

REPORT NUMBER: SPNCAP-MGA-2012-048

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

**CHRYSLER GROUP LLC
2012 Dodge Charger SE 4-Dr Sedan
NHTSA No.: MC0318**

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



Test Date: January 4, 2012


Final Report Date: February 21, 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**

This publication is distributed by the U.S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its contents or use thereof.

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: February 21, 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-2012-048	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 Dodge Charger SE 4-Dr Sedan, NHTSA No.: MC0318		5. Report Date February 21, 2012																												
		6. Performing Organization Code MGA																												
7. Author(s) Donna Janovicz, Project Manager Ben Fischer, Project Engineer		8. Performing Organization Report No. SPNCAP-MGA-2012-048																												
9. Performing Organization Name and Address MGA Research Corporation 5000 Warren Road Burlington, WI 53105		10. Work Unit No.																												
		11. Contract or Grant No. DTNH22-09-D-00124																												
12. Sponsoring Agency Name and Address United States Department of Transportation National Highway Traffic Safety Administration Office of Crashworthiness Standards (NVS-111) 1200 New Jersey Ave, SE, Room W43-410 Washington, DC 20590		13. Type of Report and Period Covered: Final Test Report January 4 to February 21, 2012																												
		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 Dodge Charger SE 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 January 4, 2012. The impact velocity was 32.0 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 370 mm at level 3. The test vehicle's performance was as follows:																														
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: left;">Measurement Description</th> <th colspan="3" style="text-align: center;">Driver ATD (SID-IIs)</th> </tr> <tr> <th style="text-align: center;">Units</th> <th style="text-align: center;">Threshold</th> <th style="text-align: center;">Result</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆)</td> <td style="text-align: center;">N/A</td> <td style="text-align: center;">1000</td> <td style="text-align: center;">304</td> </tr> <tr> <td>Resultant Lower Spine Acceleration</td> <td style="text-align: center;">Gs</td> <td style="text-align: center;">82</td> <td style="text-align: center;">50</td> </tr> <tr> <td>Total Pelvic Force (sum of acetabular and iliac forces)</td> <td style="text-align: center;">N</td> <td style="text-align: center;">5525</td> <td style="text-align: center;">3807</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td style="text-align: center;">mm</td> <td style="text-align: center;">38*</td> <td style="text-align: center;">28</td> </tr> <tr> <td>Maximum Abdomen Rib Deflection</td> <td style="text-align: center;">mm</td> <td style="text-align: center;">45*</td> <td style="text-align: center;">33</td> </tr> </tbody> </table>				Measurement Description	Driver ATD (SID-IIs)			Units	Threshold	Result	Head Injury Criteria (HIC ₃₆)	N/A	1000	304	Resultant Lower Spine Acceleration	Gs	82	50	Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	3807	Maximum Thoracic Rib Deflection	mm	38*	28	Maximum Abdomen Rib Deflection	mm	45*	33
Measurement Description	Driver ATD (SID-IIs)																													
	Units	Threshold	Result																											
Head Injury Criteria (HIC ₃₆)	N/A	1000	304																											
Resultant Lower Spine Acceleration	Gs	82	50																											
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	3807																											
Maximum Thoracic Rib Deflection	mm	38*	28																											
Maximum Abdomen Rib Deflection	mm	45*	33																											
* 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.																														
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																												
19. Security Classification of Report Unclassified	20. Security Classification of Page Unclassified	21. No. of Pages 131	22. Price																											

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 Dodge Charger SE 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 Dodge Charger SE 4-Dr Sedan. The subject vehicle was towed into the rigid pole at an angle of 75° and a velocity of 32.0 km/h. The test was conducted by MGA Research Corporation in Burlington, Wisconsin, on January 4, 2012. 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	304
Resultant Lower Spine Acceleration	Gs	82	50
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	3807
Maximum Thoracic Rib Deflection	mm	38*	28
Maximum Abdomen Rib Deflection	mm	45*	33

*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	Yes	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:

Vehicle CG Y after 28 msec.

Left Lower B-Post Y after 14 msec.

Vehicle CG X is questionable from 34-47 msec.

Left Lower A-Post Y is questionable from 9-25 msec.

Left Mid B-Post Y is questionable from 10-41 msec.

Driver Seat Track Y is questionable from 49-54, 81-84, and 115-116 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 Dodge Charger SE 4-Dr Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
Test Date: 1/04/2012

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	MC0318	Traction Control System (TCS)	Yes
Model Year	2012	Auto-Leveling System	No
Make	Dodge	Automatic Door Locks (ADL)	Yes
Model	Charger	Power Window Auto-Reverse	No
Body Style	Sedan	Other Optional Feature	N/A
VIN	2C3CDXBG5CH103682	Driver Front Airbag	Yes
Body Color	Tungsten Metallic	Driver Curtain Airbag	Yes
Odometer Reading (km/mi)	280 / 174	Driver Head/Torso Airbag	No
Engine Displacement (L)	3.6	Driver Torso Airbag	No
Type/No. Cylinders	6	Driver Torso/Pelvis Airbag	Yes
Engine Placement	Longitudinal	Driver Pelvis Airbag	No
Transmission Type	Automatic	Driver Knee Airbag	Yes
Transmission Speeds	5	Rear Pass. Curtain Airbag	Yes
Overdrive	Yes	Rear Pass. Head/Torso Airbag	No
Final Drive	Rear	Rear Pass. Torso Airbag	No
Roof Rack	No	Rear Pass. Torso/Pelvis Airbag	No
Sunroof/T-Top	No	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's seat only	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	Chrysler Group LLC	GVWR (kg)	2314
Date of Manufacture	7-11	GAWR Front (kg)	1275
Vehicle Type	Passenger Car	GAWR Rear (kg)	1275

VEHICLE SEATING AND WEIGHT CAPACITY DATA

Measured Parameter	Front	Rear	Third	Total	
Designated Seating Capacity (DSC)	2	3		5	
Capacity Weight (VCW) (kg)				392	(A)
DSC x 68.04 kg				340	(B)
Rated Cargo and Luggage Weight (RCLW)				52	(A-B)

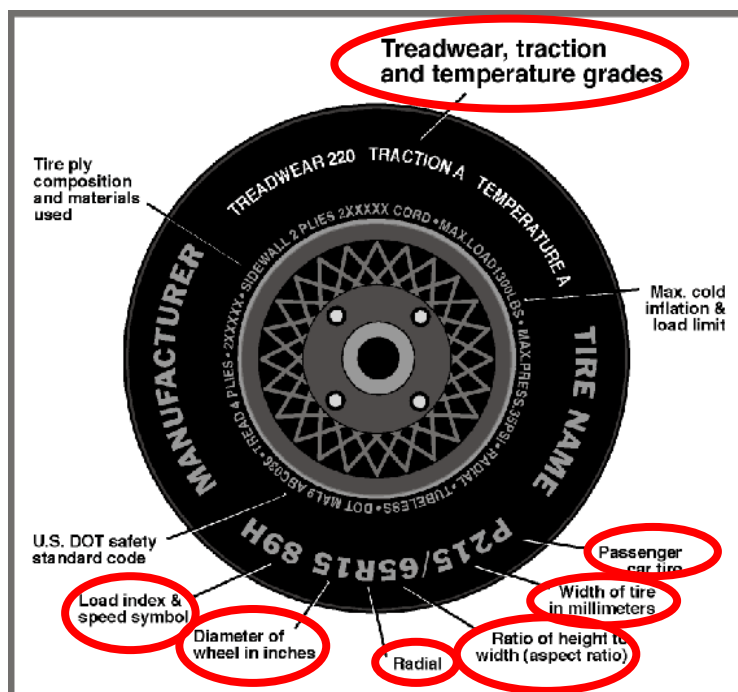
VEHICLE SEAT TYPE

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 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012



TIRE PLACARD INFORMATION

Measured Parameter	Front	Rear
Recommended Cold Tire Pressure (kPa)	240	240
Recommended Tire Size	P215/65R17	P215/65R17

TIRE SIDEWALL INFORMATION

Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	300	300
Tire Size on Vehicle	P215/65R17	P215/65R17
Tire Manufacturer	Michelin	Michelin
Tire Name	Energy Saver	Energy Saver
Tire Type	Passenger	Passenger
Tire Width	215	215
Aspect Ratio	65	65
Radial	Yes	Yes
Wheel Diameter	17	17
Load Index/Speed Symbol	98T	98T
Treadwear	480	480
Traction Grade	A	A
Temperature Grade	B	B
Tire Material	Rubber	Rubber

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

Test Vehicle: 2012 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012

TEST PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kpa	240	240	240	240
Tire Placard	kpa	240	240	240	240
Owner's Manual	kpa				
As Tested	kpa	240	240	240	240

TEST VEHICLE AXLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Left	kg	457.8	440.9		475.3	477.2		478.0	484.9	
Right	kg	469.9	433.6		475.4	471.3		472.7	470.4	
Ratio	%	51.5	48.5		50.1	49.9		49.9	50.1	
Totals	kg	927.7	874.5	1802.2	950.7	948.5	1899.2	950.7	955.3	1906.0

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total Delivered Weight (UVW)	kg	1802.2	(A)
Actual Weight of 1 P572V ATD (SID-IIs) ATD Used	kg	52.2	(B)
Rated Cargo/Luggage Weight (RCLW)	kg	52	(C)
Calculated Vehicle Target Weight (TVTW)	kg	1906.4	(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	15.4
Right tail light, jack & tools, right side mirror, spare tire, right rear speaker, trunk carpet.	24.9

TEST VEHICLE ATTITUDES AND CG

	Units	As Delivered	As Tested	Fully Loaded	Meets Requirement***
Driver Door Sill Angle (front-to-rear)*	deg	-0.5	-0.5	-0.2	Yes
Front Pass. Sill Angle (front-to-rear)*	deg	-0.6	-0.6	-0.4	Yes
Front Bumper Angle (left-to-right)**	deg	0.3	0.1	0.1	Yes
Rear Bumper Angle (left-to-right)**	deg	0.2	0.1	0.1	Yes
Vehicle CG (Aft of Front Axle)	mm	1481	1525	1530	
Vehicle CG (Left (+) / Right (-) from Longitudinal Centerline)	mm	-2	2	8	

*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 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012

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	20.3	12.7	16.5
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 SCRP Height (mm)	SCRP Height Position	SCRP Height (mm)		
				Rear-most	Mid-Fore/Aft	Forward-Most
Driver Seat	16.5	27	Max	54	54	54
	16.5	27	Mid	27	27	27
	16.5	27	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 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

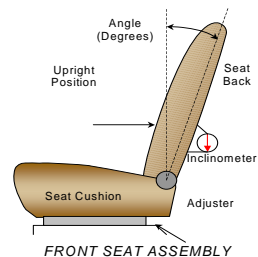
NHTSA No. MC0318
 Test Date: 1/04/2012

SEAT FORE/AFT POSITIONS

Seat	Total Fore/Aft Travel		Test Position from Forward-most Position	
	mm	Detents	mm	Detent
Driver Seat	272		0	
Front Passenger Seat	220	22 (1 st as 0)	0	0 (1 st as 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	66.2		4.0	
Front Passenger Seat	65.9		5.1	
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

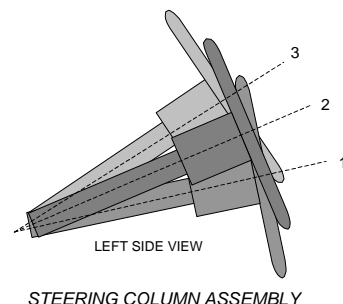
Test Vehicle: 2012 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012

STEERING COLUMN ADJUSTMENT

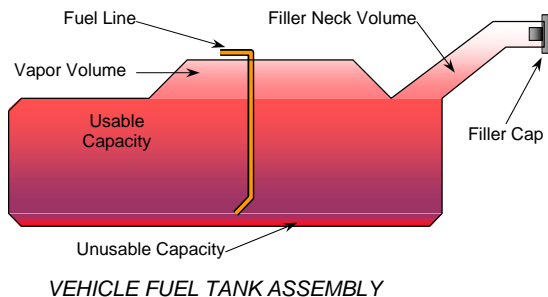
Steering wheel and column adjustments are made so that the steering wheel geometric locus is described when it moves through its full range of motion.

	Degrees	Fore/Aft Position (mm)
Lowermost, Position 1	70.0	205
Geometric Center, Position 2	67.7	175
Uppermost, Position 3	65.4	145
Telescoping Steering Wheel Travel		60
Test Position	67.7	175



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 starts pumping fuel when the key is in the "ON" position. The fuel pipe is on the left side.



FUEL TANK CAPACITY DATA

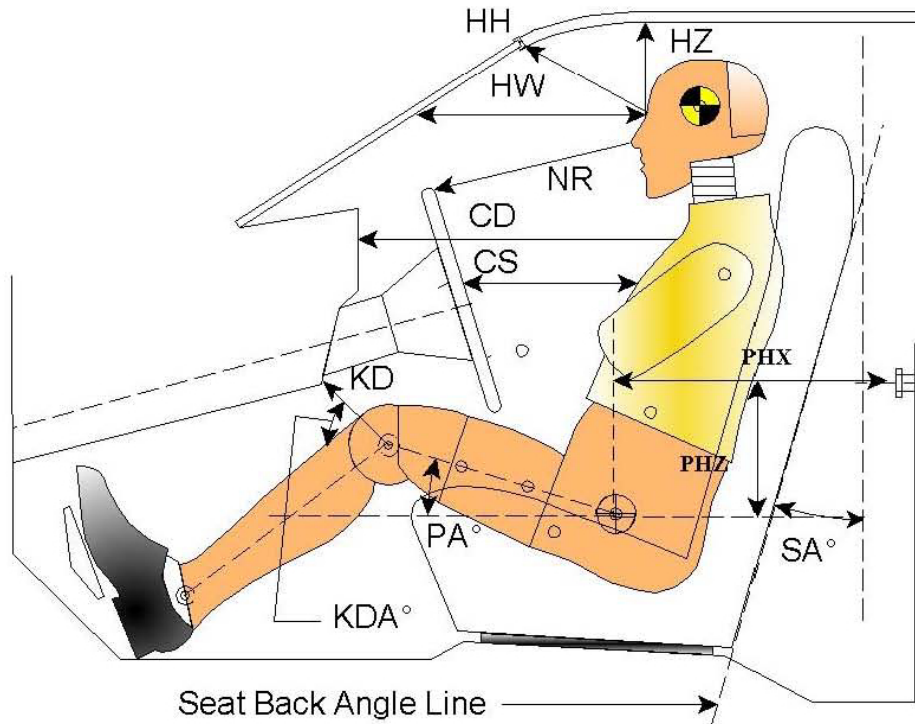
	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	72.3
Usable Capacity of "Optional Tank" (see Form No. 1)	
Usable Capacity of Standard Tank as Specified in Owner's Manual	72.0
Usable Capacity of Optional Tank as Specified in Owner's Manual	
93% of Usable Capacity	67.2
Actual Amount of Solvent Used	67.4
1/3 of Usable Capacity	24.1

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 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012



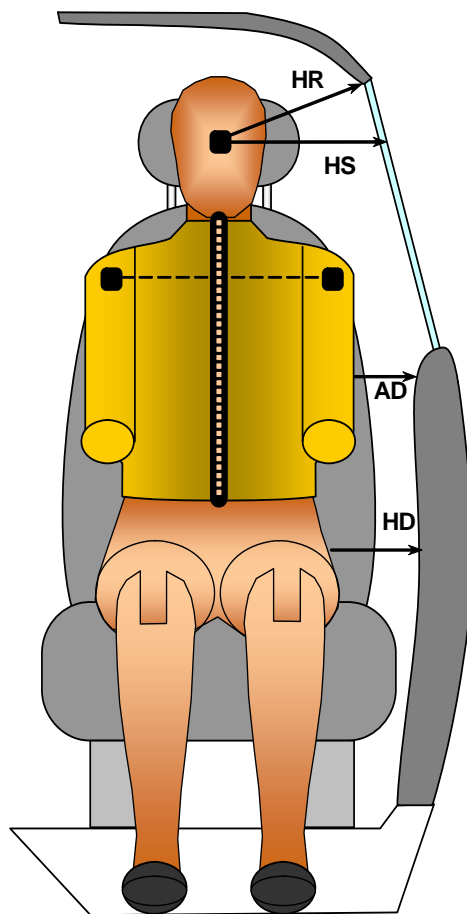
LEFT SIDE VIEW

Code	Measurement Description	Driver S/N 296	
		Length (mm)	Angle (°)
HH	Head to Header	260	
HW	Head to Windshield	572	
HZ	Head to Roof Liner	179	
NR	Nose to Rim	191	
CD	Chest to Dashboard	378	
CS	Chest to Steering Wheel	125	
KDL/KDAL°	Left Knee to Dash	92	41.0
KDR/KDAR°	Right Knee to Dash	77	35.8
PAX°	Pelvic Tilt Angle (X-Axis)		20.1
PAY°	Pelvic Tilt Angle (Y-Axis)		-0.6
PHX	Hip Point to Striker (X-Axis)	351	
PHZ	Hip Point to Striker (Z-Axis)	129	

DATA SHEET NO. 4
DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2012 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012



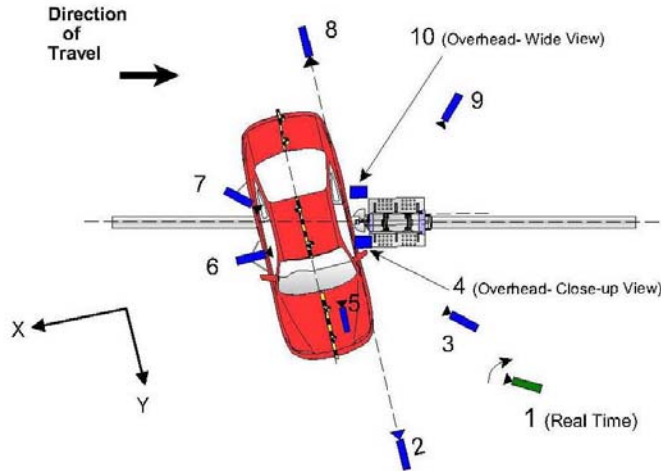
FRONT VIEW OF DUMMY

Code	Measurement Description	Driver S/N 296 Length (mm)
HR	Head to Side Header	218
HS	Head to Side Window	361
AD	Arm to Door	183
HD	Hip Point to Door	170

**DATA SHEET NO. 5
CAMERA AND INSTRUMENTATION DATA**

Test Vehicle: 2012 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012



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	-90	6120	-1830	24	1000
3	Impact Side 45° Forward	-2610	5340	-1930	20	1000
4	Overhead Closeup	140	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	-80	-6420	-1830	24	1000
9	Impact Side 45° Rearward	-4150	-4210	-1950	20	1000
10	Overhead Wide View	340	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

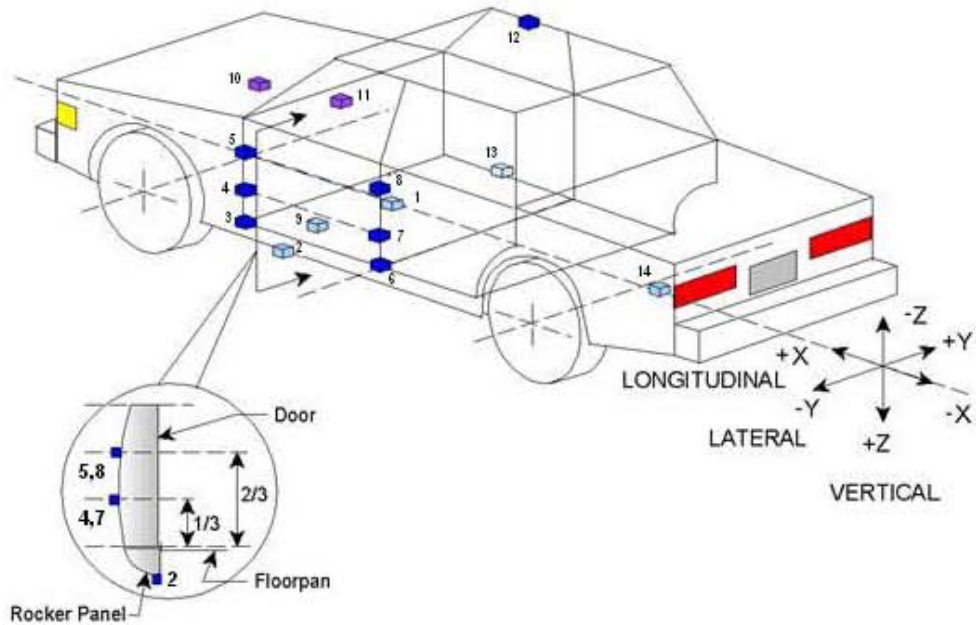
INSTRUMENTATION

	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 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012



	Accelerometer Location			
	ID	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	2453	-256	-170
2	Left Floor Sill	3144	-772	-174
3	A Pillar Sill	3545	-772	-165
4	A Pillar Low	3306	-754	-515
5	A Pillar Mid	3385	-822	-747
6	B Pillar Sill	2306	-772	-176
7	B Pillar Low	2227	-746	-522
8	B Pillar Mid	2270	-751	-794
9	Driver Seat Track	2585	-591	-236
10	Engine Top	4121	-55	-967
11	Firewall	3697	60	-908
12	Right Roof	2204	562	-1467
13	Right Floor Sill	3105	772	-162
14	Rear Floorpan	734	0	-548

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 Dodge Charger SE 4-Dr Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
Test Date: 1/04/2012



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 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012

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, Headrest
Left Shoulder	Side Airbag, Seatback
Upper Torso	Side Airbag, Seatback
Lower Torso	Side Airbag, Seatback
Left Hip	Side Airbag, Door Panel, 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 Cracked
Other Notable Effects	None

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

Test Vehicle: 2012 Dodge Charger SE 4-Dr Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
Test Date: 1/04/2012

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	Yes	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	

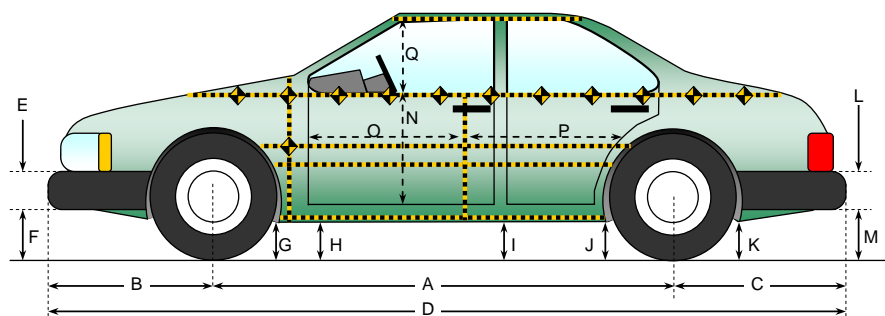
VEHICLE SPEED, VEHICLE ANGLE AT IMPACT, AND IMPACT POINT LOCATION DATA

Measured Parameter	Units	Tolerance	Value
Vertical Impact Reference Line (Aft of Front Axle) (Intended Impact Point)	mm		1347
Actual Impact Point (Aft of Front Axle)	mm		1340
Horizontal Offset (+forward / -rearward)	mm	+/- 38 of Intended Impact Point	+7
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	32.0
Trap No. 2 Velocity (Redundant)	km/h	31.4 to 33.0	NA

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

Test Vehicle: 2012 Dodge Charger SE 4-Dr Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
Test Date: 1/04/2012



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

LEFT SIDE VIEW

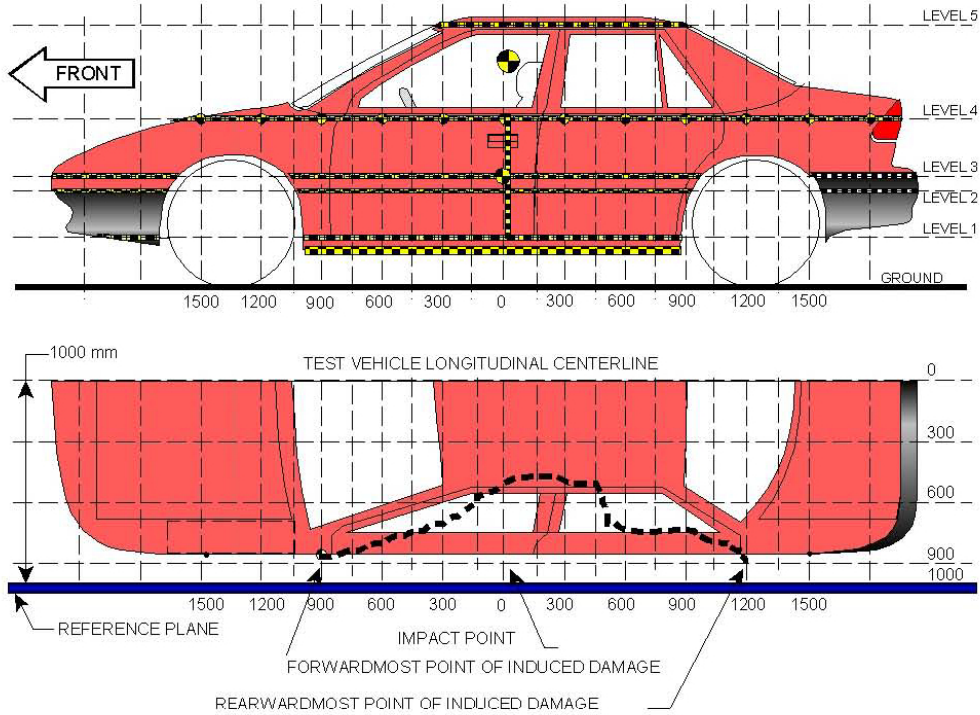
VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	3053	2912	141
B	Front Axle to FSOV	924	924	0
C	Rear Axle to RSOV	1103	1103	0
D	Total Vehicle Length at Centerline	5080	4939	141
E	Front Bumper Thickness	130	130	0
F	Front Bumper Bottom to Ground	245	283	-38
G	Sill Height at Front Wheel Well	158	133	25
H	Sill Height at Front Door Leading Edge	156	135	21
I	Sill Height at B Pillar	166	203	-37
J1	Sill Height at Rear Wheel Well	173	205	-32
J2	Pinch Weld Height at Rear Wheel Well	170	202	-32
K	Sill Height Aft of Rear Wheel Well	243	261	-18
L	Rear Bumper Thickness	104	104	0
M	Rear Bumper Bottom to Ground	261	250	11
N	Sill Height to Bottom of Front Window Sill	762	723	39
O	Front Door Leading Edge to Impact CL	759	756	3
P	Rear Door Trailing Edge to Impact CL	1329	1364	-35
Q	Front Window Opening	437	425	12
R	Right Side Length	4495	4505	-10
S	Left Side Length	4495	4330	165
T	Vehicle Width at B-Pillars	1891	1814	77

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

Test Vehicle: 2012 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012



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	236
2	Occupant Hip Point	572
3	Mid Door	638
4	Window Sill	984
5	Window Top	1411

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

Test Vehicle: 2012 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012

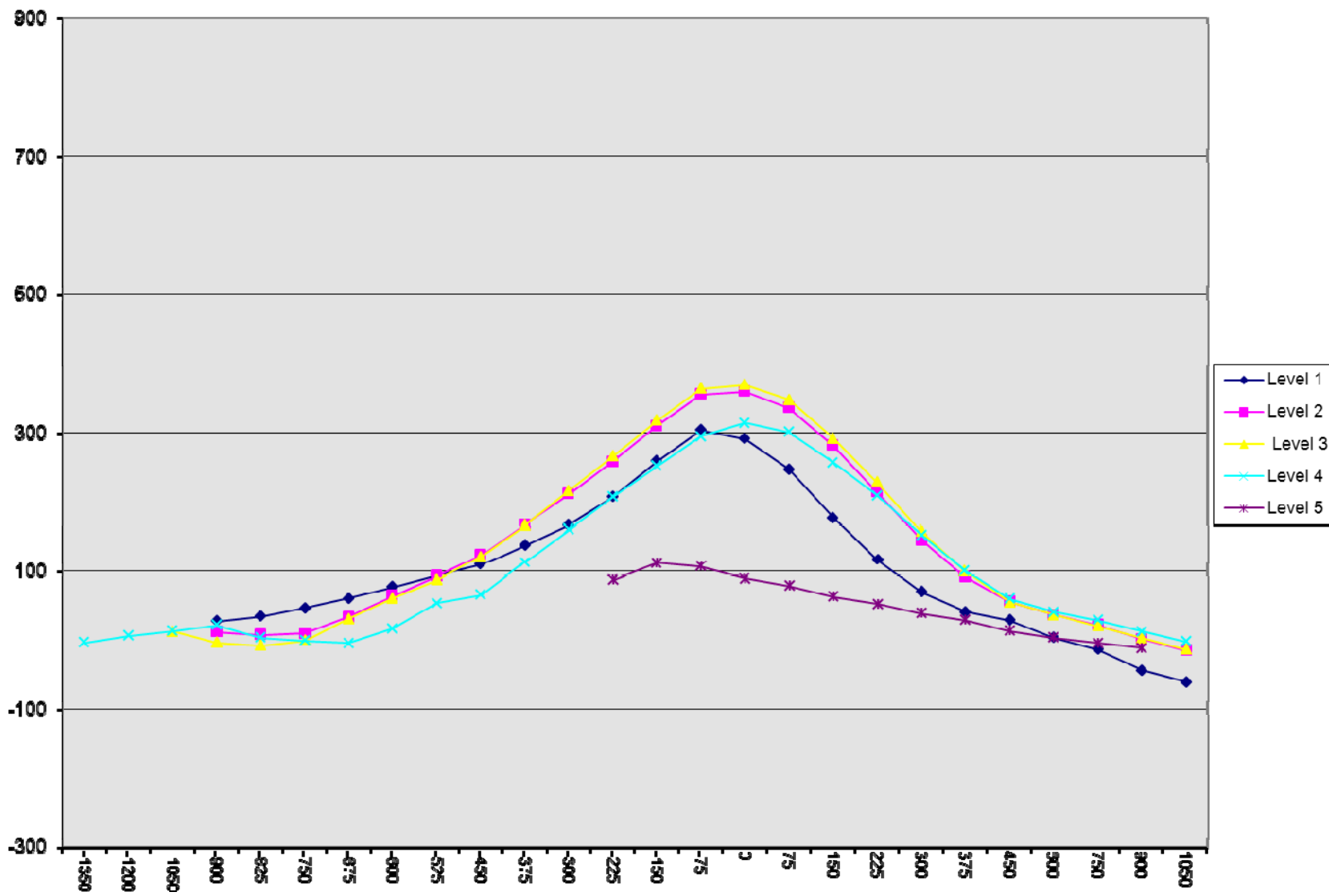
	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-1350				282					280						-2
-1200				260					268						8
-1050			161	254				175	269				14	15	
-900	208	165	162	249		237	178	160	272		29	13	-2	23	
-825	211	164	161	249		247	173	155	254		36	9	-6	5	
-750	214	165	162	250		262	176	163	251		48	11	1	1	
-675	217	164	161	249		279	199	193	246		62	35	32	-3	
-600	219	163	160	251		297	228	222	269		78	65	62	18	
-525	221	171	173	250		315	264	261	305		94	93	88	55	
-450	223	178	173	248		333	302	295	315		110	124	122	67	
-375	223	177	171	248		361	344	337	362		138	167	166	114	
-300	224	175	170	246		391	386	386	407		167	211	216	161	
-225	224	174	168	243	501	431	432	434	450	589	207	258	266	207	88
-150	224	173	166	241	494	483	483	484	493	606	259	310	318	252	112
-75	224	171	165	238	490	528	527	529	533	597	304	356	364	295	107
0	222	170	163	235	487	513	530	533	549	577	291	360	370	314	90
75	223	168	162	231	484	470	504	510	532	563	247	336	348	301	79
150	224	167	161	227	479	401	448	453	484	543	177	281	292	257	64
225	224	166	159	222	478	341	380	387	431	531	117	214	228	209	53
300	224	165	159	216	475	295	311	317	369	515	71	146	158	153	40
375	225	164	158	213	473	267	256	258	314	503	42	92	100	101	30
450	224	164	158	207	470	254	221	214	268	485	30	57	56	61	15
600	224	163	157	202	472	229	201	195	244	477	5	38	38	42	5
750	220	161	155	194	474	208	184	177	224	471	-12	23	22	30	-3
900	225	160	154	188	485	183	163	158	202	475	-42	3	4	14	-10
1050	226	157	152	187		167	144	140	186		-59	-13	-12	-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 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012



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

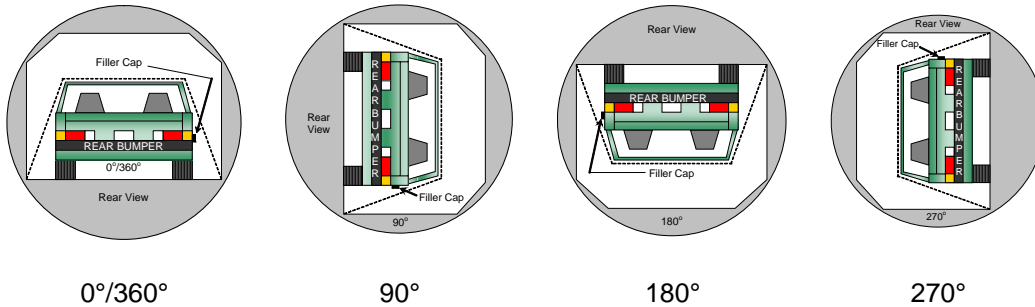
Test Vehicle: 2012 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012

Test Time: 9:46 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°	118	300	418
90° to 180°	113	300	413
180° to 270°	109	300	409
270° to 360°	115	300	415

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

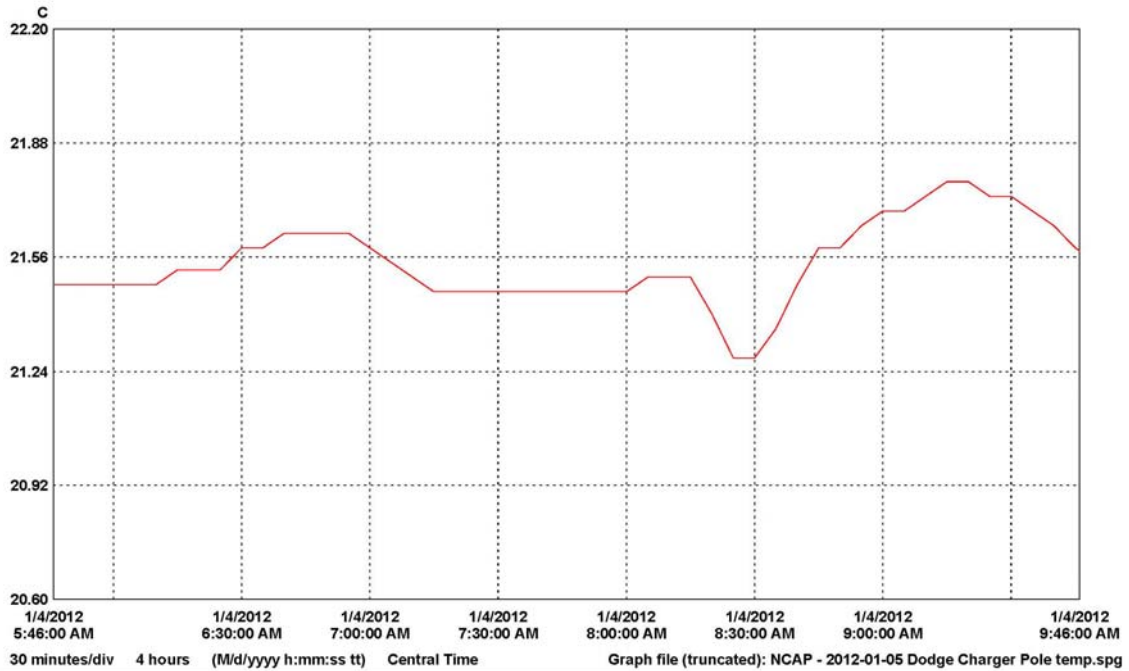
ROLLOVER SOLVENT SPILLAGE LOCATION TABLE

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 Dodge Charger SE 4-Dr Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. MC0318
 Test Date: 1/04/2012



LN	Serial #	Description	CH	Value	Maximum	Average	Minimum	Units	CH description	Logger file
1	05122082	05122082	1	21.77	21.54	21.28	C	Temperature	05122082_05122082.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.	Post-Test Overhead View of Test Area	A-9
Photo No. 18.	Pre-Test Left Side View of Pole Positioned Against Side of Vehicle	A-9
Photo No. 19.	Pre-Test Right Side View of Pole Positioned Against Side of Vehicle	A-10
Photo No. 20.	Pre-Test Close-Up View of Impact Point Target	A-10
Photo No. 21.	Post-Test Close-Up View of Impact Point Target Showing Impact Location	A-11
Photo No. 22.	Pre-Test Front Close-Up View of Dummy Head and Chest	A-11
Photo No. 23.	Post-Test Front Close-Up View of Dummy	A-12
Photo No. 24.	Pre-Test Left Side View of Dummy Showing Belt and Chalking	A-12

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

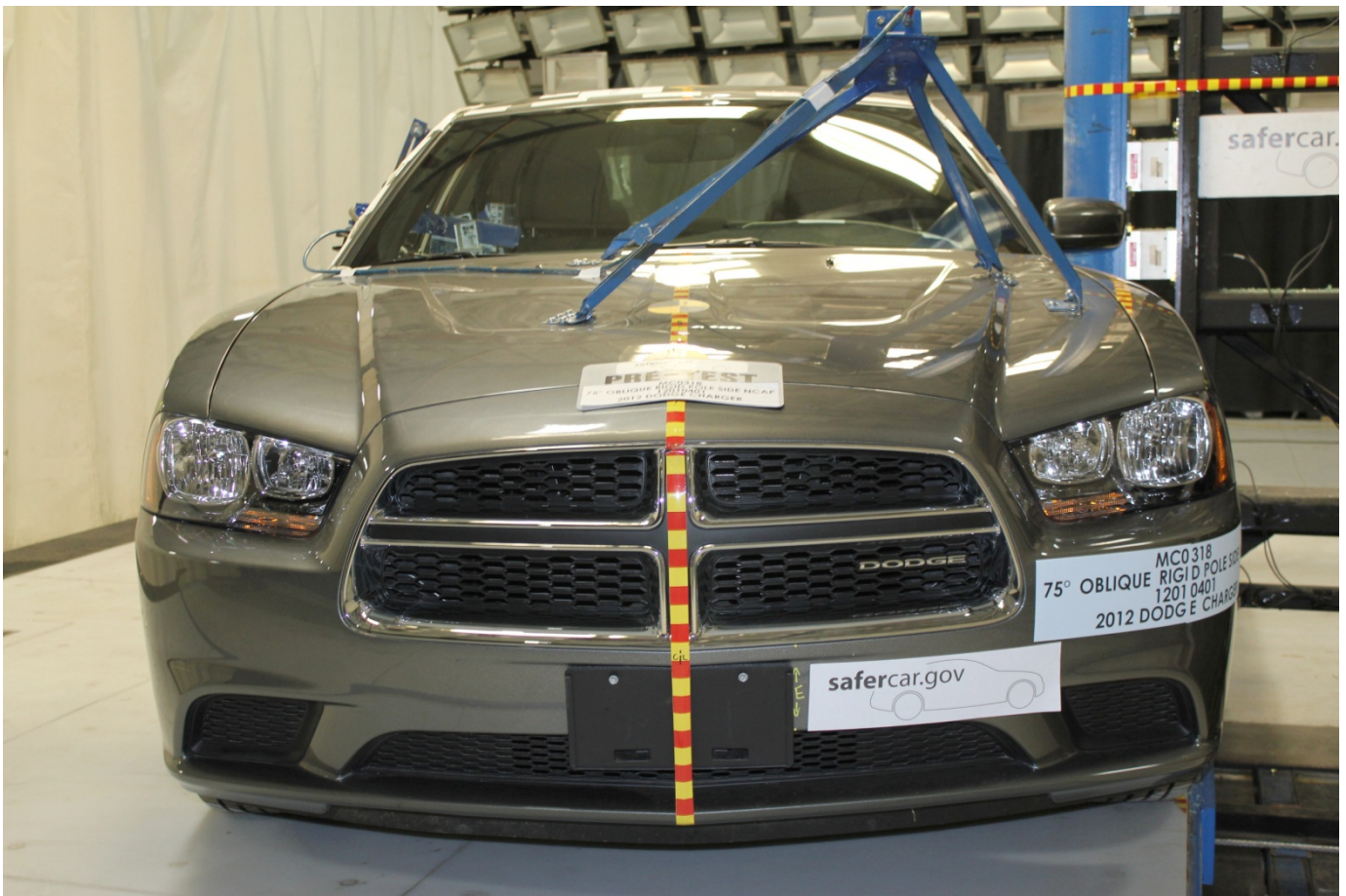
	<u>Page No.</u>
Photo No. 51. Post-Test Dummy Close-Up Torso Contact with Side Air Bag View	A-26
Photo No. 52. Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View	A-26
Photo No. 53. Post-Test Dummy Close-Up Pelvis Contact with Side Air Bag View	A-27
Photo No. 54. Pre-Test View of Fuel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



As Delivered Right Front ¾ View of Test Vehicle



As Delivered Left Rear ¾ View of Test Vehicle



Pre-Test Frontal View of Test Vehicle



Post-Test Frontal View of Test Vehicle



Pre-Test Left Front ¾ View of Test Vehicle



Post-Test Left Front ¾ 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



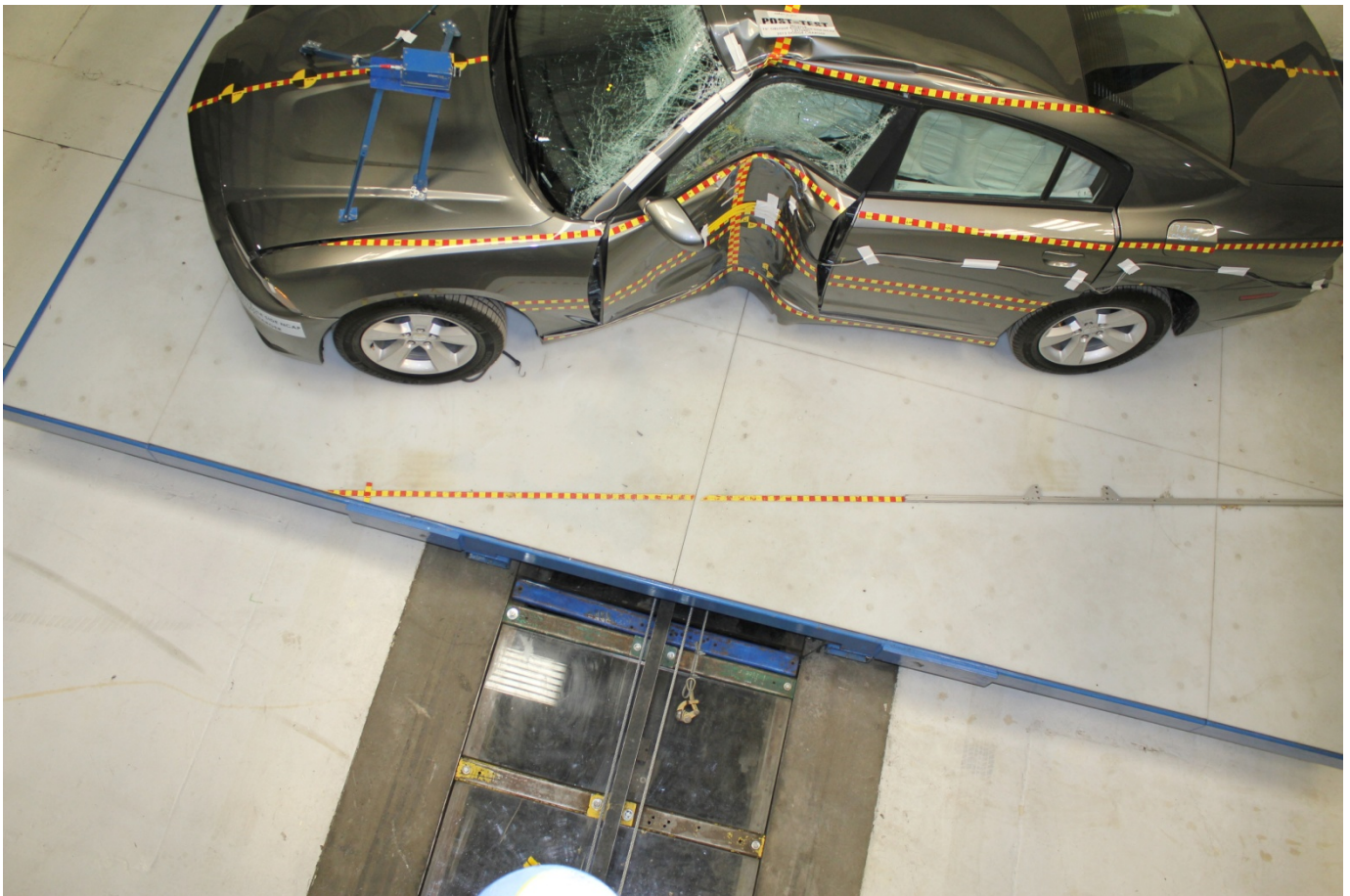
Pre-Test Right Side View of Test Vehicle



Post-Test Right Side View of Test Vehicle



Pre-Test Overhead View of Test Area



Post-Test Overhead View of Test Area



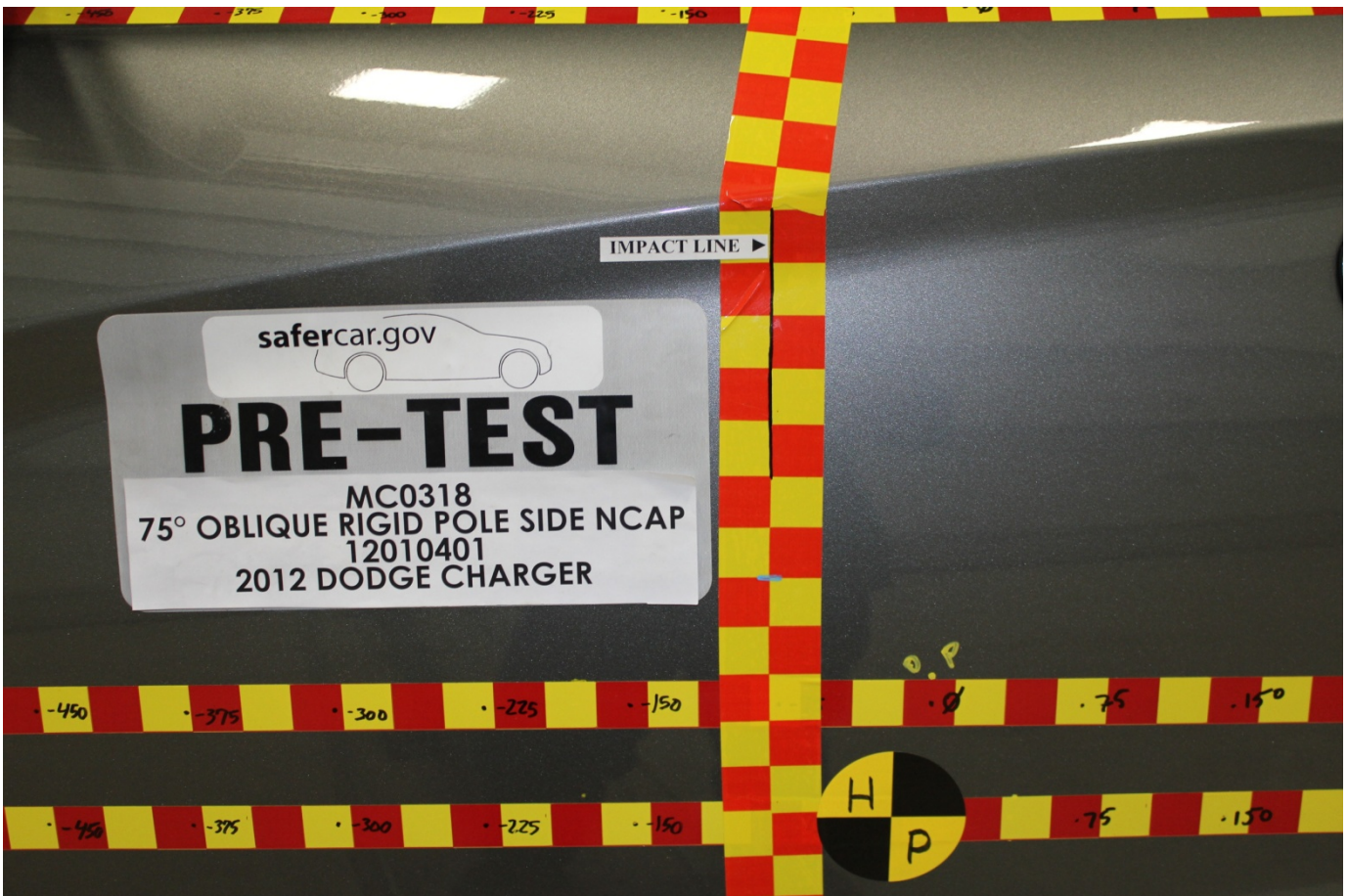
Post-Test Overhead View of Test Area



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



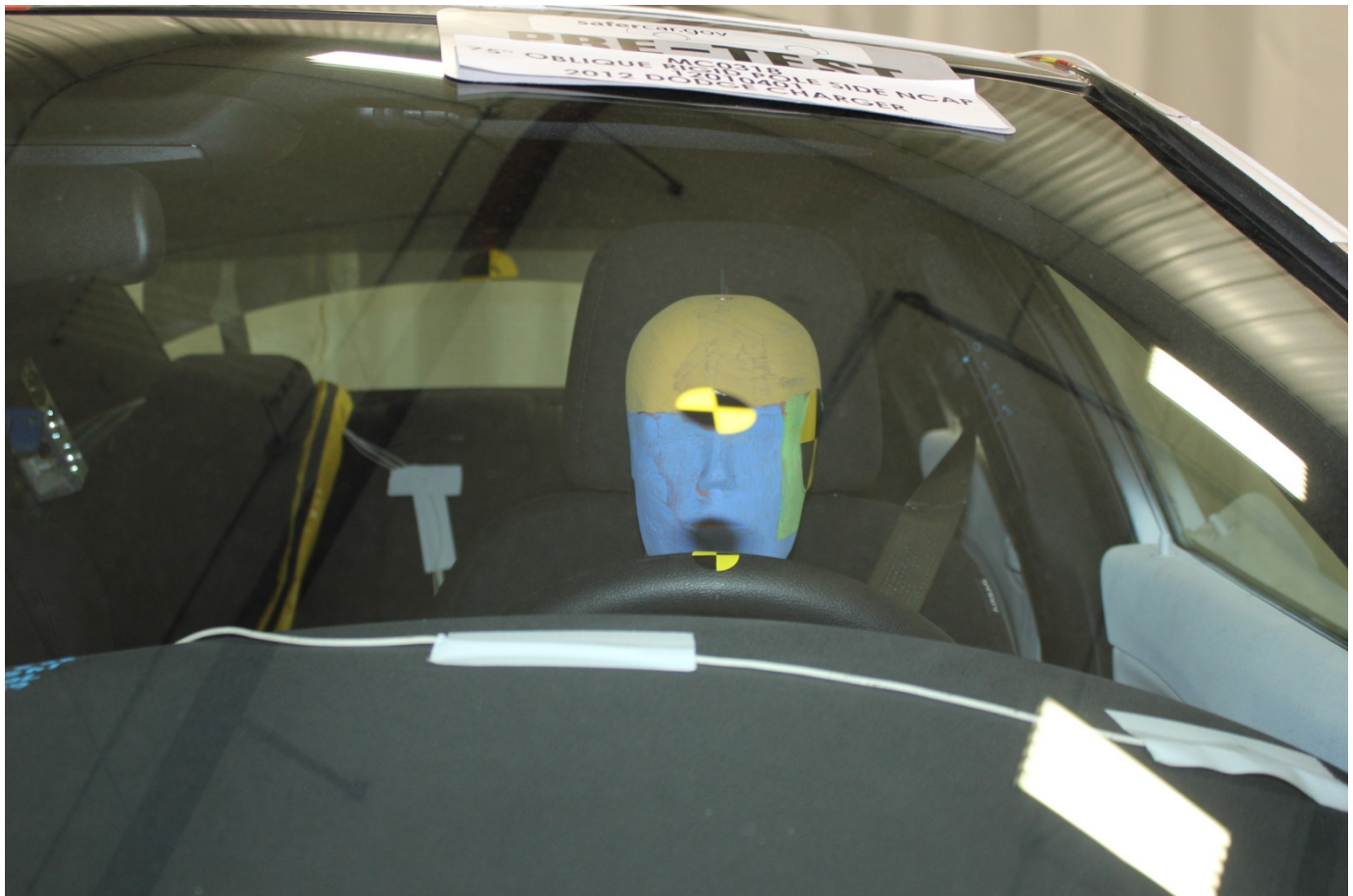
Pre-Test Right Side View of Pole Positioned Against Side of Vehicle



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



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



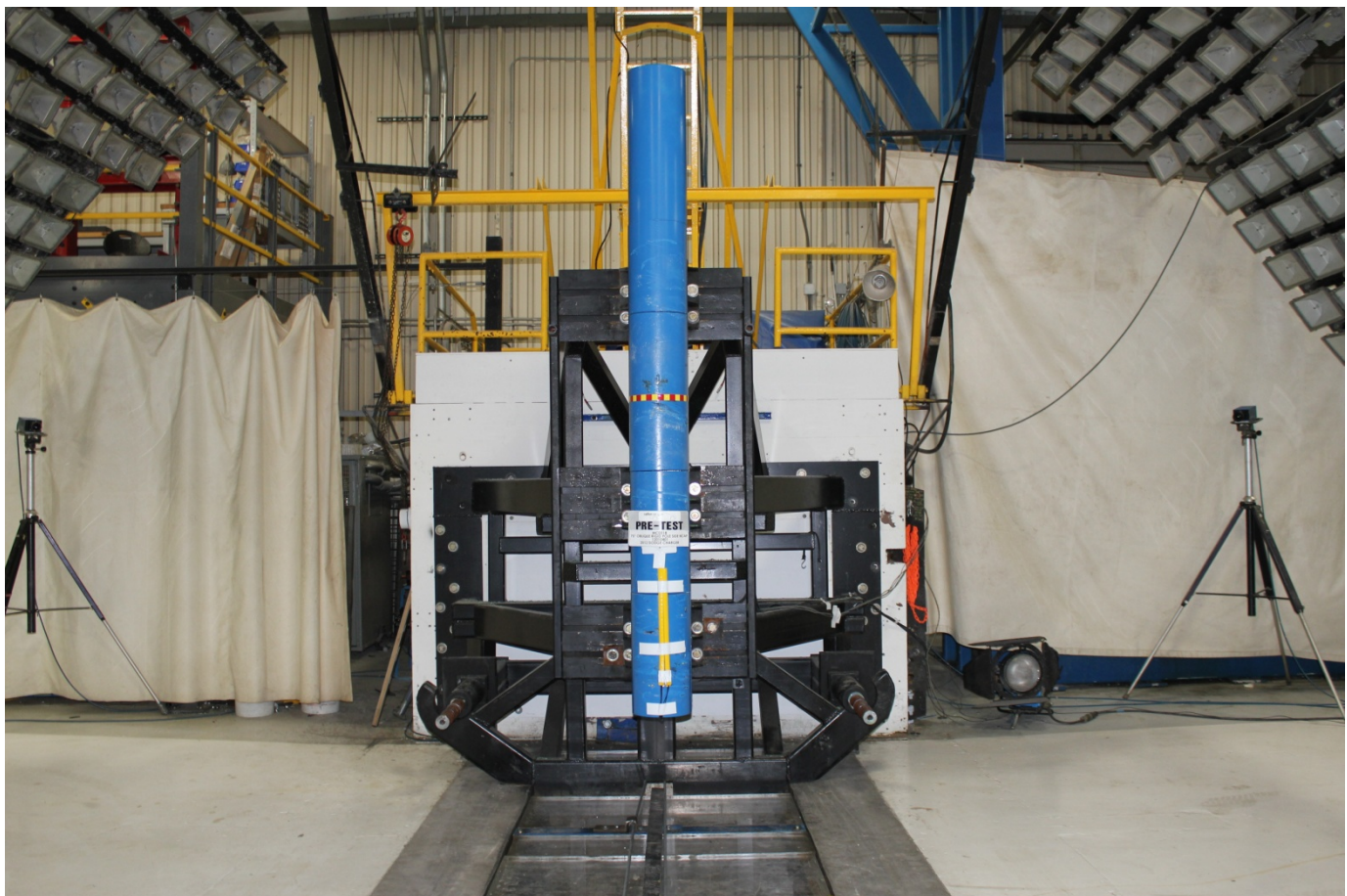
Post-Test View of Fuel Filler Cap or Fuel Filler Neck



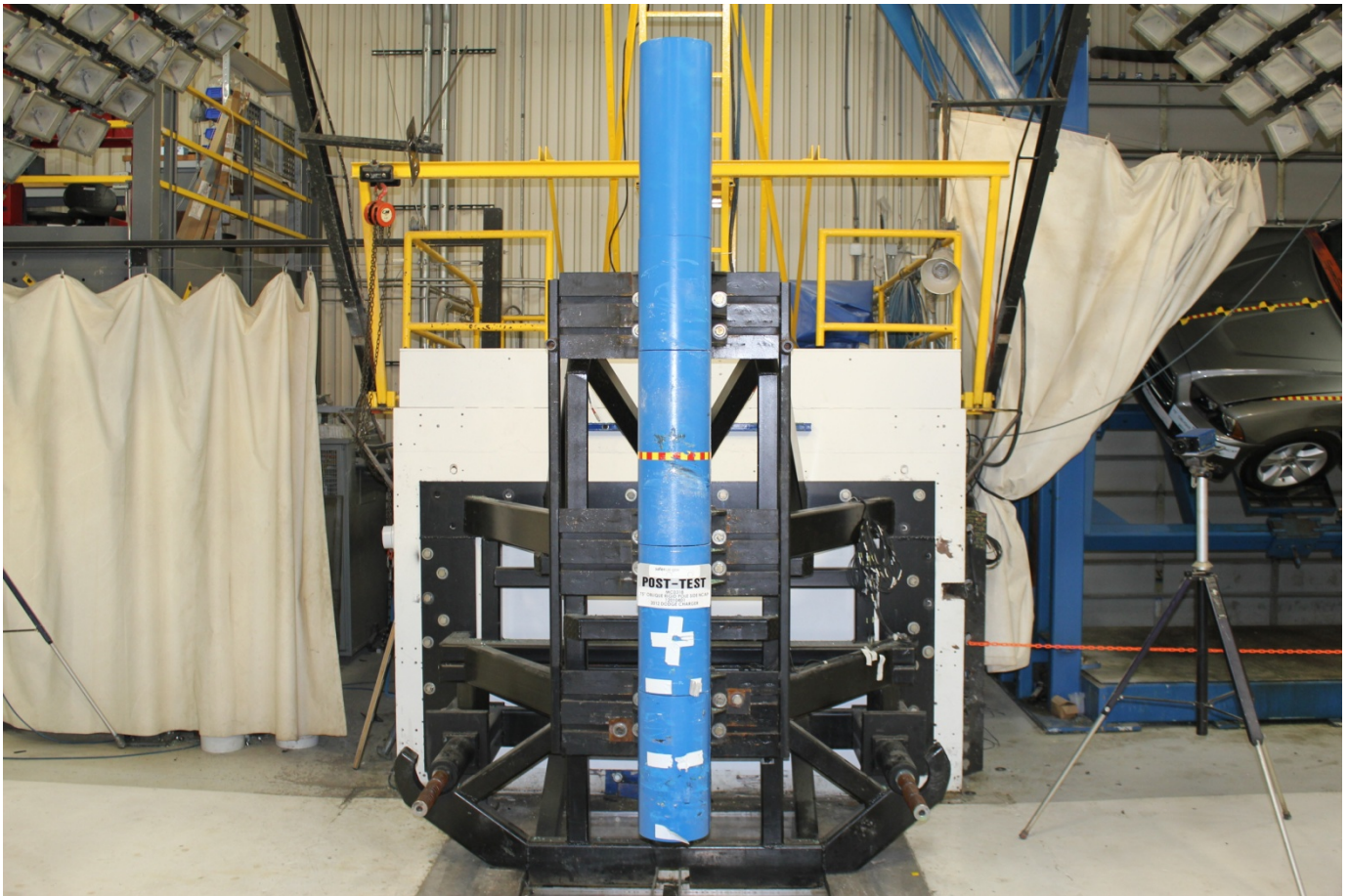
Close-Up View of Vehicle's Certification Label



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



Pre-Test Pole Barrier Front View



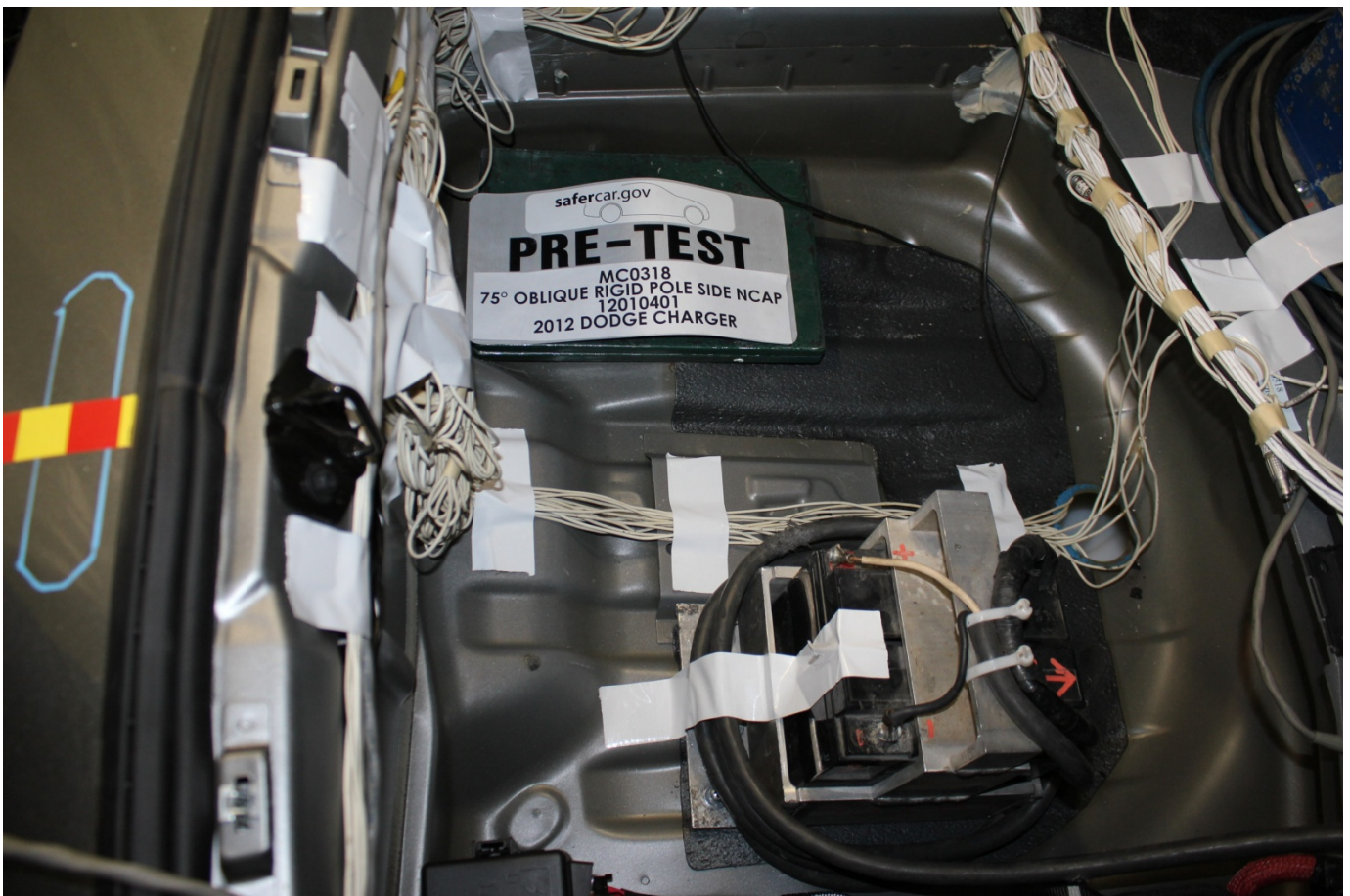
Post-Test Pole Barrier Front View



Pre-Test Pole Barrier Side View



Post-Test Pole Barrier Side View



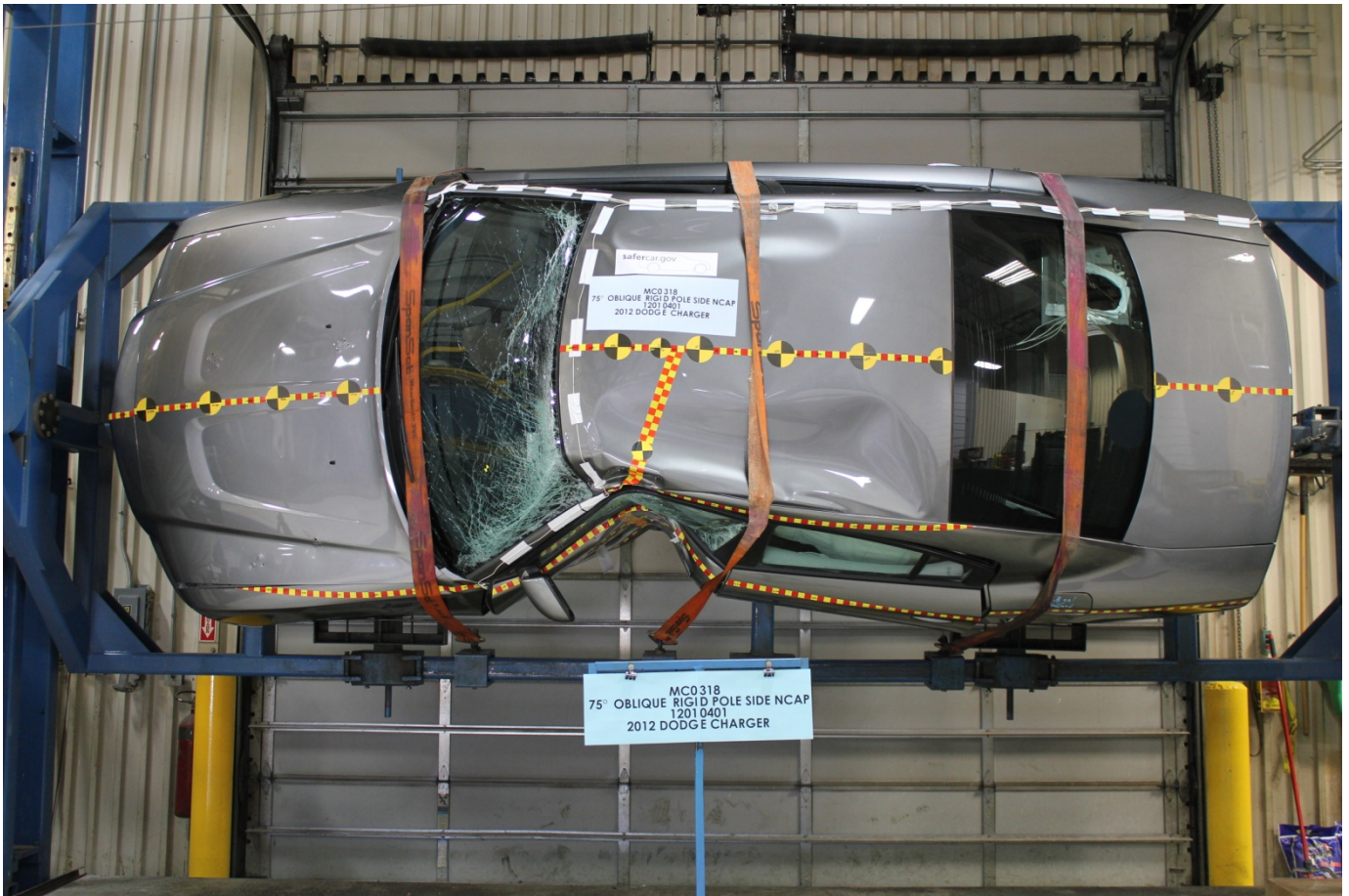
Pre-Test Ballast View



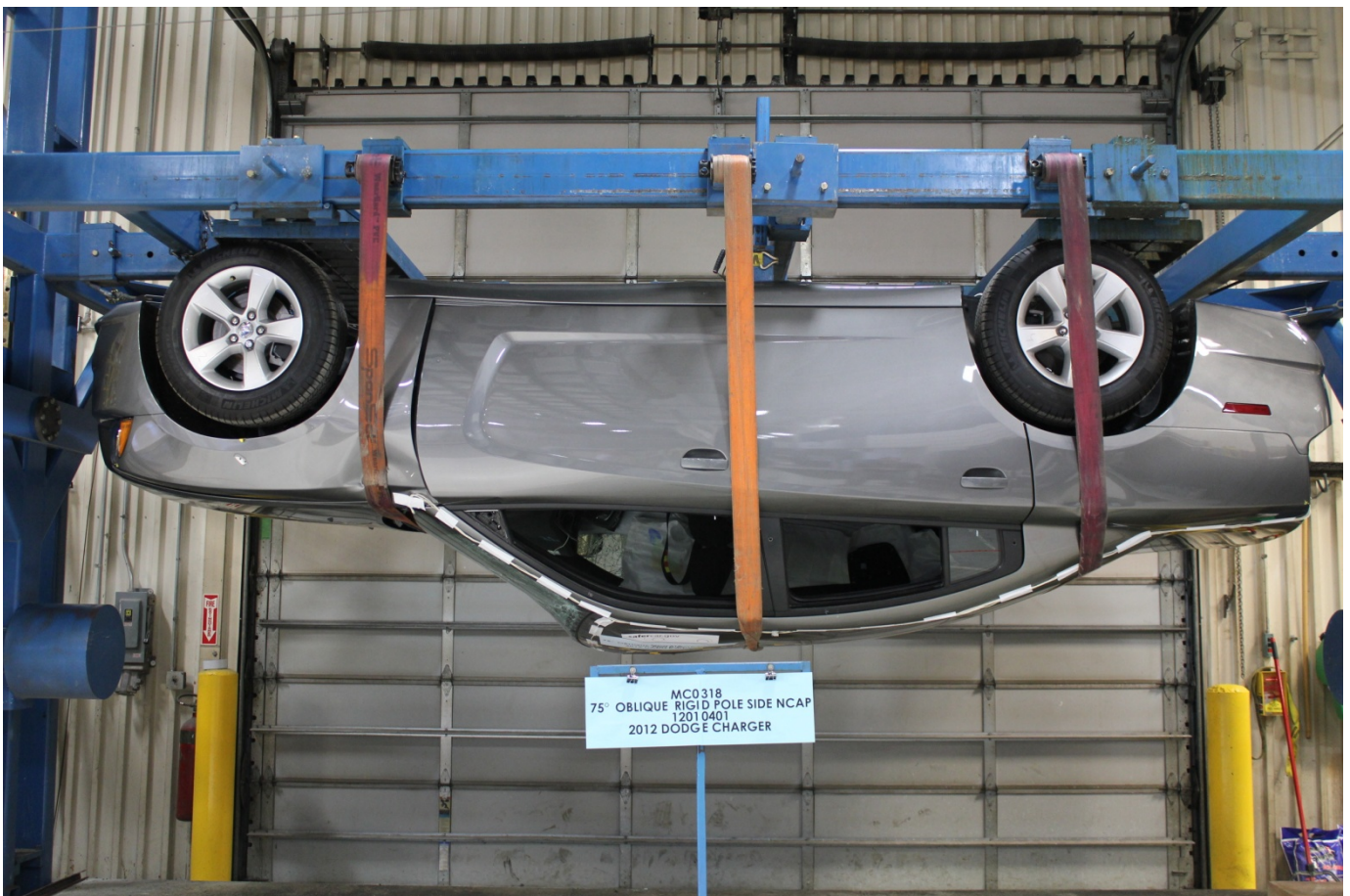
Post-Test Primary and Redundant Speed Trap Read-Out



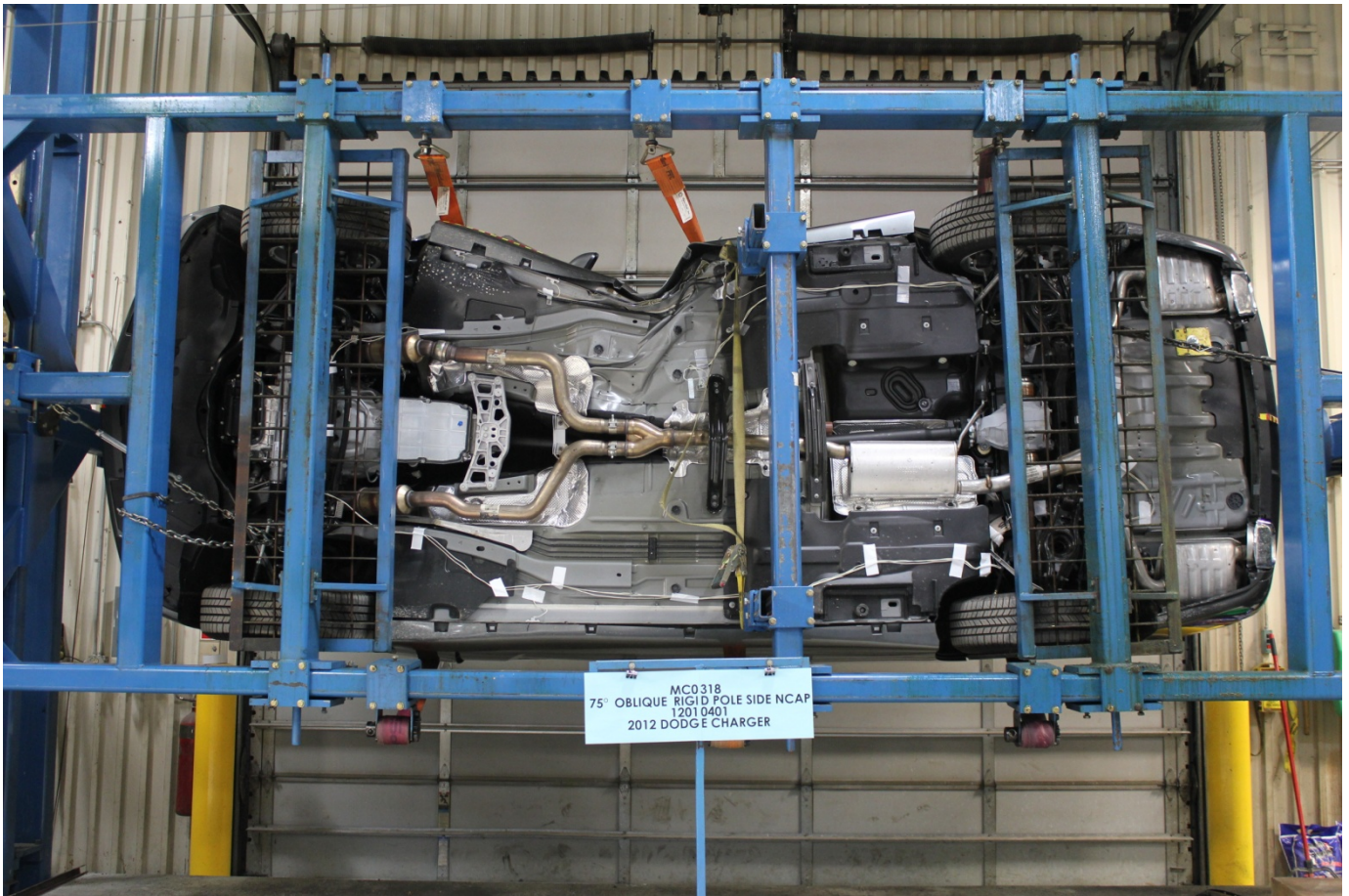
FMVSS No. 301 Static Rollover 0 Degrees



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 DODGE CHARGER SE

THIS VEHICLE IS MANUFACTURED TO MEET SPECIFIC UNITED STATES REQUIREMENTS. THIS VEHICLE IS NOT MANUFACTURED FOR SALE OR REGISTRATION OUTSIDE OF THE UNITED STATES.

MANUFACTURER'S SUGGESTED RETAIL PRICE OF THIS MODEL INCLUDING DEALER PREPARATION

Base Price: \$25,495

DODGE CHARGER SE RWD
 Exterior Color: Temptation Metallic Clear Coat Exterior Paint
 Interior Color: Black Interior Color
 Interior: Cloth Low-Back Bucket Seats
 Engine: 3.6 Liter V6 VVT Plusstar Engine
 Transmission: 5-Speed Automatic Transmission

STANDARD EQUIPMENT (UNLESS REPLACED BY OPTIONAL EQUIPMENT)

FUNCTIONAL/SAFETY FEATURES

- Advanced Multistage Front Airbags
- Supplemental Front Seat-Mounted Side Airbags
- Supplemental Side-Curtain Front and Rear Airbags
- Reactive Head Restraints
- Anti-Lock 4-Wheel Disc Brakes
- Electronic Stability Control
- All-Speed Traction Control
- Hill Start Assist
- Rain Brake Support
- Ready Alert Braking
- AutoStick Automatic Transmission
- Touring Suspension
- Electro-Hydraulic Power Steering
- 19.1-Gallon Fuel Tank
- Tire Pressure Monitoring Display
- Outside Temperature Display
- Color Electronic Veh Info Cr w/Reconfigure Display
- Keyless Enter-N-Go
- Remote Windows Down
- Power Windows w/ Front One-Touch-Up & Down Feature
- Speed Control

INTERIOR FEATURES

- Power 6-Way Driver Seat
- Rear 60 / 40 Folding Seat
- Rear-Seat Armrest with Cup Holder
- Illuminated Rear Assist Handles
- Illuminated Front Cup Holders
- Sun Visors with Illuminated Vanity Mirrors
- Glove Box Lamp
- Air Conditioning with Dual Zone Temperature Control

- Uconnect Touch 4.3 CD/MP3
- Audio Jack Input for Mobile Devices
- Remote USB Port
- 6 Speakers
- Steering Wheel-Mounted Audio Controls
- Tilt / Telescoping Steering Column
- Weaved Micro Aluminum Lithographic Interior Accents

EXTERIOR FEATURES

- 17-inch x 7.0-inch Painted Aluminum Wheel
- P215/65 R17 BSW All Season Tires
- Compact Spare Tire
- Automatic Headlamps
- Acoustic Windshield
- Acoustic Front Door Glass
- Power Mirrors with Manual Fold-Away
- Remote Fuel Door Release
- Capless Fuel Filler
- Dual Bright Exhaust Tips

OPTIONAL EQUIPMENT

- 230 Charger SE
- Flex Fuel Vehicle

DESTINATION CHARGE \$825

TOTAL PRICE: * \$26,320

WARRANTY COVERAGE
 5-year or 100,000-mile Powertrain Limited Warranty.
 3-year or 36,000-mile Basic Limited Warranty.
 24-hour towing assistance; certain restrictions apply.
 Ask Dealer for a copy of the limited warranties or see your owner's manual for details.

5 YEAR / 100,000 MILE POWERTRAIN WARRANTY

Assembly Plant/Part of Origin: BRAMPTON, ONTARIO, CANADA

SHIP TO: 0207 30
 WILDE CHRYSLER JEP 0006
 1718 WILSON ST
 WILSON, WI 53186-3807

SOLD TO: 4787
 WILDE CHRYSLER JEP 0006
 1718 WILSON ST
 WILSON, WI 53186-3807

THIS LABEL IS ADDED TO THE VEHICLE TO COMPLY WITH FEDERAL LAW. THE LABEL CANNOT BE REMOVED OR ALTERED PRIOR TO DELIVERY TO THE END USER. THIS LABEL IS ADDED TO THE VEHICLE TO COMPLY WITH FEDERAL LAW. THE LABEL CANNOT BE REMOVED OR ALTERED PRIOR TO DELIVERY TO THE END USER. THIS LABEL IS ADDED TO THE VEHICLE TO COMPLY WITH FEDERAL LAW. THE LABEL CANNOT BE REMOVED OR ALTERED PRIOR TO DELIVERY TO THE END USER.



For more information visit: www.dodge.com or call 1-800-4ADODGE

Chrysler Group LLC

EPA Fuel Economy Estimates

These estimates reflect new EPA methods beginning with 2008 models.

GASOLINE CITY MPG 18

Expected range for most drivers 14 to 22 MPG

*Fuel economy when operating on this will yield different values than gasoline. See Fuel Economy Guide for more information.

Dual Fuel Vehicle* Gasoline-Ethanol (E85)
Estimated Annual Fuel Cost \$2,642
 based on 15,000 miles at \$3.70 per gallon of gasoline

Combined Gasoline Fuel Economy 21

GASOLINE HIGHWAY MPG 27

Expected range for most drivers 22 to 32 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

This vehicle has not been rated by the government for frontal crash, side crash or rollover risk.

Source: National Highway Traffic Safety Administration (NHTSA).

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

Bumper Performance

This vehicle is equipped with bumper systems that can withstand a frontal barrier impact speed of 2.5 miles per hour and a rear barrier impact speed of 2.5 miles per hour with no more damage than allowed by the Federal bumper standard. The Federal bumper standard allows damage to the bumpers and attaching hardware and specifies barrier tests to be conducted at 2.5 miles per hour.

PARTS CONTENT INFORMATION

FOR VEHICLES IN THIS CARLINE: U.S./CANADIAN PARTS CONTENT: 63% MAJOR SOURCES OF FOREIGN PARTS CONTENT:

MEXICO: 15% NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON-PARTS COSTS.

FOR THIS VEHICLE: FINAL ASSEMBLY POINT: BRAMPTON, ONTARIO, CANADA

COUNTRY OF ORIGIN: ENGINE: MEXICO TRANSMISSION: GERMANY

Monroney Label

Head Restraints

Head restraints are designed to reduce the risk of injury by restricting head movement in the event of a rear impact. Head restraints should be adjusted so that the top of the head restraint is located above the top of your ear.

WARNING!

The head restraints for all occupant's must be properly adjusted prior to operating the vehicle or occupying a seat. Head restraints should never be adjusted while the vehicle is in motion. Driving a vehicle with the head restraints improperly adjusted or removed could cause serious injury or death in the event of a collision.

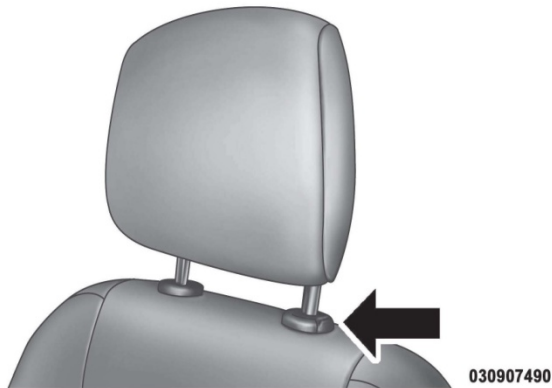
Active Head Restraints — Front Seats

The front driver and passenger seats are equipped with Active Head Restraints (AHR). In the event of a rear impact the AHRs will automatically extend forward minimizing the gap between the back of the occupants head and the AHR.

The AHRs will automatically return to their normal position following a rear impact. If the AHRs do not return to their normal position see your authorized dealer immediately.

To raise the head restraint, pull upward on the head restraint. To lower the head restraint, press the push button, located at the base of the head restraint, and push downward on the head restraint.

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



Push Button

NOTE: The head restraints should only be removed by qualified technicians, for service purposes only. If either of the head restraints require removal, see your authorized dealer.

WARNING!

Do not place items over the top of the Active Head Restraint, such as coats, seat covers or portable DVD players. These items may interfere with the operation of the Active Head Restraint in the event of a collision and could result in serious injury or death.

Rear Head Restraints

The center rear head restraint has two positions, up or down. When the seat is being occupied the head restraint should be raised. When there are no occupants in the center seat position the head restraint can be lowered for maximum visibility for the driver.

To raise the head restraint, pull upward on the head restraint. To lower the head restraint, press the push button, located at the base of the head restraint, and push downward on the head restraint.

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



Post-Test Dummy Knee Contact with Vehicle Interior View

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)

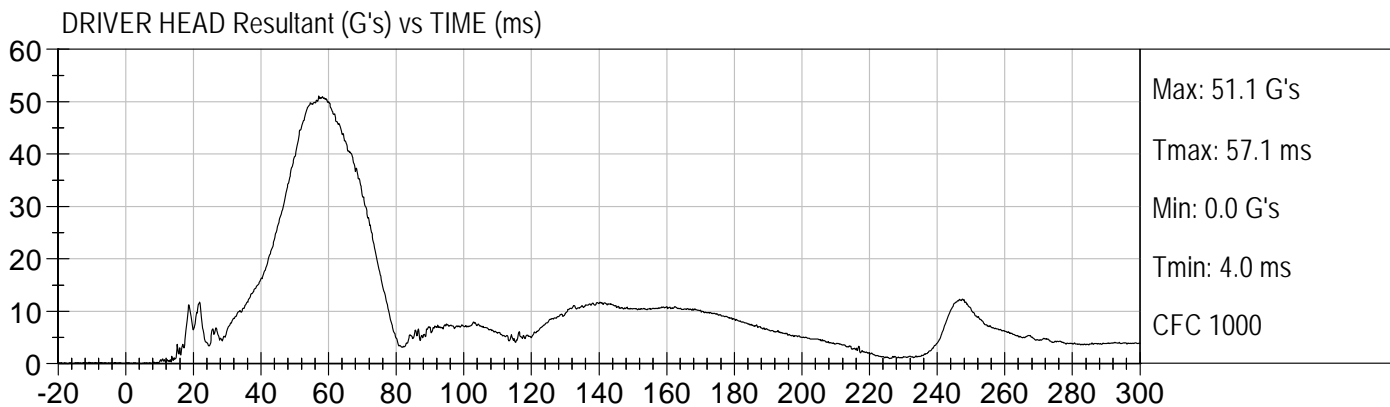
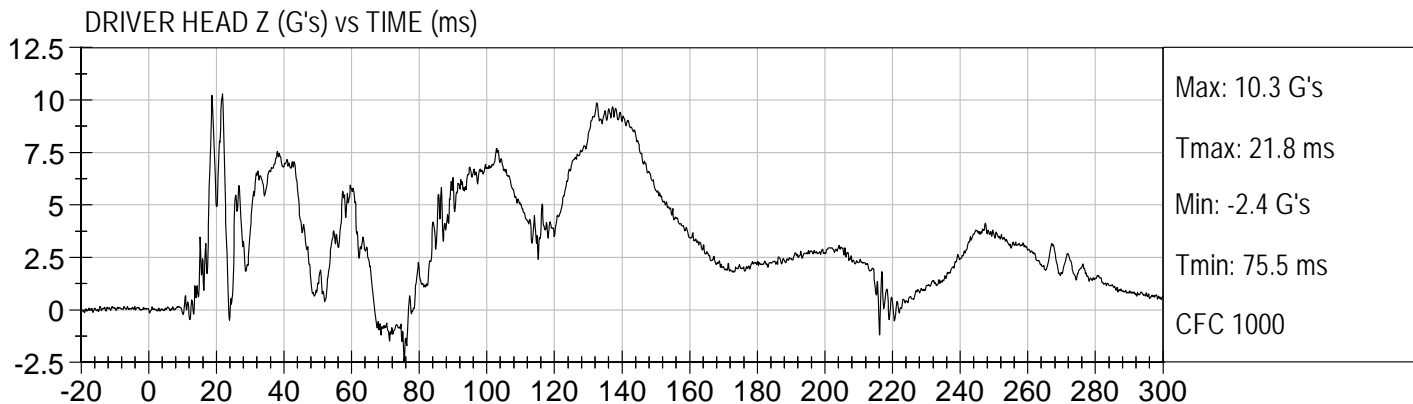
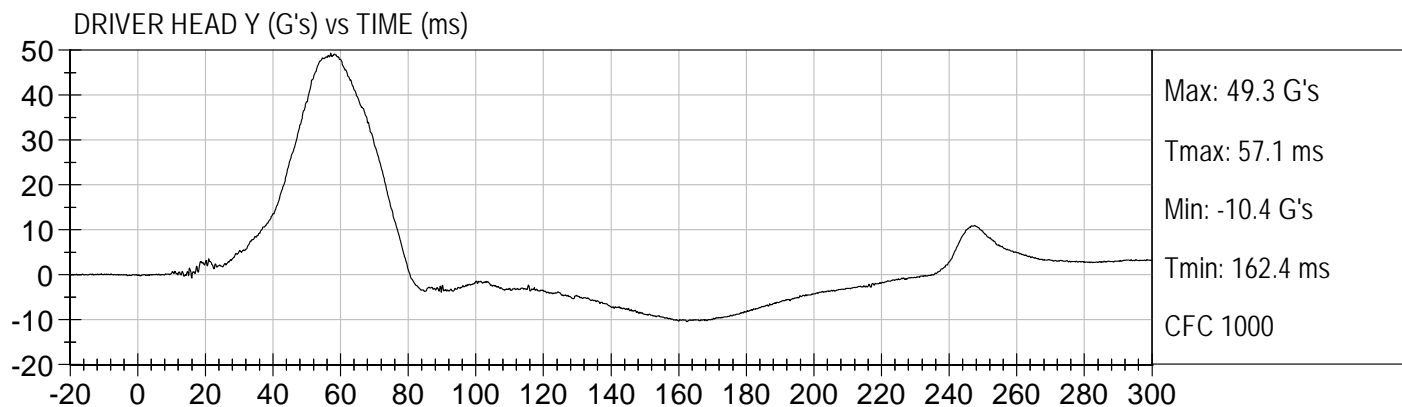
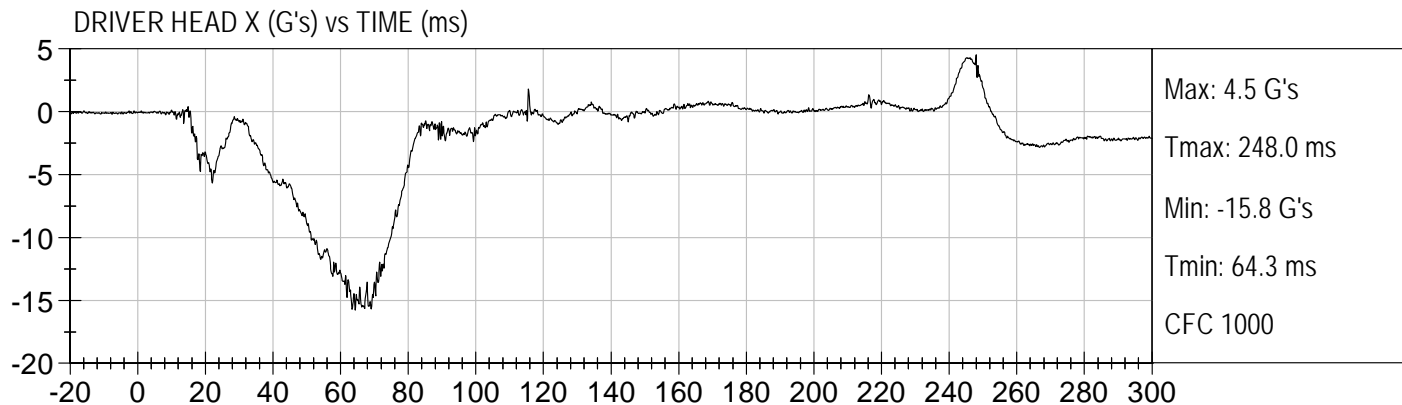
Load Cell Pole Barrier #4 Force (Y)

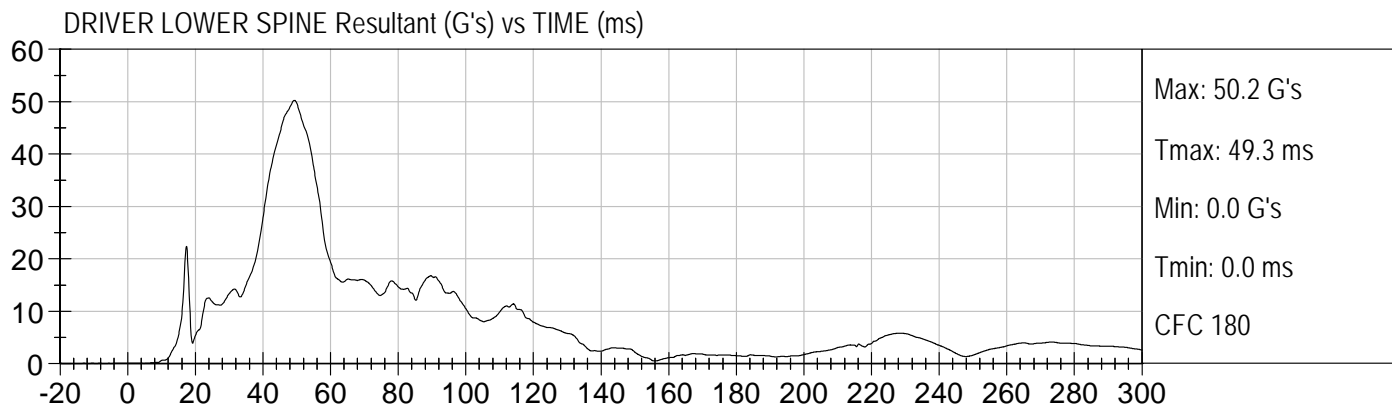
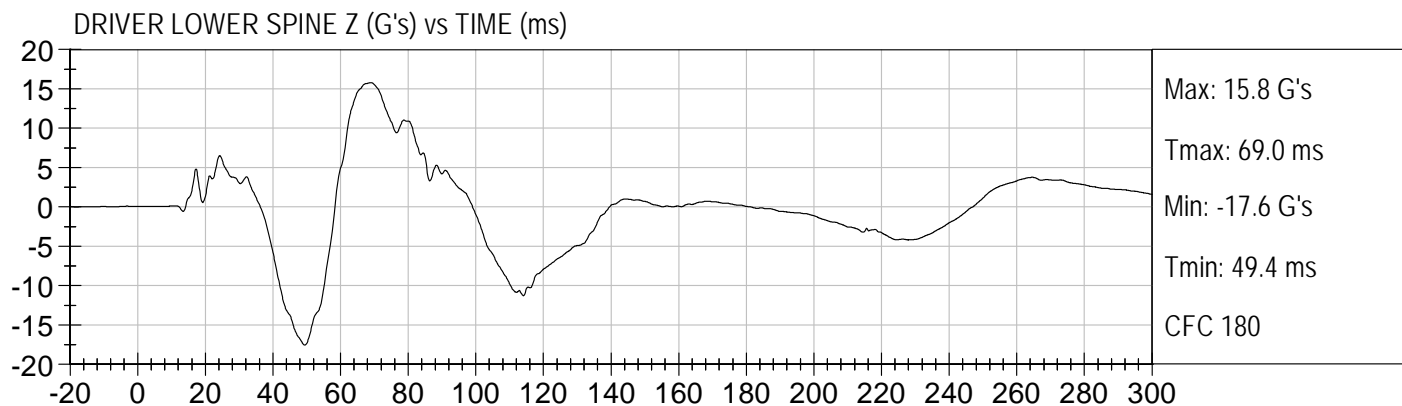
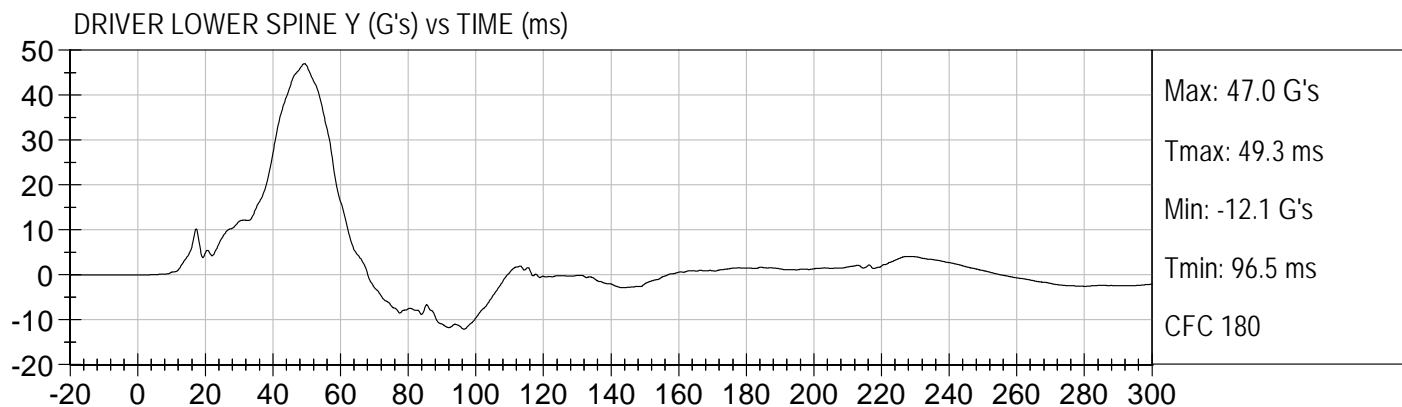
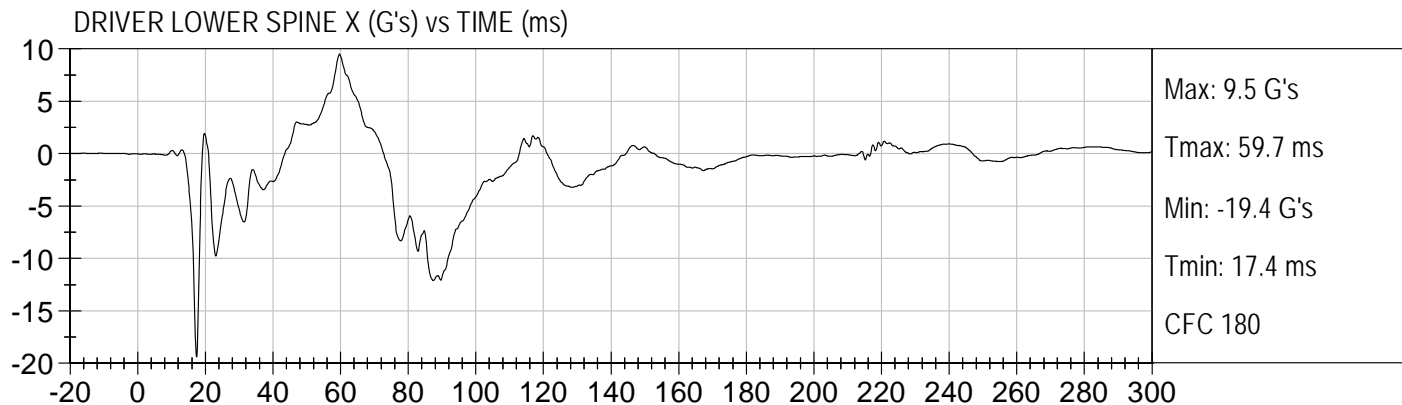
Load Cell Pole Barrier #5 Force (Y)

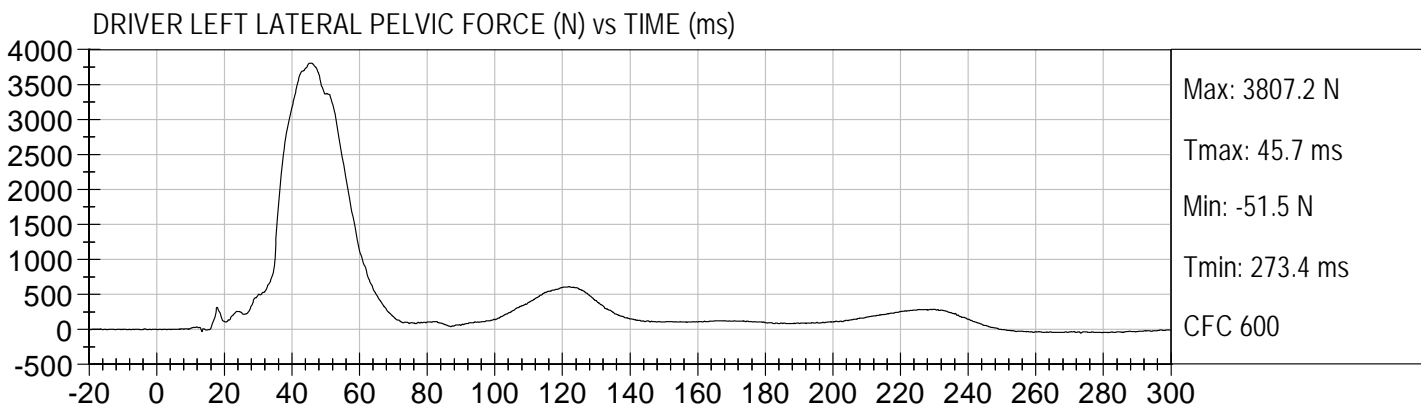
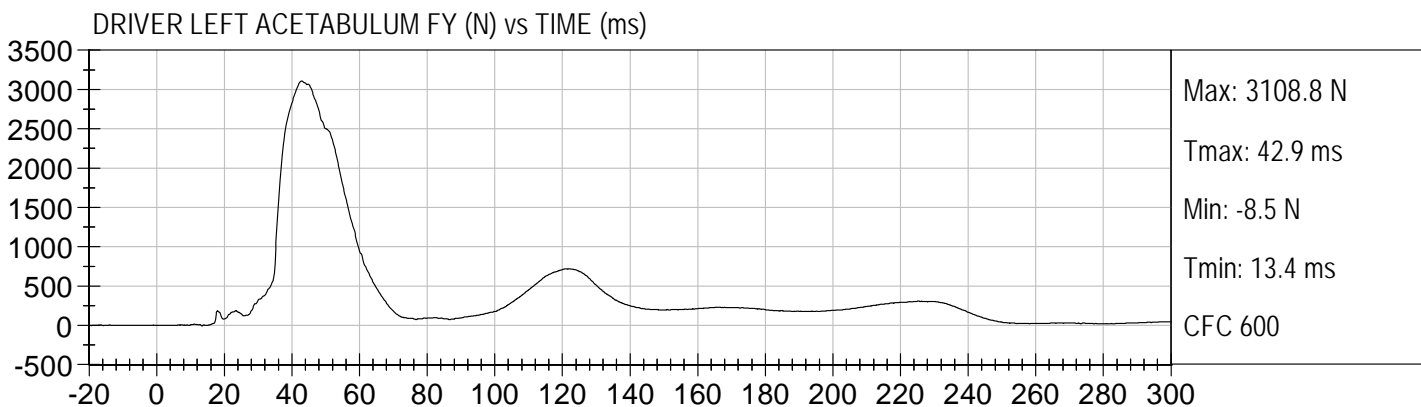
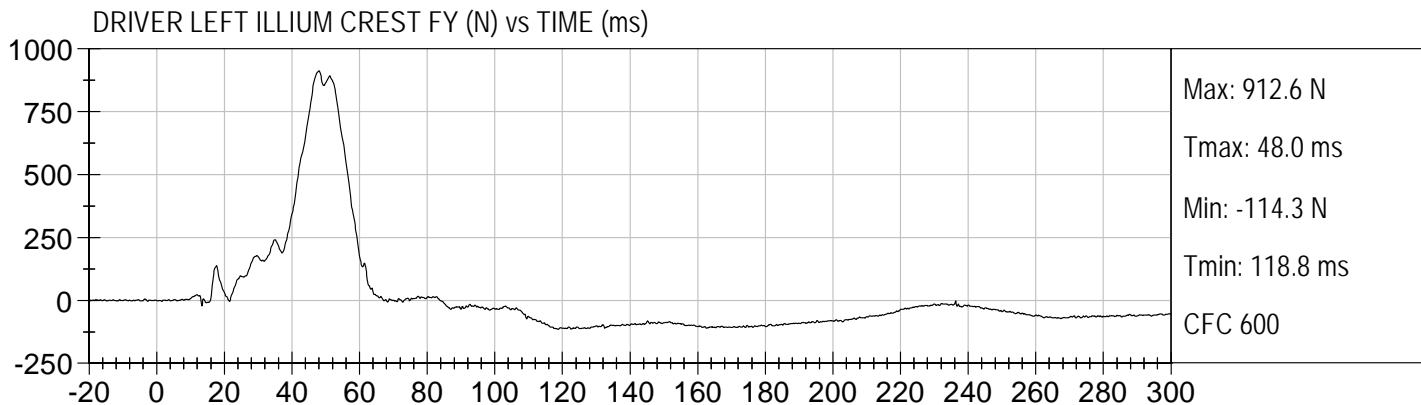
Load Cell Pole Barrier #6 Force (Y)

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

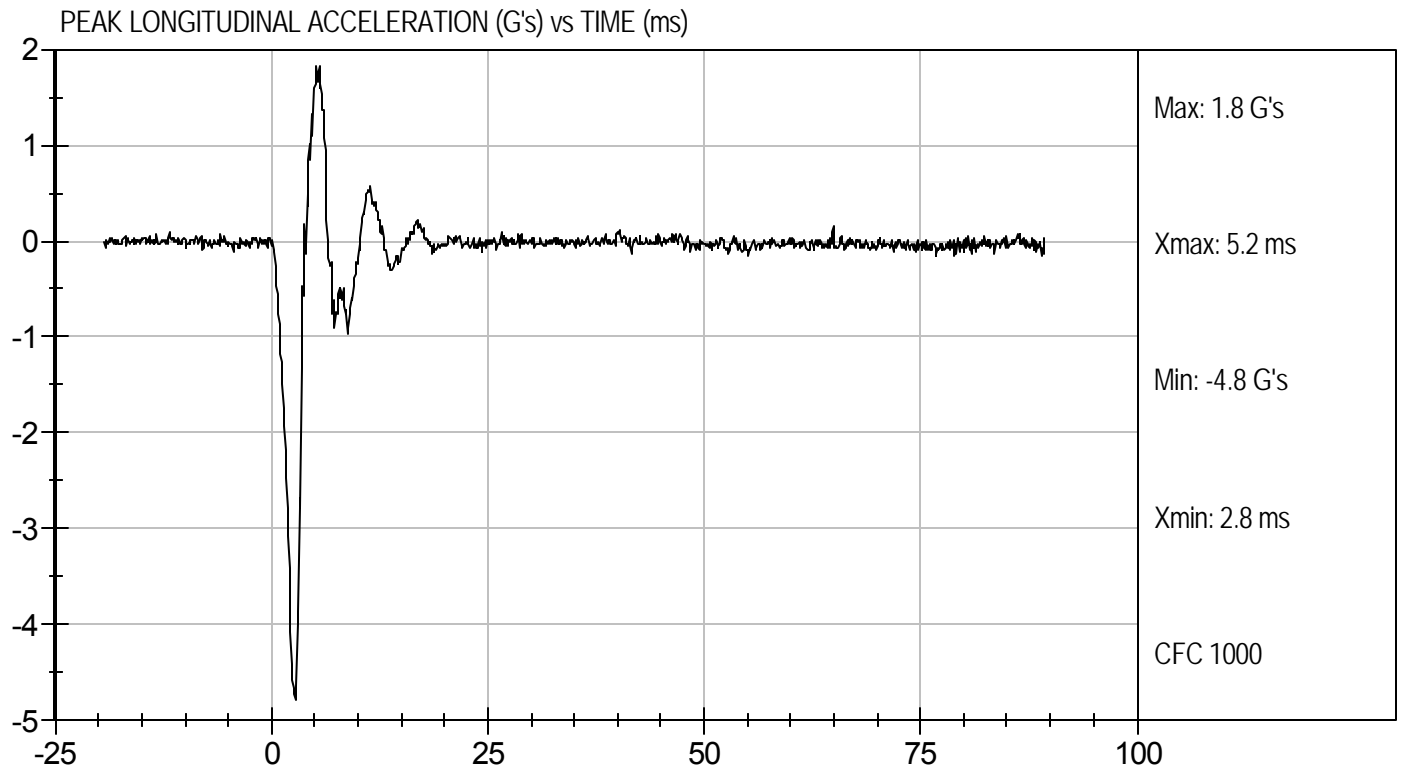
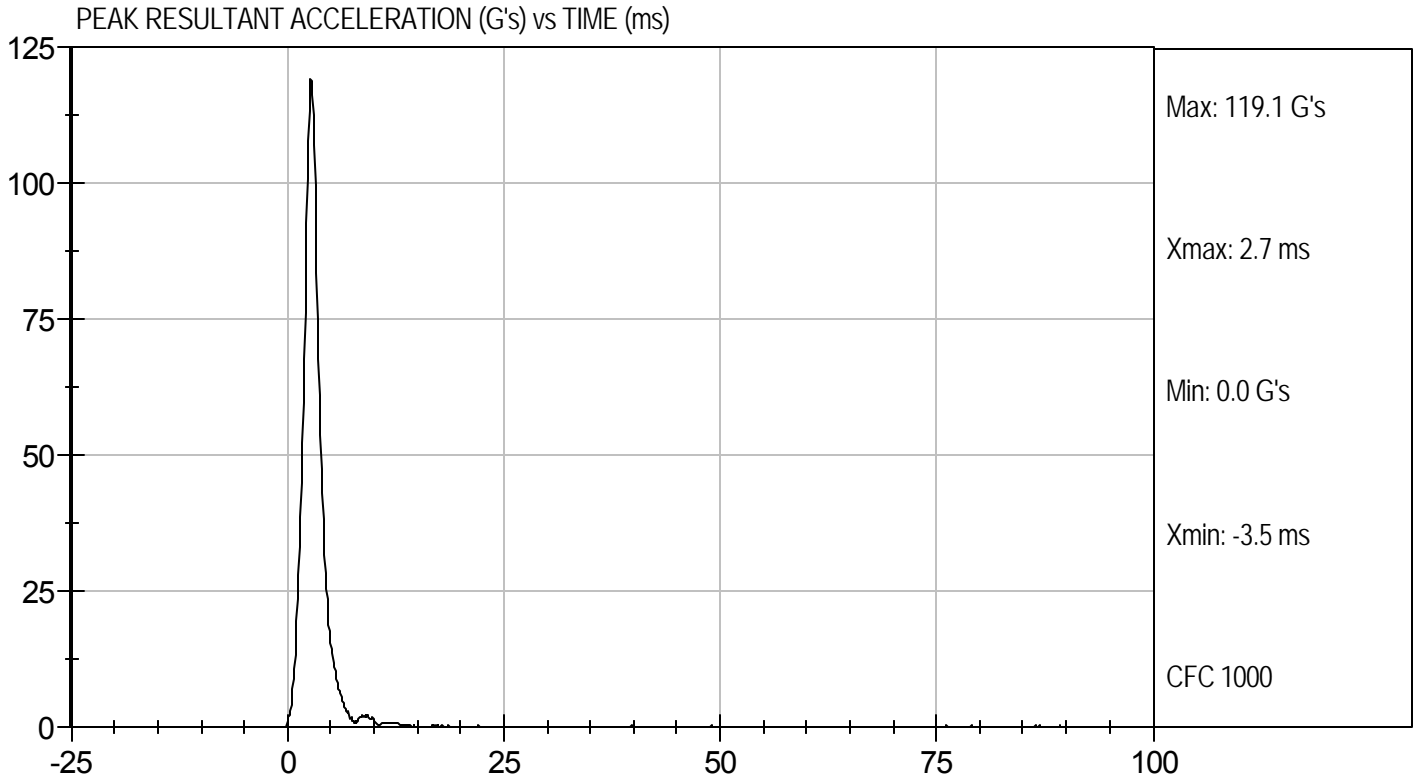
Test ID: D114371

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	20.6 to 22.2	22.0	Pass
Laboratory Relative Humidity	%	10 to 70	27	Pass
Peak Resultant Acceleration	G's	115 to 137	119	Pass
Peak Longitudinal Acceleration	G's	+/- 15	-4.8	Pass
Unimodal	N/A	<15%	Yes	Pass
Overall Test Results				Pass

Jessica Gall
Laboratory Technician

12/22/11
Test Date

David Winkelbauer
Approved By



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

ATD Serial No: 296

Test I.D.: D114372

Tested Parameter		Units	Specification	Result	Pass/Fail
Temperature		deg C	20.6 to 22.2	22.0	Pass
Humidity		%	10 to 70	29	Pass
Impact Velocity		m/s	5.51 to 5.63	5.58	Pass
Delta Velocity	10 ms	m/s	2.20 to 2.80	2.64	Pass
	15 ms	m/s	3.30 to 4.10	3.74	Pass
	20 ms	m/s	4.40 to 5.40	4.96	Pass
	25 ms	m/s	5.40 to 6.10	5.55	Pass
	25-100 ms	m/s	5.50 to 6.20	5.58	Pass
Maximum D-Plane Rotation		deg	71 to 81	73	Pass
Time of Maximum D-Plane Rotation		ms	50 to 70	60	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	116	Pass
Overall Test Results					Pass

Jessica Gall

Laboratory Technician

12/22/11

Test Date

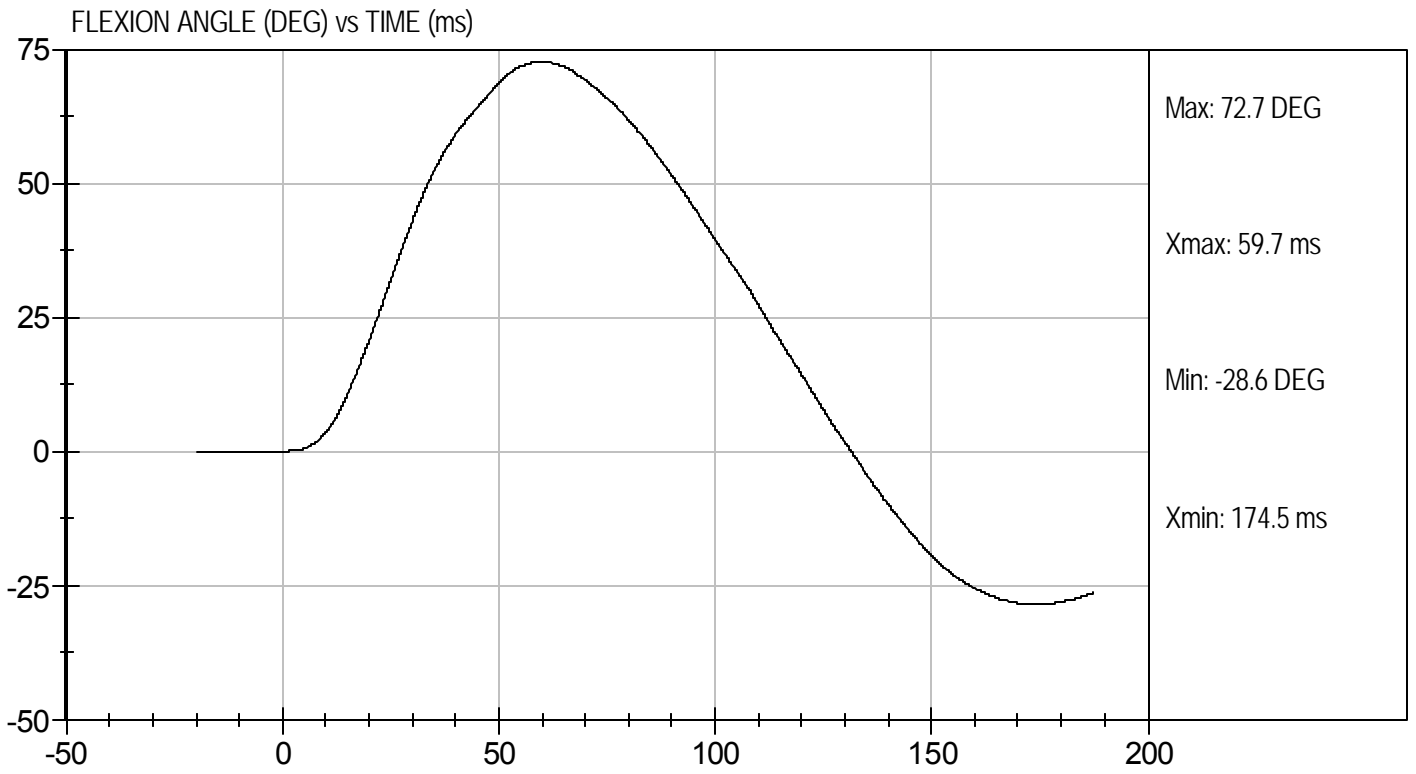
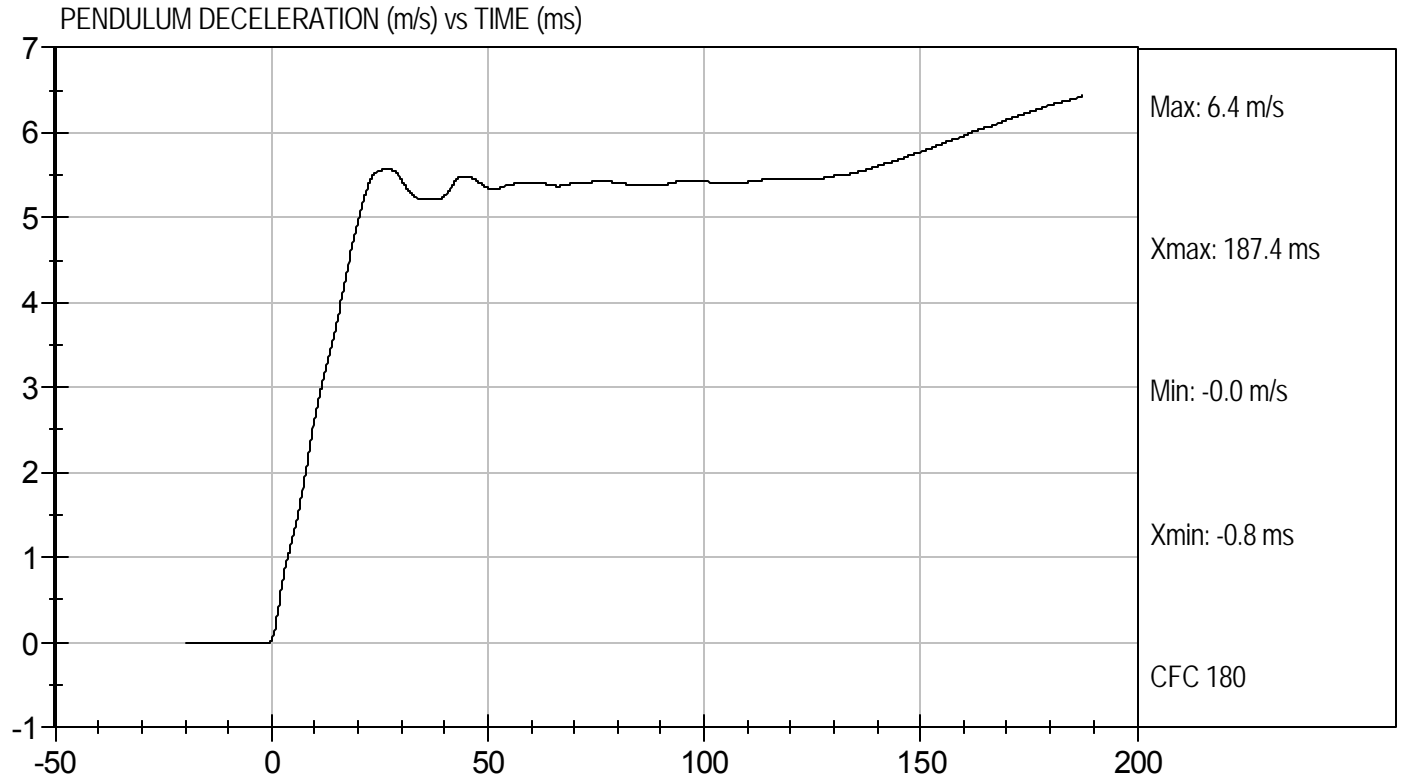
David Winkelbauer

Approved By



Test Desc: Neck Bending
Component ID: D114372

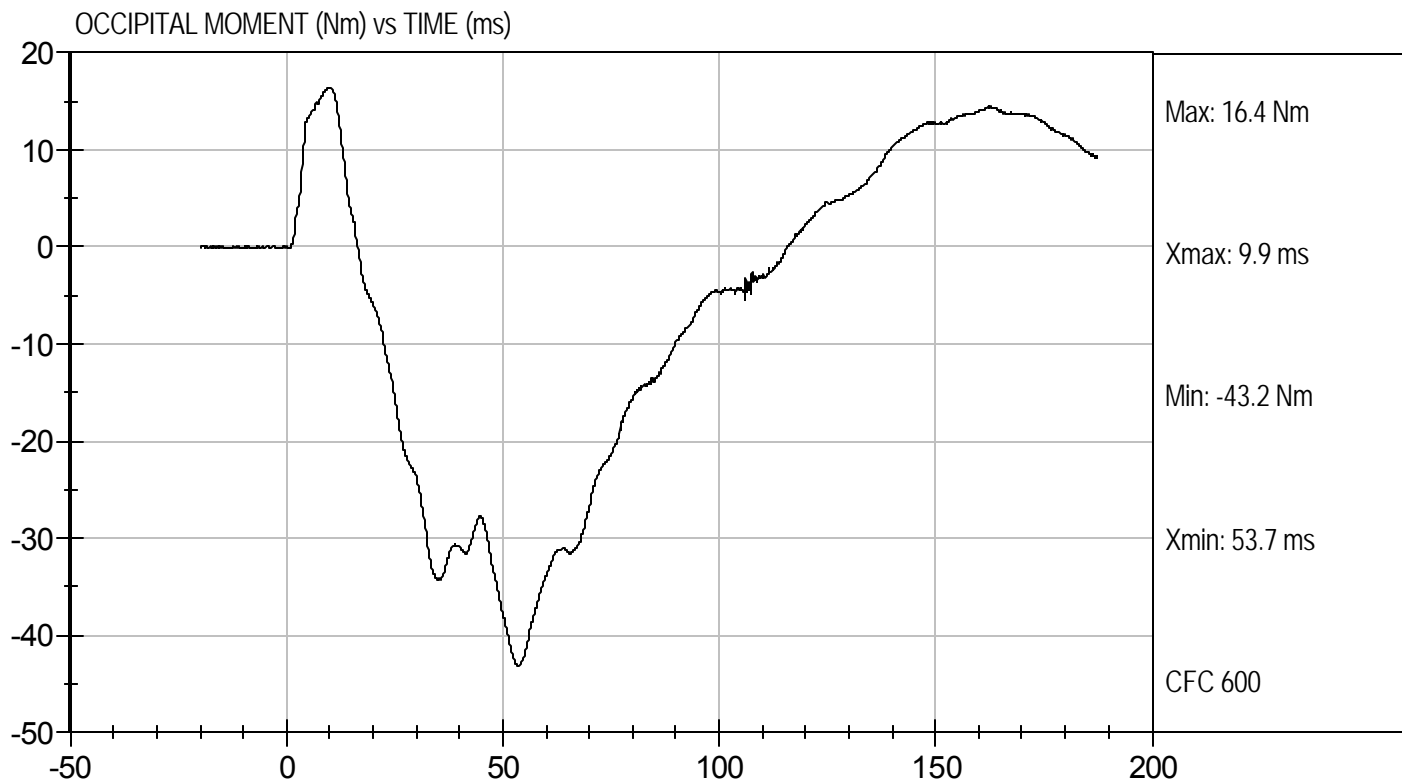
Test Date: 12/22/11
Velocity: 18.32 ft/s, 5.58 m/s





Test Desc: Neck Bending
Component ID: D114372

Test Date: 12/22/11
Velocity: 18.32 ft/s, 5.58 m/s



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

ATD Serial No: 296

Test ID: D114373

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
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	19	Pass
Overall Test Results				Pass

Jessica Hall
 Laboratory Technician

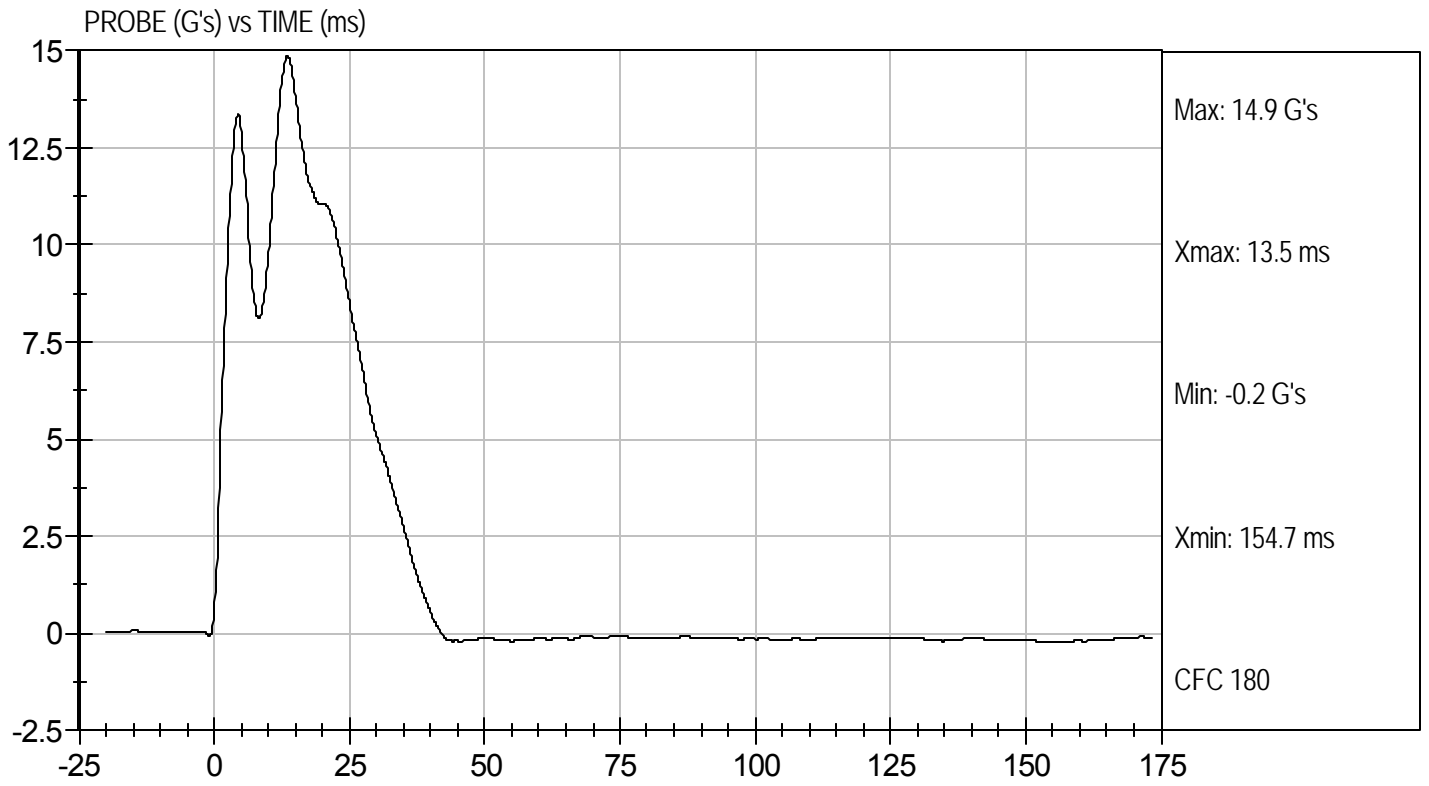
12/22/11
 Test Date

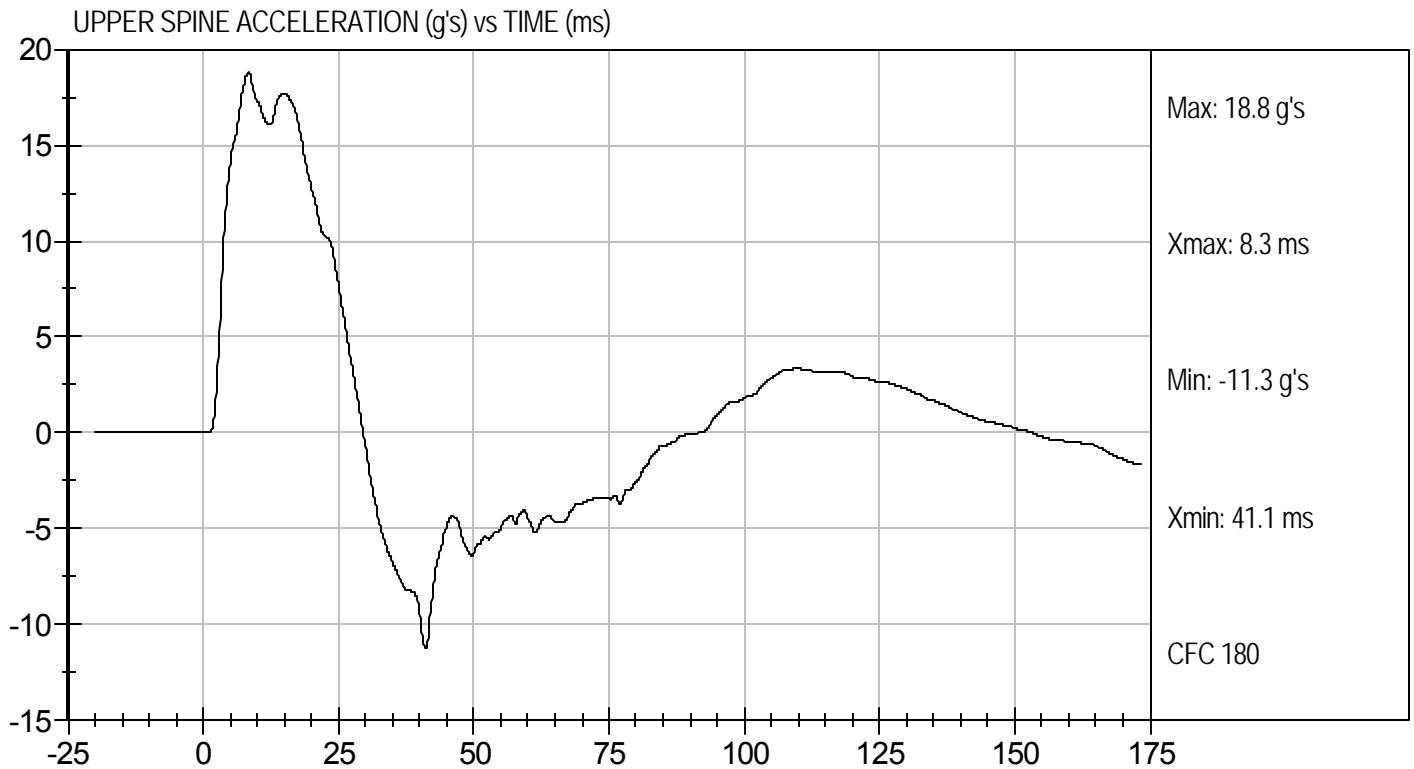
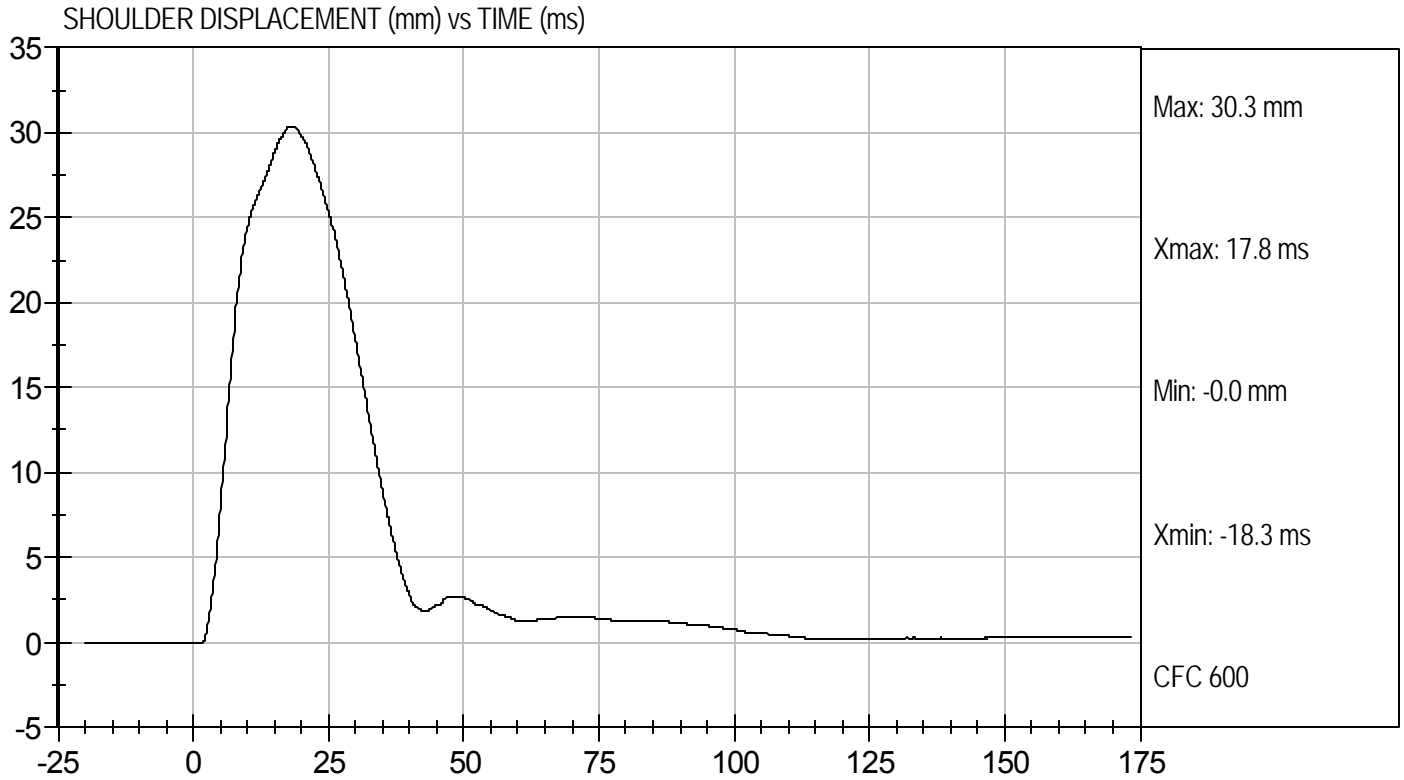
David Winkelbauer
 Approved By



Test Desc: Shoulder Impact
Component ID: D114373

Test Date: 12/22/11
Velocity: 14.37 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: D114374

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.9	Pass
Humidity	%	10 to 70	28	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	34	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	35	Pass
Upper Spine (T1) Y Acceleration	G's	34 to 43	39	Pass
Lower Spine (T12) Y Acceleration	G's	29 to 37	32	Pass
Overall Test Results				Pass

Jessica Hall
Laboratory Technician

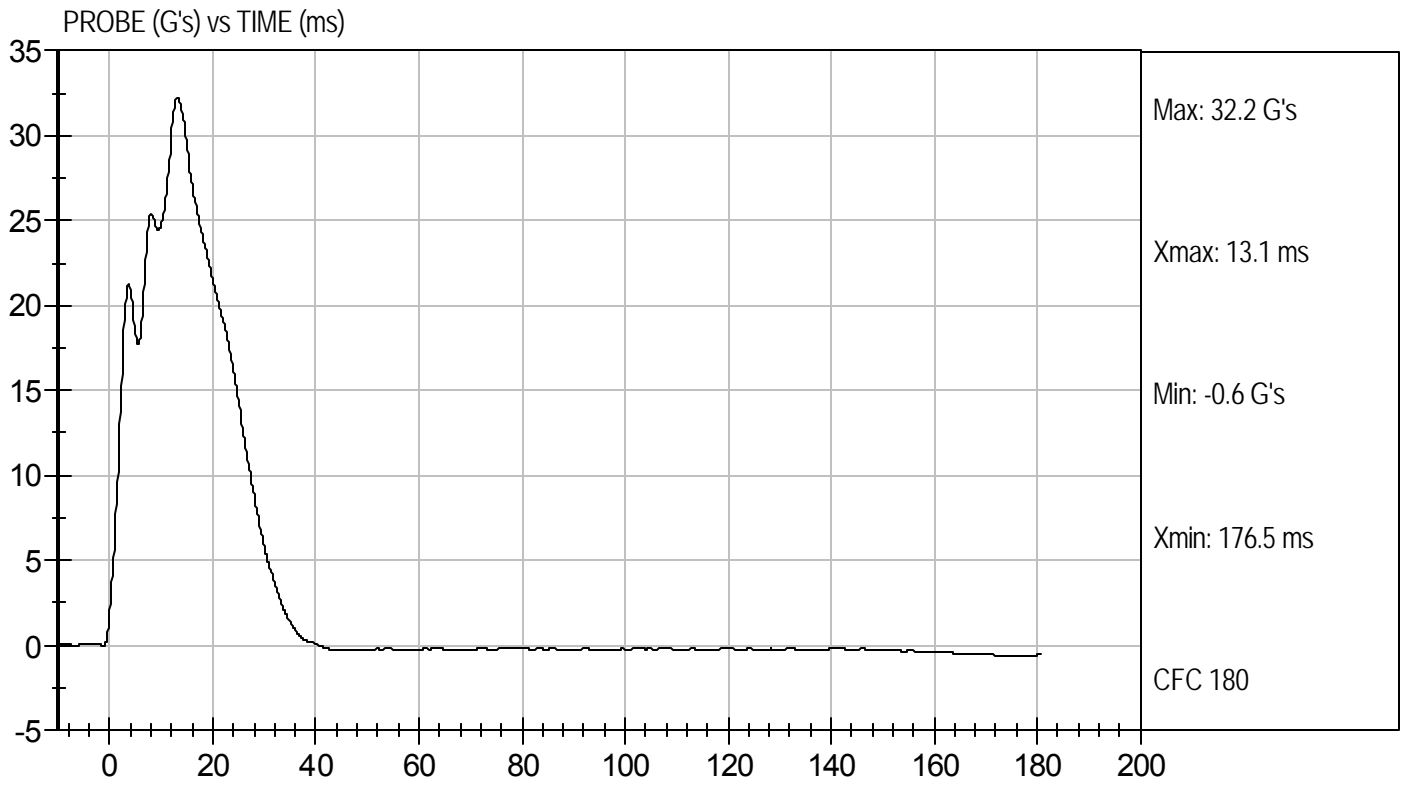
12/22/11
Test Date

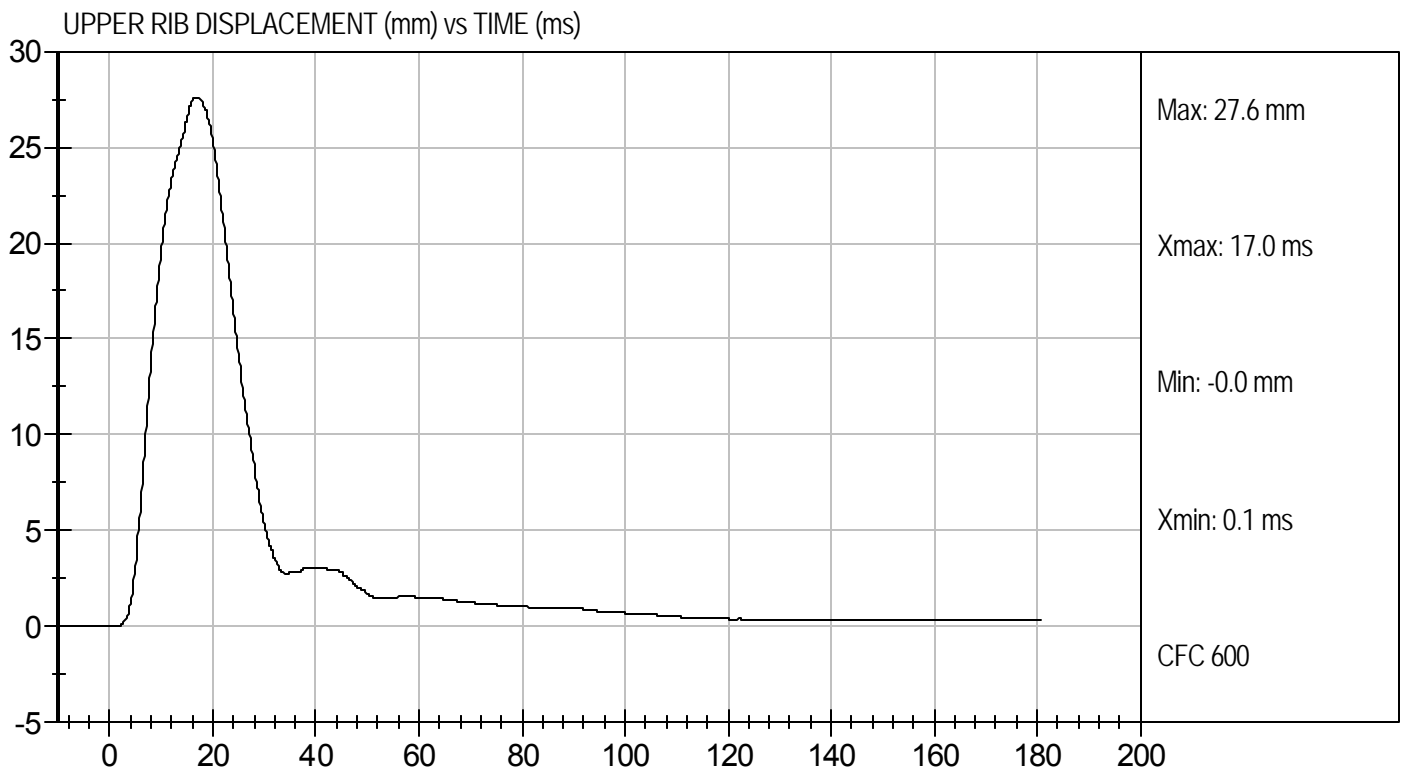
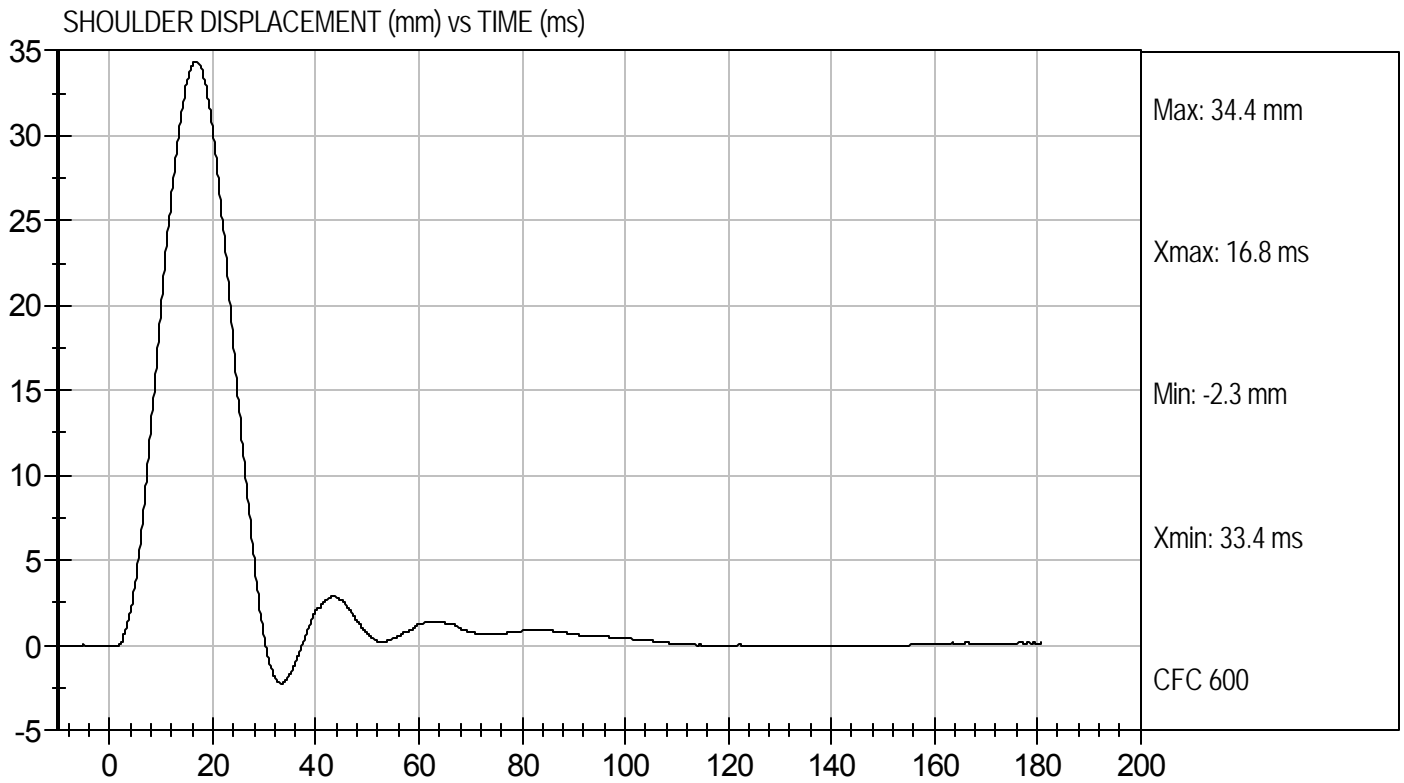
David Winkelbauer
Approved By

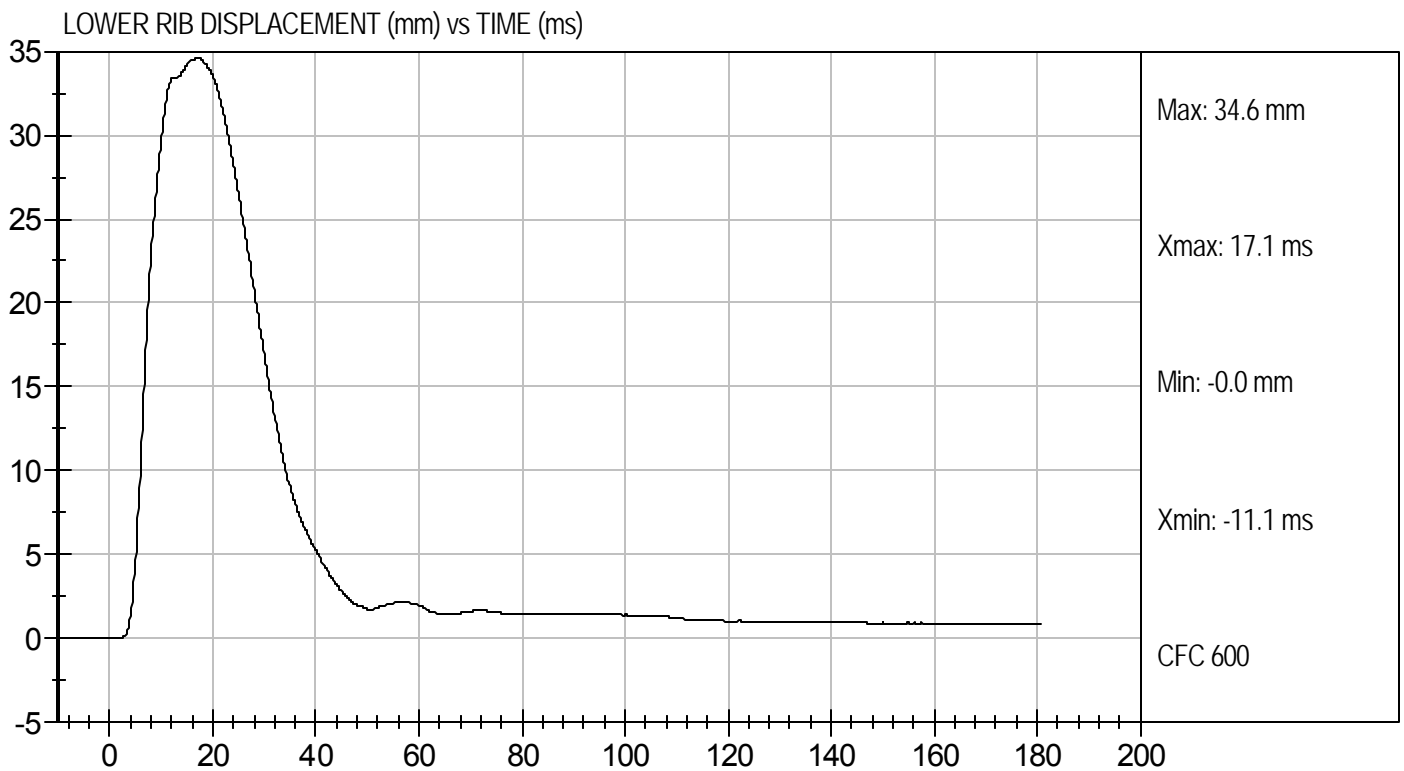
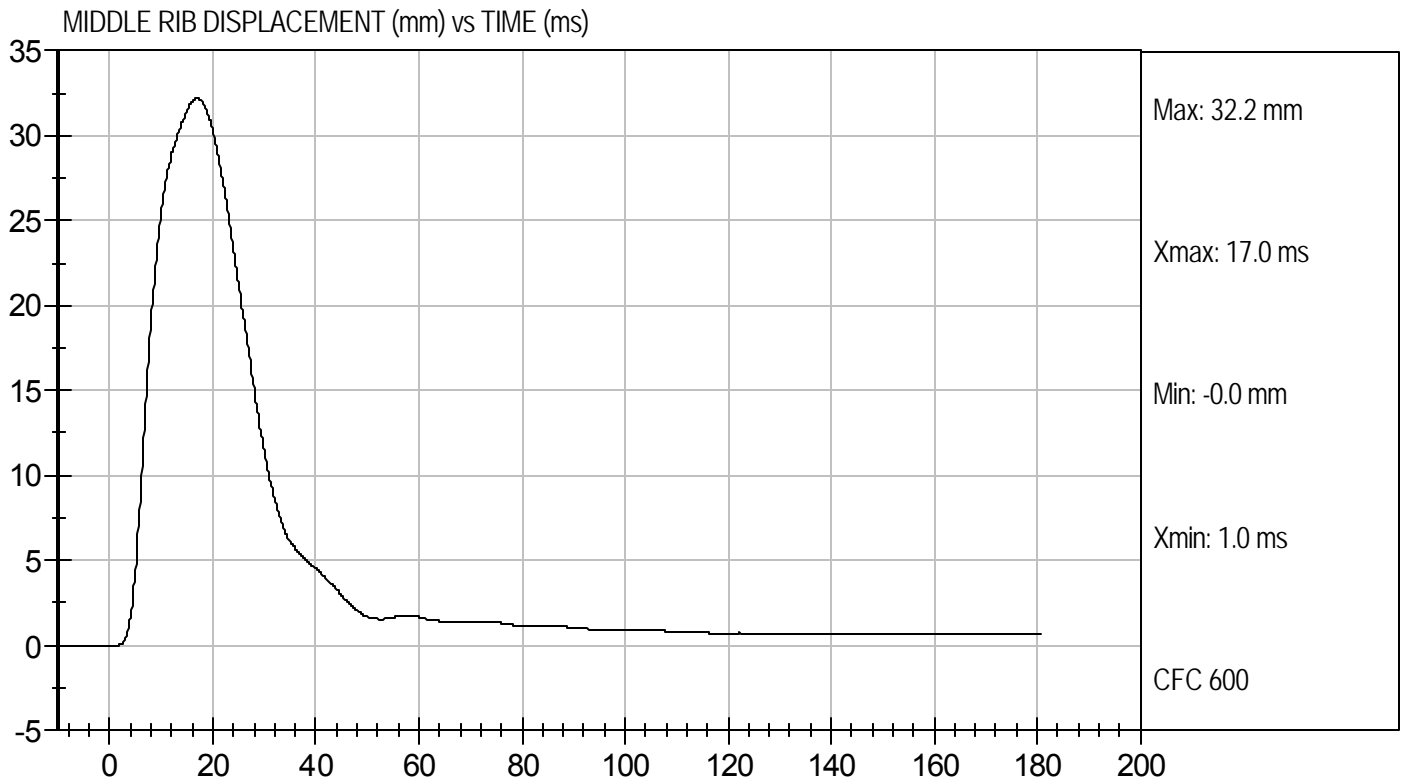


Test Desc: Thorax With Arm
Component ID: D114374

Test Date: 12/22/11
Velocity: 22.22 ft/s, 6.77 m/s



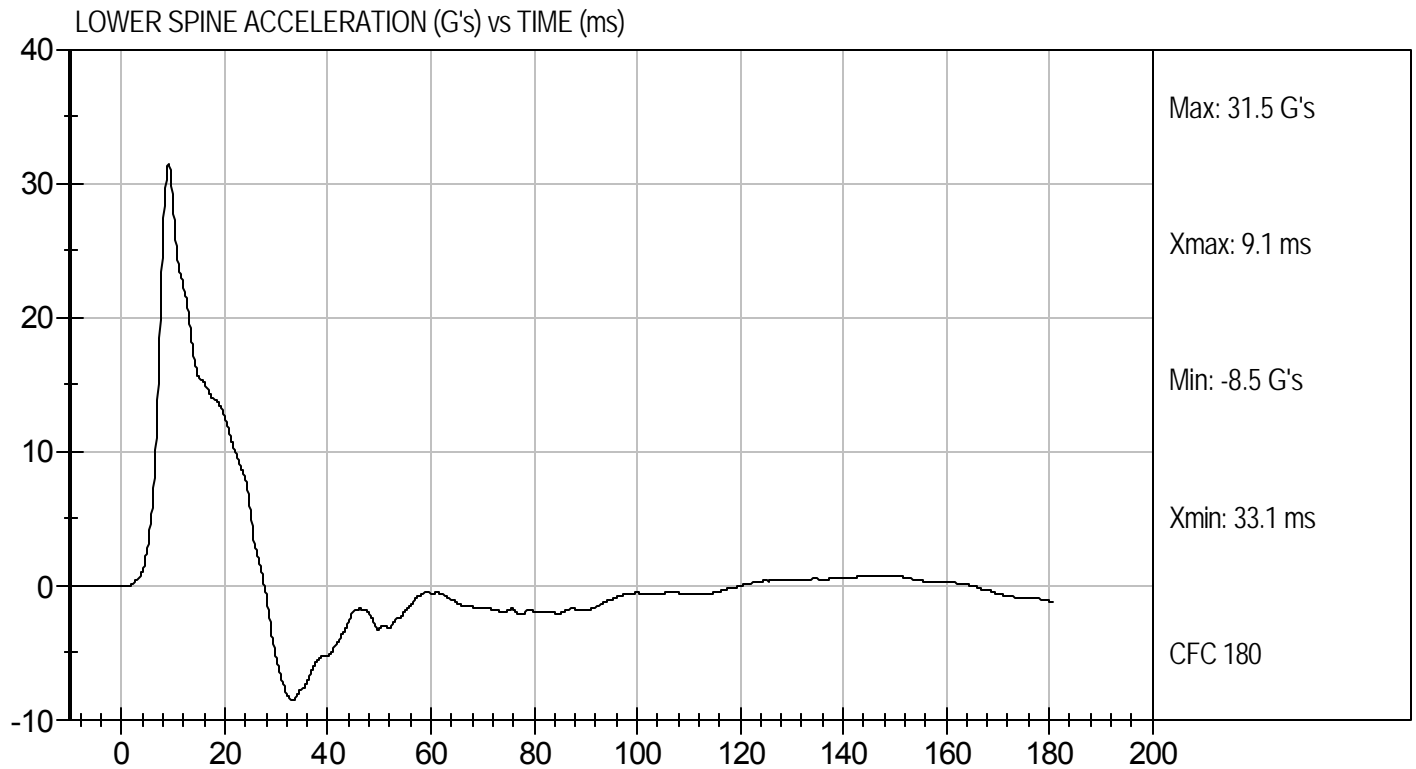
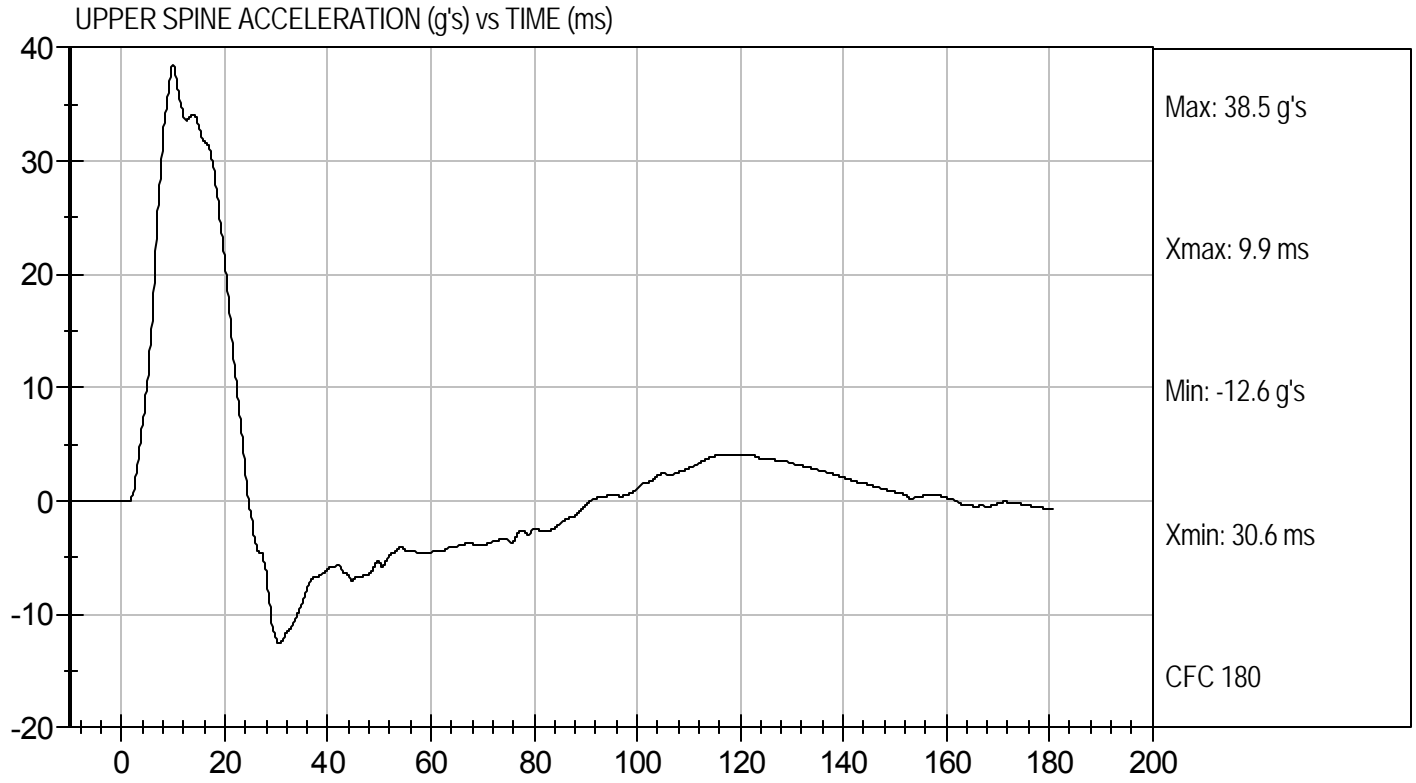






Test Desc: Thorax With Arm
Component ID: D114374

Test Date: 12/22/11
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: D114375

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.9	Pass
Humidity	%	10 to 70	28	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	37	Pass
Middle Rib Displacement	mm	39 to 45	43	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

Jessica Gall
Laboratory Technician

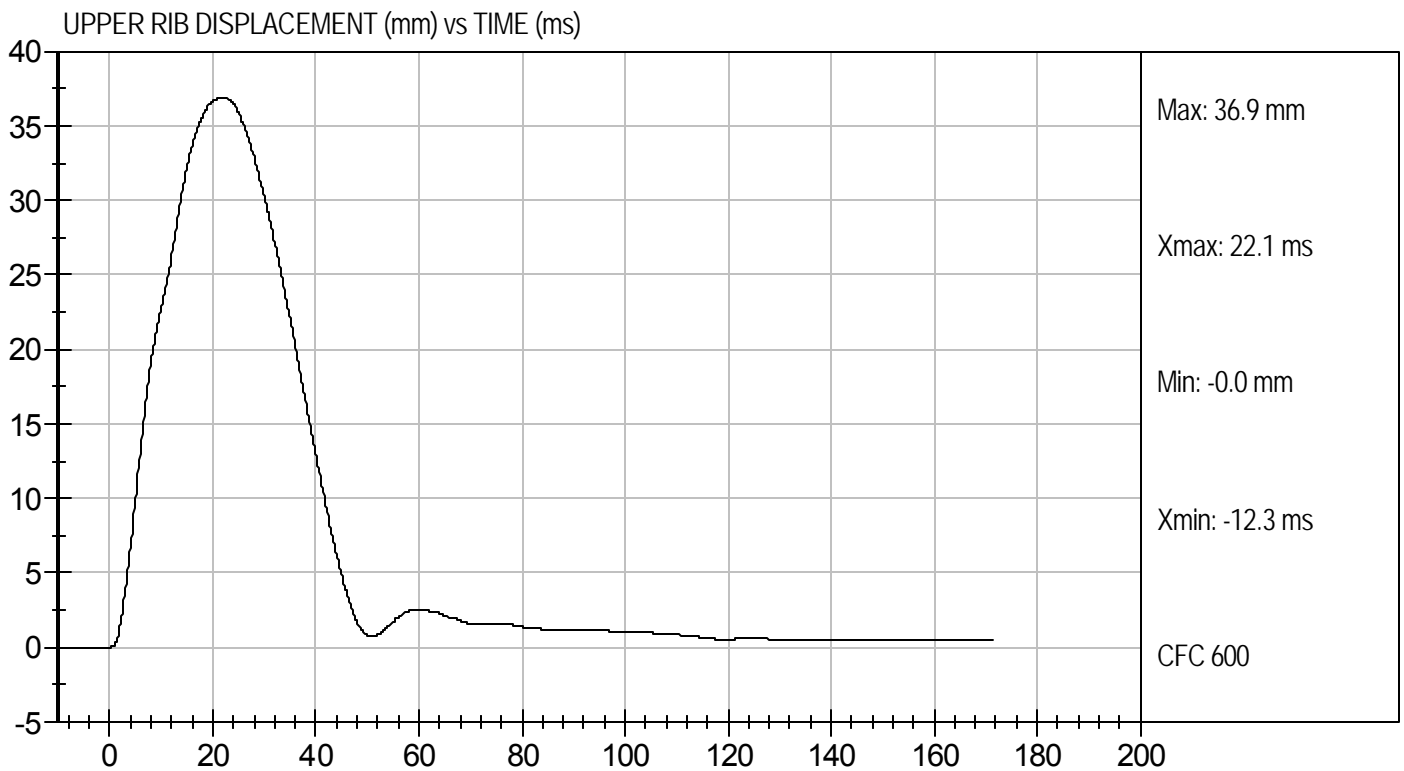
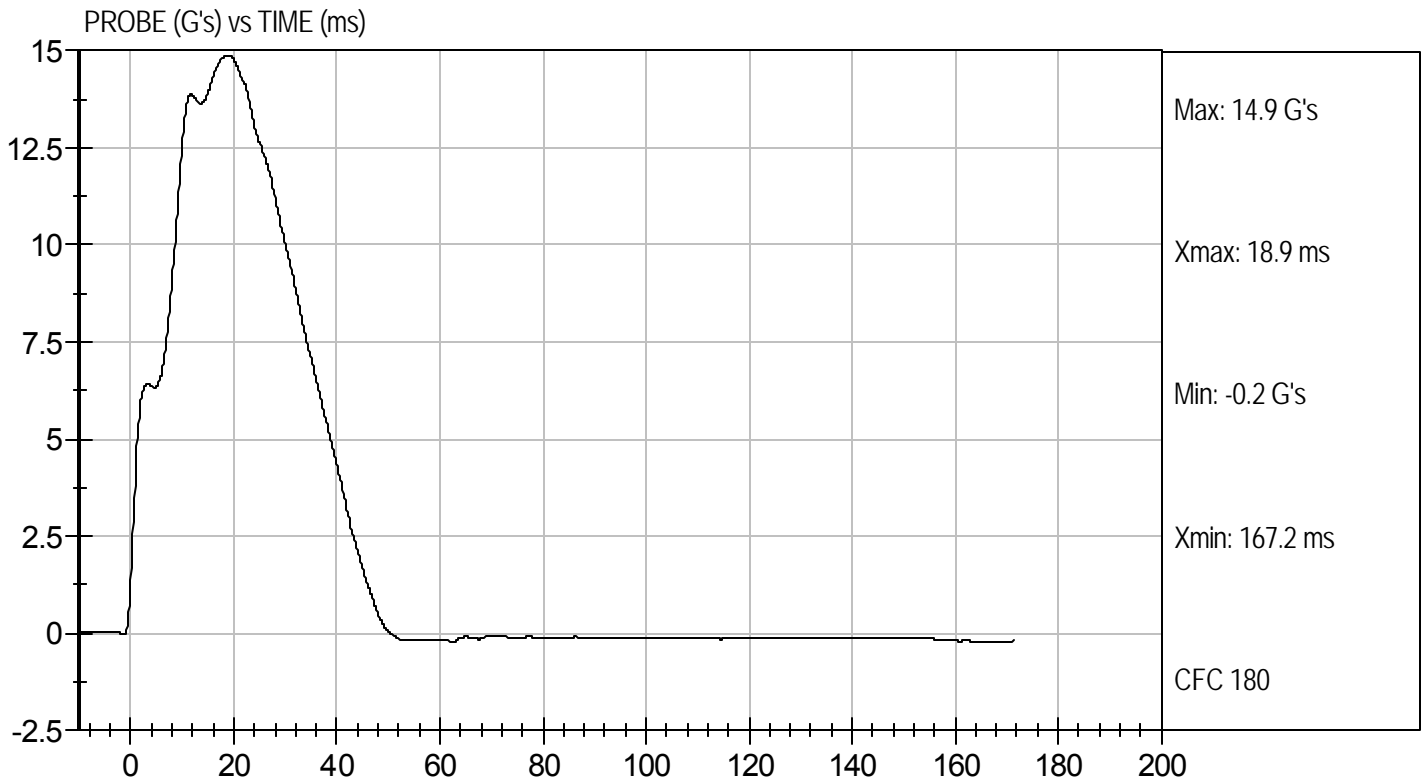
12/22/11
Test Date

David Winkelbauer
Approved By



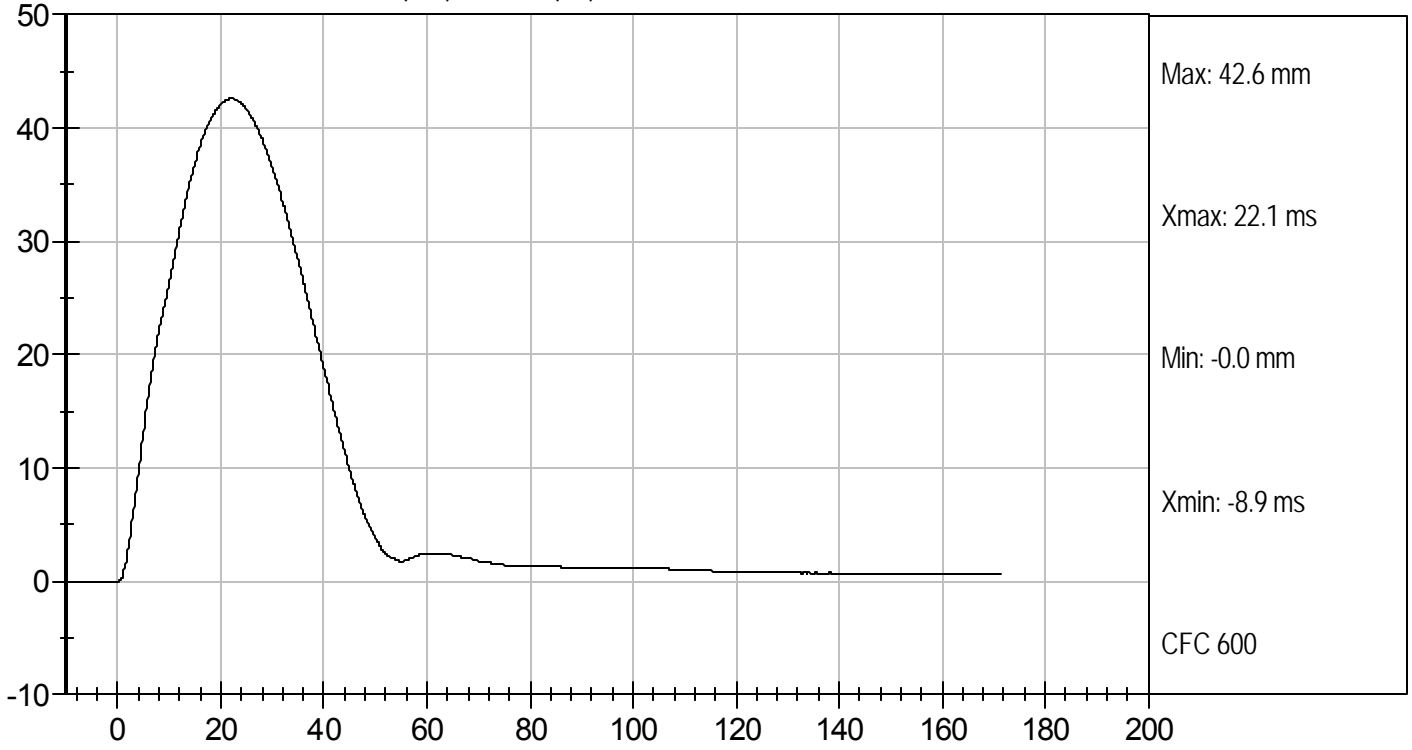
Test Desc: Thorax Without Arm
Component ID: D114375

Test Date: 12/22/11
Velocity: 14.37 ft/s, 4.38 m/s

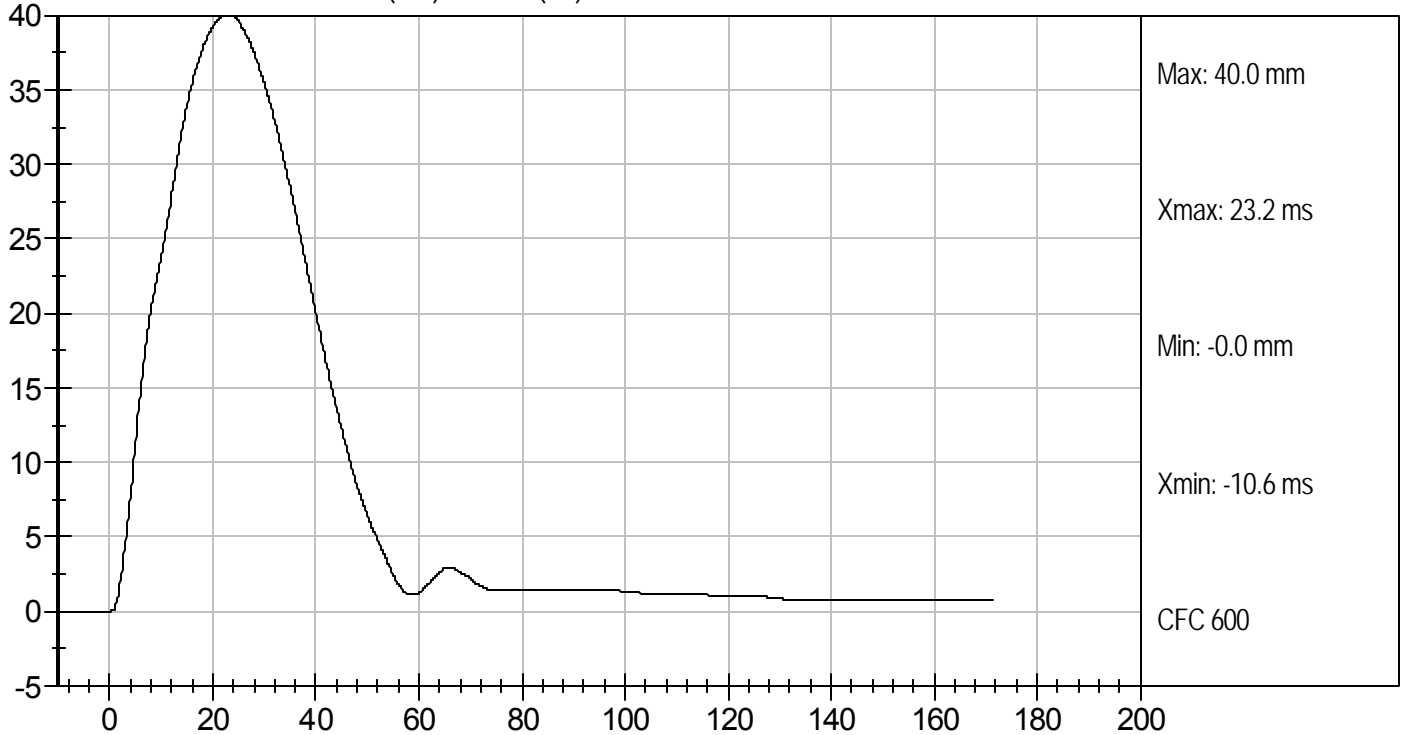




MIDDLE RIB DISPLACEMENT (mm) vs TIME (ms)



LOWER RIB DISPLACEMENT (mm) vs TIME (ms)

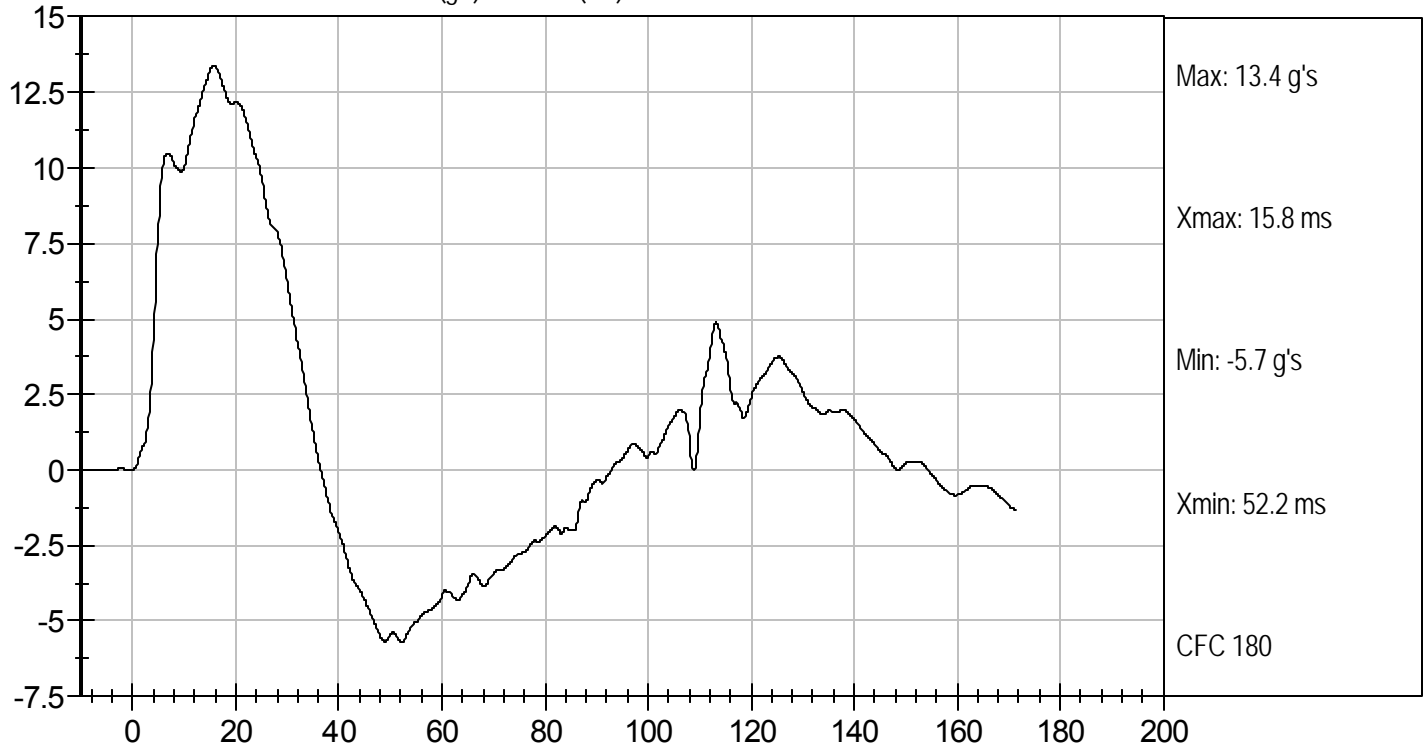




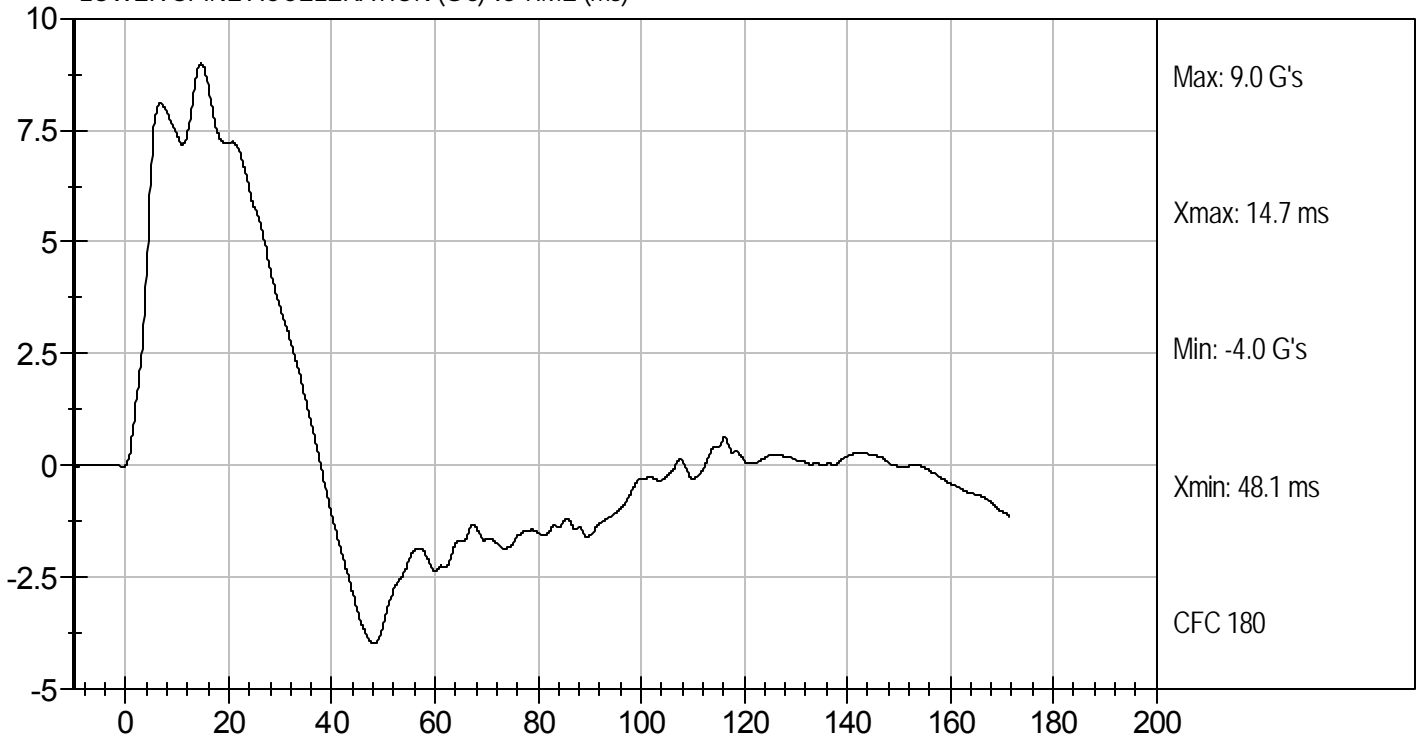
Test Desc: Thorax Without Arm
Component ID: D114375

Test Date: 12/22/11
Velocity: 14.37 ft/s, 4.38 m/s

UPPER SPINE ACCELERATION (g's) vs TIME (ms)



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



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

ATD Serial No: 296

Test I.D: D114376

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	22.0	Pass
Humidity	%	10 to 70	28	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	41	Pass
Lower Rib Displacement	mm	33 to 44	36	Pass
Lower Spine (T12) Y Acceleration	G's	9 to 14	11	Pass
Overall Test Results				Pass

Jessica Gall
Laboratory Technician

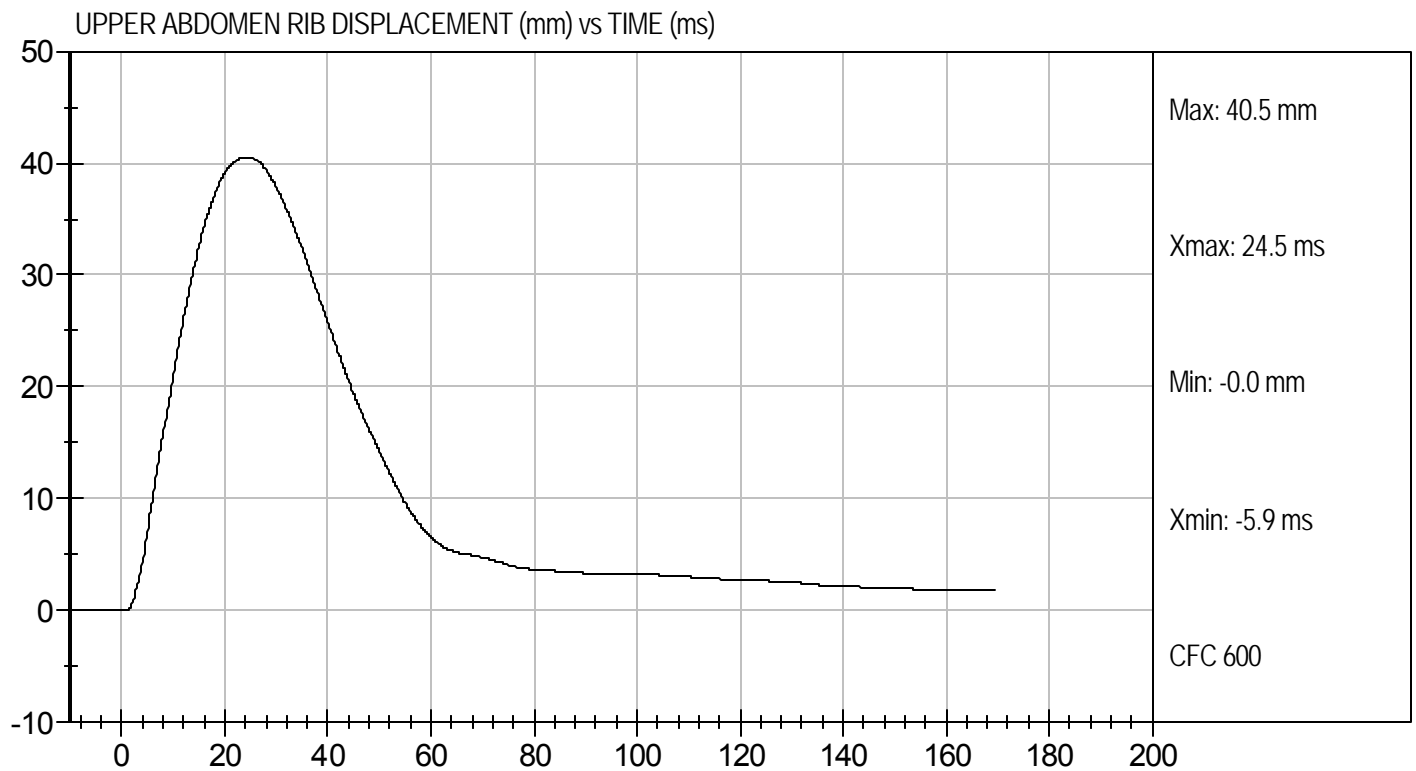
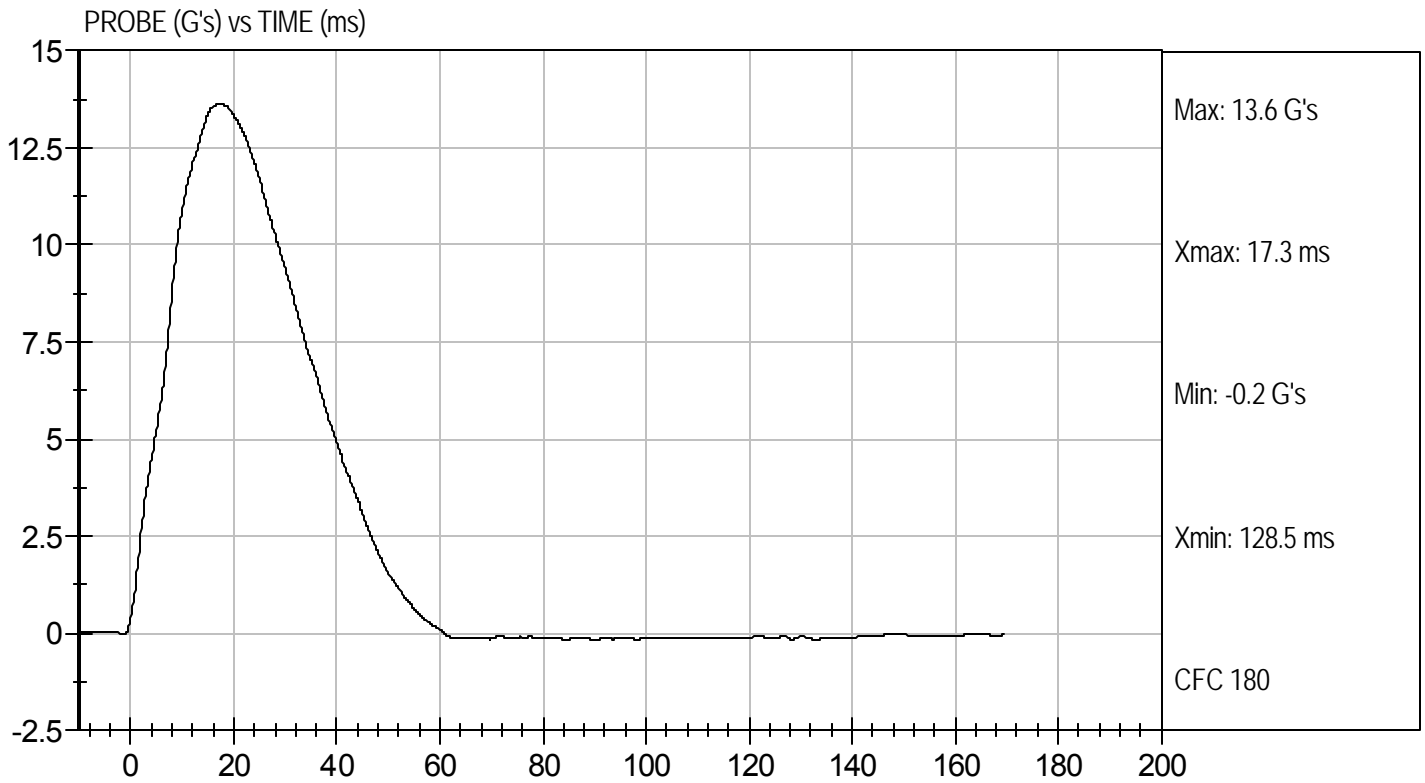
12/22/11
Test Date

David Winkelbauer
Approved By



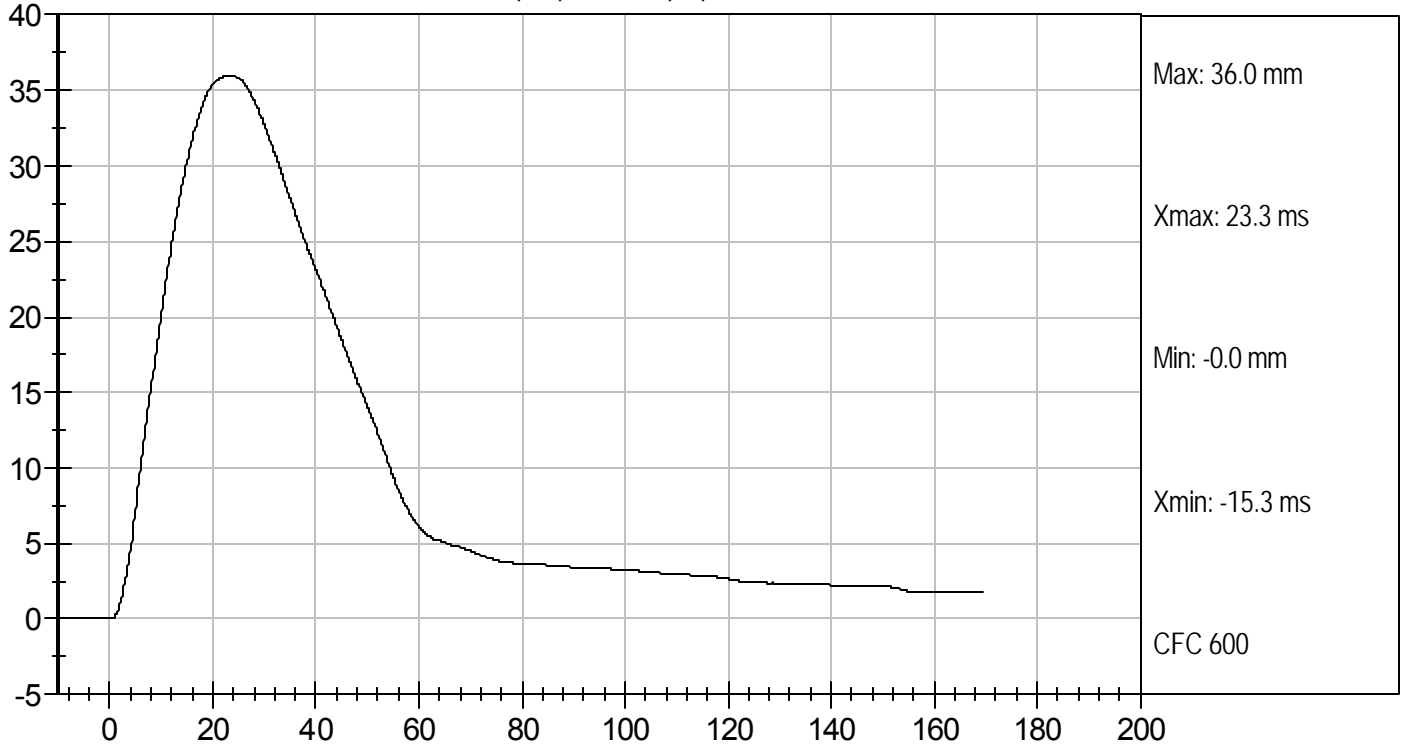
Test Desc: Abdomen Impact
Component ID: D114376

Test Date: 12/22/11
Velocity: 14.25 ft/s, 4.34 m/s

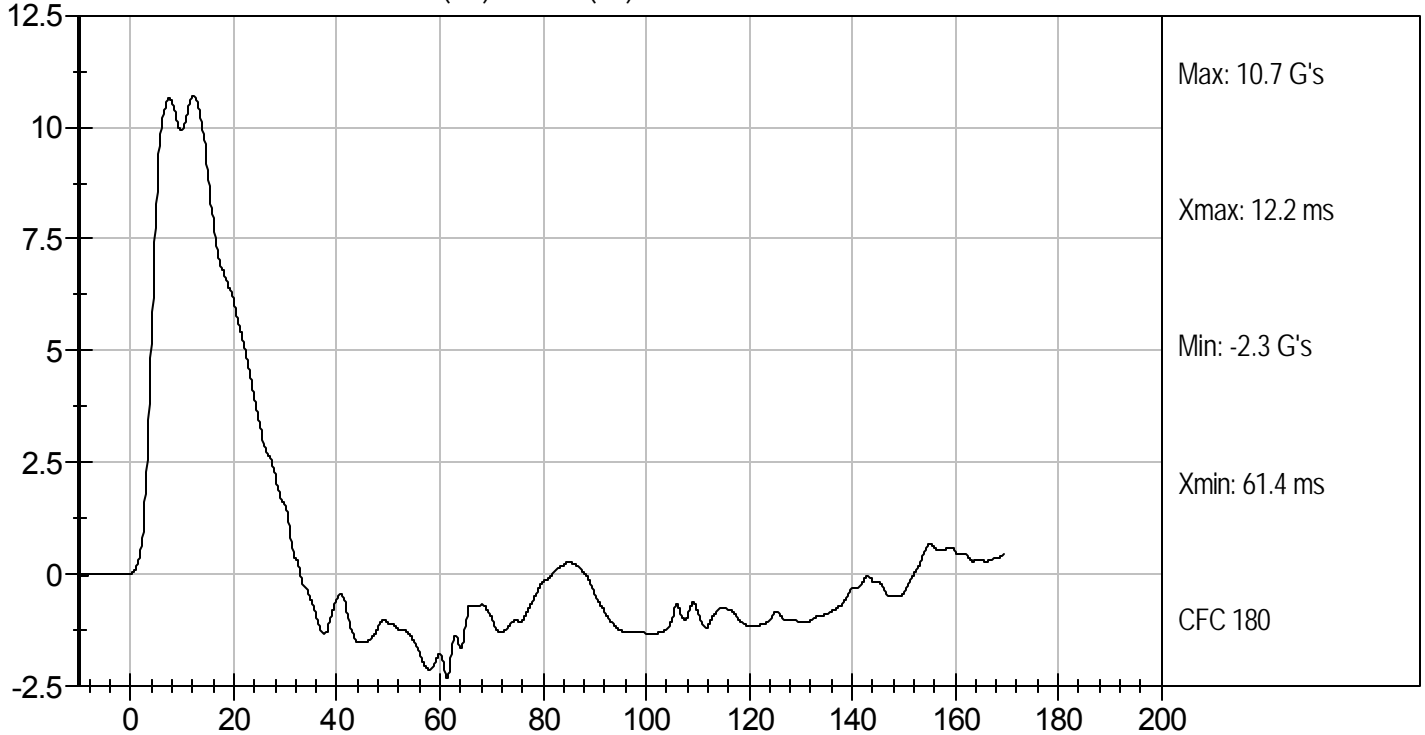




LOWER ABDOMEN RIB DISPLACEMENT (mm) vs TIME (ms)



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: D114377

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.8	Pass
Humidity	%	10 to 70	27	Pass
Impact Velocity	m/s	6.60 to 6.80	6.69	Pass
Peak Impactor Acceleration	G's	38 to 47	42	Pass
Pelvis Y Acceleration after 6 ms	G's	34 to 42	40	Pass
Peak Acetabulum Force	N	3600 to 4300	3963	Pass
Overall Test Results				Pass

Jessica Gall
 Laboratory Technician

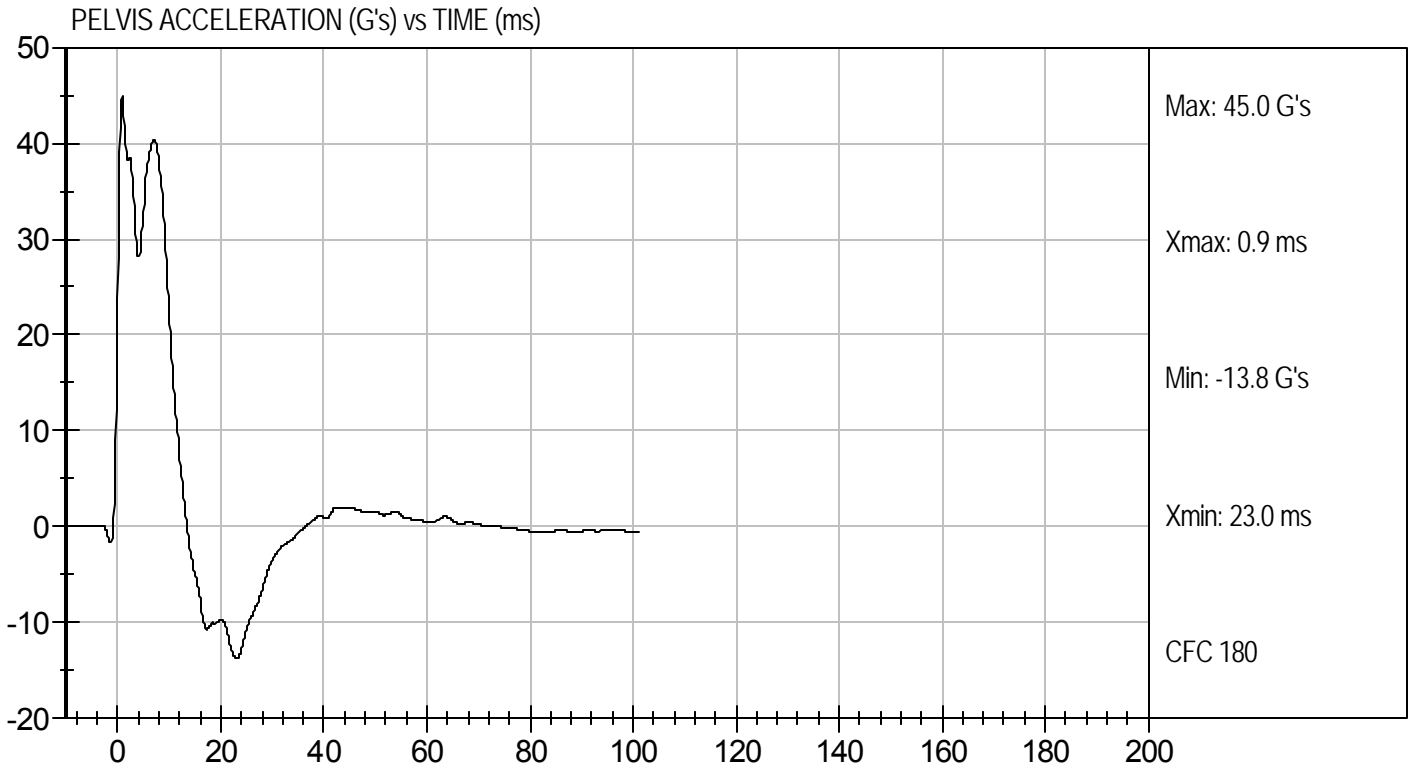
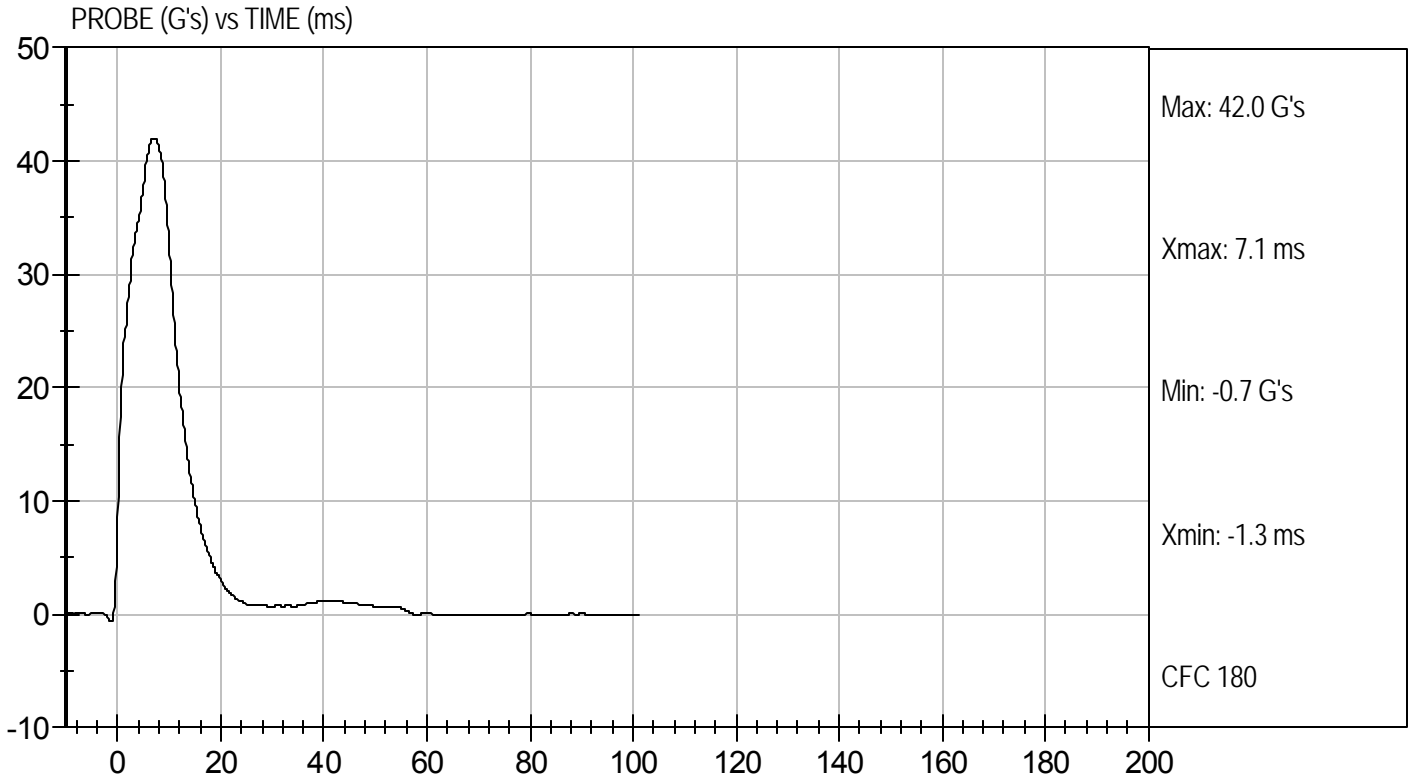
12/22/11
 Test Date

David Winkelbauer
 Approved By



Test Desc: Pelvis Impact
Component ID: D114377

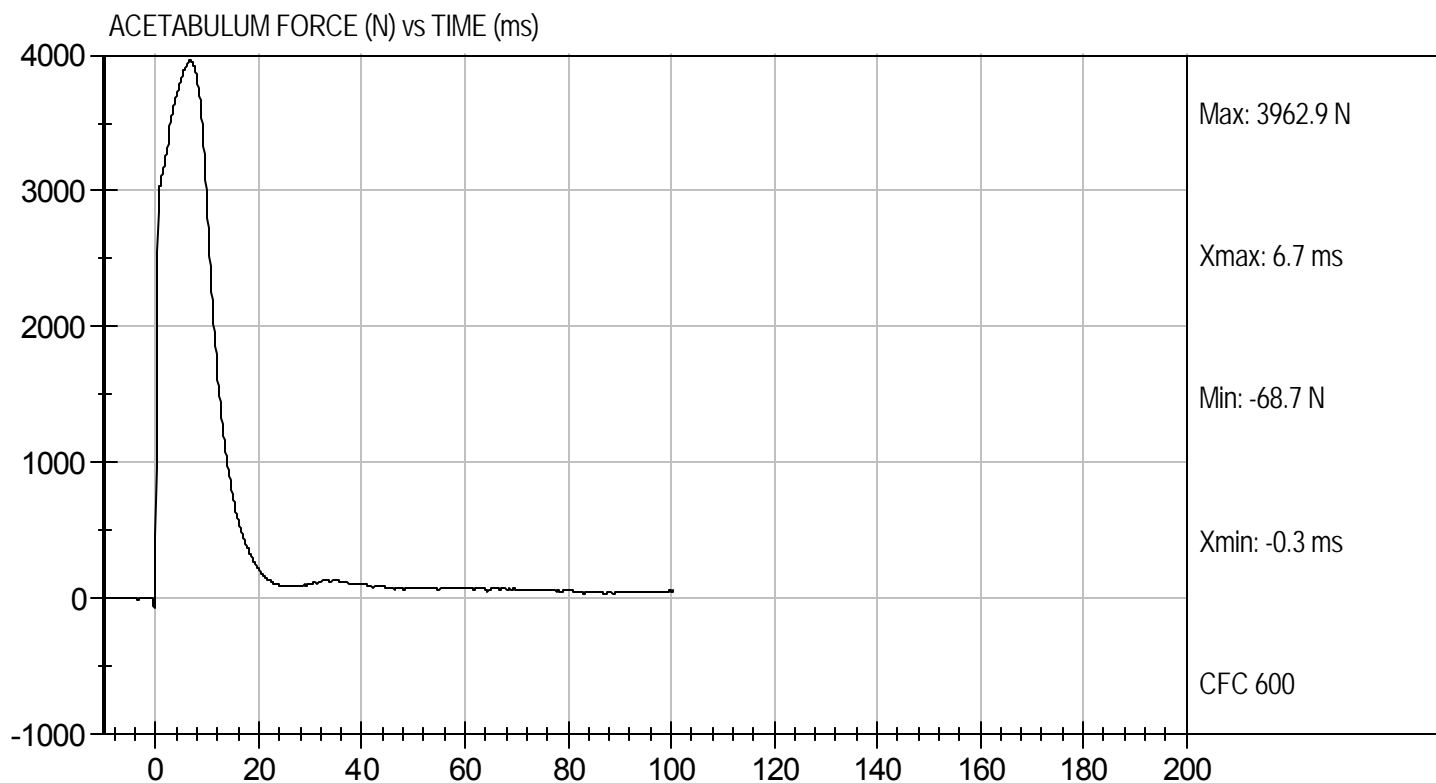
Test Date: 12/22/11
Velocity: 21.96 ft/s, 6.69 m/s





Test Desc: Pelvis Impact
Component ID: D114377

Test Date: 12/22/11
Velocity: 21.96 ft/s, 6.69 m/s



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

ATD Serial No: 296

Test I.D: D114378

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.8	Pass
Humidity	%	10 to 70	27	Pass
Impact Velocity	m/s	4.20 to 4.40	4.34	Pass
Peak Impactor Acceleration	G's	36 to 45	37	Pass
Pelvis Y Acceleration	G's	28 to 39	30	Pass
Peak Pelvis Iliac Force	N	4100 to 5100	4396	Pass
Overall Test Results				Pass

Jessica Gall
 Laboratory Technician

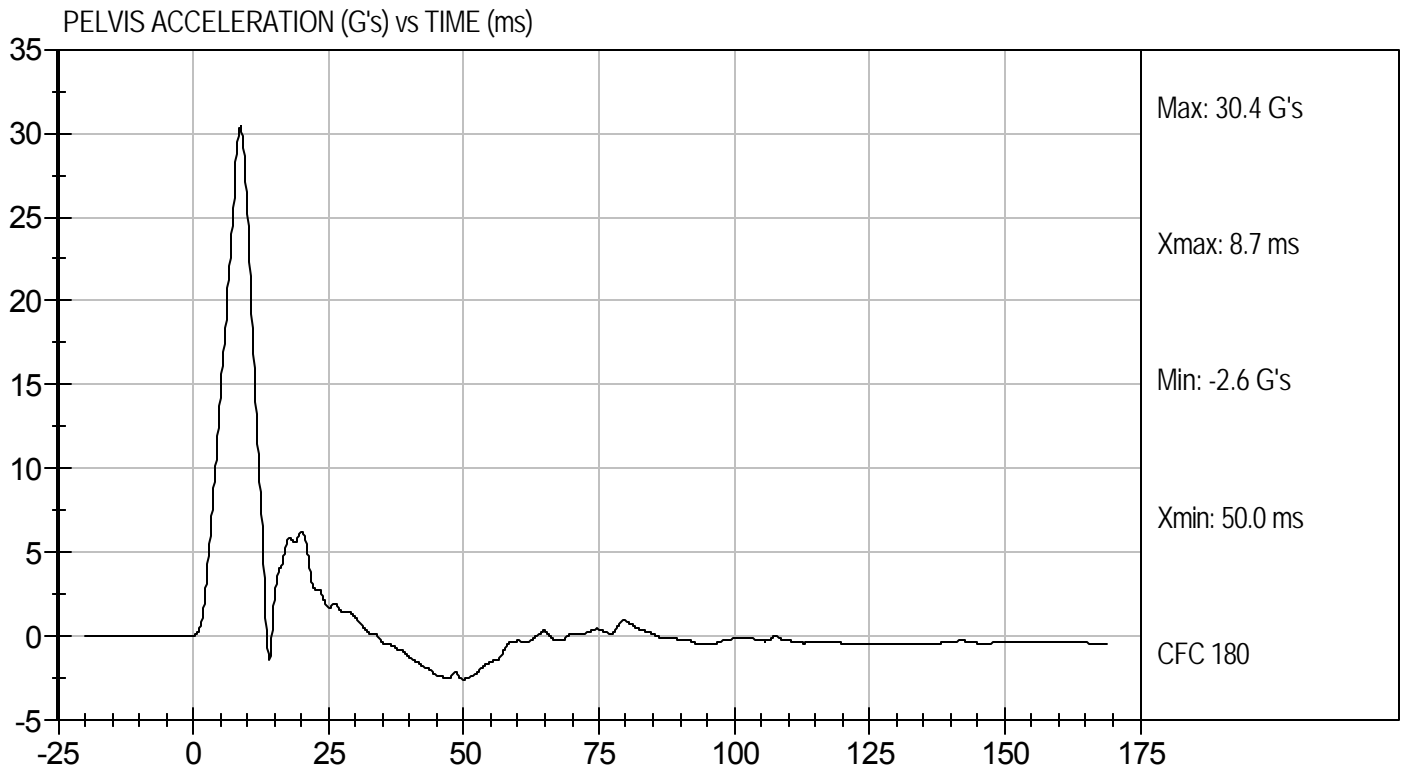
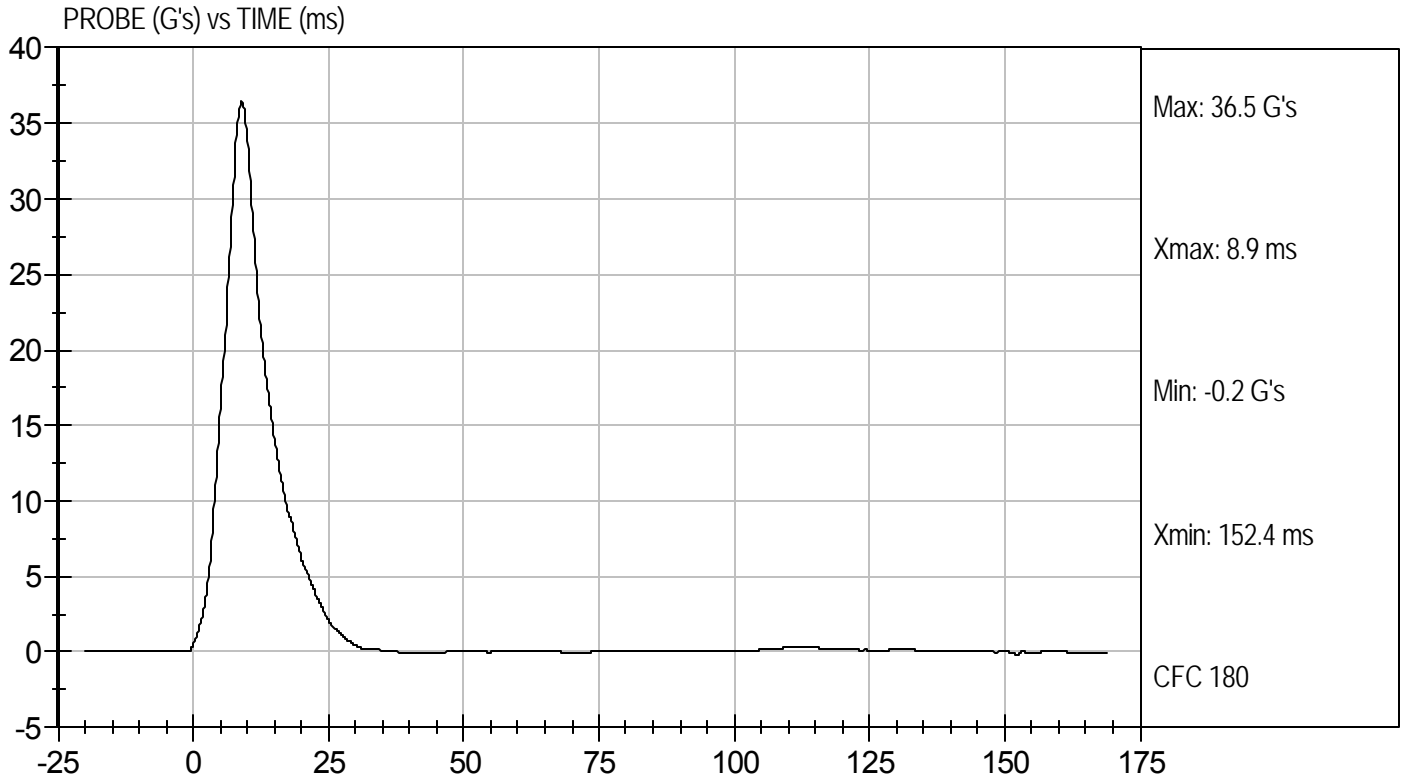
12/22/11
 Test Date

David Winkelbauer
 Approved By



Test Desc: Iliac Impact
Component ID: D114378

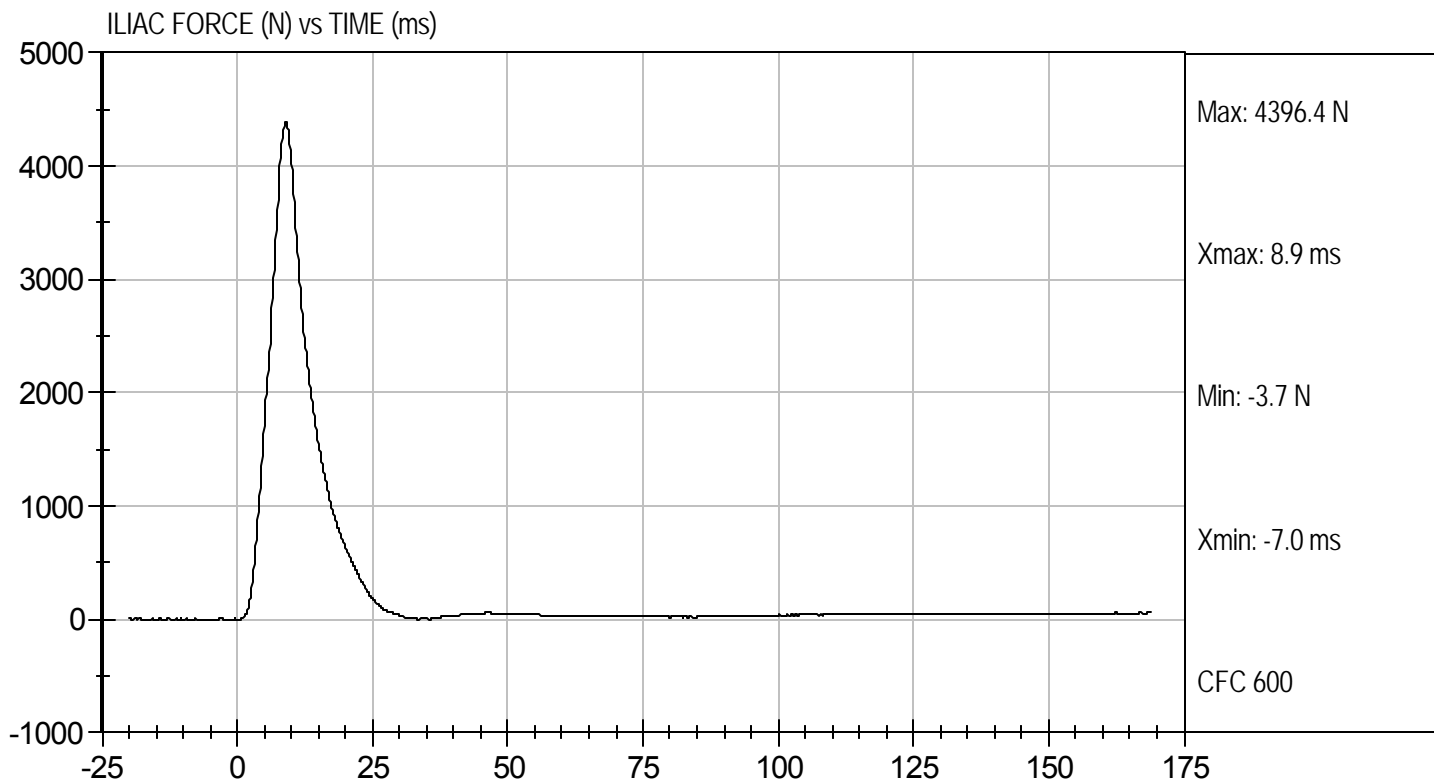
Test Date: 12/22/11
Velocity: 14.25 ft/s, 4.34 m/s





Test Desc: Iliac Impact
Component ID: D114378

Test Date: 12/22/11
Velocity: 14.25 ft/s, 4.34 m/s



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

ATD Serial No: 296

Test ID: D12021


Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	20.6 to 22.2	22.1	Pass
Laboratory Relative Humidity	%	10 to 70	18	Pass
Peak Resultant Acceleration	G's	115 to 137	122	Pass
Peak Longitudinal Acceleration	G's	+/- 15	-3.7	Pass
Unimodal	N/A	<15%	Yes	Pass
Overall Test Results				Pass



 Laboratory Technician

1/4/12

 Test Date

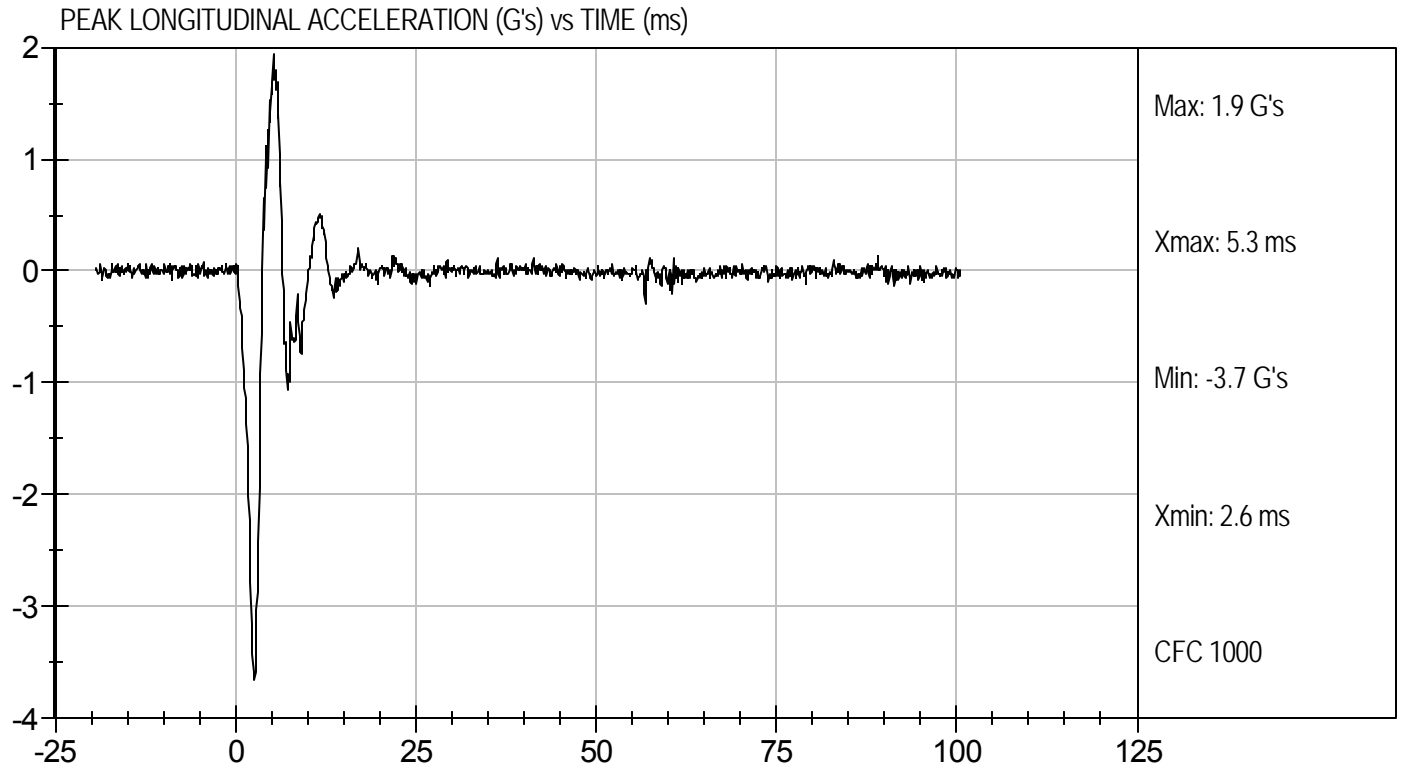
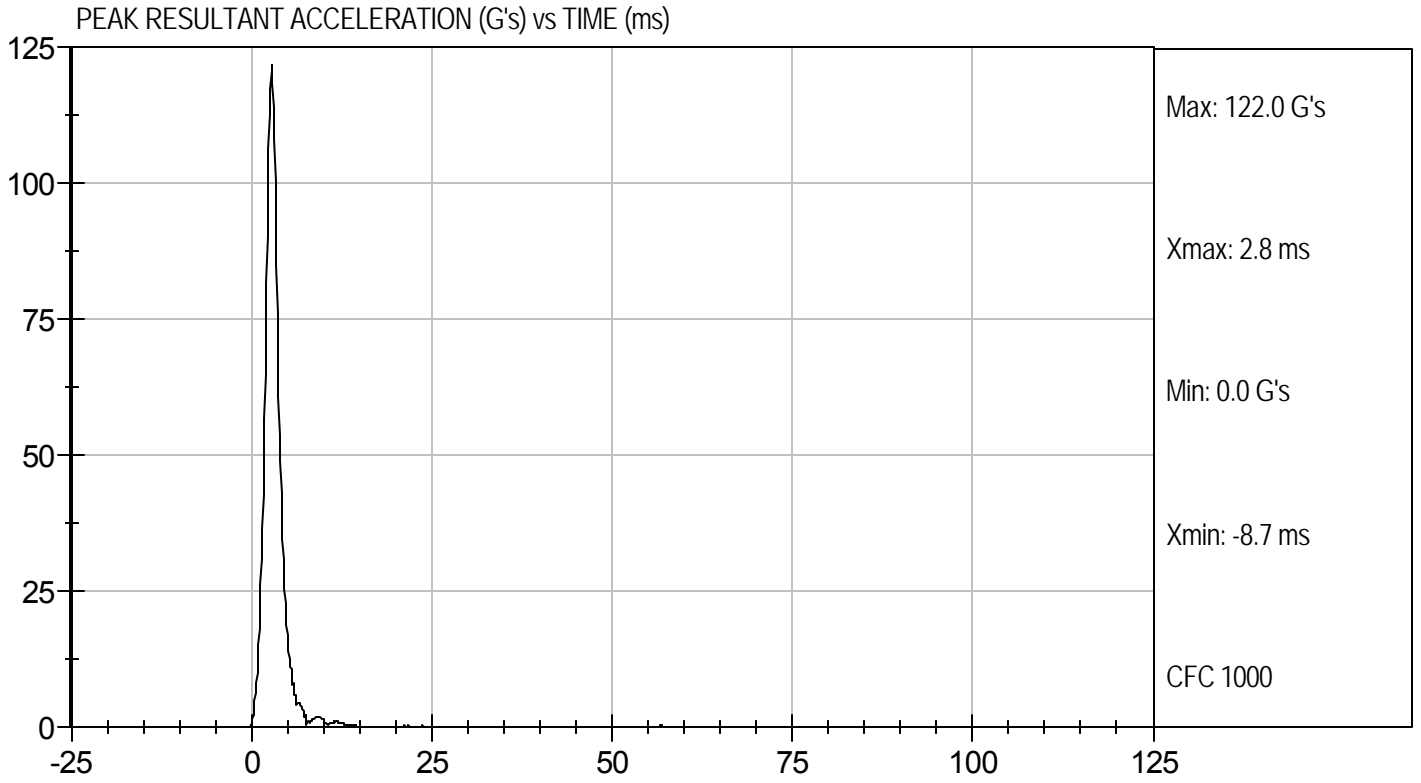


 Approved By



Test Desc: Head Drop
Component ID: D12021

Test Date: 1/4/12
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.: D12022

Tested Parameter		Units	Specification	Result	Pass/Fail
Temperature		deg C	20.6 to 22.2	22.0	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	2.66	Pass
	15 ms	m/s	3.30 to 4.10	3.80	Pass
	20 ms	m/s	4.40 to 5.40	5.00	Pass
	25 ms	m/s	5.40 to 6.10	5.49	Pass
	25-100 ms	m/s	5.50 to 6.20	5.51	Pass
Maximum D-Plane Rotation		deg	71 to 81	72	Pass
Time of Maximum D-Plane Rotation		ms	50 to 70	60	Pass
Maximum Occipital Condyle Moment during Rotation Interval Nm			-44 to -36	-42	Pass
Time of Moment Decay to 0 Nm		ms	102 to 126	116	Pass
Overall Test Results					Pass

Jessica Hall
Laboratory Technician

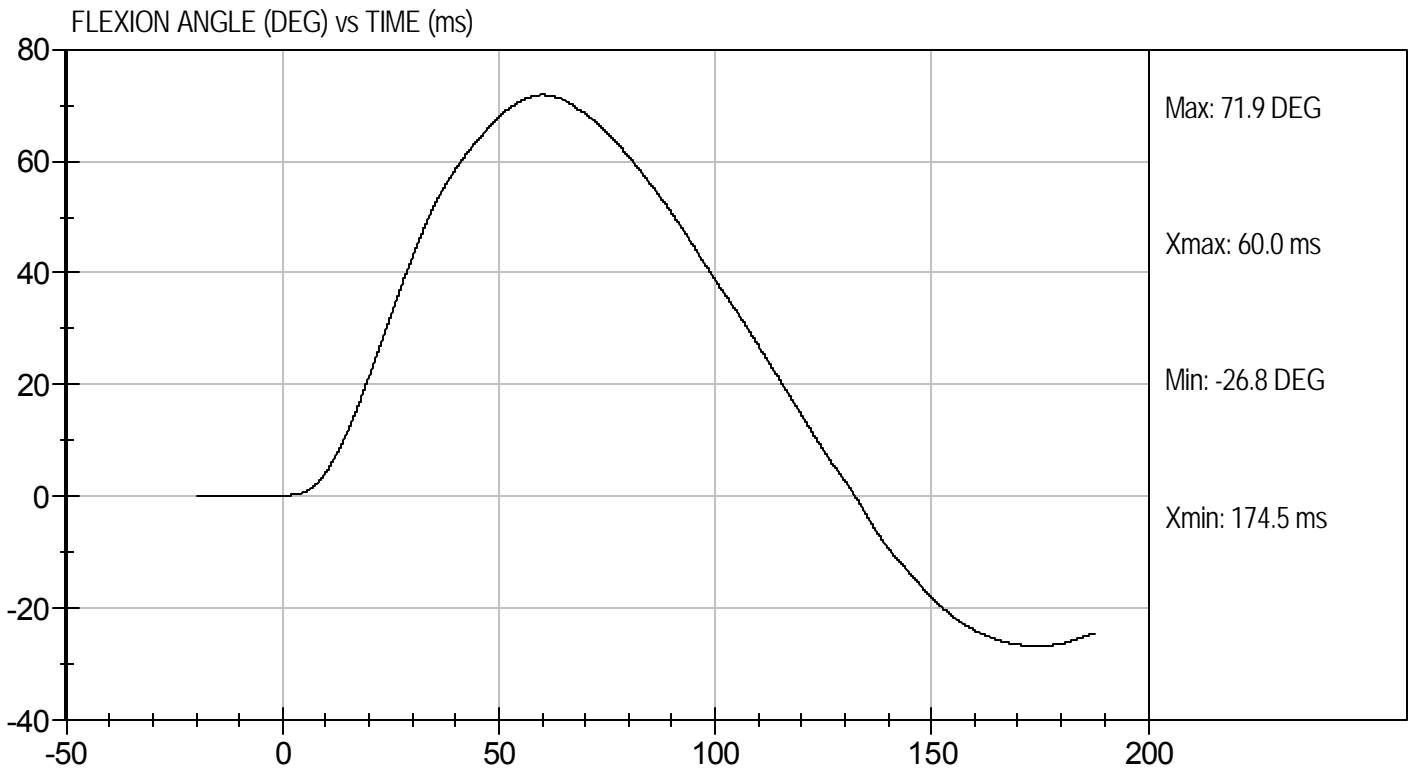
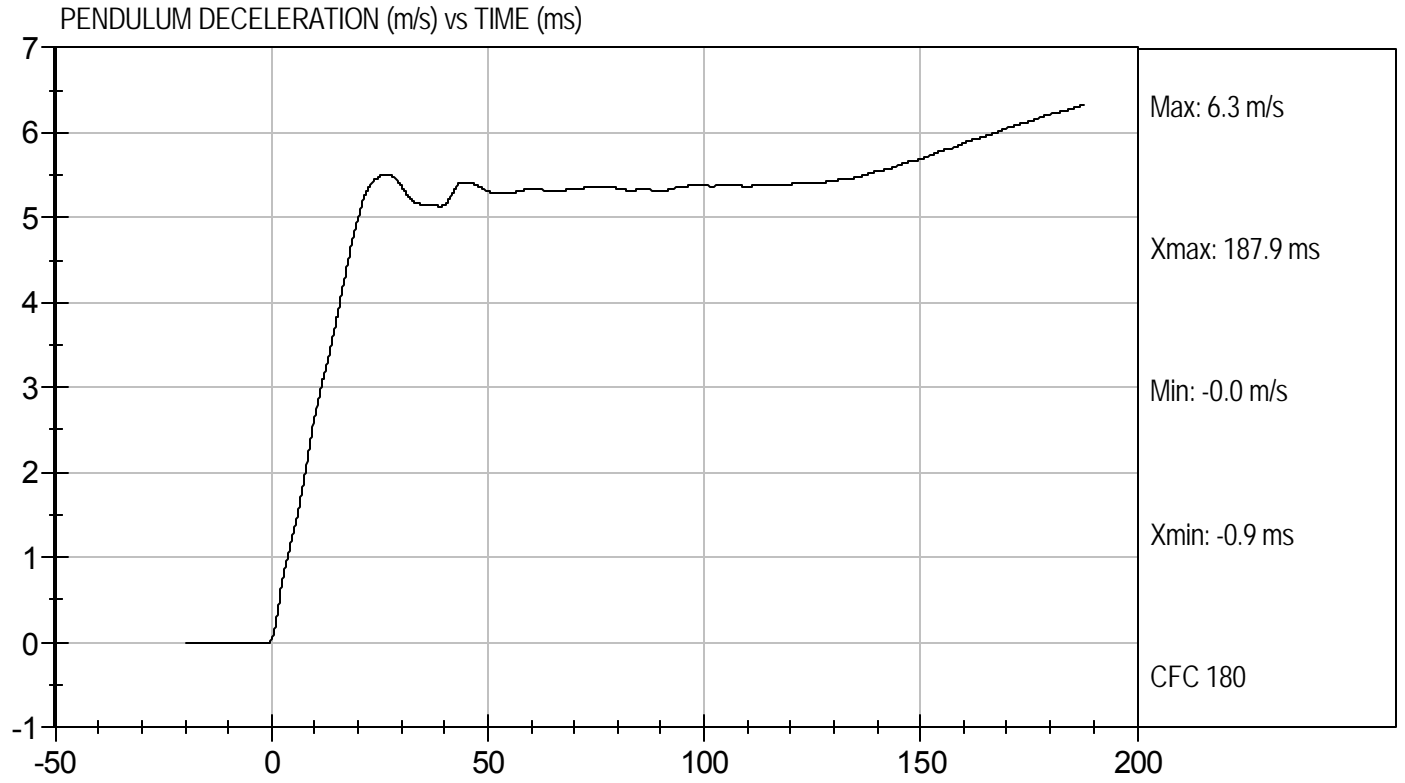
1/4/12
Test Date

David Winkelbauer
Approved By



Test Desc: Neck Bending
Component ID: D12022

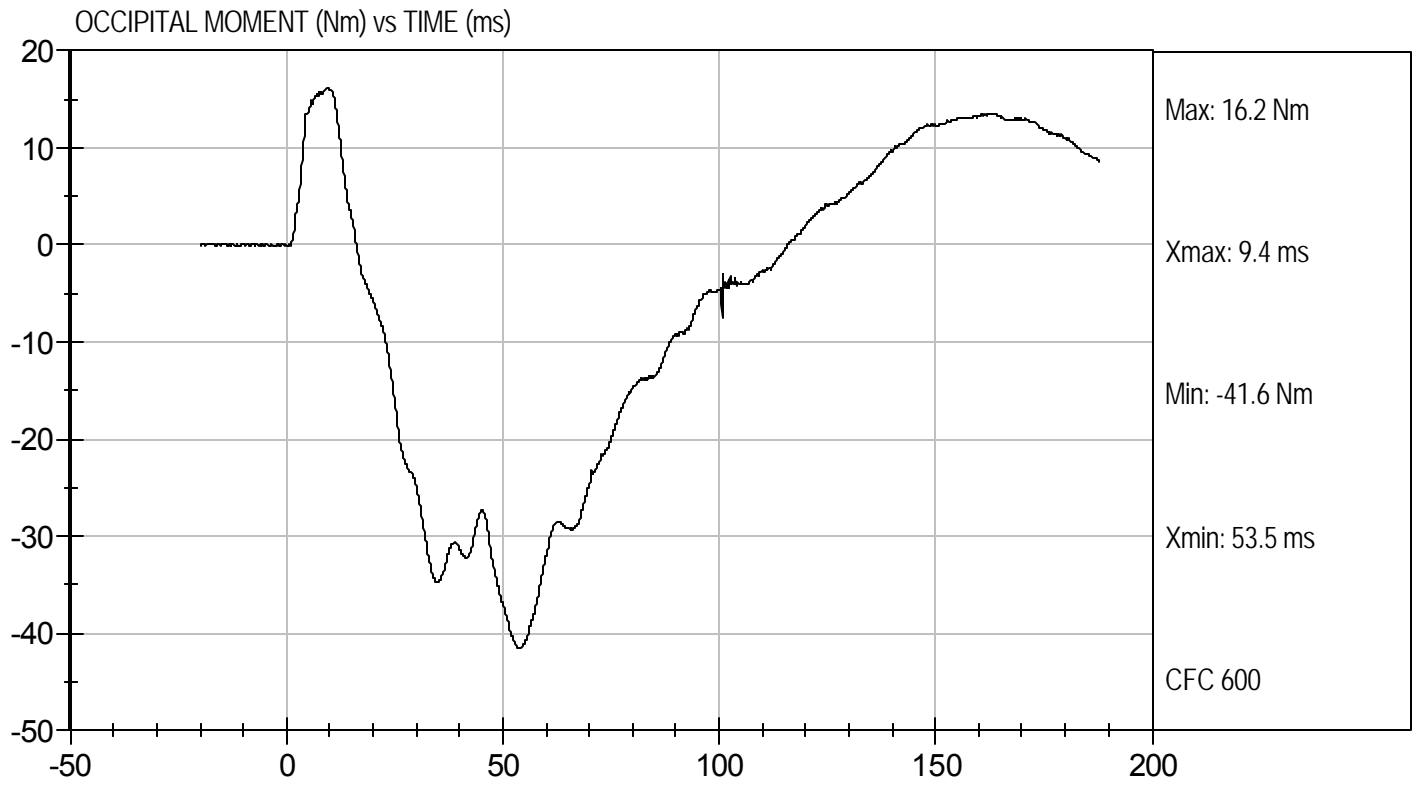
Test Date: 1/4/12
Velocity: 18.32 ft/s, 5.58 m/s





Test Desc: Neck Bending
Component ID: D12022

Test Date: 1/4/12
Velocity: 18.32 ft/s, 5.58 m/s



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

ATD Serial No: 296

Test ID: D12023

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	20.6 to 22.2	22.1	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

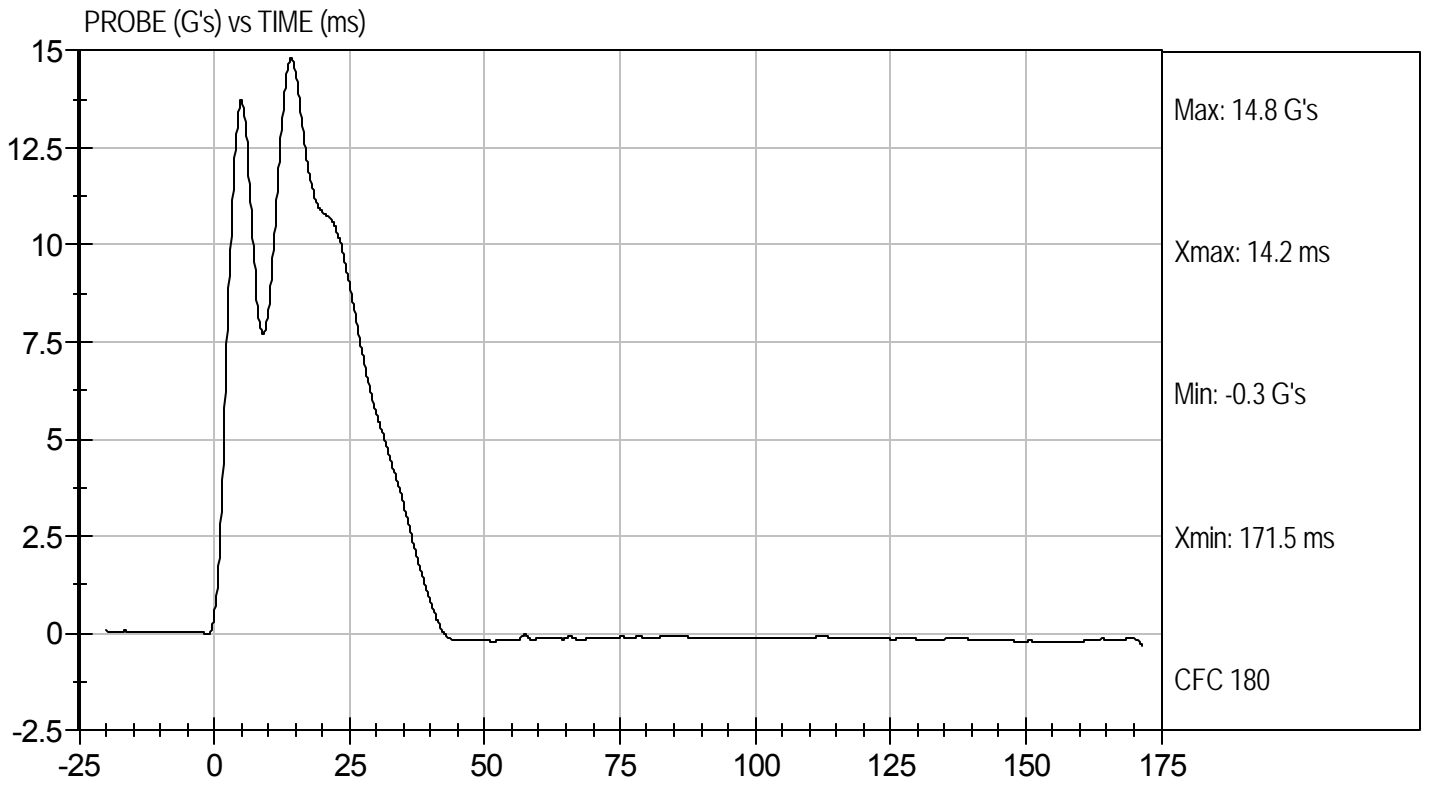
1/4/12
 Test Date

David Winkelbauer
 Approved By



Test Desc: Shoulder Impact
Component ID: D12023

Test Date: 1/4/12
Velocity: 14.36 ft/s, 4.38 m/s

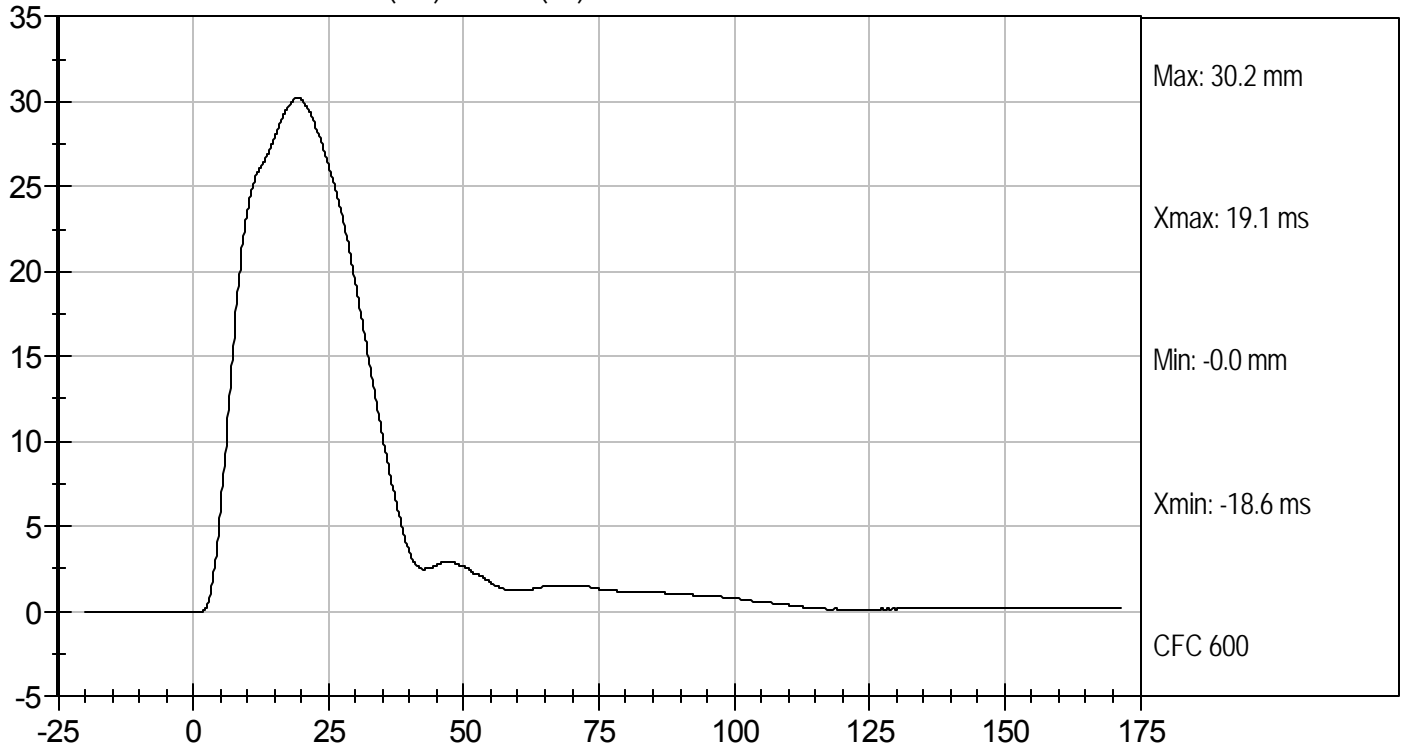




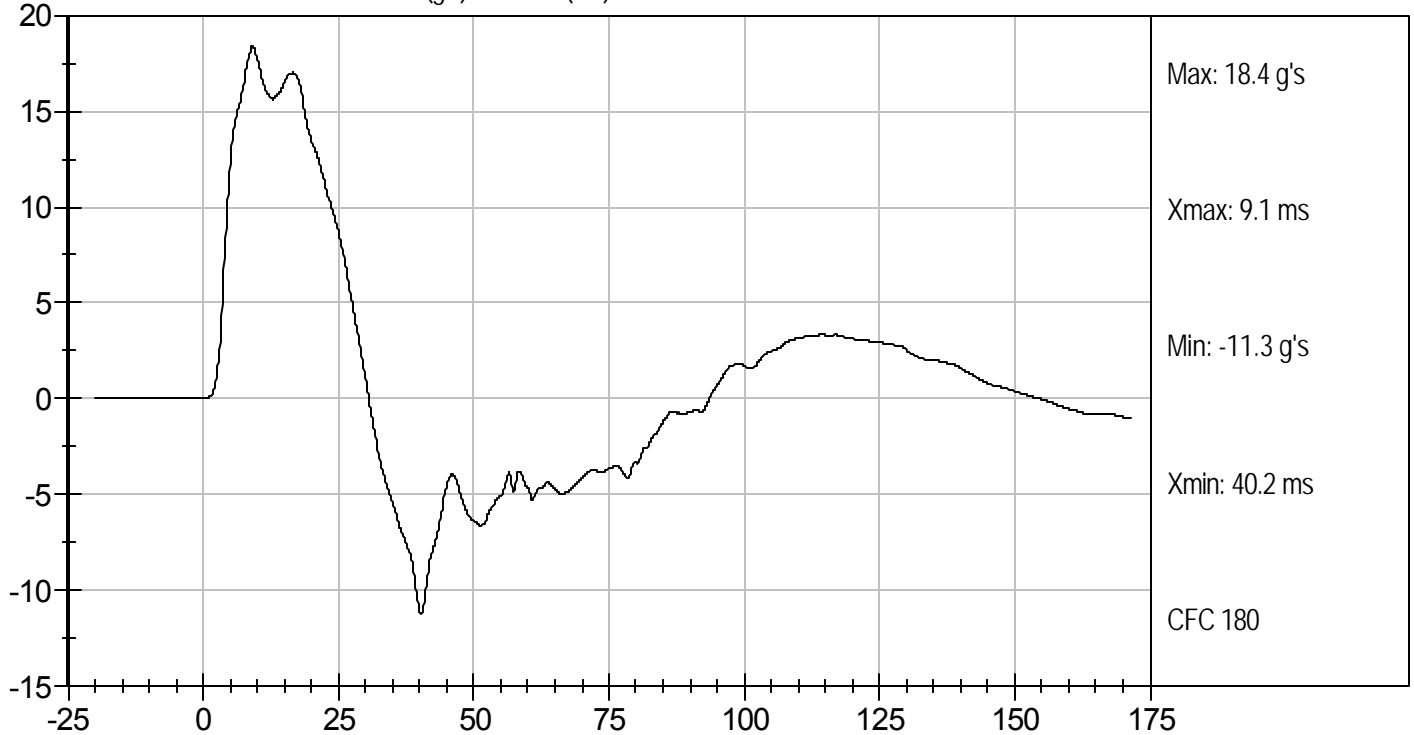
Test Desc: Shoulder Impact
Component ID: D12023

Test Date: 1/4/12
Velocity: 14.36 ft/s, 4.38 m/s

SHOULDER DISPLACEMENT (mm) vs TIME (ms)



UPPER SPINE ACCELERATION (g's) vs TIME (ms)



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

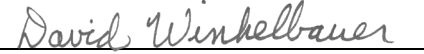
ATD Serial No: 296

Test I.D: D12024

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	22.1	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	34	Pass
Upper Rib Displacement	mm	25 to 32	27	Pass
Middle Rib Displacement	mm	30 to 36	33	Pass
Lower Rib Displacement	mm	32 to 38	36	Pass
Upper Spine (T1) Y Acceleration	G's	34 to 43	38	Pass
Lower Spine (T12) Y Acceleration	G's	29 to 37	30	Pass
Overall Test Results				Pass


Laboratory Technician

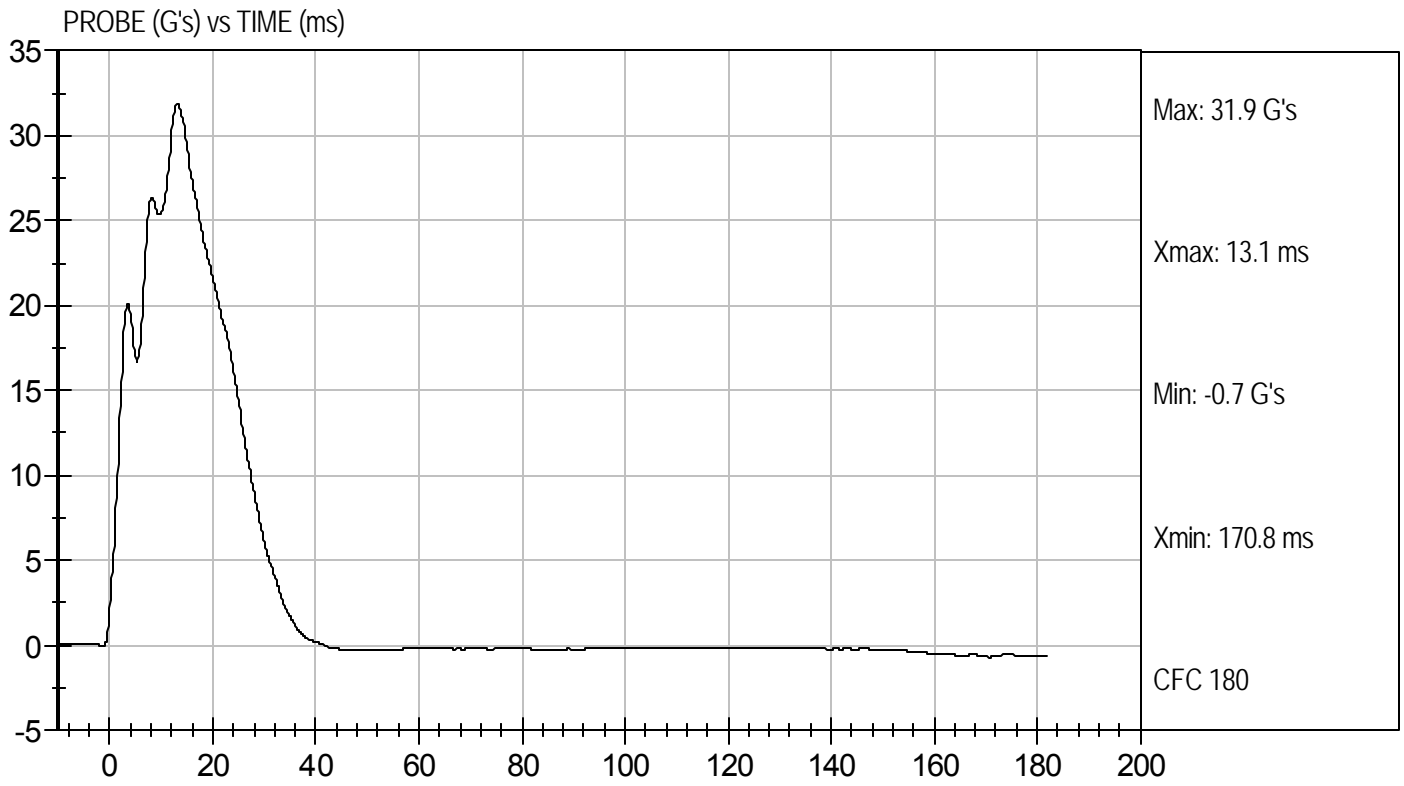
1/4/12
Test Date

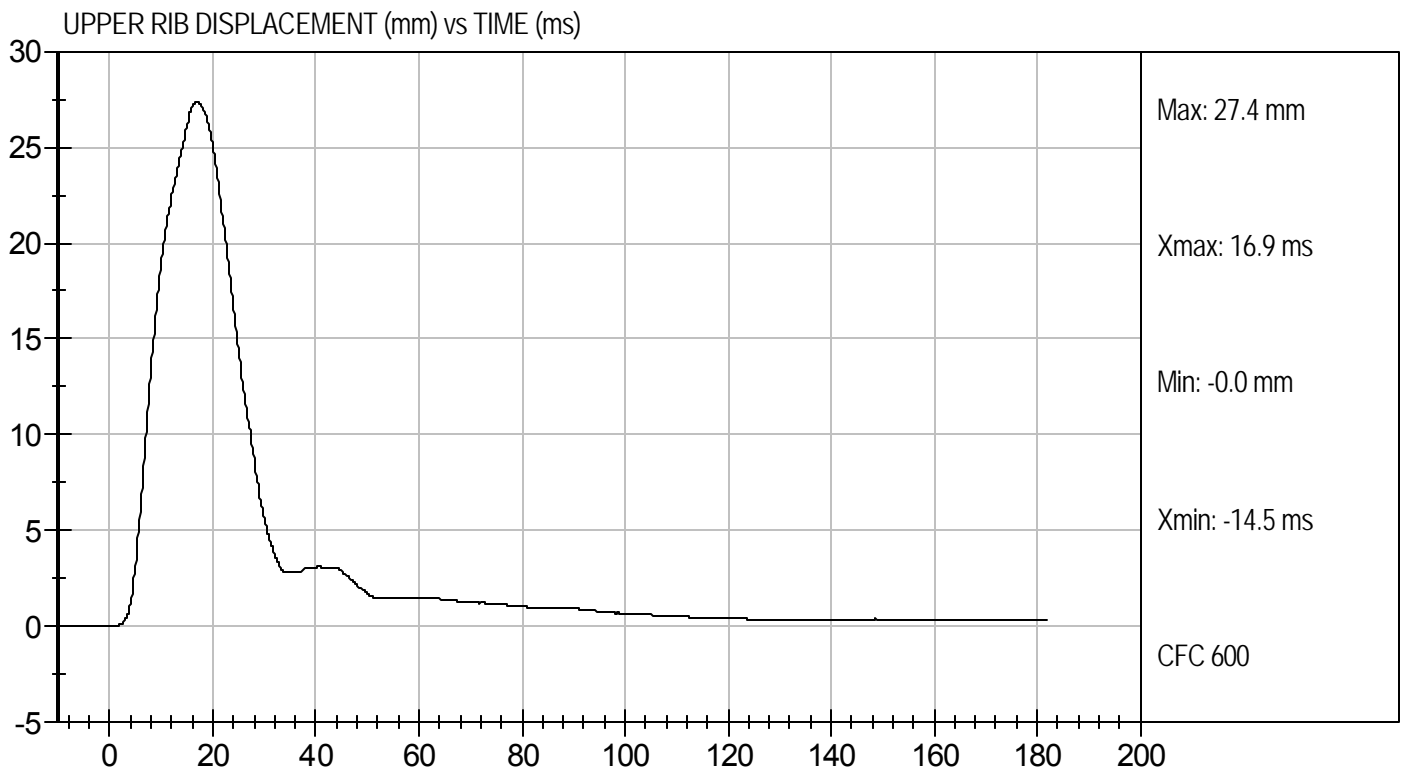
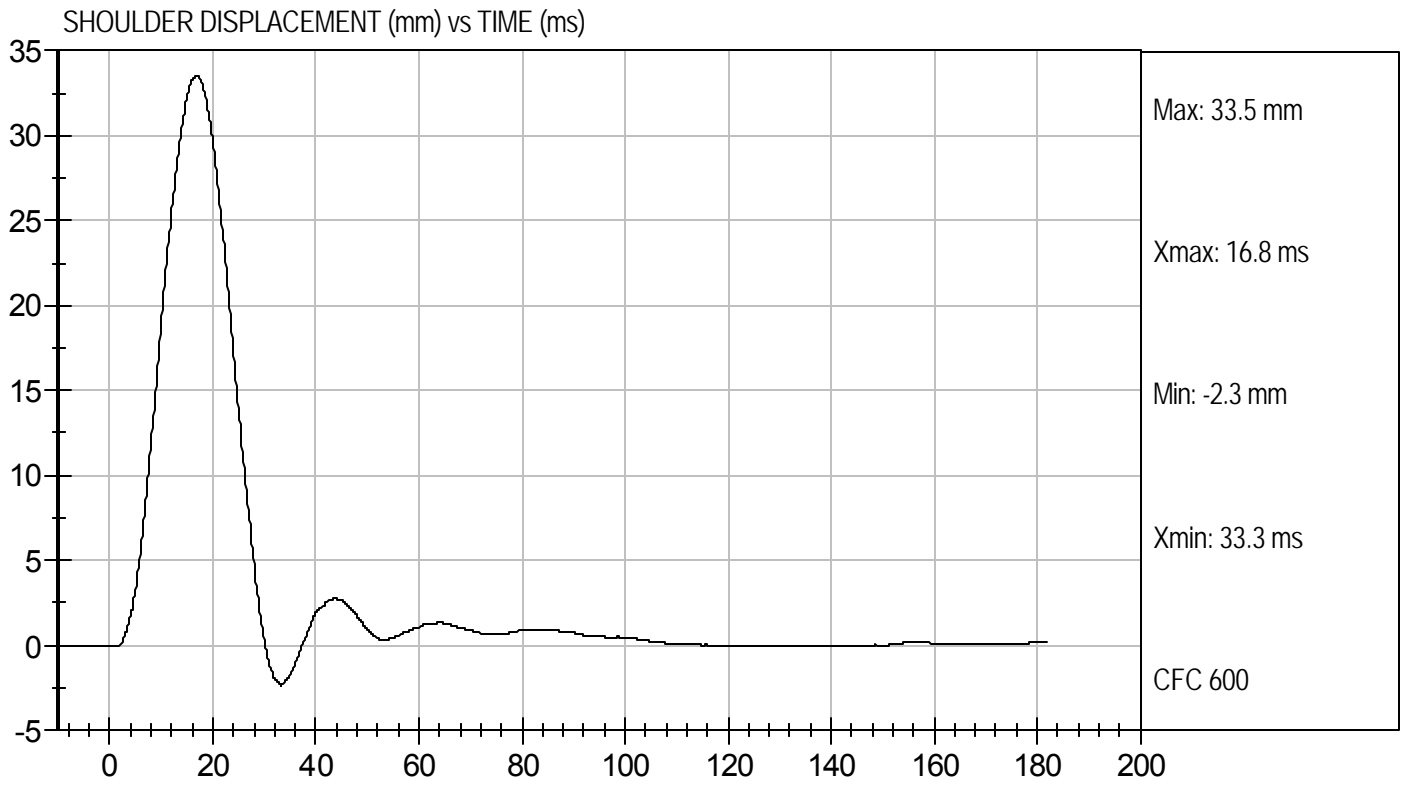

Approved By

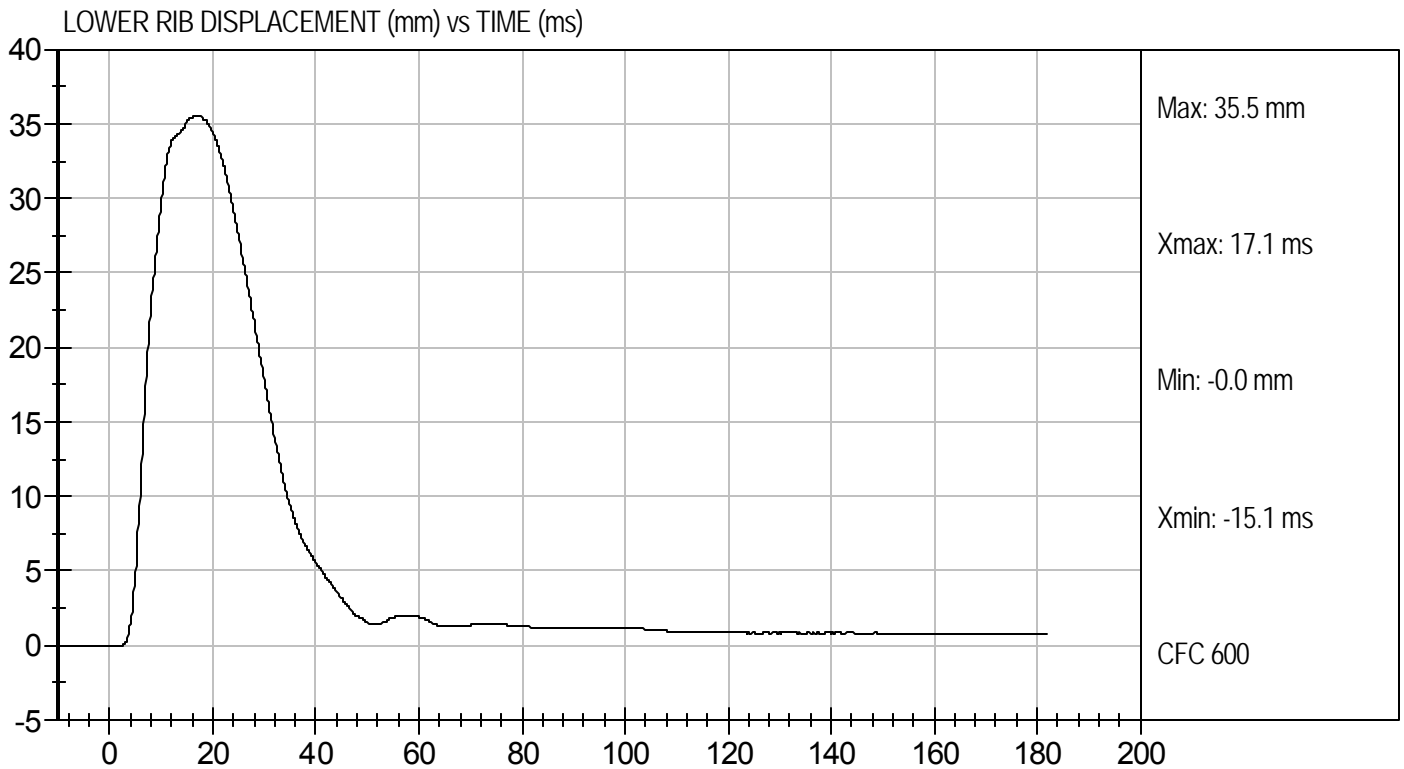
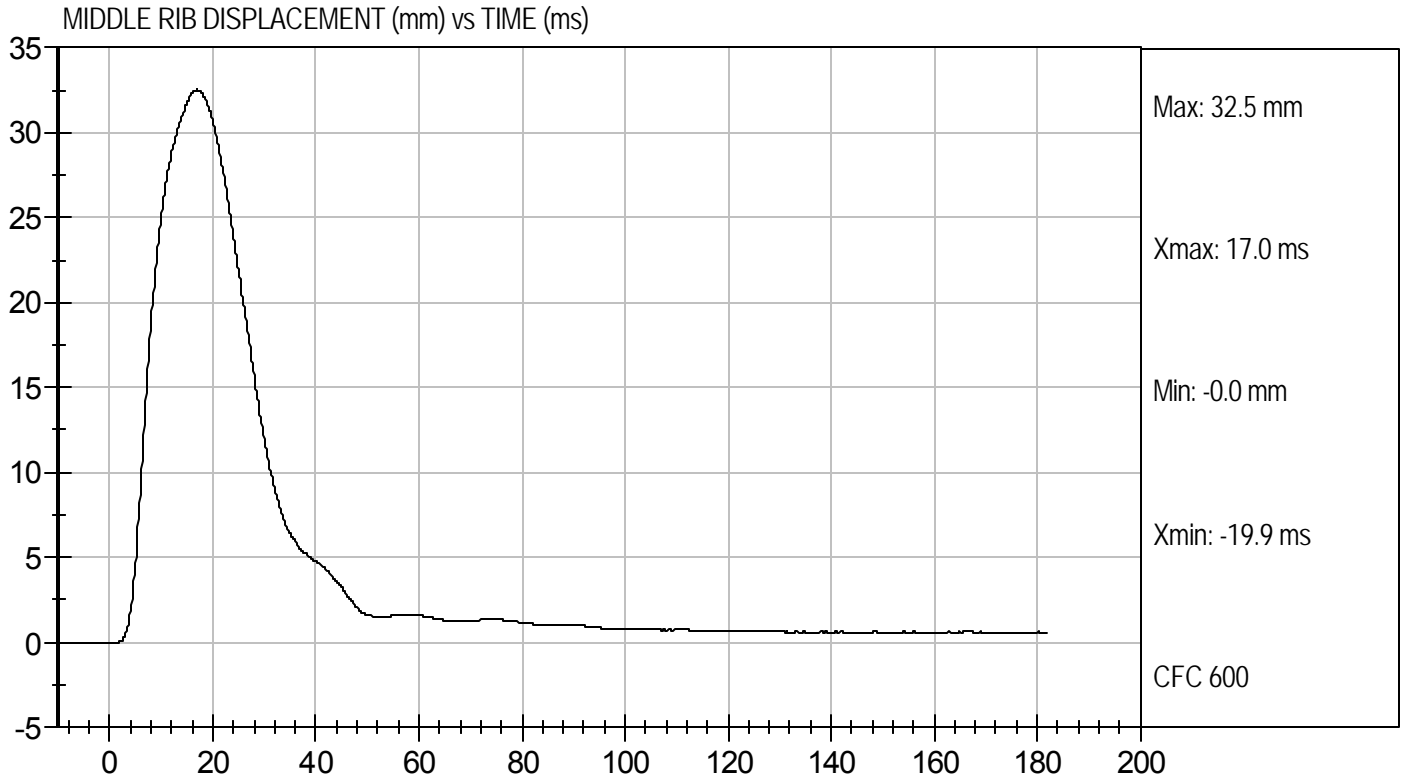


Test Desc: Thorax With Arm
Component ID: D12024

Test Date: 1/4/12
Velocity: 22.22 ft/s, 6.77 m/s





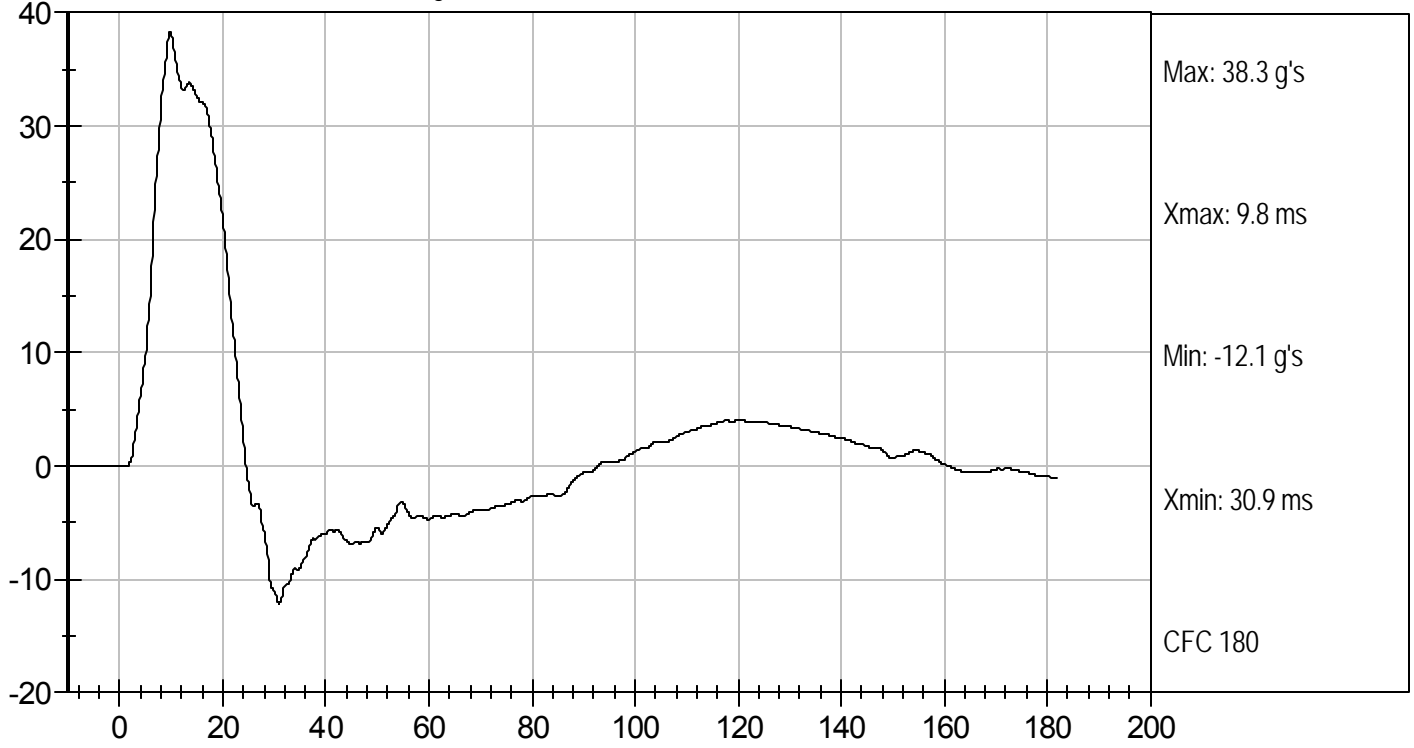




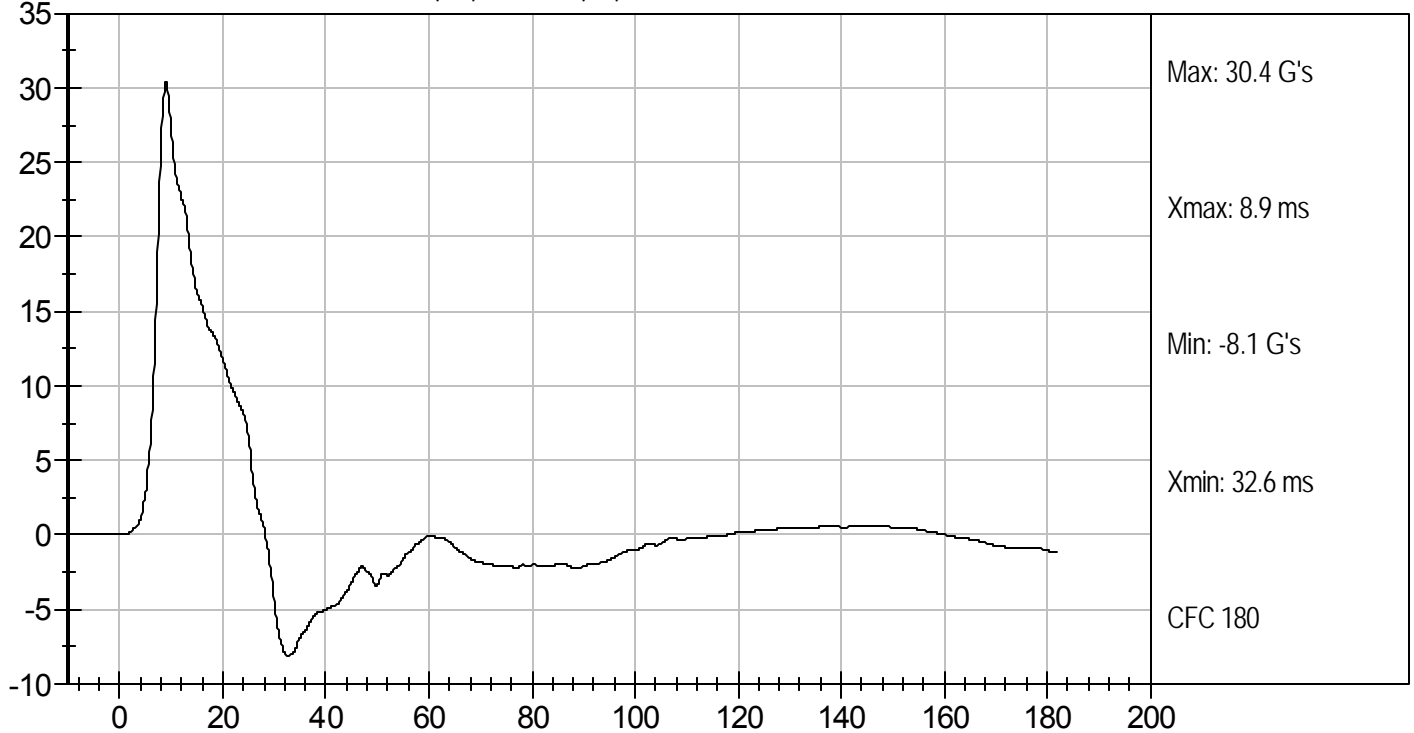
Test Desc: Thorax With Arm
Component ID: D12024

Test Date: 1/4/12
Velocity: 22.22 ft/s, 6.77 m/s

UPPER SPINE ACCELERATION (g's) vs TIME (ms)



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



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

ATD Serial No: 296

Test I.D: D12025

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	22.1	Pass
Humidity	%	10 to 70	18	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	36	Pass
Middle Rib Displacement	mm	39 to 45	43	Pass
Lower Rib Displacement	mm	35 to 43	41	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

Jessica Hall
Laboratory Technician

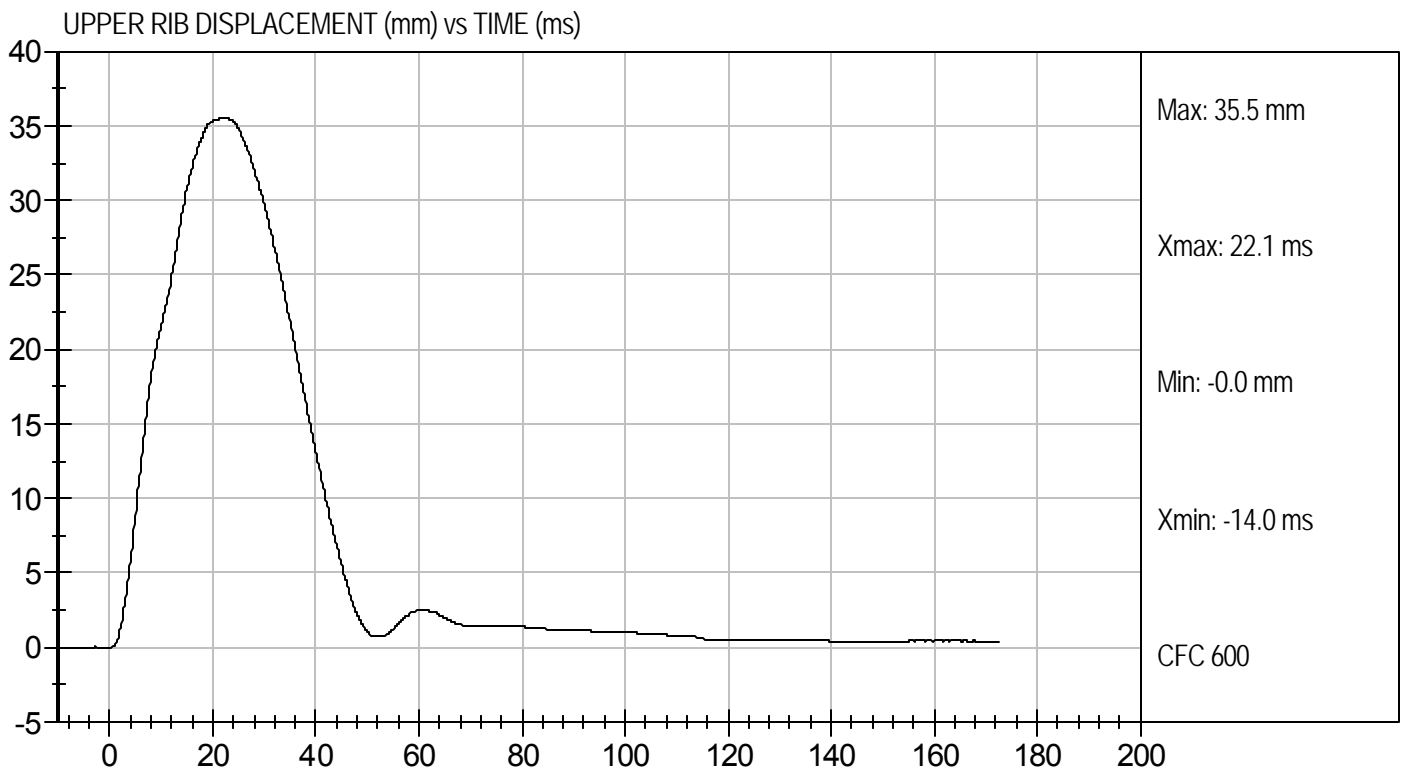
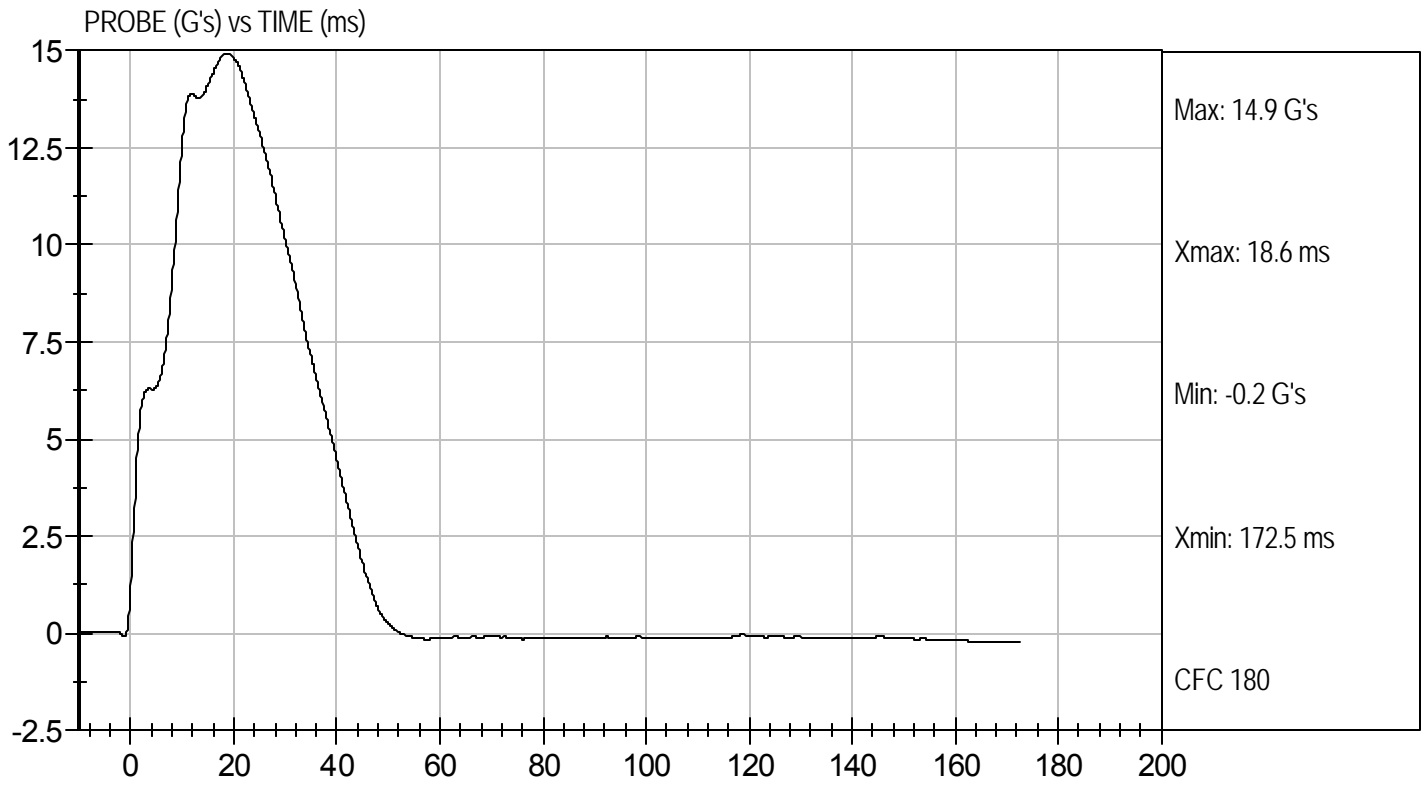
1/4/12
Test Date

David Winkelbauer
Approved By



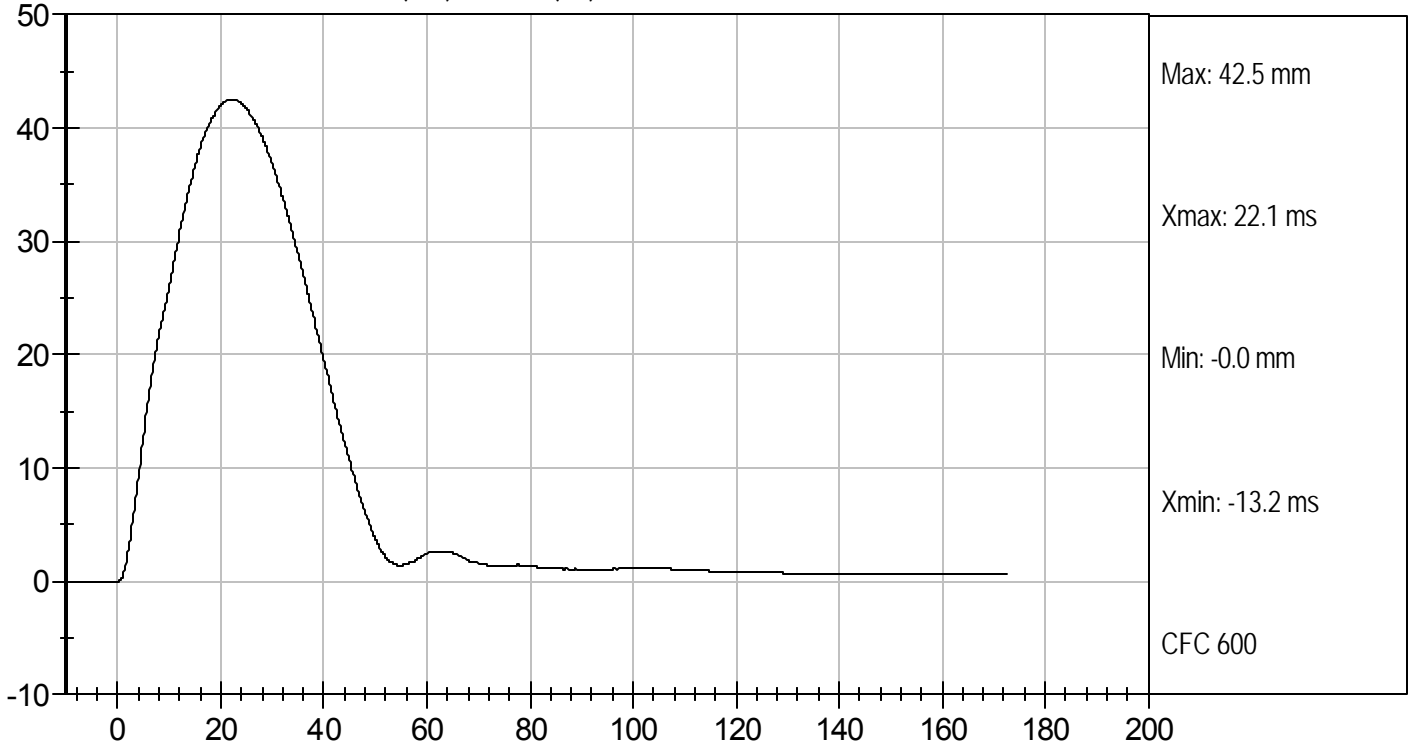
Test Desc: Thorax Without Arm
Component ID: D12025

Test Date: 1/4/12
Velocity: 14.24 ft/s, 4.34 m/s

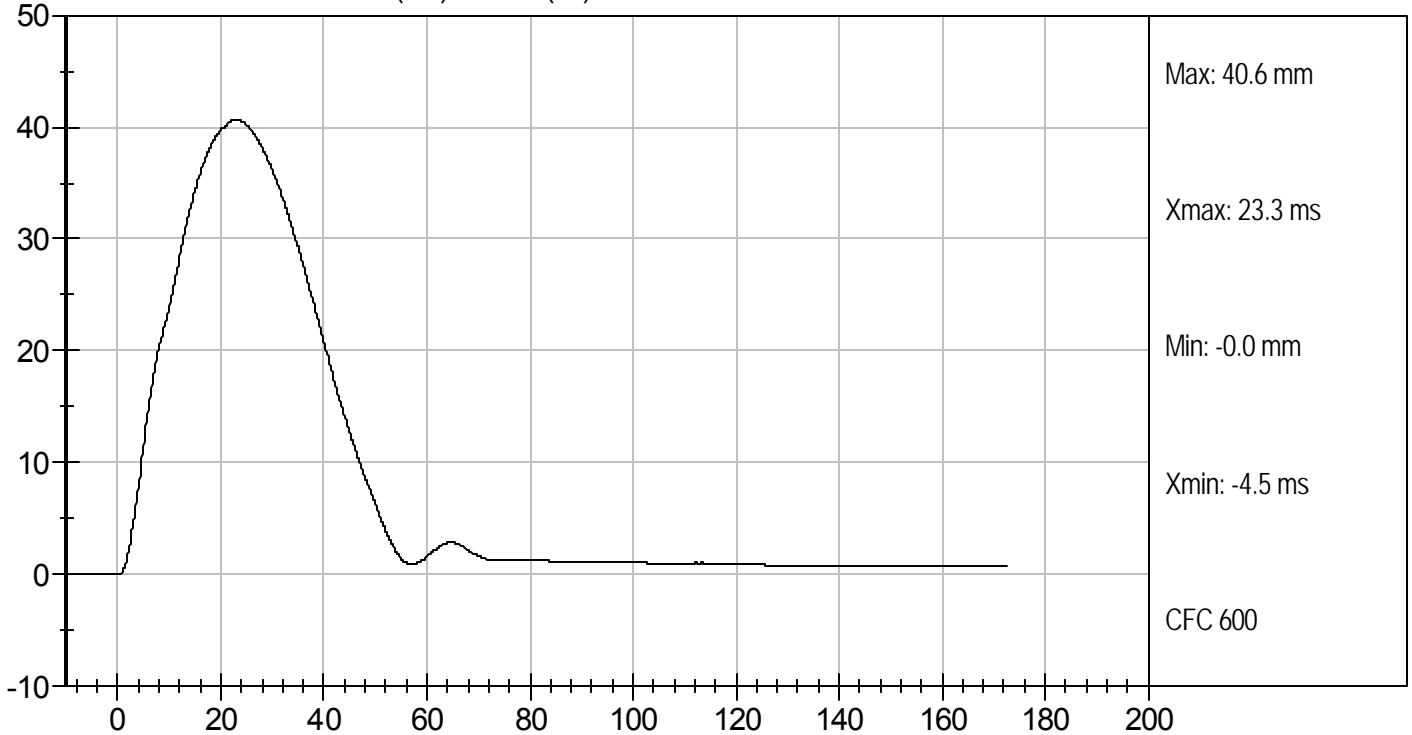




MIDDLE RIB DISPLACEMENT (mm) vs TIME (ms)

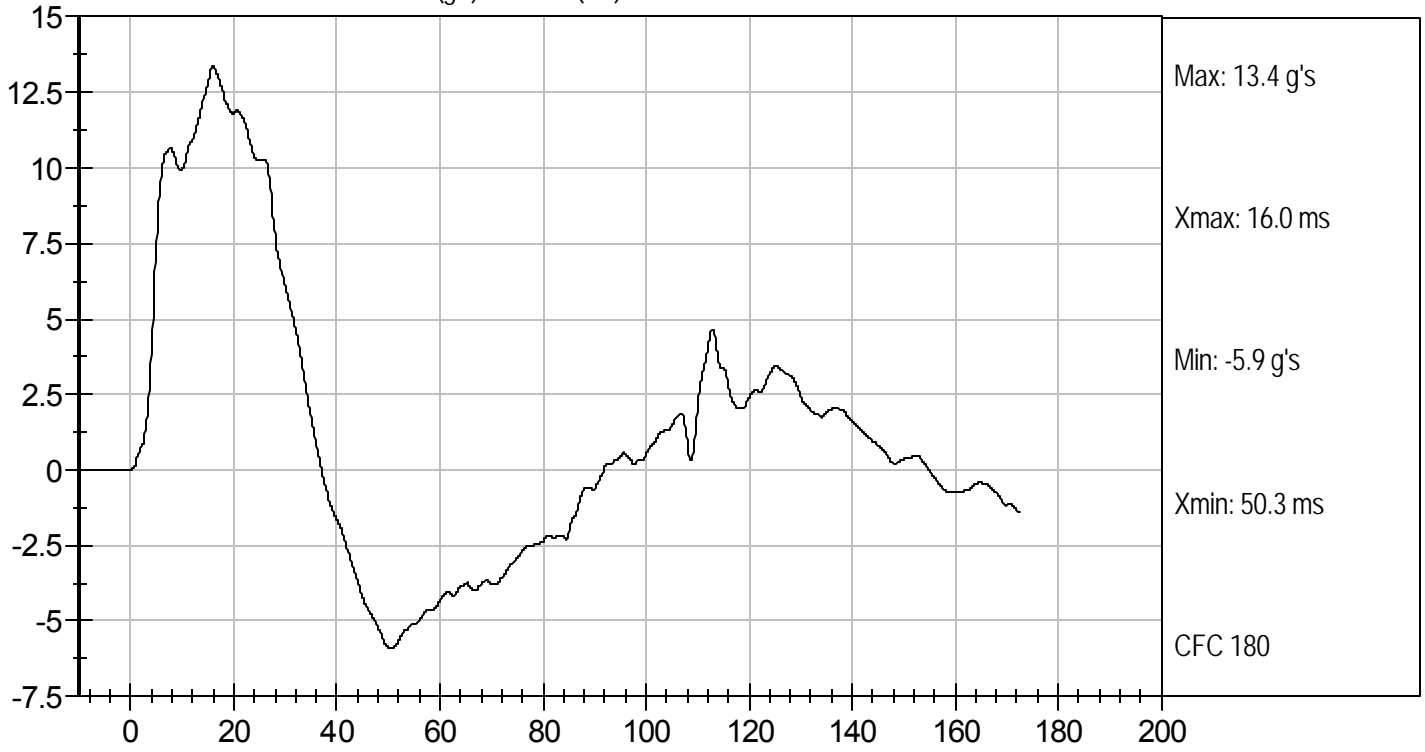


LOWER RIB DISPLACEMENT (mm) vs TIME (ms)

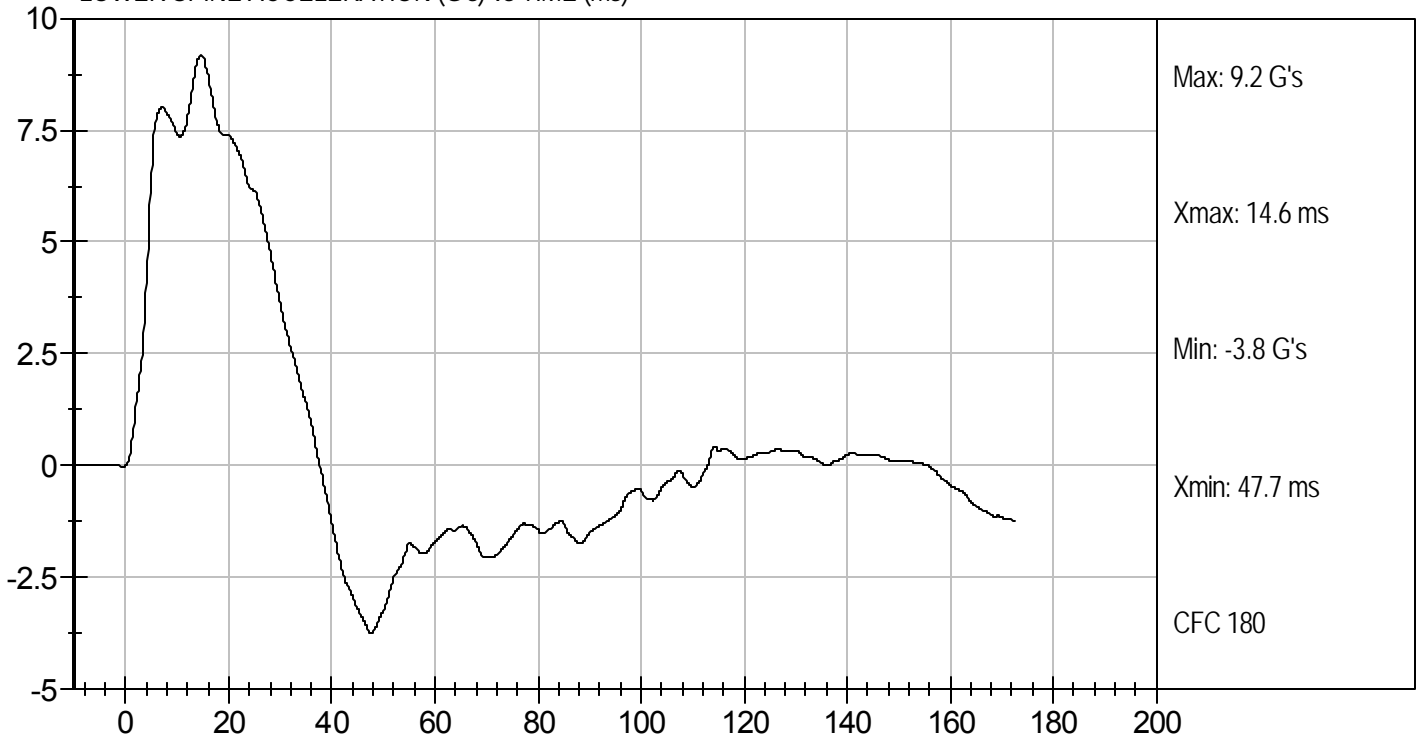




UPPER SPINE ACCELERATION (g's) vs TIME (ms)



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



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

ATD Serial No: 296

Test I.D: D12026

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	22.1	Pass
Humidity	%	10 to 70	18	Pass
Impact Velocity	m/s	4.20 to 4.40	4.38	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	38	Pass
Lower Spine (T12) Y Acceleration	G's	9 to 14	11	Pass
Overall Test Results				Pass

Jessica Hall
Laboratory Technician

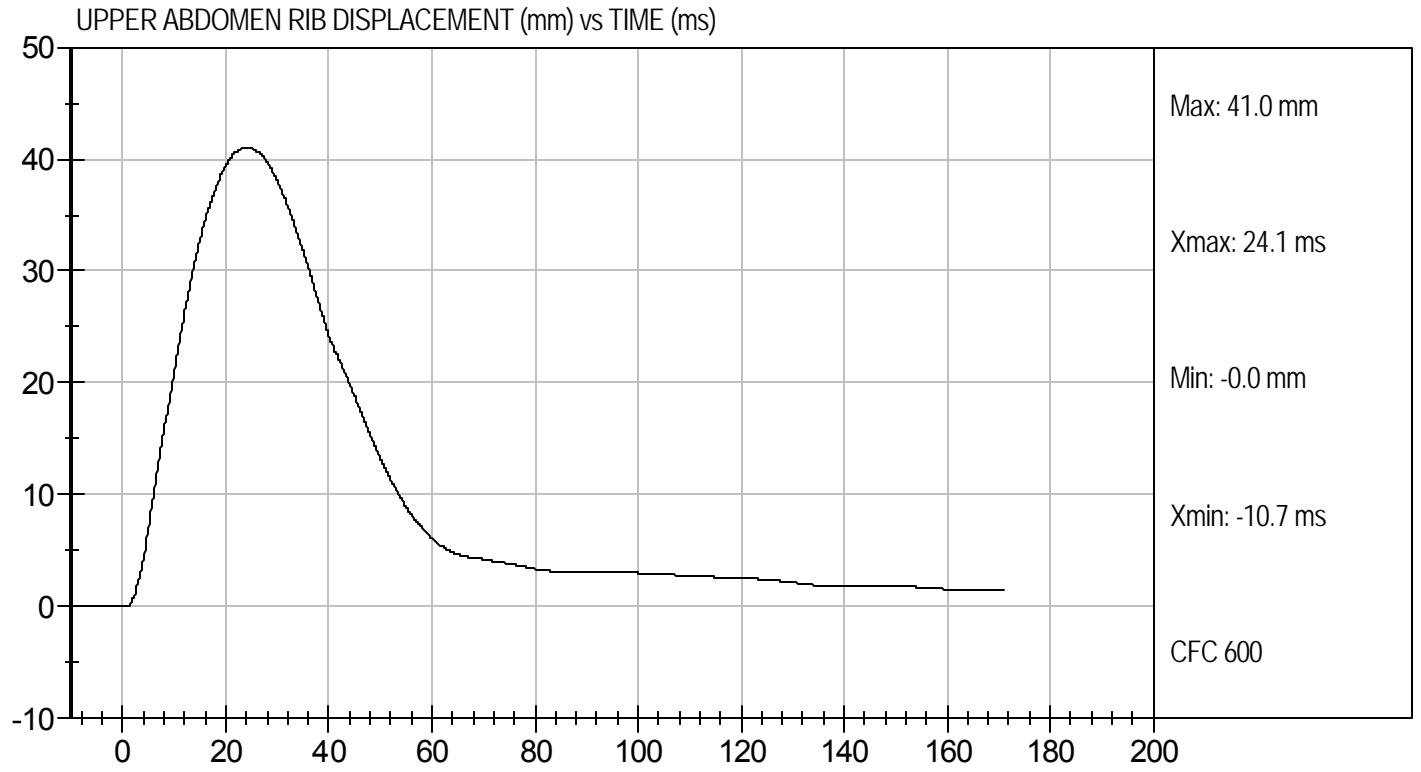
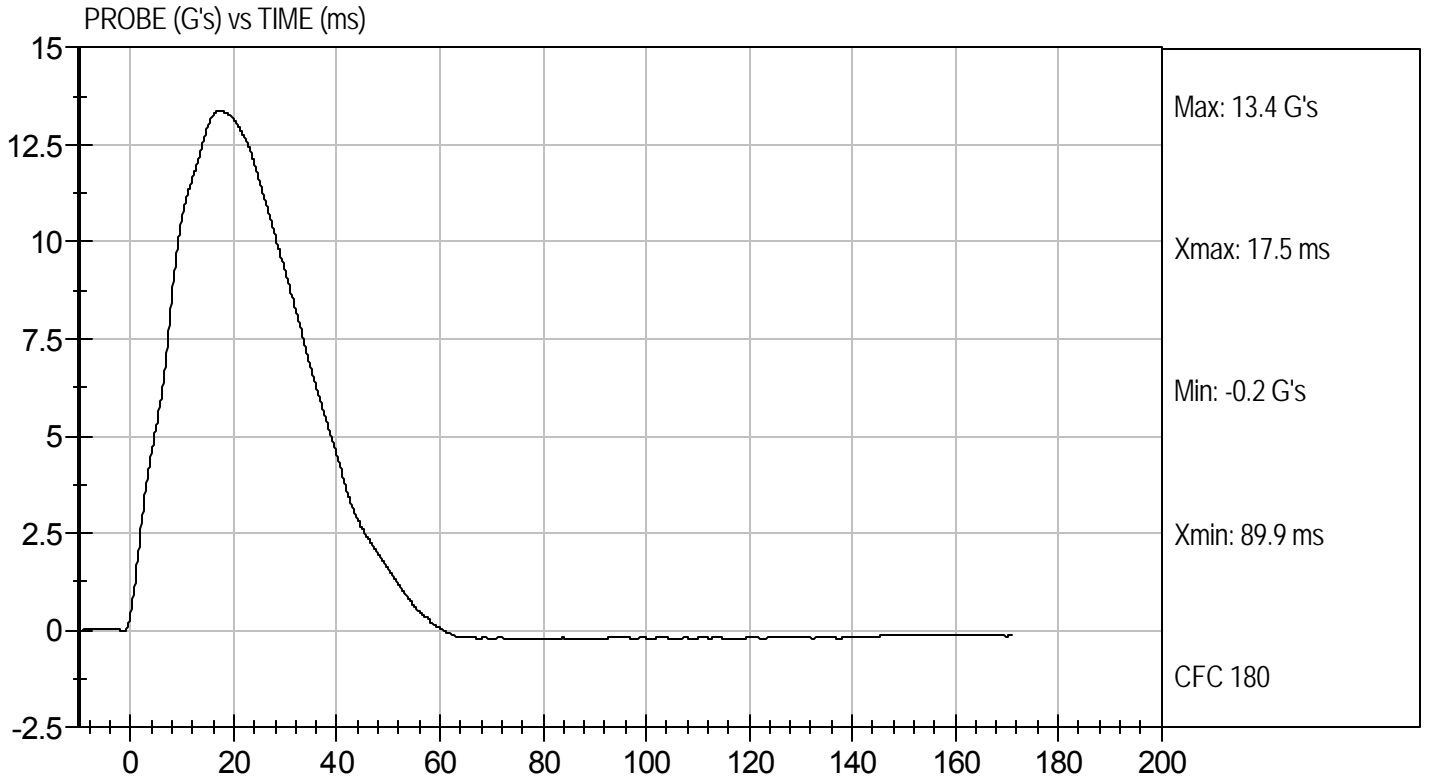
1/4/12
Test Date

David Winkelbauer
Approved By



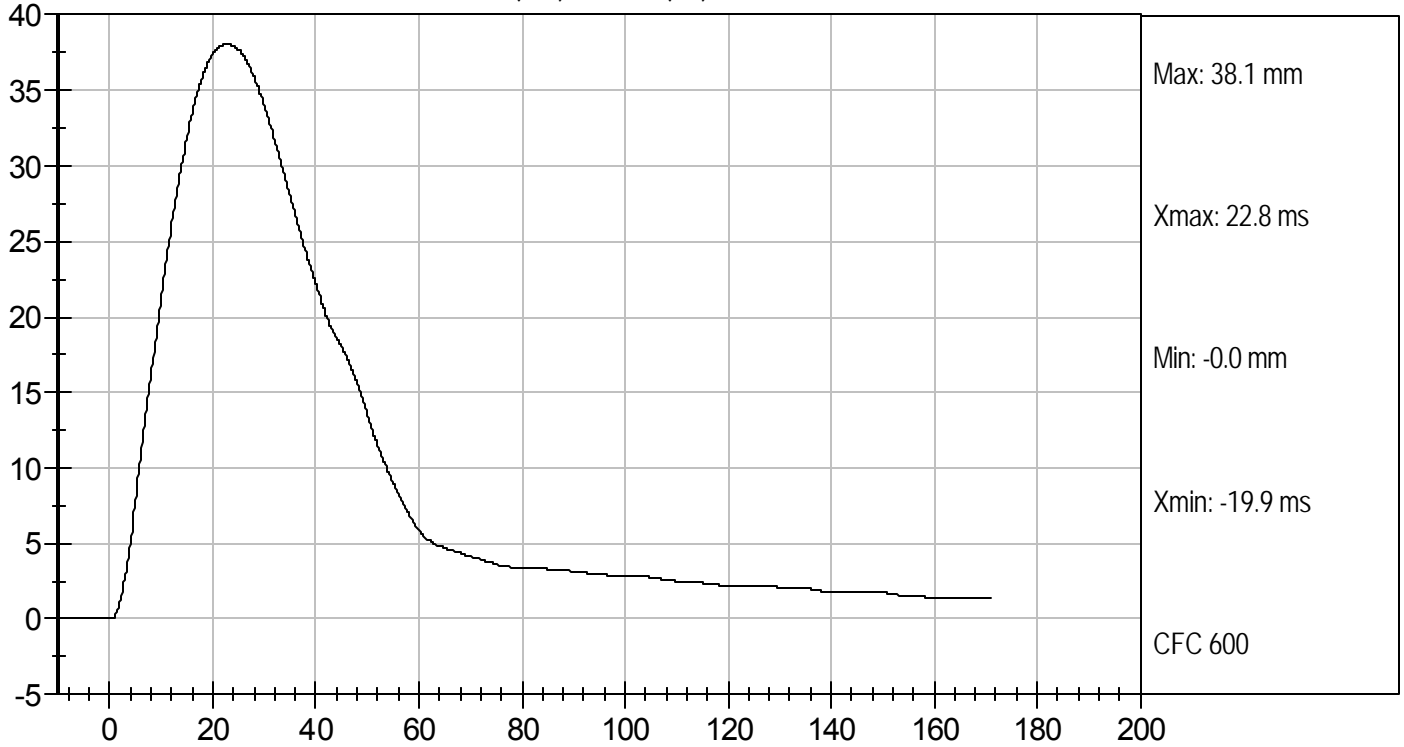
Test Desc: Abdomen Impact
Component ID: D12026

Test Date: 1/4/12
Velocity: 14.36 ft/s, 4.38 m/s

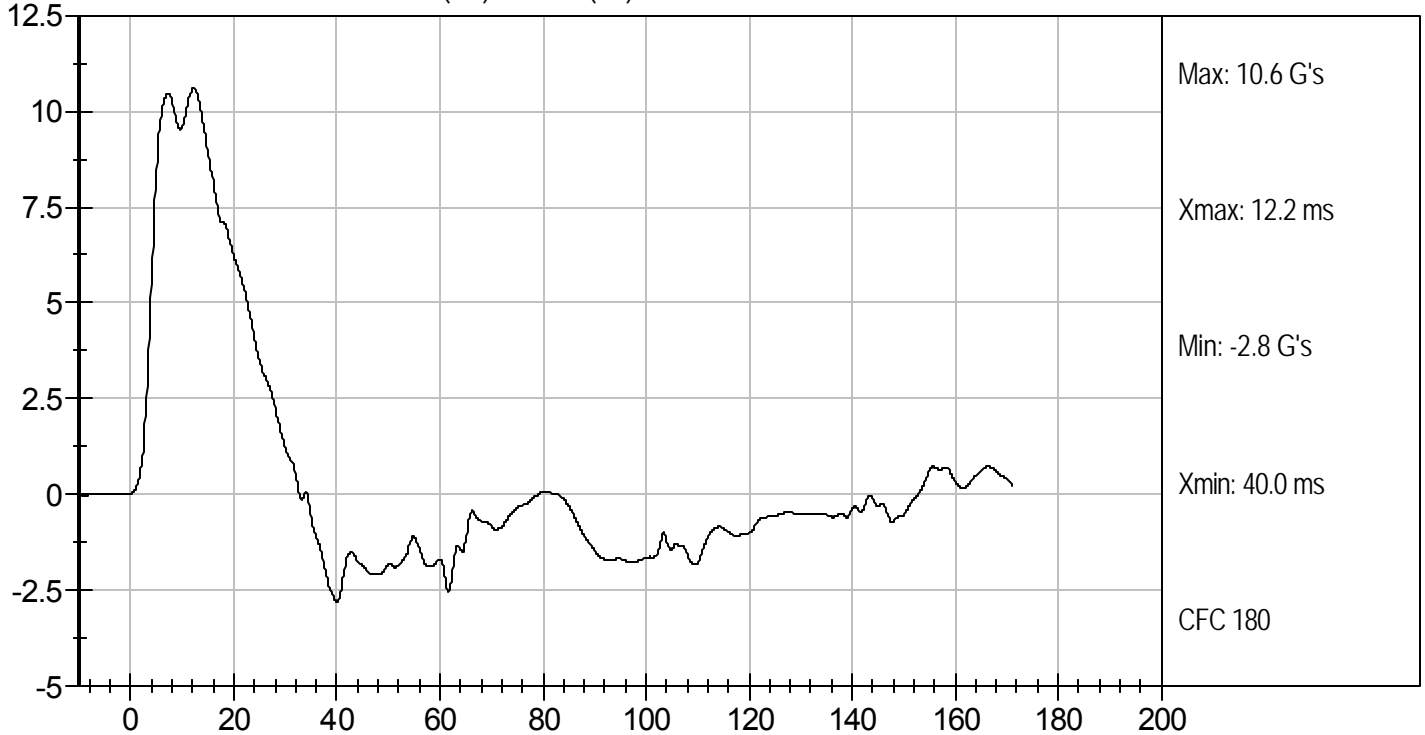




LOWER ABDOMEN RIB DISPLACEMENT (mm) vs TIME (ms)



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: D12027

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.1	Pass
Humidity	%	10 to 70	17	Pass
Impact Velocity	m/s	6.60 to 6.80	6.68	Pass
Peak Impactor Acceleration	G's	38 to 47	44	Pass
Pelvis Y Acceleration after 6 ms	G's	34 to 42	42	Pass
Peak Acetabulum Force	N	3600 to 4300	3938	Pass
Overall Test Results				Pass

Jessica Gall
Laboratory Technician

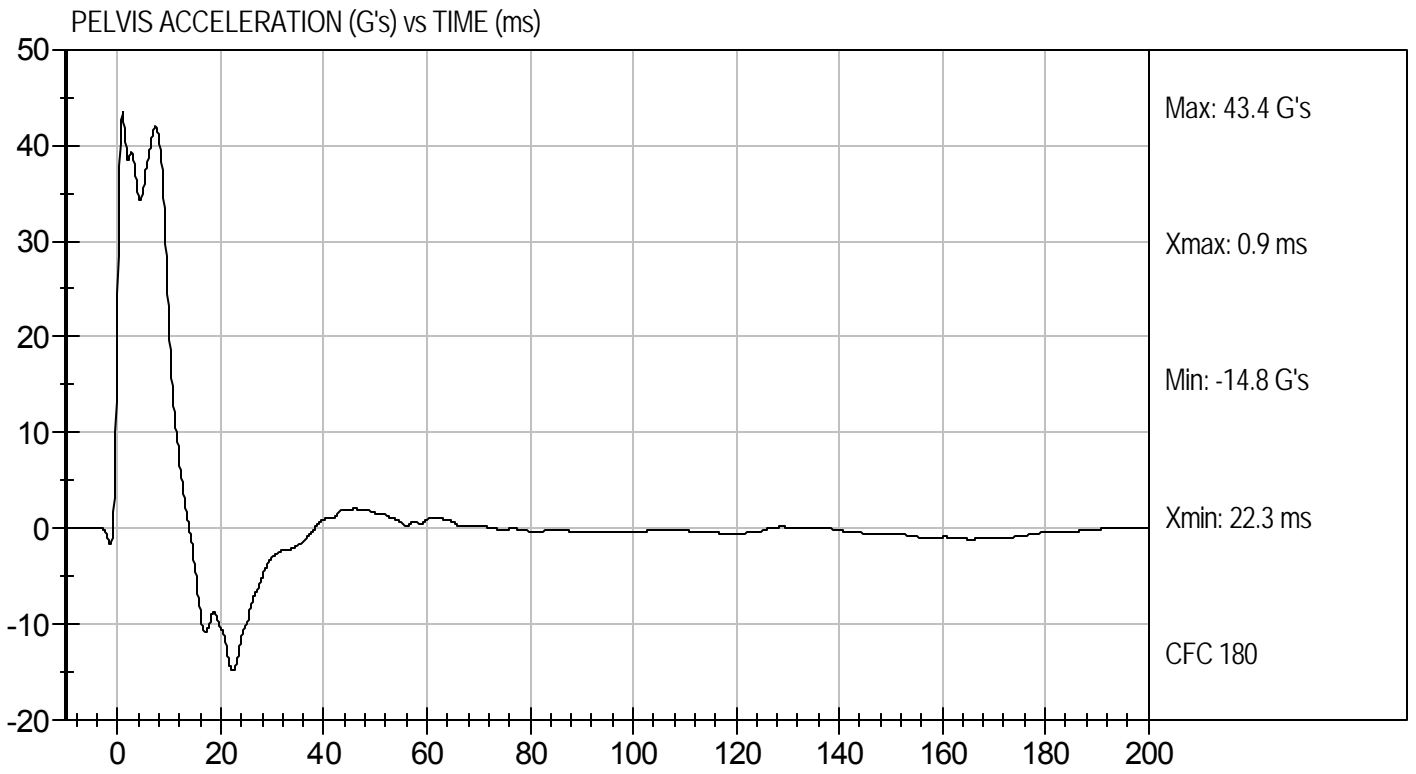
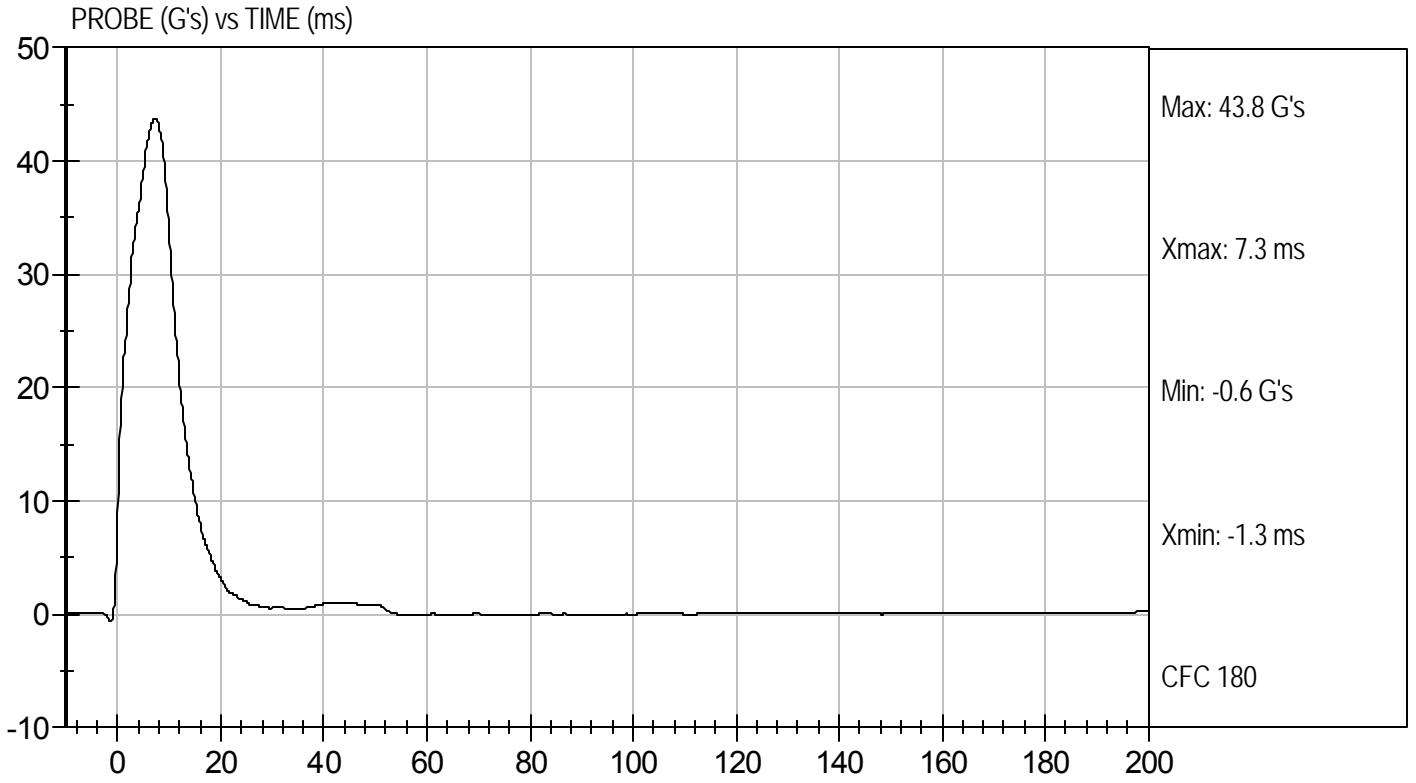
1/5/12
Test Date

David Winkelbauer
Approved By



Test Desc: Pelvis Impact
Component ID: D12027

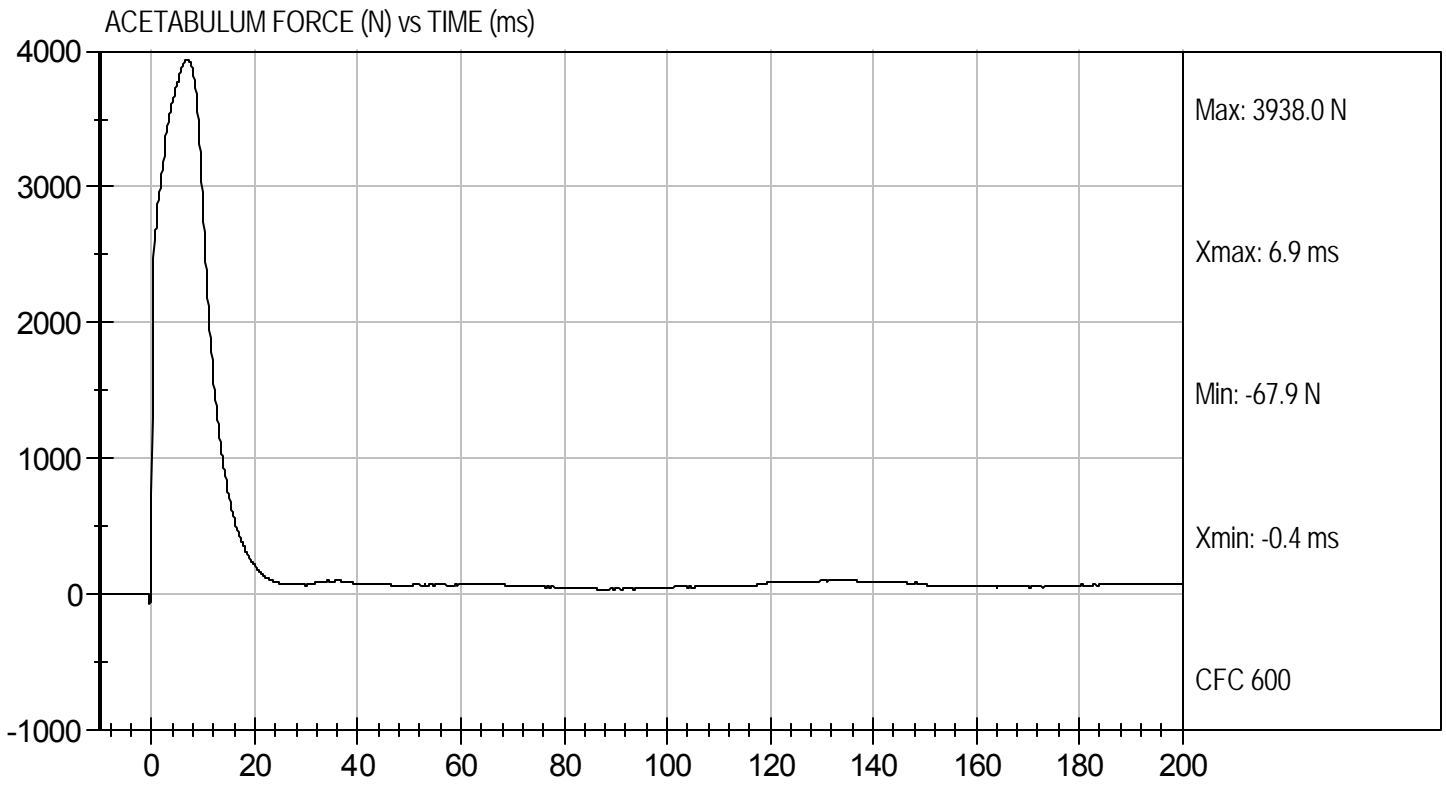
Test Date: 1/5/12
Velocity: 21.93 ft/s, 6.68 m/s





Test Desc: Pelvis Impact
Component ID: D12027

Test Date: 1/5/12
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: D12028

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.1	Pass
Humidity	%	10 to 70	17	Pass
Impact Velocity	m/s	4.20 to 4.40	4.38	Pass
Peak Impactor Acceleration	G's	36 to 45	36	Pass
Pelvis Y Acceleration	G's	28 to 39	30	Pass
Peak Pelvis Iliac Force	N	4100 to 5100	4371	Pass
Overall Test Results				Pass

Jessica Gall
 Laboratory Technician

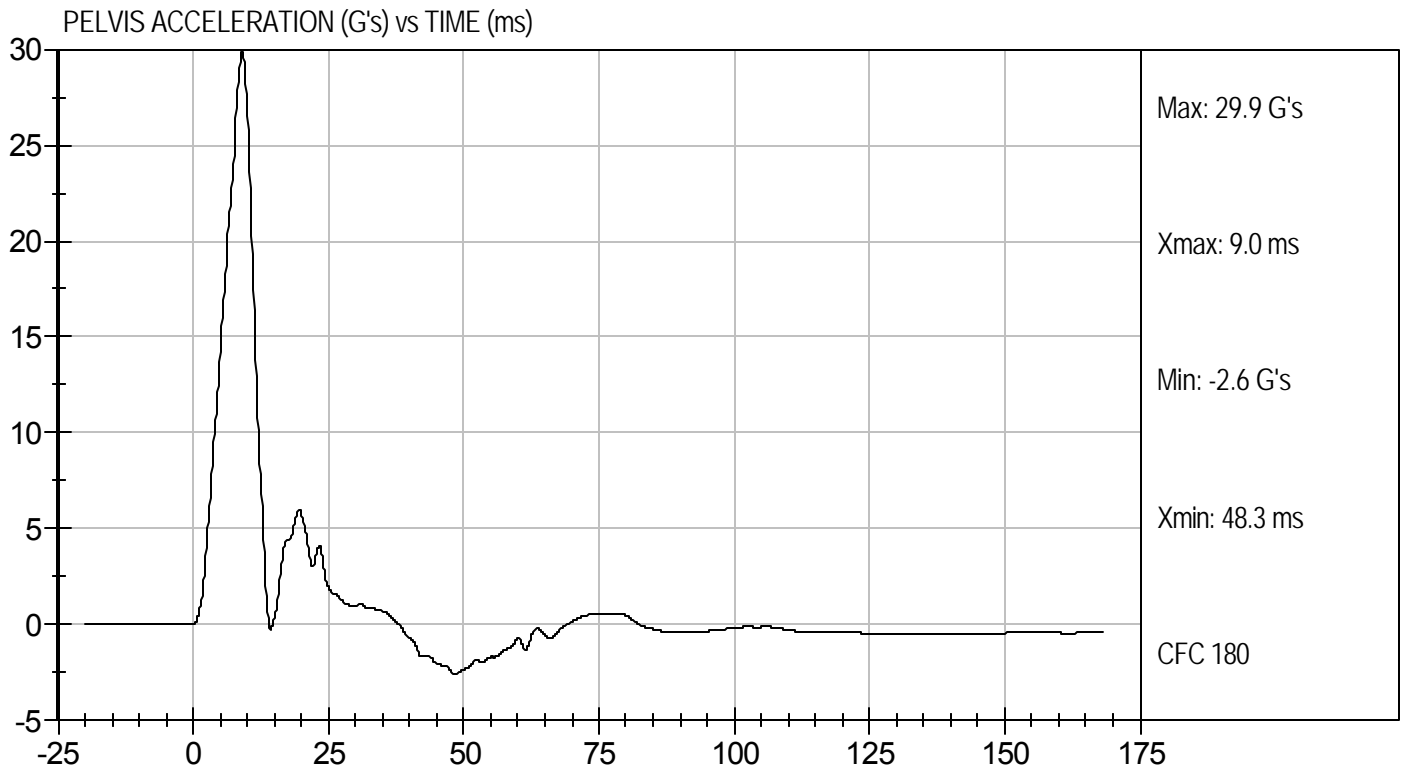
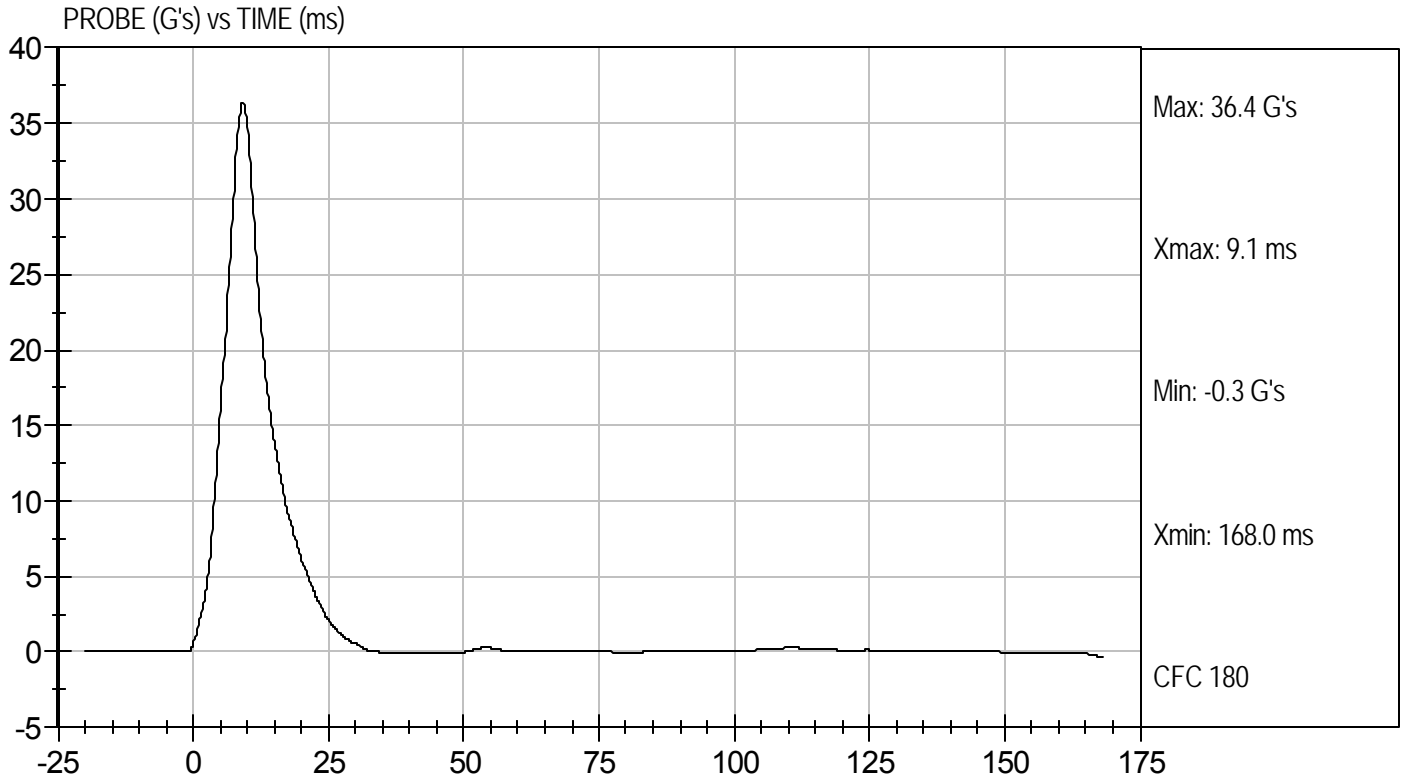
1/5/12
 Test Date

David Winkelbauer
 Approved By



Test Desc: Iliac Impact
Component ID: D12028

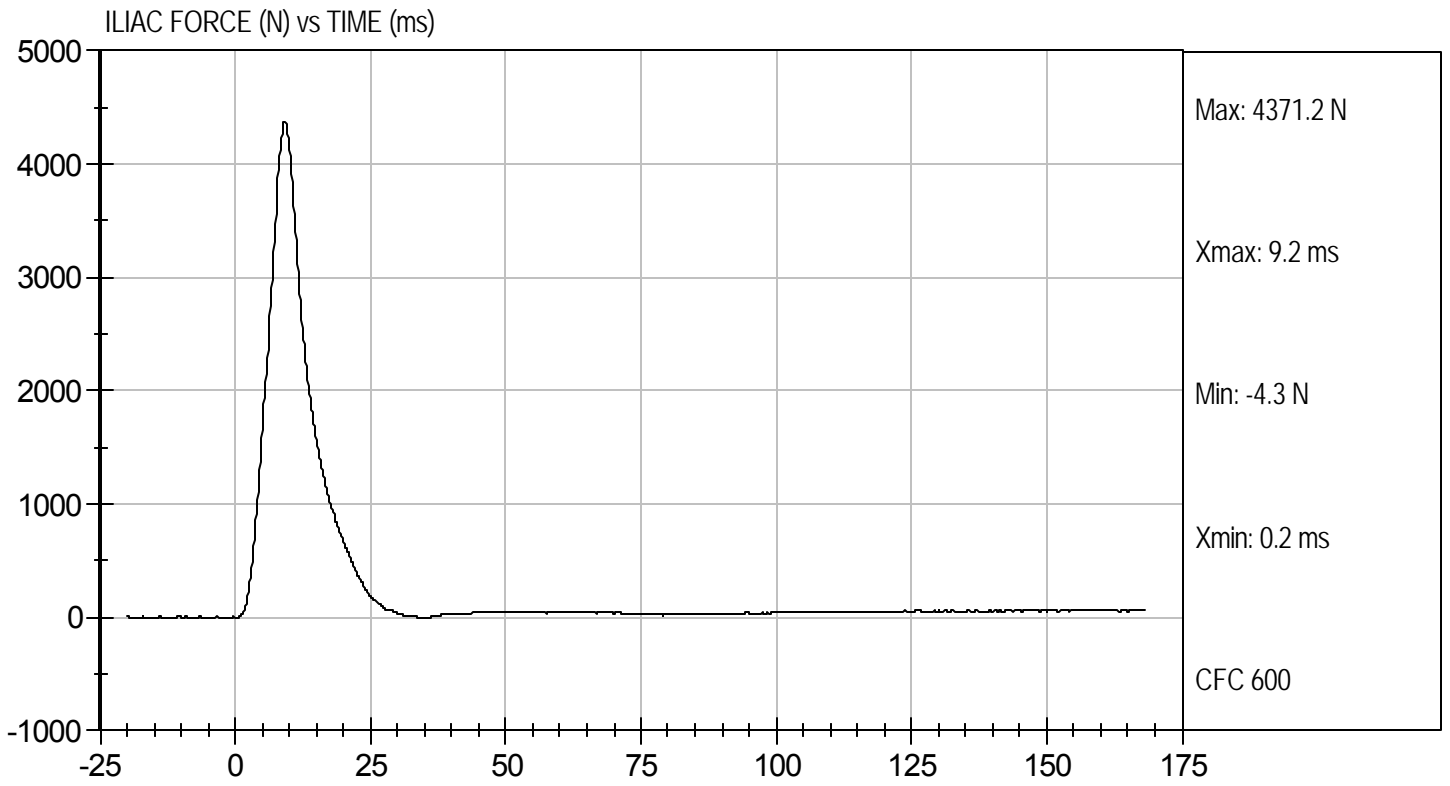
Test Date: 1/5/12
Velocity: 14.36 ft/s, 4.38 m/s





Test Desc: Iliac Impact
Component ID: D12028

Test Date: 1/5/12
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	12/23/11
Iliac Wing Load Cell			Y	IWG282	Denton	12/23/11
Pelvis Plug (struck side)				46400	FTSS	09/22/11
Pelvis Plug (non-struck side)				46411	FTSS	09/22/11

Table 2 – Vehicle Instrumentation

		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	P59326	Endevco	12/14/11
Vehicle Center of Gravity	Y	P59327	Endevco	12/14/11
Vehicle Center of Gravity	Z	P59325	Endevco	12/14/11
Left Floor Sill	Y	P63206	Endevco	10/20/11
A-Pillar Sill	Y	P59238	Endevco	12/13/11
A-Pillar Low	Y	P59376	Endevco	10/20/11
A-Pillar Mid	Y	P55674	Endevco	07/07/11
B-Pillar Sill	Y	P59251	Endevco	12/13/11
B-Pillar Low	Y	P52186	Endevco	08/22/11
B-Pillar Mid	V	P59634	Endevco	11/04/11
Driver Seat	Y	P59352	Endevco	07/07/11
Engine Top	X	P63255	Endevco	09/13/11
Engine Top	Y	P63254	Endevco	09/13/11
Firewall	Y	P63219	Endevco	10/25/11
Right Roof	Y	P45392	Endevco	09/12/11
Right Floor Sill	Y	P63395	Endevco	12/13/11
Rear Floorpan	X	P59653	Endevco	10/20/11
Rear Floorpan	Y	P59652	Endevco	10/20/11

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