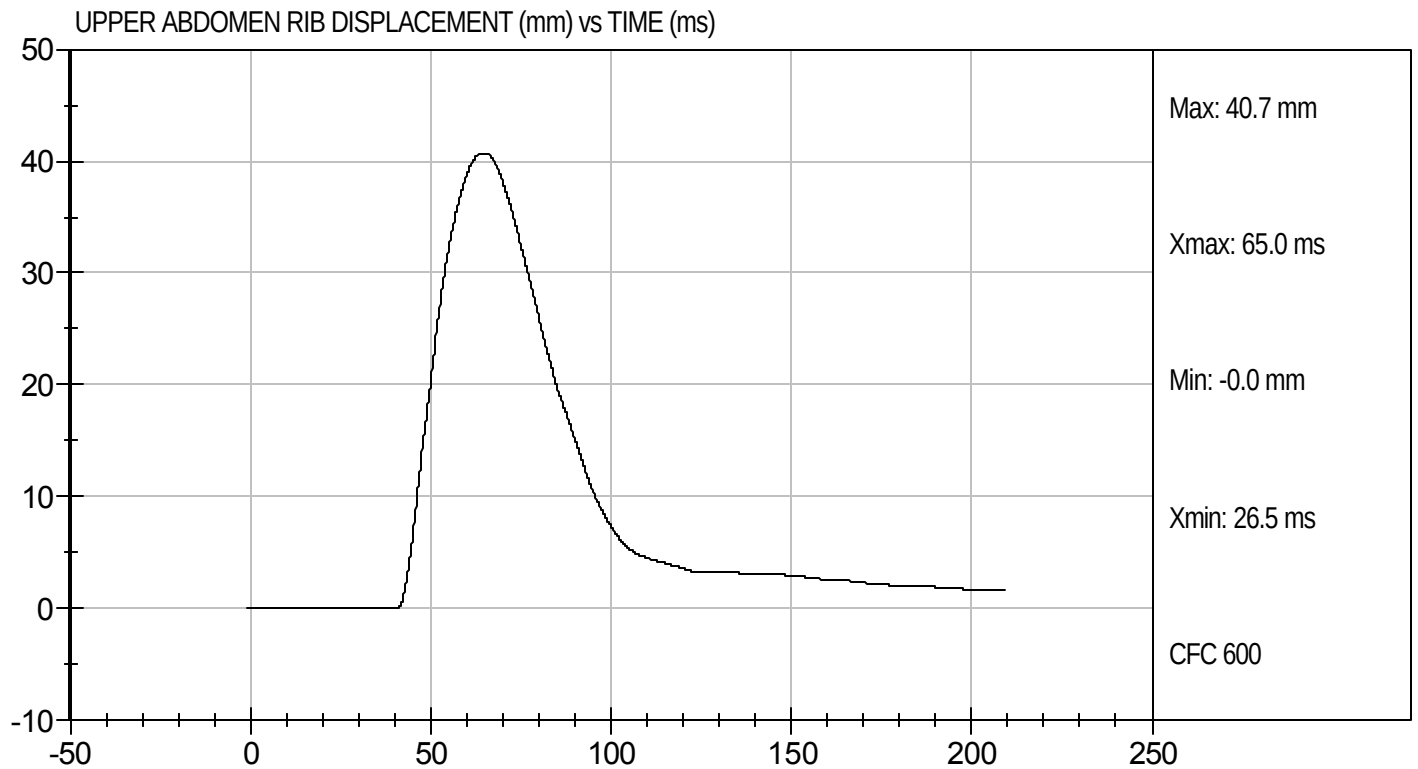
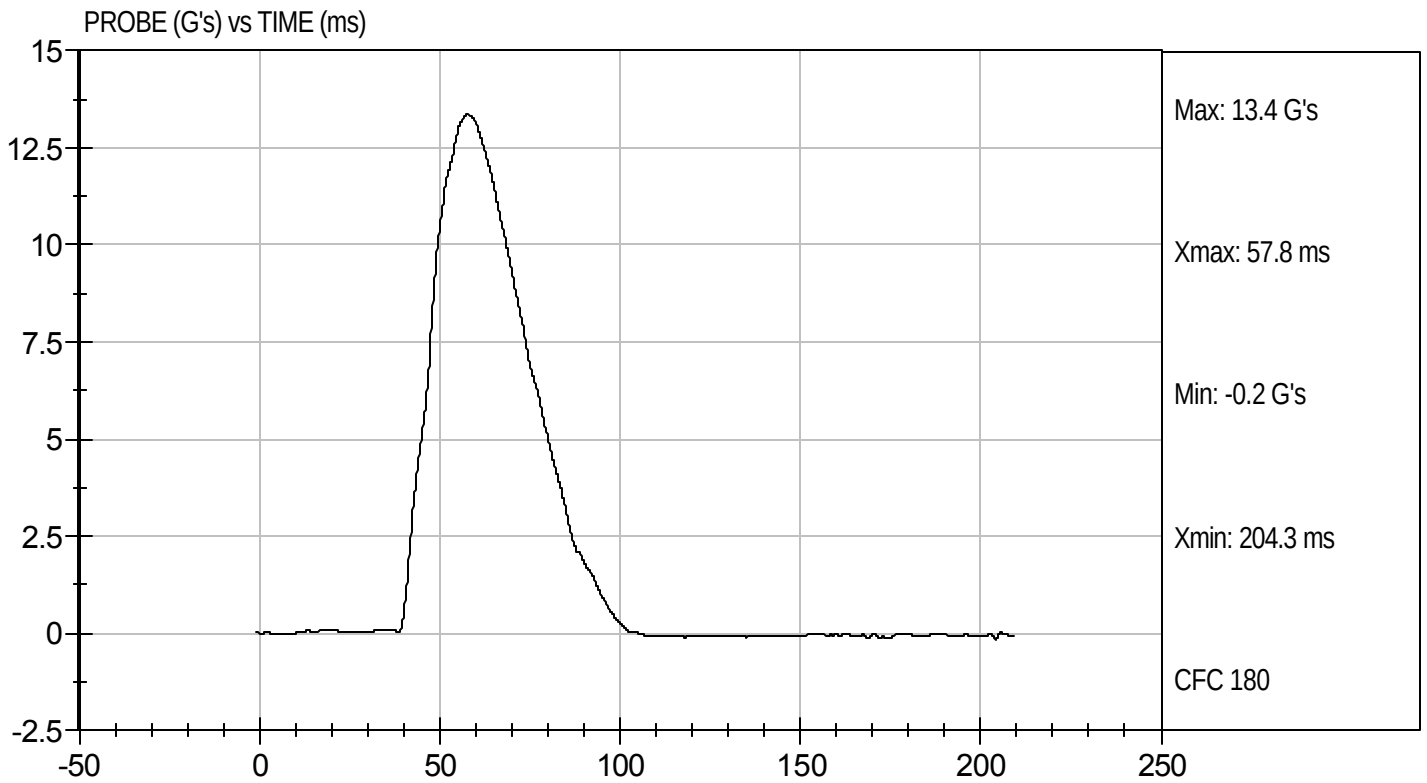
11/28/11
Test Date


Approved By



Test Desc: Abdomen Impact
Component ID: D113956

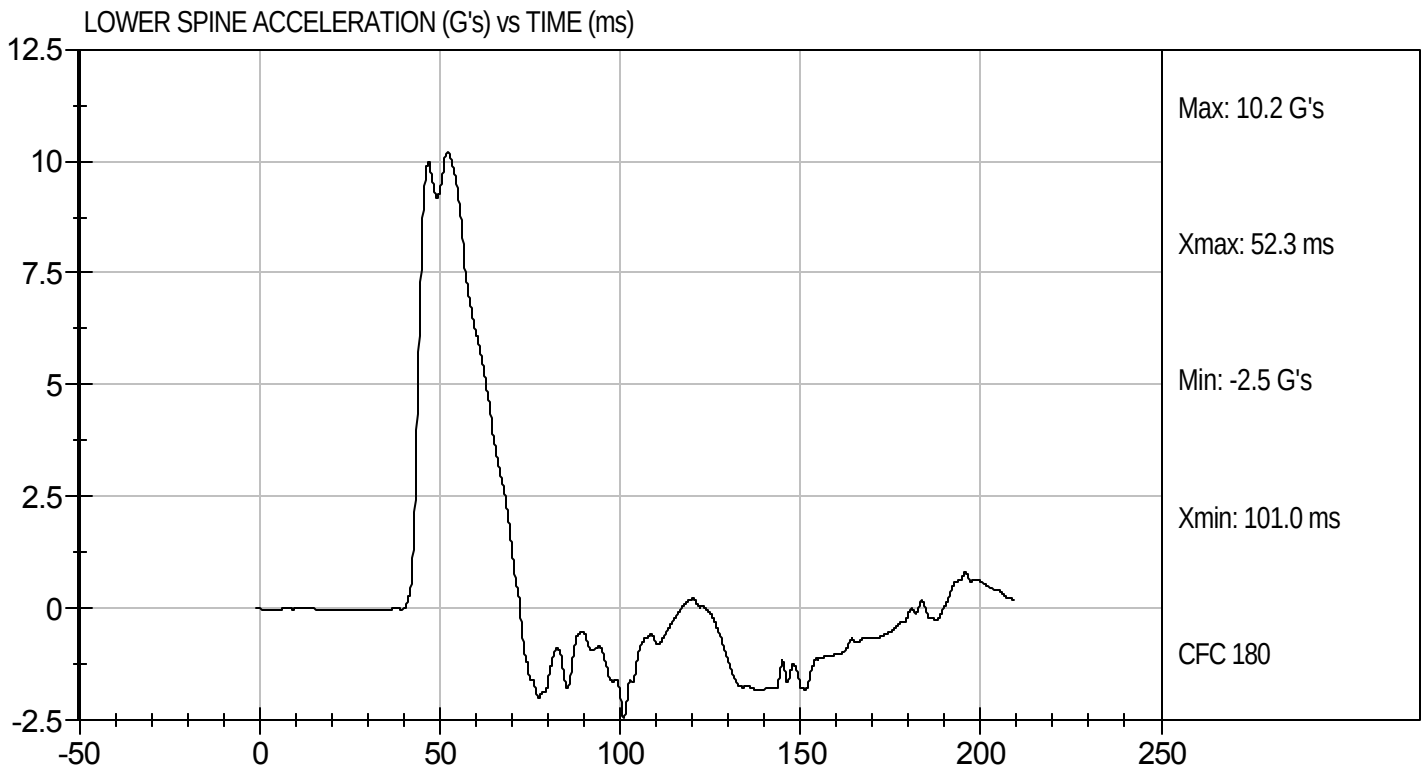
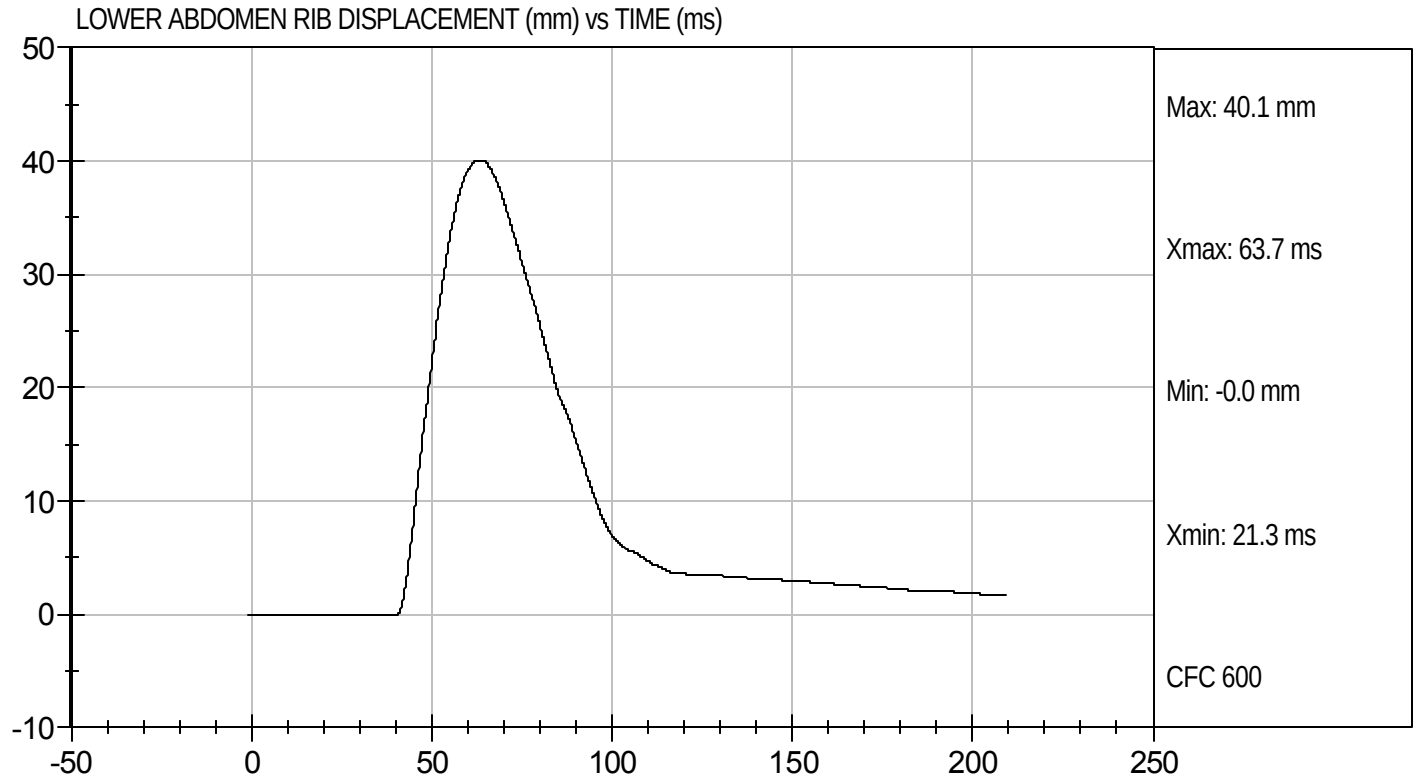
Test Date: 11/28/11
Velocity: 14.25 ft/s, 4.34 m/s





Test Desc: Abdomen Impact
Component ID: D113956

Test Date: 11/28/11
Velocity: 14.25 ft/s, 4.34 m/s



MGA RESEARCH CORPORATION
PELVIS IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

Test I.D: D113957

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.6	Pass
Humidity	%	10 to 70	26	Pass
Impact Velocity	m/s	6.60 to 6.80	6.68	Pass
Peak Impactor Acceleration	G's	38 to 47	42	Pass
Pelvis Y Acceleration after 6 ms	G's	34 to 42	41	Pass
Peak Acetabulum Force	N	3600 to 4300	3746	Pass
Overall Test Results				Pass


Laboratory Technician

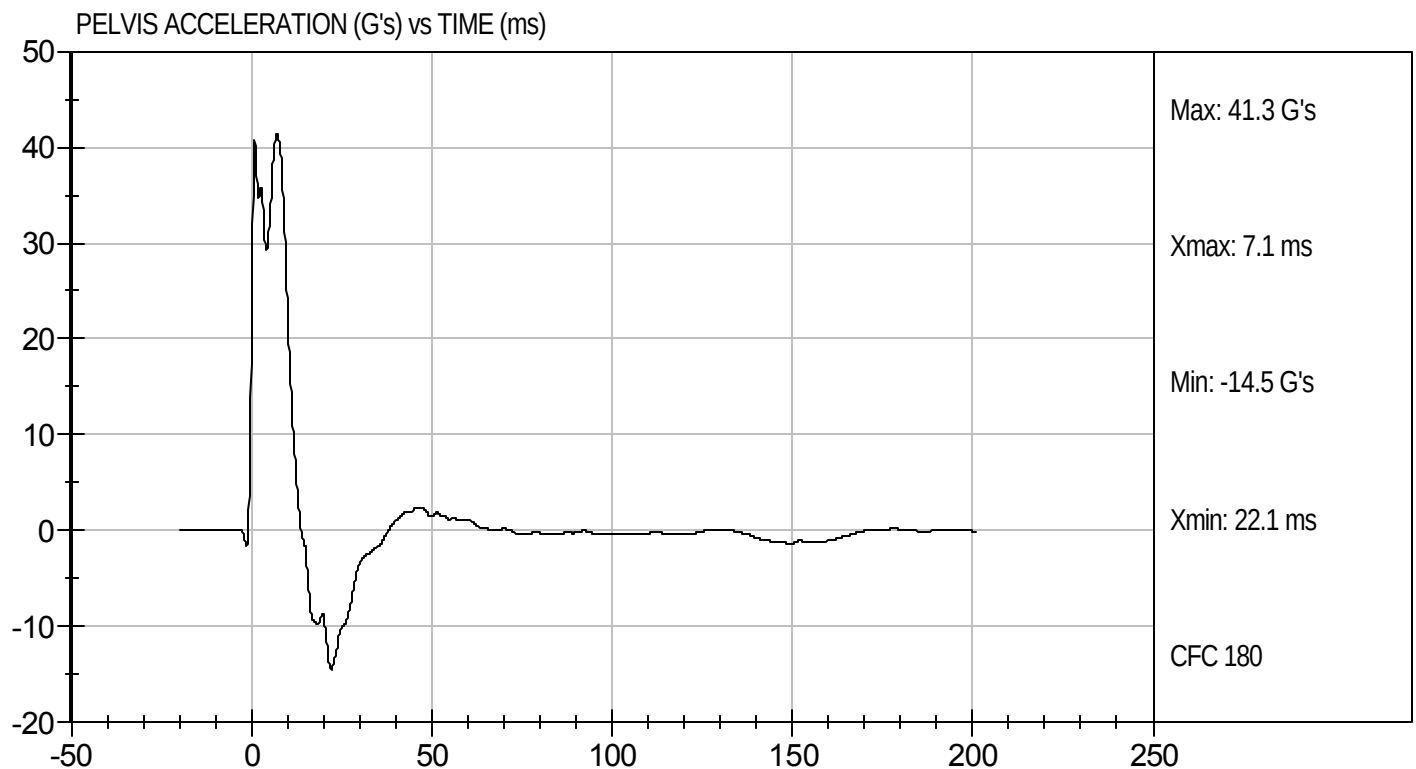
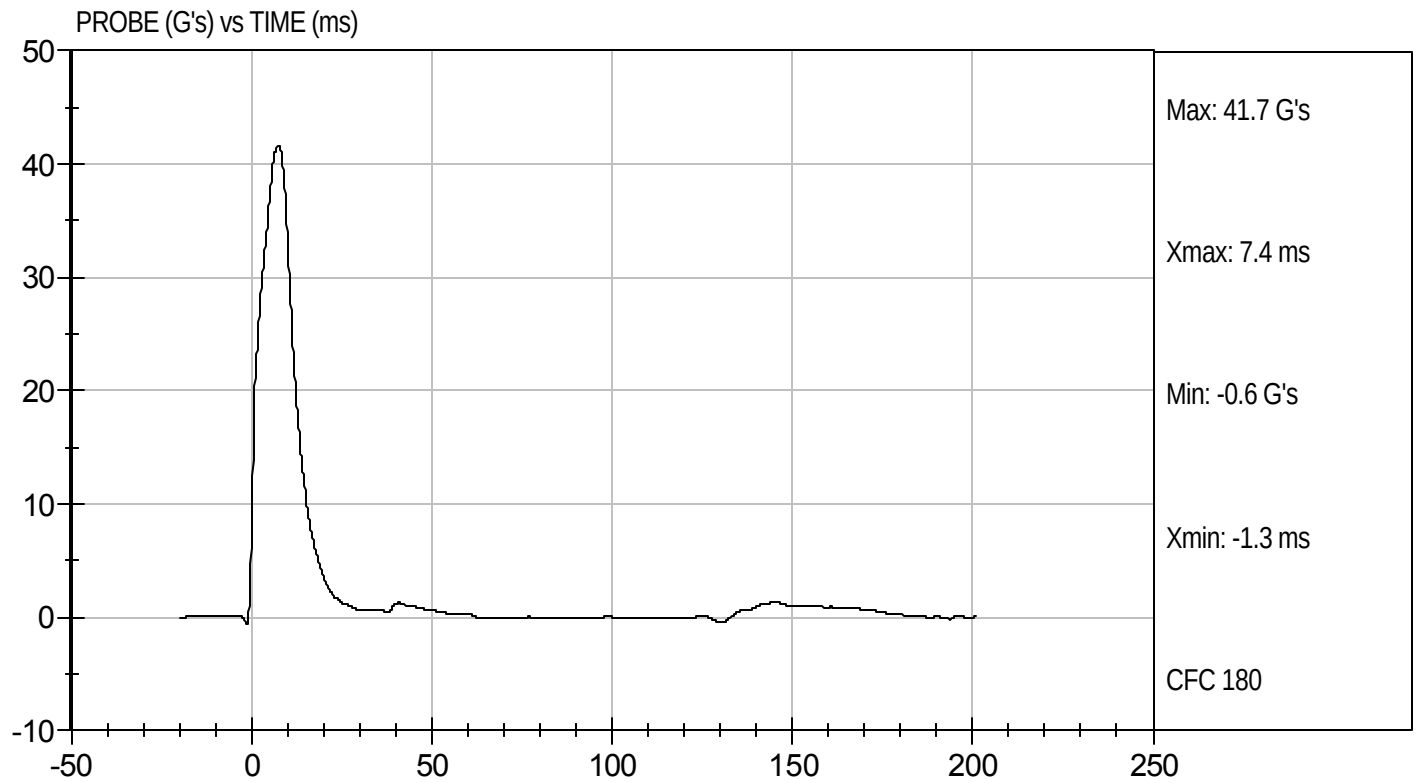
11/28/11
Test Date


Approved By



Test Desc: Pelvis Impact
Component ID: D113957

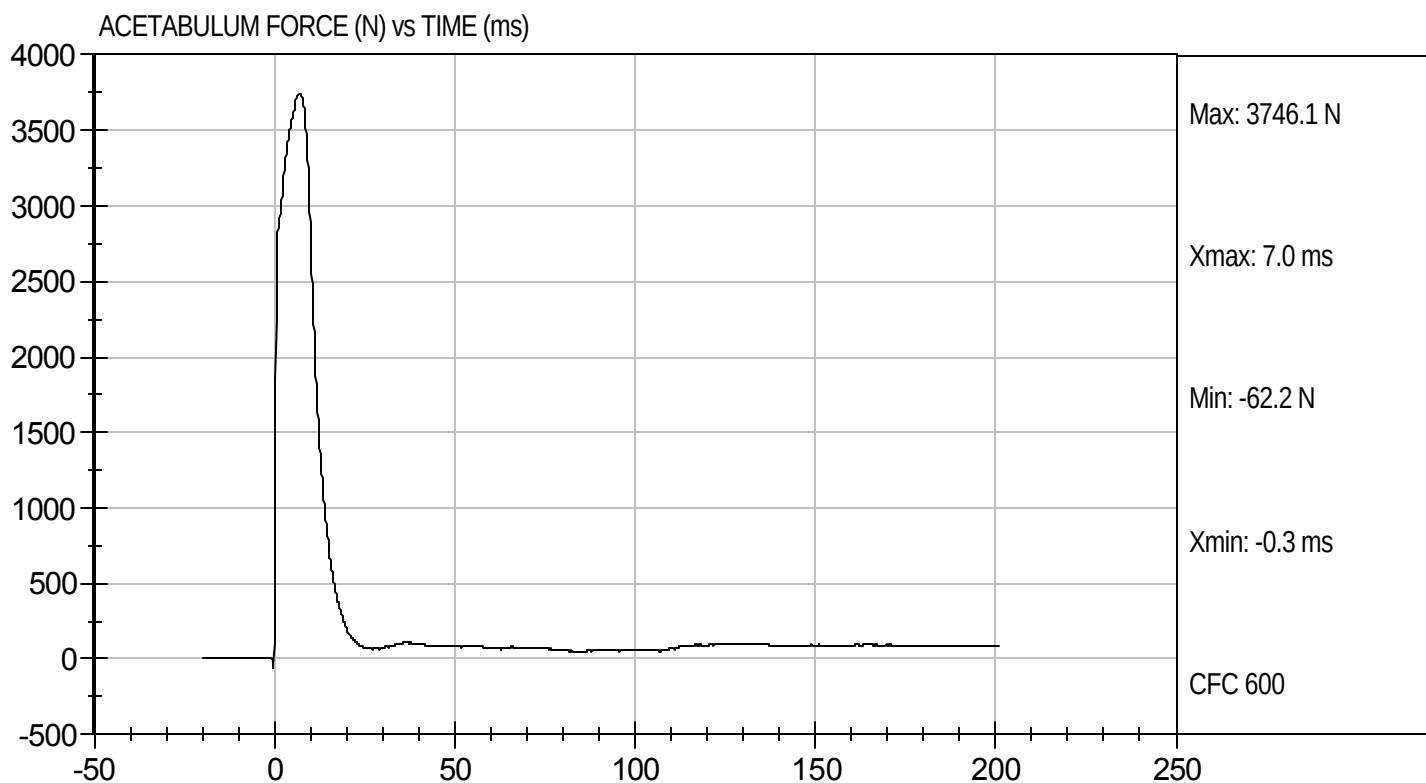
Test Date: 11/28/11
Velocity: 21.93 ft/s, 6.68 m/s





Test Desc: Pelvis Impact
Component ID: D113957

Test Date: 11/28/11
Velocity: 21.93 ft/s, 6.68 m/s



MGA RESEARCH CORPORATION
ILIAC IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

Test I.D: D113958

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.9	Pass
Humidity	%	10 to 70	27	Pass
Impact Velocity	m/s	4.20 to 4.40	4.38	Pass
Peak Impactor Acceleration	G's	36 to 45	38	Pass
Pelvis Y Acceleration	G's	28 to 39	32	Pass
Peak Pelvis Iliac Force	N	4100 to 5100	4876	Pass
Overall Test Results				Pass


Laboratory Technician

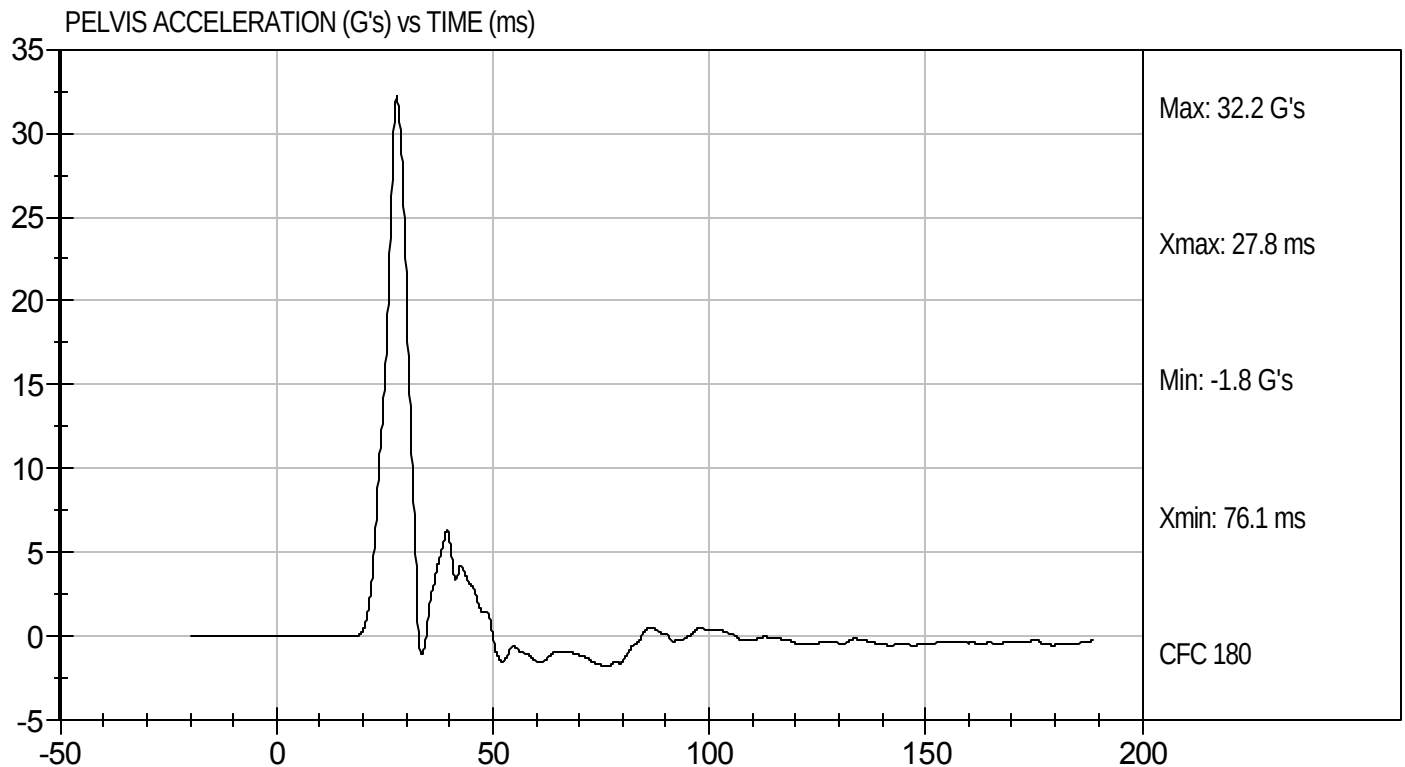
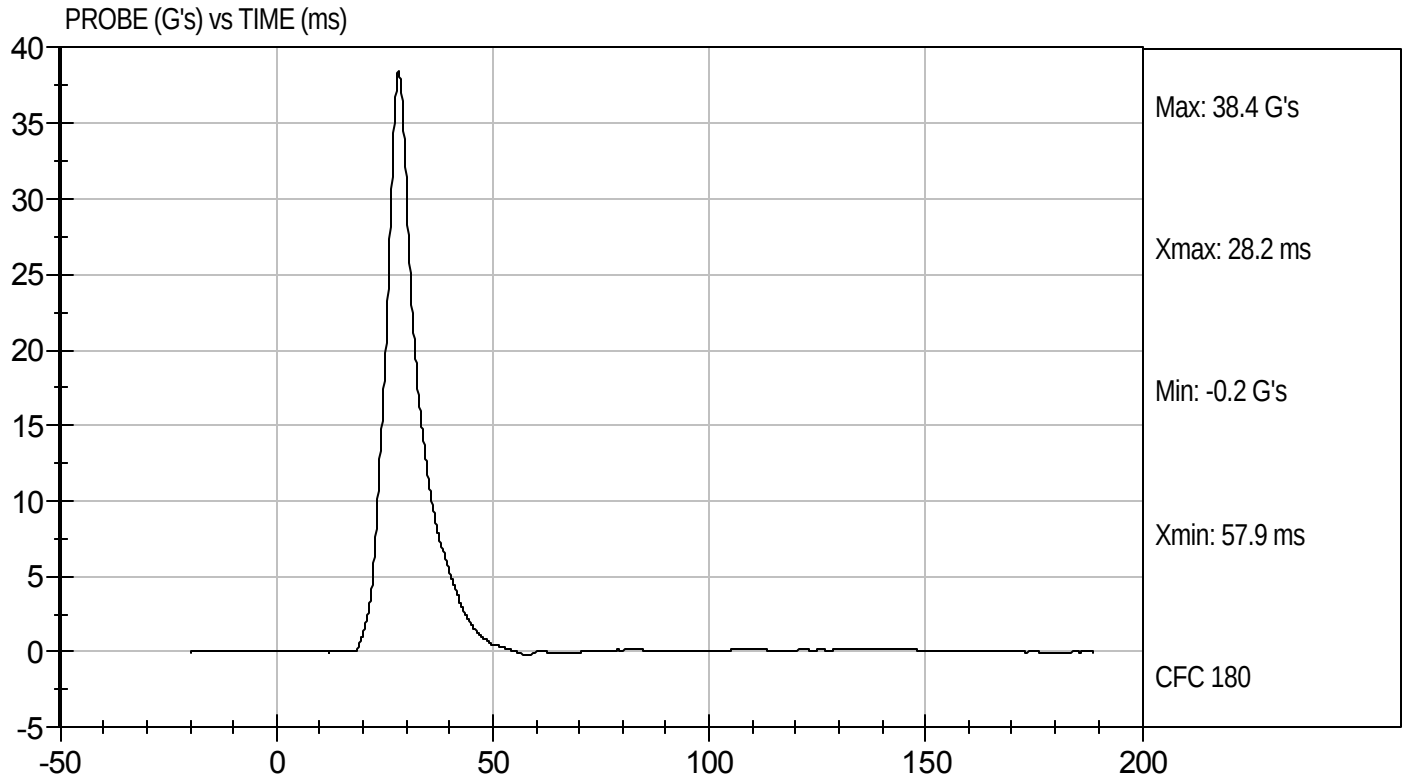
11/28/11
Test Date


Approved By



Test Desc: Iliac Impact
Component ID: D113958

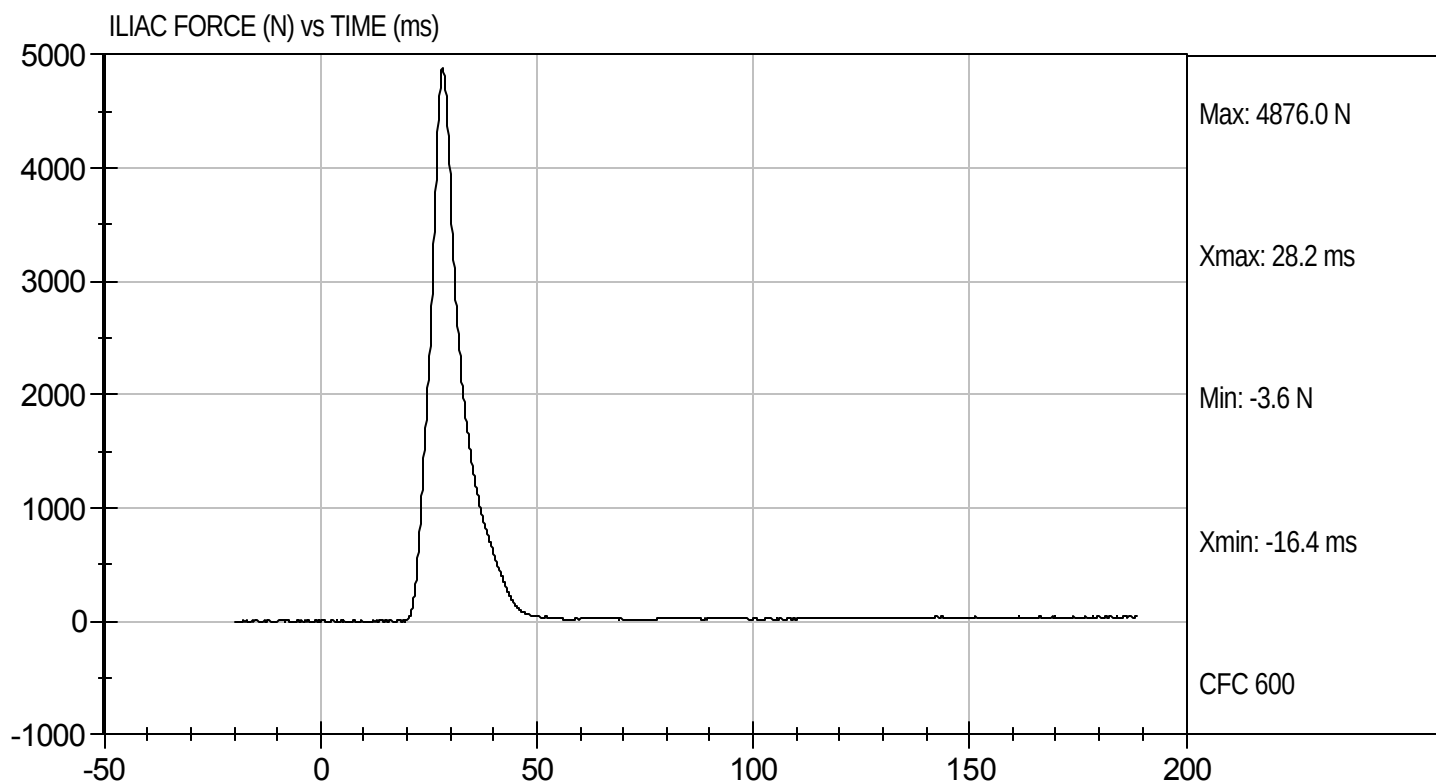
Test Date: 11/28/11
Velocity: 14.36 ft/s, 4.38 m/s





Test Desc: Iliac Impact
Component ID: D113958

Test Date: 11/28/11
Velocity: 14.36 ft/s, 4.38 m/s



APPENDIX D

TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION DATA

Table 1 – Dummy Instrumentation

				SID-IIs S/N 296			
				Serial Number	Manufacturer	Calibration Date	
Head Accelerometers				X	P67363	Endevco	10/13/11
				Y	P67364	Endevco	10/13/11
				Z	P67365	Endevco	10/13/11
Head Accelerometers				Xr	P64023	Endevco	10/13/11
				Yr	P66672	Endevco	10/13/11
				Zr	P66762	Endevco	10/13/11
Displacement Potentiometers	Thoracic Rib	Upper	Y	G1214	FTSS	10/18/11	
		Middle	Y	G1163	FTSS	10/18/11	
		Lower	Y	G1158	FTSS	10/18/11	
	Abdominal Rib	Upper	Y	G1146	FTSS	10/18/11	
		Lower	Y	G1126	FTSS	10/18/11	
Lower Spine Accelerometers (T12)				X	P67286	Endevco	09/22/11
				Y	P67289	Endevco	09/22/11
				Z	P67291	Endevco	09/22/11
Acetabulum Load Cell				Y	ACG269	Denton	01/06/11
Iliac Wing Load Cell				Y	IWG282	Denton	01/06/11
Pelvis Plug (struck side)					12819	FTSS	07/17/07
Pelvis Plug (non-struck side)					14025	FTSS	08/30/07

Table 2 – Vehicle Instrumentation

		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	P63287	Endevco	07/07/11
Vehicle Center of Gravity	Y	P63286	Endevco	07/07/11
Vehicle Center of Gravity	Z	P63288	Endevco	07/07/11
Left Floor Sill	Y	P63274	Endevco	08/22/11
A-Pillar Sill	Y	P63206	Endevco	10/20/11
A-Pillar Low	Y	P63282	Endevco	11/04/11
A-Pillar Mid	Y	P63226	Endevco	10/20/11
B-Pillar Sill	Y	P59352	Endevco	07/07/11
B-Pillar Low	Y	P63548	Endevco	07/14/11
B-Pillar Mid	V	P59350	Endevco	07/07/11
Driver Seat	Y	P52278	Endevco	07/07/11
Engine Top	X	P63284	Endevco	08/22/11
Engine Top	Y	P83283	Endevco	08/22/11
Firewall	Y	P47894	Endevco	09/12/11
Right Roof	Y	P59247	Endevco	11/04/11
Right Floor Sill	Y	P63280	Endevco	11/04/11
Rear Floorpan	X	P63350	Endevco	11/04/11
Rear Floorpan	Y	P63351	Endevco	11/04/11

Table 3 – Pole Instrumentation

	Serial Number	Manufacturer	Calibration Date
Load Cell 1	DG6277	FTSS	09/15/11
Load Cell 2	DG6278	FTSS	09/15/11
Load Cell 3	DG6279	FTSS	09/15/11
Load Cell 4	DG6280	FTSS	09/15/11
Load Cell 5	DG6281	FTSS	09/15/11
Load Cell 6	DG6283	FTSS	09/15/11
Load Cell 7	DG6284	FTSS	09/15/11
Load Cell 8	DG6582	FTSS	09/15/11