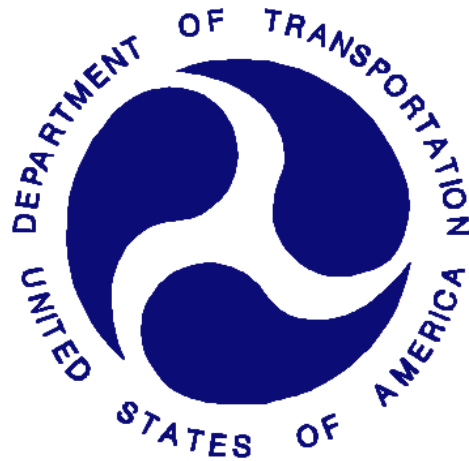


REPORT NUMBER: SINCAP-MCW-13-02

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

**CHRYSLER GROUP, LLC
2013 RAM 1500 4-DOOR CREW CAB PICKUP
NHTSA NUMBER: MD 0314**

**PREPARED BY:
MEDICAL COLLEGE OF WISCONSIN
5000 WEST NATIONAL AVENUE
RESEARCH 151
MILWAUKEE, WISCONSIN 53295**



TEST DATE: 28 NOVEMBER 2012

REPORT DATE: 10 DECEMBER 2012

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, D.C. 20590**

Test Vehicle: 2013 Ram 1500 4-Door Crew Cab Pickup
Test Program: SINCAP

NHTSA Number: MD 0314
Test Date: November 28, 2012

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Prepared by: Mark Meyer

Date: 3/4/13

Approved by: Jim H. [Signature]

Date: 3/4/2013

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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4. Title and Subtitle Final report of New Car Assessment Program SINCAP Test of a 2013 Ram 1500 4-Door Crew Cab Pickup NHTSA No. MD 0314	5. Report Date December 10, 2012	6. Performing Organization Code MCW																																												
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7. Author(s) Frank A. Pintar, Ph. D, Project Manager Mark Meyer, Project Engineer	10. Work Unit No.																																													
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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 2013 Ram 1500 4-Door Crew Cab Pickup 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 28 November 2012. The impact velocity of the Moving Deformable Barrier (MDB) was 62.12 km/h, and the ambient temperature at the struck (driver's) side of the target vehicle at the time of impact was 19°C. The target vehicle's post test maximum static crush was 356 mm at level 1. The test vehicle's performance is as follows: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Units</th> <th>IARV</th> <th>DRIVER ATD (ES-2re)</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆)</td> <td>N/a</td> <td>1000</td> <td>15</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>44</td> <td>29</td> </tr> <tr> <td>Total Abdominal Force</td> <td>N</td> <td>2500</td> <td>775**</td> </tr> <tr> <td>Pubic Symphysis Force</td> <td>N</td> <td>6000</td> <td>774</td> </tr> </tbody> </table> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th>Units</th> <th>IARV</th> <th>Pass. ATD (SID-IIs)</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆)</td> <td>N/a</td> <td>1000</td> <td>10</td> </tr> <tr> <td>Lower Spine Resultant Acceleration</td> <td>G's</td> <td>82</td> <td>36</td> </tr> <tr> <td>Total Pelvic Force (sum of Acetabular and Iliac forces)</td> <td>N</td> <td>5525</td> <td>1329</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>38</td> <td>2</td> </tr> <tr> <td>Maximum Abdominal Rib Deflection</td> <td>mm</td> <td>45</td> <td>0.4</td> </tr> </tbody> </table>				Units	IARV	DRIVER ATD (ES-2re)	Head Injury Criteria (HIC ₃₆)	N/a	1000	15	Maximum Thoracic Rib Deflection	mm	44	29	Total Abdominal Force	N	2500	775**	Pubic Symphysis Force	N	6000	774		Units	IARV	Pass. ATD (SID-IIs)	Head Injury Criteria (HIC ₃₆)	N/a	1000	10	Lower Spine Resultant Acceleration	G's	82	36	Total Pelvic Force (sum of Acetabular and Iliac forces)	N	5525	1329	Maximum Thoracic Rib Deflection	mm	38	2	Maximum Abdominal Rib Deflection	mm	45	0.4
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**The anterior abdomen loadcell failed at ~45 msec. 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: 2013 Ram 1500 4-Door Crew Cab Pickup
Test Program: SINCAP

NHTSA Number: MD 0314
Test Date: November 28, 2012

Technical Report Documentation Page (CONTINUED)

17. Key Words New Car Assessment Program (NCAP) Side impact MDB ES-2re 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, D.C. 20590 e-mail: tis@nhtsa.dot.gov FAX: 202-493-2833	
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Test Vehicle: 2013 Ram 1500 4-Door Crew Cab Pickup
Test Program: SINCAP

NHTSA Number: MD 0314
Test Date: November 28, 2012

SECTION 1

TEST PURPOSE AND PROCEDURE

This moving deformable barrier side impact test is part of the MY 2013 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 2013 Ram 1500 4-Door Crew Cab Pickup. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Laboratory Test Procedure dated September 2012.

SECTION 2 SUMMARY OF TEST RESULTS

A 2013 Ram 1500 4-Door Crew Cab Pickup was impacted on the left (driver's) side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 62.12 km/h (38.60 mph). 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 November 28, 2012. 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 2012. 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

Supplemental restraint information is given below:

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION				
Restraint type	Left Front (Driver)		Left Rear (Passenger)	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	Did Not Deploy	No	N/a
Knee Airbag	No	N/a	No	N/a
Side Curtain Airbag	Yes	Deployed	Yes	Deployed
Side Torso/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

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	15
Maximum Thorax Rib Deflection	mm	44	29
Combined Abdominal Force	N	2500	775**
Pubic Symphysis Force	N	6000	774

PASSENGER DUMMY INJURY VALUES			
Measurement Description	Passenger ATD (SID-IIs)		
	Units	Threshold	Result
Head Injury Criteria (HIC ₃₆)	N/a	1000	10
Lower Spine (T ₁₂) Resultant Acceleration	G's	82	36
Total Pelvic Force (Sum of Acetabular and Iliac Forces)	N	5525	1329
Maximum Thoracic Rib Deflection	mm	38*	2
Maximum Abdominal Rib Deflection	mm	45*	0.4

**Proposed IARV*

GENERAL COMMENTS

*******The anterior abdomen loadcell failed at ~45 msec.*

********All placards say "Dodge" Ram 1500, and should say Ram 1500. ****

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.	MD 0314
Model Year	2013
Make	Ram
Model	1500 Crew
Body Style	Crew Cab Pickup
VIN	1C6RR6KP9DS523657
Body Color	Flame Red
Odometer Reading (km/mi)	18.4 mi
Engine Displacement (L)	4.7
Type/No. of Cylinders	8
Engine Placement	Longitudinal
Transmission Type	Automatic
Transmission Speeds	6
Overdrive	Yes
Final Drive	RWD
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)	Yes
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	No
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? No

DATA FROM CERTIFICATION LABEL			
Manufactured By	Chrysler Group, LLC	GVWR (kg)	3085
Date of Manufacture	October 2012	GAWR Front(kg)	1679
Vehicle Type	Pickup	GAWR Rear (kg)	1770

VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION				
	Front	Rear	Third	Total
Designated Seating Capacity (DSC)	3	3	0	6
Capacity Weight (VCW) (kg)				723 (A)
DSC X 68.04 (kg)				408.2 (B)
Cargo Weight (RCLW) (kg)				314.8 (A-B)

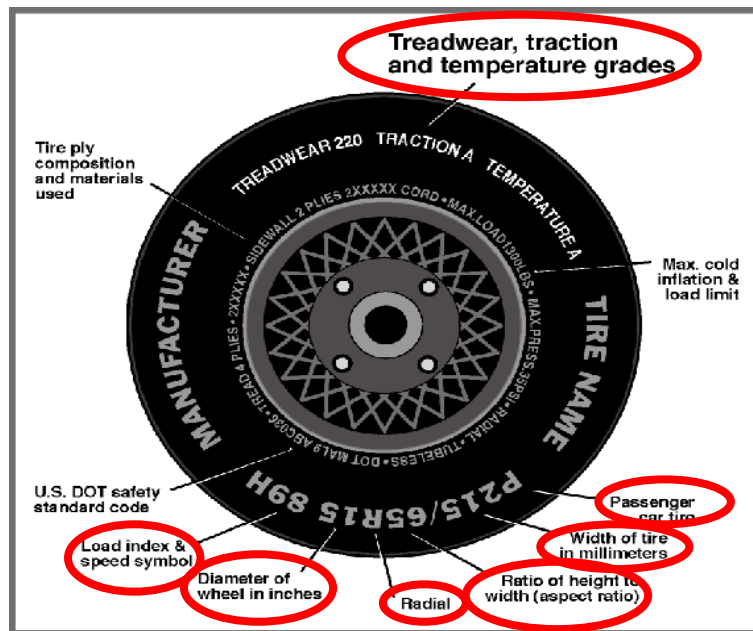
Test Vehicle: 2013 Ram 1500 4-Door Crew Cab Pickup
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NHTSA Number: MD 0314
 Test Date: November 28, 2012

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	X	N/a	
Third Row Seat							

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)	275	275
Recommended Tire Size	265/70R17	265/70R17
Tire Size on Vehicle	265/70R17	265/70R17
Tire Manufacturer	Goodyear	Goodyear
Tire Model	Wrangler SR-A	Wrangler SR-A
Treadware	500	500
Traction	A	A
Temperature Grade	B	B
Tire Plies Sidewall	2	2
Tire Plies Body	4	4
Load Index/Speed Symbol	113R	113R
Tire Material	Polyester & Steel	Polyester & Steel
DOT Safety Code Left	4BT6 EXWR 3412	4BT6 EXWR 3412
DOT Safety Code Right	4BT6 EXWR 3412	4BT6 EXWR 3412

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

TIRE PRESSURES					
	Units	LF	RF	LR	RR
As Delivered	kPa	257.7	261.3	265.9	266.9
Tire Placard	kPa	275.8	275.8	275.8	275.8
Owner's Manual	kPa	275.8	275.8	275.8	275.8
As Tested	kPa	275.8	275.8	275.8	275.8

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 AXLE WEIGHTS										
	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Left	kg	661.3	533.0		712.6	638.7		726.0	634.0	
Right	kg	655.0	508.9		658.6	602.8		663.1	596.4	
Ratio	%	55.8	44.2		52.5	47.5		53.0	47.0	
Totals	kg	1316.3	1041.9	2358.2	1371.2	1241.5	2612.7	1389.1	1230.4	2619.5

TARGET TEST WEIGHT CALCULATION			
	Units		
Total Delivered Weight (UVW)	kg	2358.2	(A)
Sum of Actual Weight of 2 P572 ATDs used	kg	125.2	(B)
Rated Cargo/Luggage Weight (RCLW)	kg	136.1	(C)
Calculated Target Vehicle Test Weight (TVTW)	kg	2619.5	(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

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

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW	
Ballast	Weight (kg)
Removed non-struck side windows & door panels to achieve calculated "As Tested" weight.	18.6

TEST VEHICLE ATTITUDE AND CG				
Measurement description	Units	Fully Loaded	As Tested	Meets Requirement***
LF	mm	925	928	Yes
RF	mm	930	928	Yes
RR	mm	974	967	Yes
LR	mm	978	972	Yes
Vehicle CG (Aft of Front Axle)	mm	1676.9	1696.4	
Vehicle CG (Left(+))/Right(-) from Longitudinal Centerline)	mm	38.7	34.7	

***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.

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

SCRL ANGLE RANGE			
Seat	SCRL (°)		
	Max	Min	Mid
Driver Seat	4.0**	4.0**	4.0**
Front Passenger Seat	0.0**	0.0**	0.0**
Front Center Seat*			
Struck Side Rear Seat	N/a	N/a	N/a
Non-Struck Side Rear Seat**	N/a	N/a	N/a
Rear Center Seat*			

*If applicable

**Seat pan non-adjustable

SCRL ANGLE RANGE						
Seat	As Tested SCRL Angle (Mid) (°)	As Tested SCRCP Height (mm)	SCRCP Height Position	SCRCP Height (mm)		
				Rearmost	Mid-Fore / Aft	Forward- Most
Driver's Seat	N/a**	N/a**	Max	N/a**	N/a**	N/a**
	4.0	-280.4	Mid	-272.9	-280.4	-287.5
	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	-282.6	Mid	-273.4	-282.6	-290.9
	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
	Fixed	Fixed	Mid	Fixed	Fixed	Fixed
	Fixed	Fixed	Min	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
	Fixed	Fixed	Mid	Fixed	Fixed	Fixed
	Fixed	Fixed	Min	Fixed	Fixed	Fixed
Rear Center Seat*			Max			
			Mid			
			Min			

*If applicable

** Seat pan non-adjustable

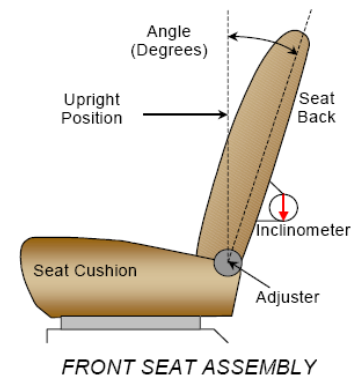
DATA SHEET NO. 2
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT AND FUEL SYSTEM DATA (CONTINUED)

SEAT FORE/AFT TRAVEL				
Seat	Total Fore/Aft Travel		Test Position from Forward-most Position	
	mm	Detents*	mm	Detents*
Driver Seat	230	24	115	12
Front Passenger Seat	230	24	115	12
Front Center Seat*				
Struck Side Rear Seat	Fixed	N/a	Fixed	N/a
Non-Struck Side Rear Seat	Fixed	N/a	Fixed	N/a
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	56.4	29	4.0	9
Front Passenger Seat	56.0	29	3.7	9
Front Center Seat*				
Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
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 No. of Positions	Placed in Position No.
Driver Seat	5	H
Rear Seat	Fixed	As Positioned

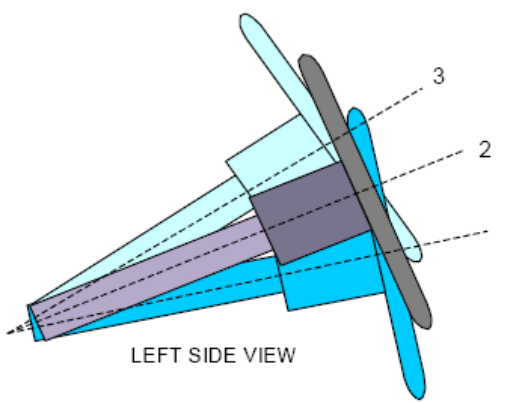
Head Restraint Adjustment

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.

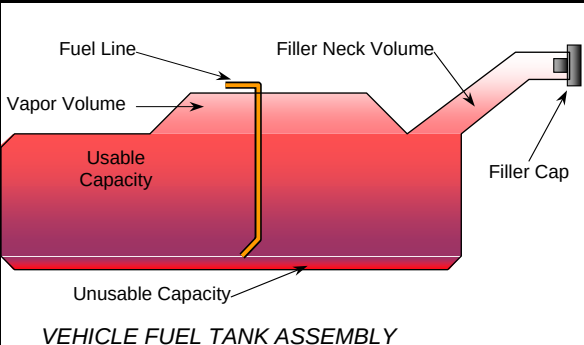
HEAD RESTRAINT ADJUSTMENT		
	Total No. of Positions	Placement
Driver Seat	3	Highest Position
Rear Seat	1	Lowest Position

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 STEERING COLUMN ASSEMBLY
Lowermost, Pos. No. 1	14.6	Non-Adjustable	
Geometric Center, Pos. No. 2	23.2	Non-Adjustable	
Uppermost, Pos. No. 3	31.7	Non-Adjustable	
Telescoping Steering Wheel Travel	N/a	N/a	
Test Position	24.0	As Positioned	

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	98.4	
Usable Capacity of "Optional Tank"	L	121.1	
Usable Capacity of Standard Tank	L	98.4	
Usable Capacity of Optional Tank	L	121.1	
93% of Usable Capacity	%	112.6	
Actual Amount of Solvent Used in Test	L	112.7	
1/3 of Usable Capacity	40.4		

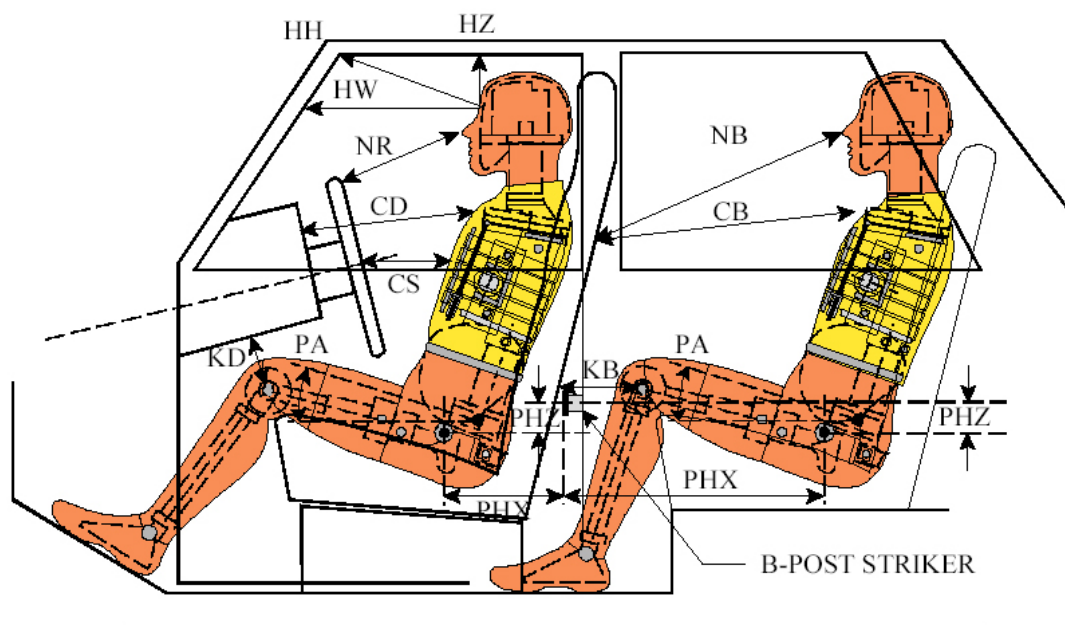
Fuel Pump

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?

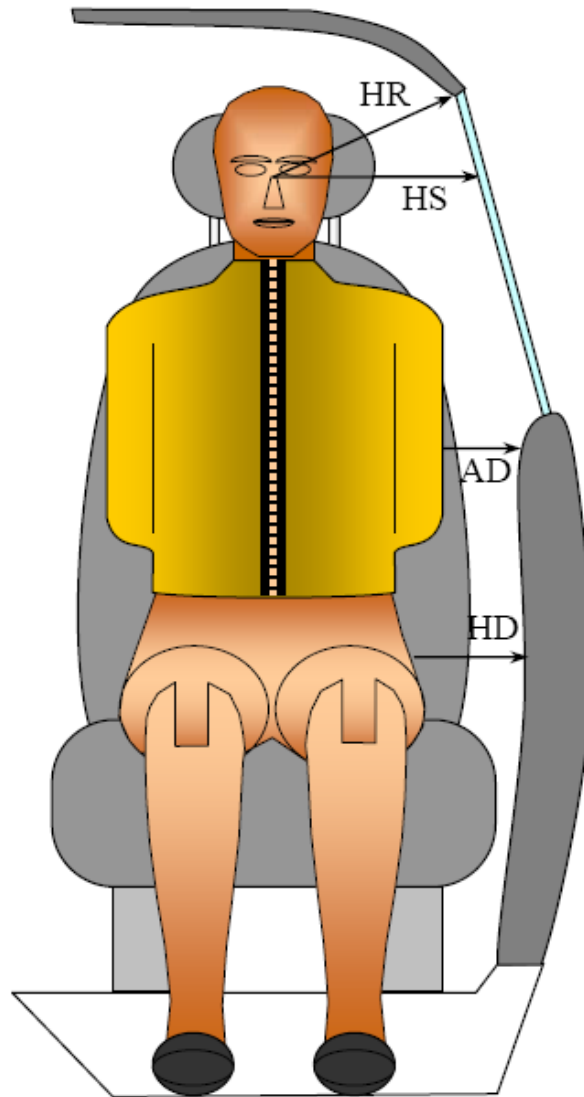
Yes

DATA SHEET NUMBER 3
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS



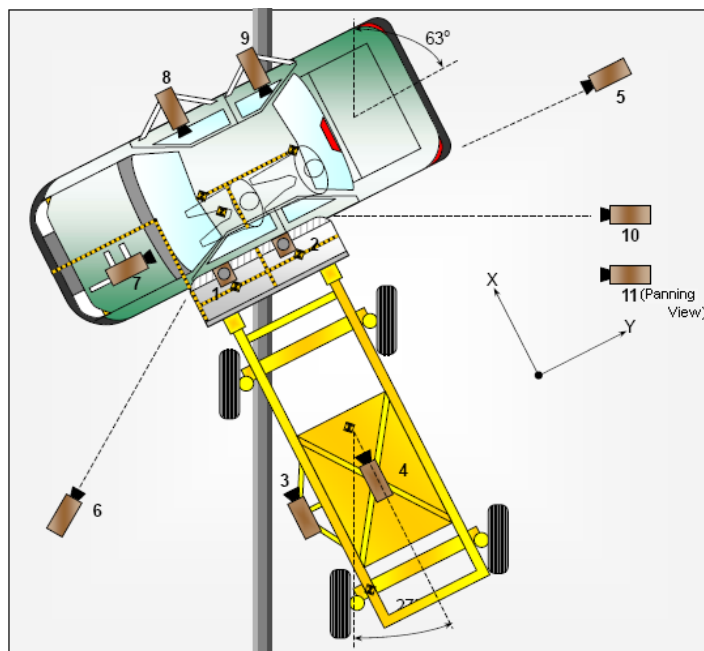
DUMMY LONGITUDINAL CLEARANCE DIMENSION INFORMATION						
Driver Code	Pass. Code	Measurement Description	Driver		Passenger	
			Length (mm)	Angle	Length (mm)	Angle
HH		Header to Header	470			
HW		Header to Windshield	720			
HZ	HZ	Head to Roof	227		308	
NR	NB	Nose to Rim/Seat Back	508		615	
CD	CB	Chest to Dash/Seat Back	612		575	
CS		Chest to Steering Wheel	390			
KD(L)/KDA(L)°	KB(L)/KBA(L)°	Left Knee to Dash/Seat Back	143	20.5	313	26.4
KD(R)/KDA(R)°	KB(R)/KBA(R)°	Right Knee to Dash/Seat Back	135	9.5	312	26.8
PAX°	PAX°	Pelvic Tilt Angle X		0.0		0.0
	PAY°	Pelvic Tilt Angle Y		21.5		20.6
PHX	PHX	Hip Point to Striker (X-Axis)	187.6		222.6	
PHZ	PHZ	Hip Point to Striker (Z-Axis)	-21.2		-23.1	

DATA SHEET NUMBER 4
DUMMY LATERAL CLEARANCE DIMENSIONS



DUMMY LATERAL CLEARANCE MEASUREMENTS INFORMATION				
Code	Description	Units	Driver	Passenger
HR	Head to Side Header	mm	189	240
HS	Head to Side Window	mm	409	351
AD	Arm to Door	mm	195	139
HD	Hip Point to Door	mm	151	160

DATA SHEET 5 CAMERA AND INSTRUMENTATION DATA



	View	Coordinates †			Lens Length mm	Operating Frame Rate fps
		X	Y	Z		
		mm	mm	mm		
1	Overhead Overall	-315	-641	-4861	10	1000
2	Overhead Close-up	-534	-153	-4812	25	1000
3	Left Impact Point (MDB)	-2137	-76	-63	25	1000
4	Side Overall (MDB)	-2297	843	-643	12.5	1000
5	Rear	-704	13110	-506	50	1000
6	Left Front	-1731	-4254	-856	25	1000
7	Driver Front (OB)				12.5	1000
8	Driver Side (OB)				12.5	1000
9	Passenger Side (OB)				12.5	1000
10	Real-Time Left Rear				N/a	30
11	Real-Time In-Run				N/a	30

Origin

X

Y

Z

Impact Point

Impact Point

Ground

Orientation

X

Y

Z

+(X) To Front of MDB

+(Y) To Right of MDB

+(Z) Down

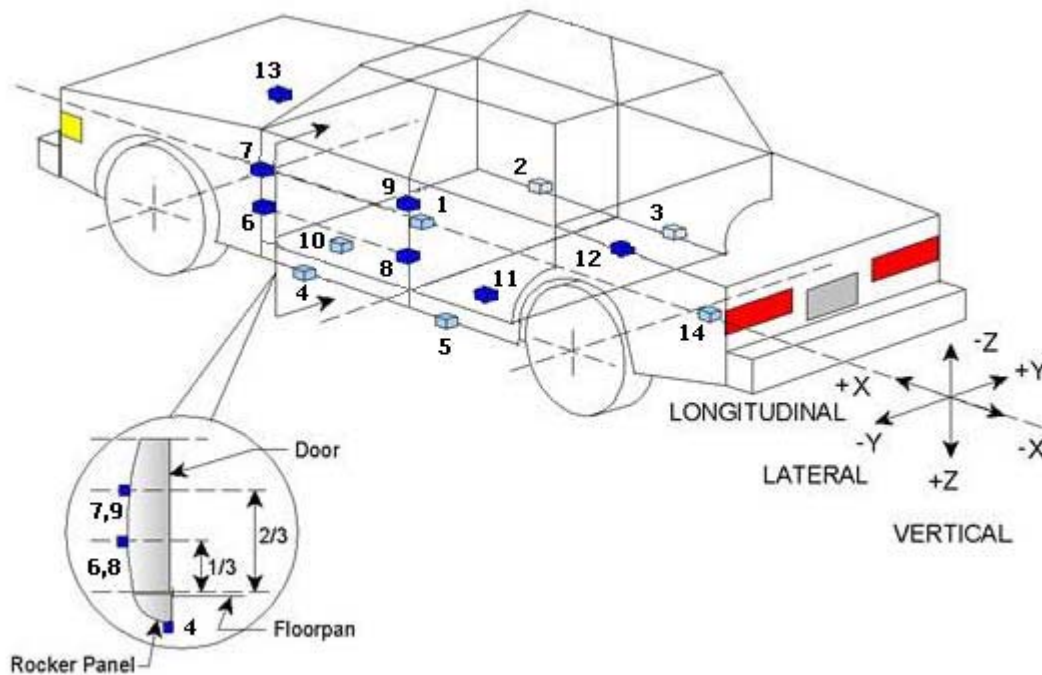
**All measurements accurate to +/- 6 mm*

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

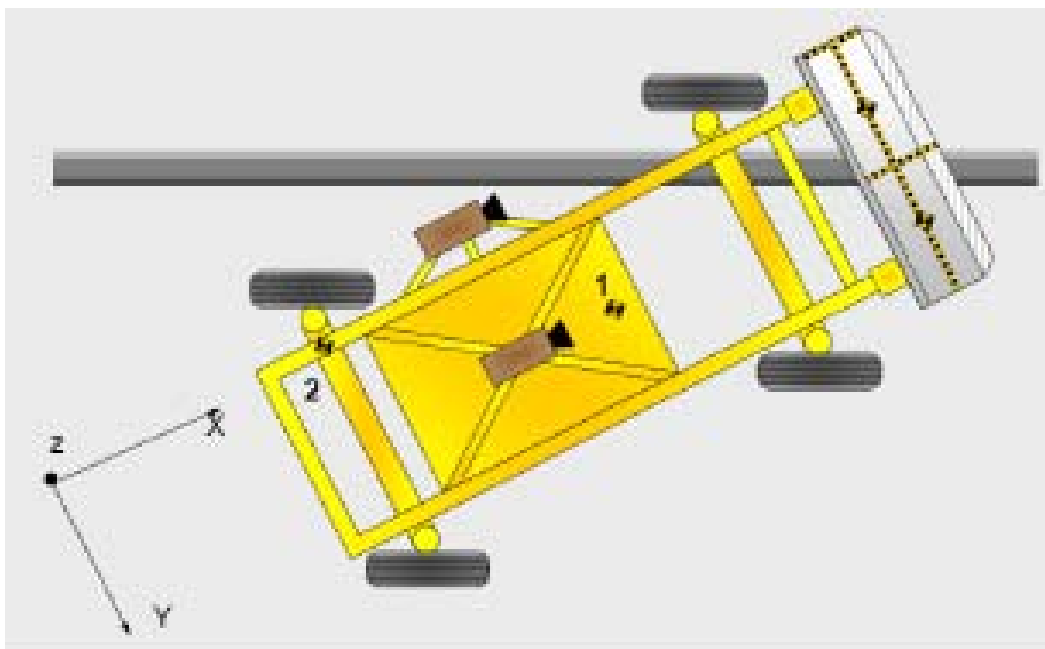


TEST VEHICLE ACCELEROMETER LOCATIONS				
Loc. No.	Accelerometer Location	Measurements (mm)		
		X	Y	Z
1	Vehicle CG	3826.9	140.3	-110.8
2	Right Sill at Front Seat	3602.3	787.9	199.6
3	Right Sill at Rear Seat	2665.2	788.4	185.6
4	Left Sill at Front Door	3619.8	-845.2	276.8
5	Left Sill at Rear Door	2596.5	-846.6	240.6
6	A-Post Lower	4180.8	-901.0	-164.6
7	A-Post Middle	4190.5	-892.8	-392.8
8	B-Post Lower	3069.9	-904.7	-192.9
9	B-Post Middle	3075.5	-902.6	-444.6
10	Front Seat Track	3477.6	-655.6	-87.2
11	Rear Seat Structure	2405.4	-749.9	-261.0
12	Rt. Rear Occ. Compartment	2396.4	745.6	-287.9
13	Engine Block	4977.9	171.6	-451.4
14	Rear Above Axle	1178.1	7.53	-231.8

Reference:

X - Rear surface of vehicle (+ forward)
 Y - Vehicle centerline (+ right)
 Z - Ground plane (+ 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 Side Curtain Airbag & Roof Rail	To Side Curtain Airbag & Roof Rail
Left Side of Head	To Side Curtain Airbag	To Side Curtain Airbag
Back of Head	Along Head Rest to the Side Curtain Airbag	To Side Curtain Airbag
Left Shoulder	To Side Curtain Airbag	To Interior Door Panel
Upper Torso	To Seat Mounted Side Airbag	To Interior Door Panel
Lower Torso	To Seat Mounted Side Airbag	To Interior Door Panel
Left Hip	To Seat Mounted Side Airbag	To Interior Door Panel
Left Knee	To Interior Door Panel	To Upper 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	Max Sill Separation of ~150 mm at upper C-Post
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	Did Not Deploy		
Knee Airbag	No	N/a		
Side Curtain Airbag	Yes	Deployed	Yes	Deployed
Side Torso/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	No	N/a	No	N/a

IMPACT POINT LOCATION DATA			
Measured Parameter	Units	Tolerance	Value
Vehicle Wheel Base	mm		3570
Vertical Impact Reference Line (Aft of Front Axle)(Intended Impact Point)	mm		508
Actual Impact Point (Aft of Front Axle)	mm		518
Horizontal Offset (+ forward / - rear)	mm	+/- 50 of Intended Impact Point	-10
Vertical Offset (+ down / - up)	mm	+/- 20 of Intended Impact Point	-8

DATA SHEET NUMBER 9
MDB SUMMARY OF RESULTS

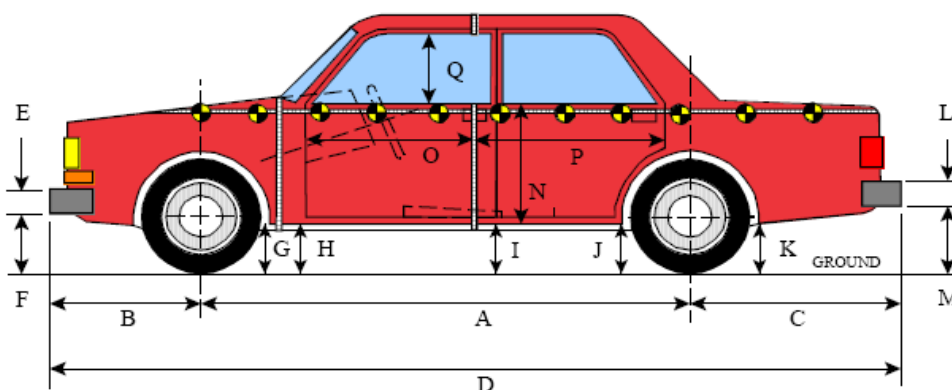
MDB SPECIFICATIONS	
Measurement Description	Length (mm)
Overall Width of Framework Carriage	1250
Overall Length Including Honeycomb Frame	4116
Wheel Base of Framework Carriage	2578
CG Location of Front Axle	1112

MDB WEIGHTS				
	Units	Front Axle	Rear Axle	Total
Left	kg	439.1	242.7	681.8
Right	kg	321.1	358.3	679.4
Ratio	%	55.8	44.2	100.0
Totals	kg	760.2	601.0	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	62.12
Trap No. 2 Velocity (Secondary)	km/h	61.1 to 62.7	62.10
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

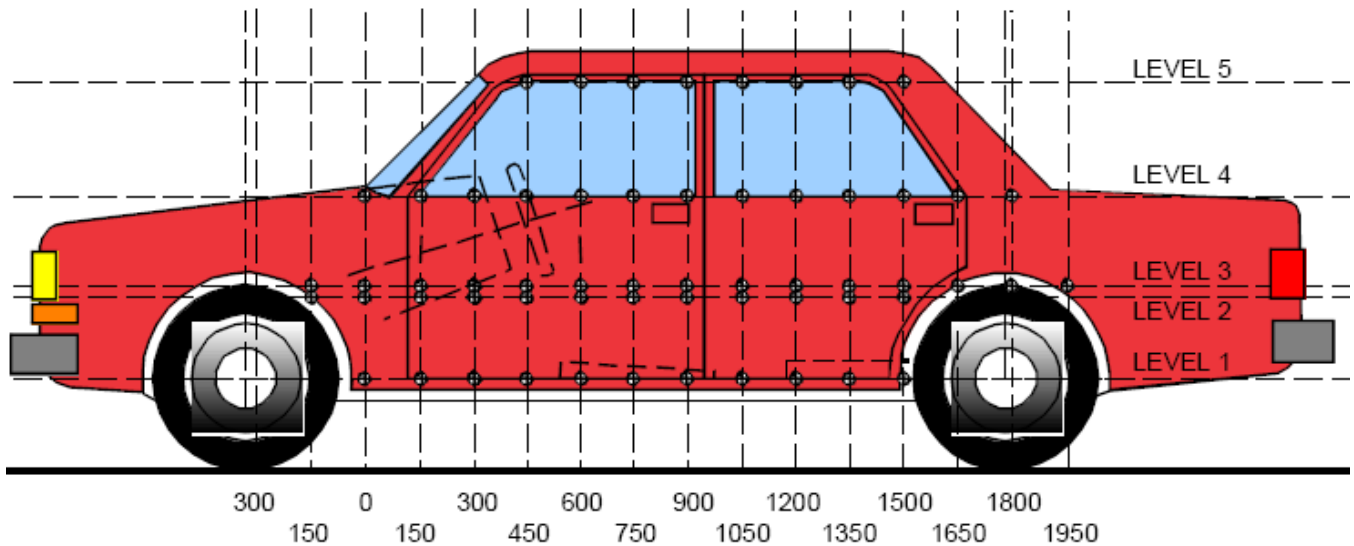
MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE					
Vertical Location			From Centerline		Maximum Crush
Row	Description	Height	Distance	Direction	
A	Bottom of Barrier	278	800	Left	82
B	Bottom of Bumper	331	800	Left	108
C	Top of Bumper	533	800	Right	137
D	Top of Barrier	837	800	Right	207

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	3570	3515	-55
B	Front Axle to FSOV	787	822	35
C	Rear Axle to RSOV	1138	1150	12
D	Total Length at Centerline	5827	5810	-17
E	Front Bumper Thickness	311	311	0
F	Front Bumper Bottom to Ground	365	375	10
G	Sill Height at Front Wheel Well	390	378	-12
H	Sill Height at Front Door Leading Edge	392	375	-17
I	Sill Height at B-Pillar	403	377	-26
J1	Sill Height at Rear Wheel Well	372	302	-70
J2	Pinch Weld Height at Rear Wheel Well	422	354	-68
K	Sill Height Aft of Rear Wheel Well	502	413	-89
L	Rear Bumper Thickness	54	54	0
M	Rear Bumper Bottom to Ground	538	410	-128
N	Sill Height to Bottom of Front Window Sill	868	810	-58
O	Front Door Leading Edge to Impact C/L	1116	1105	-11
P	Rear Door Trailing Edge to Impact C/L	1033	1030	-3
Q	Front Window Opening	480	482	2
R	Right Side Length	5495	5487	-8
S	Left Side Length	5495	5487	-8
T	Maximum Vehicle Width	2017	1862	-155

DATA SHEET NUMBER 11
VEHICLE EXTERIOR CRUSH MEASUREMENTS



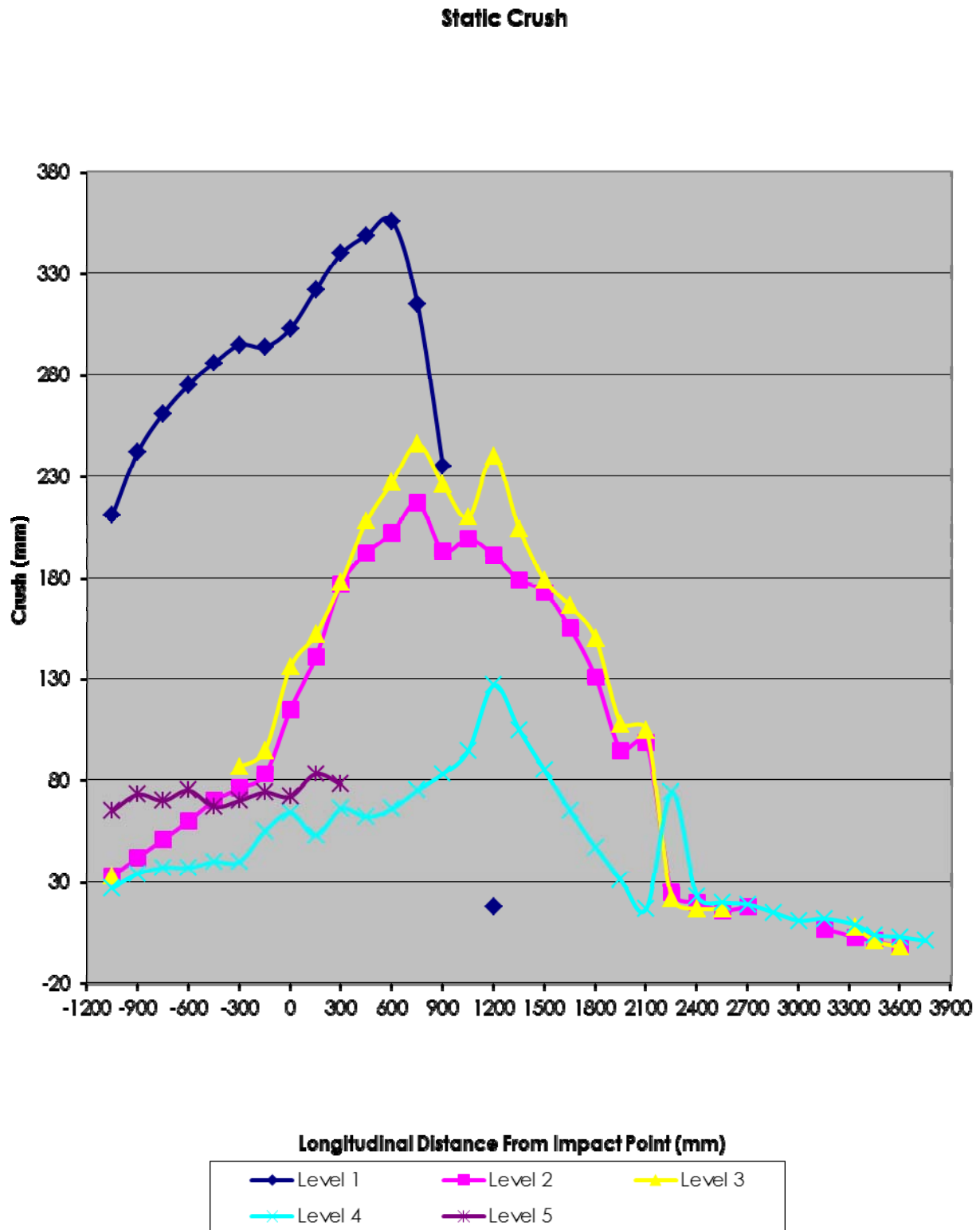
LEFT SIDE VIEW

MAXIMUM EXTERIOR CRUSH MEASUREMENTS				
Level	Measurement Description	Height Above Ground	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	420	356	1800
2	Occupant Hip Point	922	217	900
3	Mid-Door	837	246	900
4	Window Sill	1260	127	1200
5	Window Top	1810	83	1950

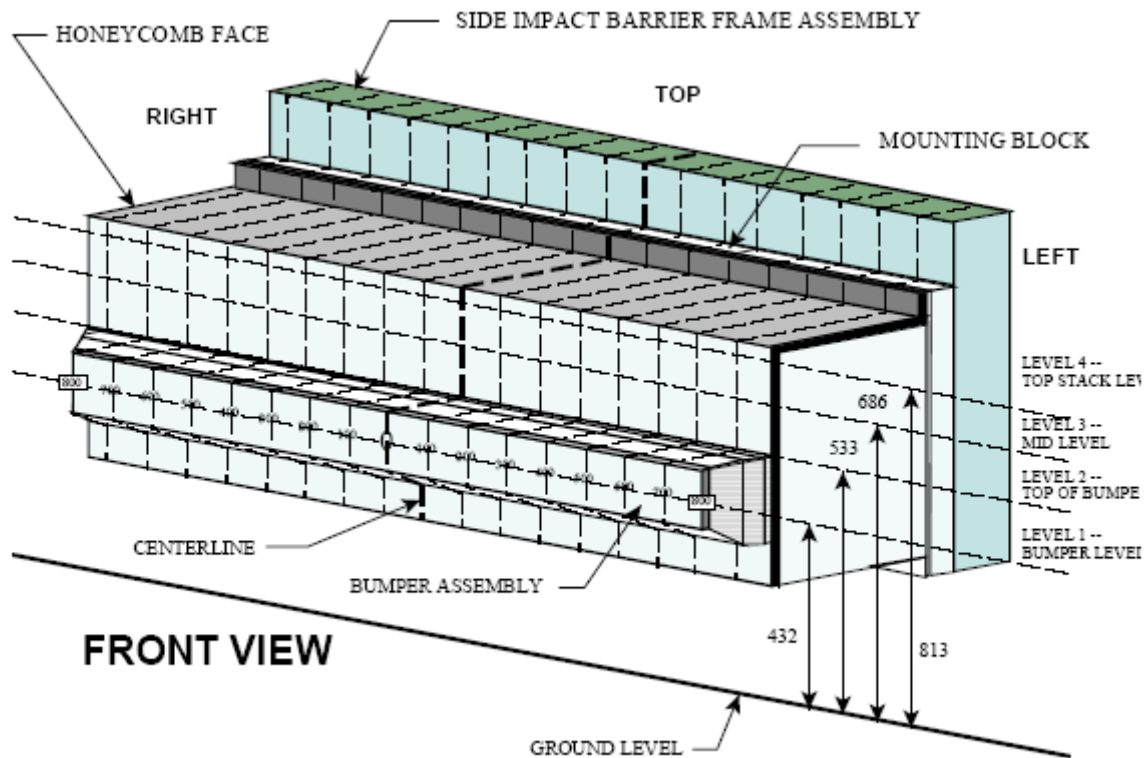
DATA SHEET NUMBER 11
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS (CONTINUED)

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										524	551	27			
	-900				279	312	33	275	308	33	480	514	34			
	-750				268	310	42				448	485	37			
	-600				264	315	51				421	458	37			
	-450				260	320	60				401	441	40			
	-300				255	325	70				386	426	40			
	-150				254	330	76	258	345	87	374	429	55			
	0				255	338	83	257	352	95	360	424	64			
	150	327	538	211	260	375	115	260	396	136	352	405	53			
	300	326	568	242	259	400	141	262	414	152	347	413	66			
	450	323	584	261	263	440	177	264	442	178	346	408	62			
	600	321	596	275	262	454	192	264	472	208	344	410	66			
	750	320	606	286	263	465	202	263	490	227	337	412	75	570	635	65
	900	319	614	295	262	479	217	262	508	246	334	417	83	562	635	73
	1050	318	612	294	260	453	193	259	485	226	330	425	95	560	630	70
	1200	320	623	303	259	458	199	258	468	210	325	452	127	553	628	75
	1350	322	644	322	257	448	191	258	498	240	323	428	105	555	622	67
	1500	325	665	340	258	437	179	259	463	204	321	406	85	552	622	70
	1650	330	679	349	257	430	173	259	438	179	320	385	65	552	626	74
	1800	333	689	356	259	414	155	259	425	166	319	366	47	550	622	72
	1950	333	648	315	260	391	131	260	410	150	318	349	31	547	630	83
	2100	337	572	235	261	356	95	262	370	108	316	333	17	547	625	78
	2250				272	371	99	280	385	105	328	402	74			
	2400	347	365	18	267	292	25	269	291	22	322	345	23			
	2550				262	282	20	262	279	17	317	337	20			
	2700				257	273	16	263	280	17	314	333	19			
	2850				260	278	18				312	327	15			
	3000										311	322	11			
	3150										310	322	12			
	3330				262	269	7				310	319	9			
	3450				262	265	3	262	270	8	312	316	4			
	3600				267	268	1	270	271	1	314	317	3			
	3750				274	272	-2	277	275	-2	316	317	1			

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



DATA SHEET NUMBER 12
MDB EXTERIOR STATIC CRUSH MEASUREMENTS



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	82	78	76	73	69	65	61	63	65	60	56	51	49	47	44	44	46
2	108	99	95	87	77	61	49	43	43	38	37	38	58	60	63	62	70
3	85	70	65	59	57	59	58	62	66	61	66	46	46	48	55	86	137
4	117	100	93	91	95	99	94	111	120	137	113	93	95	113	125	167	207

Test Vehicle: 2013 Ram 1500 4-Door Crew Cab Pickup
 Test Program: SINCAP

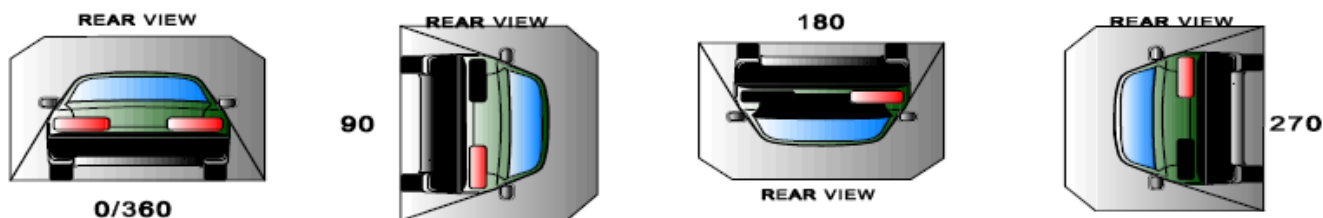
NHTSA Number: MD 0314
 Test Date: November 28, 2012

FMVSS 301 STATIC ROLLOVER RESULTS

Temperature at Time of Impact: 19.5° C Test Time: 2:00 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			
Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	64	300	364
90° to 180°	65	300	365
180° to 270°	80	300	380
270° to 360°	63	300	363

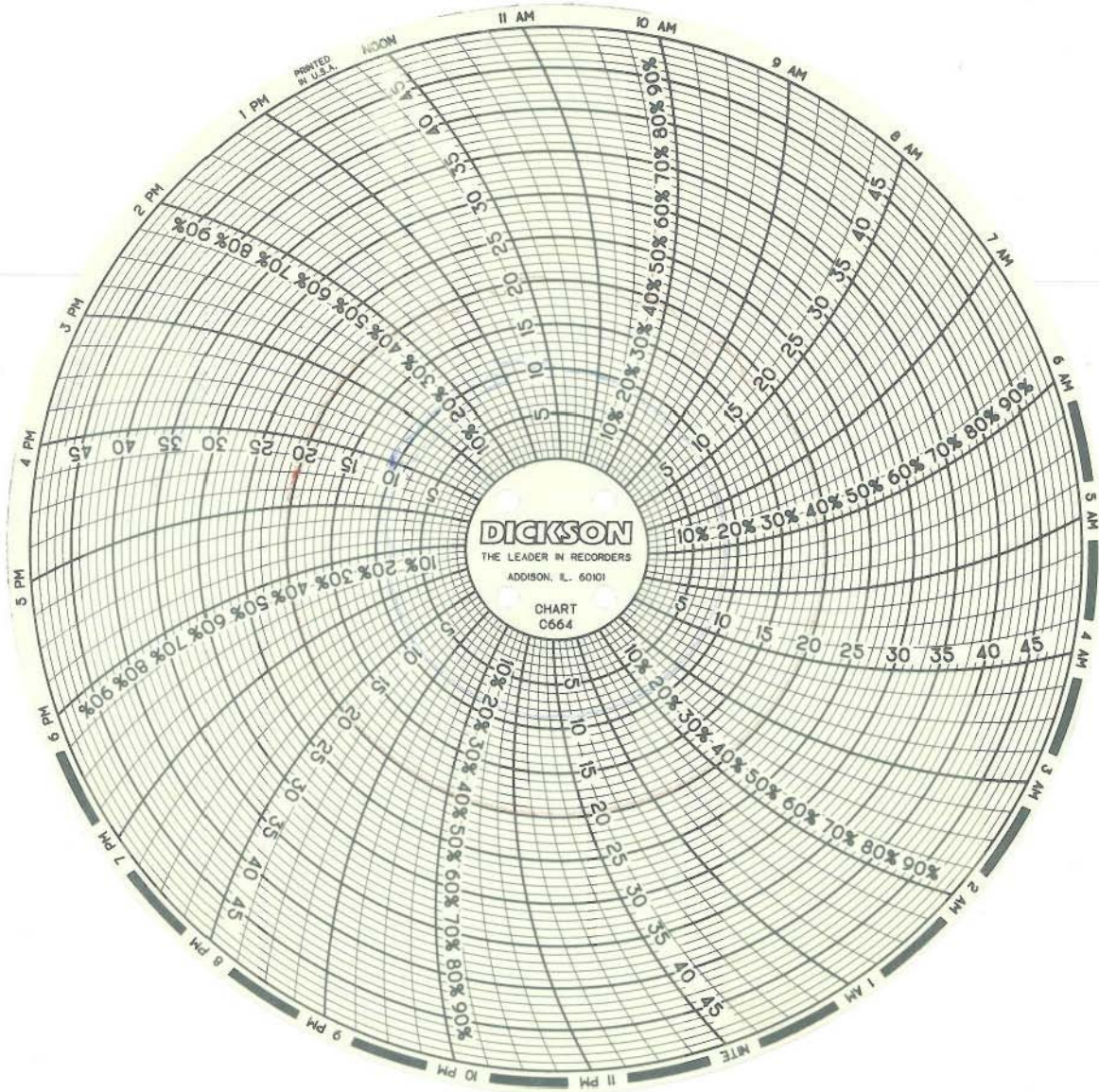
FMVSS 301 STATIC ROLLOVER RESULTS (CONTINUED)

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: 2013 Ram 1500 4-Door Crew Cab Pickup
Test Program: SINCAP

NHTSA Number: MD 0314
Test Date: November 28, 2012

APPENDIX A PHOTOGRAPHS

LIST OF PHOTOGRAPHS

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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



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

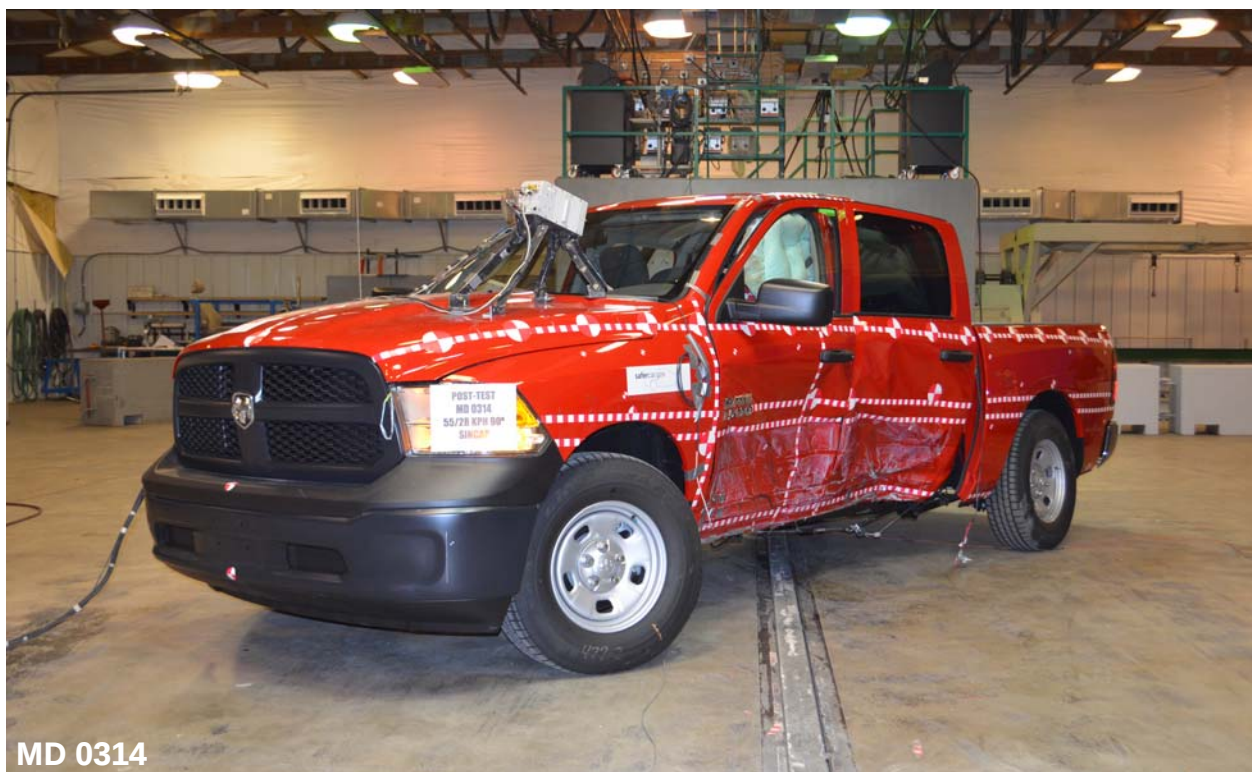


Figure A-6: Post-Test Left Front 3-4 View of Test Vehicle



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

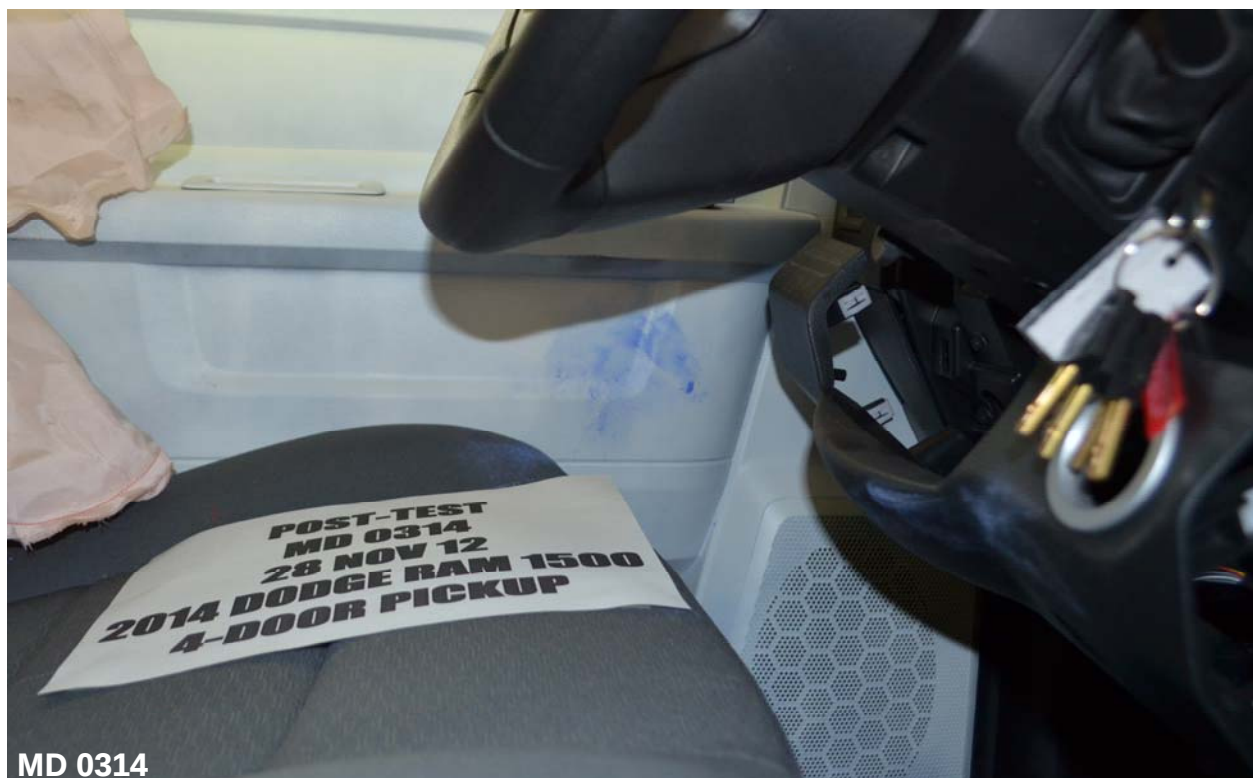


Figure A-54: Post-Test Driver Dummy Close-Up Knee Contact View



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



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



MD 0314

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



MD 0314

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

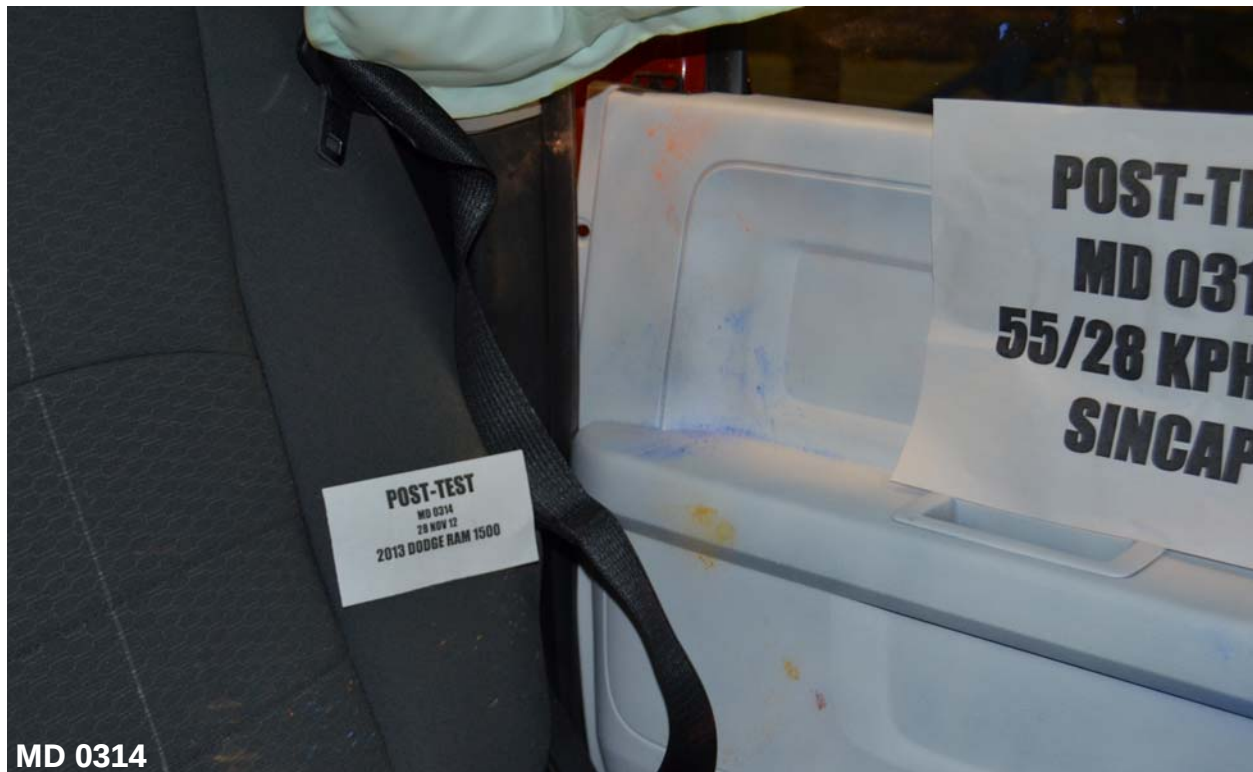


Figure A-77: Post-Test Rear Passenger Dummy Close-Up Torso Contact with Vehicle Interior View

Not Applicable

MD 0314

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



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

Not Applicable

MD 0314

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



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

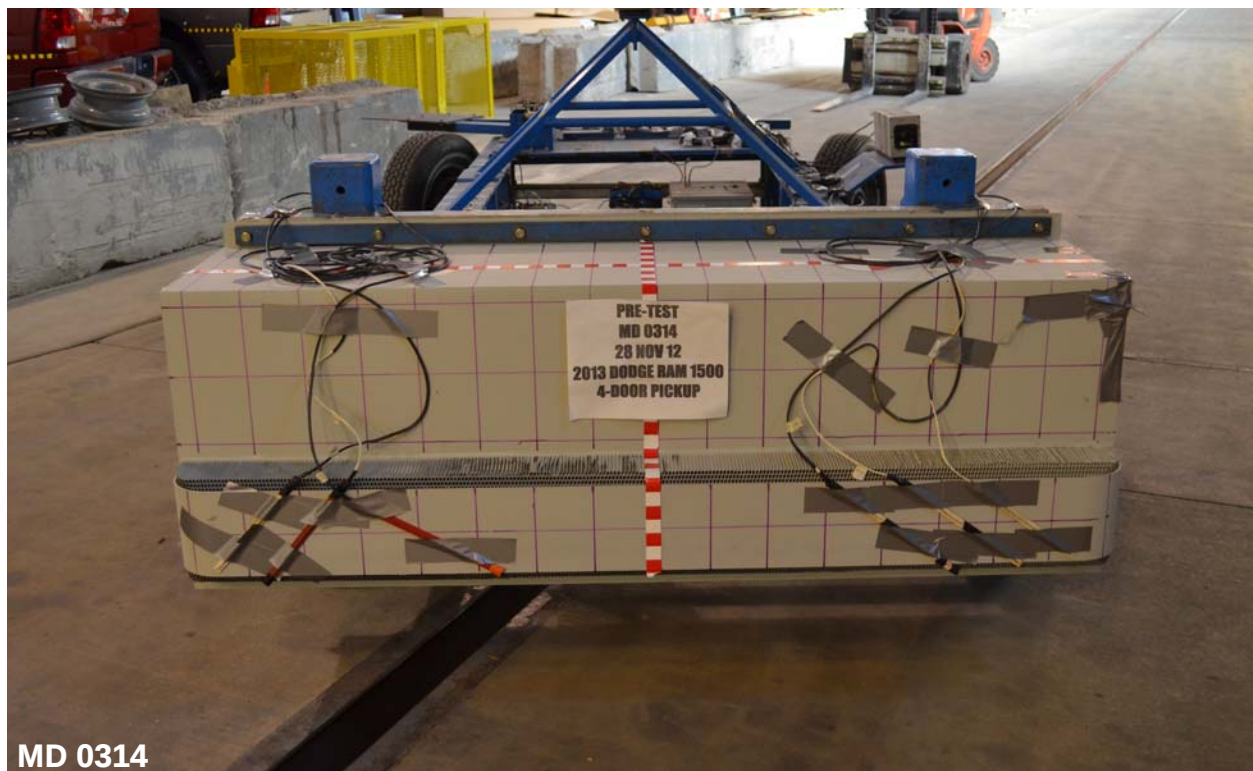


Figure A-84: Pre-Test Front View of MDB Impactor Face



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

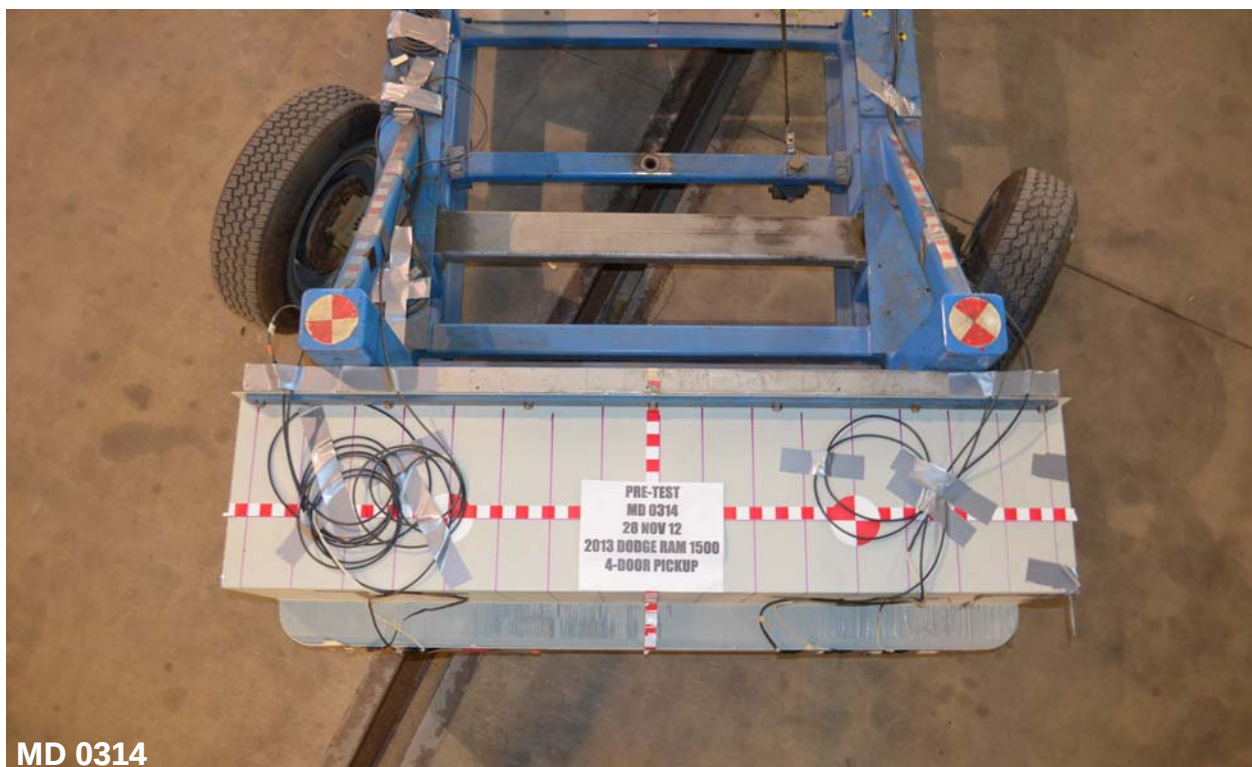


Figure A-86: Pre-Test Top View of MDB Impactor Face



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



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



MD 0314

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



MD 0314

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

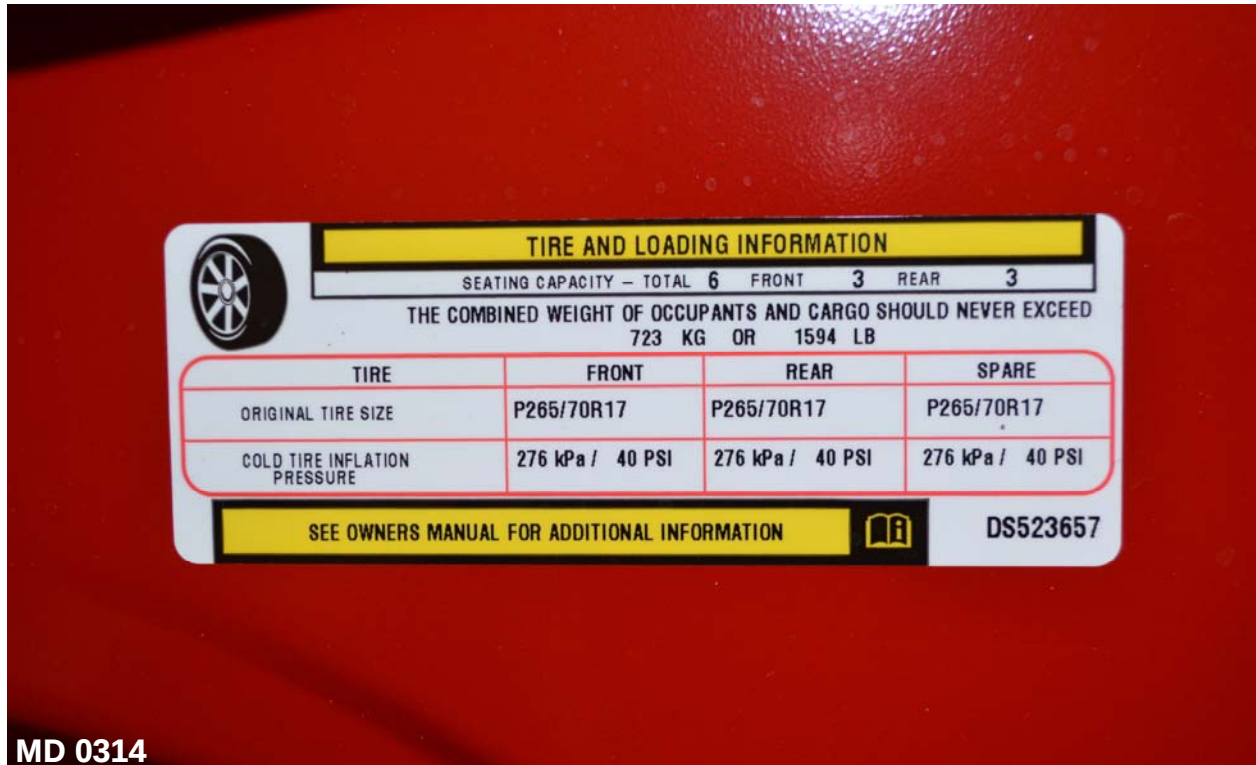


Figure A-91: Post-Test Right Side View of MDB Impactor Face



MD 0314

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



MD 0314

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

Not Applicable

MD 0314

Figure A-94: Pre-Test Ballast View N/a (No Ballast Added)



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



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

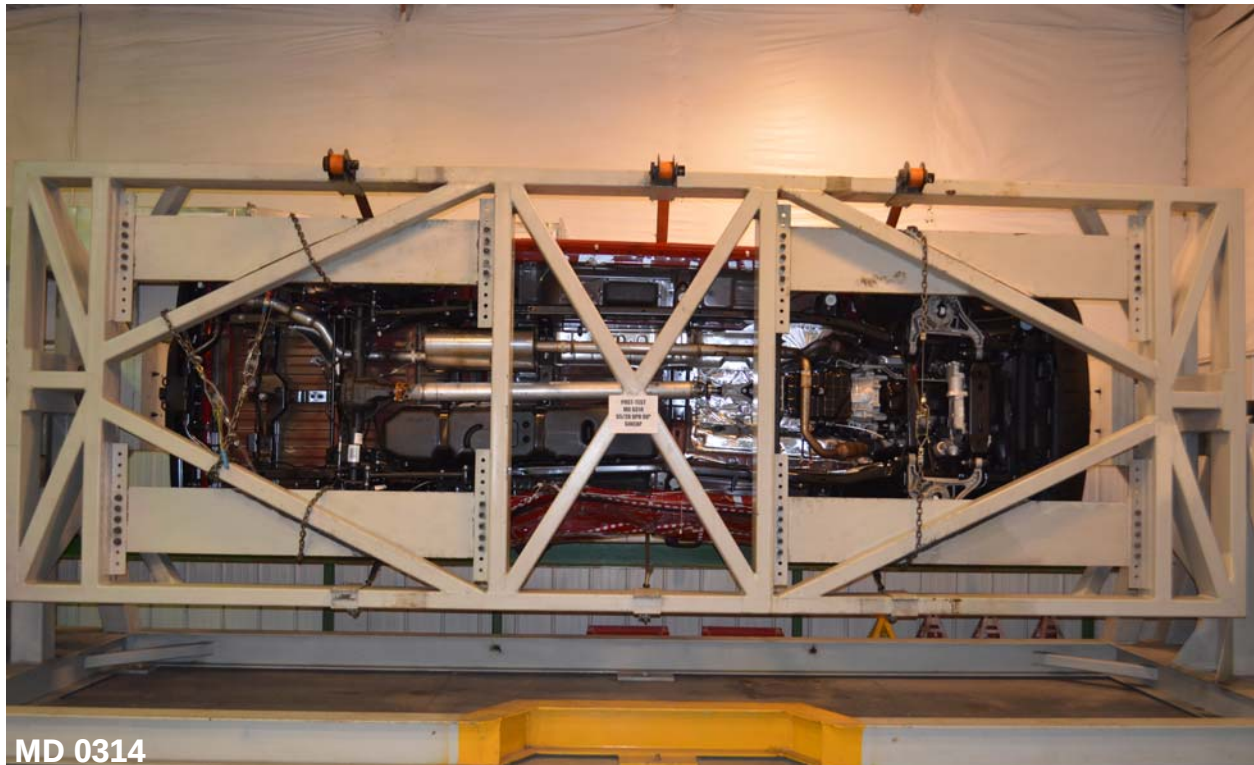


Figure A-97: FMVSS No. 301 Static Rollover 90 Degrees



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

Test Vehicle: 2013 Ram 1500 4-Door Crew Cab Pickup
Test Program: SINCAP

NHTSA Number: MD 0314
Test Date: November 28 2012



Figure A-101: Impact Event

2013 MODEL YEAR
RAM 1500 TRADESMAN CREW CAB 4X2

For more information visit: www.ramtrucks.com
or call 1-866-RAMINFO Chrysler Group LLC

EPA DOT Fuel Economy and Environment

Fuel Economy
16 MPG
combined city/hwy 14 20 6.2
Driving Range 612 miles
Estimated 302 miles/hwy

You spend \$5,150 more in fuel costs over 5 years
compared to the average new vehicle

Annual fuel COST \$3,350

Fuel Economy & Greenhouse Gas Rating
1 2 3 4 5 6 7 8 9 10
The vehicle earns 10 green CO₂ per mile. The best score is 0 grams per mile (tailpipe only). Fuel-economy and CO₂ emissions are based on EPA estimates. Actual results may vary.

GOVERNMENT 5-STAR SAFETY RATINGS

Overall Vehicle Score Not Rated
Based on the combined ratings of frontal, side, and rollover.
Smaller vehicles are more prone to other vehicles or other objects and weight.
A safety outcome, visit www.safercar.gov or call 1-888-327-4236 for more details.

Frontal Crash Driver Passenger
★★★★★
★★★★★

Side Crash Front seat Rear seat
Not Rated Not Rated

Rollover ★★★★★
Based on the risk of rollover in a single-vehicle crash.

Star ratings range from 1 to 5 stars (★★★★★) with 5 being the highest.
Source: National Highway Traffic Safety Administration (NHTSA)
www.safercar.gov or 1-888-327-4236

PARTS CONTENT INFORMATION
FOR VEHICLES IN THIS COUNTRY:
U.S./CANADIAN PARTS CONTENT: 67 %
MAJOR SOURCES OF FOREIGN PARTS CONTENT:
MEXICO: 22 %
NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON-PARTS COSTS.
FOR THIS VEHICLE:
FINAL ASSEMBLY POINT: WARREN, MICHIGAN, U.S.A.
COUNTRY OF ORIGIN: ENGINE: UNITED STATES TRANSMISSION: UNITED STATES

WARRANTY COVERAGE
5-year or 100,000-mile Powertrain Limited Warranty.
3-year or 50,000-mile Basic Limited Warranty.
Roadside assistance: certain restrictions apply. Ask Dealer for a copy of the limited warranties or see your owner's manual for details.

5 YEAR/100,000 MILE POWERTRAIN WARRANTY

EXTERIOR FEATURES
Hologram Hood Headlights
17-inch x 7.0-inch Steel Wheels
P255-70R17 85W All Season Tires
Full-Size Spare Tire
Power Black Heated Mirrors with Manual Fold-Away
Black Door Handles
Black Front Bumper
Black Rear Bumper
Black Grille

OPTIONAL EQUIPMENT
Customer Preferred Package 238
Tradesman Package
Popular Equipment Group \$645
Front and Rear Floor Mats
SiriusXM Satellite Radio w/ 1-yr Radio Subscription
Fox Mail Information, Call 800-643-2112
Crew 40 / 20 / 40 Bench Seat
Remote Keyless Entry with All-Secure
Auto-Shift Differential Rear Axle
32-Gallon Fuel Tank \$529
Flex Fuel Vehicle \$75

DESTINATION CHARGE \$995

TOTAL PRICE: * \$31,805

MANUFACTURER'S SUGGESTED RETAIL PRICE OF THIS MODEL INCLUDING DEALER PREPARATION
Base Price: \$29,765

RAM 1500 BY CREW CAB 4X2
Exterior Color: Flame Red Clear Coat Exterior Paint
Interior Color: Black / Diesel Gray Interior Colors
Interior: Cloth 40 / 20 / 40 Bench Seat
Engine: 4.7 Liter V8 HPI Engine
Transmission: 6-Speed Automatic Transmission

STANDARD EQUIPMENT (UNLESS REPLACED BY OPTIONAL EQUIPMENT)
FUNCTIONAL SAFETY FEATURES
Trailer Tow with 4-Pin Connector Wiring
7-Pin Wiring Harness
Heavy Duty Engine Cooling
Heavy Duty Transmission Oil Cooler
38-Gallon Fuel Tank
Adjustable Multifunction Four Airbags
Suspension: Side-Curtain Front and Rear Airbags
Electronic Stability Control
ABS w/ 4-Wheel Disc Brakes
32-Gallon Fuel Tank
SiriusXM's Text-to-Drive System
Power Accessory Delay
Automatic Headlamps
Loading Tailgate
155 Rear Axle Ratio
Sentry-Itz Backup
2100 lb Receiver Hitch

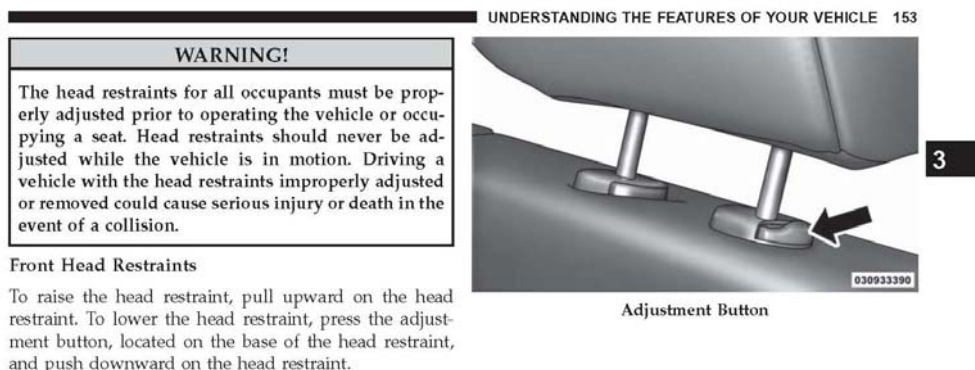
INTERIOR FEATURES
Front Accessory with Three Dog Holders
Secure-Box In-Floor Storage Bin
Rear Under-Seat Storage Compartment
In-Cabin Storage
Interior 15.5 AM FM
6 Speakers
Laser Jack Input for Mobile Devices
Media Hub (USB, Aux)
Rear Parking Aid
Power Front Windows w/ 1-Touch Up and Down Feature
Power Door Locks
Tilt Steering Column
Electronic Vehicle Information Center
12-Volt Auxiliary Power Outlet
Black Vinyl Floor Covering

Assembly Plant of Entry: WARREN, MICHIGAN, U.S.A.
VIN: 1C6RR6XPG05-523657
Model: 1500
Year: 2013

SALES: 1-800-4-A-RAM
FINANCIAL: 1-800-4-A-RAM
RENTAL: 1-800-4-A-RAM
SERVICE: 1-800-4-A-RAM
SALES: 1-800-4-A-RAM
FINANCIAL: 1-800-4-A-RAM
RENTAL: 1-800-4-A-RAM
SERVICE: 1-800-4-A-RAM

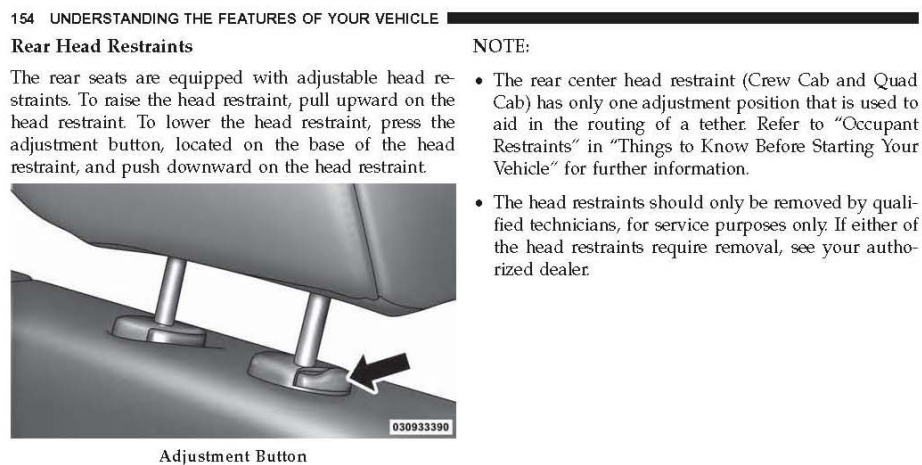
MD 0314

Figure A-102: Monroney Label



MD 0314

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



MD 0314

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

Test Vehicle: 2013 Ram 1500 4-Door Crew Cab Pickup
Test Program: SINCAP

NHTSA Number: MD 0314
Test Date: November 28, 2012

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 T₁₂ Acceleration (X)
Driver Lower Spine T₁₂ Acceleration (Y)
Driver Lower Spine T₁₂ 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

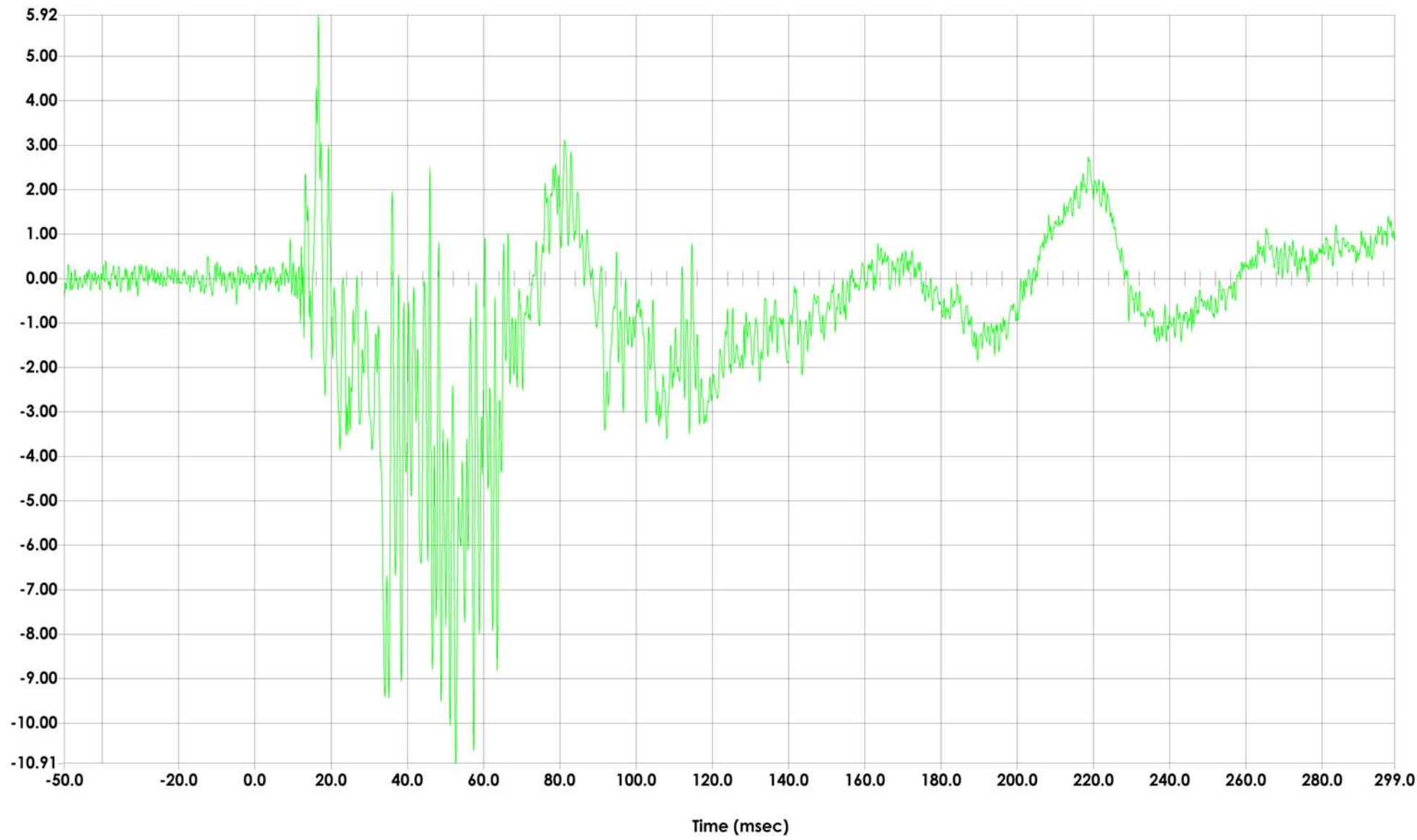
MDB Center of Gravity Acceleration (X)
MDB Center of Gravity Acceleration (Y)
MDB Center of Gravity Acceleration (Z)
MDB Rear Acceleration (X)
MDB Rear Acceleration (Y)
Left MDB Contact Switch
Right MDB Contact Switch

Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	001
Units	G'S

Max	5.92	G'S
	16.64	msec
Min	-10.91	G'S
	52.72	msec



Driver Head Acceleration (X) Primary vs. Time

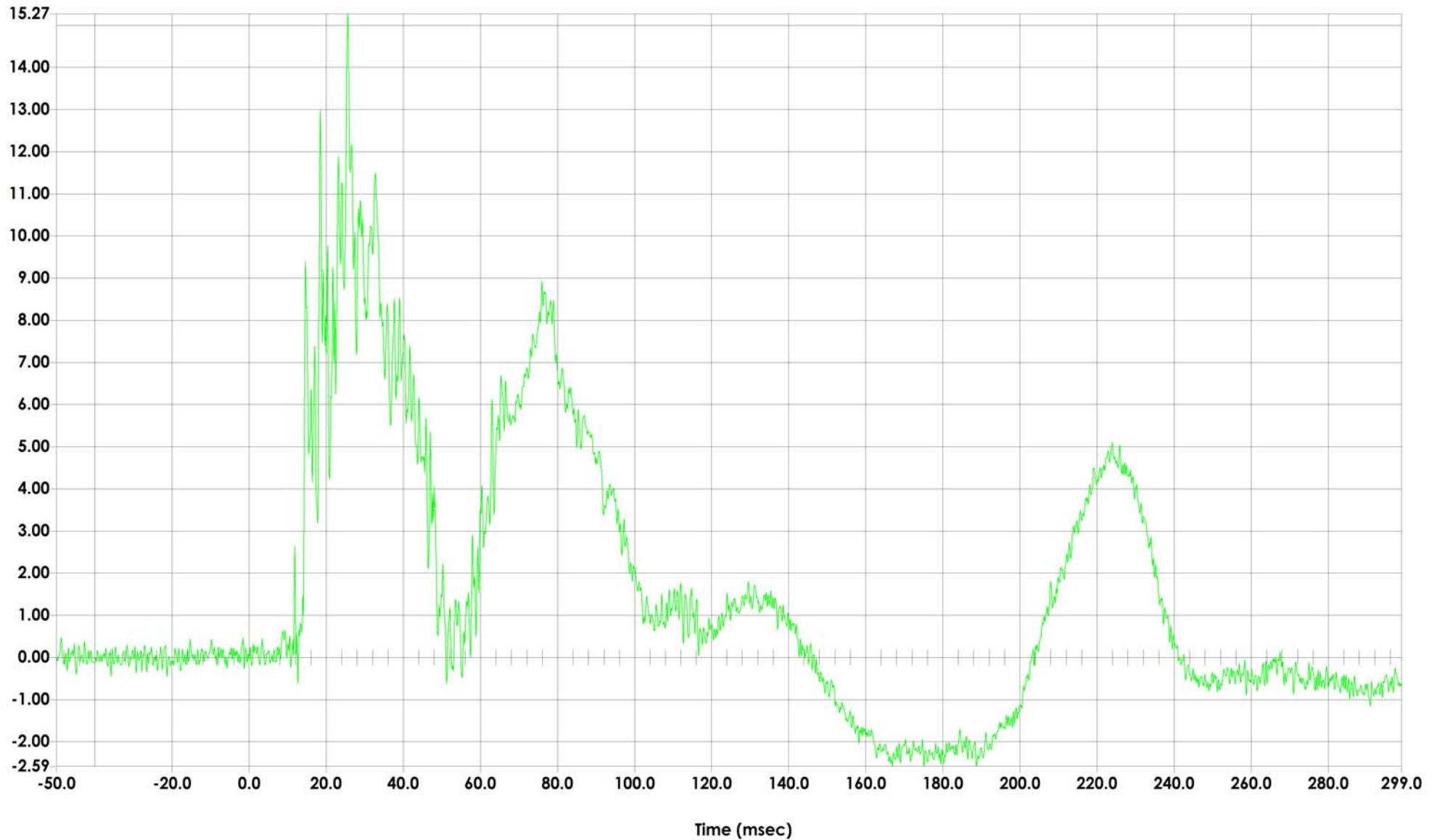


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	002
Units	G'S

Max	15.27	G'S
	25.60	msec
Min	-2.59	G'S
	175.12	msec



Driver Head Acceleration (Y) Primary vs. Time

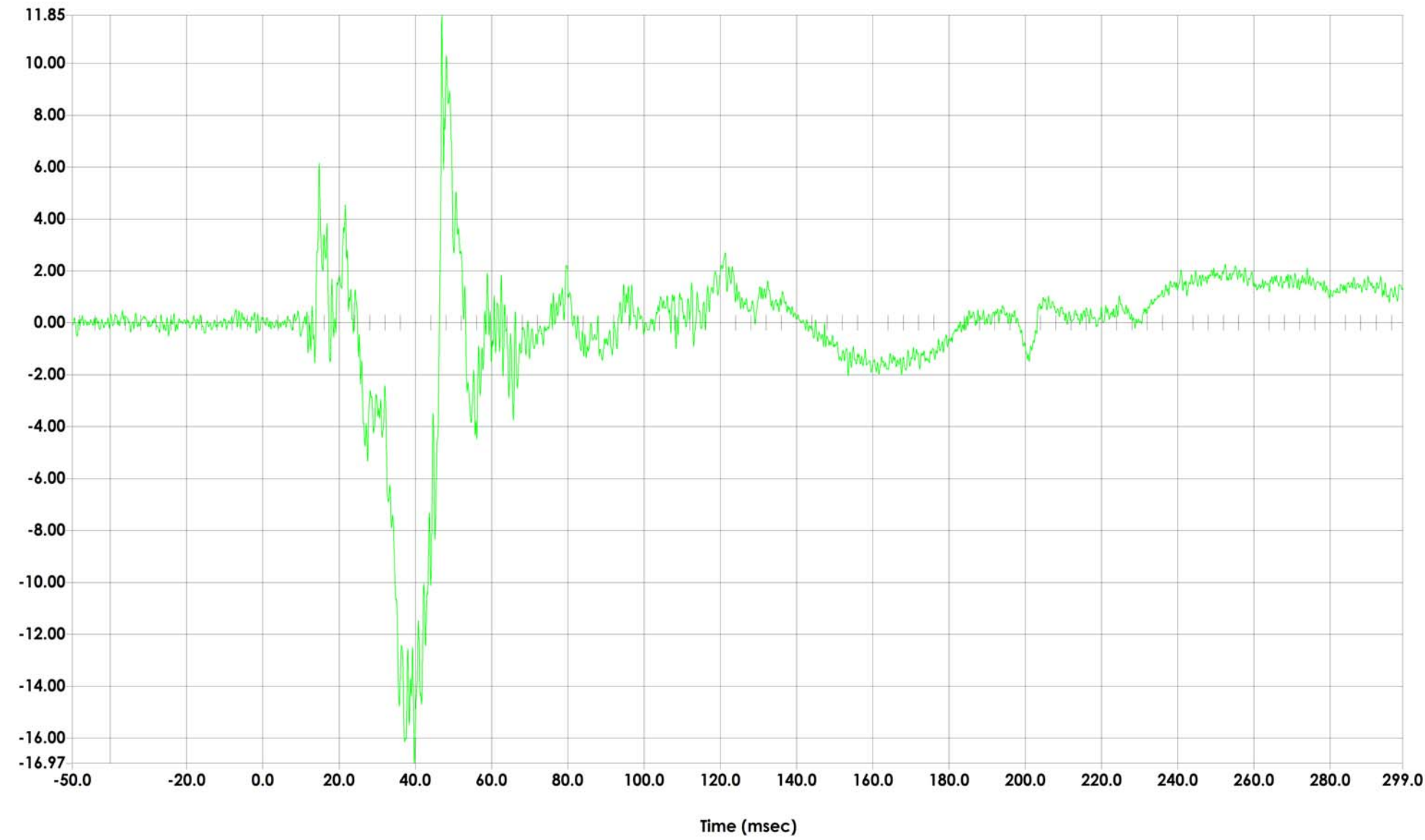


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	003
Units	G'S

Max	11.85	G'S
	46.96	msec
Min	-16.97	G'S
	39.76	msec



Driver Head Acceleration (Z) Primary vs. Time

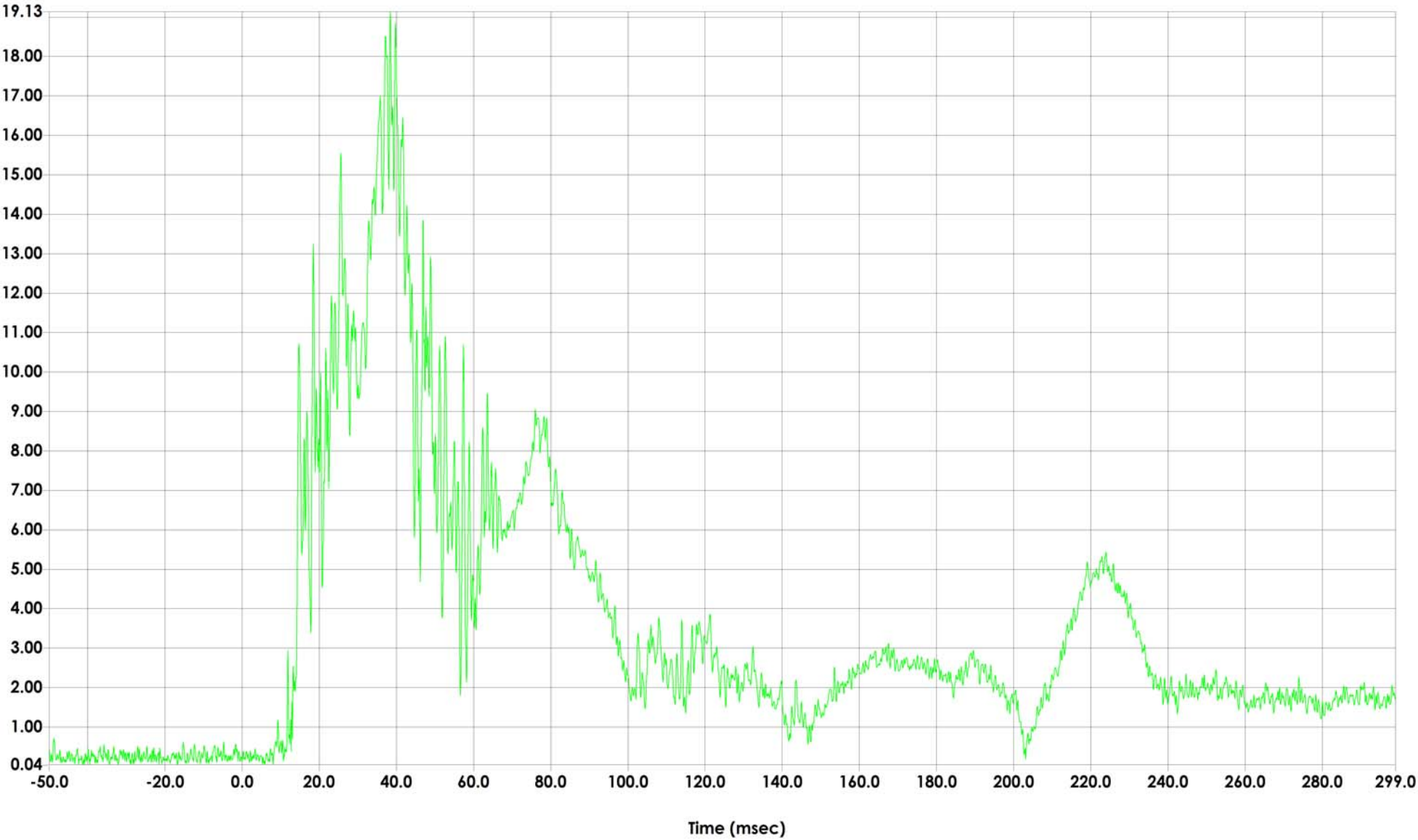


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	063
Units	G'S

Max	19.13	G'S
	38.40	msec
Min	0.04	G'S
	-32.16	msec



Driver Head Resultant Acceleration Primary vs. Time

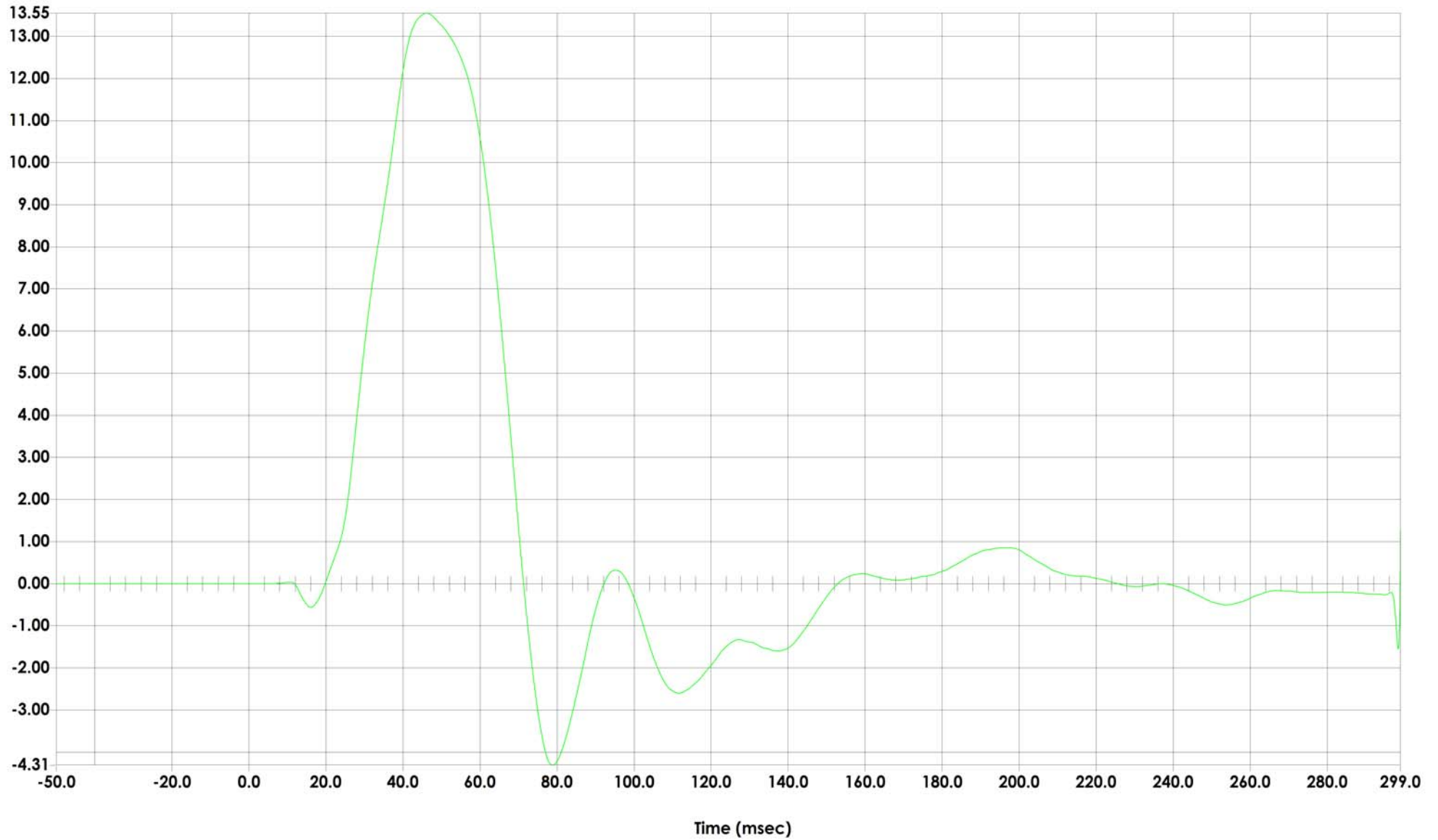


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	007
Units	MM

Max	13.55	MM
	46.16	msec
Min	-4.31	MM
	78.80	msec



Driver Upper Thorax Rib Deflection (Y) vs. Time

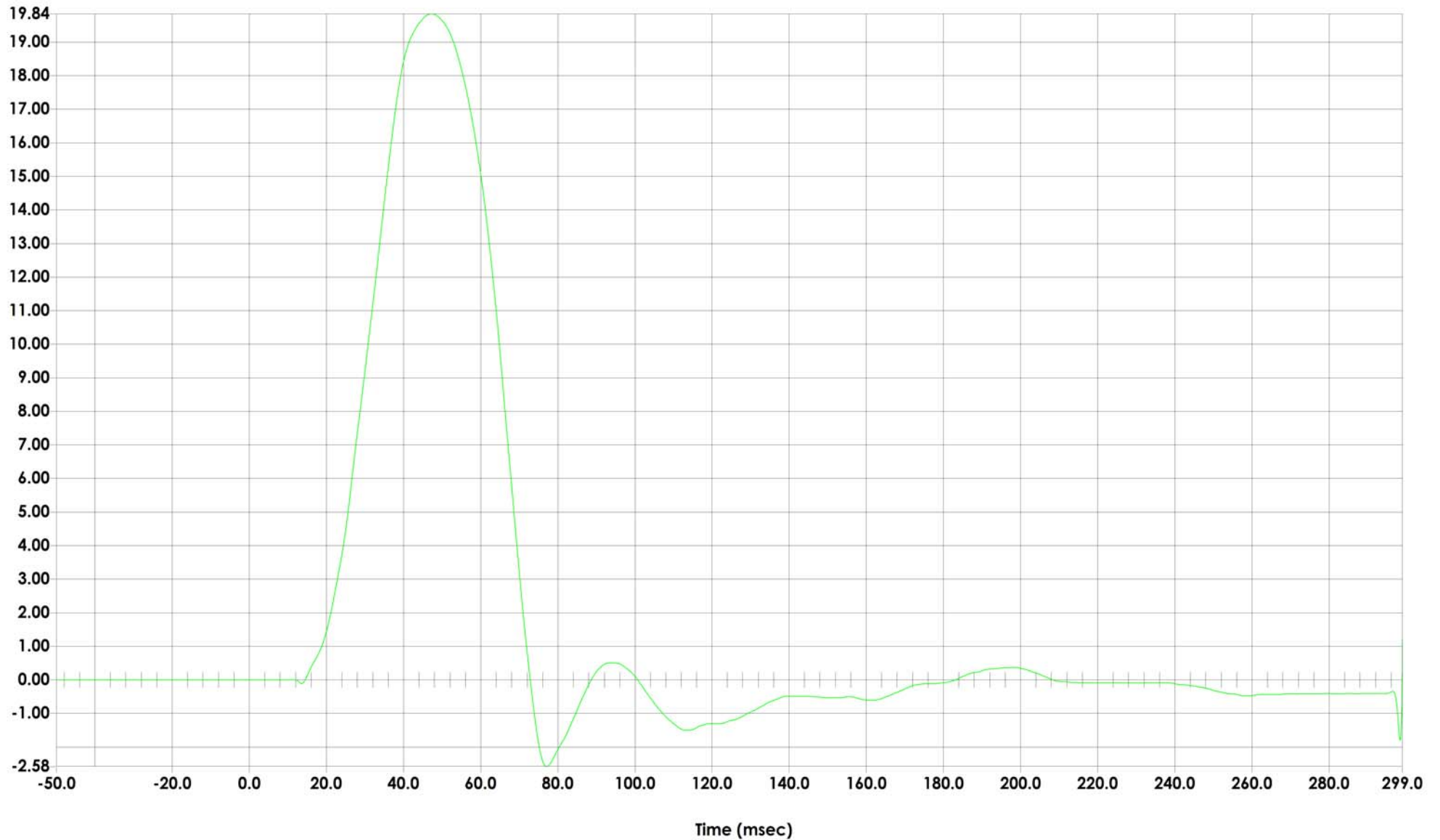


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	008
Units	MM

Max	19.84	MM
	47.28	msec
Min	-2.58	MM
	77.12	msec



Driver Middle Thorax Rib Deflection (Y) vs. Time

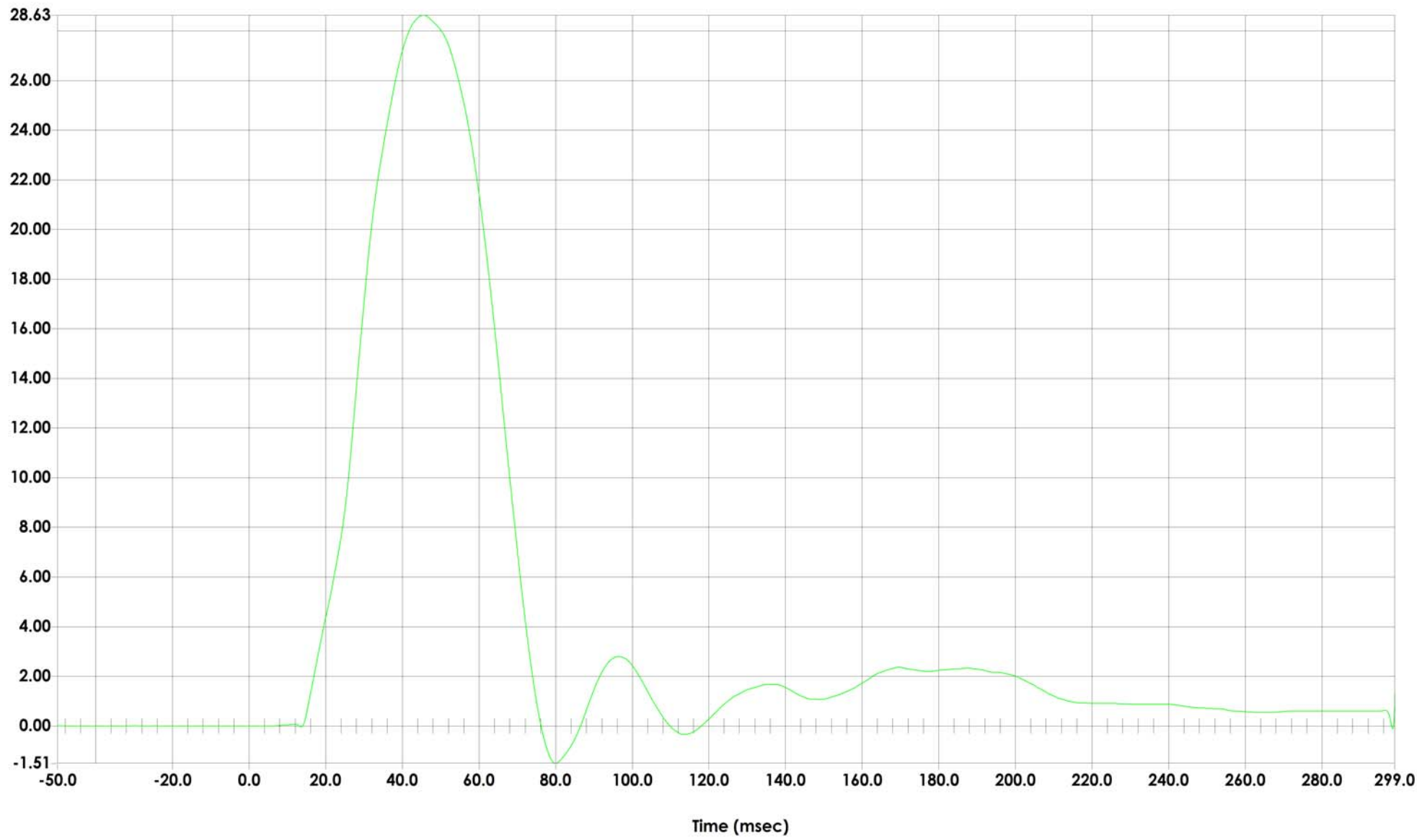


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	009
Units	MM

Max	28.63	MM
	45.60	msec
Min	-1.51	MM
	80.00	msec



Driver Lower Thorax Rib Deflection (Y) vs. Time

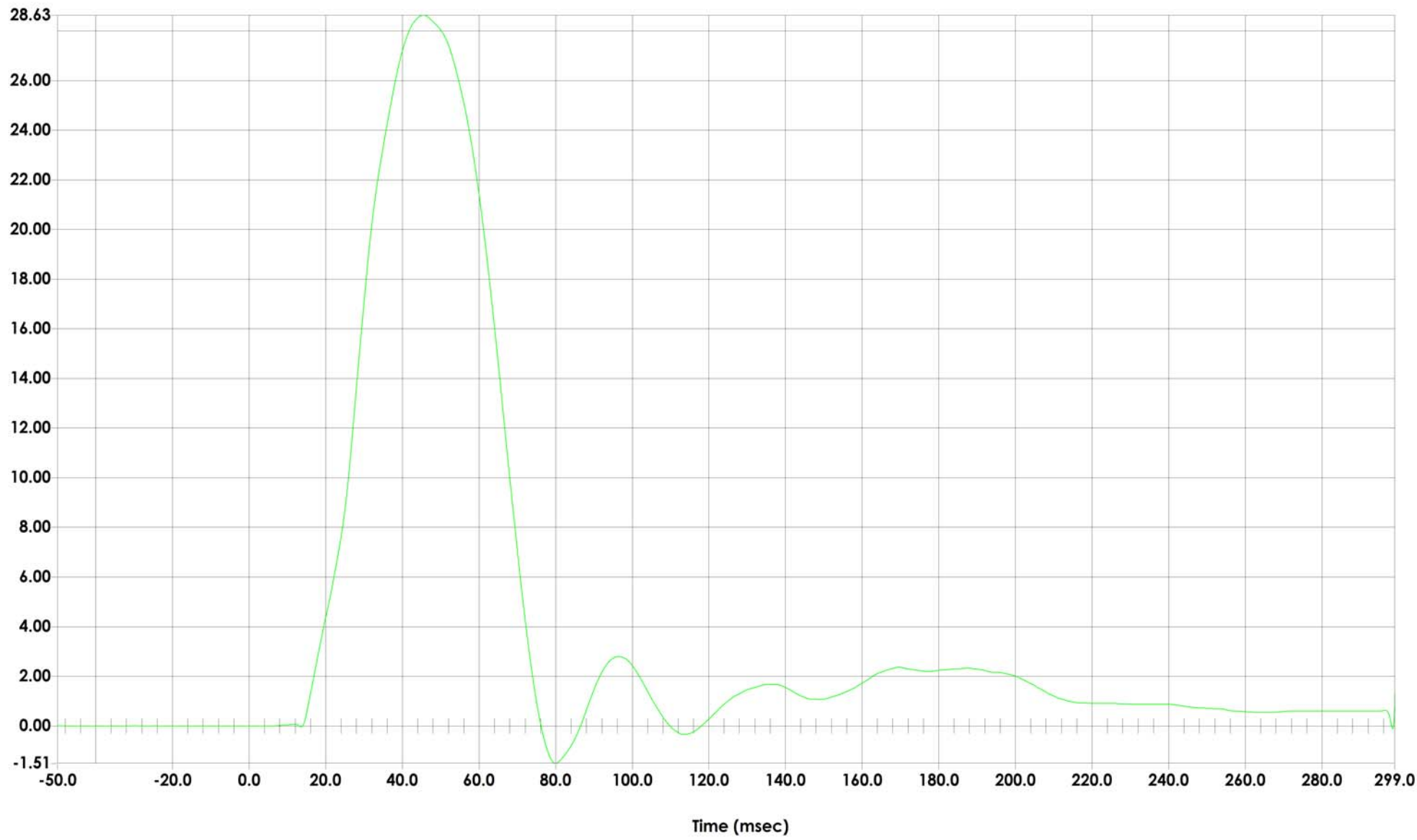


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	009
Units	MM

Max	28.63	MM
	45.60	msec
Min	-1.51	MM
	80.00	msec



Driver Rib Deflection Maximum vs. Time



Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	010
Units	NWT

Max	255.84	NWT
	93.12	msec
Min	-6668.10	NWT
	81.84	msec



Data invalid after 46 msec

Driver Anterior Abdominal Force (Y) vs. Time

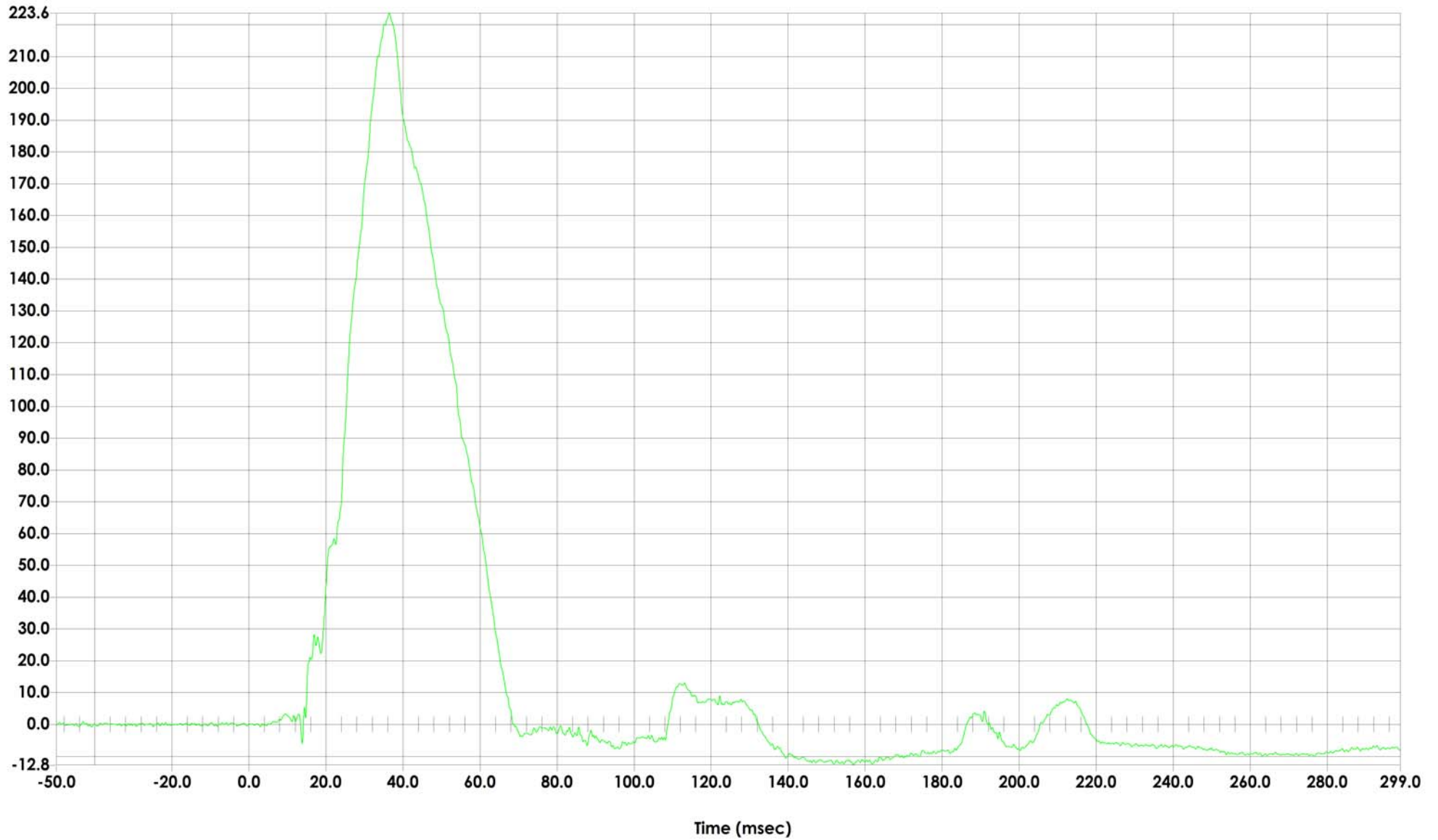


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	011
Units	NWT

Max	223.61	NWT
	36.40	msec
Min	-12.80	NWT
	156.96	msec



Driver Middle Abdominal Force (Y) vs. Time

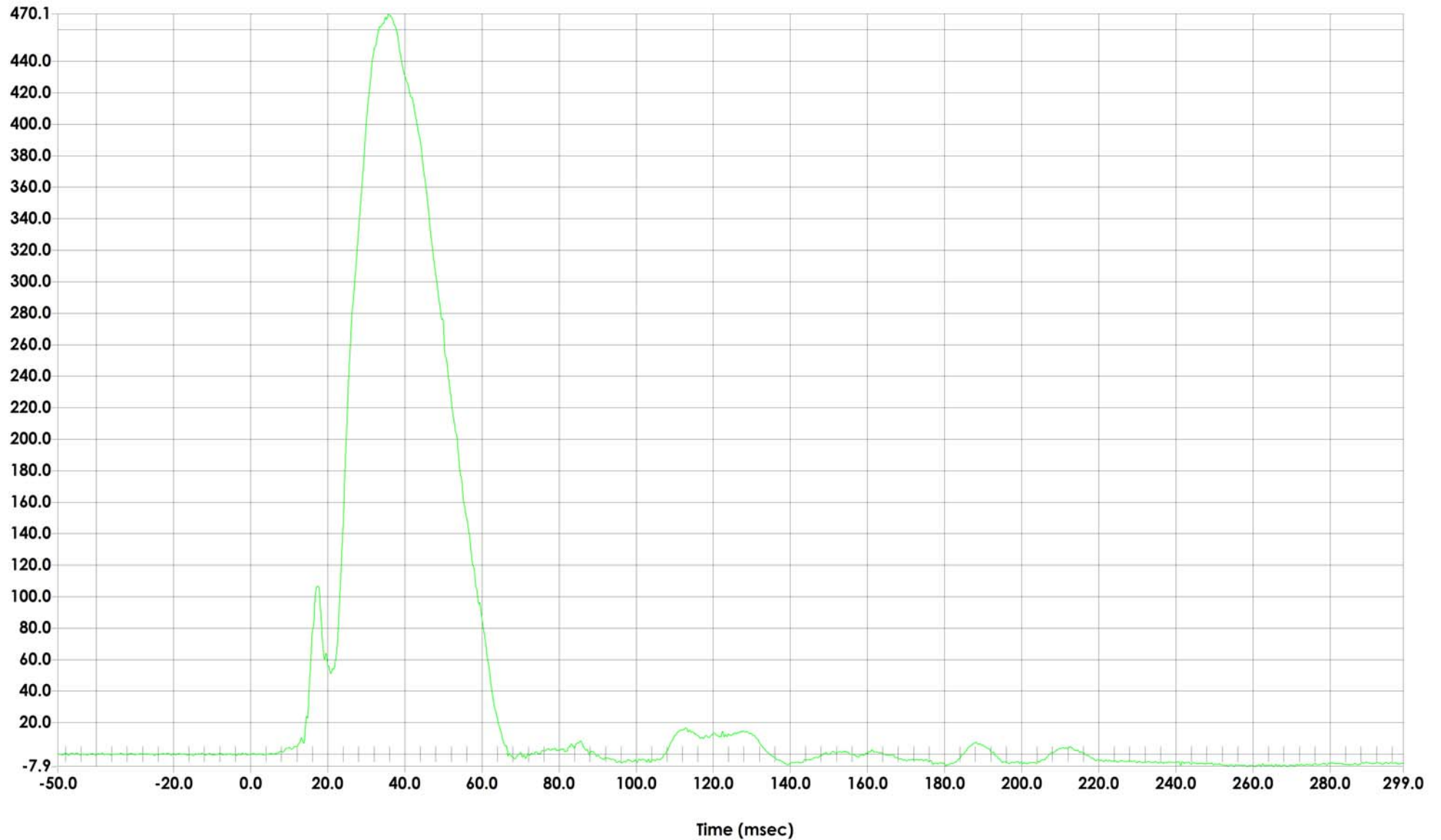


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	012
Units	NWT

Max	470.08	NWT
	35.76	msec
Min	-7.87	NWT
	258.32	msec



Driver Posterior Abdominal Force (Y) vs. Time



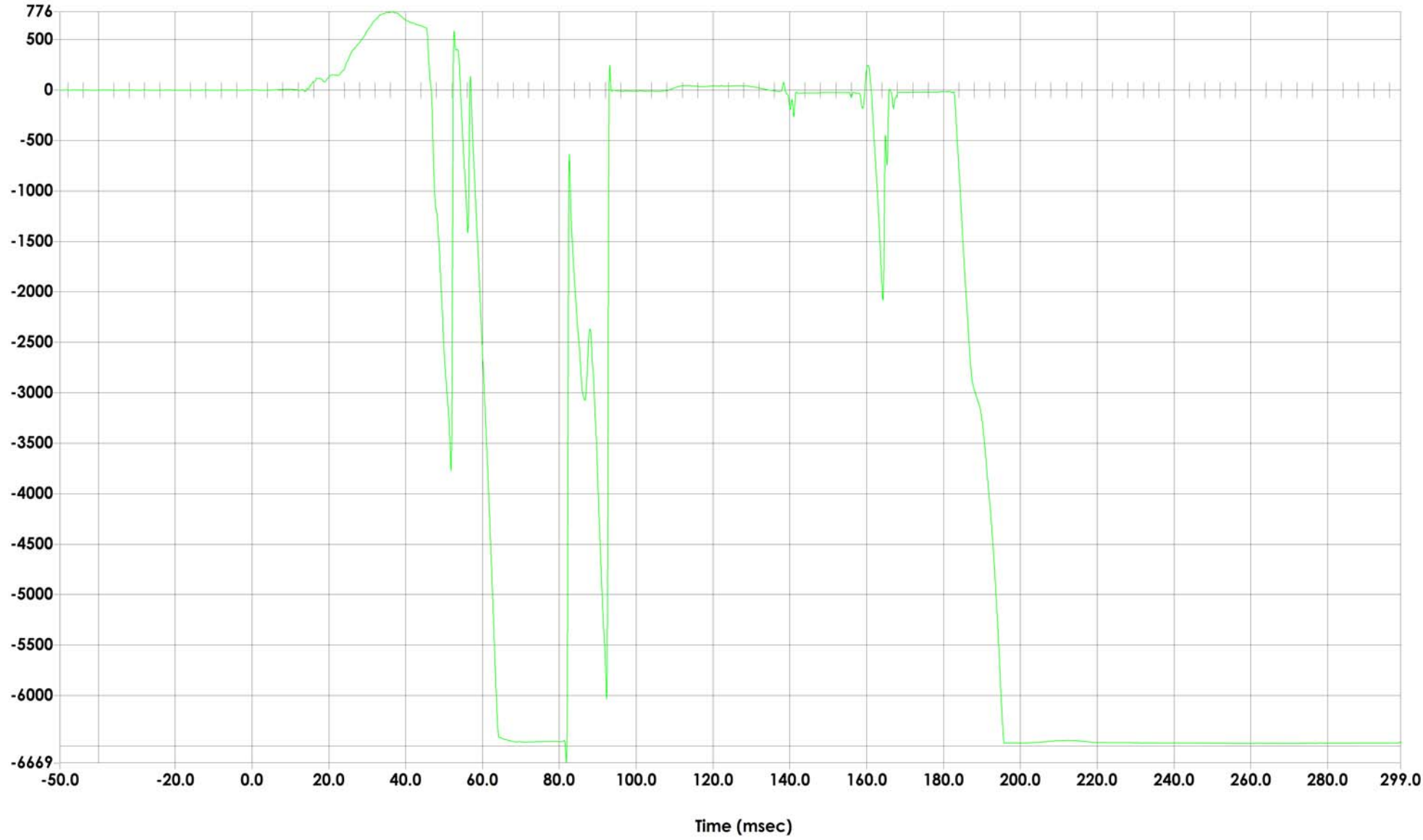
Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	064
Units	NWT

Max	775.51	NWT
	36.40	msec
Min	-6669.09	NWT
	81.84	msec



Data invalid after 46 msec

Driver Total Abdominal Force (Y) vs. Time

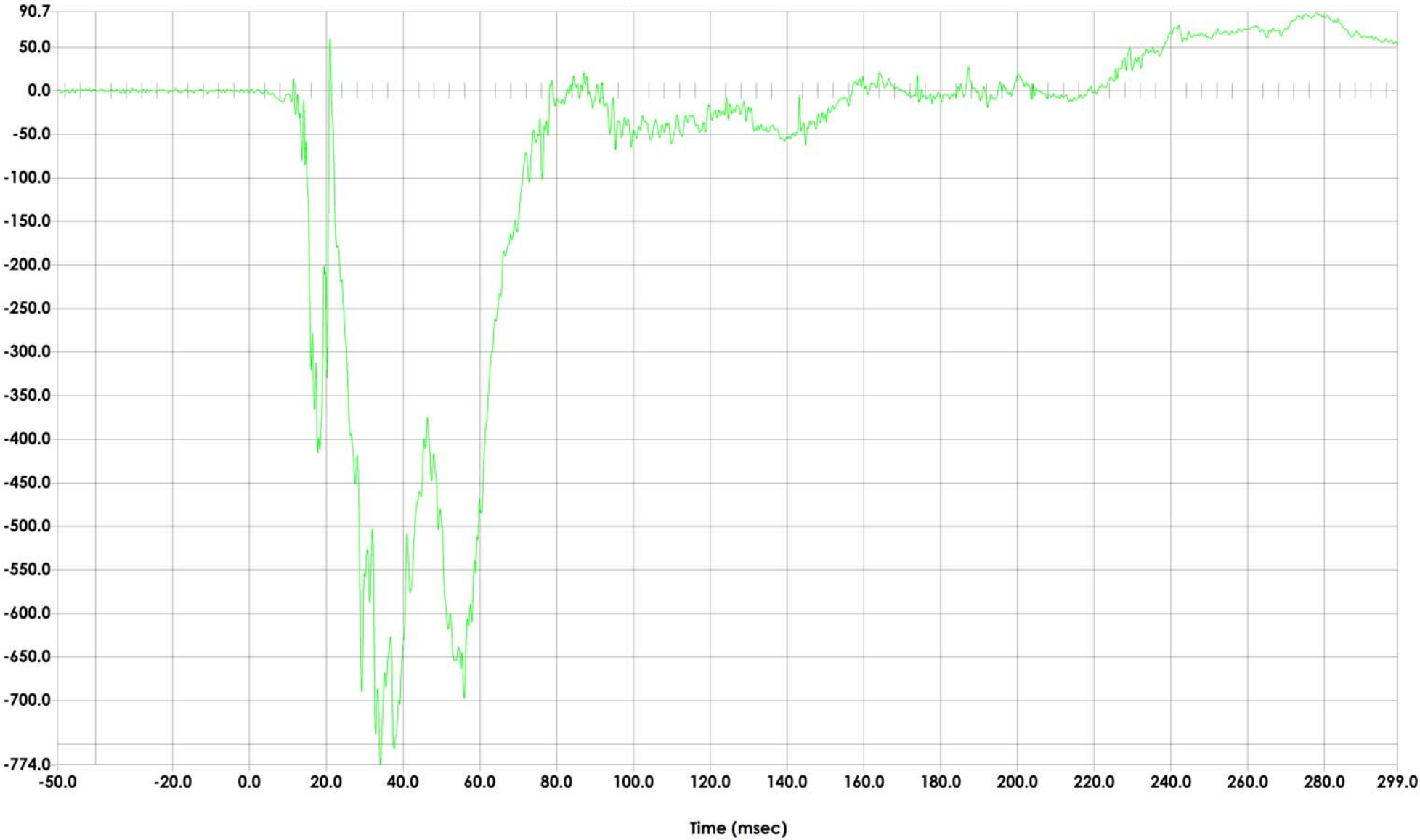


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	016
Units	NWT

Max	90.71	NWT
	277.92	msec
Min	-774.05	NWT
	34.08	msec



Driver Pubic Symphysis Force (Y) vs. Time

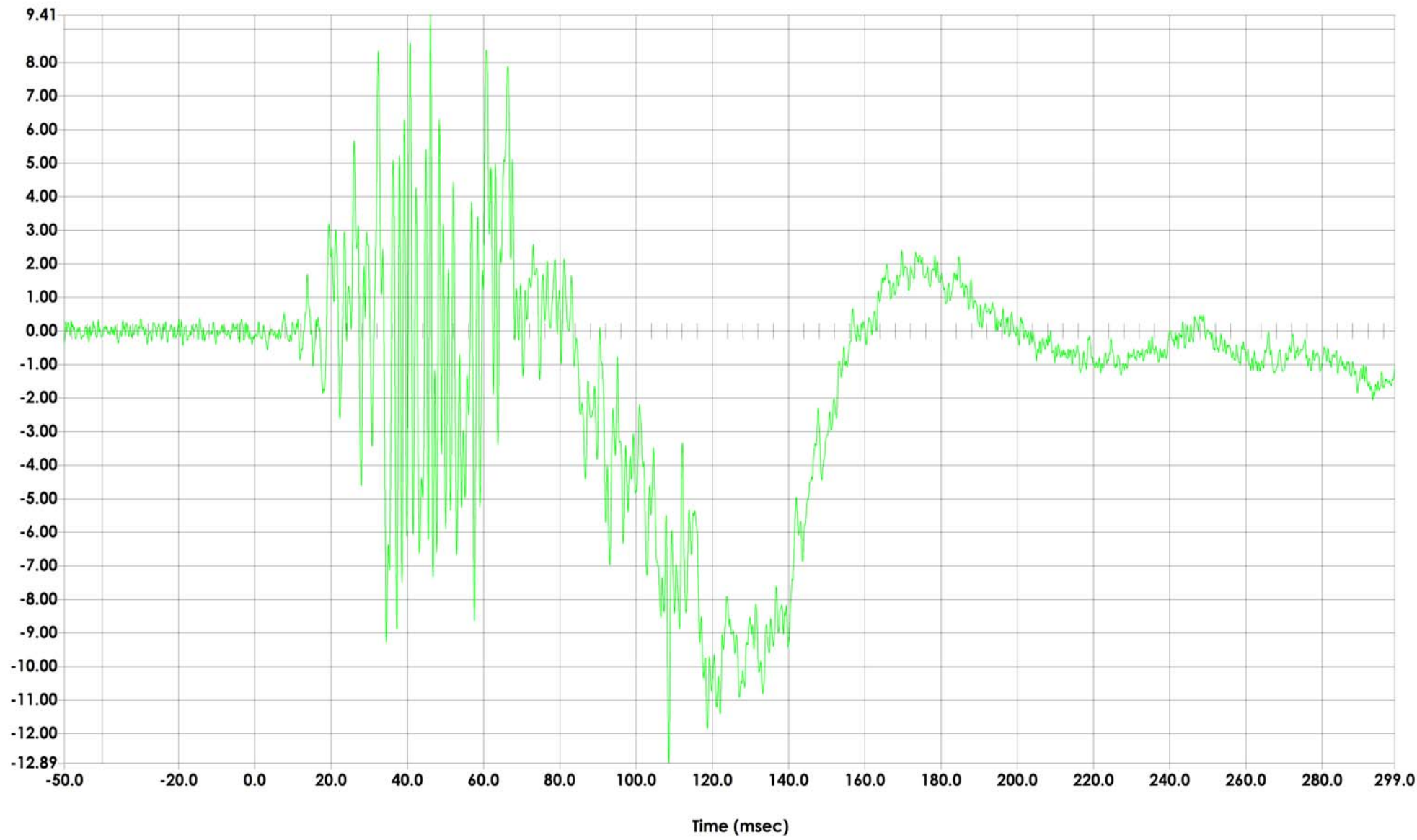


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	017
Units	G'S

Max	9.41	G'S
	46.08	msec
Min	-12.89	G'S
	108.56	msec



Passenger Head Acceleration (X) Primary vs. Time

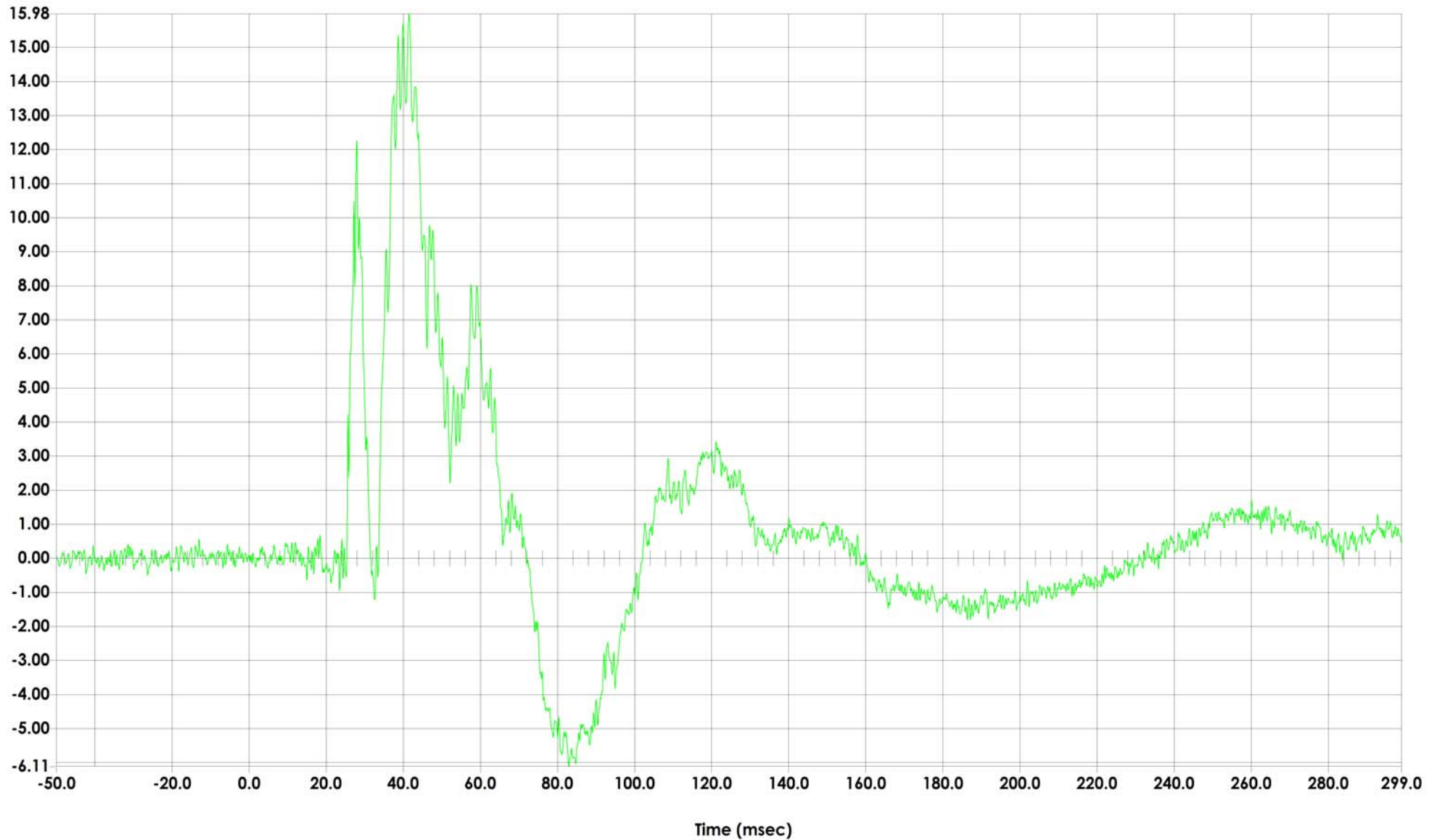


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	018
Units	G'S

Max	15.98	G'S
	41.52	msec
Min	-6.11	G'S
	82.96	msec



Passenger Head Acceleration (Y) Primary vs. Time

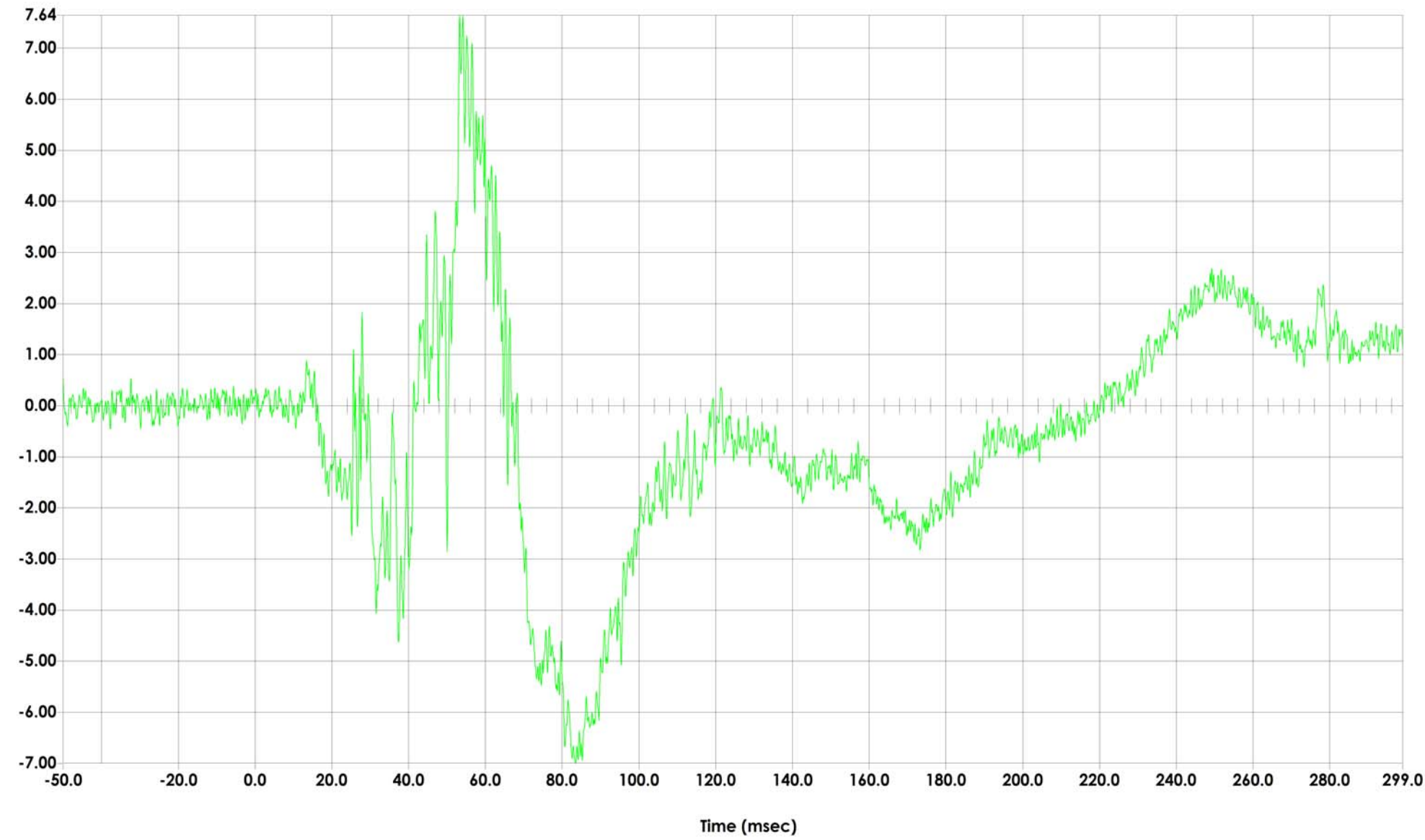


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	019
Units	G'S

Max	7.64	G'S
	53.28	msec
Min	-7.00	G'S
	83.52	msec



Passenger Head Acceleration (Z) Primary vs. Time

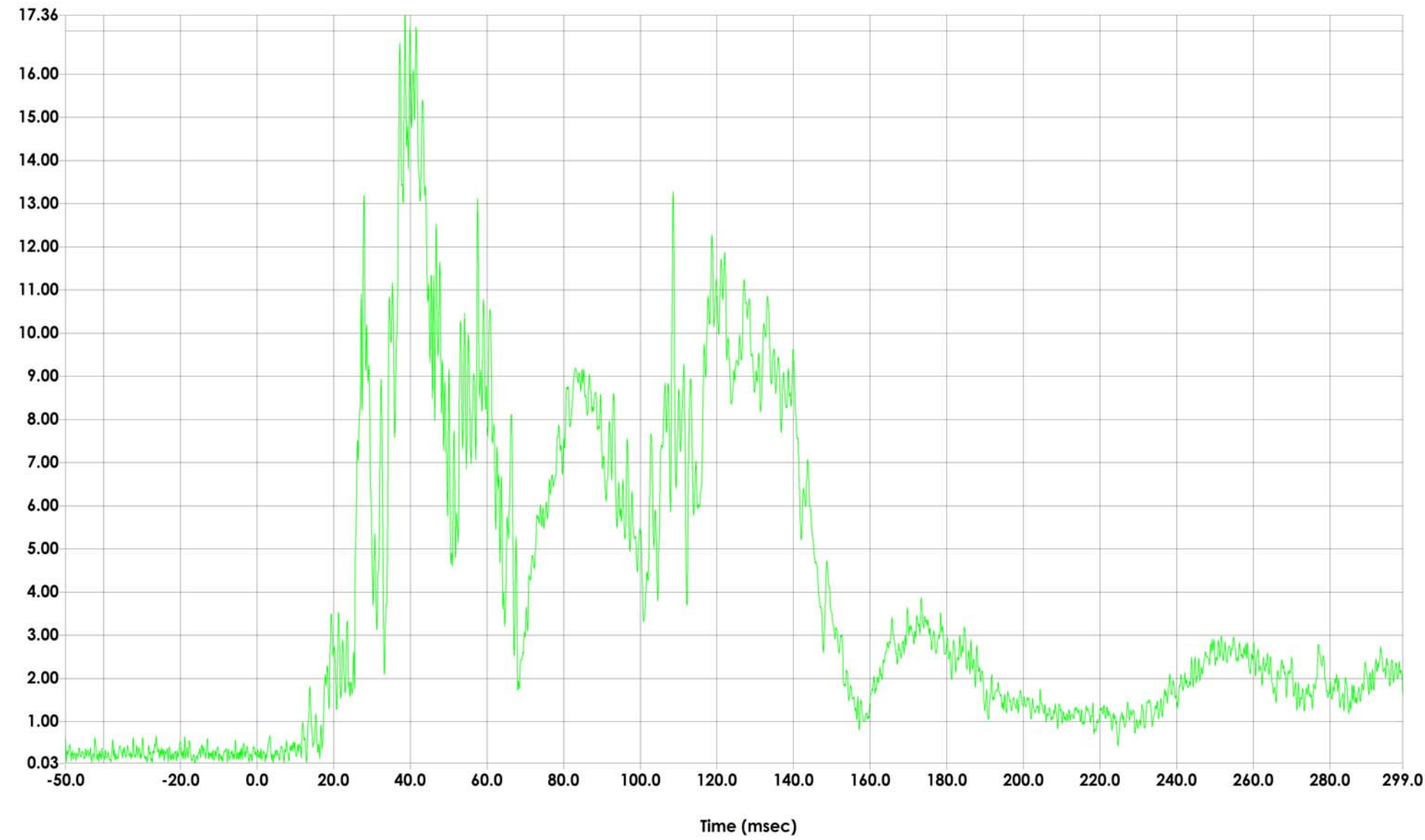


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC1000
Plot number	067
Units	G'S

Max	17.36	G'S
	38.64	msec
Min	0.03	G'S
	-43.12	msec



Passenger Head Resultant Acceleration Primary vs. Time

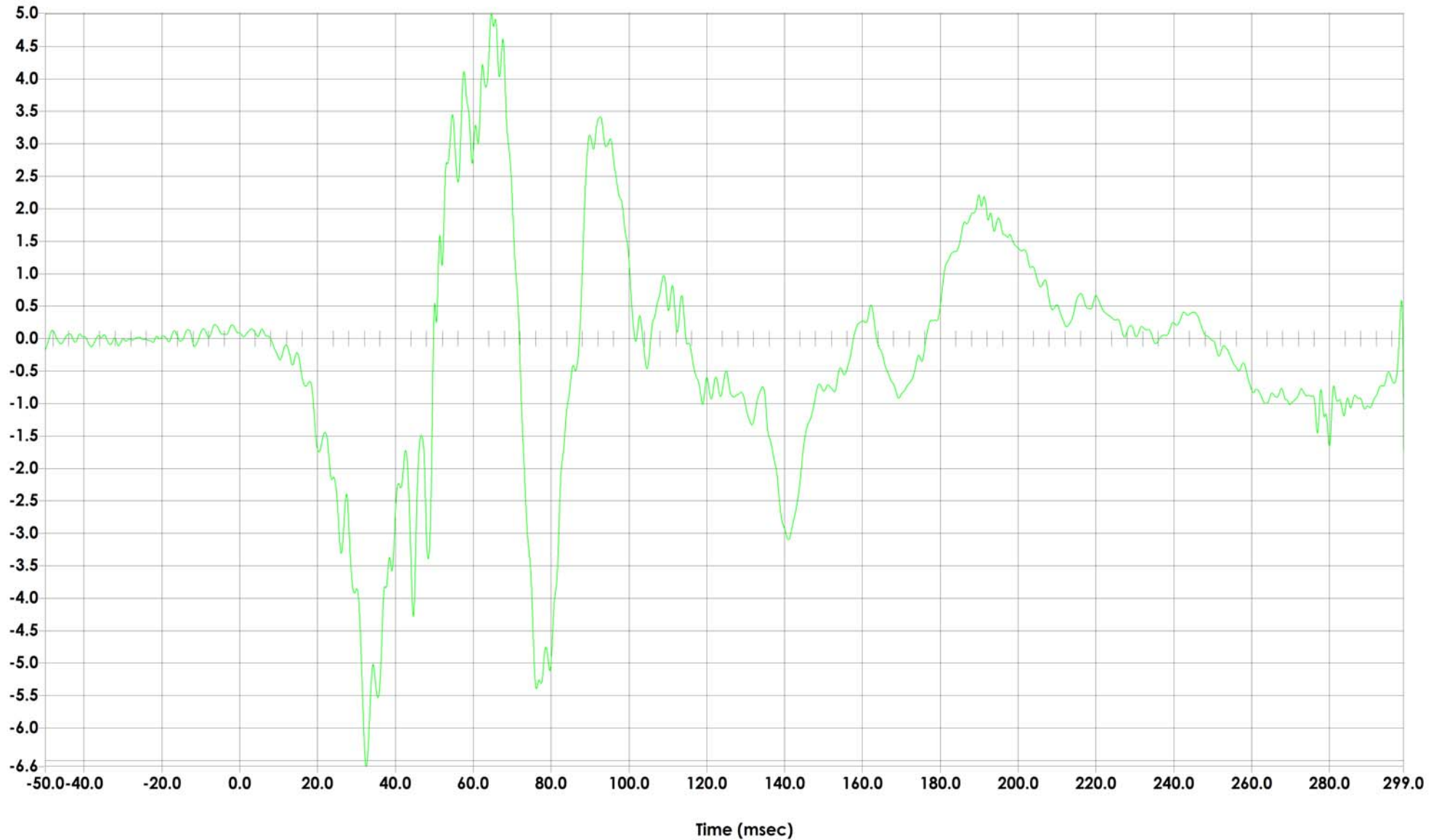


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	028
Units	G'S

Max	5.01	G'S
	64.64	msec
Min	-6.59	G'S
	32.48	msec



Passenger Lower Spine T12 Acceleration (X) vs. Time

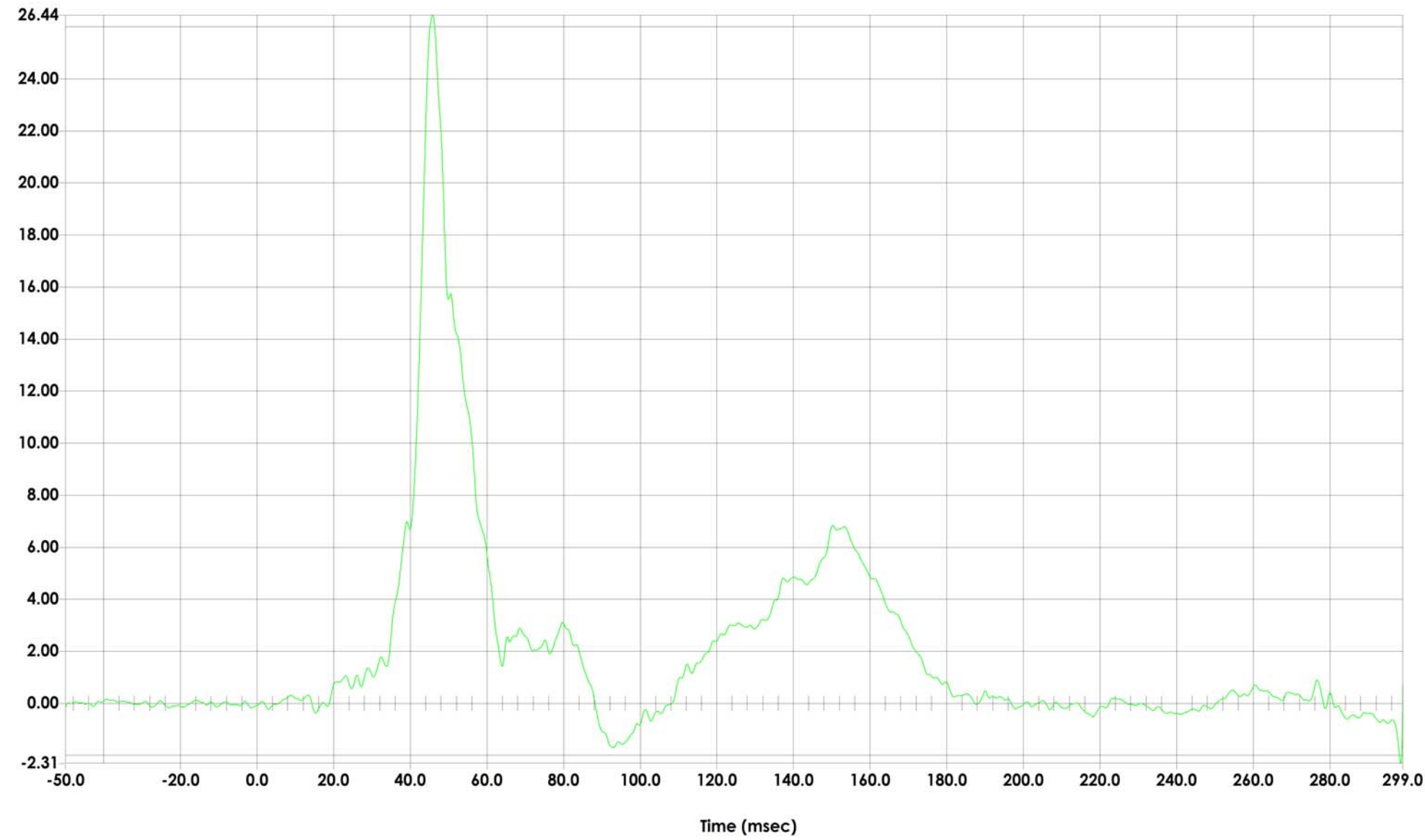


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	029
Units	G'S

Max	26.44	G'S
	45.84	msec
Min	-2.31	G'S
	298.48	msec



Passenger Lower Spine T12 Acceleration (Y) vs. Time

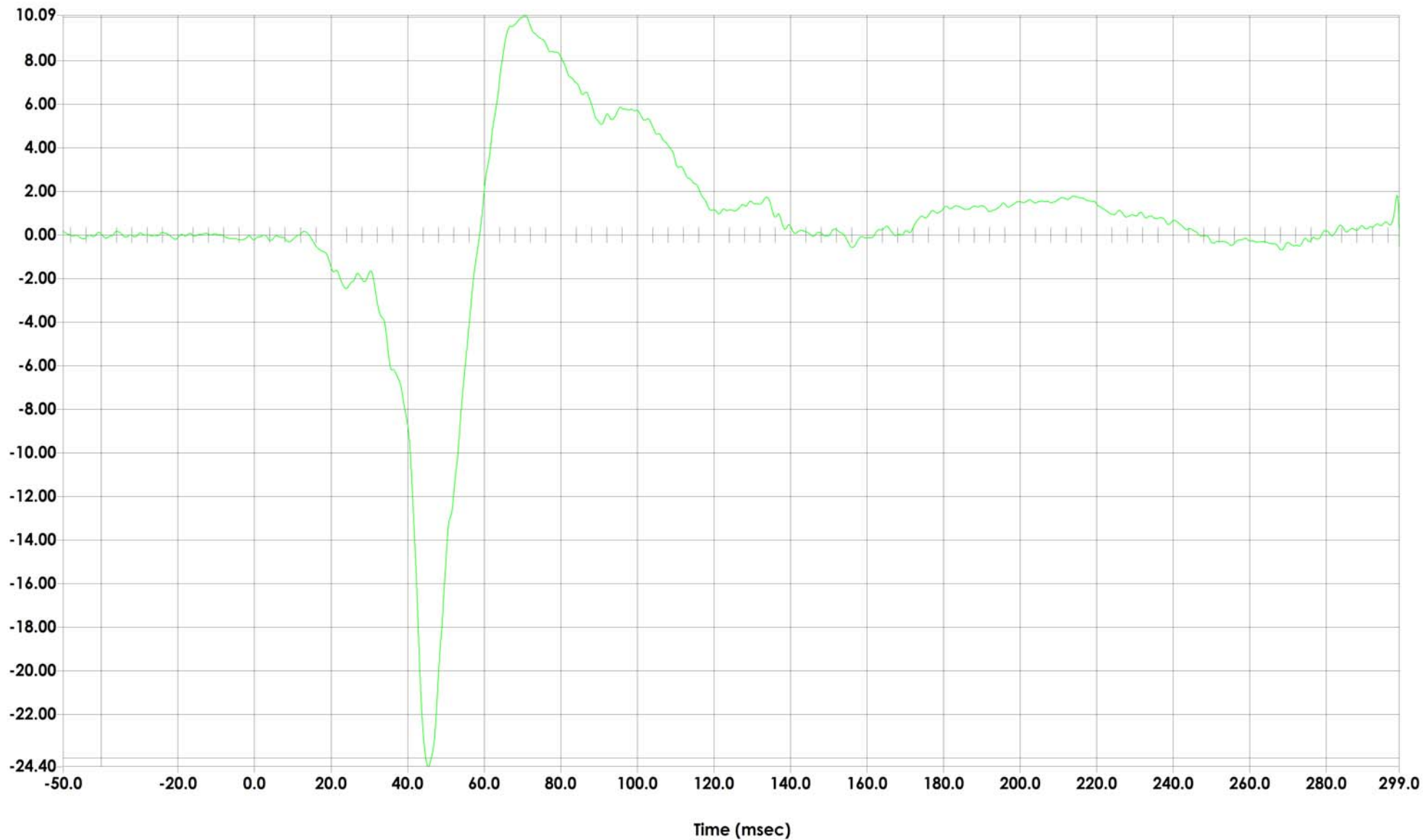


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	030
Units	G'S

Max	10.09	G'S
	70.64	msec
Min	-24.40	G'S
	45.36	msec



Passenger Lower Spine T12 Acceleration (Z) vs. Time

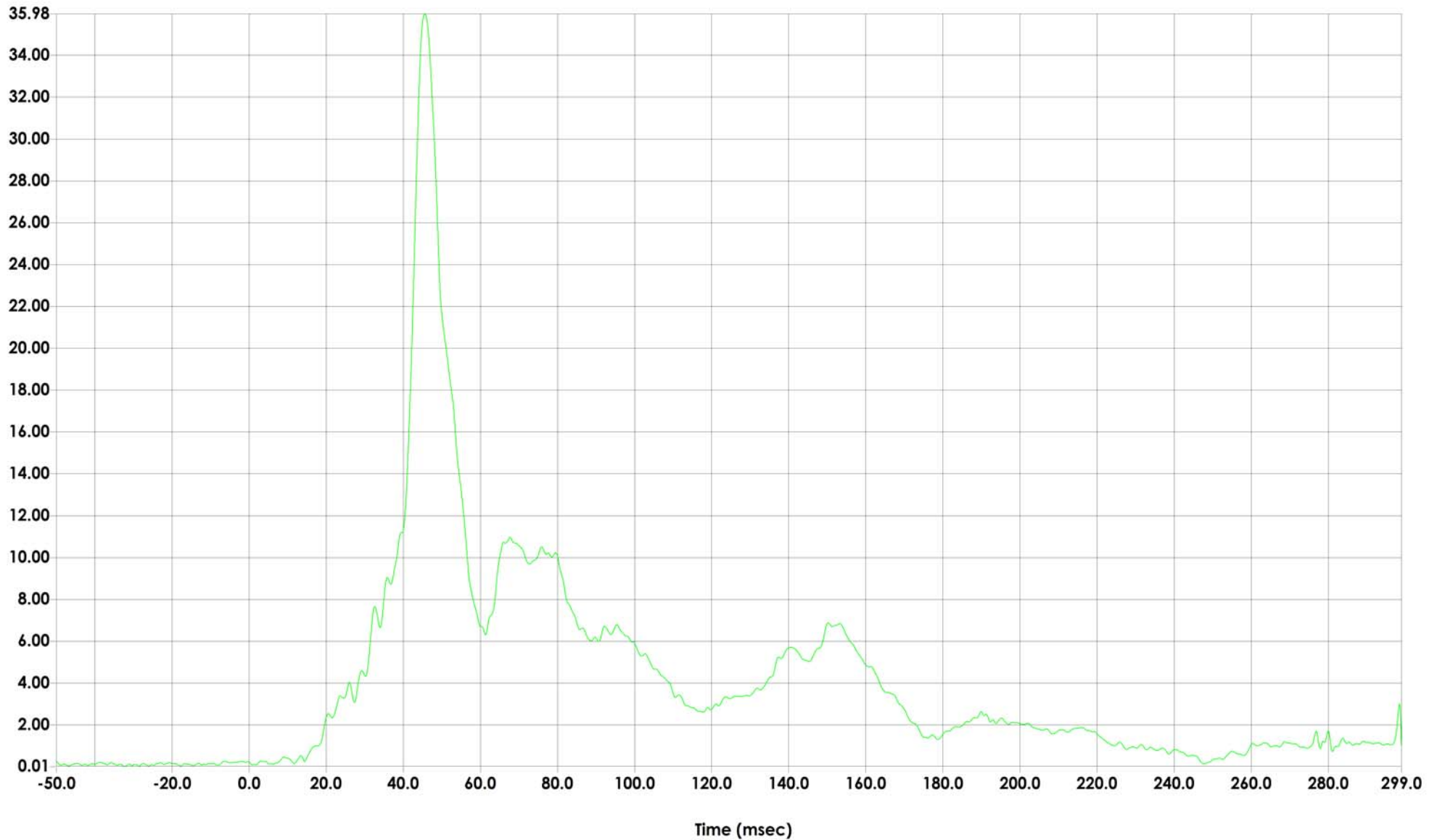


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC180
Plot number	065
Units	G'S

Max	35.98	G'S
	45.60	msec
Min	0.01	G'S
	-28.56	msec



Passenger Lower Spine T12 Resultant Acceleration vs. Time

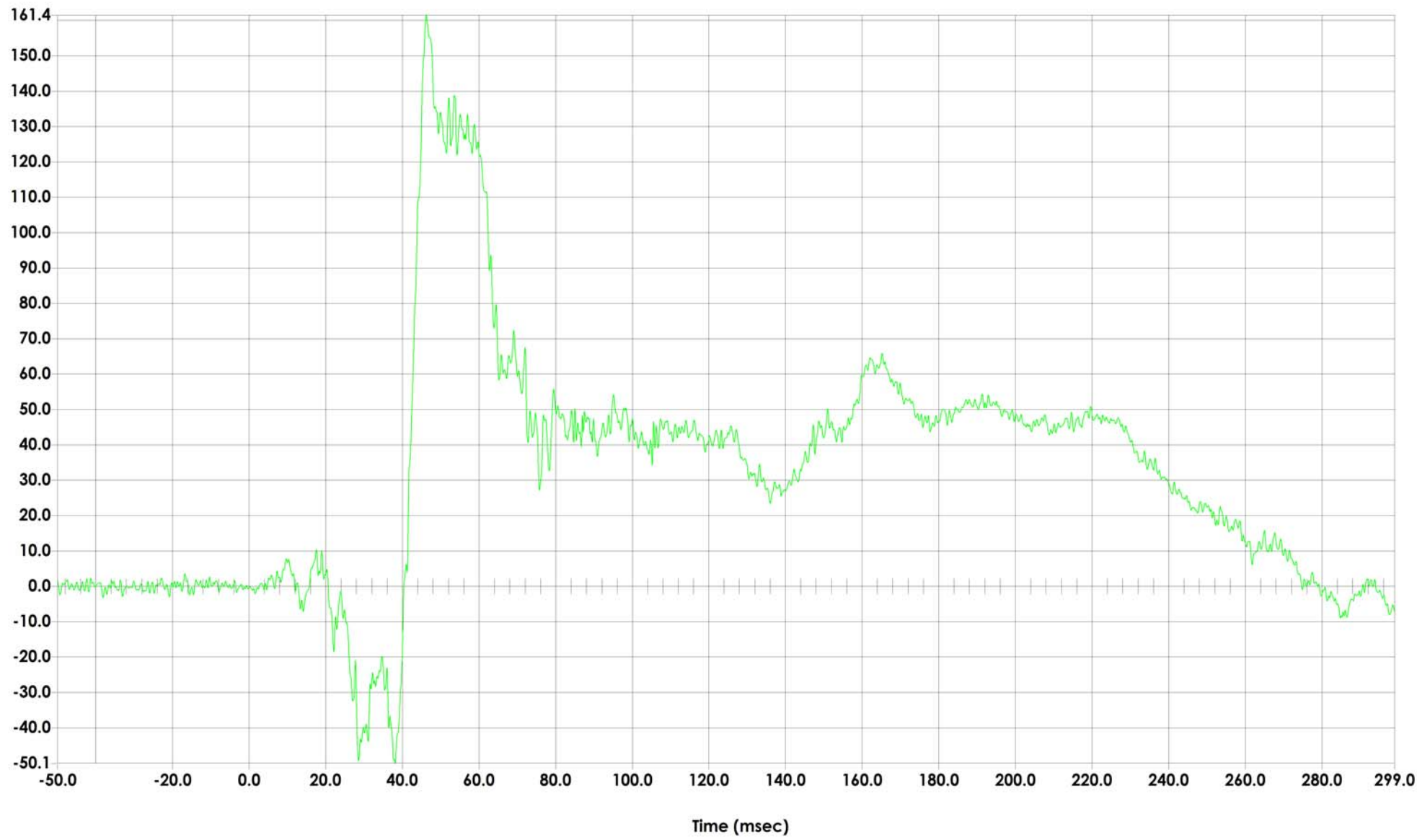


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	031
Units	NWT

Max	161.44	NWT
	46.24	msec
Min	-50.06	NWT
	38.16	msec



Passenger Iliac Force on Impact Side vs. Time

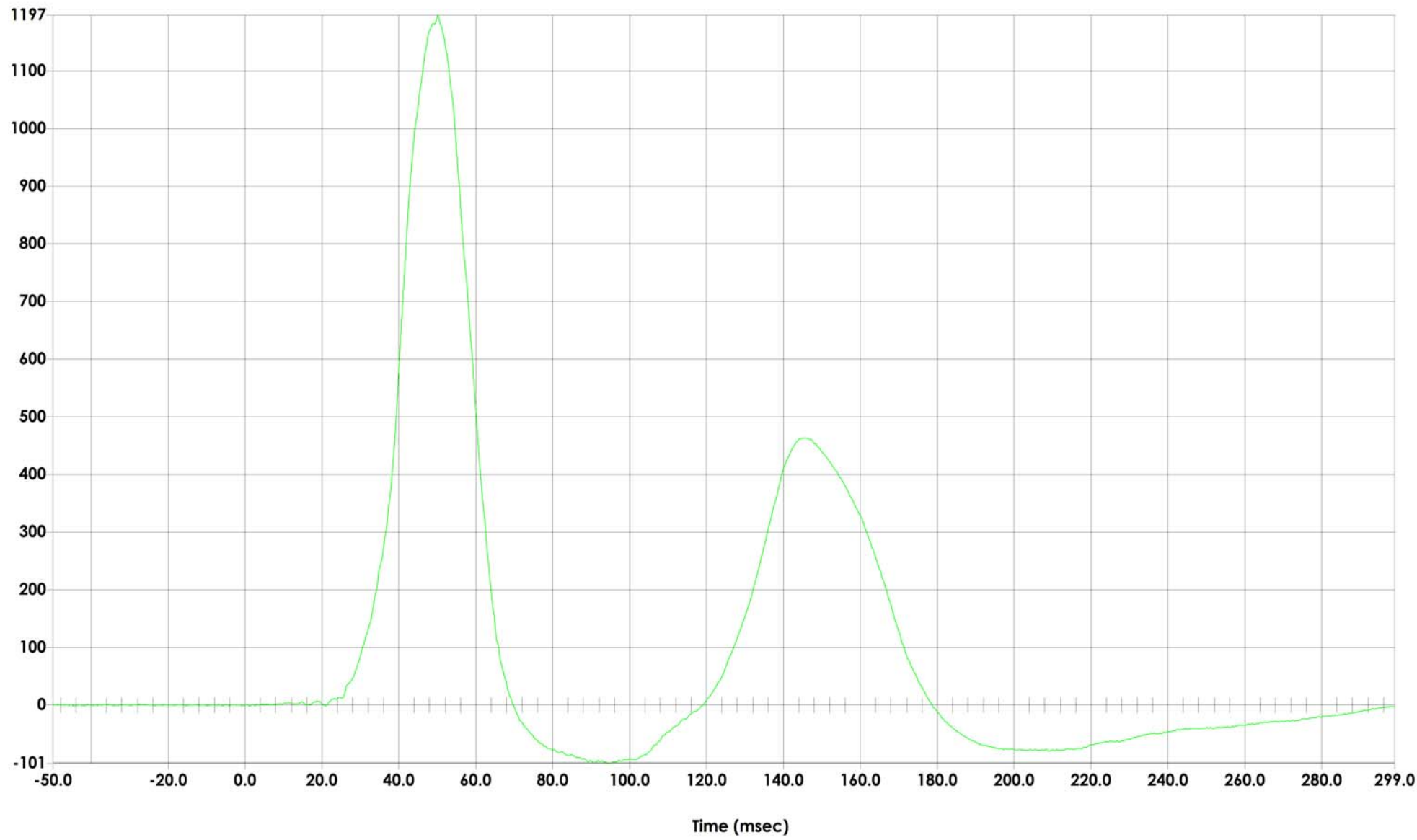


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	032
Units	NWT

Max	1196.51	NWT
	50.16	msec
Min	-101.18	NWT
	95.04	msec



Passenger Acetabulum Force on Impact Side vs. Time

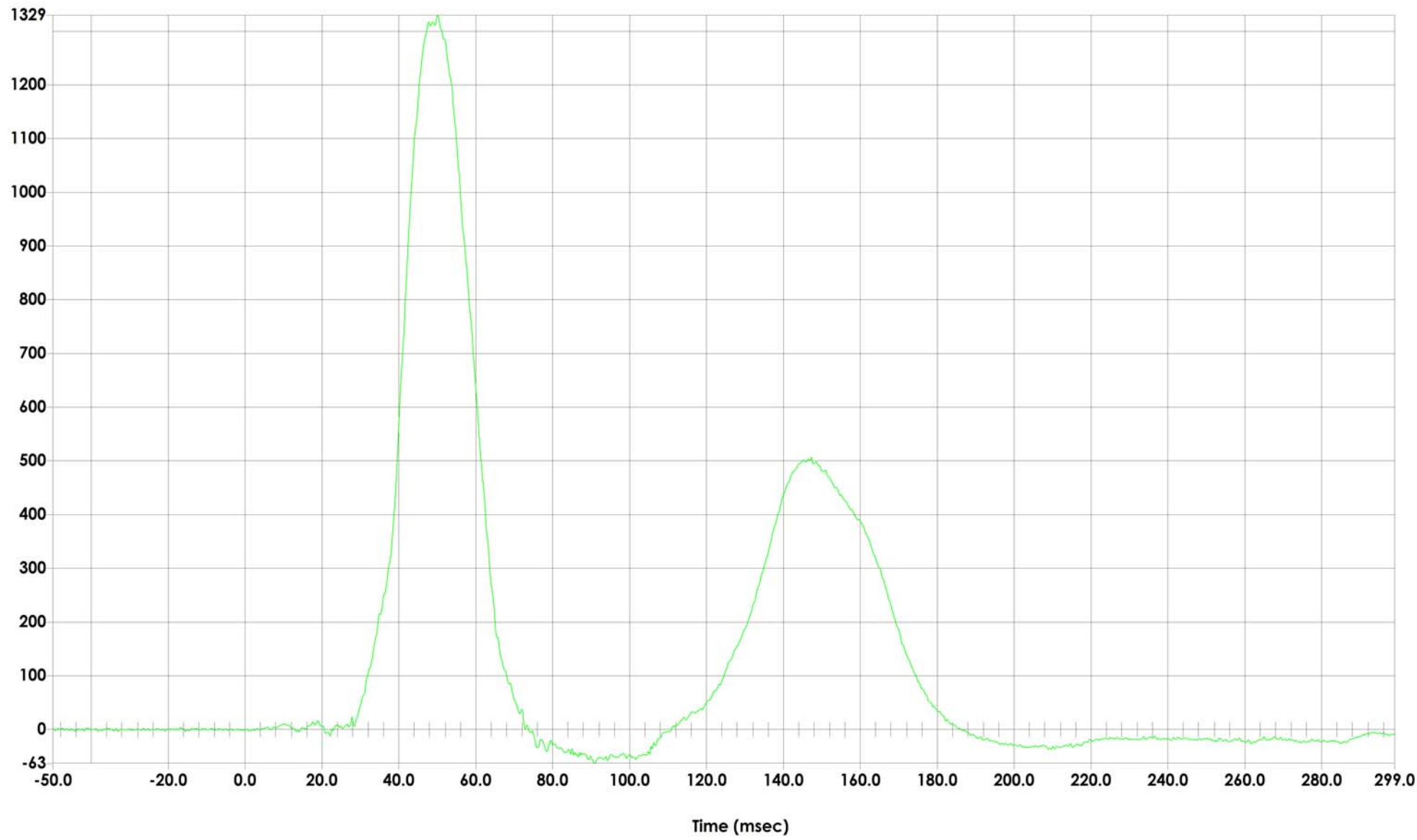


Test ID	MD 0314
Sampling Rate (Hz)	12500
Filter	CFC600
Plot number	066
Units	NWT

Max	1329.45	NWT
	50.08	msec
Min	-63.09	NWT
	90.88	msec



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



Test Vehicle: 2013 Ram 1500 4-Door Crew Cab Pickup
Test Program: SINCAP

NHTSA Number: MD 0314
Test Date: November 28, 2012

APPENDIX C
DUMMY CONFIGURATION AND PERFORMANCE DATA

TABLE 1
EXTERNAL MEASUREMENTS (ES-IIre)

ES-IIre Serial Number F038 Test Sequences 2 & 3

TEST PARAMETER	SPEC.	PRE		POST	
Date	-	11-5-12		12-4-12	
Sequential Test Number	-	2		3	
		Result	Pass/Fail	Result	Pass/Fail
Temperature (°C)	20.6-22.2	21.2	Pass	22.0	Pass
Relative Humidity (%)	10-70	53.6	Pass	34.9	Pass
Sitting Height	900 - 918	909	Pass	907	Pass
Seat to Shoulder Joint	558 -572	565	Pass	563	Pass
Seat to Lower Face of Thoracic Spine Box	346 -356	352	Pass	351	Pass
Seat to Hip Joint (Center of Bolt)	97 - 103	100	Pass	101	Pass
Sole to Seat, Sitting	433 - 451	437	Pass	440	Pass
Head Width	152 -158	154	Pass	155	Pass
Shoulder/Arm Width	461 - 479	476	Pass	474	Pass
Thorax Width	322 - 332	325	Pass	327	Pass
Abdomen Width	273 - 287	281	Pass	283	Pass
Pelvis/Lap Width	359 - 373	362	Pass	365	Pass
Head Depth	196 - 206	200	Pass	202	Pass
Thorax Depth	262 - 272	270	Pass	268	Pass
Abdomen Depth	194 - 204	202	Pass	200	Pass
Pelvis Depth	235 - 245	237	Pass	239	Pass
Back of Buttocks to Hip Joint (Center of Bolt)	150 - 160	153	Pass	154	Pass
Back of Buttocks to Front Knee	597 - 615	602	Pass	605	Pass

TABLE 2
HEAD DROP TEST (ES-Ilre)

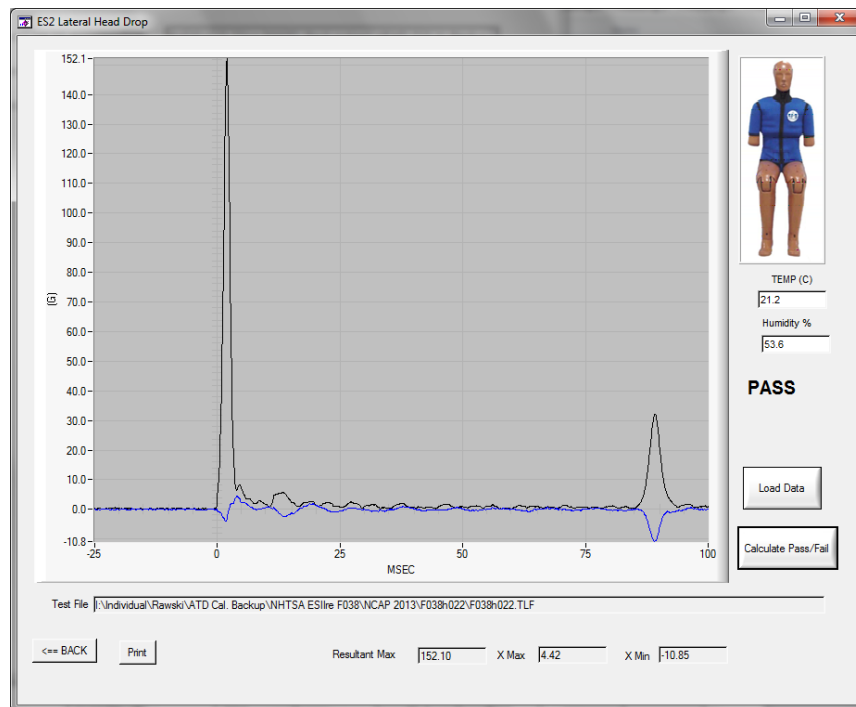
ES-Ilre Serial Number F038

Test Sequences 1 & 2

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-2-12		12-1-12	
Sequential Test Number		-	2		3	
			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	21.2	Pass	20.9	Pass
	Min		21.2	Pass	20.8	Pass
Humidity (%) – During Soak	Max	10.0-70.0	53.6	Pass	34.3	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	20.8	Pass
Humidity – During Test (%)		10-70	53.6	Pass	34.2	Pass
Peak Head Resultant Acceleration (G)		125-155	152.1	Pass	148.9	Pass
Peak Head X Acceleration (G)		<15	4.4	Pass	9.4	Pass
Unimodal (Oscillation) (Yes/No)		<15%	Yes	Pass	Yes	Pass

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

PRE-TEST



POST-TEST

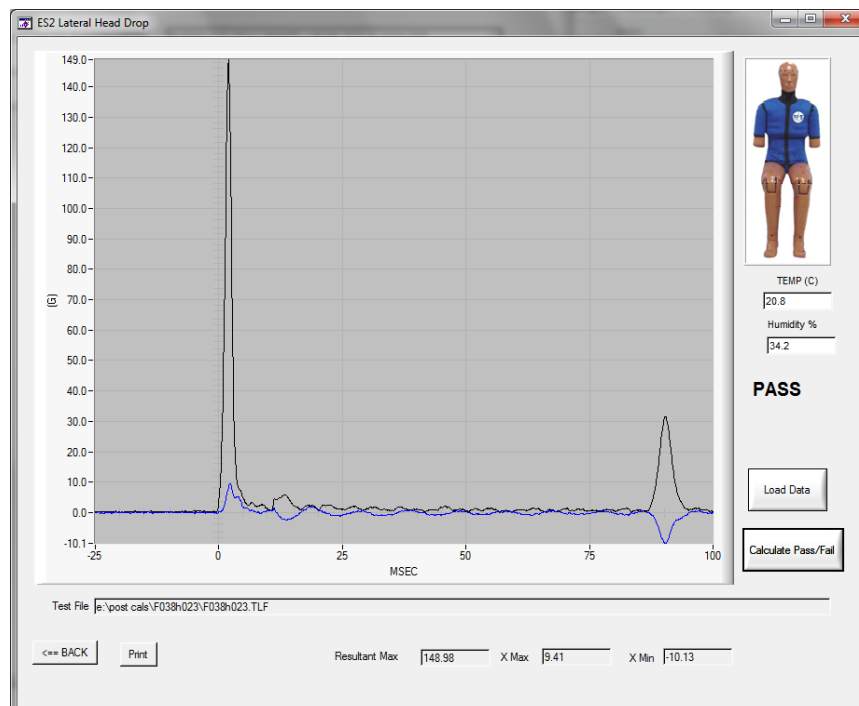


TABLE 3
NECK PENDULUM TEST (ES-IIre)

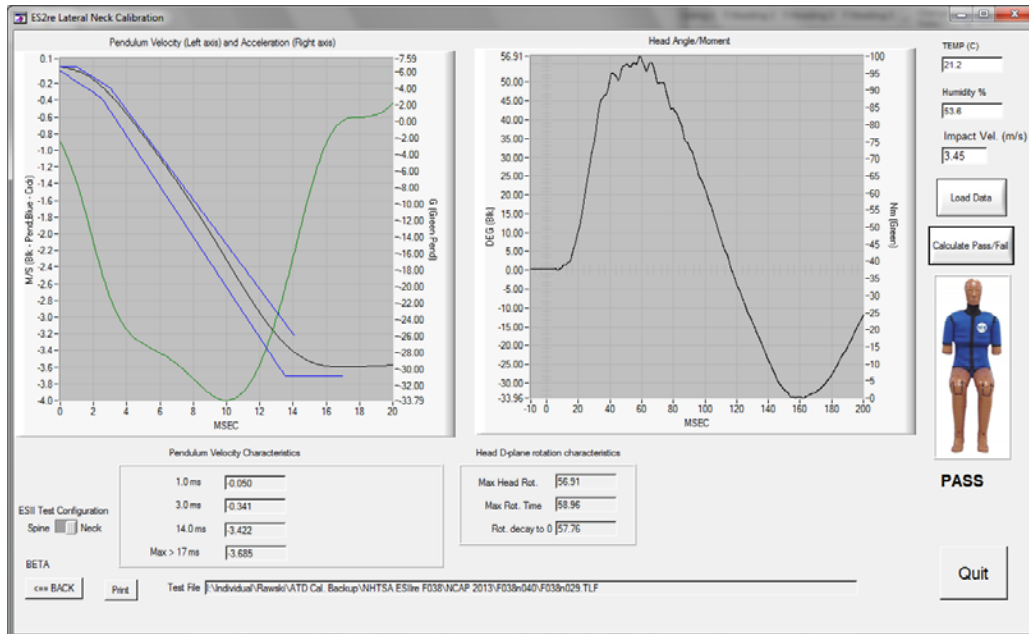
ES-IIre Serial Number F038

Test Sequences 2 & 3

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-3-12		12-1-12	
Sequential Test Number		-	2		3	
			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	21.2	Pass	20.9	Pass
	Min		21.2	Pass	20.8	Pass
Humidity (%) – During Soak	Max	10.0-70.0	53.6	Pass	34.3	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	20.8	Pass
Humidity – During Test (%)		10-70	53.6	Pass	34.3	Pass
Pendulum Velocity (m/s)		3.3-3.5	3.45	Pass	3.45	Pass
Pendulum Velocity Corridors (m/s)	0-1.0 ms	(-0.05)-0.00	-0.05	Pass	-0.04	Pass
	2.5-3.0 ms	(-0.375) - (-0.25)	-0.34	Pass	-0.34	Pass
	13.5-14.0 ms	(-3.7) - (-3.20)	-3.42	Pass	-3.53	Pass
	Max > 17 ms	-3.7	-3.69	Pass	-3.67	Pass
Max D-Plane rotation (deg)		49-59	56.9	Pass	58.5	Pass
Time of Max D-Plane Rotation (ms)		54-66	58.9	Pass	57.4	Pass
Time of Moment Decay from Peak to 0 Nm (ms)		53-88	57.8	Pass	59.4	Pass

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

PRE-TEST



POST-TEST

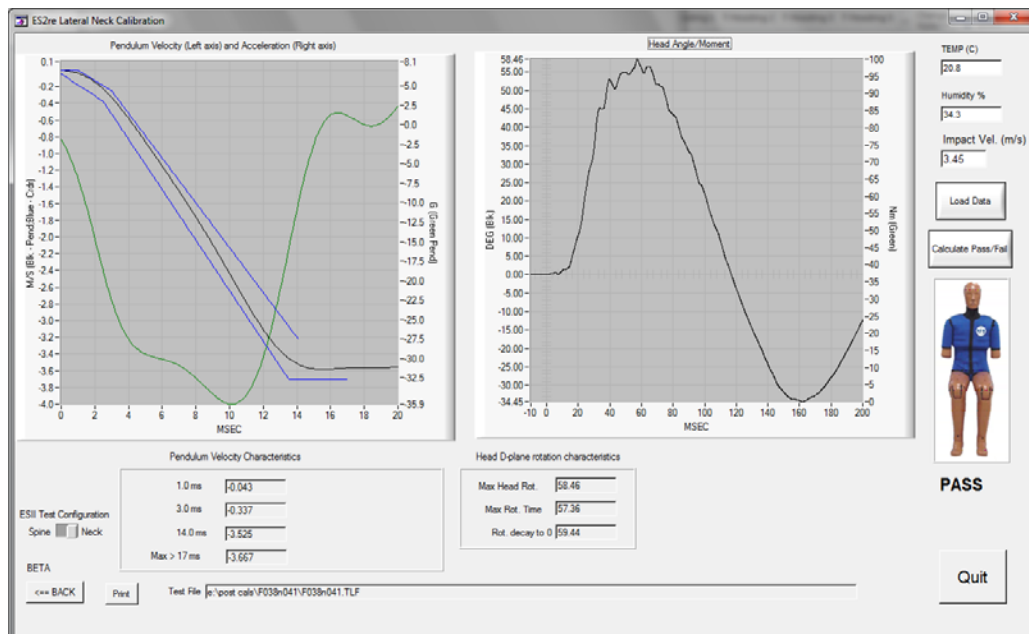


TABLE 4
SHOULDER IMPACT TEST (ES-Ilre)

ES-Ilre Serial Number F038 Test Sequences 2 & 3

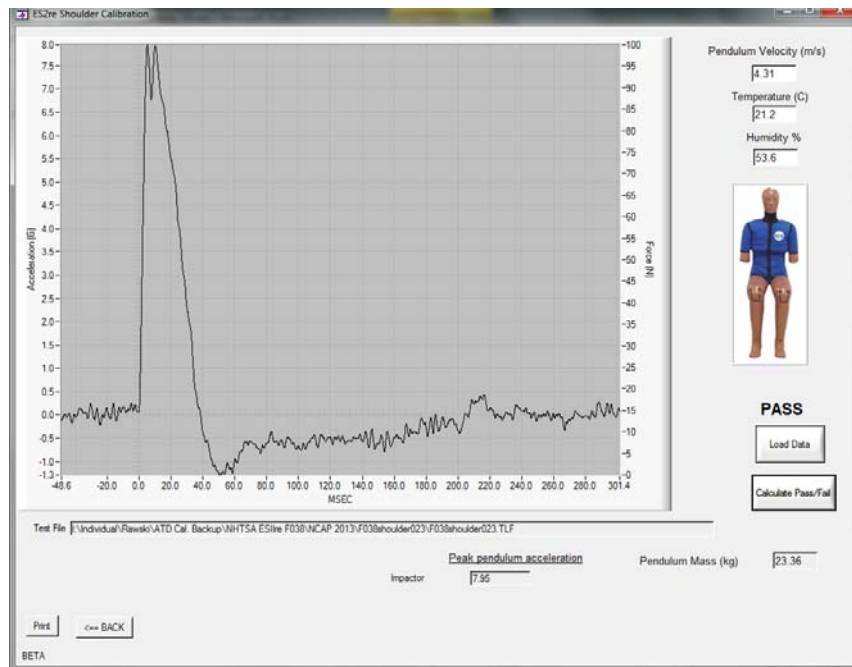
TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-5-12		12-4-12	
Sequential Test Number		-	2		3	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	21.2	Pass	21.9	Pass
	Min		21.2	Pass	20.8	Pass
Humidity (%) – During Soak	Max	10.0-70.0	53.6	Pass	42.3	Pass
	Min		53.6	Pass	41.4	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	21.8	Pass
Humidity – During Test (%)		10-70	53.6	Pass	41.1	Pass
Pendulum Velocity (m/s)		4.2-4.4	4.31	Pass	4.31	Pass
Peak Impactor Acceleration (G)		7.5-10.5	7.95	Pass	8.00	Pass

Test Vehicle: 2013 Ram 1500 4-Door Crew Cab Pickup
Test Program: SINCAP

NHTSA Number: MD 0314
Test Date: November 28, 2012

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

PRE-TEST



POST-TEST

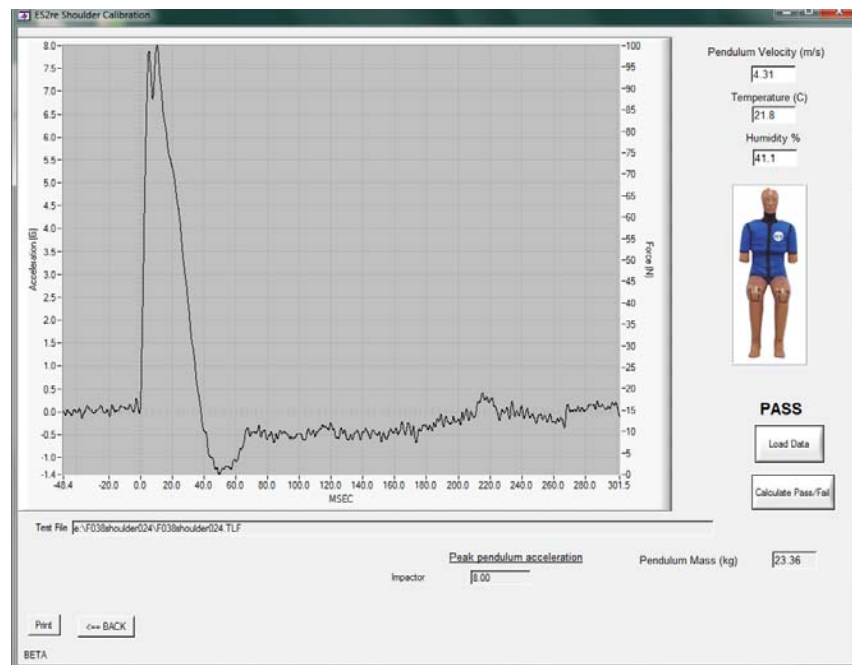


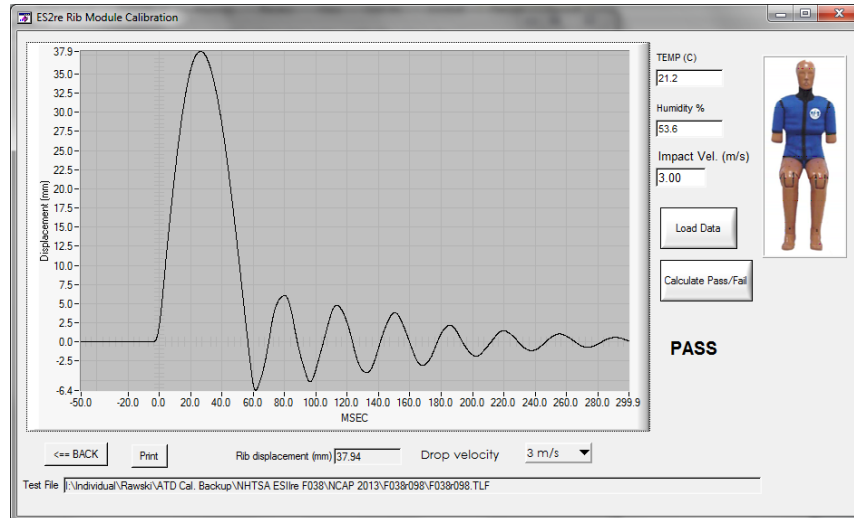
TABLE 5
THORAX – UPPER RIB DROP TEST (ES-Ilre)

ES-Ilre Serial Number F038 Test Sequences 2 & 3

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-2-12		12-1-12	
Sequential Test Number		-	2		3	
			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	21.2	Pass	20.9	Pass
	Min		21.2	Pass	20.8	Pass
Humidity (%) – During Soak	Max	10.0-70.0	53.6	Pass	34.3	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	20.9	Pass
Humidity – During Test (%)		10-70	53.6	Pass	34.3	Pass
1 st Test - Drop Height 459 ± 5 mm		36-40	37.9	Pass	37.7	Pass
2 nd Test - Drop Height 815 ± 5 mm		46-51	49.0	Pass	49.2	Pass

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

PRE-TEST



POST-TEST

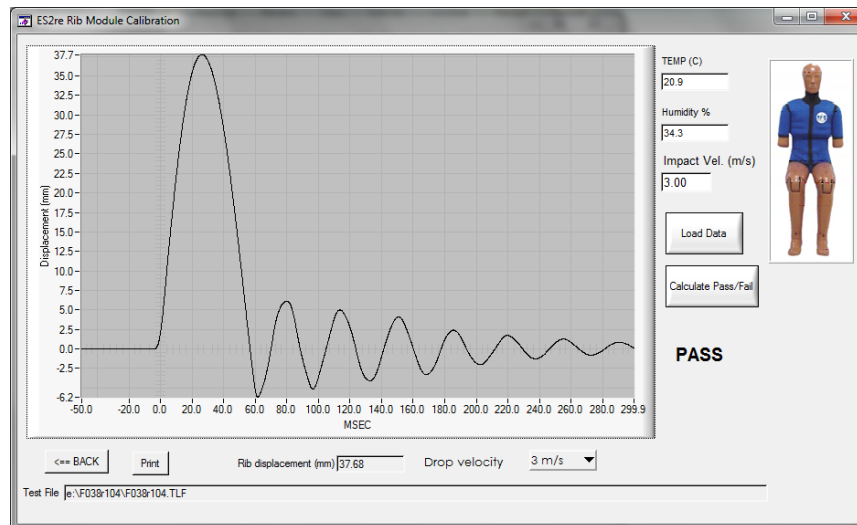
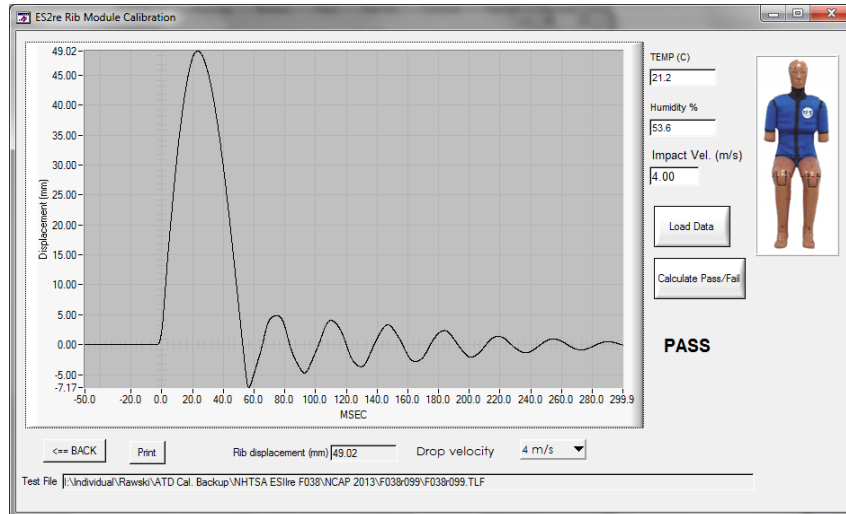


TABLE 5
THORAX – UPPER RIB DROP TEST (ES-IIre) (CONTINUED)
4.00 m/s

PRE-TEST



POST-TEST

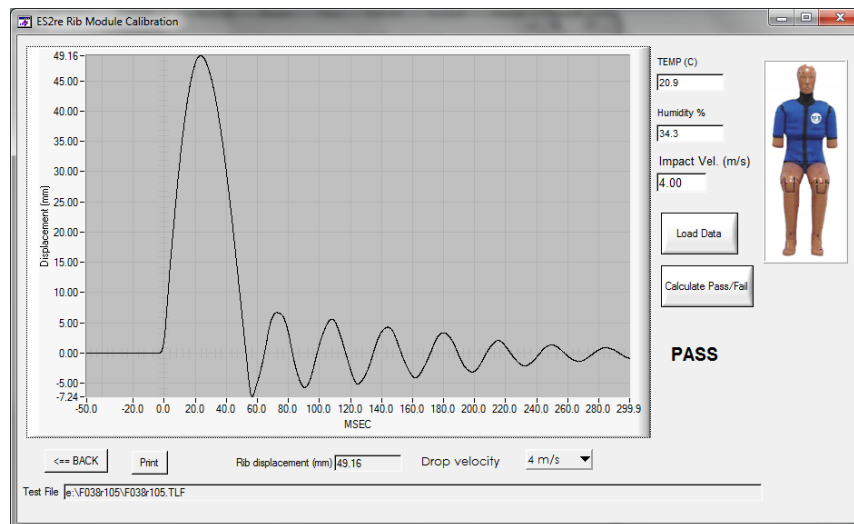


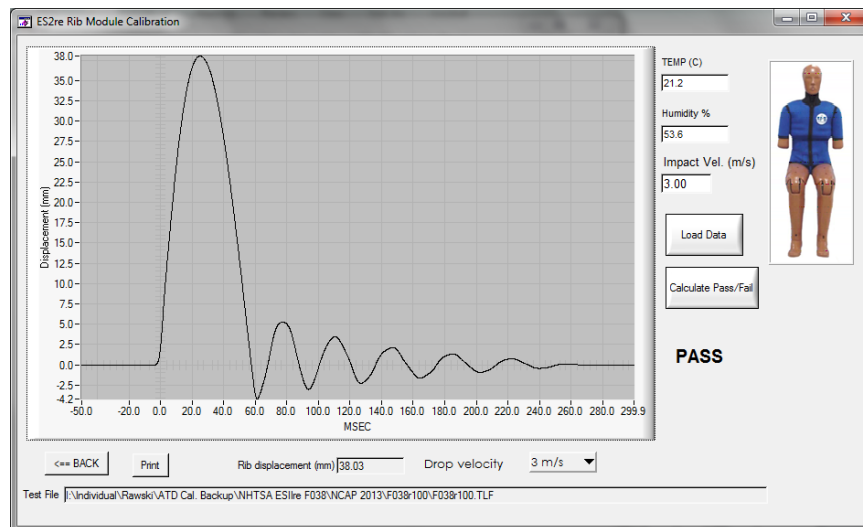
TABLE 6
THORAX – MIDDLE RIB DROP TEST (ES-Ilre)

ES-Ilre Serial Number F038 Test Sequences 2 & 3

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-2-12		12-1-12	
Sequential Test Number		-	2		3	
			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	21.2	Pass	20.9	Pass
	Min		21.2	Pass	20.8	Pass
Humidity (%) – During Soak	Max	10.0-70.0	53.6	Pass	34.3	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	20.9	Pass
Humidity – During Test (%)		10-70	53.6	Pass	34.3	Pass
1 st Test - Drop Height 459 ± 5 mm		36-40	38.0	Pass	38.1	Pass
2 nd Test - Drop Height 815 ± 5 mm		46-51	49.8	Pass	49.9	Pass

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

PRE-TEST



POST-TEST

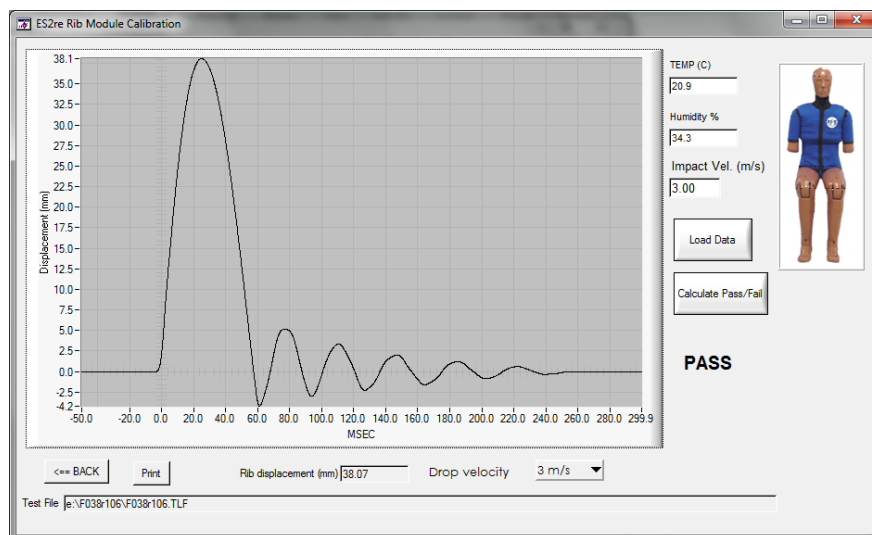
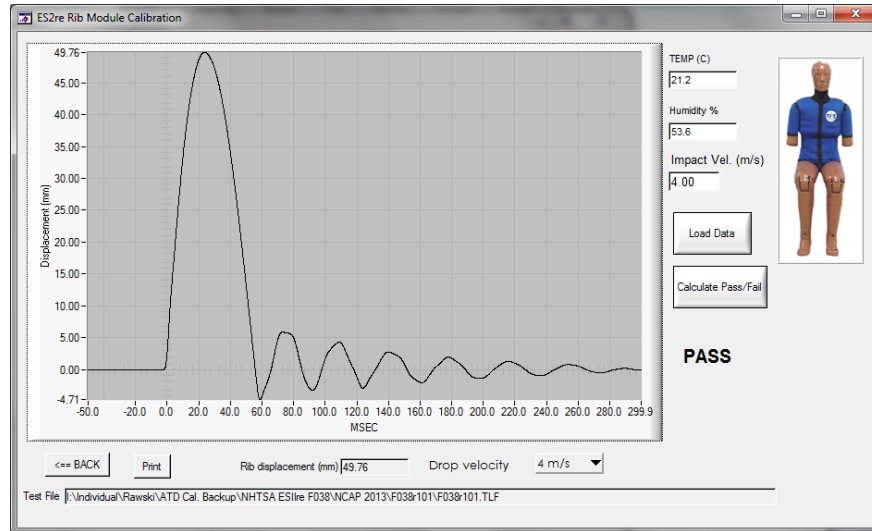


TABLE 6
THORAX – MIDDLE RIB DROP TEST (ES-IIre) (CONTINUED)
4.00 m/s

PRE-TEST



POST-TEST

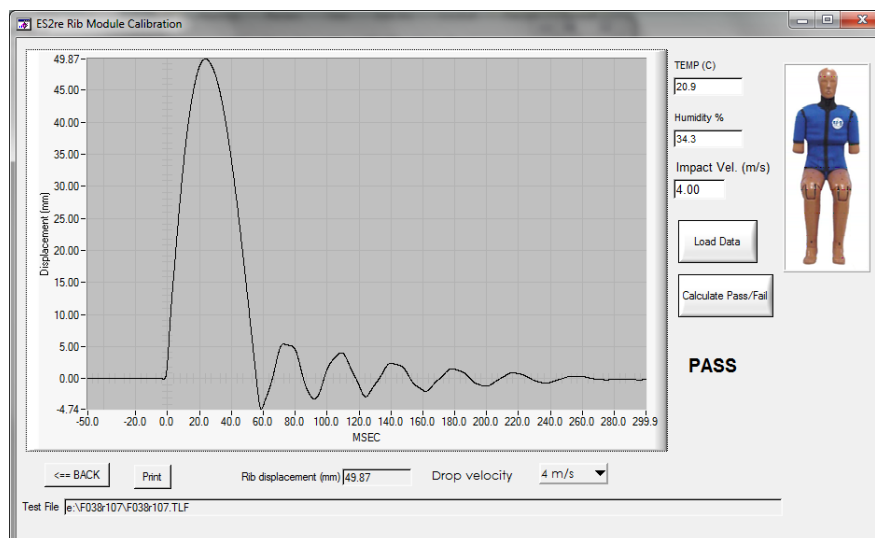


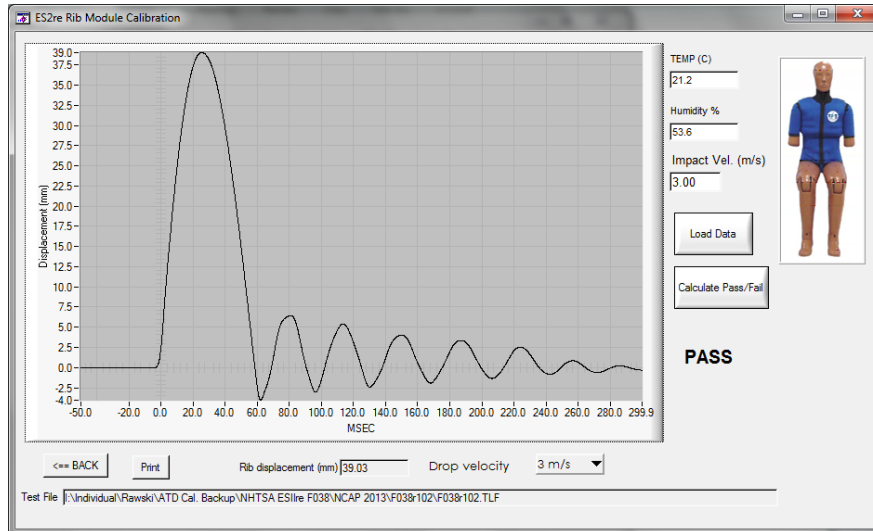
TABLE 7
THORAX – LOWER RIB DROP TEST (ES-IIre)

ES-IIre Serial Number F038 Test Sequences 2 & 3

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-2-12		12-1-12	
Sequential Test Number		-	2		3	
			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	21.2	Pass	20.9	Pass
	Min		21.2	Pass	20.8	Pass
Humidity (%) – During Soak	Max	10.0-70.0	53.6	Pass	34.3	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	20.9	Pass
Humidity – During Test (%)		10-70	53.6	Pass	34.3	Pass
1 st Test - Drop Height 459 ± 5 mm		36-40	39.0	Pass	39.2	Pass
2 nd Test - Drop Height 815 ± 5 mm		46-51	49.6	Pass	49.9	Pass

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

PRE-TEST



POST-TEST

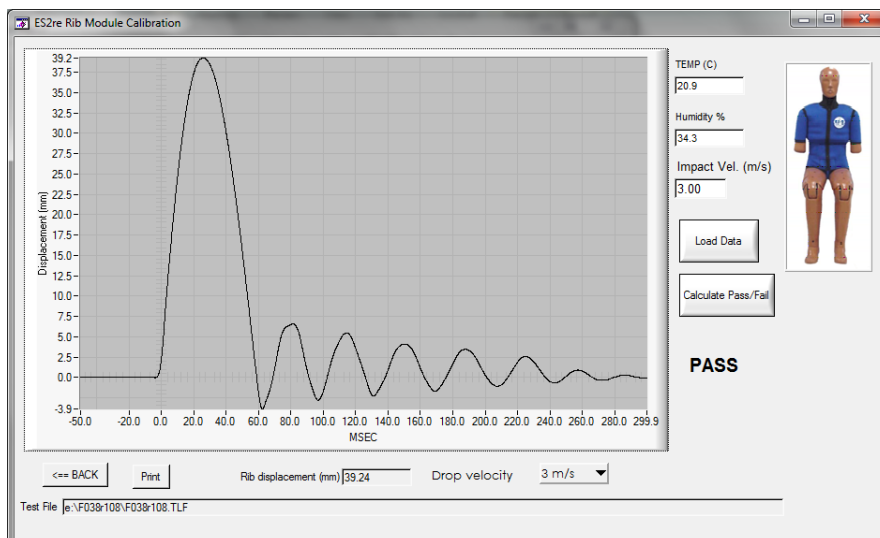
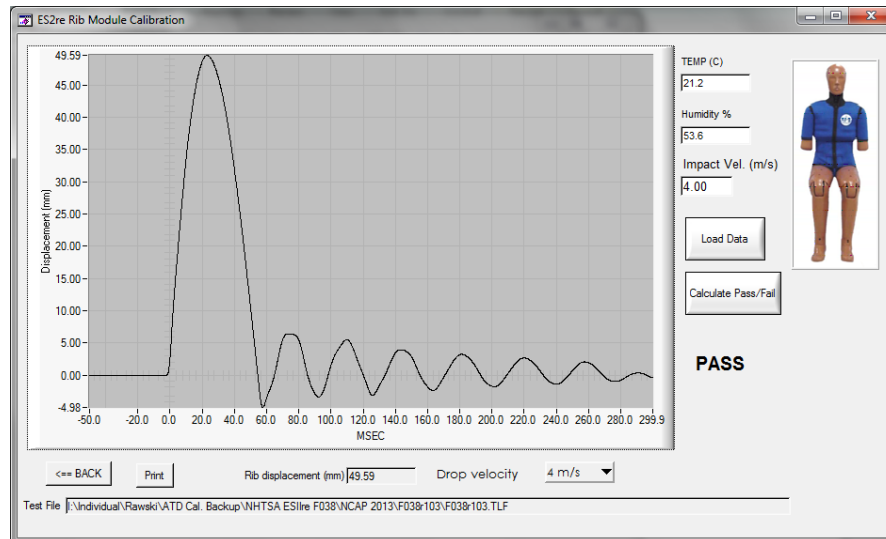


TABLE 7
THORAX – LOWER RIB DROP TEST (ES-Ilre) (CONTINUED)
4.00 m/s

PRE-TEST



POST-TEST

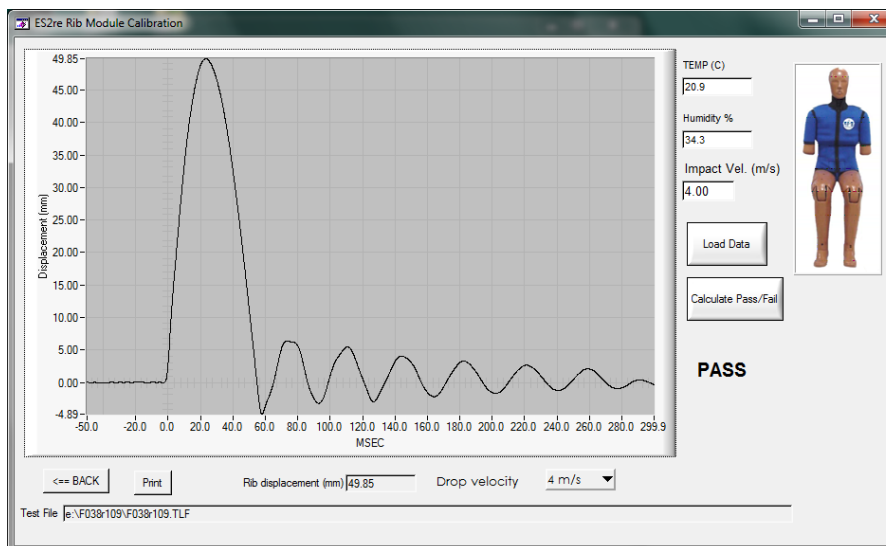


TABLE 8
THORAX – FULL BODY IMPACT TEST (ES-Ilre)

ES-Ilre Serial Number F038 Test Sequences 2 & 3

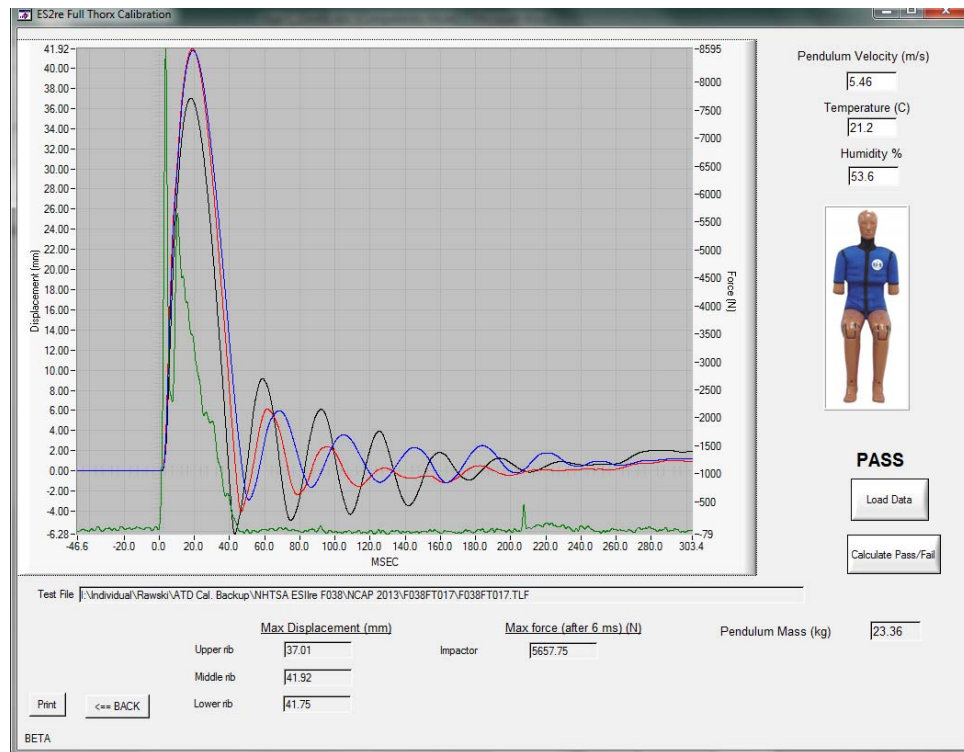
TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-5-12		12-4-12	
Sequential Test Number		-	2		3	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	21.2	Pass	22.0	Pass
	Min		21.2	Pass	21.4	Pass
Humidity (%) – During Soak	Max	10.0-70.0	53.6	Pass	41.4	Pass
	Min		53.6	Pass	35.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	22.0	Pass
Humidity – During Test (%)		10-70	53.6	Pass	38.3	Pass
Peak Impactor Velocity (m/s)		5.4-5.6	5.46	Pass	5.46	Pass
Peak Upper Rib Deflection (mm)		34-41	37.0	Pass	37.7	Pass
Peak Middle Rib Deflection (mm)		37-45	41.9	Pass	42.0	Pass
Peak Lower Rib Deflection (mm)		37-44	41.8	Pass	41.0	Pass
Peak Impactor Force (>6ms) (kN)		5.1-6.2	5.7	Pass	5.4	Pass

Test Vehicle: 2013 Ram 1500 4-Door Crew Cab Pickup
Test Program: SINCAP

NHTSA Number: MD 0314
Test Date: November 28, 2012

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

PRE-TEST



POST-TEST

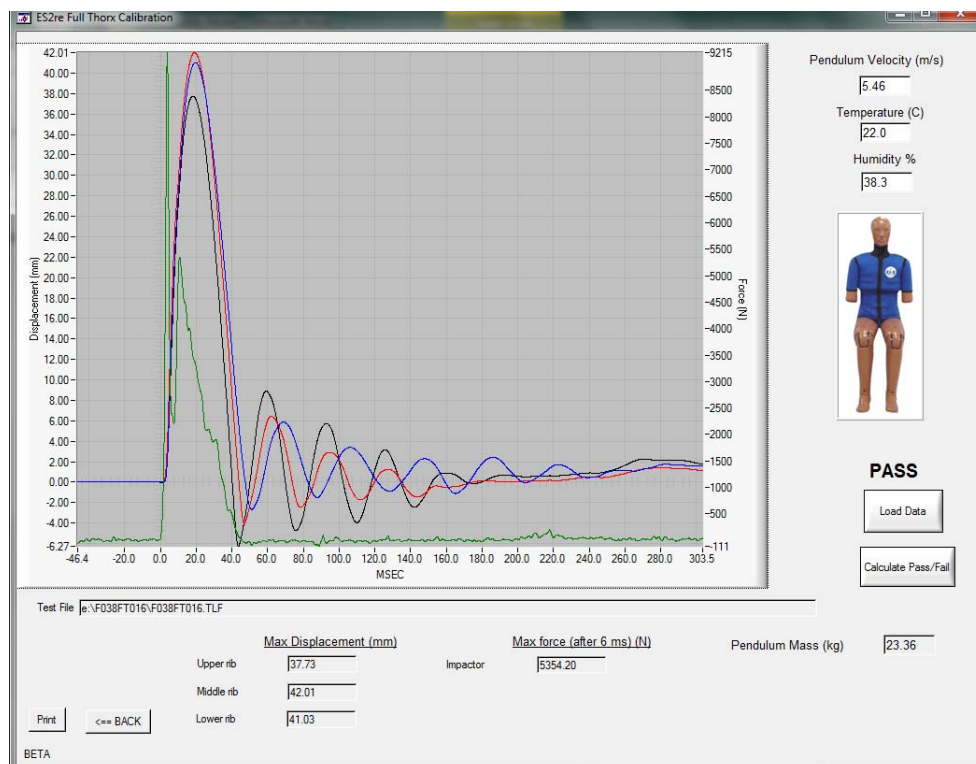


TABLE 9
ABDOMEN IMPACT TEST (ES-IIre)

ES-IIre Serial Number F038

Test Sequences 2 & 3

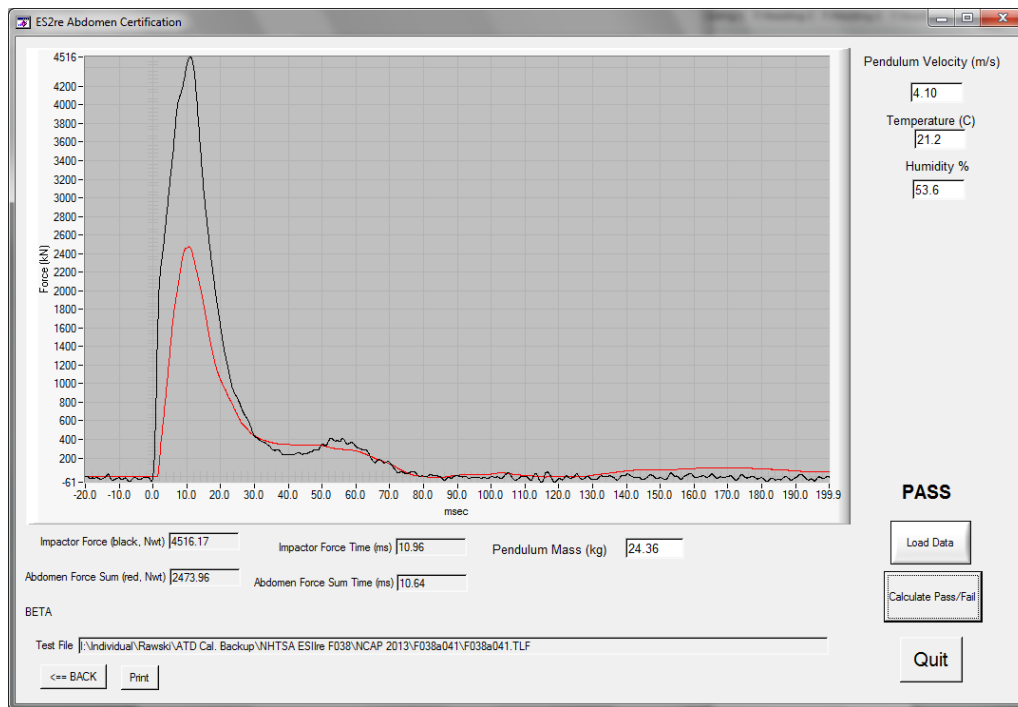
TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-5-12		12-4-12	
Sequential Test Number		-	2		3	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	21.2	Pass	22.0	Pass
	Min		21.2	Pass	21.4	Pass
Humidity (%) – During Soak	Max	10.0-70.0	53.6	Pass	41.4	Pass
	Min		53.6	Pass	35.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	21.9	Pass
Humidity – During Test (%)		10-70	53.6	Pass	41.3	Pass
Peak Impactor Velocity (m/s)		3.9-4.1	4.1	Pass	4.1	Pass
Sum of Abdominal Forces (kN)		2.2-2.7	2.5	Pass	2.5	Pass
Time of Abdominal Forces (ms)		10-12.3	10.6	Pass	10.9	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	11.5	Pass

Test Vehicle: 2013 Ram 1500 4-Door Crew Cab Pickup
Test Program: SINCAP

NHTSA Number: MD 0314
Test Date: November 28, 2012

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

PRE-TEST



POST-TEST

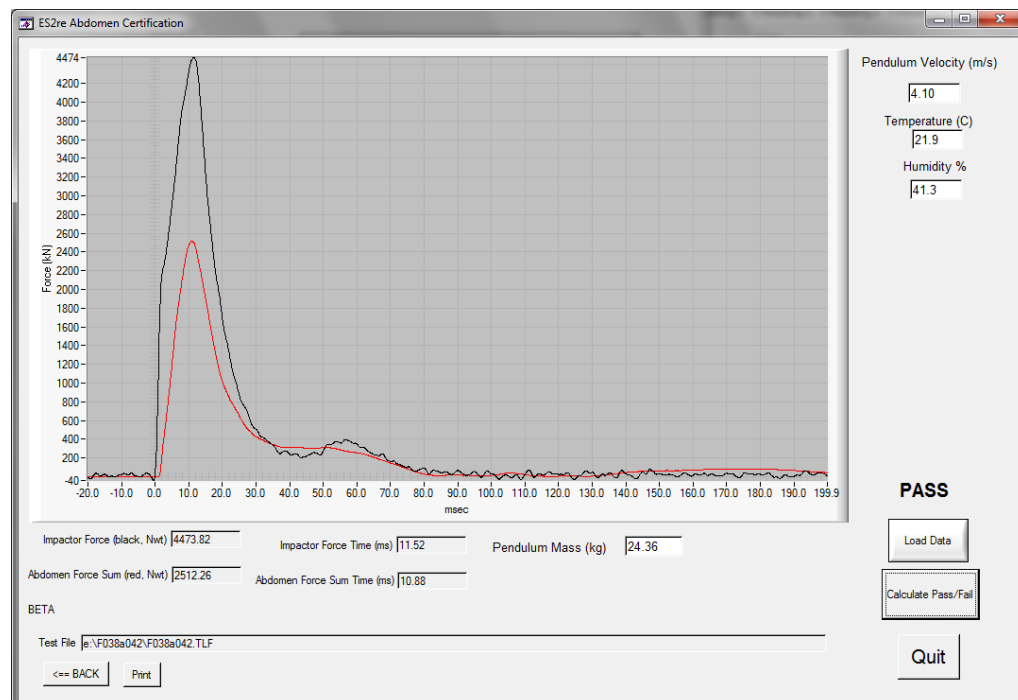


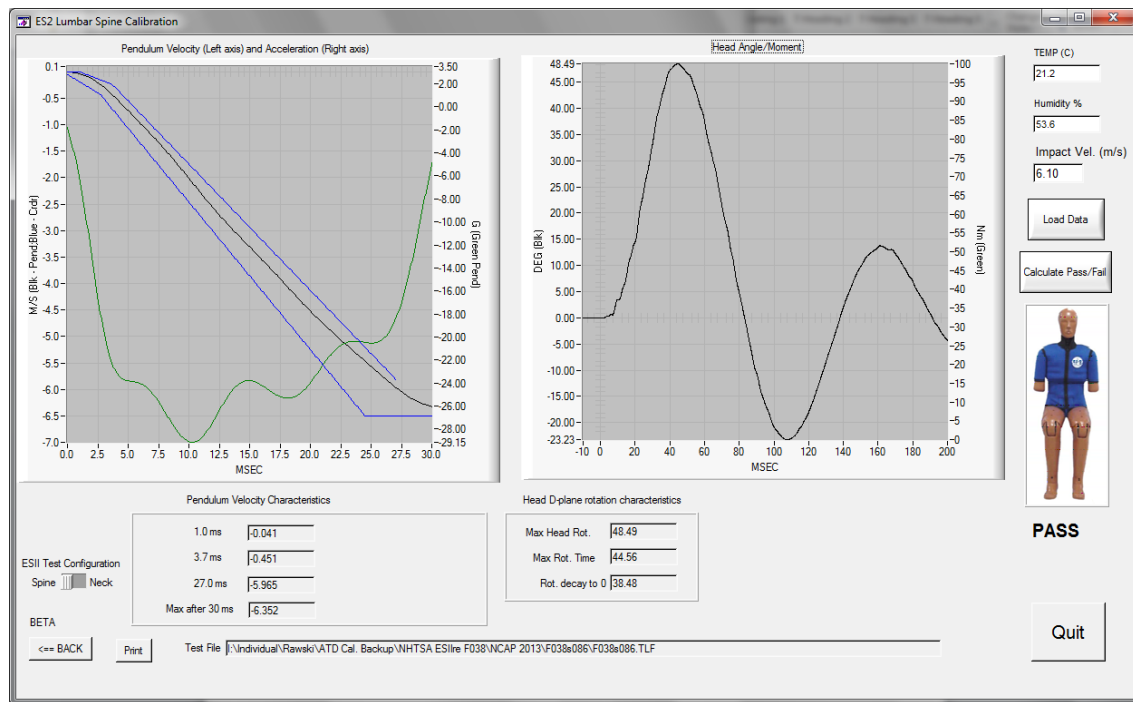
TABLE 10
LUMBAR SPINE FLEXION TEST (ES-Ilre)

ES-Ilre Serial Number F038 Test Sequences 2 & 3

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-3-12		12-1-12	
Sequential Test Number		-	2		3	
			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	20.9	Pass
	Min		21.2	Pass	20.8	Pass
Humidity (%) – During Soak	Max	10.0-70.0	53.6	Pass	34.3	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	20.9	Pass
Humidity – During Test (%)		10-70	53.6	Pass	34.3	Pass
Pendulum Velocity (m/s)		5.95-6.15	6.10	Pass	6.10	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)	-5.9	Pass	-5.9	Pass
	Max after 30 ms	-6.50	-6.4	Pass	-6.3	Pass
Maximum Headform Flexion Angle (deg)		45-55	48.5	Pass	50.5	Pass
Time at Maximum Flexion Angel (ms)		39-53	44.6	Pass	44.4	Pass
Time of Decay to Zero Angle from Peak (ms)		37-57	38.5	Pass	39.8	Pass

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

PRE-TEST



POST-TEST

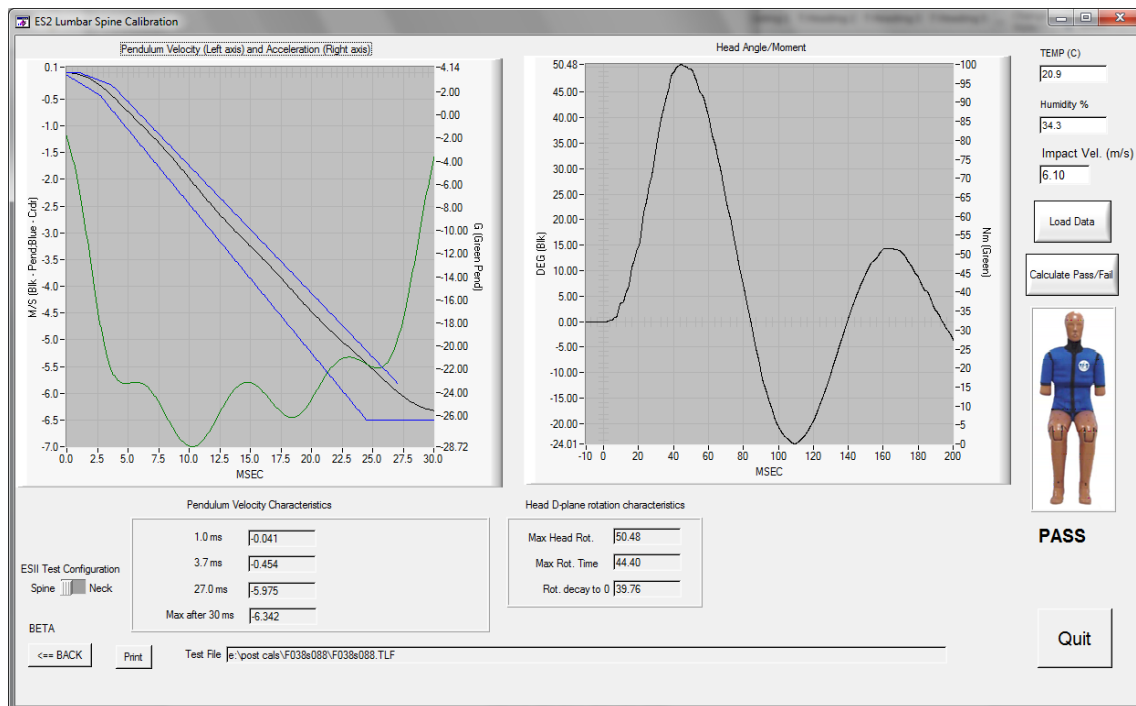


TABLE 11
PELVIS IMPACT TEST (ES-IIre)

ES-IIre Serial Number F038

Test Sequences 2 & 3

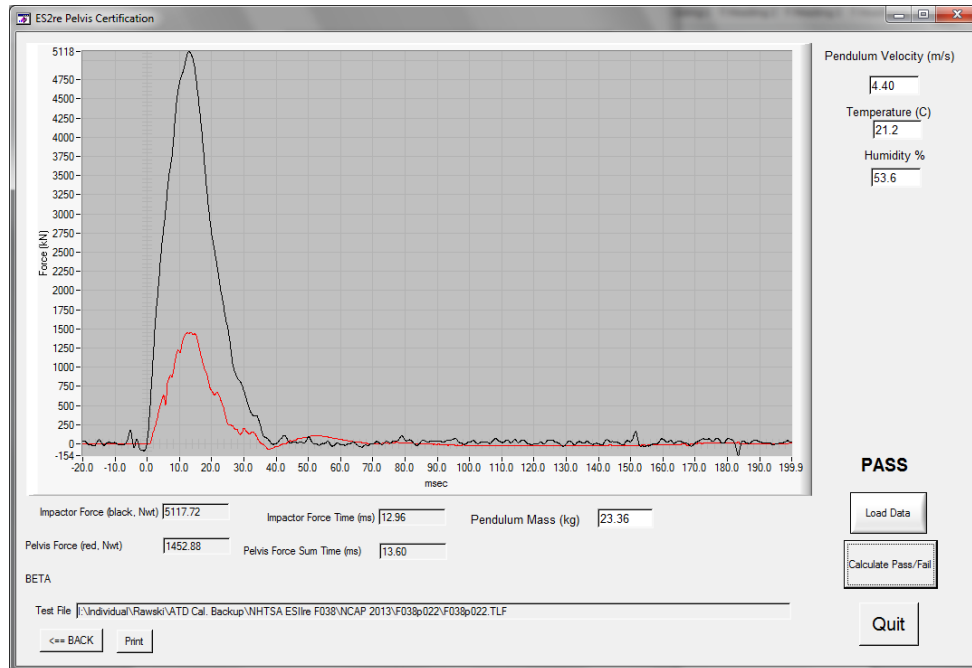
TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-5-12		12-4-12	
Sequential Test Number		-	2		3	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature (°C) – During Soak	Max	20.6-22.2	21.2	Pass	22.0	Pass
	Min		21.2	Pass	21.4	Pass
Humidity (%) – During Soak	Max	10.0-70.0	53.6	Pass	41.4	Pass
	Min		53.6	Pass	35.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	22.0	Pass
Humidity – During Test (%)		10-70	53.6	Pass	41.4	Pass
Pendulum Velocity (m/s)		4.2-4.4	4.4	Pass	4.4	Pass
Peak Impactor Force (kN)		4.7 – 5.4	5.1	Pass	5.0	Pass
Time at Peak Force (ms)		11.8-16.1	12.9	Pass	13.7	Pass
Peak Pubic Symphysis Force (kN)		1.23-1.59	1.5	Pass	1.5	Pass
Time at Peak Force (ms)		12.2-17.0	13.6	Pass	15.3	Pass

Test Vehicle: 2013 Ram 1500 4-Door Crew Cab Pickup
Test Program: SINCAP

NHTSA Number: MD 0314
Test Date: November 28, 2012

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

PRE-TEST



POST-TEST

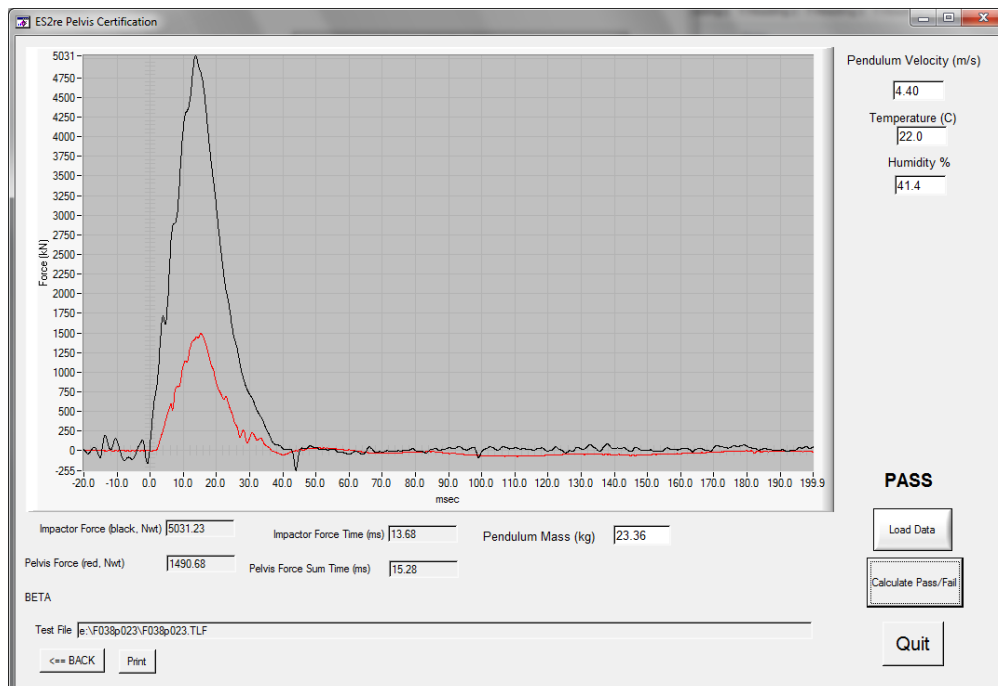


TABLE 1
EXTERNAL MEASUREMENTS (SID-IIs)

SID-IIs Serial Number	298	Test Sequences		2 & 3	
TEST PARAMETER	SPEC.	PRE		POST	
Date	-	11-5-12		12-4-12	
Sequential Test Number	-	2		3	
		Result	Pass/Fail	Result	Pass/Fail
Temperature (°C)	20.6-22.2	21.2	Pass	22.0	Pass
Relative Humidity (%)	10-70	53.6	Pass	35.2	Pass
Sitting Height	772 – 788	776	Pass	776	Pass
Shoulder Pivot Height	437 – 453	446	Pass	444	Pass
H-Point Height	79 – 89	83	Pass	85	Pass
H-Point from Seat Back	141 – 151	147	Pass	148	Pass
Shoulder Pivot from Backline	97 – 107	105	Pass	103	Pass
Thigh Clearance	119 – 135	123	Pass	125	Pass
Head Breadth	140 – 148	144	Pass	144	Pass
Head Back from Backline	40 – 46	42	Pass	42	Pass
Head Depth	178 – 188	181	Pass	183	Pass
Head Circumference	541 – 551	543	Pass	543	Pass
Buttock to Knee Length	514 – 540	525	Pass	523	Pass
Popliteal Height	343 – 369	351	Pass	351	Pass
Knee Pivot to Floor Height	392 – 409	397	Pass	405	Pass
Buttock Popliteal Length	416 – 442	425	Pass	427	Pass
Chest Depth w/o Jacket	195 – 211	203	Pass	208	Pass
Foot Length	216 – 232	220	Pass	222	Pass
Hip Breadth	313 – 323	317	Pass	320	Pass
Arm Length	249 – 259	255	Pass	256	Pass
Knee Joint to Seat Back	477 – 493	484	Pass	485	Pass
Shoulder Width	341 – 357	343	Pass	352	Pass
Foot Width	78 – 94	84	Pass	84	Pass
Chest Circumference w/Jacket	851 – 881	876	Pass	876	Pass
Waist Circumference	761 – 791	786	Pass	784	Pass

TABLE 2
HEAD DROP TEST (SID-IIs)

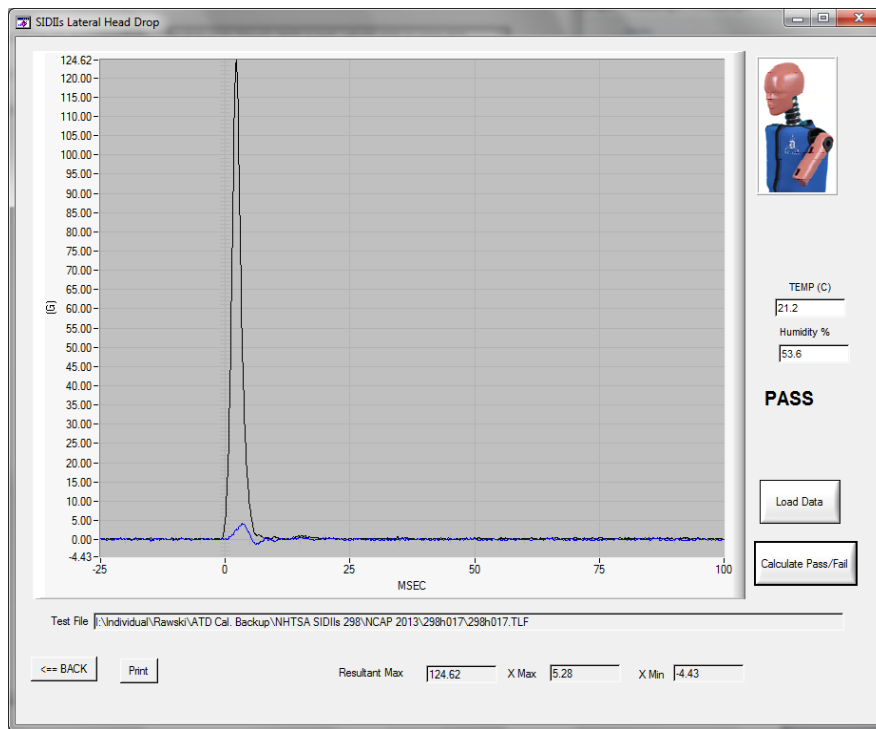
SIDIs Serial Number 298

Test Sequences 2 & 3

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-2-12		12-1-12	
Sequential Test Number		-	2		3	
			Result	Pass/Fail	Result	Pass/Fail
Head Soak Time (min)		≥ 240	240	Pass	240	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	21.2	Pass	20.9	Pass
	Min		21.2	Pass	20.8	Pass
Humidity(%) – During Soak	Max	10.0-70.0	53.6	Pass	34.3	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	20.9	Pass
Humidity – During Test (%)		10-70	53.6	Pass	34.3	Pass
Peak Head Resultant Acceleration (G)		115-137	124.6	Pass	120.5	Pass
Peak Head X Acceleration (G)		<15	5.3	Pass	6.7	Pass
Unimodal (Oscillation) (Yes/No)		<15%	Yes	Pass	Yes	Pass

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

PRE-TEST



POST-TEST

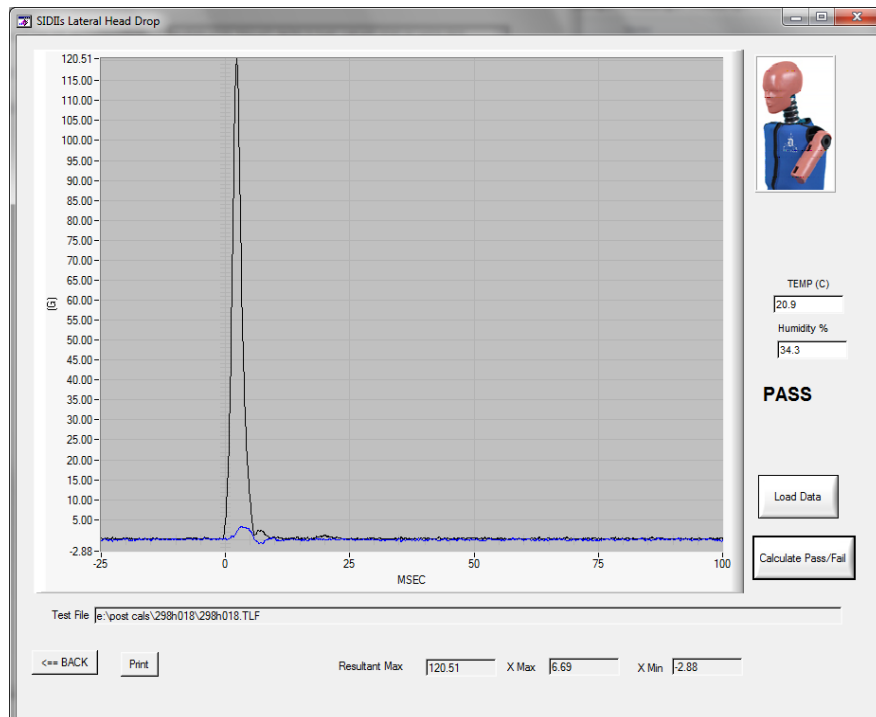


TABLE 3
LATERAL NECK PENDULUM TEST (SID-IIIs)

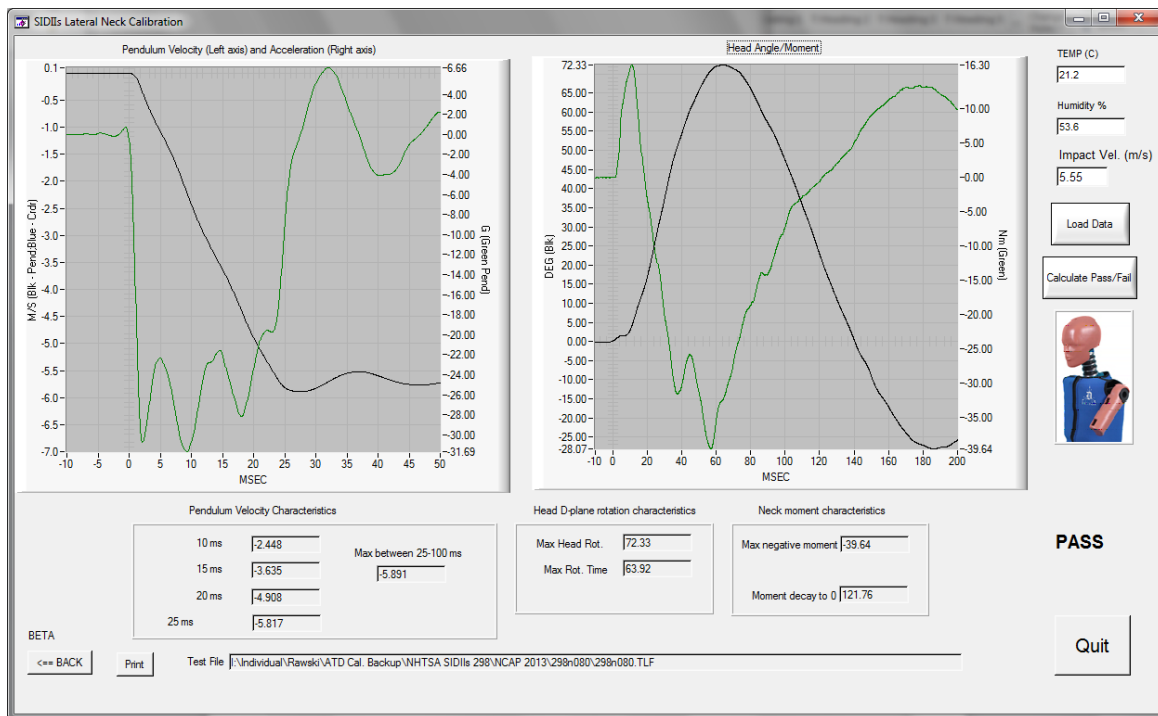
SIDIIIs Serial Number 298

Test Sequences 2 & 3

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-3-12		12-1-12	
Sequential Test Number		-	2		3	
			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	21.2	Pass	20.9	Pass
	Min		21.2	Pass	20.8	Pass
Humidity(%) – During Soak	Max	10.0-70.0	53.6	Pass	34.3	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	20.9	Pass
Humidity – During Test (%)		10-70	53.6	Pass	34.3	Pass
Pendulum Velocity (m/s)		5.51-5.63	5.55	Pass	5.55	Pass
Pendulum Deceleration (G)	10 ms	2.20-2.80	2.45	Pass	2.42	Pass
	15 ms	3.30-4.10	3.64	Pass	3.52	Pass
	20 ms	4.40-5.40	4.91	Pass	4.76	Pass
	25 ms	5.40-6.10	5.82	Pass	5.73	Pass
	25-100 ms	5.50-6.20	5.89	Pass	5.88	Pass
Maximum D-Plane rotation (deg)		71-81	72.3	Pass	73.8	Pass
Time of Maximum D-Plane Rotation (ms)		50-70	63.9	Pass	63.6	Pass
Peak Occ. Condyle Moment (Nm)		36-44	39.6	Pass	39.9	Pass
Time of Moment Decay (ms)		102-126	121.8	Pass	123.6	Pass

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

PRE-TEST



POST-TEST

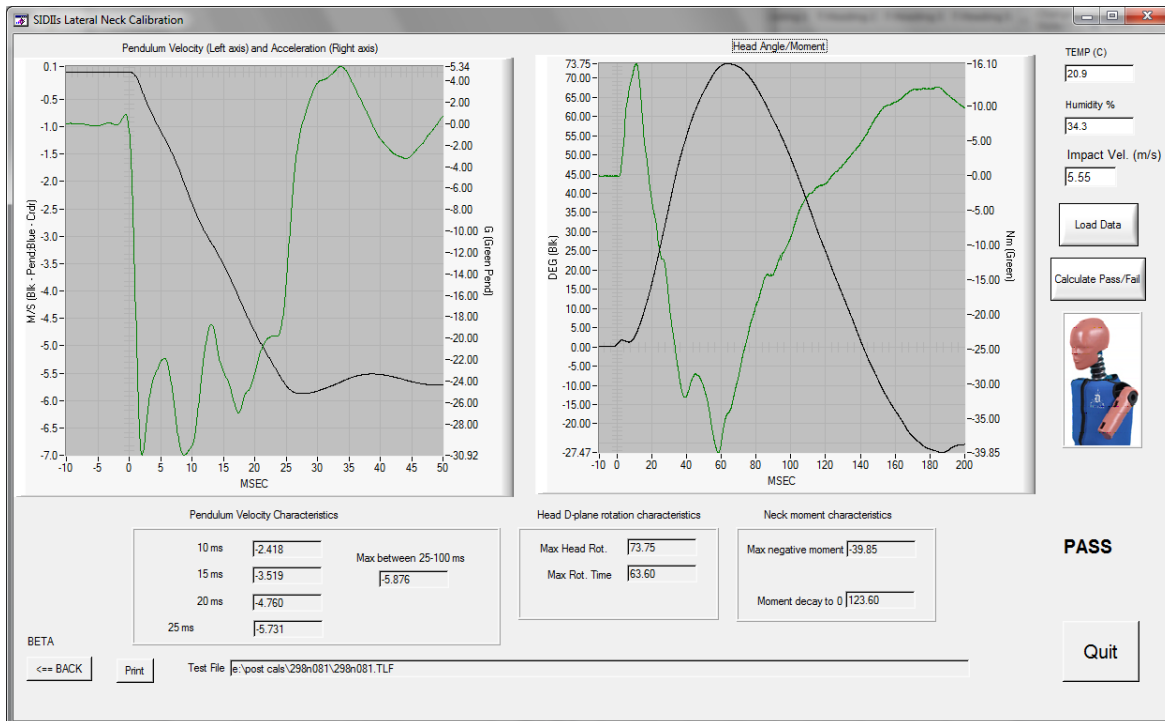


TABLE 4
SHOULDER IMPACT TEST (SID-IIs)

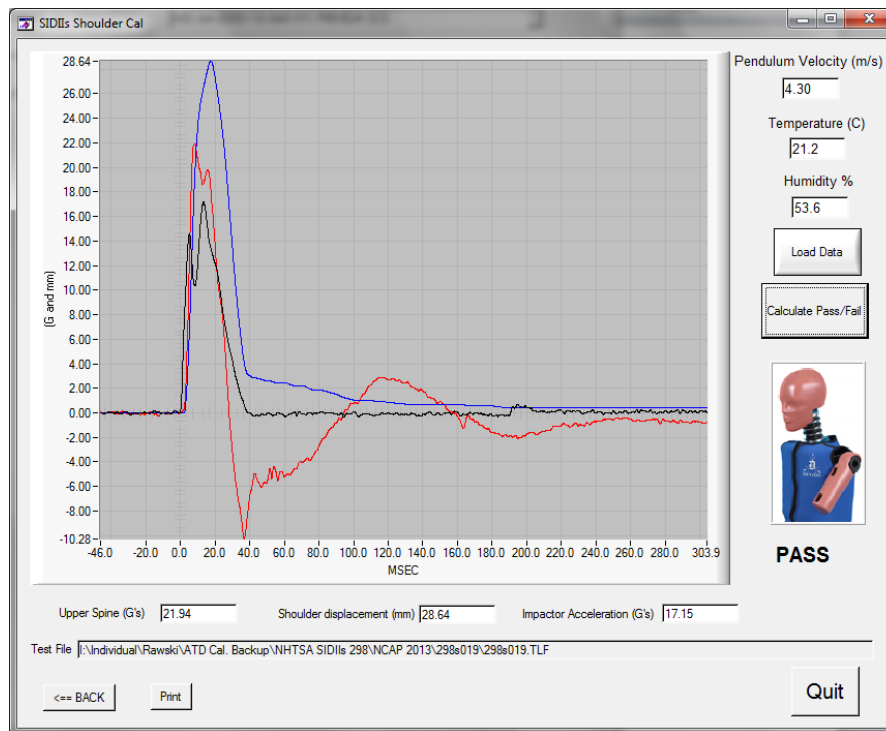
SIDIs Serial Number 298

Test Sequences 2 & 3

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-5-12		12-3-12	
Sequential Test Number		-	2		3	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 180	180	Pass	180	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	21.2	Pass	21.6	Pass
	Min		21.2	Pass	21.0	Pass
Humidity(%) – During Soak	Max	10.0-70.0	53.6	Pass	39.5	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	21.6	Pass
Relative Humidity – During Test (%)		10-70	53.6	Pass	39.5	Pass
Impactor Velocity (m/s)		4.2-4.4	4.30	Pass	4.30	Pass
Peak Shoulder Deflection (mm)		28-37	28.6	Pass	30.3	Pass
Peak Lateral Spine (T1) Acceleration Y (G)		17-22	21.9	Pass	20.8	Pass
Peak Impactor Acceleration (G)		13-18	17.2	Pass	16.9	Pass

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

PRE-TEST



POST-TEST

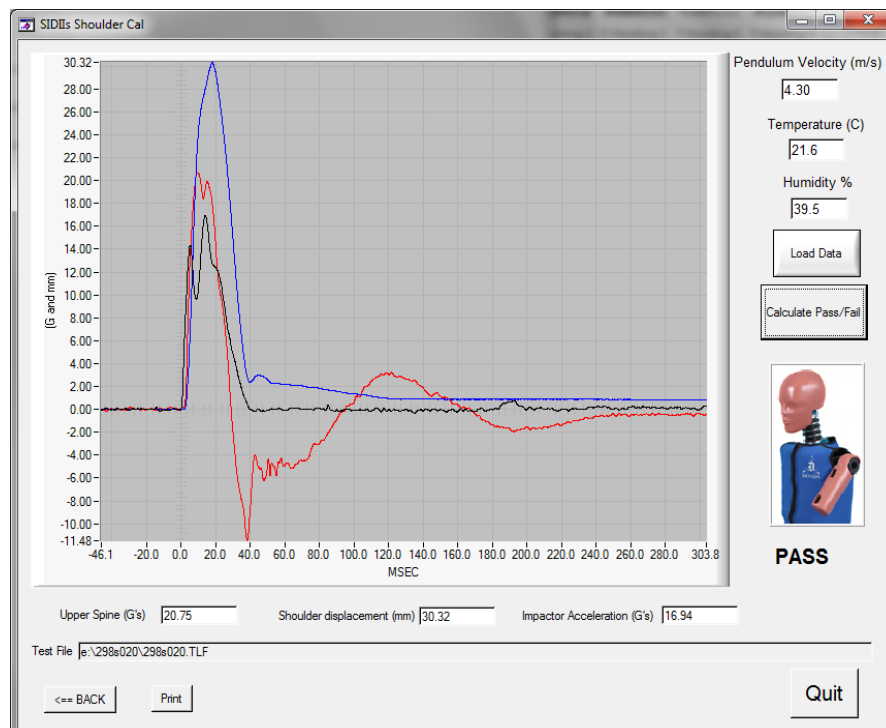


TABLE 5
THORAX (WITH ARM) IMPACT TEST (SID-IIs)

SIDIIs Serial Number 298

Test Sequences 2 & 3

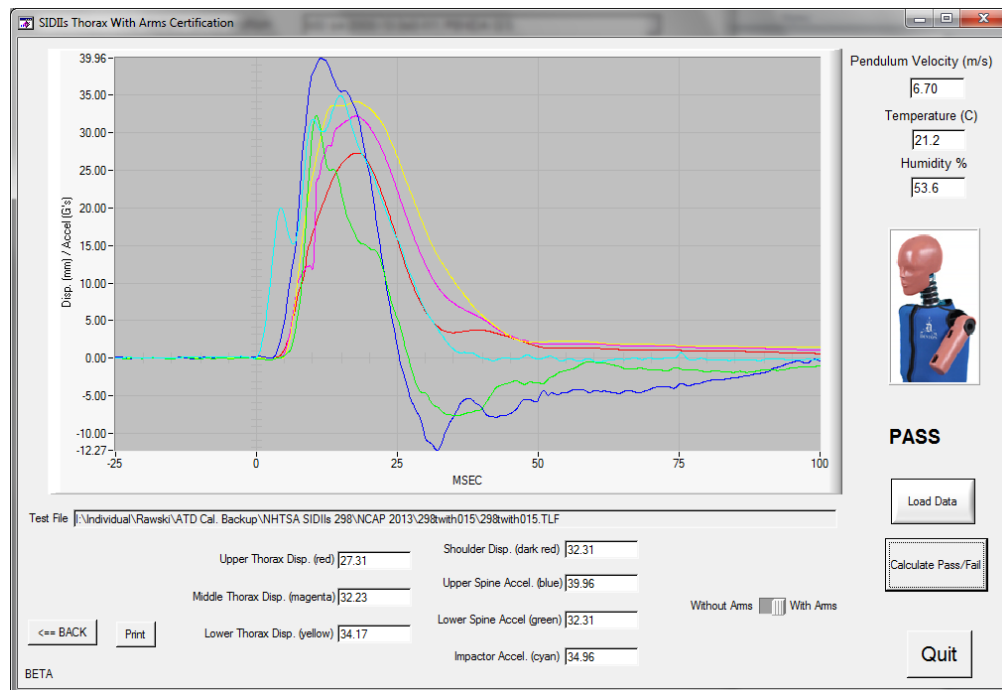
TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-5-12		12-3-12	
Sequential Test Number		-	2		3	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 180	180	Pass	180	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	21.2	Pass	21.6	Pass
	Min		21.2	Pass	21.0	Pass
Humidity(%) – During Soak	Max	10.0-70.0	53.6	Pass	39.8	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	21.6	Pass
Relative Humidity – During Test (%)		10-70	53.6	Pass	39.8	Pass
Impactor Velocity (m/s)		6.6-6.8	6.70	Pass	6.70	Pass
Peak Shoulder Deflection (mm)		31-40	32.3	Pass	33.9	Pass
Peak Upper Rib Deflection (mm)		25-32	27.3	Pass	26.7	Pass
Peak Middle Rib Deflection (mm)		30-36	32.2	Pass	31.7	Pass
Peak Lower Rib Deflection (mm)		32-38	34.2	Pass	33.7	Pass
Peak Upper Spine (T1) Acceleration Y (G)		34-43	39.9	Pass	40.4	Pass
Peak Lower Spine (T12) Acceleration Y (G)		29-37	32.3	Pass	33.9	Pass
Peak Impactor Acceleration (G)		30-36	34.9	Pass	34.4	Pass

Test Vehicle: 2013 Ram 1500 4-Door Crew Cab Pickup
Test Program: SINCAP

NHTSA Number: MD 0314
Test Date: November 28, 2012

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

PRE-TEST



POST-TEST

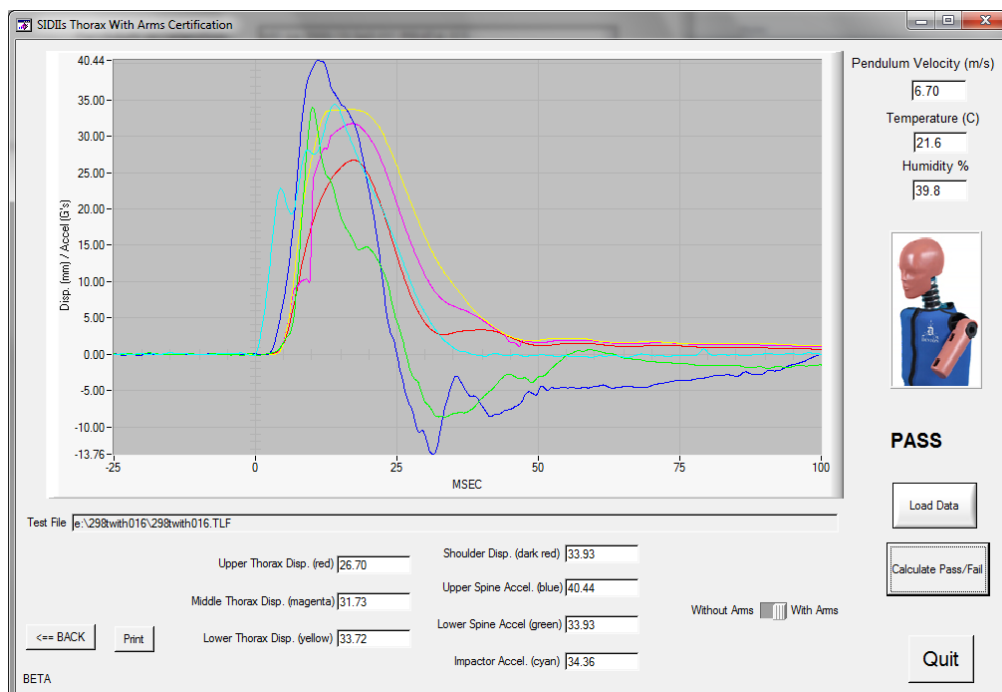


TABLE 6
THORAX (WITHOUT ARM) IMPACT TEST (SID-IIs)

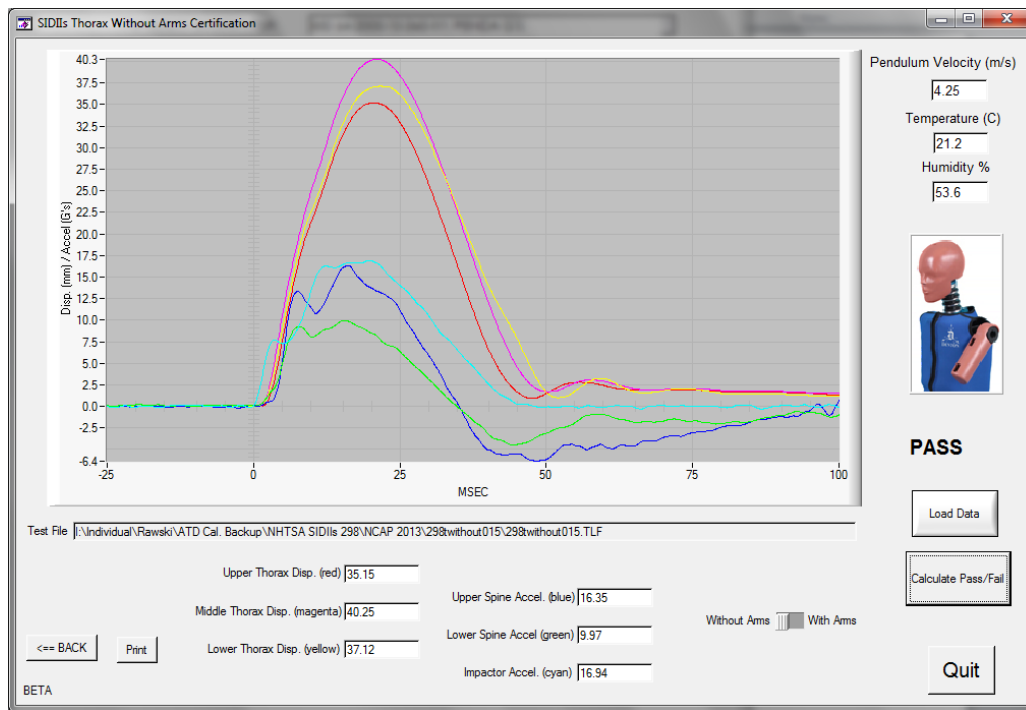
SIDIIs Serial Number 298

Test Sequences 2 & 3

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-5-12		12-3-12	
Sequential Test Number		-	2		3	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 180	180	Pass	180	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	21.2	Pass	21.7	Pass
	Min		21.2	Pass	21.0	Pass
Humidity(%) – During Soak	Max	10.0-70.0	53.6	Pass	40.3	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	21.7	Pass
Relative Humidity – During Test (%)		10-70	53.6	Pass	40.3	Pass
Impactor Velocity (m/s)		4.2-4.4	4.25	Pass	4.25	Pass
Peak Upper Rib Deflection (mm)		32-40	35.2	Pass	34.4	Pass
Peak Middle Rib Deflection (mm)		39-45	40.3	Pass	40.4	Pass
Peak Lower Rib Deflection (mm)		35-43	37.1	Pass	38.1	Pass
Peak Upper Spine (T1) Acceleration Y (G)		13-17	16.4	Pass	15.9	Pass
Peak Lower Spine (T12) Acceleration Y (G)		7-11	9.9	Pass	10.3	Pass
Peak Impactor Acceleration (G)		14-18	16.9	Pass	16.8	Pass

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

PRE-TEST



POST-TEST

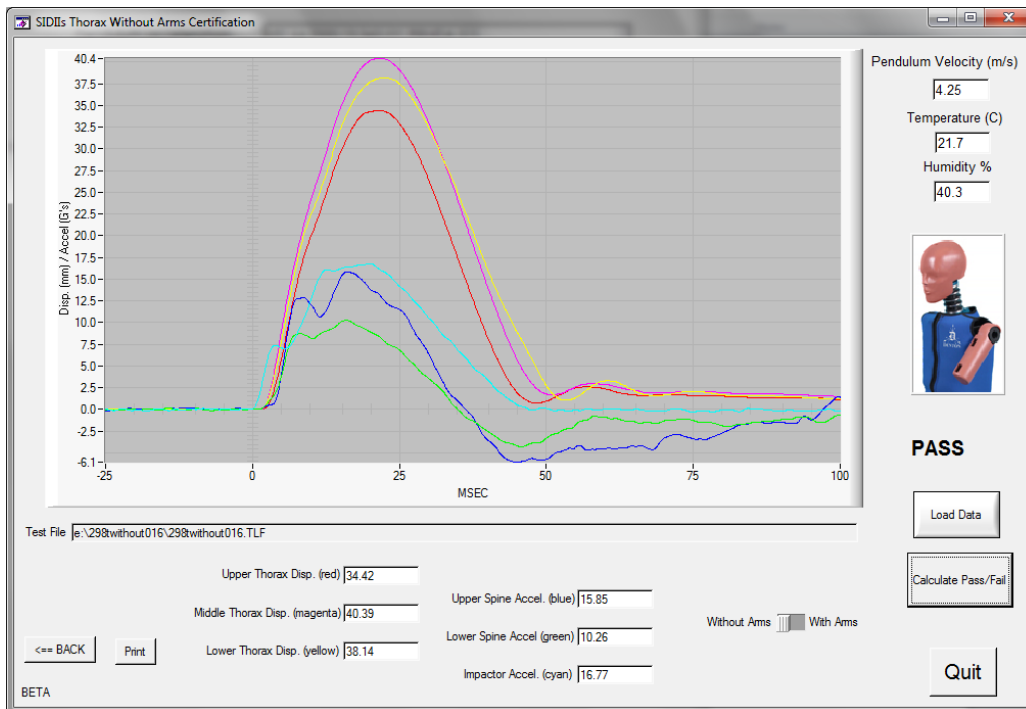


TABLE 7
ABDOMEN IMPACT TEST (SID-IIs)

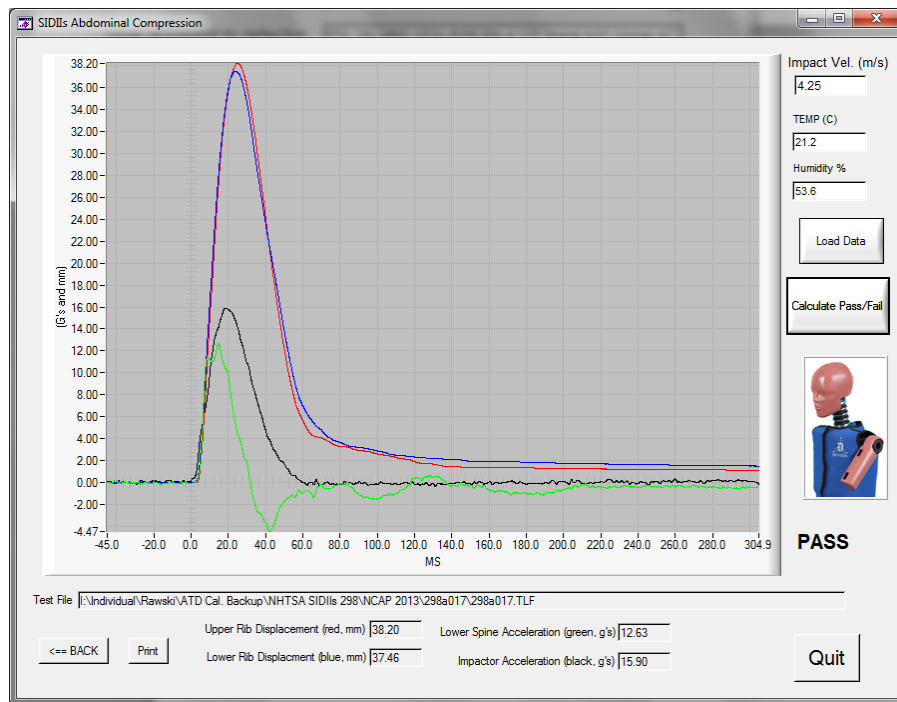
SIDIs Serial Number 298

Test Sequences 2 & 3

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-5-12		12-3-12	
Sequential Test Number		-	2		3	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 180	180	Pass	180	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	21.2	Pass	21.7	Pass
	Min		21.2	Pass	21.0	Pass
Humidity(%) – During Soak	Max	10.0-70.0	53.6	Pass	40.4	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	21.7	Pass
Relative Humidity – During Test (%)		10-70	53.6	Pass	40.3	Pass
Impactor Velocity (m/s)		4.2-4.4	4.25	Pass	4.25	Pass
Peak Upper Abdominal Rib Deflection (mm)		36-47	38.2	Pass	39.4	Pass
Peak Lower Abdominal Rib Deflection (mm)		33-44	37.5	Pass	38.6	Pass
Peak Lower Spine (T12) Acceleration Y (G)		9-14	12.6	Pass	12.1	Pass
Peak Impactor Acceleration (G)		12-16	15.9	Pass	15.7	Pass

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

PRE-TEST



POST-TEST

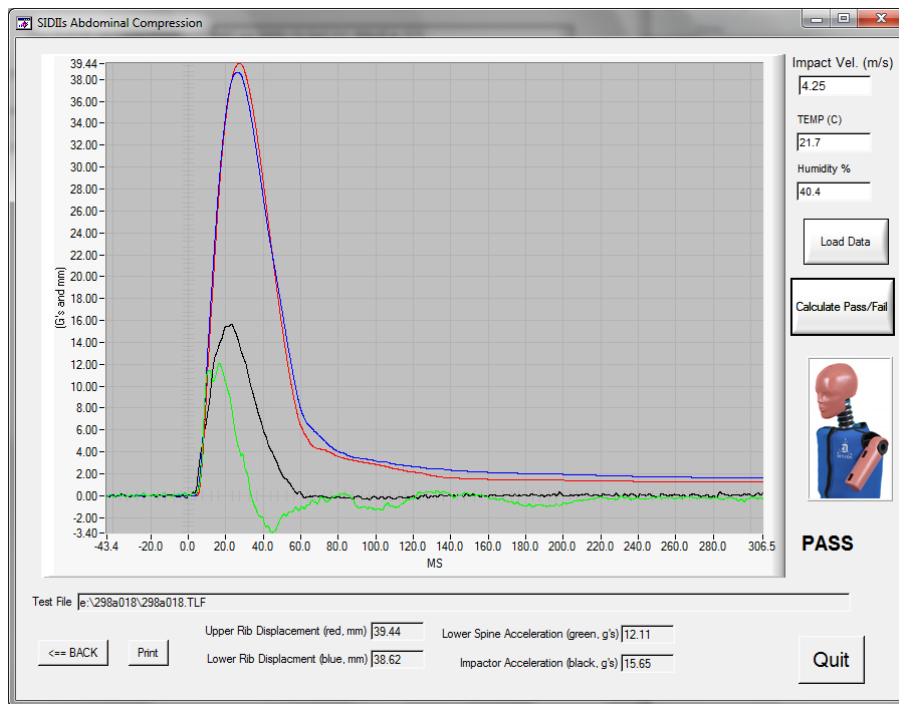
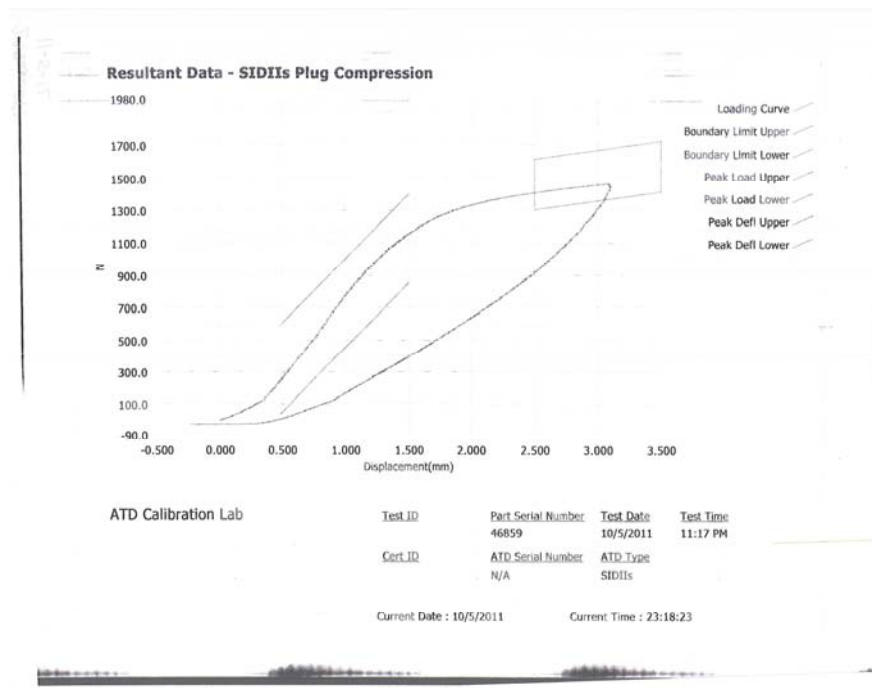


TABLE 8
PELVIS PLUG QUASI-STATIC TEST (SID-IIIs)

PRE-Test



POST-TEST

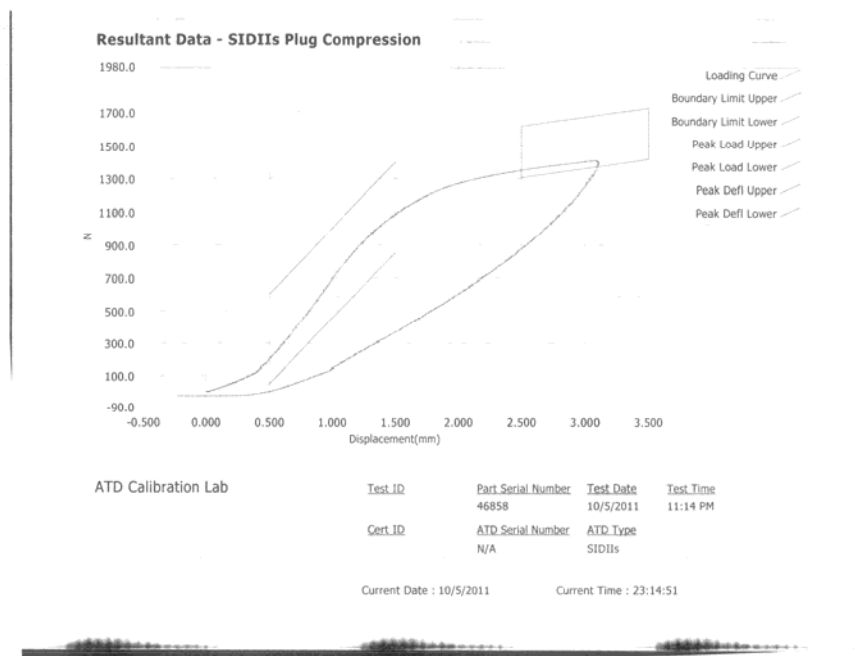


TABLE 9
PELVIS ACETABULUM IMPACT TEST (SID-IIs)

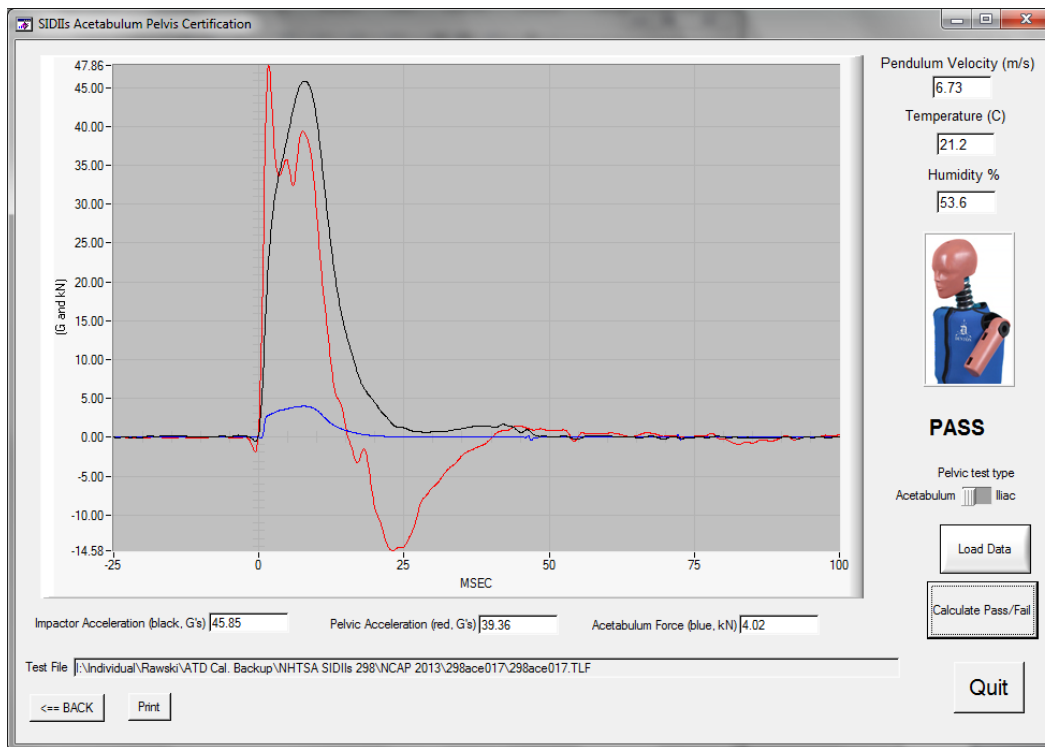
SIDIs Serial Number 298

Test Sequences 2 & 3

TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-5-12		12-3-12	
Sequential Test Number		-	2		3	
			Result	Pass/Fail	Results	Pass/Fail
Dummy Soak Time (min)		≥ 180	180	Pass	180	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	21.2	Pass	21.8	Pass
	Min		21.2	Pass	21.0	Pass
Humidity(%) – During Soak	Max	10.0-70.0	53.6	Pass	40.8	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	21.8	Pass
Humidity – During Test (%)		10-70	53.6	Pass	40.8	Pass
Impactor Velocity (m/s)		6.6-6.8	6.73	Pass	6.73	Pass
Peak Impactor Acceleration (G)		38-47	45.9	Pass	45.1	Pass
Pelvis Acceleration Y after 6ms (G)		34-42	39.4	Pass	38.2	Pass
Peak Acetabulum Force (kN)		3.60-4.30	4.02	Pass	3.95	Pass
Pelvis Plug Serial No. 46859 (Pre) No. (Post) 46858						

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

PRE-TEST



POST-TEST

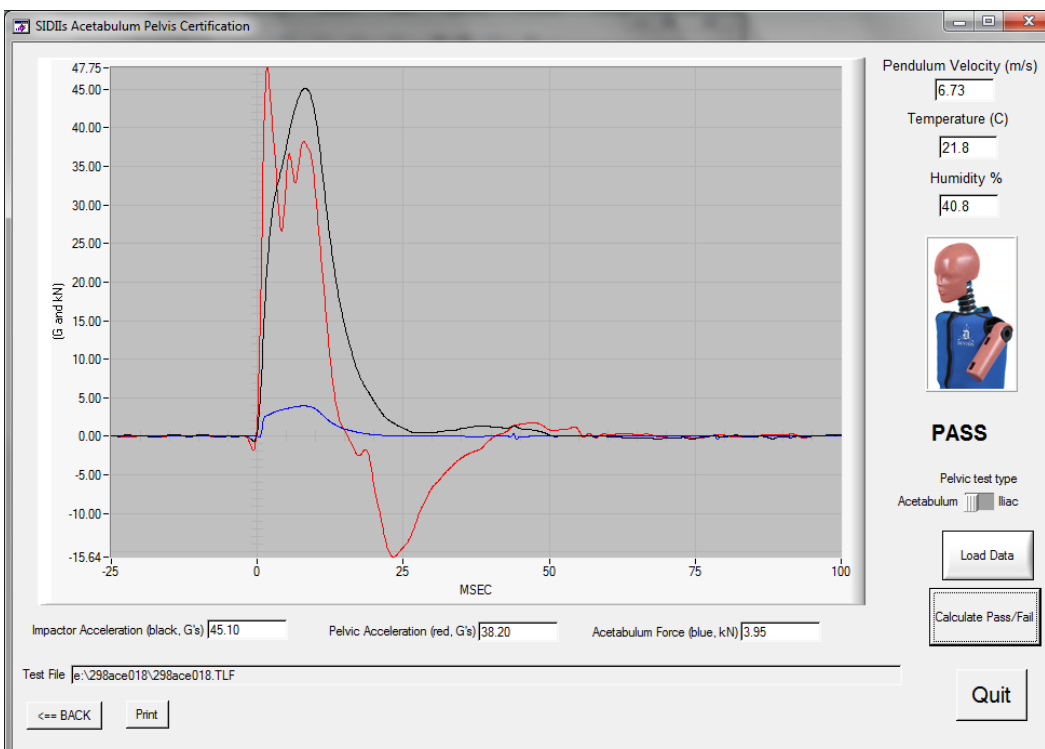


TABLE 10
PELVIS ILIAC IMPACT TEST (SID-IIs)

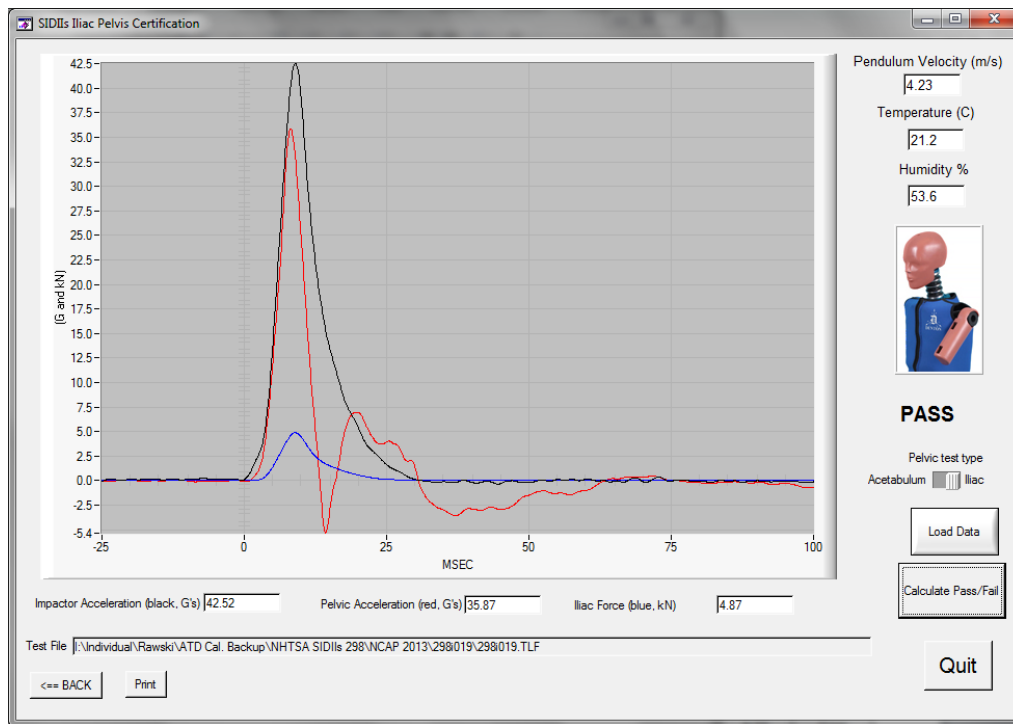
SIDIs Serial Number 298

Test Sequences 2 & 3

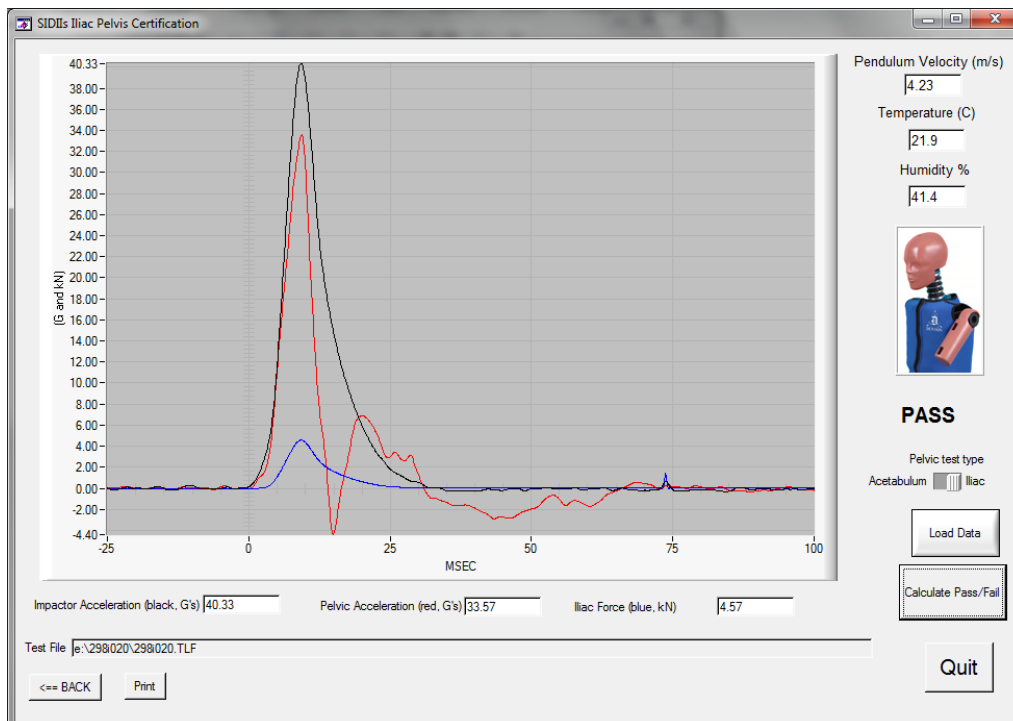
TEST PARAMETER		SPEC.	PRE		POST	
Date		-	11-5-12		12-3-12	
Sequential Test Number		-	2		3	
			Result	Pass/Fail	Result	Pass/Fail
Dummy Soak Time (min)		≥ 180	180	Pass	180	Pass
Temperature(°C) – During Soak	Max	20.6-22.2	21.2	Pass	21.9	Pass
	Min		21.2	Pass	21.0	Pass
Humidity(%) – During Soak	Max	10.0-70.0	53.6	Pass	41.4	Pass
	Min		53.6	Pass	34.2	Pass
Temperature – During Test (°C)		20.6-22.2	21.2	Pass	21.9	Pass
Humidity – During Test (%)		10-70	53.6	Pass	41.4	Pass
Pendulum Velocity (m/s)		4.2-4.4	4.23	Pass	4.23	Pass
Peak Impactor Acceleration (G)		36-46	42.5	Pass	40.3	Pass
Pelvis Acceleration Y (G)		29-39	35.9	Pass	33.6	Pass
Peak Iliac Force Y (N)		4.00-5.20	4.9	Pass	4.6	Pass
Pelvis Plug Serial No. 46859 (Pre) No. (Post) 46858						

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

PRE-TEST



POST-TEST



Test Vehicle: 2013 Ram 1500 4-Door Crew Cab Pickup
Test Program: SINCAP

NHTSA Number: MD 0314
Test Date: November 28, 2012

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	J43494	Endevco	15/June/2012
		Y	J43475	Endevco	15/June/2012
		Z	J43779	Endevco	15/June/2012
		X _R	J21551	Endevco	15/June/2012
		Y _R	J43432	Endevco	15/June/2012
		Z _R	12104	Endevco	15/June/2012
Thoracic Rib Displacement Potentiometers	Upper	Y	433	Denton	15/June/2012
	Middle	Y	193	Denton	15/June/2012
	Lower	Y	191	Denton	15/June/2012
Abdomen Load Cells	Forward	Y	1502	Denton	19/April/2012
	Middle	Y	1511	Denton	20/April/2012
	Rear	Y	1537	Denton	20/April/2012
Lower Spine Accelerometers (T ₁₂)		X	12112	Endevco	15/June/2012
		Y	P21586	Endevco	15/June/2012
		Z	P21580	Endevco	15/June/2012
Pubic Symphosis Load Cell		Y	460	Denton	19/April/2012

TABLE 2 - DUMMY INSTRUMENTATION – SID-IIs						
			SID-IIs S/N: 298			
			Serial Number	Manufacturer	Calibration Date	
Head Accelerometers		X	P22041	Endevco	15/June/2012	
		Y	P24562	Endevco	15/June/2012	
		Z	P22322	Endevco	15/June/2012	
		X _R	P24124	Endevco	15/June/2012	
		Y _R	P21575	Endevco	15/June/2012	
		Z _R	12132	Endevco	15/June/2012	
Displacement Potentiometers	Shoulder		Y	1095	FTSS	16/April/2012
	Thoracic Rib	Upper	Y	1181	Denton	16/April/2012
		Middle	Y	1203	Denton	16/April/2012
		Lower	Y	1215	Denton	16/April/2012
	Abdominal Rib	Upper	Y	717	Denton	16/April/2012
		Lower	Y	486	Denton	16/April/2012
Lower Spine Accelerometers (T ₁₂)		X	P21661	Endevco	15/June/2012	
		Y	P24682	Endevco	15/June/2012	
		Z	P21788	Endevco	15/June/2012	
Acetabulum Load Cell		Y	114	Denton	19/April/2012	
Iliac Wing Load Cell		Y	283	Denton	20/April/2012	
Pelvis Plug (Struck-Side)			46859	FTSS	07/Sept/2012	
Pelvis Plug (Non-Struck-Side)			12889	FTSS	07/Sept/2012	

TABLE 3 - VEHICLE INSTRUMENTATION					
			Serial Number	Manufacturer	Calibration Date
1	Vehicle Center of Gravity	X	P21785	Endevco	15/Oct/2012
	Vehicle Center of Gravity	Y	P21608	Endevco	15/Oct/2012
	Vehicle Center of Gravity	Z	P21605	Endevco	15/Oct/2012
2	Right Sill at Front Seat	X	12111	MSI	15/Oct/2012
	Right Sill at Front Seat	Y	12118	MSI	15/Oct/2012
	Right Sill at Front Seat	Z	12096	MSI	15/Oct/2012
3	Right Sill at Rear Seat	X	12110	MSI	15/Oct/2012
	Right Sill at Rear Seat	Y	A011343	Endevco	15/Oct/2012
	Right Sill at Rear Seat	Z	A011334	Endevco	15/Oct/2012
4	Left Sill at Front Door	Y	A086987	Endevco	15/Oct/2012
5	Left Sill at Rear Door	Y	A086976	Endevco	15/Oct/2012
6	Left A-Post Lower	Y	A086972	Endevco	15/Oct/2012
7	Left A-Post Middle	Y	A086974	Endevco	15/Oct/2012
8	Left B-Post Lower	Y	A086979	Endevco	15/Oct/2012
9	Left B-Post Middle	Y	A086985	Endevco	15/Oct/2012
10	Front Seat Track	Y	A086980	Endevco	15/Oct/2012
11	Rear Seat Track or Structure	Y	A002042	Endevco	15/Oct/2012
12	Right Rear Occ. Compartment	Y	04A04A07-J13	Endevco	15/Oct/2012
13	Engine Block	X	A010890	Endevco	15/Oct/2012
	Engine Block	Y	A011335	Endevco	15/Oct/2012
14	Rear Floorpan Above Axle	X	98G98E11-K02	Endevco	15/Oct/2012
	Rear Floorpan Above Axle	Y	98L98H31-Z05	Endevco	15/Oct/2012
	Rear Floorpan Above Axle	Z	98G98D22-Z15	Endevco	15/Oct/2012

TABLE 4 - MDB INSTRUMENTATION				
		Serial Number	Manufacturer	Calibration Date
MDB Center of Gravity	X	12115	Endevco	22/Oct/2012
MDB Center of Gravity	Y	12149	Endevco	22/Oct/2012
MDB Center of Gravity	Z	P21898	Endevco	22/Oct/2012
Left Frame at Rear Axle Centerline	X	P22339	Endevco	22/Oct/2012
Left Frame at Rear Axle Centerline	Y	P22539	Endevco	22/Oct/2012