REPORT NUMBER: 214P-CAL-25-004

SAFETY COMPLIANCE TESTING FOR FMVSS 214
DYNAMIC SIDE IMPACT PROTECTION
RIGID POLE TEST

General Motors LLC
2025 Chevrolet Corvette Stingray
2 Door Coupe

NHTSA No: C20250105

PREPARED BY:
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February 13, 2025

FINAL REPORT

PREPARED FOR:
U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
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WASHINGTON, D.C. 20590

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Date: February 13, 2025

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Date: February 13, 2025

FINAL REPORT ACCEPTANCE BY OVSC:

_____
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Date: _____

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15. Supplementary Notes

16. Abstract

A 31.00 km/h (19.3 mph), 75° oblique compliance test was conducted on the subject 2025 Chevrolet Corvette Stingray 2 Door Coupe in accordance with the specifications of the Office of Vehicle Safety Compliance TP-214P-01 for the determination of FMVSS No.214 Side Impact Protection compliance. This test was conducted at Calspan Corporation's Transportation Test Operations facility in Buffalo, New York on January 22, 2025.

The impact velocity of the vehicle was 31.10 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 241 mm located at level 3. The test vehicle's occupant performance data is as follows:

Measurement Description	Driver ATD (ES-2re)		
	Units	IARV	Result
Head Injury Criteria (HIC36)		1000	125.760
Maximum Thoracic Rib Deflection	mm	44	32.854
Total Abdominal Force	N	2500	1263.258
Pubic Symphysis Force	N	6000	2237.382

The one door on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.

17. Key Words	***18. Distribution Statement***
Compliance Testing Side Impact Protection Pole Test ES-2re SID-IIs	Copies of this report are available from: National Highway Traffic Safety Administration Technical Information Services (TIS) Room E12-100 East Bldg. 1200 New Jersey Ave. Washington, D.C. 20590 Telephone No. (202) 366-2588

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SECTION 1

PURPOSE AND SUMMARY OF TEST

PURPOSE

This side impact test was conducted as part of the FY 2025 FMVSS 214 Side Impact Protection Compliance Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. 693JJ923D000043. The purpose of this test was to evaluate side impact protection in a 2025 Chevrolet Corvette Stingray 2 Door Coupe. The side impact test was conducted in accordance with the Office of Vehicle Safety Compliance's Laboratory Test Procedure, TP-214P-01 dated September 2012.

SUMMARY

A rigid pole side impact test was conducted on a 2025 Chevrolet Corvette Stingray 2 Door Coupe. The subject vehicle was towed into the rigid pole at an angle of 75^{o} and a velocity of 31.10 km/h. The test was conducted by Calspan Corporation's Transportation Test Operations facility in Buffalo, New York on January 22, 2025. Pre-test and post-test photographs of the test vehicle and side impact dummy (ES2re) are included in Appendix I of this report.

One Part 572U (ES-2re) dummy was placed in the driver designated seating position according to instructions specified in the TP-214P-01Test Procedure, dated September 2012. The side impact event was documented by eight High Speed Cameras and one real time camera.

The ES2re male dummy was instrumented accordingly:

- Primary and redundant head CG tri-axial accelerometers
- Chest upper rib, middle rib, and lower rib y-axis displacement potentiometers
- Abdomen forward, middle, and rear y-axis load cells
- Lower spine (T12) tri-axial accelerometers
- Pubic symphysis y-axis load cell

Appendix II contains the dummy response data. Dummy configuration and performance verification data can be found in Appendix IV of this report. Appendix V 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 ES2re dummy were recorded as follows:

INJURY READINGS

Measurement Description	Driver ATD (ES2re)		
	Units	IARV	Result
Head Injury Criteria (HIC36)		1000	125.760
Upper Rib Deflection	mm	44	26.640
Mid Rib Deflection	mm	44	26.766
Lower Rib Deflection	mm	44	32.854
Abdominal Load (front)	N		206.919
Abdominal Load (mid)	N		406.467
Abdominal Load (rear)	N		666.092
Total Abdominal Force	N	2500	1263.258
Pubic Symphysis Force	N	6000	2237.382

SECTION 2

OCCUPANT AND VEHICLE INFORMATION

This section contains information reporting for the following Data Sheets:

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DATA SHEET NO. 1
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025

TEST VEHICLE INFORMATION AND OPTIONS

Make	Chevrolet
Model	Corvette Stringray
Body Style	2 Door Coupe
VIN	1G1YA2D47S5104055
Body Color	Torch Red
Engine Displacement (L)	6.2
Type / No. Cylinders	V8
Engine Placement	Inline
Transmission Type	Automatic
Transmission Speeds	8-Speed
Overdrive	Yes
Final Drive	Rear Wheel Drive
Odometer Reading (mi)	6 miles

Anti-Lock Brakes (ABS)	Yes
All-Wheel Drive (AWD)	No
Traction Control System (TCS)	Yes
Electric Stability Control (ECS)	Yes
Curtain Airbags	No
Torso Airbags – Front Seats	No
Torso Airbags – Rear Seats	N/A
Combination/Head Torso Bag	Yes
Pelvic Airbag – Front Seats	No
Pelvis Airbag – Rear Seats	N/A
Knee Airbag – Driver	No
Knee Airbag – Front Passenger	No
Seat Belt Pretensioners – Front Seats	Yes
Seat Belt Pretensioners – Rear Seats	N/A
Seat Belt Load Limiter – Front Seats	Yes
Seat Belt Load Limiter – Rear Seats	N/A
Tire Pressure Monitoring System (TPMS)	Yes
Tilt Steering Wheel	Yes
Automatic Door Locks (ADL)	Yes
Power Window Auto-reverse	No
Power Seats	Yes
Other Safety Restraint	N/A

DATA FROM CERTIFICATION LABEL

Manufactured By	General Motors LLC
Date of Manufacture	10/24
Vehicle Type	Passenger Car

GVWR (kg)	1810
GAWR Front (kg)	724
GAWR Rear (kg)	1086

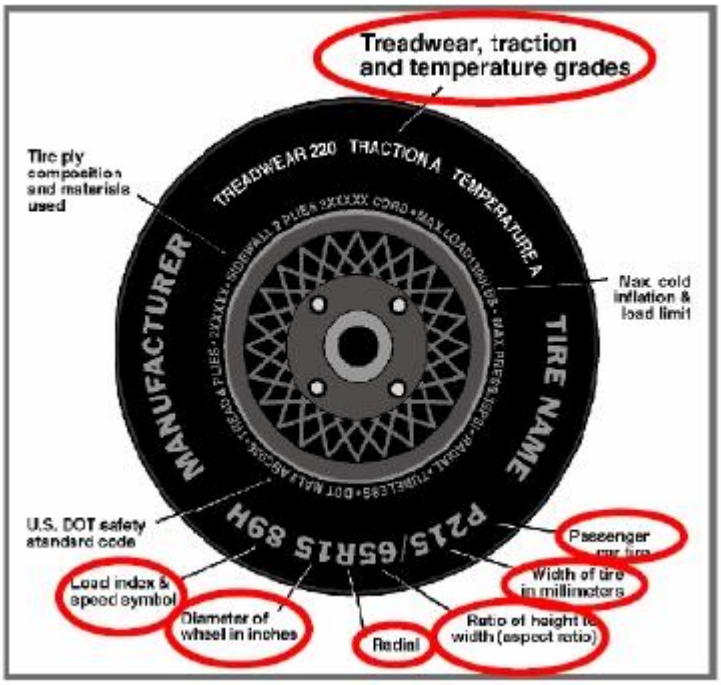
VEHICLE SEATING AND WEIGHT CAPACITY DATA

Measured Parameter	Front	Rear	Third	Total
Type of Seats (Bench or Bucket)	Bucket	N/A	N/A	
Designated Seating Capacity (DSC)	2	N/A	N/A	2
Capacity Weight (VCW) (kg)				192
Cargo Weight (RCLW) (kg)				55.92

DATA SHEET NO. 2
VEHICLE TIRE INFORMATION

Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025

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



VEHICLE TIRE INFORMATION

Tire Placard	Front	Rear
Recommended Cold Pressure (kPa)	210	210
Recommended Tire Size	245/35ZR19	305/30ZR20
Tire Sidewall	**Front**	**Rear**
Maximum Tire Pressure (kPa)	350	350
Tire Size on Vehicle	245/35ZR19	305/30ZR20
Tire Manufacturer Model	Michelin	Michelin
Tire Name	Pilot Sport	Pilot Sport
Tire Type	All Season	All Season
Tire Width	245	305
Aspect Ratio	35	30
Radial	Yes	Yes
Wheel Diameter	19"	20"
Load Index / Speed Symbol	89Y	99Y
Treadwear	540	540
Traction Grade	AA	AA
Temperature Grades	A	A

DATA SHEET NO. 3
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025

TIRE PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kPa	196	195	196	202
Tire Placard	kPa	210	210	210	210

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW)			Fully Loaded			As Tested		
		Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Left	kg	309	507		338	567		348	551	
Right	kg	326	488		337	527		351	510	
Ratio	%	39.0	61.0		38.2	61.8		39.7	60.3	
Totals	kg	635	995	1630	675	1094	1769	699	1061	1760

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total As Delivered Weight (UVW)	kg	1630	(A)
Weight of Test Dummy	kg	81	(B)
Rated Cargo / Luggage Weight (RCLW)	kg	55.92	(C)
Calculated Vehicle Target Weight (TVTW)	kg	1766.92	(A+B+C)

TEST VEHICLE ATTITUDES AND CG

Measurement Description	Units	As Delivered	Fully Loaded	As Tested
Driver Door Sill Angle	Deg	+0.30	+0.25	+0.30
Front Passenger Sill Angle	Deg	+0.25	+0.40	+0.25
Front Bumper-Line Angle	Deg	-0.15	-0.75	-0.25
Rear Bumper-Line Angle	Deg	-0.05	-0.30	-0.30

ND = Nose Down (-), NU = Nose Up (+), LD = Left Down (-), LU = Left Up (+)

CALCULATION OF VERTICAL IMPACT REFFERENCE LINE

Measured Parameter	Units	Value
Test Vehicle Wheelbase	mm	2722
Vertical Impact Reference Line Aft of Front Axle	mm	1280

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Trunk Carpeting	9
Hood	7
Front Bumper	8
Right Front Headlight	4
Ballast (if any)	32

DATA SHEET NO. 4
SEAT AND SEAT BELT ANCHORAGE ADJUSTMENT DATA

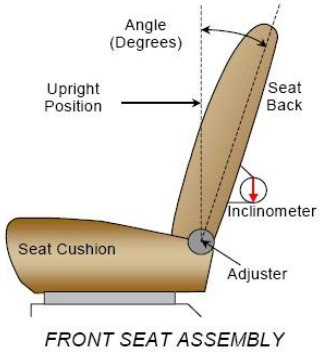
Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025

SEAT BACK ANGLE ADJUSTMENT

The driver and passenger seat backs are positioned to the manufacturer's designated angle provided in the Form1.

	Units	Seat Back Angle
Driver Seat	Degrees	0.0
Front Passenger Seat	Degrees	0.0

**Measurement taken on seatback using OEM provided tool*



FRONT SEAT ASSEMBLY

SEAT HEIGHT AND ANGLE

Seat	As Tested SCRL Angle (Mid) (º)	SCRP Height Position	SCRP Height (mm)		
			Rearmost	Mid-Fore / Aft	Forward-Most
Driver Seat	19.8	Max	40	49	56
		Mid	24	31	39
		Min	5	13.5	22
Front Passenger Seat	19.5	Max	35	42	51
		Mid	17	24.5	34.5
		Min	0	8	17.5

SEAT FORE / AFT POSITION

Seat	Total Fore / Aft Travel		Placed in Position #	
	mm	Detents*	mm	Detents*
Driver Seat	228	Power	114	Power
Front Passenger Seat	226	Power	113	Power

SEAT BELT ANCHORAGE ADJUSTMENT

Seat	Total # of Positions	Placed in Position #
Driver Seat	Fixed	Fixed

HEAD RESTRAINT ADJUSTMENT

Seat	Total # of Positions	Placed in Position #
Driver Seat	Fixed	Fixed

DATA SHEET NO. 5
FUEL SYSTEMS AND STEERING WHEEL POSITION DATA

Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025

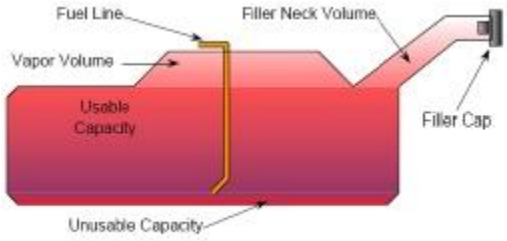
FUEL TANK CAPACITY DATA

Description	Liters
Usable Capacity of (Form No.1)	70.0
Usable Capacity of (Owner's Manual)	70.0
92 - 94% of Usable Capacity	64.4 - 65.8
Actual Amount of Solvent Used in Test	65.1

FUEL PUMP

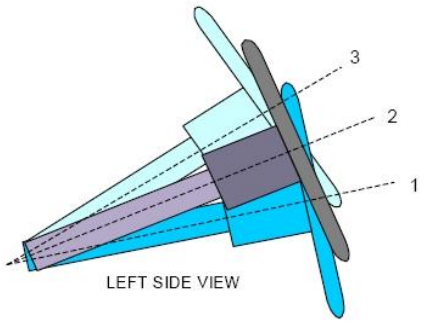
Describe the operation of the fuel pump.

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.



VEHICLE FUEL TANK ASSEMBLY

STEERING COLUMN POSITIONS

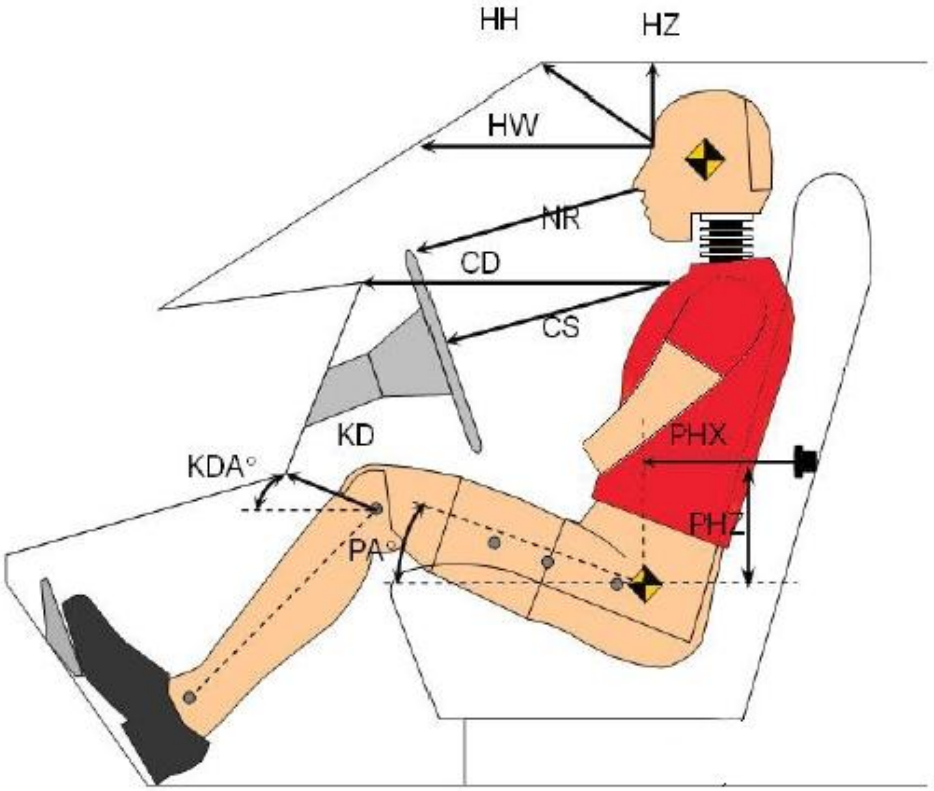


STEERING COLUMN ASSEMBLY

	Degrees	Fore / Aft Position (mm)
Lowermost - Position No. 1	13.7	
Geometric center - Position No. 2	15.9	
Uppermost - Position No. 3	18.1	
Telescoping Steering Wheel Travel		56
Test Position	15.9	28

DATA SHEET NO. 6
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025



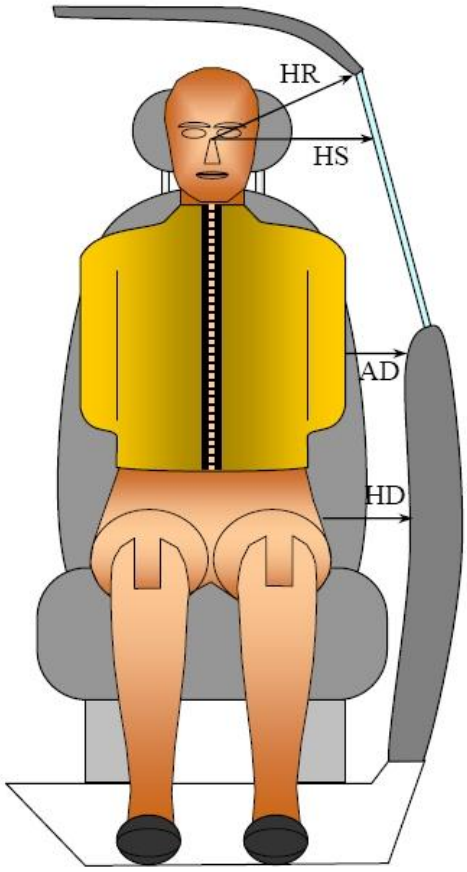
Left Side View

DUMMY LONGITUDINAL CLEARANCE DIMENSION INFORMATION

Driver Code	Description	Driver	
		Length (mm)	Angle (°)
HH	Head to Header	447	
HW	Head to Windshield	661	
HZ	Head to Roof Liner	168	
NR	Nose to Rim	398	
CD	Chest to Dash	564	
CS	Chest to Steering Wheel	340	
KD(L) / KDA(L)◦	Left Knee to Dash	157	40.5
KD(R) / KDA(R)◦	Right Knee to Dash	155	41.2
PAX◦	Pelvic Tilt Angle (X-Axis)		28.1
PAY◦	Pelvic Tilt Angle (Y-Axis)		-1.8
PHX	Hip Point to Striker (X-Axis)		405
PHZ	Hip Point to Striker (Z-Axis)		226

DATA SHEET NO. 7
DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025



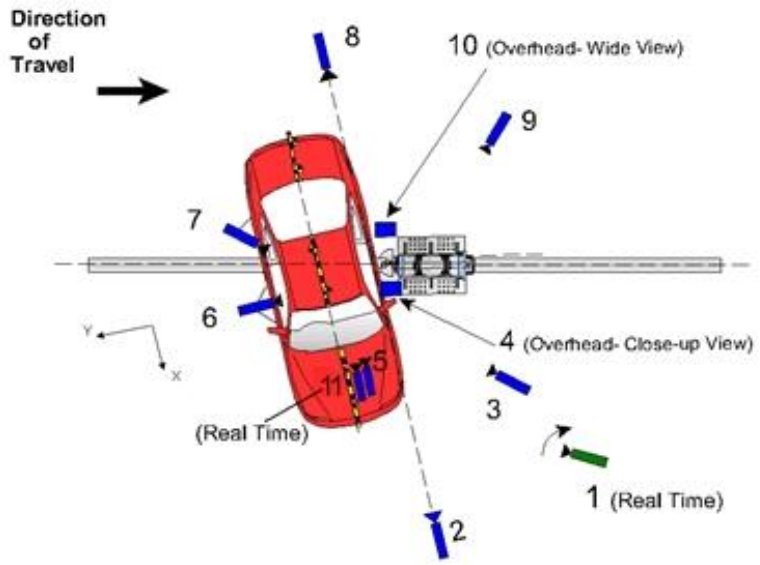
FRONT VIEW OF DUMMY

DUMMY LATERAL CLEARANCE DIMENSION INFORMATION

Code	Measurement Description	Units	Driver
HR	Head to Side Header	mm	203
HS	Head to Side Window	mm	294
AD	Arm to Door	mm	95
HD	H-Point to Door	mm	131

DATA SHEET NO. 8
LOCATION OF CAMERA

Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025



CAMERA LOCATIONS AND DATA

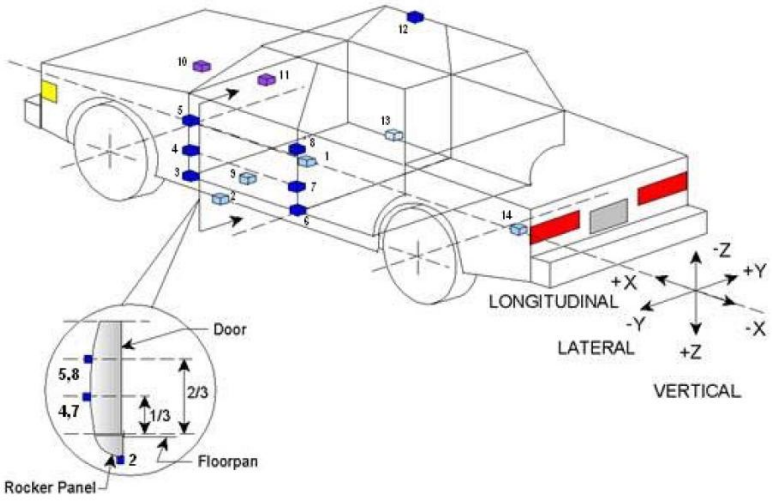
No.	Camera View	Coordinates (mm)			Lens Length (mm)	Operating Frame Rate (fps)
		X	Y	Z		
1	Real-time (24 - 30 fps) pan view of impact				Zoom	60
2	Front ground level - impact view	0	7830	-1550	28	1000
3	Impact side 45º - forward pole view	1025	4740	-1550	24	1000
4	Overhead Close-up view of impact	0	0	-9200	24	1000
5	Onboard - dummy front view				25	1000
6	Onboard - dummy side view				12.5	1000
7	Onboard - dummy rear oblique view**	N/A	N/A	N/A	N/A	N/A
8	Rear ground level - impact view	0	-7645	-1550	28	1000
9	Impact side 45º - rearward pole view	4020	-3430	-1550	24	1000
10	Overhead wide - view of impact	0	0	-9200	16	1000

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 75º angle to the rigid pole.*

***The onboard dummy rear oblique high speed camera was not installed due to test vehicle interior space constraints. This omission was approved by the Contracting Officer's Technical Representative (COTR)*

DATA SHEET NO. 9
TEST VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025



TEST VEHICLE ACCELEROMETER LOCATIONS

No.	Accelerometer Location	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	2531	3	-112
2	Left Floor Sill	2526	-635	113
3	A-Pillar Sill	3095	-580	117
4	A-Pillar Low	3114	-600	-30
5	A-Pillar Mid	2979	-622	-450
6	B-Pillar Sill	2002	-626	109
7	B-Pillar Low	1908	-630	-95
8	B-Pillar Mid	1807	-613	-370
9	Seat	2360	-450	199
10	Engine	1487	3	-403
11	Firewall	1607	-395	-257
12	Roof	1807	491	-780
13	Right Floor Sill	2549	634	111
14	Rear Deck	853	-4	-536

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

DATA SHEET NO. 10
TEST VEHICLE ACCELEROMETER DATA SUMMARY

Test Vehicle: 2025 Chevrolet Corvette Stingray 2 Door Coupe
NHTSA No.: C20250105
Test Facility: Calspan
Test Date: 01/22/2025

Loc. No	Description	Axes	Units	Positive Direction		Negative Direction	
				Max	Time (ms)	Max	Time (ms)
1	Vehicle CG	X	g	0.69	54.30	-8.23	50.15
	Vehicle CG	Y	g	26.76	21.05	-1.07	179.75
	Vehicle CG	Z	g	9.62	36.95	-13.39	41.90
	Vehicle CG Resultant	N/A	g	27.51	20.95	0.02	-47.90
2	Floor Sill (Left)	Y	g	154.03	17.50	-78.63	21.20
3	A Pillar Sill	Y	g	42.99	47.05	-45.66	32.90
4	A Pillar Low	Y	g	32.84	40.85	-12.59	35.30
5	A Pillar Mid	Y	g	28.56	27.85	-5.56	21.40
6	B Pillar Sill	Y	g	60.17	26.20	-15.68	56.65
7	B Pillar Low	Y	g	50.78	19.70	-15.09	12.65
8	B Pillar Mid	Y	g	38.47	19.50	-10.04	24.10
9	Seat	Y	g	41.53	34.70	-3.32	52.15
10	Engine Top	X	g	1.06	175.75	-6.02	68.70
	Engine Top	Y	g	29.89	45.30	-5.87	26.85
11	Firewall	Y	g	41.47	42.45	-31.16	30.90
12	Roof	Y	g	25.11	57.65	-1.65	243.00
13	Floor Sill (Right)	Y	g	25.82	18.20	-1.51	31.60
14	Rear Deck	X	g	3.53	61.70	-10.06	64.35
	Rear Deck	Y	g	18.80	61.75	-1.42	253.05

DATA SHEET NO. 11
DUMMY INJURY RESPONSE DATA
(Subpart U, ES-2re)

Test Vehicle: 2025 Chevrolet Corvette Stingray 2 Door Coupe NHTSA No.: C20250105
Test Facility: Calspan Test Date: 01/22/2025

Dummy Serial No. D037

Description	Axes	Positive Direction		Negative Direction	
		MAX	TIME (ms)	MAX	TIME (ms)
HEAD ACCELERATION (g)					
Longitudinal	X	8.86	130.30	-10.02	46.50
Lateral	Y	41.64	74.45	-3.52	123.70
Vertical	Z	13.24	60.70	-6.33	107.05
Resultant	N/A	42.43	74.45		
HIC36 (t1, t2)	N/A	125.76		**t1 =** 44.30	**t2 =** 77.45
THORAX DEFLECTION (mm)					
Upper Rib	Y	26.64	54.45	-6.72	24.10
Middle Rib	Y	26.77	54.85	-4.10	27.15
Lower Rib	Y	32.85	53.10	-1.41	25.60
ABDOMINAL FORCES (N)					
Front	Y	206.92	46.80	-54.25	37.85
Middle	Y	406.47	45.65	-34.14	35.65
Rear	Y	666.09	44.35	-20.65	28.30
SUM	N/A	1263.26	46.45		
PELVIS FORCES (N)					
Pubic Symphysis	Y	162.74	19.95	-2237.38	53.95

Reference: Positive Direction - Longitudinal (X) = forward
- Lateral (Y) = to right
- Vertical (Z) = down

DATA SHEET NO. 12
POST-TEST OBSERVATIONS

Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025

IMPACT POINT DATA

Measured Parameter		Units	Value
Vertical Impact Ref Line	- Aft of Front Axle, Intended Impact Pt	mm	1280
Actual Impact Point	- Aft of Front Axle	mm	1289
Difference		mm	9

TEST DUMMY INFORMATION AND CONTACT POINTS

Dummy Body Part	Driver Seat Dummy (ES2-re)
Head Contact	Head/Torso Airbag & Head Restraint
Upper Torso Contact	Head/Torso Airbag & Seat Back
Lower Torso Contact	Seat Back
Left Knee Contact	Door Trim
Right Knee Contact	Left Knee

POST-TEST DOOR PERFORMANCE

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

POST-TEST SEAT PERFORMANCE

Description	Struck Side		Non-Struck Side	
	Front	Rear	Front	Rear
Seat Movement Along Seat Track	No	N/A	No	N/A
Seat Disengagement from Floor Pan	No	N/A	No	N/A

POST-TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	No Visible Buckling
Sill Separation	Fiberglass Sill Cracked Throughout Adjacent to Impact Zone
Windshield Damage	None
Side Window Damage	Driver's Window Shattered Completely
Other Notable Effects	None

DATA SHEET NO. 12 … (CONTINUED)
POST-TEST OBSERVATIONS

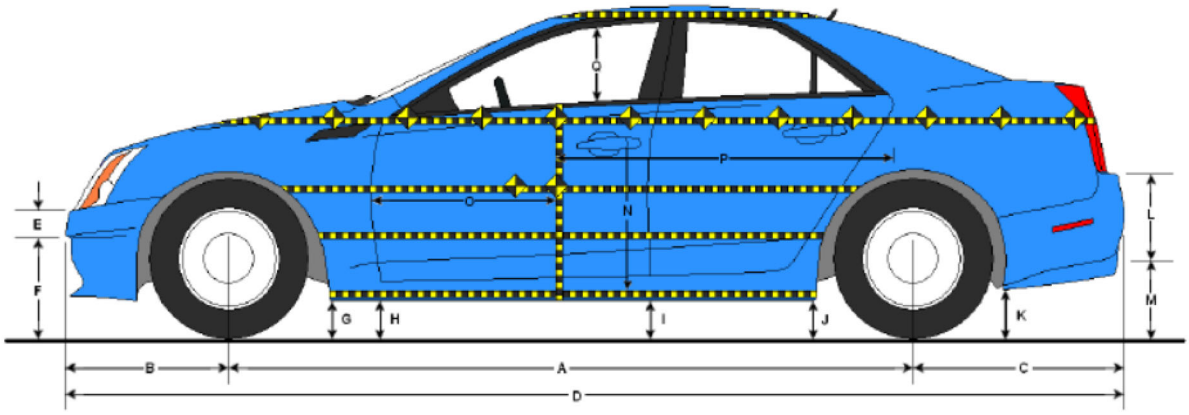
Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Struck Side Front Occupant	
	Mounted	Deployed
Front Airbag	Yes	No
Knee Airbag	No	N/A
Side Airbag 1 - Combination/Head Torso Airbag	Yes	Yes
Side Airbag 2 - Torso/Pelvis Airbag	No	N/A
Seat Belt Pretensioner	Yes	Yes
Seat Belt Load Limiter	Yes	Yes
Other		

DATA SHEET NO. 13
VEHICLE PRE TEST AND POST TEST MEASUREMENTS

Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025



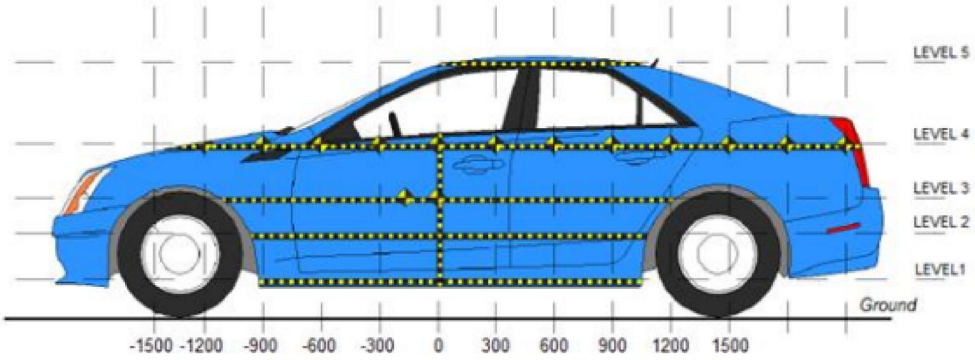
LEFT SIDE VIEW

VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

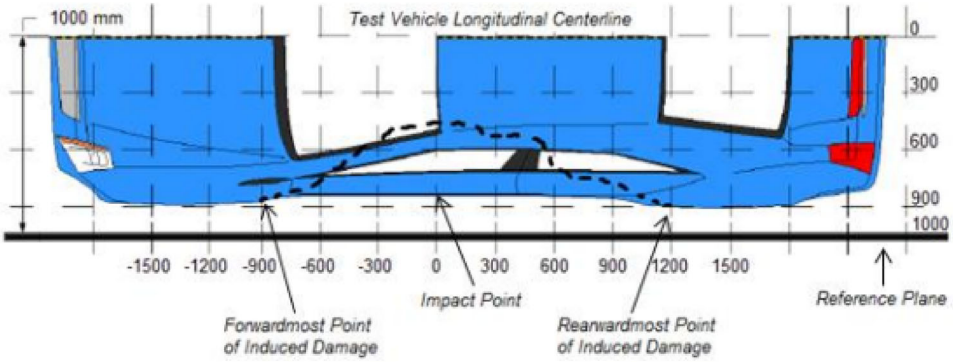
No.	Measurement Description	Pre-Test	Post-Test	Difference
A	Vehicle Wheelbase	2722	2691	-31
B	Front Axle to FSOV	1033	1058	24
C	Rear Axle to RSOV	873	871	-1
D	Total Vehicle Length at Centerline	4628	4620	-8
E	Front Bumper Thickness	45	45	0
F	Front Bumper Bottom to Ground	420	418	-2
G	Sill Height at Front Wheel Well	125	131	6
H	Sill Height at Front Door Leading Edge	128	126	-2
I	Sill Height at B Pillar	126	101	-25
J1	Sill Height at Rear Wheel Well	135	138	3
J2	Pinch Weld Height at Rear Wheel Well	127	108	-19
K	Sill Height Aft of Rear Wheel Well	200	195	-5
L	Rear Bumper Thickness	135	135	0
M	Rear Bumper Bottom to Ground	406	402	-4
N	Sill Height to Window Bottom Sill	794	816	22
O	Front Door Leading Edge to Impact CL	793	764	-30
P	Rear Door Trailing Edge to Impact CL	486	387	-99
Q	Front Window Opening	278	269	-9
R	Right Side Length	4484	4488	4
S	Left Side Length	4479	4473	-6
T	Vehicle Width at B-Pillars	1935	1934	-1

DATA SHEET NO. 14
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025



Left Side View



Overhead View

MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Measurement Description	Units	Height Above Ground	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	mm	251	185	0
2	Occupant H-Point	mm	378	225	150
3	Mid-Door	mm	577	241	0
4	Window Sill	mm	826	191	0
5	Window Top	mm	1180	30	0

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. 14
VEHICLE EXTERIOR CRUSH MEASUREMENTS (CONTINUED)

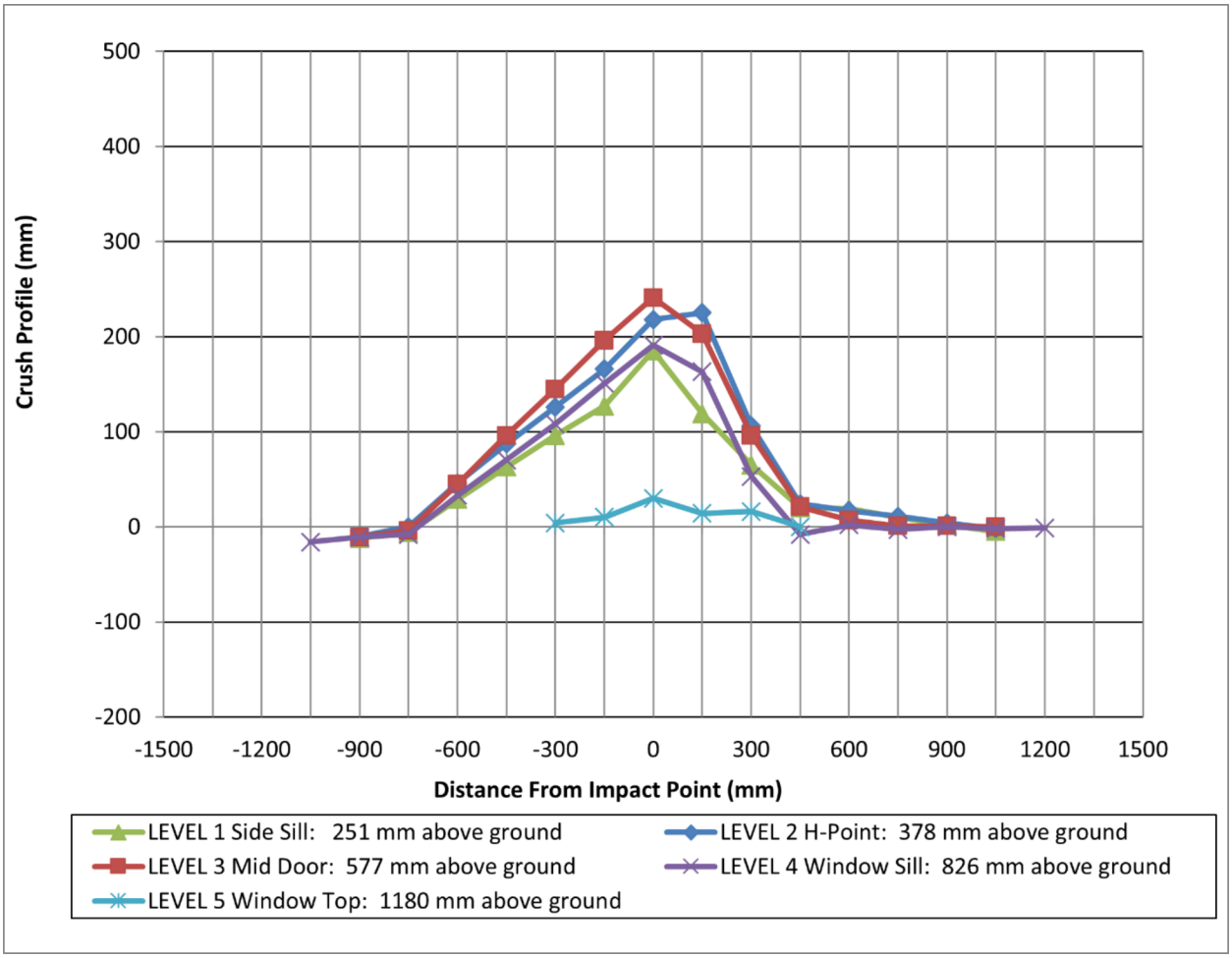
Test Vehicle: 2025 Chevrolet Corvette Stingray 2 Door Coupe
NHTSA No.: C20250105
Test Facility: Calspan
Test Date: 01/22/2025

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															
-1050				807					823					-16	
-900	939	947	952	807		951	957	963	818		-12	-10	-11	-11	
-750	912	924	943	831		918	924	947	839		-6	0	-4	-8	
-600	895	912	935	808		866	866	890	775		29	46	45	33	
-450	886	910	927	811		823	823	831	741		63	87	96	70	
-300	878	911	918	817	570	782	785	773	709	566	96	126	145	108	4
-150	870	915	909	821	575	743	749	713	670	565	127	166	196	151	10
0	864	918	899	821	568	679	700	658	630	538	185	218	241	191	30
150	856	922	889	822	556	737	697	686	659	542	119	225	203	163	14
300	853	925	876	842	535	788	819	780	789	519	65	106	96	53	16
450	867	925	861	856	476	847	901	840	864	476	20	24	21	-8	0
600	887	918	840	872		868	901	833	870		19	17	7	2	
750	907	917	960	887		897	906	959	890		10	11	1	-3	
900	926	933	950	900		924	929	949	900		2	4	1	0	
1050	945	951	955	912		950	953	955	914		-5	-2	0	-2	
1200				924					925					-1	
1350															
1500															

DATA SHEET NO. 14
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS (CONTINUED)

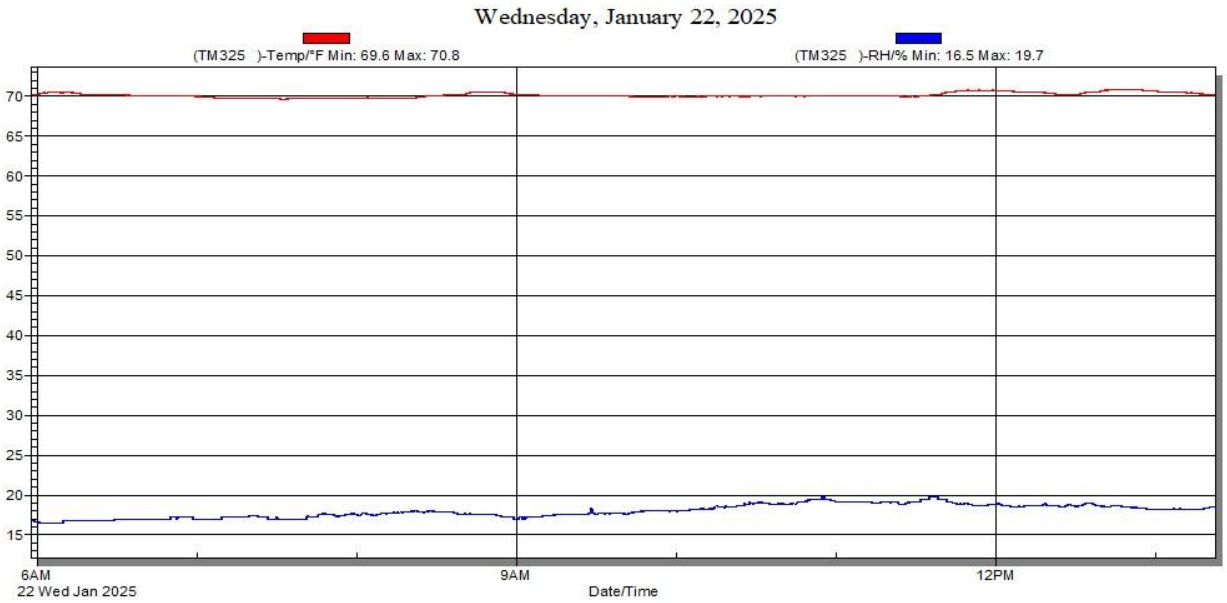
Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025



Vehicle Exterior Crush Measurements - Visual Representation

DATA SHEET NO. 16
DUMMY / VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION DATA

Test Vehicle:	2025 Chevrolet Corvette Stingray 2 Door Coupe	NHTSA No.:	C20250105
Test Facility:	Calspan	Test Date:	01/22/2025



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

APPENDIX I

PHOTOGRAPHS

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6	Post-Test Impacted Side View of Test Vehicle	I-5
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26	Close-Up View of Vehicle’s Tire Placard Label	I-15

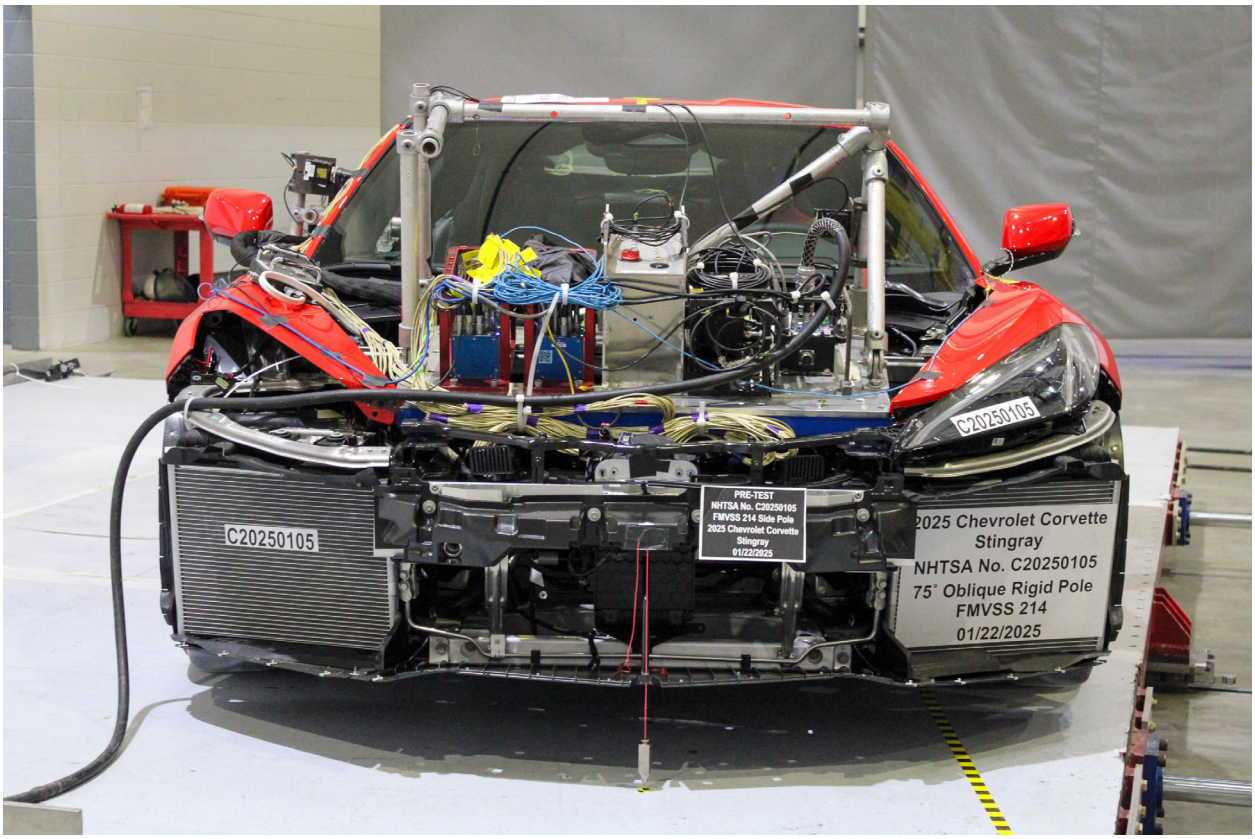

Figure A-1: Pre-Test Frontal View of Test Vehicle

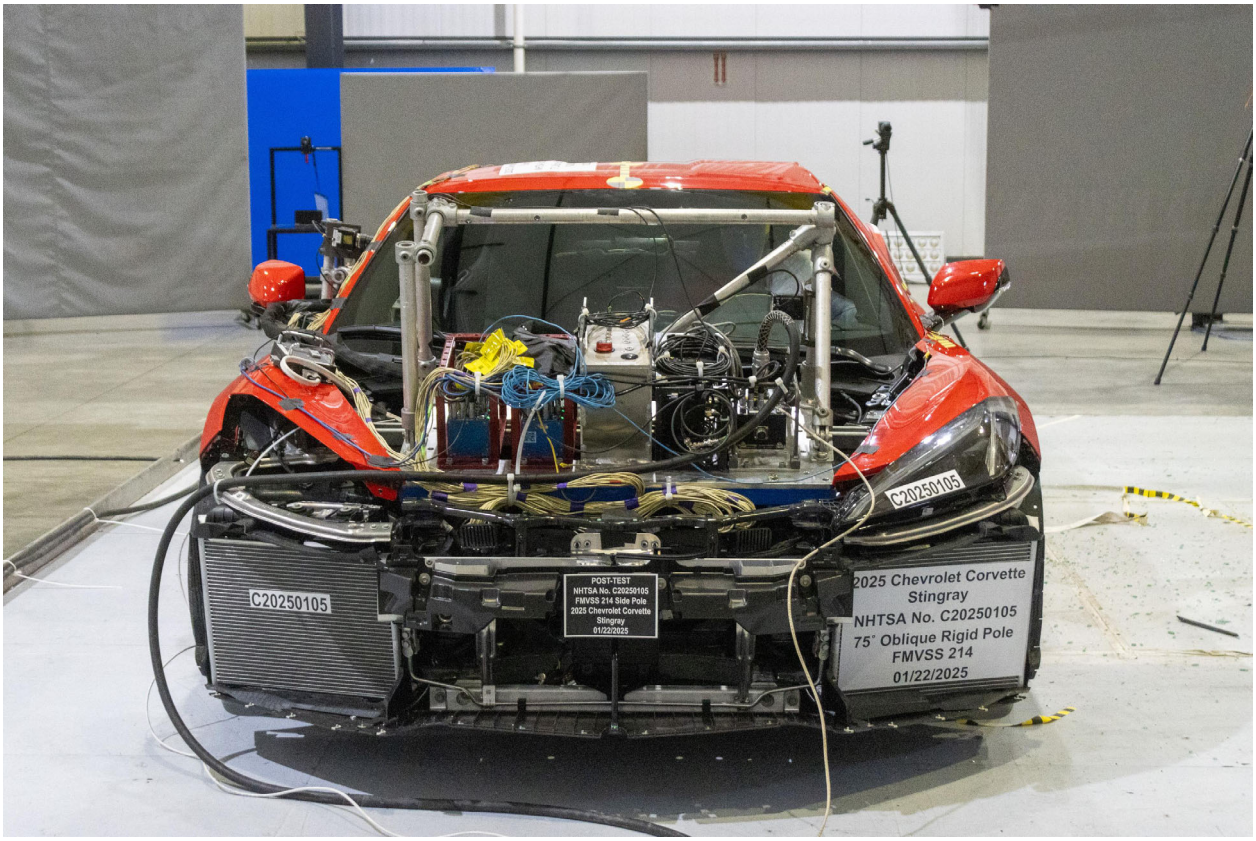

Figure A-2: Post Test Frontal View of Test Vehicle

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

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

Figure A-5: Pre-Test Impacted Side View of Test Vehicle

Figure A-6: Post-Test Impacted Side View of Test Vehicle

Figure A-7: Pre-Test Left ¾ Front View of Vehicle and Pole

Figure A-8: Pre-Test Left ¾ Rear View of Vehicle and Pole

Figure A-9: Pre-Test Overhead View of Test Vehicle

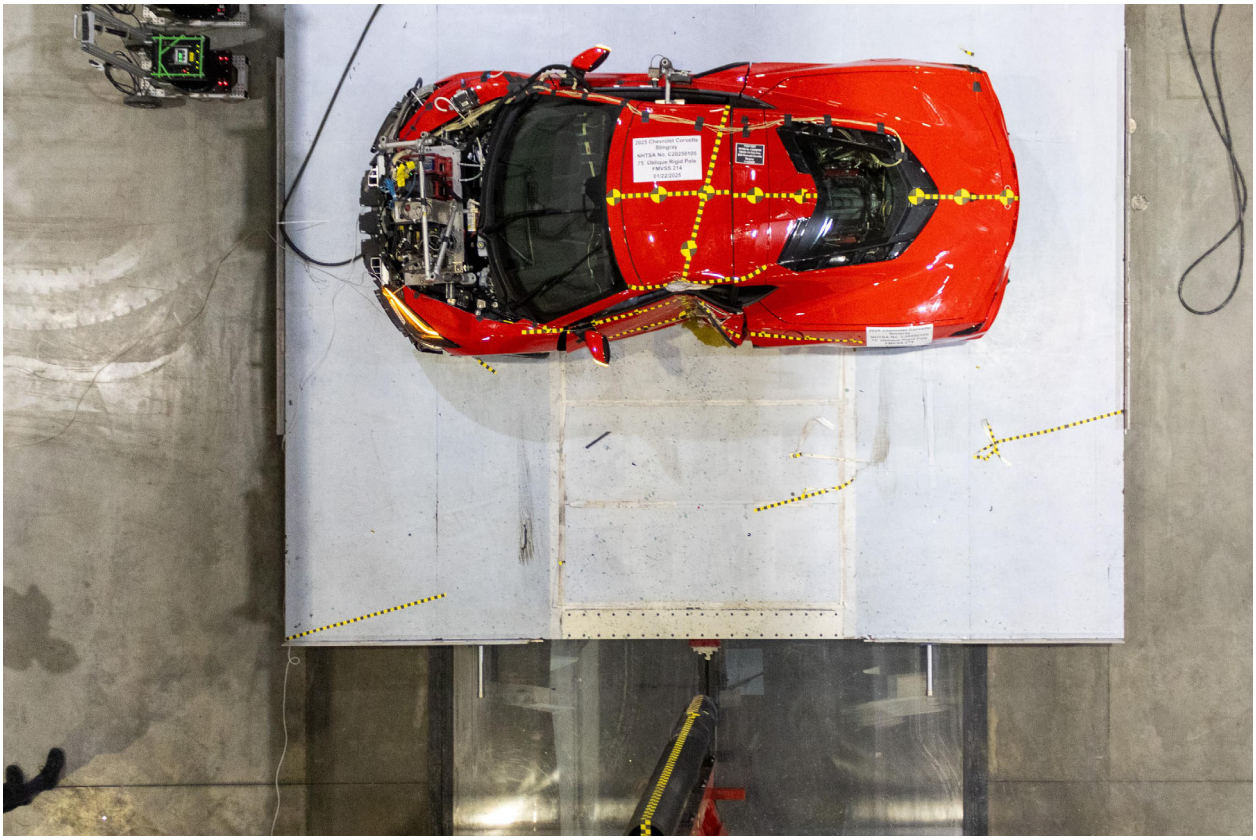

Figure A-10: Post-Test Overhead View of Test Vehicle

Figure A-11: Pre-Test Dummy Through Opposite Window

Figure A-12: Post-Test Dummy Through Opposite Window

Figure A-13: Pre-Test Close-Up of Dummy with Door Closed (Impact Side)

Figure A-14: Post-Test Close-Up of Dummy with Door Closed (Impact Side)

Figure A-15: Pre-Test Dummy with Door Open

Figure A-16: Pre-Test Dummy Shoulder and Door Top View

Figure A-17: Post-Test Dummy Shoulder and Door Top View

Figure A-18: Pre-Test Interior of Front Door Closed (through opposite window)

Figure A-19: Post-Test Interior of Front Door Showing Dummy Impact Locations

Figure A-20: Impact Event

Figure A-21: Post-Test Impact Zone Close-Up View

Figure A-22: Post-Test ¾ Front View of Impact Zone

Figure A-23: Post-Test ¾ Rear View of Impact Zone

Figure A-24: Post-Test Close-Up View of Impact Point Target

Figure A-25: Close-Up View of Vehicle's Certification Label

Figure A-26: Close-Up View of Vehicle's Tire Placard Label

APPENDIX II
ES-2re DUMMY RESPONSE DATA TRACES

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11	ES-2re Middle Thorax Rib Deflection (Y) vs. Time	II-5
12	ES-2re Lower Thorax Rib Deflection Rate vs. Time	II-5
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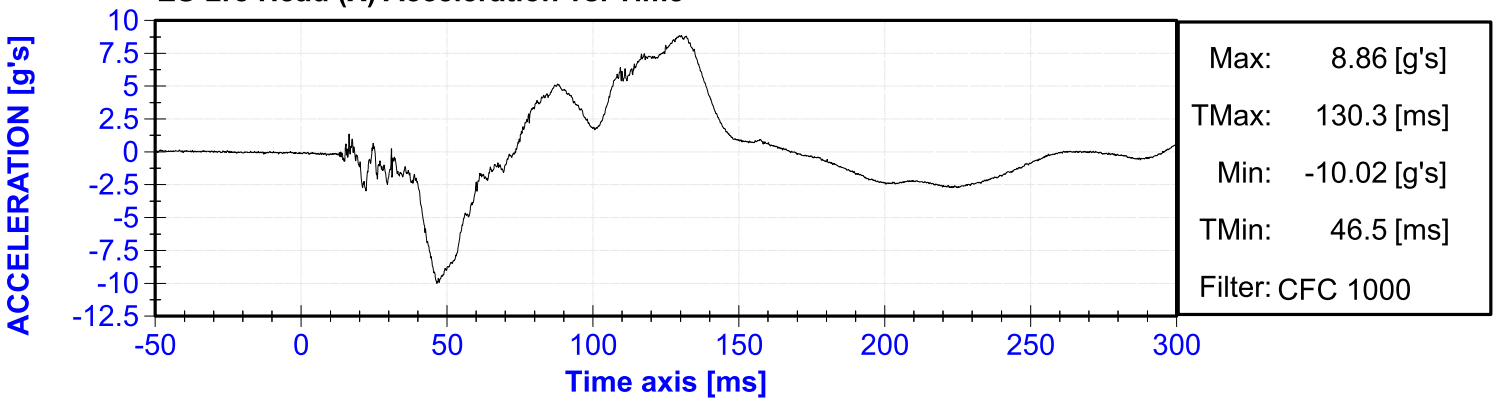
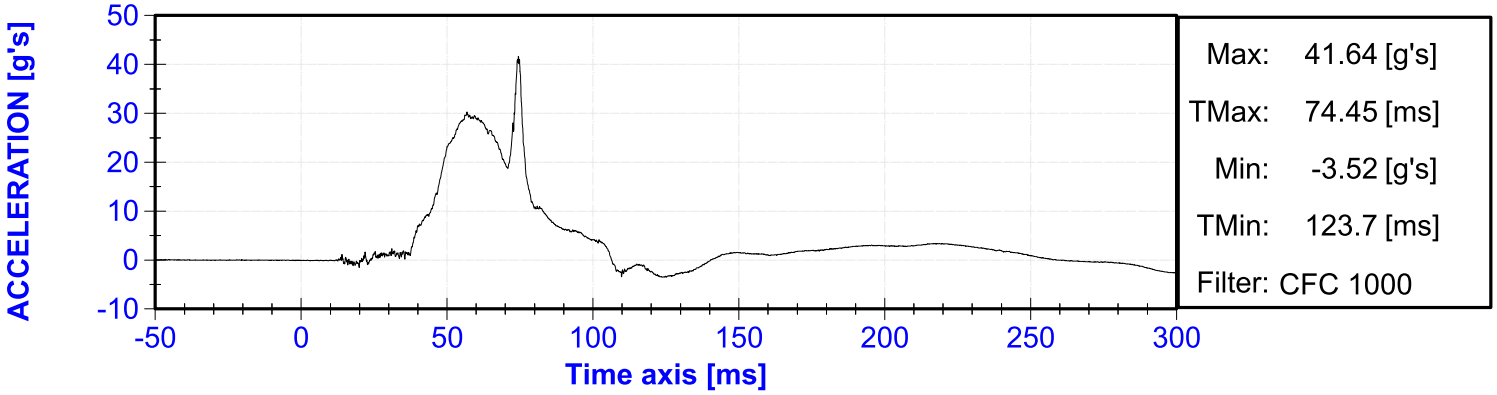
14	ES-2re Front Abdomen Force (Y) vs. Time	II-6
15	ES-2re Middle Abdomen Force (Y) vs. Time	II-6
16	ES-2re Rear Abdomen Force (Y) vs. Time	II-6
17	ES-2re Sum of Abdomen Forces vs. Time	II-7
18	ES-2re Pubic Symphysis Force (Y) vs. Time	II-7

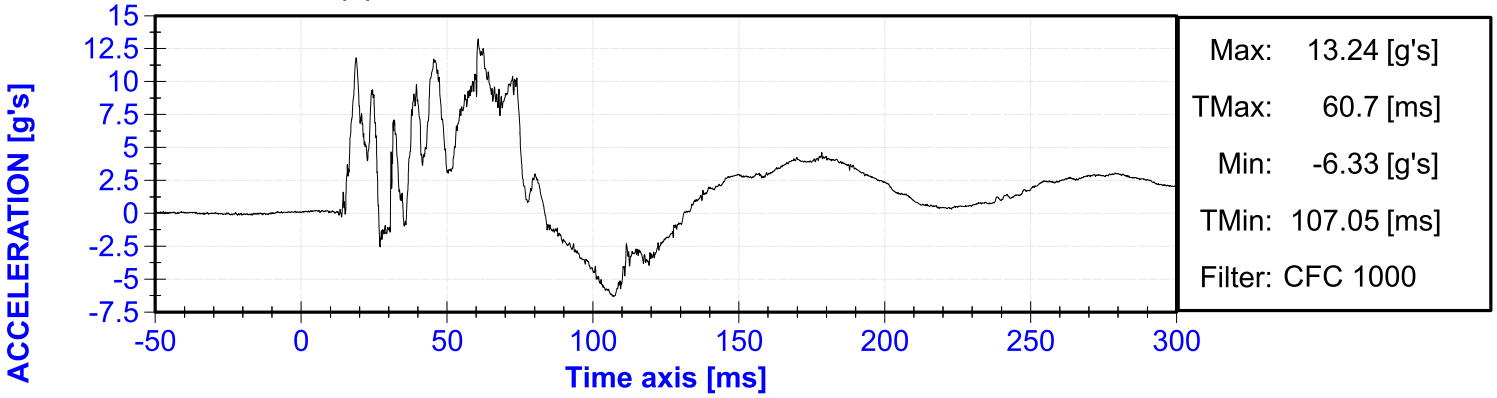
ES-2re Head (X) Acceleration vs. Time



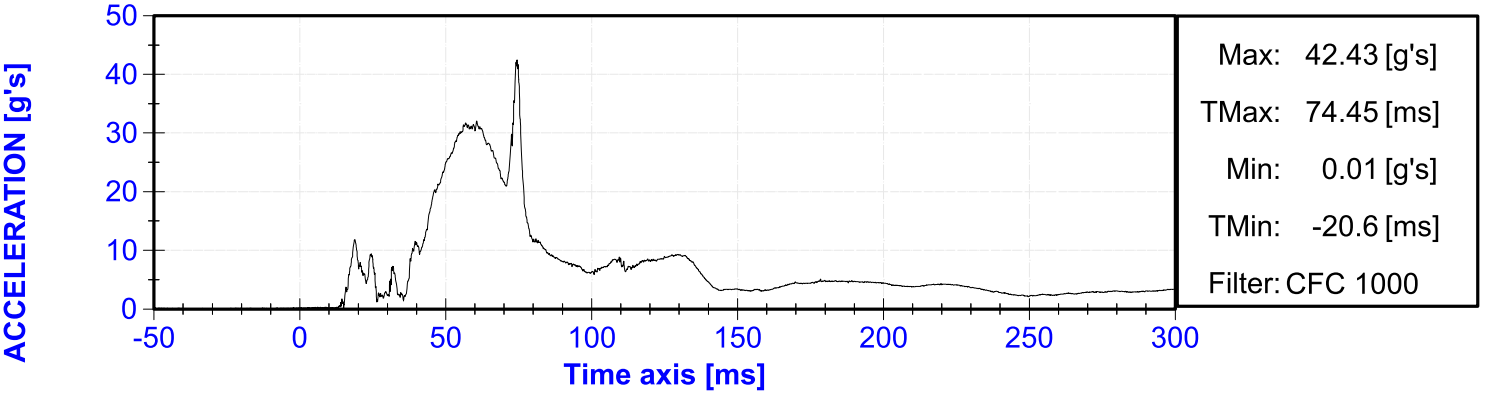
ES-2re Head (Y) Acceleration vs. Time



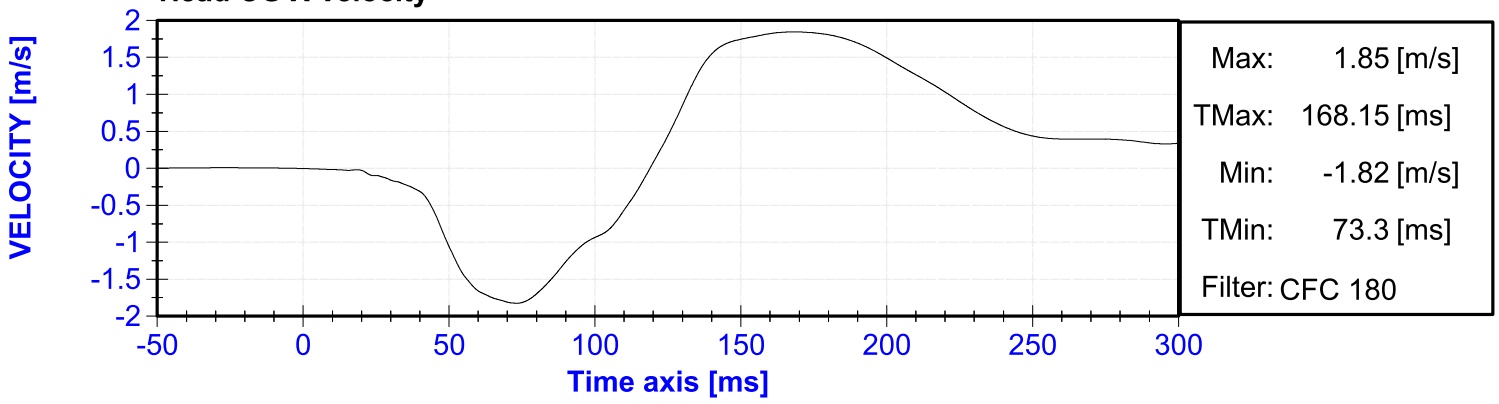
ES-2re Head (Z) Acceleration vs. Time



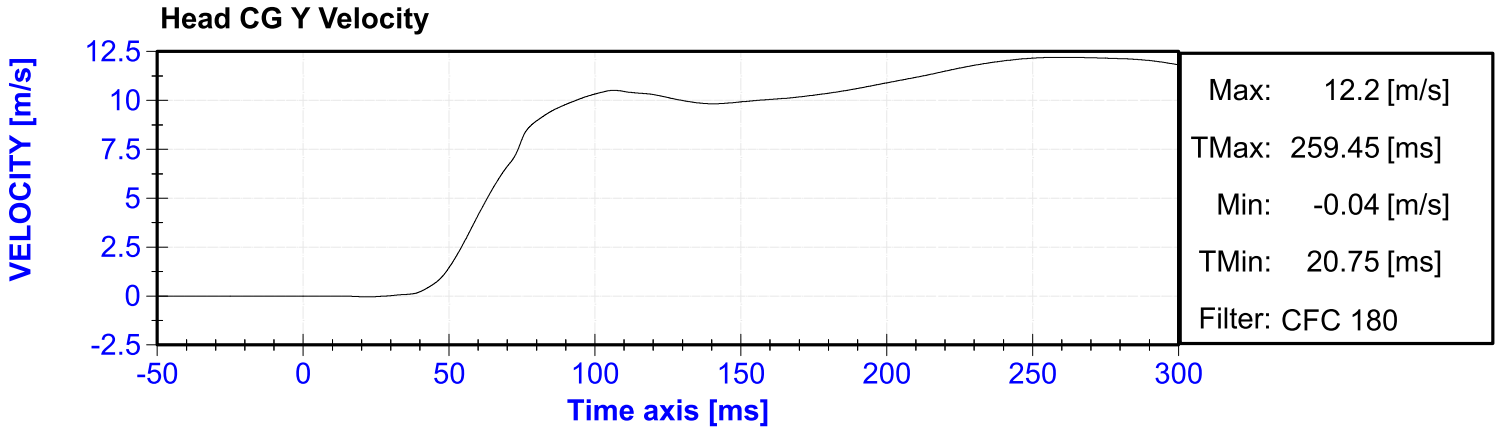
ES-2re Head Resultant Acceleration vs. Time



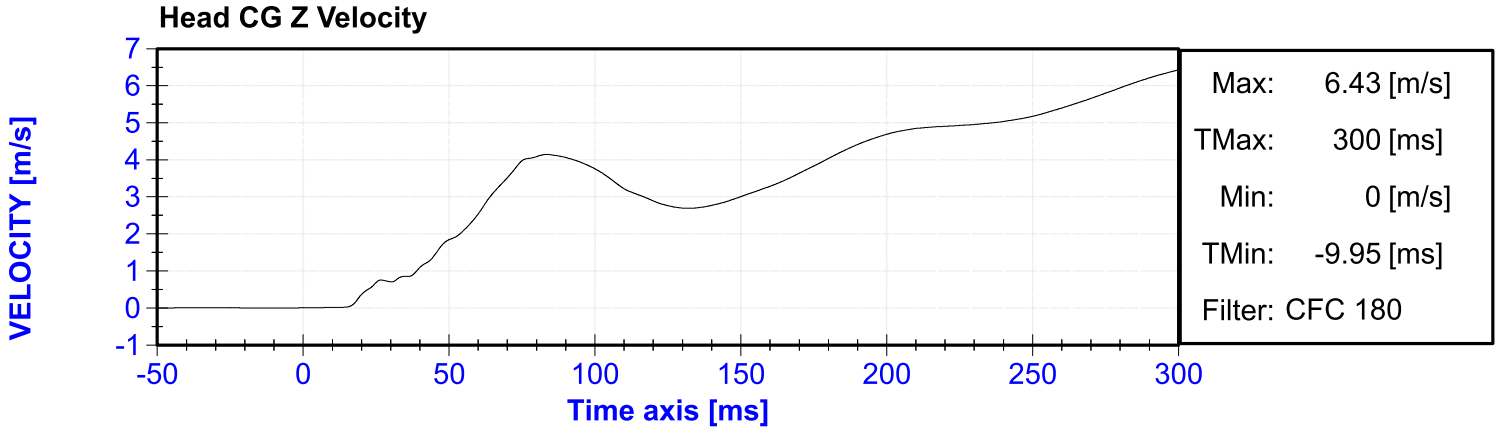
Head CG X Velocity



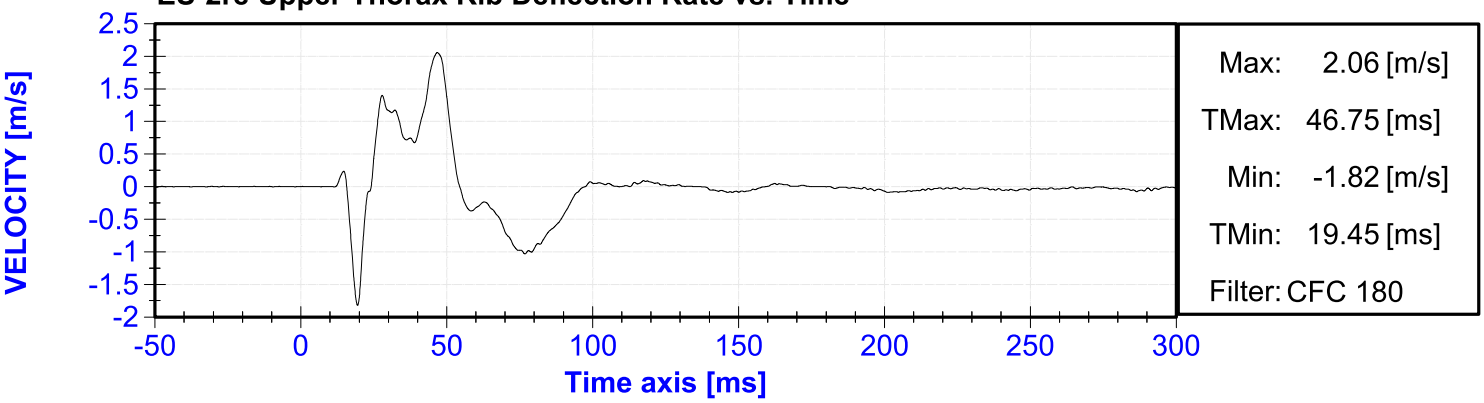
Head CG Y Velocity



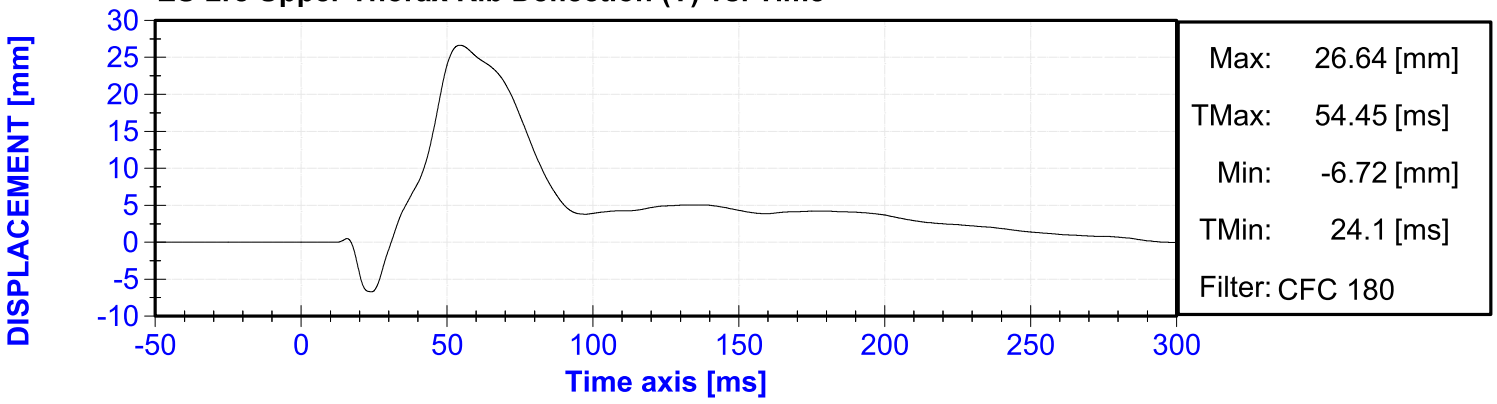
Head CG Z Velocity



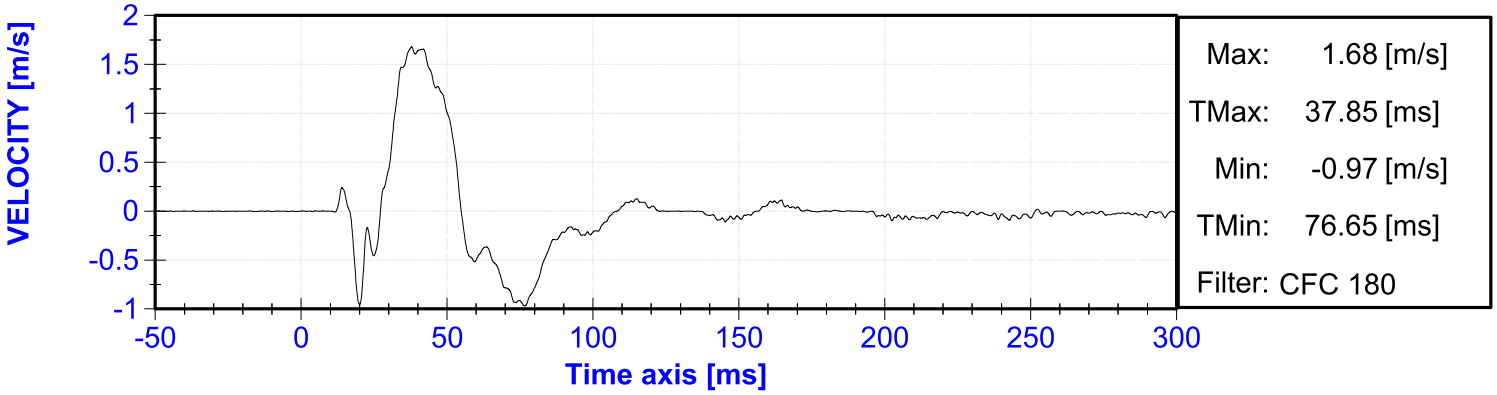
ES-2re Upper Thorax Rib Deflection Rate vs. Time



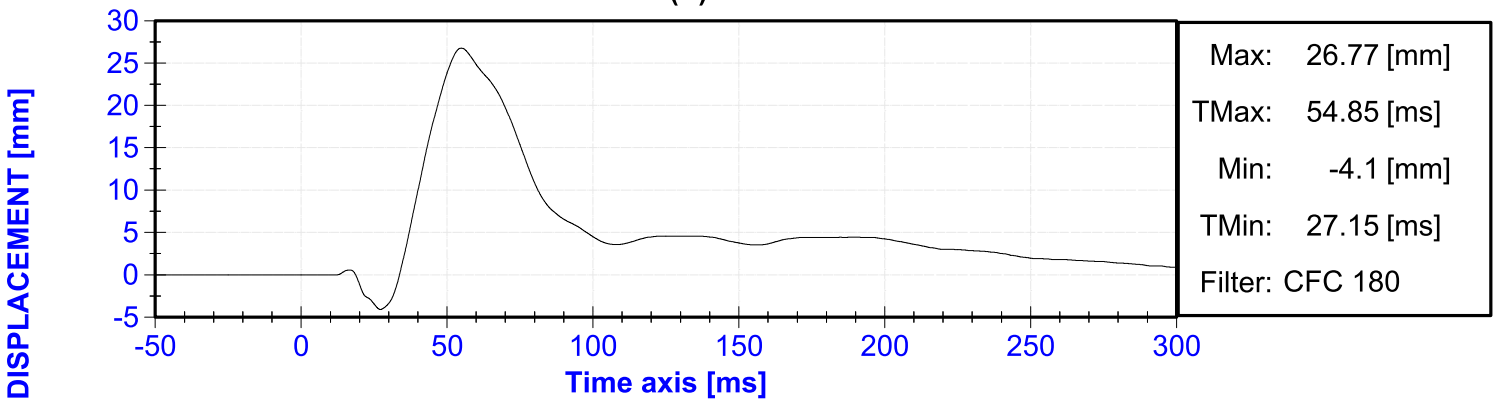
ES-2re Upper Thorax Rib Deflection (Y) vs. Time



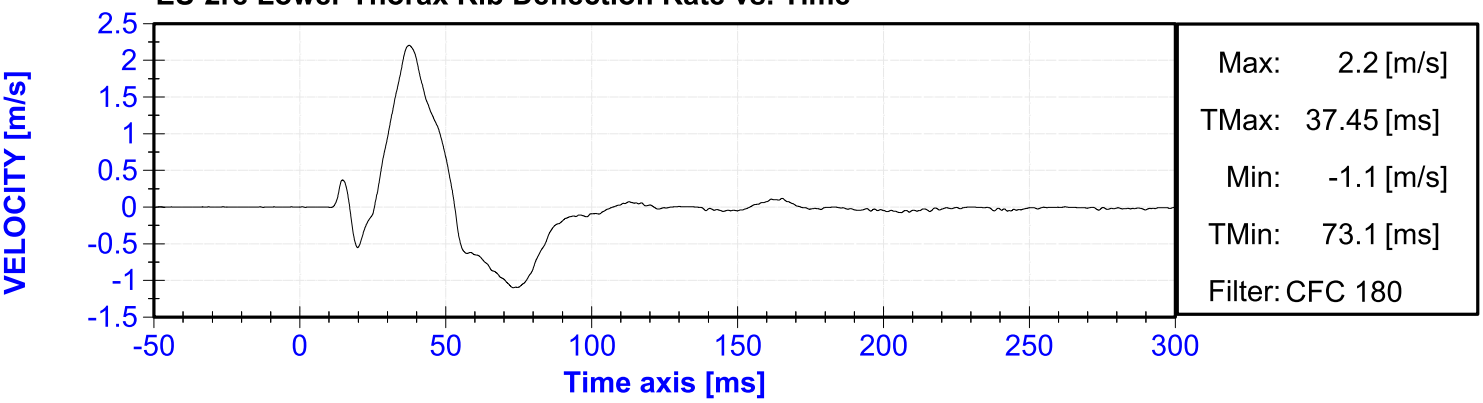
ES-2re Middle Thorax Rib Deflection Rate vs. Time



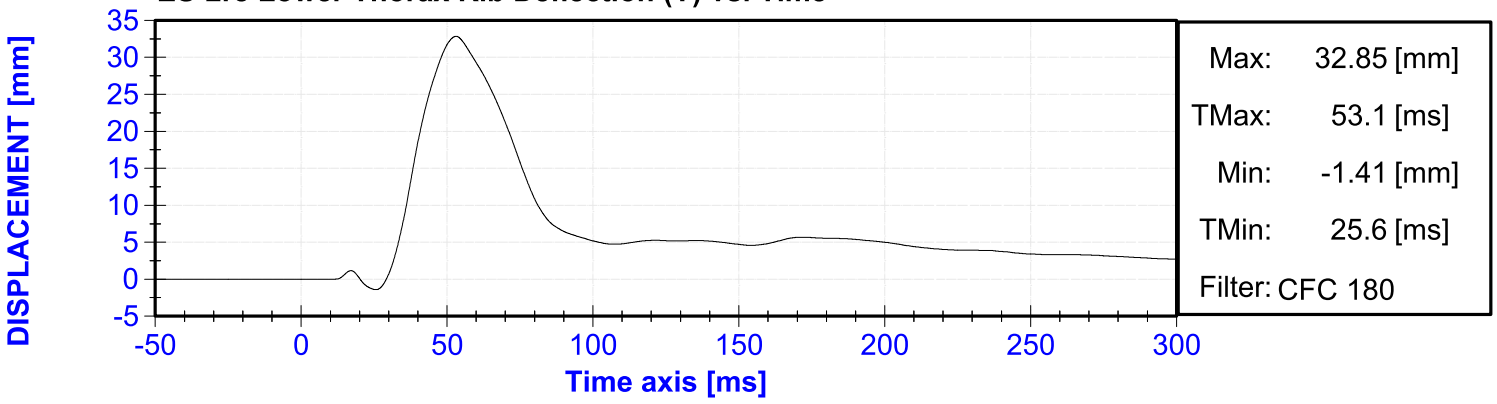
ES-2re Middle Thorax Rib Deflection (Y) vs. Time



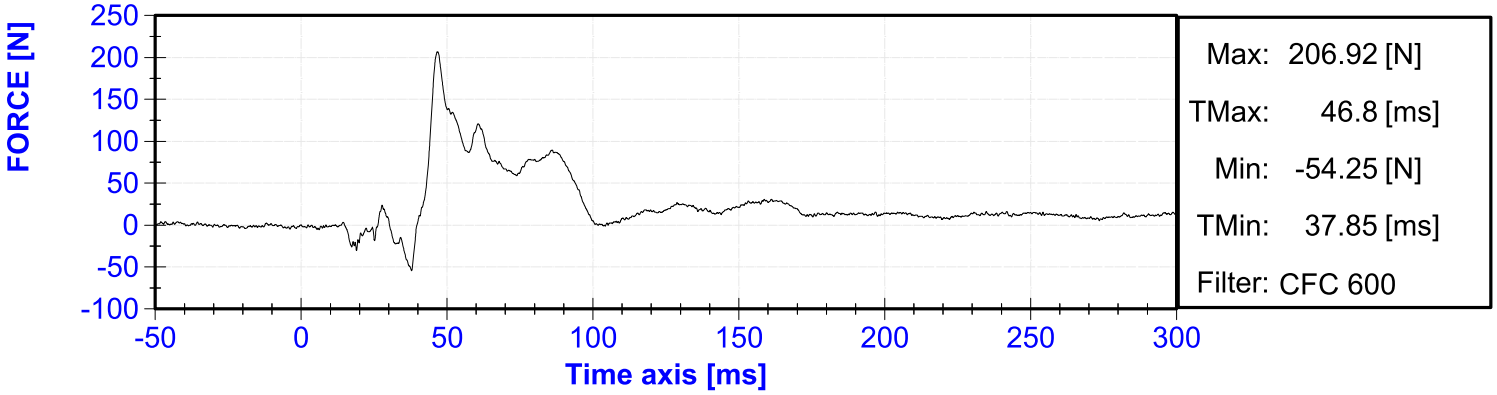
ES-2re Lower Thorax Rib Deflection Rate vs. Time



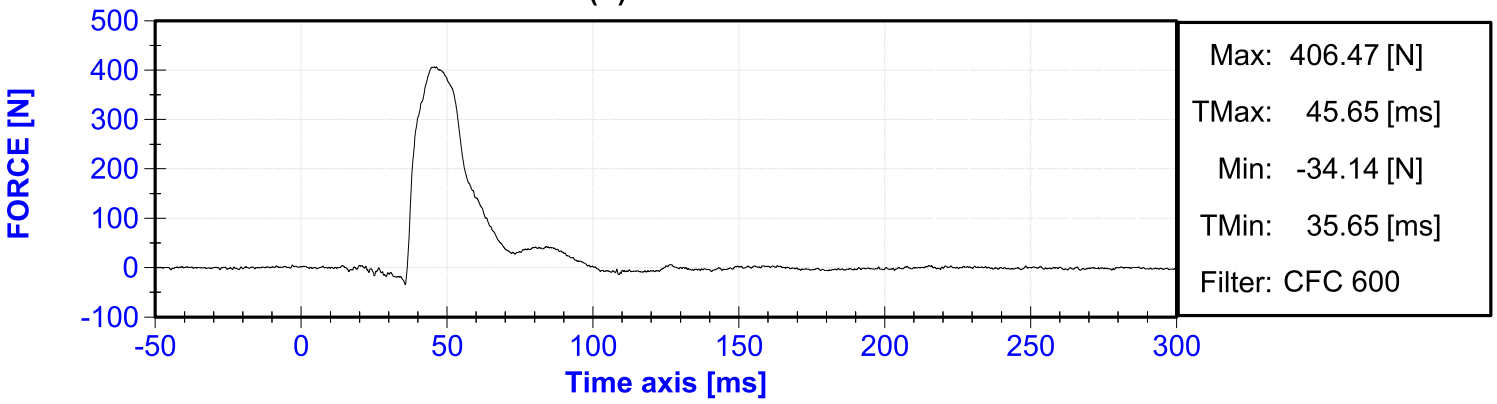
ES-2re Lower Thorax Rib Deflection (Y) vs. Time



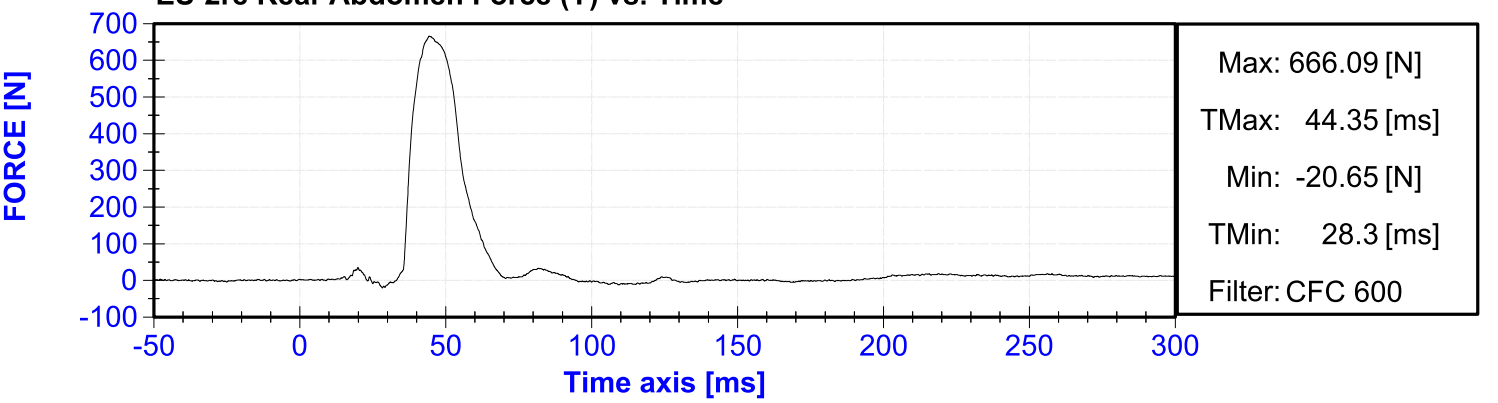
ES-2re Front Abdomen Force (Y) vs. Time

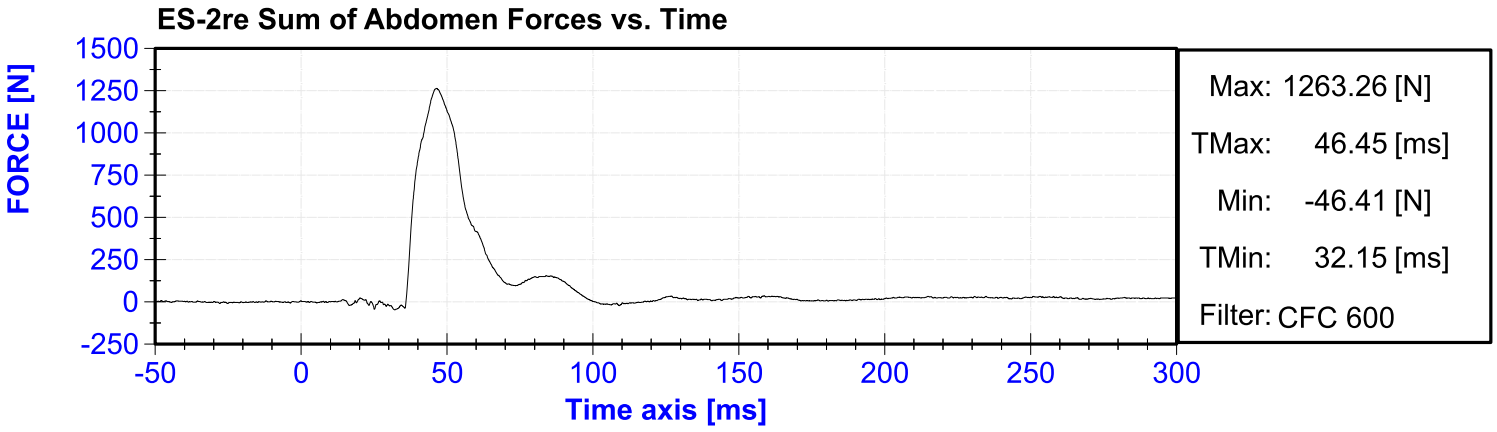


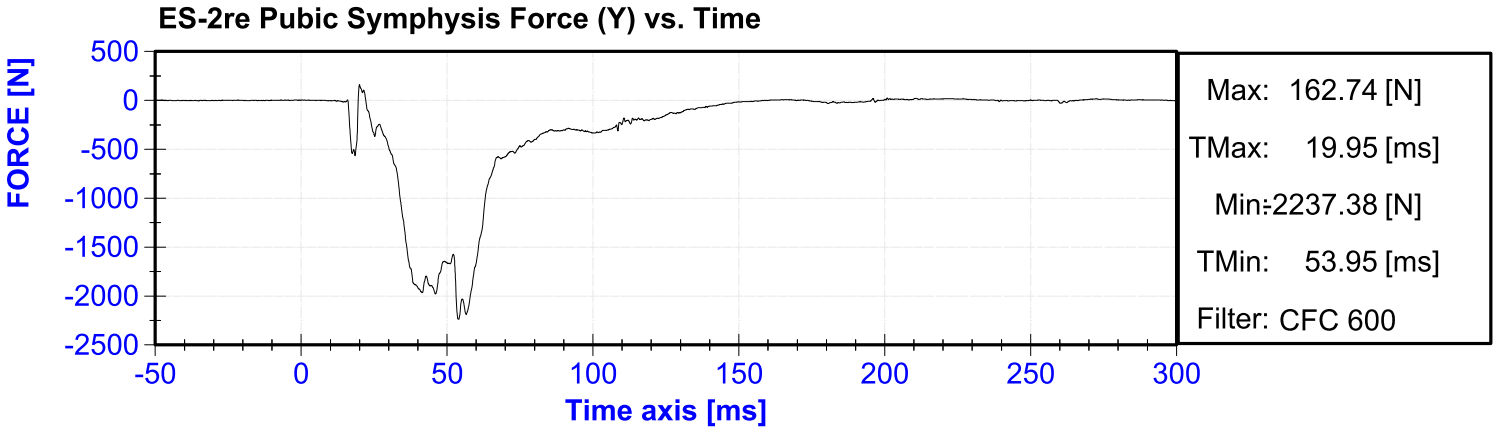
ES-2re Middle Abdomen Force (Y) vs. Time



ES-2re Rear Abdomen Force (Y) vs. Time




ES-2re Sum of Abdomen Forces vs. Time
FORCE [N]
1500
1250
1000
750
500
250
0
-250
-50
0
50
100
150
200
250
300
Time axis [ms]
Max: 1263.26 [N]
TMax: 46.45 [ms]
Min: -46.41 [N]
TMin: 32.15 [ms]
Filter: CFC 600


ES-2re Pubic Symphysis Force (Y) vs. Time
FORCE [N]
500
0
-500
-1000
-1500
-2000
-2500
-50
0
50
100
150
200
250
300
Time axis [ms]
Max: 162.74 [N]
TMax: 19.95 [ms]
Min: -2237.38 [N]
TMin: 53.95 [ms]
Filter: CFC 600

APPENDIX III
VEHICLE ACCELEROMETER RESPONSE DATA

Table of Data Plots

No.	Description	Page
1	Vehicle Center of Gravity (X) Acceleration vs. Time	III-3
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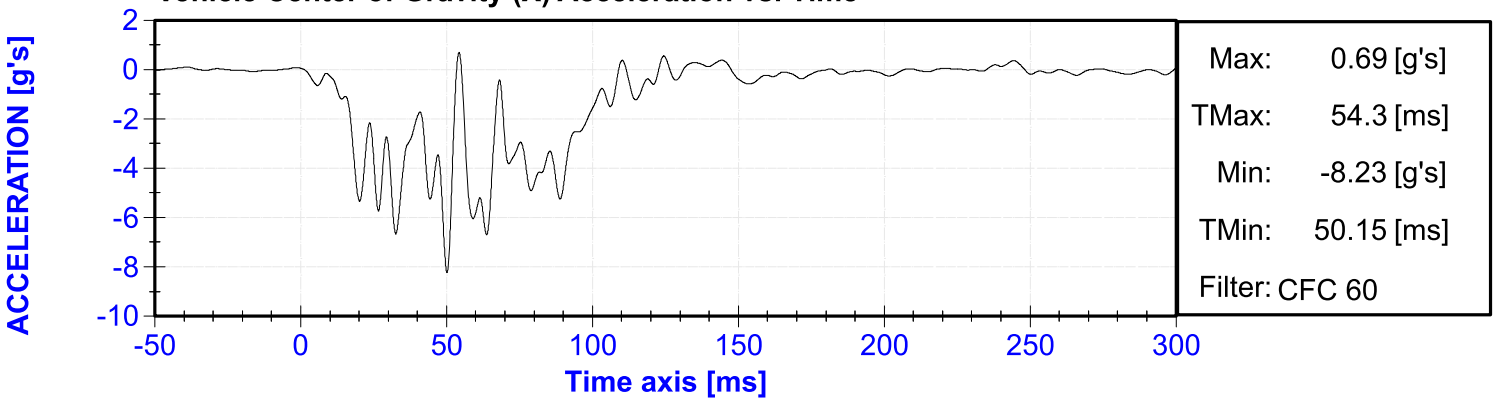
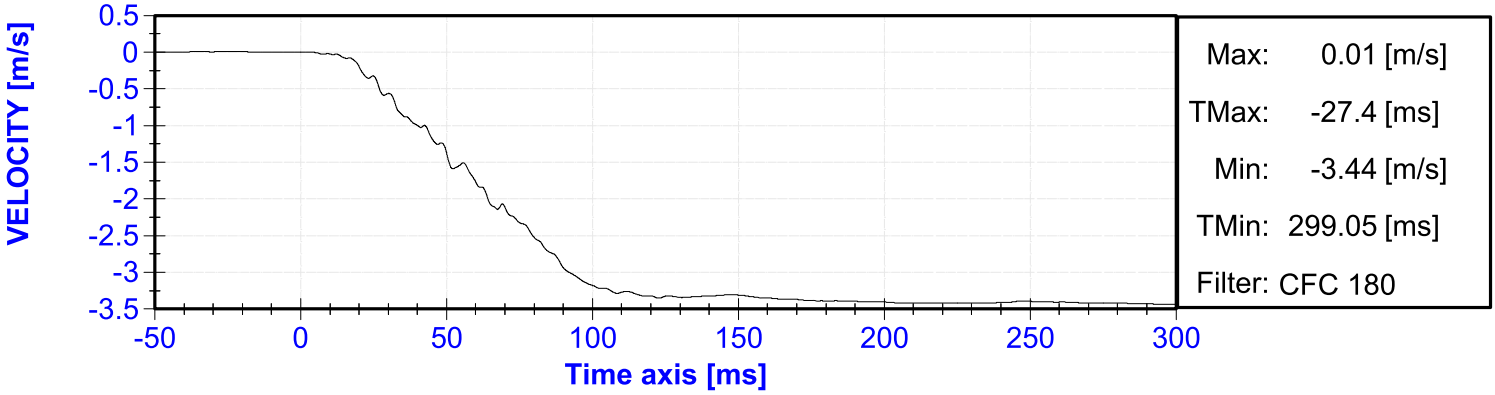
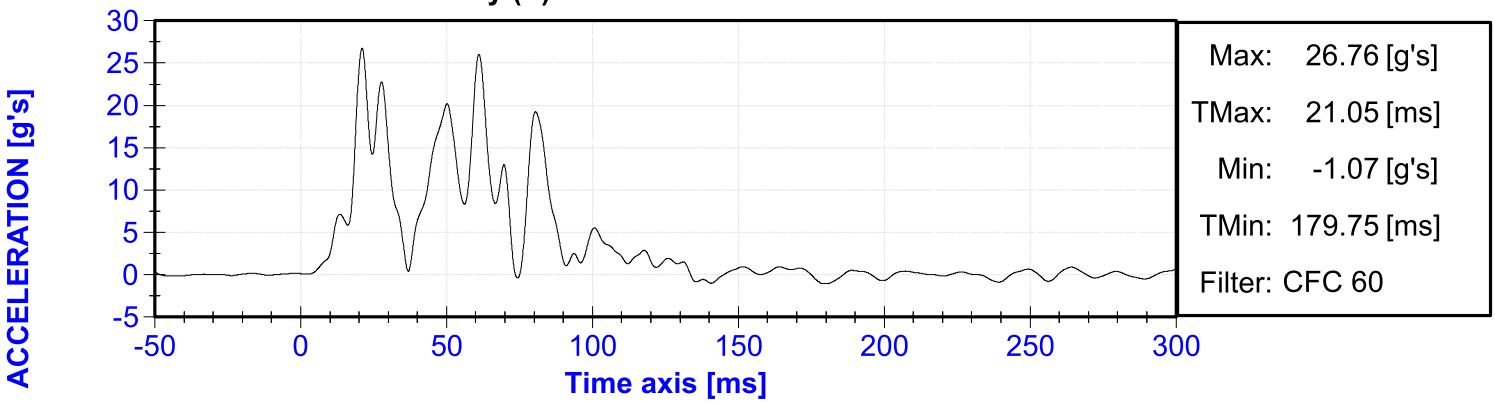
Vehicle Center of Gravity (X) Acceleration vs. Time



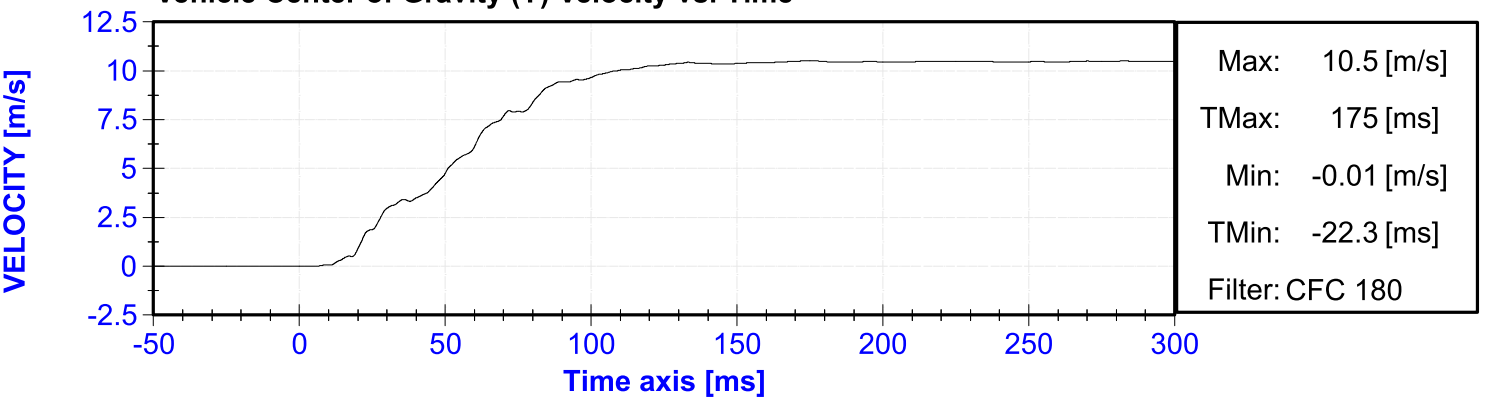
Vehicle Center of Gravity (X) Velocity vs. Time



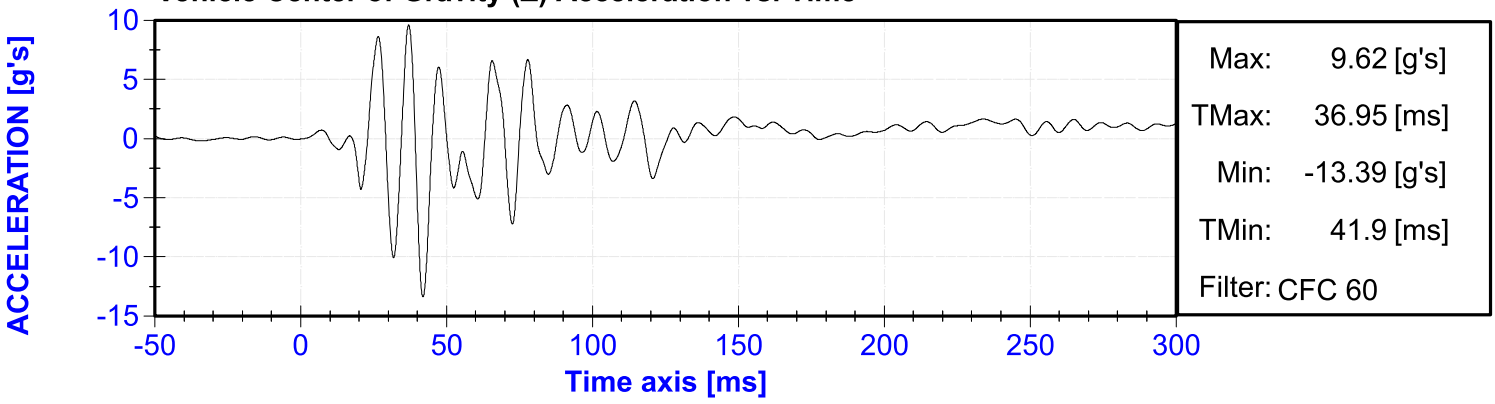
Vehicle Center of Gravity (Y) Acceleration vs. Time



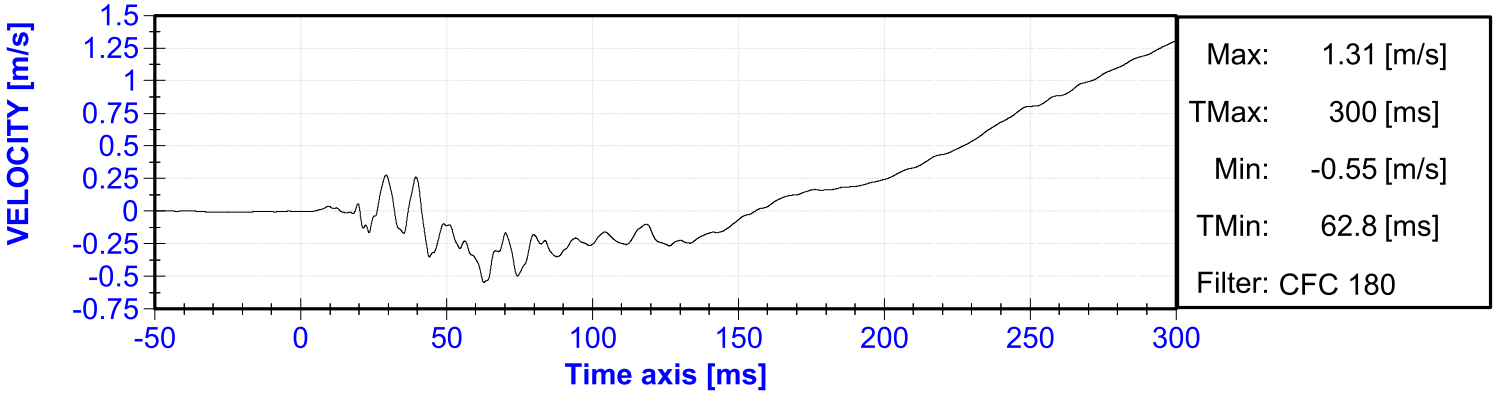
Vehicle Center of Gravity (Y) Velocity vs. Time



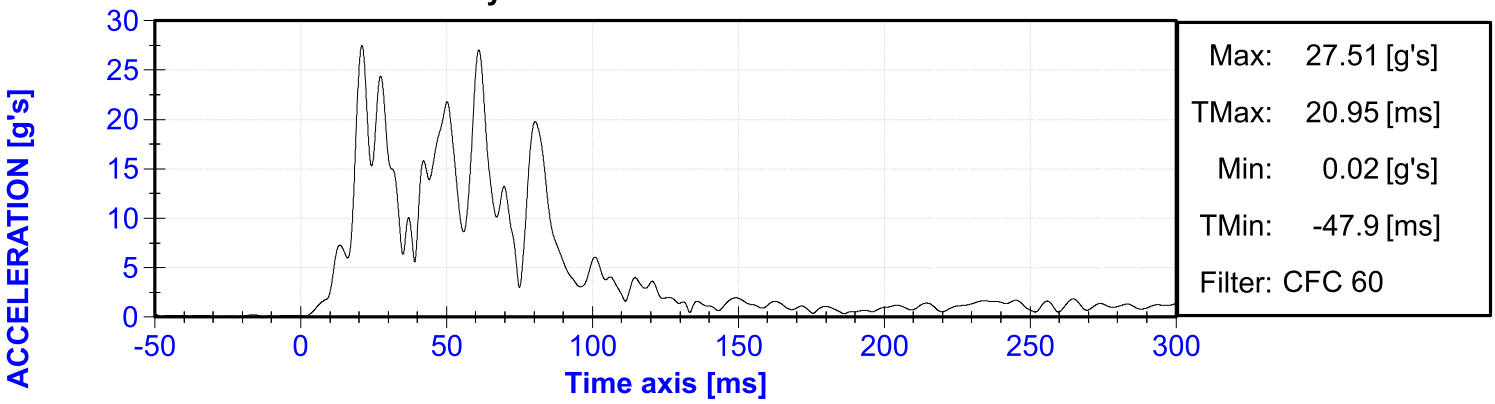
Vehicle Center of Gravity (Z) Acceleration vs. Time



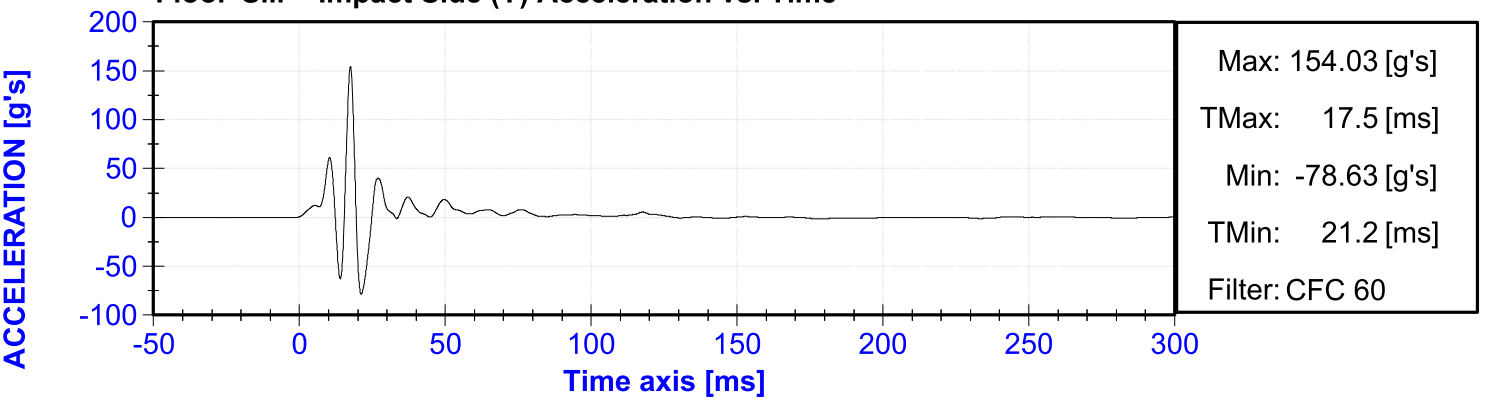
Vehicle Center of Gravity (Z) Velocity vs. Time



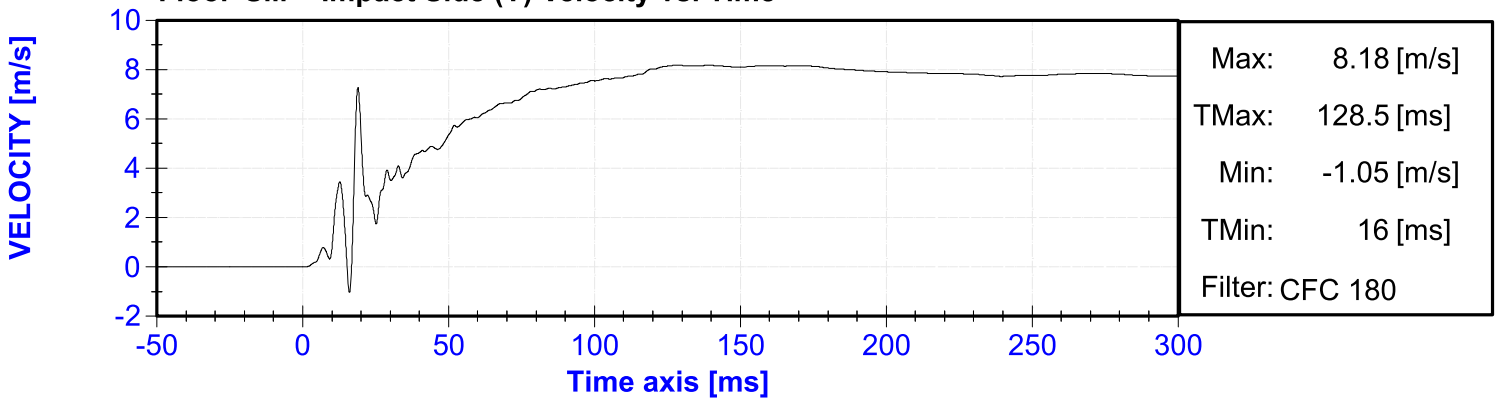
Vehicle Center of Gravity Resultant Acceleration vs. Time



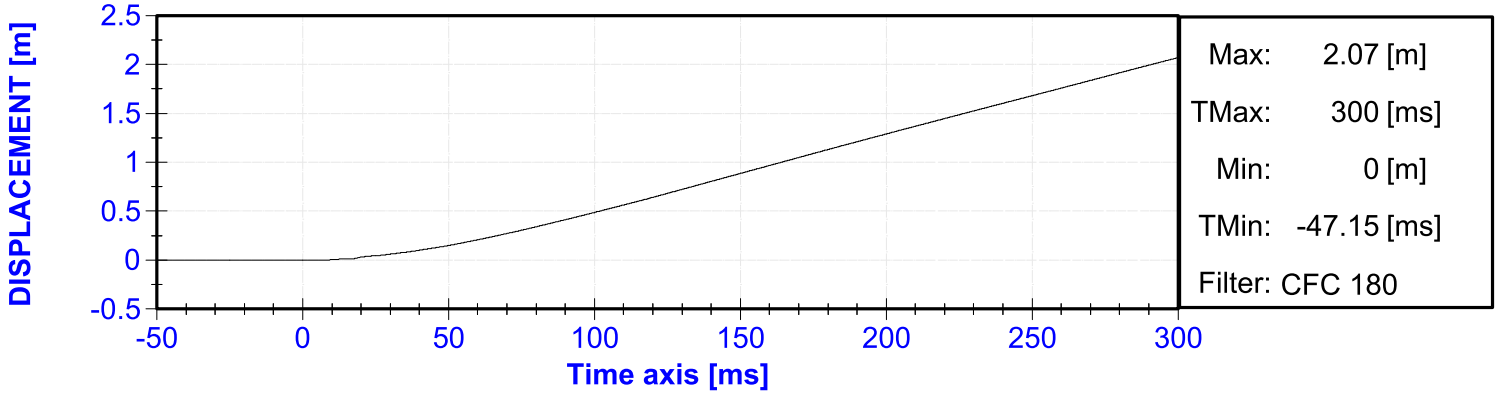
Floor Sill – Impact Side (Y) Acceleration vs. Time



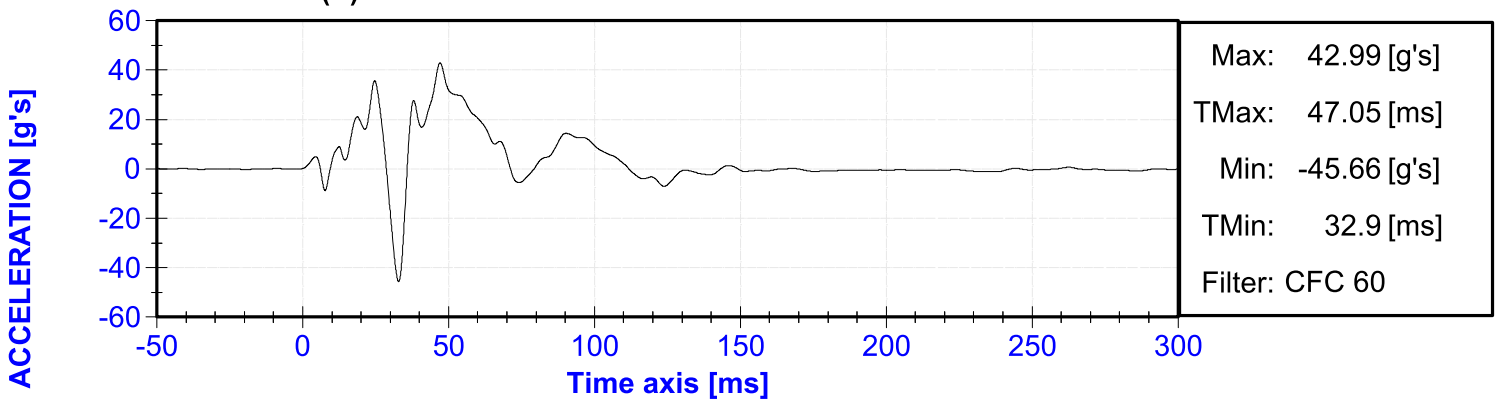
Floor Sill – Impact Side (Y) Velocity vs. Time



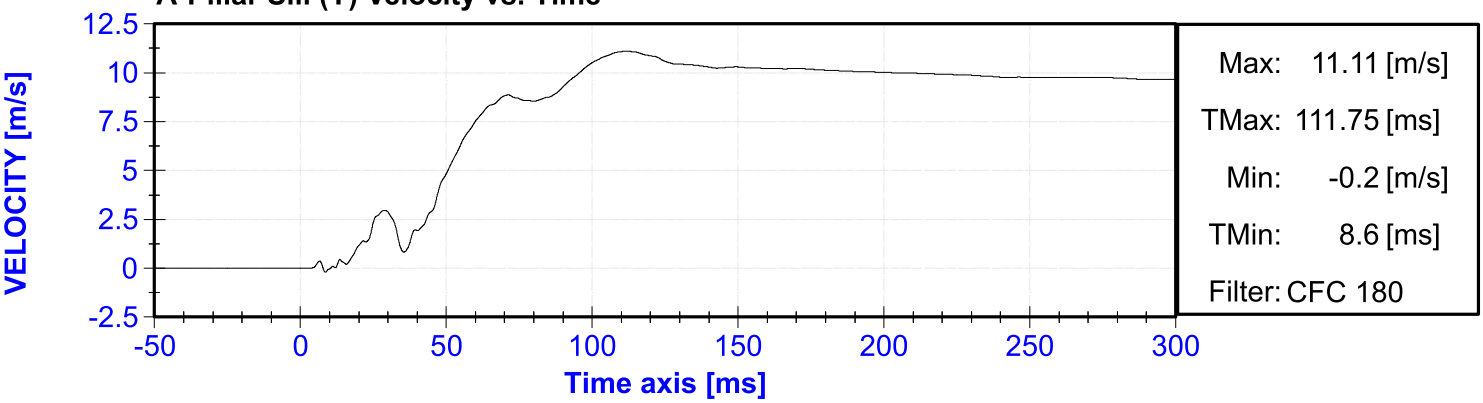
Floor Sill – Impact Side (Y) Displacement vs. Time



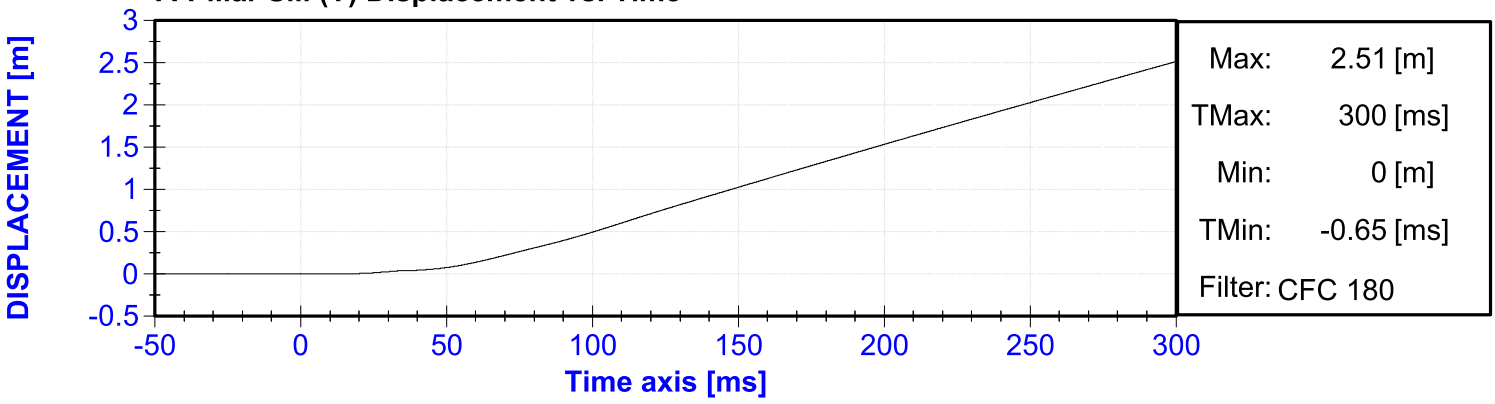
A-Pillar Sill (Y) Acceleration vs. Time



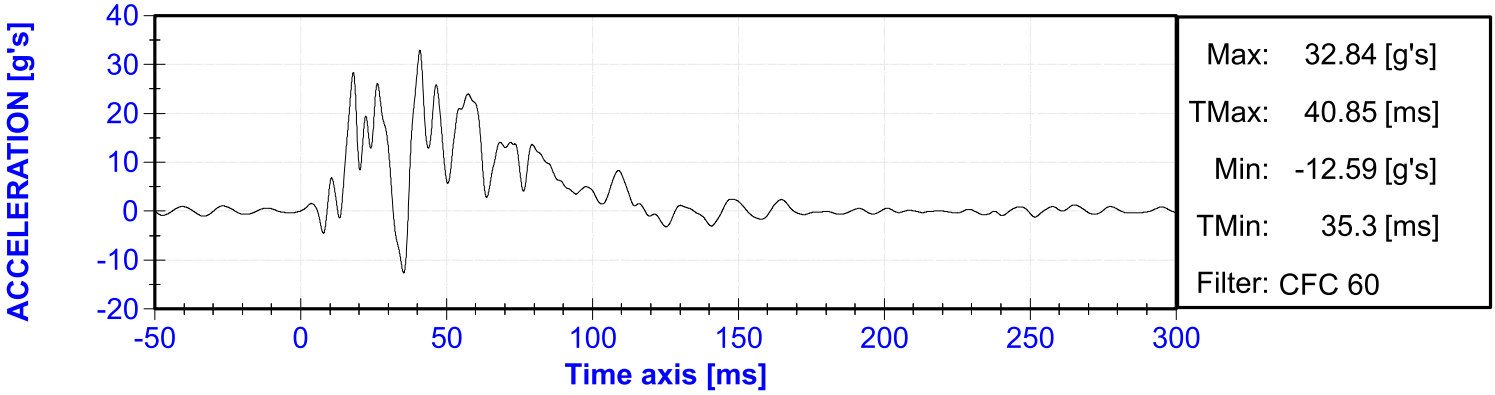
A-Pillar Sill (Y) Velocity vs. Time



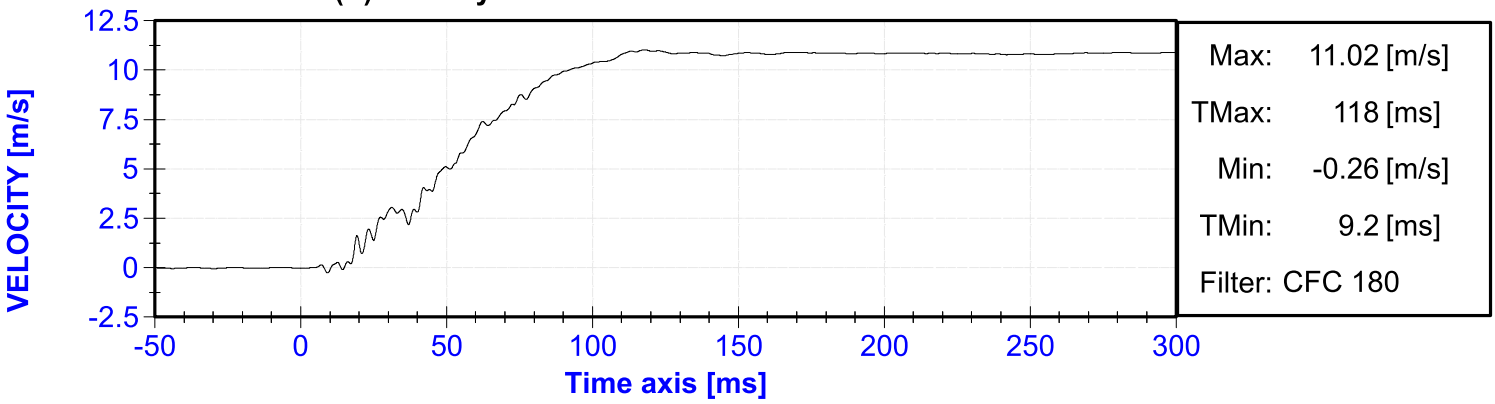
A-Pillar Sill (Y) Displacement vs. Time



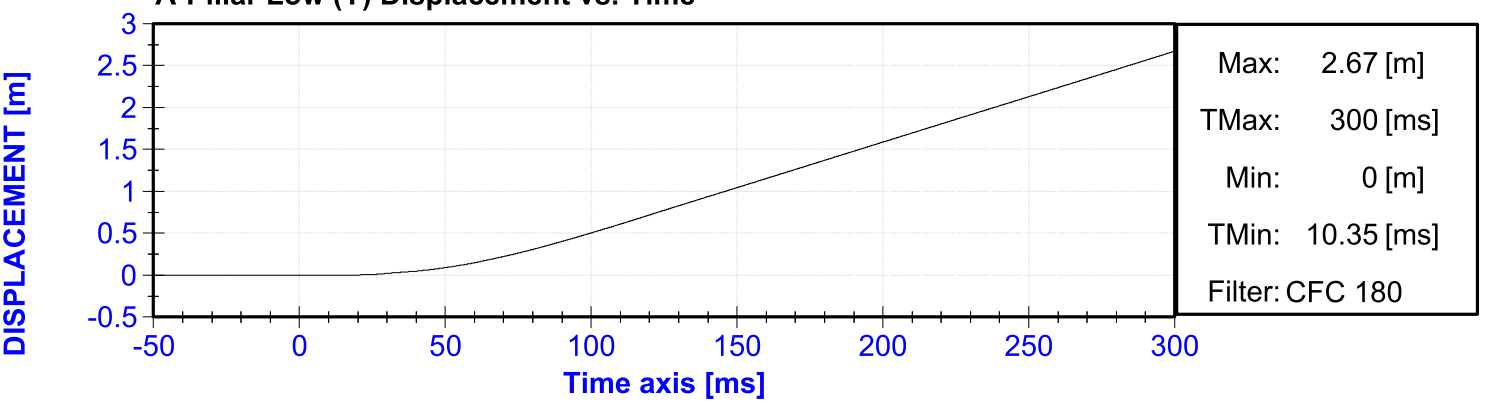
A-Pillar Low (Y) Acceleration vs. Time



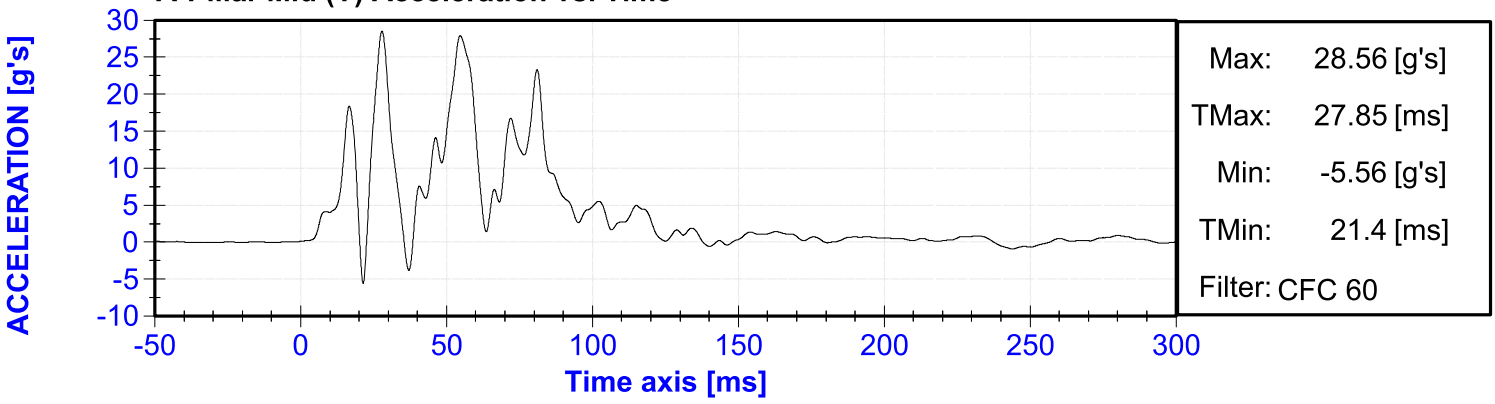
A-Pillar Low (Y) Velocity vs. Time



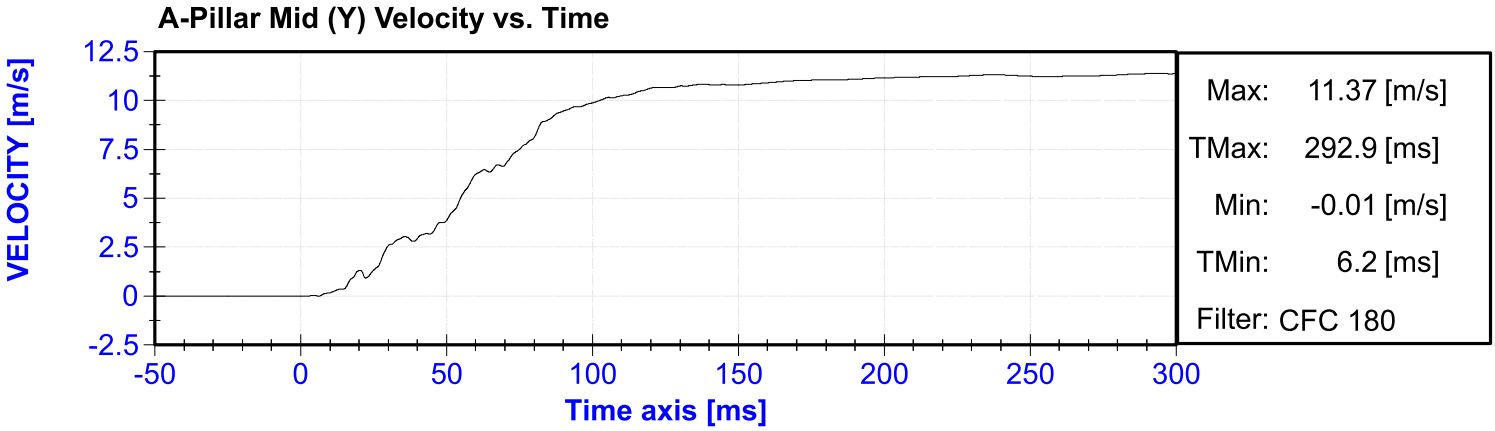
A-Pillar Low (Y) Displacement vs. Time



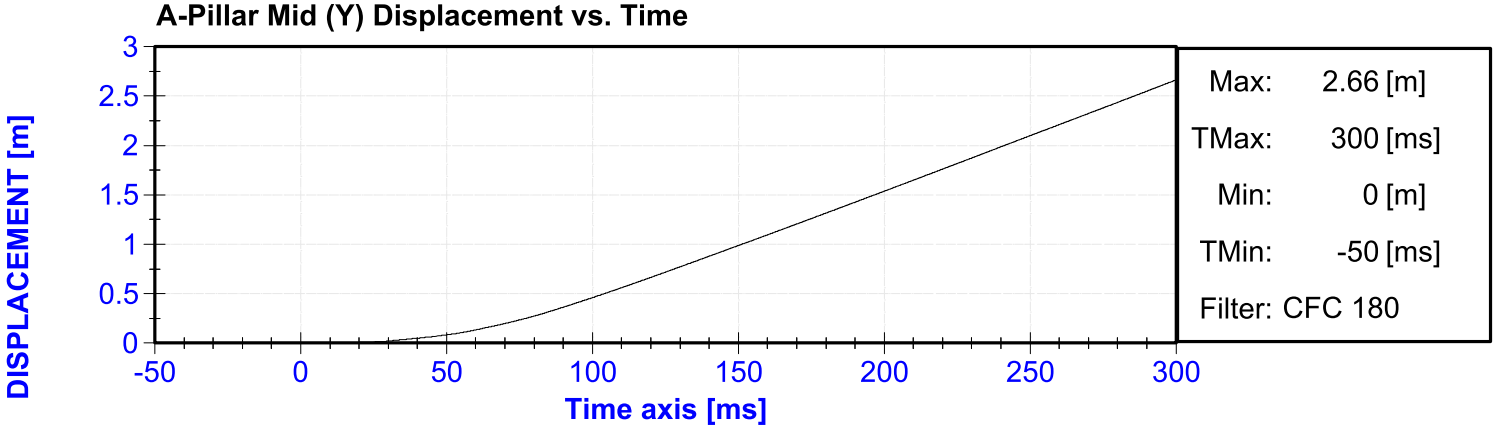
A-Pillar Mid (Y) Acceleration vs. Time



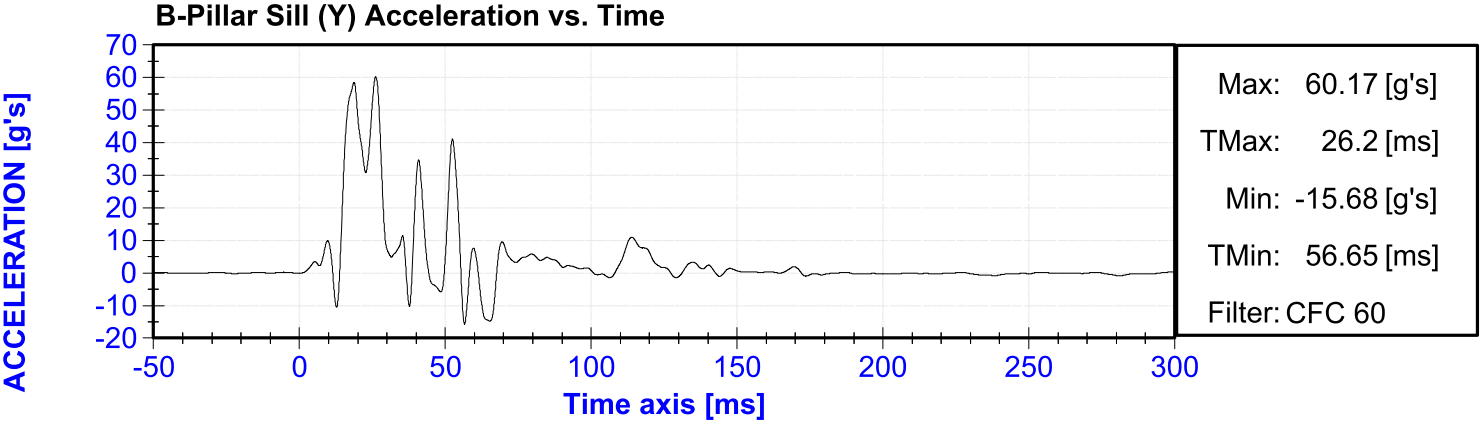
A-Pillar Mid (Y) Velocity vs. Time



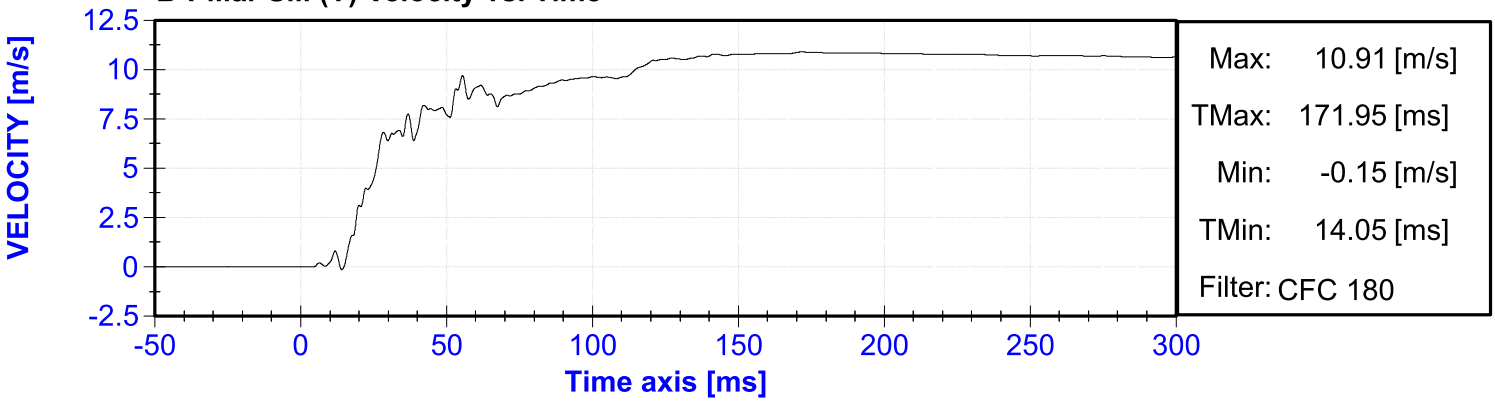
A-Pillar Mid (Y) Displacement vs. Time



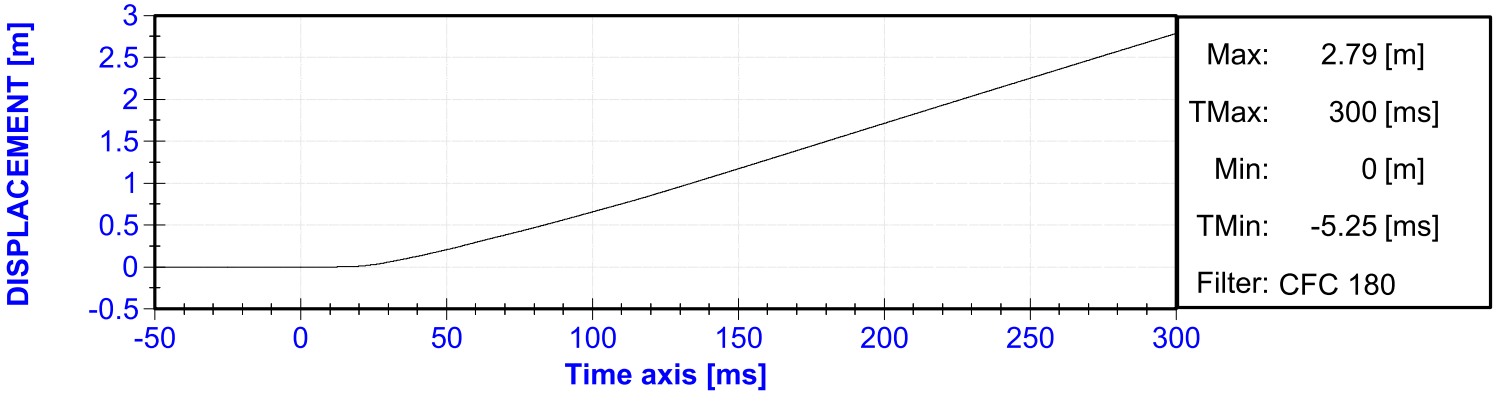
B-Pillar Sill (Y) Acceleration vs. Time



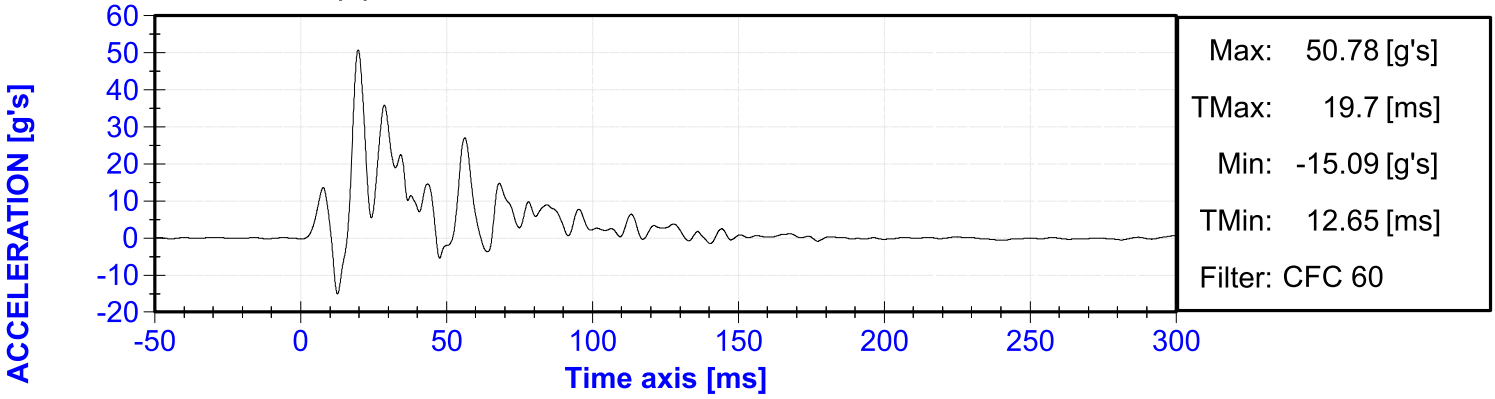
B-Pillar Sill (Y) Velocity vs. Time



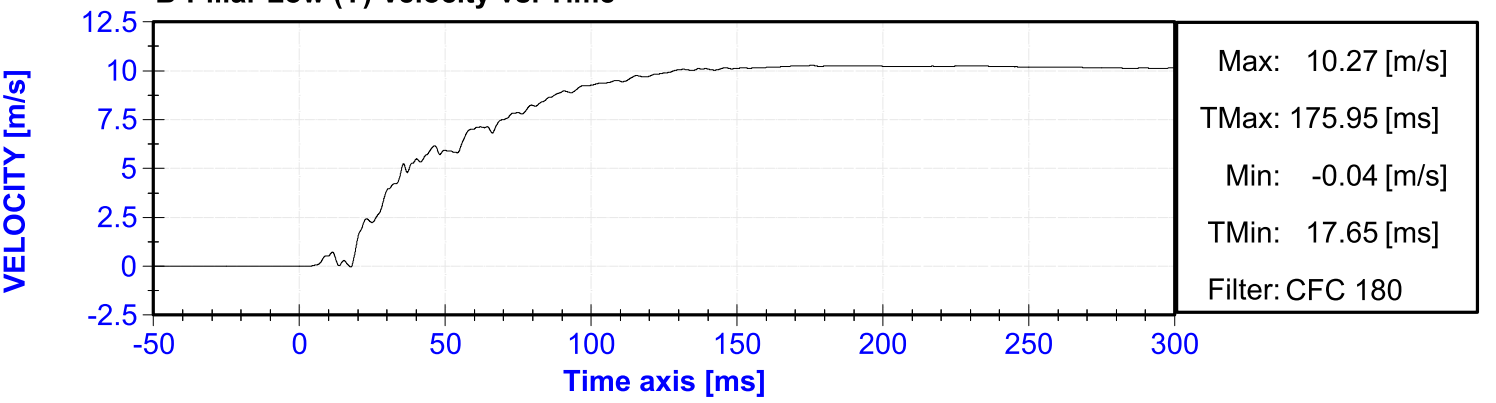
B-Pillar Sill (Y) Displacement vs. Time



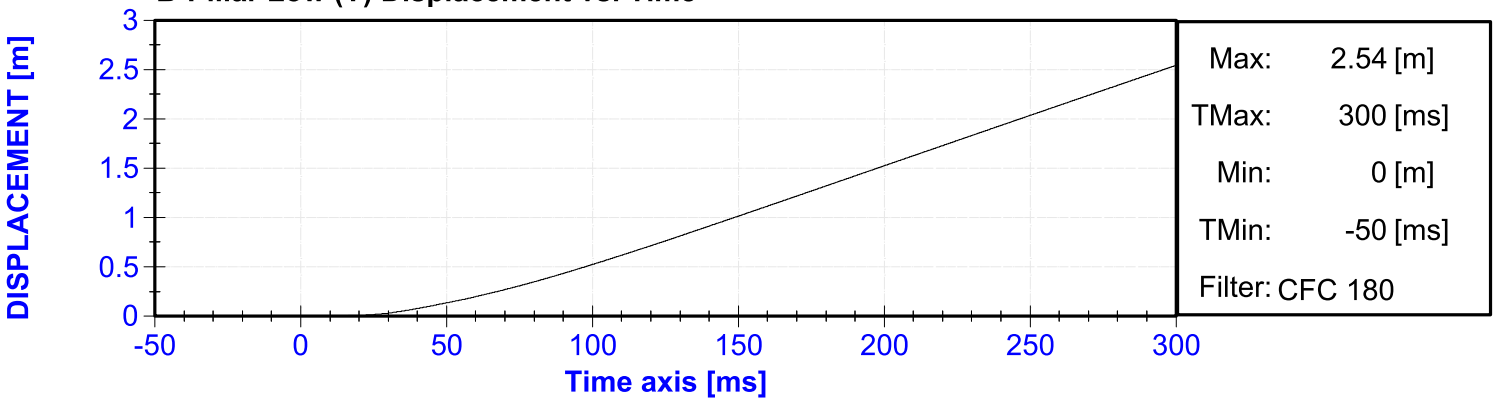
B-Pillar Low (Y) Acceleration vs. Time



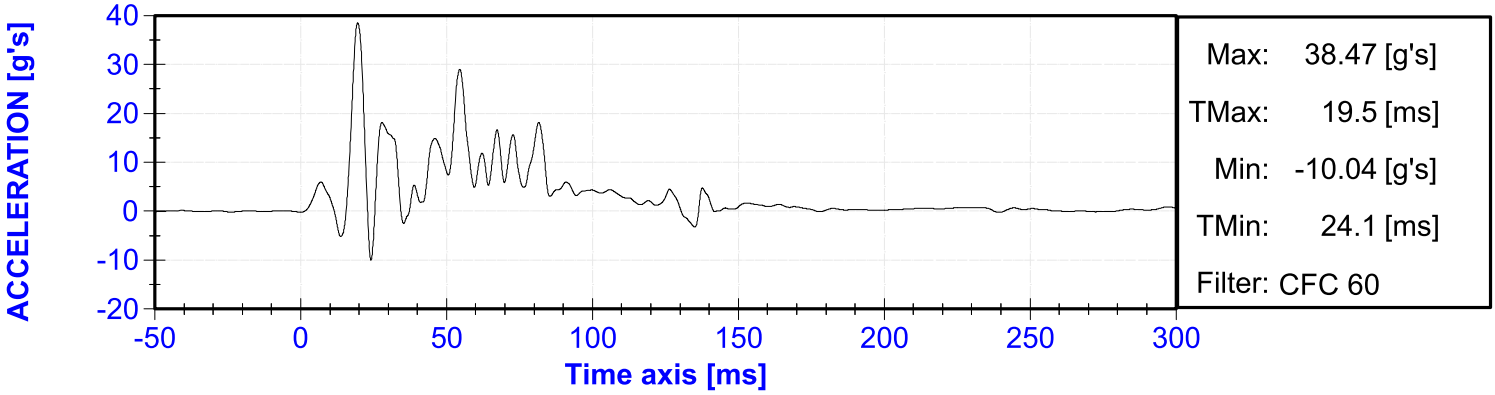
B-Pillar Low (Y) Velocity vs. Time



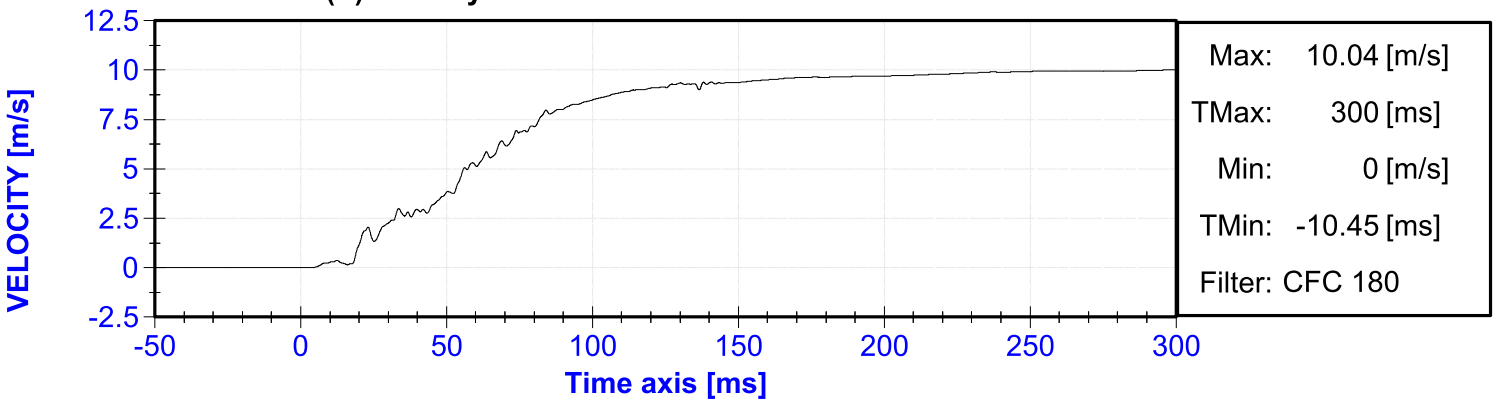
B-Pillar Low (Y) Displacement vs. Time



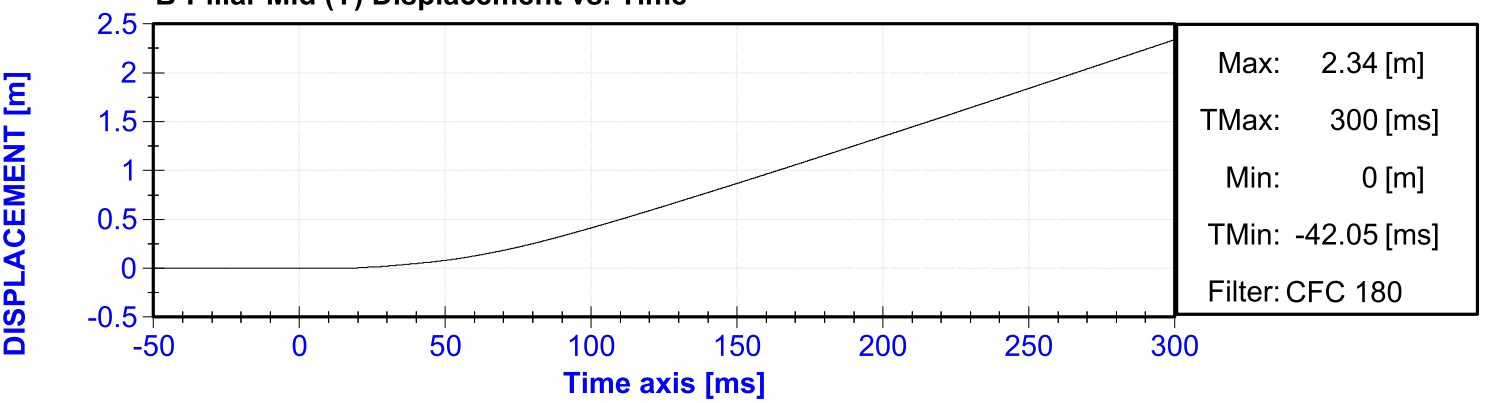
B-Pillar Mid (Y) Acceleration vs. Time

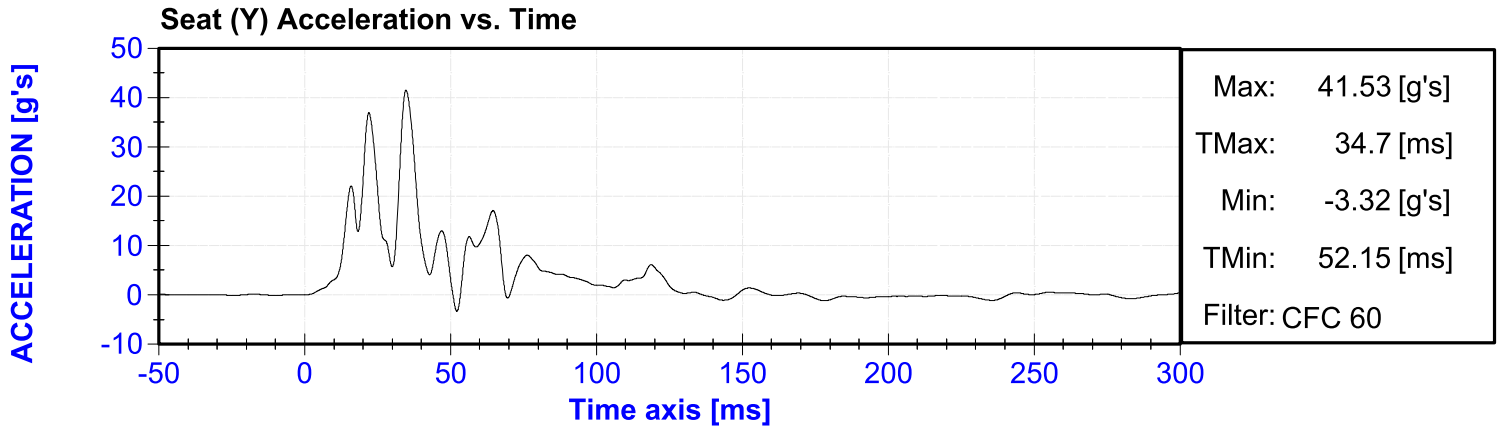


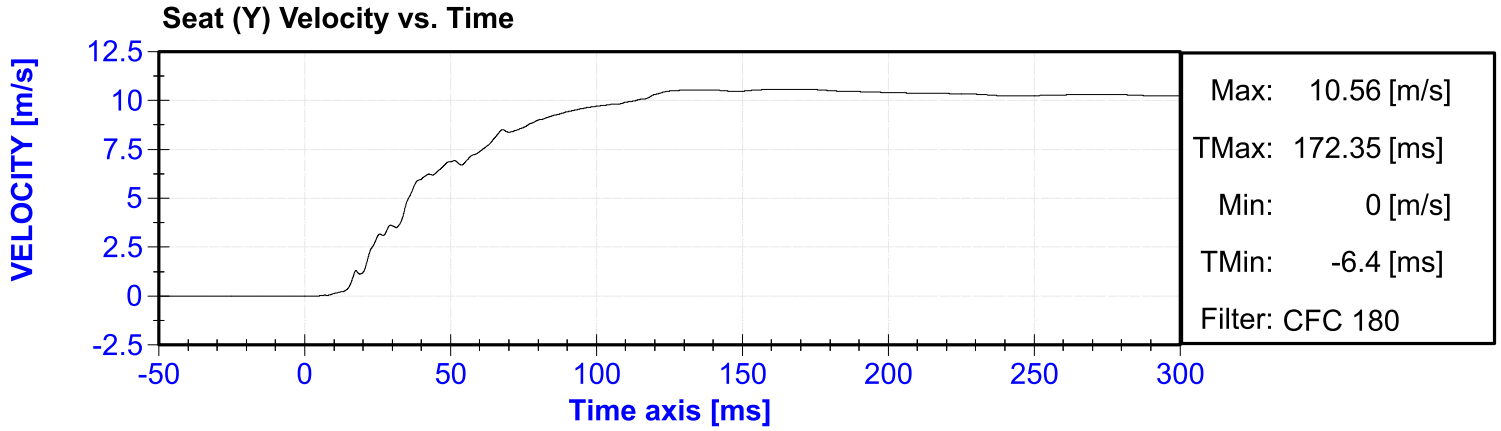
B-Pillar Mid (Y) Velocity vs. Time

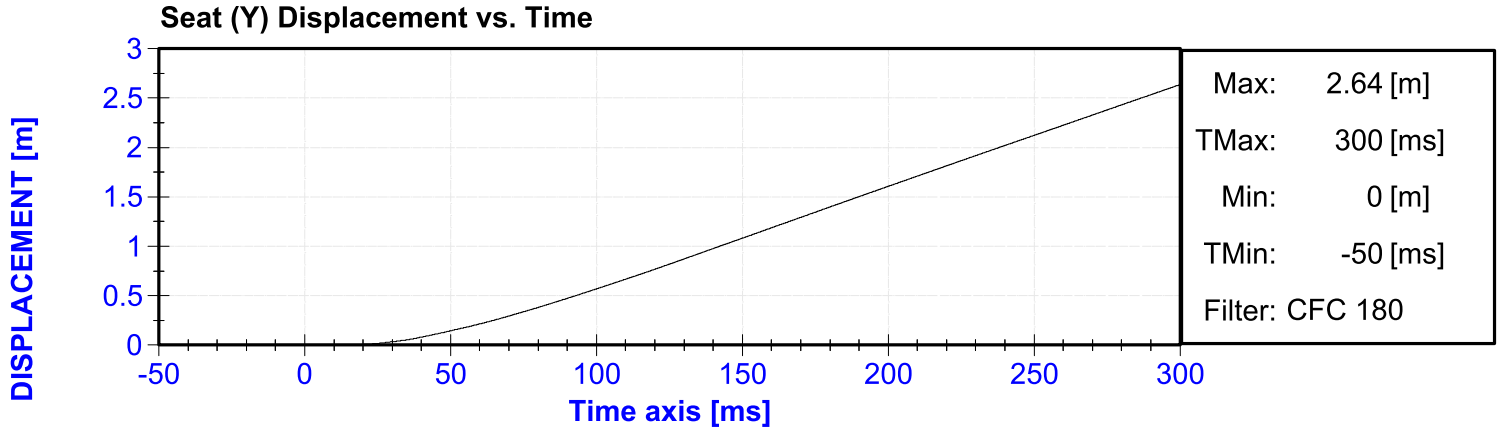


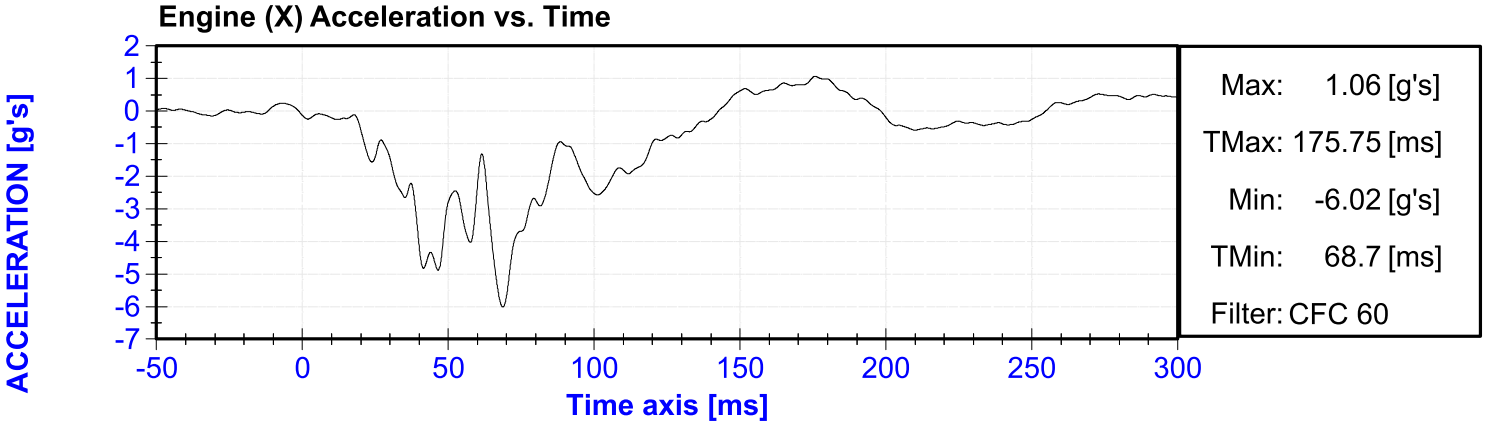
B-Pillar Mid (Y) Displacement vs. Time

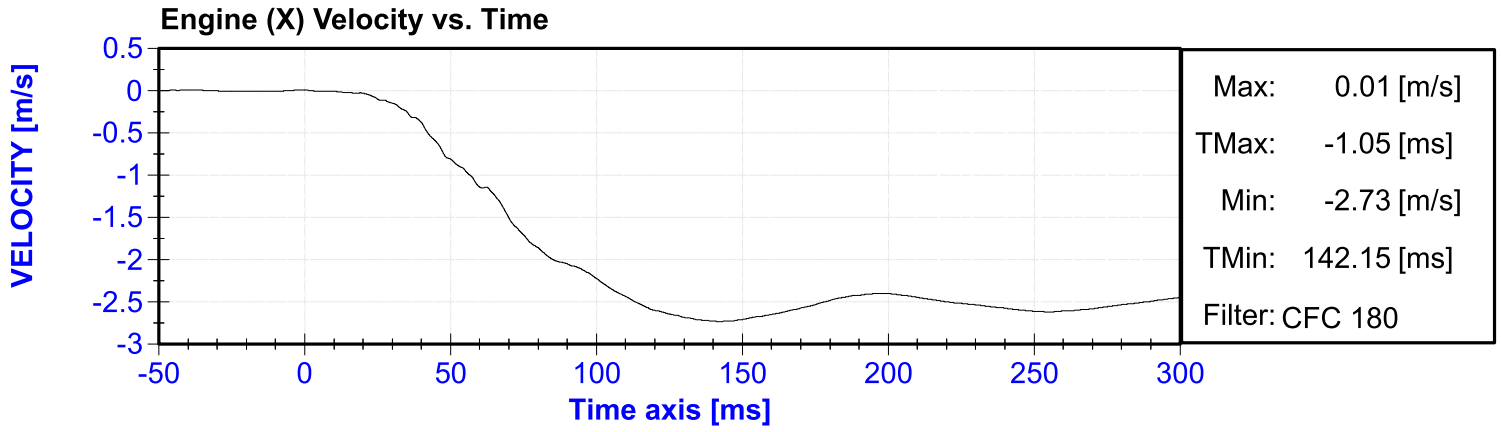


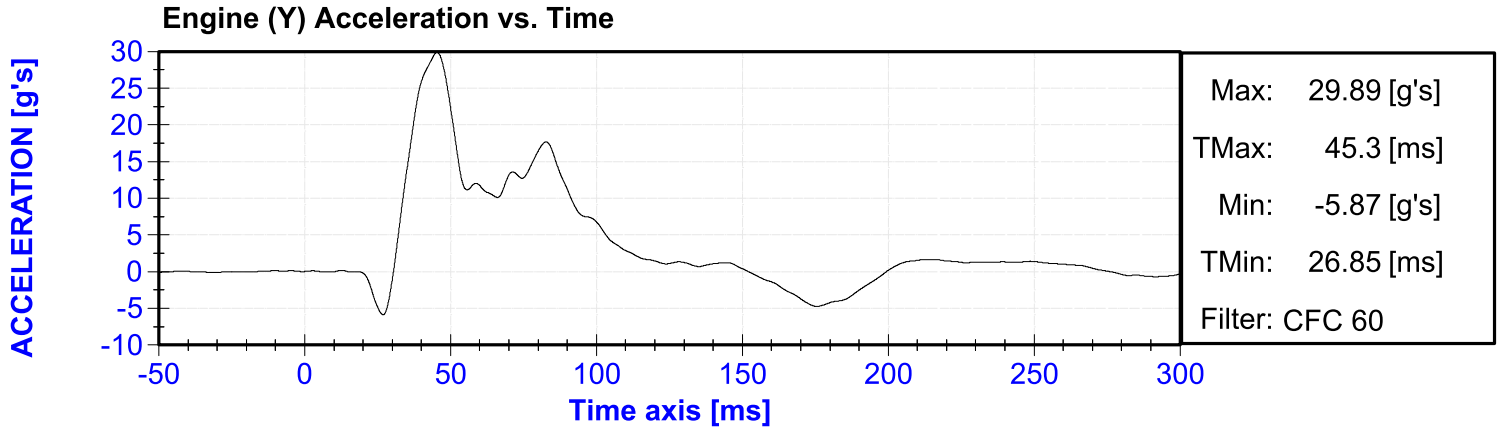

Seat (Y) Acceleration vs. Time
ACCELERATION [g's]
50
40
30
20
10
0
-10
-50
0
50
100
150
200
250
300
Time axis [ms]
Max: 41.53 [g's]
TMax: 34.7 [ms]
Min: -3.32 [g's]
TMin: 52.15 [ms]
Filter: CFC 60

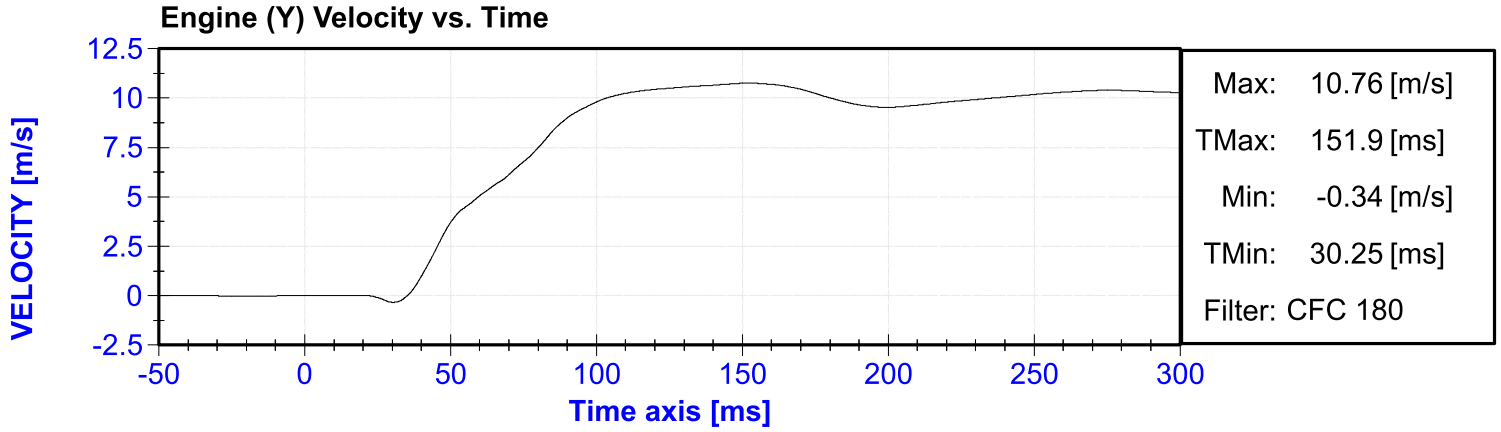

Seat (Y) Velocity vs. Time
VELOCITY [m/s]
12.5
10
7.5
5
2.5
0
-2.5
-50
0
50
100
150
200
250
300
Time axis [ms]
Max: 10.56 [m/s]
TMax: 172.35 [ms]
Min: 0 [m/s]
TMin: -6.4 [ms]
Filter: CFC 180

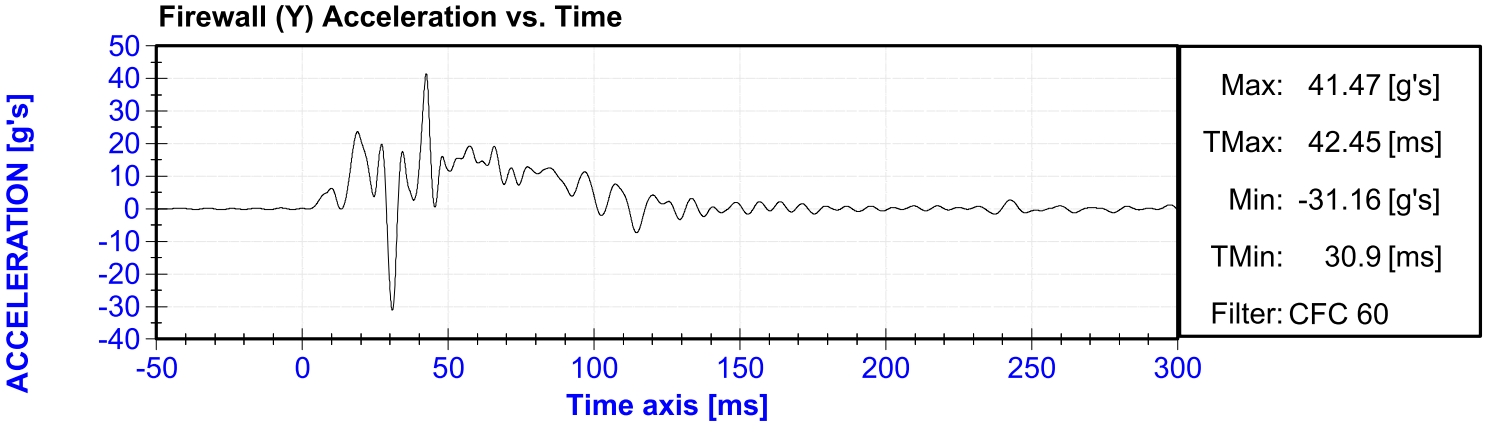

Seat (Y) Displacement vs. Time
DISPLACEMENT [m]
3
2.5
2
1.5
1
0.5
0
-50
0
50
100
150
200
250
300
Time axis [ms]
Max: 2.64 [m]
TMax: 300 [ms]
Min: 0 [m]
TMin: -50 [ms]
Filter: CFC 180


Engine (X) Acceleration vs. Time
ACCELERATION [g's]
2
1
0
-1
-2
-3
-4
-5
-6
-7
-50
0
50
100
150
200
250
300
Time axis [ms]
Max: 1.06 [g's]
TMax: 175.75 [ms]
Min: -6.02 [g's]
TMin: 68.7 [ms]
Filter: CFC 60

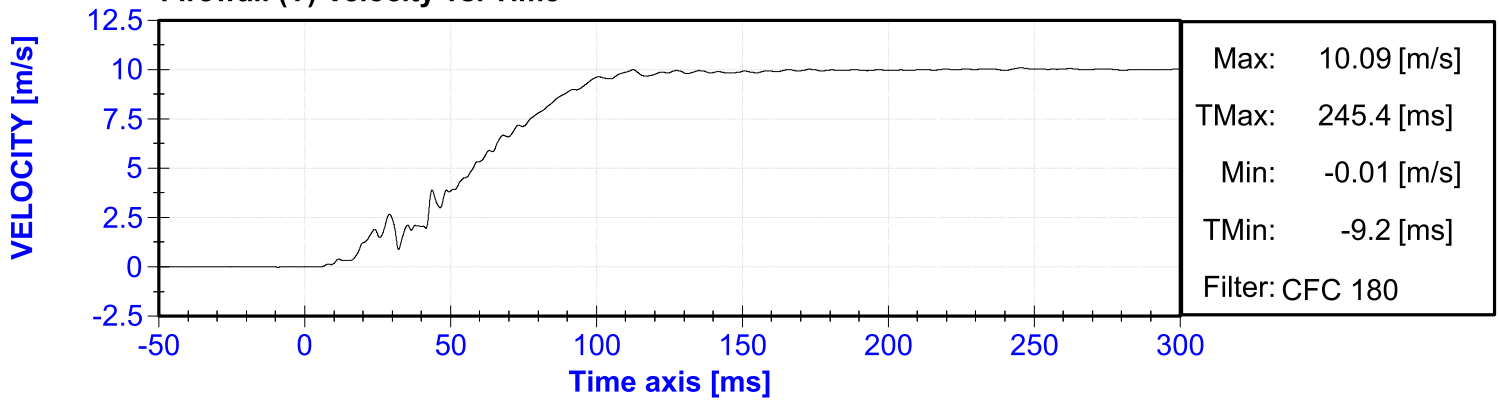

Engine (X) Velocity vs. Time
VELOCITY [m/s]
0.5
0
-0.5
-1
-1.5
-2
-2.5
-3
-50
0
50
100
150
200
250
300
Time axis [ms]
Max: 0.01 [m/s]
TMax: -1.05 [ms]
Min: -2.73 [m/s]
TMin: 142.15 [ms]
Filter: CFC 180


Engine (Y) Acceleration vs. Time
ACCELERATION [g's]
30
25
20
15
10
5
0
-5
-10
-50
0
50
100
150
200
250
300
Time axis [ms]
Max: 29.89 [g's]
TMax: 45.3 [ms]
Min: -5.87 [g's]
TMin: 26.85 [ms]
Filter: CFC 60

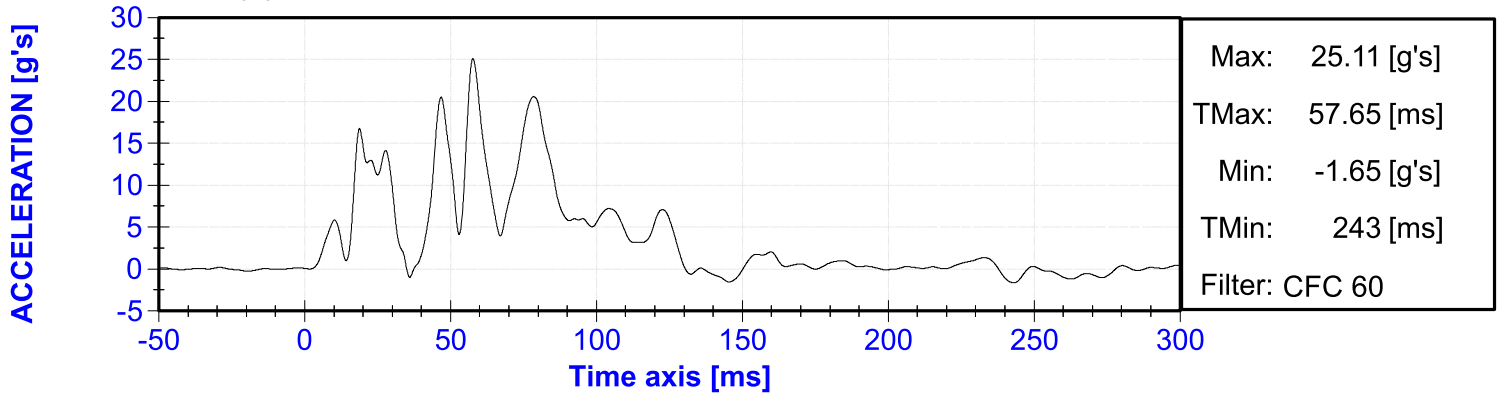

Engine (Y) Velocity vs. Time
VELOCITY [m/s]
12.5
10
7.5
5
2.5
0
-2.5
-50
0
50
100
150
200
250
300
Time axis [ms]
Max: 10.76 [m/s]
TMax: 151.9 [ms]
Min: -0.34 [m/s]
TMin: 30.25 [ms]
Filter: CFC 180


Firewall (Y) Acceleration vs. Time
ACCELERATION [g's]
50
40
30
20
10
0
-10
-20
-30
-40
-50
0
50
100
150
200
250
300
Time axis [ms]
Max: 41.47 [g's]
TMax: 42.45 [ms]
Min: -31.16 [g's]
TMin: 30.9 [ms]
Filter: CFC 60

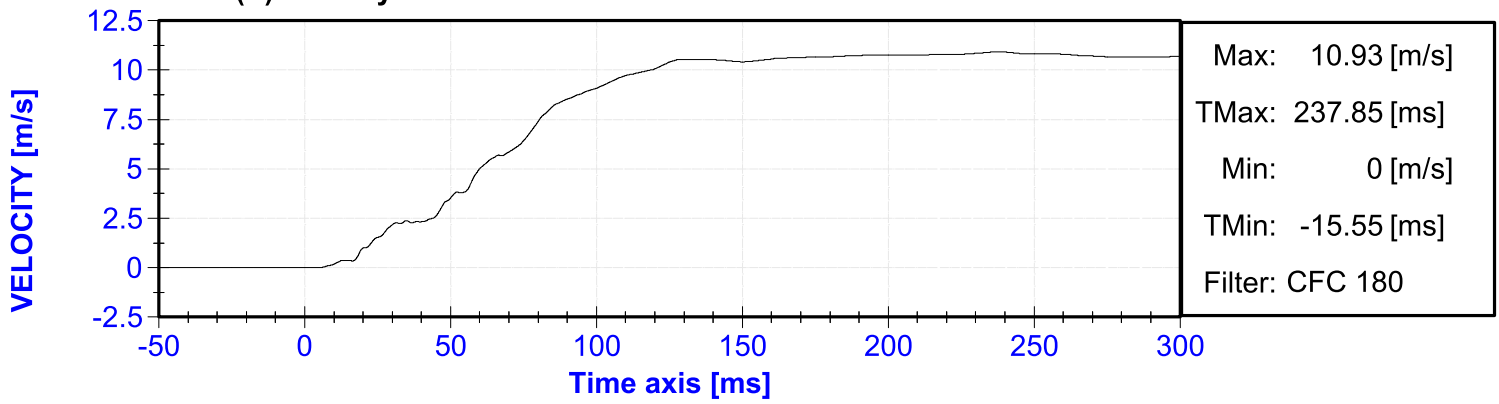
Firewall (Y) Velocity vs. Time



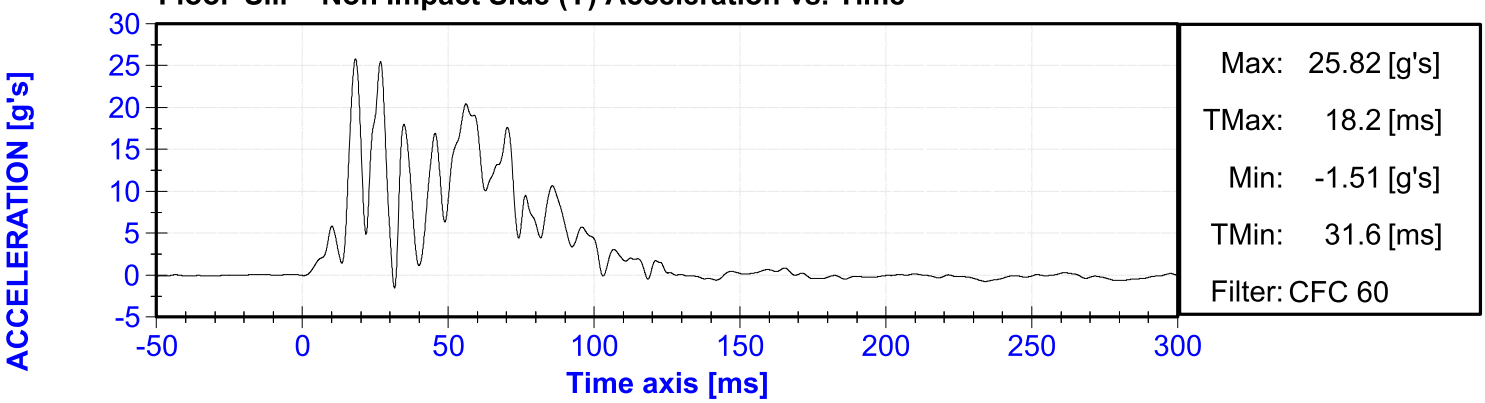
Roof (Y) Acceleration vs. Time



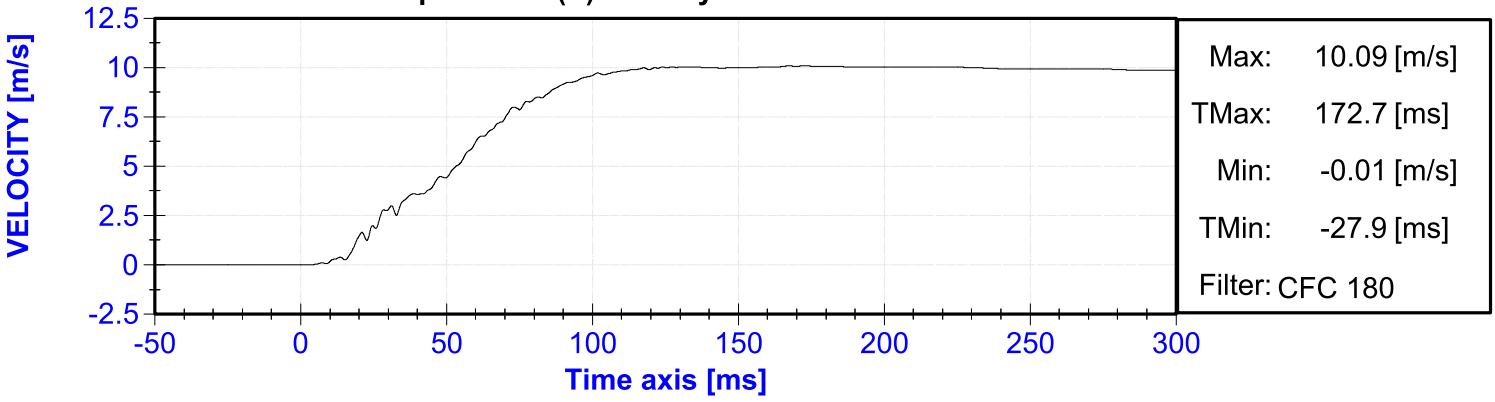
Roof (Y) Velocity vs. Time



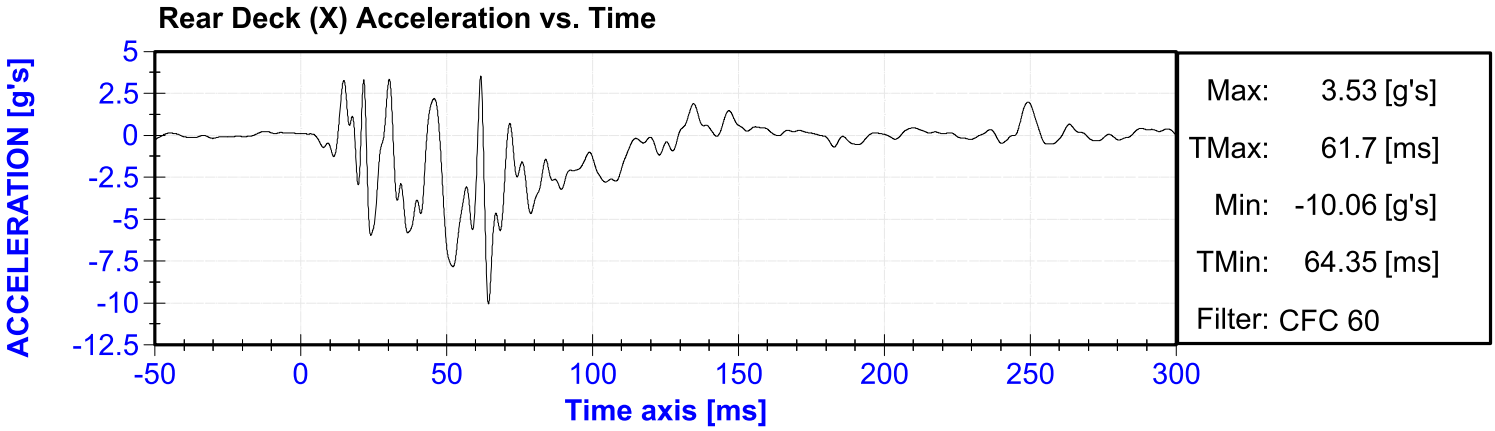
Floor Sill – Non Impact Side (Y) Acceleration vs. Time



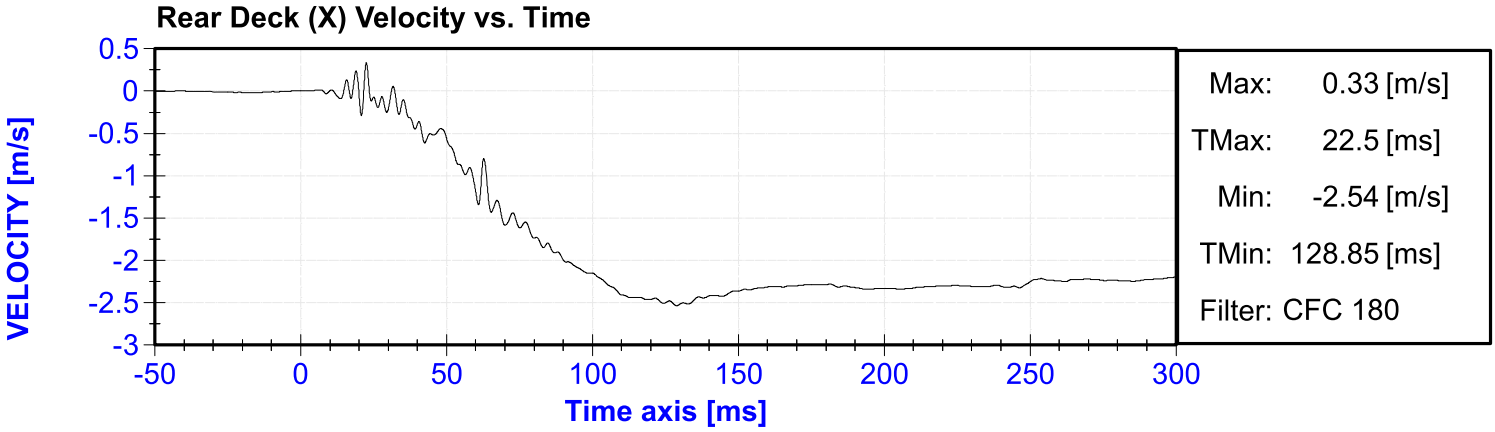
Floor Sill – Non Impact Side (Y) Velocity vs. Time



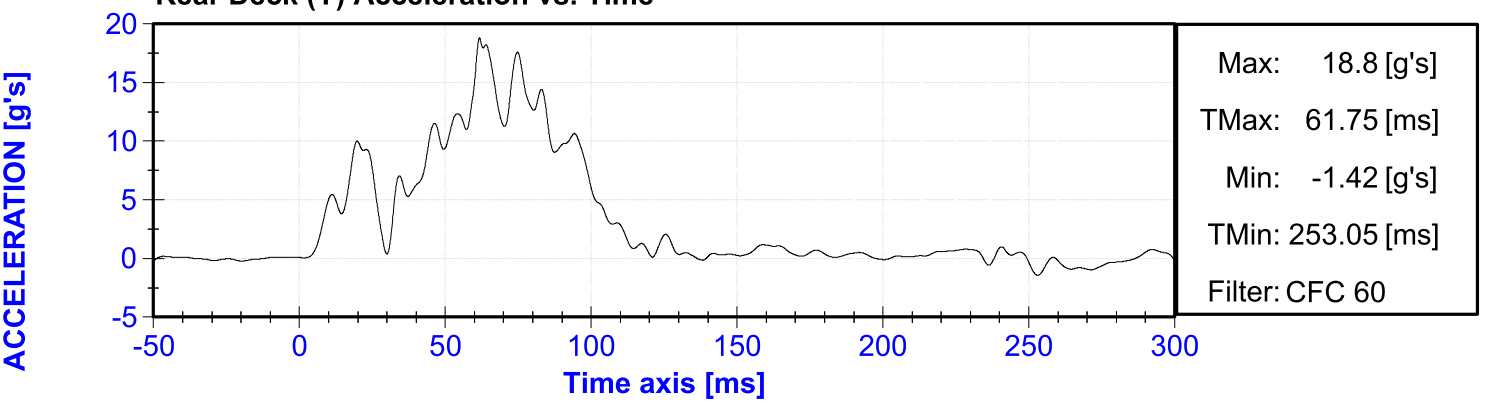
Rear Deck (X) Acceleration vs. Time

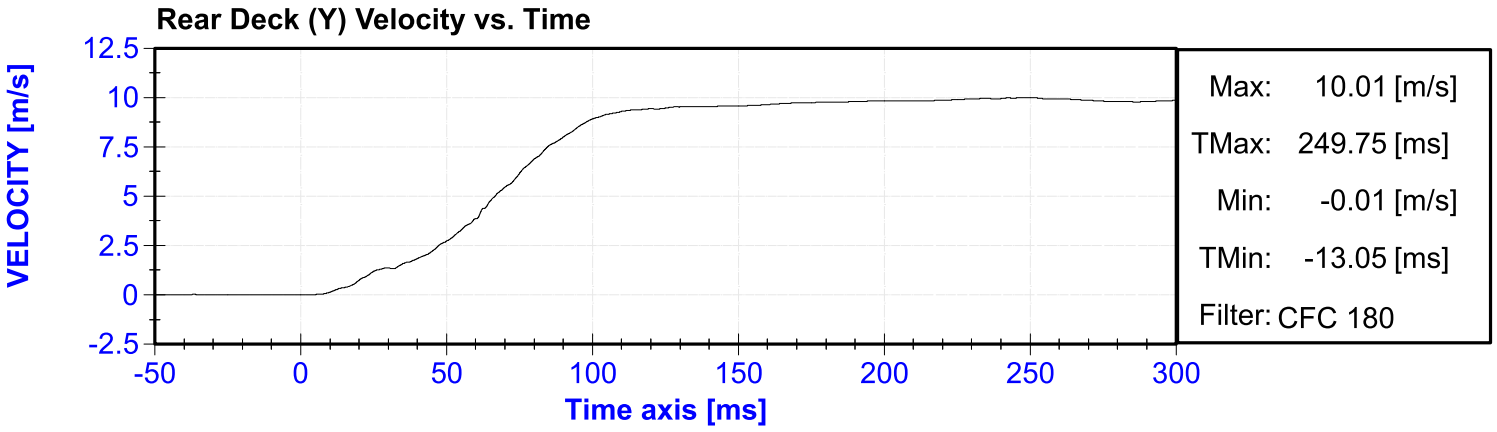


Rear Deck (X) Velocity vs. Time



Rear Deck (Y) Acceleration vs. Time




Rear Deck (Y) Velocity vs. Time
VELOCITY [m/s]
12.5
10
7.5
5
2.5
0
-2.5
-50
0
50
100
150
200
250
300
Time axis [ms]
Max: 10.01 [m/s]
TMax: 249.75 [ms]
Min: -0.01 [m/s]
TMin: -13.05 [ms]
Filter: CFC 180

APPENDIX IV

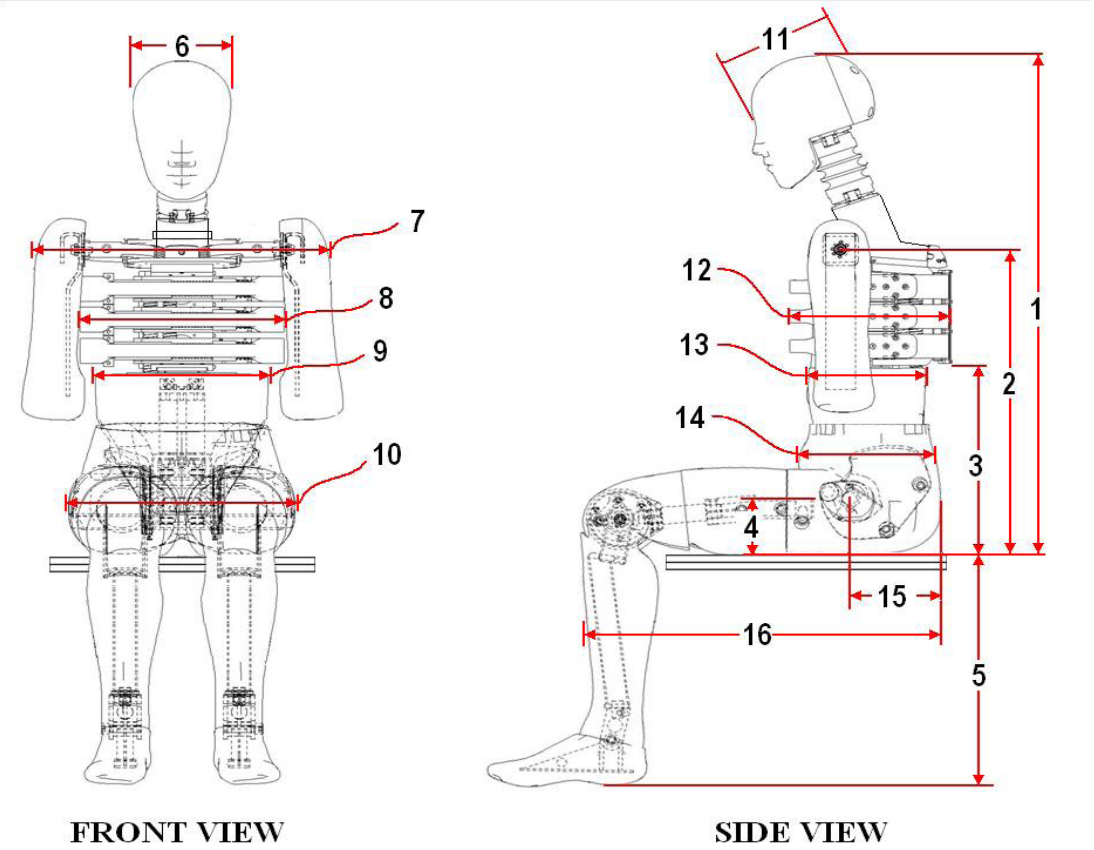
PRE-TEST DUMMY PERFORMANCE CALIBRATION TEST DATA

(Subpart U, ES-2re)

External Measurements - EuroSID-2re

Technician: J. Rios Date: 1/17/2025

Dummy Serial Number: D037



FRONT VIEW SIDE VIEW

Dim. No.	Description	Specification (mm)		Result (mm)	Pass/Fail
1	Sitting Height	900	918	912	Pass
2	Seat to Shoulder Joint	558	572	566	Pass
3	Seat to Lower Face of Thoracic Spine Box	346	356	352	Pass
4	Seat to Hip Joint (center of bolt)	97	103	101	Pass
5	Sole to Seat, Sitting	333	451	397	Pass
6	Head Width	152	158	154	Pass
7	Shoulder/Arm Width	461	479	472	Pass
8	Thorax Width	322	332	328	Pass
9	Abdomen Width	273	287	281	Pass
10	Pelvis Lap Width	359	373	364	Pass
11	Head Depth	196	206	200	Pass
12	Thorax Depth	262	272	268	Pass
13	Abdomen Depth	194	204	197	Pass
14	Pelvis Depth	235	245	239	Pass
15	Back of Buttocks to Hip Joint (center of bolt)	150	160	153	Pass
16	Back of Buttocks to Front Knee	597	615	601	Pass

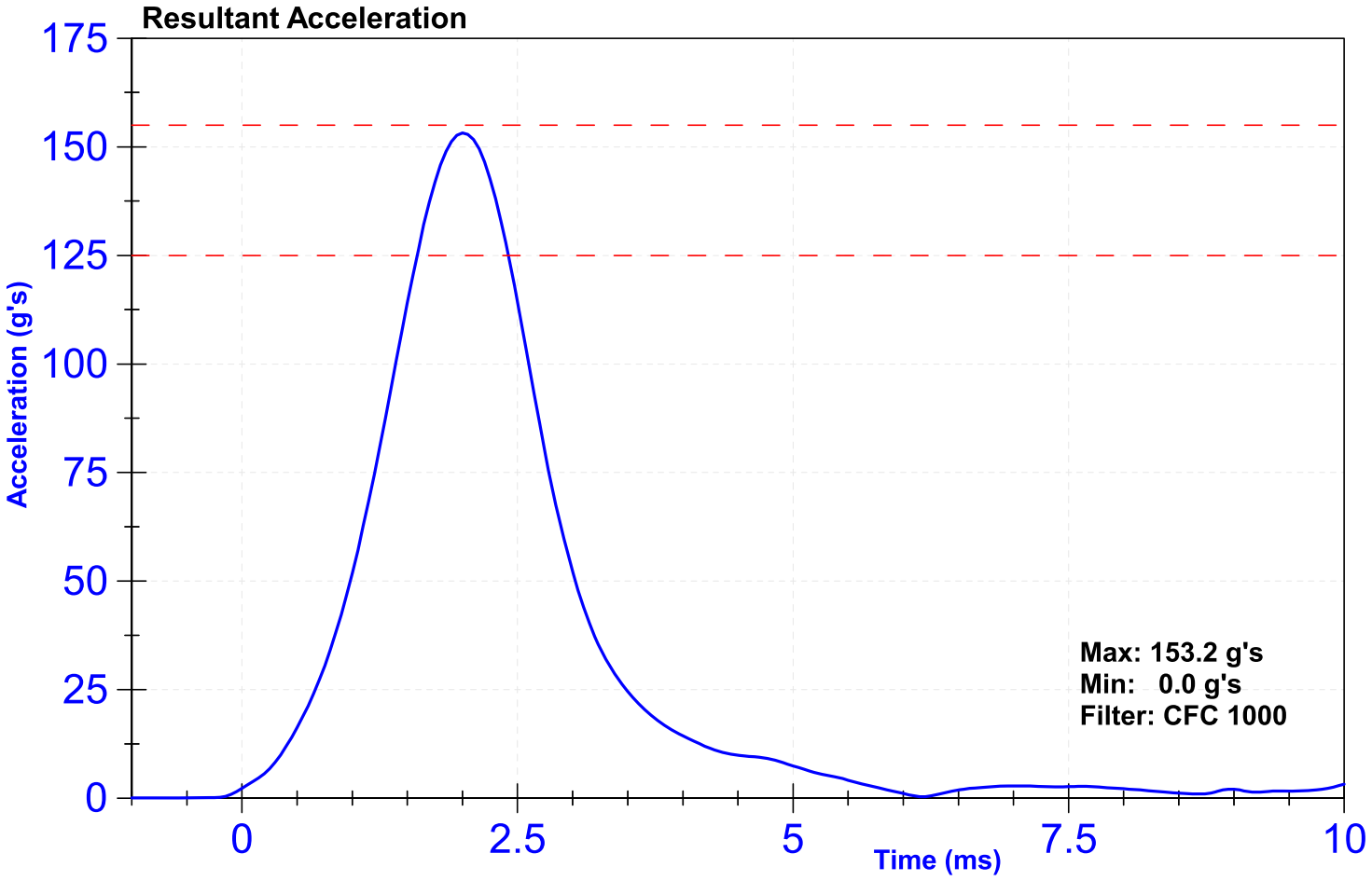
ATD Manufacturer	Humanetics	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

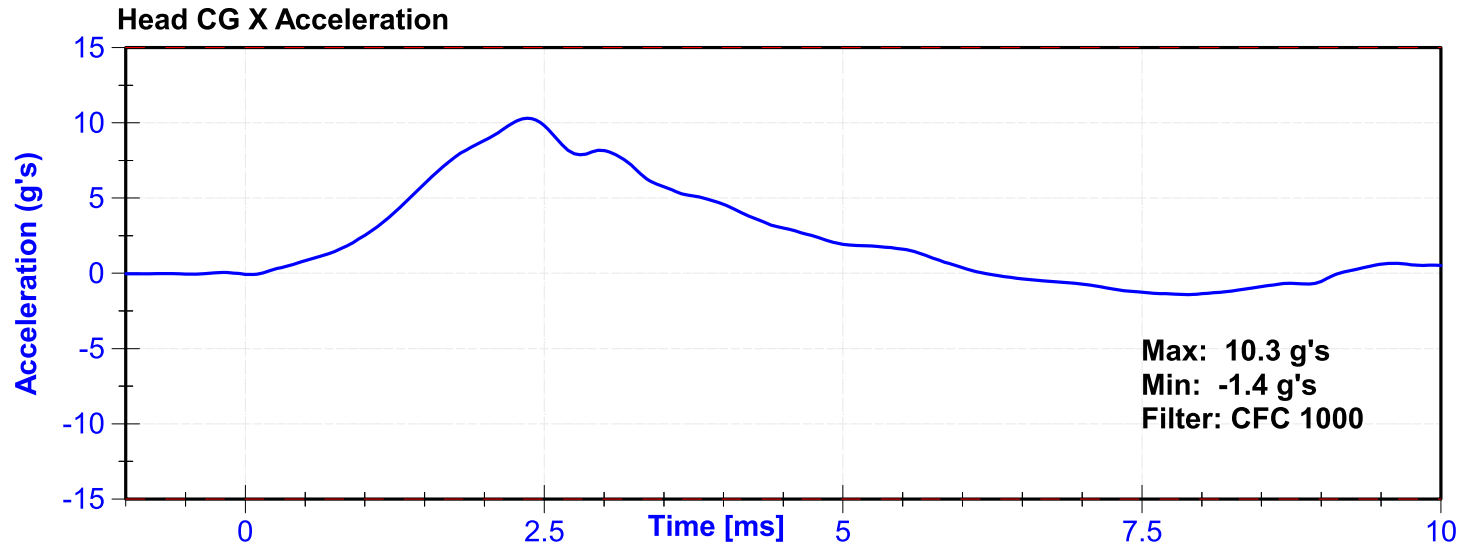
Results

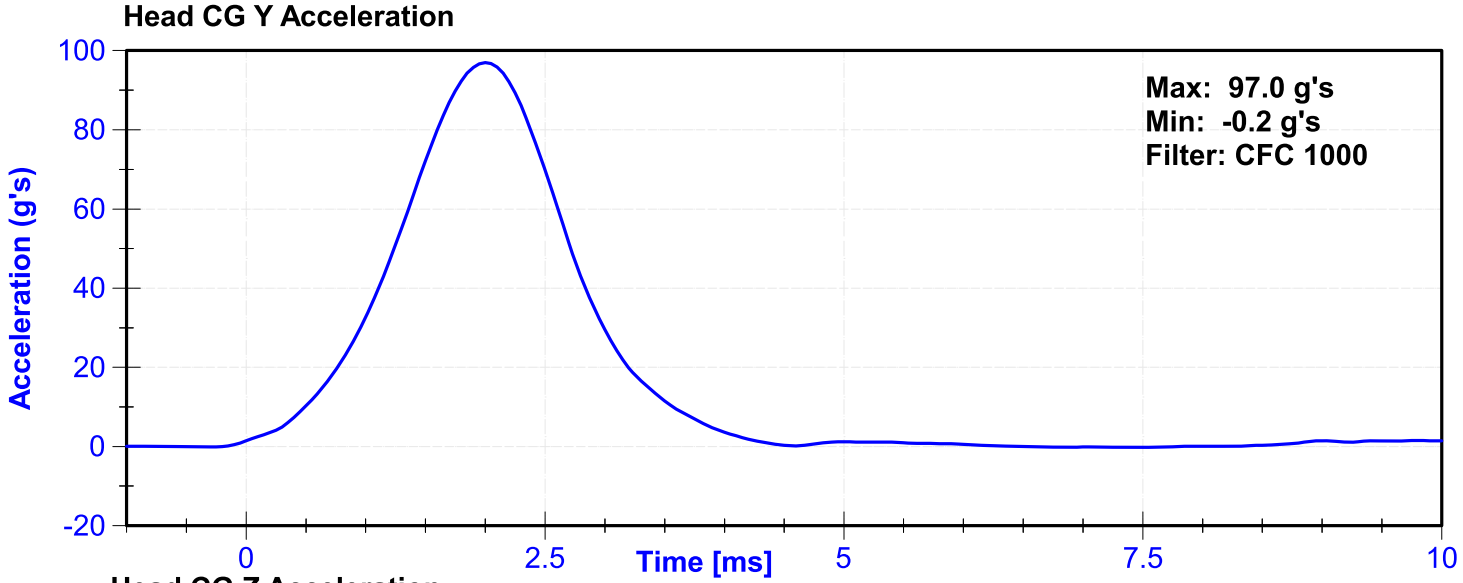
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Resultant Acceleration	125	155	g's	153.2	Pass
Oscillation	0	15	%	2.40	Pass
Fore-Aft Acceleration	-15	15	g's	10.3	Pass

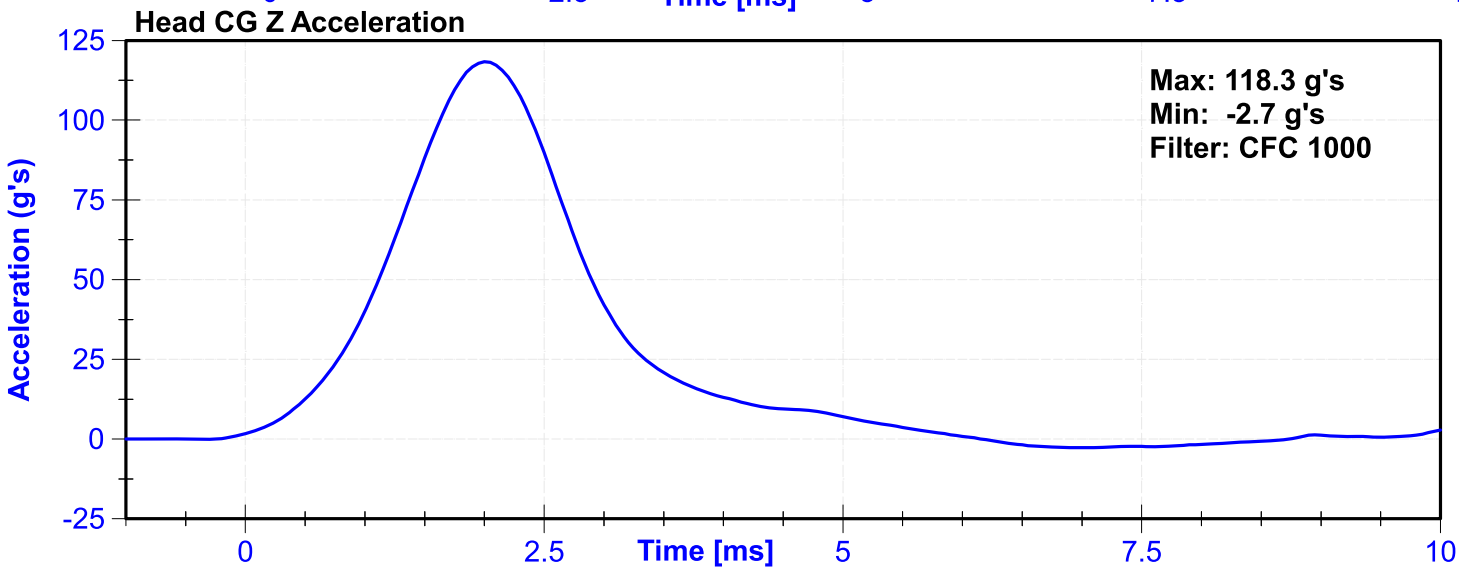
Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
X Accelerometer	Endevco	T21724	10/8/2024	4/6/2025
Y Accelerometer	Endevco	T22281	10/8/2024	4/6/2025
Z Accelerometer	Endevco	T26050	10/8/2024	4/6/2025




Head CG X Acceleration
Acceleration (g's)
15
10
5
0
-5
-10
-15
0
2.5
Time [ms]
5
7.5
10
Max: 10.3 g's
Min: -1.4 g's
Filter: CFC 1000


Head CG Y Acceleration
Acceleration (g's)
100
80
60
40
20
0
-20
0
2.5
Time [ms]
5
7.5
10
Max: 97.0 g's
Min: -0.2 g's
Filter: CFC 1000


Head CG Z Acceleration
Acceleration (g's)
125
100
75
50
25
0
-25
0
2.5
Time [ms]
5
7.5
10
Max: 118.3 g's
Min: -2.7 g's
Filter: CFC 1000

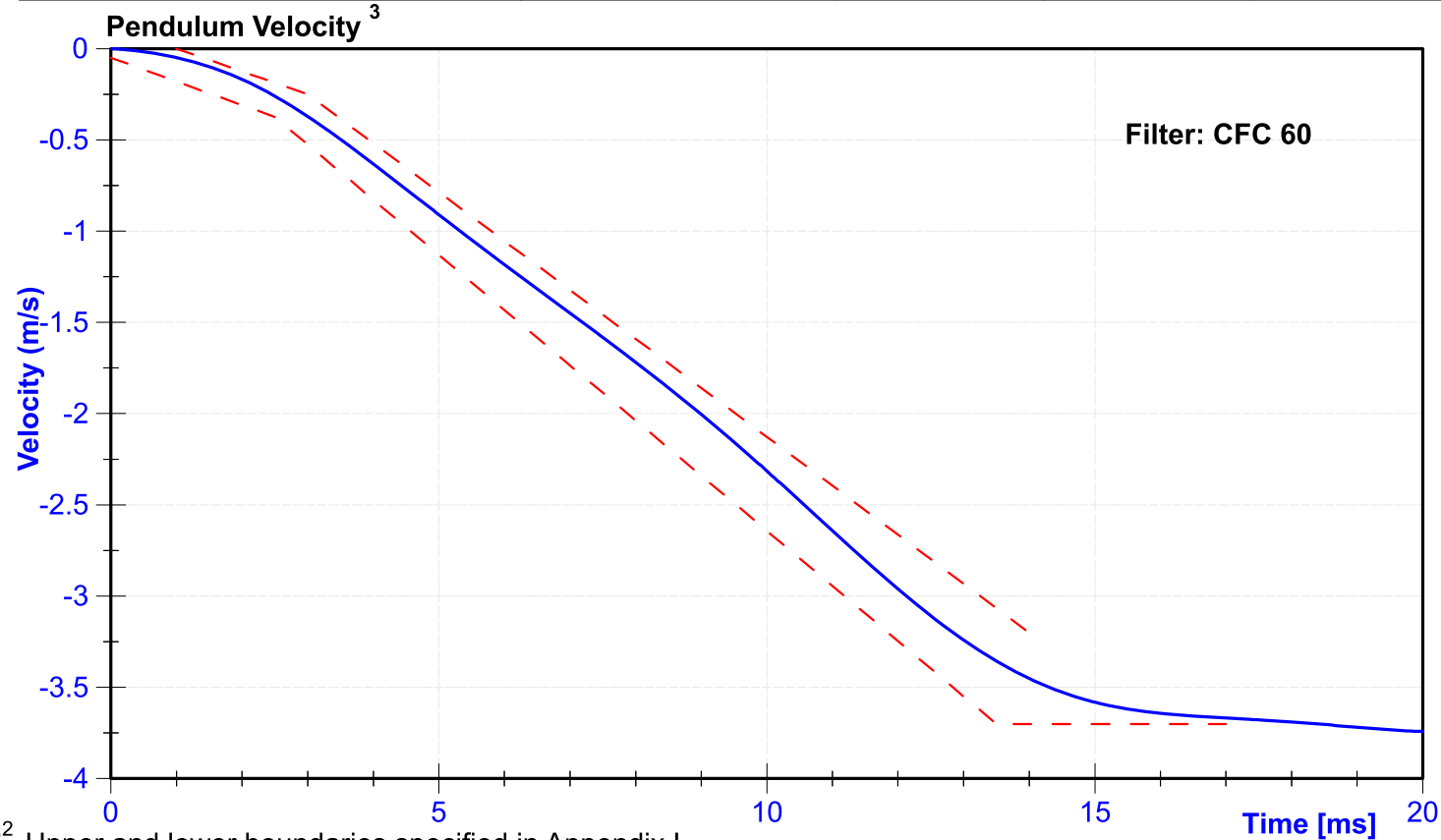
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

Results

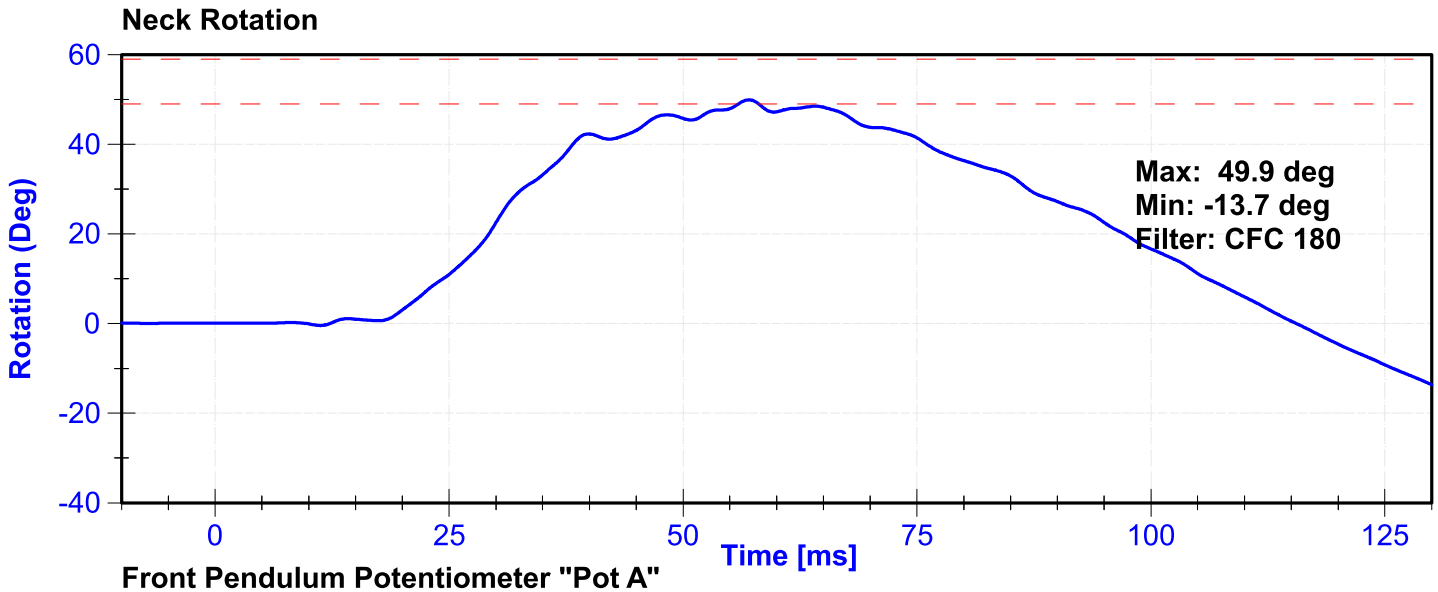
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Velocity	3.3	3.5	m/s	3.46	Pass
Lateral Neck Rotation	49	59	deg	49.9	Pass
Time at Maximum Rotation	54	66	ms	57.0	Pass
Time of Rotation Decay from Maximum	53	88	ms	58.5	Pass
Pendulum Velocity Overall Corridor	Lower Boundary[1]	Upper Boundary[2]	m/s	See Plot[3]	Pass

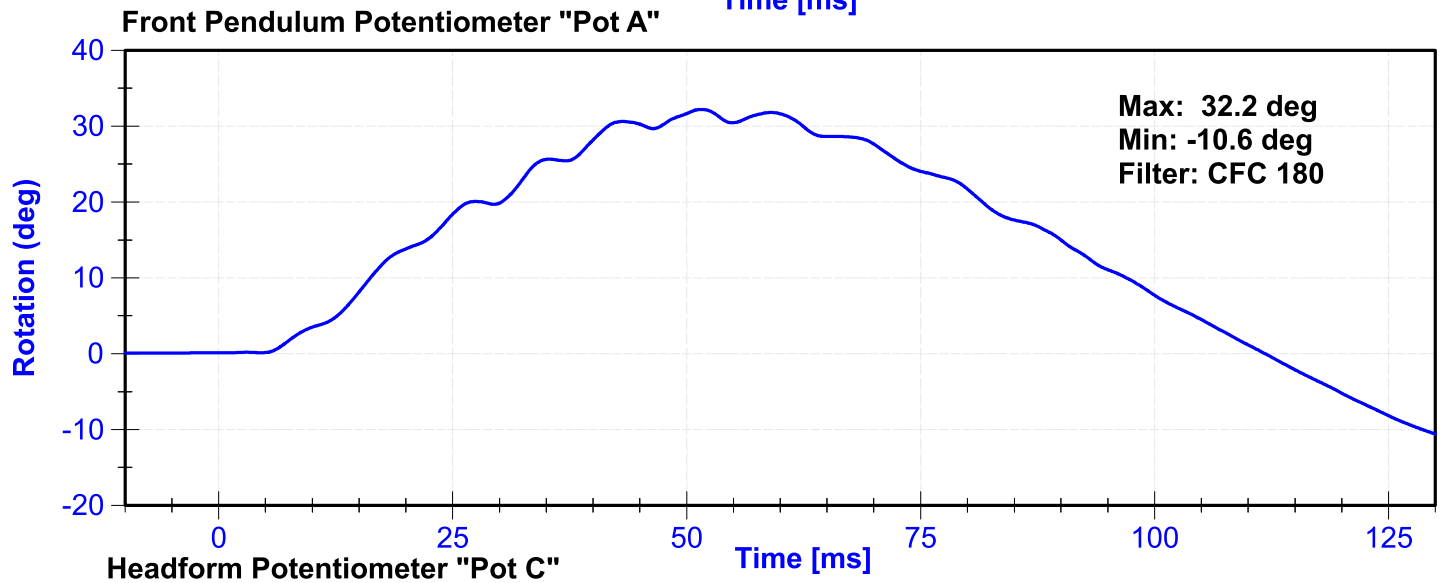
Transducer Calibrations

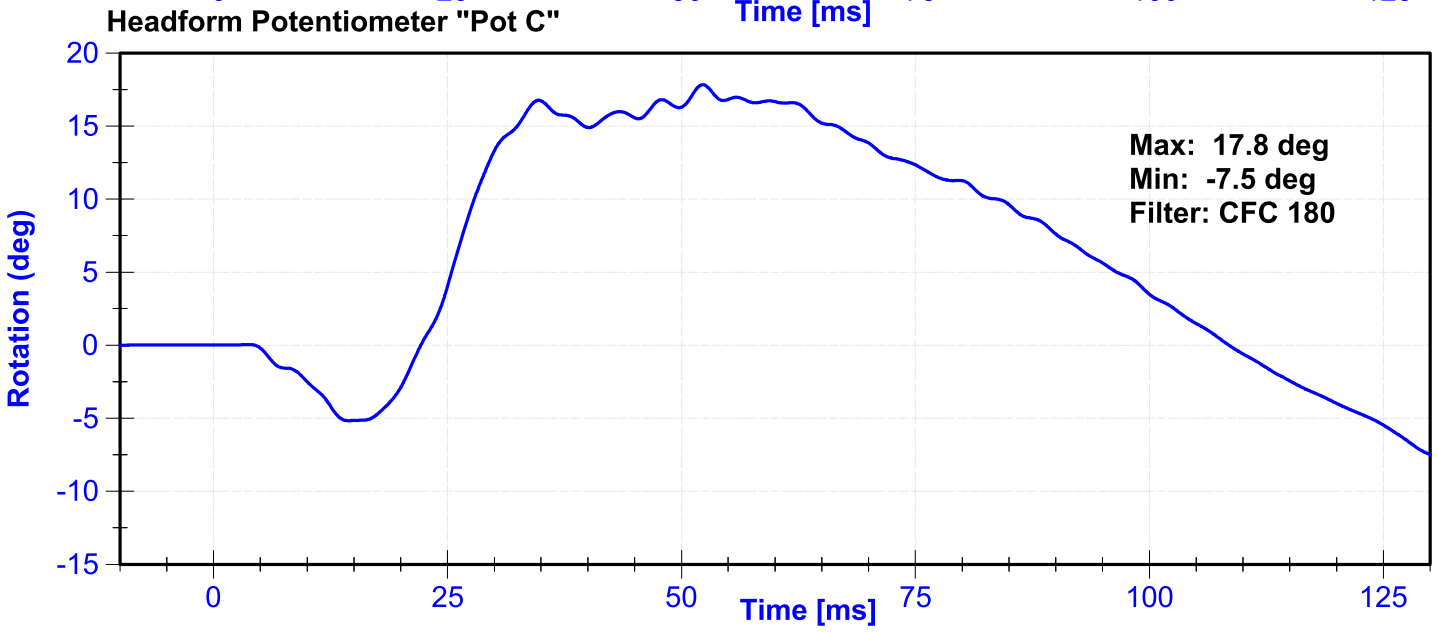
Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	C16650	11/1/2024	11/1/2025
Front Pendulum Potentiometer	Sfernice	2247	9/13/2024	9/13/2025
Headform Potentiometer	Sfernice	095	9/13/2024	9/13/2025



[1,2] Upper and lower boundaries specified in Appendix I


Neck Rotation
Rotation (Deg)
60
40
20
0
-20
-40
0
25
50
75
100
125
Time [ms]
Max: 49.9 deg
Min: -13.7 deg
Filter: CFC 180


Front Pendulum Potentiometer "Pot A"
Rotation (deg)
40
30
20
10
0
-10
-20
0
25
50
75
100
125
Time [ms]
Max: 32.2 deg
Min: -10.6 deg
Filter: CFC 180


Headform Potentiometer "Pot C"
Rotation (deg)
20
15
10
5
0
-5
-10
-15
0
25
50
75
100
125
Time [ms]
Max: 17.8 deg
Min: -7.5 deg
Filter: CFC 180

Appendix I

[2] Upper Boundary Corridor		[1] Lower Boundary Corridor	
Time (ms)	Velocity (m/s)	Time (ms)	Velocity (m/s)
1.0	0.00	0.0	-0.05
3.0	-0.25	2.5	-0.375
14.0	-3.20	13.5	-3.7
		17.0	-3.7

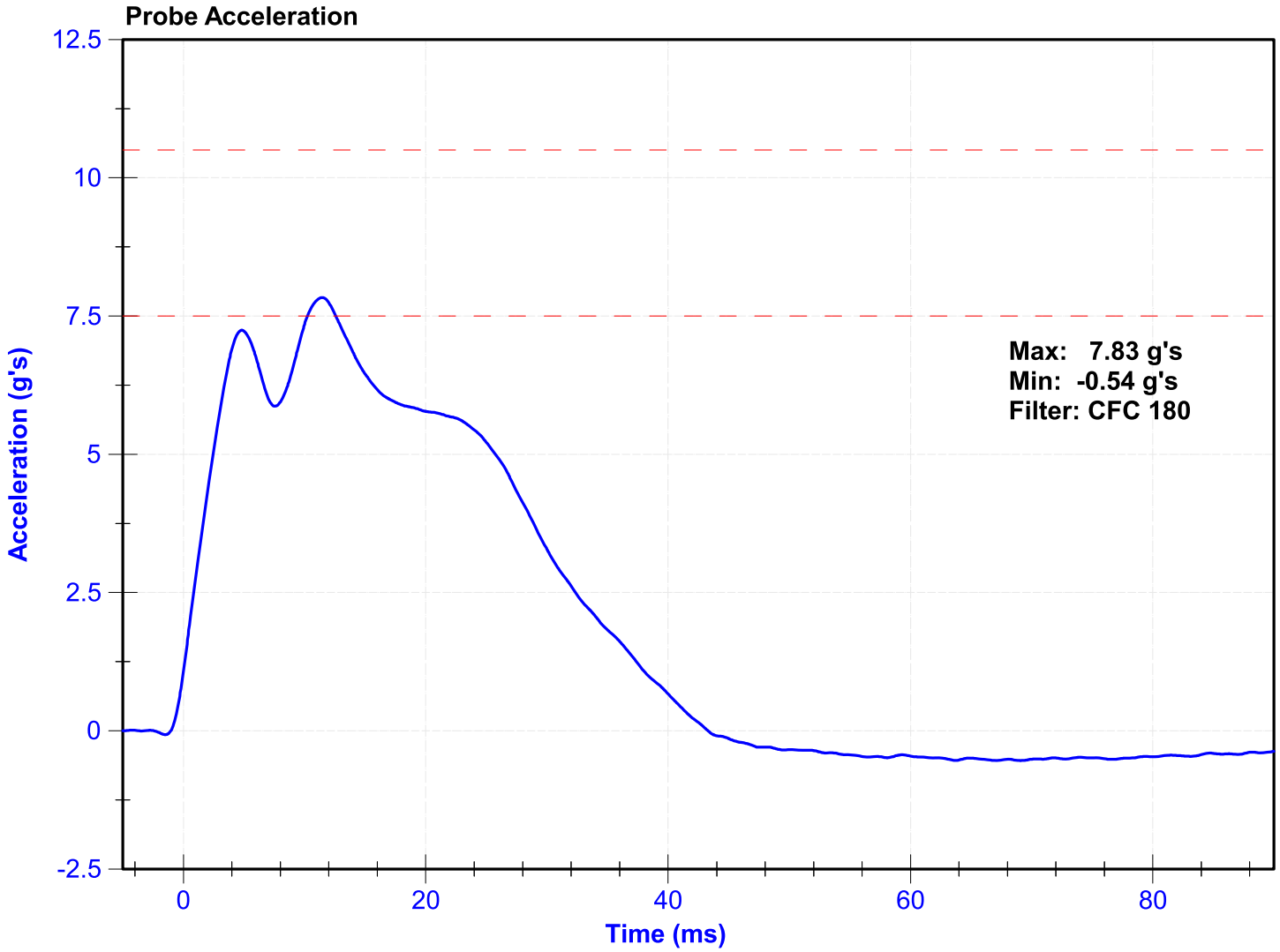
ATD Manufacturer	FTSS	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Velocity	4.2	4.4	m/s	4.27	Pass
Probe Acceleration	7.5	10.5	g's	7.83	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Probe Accelerometer	Endevco	T25863	1/17/2025	7/16/2025



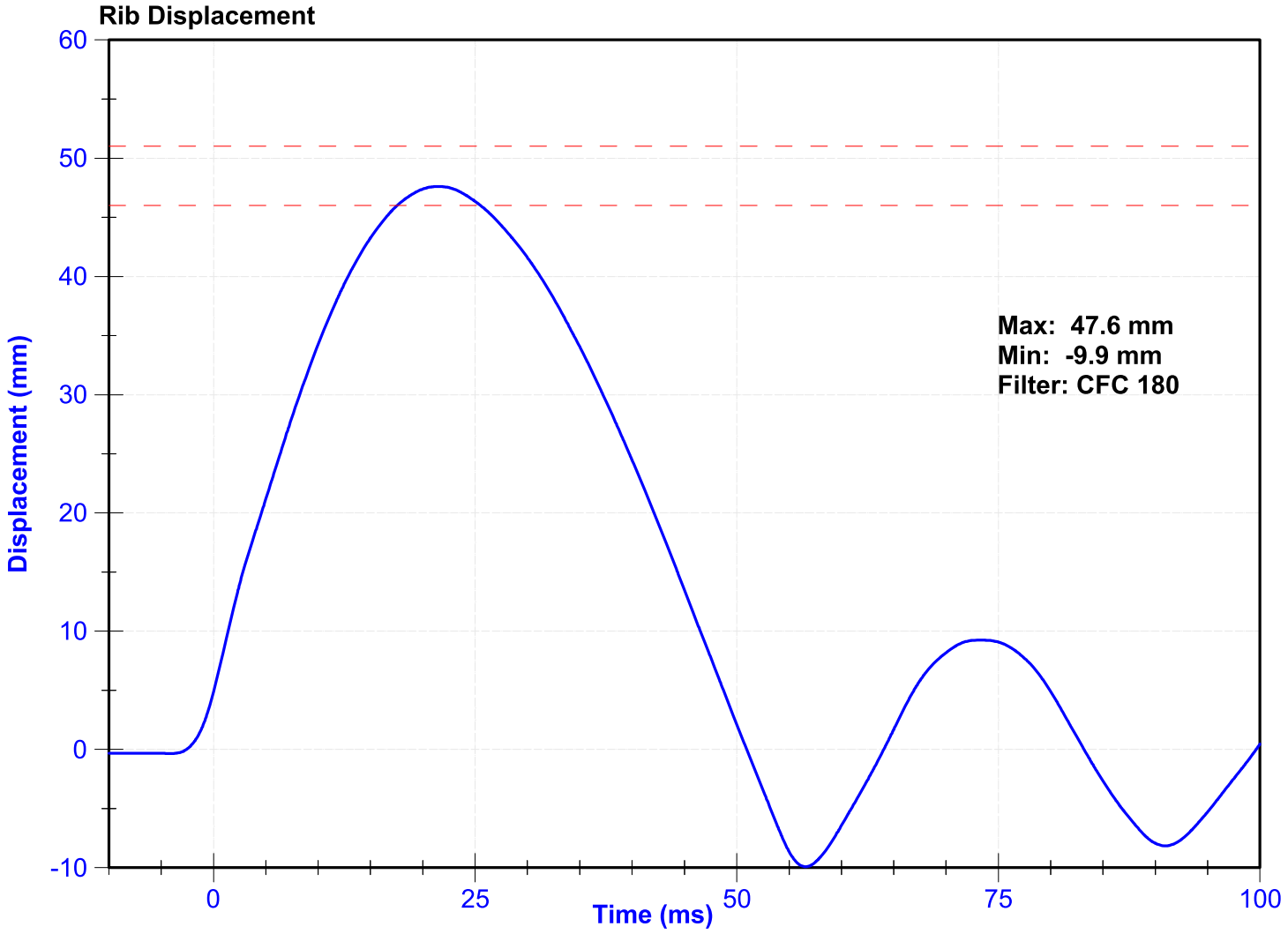
ATD Manufacturer	Humanetics	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Rib Displacement	46	51	mm	47.6	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Rib Potentiometer	Honeywell	0552-01	10/8/2024	4/8/2025



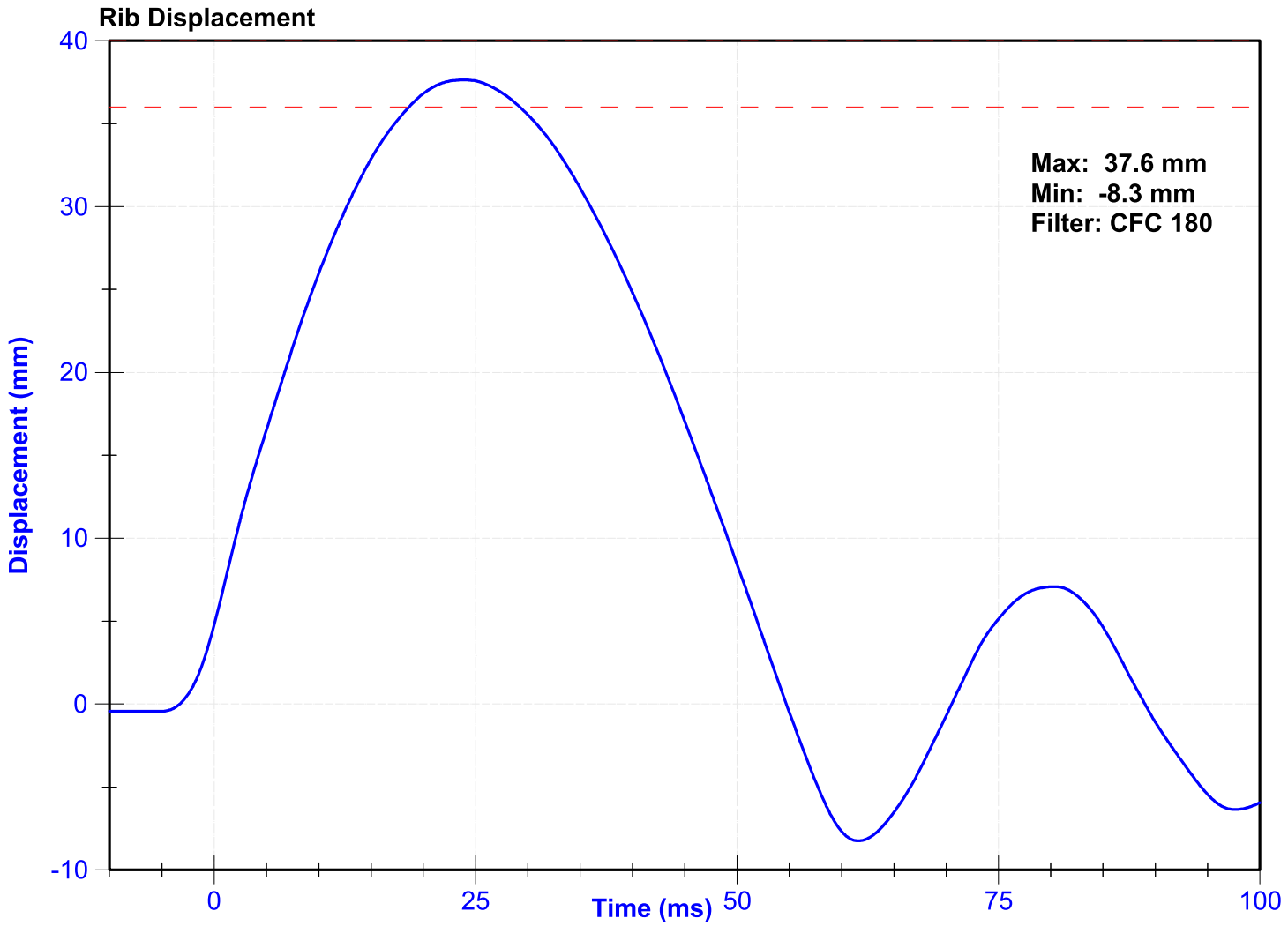
ATD Manufacturer	Humanetics	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Rib Displacement	36	40	mm	37.6	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Rib Potentiometer	Honeywell	0552-01	10/8/2024	4/8/2025



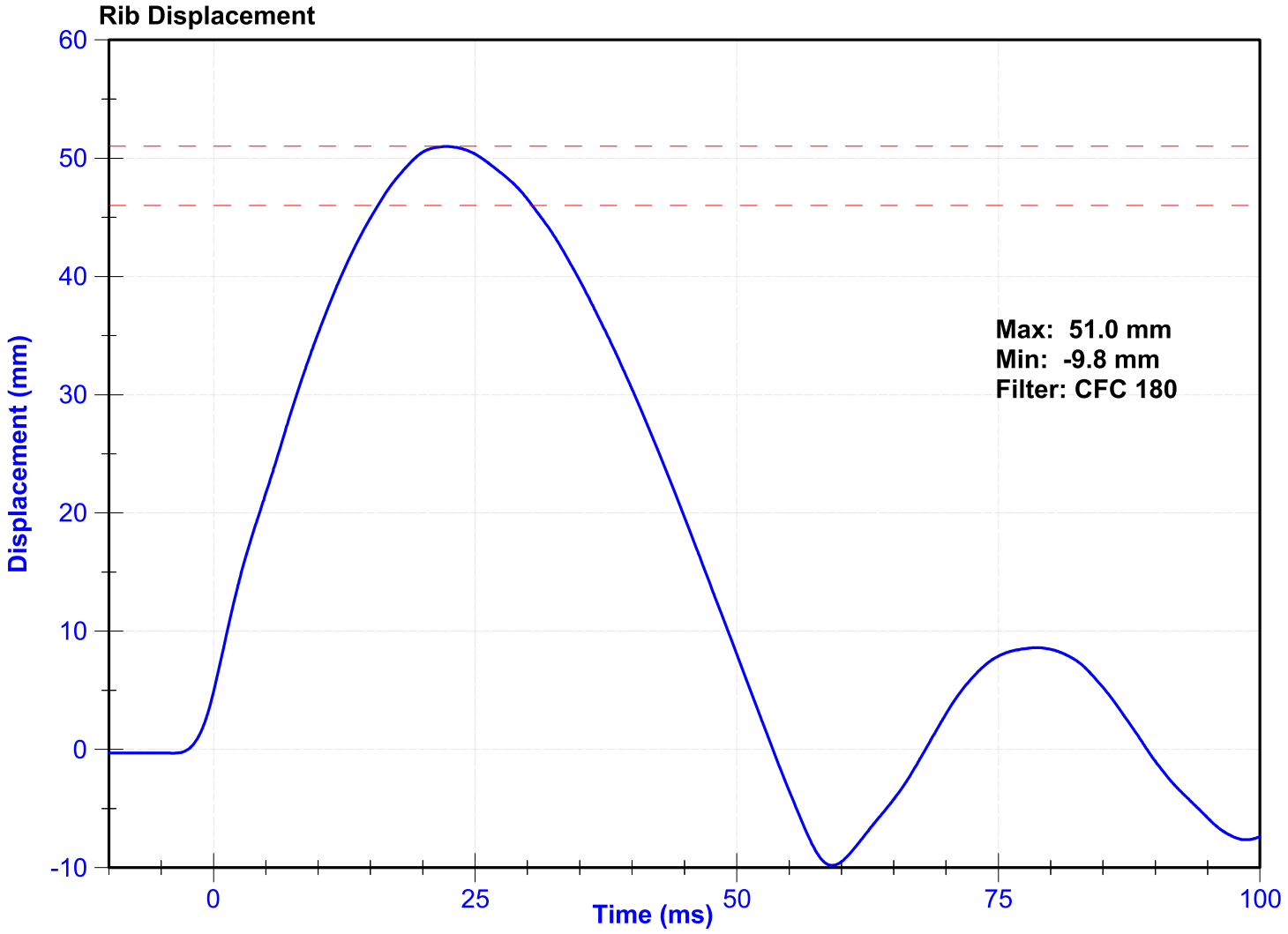
ATD Manufacturer	Humanetics	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Rib Displacement	46	51	mm	51.0	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Rib Potentiometer	Honeywell	807	10/8/2024	4/8/2025



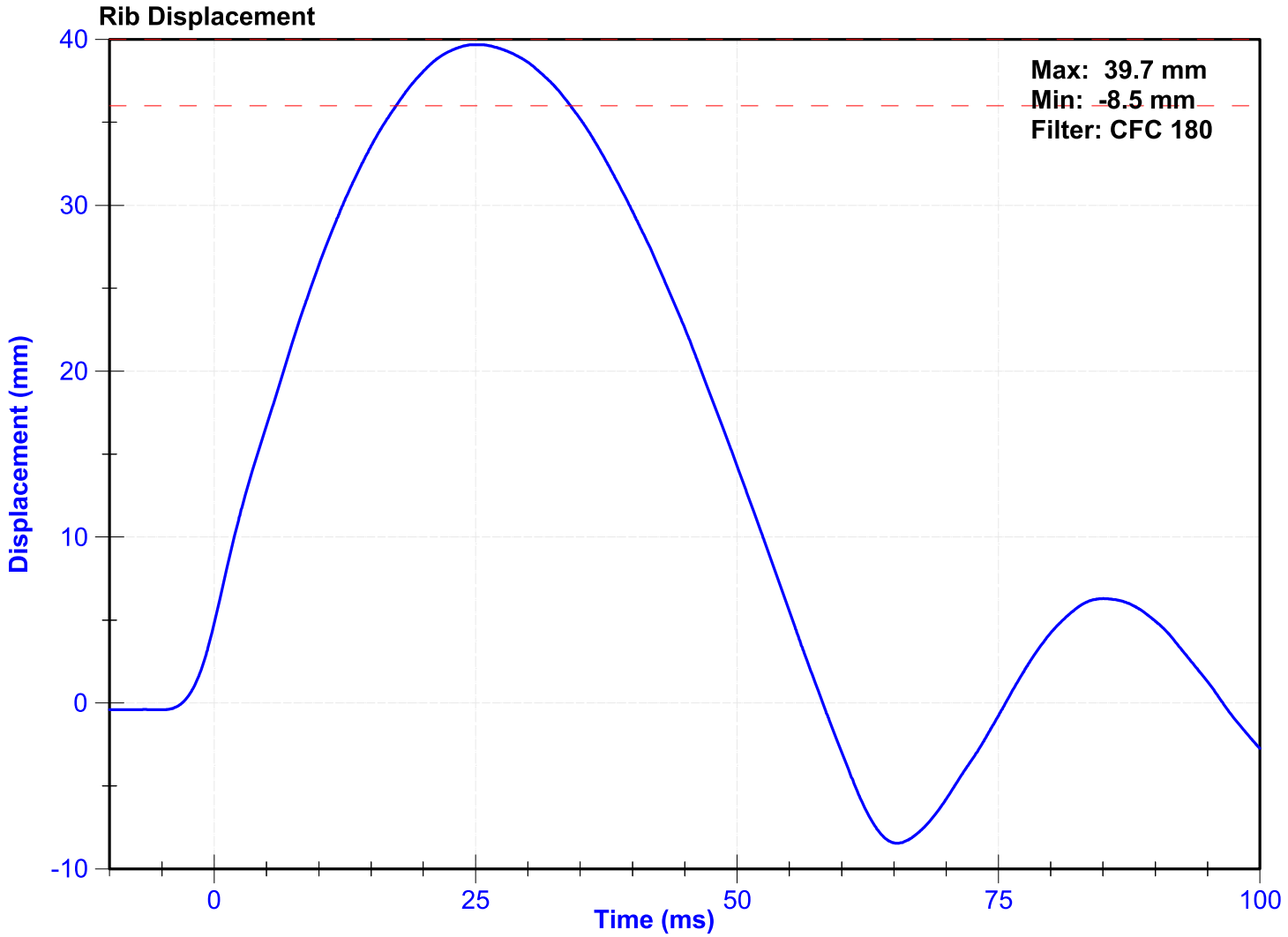
ATD Manufacturer	Humanetics	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Rib Displacement	36	40	mm	39.7	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Rib Potentiometer	Honeywell	807	10/8/2024	4/8/2025



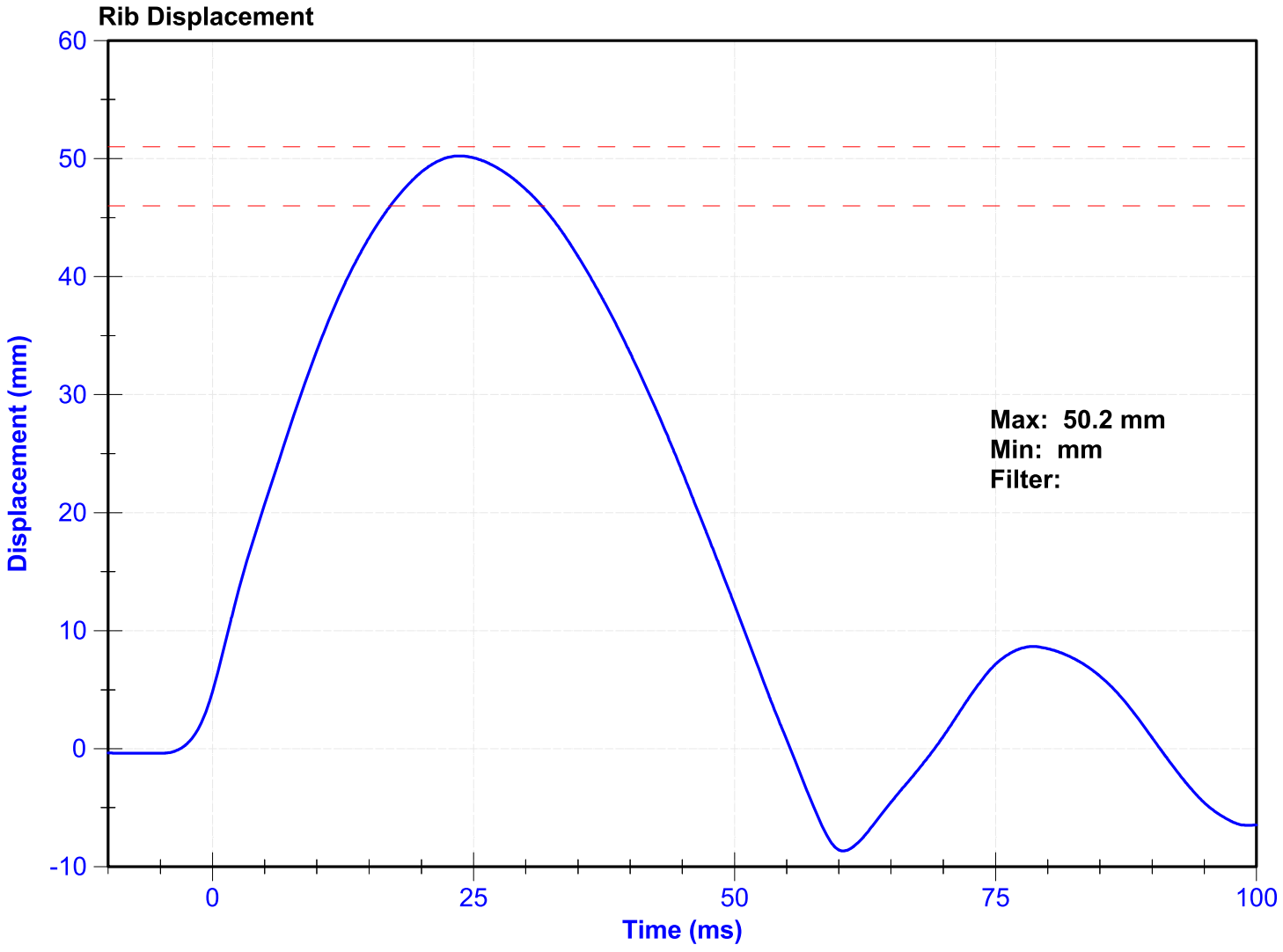
ATD Manufacturer	Humanetics	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Rib Displacement	46	51	mm	50.2	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Rib Potentiometer	Honeywell	0552-03	10/8/2024	4/8/2025



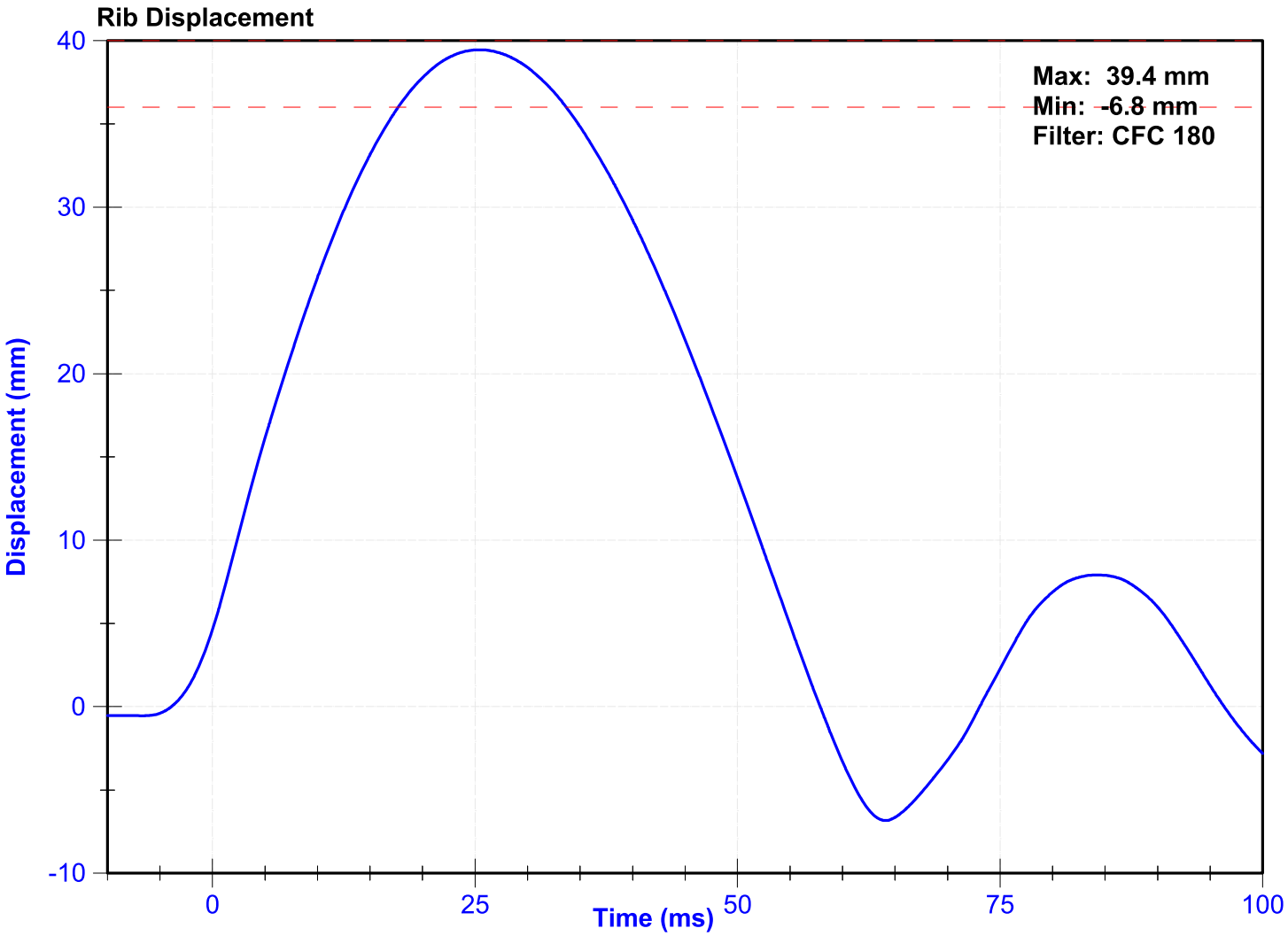
ATD Manufacturer	Humanetics	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Rib Displacement	36	40	mm	39.4	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Rib Potentiometer	Honeywell	0552-03	10/8/2024	4/8/2025



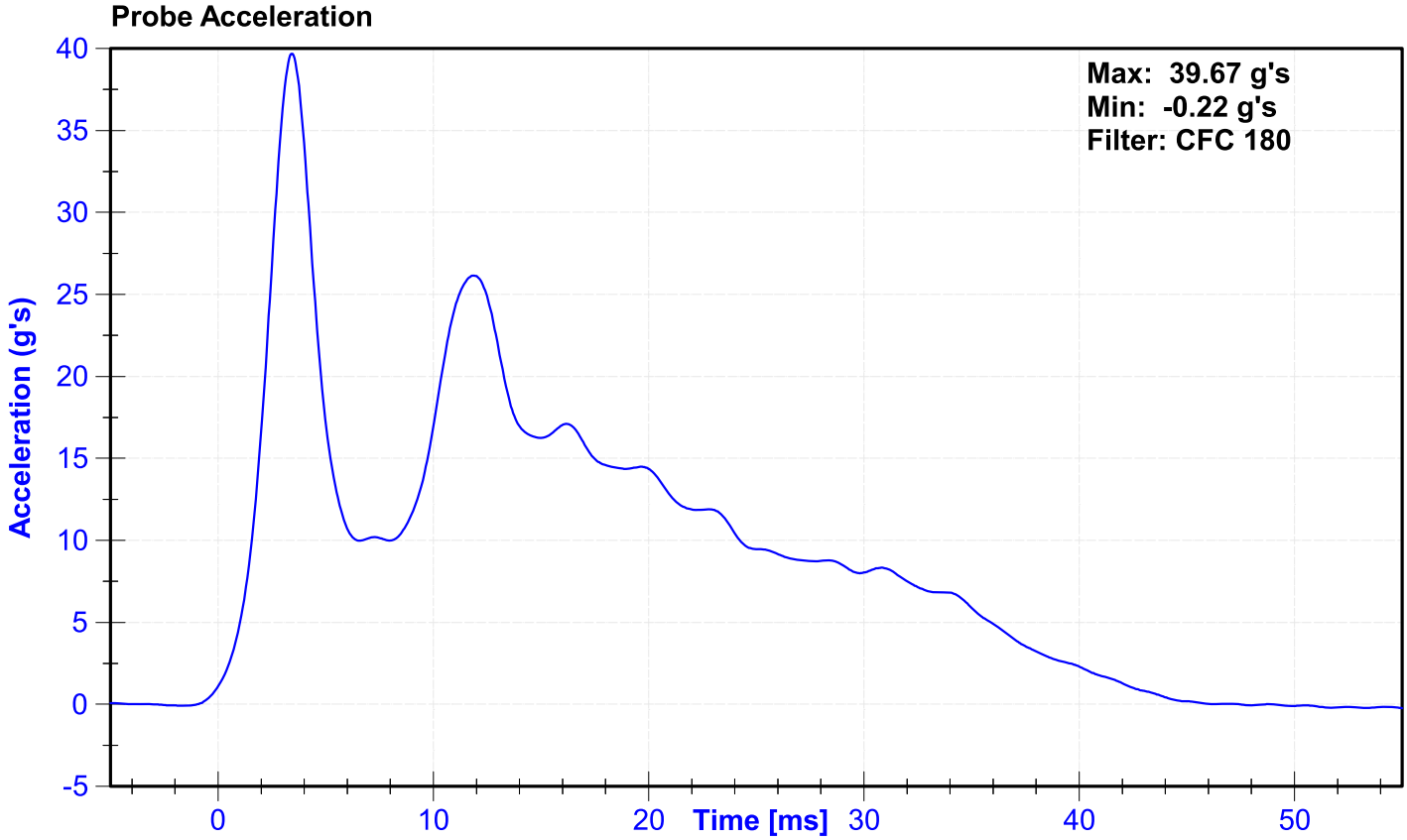
ATD Manufacturer	FTSS	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

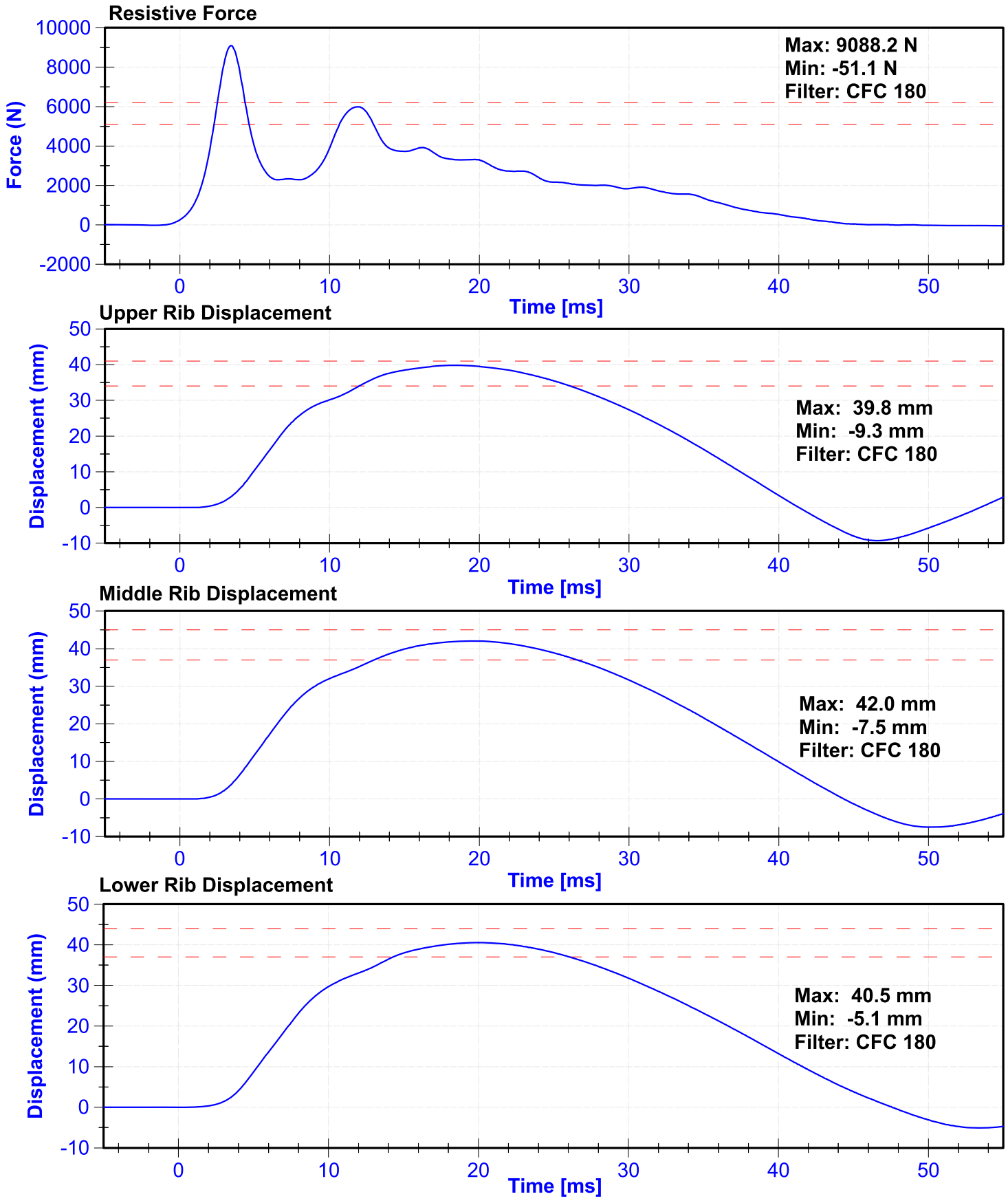
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Velocity	5.4	5.6	m/s	5.49	Pass
Resistive Force after 6ms	5100	6200	N	5990.7	Pass
Upper Thorax Rib Deflection	34	41	mm	39.8	Pass
Mid Thorax Rib Deflection	37	45	mm	42.0	Pass
Lower Thorax Rib Deflection	37	44	mm	40.5	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Probe Accelerometer	Endevco	T25863	1/17/2025	7/16/2025
Upper Thorax Rib Potentiometer	Honeywell	0552-01	10/8/2024	4/8/2025
Middle Thorax Rib Potentiometer	Honeywell	807	10/8/2024	4/8/2025
Lower Thorax Rib Potentiometer	Honeywell	0552-03	10/8/2024	4/8/2025




Resistive Force
Max: 9088.2 N
Min: -51.1 N
Filter: CFC 180
Force (N)
Time [ms]
Upper Rib Displacement
Max: 39.8 mm
Min: -9.3 mm
Filter: CFC 180
Displacement (mm)
Time [ms]
Middle Rib Displacement
Max: 42.0 mm
Min: -7.5 mm
Filter: CFC 180
Displacement (mm)
Time [ms]
Lower Rib Displacement
Max: 40.5 mm
Min: -5.1 mm
Filter: CFC 180
Displacement (mm)
Time [ms]

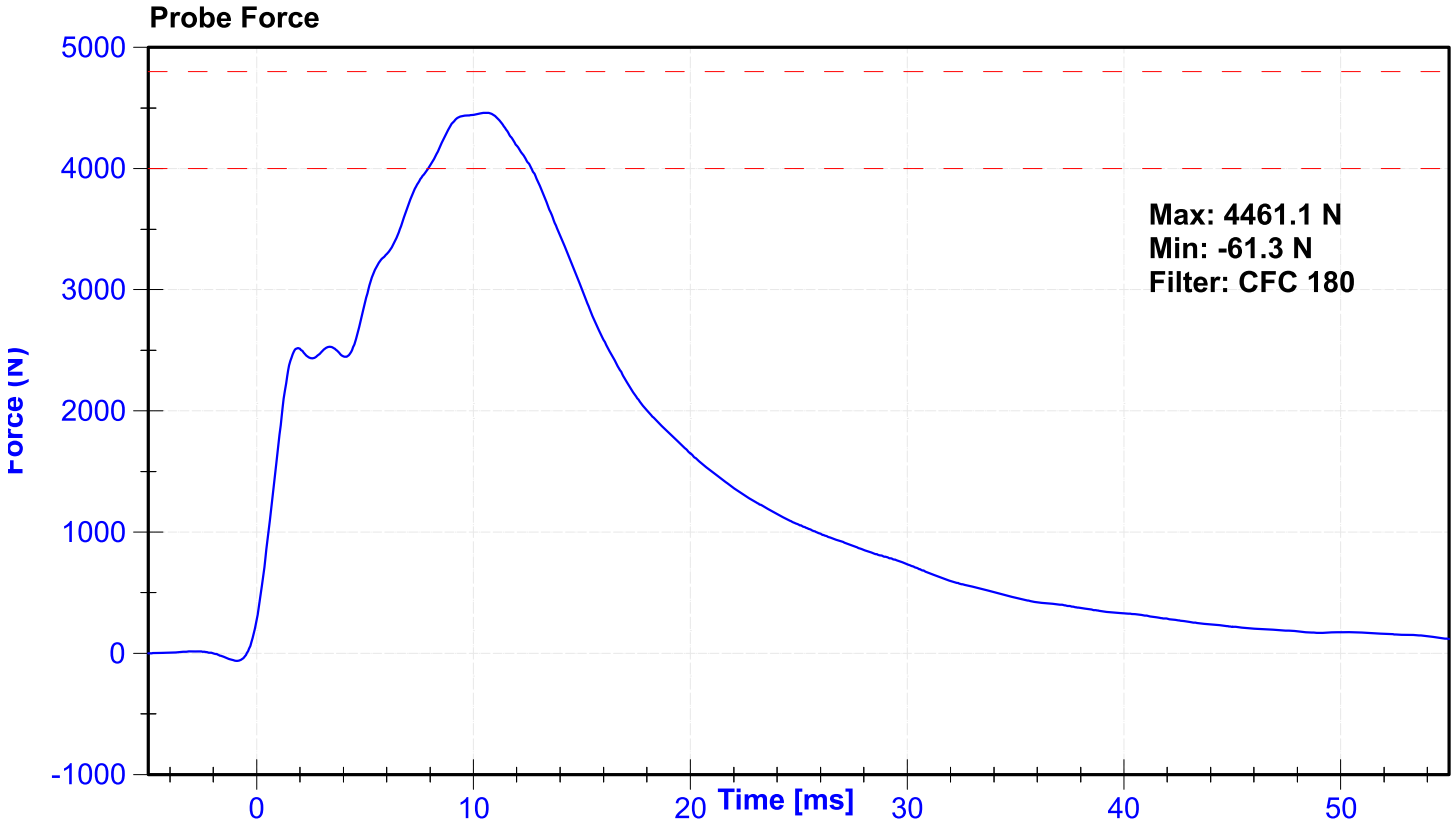
ATD Manufacturer	FTSS	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

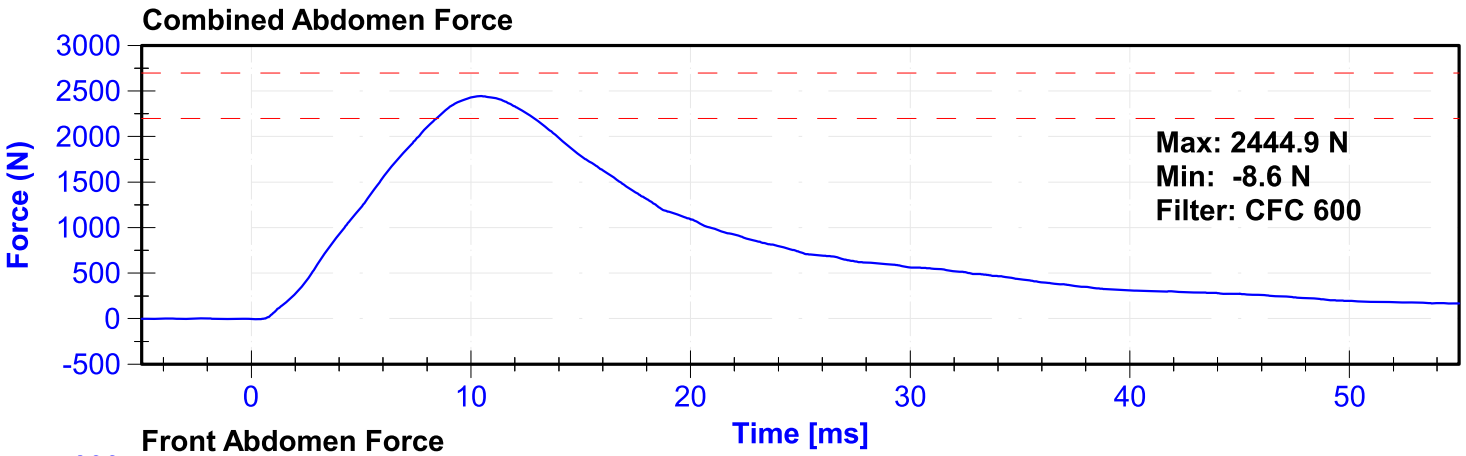
Results

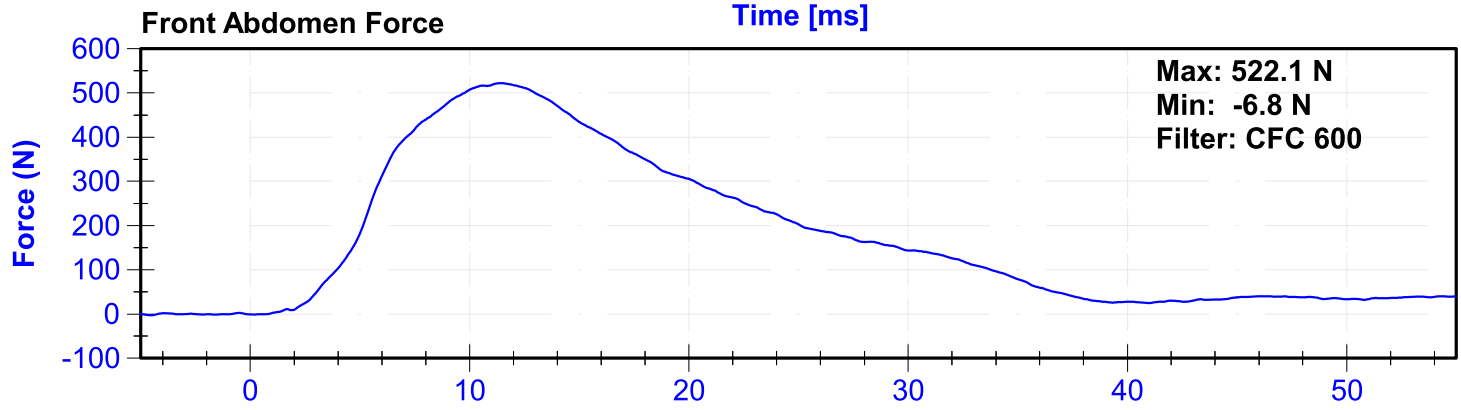
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Velocity	3.9	4.1	m/s	4.03	Pass
Combined Abdomen Force	2200	2700	N	2444.9	Pass
Time at Peak Abdomen Force	10.0	12.3	ms	10.45	Pass
Resistive Probe Force	4000	4800	N	4461.1	Pass
Time at Peak Resistive Force	10.6	13.0	ms	10.60	Pass

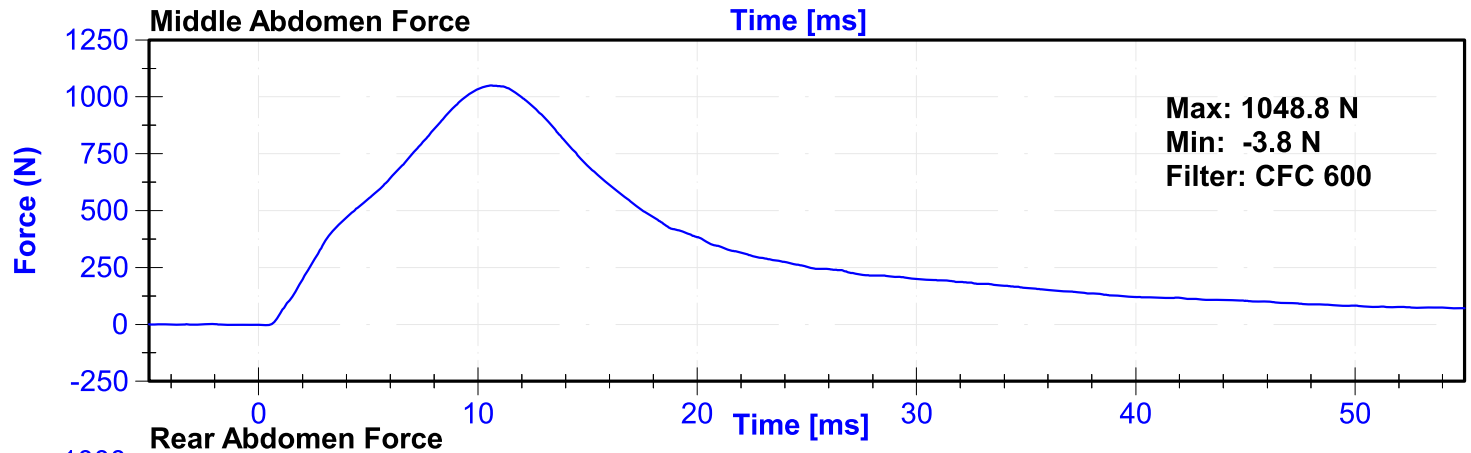
Transducer Calibrations

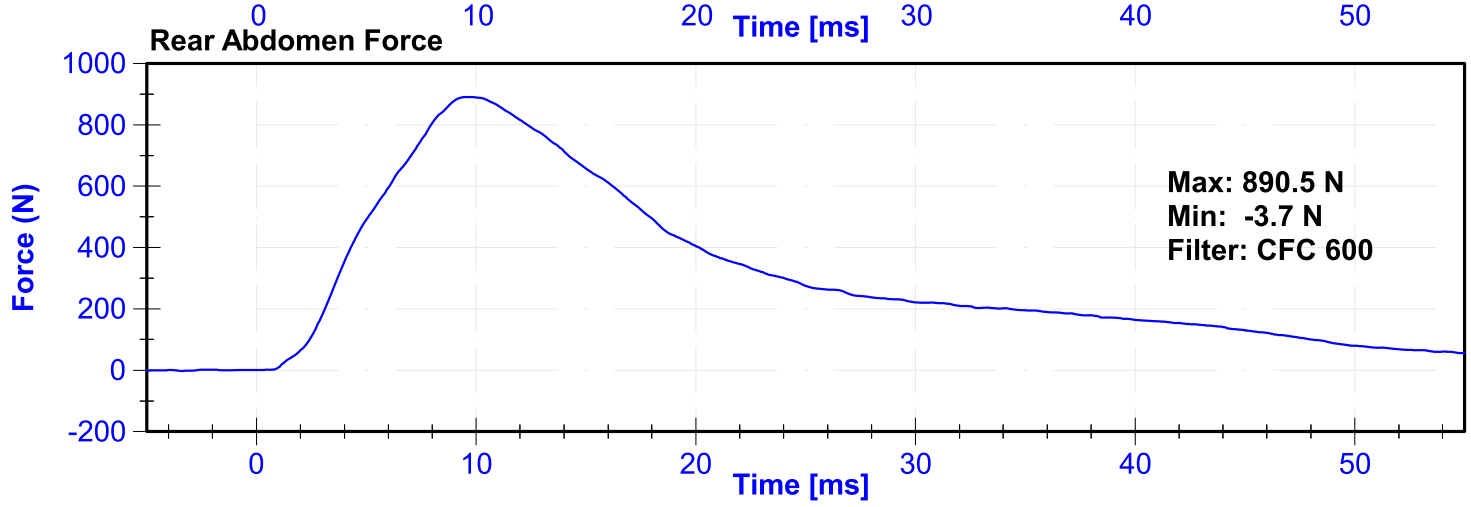
Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	T25863	1/17/2025	7/16/2025
Front Abdomen Load Cell	Denton	1512	9/16/2024	9/16/2025
Middle Abdomen Load Cell	Denton	1526	9/16/2024	9/16/2025
Rear Abdomen Load Cell	Denton	1516	9/16/2024	9/16/2025




Combined Abdomen Force
Force (N)
Time [ms]
Max: 2444.9 N
Min: -8.6 N
Filter: CFC 600


Front Abdomen Force
Force (N)
Time [ms]
Max: 522.1 N
Min: -6.8 N
Filter: CFC 600


Middle Abdomen Force
Force (N)
Time [ms]
Max: 1048.8 N
Min: -3.8 N
Filter: CFC 600


Rear Abdomen Force
Force (N)
Time [ms]
Max: 890.5 N
Min: -3.7 N
Filter: CFC 600

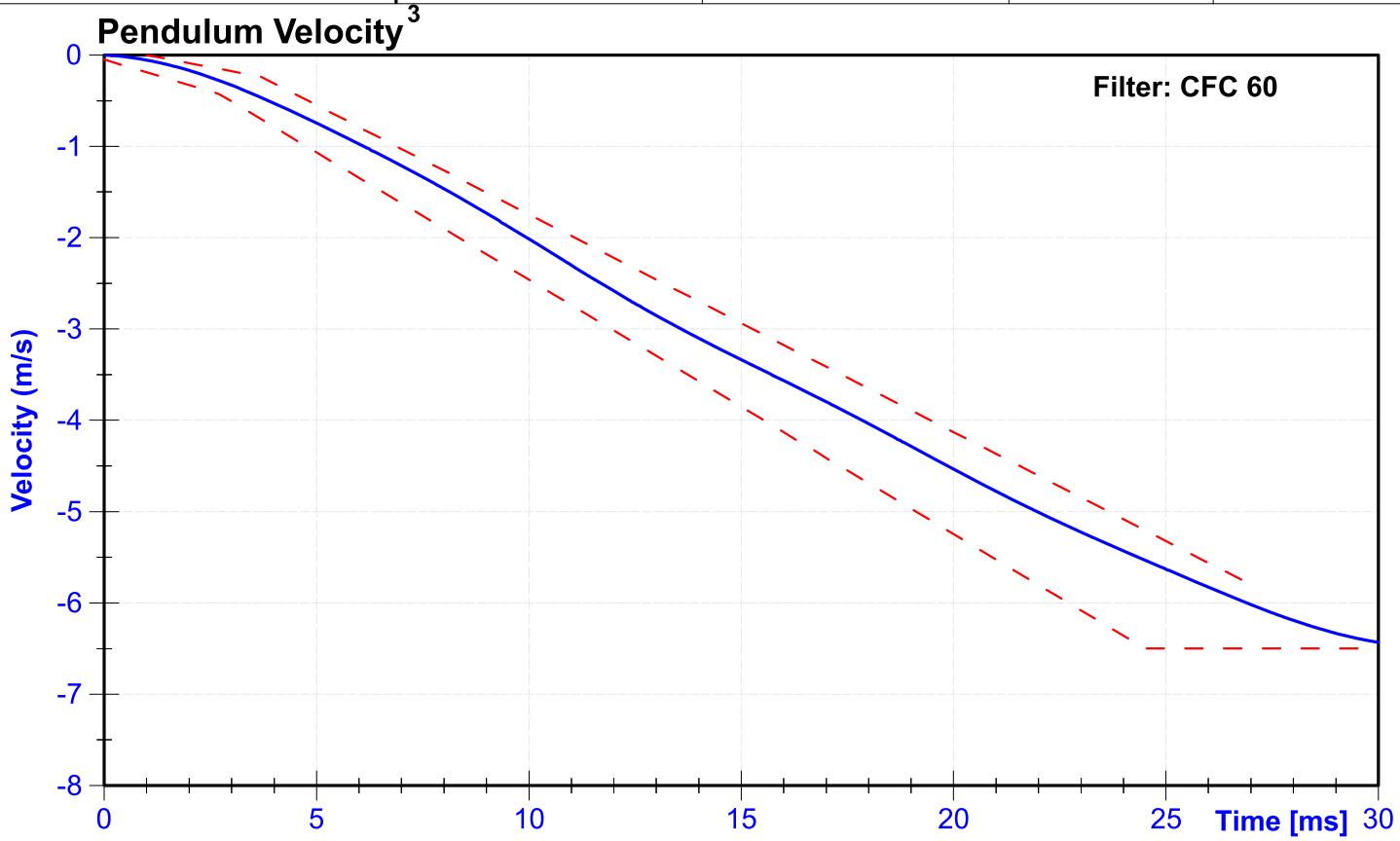
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

Results

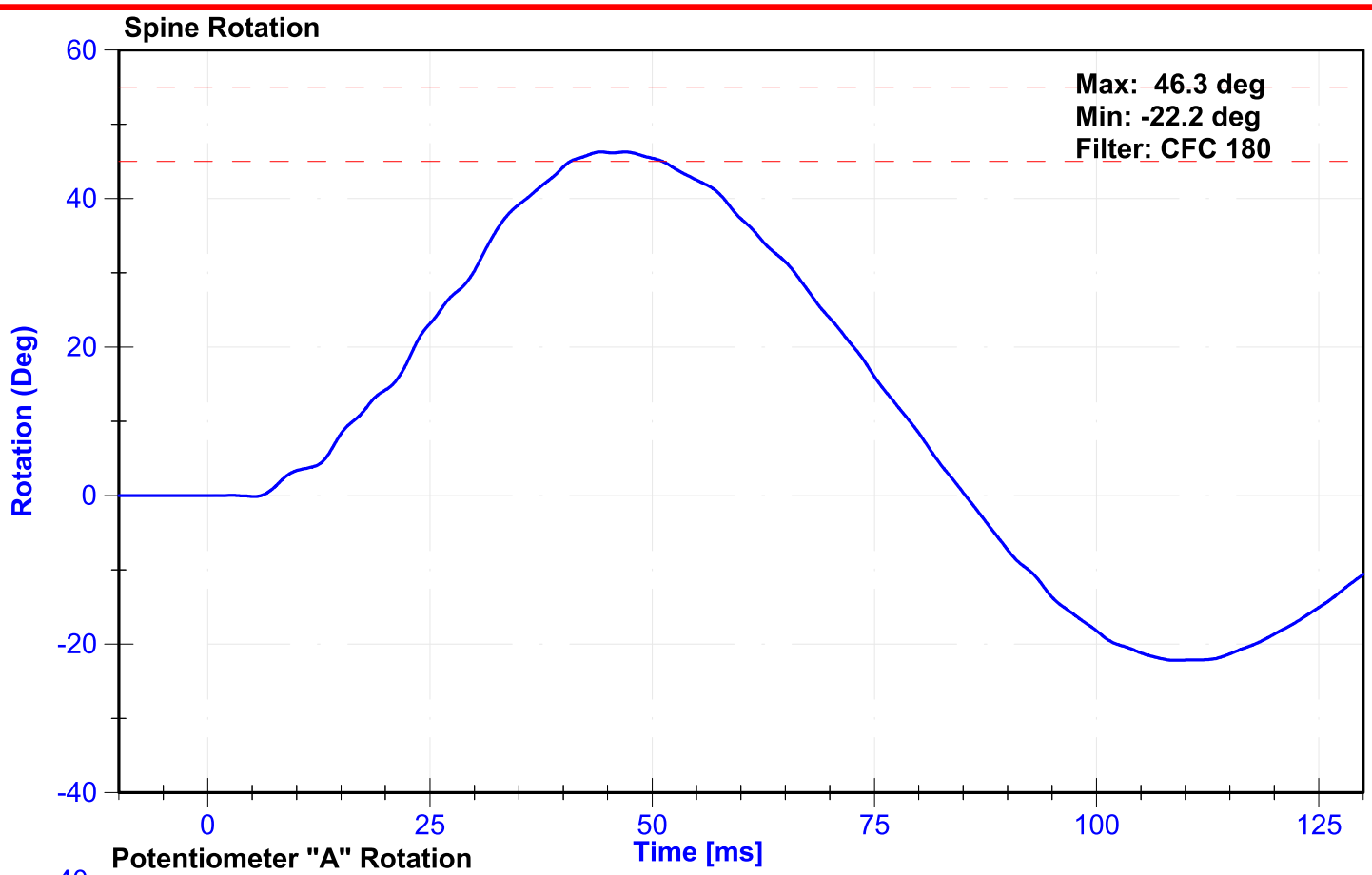
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Velocity	5.95	6.15	m/s	6.147	Pass
Lateral Spine Rotation	45	55	deg	46.3	Pass
Time at Maximum Rotation	39	53	ms	44.2	Pass
Time of Decay to Zero Degrees	37	57	ms	41.1	Pass
Pendulum Velocity Overall Corridor	Lower Boundary[1]	Upper Boundary[2]	m/s	See Plot[3]	Pass

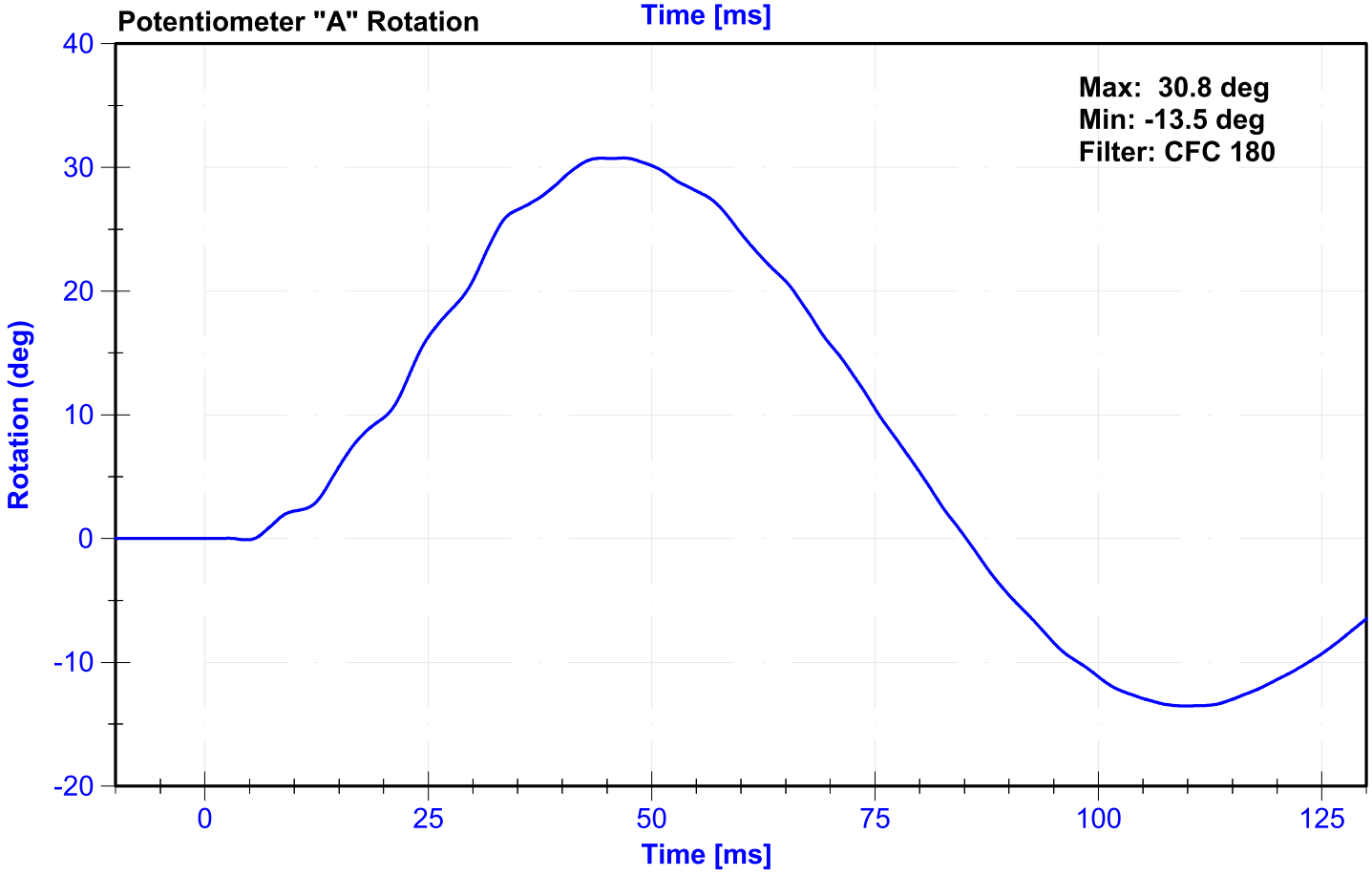
Transducer Calibrations

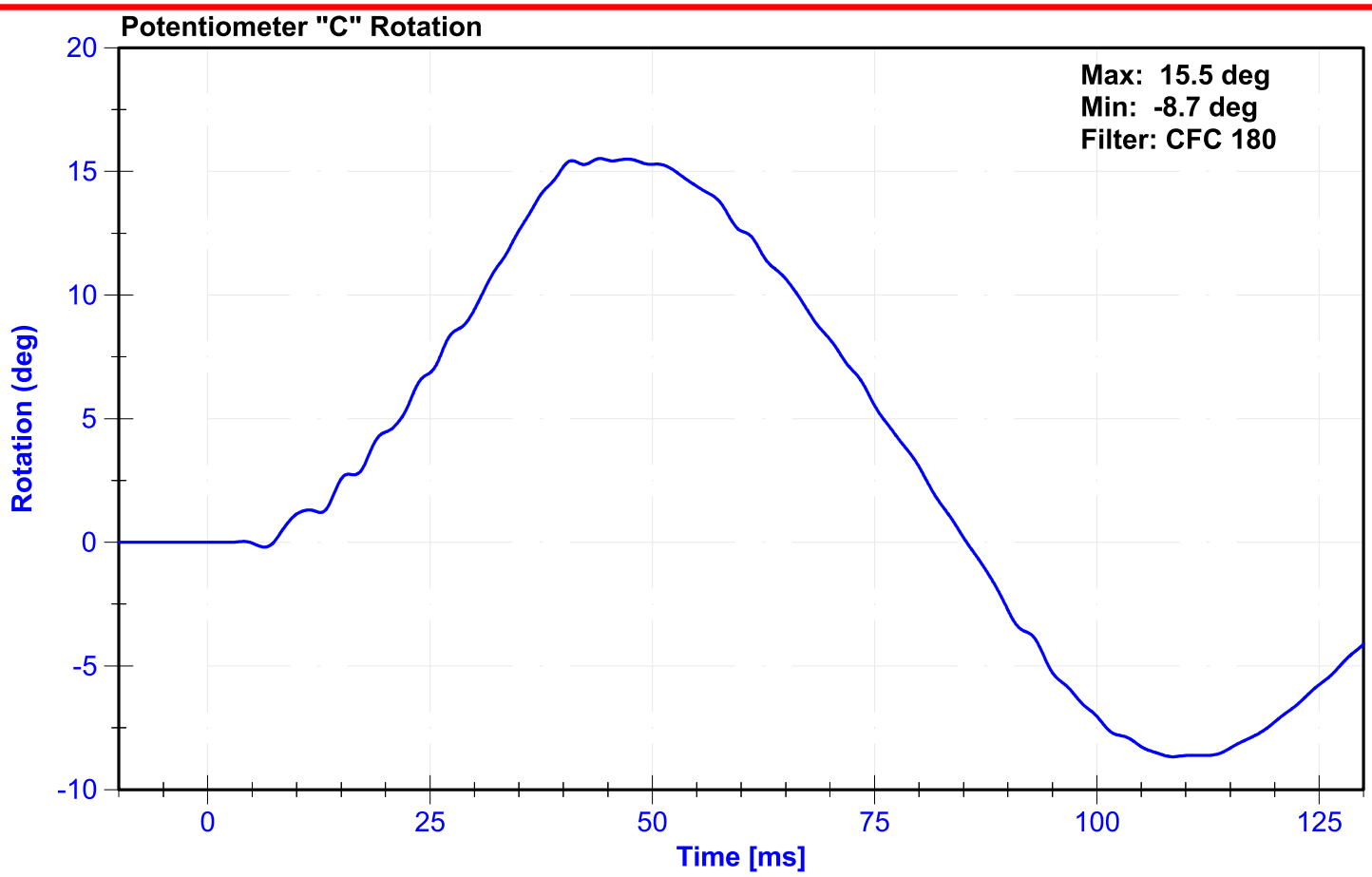
Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	C16650	11/1/2024	11/1/2025
Pendulum "A" Potentiometer	Sfernice	2247	9/13/2024	9/13/2025
Condyle "B" Potentiometer	Sfernice	095	9/13/2024	9/13/2025



[1,2] Upper and lower boundaries specified in Appendix I


Spine Rotation
Max: 46.3 deg
Min: -22.2 deg
Filter: CFC 180
Rotation (Deg)
60
40
20
0
-20
-40
0
25
50
75
100
125
Time [ms]


Potentiometer "A" Rotation
Max: 30.8 deg
Min: -13.5 deg
Filter: CFC 180
Rotation (deg)
40
30
20
10
0
-10
-20
0
25
50
75
100
125
Time [ms]



Appendix I

[2] Upper Boundary Corridor		[1] Lower Boundary Corridor	
Time (ms)	Velocity (m/s)	Time (ms)	Velocity (m/s)
1.0	0.00	0.0	-0.05
3.7	-0.24	2.7	-0.425
27.0	-5.80	24.5	-6.5
		30.0	-6.5

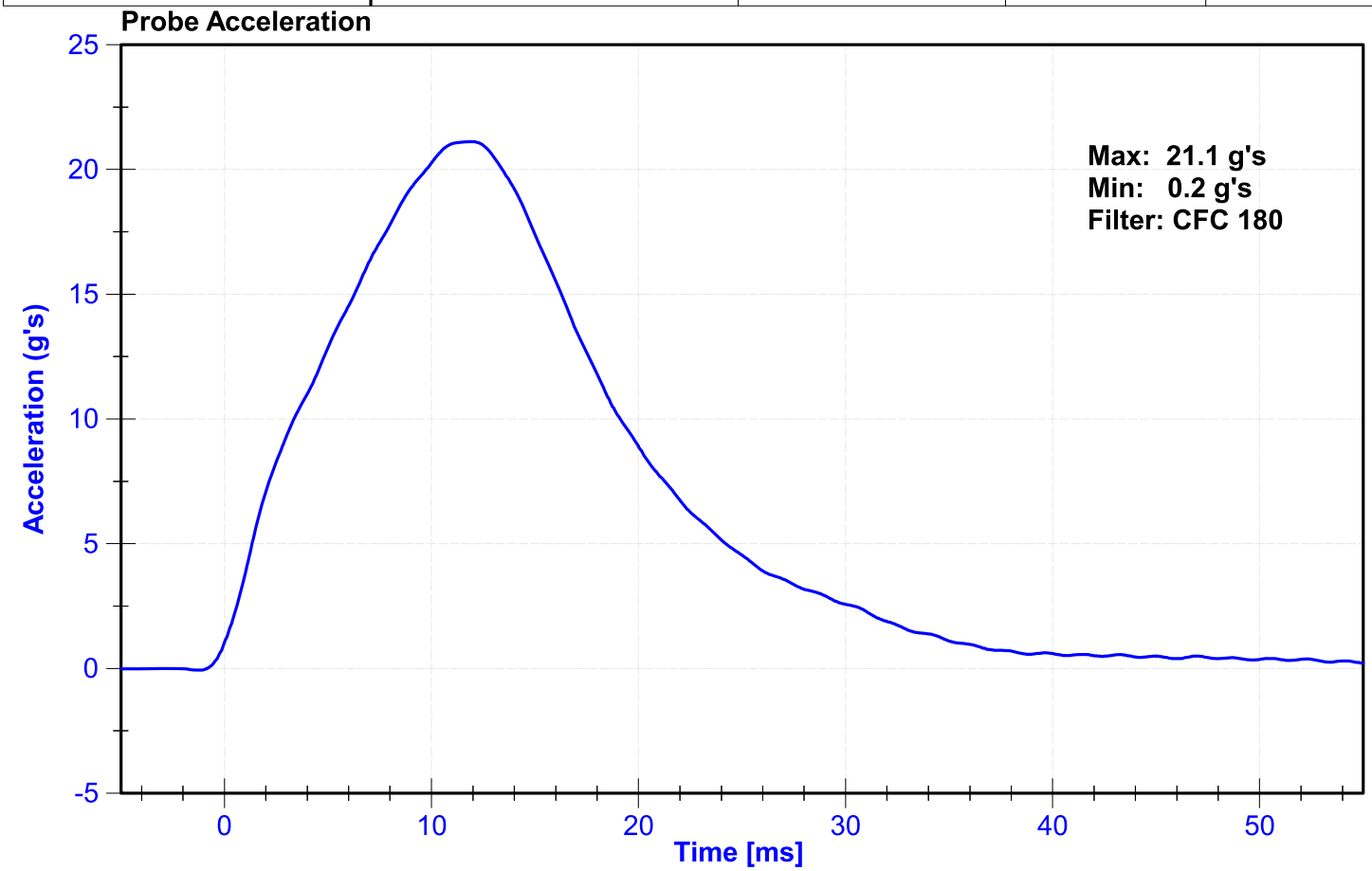
ATD Manufacturer	FTSS	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

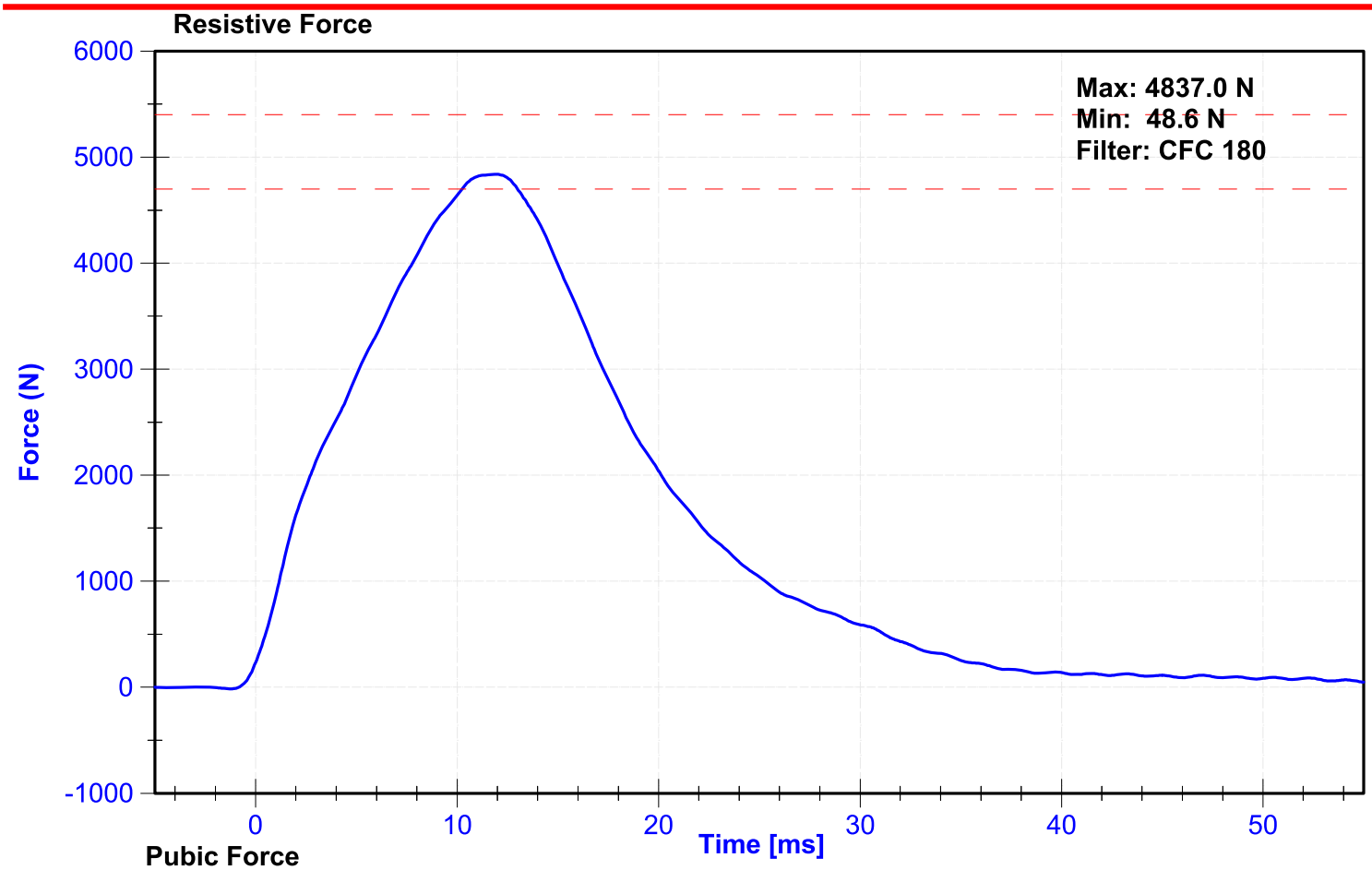
Results

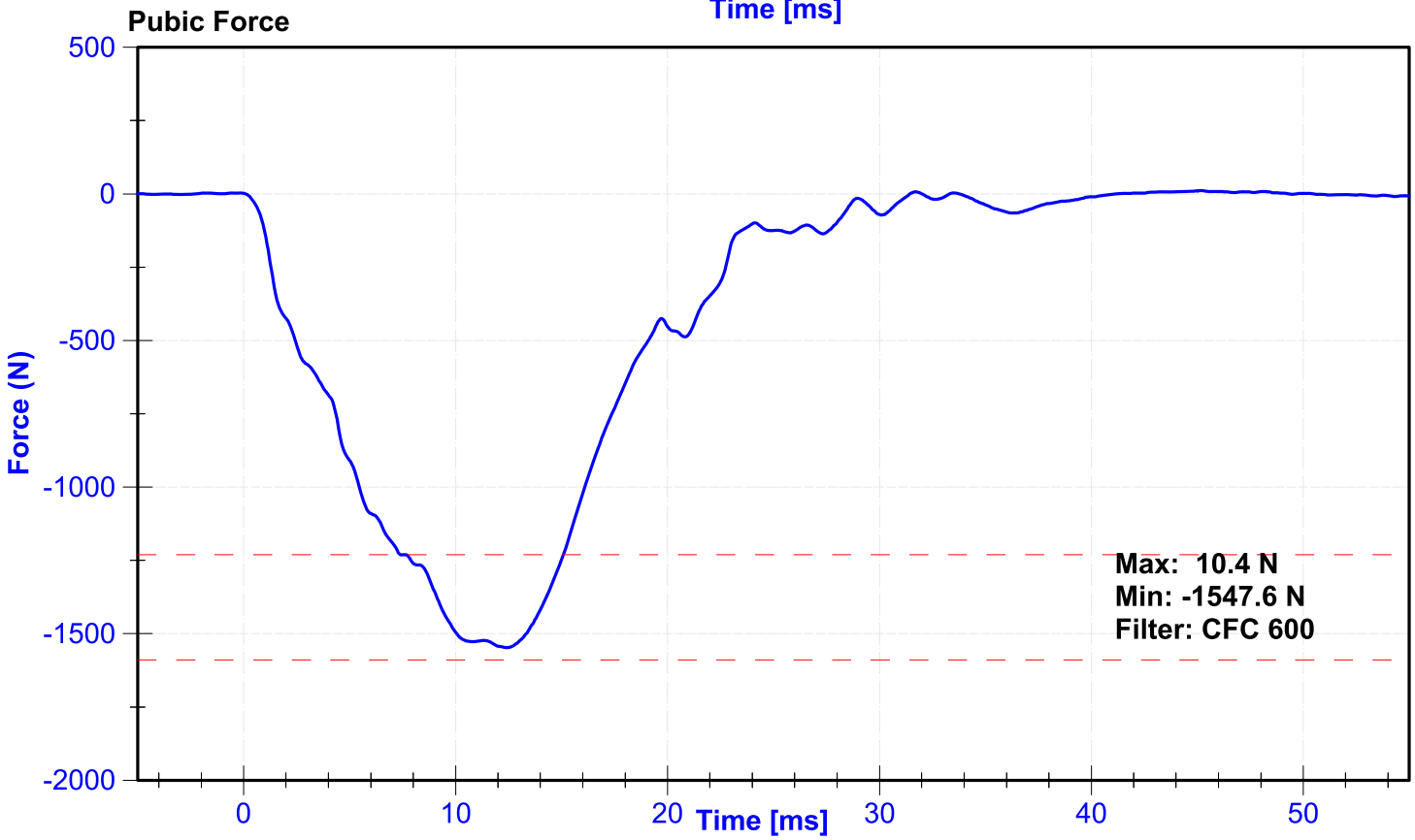
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Velocity	4.2	4.4	m/s	4.29	Pass
Resistive Force	4700	5400	N	4837.0	Pass
Time at Peak Resistive Force	11.8	16.1	ms	11.95	Pass
Pubic Force	-1590	-1230	N	-1547.6	Pass
Time at Peak Pubic Force	12.2	17.0	ms	12.45	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	T25863	1/17/2025	7/16/2025
Pubic Load Cell	Denton	464-FY	9/16/2024	9/16/2025




Resistive Force
Max: 4837.0 N
Min: 48.6 N
Filter: CFC 180
Force (N)
Time [ms]
6000
5000
4000
3000
2000
1000
0
-1000
0
10
20
30
40
50

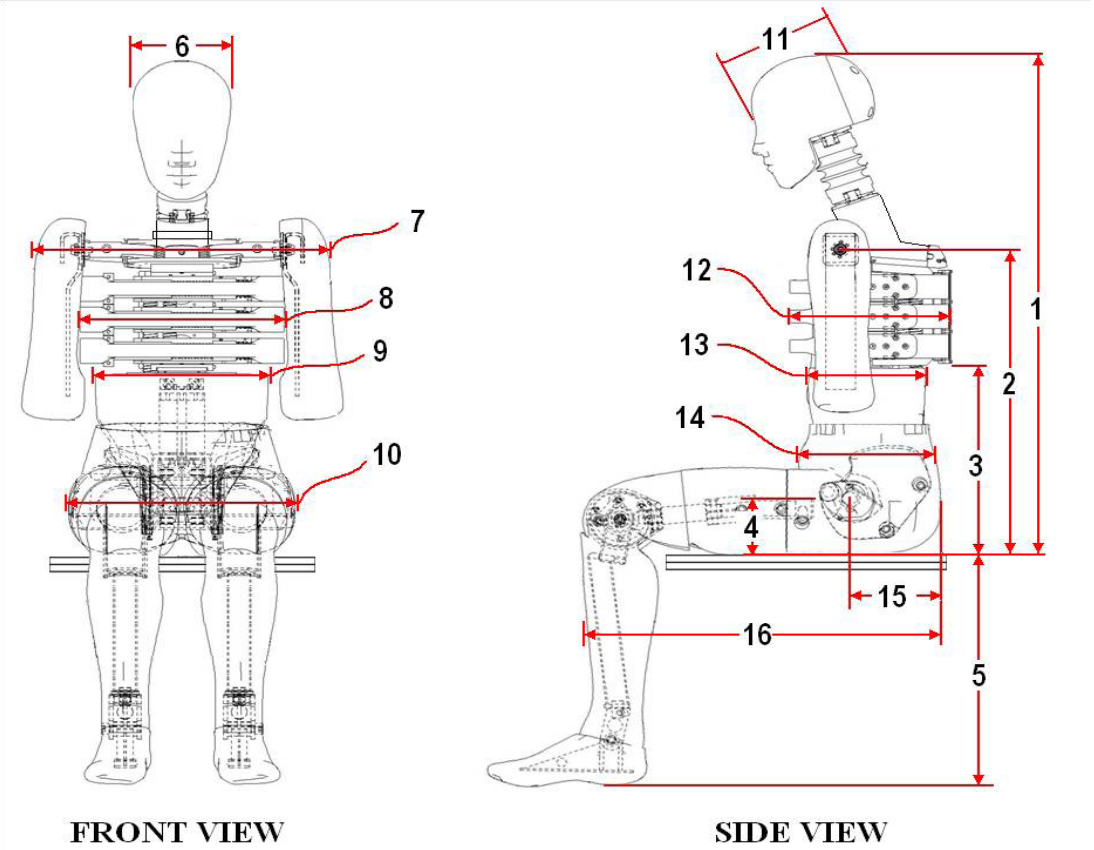

Pubic Force
Max: 10.4 N
Min: -1547.6 N
Filter: CFC 600
Force (N)
Time [ms]
500
0
-500
-1000
-1500
-2000
0
10
20
30
40
50

POST-TEST DUMMY PERFORMANCE CALIBRATION TEST DATA
(Subpart U, ES-2re)

External Measurements - EuroSID-2re

Technician: J. Rios Date: 1/29/2025

Dummy Serial Number: D037



FRONT VIEW SIDE VIEW

Dim. No.	Description	Specification (mm)		Result (mm)	Pass/Fail
1	Sitting Height	900	918	911	Pass
2	Seat to Shoulder Joint	558	572	563	Pass
3	Seat to Lower Face of Thoracic Spine Box	346	356	354	Pass
4	Seat to Hip Joint (center of bolt)	97	103	100	Pass
5	Sole to Seat, Sitting	333	451	424	Pass
6	Head Width	152	158	155	Pass
7	Shoulder/Arm Width	461	479	470	Pass
8	Thorax Width	322	332	331	Pass
9	Abdomen Width	273	287	279	Pass
10	Pelvis Lap Width	359	373	362	Pass
11	Head Depth	196	206	201	Pass
12	Thorax Depth	262	272	267	Pass
13	Abdomen Depth	194	204	197	Pass
14	Pelvis Depth	235	245	240	Pass
15	Back of Buttocks to Hip Joint (center of bolt)	150	160	155	Pass
16	Back of Buttocks to Front Knee	597	615	603	Pass

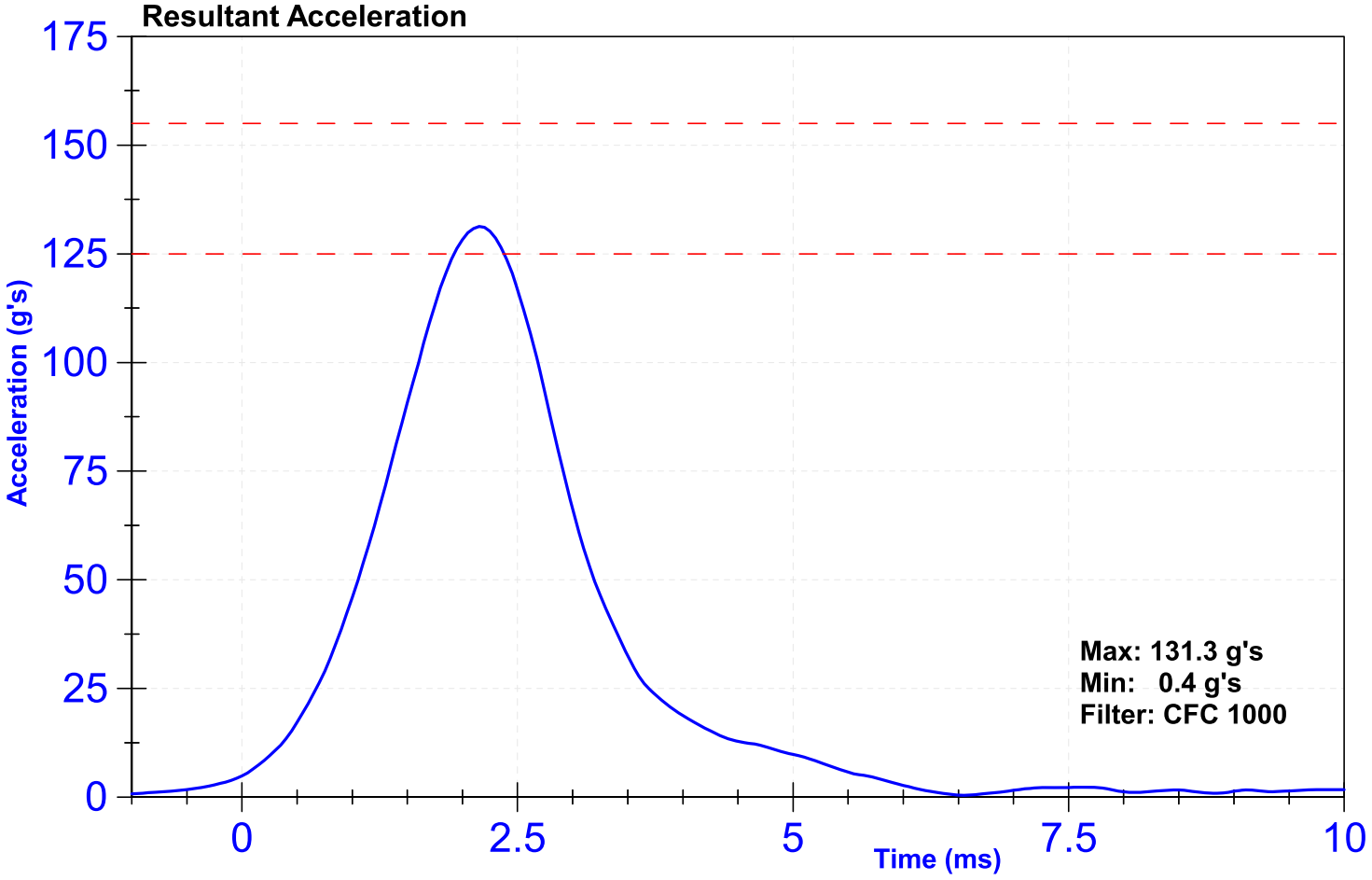
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

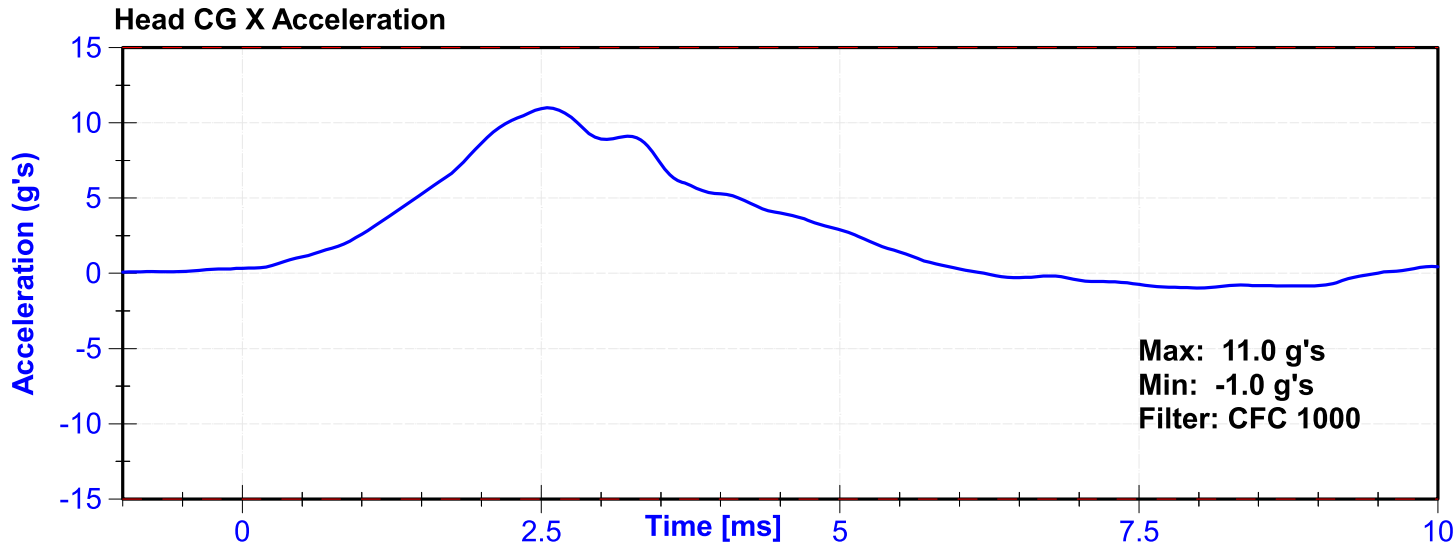
Results

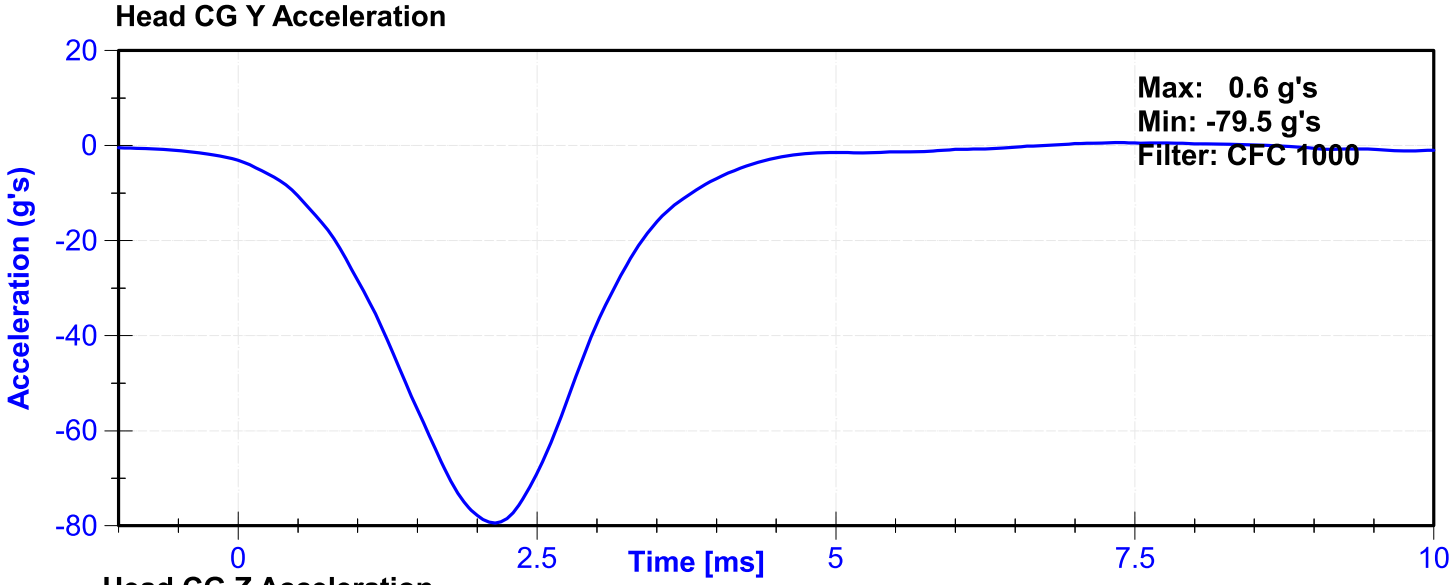
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Resultant Acceleration	125	155	g's	131.3	Pass
Oscillation	0	15	%	1.92	Pass
Fore-Aft Acceleration	-15	15	g's	11.0	Pass

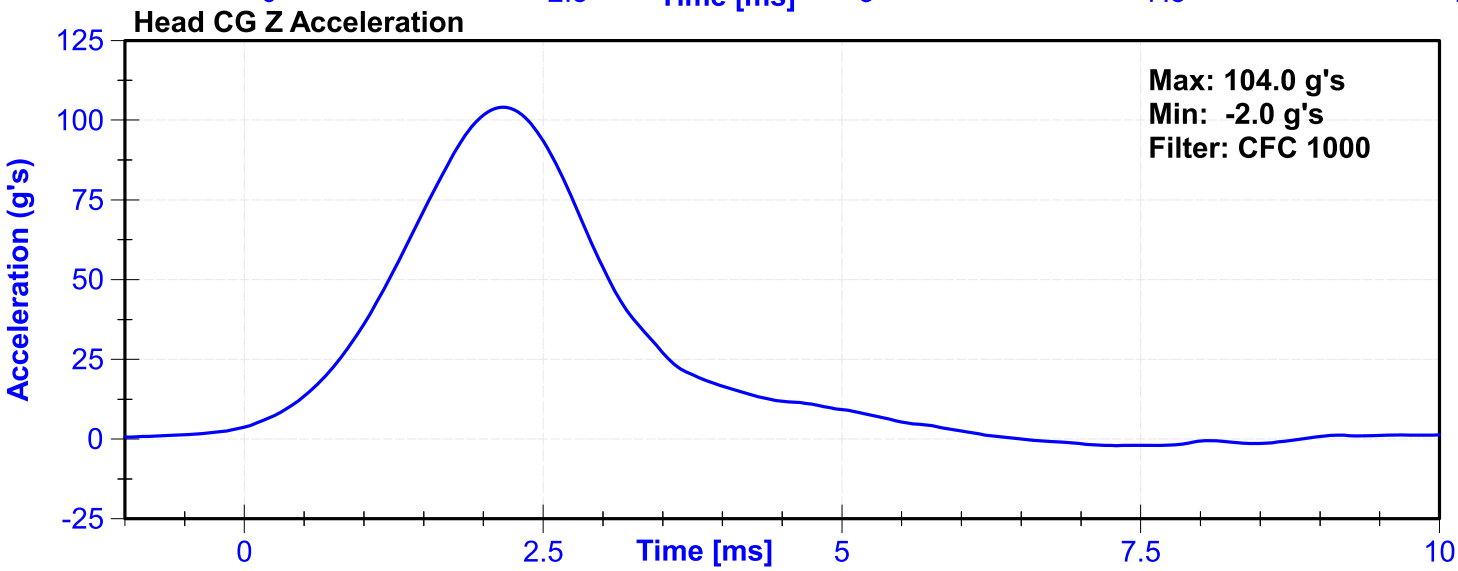
Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
X Accelerometer	Endevco	T21724	10/8/2024	4/6/2025
Y Accelerometer	Endevco	T22281	10/8/2024	4/6/2025
Z Accelerometer	Endevco	T26050	10/8/2024	4/6/2025




Head CG X Acceleration
Acceleration (g's)
15
10
5
0
-5
-10
-15
0
2.5
5
7.5
10
Time [ms]
Max: 11.0 g's
Min: -1.0 g's
Filter: CFC 1000


Head CG Y Acceleration
Acceleration (g's)
20
0
-20
-40
-60
-80
0
2.5
5
7.5
10
Time [ms]
Max: 0.6 g's
Min: -79.5 g's
Filter: CFC 1000


Head CG Z Acceleration
Acceleration (g's)
125
100
75
50
25
0
-25
0
2.5
5
7.5
10
Time [ms]
Max: 104.0 g's
Min: -2.0 g's
Filter: CFC 1000

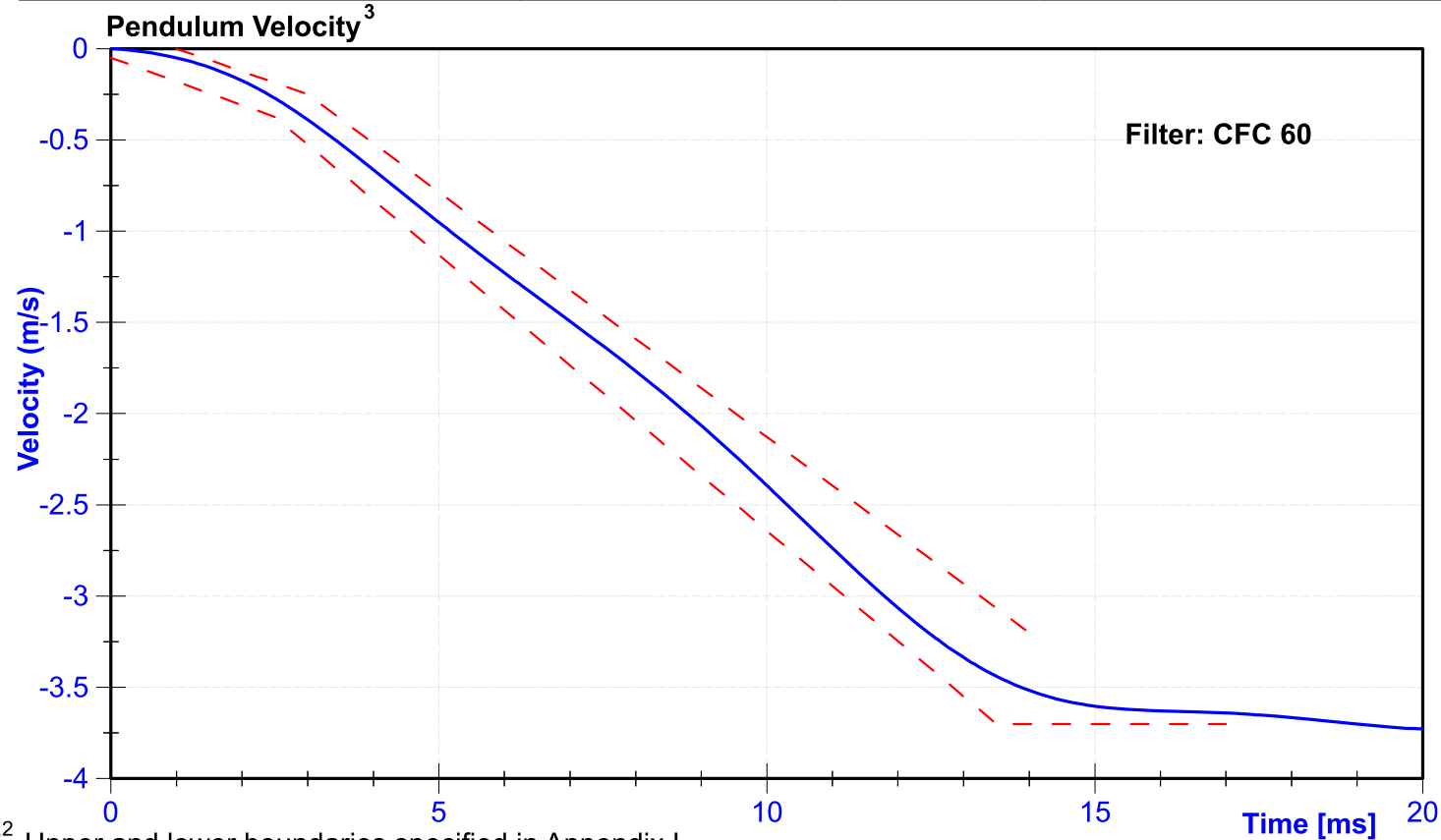
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

Results

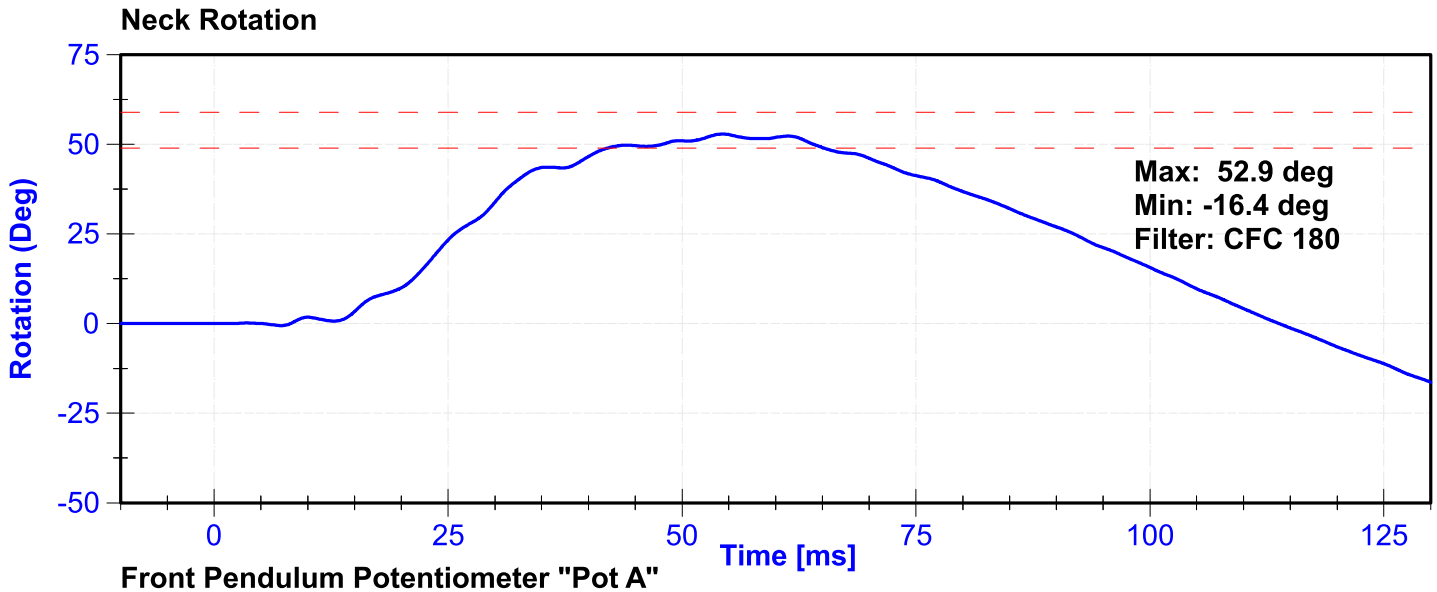
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Velocity	3.3	3.5	m/s	3.45	Pass
Lateral Neck Rotation	49	59	deg	52.9	Pass
Time at Maximum Rotation	54	66	ms	54.4	Pass
Time of Rotation Decay from Maximum	53	88	ms	59.4	Pass
Pendulum Velocity Overall Corridor	Lower Boundary[1]	Upper Boundary[2]	m/s	See Plot[3]	Pass

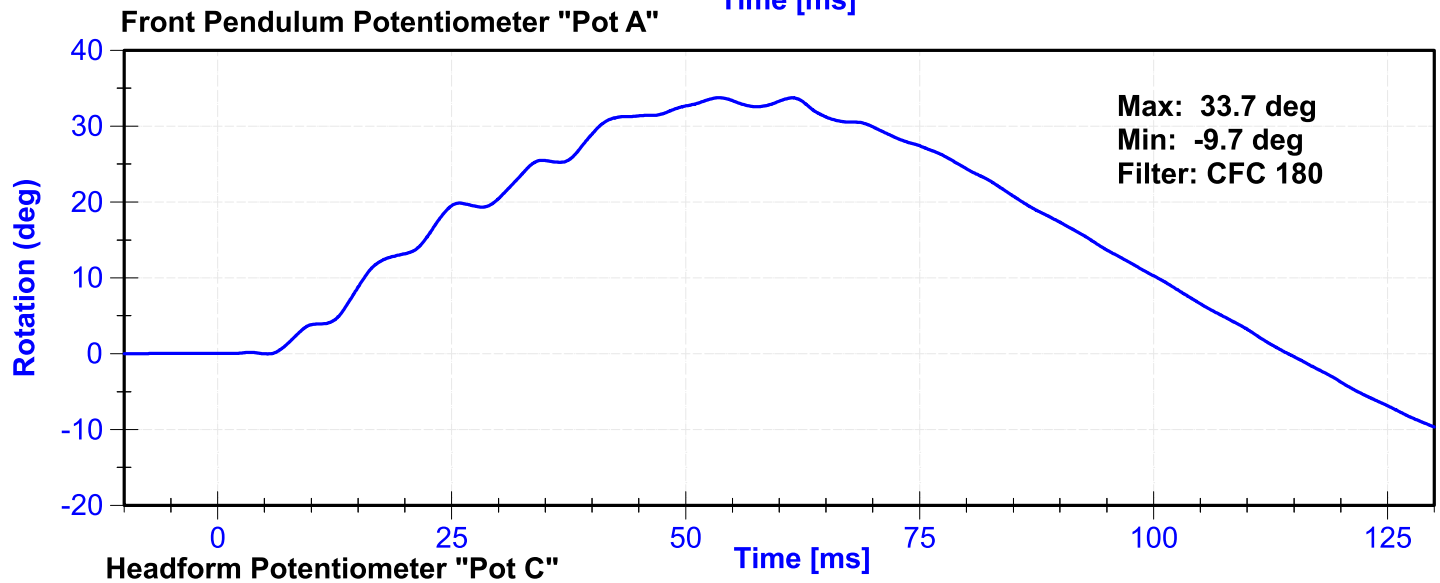
Transducer Calibrations

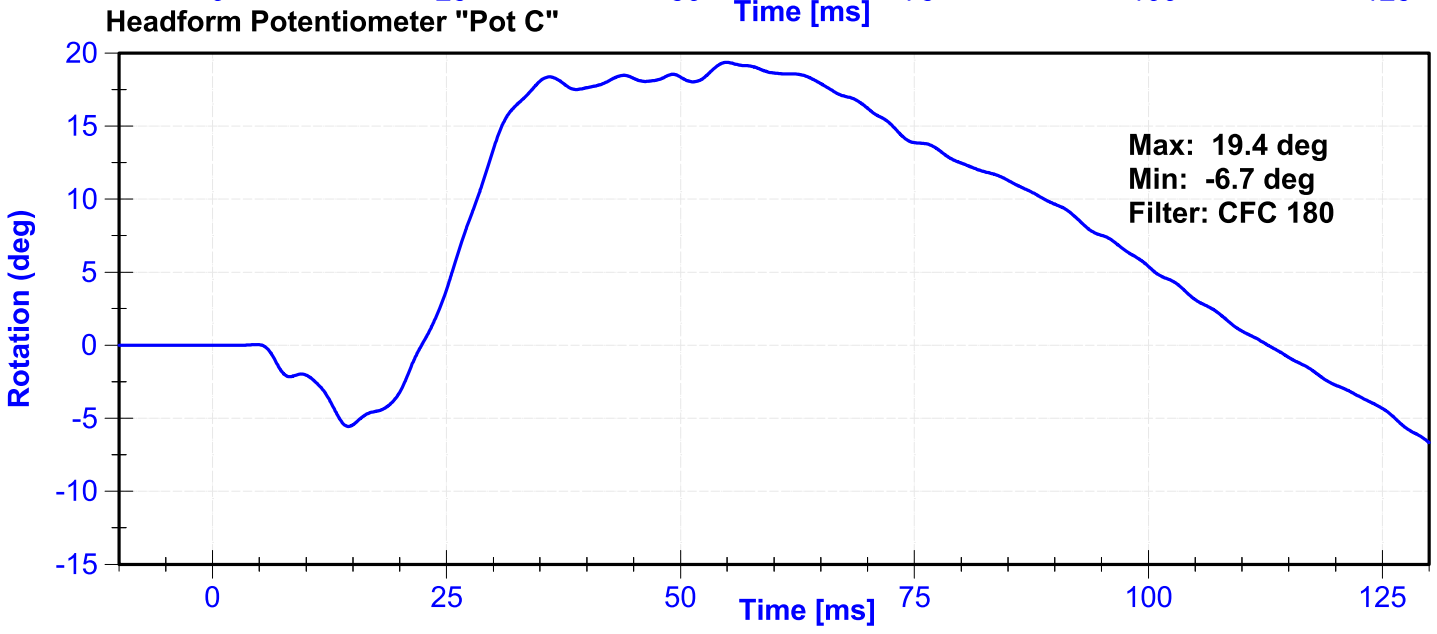
Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	C16650	11/1/2024	11/1/2025
Front Pendulum Potentiometer	Sfernice	2247	9/13/2024	9/13/2025
Headform Potentiometer	Sfernice	095	9/13/2024	9/13/2025



[1,2] Upper and lower boundaries specified in Appendix I


Neck Rotation
Rotation (Deg)
75
50
25
0
-25
-50
0
25
50
75
100
125
Time [ms]
Max: 52.9 deg
Min: -16.4 deg
Filter: CFC 180


Front Pendulum Potentiometer "Pot A"
Rotation (deg)
40
30
20
10
0
-10
-20
0
25
50
75
100
125
Time [ms]
Max: 33.7 deg
Min: -9.7 deg
Filter: CFC 180


Headform Potentiometer "Pot C"
Rotation (deg)
20
15
10
5
0
-5
-10
-15
0
25
50
75
100
125
Time [ms]
Max: 19.4 deg
Min: -6.7 deg
Filter: CFC 180

Appendix I

[2] Upper Boundary Corridor		[1] Lower Boundary Corridor	
Time (ms)	Velocity (m/s)	Time (ms)	Velocity (m/s)
1.0	0.00	0.0	-0.05
3.0	-0.25	2.5	-0.375
14.0	-3.20	13.5	-3.7
		17.0	-3.7

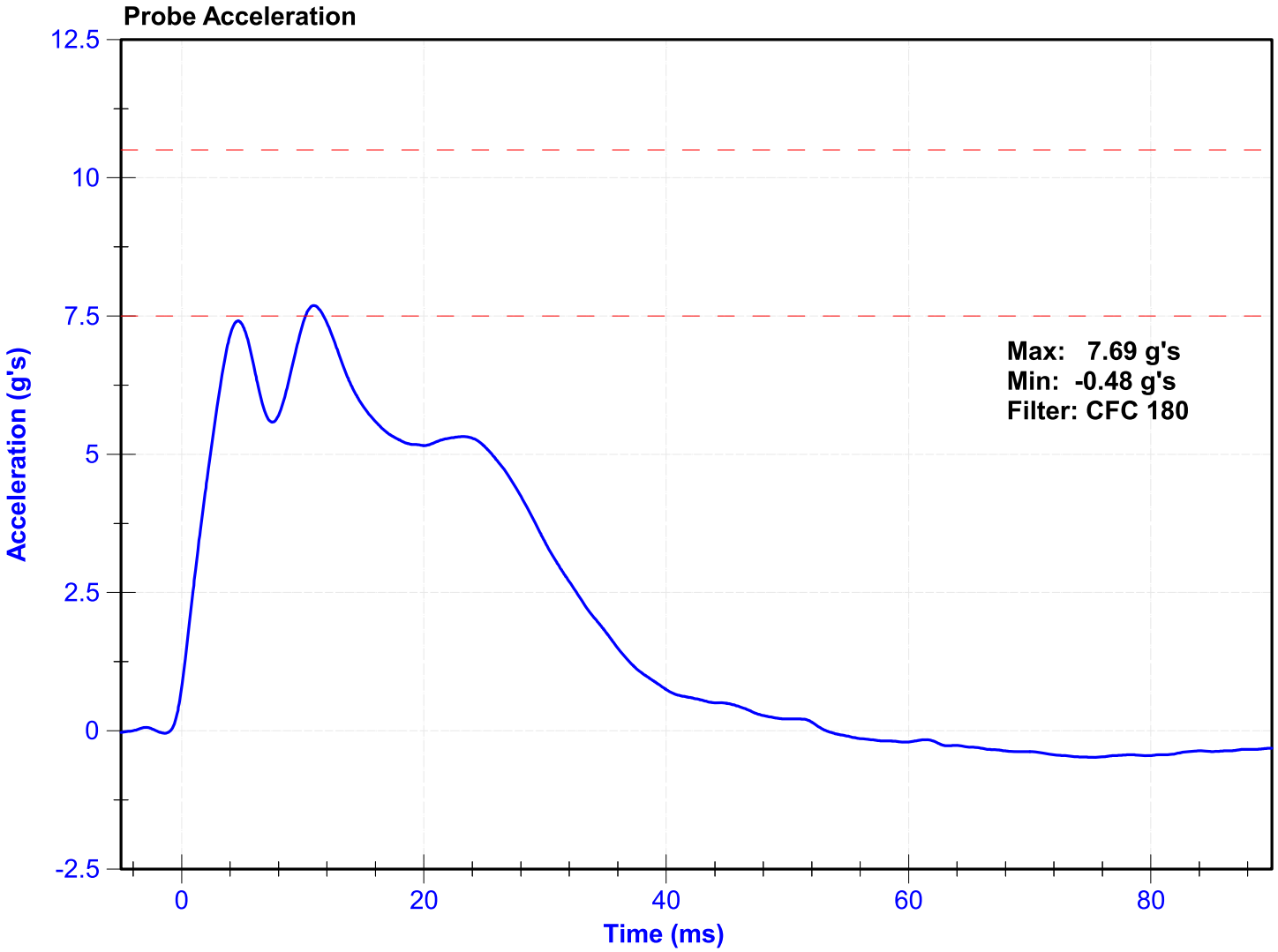
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Velocity	4.2	4.4	m/s	4.28	Pass
Probe Acceleration	7.5	10.5	g's	7.69	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Probe Accelerometer	Endevco	T25863	1/17/2025	7/16/2025



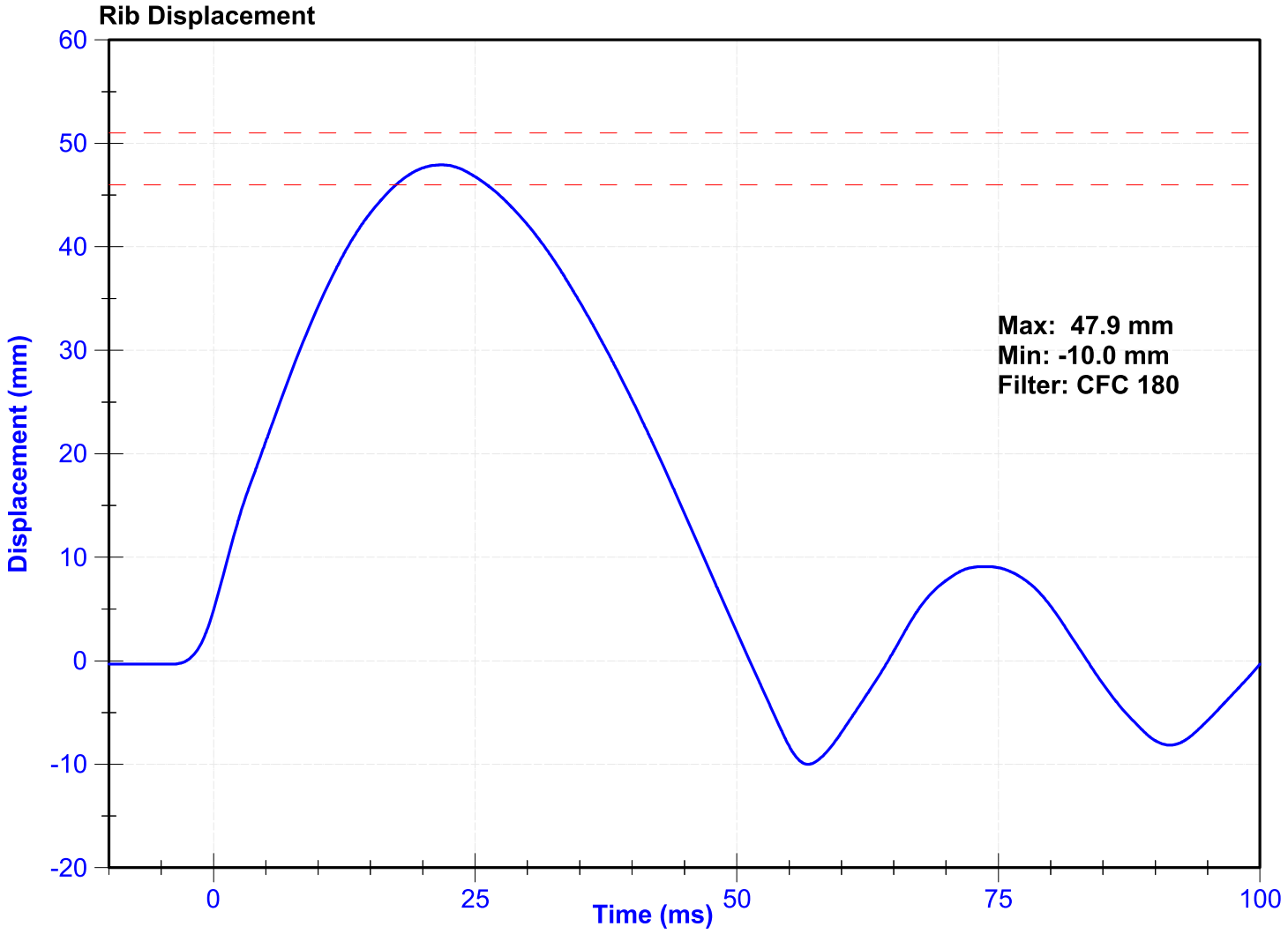
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J.Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Rib Displacement	46	51	mm	47.9	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Rib Potentiometer	Honeywell	0552-01	10/8/2024	4/8/2025



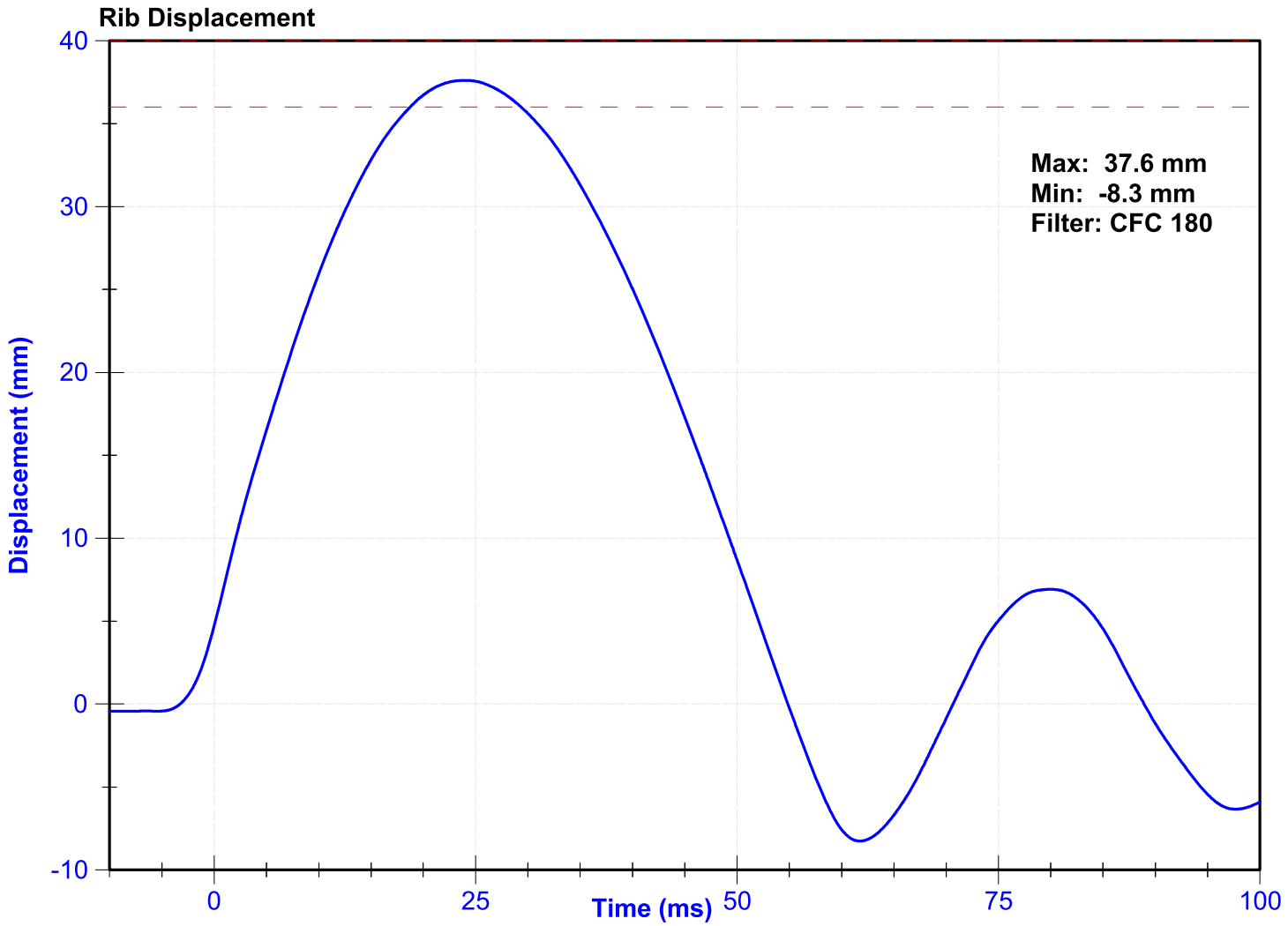
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J.Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Rib Displacement	36	40	mm	37.6	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Rib Potentiometer	Honeywell	0552-01	10/8/2024	4/8/2025



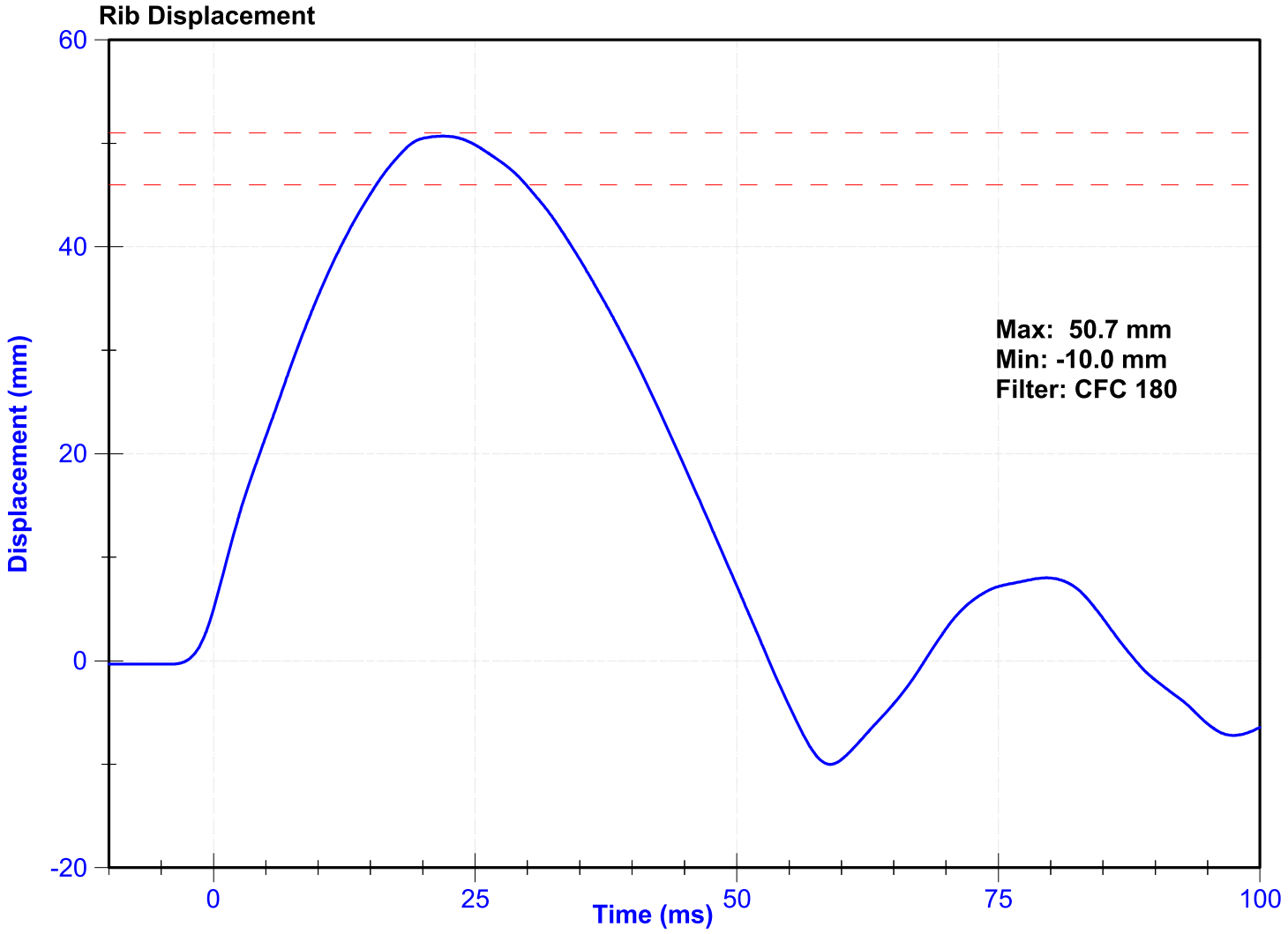
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J.Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Rib Displacement	46	51	mm	50.7	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Rib Potentiometer	Honeywell	807	10/8/2024	4/8/2025



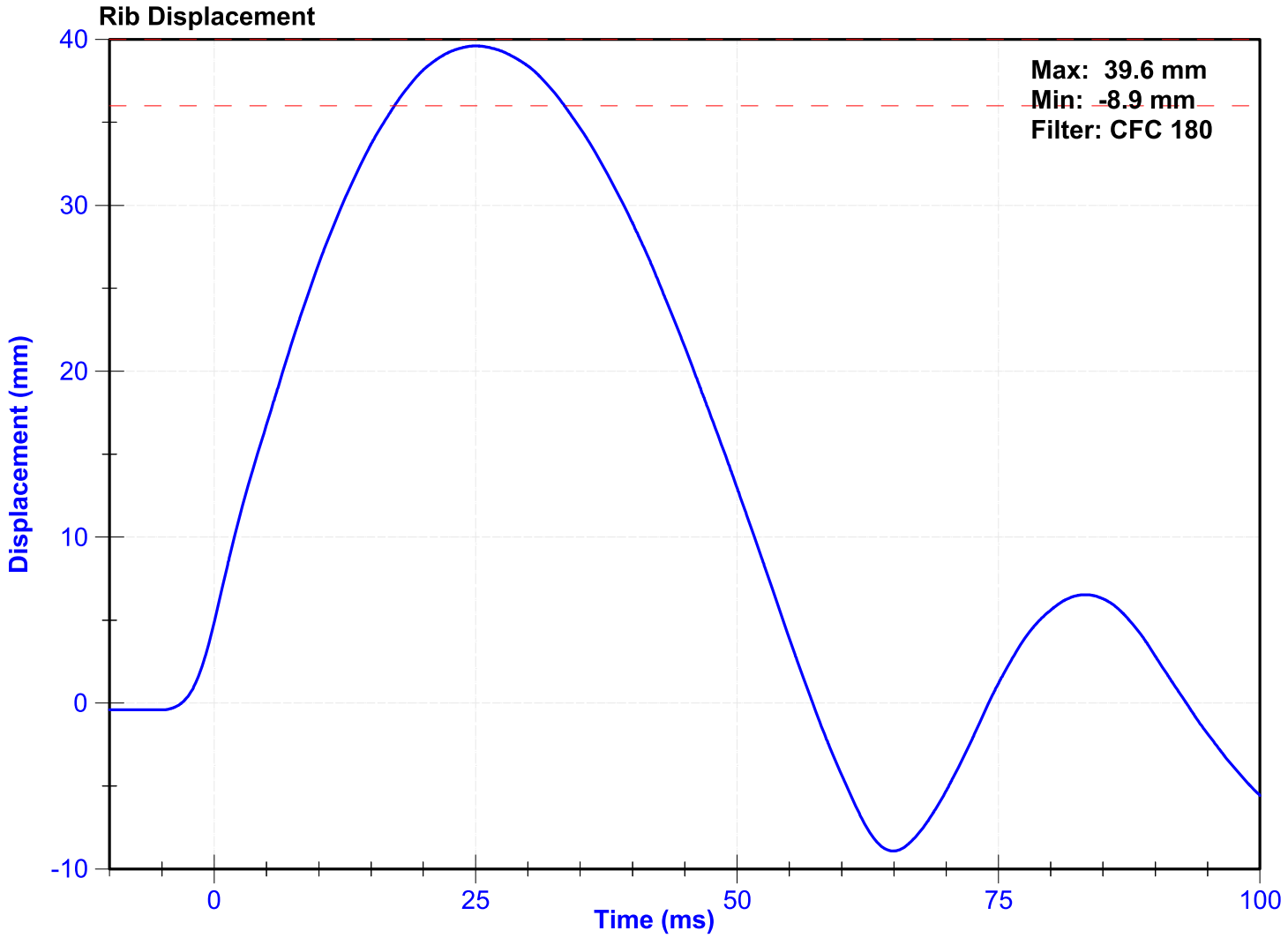
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J.Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Rib Displacement	36	40	mm	39.6	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Rib Potentiometer	Honeywell	807	10/8/2024	4/8/2025



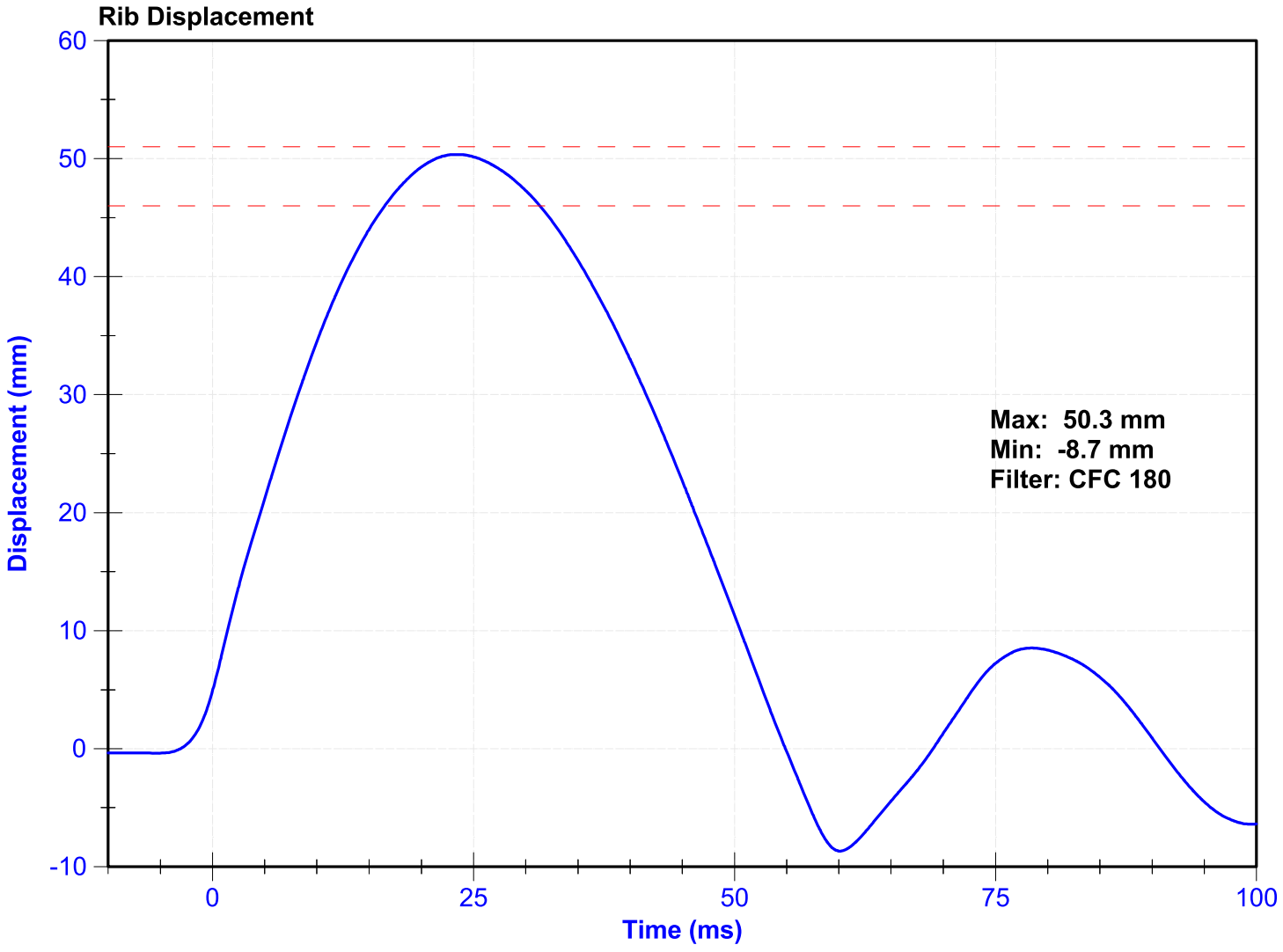
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Rib Displacement	46	51	mm	50.3	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Rib Potentiometer	Honeywell	0552-03	10/8/2024	4/8/2025



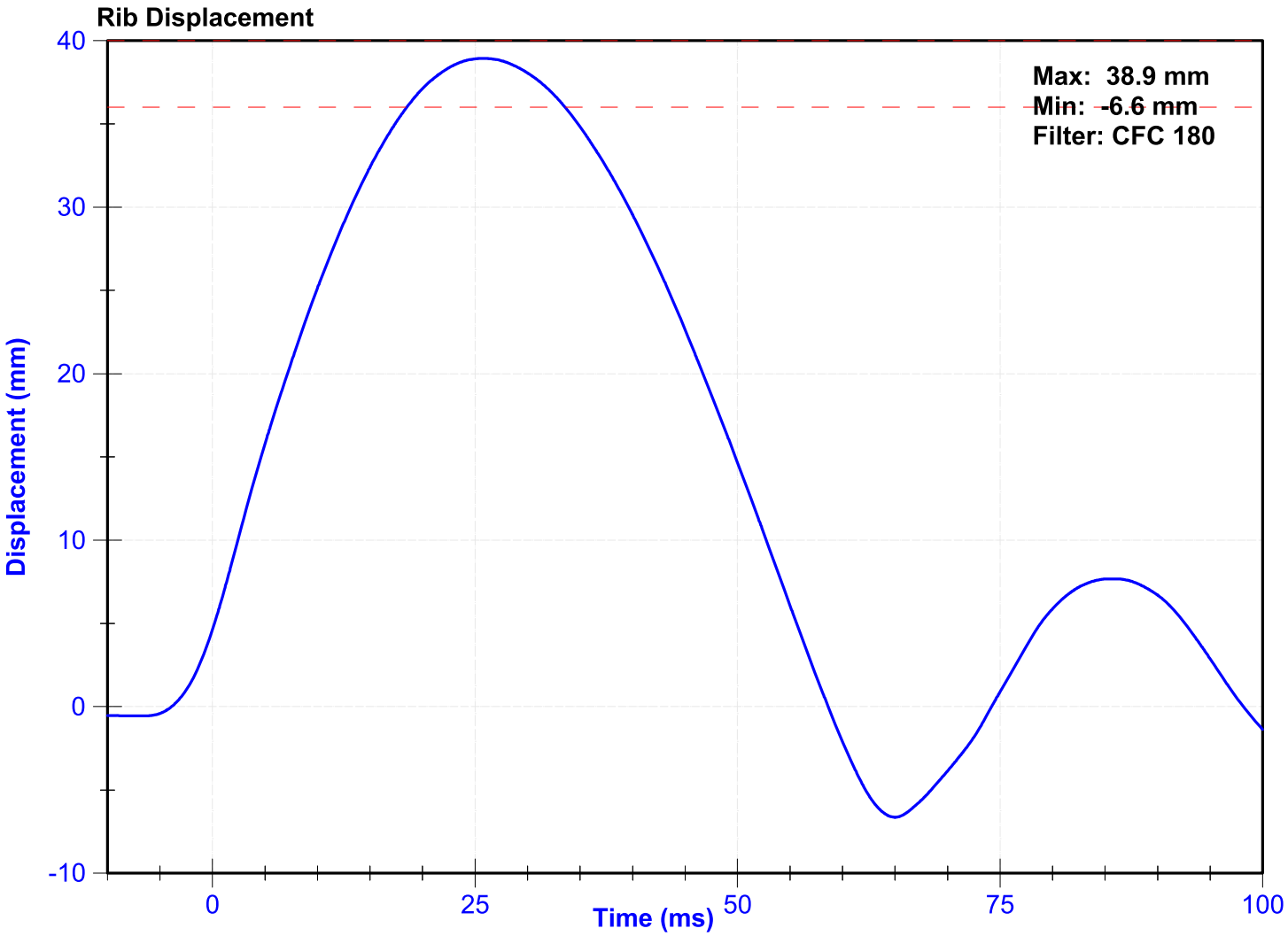
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J.Kinderman

Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Rib Displacement	36	40	mm	38.9	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Rib Potentiometer	Honeywell	0552-03	10/8/2024	4/8/2025



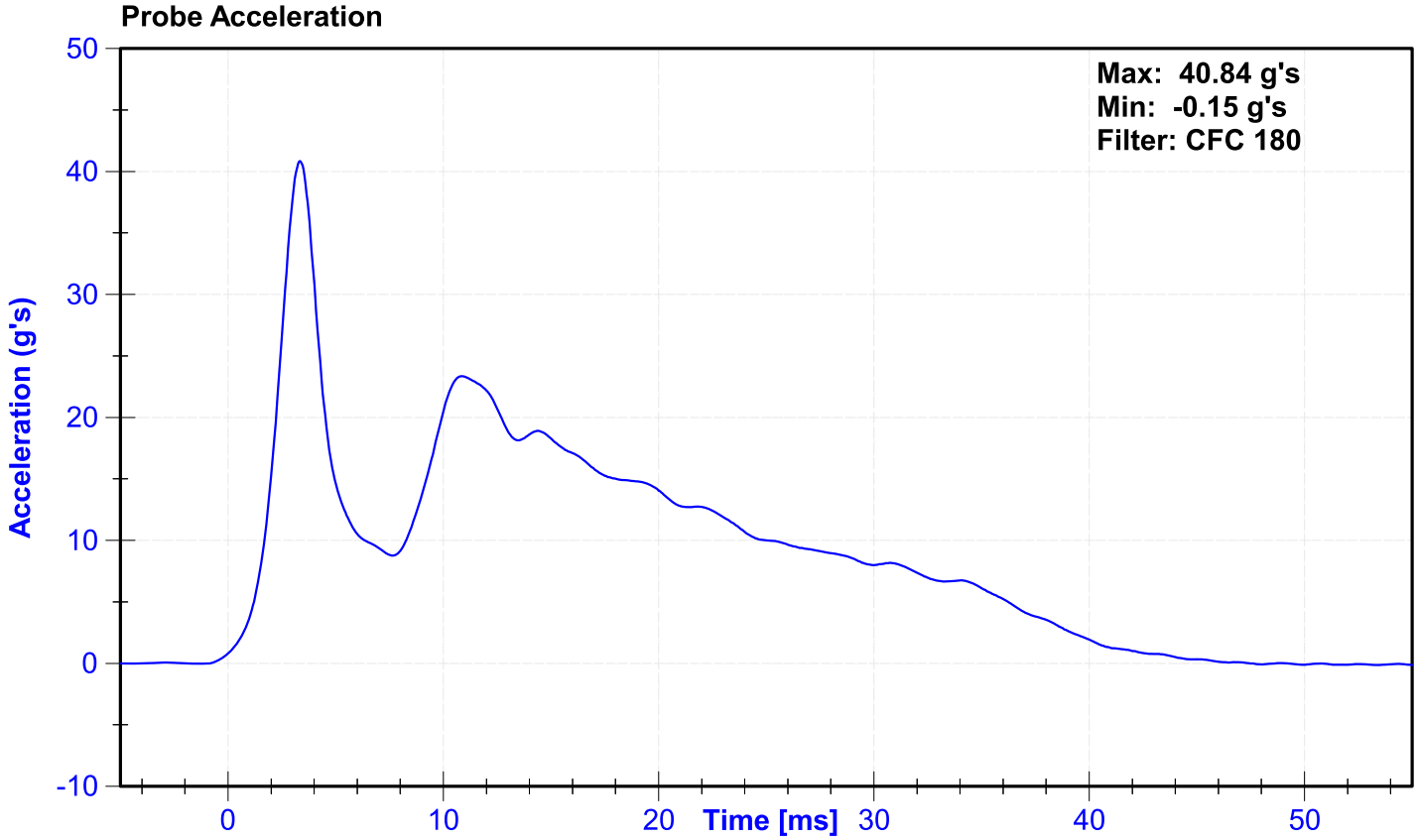
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

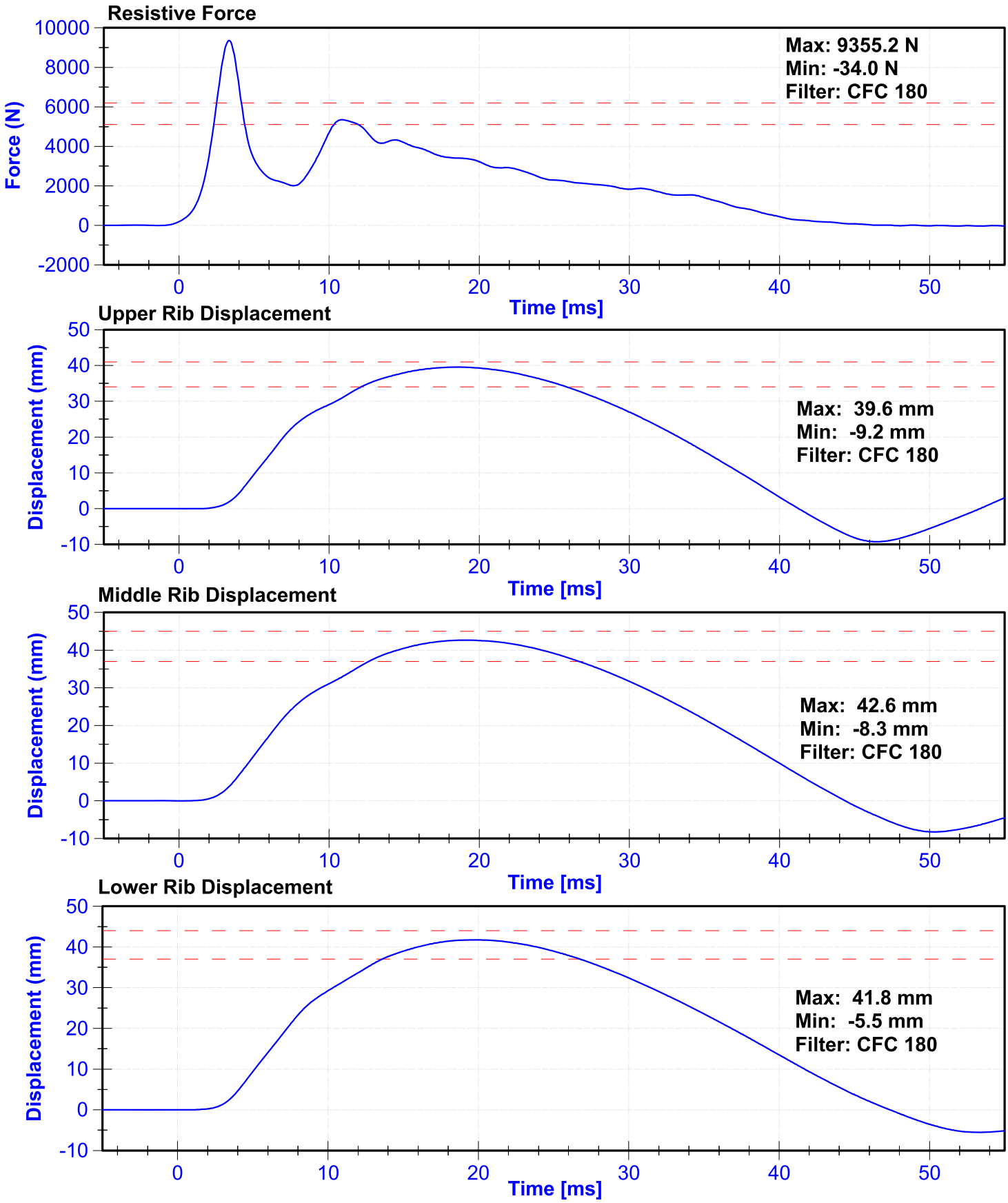
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Velocity	5.4	5.6	m/s	5.42	Pass
Resistive Force after 6ms	5100	6200	N	5348.7	Pass
Upper Thorax Rib Deflection	34	41	mm	39.6	Pass
Mid Thorax Rib Deflection	37	45	mm	42.6	Pass
Lower Thorax Rib Deflection	37	44	mm	41.8	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Probe Accelerometer	Endevco	T25863	1/17/2025	7/16/2025
Upper Thorax Rib Potentiometer	Honeywell	0552-01	10/8/2024	4/8/2025
Middle Thorax Rib Potentiometer	Honeywell	807	10/8/2024	4/8/2025
Lower Thorax Rib Potentiometer	Honeywell	0552-03	10/8/2024	4/8/2025




Resistive Force
Max: 9355.2 N
Min: -34.0 N
Filter: CFC 180
Force (N)
Time [ms]
Upper Rib Displacement
Max: 39.6 mm
Min: -9.2 mm
Filter: CFC 180
Displacement (mm)
Time [ms]
Middle Rib Displacement
Max: 42.6 mm
Min: -8.3 mm
Filter: CFC 180
Displacement (mm)
Time [ms]
Lower Rib Displacement
Max: 41.8 mm
Min: -5.5 mm
Filter: CFC 180
Displacement (mm)
Time [ms]

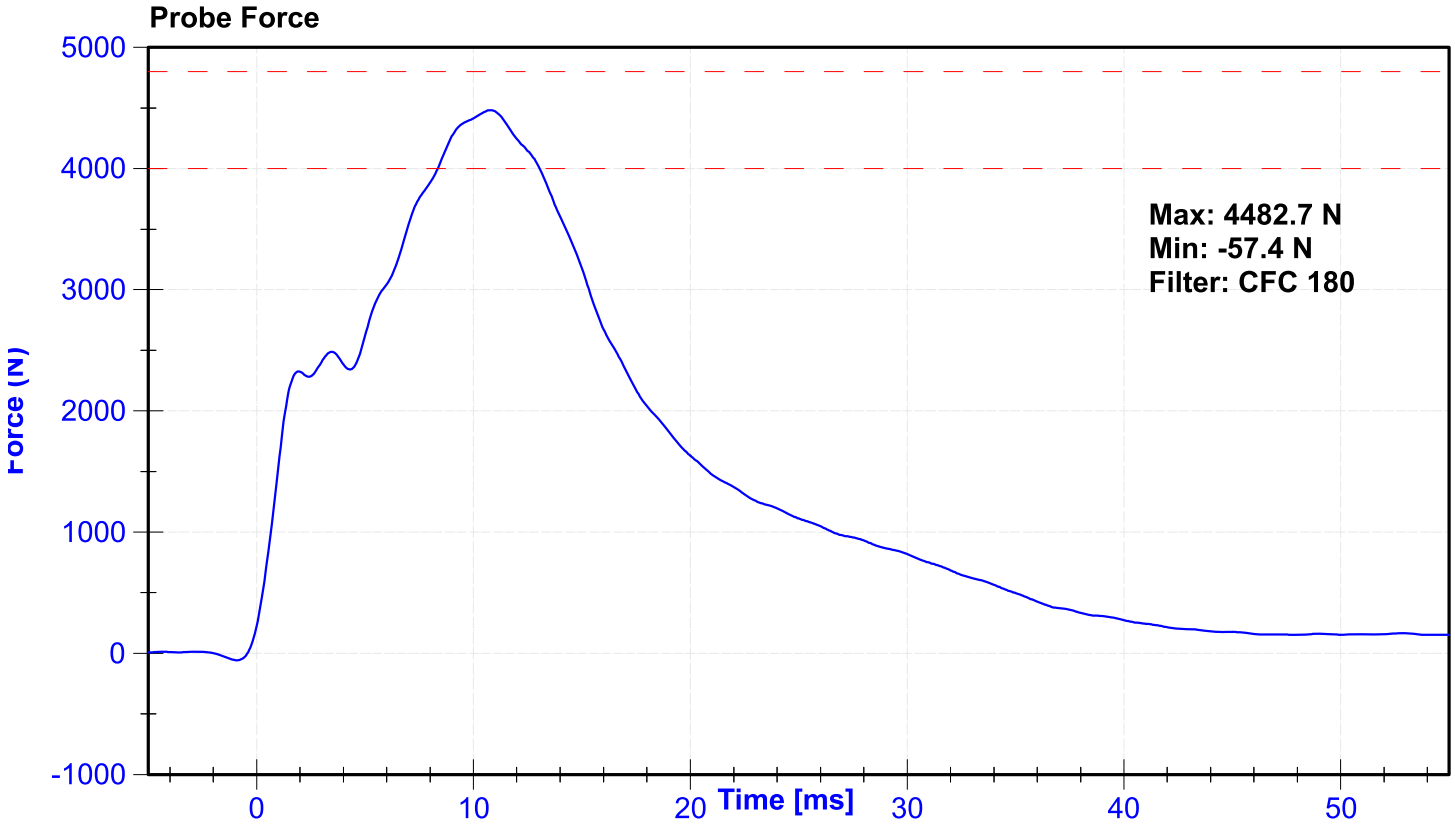
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

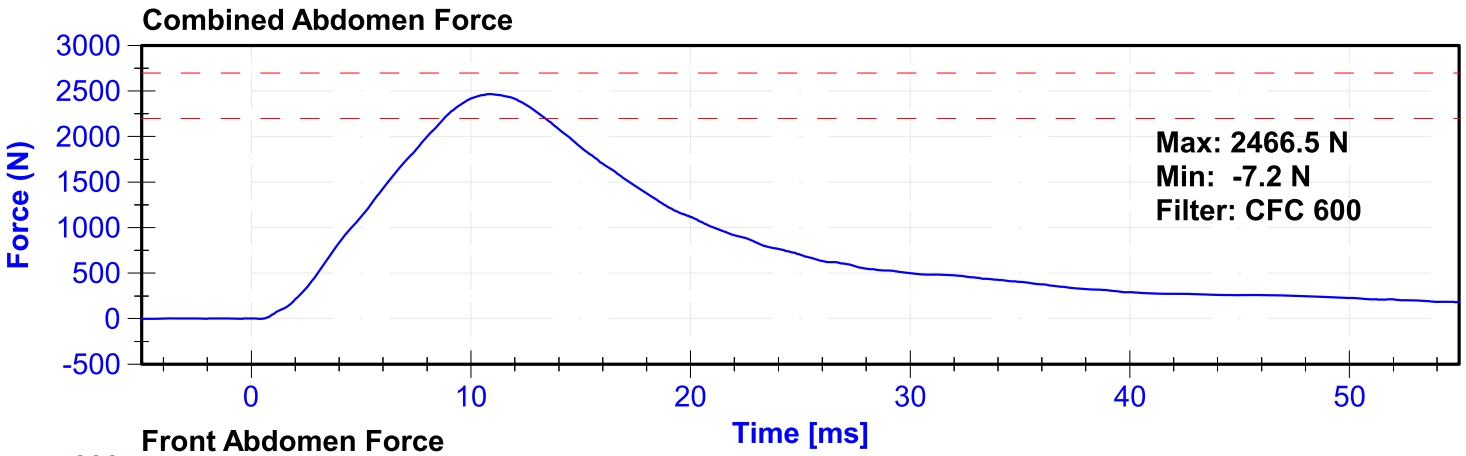
Results

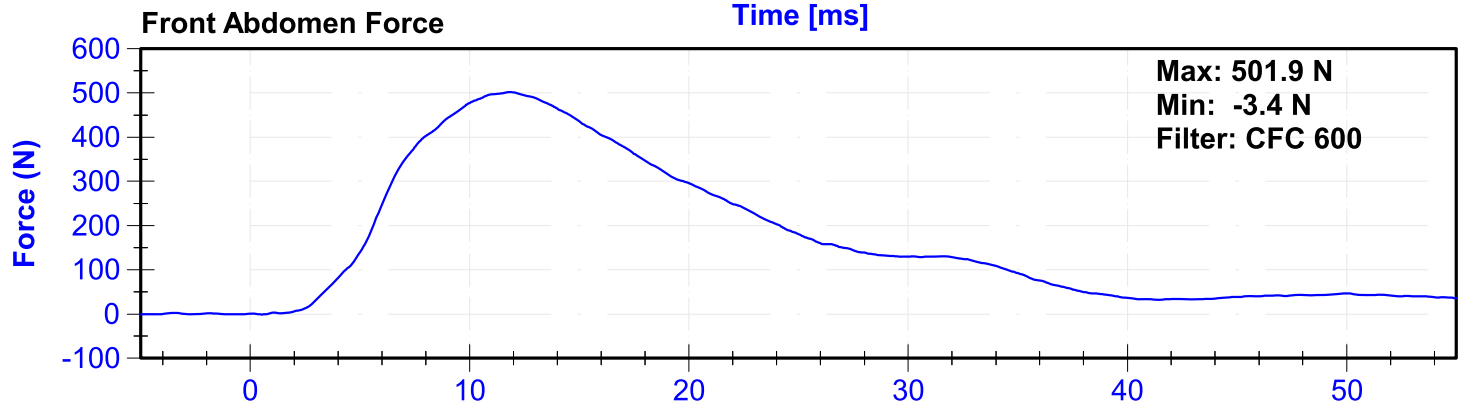
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Velocity	3.9	4.1	m/s	4.03	Pass
Combined Abdomen Force	2200	2700	N	2466.5	Pass
Time at Peak Abdomen Force	10.0	12.3	ms	10.90	Pass
Resistive Probe Force	4000	4800	N	4482.7	Pass
Time at Peak Resistive Force	10.6	13.0	ms	10.80	Pass

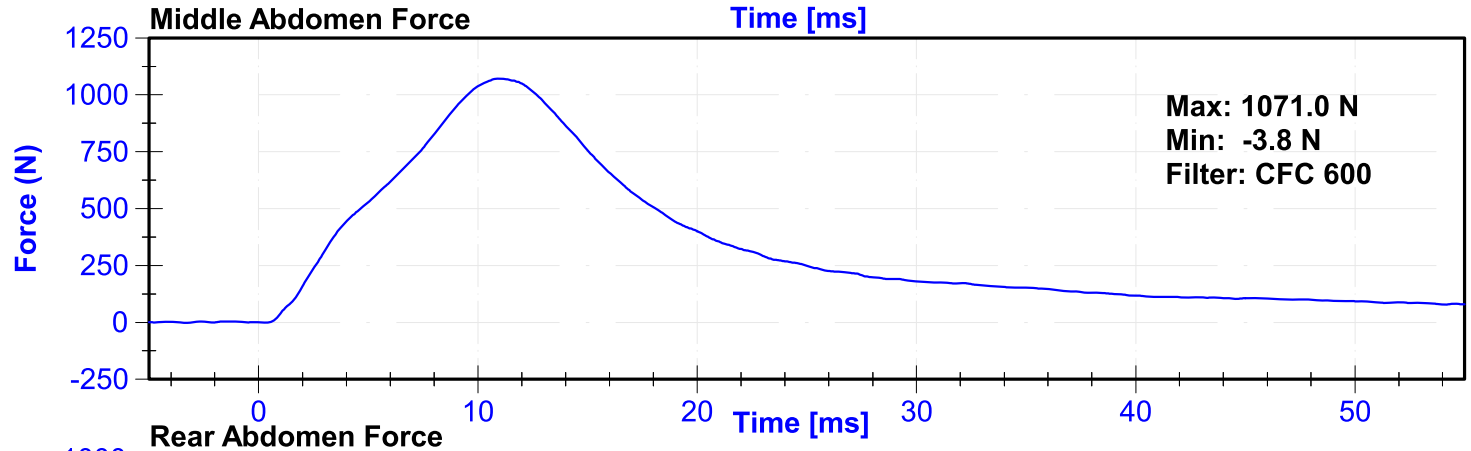
Transducer Calibrations

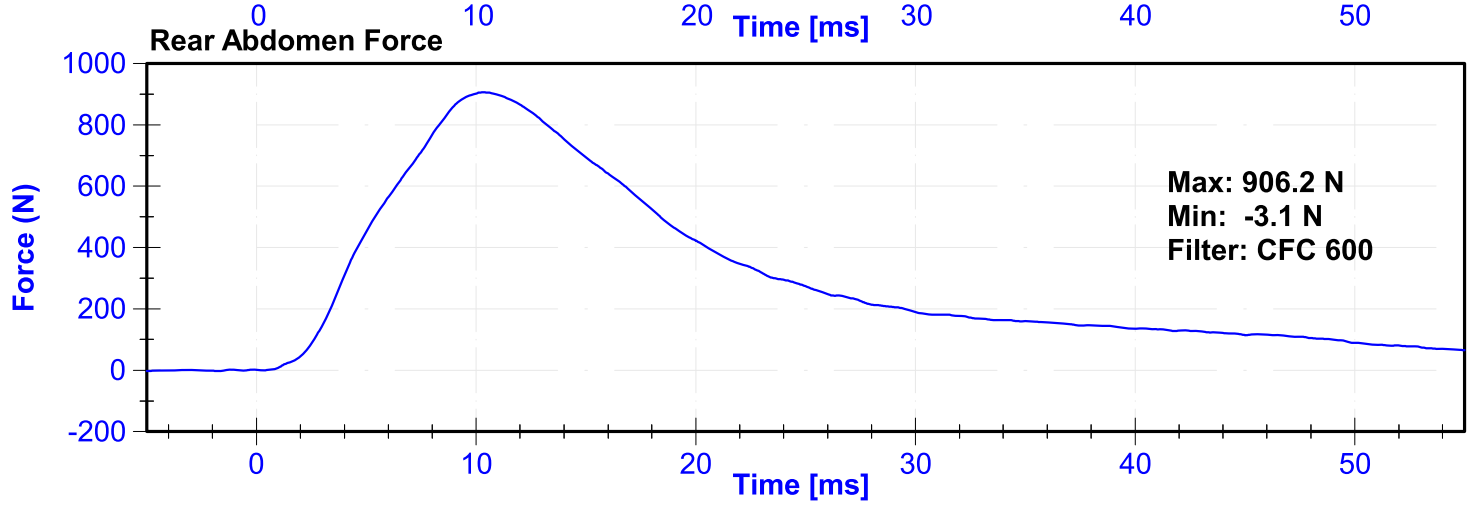
Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	T25863	1/17/2025	7/16/2025
Front Abdomen Load Cell	Denton	1512	9/16/2024	9/16/2025
Middle Abdomen Load Cell	Denton	1526	9/16/2024	9/16/2025
Rear Abdomen Load Cell	Denton	1516	9/16/2024	9/16/2025




Combined Abdomen Force
Force (N)
3000
2500
2000
1500
1000
500
0
-500
0
10
20
30
40
50
Time [ms]
Max: 2466.5 N
Min: -7.2 N
Filter: CFC 600


Front Abdomen Force
Force (N)
600
500
400
300
200
100
0
-100
0
10
20
30
40
50
Time [ms]
Max: 501.9 N
Min: -3.4 N
Filter: CFC 600


Middle Abdomen Force
Force (N)
1250
1000
750
500
250
0
-250
0
10
20
30
40
50
Time [ms]
Max: 1071.0 N
Min: -3.8 N
Filter: CFC 600


Rear Abdomen Force
Force (N)
1000
800
600
400
200
0
-200
0
10
20
30
40
50
Time [ms]
Max: 906.2 N
Min: -3.1 N
Filter: CFC 600

ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

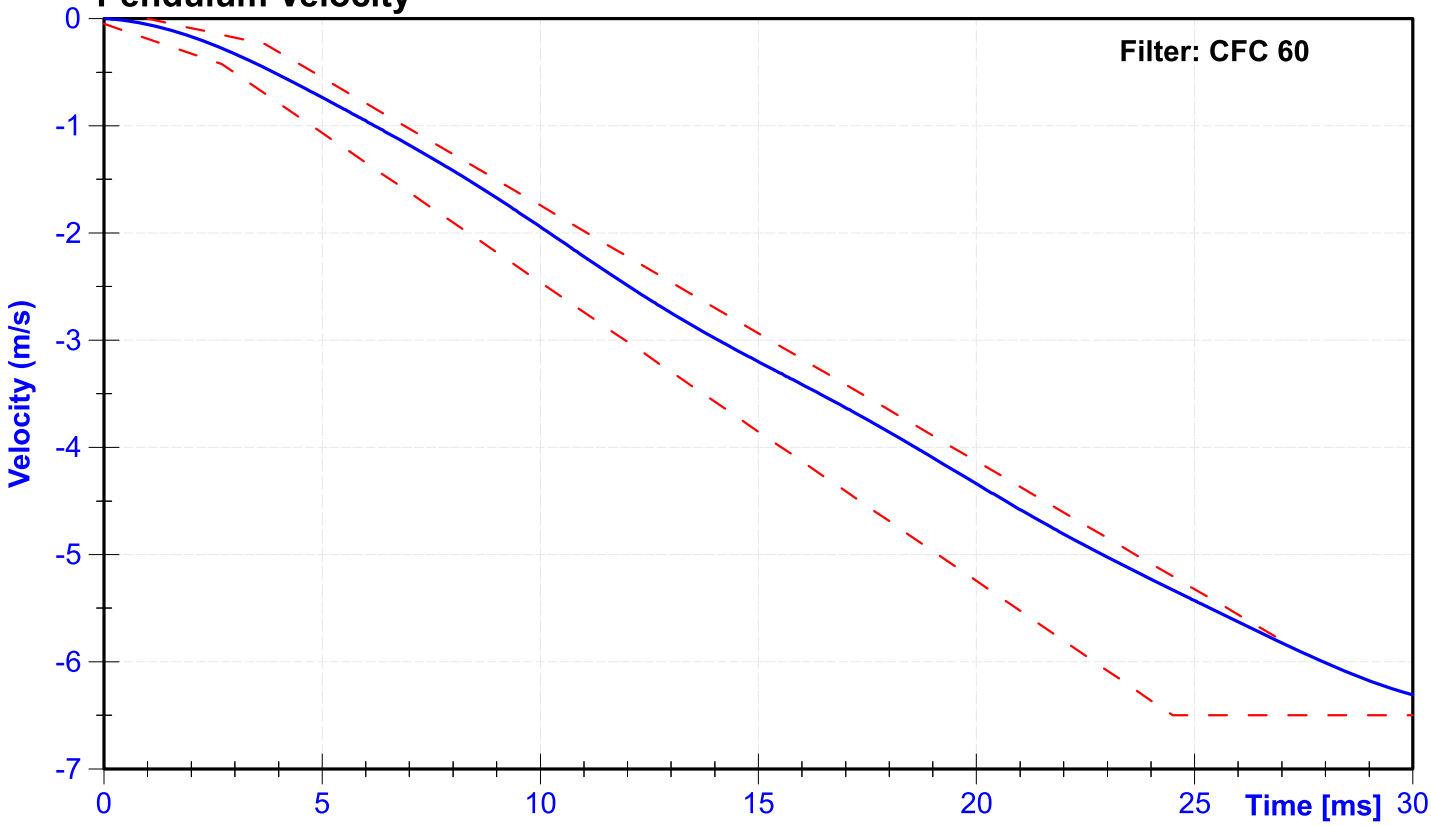
Results

Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Velocity	5.95	6.15	m/s	6.148	Pass
Lateral Spine Rotation	45	55	deg	50.0	Pass
Time at Maximum Rotation	39	53	ms	47.5	Pass
Time of Decay to Zero Degrees	37	57	ms	40.8	Pass
Pendulum Velocity Overall Corridor	Lower Boundary[1]	Upper Boundary[2]	m/s	See Plot[3]	Pass

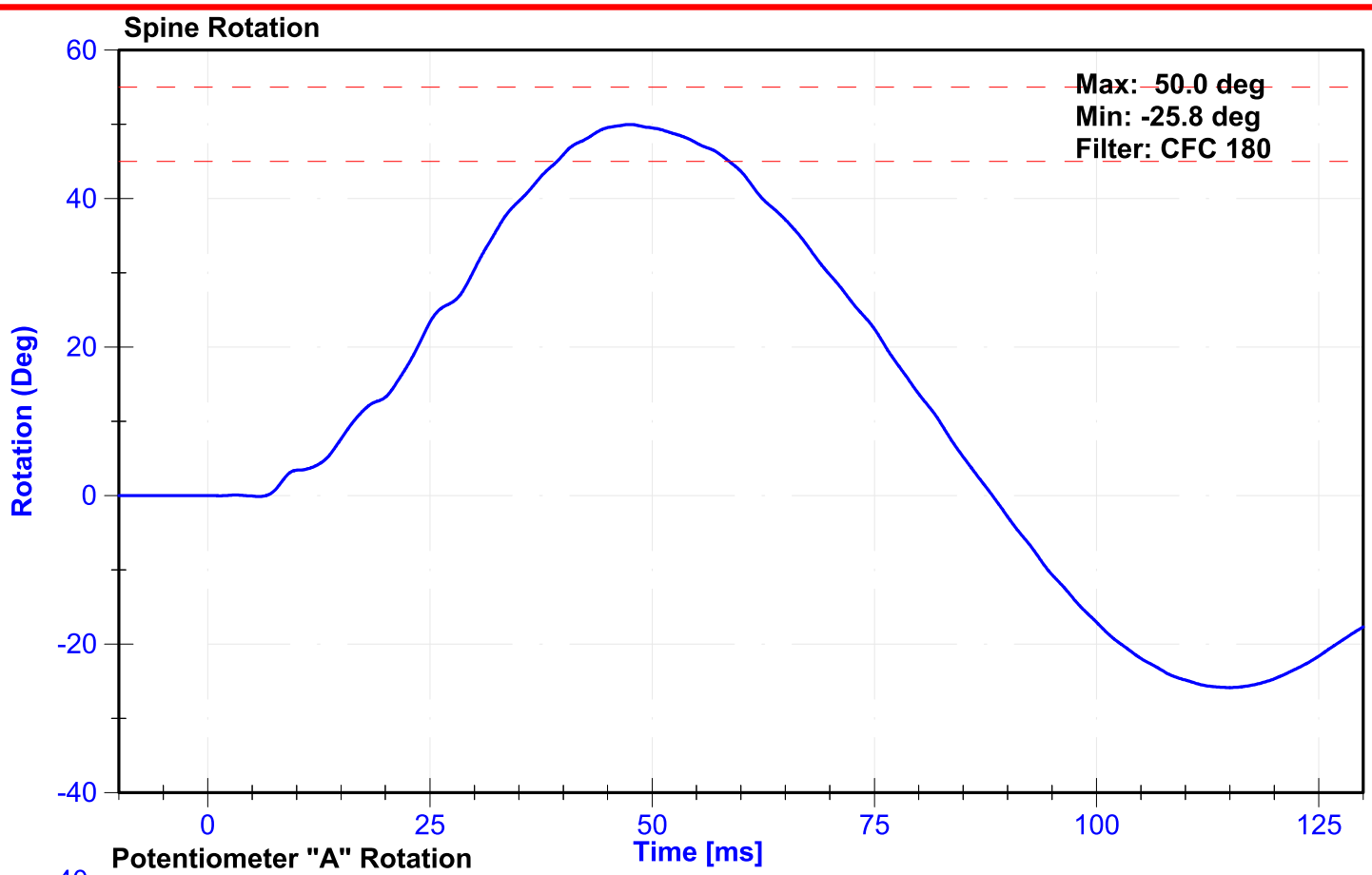
Transducer Calibrations

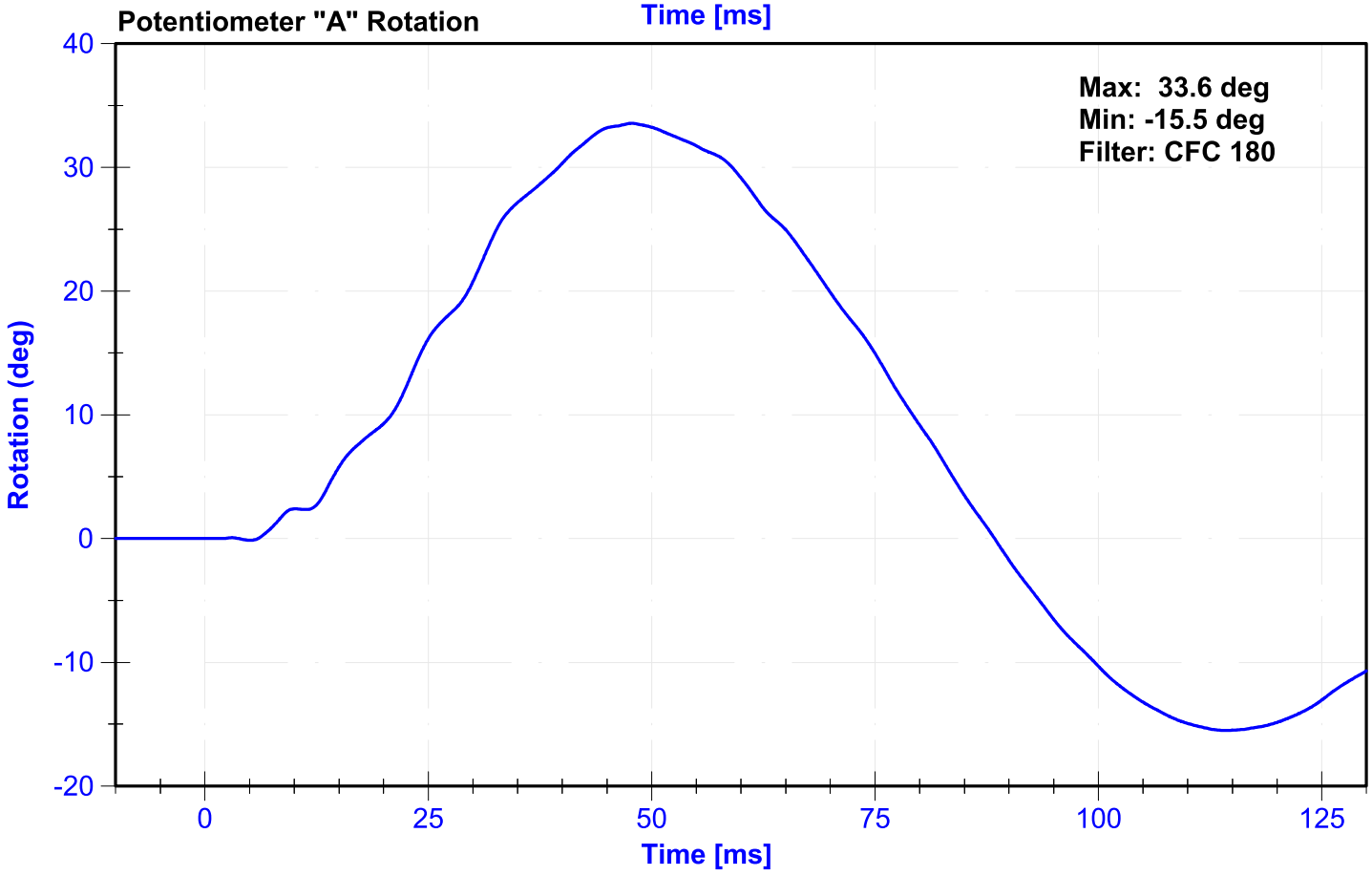
Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	C16650	11/1/2024	11/1/2025
Pendulum "A" Potentiometer	Sfernice	2247	9/13/2024	9/13/2025
Condyle "B" Potentiometer	Sfernice	095	9/13/2024	9/13/2025

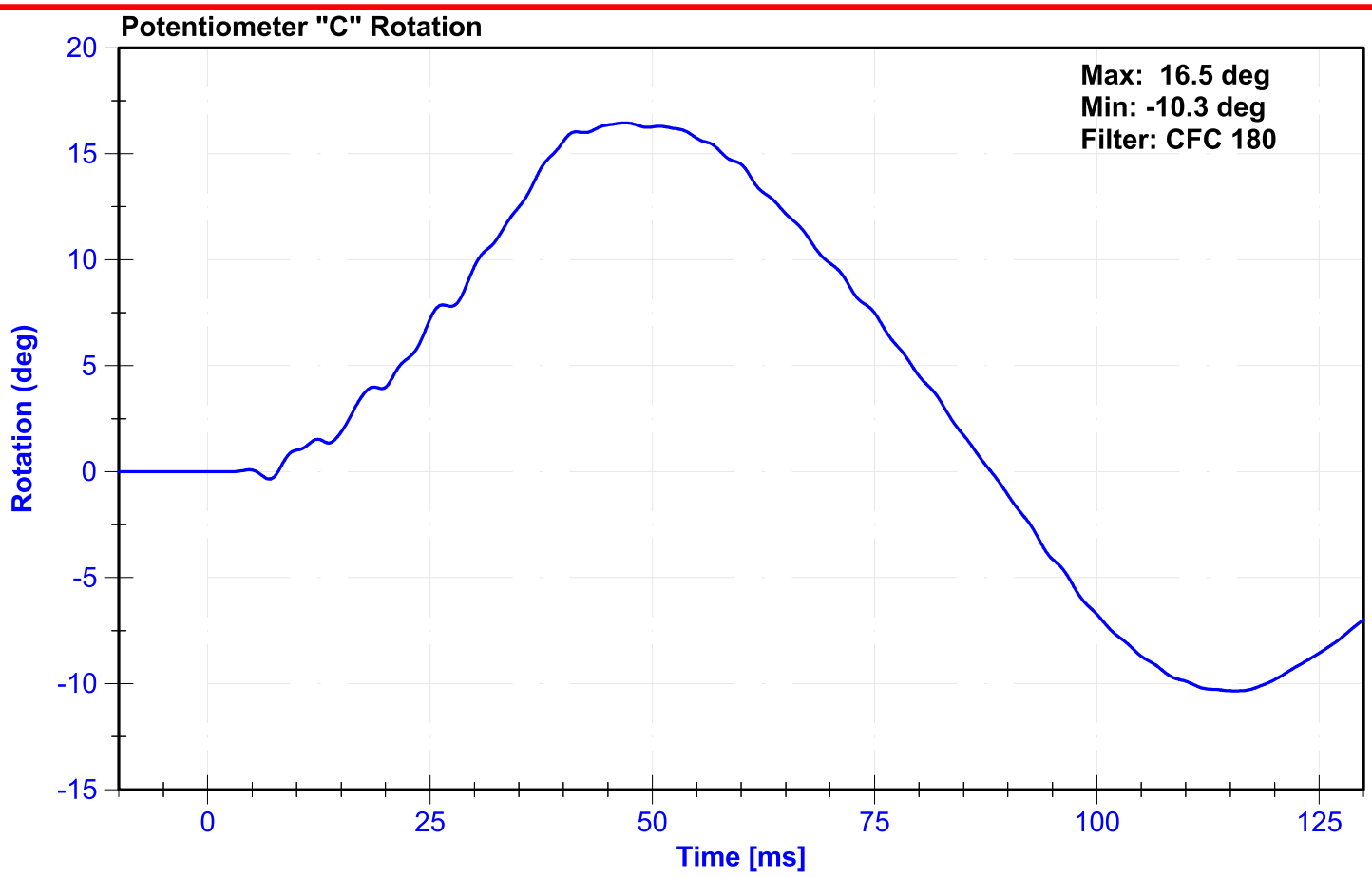
Pendulum Velocity[3]



[1,2] Upper and lower boundaries specified in Appendix I


Spine Rotation
Max: 50.0 deg
Min: -25.8 deg
Filter: CFC 180
Rotation (Deg)
60
40
20
0
-20
-40
0
25
50
75
100
125
Time [ms]


Potentiometer "A" Rotation
Max: 33.6 deg
Min: -15.5 deg
Filter: CFC 180
Rotation (deg)
40
30
20
10
0
-10
-20
0
25
50
75
100
125
Time [ms]



Appendix I

[2] Upper Boundary Corridor		[1] Lower Boundary Corridor	
Time (ms)	Velocity (m/s)	Time (ms)	Velocity (m/s)
1.0	0.00	0.0	-0.05
3.7	-0.24	2.7	-0.425
27.0	-5.80	24.5	-6.5
		30.0	-6.5

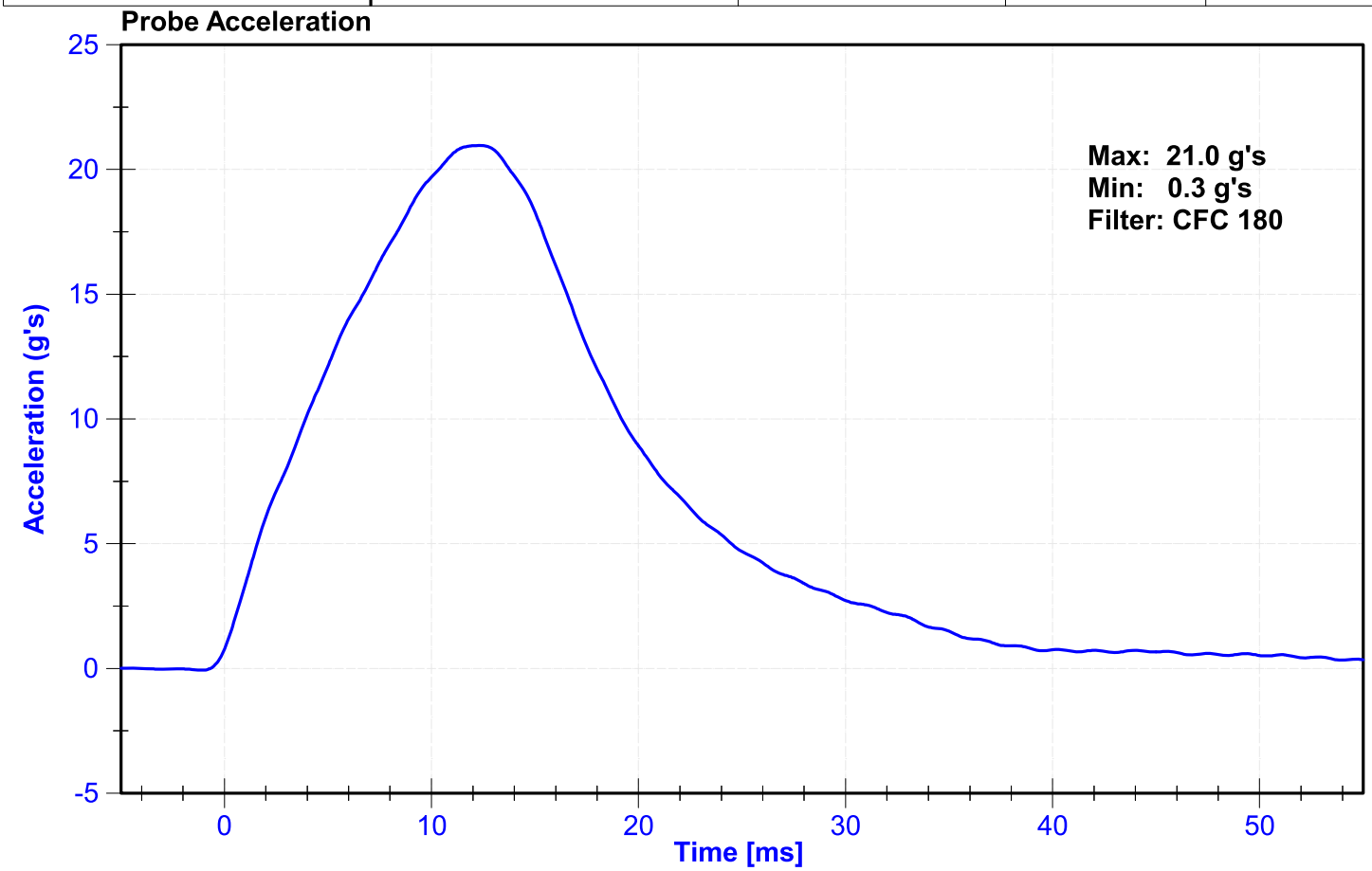
ATD Manufacturer	Denton	Test Technician	E. Andruczyk
ATD Serial Number	D037	Laboratory Supervisor	J. Kinderman

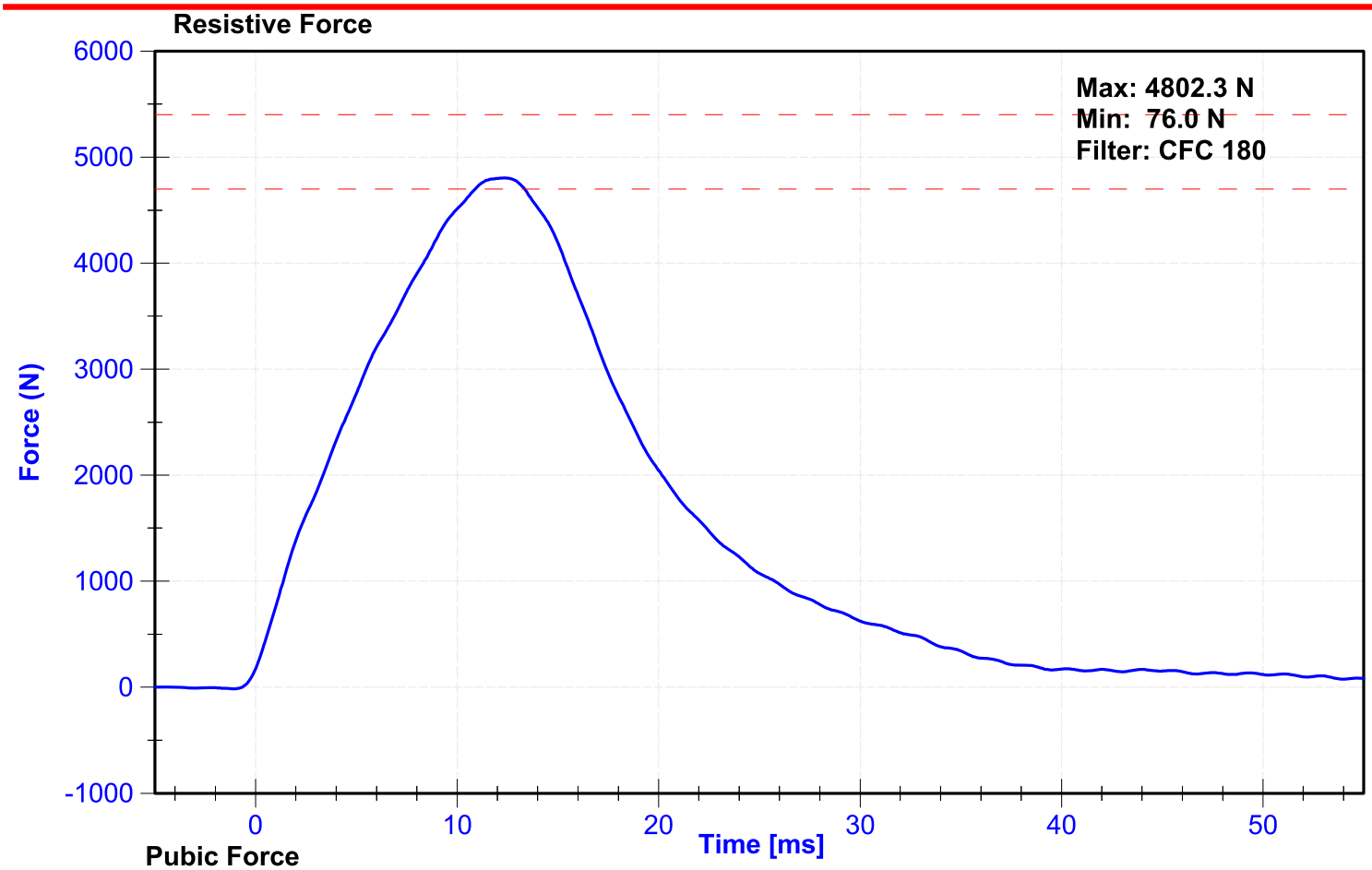
Results

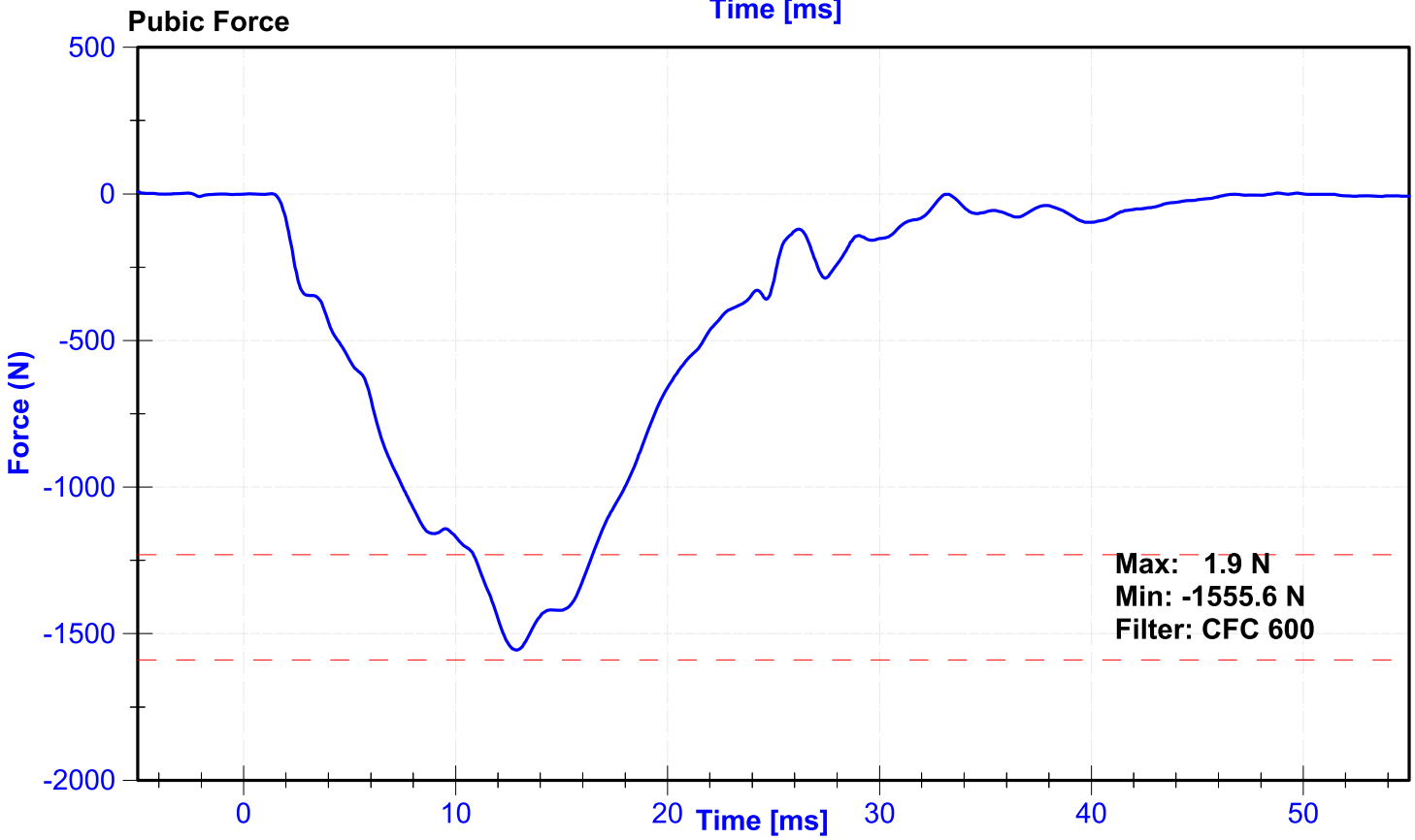
Test Parameter	Minimum Specification	Maximum Specification	Unit	Result	Pass/Fail
Temperature	20.6	22.2	ºC	21	Pass
Humidity	10	70	%	20	Pass
Velocity	4.2	4.4	m/s	4.29	Pass
Resistive Force	4700	5400	N	4802.3	Pass
Time at Peak Resistive Force	11.8	16.1	ms	12.40	Pass
Pubic Force	-1590	-1230	N	-1555.6	Pass
Time at Peak Pubic Force	12.2	17.0	ms	12.88	Pass

Transducer Calibrations

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
Pendulum Accelerometer	Endevco	T25863	1/17/2025	7/16/2025
Pubic Load Cell	Denton	464-FY	9/16/2024	9/16/2025




Resistive Force
Max: 4802.3 N
Min: 76.0 N
Filter: CFC 180
Force (N)
6000
5000
4000
3000
2000
1000
0
-1000
0
10
20
30
40
50
Time [ms]


Pubic Force
Max: 1.9 N
Min: -1555.6 N
Filter: CFC 600
Force (N)
500
0
-500
-1000
-1500
-2000
0
10
20
30
40
50
Time [ms]

APPENDIX V

TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION DATA

Table 1 – Dummy Instrumentation (ES-2re)

			ES-2re S/N D037		
			Serial Number	Manufacturer	Calibration Date
Head Accelerometers	Primary	X	T21724	Endevco	10/08/2024
		Y	T22281	Endevco	10/08/2024
		Z	T26050	Endevco	10/08/2024
	Redundant	X	T21682	Endevco	10/08/2024
		Y	T25989	Endevco	10/08/2024
		Z	T25864	Endevco	10/08/2024
Thorax Rib Displacement Potentiometers	Upper	Y	0552-01	Honeywell	10/08/2024
	Middle	Y	807	Honeywell	10/08/2024
	Lower	Y	0552-03	Honeywell	10/08/2024
Abdomen Load Cells	Forward	Y	1512	Denton	09/16/2024
	Middle	Y	1526	Denton	09/16/2024
	Rear	Y	1516	Denton	09/16/2024
Lower Spine Accelerometers (T12)		X	P71278	Endevco	10/08/2024
		Y	18595	Endevco	10/08/2024
		Z	18509	Endevco	10/08/2024
Pubic Symphysis Load Cell		Y	464-FY	Denton	09/16/2024

Table 2 – Vehicle Instrumentation

Vehicle Instrumentation		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	G24325	Endevco	12/16/2024
Vehicle Center of Gravity	Y	G25978	Endevco	12/16/2024
Vehicle Center of Gravity	Z	A400017	Measurement Specialties	12/16/2024
Left Floor Sill	Y	G24190	Endevco	10/18/2024
A-Pillar Sill	Y	G25032	Endevco	11/21/2024
A-Pillar Low	Y	G23880	Endevco	11/04/2024
A-Pillar Mid	Y	G24225	Endevco	11/20/2024
B-Pillar Sill	Y	G23834	Endevco	12/03/2024
B-Pillar Low	Y	G24208	Endevco	09/13/2024
B-Pillar Mid	Y	G25536	Endevco	11/04/2024
Driver Seat	Y	G25005	Endevco	12/16/2024
Engine Top	X	A290932	Measurement Specialties	10/21/2024
Engine Top	Y	A370893	Measurement Specialties	10/16/2024
Firewall	Y	G22809	Endevco	11/21/2024
Right Roof	Y	A372807	Measurement Specialties	11/16/2024
Right Floor Sill	Y	A373188	Measurement Specialties	10/15/2024
Rear Floorpan	X	A280354	Measurement Specialties	09/17/2024
Rear Floorpan	Y	A280858	Measurement Specialties	09/17/2024