

REPORT NUMBER: NCAP-MGA-25-025

**NEW CAR ASSESSMENT PROGRAM (NCAP)
Frontal Barrier Impact Test**

**TOYOTA MOTOR CORPORATION
2025 Toyota 4Runner 4WD SR5 5-Door SUV
NHTSA No.: M20255102**

**MGA RESEARCH CORPORATION
5000 Warren Road
Burlington, WI 53105**



Test Date: August 4, 2025

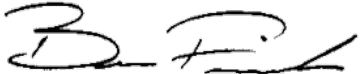
Final Report Date: May 21, 2026

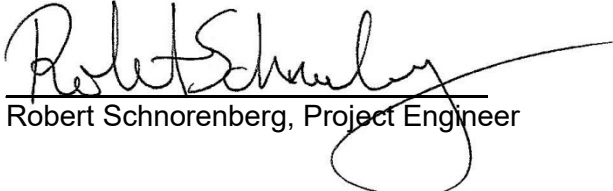
FINAL REPORT

**U.S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Office of Crashworthiness Standards
Mail Code: NRM-110
1200 New Jersey Ave, SE
Washington, DC 20590**

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Approval Date: May 21, 2026

FINAL REPORT ACCEPTANCE BY OCWS:

Division Chief, New Car Assessment Program
NHTSA, Office of Crashworthiness Standards

Date: _____

COTR, New Car Assessment Program
NHTSA, Office of Crashworthiness Standards

Date: _____

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16. Abstract A 56.3 km/h NCAP Full Frontal Rigid Barrier Impact Test was conducted on a 2025 Toyota 4Runner 4WD SR5 5-Door SUV in accordance with the specifications of the Office of Crashworthiness Standards Laboratory Procedure for NCAP Full Frontal Rigid Barrier Impact Testing. The test was conducted at MGA Research Corporation in Burlington, Wisconsin on August 4, 2025. The impact velocity of the vehicle was 56.23 km/h and the ambient temperature at the barrier face at the time of impact was 21.7°C. The target vehicle post-test maximum crush was 453 mm located to the left of the vehicle centerline. The test vehicle's performance was as follows: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Measurement Description</th> <th rowspan="2">Units</th> <th colspan="2">Driver ATD</th> <th colspan="2">Passenger ATD</th> </tr> <tr> <th>Threshold</th> <th>Result</th> <th>Threshold</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₁₅)</td> <td></td> <td>700</td> <td>178.897</td> <td>700</td> <td>252.231</td> </tr> <tr> <td>Maximum Chest Compression</td> <td>mm</td> <td>63</td> <td>26.213</td> <td>52</td> <td>20.314</td> </tr> <tr> <td>Nij</td> <td></td> <td>1</td> <td>0.397</td> <td>1</td> <td>0.441</td> </tr> <tr> <td>Neck Tension</td> <td>N</td> <td>4170</td> <td>2215.057</td> <td>2620</td> <td>1174.777</td> </tr> <tr> <td>Neck Compression</td> <td>N</td> <td>4000</td> <td>118.452</td> <td>2520</td> <td>104.782</td> </tr> <tr> <td>Left Femur Force</td> <td>N</td> <td>10008</td> <td>2182.390</td> <td>6805</td> <td>1886.001</td> </tr> <tr> <td>Right Femur Force</td> <td>N</td> <td>10008</td> <td>1610.329</td> <td>6805</td> <td>1903.026</td> </tr> </tbody> </table>						Measurement Description	Units	Driver ATD		Passenger ATD		Threshold	Result	Threshold	Result	Head Injury Criteria (HIC ₁₅)		700	178.897	700	252.231	Maximum Chest Compression	mm	63	26.213	52	20.314	Nij		1	0.397	1	0.441	Neck Tension	N	4170	2215.057	2620	1174.777	Neck Compression	N	4000	118.452	2520	104.782	Left Femur Force	N	10008	2182.390	6805	1886.001	Right Femur Force	N	10008	1610.329	6805	1903.026
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17. Key Words 56.3 km/h (35 mph) Full Frontal Rigid Barrier Impact Test New Car Assessment Program (NCAP)			18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Administration Technical Information Services Division 1200 New Jersey Ave, SE Washington, DC 20590																																																						
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SECTION 1 PURPOSE AND SUMMARY OF TEST

PURPOSE

This 56.3 km/h frontal barrier impact test is part of the Vehicle Barrier Impact Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under contract number 693JJ919D000006. The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for consumer information purposes.

The 56.3 km/h frontal barrier impact was conducted in accordance with the Office of Crashworthiness Standards Laboratory Procedure for NCAP Full Frontal Rigid Barrier Impact Testing, dated May 2018.

SUMMARY

A load cell barrier consisting of 176 load cells was impacted by a 2025 Toyota 4Runner 4WD SR5 5-Door SUV at a velocity of 56.23 km/h. The test was performed at MGA Research Corporation on August 4, 2025. Pre-test and post-test photographs of the vehicle and dummies can be found in Appendix A.

Two (2) real-time cameras and sixteen (16) high-speed cameras were used to document the frontal barrier impact event. Camera locations and other pertinent camera information can be found in this report.

One Part 572E 50th percentile male anthropomorphic test device (ATD), was placed in the driver seating position and one Part 572O 5th percentile female test device (ATD) was placed in the right-front passenger seating position according to dummy placement instructions specified in the Laboratory Procedure for NCAP Full Frontal Rigid Barrier Impact Testing.

Both ATDs were fully instrumented with head, chest and pelvis tri-axial accelerometers, chest displacement potentiometers, upper neck transducers, right/left femur load cells, and lower leg instrumentation.

The driver (position 1) ATD (Serial No. 064) and the right-front passenger (position 2) ATD (Serial No. 142) were qualified previous to this test. Certification details, along with instrumentation calibration data, are found in Appendix C of this report.

The 278 channels of data were recorded on a data acquisition system. Appendix B contains the dummy response data traces.

There was 100 percent windshield retention and no intrusion into the protected zone of the windshield during the event. There was no Stoddard Solvent leakage after the event or during any phase of the static rollover.

The maximum static crush of the vehicle was 453 mm located to the left of the vehicle centerline and both the driver and passenger side doors remained closed during the impact event and were operable after the impact.

The driver's visible contact points were as follows: The driver's head contacted the airbag. The driver's knees contacted the knee airbag.

The passenger's visible contact points were as follows: The passenger's head contacted the airbag. The passenger's knees contacted the knee airbag.

The occupant data is summarized below:

ATD position	HIC₁₅	Nij	Neck Tension (N)	Neck Comp. (N)	3ms Chest Clip (g)	Chest Disp. (mm)	Left Femur (N)	Right Femur (N)
Driver (50 th)	178.897	0.397	2215.057	118.452	40.438	26.213	2182.390	1610.329
Passenger (5 th)	252.231	0.441	1174.777	104.782	46.979	20.314	1886.001	1903.026

The test data can be found on the NHTSA website at www.nhtsa.gov

TEST NOTES

None.

MGA does not endorse or certify products. The manufacturer's name appears solely for identification purposes.

SECTION 2
OCCUPANT AND VEHICLE INFORMATION / DATA SHEETS

DATA SHEET NO. 1
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
 Test Date: 8/4/2025

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M20255102	Traction Control System (TCS)	Yes
Model Year	2025	Power Steering	Yes
Make	Toyota	Power Window Auto-Reverse	Yes
Model	4Runner 4WD SR5	Driver Frontal Airbag	Yes
Body Style	5-Door SUV	Driver Curtain Airbag	Yes
VIN	JTEVA5BR4S5030129	Driver Head/Torso Airbag	No
Body Color	Ice Cap	Driver Torso Airbag	No
Odometer (km/mi)	56 km / 35 mi	Driver Torso/Pelvis Airbag	Yes
Engine Displacement (L)	2.4	Driver Pelvis Airbag	No
Type/No. Cylinders	Inline 4	Driver Knee Airbag	Yes
Engine Placement	Longitudinal	Front Pass. Frontal Airbag	Yes
Transmission Type	Automatic	Front Pass. Curtain Airbag	Yes
Transmission Speeds	8	Front Pass. Head/Torso Airbag	No
Overdrive	Yes	Front Pass. Torso Airbag	No
Final Drive	4WD	Front Pass. Torso/Pelvis Airbag	Yes
Roof Rack	Yes	Front Pass. Pelvis Airbag	No
Sunroof/T-Top	No	Front Pass. Knee Airbag	Yes
Running Boards	No	Driver Pretensioner	Yes
Tilt Steering Wheel	Yes	Driver Load Limiter	Yes
Power Seats	No	Front Pass. Pretensioner	Yes
Anti-Lock Brakes (ABS)	Yes	Front Pass. Load Limiter	Yes
Automatic Door Locks (ADLs)	Yes	Front Pass. Seat Pan Airbag	Yes

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

DATA FROM CERTIFICATION LABEL

Manufactured By	TOYOTA MOTOR CORPORATION	GVWR (kg)	2755
Date of Manufacture	05/25	GAWR Front (kg)	1315
		GAWR Rear (kg)	1650

VEHICLE SEATING AND WEIGHT CAPACITY DATA

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket	Split Bench		
Designated Seating Capacity (DSC)	2	3		5
Capacity Weight (VCW) (kg)				405
Cargo Weight (RCLW) (kg)				60

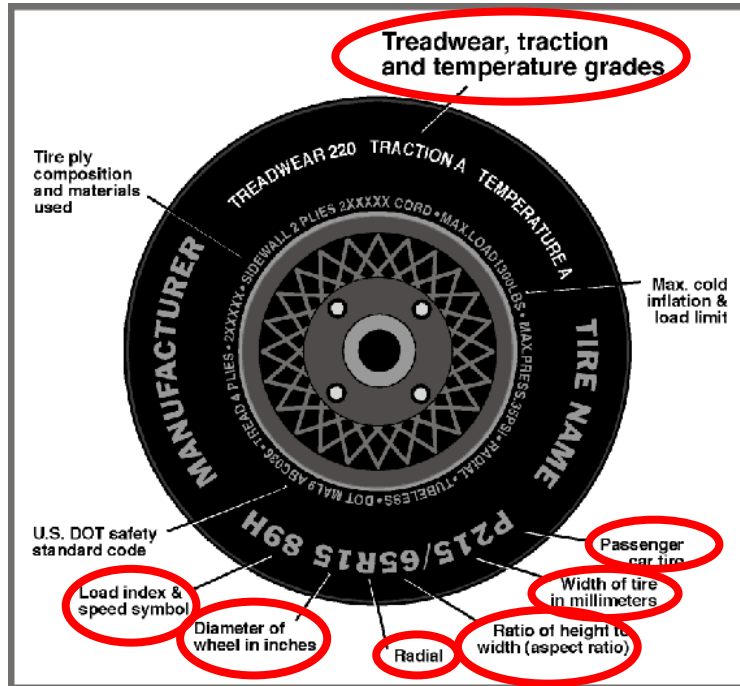
* Rated Cargo and Luggage Weight (RCLW) reduced by 5 kg to account for Load Carrying Capacity Reduction Label.

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

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
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 Test Date: 8/4/2025

VEHICLE TIRE INFORMATION



Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	350	350
Cold Pressure (kPa)	230	230
Recommended Tire Size	245/70R17	245/70R17
Tire Size on Vehicle	245/70R17	245/70R17
Tire Manufacturer	Yokohama	Yokohama
Tire Model	Geolander X-CV	Geolander X-CV
Treadwear	520	520
Traction	A	A
Temperature Grade	B	B
Tire Plies Sidewall	2 Polyester	2 Polyester
Tire Plies Body	2 Polyester, 2 Steel, 1 Nylon	2 Polyester, 2 Steel, 1 Nylon
Load Index/Speed Symbol	110T	110T
Tire Material	Rubber	Rubber
DOT Safety Code Left	14U WXY6LJ 1025	14U WXY6LJ 1025
DOT Safety Code Right	14U WXY6LJ 1025	14U WXY6LJ 1025

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

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
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 Test Date: 8/4/2025

TEST VEHICLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)		
		Front	Rear	Total	Front	Rear	Total
Left	kg	561.5	492.0		590.5	569.0	
Right	kg	559.5	510.5		573.5	583.5	
Ratio	%	52.8%	47.2%		50.2%	49.8%	
Totals	kg	1121.0	1002.5	2123.5	1164.0	1152.5	2316.5

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	2123.5
Weight of 1 P572E ATD & 1 P572O ATD	kg	141
Rated Cargo/Luggage Weight (RCLW)	kg	60
Calculated Test Vehicle Target Weight (TVTW)	kg	2324.5

TEST VEHICLE ATTITUDES AND CG

	Units	LF	RF	LR	RR	CG (aft of front axle)
As Delivered	mm	889	891	921	916	1348
As Tested	mm	867	871	882	894	1421
Post Test	mm	856	906	894	907	

GENERAL TEST VEHICLE DATA

Measurement Description	Units	Value
Total Vehicle Wheel Base	mm	2856
Total Vehicle Length at Left Side	mm	4810
Total Vehicle Length at Centerline	mm	4918
Total Vehicle Length at Right Side	mm	4808
Weight of Ballast in Cargo Area	kg	0
Weight of Vehicle Components Removed	kg	4
Amount of Stoddard Solvent in Fuel Tank	L	67.0

List of components removed to meet test weight: None.

List of components removed for instrumentation, data box, and equipment installation: Cargo area carpet/trim/divider, jack and tools.

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

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
 Test Date: 8/4/2025

TARGET VEHICLE STRUCTURAL MEASUREMENT

	Elements	Pre-Test (mm)
1	Total Length	4918
2	Total Width	1837
3	Bumper Top Height	576
4	Bumper Bottom Height	469
5	Longitudinal Member Top Height	554
6	Distance between Longitudinal Members	778
7	Longitudinal Member Width	73
8	Engine Top Height	1081
9	Engine Bottom Height	301
10	Engine and Gearbox Width	350
11	Front Bumper-Engine Distance	745
12	Front Shock Absorber Fixing Height	809
13	Bonnet Leading Edge Height	1110
14	Front Shock Absorber Fixing Width	997
15	Front Bumper – Front Axle Distance	897
16	Front Axle – A-Pillar Distance	703
17	A-Pillar – B-Pillar Distance	1043
18	B-Pillar – Rear Axle Distance	1109
19	B-Pillar – C-Pillar Distance	1098
20	Roof Sill Bottom Height	1608
21	Roof Sill Top Height	1699
22	Floor Sill Bottom Height	369
23	Floor Sill Top Height	520

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

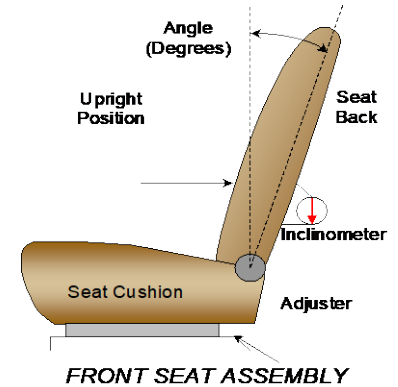
Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
 Test Date: 8/4/2025

NOMINAL DESIGN RIDING POSITION

The driver seat back is positioned as close as possible to the manufacturer's design angle. For the passenger seat back, seat back is adjusted following Appendix F, "Driver & Passenger Dummy Seating & Positioning Procedures" in the NCAP Test Procedure dated May 2018.

	Degrees
Driver Seat Back Angle	3.5° on outboard headrest post
Passenger Seat Back Angle	-1.9° on outboard headrest post



SEAT FORE/AFT POSITIONS

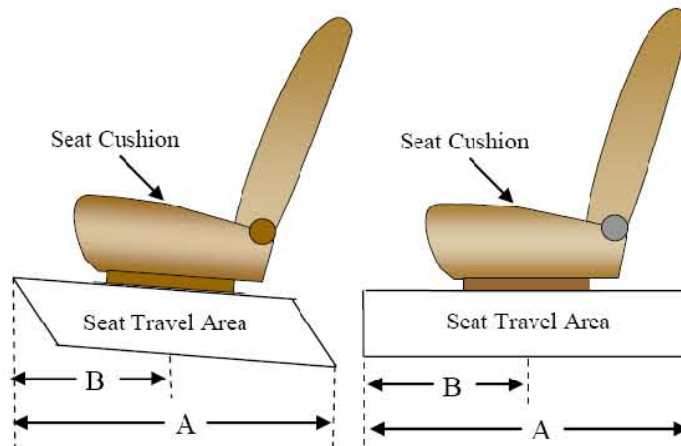
The driver and passenger seat fore/aft positions are adjusted following Appendix F, "Driver & Passenger Dummy Seating & Positioning Procedures" in the NCAP Test Procedure dated May 2018.

	Total Fore/Aft Travel	Placed in Position #
Driver Seat	284 mm / 25 detents (1st as 1)	144 mm / 10th detent (1st as 0)
Passenger Seat	240 mm / 25 detents (1st as 1)	0 mm / 0th detent (1st as 0)

SEAT BELT UPPER ANCHORAGES

The seat belt upper anchorages are set following the manufacturer's specified position as listed in Form 1.

	Total # of Positions	Placed in Position #
Driver Seat	4 (1st as 1)	0 (1st as 0)
Passenger Seat	4 (1st as 1)	0 (1st as 0)



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

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

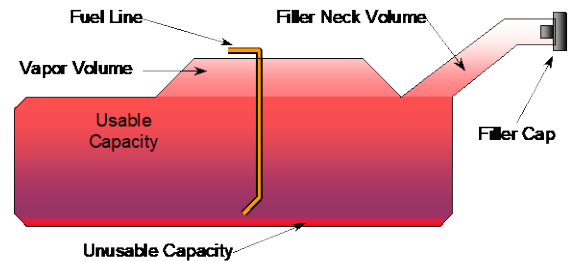
NHTSA No.: M20255102
 Test Date: 8/4/2025

FUEL TANK CAPACITY DATA

	Liters
Usable Capacity of "Standard Tank"	72.0
Usable Capacity of "Optional Tank"	
92-94% of Usable Capacity	66.2 to 67.7
Actual Amount of Solvent used	67.0
1/3 of Usable Capacity	24.0

FUEL PUMP

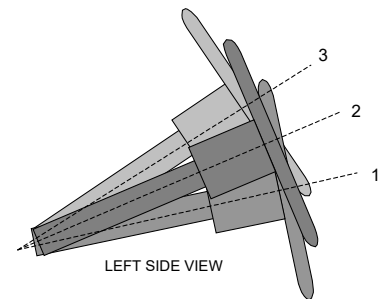
The vehicle is equipped with an electronic fuel pump. The fuel pump will run when the engine is running. The pump will also briefly run when the ignition key is turned to the "on" position. The filler neck is located on the driver's side.



VEHICLE FUEL TANK ASSEMBLY

STEERING COLUMN ADJUSTMENT

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when moved through its full range of motion. An aluminum plate is placed across the rim of the steering wheel, an inclinometer is placed on the plate and the angle is measured.



STEERING COLUMN ASSEMBLY

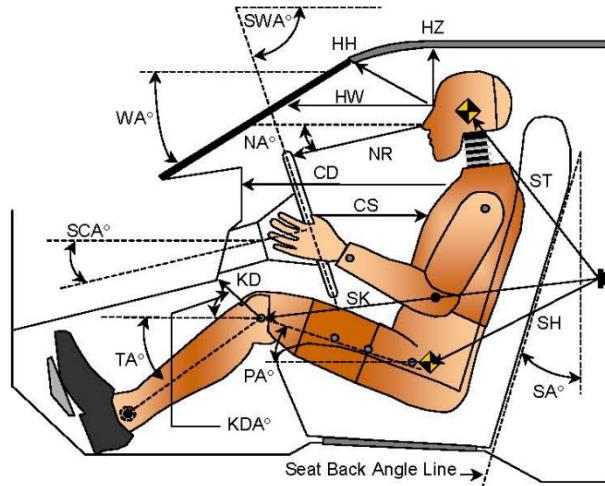
STEERING COLUMN POSITION

	Degrees	Fore/Aft Position (mm)
Lowermost Position 1	72.0	
Geometric Center Position 2	70.1	
Uppermost Position 3	68.1	
Telescoping Steering Wheel Travel		60
Test Position	70.1	30

DATA SHEET NO. 3
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
 Test Date: 8/4/2025



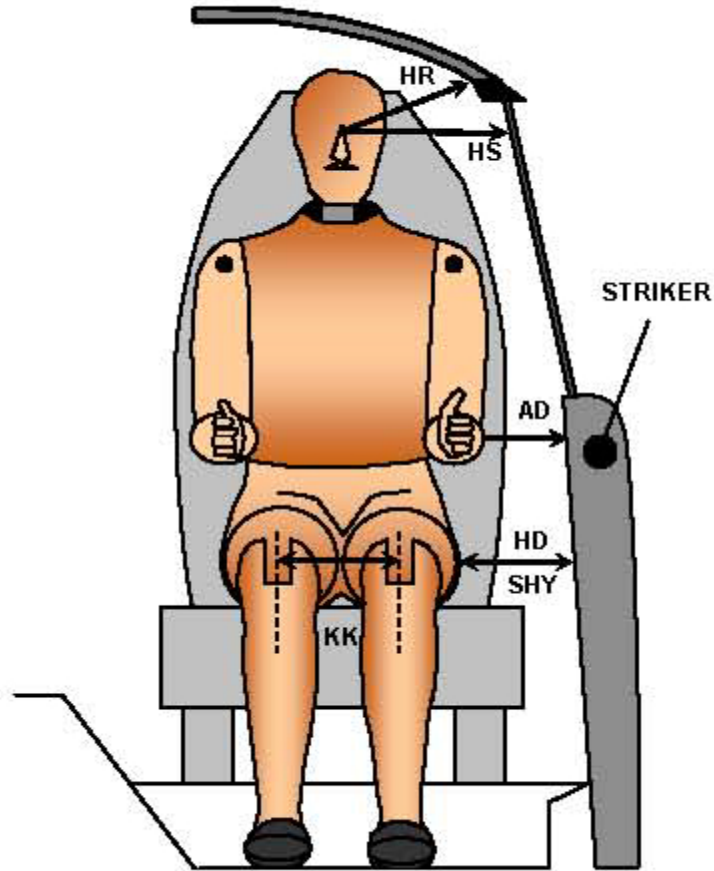
LEFT SIDE VIEW

Code	Measurement Description	Driver		Passenger	
		Length (mm)	Angle (°)	Length (mm)	Angle (°)
WA°	Windshield Angle		31.0		
SWA°	Steering Wheel Angle		70.1		
SCA°	Steering Column Angle		19.9		
SA°	Seat Back Angle		3.5		-1.9
HZ	Head to Roof (Z)	205	90	212	90
HH	Head to Header	466	18.1	361	35.5
HW	Head to Windshield	712	0	650	0
NR	Nose to Rim	410	10.9		
CD	Chest to Dash	546		379	
CS	Chest to Steering Hub	330	4.2		
RA	Rim to Abdomen	212	0		
KDL	Left Knee to Dash	177	33.0	109	74.9
KDR	Right Knee to Dash	167	54.6	102	58.4
PA°	Pelvic Angle		24.7		19.3
TA°	Tibia Angle		34.1		35.0
SK	Striker to Knee	598	96.5	703	98.8
ST	Striker to Head	475	10.0	476	29.7
SH	Striker to H-Point	295	130.7	392	113.2

DATA SHEET NO. 4
DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

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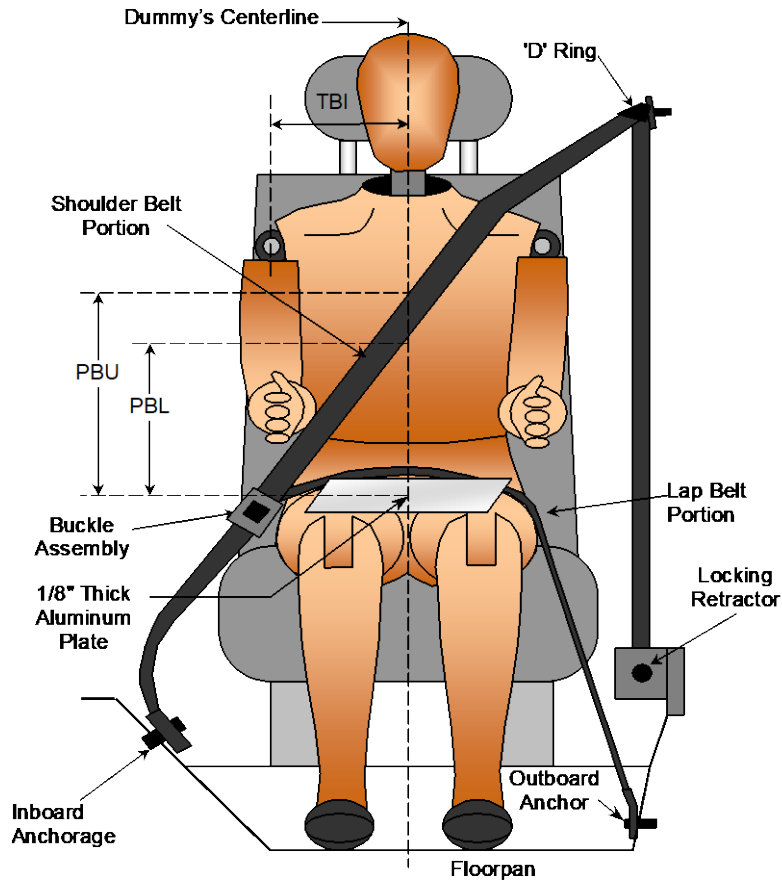
FRONT VIEW OF DUMMY

Code	Measurement Description	Units	Driver	Passenger
AD	Arm to Door	mm	116	85
HD	H-Point to Door	mm	148	207
HR	Head to Side Header	mm	234	268
HS	Head to Side Window	mm	330	355
KK	Knee to Knee	mm	359	224
SHY	Striker to H-Point (Y Direction)	mm	241	276
AA	Ankle to Ankle	mm	366	173

DATA SHEET NO. 5
SEAT BELT POSITIONING DATA

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
Test Date: 8/4/2025



FRONT VIEW OF DUMMY

SEAT BELT POSITIONING MEASUREMENTS

Measurement Description	Units	Driver	Passenger
PBU - Top surface of reference to belt upper edge	mm	355	310
PBL - Top surface of reference to belt lower edge	mm	280	200

BELT LENGTH DATA

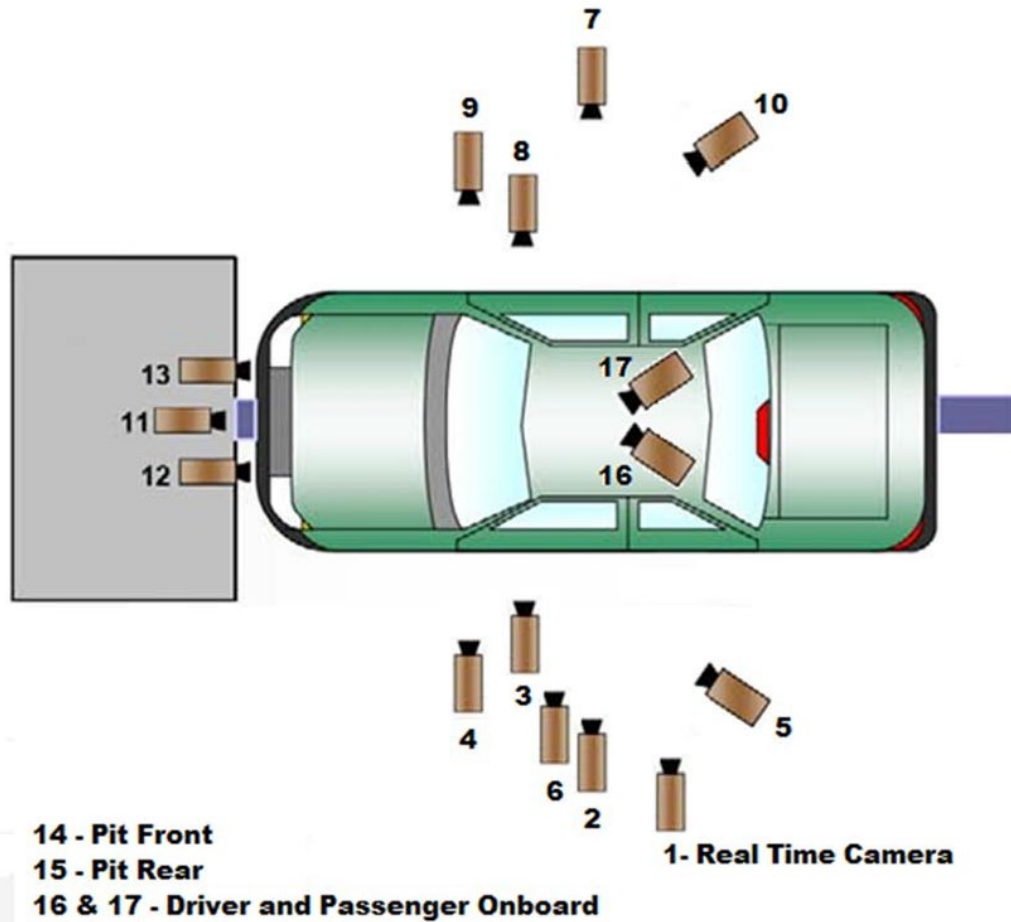
Measurement Description	Units	Driver	Passenger
Shoulder Belt Length as measured on ATD	mm	850	965
Lap Belt Length as measured on ATD	mm	765	825
Remainder of belt on reel	mm	415	240
Total Belt Length for Continuous Webbing Systems	mm	2650	2650

DATA SHEET NO. 6
HIGH-SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
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NHTSA No.: M20255102
Test Date: 8/4/2025

CAMERA POSITIONS FOR FRONTAL IMPACTS



***Camera locations are approximate and not to scale*

DATA SHEET NO. 6 (CONTINUED)
HIGH-SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
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CAMERA LOCATIONS

No.	Camera View	Coordinates* (mm)			Lens (mm)	Speed (fps)
		X	Y	Z		
1	Real-Time Left Overall					30
2	Left Overall	-2340	-5960	-1510	12	1000
3	Driver Close-Up	-1800	-6290	-2210	50	1000
4	Left Front Half	-830	-5920	-1490	24	1000
5	Left Angle	-7350	-5820	-2110	75	1000
6	Steering Column	-1230	-6240	-1230	50	1000
7	Right Overall	-1980	5740	-1530	12	1000
8	Passenger Close-Up	-1680	6460	-2130	50	1000
9	Right Front Half	-1150	5780	-1530	24	1000
10	Right Angle	-7500	5520	-2250	75	1000
11	Windshield	150	0	-2310	12	1000
12	Driver Windshield	200	-370	-2230	25	1000
13	Passenger Windshield	200	370	-2230	25	1000
14	Pit Front	-830	0	3340	24	1000
15	Pit Rear	-3120	0	3340	24	1000
16	Driver Onboard				12	1000
17	Passenger Onboard				12	1000
18	Real-Time Pan View					30

*COORDINATES:

+X = forward of impact plane

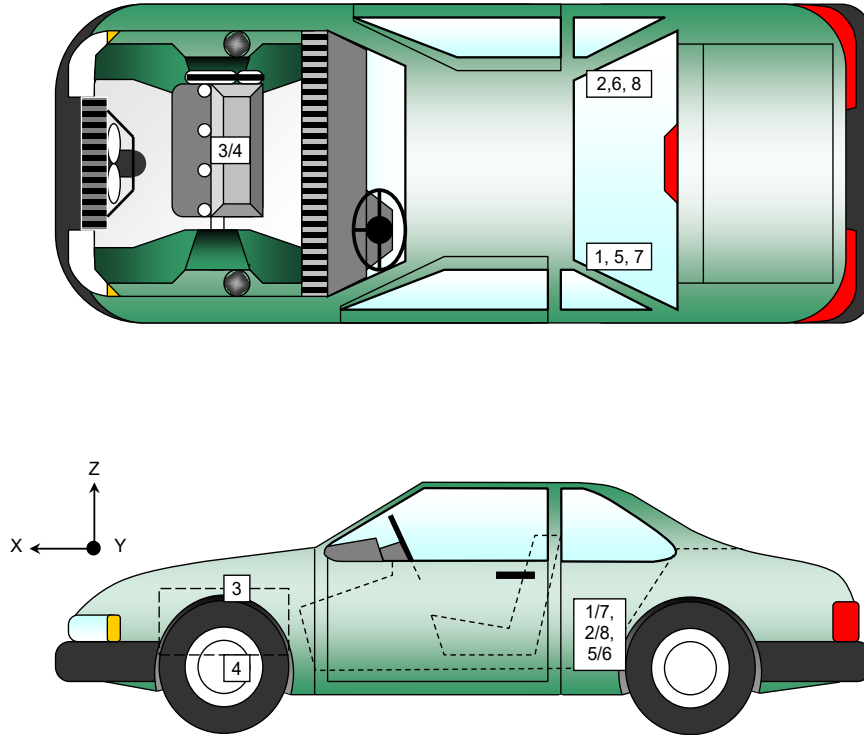
+Y = right of monorail centerline

+Z = below ground level

DATA SHEET NO. 7 **VEHICLE ACCELEROMETER LOCATIONS**

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
Test Date: 8/4/2025



VEHICLE ACCELEROMETER PRE-TEST LOCATIONS

No.	Accelerometer Location	Measurements (mm)		
		X	Y	Z
1	Left Rear Crossmember Accelerometer – X Direction	2050	-446	-541
2	Right Rear Crossmember Accelerometer – X Direction	2052	412	-543
3	Engine Top X	4155	-1	-1114
4	Engine Bottom X	3891	52	-288
5	Left Rear Crossmember Accelerometer – Z Direction	2050	-446	-541
6	Right Rear Crossmember Accelerometer – Z Direction	2052	412	-543
7	Left Rear Crossmember Accelerometer Redundant – X Direction	2050	-446	-541
8	Right Rear Crossmember Accelerometer Redundant – X Direction	2052	412	-543

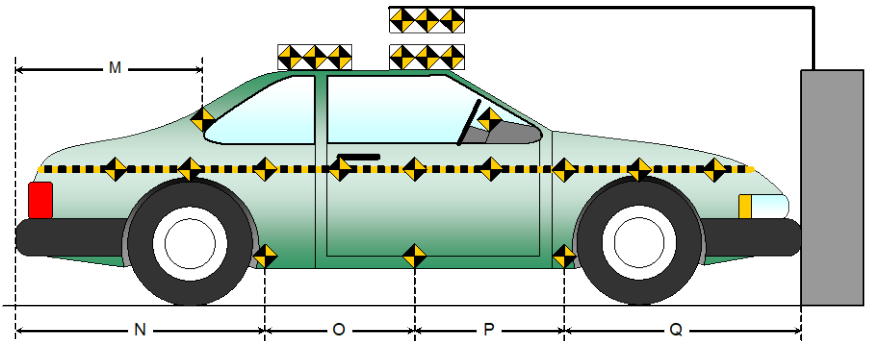
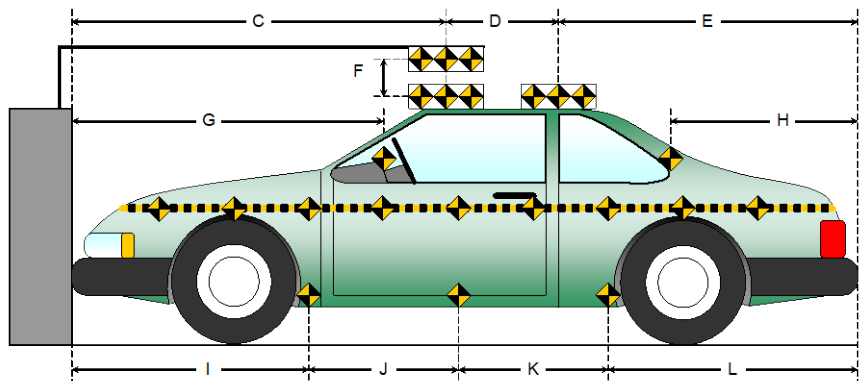
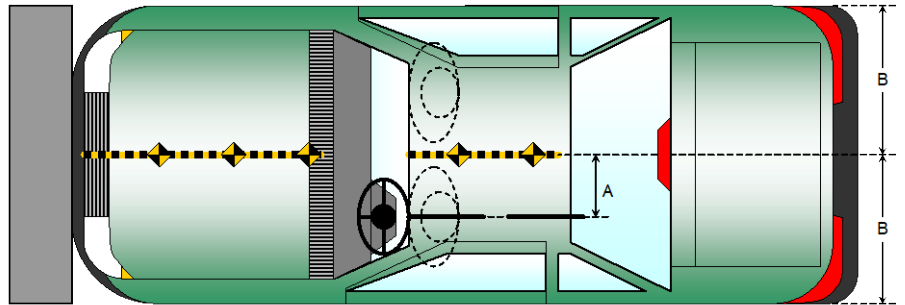
Reference Points: X - Rear Surface of Vehicle (+ forward)
Y - Vehicle Centerline (+ to right)
Z - Ground Plane (+ down)

DATA SHEET NO. 8
PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
 Test Date: 8/4/2025

Item	Value (mm)
A	403
B	918
C	2506
D	612
E	1800
F	56
G	
H	1223
I	1477
J	843
K	862
L	1736
M	1224
N	1735
O	859
P	856
Q	1469



DATA SHEET NO. 9 **LOAD CELL LOCATIONS ON FIXED BARRIER**

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
 Test Date: 8/4/2025

ADVANCED RESEARCH LOAD CELL BARRIER

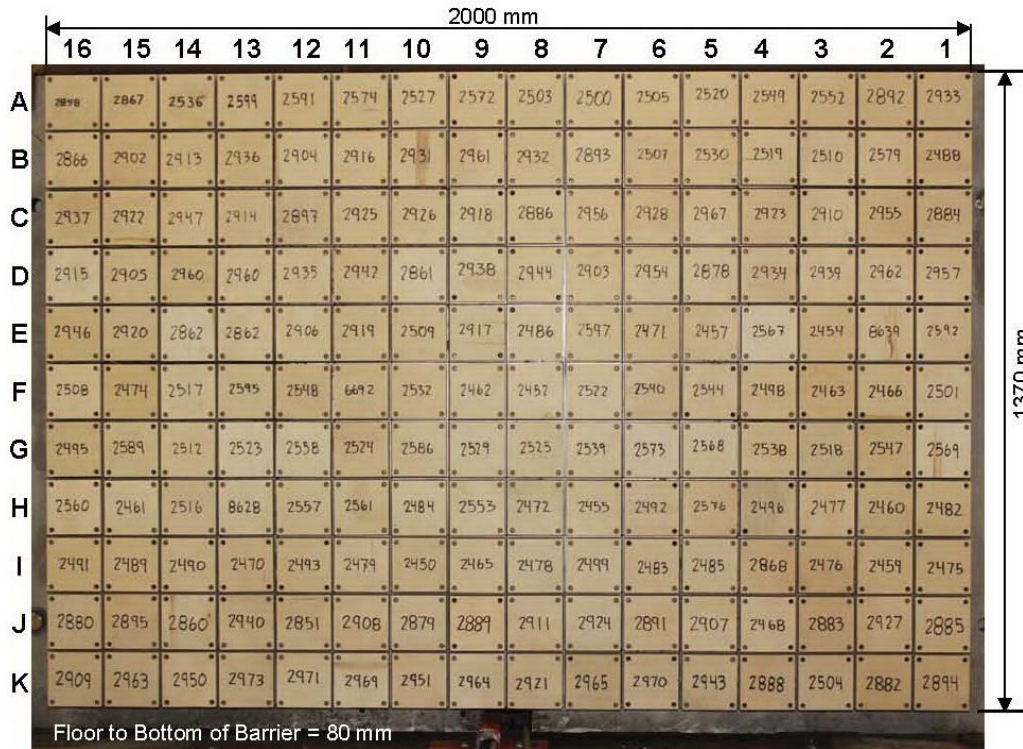


Photo for Reference Only

Centerline

A-16	A-15	A-14	A-13	A-12	A-11	A-10	A-09	A-08	A-07	A-06	A-05	A-04	A-03	A-02	A-01
B-16	B-15	B-14	B-13	B-12	B-11	B-10	B-09	B-08	B-07	B-06	B-05	B-04	B-03	B-02	B-01
C-16	C-15	C-14	C-13	C-12	C-11	C-10	C-09	C-08	C-07	C-06	C-05	C-04	C-03	C-02	C-01
D-16	D-15	D-14	D-13	D-12	D-11	D-10	D-09	D-08	D-07	D-06	D-05	D-04	D-03	D-02	D-01
E-16	E-15	E-14	E-13	E-12	E-11	E-10	E-09	E-08	E-07	E-06	E-05	E-04	E-03	E-02	E-01
F-16	F-15	F-14	F-13	F-12	F-11	F-10	F-09	F-08	F-07	F-06	F-05	F-04	F-03	F-02	F-01
G-16	G-15	G-14	G-13	G-12	G-11	G-10	G-09	G-08	G-07	G-06	G-05	G-04	G-03	G-02	G-01
H-16	H-15	H-14	H-13	H-12	H-11	H-10	H-09	H-08	H-07	H-06	H-05	H-04	H-03	H-02	H-01
I-16	I-15	I-14	I-13	I-12	I-11	I-10	I-09	I-08	I-07	I-06	I-05	I-04	I-03	I-02	I-01
J-16	J-15	J-14	J-13	J-12	J-11	J-10	J-09	J-08	J-07	J-06	J-05	J-04	J-03	J-02	J-01
K-16	K-15	K-14	K-13	K-12	K-11	K-10	K-09	K-08	K-07	K-06	K-05	K-04	K-03	K-02	K-01

Load Cells are 121 mm x 121 mm with a 7 mm gap in between each load cell.

DATA SHEET NO. 10
TEST VEHICLE SUMMARY OF RESULTS

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
Test Date: 8/4/2025

INSTRUMENTATION

Instrumentation	Number of Channels Collected
Driver Dummy Data Channels	47
Passenger Dummy Data Channels	47
Vehicle Structure Accelerometers	8
Barrier Channels	176
Total	278

CAMERA COVERAGE

Type of Camera	Number Used in this Test
High-Speed Vehicle Onboard	2
High-Speed Offboard	14
Real-Time	2
Total	18

DATA SHEET NO. 11
POST-TEST OBSERVATIONS

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
Test Date: 8/4/2025

TEST DUMMY INFORMATION AND CONTACT LOCATIONS

Description	Driver	Passenger
Dummy Type / Serial No.	HIII 50% / 064	HIII 5% / 142
Head Contact	Frontal Airbag	Frontal Airbag
Upper Torso Contact	Frontal Airbag	Frontal Airbag
Lower Torso Contact	None	None
Left Knee Contact	Knee Airbag	Knee Airbag
Right Knee Contact	Knee Airbag	Knee Airbag

DOOR OPENING, TRUNK OPENING, AND SEAT TRACK INFORMATION

Description	Driver	Passenger
Locked/Unlocked Doors	Doors were unlocked pre-test	Doors were unlocked pre-test
Front Door Opening	Remained closed and unlocked; opened without tools	Remained closed and unlocked; opened without tools
Rear Door Opening	Remained closed and unlocked; opened without tools	Remained closed and unlocked; opened without tools
Trunk/Hatch/Tailgate Opening	Remained closed; opened without tools	
Seat Track Shift (mm)	0	0
Seat Back Movement	None	None

OTHER VEHICLE POST-TEST OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Windshield Damage	None
Window Damage	None
Other Notable Effects	None

VEHICLE REBOUND FROM BARRIER

Measured Parameter	Units	Value
Left Side	mm	475
Center	mm	357
Right Side	mm	408
Average	mm	413

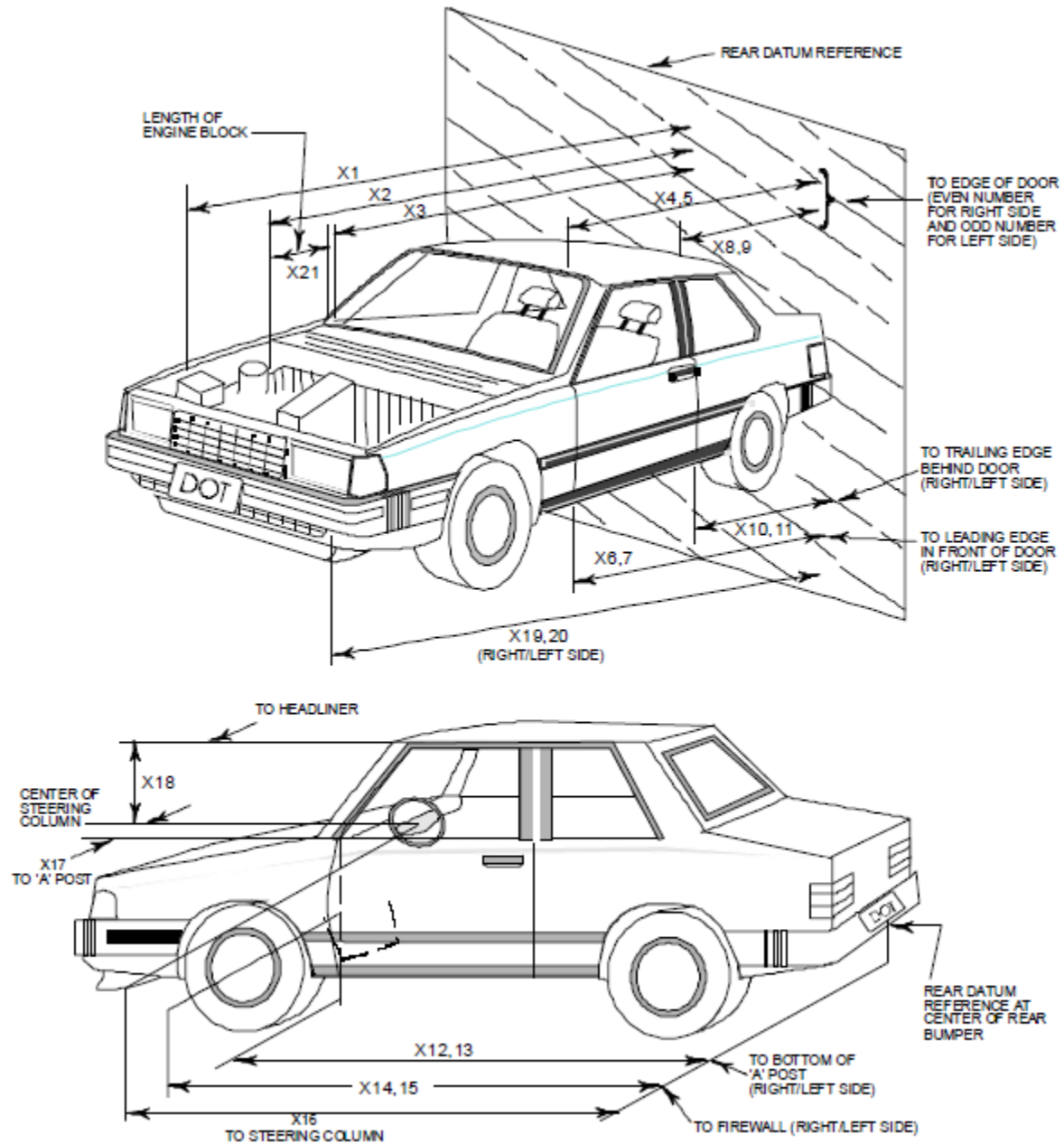
SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Driver		Passenger	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	Yes	Yes	Yes
Curtain Side Airbag	Yes	Yes	Yes	Yes
Torso/Pelvis Side Airbag	Yes	No	Yes	No
Knee Airbag	Yes	Yes	Yes	Yes
Seat Belt Pretensioner	Yes	Yes	Yes	Yes
Seat Belt Load Limiter	Yes	Yes	Yes	Yes
Other				

DATA SHEET NO. 12 VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
 Test Date: 8/4/2025



DATA SHEET NO. 12 (CONTINUED)
VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
Test Date: 8/4/2025

No.	Measurement Description	Pre-Test	Post-Test	Change
1	Total Length of Vehicle at Centerline	4918	4444	-474
2	RSOV to Front of Engine	4182	4021	-161
3	RSOV to Firewall	3691	3588	-103
4	RSOV to Upper Leading Edge of Right Door	3391	3393	2
5	RSOV to Upper Leading Edge of Left Door	3389	3389	0
6	RSOV to Lower Leading Edge of Right Door	3357	3360	3
7	RSOV to Lower Leading Edge of Left Door	3356	3355	-1
8	RSOV to Upper Trailing Edge of Right Door	2247	2249	2
9	RSOV to Upper Trailing Edge of Left Door	2244	2245	1
10	RSOV to Lower Trailing Edge of Right Door	2274	2277	3
11	RSOV to Lower Trailing Edge of Left Door	2272	2275	3
12	RSOV to Bottom of "A" Post of Right Side	3449	3449	0
13	RSOV to Bottom of "A" Post of Left Side	3441	3441	0
14	RSOV to Firewall, Right Side	3622	3595	-27
15	RSOV to Firewall, Left Side	3621	3596	-25
16	RSOV to Steering Column	2871	2934	63
17	Center of Steering Column to "A" Post	255	258	3
18	Center of Steering Column to Headliner	438	450	12
19	RSOV to Right Side of Front Bumper	4808	4423	-385
20	RSOV to Left Side of Front Bumper	4810	4366	-444
21	Length of Engine Block	384	384	0
RD	RSOV to Right Side of Dash Panel	3124	3124	0
CD	RSOV to Center of Dash Panel	3147	3156	9
LD	RSOV to Left Side of Dash Panel	3123	3123	0

All dimensions in mm

DATA SHEET NO. 13
ACCIDENT INVESTIGATION DIVISION DATA

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
Test Date: 8/4/2025

VEHICLE INFORMATION

VIN: JTEVA5BR4S5030129
Vehicle Size Category: MPV

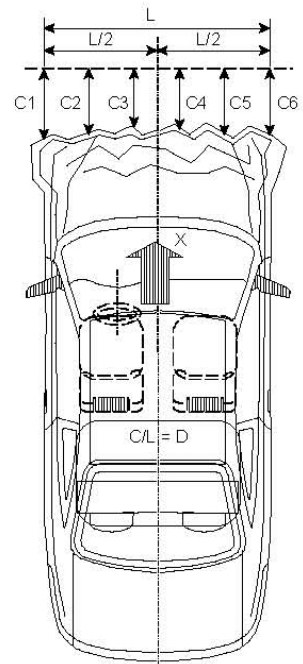
Wheelbase (mm): 2856
Test Weight (kg): 2316.5

ACCELEROMETER DATA

Accelerometer Locations: As per Data Sheet No. 7
Cal. Procedure/Interval: MGA Procedure / 6 month
Integration Algorithm: Trapezoidal
Linearity: > 99%
Impact Velocity (km/h): 56.23
Velocity Change (km/h): 65.0
Time of Separation (msec) 128

CRUSH PROFILE

Collision Deformation Classification: 12FDEW2
Midpoint of Damage: Centerline
Damage Region Length (mm): 1401
Impact Mode: Frontal



No.	Measurement Description	Units	Pre-Test	Post-Test	Exterior Crush
C1	Crush zone 1 at left side	mm	2190	2634	444
C2	Crush zone 2 at left side	mm	2088	2541	453
C3	Crush zone 3 at left side	mm	2075	2522	447
C4	Crush zone 4 at right side	mm	2075	2507	432
C5	Crush zone 5 at right side	mm	2085	2500	415
C6	Crush zone 6 at right side	mm	2192	2577	385
L	C1 TO C6	mm	1401	1403	2

DATA SHEET NO. 14
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
Test Program: NCAP Frontal Barrier Impact Test

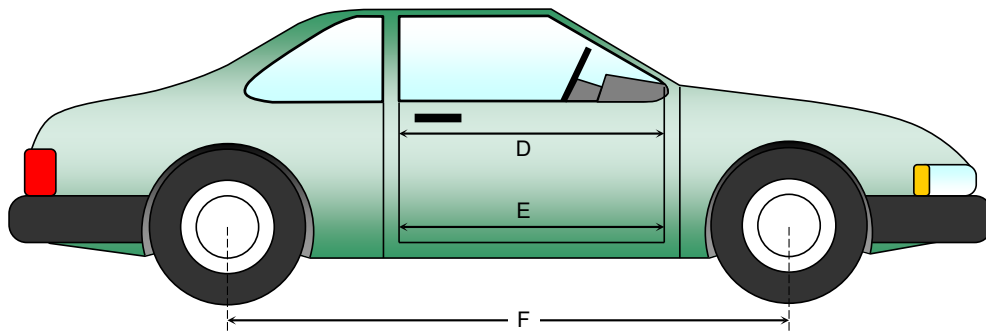
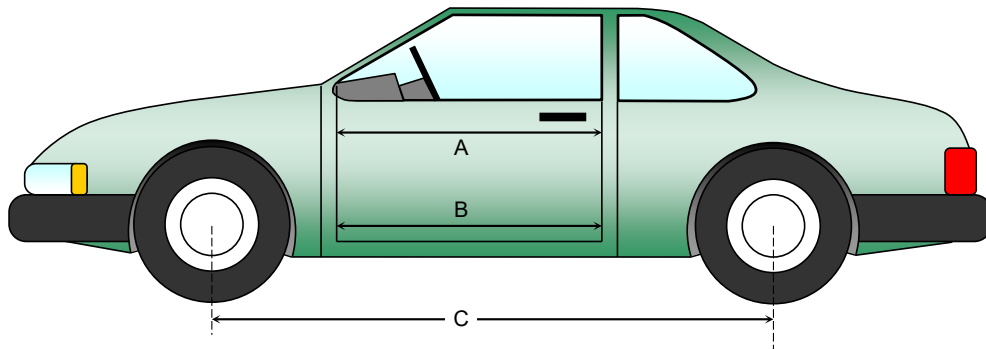
NHTSA No.: M20255102
Test Date: 8/4/2025

DOOR OPENING WIDTH

Item	Description	Units	Pre-Test	Post-Test	Change
A	Left Side Upper	mm	1036	1036	0
B	Left Side Lower	mm	913	913	0
D	Right Side Upper	mm	1036	1036	0
E	Right Side Lower	mm	915	914	-1

WHEELBASE MEASUREMENTS

Item	Description	Units	Pre-Test	Post-Test	Change
C	Left Side Wheelbase	mm	2856	2820	-36
F	Right Side Wheelbase	mm	2855	2813	-42



DATA SHEET NO. 14 (CONTINUED)
VEHICLE INTRUSION MEASUREMENTS

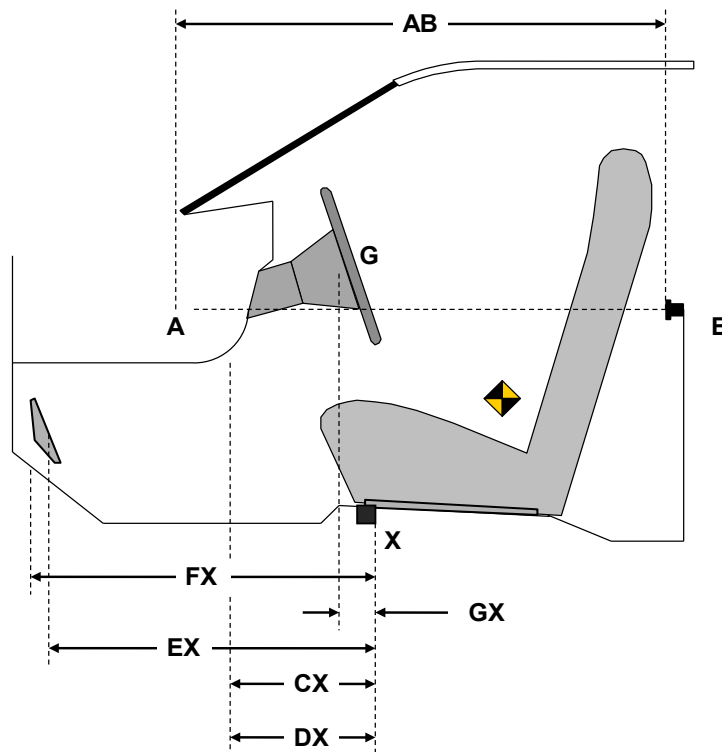
Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
 Test Date: 8/4/2025

DRIVER COMPARTMENT INTRUSION

Item	Description	Units	Pre-Test	Post-Test	Change
AB	Door Opening (Inside Window Jam)	mm	783	783	0
CX	Left Knee Bolster to X	mm	297	310	13
DX	Right Knee Bolster to X	mm	307	314	7
EX	Brake Pedal to X	mm	571	563	-8
FX	Foot Rest to X	mm	595	594	-1
GX	Center of Steering Column Wheel Hub to X	mm	54	118	64

X = Front of Seat Track (stationary)



DRIVER COMPARTMENT

DATA SHEET NO. 15
SUMMARY OF INDICANT FMVSS NO. 212 AND FMVSS NO. 219 (PARTIAL) DATA

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
 Test Date: 8/4/2025

WINDSHIELD MOUNTING DETAILS

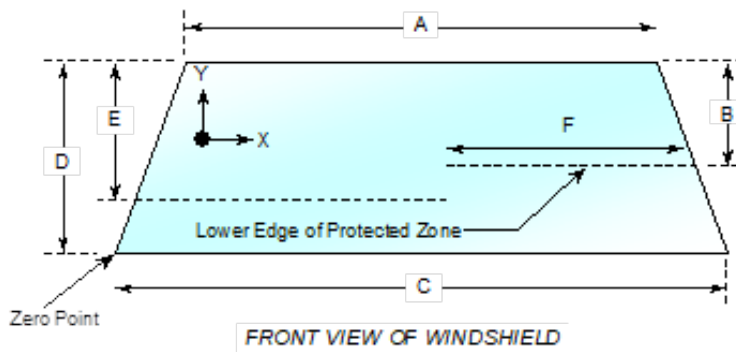
Windshield glass is secured to the vehicle frame with a rubber trim and glue.

The standard requires that the post-test retention measurement be a minimum of 75 percent of the pre-test total periphery measurement for vehicles not equipped with occupant passive restraints and 50 percent for each side of the windshield for vehicles which are equipped with occupant passive restraints.

Temperature of windshield molding during test: 21.7°C.

WINDSHIELD PERIPHERY MEASUREMENTS

Measurement	Pre-Test (mm)	Post-Test (mm)	% of Retention
Left Side	2070	2070	100
Right Side	2070	2070	100
Total	4140	4140	100



Item	Units	Value
A	mm	1214
B	mm	325
C	mm	1454
D	mm	736
E	mm	406
F	mm	535

AREA OF PROTECTED ZONE FAILURES

A. Provide coordinates of the area that the protected zone was penetrated more than 0.25 inches by a vehicle component other than one that is normally in contact with the windshield. **None**

X	Y

B. Provide coordinates of the area beneath the protected zone that the inner surface of the windshield was penetrated by a vehicle component. **None**

X	Y

DATA SHEET NO. 16
FMVSS NO. 301 BARRIER IMPACT AND STATIC ROLLOVER RESULTS

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
 Test Date: 8/4/2025

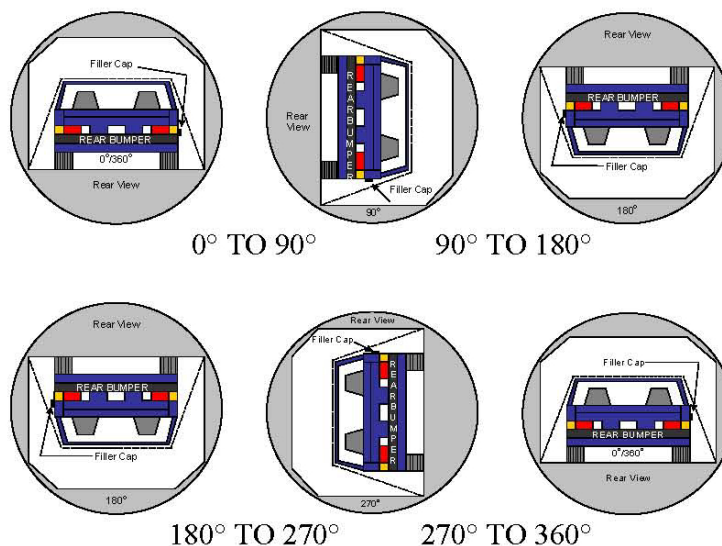
FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

Temperature at Time of Impact: 21.7°C

Test Time: 10:48 a.m.

- A. From impact until vehicle motion ceases: (Maximum Allowable = 1 ounce) 0.0 oz.
 B. For the 5 minute period after motion ceases: (Maximum Allowable = 5 ounces) 0.0 oz.
 C. For the following 25 minutes: (Maximum Allowable = 1 ounce / minute) None
 D. Spillage Details: None

FMVSS 301 STATIC ROLLOVER RESULTS



1. The specified fixture rollover rate for each 90° of rotation is 60 to 180 seconds.
2. The position hold time at each position is 300 seconds (minimum).
3. Details of Stoddard Solvent spillage: **None**

SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	111	300	411
90° to 180°	111	300	411
180° to 270°	108	300	408
270° to 360°	110	300	410

DATA SHEET NO. 16 (CONTINUED)
FMVSS 301 BARRIER IMPACT AND STATIC ROLLOVER

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
 Test Date: 8/4/2025

FMVSS 301 SPILLAGE TABLE (UNITS IN OUNCES)

Test Phase	First 5 Minutes	Sixth Minute	Seventh Minute	Eight 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	

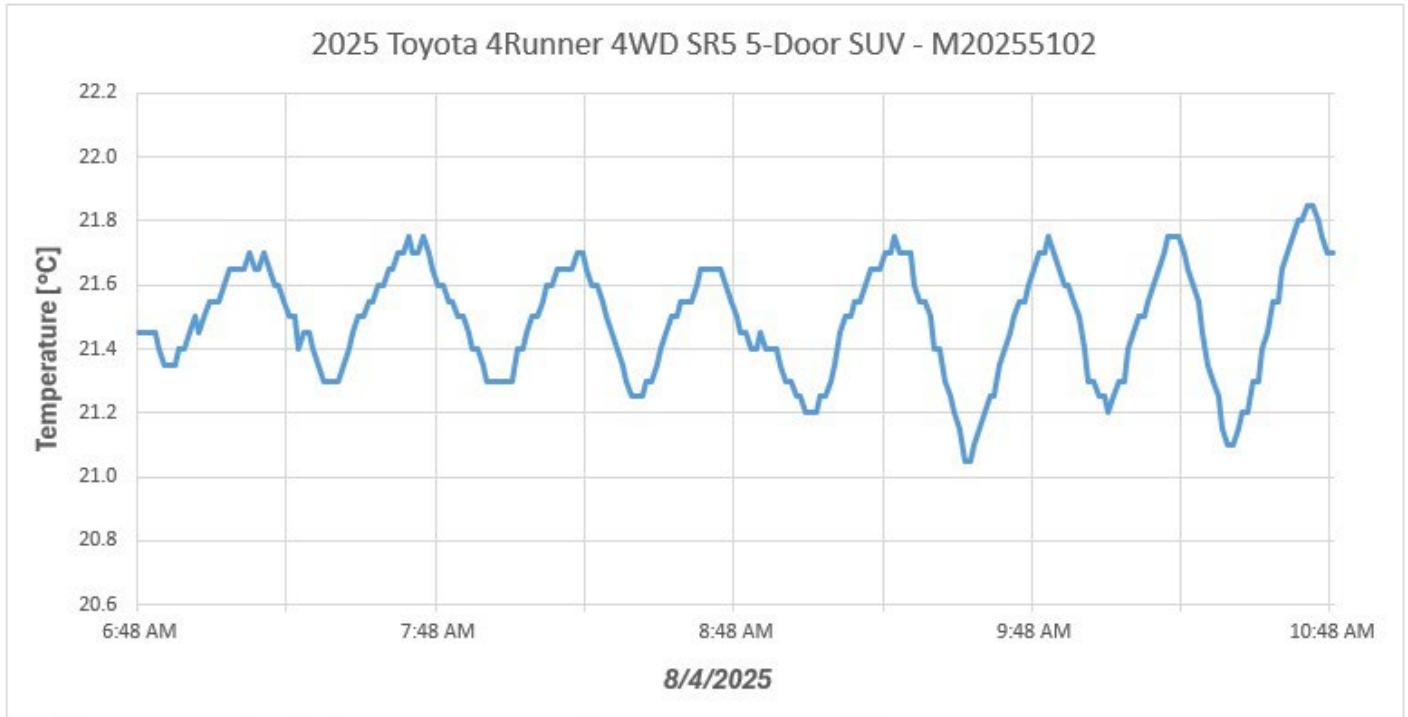
SOLVENT SPILLAGE LOCATION TABLE

Test Phase	Spillage Location
0° to 90°	
90° to 180°	
180° to 270°	
270° to 360°	

DATA SHEET NO. 17
DUMMY/VEHICLE TEMPERATURE STABILIZATION DATA

Test Vehicle: 2025 Toyota 4Runner 4WD SR5 5-Door SUV
 Test Program: NCAP Frontal Barrier Impact Test

NHTSA No.: M20255102
 Test Date: 8/4/2025



Serial #	Description	Maximum	Average	Minimum	Units
X1549602	VSC Start Room A - Temp (1038)	21.85	21.48	21.05	°C

**APPENDIX A
PHOTOGRAPHS**

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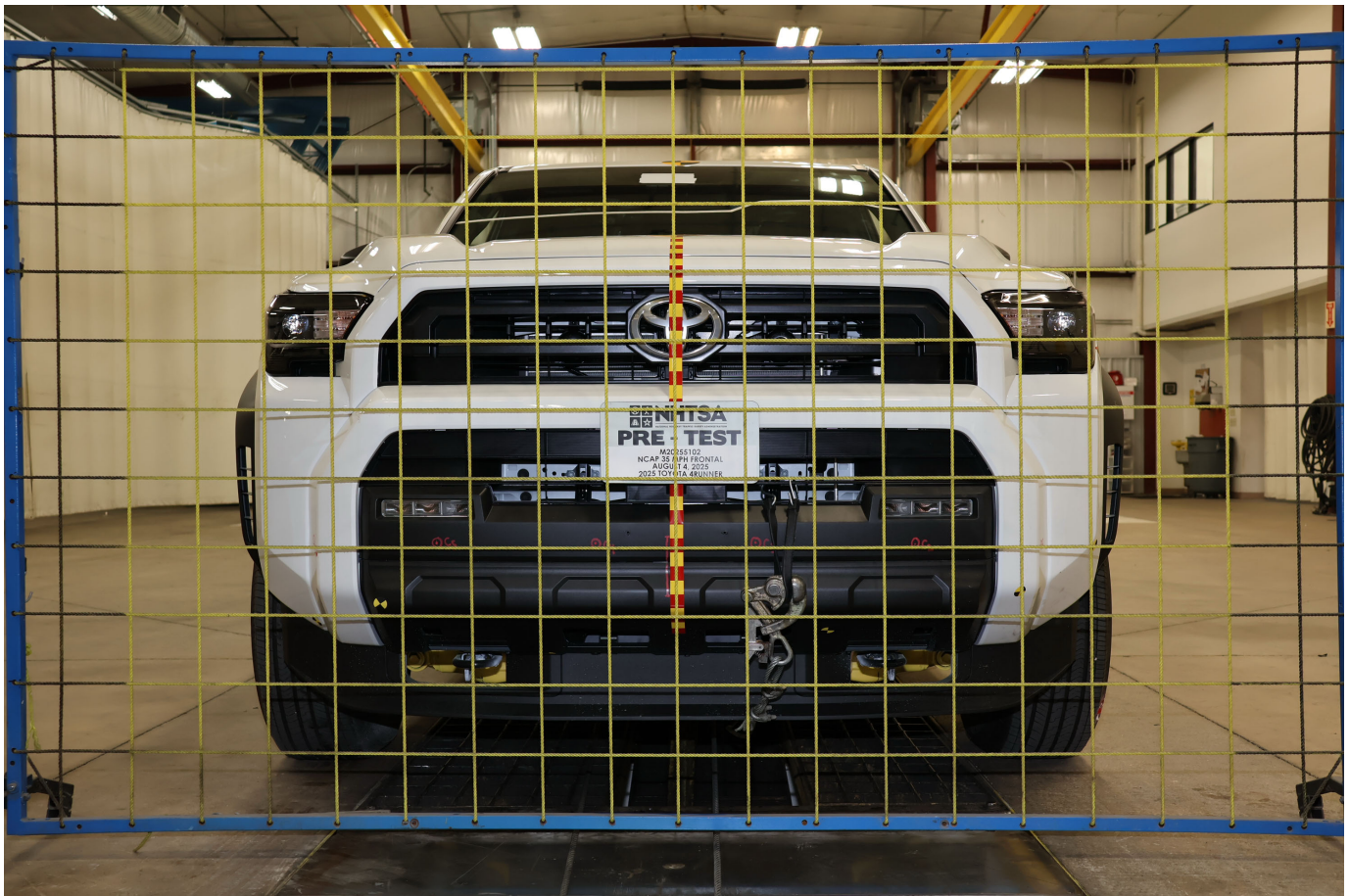


Photo No. 001 - Load Cell Location



Photo No. 002 - Pre-Test Load Cell Wall



Photo No. 003 - Post-Test Load Cell Wall



Photo No. 004 - Manufacturer's Label



Photo No. 005 - Tire Placard



Photo No. 005a - Vehicle Load Carrying Capacity Reduction Label



Photo No. 006 - 2025 Toyota 4Runner 4WD SR5 5-Door SUV Frontal As Delivered



Photo No. 007 - Left Rear 3-4 View, As Received



Photo No. 008 - Pre-Test Front View of Test Vehicle



Photo No. 009 - Post-Test Front View of Test Vehicle



Photo No. 010 - Pre-Test Left View of Test Vehicle



Photo No. 011 - Post-Test Left View of Test Vehicle



Photo No. 012 - Pre-Test Right View of Test Vehicle



Photo No. 013 - Post-Test Right View of Test Vehicle



Photo No. 014 - Pre-Test Right Front 3-4 View



Photo No. 015 - Post-Test Right Front 3-4 View



Photo No. 016 - Pre-Test Left Rear 3-4 View



Photo No. 017 - Post-Test Left Rear 3-4 View



Photo No. 018 - Pre-Test Windshield View



Photo No. 019 - Post-Test Windshield View



Photo No. 020 - Pre-Test Engine Compartment View

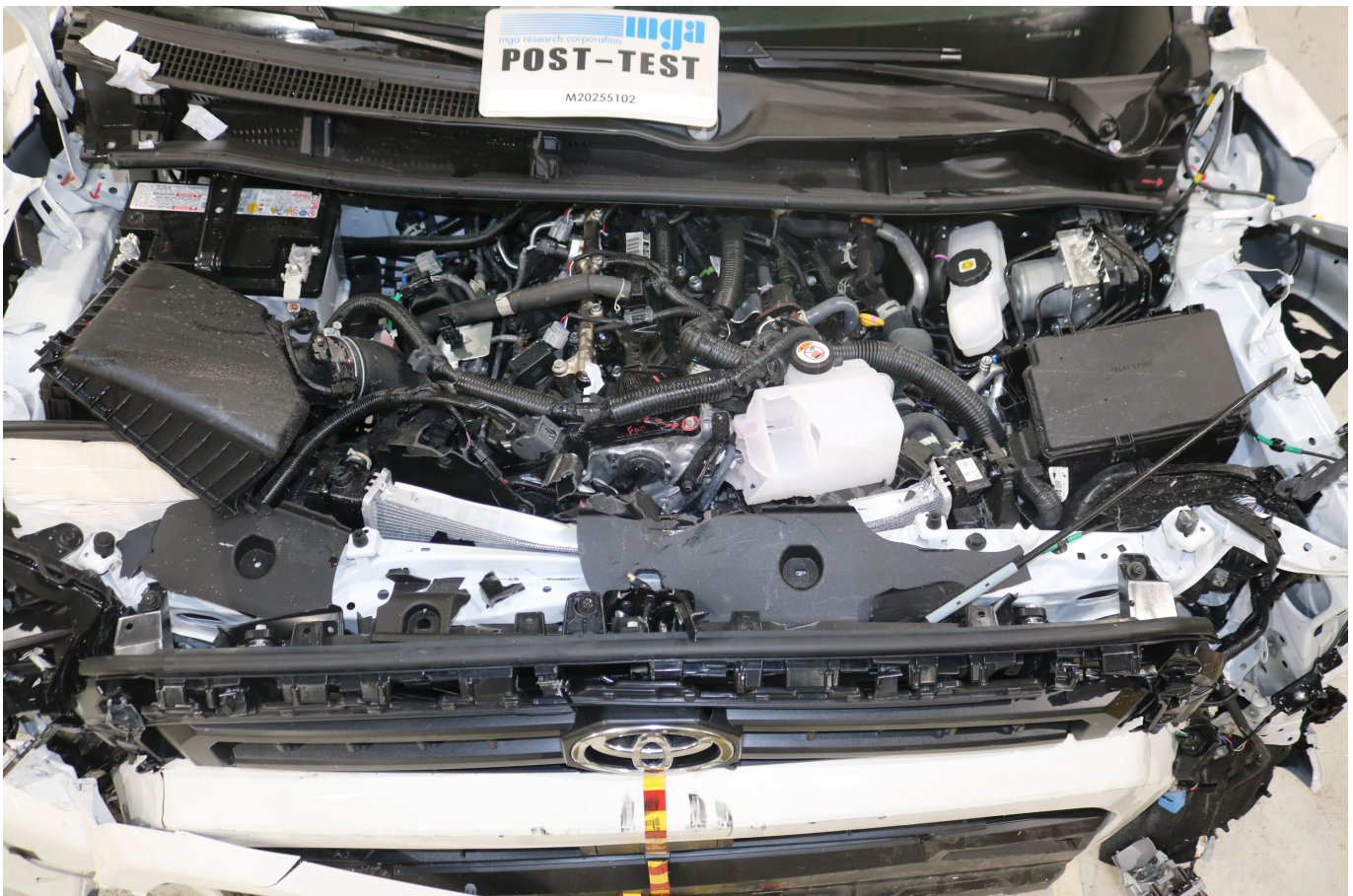


Photo No. 021 - Post-Test Engine Compartment View



Photo No. 022 - Pre-Test Fuel Filler Cap View



Photo No. 023 - Post-Test Fuel Filler Cap View

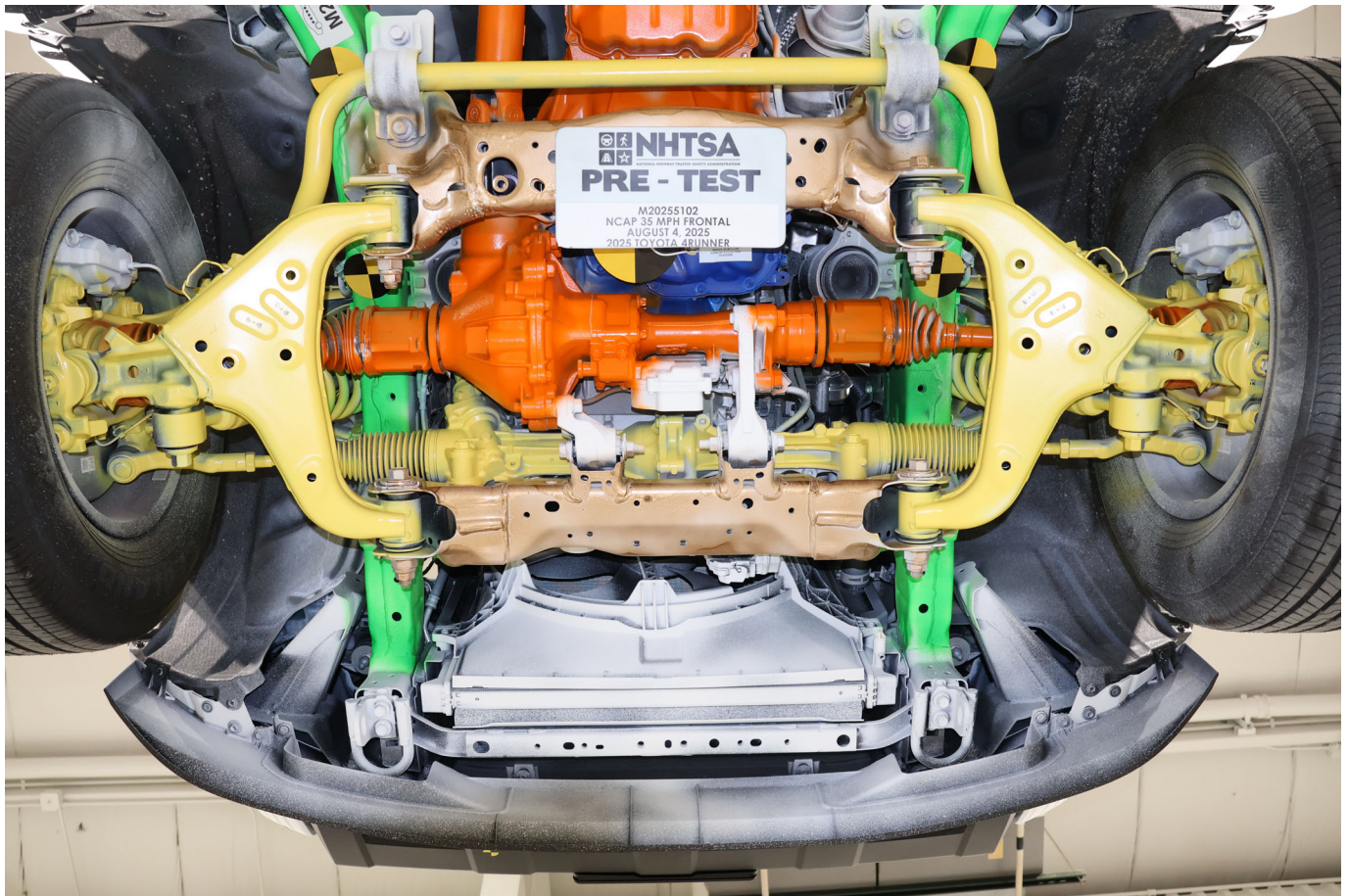


Photo No. 024 - Pre-Test Front Underbody View

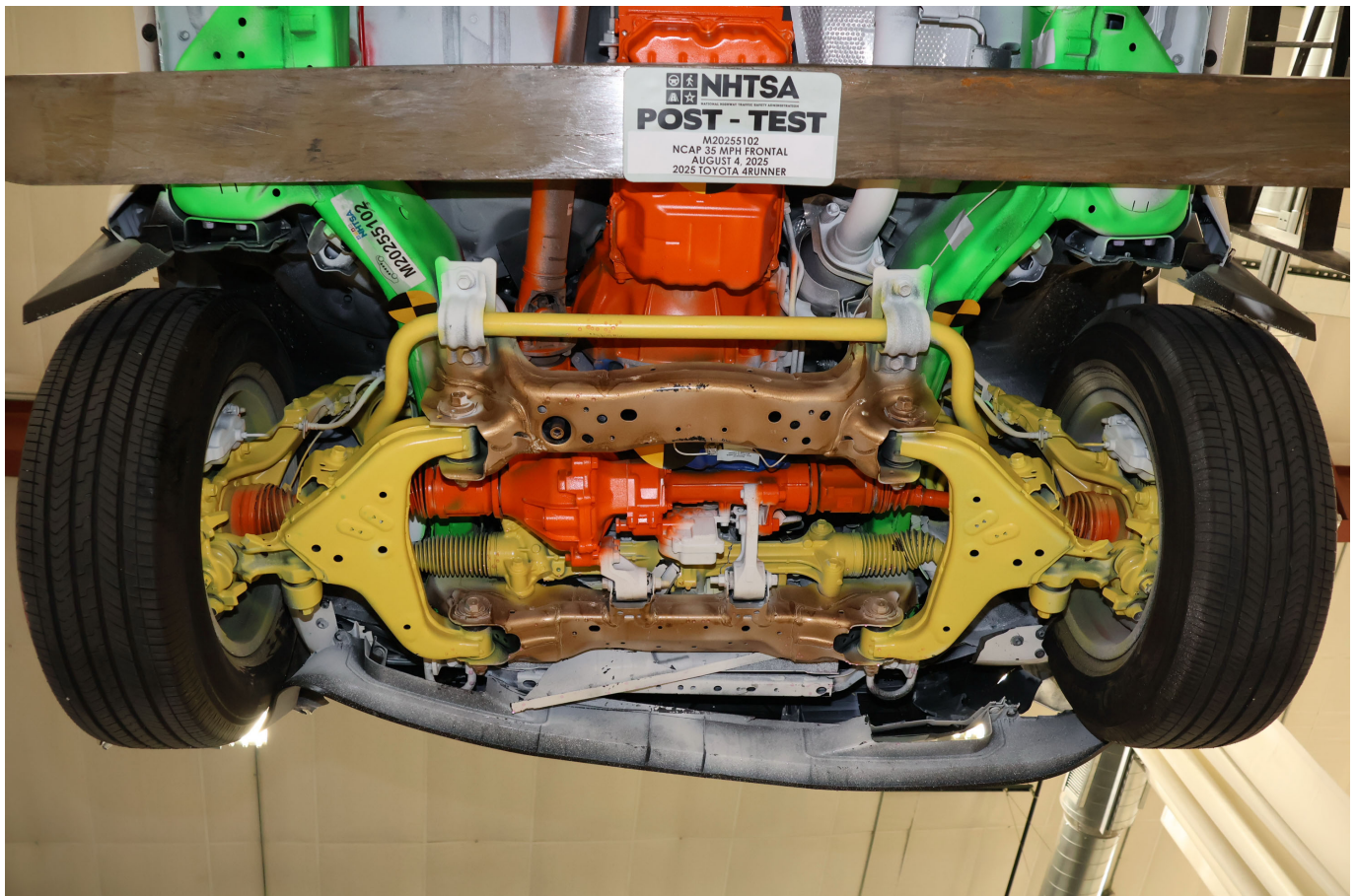


Photo No. 025 - Post-Test Front Underbody View

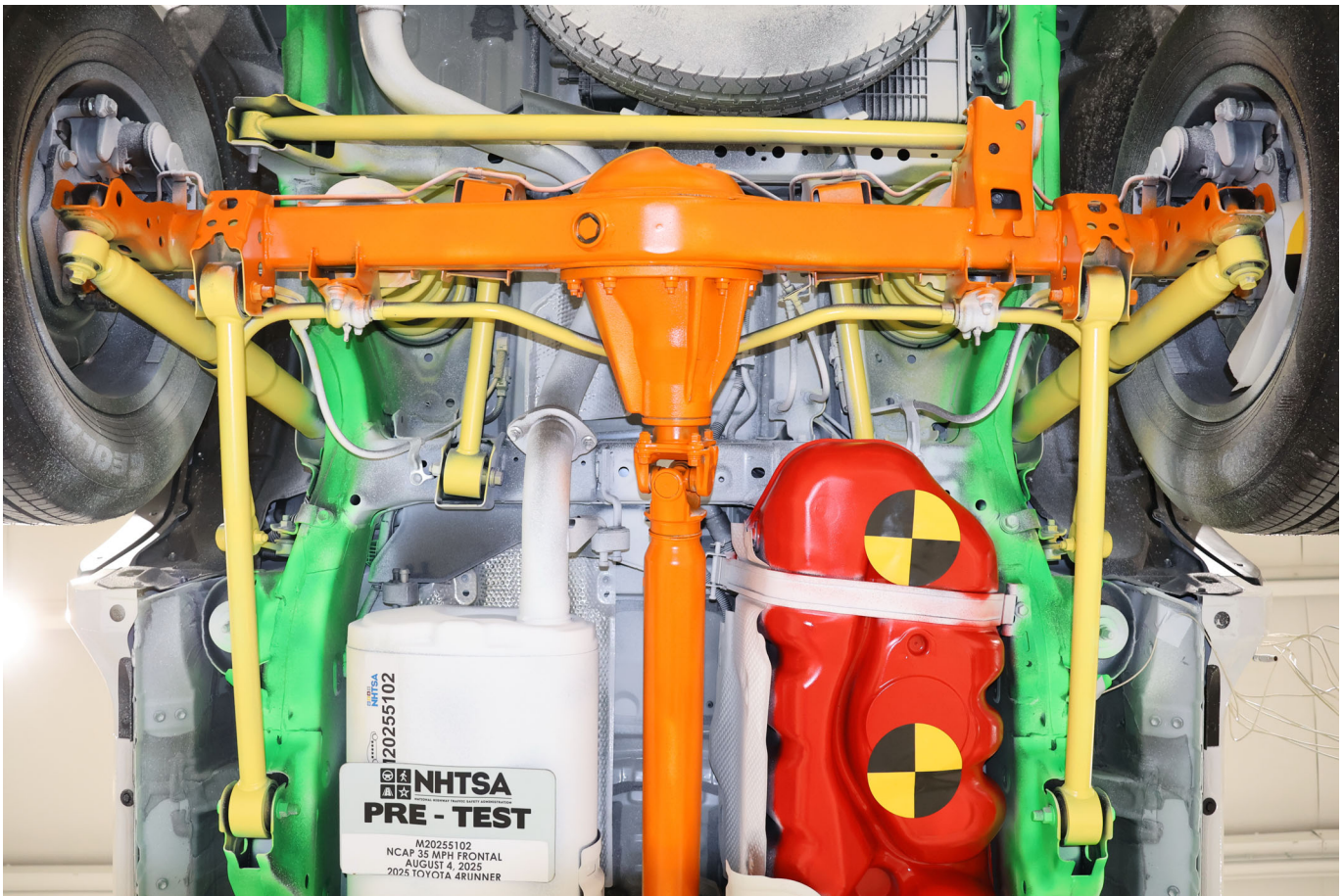


Photo No. 026 - Pre-Test Rear Underbody View

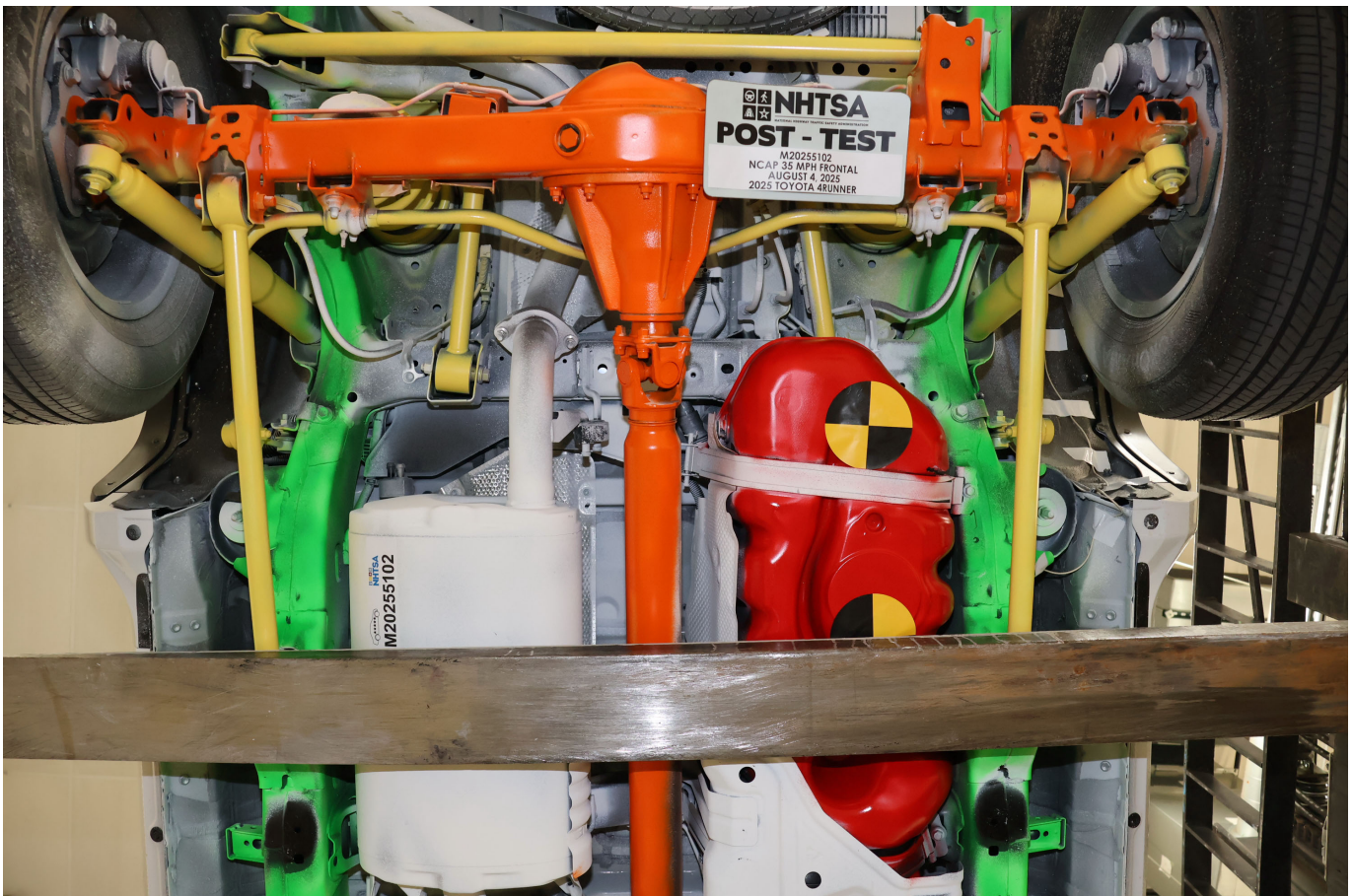


Photo No. 027 - Post-Test Rear Underbody View



Photo No. 028 - Pre-Test Dummy Cable Routing



Photo No. 029 - Post-Test Dummy Cable Routing



Photo No. 030 - Pre-Test Driver Dummy Front View



Photo No. 031 - Post-Test Driver Dummy Front View



Photo No. 032 - Pre-Test Driver Dummy Window View



Photo No. 033 - Post-Test Driver Dummy Window View



Photo No. 034 - Pre-Test Driver Dummy and Vehicle Interior View



Photo No. 035 - Post-Test Driver Dummy and Vehicle Interior View



Photo No. 036 - Pre-Test Driver's Seat Fore-Aft Markings



Photo No. 037 - Post-Test Driver's Seat Fore-Aft Markings



Photo No. 038 - Pre-Test View of Belt Anchorage for Driver Dummy



Photo No. 039 - Post-Test View of Belt Anchorage for Driver Dummy



Photo No. 040 - Pre-Test View of Belt Buckle and Latch Plate for Driver Dummy



Photo No. 041 - Post-Test View of Belt Buckle and Latch Plate for Driver Dummy



Photo No. 042 - Pre-Test Driver Dummy Feet



Photo No. 043 - Post-Test Driver Dummy Feet



Photo No. 044 - Pre-Test Driver's Side Knee Bolster



Photo No. 045 - Post-Test Driver's Side Knee Bolster



Photo No. 046 - Pre-Test Driver's Side Floorpan



Photo No. 047 - Post-Test Driver's Side Floorpan



Photo No. 048 - Post-Test Driver Dummy Face

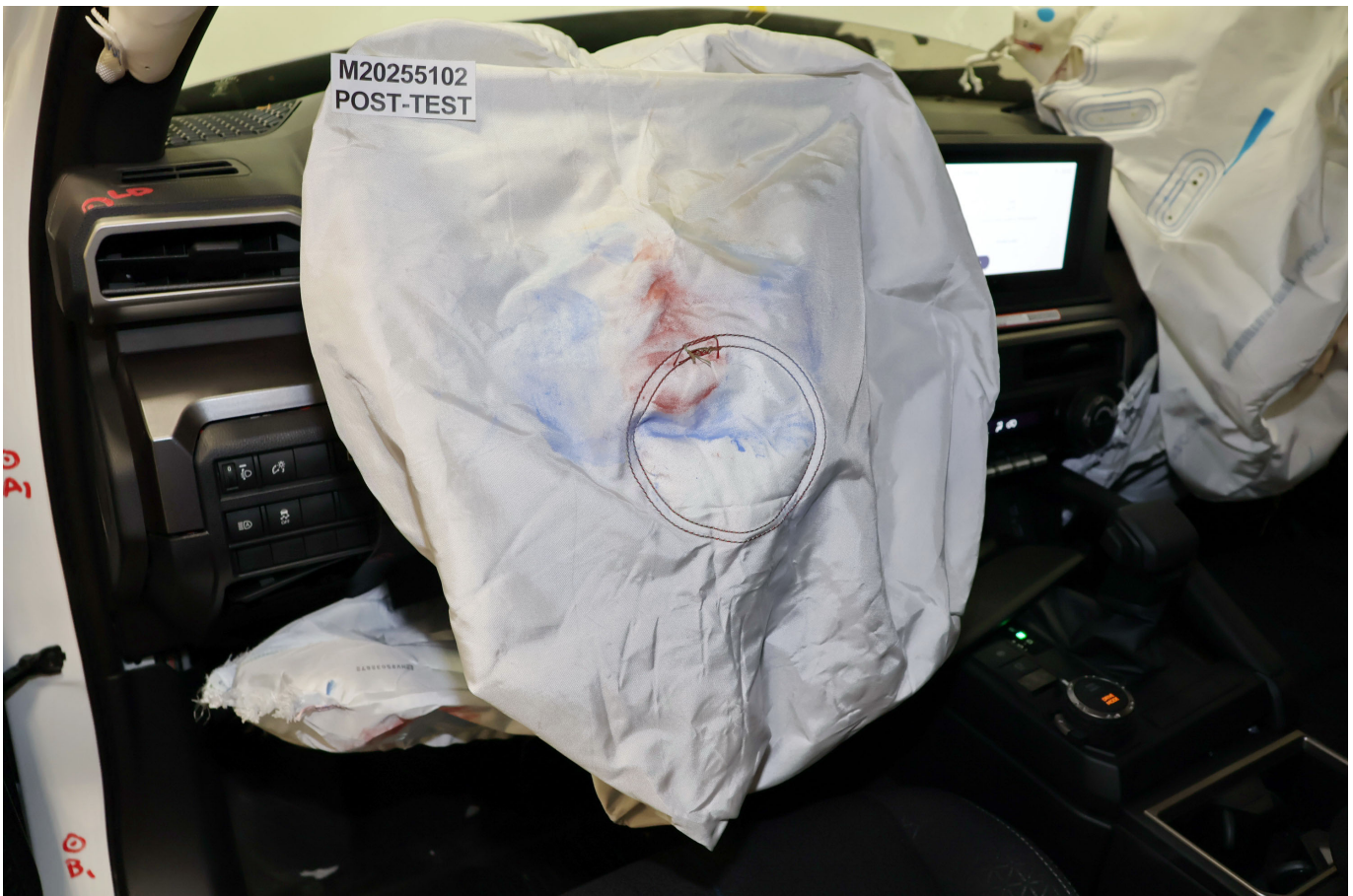


Photo No. 049 - Post-Test Driver Dummy Contact with Airbag

PHOTOGRAPH NOT APPLICABLE

Photo No. 050 - Post-Test Driver Dummy Contact with Headrest



Photo No. 051 - Pre-Test View of the Steering Wheel



Photo No. 052 - Post-Test View of the Steering Wheel



Photo No. 053 - Pre-Test Passenger Dummy Front View



Photo No. 054 - Post-Test Passenger Dummy Front View



Photo No. 055 - Pre-Test Passenger Dummy Window View



Photo No. 056 - Post-Test Passenger Dummy Window View



Photo No. 057 - Pre-Test Passenger Dummy and Vehicle Interior View



Photo No. 058 - Post-Test Passenger Dummy and Vehicle Interior View



Photo No. 059 - Pre-Test Passenger's Seat Fore-Aft Markings



Photo No. 060 - Post-Test Passenger's Seat Fore-Aft Markings



Photo No. 061 - Pre-Test View of Belt Anchorage for Passenger Dummy



Photo No. 062 - Post-Test View of Belt Anchorage for Passenger Dummy



Photo No. 063 - Pre-Test View of Belt Buckle and Latch Plate for Passenger Dummy



Photo No. 064 - Post-Test View of Belt Buckle and Latch Plate for Passenger Dummy



Photo No. 065 - Pre-Test Passenger Dummy Feet



Photo No. 066 - Post-Test Passenger Dummy Feet



Photo No. 067 - Pre-Test Passenger's Side Knee Bolster



Photo No. 068 - Post-Test Passenger's Side Knee Bolster



Photo No. 069 - Pre-Test Passenger's Side Floorpan



Photo No. 070 - Post-Test Passenger's Side Floorpan



Photo No. 071 - Post-Test Passenger Dummy Face



Photo No. 072 - Post-Test Passenger Dummy Contact with Airbag

PHOTOGRAPH NOT APPLICABLE

Photo No. 073 - Post-Test Passenger Dummy Contact with Headrest



Photo No. 074 - Photograph of Ballast Installed in Vehicle

PHOTOGRAPH NOT APPLICABLE

Photo No. 075 - Post-Test Stoddard Solvent Spillage Location View



Photo No. 076 - Post-Test Speed Trap Read-Out



Photo No. 077 - Vehicle at 0 Degrees on Static Rollover Device

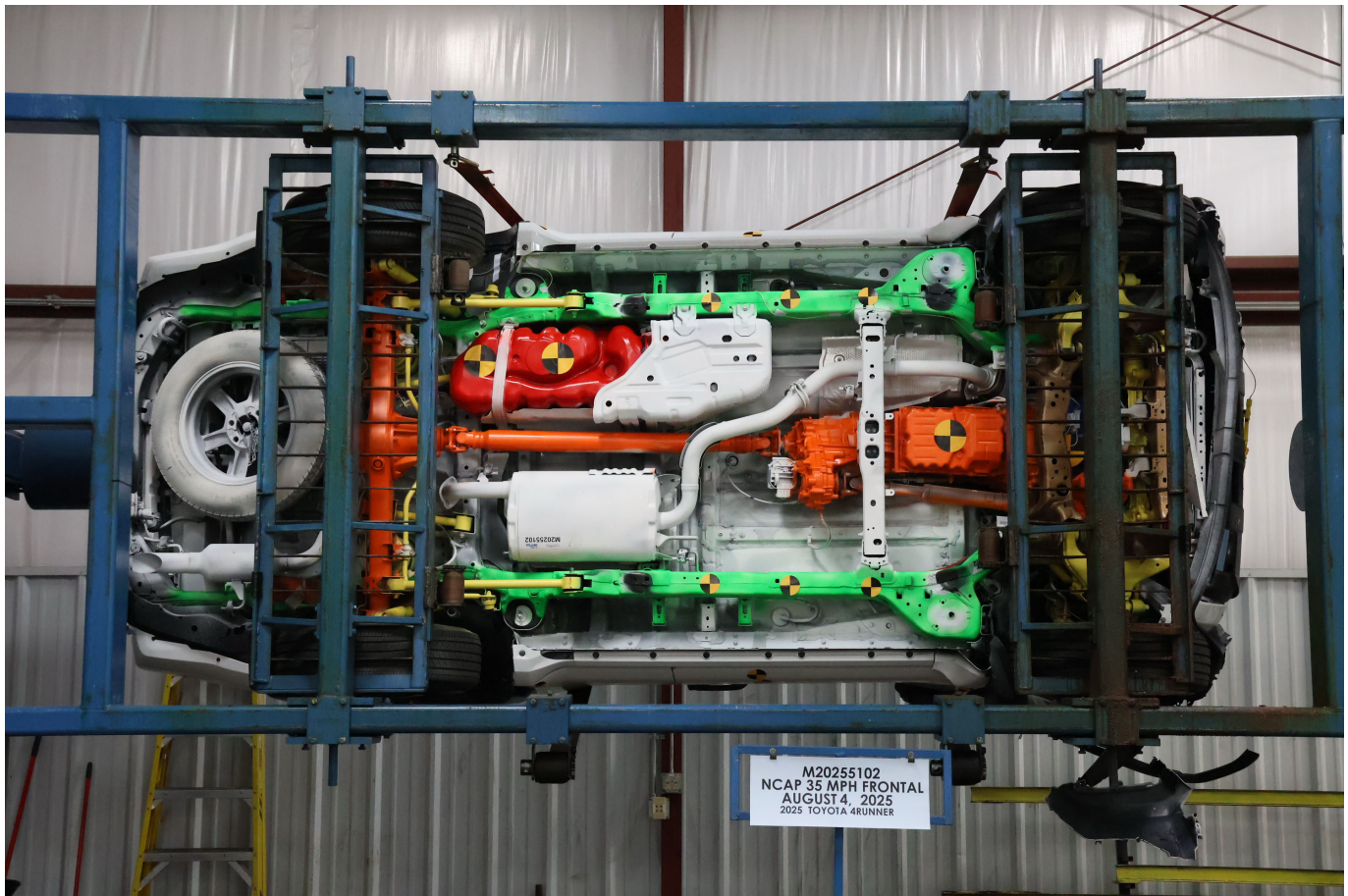


Photo No. 078 - Vehicle at 90 Degrees on Static Rollover Device



Photo No. 079 - Vehicle at 180 Degrees on Static Rollover Device



Photo No. 080 - Vehicle at 270 Degrees on Static Rollover Device



Photo No. 081 - Vehicle at 360 Degrees on Static Rollover Device



Photo No. 082 - 2025 Toyota 4Runner 4WD SR5 5-Door SUV Frontal Impact Event

TOYOTA

DESC: 4RUNNER 4WD SR5
VIN: JTEVA5BR4S5030129
YR/MDL: 2025/8664A
CLR: ICE CAP/FA20 (0040/20)
FINAL ASSEMBLY POINT: TAHARA, AICHI, JAPAN

STANDARD EQUIPMENT

UNLESS REPLACED BY OPTIONAL EQUIPMENT

MECHANICAL & PERFORMANCE

- i-FORCE 2.4L 4cyl Turbocharged Engine
- 8-Spd Automatic Transmission
- Part-Time 4WD System
- Tow Hitch Receiver w/7 & 4-Pin Connector

SAFETY & CONVENIENCE

- Toyota Safety Sense 3.0 w/Pre-Collision
- Connected Services Capable, 4G network dependent. See Toyota.com for details.
- Blind Spot Monitor (BSM) w/ Rear Cross-Traffic Alert (RCTA)
- Smart Key System

EXTERIOR

- 17-in Alloy Wheels
- Power Rear Window
- LED Headlights and Fog Lights
- Black Roof Rails
- Temporary Spare Tire

INTERIOR

- 8-in. Toyota Audio Multimedia w/ 8-Speakers, Wireless Apple CarPlay and Android Auto Compatibility
- SiriusXM w/3-Month Trial
- Fabric-Trimmed Seats w/ Driver Lumbar Support
- Leather-trimmed steering wheel

- For Full Product Details, Please Visit Toyota.com/4Runner

BASE MANUFACTURER'S SUGGESTED RETAIL PRICE \$42,770.00

OPTIONAL EQUIPMENT

FE	50 STATE EMISSIONS	
63	Floor Mats- All Weather- '4Runner'	248.00
MF	Mudguards- Fr -Rr Molded Black '4Runner'	160.00

GOVERNMENT 5-STAR SAFETY RATINGS

This vehicle has not been rated by the government for overall vehicle score, frontal crash, side crash or rollover risk.

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

*****Full Tank of Gas*****

EPA DOT Fuel Economy and Environment

Fuel Economy

21 MPG
combined city/hwy

19 25
city highway

4.8 gallons per 100 miles

You spend \$3,000 more in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost \$2,500

Fuel Economy & Greenhouse Gas Rating (tailpipe only) **Smog Rating** (tailpipe only)

1 4 10 1 6 10
Best Best

This vehicle emits 417 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions. Learn more at fueleconomy.gov.

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 28 MPG and costs \$9,500 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at \$3.50 per gallon. MPG is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

fueleconomy.gov
Calculate personalized estimates and compare vehicles

Smartphone QR Code

MANUFACTURER'S SUGGESTED RETAIL PRICE \$43,178.00

DELIVERY, PROCESSING AND HANDLING FEE 1,450.00

TOTAL SUGGESTED RETAIL PRICE \$44,628.00

*Manufacturer's suggested retail price includes delivery, processing and handling fees. Tax, title and other fees, applicable federal, state and local taxes, and dealer and distributor options and accessories.

Delivered by Truck to 48067
KENOSHA TOYOTA
8180 120TH AVENUE
KENOSHA WI 53142

TML1EIN150F0W0

Photo No. 083 - Monroney Label Photograph

APPENDIX B
DUMMY RESPONSE DATA TRACES

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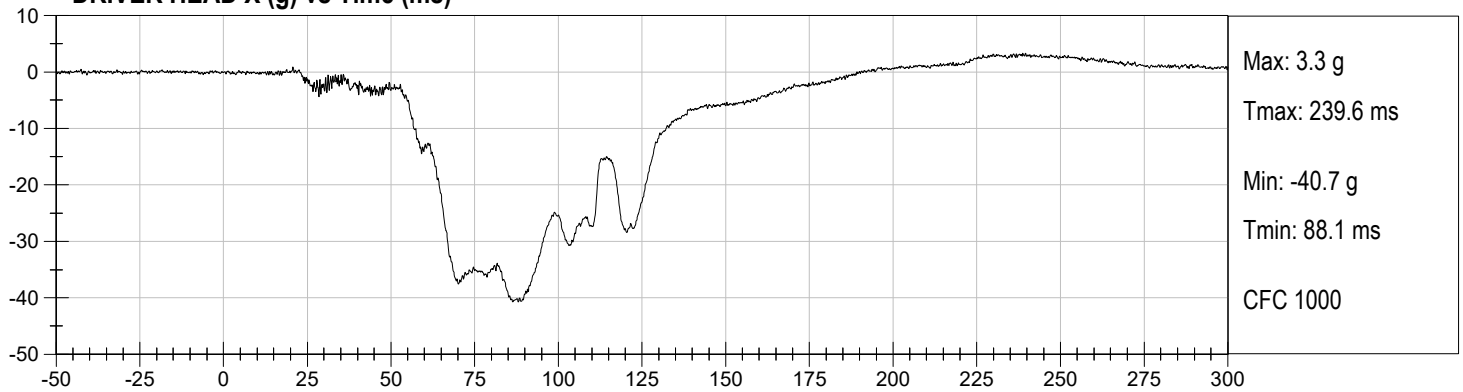
The following additional dummy and vehicle response data can be found in the R&D section of the NHTSA website at www.nhtsa.gov

Driver Head X Redundant
 Driver Head Y Redundant
 Driver Head Z Redundant
 Driver Head Angular Velocity X
 Driver Head Angular Velocity Y
 Driver Head Angular Velocity Z
 Driver Upper Neck Force Y
 Driver Upper Neck Moment X
 Driver Upper Neck Moment Z
 Driver Chest X Redundant
 Driver Chest Y Redundant
 Driver Chest Z Redundant
 Driver Pelvis X
 Driver Pelvis Y
 Driver Pelvis Z
 Driver Left Femur Redundant
 Driver Right Femur Redundant
 Driver Left Upper Tibia Moment X
 Driver Left Upper Tibia Moment Y

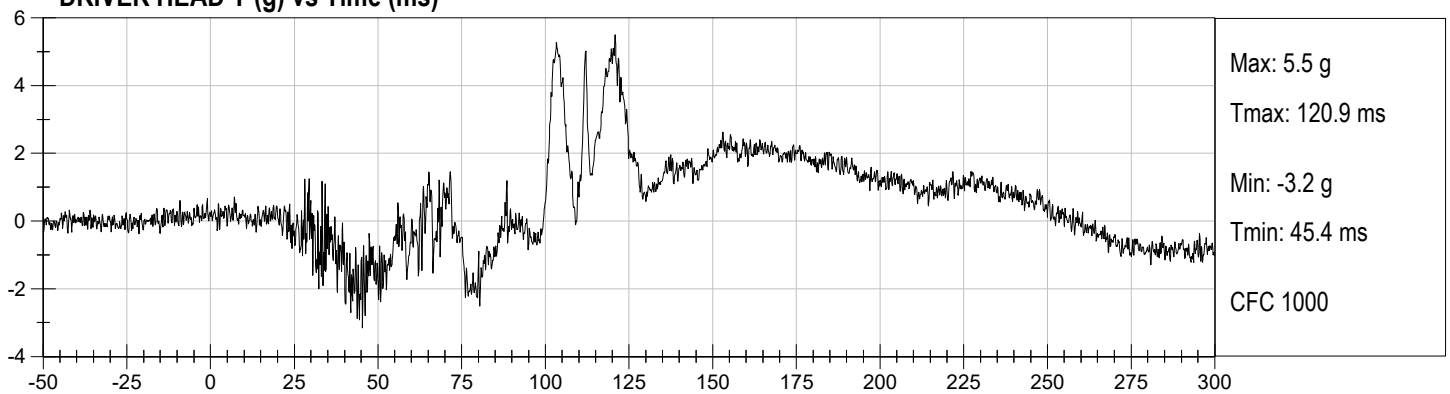
Driver Left Upper Tibia Force Z
Driver Left Lower Tibia Moment X
Driver Left Lower Tibia Moment Y
Driver Left Lower Tibia Force Z
Driver Right Upper Tibia Moment X
Driver Right Upper Tibia Moment Y
Driver Right Upper Tibia Force Z
Driver Right Lower Tibia Moment X
Driver Right Lower Tibia Moment Y
Driver Right Lower Tibia Force Z
Driver Left Foot Fore Z
Driver Left Foot Aft X
Driver Left Foot Aft Z
Driver Right Foot Fore Z
Driver Right Foot Aft X
Driver Right Foot Aft Z
Driver Lap Belt Force
Driver Shoulder Belt Force
Passenger Head X Redundant
Passenger Head Y Redundant
Passenger Head Z Redundant
Passenger Head Angular Velocity X
Passenger Head Angular Velocity Y
Passenger Head Angular Velocity Z
Passenger Upper Neck Force Y
Passenger Upper Neck Moment X
Passenger Upper Neck Moment Z
Passenger Chest X Redundant
Passenger Chest Y Redundant
Passenger Chest Z Redundant
Passenger Pelvis X
Passenger Pelvis Y

Passenger Pelvis Z
Passenger Left Femur Redundant
Passenger Right Femur Redundant
Passenger Left Upper Tibia Moment X
Passenger Left Upper Tibia Moment Y
Passenger Left Upper Tibia Force Z
Passenger Left Lower Tibia Moment X
Passenger Left Lower Tibia Moment Y
Passenger Left Lower Tibia Force Z
Passenger Right Upper Tibia Moment X
Passenger Right Upper Tibia Moment Y
Passenger Right Upper Tibia Force Z
Passenger Right Lower Tibia Moment X
Passenger Right Lower Tibia Moment Y
Passenger Right Lower Tibia Force Z
Passenger Left Foot Fore Z
Passenger Left Foot Aft X
Passenger Left Foot Aft Z
Passenger Right Foot Fore Z
Passenger Right Foot Aft X
Passenger Right Foot Aft Z
Passenger Lap Belt Force
Passenger Shoulder Belt Force
Left Rear Seat Crossmember X
Right Rear Seat Crossmember X
Vehicle Engine Top X
Vehicle Engine Bottom X
Left Rear Seat Crossmember Z
Right Rear Seat Crossmember Z
Left Rear Seat Crossmember Xr
Right Rear Seat Crossmember Xr
Advanced Research Load Cell Barrier – 528 channels

DRIVER HEAD X (g) vs Time (ms)



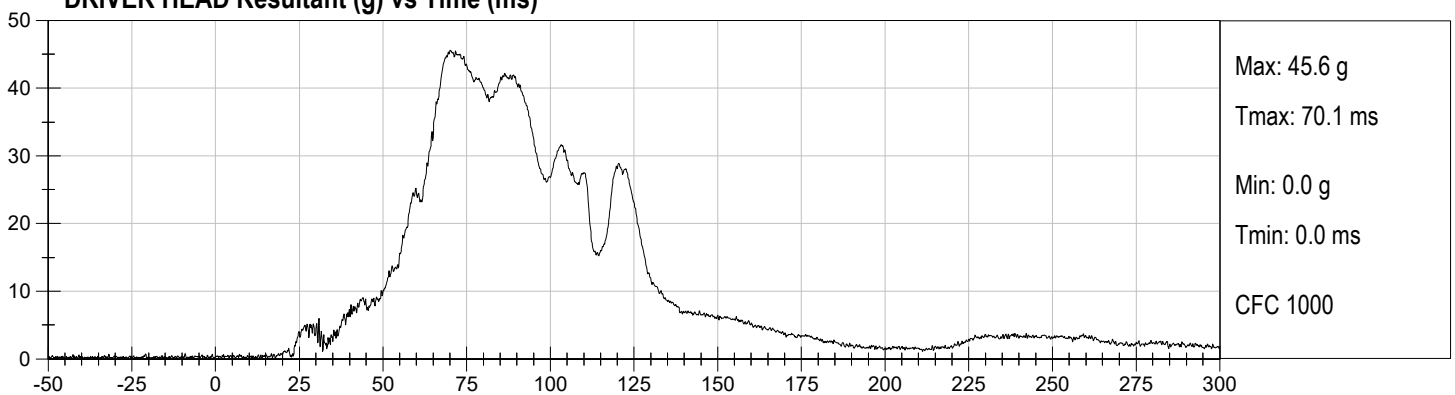
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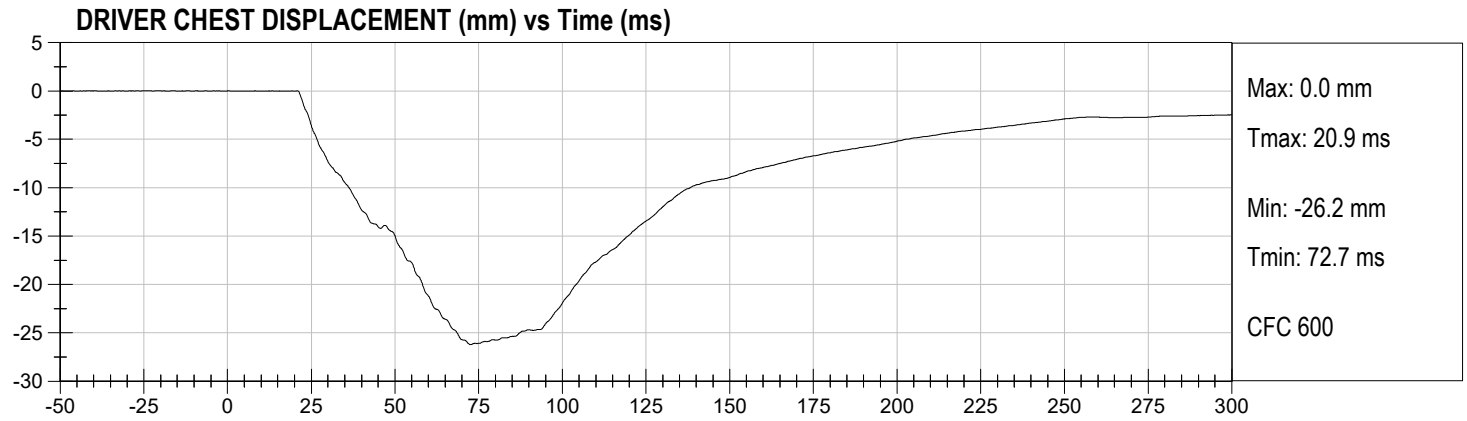


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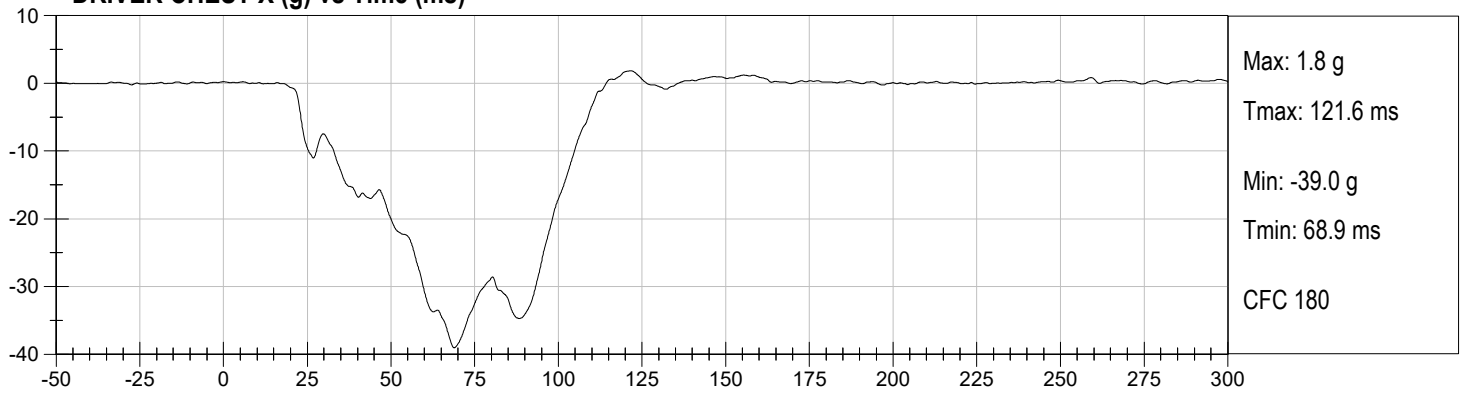


DRIVER HEAD Resultant (g) vs Time (ms)

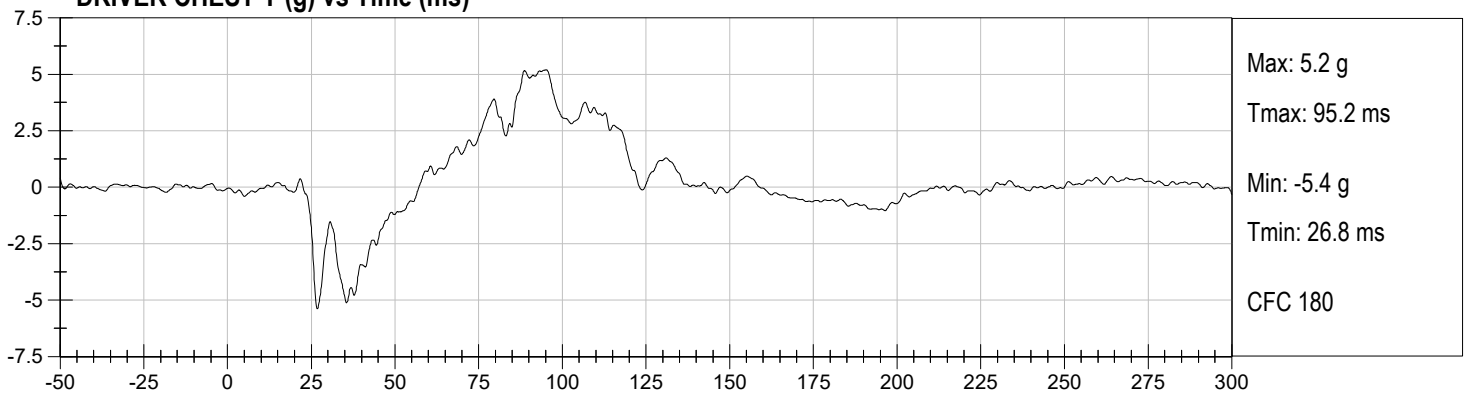




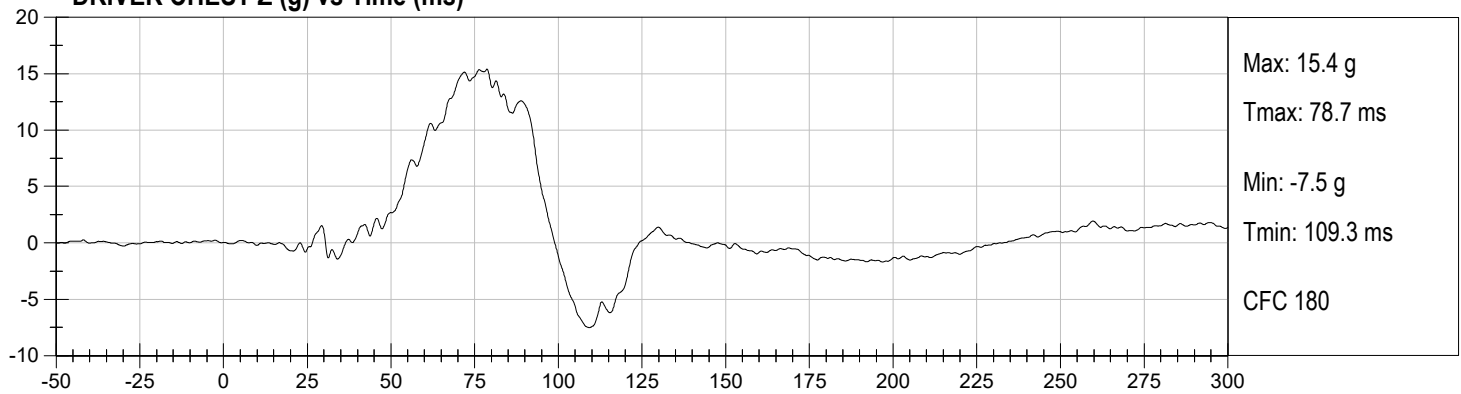
DRIVER CHEST X (g) vs Time (ms)



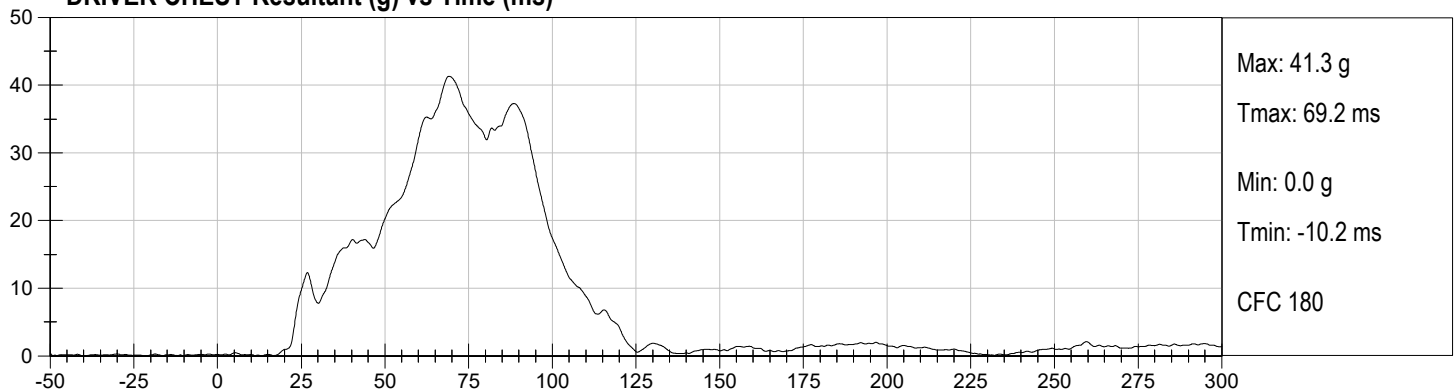
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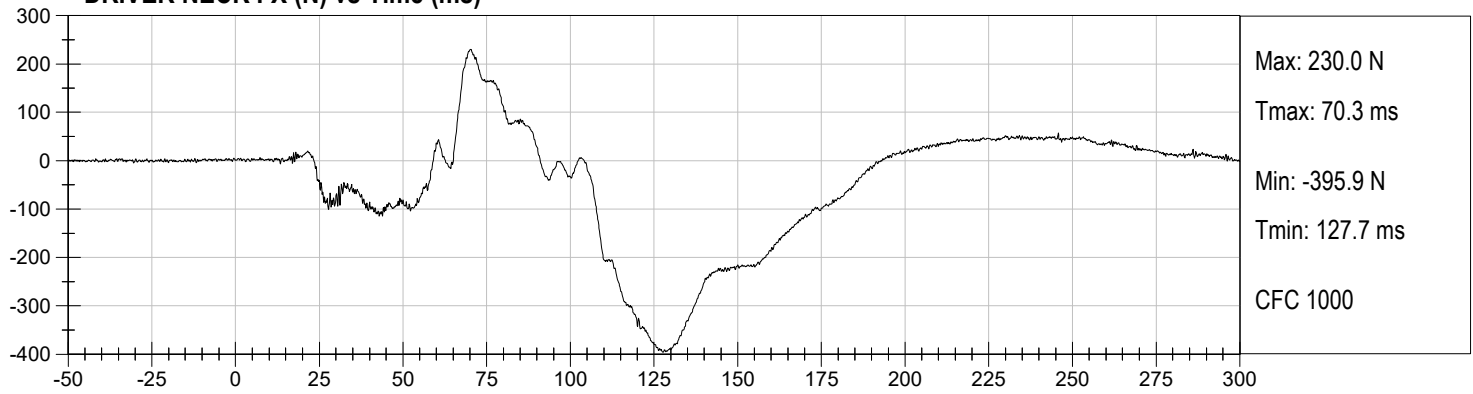
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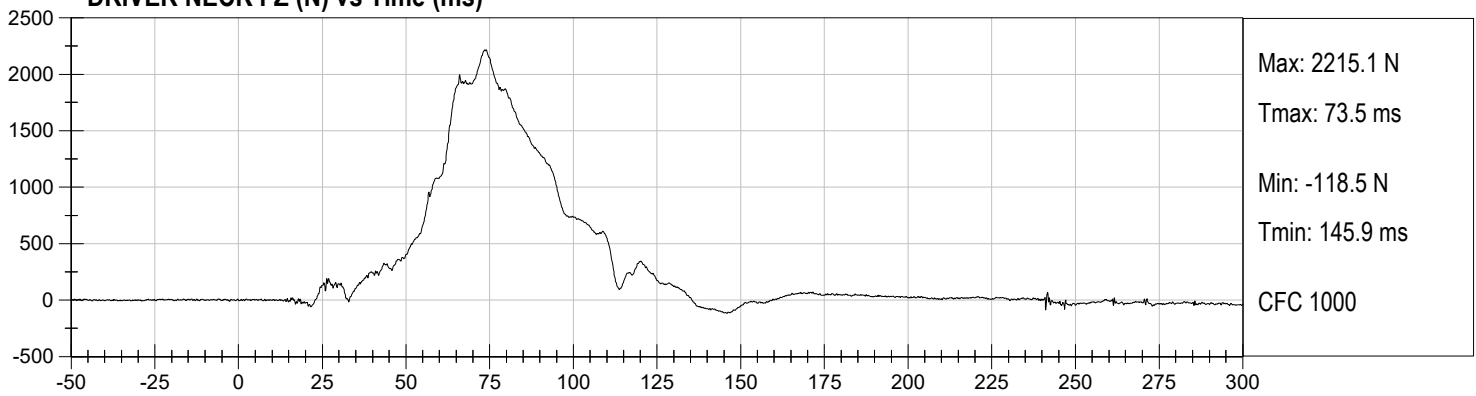
DRIVER CHEST Resultant (g) vs Time (ms)



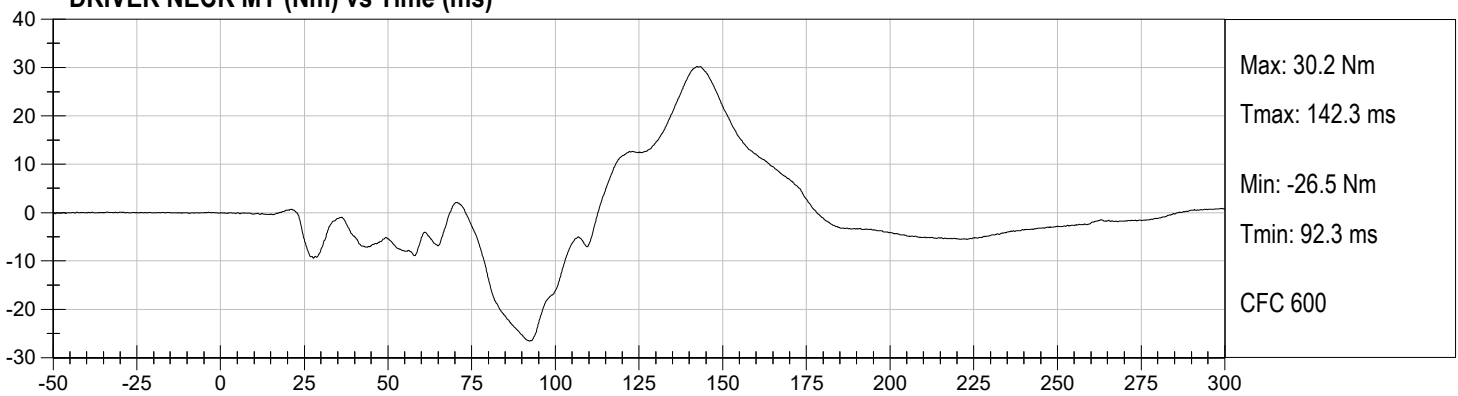
DRIVER NECK FX (N) vs Time (ms)

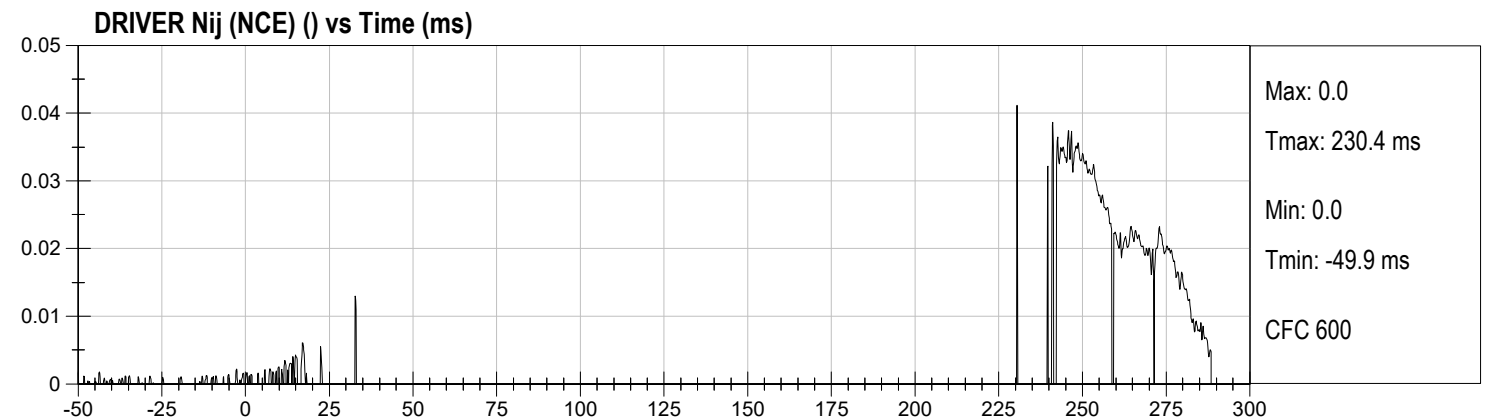
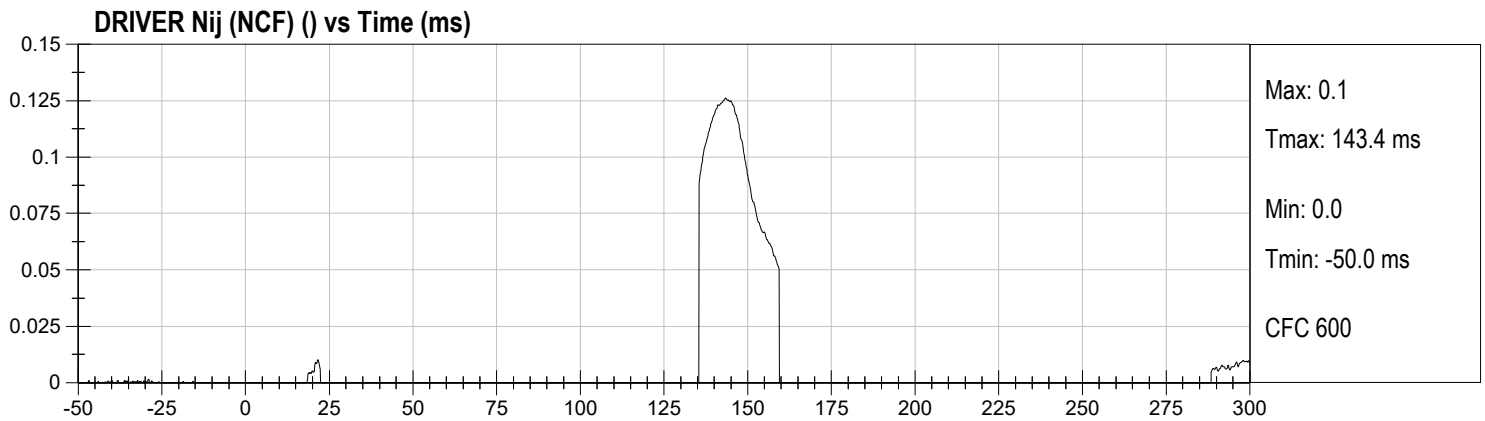
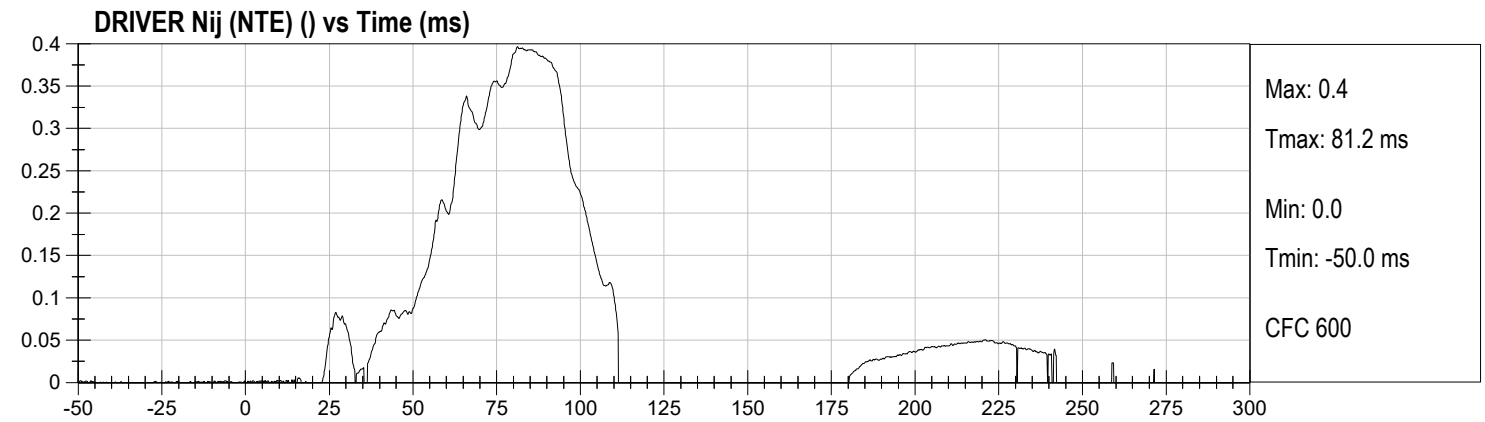
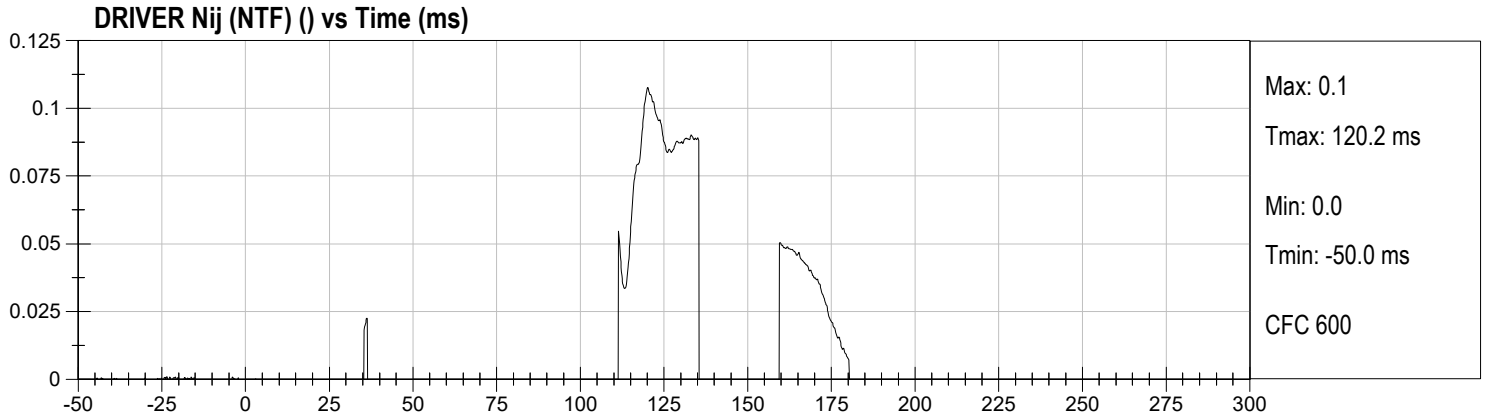


DRIVER NECK FZ (N) vs Time (ms)

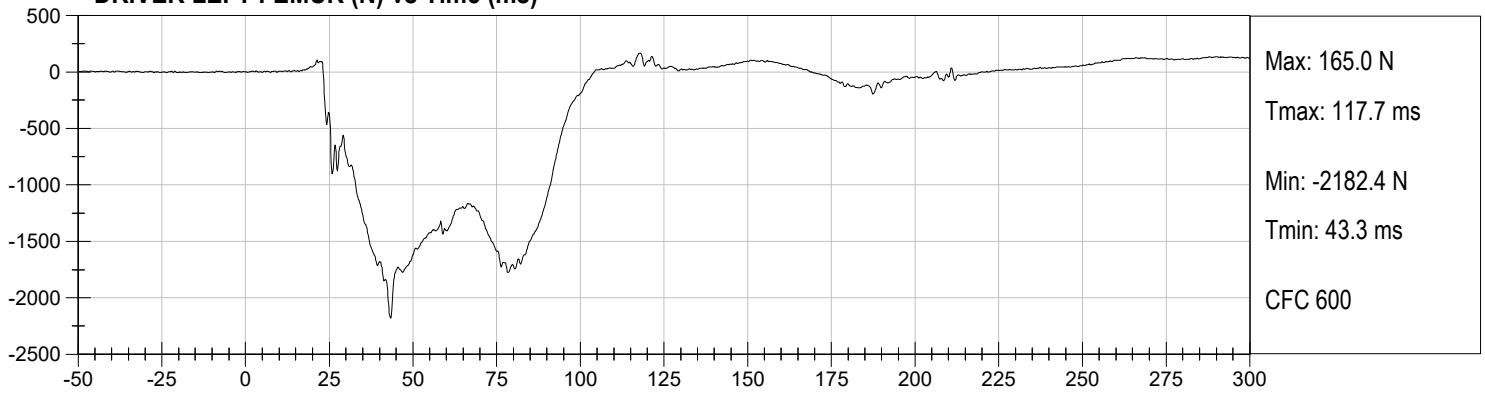


DRIVER NECK MY (Nm) vs Time (ms)

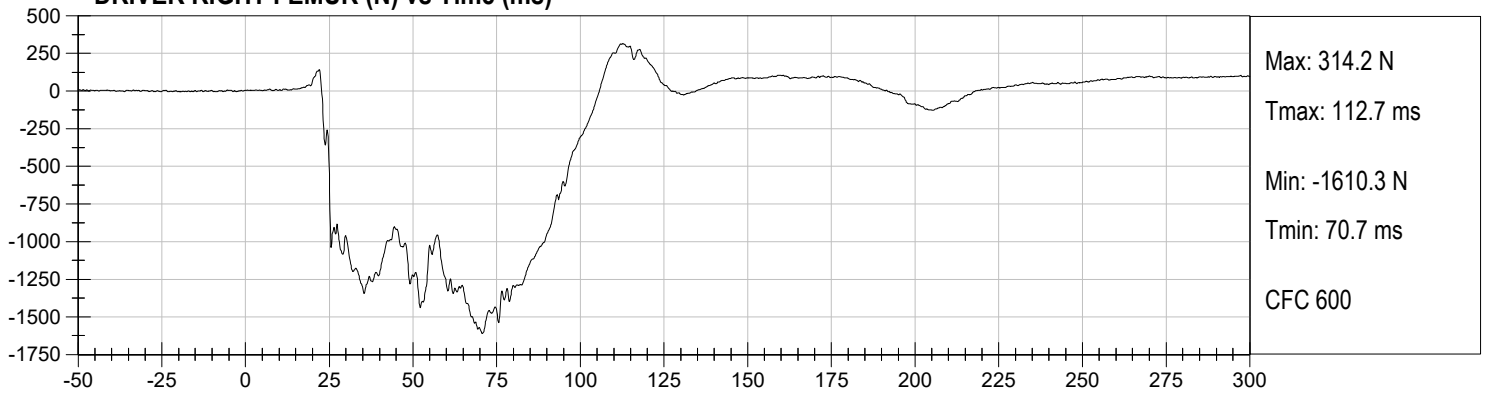




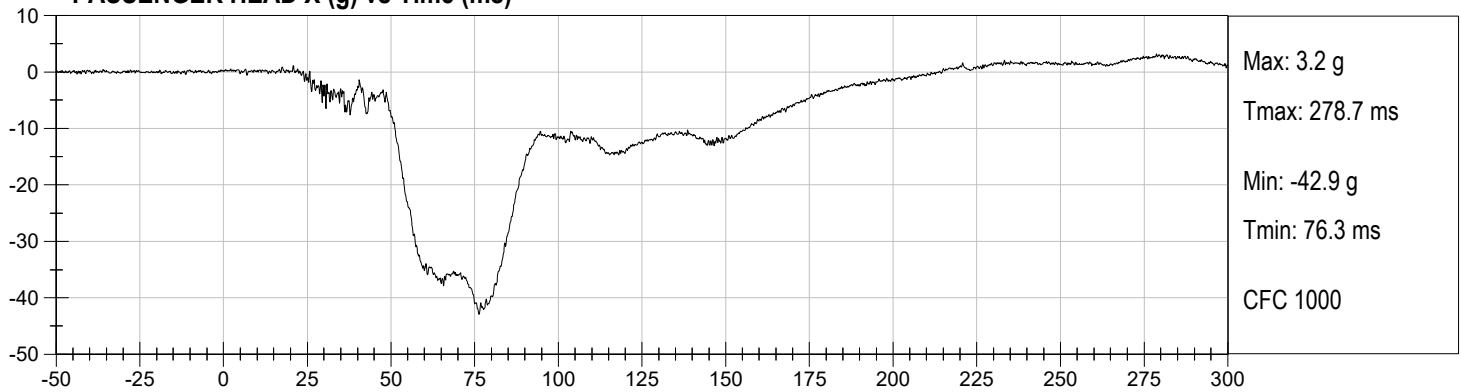
DRIVER LEFT FEMUR (N) vs Time (ms)



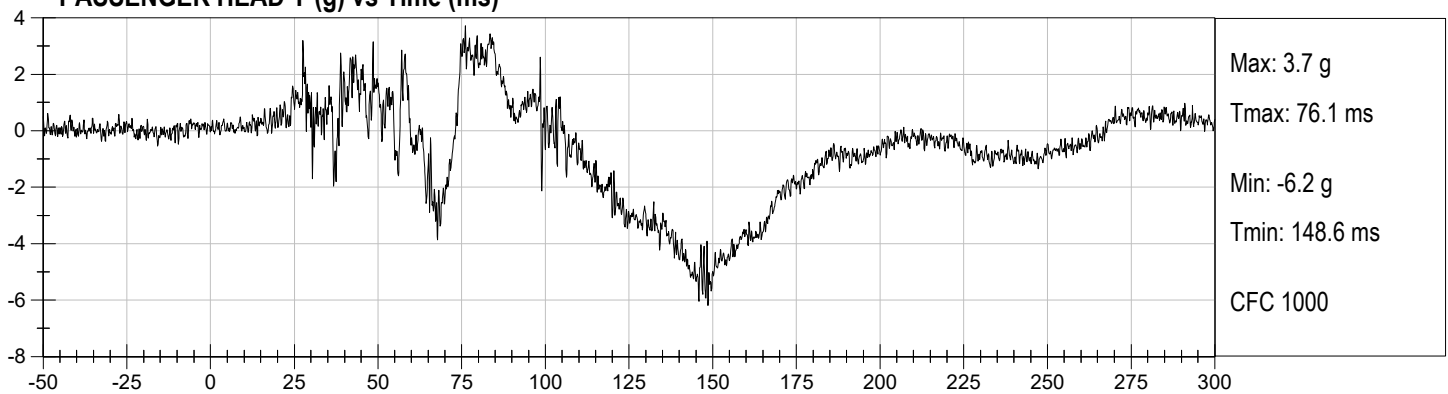
DRIVER RIGHT FEMUR (N) vs Time (ms)



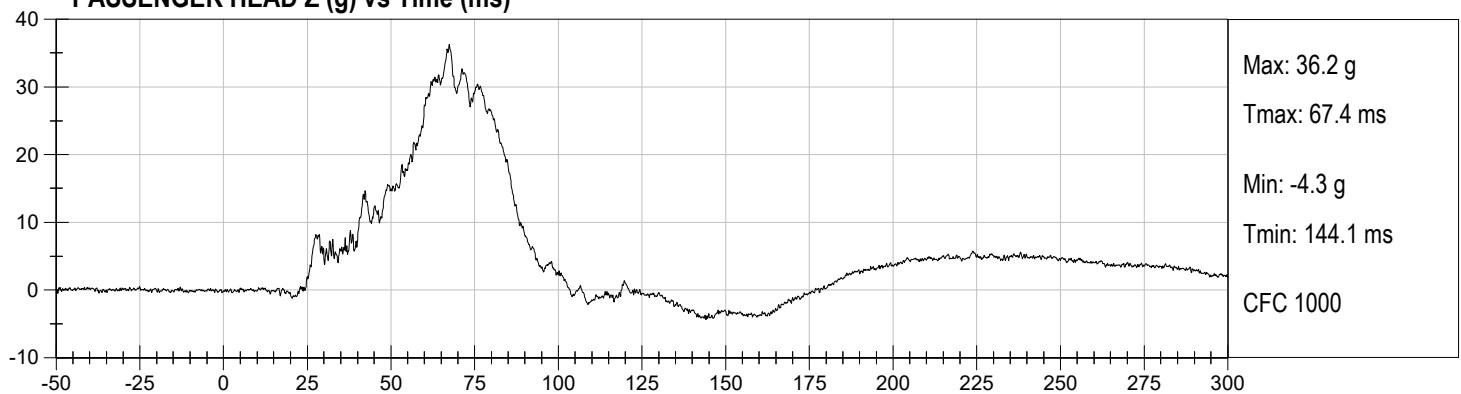
PASSENGER HEAD X (g) vs Time (ms)



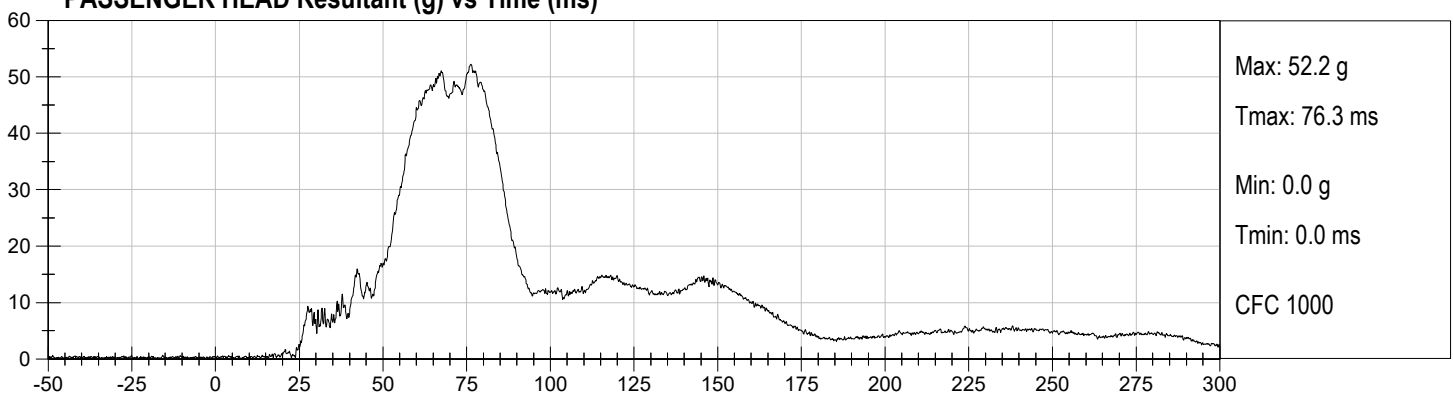
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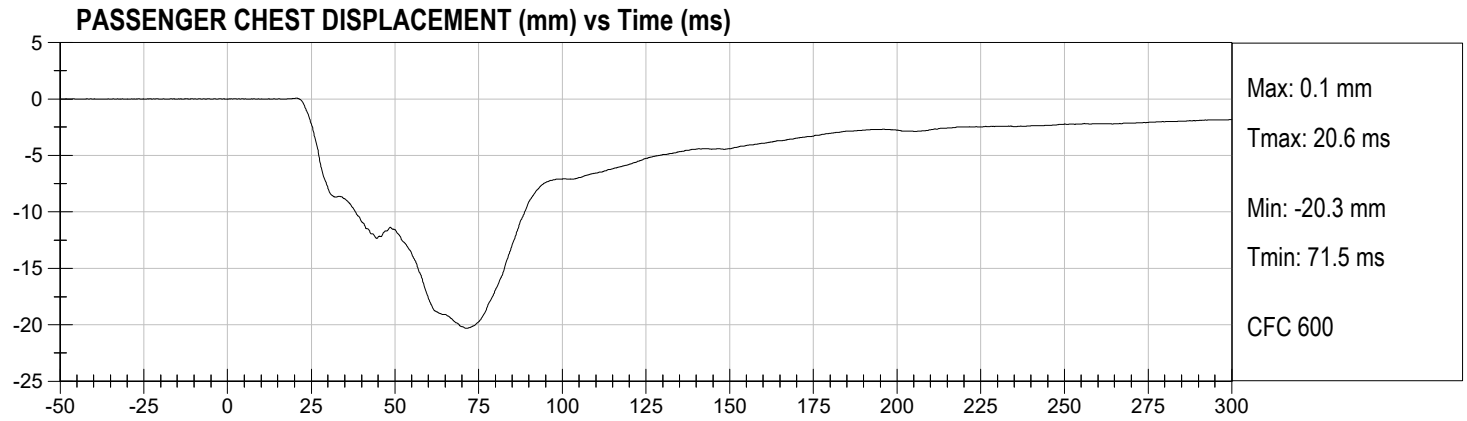


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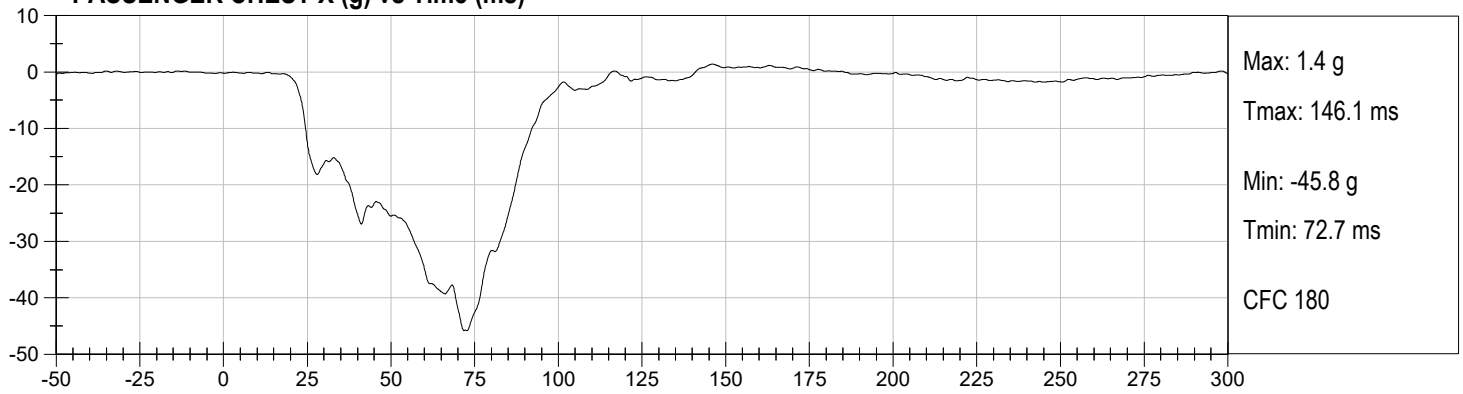


PASSENGER HEAD Resultant (g) vs Time (ms)

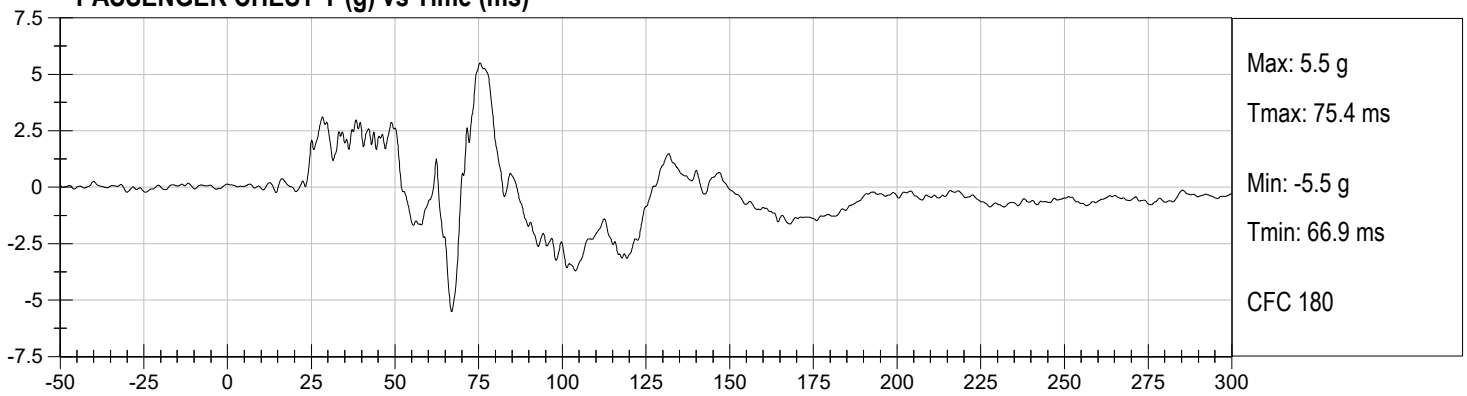




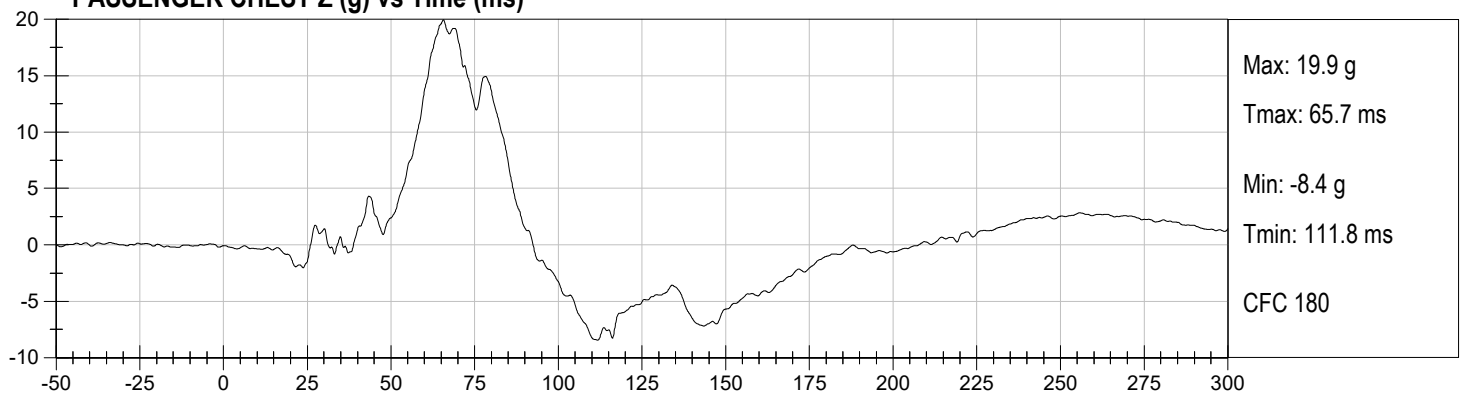
PASSENGER CHEST X (g) vs Time (ms)



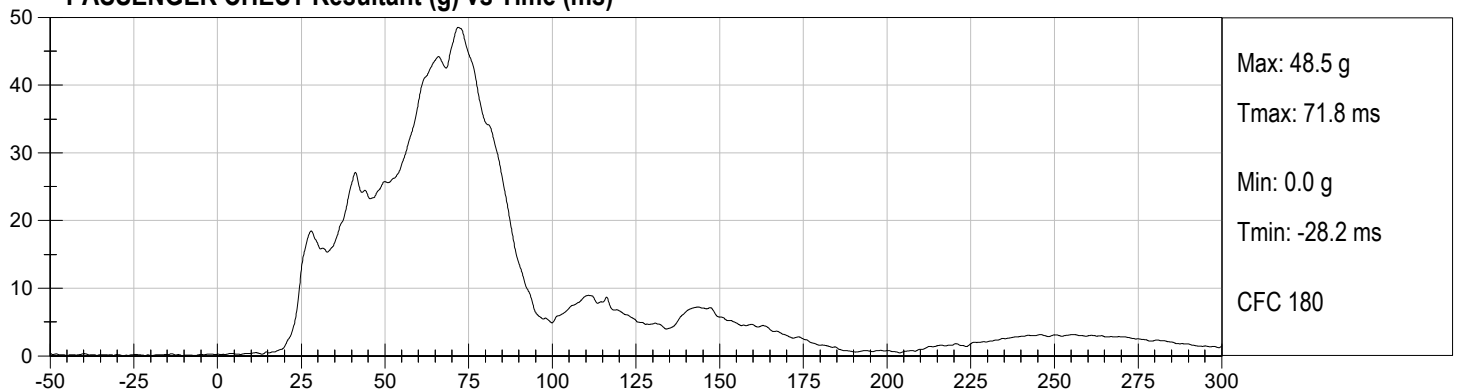
PASSENGER CHEST Y (g) vs Time (ms)



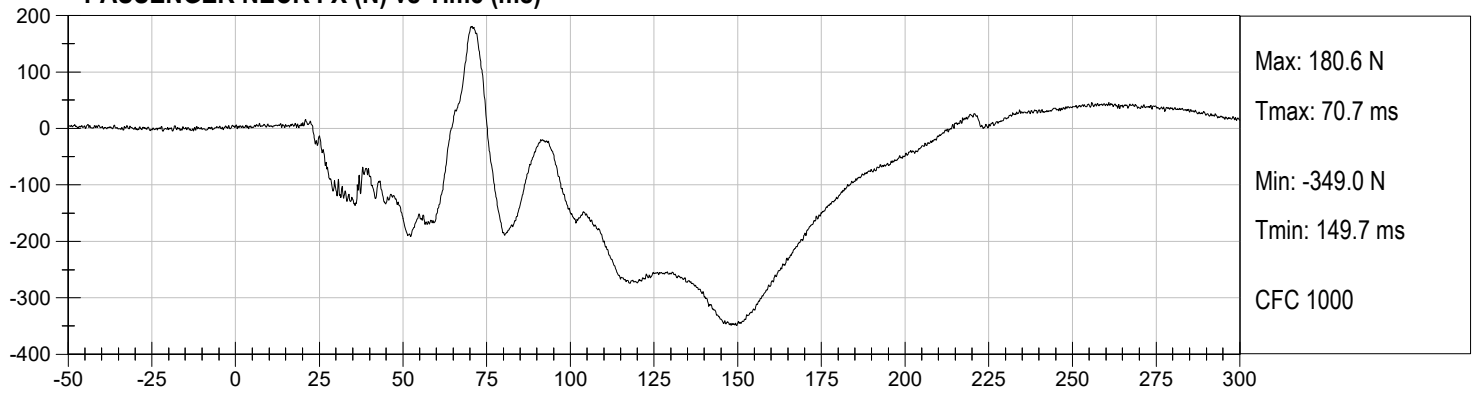
PASSENGER CHEST Z (g) vs Time (ms)



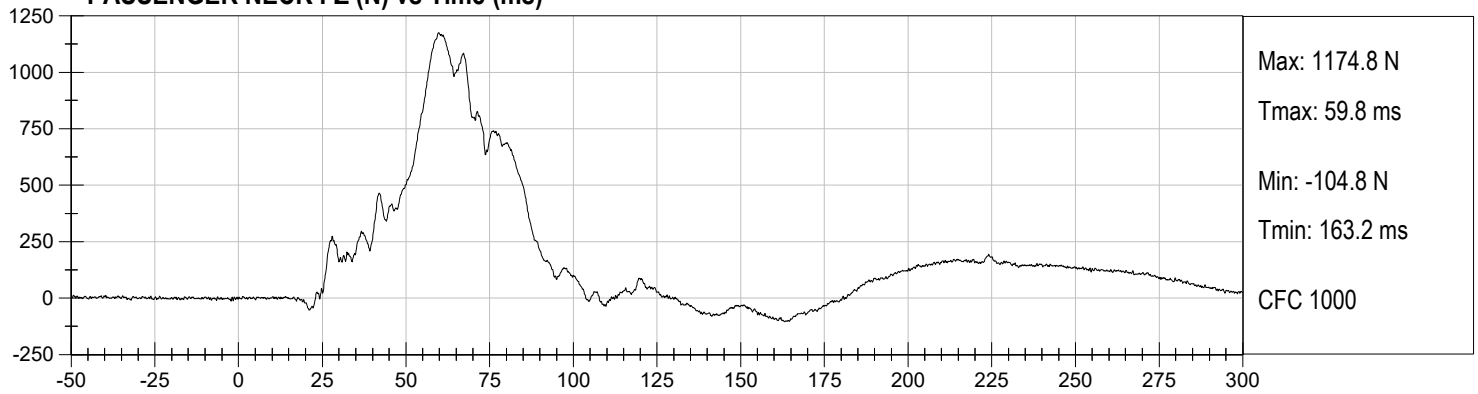
PASSENGER CHEST Resultant (g) vs Time (ms)



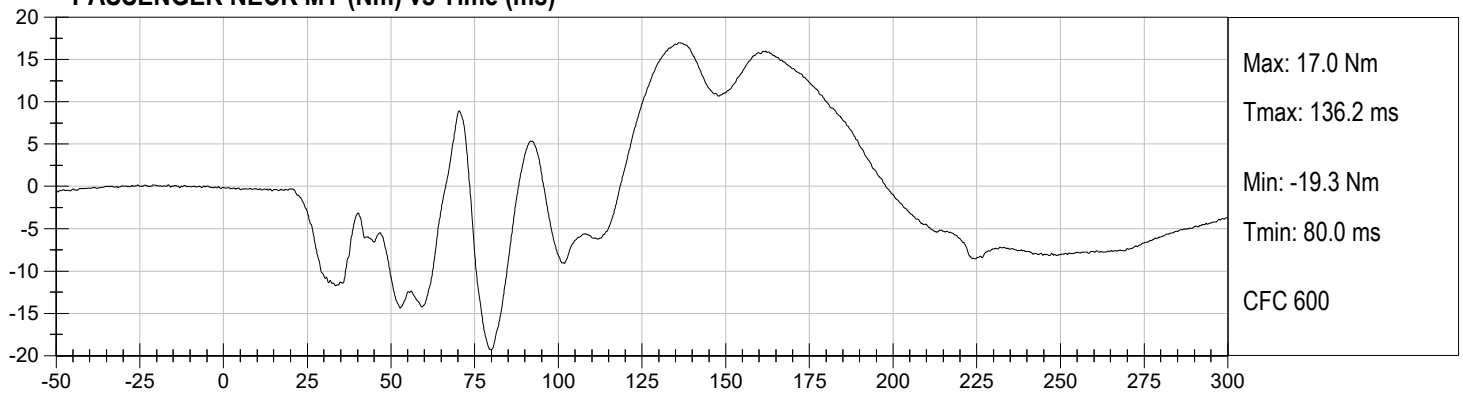
PASSENGER NECK FX (N) vs Time (ms)



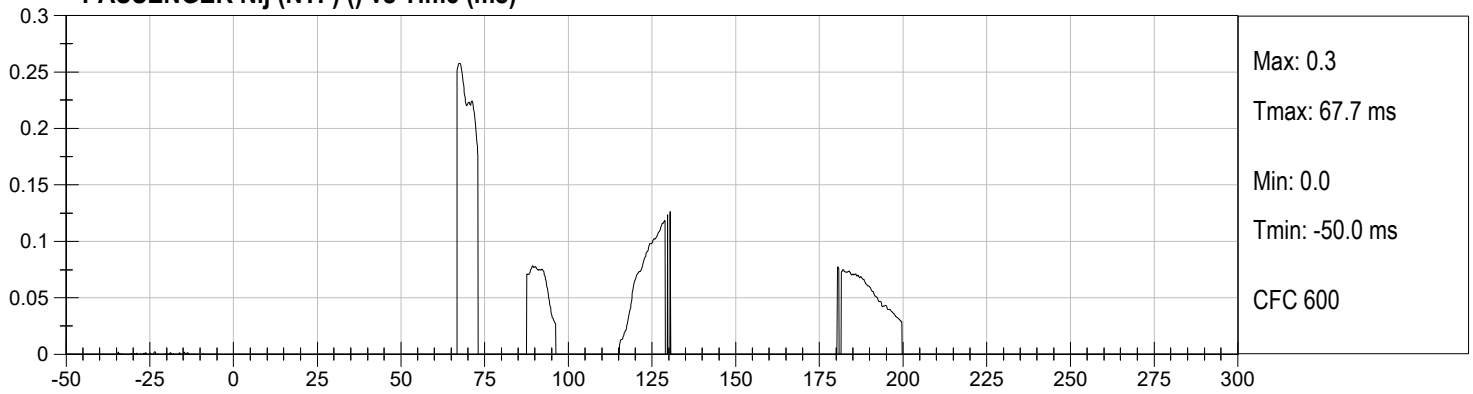
PASSENGER NECK FZ (N) vs Time (ms)



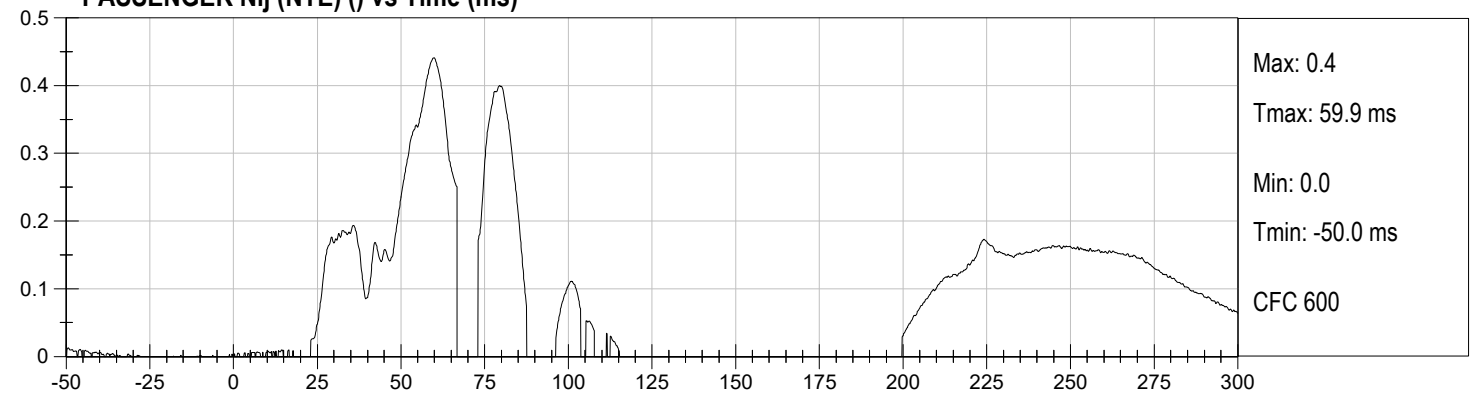
PASSENGER NECK MY (Nm) vs Time (ms)



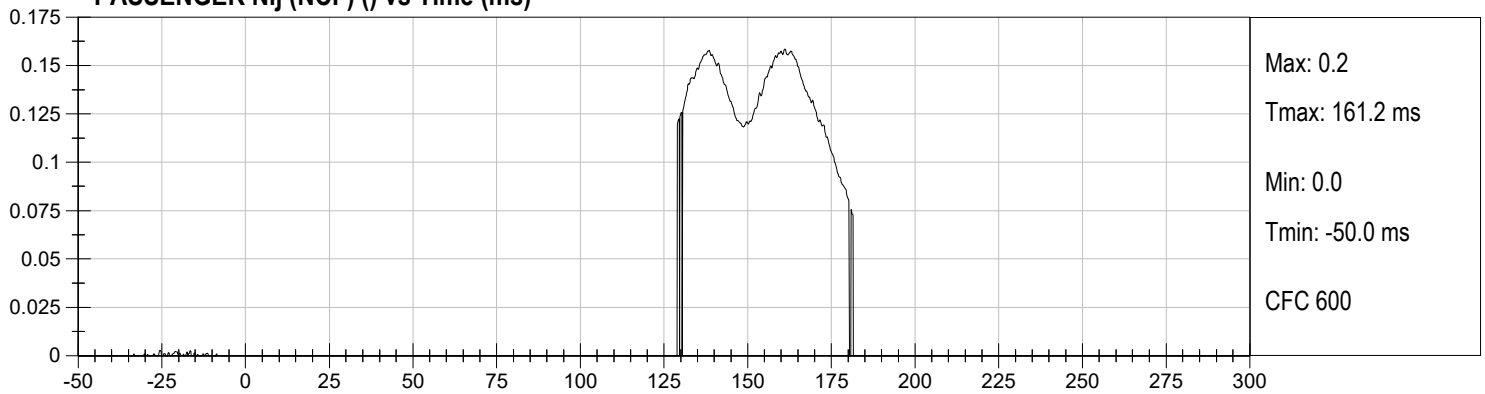
PASSENGER Nij (NTF) () vs Time (ms)



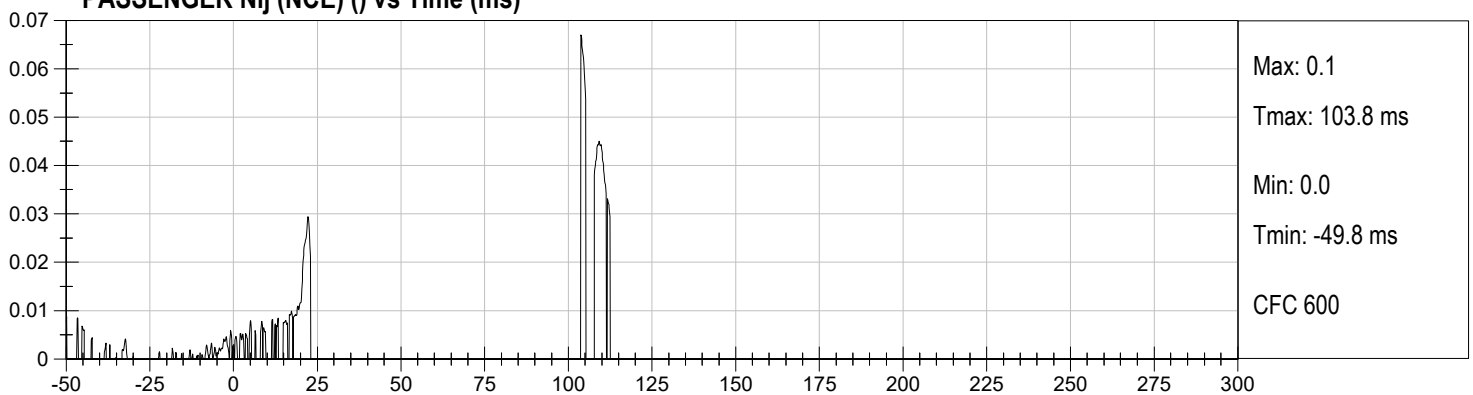
PASSENGER Nij (NTE) () vs Time (ms)



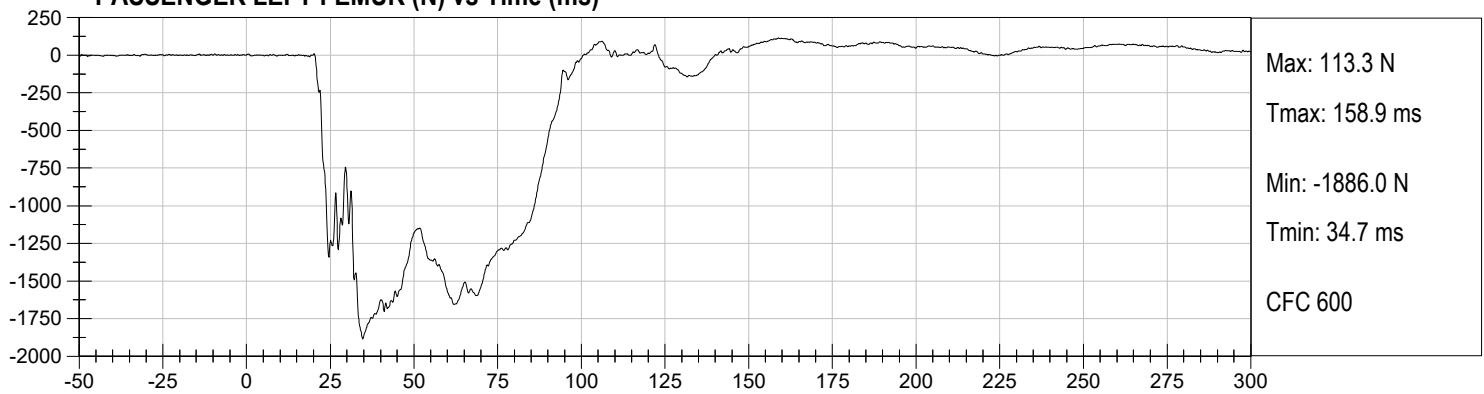
PASSENGER Nij (NCF) () vs Time (ms)



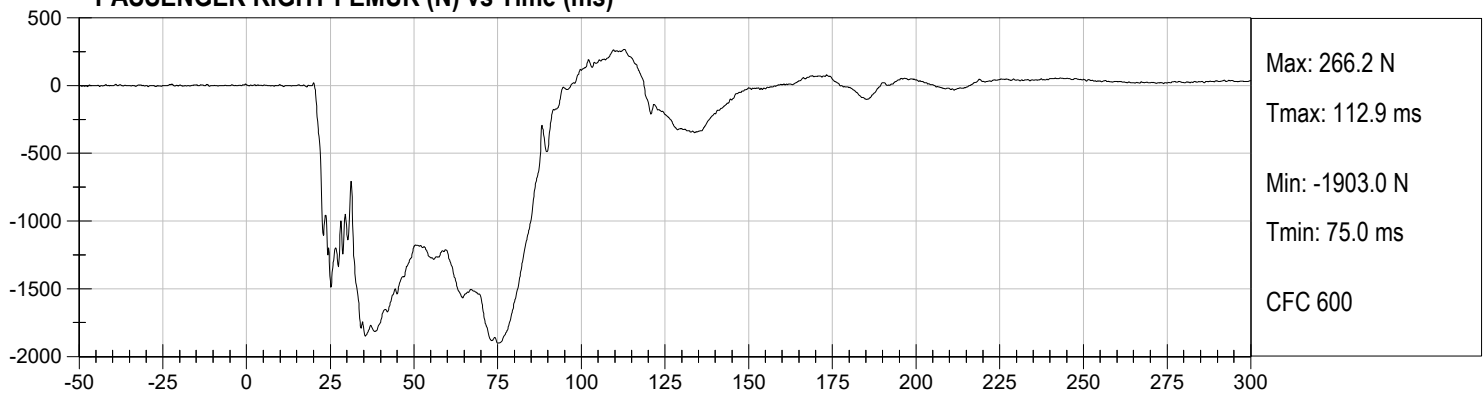
PASSENGER Nij (NCE) () vs Time (ms)



PASSENGER LEFT FEMUR (N) vs Time (ms)



PASSENGER RIGHT FEMUR (N) vs Time (ms)



APPENDIX C
DUMMY QUALIFICATION AND PERFORMANCE VERIFICATION

QUALIFICATION TEST RESULTS

PRE-TEST

HYBRID III 50TH PERCENTILE MALE - DRIVER ATD

**Hybrid III 50th, External Measurements
SN: 064**

HYBRID III, PART 572, SUBPART E EXTERNAL DIMENSIONS				
DIMENSION	DESCRIPTION	DETAILS	ASSEMBLY DIMENSION (inches)	ACTUAL MEASUREMENT
A	TOTAL SITTING HEIGHT	Seat surface to highest point on top of the head.	34.6–35.0	34.71
B	SHOULDER PIVOT HEIGHT	Centerline of shoulder pivot bolt to the seat surface.	19.9-20.5	20.31
C	H-POINT HEIGHT	Reference	3.3-3.5	3.38
D	H-POINT LOCATION FROM BACKLINE	Reference	5.3-5.5	5.40
E	SHOULDER PIVOT FROM BACKLINE	Center of the shoulder clevis to the rear vertical surface of the fixture.	3.3-3.7	3.46
F	THIGH CLEARANCE	Measured at the highest point on the upper femur segment.	5.5-6.1	6.09
G	BACK OF ELBOW TO WRIST PIVOT	back of the elbow flesh to the wrist pivot in line with the elbow and wrist pivots	11.4-12.0	11.48
H	HEAD BACK TO BACKLINE	Back of Skull cap skin to seat rear vertical surface (Reference)	1.6-1.8	1.75
I	SHOULDER TO- ELBOW LENGTH	Measure from the highest point on top of the shoulder clevis to the lowest part of the flesh on the elbow in line with the elbow pivot bolt.	13.0-13.6	13.08
J	ELBOW REST HEIGHT	Measure from the flesh below the elbow pivot bolt to the seat surface.	7.5-8.3	8.13
K	BUTTOCK TO KNEE LENGTH	The forward most part of the knee flesh to the rear vertical surface of the fixture.	22.8-23.8	23.49
L	POPLITEAL HEIGHT	Seat surface to the plane of the horizontal plane of the bottom of the feet.	16.9-17.9	17.01
M	KNEE PIVOT HEIGHT	Centerline of knee pivot bolt to the horizontal plane of the bottom of the feet.	19.1-19.7	19.22
N	BUTTOCK POPLITEAL LENGTH	The rearmost surface of the lower leg to the same point on the rear surface of the buttocks used for dim. "K".	17.8-18.8	18.20

HYBRID III, SUBPART E EXTERIOR DIMENSIONS, continued				
DIMENSION	DESCRIPTION	DETAILS		ACTUAL MEASUREMENT
O	CHEST DEPTH WITHOUT JACKET	Measured 16.9-17.1 in. above seat surface	8.4-9.0	8.43
P	FOOT LENGTH	Tip of toe to rear of heel	9.9-10.5	10.33
V	SHOULDER BREADTH	Outside edges of right and left shoulder clevises	16.3-17.2	16.65
W	FOOT BREADTH	The widest part of the foot	3.6-4.2	3.94
Y	CHEST CIRCUMFERENCE (WITH CHEST JACKET)	Measured 16.9-17.1 in. above seat surface	38.2-39.4	39.25
Z	WAIST CIRCUMFERENCE	Measured 8.9-9.1 in. above seat surface	32.9-34.1	33.89
AA	REFERENCE LOCATION FOR MEASUREMENT OF CHEST CIRCUMFERENCE	Reference	16.9-17.1	17.00
BB	REFERENCE LOCATION FOR MEASUREMENT OF WAIST CIRCUMFERENCE	Reference	8.9-9.1	9.00

NOTE: THE H-POINT IS LOCATED 1.83 INCHES FORWARD AND 2.57 INCHES DOWN FROM THE CENTER OF THE PELVIS ANGLE REFERENCE HOLE.

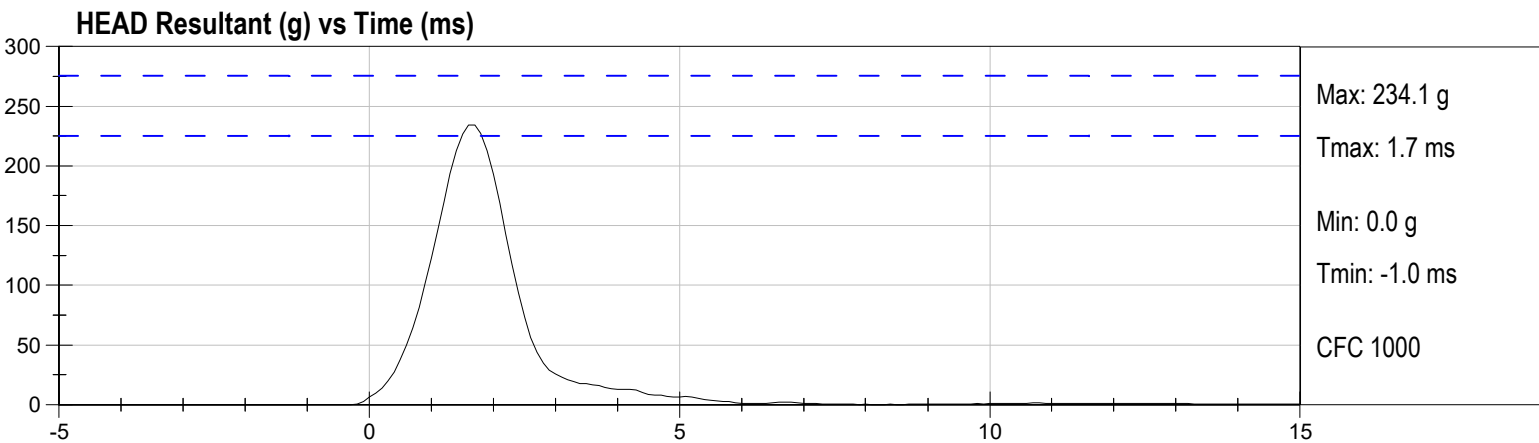
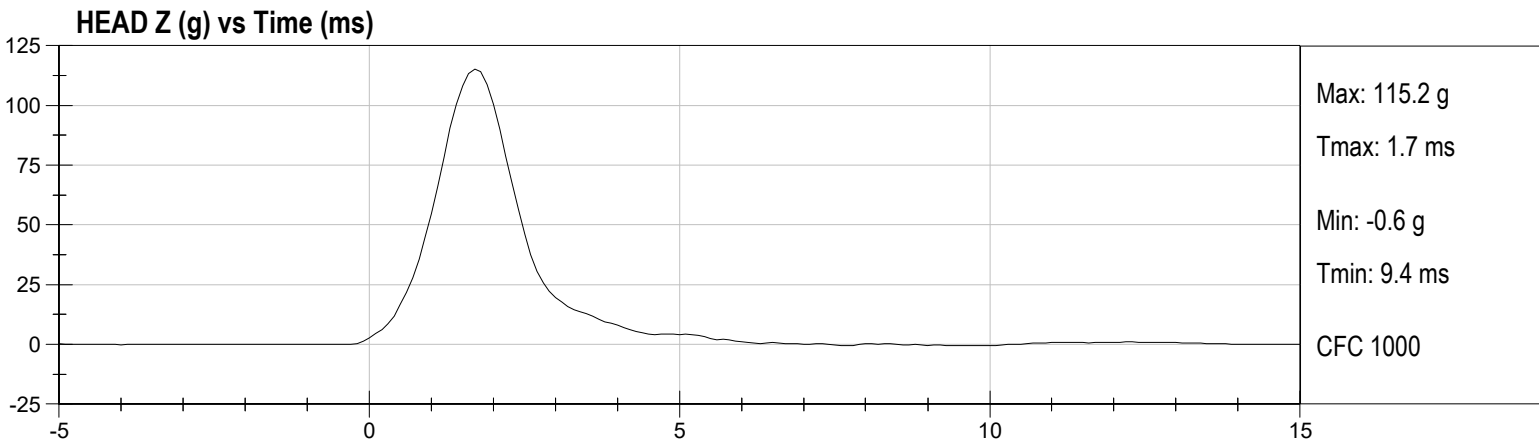
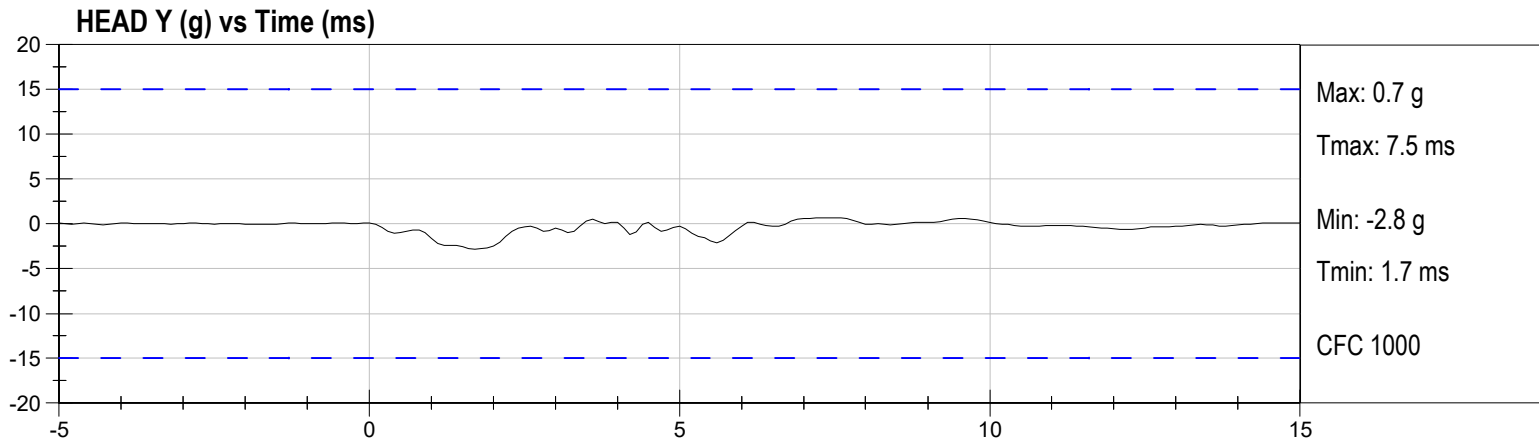
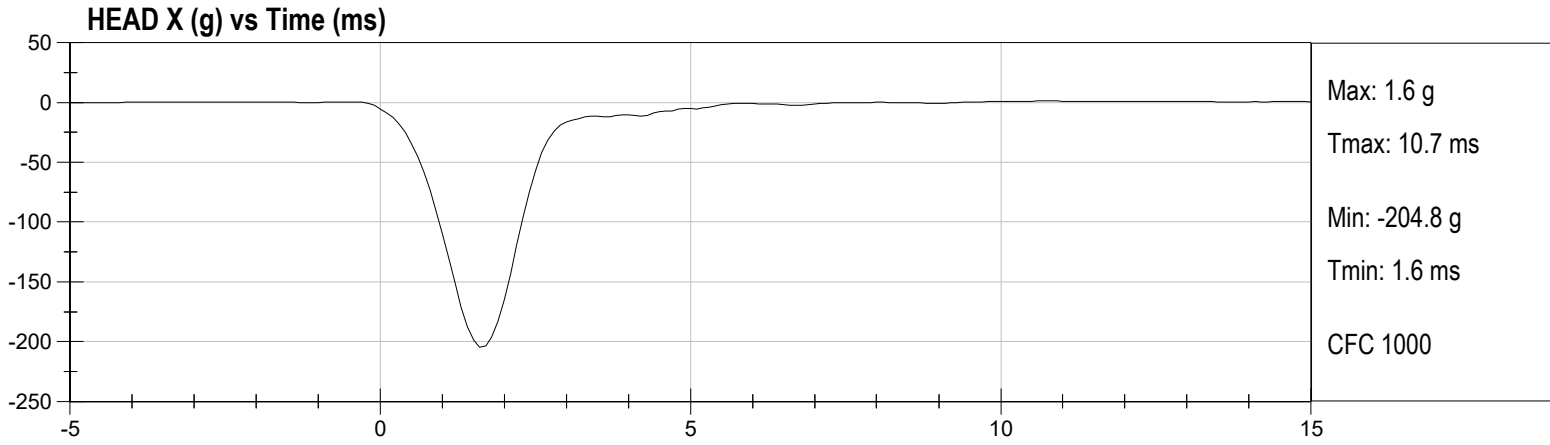


Head Drop Test
Hybrid III 50th Percentile Male
ATD Serial No: 064

Test Date: 07/15/2025
Test ID: D252031
Test Technician: Brian Lucas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	48	Pass
Peak Resultant Acceleration	g	225 to 275	234	Pass
Peak Lateral Acceleration	g	-15.0 to 15.0	-2.8	Pass
Unimodal	%	within 10% of peak	6	Pass

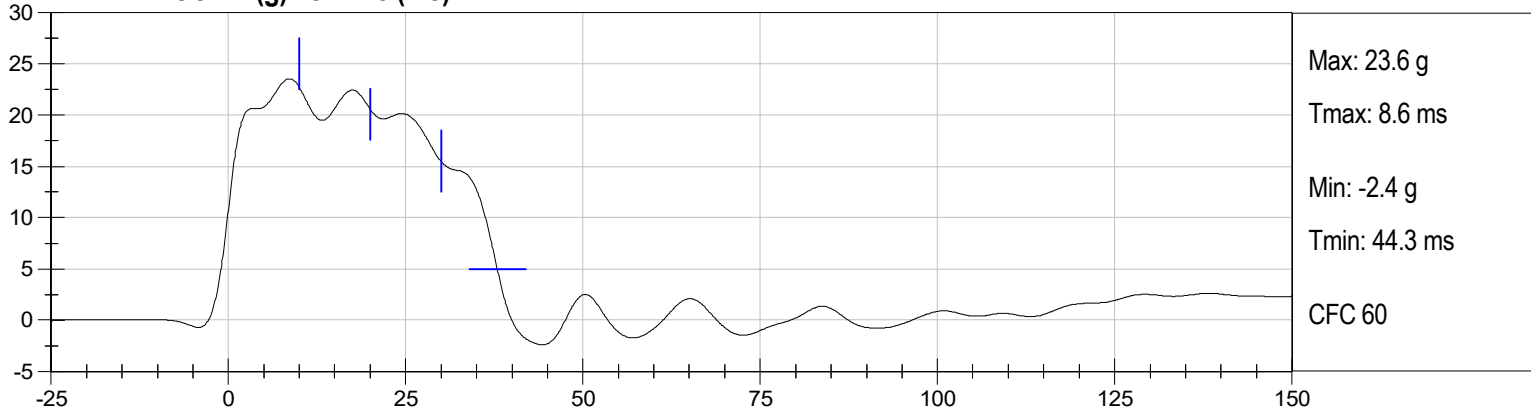
Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
HEAD X	Endevco	T30974	05/27/2025	11/26/2025
HEAD Y	Endevco	T30975	05/27/2025	11/26/2025
HEAD Z	Endevco	T30976	05/27/2025	11/26/2025



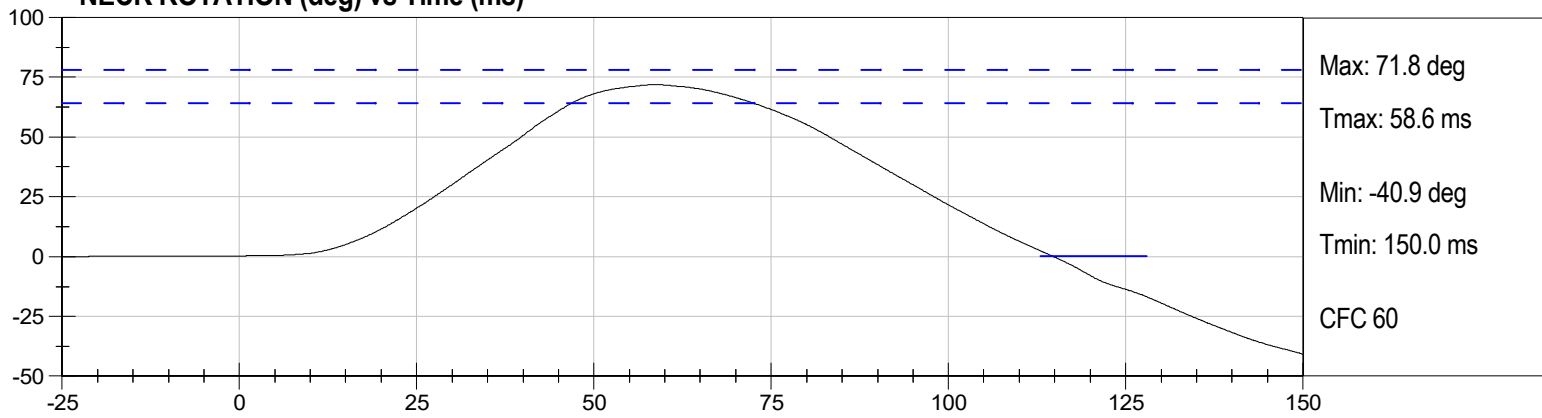
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	20.9	Pass
Laboratory Relative Humidity	%	10 to 70	46	Pass
Pendulum Velocity	m/s	6.89 to 7.13	7.10	Pass
Pendulum Deceleration At 10 ms After T0	g	22.50 to 27.50	22.81	Pass
Pendulum Deceleration At 20 ms After T0	g	17.60 to 22.60	20.67	Pass
Pendulum Deceleration At 30 ms After T0	g	12.50 to 18.50	15.54	Pass
Peak Pendulum Deceleration After 30 ms	g	<= 29.0	15.5	Pass
Deceleration Decay Time to Cross 5 g	ms	34.0 to 42.0	38.1	Pass
Maximum "D" Plane Rotation	deg	64.0 to 78.0	71.8	Pass
Time of Maximum "D" Plane Rotation	ms	57.0 to 64.0	58.6	Pass
"D" Plane Rotation Decay Time To Zero Crossing	ms	113.0 to 128.0	114.9	Pass
Maximum Moment About Occipital Condyle	Nm	88.1 to 108.5	106.1	Pass
Time of Maximum Moment About Occipital Condyle	ms	47.0 to 58.0	50.6	Pass
Positive Moment Decay Time To Zero Crossing	ms	97.0 to 107.0	98.0	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
PEND. ACCEL.	Endevco	C19538	05/19/2025	11/18/2025
NECK FORCE X	Denton	N253FX	05/05/2025	11/4/2025
NECK MOMENT Y	Denton	N253MY	05/05/2025	11/4/2025
PEND. POT	Servo	4707	02/25/2025	8/27/2025
HEAD POT	Servo	7297	02/25/2025	8/27/2025

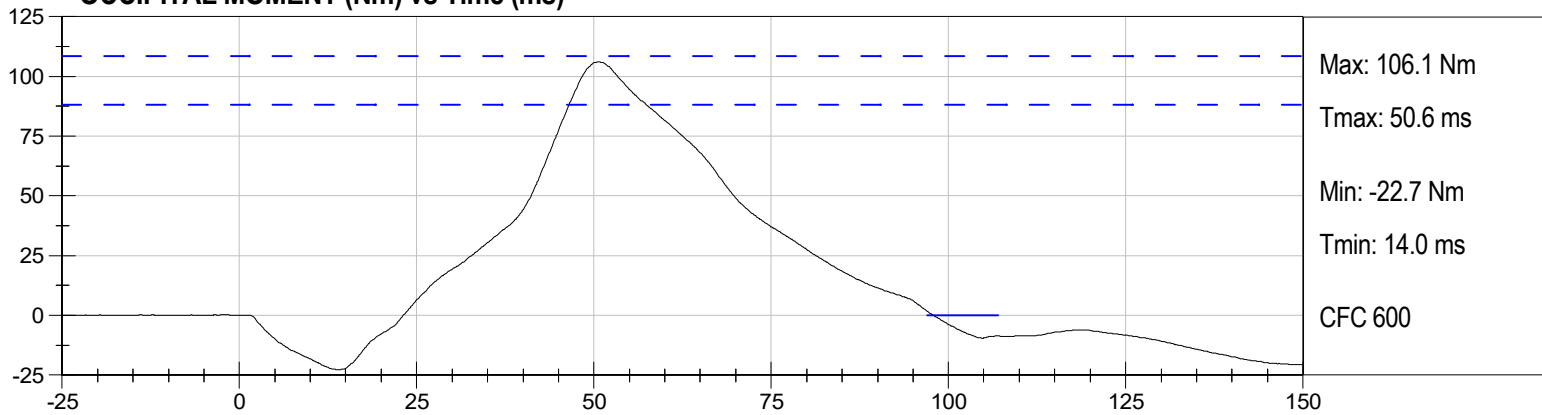
PEND. ACCEL. (g) vs Time (ms)



NECK ROTATION (deg) vs Time (ms)



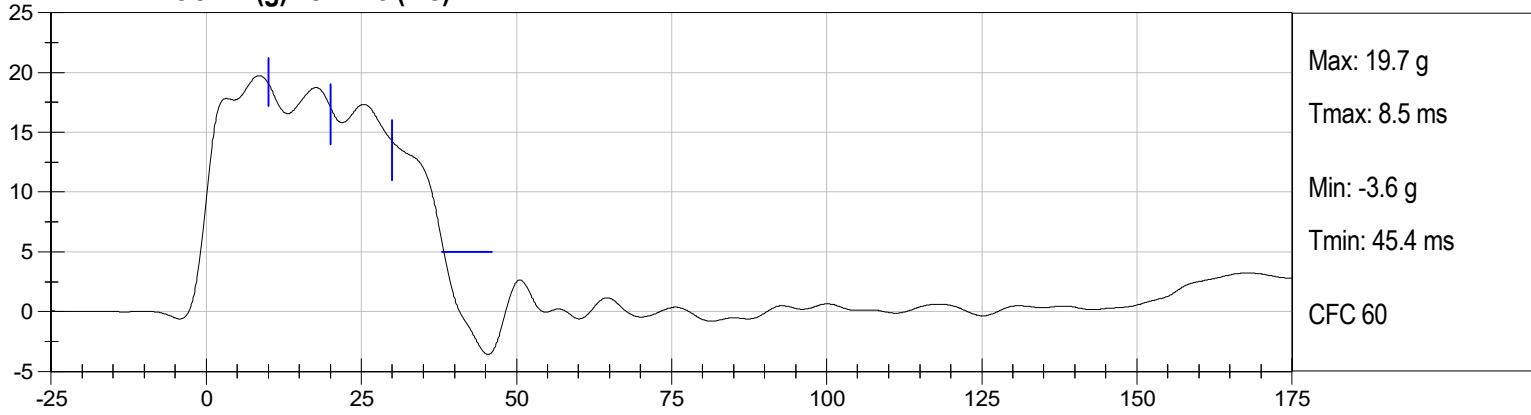
OCCIPITAL MOMENT (Nm) vs Time (ms)



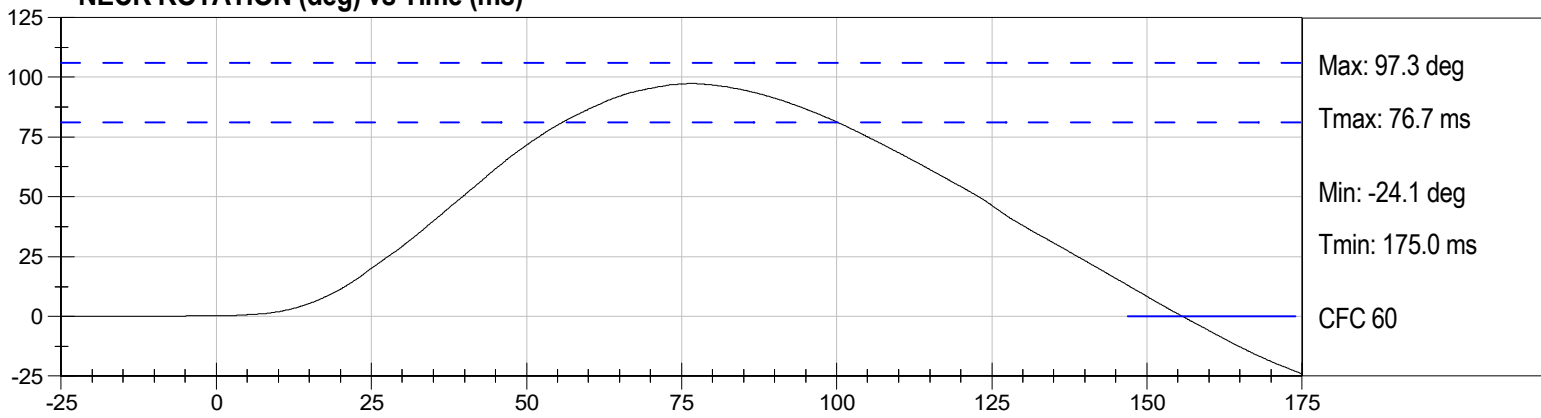
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.0	Pass
Laboratory Relative Humidity	%	10 to 70	47	Pass
Pendulum Velocity	m/s	5.95 to 6.19	6.05	Pass
Pendulum Deceleration At 10 ms After T0	g	17.20 to 21.20	19.15	Pass
Pendulum Deceleration At 20 ms After T0	g	14.00 to 19.00	17.20	Pass
Pendulum Deceleration At 30 ms After T0	g	11.00 to 16.00	14.27	Pass
Peak Pendulum Deceleration After 30 ms	g	<= 22.0	14.2	Pass
Deceleration Decay Time to Cross 5 G's	ms	38.0 to 46.0	38.4	Pass
Maximum "D" Plane Rotation	deg	81.0 to 106.0	97.3	Pass
Time of Maximum "D" Plane Rotation	ms	72.0 to 82.0	76.7	Pass
"D" Plane Rotation Decay Time To Zero Crossing	ms	147.0 to 174.0	155.9	Pass
Minimum Moment About Occipital Condyle	Nm	-79.9 to -52.9	-64.3	Pass
Time of Minimum Moment About Occipital Condyle	ms	65.0 to 79.0	71.7	Pass
Negative Moment Decay Time To Zero Crossing	ms	120.0 to 148.0	142.2	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
PEND. ACCEL.	Endevco	C19538	05/19/2025	11/18/2025
NECK FORCE X	Denton	N253FX	05/05/2025	11/4/2025
NECK MOMENT Y	Denton	N253MY	05/05/2025	11/4/2025
PEND. POT	Servo	4707	02/25/2025	8/27/2025
HEAD POT	Servo	7297	02/25/2025	8/27/2025

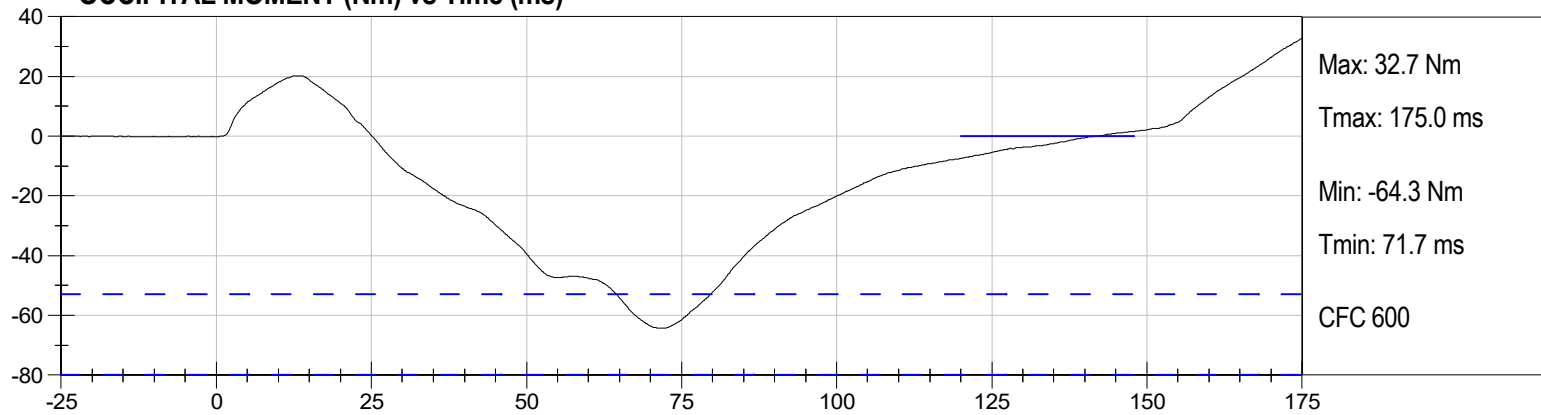
PEND. ACCEL. (g) vs Time (ms)



NECK ROTATION (deg) vs Time (ms)



OCCIPITAL MOMENT (Nm) vs Time (ms)





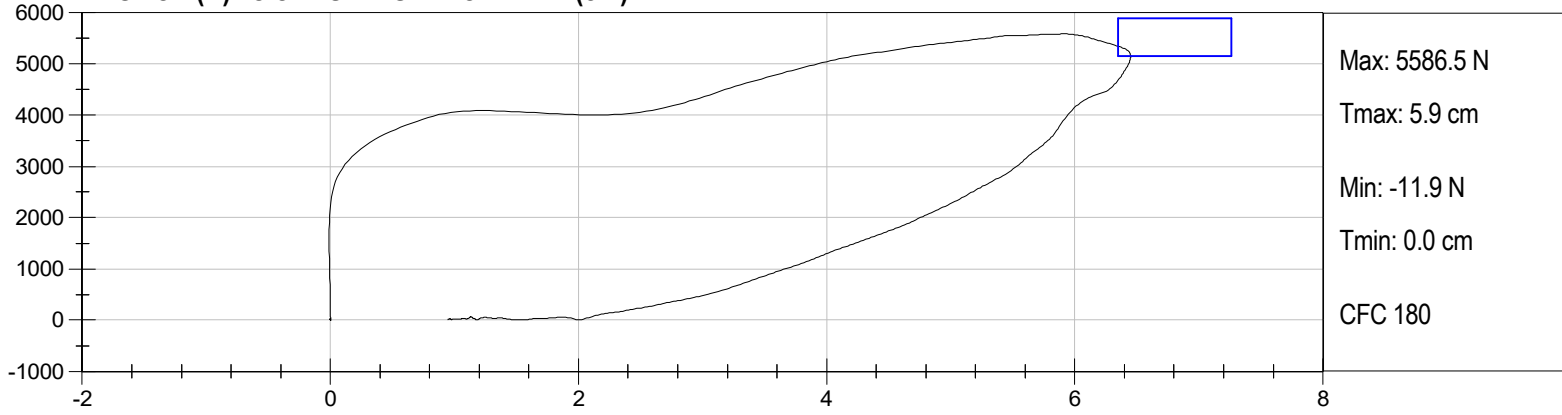
Thorax Impact Test
Hybrid III 50th Percentile Male
ATD Serial No: 064

Test Date: 07/15/2025
Test ID: D252034
Test Technician: Jonah Pulokas

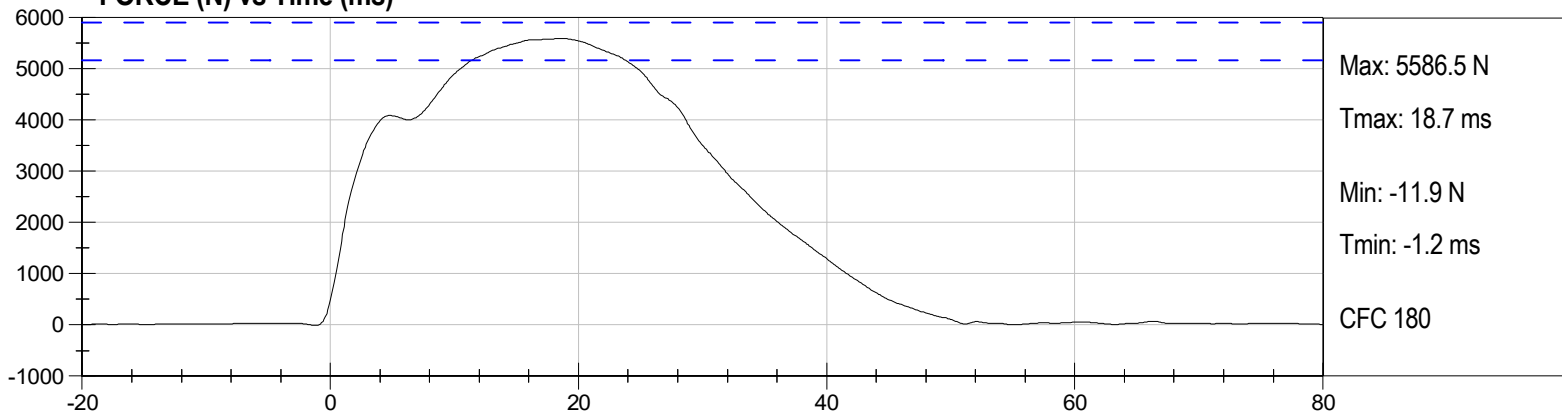
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	20.9	Pass
Laboratory Relative Humidity	%	10 to 70	47	Pass
Probe Velocity	m/s	6.58 to 6.82	6.68	Pass
Peak Probe Force	N	5159 to 5893	5586	Pass
Peak Sternum Displacement	cm	6.35 to 7.26	6.45	Pass
Internal Hysteresis	%	69 to 85	73	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
PROBE	Endevco	P79577	03/21/2025	9/20/2025
CHEST DISPLACEMENT	Humanetics	064	05/21/2025	11/20/2025

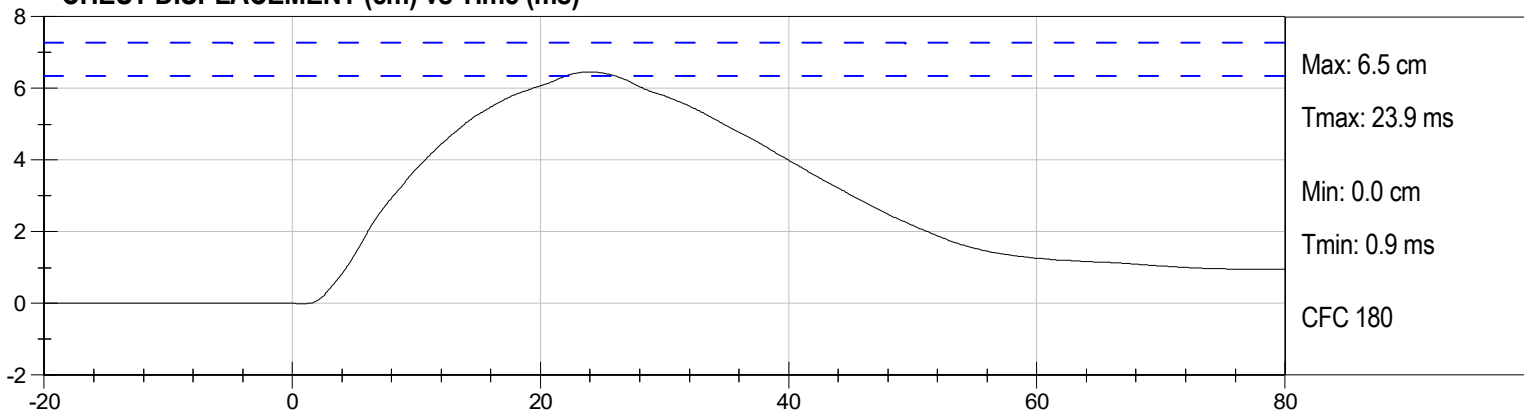
FORCE (N) vs CHEST DISPLACEMENT (cm)



FORCE (N) vs Time (ms)



CHEST DISPLACEMENT (cm) vs Time (ms)



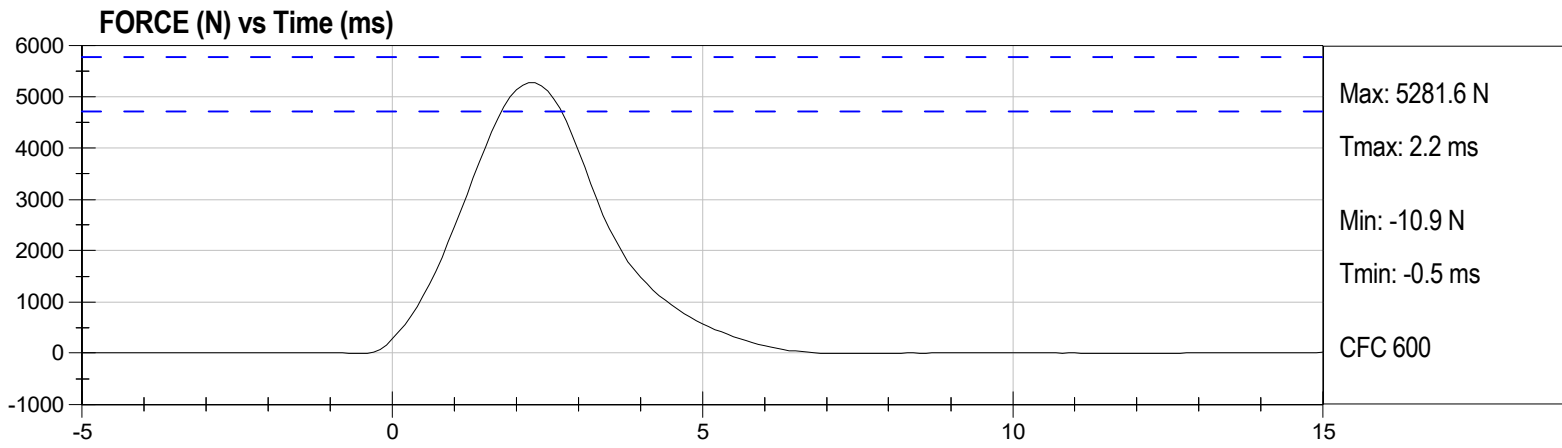


Right Knee Impact Test
Hybrid III 50th Percentile Male
ATD Serial No: 064

Test Date: 07/15/2025
Test ID: D252035
Test Technician: Brian Lucas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	46	Pass
Probe Velocity	m/s	2.07 to 2.13	2.13	Pass
Peak Probe Force	N	4715 to 5782	5282	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
KNEE PROBE	Endevco	P82128	05/30/2025	11/29/2025



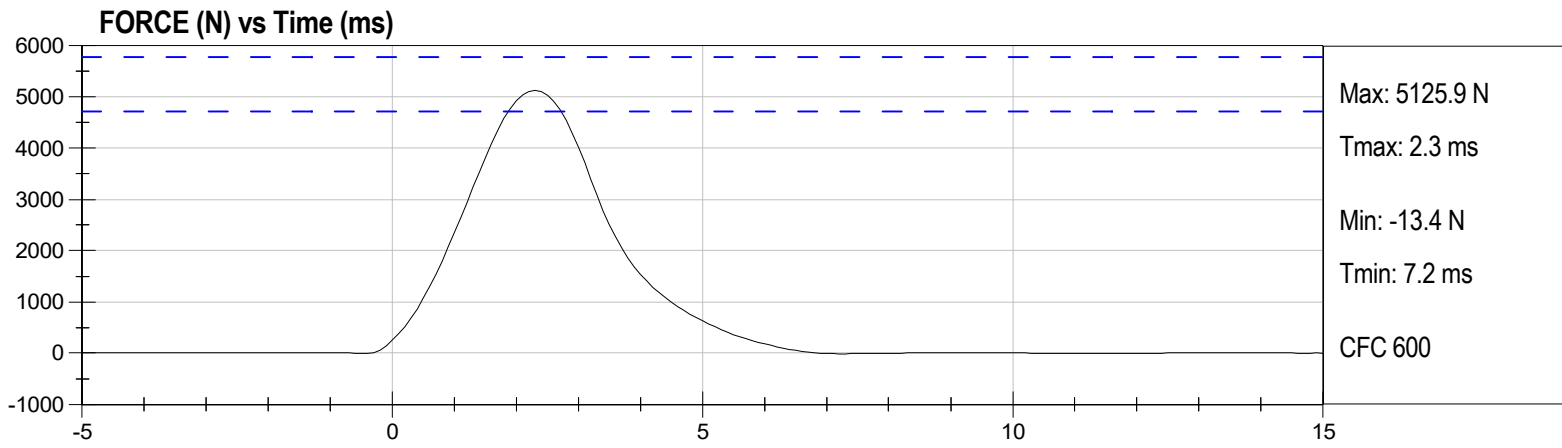


Left Knee Impact Test
Hybrid III 50th Percentile Male
ATD Serial No: 064

Test Date: 07/15/2025
Test ID: D252036
Test Technician: Brian Lucas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	46	Pass
Probe Velocity	m/s	2.07 to 2.13	2.13	Pass
Peak Probe Force	N	4715 to 5782	5126	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
KNEE PROBE	Endevco	P82128	05/30/2025	11/29/2025



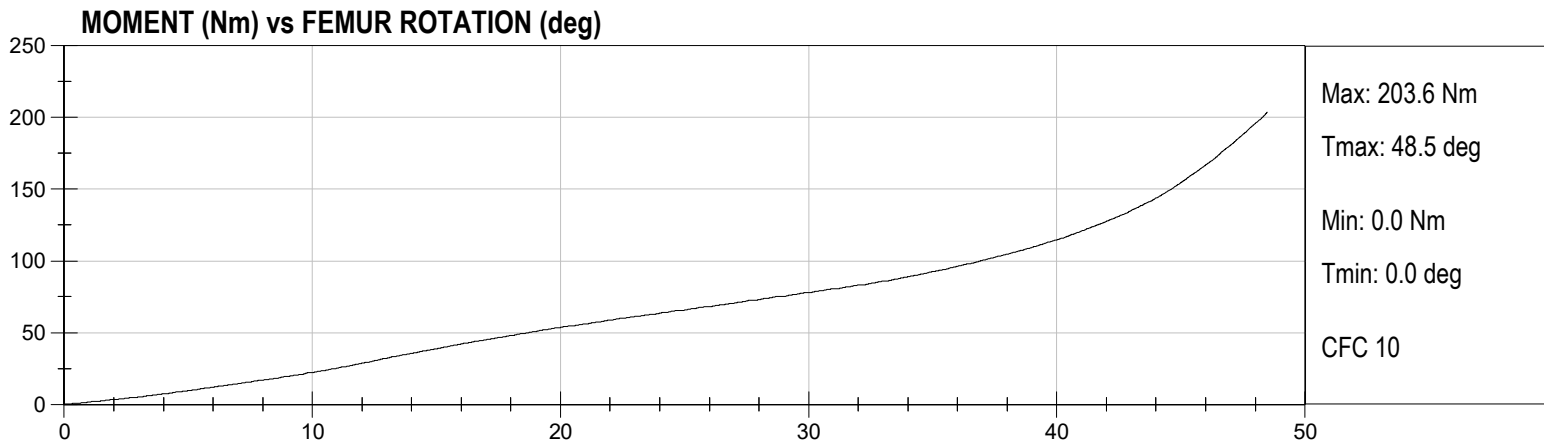


Right Hip-Femur Flexion Test
Hybrid III 50th Percentile Male
ATD Serial No: 064

Test Date: 07/15/2025
Test ID: D252039
Test Technician: Brian Lucas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.0	Pass
Laboratory Relative Humidity	%	10 to 70	46	Pass
Rotation Rate	deg/s	5.0 to 10.0	6.5	Pass
Moment at 30 Degrees	Nm	<= 94.9	77.8	Pass
Rotation Angle at 203.4 Nm	deg	40.0 to 50.0	48.5	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
LOAD CELL	FTSS	DS8350MY	03/11/2025	3/11/2026
FRAME ANGLE	Servo	3966	03/27/2025	9/26/2025
FEMUR ANGLE	Servo	4714	03/27/2025	9/26/2025



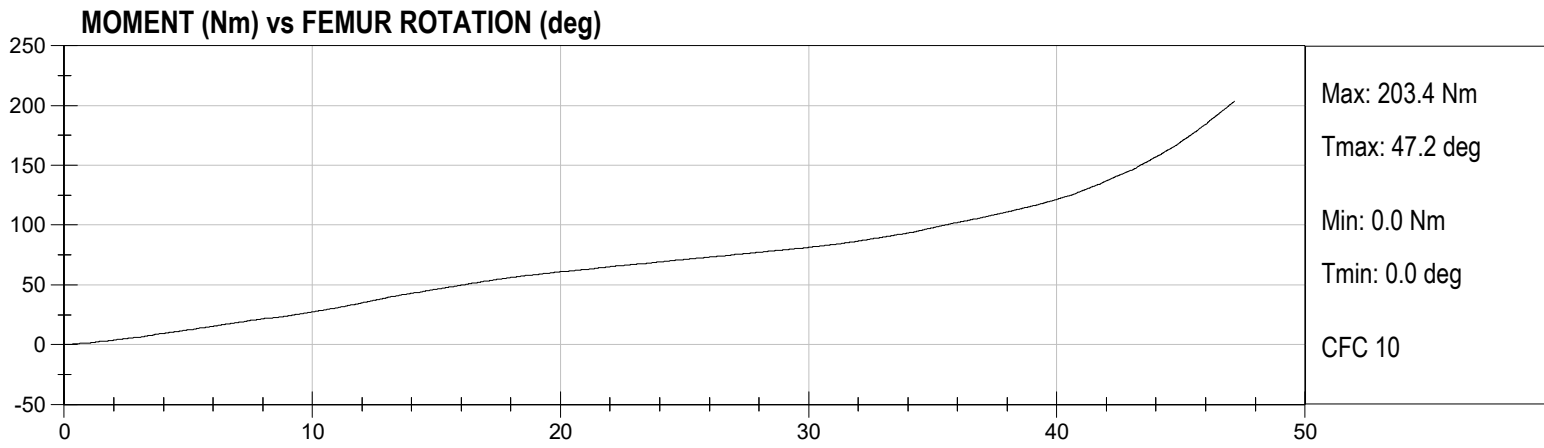


Left Hip-Femur Flexion Test
Hybrid III 50th Percentile Male
ATD Serial No: 064

Test Date: 07/15/2025
Test ID: D252030
Test Technician: Brian Lucas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.0	Pass
Laboratory Relative Humidity	%	10 to 70	46	Pass
Rotation Rate	deg/s	5.0 to 10.0	6.5	Pass
Moment at 30 Degrees	Nm	<= 94.9	81.3	Pass
Rotation Angle at 203.4 Nm	deg	40.0 to 50.0	47.2	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
LOAD CELL	FTSS	DS8350MY	03/11/2025	3/11/2026
FRAME ANGLE	Servo	3966	03/27/2025	9/26/2025
FEMUR ANGLE	Servo	4714	03/27/2025	9/26/2025



QUALIFICATION TEST RESULTS

POST-TEST

HYBRID III 50TH PERCENTILE MALE - DRIVER ATD

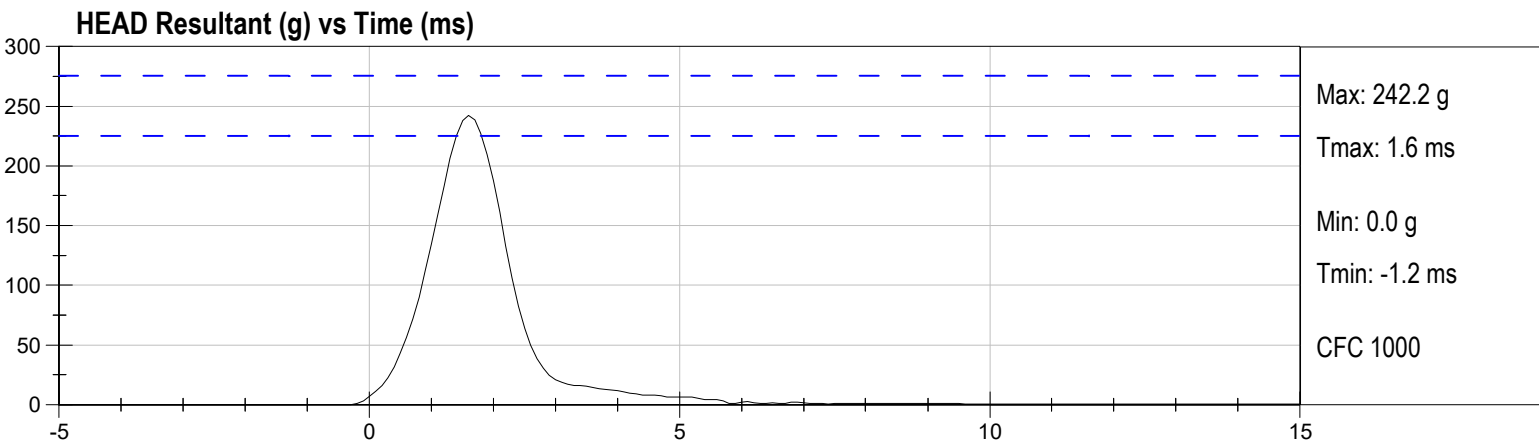
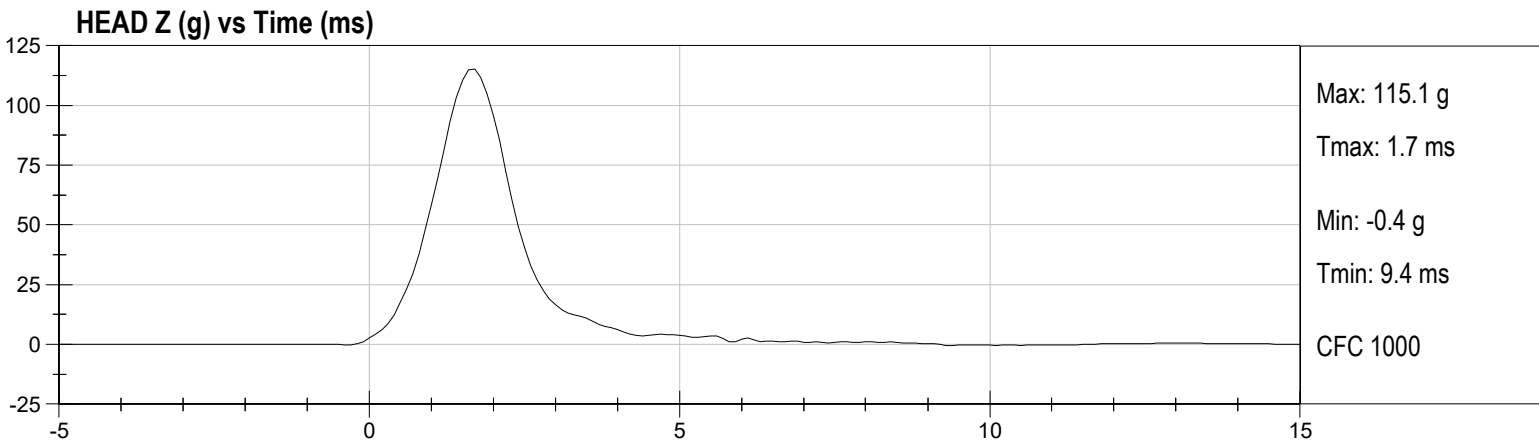
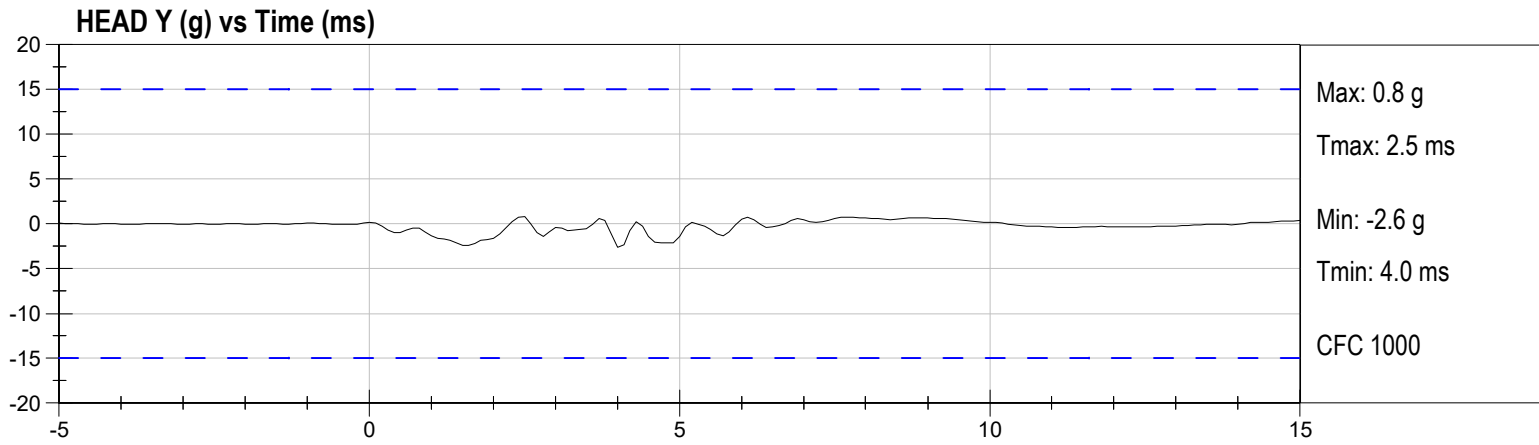
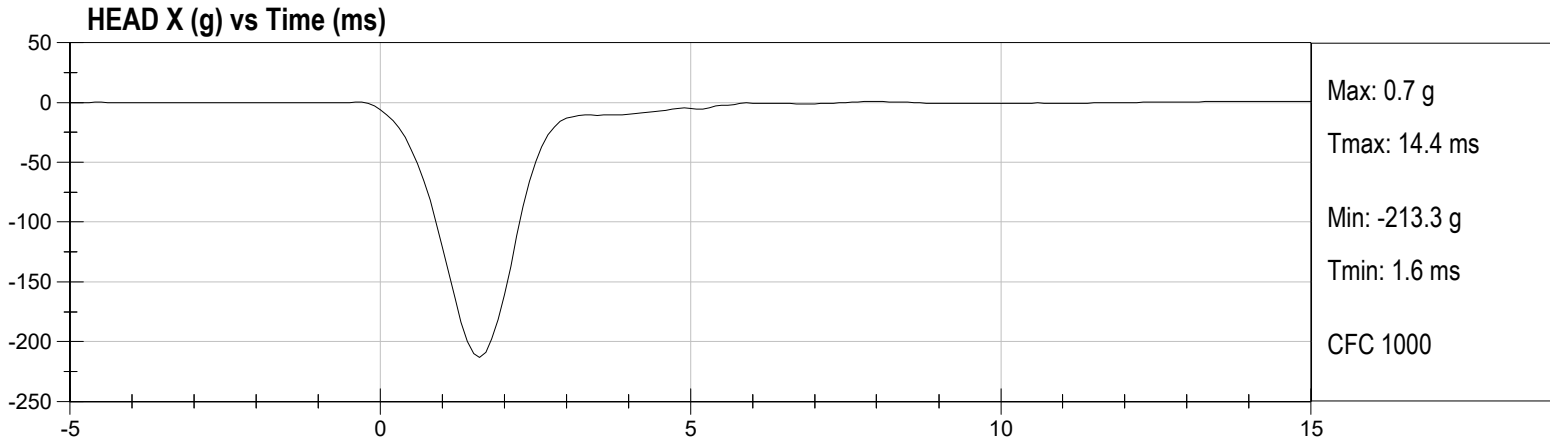


Head Drop Test
Hybrid III 50th Percentile Male
ATD Serial No: 064

Test Date: 08/05/2025
Test ID: D252241
Test Technician: Jonah Pulokas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	44	Pass
Peak Resultant Acceleration	g	225 to 275	242	Pass
Peak Lateral Acceleration	g	-15.0 to 15.0	-2.6	Pass
Unimodal	%	within 10% of peak	3	Pass

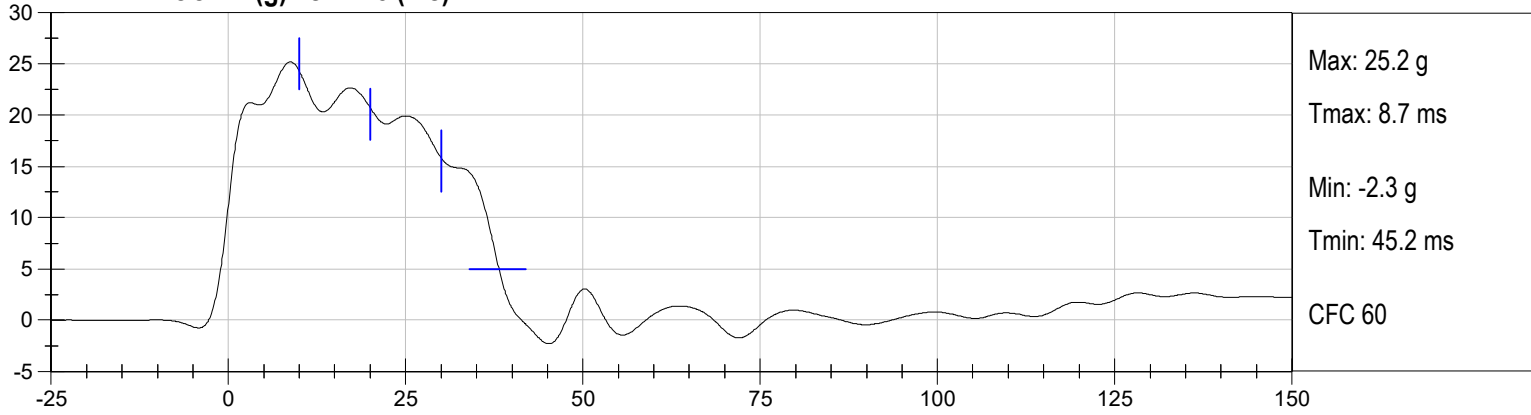
Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
HEAD X	Endevco	T30974	05/27/2025	11/26/2025
HEAD Y	Endevco	T30975	05/27/2025	11/26/2025
HEAD Z	Endevco	T30976	05/27/2025	11/26/2025



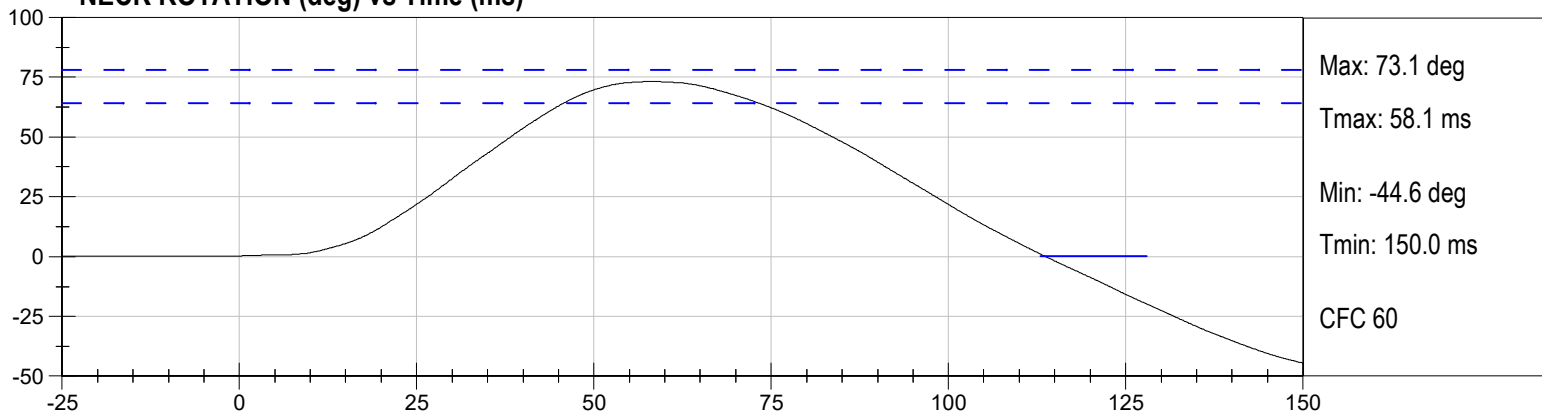
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	20.9	Pass
Laboratory Relative Humidity	%	10 to 70	44	Pass
Pendulum Velocity	m/s	6.89 to 7.13	7.13	Pass
Pendulum Deceleration At 10 ms After T0	g	22.50 to 27.50	24.43	Pass
Pendulum Deceleration At 20 ms After T0	g	17.60 to 22.60	20.82	Pass
Pendulum Deceleration At 30 ms After T0	g	12.50 to 18.50	15.92	Pass
Peak Pendulum Deceleration After 30 ms	g	<= 29.0	15.8	Pass
Deceleration Decay Time to Cross 5 g	ms	34.0 to 42.0	38.3	Pass
Maximum "D" Plane Rotation	deg	64.0 to 78.0	73.1	Pass
Time of Maximum "D" Plane Rotation	ms	57.0 to 64.0	58.1	Pass
"D" Plane Rotation Decay Time To Zero Crossing	ms	113.0 to 128.0	113.8	Pass
Maximum Moment About Occipital Condyle	Nm	88.1 to 108.5	99.7	Pass
Time of Maximum Moment About Occipital Condyle	ms	47.0 to 58.0	50.7	Pass
Positive Moment Decay Time To Zero Crossing	ms	97.0 to 107.0	97.3	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
PEND. ACCEL.	Endevco	AH5P1	07/09/2025	1/8/2026
NECK FORCE X	Denton	NG2202FX	05/07/2025	5/7/2026
NECK MOMENT Y	Denton	NG2202MY	05/07/2025	5/7/2026
PEND. POT	Servo	4707	02/25/2025	8/27/2025
HEAD POT	Servo	7297	02/25/2025	8/27/2025

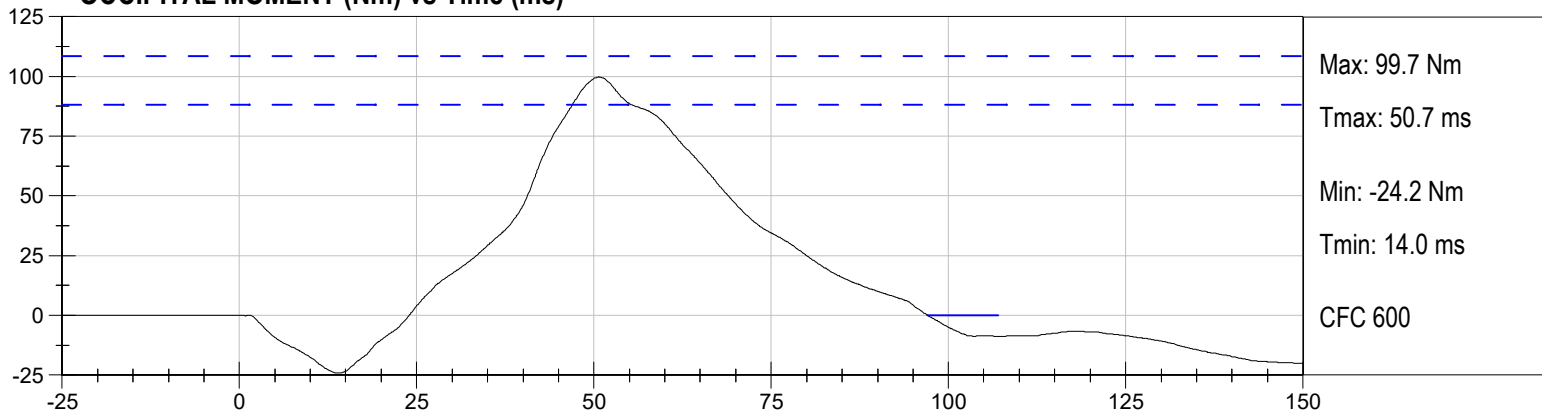
PEND. ACCEL. (g) vs Time (ms)



NECK ROTATION (deg) vs Time (ms)



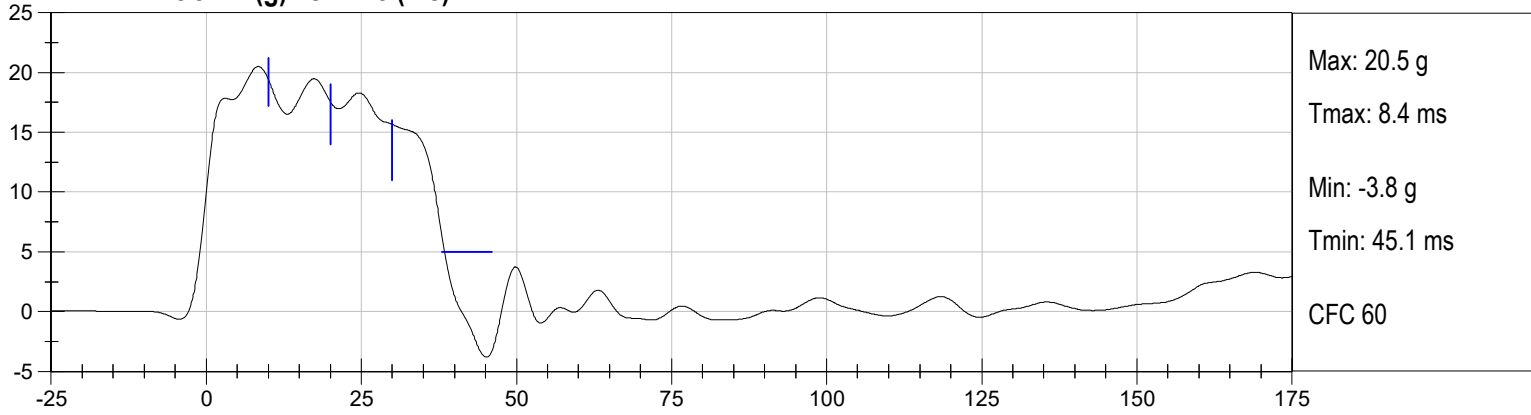
OCCIPITAL MOMENT (Nm) vs Time (ms)



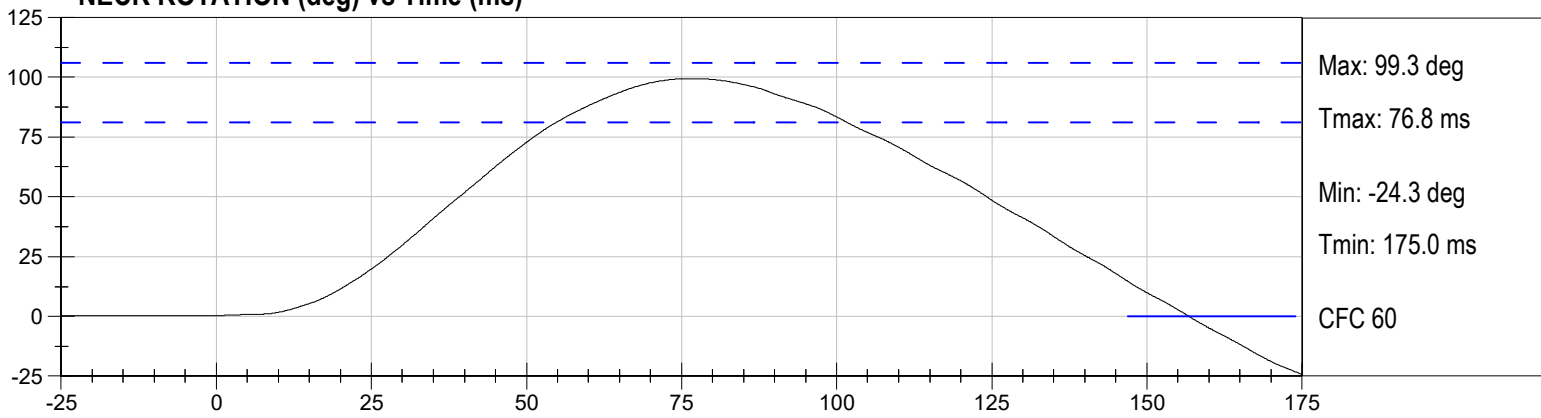
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	44	Pass
Pendulum Velocity	m/s	5.95 to 6.19	6.05	Pass
Pendulum Deceleration At 10 ms After T0	g	17.20 to 21.20	19.51	Pass
Pendulum Deceleration At 20 ms After T0	g	14.00 to 19.00	17.62	Pass
Pendulum Deceleration At 30 ms After T0	g	11.00 to 16.00	15.68	Pass
Peak Pendulum Deceleration After 30 ms	g	<= 22.0	15.7	Pass
Deceleration Decay Time to Cross 5 G's	ms	38.0 to 46.0	38.6	Pass
Maximum "D" Plane Rotation	deg	81.0 to 106.0	99.3	Pass
Time of Maximum "D" Plane Rotation	ms	72.0 to 82.0	76.8	Pass
"D" Plane Rotation Decay Time To Zero Crossing	ms	147.0 to 174.0	156.9	Pass
Minimum Moment About Occipital Condyle	Nm	-79.9 to -52.9	-63.2	Pass
Time of Minimum Moment About Occipital Condyle	ms	65.0 to 79.0	72.4	Pass
Negative Moment Decay Time To Zero Crossing	ms	120.0 to 148.0	141.9	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
PEND. ACCEL.	Endevco	AH5P1	07/09/2025	1/8/2026
NECK FORCE X	Denton	NG2202FX	05/07/2025	5/7/2026
NECK MOMENT Y	Denton	NG2202MY	05/07/2025	5/7/2026
PEND. POT	Servo	4707	02/25/2025	8/27/2025
HEAD POT	Servo	7297	02/25/2025	8/27/2025

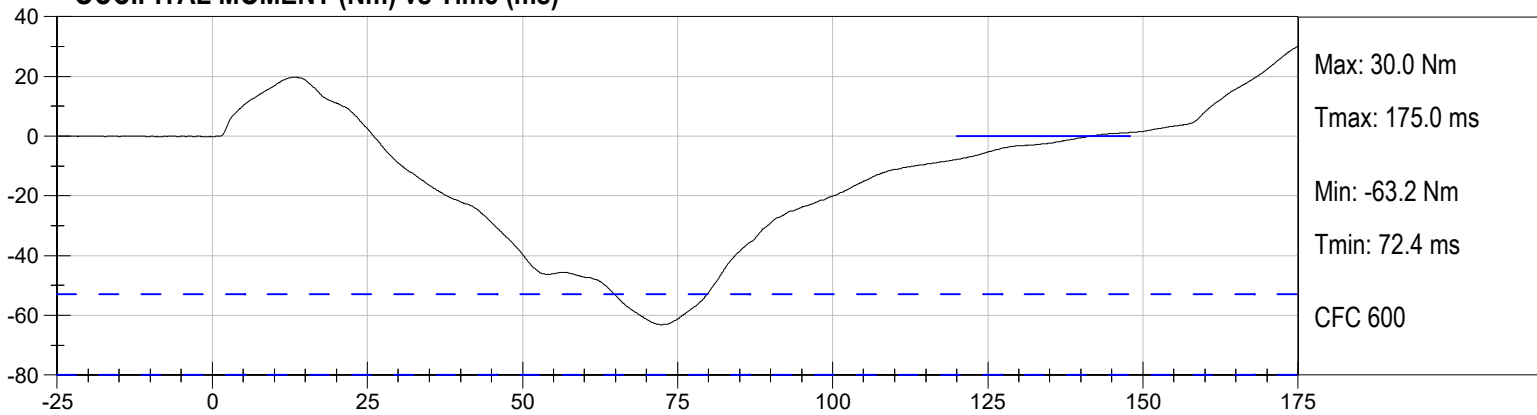
PEND. ACCEL. (g) vs Time (ms)



NECK ROTATION (deg) vs Time (ms)



OCCIPITAL MOMENT (Nm) vs Time (ms)





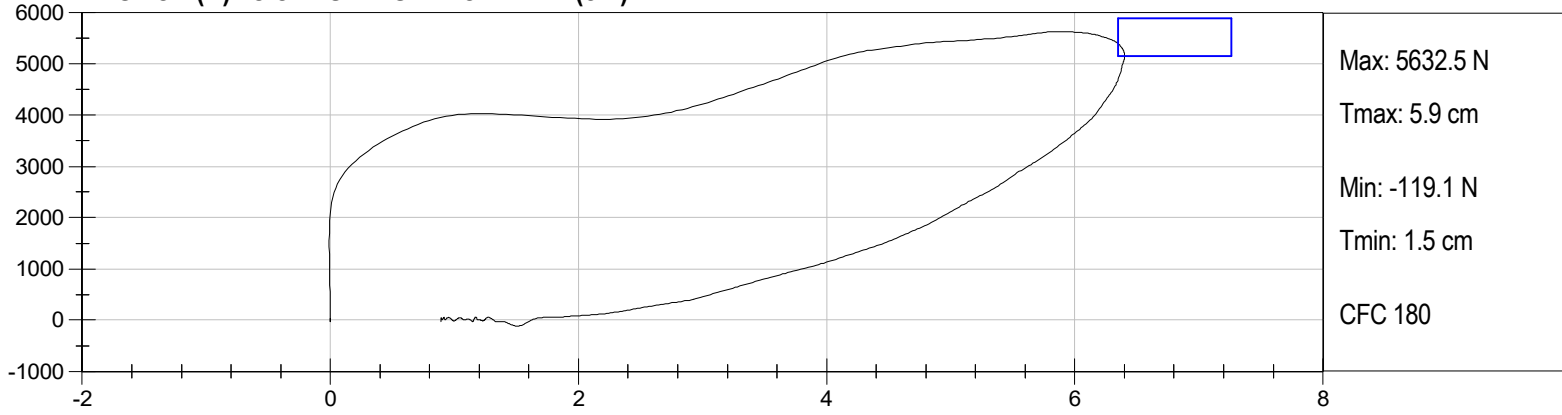
Thorax Impact Test
Hybrid III 50th Percentile Male
ATD Serial No: 064

Test Date: 08/05/2025
Test ID: D252244
Test Technician: Jonah Pulokas

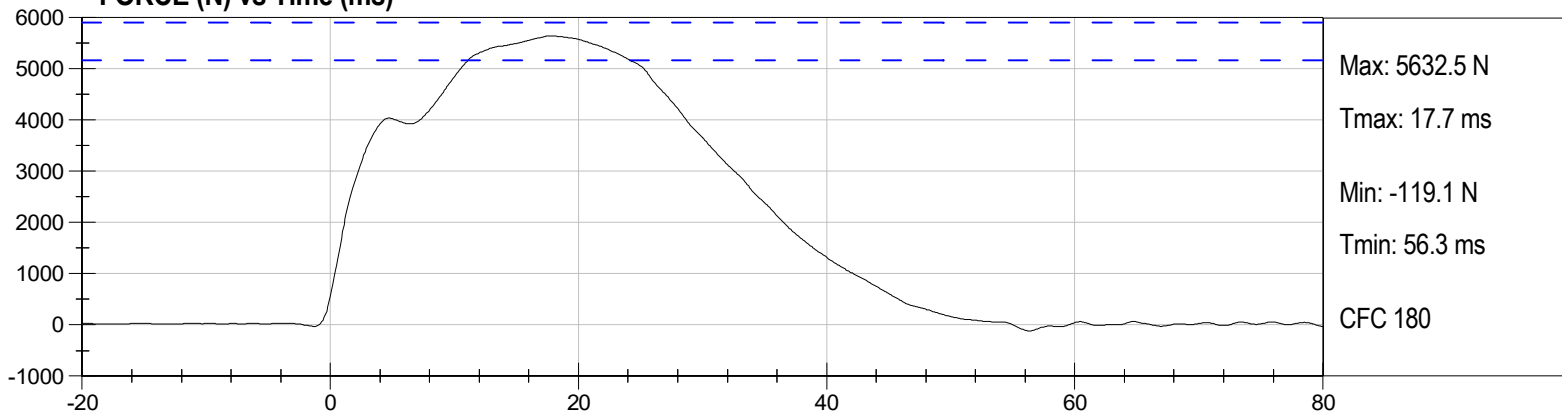
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.3	Pass
Laboratory Relative Humidity	%	10 to 70	46	Pass
Probe Velocity	m/s	6.58 to 6.82	6.68	Pass
Peak Probe Force	N	5159 to 5893	5633	Pass
Peak Sternum Displacement	cm	6.35 to 7.26	6.40	Pass
Internal Hysteresis	%	69 to 85	76	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
PROBE	Endevco	P79577	03/21/2025	9/20/2025
CHEST DISPLACEMENT	Humanetics	064	05/21/2025	11/20/2025

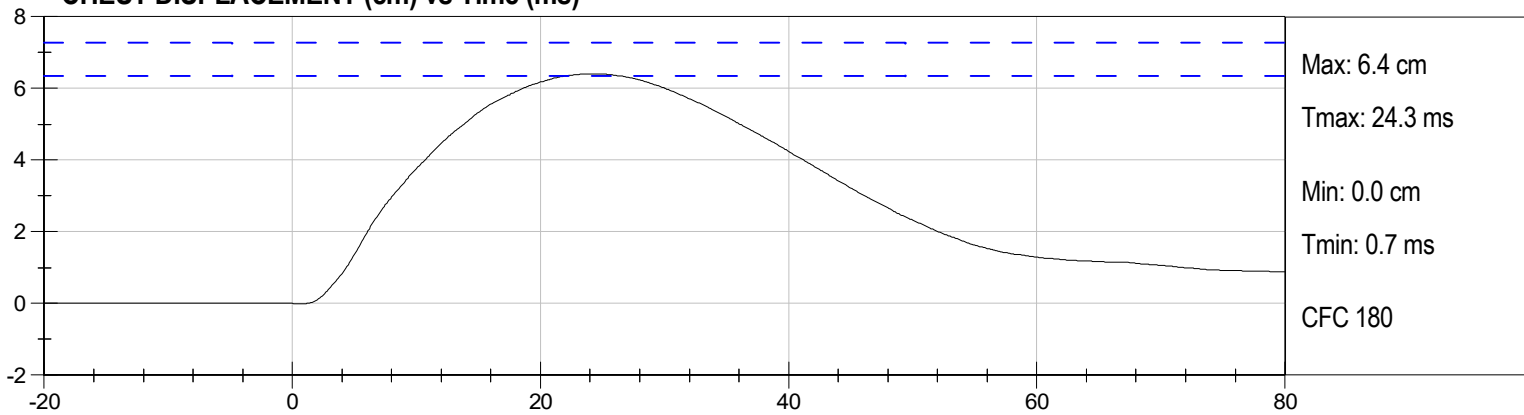
FORCE (N) vs CHEST DISPLACEMENT (cm)



FORCE (N) vs Time (ms)



CHEST DISPLACEMENT (cm) vs Time (ms)



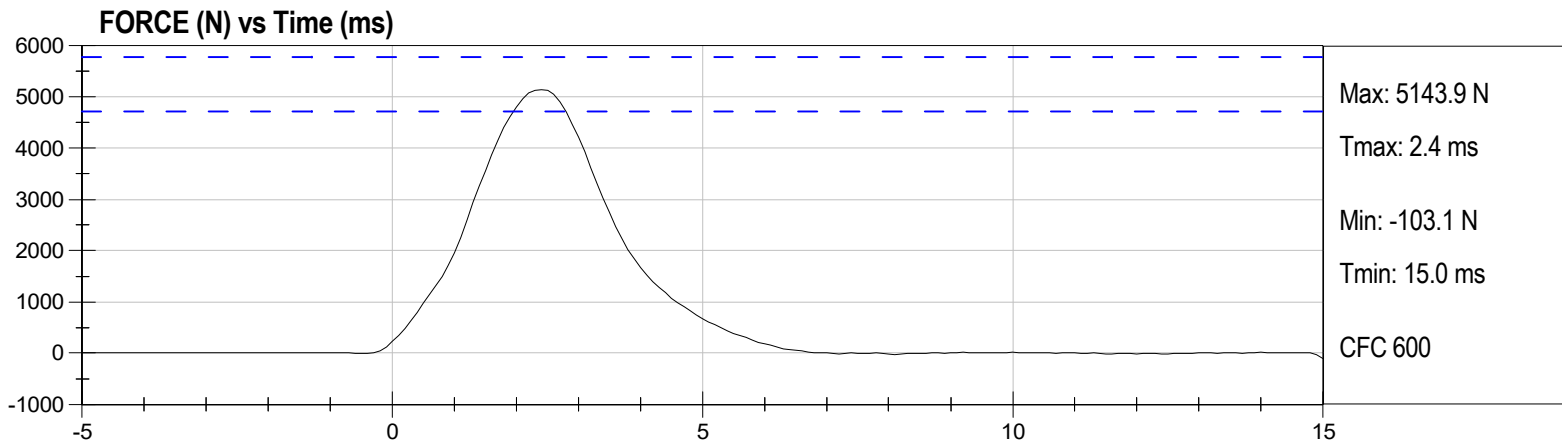


Right Knee Impact Test
Hybrid III 50th Percentile Male
ATD Serial No: 064

Test Date: 08/05/2025
Test ID: D252245
Test Technician: Jonah Pulokas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	20.9	Pass
Laboratory Relative Humidity	%	10 to 70	43	Pass
Probe Velocity	m/s	2.07 to 2.13	2.10	Pass
Peak Probe Force	N	4715 to 5782	5144	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
KNEE PROBE	Endevco	P82128	05/30/2025	11/29/2025



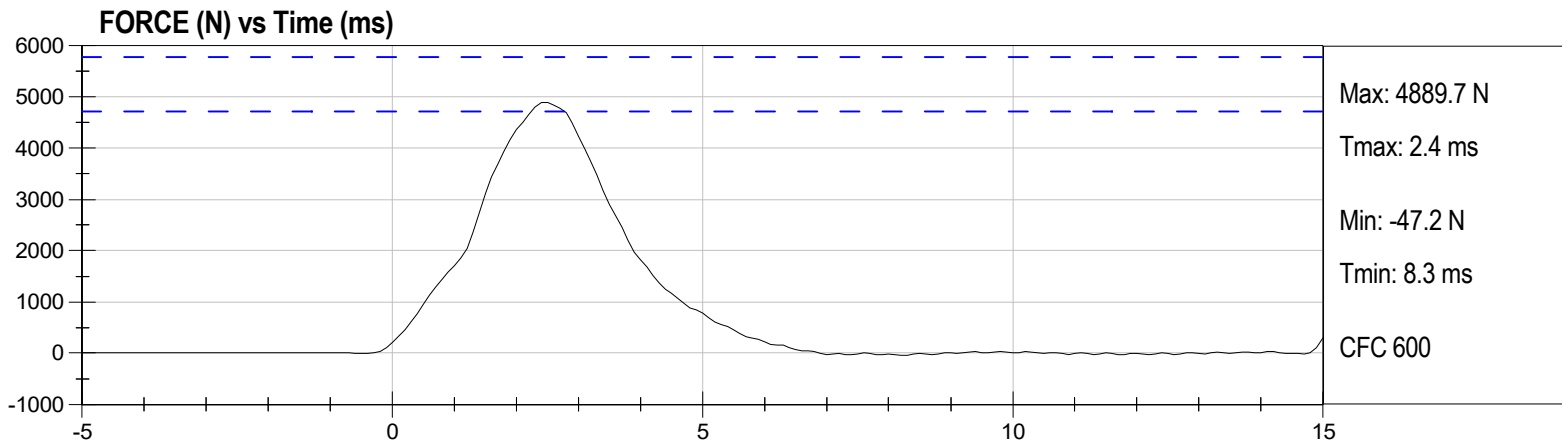


Left Knee Impact Test
Hybrid III 50th Percentile Male
ATD Serial No: 064

Test Date: 08/05/2025
Test ID: D252246
Test Technician: Jonah Pulokas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	20.9	Pass
Laboratory Relative Humidity	%	10 to 70	43	Pass
Probe Velocity	m/s	2.07 to 2.13	2.10	Pass
Peak Probe Force	N	4715 to 5782	4890	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
KNEE PROBE	Endevco	P82128	05/30/2025	11/29/2025



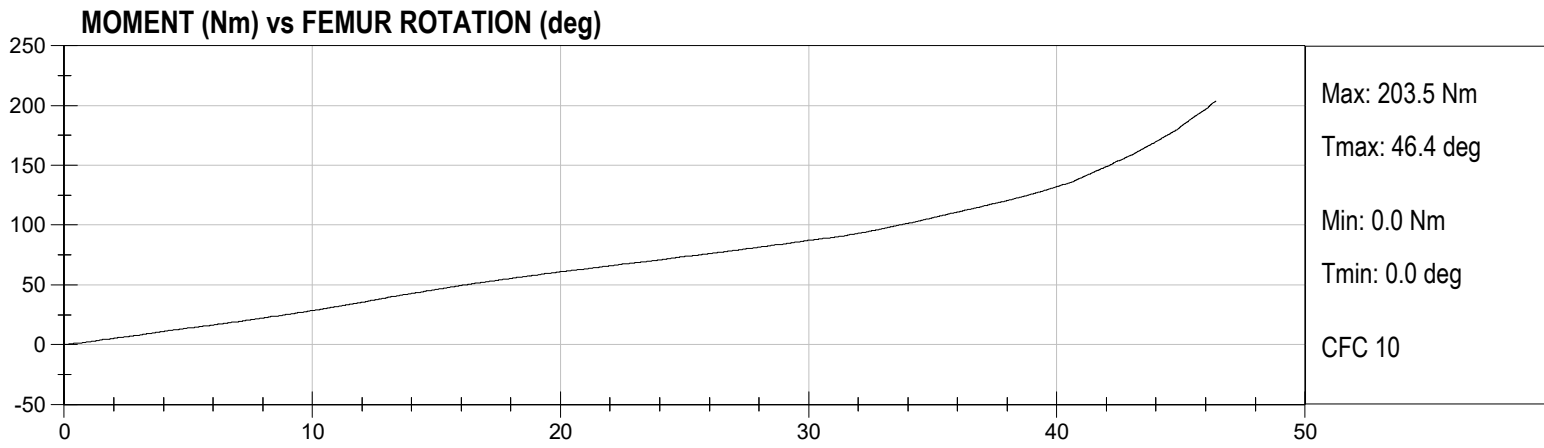


Right Hip-Femur Flexion Test
Hybrid III 50th Percentile Male
ATD Serial No: 064

Test Date: 08/05/2025
Test ID: D252249
Test Technician: Jonah Pulokas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	43	Pass
Rotation Rate	deg/s	5.0 to 10.0	6.5	Pass
Moment at 30 Degrees	Nm	<= 94.9	87.1	Pass
Rotation Angle at 203.4 Nm	deg	40.0 to 50.0	46.4	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
LOAD CELL	FTSS	DS8350MY	03/11/2025	3/11/2026
FRAME ANGLE	Servo	3966	03/27/2025	9/26/2025
FEMUR ANGLE	Servo	4714	03/27/2025	9/26/2025



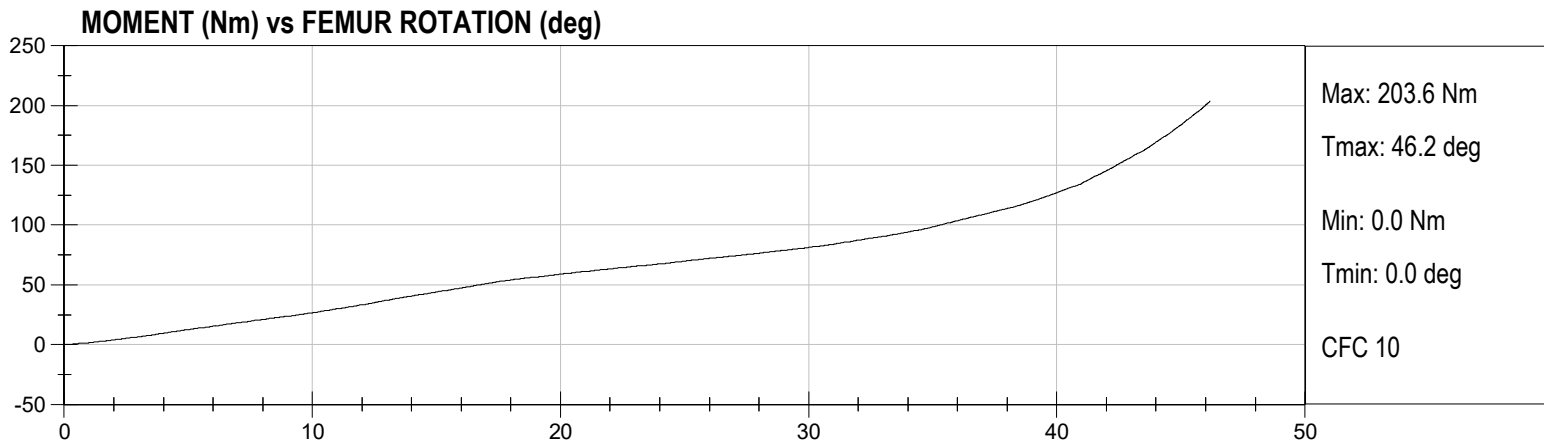


Left Hip-Femur Flexion Test
Hybrid III 50th Percentile Male
ATD Serial No: 064

Test Date: 08/05/2025
Test ID: D252240
Test Technician: Jonah Pulokas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	45	Pass
Rotation Rate	deg/s	5.0 to 10.0	6.5	Pass
Moment at 30 Degrees	Nm	<= 94.9	81.2	Pass
Rotation Angle at 203.4 Nm	deg	40.0 to 50.0	46.2	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
LOAD CELL	FTSS	DS8350MY	03/11/2025	3/11/2026
FRAME ANGLE	Servo	3966	03/27/2025	9/26/2025
FEMUR ANGLE	Servo	4714	03/27/2025	9/26/2025



QUALIFICATION TEST RESULTS

PRE-TEST

HYBRID III 5TH PERCENTILE FEMALE - PASSENGER ATD

Hybrid III, 5th External Measurements
SN: 142

HYBRID III, PART 572, SUBPART O EXTERNAL DIMENSIONS				
DIMENSION	DESCRIPTION	DETAILS	ASSEMBLY DIMENSION (mm)	ACTUAL MEASUREMENT
A	TOTAL SITTING HEIGHT	Seat surface to highest point on top of the head.	774.7-800.1	775.0
B	SHOULDER PIVOT HEIGHT	Centerline of shoulder pivot bolt to the seat surface.	431.8-457.2	438.2
C	H-POINT HEIGHT	Reference	81.3-86.3	81.8
D	H-POINT LOCATION FROM BACKLINE	Reference	144.8-149.8	148.3
E	SHOULDER PIVOT FROM BACKLINE	Center of the shoulder clevis to the rear vertical surface of the fixture.	68.6-83.8	83.0
F	THIGH CLEARANCE	Measured at the highest point on the upper femur segment.	119.4-134.6	124.4
G	BACK OF ELBOW TO WRIST PIVOT	back of the elbow flesh to the wrist pivot in line with the elbow and wrist pivots	243.9-259.1	245.2
H	HEAD BACK TO BACKLINE	Back of Skull cap skin to seat rear vertical surface (Reference)	43.2-48.2	43.4
I	SHOULDER TO- ELBOW LENGTH	Measure from the highest point on top of the shoulder clevis to the lowest part of the flesh on the elbow in line with the elbow pivot bolt.	276.8-297.2	281.1
J	ELBOW REST HEIGHT	Measure from the flesh below the elbow pivot bolt to the seat surface.	182.8-203.2	197.2
K	BUTTOCK TO KNEE LENGTH	The forward most part of the knee flesh to the rear vertical surface of the fixture.	520.7-546.1	537.2
L	POPLITEAL HEIGHT	Seat surface to the plane of the horizontal plane of the bottom of the feet.	355.6-376	358.8
M	KNEE PIVOT HEIGHT	Centerline of knee pivot bolt to the horizontal plane of the bottom of the feet.	393.7-419.1	403.1
N	BUTTOCK POPLITEAL LENGTH	The rearmost surface of the lower leg to the same point on the rear surface of the buttocks used for dim. "K".	414-439.4	435.2

HYBRID III, SUBPART O EXTERNAL DIMENSIONS, continued				
DIMENSION	DESCRIPTION	DETAILS	ASSEMBLY DIMENSION (mm)	ACTUAL MEASUREMENT
O	CHEST DEPTH WITHOUT JACKET	Measured 304.8 ± 5.1 mm above seat surface	175.3-190.5	181.2
P	FOOT LENGTH	Tip of toe to rear of heel	218.5-233.7	227.3
Q	STANDING HEIGHT	(THEORETICAL)	1501.1	N/A
R	BUTTOCK TO KNEE PIVOT LENGTH	The rear surface of the buttocks to the knee pivot bolt	457.2-482.6	475.0
S	HEAD BREADTH	The widest part of the head	137.1-147.3	138.6
T	HEAD DEPTH	Back of the head to the forehead	177.8-188	181.0
U	HIP BREADTH	The widest part of the hip	299.7-314.9	308.4
V	SHOULDER BREADTH	Outside edges of right and left shoulder clevises	350.5-365.7	362.1
W	FOOT BREADTH	The widest part of the foot	78.8-94	82.8
X	HEAD CIRCUMFERENCE	Measured at the point as in dim. "T"	528.3-548.7	545.2
Y	CHEST CIRCUMFERENCE (WITH CHEST JACKET)	Measured 345.4 ± 12.7 mm above seat surface	850.9-881.3	870.7
Z	WAIST CIRCUMFERENCE	Measured 165.1 ± 5.1 mm above seat surface	759.5-789.9	779.9
AA	REFERENCE LOCATION FOR MEASUREMENT OF CHEST CIRCUMFERENCE	Reference	332.7-358.1	350.1
BB	REFERENCE LOCATION FOR MEASUREMENT OF WAIST CIRCUMFERENCE	Reference	160.1-170.2	170.0

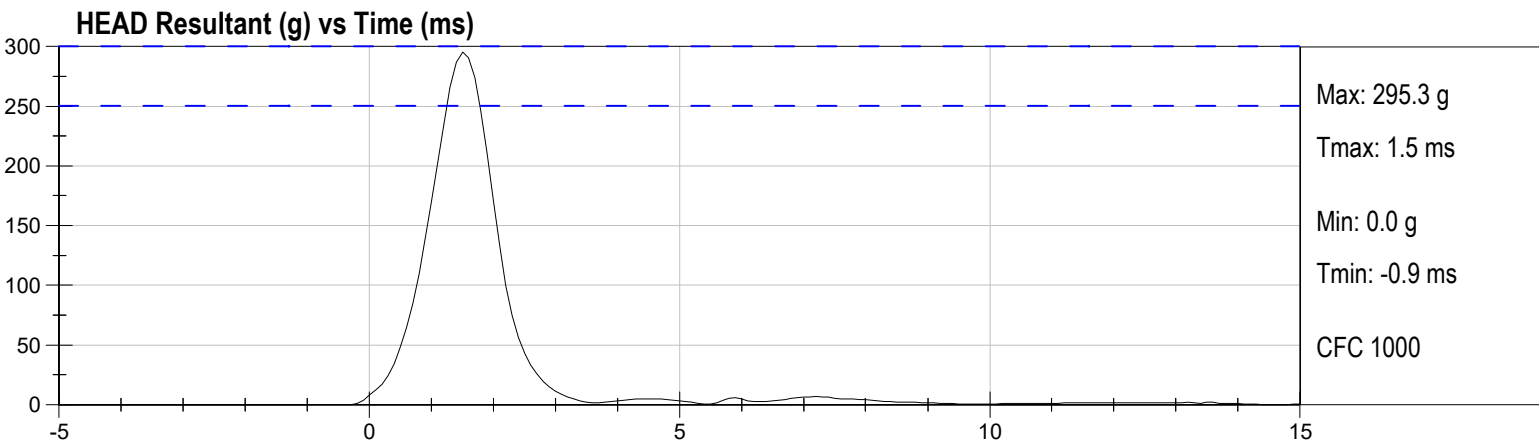
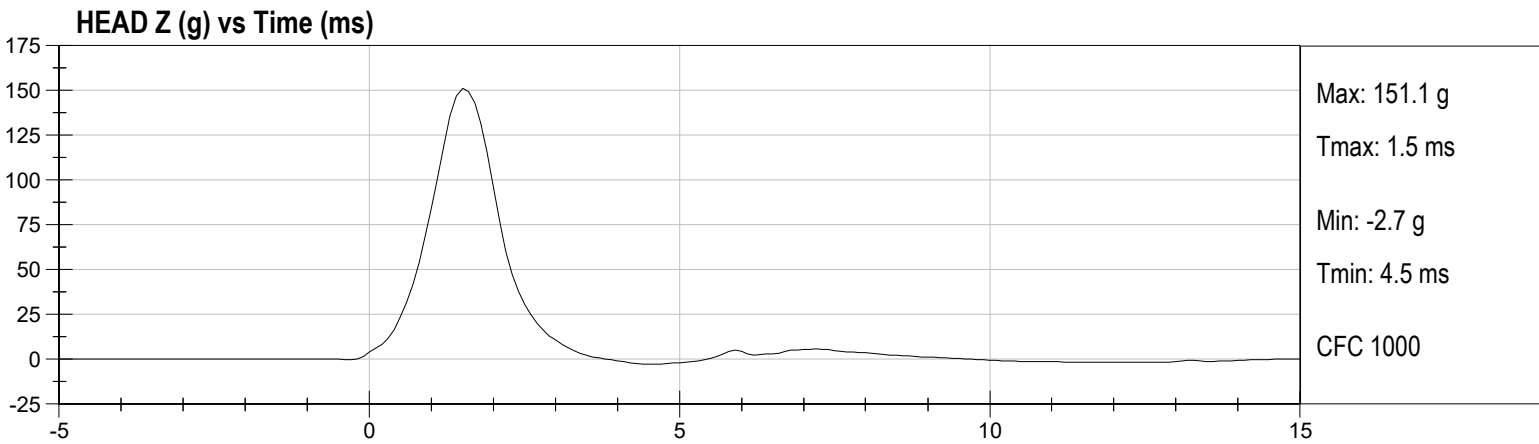
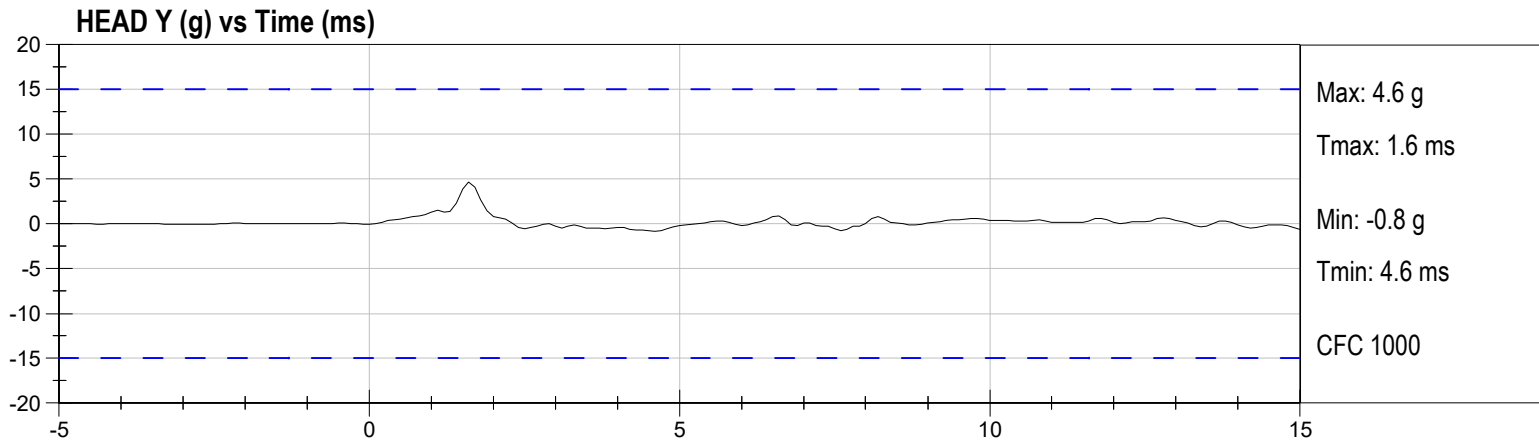
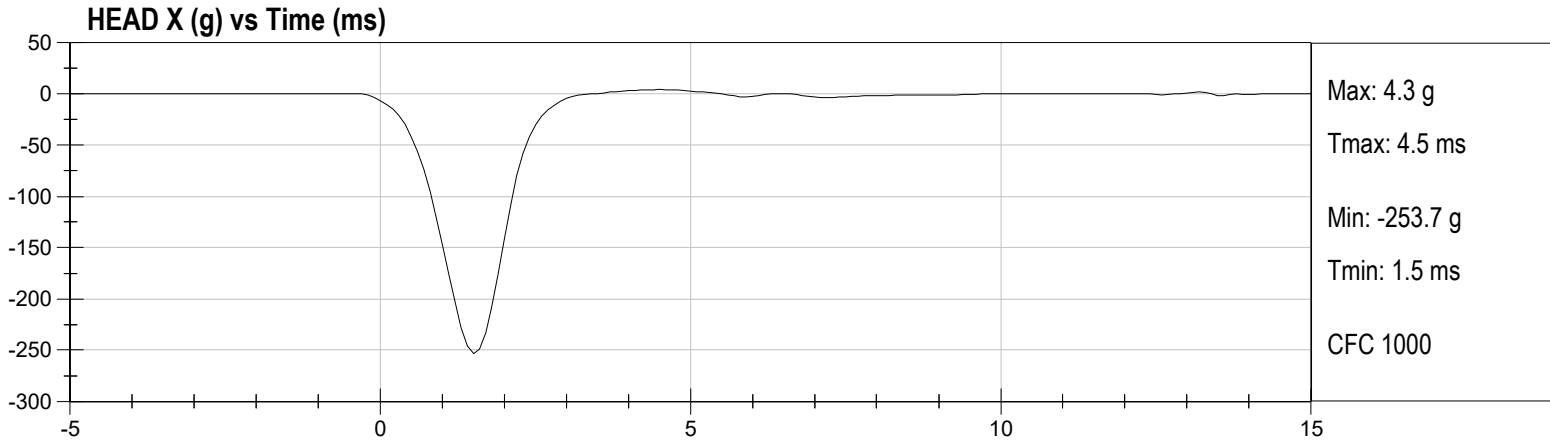


Head Drop Test
Hybrid III 5th Percentile Female
ATD Serial No: 142

Test Date: 07/15/2025
Test ID: D252021
Test Technician: Jonah Pulokas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	47	Pass
Peak Resultant Acceleration	g	250 to 300	295	Pass
Peak Lateral Acceleration	g	-15.0 to 15.0	4.6	Pass
Unimodal	%	within 10% of peak	2	Pass

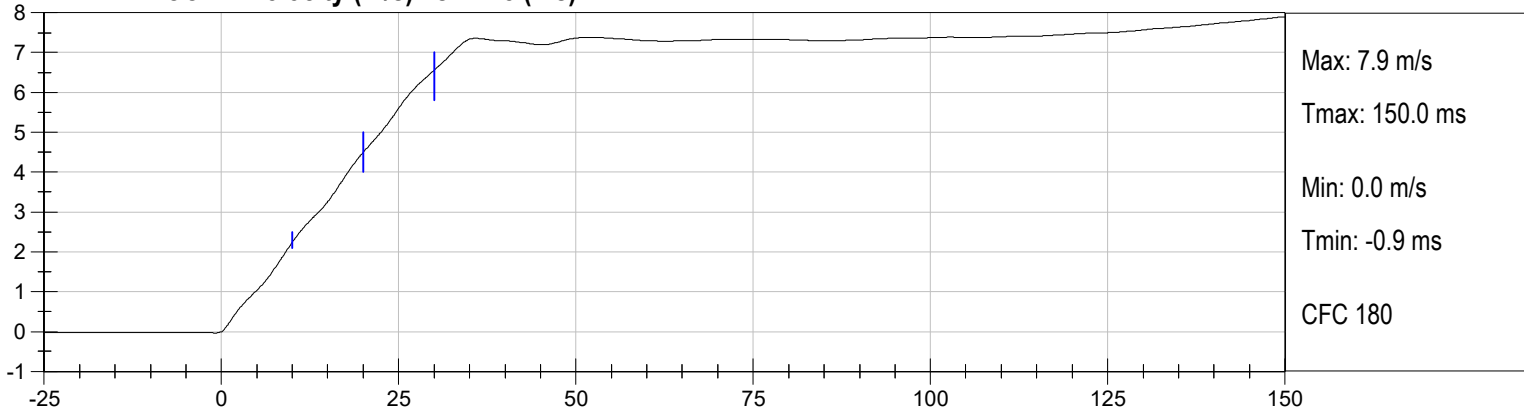
Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
HEAD X	Endevco	T30974	05/27/2025	11/26/2025
HEAD Y	Endevco	T30975	05/27/2025	11/26/2025
HEAD Z	Endevco	T30976	05/27/2025	11/26/2025



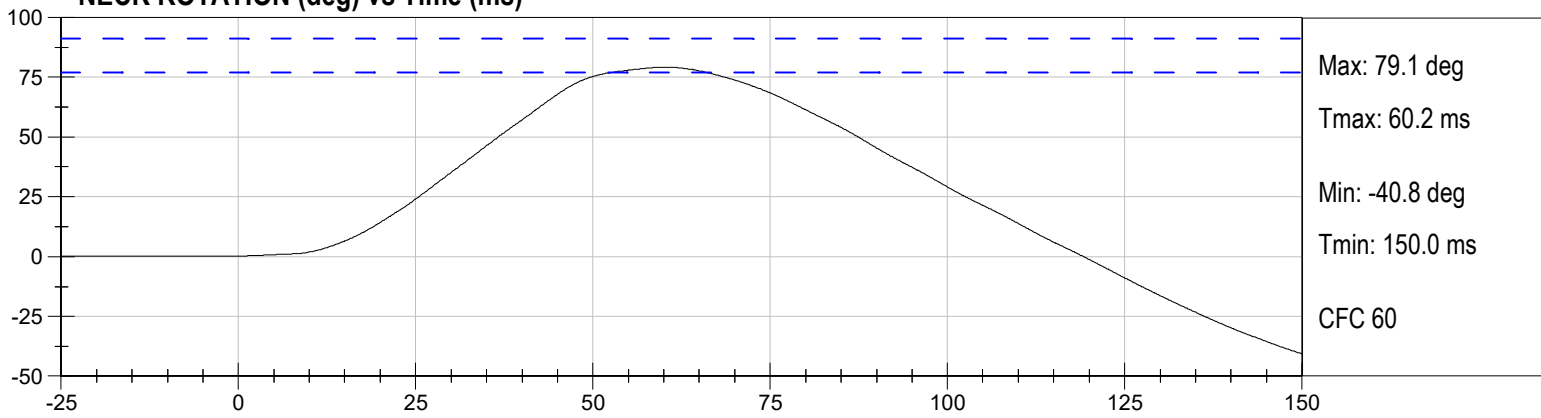
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	20.9	Pass
Laboratory Relative Humidity	%	10 to 70	46	Pass
Pendulum Velocity	m/s	6.89 to 7.13	6.96	Pass
Pendulum Velocity At 10 ms After T0	m/s	2.1 to 2.5	2.21	Pass
Pendulum Velocity At 20 ms After T0	m/s	4.0 to 5.0	4.48	Pass
Pendulum Velocity At 30 ms After T0	m/s	5.8 to 7.0	6.54	Pass
Maximum "D" Plane Rotation	Deg	77 to 91	79	Pass
Occipital Condyle Moment within Rotation Corridor	Nm	69 to 83	72	Pass
Positive Moment Time Curve Decay to 10 Nm	ms	80 to 100	85	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
PEND. ACCEL.	Endevco	AH5P1	07/09/2025	1/8/2026
NECK FORCE X	Denton	NG2203FX	01/20/2025	1/20/2026
NECK MOMENT Y	Denton	NG2203MY	01/20/2025	1/20/2026
PEND. POT	Servo	4707	02/25/2025	8/27/2025
HEAD POT	Servo	7297	02/25/2025	8/27/2025

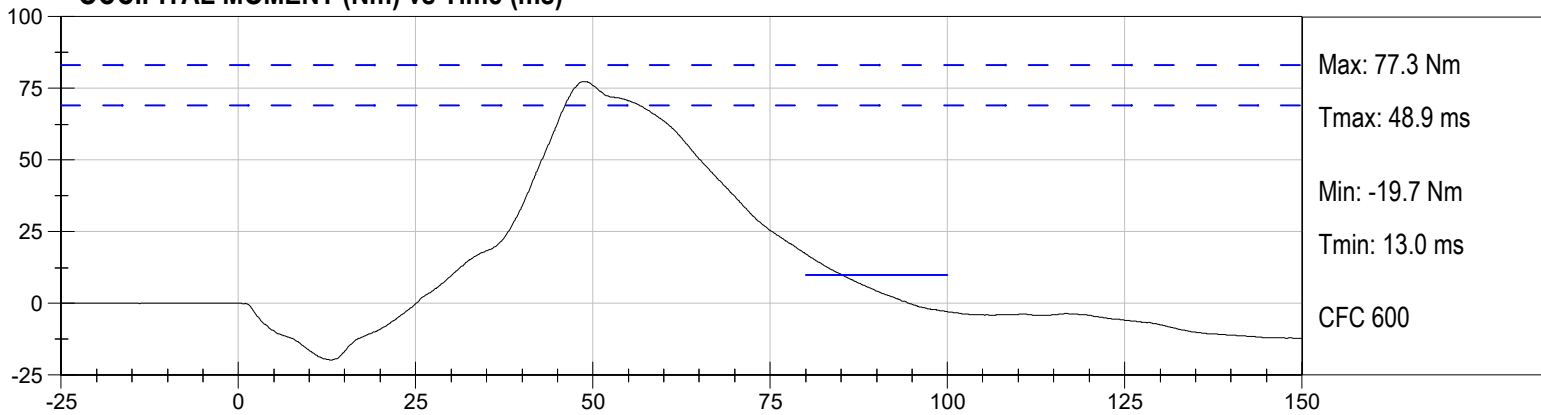
PEND. ACCEL. Velocity (m/s) vs Time (ms)



NECK ROTATION (deg) vs Time (ms)



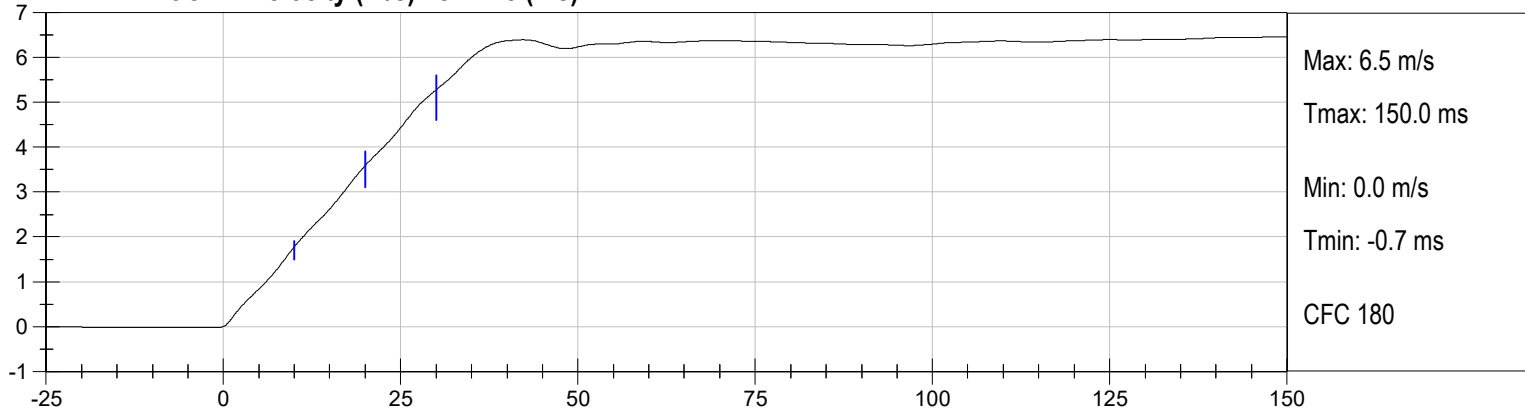
OCCIPITAL MOMENT (Nm) vs Time (ms)



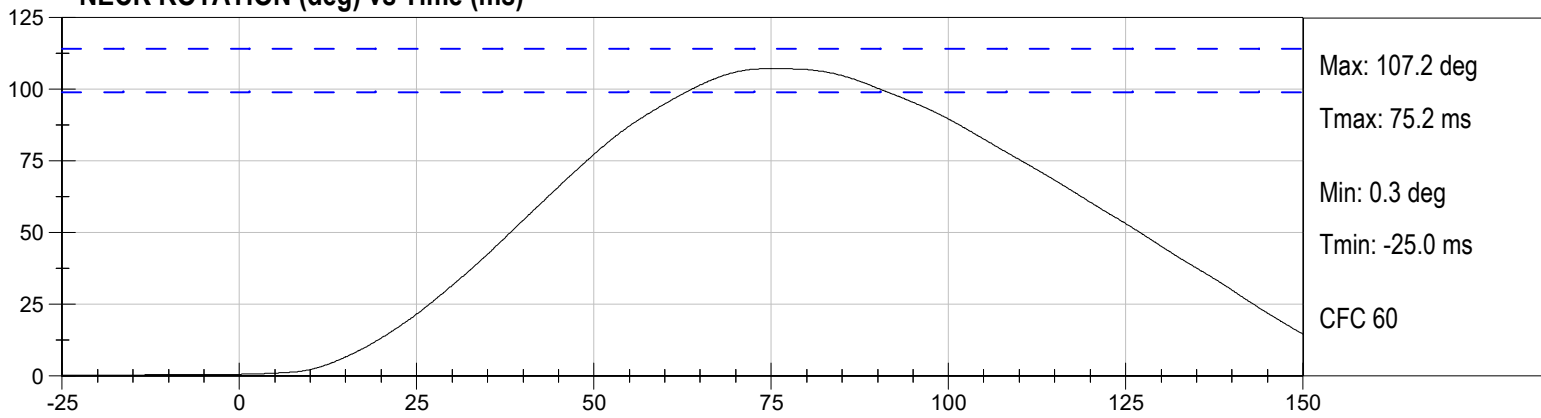
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	20.9	Pass
Laboratory Relative Humidity	%	10 to 70	45	Pass
Pendulum Velocity	m/s	5.95 to 6.19	5.98	Pass
Pendulum Velocity At 10 ms After T0	m/s	1.5 to 1.9	1.76	Pass
Pendulum Velocity At 20 ms After T0	m/s	3.1 to 3.9	3.57	Pass
Pendulum Velocity At 30 ms After T0	m/s	4.6 to 5.6	5.27	Pass
Maximum "D" Plane Rotation	Deg	99 to 114	107.2	Pass
Occipital Condyle Moment within Rotation Corridor	Nm	-53 to -65	-56	Pass
Negative Moment Time Curve Decay to -10 Nm	ms	94 to 114	105	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
PEND. ACCEL.	Endevco	AH5P1	07/09/2025	1/8/2026
NECK FORCE X	Denton	NG2203FX	01/20/2025	1/20/2026
NECK MOMENT Y	Denton	NG2203MY	01/20/2025	1/20/2026
PEND. POT	Servo	4707	02/25/2025	8/27/2025
HEAD POT	Servo	7297	02/25/2025	8/27/2025

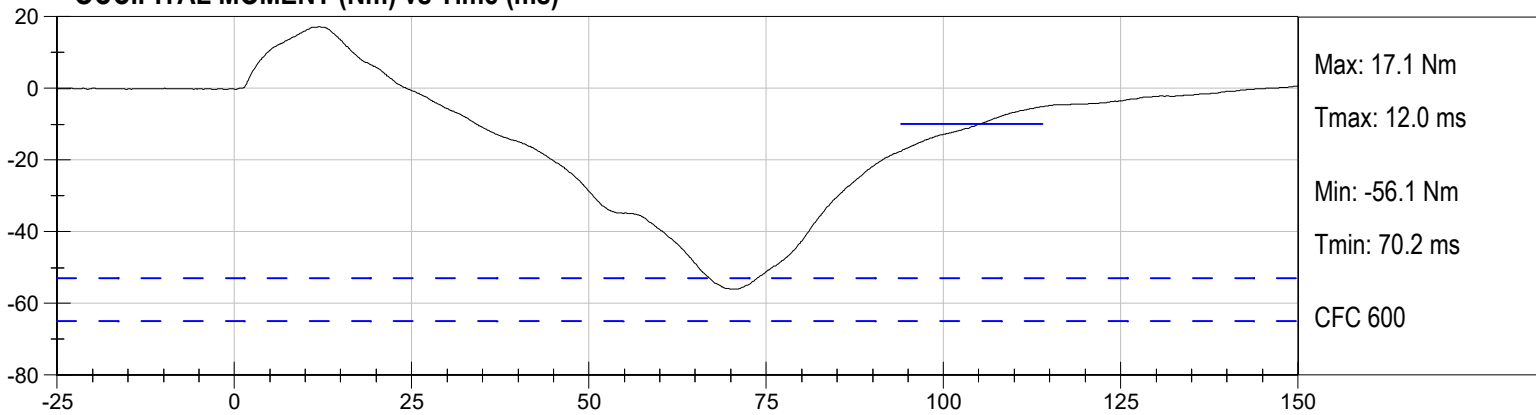
PEND. ACCEL. Velocity (m/s) vs Time (ms)



NECK ROTATION (deg) vs Time (ms)



OCCIPITAL MOMENT (Nm) vs Time (ms)





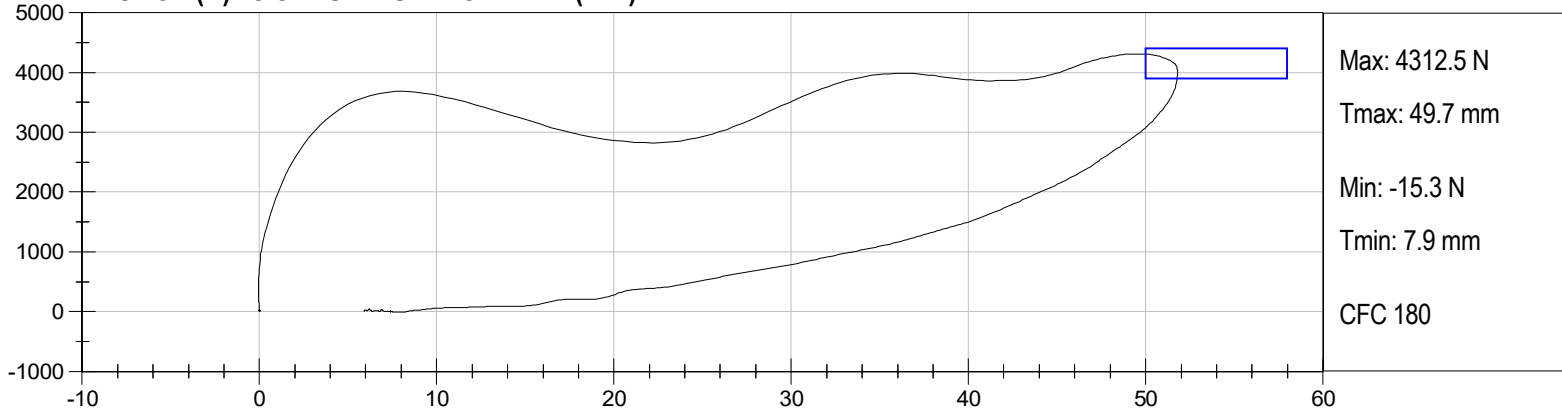
Thorax Impact Test
Hybrid III 5th Percentile Female
ATD Serial No: 142

Test Date: 07/15/2025
Test ID: D252024
Test Technician: Jonah Pulokas

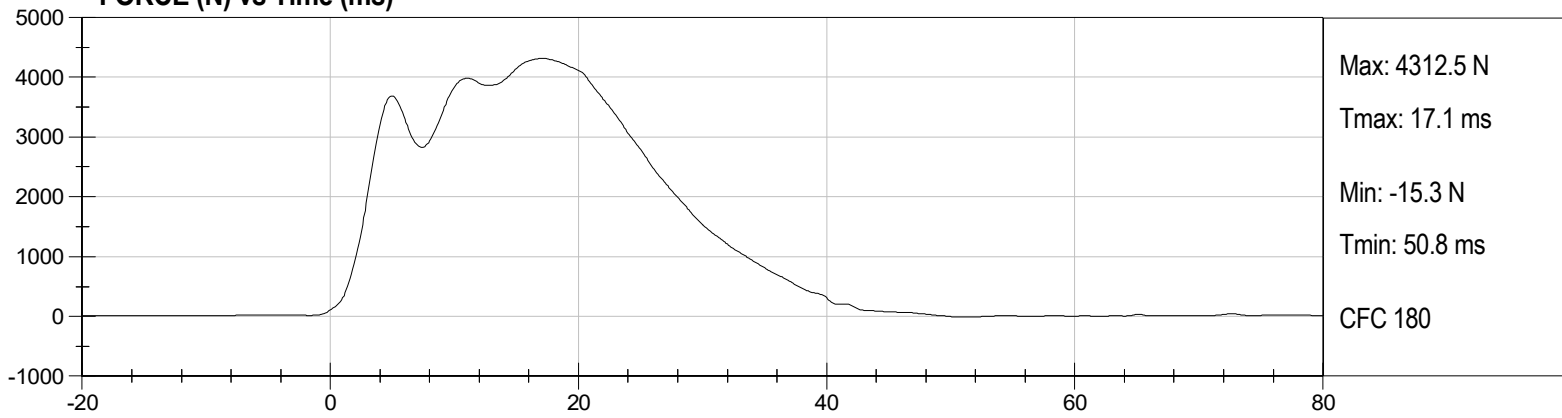
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	20.8	Pass
Laboratory Relative Humidity	%	10 to 70	47	Pass
Probe Velocity	m/s	6.59 to 6.83	6.77	Pass
Peak Deflection	mm	50 to 58	52	Pass
Peak Resistive Force w/in Corridor	N	3900 to 4400	4310	Pass
Internal Hysteresis	%	69 to 85	75	Pass
Peak Force 18 mm - 50 mm	N	0 to 4600	4312	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
PROBE	Endevco	P79577	03/21/2025	9/20/2025
CHEST DISPLACEMENT	Humanetics	142	04/29/2025	10/29/2025

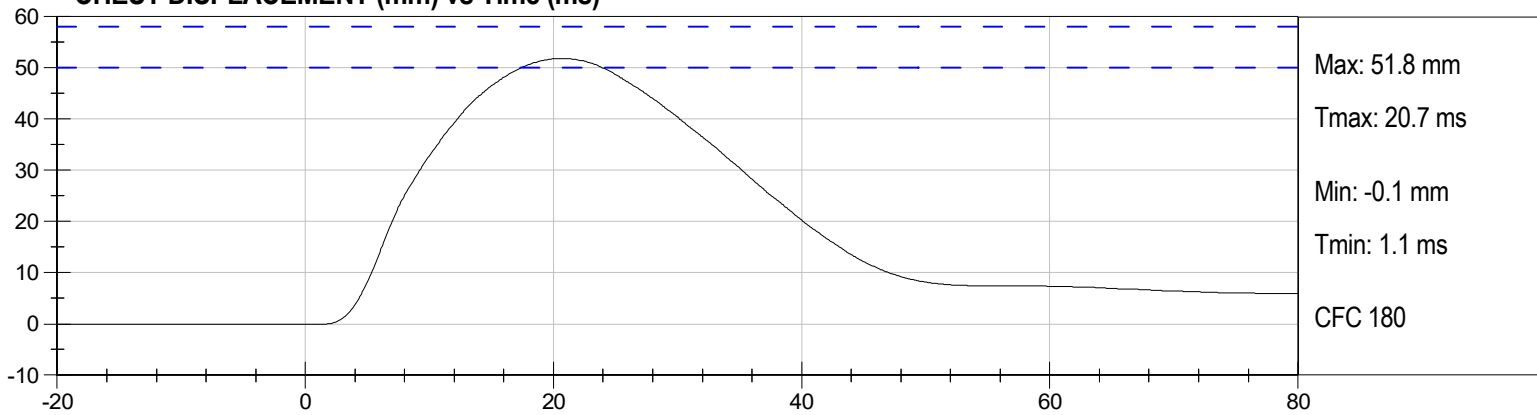
FORCE (N) vs CHEST DISPLACEMENT (mm)



FORCE (N) vs Time (ms)



CHEST DISPLACEMENT (mm) vs Time (ms)



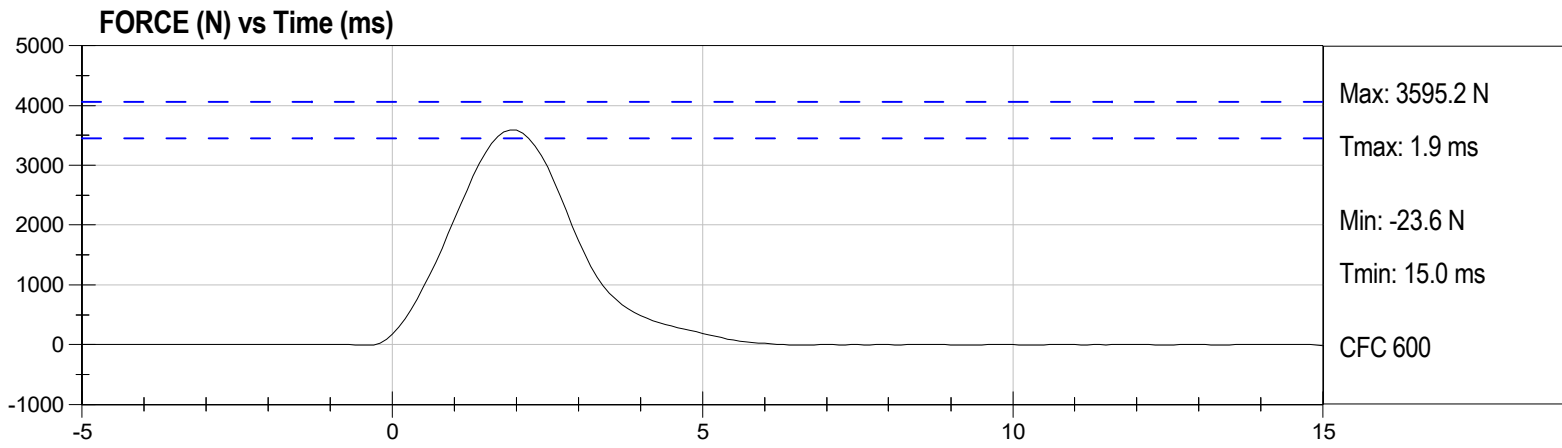


Right Knee Impact Test
Hybrid III 5th Percentile Female
ATD Serial No: 142

Test Date: 07/15/2025
Test ID: D252025
Test Technician: Jonah Pulokas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	20.9	Pass
Laboratory Relative Humidity	%	10 to 70	46	Pass
Probe Velocity	m/s	2.07 to 2.13	2.13	Pass
Peak Probe Force	N	3450 to 4060	3595	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
KNEE PROBE	Endevco	P82128	05/30/2025	11/29/2025



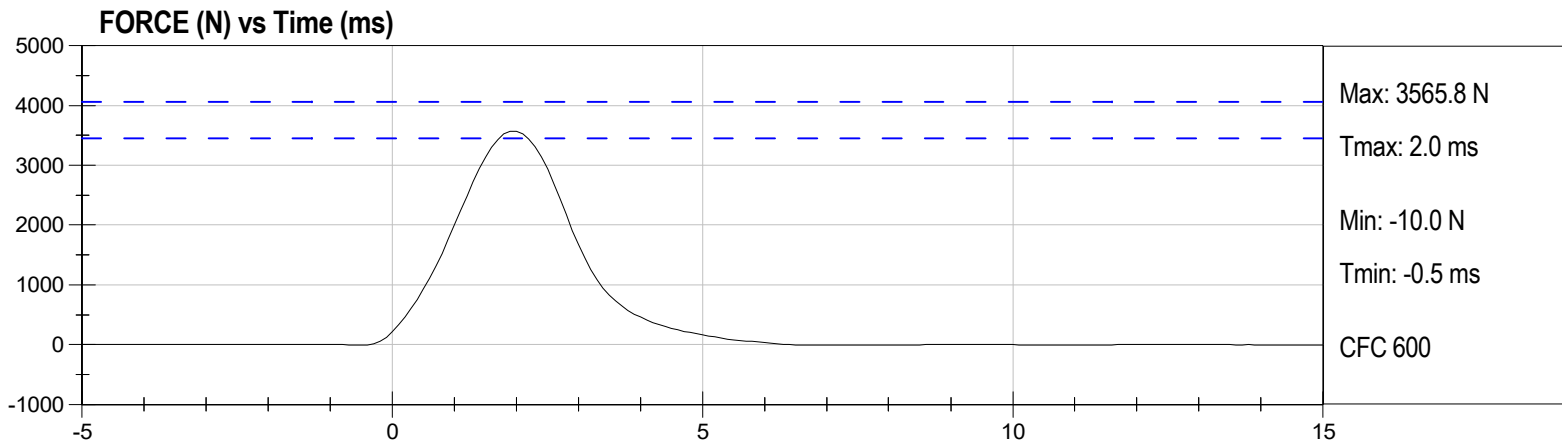


Left Knee Impact Test
Hybrid III 5th Percentile Female
ATD Serial No: 142

Test Date: 07/15/2025
Test ID: D252026
Test Technician: Jonah Pulokas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	20.9	Pass
Laboratory Relative Humidity	%	10 to 70	47	Pass
Probe Velocity	m/s	2.07 to 2.13	2.09	Pass
Peak Probe Force	N	3450 to 4060	3566	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
KNEE PROBE	Endevco	P82128	05/30/2025	11/29/2025



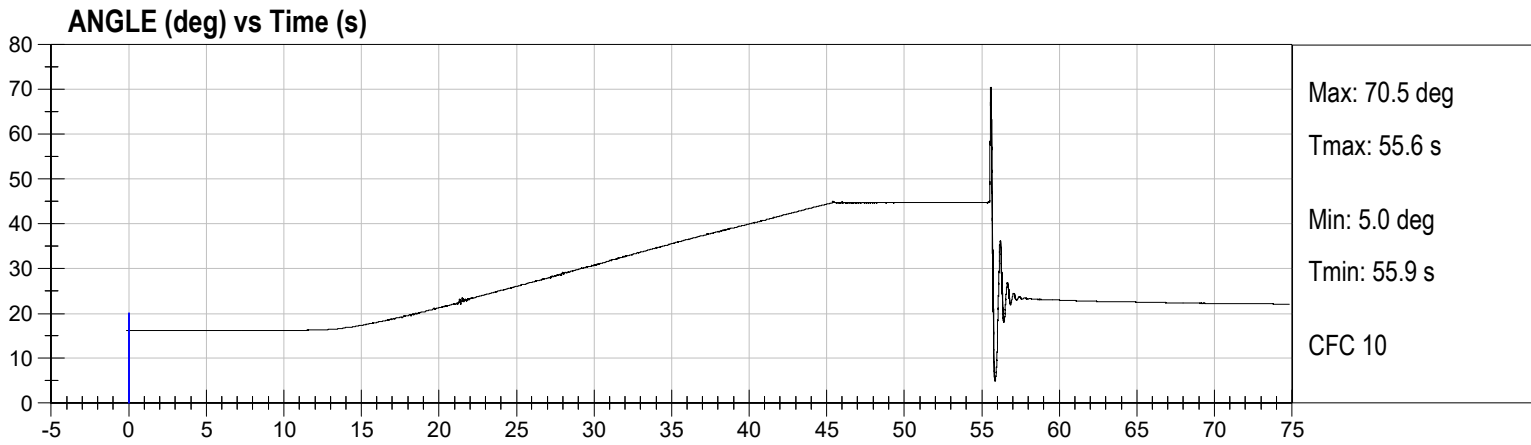
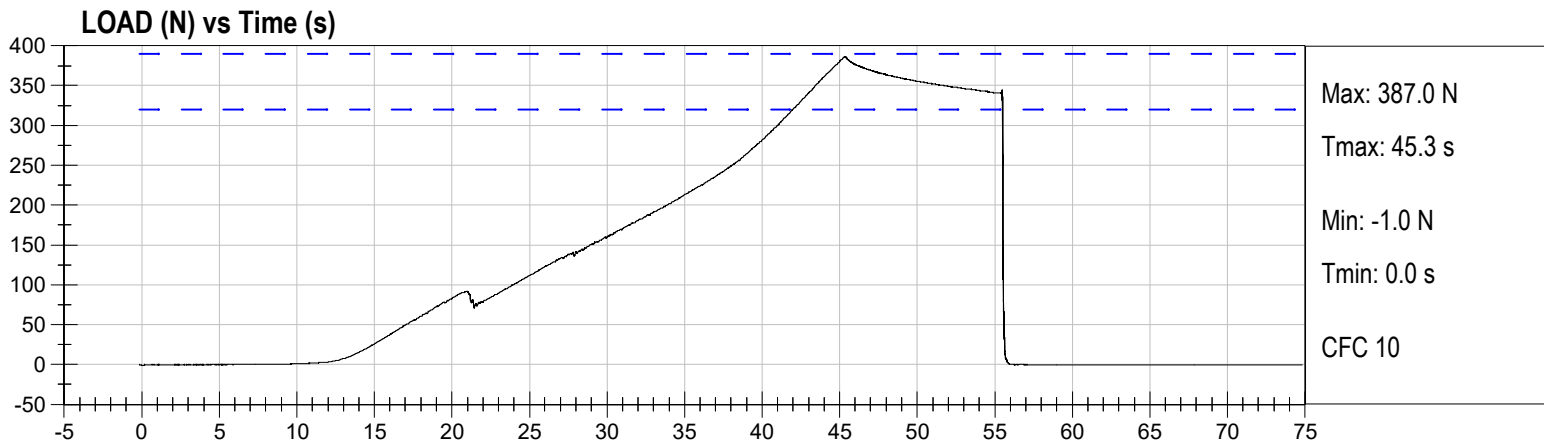


Torso Flexion Test
Hybrid III 5th Percentile Female
ATD Serial No: 142

Test Date: 07/15/2025
Test ID: D252027
Test Technician: Jonah Pulokas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	47	Pass
Initial Angle	deg	0 to 20	16	Pass
Return Angle Relative to Initial	deg	-8 to 8	4	Pass
Force at 45 deg	N	320 to 390	387	Pass
Upper Torso Deflection Rate	deg/s	0.5 to 1.5	0.9	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
LOAD	Interface	479661	01/29/2025	7/31/2025
ANGLE	Seika	494819	06/20/2025	6/20/2026



QUALIFICATION TEST RESULTS

POST-TEST

HYBRID III 5TH PERCENTILE FEMALE - PASSENGER ATD

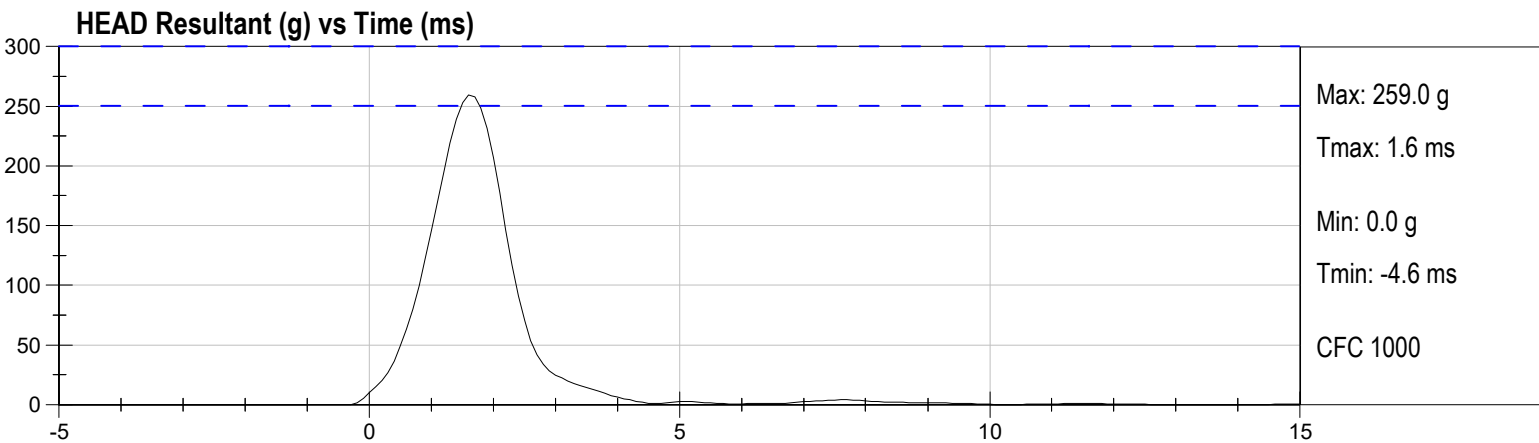
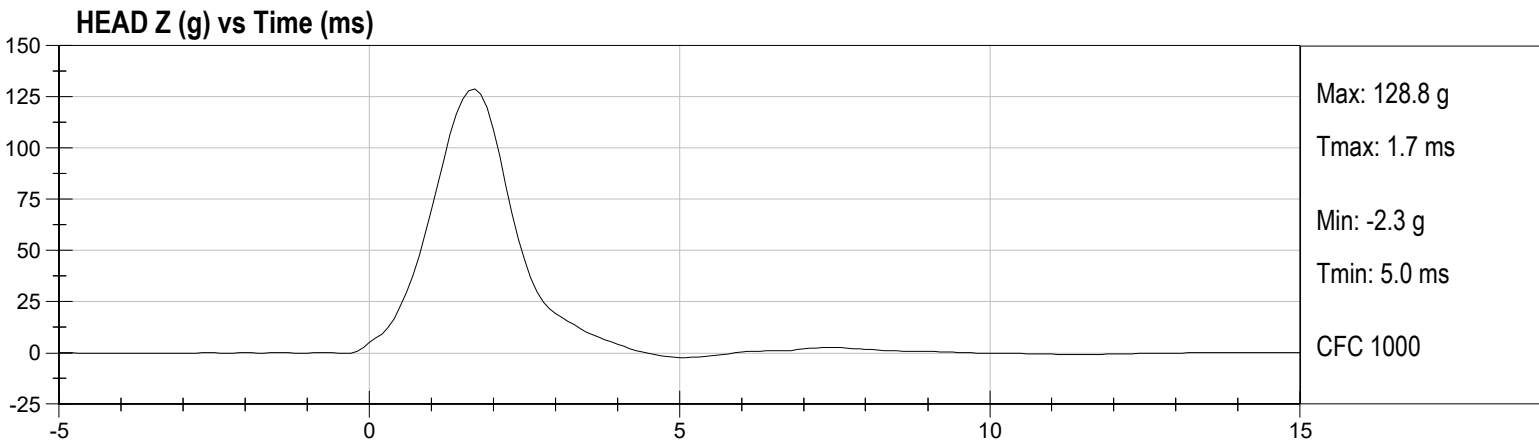
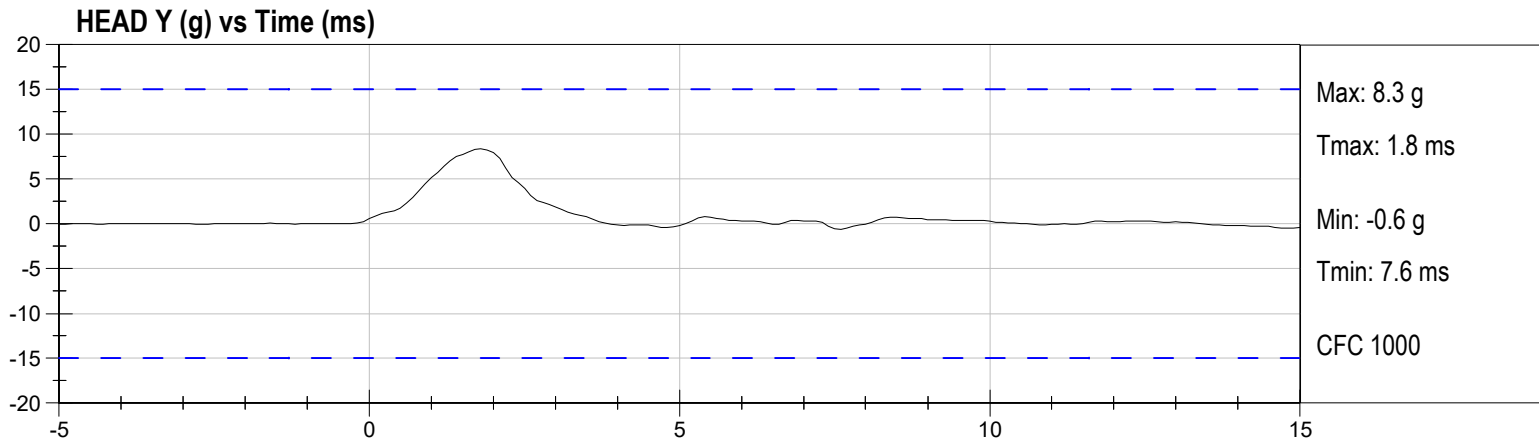
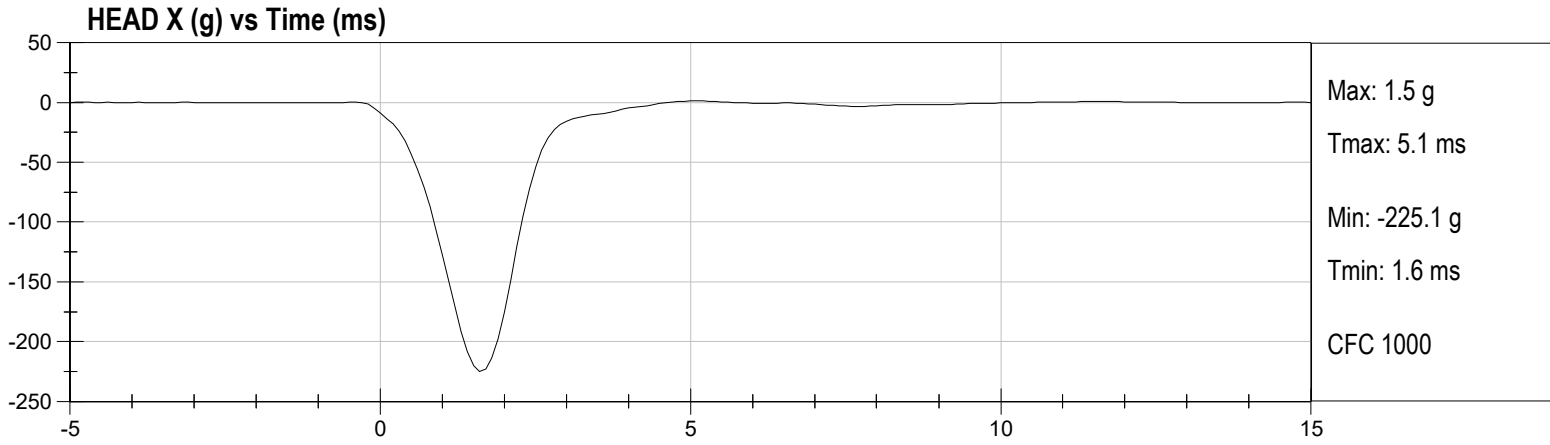


Head Drop Test
Hybrid III 5th Percentile Female
ATD Serial No: 142

Test Date: 08/05/2025
Test ID: D252251
Test Technician: Jonah Pulokas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	43	Pass
Peak Resultant Acceleration	g	250 to 300	259	Pass
Peak Lateral Acceleration	g	-15.0 to 15.0	8.3	Pass
Unimodal	%	within 10% of peak	2	Pass

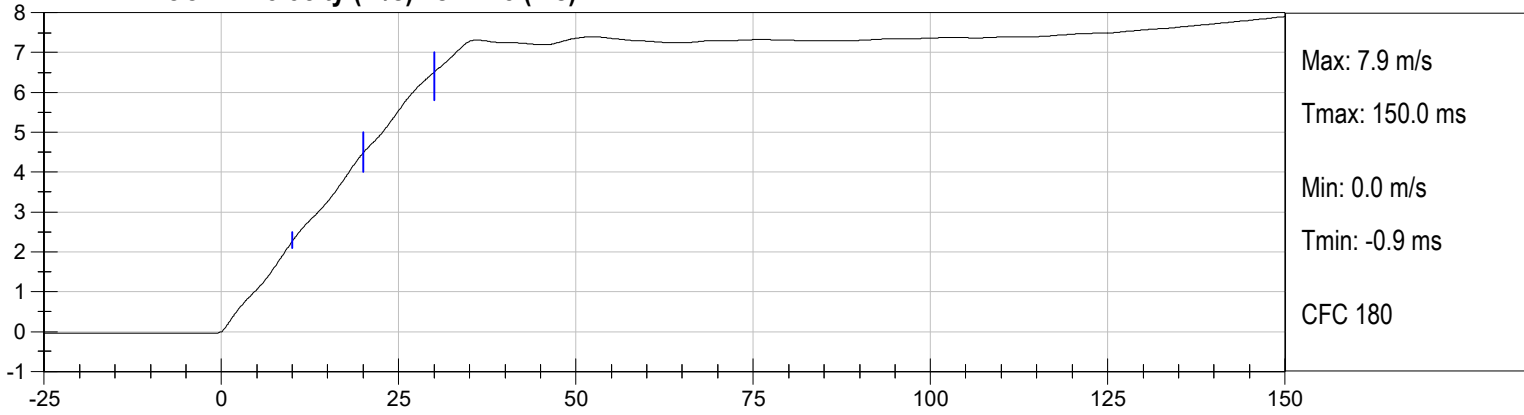
Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
HEAD X	Endevco	T30974	05/27/2025	11/26/2025
HEAD Y	Endevco	T30975	05/27/2025	11/26/2025
HEAD Z	Endevco	T30976	05/27/2025	11/26/2025



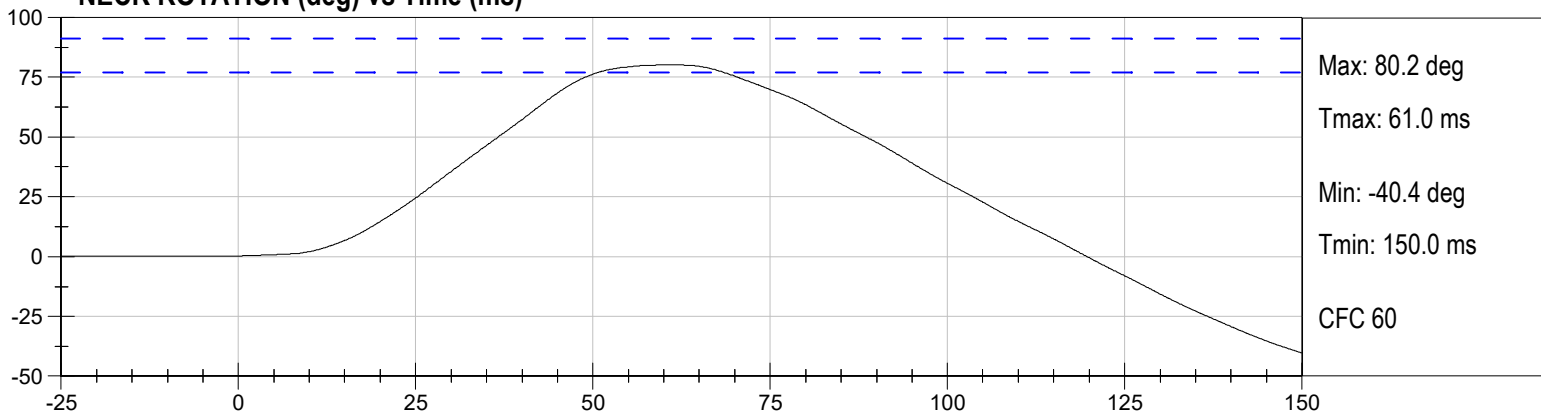
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	46	Pass
Pendulum Velocity	m/s	6.89 to 7.13	6.96	Pass
Pendulum Velocity At 10 ms After T0	m/s	2.1 to 2.5	2.24	Pass
Pendulum Velocity At 20 ms After T0	m/s	4.0 to 5.0	4.46	Pass
Pendulum Velocity At 30 ms After T0	m/s	5.8 to 7.0	6.49	Pass
Maximum "D" Plane Rotation	Deg	77 to 91	80	Pass
Occipital Condyle Moment within Rotation Corridor	Nm	69 to 83	78	Pass
Positive Moment Time Curve Decay to 10 Nm	ms	80 to 100	86	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
PEND. ACCEL.	Endevco	AH5P1	07/09/2025	1/8/2026
NECK FORCE X	Denton	NG2256FX	07/14/2025	7/14/2026
NECK MOMENT Y	Denton	NG2256MY	07/14/2025	7/14/2026
PEND. POT	Servo	4707	02/25/2025	8/27/2025
HEAD POT	Servo	7297	02/25/2025	8/27/2025

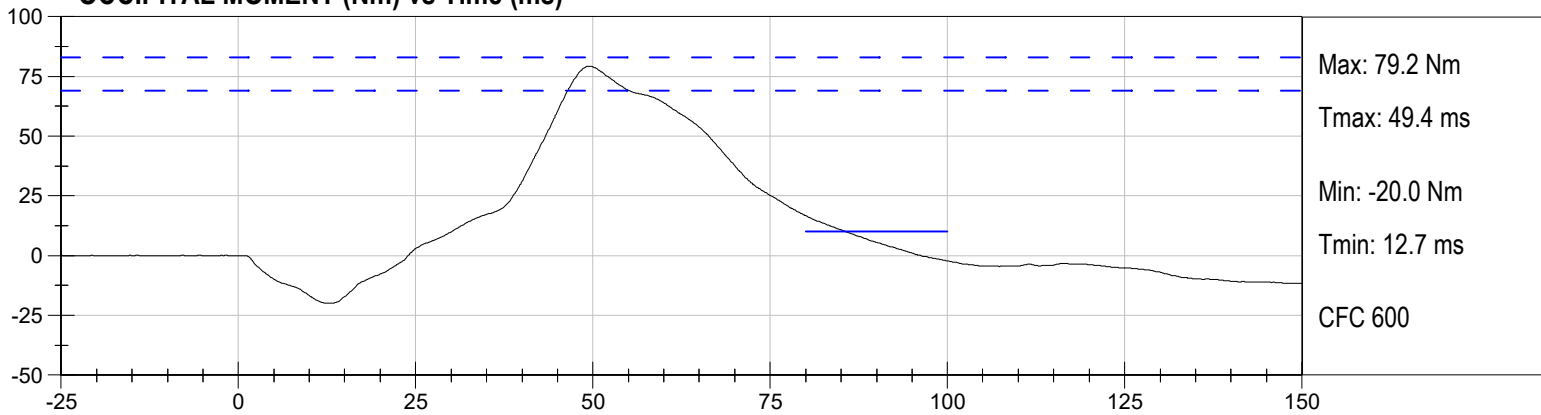
PEND. ACCEL. Velocity (m/s) vs Time (ms)



NECK ROTATION (deg) vs Time (ms)



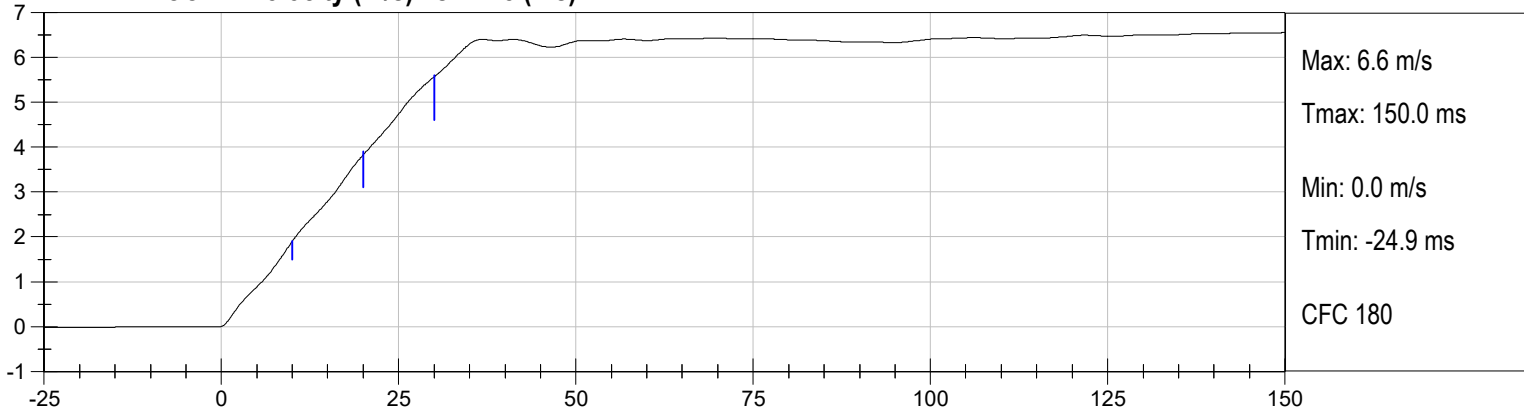
OCCIPITAL MOMENT (Nm) vs Time (ms)



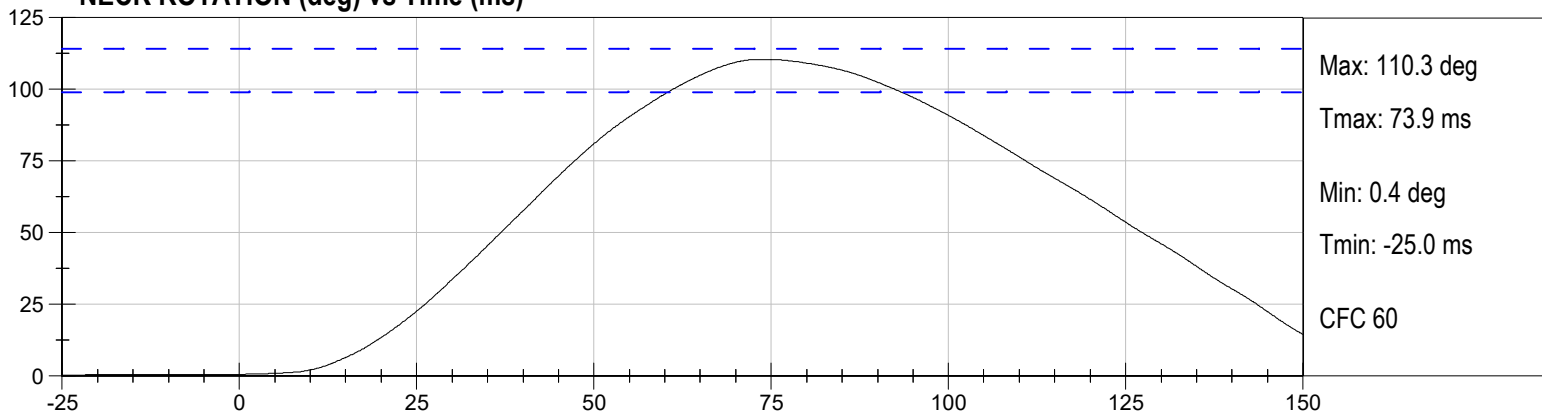
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	45	Pass
Pendulum Velocity	m/s	5.95 to 6.19	6.05	Pass
Pendulum Velocity At 10 ms After T0	m/s	1.5 to 1.9	1.88	Pass
Pendulum Velocity At 20 ms After T0	m/s	3.1 to 3.9	3.81	Pass
Pendulum Velocity At 30 ms After T0	m/s	4.6 to 5.6	5.55	Pass
Maximum "D" Plane Rotation	Deg	99 to 114	110.3	Pass
Occipital Condyle Moment within Rotation Corridor	Nm	-53 to -65	-58	Pass
Negative Moment Time Curve Decay to -10 Nm	ms	94 to 114	104	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
PEND. ACCEL.	Endevco	AH5P1	07/09/2025	1/8/2026
NECK FORCE X	Denton	NG2256FX	07/14/2025	7/14/2026
NECK MOMENT Y	Denton	NG2256MY	07/14/2025	7/14/2026
PEND. POT	Servo	4707	02/25/2025	8/27/2025
HEAD POT	Servo	7297	02/25/2025	8/27/2025

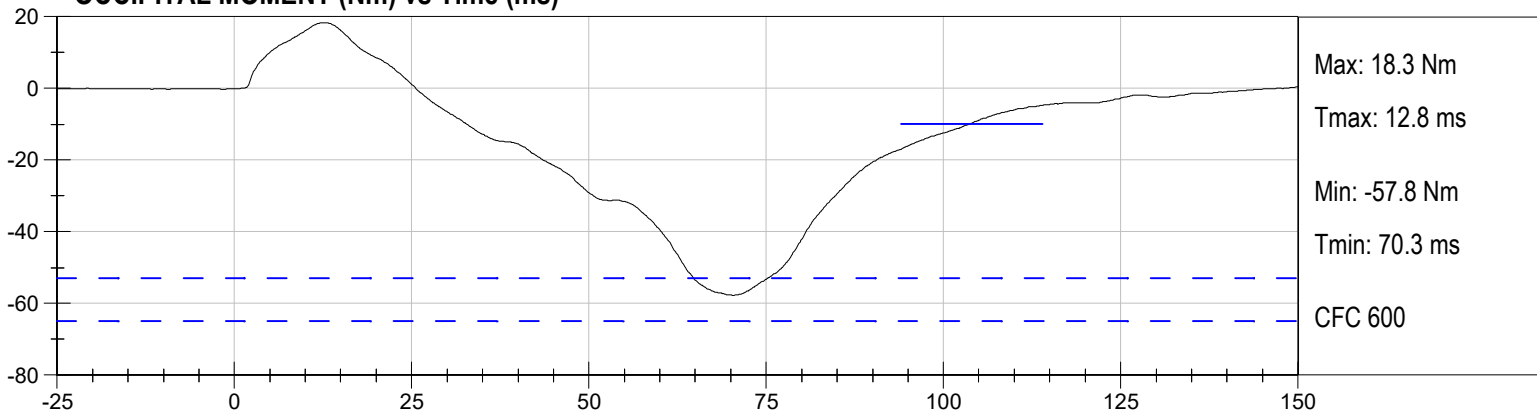
PEND. ACCEL. Velocity (m/s) vs Time (ms)



NECK ROTATION (deg) vs Time (ms)



OCCIPITAL MOMENT (Nm) vs Time (ms)





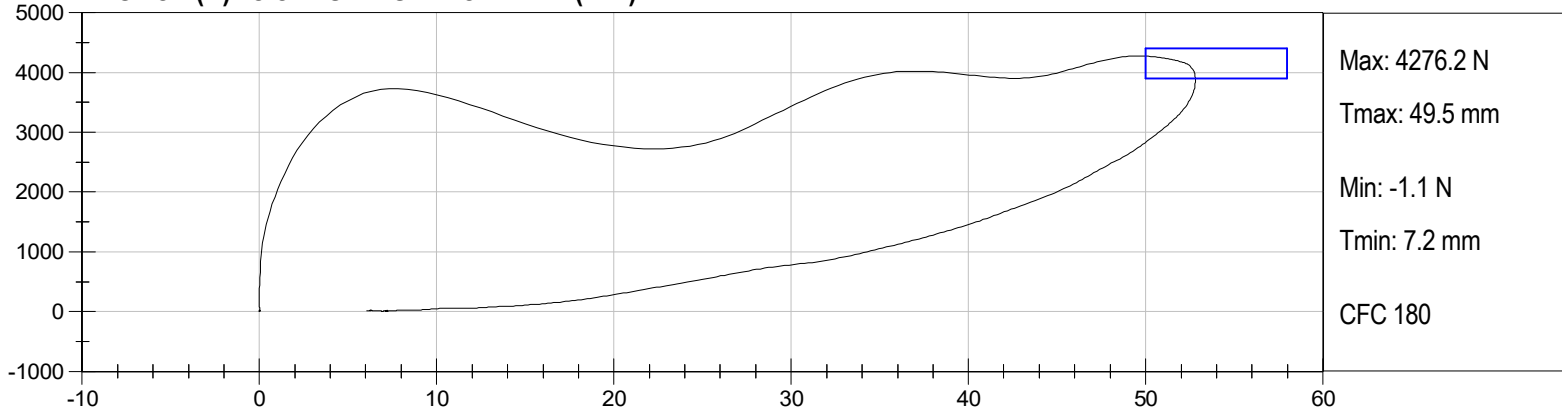
Thorax Impact Test
Hybrid III 5th Percentile Female
ATD Serial No: 142

Test Date: 08/05/2025
Test ID: D252254
Test Technician: Jonah Pulokas

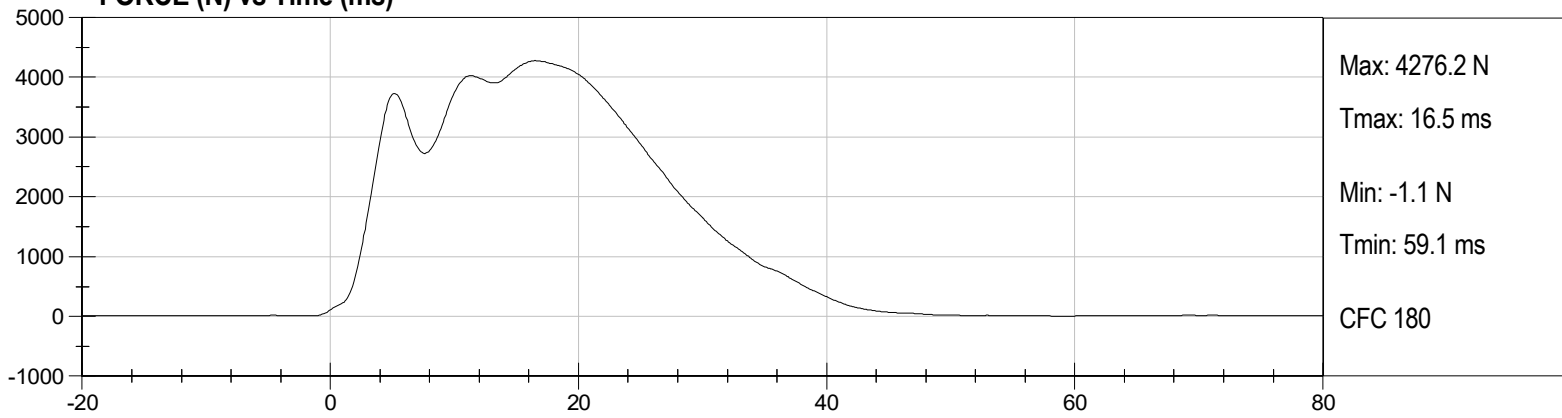
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	44	Pass
Probe Velocity	m/s	6.59 to 6.83	6.77	Pass
Peak Deflection	mm	50 to 58	53	Pass
Peak Resistive Force w/in Corridor	N	3900 to 4400	4272	Pass
Internal Hysteresis	%	69 to 85	74	Pass
Peak Force 18 mm - 50 mm	N	0 to 4600	4276	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
PROBE	Endevco	P79577	03/21/2025	9/20/2025
CHEST DISPLACEMENT	Humanetics	142	04/29/2025	10/29/2025

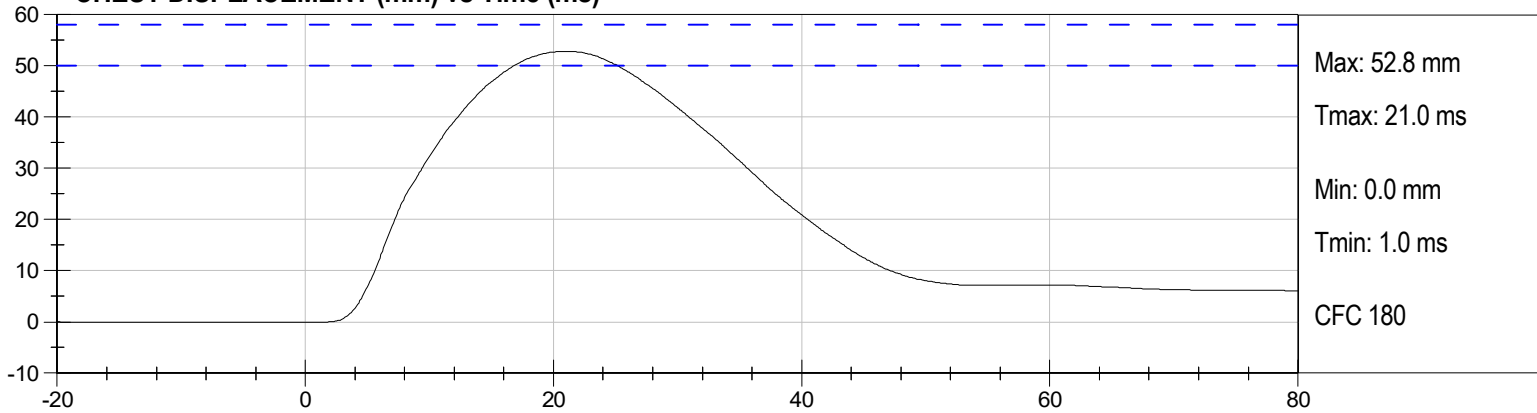
FORCE (N) vs CHEST DISPLACEMENT (mm)



FORCE (N) vs Time (ms)



CHEST DISPLACEMENT (mm) vs Time (ms)



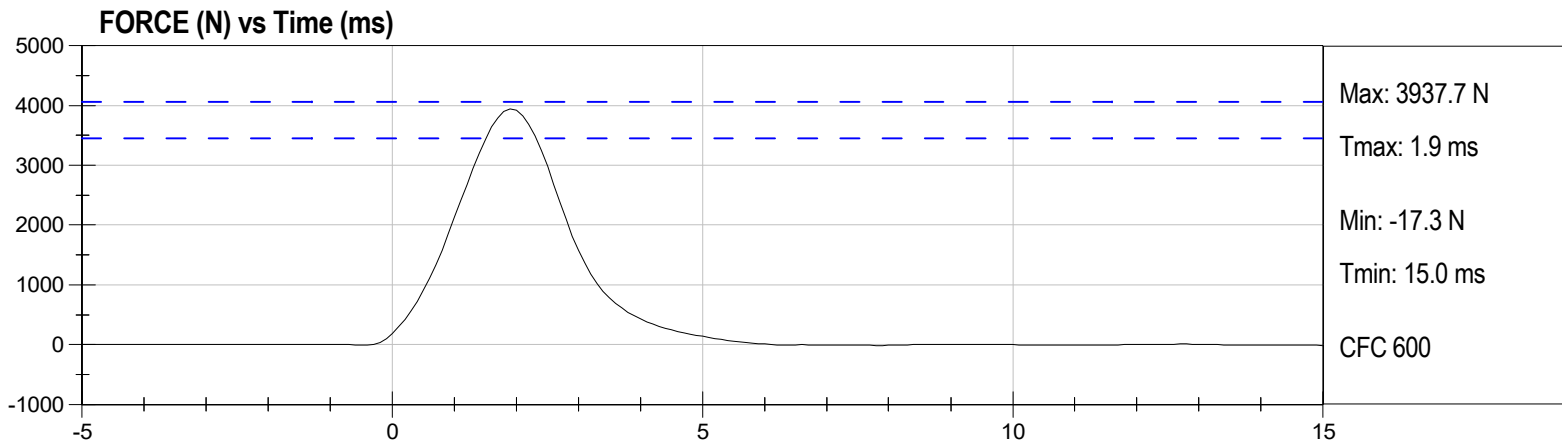


Right Knee Impact Test
Hybrid III 5th Percentile Female
ATD Serial No: 142

Test Date: 08/05/2025
Test ID: D252255
Test Technician: Jonah Pulokas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	47	Pass
Probe Velocity	m/s	2.07 to 2.13	2.12	Pass
Peak Probe Force	N	3450 to 4060	3938	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
KNEE PROBE	Endevco	P82128	05/30/2025	11/29/2025



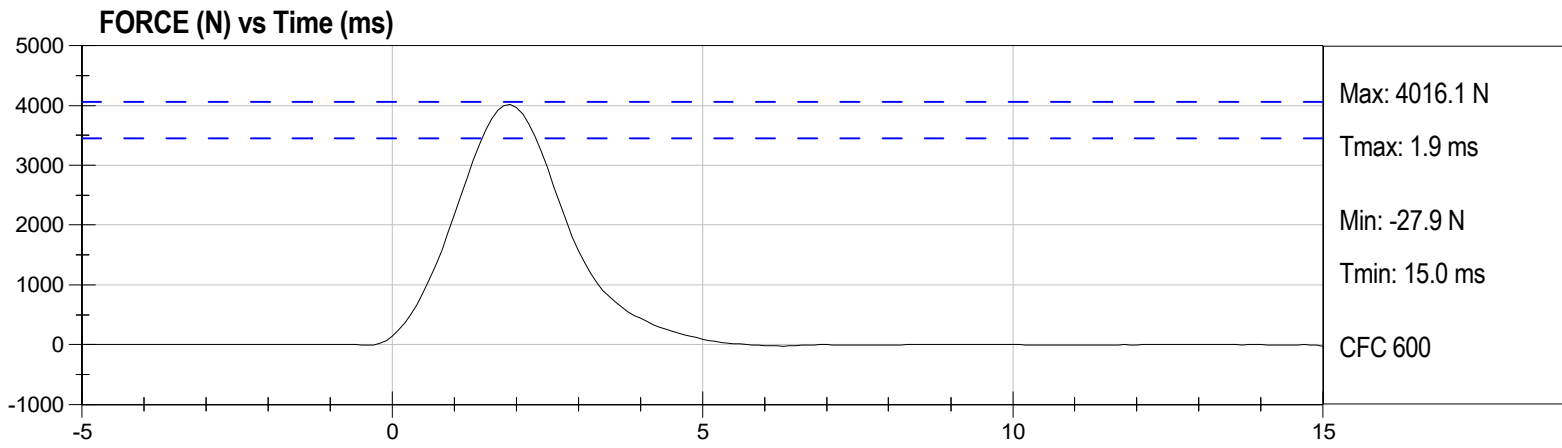


Left Knee Impact Test
Hybrid III 5th Percentile Female
ATD Serial No: 142

Test Date: 08/05/2025
Test ID: D252256
Test Technician: Jonah Pulokas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	46	Pass
Probe Velocity	m/s	2.07 to 2.13	2.11	Pass
Peak Probe Force	N	3450 to 4060	4016	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
KNEE PROBE	Endevco	P82128	05/30/2025	11/29/2025



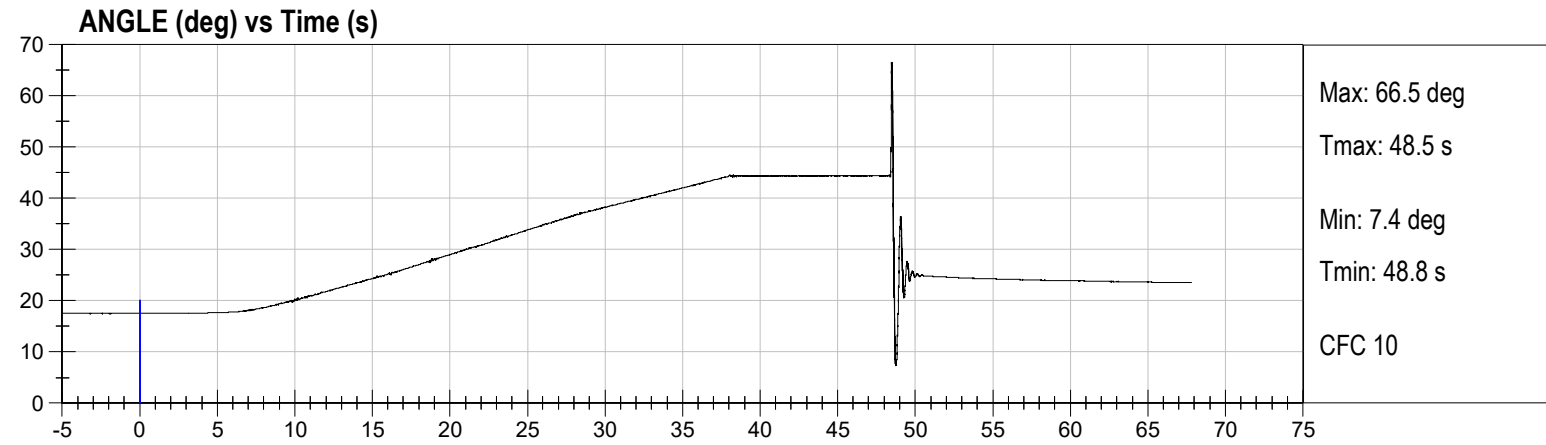
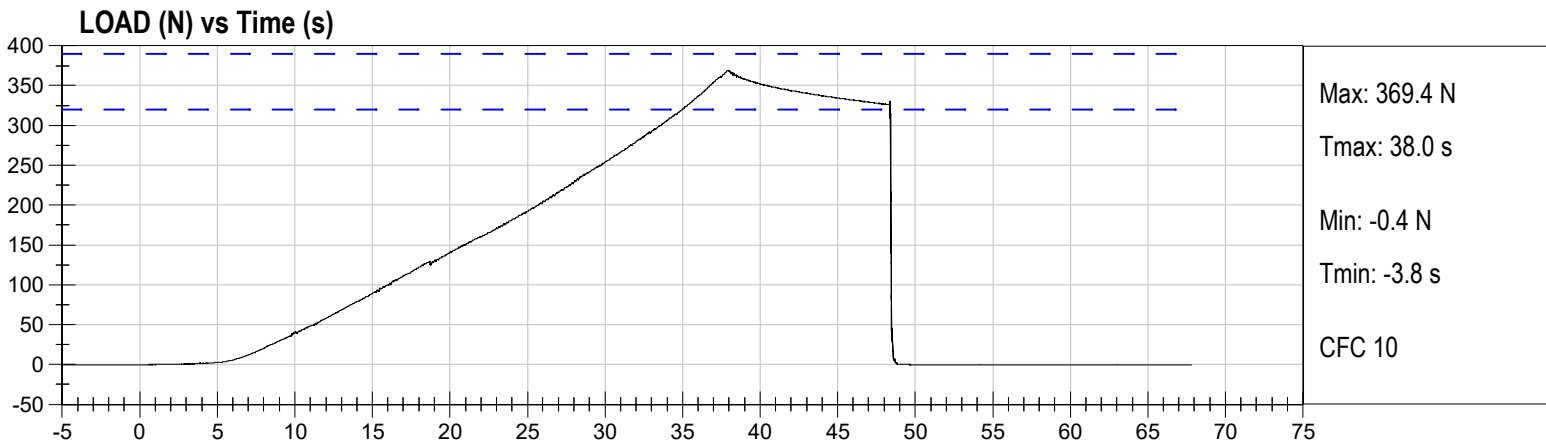


Torso Flexion Test
Hybrid III 5th Percentile Female
ATD Serial No: 142

Test Date: 08/05/2025
Test ID: D252257
Test Technician: Jonah Pulokas

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.0	Pass
Laboratory Relative Humidity	%	10 to 70	43	Pass
Initial Angle	deg	0 to 20	18	Pass
Return Angle Relative to Initial	deg	-8 to 8	4	Pass
Force at 45 deg	N	320 to 390	369	Pass
Upper Torso Deflection Rate	deg/s	0.5 to 1.5	0.9	Pass

Channel	Manufacturer	Serial Number	Calibration Date	Calibration Due Date
LOAD	Interface	479661	08/04/2025	2/3/2026
ANGLE	Seika	494819	06/20/2025	6/20/2026



APPENDIX D
TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION

TABLE 1 – DRIVER DUMMY INSTRUMENTATION

Instrument Location			Axis	Hybrid III 50 th S/N 064		
				Serial Number	Manufacturer	Calibration Date
Head Accelerometers	Primary		X	T30960	05/23/2025	Endevco
			Y	P79743	05/23/2025	Endevco
			Z	P79741	05/23/2025	Endevco
	Redundant		X	P79744	05/23/2025	Endevco
			Y	P94834	05/23/2025	Endevco
			Z	P94856	05/23/2025	Endevco
Head Angular Rate Sensors			X	ARS7325	07/15/2025	DTS
			Y	ARS7340	07/15/2025	DTS
			Z	ARS7354	07/15/2025	DTS
Upper Neck Load Cell		Fx, Fy, Fz Mx, My, Mz	NG2202	05/07/2025	Denton	
Chest Accelerometers	Primary		X	P86793	05/23/2025	Endevco
			Y	P88348	05/23/2025	Endevco
			Z	P86792	05/23/2025	Endevco
	Redundant		X	P88667	05/23/2025	Endevco
			Y	P94109	05/23/2025	Endevco
			Z	P88666	05/23/2025	Endevco
Chest Potentiometer		X	064	05/21/2025	Humanetics	
Pelvis Accelerometers			X	P97742	05/23/2025	Endevco
			Y	P96038	05/23/2025	Endevco
			Z	P95526	05/23/2025	Endevco
Femur Load Cells	Right	Primary	Z	FG121P	05/27/2025	Denton
		Redundant	Z	FG121R	05/27/2025	Denton
	Left	Primary	Z	FG122P	05/27/2025	Denton
		Redundant	Z	FG122R	05/27/2025	Denton
Tibia Load Cells	Right	Upper	Mx, My, Fz	TG405	11/12/2024	Denton
		Lower	Mx, My, Fz	AG368	11/11/2024	Denton
	Left	Upper	Mx, My, Fz	TG475	11/12/2024	Denton
		Lower	Mx, My, Fz	AG504	11/12/2024	Denton
Foot Accelerometers	Right	Rear	X	T22486	05/23/2025	Endevco
			Z	P97382	05/23/2025	Endevco
		Front	Z	P82120	05/23/2025	Endevco
	Left	Rear	X	T16468	05/23/2025	Endevco
			Z	T32154	05/23/2025	Endevco
		Front	Z	T32190	05/23/2025	Endevco
Seat Belt Load Cells		Lap				
		Shoulder				

TABLE 2 – FRONT PASSENGER DUMMY INSTRUMENTATION

Instrument Location			Axis	Hybrid III 5 th S/N 142		
				Serial Number	Manufacturer	Calibration Date
Head Accelerometers	Primary		X	P94799	04/29/2025	Endevco
			Y	P94800	04/29/2025	Endevco
			Z	P94801	04/29/2025	Endevco
	Redundant		X	P94802	04/29/2025	Endevco
			Y	P94803	04/29/2025	Endevco
			Z	P97377	04/29/2025	Endevco
Head Angular Rate Sensors			X	ARS7357	07/15/2025	DTS
			Y	ARS7366	07/15/2025	DTS
			Z	ARS7371	07/15/2025	DTS
Upper Neck Load Cell		Fx, Fy, Fz Mx, My, Mz	NG2256	07/14/2025	Denton	
Chest Accelerometers	Primary		X	P88719	04/29/2025	Endevco
			Y	P94785	04/29/2025	Endevco
			Z	P94793	04/29/2025	Endevco
	Redundant		X	P95322	04/29/2025	Endevco
			Y	P95370	04/29/2025	Endevco
			Z	T30901	04/29/2025	Endevco
Chest Potentiometer		X	142	04/29/2025	Humanetics	
Pelvis Accelerometers			X	P94798	04/29/2025	Endevco
			Y	P82646	04/29/2025	Endevco
			Z	P97705	04/29/2025	Endevco
Femur Load Cells	Right	Primary	Z	FG126P	04/28/2025	Denton
		Redundant	Z	FG126R	04/28/2025	Denton
	Left	Primary	Z	FG127P	04/28/2025	Denton
		Redundant	Z	FG127R	04/28/2025	Denton
Tibia Load Cells	Right	Upper	Mx, My, Fz	TG408	01/17/2025	Denton
		Lower	Mx, My, Fz	AG116	01/17/2025	Denton
	Left	Upper	Mx, My, Fz	TG480	01/17/2025	Denton
		Lower	Mx, My, Fz	AG502	01/17/2025	Denton
Foot Accelerometers	Right	Rear	X	P79770	04/29/2025	Endevco
			Z	P79414	04/29/2025	Endevco
		Front	Z	P79611	04/29/2025	Endevco
	Left	Rear	X	P83167	04/29/2025	Endevco
			Z	P83168	04/29/2025	Endevco
		Front	Z	P83169	04/29/2025	Endevco
Seat Belt Load Cells		Lap				
		Shoulder				

TABLE 3 – VEHICLE INSTRUMENTATION

Instrument Location			Axis	Serial Number	Manufacturer	Calibration Date
Crossmember / Rear Seat Accelerometers	Left	Primary	X	A390957	06/16/2025	MSI
			Z	T42381	07/15/2025	Endevco
		Redundant	X	A391104	06/16/2025	MSI
	Right	Primary	X	T43476	05/06/2025	Endevco
			Z	T43405	04/07/2025	Endevco
		Redundant	X	T42647	06/12/2025	Endevco
Engine Accelerometers		Top	X	A390893	06/16/2025	MSI
		Bottom	X	A395071	06/16/2025	MSI