

REPORT NUMBER: SINCAP-MCW-14-012

**NEW CAR ASSESSMENT PROGRAM (NCAP)
MOVING DEFORMABLE BARRIER SIDE IMPACT TEST**

**MITSUBISHI MOTORS CORPORATION
2014 MITSUBISHI OUTLANDER 5-DOOR MPV
NHTSA NUMBER: M20145602**

**PREPARED BY:
MEDICAL COLLEGE OF WISCONSIN
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MILWAUKEE, WISCONSIN 53295**



TEST DATE: 29 JANUARY 2014

REPORT DATE: 28 FEBRUARY 2014

FINAL REPORT

**PREPARED FOR:
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**

Test Vehicle: 2014 Mitsubishi Outlander 5-Door MPV
Test Program: SINCAP

NHTSA Number: M20145602
Test Date: January 29, 2014

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Date: April 30, 2014

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Date: April 30, 2014

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 55/28 km/h 90° Moving Deformable Barrier NCAP Side Impact Test was conducted on the subject 2014 Mitsubishi Outlander 5-Door MPV in accordance with the specifications of the Office of Crashworthiness Standards Test Procedure for the generation of consumer information on vehicle side crash protection. The test was conducted at the Medical College of Wisconsin (MCW) facility in Milwaukee, Wisconsin on 29 January 2014. The impact velocity of the Moving Deformable Barrier (MDB) was 61.91 km/h, and the ambient temperature at the struck (driver's) side of the target vehicle at the time of impact was 21°C. The target vehicle's post test maximum static crush was 236 mm at level 3. The test vehicle's performance is as follows: <table border="1"> <thead> <tr> <th></th> <th><u>Units</u></th> <th><u>IARV</u></th> <th><u>DRIVER ATD (ES-2re)</u></th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆)</td> <td>N/a</td> <td>1000</td> <td>174</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>44</td> <td>17</td> </tr> <tr> <td>Total Abdominal Force</td> <td>N</td> <td>2500</td> <td>743</td> </tr> <tr> <td>Pubic Symphysis Force</td> <td>N</td> <td>6000</td> <td>1817</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th></th> <th><u>Units</u></th> <th><u>IARV</u></th> <th><u>Pass. ATD (SID-IIs)</u></th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆)</td> <td>N/a</td> <td>1000</td> <td>347</td> </tr> <tr> <td>Lower Spine Resultant Acceleration</td> <td>G</td> <td>82</td> <td>50</td> </tr> <tr> <td>Total Pelvic Force (sum of acetabular and iliac forces)</td> <td>N</td> <td>5525</td> <td>3103</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>38*</td> <td>12</td> </tr> <tr> <td>Maximum Abdominal Rib Deflection</td> <td>mm</td> <td>45*</td> <td>21</td> </tr> </tbody> </table>				<u>Units</u>	<u>IARV</u>	<u>DRIVER ATD (ES-2re)</u>	Head Injury Criteria (HIC ₃₆)	N/a	1000	174	Maximum Thoracic Rib Deflection	mm	44	17	Total Abdominal Force	N	2500	743	Pubic Symphysis Force	N	6000	1817		<u>Units</u>	<u>IARV</u>	<u>Pass. ATD (SID-IIs)</u>	Head Injury Criteria (HIC ₃₆)	N/a	1000	347	Lower Spine Resultant Acceleration	G	82	50	Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	3103	Maximum Thoracic Rib Deflection	mm	38*	12	Maximum Abdominal Rib Deflection	mm	45*	21
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The two 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.																																														

Test Vehicle: 2014 Mitsubishi Outlander 5-Door MPV
Test Program: SINCAP

NHTSA Number: M20145602
Test Date: January 29, 2014

Technical Report Documentation Page (CONTINUED)

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Test Vehicle: 2014 Mitsubishi Outlander 5-Door MPV
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SECTION 1

TEST PURPOSE AND PROCEDURE

This moving deformable barrier side impact test is part of the MY 2014 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under contract number DTNH22-09-D-00123. The purpose of this test is to generate comparative side impact performance in a 2014 Mitsubishi Outlander 5-Door MPV. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Laboratory Test Procedure dated September 2013.

SECTION 2 SUMMARY OF TEST RESULTS

A 2014 Mitsubishi Outlander 5-Door MPV was impacted on the left (driver's) side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 61.91 km/h. The target vehicle was stationary and was positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by The Medical College of Wisconsin in Milwaukee, Wisconsin, on January 29, 2014. Pre-test and post-test photographs of the test vehicle, the MDB, and the dummies (ES-2re and SID-IIs) are included in this report.

Dummies were placed in the driver and left rear designated seating positions according to instructions specified in the OCWS Side Impact Laboratory Test Procedure, dated September 2013. The side impact event was documented by 11 cameras. Camera locations are included in this report.

The dummies were instrumented in the following manner:

DRIVER ATD (ES-2re)

- Primary and Redundant Head CG Tri-Axial Accelerometers
- Chest, Upper Rib, Middle Rib, and Lower Rib Y-Axis Displacement Potentiometers
- Abdomen Forward, Middle, and Rear Y-Axis Load Cells
- Lower Spine (T₁₂) Tri-Axial Accelerometers
- Pubic Symphysis Y-Axis Load Cell

PASSENGER ATD (SID-IIs)

- Primary and Redundant Head CG Tri-Axial 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) Tri-Axial Accelerometers
- Acetabulum and Iliac Wing Y-Axis Load Cells

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 of this report contains the test equipment and instrumentation calibration data.

SECTION 2
SUMMARY OF TEST RESULTS (CONTINUED)

Dummy injury values were recorded as follows:

DRIVER DUMMY INJURY VALUES			
Measurement Description	Driver ATD (ES-2re)		
	Units	Threshold	Result
Head Injury Criteria (HIC ₃₆)	N/a	1000	174
Maximum Thorax Rib Deflection	mm	44	17
Combined Abdominal Force	N	2500	743
Pubic Symphysis Force	N	6000	1817

PASSENGER DUMMY INJURY VALUES			
Measurement Description	Passenger ATD (SID-IIs)		
	Units	Threshold	Result
Head Injury Criteria (HIC ₃₆)	N/a	1000	347
Lower Spine (T ₁₂) Resultant Acceleration	G's	82	50
Total Pelvic Force (Sum of Acetabular and Iliac Forces)	N	5525	3103
Maximum Thoracic Rib Deflection	mm	38*	12
Maximum Abdominal Rib Deflection	mm	45*	21

**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	Did Not Deploy	No	N/a
Knee Airbag	Yes	Did Not Deploy	No	N/a
Side Curtain Airbag	Yes	Deployed	Yes	Deployed
Side Torso/Abdomen/Pelvis Airbag	Yes	Deployed	No	N/a
Seat Belt Pretensioner	Yes	Deployed	Yes	Deployed
Seat Belt Load Limiter	Yes	N/a	No	N/a
Other	N/a	N/a	N/a	N/a

GENERAL COMMENTS

SECTION 3

OCCUPANT AND VEHICLE INFORMATION

PRE TEST

Data Sheet No. 1 – General Test and Vehicle Parameter Data
Data Sheet No. 2 – Seat, Seat Belt, Steering Wheel Adjustment and Fuel System Data
Data Sheet No. 3 – Dummy Longitudinal Clearance Dimensions
Data Sheet No. 4 – Dummy Lateral Clearance Dimensions
Data Sheet No. 5 – Camera and Instrumentation Data
Data Sheet No. 6 – Test Vehicle Accelerometer Locations
Data Sheet No. 7 – MDB Accelerometer Locations

POST TEST

Data Sheet No. 8 – Post-Test Observations
Data Sheet No. 9 – MDB Summary of Results
Data Sheet No. 10 – Test Vehicle Profile Measurements
Data Sheet No. 11 – Test Vehicle Exterior Crush Measurements
Data Sheet No. 12 – MDB Exterior Static Crush Measurements
Data Sheet No. 13 – FMVSS No. 301 Static Rollover Results
Data Sheet No. 14 – Dummy/Vehicle Temperature and Humidity Stabilization Data

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

VEHICLE INFORMATION	
NHTSA No.	M20145602
Model Year	2014
Make	Mitsubishi
Model	Outlander
Body Style	MPV
VIN	JA4AD2A30EZ007945
Body Color	Cosmic Blue/Black
Odometer Reading (km/mi)	29 mi
Engine Displacement (L)	2.4
Type/No. of Cylinders	4 Cylinder
Engine Placement	Lateral
Transmission Type	Automatic
Transmission Speeds	5
Overdrive	Yes
Final Drive	FWD
Roof Rack	No
Sunroof/T-Top	No
Running Boards	No
Tilt Steering Wheel	Yes
Power Seats	No
Anti-Lock Brakes (ABS)	Yes

VEHICLE OPTIONS	
Traction Control System (TCS)	Yes
Auto-Leveling System	No
Automatic Door Locks (ADL)	No
Power Window Auto-Reverse	No
Other Optional Features	Yes
Driver Front Airbag	Yes
Driver Curtain Airbag	Yes
Driver Head/Torso Airbag	No
Driver Torso Airbag	No
Driver Torso/Pelvis Airbag	Yes
Driver Pelvis Airbag	No
Driver Knee Airbag	Yes
Rear Pass. Curtain Airbag	Yes
Rear Pass. Head/Torso Airbag	No
Rear Pass. Torso Airbag	No
Rear Pass. Torso/Pelvis Airbag	No
Rear Pass. Pelvis Airbag	No
Driver Seat Belt Pretensioner	Yes
Rear Pass. Seat Belt Pretensioner	Yes
Driver Load Limiter	Yes
Rear Pass. Load Limiter	No
Other Safety Restraint	None Noted

Does owner's manual provide instructions to turn off automatic door locks?

N/a

DATA FROM CERTIFICATION LABEL			
Manufactured By	Mitsubishi Motors Corporation	GVWR (kg)	2175
Date of Manufacture	June 2013	GAWR Front(kg)	1150
Vehicle Type	MPV	GAWR Rear (kg)	1250

VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION				
	Front	Rear	Third	Total
Designated Seating Capacity (DSC)	2	5	0	7
Capacity Weight (VCW) (kg)				524.8
DSC X 68.04 (kg)				476.3
Cargo Weight (RCLW) (kg)				48.5

(A)

(B)

(A-B)

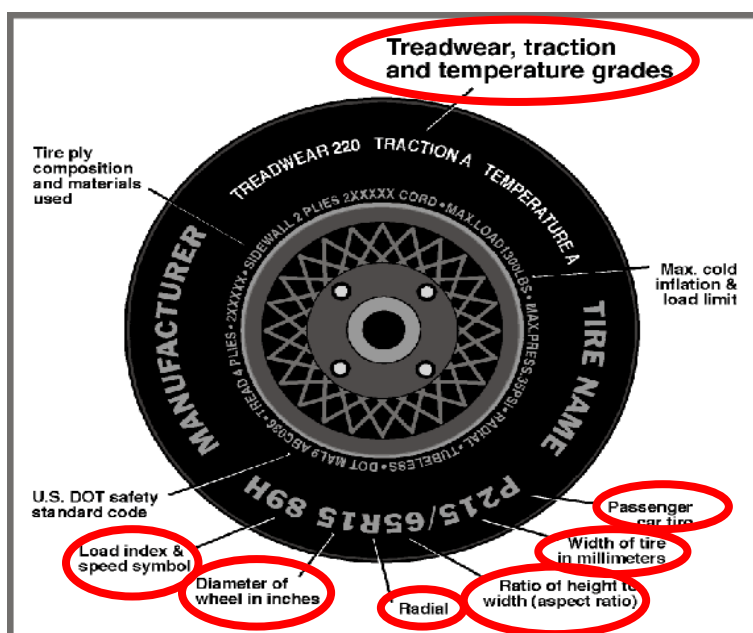
Test Vehicle: 2014 Mitsubishi Outlander 5-Door MPV
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DATA SHEET NO. 1
GENERAL TEST AND VEHICLE PARAMETER DATA (CONTINUED)

VEHICLE SEAT TYPE							
Seating Location	Type of Seat Pan				Type of Seat Back		
	Bucket	Bench	Split Bench	Contoured	Fixed	Adjustable	
						W/ Lever	W/ Knob
Front Seat	X					X	
Rear or Second Row Seat			X			X	
Third Row Seat			X	X		X	

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



VEHICLE TIRE INFORMATION		
Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	300	300
Cold Pressure (kPa)	240	240
Recommended Tire Size	P215/70R16	P215/70R16
Tire Size on Vehicle	P215/70R16	P215/70R16
Tire Manufacturer	Yokohama	Yokohama
Tire Model	Geolander Go33	Geolander Go33
Treadwear	300	300
Traction	B	B
Temperature Grades	A	A
Tire Plies Sidewall	2	2
Tire Plies Body	5	5
Load Index/Speed Symbol	99H	99H
Tire Material	Nylon, Polyester & Steel	Nylon, Polyester & Steel
DOT Safety Code Left	FDYV M452313 -23	FDYV M452313 -23
DOT Safety Code Right	FDYV M452313 -23	FDYV M452313 -23

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

TIRE PRESSURES					
	Units	LF	RF	LR	RR
As Delivered	kPa	227.5	227.5	227.5	234.4
Tire Placard	kPa	241.3	241.3	241.3	241.3
Owner's Manual	kPa	241.3	241.3	241.3	241.3
As Tested	kPa	241.3	241.3	241.3	241.3

MDB TIRE SPECIFICATIONS						
	Units	Requirement	LF	RF	LR	RR
Tire Size		205/75R15	P205/75R15	P205/75R15	P205/75R15	P205/75R15
Tire Pressure	kPa	200 +/- 21	200	200	200	200

TEST VEHICLE WEIGHTS										
	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	428.2	322.5		458.6	407.3		467.8	397.0	
Right	kg	417.3	312.5		412.8	368.3		424.2	365.2	
Ratio	%	57.1	42.9		52.9	47.1		53.9	46.1	
Totals	kg	845.5	635.0	1480.5	871.4	775.6	1647.0	892.0	762.2	1654.2

TARGET TEST WEIGHT CALCULATION			
	Units		
Total Delivered Weight (UVW)	kg	1480.5	(A)
Sum of Actual Weight of 2 P572 ATDs used	kg	125.2	(B)
Rated Cargo/Luggage Weight (RCLW)	kg	48.5	(C)
Calculated Target Vehicle Test Weight (TVTW)	kg	1654.2	(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

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

TEST VEHICLE ATTITUDE AND CG				
Measurement description	Units	Fully Loaded	As Tested	Meets Requirement***
LF	mm	786	787	Yes
RF	mm	795	794	Yes
RR	mm	789	788	Yes
LR	mm	798	796	Yes
Vehicle CG (Aft of Front Axle)	mm	1230	1257	
Vehicle CG (Left(+))/Right(-) from Longitudinal Centerline)	mm	40	46	

***The "As Tested" vehicle attitude measurements must be equal to or within +/- 10 mm of the "Fully Loaded" vehicle attitude measurements at each wheel well. "Yes" or "No" is indicated.

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW	
Ballast	Weight (kg)
Spare Tire, Spare Tire Cradle, Jack & Tools, Muffler, 3 rd Row Seat Head Rest, Cargo Area Trim & Carpet	31.8

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

SCRL ANGLE RANGE			
Seat	SCRL (°)		
	Max	Min	Mid
Driver Seat	1.4°	-1.4°	0.0°
Front Passenger Seat	0.0°	0.0°	0.0°
Front Center Seat*			
Struck Side Rear Seat	0.0°	0.0°	0.0°
Non-Struck Side Rear Seat	0.0°	0.0°	0.0°
Rear Center Seat*			

*If applicable

SCRL ANGLE RANGE						
Seat	As Tested SCRL Angle (Mid) (°)	As Tested SCR Height (mm)	SCR Height Position	SCR Height (mm)		
				Rearmost	Mid-Fore/Aft	Forward- Most
Driver's Seat	N/a**	N/a**	Max	N/a**	N/a**	N/a**
	0.0	-8.90	Mid	-14.2	-8.90	-3.55
	N/a**	N/a**	Min	N/a**	N/a**	N/a**
Front Passenger Seat	N/a**	N/a**	Max	N/a**	N/a**	N/a**
	0.0	1.05	Mid	6.33	1.05	-4.21
	N/a**	N/a**	Min	N/a**	N/a**	N/a**
Front Center Seat*			Max			
			Mid			
			Min			
Struck Side Rear Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
	0.0	-14.9	Mid	-14.9	-14.3	-14.4
	Fixed	Fixed	Min	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
	0.0	-14.5	Mid	-14.5	-14.6	-13.7
	Fixed	Fixed	Min	Fixed	Fixed	Fixed
Rear Center Seat*			Max			
			Mid			
			Min			

**If applicable

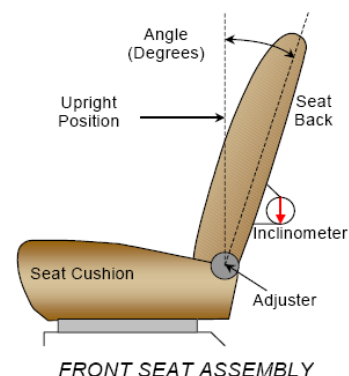
DATA SHEET NO. 2
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT AND FUEL SYSTEM DATA (CONTINUED)

SEAT FORE/AFT POSITION				
Seat	Total Fore/Aft Travel		Test Position from Forward-most Position	
	mm	Detent*	mm	Detent*
Driver Seat	220	23	110	11
Front Passenger Seat	220	23	110	11
Front Center Seat*				
Struck Side Rear Seat	250	26	250	25
Non-Struck Side Rear Seat	250	26	250	25
Rear Center Seat*				

*If applicable

Seat Back Angle Adjustment

The driver's seat back is positioned to the manufacturer's designated design angle. 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 seat back is positioned such that the dummy's head is level. The rear center and non-struck side rear outboard seat backs are positioned in a similar manner as the struck-side rear seat back.



SEAT BACK ANGLE ADJUSTMENT				
Seat	Total Seat Back Angle Range		Test Position from Most Upright	
	Degrees	Detents*	Degrees	Detents*
Driver Seat w/ Seated Dummy	76.2	41	1.0	4
Front Passenger Seat	74.3	38	0.0	4
Front Center Seat*				
Struck Side Rear Seat	17.0	9	11.4	0
Non-Struck Side Rear Seat	17.2	9	11.4	0
Rear Center Seat*				

*If applicable

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

Seat Belt Anchorage Adjustment

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

SEAT BELT ANCHORAGE ADJUSTMENT		
	Total # of Positions	Placed in Position #
Driver Seat	4	H
Rear Seat	Fixed	As Positioned

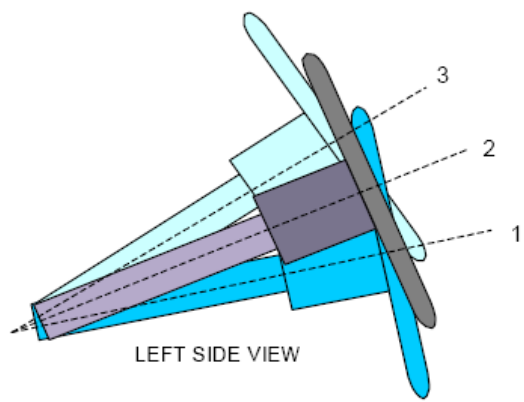
Head Restraint Adjustment

The driver's head restraint is adjusted to the highest and most forward in-use position. The struck-side rear passenger's head restraint is adjusted to the lowest and most full forward in-use position.

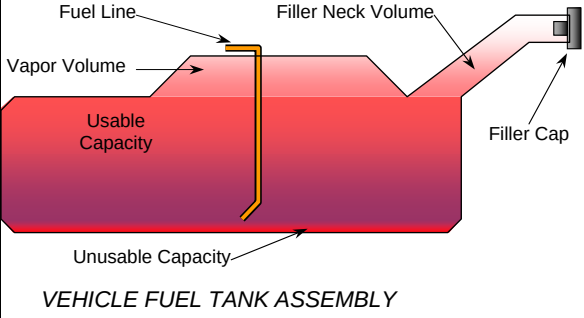
HEAD RESTRAINT ADJUSTMENT		
	Total # of Positions	Placed in Position #
Driver Seat	4	H
Rear Seat	4	L

Steering Column Adjustment

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

STEERING COLUMN ADJUSTMENT			
	Degrees	Fore/Aft Position (mm)	 LEFT SIDE VIEW <i>STEERING COLUMN ASSEMBLY</i>
Lowermost, Pos. No. 1	61.3	19	
Geometric Center, Pos. No. 2	63.4	19	
Uppermost, Pos. No. 3	65.5	19	
Telescoping Steering Wheel Travel	38	N/a	
Test Position	63.4	19	

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

FUEL TANK CAPACITY DATA			
Description	Units	Value	
Usable Capacity of “Standard Tank”	L	62.8	
Usable Capacity of “Optional Tank”	L	N/a	
Usable Capacity of Standard Tank	L	62.8	
Usable Capacity of Optional Tank	L	N/a	
93% of Usable Capacity	%	58.4	
Actual Amount of Solvent Used in Test	L	58.4	
1/3 of Usable Capacity	20.9		

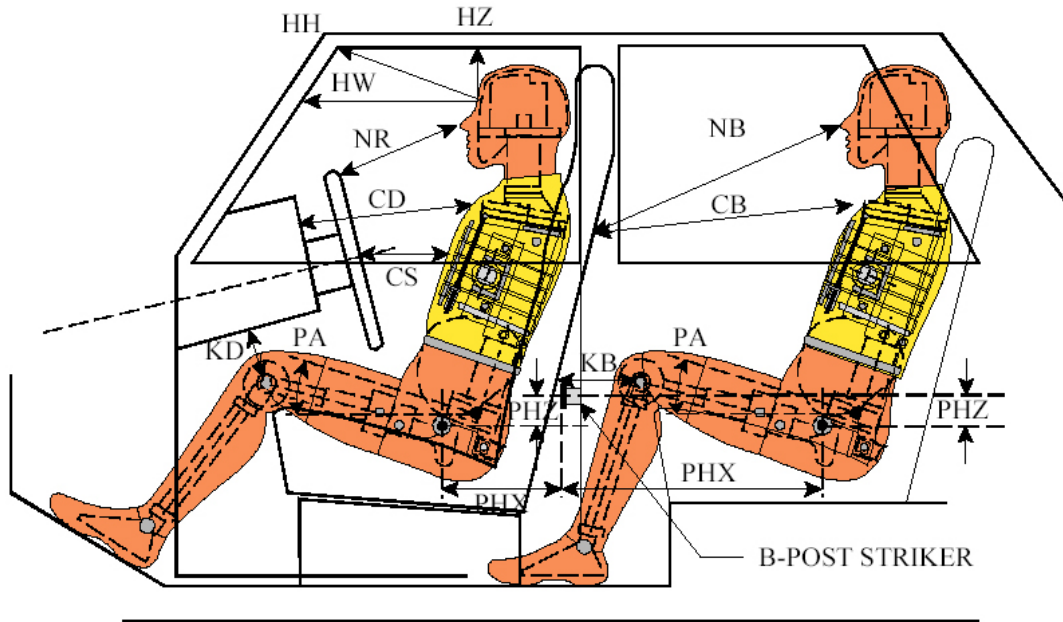
Fuel Pump

The vehicle is equipped with an electronic fuel pump. Key is "ON" position. The fuel pump is on the left side.

Is the Actual Amount of Solvent Used in the test equal to 93% +/- 1% of the Usable Capacity stated in on Form No. 1?

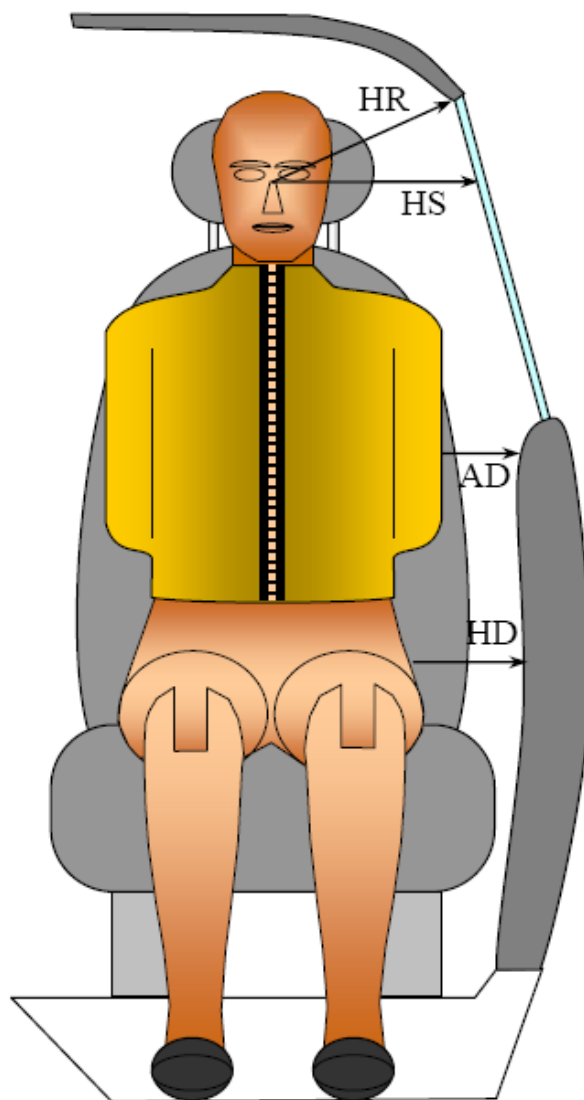
Yes

DATA SHEET NUMBER 3
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS



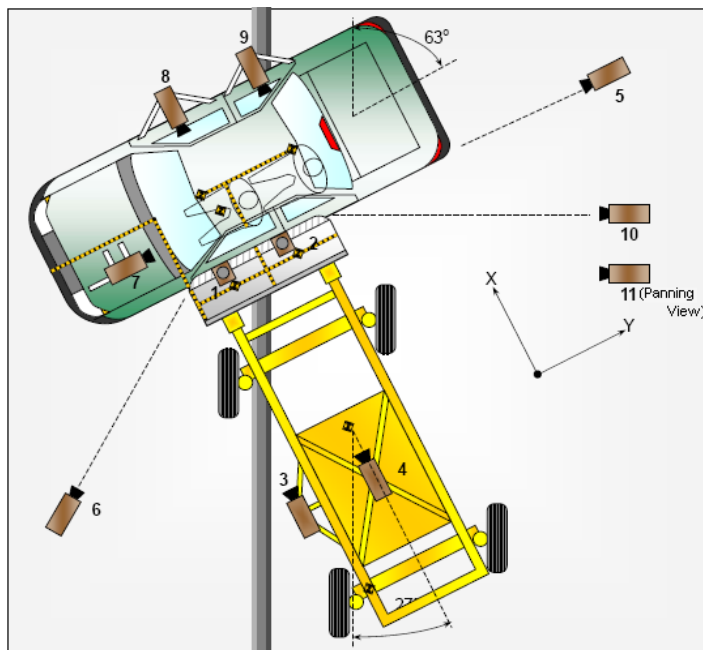
DUMMY LONGITUDINAL CLEARANCE DIMENSION INFORMATION						
Driver Code	Pass. Code	Measurement Description	Driver		Passenger	
			Length (mm)	Angle	Length (mm)	Angle
HH		Header to Header	350			
HW		Header to Windshield	626			
HZ	HZ	Head to Roof Liner	158		282	
NR	NB	Nose to Rim/Seat Back	501		589	
CD	CB	Chest to Dash/Seat Back	559		570	
CS		Chest to Steering Wheel	380			
KD(L)/KDA(L)°	KB(L)/KBA(L)°	Left Knee to Dash/Seat Back	164	34.3	352	16.4
KD(R)/KDA(R)°	KB(R)/KBA(R)°	Right Knee to Dash/Seat Back	149	31.6	348	16.1
PAX°	PAX°	Pelvic Tilt Angle X		0.0		0.0
	PAY°	Pelvic Tilt Angle Y		20.4		19.3
PHX	PHX	Hip Point to Striker (X-Axis)	229.7		238.5	
PHZ	PHZ	Hip Point to Striker (Z-Axis)	107.9		185.2	

DATA SHEET NUMBER 4
DUMMY LATERAL CLEARANCE DIMENSIONS



DUMMY LATERAL CLEARANCE DIMENSION INFORMATION				
Code	Description	Units	Driver	Passenger
HR	Head to Side Header	mm	233	284
HS	Head to Side Window	mm	352	397
AD	Arm to Door	mm	206	215
HD	Hip Point to Door	mm	146	165

DATA SHEET 5 CAMERA AND INSTRUMENTATION DATA



	View	Coordinates †			Lens Length mm	Operating Frame Rate fps
		X	Y	Z		
		mm	mm	mm		
1	Overhead Wide View	2610	-385	-3702	10	1000
2	Overhead Close-Up View	3623	-838	-3767	25	1000
3	Impact Point	2246	-1519	-300	25	1000
4	Struck-Side at Impact	2034	-1603	-492	12.5	1000
5	Rear Impact View of Struck Side	-8776	-810	-727	50	1000
6	Front Oblique Impact View of Struck Side	8890	-2245	-982	25	1000
7	Driver Dummy Front View (Onboard)				12.5	1000
8	Driver Dummy Side View (Onboard)				12.5	1000
9	Rear Passenger Dummy Side View (Onboard)				12.5	1000
10	Real-Time Rear View of Impact				N/a	30
11	Real-Time Pan View of Impact				N/a	30

Origin

X Vehicle Zero Point
Y Vehicle Zero Point
Z Vehicle Zero Point

Orientation

X +(X) To Front of Vehicle
Y +(Y) To Right of Vehicle
Z +(Z) Down

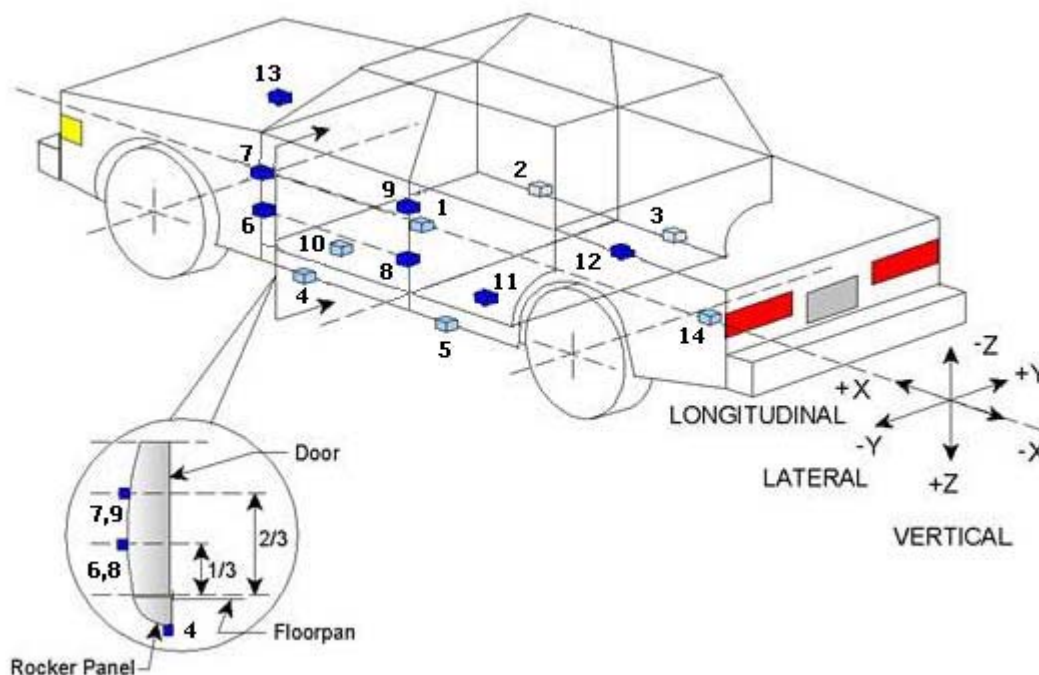
*All measurements accurate to +/- 6 mm

DATA SHEET 5
CAMERA AND INSTRUMENTATION DATA (CONTINUED)

Why did the cameras not operate?

INSTRUMENTATION	
Driver Dummy Channels	16
Passenger Dummy Channels	16
Vehicle Structure Accelerometers	23
MDB Accelerometers	5
Total	60

DATA SHEET 6 **TEST VEHICLE ACCELEROMETER LOCATIONS**

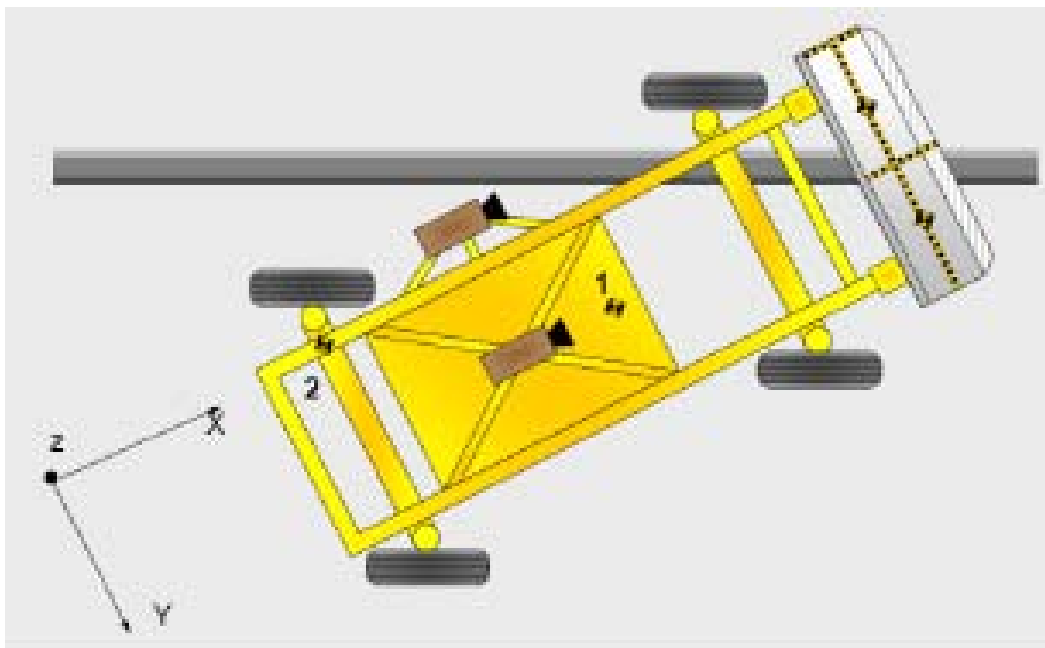


TEST VEHICLE ACCELEROMETER LOCATIONS				
Loc. No.	Accelerometer Location	Measurements (mm)		
		X	Y	Z
1	Vehicle CG	2669.4	54.6	209.9
2	Right Sill at Front Seat	2601.7	691.7	404.6
3	Right Sill at Rear Seat	1646.6	695.1	400.9
4	Left Sill at Front Door	2459.6	-707.5	407.7
5	Left Sill at Rear Door	1651.2	-706.5	403.3
6	A-Post Lower	3149.1	-809.7	55.3
7	A-Post Middle	3169.7	-815.1	-125.4
8	B-Post Lower	2106.1	-807.9	-12.4
9	B-Post Middle	2098.3	-808.5	-224.9
10	Front Seat Track	2398.1	-579.1	220.6
11	Rear Seat Structure	1314.5	-560.3	7.57
12	Rt. Rear Occ. Compartment	1537.9	560.7	40.1
13	Engine Block	3880.4	321.1	-198.7
14	Rear Above Axle	1106.1	96.2	109.8

Reference:

X - Rear surface of vehicle (+ forward)
Y - Vehicle centerline (+ right)
Z - Bumper target (+ down)

DATA SHEET 7
MDB ACCELEROMETER LOCATIONS



MDB ACCELEROMETER LOCATIONS				
Loc No.	Accelerometer Locations	Coordinates (mm)		
		X	Y	Z
1	MDB CG	1113	-1	311
2	MDB Rear	2812	-614	585

Reference

X - Face of MDB (+ forward)
Y - MDB centerline (+ to right)
Z - Ground plane (+ down)

DATA SHEET NUMBER 8
POST-TEST OBSERVATIONS

TEST DUMMY INFORMATION AND CONTACT POINTS		
Dummy Body Part	Front Seat Dummy (ES-2re)	Rear Seat Dummy (SID-IIs)
Face	To Side Curtain Airbag	To Side Curtain Airbag
Top of Head	To Roof Rail	To Side Curtain Airbag
Left Side of Head	To Side Curtain Airbag	To Side Curtain Airbag
Back of Head	Along Head Rest to Side Curtain Airbag	To Side Curtain Airbag
Left Shoulder	To TAP Airbag	To Side Curtain Airbag
Upper Torso	To TAP Airbag	To Interior Door Panel
Lower Torso	To TAP Airbag	To Interior Door Panel
Left Hip	Along Seat Back Wing To TAP Bag	To Interior Door Panel
Left Knee	To Interior Door Panel	To Interior 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 of Latches	No	No	No	No	No
Latch of 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

**DATA SHEET NUMBER 8
 POST-TEST OBSERVATIONS (CONTINUED)**

POST TEST STRUCTURAL OBSERVATIONS	
Critical Areas of Performance	Observations/Conclusions
Pillar Performance	No Damage
Sill Separation	No Separation
Windshield Damage	No Damage
Window Damage	No Damage
Other Notable Effects	None Noted

SUPPLEMENTAL RESTRAINT INFORMATION				
Restraint Type	Struck Side Driver		Struck Side Rear Passenger	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes – Steering Wheel	Did Not Deploy		
Knee Airbag	Yes – Knee Bolster	Did Not Deploy		
Side Curtain Airbag	Yes – Side Header	Deployed Properly	Yes – Side Header	Deployed Properly
Side Torso/Abdomen/Pelvis Airbag	Yes – Seat Back	Deployed Properly	No	N/a
Seat Belt Pretensioner	Yes	Deployed Properly	Yes	Deployed Properly
Seat Belt Load Limiter	Yes	N/a	No	N/a
Other	No	N/a	No	N/a

IMPACT POINT LOCATION DATA			
Measured Parameter	Units	Tolerance	Value
Vehicle Wheel Base	mm		2670
Vertical Impact Reference Line (Aft of Front Axle)(Intended Impact Point)	mm		395
Actual Impact Point (Aft of Front Axle)	mm		395
Horizontal Offset (+ forward / - rear)	mm	+/- 50 of Intended Impact Point	0 Forward/Rearward
Vertical Offset (+ down / - up)	mm	+/- 20 of Intended Impact Point	10 Below

DATA SHEET NUMBER 9
MDB SUMMARY OF RESULTS

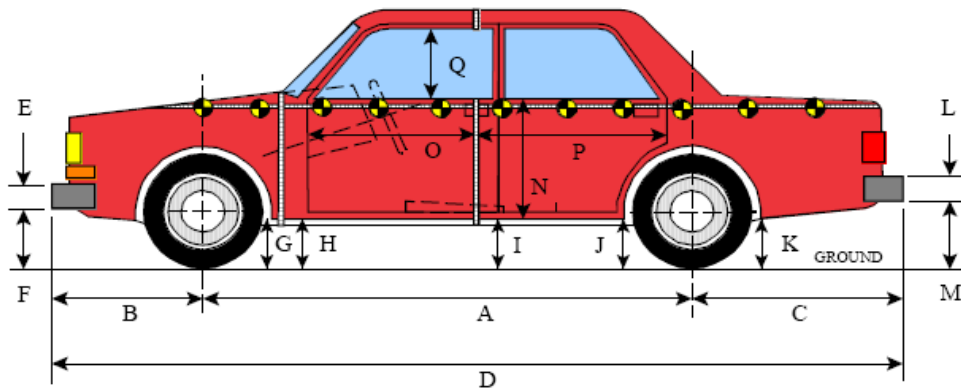
MDB SPECIFICATIONS	
Measurement Description	Length (mm)
Overall Width of Framework Carriage	1250
Overall Length Including Honeycomb Frame	4116
Wheel Base of Framework Carriage	2578
CG Location of Front Axle	1112

MDB WEIGHTS				
	Units	Front Axle	Rear Axle	Total
Left	kg	450.0	233.1	683.1
Right	kg	309.8	368.3	678.1
Ratio	%	55.8	44.2	100.0
Totals	kg	759.8	601.4	1361.2

SPEED AND ANGLE AT IMPACT DATA			
Measured parameter	Units	Requirement	Value
Trap No. 1 Velocity (Primary)	km/h	61.1 to 62.7	61.91
Trap No. 2 Velocity (Secondary)	km/h	61.1 to 62.7	61.89
MDB CL to Target Vehicle CL	degrees	88.5 to 91.5	90
MDB Forward Line of Motion to Target Vehicle	degrees	62.5 to 63.5	63.0
MDB Crabbed Angle to MDB Forward Line of Motion	degrees	26 to 28	27.0

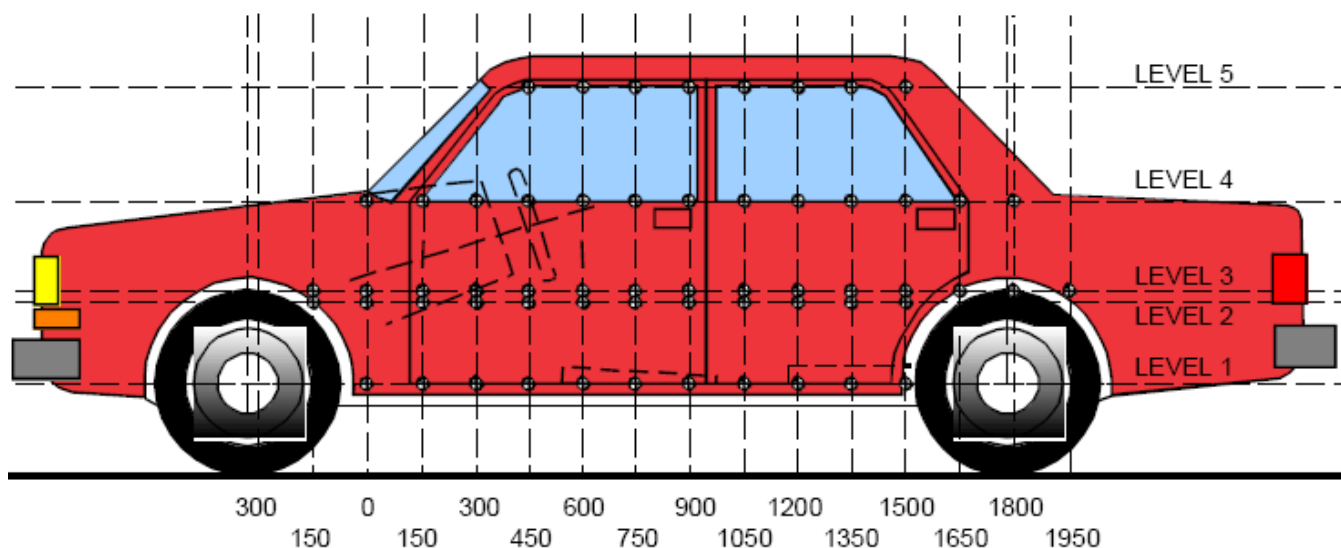
MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE					
Vertical Location			From Centerline		Maximum Crush
Row	Description	Height	Distance	Direction	
A	Center of Bumper	433	800	Right	235
B	Top of Bumper	530	800	Left	134
C	Mid-Level	557	800	Left	138
D	Top of Stack	837	800	Left	184

DATA SHEET NUMBER 10
TEST VEHICLE PROFILE MEASUREMENTS



VEHICLE PRE – AND POST – TEST MEASUREMENT INFORMATION				
Code	Description	Pre test	Post test	Difference
		mm	mm	mm
A	Wheelbase	2670	2667	-3
B	Front Axle to FSOV	665	668	3
C	Rear Axle to RSOV	935	935	0
D	Total Length at Centerline	4661	4659	-2
E	Front Bumper Thickness	123	123	0
F	Front Bumper Bottom to Ground	340	343	3
G	Sill Height at Front Wheel Well	262	218	-44
H	Sill Height at Front Door Leading Edge	266	210	-56
I	Sill Height at B-Pillar	291	140	-151
J1	Sill Height at Rear Wheel Well	258	239	-19
J2	Pinch Weld Height at Rear Wheel Well	289	90	-199
K	Sill Height Aft of Rear Wheel Well	448	420	-28
L	Rear Bumper Thickness	260	260	0
M	Rear Bumper Bottom to Ground	410	391	-19
N	Sill Height to Bottom of Front Window Sill	802	729	-73
O	Front Door Leading Edge to Impact C/L	1098	1057	-41
P	Rear Door Trailing Edge to Impact C/L	942	860	-82
Q	Front Window Opening	445	448	3
R	Right Side Length	4270	4275	5
S	Left Side Length	4270	4270	0
T	Maximum Vehicle Width	1770	1618	-152

DATA SHEET NUMBER 11
VEHICLE EXTERIOR CRUSH MEASUREMENTS



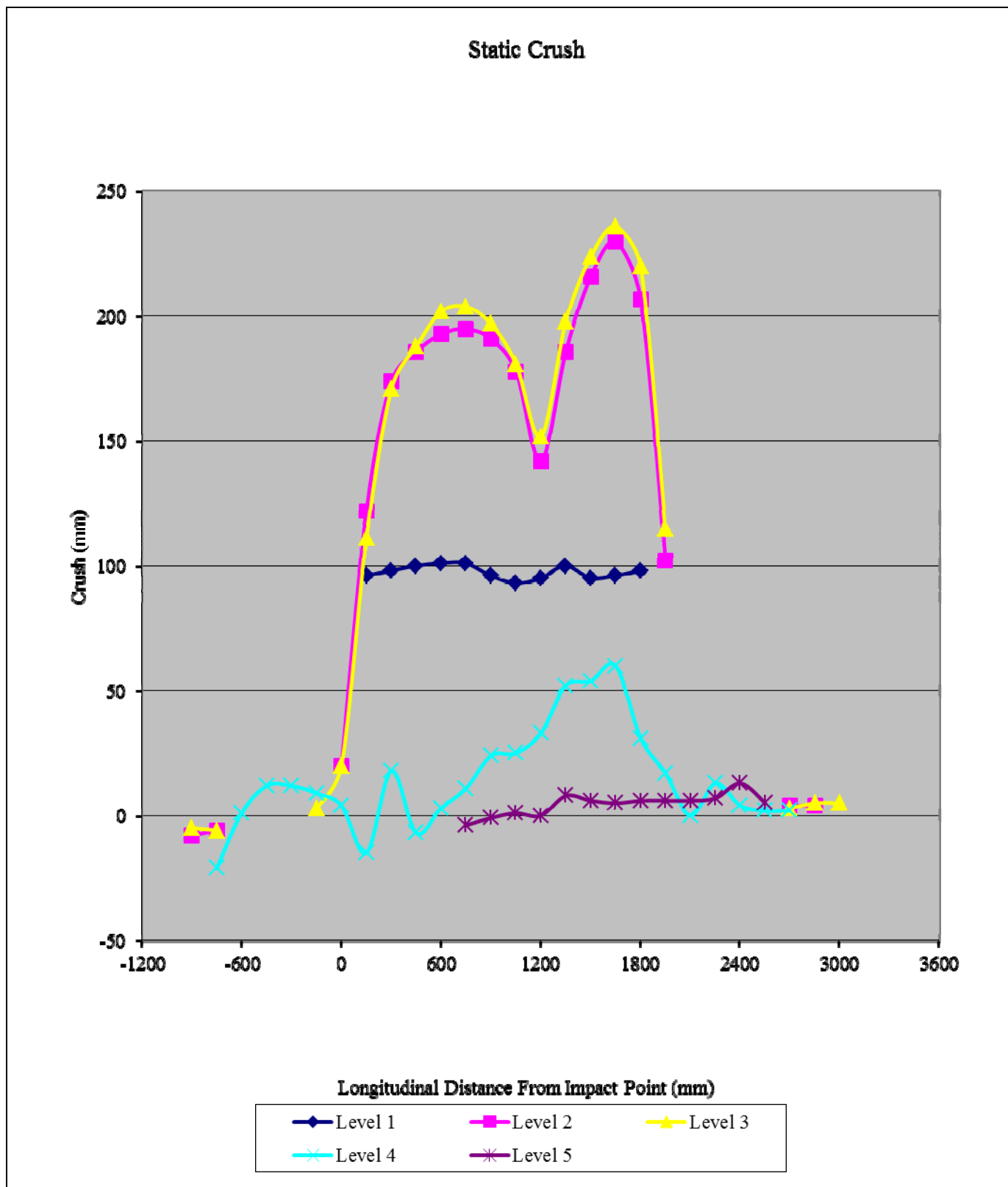
LEFT SIDE VIEW

MAXIMUM EXTERIOR CRUSH MEASUREMENTS				
Level	Measurement Description	Height Above Ground	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	328	101	600 & 750
2	Occupant Hip Point	671	230	1650
3	Mid-Door	710	236	1650
4	Window Sill	1061	60	1650
5	Window Top	1552	13	2400

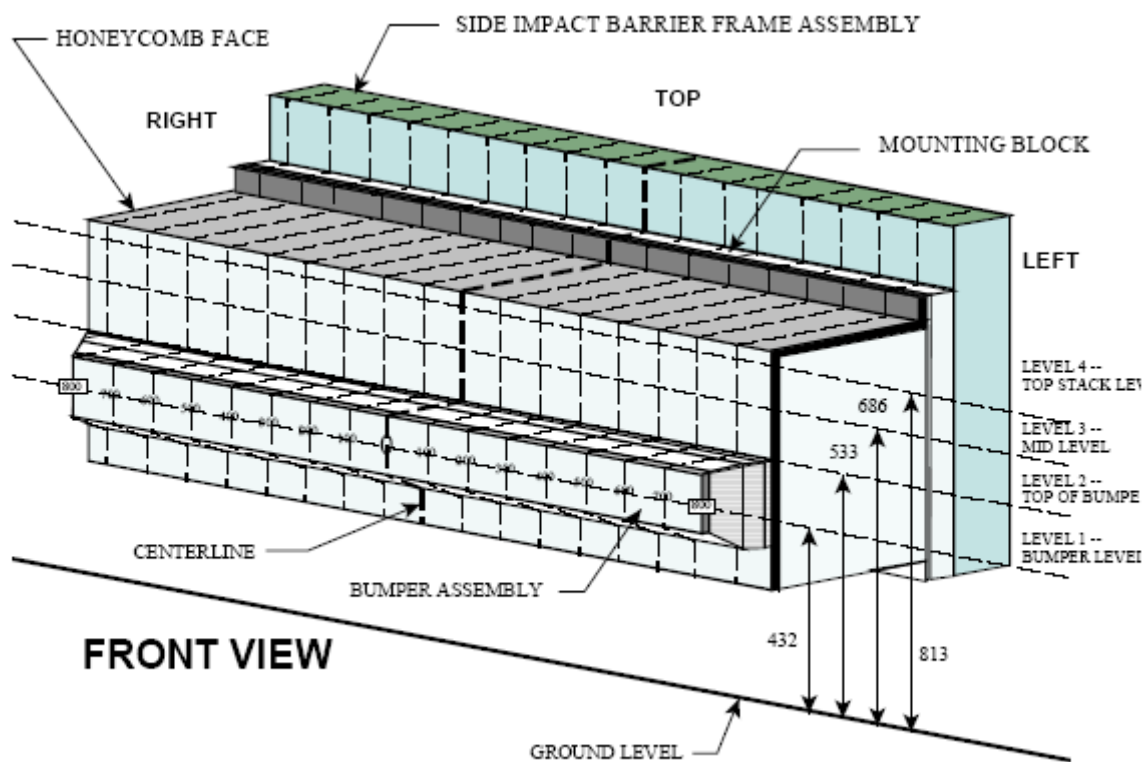
DATA SHEET NUMBER 11
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS (CONTINUED)

EXTERIOR CRUSH MEASUREMENTS AT EACH LEVEL															
Level	1			2			3			4			5		
	Pre	Post	Crush	Pre	Post	Crush	Pre	Post	Crush	Pre	Post	Crush	Pre	Post	Crush
DISTANCE IN MILLIMETERS (mm) FROM IMPACT POINT	-1050														
	-900			302	294	-8	303	298	-5						
	-750			272	266	-6	273	267	-6	427	406	-21			
	-600									405	406	1			
	-450									386	398	12			
	-300									373	385	12			
	-150						261	264	3	366	375	9			
	0			263	283	20	264	284	20	360	364	4			
	150	294	390	96	276	398	122	276	387	111	355	340	-15		
	300	300	398	98	285	459	174	284	455	171	348	366	18		
	450	301	401	100	286	472	186	284	472	188	339	332	-7		
	600	302	403	101	284	477	193	283	485	202	331	334	3		
	750	303	404	101	283	478	195	281	485	204	324	335	11	527	523
	900	305	401	96	282	473	191	281	478	197	318	342	24	524	523
	1050	307	400	93	282	460	178	281	462	181	313	338	25	526	527
	1200	308	403	95	284	426	142	282	434	152	309	342	33	530	530
	1350	310	410	100	287	473	186	286	484	198	305	357	52	529	537
	1500	311	406	95	289	505	216	288	512	224	301	355	54	531	537
	1650	309	405	96	288	518	230	286	522	236	304	364	60	533	538
	1800	302	400	98	277	484	207	278	498	220	308	339	31	534	540
	1950				270	372	102	268	383	115	313	330	17	538	544
	2100										319	319	0	542	548
	2250										324	337	13	548	555
	2400										331	335	4	556	569
	2550										335	337	2	568	573
	2700				281	285	4	263	266	3	341	343	2		
	2850				313	317	4	281	286	5					
	3000							311	316	5					
	3150														
	3330														

DATA SHEET NUMBER 11
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS (CONTINUED)



DATA SHEET NUMBER 12
MDB EXTERIOR STATIC CRUSH MEASUREMENTS



NOTE: Dimensions are shown in millimeters, mm

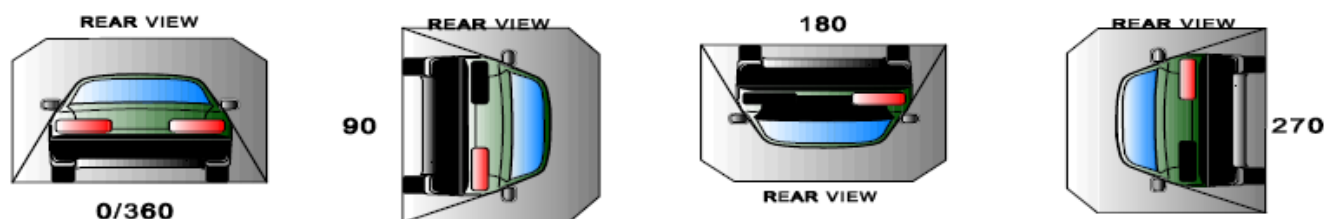
DEFORMABLE BARRIER STATIC CRUSH																	
	Distance Left of Center								C _L	Distance Right of Center							
	800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800
1	207	213	210	212	209	214	212	212	216	214	219	225	224	219	221	234	235
2	134	115	111	110	107	101	98	95	100	108	117	102	97	97	104	112	115
3	138	85	71	57	49	46	48	56	63	86	114	106	73	64	50	46	53
4	184	135	106	97	87	89	76	73	85	101	135	108	75	59	50	55	74

DATA SHEET NO. 13
FMVSS 301 STATIC ROLLOVER RESULTS

Temperature at Time of Impact: 21° C Test Time: 2:15 pm

STODDARD SOLVENT SPILLAGE MEASUREMENTS				
Period	Description	Maximum Allowable Spillage	Spillage	
			Amount	Location
A	From Impact Until Vehicle Motion Ceases	1 oz	0	N/a
B	5 Minutes After Vehicle Motion Ceases	5 oz	0	N/a
C	Next 25 Minutes	1 oz/minute	0	N/a
D	Spillage Details:			

FMVSS 301 STATIC ROLLOVER



ROLLOVER SOLVENT COLLECTION TIME TABLE IN SECONDS			
Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	64	300	364
90° to 180°	66	300	366
180° to 270°	66	300	366
270° to 360°	65	300	365

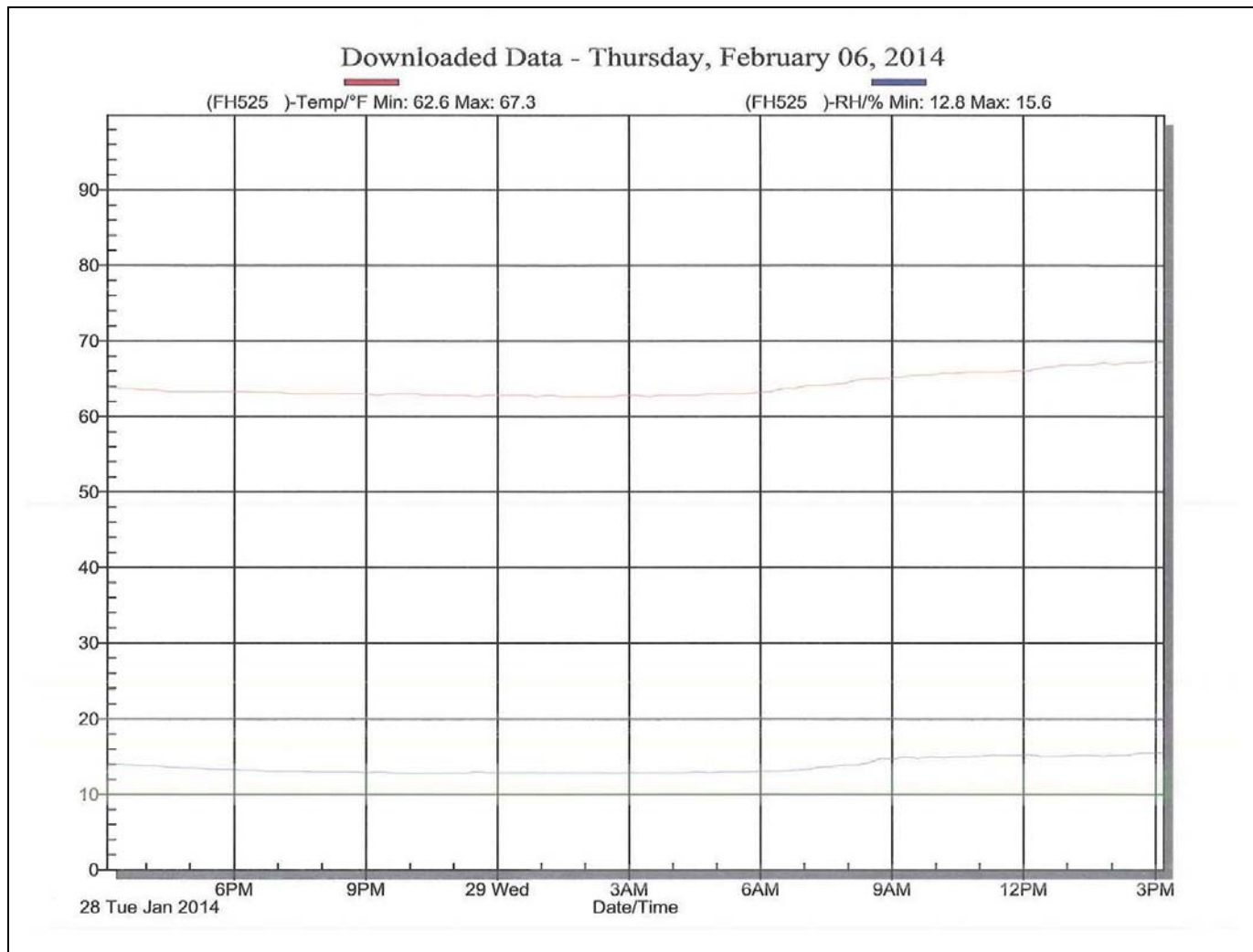
DATA SHEET NO. 13
FMVSS 301 STATIC ROLLOVER RESULTS (CONTINUED)

FMVSS No. 301 ROLLOVER SPILLAGE TABLE				
	First 5 Minutes	Sixth Minute	Seventh Minute	Eighth Minute
0° to 90°	0	0	0	N/a
90° to 180°	0	0	0	N/a
180° to 270°	0	0	0	N/a
270° to 360°	0	0	0	N/a

FMVSS No. 301 STATIC ROLLOVER - SPILLAGE				
	First five minutes (oz)	Sixth minute (oz)	Seventh minute (oz)	Eighth minute (oz)
Max allowable leakage	5.0	1.0	1.0	1.0
0° to 90°	0	0	0	N/a
90° to 180°	0	0	0	N/a
180° to 270°	0	0	0	N/a
270° to 360°	0	0	0	N/a

ROLLOVER SOLVENT SPILLAGE LOCATION TABLE	
Test Phase	Spillage Location
0° to 90°	N/a
90° to 180°	N/a
180° to 270°	N/a
270° to 360°	N/a

DATA SHEET 14
DUMMY/VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION DATA



Test Vehicle: 2014 Mitsubishi Outlander 5-Door MPV
Test Program: SINCAP

NHTSA Number: M20145602
Test Date: January 29, 2014

APPENDIX A PHOTOGRAPHS

LIST OF PHOTOGRAPHS

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No. 086	Pre-Test Top View of MDB Impactor Face	A-47
No. 087	Post-Test Top View of MDB Impactor Face	A-48
No. 088	Pre-Test Left Side View of MDB Impactor Face	A-48
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No. 100	FMVSS No. 301 Static Rollover 360°	A-54
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No. 104	Left Rear Passenger Head Restraint Use and Adjustment Information from Vehicle Owner's Manual	A-56



Figure A-1: As-Delivered Right Front 3-4 View of Test Vehicle



Figure A-2: As-Delivered Left Rear 3-4 View of Test Vehicle

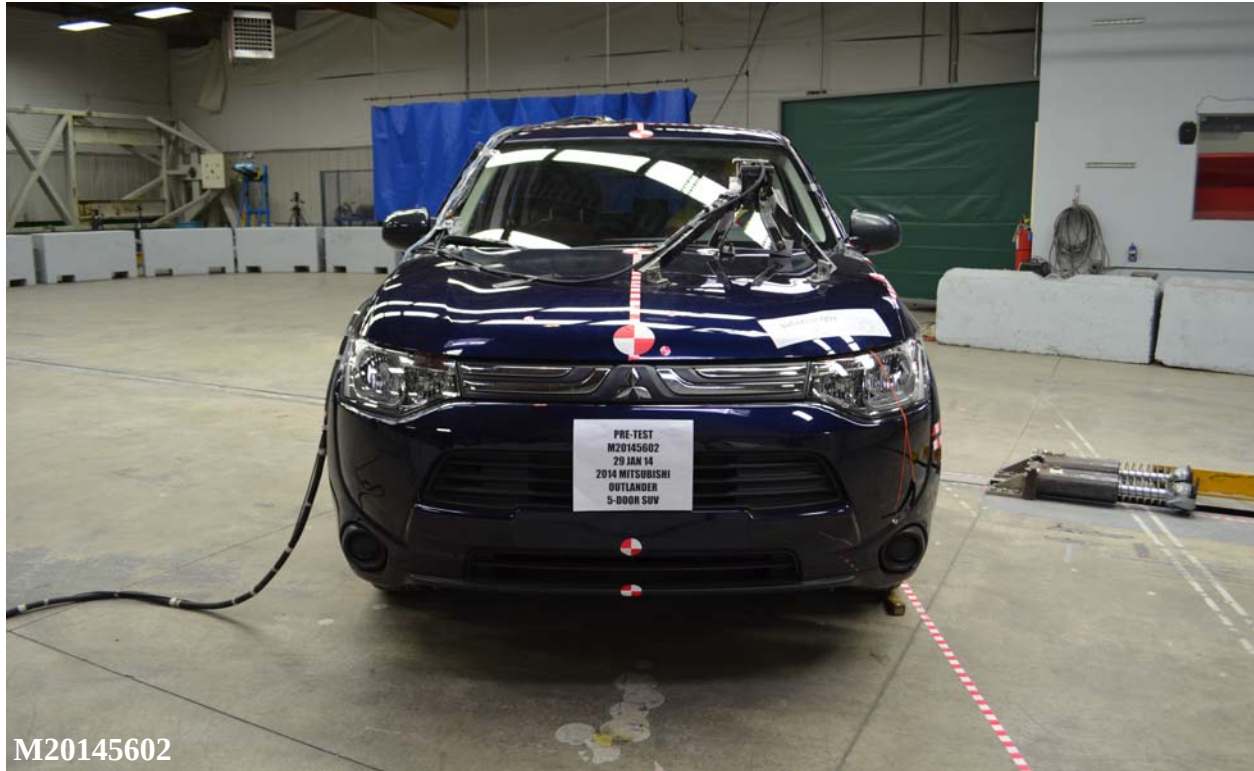


Figure A-3: Pre-Test Frontal View of the Test Vehicle



Figure A-4: Post-Test Frontal View of Test Vehicle



M20145602

Figure A-5: Pre-Test Left Front 3-4 View of Test Vehicle



M20145602

Figure A-6: Post-Test Left Front 3-4 View of Test Vehicle



Figure A-7: Pre-Test Left Side View of Test Vehicle



Figure A-8: Post-Test Left Side View of Test Vehicle



Figure A-9: Pre-Test Left Rear 3-4 View of Test Vehicle

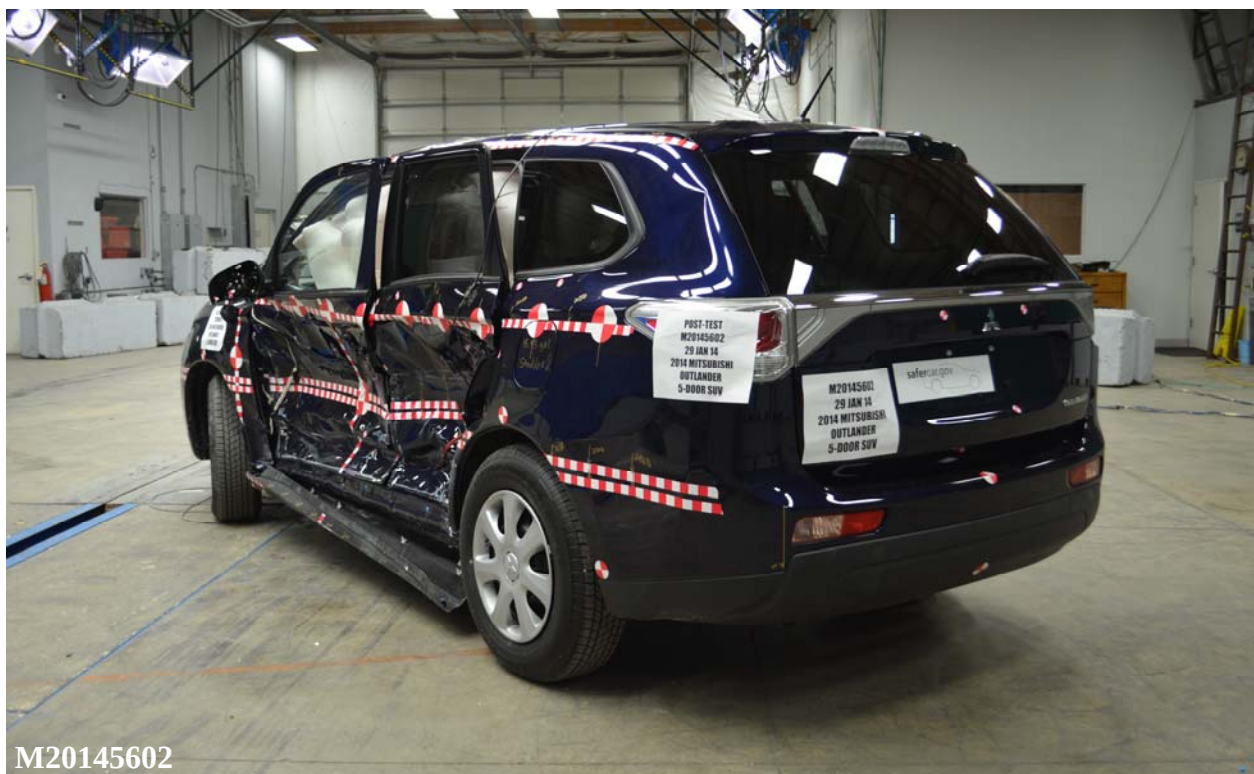


Figure A-10: Post-Test Left Rear 3-4 View of Test Vehicle



Figure A-11: Pre-Test Rear View of Test Vehicle



Figure A-12: Post-Test Rear View of Test Vehicle



Figure A-13: Pre-Test Right Side View of Test Vehicle



Figure A-14: Post-Test Right Side View of Test Vehicle

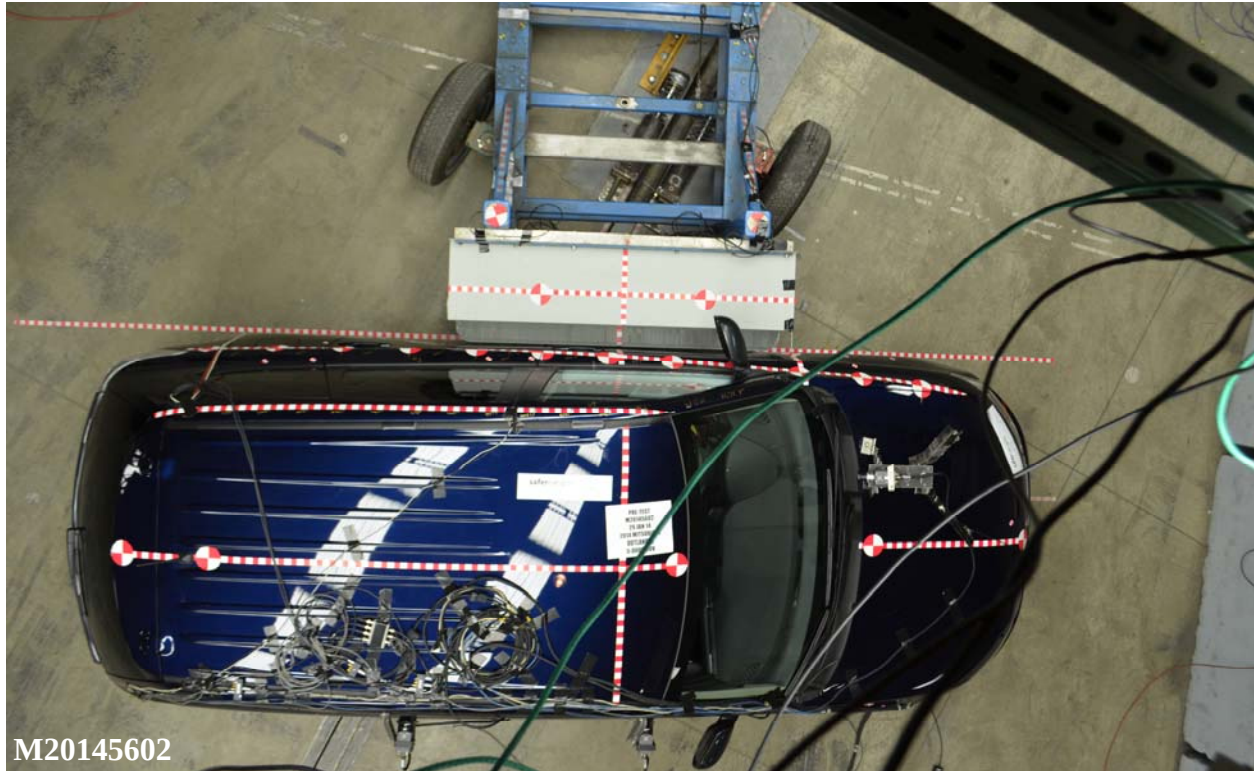


Figure A-15: Pre-Test Overhead View of Test Area



Figure A-16: Post-Test Overhead View of Test Area



Figure A-17: Pre-Test Left Side View of MDB Positioned Against Side of Test Vehicle



Figure A-18: Pre-Test Right Side View of MDB Positioned Against Side of Test Vehicle

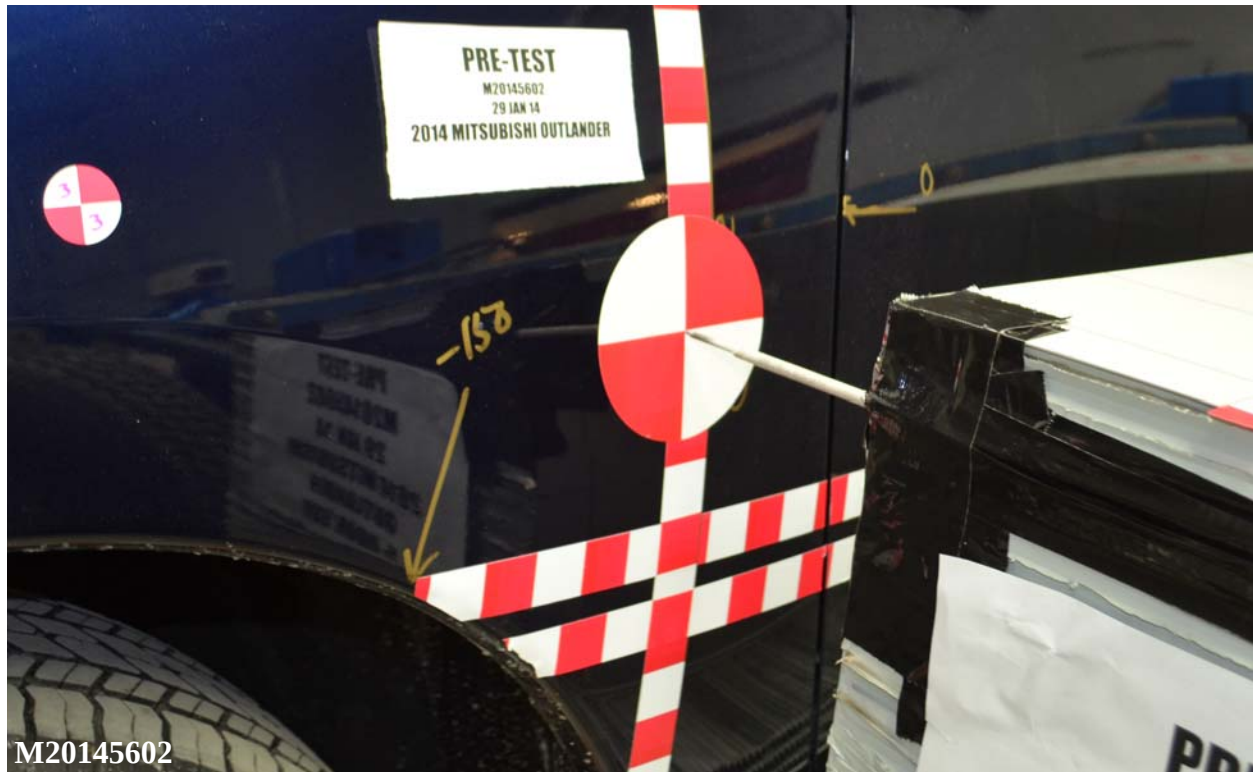


Figure A-19: Pre-Test Close-Up View of Impact Point Target



Figure A-20: Post-Test Close-Up View of Impact Point Target



Figure A-21: Pre-Test Left Front Door Latch Close-Up



Figure A-22: Post-Test Left Front Door Latch Close-Up

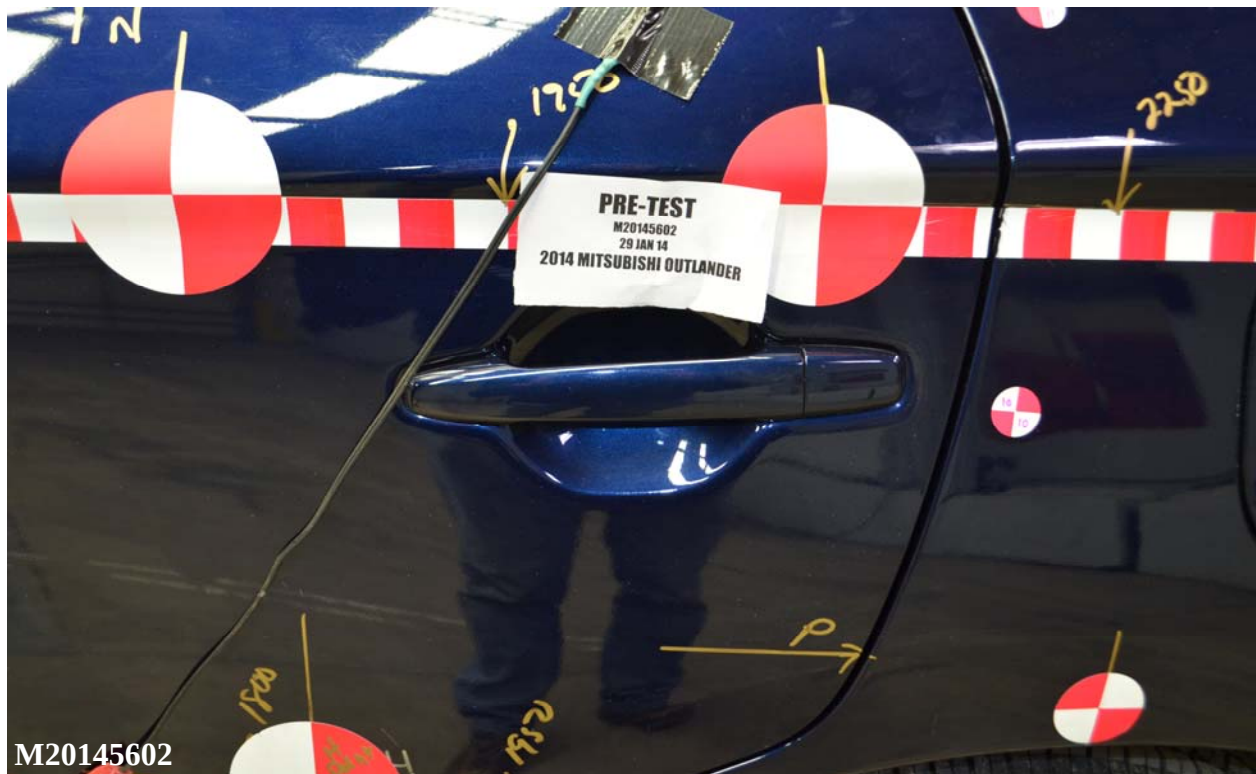


Figure A-23: Pre-Test Left Rear Door Latch Close-Up



Figure A-24: Post-Test Left Rear Door Latch Close-Up



Figure A-25: Pre-Test Front Close-Up View of Driver Dummy



Figure A-26: Post-Test Front Close-Up View of Driver Dummy



Figure A-27: Pre-Test Left Side View of Driver Dummy Showing Belt and Chalking



Figure A-28: Pre-Test Left Side View of Driver Dummy Shoulder and Door Top View



Figure A-29: Post-Test Left Side View of Driver Dummy Shoulder and Door Top View

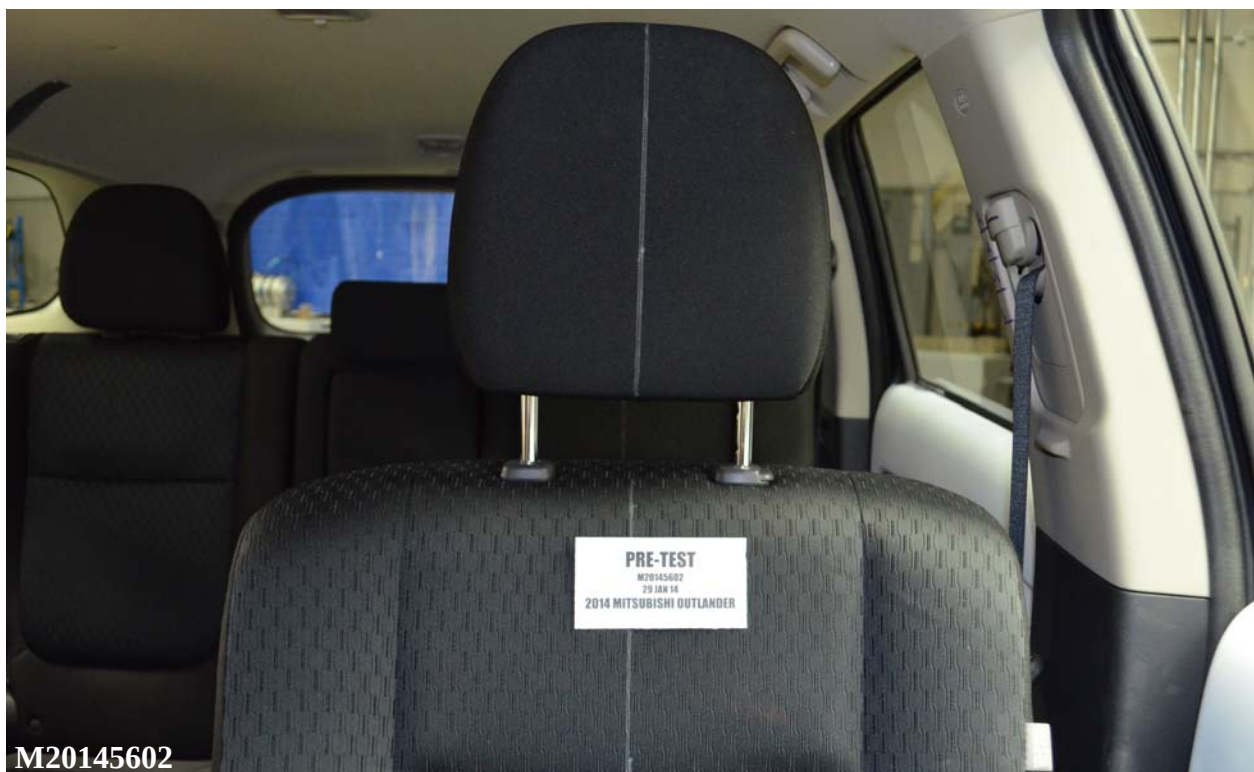


Figure A-30: Pre-Test Frontal View of Driver Seat Back Prior to Dummy Positioning



Figure A-31: Pre-Test Frontal View of Driver Dummy Head and Shoulders in Relation to Head Restraint



Figure A-32: Pre-Test Frontal View of Driver Seat Pan Prior to Dummy Positioning



Figure A-33: Pre-Test Overhead View of Driver Dummy Thighs on Seat Pan



Figure A-34: Pre-Test Placement of Driver Dummy's Feet



Figure A-35: Pre-Test View of Belt Anchorage for Driver Dummy



Figure A-36: Pre-Test Left Side View of Steering Wheel



Figure A-37: View of Disengaged Parking Brake

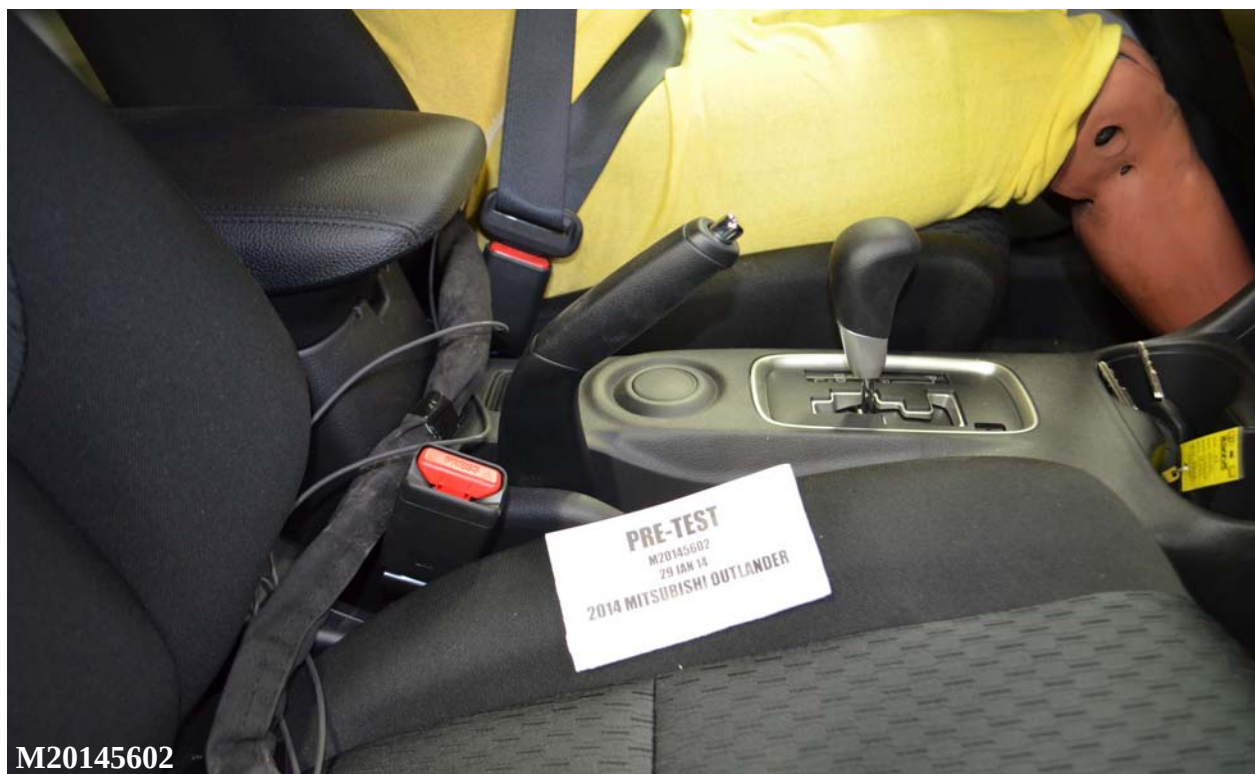


Figure A-38: Pre-Test View of Parking Brake



Figure A-39: Pre-Test Close-Up Left Side View of Driver Seat Track



Figure A-40: Pre-Test Close-Up Left Side View of Driver Seat Back



Figure A-41: Pre-Test Close-Up View of Driver Seat Back or Head Restraint



Figure A-42: Pre-Test Driver Dummy and Door Clearance View



Figure A-43: Post-Test Driver Dummy and Door Clearance View



Figure A-44: Pre-Test Right Side View of Driver Dummy and Front Seat of Occupant Compartment



Figure A-45: Post-Test Right Side View of Driver Dummy and Front Seat Occupant Compartment



Figure A-46: Pre-Test Driver Inner Door Panel View



Figure A-47: Post-Test Driver Inner Door Panel View Showing Driver Dummy Contact Locations



Figure A-48: Post-Test Driver Dummy Close-Up Head Contact With Vehicle Interior View



Figure A-49: Post-Test Driver Dummy Close-Up Head Contact with Side Airbag View



Figure A-50: Post-Test Driver Dummy Close-Up Torso Contact with Vehicle Interior View

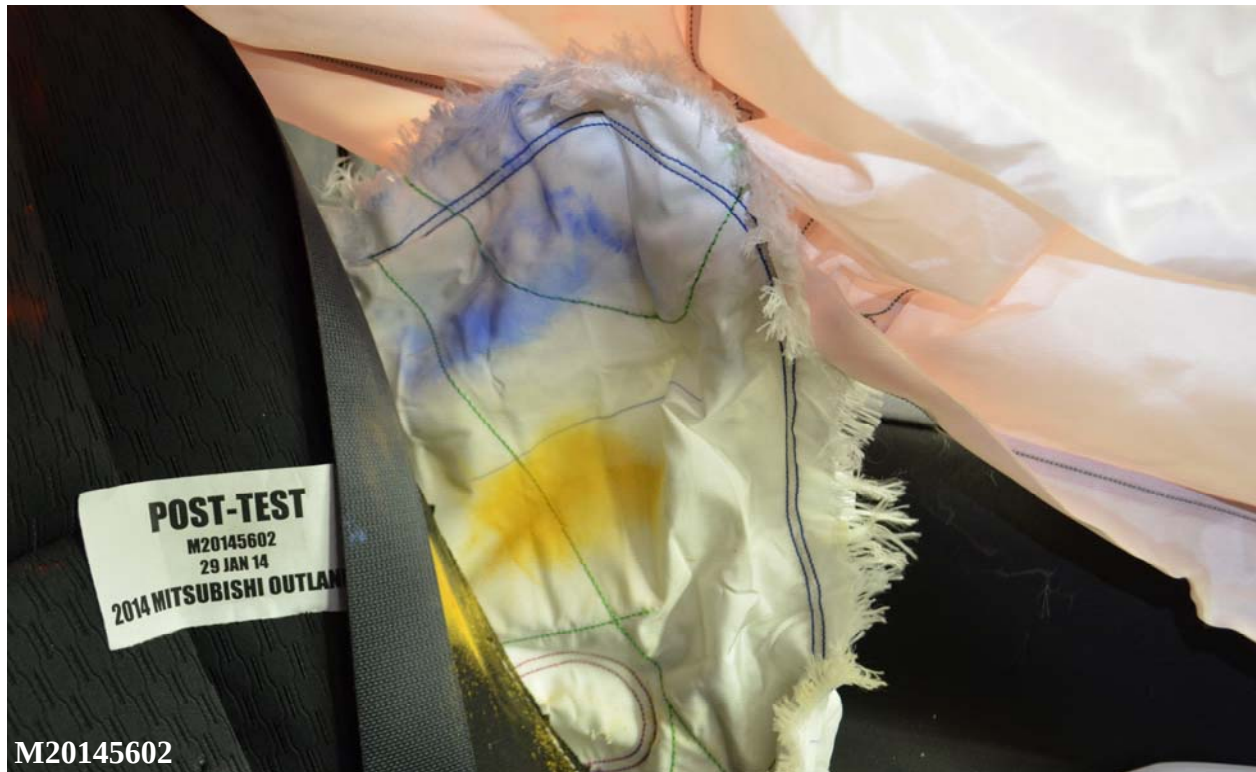


Figure A-51: Post-Test Driver Dummy Close-Up Torso Contact with Side Air Bag View



Figure A-52: Post-Test Driver Dummy Close-Up Pelvis Contact With Vehicle Interior View



Figure A-53: Post-Test Driver Dummy Close-Up Pelvis Contact with Side Airbag View



Figure A-54: Post-Test Driver Dummy Close-Up Knee Contact View



Figure A-55: Pre-Test Left Side View of Rear Passenger Dummy Showing Belt and Chalking



Figure A-56: Pre-Test Left Side View of Rear Passenger Dummy Shoulder and Door Top View



Figure A-57: Post-Test Left Side View of Rear Passenger Dummy Shoulder and Door Top View



Figure A-58: Pre-Test Frontal View of Rear Passenger Seat Back Prior to Dummy Positioning



Figure A-59 - Pre-Test Frontal View of Rear Passenger Dummy Head and Shoulders in Relation to Head Restraint



Figure A-60: Pre-Test Overhead View of Rear Passenger Seat Pan Prior to Dummy Positioning



Figure A-61: Pre-Test Overhead View of Rear Passenger Dummy Thighs on Seat Pan

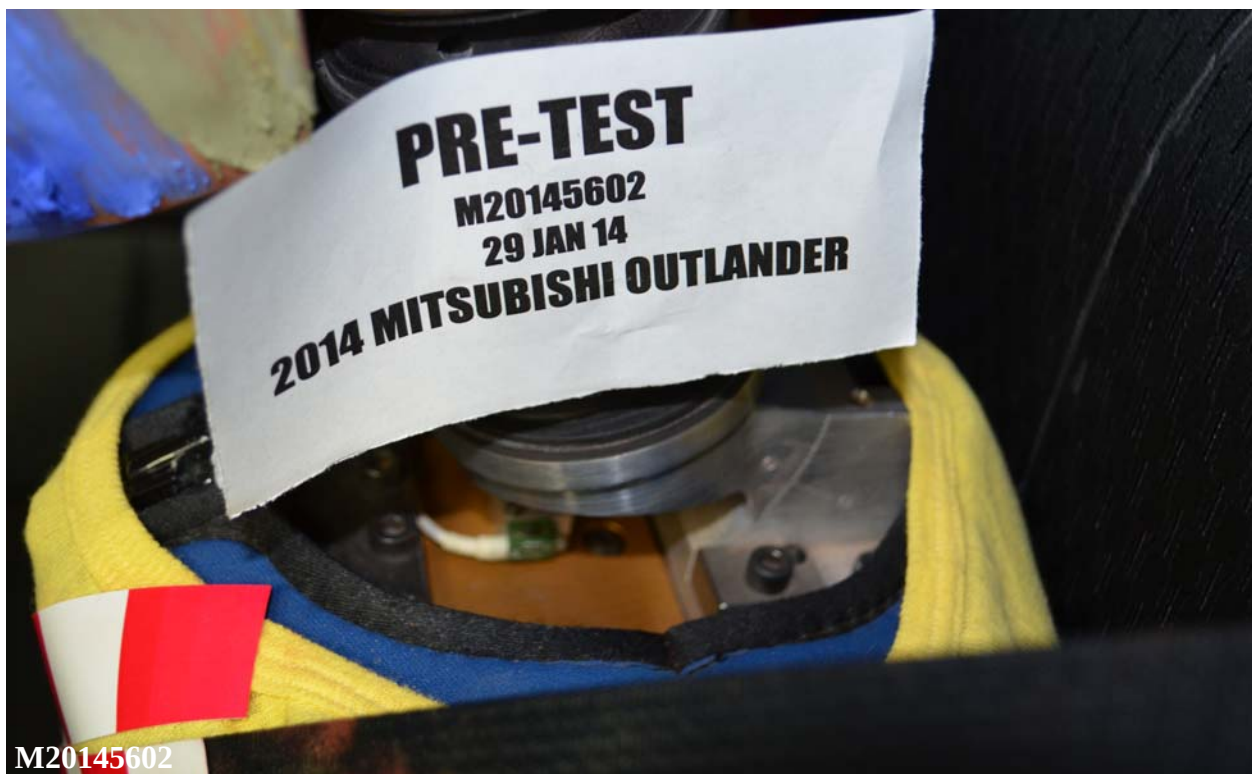


Figure A-62: Pre-Test View of Rear Passenger Dummy's Neck Showing Position of Adjustable Neck Bracket



Figure A-63: Pre-Test View of Rear Passenger Dummy's Head Showing Dummy's Head is Level



Figure A-64: Pre-Test Placement of Rear Passenger Dummy's Feet



Figure A-65: Pre-Test View of Belt Anchorage for Rear Passenger Dummy



Figure A-66: Pre-Test Close-Up Left Side View of Rear Passenger Seat Track

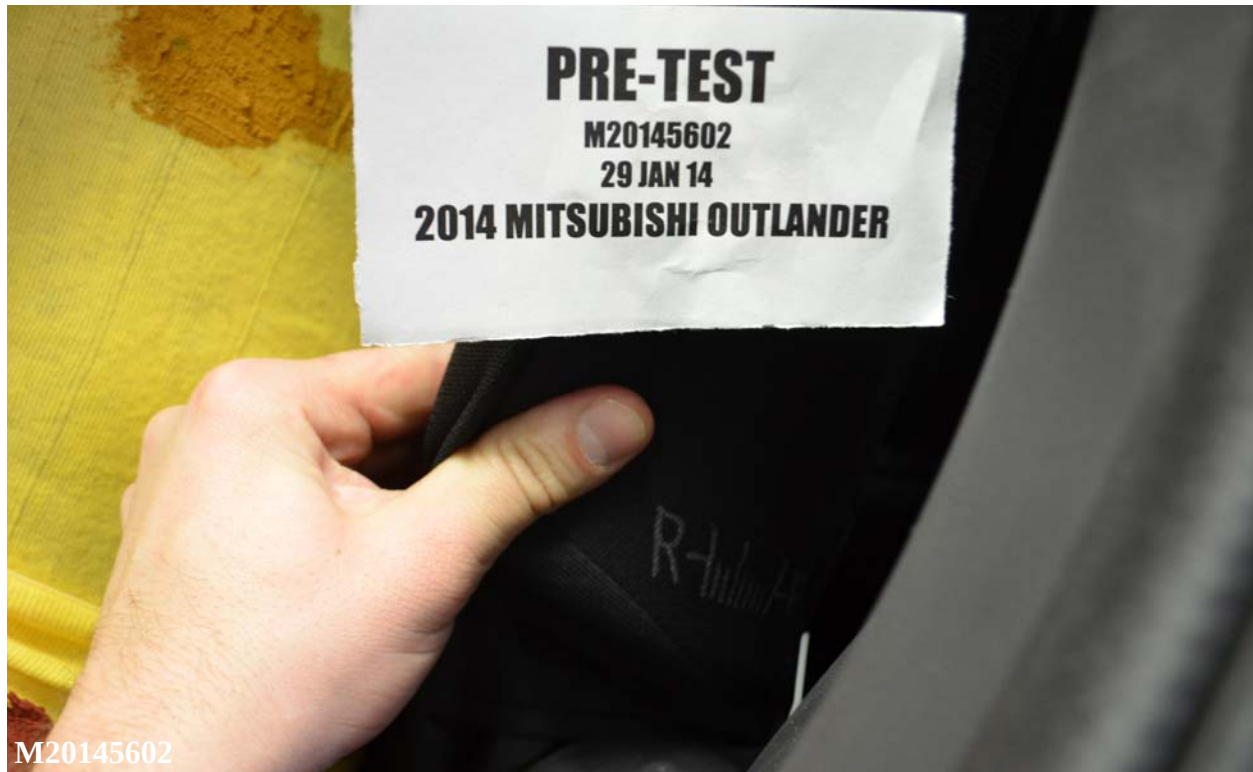


Figure A-67: Pre-Test Close-Up Left Side View of Rear Passenger Seat Back

Not Taken

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Figure A-68: Pre-Test Close-Up View of Rear Passenger Seat Back or Head Restraint

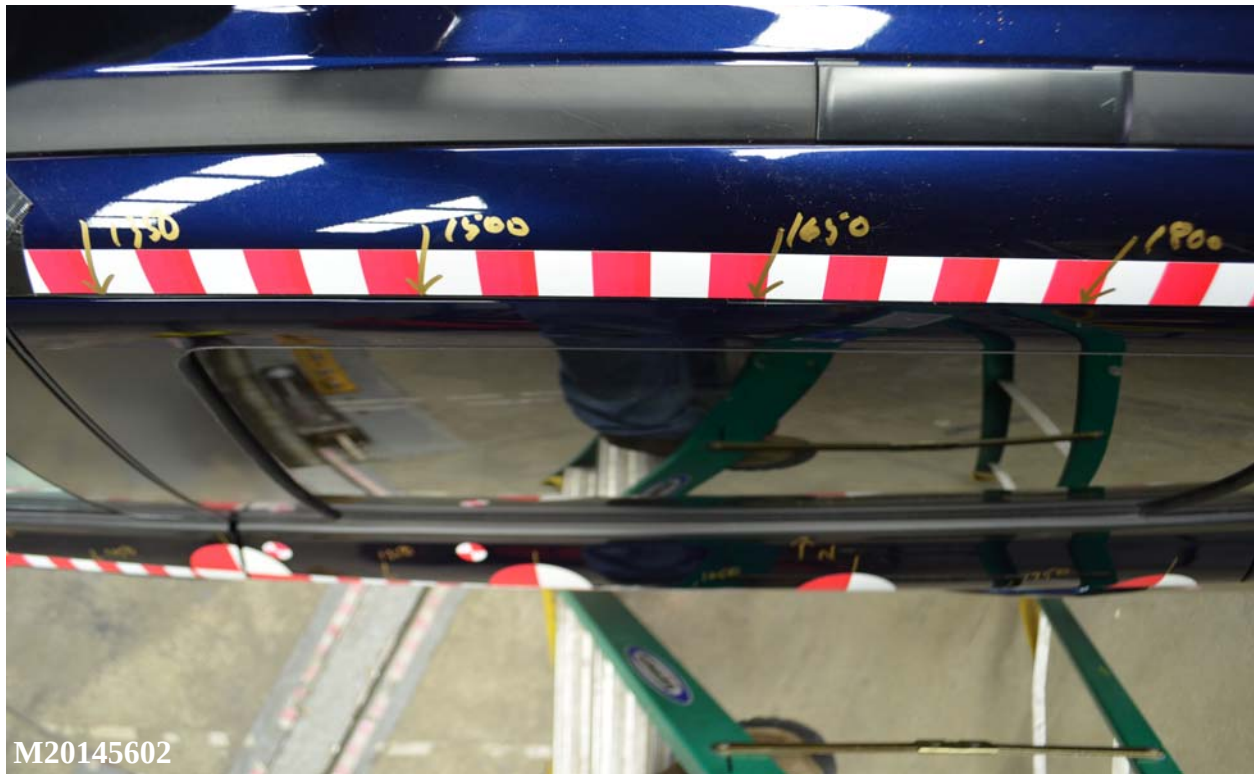


Figure A-69: Pre-Test Rear Passenger Dummy and Door Clearance View



Figure A-70: Post-Test Rear Passenger Dummy and Door Clearance View



Figure A-71: Pre-Test Right Side View of Rear Passenger Dummy and Rear Seat Occupant Compartment



Figure A-72: Post-Test Right Side View of Rear Passenger Dummy and Rear Seat Occupant Compartment



Figure A-73: Pre-Test Rear Passenger Inner Door Panel View



Figure A-74: Post-Test Rear Passenger Inner Door Panel View Showing Dummy Contact Locations

Not Applicable

M20145602

Figure A-75: Post-Test Rear Passenger Dummy Close-Up Head Contact with Vehicle Interior View - N/a



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Figure A-76: Post-Test Rear Passenger Dummy Close-Up Head Contact with Side Airbag View



Figure A-77: Post-Test Rear Passenger Dummy Close-Up Torso Contact with Vehicle Interior View

Not Applicable

M20145602

Figure A-78: Post-Test Rear Passenger Dummy Close-Up Torso Contact with Side Airbag View - N/a



Figure A-79: Post-Test Rear Passenger Dummy Close-up Pelvis Contact with Vehicle Interior View

Not Applicable

M20145602

Figure A-80: Post-Test Rear Passenger Dummy Close-Up Pelvis Contact with Side Airbag View - N/a



Figure A-81: Post-Test Rear Passenger Dummy Close-Up Knee Contact View



Figure A-82: Pre-Test View of Fuel Filler Cap or Fuel Filler Neck



Figure A-83: Post-Test View of Fuel Filler Cap or Fuel Filler Neck



Figure A-84: Pre-Test Front View of MDB Impactor Face



Figure A-85: Post-Test Front View of MDB Impactor Face



Figure A-86: Pre-Test Top View of MDB Impactor Face



Figure A-87: Post-Test Top View of MDB Impactor Face



Figure A-88: Pre-Test Left Side View of MDB Impactor Face



Figure A-89: Post-Test Left Side View of MDB Impactor Face



Figure A-90: Pre-Test Right Side View of MDB Impactor Face



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Figure A-91: Post-Test Right Side View of MDB Impactor Face



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Figure A-92: Close-Up View of Vehicle's Certification Label



M20145602

Figure A-93: Close-Up View of Vehicle's Tire Information Placard or Label



M20145602

Figure A-94: Pre-Test Ballast View



M20145602

Figure A-95: Post-Test Primary and Redundant Speed Trap Read-Out



M20145602

Figure A-96: FMVSS No. 301 Static Rollover 0 Degrees

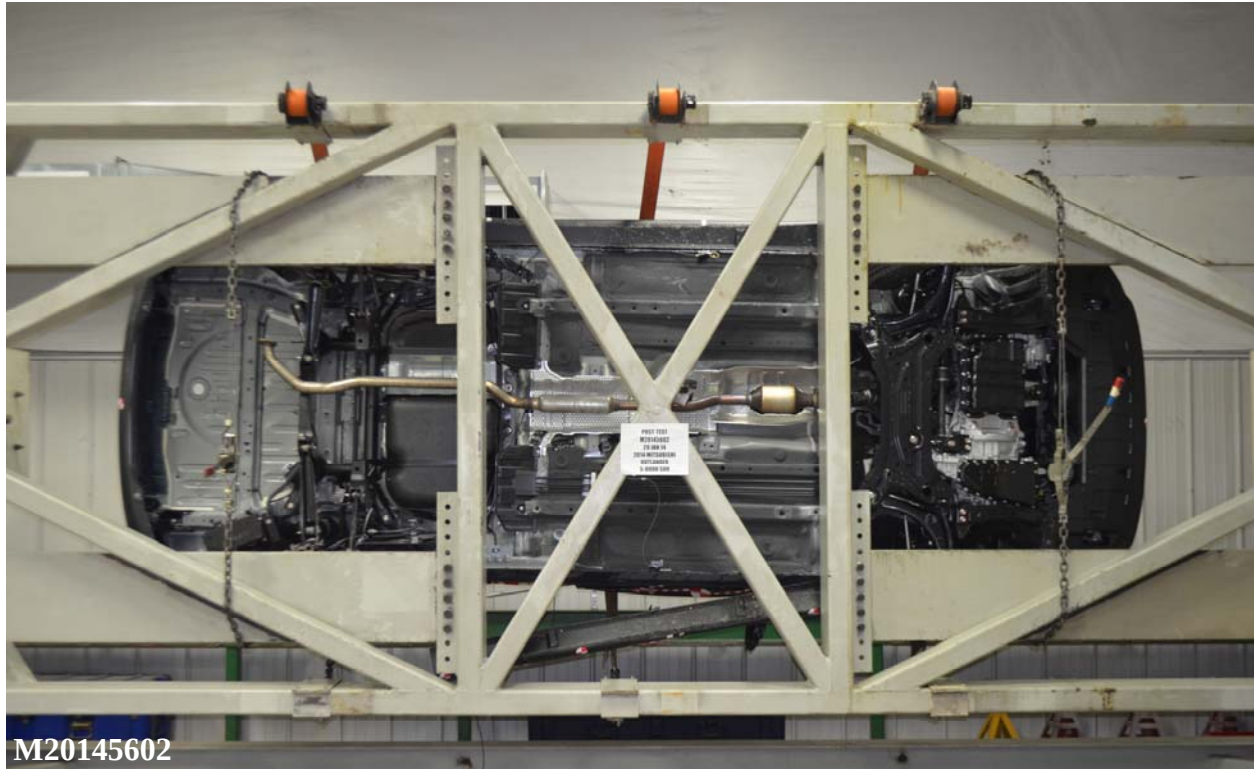


Figure A-97: FMVSS No. 301 Static Rollover 90 Degrees



Figure A-98: FMVSS No. 301 Static Rollover 180 Degrees



Figure A-99: FMVSS No. 301 Static Rollover 270 Degrees



Figure A-100: FMVSS No. 301 Static Rollover 360 Degrees



Figure A-101: Impact Event



2014 OUTLANDER 2.4 ES 2WD
4-DOOR SUV
COSMIC BLUE / BLACK

2.4L 90HC 14 MIVEC
CONTINUOUSLY VARIABLE TRANSMISSION
50-STATE EMISSIONS STANDARD

Optional Equipment
FULL TANK OF GAS

Fuel Economy and Environment

Fuel Economy
27 MPG
combined city/hwy
3.7 gallons per 100 miles

Small SUVs range from 16 to 30 MPG.
The best vehicle rates 121 MPG.

You save \$1,750
in fuel costs
over 5 years
compared to the
average new vehicle.

Annual fuel cost \$1,950

Fuel Economy & Greenhouse Gas Rating
1 7 10
This vehicle emits 326 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions. Learn more at fueleconomy.gov.

10-year LIMITED POWERTRAIN WARRANTY
10"/100,000 7"/100,000
POWERTRAIN 5"/60,000 5"/UNLIMITED
www.mitsubishi.com

GOVERNMENT 5-STAR SAFETY RATINGS
This vehicle has not been rated by the government for overall vehicle score, frontal crash, side crash, or rollover risk.
Source: National Highway Traffic Safety Administration (NHTSA).
www.safercar.gov or 1-888-327-4236

Ports Content Information
For vehicles in this carline:
U.S./Canadian Parts Content: 0%
Major Sources of Foreign Parts Content: JAPAN 96%
For this vehicle:
Final Assembly Point: OKAZAKI, JAPAN
Country of Origin: JAPAN
Engine: JAPAN
Transmission: JAPAN
Note: Parts content does not include final assembly, distribution, or other non-parts costs.

Mitsubishi Motors

MSRP: \$22,995.00
Total Optional Equipment: \$0.00
Subtotal: \$22,995.00
Destination/Handling: \$825.00
Total MSRP: \$23,820.00

Ship To: (DBA) SCHLOSSMANN CITY
49052 4640 S. 27TH STREET
MILWAUKEE, WI 53221

Sold To: (Same unless indicated)

Method of Transport: RAIL
Place/Port of Entry: TACOMA, WA
VIN: JA4AD2A30E2007945
Route Code: RJ0

Gasoline, license and title fees, applicable federal, state and local taxes and dealer and distributor installed options and accessories are not included.

Figure A-102: Monroney Label

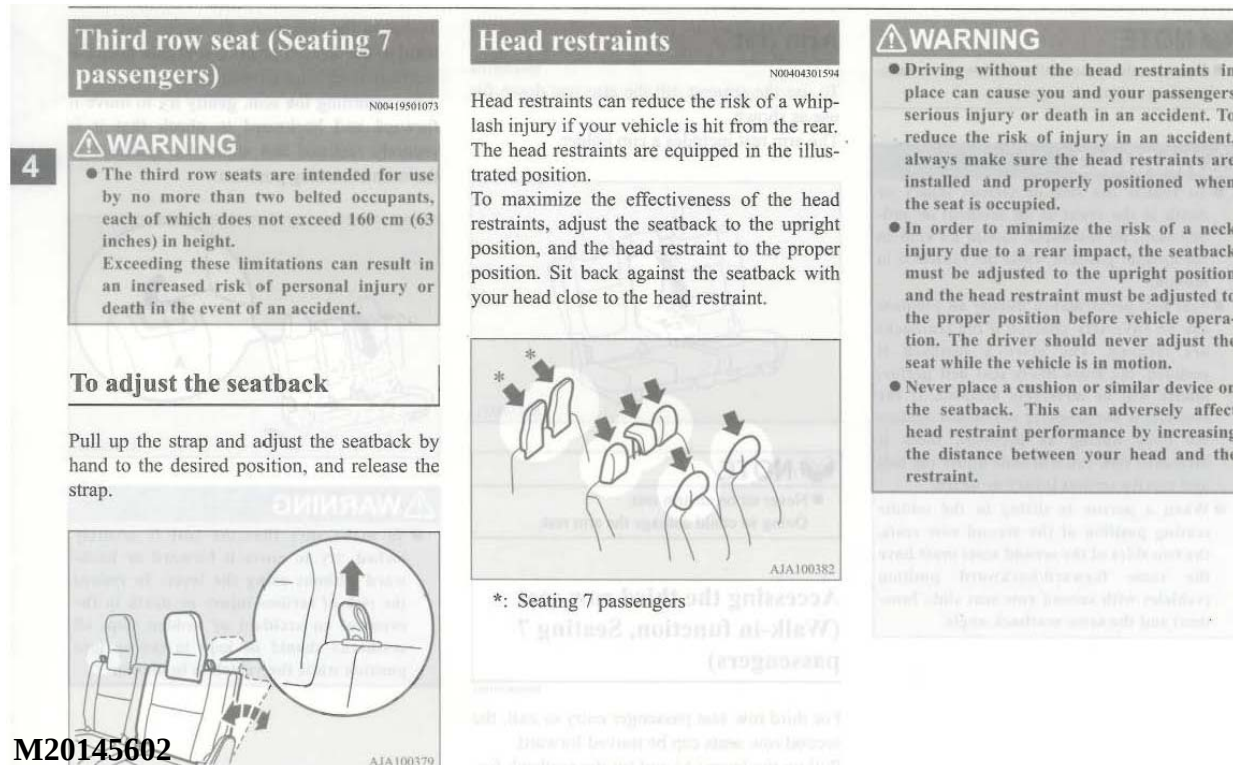


Figure A-103: Driver Head Restraint Use and Adjustment Information from Vehicle Owner's Manual

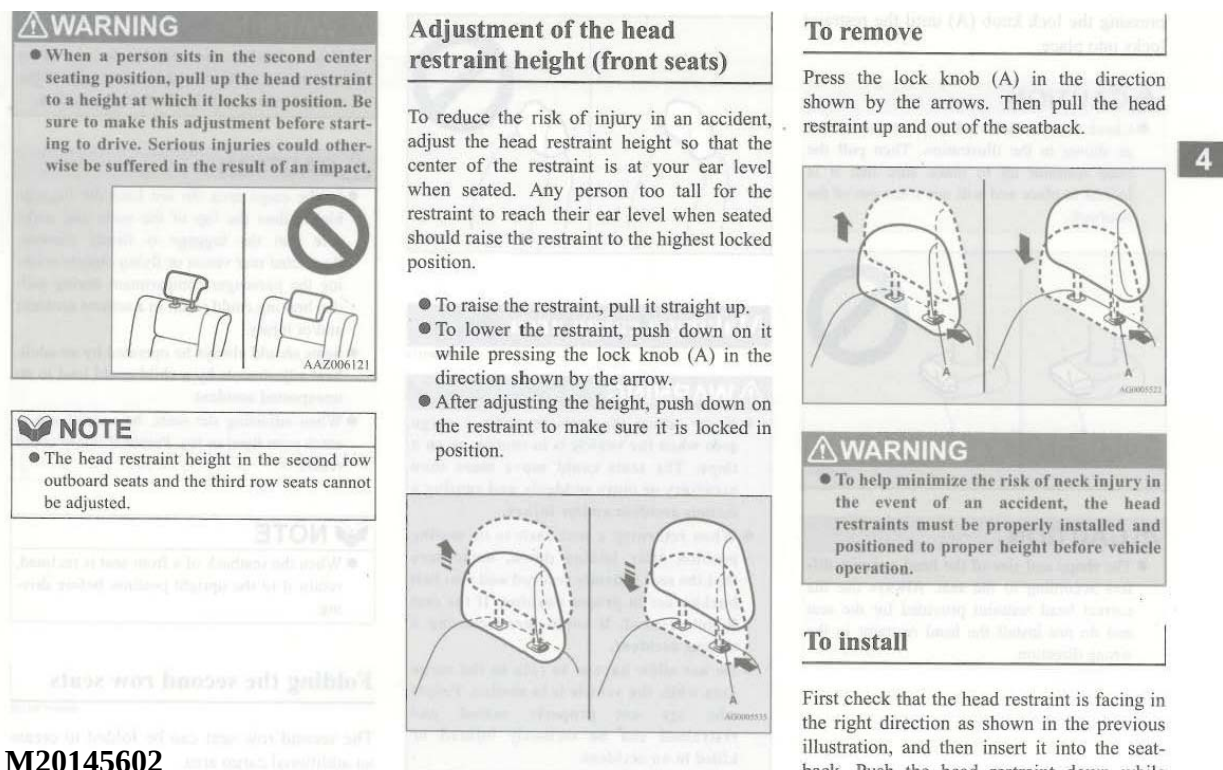


Figure A-104: Left Rear Passenger Head Restraint Use and Adjustment Information from Vehicle Owner's Manual

Test Vehicle: 2014 Mitsubishi Outlander 5-Door MPV
Test Program: SINCAP

NHTSA Number: M20145602
Test Date: January 29, 2014

APPENDIX B
DRIVER & PASSENGER DUMMY INSTRUMENTATION PLOTS

The following plots are provided in the test report

Data Plot	Description	Page
1	Driver Head Acceleration (X) Primary vs. Time	B-4
2	Driver Head Acceleration (Y) Primary vs. Time	B-5
3	Driver Head Acceleration (Z) Primary vs. Time	B-6
4	Driver Head Resultant Acceleration Primary vs. Time	B-7
5	Driver Upper Thorax Rib Deflection (Y) vs. Time	B-8
6	Driver Middle Thorax Rib Deflection (Y) vs. Time	B-9
7	Driver Lower Thorax Rib Deflection (Y) vs. Time	B-10
8	Driver Thorax Rib Deflection Maximum vs. Time	B-11
9	Driver Anterior Abdominal Force (Y) vs. Time	B-12
10	Driver Middle Abdominal Force (Y) vs. Time	B-13
11	Driver Posterior Abdominal Force (Y) vs. Time	B-14
12	Driver Total Abdominal Force (Y) vs. Time	B-15
13	Driver Pubic Symphysis Force (Y) vs. Time	B-16
14	Passenger Head Acceleration (X) Primary vs. Time	B-17
15	Passenger Head Acceleration (Y) Primary vs. Time	B-18
16	Passenger Head Acceleration (Z) Primary vs. Time	B-19
17	Passenger Head Resultant Acceleration Primary vs. Time	B-20
18	Passenger Lower Spine T ₁₂ Acceleration (X) vs. Time	B-21
19	Passenger Lower Spine T ₁₂ Acceleration (Y) vs. Time	B-22
20	Passenger Lower Spine T ₁₂ Acceleration (Z) vs. Time	B-23
21	Passenger Lower Spine T ₁₂ Resultant Acceleration vs. Time	B-24
22	Passenger Iliac Force on Impact Side (Y) vs. Time	B-25
23	Passenger Acetabulum Force on Impact Side (Y) vs. Time	B-26
24	Passenger Total Pelvic Force on Impact Side (Y) vs. Time	B-27

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 & Passenger Dummy Instrumentation Data	
Driver Lower Spine T ₁₂ Acceleration (X)	
Driver Lower Spine T ₁₂ Acceleration (Y)	
Driver Lower Spine T ₁₂ Acceleration (Z)	
Passenger Upper Thorax Rib Deflection (Y)	
Passenger Middle Thorax Rib Deflection (Y)	
Passenger Lower Thorax Rib Deflection (Y)	
Passenger Upper Abdomen Rib Deflection (Y)	
Passenger Lower Abdomen Rib Deflection (Y)	
Driver Head Acceleration Redundant (X)	
Driver Head Acceleration Redundant (Y)	
Driver Head Acceleration Redundant (Z)	
Passenger Head Acceleration Redundant (X)	
Passenger Head Acceleration Redundant (Y)	
Passenger Head Acceleration Redundant (Z)	

Vehicle Instrumentation Data

Vehicle Center of Gravity Acceleration (X)
Vehicle Center of Gravity Acceleration (Y)
Vehicle Center of Gravity Acceleration (Z)
Right Side Sill at Front Seat Acceleration (X)
Right Side Sill at Front Seat Acceleration (Y)
Right Side Sill at Front Seat Acceleration (Z)
Right Side Sill at Rear Seat Acceleration (X)
Right Side Sill at Rear Seat Acceleration (Y)
Right Side Sill at Rear Seat Acceleration (Z)
Left Side Sill at Front Seat Acceleration (Y)
Left Side Sill at Rear Seat Acceleration (Y)
Lower A-Post Acceleration (Y)
Middle A-Post Acceleration (Y)
Lower B-Post Acceleration (Y)
Middle B-Post Acceleration (Y)
Front Seat Track Acceleration (Y)
Rear Seat Structure Acceleration (Y)
Right Rear Occupant Compartment Acceleration (Y)
Engine Block (X)
Engine Block (Y)
Rear Floorpan Above Axle Acceleration (X)
Rear Floorpan Above Axle Acceleration (Y)
Rear Floorpan Above Axle Acceleration (Z)

MDB Instrumentation Data

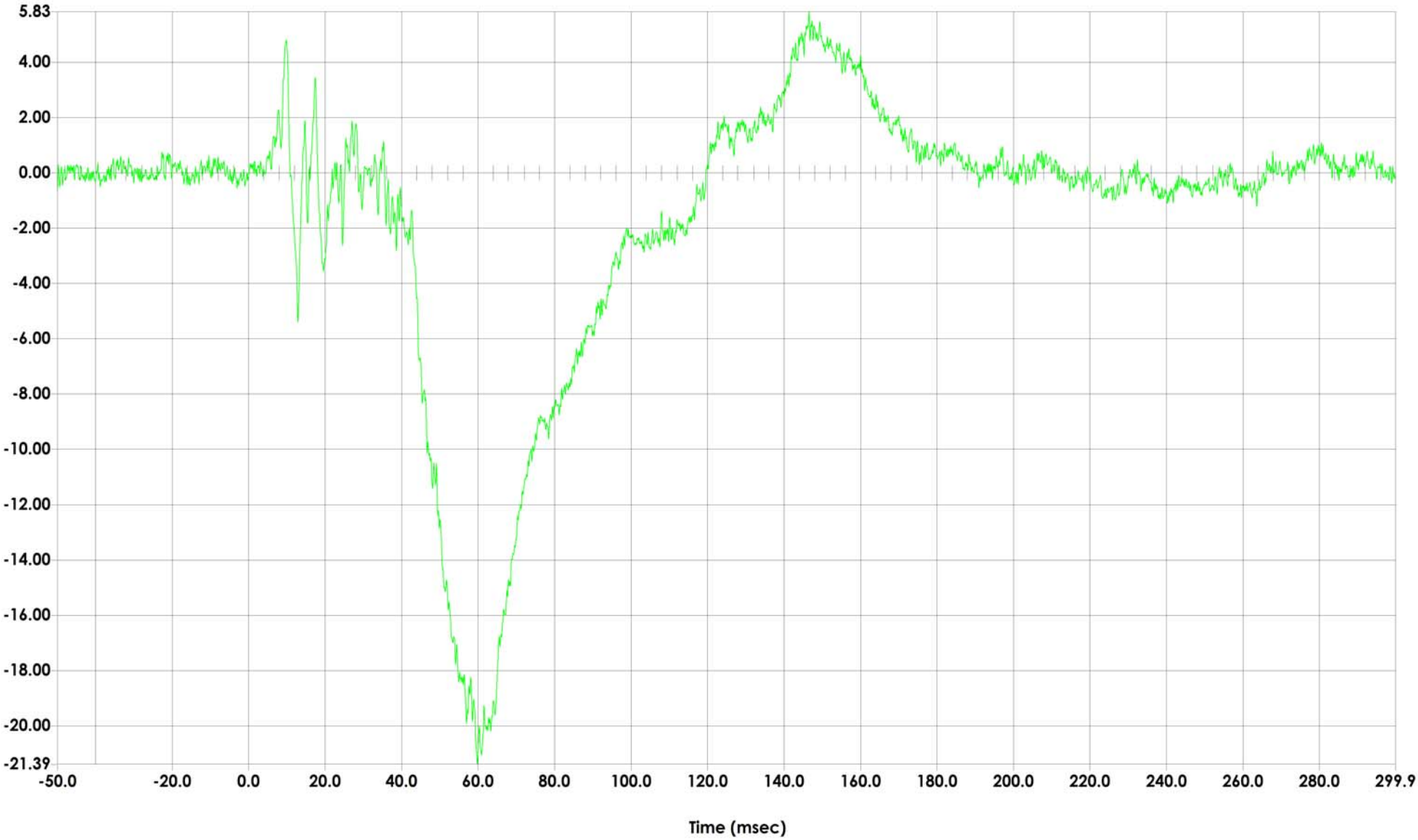
MDB Center of Gravity Acceleration (X)
MDB Center of Gravity Acceleration (Y)
MDB Center of Gravity Acceleration (Z)
MDB Rear Acceleration (X)
MDB Rear Acceleration (Y)
Left MDB Contact Switch
Right MDB Contact Switch

Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	001
Units	G'S

Max	5.83	G'S
	146.48	msec
Min	-21.39	G'S
	59.76	msec



Driver Head Acceleration (X) Primary vs. Time

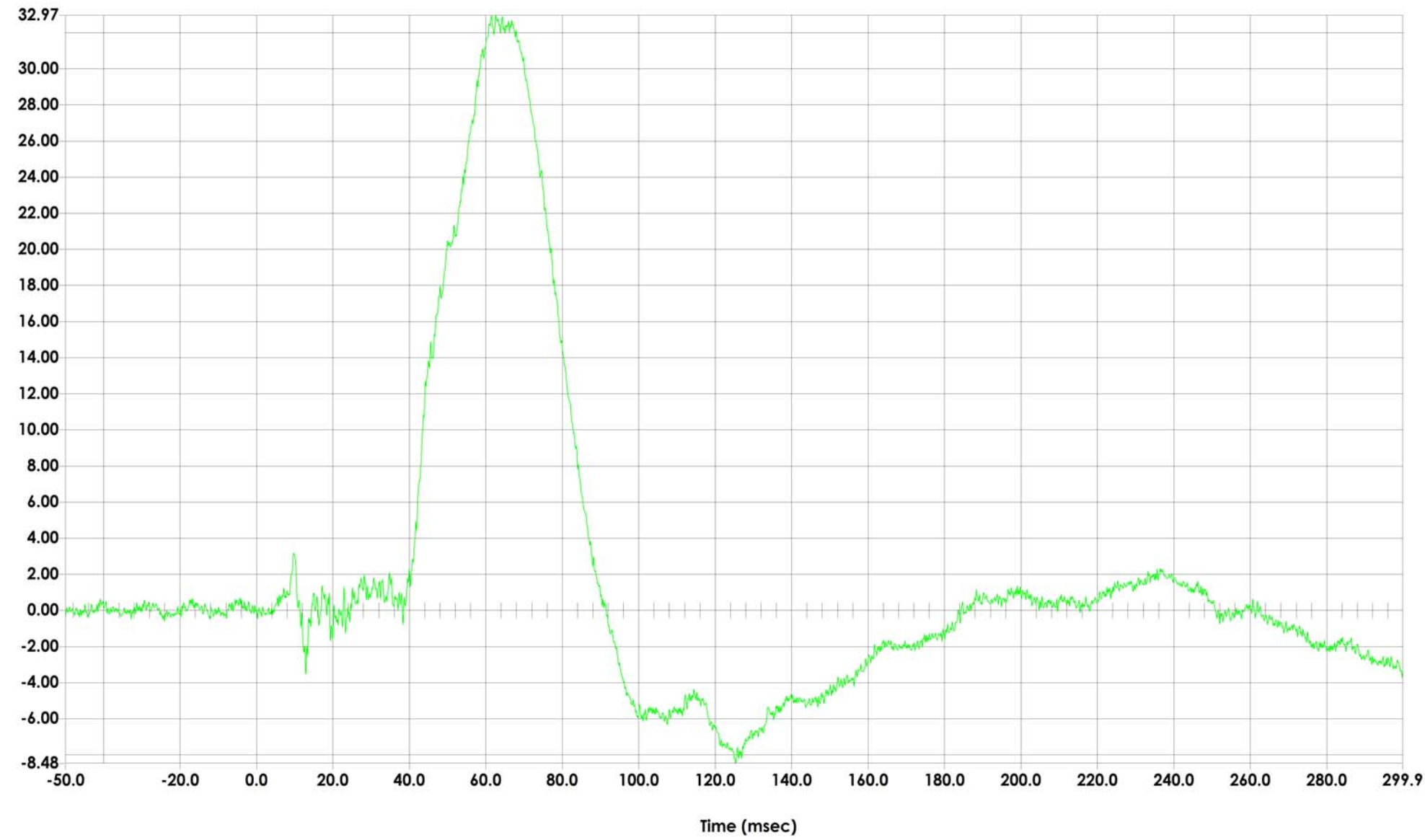


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	002
Units	G'S

Max	32.97	G'S
	61.44	msec
Min	-8.48	G'S
	125.36	msec



Driver Head Acceleration (Y) Primary vs. Time

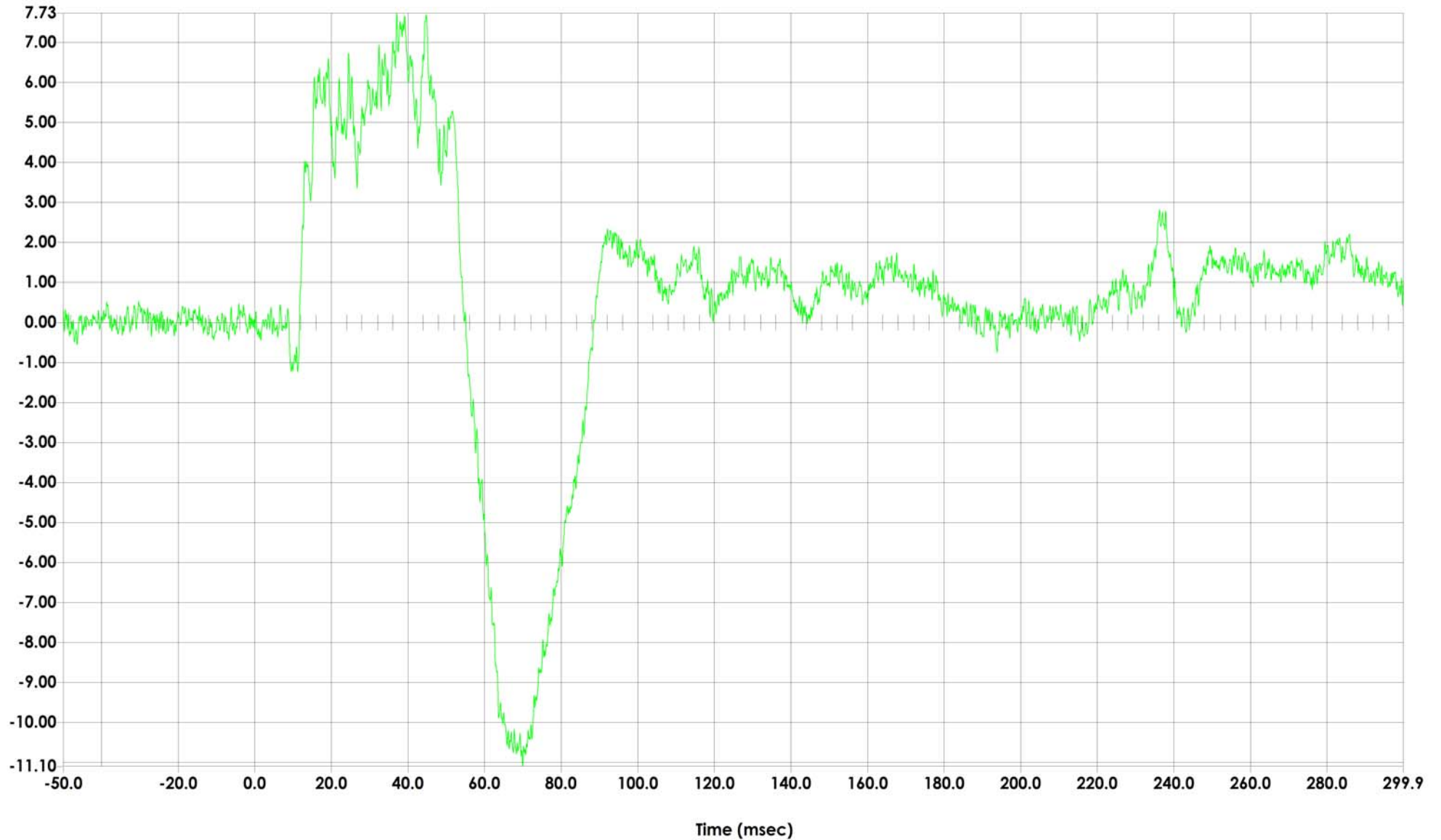


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	003
Units	G'S

Max	7.73	G'S
	37.12	msec
Min	-11.10	G'S
	69.92	msec



Driver Head Acceleration (Z) Primary vs. Time

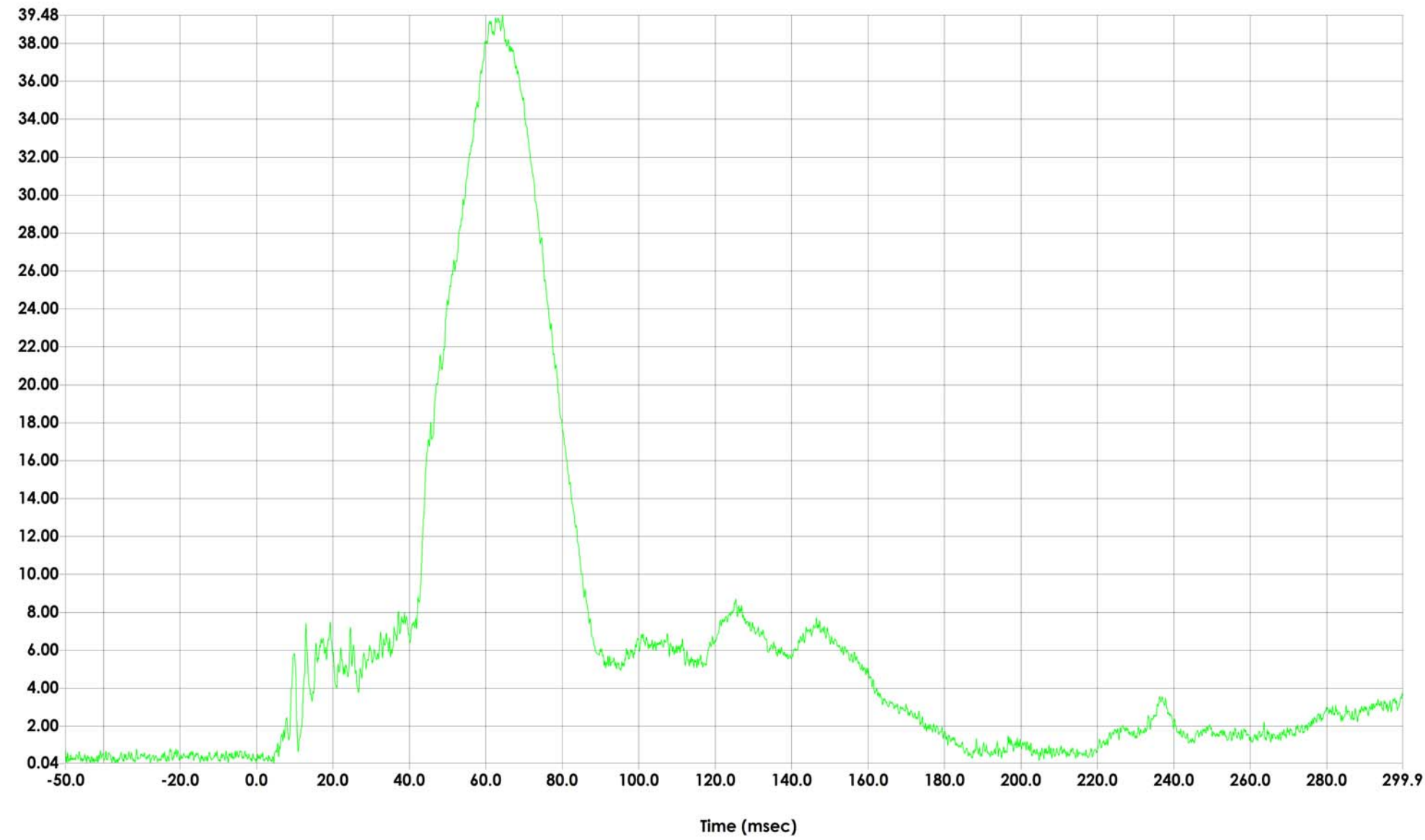


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	063
Units	G'S

Max	39.48	G'S
	64.32	msec
Min	0.04	G'S
	4.48	msec



Driver Head Resultant Acceleration Primary vs. Time

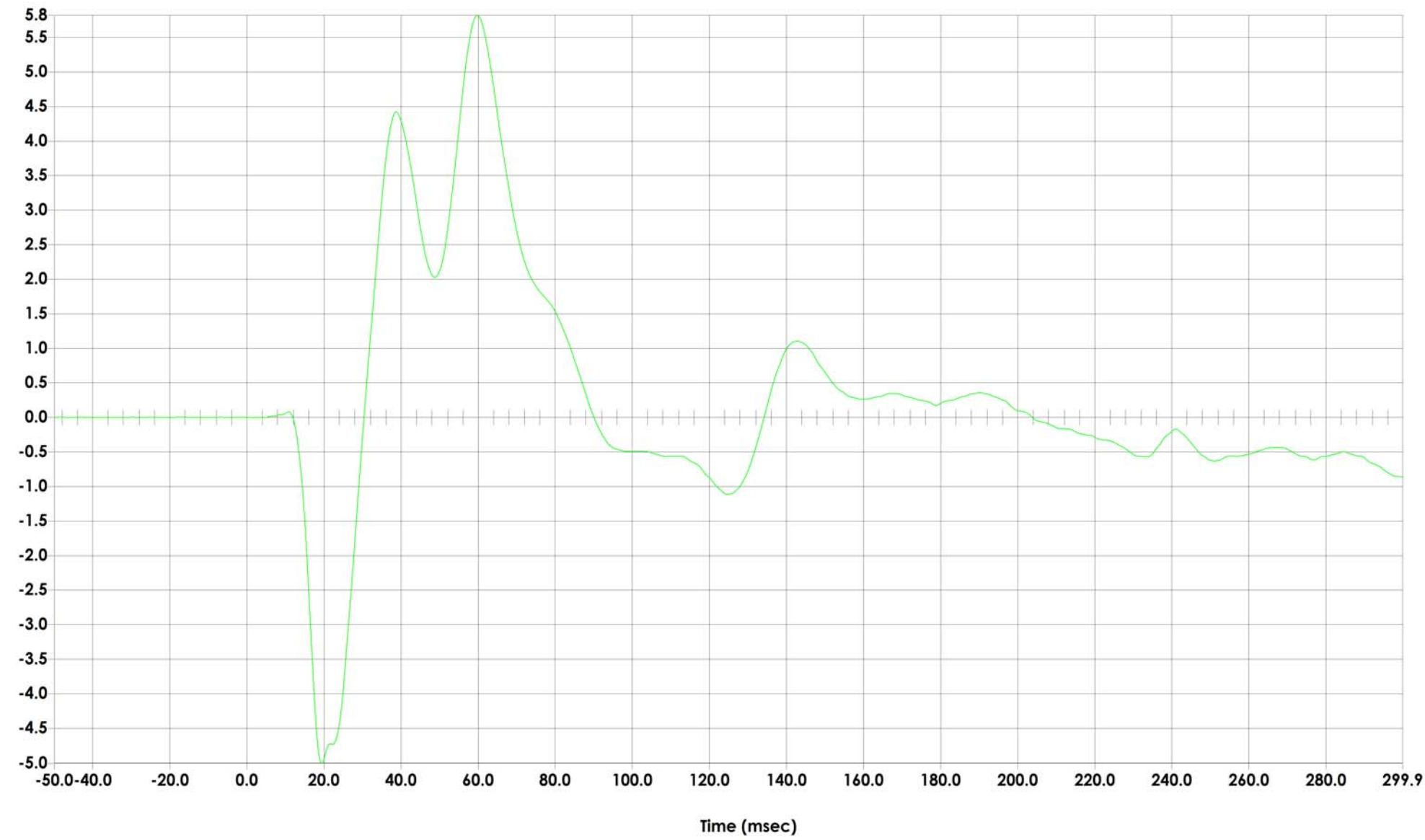


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	007
Units	MM

Max	5.82	MM
	59.76	msec
Min	-5.01	MM
	19.36	msec



Driver Upper Thorax Rib Deflection (Y) vs. Time

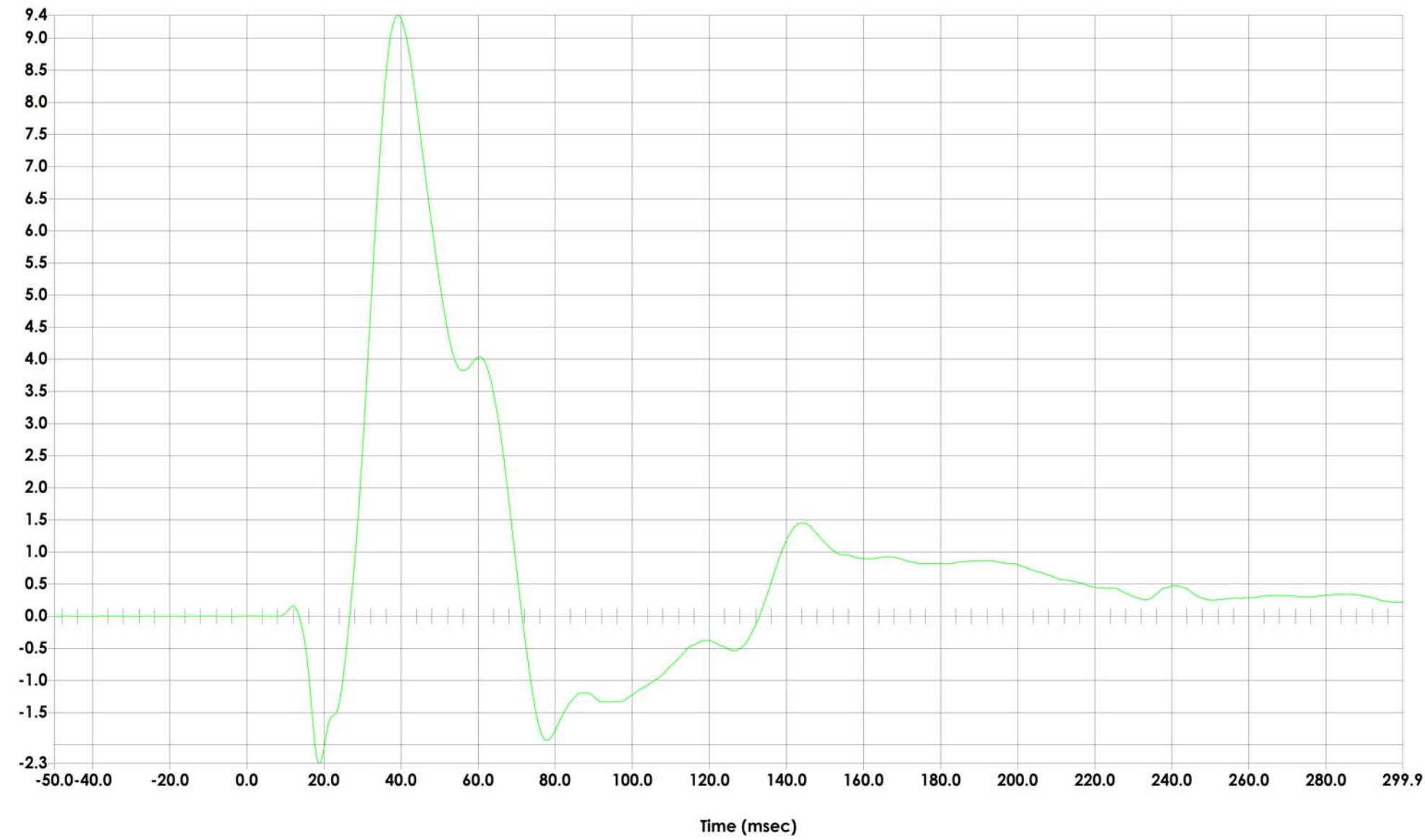


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	008
Units	MM

Max	9.36	MM
	39.20	msec
Min	-2.29	MM
	18.80	msec



Driver Middle Thorax Rib Deflection (Y) vs. Time

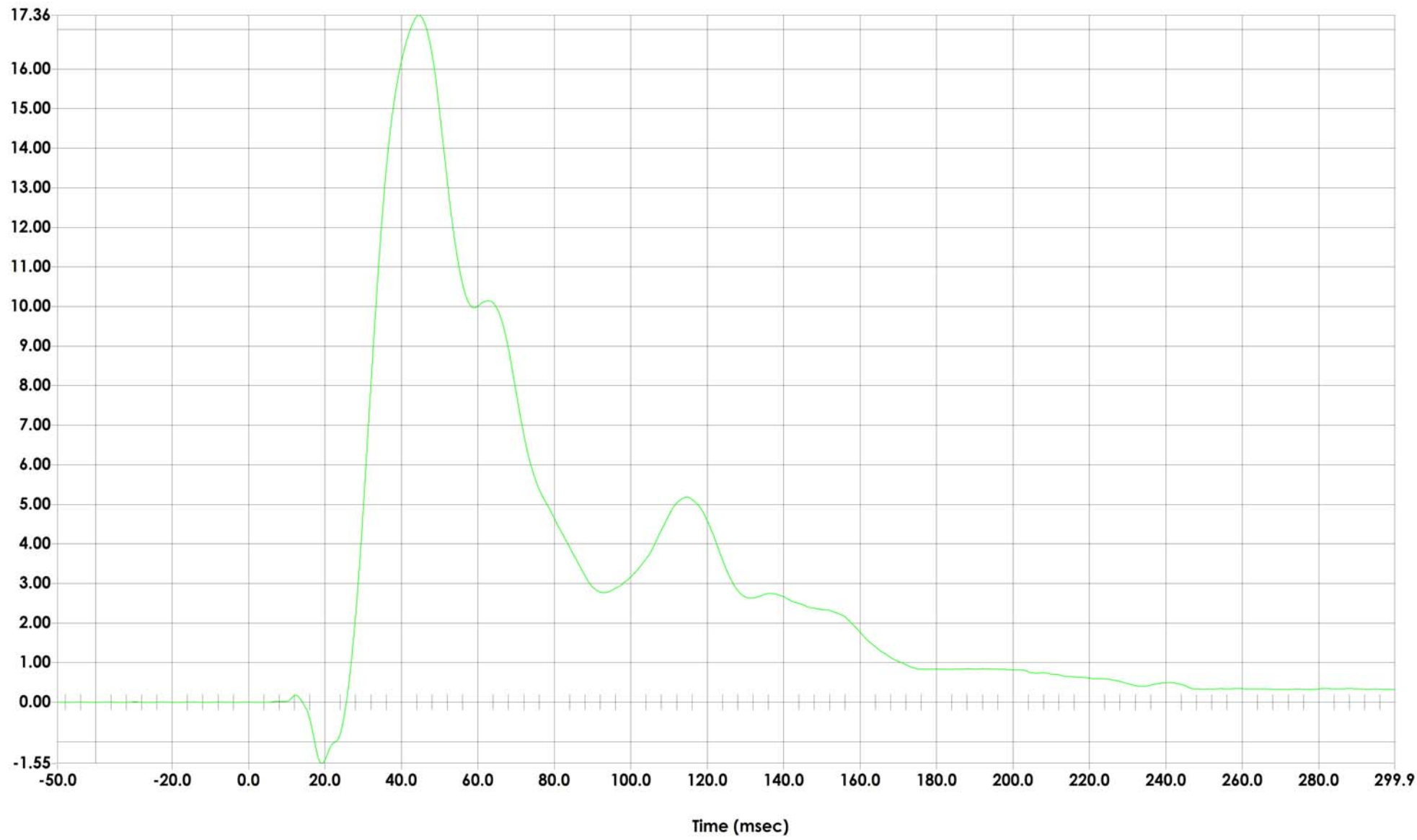


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	009
Units	MM

Max	17.36	MM
	44.56	msec
Min	-1.55	MM
	19.12	msec



Driver Lower Thorax Rib Deflection (Y) vs. Time

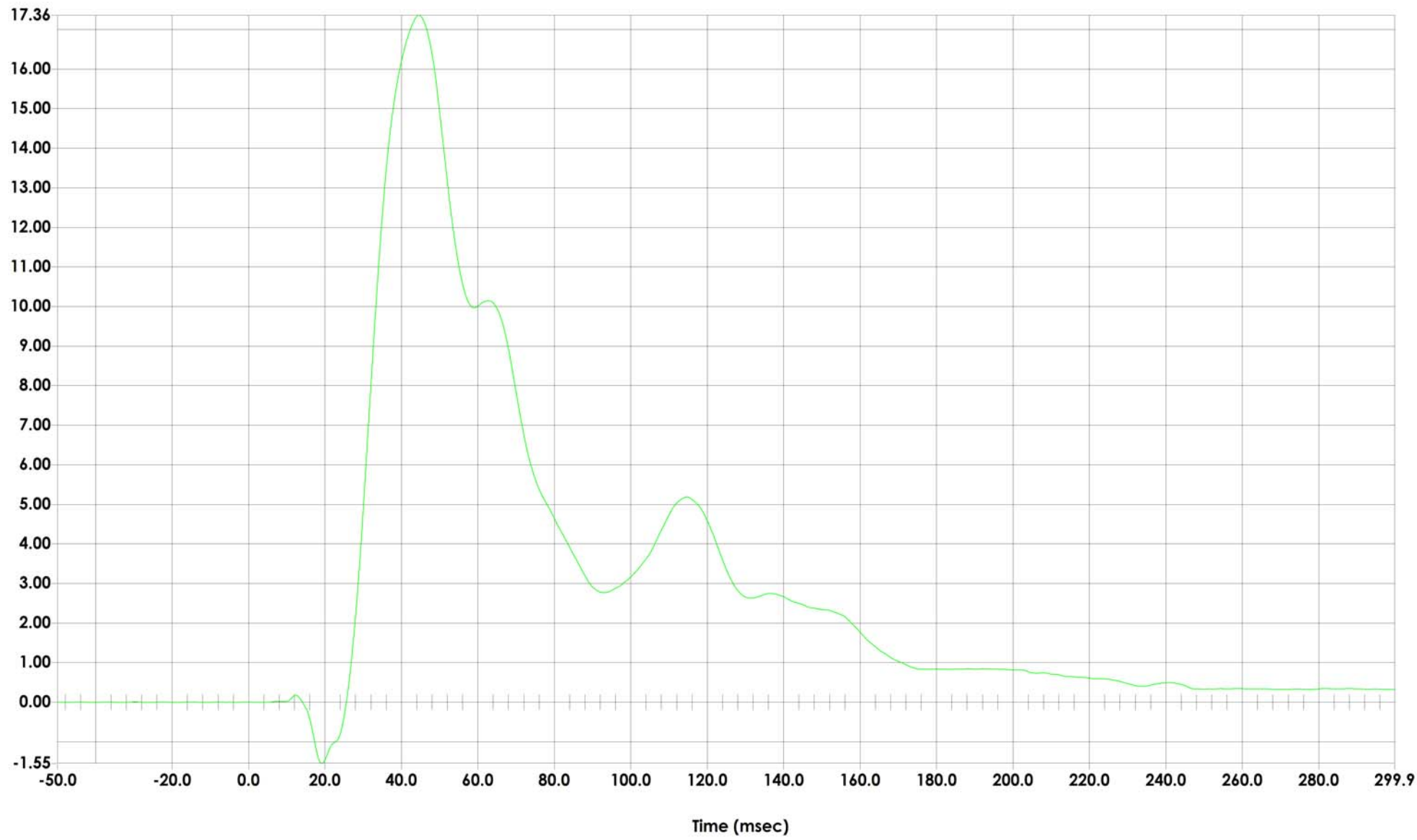


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	009
Units	MM

Max	17.36	MM
	44.56	msec
Min	-1.55	MM
	19.12	msec



Driver Thorax Rib Deflection Maximum vs. Time

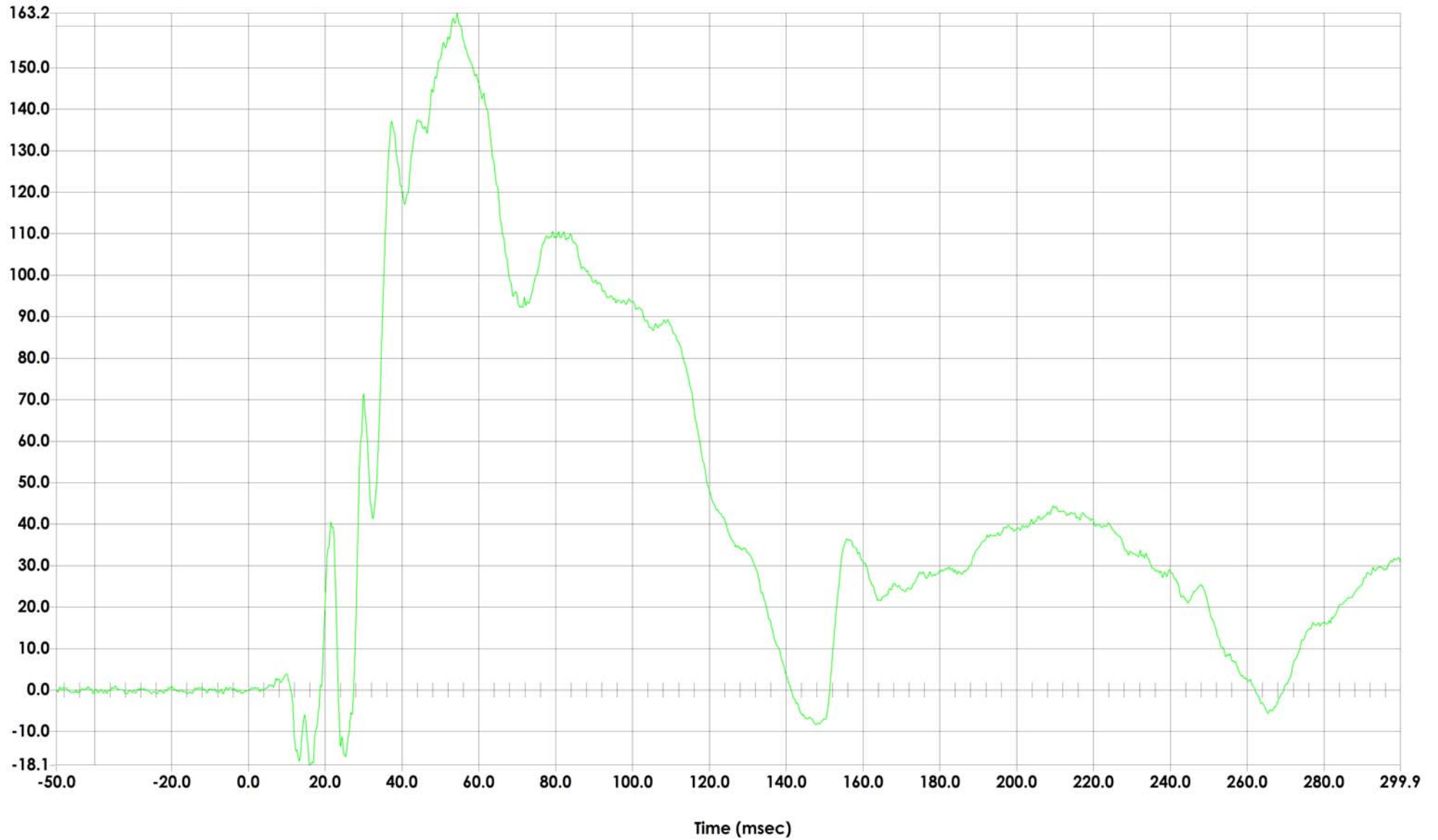


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	010
Units	NWT

Max	163.15	NWT
	54.32	msec
Min	-18.10	NWT
	15.92	msec



Driver Anterior Abdominal Force (Y) vs. Time

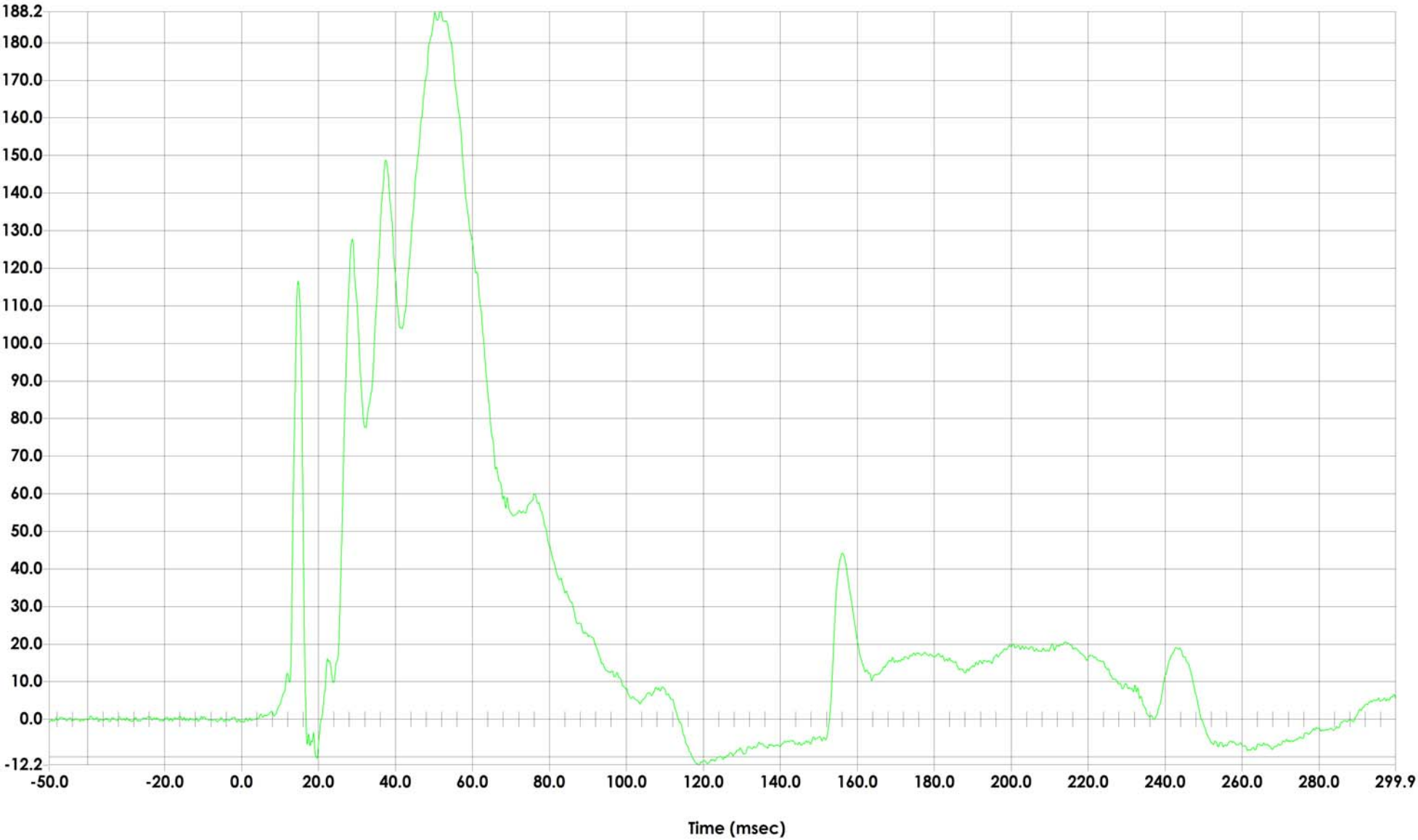


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	011
Units	NWT

Max	188.22	NWT
	51.84	msec
Min	-12.17	NWT
	118.88	msec



Driver Middle Abdominal Force (Y) vs. Time

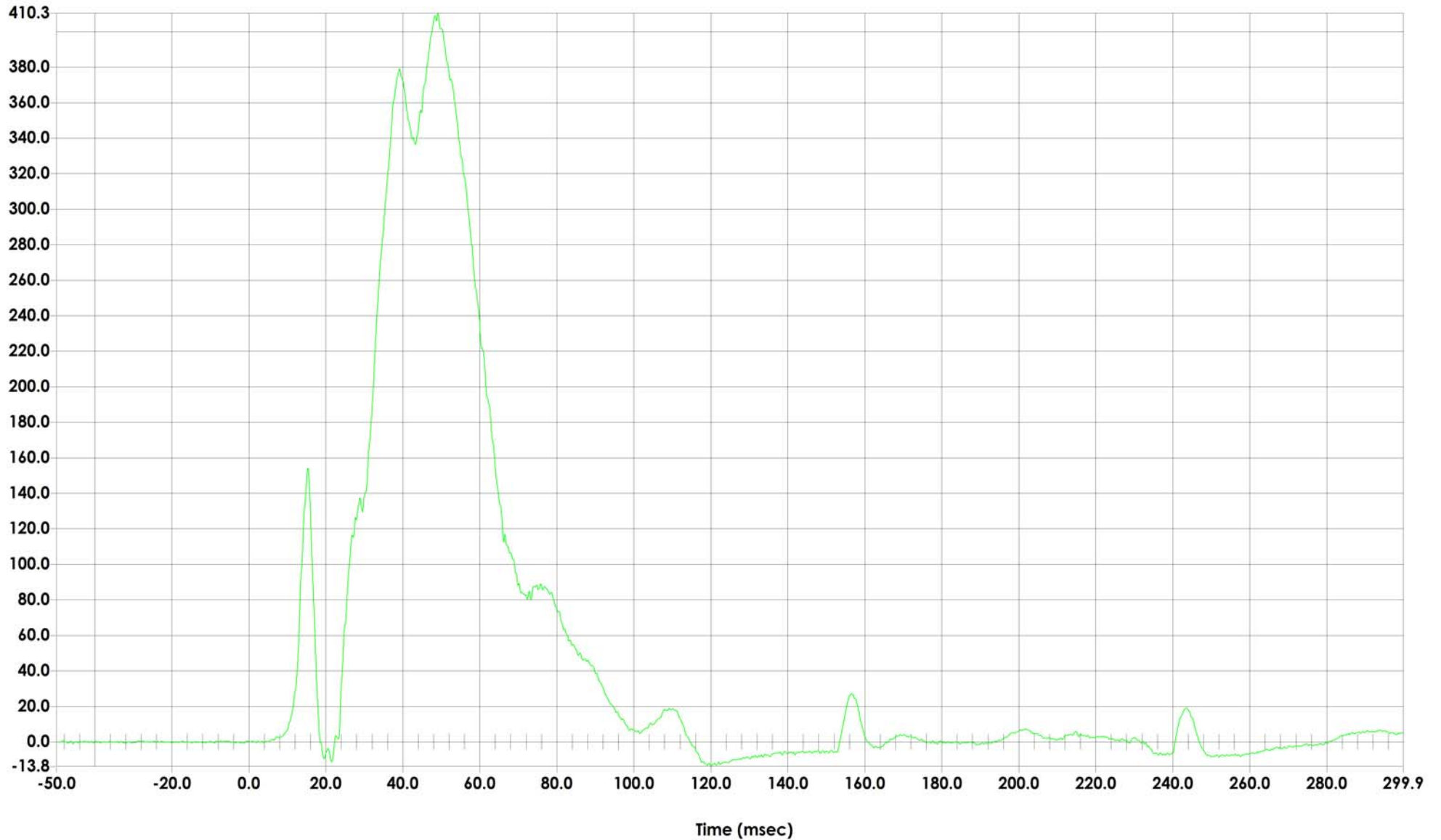


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	012
Units	NWT

Max	410.33	NWT
	49.04	msec
Min	-13.83	NWT
	120.08	msec



Driver Posterior Abdominal Force (Y) vs. Time

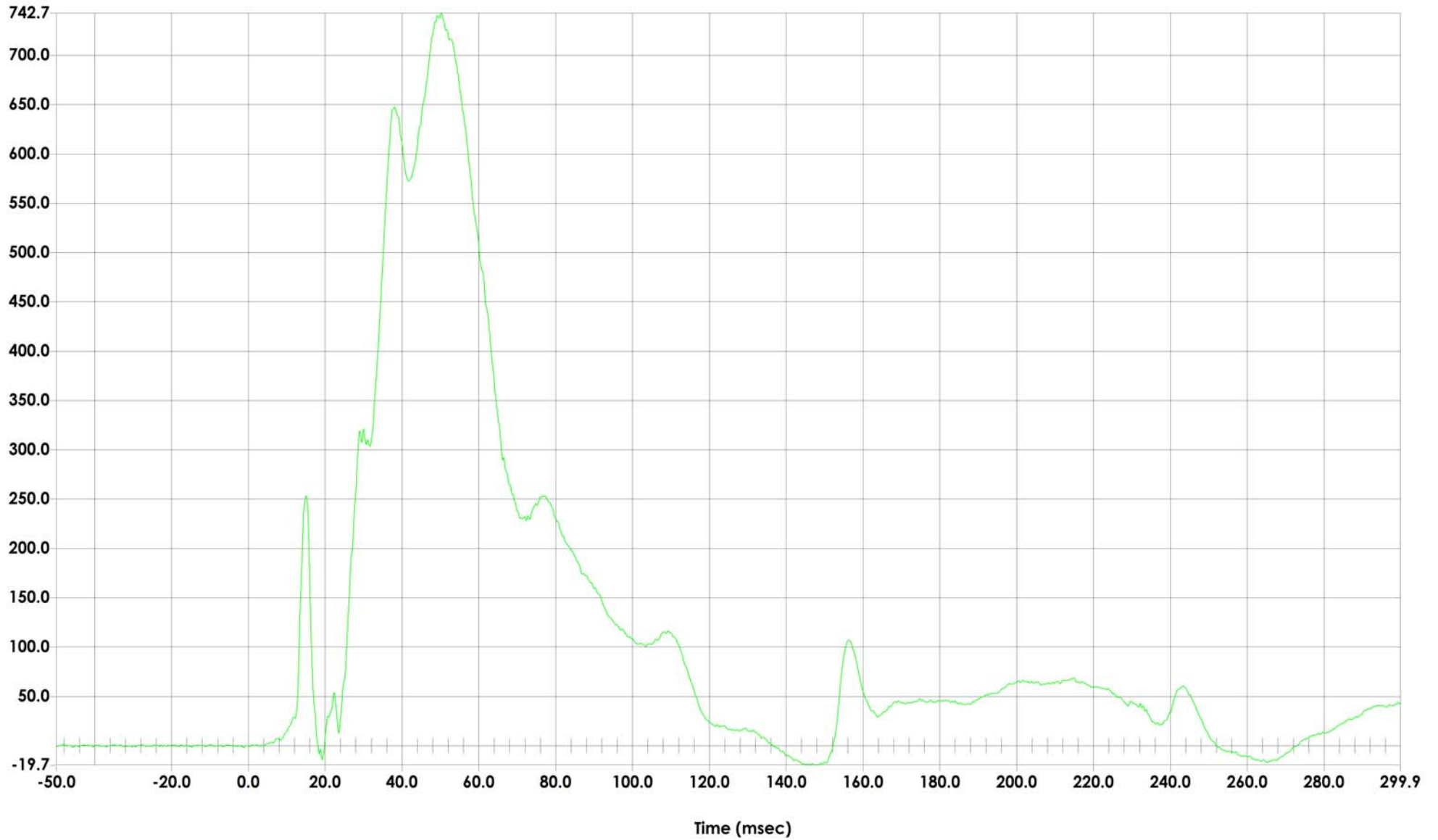


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	064
Units	NWT

Max	742.69	NWT
	50.24	msec
Min	-19.75	NWT
	147.68	msec



Driver Total Abdominal Force (Y) vs. Time

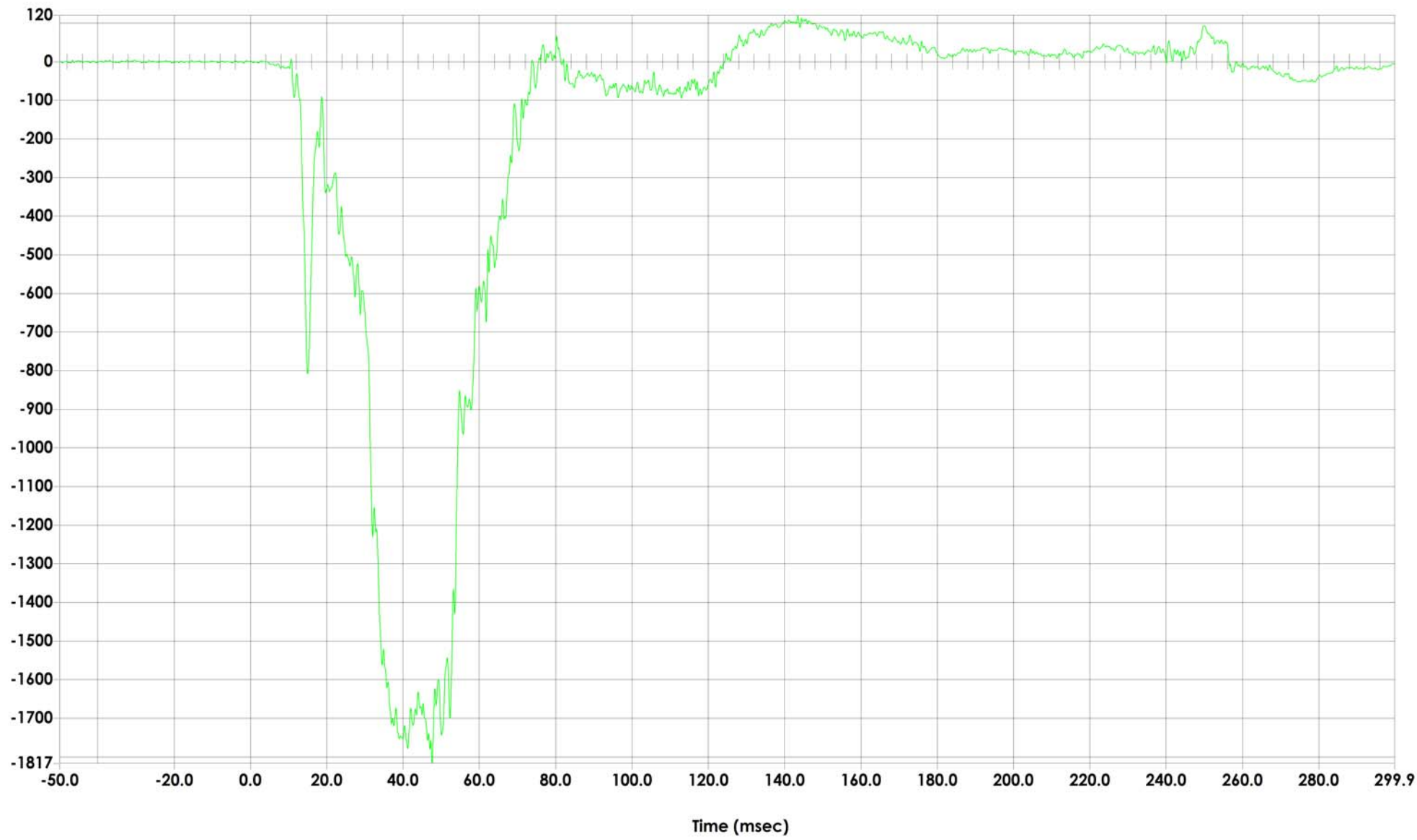


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	016
Units	NWT

Max	119.99	NWT
	143.44	msec
Min	-1816.94	NWT
	47.60	msec



Driver Pubic Symphysis Force (Y) vs. Time

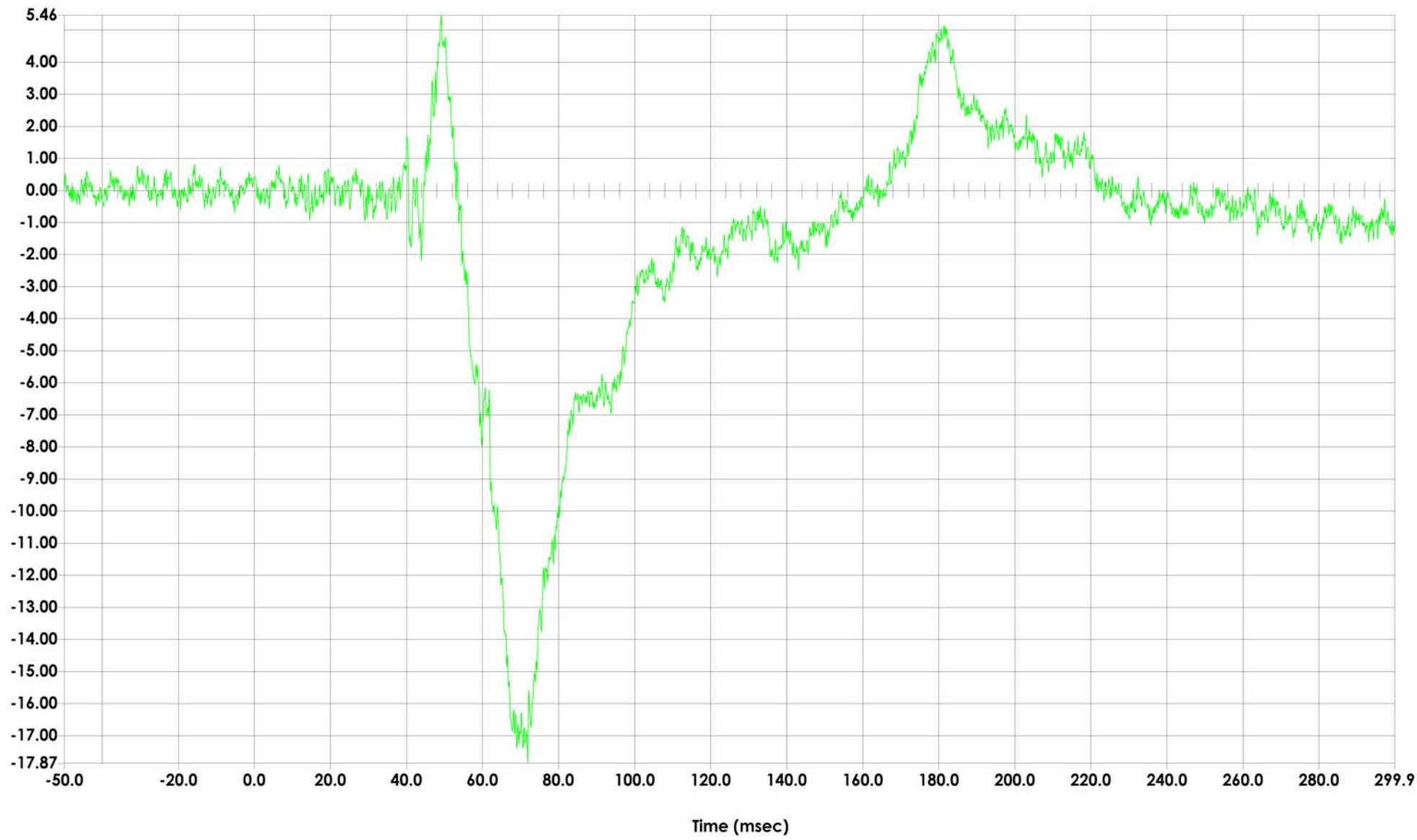


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	017
Units	G'S

Max	5.46	G'S
	49.12	msec
Min	-17.87	G'S
	71.84	msec



Passenger Head Acceleration (X) Primary vs. Time

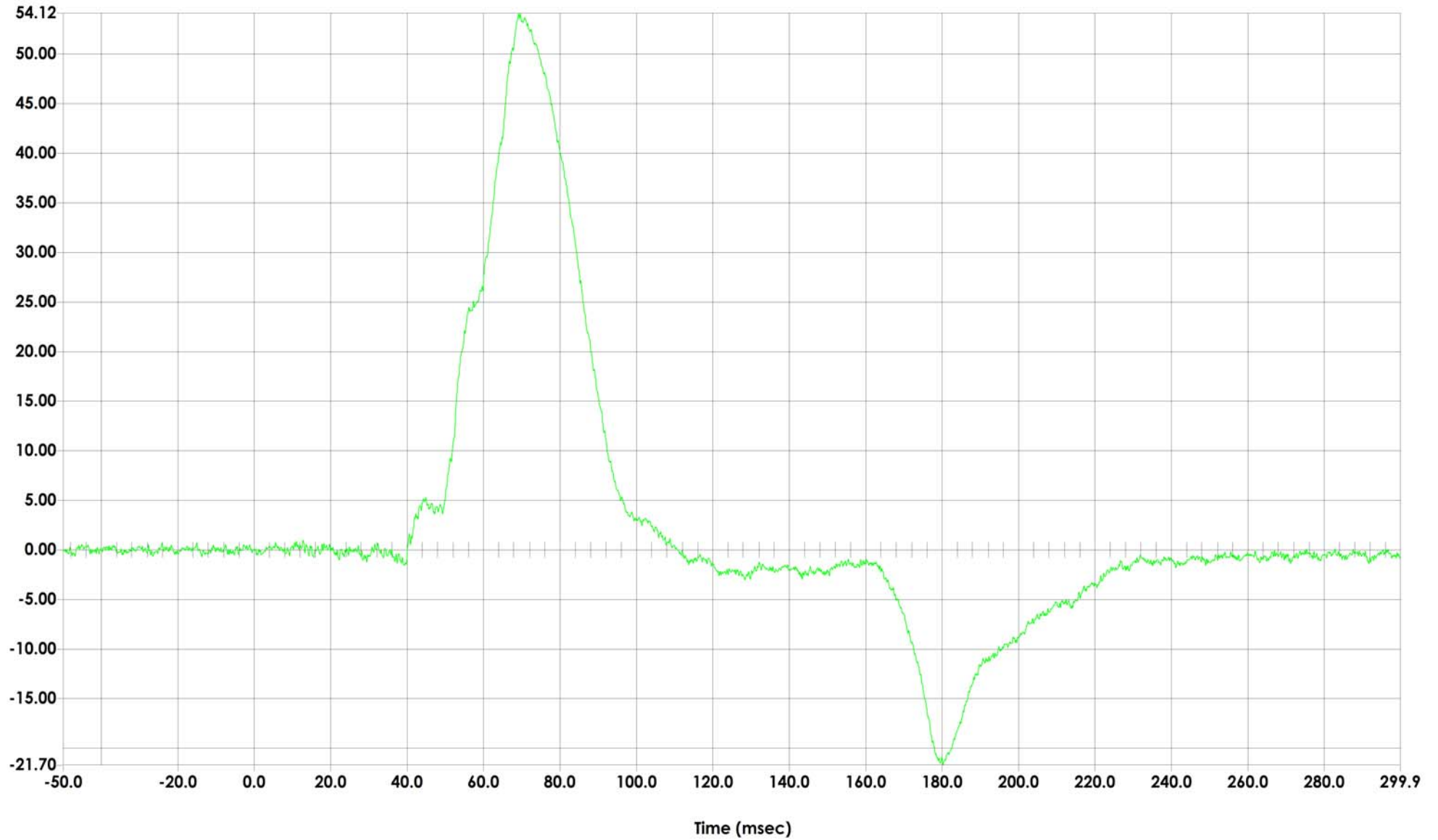


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	018
Units	G'S

Max	54.12	G'S
	69.60	msec
Min	-21.70	G'S
	180.16	msec



Passenger Head Acceleration (Y) Primary vs. Time

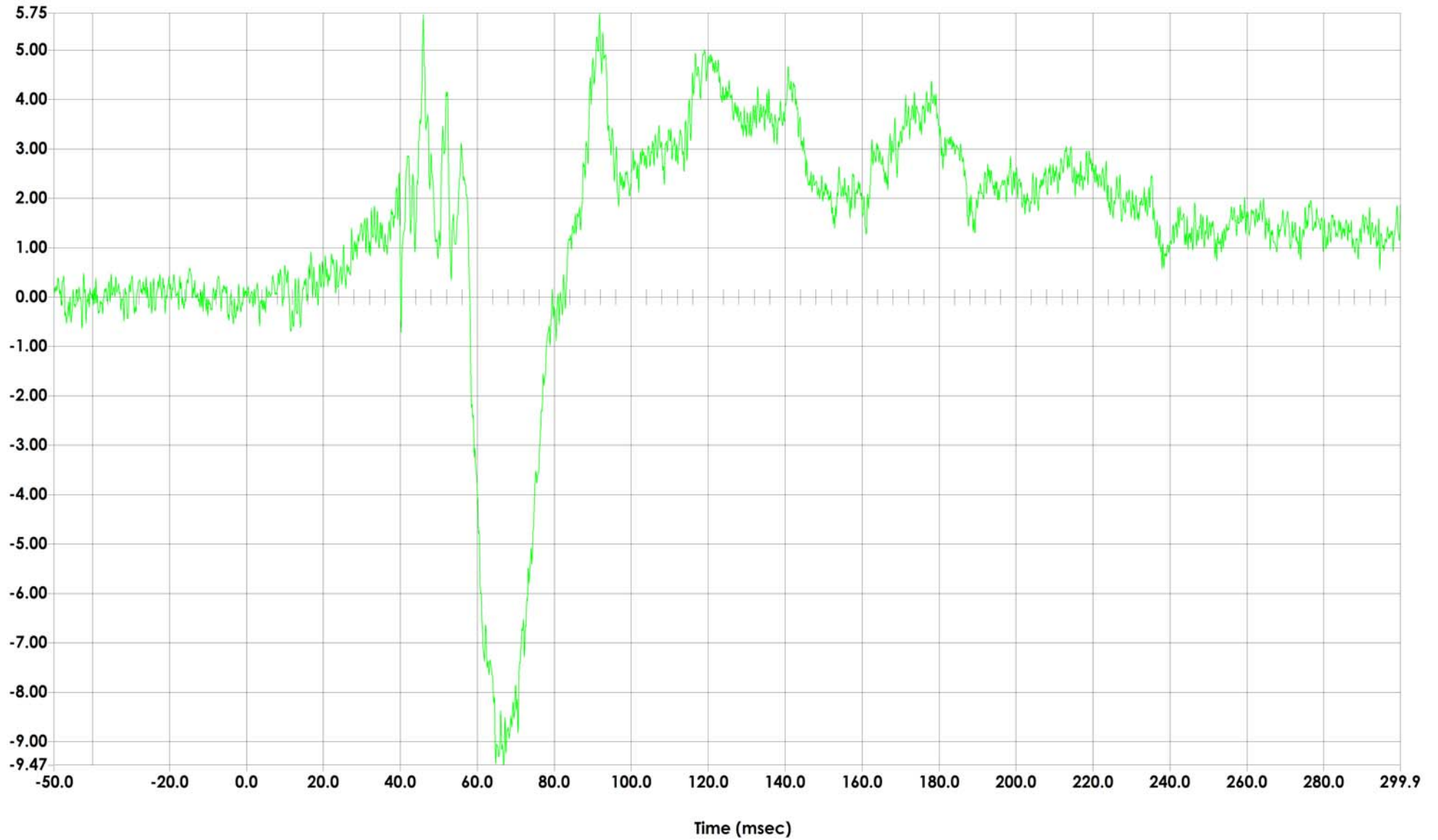


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	019
Units	G'S

Max	5.75	G'S
	91.76	msec
Min	-9.47	G'S
	66.88	msec



Passenger Head Acceleration (Z) Primary vs. Time

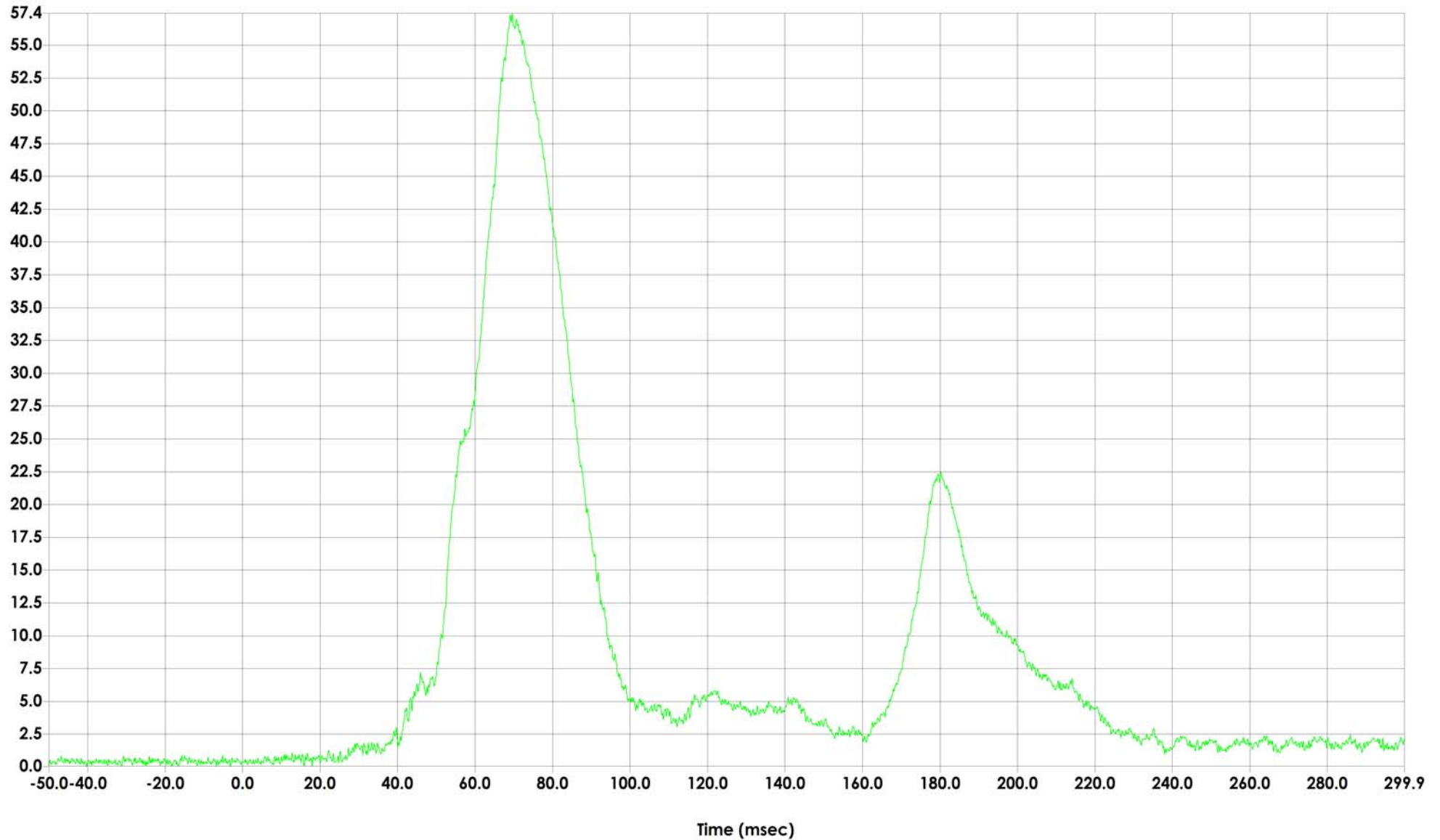


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	065
Units	G'S

Max	57.43	G'S
	69.60	msec
Min	0.04	G'S
	-3.12	msec



Passenger Head Resultant Acceleration Primary vs. Time

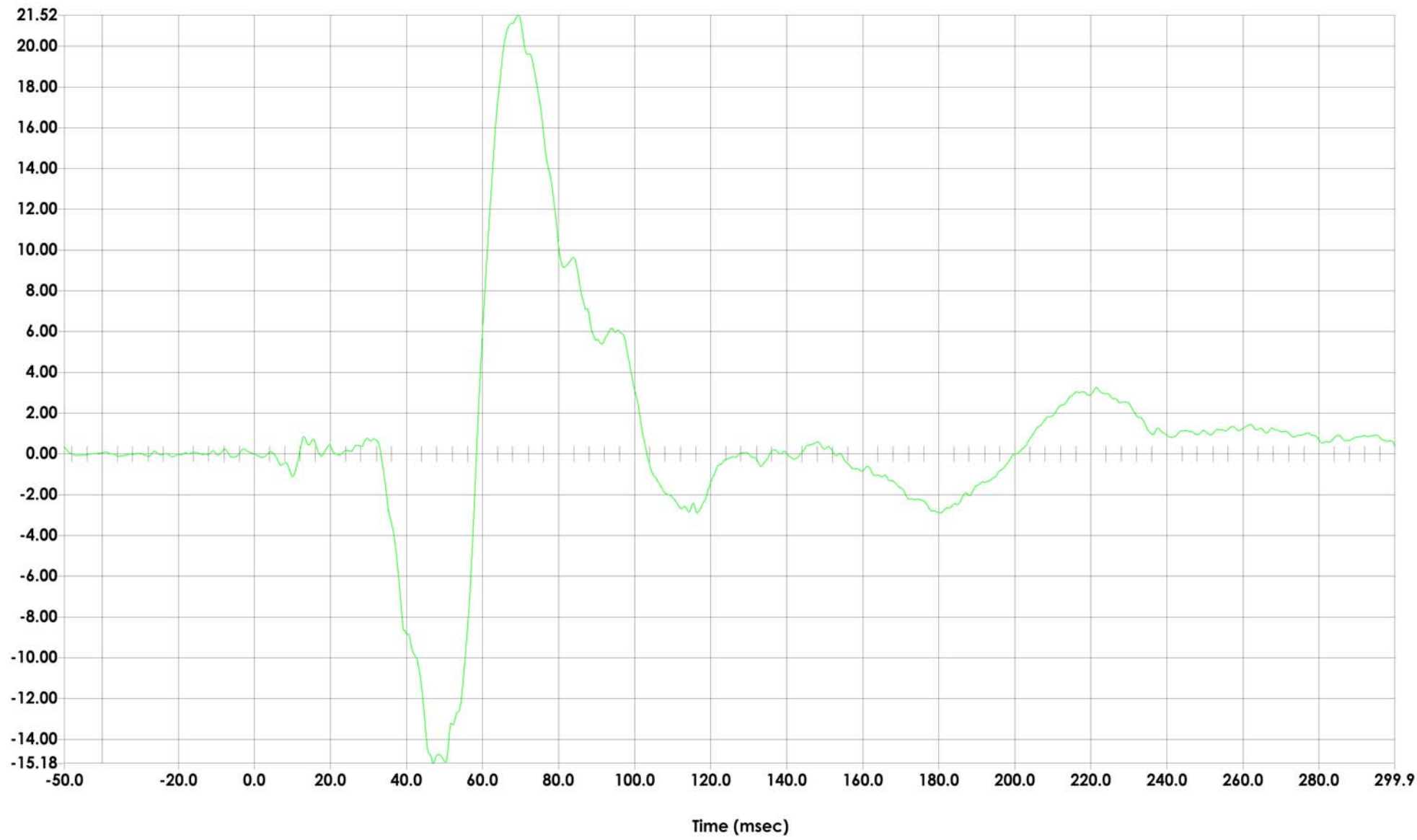


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	028
Units	G'S

Max	21.52	G'S
	69.44	msec
Min	-15.18	G'S
	47.04	msec



Passenger Lower Spine T12 Acceleration (X) vs. Time

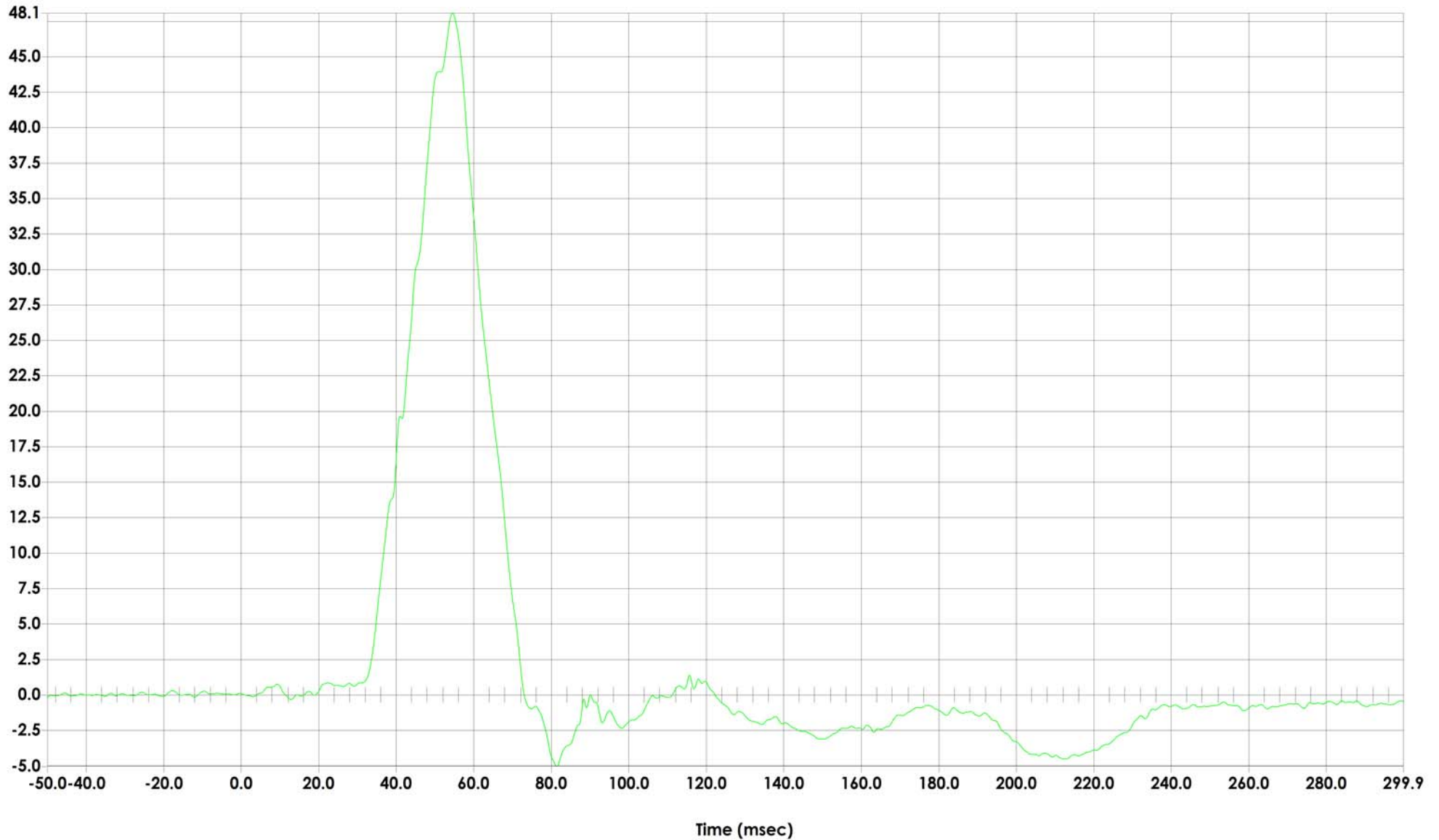


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	029
Units	G'S

Max	48.07	G'S
	54.56	msec
Min	-5.04	G'S
	81.44	msec



Passenger Lower Spine T12 Acceleration (Y) vs. Time

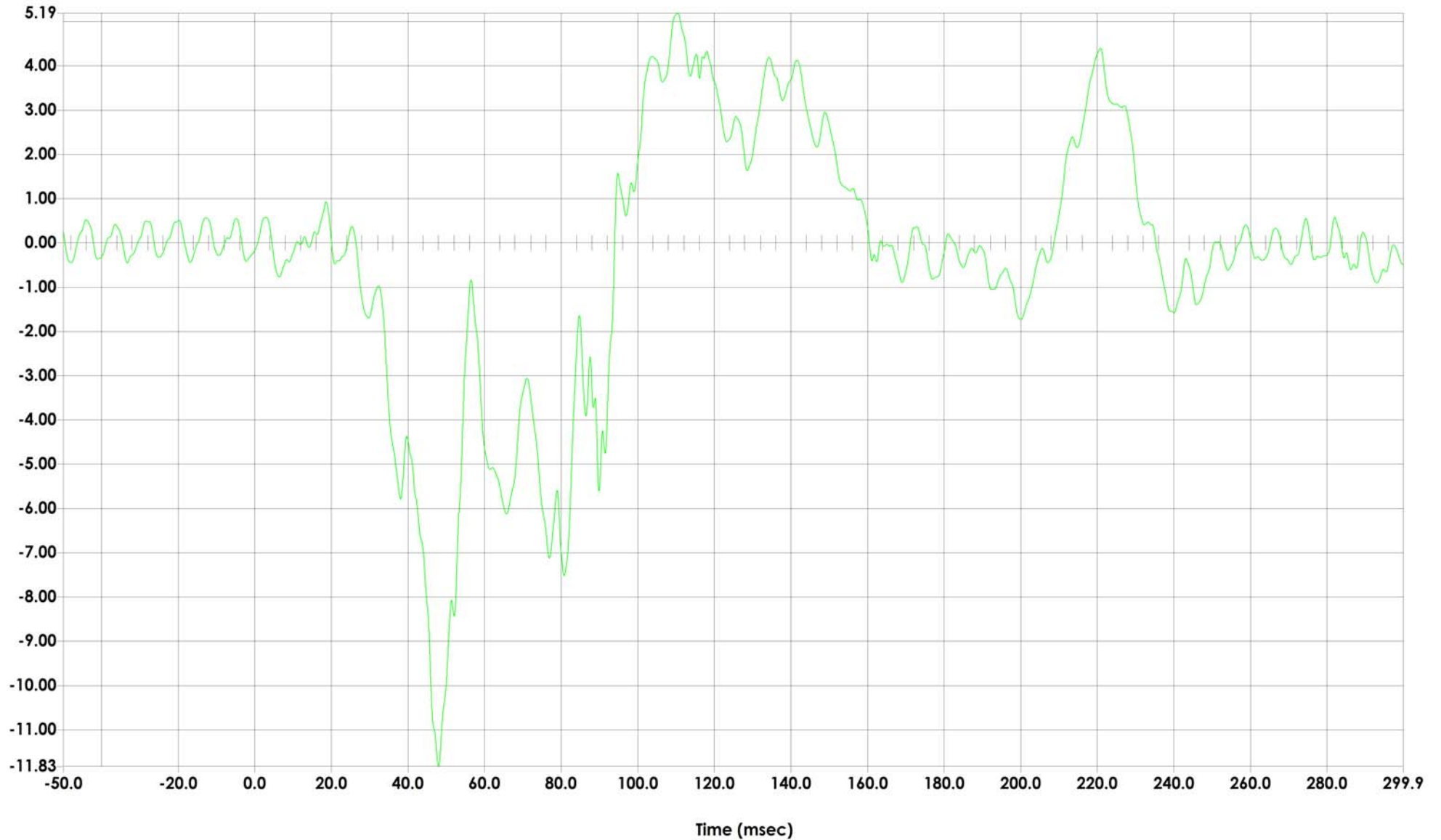


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	030
Units	G'S

Max	5.19	G'S
	110.48	msec
Min	-11.83	G'S
	48.00	msec



Passenger Lower Spine T12 Acceleration (Z) vs. Time

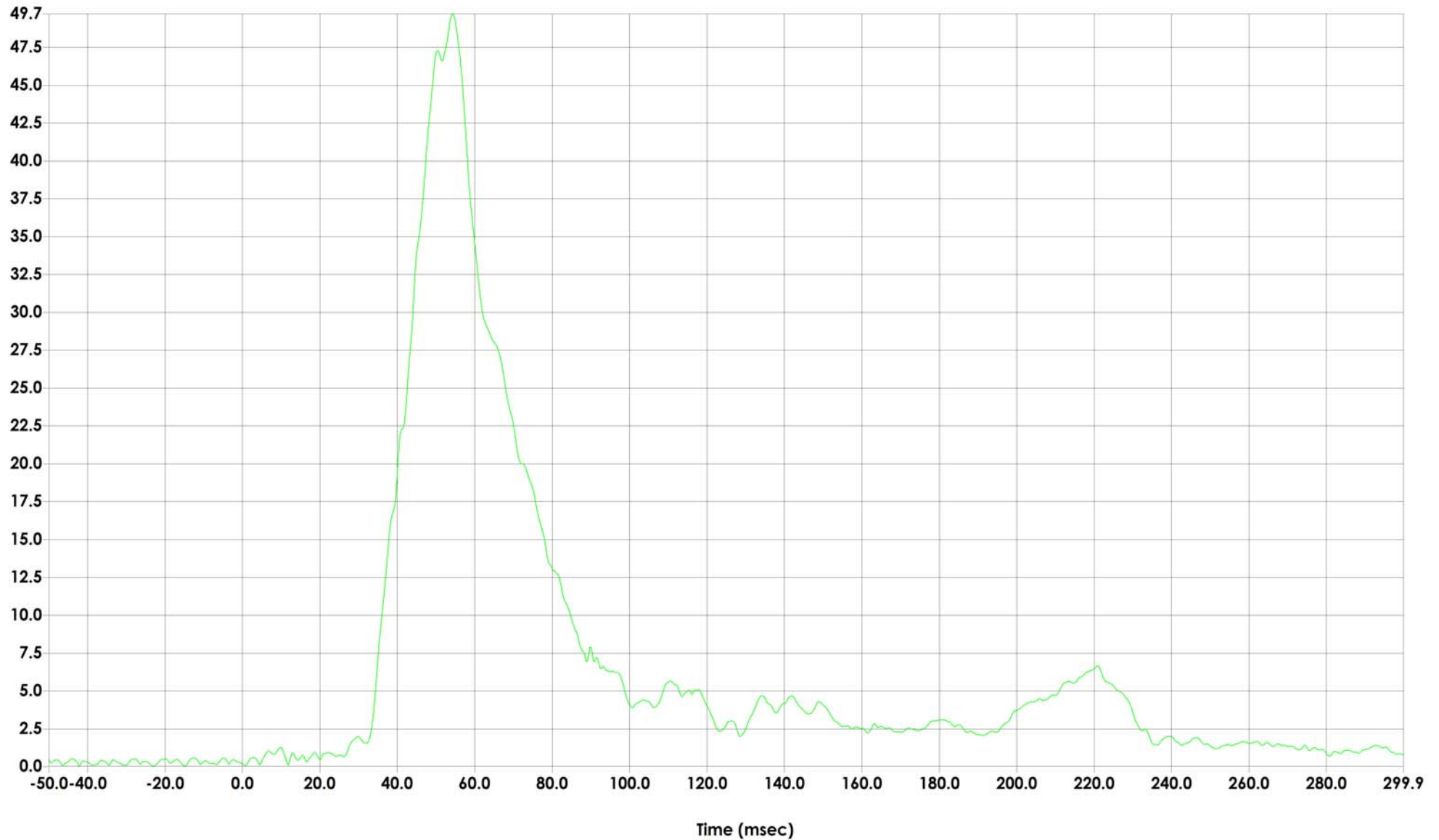


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	066
Units	G'S

Max	49.70	G'S
	54.24	msec
Min	0.02	G'S
	-23.12	msec



Passenger Lower Spine T12 Resultant Acceleration vs. Time

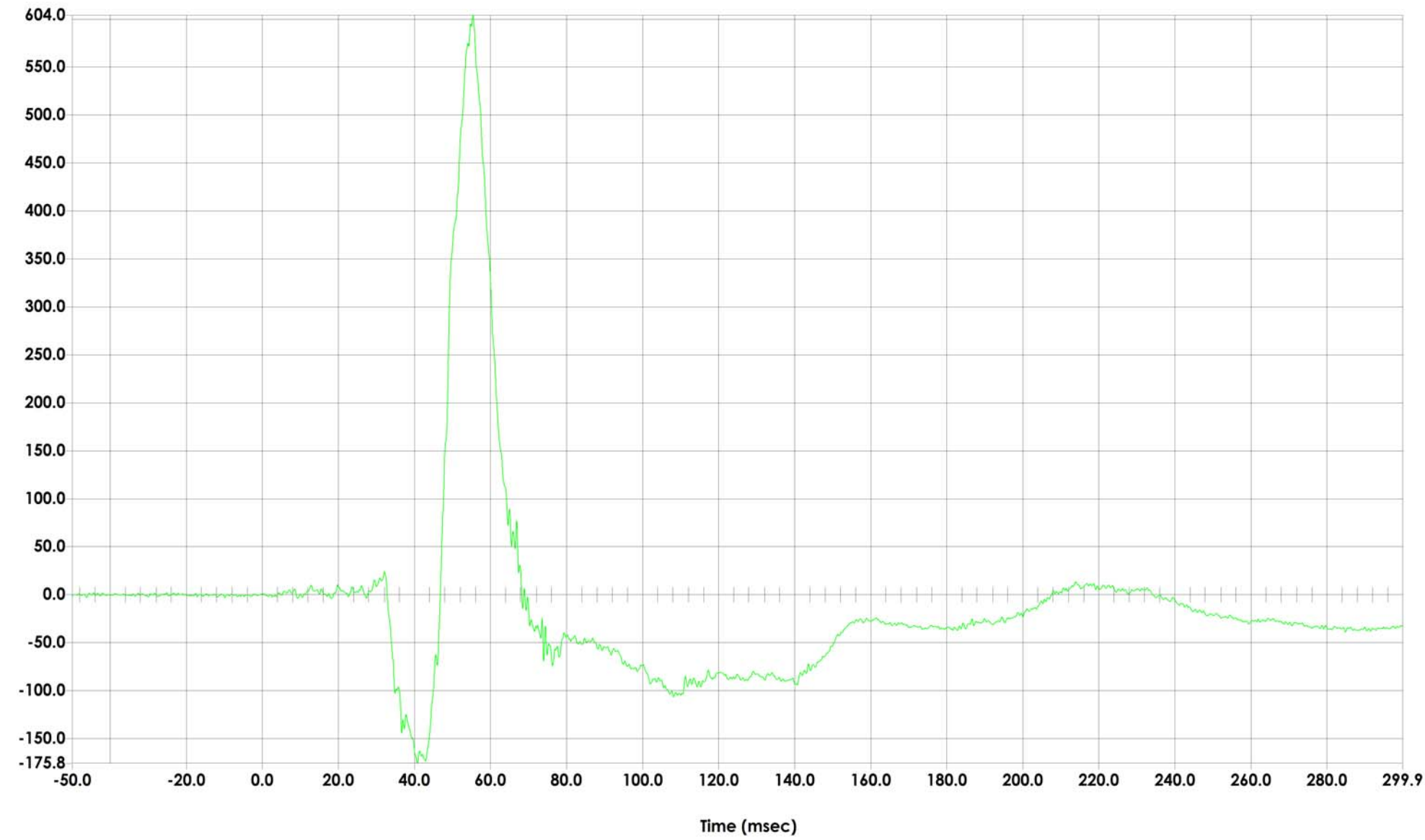


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	031
Units	NWT

Max	604.01	NWT
	55.44	msec
Min	-175.83	NWT
	40.80	msec



Passenger Iliac Wing Forceon Impact Side vs. Time

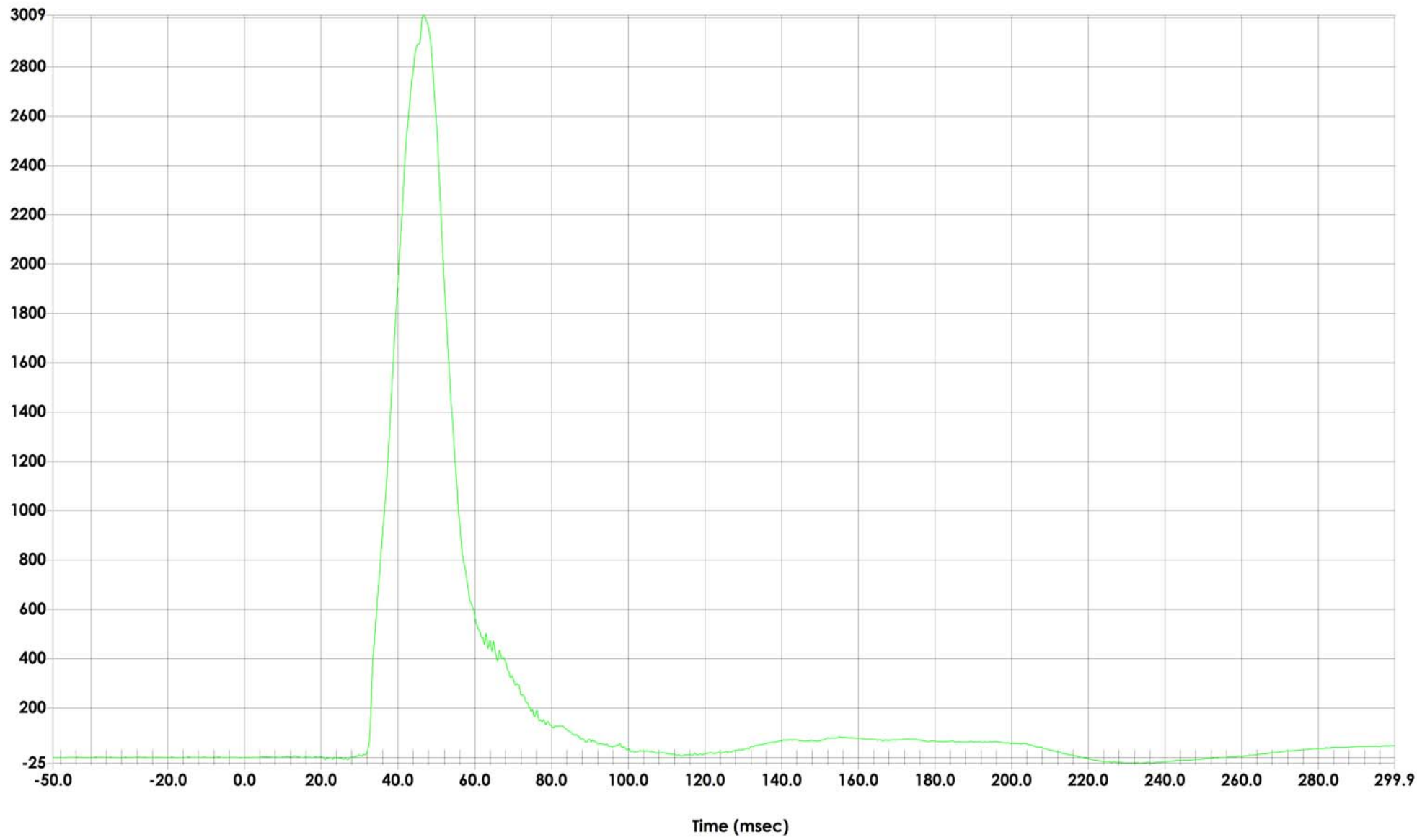


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	032
Units	NWT

Max	3008.94	NWT
	46.80	msec
Min	-24.73	NWT
	233.68	msec



Passenger Acetabulum Force on Impact Side vs. Time

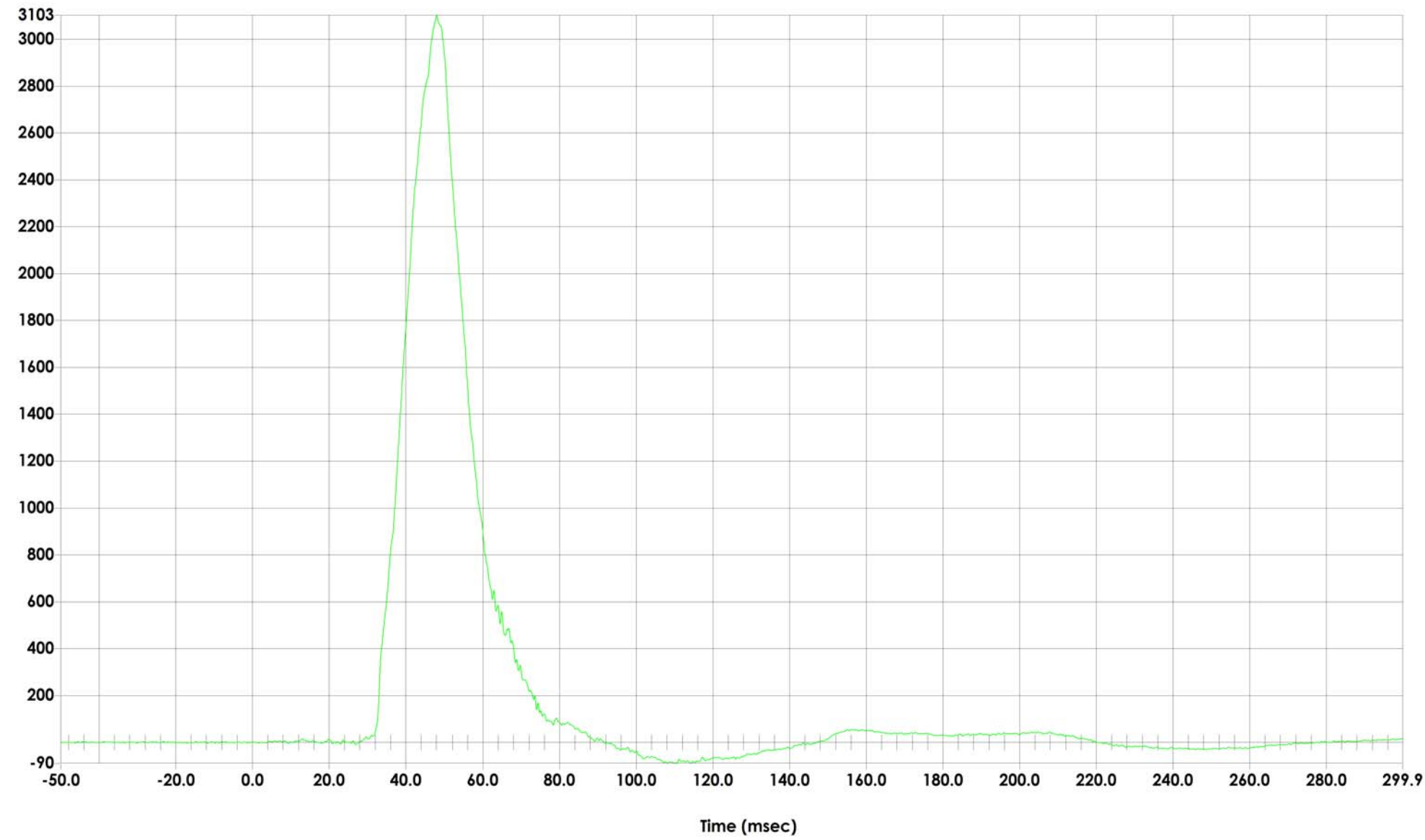


Test ID	M20145602
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	067
Units	NWT

Max	3102.61	NWT
	48.00	msec
Min	-89.93	NWT
	114.24	msec



Passenger Total Pelvic Force on Impact Side (Y) vs. Time



Test Vehicle: 2014 Mitsubishi Outlander 5-Door MPV
Test Program: SINCAP

NHTSA Number: M20145602
Test Date: January 29, 2014

APPENDIX C
DUMMY CONFIGURATION AND PERFORMANCE DATA

TABLE 1
EXTERNAL MEASUREMENTS (ES-IIre)

ES-IIre Serial Number F038 Test Sequences 7 & 8

TEST PARAMETER	SPEC.	PRE		POST	
Date	-	1-22-14		2-4-14	
Sequential Test Number	-	7		8	
		Result	Pass/Fail	Result	Pass/Fail
Temperature (°C)	20.6-22.2	20.9	Pass	21.2	Pass
Relative Humidity (%)	10-70	30.8	Pass	30.0	Pass
Sitting Height	900 - 918	908	Pass	911	Pass
Seat to Shoulder Joint	558 -572	566	Pass	567	Pass
Seat to Lower Face of Thoracic Spine Box	346 -356	355	Pass	354	Pass
Seat to Hip Joint (Center of Bolt)	97 - 103	100	Pass	99	Pass
Sole to Seat, Sitting	433 - 451	441	Pass	441	Pass
Head Width	152 -158	156	Pass	155	Pass
Shoulder/Arm Width	461 - 479	476	Pass	478	Pass
Thorax Width	322 - 332	324	Pass	324	Pass
Abdomen Width	273 - 287	281	Pass	280	Pass
Pelvis/Lap Width	359 - 373	366	Pass	363	Pass
Head Depth	196 - 206	200	Pass	201	Pass
Thorax Depth	262 - 272	267	Pass	266	Pass
Abdomen Depth	194 - 204	201	Pass	201	Pass
Pelvis Depth	235 - 245	240	Pass	239	Pass
Back of Buttocks to Hip Joint (Center of Bolt)	150 - 160	155	Pass	155	Pass
Back of Buttocks to Front Knee	597 - 615	610	Pass	610	Pass

TABLE 2
HEAD DROP TEST (ES-IIre)

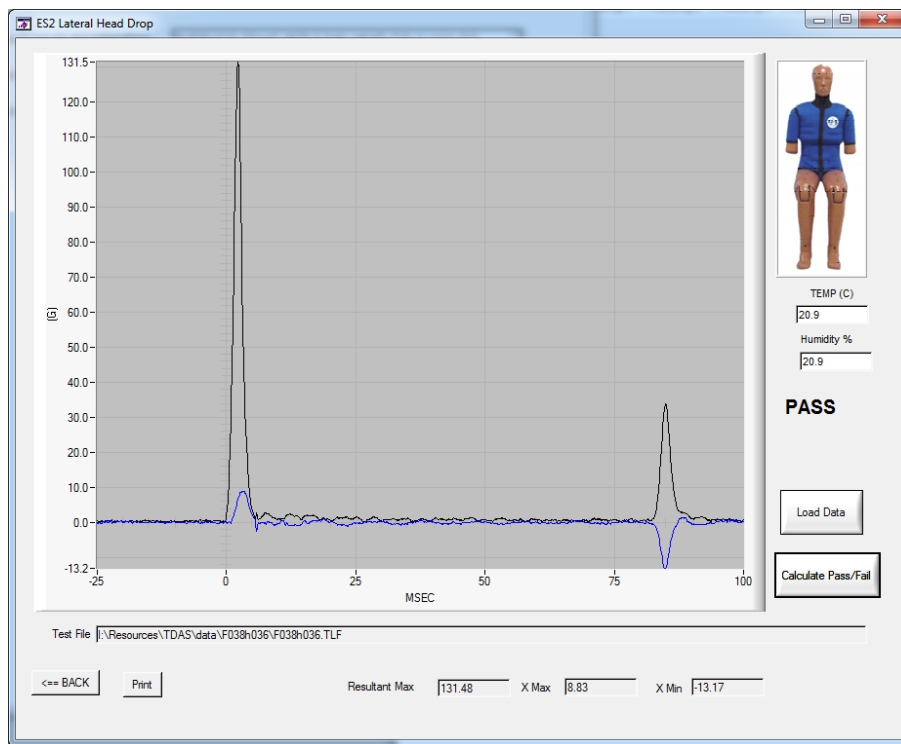
ES-IIre Serial Number F038

Test Sequences 7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-21-14		2-3-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Head Assembly Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	20.9	Pass	21.0	Pass
	Min		20.7	Pass	20.8	Pass
Humidity (%) – During Soak	Max	10.0-70.0	20.9	Pass	16.6	Pass
	Min		18.7	Pass	13.5	Pass
Temperature – During Test (°C)		20.6-22.2	20.9	Pass	21.0	Pass
Humidity – During Test (%)		10-70	20.9	Pass	16.6	Pass
Peak Head Resultant Acceleration (G)		125-155	131.5	Pass	138.2	Pass
Peak Head X Acceleration (G)		<15	8.8	Pass	2.6	Pass
Unimodal (Oscillation) (Yes/No)		<15%	Yes	Pass	Yes	Pass

TABLE 2
HEAD DROP TEST (ES-IIre) (CONTINUED)

PRE-TEST



POST-TEST

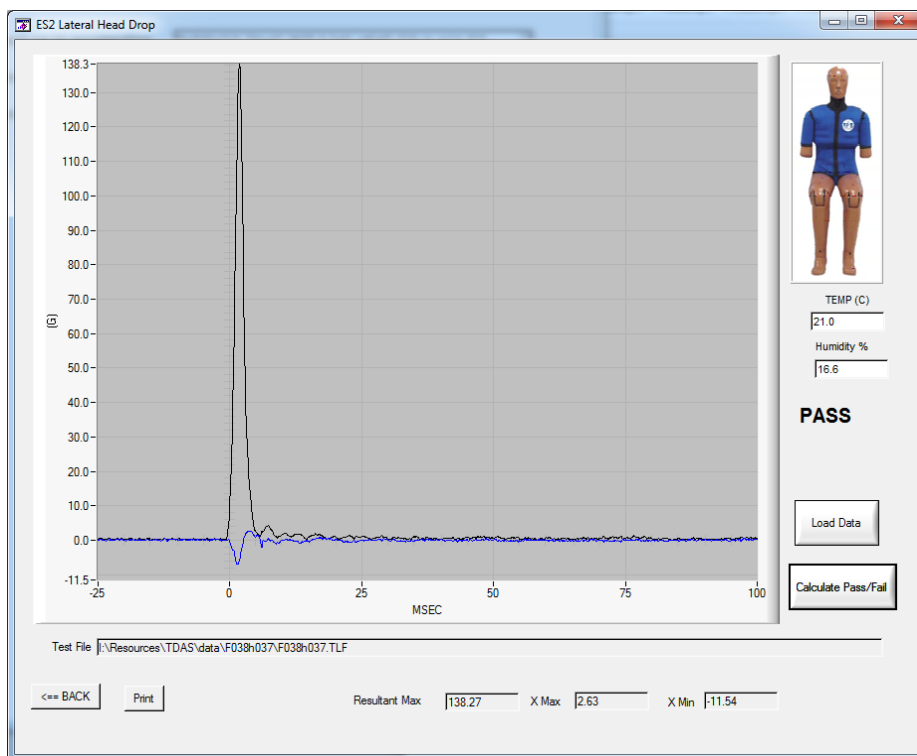


TABLE 3
NECK PENDULUM TEST (ES-IIre)

ES-IIre Serial Number F038

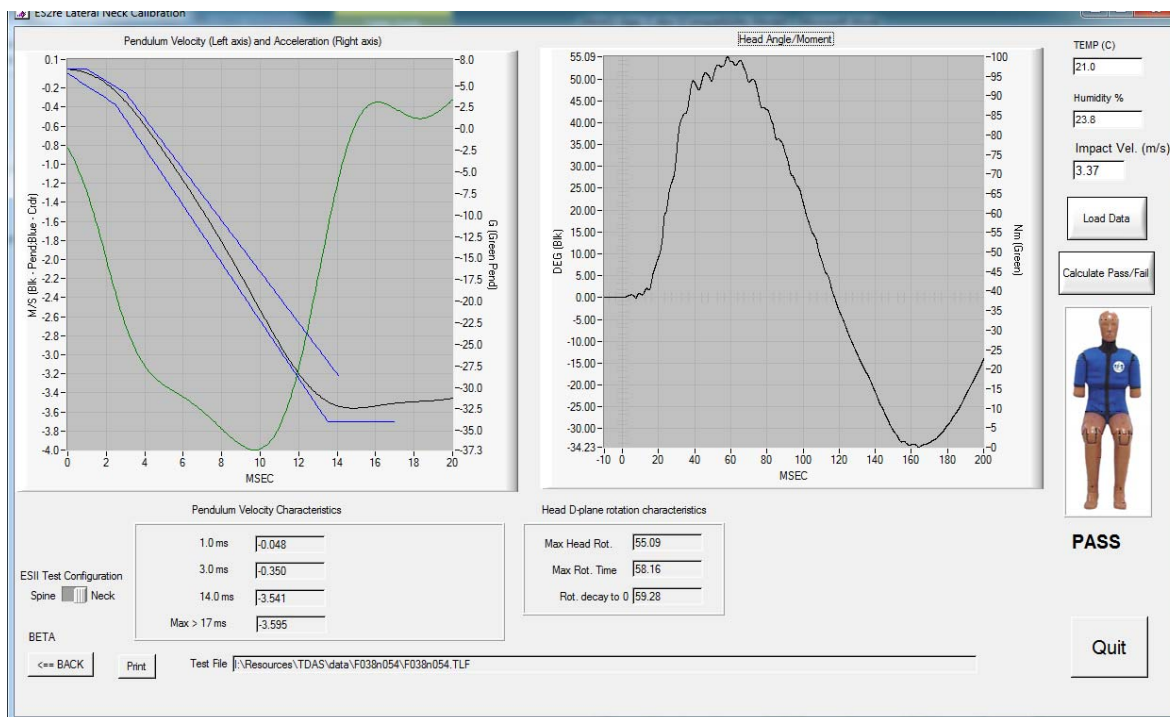
Test Sequences

7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-21-14		2-3-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Neck Assembly Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	21.0	Pass	21.2	Pass
	Min		20.7	Pass	20.8	Pass
Humidity (%) – During Soak	Max	10.0-70.0	23.8	Pass	23.6	Pass
	Min		18.7	Pass	13.5	Pass
Temperature – During Test (°C)		20.6-22.2	21.0	Pass	21.2	Pass
Humidity – During Test (%)		10-70	23.8	Pass	23.6	Pass
Pendulum Velocity (m/s)		3.3-3.5	3.4	Pass	3.4	Pass
Pendulum Velocity Corridors (m/s)	0-1.0 ms	(-0.05)-0.00	-0.05	Pass	-0.05	Pass
	2.5-3.0 ms	(-0.375) - (-0.25)	-0.35	Pass	-0.34	Pass
	13.5-14.0 ms	(-3.7) - (-3.20)	-3.5	Pass	-3.5	Pass
	Max > 17 ms	-3.7	-3.6	Pass	-3.6	Pass
Max D-Plane rotation (deg)		49-59	55.1	Pass	54.6	Pass
Time of Max D-Plane Rotation (ms)		54-66	58.2	Pass	58.6	Pass
Time of Moment Decay from Peak to 0 Nm (ms)		53-88	59.3	Pass	59.0	Pass

TABLE 3
NECK PENDULUM TEST (ES-IIre) (CONTINUED)

PRE-TEST



POST-TEST

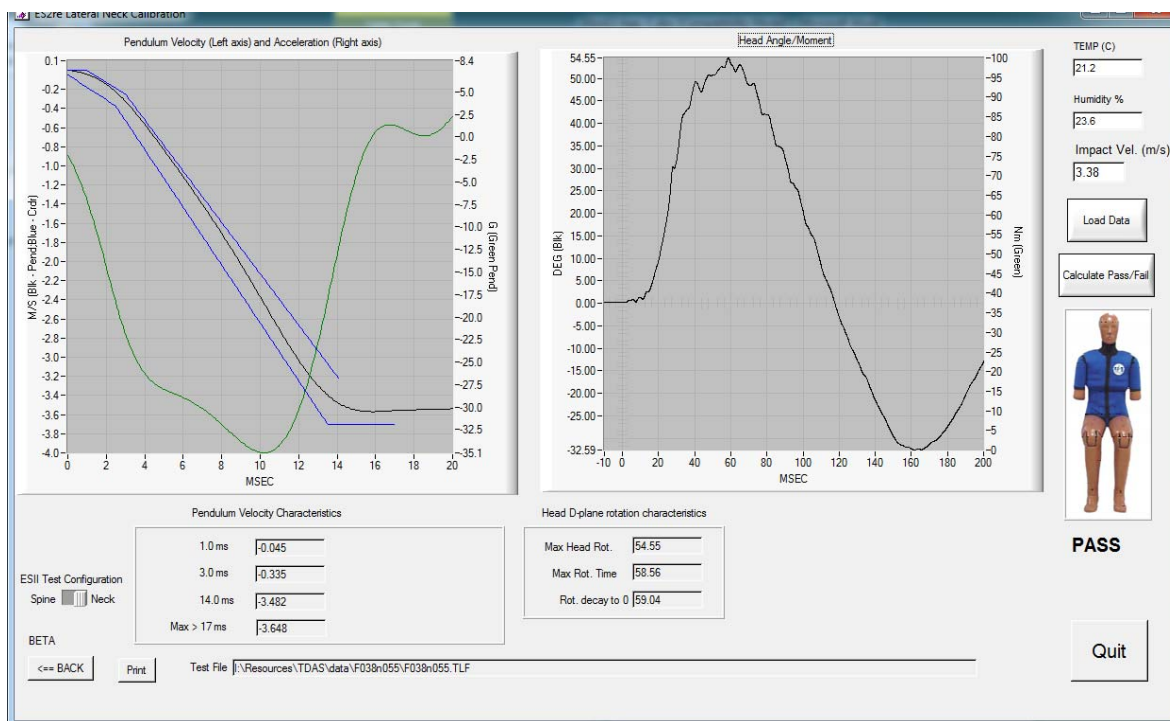


TABLE 4

Test Vehicle: 2014 Mitsubishi Outlander 5-Door MPV
 Test Program: SINCAP

NHTSA Number: M20145602
 Test Date: January 29, 2014

SHOULDER IMPACT TEST (ES-IIre)

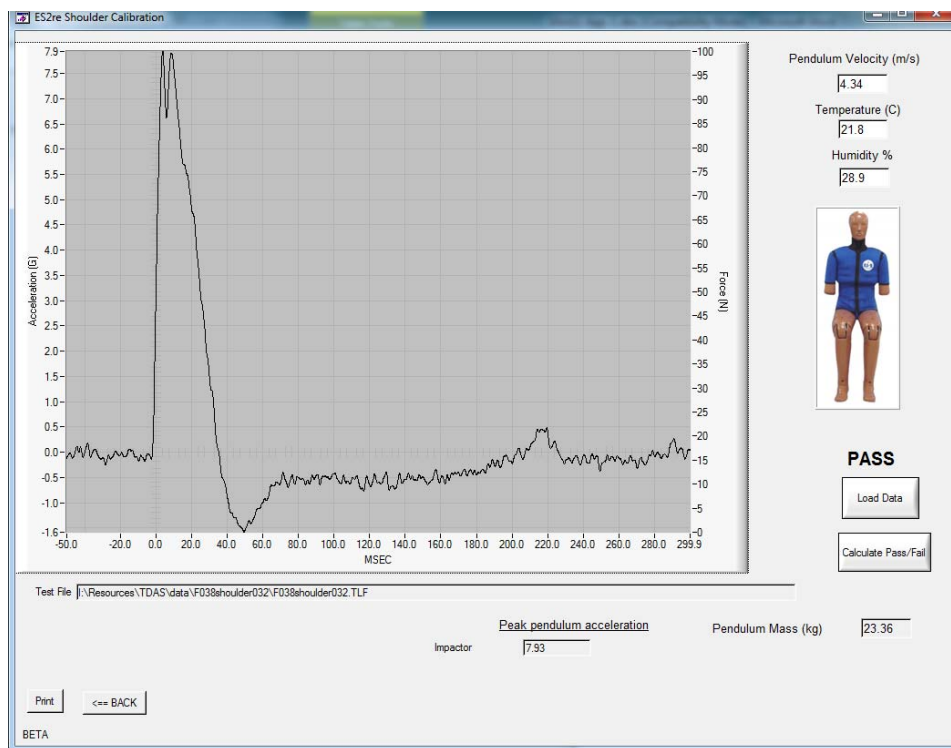
ES-IIre Serial Number F038

Test Sequences 7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-22-14		2-4-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	21.8	Pass	21.2	Pass
	Min		20.8	Pass	20.6	Pass
Humidity (%) – During Soak	Max	10.0-70.0	28.9	Pass	29.1	Pass
	Min		20.1	Pass	23.1	Pass
Temperature – During Test (°C)		20.6-22.2	21.8	Pass	21.2	Pass
Humidity – During Test (%)		10-70	28.9	Pass	29.1	Pass
Pendulum Velocity (m/s)		4.2-4.4	4.3	Pass	4.3	Pass
Peak Impactor Acceleration (G)		7.5-10.5	7.9	Pass	8.5	Pass

TABLE 4
SHOULDER IMPACT TEST (ES-IIre) (CONTINUED)

PRE-TEST



POST-TEST

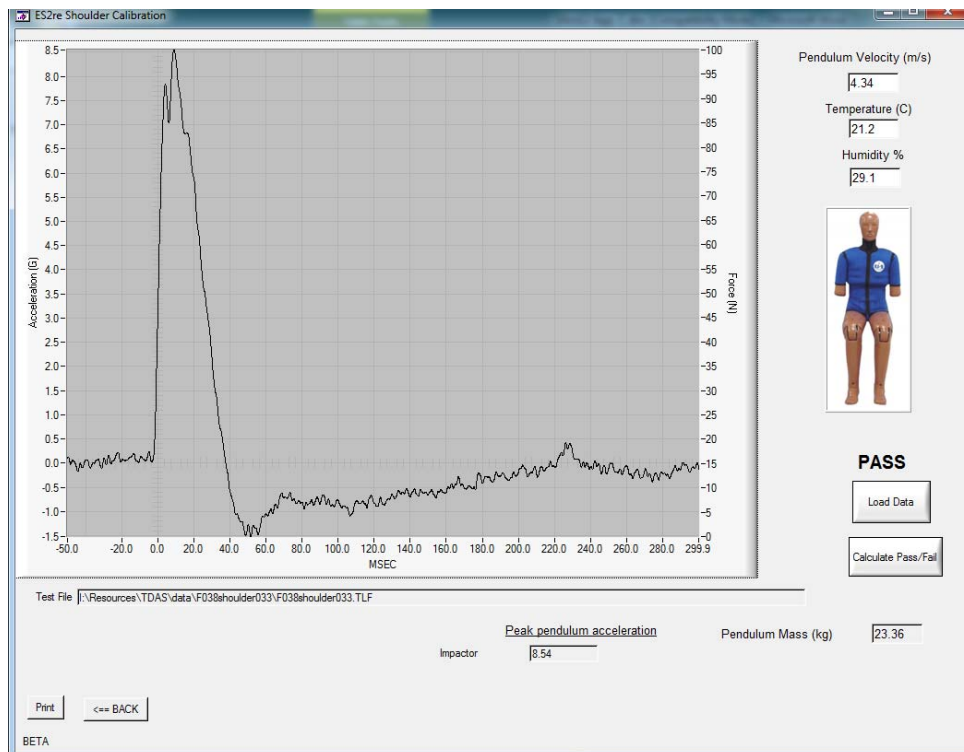


TABLE 5
THORAX – UPPER RIB DROP TEST (ES-IIre)

ES-IIre Serial Number

F038

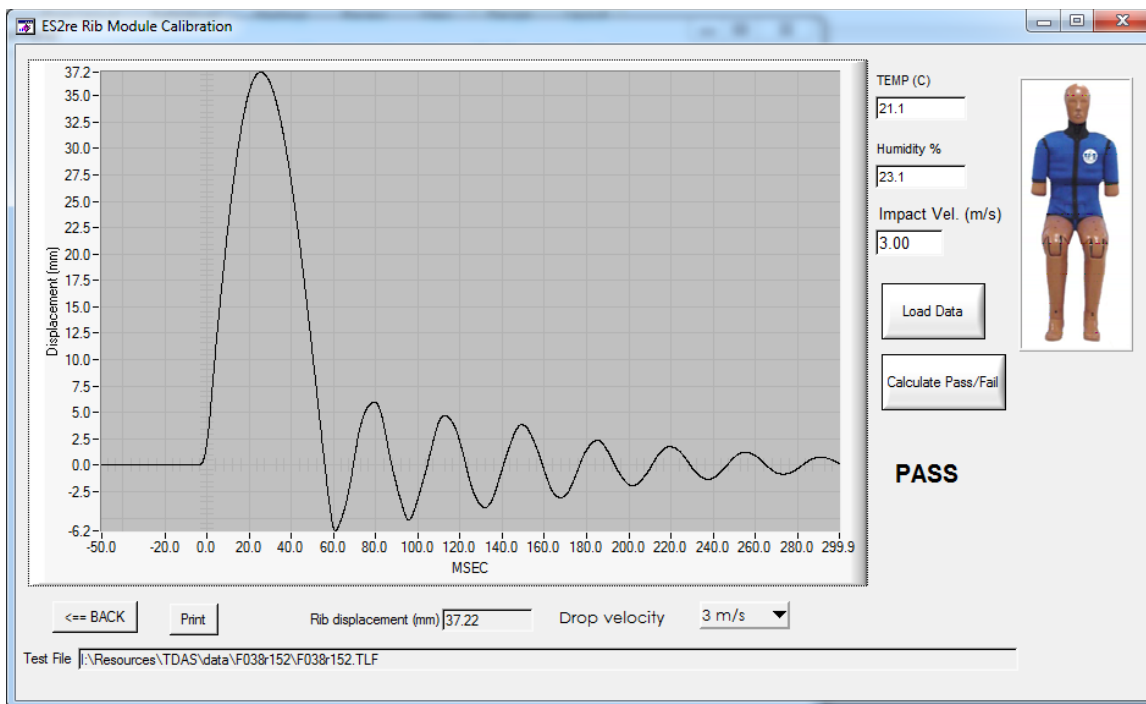
Test Sequences

7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-22-14		2-3-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Upper Rib Drop Module Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	21.1	Pass	21.9	Pass
	Min		20.8	Pass	20.8	Pass
Humidity (%) – During Soak	Max	10.0-70.0	23.1	Pass	21.3	Pass
	Min		20.1	Pass	13.5	Pass
Temperature – During Test (°C)		20.6-22.2	21.1	Pass	21.9	Pass
Humidity – During Test (%)		10-70	23.1	Pass	21.3	Pass
1 st Test - Drop Height 459 ± 5 mm		36-40	37.2	Pass	37.5	Pass
2 nd Test - Drop Height 815 ± 5 mm		46-51	48.8	Pass	48.9	Pass

TABLE 5
THORAX – UPPER RIB DROP TEST (ES-IIre) (CONTINUED)
3.00 m/s

PRE-TEST



POST-TEST

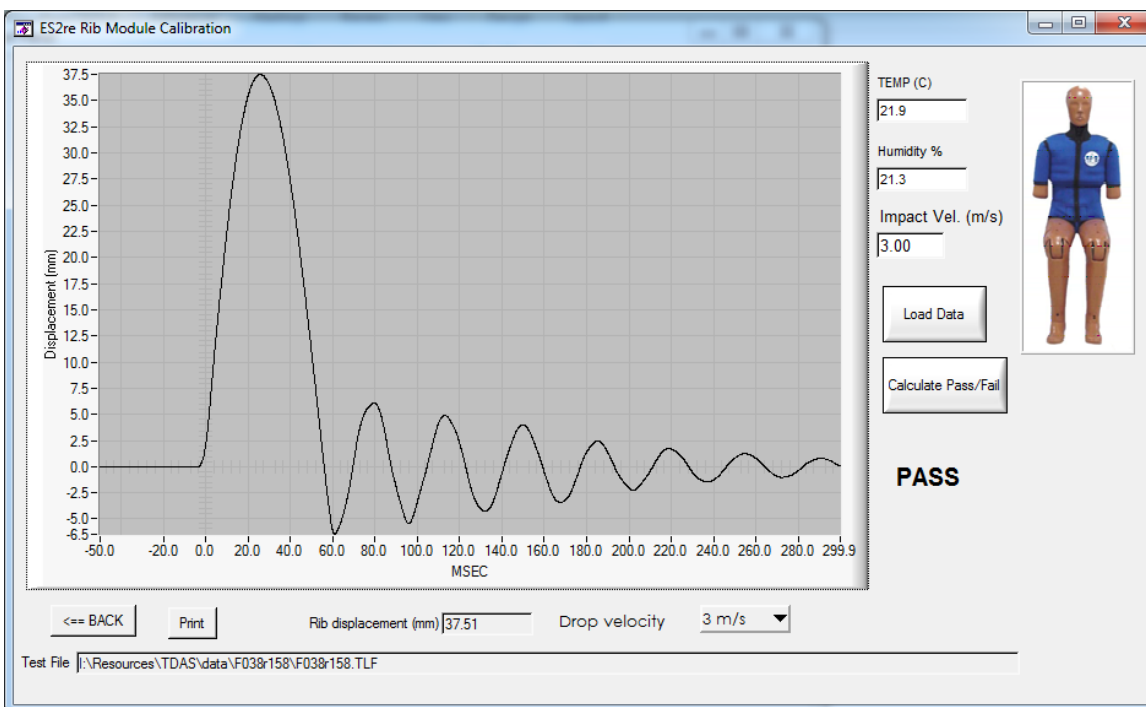
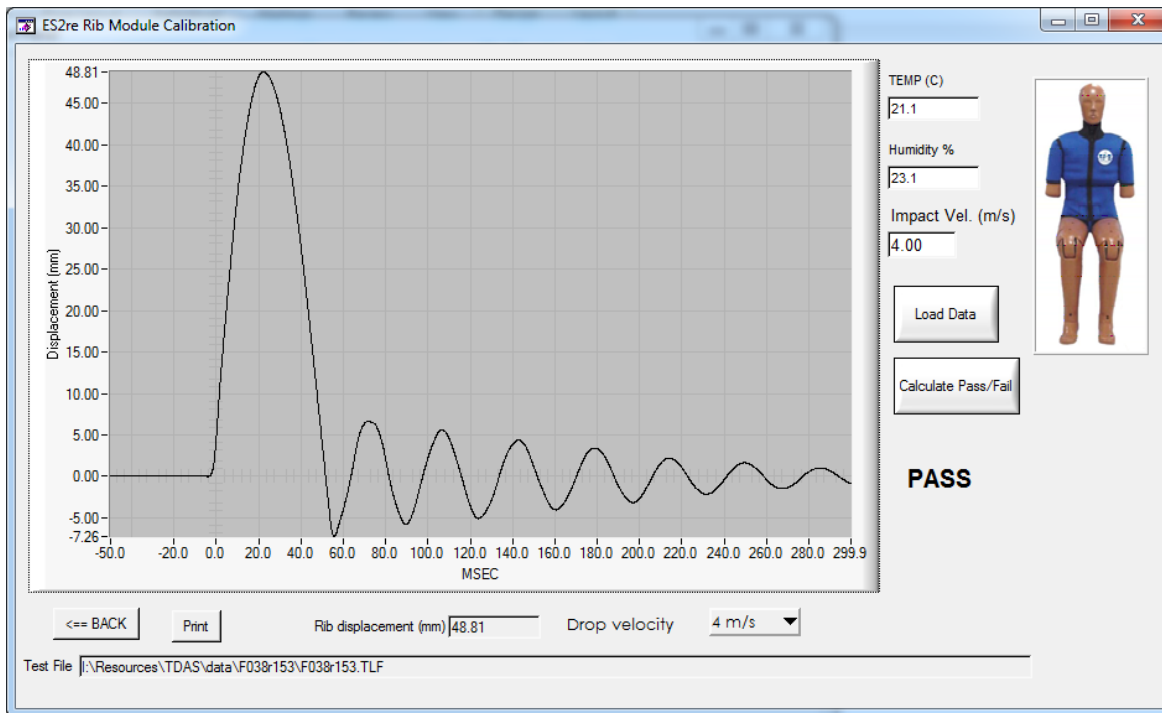


TABLE 5
THORAX – UPPER RIB DROP TEST (ES-IIre) (CONTINUED)
4.00 m/s

PRE-TEST



POST-TEST

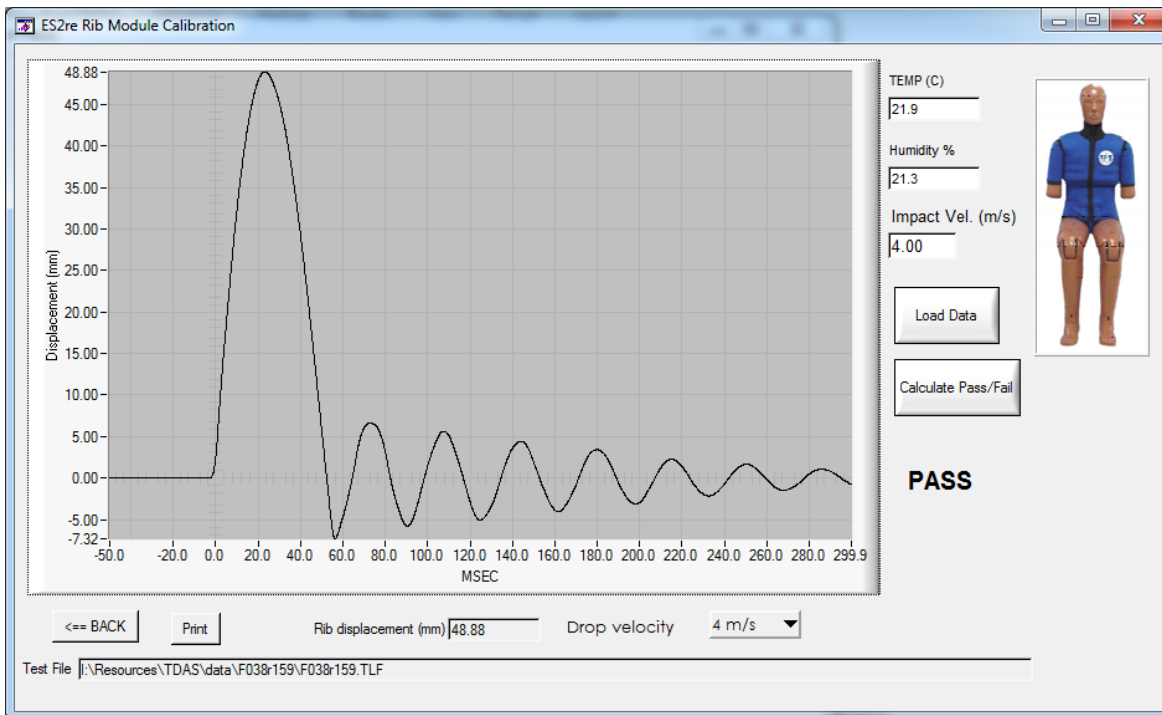


TABLE 6
THORAX – MIDDLE RIB DROP TEST (ES-IIre)

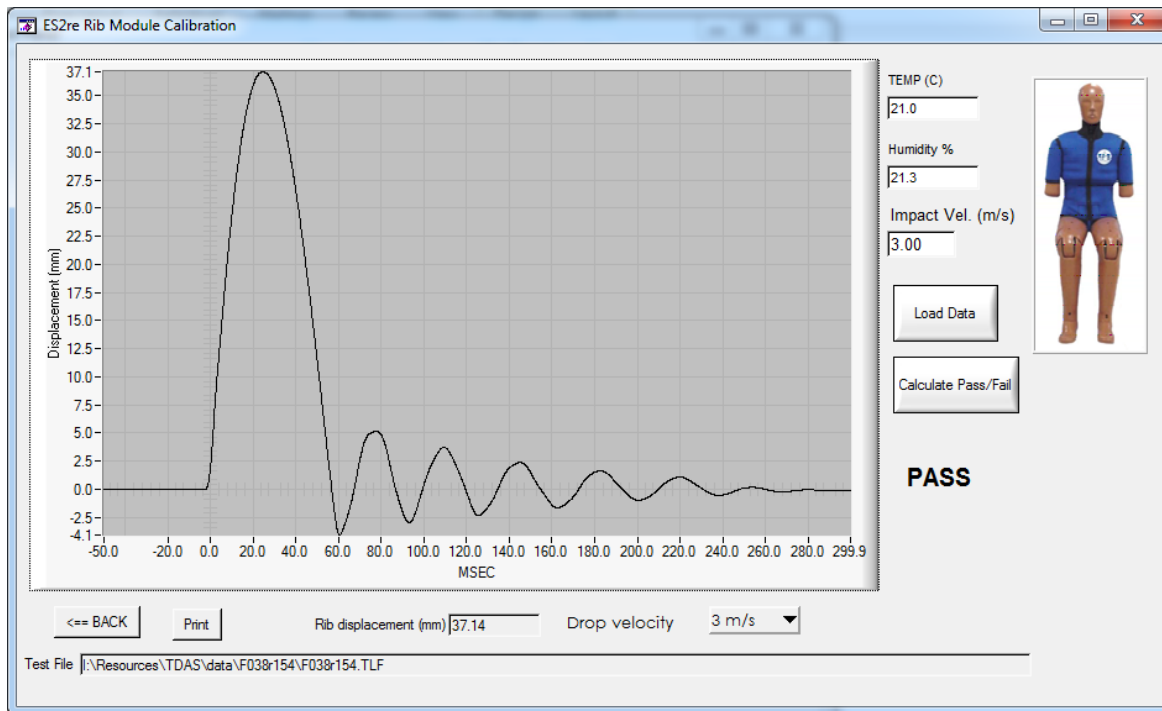
ES-IIre Serial Number F038

Test Sequences 7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-22-14		2-3-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Middle Rib Drop Module Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	21.0	Pass	21.3	Pass
	Min		20.8	Pass	20.8	Pass
Humidity (%) – During Soak	Max	10.0-70.0	21.3	Pass	21.7	Pass
	Min		20.1	Pass	13.5	Pass
Temperature – During Test (°C)		20.6-22.2	21.0	Pass	21.3	Pass
Humidity – During Test (%)		10-70	21.3	Pass	21.7	Pass
1 st Test - Drop Height 459 ± 5 mm		36-40	37.1	Pass	37.0	Pass
2 nd Test - Drop Height 815 ± 5 mm		46-51	48.7	Pass	48.6	Pass

TABLE 6
THORAX – MIDDLE RIB DROP TEST (ES-IIre) (CONTINUED)
3.00 m/s

PRE-TEST



POST-TEST

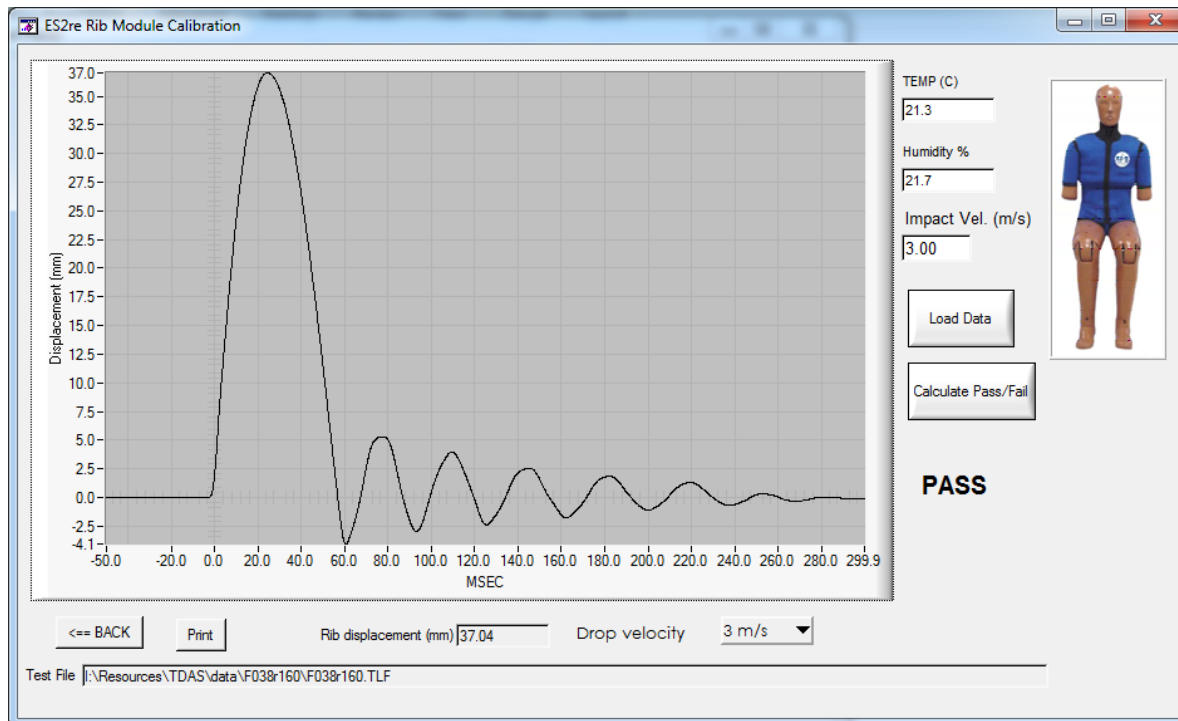
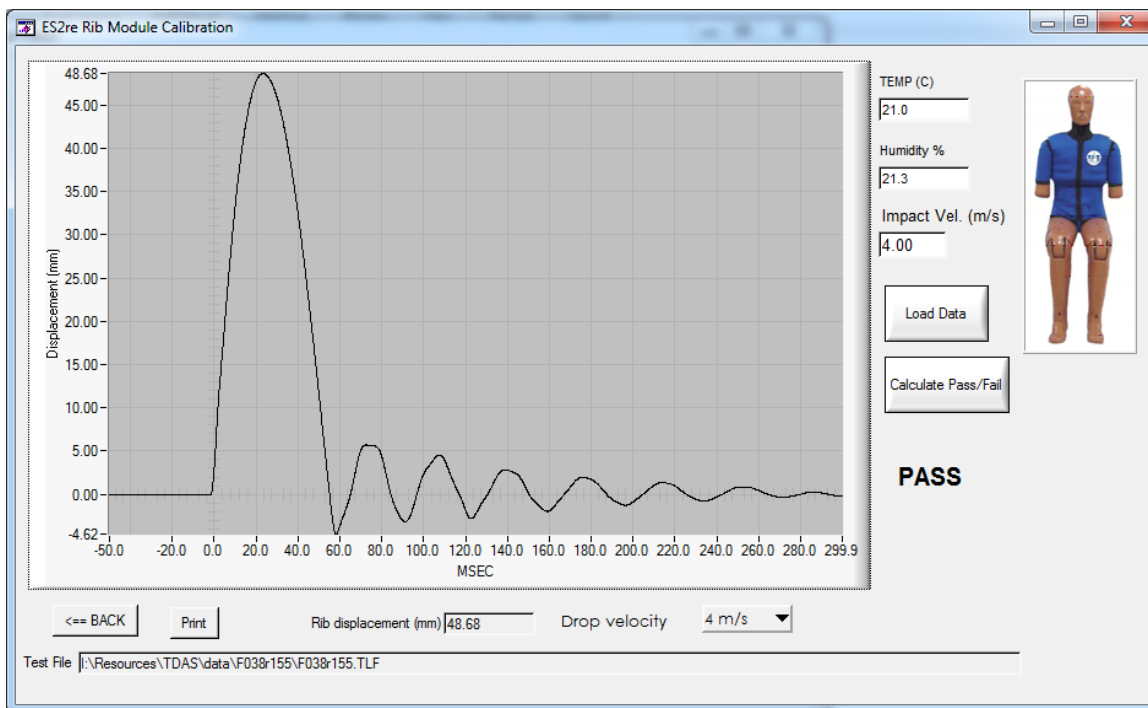


TABLE 6
THORAX – MIDDLE RIB DROP TEST (ES-IIre) (CONTINUED)
4.00 m/s

PRE-TEST



POST-TEST

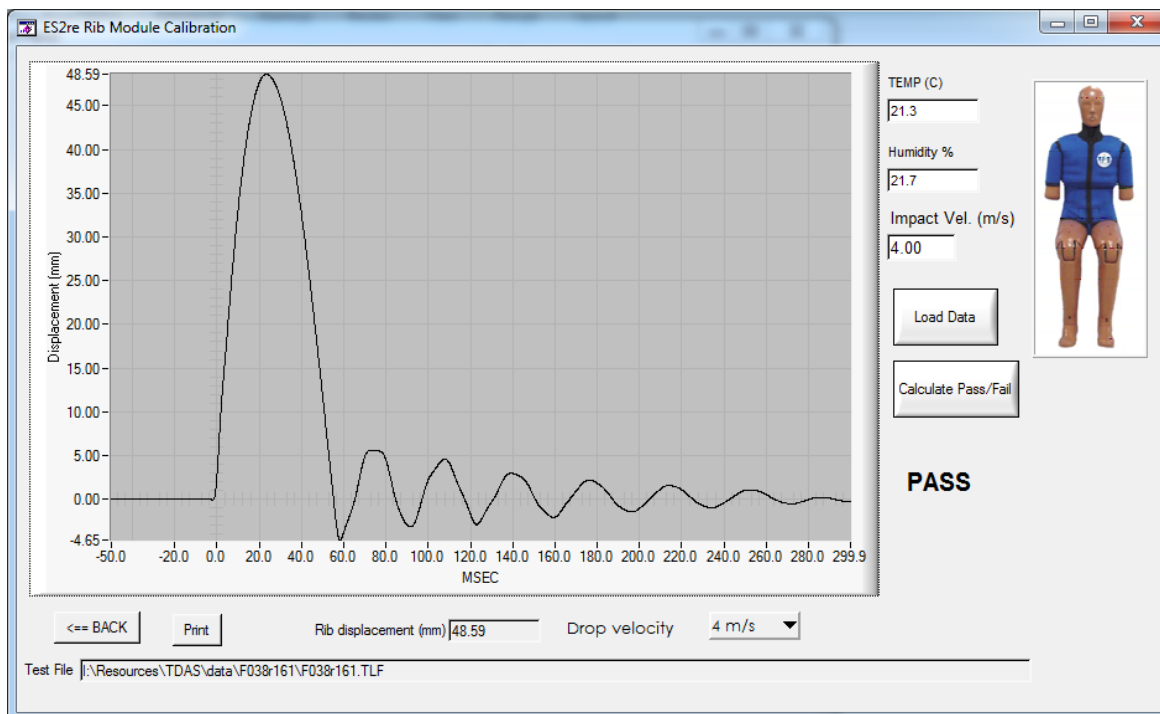


TABLE 7
THORAX – LOWER RIB DROP TEST (ES-IIre)

ES-IIre Serial Number

F038

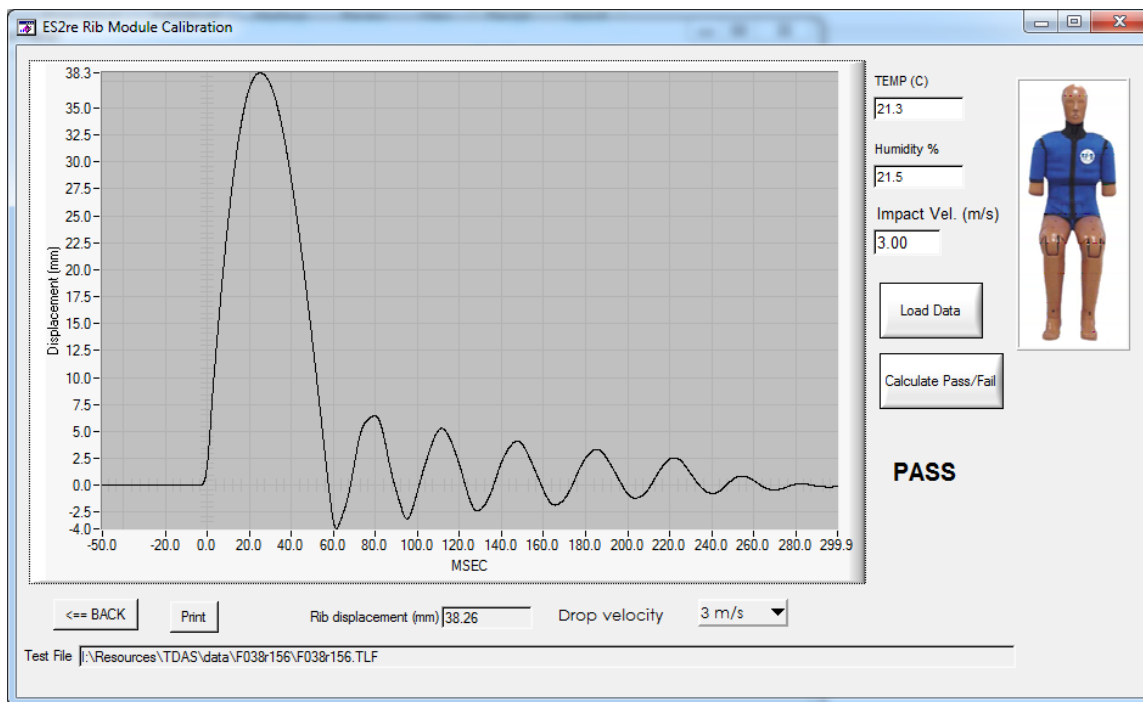
Test Sequences

7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-22-14		2-3-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Lower Rib Drop Module Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	21.3	Pass	21.0	Pass
	Min		20.8	Pass	20.8	Pass
Humidity (%) – During Soak	Max	10.0-70.0	21.5	Pass	22.9	Pass
	Min		20.1	Pass	13.5	Pass
Temperature – During Test (°C)		20.6-22.2	21.3	Pass	21.0	Pass
Humidity – During Test (%)		10-70	21.5	Pass	22.9	Pass
1 st Test - Drop Height 459 ± 5 mm		36-40	38.3	Pass	38.8	Pass
2nd Test - Drop Height 815 ± 5 mm		46-51	49.2	Pass	49.5	Pass

TABLE 7
THORAX – LOWER RIB DROP TEST (ES-IIre) (CONTINUED)
3.00 m/s

PRE-TEST



POST-TEST

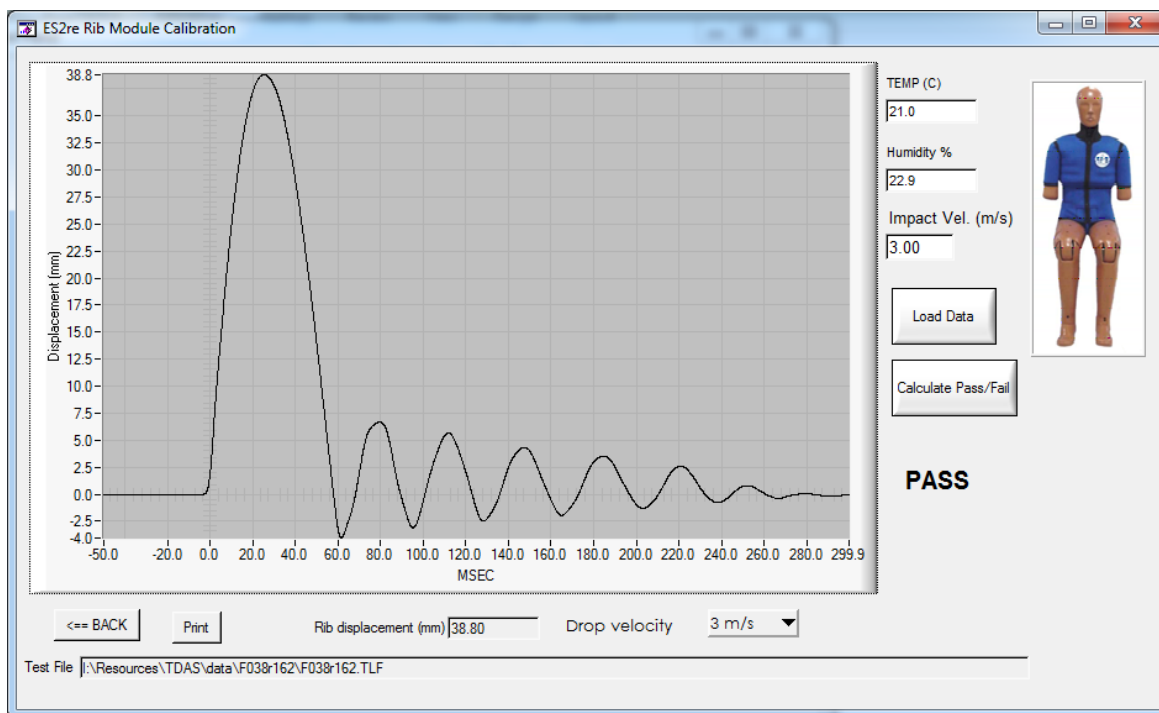
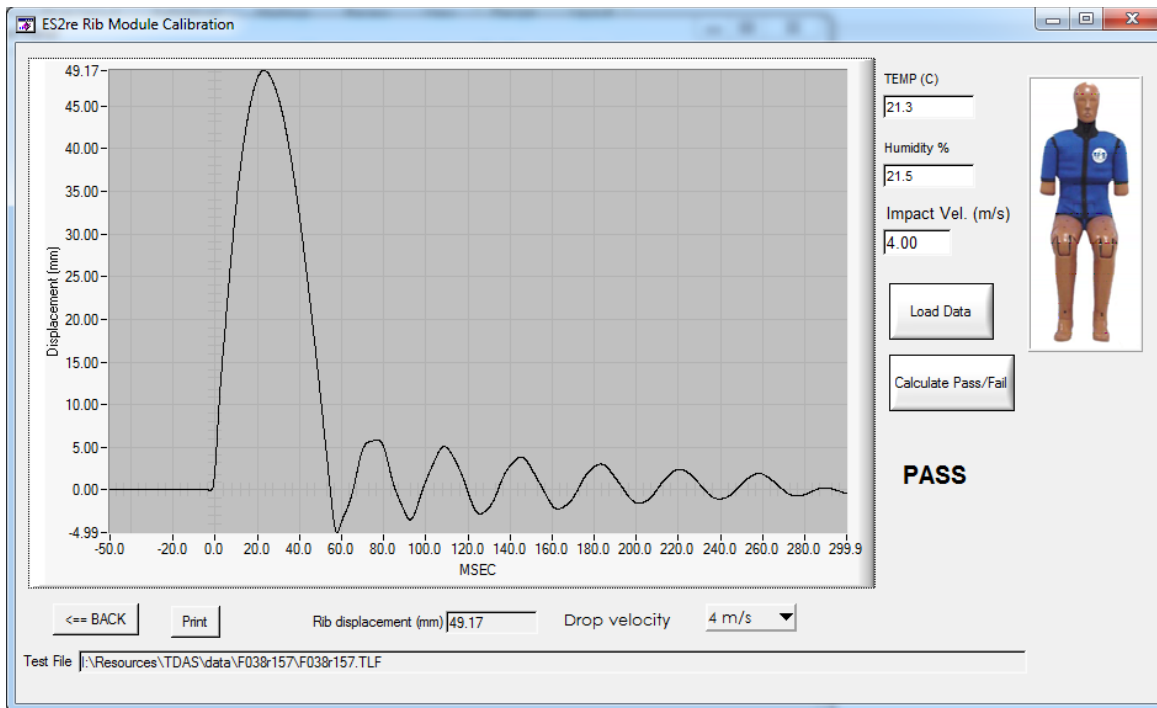


TABLE 7
THORAX – LOWER RIB DROP TEST (ES-IIre) (CONTINUED)
4.00 m/s

PRE-TEST



POST-TEST

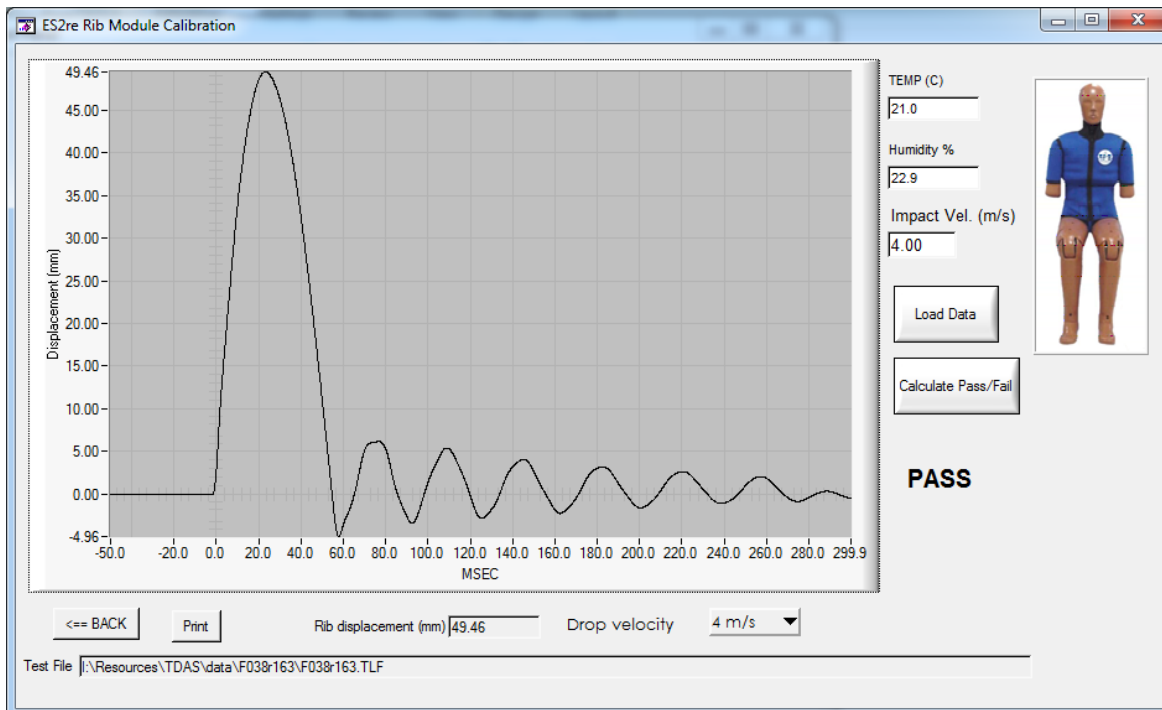


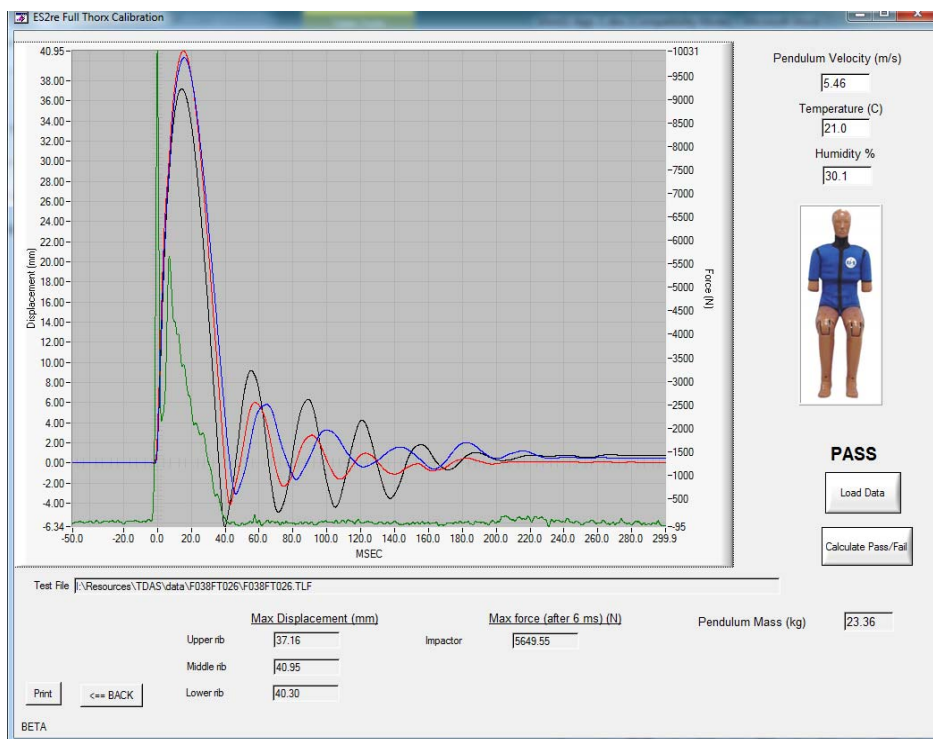
TABLE 8
THORAX – FULL BODY IMPACT TEST (ES-IIre)

ES-IIre Serial Number F038 Test Sequences 7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-22-14		2-4-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	21.0	Pass	21.2	Pass
	Min		20.8	Pass	20.6	Pass
Humidity (%) – During Soak	Max	10.0-70.0	30.1	Pass	29.5	Pass
	Min		20.1	Pass	23.1	Pass
Temperature – During Test (°C)		20.6-22.2	21.0	Pass	21.2	Pass
Humidity – During Test (%)		10-70	30.1	Pass	29.5	Pass
Peak Impactor Velocity (m/s)		5.4-5.6	5.5	Pass	5.5	Pass
Peak Upper Rib Deflection (mm)		34-41	37.2	Pass	36.9	Pass
Peak Middle Rib Deflection (mm)		37-45	41.0	Pass	41.0	Pass
Peak Lower Rib Deflection (mm)		37-44	40.3	Pass	40.3	Pass
Peak Impactor Force (>6ms) (kN)		5.1-6.2	5.6	Pass	5.7	Pass

TABLE 8
THORAX – FULL BODY IMPACT TEST (ES-IIre)

PRE-TEST



POST-TEST

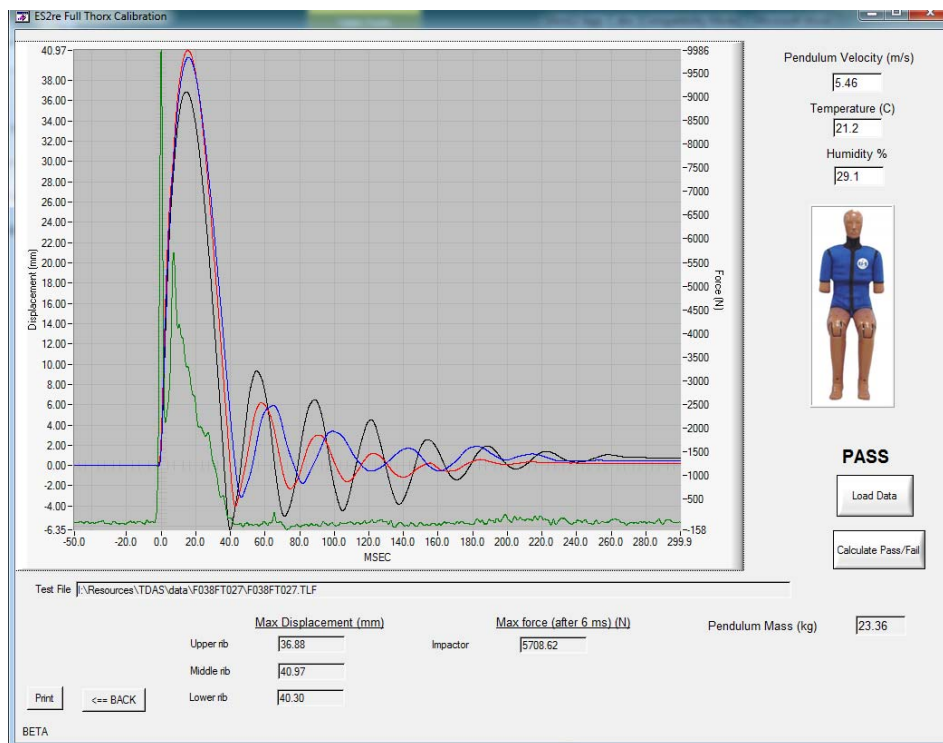


TABLE 9
ABDOMEN IMPACT TEST (ES-IIre)

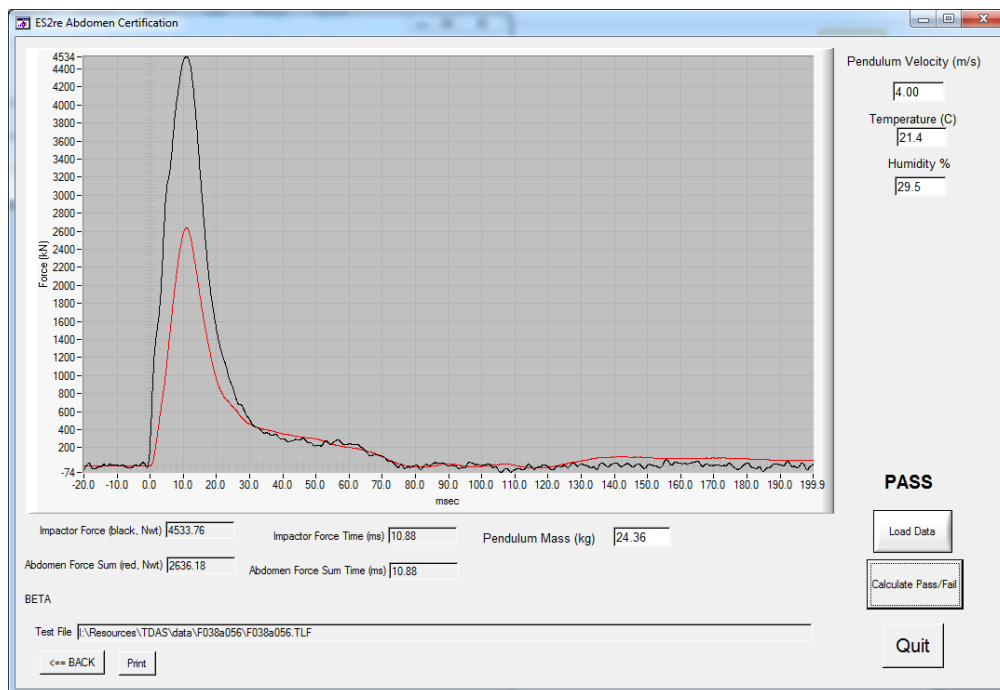
ES-IIre Serial Number F038

Test Sequences 7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-22-14		2-4-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	21.4	Pass	21.2	Pass
	Min		20.8	Pass	20.6	Pass
Humidity (%) – During Soak	Max	10.0-70.0	29.5	Pass	29.6	Pass
	Min		20.1	Pass	23.1	Pass
Temperature – During Test (°C)		20.6-22.2	21.4	Pass	21.2	Pass
Humidity – During Test (%)		10-70	29.5	Pass	29.6	Pass
Peak Impactor Velocity (m/s)		3.9-4.1	4.0	Pass	4.0	Pass
Sum of Abdominal Forces (kN)		2.2-2.7	2.6	Pass	2.6	Pass
Time of Abdominal Forces (ms)		10-12.3	10.9	Pass	11.6	Pass
Peak Impactor Force (kN)		4.0-4.8	4.5	Pass	4.5	Pass
Time of Peak Impactor Force (ms)		10.6-13.0	10.9	Pass	11.0	Pass

TABLE 9
ABDOMEN IMPACT TEST (ES-IIre) (CONTINUED)

PRE-TEST



POST-TEST

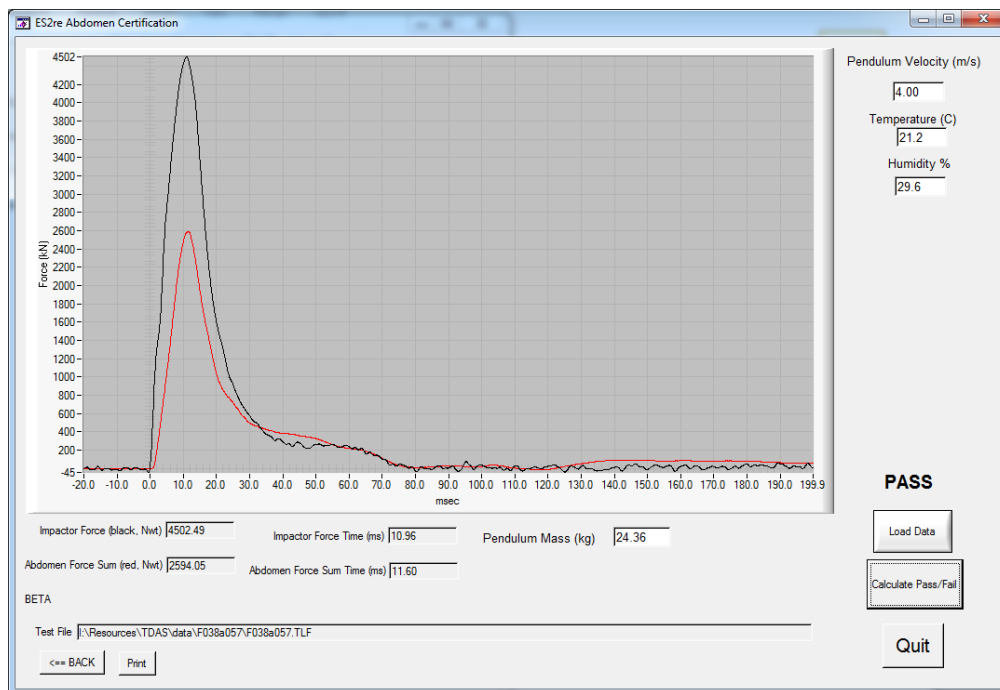


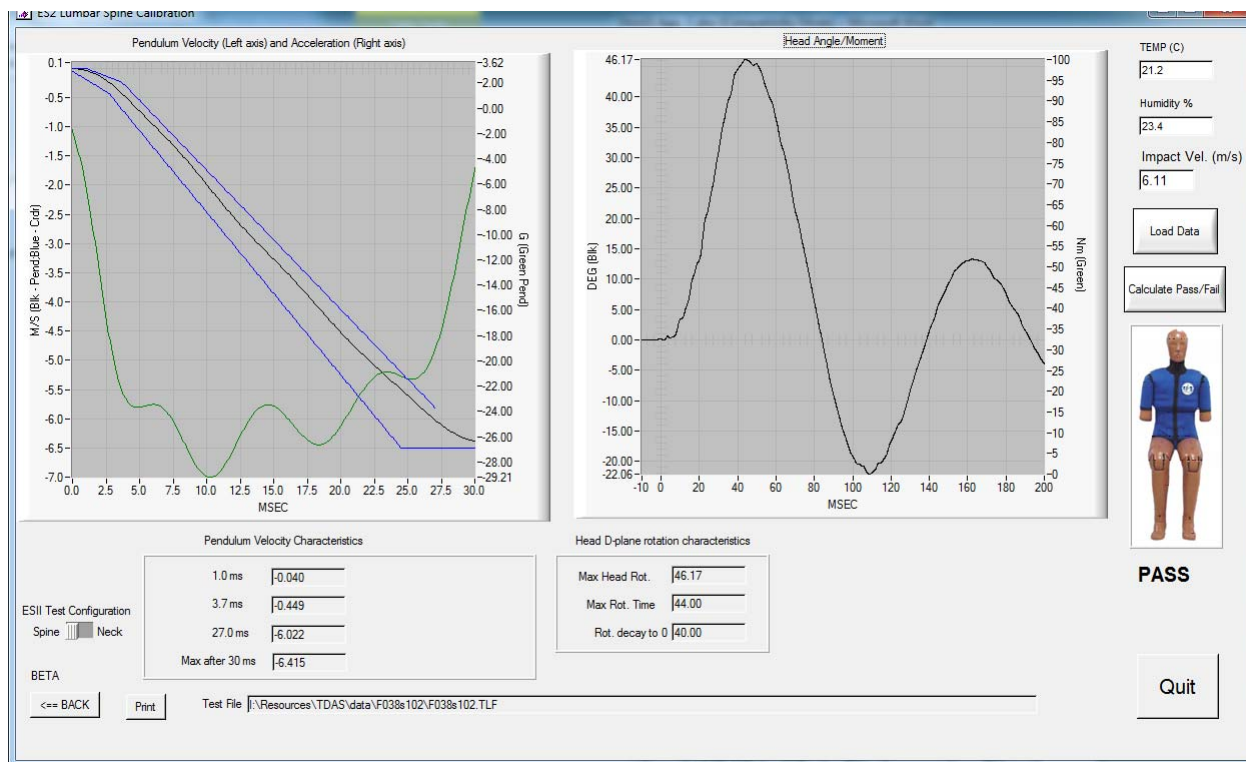
TABLE 10
LUMBAR SPINE FLEXION TEST (ES-IIre)

ES-IIre Serial Number F038 Test Sequences 7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-21-14		2-4-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Lumbar Spine Assembly Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	21.2	Pass	20.7	Pass
	Min		20.7	Pass	20.6	Pass
Humidity (%) – During Soak	Max	10.0-70.0	23.4	Pass	25.0	Pass
	Min		18.7	Pass	23.1	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	20.7	Pass
Humidity – During Test (%)		10-70	23.4	Pass	25.0	Pass
Pendulum Velocity (m/s)		5.95-6.15	6.1	Pass	6.1	Pass
Pendulum Velocity Corridors (m/s)	0-1.0 ms	(-0.05)-0.00	-0.04	Pass	-0.04	Pass
	2.7-3.7 ms	(-0.425) - (-0.24)	-0.45	Pass	-0.45	Pass
	24.5-27.0 ms	(-6.50) - (-5.80)	-6.0	Pass	-5.9	Pass
	Max after 30 ms	-6.50	-6.4	Pass	-6.4	Pass
Maximum Headform Flexion Angle (deg)		45-55	46.2	Pass	46.5	Pass
Time at Maximum Flexion Angel (ms)		39-53	44.0	Pass	44.5	Pass
Time of Decay to Zero Angle from Peak (ms)		37-57	40.0	Pass	39.4	Pass

TABLE 10
LUMBAR SPINE FLEXION TEST (ES-IIre) (CONTINUED)

PRE-TEST



POST-TEST

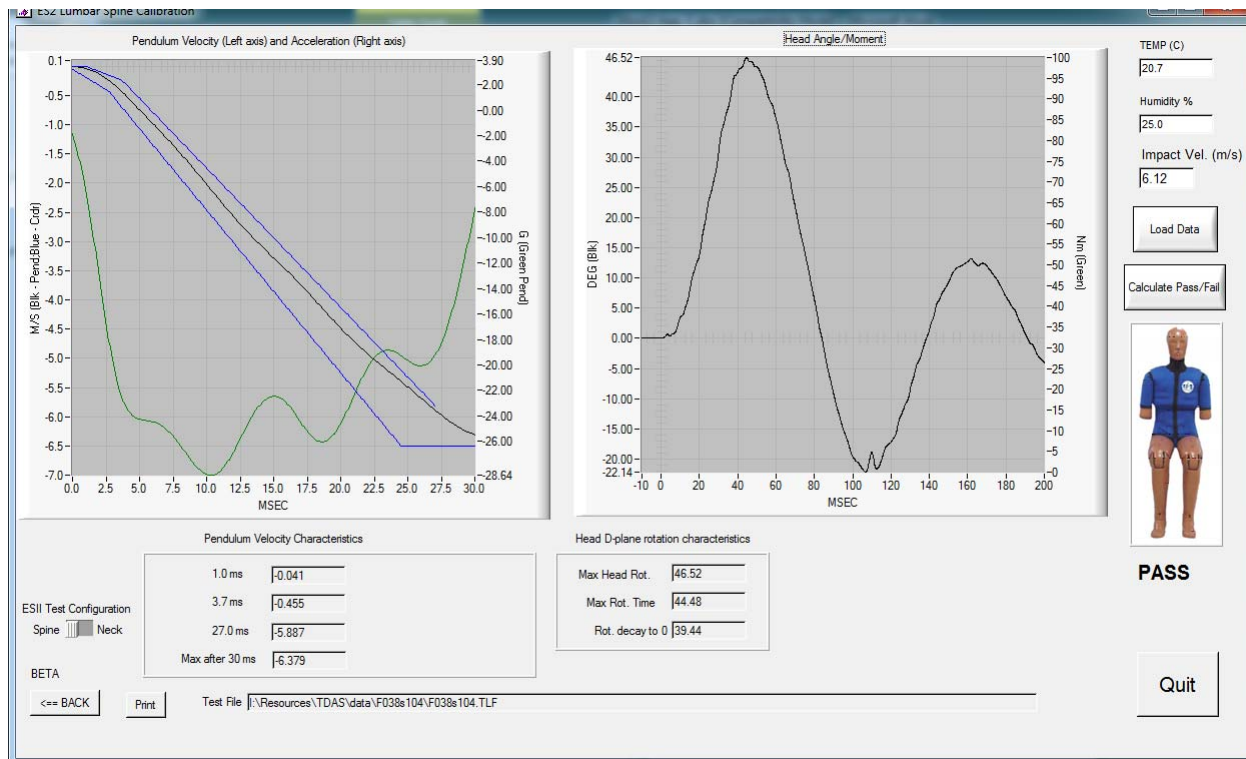


TABLE 11
PELVIS IMPACT TEST (ES-IIre)

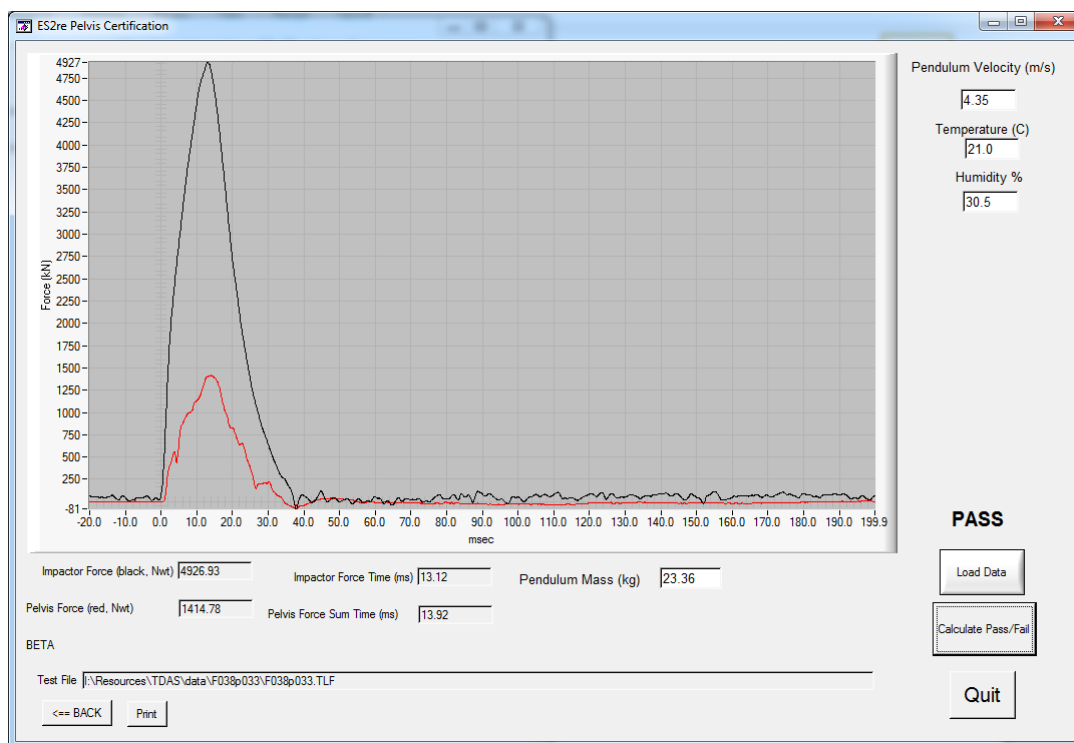
ES-IIre Serial Number F038

Test Sequences 7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-22-14		2-4-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	21.0	Pass	21.2	Pass
	Min		20.8	Pass	20.6	Pass
Humidity (%) – During Soak	Max	10.0-70.0	30.5	Pass	30.0	Pass
	Min		20.1	Pass	23.1	Pass
Temperature – During Test (°C)		20.6-22.2	21.0	Pass	21.2	Pass
Humidity – During Test (%)		10-70	30.5	Pass	30.0	Pass
Pendulum Velocity (m/s)		4.2-4.4	4.4	Pass	4.4	Pass
Peak Impactor Force (kN)		4.7 – 5.4	4.9	Pass	4.9	Pass
Time at Peak Force (ms)		11.8-16.1	13.1	Pass	13.3	Pass
Peak Pubic Symphysis Force (kN)		1.23-1.59	1.4	Pass	1.5	Pass
Time at Peak Force (ms)		12.2-17.0	13.9	Pass	13.1	Pass

TABLE 11
PELVIS IMPACT TEST (ES-IIre) (CONTINUED)

PRE-TEST



POST-TEST

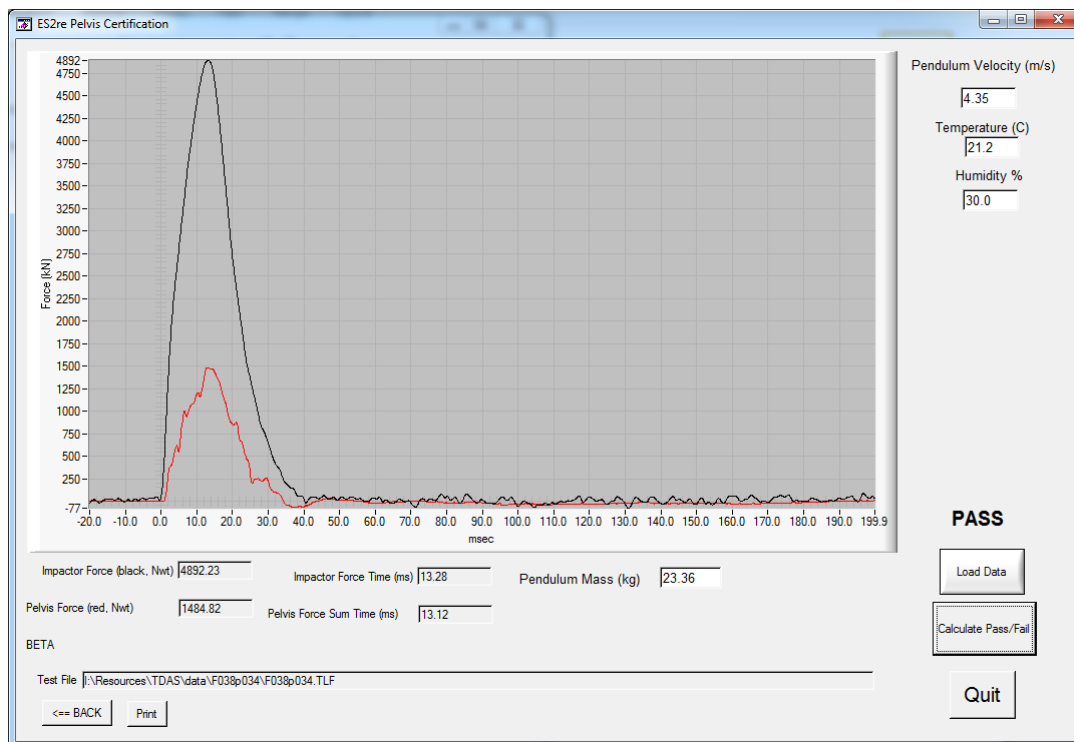


TABLE 1
EXTERNAL MEASUREMENTS (SID-IIIs)

SIDIIs Serial Number	298	Test Sequences		7 & 8	
TEST PARAMETER	SPEC.	PRE		POST	
Date	-	1-22-14		2-4-14	
Sequential Test Number	-	7		8	
		Result	Pass/Fail	Result	Pass/Fail
Temperature (°C)	20.6-22.2	21.0	Pass	21.2	Pass
Relative Humidity (%)	10-70	29.8	Pass	32.2	Pass
Sitting Height	772 – 788	778	Pass	775	Pass
Shoulder Pivot Height	437 – 453	446	Pass	448	Pass
H-Point Height	79 – 89	88	Pass	87	Pass
H-Point from Seat Back	141 – 151	145	Pass	146	Pass
Shoulder Pivot from Backline	97 – 107	101	Pass	100	Pass
Thigh Clearance	119 – 135	125	Pass	124	Pass
Head Breadth	140 – 148	141	Pass	141	Pass
Head Back from Backline	40 – 46	43	Pass	42	Pass
Head Depth	178 – 188	182	Pass	182	Pass
Head Circumference	541 – 551	543	Pass	542	Pass
Buttock to Knee Length	514 – 540	523	Pass	525	Pass
Popliteal Height	343 – 369	360	Pass	360	Pass
Knee Pivot to Floor Height	392 – 409	405	Pass	405	Pass
Buttock Popliteal Length	416 – 442	430	Pass	430	Pass
Chest Depth w/o Jacket	195 – 211	206	Pass	205	Pass
Foot Length	216 – 232	225	Pass	225	Pass
Hip Breadth	313 – 323	321	Pass	320	Pass
Arm Length	249 – 259	255	Pass	255	Pass
Knee Joint to Seat Back	477 – 493	485	Pass	485	Pass
Shoulder Width	341 – 357	350	Pass	350	Pass
Foot Width	78 – 94	87	Pass	87	Pass
Chest Circumference w/Jacket	851 – 881	879	Pass	880	Pass
Waist Circumference	761 – 791	780	Pass	783	Pass

TABLE 2
HEAD DROP TEST (SID-IIIs)

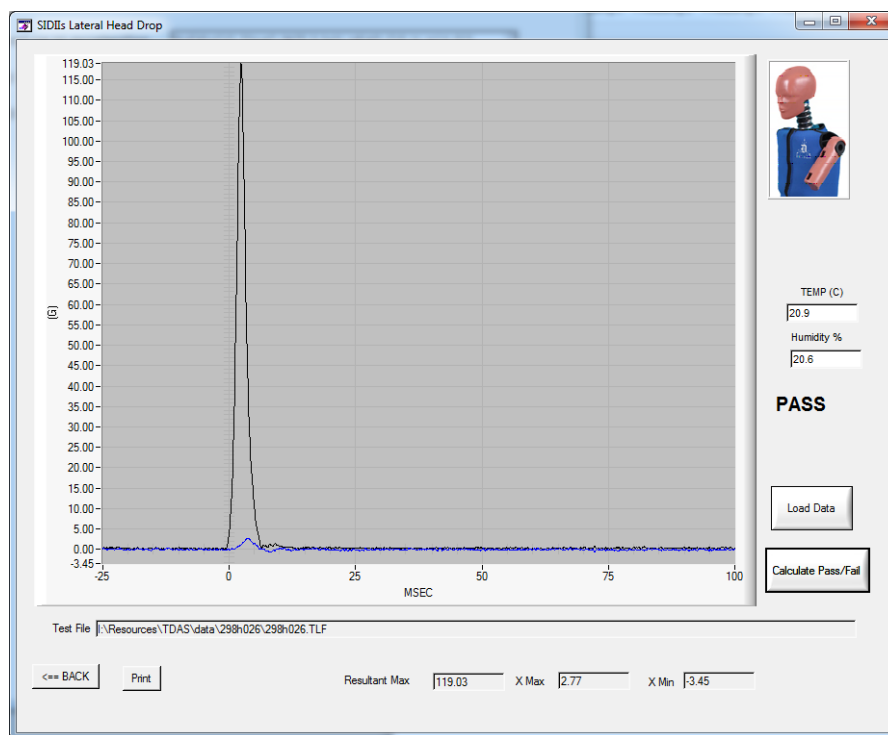
SIDIIs Serial Number 298

Test Sequences 7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-21-14		2-3-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Head Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	20.9	Pass	20.9	Pass
	Min		20.7	Pass	20.8	Pass
Humidity(%) – During Soak	Max	10.0-70.0	20.6	Pass	19.7	Pass
	Min		18.7	Pass	13.5	Pass
Temperature – During Test (°C)		20.6-22.2	20.9	Pass	20.9	Pass
Humidity – During Test (%)		10-70	20.6	Pass	19.7	Pass
Peak Head Resultant Acceleration (G)		115-137	119.0	Pass	120.3	Pass
Peak Head X Acceleration (G)		<15	2.8	Pass	4.2	Pass
Unimodal (Oscillation) (Yes/No)		<15%	Yes	Pass	Yes	Pass

TABLE 2
HEAD DROP TEST (SID-II_s) (CONTINUED)

PRE-TEST



POST-TEST

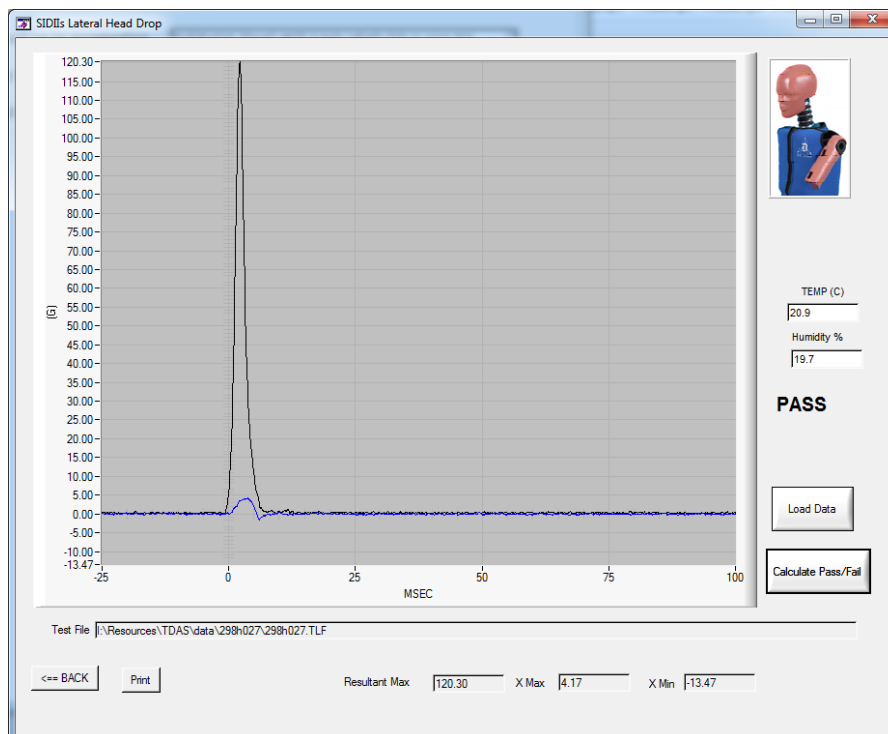


TABLE 3
LATERAL NECK PENDULUM TEST (SID-IIIs)

SIDIIs Serial Number 298

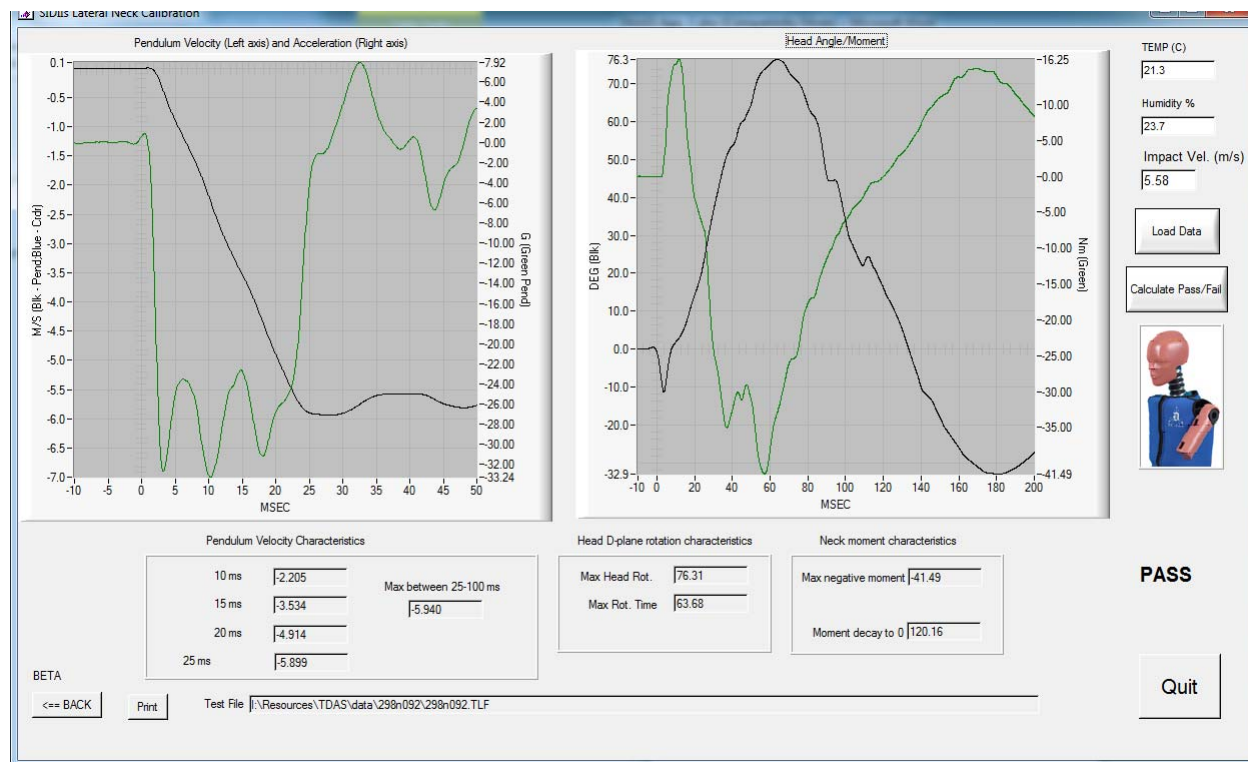
Test Sequences

7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-21-14		2-4-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Neck Assembly Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	21.3	Pass	21.6	Pass
	Min		20.7	Pass	20.6	Pass
Humidity(%) – During Soak	Max	10.0-70.0	23.7	Pass	24.7	Pass
	Min		18.7	Pass	23.1	Pass
Temperature – During Test (°C)		20.6-22.2	21.3	Pass	21.6	Pass
Humidity – During Test (%)		10-70	23.7	Pass	24.7	Pass
Pendulum Velocity (m/s)		5.51-5.63	5.6	Pass	5.6	Pass
Pendulum Deceleration (G)	10 ms	2.20-2.80	2.2	Pass	2.4	Pass
	15 ms	3.30-4.10	3.5	Pass	3.8	Pass
	20 ms	4.40-5.40	4.9	Pass	5.2	Pass
	25 ms	5.40-6.10	5.9	Pass	5.9	Pass
	25-100 ms	5.50-6.20	5.9	Pass	5.9	Pass
Maximum D-Plane rotation (deg)		71-81	76.3	Pass	80.3	Pass
Time of Maximum D-Plane Rotation (ms)		50-70	63.7	Pass	65.0	Pass
Peak Occ. Condyle Moment (Nm)		36-44	41.5	Pass	43.1	Pass
Time of Moment Decay (ms)		102-126	120.2	Pass	125.4	Pass

TABLE 3
LATERAL NECK PENDULUM TEST (SID-II_s) (CONTINUED)

PRE-TEST



POST-TEST

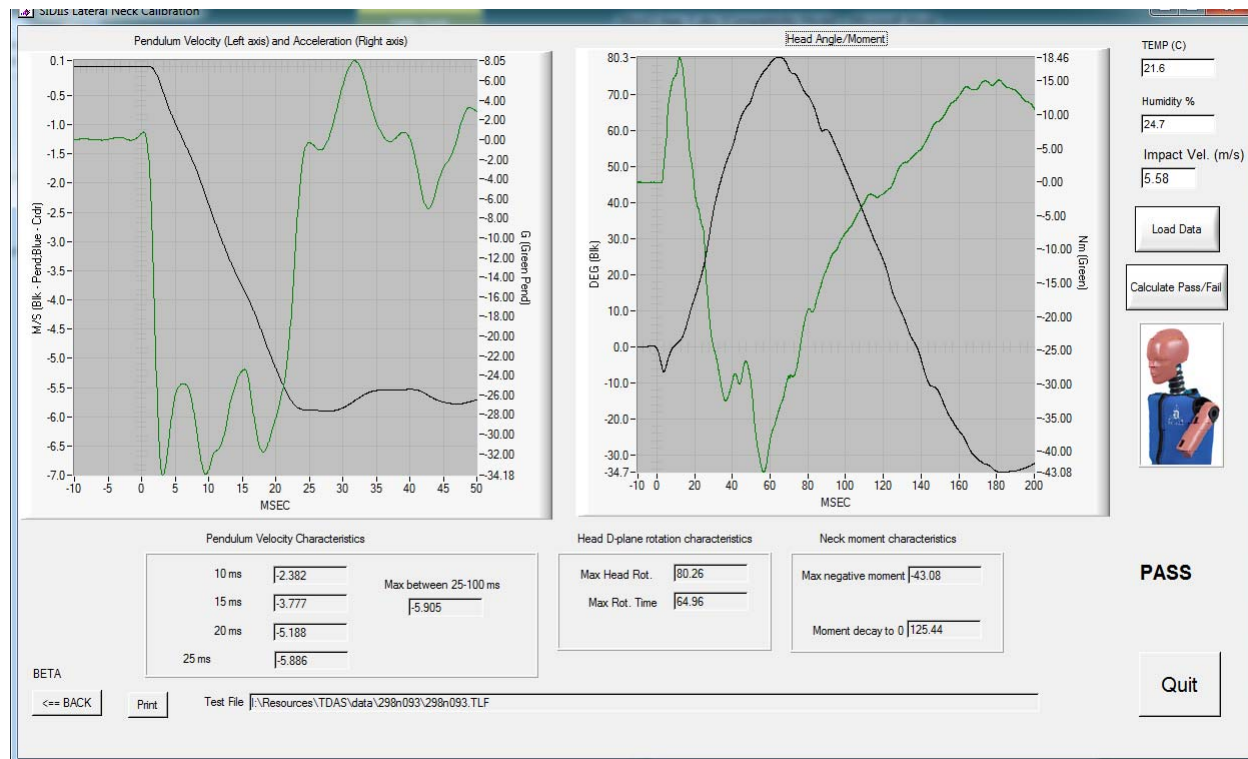


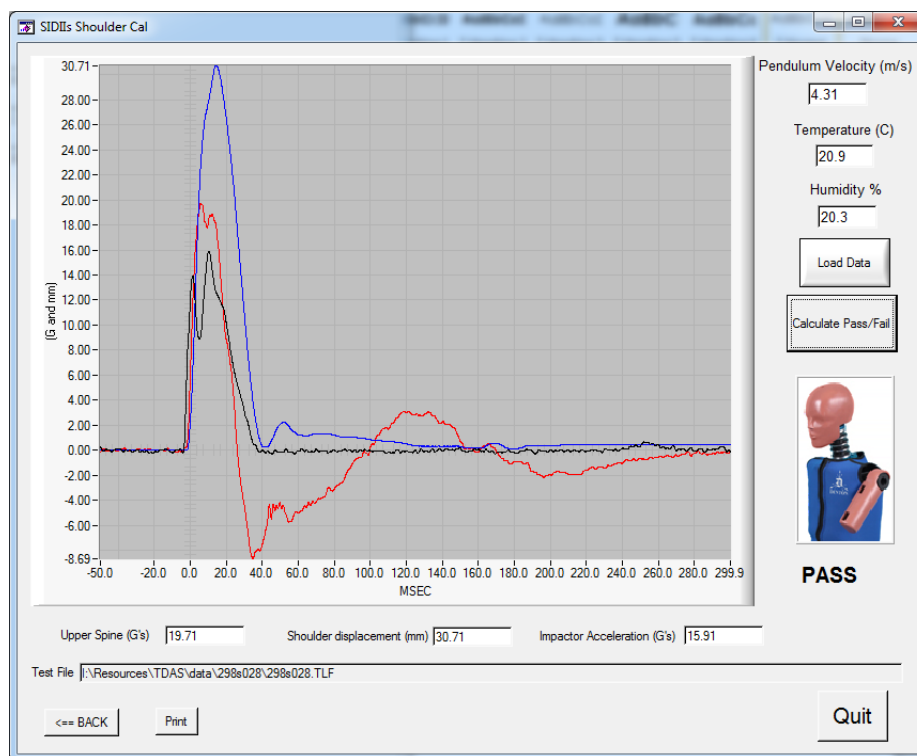
TABLE 4
SHOULDER IMPACT TEST (SID-IIs)

SIDIIs Serial Number 298 Test Sequences 7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-22-14		2-4-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 180	180	Pass	180	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	20.9	Pass	21.2	Pass
	Min		20.8	Pass	20.6	Pass
Humidity(%) – During Soak	Max	10.0-70.0	20.3	Pass	30.9	Pass
	Min		20.1	Pass	23.1	Pass
Temperature – During Test (°C)		20.6-22.2	20.9	Pass	21.2	Pass
Relative Humidity – During Test (%)		10-70	20.3	Pass	30.9	Pass
Impactor Velocity (m/s)		4.2-4.4	4.3	Pass	4.3	Pass
Peak Shoulder Deflection (mm)		28-37	30.7	Pass	30.0	Pass
Peak Lateral Spine (T1) Acceleration Y (G)		17-22	19.7	Pass	20.0	Pass
Peak Impactor Acceleration (G)		13-18	15.9	Pass	16.0	Pass

TABLE 4
SHOULDER IMPACT TEST (SID-II_s) (CONTINUED)

PRE-TEST



POST-TEST

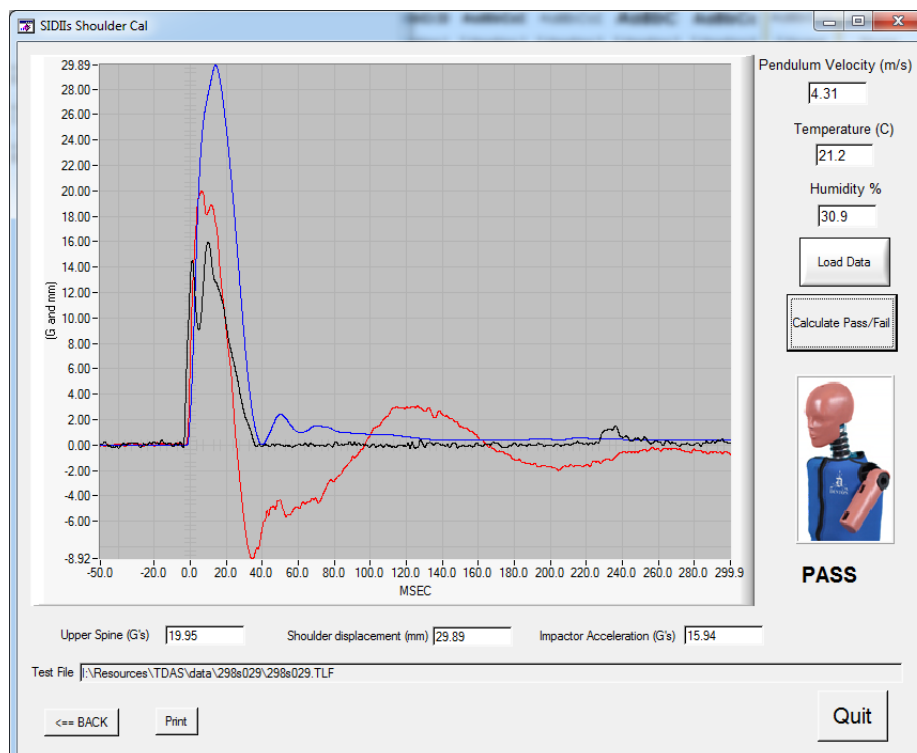


TABLE 5
THORAX (WITH ARM) IMPACT TEST (SID-IIIs)

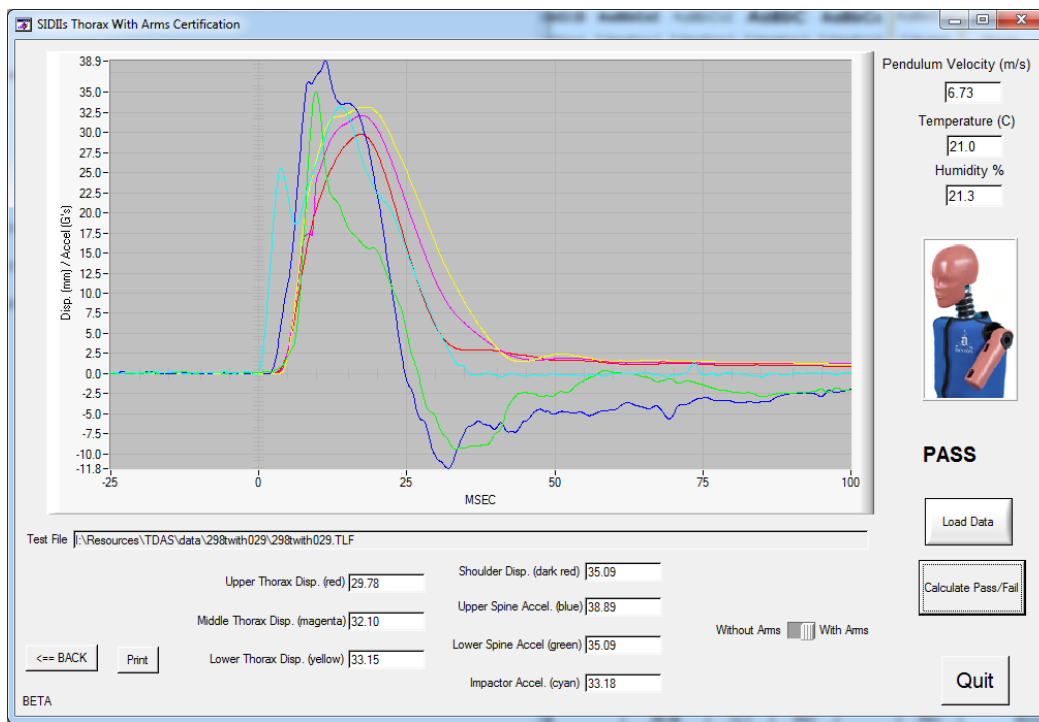
SIDIIs Serial Number 298

Test Sequences 7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-22-14		2-4-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 180	180	Pass	180	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	21.0	Pass	21.2	Pass
	Min		20.8	Pass	20.6	Pass
Humidity(%) – During Soak	Max	10.0-70.0	21.3	Pass	31.1	Pass
	Min		20.1	Pass	23.1	Pass
Temperature – During Test (°C)		20.6-22.2	21.0	Pass	21.2	Pass
Relative Humidity – During Test (%)		10-70	21.3	Pass	31.1	Pass
Impactor Velocity (m/s)		6.6-6.8	6.7	Pass	6.7	Pass
Peak Shoulder Deflection (mm)		31-40	35.1	Pass	35.1	Pass
Peak Upper Rib Deflection (mm)		25-32	29.8	Pass	29.2	Pass
Peak Middle Rib Deflection (mm)		30-36	32.1	Pass	32.3	Pass
Peak Lower Rib Deflection (mm)		32-38	33.2	Pass	34.1	Pass
Peak Upper Spine (T1) Acceleration Y (G)		34-43	38.9	Pass	38.9	Pass
Peak Lower Spine (T12) Acceleration Y (G)		29-37	35.1	Pass	35.1	Pass
Peak Impactor Acceleration (G)		30-36	33.2	Pass	32.5	Pass

TABLE 5
THORAX (WITH ARM) IMPACT TEST (SID-II_s) (CONTINUED)

PRE-TEST



POST-TEST

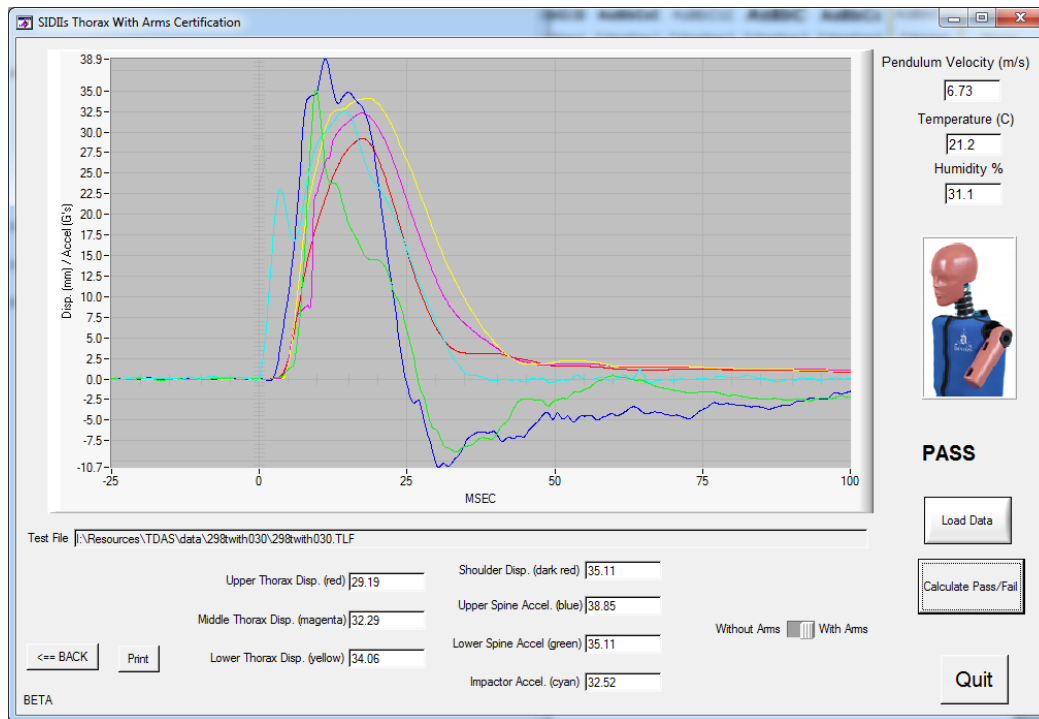


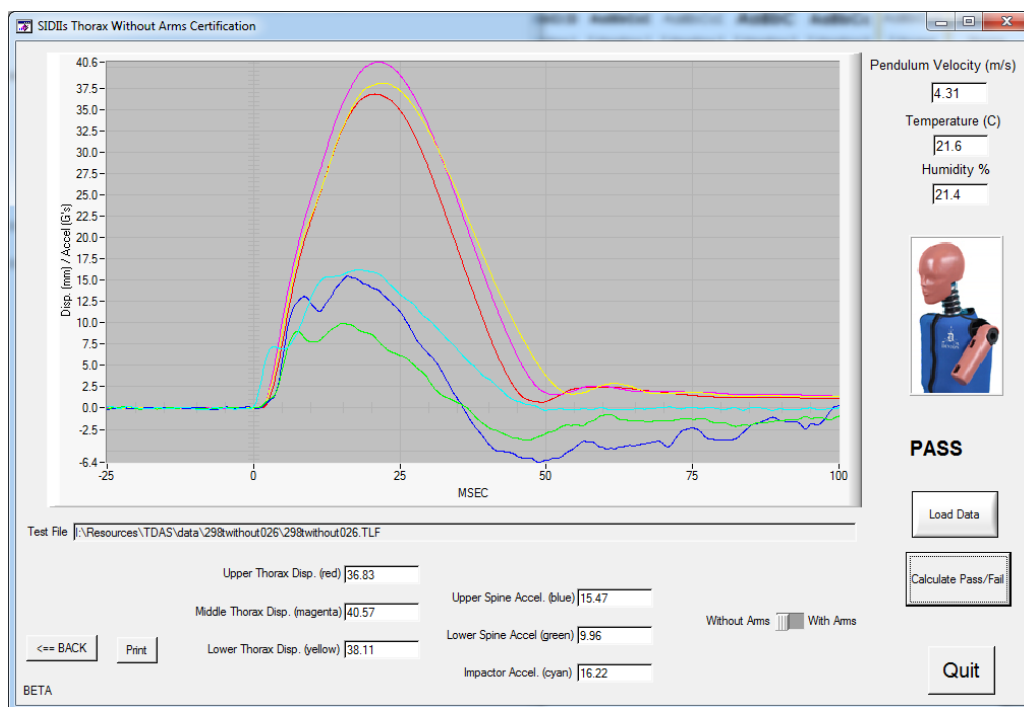
TABLE 6
THORAX (WITHOUT ARM) IMPACT TEST (SID-IIIs)

SIDIIs Serial Number 298 Test Sequences 7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-22-14		2-4-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 180	180	Pass	180	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	21.6	Pass	21.3	Pass
	Min		20.8	Pass	20.6	Pass
Humidity(%) – During Soak	Max	10.0-70.0	21.4	Pass	31.0	Pass
	Min		20.1	Pass	23.1	Pass
Temperature – During Test (°C)		20.6-22.2	21.6	Pass	21.3	Pass
Relative Humidity – During Test (%)		10-70	21.4	Pass	31.0	Pass
Impactor Velocity (m/s)		4.2-4.4	4.3	Pass	4.3	Pass
Peak Upper Rib Deflection (mm)		32-40	36.8	Pass	34.7	Pass
Peak Middle Rib Deflection (mm)		39-45	40.6	Pass	40.4	Pass
Peak Lower Rib Deflection (mm)		35-43	38.1	Pass	40.1	Pass
Peak Upper Spine (T1) Acceleration Y (G)		13-17	15.5	Pass	15.3	Pass
Peak Lower Spine (T12) Acceleration Y (G)		7-11	10.0	Pass	10.4	Pass
Peak Impactor Acceleration (G)		14-18	16.2	Pass	16.9	Pass

TABLE 6
THORAX (WITHOUT ARM) IMPACT TEST (SID-II_s) (CONTINUED)

PRE-TEST



POST-TEST

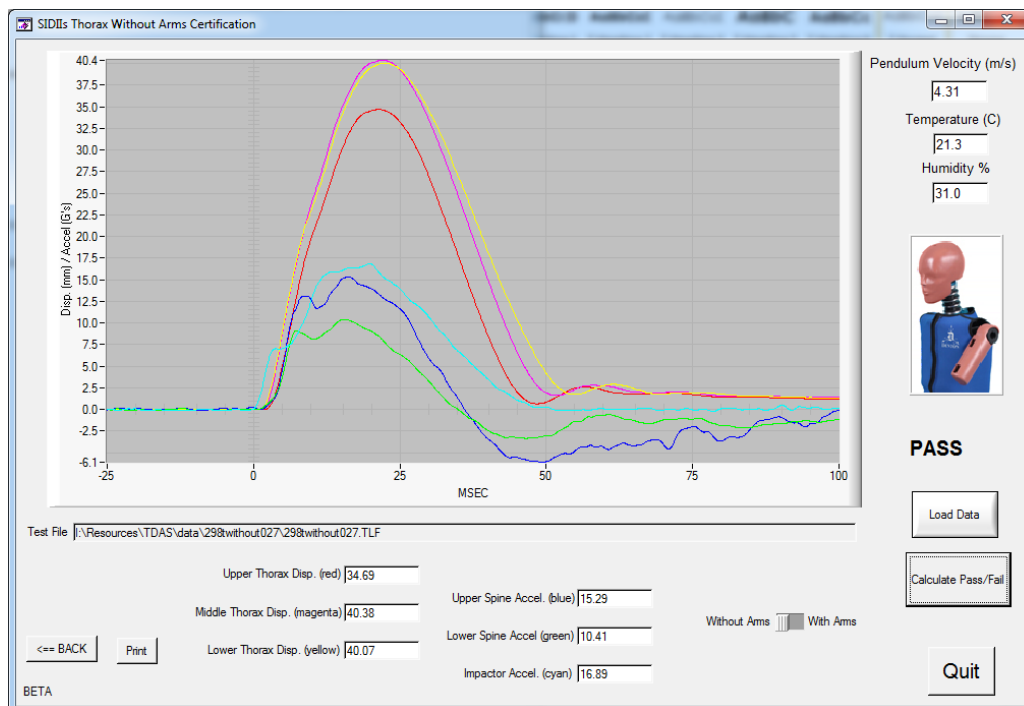


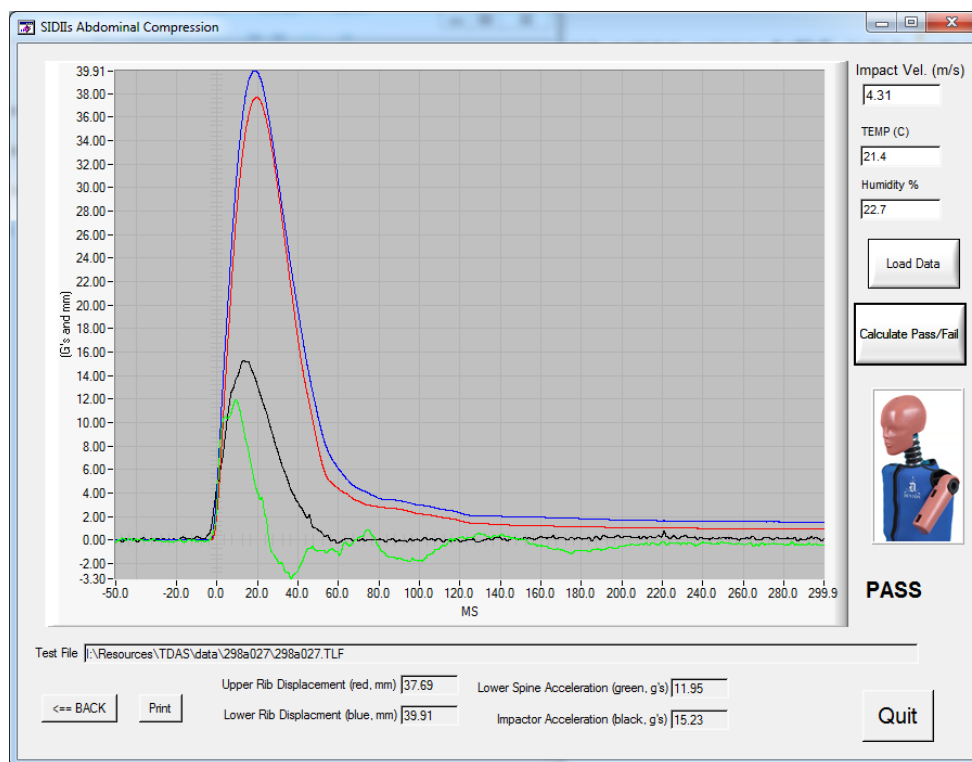
TABLE 7
ABDOMEN IMPACT TEST (SID-IIIs)

SIDIIs Serial Number 298 Test Sequences 7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-22-14		2-4-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 180	180	Pass	180	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	21.4	Pass	21.2	Pass
	Min		20.8	Pass	20.6	Pass
Humidity(%) – During Soak	Max	10.0-70.0	22.7	Pass	31.5	Pass
	Min		20.1	Pass	23.1	Pass
Temperature – During Test (°C)		20.6-22.2	21.4	Pass	21.2	Pass
Relative Humidity – During Test (%)		10-70	22.7	Pass	31.5	Pass
Impactor Velocity (m/s)		4.2-4.4	4.3	Pass	4.3	Pass
Peak Upper Abdominal Rib Deflection (mm)		36-47	37.7	Pass	38.7	Pass
Peak Lower Abdominal Rib Deflection (mm)		33-44	40.0	Pass	40.7	Pass
Peak Lower Spine (T12) Acceleration Y (G)		9-14	12.0	Pass	12.2	Pass
Peak Impactor Acceleration (G)		12-16	15.2	Pass	15.2	Pass

TABLE 7
ABDOMEN IMPACT TEST (SID-II_s) (CONTINUED)

PRE-TEST



POST-TEST

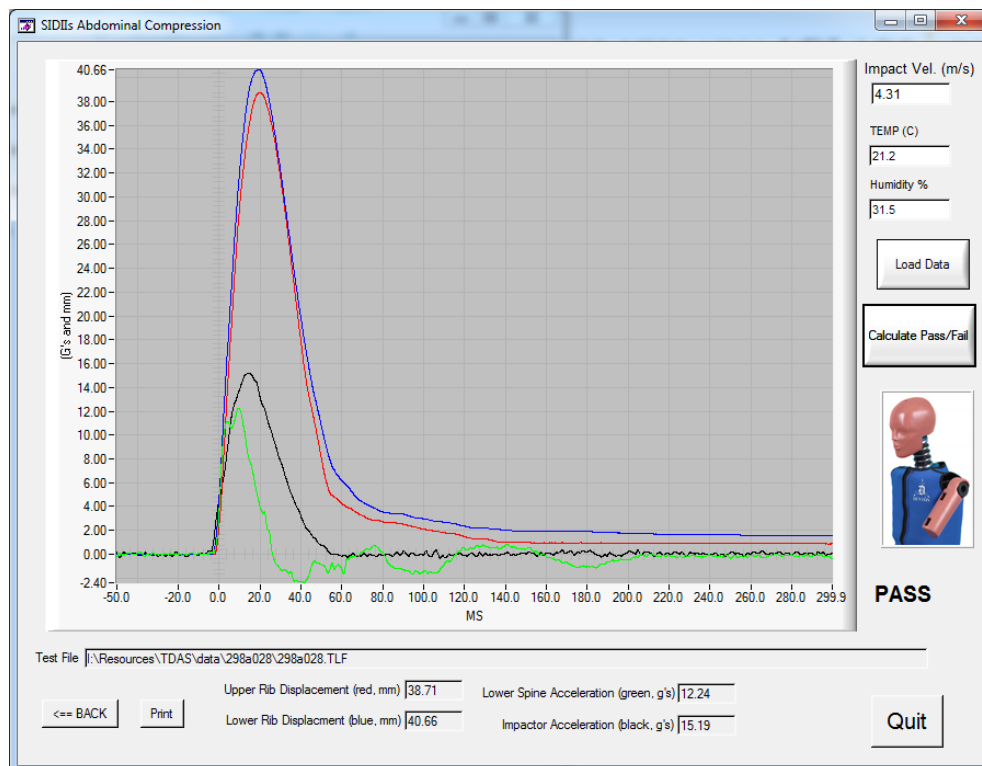
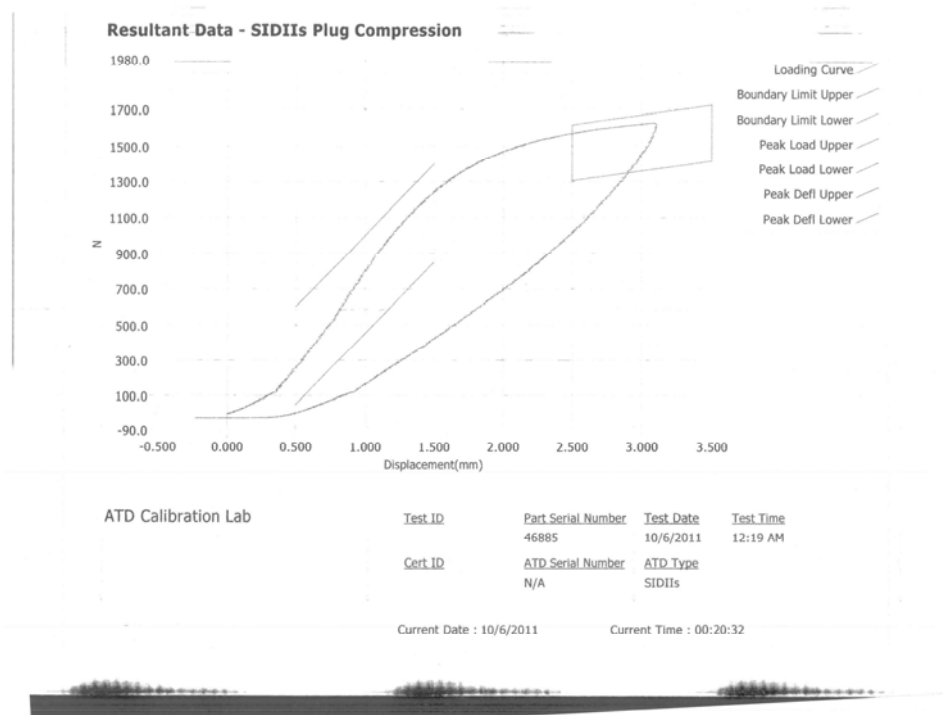


TABLE 8
PELVIS PLUG QUASI-STATIC TEST (SID-IIs)

PRE-Test



POST-TEST

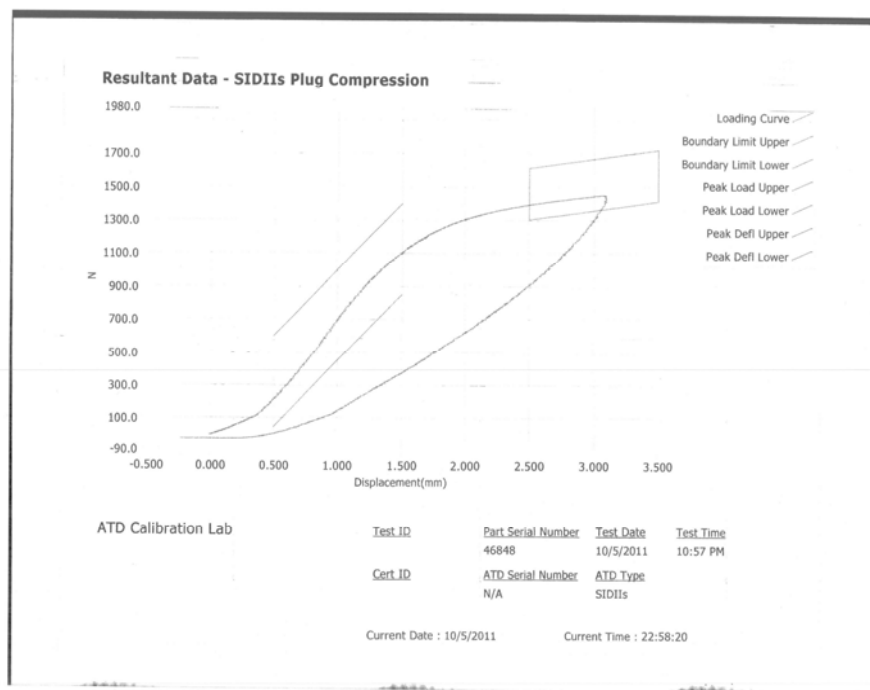


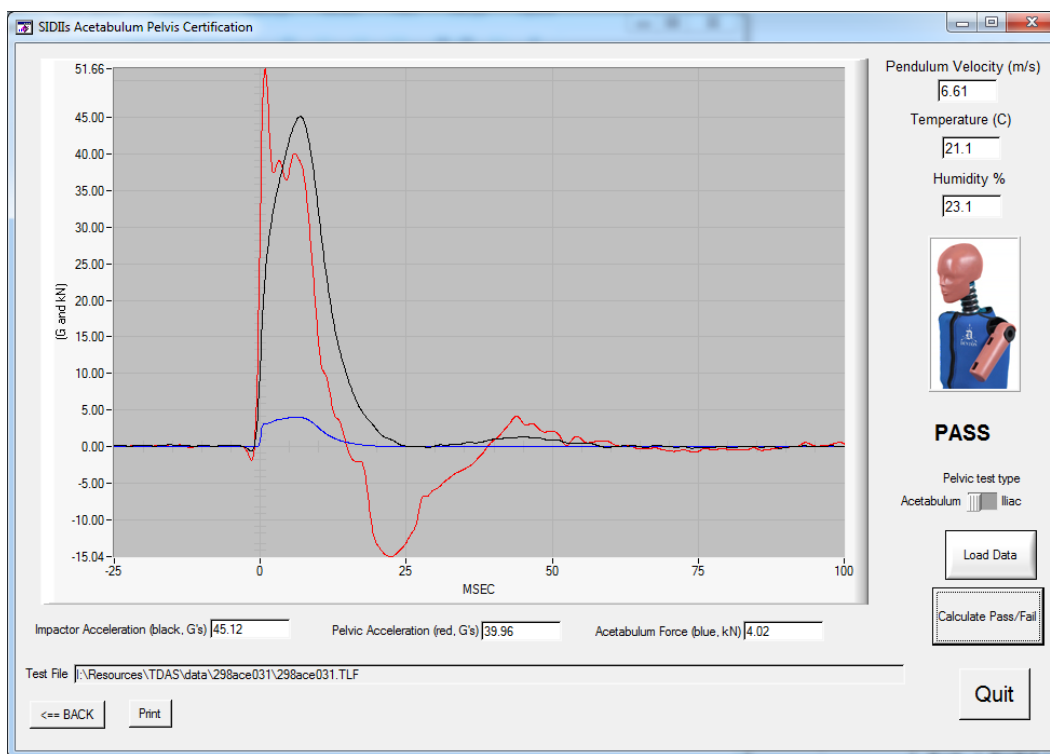
TABLE 9
PELVIS ACETABULUM IMPACT TEST (SID-IIIs)

SIDIIs Serial Number 298 Test Sequences 7 & 8

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-22-14		2-4-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Results	Pass/Fail
Dummy Soak Time (min)		≥ 180	180	Pass	180	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	21.1	Pass	21.2	Pass
	Min		20.8	Pass	20.6	Pass
Humidity(%) – During Soak	Max	10.0-70.0	23.1	Pass	32.0	Pass
	Min		20.1	Pass	23.1	Pass
Temperature – During Test (°C)		20.6-22.2	21.1	Pass	21.2	Pass
Humidity – During Test (%)		10-70	23.1	Pass	32.0	Pass
Impactor Velocity (m/s)		6.6-6.8	6.6	Pass	6.6	Pass
Peak Impactor Acceleration (G)		38-47	45.1	Pass	44.7	Pass
Pelvis Acceleration Y after 6ms (G)		34-42	40.0	Pass	41.7	Pass
Peak Acetabulum Force (kN)		3.60-4.30	4.0	Pass	3.9	Pass
Pelvis Plug Serial No. 46885 (Pre) No. 46848 (Post)						

TABLE 9
PELVIS ACETABULUM IMPACT TEST (SID-II_s) (CONTINUED)

PRE-TEST



POST-TEST

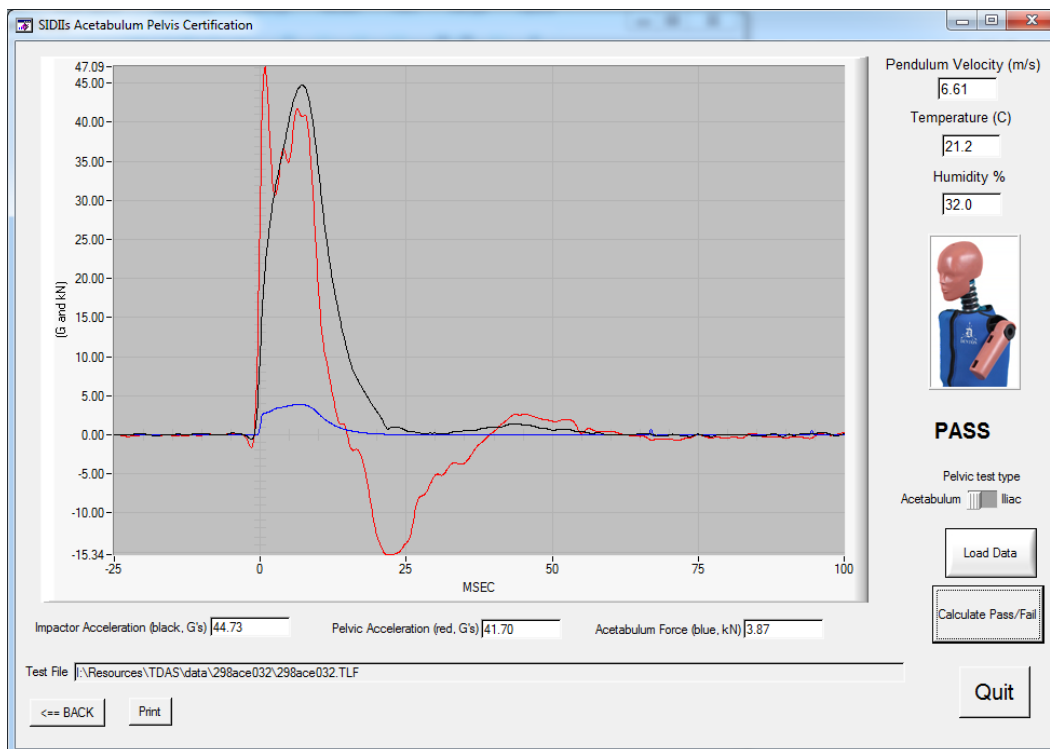


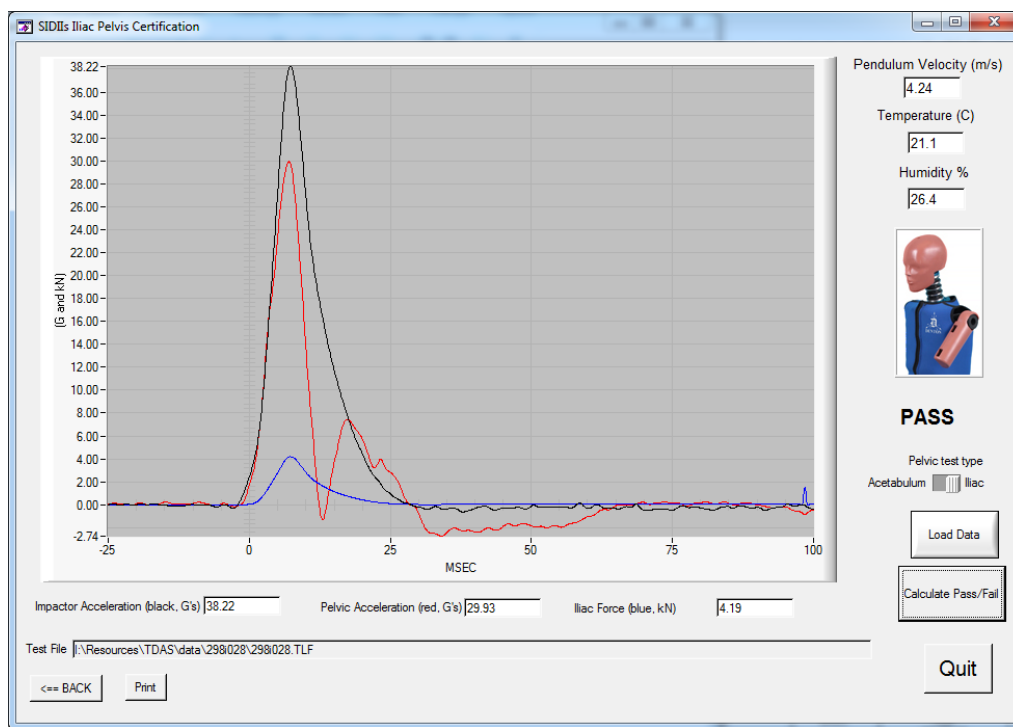
TABLE 10
PELVIS ILIAC IMPACT TEST (SID-IIs)

SIDIIs Serial Number 298 Test Sequences 7 & 8

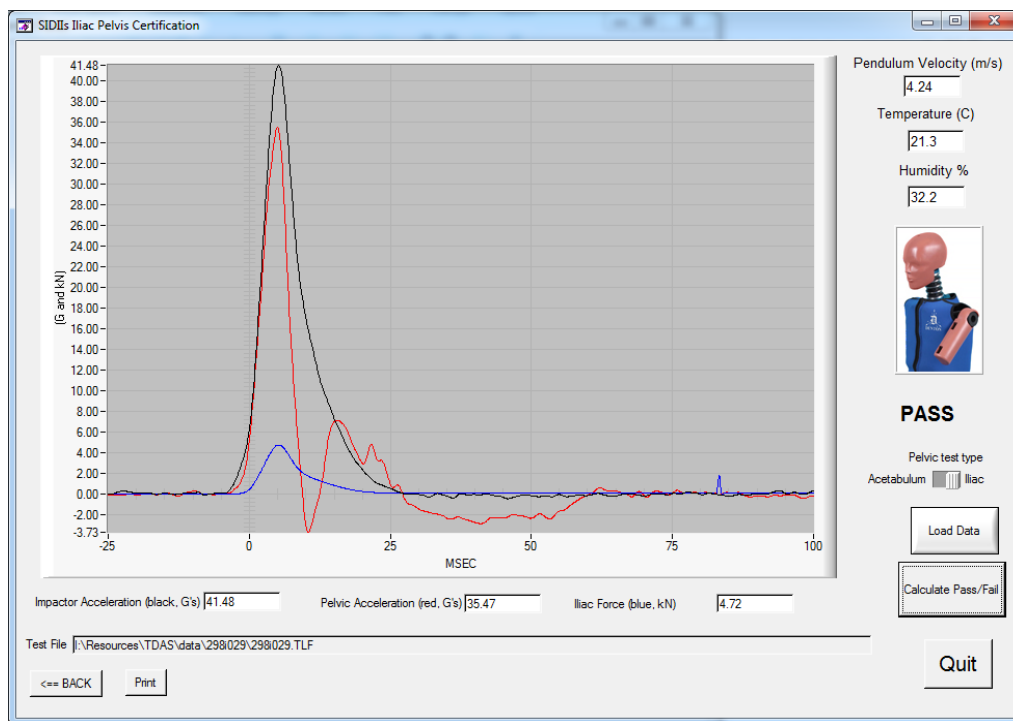
TEST PARAMETER		SPEC.	PRE		POST	
Date		-	1-22-14		2-4-14	
Sequential Test Number		-	7		8	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 180	180	Pass	180	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	21.1	Pass	21.3	Pass
	Min		20.8	Pass	20.6	Pass
Humidity(%) – During Soak	Max	10.0-70.0	26.4	Pass	32.2	Pass
	Min		20.1	Pass	23.1	Pass
Temperature – During Test (°C)		20.6-22.2	21.1	Pass	21.3	Pass
Humidity – During Test (%)		10-70	26.4	Pass	32.2	Pass
Pendulum Velocity (m/s)		4.2-4.4	4.2	Pass	4.2	Pass
Peak Impactor Acceleration (G)		36-46	38.2	Pass	41.5	Pass
Pelvis Acceleration Y (G)		29-39	30.0	Pass	35.5	Pass
Peak Iliac Force Y (N)		4.00-5.20	4.2	Pass	4.7	Pass
Pelvis Plug Serial No. 46885 (Pre) No. 46848 (Post)						

TABLE 10
PELVIS ILIAC IMPACT TEST (SID-II_s) (CONTINUED)

PRE-TEST



POST-TEST



Test Vehicle: 2014 Mitsubishi Outlander 5-Door MPV
Test Program: SINCAP

NHTSA Number: M20145602
Test Date: January 29, 2014

APPENDIX D
TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION DATA

TABLE 1 - DUMMY INSTRUMENTATION – ES-IIre					
		ES-IIre S/N: F038			
		Serial Number	Manufacturer	Calibration Date	
Head Accelerometers	X	P24165	Endevco	28/Nov/2013	
	Y	P25036	Endevco	15/June/2013	
	Z	P21704	Endevco	15/June/2013	
	X _R	12120	Endevco	15/June/2013	
	Y _R	12093	Endevco	06/Aug/2013	
	Z _R	12097	Endevco	15/June/2013	
Thoracic Rib Displacement Potentiometers	Upper	Y	224	Honeywell	02/May/2013
	Middle	Y	193	Honeywell	02/May/2013
	Lower	Y	191	Honeywell	02/May/2013
Abdomen Load Cells	Forward	Y	1502	Denton	07/May/2013
	Middle	Y	1511	Denton	07/May/2013
	Rear	Y	1537	Denton	07/May/2013
Lower Spine Accelerometers (T ₁₂)	X	P19287	Endevco	15/June/2013	
	Y	P21575	Endevco	25/Aug/2013	
	Z	P21732	Endevco	15/June/2013	
Pubic Symphosis Load Cell		Y	460	Denton	07/May/2013

TABLE 2 - DUMMY INSTRUMENTATION – SID-IIs						
				SID-IIs S/N: 298		
				Serial Number	Manufacturer	Calibration Date
Head Accelerometers			X	P59221	Endevco	15/Oct/2013
			Y	P22311	Endevco	25/Aug/2013
			Z	P23582	Endevco	25/Aug/2013
			X _R	12099	Endevco	15/June/2013
			Y _R	12103	Endevco	28/May/2013
			Z _R	12108	Endevco	15/June/2013
Displacement Potentiometers	Shoulder		Y	N/a	N/a	N/a
	Thoracic Rib	Upper	Y	1181	FTSS	02/May/2013
		Middle	Y	1203	FTSS	02/May/2013
		Lower	Y	1215	FTSS	03/May/2013
	Abdominal Rib	Upper	Y	717	FTSS	03/May/2013
		Lower	Y	486	FTSS	03/May/2013
Lower Spine Accelerometers (T ₁₂)			X	P21586	Endevco	25/Aug/2013
			Y	P21673	Endevco	25/Aug/2013
			Z	P24682	Endevco	25/Aug/2013
Acetabulum Load Cell			Y	114	FTSS	07/May/2013
Iliac Wing Load Cell			Y	283	Denton	22/Aug/2013
Pelvis Plug (Struck-Side)				36272	FTSS	N/a
Pelvis Plug (Non-Struck-Side)				46804	FTSS	N/a

TABLE 3 - VEHICLE INSTRUMENTATION					
			Serial Number	Manufacturer	Calibration Date
1	Vehicle Center of Gravity	X	P21608	Endevco	15/Oct/2013
	Vehicle Center of Gravity	Y	P21785	Endevco	15/Oct/2013
	Vehicle Center of Gravity	Z	P21605	Endevco	22/Sept/2013
2	Right Sill at Front Seat	X	A011334	MSI	15/Oct/2013
	Right Sill at Front Seat	Y	A011343	MSI	15/Oct/2013
	Right Sill at Front Seat	Z	12110	Endevco	15/Oct/2013
3	Right Sill at Rear Seat	X	P22230	Endevco	15/Oct/2013
	Right Sill at Rear Seat	Y	P22315	Endevco	15/Oct/2013
	Right Sill at Rear Seat	Z	P14233	Endevco	15/Oct/2013
4	Left Sill at Front Door	Y	A119068	MSI	05/Nov/2013
5	Left Sill at Rear Door	Y	A119077	MSI	15/Nov/2013
6	Left A-Post Lower	Y	A086968	MSI	15/Oct/2013
7	Left A-Post Middle	Y	A086967	MSI	22/Sept/2013
8	Left B-Post Lower	Y	A086969	MSI	15/Oct/2013
9	Left B-Post Middle	Y	A119079	MSI	15/Nov/2013
10	Front Seat Track	Y	P12931	Endevco	07/Jul/2013
11	Rear Seat Track or Structure	Y	J43476	Endevco	07/Jul/2013
12	Right Rear Occ. Compartment	Y	A127956	MSI	17/Oct/2013
13	Engine Block	X	J43474	Endevco	15/Oct/2013
	Engine Block	Y	P21820	Endevco	15/Oct/2013
14	Rear Floorpan Above Axle	X	98L98H31-Z05	Endevco	15/Oct/2013
	Rear Floorpan Above Axle	Y	98G98E11-K02	Endevco	15/Oct/2013
	Rear Floorpan Above Axle	Z	98G98D22-Z15	Endevco	15/Oct/2013

TABLE 4 - MDB INSTRUMENTATION				
		Serial Number	Manufacturer	Calibration Date
MDB Center of Gravity	X	12115	Endevco	22/Oct/2013
MDB Center of Gravity	Y	12149	Endevco	22/Oct/2013
MDB Center of Gravity	Z	P21898	Endevco	22/Oct/2013
Left Frame at Rear Axle Centerline	X	P22339	Endevco	22/Oct/2013
Left Frame at Rear Axle Centerline	Y	P22539	Endevco	22/Oct/2013