

REPORT NUMBER: SPNCAP-MGA-2017-005

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

**FORD MOTOR CO.
2017 Ford Fusion SE 4-Door Sedan
NHTSA No.: M20170202**

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



Test Date: June 16, 2016

Final Report Date: August 22, 2016

FINAL REPORT

**U.S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Office of Crashworthiness Standards
Mail Code: NRM-110
1200 New Jersey Ave, SE
Room W43-410
Washington, DC 20590**

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Approval Date: August 22, 2016

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

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15. Supplementary Notes																															
16. Abstract A 32.20 km/h, 75° oblique impact Side NCAP Test was conducted on the subject 2017 Ford Fusion SE 4-Door 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 June 16, 2016. The impact velocity was 32.33 km/h, and the ambient temperature at the struck (driver's) side of the target vehicle at the time of impact was 21.5°C. The test vehicle post-test maximum crush was 399 mm at level 3. The test vehicle's performance was as follows: <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th></th> <th colspan="3" style="text-align: center;">Driver ATD (SID-IIs)</th> </tr> <tr> <th style="text-align: left;">Measurement Description</th> <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;">258</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;">45</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;">3208</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;">17</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;">22</td> </tr> </tbody> </table> *Proposed IARV					Driver ATD (SID-IIs)			Measurement Description	Units	Threshold	Result	Head Injury Criteria (HIC ₃₆)	N/A	1000	258	Resultant Lower Spine Acceleration	Gs	82	45	Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	3208	Maximum Thoracic Rib Deflection	mm	38*	17	Maximum Abdomen Rib Deflection	mm	45*	22
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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 Washington, DC 20590 e-mail: tis@nhtsa.dot.gov FAX: 202-493-2833																													
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SECTION 1

TEST PURPOSE AND PROCEDURE

This side impact test is part of the MY 2016 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-14-D-00353. The purpose of this test is to generate comparative side impact performance in a 2017 Ford Fusion SE 4-Door Sedan. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Side NCAP Pole Laboratory Test Procedure, dated October 2015.

SECTION 2 SUMMARY OF TEST RESULTS

A rigid pole side impact test was conducted on a 2017 Ford Fusion SE 4-Door Sedan. The subject vehicle was towed into the rigid pole at an angle of 75° and a velocity of 32.33 km/h. The test was conducted by MGA Research Corporation in Burlington, Wisconsin on June 16, 2016. 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 October 2015. 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
Thorax Upper, Middle, and Lower Rib Displacement Potentiometers
Abdomen Upper Rib and Lower Rib Displacement Potentiometers
Lower Spine (T12) Triaxial Accelerometers
Iliac Load Cell
Acetabulum Load Cell

Appendix B contains the vehicle and 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	258
Resultant Lower Spine Acceleration	Gs	82	45
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	3208
Maximum Thoracic Rib Deflection	mm	38*	17
Maximum Abdominal Rib Deflection	mm	45*	22

*Proposed IARV

Supplemental restraint information is given below:

Restraint Type	Struck Side Driver		Struck Side Rear Passenger	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	No		
Knee Airbag	Yes	No		
Side Curtain Airbag	Yes	Yes	Yes	Yes
Side Torso/Pelvis Airbag	Yes	Yes	No	
Seat Belt Pretensioner	Yes	Yes	No	
Seat Belt Load Limiter	Yes		No	
Other				

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

GENERAL COMMENTS

Left Floor Sill Y recorded no valid data after 14ms.
Left Lower A-Post Y recorded no valid data after 33ms.
Left Mid A-Post Y recorded no valid data after 44ms.

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: 2017 Ford Fusion SE 4-Door Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
Test Date: 6/16/2016

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M20170202	Traction Control System (TCS)	Yes
Model Year	2017	Auto-Leveling System	No
Make	Ford	Automatic Door Locks (ADL)	Yes
Model	Fusion SE	Power Window Auto-Reverse	Yes
Body Style	4-Door Sedan	Other Optional Feature	N/A
VIN	3FA6P0H72HR107415	Driver Front Airbag	Yes
Body Color	Blue Lightning	Driver Curtain Airbag	Yes
Odometer Reading (km/mi)	298km / 185mi	Driver Head/Torso Airbag	No
Engine Displacement (L)	2.5 L	Driver Torso Airbag	No
Type/No. Cylinders	4	Driver Torso/Pelvis Airbag	Yes
Engine Placement	Lateral	Driver Pelvis Airbag	No
Transmission Type	Automatic	Driver Knee Airbag	Yes
Transmission Speeds	6	Rear Pass. Curtain Airbag	Yes
Overdrive	Yes	Rear Pass. Head/Torso Airbag	No
Final Drive	FWD	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 Load Limiter	Yes
Anti-Lock Brakes (ABS)	Yes	Rear Pass. Load Limiter	No
		Other Restraint Feature	N/A

Does owner's manual provide instructions to turn off automatic door locks?	No
--	----

DATA FROM CERTIFICATION LABEL

Manufactured By	FORD MOTOR CO.	GVWR (kg)	2009
Date of Manufacture	04/16	GAWR Front (kg)	1066
Vehicle Type	Passenger Car	GAWR Rear (kg)	966

VEHICLE SEATING AND WEIGHT CAPACITY DATA

Measured Parameter	Front	Rear	Third	Total	
Designated Seating Capacity (DSC)	2	3		5	(A)
Capacity Weight (VCW) (kg)				375	(B)
DSC x 68.04 kg				340	(A-B)
Rated Cargo and Luggage Weight (RCLW) (kg)				35	

VEHICLE SEAT TYPE

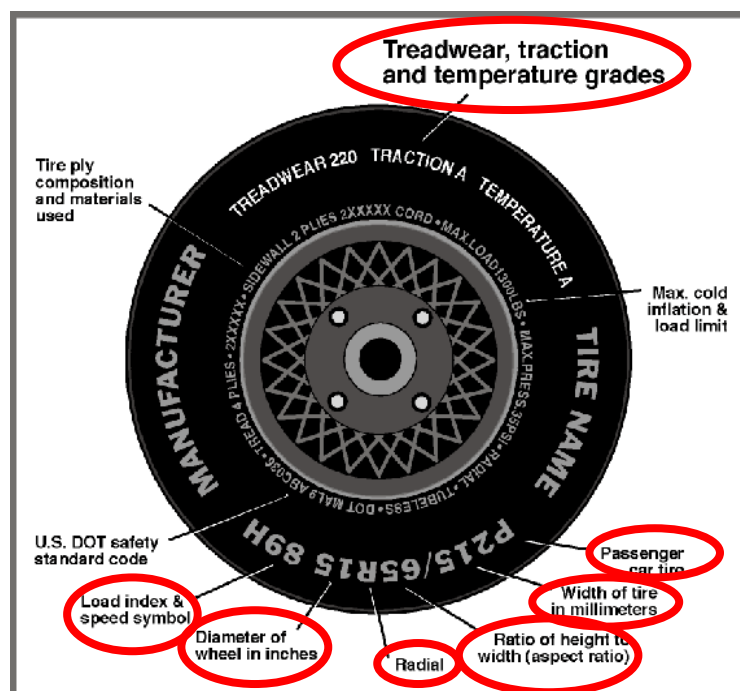
Seating Location	Type of Seat Pan				Type of Seat Back		
	Bucket	Bench	Split Bench	Contoured	Fixed	Adjustable	
						Manual	Power
Front Seat	X						X
Rear or Second Row				X	X		
Third Row Seat							

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

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
 Test Date: 6/16/2016

VEHICLE TIRE INFORMATION



Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	350	350
Cold Pressure (kPa)	230	230
Recommended Tire Size	235/50R17	235/50R17
Tire Size on Vehicle	235/50R17	235/50R17
Tire Manufacturer	Michelin	Michelin
Tire Model	Energy Saver A/S	Energy Saver A/S
Treadwear	480	480
Traction	A	A
Temperature Grade	A	A
Tire Plies Sidewall	1 Polyester	1 Polyester
Tire Plies Body	1 Polyester, 2 Steel, 1 Polyamide	1 Polyester, 2 Steel, 1 Polyamide
Load Index/Speed Symbol	96H	96H
Tire Material	Rubber	Rubber
DOT Safety Code Left	FUYD 00CX 0616	FUYD 00CX 0616
DOT Safety Code Right	FUYD 00CX 0616	FUYD 00CX 0616

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

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
 Test Date: 6/16/2016

TEST PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kpa	275	270	270	270
Tire Placard	kpa	230	230	230	230
Owner's Manual	kpa	230	230	230	230
As Tested	kpa	230	230	230	230

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Left	kg	475.5	324.0		482.5	369.0		493.5	362.5	
Right	kg	468.0	317.0		463.0	349.5		472.0	343.0	
Ratio	%	59.5%	40.5%		56.8%	43.2%		57.8%	42.2%	
Totals	kg	943.5	641.0	1584.5	945.5	718.5	1664.0	965.5	705.5	1671.0

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total Delivered Weight (UVW)	kg	1584.5	(A)
Actual Weight of 1 P572V ATD (SID-IIs) ATD Used	kg	52	(B)
Rated Cargo/Luggage Weight (RCLW)	kg	35	(C)
Calculated Vehicle Target Weight (TVTW)	kg	1671.5	(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**

TEST VEHICLE ATTITUDES AND CG

	Units	As Delivered	As Tested	Fully Loaded	Meets Requirement***
Driver Door Sill Angle (front-to-rear)*	deg	-0.4	-0.3	-0.1	Yes
Front Pass. Sill Angle (front-to-rear)*	deg	-0.6	-0.4	-0.4	Yes
Front Bumper Angle (left-to-right)**	deg	0.0	0.0	0.0	Yes
Rear Bumper Angle (left-to-right)**	deg	0.0	0.0	0.0	Yes
Vehicle CG (Aft of Front Axle)	mm	1152	1229	1202	
Vehicle CG (Left (+) / Right (-) from Longitudinal Centerline)	mm	7	18	19	

*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.

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Ballast (if any)	
LR, RR Tail Light	3

Test height adjustable suspension setting, if applicable:	Not Applicable
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DATA SHEET NO. 2
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT AND FUEL SYSTEM DATA

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
 Test Date: 6/16/2016

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	23.1	13.8	18.5
Front Passenger Seat	21.3	16.3	18.8
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 SCRIP Height (mm)	SCRIP Height Position	SCRIP Height (mm)		
				Rear- most	Mid- Fore/Aft	Forward- Most
Driver Seat	18.5	25	Max	50	50	50
			Mid	25	25	25
			Min	0	0	0
Front Passenger Seat	18.8	Fixed	Max	Fixed	Fixed	Fixed
			Mid	Fixed	Fixed	Fixed
			Min	Fixed	Fixed	Fixed
Front Center Seat			Max			
			Mid			
			Min			
Struck Side Rear Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
			Mid	Fixed	Fixed	Fixed
			Min	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
			Mid	Fixed	Fixed	Fixed
			Min	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
			Mid	Fixed	Fixed	Fixed
			Min	Fixed	Fixed	Fixed

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

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
 Test Program: NCAP Side Pole Impact Test

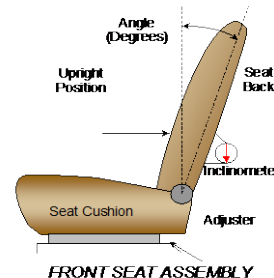
NHTSA No. M20170202
 Test Date: 6/16/2016

SEAT FORE/AFT POSITIONS

Seat	Total Fore/Aft Travel		Test Position from Forward-most Position	
	mm	Detents	mm	Detent
Driver Seat	267		0	
Front Passenger Seat	267		0	
Front Center Seat				
Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	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	Degree	Detent
Driver Seat w/Seated Dummy	57.7		4.8	
Front Passenger Seat	57.6		4.8	
Front Center Seat				
Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed	Fixed

Seat back angles measured on outboard headrest post.

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 detents (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	3 detents (1 st as 1)	0 (Lowermost as 0)

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

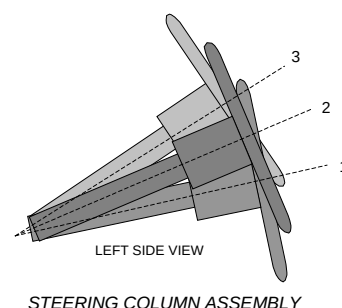
Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
 Test Date: 6/16/2016

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.

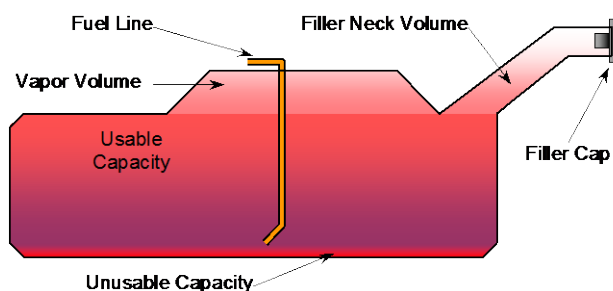
	Degrees	Fore/Aft Position (mm)
Lowermost, Position 1	70.3	186
Geometric Center, Position 2	67.4	213
Uppermost, Position 3	64.4	239
Telescoping Steering Wheel Travel		50
Test Position	64.7	213



FUEL PUMP

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

Fuel pump operates with ignition "ON". The filler neck is located on the driver's side.



FUEL TANK CAPACITY DATA

VEHICLE FUEL TANK ASSEMBLY

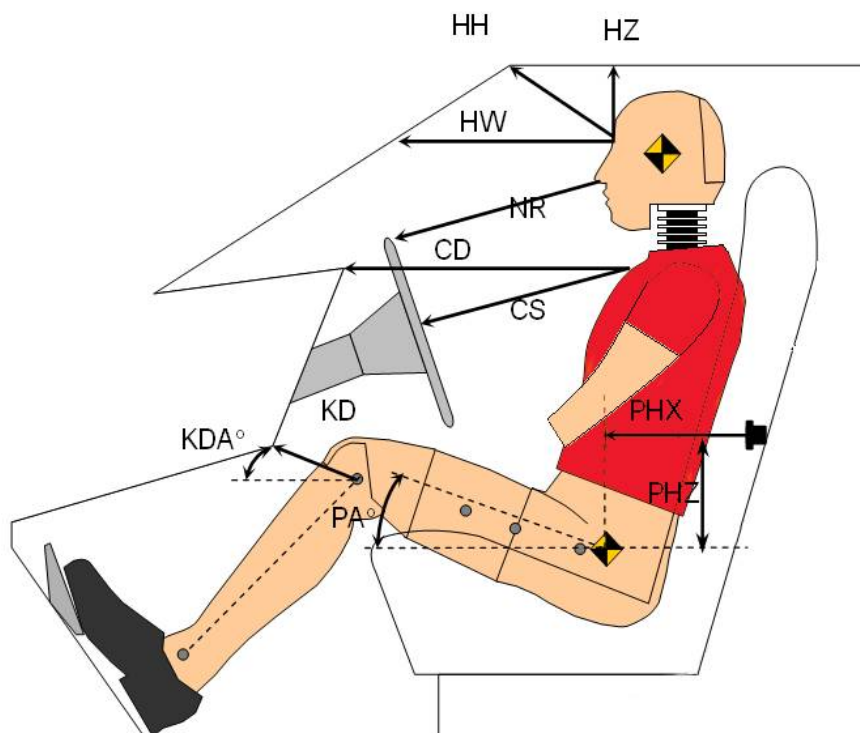
	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	62.5
Usable Capacity of "Optional Tank" (see Form No. 1)	
Usable Capacity of Standard Tank as Specified in Owner's Manual	62.5
Usable Capacity of Optional Tank as Specified in Owner's Manual	
93% of Usable Capacity	58.1
Actual Amount of Solvent Used	57.9
1/3 of Usable Capacity	20.8

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: 2017 Ford Fusion SE 4-Door Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
 Test Date: 6/16/2016



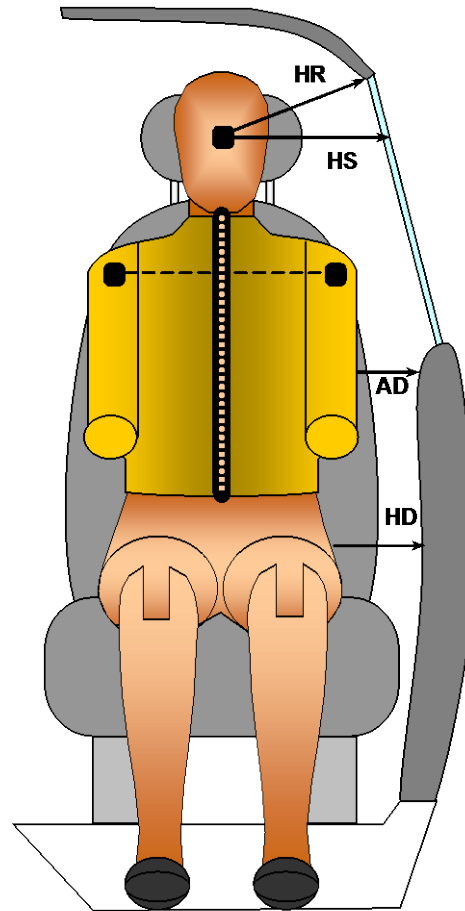
LEFT SIDE VIEW

Code	Measurement Description	Driver	
		Length (mm)	Angle (°)
HH	Head to Header	250	
HW	Head to Windshield	559	
HZ	Head to Roof Liner	178	
NR	Nose to Rim	196	
CD	Chest to Dashboard	389	
CS	Chest to Steering Wheel	158	
KDL/KDAL°	Left Knee to Dash	159	27.2
KDR/KDAR°	Right Knee to Dash	166	32.3
PAX°	Pelvic Tilt Angle (X-Axis)		20.4
PAY°	Pelvic Tilt Angle (Y-Axis)		-0.2
PHX	Hip Point to Striker (X-Axis)	316	
PHZ	Hip Point to Striker (Z-Axis)	134	

DATA SHEET NO. 4
DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
Test Date: 6/16/2016



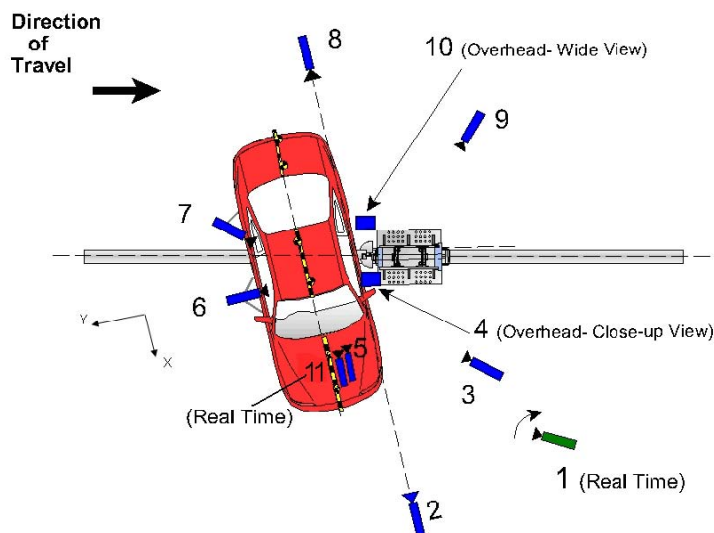
FRONT VIEW OF DUMMY

Code	Measurement Description	Driver
		Length (mm)
HR	Head to Side Header	221
HS	Head to Side Window	341
AD	Arm to Door	194
HD	Hip Point to Door	157

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

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
 Test Date: 6/16/2016



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	5860	90	-2040	24	1000
3	Impact Side 45° Forward	4840	-1550	-2020	20	1000
4	Overhead Closeup	0	0	-4890	50	1000
5	Onboard – Driver Front				16	1000
6	Onboard – Driver Side				8	1000
7	Onboard – Driver Rear				8	1000
8	Rear Ground Level	-6690	120	-2000	24	1000
9	Impact Side 45° Rearward	-3570	-3800	-2030	20	1000
10	Overhead Wide View	50	500	-4910	14	1000
11	Real-Time Dummy Front View					30

*All measurements accurate to ± 6 mm

Note: Vehicle was at a 75° angle to the rigid pole.

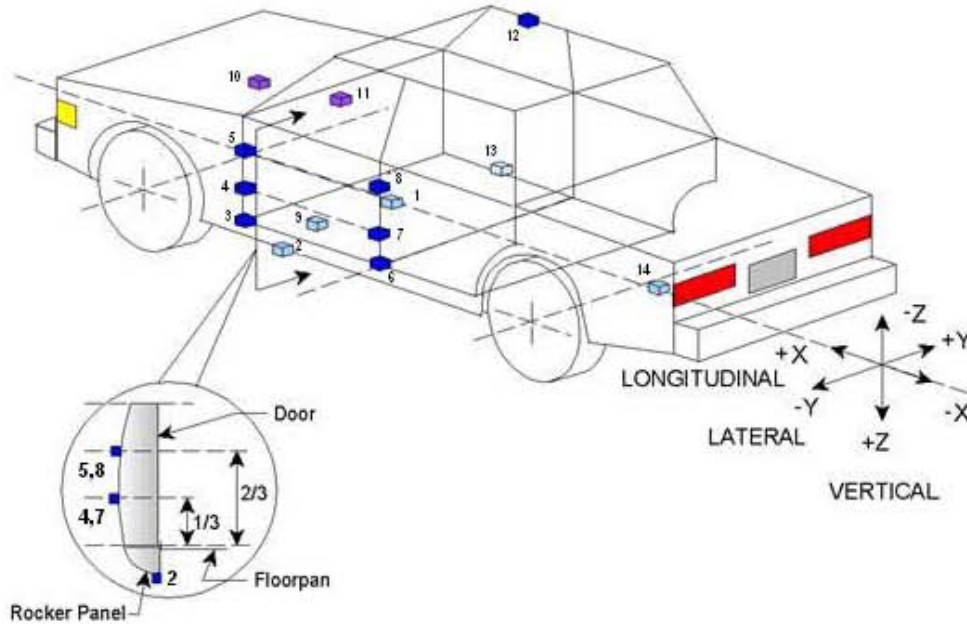
Explain why camera(s) did not operate as intended: None

INSTRUMENTATION	Number of Channels
Driver Dummy	19
Vehicle Structure	16
Pole Load Cells	8
TOTAL	43

DATA SHEET NO. 6 **VEHICLE ACCELEROMETER DATA**

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
Test Date: 6/16/2016



	Accelerometer Location			
	ID	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	2688	183	-206
2	Left Floor Sill	3054	-756	-228
3	A Pillar Sill	3455	-756	-249
4	A Pillar Low	3385	826	-577
5	A Pillar Mid	3344	818	-794
6	B Pillar Sill	2312	-756	-239
7	B Pillar Low	2277	-752	-595
8	B Pillar Mid	2240	-746	-838
9	Driver Seat Track	3432	-392	-263
10	Engine Top	3940	0	-865
11	Firewall	3720	5	-838
12	Right Roof	2268	595	-1454
13	Right Floor Sill	3053	756	-232
14	Rear Floorpan	969	0	-523

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: 2017 Ford Fusion SE 4-Door Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
Test Date: 6/16/2016



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: 2017 Ford Fusion SE 4-Door Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
Test Date: 6/16/2016

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, Seat Back
Left Shoulder	Side Airbag, Seat Back
Upper Torso	Side Airbag, Seat Back
Lower Torso	Side Airbag, Seat Back
Left Hip	Side Airbag, Seat Cushion, Seat Back
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 Broken
Other Notable Effects	None

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

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
Test Date: 6/16/2016

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Struck Side Driver		Struck Side Rear Passenger	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	No		
Knee Airbag	Yes	No		
Side Curtain Airbag	Yes	Yes	Yes	Yes
Side Torso/Pelvis Airbag	Yes	Yes	No	
Seat Belt Pretensioner	Yes	Yes	No	
Seat Belt Load Limiter	Yes		No	
Other				

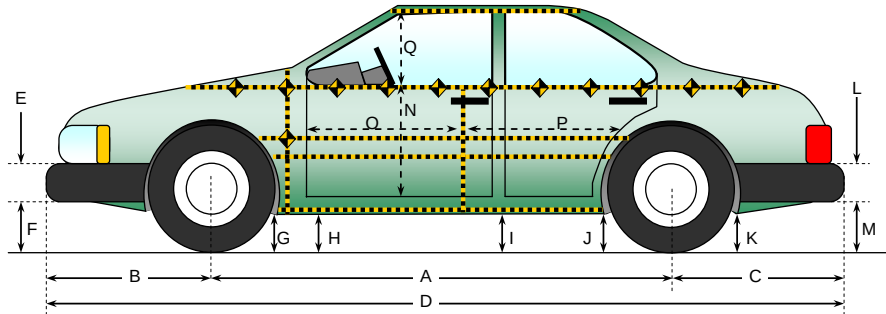
VEHICLE SPEED, VEHICLE ANGLE AT IMPACT, AND IMPACT POINT LOCATION DATA

Measured Parameter	Units	Tolerance	Value
Vertical Impact Reference Line (Aft of Front Axle) (Intended Impact Point)	mm		1134
Actual Impact Point (Aft of Front Axle)	mm		1130
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	N/A
Trap No. 2 Velocity (Redundant)	km/h	31.4 to 33.0	32.33

DATA SHEET NO. 9
VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
Test Date: 6/16/2016



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

LEFT SIDE VIEW

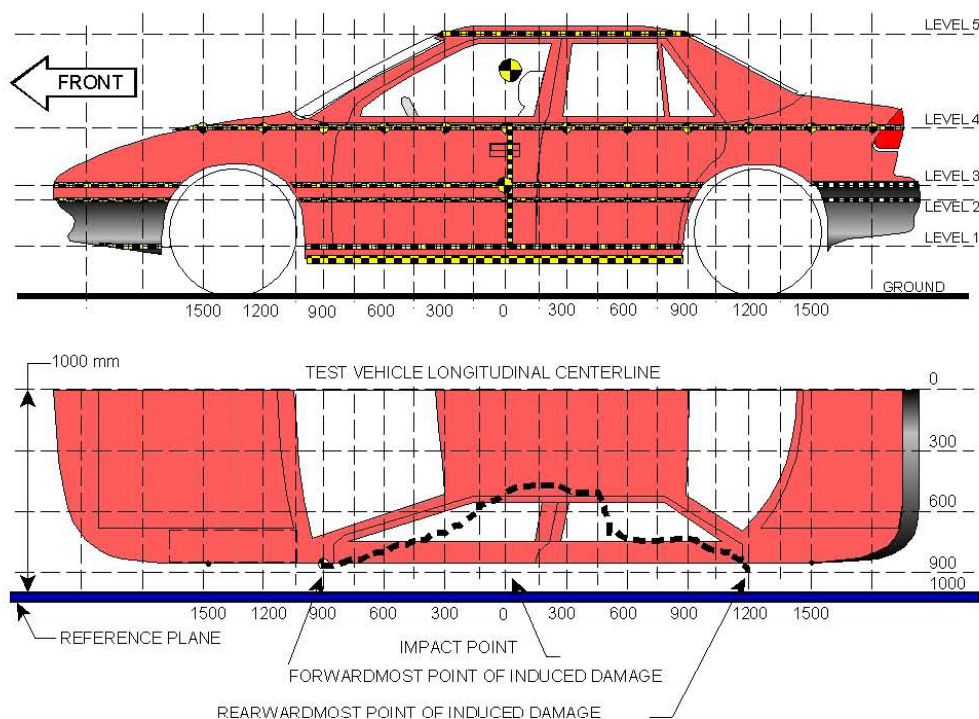
VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2847	2697	150
B	Front Axle to FSOV	940	1014	-74
C	Rear Axle to RSOV	1060	1105	-45
D	Total Vehicle Length at Centerline	4847	4816	31
E	Front Bumper Thickness	95	95	0
F	Front Bumper Bottom to Ground	198	215	-17
G	Sill Height at Front Wheel Well	188	167	21
H	Sill Height at Front Door Leading Edge	188	167	21
I	Sill Height at B-Pillar	190	182	8
J1	Sill Height at Rear Wheel Well	189	202	-13
J2	Pinch Weld Height at Rear Wheel Well	190	200	-10
K	Sill Height Aft of Rear Wheel Well	210	213	-3
L	Rear Bumper Thickness	100	100	0
M	Rear Bumper Bottom to Ground	270	266	4
N	Sill Height to Bottom of Front Window Sill	752	748	4
O	Front Door Leading Edge to Impact CL	640	494	146
P	Rear Door Trailing Edge to Impact CL	1375	1255	120
Q	Front Window Opening	392	343	49
R	Right Side Length	3698	3716	-18
S	Left Side Length	3698	3536	162
T	Vehicle Width at B-Pillars	1836	1719	117

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

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
 Test Date: 6/16/2016



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)	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	214	348	0
2	Occupant Hip Point	546	390	0
3	Mid Door	637	399	0
4	Window Sill	934	361	0
5	Window Top	1390	144	75

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

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
 Test Date: 6/16/2016

	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-2700															
-2550															
-2400															
-2250															
-2100															
-1950															
-1800															
-1650															
-1500															
-1350															
-1200															
-1050															
-900			179					195					16		
-825															
-750	215	189	191	288		201	205	200	308		-15	15	8	19	
-675															
-600	226	198	193	275		255	224	224	306		29	26	31	31	
-525	227	199	193			284	262	264			57	63	71		
-450	226	198	192			315	302	297			89	104	105		
-375	225	198	191	255		346	341	340	388		121	143	149	133	
-300	225	197	190	250		377	378	379	418		152	181	189	168	
-225	224	195	189	243		422	429	433	462		198	234	244	219	
-150	224	194	188	239		471	484	487	506		247	290	299	267	
-75	224	193	187	235		530	543	546	567		306	350	359	332	
0	224	193	187	230		572	583	586	591		348	390	399	361	
75	224	193	187	227	500	560	575	582	587	644	336	382	395	360	144
150	225	193	186	224	493	503	532	538	542	593	278	339	352	318	100
225	227	193	186	226	488	451	469	477	490	571	224	276	291	264	83
300	227	193	186		484	404	399	409		547	177	206	223		63
375	227	192	186	220	483	361	344	346	359	535	134	152	160	139	52
450	227	193	186	215	482	316	259	253	279	522	89	66	67	64	40
525	228	194	188	215	482	285	256	253	275	511	57	62	65	60	29
600	230	194	189	213	484	262	248	245	266	501	32	54	56	53	17
675															
750	234	197	191	211	482	250	239	236	253	496	16	42	45	42	14
825															
900	235	198	195	215	492	246	230	229	248	501	11	32	34	33	9
1050	232	199	196	220	518	235	220	219	241	520	3	21	23	21	2
1200	230	199	196	223		226	209	209	237		-4	10	13	14	
1350		188	185	208			195	187	211			7	2	3	
1500				235					227					-9	
1650				243					250					7	
1800				252					251					-1	
1950				258					264					6	
2100				273					276					3	
2250															
2400															
2550															
2700															

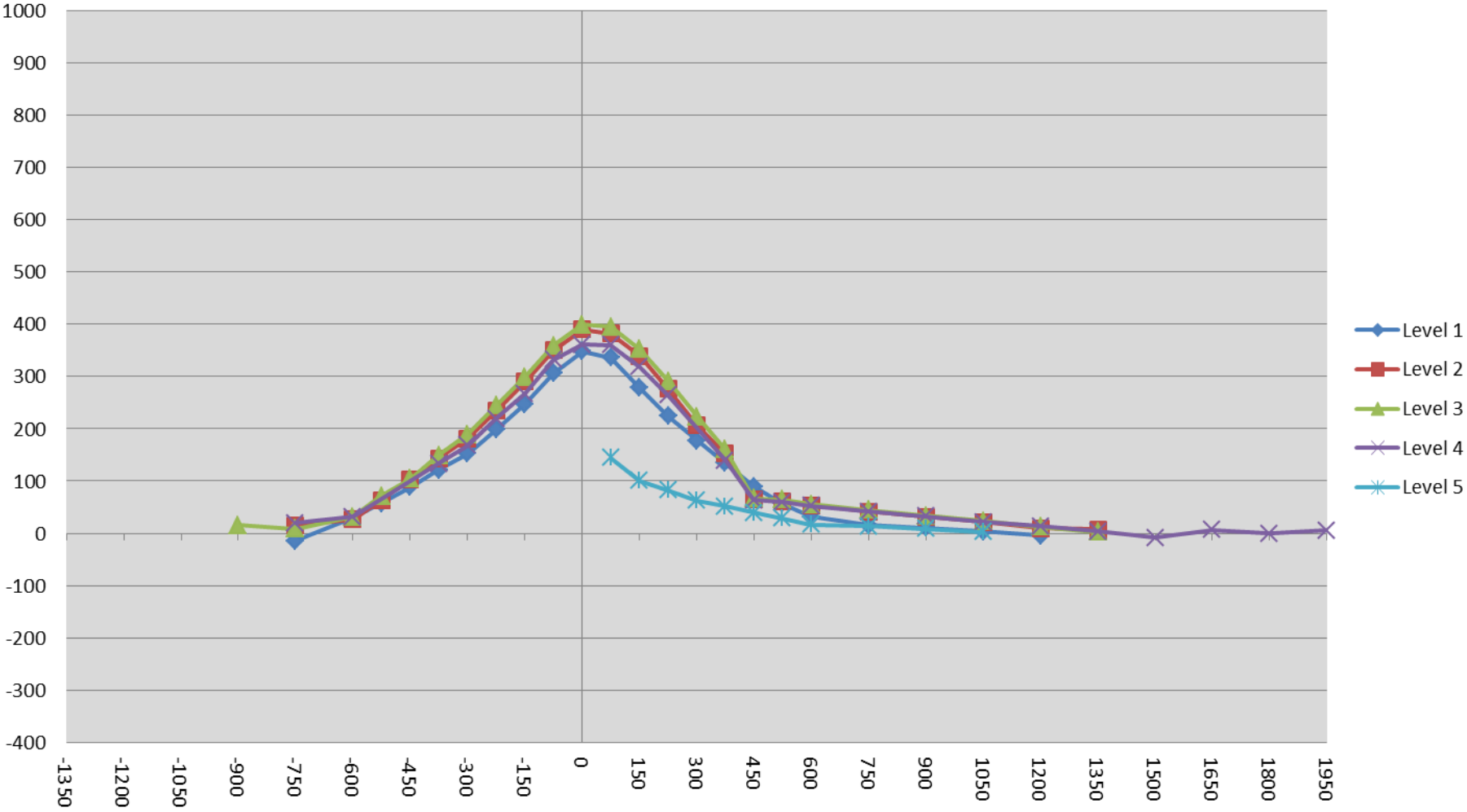
Pre-test measurements are taken when the vehicle is in the "As Tested" weight condition. Vehicle measurements forward of the vertical impact reference line are negative. The crush pile grid is established prior to the test based on an estimated impact point. The final distance from impact is determined 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: 2017 Ford Fusion SE 4-Door Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
Test Date: 6/16/2016

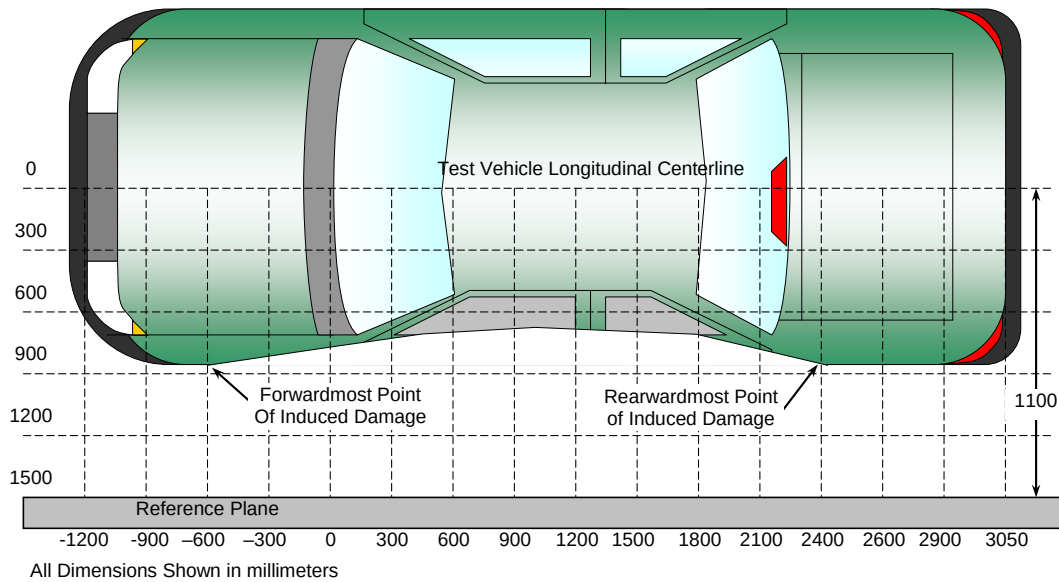
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DATA SHEET NO. 11 **VEHICLE DAMAGE PROFILE DISTANCES**

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
 Test Date: 6/16/2016



TOP VIEW

DAMAGE PROFILE DISTANCES

DPD	Distance from Impact Point (mm)	Level	Pre-Test (mm)	Post-Test (mm)	Crush (mm)
1	550	3	189	250	61
2	255	3	186	448	262
3	-40	3	187	567	380
4	-335	3	190	360	170
5	-630	3	193	203	10
6	-925	3	179	194	15

DATA SHEET NO. 12
FMVSS NO. 301 STATIC ROLLOVER RESULTS

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
 Test Program: NCAP Side Pole Impact Test

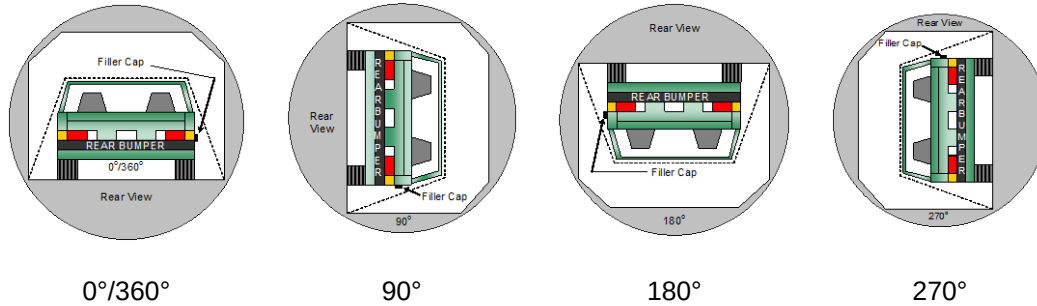
NHTSA No. M20170202
 Test Date: 6/16/2016

Test Time: 9:57 a.m.

Temperature: 21.5°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°	112	300	412
90° to 180°	111	300	411
180° to 270°	107	300	407
270° to 360°	109	300	409

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

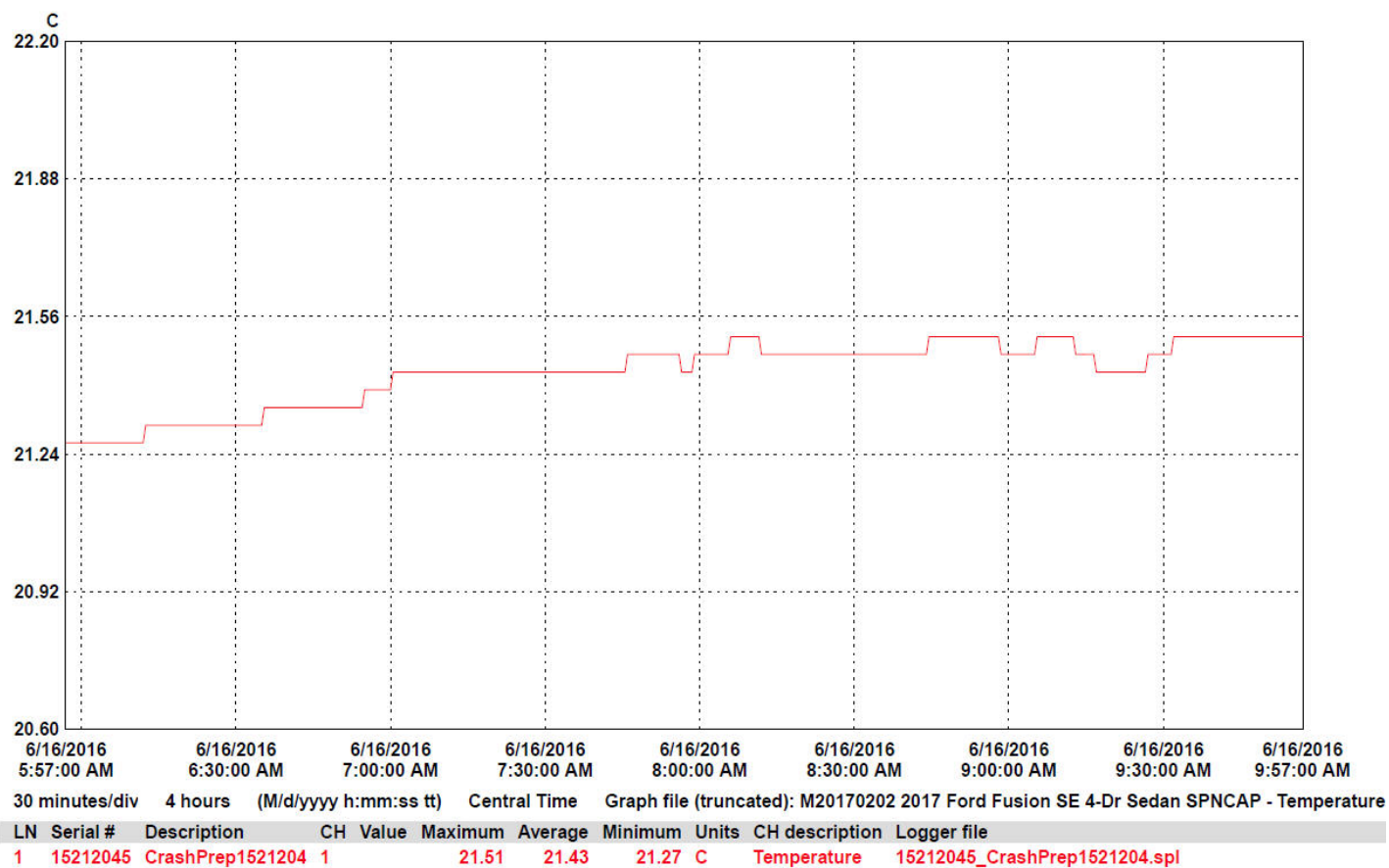
ROLLOVER SOLVENT SPILLAGE LOCATION TABLE

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

DATA SHEET NO. 13
DUMMY/VEHICLE TEMPERATURE STABILIZATION DATA

Test Vehicle: 2017 Ford Fusion SE 4-Door Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No. M20170202
 Test Date: 6/16/2016



**APPENDIX A
PHOTOGRAPHS**

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Photo No. 001 - As Delivered Right Front $\frac{3}{4}$ View of Test Vehicle



Photo No. 002 - As Delivered Left Rear $\frac{3}{4}$ View of Test Vehicle

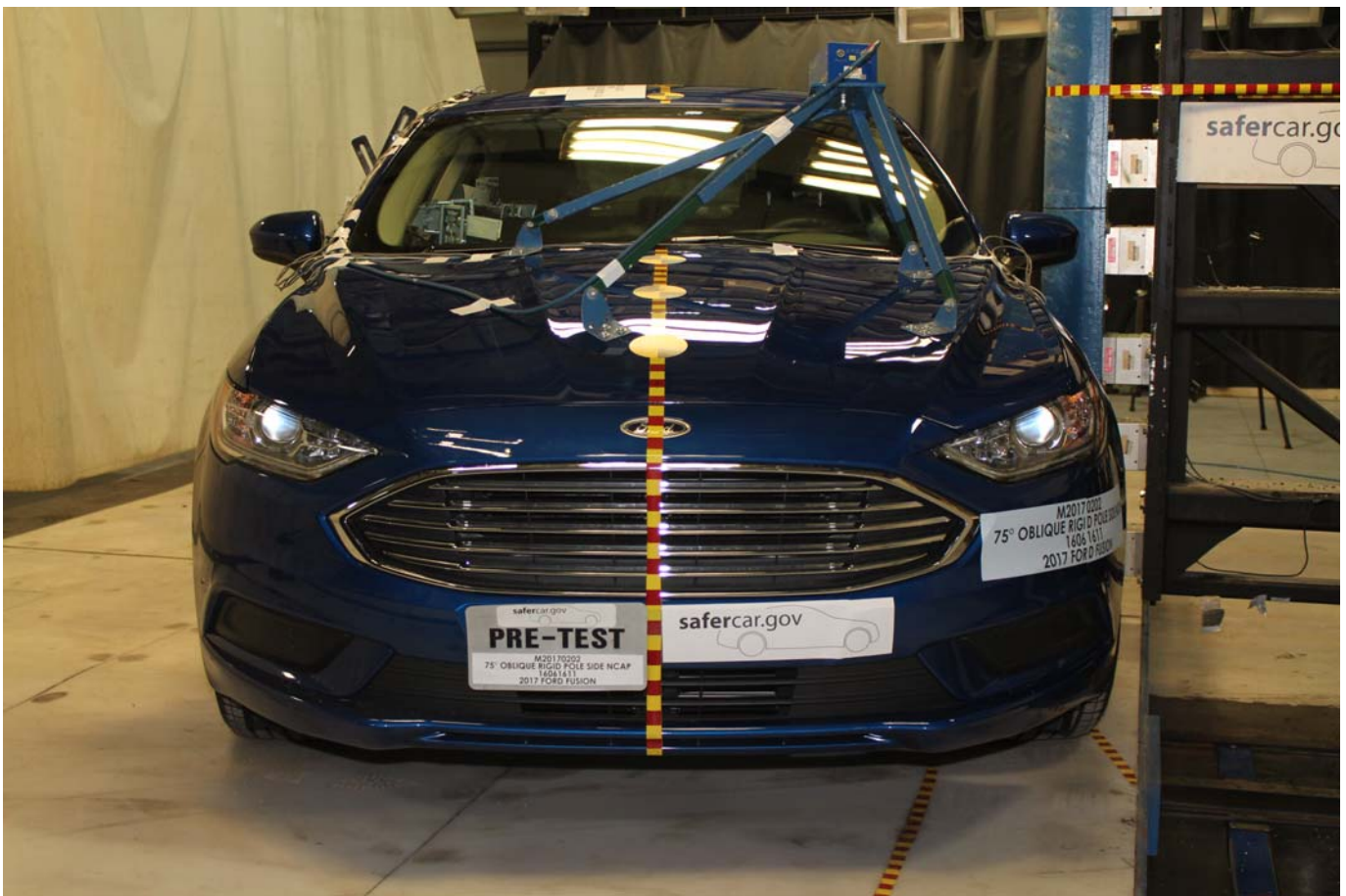


Photo No. 003 - Pre-Test Frontal View of Test Vehicle



Photo No. 004 - Post-Test Frontal View of Test Vehicle

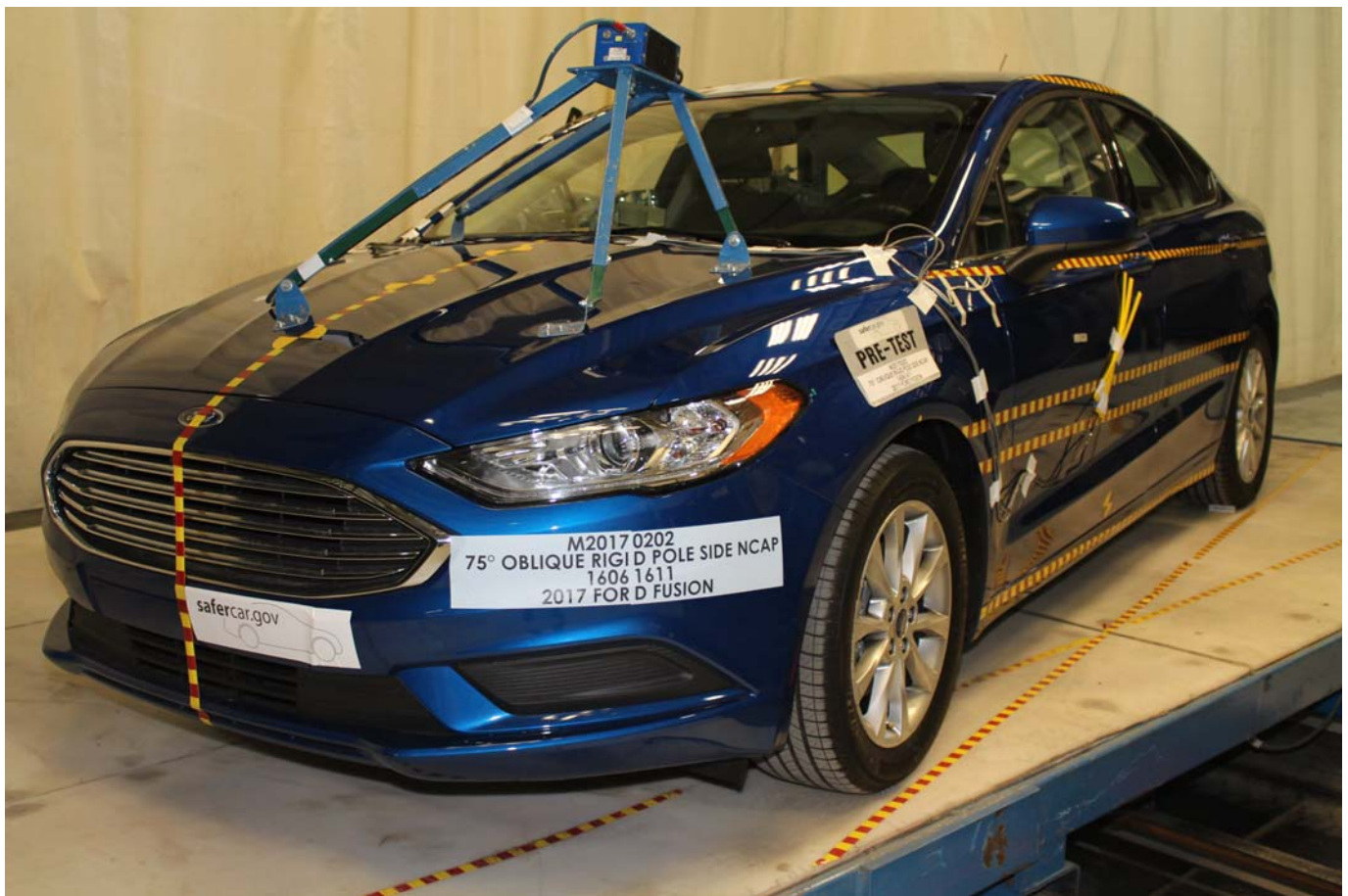


Photo No. 005 - Pre-Test Left Front $\frac{3}{4}$ View of Test Vehicle



Photo No. 006 - Post-Test Left Front $\frac{3}{4}$ View of Test Vehicle

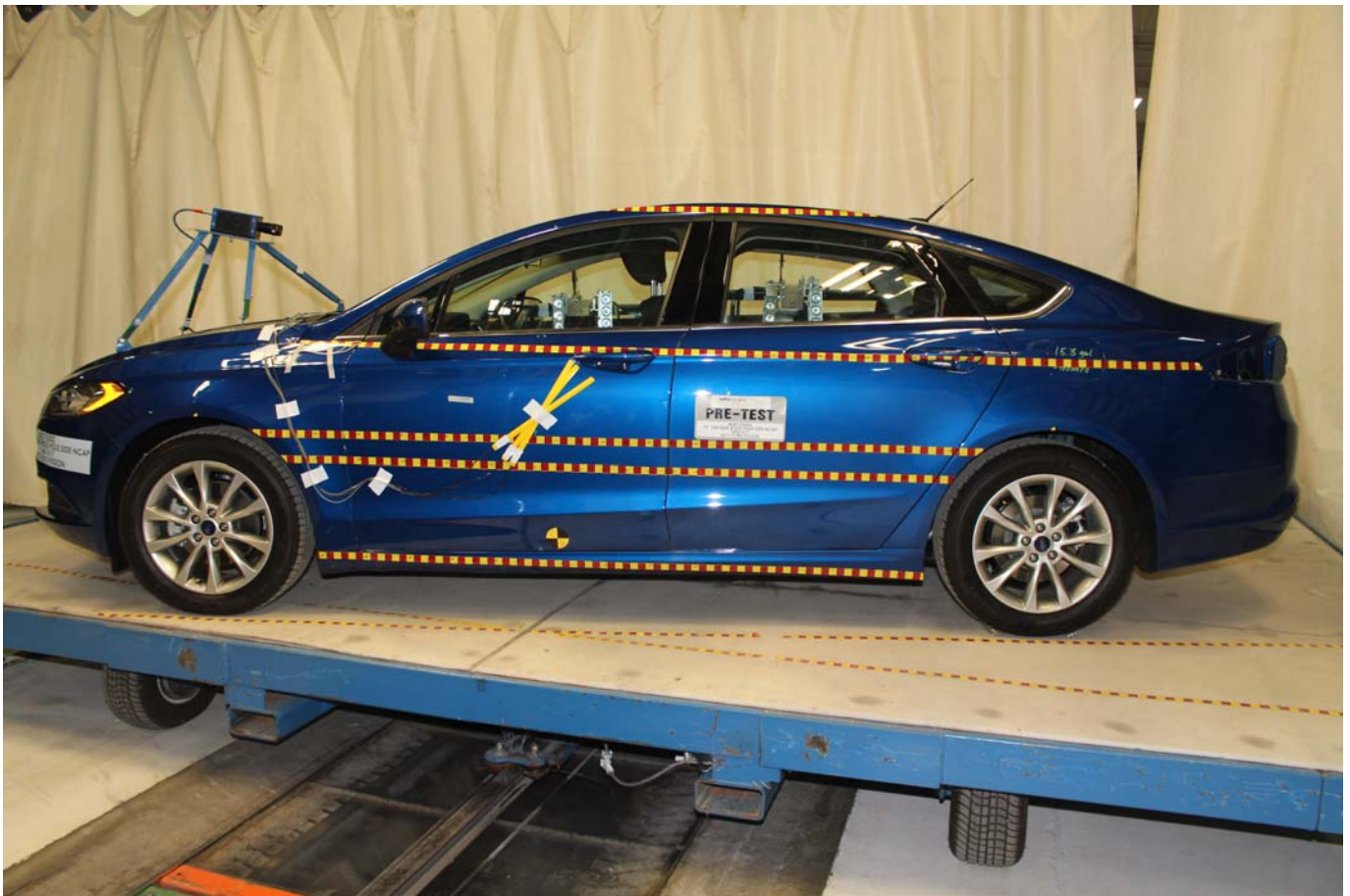


Photo No. 007 - Pre-Test Left Side View of Test Vehicle



Photo No. 008 - Post-Test Left Side View of Test Vehicle



Photo No. 009 - Pre-Test Left Rear $\frac{3}{4}$ View of Test Vehicle



Photo No. 010 - Post-Test Left Rear $\frac{3}{4}$ View of Test Vehicle



Photo No. 011 - Pre-Test Rear View of Test Vehicle



Photo No. 012 - Post-Test Rear View of Test Vehicle



Photo No. 013 - Pre-Test Right Side View of Test Vehicle



Photo No. 014 - Post-Test Right Side View of Test Vehicle



Photo No. 015 - Pre-Test Overhead View of Test Area

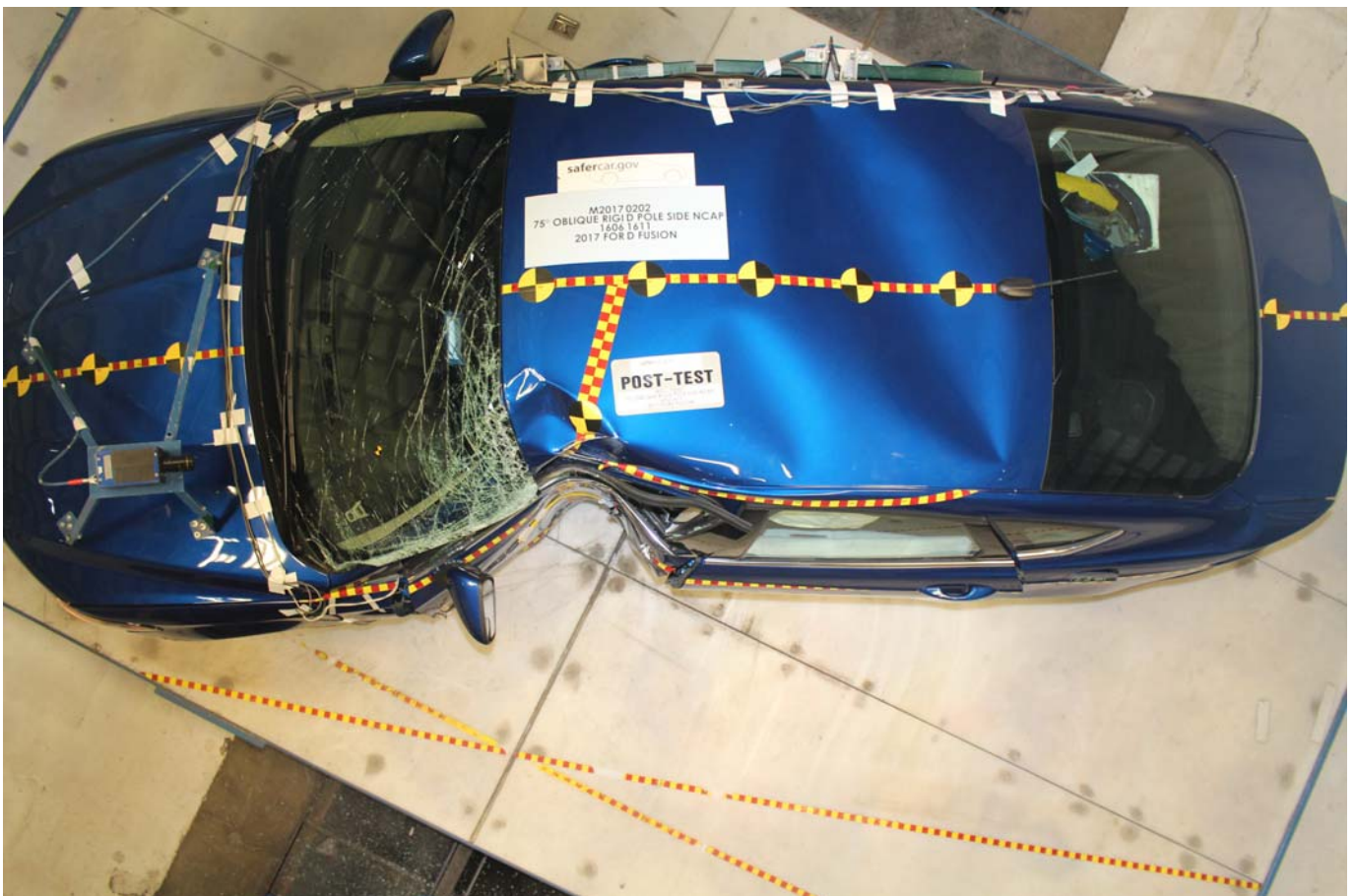


Photo No. 016 - Post-Test Overhead View of Test Area



Photo No. 017 - Pre-Test Left Side View of Pole Positioned Against Side of Vehicle



Photo No. 018 - Pre-Test Right Side View of Pole Positioned Against Side of Vehicle



Photo No. 019 - Pre-Test Close-Up View of Impact Point Target



Photo No. 020 - Post-Test Close-Up View of Impact Point Target Showing Impact Location



Photo No. 021 - Pre-Test Front Close-Up View of Dummy Head and Chest



Photo No. 022 - Post-Test Front Close-Up View of Dummy



Photo No. 023 - Pre-Test Left Side View of Dummy Showing Belt and Chalking



Photo No. 024 - Pre-Test Left Side View of Dummy Shoulder and Door Top View



Photo No. 025 - Post-Test Left Side View of Dummy Shoulder and Door Top View



Photo No. 026 - Pre-Test Front View of Seat Back Prior to Dummy Positioning

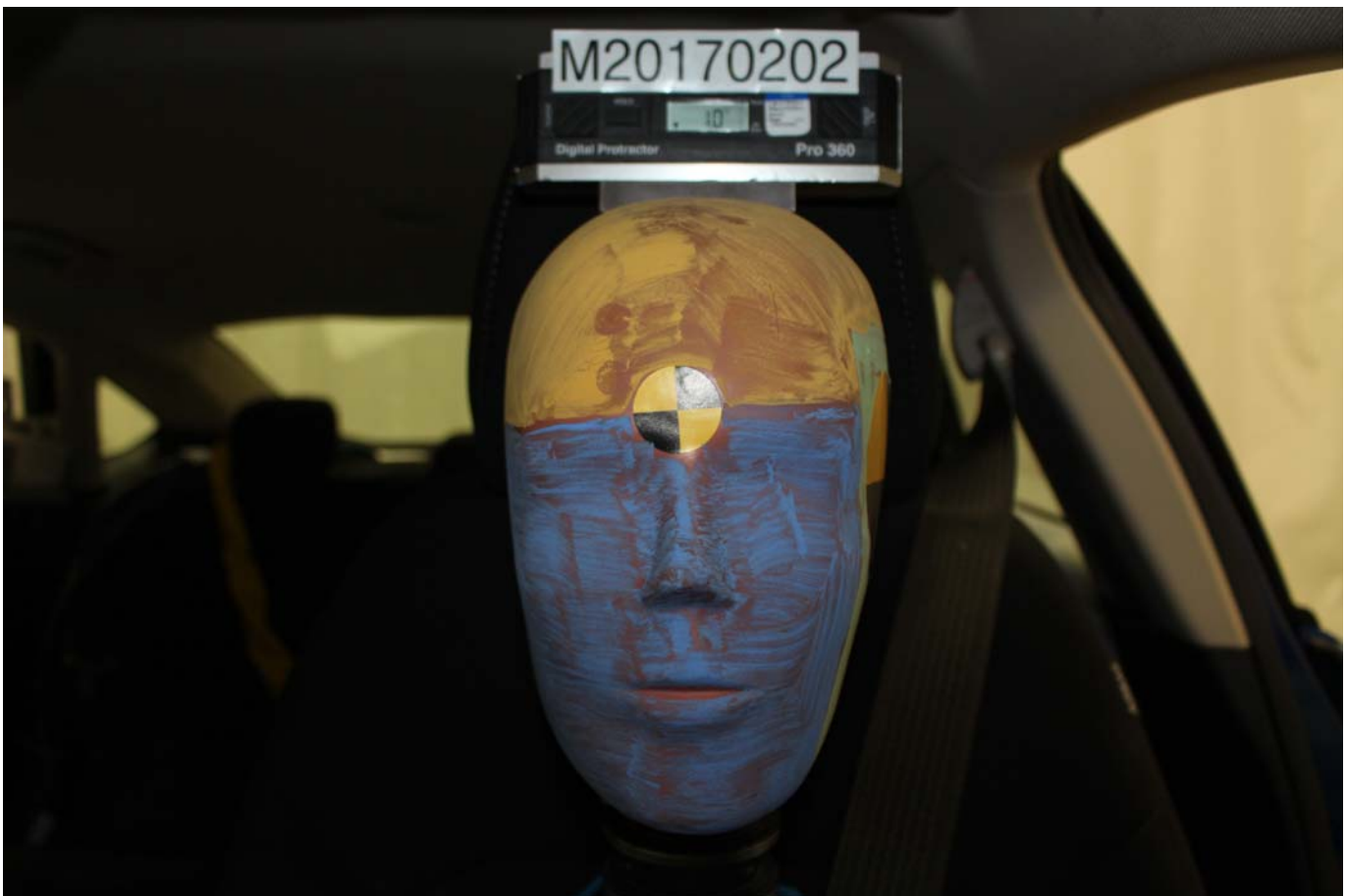


Photo No. 027 - Pre-Test Front Close-Up View of Dummy Head and Shoulders in Relation to Head Restraint



Photo No. 028 - Pre-Test Front View of Seat Pan Prior to Dummy Positioning



Photo No. 029 - Pre-Test Overhead View of Dummy Thighs on Seat Pan



Photo No. 030 - Pre-Test Left Side View of Dummy's Neck Showing Position of Adjustable Neck Bracket



Photo No. 031 - Pre-Test Left Side View of Dummy's Head Showing Dummy's Head is Level



Photo No. 032 - Pre-Test Placement of Dummy's Feet

PHOTOGRAPH NOT AVAILABLE

Photo No. 033 - Pre-Test View of Belt Anchorage for Dummy



Photo No. 034 - Pre-Test Left Side View of Steering Wheel



Photo No. 035 - Pre-Test View of Disengaged Parking Brake



Photo No. 036 - Pre-Test View of Parking Brake



Photo No. 037 - Pre-Test Close-Up Left Side View of Driver Seat Track



Photo No. 038 - Pre-Test Close-Up Left Side View of Driver Seat Back



Photo No. 039 - Pre-Test Close-Up View of Driver Seat Back or Head Restraint



Photo No. 040 - Pre-Test Dummy and Door Clearance View



Photo No. 041 - Post-Test Dummy and Door Clearance View



Photo No. 042 - Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment



Photo No. 043 - Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment



Photo No. 044 - Pre-Test Inner Door Panel View



Photo No. 045 - Post-Test Inner Door Panel View Showing Dummy Contact Location



Photo No. 046 - Post-Test Dummy Close-Up Head Contact with Vehicle Interior View



Photo No. 047 - Post-Test Dummy Close-Up Head Contact with Side Air Bag View



Photo No. 048 - Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View



Photo No. 049 - Post-Test Dummy Close-Up Torso Contact with Side Air Bag View



Photo No. 050 - Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View



Photo No. 051 - Post-Test Dummy Close-Up Pelvis Contact with Side Air Bag View



Photo No. 052 - Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View



Photo No. 053 - Pre-Test View of Fuel Filler Cap or Fuel Filler Neck



Photo No. 054 - Post-Test View of Fuel Filler Cap or Fuel Filler Neck



Photo No. 055 - Close-Up View of Vehicle's Certification Label



Photo No. 056 - Close-Up View of Vehicle's Tire Information Placard or Label



Photo No. 057 - Pre-Test Pole Barrier Front View



Photo No. 058 - Post-Test Pole Barrier Front View



Photo No. 059 - Pre-Test Pole Barrier Side View



Photo No. 060 - Post-Test Pole Barrier Side View

PHOTOGRAPH NOT APPLICABLE

Photo No. 061 - Pre-Test Ballast View



Photo No. 062 - Post-Test Primary and Redundant Speed Trap Read-Out



Photo No. 063 - FMVSS No. 301 Static Rollover 0 Degrees



Photo No. 064 - FMVSS No. 301 Static Rollover 90 Degrees



Photo No. 065 - FMVSS No. 301 Static Rollover 180 Degrees



Photo No. 066 - FMVSS No. 301 Static Rollover 270 Degrees



Photo No. 067 - FMVSS No. 301 Static Rollover 360 Degrees

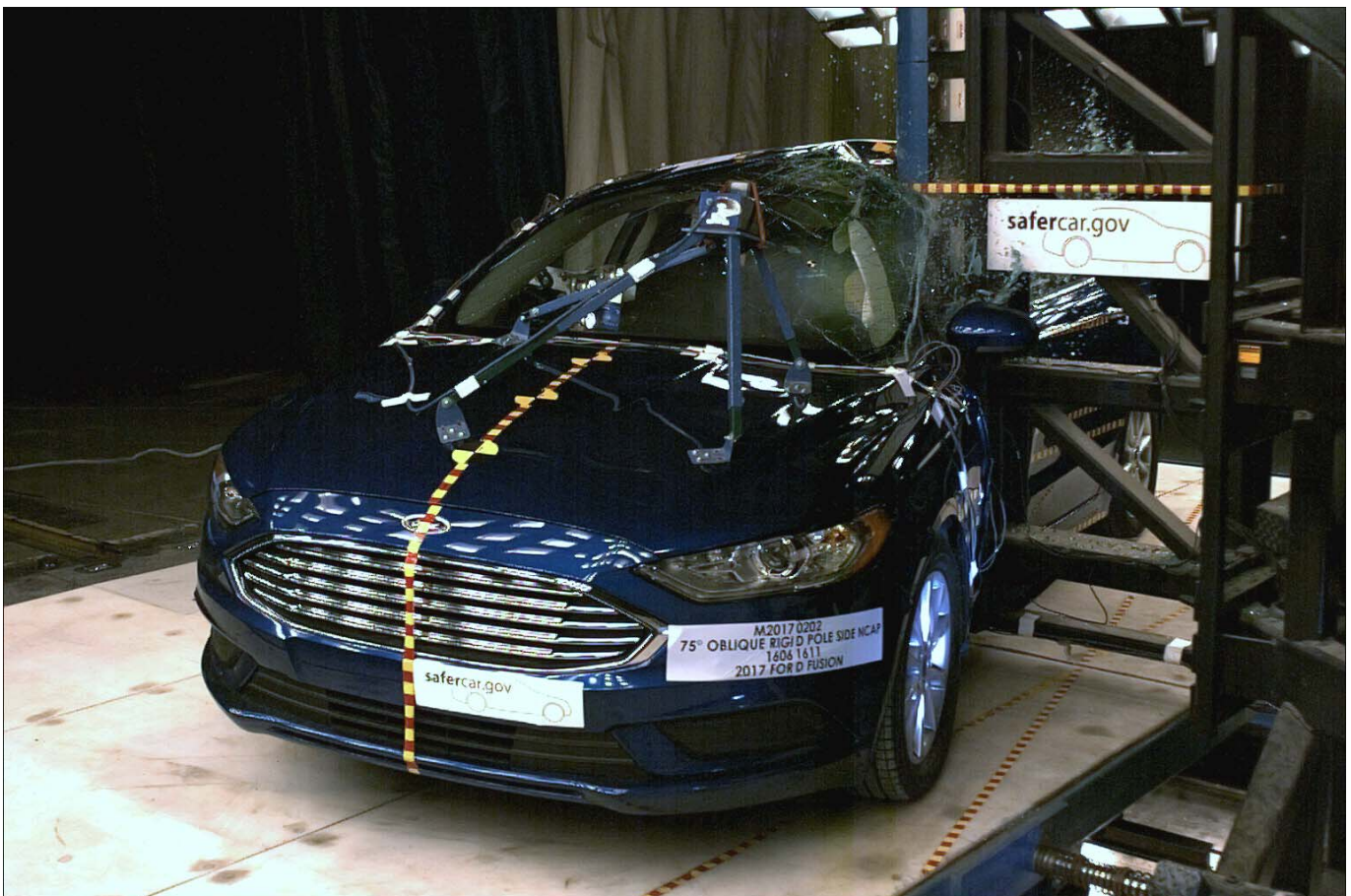


Photo No. 068 - Impact Event



Photo No. 071 - Post-Test View of Shattered Vehicle Inner Door Panel

APPENDIX B
DUMMY RESPONSE DATA PLOTS

TABLE OF DATA PLOTS
Driver Dummy Instrumentation Plots

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Figure No. 4.	Driver Head CG Resultant Acceleration (X) vs. Time	B-1
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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 CG Redundant Acceleration (X) vs. Time
Driver Head CG Redundant Acceleration (Y) vs. Time
Driver Head CG Redundant Acceleration (Z) vs. Time
Driver Head Angular Velocity X (Deg/Sec) vs. Time
Driver Head Angular Velocity Y (Deg/Sec) vs. Time
Driver Head Angular Velocity Z (Deg/Sec) vs. Time
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)

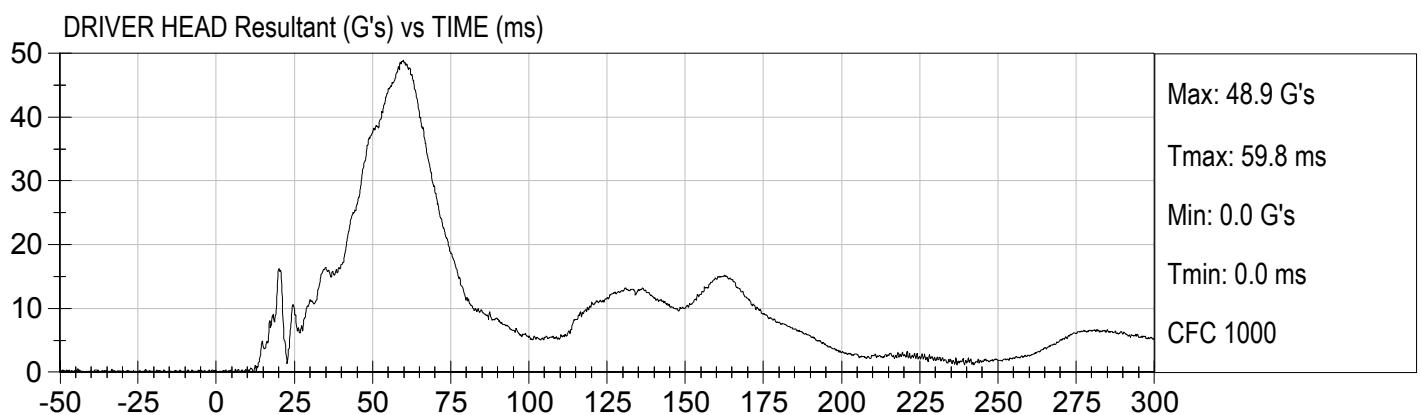
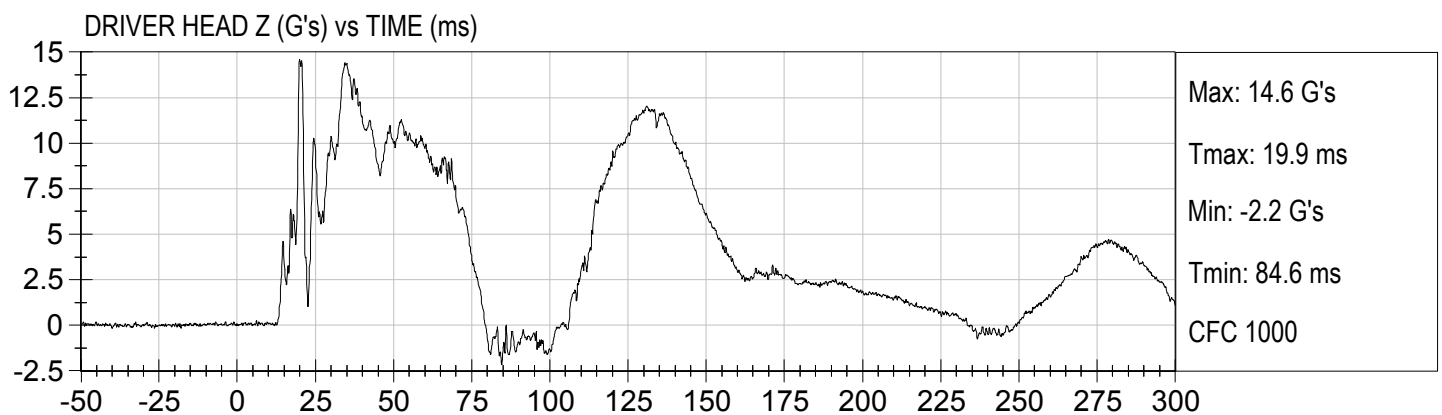
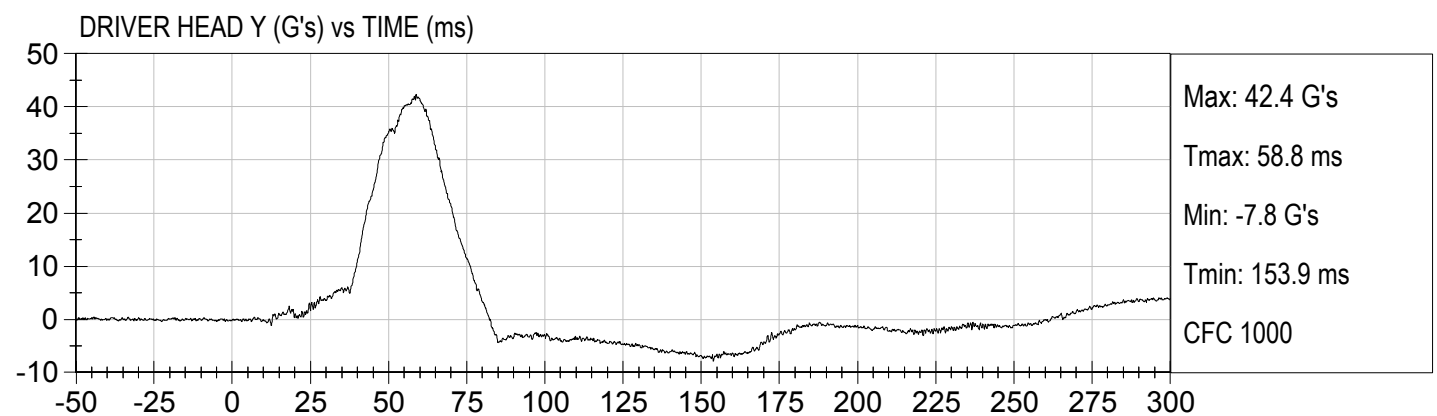
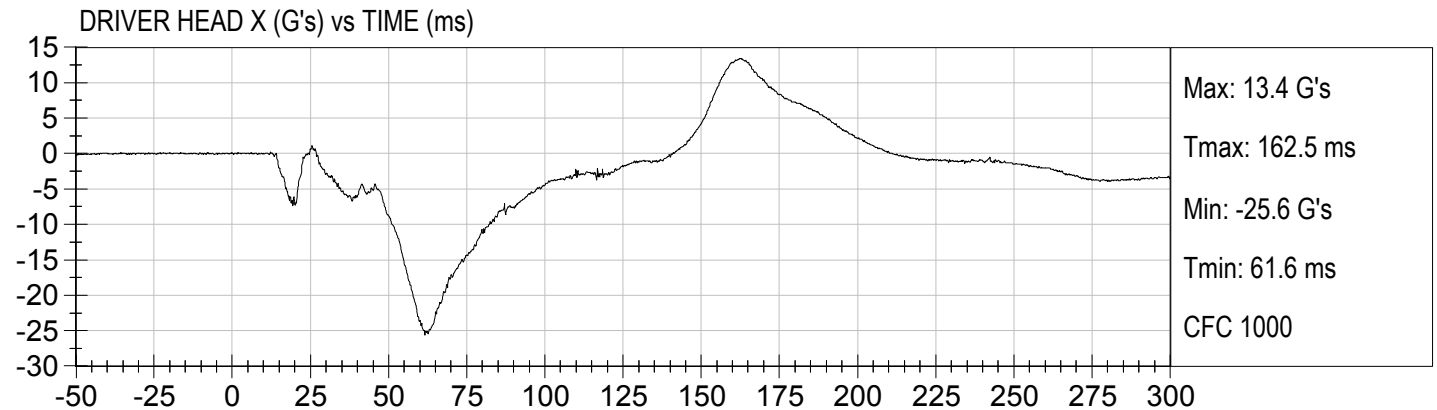
Load Cell Pole Barrier #4 Force (Y)

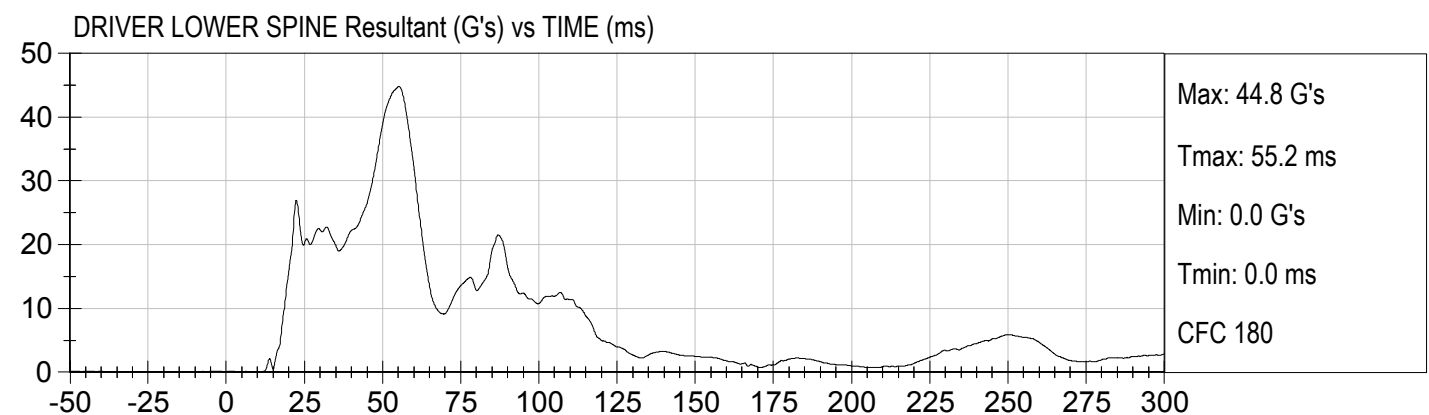
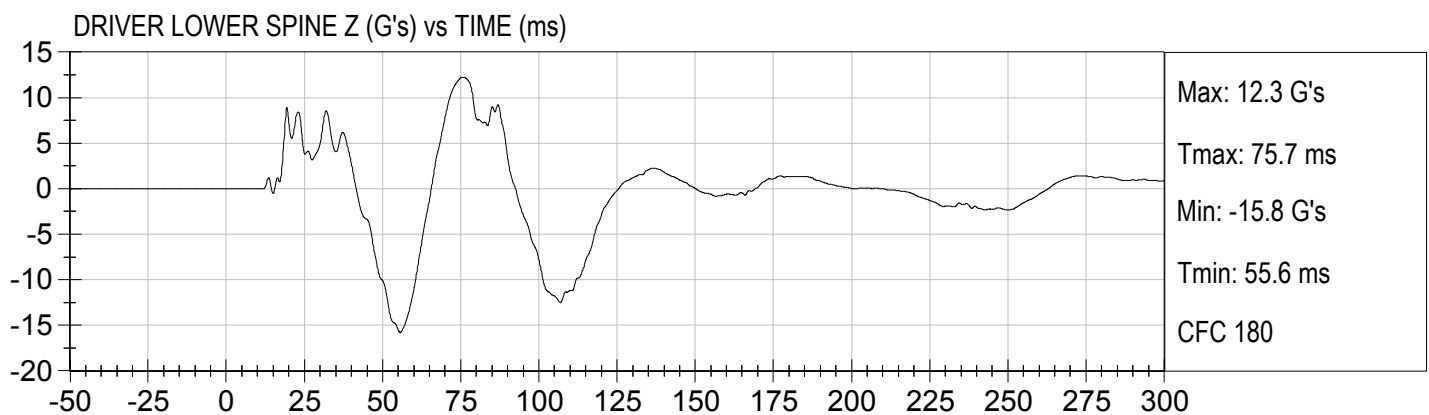
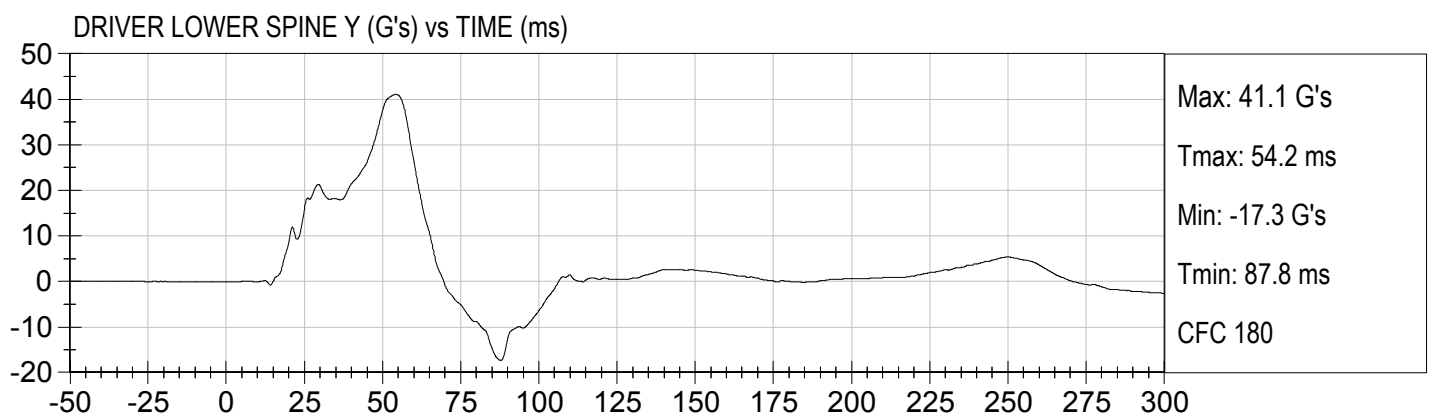
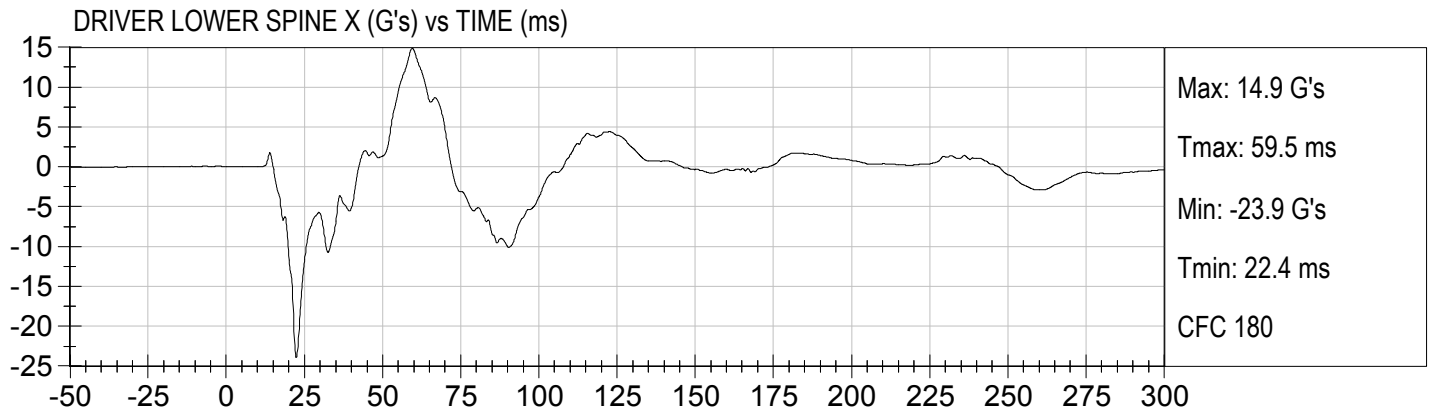
Load Cell Pole Barrier #5 Force (Y)

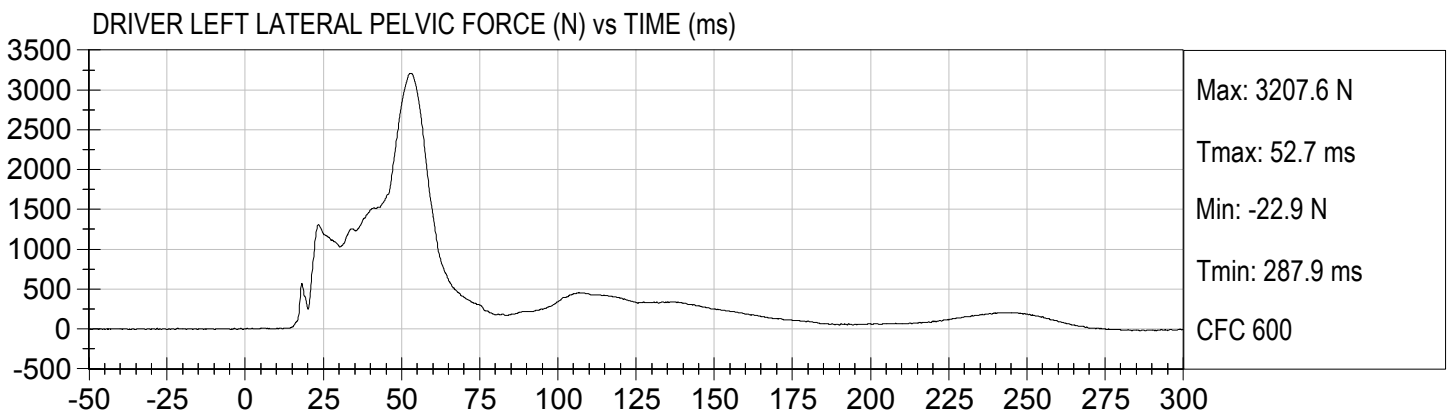
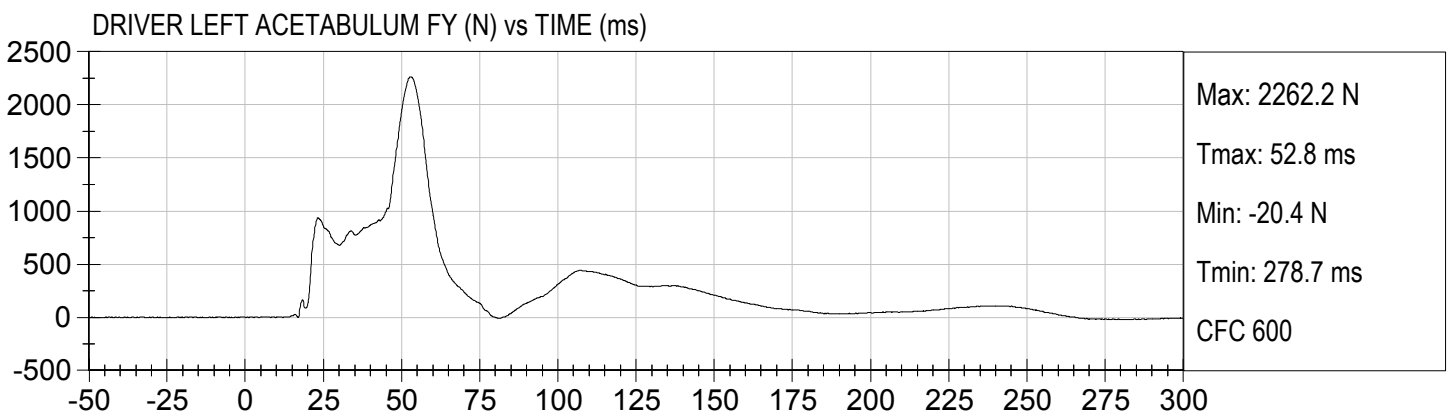
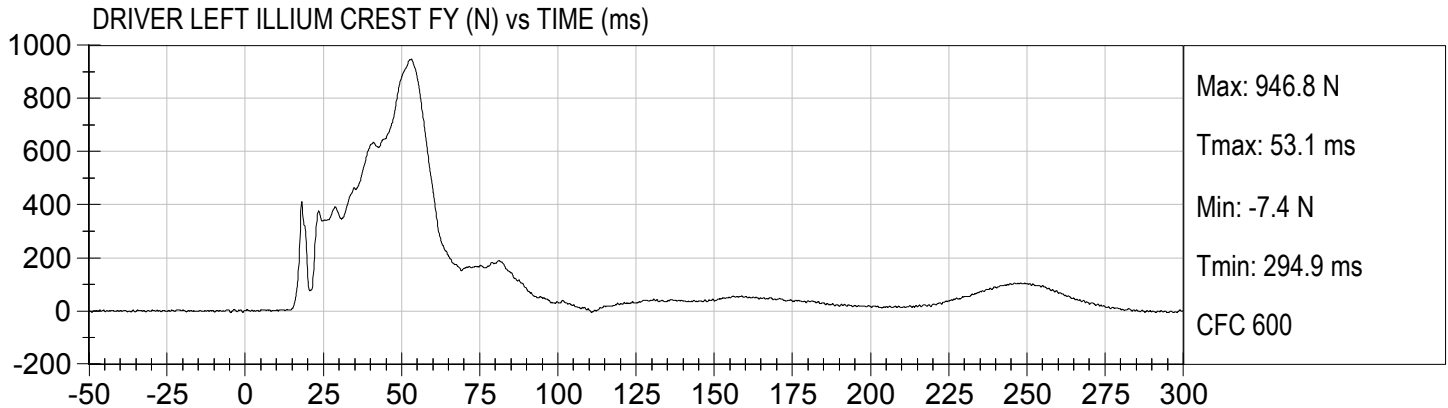
Load Cell Pole Barrier #6 Force (Y)

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

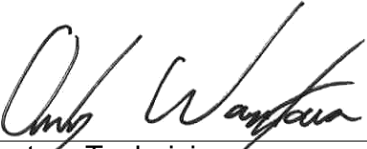
No.	Name	Spec. (mm)	Result	Pass/Fail
A	Sitting Height	772 - 788	784	Pass
B	Shoulder Pivot Height	437 - 453	442	Pass
C	H-point Height	79 - 89	83	Pass
D	H-point from Seatback	141 - 151	145	Pass
E	Shoulder Pivot from Backline	97 - 107	99	Pass
F	Thigh Clearance	119 -135	121	Pass
G	Head Breadth	140 - 148	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-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

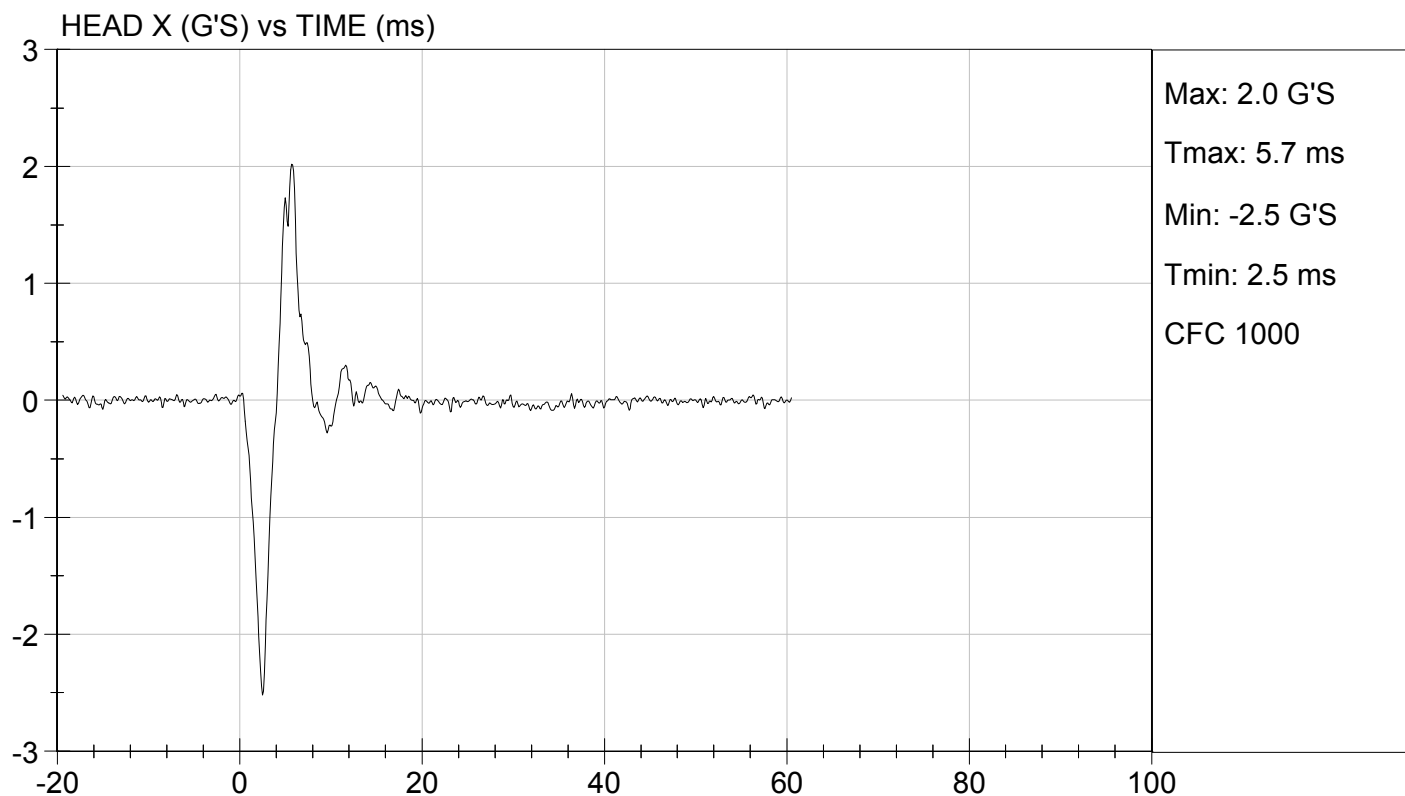
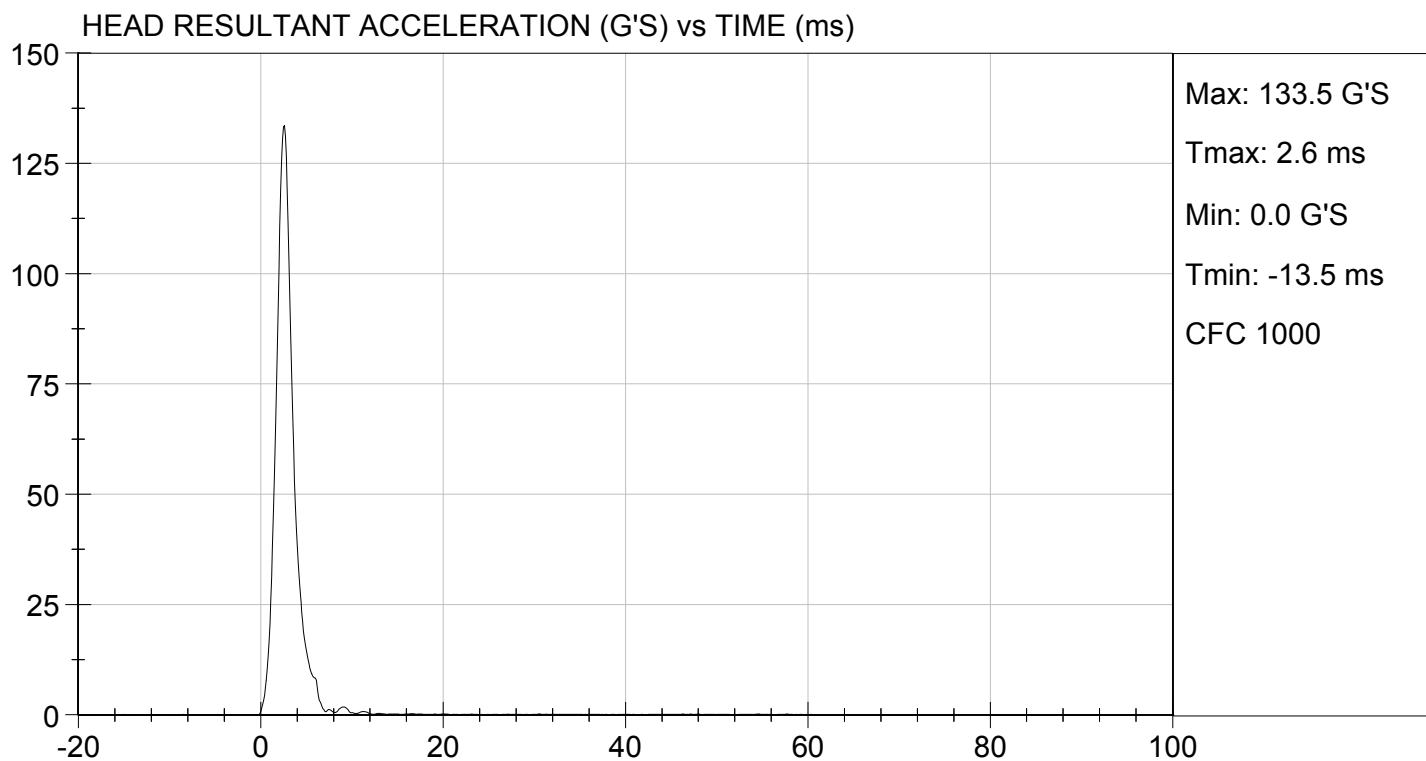
Test ID: D161851

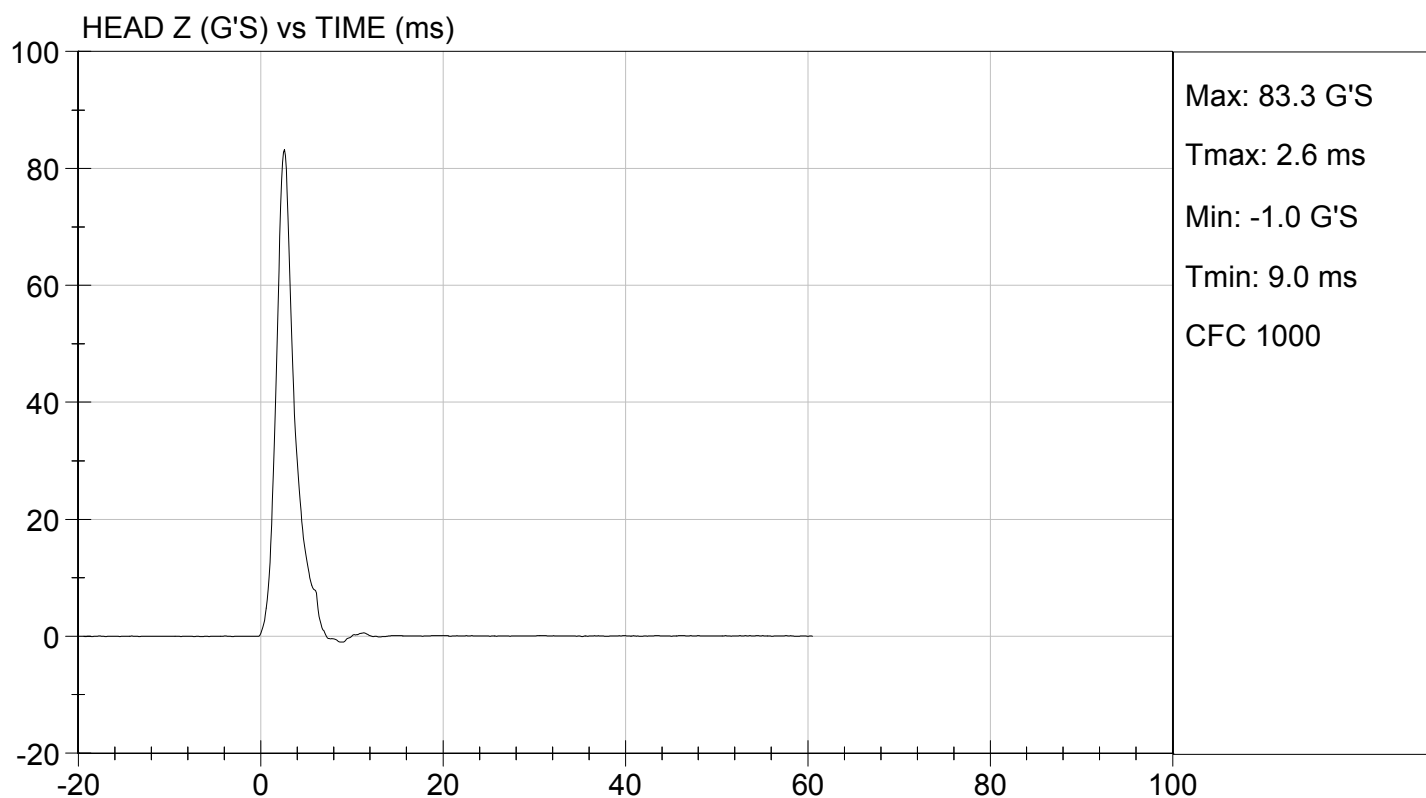
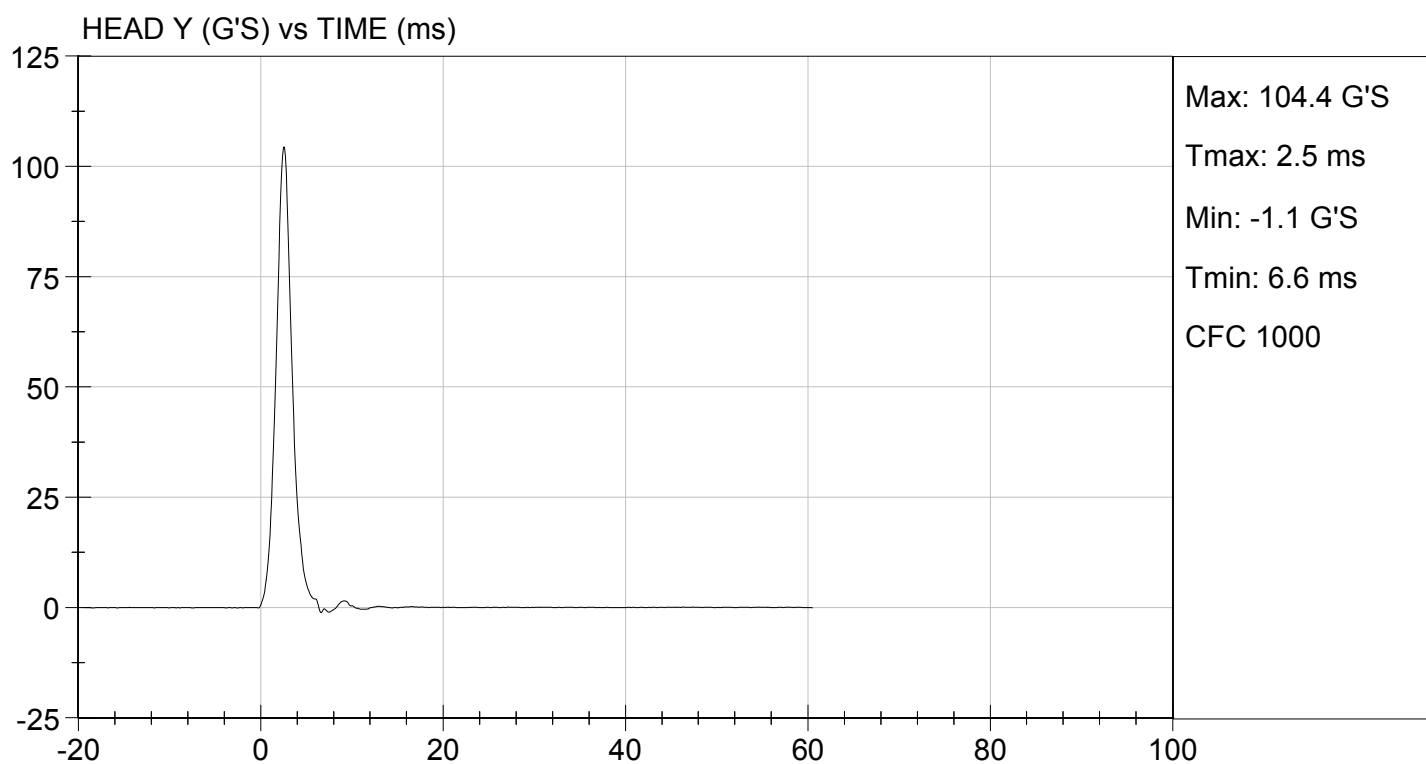
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	20.6 to 22.2	21.5	Pass
Laboratory Relative Humidity	%	10 to 70	53	Pass
Peak Resultant Acceleration	G's	115 to 137	134	Pass
Peak Longitudinal Acceleration	G's	+/- 15	-2.5	Pass
Unimodal	N/A	Yes	Yes	Pass
Oscillations	N/A	<15%	Yes	Pass
Overall Test Results			Pass	


Laboratory Technician

05/27/2016
Test Date


Approved By



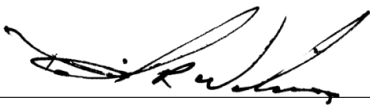


MGA RESEARCH CORPORATION
LATERAL NECK PENDULUM TEST
SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

Test I.D: D161852

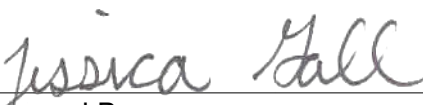
Tested Parameter		Units	Specification	Result	Pass/Fail
Temperature		deg C	20.6 to 22.2	21.4	Pass
Humidity		%	10 to 70	55	Pass
Impact Velocity		m/s	5.51 to 5.63	5.58	Pass
Pendulum Velocity	10 ms	m/s	2.20 to 2.80	2.71	Pass
	15 ms	m/s	3.30 to 4.10	3.89	Pass
	20 ms	m/s	4.40 to 5.40	5.20	Pass
	25 ms	m/s	5.40 to 6.10	5.64	Pass
	25-100 ms	m/s	5.50 to 6.20	5.67	Pass
Maximum D-Plane Rotation		deg	71 to 81	74	Pass
Time of Maximum D-Plane Rotation		ms	50 to 70	61	Pass
Maximum Occipital Condyle Moment		Nm	-44 to -36	-44	Pass
Time of Moment Decay to 0 Nm		ms	102 to 126	114	Pass
Overall Test Results					Pass



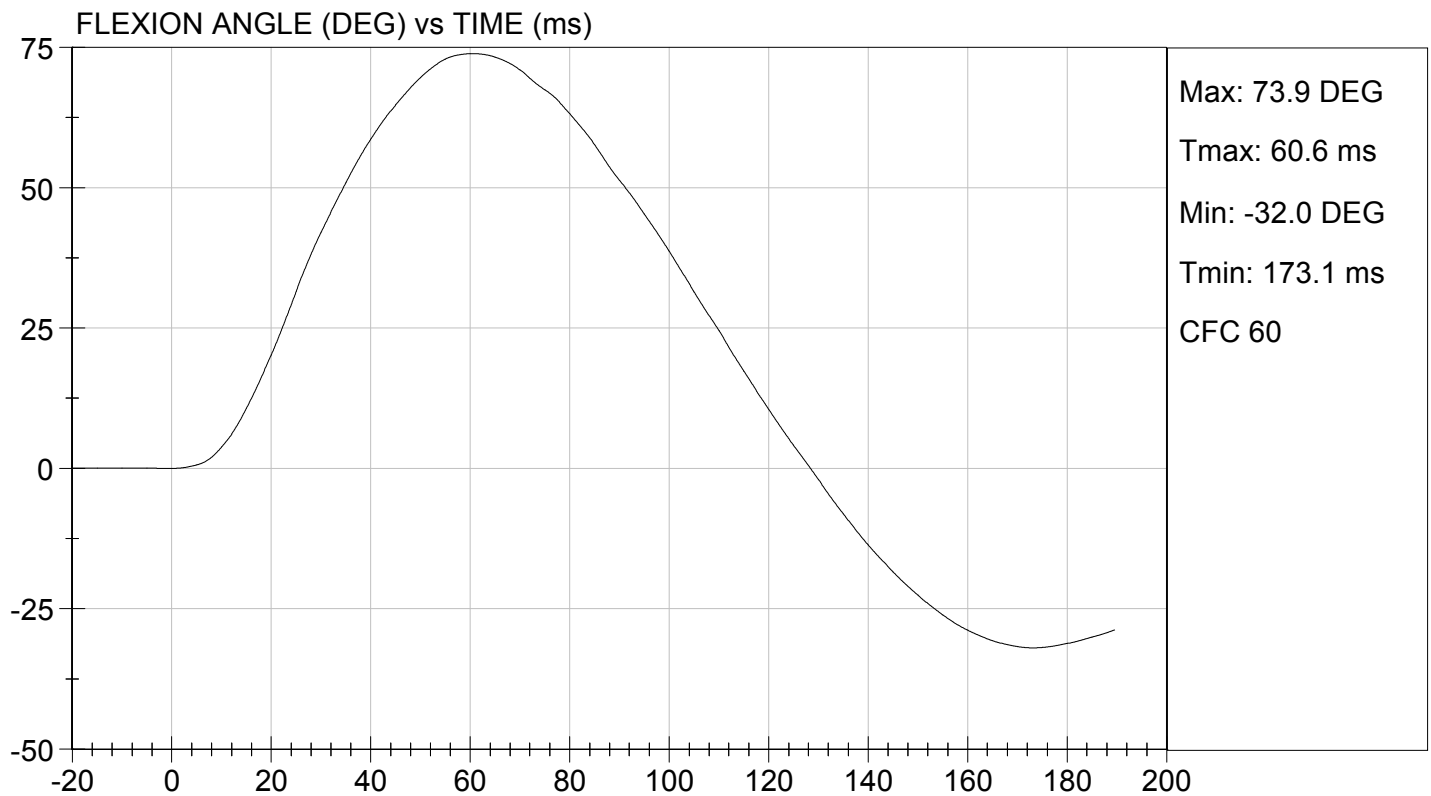
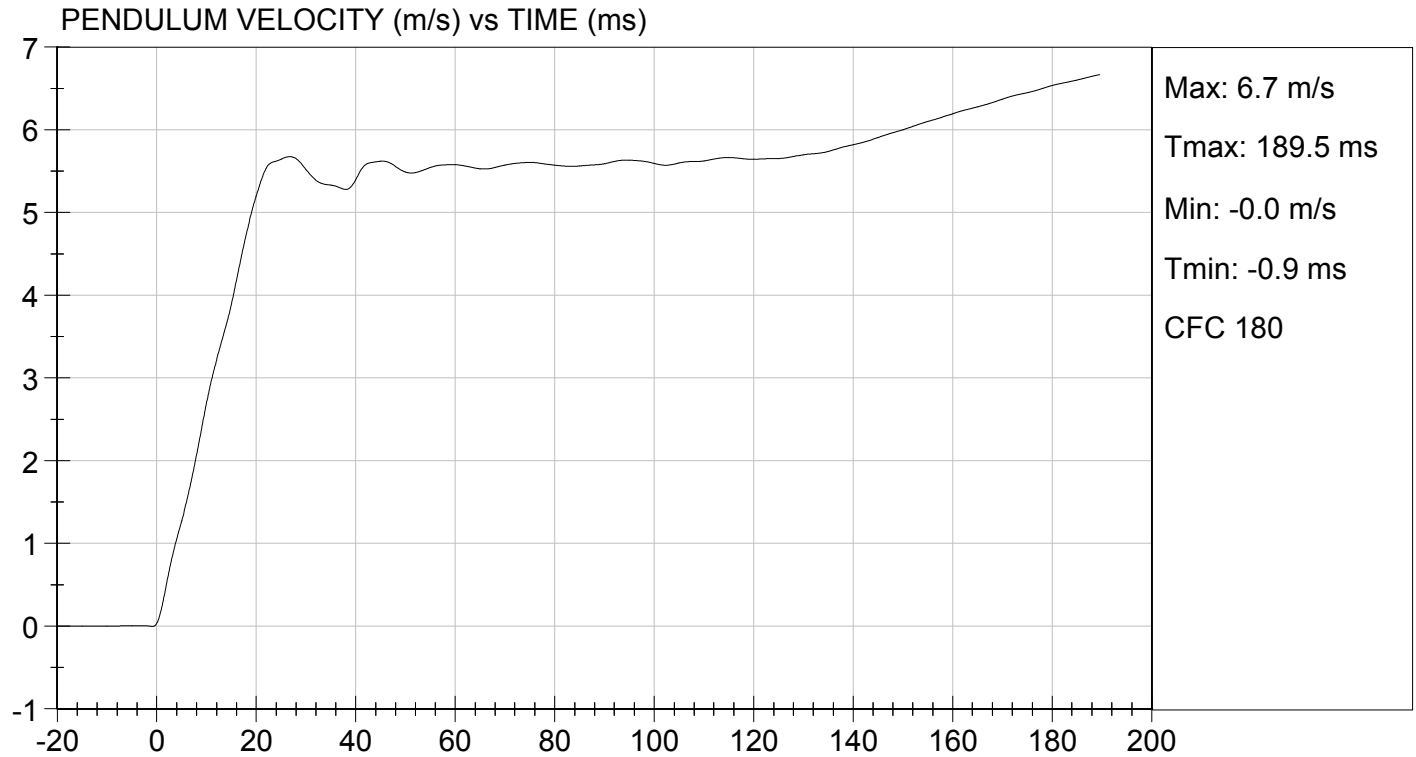
Laboratory Technician

05/27/2016

Test Date



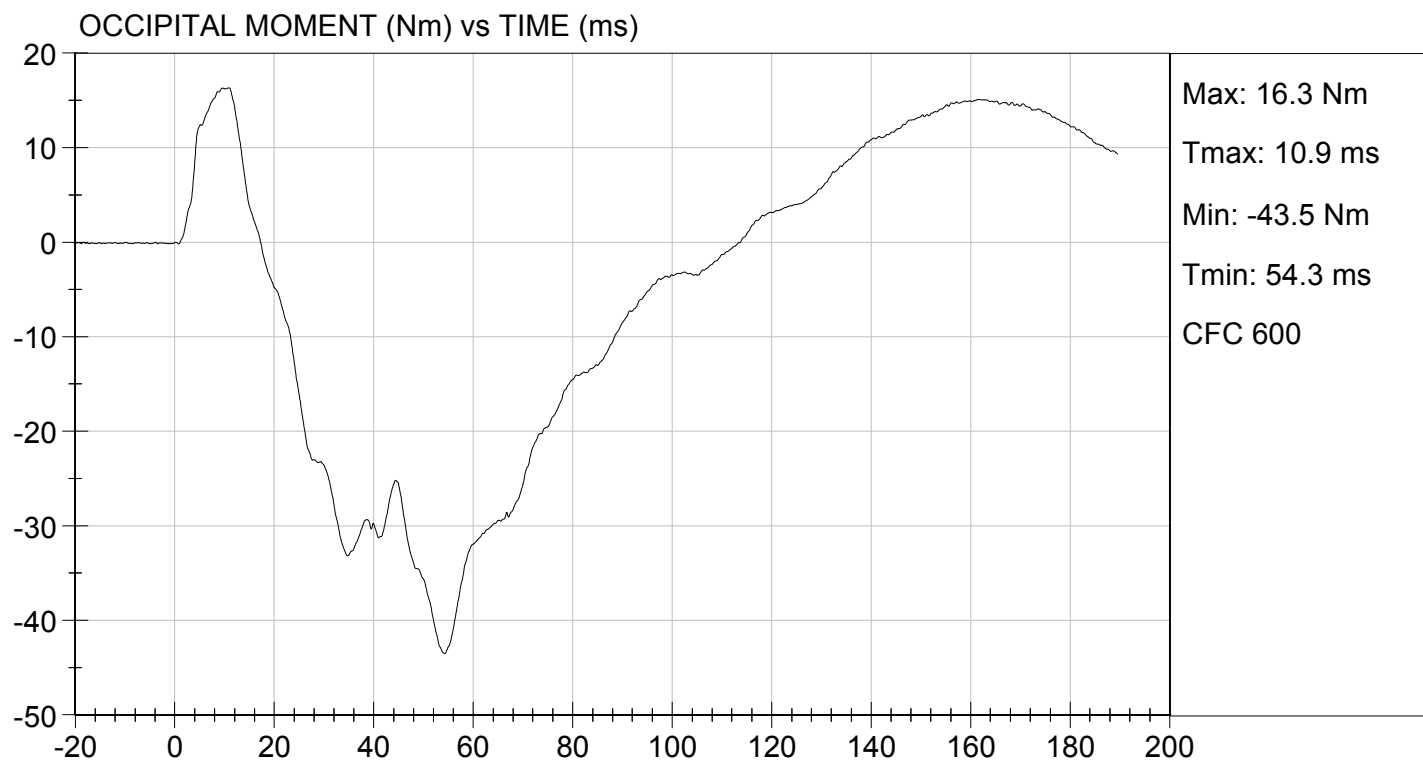
Approved By





TEST DESC: NECK BENDING
VELOCITY: 18.32 ft/s, 5.58 m/s

TEST DATE: 05/27/2016
TEST #: D161852

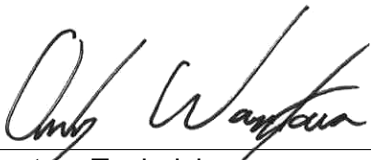


MGA RESEARCH CORPORATION
SHOULDER IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

Test ID: D161853

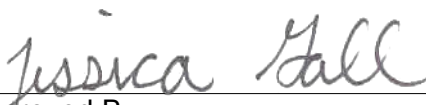
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	20.6 to 22.2	21.5	Pass
Laboratory Relative Humidity	%	10 to 70	53	Pass
Impact Velocity	m/s	4.20 to 4.40	4.34	Pass
Maximum Probe Acceleration	G's	13 to 18	16	Pass
Shoulder Displacement	mm	28 to 37	33	Pass
Upper Spine (T1) Y Acceleration	G's	17 to 22	19	Pass
Overall Test Results				Pass



Laboratory Technician

05/27/2016

Test Date

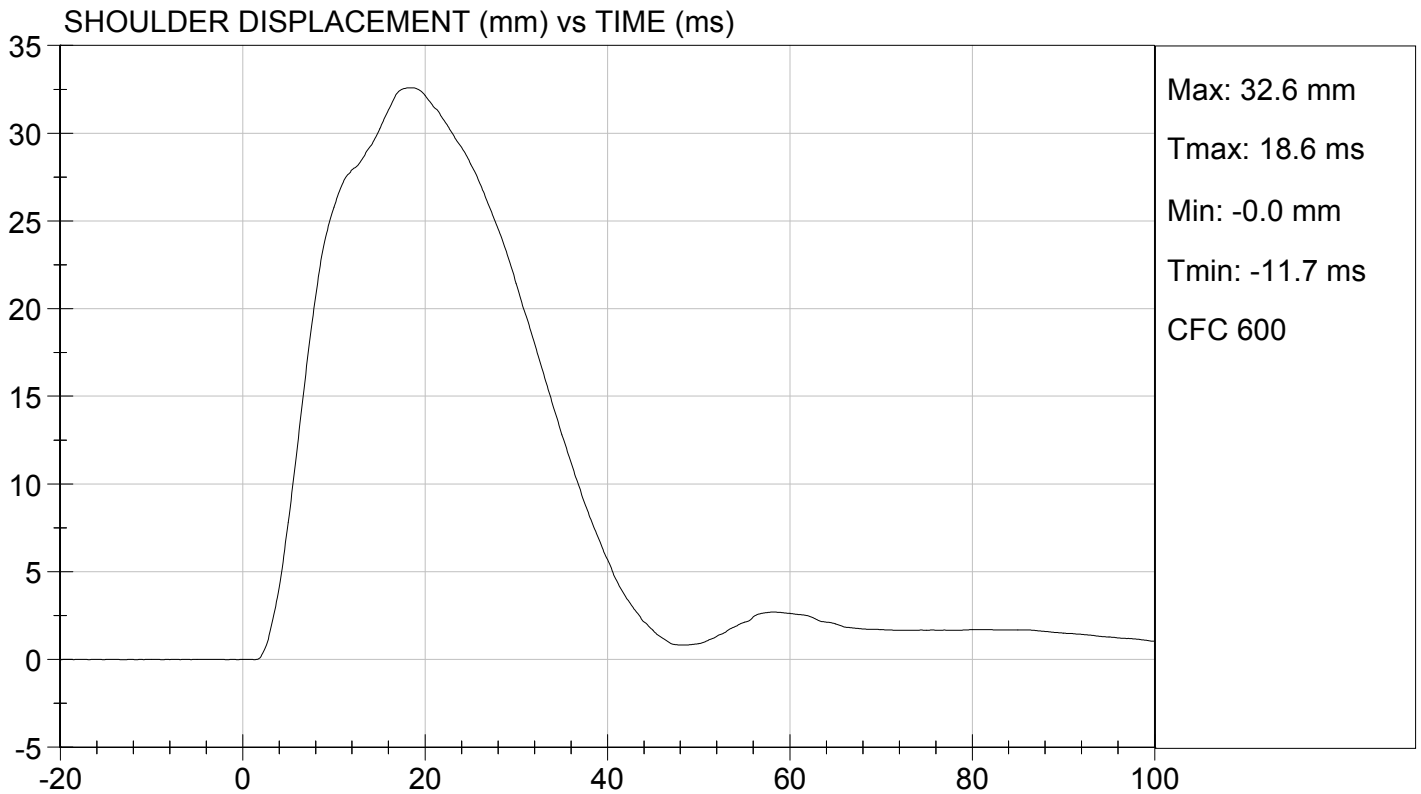
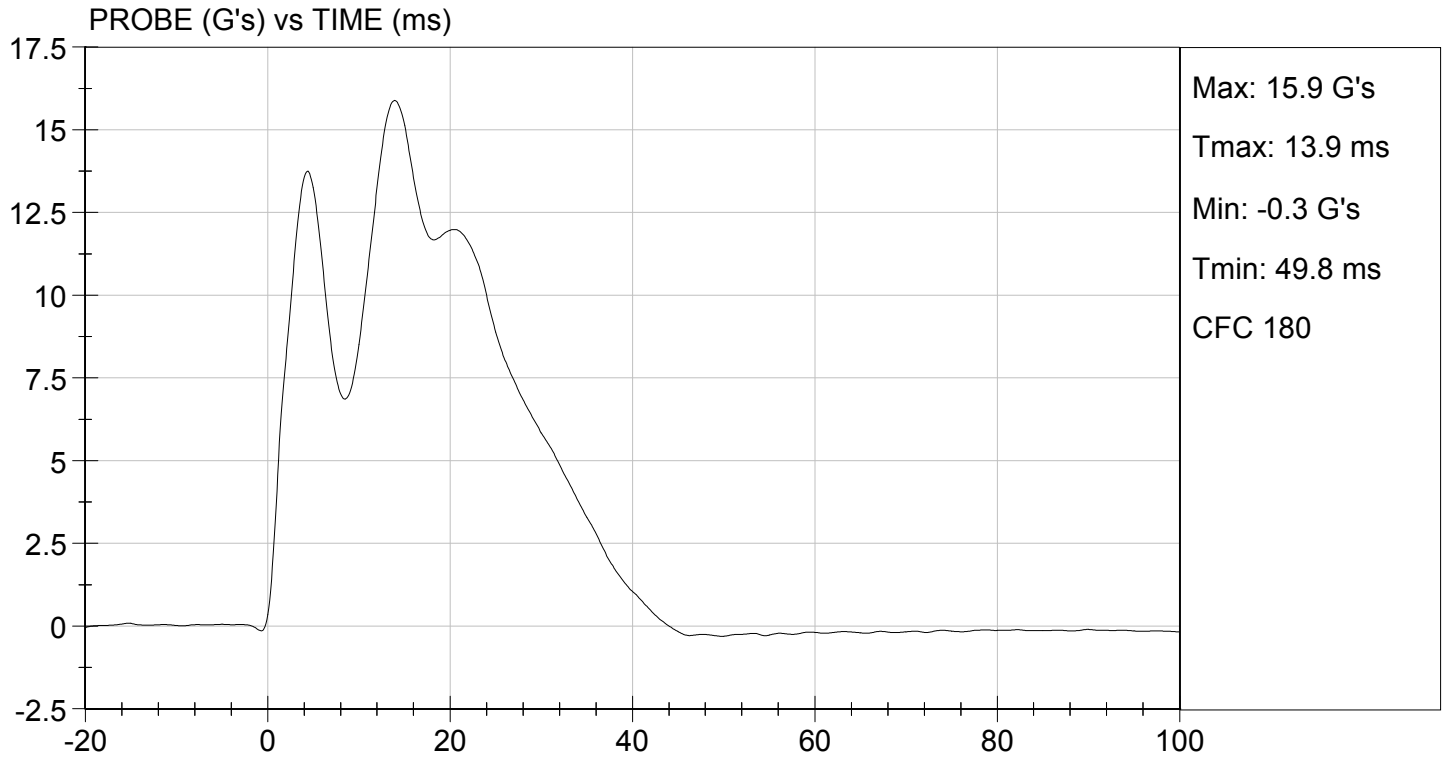


Approved By



TEST DESC: SHOULDER IMPACT
VELOCITY: 14.25 ft/s, 4.34 m/s

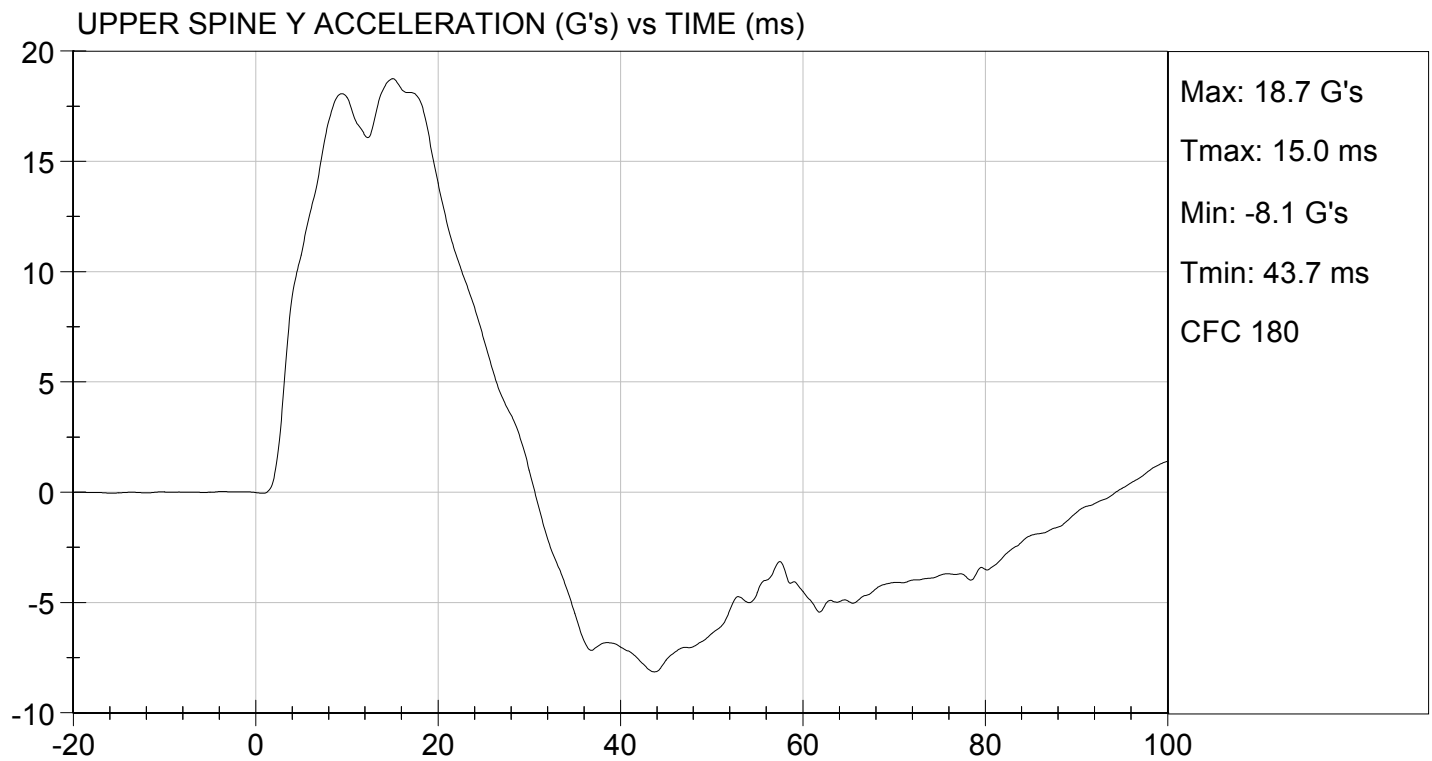
TEST DATE: 05/27/2016
TEST #: D161853





TEST DESC: SHOULDER IMPACT
VELOCITY: 14.25 ft/s, 4.34 m/s

TEST DATE: 05/27/2016
TEST #: D161853

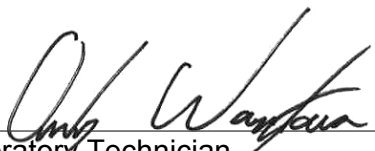


MGA RESEARCH CORPORATION
THORAX (WITH ARM) IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

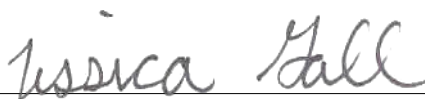
ATD Serial No: 296

Test I.D: D161854

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.5	Pass
Humidity	%	10 to 70	53	Pass
Impact Velocity	m/s	6.60 to 6.80	6.68	Pass
Maximum Probe Acceleration	G's	30 to 36	33	Pass
Shoulder Displacement	mm	31 to 40	38	Pass
Upper Rib Displacement	mm	25 to 32	29	Pass
Middle Rib Displacement	mm	30 to 36	31	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

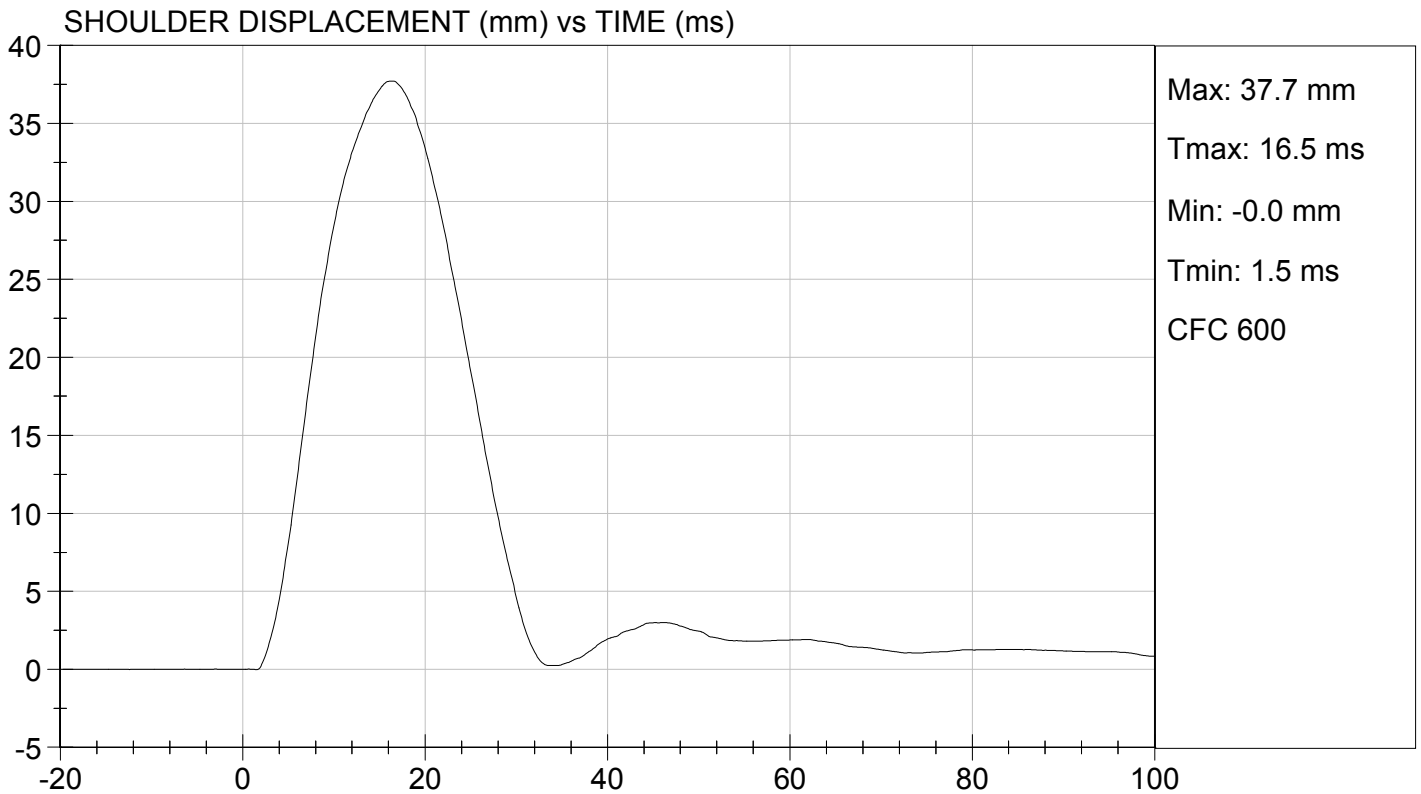
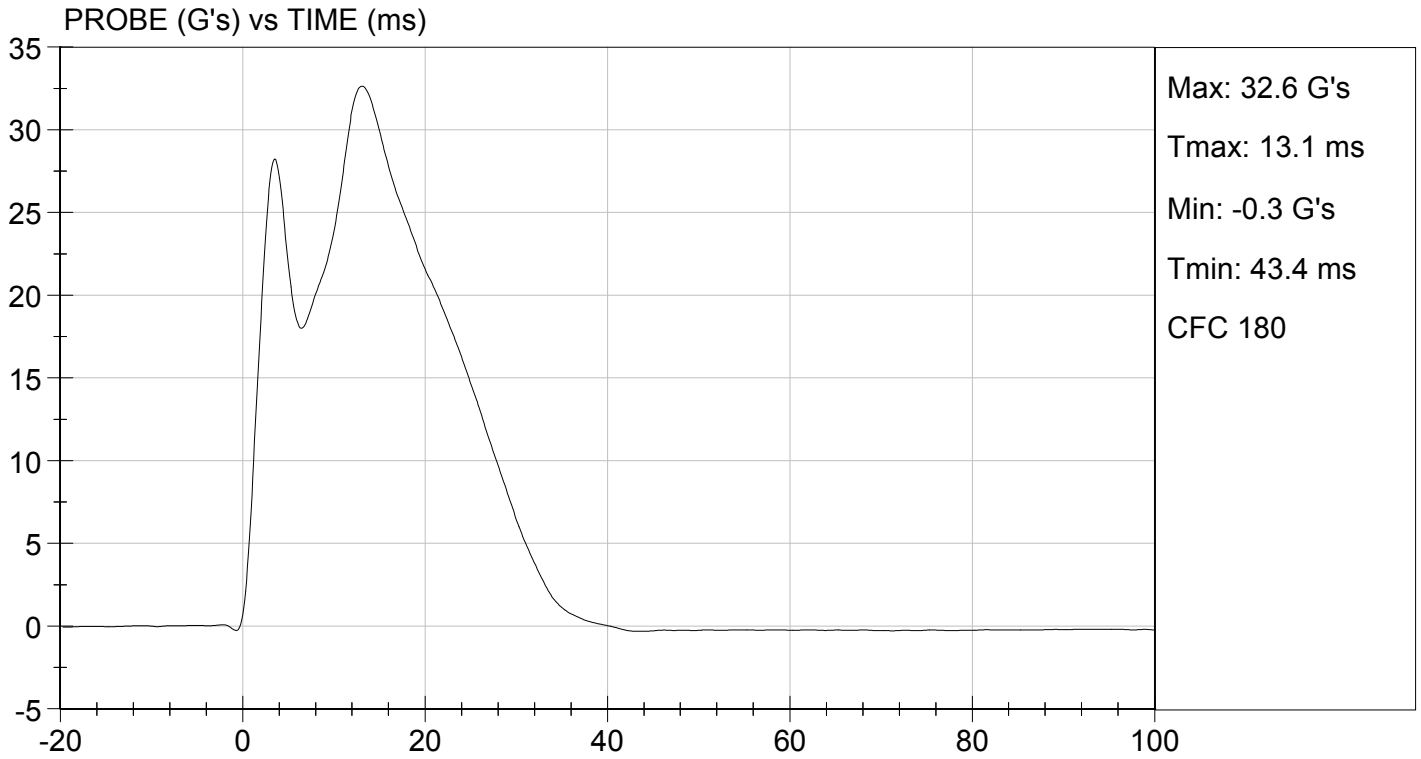
05/27/2016
Test Date


Approved By



TEST DESC: THORAX IMPACT WITH ARM
VELOCITY: 21.93 ft/s, 6.68 m/s

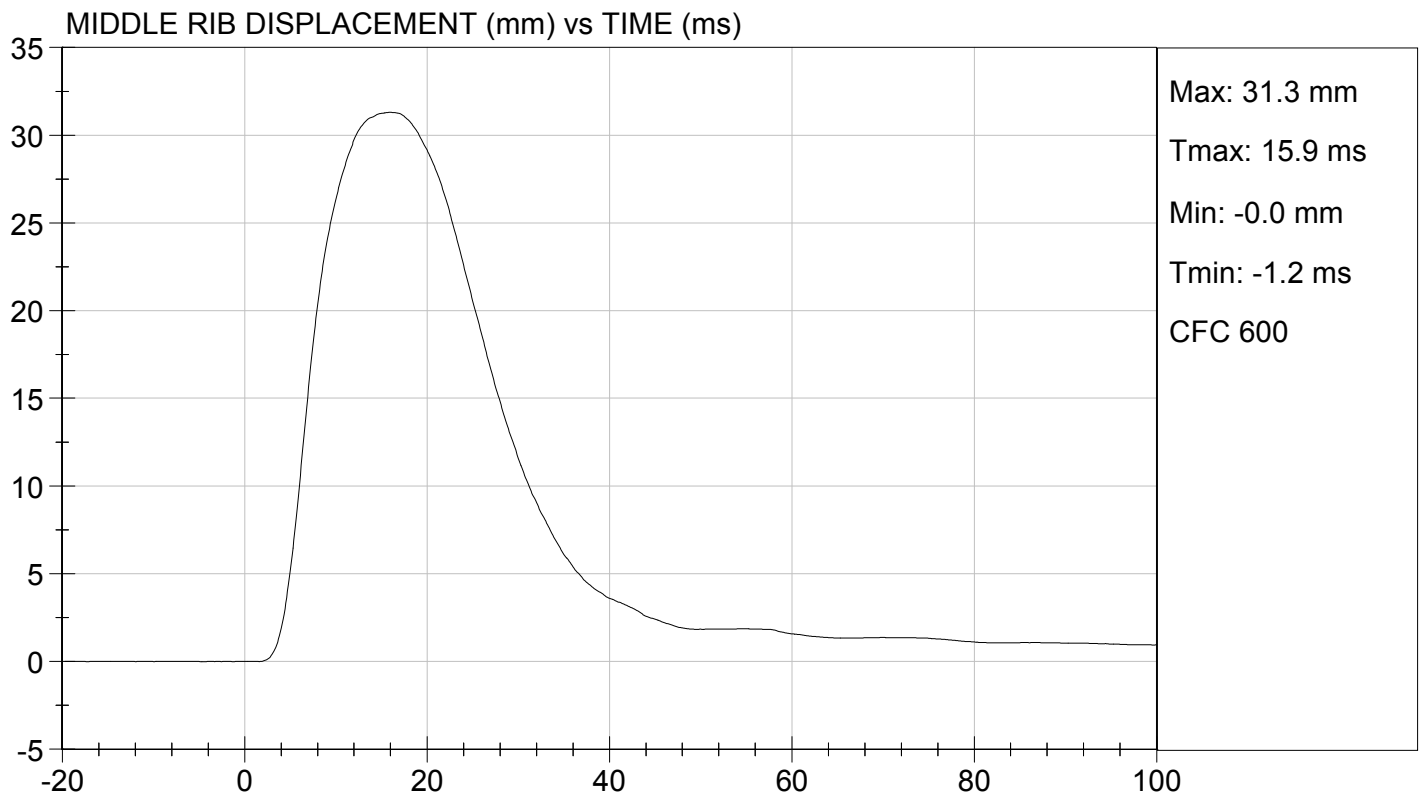
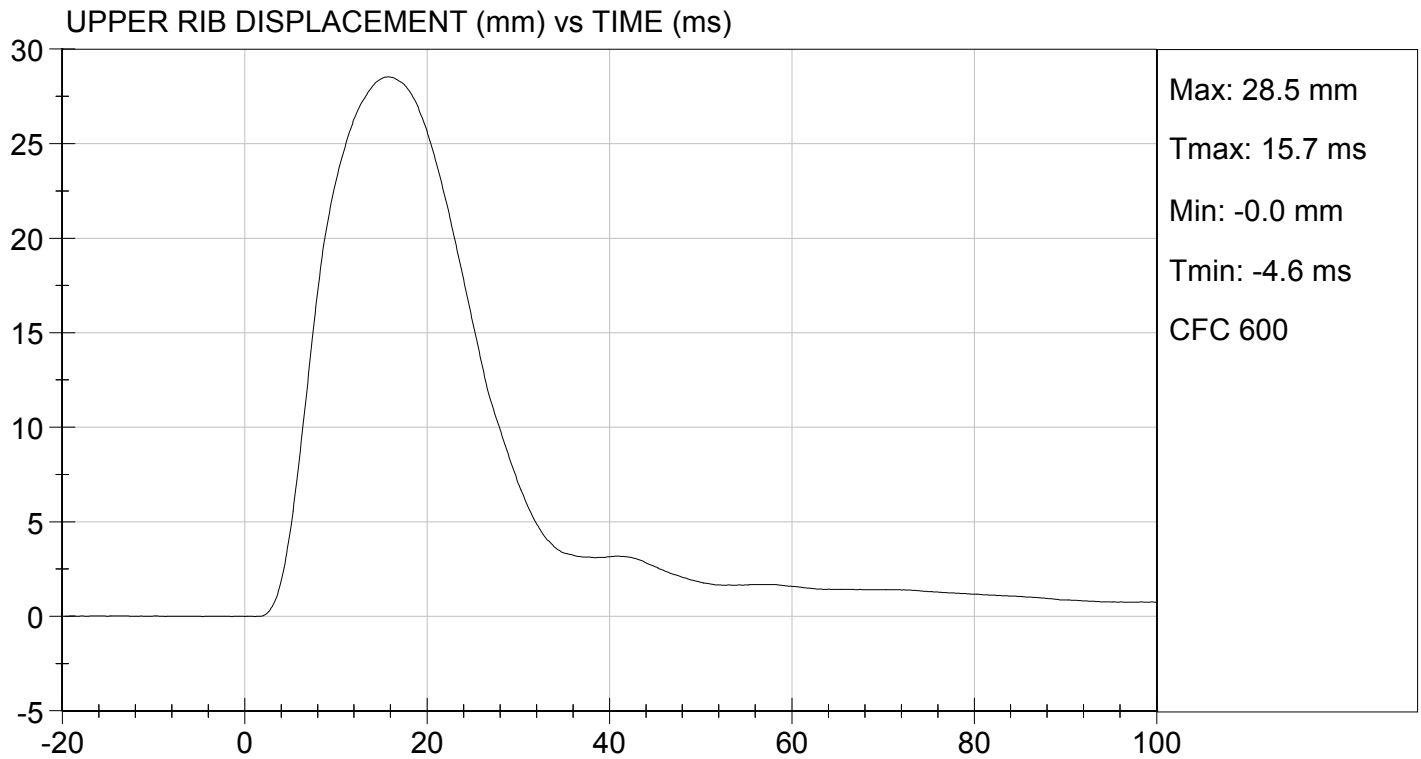
TEST DATE: 05/27/2016
TEST #: D161854





TEST DESC: THORAX IMPACT WITH ARM
VELOCITY: 21.93 ft/s, 6.68 m/s

TEST DATE: 05/27/2016
TEST #: D161854

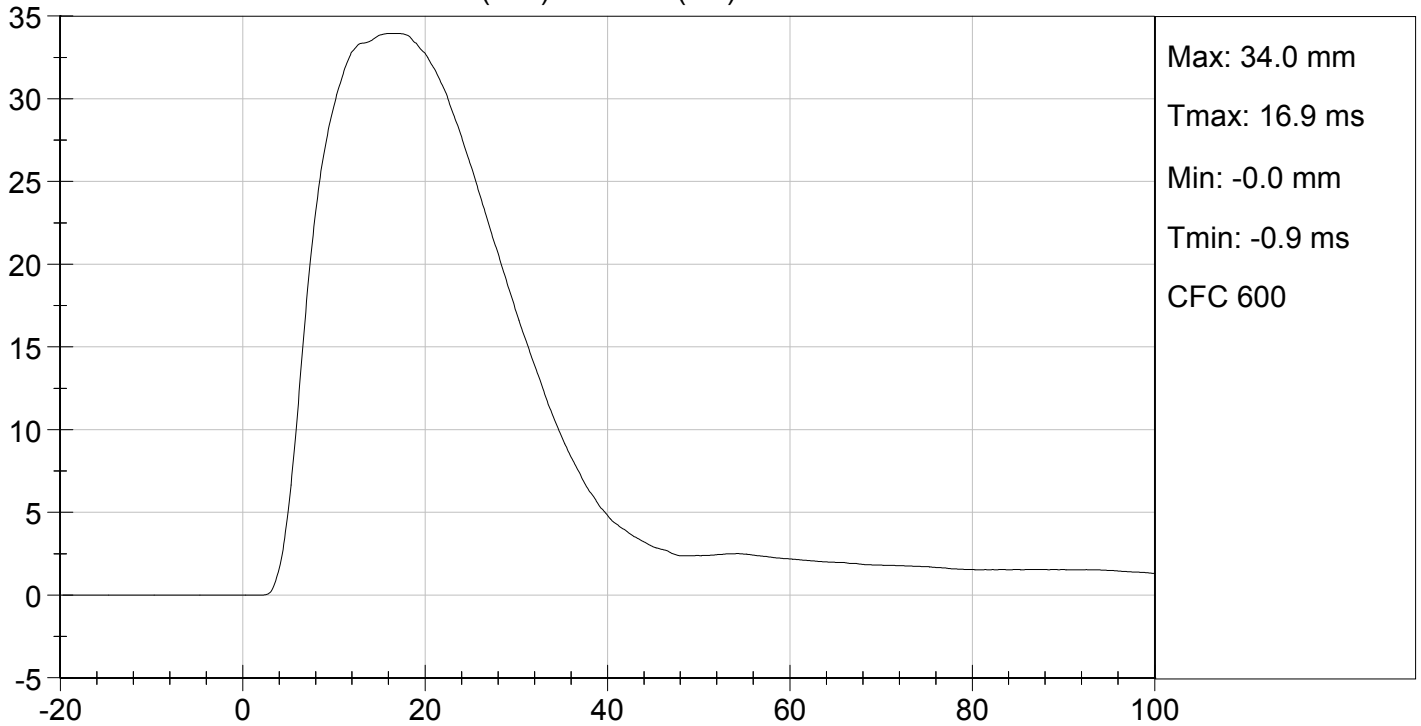




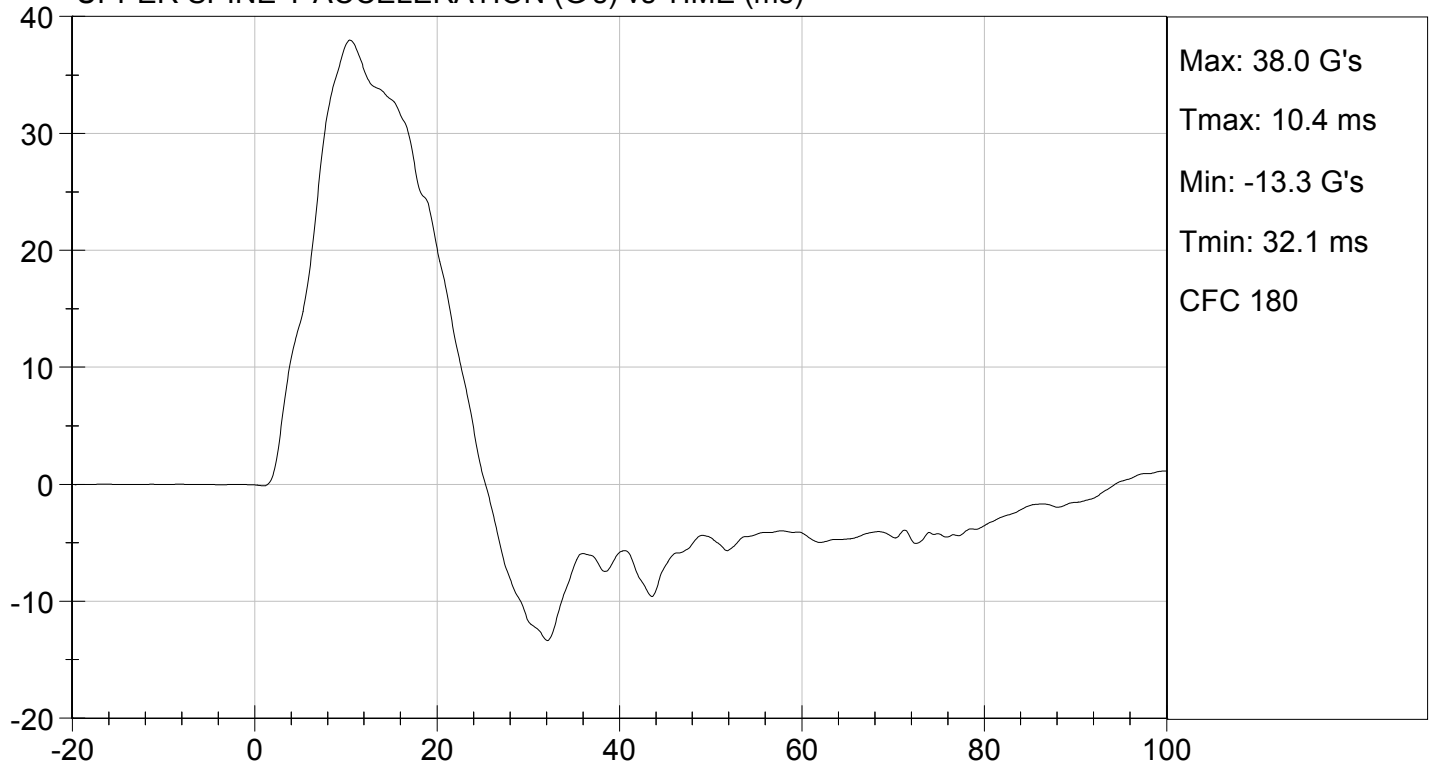
TEST DESC: THORAX IMPACT WITH ARM
VELOCITY: 21.93 ft/s, 6.68 m/s

TEST DATE: 05/27/2016
TEST #: D161854

LOWER RIB DISPLACEMENT (mm) vs TIME (ms)



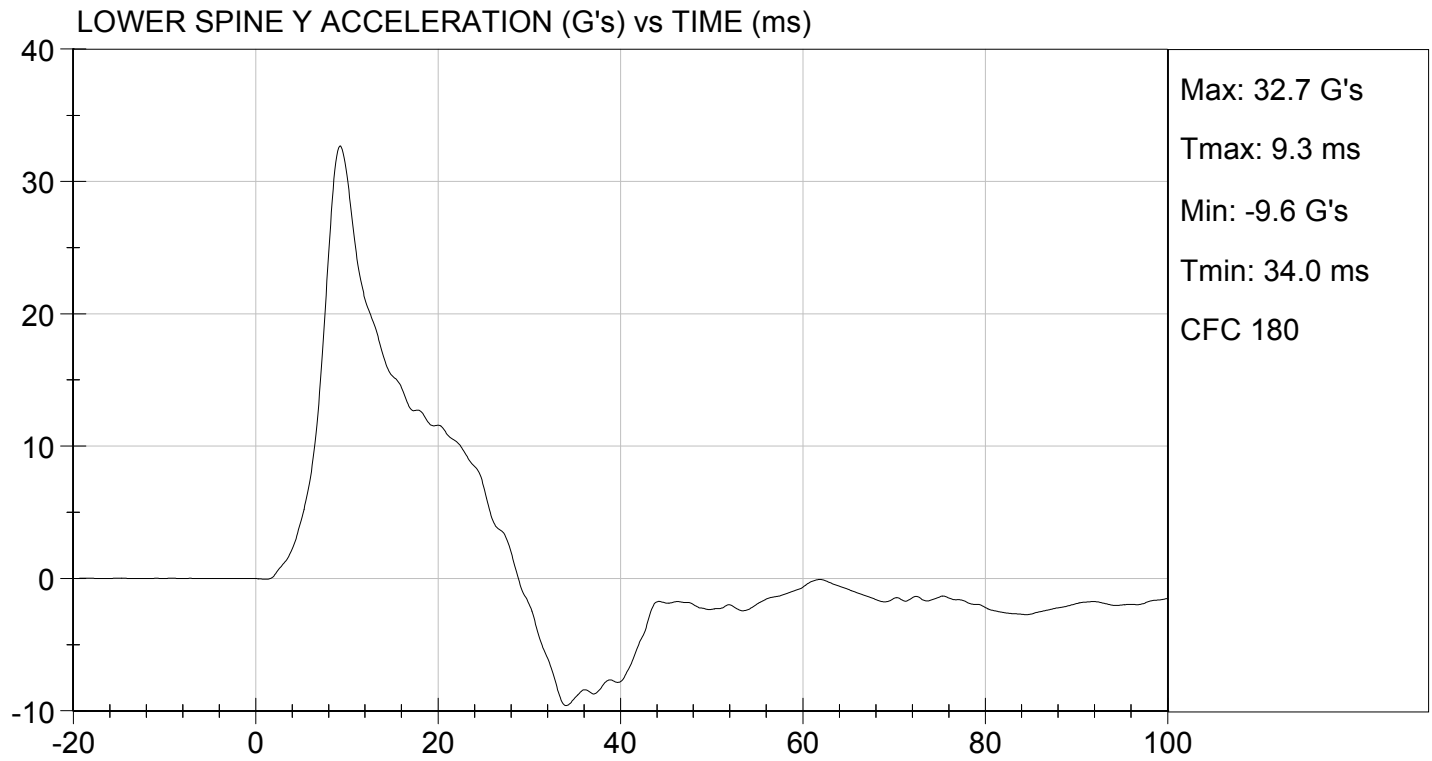
UPPER SPINE Y ACCELERATION (G's) vs TIME (ms)





TEST DESC: THORAX IMPACT WITH ARM
VELOCITY: 21.93 ft/s, 6.68 m/s

TEST DATE: 05/27/2016
TEST #: D161854



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

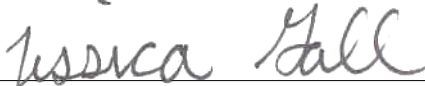
ATD Serial No: 296

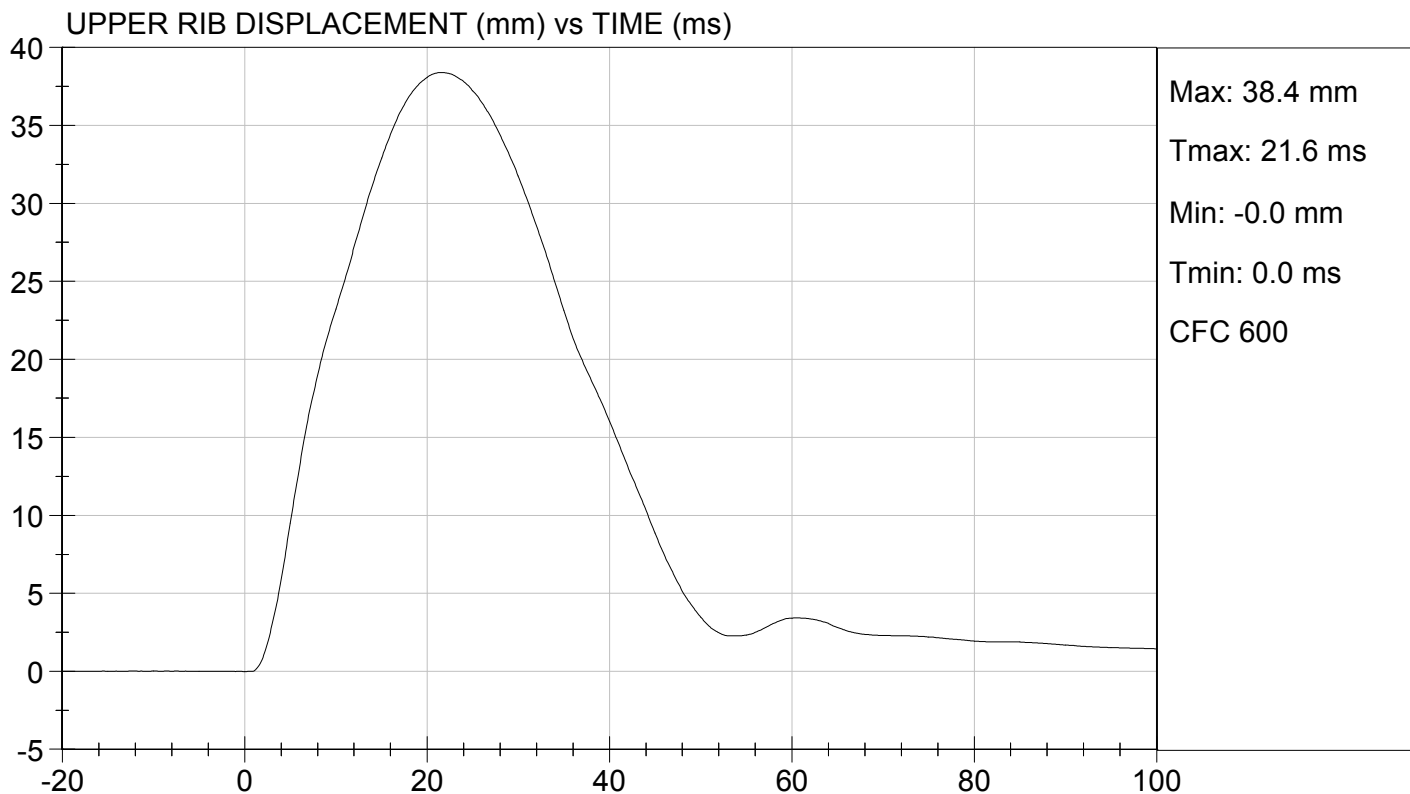
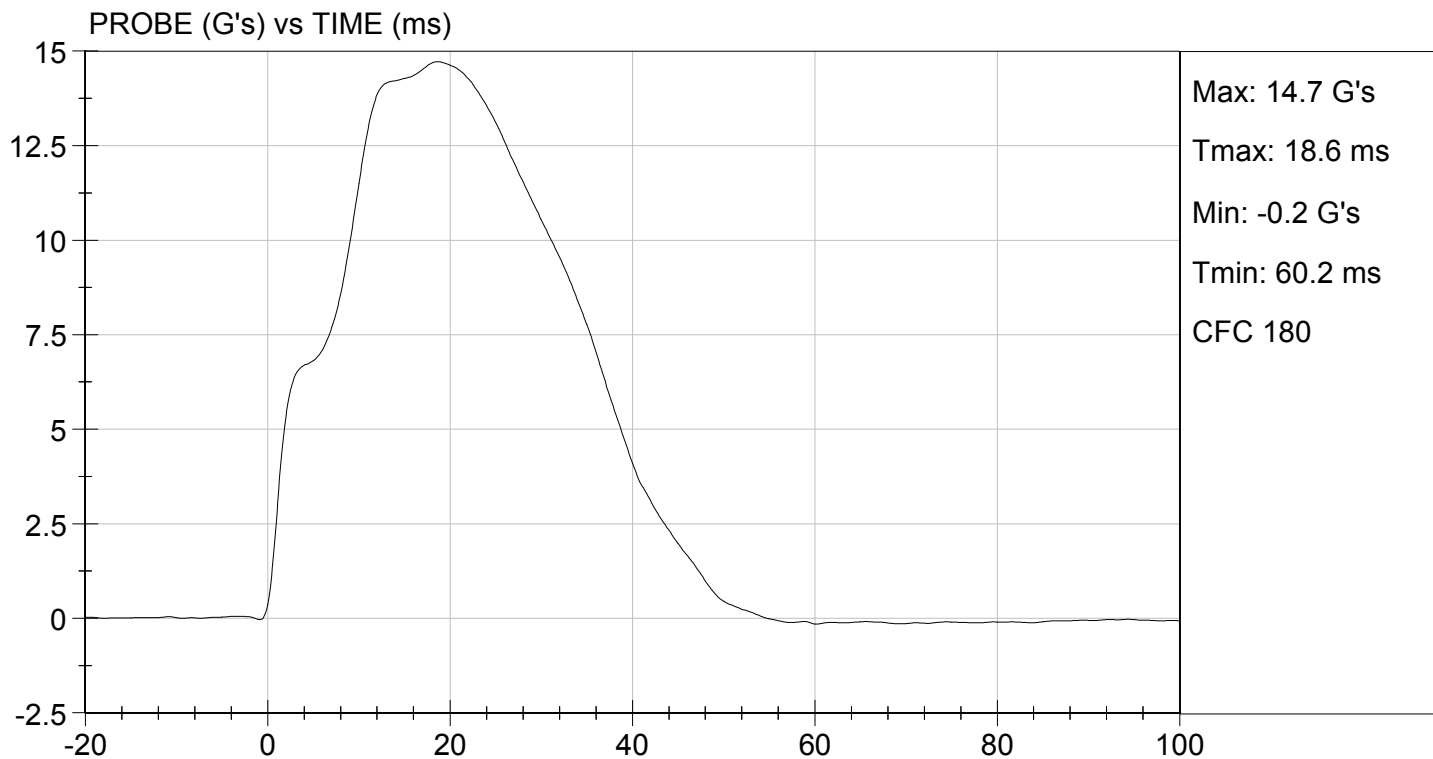
Test I.D: D161855

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.5	Pass
Humidity	%	10 to 70	53	Pass
Impact Velocity	m/s	4.20 to 4.40	4.27	Pass
Maximum Probe Acceleration	G's	14 to 18	15	Pass
Upper Rib Displacement	mm	32 to 40	38	Pass
Middle Rib Displacement	mm	39 to 45	41	Pass
Lower Rib Displacement	mm	35 to 43	37	Pass
Upper Spine (T1) Y Acceleration	G's	13 to 17	15	Pass
Lower Spine (T12) Y Acceleration	G's	7 to 11	9	Pass
Overall Test Results				Pass


 Laboratory Technician

05/27/2016
 Test Date

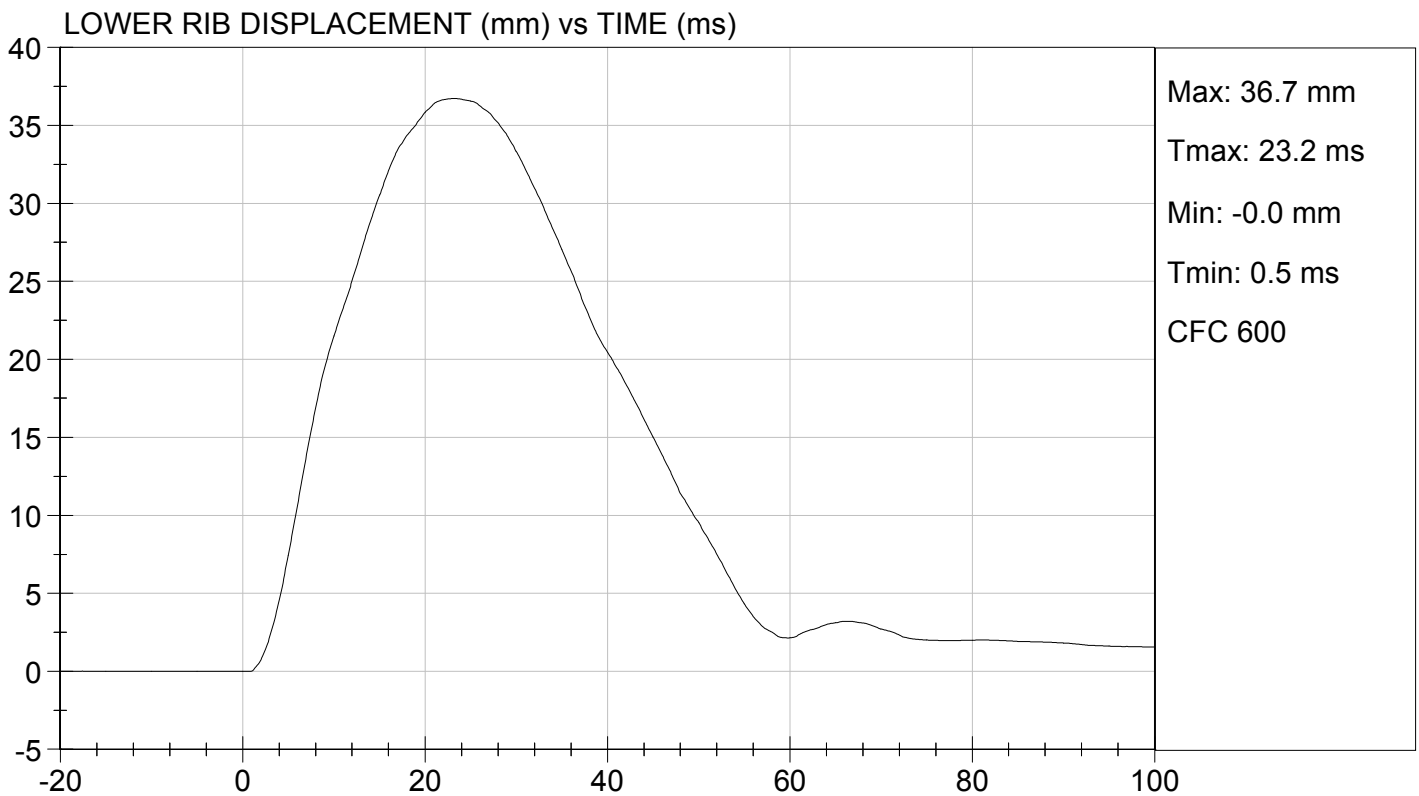
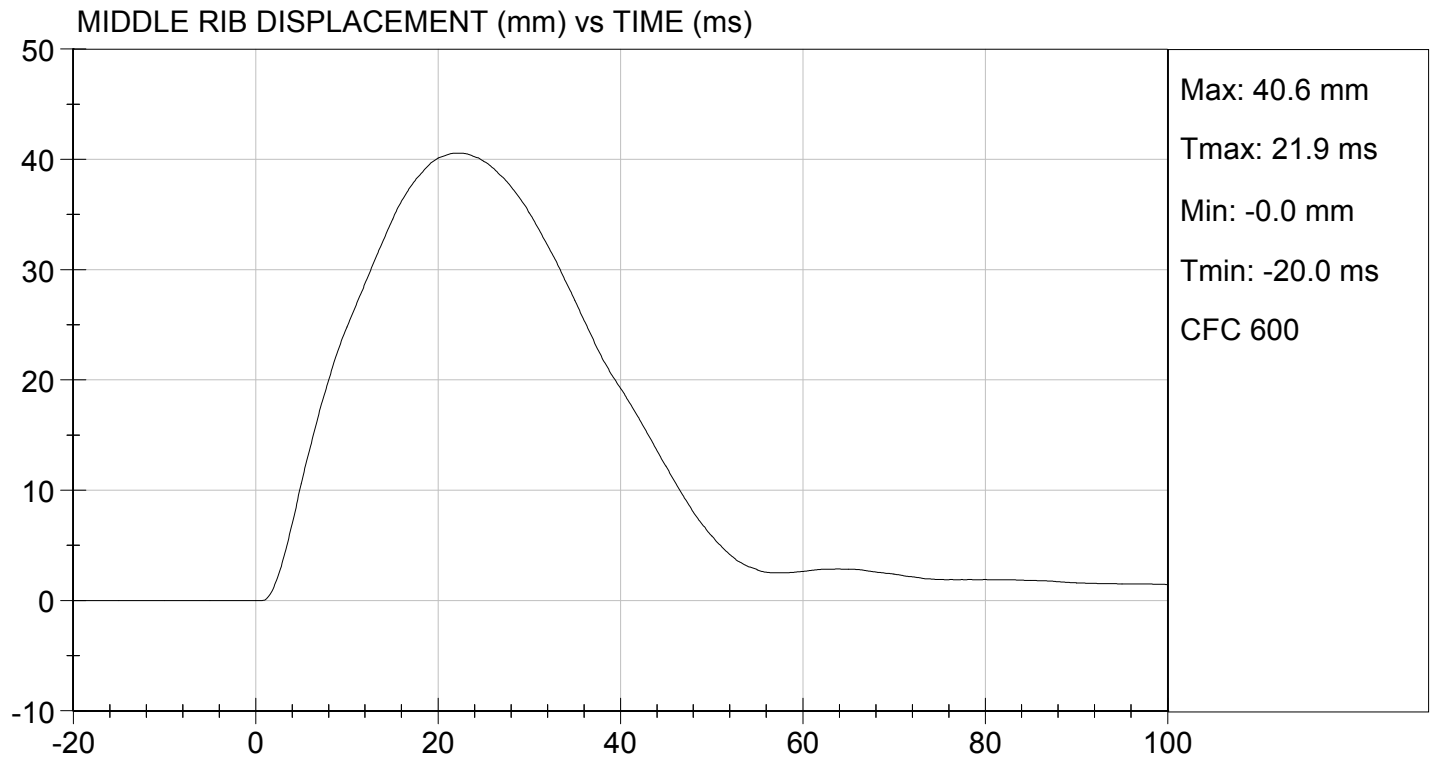

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TEST DESC: THORAX IMPACT WITHOUT ARM
VELOCITY: 14.01 ft/s, 4.27 m/s

TEST DATE: 05/27/2016
TEST #: D161855

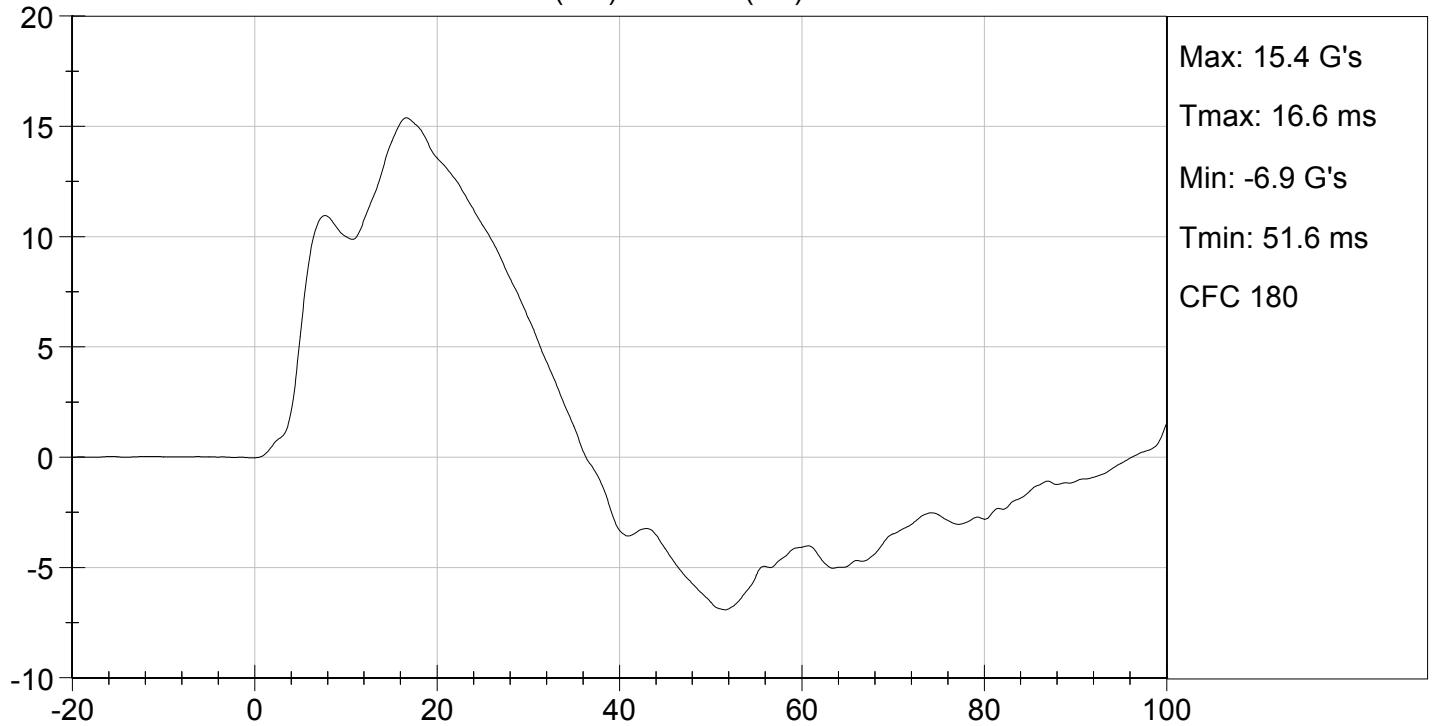




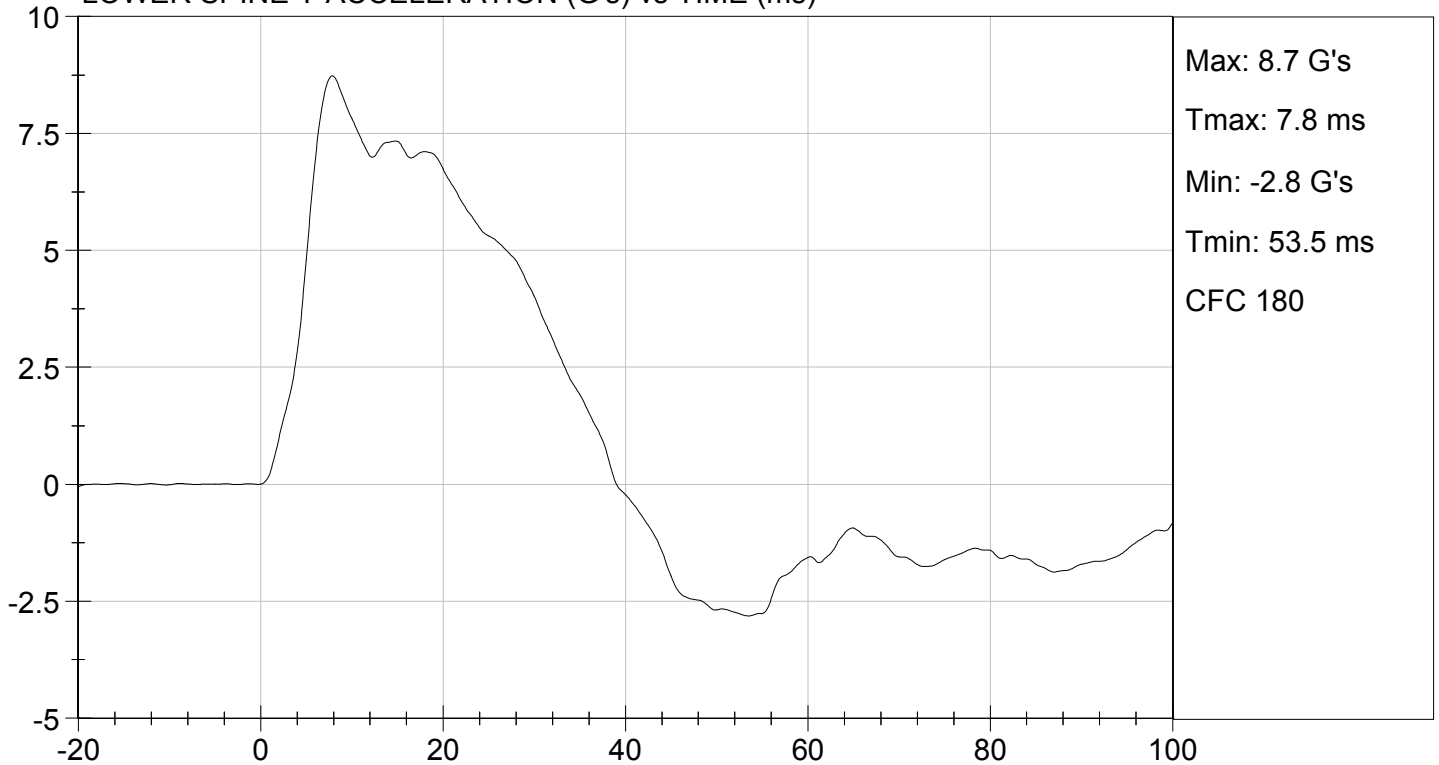
TEST DESC: THORAX IMPACT WITHOUT ARM
VELOCITY: 14.01 ft/s, 4.27 m/s

TEST DATE: 05/27/2016
TEST #: D161855

UPPER SPINE Y ACCELERATION (G's) vs TIME (ms)



LOWER SPINE Y 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: D161856

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.5	Pass
Humidity	%	10 to 70	53	Pass
Impact Velocity	m/s	4.20 to 4.40	4.27	Pass
Maximum Probe Acceleration	G's	12 to 16	13	Pass
Upper Abdomen Rib Displacement	mm	36 to 47	40	Pass
Lower Abdomen 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

05/27/2016

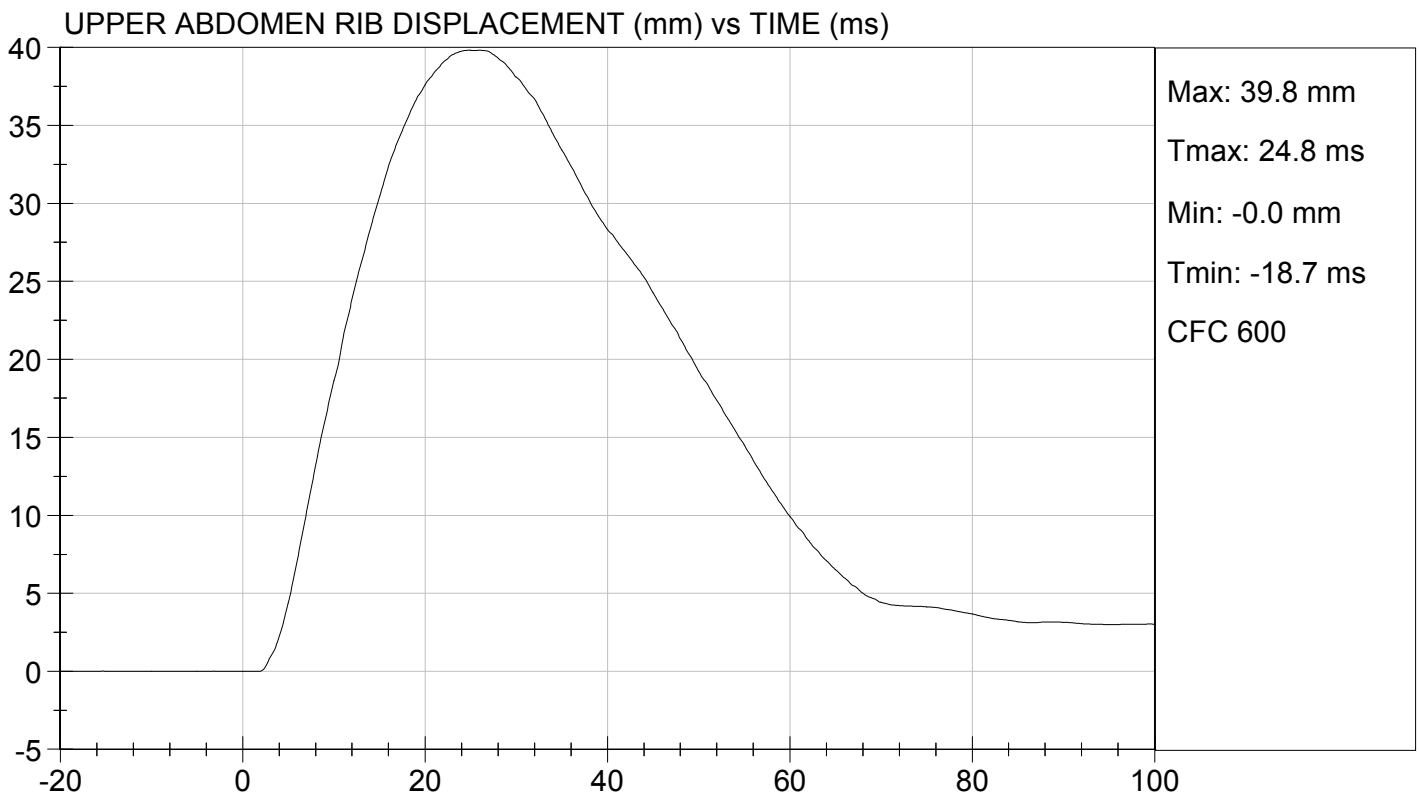
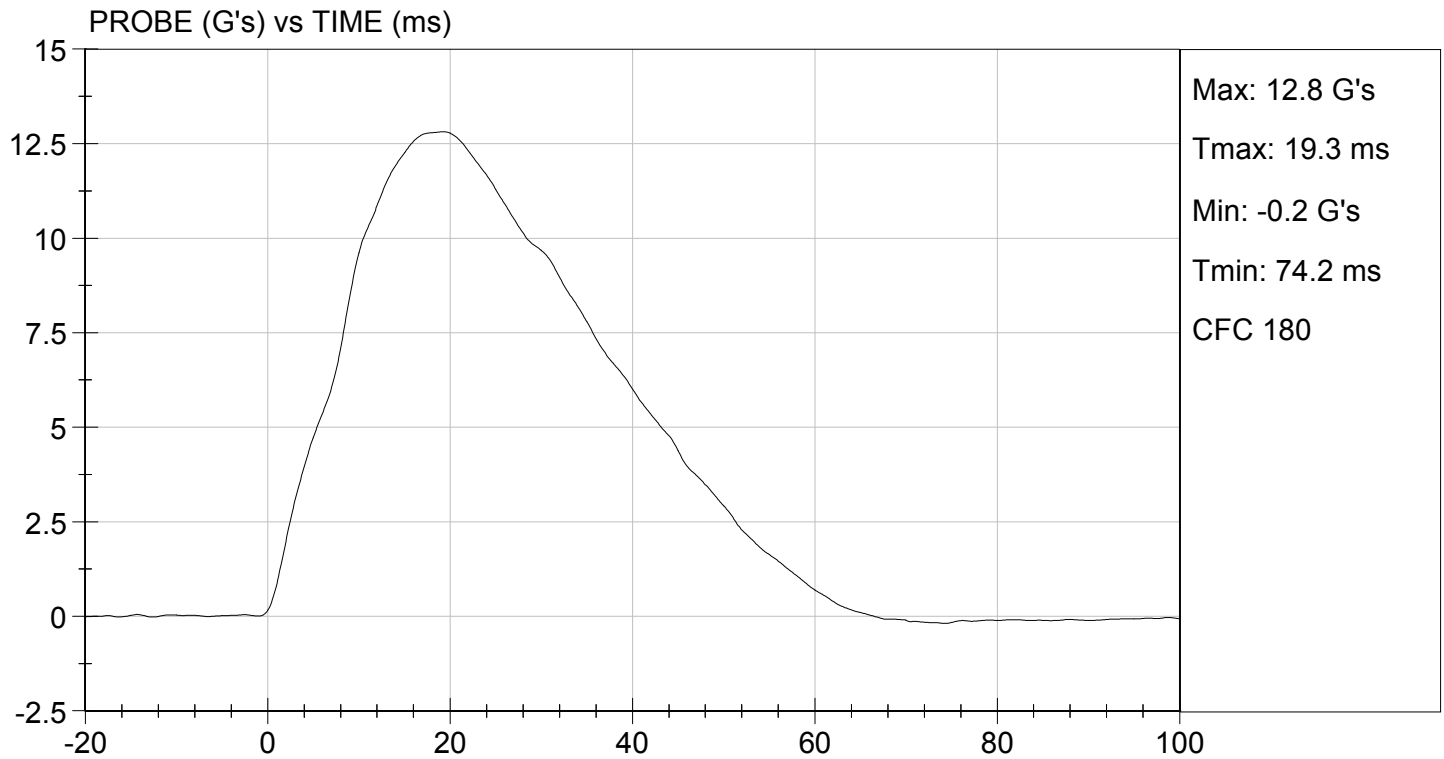
Test Date


Approved By



TEST DESC: ABDOMEN IMPACT
VELOCITY: 14.01 ft/s, 4.27 m/s

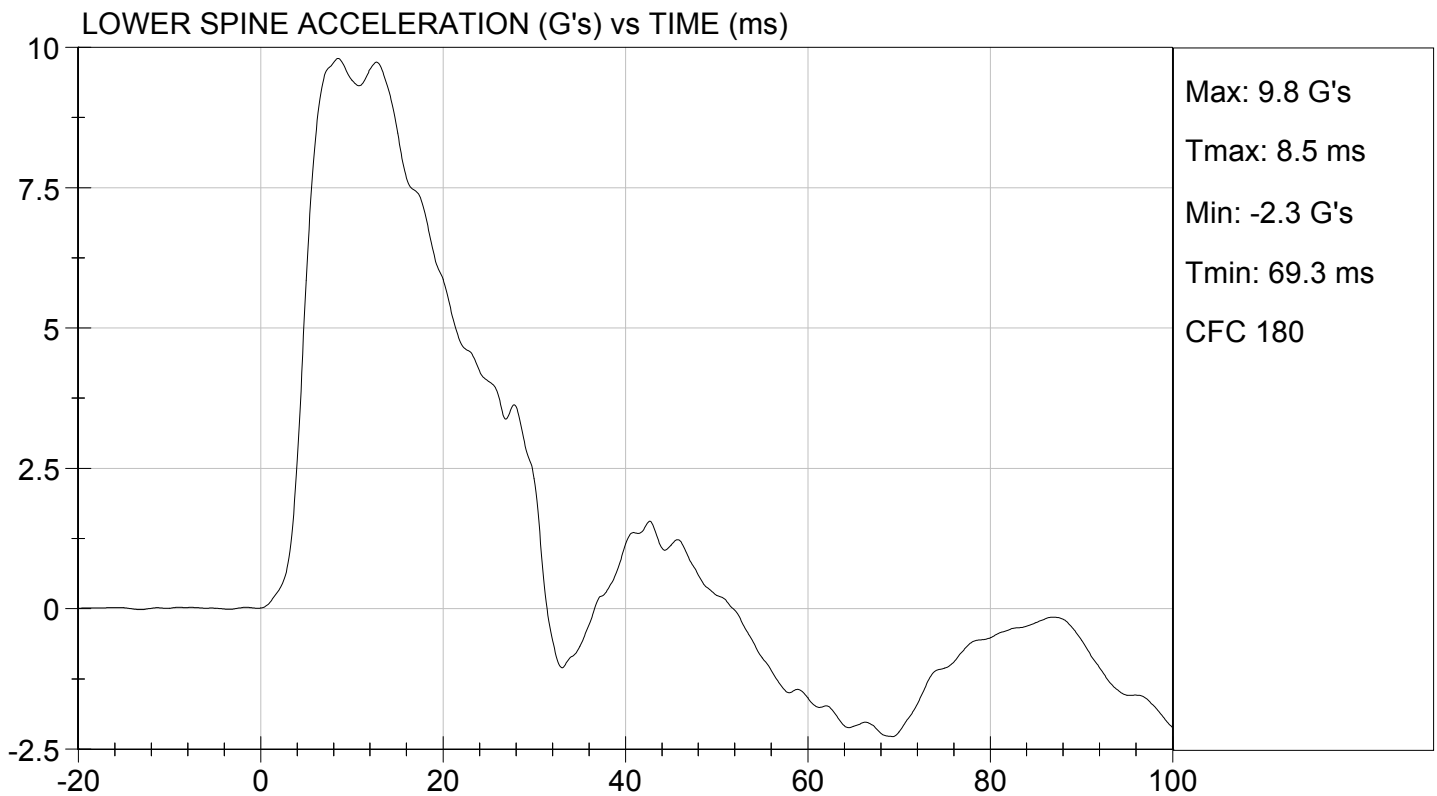
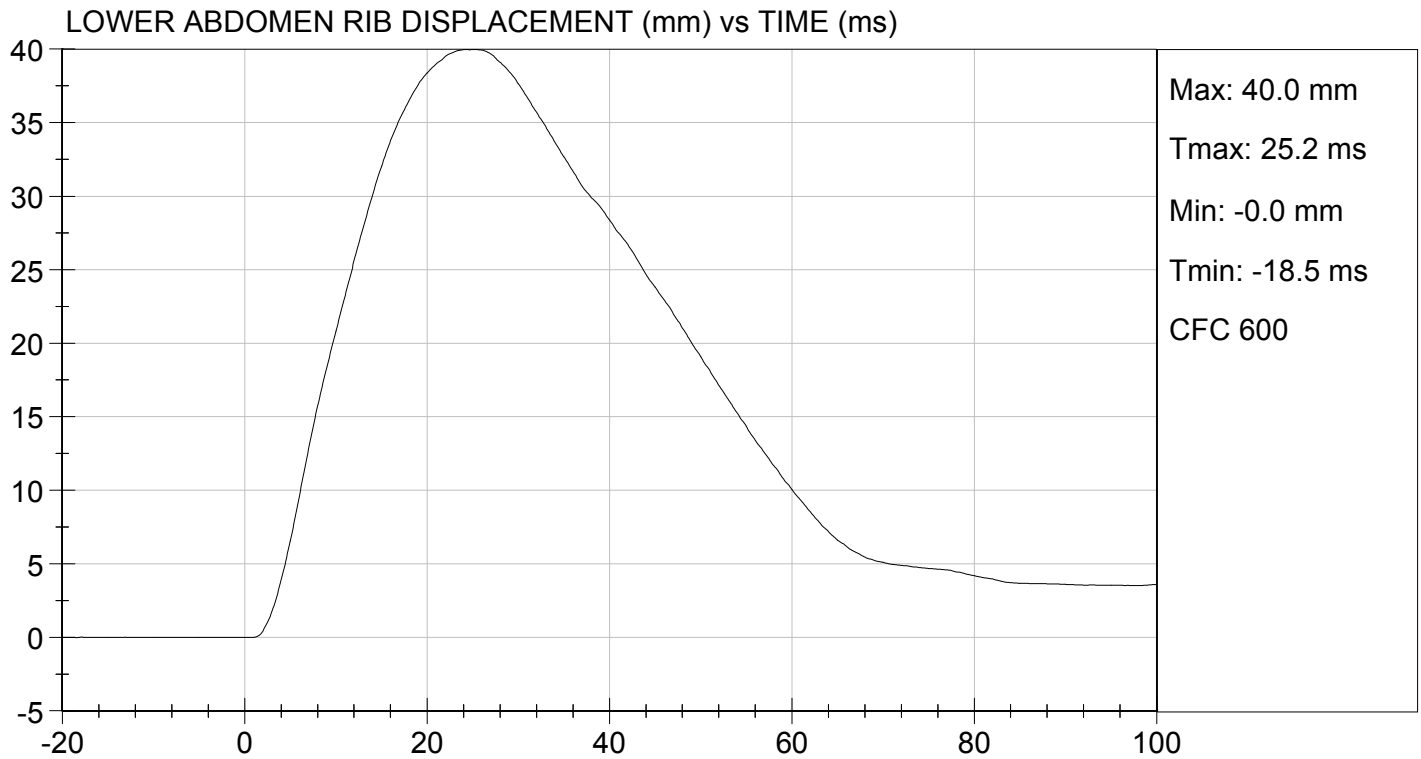
TEST DATE: 05/27/2016
TEST #: D161856





TEST DESC: ABDOMEN IMPACT
VELOCITY: 14.01 ft/s, 4.27 m/s

TEST DATE: 05/27/2016
TEST #: D161856



MGA RESEARCH CORPORATION

PELVIS IMPACT TEST

SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

Test I.D: D161857

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.5	Pass
Humidity	%	10 to 70	53	Pass
Impact Velocity	m/s	6.60 to 6.80	6.68	Pass
Maximum Probe Acceleration	G's	38 to 47	44	Pass
Pelvis Y Acceleration After 6 ms	G's	34 to 42	41	Pass
Peak Acetabulum Force	N	3600 to 4300	4,013	Pass
Overall Test Results				Pass


Laboratory Technician

05/27/2016

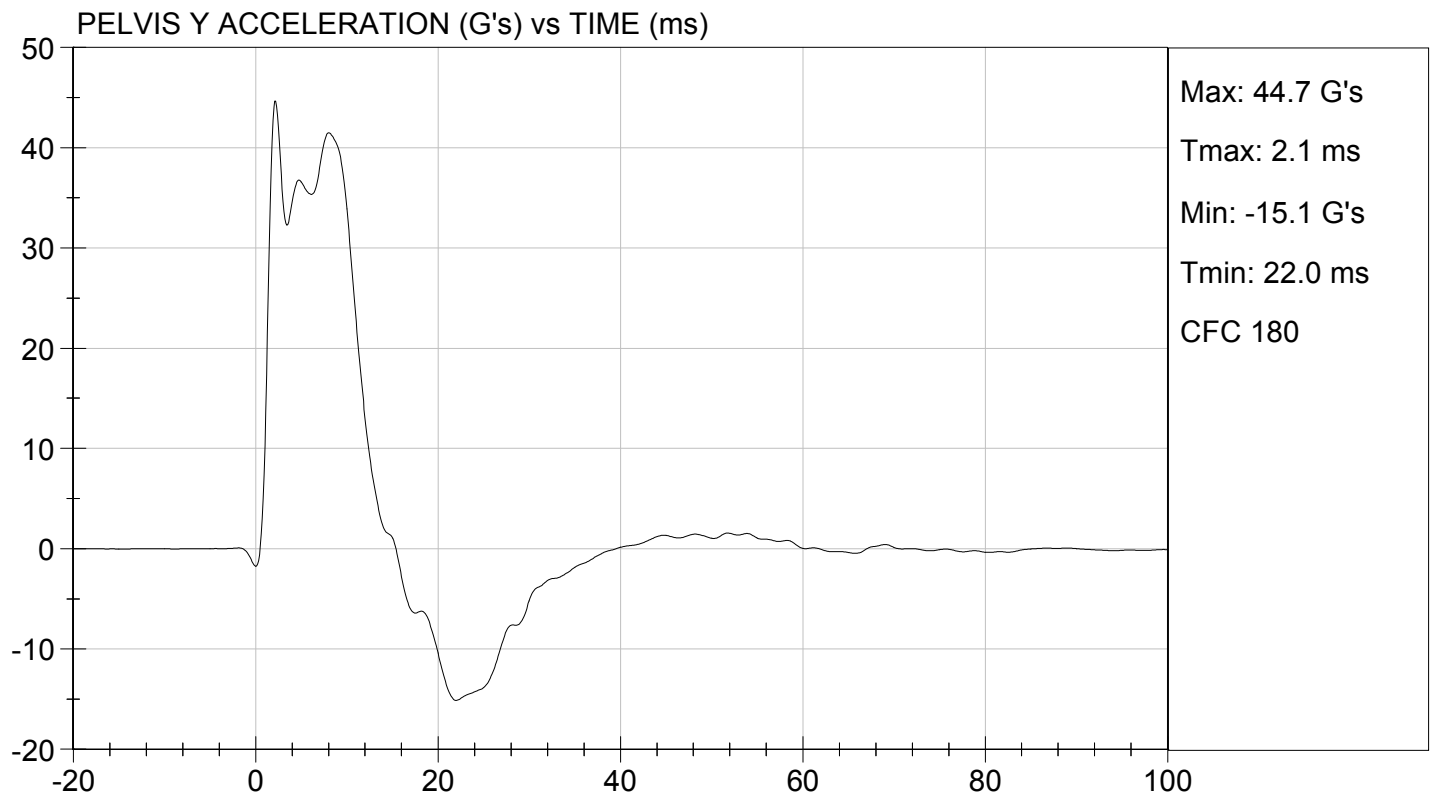
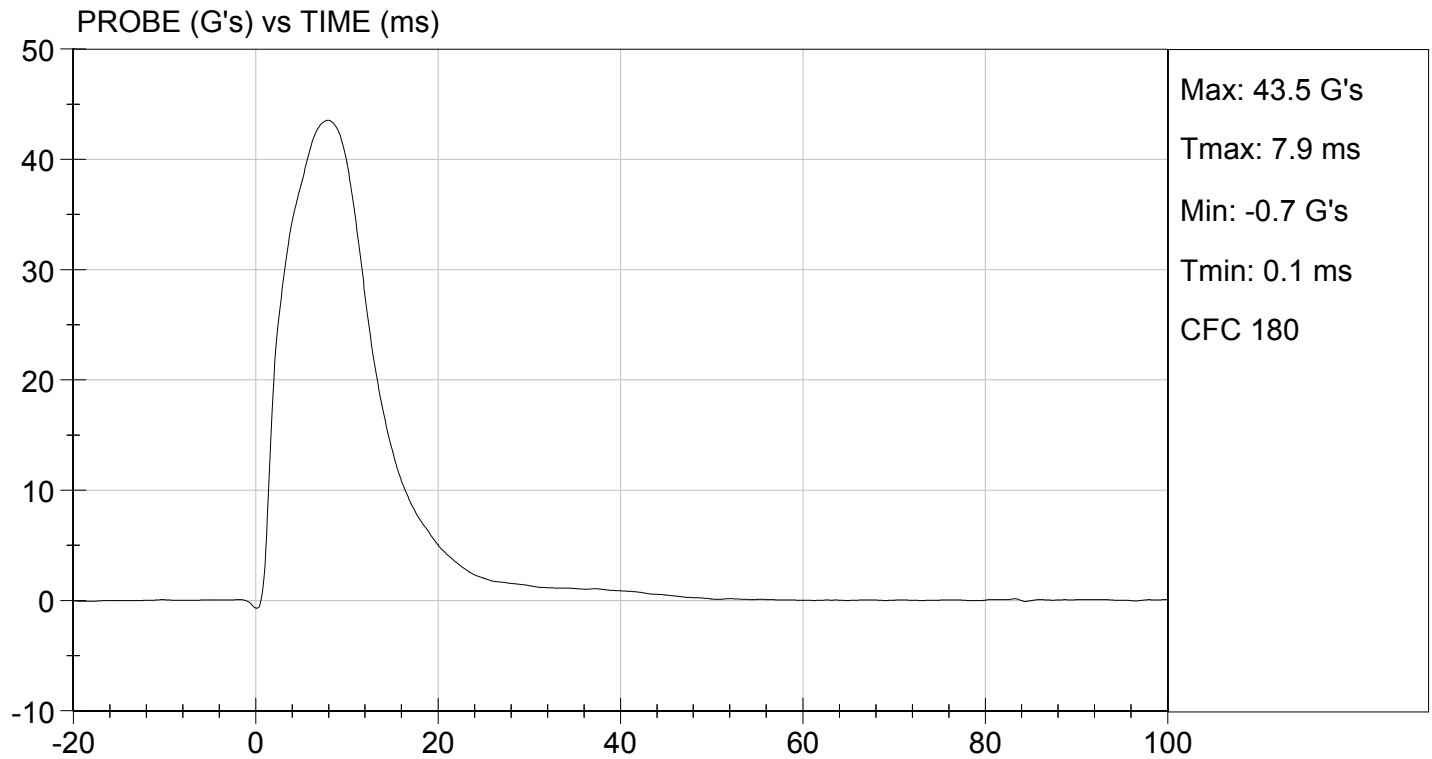
Test Date


Approved By



TEST DESC: PELVIS IMPACT
VELOCITY: 21.93 ft/s, 6.68 m/s

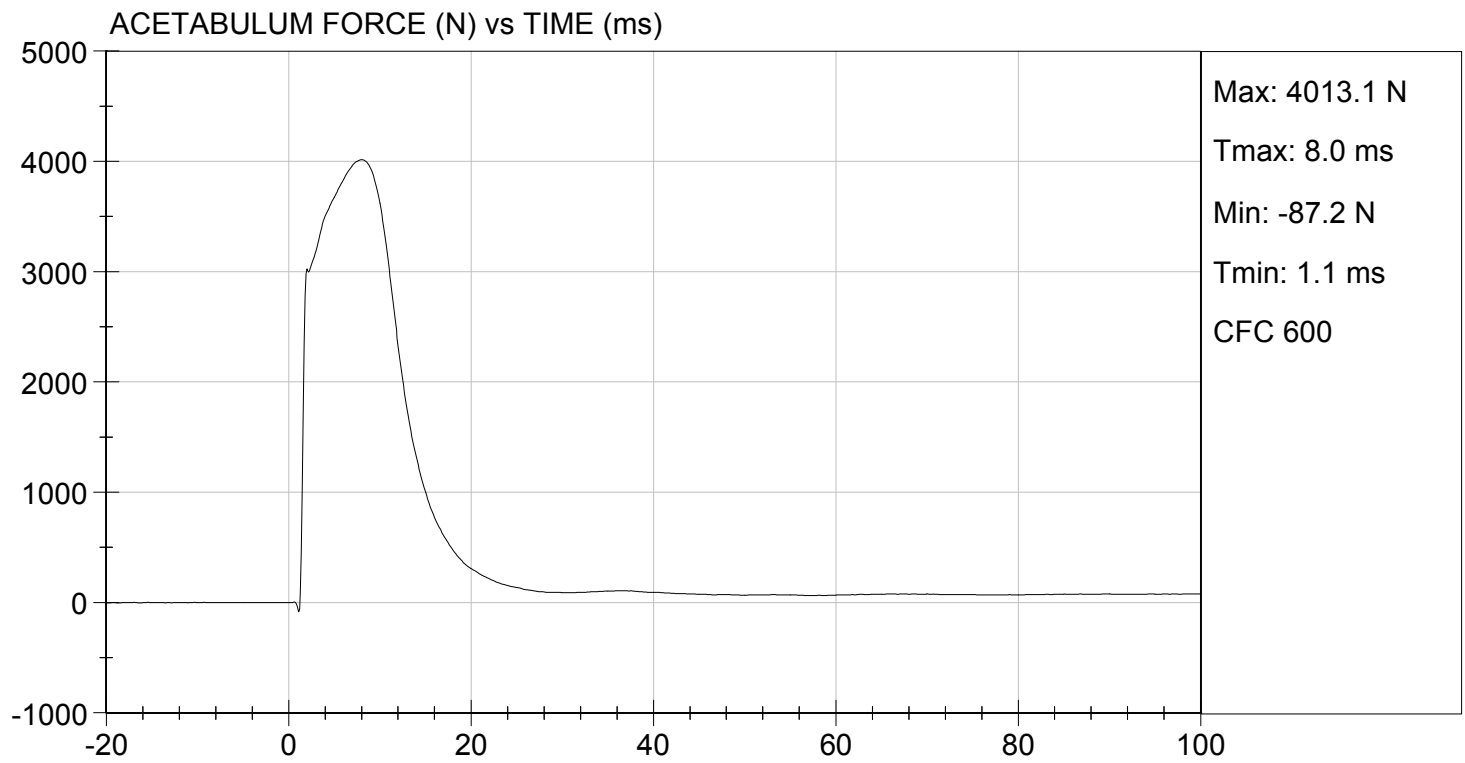
TEST DATE: 05/27/2016
TEST #: D161857





TEST DESC: PELVIS IMPACT
VELOCITY: 21.93 ft/s, 6.68 m/s

TEST DATE: 05/27/2016
TEST #: D161857



MGA RESEARCH CORPORATION

ILIAC IMPACT TEST

SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

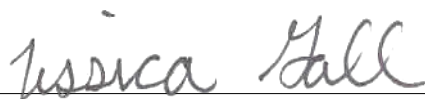
Test I.D: D161858

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.5	Pass
Humidity	%	10 to 70	53	Pass
Impact Velocity	m/s	4.20 to 4.40	4.27	Pass
Maximum Probe Acceleration	G's	36 to 45	39	Pass
Pelvis Y Acceleration	G's	28 to 39	30	Pass
Peak Pelvis Iliac Force	N	4100 to 5100	4,345	Pass
Overall Test Results				Pass


Laboratory Technician

05/27/2016

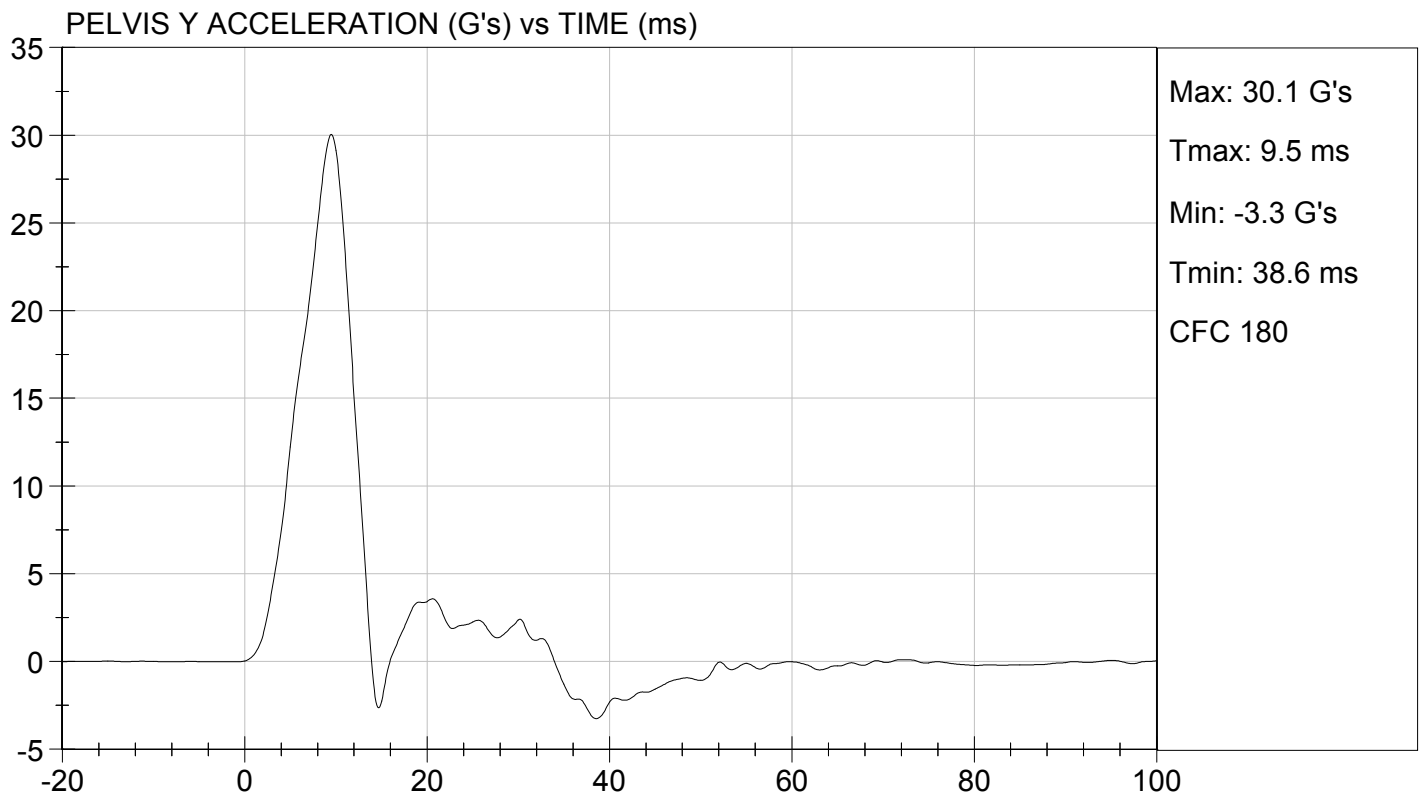
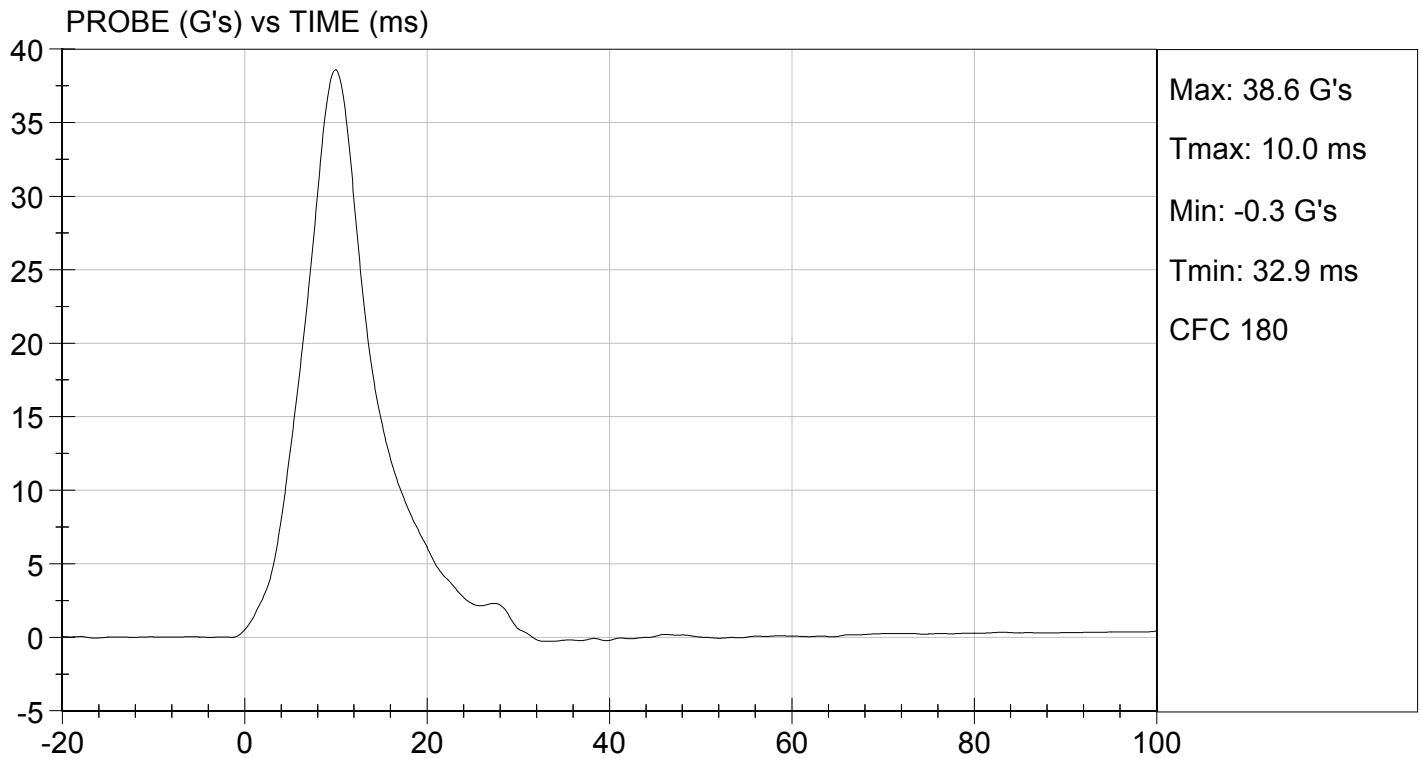
Test Date


Approved By



TEST DESC: ILLIAC
VELOCITY: 14.01 ft/s, 4.27 m/s

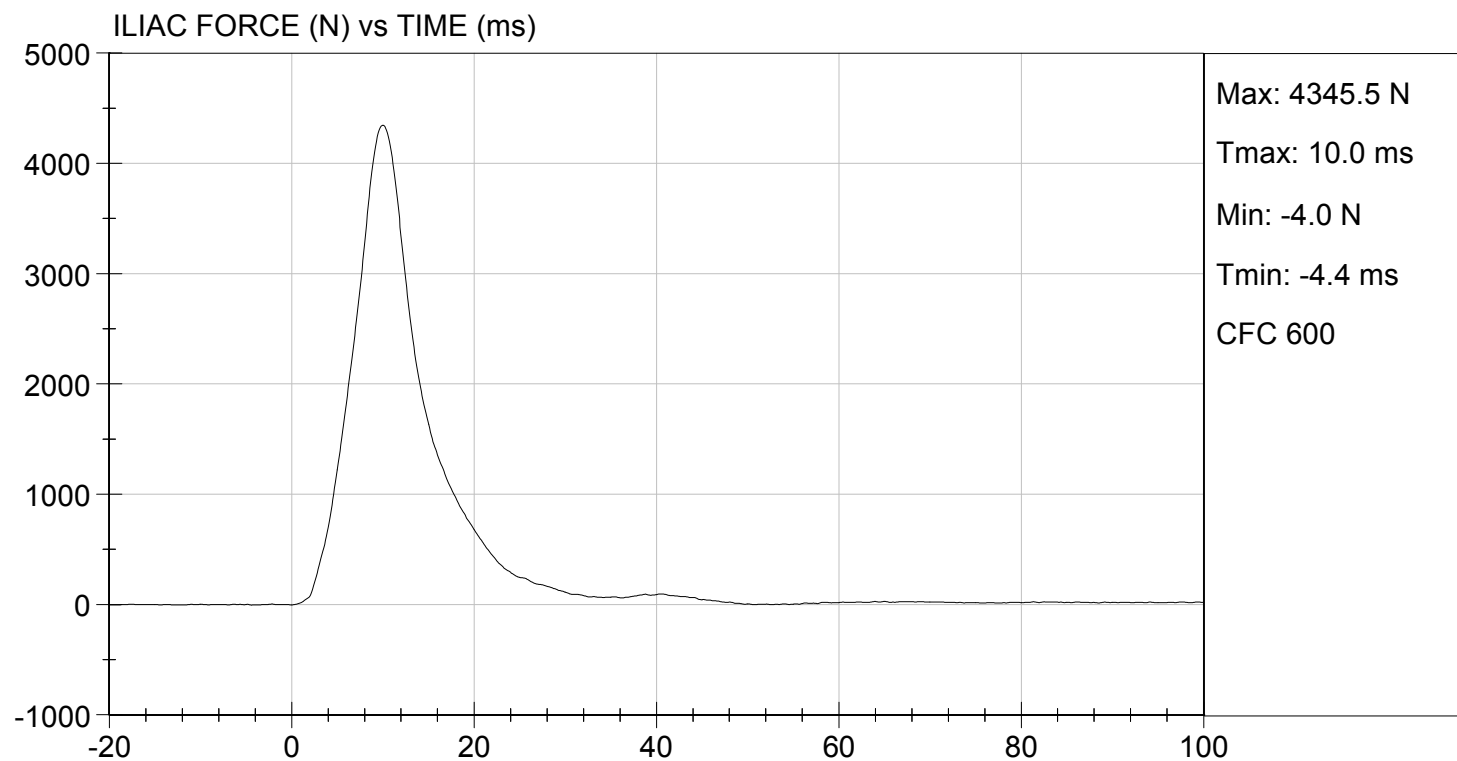
TEST DATE: 05/27/2016
TEST #: D161858





TEST DESC: ILLIAC
VELOCITY: 14.01 ft/s, 4.27 m/s

TEST DATE: 05/27/2016
TEST #: D161858



SID-IIsD External Measurements
SN: 296

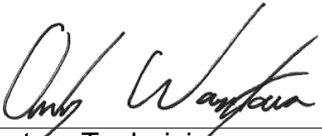
No.	Name	Spec. (mm)	Result	Pass/Fail
A	Sitting Height	772 - 788	784	Pass
B	Shoulder Pivot Height	437 - 453	442	Pass
C	H-point Height	79 - 89	83	Pass
D	H-point from Seatback	141 - 151	145	Pass
E	Shoulder Pivot from Backline	97 - 107	99	Pass
F	Thigh Clearance	119 -135	121	Pass
G	Head Breadth	140 - 148	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-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

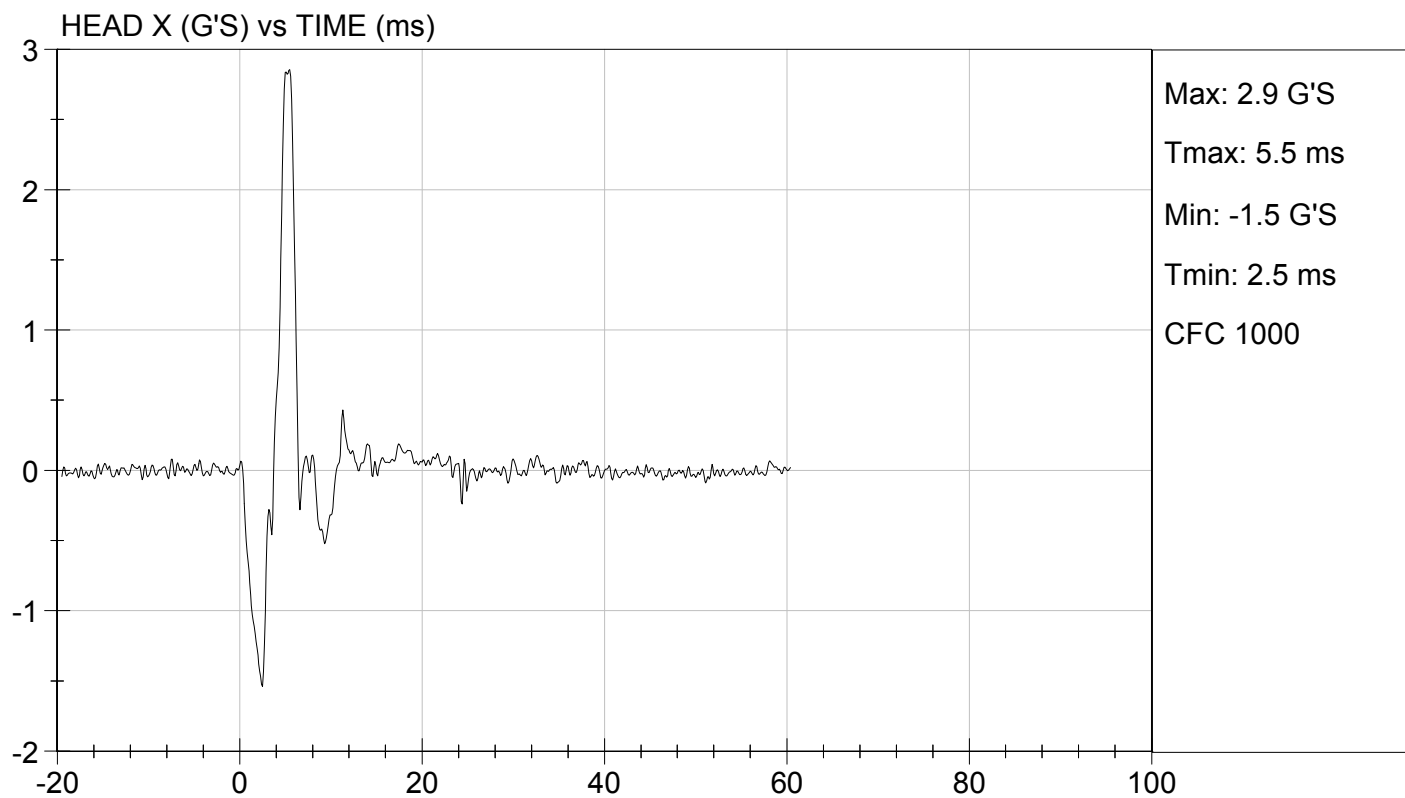
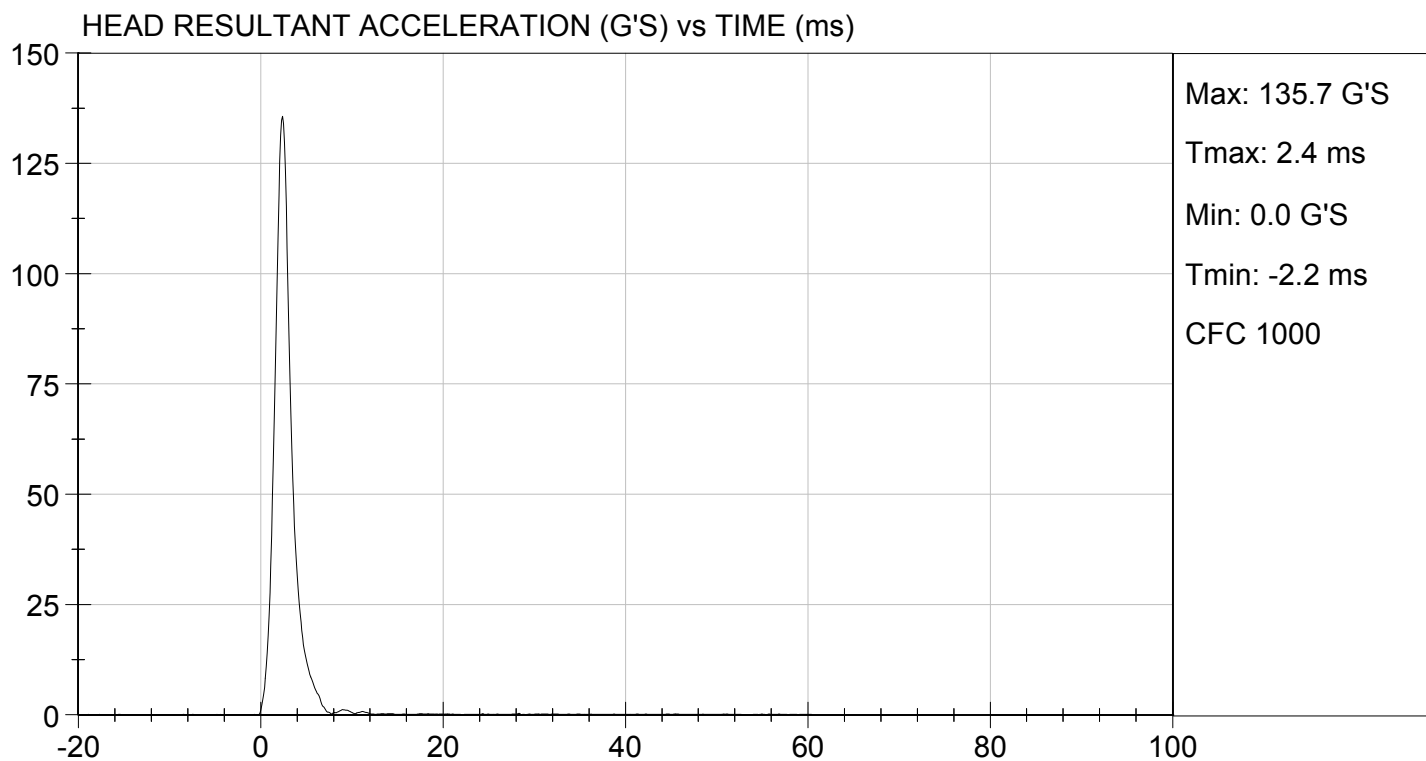
Test ID: D162091

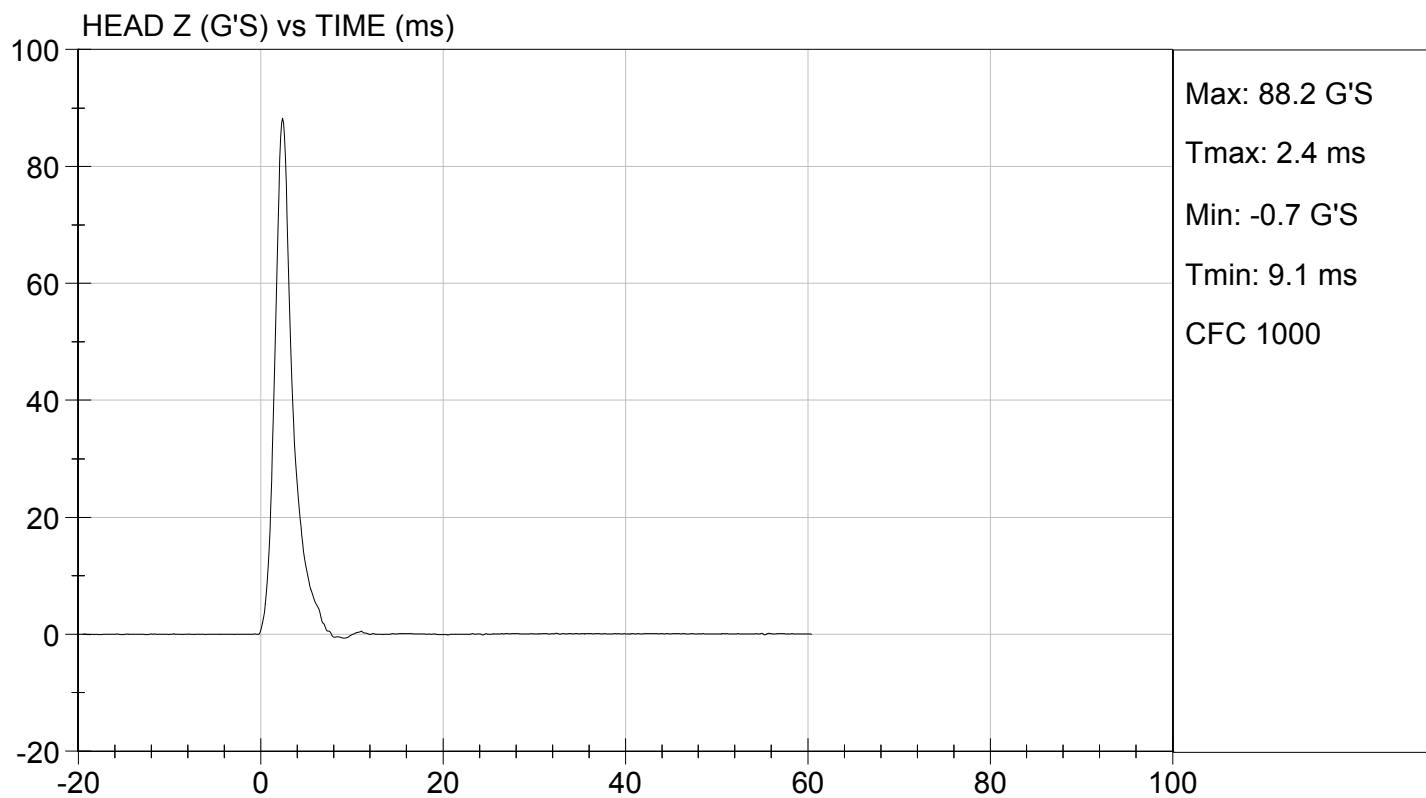
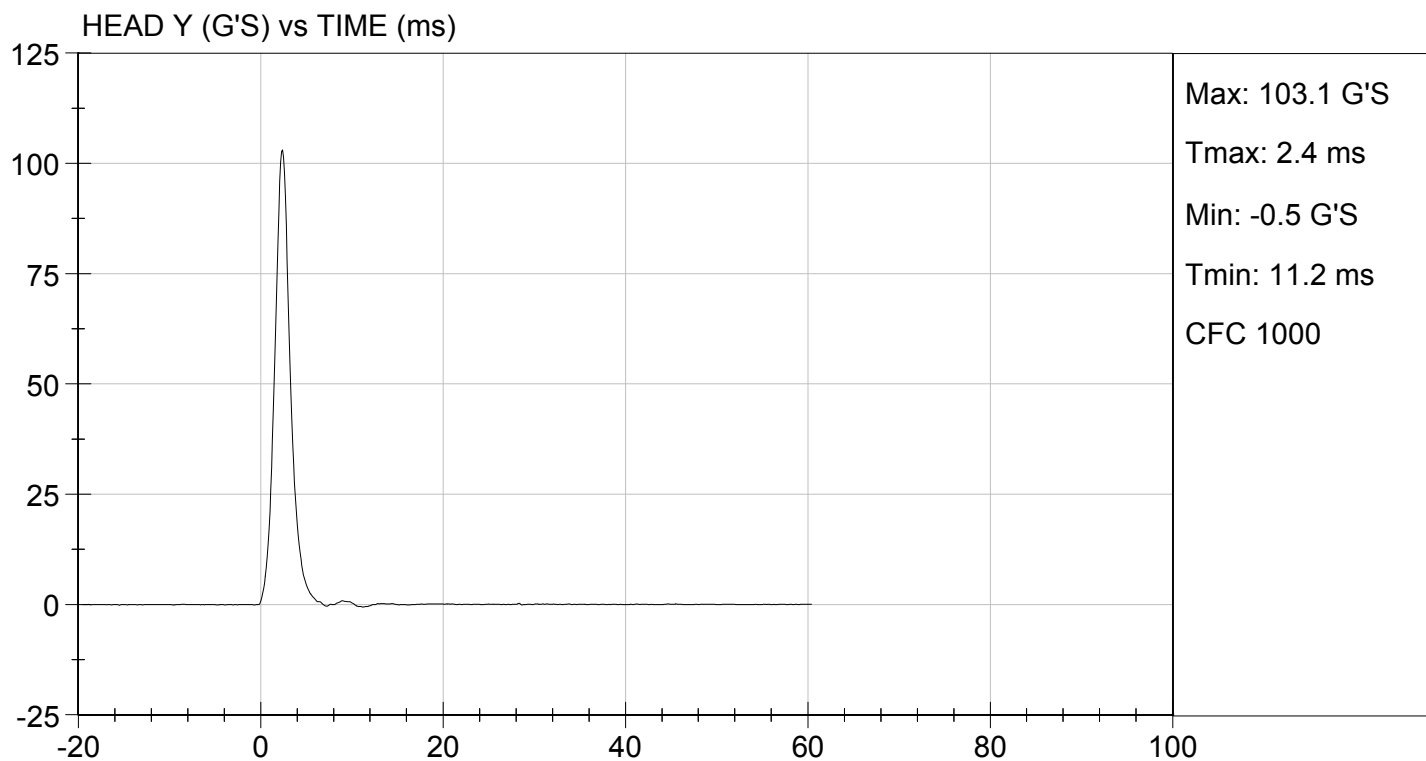
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	48	Pass
Peak Resultant Acceleration	G's	115 to 137	136	Pass
Peak Longitudinal Acceleration	G's	+/- 15	2.9	Pass
Unimodal	N/A	Yes	Yes	Pass
Oscillations	N/A	<15%	Yes	Pass
Overall Test Results			Pass	


Laboratory Technician

06/16/2016
Test Date


Approved By





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

ATD Serial No: 296

Test I.D: D162092

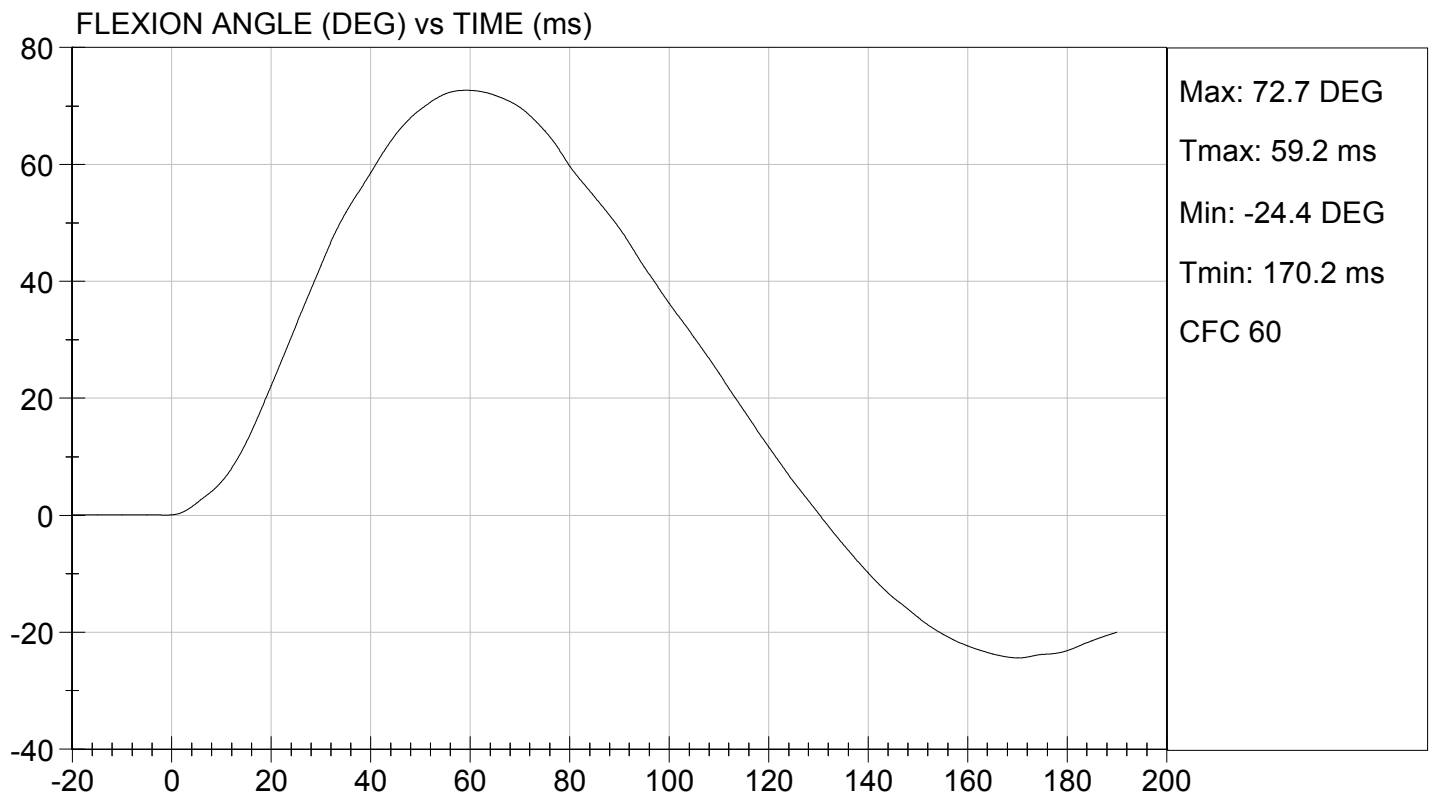
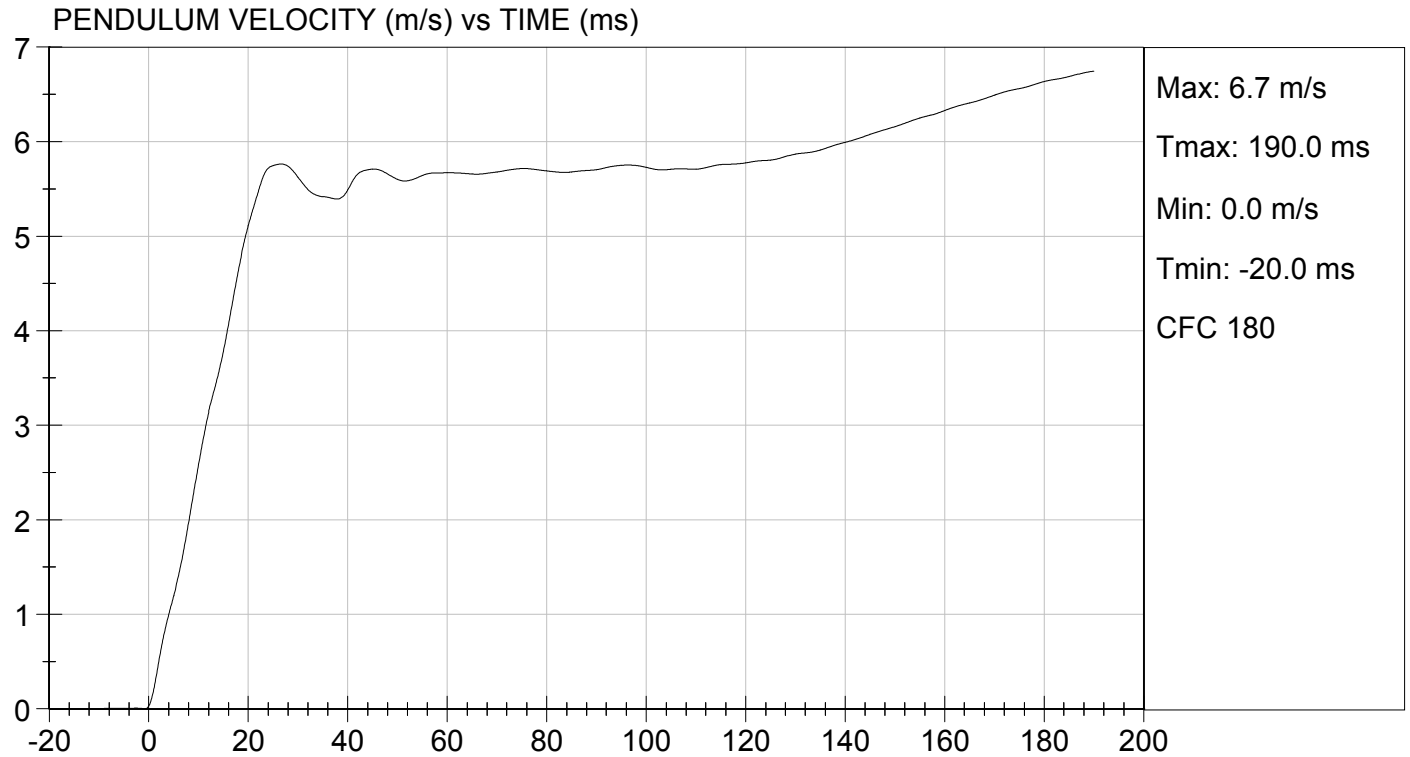
Tested Parameter		Units	Specification	Result	Pass/Fail
Temperature		deg C	20.6 to 22.2	21.0	Pass
Humidity		%	10 to 70	47	Pass
Impact Velocity		m/s	5.51 to 5.63	5.58	Pass
Pendulum Velocity	10 ms	m/s	2.20 to 2.80	2.59	Pass
	15 ms	m/s	3.30 to 4.10	3.78	Pass
	20 ms	m/s	4.40 to 5.40	5.11	Pass
	25 ms	m/s	5.40 to 6.10	5.75	Pass
	25-100 ms	m/s	5.50 to 6.20	5.76	Pass
Maximum D-Plane Rotation		deg	71 to 81	73	Pass
Time of Maximum D-Plane Rotation		ms	50 to 70	59	Pass
Maximum Occipital Condyle Moment		Nm	-44 to -36	-43	Pass
Time of Moment Decay to 0 Nm		ms	102 to 126	110	Pass
Overall Test Results					Pass


 Laboratory Technician

06/16/2016

Test Date

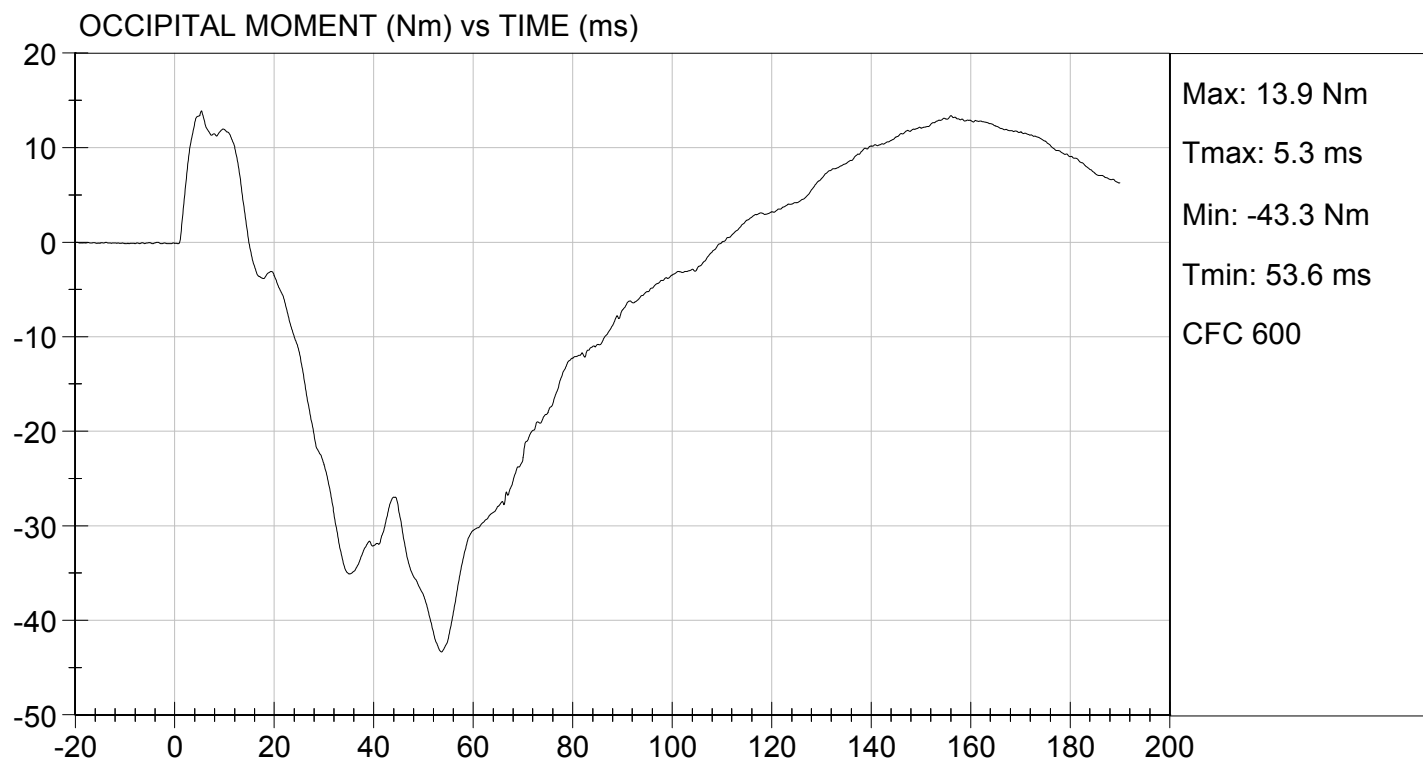

 Approved By





TEST DESC: NECK BENDING
VELOCITY: 18.32 ft/s, 5.58 m/s

TEST DATE: 06/16/2016
TEST #: D162092

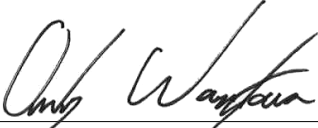


MGA RESEARCH CORPORATION
SHOULDER IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

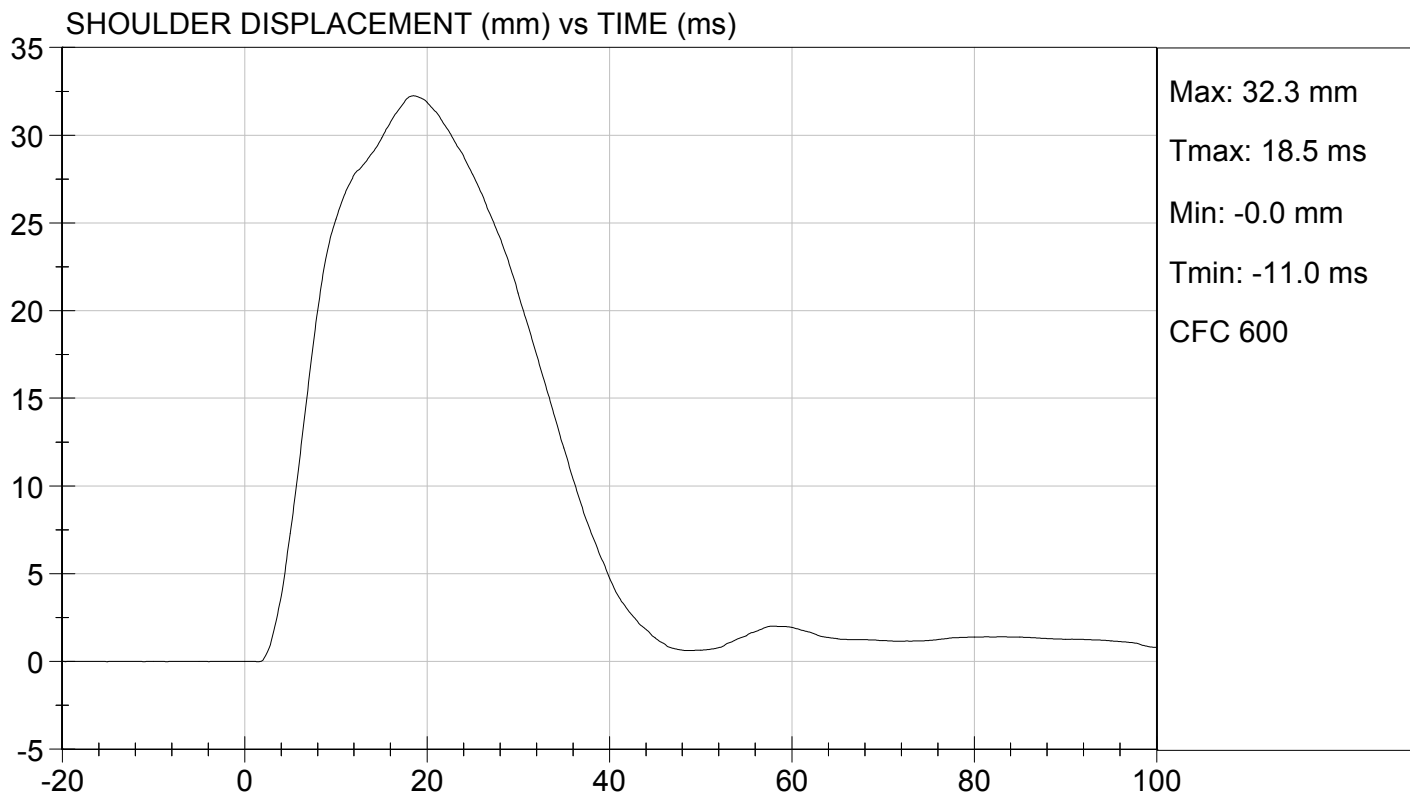
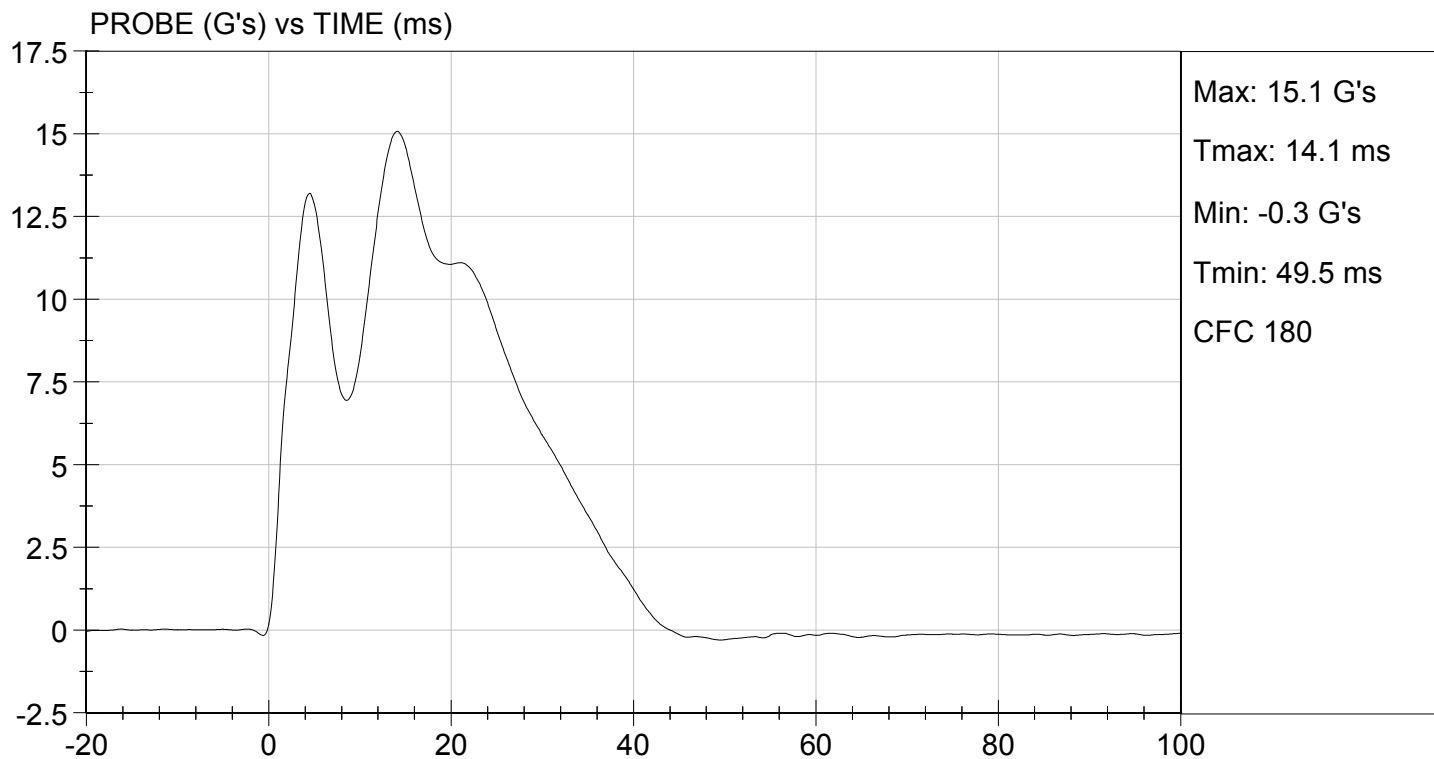
Test ID: D162093

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	deg C	20.6 to 22.2	21.0	Pass
Laboratory Relative Humidity	%	10 to 70	49	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	32	Pass
Upper Spine (T1) Y Acceleration	G's	17 to 22	18	Pass
Overall Test Results			Pass	


Laboratory Technician

06/16/2016
Test Date

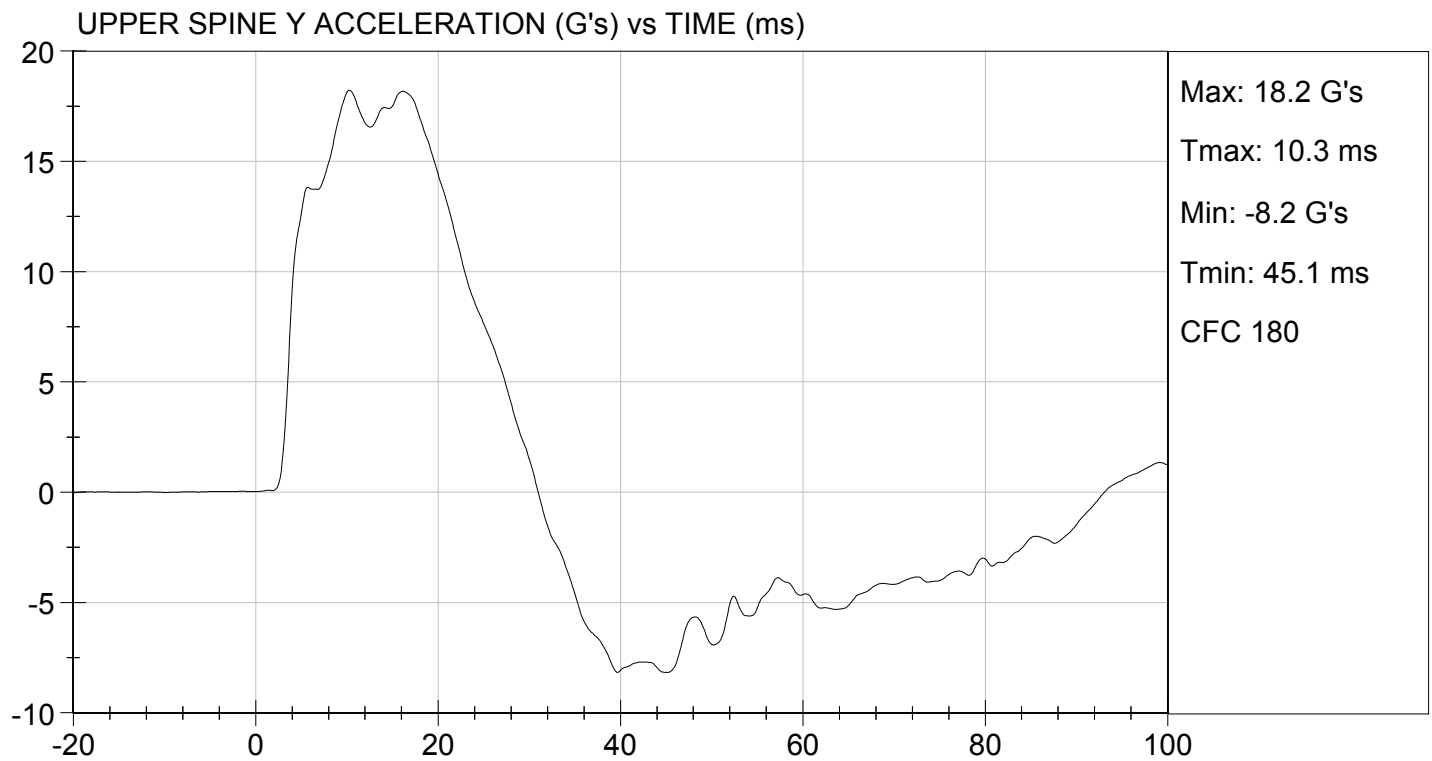

Approved By





TEST DESC: SHOULDER IMPACT
VELOCITY: 14.37 ft/s, 4.38 m/s

TEST DATE: 06/16/2016
TEST #: D162093

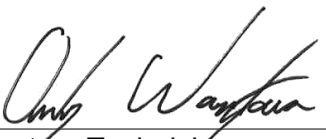


MGA RESEARCH CORPORATION
THORAX (WITH ARM) IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

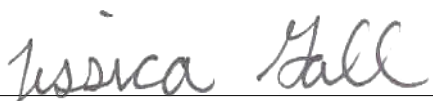
ATD Serial No: 296

Test I.D: D162094

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.6	Pass
Humidity	%	10 to 70	52	Pass
Impact Velocity	m/s	6.60 to 6.80	6.77	Pass
Maximum Probe Acceleration	G's	30 to 36	30	Pass
Shoulder Displacement	mm	31 to 40	38	Pass
Upper Rib Displacement	mm	25 to 32	28	Pass
Middle Rib Displacement	mm	30 to 36	31	Pass
Lower Rib Displacement	mm	32 to 38	32	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

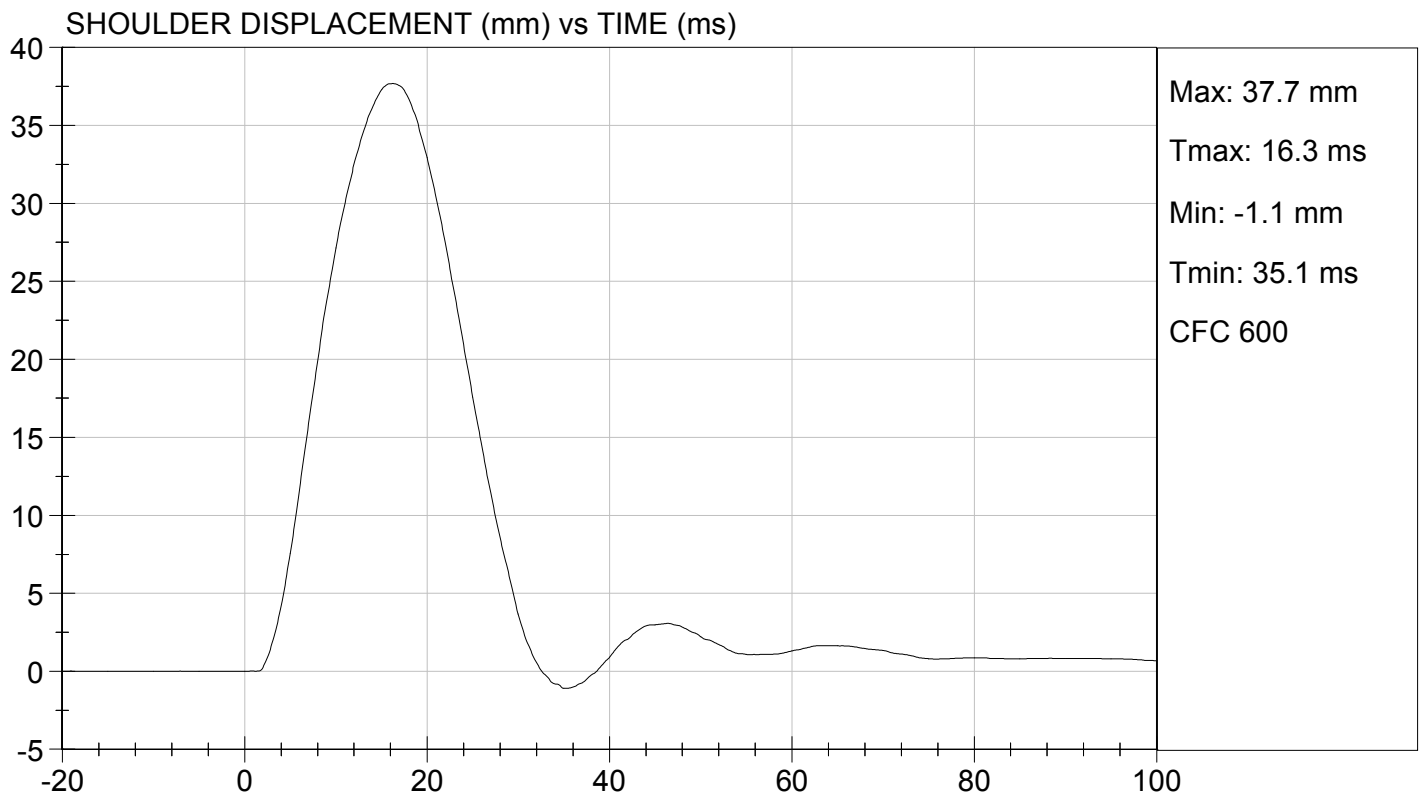
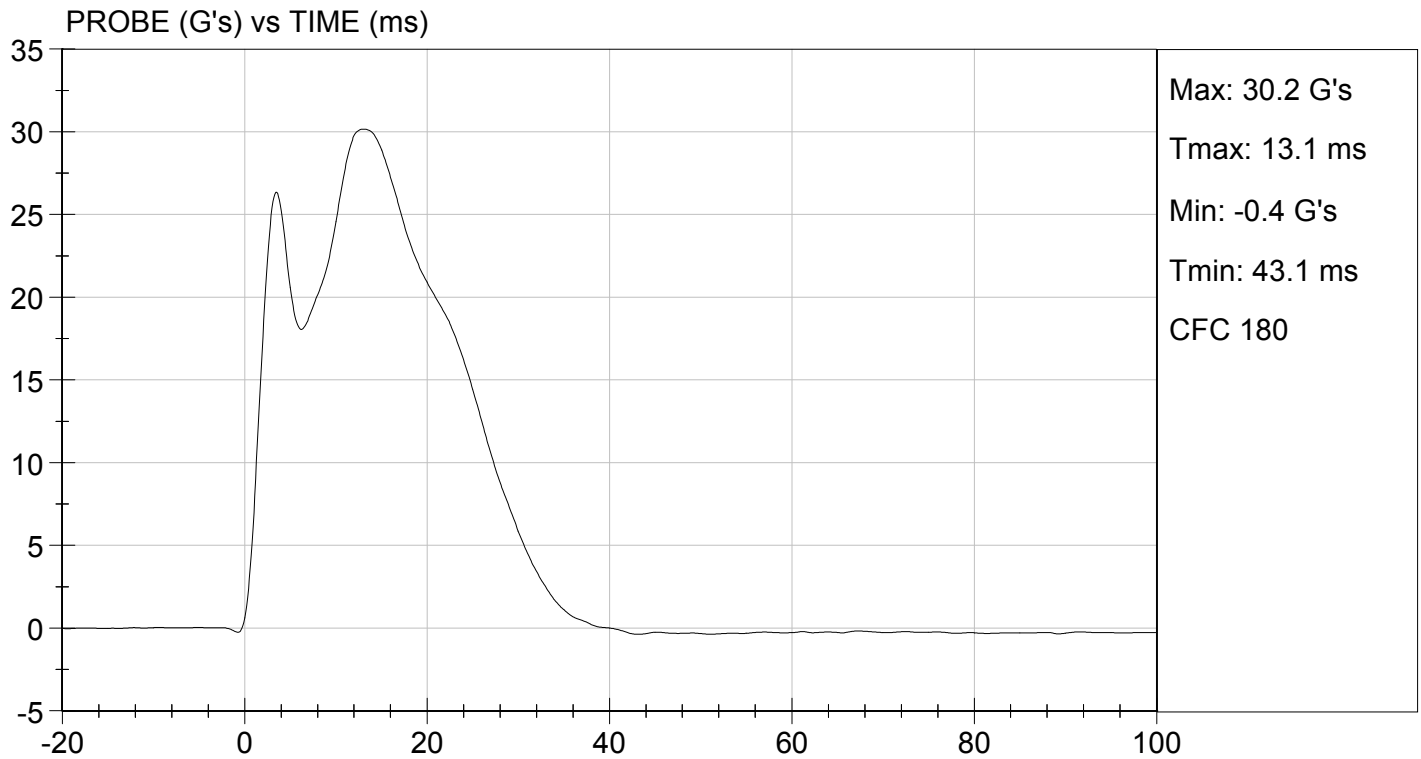
06/17/2016
Test Date


Approved By



TEST DESC: THORAX IMPACT WITH ARM
VELOCITY: 22.22 ft/s, 6.77 m/s

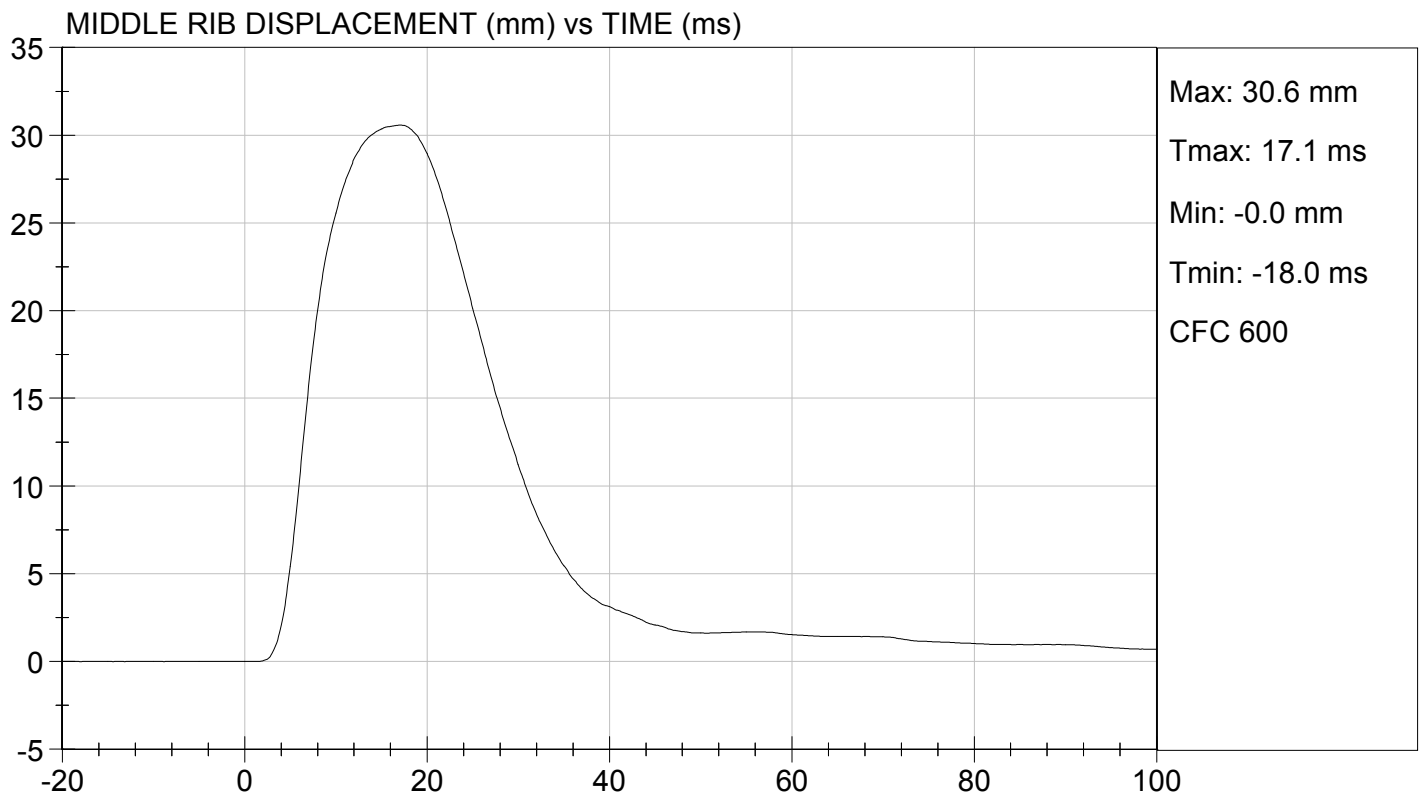
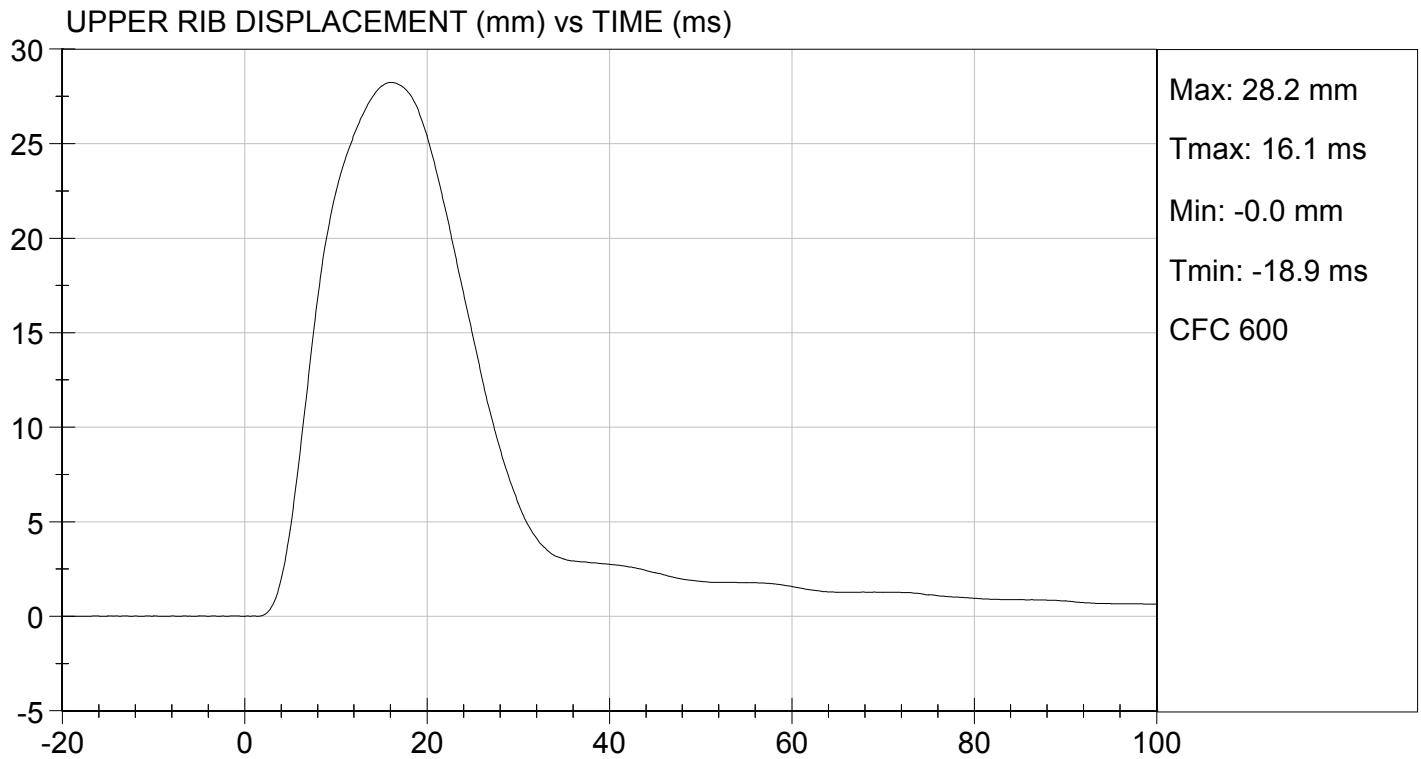
TEST DATE: 06/17/2016
TEST #: D162094





TEST DESC: THORAX IMPACT WITH ARM
VELOCITY: 22.22 ft/s, 6.77 m/s

TEST DATE: 06/17/2016
TEST #: D162094

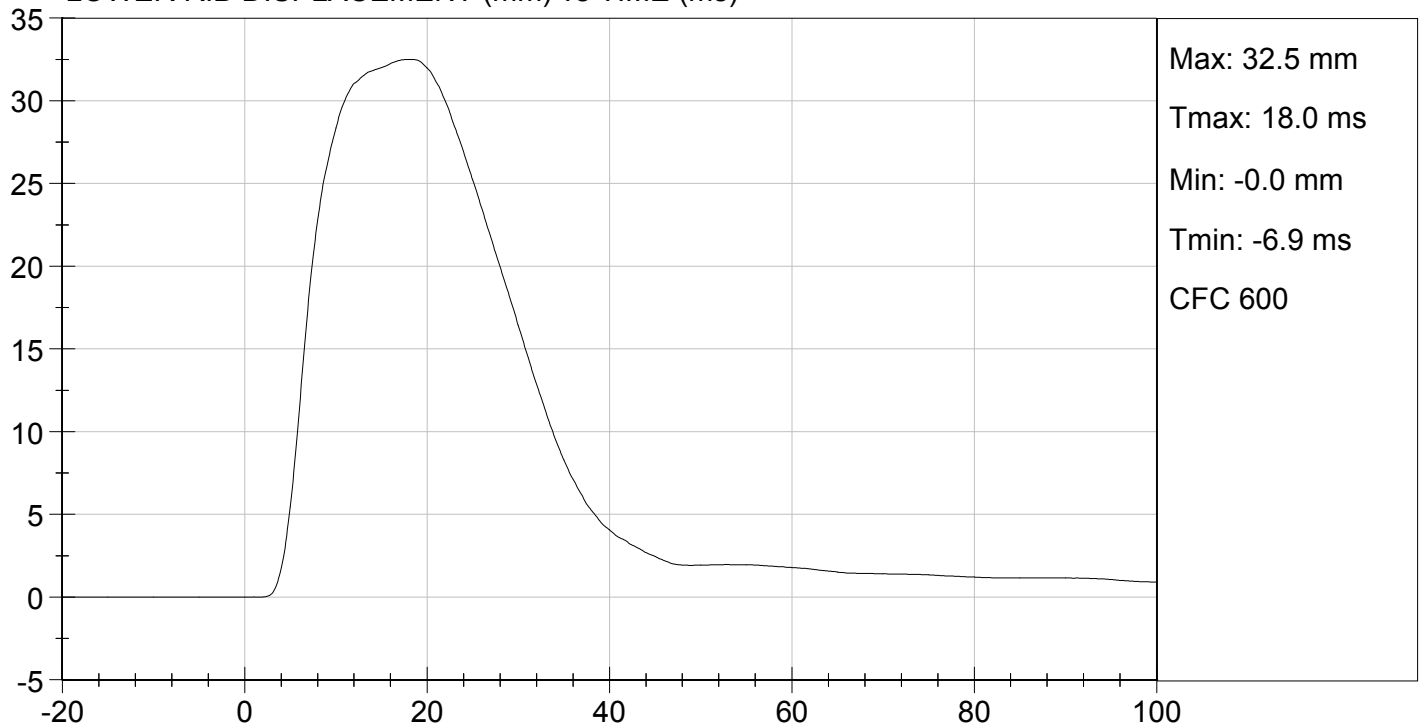




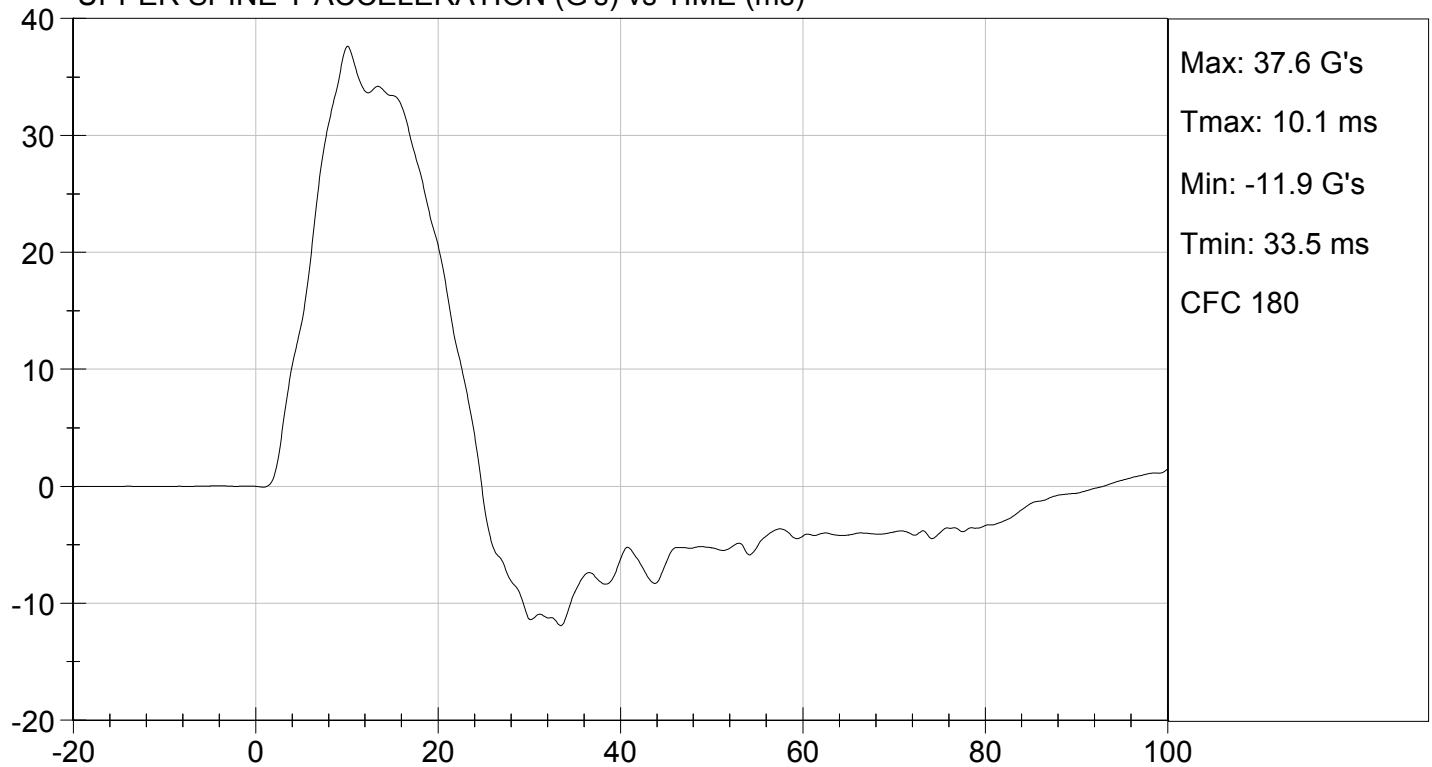
TEST DESC: THORAX IMPACT WITH ARM
VELOCITY: 22.22 ft/s, 6.77 m/s

TEST DATE: 06/17/2016
TEST #: D162094

LOWER RIB DISPLACEMENT (mm) vs TIME (ms)



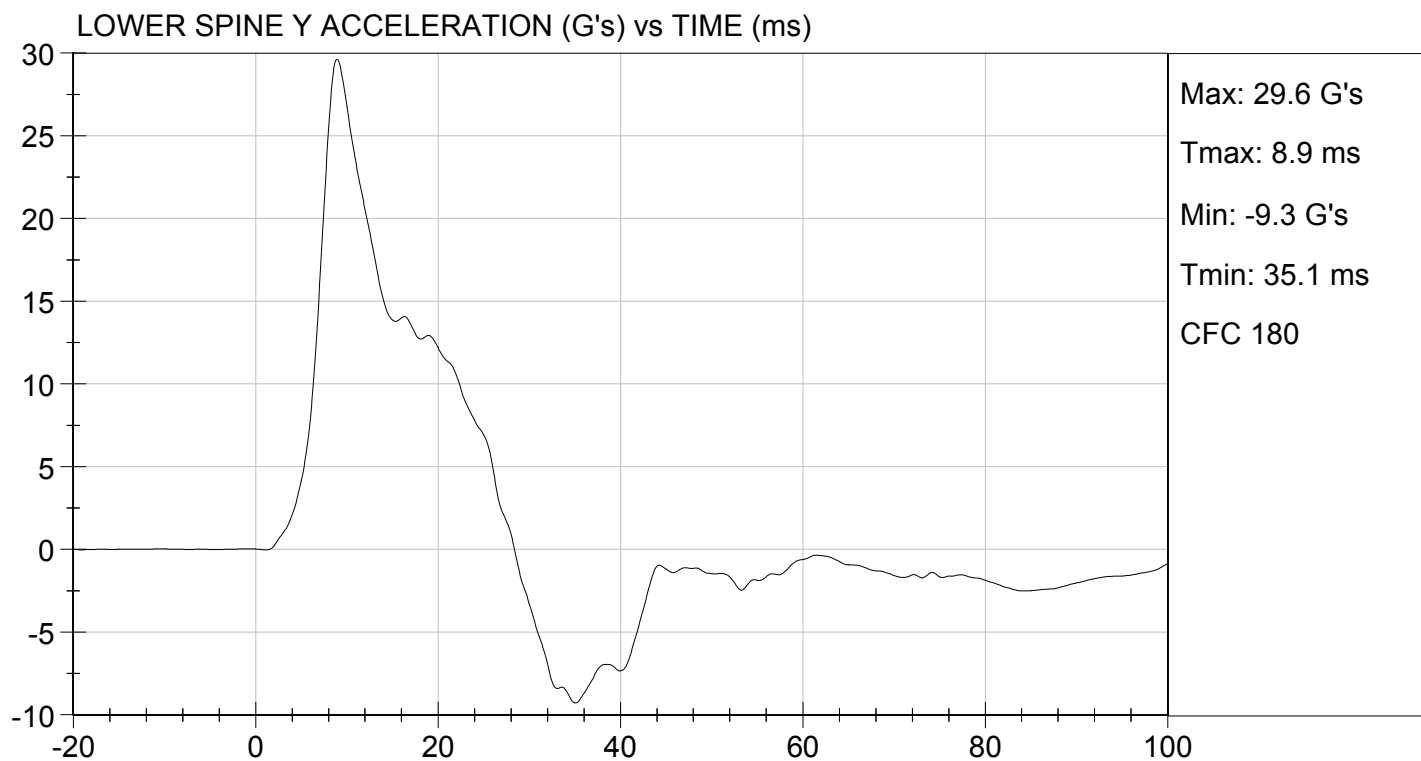
UPPER SPINE Y ACCELERATION (G's) vs TIME (ms)





TEST DESC: THORAX IMPACT WITH ARM
VELOCITY: 22.22 ft/s, 6.77 m/s

TEST DATE: 06/17/2016
TEST #: D162094

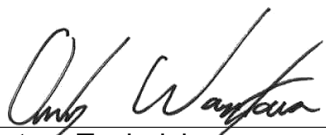


MGA RESEARCH CORPORATION
THORAX (WITHOUT ARM) IMPACT TEST
SID-IIs BUILD LEVEL D DUMMY

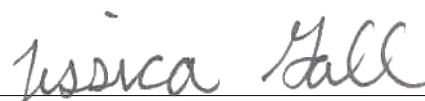
ATD Serial No: 296

Test I.D: D162095

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.0	Pass
Humidity	%	10 to 70	49	Pass
Impact Velocity	m/s	4.20 to 4.40	4.30	Pass
Maximum Probe Acceleration	G's	14 to 18	14	Pass
Upper Rib Displacement	mm	32 to 40	36	Pass
Middle Rib Displacement	mm	39 to 45	40	Pass
Lower Rib Displacement	mm	35 to 43	38	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

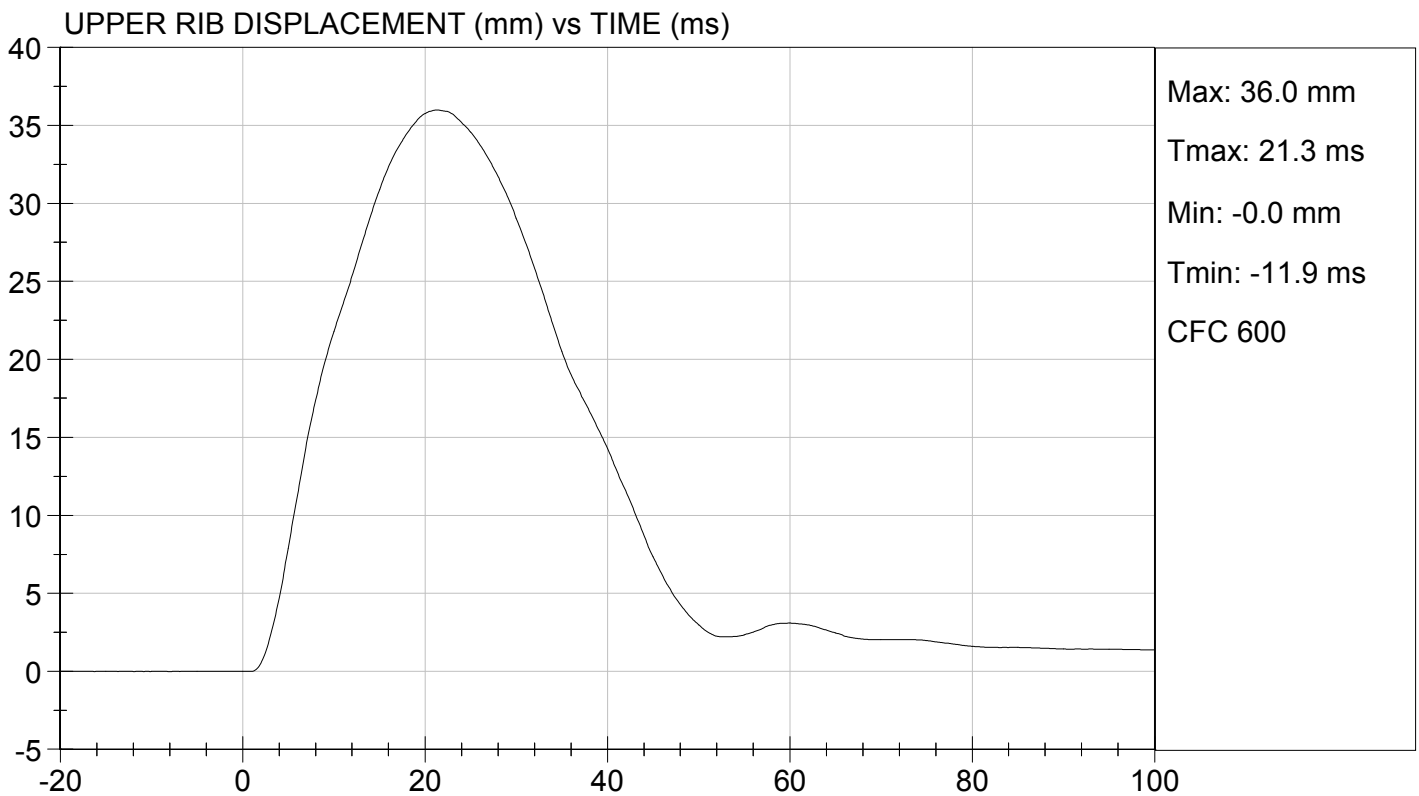
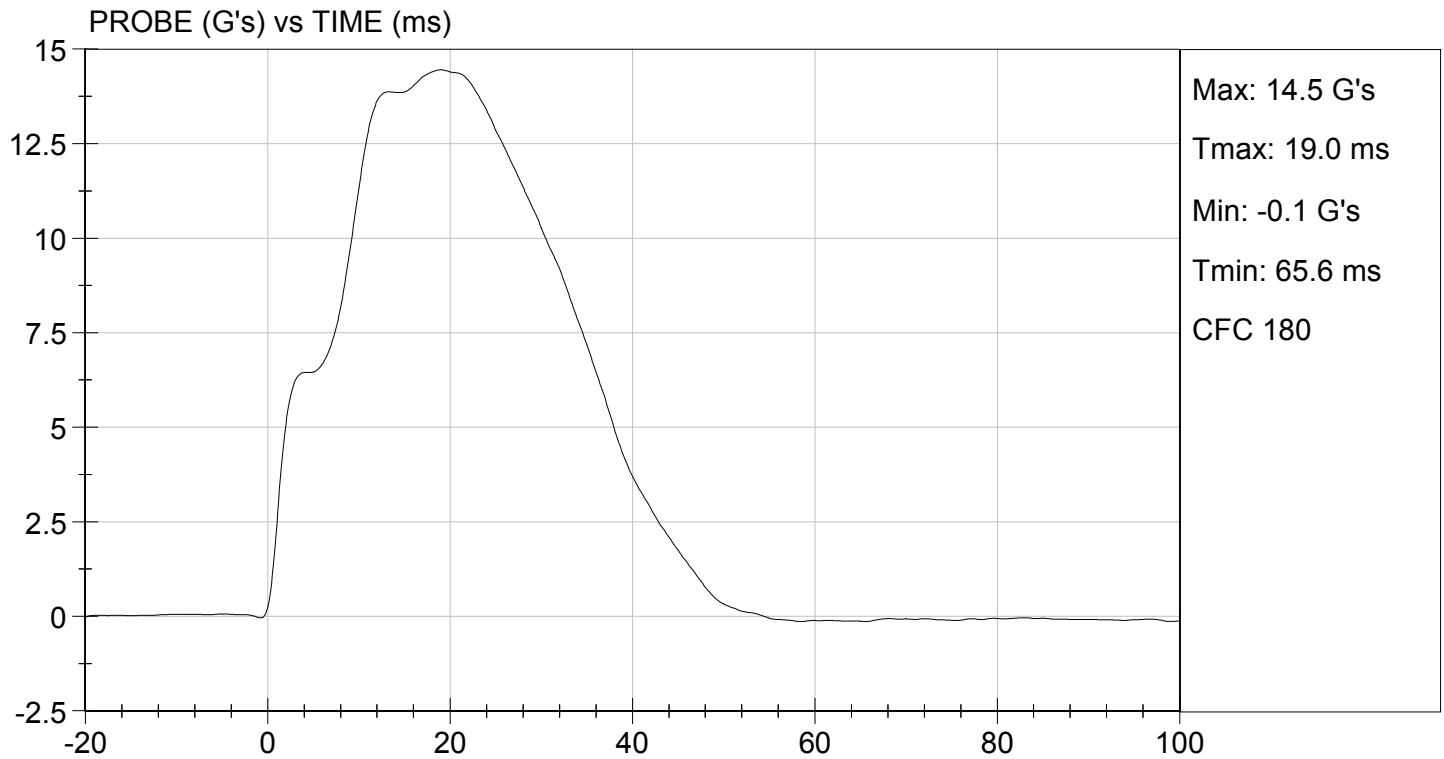
06/16/2016
Test Date


Approved By



TEST DESC: THORAX IMPACT WITHOUT ARM
VELOCITY: 14.12 ft/s, 4.30 m/s

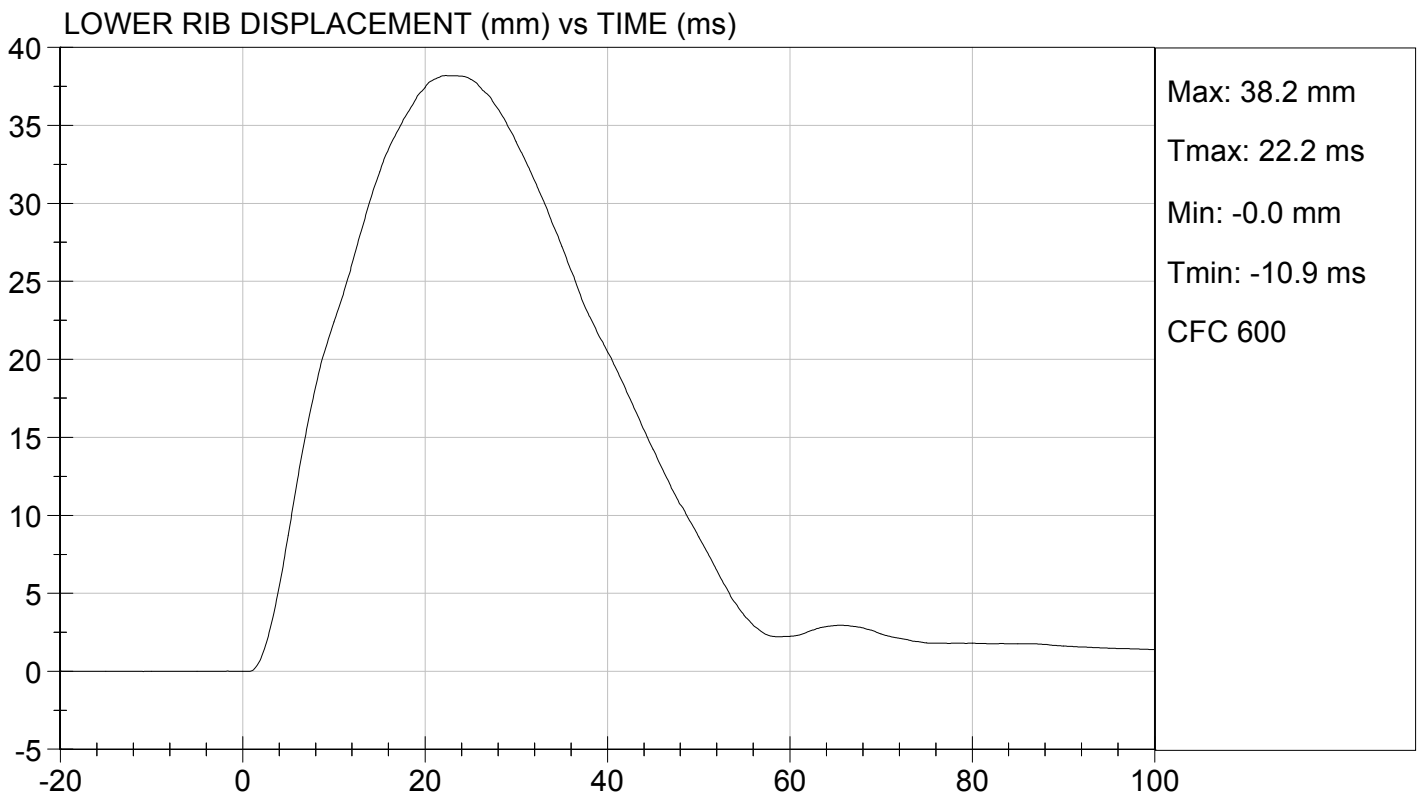
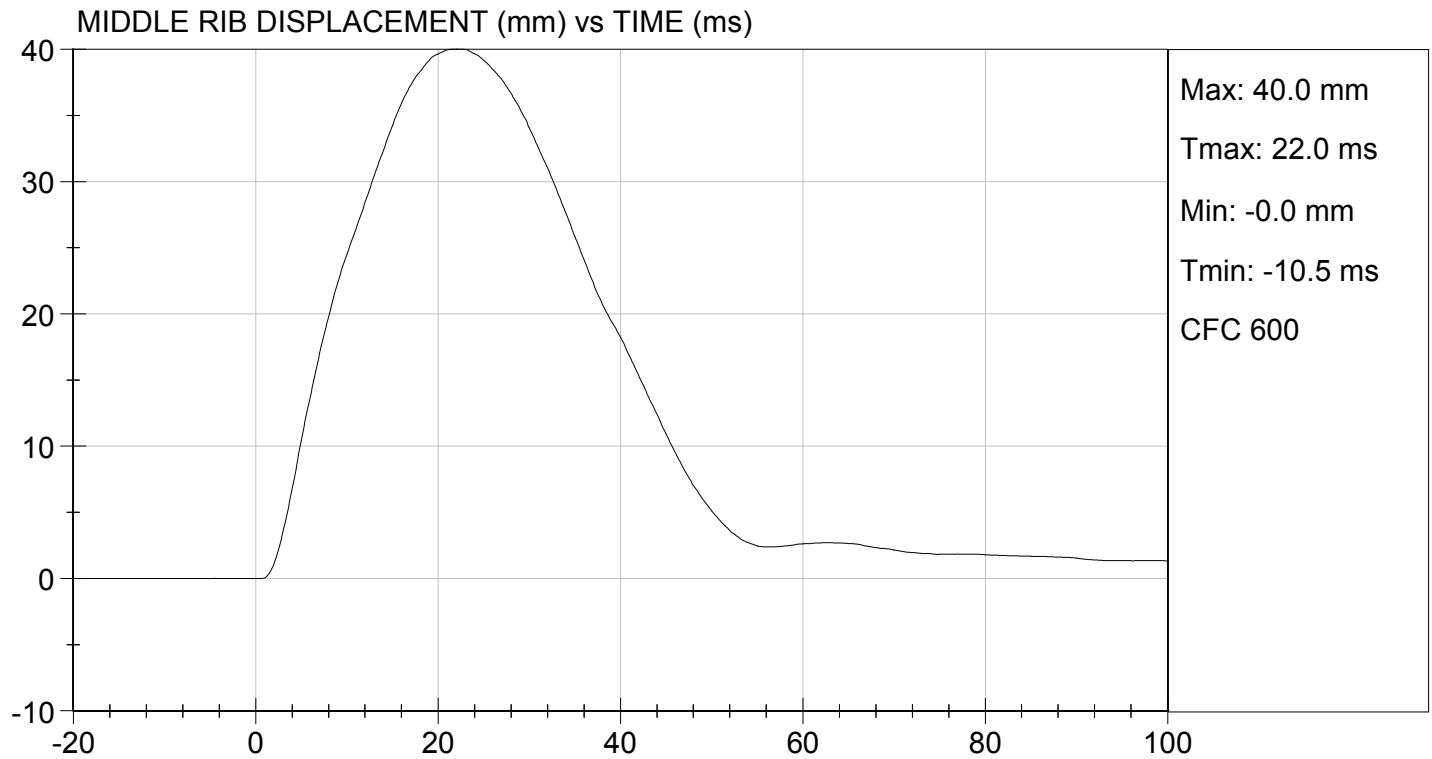
TEST DATE: 06/16/2016
TEST #: D162095





TEST DESC: THORAX IMPACT WITHOUT ARM
VELOCITY: 14.12 ft/s, 4.30 m/s

TEST DATE: 06/16/2016
TEST #: D162095

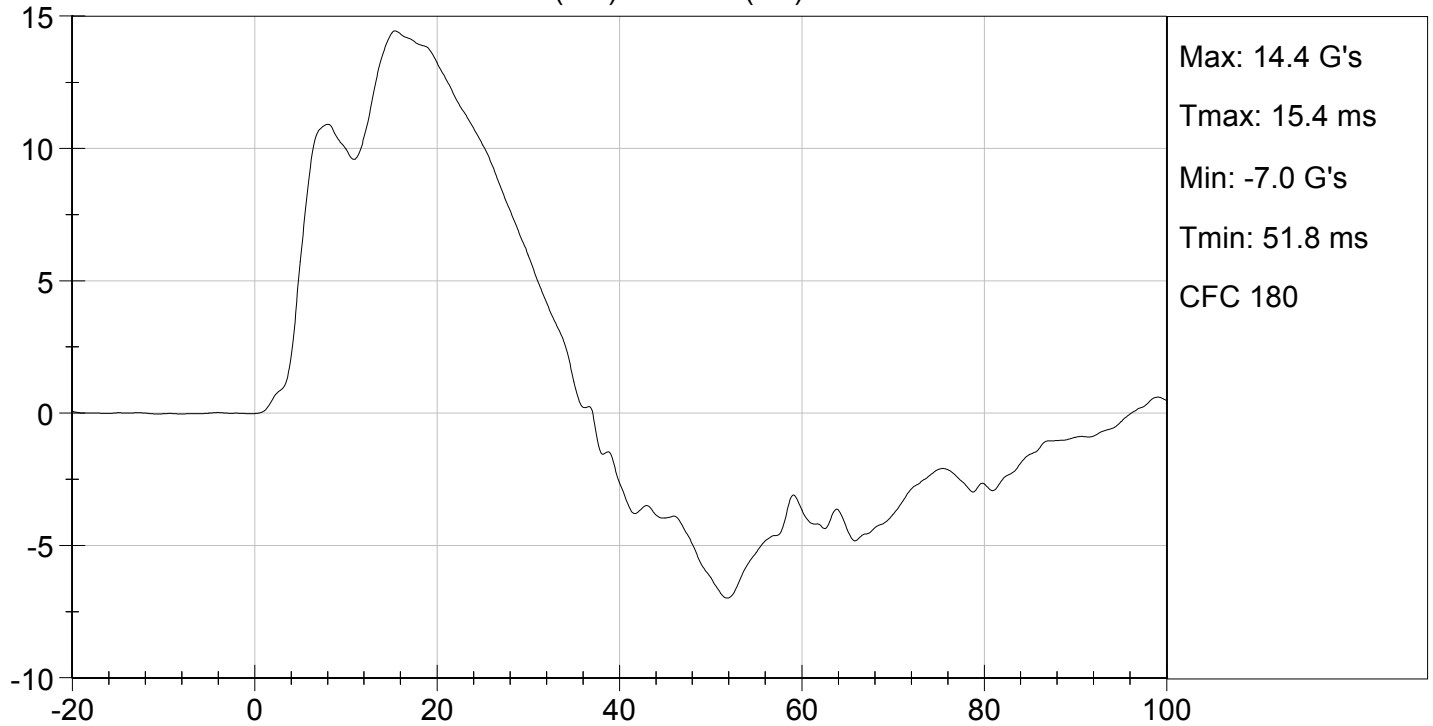




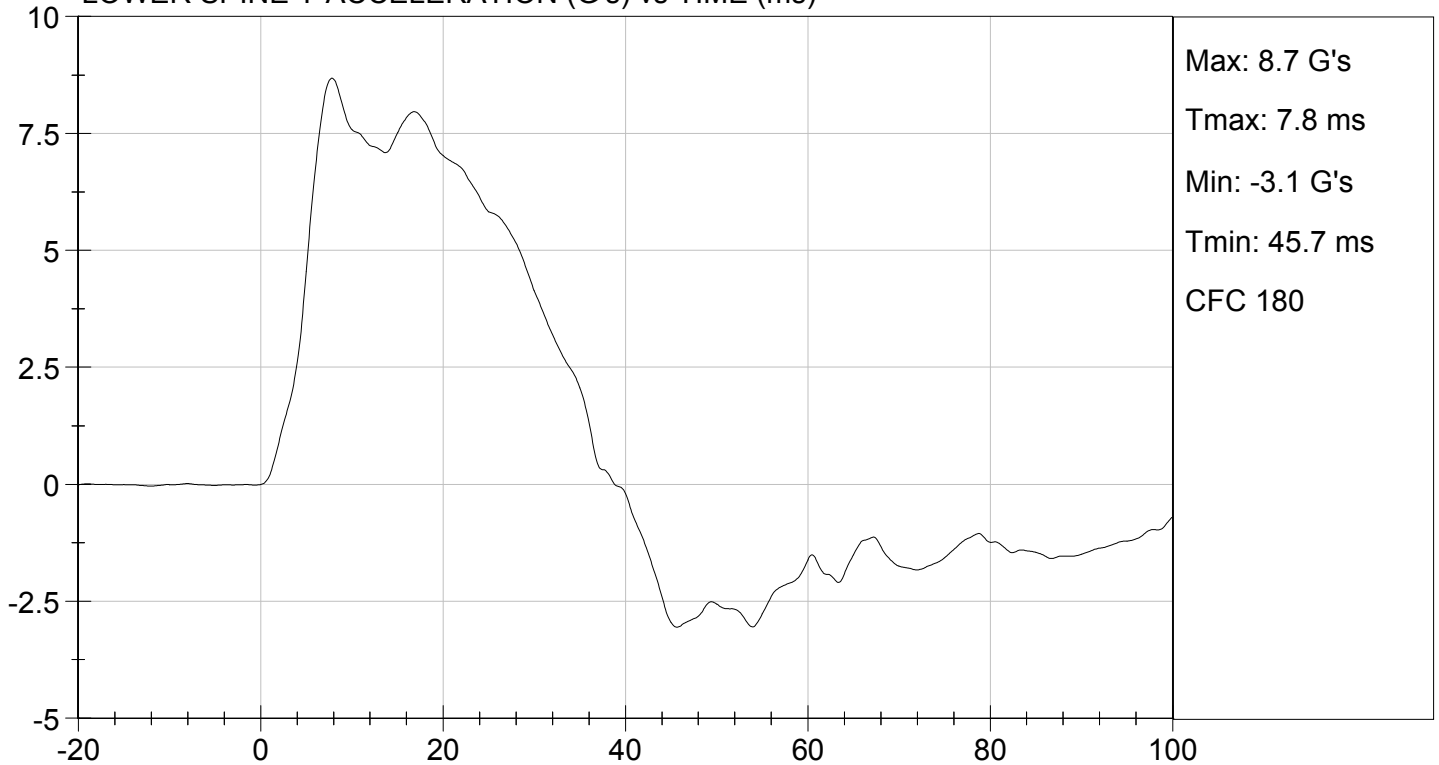
TEST DESC: THORAX IMPACT WITHOUT ARM
VELOCITY: 14.12 ft/s, 4.30 m/s

TEST DATE: 06/16/2016
TEST #: D162095

UPPER SPINE Y ACCELERATION (G's) vs TIME (ms)



LOWER SPINE Y 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: D162096

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.6	Pass
Humidity	%	10 to 70	52	Pass
Impact Velocity	m/s	4.20 to 4.40	4.20	Pass
Maximum Probe Acceleration	G's	12 to 16	13	Pass
Upper Abdomen Rib Displacement	mm	36 to 47	40	Pass
Lower Abdomen Rib Displacement	mm	33 to 44	36	Pass
Lower Spine (T12) Y Acceleration	G's	9 to 14	10	Pass
Overall Test Results				Pass


Laboratory Technician

06/17/2016

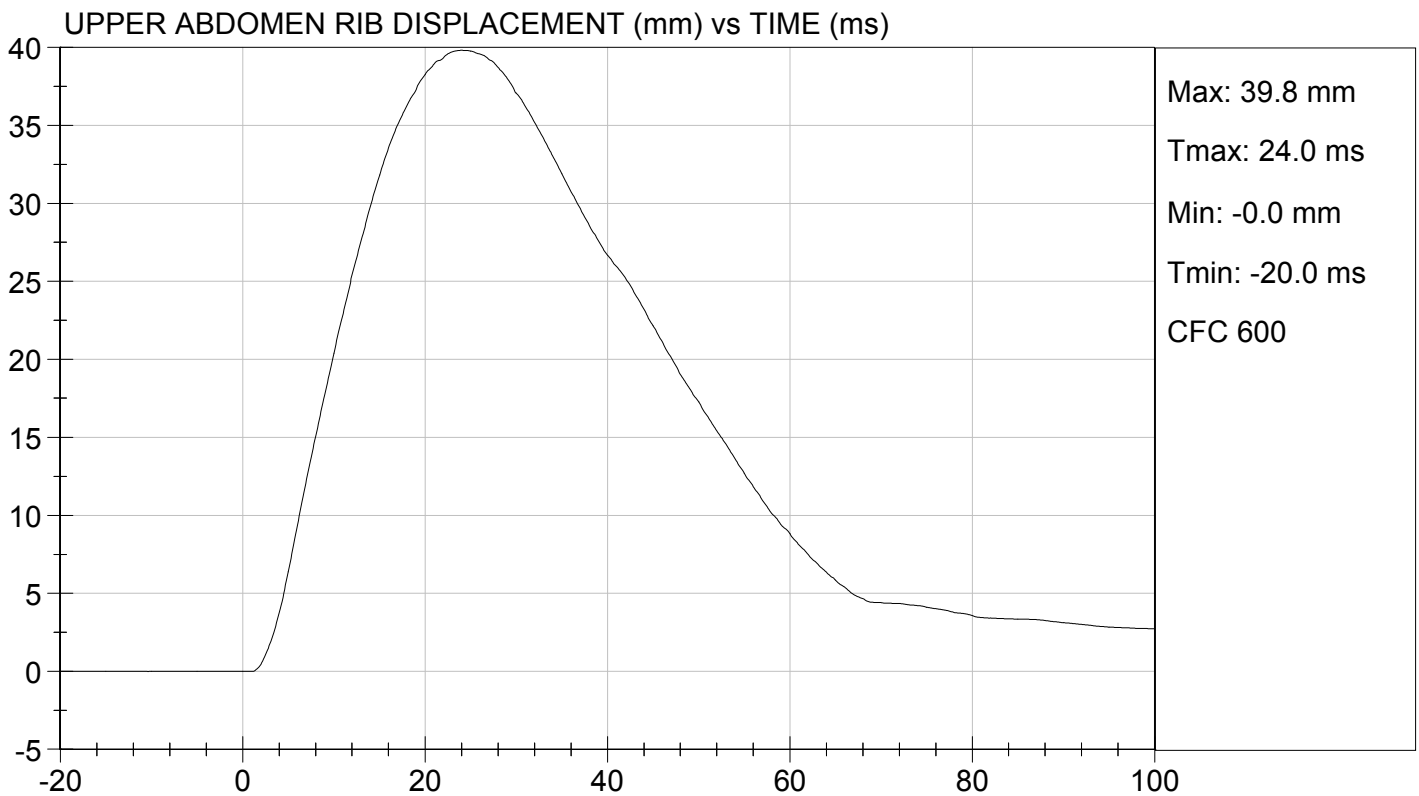
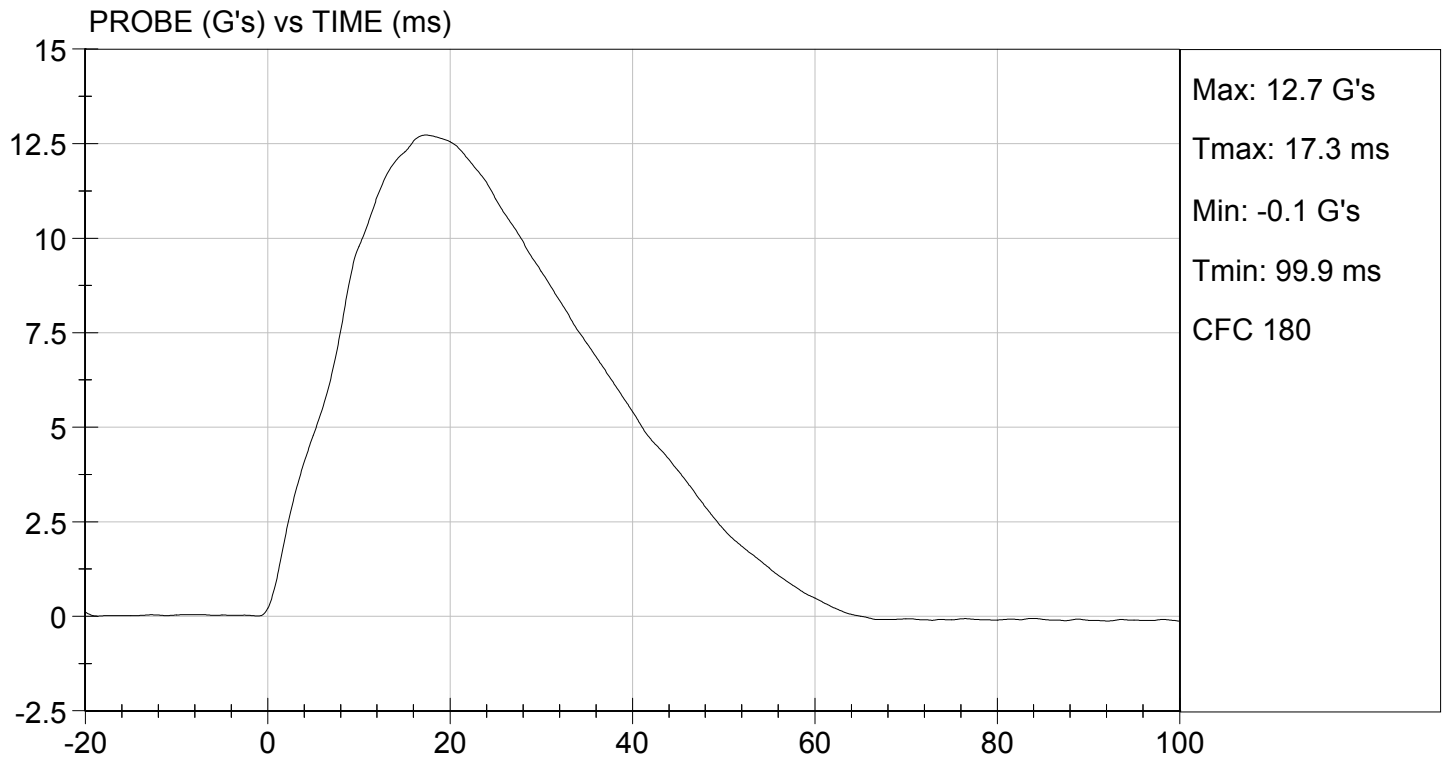
Test Date


Approved By



TEST DESC: ABDOMEN IMPACT
VELOCITY: 13.78 ft/s, 4.20 m/s

TEST DATE: 06/17/2016
TEST #: D162096

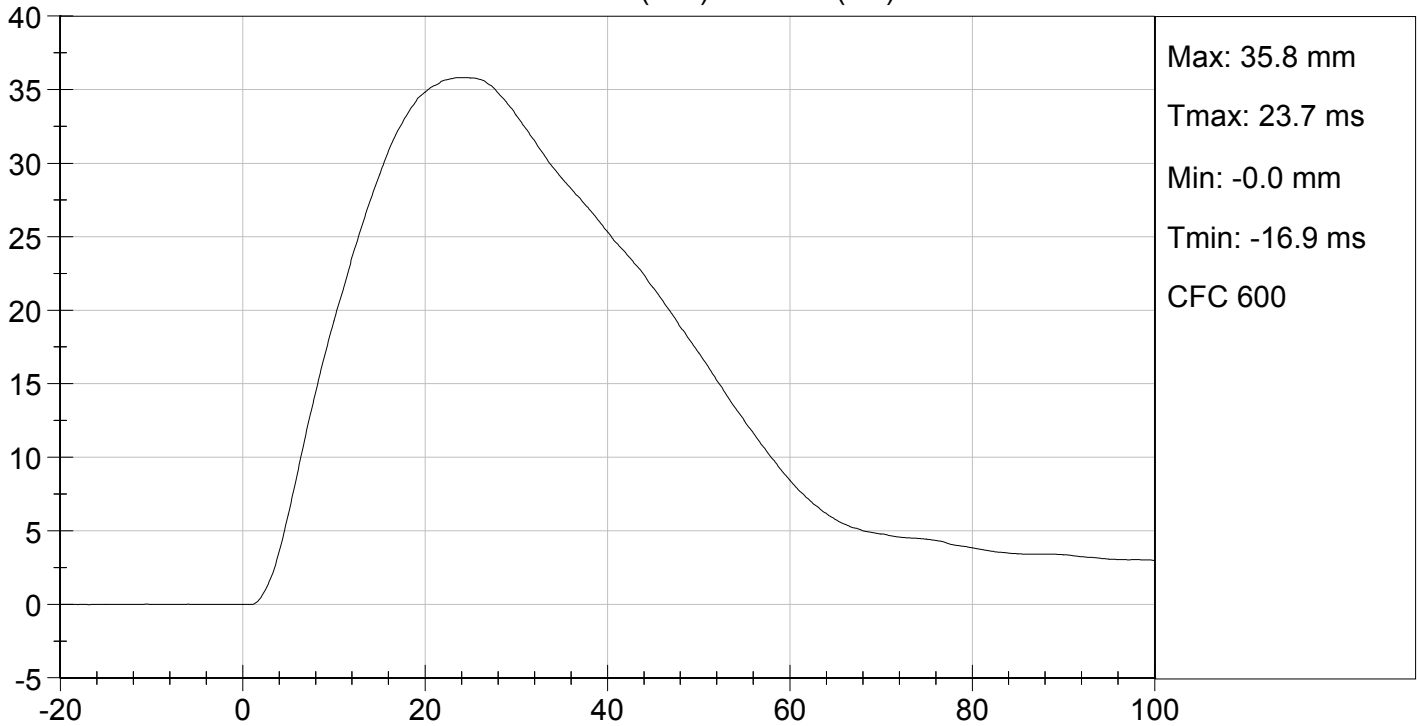




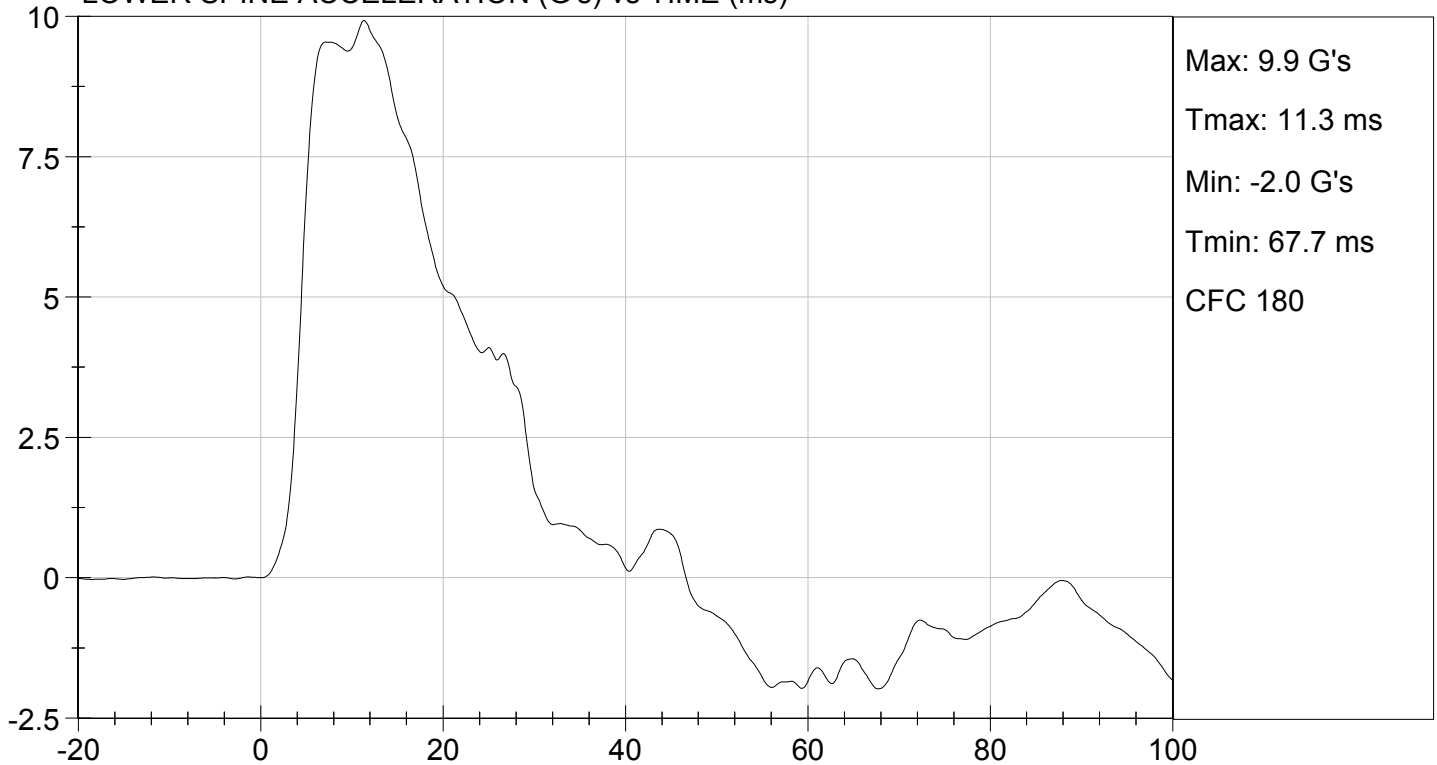
TEST DESC: ABDOMEN IMPACT
VELOCITY: 13.78 ft/s, 4.20 m/s

TEST DATE: 06/17/2016
TEST #: D162096

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

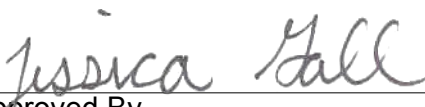
Test I.D: D162097

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.6	Pass
Humidity	%	10 to 70	52	Pass
Impact Velocity	m/s	6.60 to 6.80	6.68	Pass
Maximum Probe Acceleration	G's	38 to 47	44	Pass
Pelvis Y Acceleration After 6 ms	G's	34 to 42	41	Pass
Peak Acetabulum Force	N	3600 to 4300	4,150	Pass
Overall Test Results				Pass



Laboratory Technician

06/17/2016
Test Date

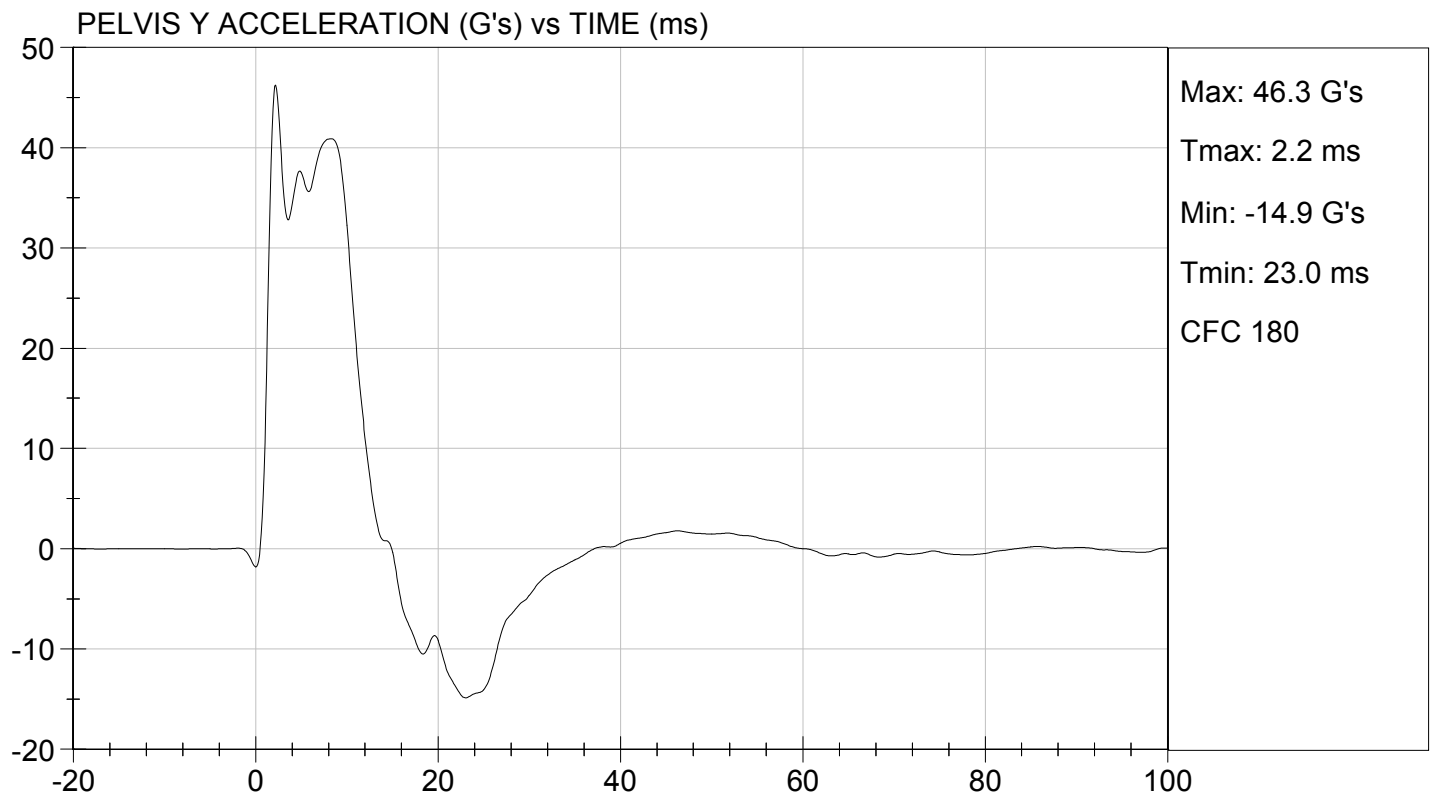
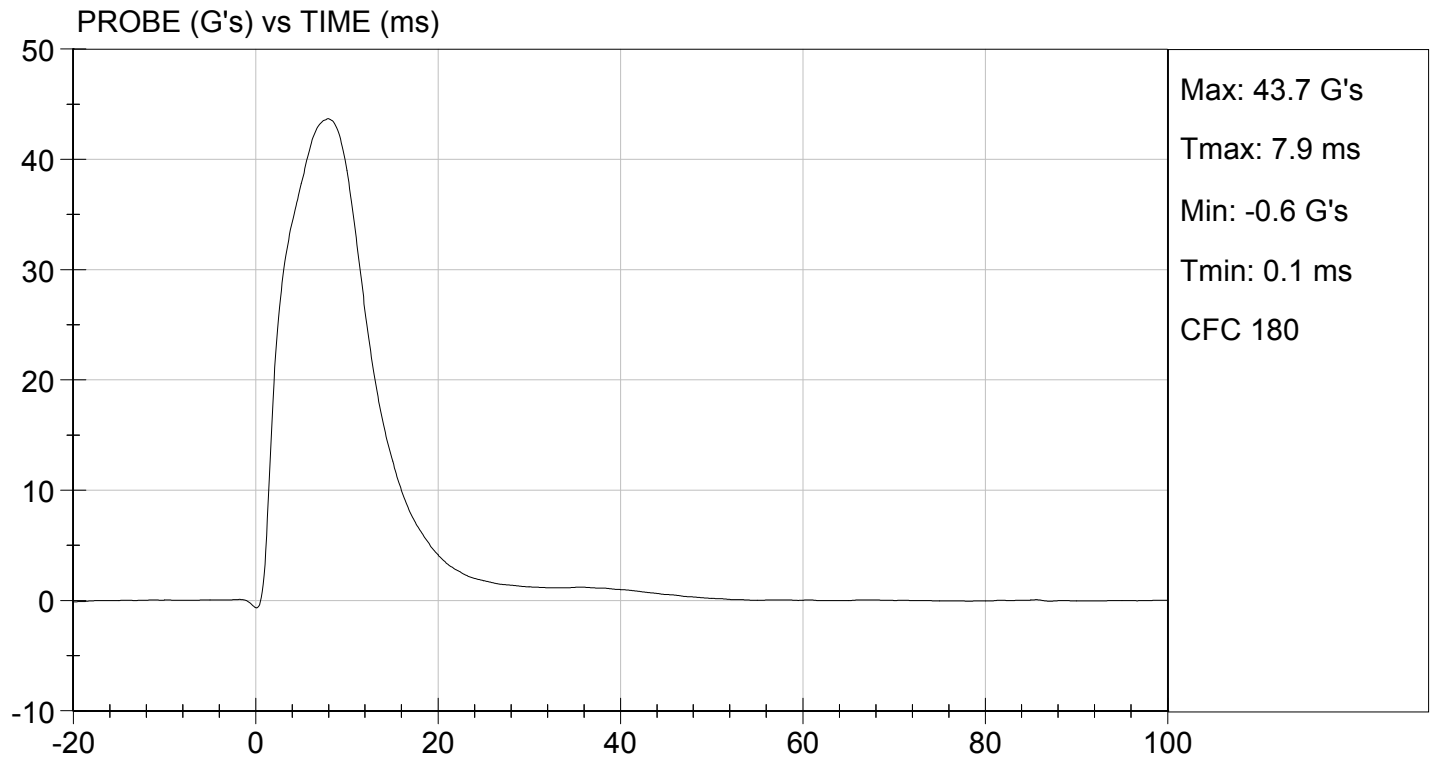


Approved By



TEST DESC: PELVIS IMPACT
VELOCITY: 21.93 ft/s, 6.68 m/s

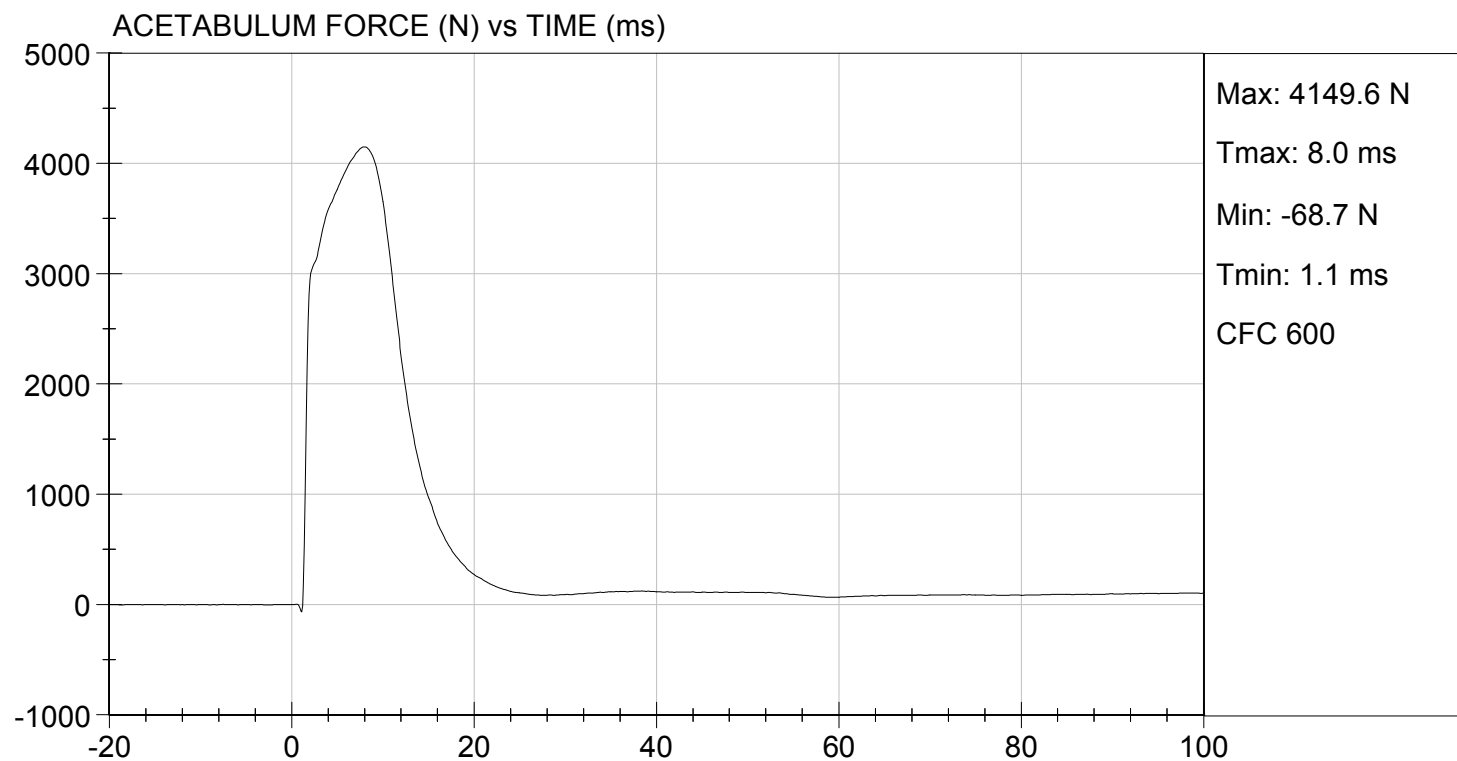
TEST DATE: 06/17/2016
TEST #: D162097





TEST DESC: PELVIS IMPACT
VELOCITY: 21.93 ft/s, 6.68 m/s

TEST DATE: 06/17/2016
TEST #: D162097



MGA RESEARCH CORPORATION

ILIAC IMPACT TEST

SID-IIs BUILD LEVEL D DUMMY

ATD Serial No: 296

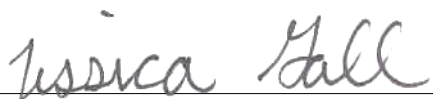
Test I.D: D162098

Tested Parameter	Units	Specification	Result	Pass/Fail
Temperature	deg C	20.6 to 22.2	21.6	Pass
Humidity	%	10 to 70	52	Pass
Impact Velocity	m/s	4.20 to 4.40	4.27	Pass
Maximum Probe 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	4,225	Pass
Overall Test Results				Pass


Laboratory Technician

06/17/2016

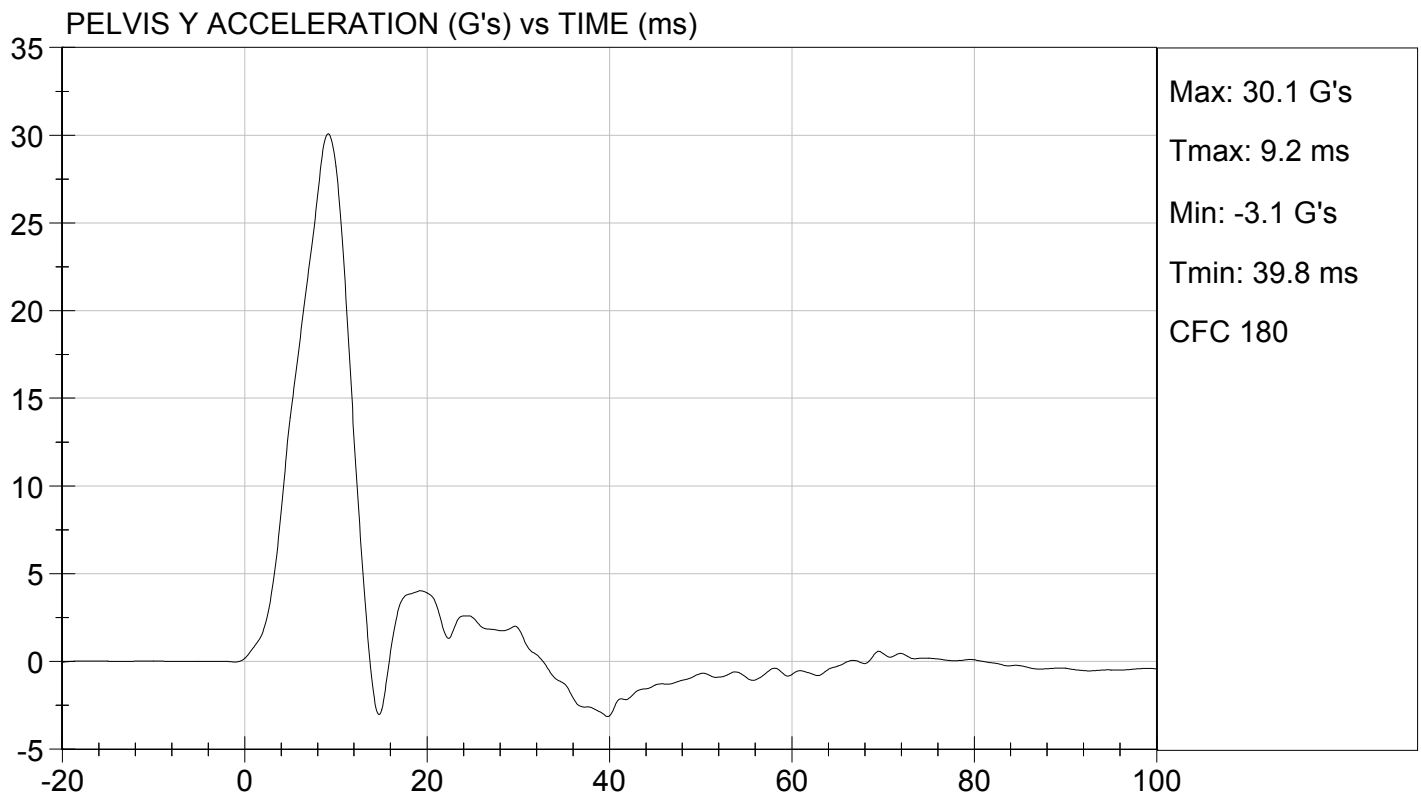
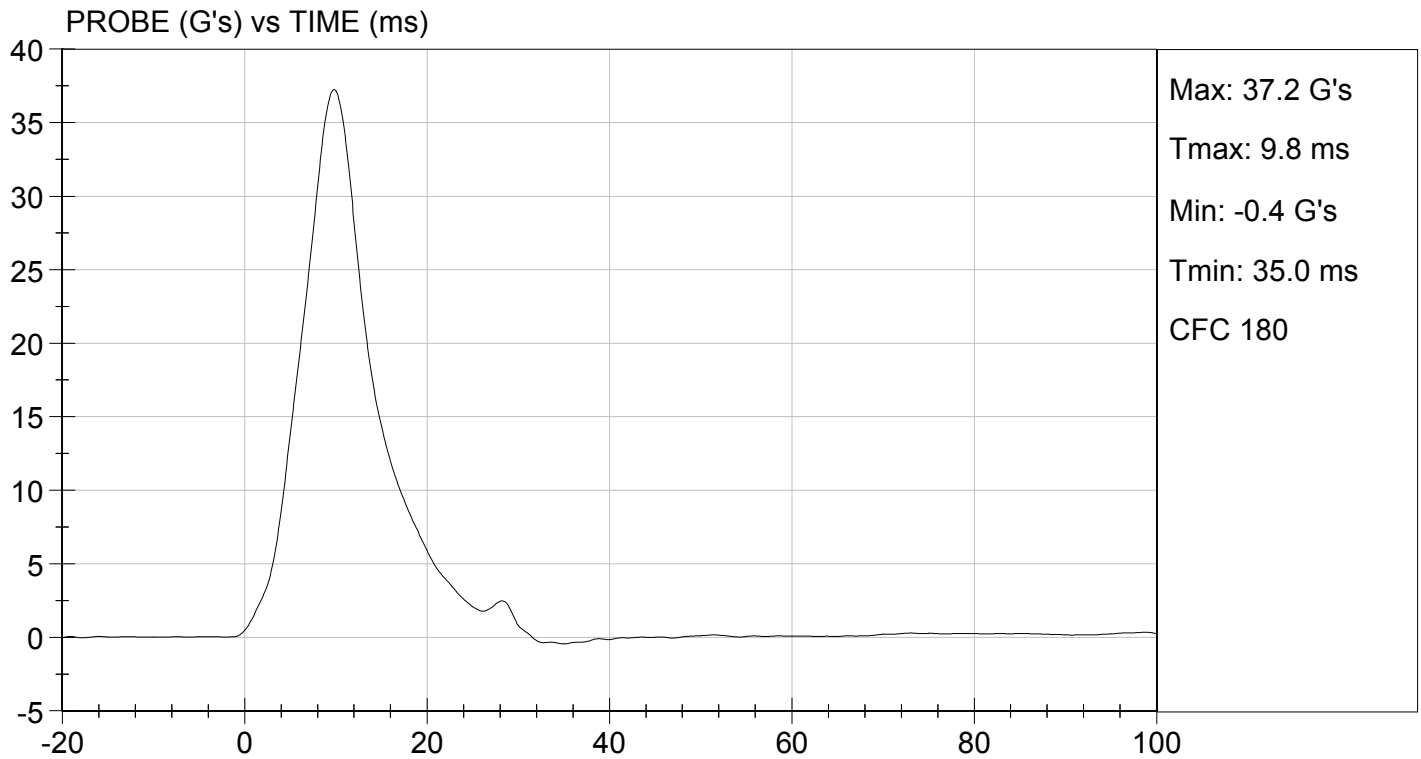
Test Date


Approved By



TEST DESC: ILLIAC
VELOCITY: 14.01 ft/s, 4.27 m/s

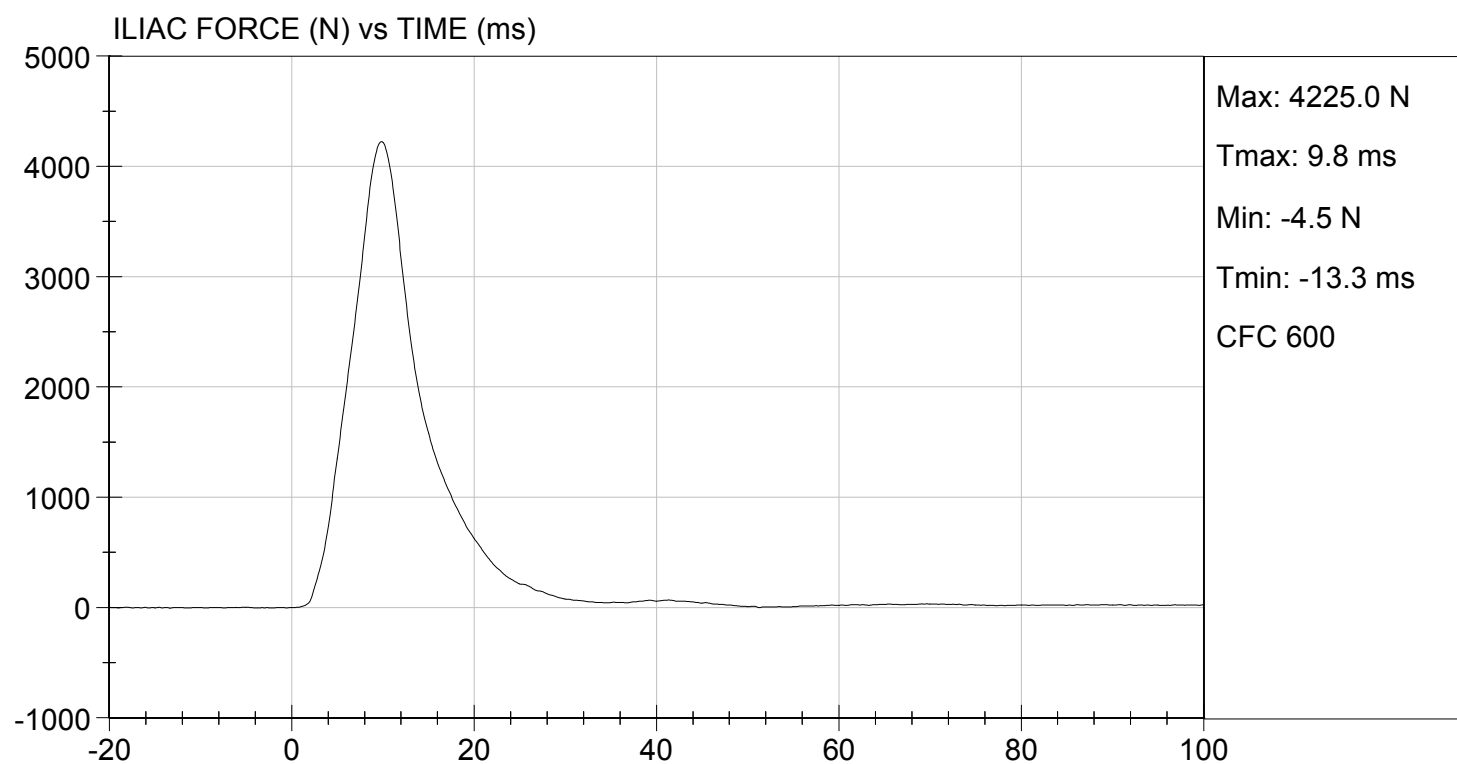
TEST DATE: 06/17/2016
TEST #: D162098



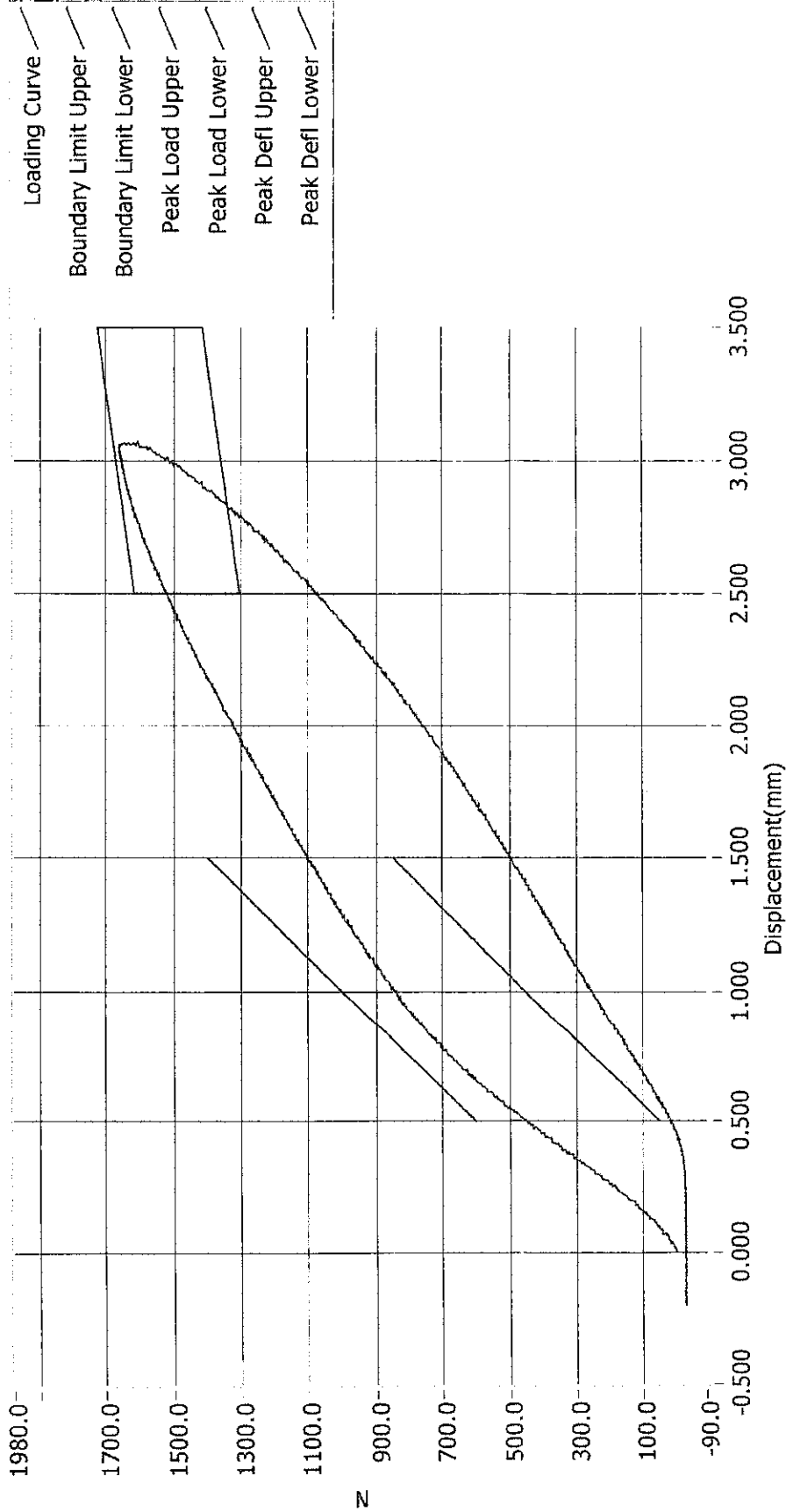


TEST DESC: ILLIAC
VELOCITY: 14.01 ft/s, 4.27 m/s

TEST DATE: 06/17/2016
TEST #: D162098



Resultant Data - SIDIIs Plug Compression



ATD Calibration Lab

Test ID	Part Serial Number	Test Date	Test Time
	81253	12/8/2014	5:52 PM
Cert ID	ATD Serial Number	ATD Type	
	N/A	SIDIIs	

Current Date : 12/8/2014

Current Time : 17:53:55



SID-IIs Pelvis Plug Certification Test

Plug S/N 10234

Test Number 571

Report Number 574

Test Date 11/5/2014 8:49:59 PM

Test Results	Spec Min	Spec Max
Force @ 0.5 mm (N)	50.00	600.00
Force @ 1.5 mm (N)	850.00	1,400.00
Force @ 2.5 mm (N)	1,306.00	1,618.00
Force @ 3.0 mm (N)	1,361.00	1,673.00

Testing Machine STM-20 5965542

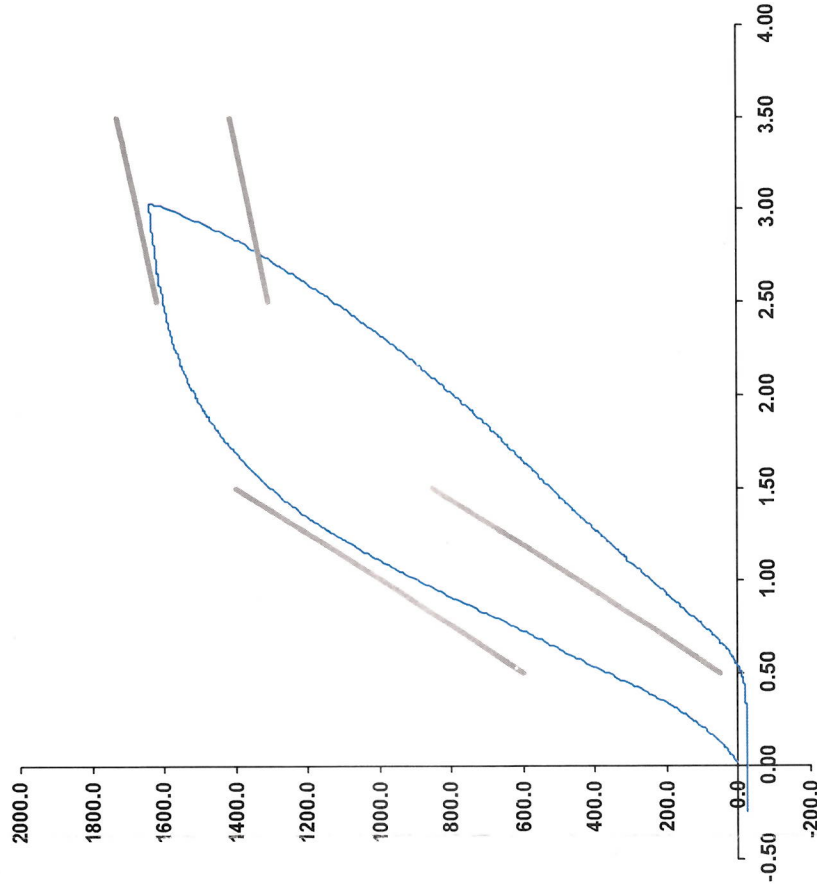
Load Cell S/N (TI240813), Units (LBS) 1000

Crosshead Speed (mm / min) or Rate 12.7

Extension or Position Measured by XHD_100 (XHD100)

Notes:

Force (-N) vs Extension (-mm)



Operator

Part Number 180-4450

Template No 107 09-Dec-14

SACO Research

By: *duc* Date: *11/5/14*
 SACO Research 39655 Bordeaux Place Murrieta, CA 92562 Tel 310-694-2082 FAX

APPENDIX D
TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION DATA

Table 1 – Dummy Instrumentation

				SID-IIs S/N 296			
				Serial Number	Manufacturer	Calibration Date	
Head CG Accelerometers				X	P79708	Endevco	01/06/16
				Y	P79709	Endevco	01/06/16
				Z	P79711	Endevco	01/06/16
				Xr	P79712	Endevco	01/06/16
				Yr	P79775	Endevco	01/06/16
				Zr	P88170	Endevco	01/06/16
Head Angular Rate Sensors				X	ARS7413	DTS	07/15/14
				Y	ARS7421	DTS	07/15/14
				Z	ARS7423	DTS	07/15/14
Displacement Potentiometers	Thoracic Rib	Upper	Y	G012	FTSS	01/07/16	
		Middle	Y	G1163	FTSS	01/07/16	
		Lower	Y	G1158	FTSS	01/07/16	
	Abdominal Rib	Upper	Y	G1146	FTSS	01/07/16	
		Lower	Y	G1126	FTSS	01/07/16	
Lower Spine Accelerometers (T12)				X	P79011	Endevco	01/15/16
				Y	P79582	Endevco	01/06/16
				Z	P88718	Endevco	01/06/16
Acetabulum Load Cell				Y	ACG4285	FTSS	12/22/15
Iliac Wing Load Cell				Y	IWG3023	FTSS	12/22/15
Pelvis Plug (struck side)					81253	FTSS	12/08/14
Pelvis Plug (non-struck side)					10234	SACO	11/05/14

Table 2 – Vehicle Instrumentation

		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	PCB543	PCB	04/26/2016
Vehicle Center of Gravity	Y	PCB541	PCB	04/26/2016
Vehicle Center of Gravity	Z	PCB542	PCB	04/26/2016
Left Floor Sill	Y	P88728	Endevco	02/26/2016
A-Pillar Sill	Y	P73888	Endevco	04/08/2016
A-Pillar Low	Y	P85129	Endevco	04/22/2016
A-Pillar Mid	Y	P79713	Endevco	01/13/2016
B-Pillar Sill	Y	P78763	Endevco	06/06/2016
B-Pillar Low	Y	PCB439	PCB	04/08/2016
B-Pillar Mid	Y	P85142	Endevco	03/31/2016
Driver Seat	Y	P67897	Endevco	01/14/2016
Engine Top	X	P78936	Endevco	02/09/2016
Engine Top	Y	P74298	Endevco	03/22/2016
Firewall	Y	P77627	Endevco	02/09/2016
Right Roof	Y	PCB294	PCB	02/03/2016
Right Floor Sill	Y	P87537	Endevco	06/06/2016
Rear Floorpan	X	P88145	Endevco	04/22/2016
Rear Floorpan	Y	P77620	Endevco	04/06/2016

Table 3 – Pole Instrumentation

	Serial Number	Manufacturer	Calibration Date
Load Cell 1	DG6277	FTSS	07/22/15
Load Cell 2	DG6278	FTSS	07/22/15
Load Cell 3	DG6279	FTSS	07/22/15
Load Cell 4	DG6280	FTSS	07/22/15
Load Cell 5	DG6281	FTSS	07/22/15
Load Cell 6	DG6283	FTSS	07/22/15
Load Cell 7	DG6284	FTSS	07/22/15
Load Cell 8	DG6582	FTSS	07/22/15