

REPORT NUMBER: SPNCAP-CAL-25-005

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

**Volkswagen de Mexico S.A. de C.V. Mexico
2025 Volkswagen Tiguan
5 Door SUV**

NHTSA No: M20255804

**PREPARED BY:
CALSPAN CORPORATION
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April 14, 2026

FINAL REPORT

**PREPARED FOR:
U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF CRASHWORTHINESS STANDARDS
1200 NEW JERSEY AVE SE
WASHINGTON, D.C. 20590**

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Vanessa Hansen, Operations Manager

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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			14. Sponsoring Agency Code NRM-110																												
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16. Abstract A 32.20 km/h (20 mph), 75° oblique impact Side NCAP Test was conducted on the subject 2025 Volkswagen Tiguan 5 Door SUV 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 July 25, 2025. The impact velocity of the vehicle was 32.29 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>288.368</td> </tr> <tr> <td>Resultant Lower Spine Acceleration</td> <td>G</td> <td>82</td> <td>33.512</td> </tr> <tr> <td>Total Pelvic Force (sum of acetabular and iliac forces)</td> <td>N</td> <td>5525</td> <td>2433.391</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>38</td> <td>19.052</td> </tr> <tr> <td>Maximum Abdominal Rib Deflection</td> <td>mm</td> <td>45*</td> <td>18.030</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 (HIC36)		1000	288.368	Resultant Lower Spine Acceleration	G	82	33.512	Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	2433.391	Maximum Thoracic Rib Deflection	mm	38	19.052	Maximum Abdominal Rib Deflection	mm	45*	18.030
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17. Key Words New Car Assessment Program (NCAP) Side Impact Pole Part 572V SID-IIs			18. Distribution Statement <u>Copies of this report are available from:</u> National Highway Traffic Safety Administration Technical Information Services Division 1200 New Jersey Ave. Washington, D.C. 20590																												
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SECTION 1

TEST PURPOSE AND PROCEDURE

This side impact test was conducted as part of the MY 2025 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. 693JJ920D000016. The purpose of this test is to generate comparative side impact performance in a 2025 Volkswagen Tiguan 5 Door SUV. The side impact test was conducted in accordance with the Office of Crashworthiness Standards Side NCAP Pole Laboratory Test Procedure, dated March 2020.

SECTION 2

SUMMARY OF TEST RESULTS

A rigid pole side impact test was conducted on a 2025 Volkswagen Tiguan 5 Door SUV. The subject vehicle was towed into the rigid pole at an angle of 75° and a velocity of 32.29 km/h. The test was conducted by Calspan Corporation's Transportation Test Operations facility in Buffalo, New York on July 25, 2025. 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 572U (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 March 2020. The side impact event was documented by 11 cameras. Camera locations and other pertinent camera information are included on page 3-11 in this report.

The Part 572U (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 (HIC36)		1000	288.368
Resultant Lower Spine Acceleration	G	82	33.512
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	2433.391
Maximum Thoracic Rib Deflection	mm	38	19.052
Maximum Abdominal Rib Deflection	mm	45*	18.030

*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
Front Airbag	Yes	No		
Knee Airbag	Yes	No		
Side Airbag 1 - Curtain	Yes	Yes	Yes	Yes
Side Airbag 2 - Torso/Pelvis Airbag	Yes	Yes	Yes	Yes
Seat Belt Pretensioner	Yes	Yes	Yes	Yes
Seat Belt Load Limiter	Yes	Yes	Yes	Yes
Other				

GENERAL COMMENTS:

1. P1 serial number - 300

Data Anomalies:

- No Questionable Channels

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 – Test Vehicle Accelerometer Locations

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: 2025 Volkswagen Tiguan 5 Door SUV
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
Test Date: 07/25/2025

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M20255804
Model Year	2025
Make	Volkswagen
Model	Tiguan
Body Style	SUV
VIN	3VVCR7RM2SM012766
Body Color	Pyrite Silver Metallic
Odometer Reading (km/mi)	18
Engine Displacement (L)	2.0
Type / No. Cylinders	14 Turbo
Engine Placement	Transverse
Transmission Type	Automatic
Transmission Speeds	8-Speed
Overdrive	Yes
Final Drive	Front Wheel Drive
Roof Rack	No
Sunroof / T-Top	No
Running Boards	No
Tilt Steering Wheel	Yes
Power Seats	No
Anti-Lock Brakes (ABS)	Yes

Traction Control System (TCS)	Yes
Auto-Leveling System	No
Automatic Door Locks (ADL)	Yes
Power Window Auto-Reverse	Yes
Other Optional Feature	N/A
Driver Front Airbag	Yes
Driver Curtain Airbag	Yes
Driver Head/Torso Airbag	No
Driver Torso Airbag	No
Driver Torso / Pelvis Airbag	Yes
Driver Pelvis Airbag	No
Driver Knee Airbag	Yes
Rear Pass. Curtain Airbag	Yes
Rear Pass. Head / Torso Airbag	No
Rear Pass. Torso Airbag	No
Rear Pass. Torso / Pelvis Airbag	Yes
Rear Pass. Pelvis Airbag	No
Driver Seat Belt Pretensioner	Yes
Rear Pass. Seat Belt Pretensioner	Yes
Driver Load Limiter	Yes
Rear Pass. Load Limiter	Yes
Other Safety Restraint - Center Seat Airbag	Yes

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

No

DATA FROM CERTIFICATION LABEL

Manufactured By	Volkswagen de Mexico S.A. de C.V. Mexico
Date of Manufacture	04/25
Vehicle Type	MPV

GVWR (KG)	2160
GAWR Front (KG)	1140
GAWR Rear (KG)	1070

VEHICLE SEATING AND WEIGHT CAPACITY DATA

Measured Parameter	Front	Rear	Third	Total
Designated Seating Capacity (DSC)	2	3	N/A	5
Vehicle Capacity Weight (VCW) (kg)				435
DSC x 68.0 kg				340
Cargo Weight (RCLW) (kg)				95

(A)

(B)

(A-B)

VEHICLE SEAT TYPE

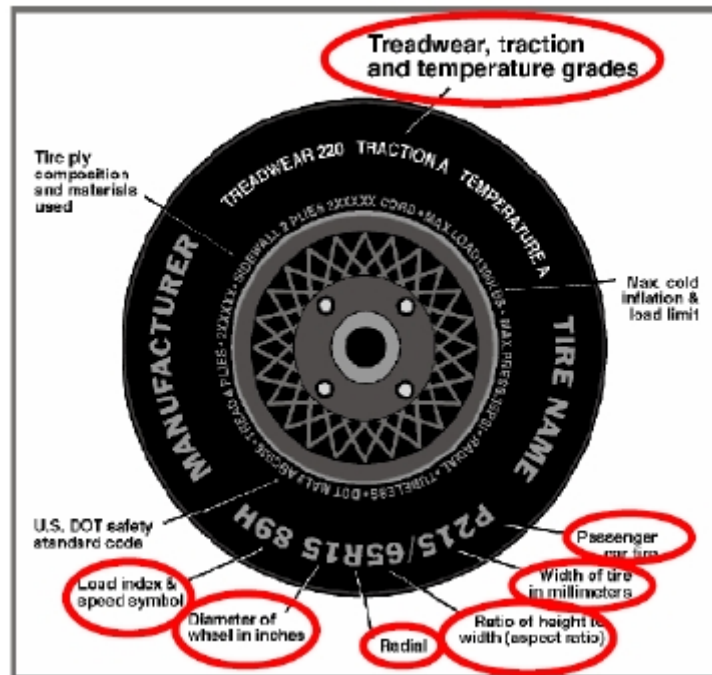
Seating Location	Type Of Seat Pan				Type Of Seat Back		
	Bucket	Bench	Split Bench	Contour	Fixed	Adjustable	
						W/ Lever	W/ Knob
Front	X					X	
Rear or Second Row Seat			X		X		
Third Row seat	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
 Test Date: 07/25/2025

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)	260	260
Recommended Tire Size	215/65R17	215/65R17
Tire Size on Vehicle	215/65R17	215/65R17
Tire Manufacturer	Goodyear	Goodyear
Tire Model	Assurance	Assurance
Treadwear	540	540
Traction	A	A
Temperature Grades	A	A
Tire Plies Sidewall	1 Polyester	1 Polyester
Tire Plies Body	1 Polyester, 2 Steel, 1 Polyamide	1 Polyester, 2 Steel, 1 Polyamide
Load Index / Speed Symbol	99H	99H
Tire Material	Rubber	Rubber
DOT Safety Code Left	1PLE3 JAJR 3624	1PLE3 JAJR 3624
DOT Safety Code Right	1PLE3 JAJR 3624	1PLE3 JAJR 3624

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

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
 Test Date: 07/25/2025

TIRE PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kPa	248	247	250	252
Tire Placard	kPa	260	260	260	260
Owner's Manual	kPa	260	260	260	260
As Tested	kPa	260	260	260	260

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front	Rear	Total	Rear	Total	Total	Front	Rear	Total
Left	kg	492	328		510	391		509	402	
Right	kg	478	334		481	388		479	390	
Ratio	%	59.4	40.6		56.0	44.0		55.5	44.5	
Totals	kg	970	662	1632	991	779	1770	988	792	1780

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total As Delivered Weight (UVW)	kg	1632	(A)
Actual Weight of 1 P572V (SID-IIs) ATD Used	kg	50	(B)
Rated Cargo / Luggage Weight (RCLW)	kg	95	(C)
Calculated Vehicle Target Weight (TVTW)	kg	1777	(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	-0.80	-0.6	-0.55	Yes
Front Passenger Sill Angle (front-to-rear)*	Deg	-0.65	-0.45	-0.35	Yes
Front Bumper-Line Angle (left-to-right)**	Deg	-0.05	-0.05	-0.10	Yes
Rear Bumper-Line Angle (left-to-right)**	Deg	-0.05	-0.05	+0.35	Yes
Vehicle CG (Aft of Front Axle)	mm	1130	1226	1240	
Vehicle CG (Left (+) / Right (-) from Longitudinal Centerline)	mm	4	14	18	

* 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: 2025 Volkswagen Tiguan 5 Door SUV	NHTSA No.: M20255804
Test Program: NCAP Side Pole Impact Test	Test Date: 07/25/2025

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Trunk Carpeting	11
Spare Tire	16
Jack	1
Ballast / Equipment Added	64.4

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

TEST SURFACE MARKING

	Distance from 75° Impact Location Line (mm)
Fore 25 mm target	1018
Aft 25 mm target	1019

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

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV

NHTSA No.: M20255804

Test Program: NCAP Side Pole Impact Test

Test Date: 07/25/2025

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	16.9	12.8	14.9
Front Passenger Seat	17.3	13.1	15.2
Front Center Seat			
Struck Side Rear Seat	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed

SEAT HEIGHT AND ANGLE

Seat	As Tested SCRL Angle (Mid) (°)	As Tested SCRP Height (mm)	SCRP Height Position	SCRP Height (mm)		
				Rearmost	Mid-Fore / Aft	Forward-Most
Driver Seat	14.9	14	Max	-	-	-
			Mid	-	-	-
			Min	17	15	14
Front Passenger Seat	15.2	8	Max	-	-	-
			Mid	-	-	-
			Min	10	9	8
Front Center Seat*			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			

**If applicable*

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

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV
 Test Program: NCAP Side Pole Impact Test

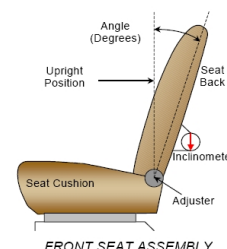
NHTSA No.: M20255804
 Test Date: 07/25/2025

SEAT FORE / AFT POSITION

Seat	Total Fore / Aft Travel		Test Position from Forward most Position	
	mm	Detents*	mm	Detents*
Driver Seat	253	40 (0-39)	0	0
Front Passenger Seat	214	30 (0-29)	0	0
Front Center Seat				
Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed	Fixed

SEAT BACK ANGLE ADJUSTMENT

The driver's seat back is positioned such that the dummy's head is level. The front center and front passenger's seat backs are positioned in a similar manner as the driver's seat back. The struck-side rear passenger seat back is positioned in accordance with the information provided by the manufacturer on Form No. 1 for the 5th percentile female dummy in a Side NCAP MDB test. The rear center and non-struck side rear passenger's seat back 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	64.35	32 (0-31)	22.7	5
Front Passenger Seat	64.15	32 (0-31)	22.7	5
Front Center Seat				
Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed	Fixed

SEAT BELT ANCHORAGE ADJUSTMENT

Seat belt anchorages are adjusted in accordance with the information provided by the manufacturer on Form No. 1. Zero is defined as the uppermost detent

Seat	Total # of Positions	Placed in Position #
Driver Seat	4 (0-3)	0

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	4 (0-3)	Lowermost

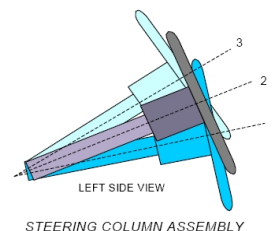
DATA SHEET NO. 2 ... (CONTINUED)
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT AND FUEL SYSTEMS DATA

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
 Test Date: 07/25/2025

STEERING COLUMN POSITIONS

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.

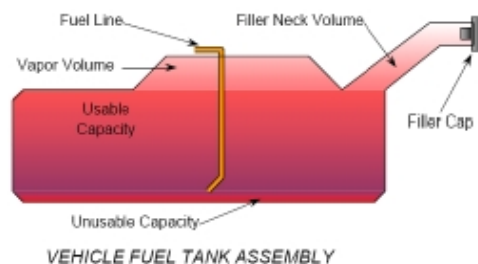


	Degrees	Fore / Aft Position (mm)
Lowermost - Position No. 1	22.3	
Geometric center - Position No. 2	25.0	
Uppermost - Position No. 3	27.6	
Telescoping Steering Wheel Travel		60
Test Position	24.9	30

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 right 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

Description	Liters
Usable Capacity of "Standard Tank" - see Form No. 1	55.0
Usable Capacity of "Optional Tank" - see Form No. 1	N/A
Usable Capacity of "Standard Tank" - see Owner's Manual	55.0
Usable Capacity of "Optional Tank" - see Owner's Manual	N/A
93% of Usable Capacity	51.15
Actual Amount of Solvent Used in Test	51.2
1/3 of Usable Capacity	18.33

Is the Actual Amount of Solvent Used in the test equal to 93% $\pm$ 1% of the Usable

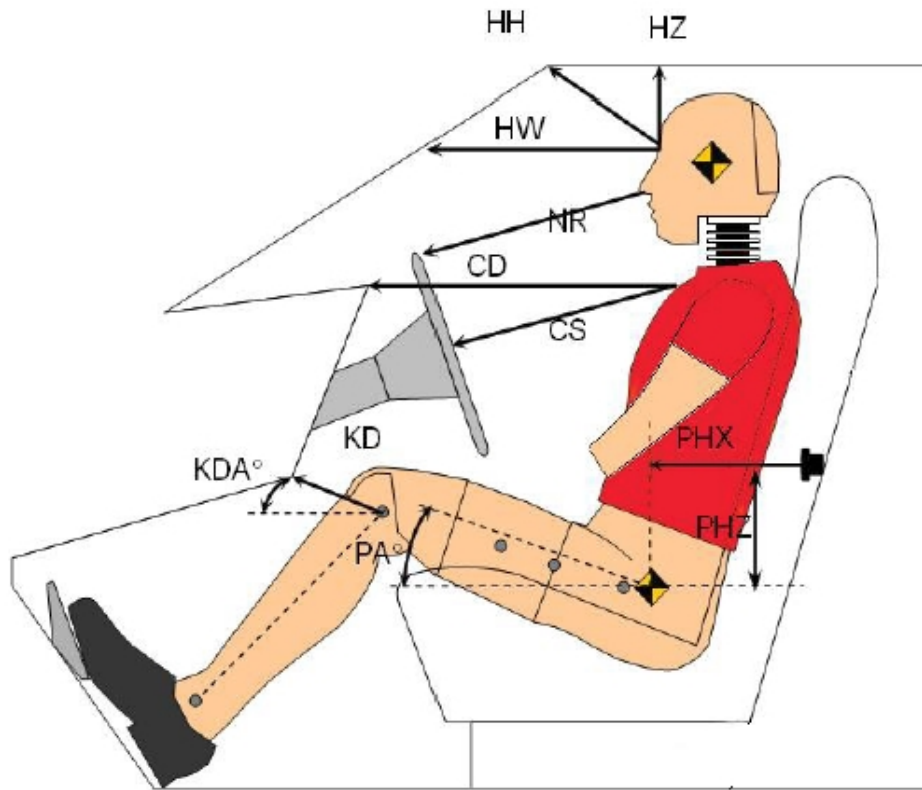
Capacity stated in Form No. 1?

☒ Yes ☐ No

DATA SHEET NO. 3
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
 Test Date: 07/25/2025



Left Side View

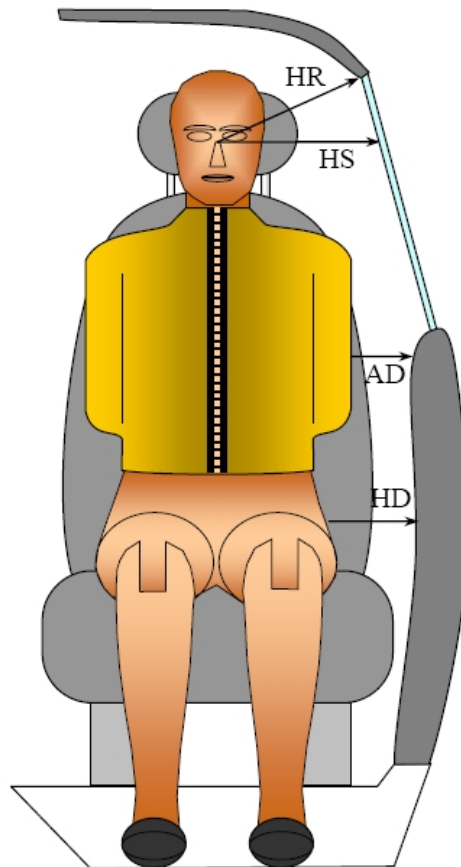
DUMMY LONGITUDINAL CLEARANCE DIMENSION INFORMATION

Driver Code	Description	Driver (Serial No. 300)	
		Length (mm)	Angle (°)
HH	Head to Header	313	
HW	Head to Windshield	581	
HZ	Head to Roof Liner	228	
NR	Nose to Rim	258	
CD	Chest to Dash	474	
CS	Chest to Steering Wheel	210	
KD(L) / KDA(L)°	Left Knee to Dash	145	26.8
KD(R) / KDA(R)°	Right Knee to Dash	133	27.0
PAX°	Pelvic Tilt Angle (X-Axis)		19.25
PAY°	Pelvic Tilt Angle (Y-Axis)		0.2
PHX	Hip Point to Striker (X-Axis)	333	
PHZ	Hip Point to Striker (Z-Axis)	203	

DATA SHEET NO. 4
DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
Test Date: 07/25/2025



FRONT VIEW OF DUMMY

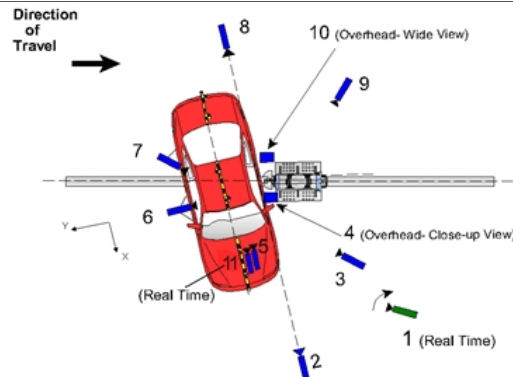
DUMMY LATERAL CLEARANCE DIMENSION INFORMATION

Code	Measurement Description	Units	Driver – Length (Serial No. 300)
HR	Head to Side Header	mm	270
HS	Head to Side Window	mm	387
AD	Arm to Door	mm	169
HD	H-Point to Door	mm	172

DATA SHEET NO. 5 CAMERA AND INSTRUMENTATION DATA

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
Test Date: 07/25/2025



CAMERA LOCATIONS AND DATA

No.	Camera View	Location (mm)			Lens (mm)	Speed (fps)
		X	Y	Z		
1	Real-time (24 - 30 fps) pan view of impact				Zoom	60
2	Front ground level - impact view	-678	7984	-1531	35	1000
3	Impact side 45° - forward pole view	1217	4954	-1526	24	1000
4	Overhead Close-up view of impact	0	0	-8990	28	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	-264	-7609	-1421	28	1000
9	Impact side 45° - rearward pole view	3752	-4755	-1477	24	1000
10	Overhead wide - view of impact	-210	0	-8990	16	1000
11	Real-time (24 - 30 fps) - dummy front view				Zoom	60

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.

If applicable, explain why camera(s) did not operate as intended: All cameras operated as intended.

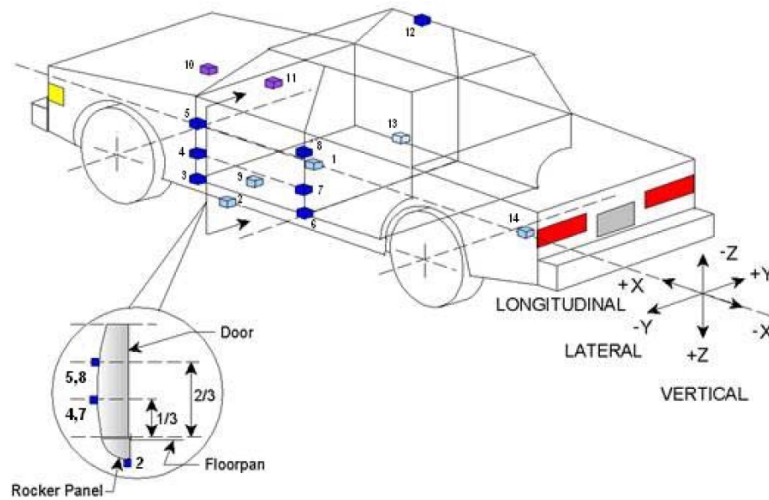
INSTRUMENTATION

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

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

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
Test Date: 07/25/2025



TEST VEHICLE ACCELEROMETER LOCATIONS

No.	Accelerometer Location	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	2386	-7	-31
2	Left Floor Sill	2804	-658	139
3	A-Pillar Sill	3199	-620	122
4	A-Pillar Low	3215	-647	-100
5	A-Pillar Mid	3185	-660	-629
6	B-Pillar Sill	2179	-681	81
7	B-Pillar Low	2166	-686	-211
8	B-Pillar Mid	2116	-669	-511
9	Driver Seat Track	2594	-598	97
10	Engine Top	3878	314	-301
11	Firewall	3703	8	-452
12	Right Roof	2348	587	-1066
13	Right Floor Sill	2819	657	139
14	Rear Floor Pan	825	-10	55

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: 2025 Volkswagen Tiguan 5 Door SUV
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
Test Date: 07/25/2025

POLE BARRIER



RIGID POLE LOAD CELL LOCATION

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: 2025 Volkswagen Tiguan 5 Door SUV
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
Test Date: 07/25/2025

TEST DUMMY INFORMATION AND CONTACT POINTS

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

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	No	No	No	No	No
Latch or Hinge Systems Pulled Out of Their Anchorages	No	No	No	No	No
Disengaged from Latched Position	No	No	No	No	No
Latch Separated from Striker	No	No	No	No	No
Jammed Shut	Yes	Yes	No	No	No
If Door Opened at Striker, 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: 2025 Volkswagen Tiguan 5 Door SUV
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
Test Date: 07/25/2025

POST-TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	A-Pillar, B-Pillar & C-Pillar Buckled
Sill Separation	20 mm in the impact area
Windshield Damage	cracks throughout and separation along Driver A-Pillar
Side Window Damage	Driver window shattered during impact
Other Notable Effects	None

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

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

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

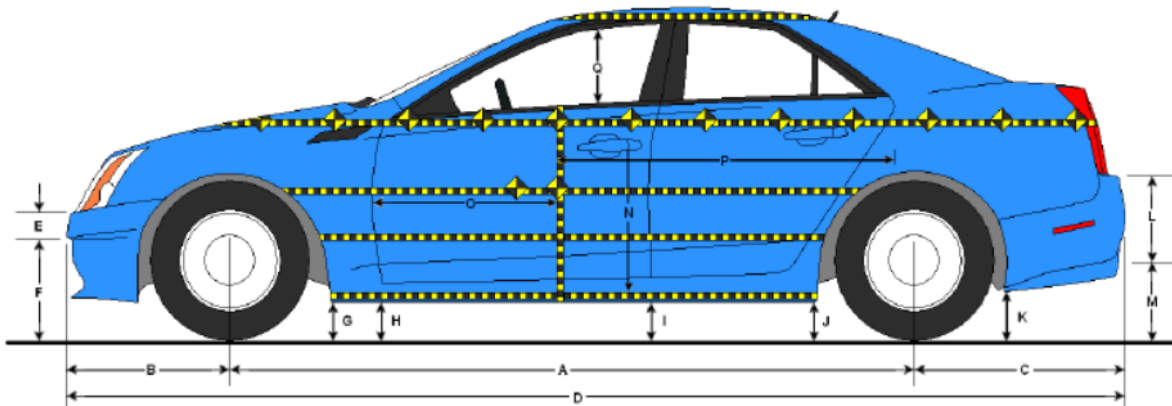
Measured Parameter	Units	Tolerance	Value
Vertical Impact Ref Line - Aft of Front Axle, Intended Impact Pt	mm		1063
Actual Impact Point - Aft of Front Axle	mm		1066
Horizontal Offset (+ forward / - rearward)	mm	+/- 38*	-3
Angle Between Vehicle's Longitudinal Centerline and Line of Forward Motion	deg	75 +/- 3	75
Trap No. 1 Velocity - Primary	kph	31.4 to 33.0	32.29
Trap No. 2 Velocity - Redundant	kph	31.4 to 33.0	32.30

*Of Intended Impact Point

DATA SHEET NO. 9
TEST VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
Test Date: 07/25/2025



LEFT SIDE VIEW

VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

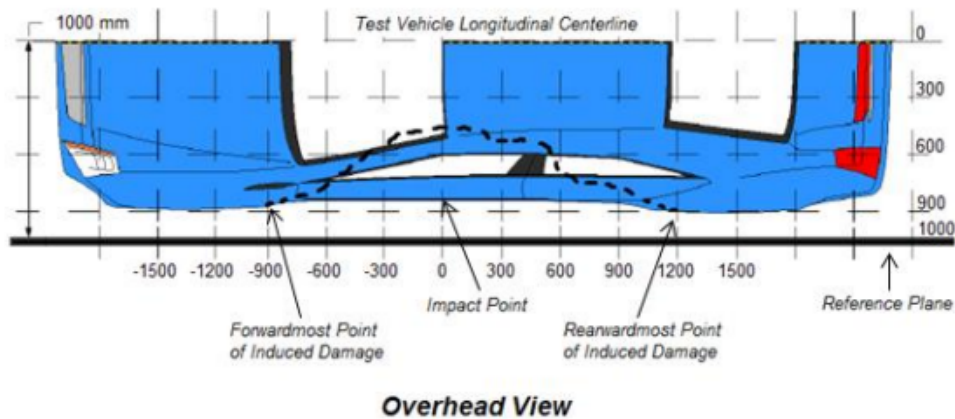
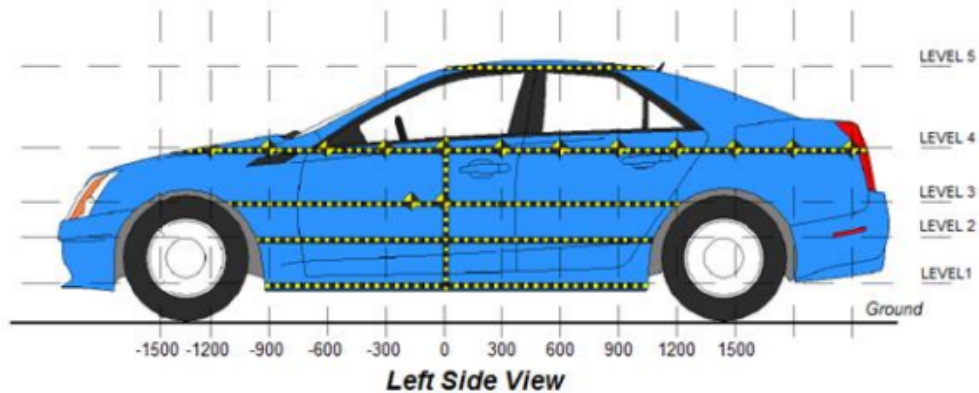
No.	Measurement Description	Pre-Test	Post-Test	Change
A	Vehicle Wheelbase	2786	2781	-5
B	Front Axle to FSOV	955	956	1
C	Rear Axle to RSOV	946	943	-3
D	Total Length at Centerline	4686	4680	-6
E	Front Bumper Thickness	146	146	0
F	Front Bumper Bottom to Ground	431	453	22
G	Sill Height at Front Wheel Well	243	241	-2
H	Sill Height at Front Door Leading Edge	245	247	2
I	Sill Height at B Pillar	266	277	11
J1	Sill Height at Rear Wheel Well	263	271	8
J2	Pinch Weld Height at Rear Wheel Well	230	233	3
K	Sill Height Aft of Rear Wheel Well	276	280	4
L	Rear Bumper Thickness	104	104	0
M	Rear Bumper Bottom to Ground	486	486	0
N	Sill Height to Bottom of Front Window Sill	883	882	-1
O	Front Door Leading Edge to Impact CL	578	504	-74
P	Rear Door Trailing Edge to Impact CL	1610	1554	-56
Q	Front Window Opening	375	377	2
R	Right Side Length	4605	4612	7
S	Left Side Length	4606	4583	-23
T	Vehicle Width at B-Pillars	1843	1734	-109
U	Front Wheel Track width	1579	1564	-15
V	Rear Wheel Track Width	1567	1567	0

* All measurements in mm with tolerance of ± 3 mm

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

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
 Test Date: 07/25/2025



MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Measurement Description	Units	Height Above Ground	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	mm	397	290	0
2	Driver H-Point	mm	687	317	0
3	Mid-Door	mm	733	322	0
4	Window Sill	mm	1102	278	0
5	Window Top	mm	1596	114	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: 2025 Volkswagen Tiguan 5 Door SUV
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
 Test Date: 07/25/2025

EXTERIOR CRUSH MEASUREMENTS AT EACH LEVEL

	Pre-Test					Post-Test					Crush				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-1500															
-1350															
-1200															
-1050				797					823					-26	
-900				811					833					-22	
-750			927	819				925	821				2	-2	
-600	905	918	921	826		894	912	926	813		11	6	-5	13	
-450	908	911	913	856		859	839	844	786		49	72	69	70	
-300	911	909	912	837		788	772	770	706		123	137	142	131	
-150	914	908	910	837		711	677	677	639		203	231	233	198	
0	915	906	908	838		625	589	586	560		290	317	322	278	
150	917	904	906	838	602	656	624	619	587	488	261	280	287	251	114
300	917	902	904	840	620	759	738	734	665	517	158	164	170	175	103
450	916	898	901	841	624	832	799	796	726	537	84	99	105	115	87
600	913	896	897	841	623	823	805	805	752	548	90	91	92	89	75
750	911	892	892	841	619	840	822	820	769	558	71	70	72	72	61
900	907	889	888	840	614	859	839	837	786	567	48	50	51	54	47
1050	903	890	890	838	606	876	861	859	800	574	27	29	31	38	32
1200	895	904	903	851	595	890	895	892	832	576	5	9	11	19	19
1350		910	912	863	579		916	917	860	568		-6	-5	3	11
1500				860	556				875	551				-15	5

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.

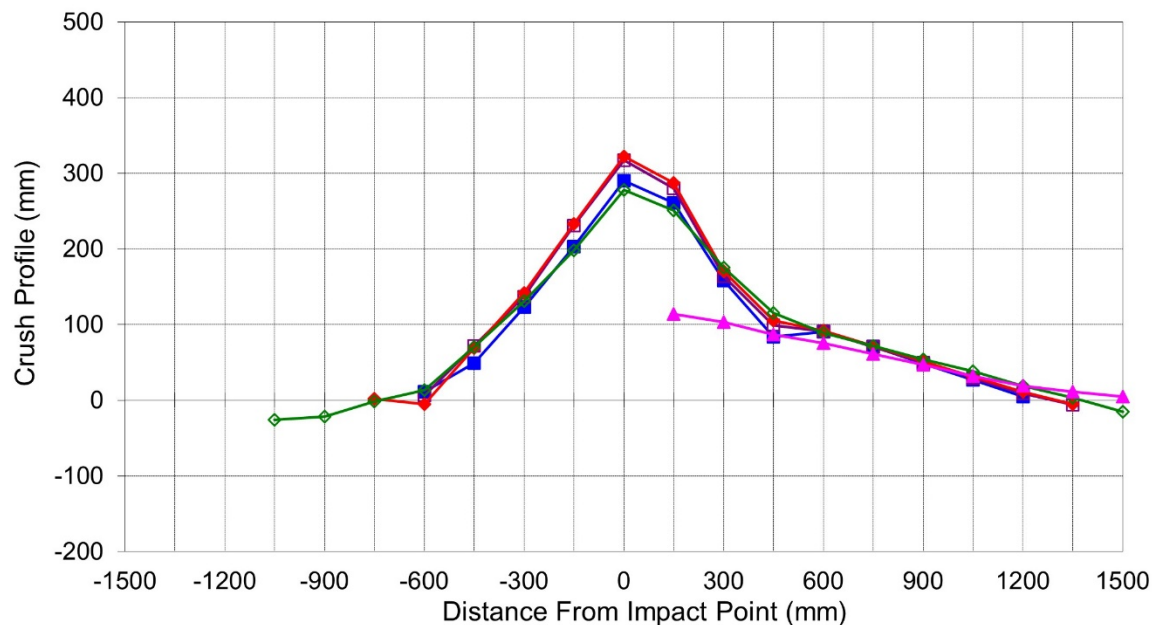
DATA SHEET NO.10 ... (CONTINUED)
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV

NHTSA No.: M20255804

Test Program: NCAP Side Pole Impact Test

Test Date: 07/25/2025



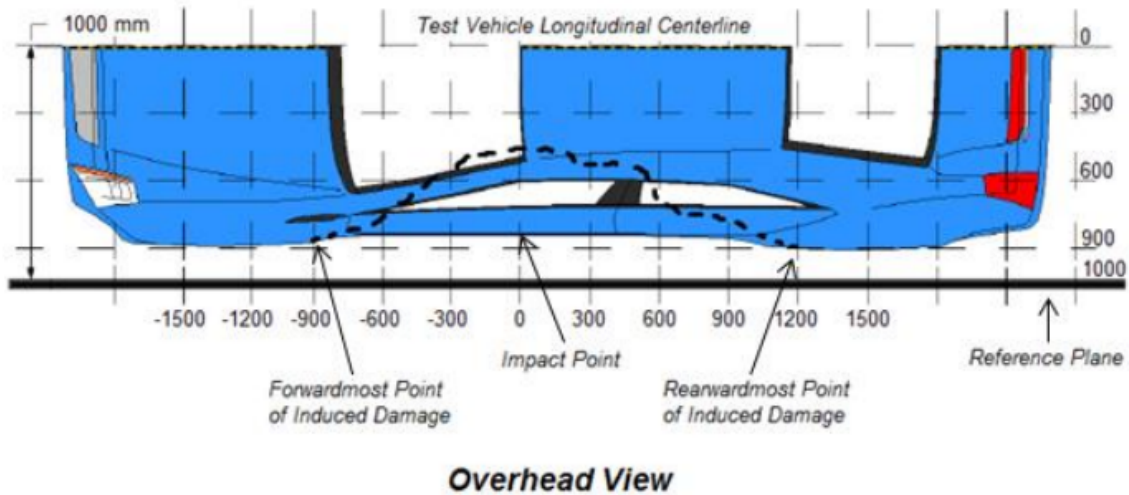
Vehicle Exterior Crush Measurements - Visual Representation

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

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
 Test Date: 07/25/2025

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	-750	3	75	73	2
2	-330	3	215	88	127
3	90	3	394	93	301
4	510	3	200	101	99
5	930	3	159	112	47
6	1350	3	83	88	-5

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

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV
 Test Program: NCAP Side Pole Impact Test

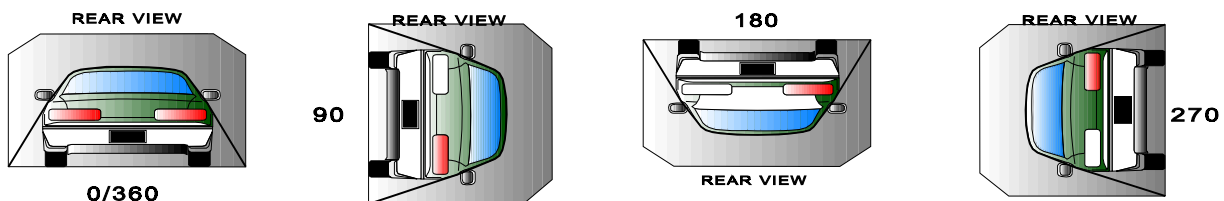
NHTSA No.: M20255804
 Test Date: 07/25/2025

Test Time: 9:45 AM

Temperature: 21.0 °C

- 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.)

D. Spillage Detail: No Spillage



ROLLOVER SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	63	300	363
90° to 180°	70	300	370
180° to 270°	63	300	363
270° to 360°	65	300	365

FMVSS 301 SPILLAGE TABLE

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

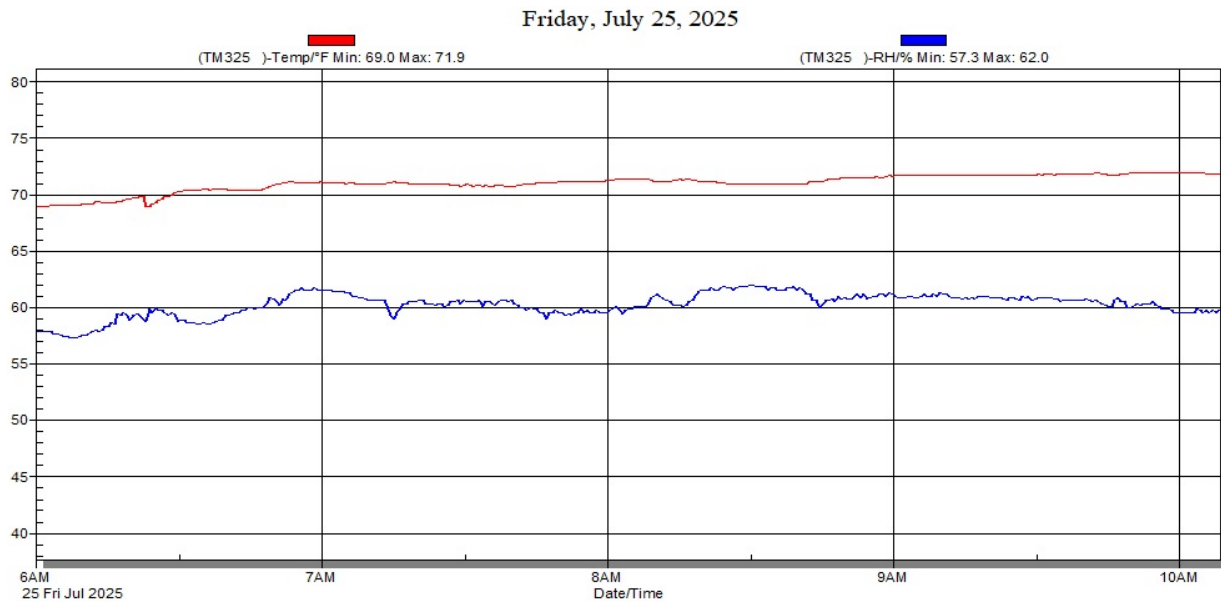
SOLVENT SPILLAGE LOCATION TABLE

Test Phase	Spillage Location
0° to 90°	None
90° to 180°	None
180° to 270°	None
270° to 360°	None

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

Test Vehicle: 2025 Volkswagen Tiguan 5 Door SUV
Test Program: NCAP Side Pole Impact Test

NHTSA No.: M20255804
Test Date: 07/25/2025



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

APPENDIX A
PHOTOGRAPHS

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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

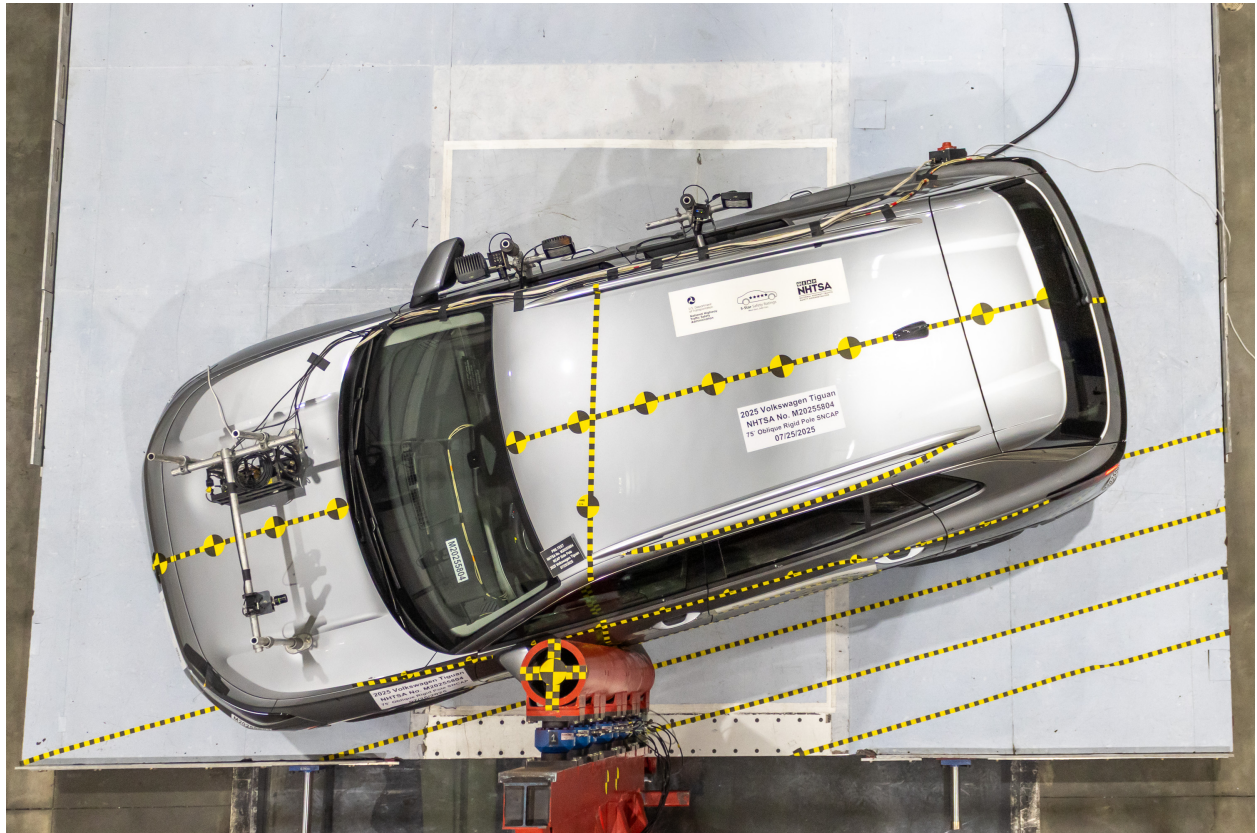


Figure A-15: Pre-Test Overhead View of Test Area

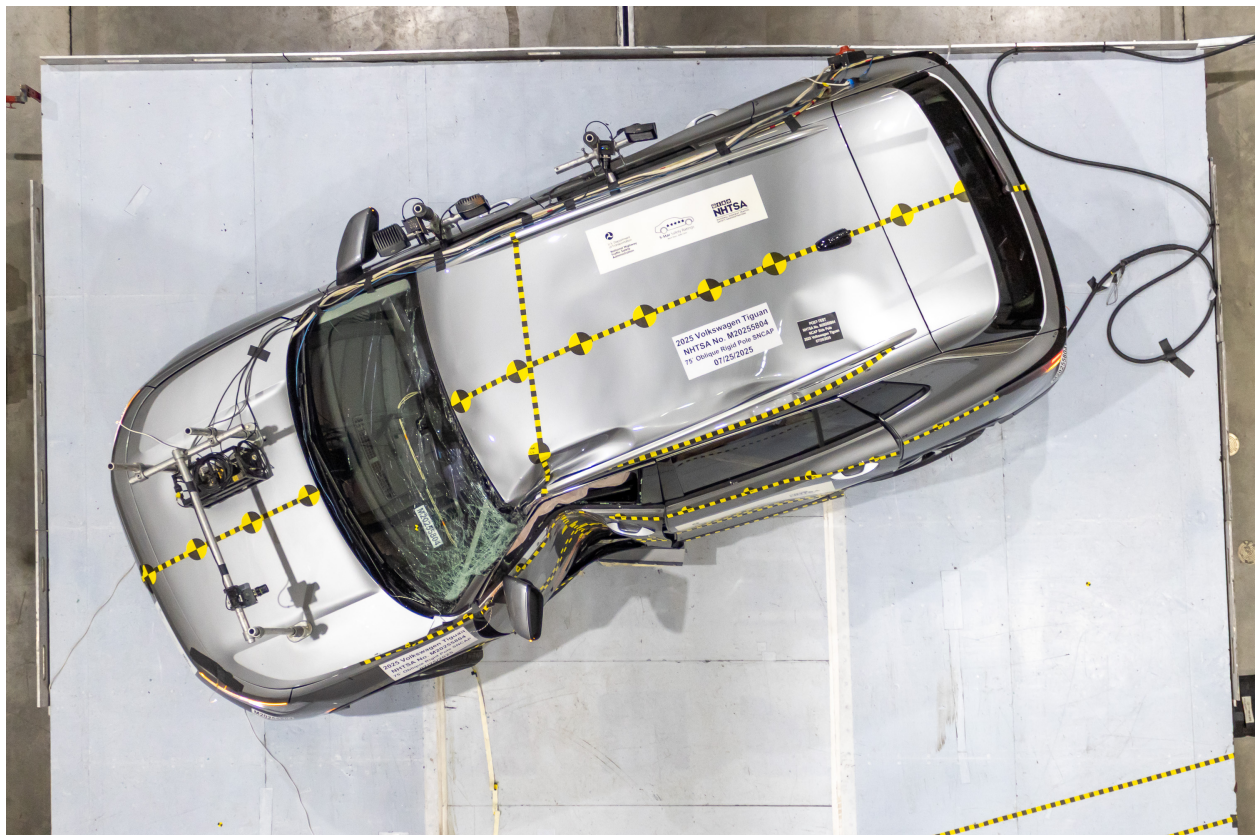


Figure A-16: Post-Test Overhead View of Test Area



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

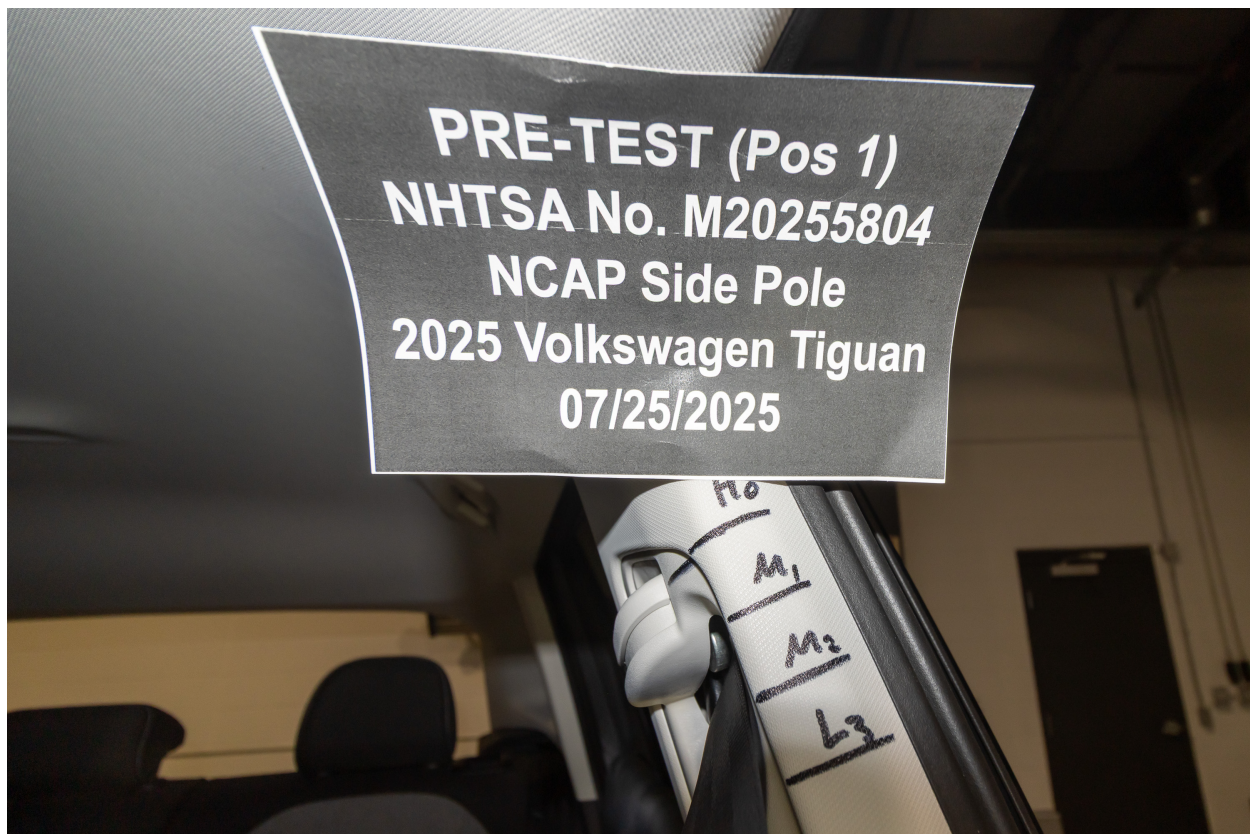


Figure A-33: Pre-Test View of Belt Anchorage for Dummy

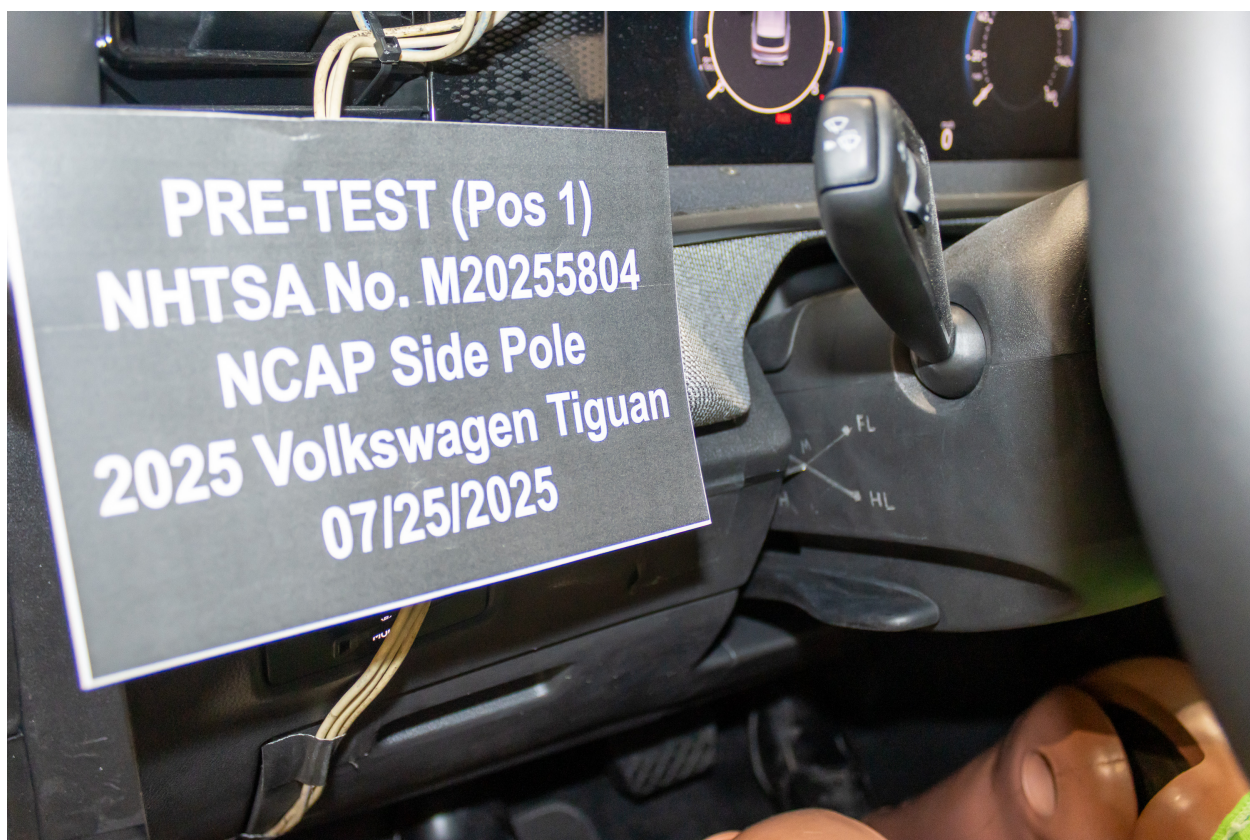


Figure A-34: Pre-Test Left Side View of Steering Wheel



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 Right Side View of Dummy and Rear Seat of Occupant Compartment



Figure A-54: Post-Test Inner Rear Passenger Torso Air Bag Deployment View





Figure A-57: Close-Up View of Vehicle's Certification Label

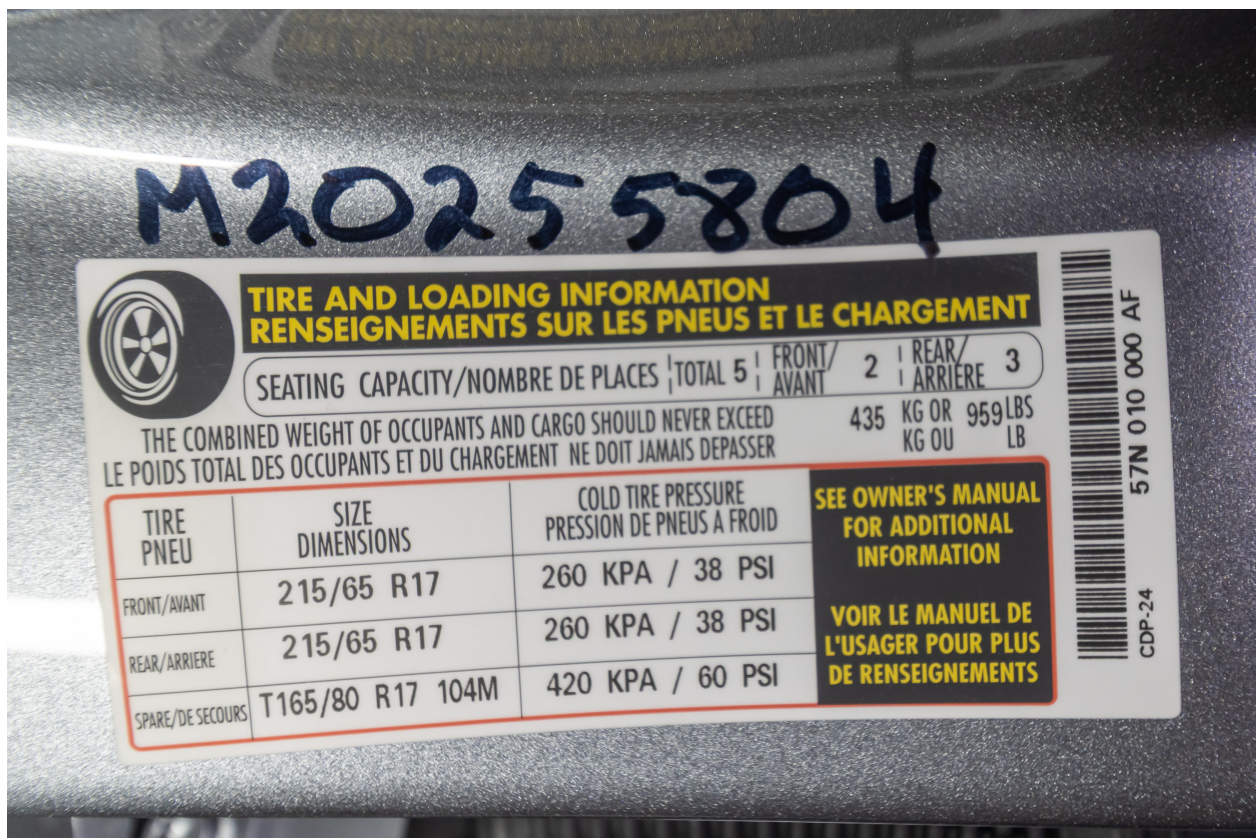


Figure A-58: Close-Up View of Vehicle's Tire Information Placard or Label



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

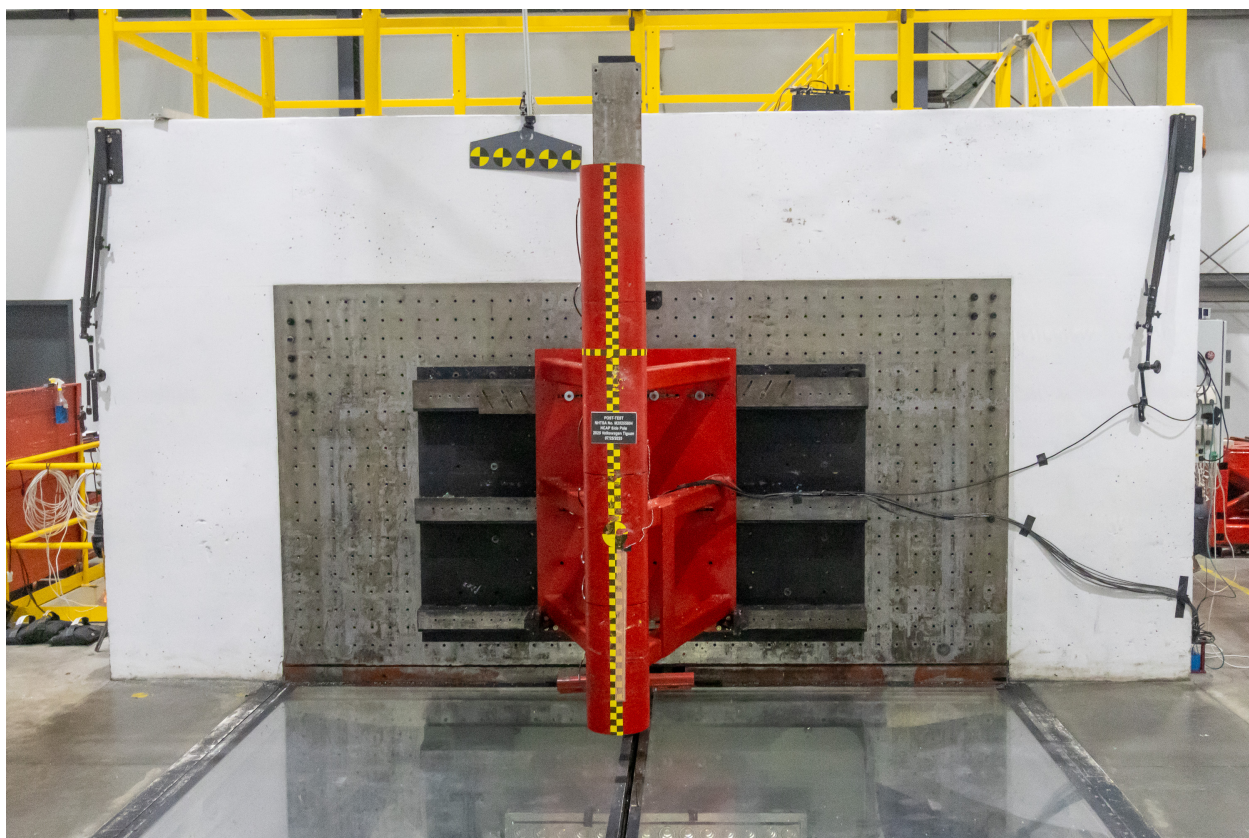


Figure A-60: Post-Test Pole Barrier Front View

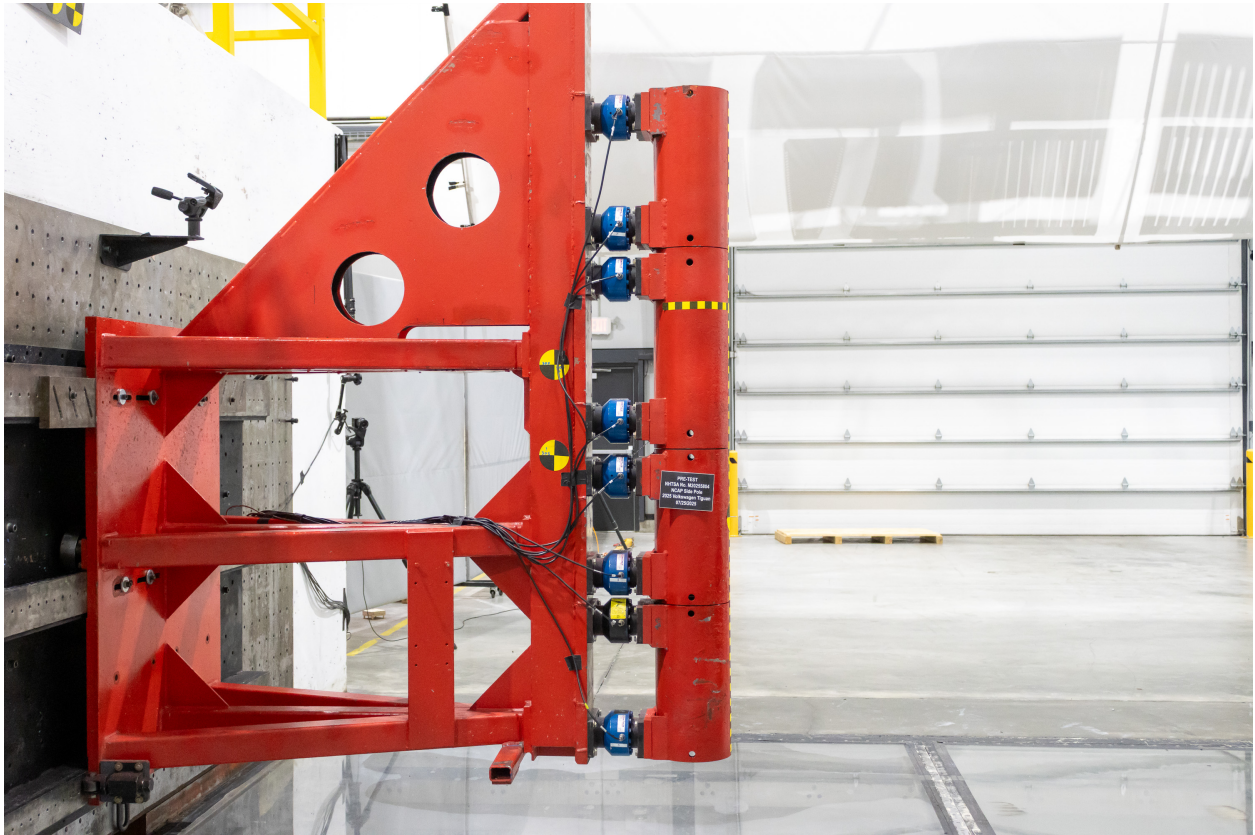


Figure A-61: Pre-Test Pole Barrier Side View

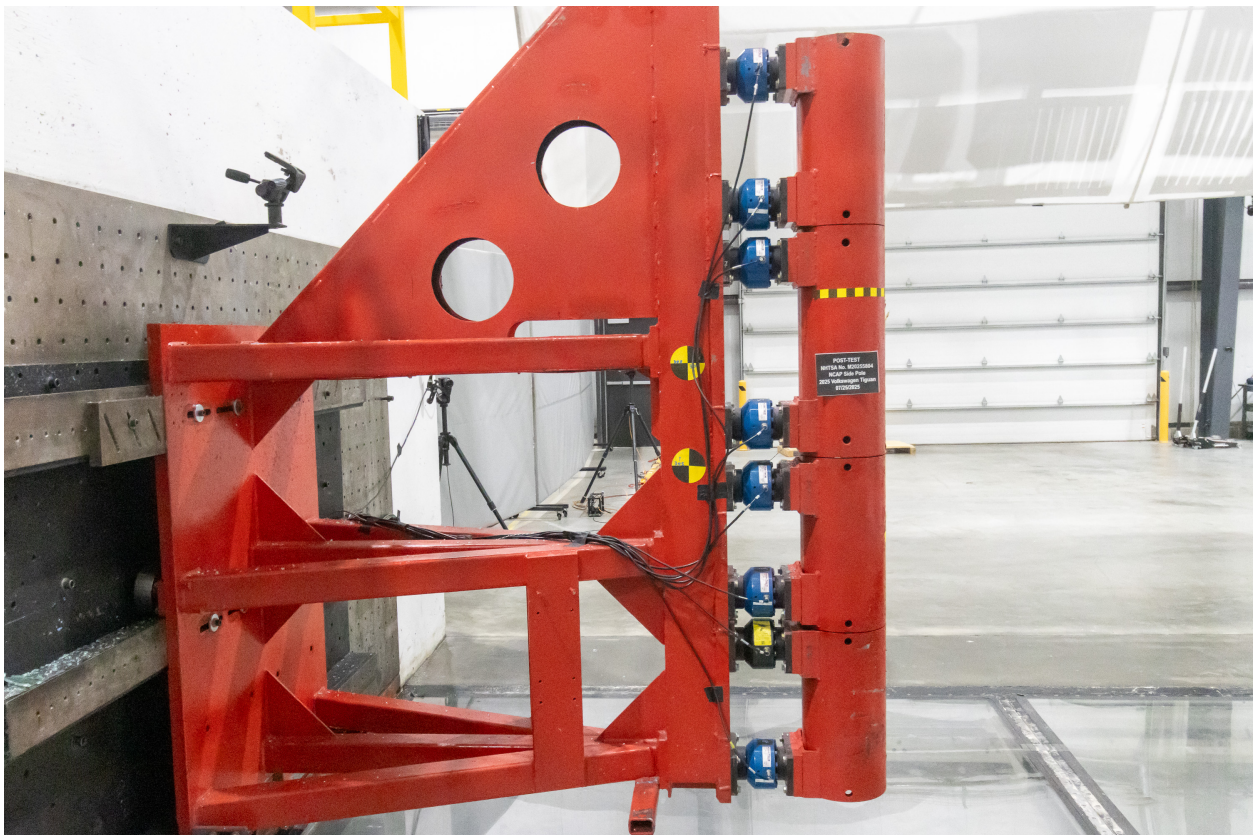


Figure A-62: Post-Test Pole Barrier Side View



Figure A-63: Pre-Test Ballast View



Figure A-64: Post-Test Primary and Redundant Speed Trap Read-Out



Figure A-65: FMVSS No. 301 Static Rollover 0 Degrees



Figure A-66: FMVSS No. 301 Static Rollover 90 Degrees

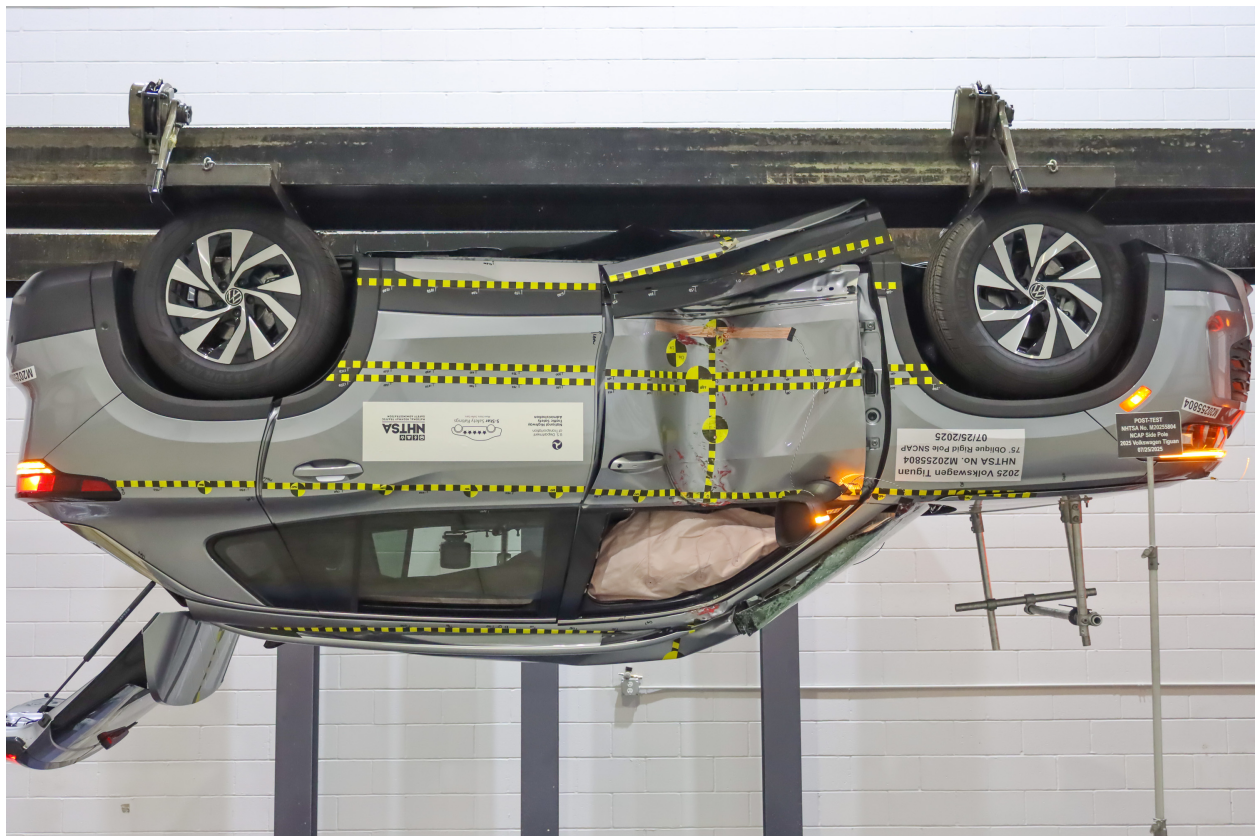


Figure A-67: FMVSS No. 301 Static Rollover 180 Degrees

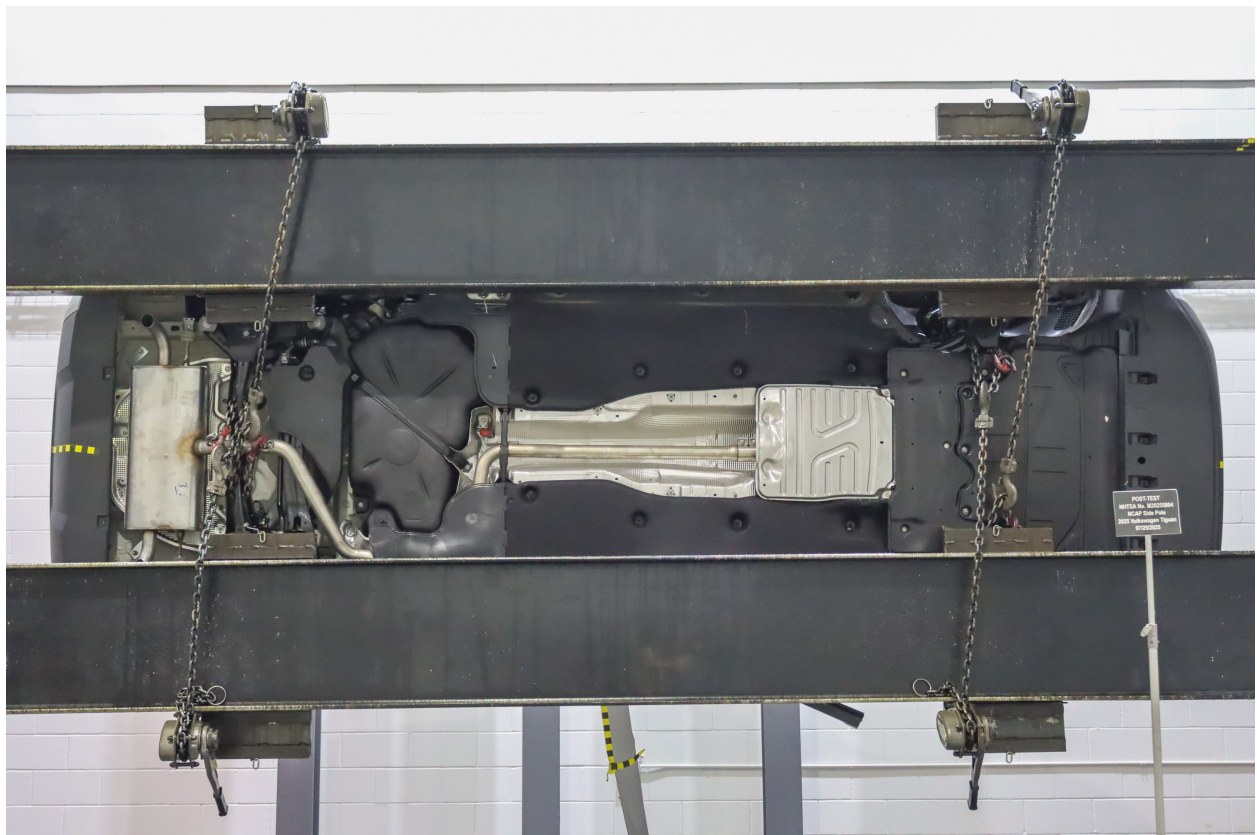


Figure A-68: FMVSS No. 301 Static Rollover 270 Degrees



Figure A-69: FMVSS No. 301 Static Rollover 360 Degrees

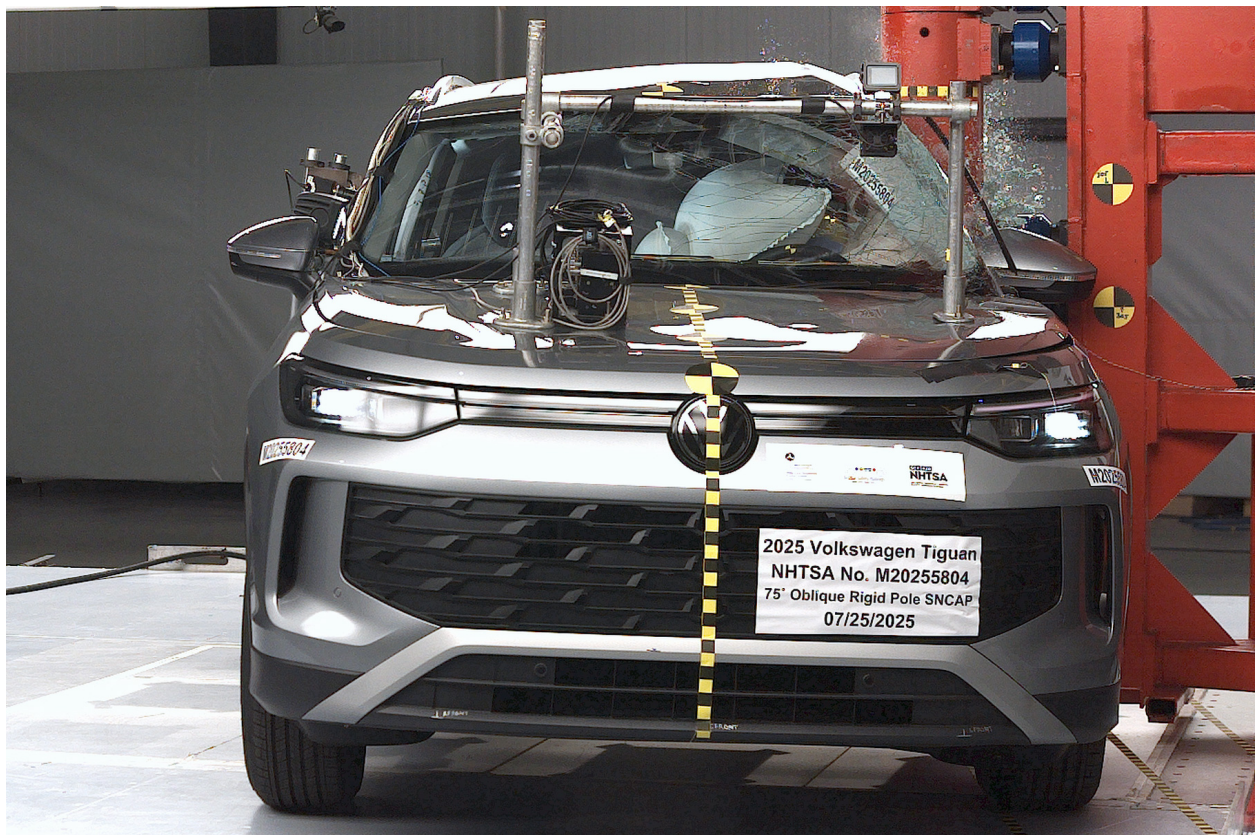


Figure A-70: Impact Event



Figure A-73: Post-Test View of Shattered Vehicle Inner Door Panel

APPENDIX B

VEHICLE AND DUMMY RESPONSE DATA TRACES

Table of Data Plots

Driver Dummy Instrumentation Plots

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

The following additional dummy and vehicle response data can be found in the R&D section of the NHTSA website at www.NHTSA.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

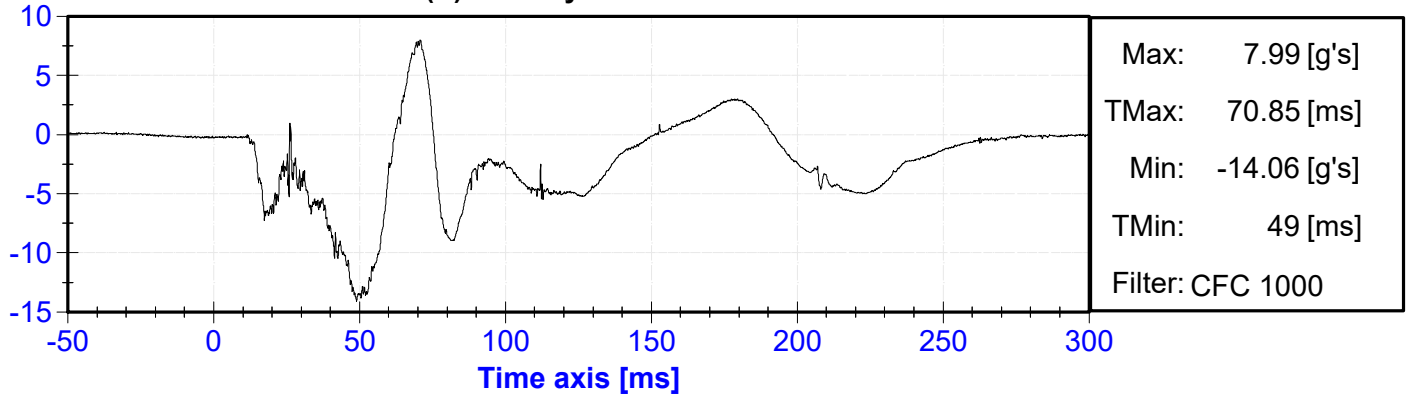
Vehicle Center of Gravity Acceleration (X)
Vehicle Center of Gravity Acceleration (Y)
Vehicle Center of Gravity Acceleration (Z)
Left Floor Sill Acceleration (Y)
Left A-Pillar Sill Acceleration (Y)
Left Lower A-Pillar Acceleration (Y)
Left Mid A-Pillar Acceleration (Y)
Left B-Pillar Sill Acceleration (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)

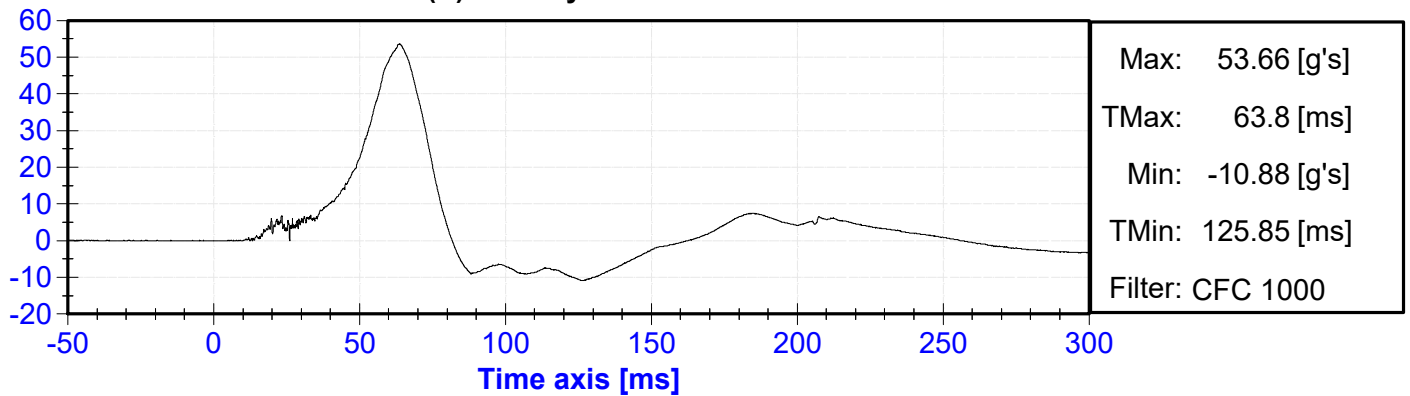
ACCELERATION [g's]

Driver Head Acceleration (X) Primary vs. Time



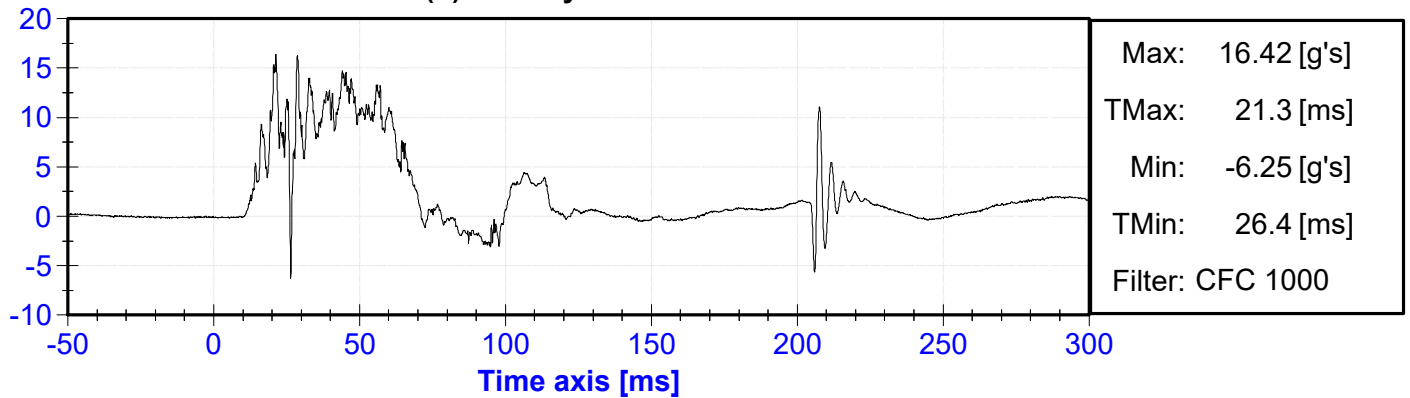
ACCELERATION [g's]

Driver Head Acceleration (Y) Primary vs. Time



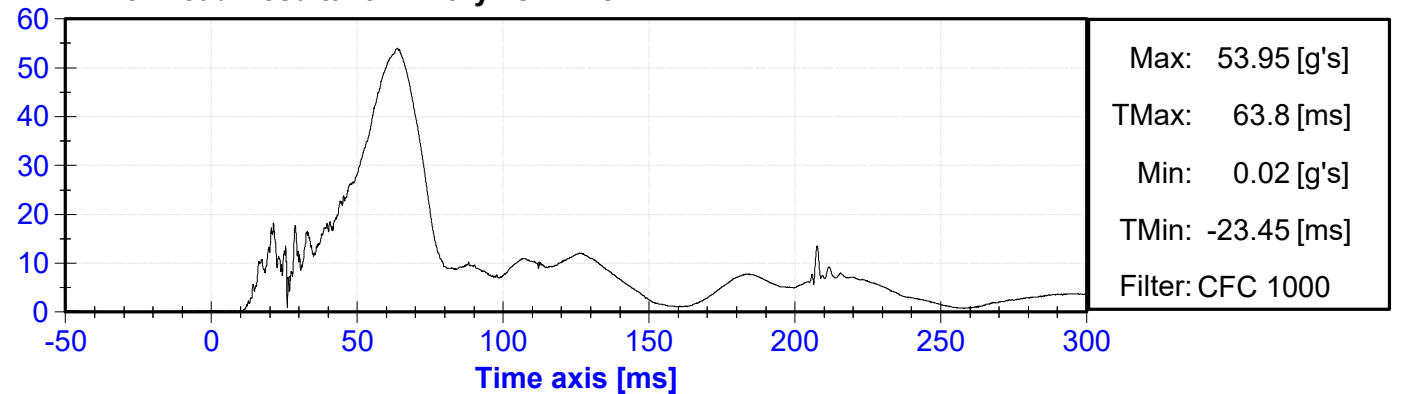
ACCELERATION [g's]

Driver Head Acceleration (Z) Primary vs. Time



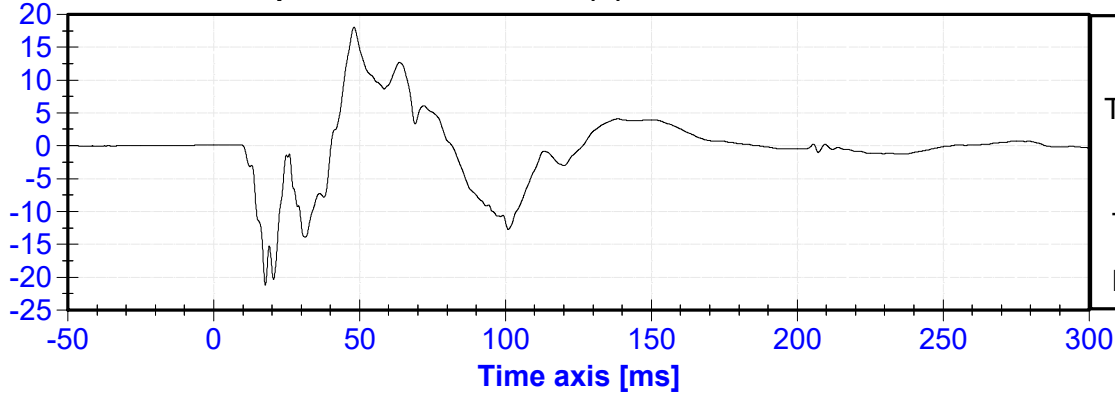
ACCELERATION [g's]

Driver Head Resultant Primary vs. Time



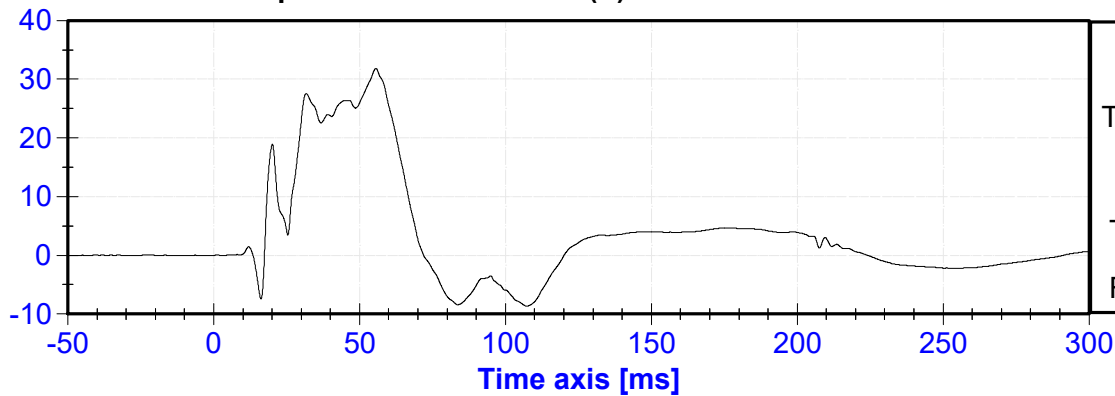
ACCELERATION [g's]

Driver Lower Spine T12 Acceleration (X) vs. Time



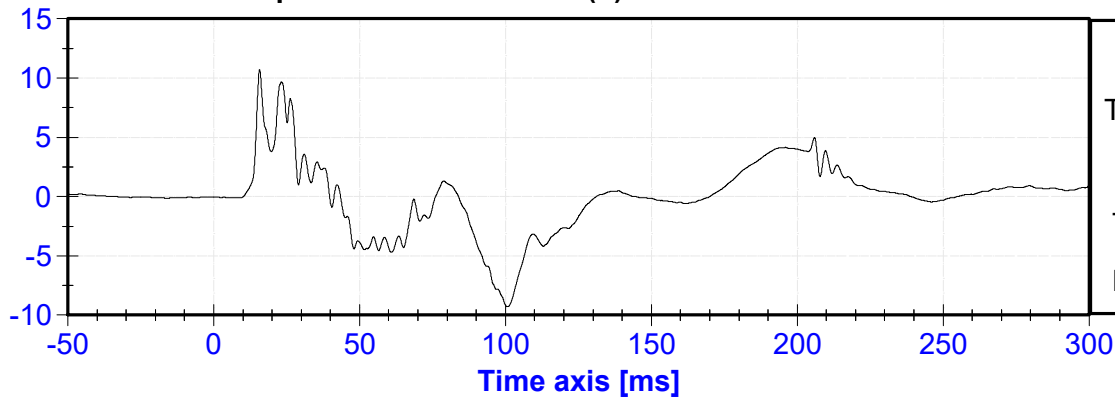
ACCELERATION [g's]

Driver Lower Spine T12 Acceleration (Y) vs. Time



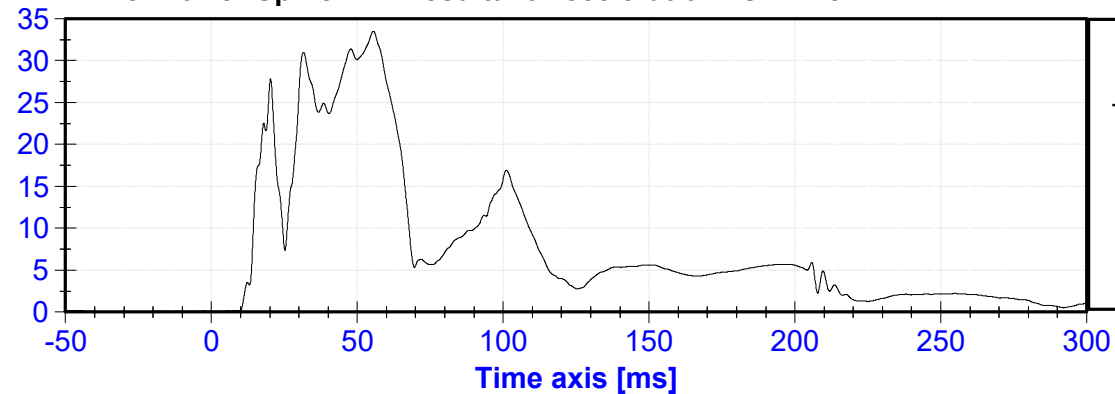
ACCELERATION [g's]

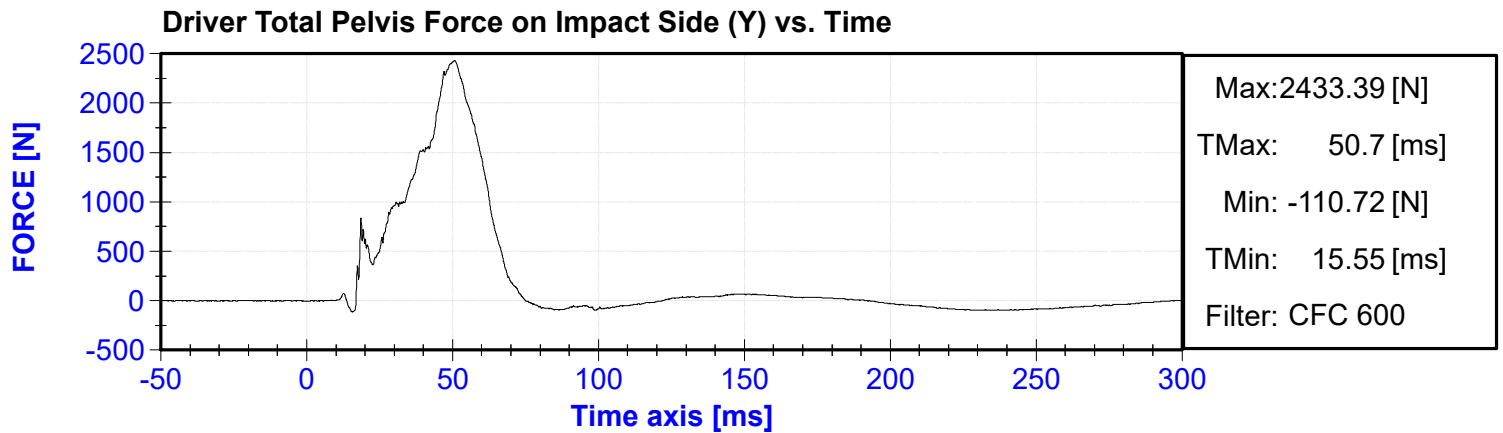
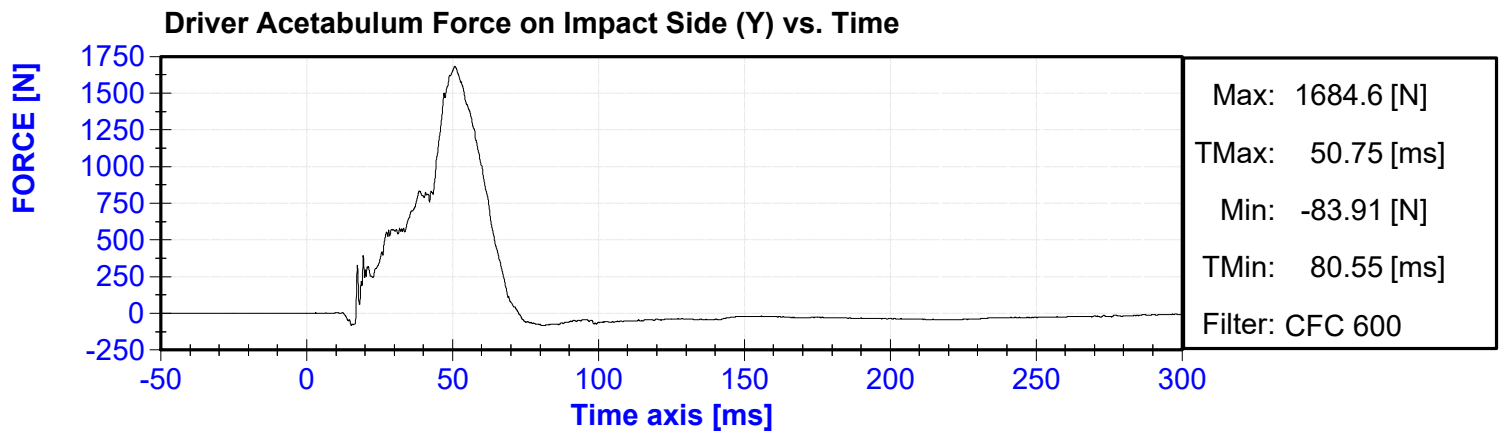
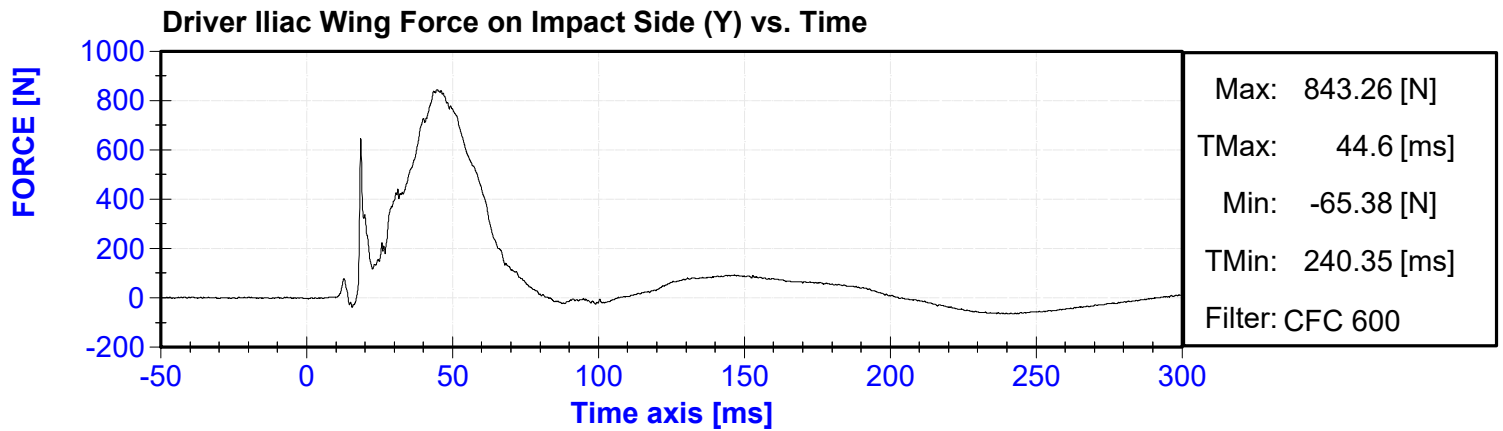
Driver Lower Spine T12 Acceleration (Z) vs. Time



ACCELERATION [g's]

Driver Lower Spine T12 Resultant Acceleration vs. Time





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)

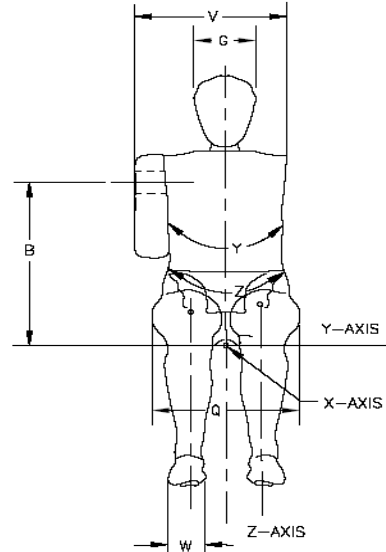
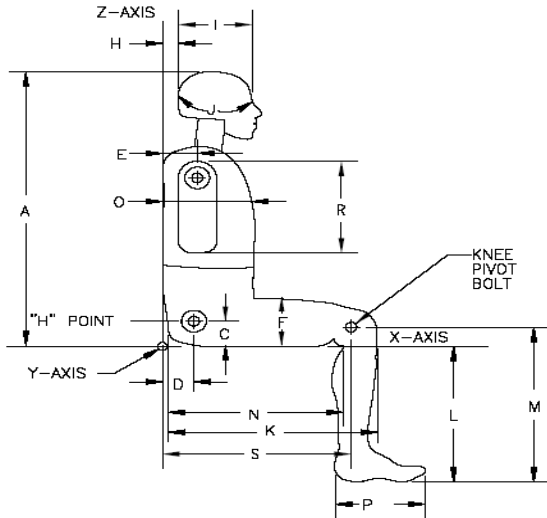


External Measurements - SID-IIs

Technician: J. Rios

Date: 07/16/2025

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	441	Pass
C	H-point Height	79	89	83	Pass
D	H-point from seatback	141	151	142	Pass
E	Shoulder Pivot from Backline	97	107	103	Pass
F	Thigh Clearance	119	135	127	Pass
G	Head Breadth	140	148	144	Pass
H	Head Back from Backline	40	46	44	Pass
I	Head Depth	178	188	184	Pass
J	Head Circumference	541	551	546	Pass
K	Buttock to Knee Length	514	540	528	Pass
L	Popliteal Height	343	369	357	Pass
M	Knee Pivot to floor height	392	409	405	Pass
N	Buttock Popliteal Length	416	442	432	Pass
O	Chest Depth w/o jacket	195	211	204	Pass
P	Foot Length	216	232	227	Pass
Q	Hip Breadth (w/pelvic plugs)	313	323	321	Pass
R	Arm Length	249	259	252	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	873	Pass
Z	Waist Circumference	761	791	765	Pass

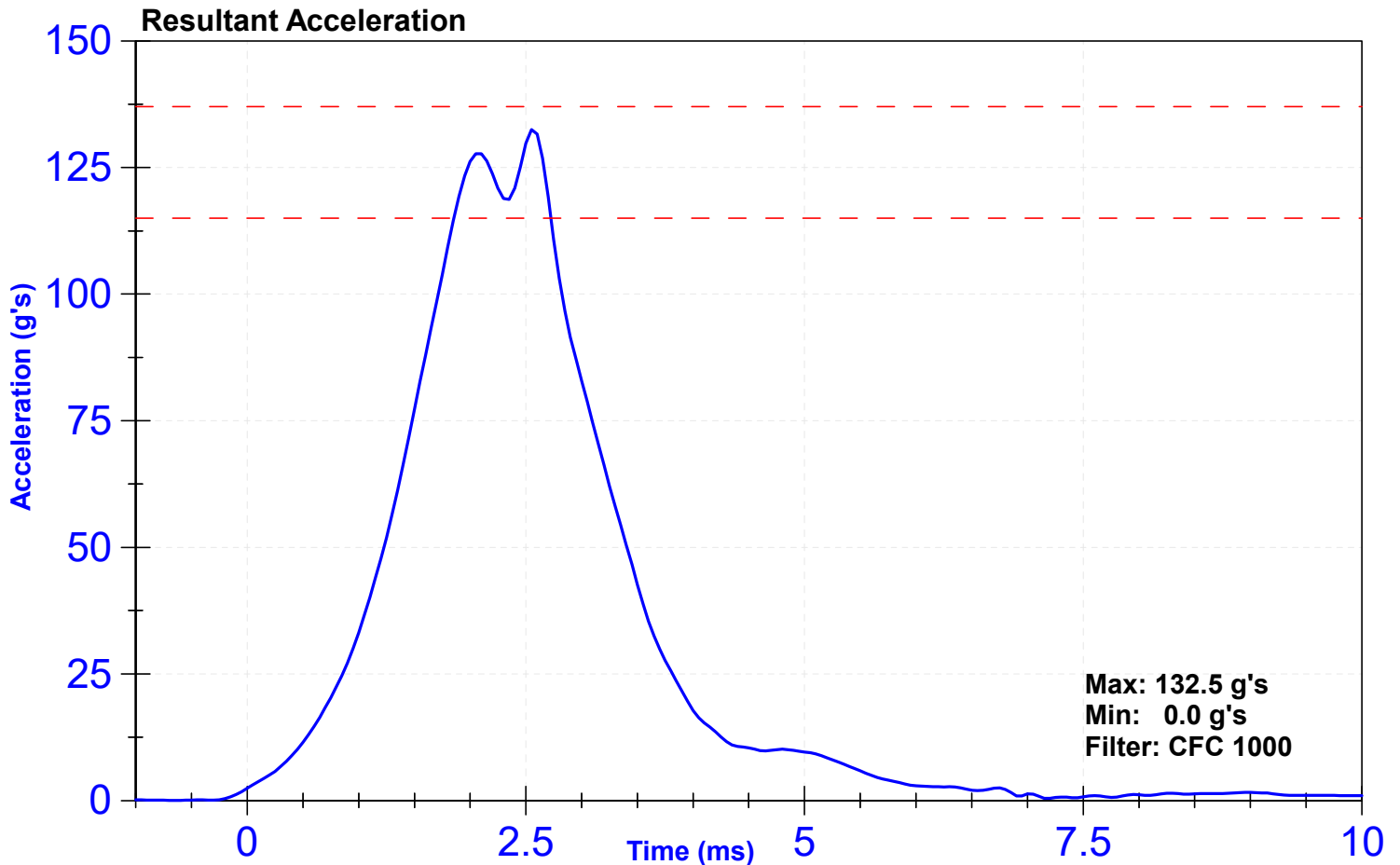
ATD Manufacturer	FTSS	Test Technician	W. Brokx
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

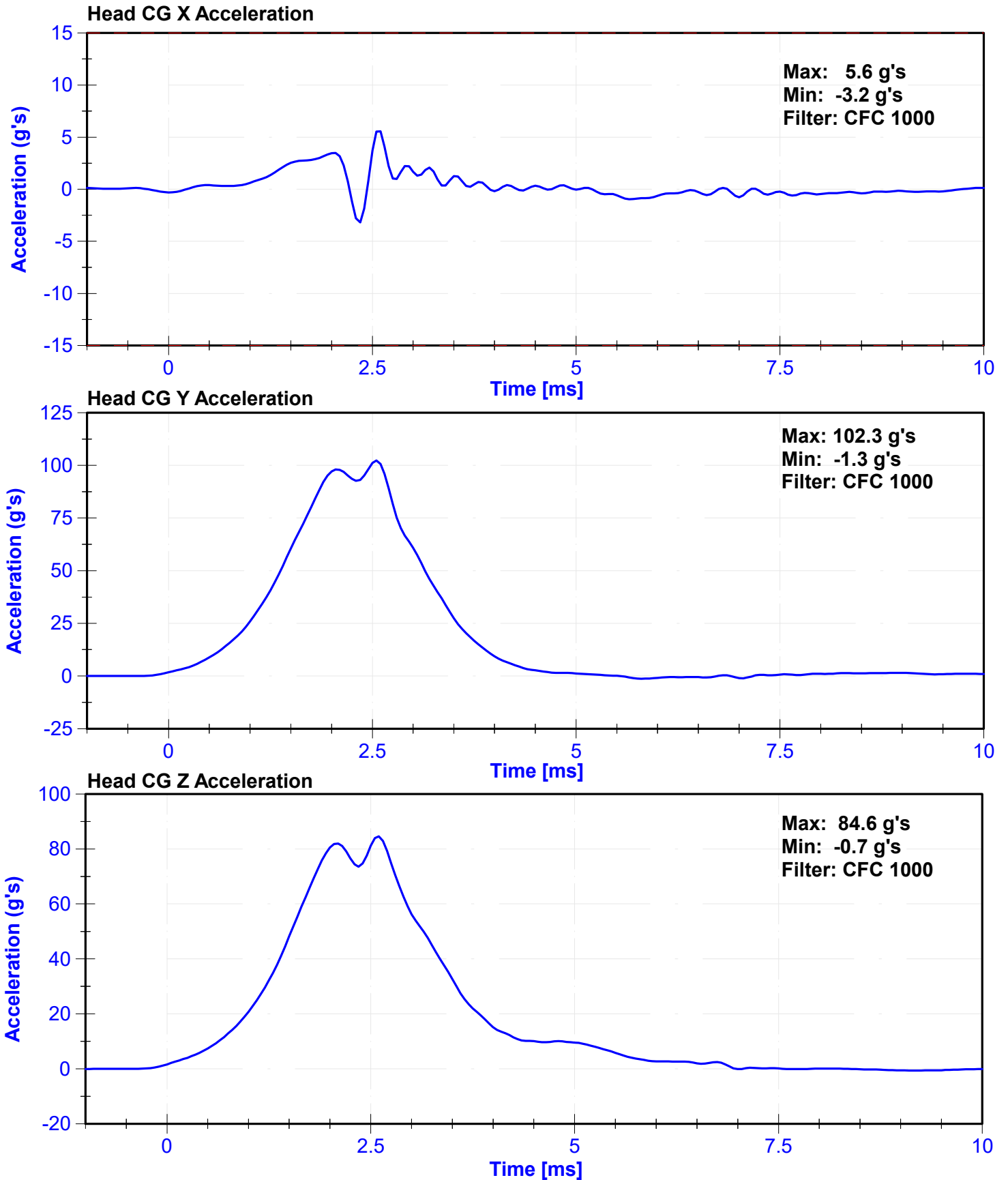
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	21.9	Pass
Humidity	10	70	%	54	Pass
Resultant Acceleration	115	137	g's	132.5	Pass
Oscillation	0	15	%	7.6	Pass
Fore-Aft Acceleration	-15	15	g's	5.6	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibratio Date	Calibratio Due Date
X Accelerometer	Endevco	P59018	7/11/2025	1/7/2026
Y Accelerometer	Endevco	P79189	7/11/2025	1/7/2026
Z Accelerometer	Endevco	P79587	7/11/2025	1/7/2026





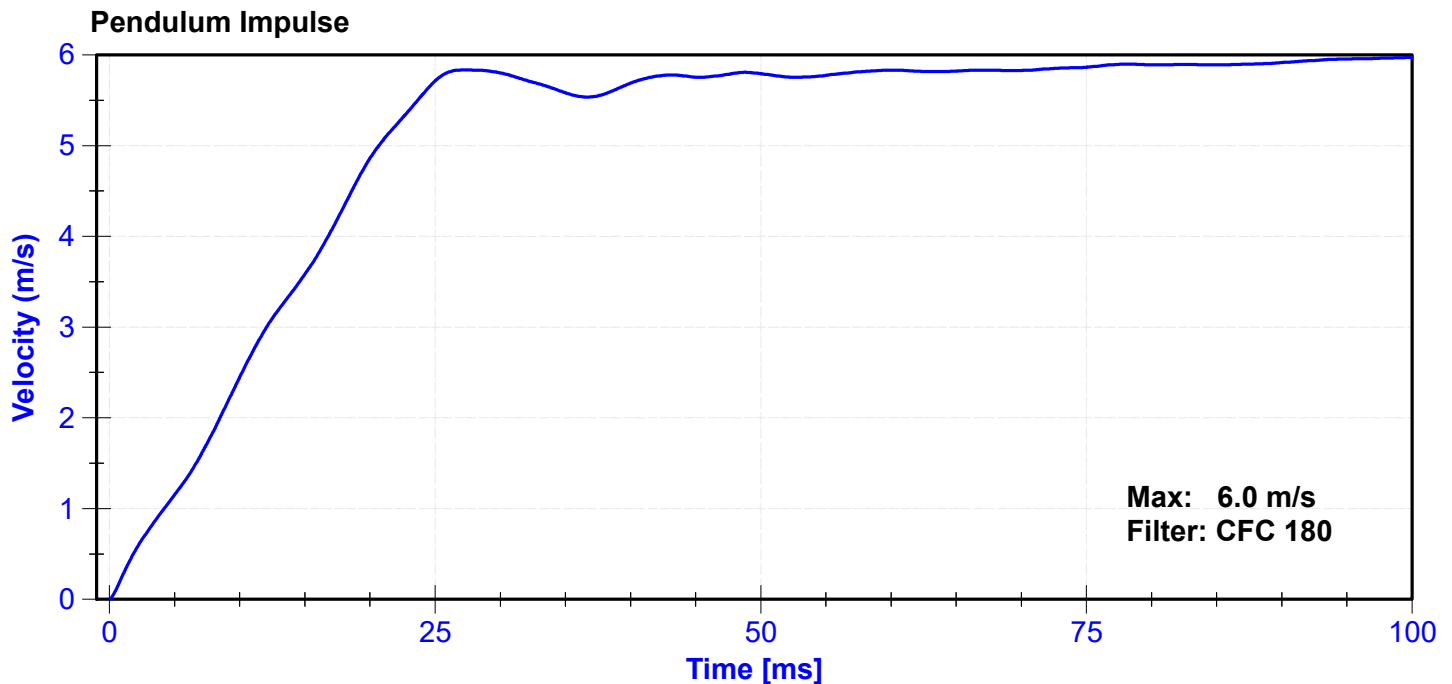
ATD Manufacturer	FTSS	Test Technician	W. Brokx
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

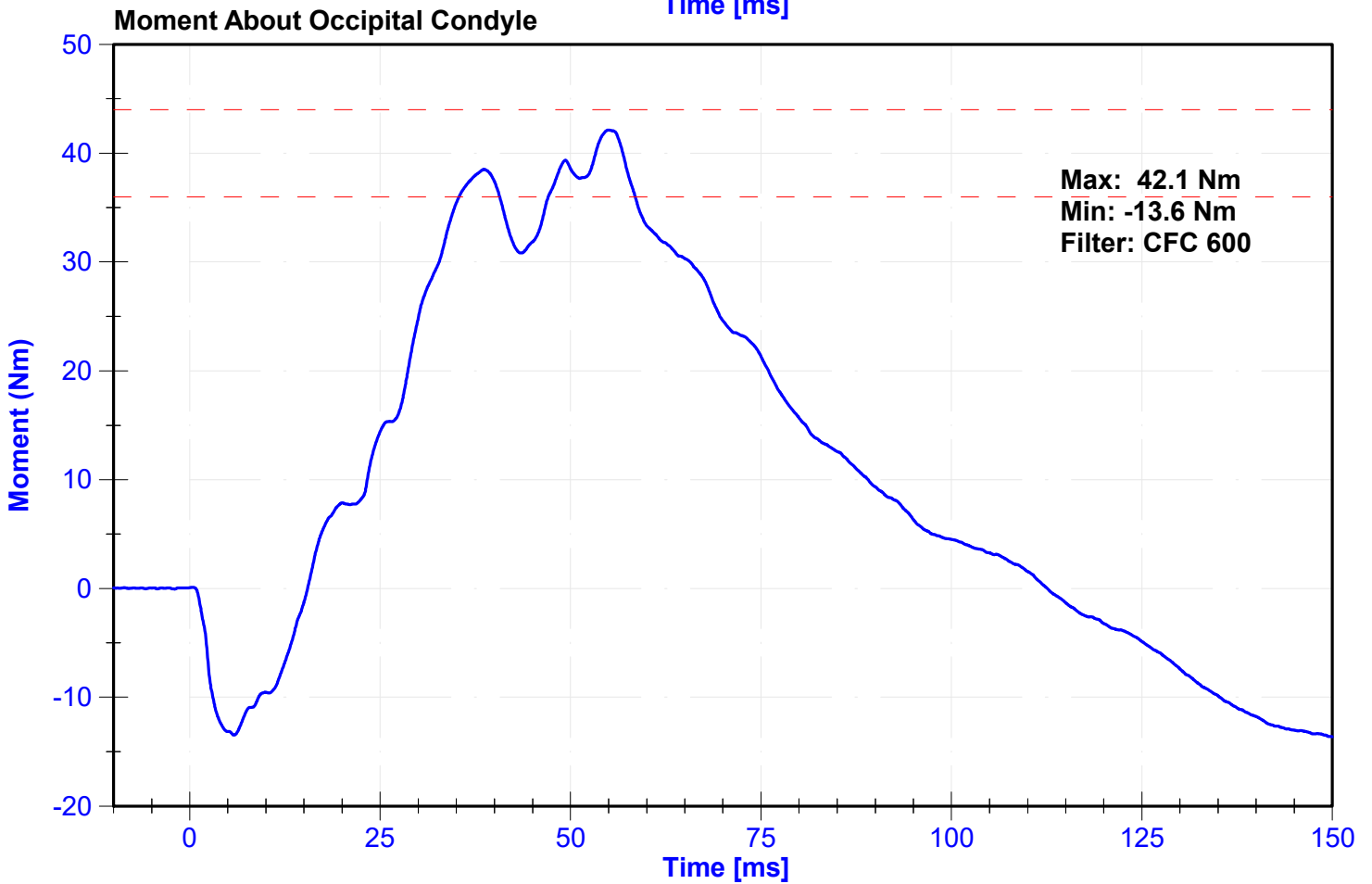
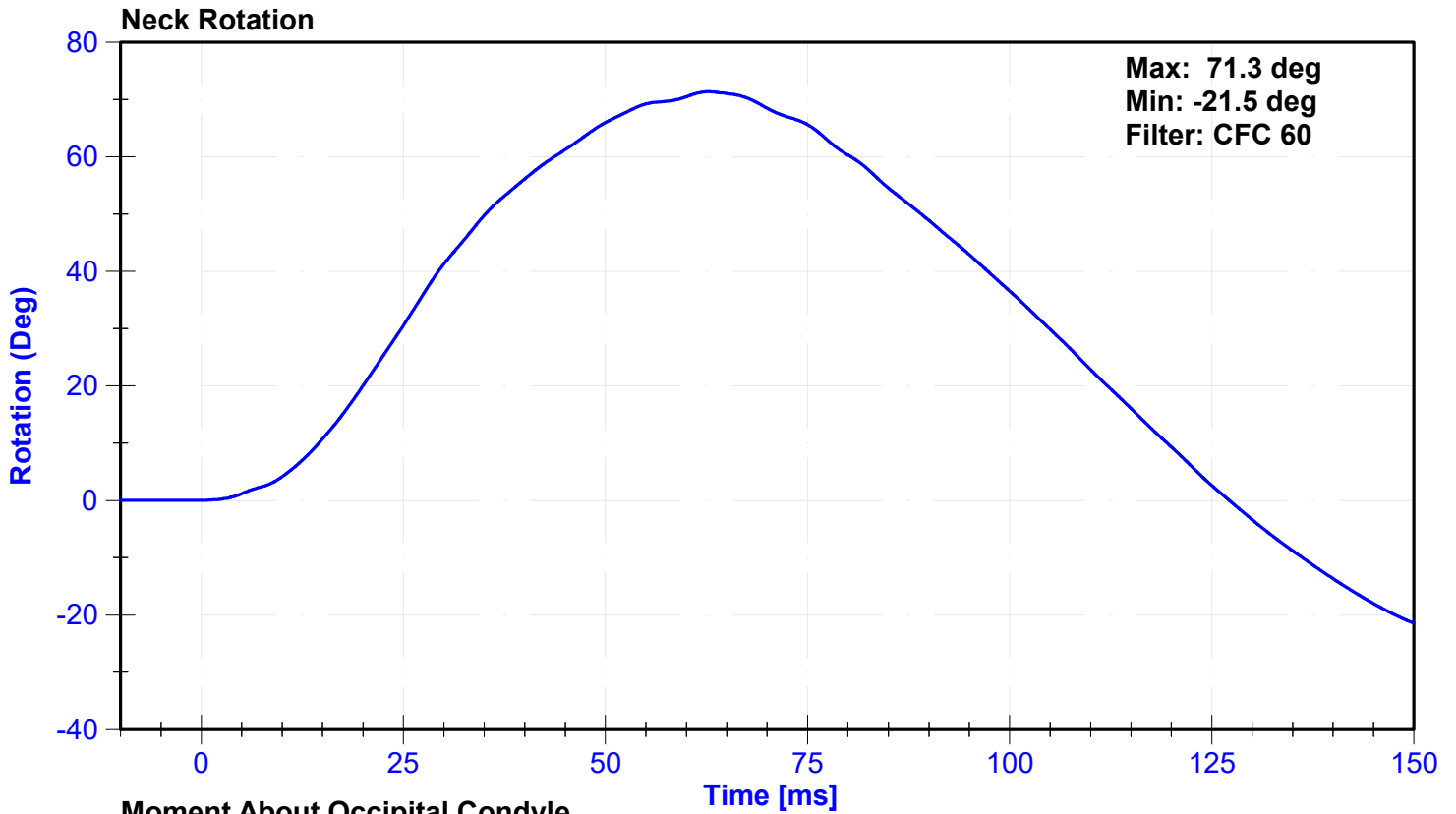
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.1	Pass
Humidity	10	70	%	51	Pass
Velocity	5.51	5.63	m/s	5.581	Pass
Pendulum Impulse at 10ms	2.2	2.8	m/s	2.45	Pass
Pendulum Impulse at 15ms	3.3	4.1	m/s	3.58	Pass
Pendulum Impulse at 20ms	4.4	5.4	m/s	4.86	Pass
Pendulum Impulse at 25ms	5.4	6.1	m/s	5.71	Pass
Pendulum Impulse from 25 to 100ms	5.5	6.2	m/s	5.97	Pass
Neck Rotation	71	81	deg	71.3	Pass
Time at Maximum Rotation	50	70	ms	62.7	Pass
Moment about the OC	36	44	Nm	42.1	Pass
Moment Decay to 0 Nm	102	126	ms	112.6	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	7231C-750	10/17/2024	10/17/2025
Pendulum Potentiometer	Servo	4961	9/23/2024	9/23/2025
Condyle Potentiometer	Servo	DS185	9/23/2024	9/23/2025
Upper Neck Load Cell	Kistler	M555A6CFM_1935H01698-F1	4/17/2025	4/17/2026





ATD Manufacturer	FTSS	Test Technician	W. Brokx
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

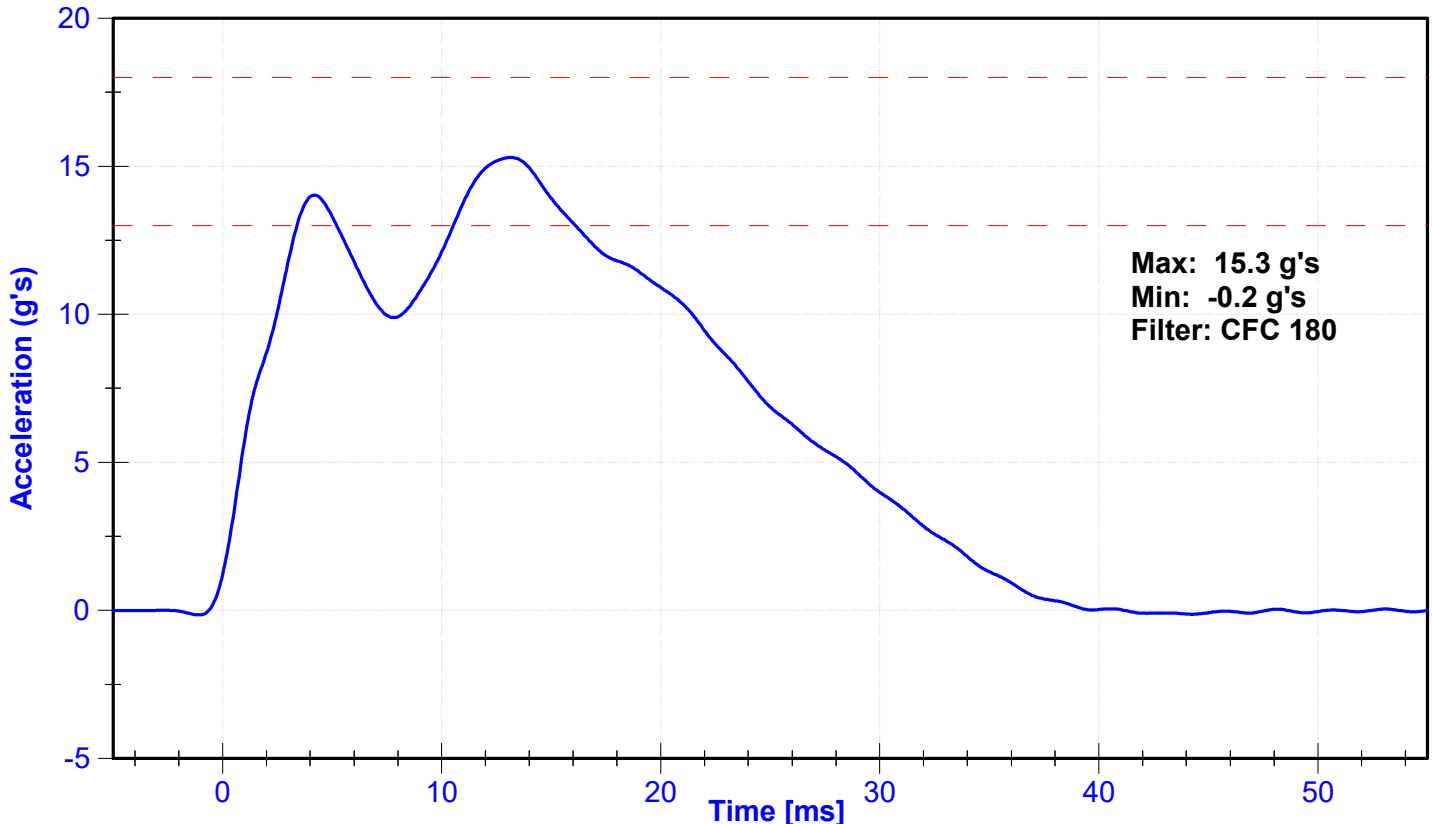
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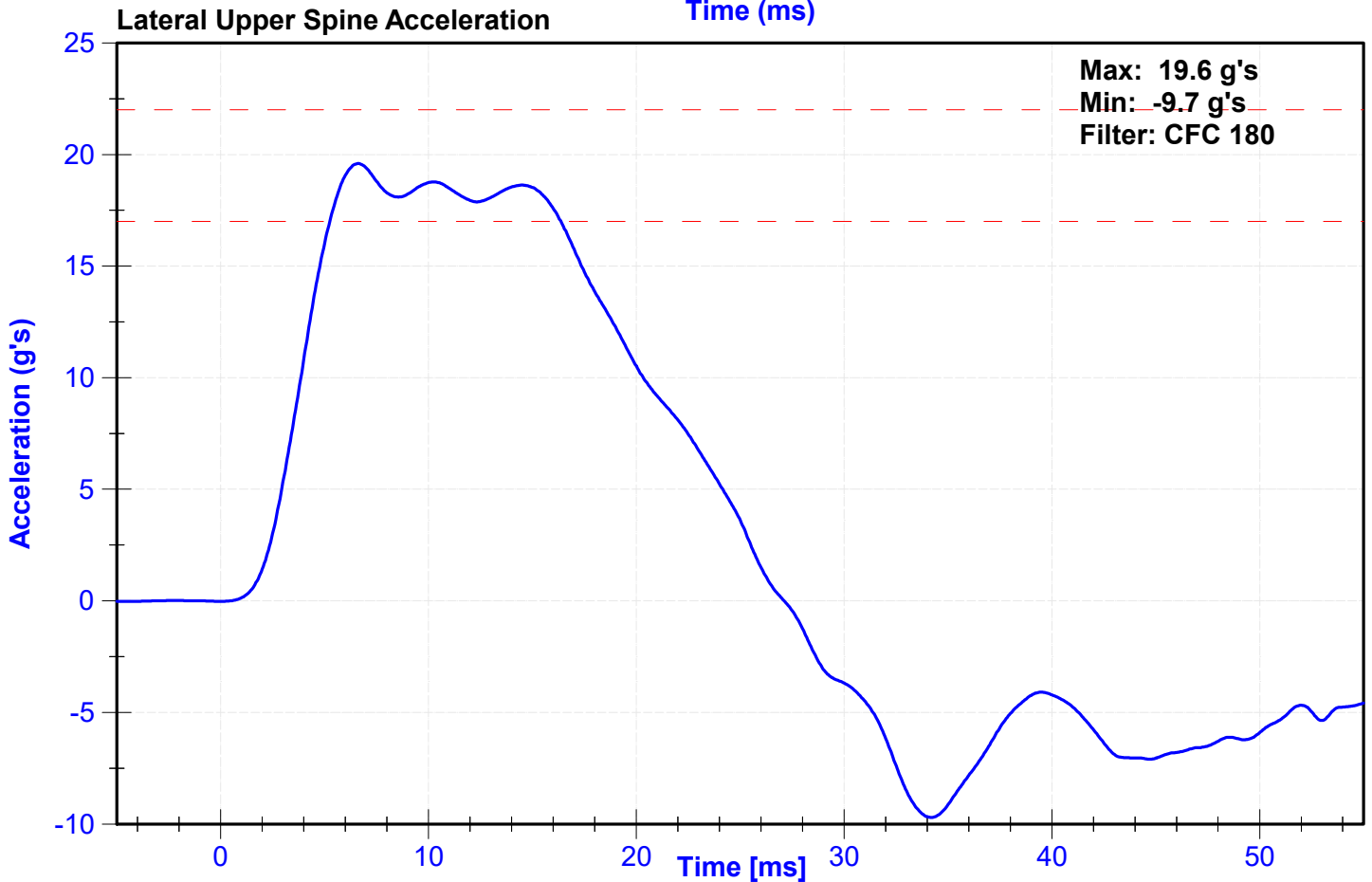
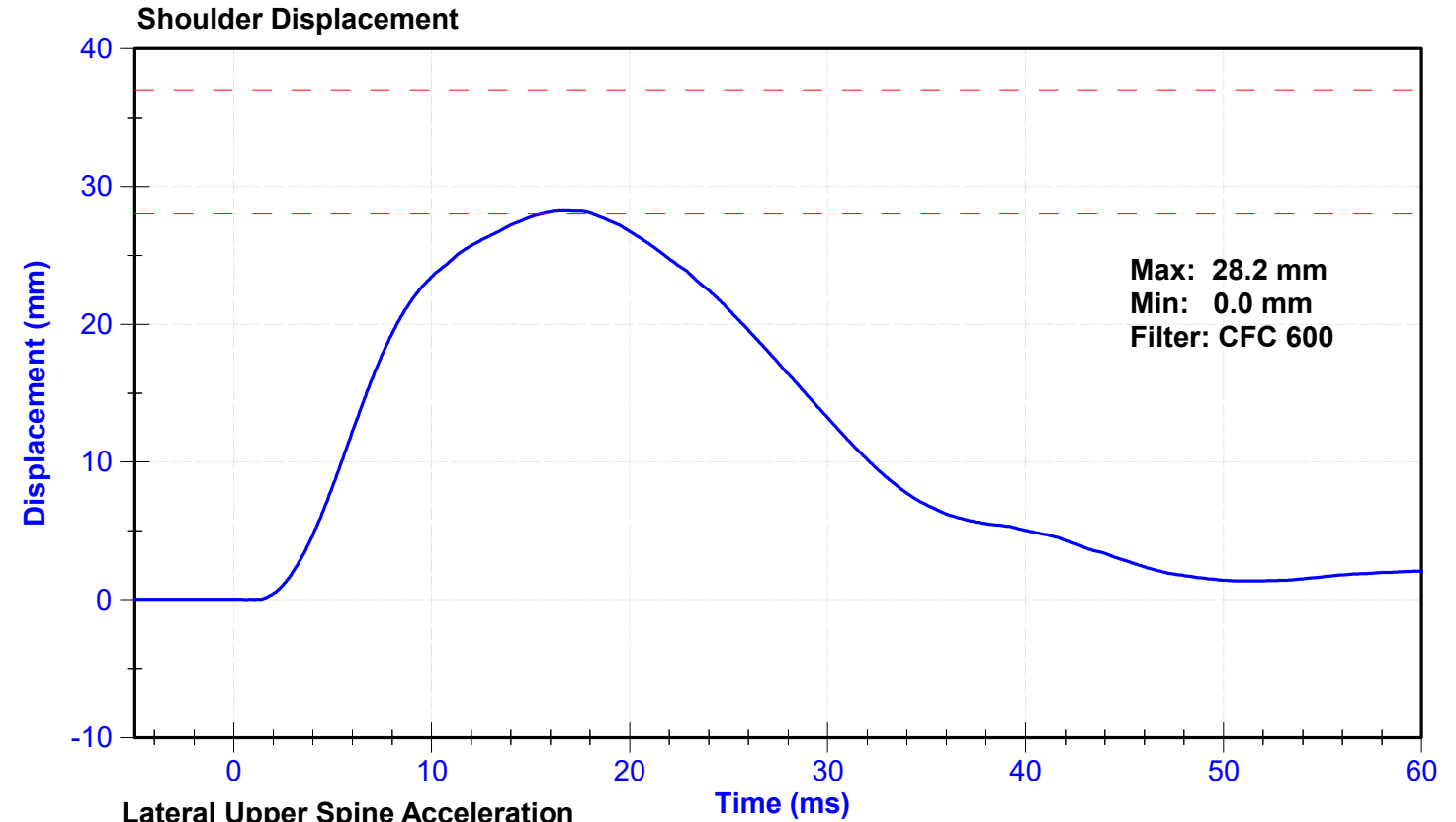
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.2	Pass
Humidity	10	70	%	50	Pass
Velocity	4.2	4.4	m/s	4.29	Pass
Probe Acceleration	13	18	g's	15.3	Pass
Shoulder Deflection	28	37	mm	28.2	Pass
Lateral Upper Spine Acceleration	17	22	g's	19.6	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	18566	5/7/2025	11/3/2025
Shoulder Potentiometer	Servo	053GFE	7/10/2025	1/8/2026
Upper Spine Y Accelerometer	Endevco	P52018	7/11/2025	1/7/2026

Probe Acceleration





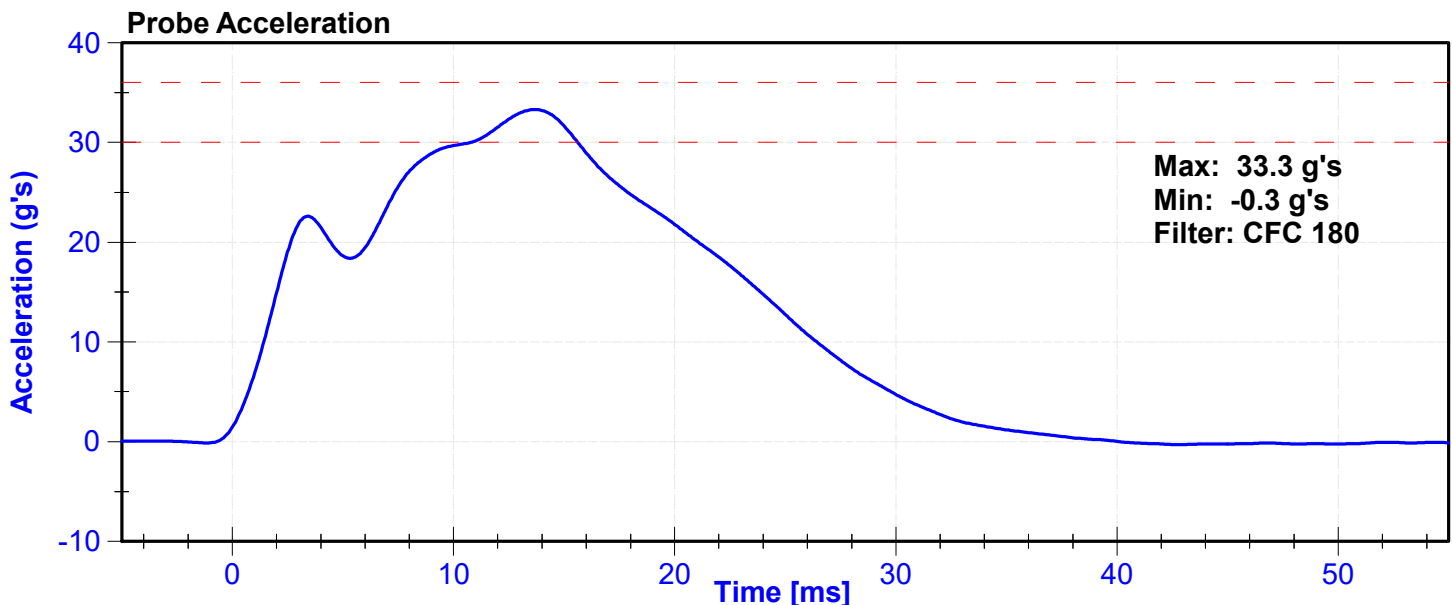
ATD Manufacturer	FTSS	Test Technician	W. Brokx
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

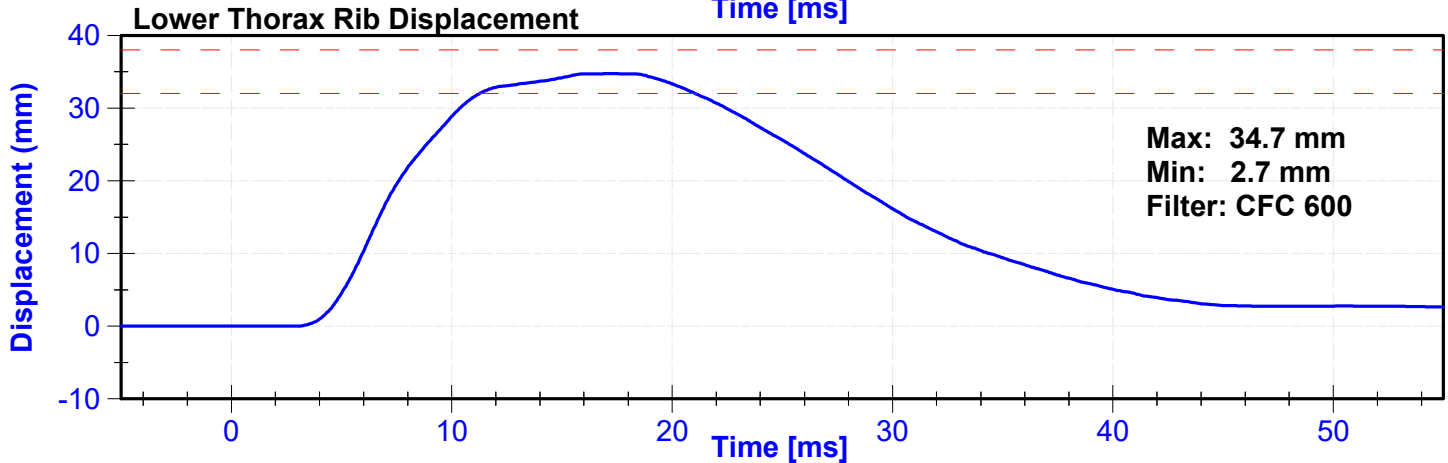
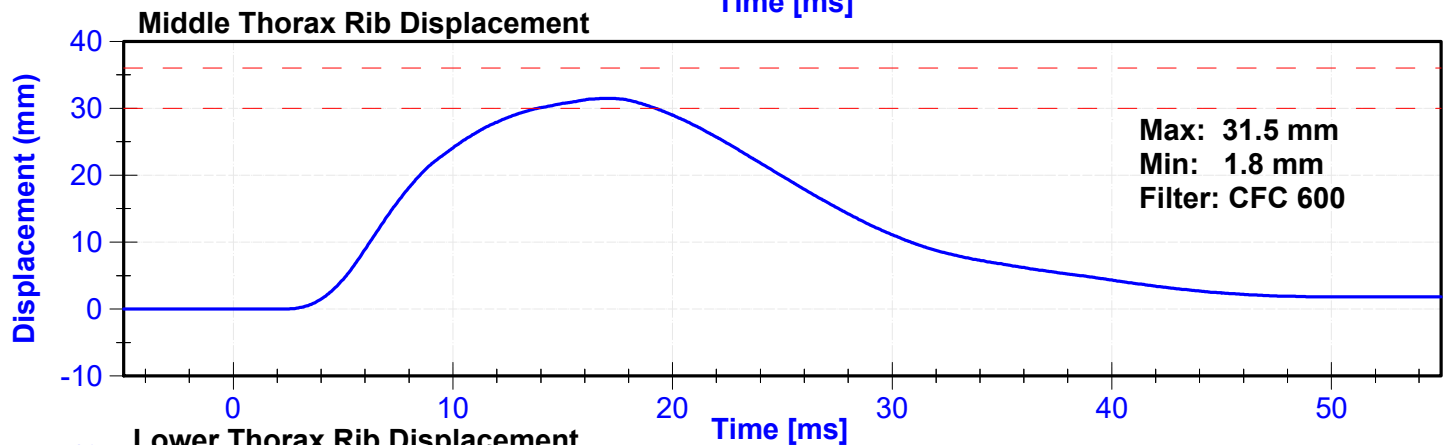
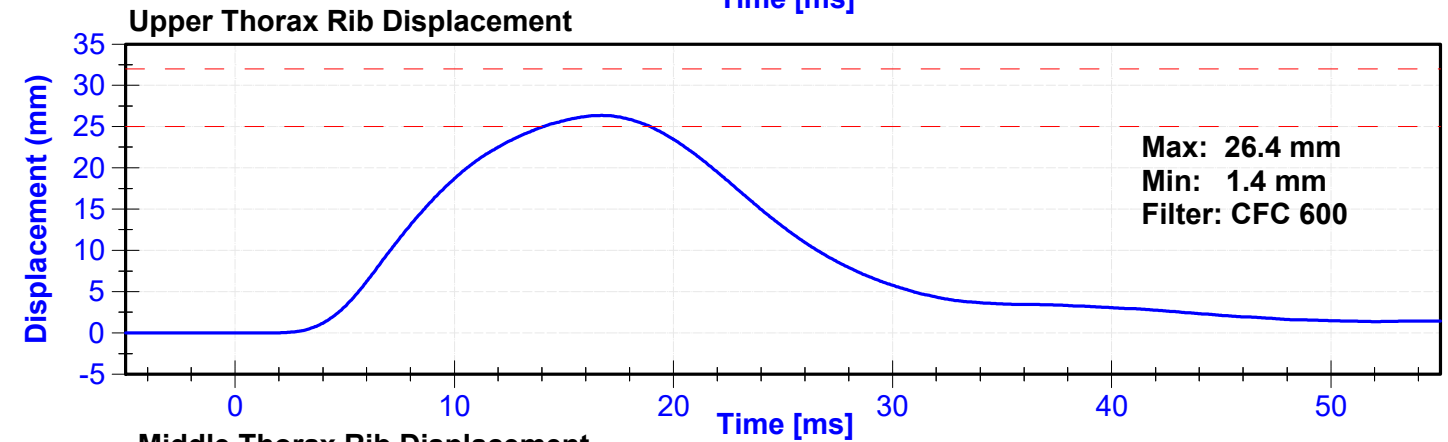
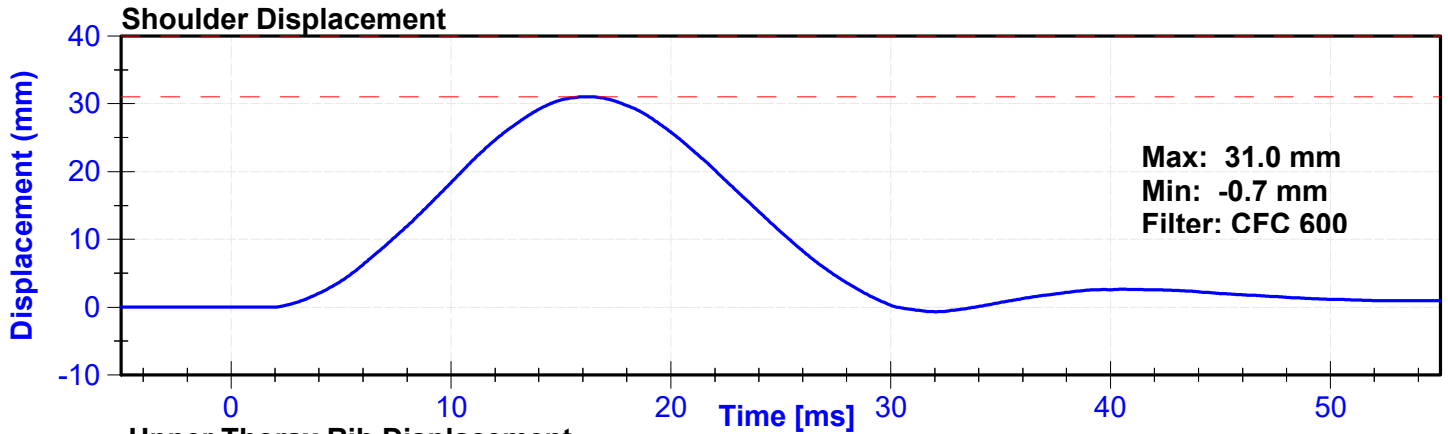
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.2	Pass
Humidity	10	70	%	50	Pass
Velocity	6.6	6.8	m/s	6.69	Pass
Probe Acceleration after 5 ms	30	36	g's	33.3	Pass
Lateral Upper Spine Acceleration	34	43	g's	35.6	Pass
Lateral Lower Spine Acceleration	29	37	g's	32.7	Pass
Shoulder Deflection	31	40	mm	31.0	Pass
Upper Thorax Rib Deflection	25	32	mm	26.4	Pass
Mid Thorax Rib Deflection	30	36	mm	31.5	Pass
Lower Thorax Rib Deflection	32	38	mm	34.7	Pass

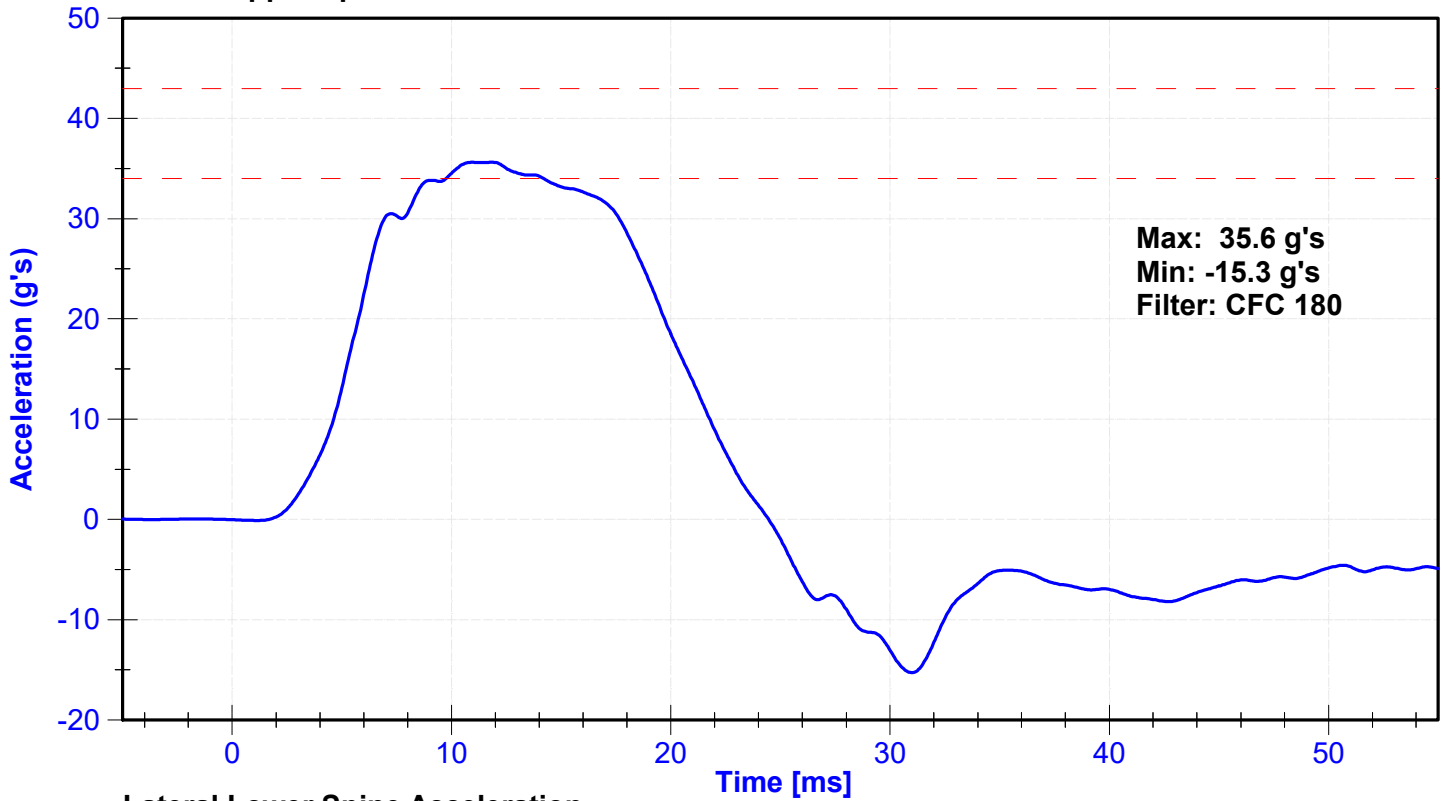
Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	18566	5/7/2025	11/3/2025
Upper Spine T1 Y Accelerometer	Endevco	P52018	7/11/2025	1/7/2026
Upper Spine T12 Y Accelerometer	Endevco	P52071	7/11/2025	1/7/2026
Shoulder Potentiometer	Servo	053GFE	7/10/2025	1/8/2026
Upper Thorax Rib Potentiometer	Servo	2316GFE	7/10/2025	1/8/2026
Middle Thorax Rib Potentiometer	Servo	085GFE	7/10/2025	1/8/2026
Lower Thorax Rib Potentiometer	Servo	1156GFE	7/10/2025	1/8/2026

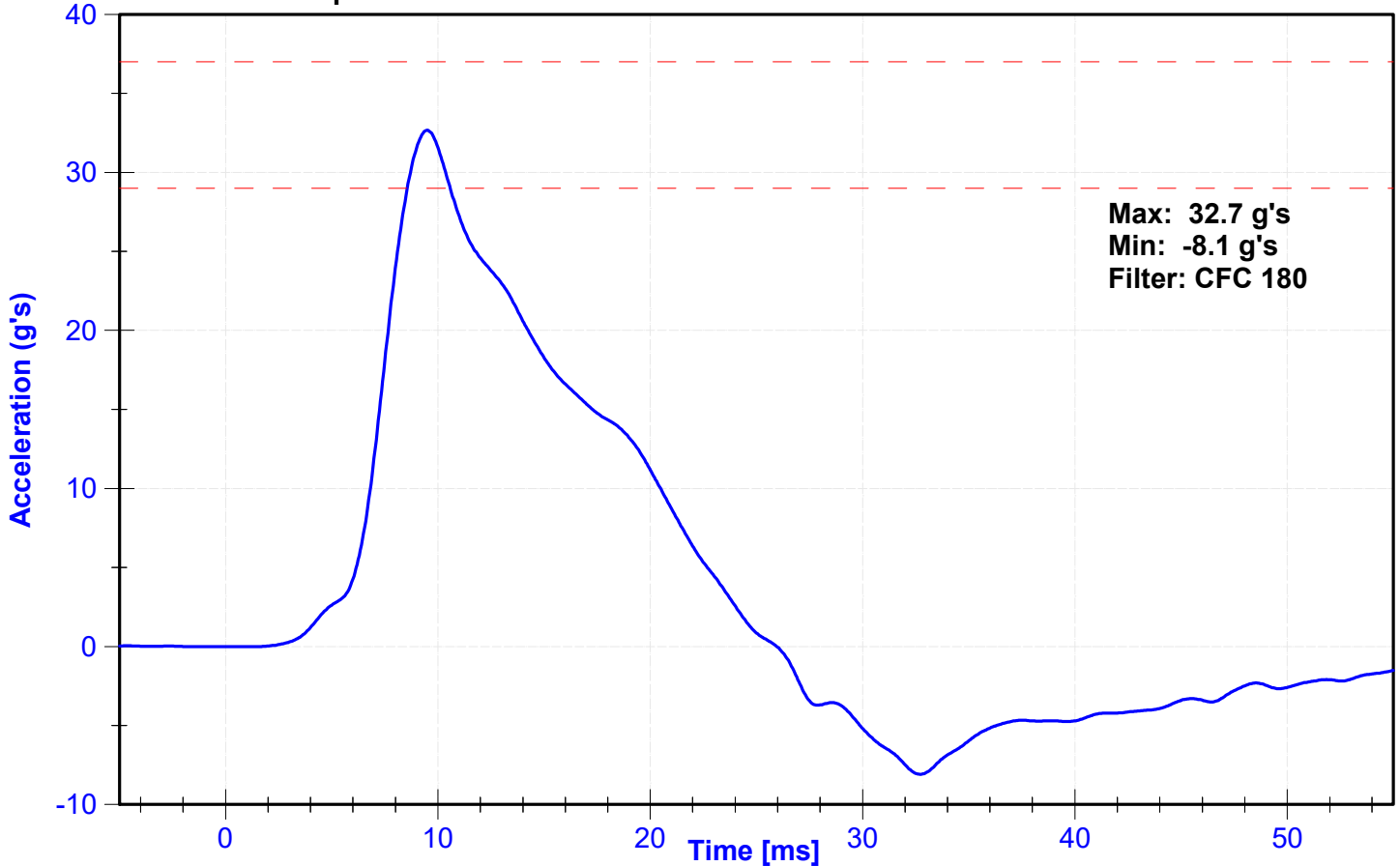




Lateral Upper Spine Acceleration



Lateral Lower Spine Acceleration



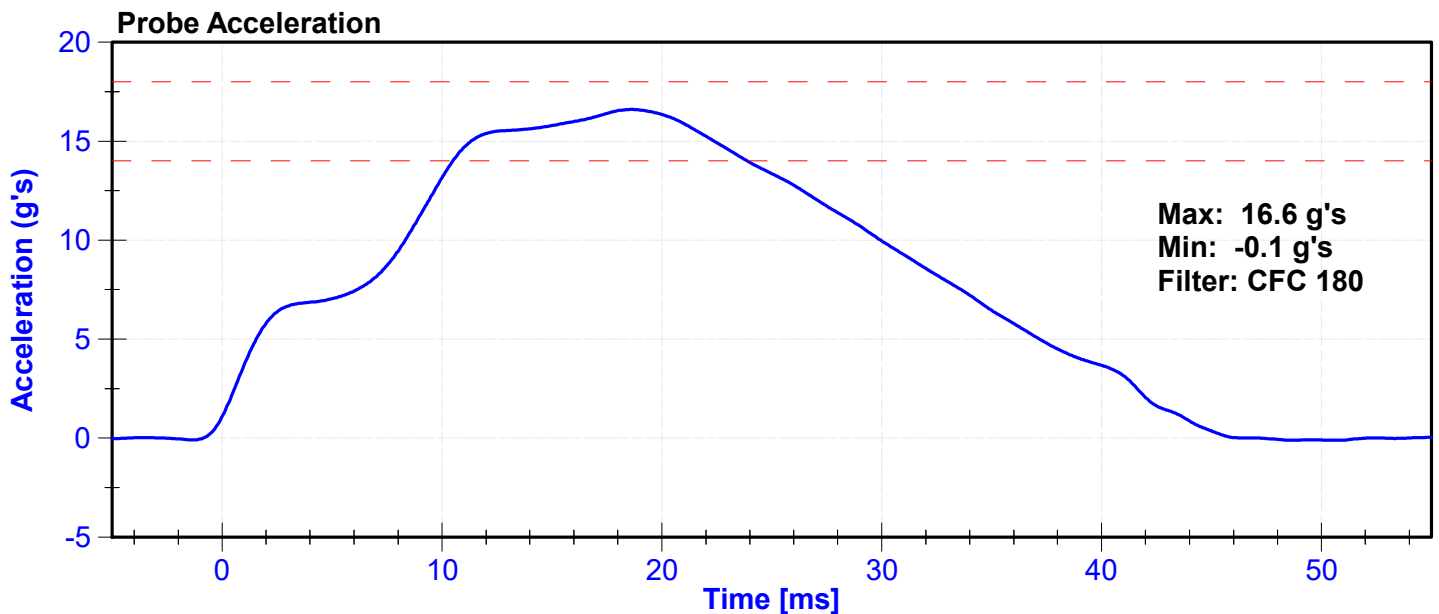
ATD Manufacturer	FTSS	Test Technician	W. Brokx
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

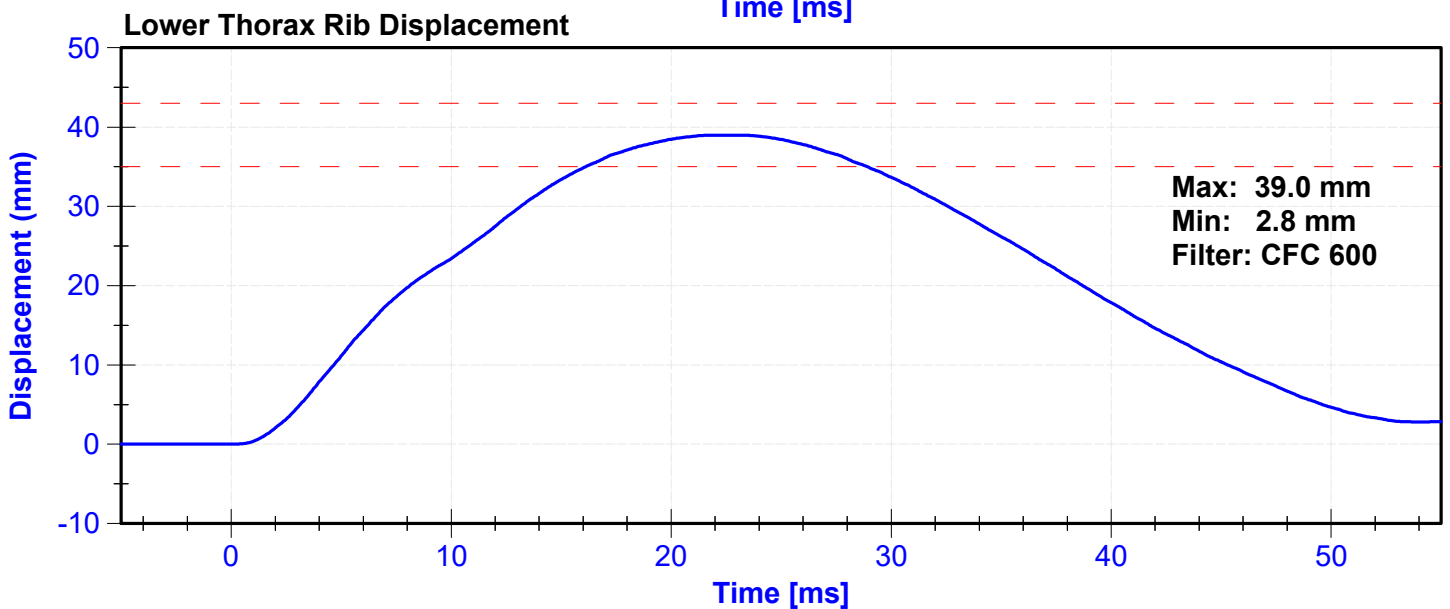
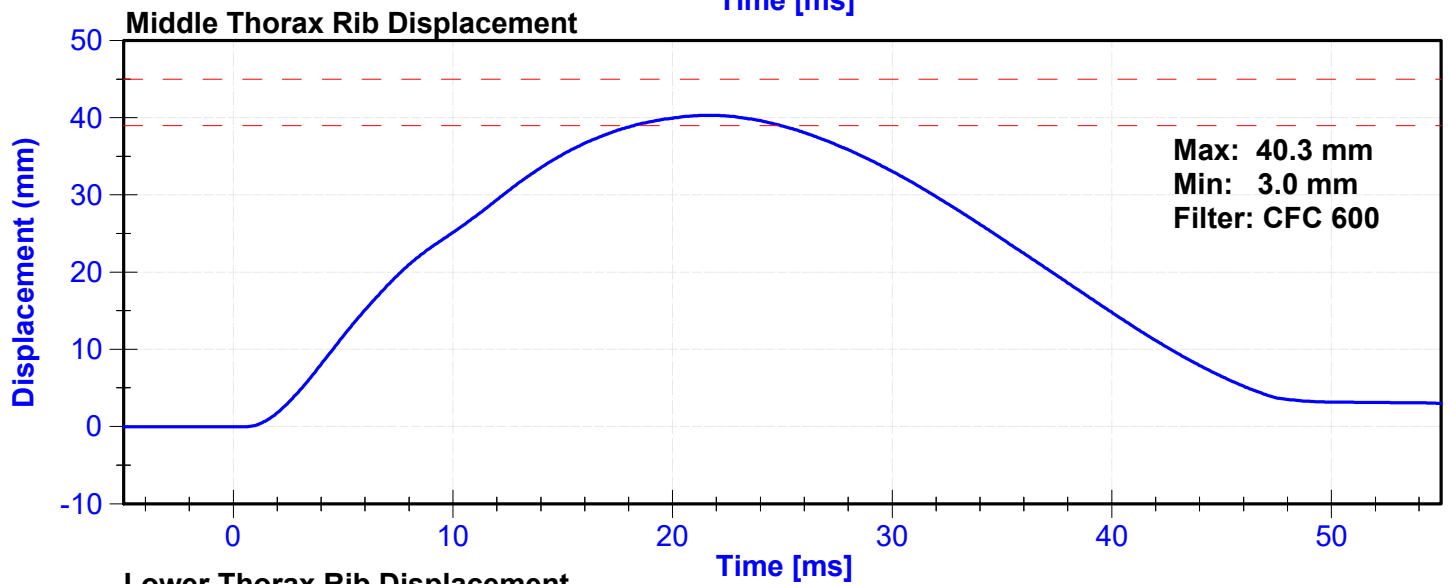
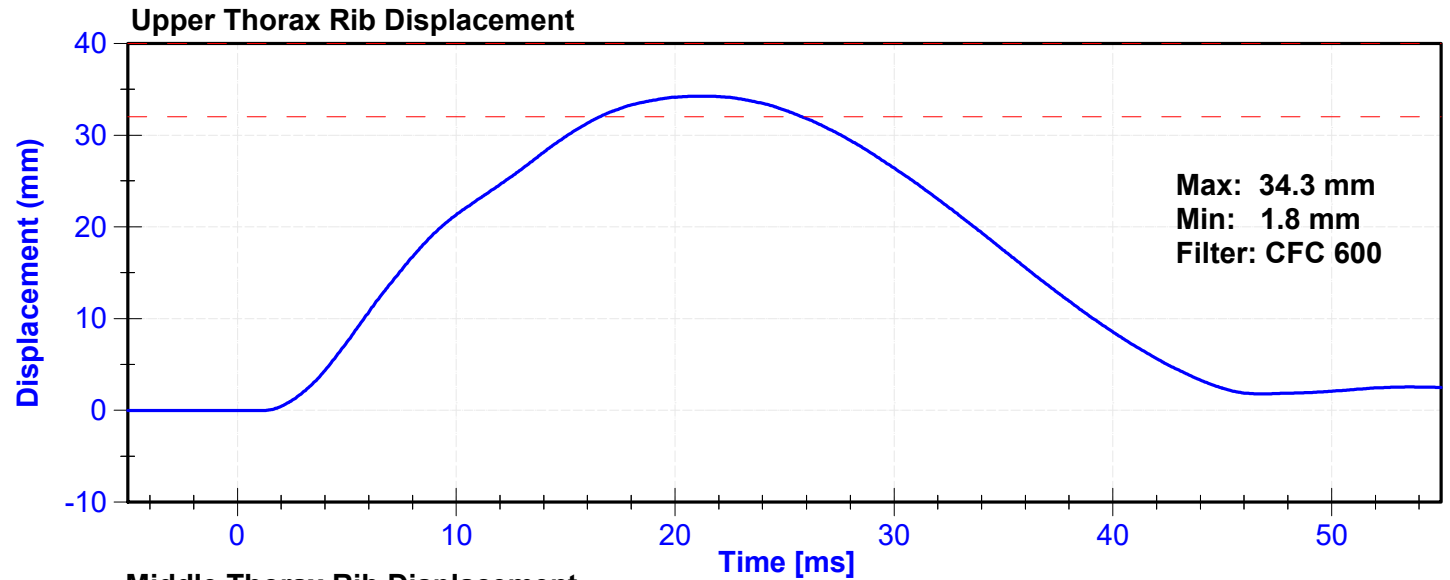
Results

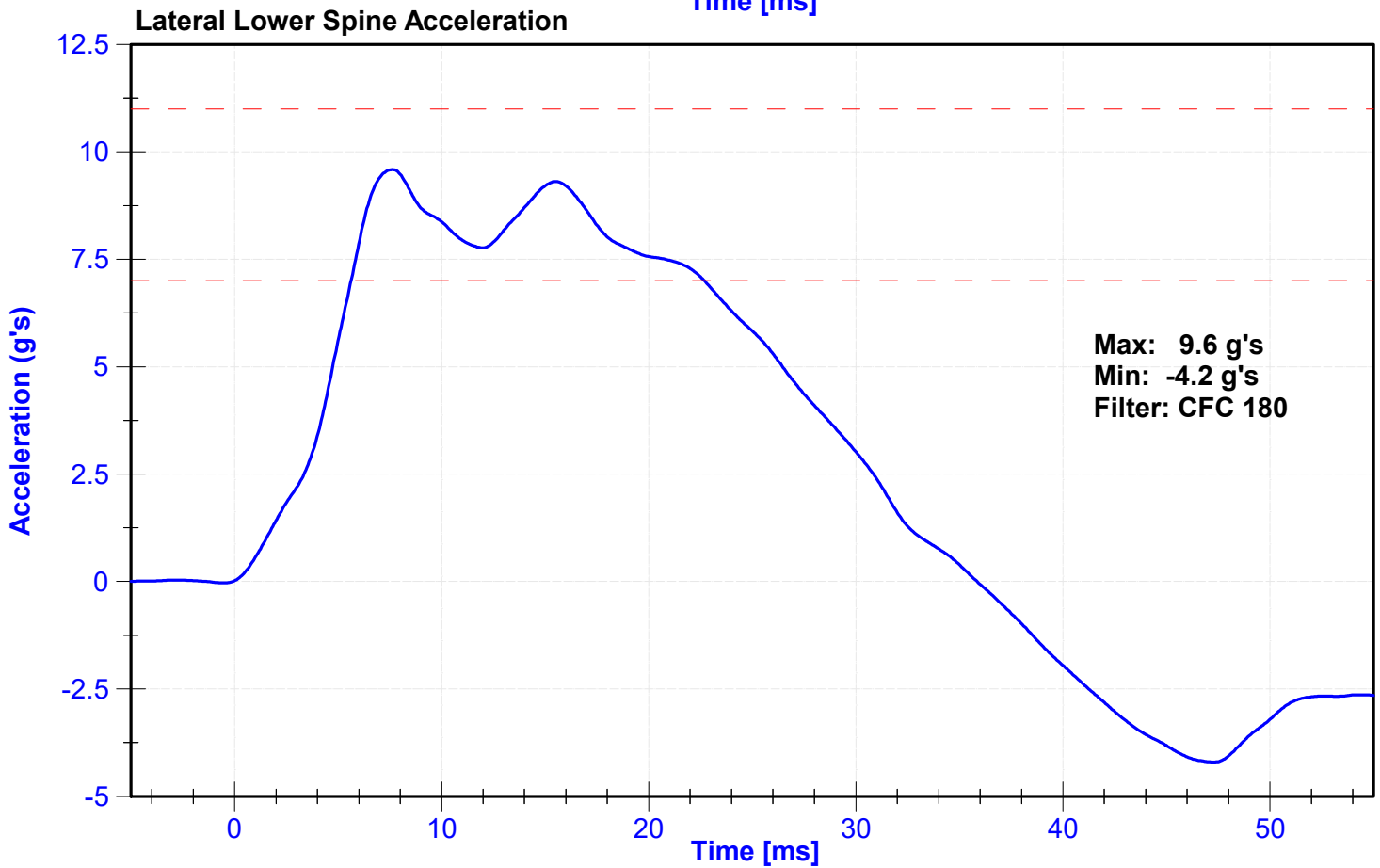
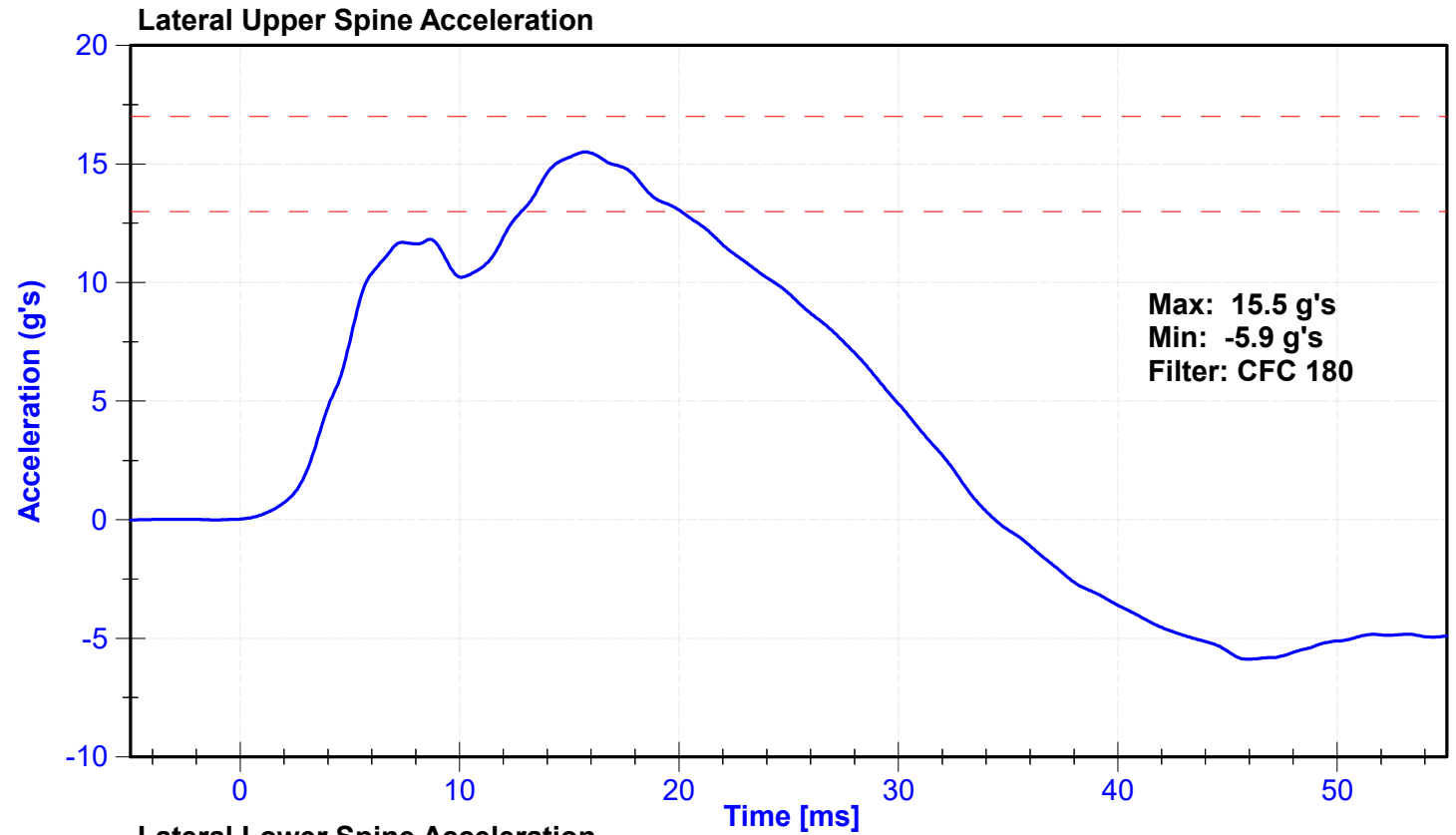
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.2	Pass
Humidity	10	70	%	50	Pass
Velocity	4.2	4.4	m/s	4.24	Pass
Probe Acceleration	14	18	g's	16.6	Pass
Lateral Upper Spine Acceleration	13	17	g's	15.5	Pass
Lateral Lower Spine Acceleration	7	11	g's	9.6	Pass
Upper Thorax Rib Deflection	32	40	mm	34.3	Pass
Middle Thorax Rib Deflection	39	45	mm	40.3	Pass
Lower Thorax Rib Deflection	35	43	mm	39.0	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	18566	5/7/2025	11/3/2025
Upper Spine Y Accelerometer	Endevco	P52018	7/11/2025	1/7/2026
Lower Spine Y Accelerometer	Endevco	P17283	7/11/2025	1/7/2026
Upper Thorax Rib Potentiometer	Servo	2316GFE	7/10/2025	1/8/2026
Middle Thorax Rib Potentiometer	Servo	085GFE	7/10/2025	1/8/2026
Lower Thorax Rib Potentiometer	Servo	1156GFE	7/10/2025	1/8/2026







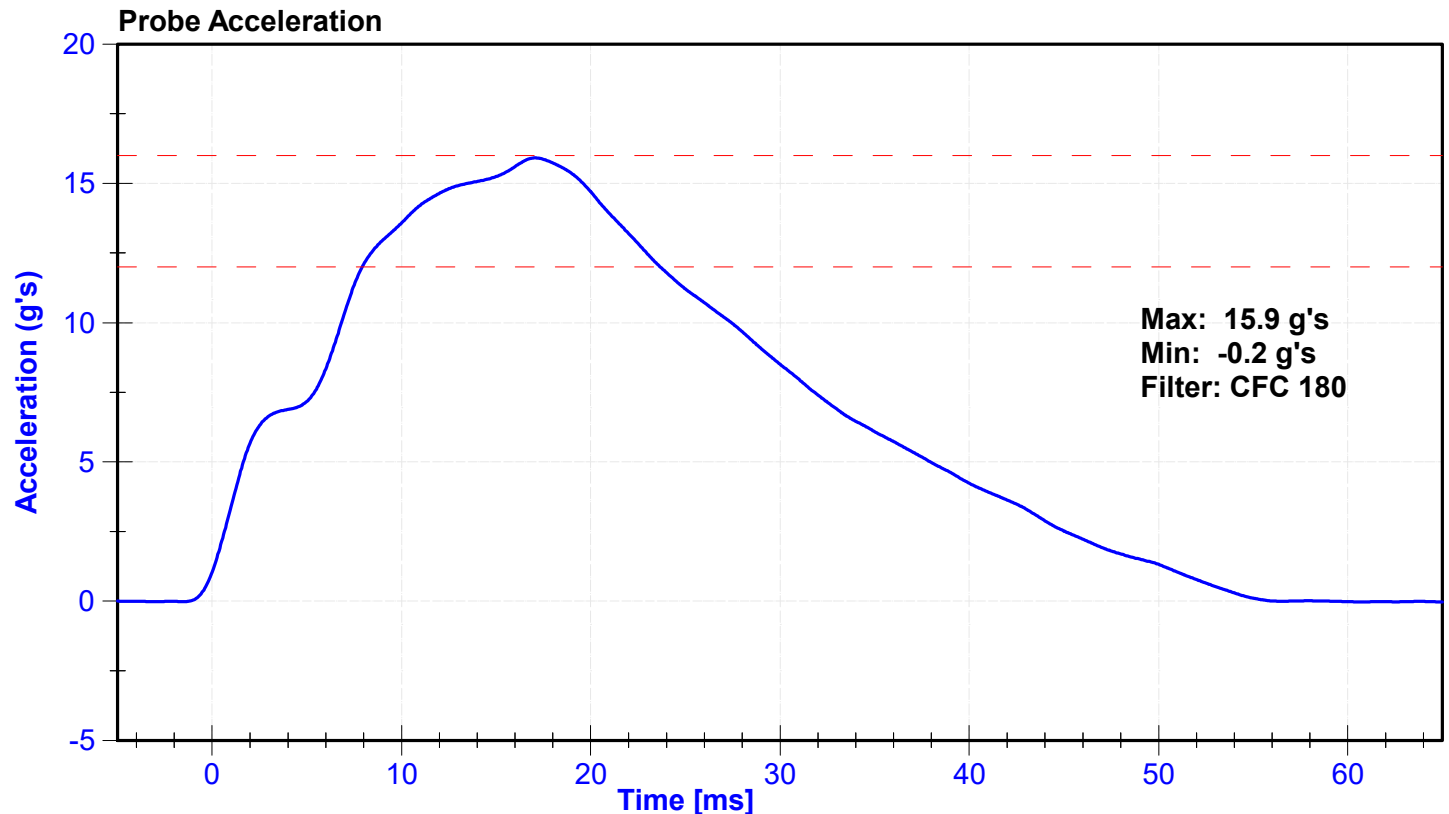
ATD Manufacturer	FTSS	Test Technician	W. Brokx
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

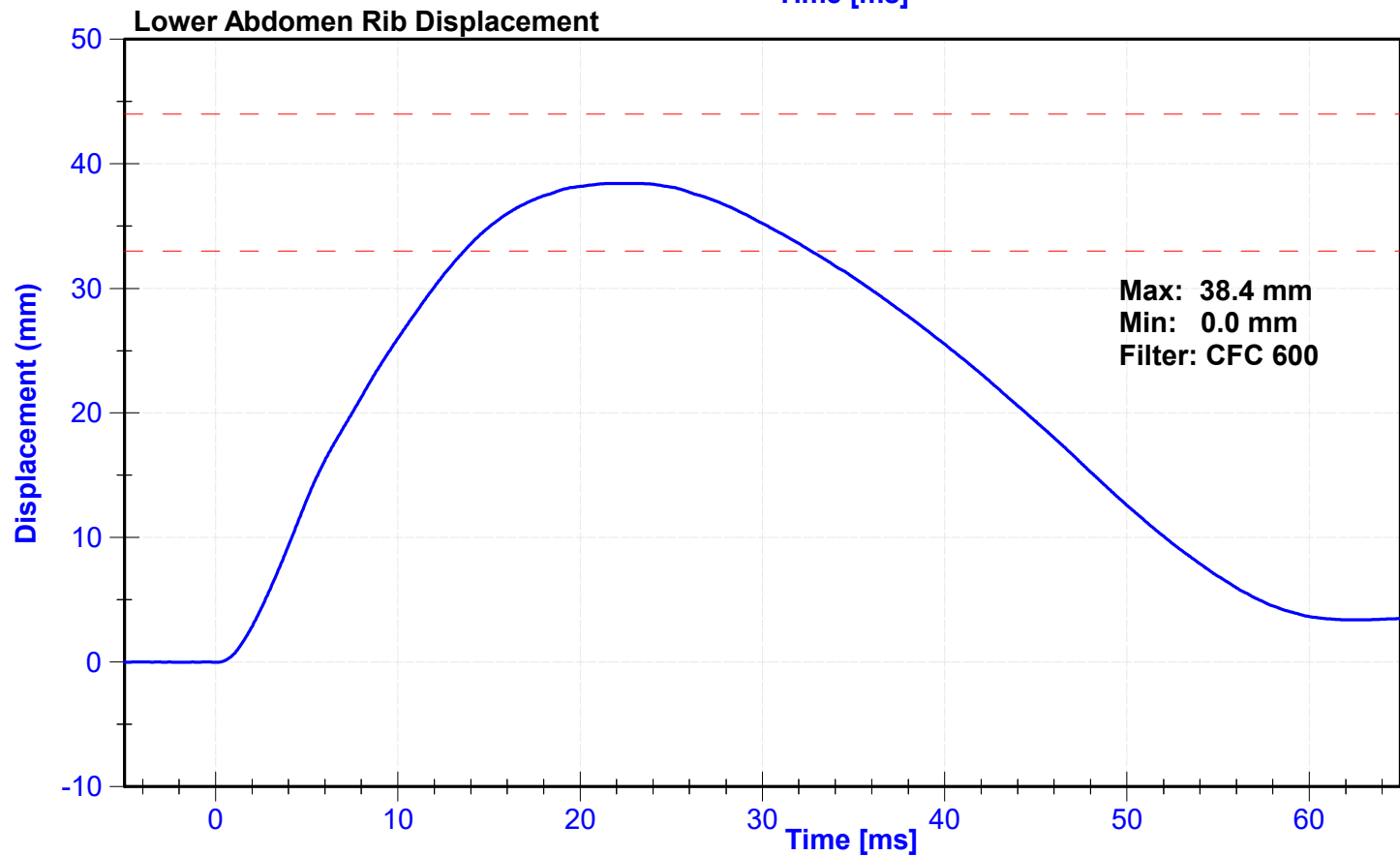
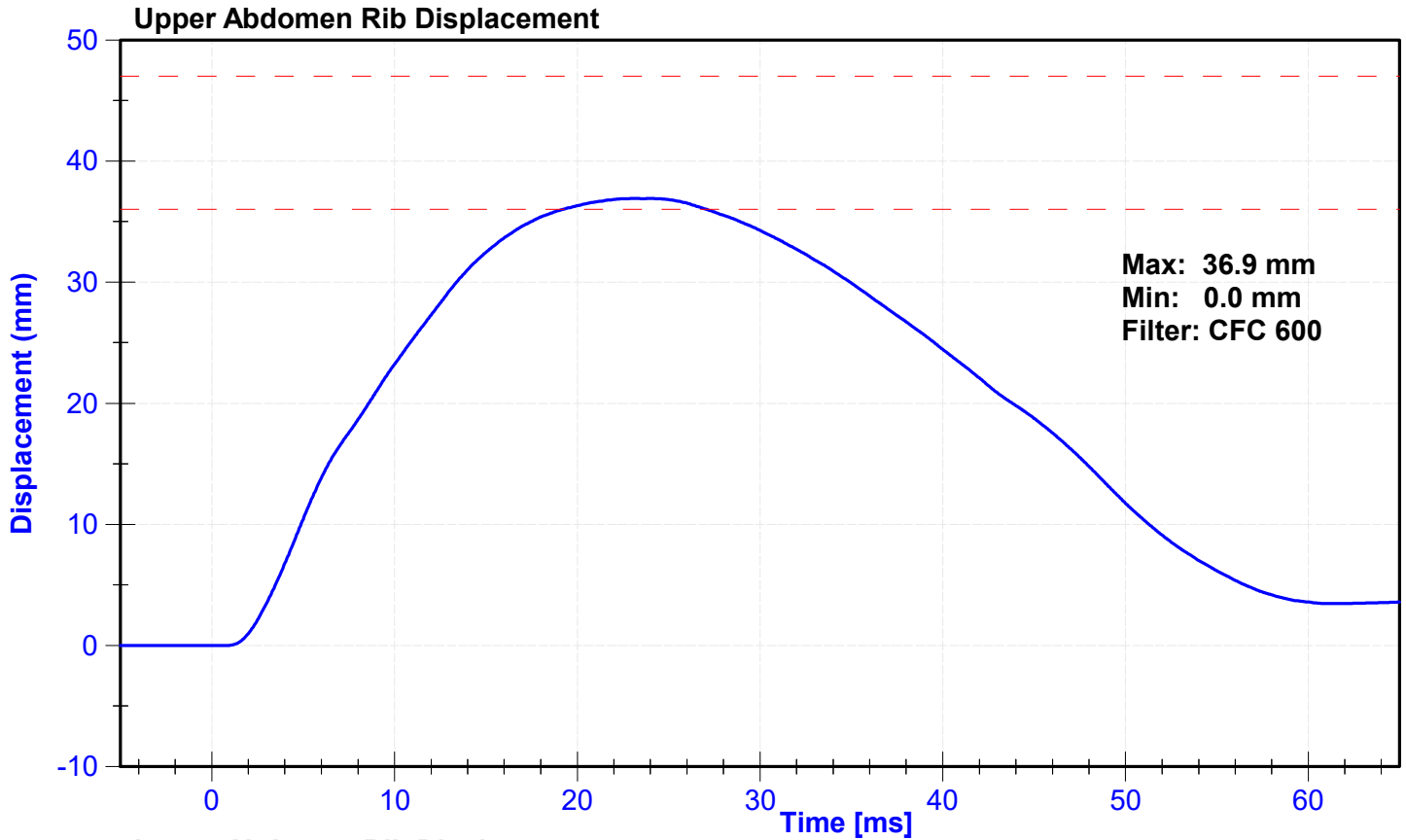
Results

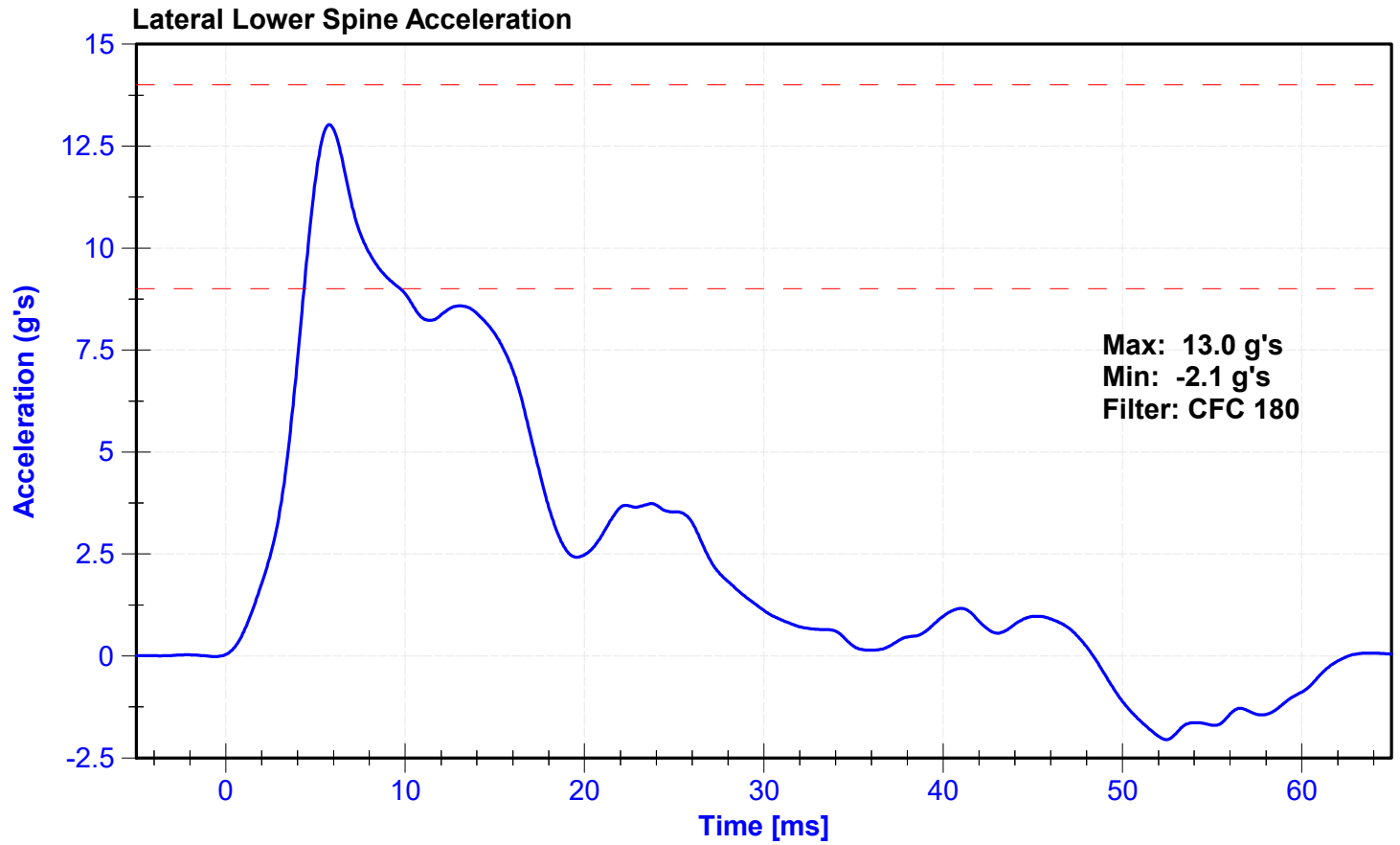
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.2	Pass
Humidity	10	70	%	50	Pass
Velocity	4.2	4.4	m/s	4.23	Pass
Probe Acceleration	12	16	g's	15.9	Pass
Lateral Lower Spine Acceleration	9	14	g's	13.0	Pass
Upper Abdomen Rib Deflection	36	47	mm	36.9	Pass
Lower Abdomen Rib Deflection	33	44	mm	38.4	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Probe Accelerometer	Endevco	P40997	5/7/2025	11/3/2025
Lower Spine Y Accelerometer	Endevco	P17283	7/11/2025	1/7/2026
Upper Abdomen Rib Potentiometer	Servo	074GFE	7/10/2025	1/8/2026
Lower Abdomen Rib Potentiometer	Servo	075GFE	7/10/2025	1/8/2026







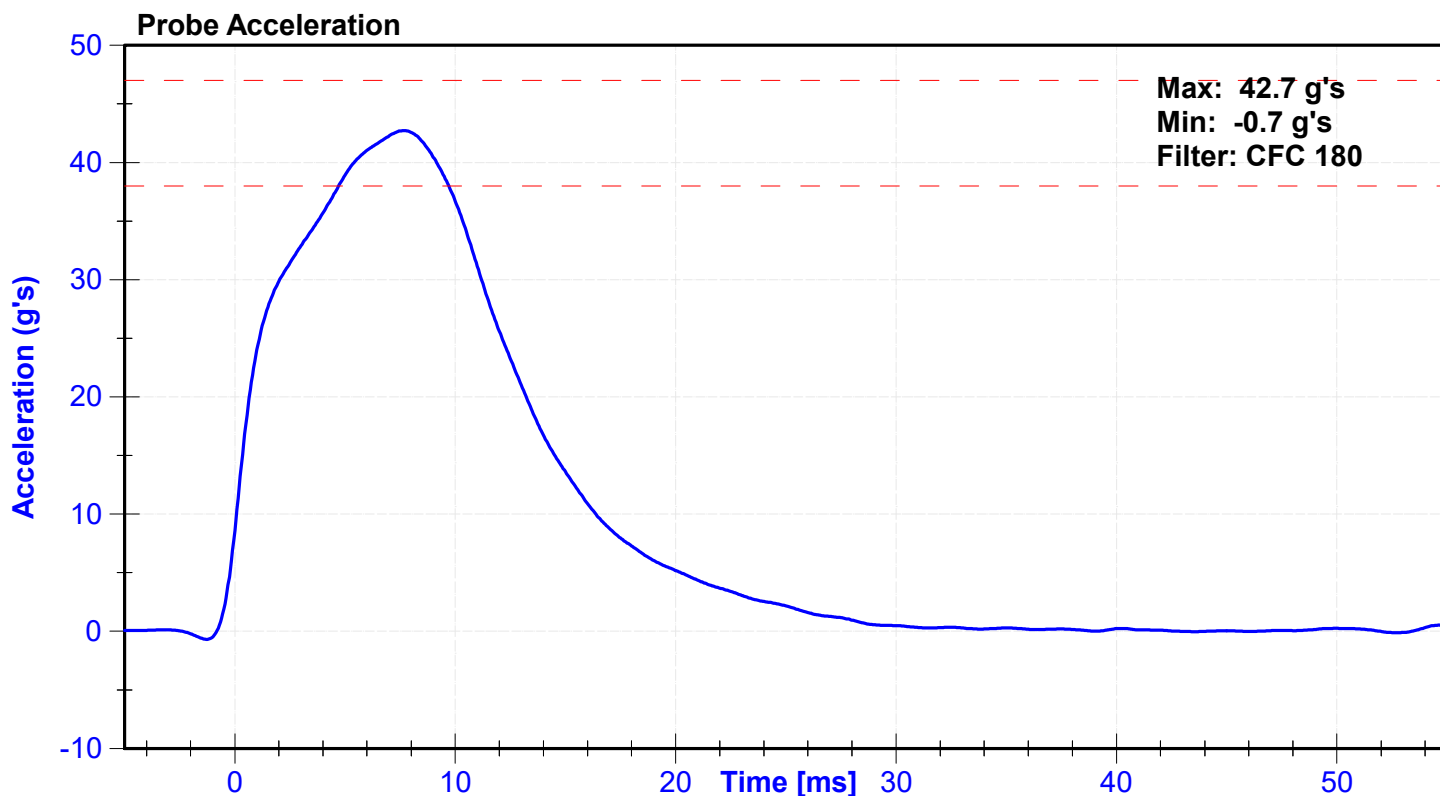
ATD Manufacturer	FTSS	Test Technician	W. Brokx
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

Results

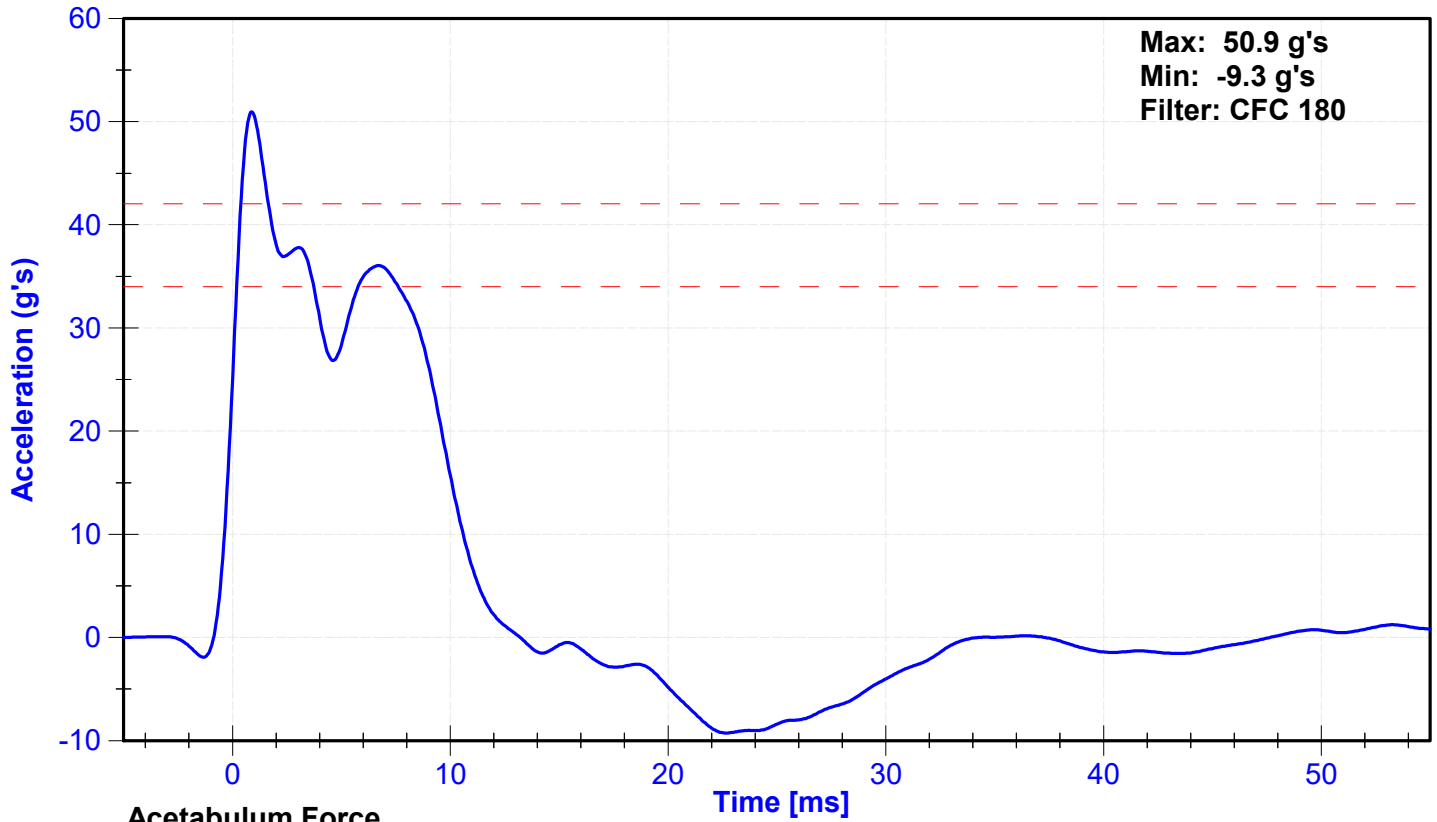
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.2	Pass
Humidity	10	70	%	50	Pass
Velocity	6.6	6.8	m/s	6.68	Pass
Probe Acceleration	38	47	g's	42.7	Pass
Lateral Pelvis Acceleration after 6ms	34	42	g's	36.0	Pass
Acetabulum Force	3600	4300	N	3963.6	Pass

Transducer Calibrations

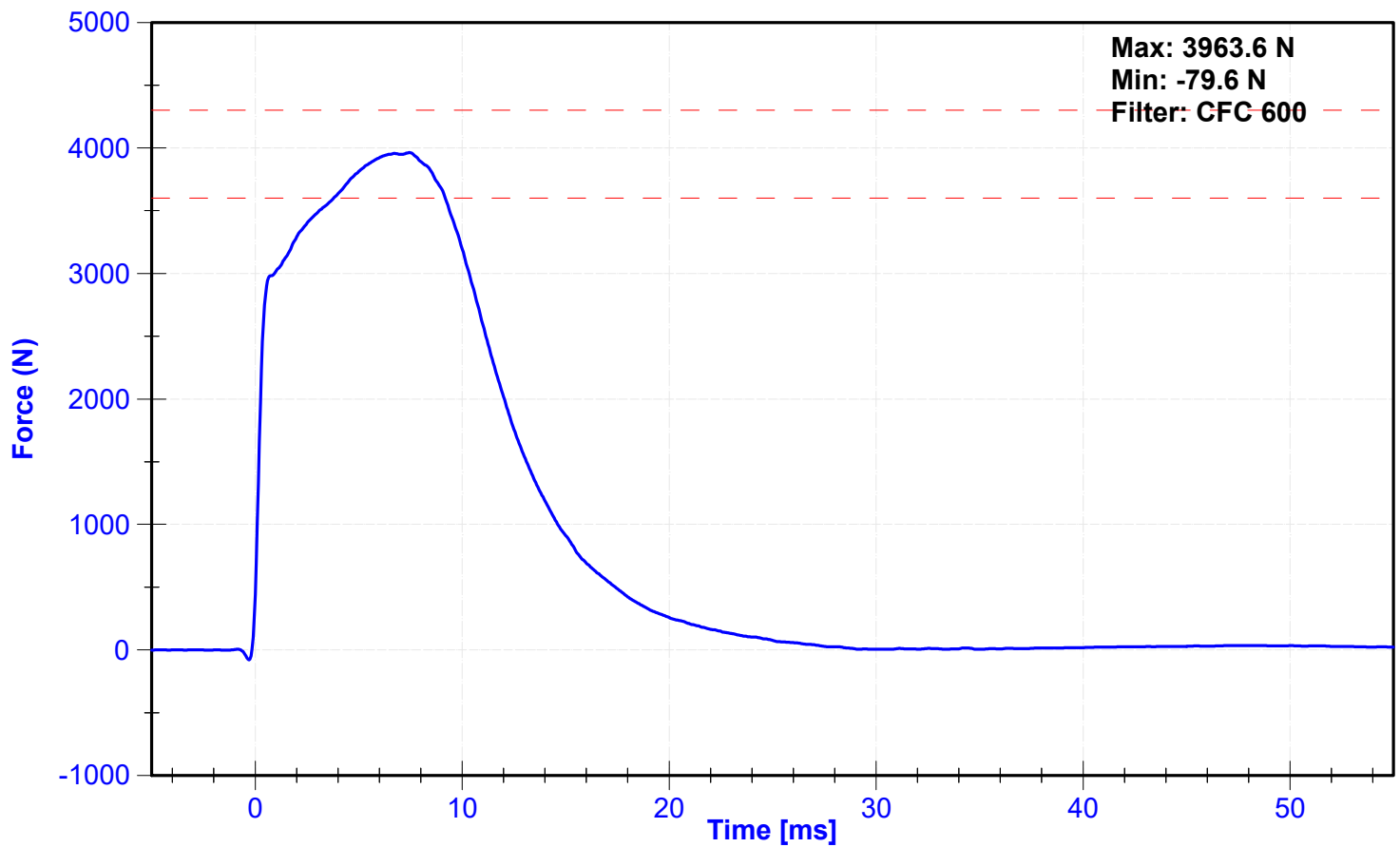
Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	18566	5/7/2025	11/3/2025
Pelvis Y Accelerometer	Endevco	P51731	7/11/2025	1/7/2026
Acetabulum Load Cell	Denton	275-FY	10/28/2024	10/28/2025
Certification Plug	SACO			N/A
Crash Test Plug	SACO			N/A



Lateral Pelvis Acceleration



Acetabulum Force





SID-11s Pelvis Plug Certification Test

Force (-N) vs Extension (-mm)

Plug S/N 16881

Test Number 23727

Report Number 23784

Test Date 8/2/2022 1:41:42 PM

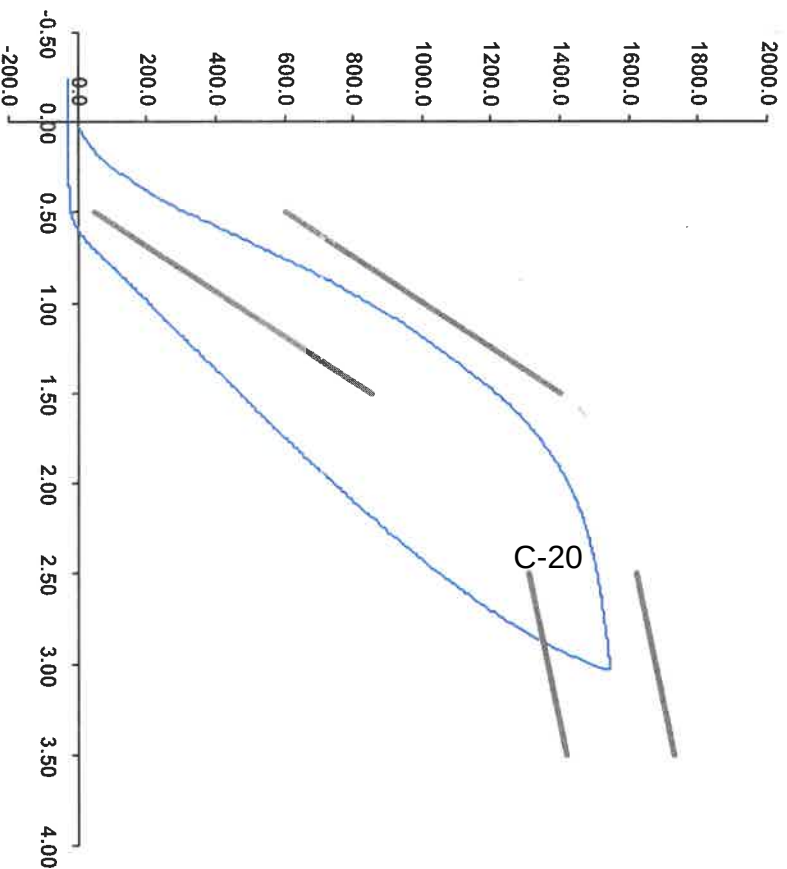
Test Results	Spec Min	Spec Max
Force @ 0.5 mm (N)	50	600
Force @ 1.5 mm (N)	850	1,400
Force @ 2.5 mm (N)	1,306	1,618
Force @ 3.0 mm (N)	1,361	1,673

Testing Machine STM-20 5965542
Load Cell S/N (F1360947), Units (LBS) 1000

Crosshead Speed (mm / min) or Rate 12.7
Extension or Position Measured by XHD_100 (XHD100)

Notes:

Cert 300 7/15/2025 will break



Operator

Part Number 180-4450

Template No 107
SACO Research
02-Aug-22

By:  Date: 8/2/22

SACO Research 41735 Elm St, #401 Murrieta, CA 92562 Tel 310-694-2082 FAX

SID-ILS Pelvis Plug Certification Test

Plug S/N 16822

Test Number 23633

Report Number 23690

Test Date 7/25/2022 9:47:06 AM

Test Results	Spec Min	Spec Max
Force @ 0.5 mm (N)	50	600
Force @ 1.5 mm (N)	850	1,400
Force @ 2.5 mm (N)	1,306	1,618
Force @ 3.0 mm (N)	1,361	1,673

Testing Machine STM-20 5965542
Load Cell S/N (F1360947), Units (LBS) 1000

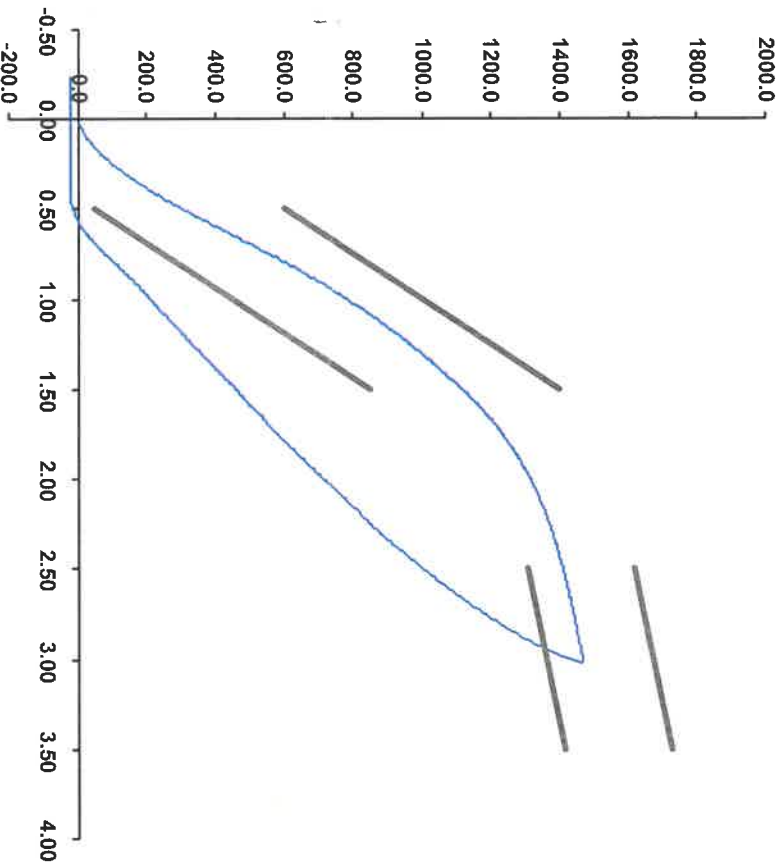
Crosshead Speed (mm / min) or Rate 12.7
Extension or Position Measured by XHD_100 (XHD100)

Notes:

Non-Impact

Zachary Nyhart
Dummy 300
11-4-2025

Force (-N) vs Extension (-mm)



Operator

Part Number 180-4450

Template No 107
SACO Research

25-Jul-22

By:

[Signature]

Date:

7/25/22

SACO Research 41735 Elm St, #401 Murrieta, CA 92562 Tel 310-694-2082 FAX



SID-ILS Pelvis Plug Certification Test

Plug S/N 16821

Test Number 23632

Report Number 23689

Test Date 7/25/2022 9:43:34 AM

Test Results	Spec Min	Spec Max
Force @ 0.5 mm (N)	50	600
Force @ 1.5 mm (N)	850	1,400
Force @ 2.5 mm (N)	1,306	1,618
Force @ 3.0 mm (N)	1,361	1,673

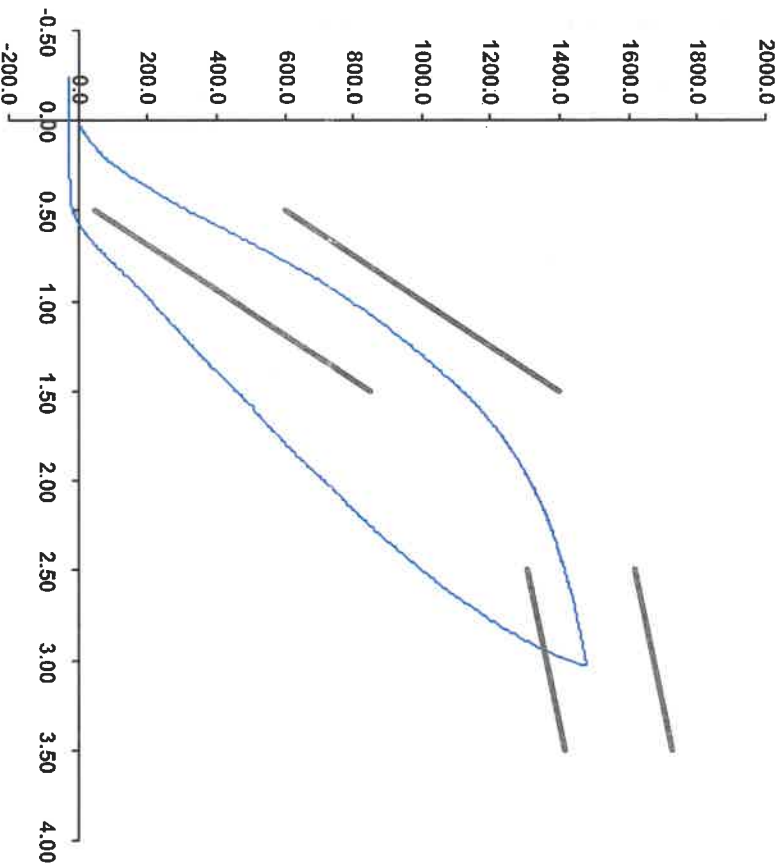
Testing Machine STM-20 5965542
Load Cell S/N (FI360947), Units (LBS) 1000

Crosshead Speed (mm / min) or Rate 12.7
Extension or Position Measured by XHD_100 (XHD100)

Notes:
Impact

Zachary Nyhart
Dummy 300
4-4-2025

Force (-N) vs Extension (-mm)



Operator

Part Number 180-4450

Template No 107 25-Jul-22
SACO Research

By: DC Date: 7/25/22

SACO Research 41735 Elm St, #401 Murrieta, CA 92562 Tel 310-694-2082 FAX

ATD Manufacturer	FTSS	Test Technician	W. Brokx
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

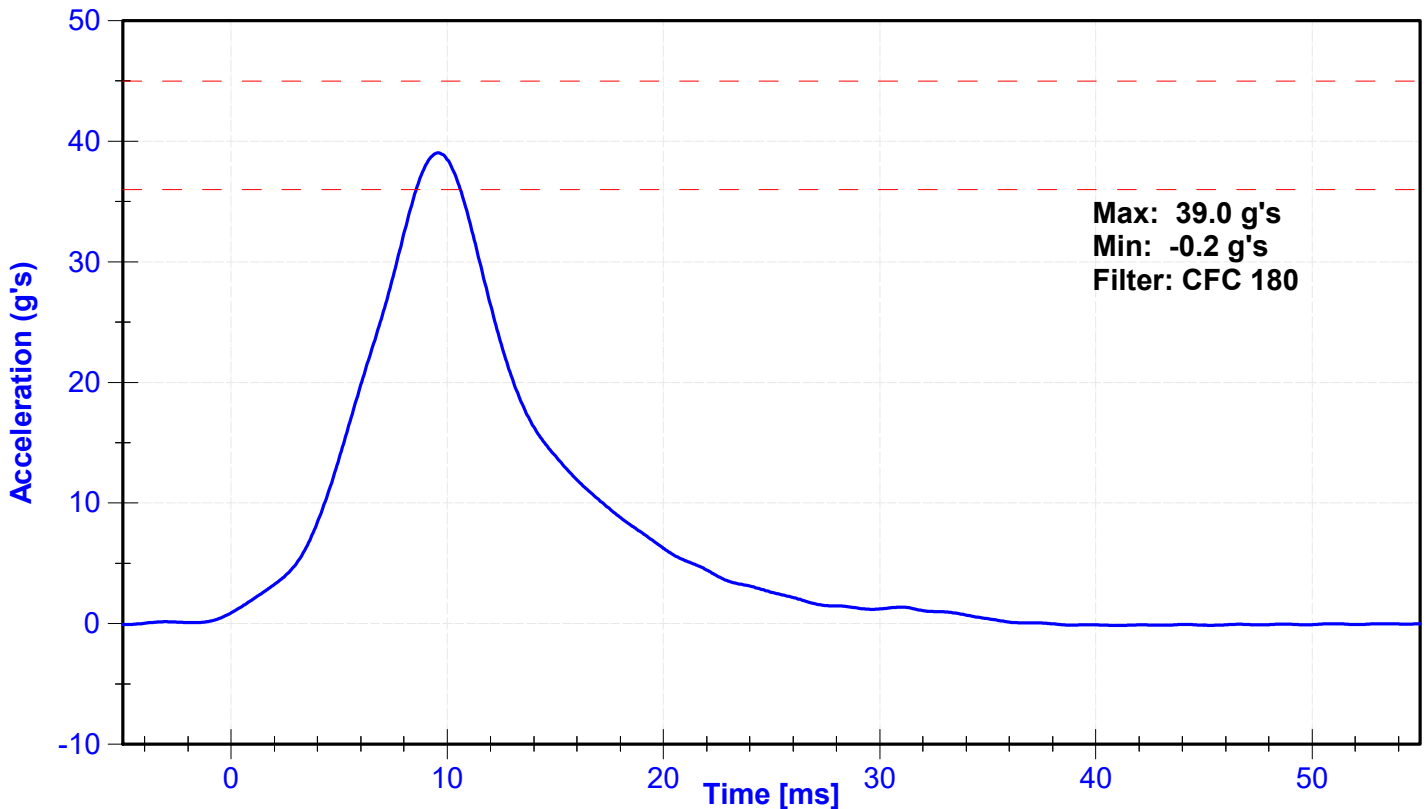
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.2	Pass
Humidity	10	70	%	50	Pass
Velocity	4.2	4.4	m/s	4.23	Pass
Probe Acceleration	36	45	g's	39.0	Pass
Lateral Pelvis Acceleration	28	39	g's	28.0	Pass
Iliac Force	4100	5100	N	4427.5	Pass

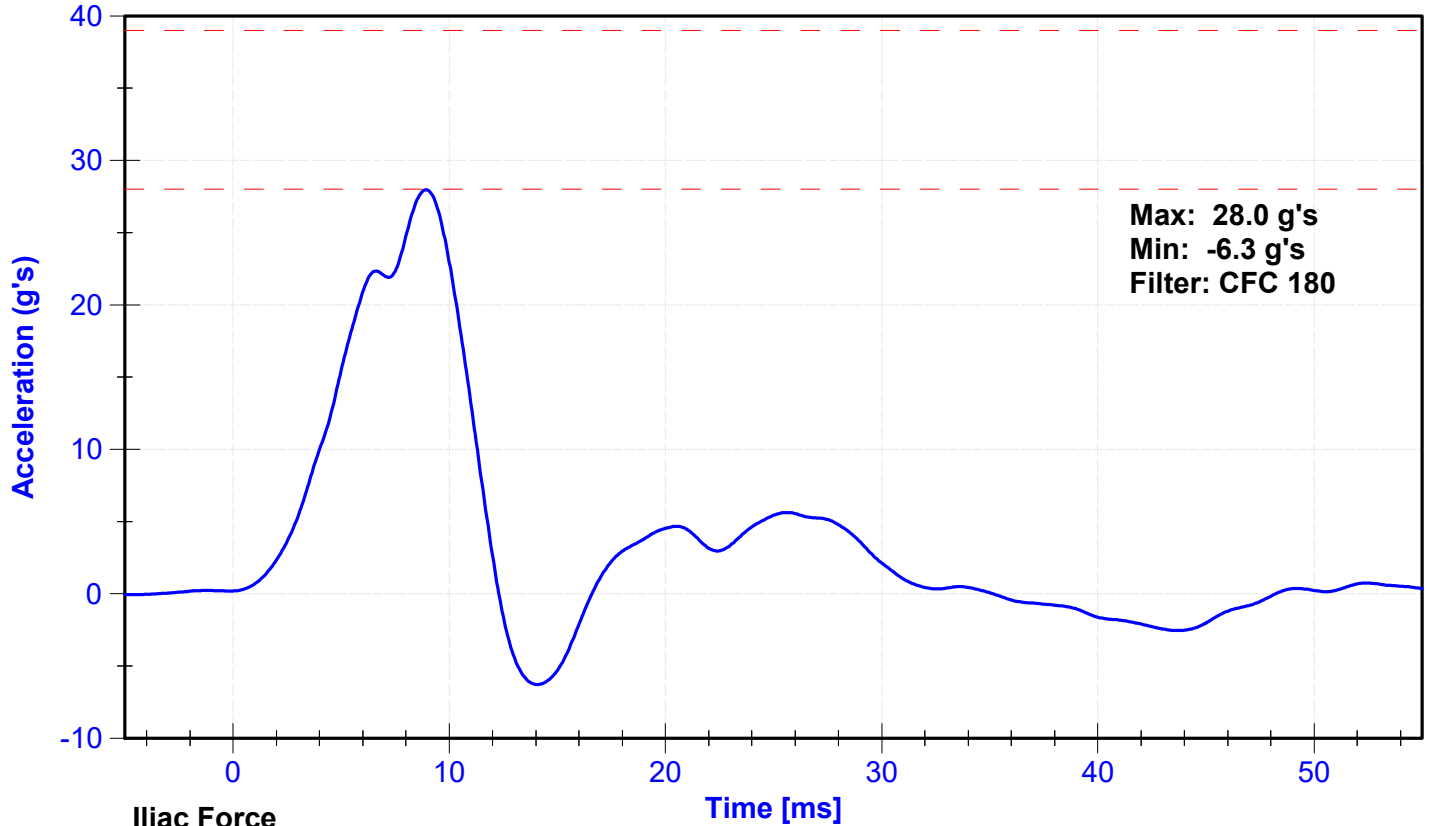
Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	18566	5/7/2025	11/3/2025
Pelvis Y Accelerometer	Endevco	P51731	7/11/2025	1/7/2026
Iliac Load Cell	Denton	279-FY	10/28/2024	10/28/2025

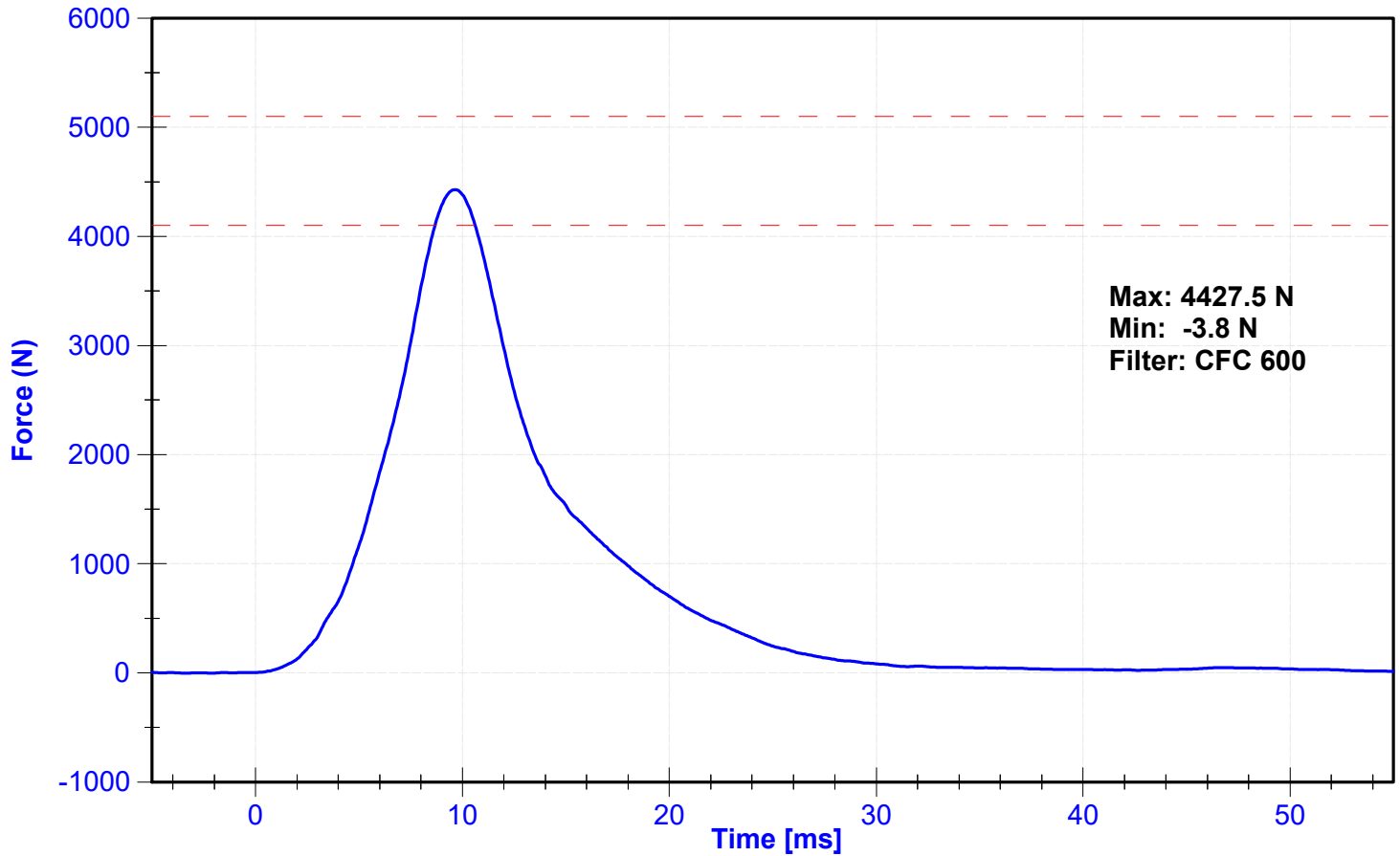
Probe Acceleration



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)

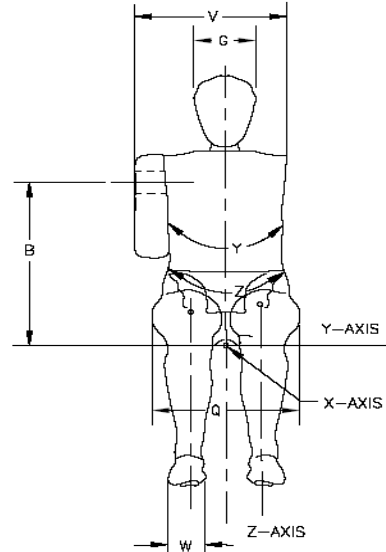
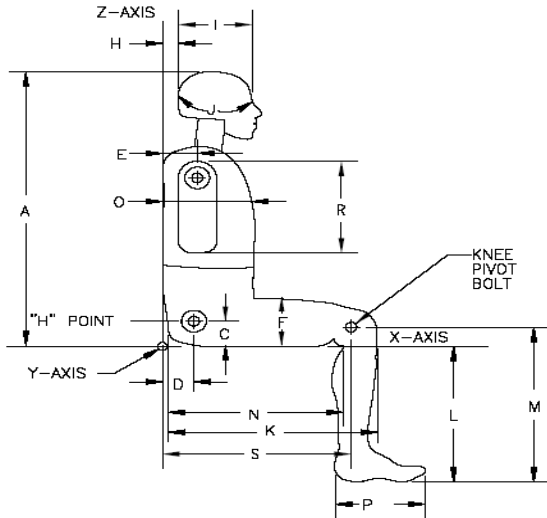


External Measurements - SID-IIs

Technician: J. Rios

Date: 07/31/2025

Dummy Serial Number: 300



Symbol	Description	Specification (mm)		Result (mm)	Pass/Fail
A	Sitting Height	772	788	779	Pass
B	Shoulder Pivot Height	437	453	441	Pass
C	H-point Height	79	89	83	Pass
D	H-point from seatback	141	151	144	Pass
E	Shoulder Pivot from Backline	97	107	105	Pass
F	Thigh Clearance	119	135	126	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	548	Pass
K	Buttock to Knee Length	514	540	526	Pass
L	Popliteal Height	343	369	362	Pass
M	Knee Pivot to floor height	392	409	405	Pass
N	Buttock Popliteal Length	416	442	428	Pass
O	Chest Depth w/o jacket	195	211	204	Pass
P	Foot Length	216	232	225	Pass
Q	Hip Breadth (w/pelvic plugs)	313	323	318	Pass
R	Arm Length	249	259	251	Pass
S	Knee Joint to seatback	477	493	485	Pass
V	Shoulder Width	341	357	350	Pass
W	Foot Width	78	94	81	Pass
Y	Chest Circumference w/jacket	851	881	872	Pass
Z	Waist Circumference	761	791	774	Pass

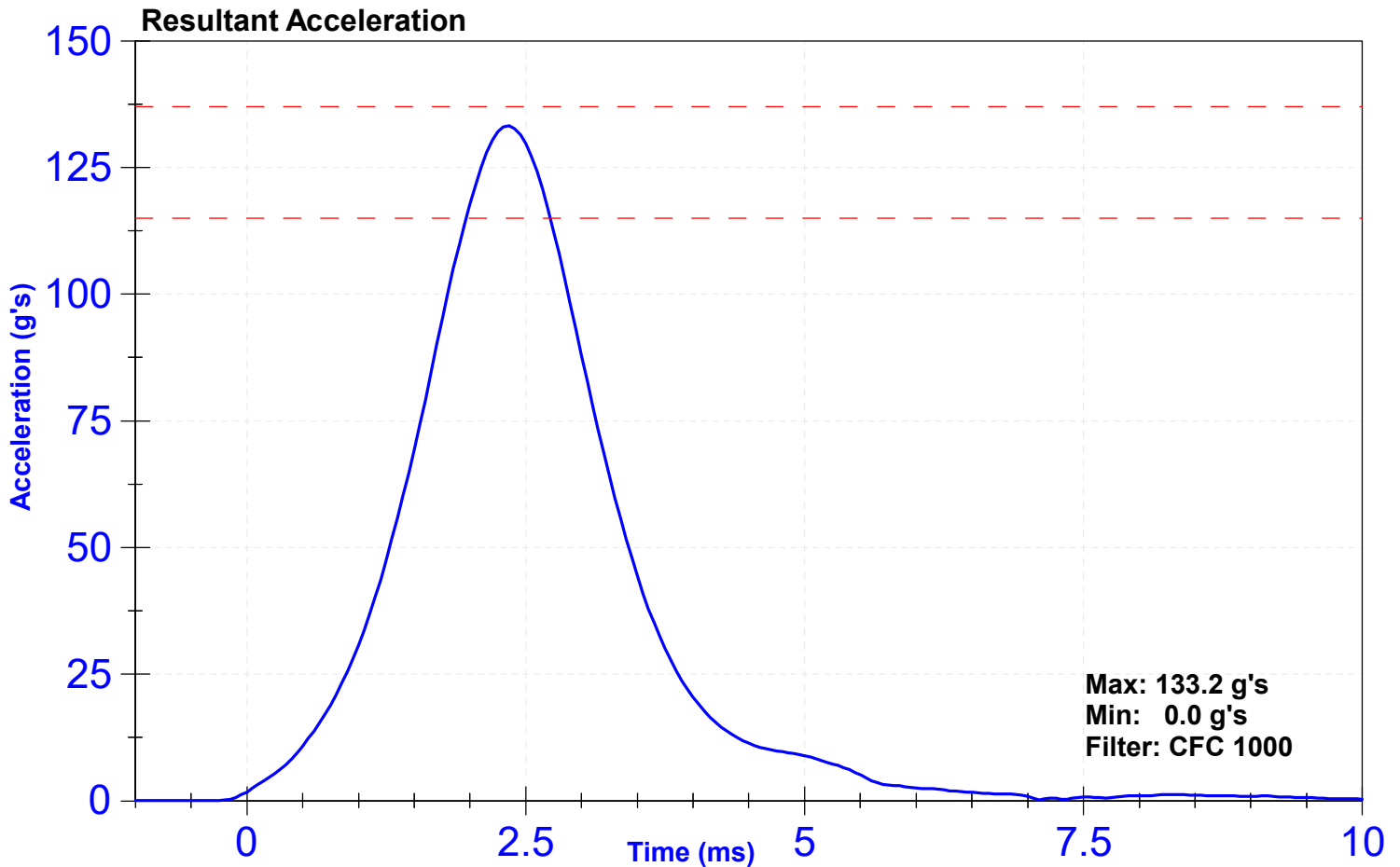
ATD Manufacturer	FTSS	Test Technician	Z. Nyhart
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

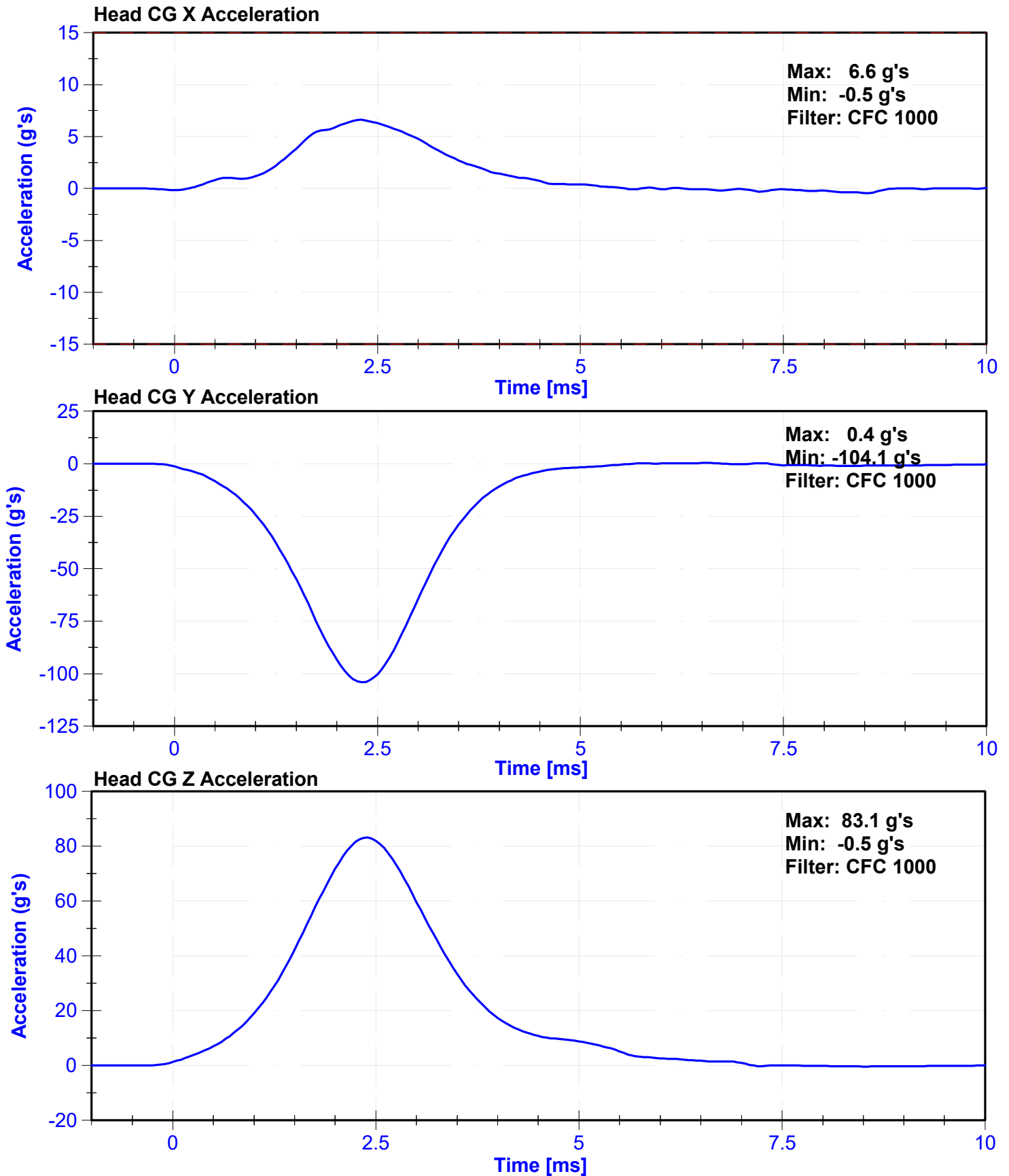
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.2	Pass
Humidity	10	70	%	49	Pass
Resultant Acceleration	115	137	g's	133.2	Pass
Oscillation	0	15	%	1.3	Pass
Fore-Aft Acceleration	-15	15	g's	6.6	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibratio Date	Calibratio Due Date
X Accelerometer	Endevco	P59018	7/11/2025	1/7/2026
Y Accelerometer	Endevco	P79189	7/11/2025	1/7/2026
Z Accelerometer	Endevco	P79587	7/11/2025	1/7/2026





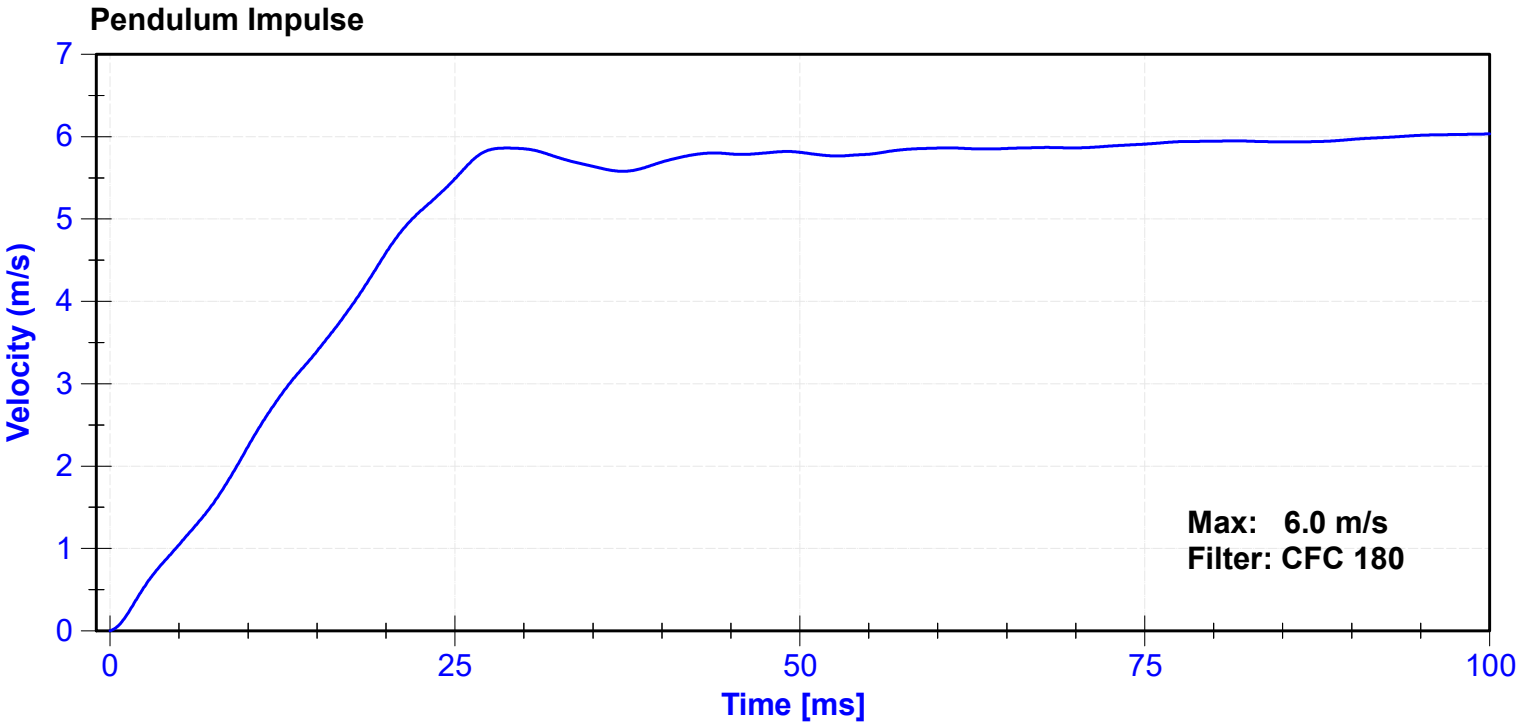
ATD Manufacturer	FTSS	Test Technician	Z. Nyhart
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

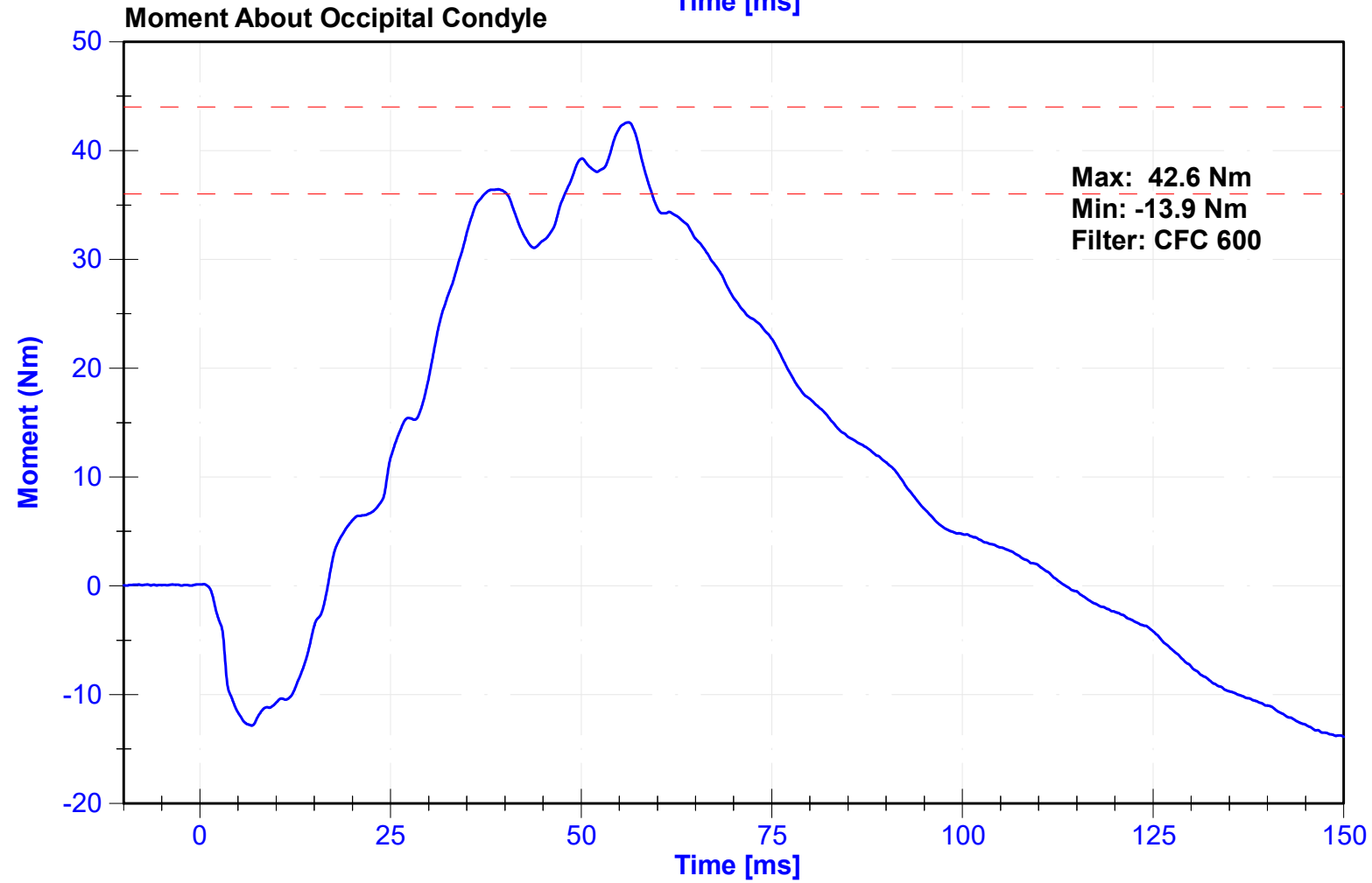
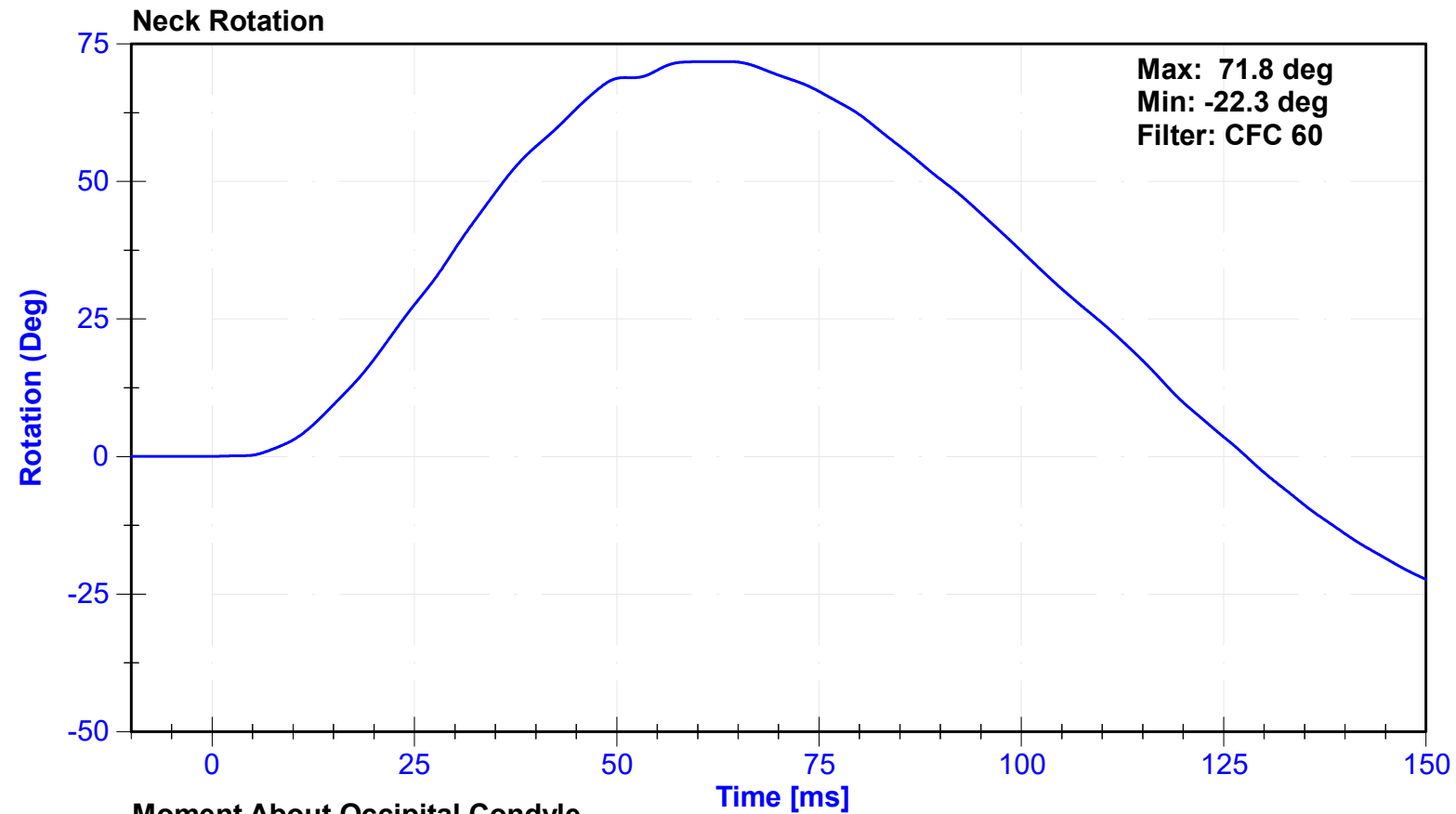
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.1	Pass
Humidity	10	70	%	51	Pass
Velocity	5.51	5.63	m/s	5.554	Pass
Pendulum Impulse at 10ms	2.2	2.8	m/s	2.24	Pass
Pendulum Impulse at 15ms	3.3	4.1	m/s	3.40	Pass
Pendulum Impulse at 20ms	4.4	5.4	m/s	4.59	Pass
Pendulum Impulse at 25ms	5.4	6.1	m/s	5.49	Pass
Pendulum Impulse from 25 to 100ms	5.5	6.2	m/s	6.03	Pass
Neck Rotation	71	81	deg	71.8	Pass
Time at Maximum Rotation	50	70	ms	63.6	Pass
Moment about the OC	36	44	Nm	42.6	Pass
Moment Decay to 0 Nm	102	126	ms	113.6	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	7231C-750	10/17/2024	10/17/2025
Pendulum Potentiometer	Servo	4961	9/23/2024	9/23/2025
Condyle Potentiometer	Servo	DS185	9/23/2024	9/23/2025
Upper Neck Load Cell	Kistler	M555A6CFM_1935H01698-F4	4/17/2025	4/17/2026





ATD Manufacturer	FTSS	Test Technician	Z. Nyhart
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

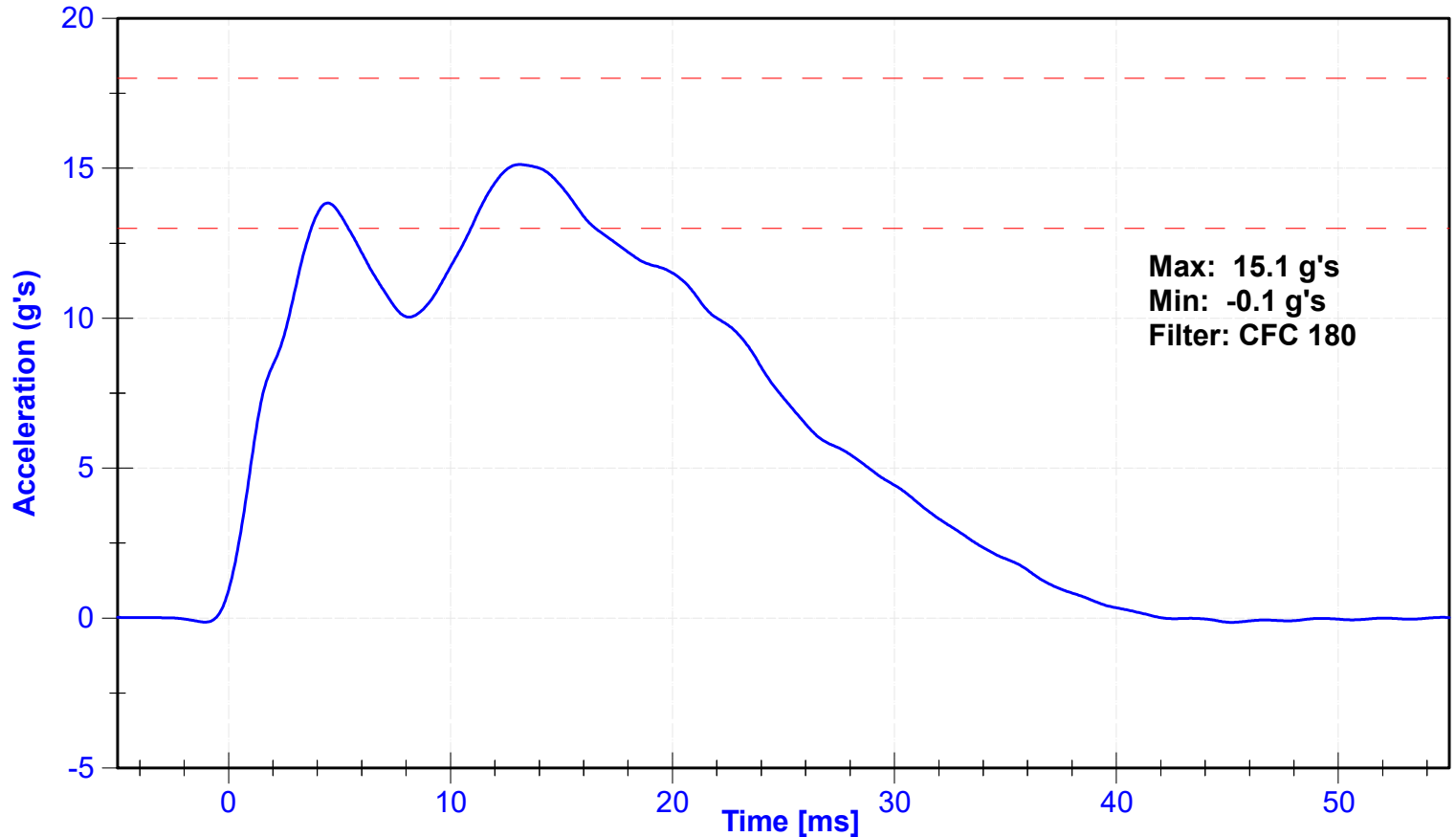
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.1	Pass
Humidity	10	70	%	46	Pass
Velocity	4.2	4.4	m/s	4.27	Pass
Probe Acceleration	13	18	g's	15.1	Pass
Shoulder Deflection	28	37	mm	28.1	Pass
Lateral Upper Spine Acceleration	17	22	g's	19.3	Pass

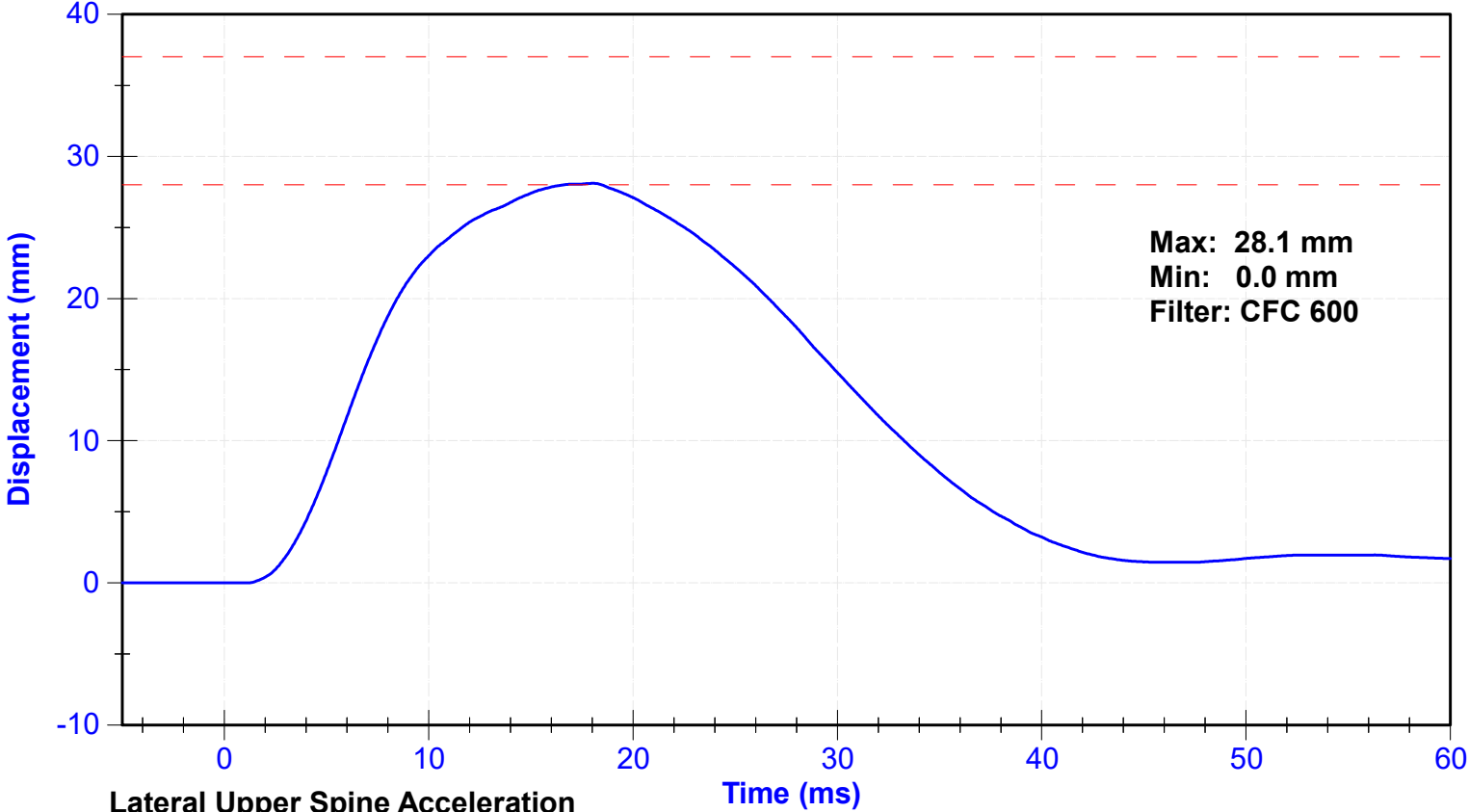
Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	18566	5/7/2025	11/3/2025
Shoulder Potentiometer	Servo	053GFE	7/10/2025	1/8/2026
Upper Spine Y Accelerometer	Endevco	P52018	7/11/2025	1/7/2026

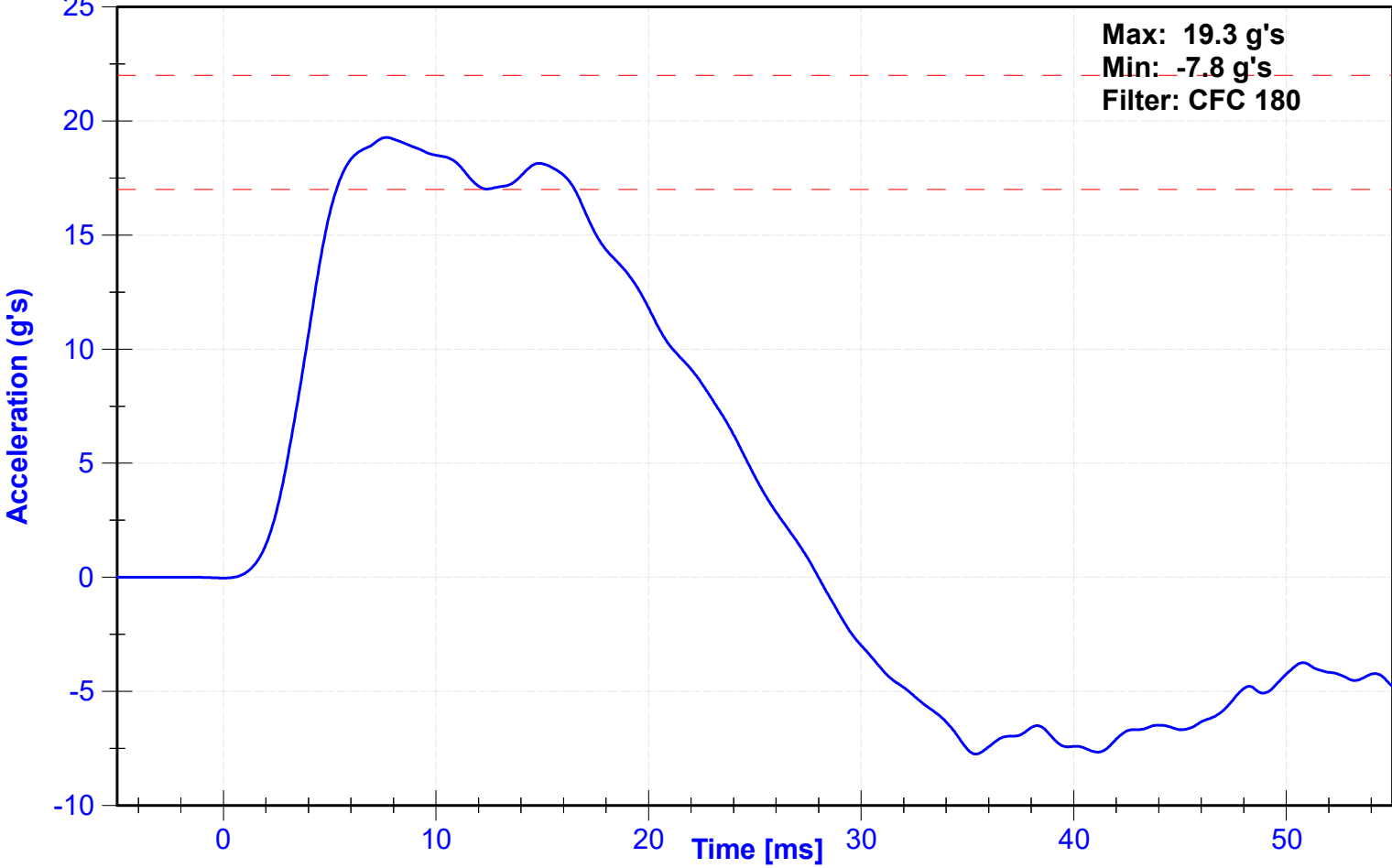
Probe Acceleration



Shoulder Displacement



Lateral Upper Spine Acceleration



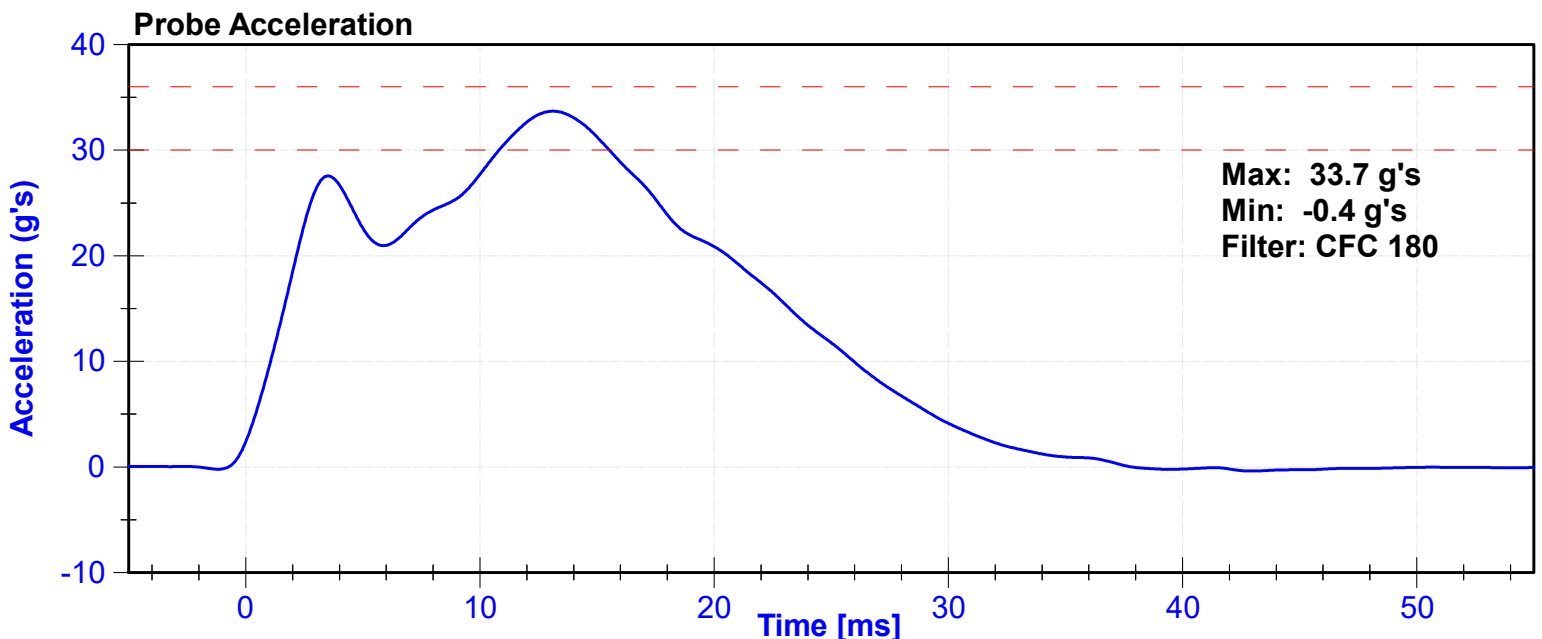
ATD Manufacturer	FTSS	Test Technician	Z. Nyhart
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

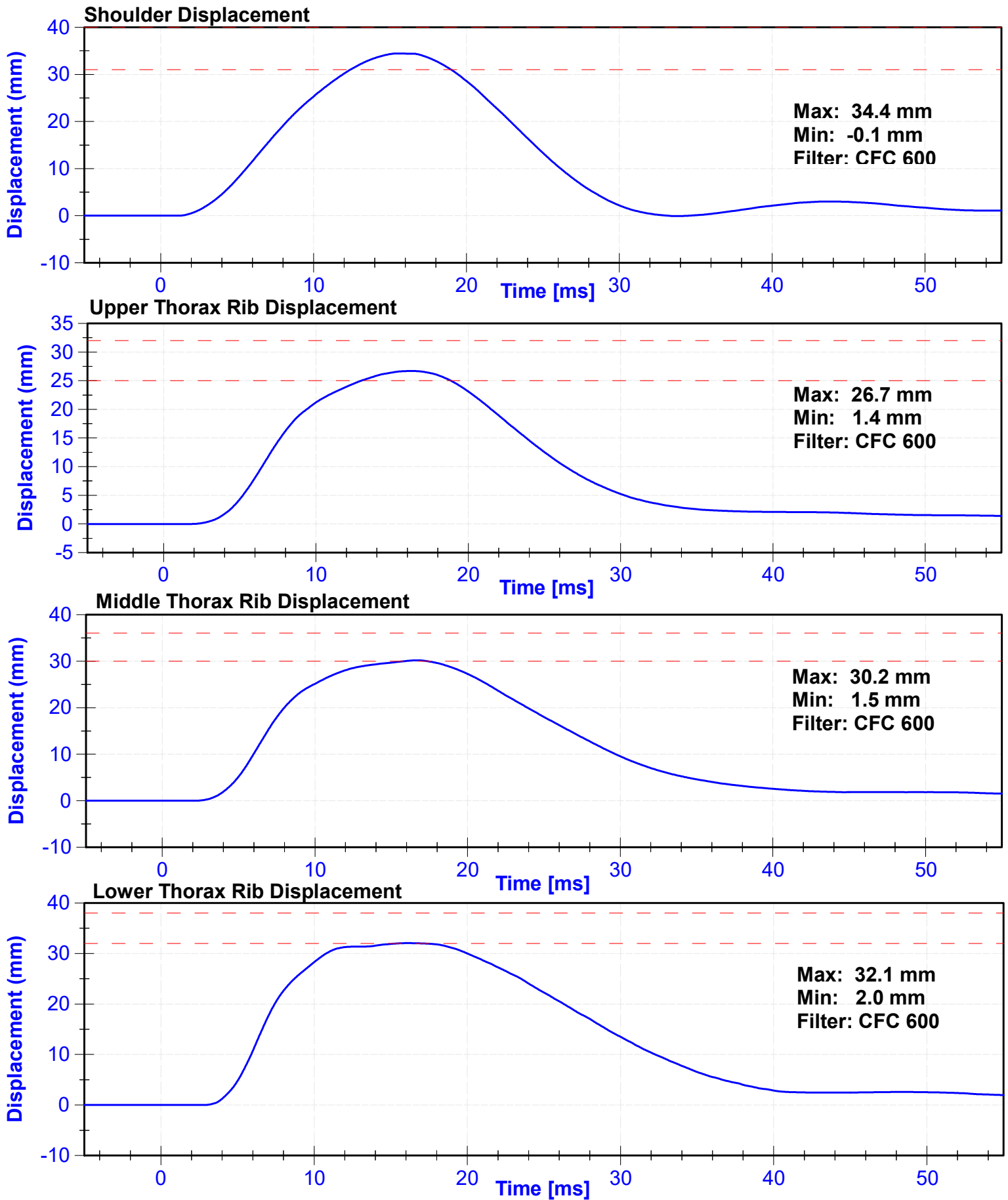
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.1	Pass
Humidity	10	70	%	46	Pass
Velocity	6.6	6.8	m/s	6.66	Pass
Probe Acceleration after 5 ms	30	36	g's	33.7	Pass
Lateral Upper Spine Acceleration	34	43	g's	36.9	Pass
Lateral Lower Spine Acceleration	29	37	g's	36.2	Pass
Shoulder Deflection	31	40	mm	34.4	Pass
Upper Thorax Rib Deflection	25	32	mm	26.7	Pass
Mid Thorax Rib Deflection	30	36	mm	30.2	Pass
Lower Thorax Rib Deflection	32	38	mm	32.1	Pass

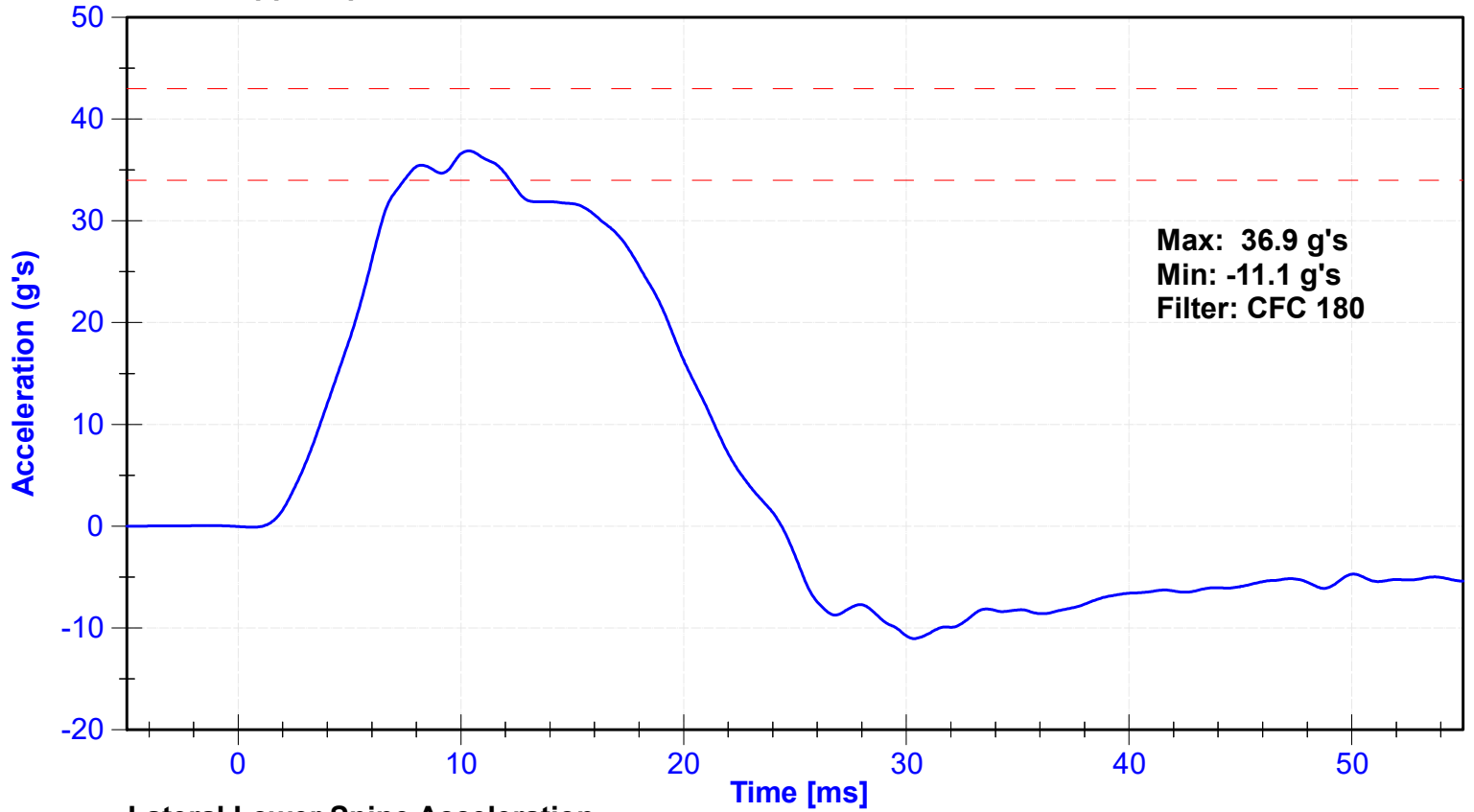
Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	18566	5/7/2025	11/3/2025
Upper Spine T1 Y Accelerometer	Endevco	P52018	7/11/2025	1/7/2026
Upper Spine T12 Y Accelerometer	Endevco	P17283	7/11/2025	1/7/2026
Shoulder Potentiometer	Servo	053GFE	7/10/2025	1/8/2026
Upper Thorax Rib Potentiometer	Servo	2316GFE	7/10/2025	1/8/2026
Middle Thorax Rib Potentiometer	Servo	085GFE	7/10/2025	1/8/2026
Lower Thorax Rib Potentiometer	Servo	1156GFE	7/10/2025	1/8/2026

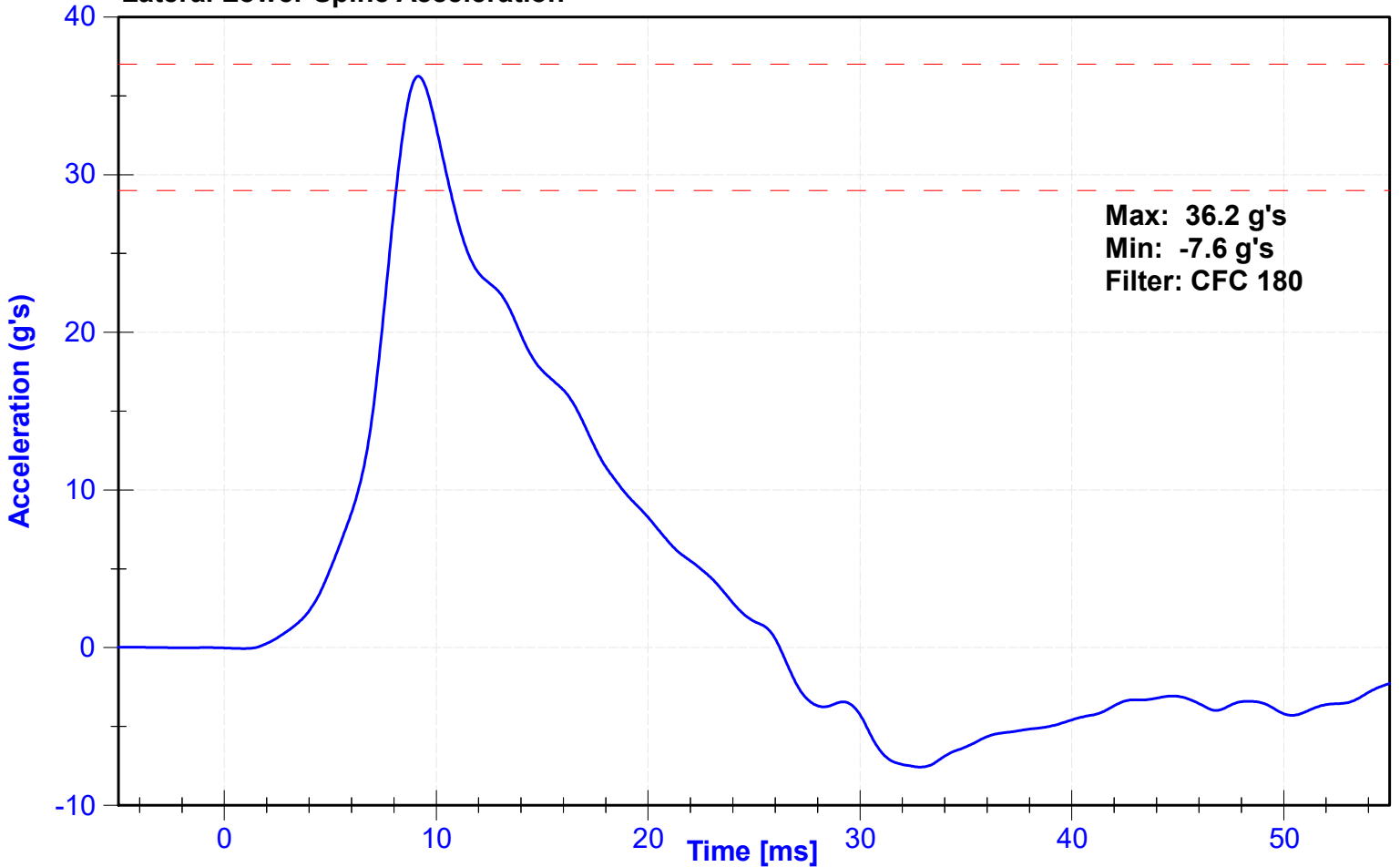




Lateral Upper Spine Acceleration



Lateral Lower Spine Acceleration



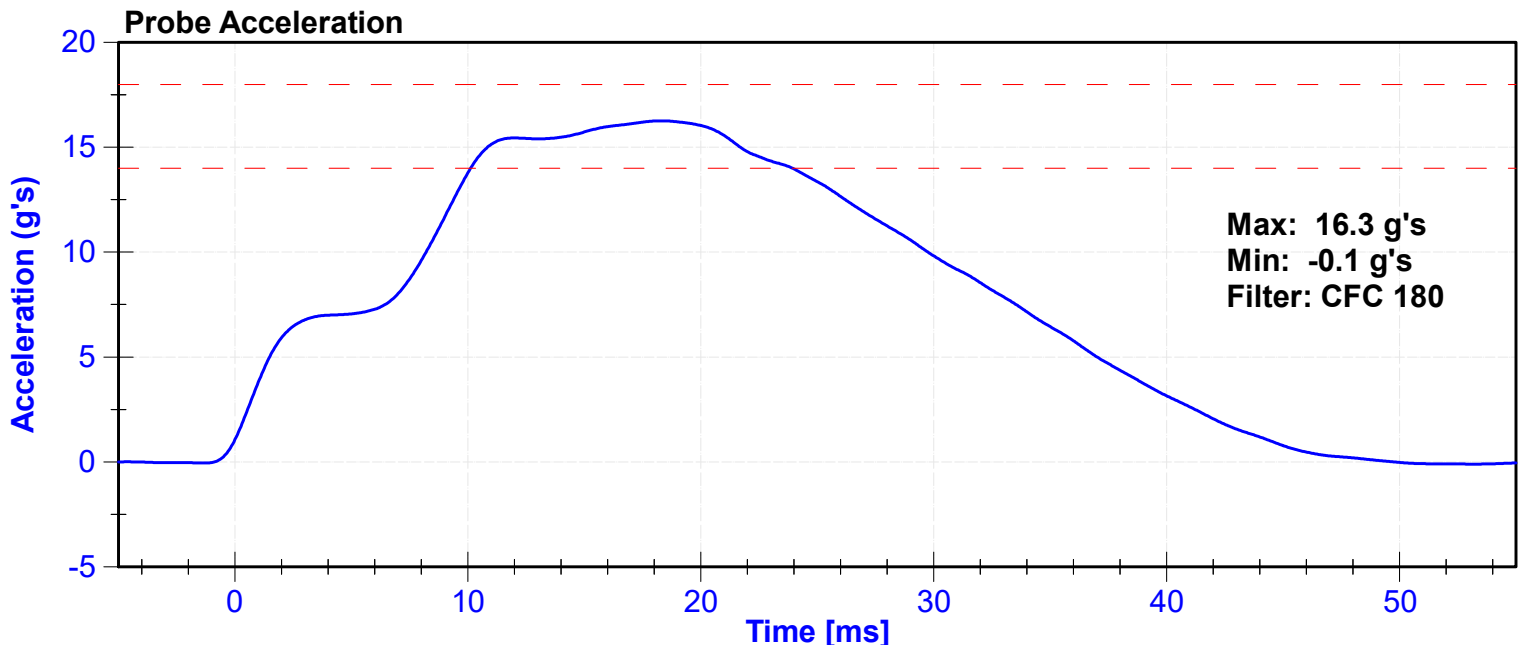
ATD Manufacturer	FTSS	Test Technician	Z. Nyhart
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

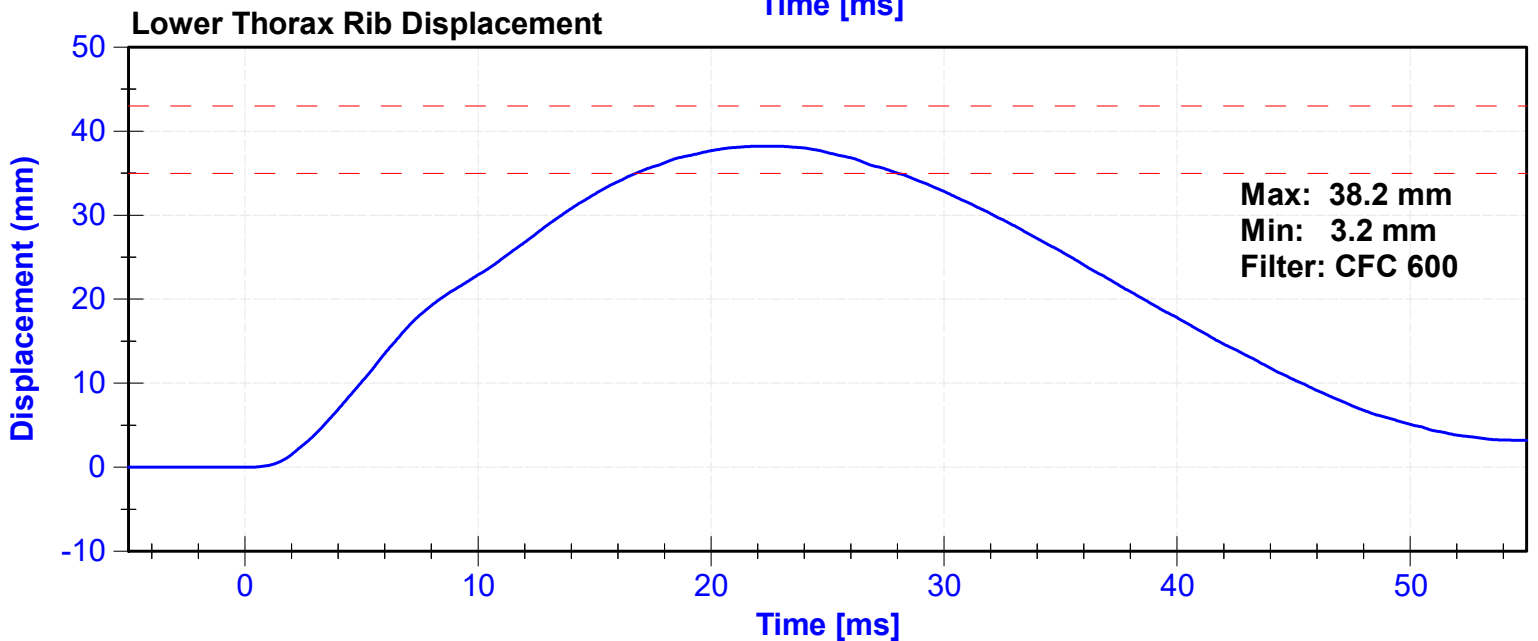
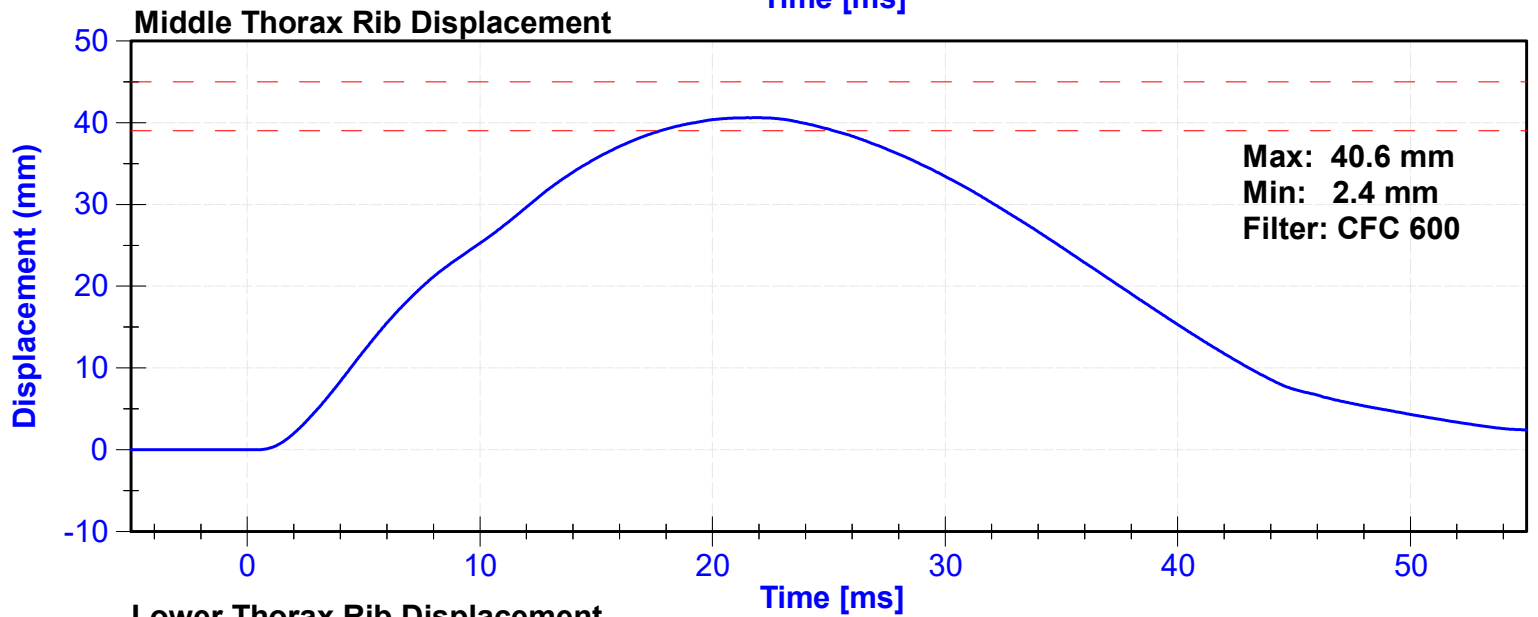
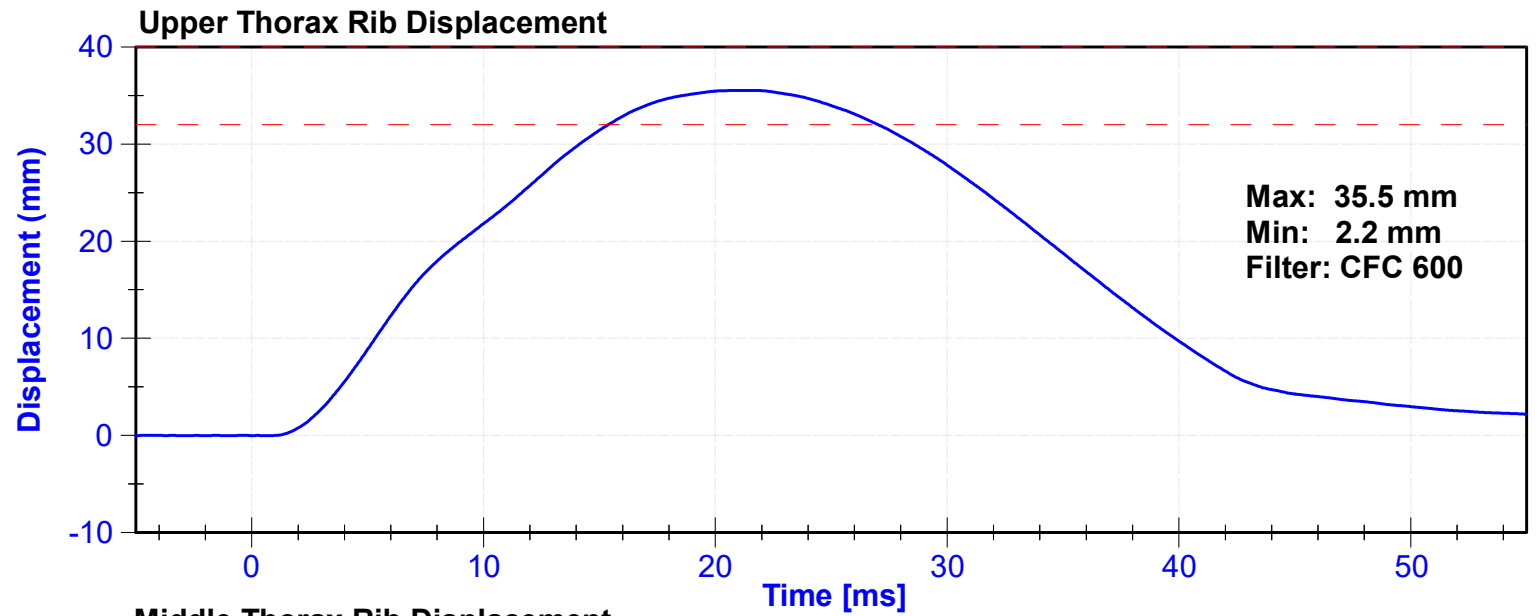
Results

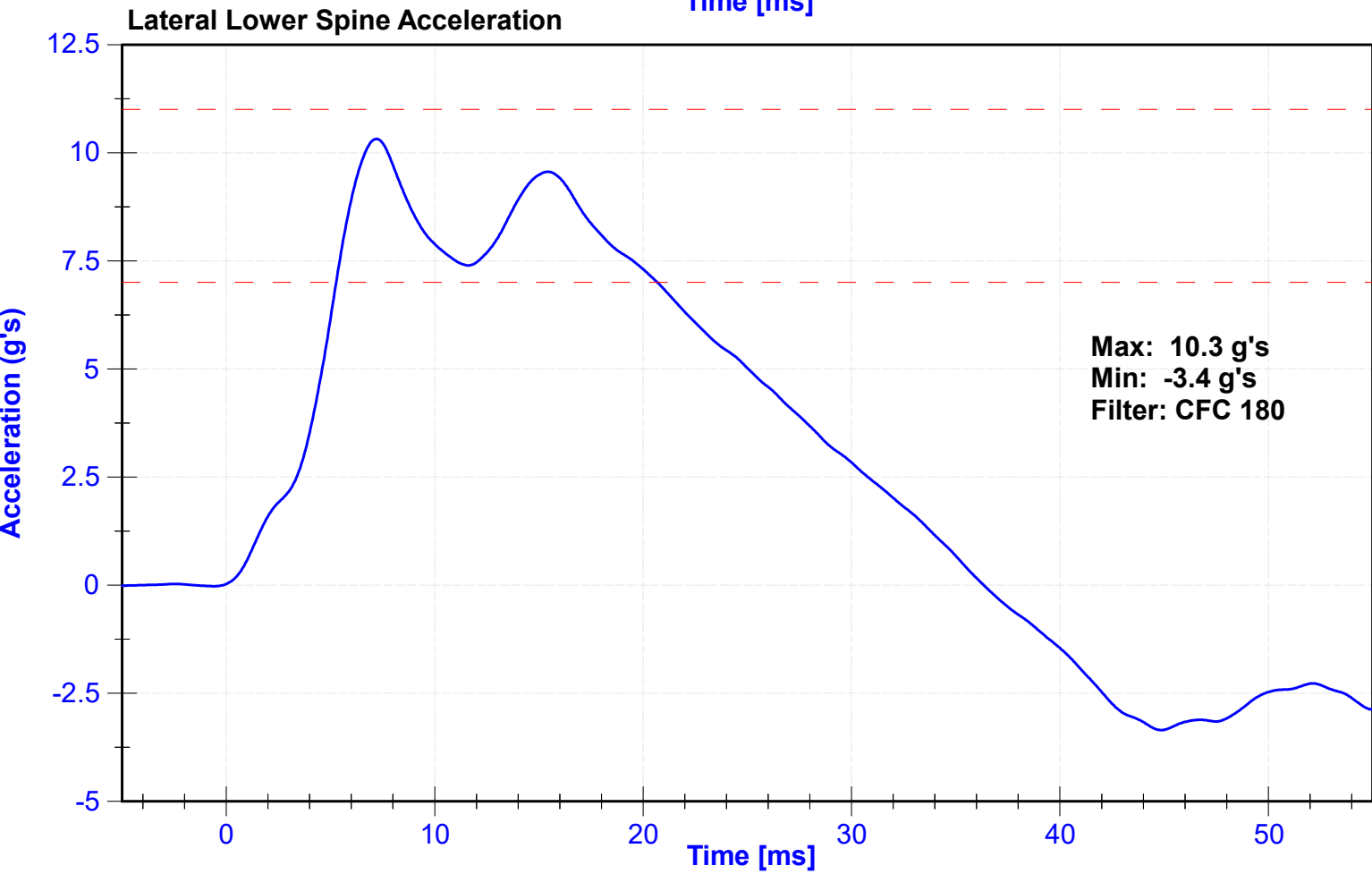
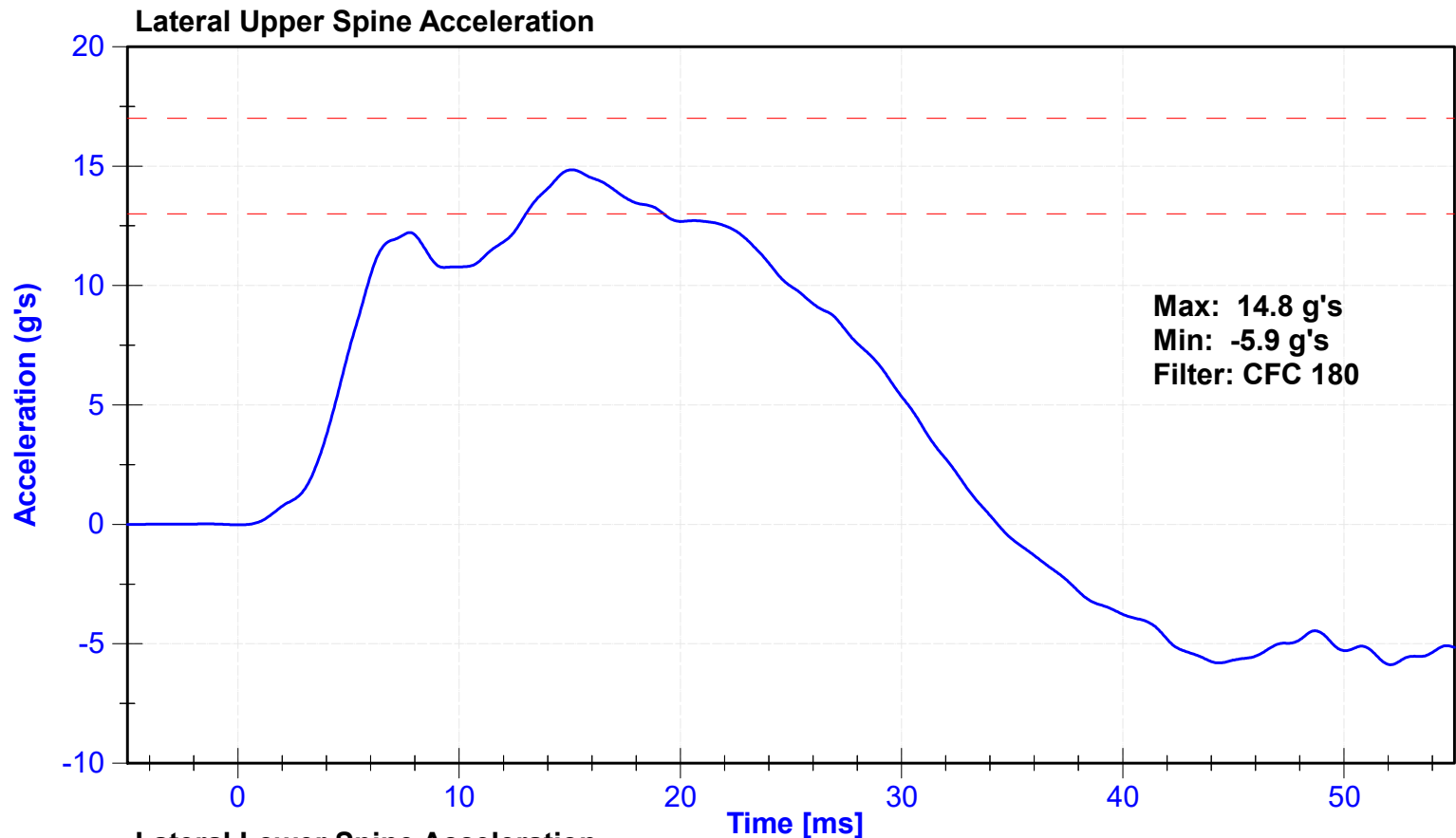
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.1	Pass
Humidity	10	70	%	46	Pass
Velocity	4.2	4.4	m/s	4.27	Pass
Probe Acceleration	14	18	g's	16.3	Pass
Lateral Upper Spine Acceleration	13	17	g's	14.8	Pass
Lateral Lower Spine Acceleration	7	11	g's	10.3	Pass
Upper Thorax Rib Deflection	32	40	mm	35.5	Pass
Middle Thorax Rib Deflection	39	45	mm	40.6	Pass
Lower Thorax Rib Deflection	35	43	mm	38.2	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	18566	5/7/2025	11/3/2025
Upper Spine Y Accelerometer	Endevco	P52018	7/11/2025	1/7/2026
Lower Spine Y Accelerometer	Endevco	P17283	7/11/2025	1/7/2026
Upper Thorax Rib Potentiometer	Servo	2316GFE	7/10/2025	1/8/2026
Middle Thorax Rib Potentiometer	Servo	085GFE	7/10/2025	1/8/2026
Lower Thorax Rib Potentiometer	Servo	1156GFE	7/10/2025	1/8/2026







ATD Manufacturer	FTSS	Test Technician	Z. Nyhart
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

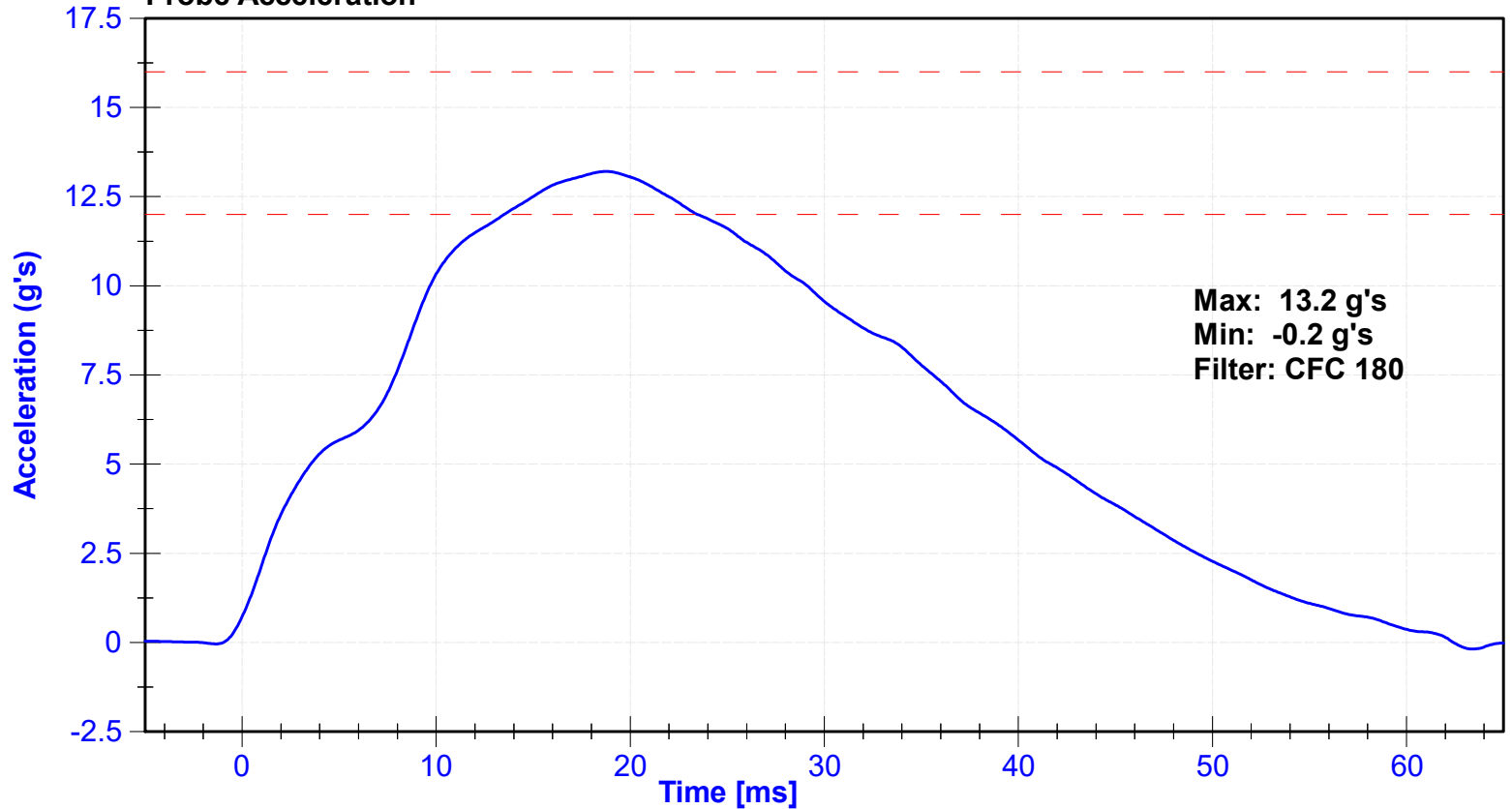
Results

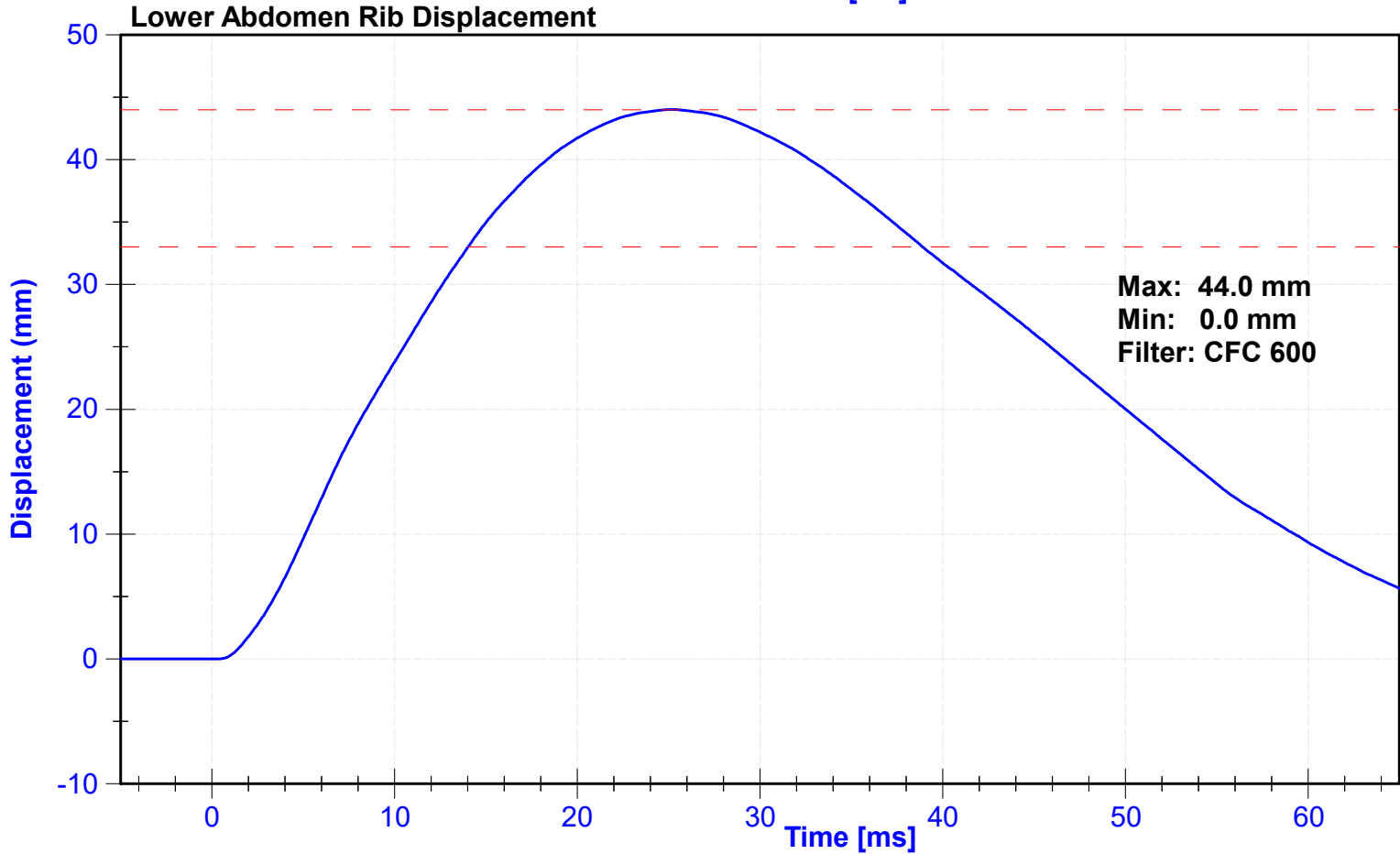
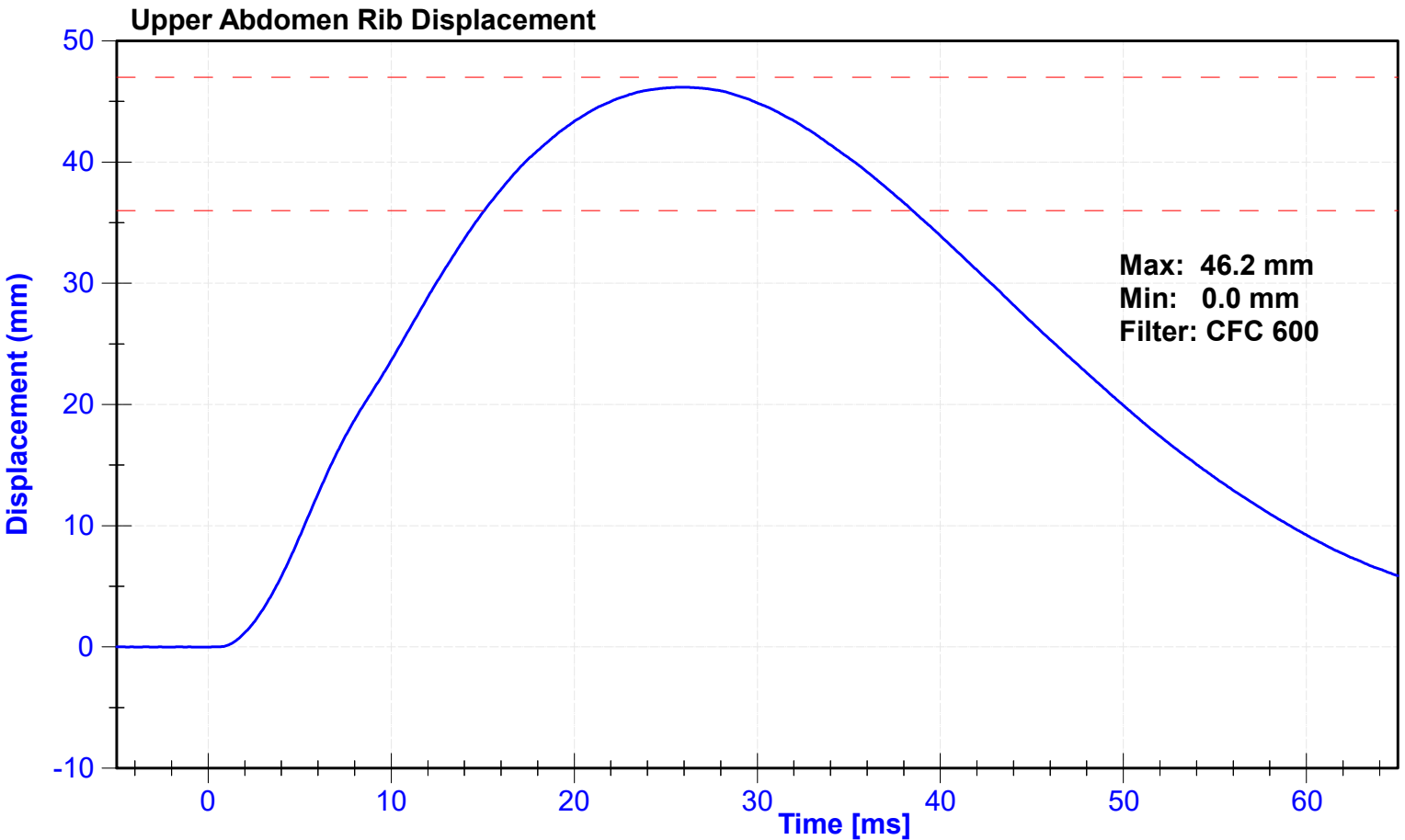
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.1	Pass
Humidity	10	70	%	46	Pass
Velocity	4.2	4.4	m/s	4.20	Pass
Probe Acceleration	12	16	g's	13.2	Pass
Lateral Lower Spine Acceleration	9	14	g's	11.6	Pass
Upper Abdomen Rib Deflection	36	47	mm	46.2	Pass
Lower Abdomen Rib Deflection	33	44	mm	44.0	Pass

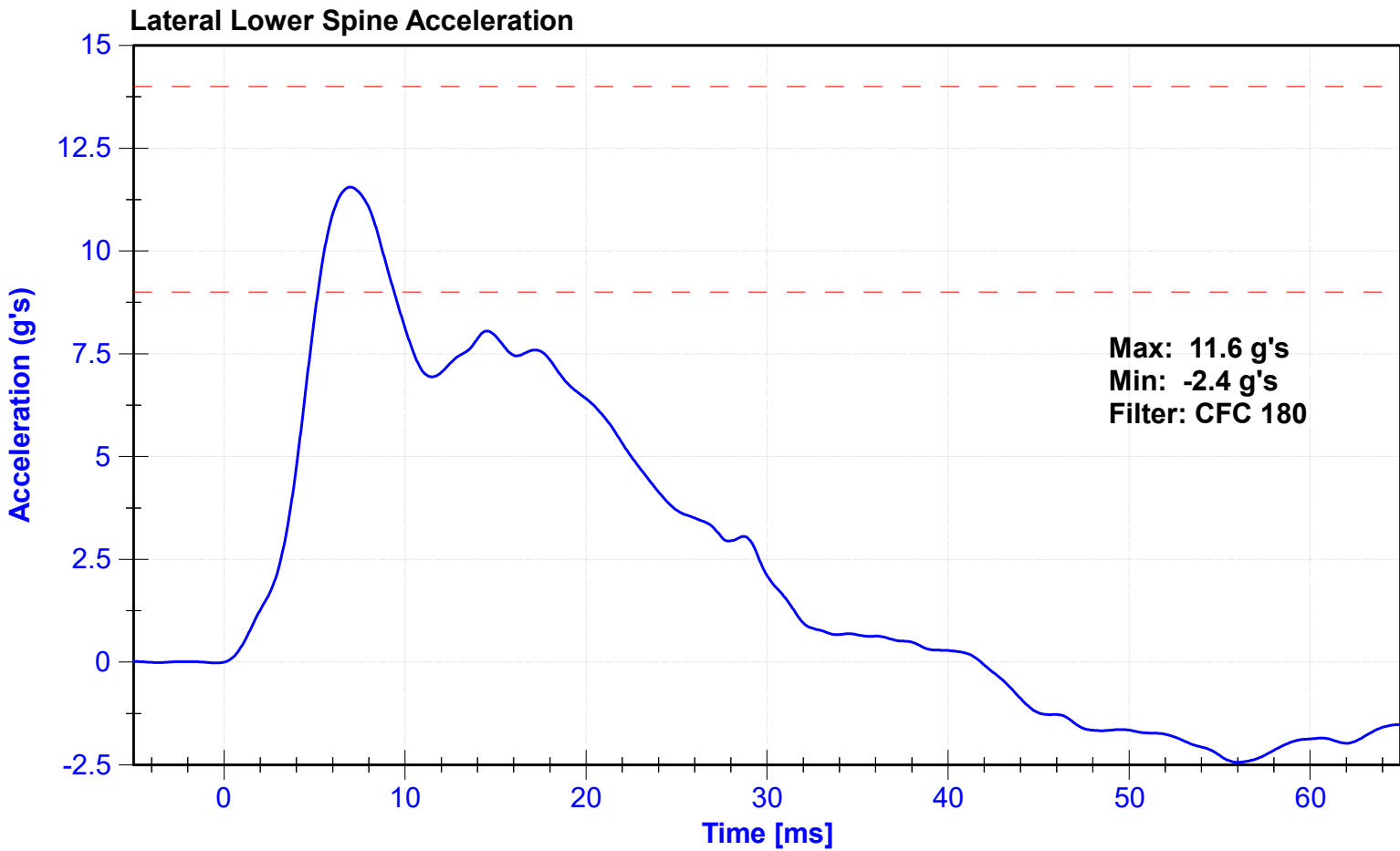
Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Probe Accelerometer	Endevco	18566	5/7/2025	11/3/2025
Lower Spine Y Accelerometer	Endevco	P17283	7/11/2025	1/7/2026
Upper Abdomen Rib Potentiometer	Servo	074GFE	7/10/2025	1/8/2026
Lower Abdomen Rib Potentiometer	Servo	075GFE	7/10/2025	1/8/2026

Probe Acceleration







ATD Manufacturer	FTSS	Test Technician	Z. Nyhart
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

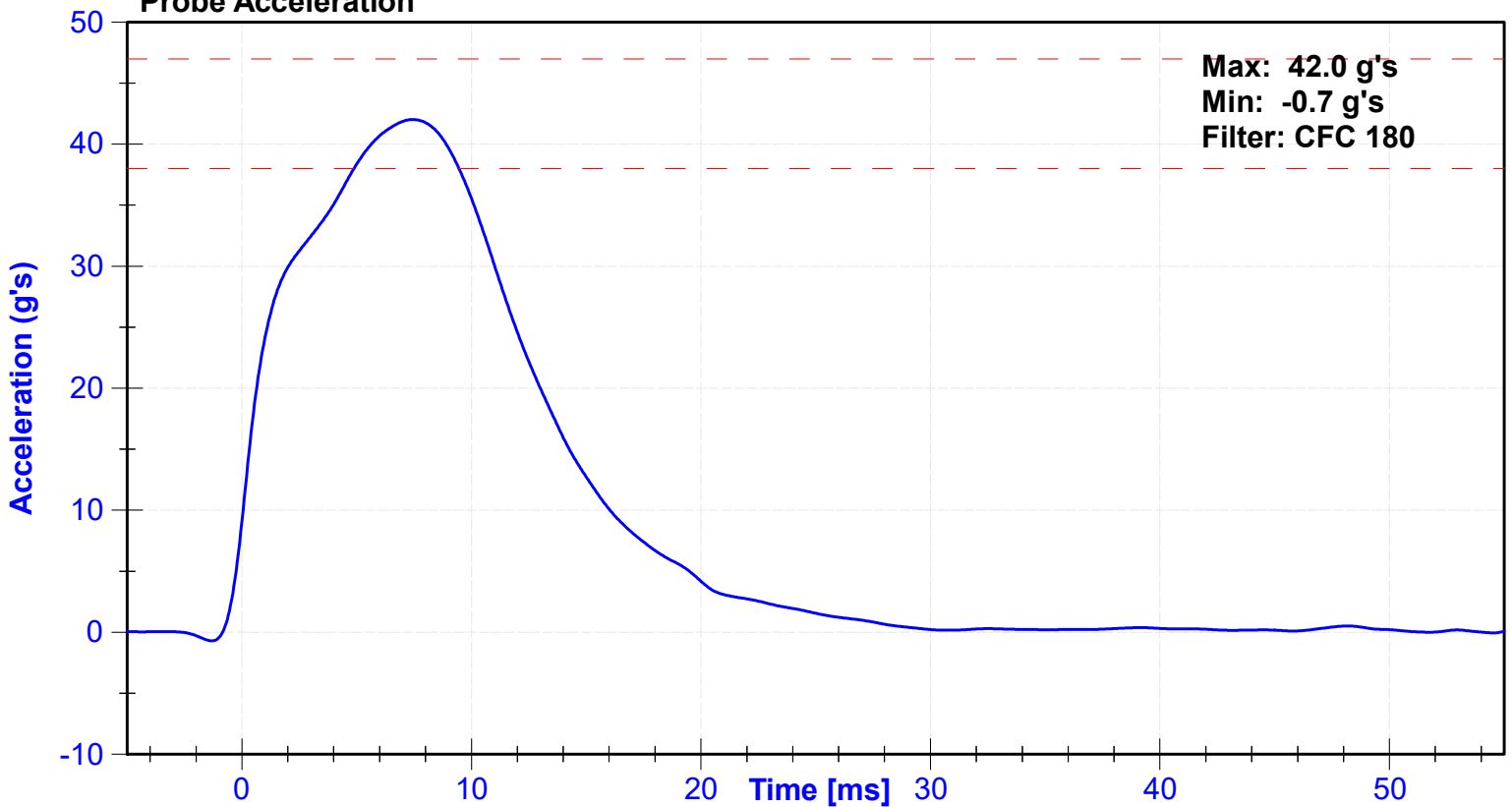
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.1	Pass
Humidity	10	70	%	46	Pass
Velocity	6.6	6.8	m/s	6.68	Pass
Probe Acceleration	38	47	g's	42.0	Pass
Lateral Pelvis Acceleration after 6ms	34	42	g's	38.2	Pass
Acetabulum Force	3600	4300	N	3867.1	Pass

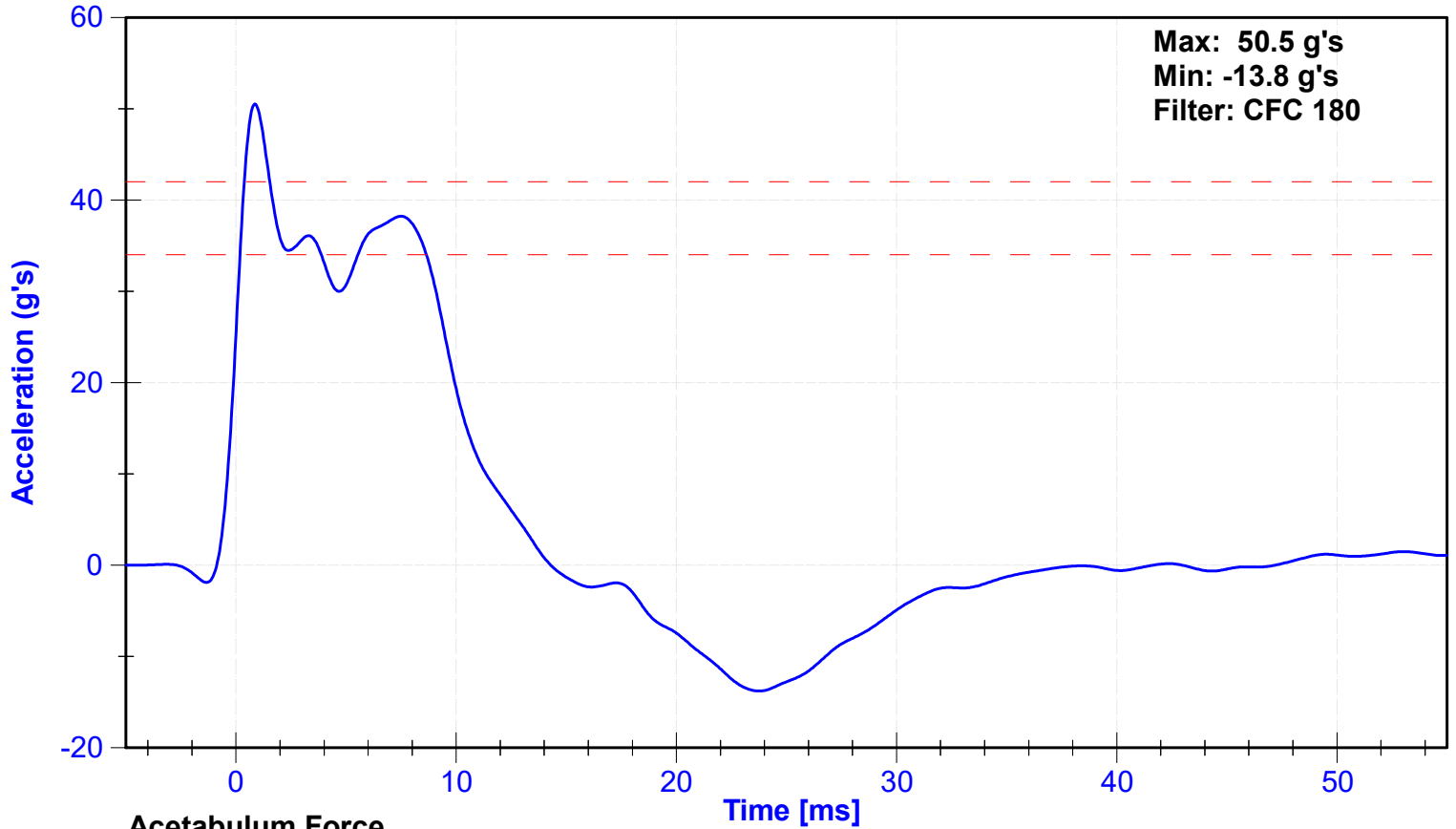
Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	18566	5/7/2025	11/3/2025
Pelvis Y Accelerometer	Endevco	P51731	7/11/2025	1/7/2026
Acetabulum Load Cell	Denton	275-FY	10/28/2024	10/28/2025
Certification Plug	SACO			N/A
Crash Test Plug	SACO			N/A

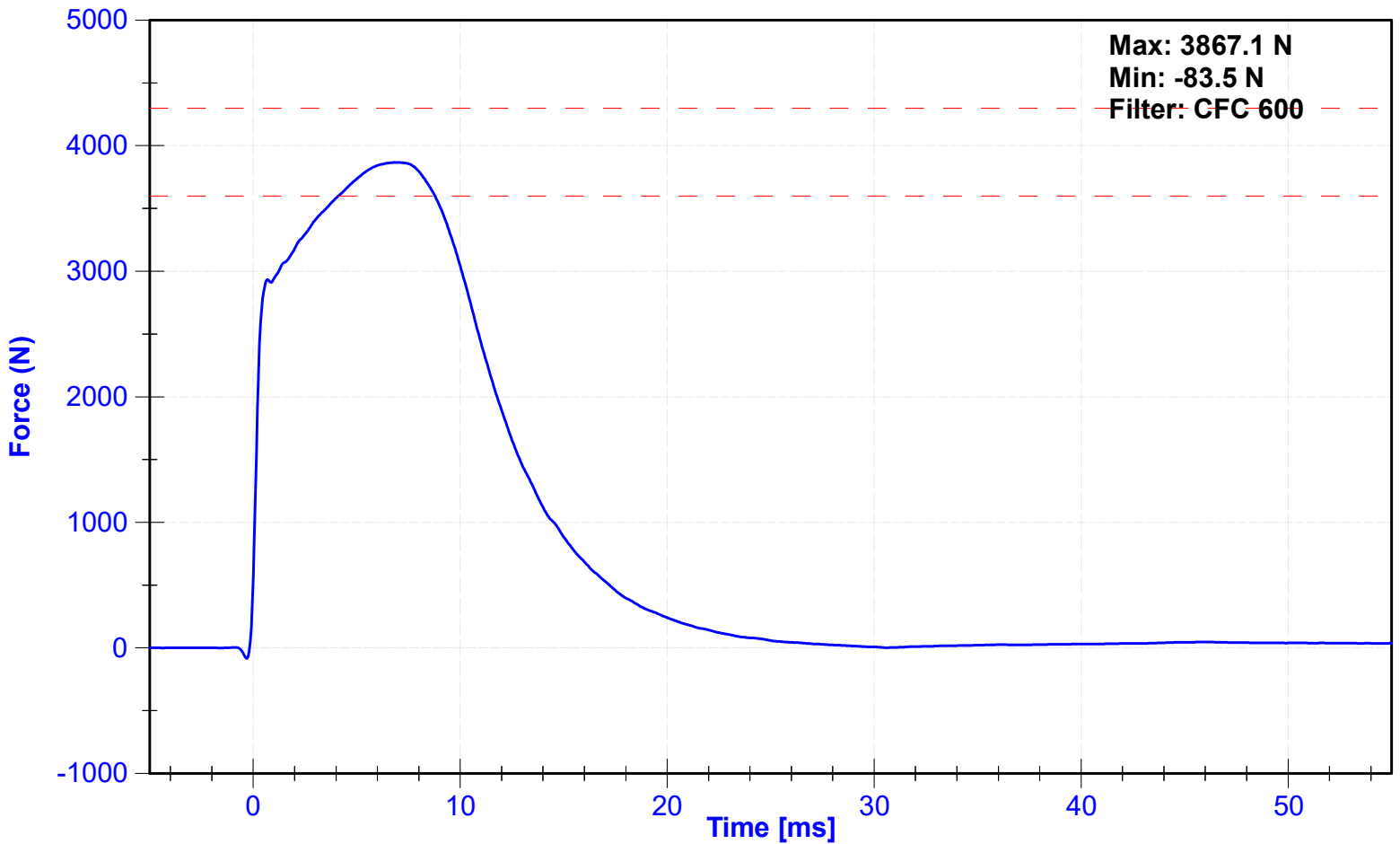
Probe Acceleration



Lateral Pelvis Acceleration



Acetabulum Force





SID-IIs Pelvis Plug Certification Test

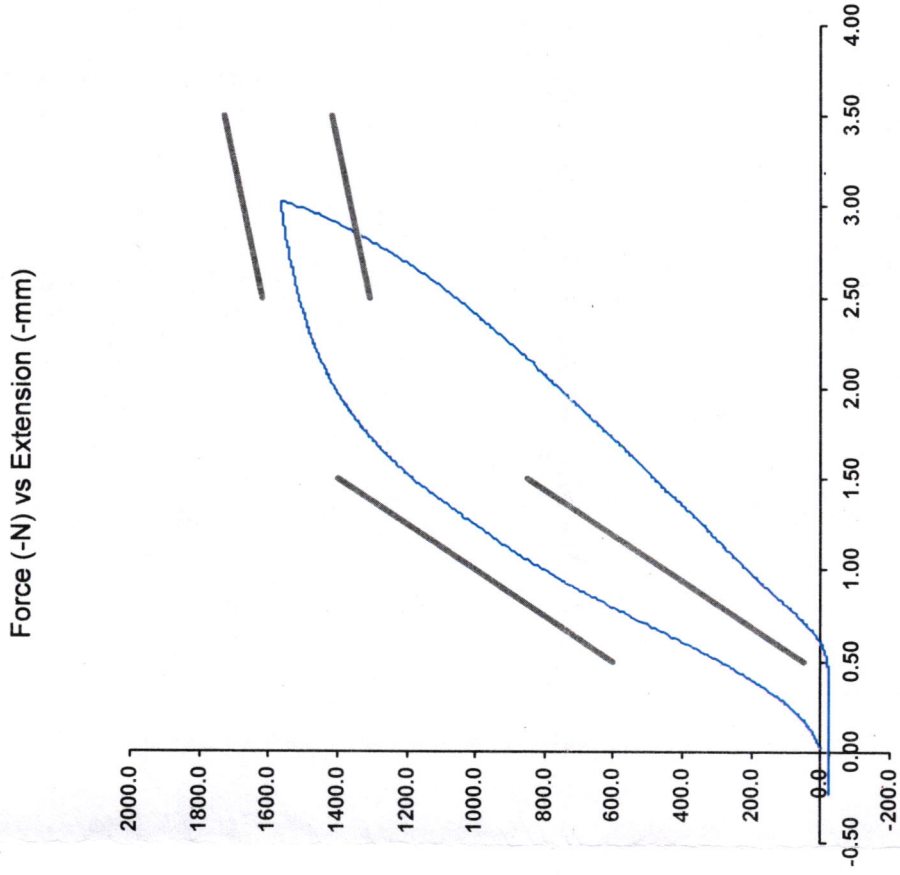
Plug S/N 16969
Test Number 23816
Report Number 23873

Test Date 8/3/2022 11:54:17 AM

Test Results	Spec Min	Spec Max
Force @ 0.5 mm (N)	50	600
Force @ 1.5 mm (N)	850	1,400
Force @ 2.5 mm (N)	1,306	1,618
Force @ 3.0 mm (N)	1,361	1,673

Testing Machine STM-20 5965542
Load Cell S/N (FI360947), Units (LBS) 1000
Crosshead Speed (mm / min) or Rate 12.7
Extension or Position Measured by XHD_100 (XHD100)

Notes: Impact 300 17.31.25



Operator _____
Part Number 180-4450

By: DC Date: 8/3/22

Template No 107 03-Aug-22
SACO Research



SID-IIs Pelvis Plug Certification Test

Plug S/N 16955

Test Number 23802

Report Number 23859

Test Date 8/3/2022 11:23:03 AM

Test Results	Spec Min	Spec Max
Force @ 0.5 mm (N)	304	600
Force @ 1.5 mm (N)	1,169	1,400
Force @ 2.5 mm (N)	1,493	1,618
Force @ 3.0 mm (N)	1,542	1,673

Testing Machine STM-20 5965542

Load Cell S/N (F1360947), Units (LBS) 1000

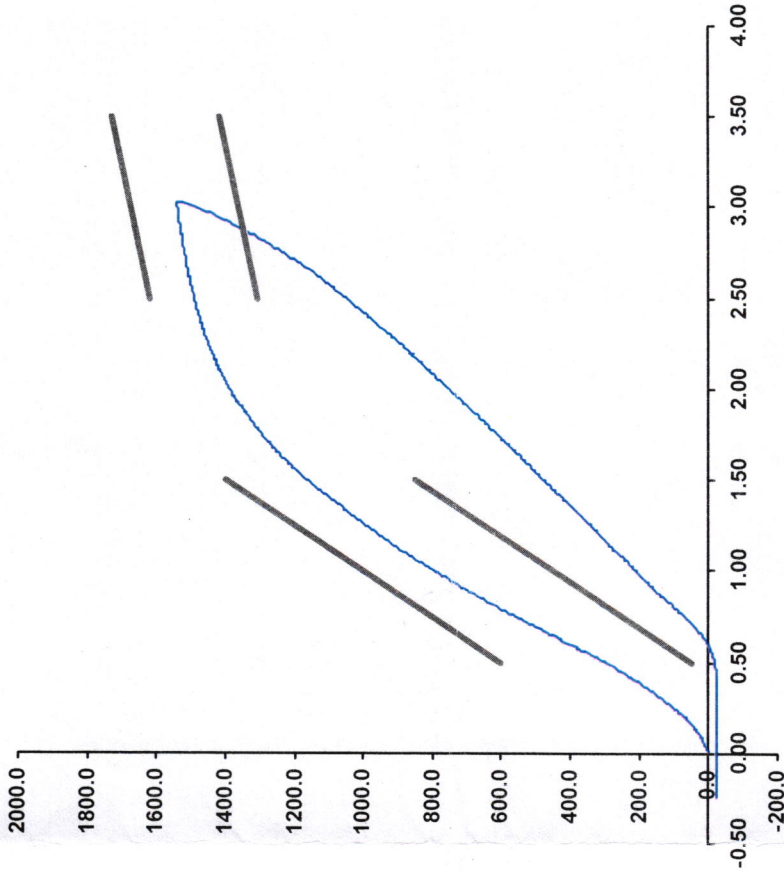
Crosshead Speed (mm / min) or Rate 12.7

Extension or Position Measured by XHD_100 (XHD100)

Notes:

Non-Impact 300 17.31.25

Force (-N) vs Extension (-mm)



Operator

Part Number 180-4450

Template No 107

03-Aug-22

SACO Research

By : DC

Date : 8/3/22

SACO Research 41735 Elm St, #401 Murrieta, CA 92562 Tel 310-694-2082 FAX



SID-IIs Pelvis Plug Certification Test

Plug S/N 16947

Test Number 23794

Report Number 23851

Test Date 8/3/2022 11:01:46 AM

Test Results	Spec Min	Spec Max
Force @ 0.5 mm (N)	50	600
Force @ 1.5 mm (N)	850	1,400
Force @ 2.5 mm (N)	1,306	1,618
Force @ 3.0 mm (N)	1,361	1,673

Testing Machine STM-20 5965542

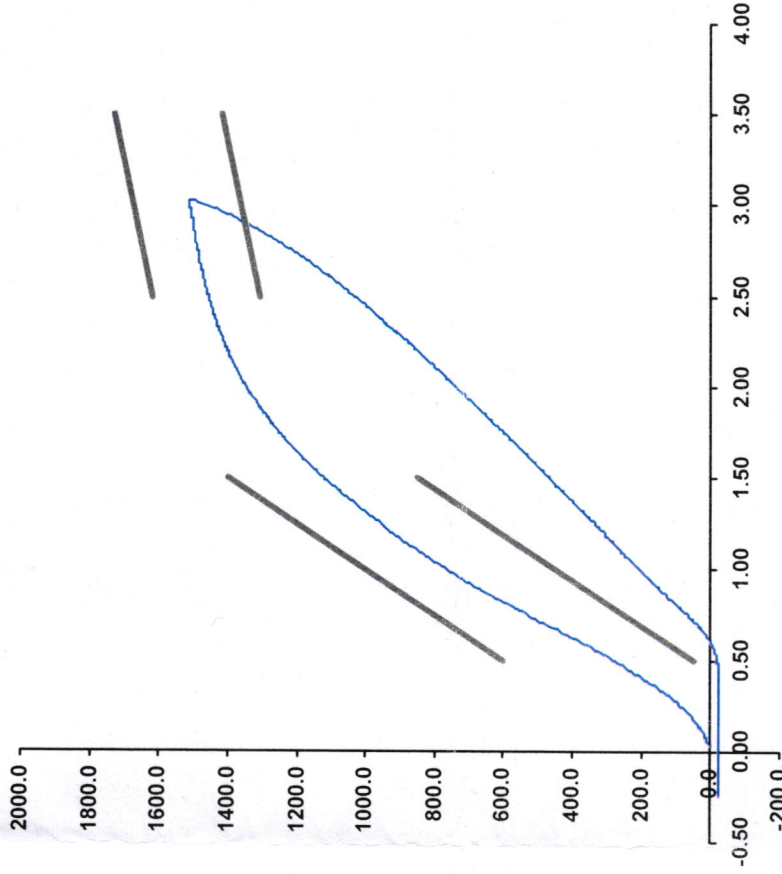
Load Cell S/N (F1360947), Units (LBS) 1000

Crosshead Speed (mm / min) or Rate 12.7

Extension or Position Measured by XHD_100 (XHD100)

Notes: Cert. 300 7.31.25

Force (-N) vs Extension (-mm)



Operator

Part Number 180-4450

Template No 107 03-Aug-22

SACO Research

By: *DC* Date: 8/3/22

SACO Research 41735 Elm St, #401 Murrieta, CA 92562 Tel 310-694-2082 FAX

ATD Manufacturer	FTSS	Test Technician	Z. Nyhart
ATD Serial Number	300	Laboratory Supervisor	J. Kinderman

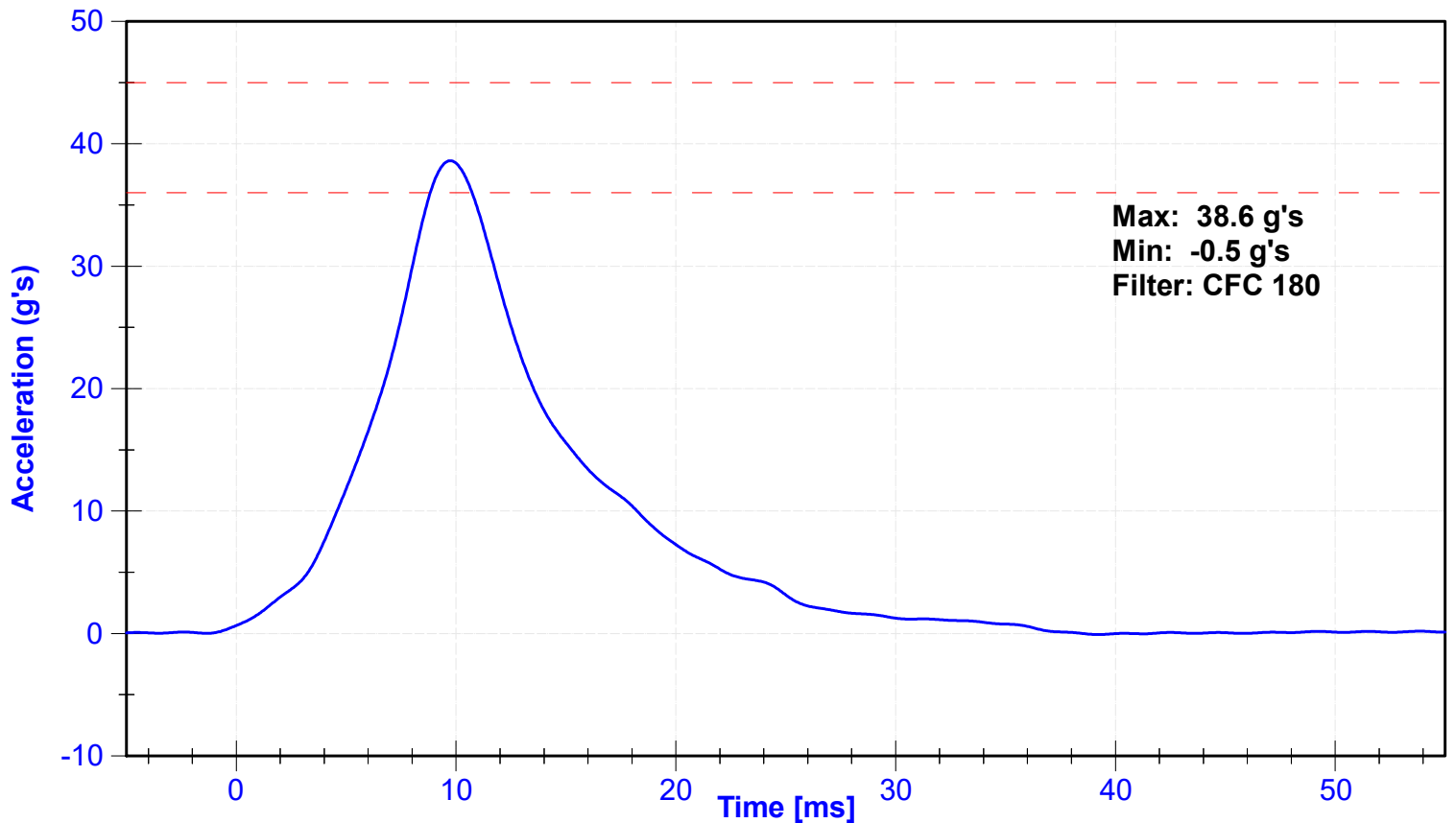
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	°C	22.1	Pass
Humidity	10	70	%	46	Pass
Velocity	4.2	4.4	m/s	4.20	Pass
Probe Acceleration	36	45	g's	38.6	Pass
Lateral Pelvis Acceleration	28	39	g's	28.2	Pass
Iliac Force	4100	5100	N	4176.8	Pass

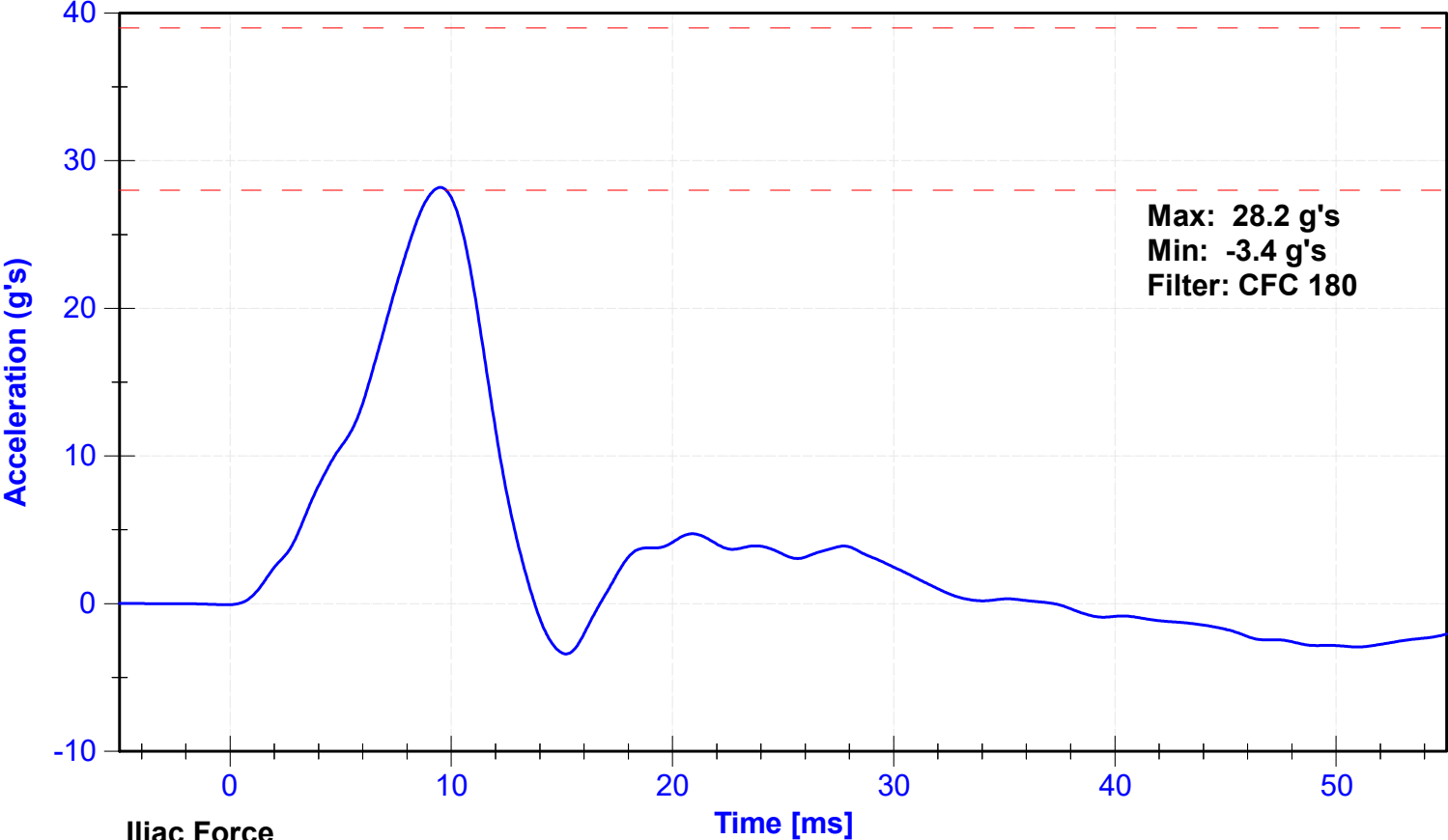
Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	18566	5/7/2025	11/3/2025
Pelvis Y Accelerometer	Endevco	P51731	7/11/2025	1/7/2026
Iliac Load Cell	Denton	279-FY	10/28/2024	10/28/2025

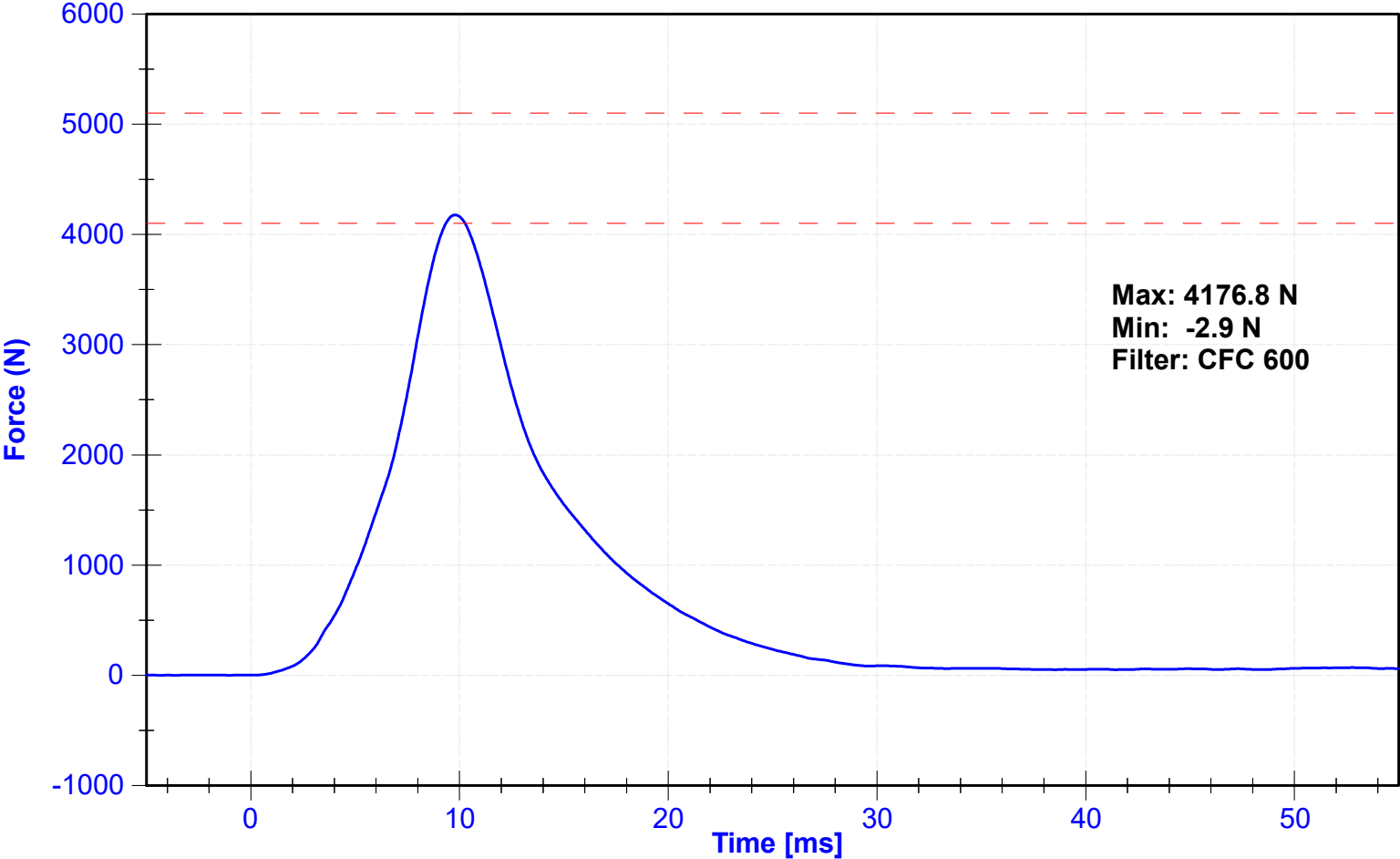
Probe Acceleration



Lateral Pelvis Acceleration



Iliac Force



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	P59018	Endevco	07/11/2025
			Y	P79189	Endevco	07/11/2025
			Z	P79587	Endevco	07/11/2025
Head Accelerometers - Redundant			X	P49182	Endevco	07/11/2025
			Y	T28133	Endevco	07/15/2025
			Z	P52025	Endevco	07/11/2025
Displacement Potentiometer	Shoulder		Y			
	Thoracic Rib	Upper	Y	2316GFE	Servo	07/10/2025
		Middle	Y	085GFE	Servo	07/10/2025
		Lower	Y	1156GFE	Servo	07/10/2025
	Abdominal Rib	Upper	Y	074GFE	Servo	07/10/2025
		Lower	Y	075GFE	Servo	07/10/2025
Lower Spine Accelerometers (T12)			X	P64003	Endevco	07/11/2025
			Y	P17283	Endevco	07/11/2025
			Z	P52071	Endevco	07/11/2025
Acetabulum Load Cell			Y	275-FY	Denton	10/28/2024
Lilac Wing Load Cell			Y	279-FY	Denton	10/28/2024
Pelvis Plug (Struck Side)				16821	SACO	07/25/2022
Pelvis Plug (Non-Struck Side)				16822	SACO	07/25/2022

Table 2 – Vehicle Instrumentation

Vehicle Instrumentation		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	G22625	Endevco	05/15/2025
Vehicle Center of Gravity	Y	G22642	Endevco	05/15/2025
Vehicle Center of Gravity	Z	A266221	Measurement Specialties	05/15/2025
Left Floor Sill	Y	A315199	Measurement Specialties	05/12/2025
A-Pillar Sill	Y	G25969	Endevco	12/18/2024
A-Pillar Low	Y	G24010	Endevco	07/11/2025
A-Pillar Mid	Y	A315898	Measurement Specialties	06/16/2025
B-Pillar Sill	Y	G22766	Endevco	02/18/2025
B-Pillar Low	Y	A405612	Measurement Specialties	06/20/2025
B-Pillar Mid	Y	G22600	Endevco	04/05/2025
Driver Seat	Y	G24611	Endevco	07/10/2025
Engine Top	X	A396616	Measurement Specialties	05/14/2025
Engine Top	Y	A396625	Measurement Specialties	05/14/2025
Firewall	Y	G22909	Endevco	07/08/2025
Right Roof	Y	A428017	Measurement Specialties	04/04/2025
Right Floor Sill	Y	A315798	Measurement Specialties	04/14/2025
Rear Floorpan	X	A370897	Measurement Specialties	07/10/2025
Rear Floorpan	Y	A370913	Measurement Specialties	07/10/2025

Table 3 – Pole Instrumentation

Pole Instrumentation	Serial Number	Manufacturer	Calibration Date
Load Cell 1	1220AF-1117011-F0	Interface	07/24/2025
Load Cell 2	1220AF-BLACKLC	Interface	07/24/2025
Load Cell 3	1220AF-1117025-F0	Interface	07/24/2025
Load Cell 4	1220AF-1130989-F0	Interface	07/24/2025
Load Cell 5	1220AF-1281288-F0	Interface	07/24/2025
Load Cell 6	1220AF-1281285-F0	Interface	07/24/2025
Load Cell 7	1220AF-1117035-F0	Interface	07/24/2025
Load Cell 8	1220AF-1277329-F0	Interface	07/24/2025