

REPORT NUMBER: SPNCAP-CAL-15-004

**NEW CAR ASSESSMENT PROGRAM (NCAP)
SIDE IMPACT POLE TEST**

**General Motors LLC
2015 Chevrolet Colorado
Pick Up / Extended Cab**

NHTSA No: M20150113

**PREPARED BY:
CALSPAN CORPORATION
P.O. BOX 400
BUFFALO, NEW YORK 14225**



April 9, 2015

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**

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Date: April 9, 2015

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Date: April 9, 2015

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: _____

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16. Abstract A 32.20 km/h (20 mph), 75° oblique impact Side NCAP Test was conducted on the subject 2015 Chevrolet Colorado Extended Cab Pick Up in accordance with the specifications of the Office of Crashworthiness Standards Side NCAP Pole Laboratory Test Procedure for the generation of consumer information on vehicle side pole crash protection. This test was conducted at Calspan Corporation's Transportation Test Operations facility in Buffalo, New York on February 5, 2015. The impact velocity of the vehicle was 32.48 km/h, and the ambient temperature at the struck (driver's) side of the target vehicle was 21°C. The target vehicle's maximum post-test static crush was 322 mm located at level 3. The test vehicle's occupant performance data is as follows: <table border="1"> <thead> <tr> <th rowspan="2">Measurement Description</th> <th colspan="3">Driver ATD (SID-IIs) (Serial No. 300)</th> </tr> <tr> <th>Units</th> <th>Threshold</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆)</td> <td></td> <td>1000</td> <td>227.356</td> </tr> <tr> <td>Resultant Lower Spine Acceleration</td> <td>G</td> <td>82</td> <td>47.042</td> </tr> <tr> <td>Total Pelvic Force (sum of acetabular and iliac forces)</td> <td>N</td> <td>5525</td> <td>3183.755</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>38</td> <td>16.234</td> </tr> <tr> <td>Maximum Abdomen Rib Deflection</td> <td>mm</td> <td>45</td> <td>14.525</td> </tr> </tbody> </table> 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.				Measurement Description	Driver ATD (SID-IIs) (Serial No. 300)			Units	Threshold	Result	Head Injury Criteria (HIC ₃₆)		1000	227.356	Resultant Lower Spine Acceleration	G	82	47.042	Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	3183.755	Maximum Thoracic Rib Deflection	mm	38	16.234	Maximum Abdomen Rib Deflection	mm	45	14.525
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17. Key Words New Car Assessment Program (NCAP) Side Impact Pole Part 572V SID-IIs		18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Administration Technical Information Services Division, NPO-411 1200 New Jersey Ave. SE Washington, D.C. 20590 e-mail: tis@nhtsa.dot.gov FAX: 202-493-2833																												
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TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
1	Test Purpose and Procedure	1-1
2	Summary of Test Results	2-1
3	Occupant and Vehicle Information	3-1
<u>Data Sheet</u>		<u>Page</u>
1	General Test and Vehicle Parameter Data	3-2
2	Seat, Seat Belt, Steering Wheel Adjustment and Fuel Systems Data	3-6
3	Dummy Longitudinal Clearance Dimensions	3-9
4	Dummy Lateral Clearance Dimensions	3-10
5	Camera and instrumentation Data	3-11
6	Vehicle Accelerometer Data	3-12
7	Rigid Pole Load Cell Data	3-13
8	Post-Test Observations	3-14
9	Test Vehicle Profile Measurements	3-16
10	Test Vehicle Exterior Crush Measurements	3-17
11	Vehicle Damage Profile Distances	3-20
12	FMVSS No. 301 Static Rollover Results	3-21
13	Dummy / Vehicle Temperature and Humidity Stabilization Data	3-22
<u>Appendix</u>		<u>Page</u>
A	Photographs	A-1
B	Vehicle and Dummy Response Data Plots	B-1
C	Dummy Configuration and Performance Verification Data	C-1
D	Test Equipment and Instrumentation Calibration Data	D-1

SECTION 1

TEST PURPOSE AND PROCEDURE

This side impact test was conducted as part of the MY 2015 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-14-D-00352. The purpose of this test is to generate comparative side impact performance in a 2015 Chevrolet Colorado Extended Cab Pick Up. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Side NCAP Pole Laboratory Test Procedure, dated September 2013.

SECTION 2

SUMMARY OF TEST RESULTS

A rigid pole side impact test was conducted on a 2015 Chevrolet Colorado Extended Cab Pick Up. The subject vehicle was towed into the rigid pole at an angle of 75° and a velocity of 32.48 km/h. The test was conducted by Calspan Corporation's Transportation Test Operations facility in Buffalo, New York on February 5, 2015. Pre-test and post-test photographs of the test vehicle and side impact dummy (SID-IIs) are included in Appendix A of this report.

One Part 572V (SID-IIs) dummy was placed in the driver designated seating position according to instructions specified in the OCWS Side NCAP Pole Laboratory Test Procedure, dated September 2013. Camera locations and other pertinent camera information are included on page 3-11 in this report.

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

Head CG tri-axial accelerometers

Thorax upper, middle, and lower rib displacement potentiometers

Abdomen upper and lower rib displacement potentiometers

Lower spine tri-axial accelerometers

Iliac load cell

Acetabulum load cell

Appendix B contains the dummy response data. Dummy configuration and performance verification data can be found in Appendix C of this report. Appendix D identifies all serial numbers, manufacturers, and calibration dates for test equipment, dummy sensors, potentiometers, and load cells used to collect data during the test.

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

INJURY READINGS

Measurement Description	Driver ATD (SID-IIs)		
	Units	IARV	Result
Head Injury Criteria (HIC ₃₆)		1000	227.356
Resultant Lower Spine Acceleration	g	82	47.042
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	3183.755
Maximum Thoracic Rib Deflection	mm	38*	16.234
Maximum Abdominal Rib Deflection	mm	45*	14.525

*Proposed IARV

Supplemental restraint information was recorded as follows:

SUPPLEMENTAL RESTRAINT INFORMATION

Restraint Type	Left Front (Driver) Occupant Location 1		Left Rear (Passenger) Occupant Location 4	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	No		
Knee Airbag	No	N/A		
Side Airbag 1 - Curtain	Yes	Yes	Yes	Yes
Side Airbag 2 – Torso/ Pelvis Airbag	Yes	Yes	No	N/A
Seat Belt Pretensioner	Yes	Yes	No	N/A
Seat Belt Load Limiter	Yes	Yes	No	N/A
Other				

GENERAL COMMENTS:

1. P1 serial number - 300

Data Anomalies:

- None

SECTION 3

OCCUPANT AND VEHICLE INFORMATION

This section contains information reporting for the following Data Sheets:

Data Sheet No. 1 – General Test and Vehicle Parameter Data

Data Sheet No. 2 – Seat, Seat Belt, Steering Wheel Adjustment and Fuel Systems 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 – Vehicle Accelerometer Data

Data Sheet No. 7 – Rigid Pole Load Cell Data

Data Sheet No. 8 – Post-Test Observations

Data Sheet No. 9 – Test Vehicle Profile Measurements

Data Sheet No. 10 – Test Vehicle Exterior Crush Measurements

Data Sheet No. 11 – Vehicle Damage Profile Distances

Data Sheet No. 12 – FMVSS No. 301 Static Rollover Results

Data Sheet No. 13 – Dummy / Vehicle Temperature and Humidity Stabilization Data

DATA SHEET NO. 1
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
Test Date: 2/5/2015

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M20150113
Model Year	2015
Make	Chevrolet
Model	Colorado
Body Style	Pickup / Extended Cab
VIN	1GCHSBEA5F1148951
Body Color	Silver
Odometer Reading (km/mi)	61.2 km / 38 mi
Engine Displacement (L)	2.5
Type / No. Cylinders	I4
Engine Placement	Inline
Transmission Type	Automatic
Transmission Speeds	6-Speed
Overdrive	Yes
Final Drive	Rear Wheel Drive
Roof Rack	No
Sunroof / T-Top	No
Running Boards	No
Tilt Steering Wheel	Yes
Power Seats	Yes
Anti-Lock Brakes (ABS)	Yes

Traction Control System (TCS)	Yes
Auto-Leveling System	No
Automatic Door Locks (ADL)	Yes
Power Window Auto-Reverse	No
Other Optional Feature	--
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	No
Driver Load Limiter	Yes
Rear Pass. Load Limiter	No
Other Safety Restraint	-

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

Yes

DATA FROM CERTIFICATION LABEL

Manufactured By	General Motors LLC
Date of Manufacture	11/14
Vehicle Type	Passenger

GVWR (kg)	2449
GAWR Front (kg)	1315
GAWR Rear (kg)	1497

VEHICLE SEATING AND WEIGHT CAPACITY DATA

Measured Parameter	Front	Rear	Third	Total
Designated Seating Capacity (DSC)	2	2	-	4
Capacity Weight (VCW) (kg)				646
DSC X 68.04 kg				272.16
Cargo Weight (RCLW) (kg)				136

(A)

(B)

(A-B)

VEHICLE SEAT TYPE

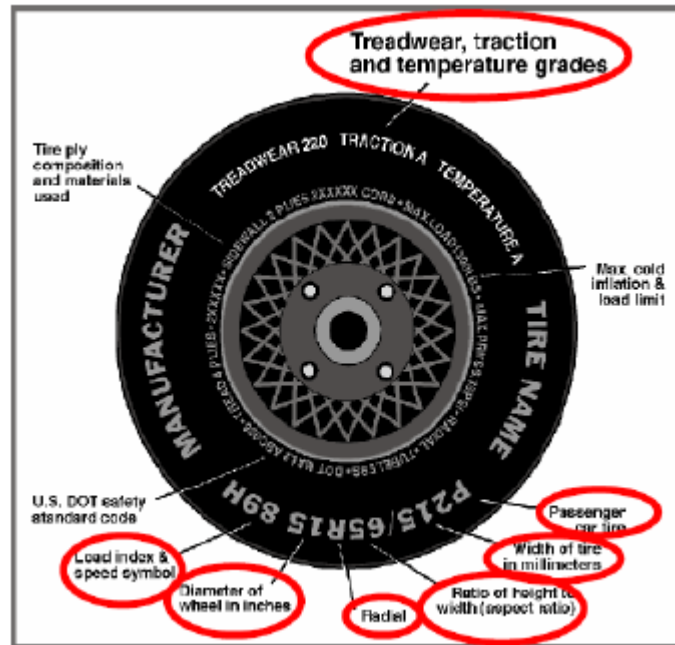
Seating Location	Type of Seat Pan				Type of Seat Back		
	Bucket	Bench	Split Bench	Contoured	Fixed	Adjustable W/ Lever	Adjustable W/ Knob
Front Seat	X						X
Rear or Second Row Seat			X		X		
Third Row seat	-	-	-	-	-	-	-

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

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
 Test Date: 2/5/2015

Collected for year, make, model, & VIN, all items circled in red, tire manufacturer and tire name.



VEHICLE TIRE INFORMATION

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	350	350
Cold Pressure (kPa)	240	240
Recommended Tire Size	P255/65R17	P255/65R17
Tire Size on Vehicle	P255/65R17	P255/65R17
Tire Manufacturer	Goodyear	Goodyear
Tire Model	Wrangler	Wrangler
Treadwear	680	680
Traction	A	A
Temperature Grades	B	B
Tire Plies Sidewall	2 Polyester	2 Polyester
Tire Plies Body	2 Polyester, 2 Steel	2 Polyester, 2 Steel
Load Index/Speed Symbol	110T	110T
Tire Material	Rubber	Rubber
DOT Safety Code Left	PJ22JH1R3914	PJ22JH1R3914
DOT Safety Code Right	PJ22JH1R3914	PJ22JH1R3914

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

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
 Test Date: 2/5/2015

TIRE PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kPa	244	248	252	252
Tire Placard	kPa	240	240	240	240
Owner's Manual	kPa	240	240	240	240
As Tested	kPa	240	240	240	240

TEST VEHICLE AXLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Left	kg	528	396		540	493		556	477	
Right	kg	483	380		479	456		492	455	
Ratio	%	56.6%	43.4%		51.8%	48.2%		52.9%	47.1%	
Totals	kg	1011	776	1787	1019	949	1968	1048	932	1980

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total As Delivered Weight (UVW)	kg	1787	(A)
Actual Weight of 1 P572V (SID-IIs) ATD Used	kg	51	(B)
Rated Cargo / Luggage Weight (RCLW)	kg	136	(C)
Calculated Vehicle Target Weight (TVTW)	kg	1974	(A+B+C)

Does the measured As Test Vehicle Weight lie within the required weight range
 (i.e. Calculated Test Vehicle Target Weight – 4.5 kg to – 9 kg)? ☒ Yes ☐ No

TEST VEHICLE ATTITUDES AND CG

Measurement Description	Units	As Delivered	As Tested	Fully Loaded	Meets Rqmt***
Driver Door Sill Angle (front-to-rear)*	Deg	-1.2	-1.1	-0.9	Yes
Front Passenger Sill Angle (front-to-rear)*	Deg	-1.4	-1.4	-1.1	Yes
Front Bumper-Line Angle (left-to-right)**	Deg	-0.4	-0.4	-0.6	Yes
Rear Bumper-Line Angle (left-to-right)**	Deg	-0.4	-0.4	-0.6	Yes
Vehicle CG (Aft of Front Axle)	mm	1418	1574	1537	
Vehicle CG (Left (+) / Right (-) from Longitudinal Centerline)	mm	27	40	35	

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

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

*** The "As Tested" vehicle attitude measurements must be equal to or between the "As Delivered" and "Fully Loaded" vehicle attitude measurements. Indicate "Yes" or "No" for Meets Requirement

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

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
 Test Date: 2/5/2015

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Side Window	3
Ballast / Equipment Added	88.5

Test Height – Adjustable Suspension Setting, if Applicable	N/A
--	-----

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

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
 Test Date: 2/5/2015

SEAT POSITIONING

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

SCRL ANGLE RANGE

Seat	SCRL (°)		
	Max	Min	Mid
Driver Seat	18.4	13.5	16.0
Front Passenger Seat	-	Not Adjustable	-
Front Center Seat	N/A	N/A	N/A
Struck Side Rear Seat	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed

SEAT HEIGHT AND ANGLE

Seat	As Tested SCRL Angle (Mid) (°)	As Tested SCRP Height (mm)	SCRP Height Position	SCRP Height (mm)		
				Rearmost	Mid-Fore / Aft	Forward- Most
Driver Seat	15.9	40	Max	55	62	66
			Mid	27	35	40
			Min	0	9	13
Front Passenger Seat	Not Adjustable		Max	-	-	-
			Mid	-	-	-
			Min	-	-	-
Front Center Seat	N/A	N/A	Max	-	-	-
			Mid	-	-	-
			Min	-	-	-
Struck Side Rear Seat	Fixed	Fixed	Max	-	-	-
			Mid	-	-	-
			Min	-	-	-
Non-Struck Side Rear Seat	Fixed	Fixed	Max	-	-	-
			Mid	-	-	-
			Min	-	-	-
Rear Center Seat	Fixed	Fixed	Max	-	-	-
			Mid	-	-	-
			Min	-	-	-

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

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
 Test Program: NCAP Side Pole Impact Test

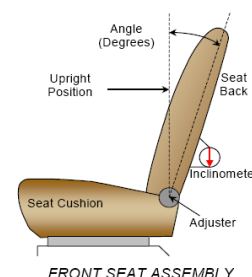
NHTSA No.: M20150113
 Test Date: 2/5/2015

SEAT FORE / AFT POSITION

Seat	Total Fore / Aft Travel		Test Position from Forwardmost Position	
	mm	Detents*	mm	Detents*
Driver Seat	235	N/A	0	N/A
Front Passenger Seat	N/A	47	N/A	0
Front Center Seat	N/A	N/A	N/A	N/A
Struck Side Rear Seat	FIXED	FIXED	FIXED	FIXED
Non-Struck Side Rear Seat	FIXED	FIXED	FIXED	FIXED
Rear Center Seat	FIXED	FIXED	FIXED	FIXED

SEAT BACK ANGLE ADJUSTMENT

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



Seat	Total Seat Back Angle Range		Test Position from Most Upright	
	Degrees	Detents*	Degrees	Detents*
Driver Seat w/Seated Dummy	-35.9-(41.5)	N/A	-4.1	N/A
Front Passenger Seat	-38.5-(40.6)	N/A	-3.5	N/A
Front Center Seat	N/A	N/A	N/A	N/A
Struck Side Rear Seat	FIXED	FIXED	FIXED	FIXED
Non-Struck Side Rear Seat	FIXED	FIXED	FIXED	FIXED
Rear Center Seat	FIXED	FIXED	FIXED	FIXED

SEAT BELT ANCHORAGE ADJUSTMENT

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

Seat	Total # of Positions	Placed in Position #
Driver Seat	4	0 - Uppermost

HEAD RESTRAINT ADJUSTMENT

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

Seat	Total # of Positions	Placed in Position #
Driver Seat	9	0 – Full Down

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

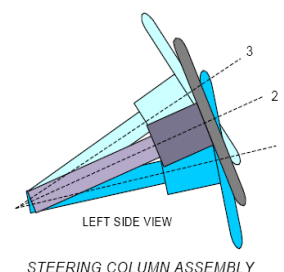
Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
 Test Date: 2/5/2015

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.

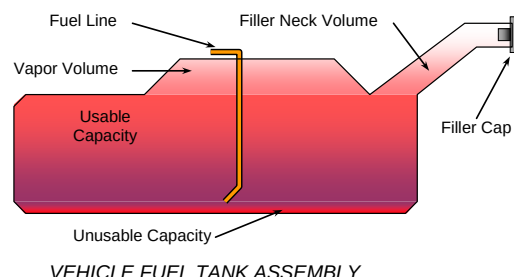
		Degrees	Fore / Aft Position (mm)
Lowermost	– Position 1	20.5	
Geometric Center	– Position 2	22.3	
Uppermost	– Position 3	24.0	
Telescoping Steering Wheel Travel			40
Test Position		22.3	20



FUEL PUMP

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

The vehicle is equipped with an electric fuel pump.
The fuel filler neck is on the left side of the vehicle.
The pump creates positive pressure in the fuel lines, pushing the gasoline to the engine. See form 1 for more information.



FUEL TANK CAPACITY DATA

Description	Liters
Usable Capacity of "Standard Tank" - see Form No. 1	80
Usable Capacity of "Optional Tank" - see Form No. 1	N/A
Usable Capacity of "Standard Tank" - see Owner's Manual	80
Usable Capacity of "Optional Tank" - see Owner's Manual	
93% of Usable Capacity	74.4
Actual Amount of Solvent Used in Test	74.4
1/3 of Usable Capacity	26.7

Is the Actual Amount of Solvent Used in the test equal to 93% $\pm$ 1% of the Usable Capacity stated in Form No. 1?



Yes

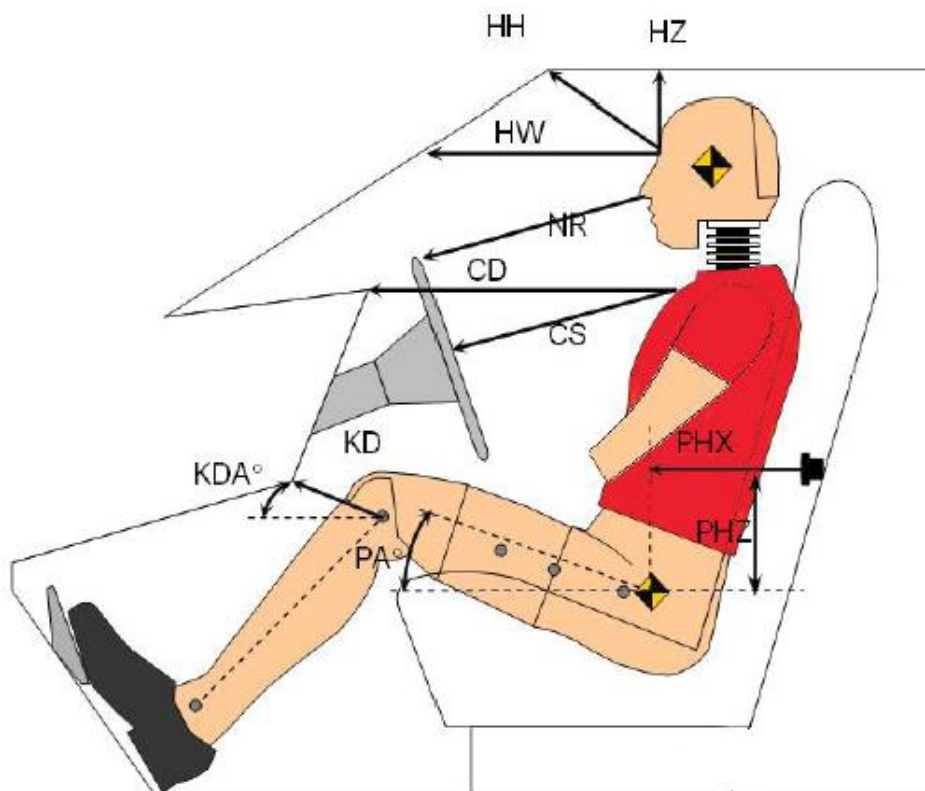


No

DATA SHEET NO. 3
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
 Test Date: 2/5/2015



Left Side View

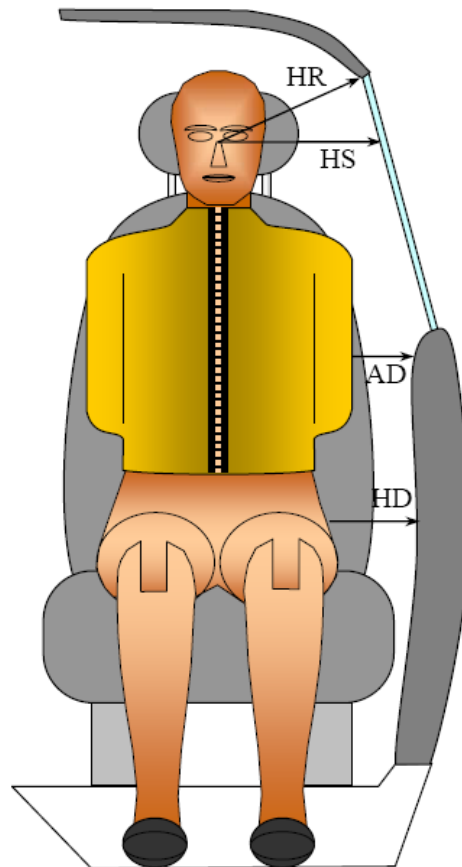
DUMMY LONGITUDINAL CLEARANCE DIMENSION INFORMATION

Driver Code	Description	Driver (Serial No. 300)	
		Length (mm)	Angle (°)
HH	Head to Header	343	
HW	Head to Windshield	630	
HZ	Head to Roof Liner	241	
NR	Nose to Rim	273	
CD	Chest to Dash	448	
CS	Chest to Steering Wheel	222	
KD(L) / KDA(L)°	Left Knee to Dash	122	31.5
KD(R) / KDA(R)°	Right Knee to Dash	118	29.6
PAX°	Pelvic Tilt Angle (X-Axis)		18.6
PAY°	Pelvic Tilt Angle (Y-Axis)		0.3
PHX	Hip Point to Striker (X-Axis)	330	
PHZ	Hip Point to Striker (Z-Axis)	80	

DATA SHEET NO. 4
DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
 Test Date: 2/5/2015



FRONT VIEW OF DUMMY

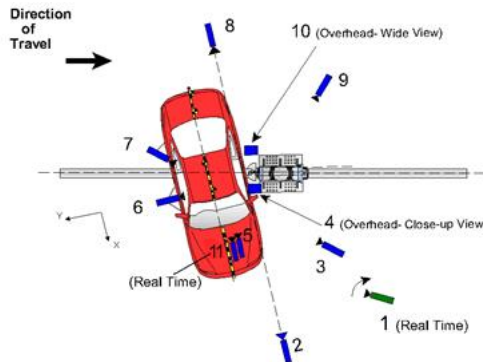
DUMMY LATERAL CLEARANCE DIMENSION INFORMATION

Code	Measurement Description	Units	Driver - Length (Serial No. 300)
HR	Head To Side Header	mm	276
HS	Head to Side Window	mm	380
AD	Arm to Door	mm	174
HD	Hip Point to Door	mm	173

DATA SHEET NO. 5 CAMERA AND INSTRUMENTATION DATA

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
Test Date: 2/5/2015



CAMERA LOCATIONS AND DATA

No.	Camera View	Coordinates (mm)			Lens Length (mm)	Operating Frame Rate (fps)
		X	Y	Z		
1	Real-time (24 - 30 fps) pan view of impact				Zoom	30
2	Front ground level - impact view	5211	-1353	-1395	24	1000
3	Impact side 45° - forward pole view	2952	-3099	-1757	24	1000
4	Overhead Close-up view of impact	0	0	-5288	20	1000
5	Onboard - dummy front view				25	1000
6	Onboard - dummy side view				12.5	1000
7	Onboard - dummy rear oblique view				12.5	1000
8	Rear ground level - impact view	-6717	-1874	-1398	24	1000
9	Impact side 45° - rearward pole view	-3816	-3061	-1769	24	1000
10	Overhead wide - view of impact	0	300	-5288	14	1000
11	Real-time (24 - 30 fps) - dummy front view				Zoom	30

Notes: Reference - From Point of Impact for X and Y; from Ground for Z
+X = Forward of vehicle, +Y = Right of vehicle, +Z = Down
* All measurements accurate to ± 6 mm. Vehicle is at a 75° angle to the rigid pole.

Comments: All cameras operated as intended.

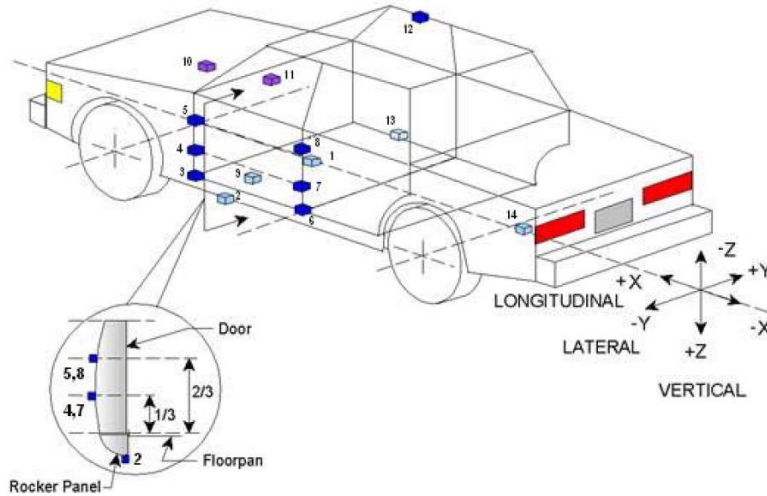
INSTRUMENTATION

Description	Number of Channels
Driver Dummy Channels	16
Vehicle Structure Accelerometers	18
Pole Load Cells	8
Total	42

DATA SHEET NO. 6 VEHICLE ACCELEROMETER DATA

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
 Test Date: 2/5/2015



TEST VEHICLE ACCELEROMETER LOCATIONS

No.	Accelerometer Location	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	3133	-2	-262
2	Left Floor Sill	3484	-667	-7
3	A-Pillar Sill	3820	-665	-53
4	A-Pillar Low	3803	-670	-253
5	A-Pillar Mid	3820	-668	-751
6	B-Pillar Sill	2831	-660	-64
7	B-Pillar Low	2797	-680	-219
8	B-Pillar Mid	2782	-669	-634
9	Driver Seat Track	3122	-562	-98
10	Engine Top	4506	-18	-524
11	Firewall	4258	19	-555
12	Right Roof	3018	578	-1209
13	Right Floor Sill	3494	671	-7
14	Rear Floorpan	1510	15	-265

Reference: *X – Rear surface of vehicle (+ forward)*
Y – Vehicle centerline (+ to right)
Z – Ground plane (+ down)

DATA SHEET NO. 7
RIGID POLE LOAD CELL DATA

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
Test Date: 2/5/2015

POLE BARRIER



RIGID POLE LOAD CELL LOCATIONS

ID	Units	Height From Ground
1	mm	200
2	mm	590
3	mm	750
4	mm	1075
5	mm	1260
6	mm	1740
7	mm	1920
8	mm	2300

**DATA SHEET NO. 8
POST-TEST OBSERVATIONS**

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
Test Date: 2/5/2015

TEST DUMMY INFORMATION AND CONTACT POINTS

Dummy Body Part	Driver Seat Dummy (SID-IIs)
Face	Curtain Airbag
Top of Head	Curtain Airbag
Left Side of Head	Curtain Airbag
Back of Head	Headrest
Left Shoulder	Torso/Pelvis Airbag
Upper Torso	Seatback
Lower Torso	Seatback & Torso/Pelvis Airbag
Left Hip	Seat Pan, Torso/Pelvis Airbag & Driver's Door
Left Knee	Driver's Door

POST-TEST DOOR PERFORMANCE

Description	Struck Side		Non-Struck Side		Rear Hatch/ Other
	Front	Rear	Front	Rear	
Remained Closed and Operational	No	No	Yes	Yes	Yes
Total Separation from Vehicle at Hinges or Latches	0	0	0	0	0
Latch or Hinge Systems Pulled Out of Their Anchorages	No	No	No	No	No
Disengaged from Latched Position	No	No	No	No	No
Latch Separated from Striker	No	No	No	No	No
Jammed Shut	Yes	Yes	No	No	No
If Door Opened at Striker, Width of Opening at Striker (mm)	0	0	0	0	0

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

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
Test Date: 2/5/2015

POST-TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	B-Pillar Buckled
Sill Separation	None
Windshield Damage	Separation along driver's A-Pillar
Side Window Damage	Driver's window shattered during impact event
Other Notable Effects	None

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Struck Side Driver		Struck Side Rear Passenger	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	No		
Knee Airbag	No	N/A		
Side Airbag 1 - Curtain	Yes	Yes	Yes	Yes
Side Airbag 2 – Torso/Pelvis	Yes	Yes	No	N/A
Seat Belt Pretensioner	Yes	Yes	No	N/A
Seat Belt Load Limiter	Yes	Yes	No	N/A
Other				

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

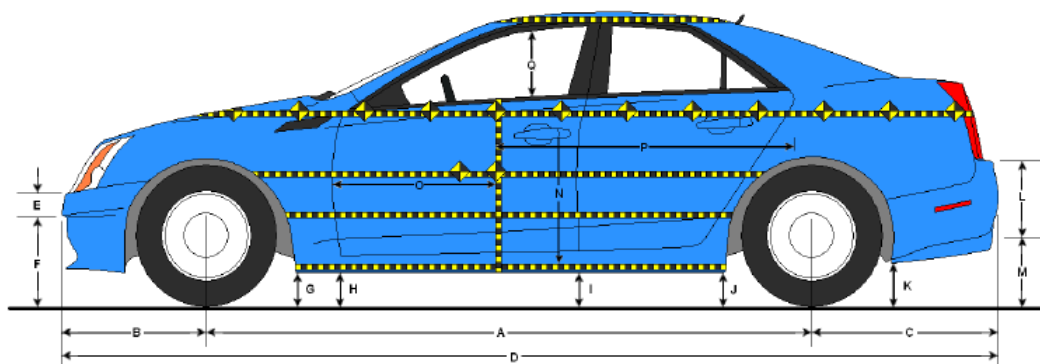
Measured Parameter	Units	Tolerance	Value
Vertical Impact Ref Line - Aft of Front Axle, Intended Impact Pt	mm		1187
Actual Impact Point - Aft of Front Axle	mm		1207
Horizontal Offset (+ forward / - rearward)	mm	+/- 38 *	-20
Angle Between Vehicle's Longitudinal Centerline and Line of Forward Motion	deg	75 +/- 3	75.0
Trap No. 1 Velocity - Primary	kph	31.4 to 33.0	32.48
Trap No. 2 Velocity - Redundant	kph	31.4 to 33.0	32.47

* Of Intended Impact Point

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

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
Test Date: 2/5/2015



LEFT SIDE VIEW

VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

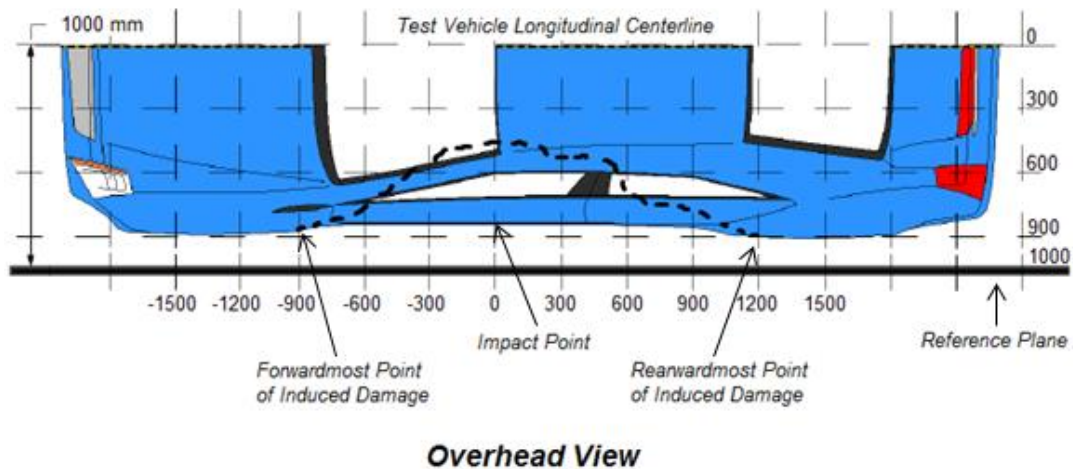
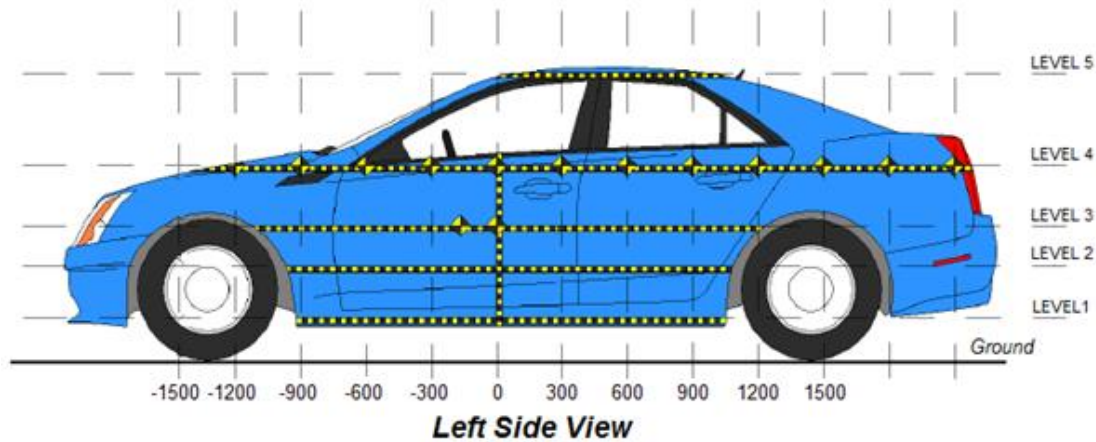
Code	Description	Pre-Test	Post-Test	Difference
A	Vehicle Wheelbase	3265	3228	37
B	Front Axle to FSOV	953	997	-44
C	Rear Axle to RSOV	1184	1126	58
D	Total Length at Centerline	5402	5351	51
E	Front Bumper Thickness	100	100	0
F	Front Bumper Bottom to Ground	404	435	-31
G	Sill Height at Front Wheel Well	377	367	10
H	Sill Height at Front Door Leading Edge	381	364	17
I	Sill Height at B-Pillar	411	386	25
J1	Sill Height at Rear Wheel Well	315	301	14
J2	Pinch Weld Height at Rear Wheel Well	409	412	-3
K	Sill Height Aft of Rear Wheel Well	465	496	-31
L	Rear Bumper Thickness	220	220	0
M	Rear Bumper Bottom to Ground	469	482	-13
N	Sill Height to Bottom of Front Window Sill	763	763	0
O	Front Door Leading Edge to Impact CL	640	539	101
P	Rear Door Trailing Edge to Impact CL	1095	1043	52
Q	Front Window Opening	446	462	-15
R	Right Side Length	5353	5326	27
S	Left Side Length	5355	5304	50
T	Vehicle Width at B-Pillars	1763	1679	84

* All measurements in mm with tolerance of $\pm 3\text{mm}$

DATA SHEET NO. 10
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
 Test Date: 2/5/2015



MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Measurement Description	Units	Height Above Ground	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	mm	481	281	0
2	Occupant Hip Point	mm	873	320	0
3	Mid - Door	mm	885	322	0
4	Window Sill	mm	1183	314	0
5	Window Top	mm	1743	140	150

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

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

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
 Test Date: 2/5/2015

EXTERIOR CRUSH MEASUREMENTS AT EACH LEVEL

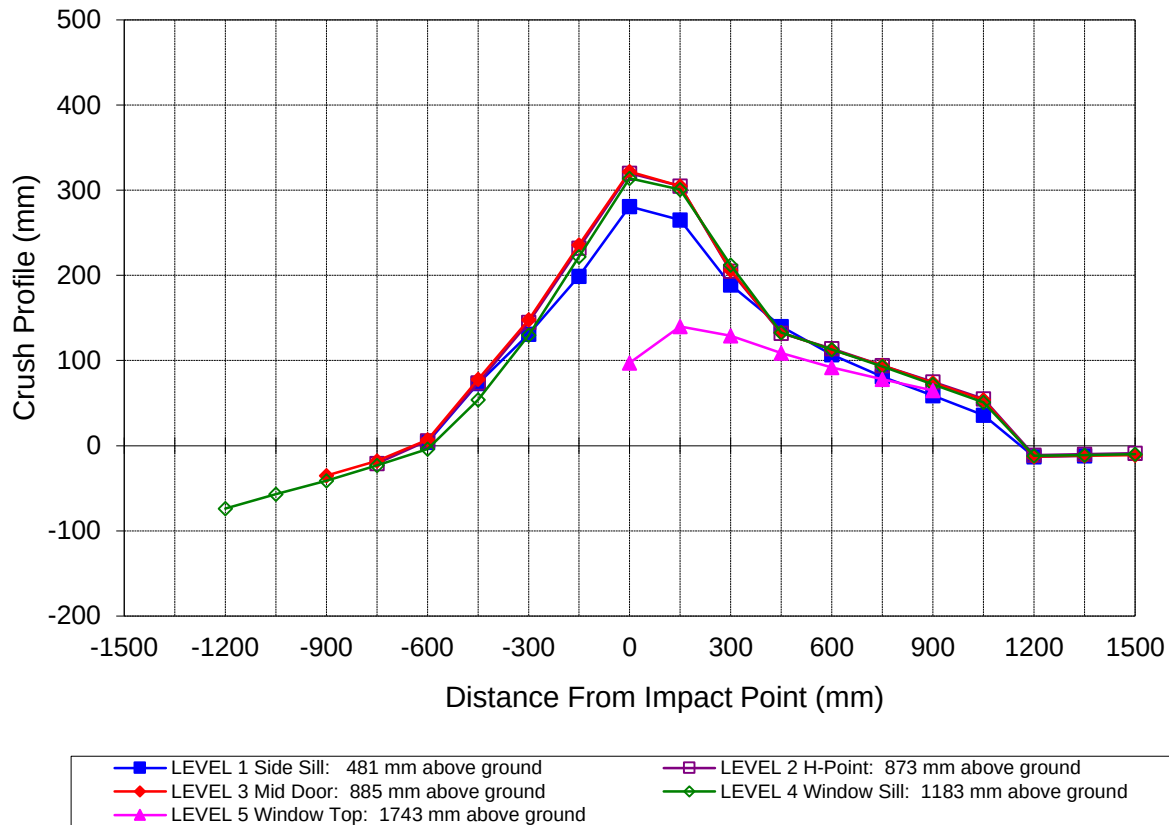
	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-1500															
-1350															
-1200				813					887					-74	
-1050				822					879					-57	
-900			948	828				983	869				-35	-41	
-750		933	933	834			954	951	857			-21	-18	-23	
-600	851	875	877	836		847	869	870	840		4	6	7	-4	
-450	845	876	879	833		772	802	801	779		73	74	78	54	
-300	845	877	879	842		714	732	731	712		131	145	148	130	
-150	845	877	879	850		646	645	643	628		199	232	236	222	
0	844	877	879	855	544	563	557	557	541	447	281	320	322	314	97
150	843	877	878	858	603	578	572	573	557	463	265	305	305	301	140
300	842	876	877	861	632	653	671	671	649	503	189	205	206	212	129
450	840	875	876	863	633	700	743	743	730	524	140	132	133	133	109
600	838	875	875	864	632	731	761	762	751	540	107	114	113	113	92
750	836	873	873	865	632	755	779	779	772	554	81	94	94	93	78
900	833	871	870	865	633	774	796	796	793	568	59	75	74	72	65
1050	827	867	867	864		791	812	813	813		36	55	54	51	
1200	825	857	856	855		838	868	869	867		-13	-11	-13	-12	
1350	825	859	858	857		837	869	870	868		-12	-10	-12	-11	
1500		869	867	859			878	878	869			-9	-11	-10	

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

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

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
 Test Date: 2/5/2015



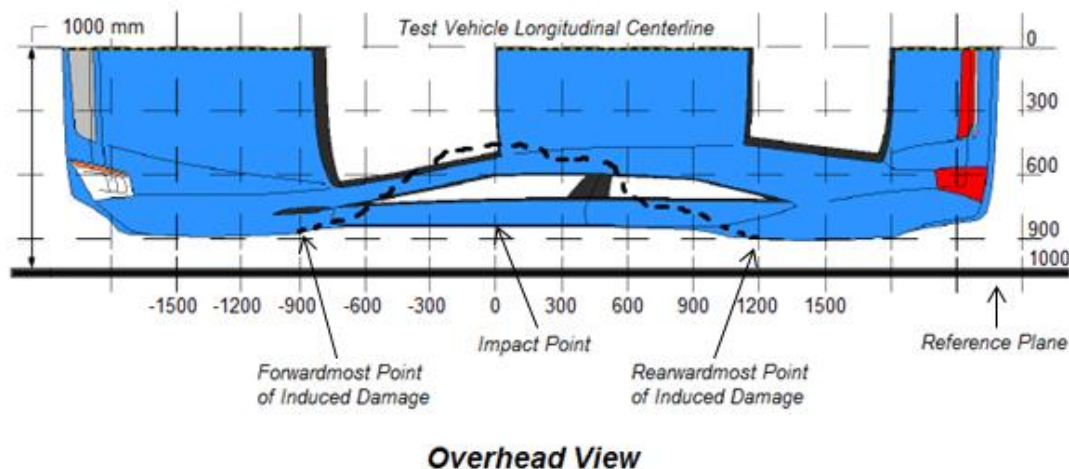
Vehicle Exterior Crush Measurements - Visual Representation

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

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
 Test Date: 2/5/2015

For guidance regarding damage profile distance measurements, please refer to the latest version of the *NHTSA Test Reference Guide, Volume 1: Vehicle Tests*.



VEHICLE DAMAGE PROFILE DISTANCES

DPD	Distance From Impact Point (mm)	Level	Post-Test (mm)	Pre-Test (mm)	Crush (mm)
1	-900	3	17	52	-35
2	-420	3	213	121	92
3	60	3	437	121	316
4	540	3	246	125	121
5	1020	3	190	132	58
6	1500	3	122	133	-11

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

Test Vehicle: <u>2015 Chevrolet Colorado Extended Cab Pick Up</u>	NHTSA No.: <u>M20150113</u>
Test Program: <u>NCAP Side MDB Impact Test</u>	Test Date: <u>2/5/2015</u>
Test Time: <u>4:30 PM</u>	Temperature: <u>21° C</u>

- A. From impact until vehicle motion ceases: 0 oz.
 (Maximum allowable is 1 oz.)
- B. For the 5-minute period after motion ceases: 0 oz.
 (Maximum allowable is 5 oz.)
- C. For the following 25 minutes: 0 oz.
 (Maximum allowable is 1 oz./minute)
- D. Spillage Details: No Spillage Occurred

FMVSS NO. 301 STATIC ROLLOVER DATA



ROLLOVER SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	71	300	371
90° to 180°	66	300	366
180° to 270°	62	300	362
270° to 360°	69	300	369

FMVSS NO. 301 ROLLOVER SPILLAGE TABLE

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

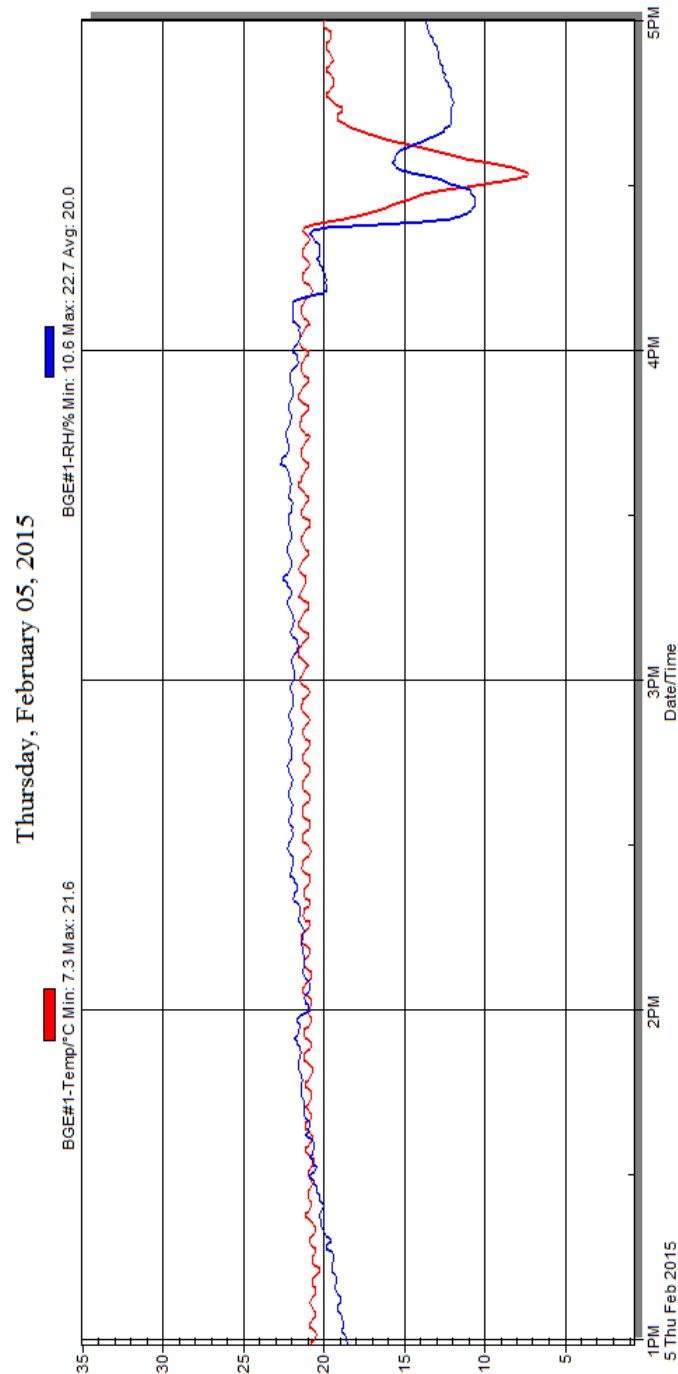
ROLLOVER SOLVENT SPILLAGE LOCATION TABLE

Test Phase	Spillage Location
0° to 90°	No Spillage Occurred
90° to 180°	No Spillage Occurred
180° to 270°	No Spillage Occurred
270° to 360°	No Spillage Occurred

DATA SHEET NO. 13
DUMMY / VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION DATA

Test Vehicle: 2015 Chevrolet Colorado Extended Cab Pick Up
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20150113
Test Date: 2/5/2015



Temperature and Humidity Stabilization Chart / Data for Dummies and Test Vehicle

APPENDIX A
PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

Fig.	Description	Page
1	As Delivered Right Front $\frac{3}{4}$ View of Test Vehicle	A-4
2	As Delivered Left Rear $\frac{3}{4}$ View of Test Vehicle	A-4
3	Pre-Test Frontal View of Test Vehicle	A-5
4	Post-Test Frontal View of Test Vehicle	A-5
5	Pre-Test Left Front $\frac{3}{4}$ View of Test Vehicle	A-6
6	Post-Test Left Front $\frac{3}{4}$ View of Test Vehicle	A-6
7	Pre-Test Left Side View of Test Vehicle	A-7
8	Post-Test Left Side View of Test Vehicle	A-7
9	Pre-Test Left Rear $\frac{3}{4}$ View of Test Vehicle	A-8
10	Post-Test Left Rear $\frac{3}{4}$ View of Test Vehicle	A-8
11	Pre-Test Rear View of Test Vehicle	A-9
12	Post-Test Rear View of Test Vehicle	A-9
13	Pre-Test Right Side View of Test Vehicle	A-10
14	Post-Test Right Side View of Test Vehicle	A-10
15	Pre-Test Overhead View of Test Area	A-11
16	Post-Test Overhead View of Test Area	A-11
17	Pre-Test Left Side View of Pole Positioned Against Side of Vehicle	A-12
18	Pre-Test Right Side View of Pole Positioned Against Side of Vehicle	A-12
19	Pre-Test Close-Up View of Impact Point Target	A-13
20	Post-Test Close-Up View of Impact Point Target Showing Impact Location	A-13
21	Pre-Test Front Close-Up View of Dummy Head and Chest	A-14
22	Post-Test Front Close-Up View of Dummy	A-14
23	Pre-Test Left Side View of Dummy Showing Belt and Chalking	A-15
24	Pre-Test Left Side View of Dummy Shoulder and Door Top View	A-15
25	Post-Test Left Side View of Dummy Shoulder and Door Top View	A-16
26	Pre-Test Frontal View of Seat Back Prior to Dummy Positioning	A-16
27	Pre-Test Frontal Close-Up View of Dummy Head / Shoulders in Relation to Head Restraint	A-17
28	Pre-Test Frontal View of Seat Pan Prior to Dummy Positioning	A-17
29	Pre-Test Overhead View of Dummy Thighs on Seat Pan	A-18
30	Pre-Test Left Side View of Dummy's Neck Showing Position of Adjustable Neck Bracket	A-18
31	Pre-Test Left Side View of Dummy's Head Showing Dummy's Head is Level	A-19
32	Pre-Test Placement of Dummy's Feet	A-19
33	Pre-Test View of Belt Anchorage for Dummy	A-20
34	Pre-Test Left Side View of Steering Wheel	A-20
35	Pre-Test View of Disengaged Parking Brake	A-21

Fig.	Description	Page
36	Pre-Test View of Parking Brake	A-21
37	Pre-Test Close-Up Left Side View of Driver Seat Track	A-22
38	Pre-Test Close-Up Left Side View of Driver Seat Back	A-22
39	Pre-Test Close-Up View of Driver Seat Back or Head Restraint	A-23
40	Pre-Test Dummy and Door Clearance View	A-23
41	Post-Test Dummy and Door Clearance View	A-24
42	Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment	A-24
43	Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment	A-25
44	Pre-Test Inner Door Panel View	A-25
45	Post-Test Inner Door Panel View Showing Dummy Contact Location	A-26
46	Post-Test Dummy Close-Up Head Contact with Vehicle Interior View	A-26
47	Post-Test Dummy Close-Up Head Contact with Side Airbag View	A-27
48	Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View	A-27
49	Post-Test Dummy Close-Up Torso Contact with Side Airbag View	A-28
50	Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View	A-28
51	Post-Test Dummy Close-Up Pelvis Contact with Side Airbag View	A-29
52	Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View	A-29
53	Pre-Test View of Fuel Filler Cap or Fuel Filler Neck	A-30
54	Post-Test View of Fuel Filler Cap or Fuel Filler Neck	A-30
55	Close-Up View of Vehicle's Certification Label	A-31
55a	Close-Up View of Reduced Load Capacity Label	A-31
56	Close-Up View of Vehicle's Tire Information Placard or Label	A-32
57	Pre-Test Pole Barrier Front View	A-32
58	Post-Test Pole Barrier Front View	A-33
59	Pre-Test Pole Barrier Side View	A-33
60	Post-Test Pole Barrier Side View	A-34
61	Pre-Test Ballast View	A-34
62	Post-Test Primary and Redundant Speed Trap Read-Out	A-35
63	FMVSS No. 301 Static Rollover 0 Degrees	A-35
64	FMVSS No. 301 Static Rollover 90 Degrees	A-36
65	FMVSS No. 301 Static Rollover 180 Degrees	A-36
66	FMVSS No. 301 Static Rollover 270 Degrees	A-37
67	FMVSS No. 301 Static Rollover 360 Degrees	A-37
68	Impact Event	A-38
69	Monroney Label	A-38
70	Head Restraint Use and Adjustment Information from Vehicle Owner's Manual	A-39
71	Post-Test View of Shattered Vehicle Inner Door Panel	A-39



Figure A-1: As Delivered Right Front $\frac{3}{4}$ View of Test Vehicle



Figure A-2: As Delivered Left Rear $\frac{3}{4}$ View of Test Vehicle

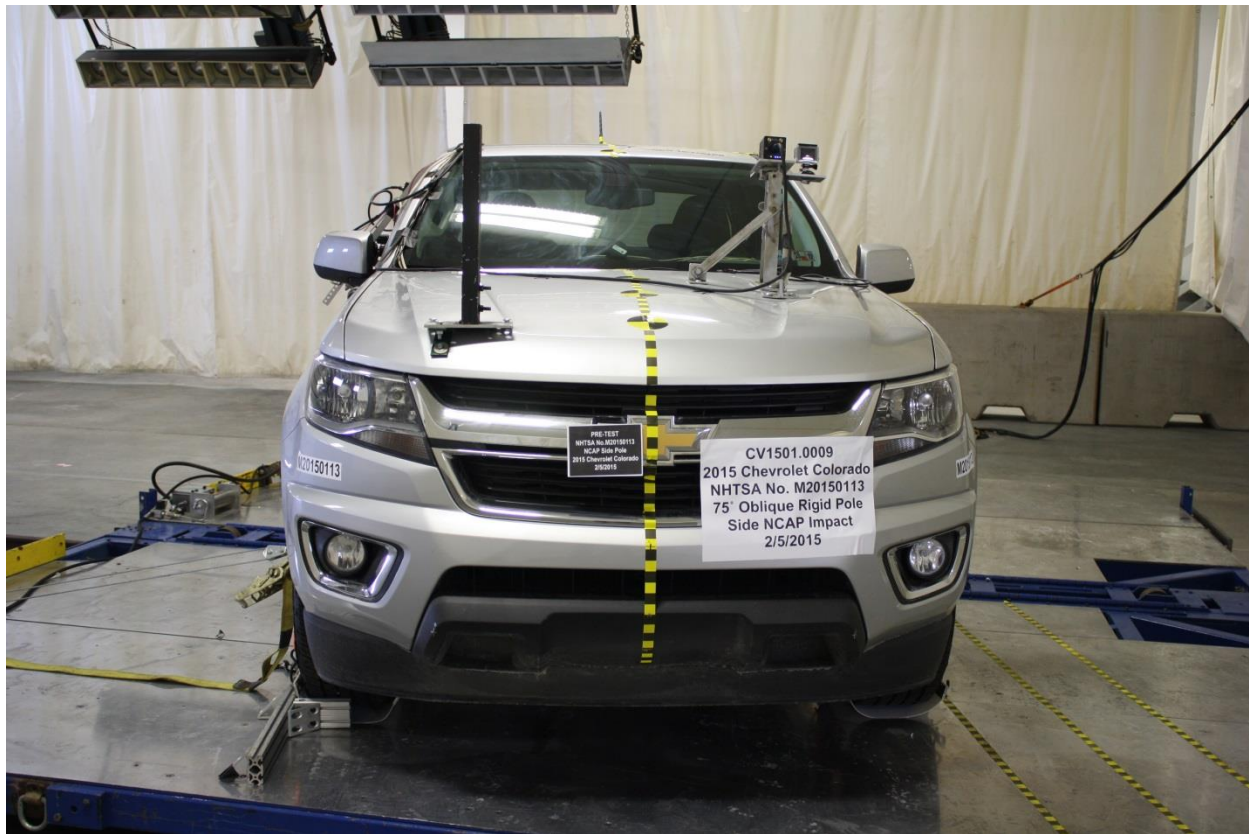


Figure A-3: Pre-Test Frontal View of Test Vehicle

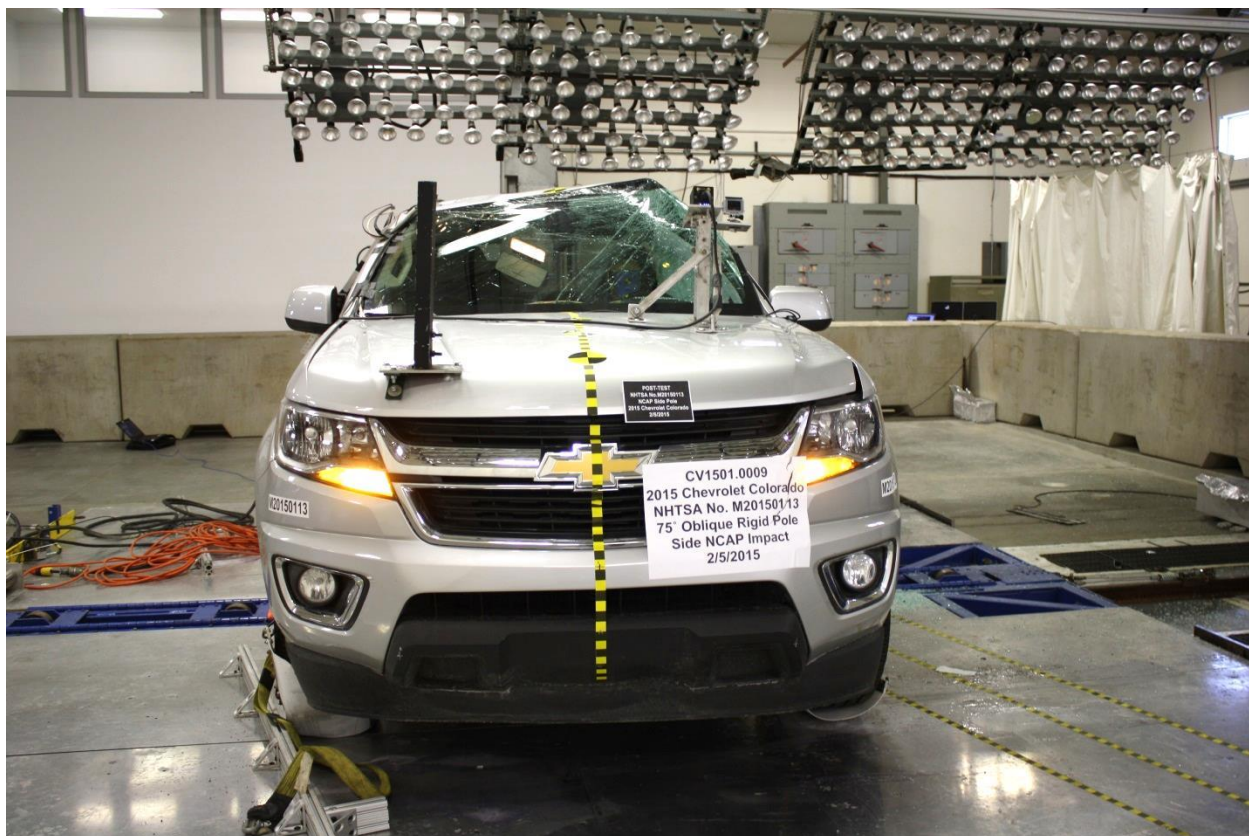


Figure A-4: Post-Test Frontal View of Test Vehicle



Figure A-5: Pre-Test Left Front $\frac{3}{4}$ View of Test Vehicle



Figure A-6: Post-Test Left Front $\frac{3}{4}$ 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 $\frac{3}{4}$ View of Test Vehicle



Figure A-10: Post-Test Left Rear $\frac{3}{4}$ View of Test Vehicle



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

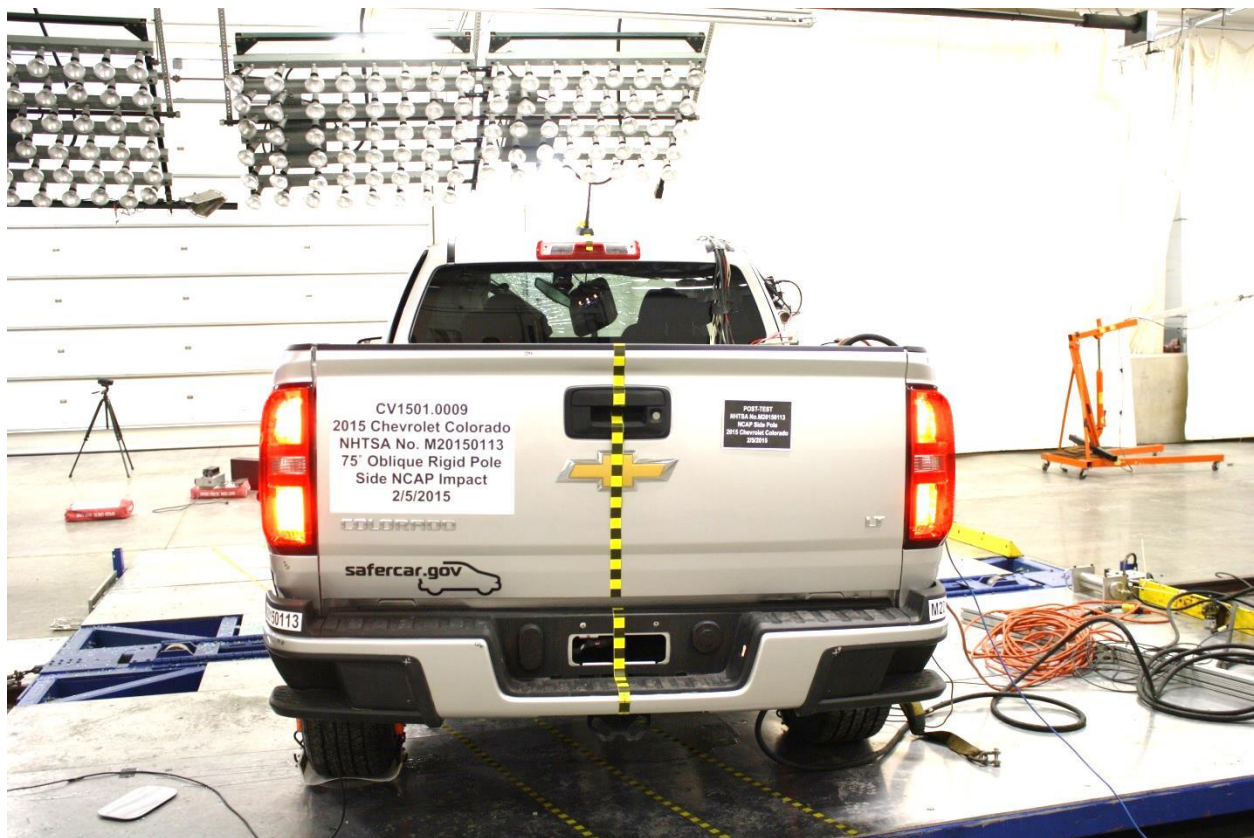


Figure A-12: Post-Test Rear View of Test Vehicle



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



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

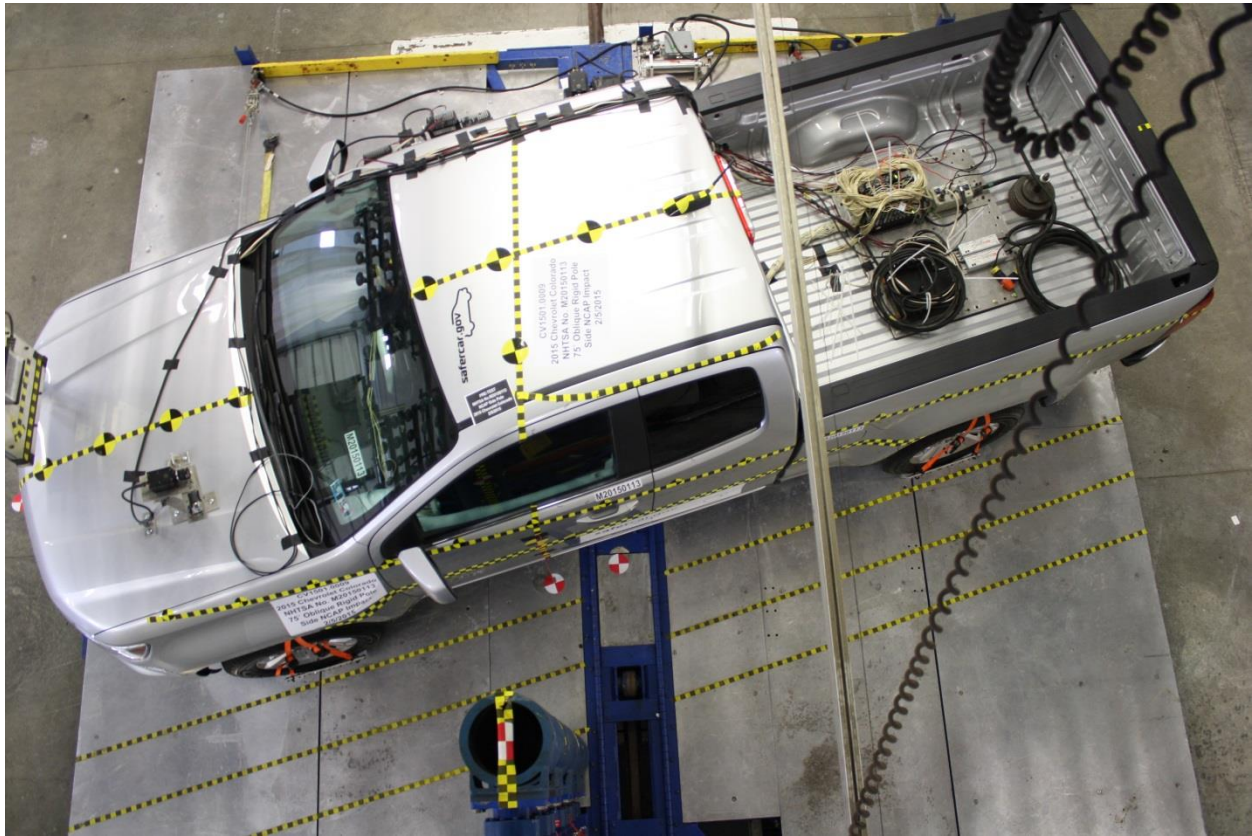


Figure A-15: Pre-Test Overhead View of Test Area

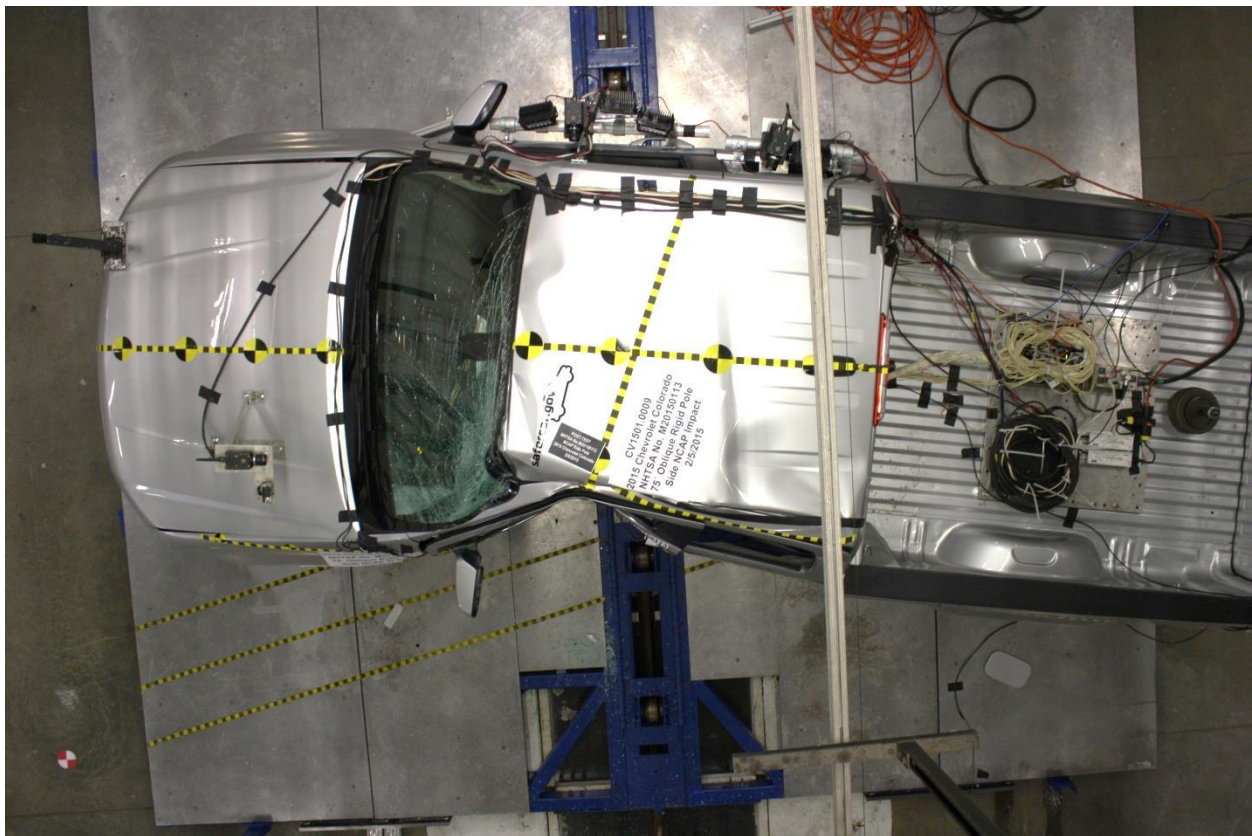


Figure A-16: Post-Test Overhead View of Test Area



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



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

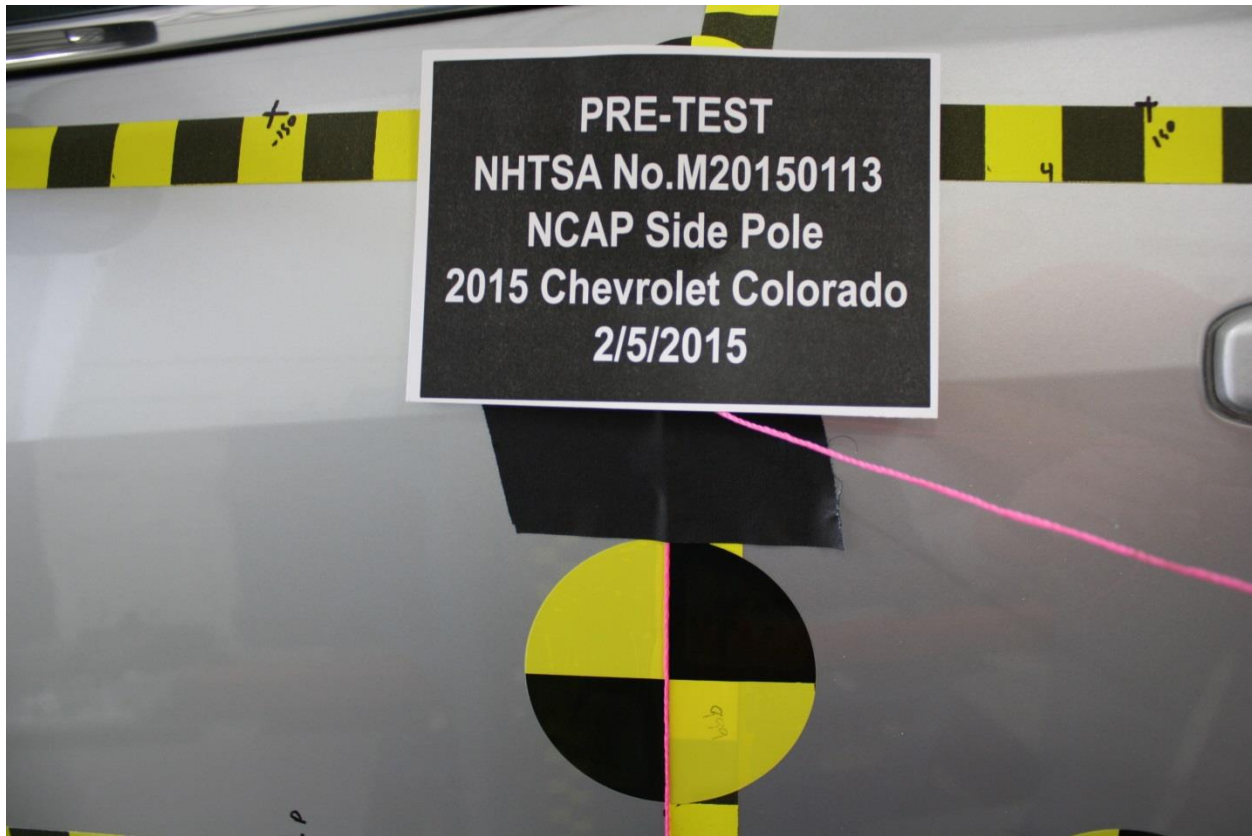


Figure A-19: Pre-Test Close-Up View of Impact Point Target



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

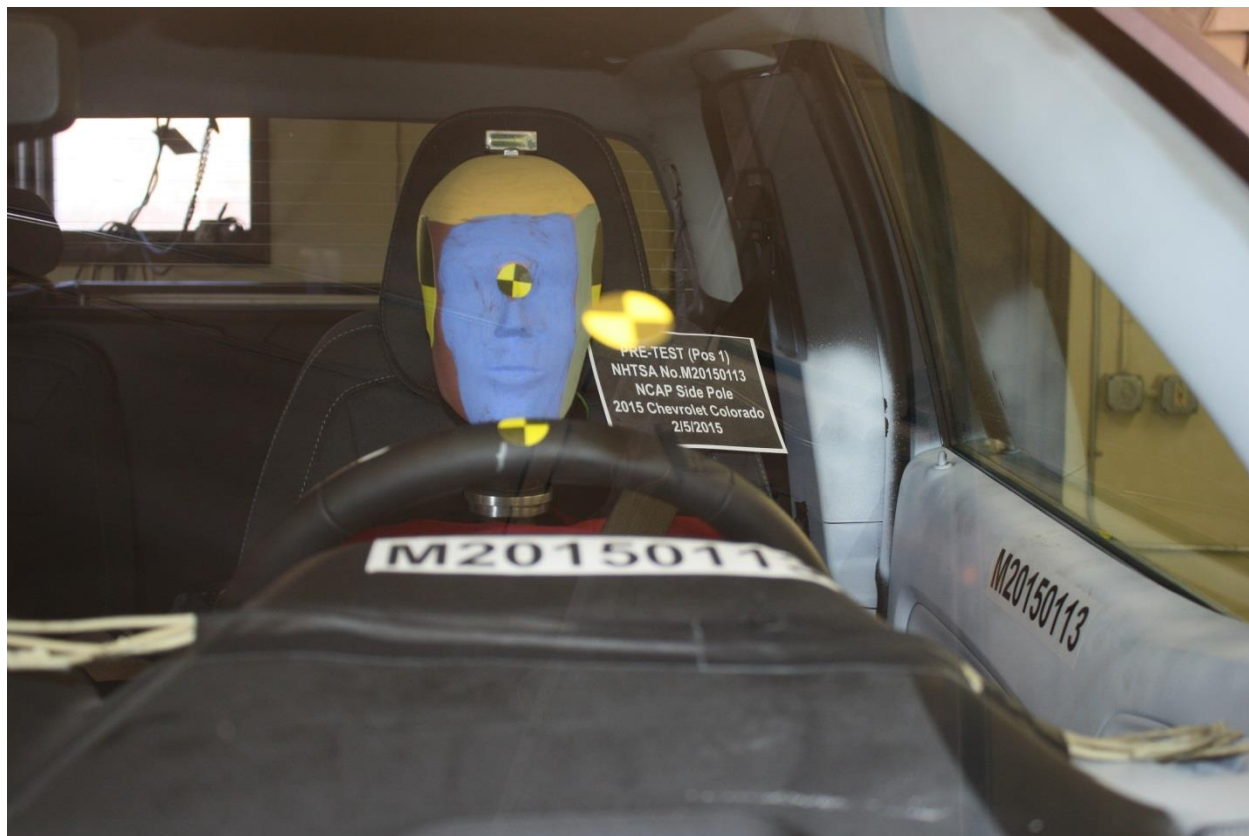


Figure A-21: Pre-Test Front Close-Up View of Dummy Head and Chest

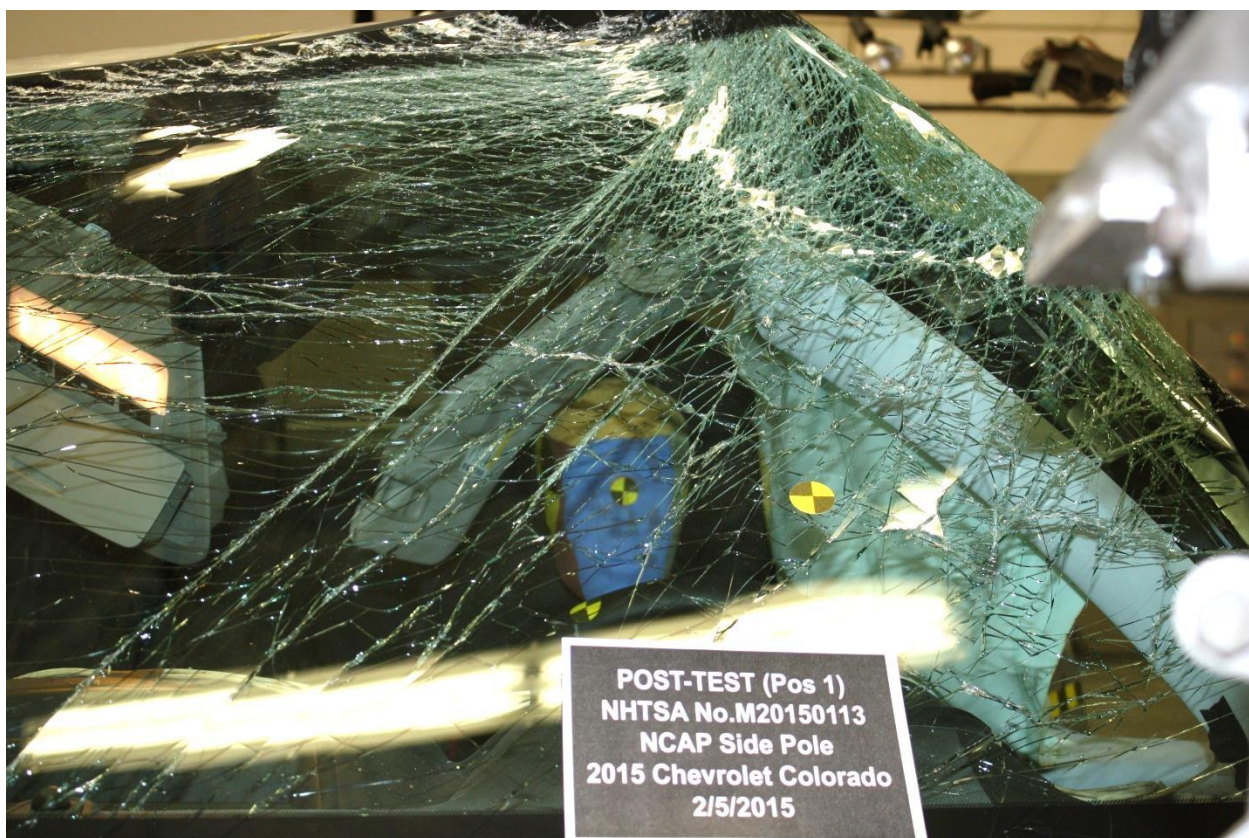


Figure A-22: Post-Test Front Close-Up View of Dummy



Figure A-23: Pre-Test Left Side View of Dummy Showing Belt and Chalking



Figure A-24: Pre-Test Left Side View of Dummy Shoulder and Door Top View



Figure A-25: Post-Test Left Side View of Dummy Shoulder and Door Top View



Figure A-26: Pre-Test Frontal View of Seat Back Prior to Dummy Positioning



Figure A-27: Pre-Test Frontal Close-Up View of Dummy Head / Shoulders in Relation to Head Restraint



Figure A-28: Pre-Test Frontal View of Seat Pan Prior to Dummy Positioning



Figure A-29: Pre-Test Overhead View of Dummy Thighs on Seat Pan

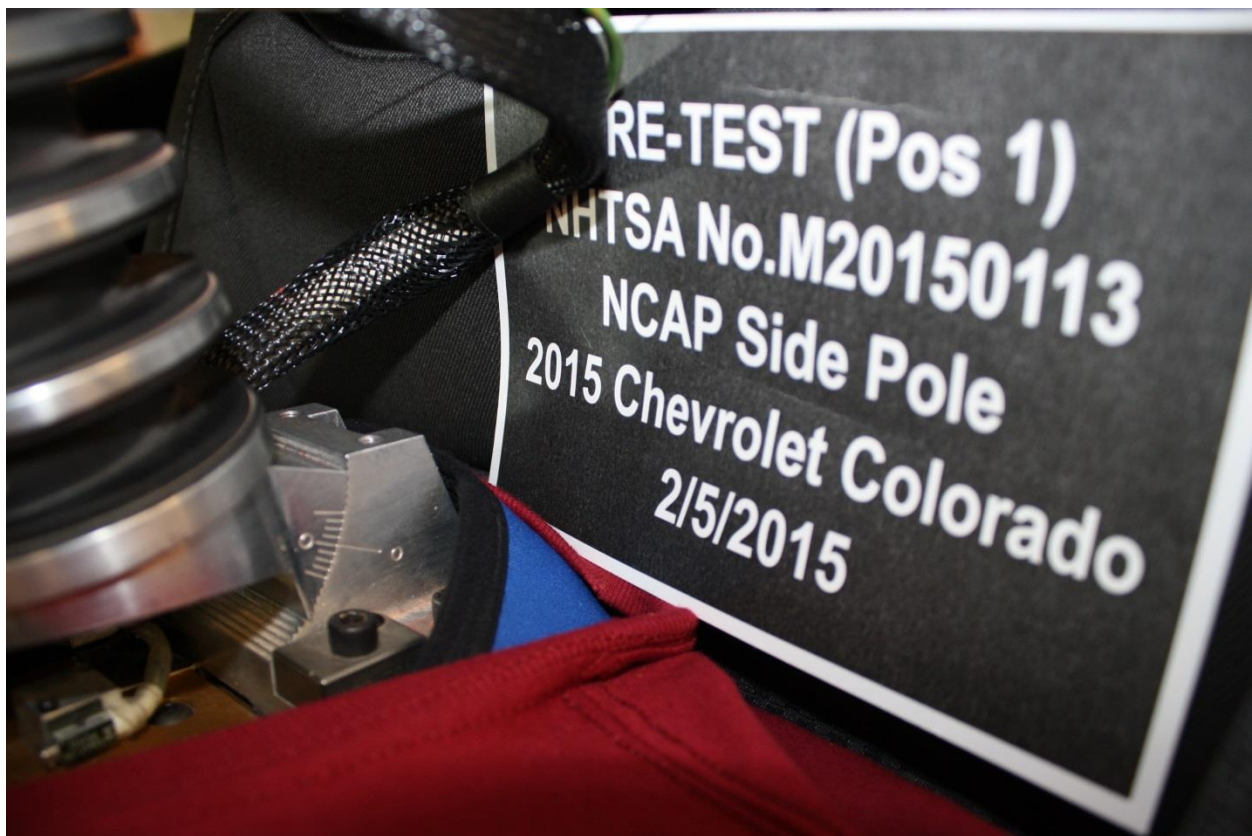


Figure A-30: Pre-Test Left Side View of Dummy's Neck Showing Position of Adjustable Neck Bracket



Figure A-31: Pre-Test Left Side View of Dummy's Head Showing Dummy's Head is Level



Figure A-32: Pre-Test Placement of Dummy's Feet



Figure A-33: Pre-Test View of Belt Anchorage for Dummy



Figure A-34: Pre-Test Left Side View of Steering Wheel

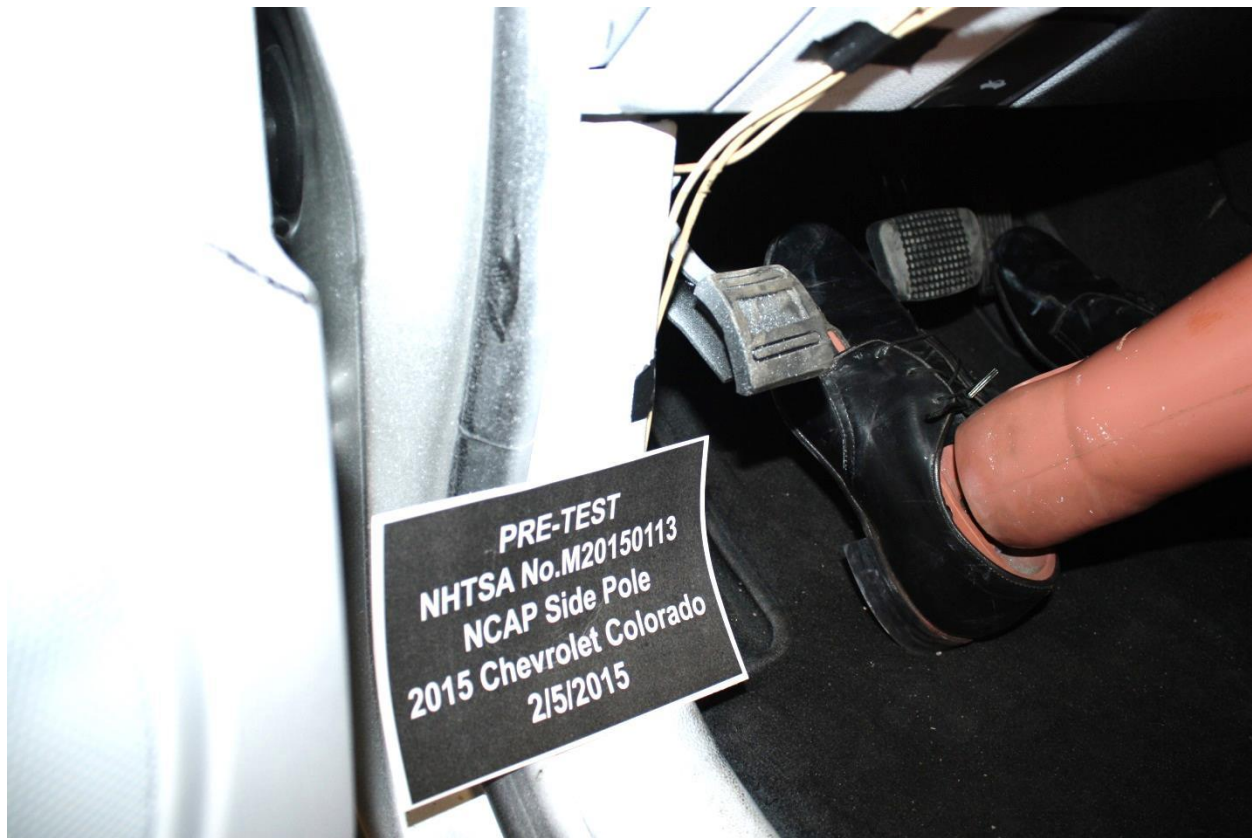


Figure A-35: Pre-Test View of Disengaged Parking Brake



Figure A-36: Pre-Test View of Parking Brake



Figure A-37: Pre-Test Close-Up Left Side View of Driver Seat Track



Figure A-38: Pre-Test Close-Up Left Side View of Driver Seat Back



Figure A-39: Pre-Test Close-Up View of Driver Seat Back or Head Restraint



Figure A-40: Pre-Test Dummy and Door Clearance View



Figure A-41: Post-Test Dummy and Door Clearance View



Figure A-42: Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment



Figure A-43: Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment

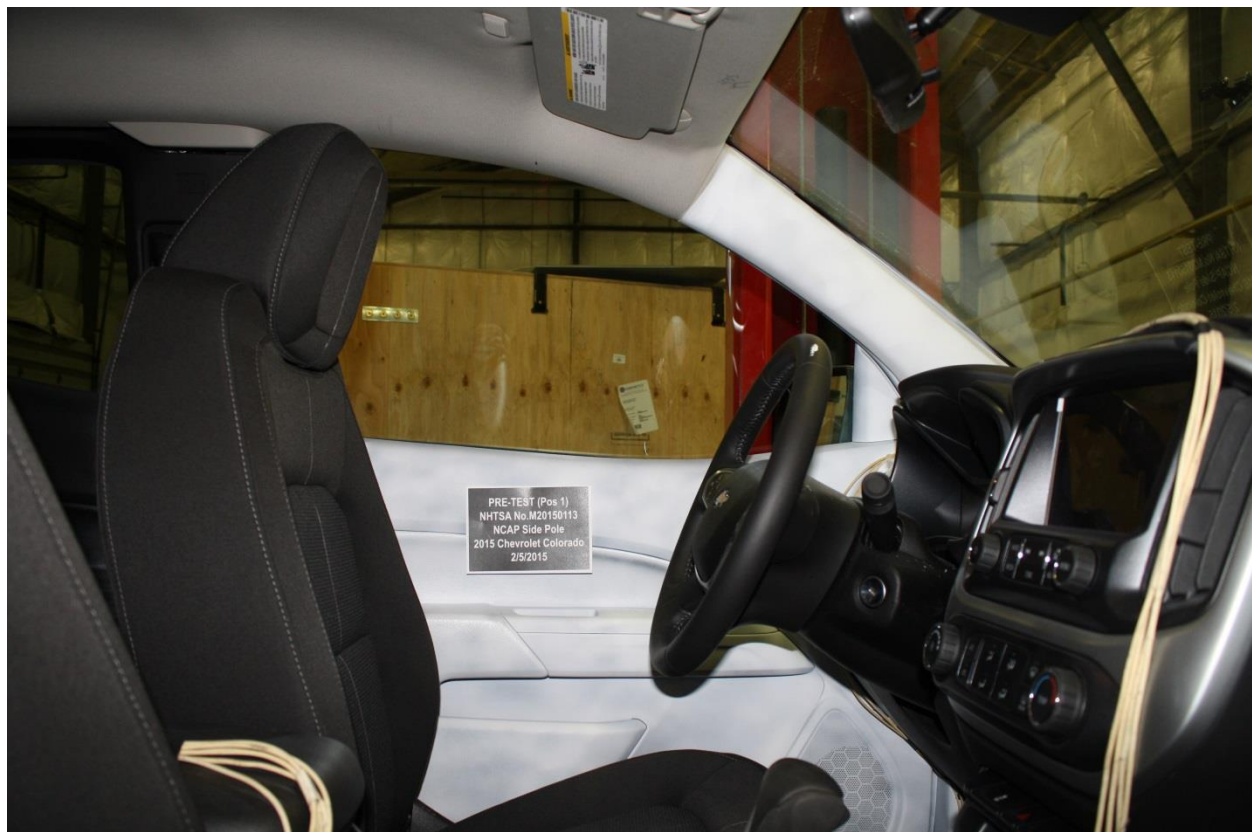


Figure A-44: Pre-Test Inner Door Panel View



Figure A-45: Post-Test Inner Door Panel View Showing Dummy Contact Location



Figure A-46: Post-Test Dummy Close-Up Head Contact with Vehicle Interior View



Figure A-47: Post-Test Dummy Close-Up Head Contact with Side Airbag View



Figure A-48: Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View



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



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



Figure A-51: Post-Test Dummy Close-Up Pelvis Contact with Side Airbag View

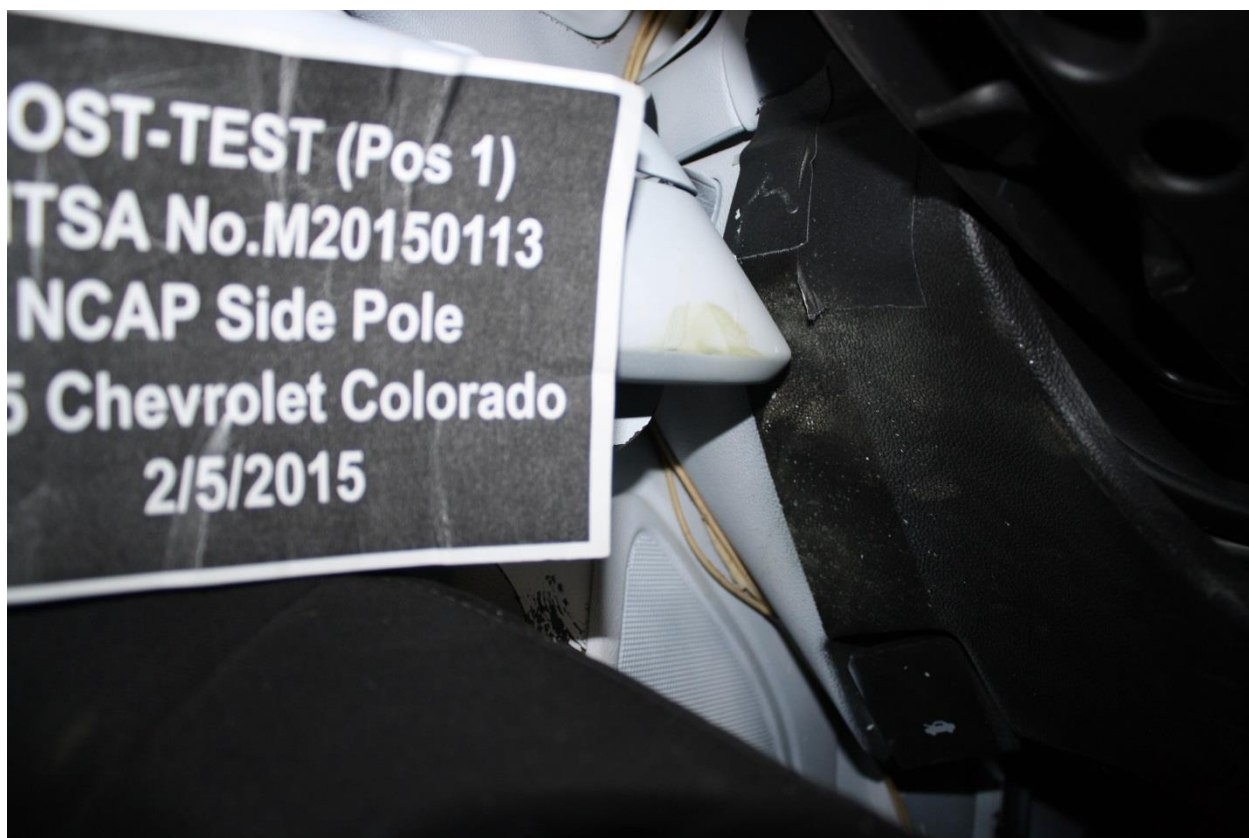


Figure A-52: Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View



Figure A-53: Pre-Test View of Fuel Filler Cap or Fuel Filler Neck



Figure A-54: Post-Test View of Fuel Filler Cap or Fuel Filler Neck



Figure A-55: Close-Up View of Vehicle's Certification Label

Photo Not Applicable

Figure A-55a: Close-Up View of Reduced Load Capacity Label



Figure A-56: Close-Up View of Vehicle's Tire Information Placard or Label

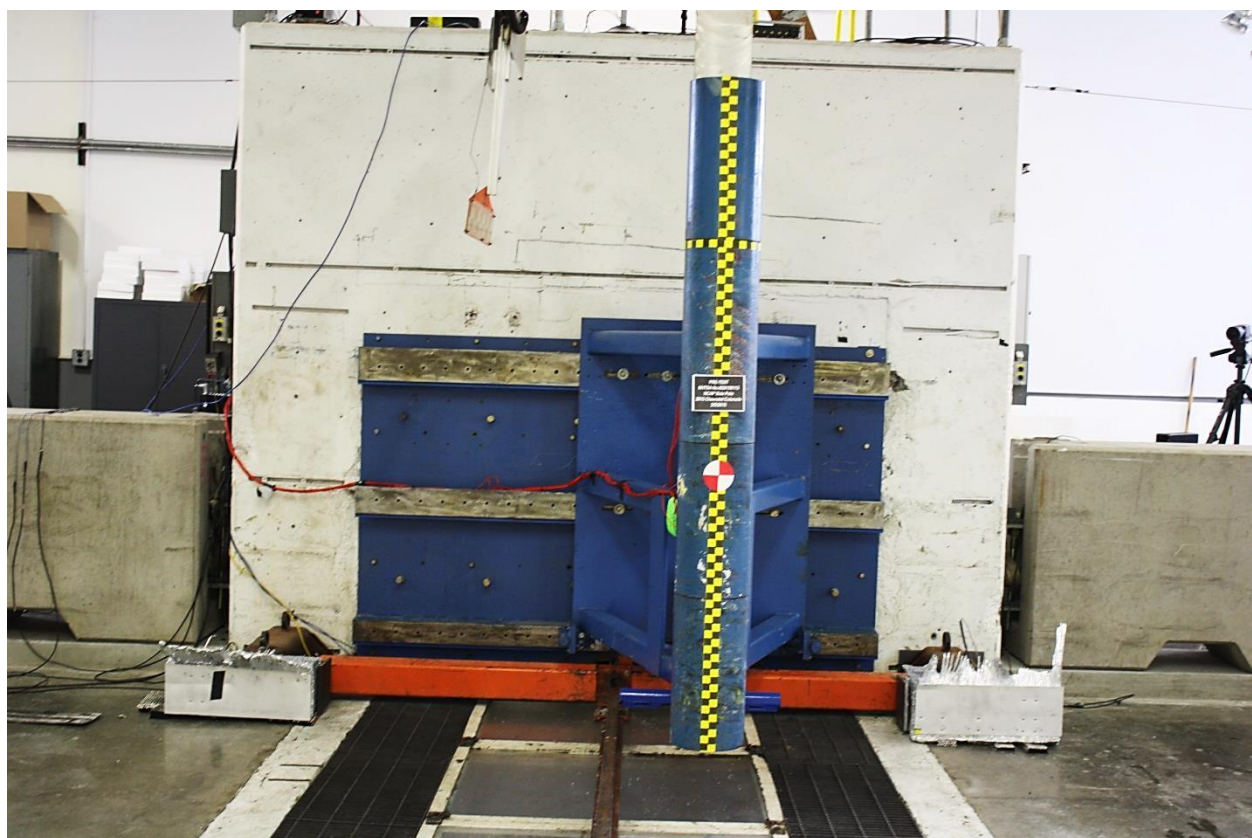


Figure A-57: Pre-Test Pole Barrier Front View

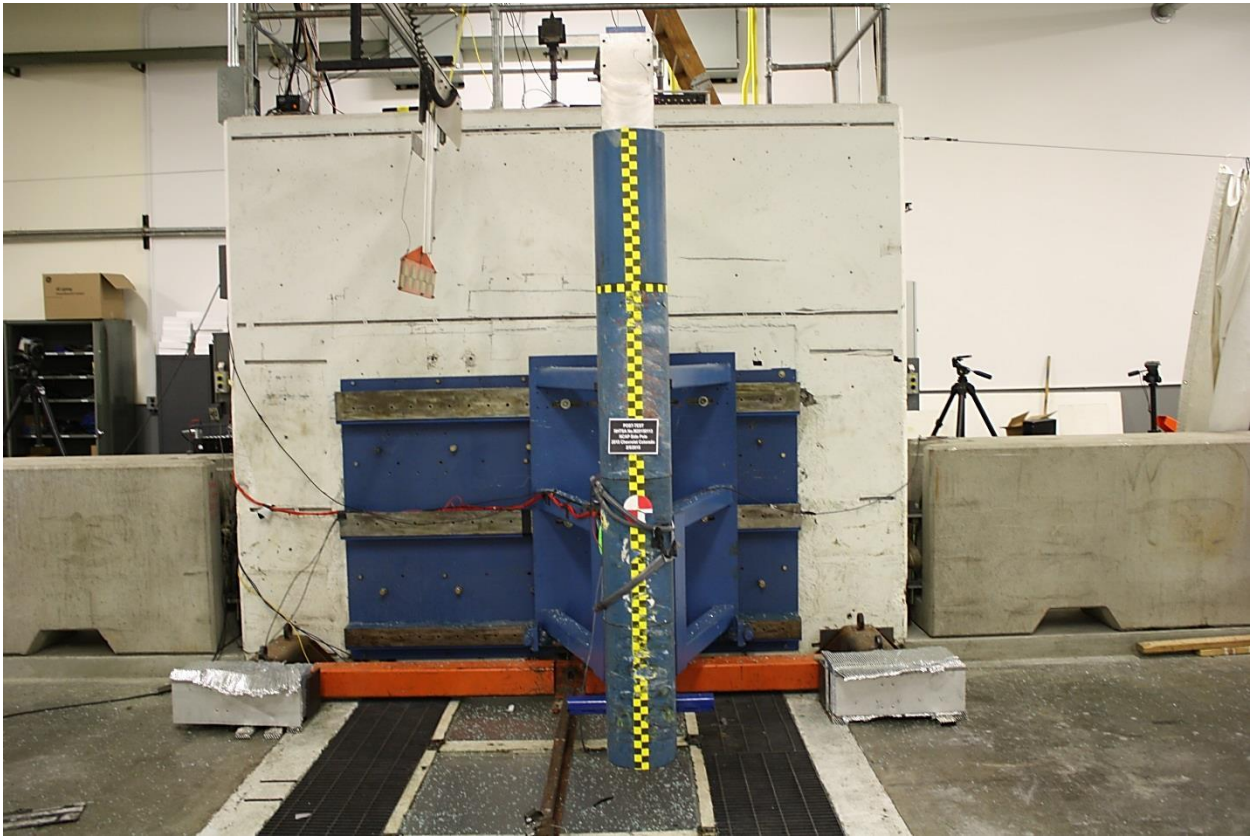


Figure A-58: Post-Test Pole Barrier Front View

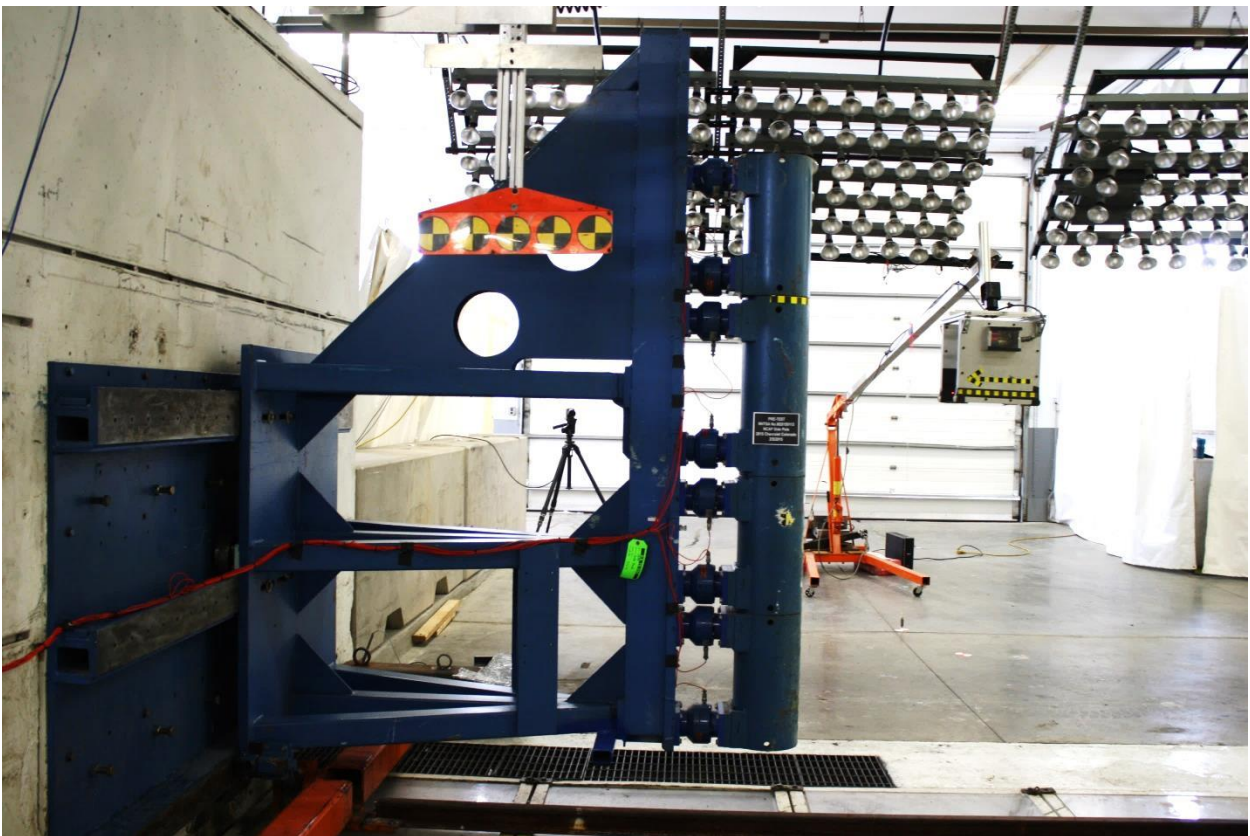


Figure A-59: Pre-Test Pole Barrier Side View

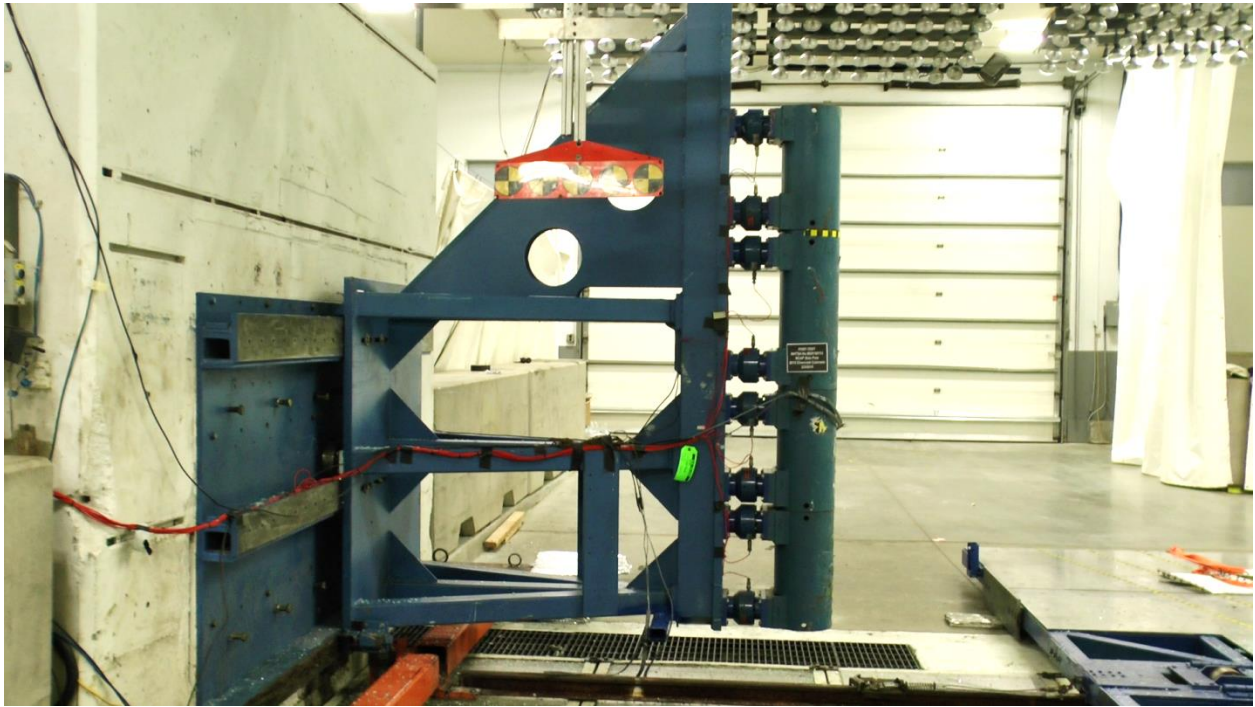


Figure A-60: Post-Test Pole Barrier Side View

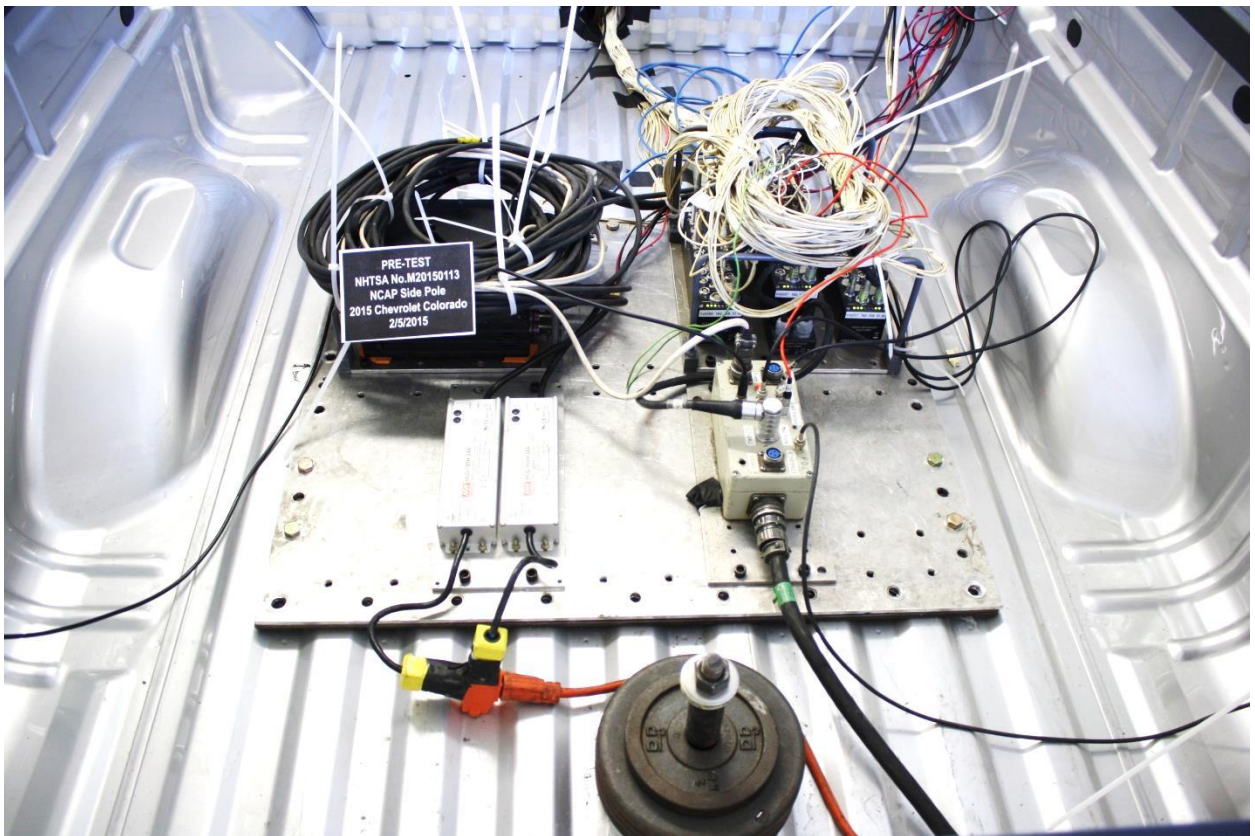


Figure A-61: Pre-Test Ballast View

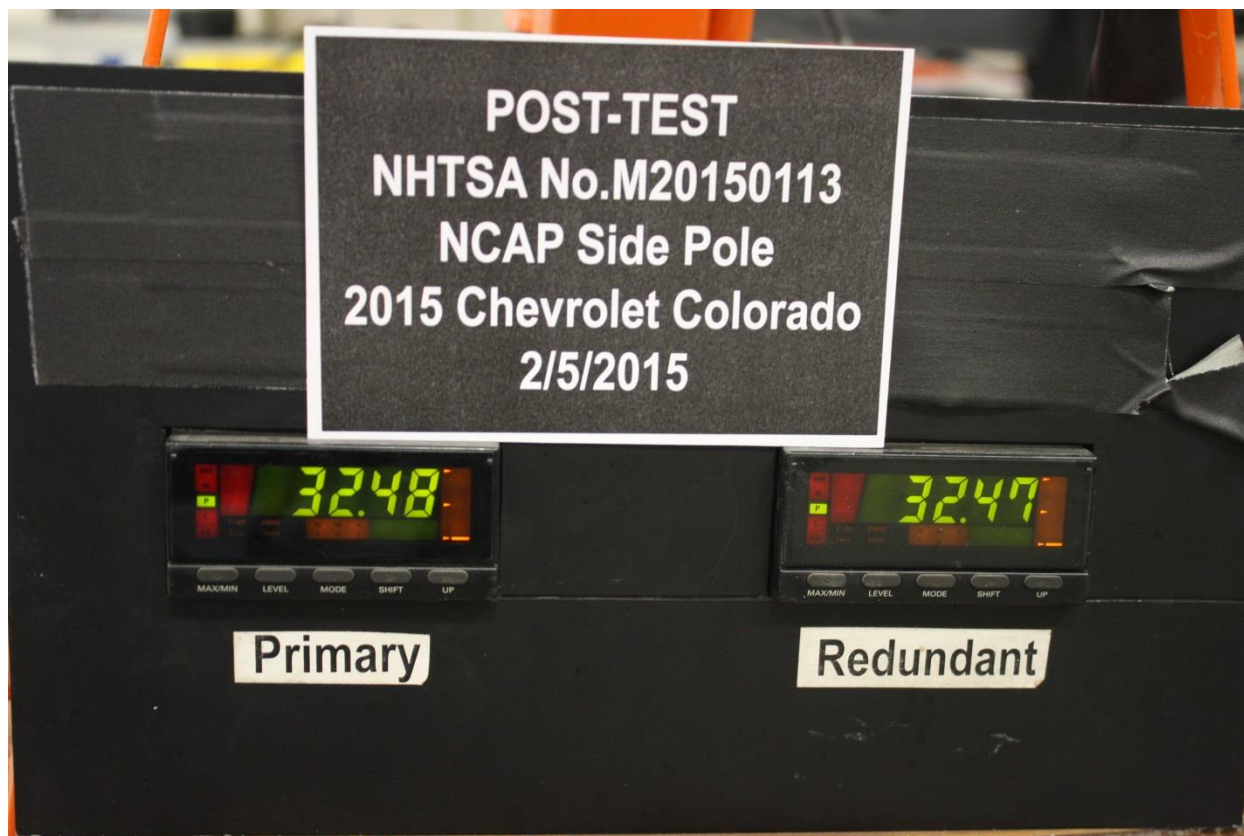


Figure A-62: Post-Test Primary and Redundant Speed Trap Read-Out

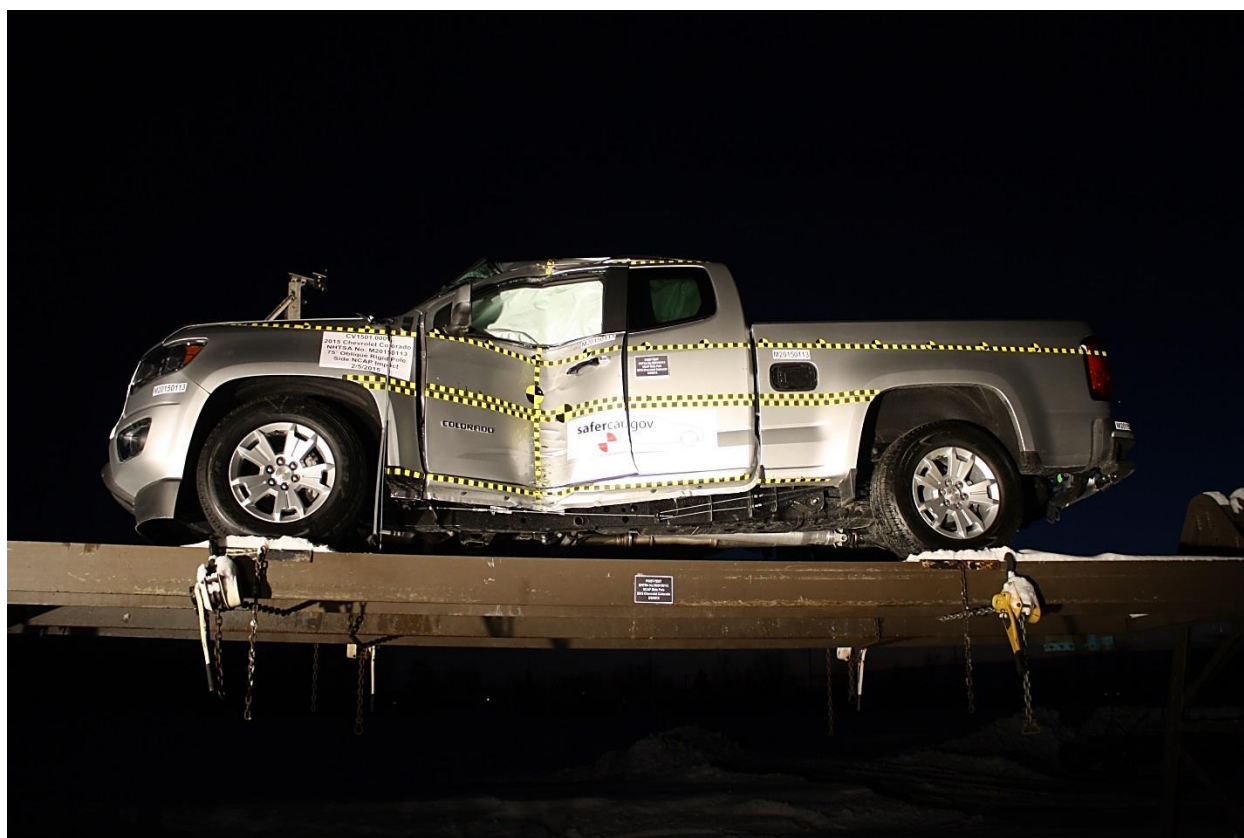


Figure A-63: FMVSS No. 301 Static Rollover 0 Degrees



Figure A-64: FMVSS No. 301 Static Rollover 90 Degrees



Figure A-65: FMVSS No. 301 Static Rollover 180 Degrees

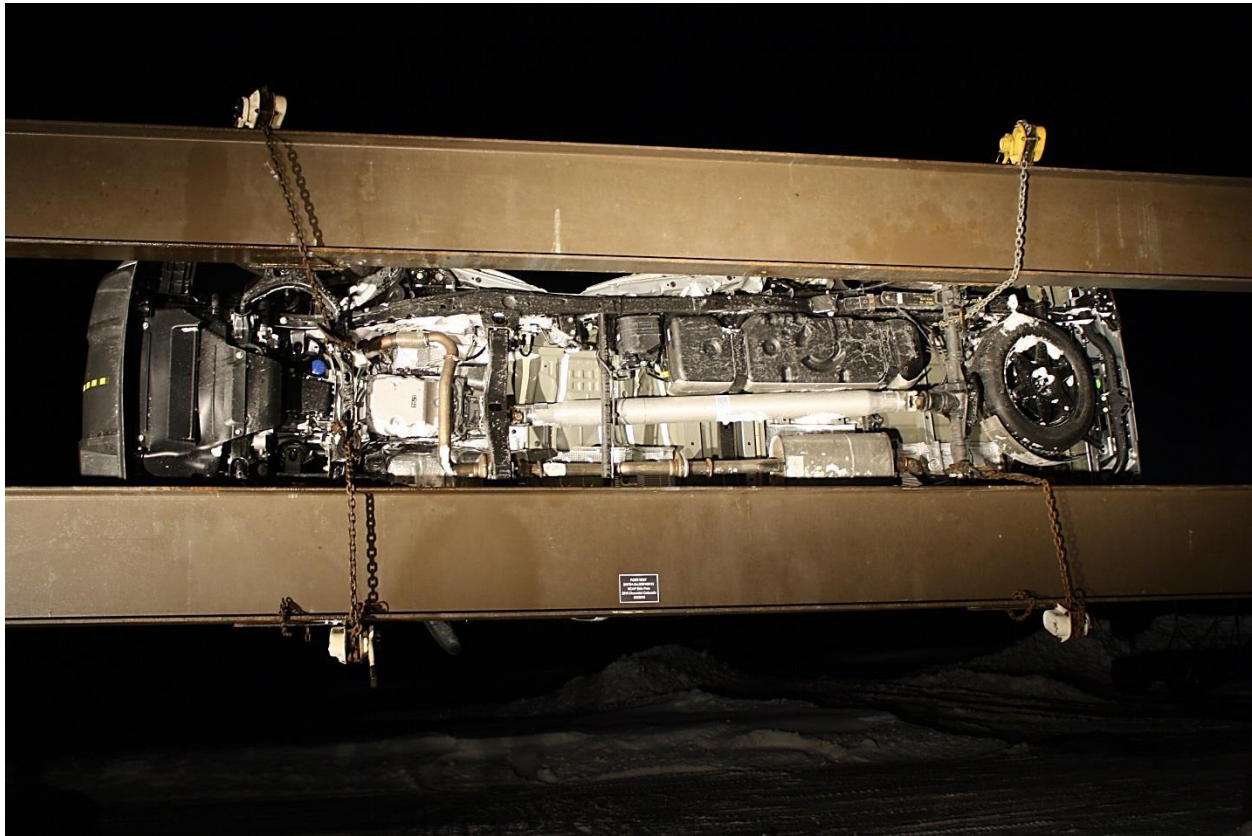


Figure A-66: FMVSS No. 301 Static Rollover 270 Degrees

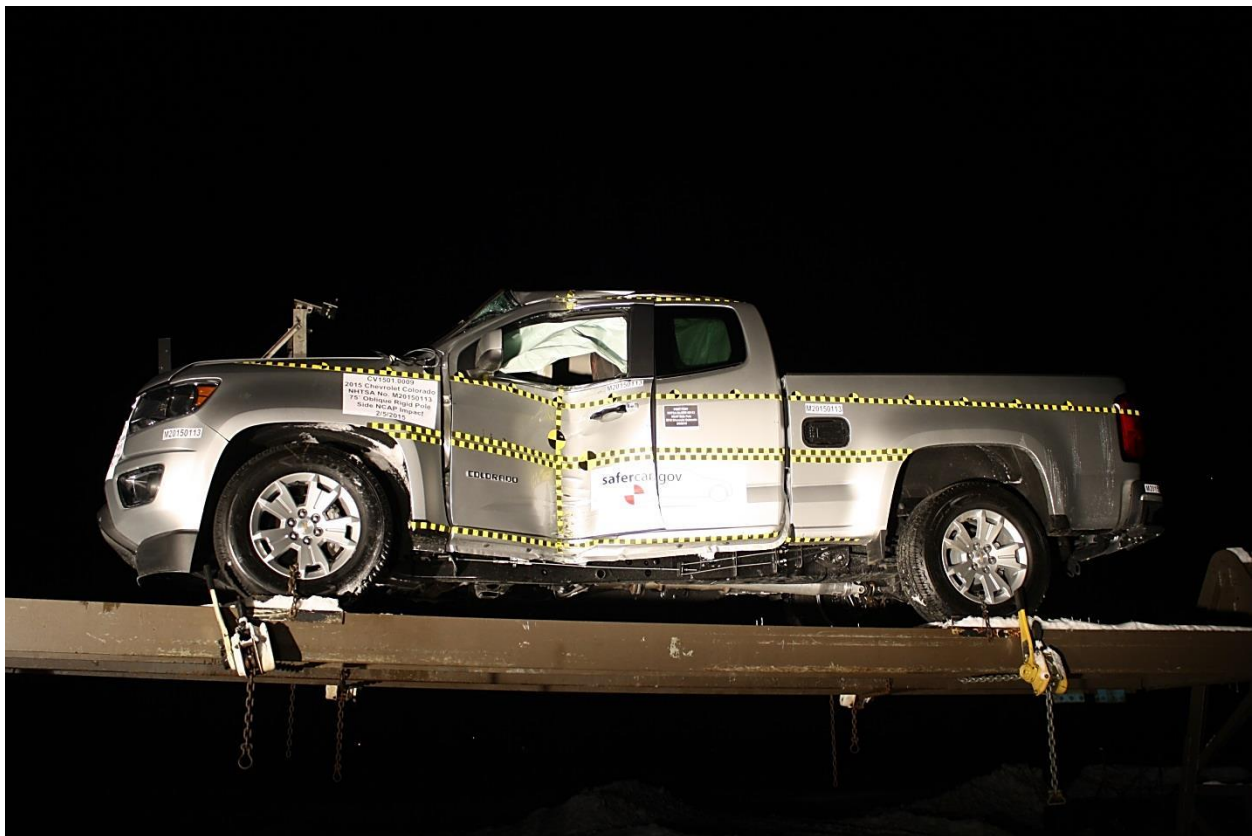


Figure A-67: FMVSS No. 301 Static Rollover 360 Degrees



Figure A-68: Impact Event

**2015 COLORADO 2WD LT
EXT CAB**

**EXTERIOR: SILVER ICE METALLIC
INTERIOR: JET BLACK**

**ENGINE: 2.5L I4, DI, DOHC,
TRANSMISSION: 6-SPD AUTOMATIC**

STANDARD EQUIPMENT

ITEMS LISTED BELOW ARE INCLUDED AT NO EXTRA CHARGE IN THE STANDARD VEHICLE PRICE SHOWN.

- CHEVROLET COMPLETE CARE:
 - SEE WWW.CHEVY.COM OR DEALER FOR TERMS, DETAILS & LIMITS
- 2 YR / 24,000 MILE SCHEDULED MAINTENANCE OIL & FILTER CHANGE
- 4 WHEEL TIRE ROTATION
- 27 POINT INSPECTION
- 3 YR/36,000 MILES BUMPER-TO-BUMPER WARRANTY
- 5 YR/100,000 MILES POWERTRAIN LIMITED WARRANTY
- ROADSIDE ASSISTANCE
- COURTESY TRANSPORTATION

MECHANICAL

- ENGINE, 2.5L I4, DI, DOHC, VVT
- TRANSMISSION, 6-SPD AUTOMATIC

SAFETY & SECURITY

- REAR VISION CAMERA
- REMOTE KEYLESS ENTRY
- AIRBAGS: DRIVER & RT. FRONT PASS - FRONT/SIDE-IMPACT, OUTBOARD FRNT & REAR SEAT
- SIDE HEAD CURTAIN
- STABILITRAK-STABILITY CONTROL SYSTEM W/ TRACTION CONTROL
- BRAKES, 4-WHEEL ANTILOCK, 4 WHEEL DISC W/ DURALIFE ROTORS

EXTERIOR

- TAILGATE, LOCKING
- CORNERSTEP, REAR BUMPER
- DUAL POWER OUTSIDE MIRRORS, POWER ADJUST, MANUAL FOLD
- HEAD LAMPS, HALOGEN
- WHEELS, 17" BLADE SILVER METALLIC CAST ALUMINUM
- TIRES, ALL-SEASON, BLACKWALL
- COMPACT SPARE WHEEL/TIRE

INTERIOR

- SEAT ADJUST, DRIVER 4-WAY PWR
- SEATS, DUAL REAR W/ UNDERSEAT STORAGE
- SEATS, FRONT BUCKET
- POWER WINDOW W/ EXPRESS DRIVER UP/DOWN
- COLOR KEYED CARPET
- FLOOR MATS, CARPETED FRNT/REAR
- AIR CONDITIONING
- MIRROR, MANUAL INSIDE RR VIEW
- VISORS, DRIVER & FRONT PASS, ILLUMINATED VANITY MIRRORS
- CRUISE CONTROL
- STEERING COLUMN, TILT & TELESCOPIC
- LEATHER WRAP STEERING WHEEL
- STEERING WHEEL CONTROLS
- CLOTH FRONT & REAR SEATS

CONNECTIVITY FEATURES

- CHEVROLET MYLINK AUDIO SYSTEM W/ 8" DIAGONAL COLOR TOUCH

OPTIONS & PRICING

MANUFACTURER'S SUGGESTED RETAIL PRICE

STANDARD VEHICLE PRICE	\$25,170.00
(OPTIONAL EQUIPMENT INSTALLED BY THE MANUFACTURER (MAY REPLACE STANDARD EQUIPMENT SHOWN))	
LT CONVENIENCE PACKAGE INCL:	615.00
• REMOTE VEHICLE START	
• REAR WINDOW DEFROSTER	

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• EZ LIFT AND LOWER TAILGATE	
• FRONT FOG LAMPS	
DIFFERENTIAL, LOCKING REAR FULLY AUTOMATIC	325.00
TOTAL OPTIONS	
	\$940.00
TOTAL VEHICLE & OPTIONS	
	\$26,110.00
DESTINATION CHARGE	
	875.00
TOTAL VEHICLE PRICE*	
	\$26,985.00

EPA DOT Fuel Economy and Environment

Fuel Economy

22 MPG
combined city/hwy

20 city 27 highway

4.5 gallons per 100 miles

You spend \$1,000 more in fuel costs over 5 years
compared to the average new vehicle.

Annual fuel cost \$2,400

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 24 MPG and costs \$11,000 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at \$3.50 per gallon. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

Smog Rating (tailpipe only)

This vehicle emits 394 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions. Learn more at fuelconomy.gov.

fuelconomy.gov
Calculate personalized estimates and compare vehicles

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

PARTS CONTENT INFORMATION

This label has been registered. Do not remove. Do not alter. Do not use for other purposes. Includes Manufacturer's Recommended Maintenance Schedule. Dealer's price includes only in-vessel options and accessories not listed above. Social Services or license fees.

FOR VEHICLES IN THIS CARLINE:
U.S./CANADIAN PARTS CONTENT: 66%
MAJOR SOURCES OF FOREIGN PARTS CONTENT: MEXICO 17%

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

FOR THIS VEHICLE:
FINAL ASSEMBLY POINT:
WENTZVILLE, MO U.S.A.
COUNTRY OF ORIGIN:
ENGINE: UNITED STATES
TRANSMISSION: UNITED STATES

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GMD-5L-PRC-2015-0110-001

4G LTE

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DEALER INFORMATION

DEALER NO 10007
SALES CODE 0000
VIN 1GCHSBEAF1148951
DEALER TO WHOM DELIVERED
LAFFERTY CHEVROLET COMPANY
629 W STREET RD
WARMINSTER, PA 18974-3132

TU

1GA2551475

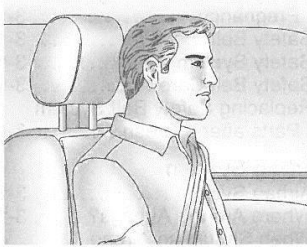
Figure A-69: Monroney Label

Head Restraints

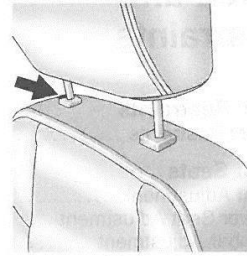
The vehicle's front seats have adjustable head restraints in the outboard seating positions.

Warning

With head restraints that are not installed and adjusted properly, there is a greater chance that occupants will suffer a neck/spinal injury in a crash. Do not drive until the head restraints for all occupants are installed and adjusted properly. ▼



Adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head. This position reduces the chance of a neck injury in a crash.



Driver Seat, Inboard Button

The height of the head restraint can be adjusted. Pull the head restraint up to raise it. Try to move the head restraint to make sure that it is locked in place.

To lower the head restraint, press the button, located on the top of the seatback, and push the restraint down. Try to move the head restraint after the button is released to make sure that it is locked in place.

The front seat outboard head restraints are not removable.

Figure A-70: Head Restraint Use and Adjustment Information from Vehicle Owner's Manual

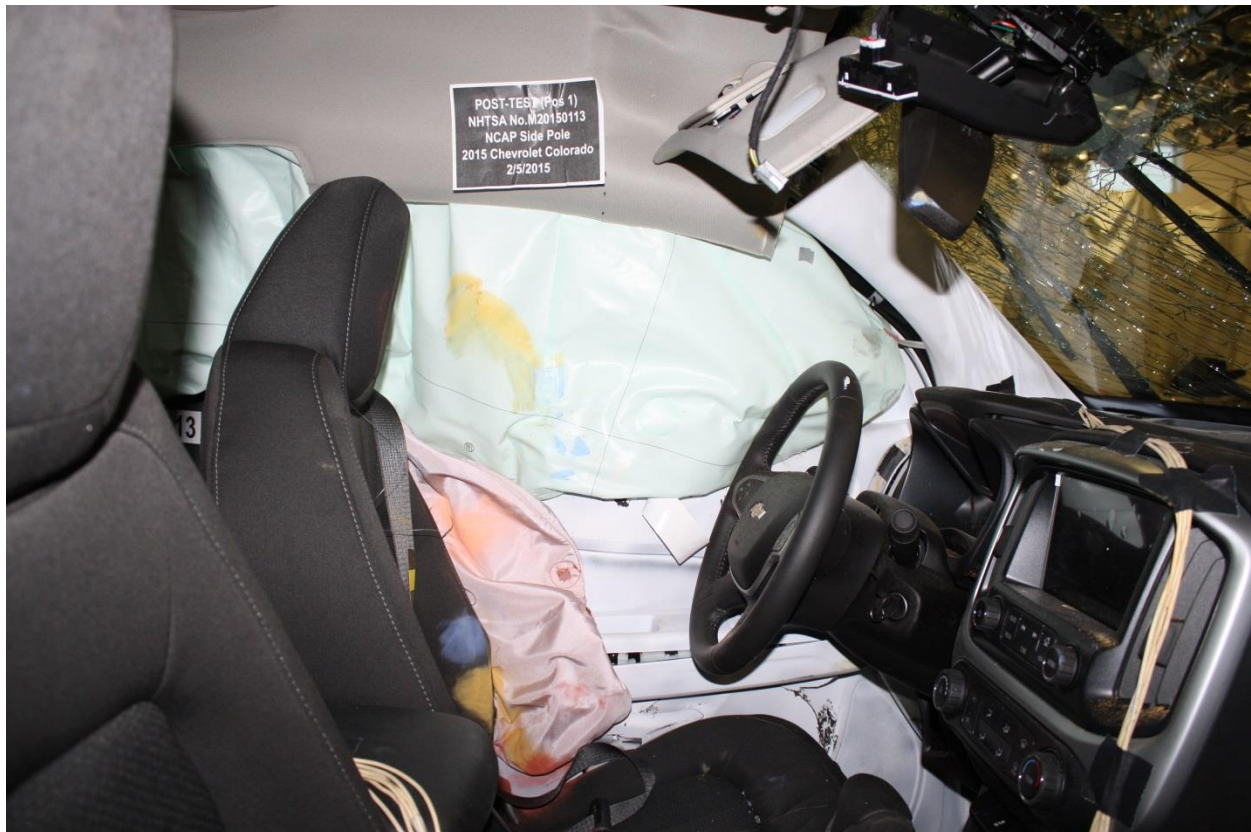


Figure A-71: Post-Test View of Shattered Vehicle Inner Door Panel (if applicable)

APPENDIX B

VEHICLE AND DUMMY RESPONSE DATA PLOTS

TABLE OF DATA PLOTS
Driver Dummy Instrumentation Plots

Fig.	Description	Page
1	Driver Head Acceleration (X) Primary vs. Time	B-4
2	Driver Head Acceleration (Y) Primary vs. Time	B-4
3	Driver Head Acceleration (Z) Primary vs. Time	B-4
4	Driver Head Resultant Acceleration Primary vs. Time	B-4
5	Driver Lower Spine T12 Acceleration (X) vs. Time	B-5
6	Driver Lower Spine T12 Acceleration (Y) vs. Time	B-5
7	Driver Lower Spine T12 Acceleration (Z) vs. Time	B-5
8	Driver Lower Spine T12 Resultant Acceleration vs. Time	B-5
9	Driver Iliac Wing Force on Impact Side (Y) vs. Time	B-6
10	Driver Acetabulum Force on Impact Side (Y) vs. Time	B-6
11	Driver Total Pelvis Force on Impact Side (Y) vs. Time	B-6

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

Additional Driver Dummy Instrumentation Data

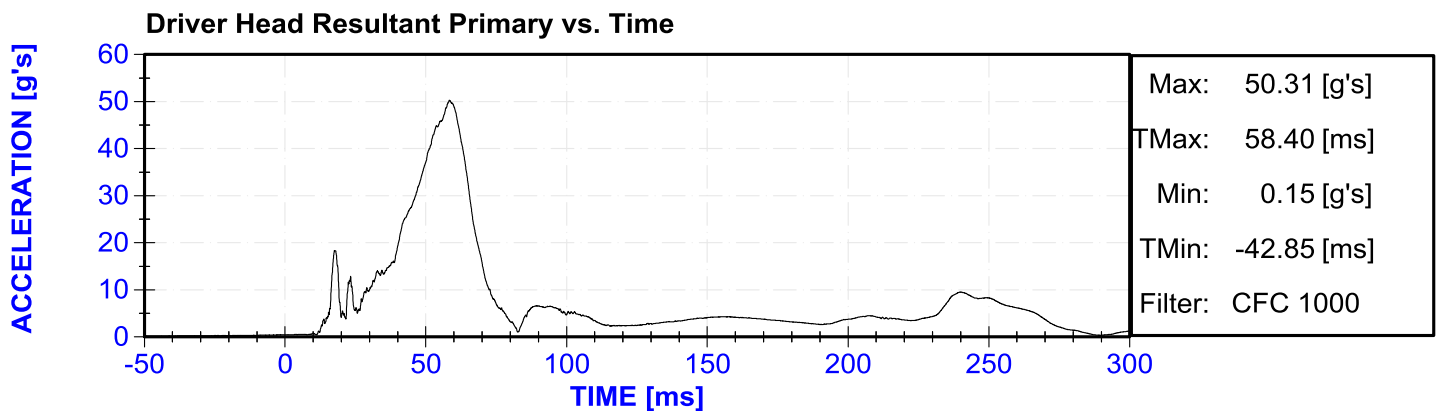
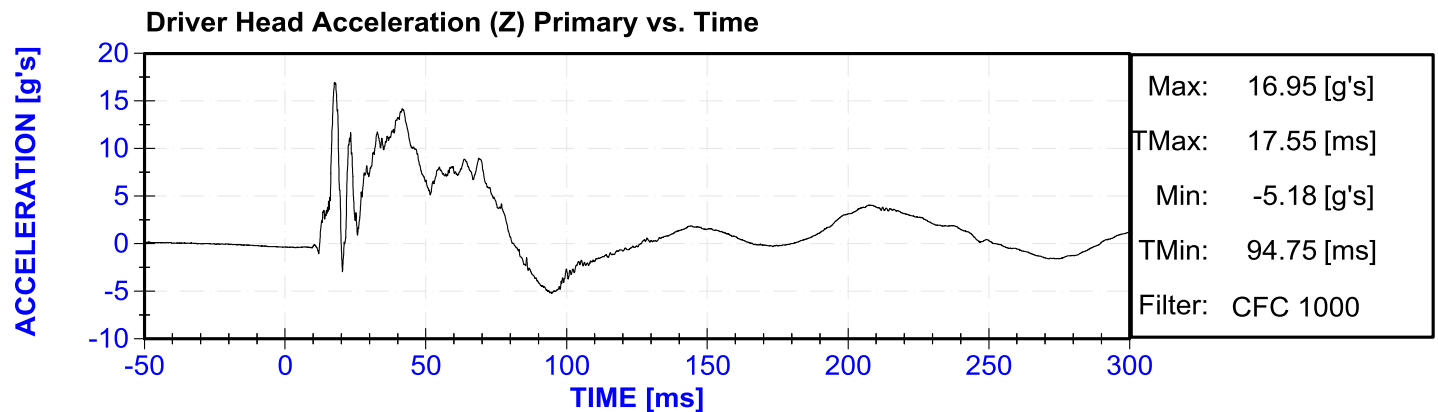
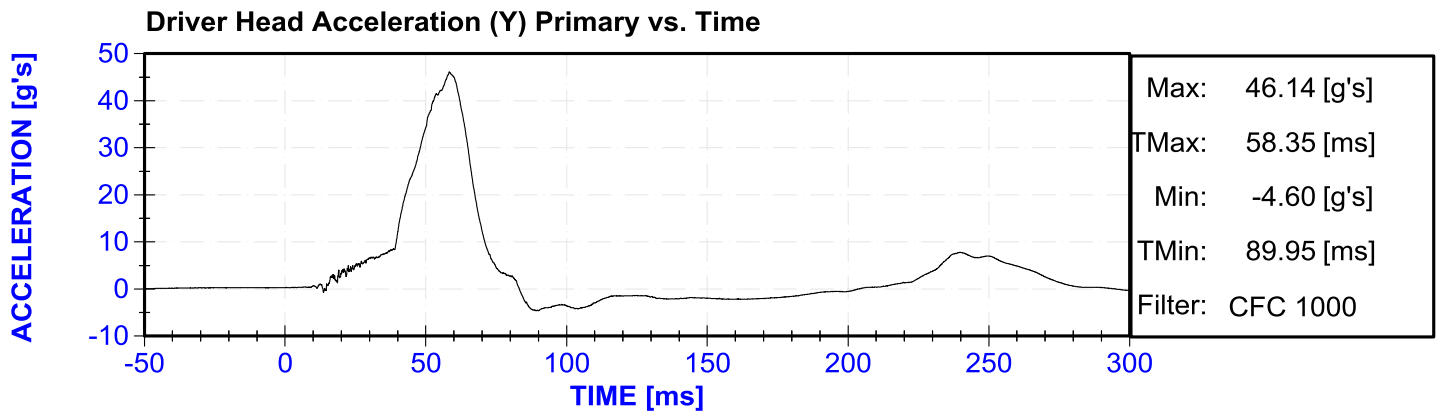
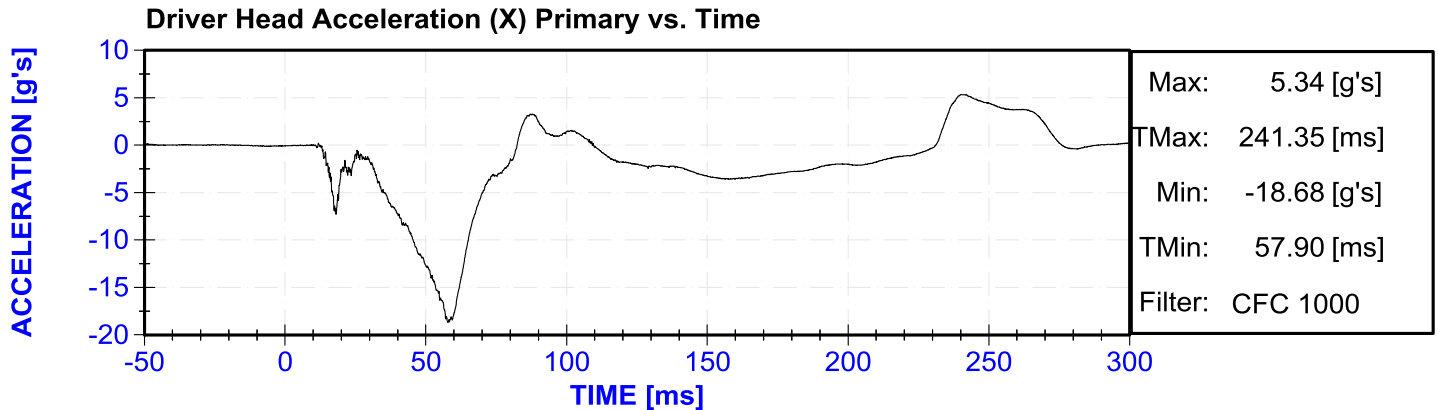
Driver Head Acceleration Redundant (X)
Driver Head Acceleration Redundant (Y)
Driver Head Acceleration Redundant (Z)
Driver Upper Thorax Rib Deflection (Y)
Driver Middle Thorax Rib Deflection (Y)
Driver Lower Thorax Rib Deflection (Y)
Driver Upper Abdomen Rib Deflection (Y)
Driver Lower Abdomen Rib Deflection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

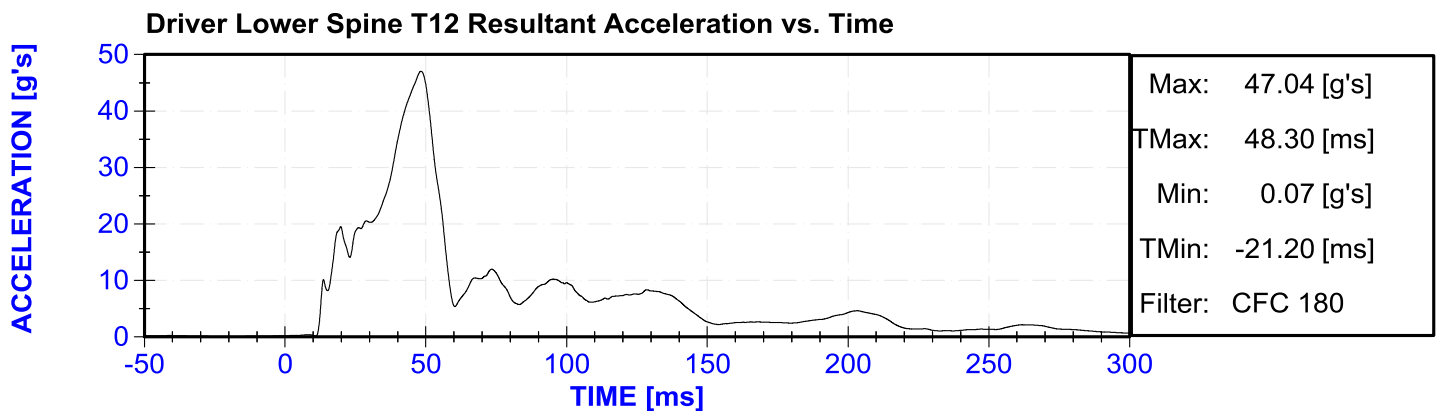
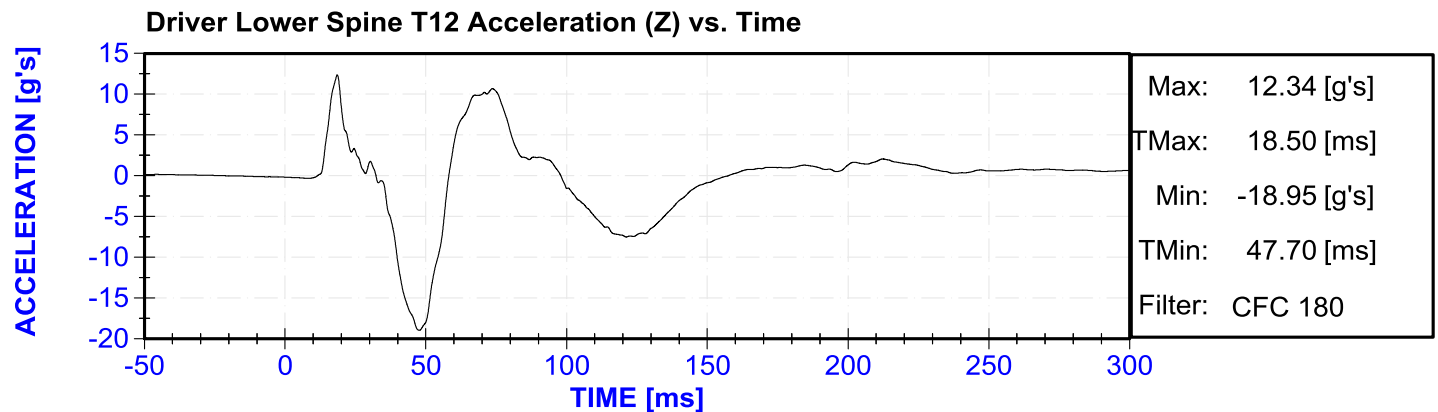
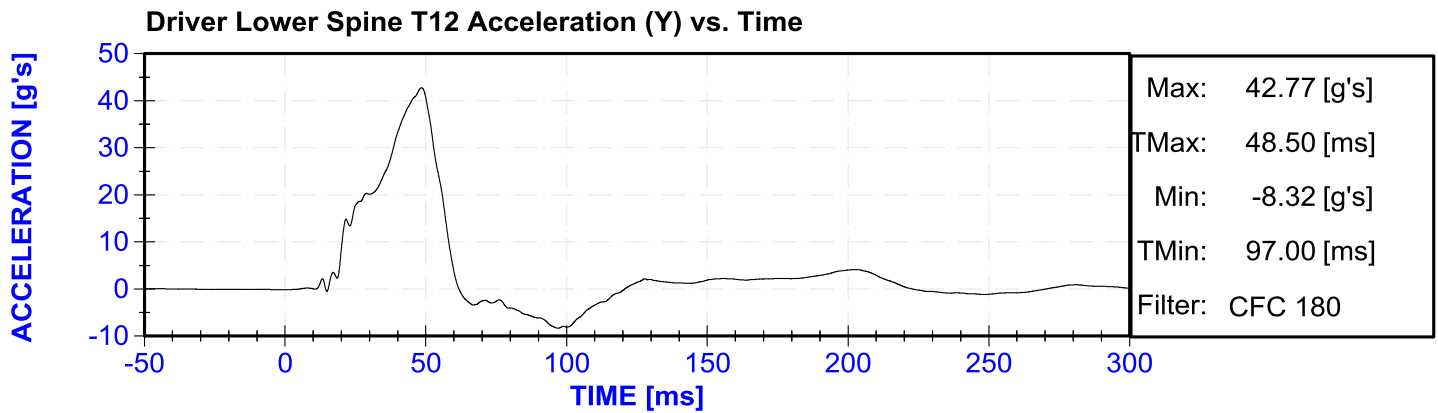
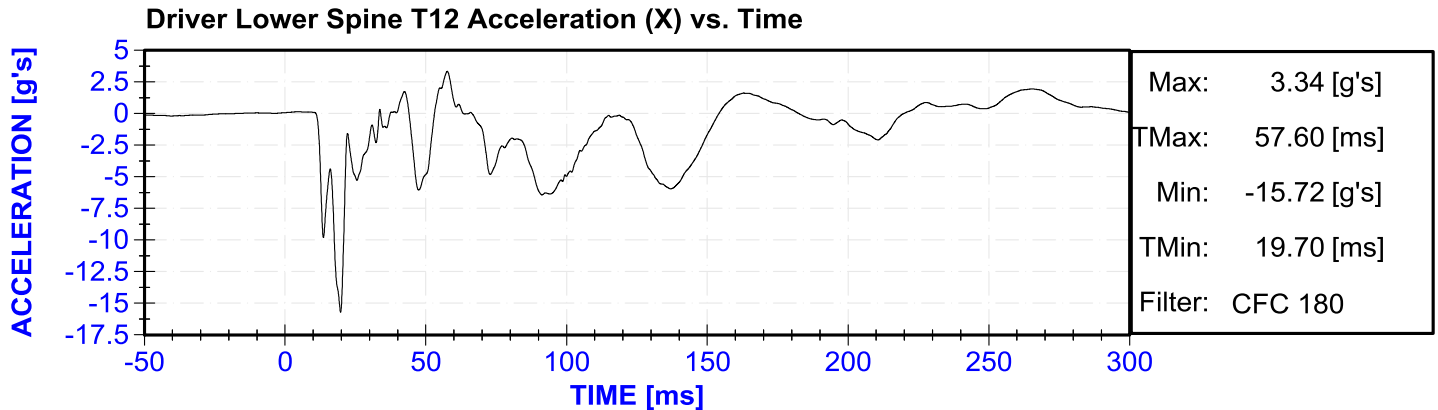
Vehicle Instrumentation Data

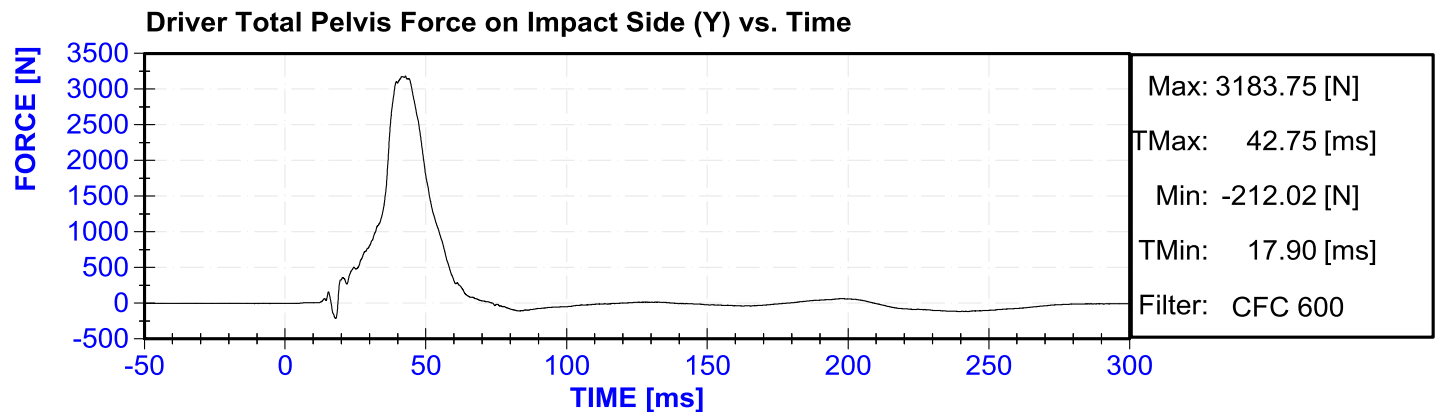
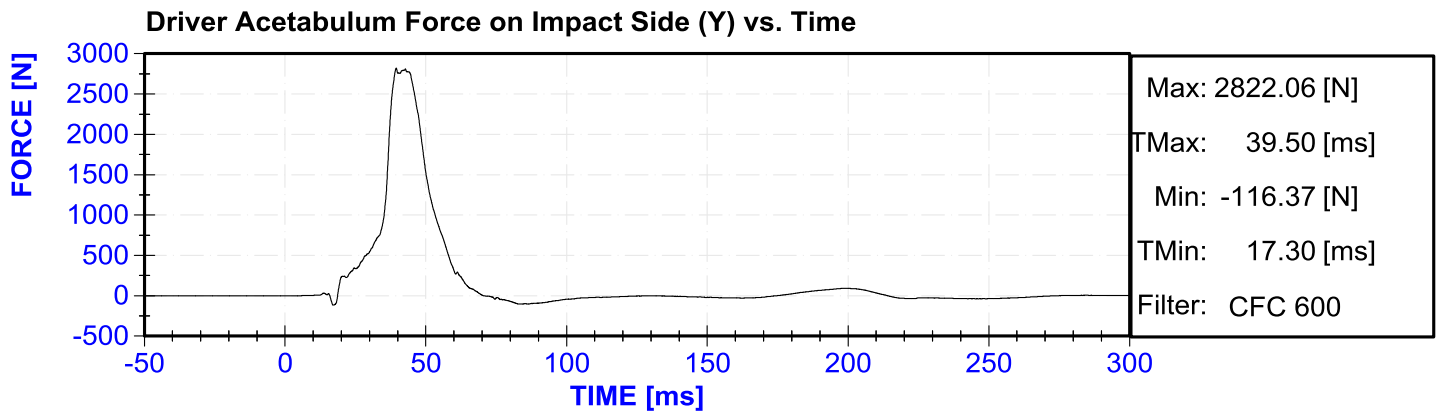
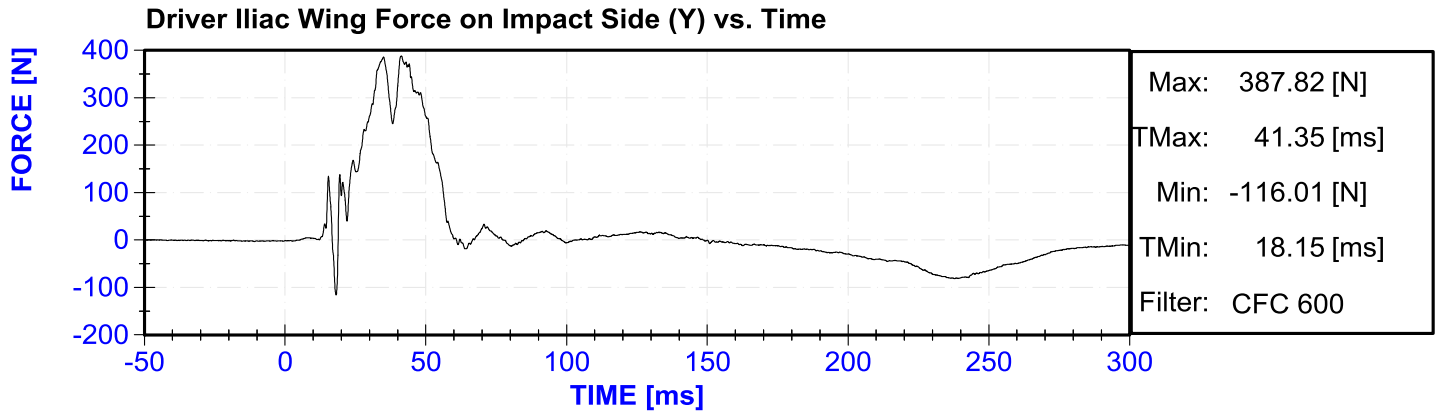
Vehicle Center of Gravity Acceleration (X)
Vehicle Center of Gravity Acceleration (Y)
Vehicle Center of Gravity Acceleration (Z)
Left Floor Sill Acceleration (Y)
Left A-Pillar Sill Acceleration (Y)
Left Lower A-Pillar Acceleration (Y)
Left Mid A-Pillar Acceleration (Y)
Left B-Pillar Sill Acceleration (Y)
Left Lower B-Pillar Acceleration (Y)
Left Mid B-Pillar Acceleration (Y)
Driver Seat Track at Dummy Hip Point Acceleration (Y)
Engine Top Acceleration (X)
Engine Top Acceleration (Y)
Firewall Center Acceleration (Y)
Right Roof at Vertical Impact Reference Line Acceleration (Y)
Right Sill at Vertical Impact Reference Line Acceleration (Y)
Rear Floorpan Behind Rear Axle at Centerline Acceleration (X)
Rear Floorpan Behind Rear Axle at Centerline Acceleration (Y)

Pole Instrumentation Data

Load Cell Pole Barrier #1 Force (Y)
Load Cell Pole Barrier #2 Force (Y)
Load Cell Pole Barrier #3 Force (Y)
Load Cell Pole Barrier #4 Force (Y)
Load Cell Pole Barrier #5 Force (Y)
Load Cell Pole Barrier #6 Force (Y)
Load Cell Pole Barrier #7 Force (Y)
Load Cell Pole Barrier #8 Force (Y)







APPENDIX C

DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

CALIBRATION TEST RESULTS

PRE-TEST

SID-IIS 5TH PERCENTILE FEMALE - DRIVER ATD

SERIAL NO: 300

(CONFIGURED FOR LEFT SIDE IMPACT)

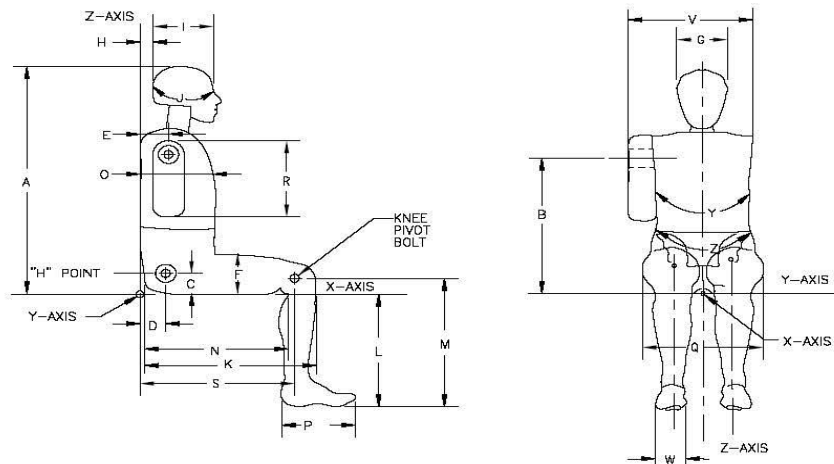


External Measurements - SID-IIs

Technician: M. Hartung

Date: 1/28/2015

Dummy Serial Number: 300



Symbol	Description	Specification (mm)		Result (mm)	Pass/Fail
A	Sitting Height	772	788	781	Pass
B	Shoulder Pivot Height	437	453	449	Pass
C	H-point Height	79	89	85	Pass
D	H-point from seatback	141	151	147	Pass
E	Shoulder Pivot from Backline	97	107	104	Pass
F	Thigh Clearance	119	135	122	Pass
G	Head Breadth	140	148	144	Pass
H	Head Back from Backline	40	46	43	Pass
I	Head Depth	178	188	182	Pass
J	Head Circumference	541	551	547	Pass
K	Buttock to Knee Length	514	540	538	Pass
L	Popliteal Height	343	369	357	Pass
M	Knee Pivot to floor height	392	409	404	Pass
N	Buttock Popliteal Length	416	442	437	Pass
O	Chest Depth w/o jacket	195	211	205	Pass
P	Foot Length	216	232	218	Pass
Q	Hip Breadth (w/pelvic plugs)	313	323	318	Pass
R	Arm Length	249	259	250	Pass
S	Knee Joint to seatback	477	493	487	Pass
V	Shoulder Width	341	357	348	Pass
W	Foot Width	78	94	82	Pass
Y	Chest Circumference w/jacket	851	881	869	Pass
Z	Waist Circumference	761	791	770	Pass

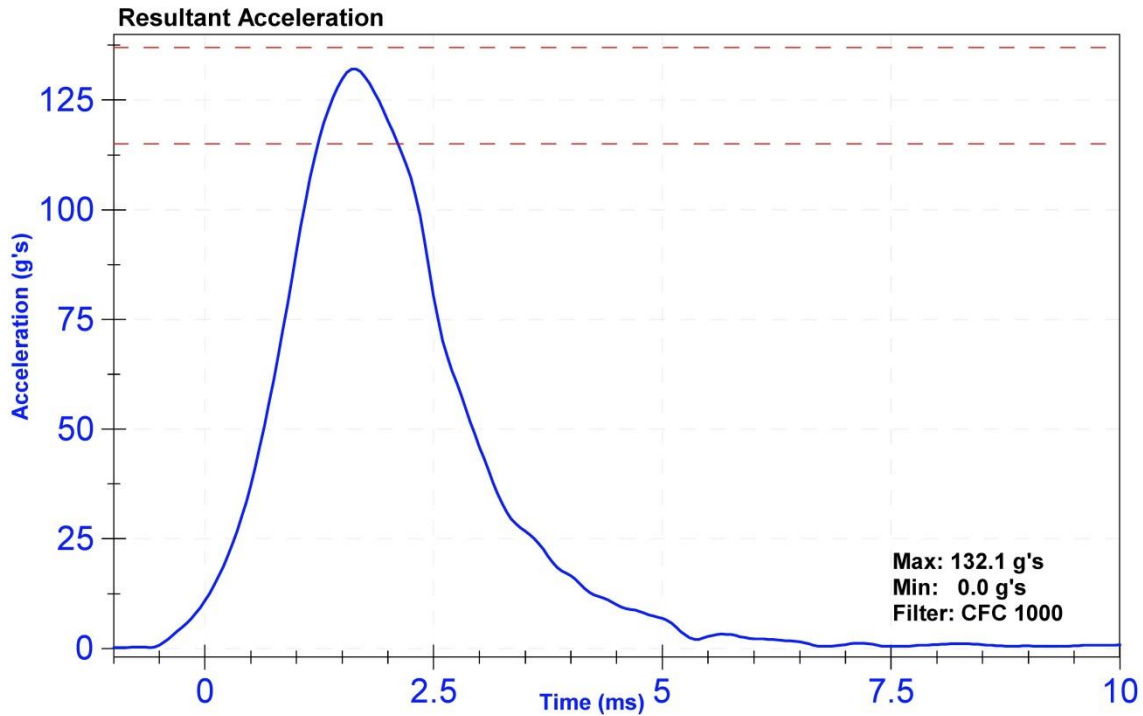
ATD Manufacturer	FTSS	Test Technician	M. Hartung
ATD Serial Number	300	Laboratory Supervisor	M. Goehle

Results

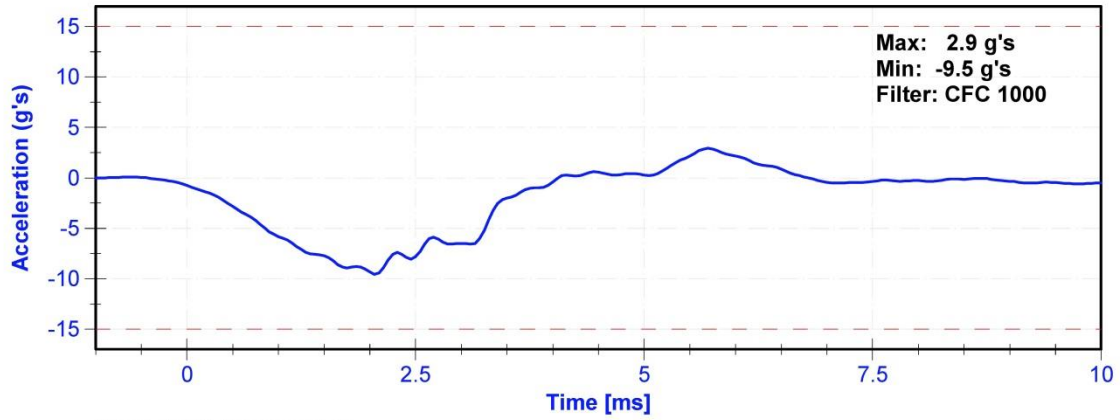
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	21.6	Pass
Humidity	10	70	%	11.9	Pass
Resultant Acceleration	115	137	g's	132.1	Pass
Oscillation	0	15	%	2.48	Pass
Fore-Aft Acceleration	-15	15	g's	-9.5	Pass

Transducer Calibrations

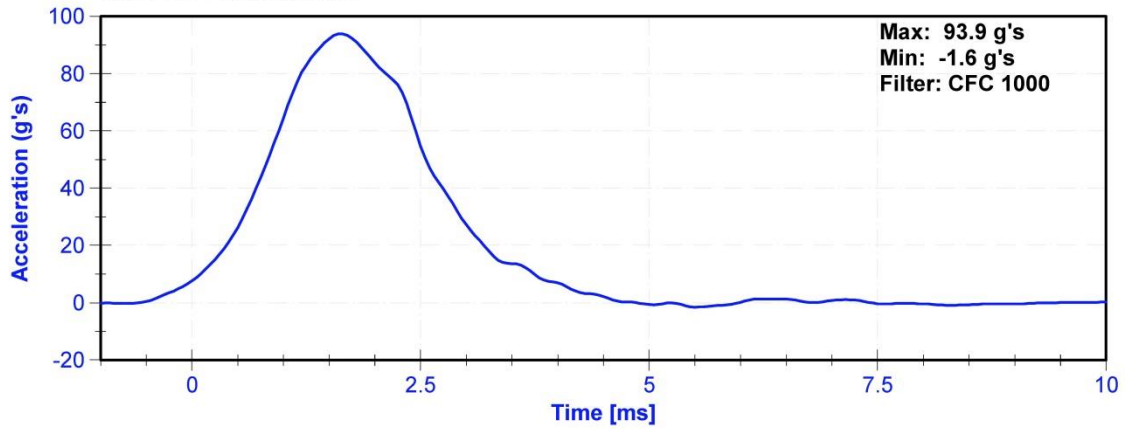
Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
X Accelerometer	ENDEVCO 7264CT	AC-P58777	8/28/2014	2/26/2015
Y Accelerometer	ENDEVCO 7264CT	AC-P59018	8/28/2014	2/26/2015
Z Accelerometer	ENDEVCO 7264CT	AC-P68608	8/28/2014	2/26/2015



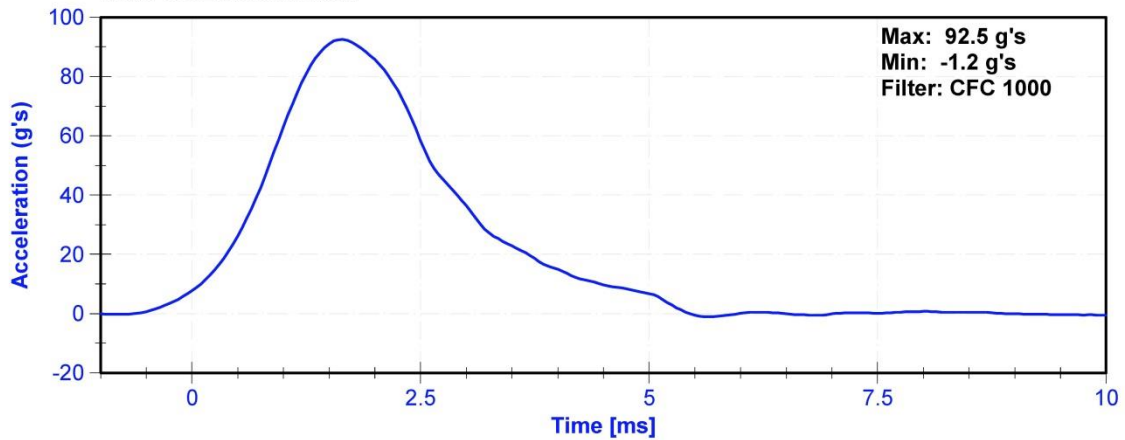
Head CG X Acceleration



Head CG Y Acceleration



Head CG Z Acceleration



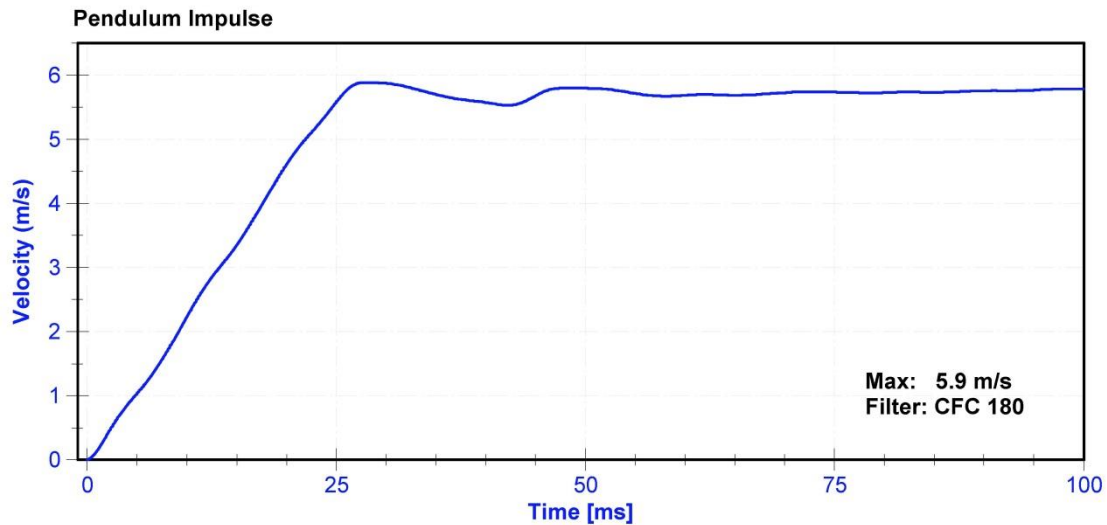
ATD Manufacturer	FTSS	Test Technician	M. Goehle
ATD Serial Number	300	Laboratory Supervisor	M. Goehle

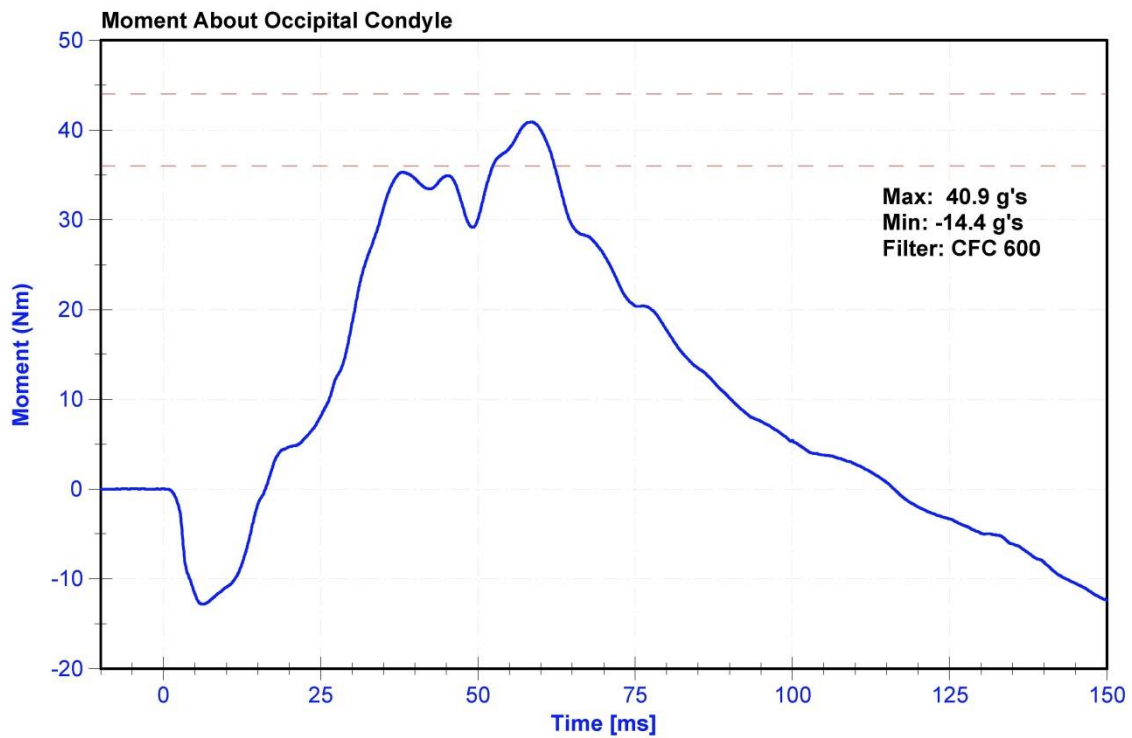
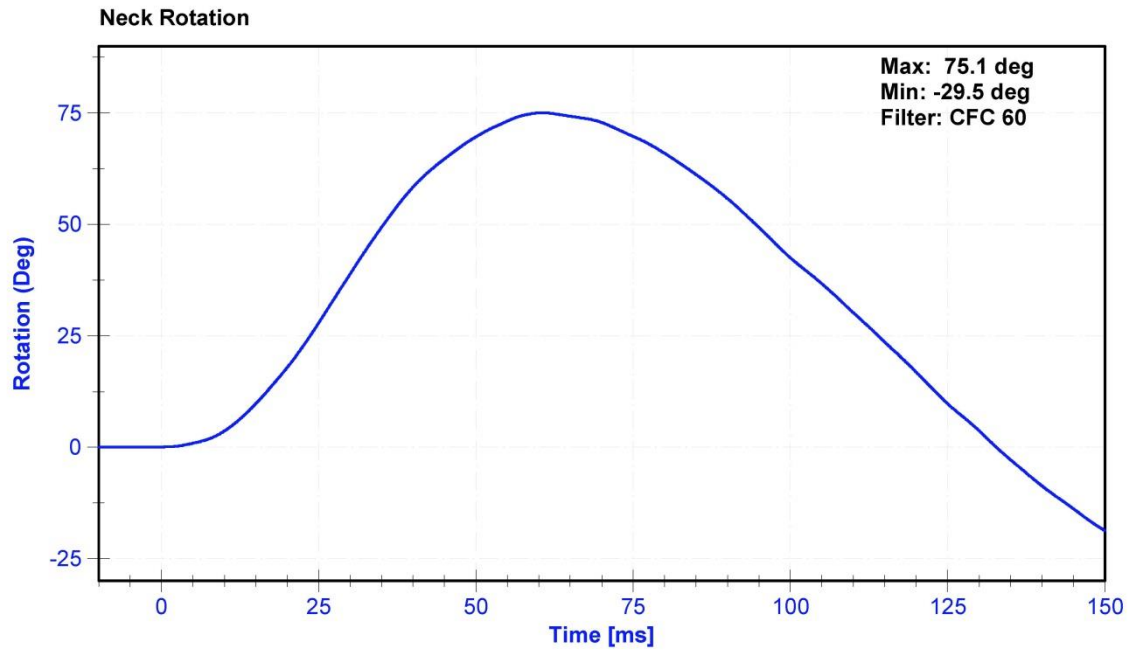
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	21.5	Pass
Humidity	10	70	%	13.5	Pass
Velocity	5.51	5.63	m/s	5.583	Pass
Pendulum Impulse at 10ms	2.2	2.8	m/s	2.23	Pass
Pendulum Impulse at 15ms	3.3	4.1	m/s	3.35	Pass
Pendulum Impulse at 20ms	4.4	5.4	m/s	4.61	Pass
Pendulum Impulse at 25ms	5.4	6.1	m/s	5.58	Pass
Pendulum Impulse from 25 to 100ms	5.5	6.2	m/s	5.89	Pass
Neck Rotation	71	81	deg	75.1	Pass
Time at Maximum Rotation	50	70	ms	60.6	Pass
Moment about the OC	36	44	Nm	40.9	Pass
Moment Decay to 0 Nm	102	126	ms	116.2	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	ENDEVCO 7231CT	AC-AH5F3	11/6/2014	11/6/2015
Pendulum Potentiometer	Denton 78051-342	DS-184Pend	11/13/2014	11/13/2015
Condyle Potentiometer	Denton 78051-342	DS-185Pend	11/13/2014	11/13/2015
Upper Neck Load Cell	DENTON 1716A	LC-130Fy	9/12/2014	9/12/2015





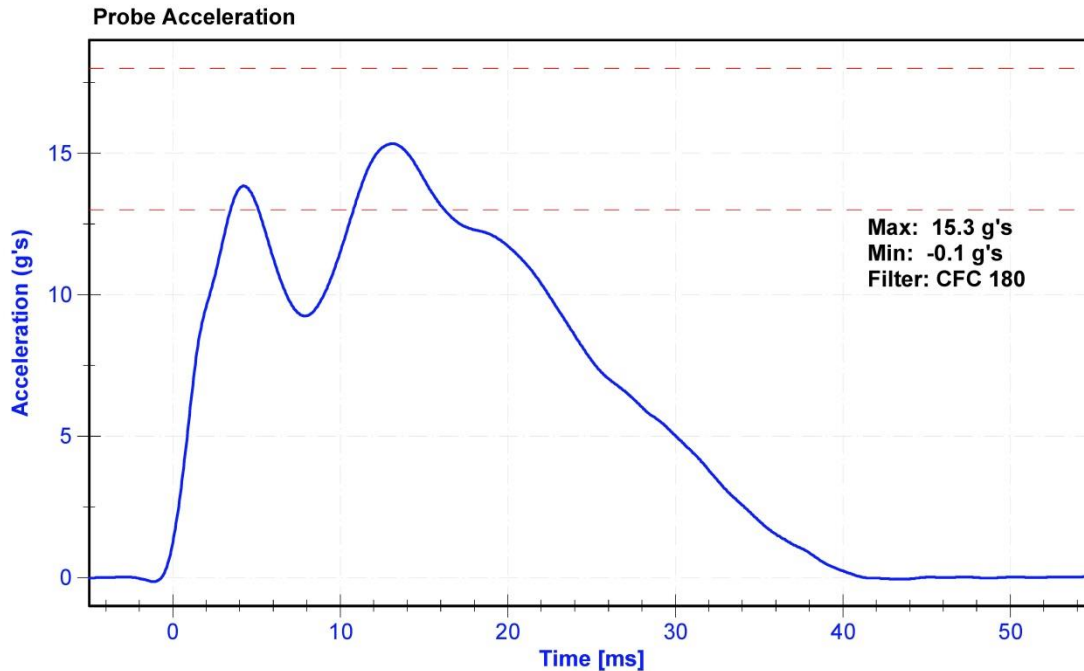
ATD Manufacturer	FTSS	Test Technician	M. Hartung
ATD Serial Number	300	Laboratory Supervisor	M. Goehle

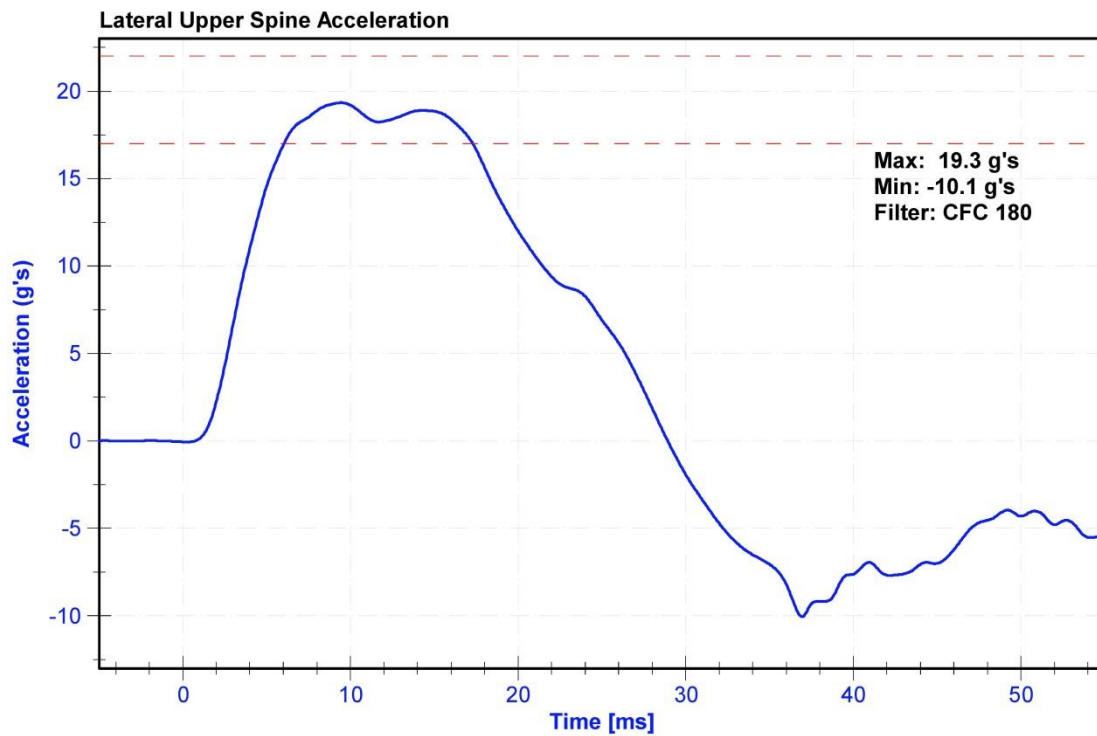
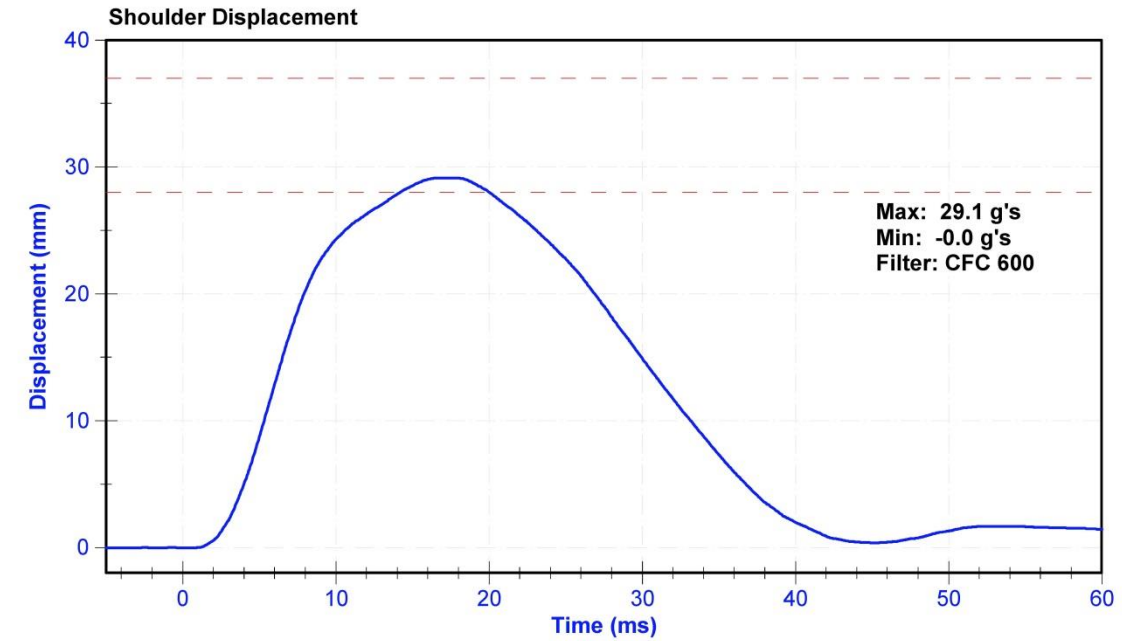
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	21.1	Pass
Humidity	10	70	%	13.3	Pass
Velocity	4.2	4.4	m/s	4.33	Pass
Probe Acceleration	13	18	g's	15.3	Pass
Shoulder Deflection	28	37	mm	29.1	Pass
Lateral Upper Spine Acceleration	17	22	g's	19.3	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	ENDEVCO 7231CT	AC-C14953	7/30/2014	1/28/2015
Shoulder Potentiometer	Servo 08TC1-3725	DS-1063GFE	8/7/2014	8/7/2015
Upper Spine Y Accelerometer	ENDEVCO 7264	AC-P51915	8/28/2014	8/28/2015





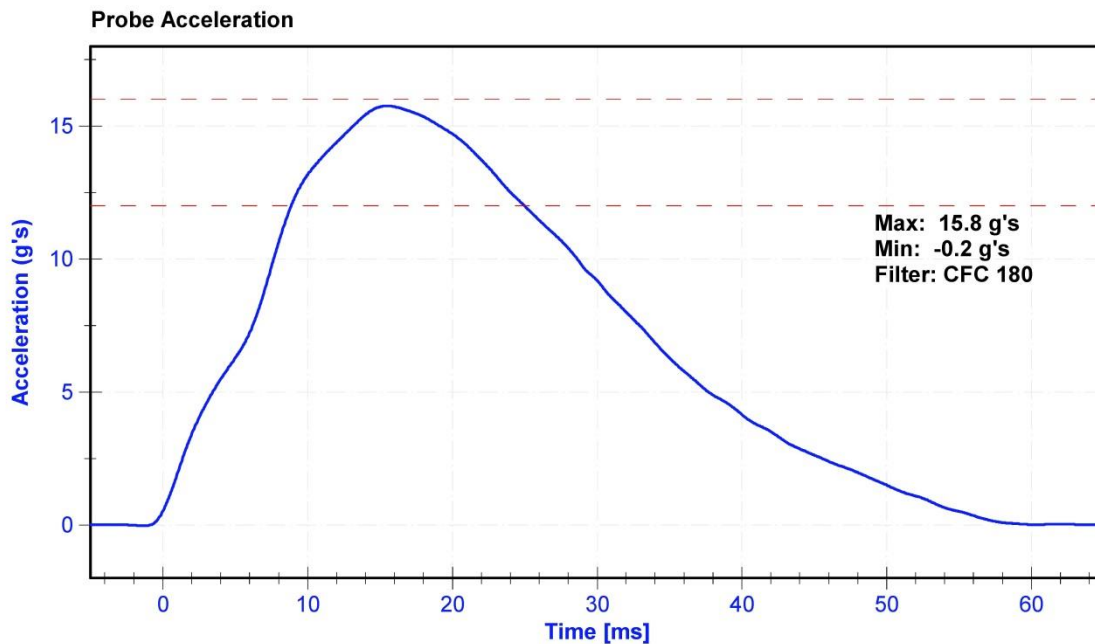
ATD Manufacturer	FTSS	Test Technician	M. Hartung
ATD Serial Number	300	Laboratory Supervisor	M. Goehle

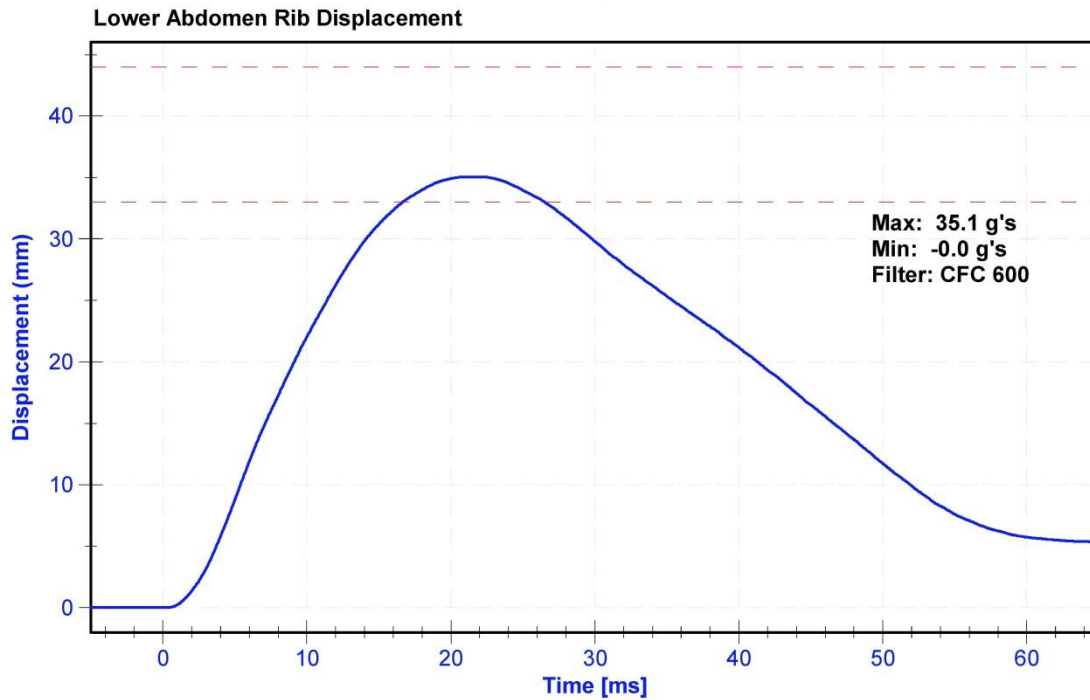
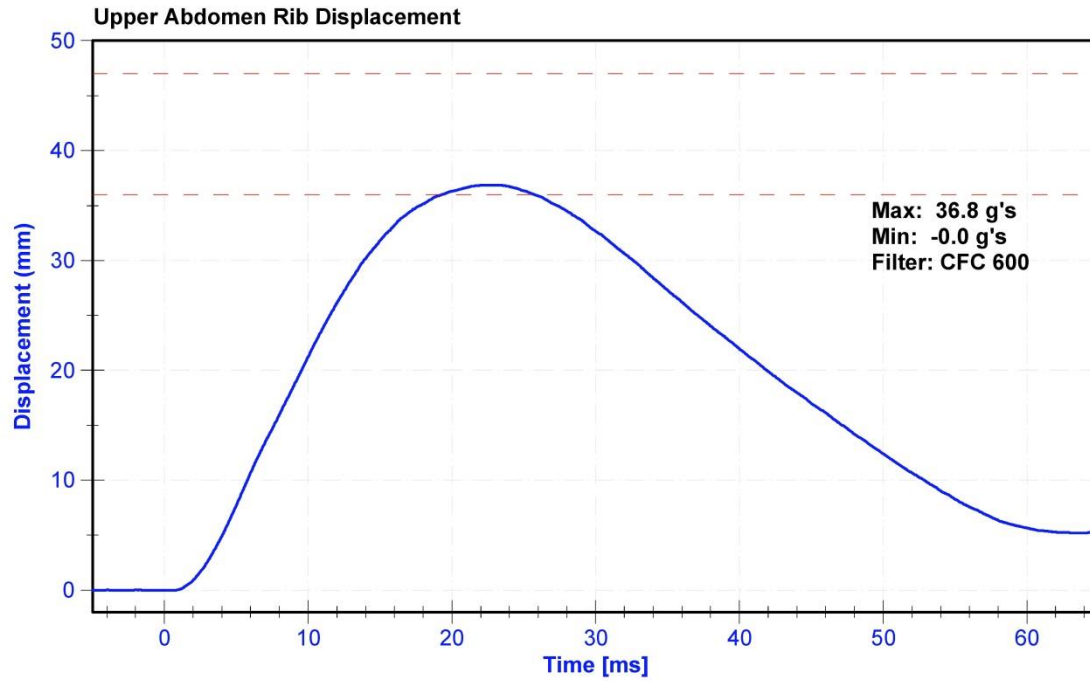
Results

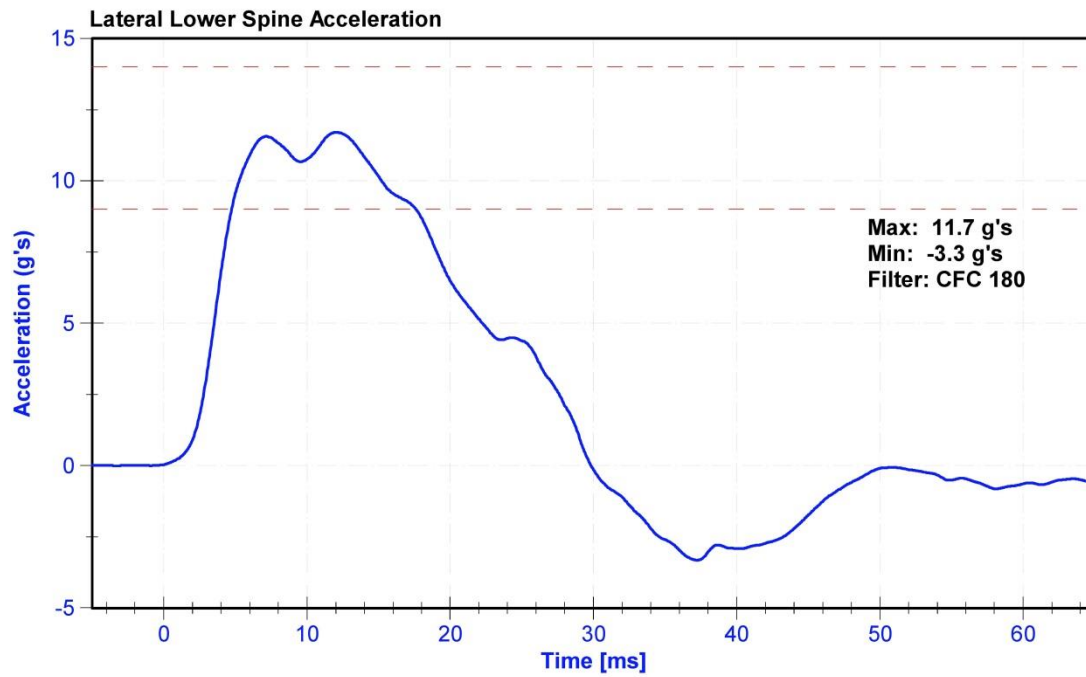
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	21.2	Pass
Humidity	10	70	%	13.6	Pass
Velocity	4.2	4.4	m/s	4.32	Pass
Probe Acceleration	12	16	g's	15.8	Pass
Lateral Lower Spine Acceleration	9	14	g's	11.7	Pass
Upper Abdomen Rib Deflection	36	47	mm	36.8	Pass
Lower Abdomen Rib Deflection	33	44	mm	35.1	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Probe Accelerometer	ENDEVCO 7231CT	AC-C14953	7/30/2014	1/28/2015
Lower Spine Y Accelerometer	ENDEVCO 7264	AC-P64147	8/28/2014	2/26/2015
Upper Abdomen Rib Potentiometer	Servo 08CT1-3725	DS-308GFE	8/12/2014	8/12/2015
Lower Abdomen Rib Potentiometer	Servo 08CT1-3725	DS-307GFE	8/7/2014	8/7/2015







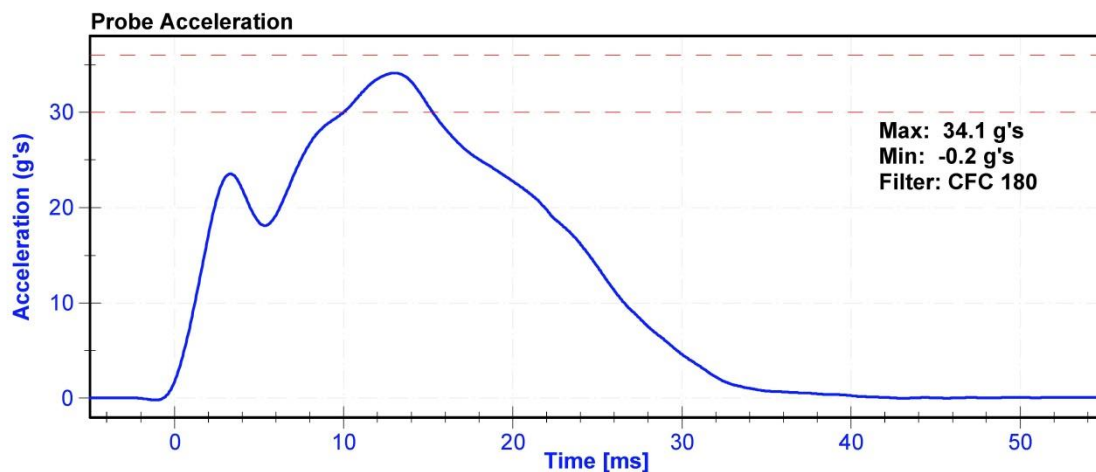
ATD Manufacturer	FTSS	Test Technician	M.Hartung
ATD Serial Number	300	Laboratory Supervisor	M. Goehle

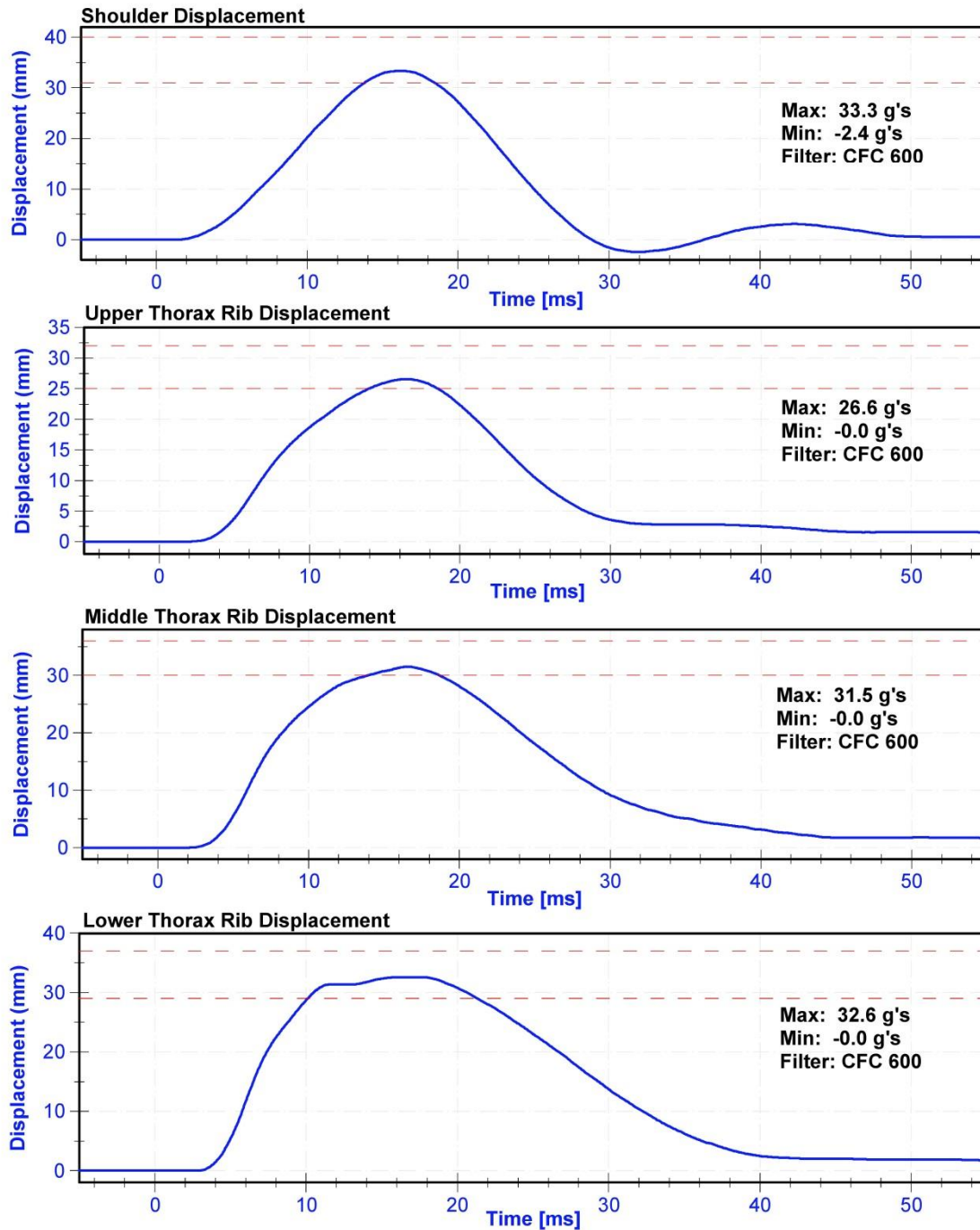
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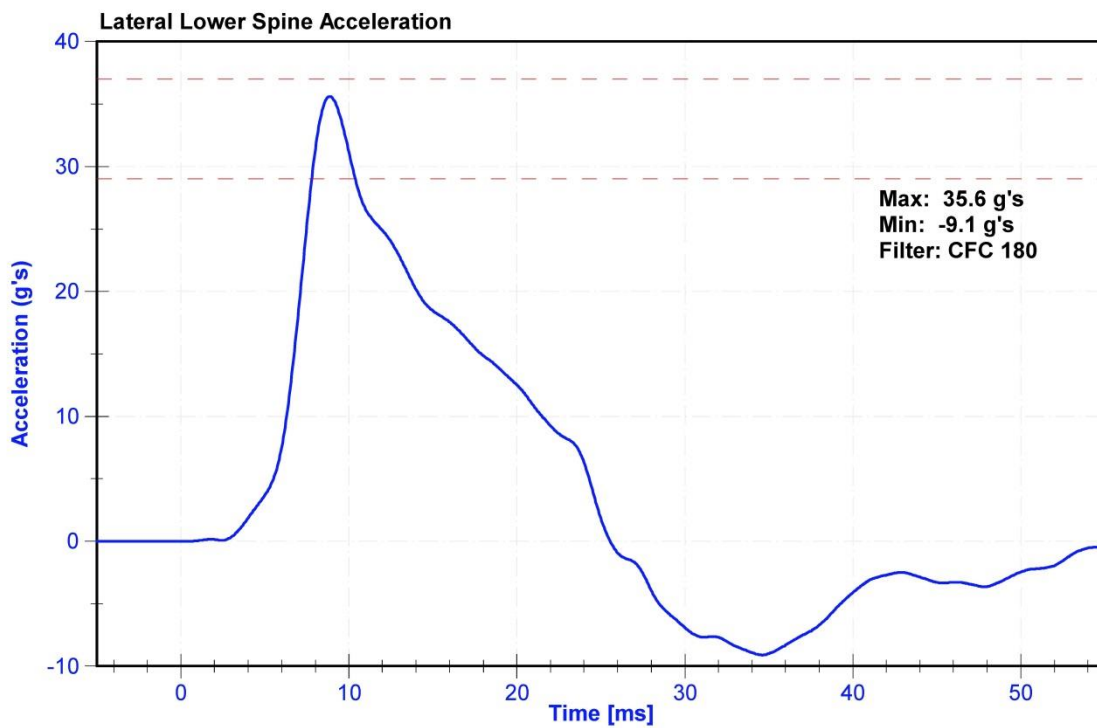
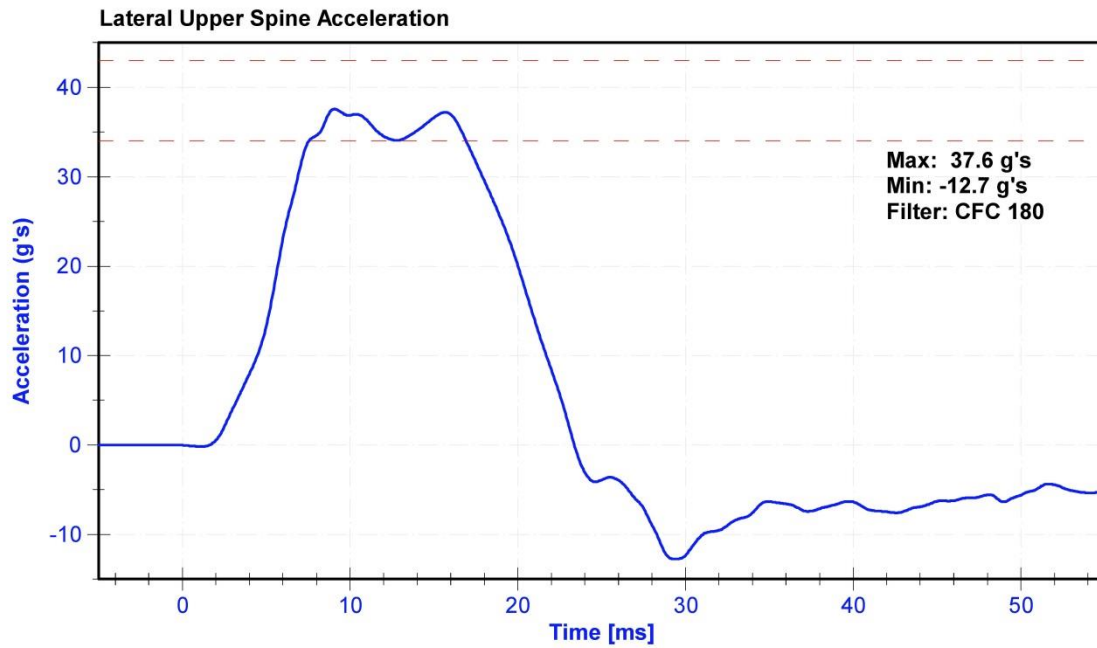
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	21.3	Pass
Humidity	10	70	%	13.5	Pass
Velocity	6.6	6.8	m/s	6.68	Pass
Probe Acceleration after 5 ms	30	36	g's	34.1	Pass
Lateral Upper Spine Acceleration	34	43	g's	37.6	Pass
Lateral Lower Spine Acceleration	29	37	g's	35.6	Pass
Shoulder Deflection	31	40	mm	33.3	Pass
Upper Thorax Rib Deflection	25	32	mm	26.6	Pass
Mid Thorax Rib Deflection	30	36	mm	31.5	Pass
Lower Thorax Rib Deflection	32	38	mm	32.6	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	ENDEVCO 7231CT	AC-C14953	7/30/2014	1/28/2015
Upper Spine T1 Y Accelerometer	ENDEVCO 7264	AC-P51915	8/28/2014	8/28/2015
Upper Spine T12 Y Accelerometer	ENDEVCO 7264	AC-P64147	8/28/2014	2/26/2015
Shoulder Potentiometer	Servo 08TC1-3725	DS-1063GFE	8/7/2014	8/7/2015
Upper Thorax Rib Potentiometer	Servo 08CT1-3725	DS-451GFE	8/12/2014	8/12/2015
Middle Thorax Rib Potentiometer	Servo 08TC1-3725	DS-1151GFE	8/12/2014	8/12/2015
Lower Thorax Rib Potentiometer	Servo 08TC1-3725	DS-1156GFE	8/12/2014	8/12/2015







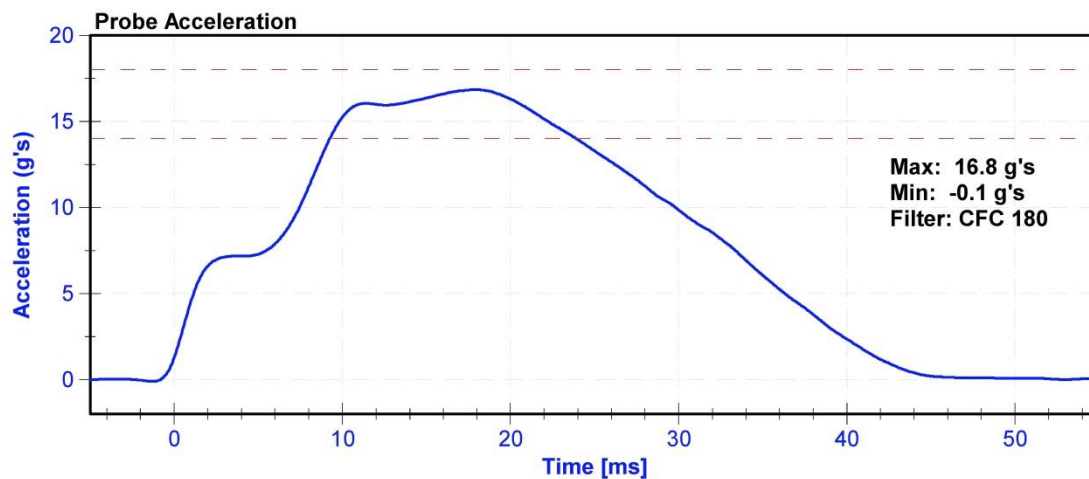
ATD Manufacturer	FTSS	Test Technician	M. Hartung
ATD Serial Number	300	Laboratory Supervisor	M. Goehle

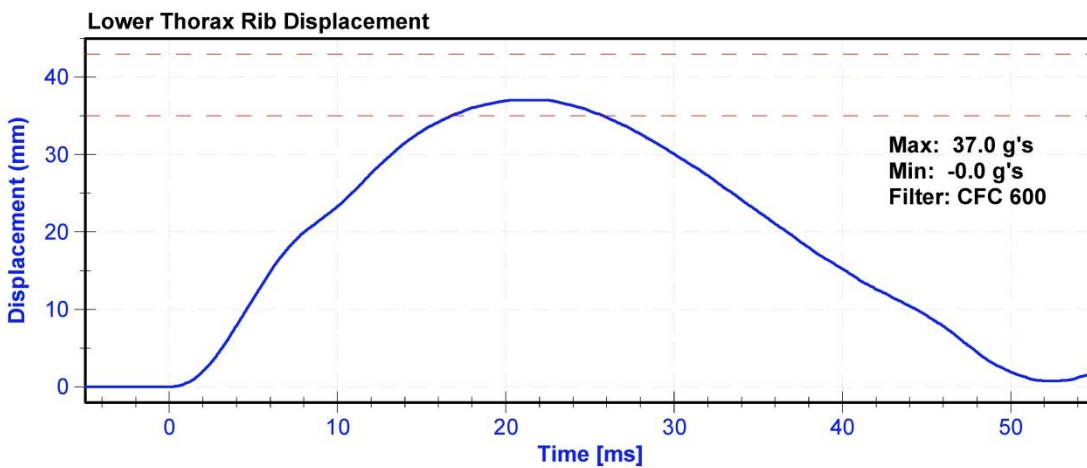
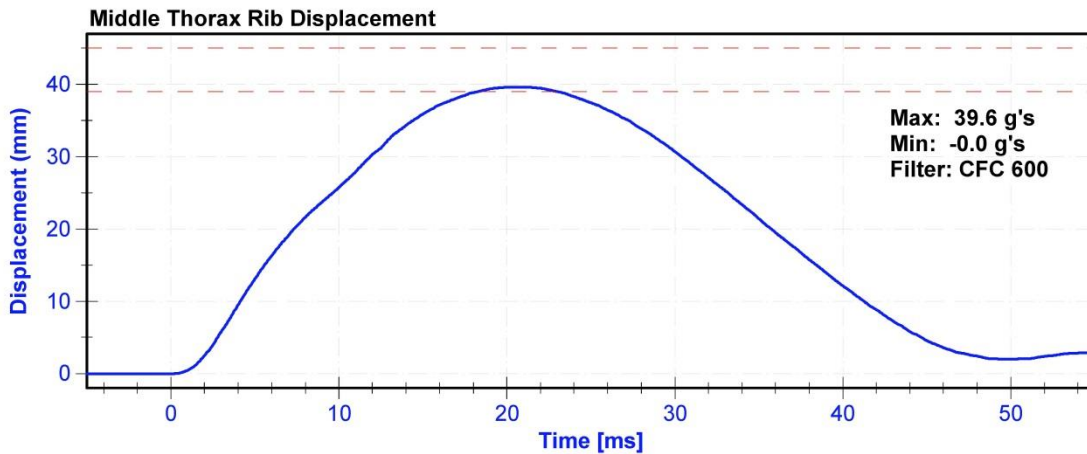
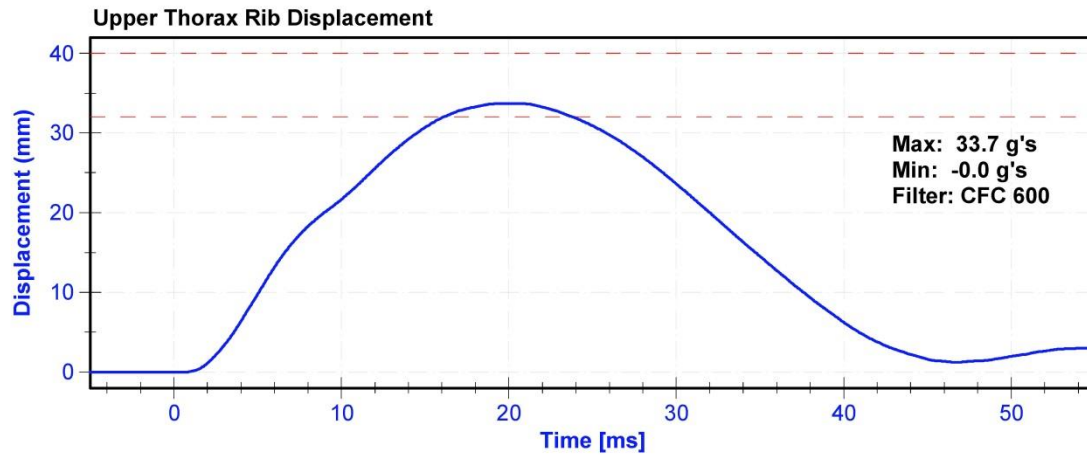
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	21.3	Pass
Humidity	10	70	%	13.1	Pass
Velocity	4.2	4.4	m/s	4.32	Pass
Probe Acceleration	14	18	g's	16.8	Pass
Lateral Upper Spine Acceleration	13	17	g's	16.2	Pass
Lateral Lower Spine Acceleration	7	11	g's	10.2	Pass
Upper Thorax Rib Deflection	32	40	mm	33.7	Pass
Middle Thorax Rib Deflection	39	45	mm	39.6	Pass
Lower Thorax Rib Deflection	35	43	mm	37.0	Pass

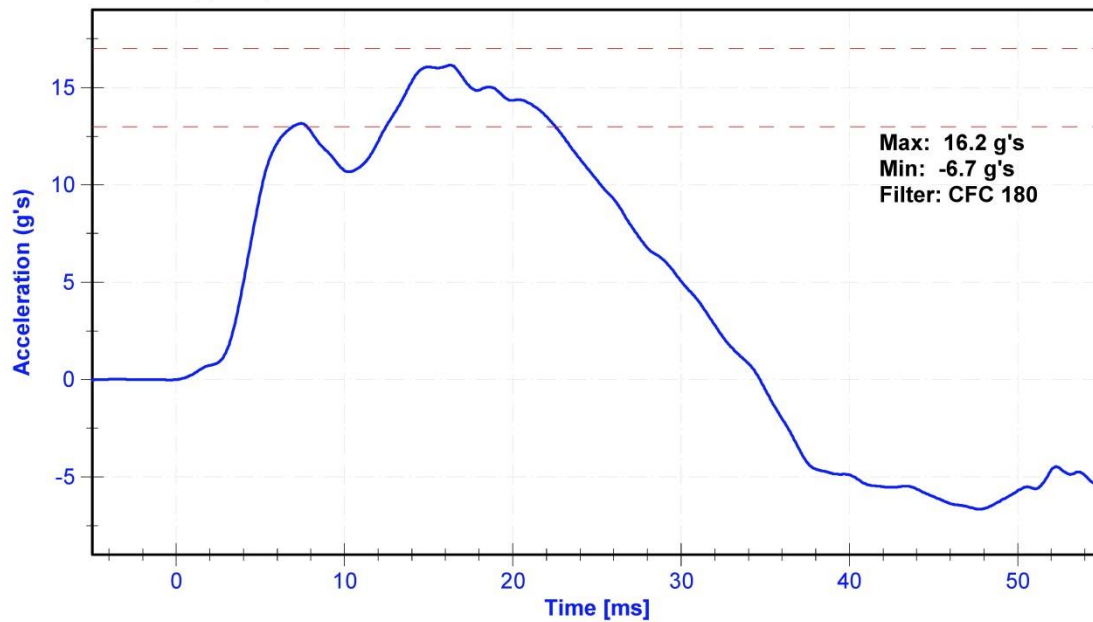
Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	ENDEVCO 7231CT	AC-C14953	7/30/2014	1/28/2015
Upper Spine Y Accelerometer	ENDEVCO 7264	AC-P51915	8/28/2014	8/28/2015
Lower Spine Y Accelerometer	ENDEVCO 7264	AC-P64147	8/28/2014	2/26/2015
Upper Thorax Rib Potentiometer	Servo 08CT1-3725	DS-451GFE	8/12/2014	8/12/2015
Middle Thorax Rib Potentiometer	Servo 08TC1-3725	DS-1151GFE	8/12/2014	8/12/2015
Lower Thorax Rib Potentiometer	Servo 08TC1-3725	DS-1156GFE	8/12/2014	8/12/2015

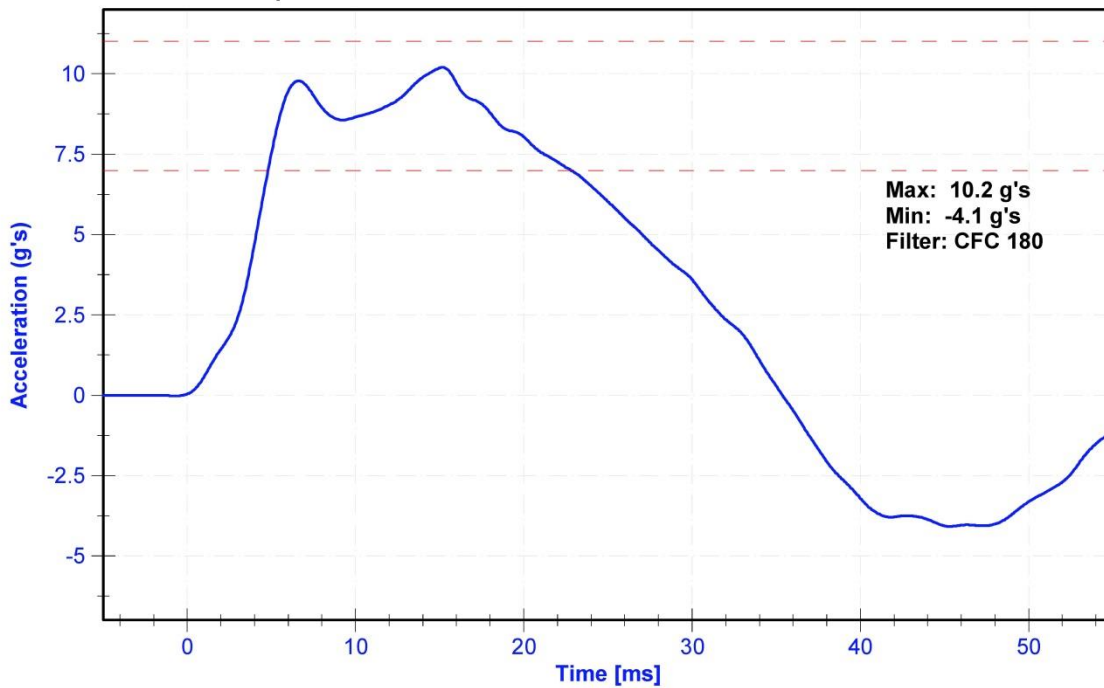




Lateral Upper Spine Acceleration



Lateral Lower Spine Acceleration



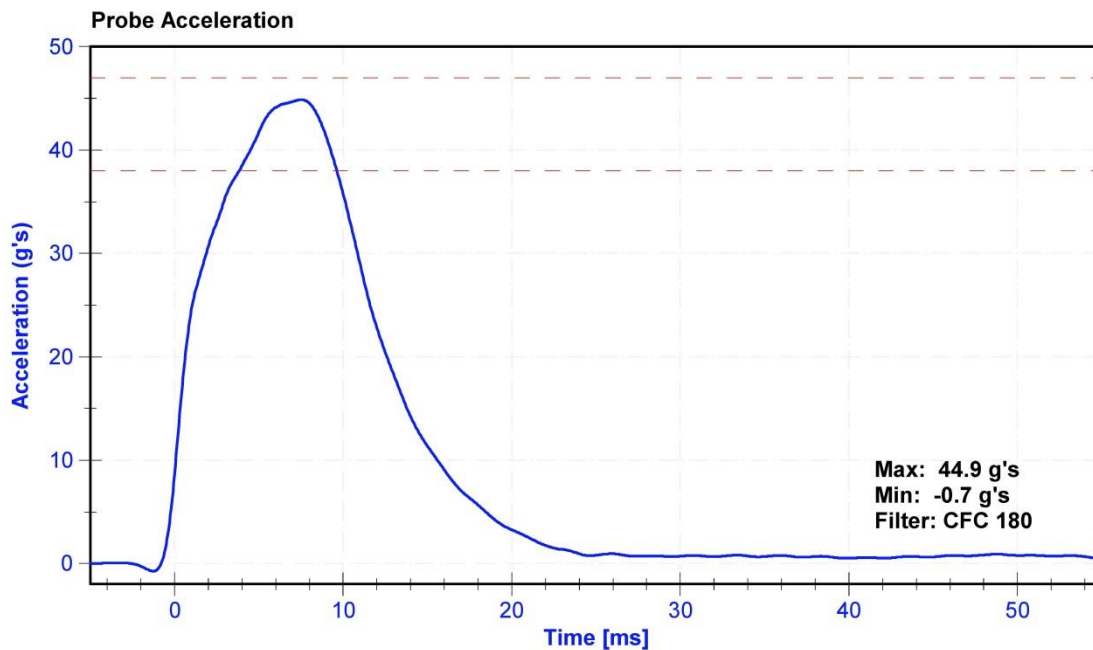
ATD Manufacturer	FTSS	Test Technician	M.Hartung
ATD Serial Number	300	Laboratory Supervisor	M.Goehle

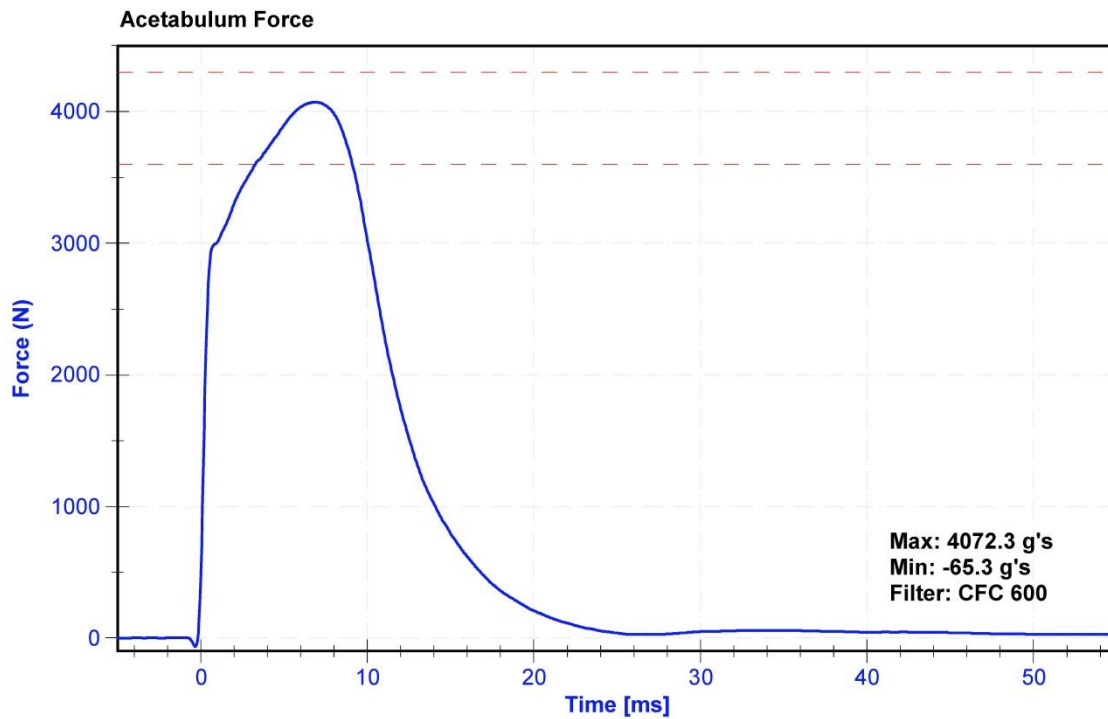
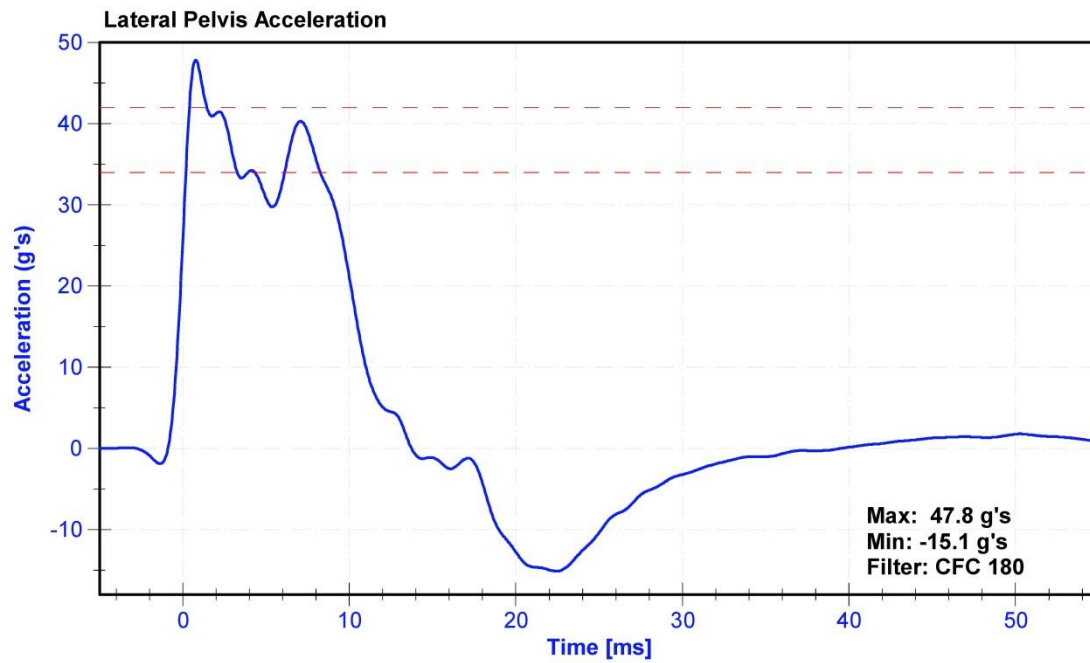
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	20.6	Pass
Humidity	10	70	%	14.7	Pass
Velocity	6.6	6.8	m/s	6.70	Pass
Probe Acceleration	38	47	g's	44.9	Pass
Lateral Pelvis Acceleration after 6ms	34	42	g's	40.3	Pass
Acetabulum Force	3,600	4,300	N	4072.3	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	ENDEVCO 7231CT	AC-C14953	1/29/2015	7/30/2015
Pelvis Y Accelerometer	ENDEVCO 7264CT	AC-P35797	11/24/2014	5/25/2015
Acetabulum Load Cell	DENTON 3249J	LC-275Fy	5/13/2014	5/13/2015





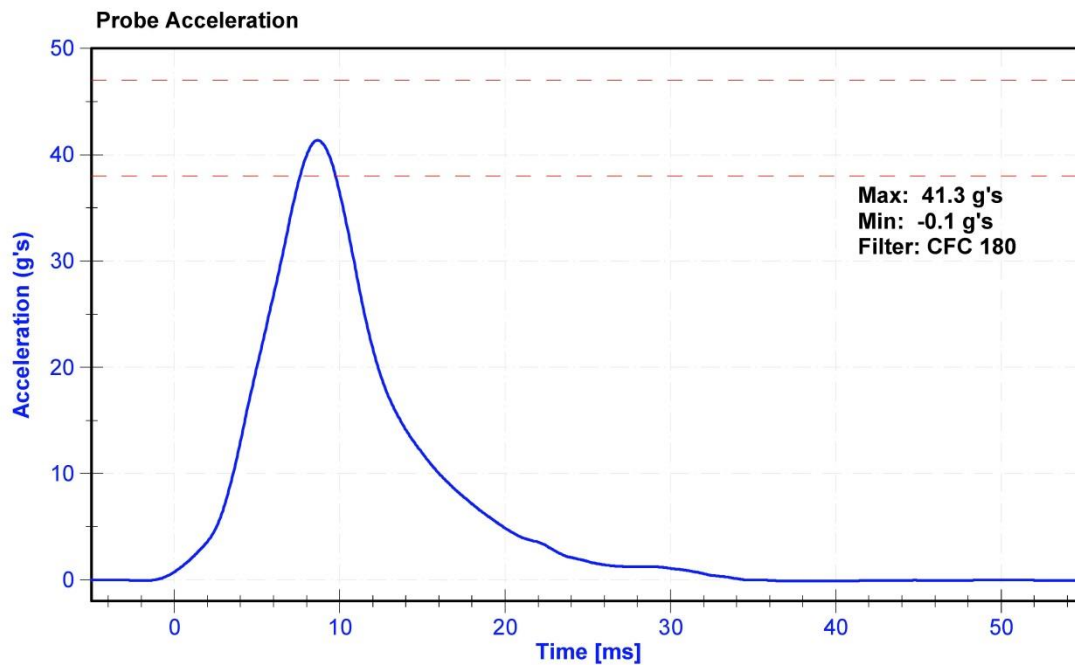
ATD Manufacturer	FTSS	Test Technician	M. Hartung
ATD Serial Number	300	Laboratory Supervisor	M. Goehle

Results

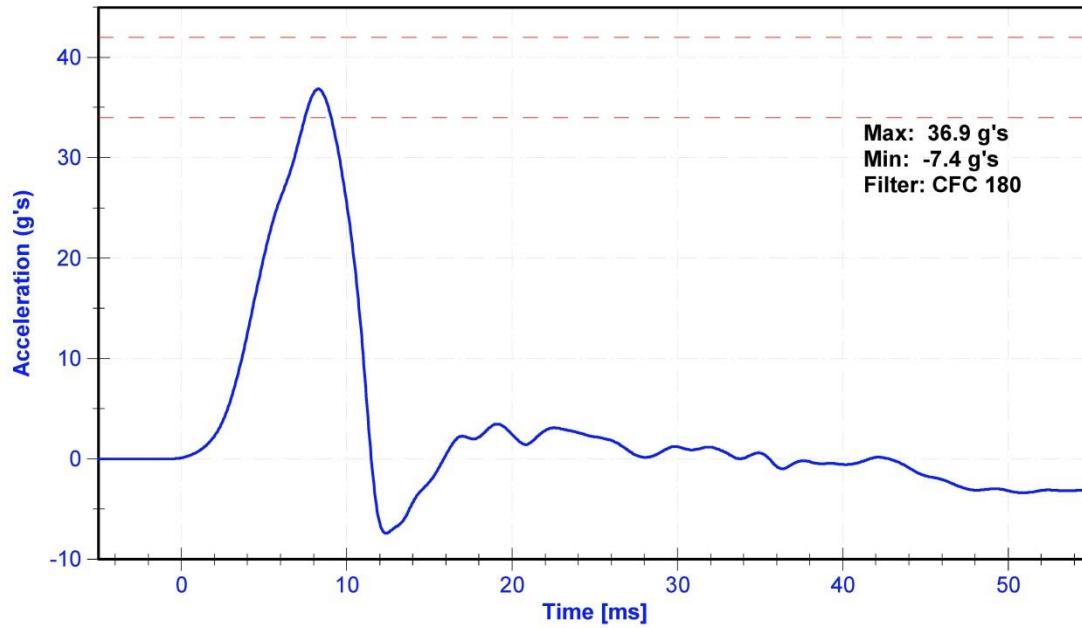
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	21.3	Pass
Humidity	10	70	%	13.0	Pass
Velocity	4.2	4.4	m/s	4.32	Pass
Probe Acceleration	36	45	g's	41.3	Pass
Lateral Pelvis Acceleration	28	39	g's	36.9	Pass
Iliac Force	4,100	5,100	N	4632.5	Pass

Transducer Calibrations

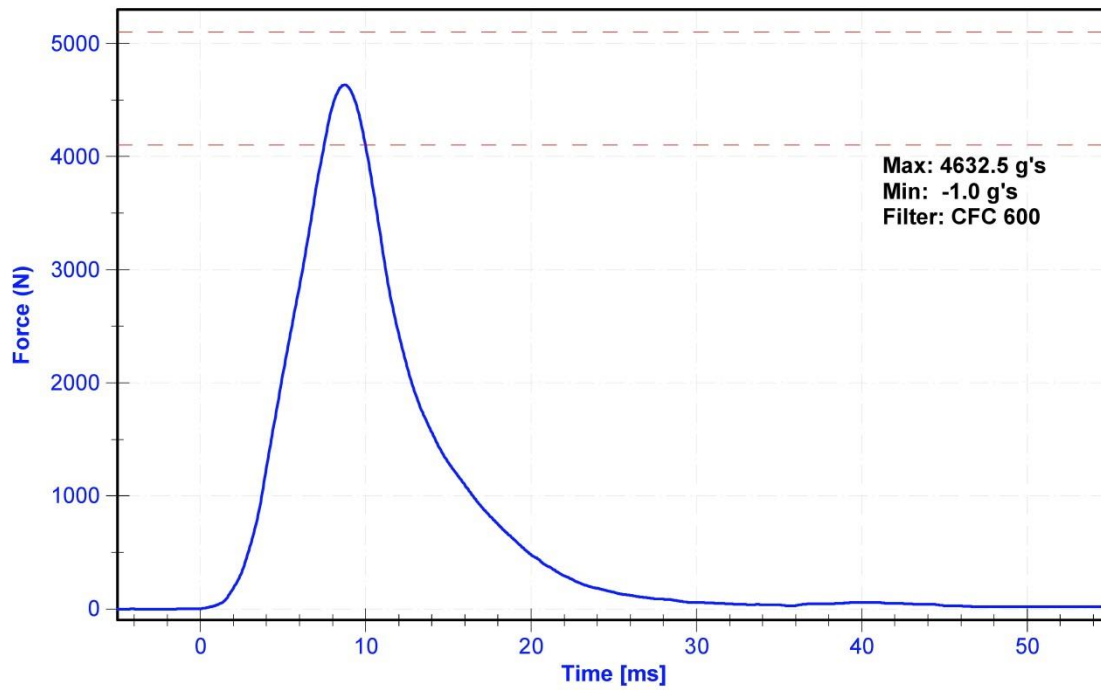
Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	ENDEVCO 7231CT	AC-C14953	7/30/2014	1/28/2015
Pelvis Y Accelerometer	ENDEVCO 7264CT	AC-P51740	12/17/2014	6/17/2015
Iliac Load Cell	DENTON 3228J	LC-279Fy	5/14/2014	5/14/2015



Lateral Pelvis Acceleration



Iliac Force



CALIBRATION TEST RESULTS

POST-TEST

SID-IIS 5TH PERCENTILE FEMALE - DRIVER ATD

SERIAL NO: 300

(CONFIGURED FOR LEFT SIDE IMPACT)

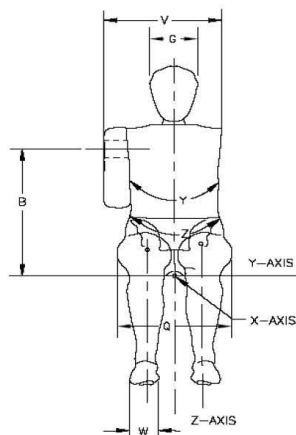
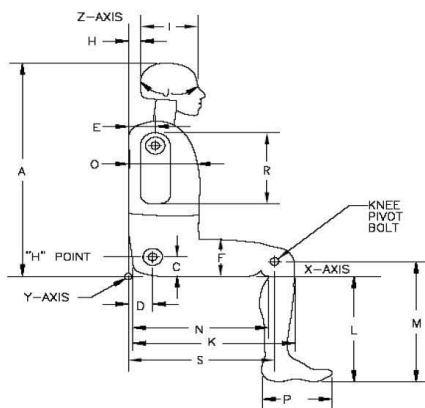


External Measurements - SID-IIs

Technician: M. Geesey

Date: 02/06/2015

Dummy Serial Number: 300



Symbol	Description	Specification (mm)		Result (mm)	Pass/Fail
A	Sitting Height	772	788	780	Pass
B	Shoulder Pivot Height	437	453	449	Pass
C	H-point Height	79	89	86	Pass
D	H-point from seatback	141	151	148	Pass
E	Shoulder Pivot from Backline	97	107	104	Pass
F	Thigh Clearance	119	135	124	Pass
G	Head Breadth	140	148	143	Pass
H	Head Back from Backline	40	46	43	Pass
I	Head Depth	178	188	182	Pass
J	Head Circumference	541	551	548	Pass
K	Buttock to Knee Length	514	540	537	Pass
L	Popliteal Height	343	369	358	Pass
M	Knee Pivot to floor height	392	409	402	Pass
N	Buttock Popliteal Length	416	442	437	Pass
O	Chest Depth w/o jacket	195	211	205	Pass
P	Foot Length	216	232	219	Pass
Q	Hip Breadth (w/pelvic plugs)	313	323	318	Pass
R	Arm Length	249	259	250	Pass
S	Knee Joint to seatback	477	493	488	Pass
V	Shoulder Width	341	357	349	Pass
W	Foot Width	78	94	83	Pass
Y	Chest Circumference w/jacket	851	881	870	Pass
Z	Waist Circumference	761	791	770	Pass

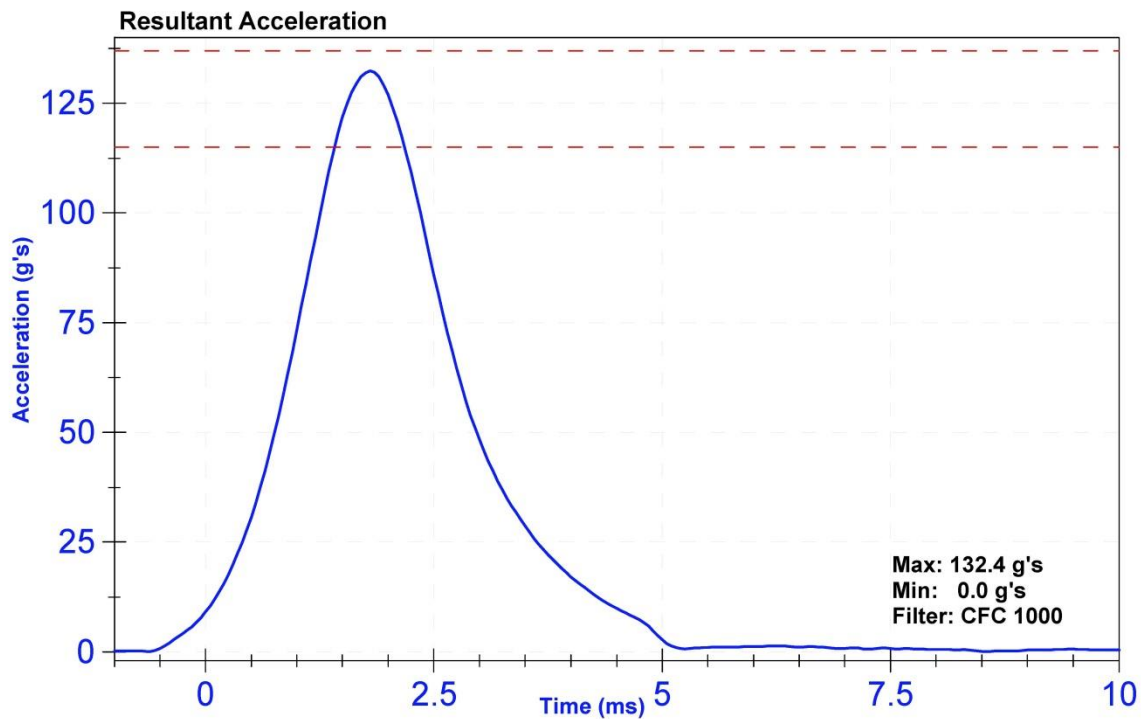
ATD Manufacturer	FTSS	Test Technician	M. Geesey
ATD Serial Number	300	Laboratory Supervisor	M. Goehle

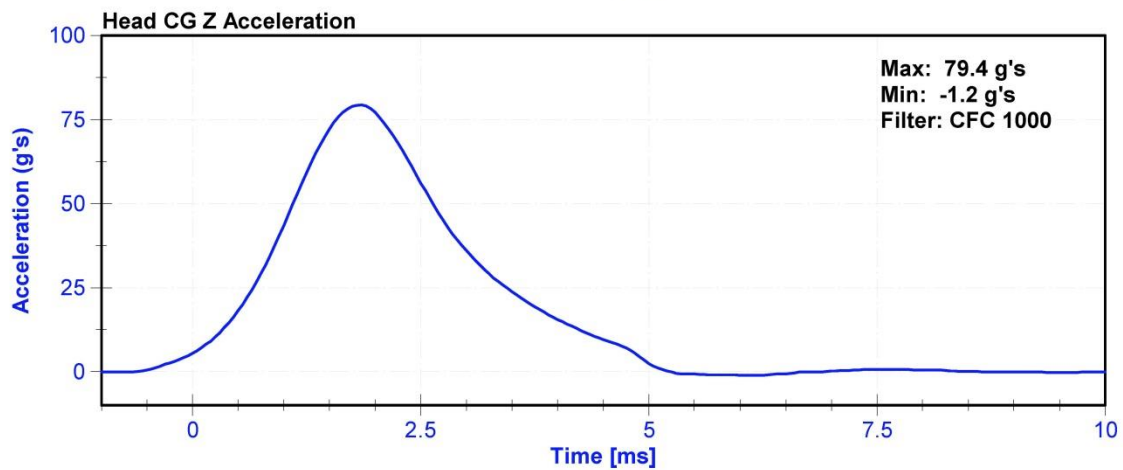
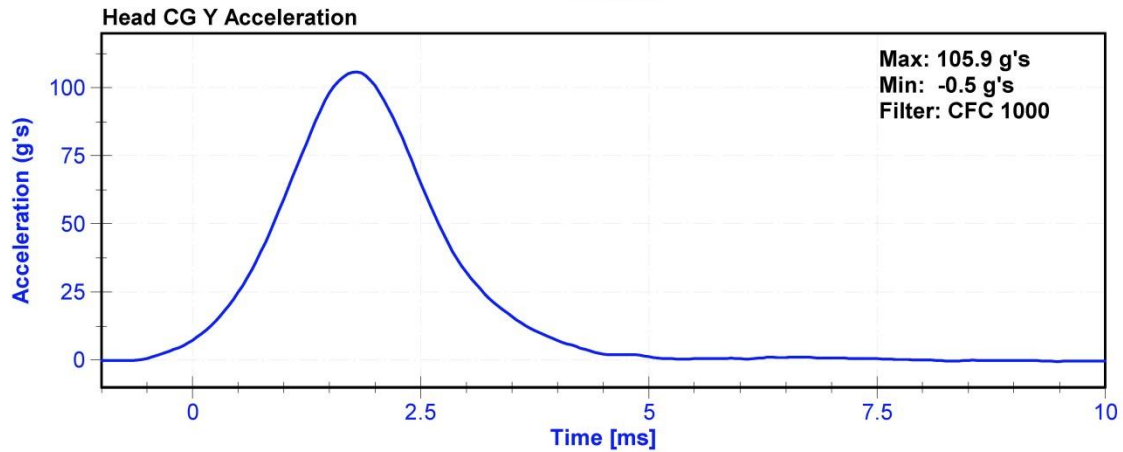
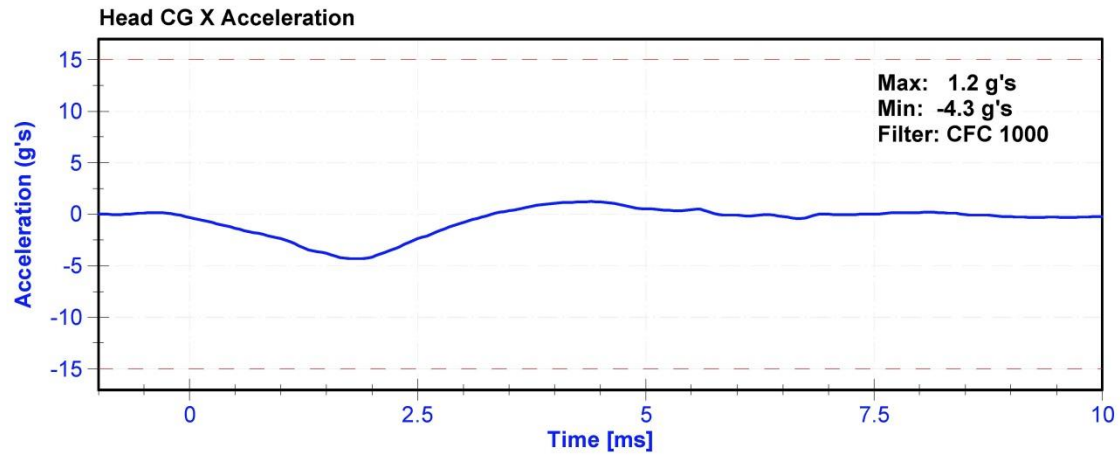
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.2	Pass
Humidity	10	70	%	14.6	Pass
Resultant Acceleration	115	137	g's	132.4	Pass
Oscillation	0	15	%	1.0	Pass
Fore-Aft Acceleration	-15	15	g's	-4.3	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
X Accelerometer	ENDEVCO 7264CT	AC-P58777	8/28/2014	2/26/2015
Y Accelerometer	ENDEVCO 7264CT	AC-P59018	8/28/2014	2/26/2015
Z Accelerometer	ENDEVCO 7264CT	AC-P68608	8/28/2014	2/26/2015





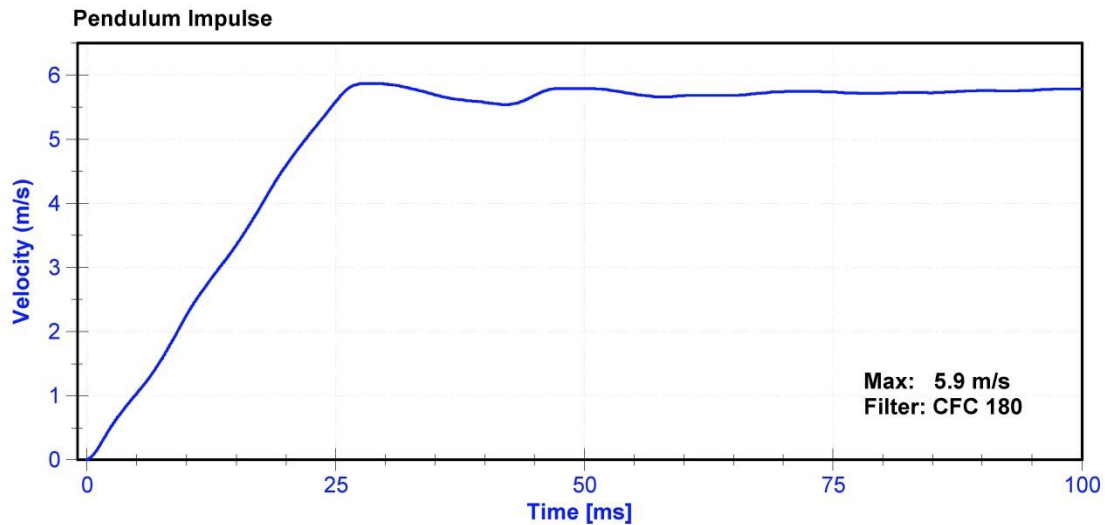
ATD Manufacturer	FTSS	Test Technician	M. Geesey
ATD Serial Number	300	Laboratory Supervisor	M. Goehle

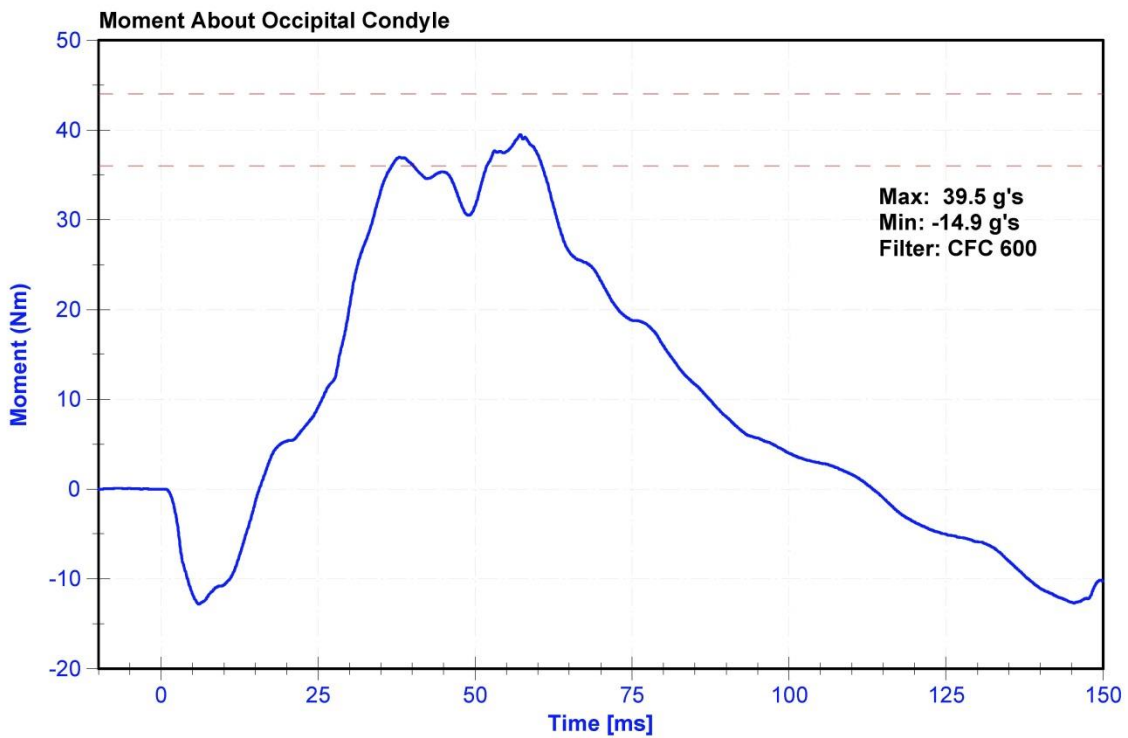
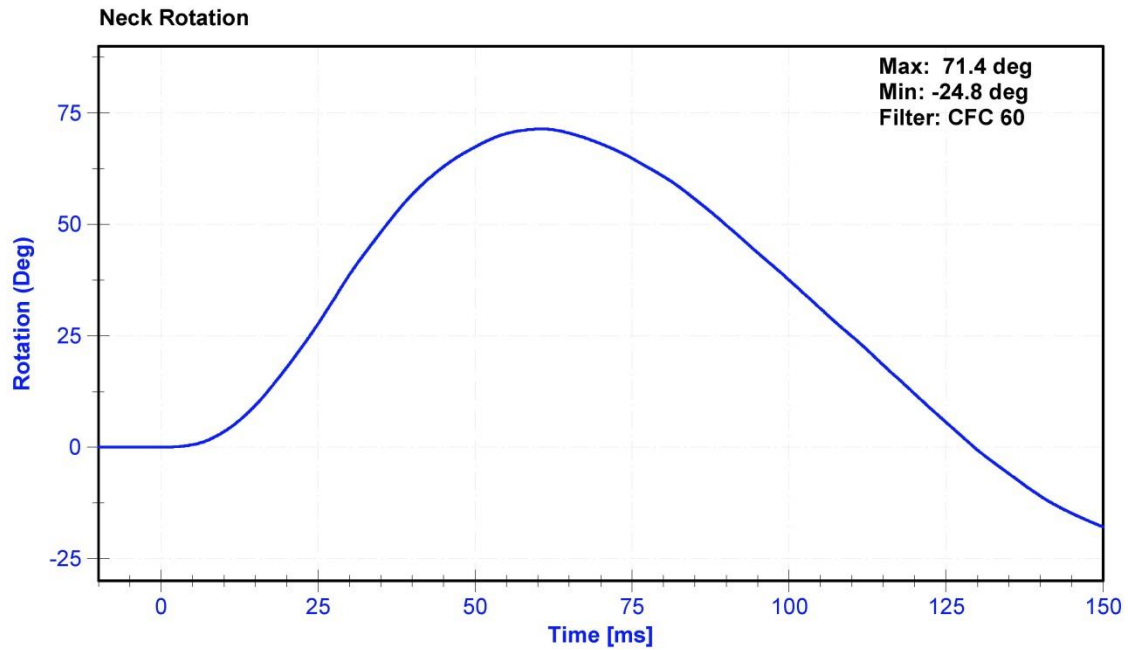
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	21.7	Pass
Humidity	10	70	%	15.1	Pass
Velocity	5.51	5.63	m/s	5.546	Pass
Pendulum Impulse at 10ms	2.2	2.8	m/s	2.25	Pass
Pendulum Impulse at 15ms	3.3	4.1	m/s	3.35	Pass
Pendulum Impulse at 20ms	4.4	5.4	m/s	4.59	Pass
Pendulum Impulse at 25ms	5.4	6.1	m/s	5.59	Pass
Pendulum Impulse from 25 to 100ms	5.5	6.2	m/s	5.87	Pass
Neck Rotation	71	81	deg	71.4	Pass
Time at Maximum Rotation	50	70	ms	60.6	Pass
Moment about the OC	36	44	Nm	39.5	Pass
Moment Decay to 0 Nm	102	126	ms	113.4	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	ENDEVCO 7231CT	AC-AH5F3	11/6/2014	11/6/2015
Pendulum Potentiometer	Denton 78051-342	DS-184Pend	11/13/2014	11/13/2015
Condyle Potentiometer	Denton 78051-342	DS-185Pend	11/13/2014	11/13/2015
Upper Neck Load Cell	DENTON 1716A	LC-130Mx	9/12/2014	9/12/2015





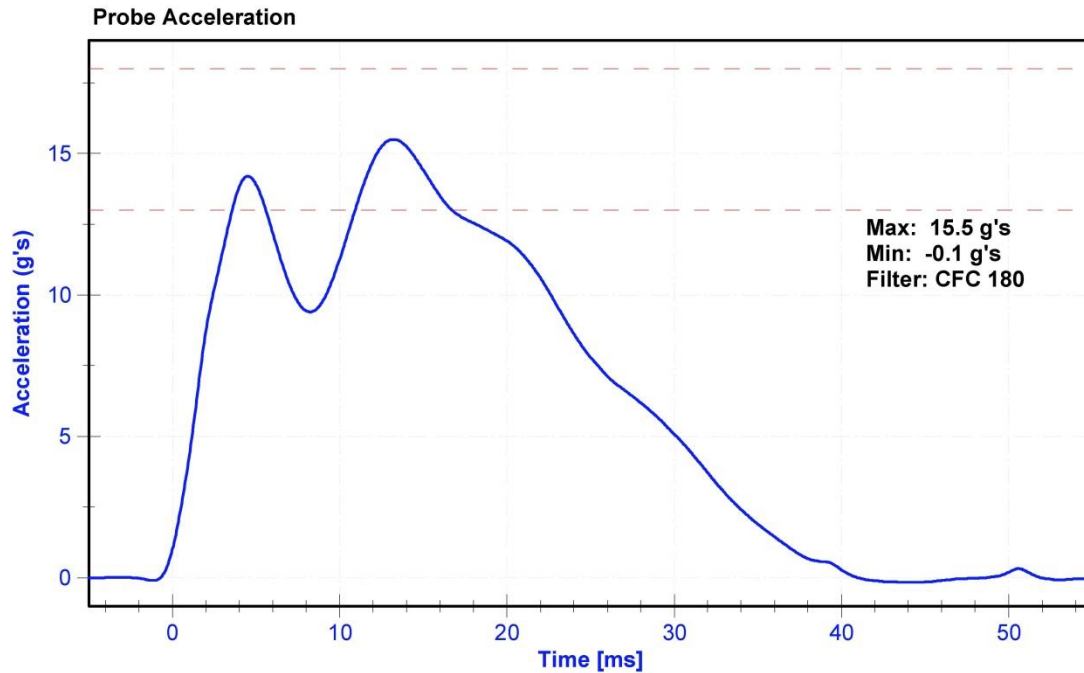
ATD Manufacturer	FTSS	Test Technician	M.Hartung
ATD Serial Number	300	Laboratory Supervisor	M.Goehle

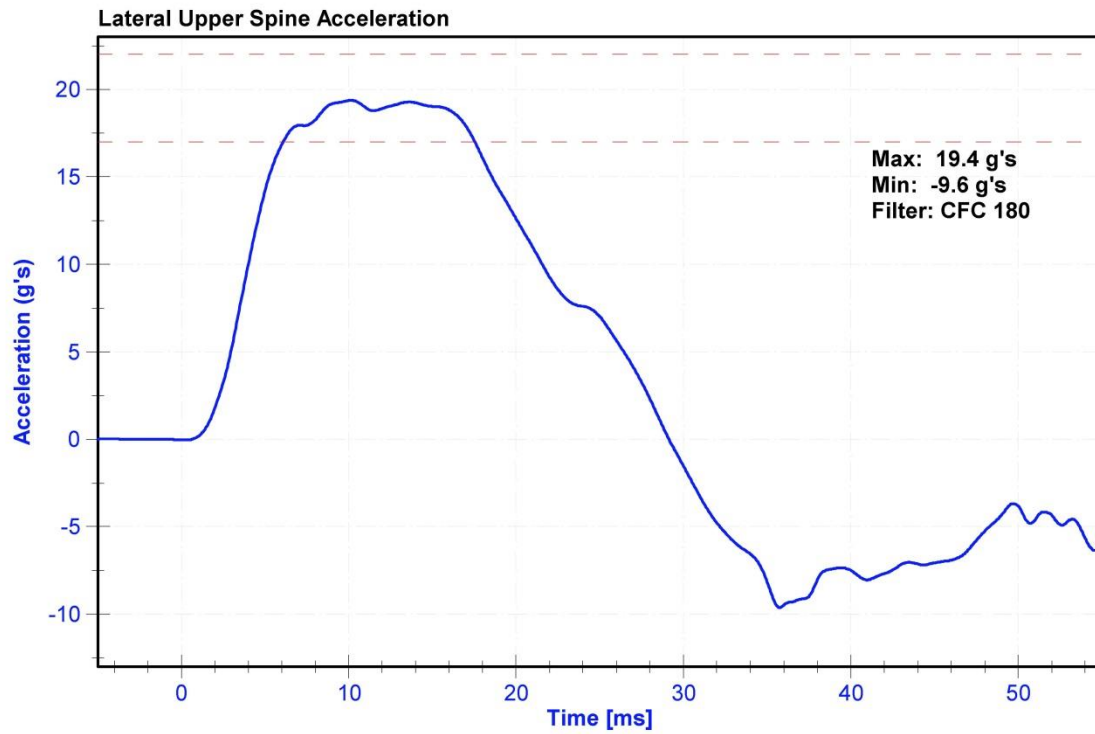
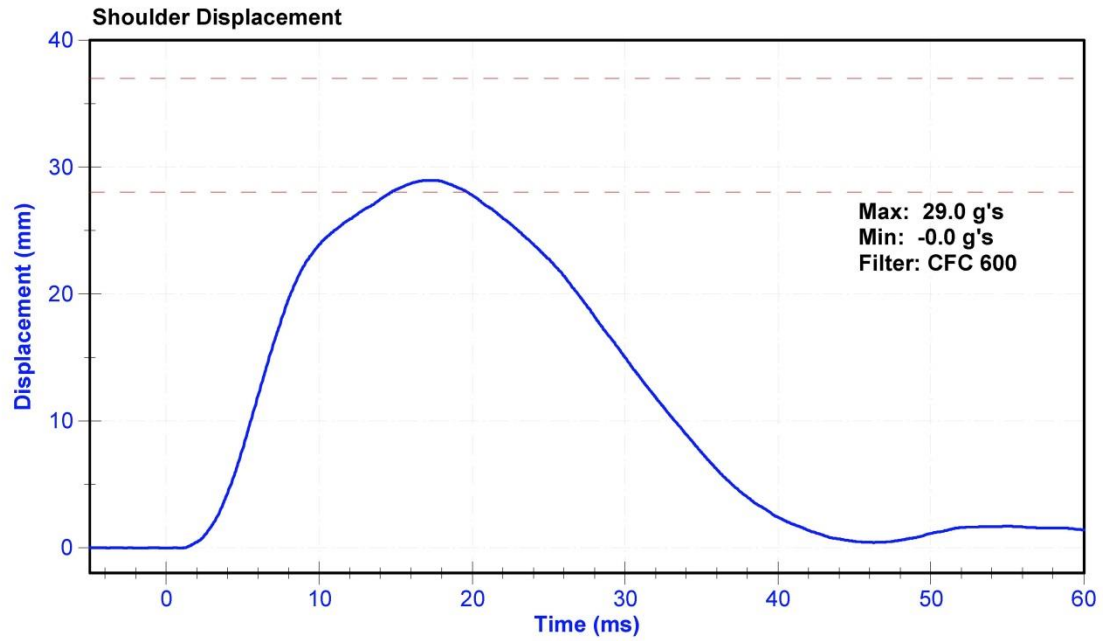
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	20.6	Pass
Humidity	10	70	%	14.8	Pass
Velocity	4.2	4.4	m/s	4.32	Pass
Probe Acceleration	13	18	g's	15.5	Pass
Shoulder Deflection	28	37	mm	29.0	Pass
Lateral Upper Spine Acceleration	17	22	g's	19.4	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	ENDEVCO 7231CT	AC-C14972	2/6/2015	8/7/2015
Shoulder Potentiometer	Servo 08TC1-3725	DS-1063GFE	8/7/2014	8/7/2015
Upper Spine Y Accelerometer	ENDEVCO 7264	AC-P51915	8/28/2014	8/28/2015





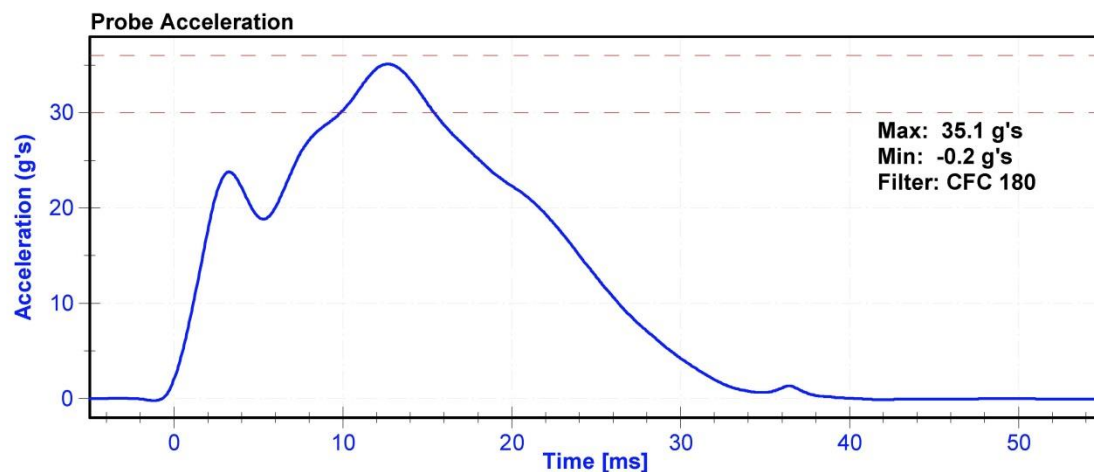
ATD Manufacturer	FTSS	Test Technician	M.Hartung
ATD Serial Number	300	Laboratory Supervisor	M.Goehle

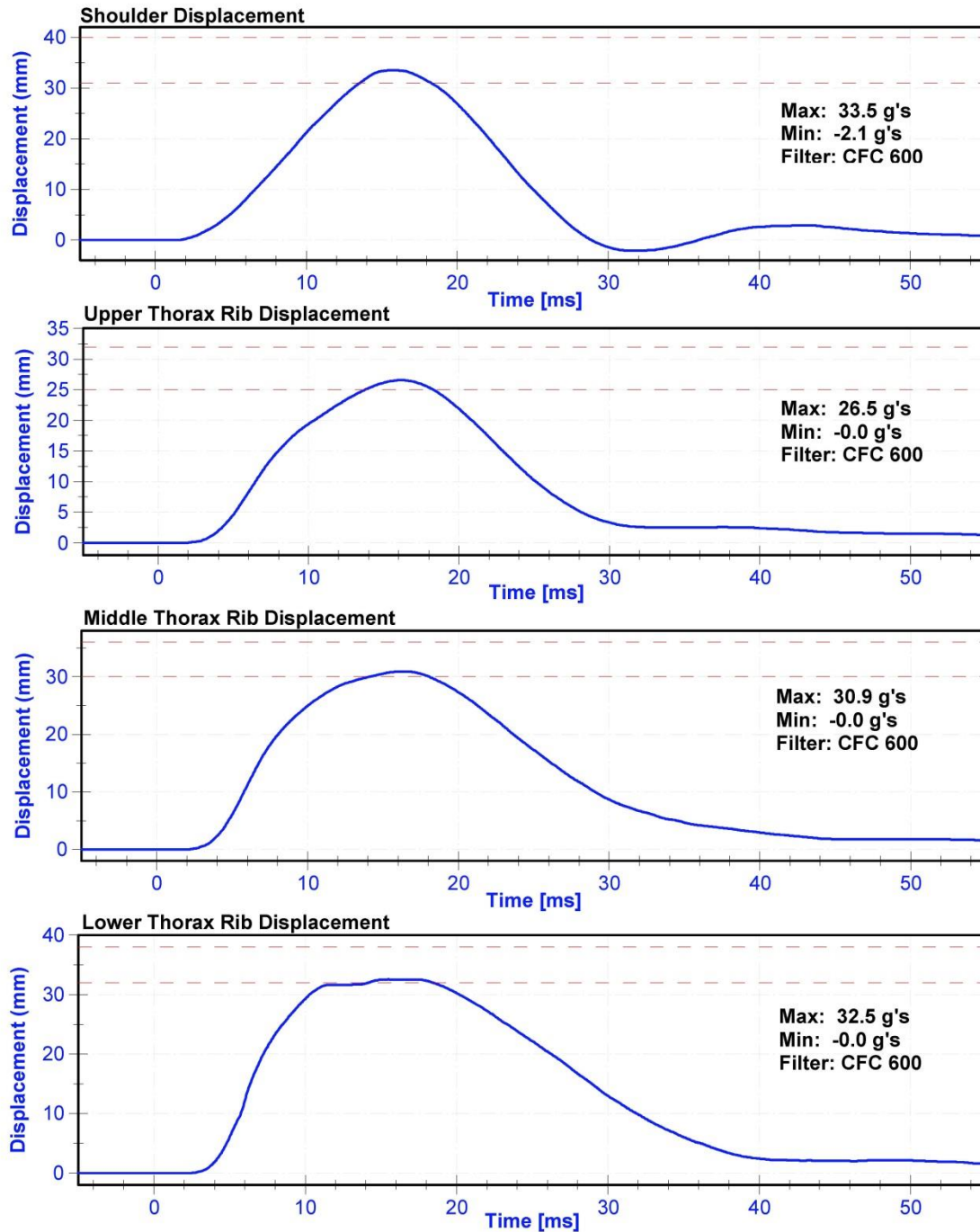
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	20.9	Pass
Humidity	10	70	%	14.8	Pass
Velocity	6.6	6.8	m/s	6.71	Pass
Probe Acceleration after 5 ms	30	36	g's	35.1	Pass
Lateral Upper Spine Acceleration	34	43	g's	37.6	Pass
Lateral Lower Spine Acceleration	29	37	g's	36.4	Pass
Shoulder Deflection	31	40	mm	33.5	Pass
Upper Thorax Rib Deflection	25	32	mm	26.5	Pass
Mid Thorax Rib Deflection	30	36	mm	30.9	Pass
Lower Thorax Rib Deflection	32	38	mm	32.5	Pass

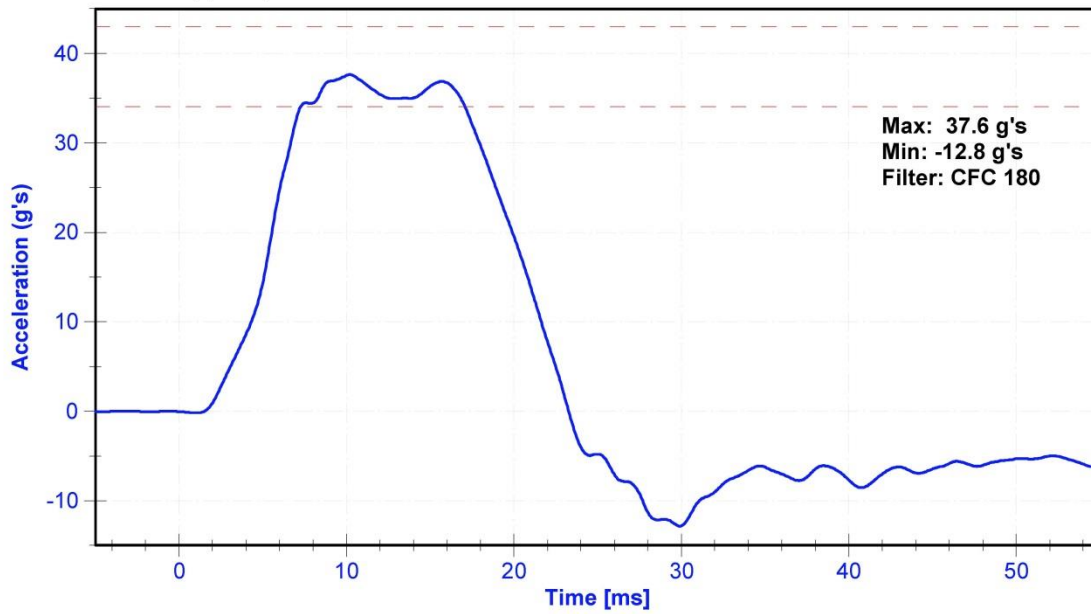
Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	ENDEVCO 7231CT	AC-C14972	2/6/2015	8/7/2015
Upper Spine T1 Y Accelerometer	ENDEVCO 7264	AC-P51915	8/28/2014	8/28/2015
Upper Spine T12 Y Accelerometer	ENDEVCO 7264	AC-P64147	8/28/2014	2/26/2015
Shoulder Potentiometer	Servo 08TC1-3725	DS-1063GFE	8/7/2014	8/7/2015
Upper Thorax Rib Potentiometer	Servo 08TC1-3725	DS-451GFE	8/12/2014	8/12/2015
Middle Thorax Rib Potentiometer	Servo 08TC1-3725	DS-1151GFE	8/12/2014	8/12/2015
Lower Thorax Rib Potentiometer	Servo 08TC1-3725	DS-1156GFE	8/12/2014	8/12/2015

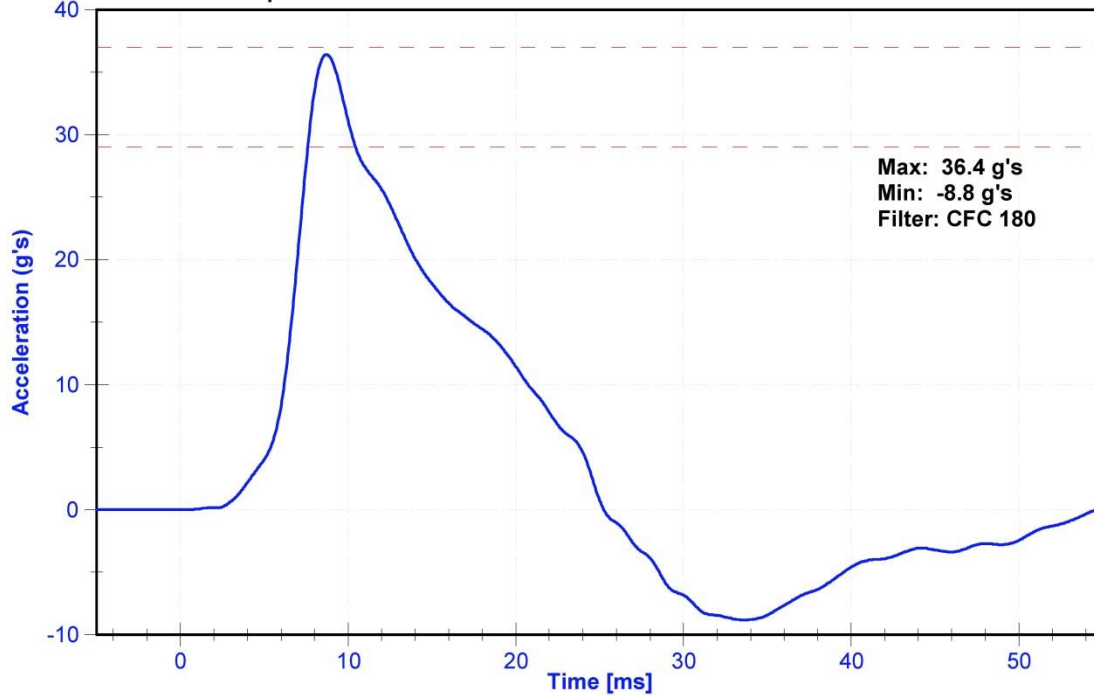




Lateral Upper Spine Acceleration



Lateral Lower Spine Acceleration



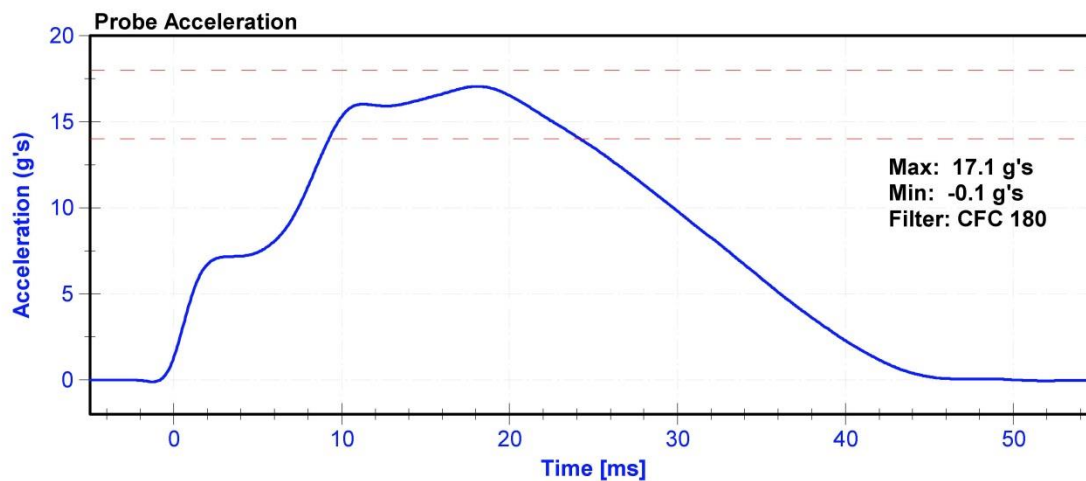
ATD Manufacturer	FTSS	Test Technician	M.Hartung
ATD Serial Number	300	Laboratory Supervisor	M.Goehle

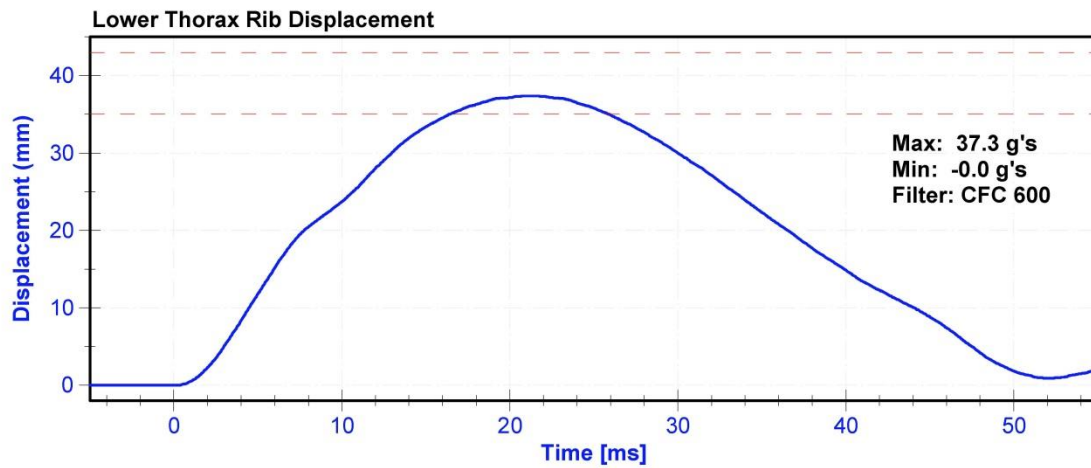
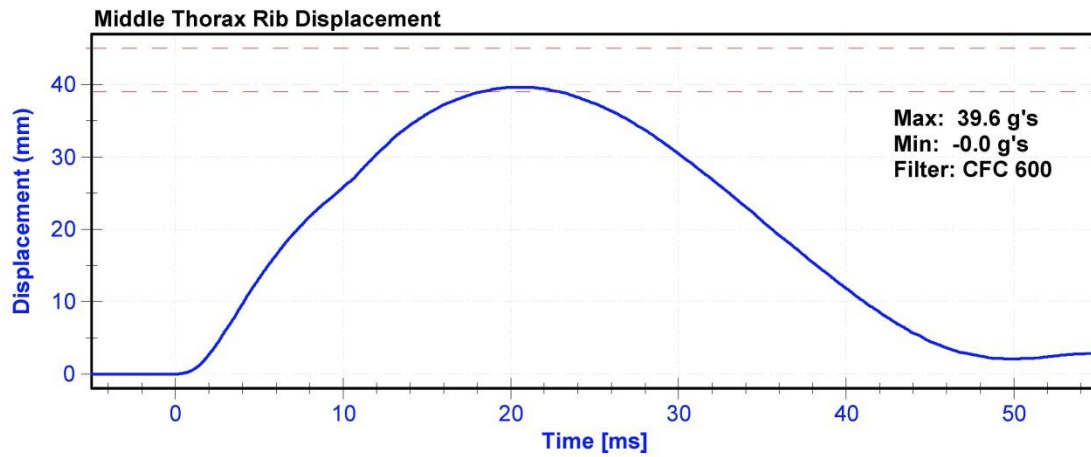
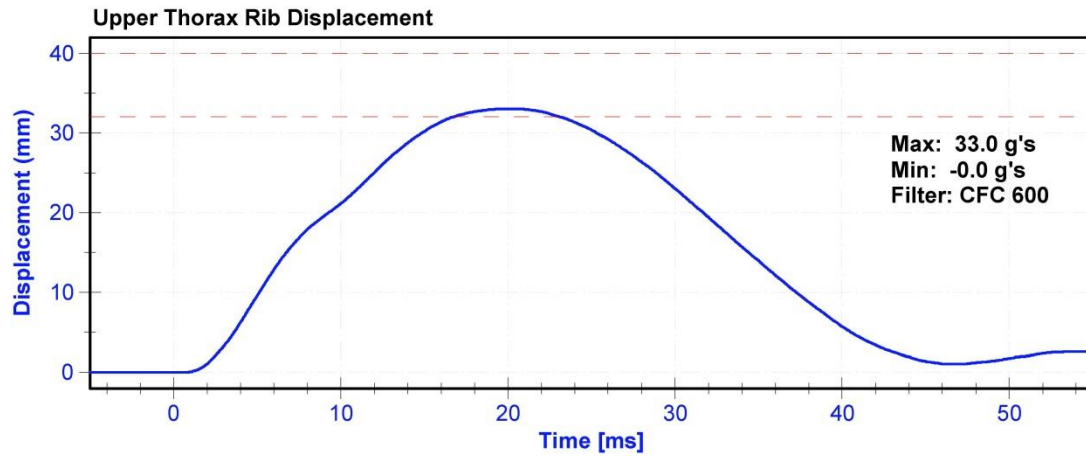
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	21.7	Pass
Humidity	10	70	%	15.1	Pass
Velocity	4.2	4.4	m/s	4.32	Pass
Probe Acceleration	14	18	g's	17.1	Pass
Lateral Upper Spine Acceleration	13	17	g's	16.3	Pass
Lateral Lower Spine Acceleration	7	11	g's	10.1	Pass
Upper Thorax Rib Deflection	32	40	mm	33.0	Pass
Middle Thorax Rib Deflection	39	45	mm	39.6	Pass
Lower Thorax Rib Deflection	35	43	mm	37.3	Pass

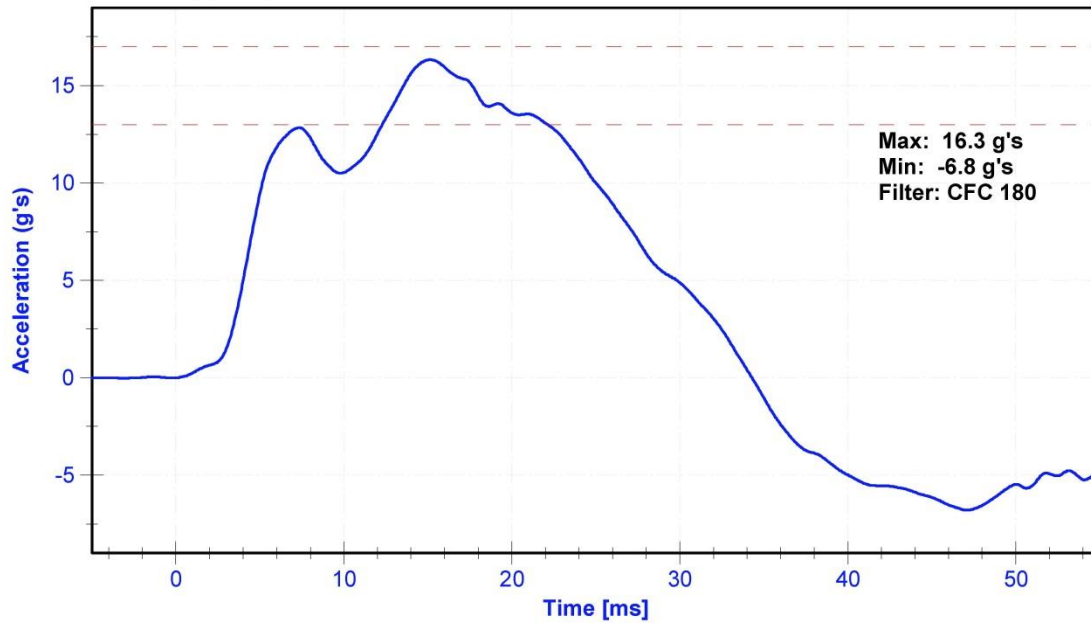
Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	ENDEVCO 7231CT	AC-C14972	2/6/2015	8/7/2015
Upper Spine Y Accelerometer	ENDEVCO 7264	AC-P51915	8/28/2014	8/28/2015
Lower Spine Y Accelerometer	ENDEVCO 7264	AC-P64147	8/28/2014	2/26/2015
Upper Thorax Rib Potentiometer	Servo 08CT1-3725	DS-451GFE	8/12/2014	8/12/2015
Middle Thorax Rib Potentiometer	Servo 08TC1-3725	DS-1151GFE	8/12/2014	8/12/2015
Lower Thorax Rib Potentiometer	Servo 08TC1-3725	DS-1156GFE	8/12/2014	8/12/2015

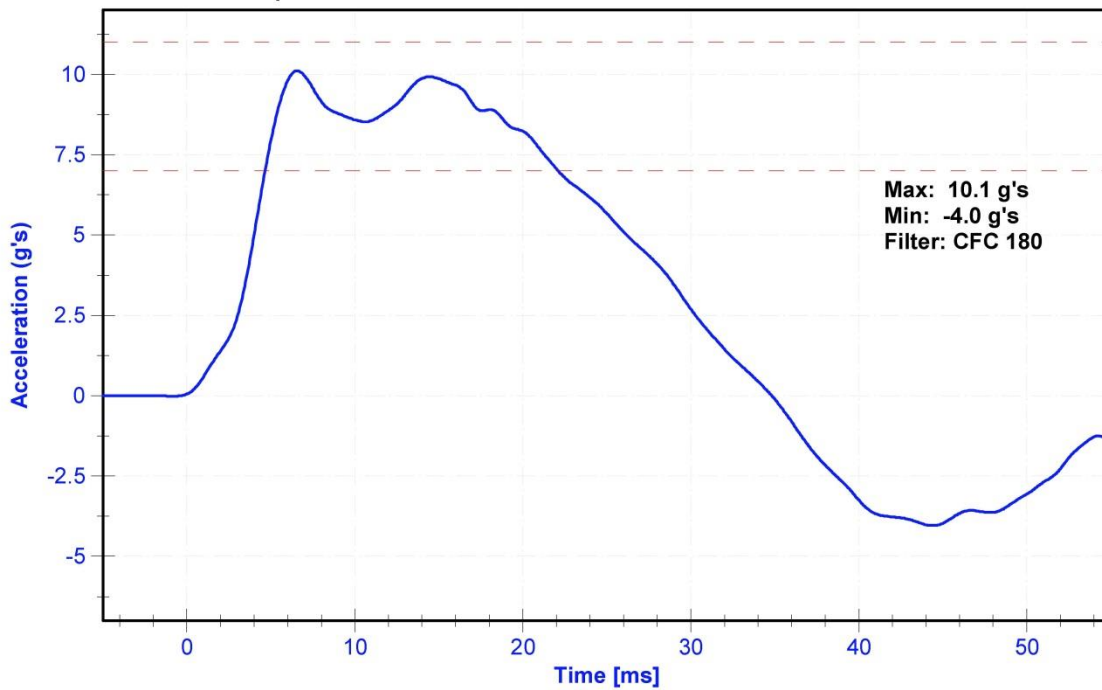




Lateral Upper Spine Acceleration



Lateral Lower Spine Acceleration



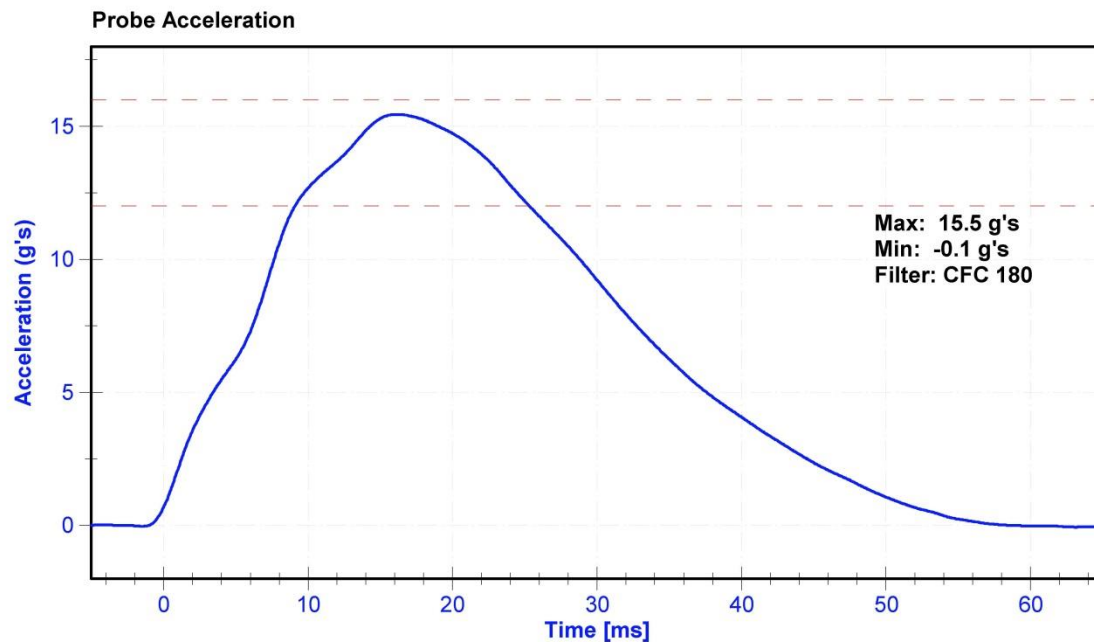
ATD Manufacturer	FTSS	Test Technician	M. Hartung
ATD Serial Number	300	Laboratory Supervisor	M. Goehle

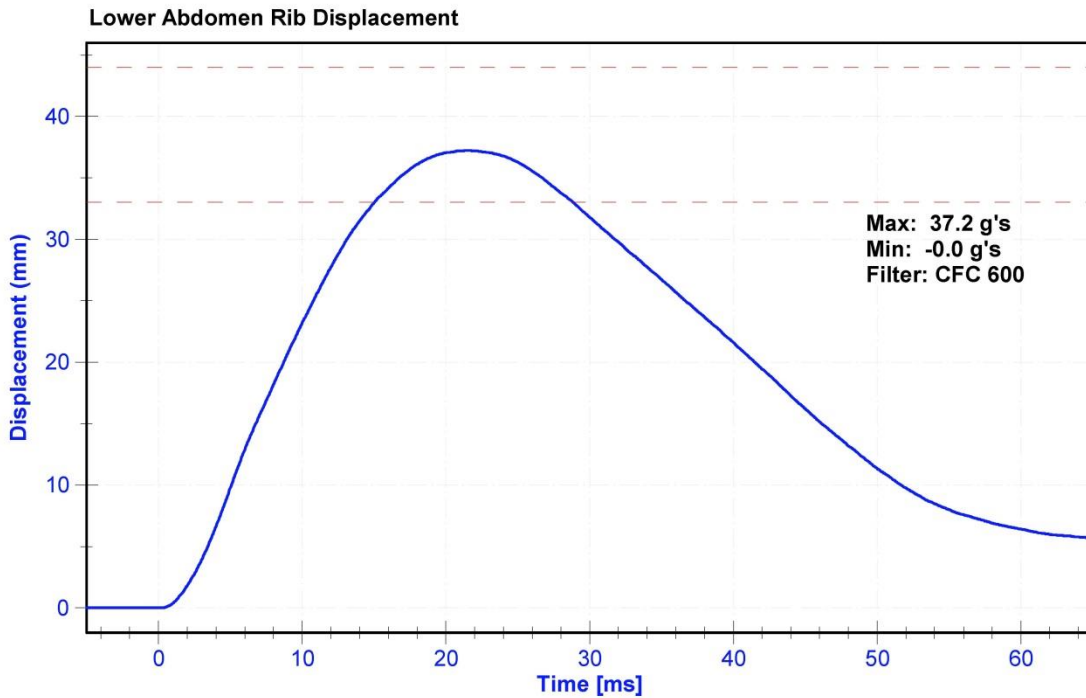
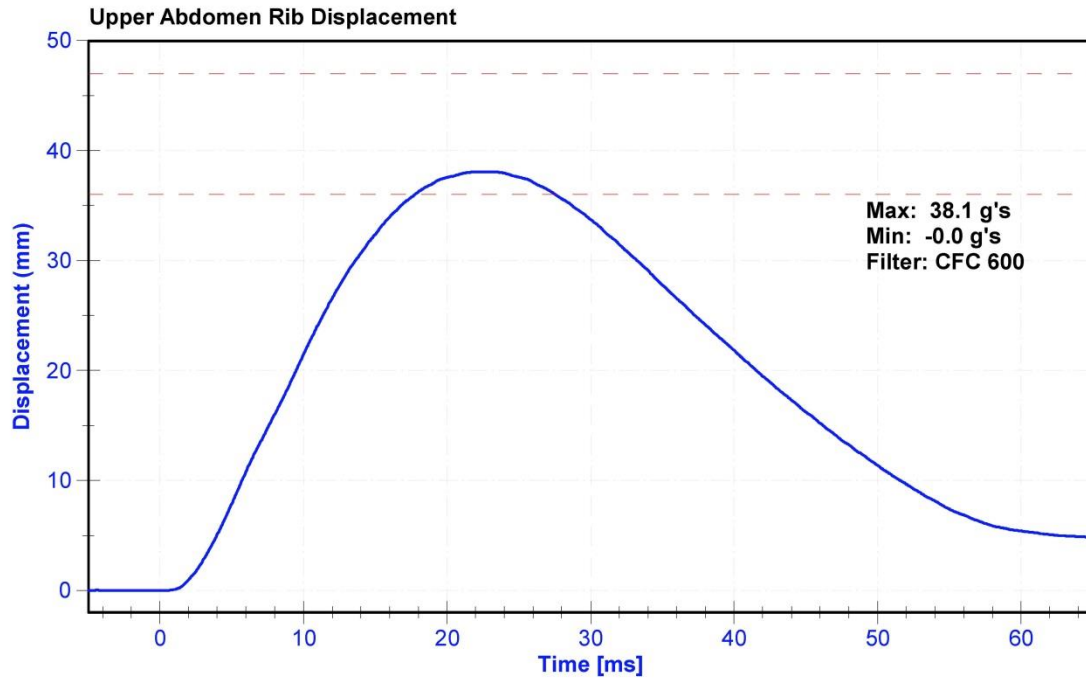
Results

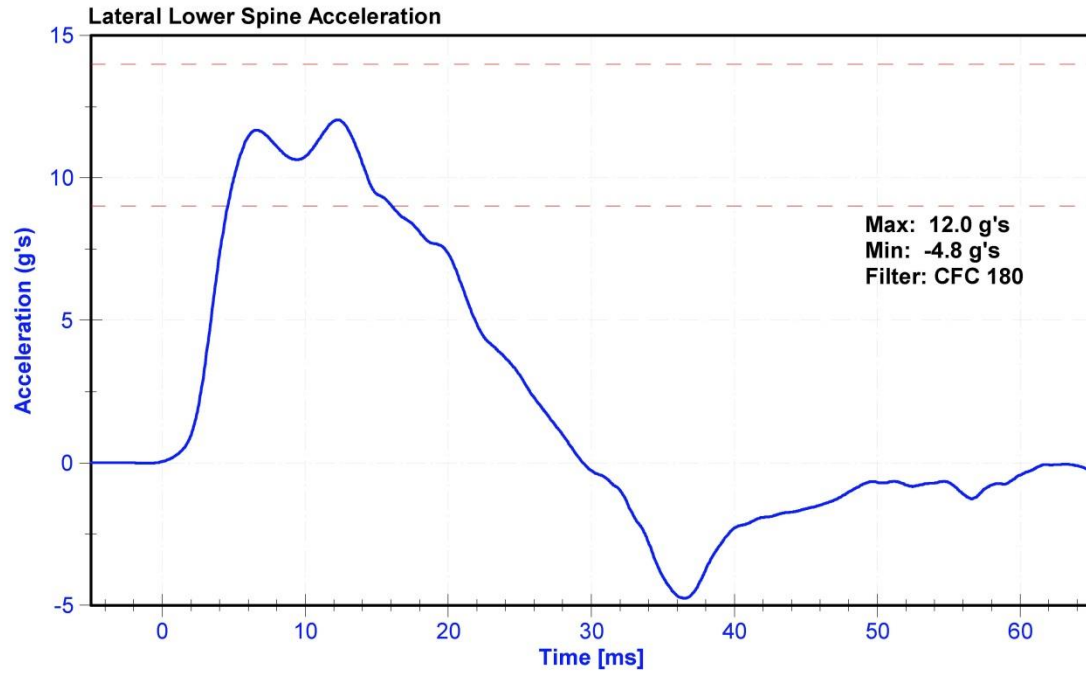
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	21.3	Pass
Humidity	10	70	%	14.7	Pass
Velocity	4.2	4.4	m/s	4.32	Pass
Probe Acceleration	12	16	g's	15.5	Pass
Lateral Lower Spine Acceleration	9	14	g's	12.0	Pass
Upper Abdomen Rib Deflection	36	47	mm	38.1	Pass
Lower Abdomen Rib Deflection	33	44	mm	37.2	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Probe Accelerometer	ENDEVCO 7231CT	AC-C14972	2/6/2015	8/7/2015
Lower Spine Y Accelerometer	ENDEVCO 7264	AC-P64147	8/28/2014	2/26/2015
Upper Abdomen Rib Potentiometer	Servo 08CT1-3725	DS-308GFE	8/12/2014	8/12/2015
Lower Abdomen Rib Potentiometer	Servo 08CT1-3725	DS-307GFE	8/7/2014	8/7/2015







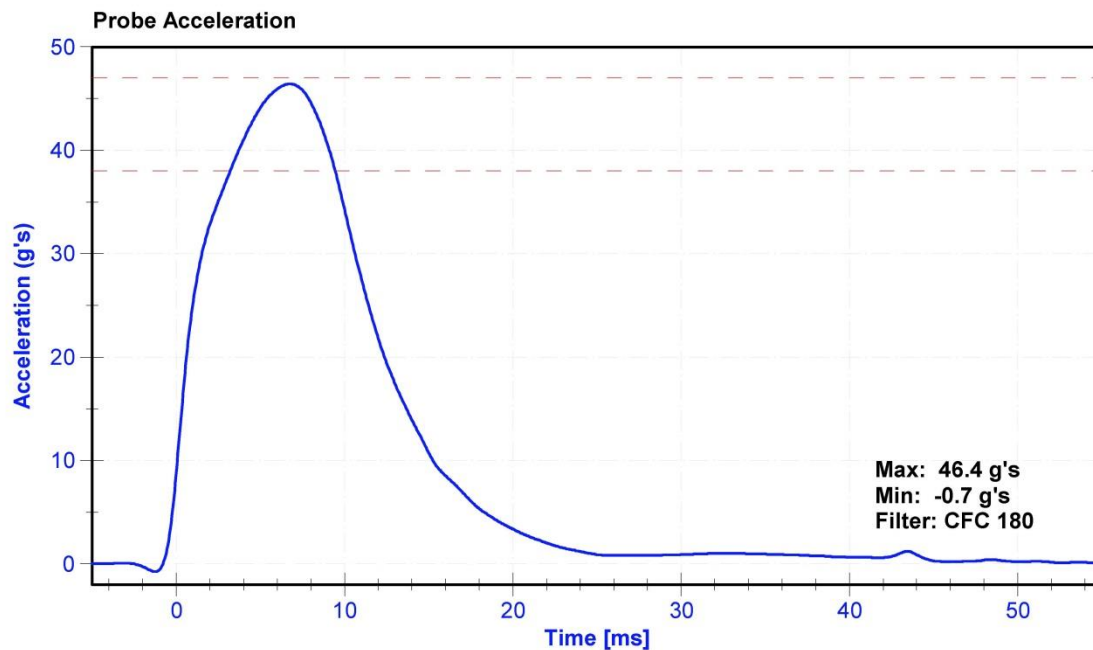
ATD Manufacturer	FTSS	Test Technician	M.Hartung
ATD Serial Number	300	Laboratory Supervisor	M.Goehle

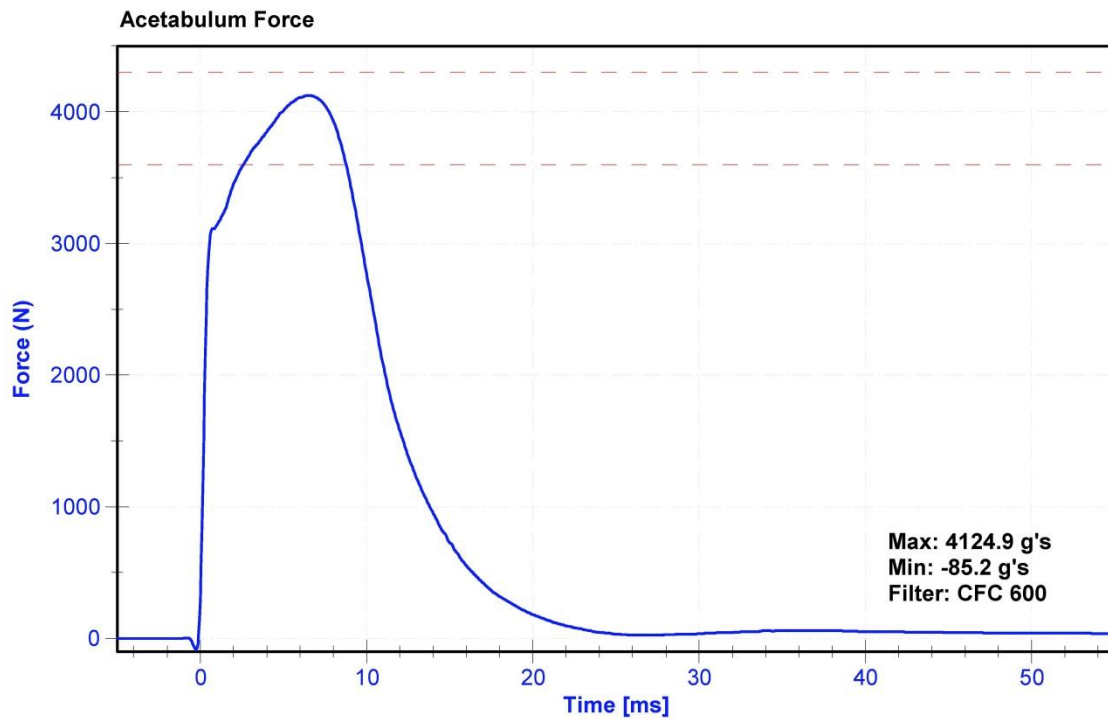
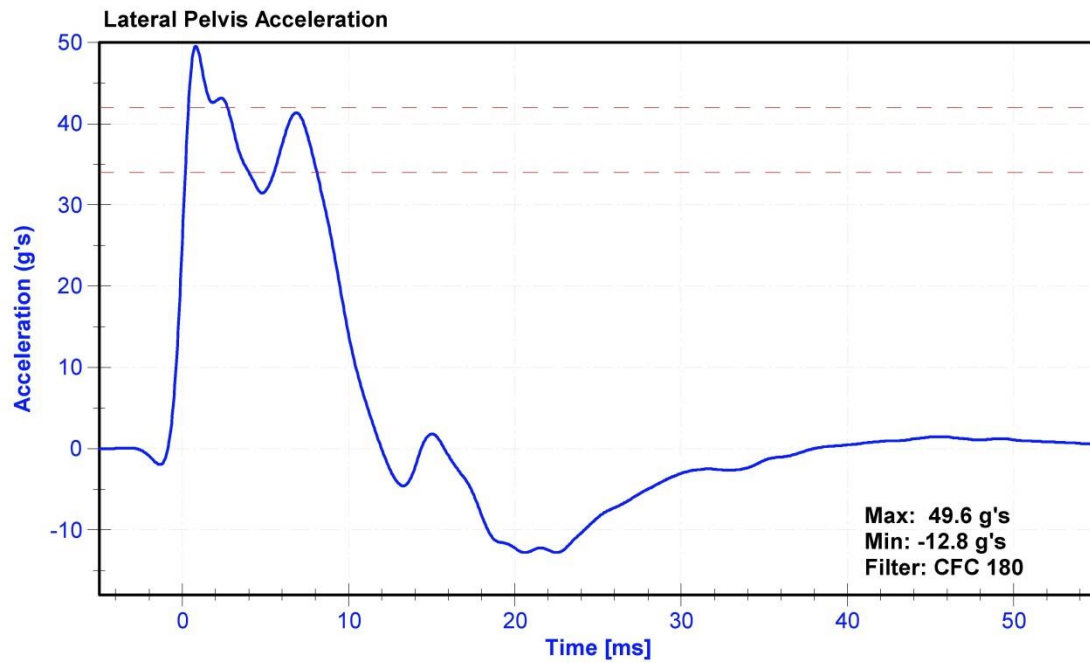
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	21.3	Pass
Humidity	10	70	%	14.7	Pass
Velocity	6.6	6.8	m/s	6.68	Pass
Probe Acceleration	38	47	g's	46.4	Pass
Lateral Pelvis Acceleration after 6ms	34	42	g's	41.4	Pass
Acetabulum Force	3,600	4,300	N	4124.9	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	ENDEVCO 7231CT	AC-C14972	2/6/2015	8/7/2015
Pelvis Y Accelerometer	ENDEVCO 7264CT	AC-P35797	11/24/2014	5/25/2015
Acetabulum Load Cell	DENTON 3249J	LC-275Fy	5/13/2014	5/13/2015
Certification Plug	Humanetics	46466	9/22/2011	N/A
Crash Test Plug	Humanetics	46431	9/22/2011	N/A





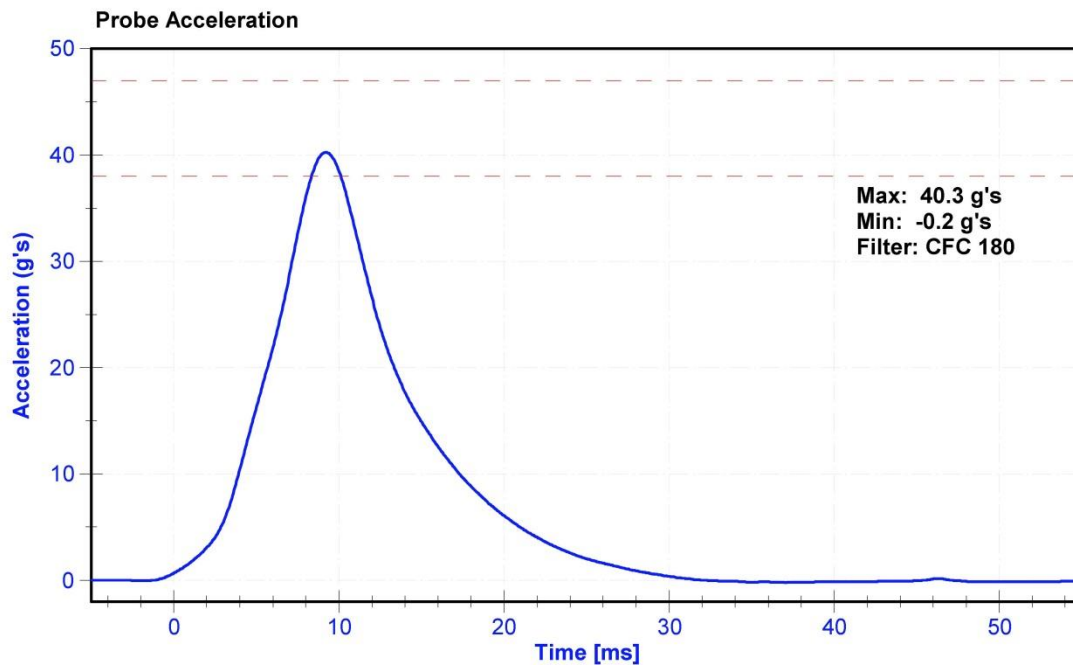
ATD Manufacturer	FTSS	Test Technician	M. Hartung
ATD Serial Number	300	Laboratory Supervisor	M. Goehle

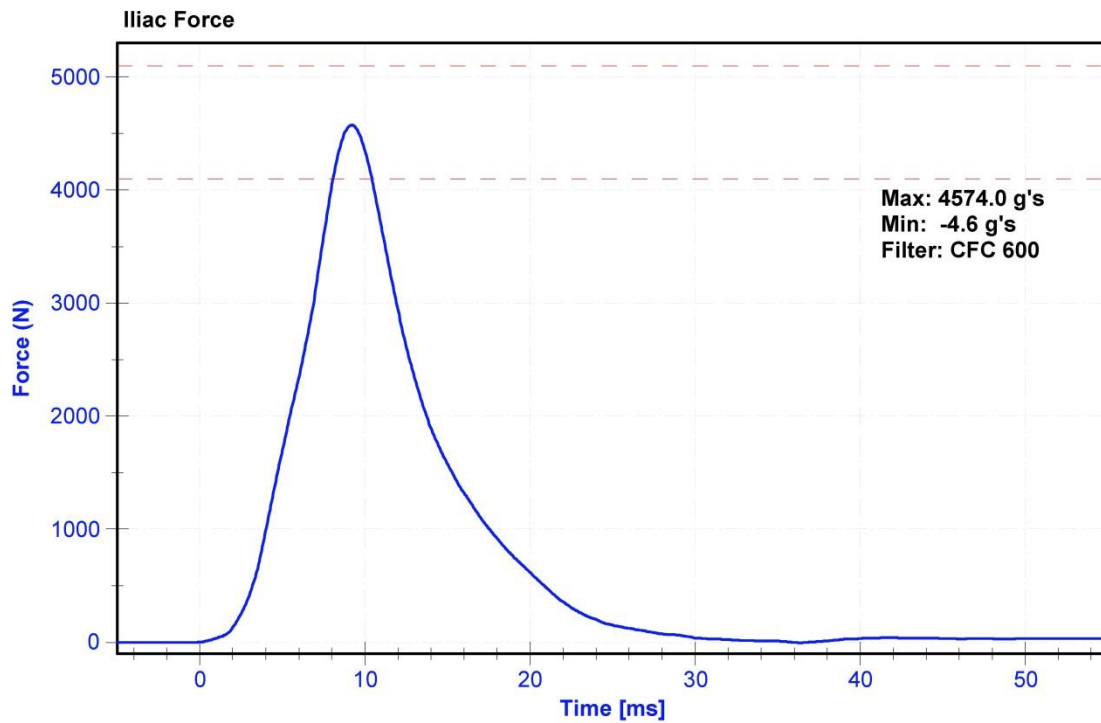
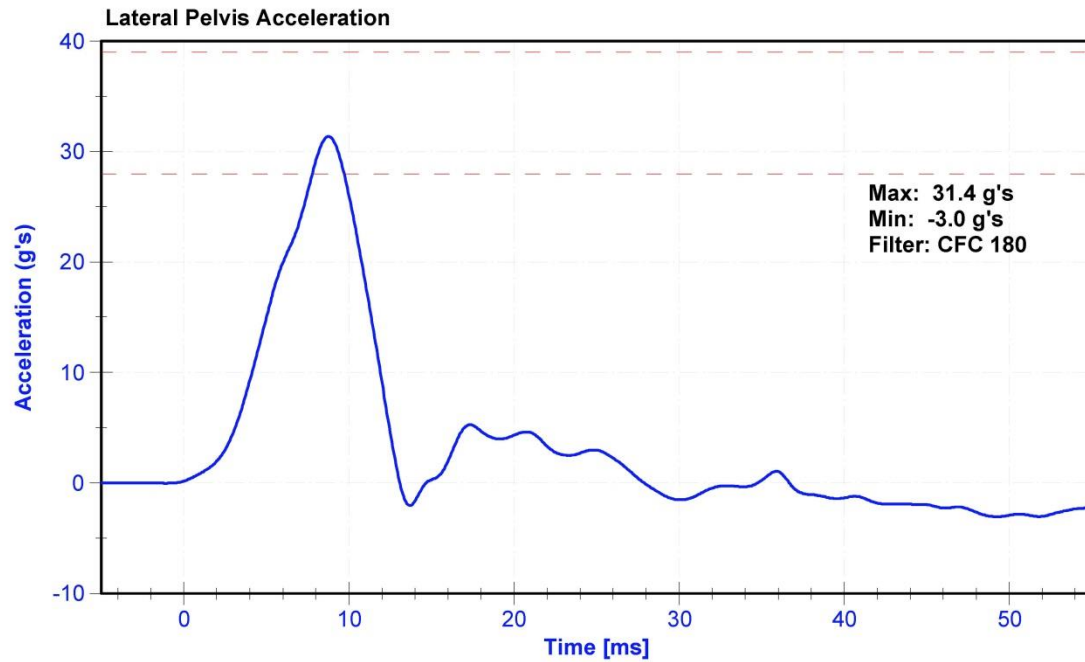
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	20.6	Pass
Humidity	10	70	%	15.0	Pass
Velocity	4.2	4.4	m/s	4.32	Pass
Probe Acceleration	36	45	g's	40.3	Pass
Lateral Pelvis Acceleration	28	39	g's	31.4	Pass
Iliac Force	4,100	5,100	N	4574.0	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	ENDEVCO 7231CT	AC-C14972	2/6/2015	8/7/2015
Pelvis Y Accelerometer	ENDEVCO 7264CT	AC-P35797	11/24/2014	5/25/2015
Iliac Load Cell	DENTON 3228J	LC-279Fy	5/14/2014	5/14/2015





APPENDIX D

TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION DATA

Table 1 – Dummy Instrumentation (SID-IIs)

			SID-IIs S/N: 300			
			Serial Number	Manufacturer	Calibration Date	
Head Accelerometers			X	AC-P58777	ENDEVCO	8/28/2014
			Y	AC-P59018	ENDEVCO	8/28/2014
			Z	AC-P68608	ENDEVCO	8/28/2014
Head Accelerometers - Redundant			X	AC-P52095	ENDEVCO	8/28/2014
			Y	AC-P58986	ENDEVCO	8/28/2014
			Z	AC-P68057	ENDEVCO	10/16/2014
Displacement Potentiometer	Shoulder		Y			
	Thoracic Rib	Upper	Y	DS-451GFE	SERVO	8/12/2014
		Middle	Y	DS-1151GFE	SERVO	8/12/2014
		Lower	Y	DS-1156GFE	SERVO	8/12/2014
	Abdominal Rib	Upper	Y	DS-308GFE	SERVO	8/12/2014
		Lower	Y	DS-307GFE	SERVO	8/7/2014
Lower Spine Accelerometers (T12)			X	AC-P58883	ENDEVCO	8/28/2014
			Y	AC-P64147	ENDEVCO	8/28/2014
			Z	AC-P58786	ENDEVCO	8/28/2014
Acetabulum Load Cell			Y	LC-275Fy	DENTON	5/13/2014
Lilac Wing Load Cell			Y	LC-279Fy	DENTON	5/14/2014
Pelvis Plug (Struck Side)				1553n	HUMANETICS	9/23/2010
Pelvis Plug (Non-Struck Side)						

Table 2 – Vehicle Instrumentation

Vehicle Instrumentation		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	AC-A120605	MSI 1201	9/18/2014
Vehicle Center of Gravity	Y	AC-A002415	MSI 1201	9/18/2014
Vehicle Center of Gravity	Z	AC-A120607	MSI 1201	9/18/2014
Left Floor Sill	Y	AC-A120621	MSI 1201	9/18/2014
A-Pillar Sill	Y	AC-A120608	MSI 1201	9/18/2014
A-Pillar Low	Y	AC-A120623	MSI 1201	9/19/2014
A-Pillar Mid	Y	AC-A126828	MSI 1201	9/18/2014
B-Pillar Sill	Y	AC-A120612	MSI 1201	9/26/2014
B-Pillar Low	Y	AC-A127671	MSI 1201	9/19/2014
B-Pillar Mid	Y	AC-A112918	MSI 1201	9/19/2014
Driver Seat	Y	AC-A127659	MSI 1201	9/18/2014
Engine Top	X	AC-A081439	MSI 1201	11/5/2014
Engine Top	Y	AC-A126786	MSI 1201	11/5/2014
Firewall	Y	AC-A127655	MSI 1201	9/19/2014
Right Roof	Y	AC-A120630	MSI 1201	9/25/2014
Right Floor Sill	Y	AC-A156951	MSI 1201	1/9/2015
Rear Floorpan	X	AC-A126803	MSI 1201	9/19/2014
Rear Floorpan	Y	AC-A126783	MSI 1201	9/19/2014

Table 3 – Pole Instrumentation

Pole Instrumentation	Serial Number	Manufacturer	Calibration Date
Load Cell 1	LC-18867	INTERFACE	8/25/2014
Load Cell 2	LC-18850	INTERFACE	8/25/2014
Load Cell 3	LC-46979	INTERFACE	8/25/2014
Load Cell 4	LC-18882	INTERFACE	8/25/2014
Load Cell 5	LC-62094	INTERFACE	8/25/2014
Load Cell 6	LC-46933	INTERFACE	8/25/2014
Load Cell 7	LC-18866	INTERFACE	8/25/2014
Load Cell 8	LC-46949	INTERFACE	8/25/2014