Report Number: NCAP-KAR-25-005

NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST

TESLA, INC.
2025 TESLA CYBERTRUCK BEAST 4-DOOR TRUCK
NHTSA NUMBER: O20254500

PREPARED BY:
APPLUS+ IDIADA KARCO ENGINEERING, LLC.
9270 HOLLY ROAD
ADELANTO, CA 92301

JUNE 25, 2025

FINAL REPORT

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF CRASHWORTHINESS STANDARDS
MAIL CODE : NRM-100
1200 NEW JERSEY AVE, SE
WASHINGTON, DC 20590

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Approval Date: June 25, 2025

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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Final Report of New Car Assessment Program Frontal Impact Testing of a 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No. O20254500	June 25, 2025
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9. Performing Organization Name and Address Applus+ IDIADA KARCO Engineering, LLC. 9270 Holly Rd. Adelanto, CA 92301	**10. Work Unit No.**
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15. Supplementary Notes

16. Abstract

A 56.3 km/h NCAP Frontal Impact Test was conducted on a 2025 Tesla Cybertruck Beast 4-Door Truck in accordance with the specifications of the Office of Crashworthiness Standards Frontal NCAP Laboratory Test Procedure. The test was conducted at the Applus+ IDIADA KARCO Engineering, LLC. facility in Adelanto, California on June 11, 2025.

The impact velocity of the vehicle was 56.11 km/h and the ambient temperature at the barrier face at the time of impact was 33.3°C. The target vehicle's post-test maximum crush was 330 mm at DPD 5 to the right of the vehicle's centerline. The test vehicle's performance is as follows:

Measurement Description	Units	Driver ATD		Passenger ATD	
		Threshold	Result	Threshold	Result
Head Injury Criteria (HIC_{15})	N/A	700	246.137	700	199.586
Maximum Chest Compression	mm	63	28.001	52	18.259
Nij	N/A	1	0.204	1	0.355
Neck Tension	N	4170	867.187	2620	486.950
Neck Compression	N	4000	179.495	2520	348.934
Left Femur Force	N	10008	104.997	6805	17.335
Right Femur Force	N	10008	227.084	6805	12.714

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56.3 km/h (35 mph) Full Frontal Rigid Barrier Impact Test New Car Assessment Program (NCAP)	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 693JJ919D000004. 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 test was conducted in accordance with the Office of Crashworthiness Standards Laboratory Procedure dated May 2018 for NCAP Full Frontal Rigid Barrier Impact Testing.

SUMMARY

A rigid plywood faced barrier was impacted by a 2025 Tesla Cybertruck Beast 4-Door Truck at a velocity of 56.11 km/h. The test was performed at Applus+ IDIADA KARCO Engineering, LLC. on June 11, 2025. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A of this report.

One (1) real-time camera 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 Data Sheet 6 of this report.

One Part 572E HIII 50th percentile male anthropomorphic test device (ATD) was placed in the driver seating position and one Part 572O HIII 5th percentile female 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 force transducers, right / left femur load cells, and lower leg instrumentation. Seat belt load cells were installed on the driver's and passenger's shoulder belts to measure dummy torso section loading.

The driver (position 1) ATD (Serial No. 360) and the right-front passenger (position 2) ATD (Serial No. DH1644) were qualified prior to this test. Certification details, along with instrumentation calibration data, are found in Appendix C of this report.

The 104 channels of dummy and vehicle response data were recorded on an on-board data acquisition system. Appendix B contains the dummy response data traces. Appendix D contains a complete list of instrumentation used for dummies and the vehicle.

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

The maximum static crush of the test vehicle was 330 mm at DPD 5 to the right of the vehicle's centerline. 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 ATD's head contacted the frontal air bag, and headrest. The upper and lower torso contacted the frontal air bag.

The passenger's visible contact points were as follows: the passenger ATD's head contacted the frontal air bag and headrest. The upper and lower torso contacted the frontal air bag.

The occupant data is summarized below:

ATD Position	HIC_{15}	Nij	Neck Tension (N)	Neck Comp. (N)	3ms Chest Clip (g)	Chest Disp. (mm)	Left Femur (N)	Right Femur (N)
Driver (50th Male)	246.137	0.204	867.187	179.495	42.011	28.001	104.997	227.084
Passenger (5th Female)	199.586	0.355	486.950	348.934	42.781	18.259	17.335	12.714

GENERAL COMMENTS:

- The driver and passenger knee air bags did not deploy. The vehicle manufacturer confirmed that the knee air bags do not deploy by design for this specific test configuration.

SECTION 2

OCCUPANT AND VEHICLE INFORMATION / DATA SHEETS

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

CONVERSION FACTORS

Quantity	Typical Application	Std Units	Metric Unit	Multiply By
Mass	Vehicle Weight	lb	kg	0.4536
Linear Velocity	Impact Velocity	miles/hr	km/hr	1.609344
Length or Distance	Measurements	in	mm	25.4
Volume	Fuel Systems	gal	liter	3.785
Volume	Small Fluids	oz	mL	29.574
Pressure	Tire Pressures	lbf/in^2	kPa	6.895
Temperature	General Use	^oF	^oC	=(Tf -32)/1.8
Force	Dynamic Forces	lbf	N	4.448
Moment	Torque	lbf-ft	N•m	1.355

DATA SHEET NO. 1

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA Number	O20254500
Model Year	2025
Make	Tesla
Model	Cybertruck Beast
Body Style	4-Door Truck
VIN	7G2CEHEE7SA075455
Body Color	Silver Gray Metal
Odometer Reading (km / mi)	18/11
Engine Displacement (L)	NA
Type / No. of Cylinders	NA
Engine Placement	N/A
Transmission Type	1-Speed Direct Drive
Transmission Speeds	1
Overdrive	N/A
Final Drive	AWD
Roof Rack	No
Sunroof / T-Top	No
Running Boards	No
Tilt Steering Wheel	Yes
Power Seats	Yes
Anti-Lock Brakes (ABS)	Yes
Automatic Door Locks (ADLs)	Yes

Traction Control System	Yes
Power Steering	Yes
Power Window Auto-Reverse	Yes
Driver Frontal Airbag	Yes
Driver Curtain Airbag	Yes
Driver Head/Torso Airbag	No
Driver Torso Airbag	No
Driver Torso/Pelvis Airbag	Yes
Driver Pelvis Airbag	No
Driver Knee Airbag	Yes
Front Pass. Frontal Airbag	Yes
Front Pass. Curtain Airbag	Yes
Front Pass. Head/Torso Airbag	No
Front Pass. Torso Airbag	No
Front Pass. Torso/Pelvis Airbag	Yes
Front Pass. Pelvis Airbag	No
Front Pass. Knee Airbag	Yes
Driver Seat Belt Pretensioner	Yes
Driver Load Limiter	Yes
Front Pass. Seat Belt Pretensioner	Yes
Front Pass. Load Limiter	Yes
Other Safety Restraint	Driver Center Air Bag

Does Owner's Manual provide instructions to turn off automatic door locks? No

DATA FROM CERTIFICATION LABEL

Manufactured By	Tesla, Inc.
Date of Manufacture	May-25

GVWR (kg)	4159
GAWR Front (kg)	1930
GAWR Rear (kg)	2380

VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total	
Type of Seats	Bucket	Split Bench			
Designated Seating Capacity	2	3		5	
Capacity Weight (VCW) (kg)				1030.0	*A*
DSC x 68.0 (kg)				340.0	*B*
Cargo Weight (RCLW) (kg)				136.0	

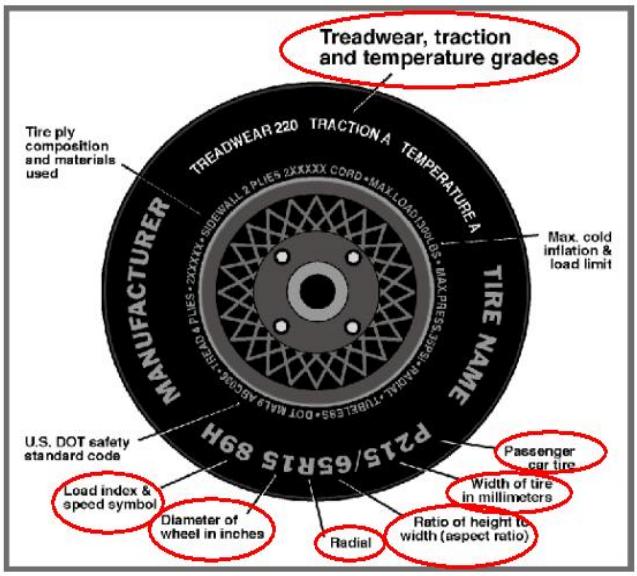
*Maximum RCLW used in testing a truck, MPV, or bus is 136 kg.

DATA SHEET NO. 1 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025



VEHICLE TIRE INFORMATION

Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	450	450
Cold Pressure (kPa)	345	345
Recommended Tire Size	LT 285/65 R20	LT 285/65 R20
Tire Size on Vehicle	LT 285/65 R20	LT 285/65 R20
Tire Manufacturer	Goodyear	Goodyear
Tire Model	Wrangler Territory	Wrangler Territory
Treadwear		
Traction		
Temperature Grades		
Tire Plies Sidewall	2 Polyester	2 Polyester
Tire Plies Body	2 Polyester, 2 Steel, 1 Polyamide	2 Polyester, 2 Steel, 1 Polyamide
Load Index / Speed Symbol	123/120 H	123/120 H
Tire Material	Rubber	Rubber
DOT Safety Code Left	1PJ3F A8IV 2924	1PJ3F A8IV 2924
DOT Safety Code Right	1PJ3F A8IV 2924	1PJ3F A8IV 2924

DATA SHEET NO. 1 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	718.0	847.0		808.5	899.5	
Right	kg	781.0	769.0		776.5	901.0	
Ratio	%	48.1%	51.9%	100.0%	46.8%	53.2%	100.0%
Total	kg	1499.0	1616.0	3115.0	1585.0	1800.5	3385.5

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total Delivered Weight (UVW)	kg	3115.0	A
Weight of 1 P572E ATD & 1 P572O ATD	kg	141.0	B
Rated Cargo/Luggage Weight (RCLW)	kg	136.0	C
Calculated Vehicle Target Weight (TVTW)	kg	3392.0	A+B+C

TEST VEHICLE ATTITUDES

Condition	Units	LF	RF	LR	RR	CG Aft of Front Axle
As Delivered	mm	940	940	960	960	1890
As Tested	mm	977	981	1002	998	1949
Post-Test	mm			975	995	

GENERAL TEST VEHICLE DATA

Measurement Description	Units	Value
Total Vehicle Wheelbase	mm	3638
Total Vehicle Length at Left Side	mm	5295
Total Vehicle Length at Centerline	mm	5662
Total Vehicle Length at Right Side	mm	5296
Weight of Ballast in Cargo Area	kg	49.0
Weight of Vehicle Components Removed	kg	0.0
Amount of Stoddard Solvent in Fuel Tank	L	N/A

VEHICLE COMPONENTS REMOVED TO MEET TEST WEIGHT:

No components were removed.

DATA SHEET NO. 1 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

TARGET VEHICLE STRUCTURAL MEASUREMENTS

No.	Description	Pre-Test
1	Total Length	5662
2	Total Width	2073
3	Bumper Top Height	675
4	Bumper Bottom Height	590
5	Longitudinal Member Top Height	520
6	Distance Between Longitudinal Members	1040
7	Longitudinal Member Width	30
8	Engine Top Height	724
9	Engine Bottom Height	725
10	Engine and Gearbox Width	2010
11	Front Bumper to Engine Distance	305
12	Front Shock Absorber Fixing Height	943
13	Bonnet Leading Edge Height	961
14	Front Shock Absorber Fixing Width	1594
15	Front Bumper to Front Axle Distance	859
16	Front Axle to A-Pillar Distance	702
17	A-Pillar to B-Pillar Distance	970
18	B-Pillar to Rear Axle Distance	1966
19	B-Pillar to C-Pillar Distance	993
20	Roof Sill Bottom Height	1765
21	Roof Sill Top Height	1816
22	Floor Sill Bottom Height	442
23	Floor Sill Top Height	489

All measurements in millimeters.

DATA SHEET NO. 2

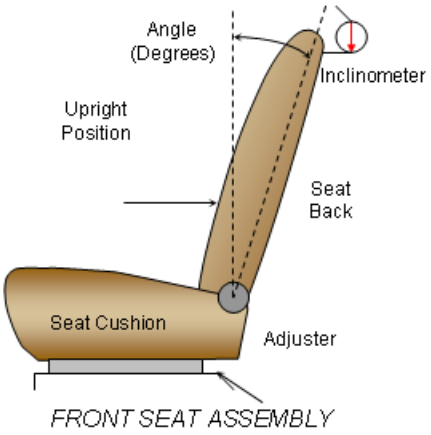
SEAT ADJUSTMENT, FUEL SYSTEM, AND STEERING WHEEL DATA

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

NOMINAL DESIGN RIDING POSITION

The procedure for the driver is as follows: the seat back is set to the manufacturer's designated angle. The procedure for the passenger is as follows: the seat back is set to position the transverse instrumentation platform of the dummy's head at 0° ± 0.5°. Seat back angle is measured at the headrest post.

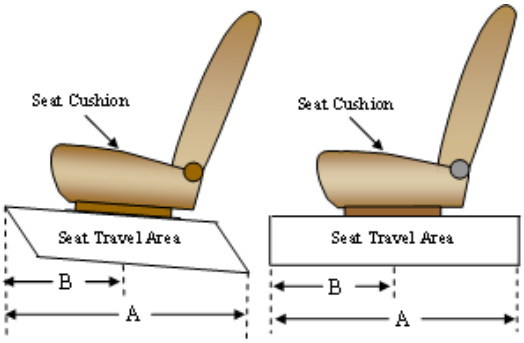


SEAT BACK ANGLE

Seating Position	Degrees
Driver Seat Back Angle	18.0
Passenger Seat Back Angle	16.8

SEAT FORE / AFT POSITIONING

The total seat travel is measured from the forward most possible position to the rear most possible position. The driver's seat is set to the middle of the fore-aft travel. The passenger's seat is set to the forward most position where the ATD will not contact any interior panels.



SEAT FORE/AFT POSITIONS

Seating Position	Total Fore-Aft Travel	Placed in Position
Driver Seat	320	160
Passenger Seat	320	0

SEAT BELT UPPER ANCHORAGE

The seat belt upper anchorage is positioned to the manufacturer's design position for a 50th percentile adult male ATD for the driver, and a 5th percentile adult female ATD for the passenger. Position "L" is the lowermost position, followed by position "M1". Position "H" is the uppermost position.

SEAT BELT UPPER ANCHORAGES

Seating Position	Total No. of Positions	Placed in Position
Driver Seat	4	H
Passenger Seat	4	H

DATA SHEET NO. 2 … (CONTINUED)

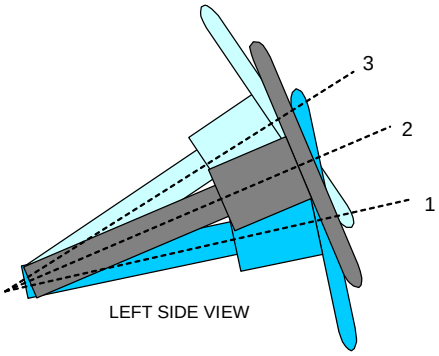
SEAT ADJUSTMENT, FUEL SYSTEM, AND STEERING WHEEL DATA

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

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. A digital inclinometer is used to measure a plate which is placed across the rim of the steering wheel for angular measurements.



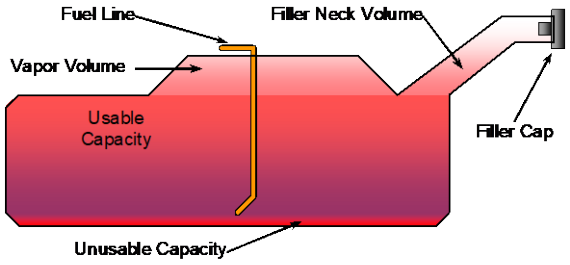
STEERING COLUMN ASSEMBLY

STEERING COLUMN POSITIONING

	Degrees	Fore-Aft Position (mm)
Lowermost Position, No. 1	19.4	0
Geometric Center Position, No. 2	21.5	29.0
Uppermost Position, No. 3	23.6	58
Telescoping Steering Wheel Travel		58
Test Position	21.5	29.0

FUEL PUMP

The vehicle is an electric vehicle, does not have a fuel pump.



VEHICLE FUEL TANK ASSEMBLY

FUEL TANK CAPACITY

Description	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	
Usable Capacity of "Optional Tank" (see Form No. 1)	
Usable Capacity of "Standard Tank" (see Owner's Manual)	
Usable Capacity of "Optional Tank" (see Owner's Manual)	
93% of Usable Capacity	
Actual Amount of Solvent Used in Test	
1/3 of Usable Capacity	

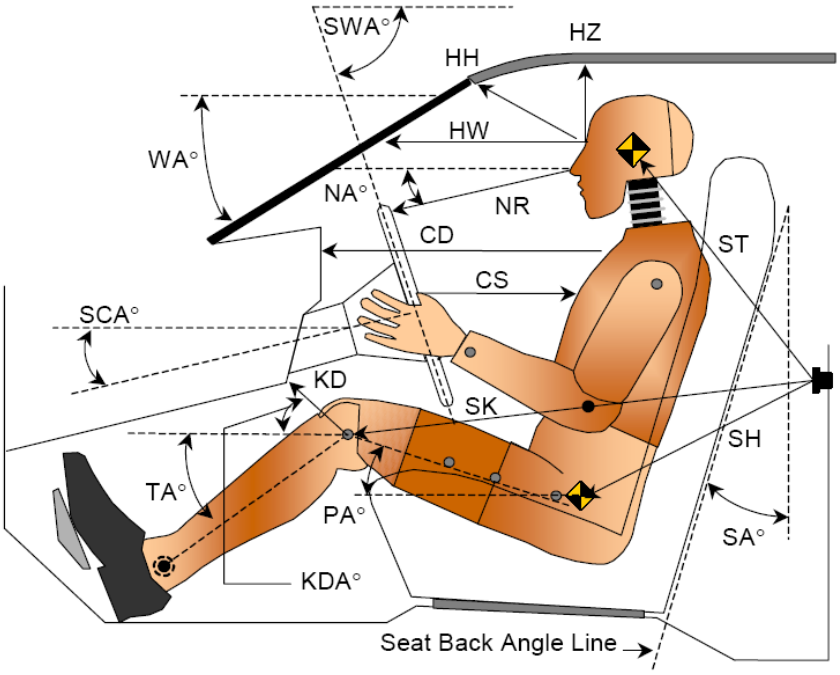
Is the Actual Amount of Solvent Used in the test equal to 93% ± 1% of the Usable Capacity stated in the Form No. 1? ☐ **Yes** ☐ **No**

DATA SHEET NO. 3

DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025



LEFT SIDE VIEW

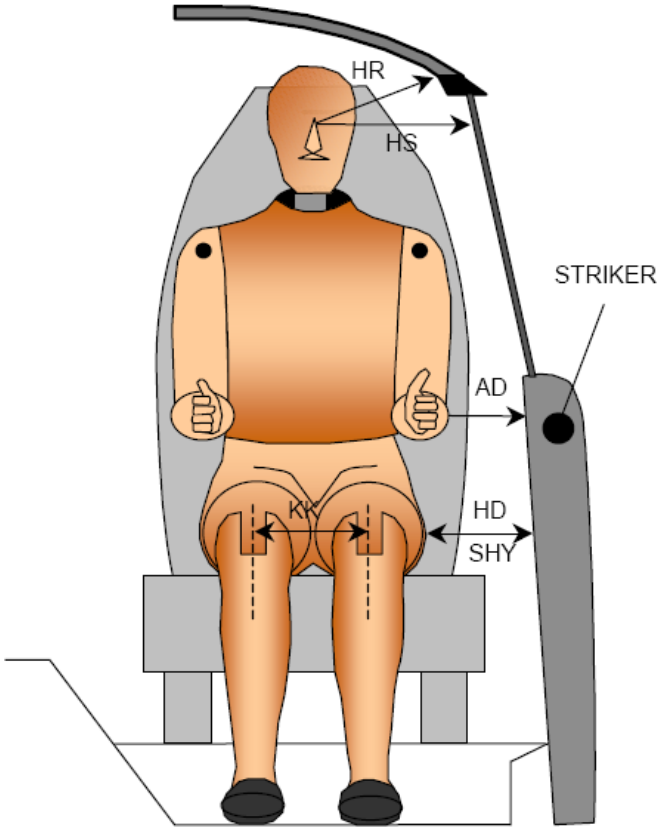
Code	Measurement Description	Driver		Passenger	
		Length (mm)	Angle (°)	Length (mm)	Angle (°)
WA°	Windshield Angle		18.7		
SWA°	Steering Wheel Angle		56.3		
SCA°	Steering Column Angle		33.7		
SA°	Seat Back Angle (On Seatback)		18.1		16.8
HZ	Head to Roof	219	90.0	315	90.0
HH	Head to Header	300	60.8	310	88.0
HW	Head to Windshield	875	0.0	835	0.0
NR	Nose to Rim	400	15.0	458	26.4
CD	Chest to Dash	605	0.0	510	0.0
CS	Chest to Steering Hub	310	0.0		
RA	Rim to Abdomen	258	0.0		
KDL	Left Knee to Dash	245	21.7	197	25.5
KDR	Right Knee to Dash	216	34.2	206	22.3
PA°	Pelvic Angle		23.4		19.1
TA°	Tibia Angle		54.1		54.8
SK	Striker to Knee	656	2.2	764	5.1
ST	Striker to Head	637	80.1	633	64.4
SH	Striker to H-Point	310	31.7	399	17.0

DATA SHEET NO. 4

DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025



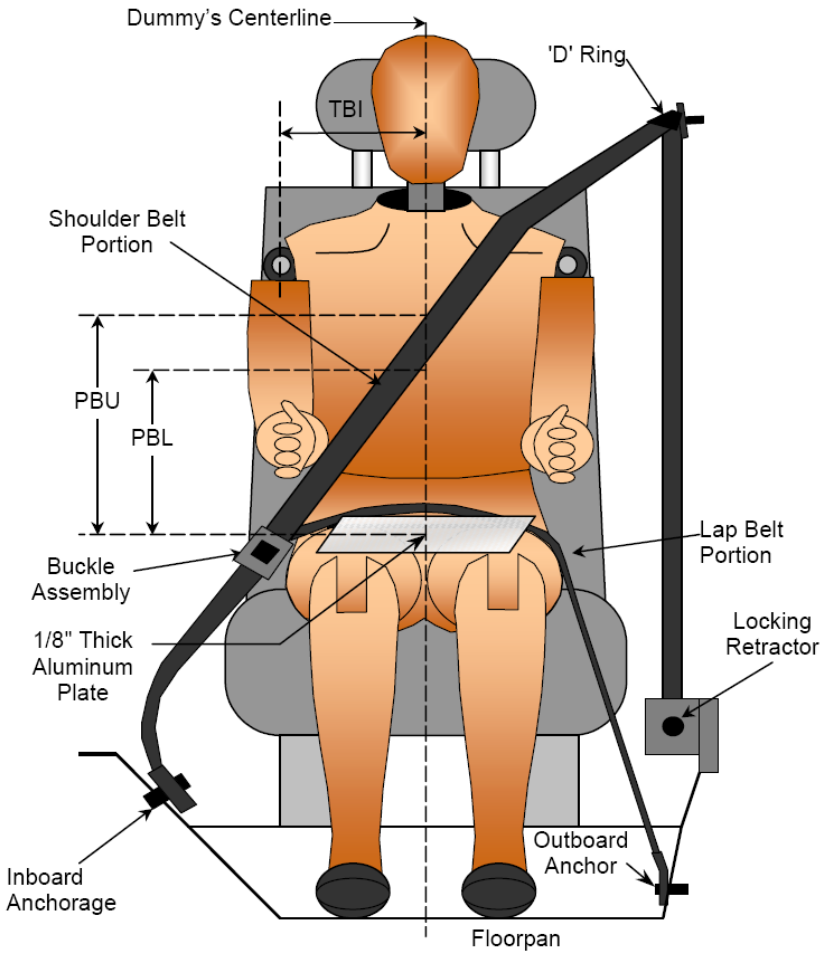
Code	Description	Driver (mm)	Passenger (mm)
AD	Arm to Door	75	100
HD	H-Point to Door	162	195
HR	Head to Side Header	344	365
HS	Head to Side Window	400	430
KK	Knee to Knee	320	170
AA	Ankle to Ankle	335	175

DATA SHEET NO. 5

SEAT BELT POSITIONING DATA

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025



FRONT VIEW OF DUMMY

SEAT BELT POSITIONING MEASUREMENTS

Code	Measurement Description	Units	Driver	Passenger
PBU	Top Surface of Aluminum Plate to Belt Upper Edge	mm	320	280
PBL	Top Surface of Aluminum Plate to Belt Lower Edge	mm	240	195

BELT LENGTH DATA

Measurement Description	Units	Driver	Passenger
Shoulder Belt Length as Measured on ATD	mm	1005	1000
Lap Belt Length as Measured on ATD	mm	470	433
Remainder of Belt on Reel	mm	749	795
Total Belt Length for Continuous Webbing Systems	mm	2224	2228

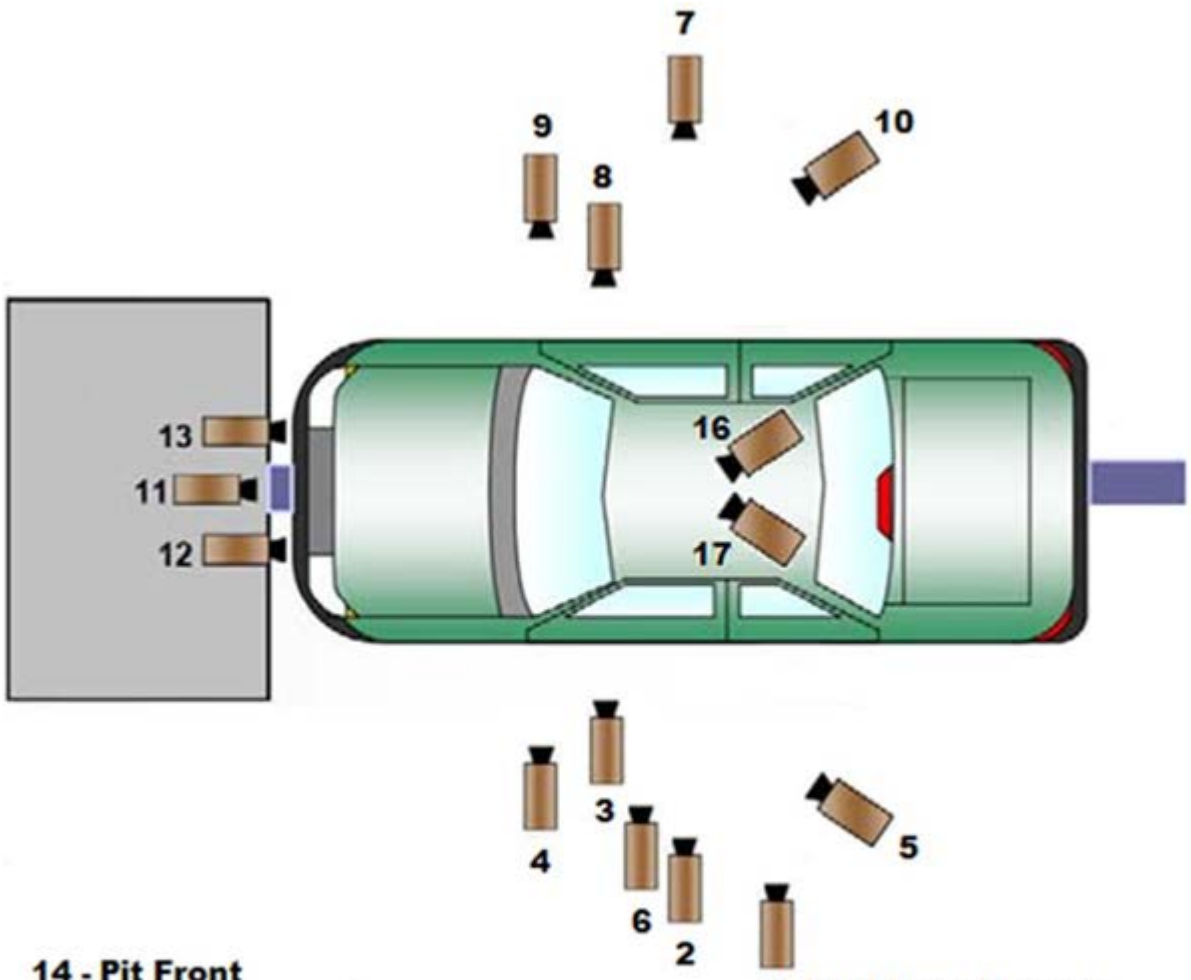
DATA SHEET NO. 6

HIGH-SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

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 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

CAMERA LOCATIONS

No.	Description	Location (mm)			Lens (mm)	Speed (fps)
		X	Y	Z		
1	Real-Time Left Overall	-11412	-8150	-1484		30
2	Left Overall	-2456	-7975	-1025	20	1000
3	Driver Close-Up	-2590	-7950	-1371	50	1000
4	Left Front Half	-1701	-6197	-1701	35	1000
5	Left Angle	-6696	-10308	-3211	105	1000
6	Steering Column	-1966	-10412	-3688	35	1000
7	Right Overall	-2336	7569	-1012	20	1000
8	Passenger Close-Up	-1733	7581	-1408	50	1000
9	Right Front Half	-1600	8214	-1811	35	1000
10	Right Angle	-6217	9516	-4830	85	1000
11	Windshield	-354	0	-5749	28	1000
12	Driver Windshield	297	-366	-2460	24	1000
13	Passenger Windshield	297	366	-2460	24	1000
14	Pit Front	-756	0	1495	21	1000
15	Pit Rear	-3398	0	1495	15	1000
16	Driver Onboard	-1250	-275	-1510	8	1000
17	Passenger Onboard	-1250	275	-1510	8	1000

Coordinates: +X = forward impact plane

+Y = right of monorail center

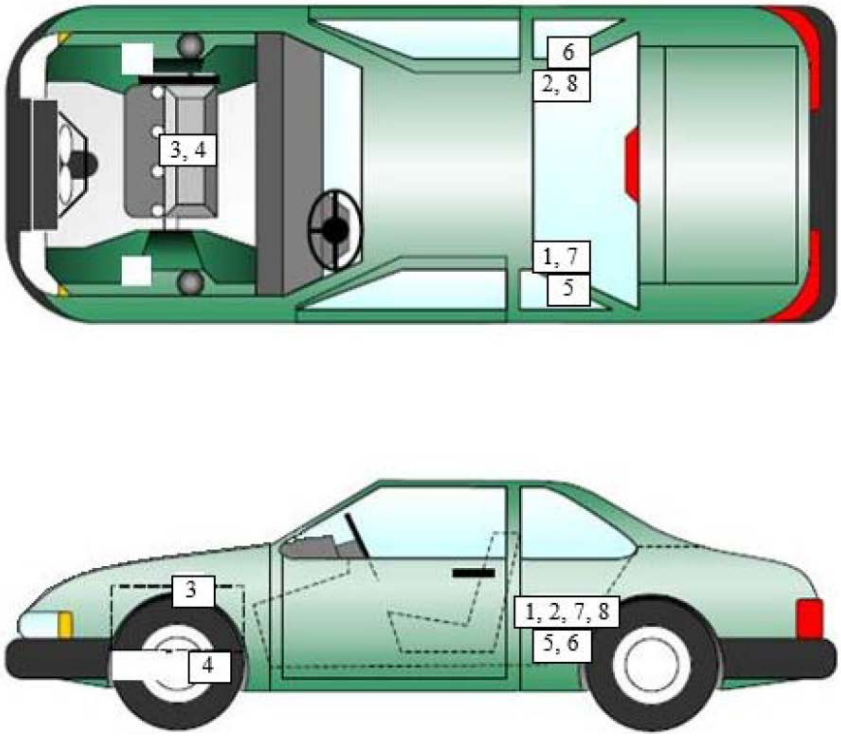
+Z = into ground

DATA SHEET NO. 7

VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025



VEHICLE ACCELEROMETER PRE-TEST LOCATIONS

No.	Description	Location		
		X	Y	Z
1	Left Rear Accelerometer X-Direction	2350	-855	-537
2	Right Rear Accelerometer X-Direction	2350	855	-537
3	Engine Top X	5500	270	-1110
4	Engine Bottom X	4850	-265	-645
5	Left Rear Accelerometer Z-Direction	2350	-855	-537
6	Right Rear Accelerometer Z-Direction	2350	855	-537
7	Left Rear Accelerometer X-Direction Redundant	2350	-855	-537
8	Right Rear Accelerometer X-Direction Redundant	2350	855	-537

Reference Points: X – Rear Surface of Vehicle (+ forward)

Y – Vehicle Centerline (+ to right)

Z – Ground Plane (+ down)

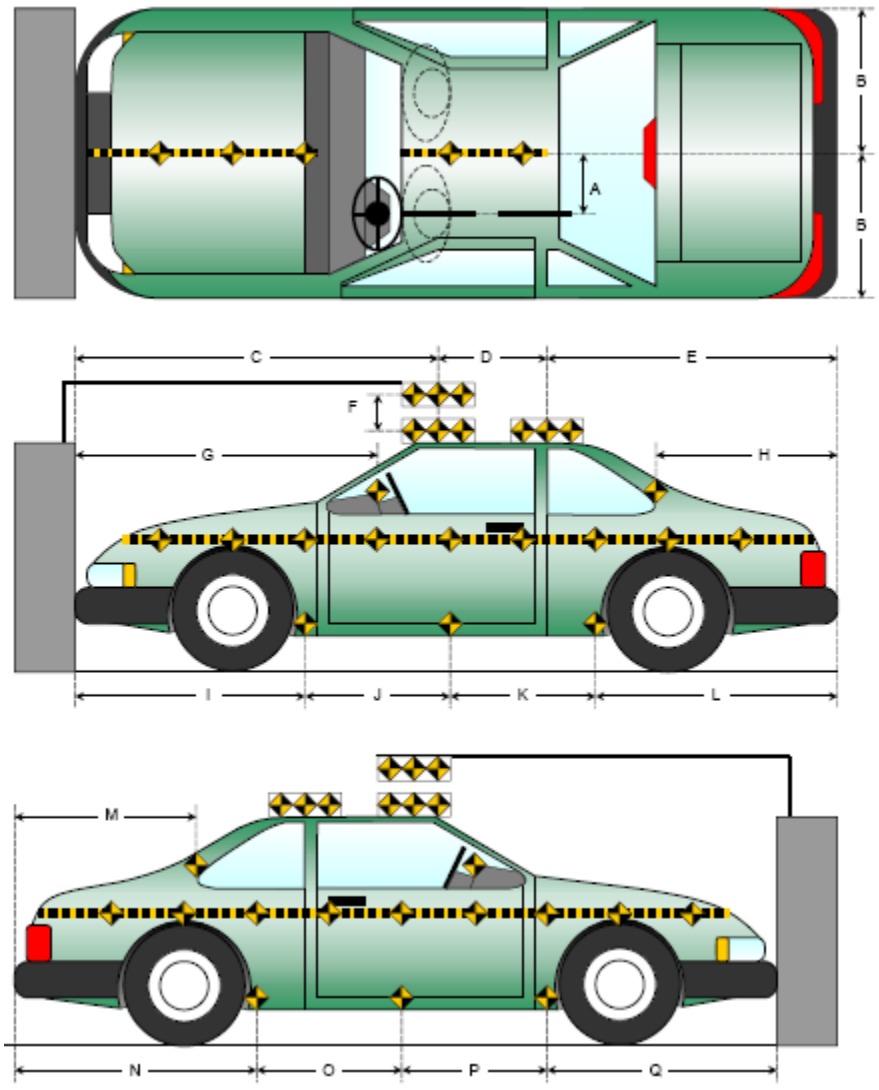
DATA SHEET NO. 8

PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

Item	Value
A	430
B	1024
C	2053
D	653
E	2957
F	328
G	1860
H	1993
I	1342
J	1252
K	1268
L	1800
M	1993
N	1800
O	1268
P	1252
Q	1342



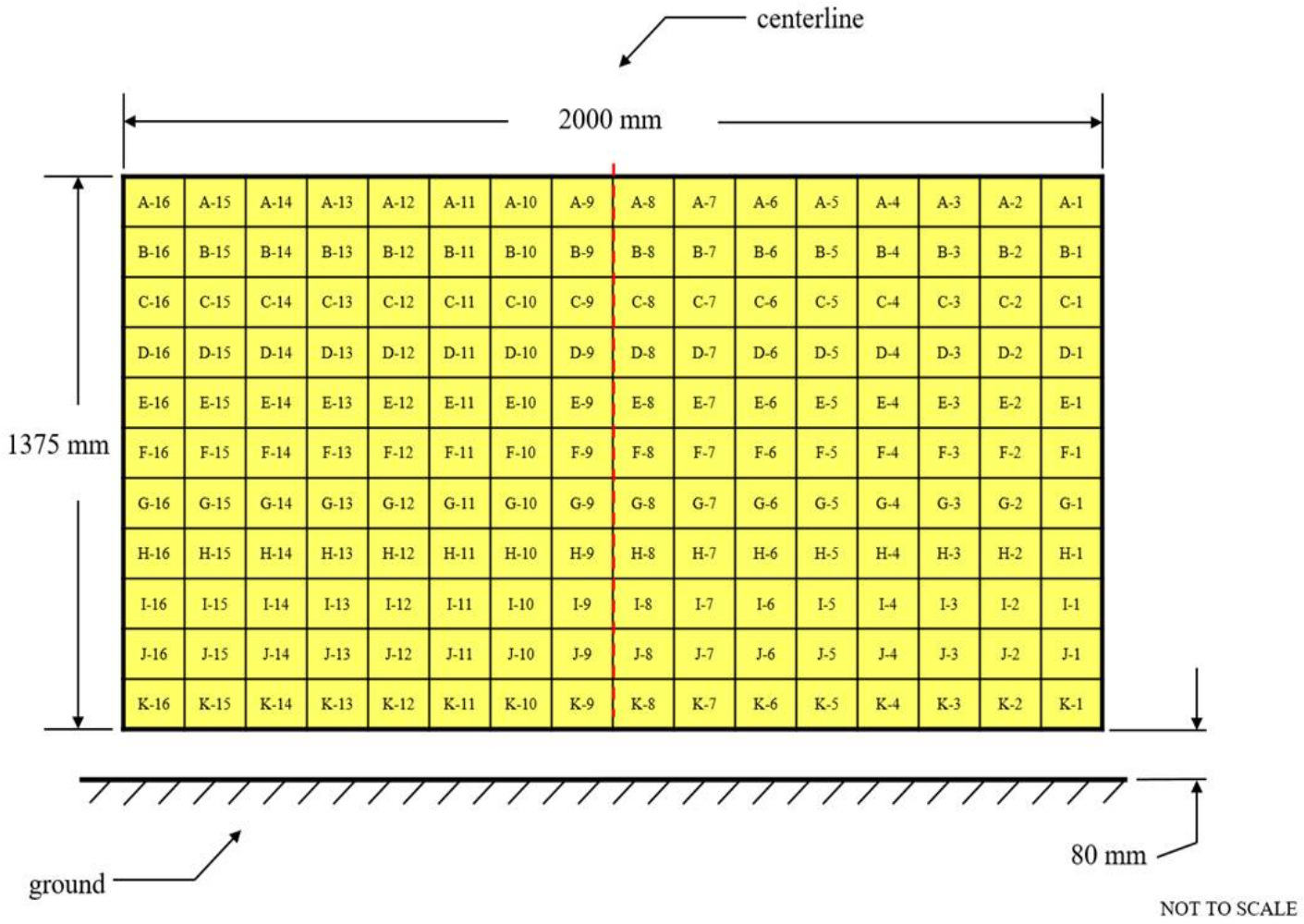
All measurements in millimeters.

DATA SHEET NO. 9

LOAD CELL LOCATIONS ON FIXED BARRIER

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025



DATA SHEET NO. 10

TEST VEHICLE SUMMARY OF RESULTS

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

INSTRUMENTATION

Driver Dummy Sensors	47
Passenger Dummy Sensors	47
Vehicle Structure Accelerometers	8
Seat Belt Load Cells	2
Load Cell Barrier	
Total	104

CAMERA COVERAGE

High-Speed Vehicle On Board	2
High-Speed Off Board	14
Real Time	1
Total	17

DATA SHEET NO. 11

POST-TEST OBSERVATIONS

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

TEST DUMMY INFORMATION AND CONTACT LOCATIONS

Description	Driver	Passenger
Dummy Type/Serial No.	HIII 50th Percentile Male ATD / 360	HIII 5th Percentile Female ATD / DH1644
Head Contact	Frontal Air Bag, Headrest	Frontal Air Bag, Headrest
Upper Torso Contact	Frontal Air Bag	Frontal Air Bag
Lower Torso Contact	Frontal Air Bag	Frontal Air Bag
Left Knee Contact	None	None
Right Knee Contact	None	None

DOOR OPENING, TRUNK OPENING, AND SEAT TRACK INFORMATION

Description	Driver	Passenger
Locked / Unlocked Doors	Unlocked	Unlocked
Front Door Opening	Remained closed, latched, and operational	Remained closed, latched, and operational
Rear Door Opening	Remained closed, latched, and operational	Remained closed, latched, and operational
Trunk/Hatch/Tailgate Opening	Remained closed, latched, and operational	
Seat Track Shift (mm)	N/A	N/A
Seat Back Movement from Initial Position	None	None

OTHER VEHICLE POST-TEST OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Windshield Damage	Cracked
Window Damage	Small side window shattered
Other Notable Effects	None

VEHICLE REBOUND FROM BARRIER

Measured Parameter	Units	Value
Left Side	mm	3848
Center	mm	3278
Right Side	mm	3929
Average	mm	3685

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Driver		Passenger	
	Installed	Operated	Installed	Operated
Front Air Bag	Yes	Yes	Yes	Yes
Side Air Bag 1 (Curtain)	Yes	No	Yes	No
Side Air Bag 2 (Torso/Pelvis)	Yes	No	Yes	No
Knee Air Bag	Yes	No*	Yes	No*
Seat Belt Pretensioner	Yes	Yes	Yes	Yes
Seat Belt Load Limiter	Yes	Yes	Yes	Yes
Other (Center Air Bag)	Yes	No		

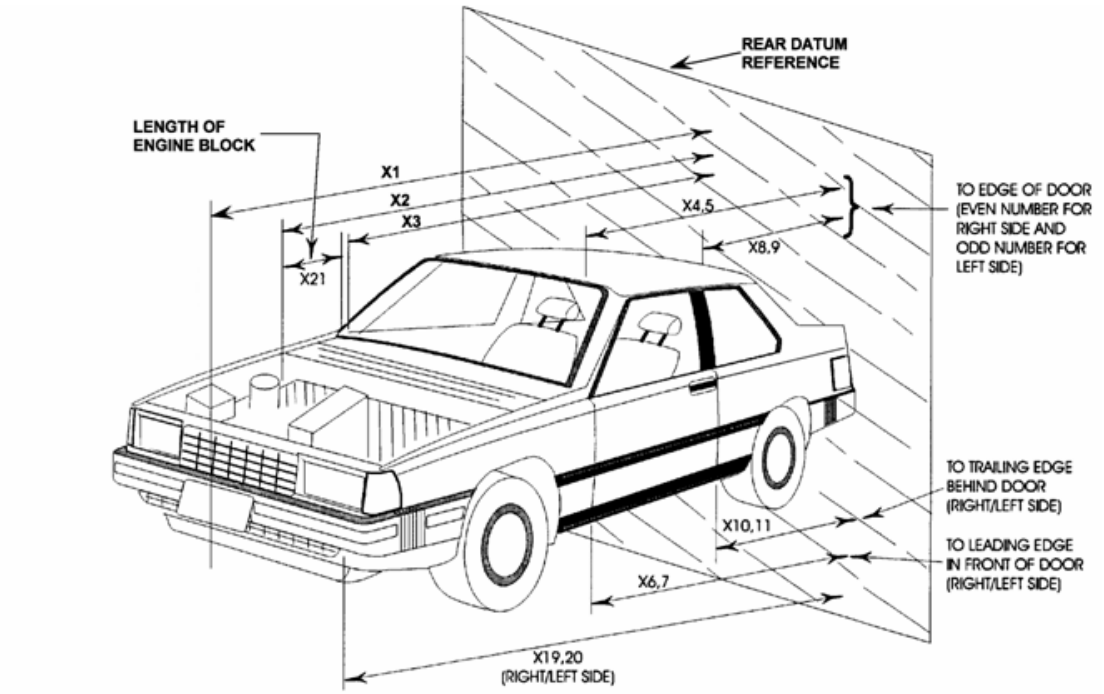
*Knee air bag did not deploy by design.

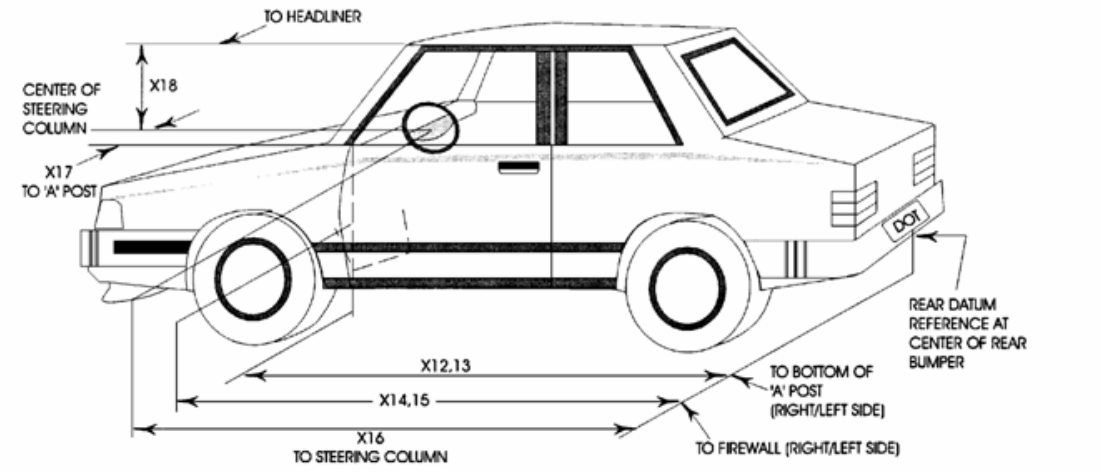
DATA SHEET NO. 12

VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025





DATA SHEET NO. 12 … (CONTINUED)

VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

No.	Description	Pre-Test	Post-Test	Change
1	Total Length of Vehicle at Centerline	5662	5373	-289
2	Rear Surface of Vehicle to Front of Engine	5870	5661	-209
3	RSOV to Firewall	4275	4287	12
4	RSOV to Upper Leading Edge of Right Door	4119	4123	4
5	RSOV to Upper Leading Edge of Left Door	4119	4116	-3
6	RSOV to Lower Leading Edge of Right Door	4142	4146	4
7	RSOV to Lower Leading Edge of Left Door	4142	4142	0
8	RSOV to Upper Trailing Edge of Right Door	3020	3030	10
9	RSOV to Upper Trailing Edge of Left Door	3020	3023	3
10	RSOV to Lower Trailing Edge of Right Door	3057	3066	9
11	RSOV to Lower Trailing Edge of Left Door	3057	3058	1
12	RSOV to Bottom of A-Pillar, Right Side	4079	4086	7
13	RSOV to Bottom of A-Pillar, Left Side	4079	4078	-1
14	RSOV to Firewall, Right Side	4280	4292	12
15	RSOV to Firewall, Left Side	4280	4305	25
16	RSOV to Steering Column	3693	3746	53
17	Center of Steering Column to A-Pillar	386	332	-54
18	Center of Steering Column to Headliner	562	578	16
19	RSOV to Right Side of Front Bumper	5389	5282	-107
20	RSOV to Left Side of Front Bumper	5389	5237	-152
21	Length of Engine Block	0	0	0
RD	RSOV to Right Side of Dash Panel	3892	3904	12
CD	RSOV to Center of Dash Panel	3885	3898	13
LD	RSOV to Left Side of Dash Panel	3892	3902	10

All measurements in millimeters.

DATA SHEET NO. 13

ACCIDENT INVESTIGATION DIVISION DATA

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

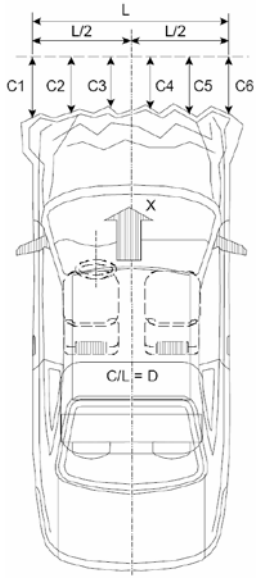
VEHICLE INFORMATION

VIN:	7G2CEHEE7SA075455	Wheelbase (mm):	3638
Vehicle Size Category:	Truck	Test Weight (kg):	3385.5

ACCELEROMETER DATA

Accelerometer Locations:	Left Rear Crossmember
Cal. Procedure/Interval:	Vibration Test / 6 months
Integration Algorithm:	NHTSA Standard
Impact Velocity (km/h):	56.11
Velocity Change (km/h):	64.81
Time of Separation (msec):	76.80

Linearity: Good



CRUSH PROFILE

Collision Deformation Classification:	12FDEW3
Midpoint of Damage:	Vehicle Centerline
Damage Region Length (mm):	1866
Impact Mode:	Full Frontal

No.	Measurement Description	Units	Pre-Test	Post-Test	Crush
C1	Crush Zone 1 at Left Side	mm	2243	2087	156
C2	Crush Zone 2 at Left Side	mm	2430	2143	287
C3	Crush Zone 3 at Left Side	mm	2496	2169	327
C4	Crush Zone 4 at Right Side	mm	2498	2199	299
C5	Crush Zone 5 at Right Side	mm	2430	2100	330
C6	Crush Zone 6 at Right Side	mm	2245	2132	113
L	C1 to C6	mm	1866		

DATA SHEET NO. 14

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

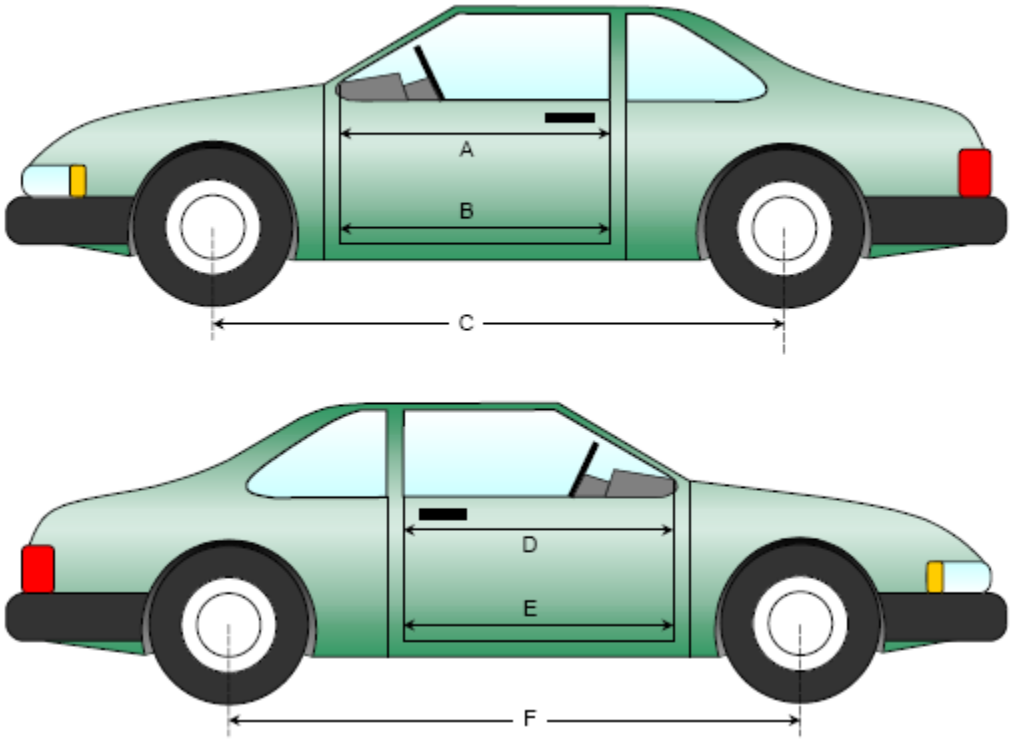
Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

DOOR OPENING WIDTH

Item	Description	Units	Pre-Test	Post-Test	Change
A	Left Side Upper	mm	1096	1093	-3
B	Left Side Lower	mm	1083	1085	2
D	Right Side Upper	mm	1096	1094	-2
E	Right Side Lower	mm	1083	1080	-3

WHEELBASE MEASUREMENTS

Item	Description	Units	Pre-Test	Post-Test	Change
C	Left Side Wheelbase	mm	3638	3536	-102
F	Right Side Wheelbase	mm	3638	3572	-66



DATA SHEET NO. 14 … (CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

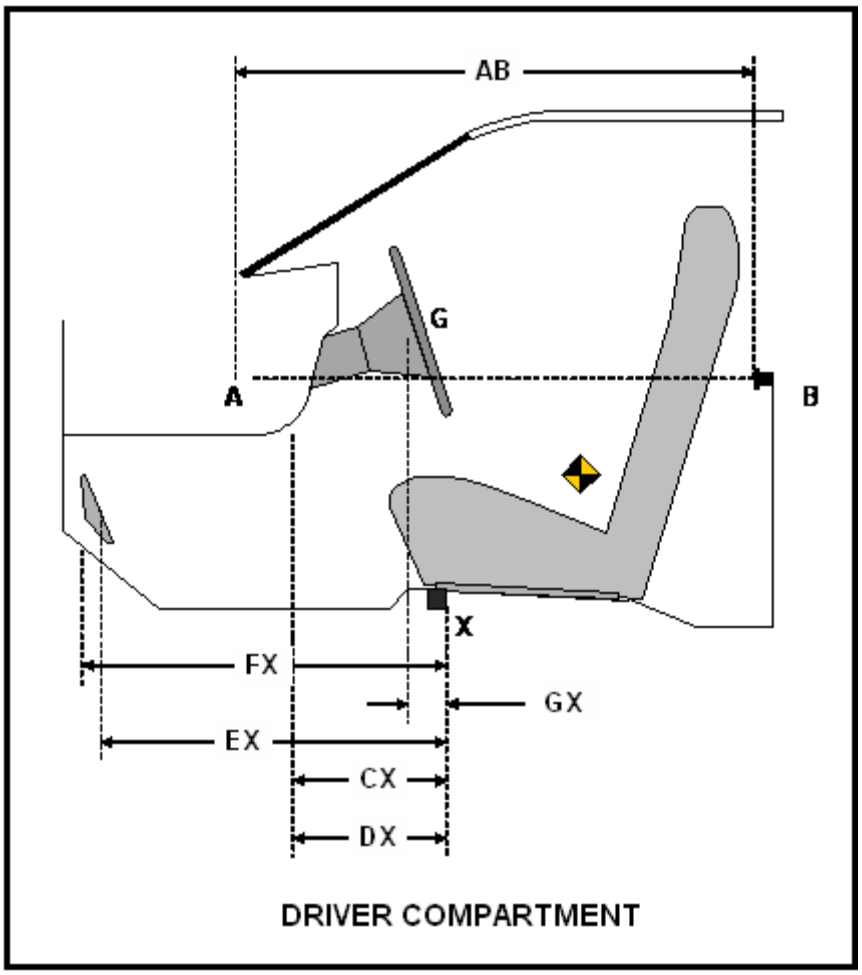
Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

DRIVER COMPARTMENT INTRUSION

Item	Description	Units	Pre-Test	Post-Test	Change
AB	Door Opening (Inside Window Jam)	mm	922	917	-5
CX	Left Knee Bolster to X	mm	327	327	0
DX	Right Knee Bolster to X	mm	319	322	3
EX	Brake Pedal to X	mm	530	519	-11
FX	Foot Rest to X	mm	569	557	-12
GX	Center of Steering Wheel Hub to X	mm	74	120	46

X = Front of Seat Track (Stationary)



DATA SHEET NO. 15

SUMMARY OF INDICANT FMVSS 212 AND 219 (PARTIAL) DATA

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

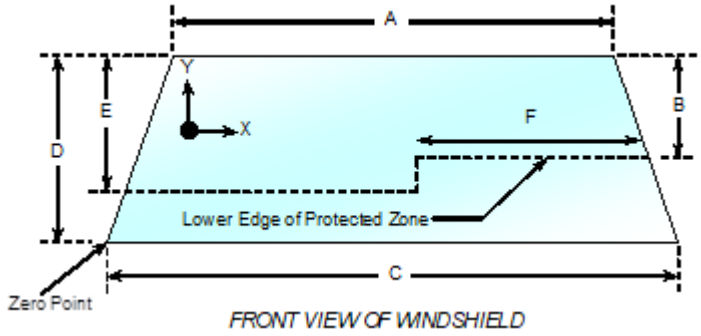
Windshield Mounting Details: Windshield glass is secured to the vehicle frame with an adhesive and rubber molding.

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

Temperature of windshield molding during test: 33.3 °C

WINDSHIELD PERIPHERY MEASUREMENTS

Measurement	Pre-Test (mm)	Post-Test (mm)	% Retention
Left Side	3378	3378	100.0%
Right Side	3378	3378	100.0%
Total	6756	6756	100.0%



FRONT VIEW OF WINDSHIELD

Item	Units	Value
A	mm	1440
B	mm	1223
C	mm	1755
D	mm	1780
E	mm	1218
F	mm	567

AREAS 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.

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.

X	Y

DATA SHEET NO. 16

FMVSS 301 BARRIER IMPACT AND STATIC ROLLOVER RESULTS

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

Temperature at Time of Impact: 33.3°C Test Time: 3:05 PM

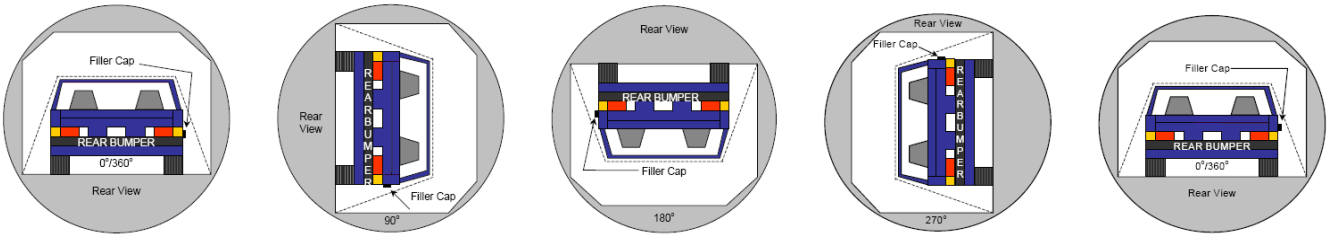
Stoddard Solvent Spillage Measurements

A. From impact until vehicle motion ceases: N/A oz.
(Maximum allowable = 1 oz.)

B. For the 5 minute period after motion ceases: N/A oz.
(Maximum allowable = 5 oz.)

C. For the following 25 minutes: N/A oz.
(Maximum allowable = 1 oz./minute)

D. Spillage: _____



0° TO 90° 90° TO 180° 180° TO 270° 270° TO 360°

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: N/A – Electric Vehicle

SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° To 90°			
90° To 180°			
180° To 270°			
270° To 360°			

DATA SHEET NO. 16 … (CONTINUED)

FMVSS 301 BARRIER IMPACT AND STATIC ROLLOVER RESULTS

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

FMVSS 301 SPILLAGE TABLE

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

SOLVENT SPILLAGE LOCATION TABLE

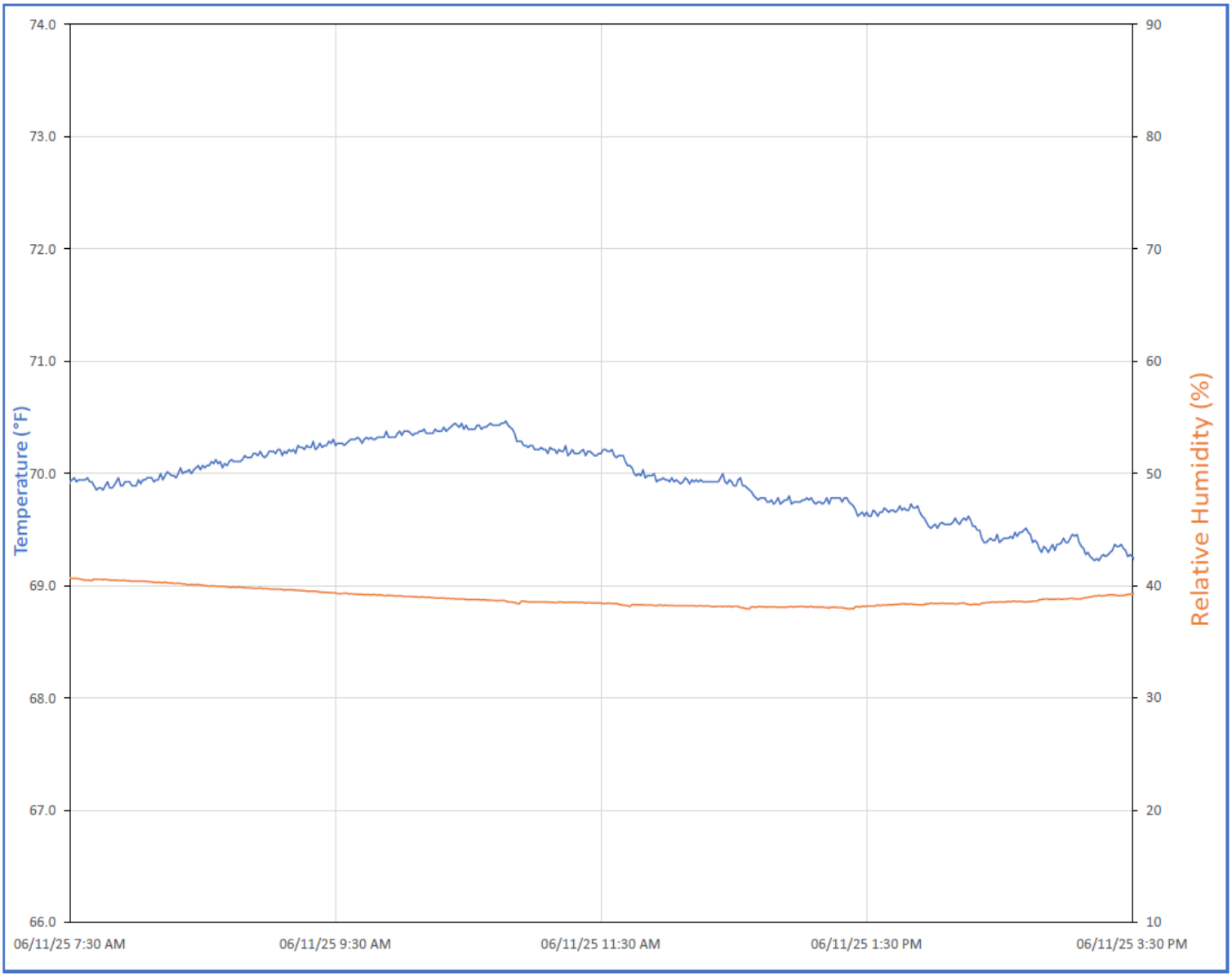
Test Phase	Spillage Location
0° To 90°	
90° To 180°	
180° To 270°	
270° To 360°	

DATA SHEET NO. 17

DUMMY / VEHICLE TEMPERATURE STABILIZATION CHART

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025



DATA SHEET NO. 305-1

GENERAL TEST AND VEHICLE PARAMETER DATA FOR INDICANT FMVSS NO. 305 TESTING

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

TEST VEHICLE INFORMATION

NHTSA Number	O20254500
Model Year	2025
Make	Tesla
Model	Cybertruck Beast
Body Style	4-Door Truck
Body Color	Silver Gray Metal
Odometer Reading (km / mi)	18/11

DATA FROM VEHICLE'S CERTIFICATION LABEL

Manufactured By	Tesla, Inc.
Date of Manufacture	May-25
VIN	7G2CEHEE7SA075455
GVWR (kg)	4159

ELECTRIC VEHICLE PROPULSION SYSTEM

Type of Electrical Vehicle	Electric
Propulsion Battery Type	Lithium-Ion
Nominal Voltage (V)	800
Automatic Propulsion Battery Disconnect	Yes
Physical Location of Automatic Propulsion Battery Disconnect	Internal to HV Battery
Auxiliary Battery Type	48-Volt

PROPULSION BATTERY SYSTEM DATA

Electrolyte Fluid Type	Organic
Electrolyte Fluid Specific Gravity (g/cc)	1.2
Electrolyte Fluid Kinematic Viscosity (mm^2/s)	2-6 cSt
Electrolyte Fluid Color	Colorless and transparent
Propulsion Battery Coolant Type	G48
Propulsion Battery Coolant Color	Light Blue
Propulsion Battery Coolant Specific Gravity	

LOCATION OF BATTERY MODULES

Location	Outside Passenger Compartment

DATA SHEET NO. 305-1…(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA FOR INDICANT FMVSS NO. 305 TESTING

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

For all battery types:

Description	Volts
Minimum Operating Voltage	28
Maximum Operating Voltage	800
95% of Maximum Operating Voltage	760
Test Voltage (no less than 95% of Maximum)*	800

For batteries that are rechargeable ONLY by an energy source on the vehicle:

Description	Volts
Minimum Operating Voltage	
Maximum Operating Voltage	
Test Voltage (Maximum practicable state of charge within normal operating range)	

DATA SHEET NO. 305-2

PRE-IMPACT DATA FOR INDICANT FMVSS NO. 305 TESTING

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

VEHICLE CHASSIS GROUND POINT(S) LOCATION(S)

DETAILS OF VEHICLE CHASSIS GROUND POINT(S) AND LOCATION(S):

The FMVSS 305 chassis ground point is located at the rear of the high voltage battery pack.

PROPULSION BATTERY SYSTEM

DETAILS OF PROPULSION BATTERY COMPONENTS:

The physical location of automatic propulsion battery disconnect is located at the rear of the high voltage battery pack.

DATA SHEET NO. 305-3

PRE-IMPACT ELECTRICAL ISOLATION MEASUREMENTS AND CALCULATIONS FOR INDICANT FMVSS NO. 305 TESTING

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

VOLTMETER INFORMATION

Make	Fluke
Model	87V MAX
Serial No.	50790043
Internal Impedence Value	50 MΩ
Resolution	0.001

HV BATTERY ELECTRICAL ISOLATION DATA

Code	Units	Threshold	Pre-Test
V_b	V		800
V_1	V		410
V_2	V		403
R_o	Ω		701,000
V_1'	V		299
V_2'	V		262
R_{i1}	Ω		517,159
R_{i2}	Ω		763,579
R_i	Ω		517,159
R_i/V_b	Ω/V	500	646

Is the Measured Electrical Isolation Value ≥ 500 Ω/V?	Yes

DATA SHEET NO. 305-4

POST-IMPACT DATA FOR INDICANT FMVSS NO. 305 TESTING

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

VOLTMETER INFORMATION

Make	Fluke
Model	87V MAX
Serial No.	50790043
Internal Impedence Value	50 MΩ
Resolution	0.001

HV BATTERY ELECTRICAL ISOLATION DATA

Code	Units	Threshold	Post-Test
V_b	V		0.202
V_1	V		0.152
V_2	V		0.021
R_o	Ω		701,000
V_1'	V		0.070
V_2'	V		0.001
R_{i1}	Ω		934,623
R_{i2}	Ω		115,498,095
R_i	Ω		934,623
R_i/V_b	Ω/V	500	4,626,845

* "Zero Volts" is considered as being compliant.

Is the Measured Electrical Isolation Value ≥ 500 Ω/V?	Yes
Is V_1, V_2, and V_b ≤ 60 VDC?	Yes

PROPULSION BATTERY SYSTEM COMPONENTS

Has the propulsion battery module moved within the passenger compartment?

No

Describe any movement: There was no movement of the propulsion battery within the passenger compartment.

Has an outside propulsion battery component intruded into the passenger compartment?

No

Describe any intrusion: There was no intrusion of the outside propulsion battery into the passenger compartment.

Is there propulsion battery electrolyte spillage visible in the passenger compartment?

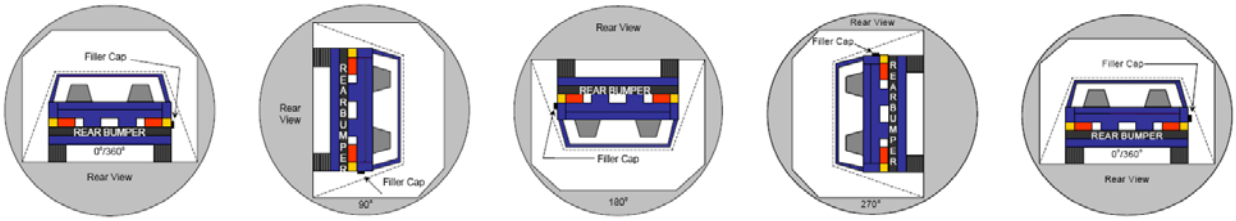
No

DATA SHEET NO. 305-5

STATIC ROLLOVER TEST DATA FOR INDICANT FMVSS NO. 305 TESTING

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025



0° TO 90° 90° TO 180° 180° TO 270° 270° TO 360°

PROPULSION BATTERY ELECTROLYTE COLLECTION TIME PERIOD

Test Phase	Rotation Time	Hold Time	Total Time
0° To 90°	82	300	382
90° To 180°	83	300	383
180° To 270°	81	300	381
270° To 360°	82	300	382

TEST VEHICLE PROPULSION BATTERY ELECTROLYTE SPILLAGE

NOTE: The maximum allowable Propulsion Battery Electrolyte Spillage is 5.0 Liters.

Test Phase	Propulsion Battery Electrolyte Spillage (L)	Spillage Location
0° To 90°	0.0	N/A
90° To 180°	0.0	N/A
180° To 270°	0.0	N/A
270° To 360°	0.0	N/A

Is the Total Propulsion Battery Electrolyte Spillage Greater Than 5.0 Liters?	No spillage occurred
Is the Propulsion Battery Electrolyte Spillage Visible in the Passenger Compartment?	N/A

DATA SHEET NO. 305-5 (CONTINUED…)

STATIC ROLLOVER TEST DATA FOR INDICANT FMVSS NO. 305 TESTING

Test Vehicle: 2025 Tesla Cybertruck Beast 4-Door Truck NHTSA No.: O20254500

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 06/11/2025

VOLTMETER INFORMATION

Make	Fluke
Model	87V MAX
Serial No.	50790043
Internal Impedence Value	50 MΩ
Nominal Propulsion Battery Voltage (Vb)	0.001

HV BATTERY ELECTRICAL ISOLATION MEASUREMENTS AND CALCULATIONS

Code	Units	Threshold	0°	90°	180°	270°	360°
V_b	V		0.006	0.003	0.028	0.012	0.091
V_1	V		0.008	0.009	0.006	0.004	0.026
V_2	V		0.008	0.040	0.020	0.006	0.060
R_o	Ω		701,000	701,000	701,000	701,000	701,000
V_1'	V		0.003	0.004	0.005	0.003	0.015
V_2'	V		0.000	0.038	0.001	0.001	0.050
R_{i1}	Ω		2,336,667	4,770,694	607,533	584,167	1,700,374
R_{i2}	Ω		*Zero Volts	45,196	17,314,700	5,841,667	200,953
R_i	Ω		*Zero Volts	45,196	607,533	584,167	200,953
R_i/V_b	Ω/V	500	*Zero Volts	15,065,351	21,697,619	48,680,556	2,208,278

* ”Zero Volts” is considered as being compliant.

Is the Measured Electrical Isolation Value ≥ 500 Ω/V?	Yes
Is V_1, V_2, and V_b ≤ 60 VDC?	Yes

APPENDIX A

PHOTOGRAPHIC DOCUMENTATION

TABLE OF PHOTOGRAPHS

TABLE OF PHOTOGRAPHS … (CONTINUED)

TABLE OF PHOTOGRAPHS … (CONTINUED)

TABLE OF PHOTOGRAPHS … (CONTINUED)

Photograph Not Applicable

FIGURE 1. Load Cell Location

Photograph Not Applicable

FIGURE 2. Pre-Test Load Cell Wall

Photograph Not Applicable

FIGURE 3. Post-Test Load Cell Wall

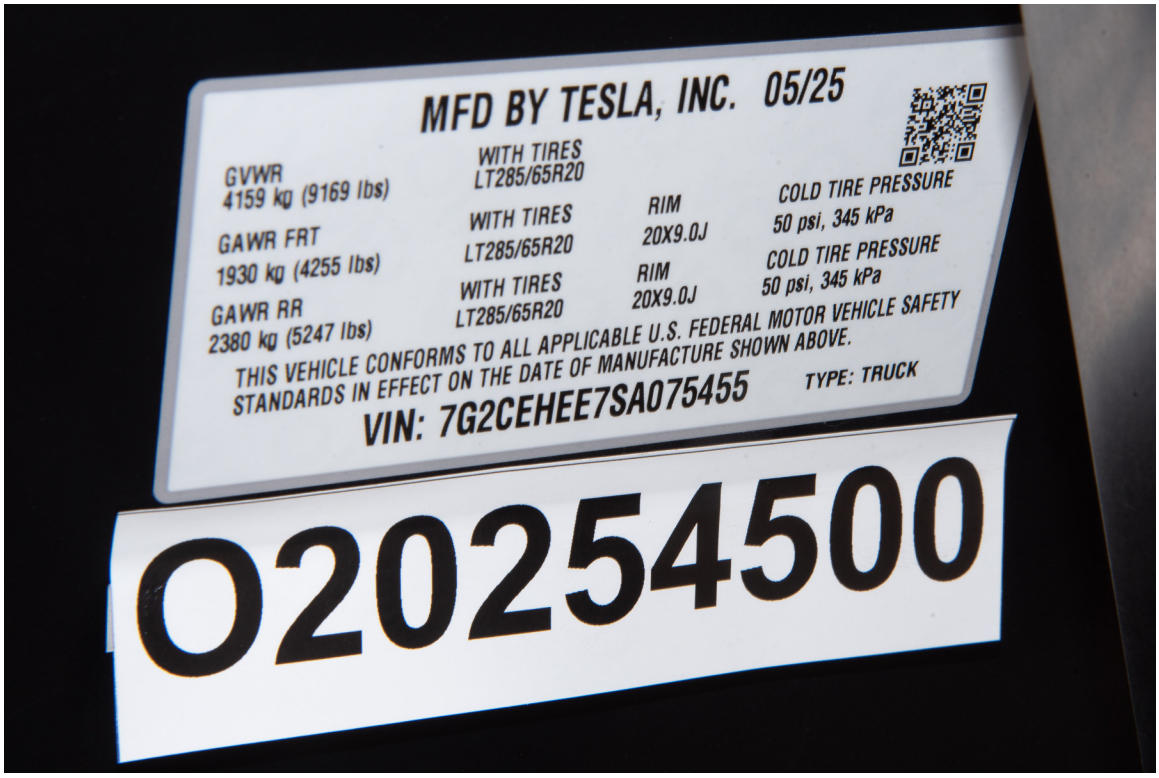


FIGURE 4. Manufacturer's Label

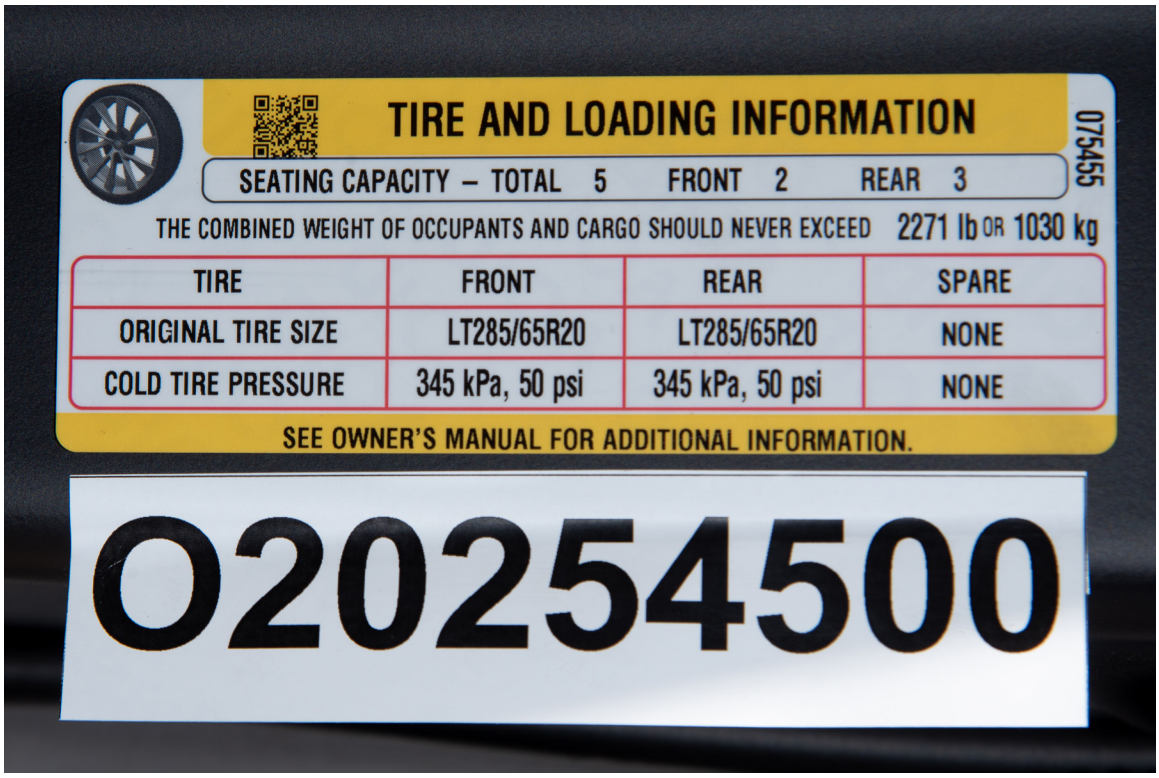


FIGURE 5. Tire Placard

FIGURE 6. 2025 Tesla Cybertruck Frontal As Delivered

FIGURE 7. Left Rear 3/4 View, As Received

FIGURE 8. Pre-Test Front View of Test Vehicle

FIGURE 9. Post-Test Front View of Test Vehicle

FIGURE 10. Pre-Test Left View of Test Vehicle

FIGURE 11. Post-Test Left View of Test Vehicle

FIGURE 12. Pre-Test Right View of Test Vehicle

FIGURE 13. Post-Test Right View of Test Vehicle

FIGURE 14. Pre-Test Right Front 3/4 View

FIGURE 15. Post-Test Right Front 3/4 View

FIGURE 16. Pre-Test Left Rear 3/4 View

FIGURE 17. Post-Test Left Rear 3/4 View

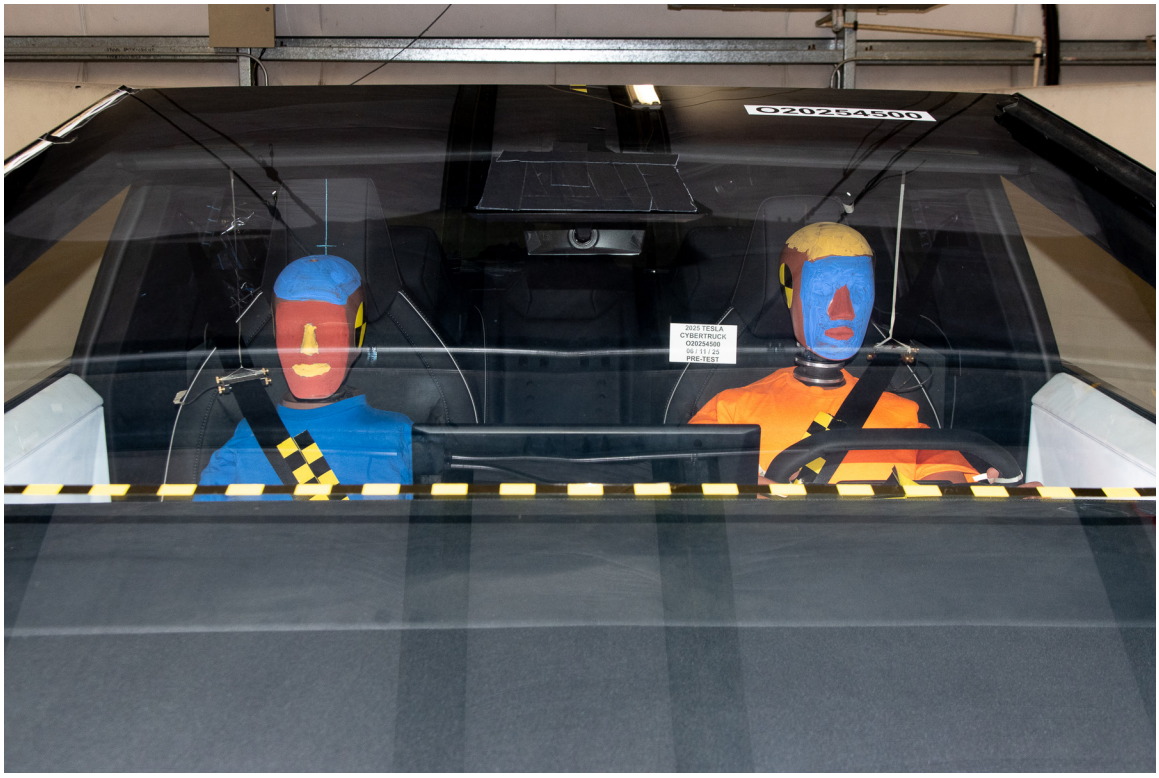


FIGURE 18. Pre-Test Windshield View

FIGURE 19. Post-Test Windshield View

FIGURE 20. Pre-Test Engine Compartment View

FIGURE 21. Post-Test Engine Compartment View

FIGURE 22. Pre-Test Fuel Filler Cap View

FIGURE 23. Post-Test Fuel Filler Cap View

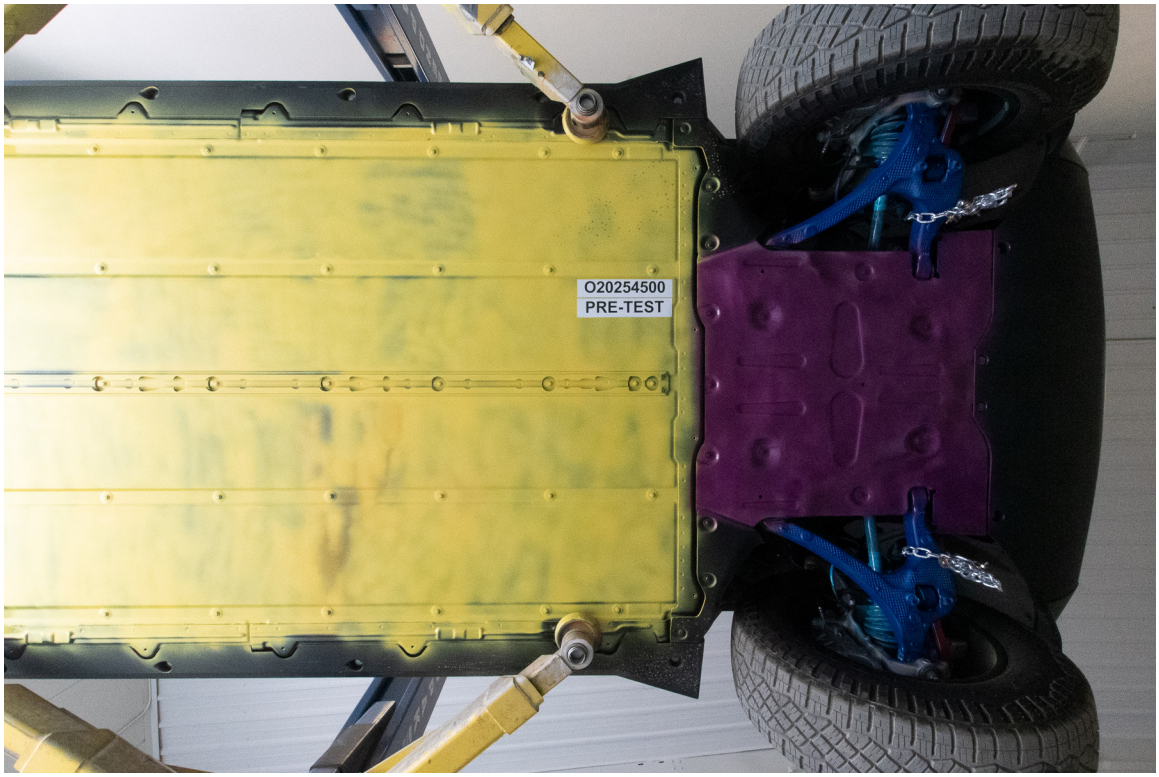


FIGURE 24. Pre-Test Front Underbody View

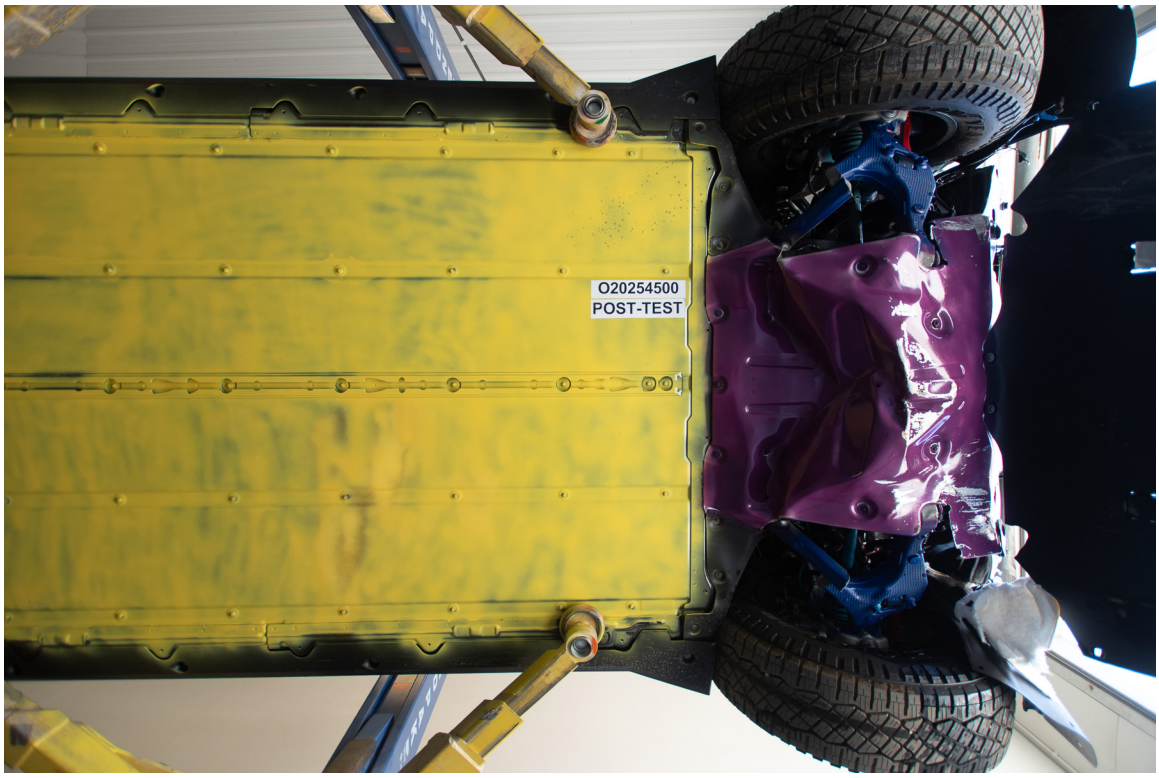


FIGURE 25. Post-Test Front Underbody View

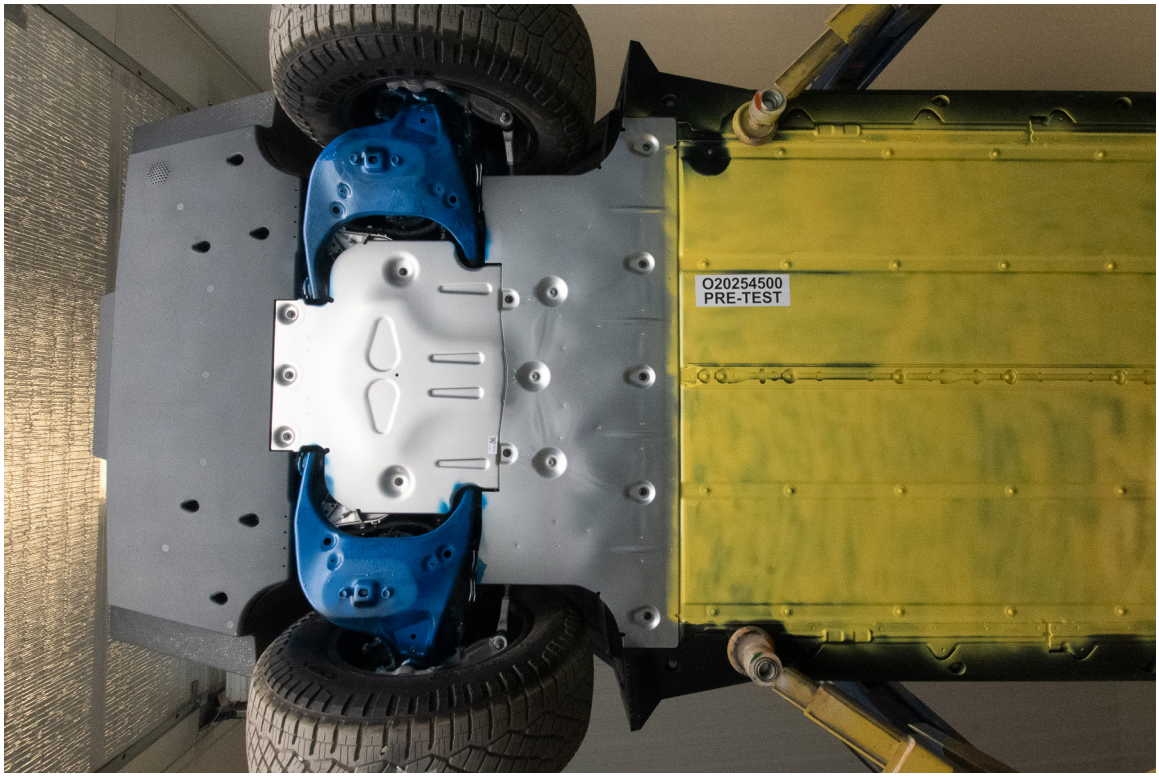


FIGURE 26. Pre-Test Rear Underbody View

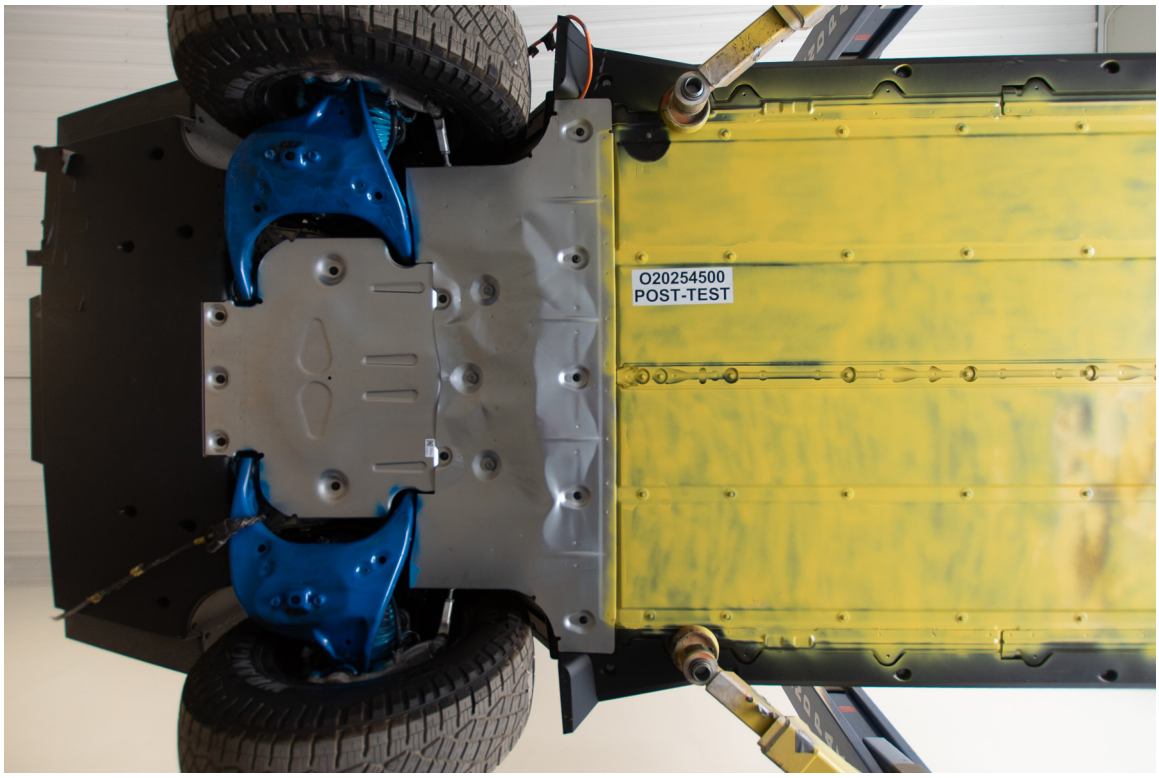


FIGURE 27. Post-Test Rear Underbody View

FIGURE 28. Pre-Test Dummy Cable Routing

FIGURE 29. Post-Test Dummy Cable Routing

FIGURE 30. Pre-Test Driver Dummy Front View

FIGURE 31. Post-Test Driver Dummy Front View

FIGURE 32. Pre-Test Driver Dummy Window View

FIGURE 33. Post-Test Driver Dummy Window View

FIGURE 34. Pre-Test Driver Dummy and Vehicle Interior View

FIGURE 35. Post-Test Driver Dummy and Vehicle Interior View

FIGURE 36. Pre-Test Driver's Seat Fore-Aft Markings

FIGURE 37. Post-Test Driver's Seat Fore-Aft Markings

FIGURE 38. Pre-Test View of Belt Anchorage for Driver Dummy

FIGURE 39. Post-Test View of Belt Anchorage for Driver Dummy

FIGURE 40. Pre-Test View of Belt Buckle and Latch Plate for Driver Dummy

FIGURE 41. Post-Test View of Belt Buckle and Latch Plate for Driver Dummy

FIGURE 42. Pre-Test Driver Dummy Feet

FIGURE 43. Post-Test Driver Dummy Feet

FIGURE 44. Pre-Test Driver's Side Knee Bolster

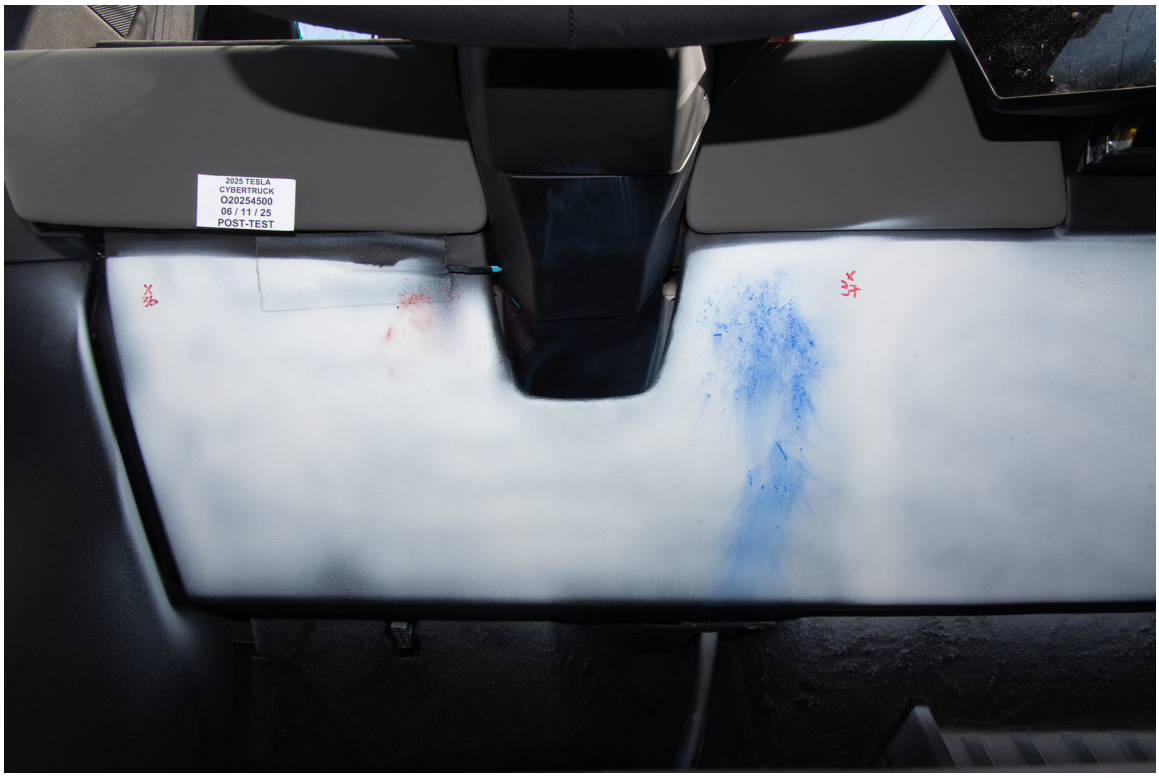


FIGURE 45. Post-Test Driver's Side Knee Bolster

FIGURE 46. Pre-Test Driver's Side Floorpan

FIGURE 47. Post-Test Driver's Side Floorpan

FIGURE 48. Post-Test Driver Dummy Face

FIGURE 49. Post-Test Driver Dummy Contact with Air Bag

FIGURE 50. Post-Test Driver Dummy Contact with Headrest

FIGURE 51. Pre-Test View of the Steering Wheel

FIGURE 52. Post-Test View of the Steering Wheel

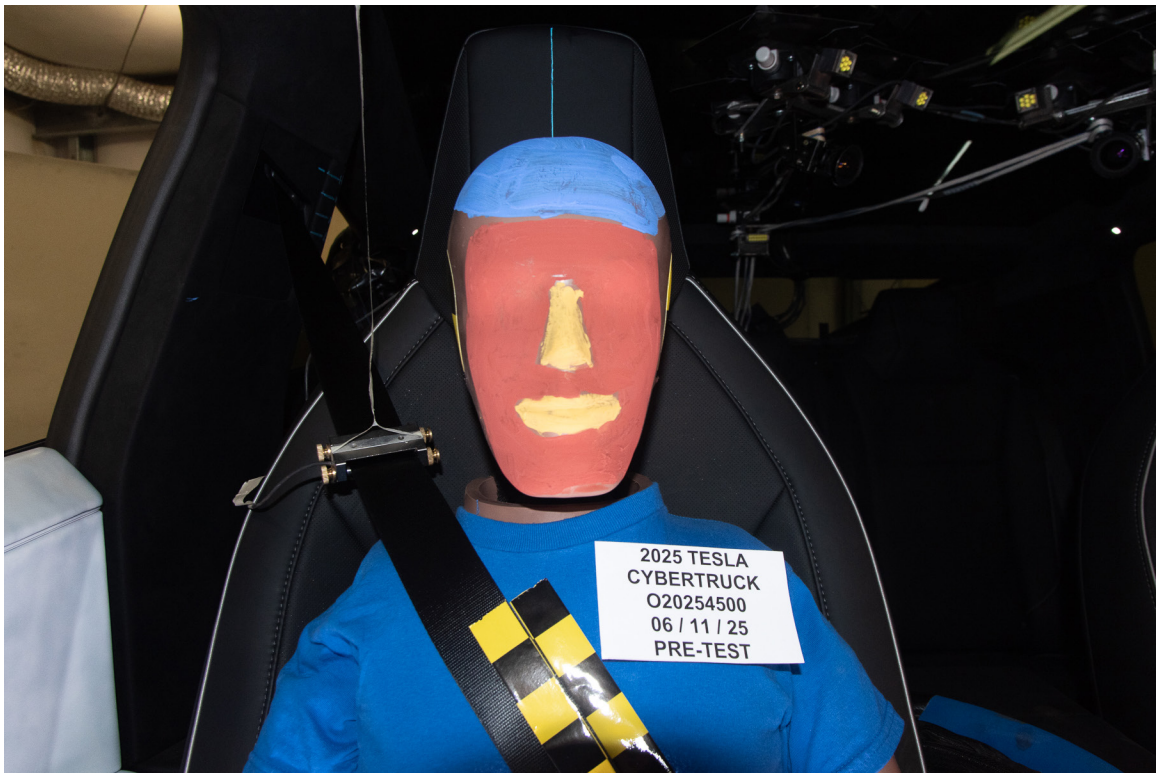


FIGURE 53. Pre-Test Passenger Dummy Front View

FIGURE 54. Post-Test Passenger Dummy Front View

FIGURE 55. Pre-Test Passenger Dummy Window View

FIGURE 56. Post-Test Passenger Dummy Window View

FIGURE 57. Pre-Test Passenger Dummy and Vehicle Interior View

FIGURE 58. Post-Test Passenger Dummy and Vehicle Interior View

FIGURE 59. Pre-Test Passenger's Seat Fore-Aft Markings

FIGURE 60. Post-Test Passenger's Seat Fore-Aft Markings

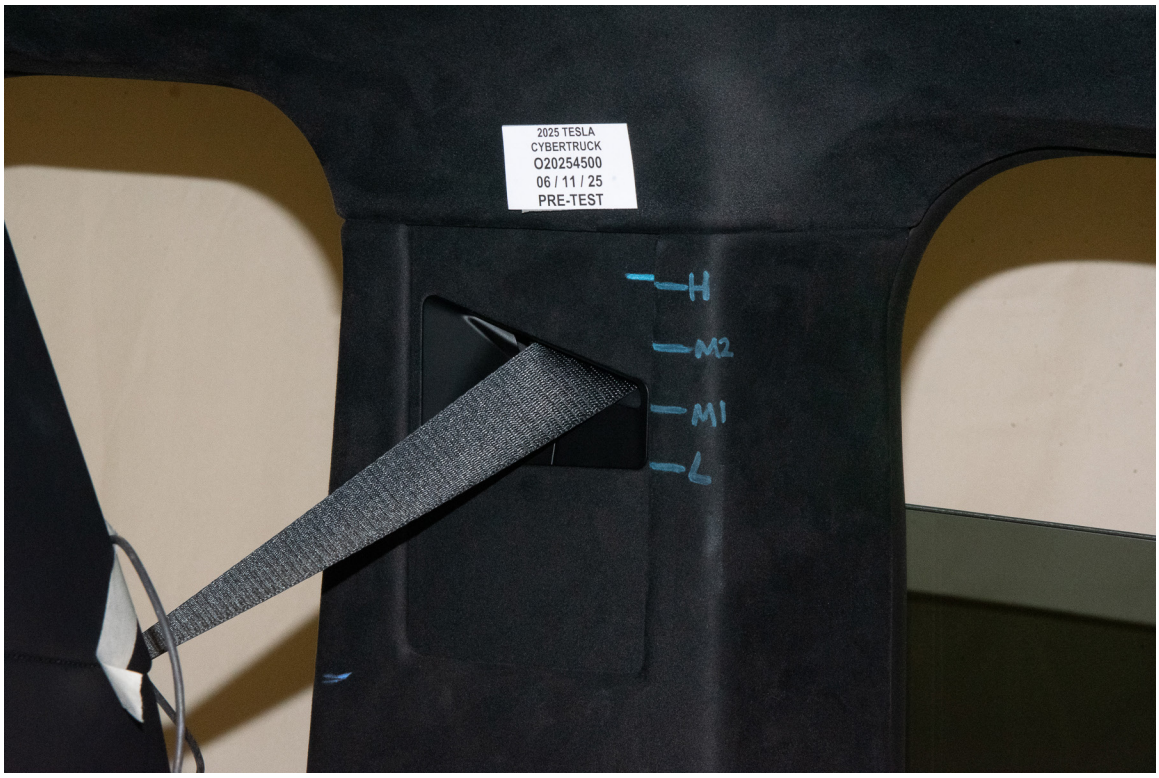


FIGURE 61. Pre-Test View of Belt Anchorage for Passenger Dummy

FIGURE 62. Post-Test View of Belt Anchorage for Passenger Dummy

FIGURE 63. Pre-Test View of Belt Buckle and Latch Plate for Passenger Dummy

FIGURE 64. Post-Test View of Belt Buckle and Latch Plate for Passenger Dummy

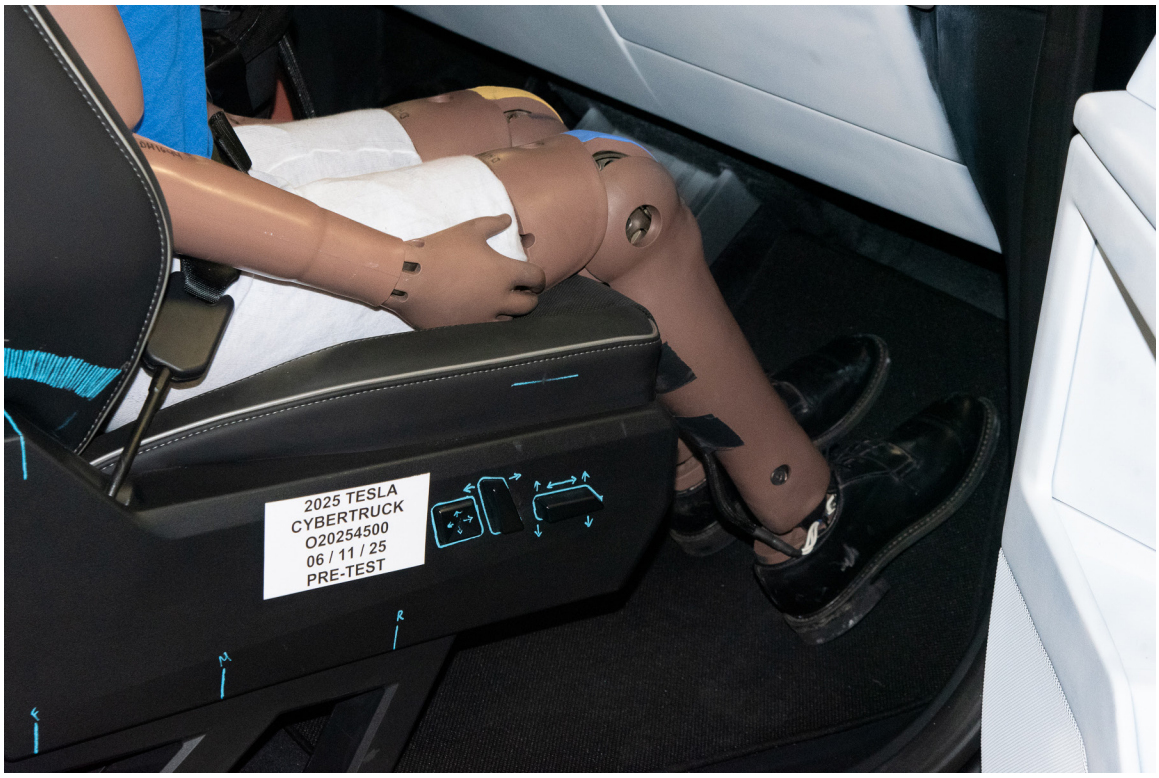


FIGURE 65. Pre-Test Passenger Dummy Feet

FIGURE 66. Post-Test Passenger Dummy Feet

FIGURE 67. Pre-Test Passenger's Side Knee Bolster

FIGURE 68. Post-Test Passenger's Side Knee Bolster

FIGURE 69. Pre-Test Passenger's Side Floorpan

FIGURE 70. Post-Test Passenger's Side Floorpan

FIGURE 71. Post-Test Passenger Dummy Face

FIGURE 72. Post-Test Passenger Dummy Contact with Air Bag

FIGURE 73. Post-Test Passenger Dummy Contact with Headrest

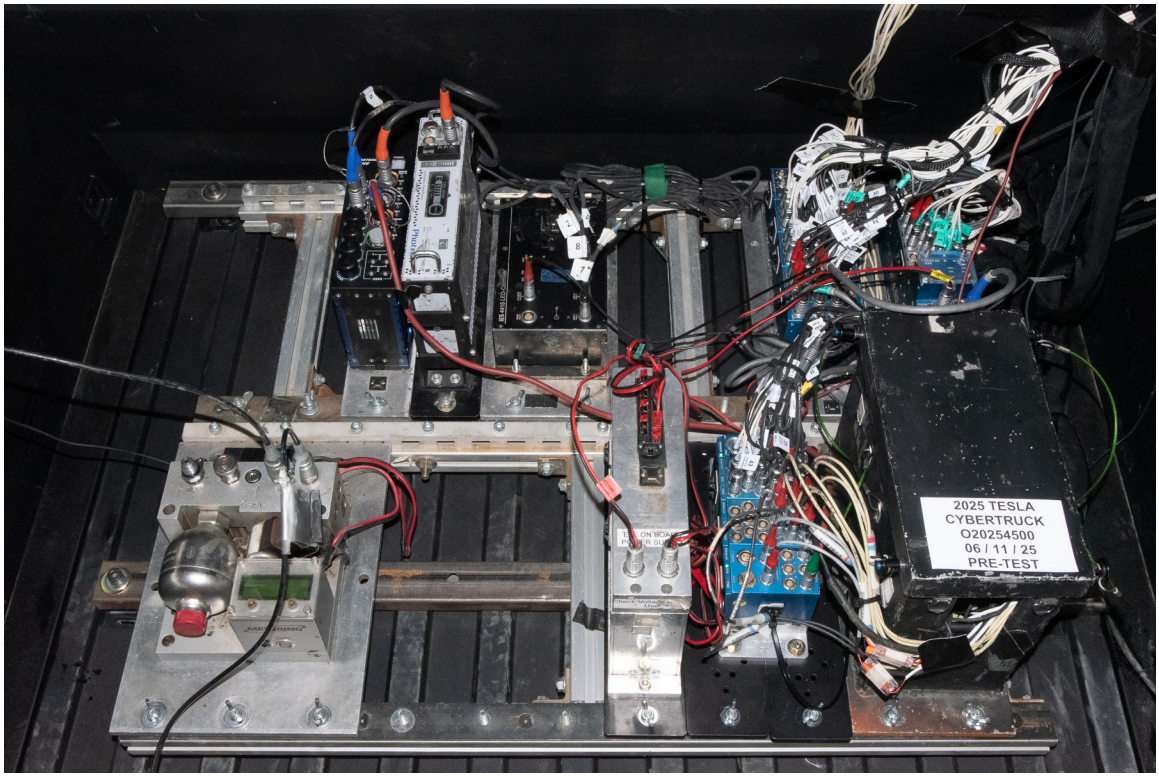


FIGURE 74. Photograph of Ballast Installed in Vehicle

Photograph Not Applicable
No Stoddard Solvent Spillage

FIGURE 75. Post-Test Stoddard Solvent Spillage Location View

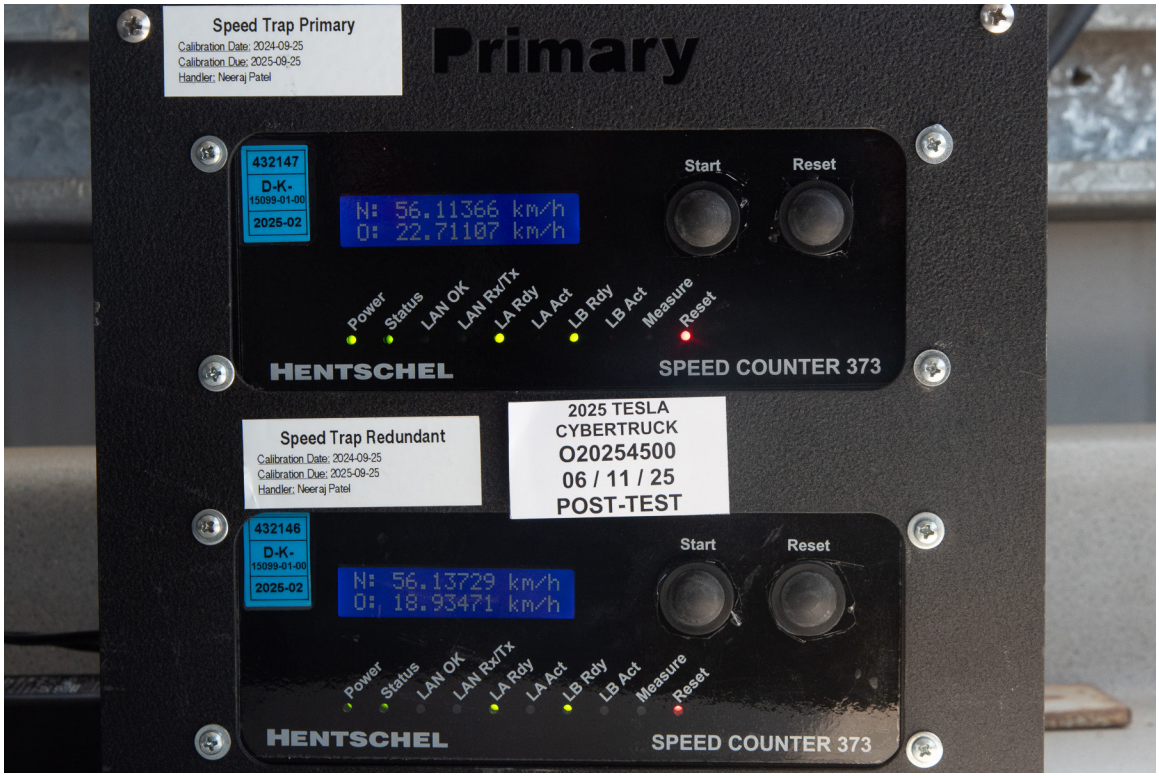


FIGURE 76. Post-Test Speed Trap Read-Out

FIGURE 77. Vehicle at 0° on Static Rollover Device

FIGURE 78. Vehicle at 90° on Static Rollover Device

FIGURE 79. Vehicle at 180° on Static Rollover Device

FIGURE 80. Vehicle at 270° on Static Rollover Device

FIGURE 81. Vehicle at 360° on Static Rollover Device

FIGURE 82. 2025 Tesla Cybertruck Frontal Impact Event

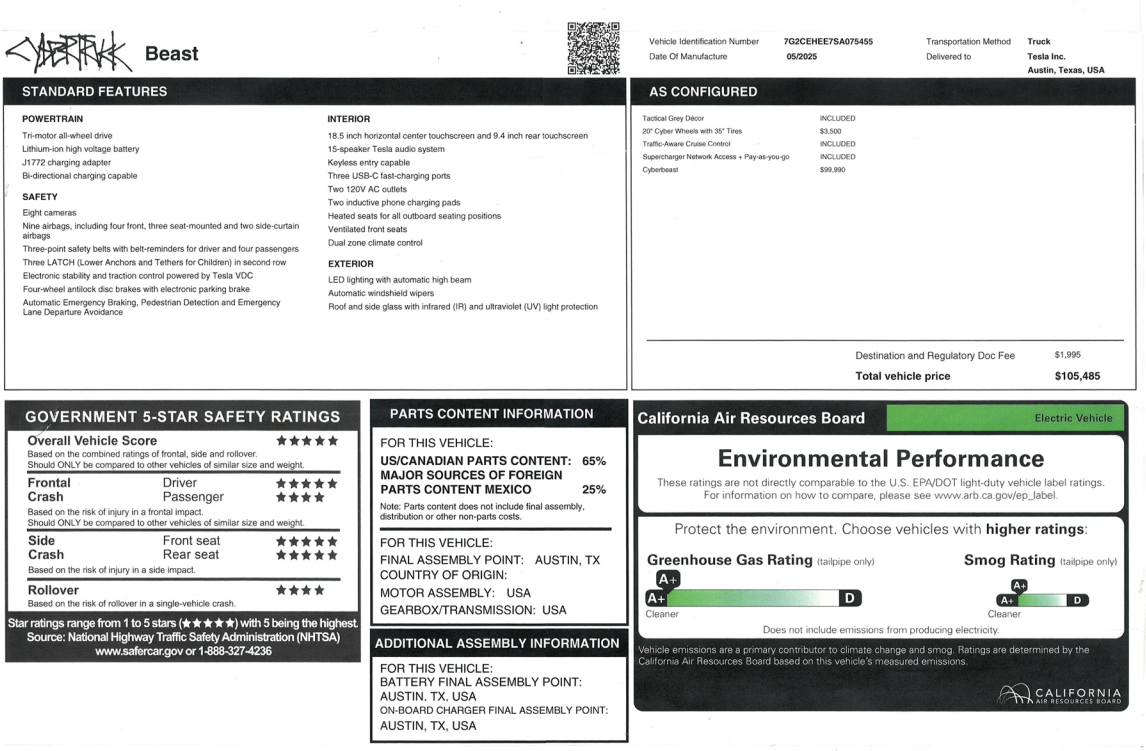


FIGURE 83. Monroney Label Photograph

NOTE: The frontal ratings shown on this Monroney label do not apply; the manufacturer made changes to the restraints to improve frontal crash performance. See www.nhtsa.gov for current vehicle ratings.

Photograph Not Applicable

No Auxiliary Power Module Warning Label Present.

FIGURE 305-01. Auxiliary Power Module Warning Label

Photograph Not Applicable

No Power Inverter Warning Label Present.

FIGURE 305-02. Power Inverter Warning Label

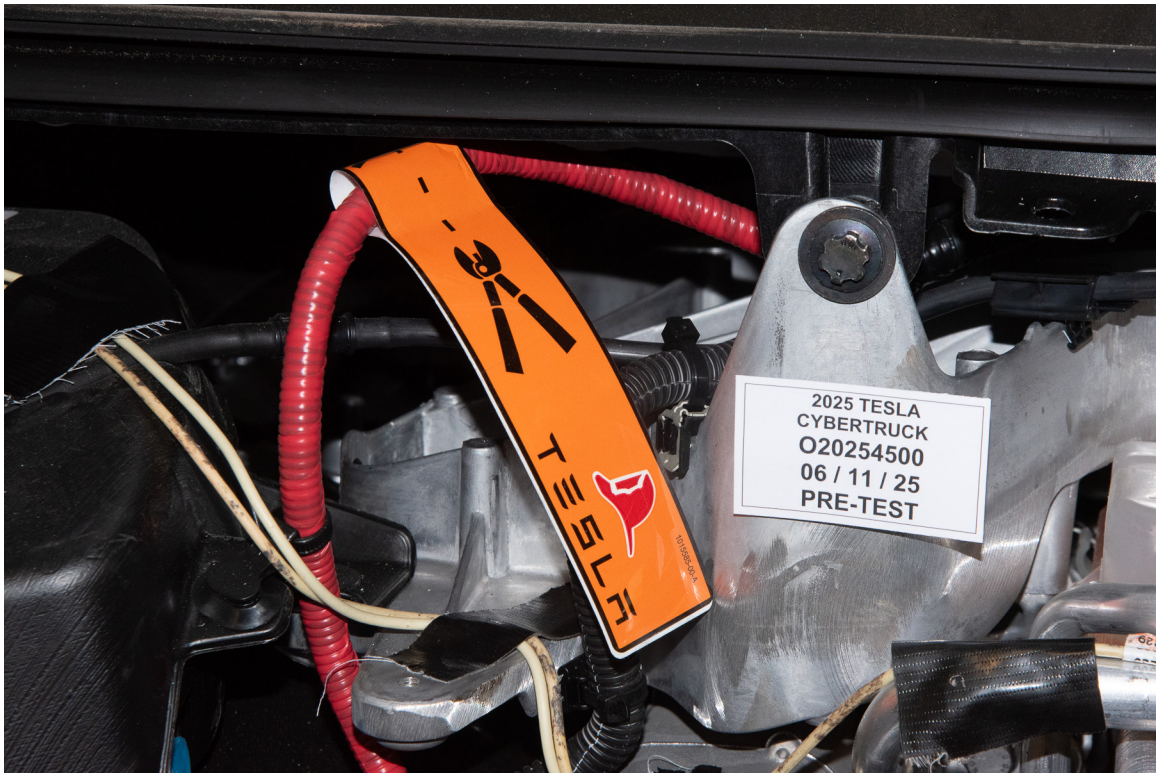


FIGURE 305-03. First Responder Warning Label

FIGURE 305-04. First Responder Warning Location

FIGURE 305-05a. Other Vehicle Label(s) Related to Electrical Propulsion System

FIGURE 305-05b. Other Vehicle Label(s) Related to Electrical Propulsion System

FIGURE 305-05c. Other Vehicle Label(s) Related to Electrical Propulsion System

FIGURE 305-06a Manual High Voltage Service Disconnect in Place

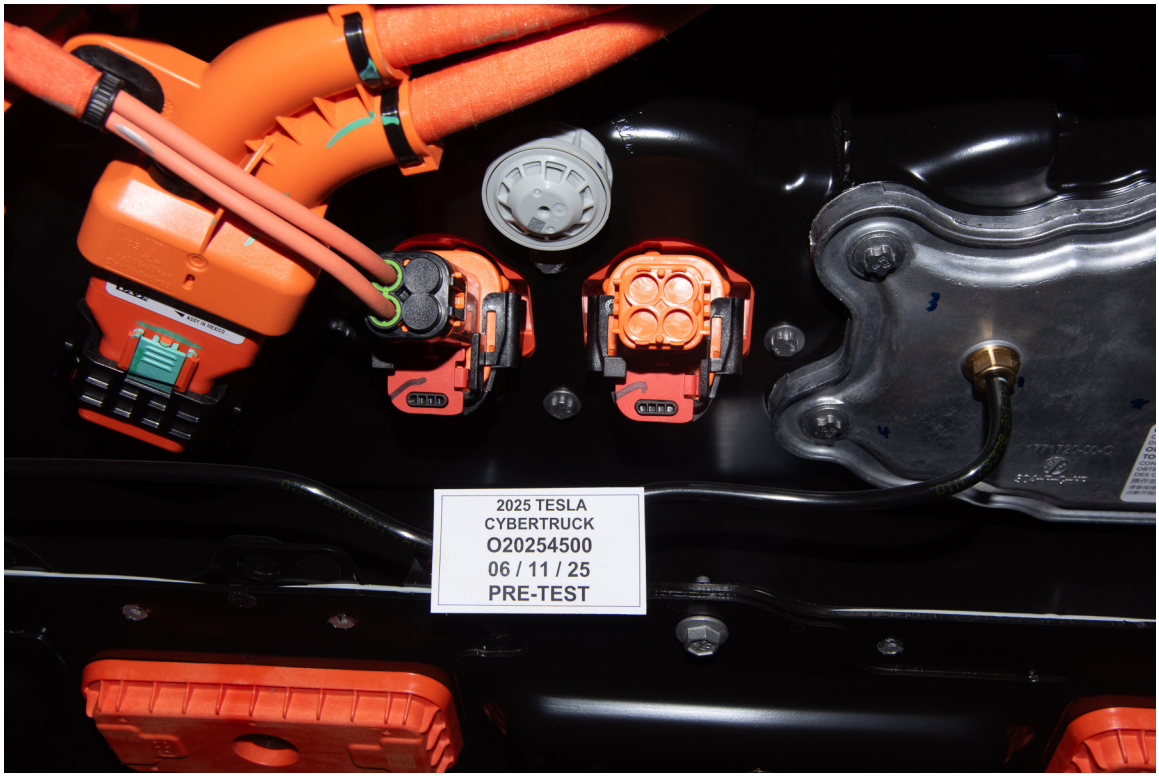


FIGURE 305-06b Manual High Voltage Service Disconnect in Place

FIGURE 305-06c Manual High Voltage Service Disconnect in Place

FIGURE 305-06d Manual High Voltage Service Disconnect in Place

FIGURE 305-06e Manual High Voltage Service Disconnect in Place

FIGURE 305-07a Manual High Voltage Service Disconnect Removed

FIGURE 305-07b Manual High Voltage Service Disconnect Removed

FIGURE 305-07c Manual High Voltage Service Disconnect Removed

FIGURE 305-07d Manual High Voltage Service Disconnect Removed

FIGURE 305-08a Manual High Voltage Service Disconnect Removed

FIGURE 305-08b Manual High Voltage Service Disconnect Removed

FIGURE 305-08c Manual High Voltage Service Disconnect Removed

FIGURE 305-08d Manual High Voltage Service Disconnect Removed

FIGURE 305-09. Pre-Impact View of Propulsion Battery

FIGURE 305-010. Post-Impact Front View of Propulsion Battery

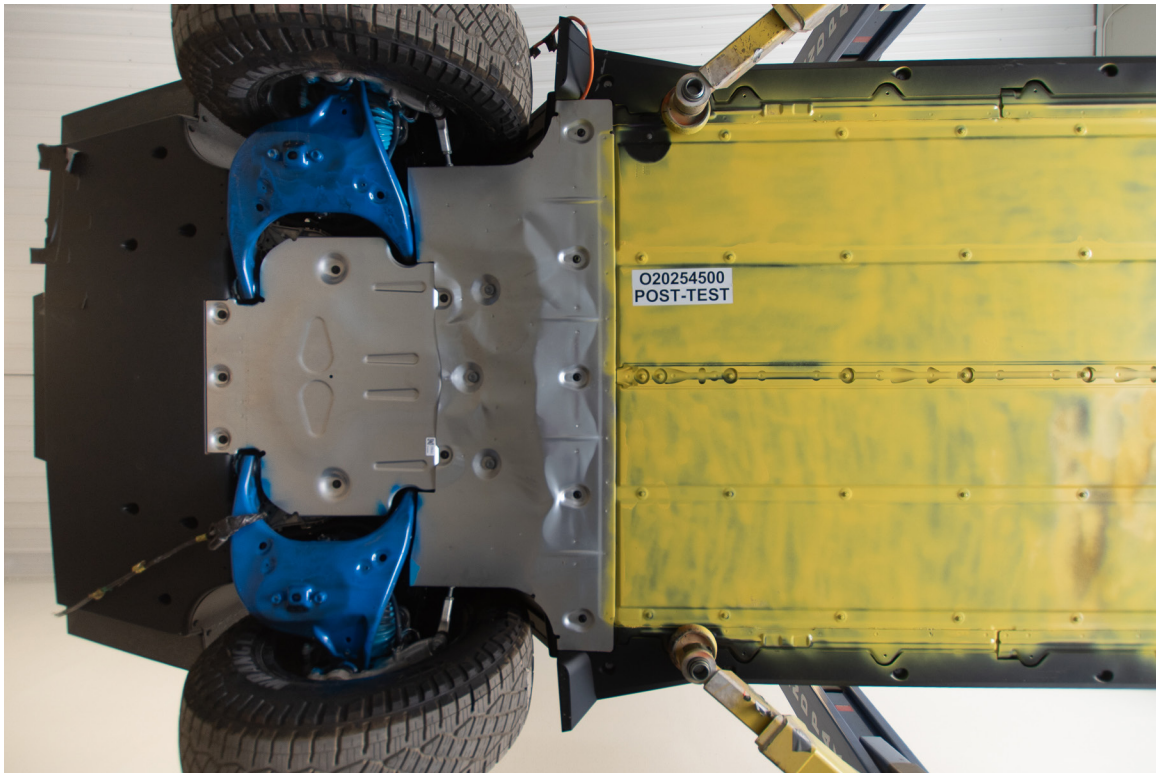


FIGURE 305-011. Post-Impact Rear View of Propulsion Battery

FIGURE 305-012. Pre-Impact View of Battery Box(s) or Container(s) Which Holds Individual Battery Module(s)

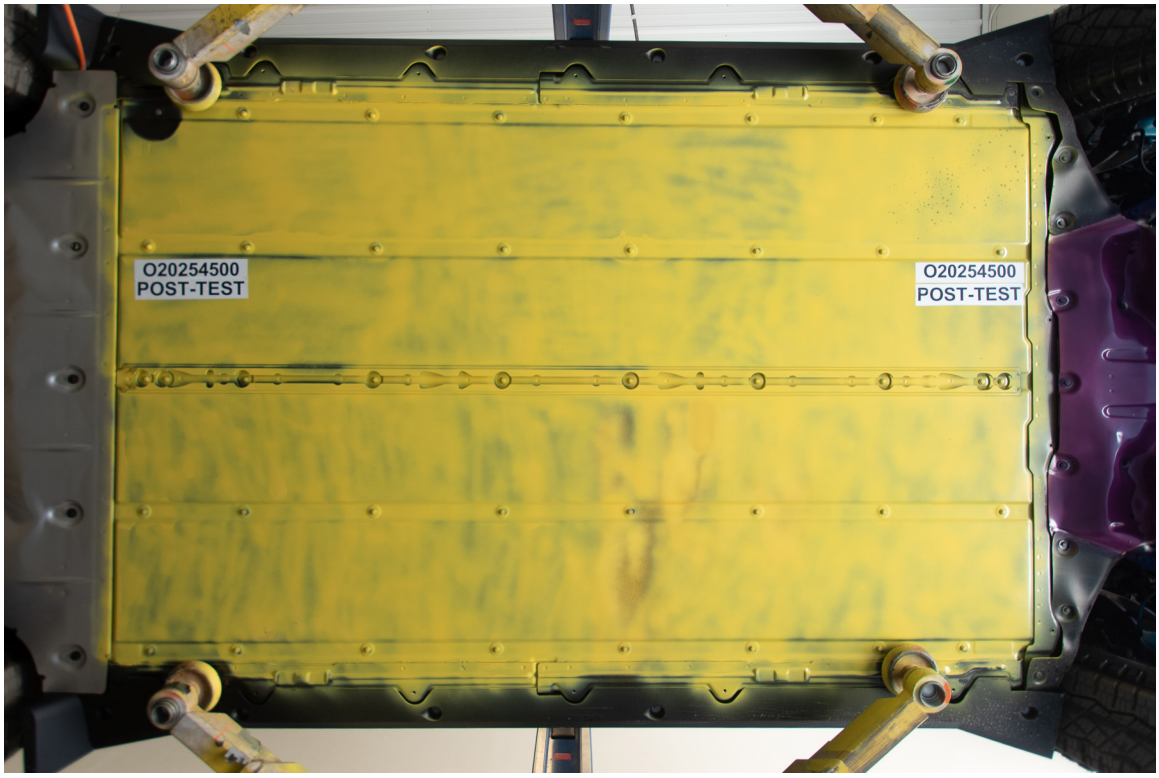


FIGURE 305-013. Post-Impact View of Battery Box(s) or Container(s) Which Holds Individual Battery Module(s)

Photograph Not Applicable

Battery Not Removed From Vehicle

FIGURE 305-014. Pre-Impact View of Propulsion Battery Module(s)

Photograph Not Applicable

Battery Not Removed From Vehicle

FIGURE 305-015. Post-Impact View of Propulsion Battery Module(s)

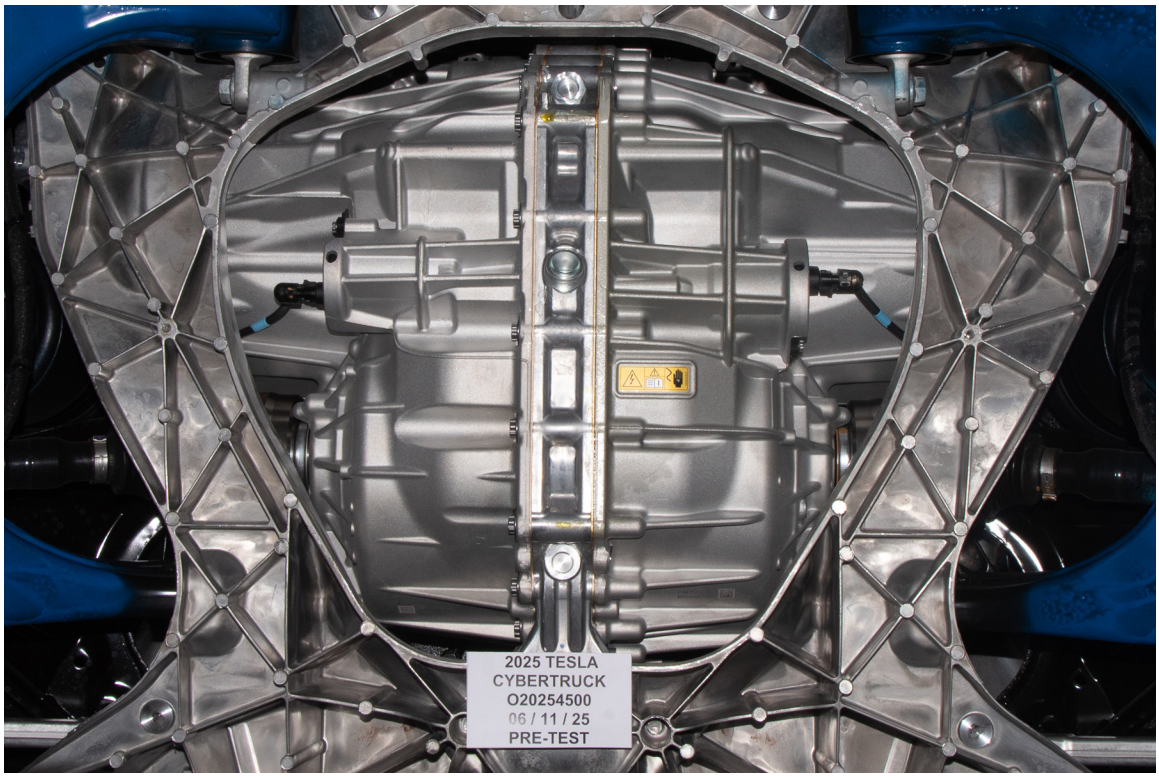


FIGURE 305-016. Pre-Impact View of Electric Propulsion Drive

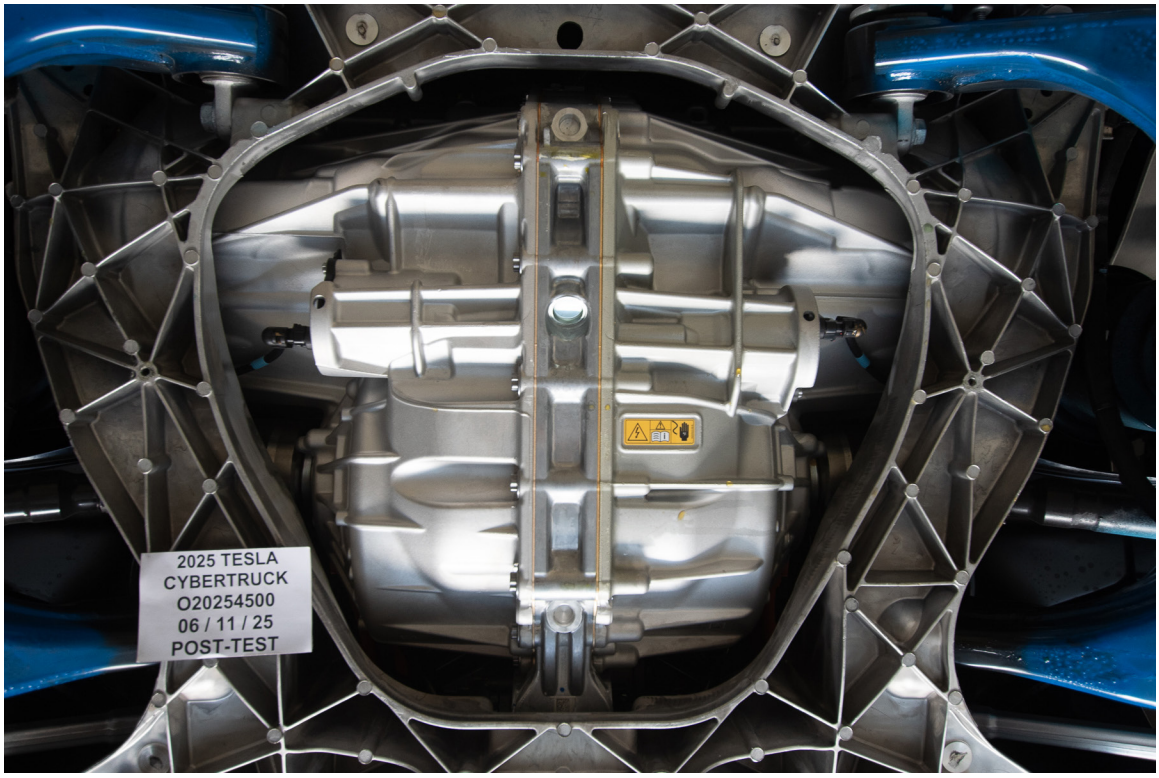


FIGURE 305-017. Post-Impact View of Electric Propulsion Drive

FIGURE 305-018. Pre-Impact View of High Voltage Interconnect(s)

Photograph Not Applicable

Propulsion Battery Venting System Not Visible.

FIGURE 305-019. Pre-Impact View Propulsion Battery Venting System(s)

Photograph Not Applicable

No Other Visible Electric Propulsion Components

FIGURE 305-020. Pre-Impact View of Other Visible Electric Propulsion Components

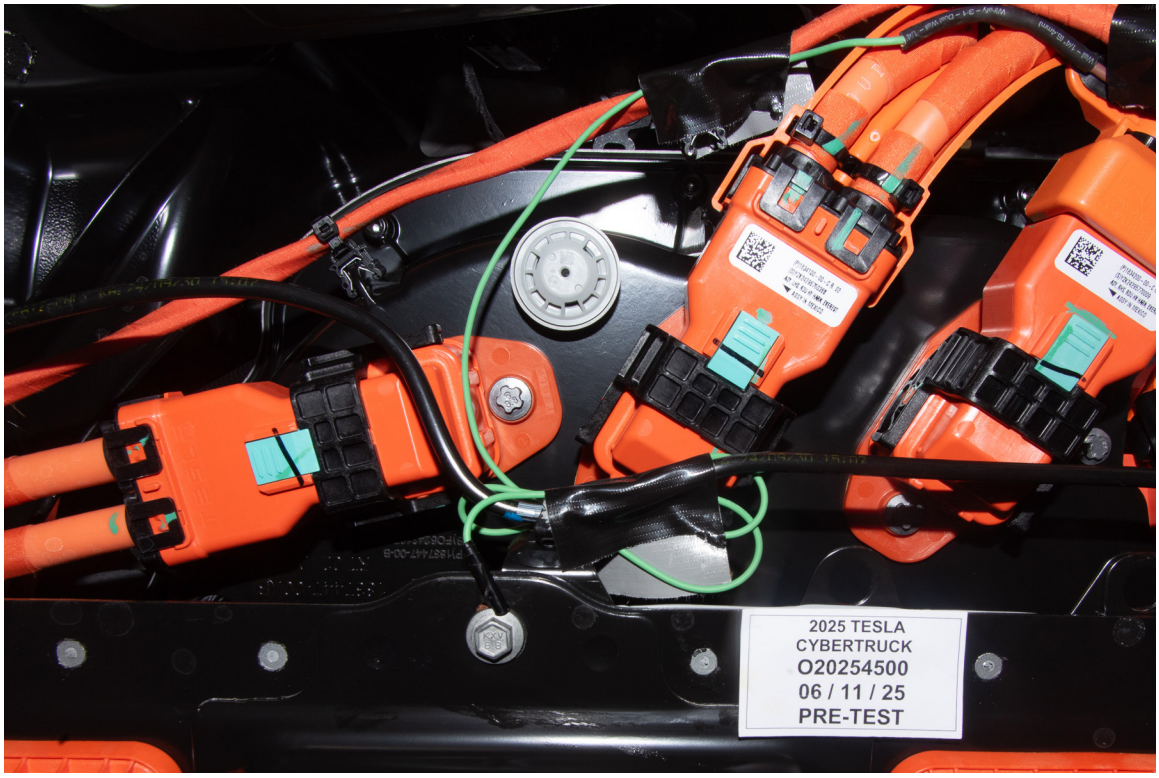


FIGURE 305-021. Pre-Impact View of Ground Lead Attached

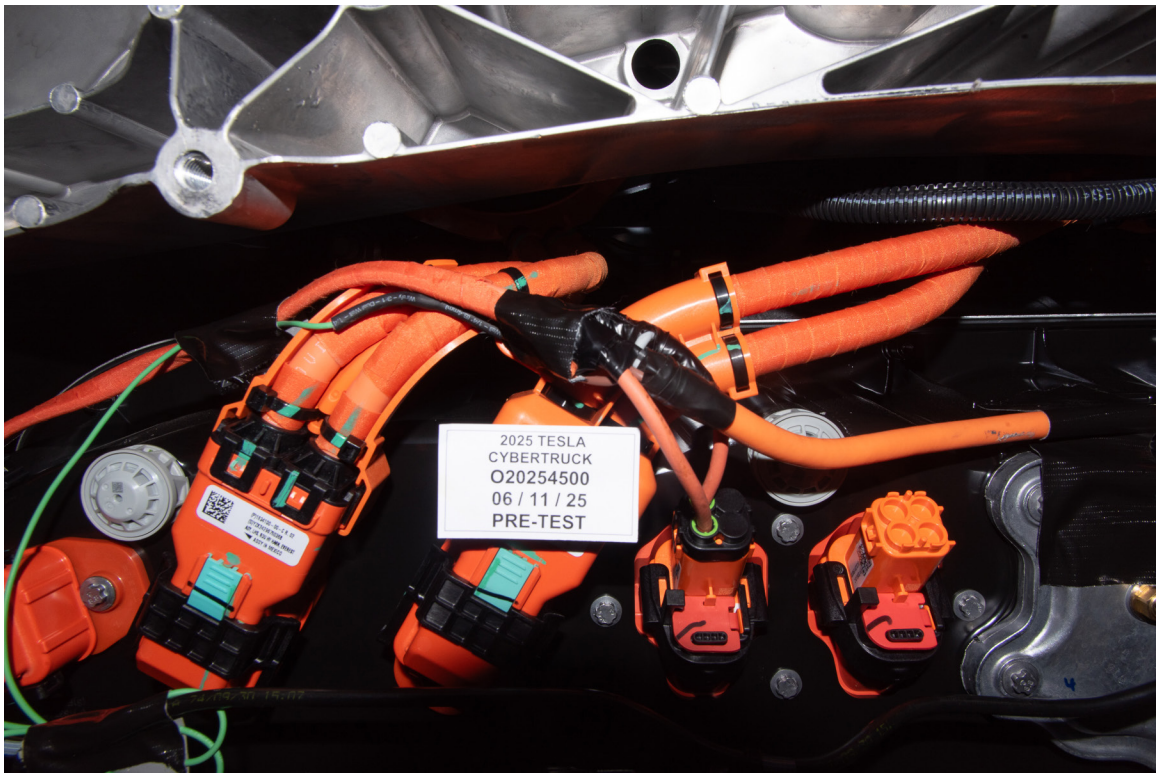


FIGURE 305-022. Pre-Impact View of High Voltage Leads Attached

FIGURE 305-023. Pre-Impact Close-Up View of High Voltage Leads Attached

FIGURE 305-024. Pre-Impact View of Installed Test Interface Port

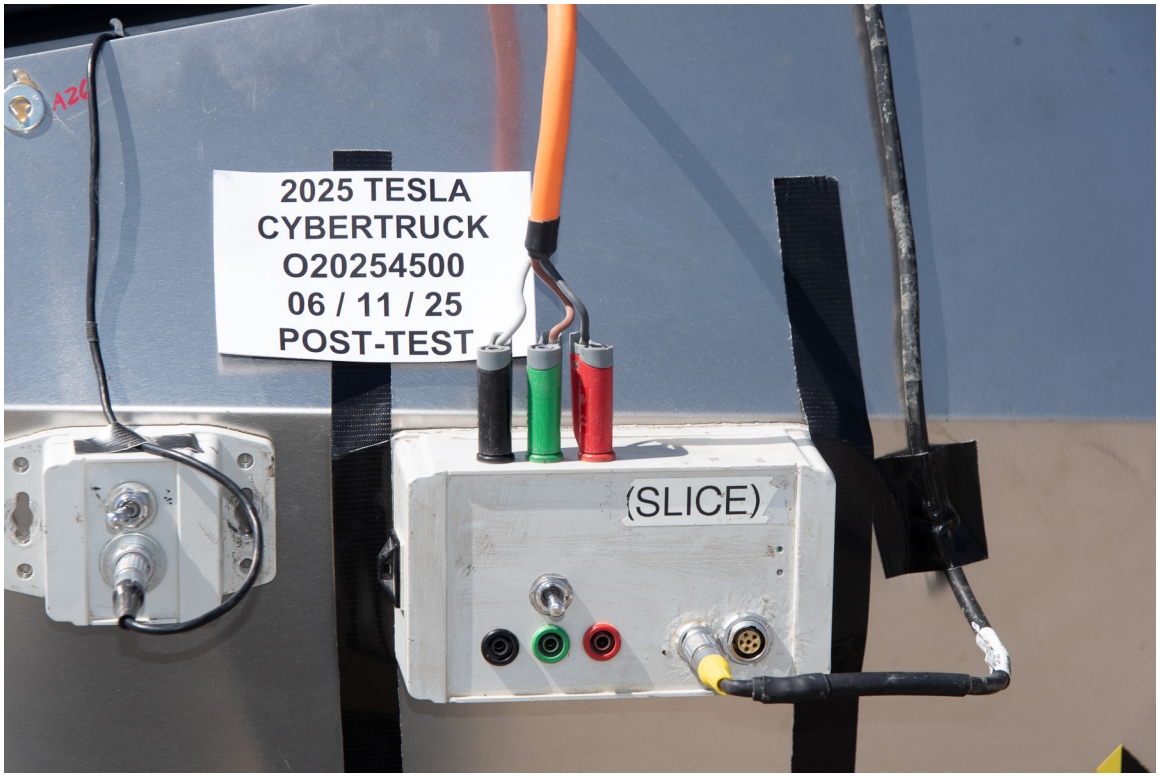


FIGURE 305-025. Post-Impact View of Installed Test Interface Port

FIGURE 305-026. Pre-Impact View of Other Test Devices

FIGURE 305-027. Post-Impact View of Other Test Devices

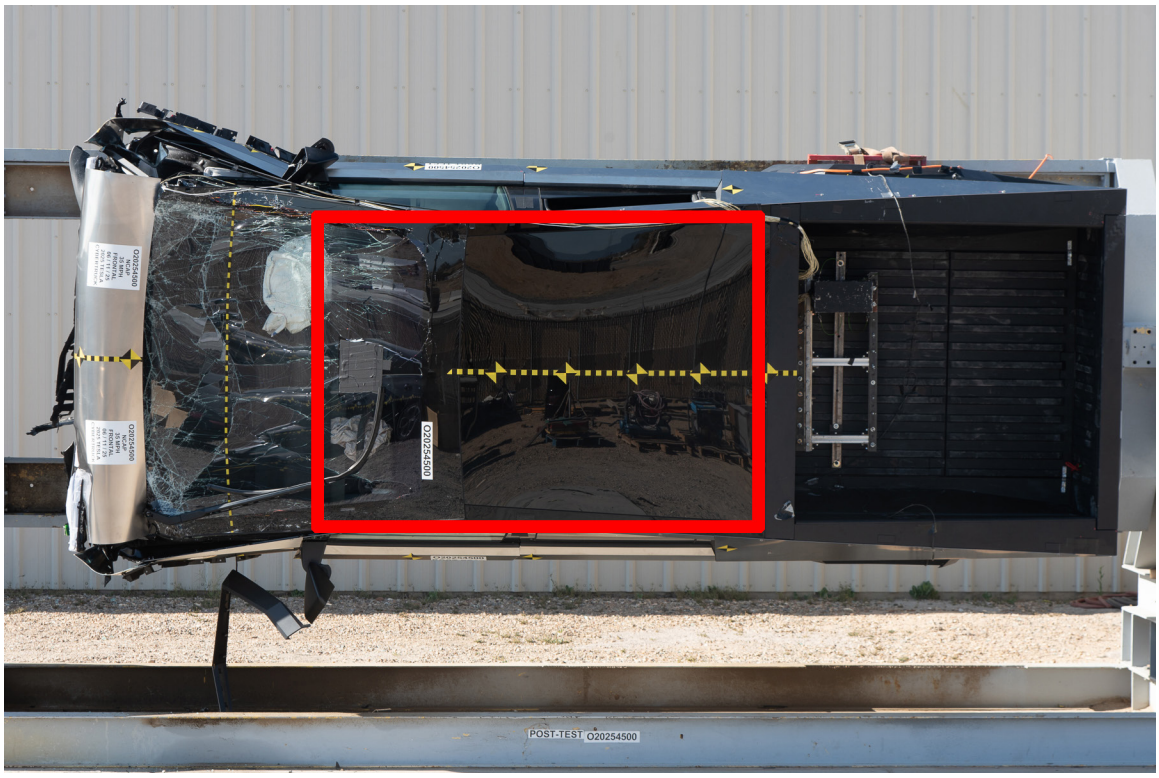


FIGURE 305-028. FMVSS No. 305 Static Rollover at 90°

FIGURE 305-029. FMVSS No. 305 Static Rollover at 180°

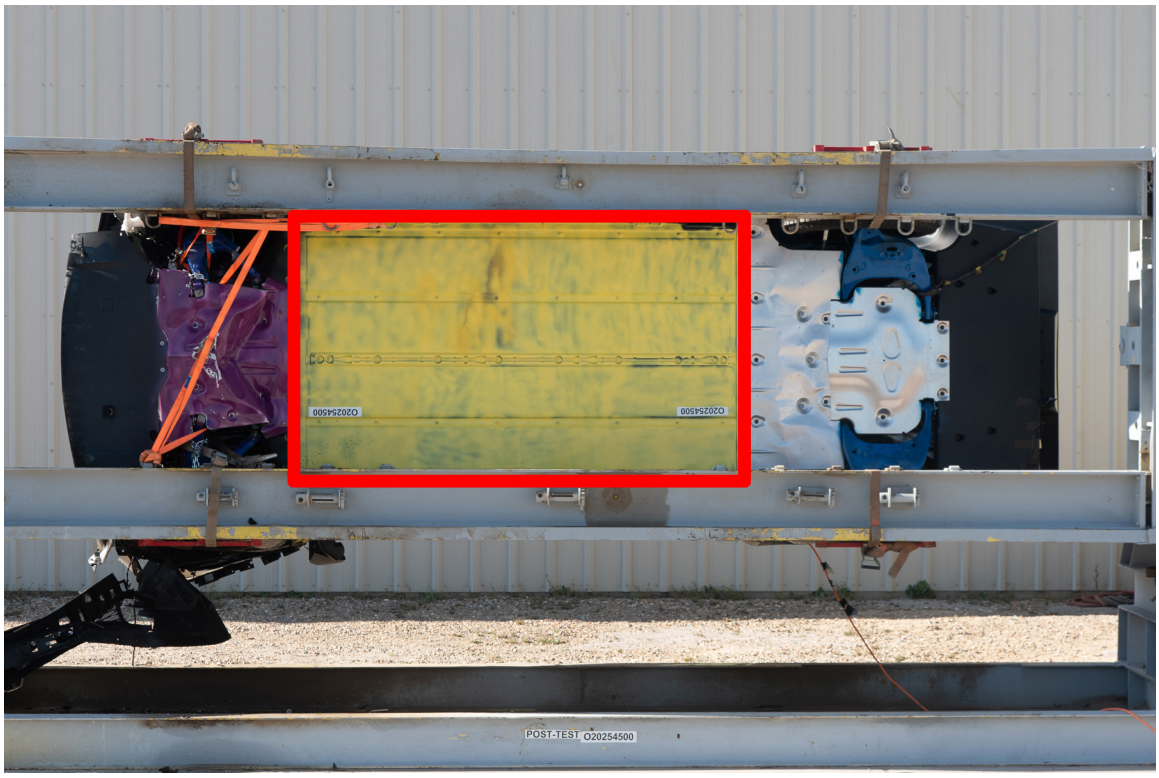


FIGURE 305-030. FMVSS No. 305 Static Rollover at 270°

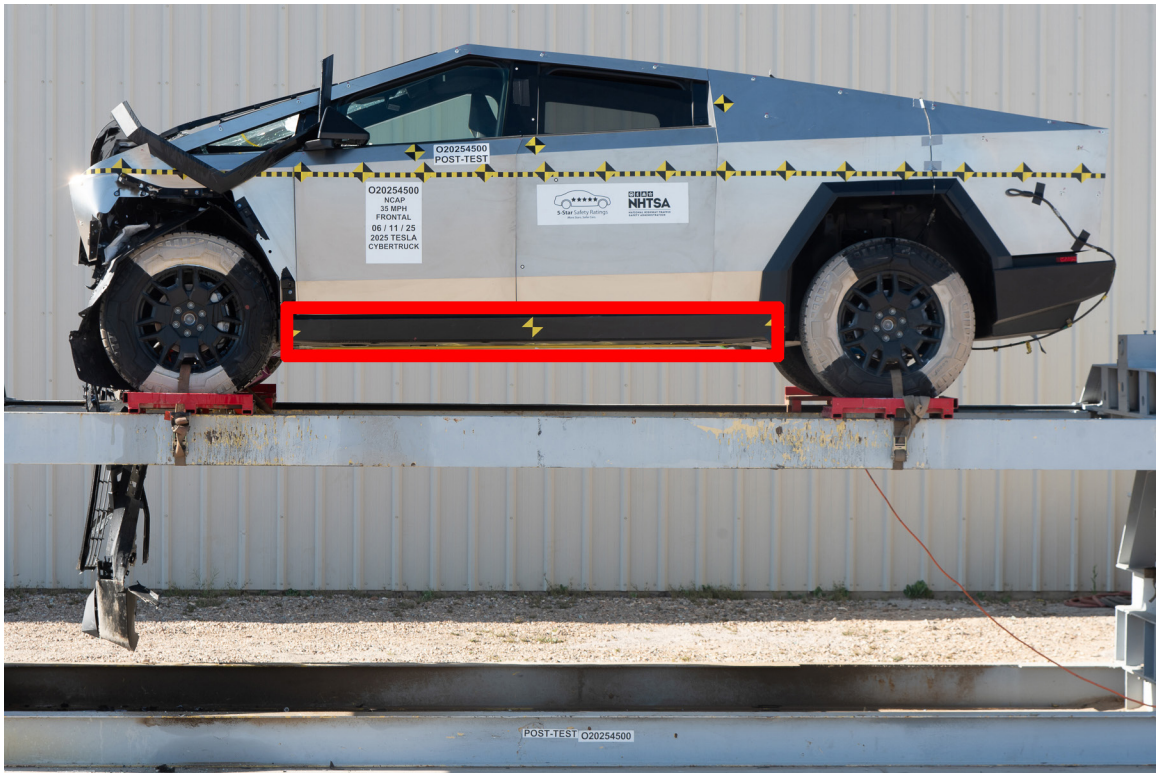


FIGURE 305-031. FMVSS No. 305 Static Rollover at 360°

FIGURE 305-032. Pre-Impact View of the Vehicle Passenger Compartment Adjacent to Propulsion Battery

FIGURE 305-033. Post-Impact View of the Vehicle Passenger Compartment Adjacent to Propulsion Battery

Photograph Not Applicable

No Propulsion Battery Mounting
and/or Intrusion Failure

FIGURE 305-034. Post-Impact Propulsion Battery System Mounting and or Intrusion Failure(s)

Photograph Not Applicable

No Battery Component Intrusion

FIGURE 305-035. Post-Impact View of Battery Component Intrusion

Photograph Not Applicable

No Propulsion Battery Movement or Retention Loss

FIGURE 305-036. Post-Impact View of Battery Module Movement or Retention Loss

Photograph Not Applicable

No Propulsion Battery Electrolyte Spillage

FIGURE 305-037. Post-Impact View of Propulsion Battery Electrolyte Spillage Location

Photograph Not Applicable

No Propulsion Battery Electrolyte Spillage

FIGURE 305-038. Post-Test View of Propulsion Battery Electrolyte Spillage Location

APPENDIX B
DUMMY RESPONSE DATA TRACES

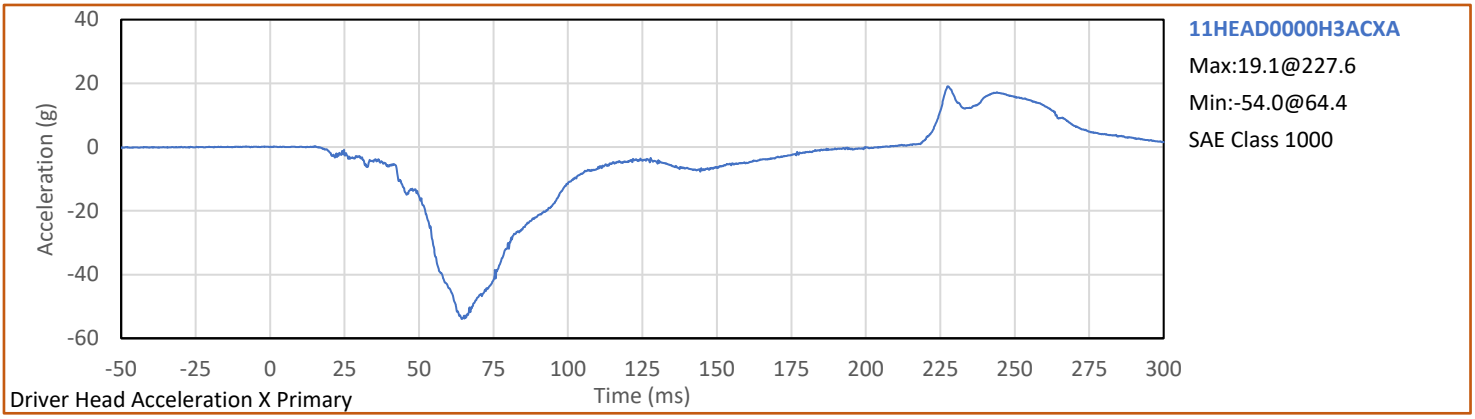
TABLE OF DATA PLOTS

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

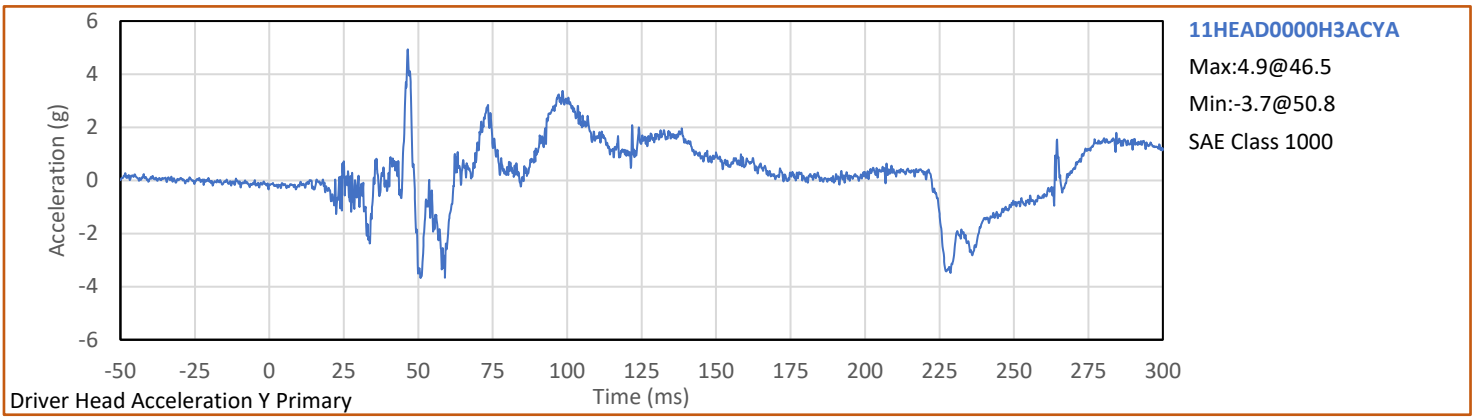
Driver Head X Acceleration Redundant
Driver Head Y Acceleration Redundant
Driver Head Z Acceleration Redundant
Driver Upper Neck Force Y
Driver Upper Neck Moment X
Driver Upper Neck Moment Z
Driver Chest X Acceleration Redundant
Driver Chest Y Acceleration Redundant
Driver Chest Z Acceleration Redundant
Driver Pelvis X
Driver Pelvis Y
Driver Pelvis Z
Driver Left Femur Force Z Redundant
Driver Right Femur Force Z 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 Shoulder Belt Force
Driver Lap Belt Force
Driver Head Angular Velocity X
Driver Head Angular Velocity Y
Driver Head Angular Velocity Z
Passenger Head X Acceleration Redundant
Passenger Head Y Acceleration Redundant
Passenger Head Z Acceleration Redundant
Passenger Upper Neck Force X
Passenger Upper Neck Force Z
Passenger Upper Neck Moment Y

Passenger Chest X Acceleration Redundant
Passenger Chest Y Acceleration Redundant
Passenger Chest Z Acceleration Redundant
Passenger Pelvis X
Passenger Pelvis Y
Passenger Pelvis Z
Passenger Left Femur Force Redundant
Passenger Right Femur Force 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 Shoulder Belt Force
Passenger Lap Belt Force
Passenger Head Angular Velocity X
Passenger Head Angular Velocity Y
Passenger Head Angular Velocity Z
Left Rear Seat Crossmember X
Left Rear Seat Crossmember Z
Right Rear Seat Crossmember X
Right Rear Seat Crossmember Z
Left Rear Seat Crossmember X Redundant
Right Rear Seat Crossmember X Redundant
Vehicle Engine Top X
Vehicle Engine Bottom X
Load Cell Barrier Forces

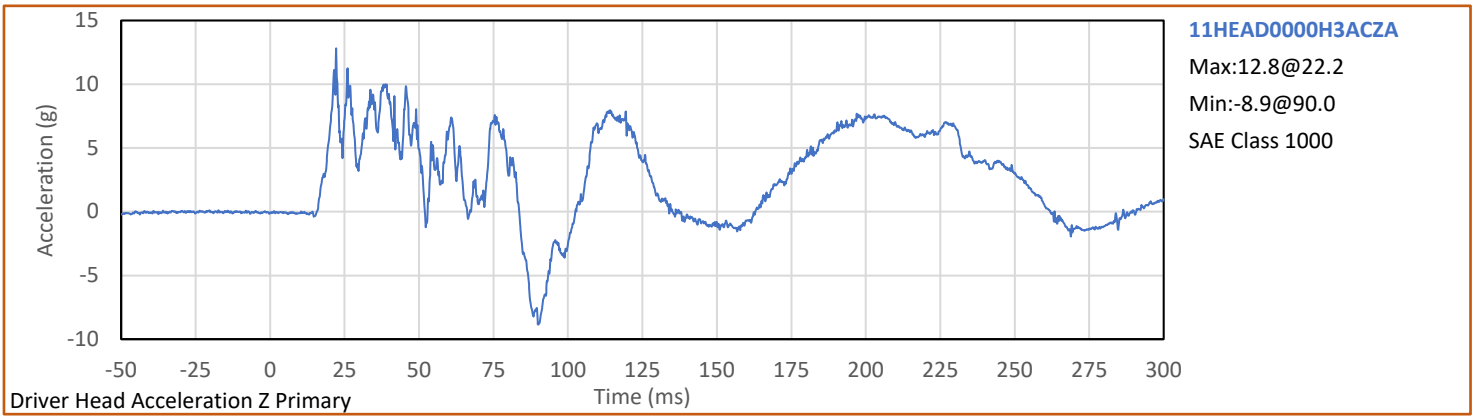
Test Vehicle:	2025 Tesla Cybertruck Beast 4-Door Pickup Truck	NHTSA No.:	O20254500
Test Program:	56.3 km/h Frontal Impact NCAP Test	Test Date:	6/11/2025



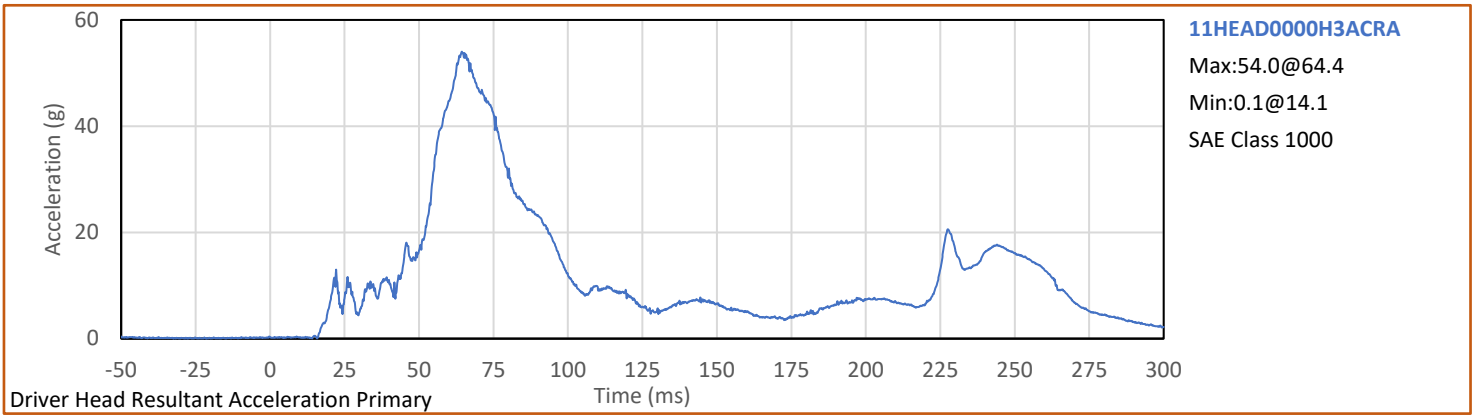
Driver Head Acceleration X Primary



Driver Head Acceleration Y Primary

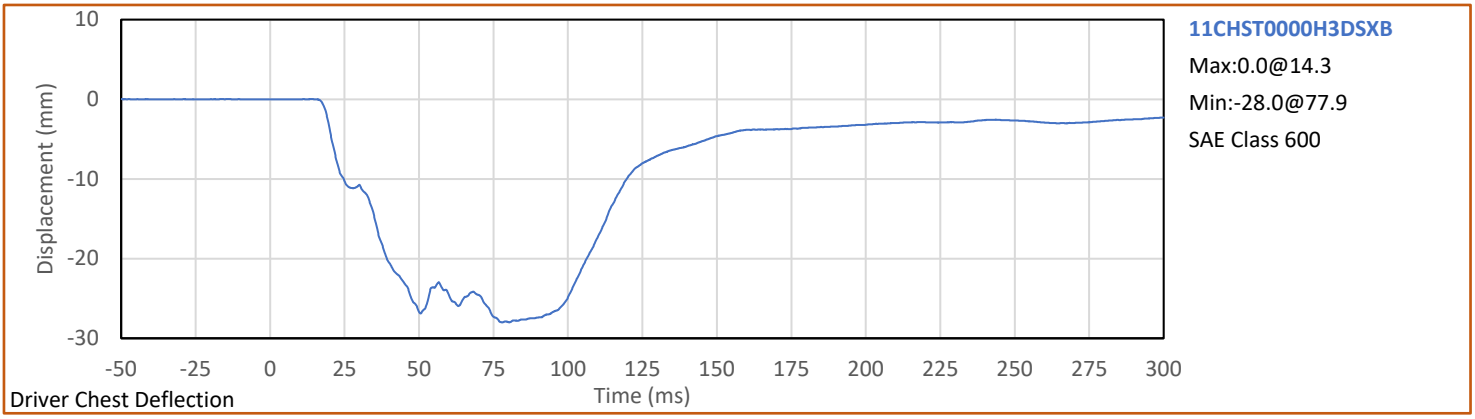


Driver Head Acceleration Z Primary

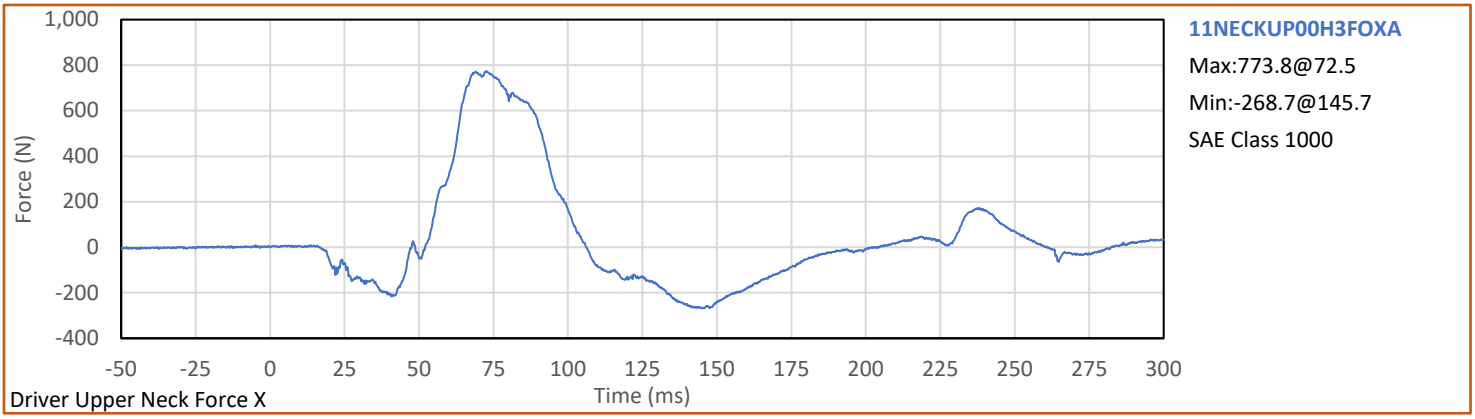


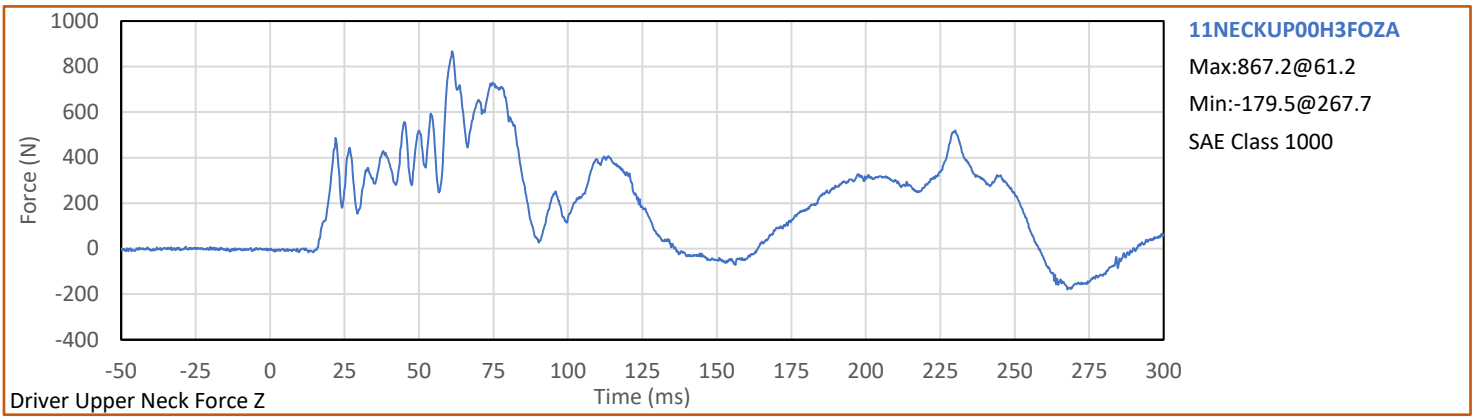
Driver Head Resultant Acceleration Primary

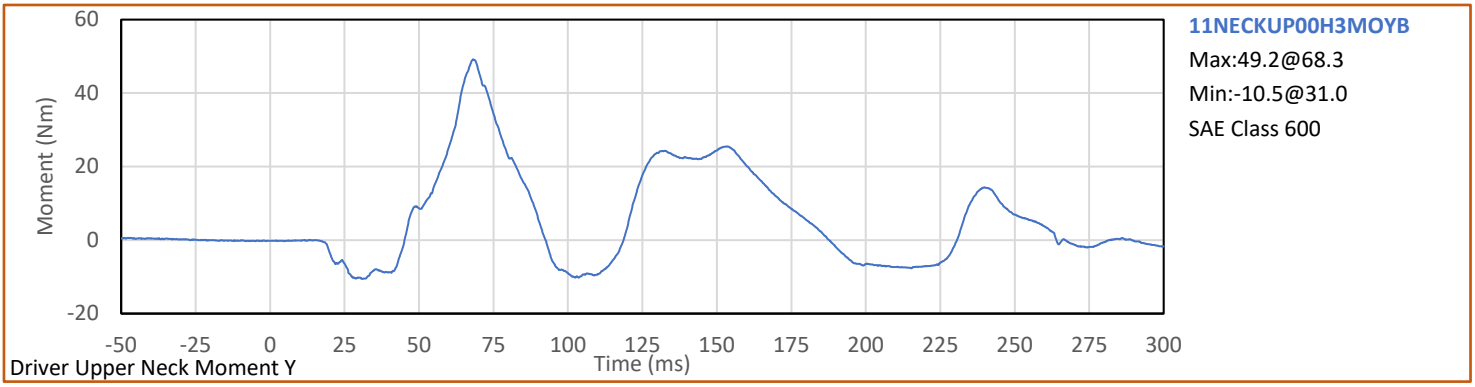
Test Vehicle:	2025 Tesla Cybertruck Beast 4-Door Pickup Truck	NHTSA No.:	O20254500
Test Program:	56.3 km/h Frontal Impact NCAP Test	Test Date:	6/11/2025

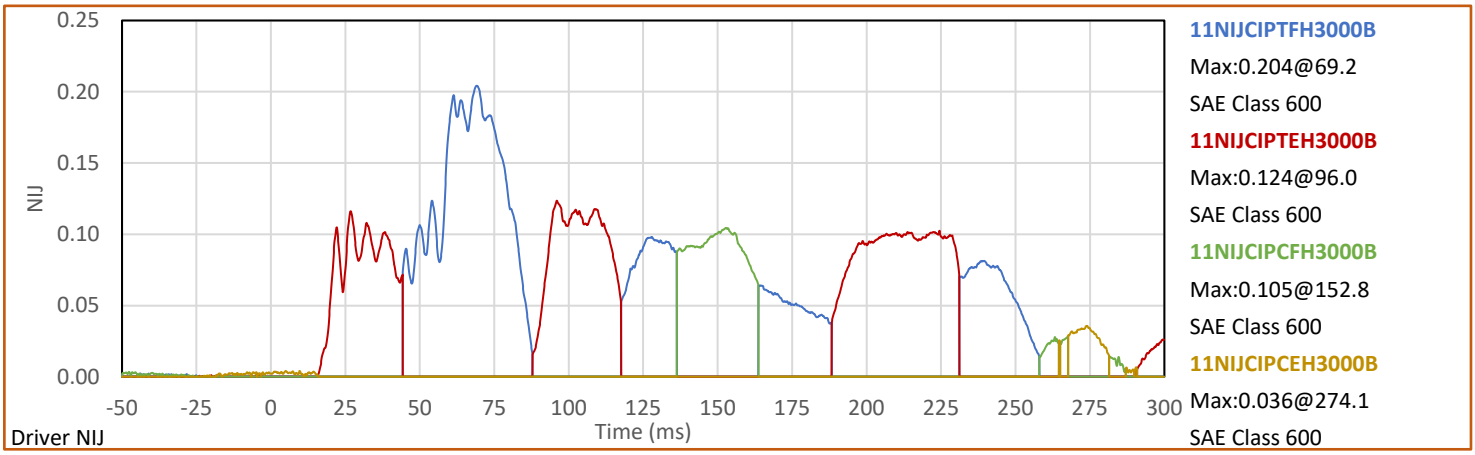


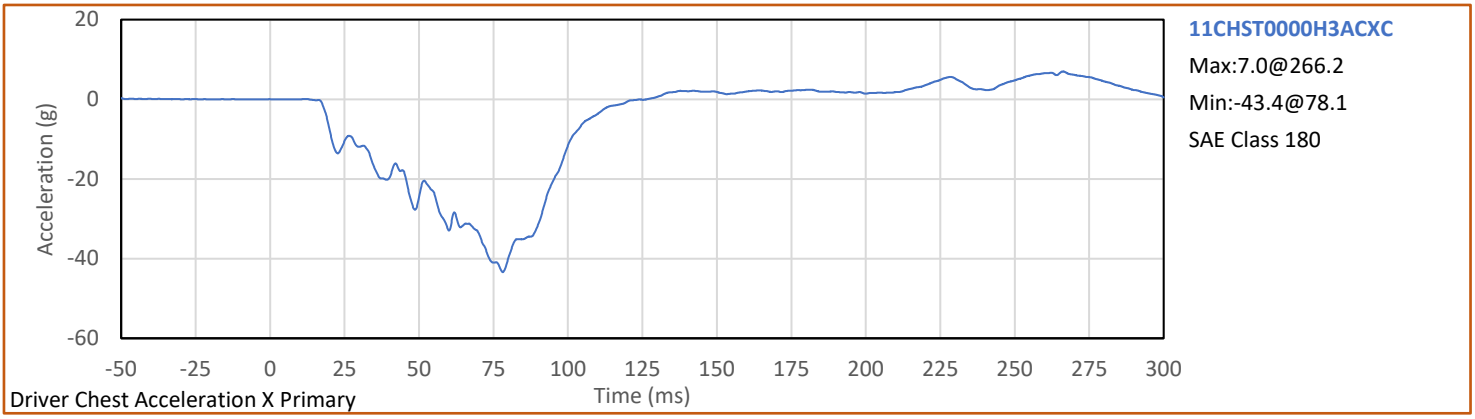
Driver Chest Deflection

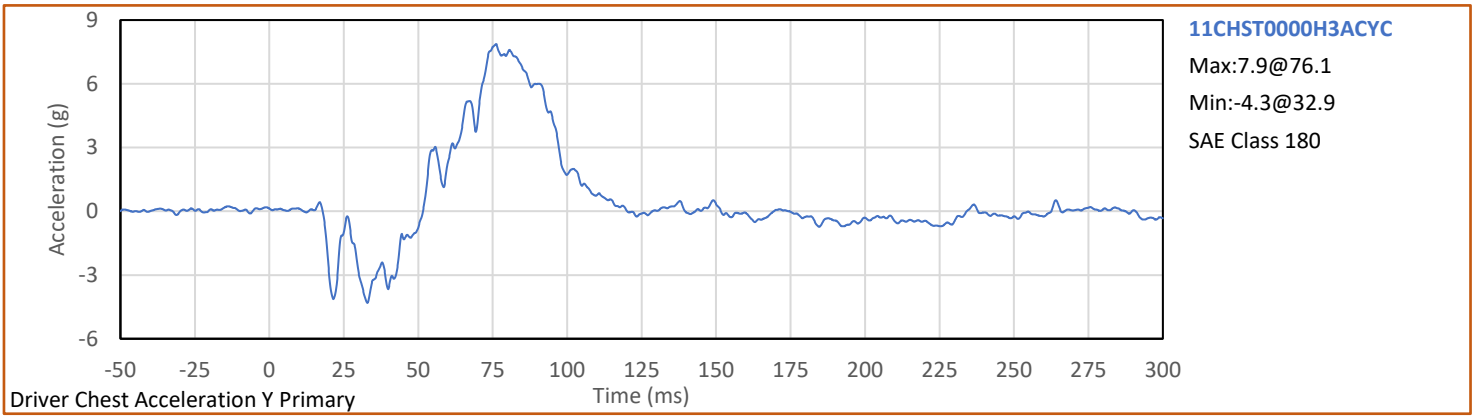

Force (N)
Time (ms)
11NECKUP00H3FOXA
Max:773.8@72.5
Min:-268.7@145.7
SAE Class 1000
Driver Upper Neck Force X

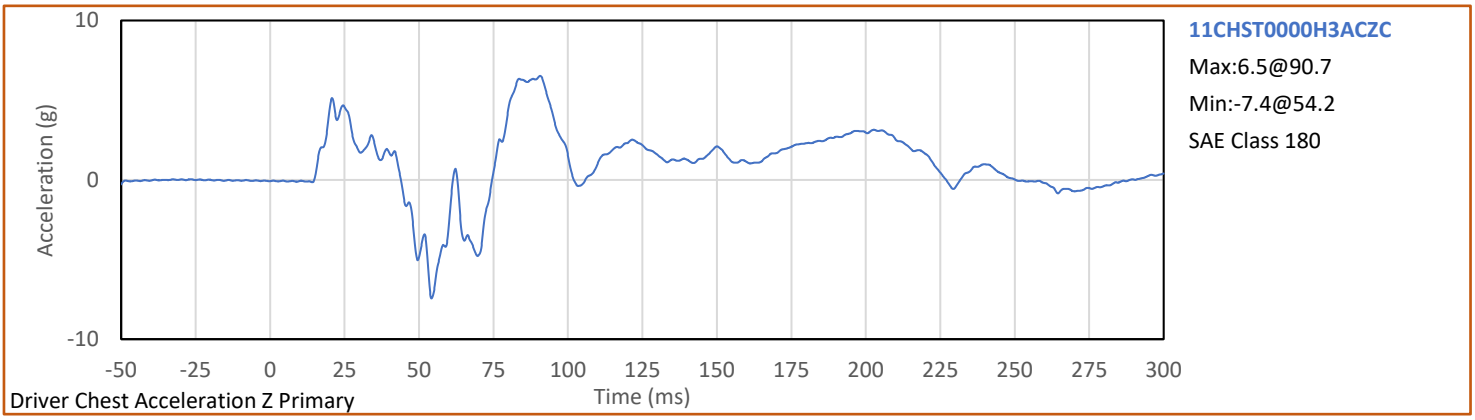

Force (N)
Time (ms)
11NECKUP00H3FOZA
Max:867.2@61.2
Min:-179.5@267.7
SAE Class 1000
Driver Upper Neck Force Z

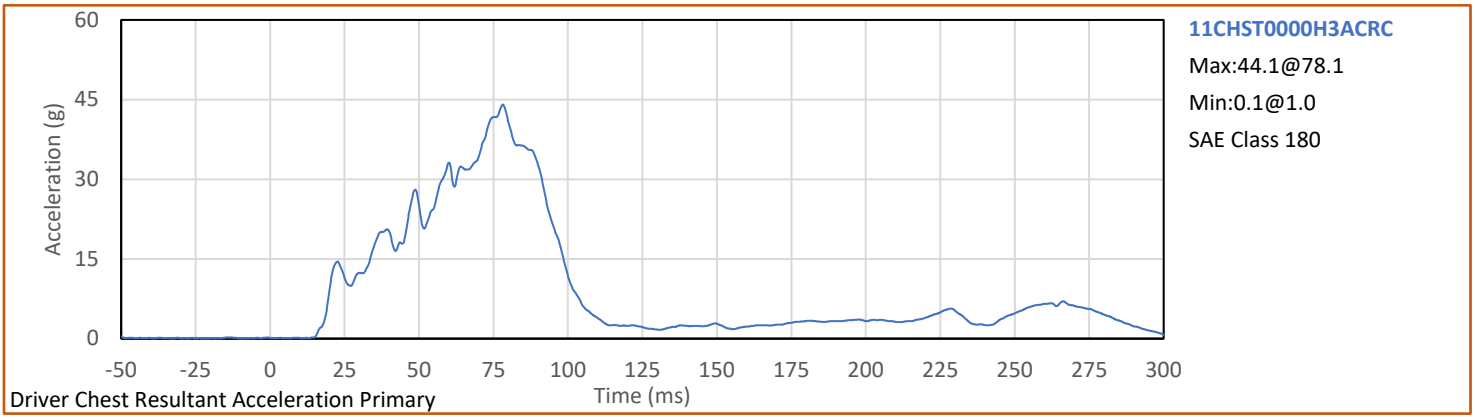

Moment (Nm)
Time (ms)
11NECKUP00H3MOYB
Max:49.2@68.3
Min:-10.5@31.0
SAE Class 600
Driver Upper Neck Moment Y

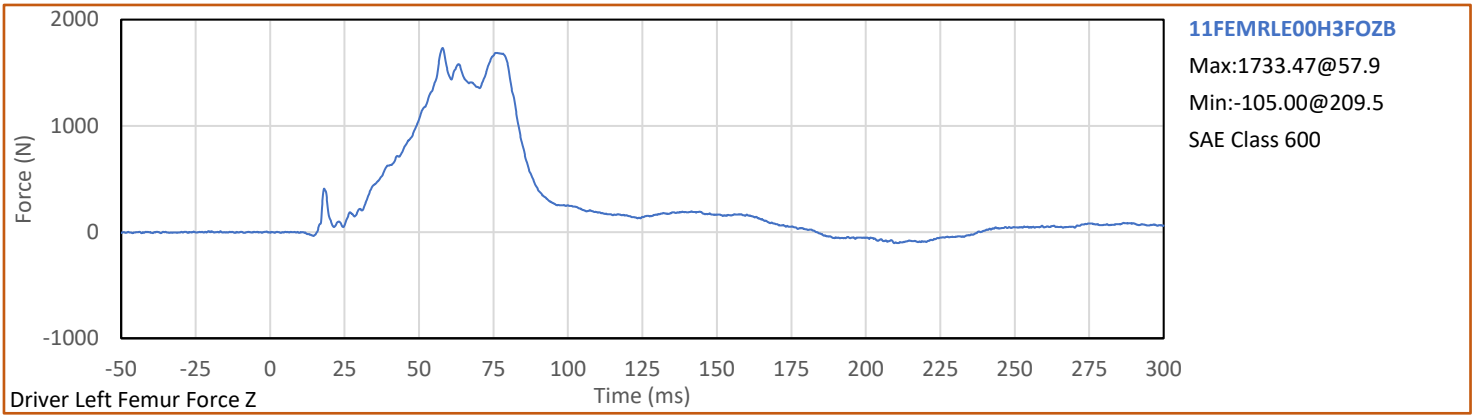

NIJ
Time (ms)
11NIJCIPTFH3000B
Max:0.204@69.2
SAE Class 600
11NIJCIPTEH3000B
Max:0.124@96.0
SAE Class 600
11NIJCIPCFH3000B
Max:0.105@152.8
SAE Class 600
11NIJCIPCEH3000B
Max:0.036@274.1
SAE Class 600
Driver NIJ


11CHST0000H3ACXC
Max:7.0@266.2
Min:-43.4@78.1
SAE Class 180
Acceleration (g)
Time (ms)
Driver Chest Acceleration X Primary

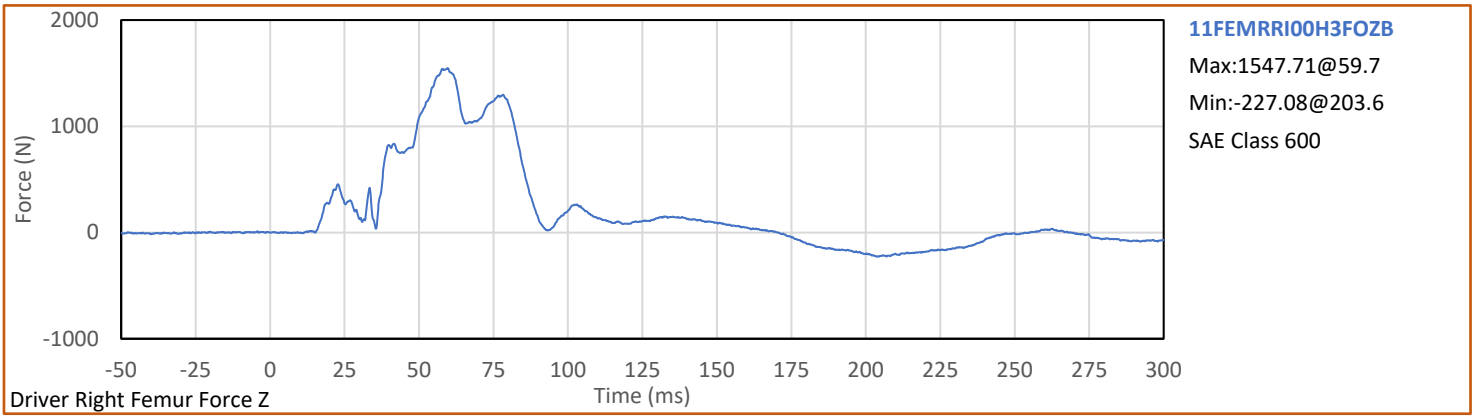

11CHST0000H3ACYC
Max:7.9@76.1
Min:-4.3@32.9
SAE Class 180
Acceleration (g)
Time (ms)
Driver Chest Acceleration Y Primary


11CHST0000H3ACZC
Max:6.5@90.7
Min:-7.4@54.2
SAE Class 180
Acceleration (g)
Time (ms)
Driver Chest Acceleration Z Primary

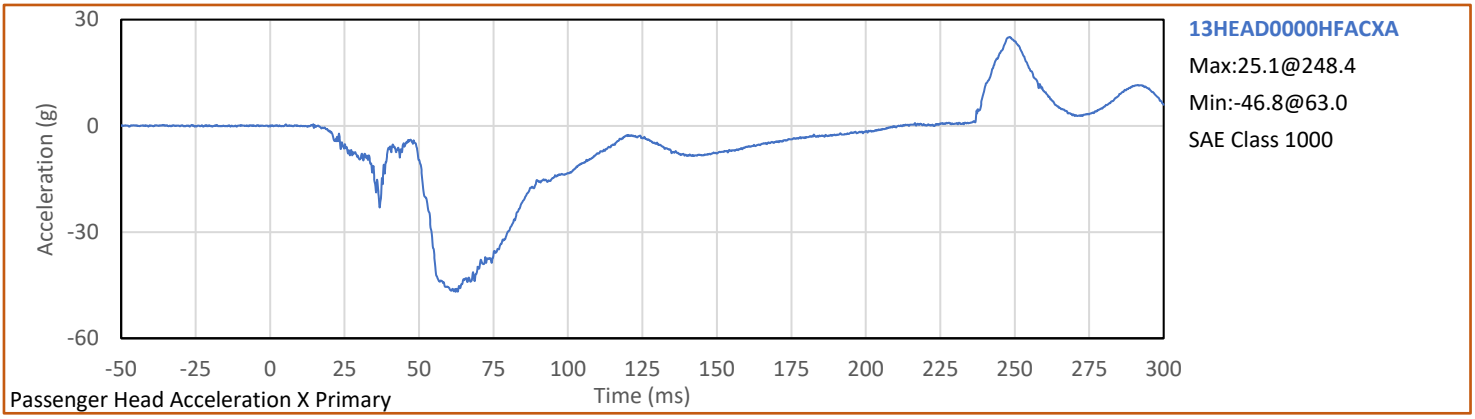

11CHST0000H3ACRC
Max:44.1@78.1
Min:0.1@1.0
SAE Class 180
Acceleration (g)
Time (ms)
Driver Chest Resultant Acceleration Primary



Driver Left Femur Force Z

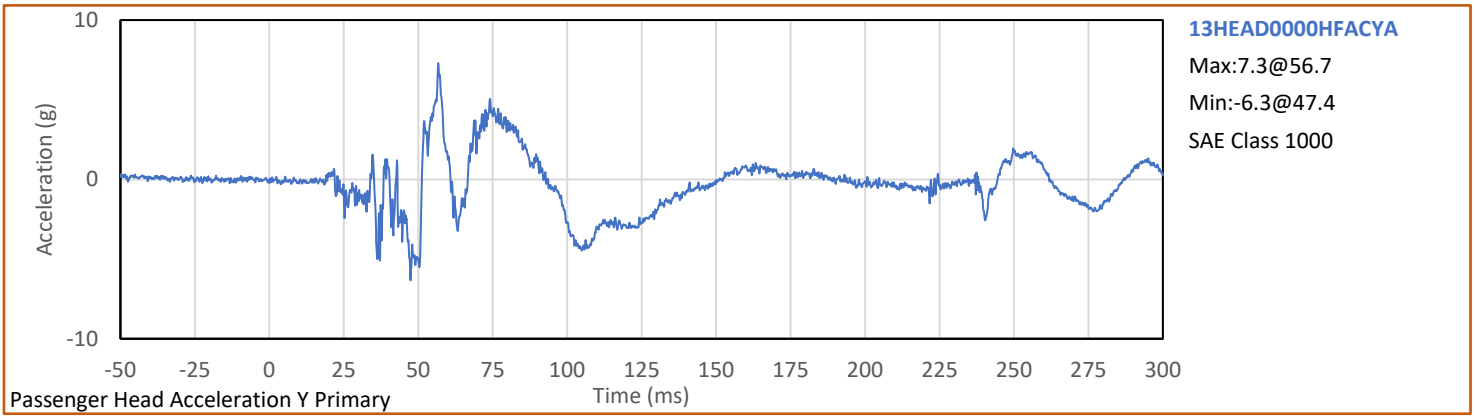


Driver Right Femur Force Z



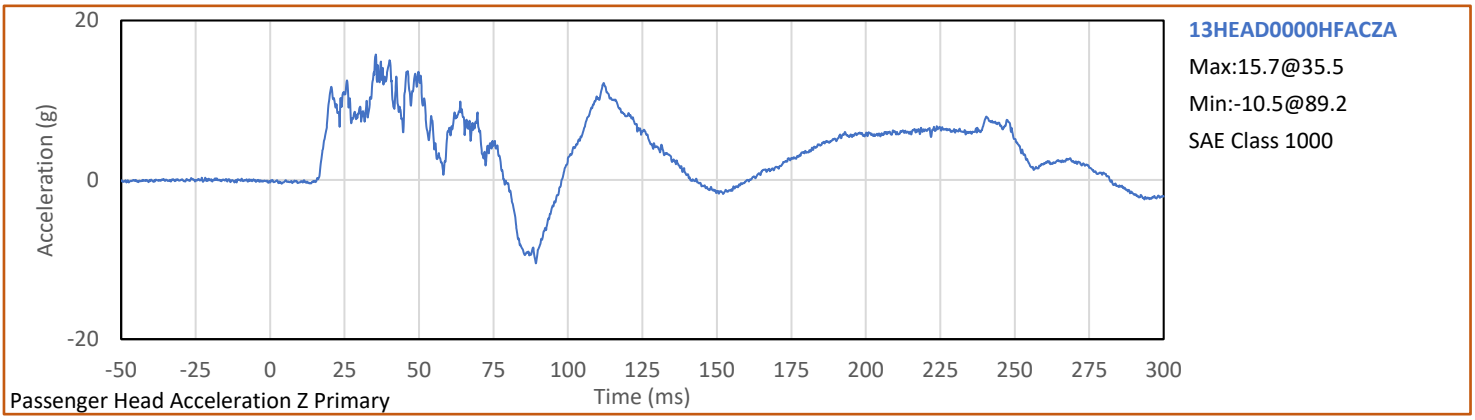
Passenger Head Acceleration X Primary

13HEAD0000HFACXA
Max:25.1@248.4
Min:-46.8@63.0
SAE Class 1000



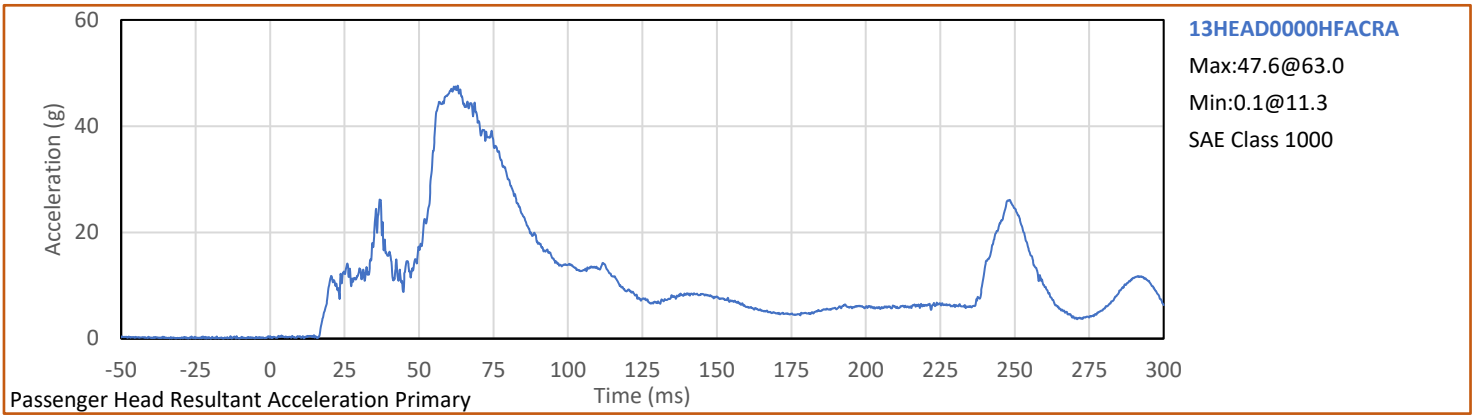
Passenger Head Acceleration Y Primary

13HEAD0000HFACYA
Max:7.3@56.7
Min:-6.3@47.4
SAE Class 1000



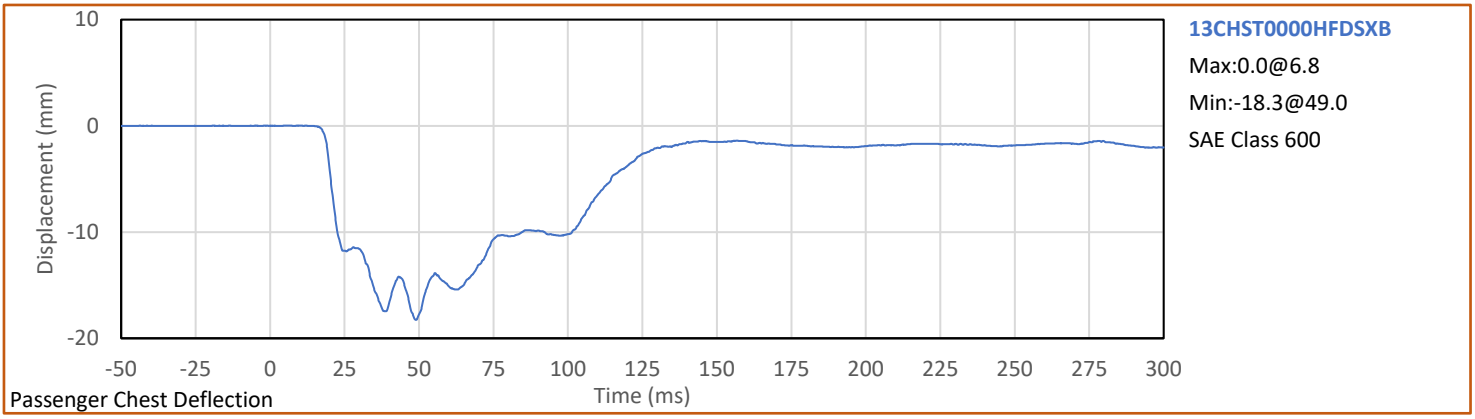
Passenger Head Acceleration Z Primary

13HEAD0000HFACZA
Max:15.7@35.5
Min:-10.5@89.2
SAE Class 1000

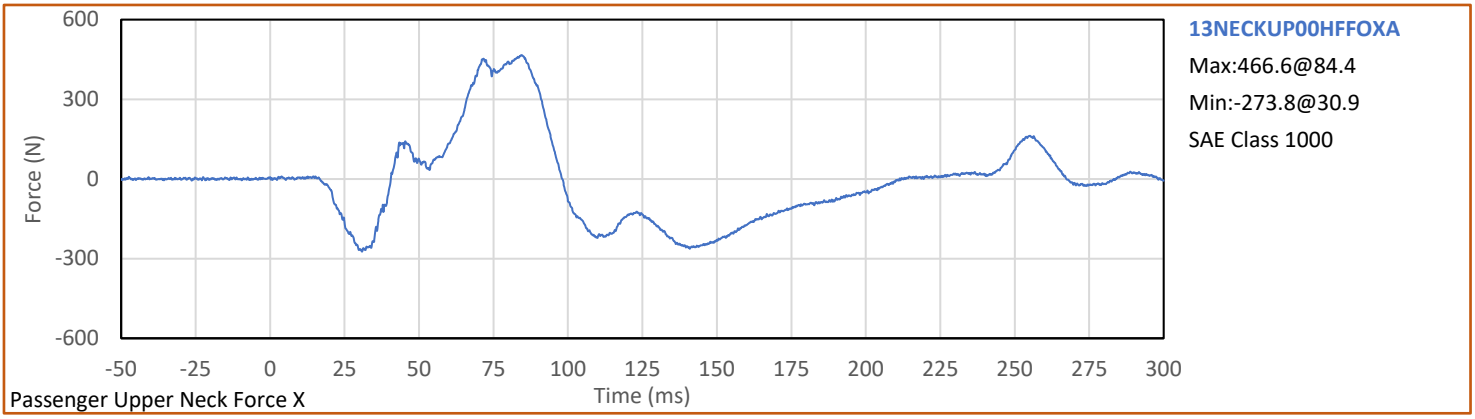


Passenger Head Resultant Acceleration Primary

13HEAD0000HFACRA
Max:47.6@63.0
Min:0.1@11.3
SAE Class 1000

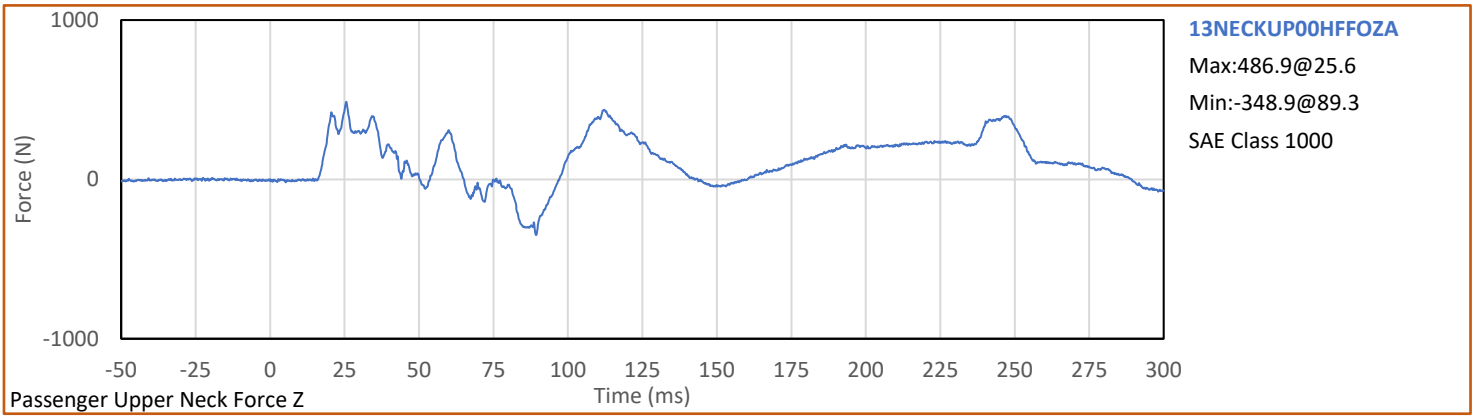


Passenger Chest Deflection



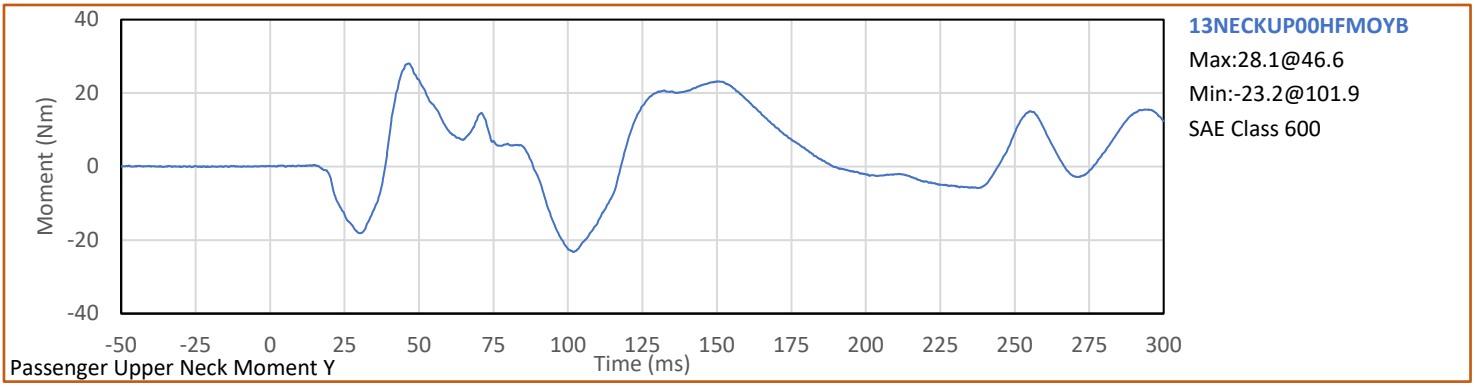
Passenger Upper Neck Force X

13NECKUP00HFFOXA
Max:466.6@84.4
Min:-273.8@30.9
SAE Class 1000



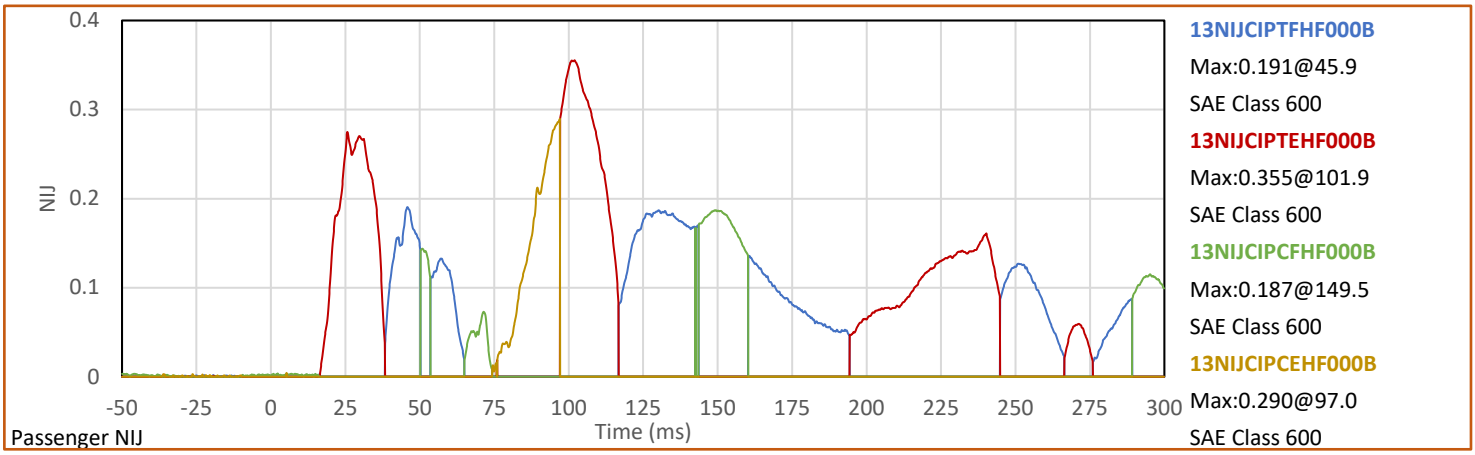
Passenger Upper Neck Force Z

13NECKUP00HFFOZA
Max:486.9@25.6
Min:-348.9@89.3
SAE Class 1000



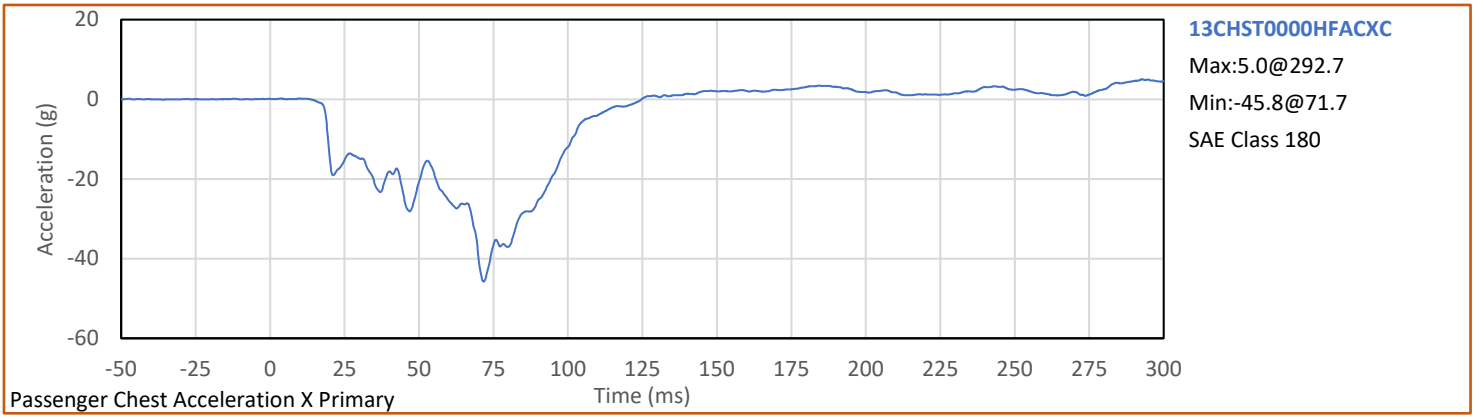
Passenger Upper Neck Moment Y

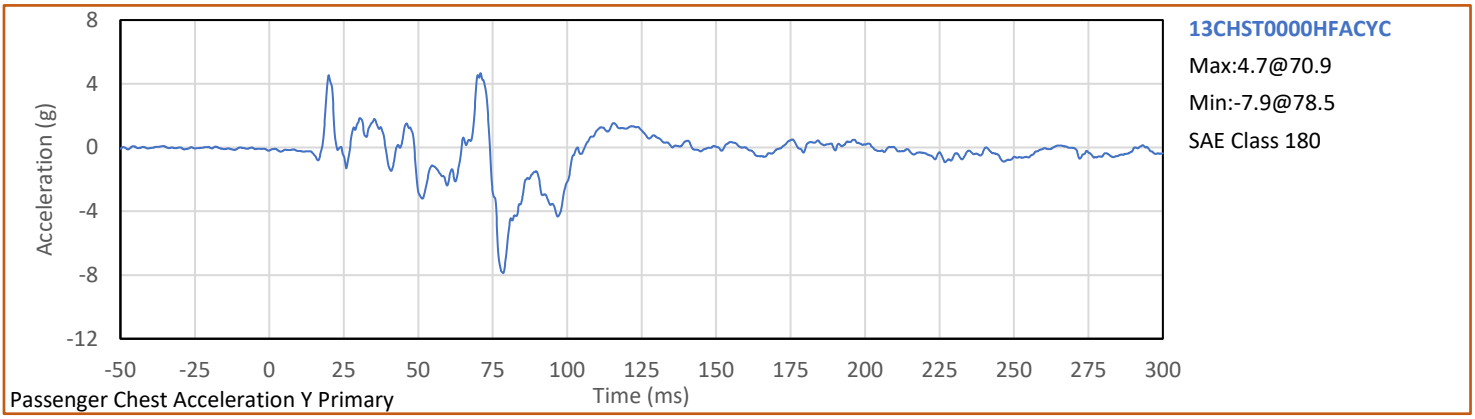
13NECKUP00HFMOYB
Max:28.1@46.6
Min:-23.2@101.9
SAE Class 600

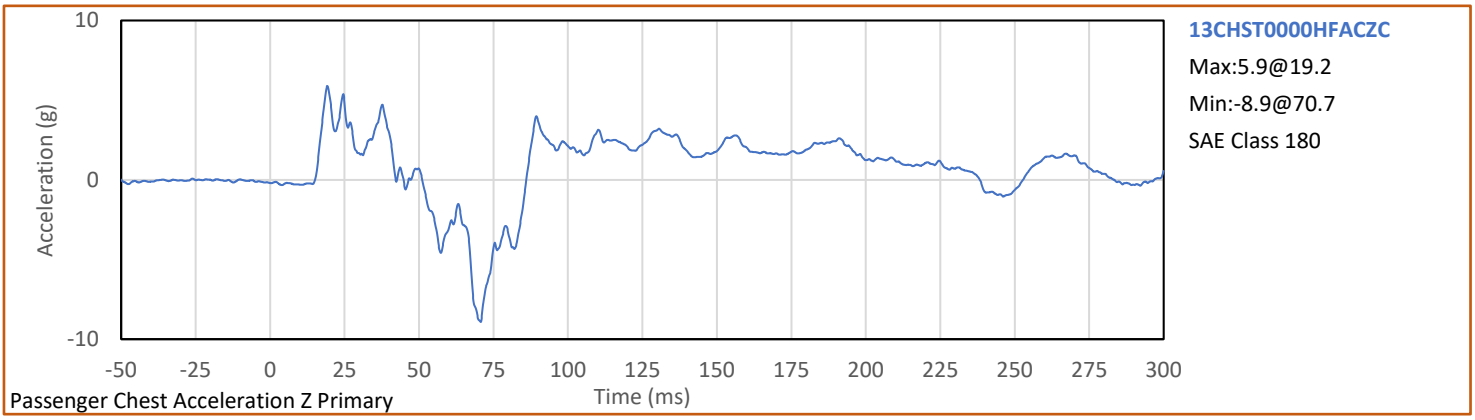


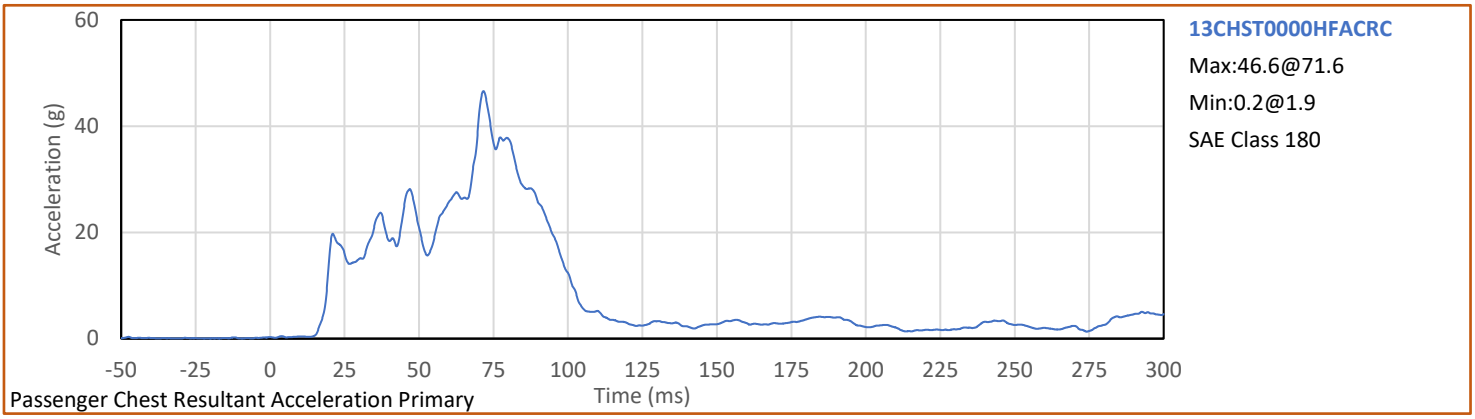
Passenger NIJ

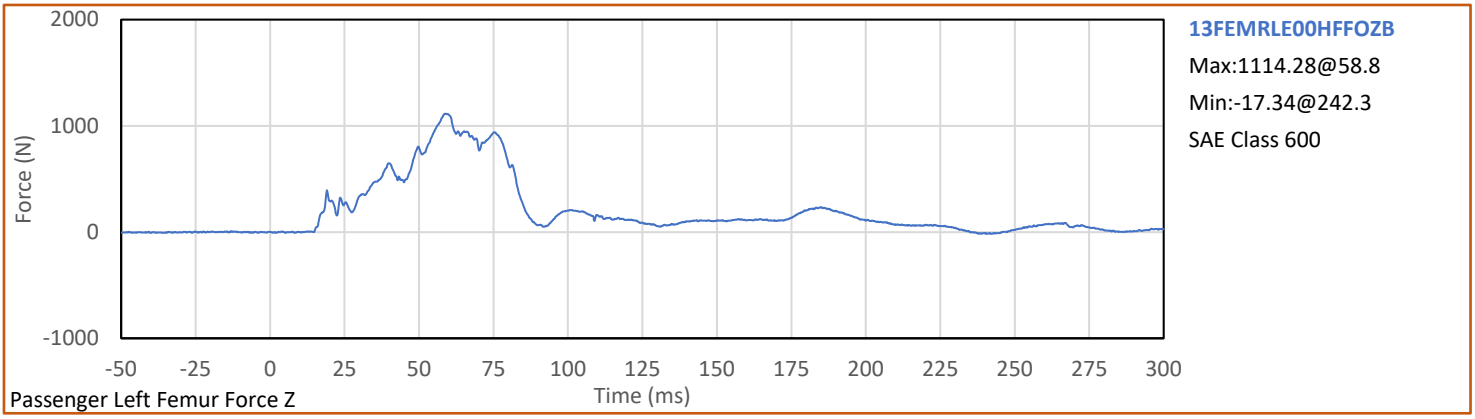
13NIJCIPTFHF000B
Max:0.191@45.9
SAE Class 600
13NIJCIPTEHF000B
Max:0.355@101.9
SAE Class 600
13NIJCIPCFHF000B
Max:0.187@149.5
SAE Class 600
13NIJCIPCEHF000B
Max:0.290@97.0
SAE Class 600


13CHST0000HFACXC
Max:5.0@292.7
Min:-45.8@71.7
SAE Class 180
Acceleration (g)
Time (ms)
Passenger Chest Acceleration X Primary

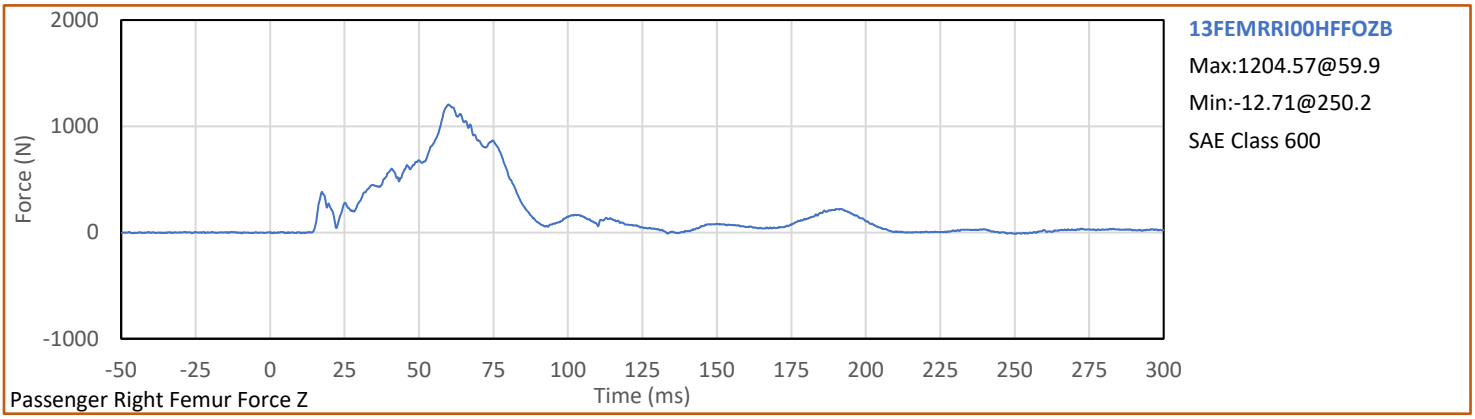

13CHST0000HFACYC
Max:4.7@70.9
Min:-7.9@78.5
SAE Class 180
Acceleration (g)
Time (ms)
Passenger Chest Acceleration Y Primary


13CHST0000HFACZC
Max:5.9@19.2
Min:-8.9@70.7
SAE Class 180
Acceleration (g)
Time (ms)
Passenger Chest Acceleration Z Primary


13CHST0000HFACRC
Max:46.6@71.6
Min:0.2@1.9
SAE Class 180
Acceleration (g)
Time (ms)
Passenger Chest Resultant Acceleration Primary



Passenger Left Femur Force Z



Passenger Right Femur Force Z

APPENDIX C
DUMMY QUALIFICATION AND PERFORMANCE VERIFICATION DATA

APPENDIX C
Pre-Test ATD Qualification and Performance Verification
Hybrid III 50th Percentile Male ATD
S/N: 360

Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
ATD Damage Checklist

ATD Serial No.: 360 Test Date: 2025-06-04

Dummy Item	Inspect for	Comments	Damage	OK
Entire ATD	Perform general cleaning			✓
Outer Skin	Gashes, rips, cracks			✓
Head	Ballast secure			✓
	General appearance			✓
Neck bracket	Upper neck firmly attached to lower bracket			✓
Neck	Broken or cracked rubber			✓
	Looseness at the condyle joint			✓
Nodding block	Cracked or out of position			✓
Lumbar Spine	Broken or cracked rubber			✓
Ribs	Broken or bent ribs			✓
	Broken or bent rib supports			✓
	Damping material separated or cracked			✓
	Rubber bumpers in place			✓
Chest Displ.	Bent shaft			✓
Assembly	Slider arm riding in track			✓
Sensors	Check cables for cuts, tears			✓
	Check for damaged insulation			✓
Accelerometer	Head mounting secure			✓
Mounting	Chest mounting secure			✓
Knees	Skin condition			✓
	Insert (do not remove)			✓
	Casting			✓
Limbs	Normal movement and adjustment			✓
Knee Sliders	Wires intact			✓
	Rubber returned to "resting" position			✓
Pelvis	Broken			✓
Other	Describe below as needed			✓

Describe any repairs or replacement of parts or other findings:

No Problems Found

Technician: J. Perez

Approved By: J. Hernandez

Applus IDIADA
KARCO

Hybrid III 50th Percentile Male ATD
External Measurements

ATD Serial No.: 360 Test Date: 2025-06-04

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.4	Pass
Laboratory Relative Humidity	%	10	70	39	Pass
A - Total sitting height	mm	879	889	885	Pass
B - Shoulder pivot height	mm	505	521	516	Pass
C - 'H' point height	mm	84	89	88	Pass
D - 'H' point location from backline	mm	135	140	137	Pass
E - Shoulder pivot from backline	mm	84	94	87	Pass
F - Thigh clearance	mm	140	155	146	Pass
G - Back of elbow to wrist pivot	mm	290	305	298	Pass
H - Head back to backline	mm	41	46	43	Pass
I - Shoulder to elbow length	mm	330	345	334	Pass
J - Elbow rest height	mm	190	211	202	Pass
K - Buttock to knee length	mm	579	604	588	Pass
L - Popliteal length	mm	429	455	446	Pass
M - Knee pivot height	mm	485	500	488	Pass
N - Buttock popliteal length	mm	452	477	457	Pass
O - Chest depth without jacket	mm	213	229	225	Pass
P - Foot length	mm	251	267	261	Pass
V - Shoulder breadth	mm	422	437	428	Pass
W - Foot breadth	mm	91	107	100	Pass
Y - Chest circum. (w/chest jacket)	mm	970	1001	984	Pass
Z - Waist circum.	mm	836	866	855	Pass
AA - Location for chest circum.	mm	429	434	432	Pass
BB - Location for waist circum.	mm	226	231	230	Pass
			Overall Test Results		Pass

Technician. J. Perez

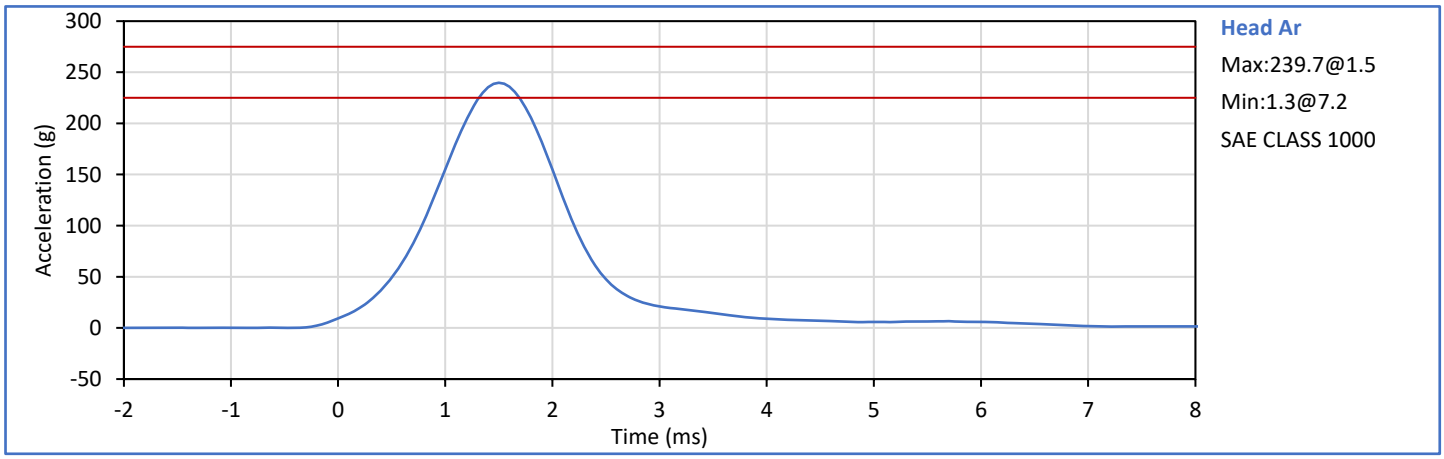
Approved By: J. Hernandez

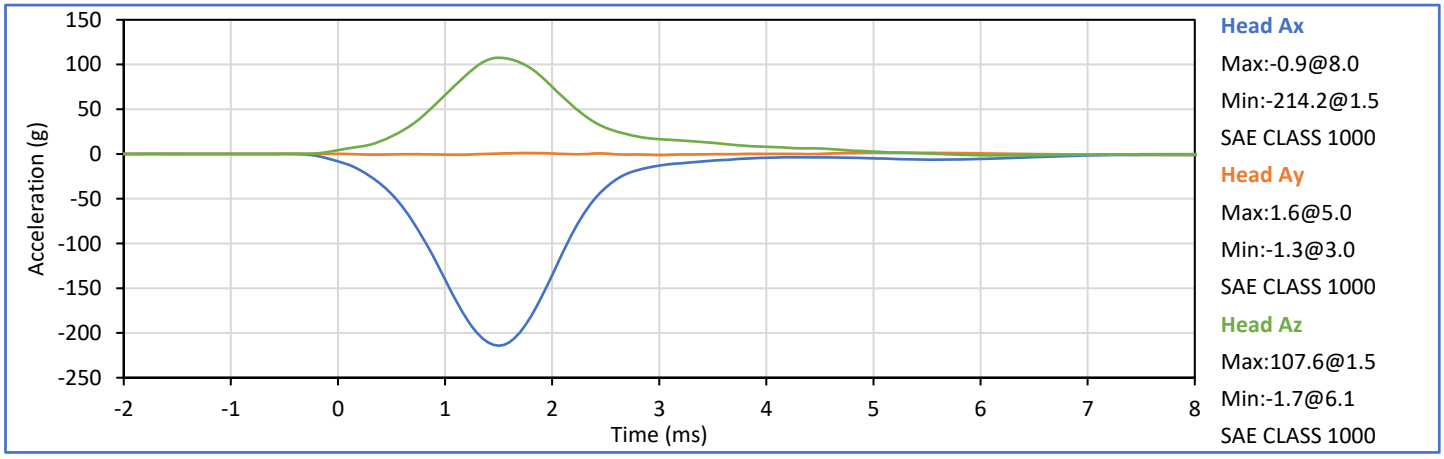
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Head Drop

ATD Serial No.: 360 Test Date: 2025-06-04

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.5	Pass
Laboratory Relative Humidity	%	10	70	39	Pass
Peak Resultant Acceleration	g	225.0	275.0	239.7	Pass
Peak Lateral Acceleration	g	-15.0	15.0	1.6	Pass
Oscillations After Main Pulse	%	0.0	10.0	0.0	Pass
Is Acceleration Unimodal?	Yes/No	Yes		Yes	Pass
			Overall Test Results		Pass





Technician: J. Perez

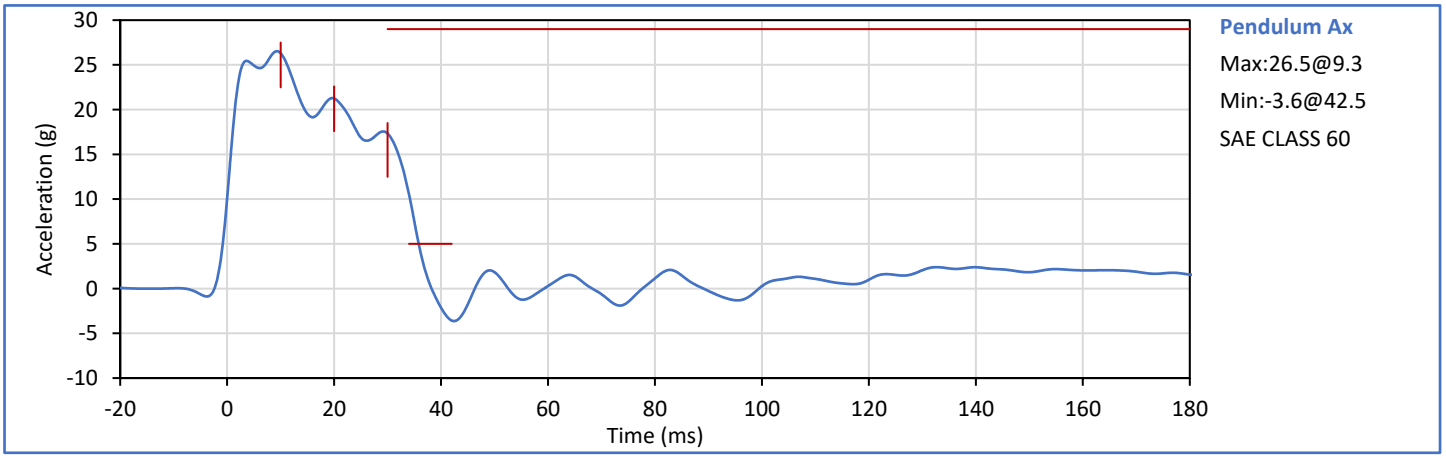
Approved By: J. Hernandez

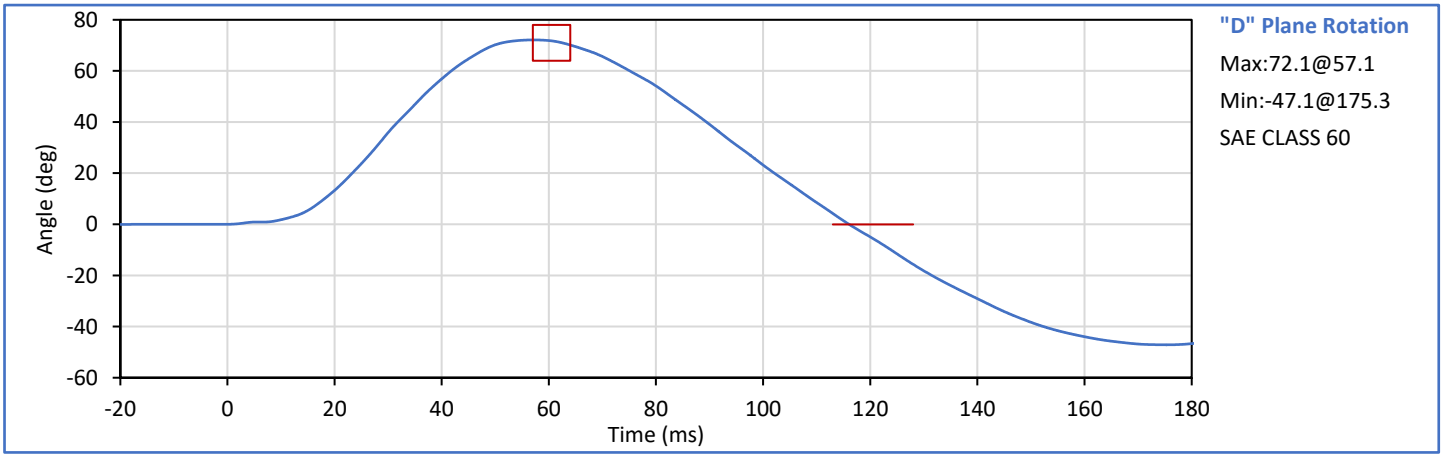
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Neck Flexion Test

ATD Serial No.: 360 Test Date: 2025-06-09

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.3	Pass
Laboratory Relative Humidity	%	10	70	42	Pass
Pendulum Velocity	m/s	6.89	7.13	7.04	Pass
Pendulum Deceleration at 10 ms	g	22.5	27.5	26.3	Pass
Pendulum Deceleration at 20 ms	g	17.6	22.6	21.2	Pass
Pendulum Deceleration at 30 ms	g	12.5	18.5	17.3	Pass
Peak Pendulum Decel After 30 ms	g	0.0	29.0	17.3	Pass
Deceleration Decay to Cross 5g	ms	34.0	42.0	35.8	Pass
"D" Plane Rotation peak	deg	64.0	78.0	72.1	Pass
	ms	57.0	64.0	57.1	Pass
"D" Plane Rotation Decay to Zero	ms	113.0	128.0	116.1	Pass
Moment About Occipital Condyle	Nm	88.1	108.5	98.1	Pass
	ms	47.0	58.0	49.5	Pass
Moment Decay, Peak to Zero	ms	97.0	107.0	97.1	Pass
			Overall Test Results		Pass



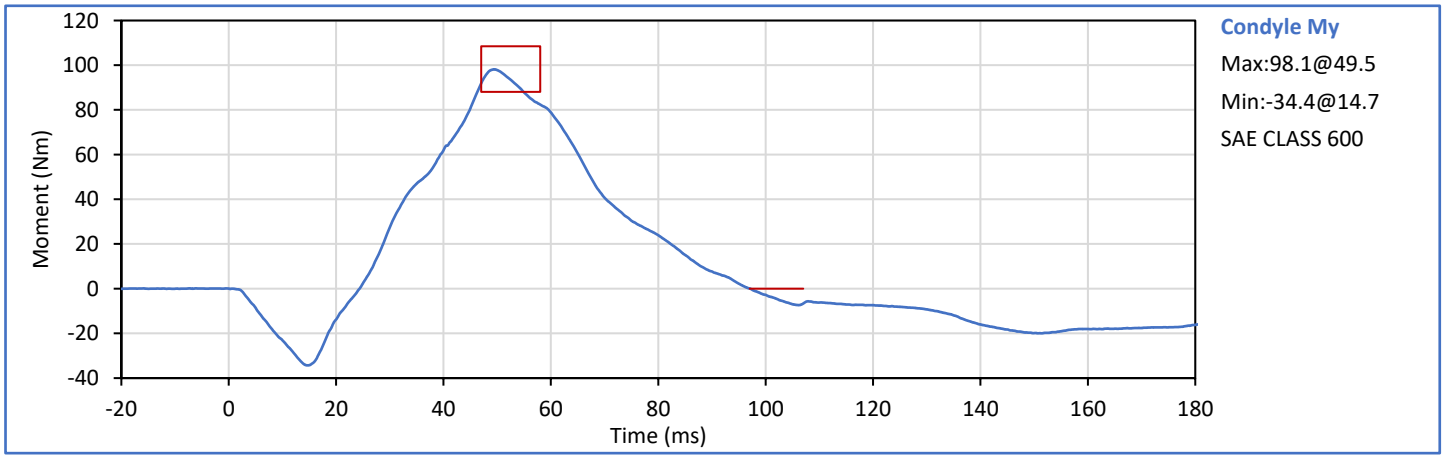


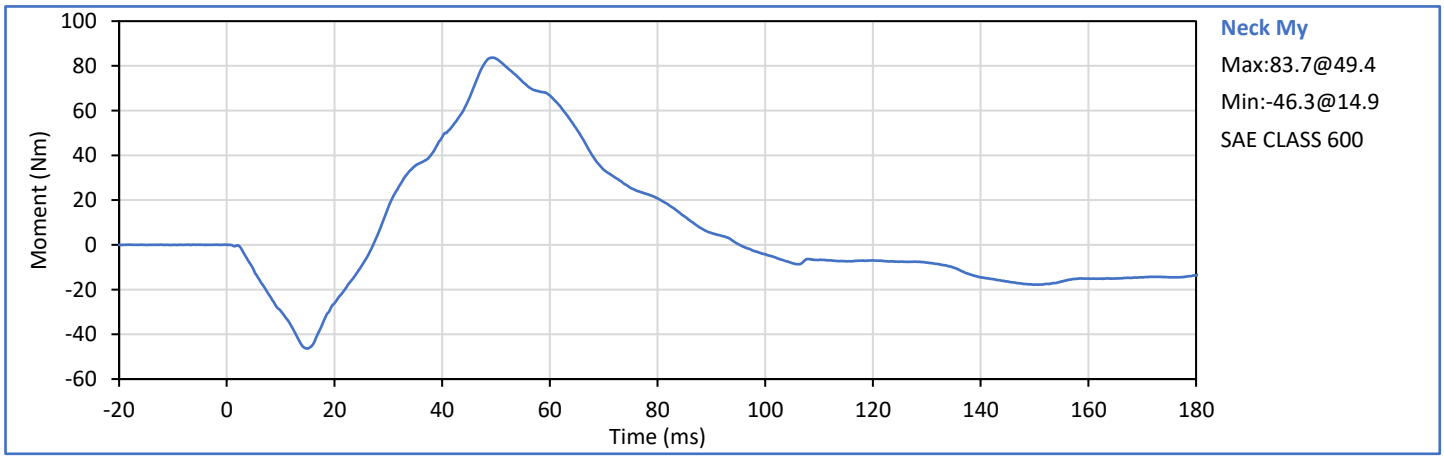
Technician: J. Perez

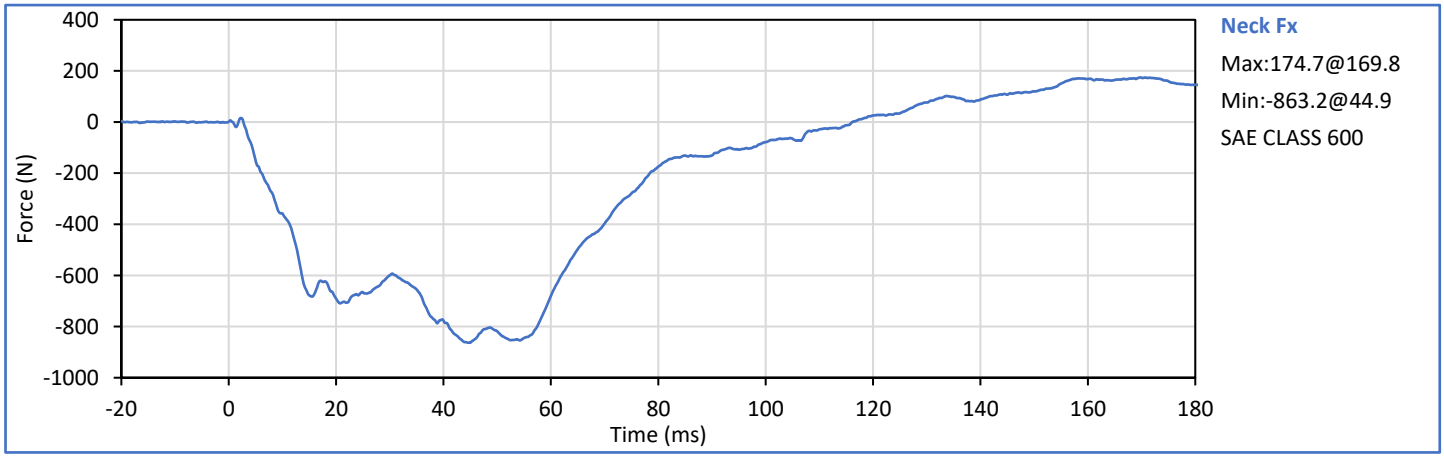
Approved By: J. Hernandez

Hybrid III 50th Percentile Male ATD
Neck Flexion Test

ATD Serial No.: 360 Test Date: 2025-06-09





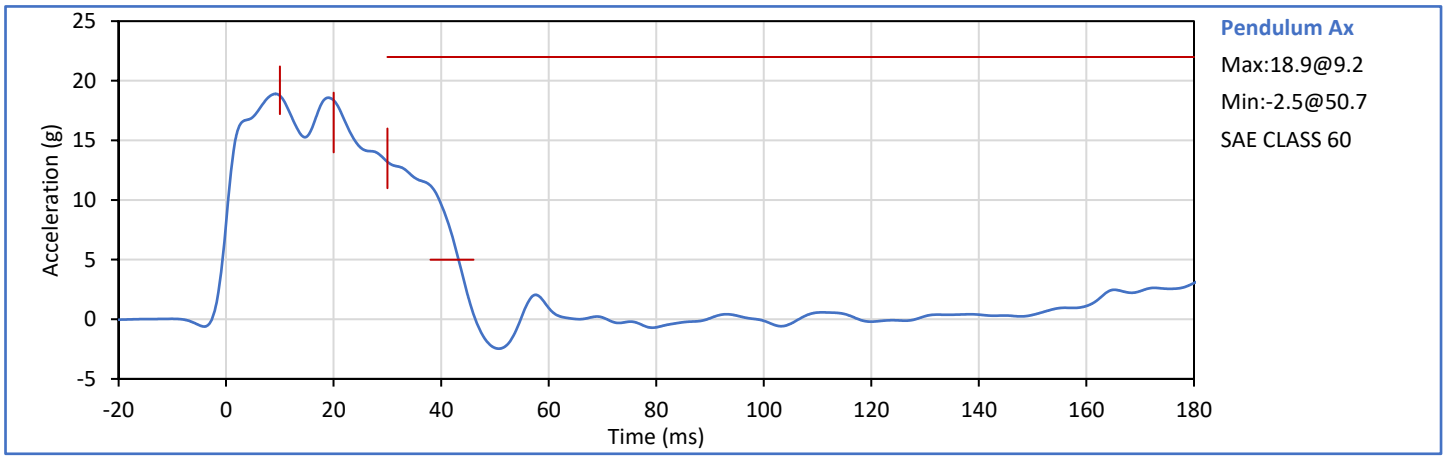


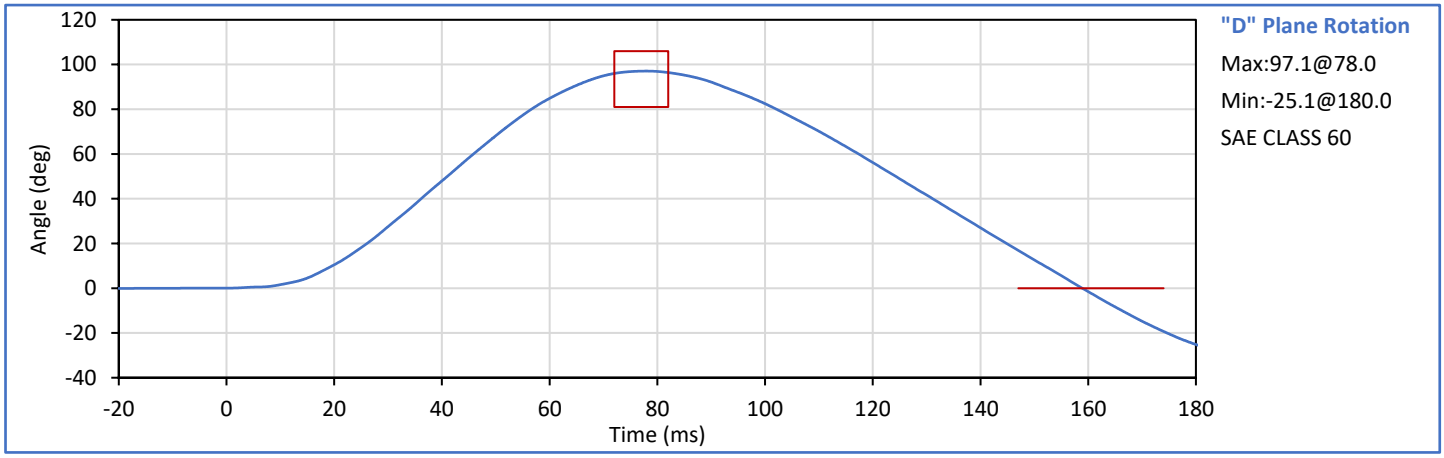
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Neck Extension Test

ATD Serial No.: 360 Test Date: 2025-06-09

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.3	Pass
Laboratory Relative Humidity	%	10	70	41	Pass
Pendulum Velocity	m/s	5.94	6.19	6.10	Pass
Pendulum Deceleration at 10 ms	g	17.2	21.2	18.7	Pass
Pendulum Deceleration at 20 ms	g	14.0	19.0	18.4	Pass
Pendulum Deceleration at 30 ms	g	11.0	16.0	13.2	Pass
Peak Pendulum Decel After 30 ms	g	0.0	22.0	13.2	Pass
Deceleration Decay to Cross 5g	ms	38.0	46.0	43.3	Pass
"D" Plane Rotation peak	deg	81.0	106.0	97.1	Pass
	ms	72.0	82.0	78.0	Pass
"D" Plane Rotation Decay to Zero	ms	147.0	174.0	159.0	Pass
Moment About Occipital Condyle	Nm	-79.9	-52.9	-67.2	Pass
	ms	65.0	79.0	72.5	Pass
Moment Decay, Peak to Zero	ms	120.0	148.0	138.4	Pass
			Overall Test Results		Pass





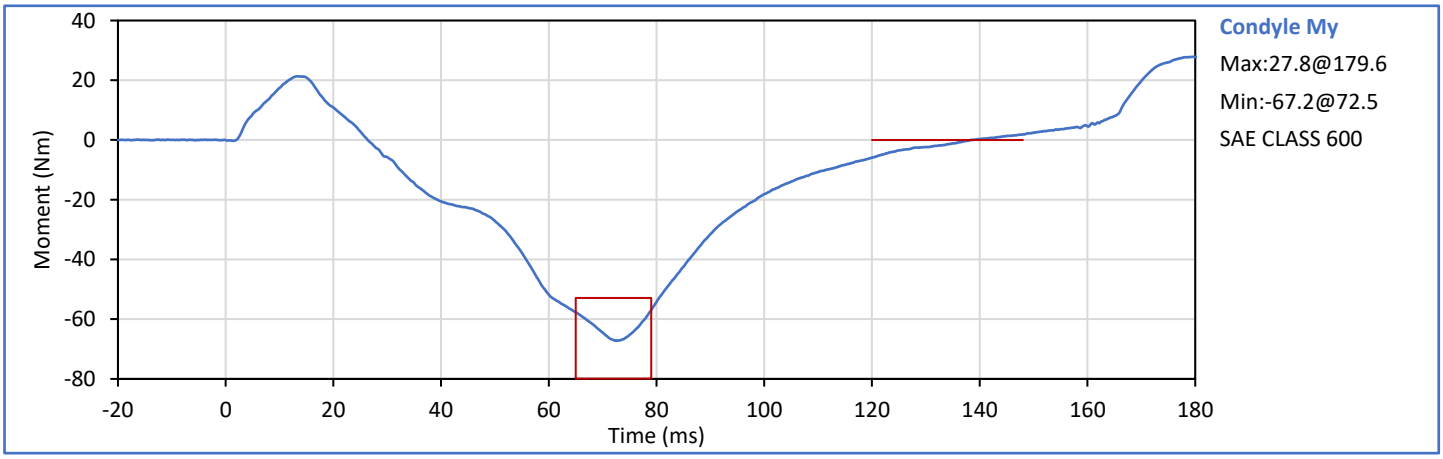
Technician: J. Perez

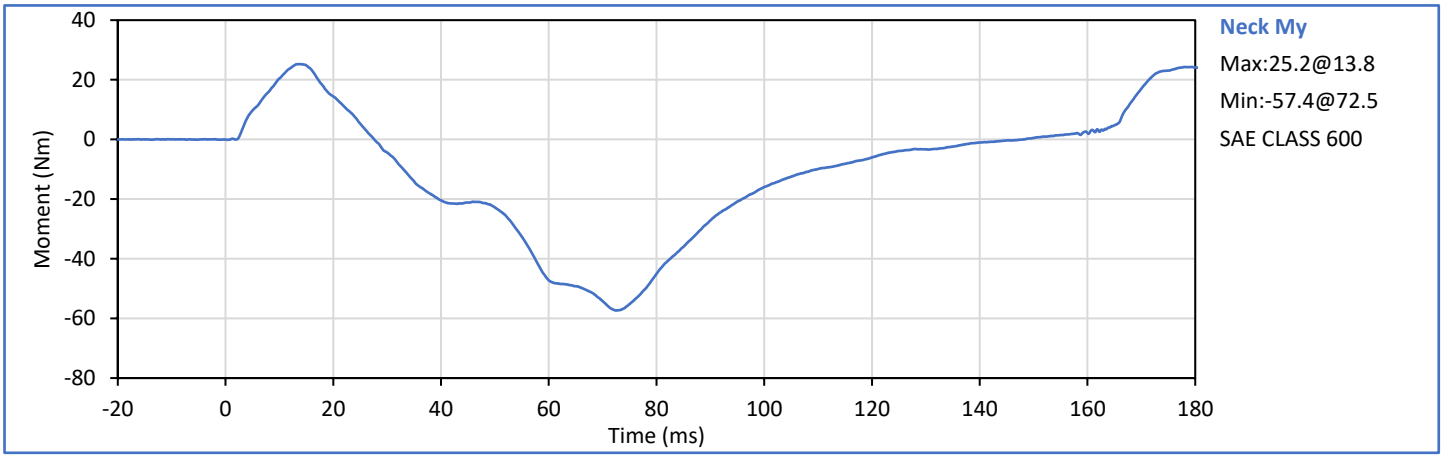
Approved By: J. Hernandez

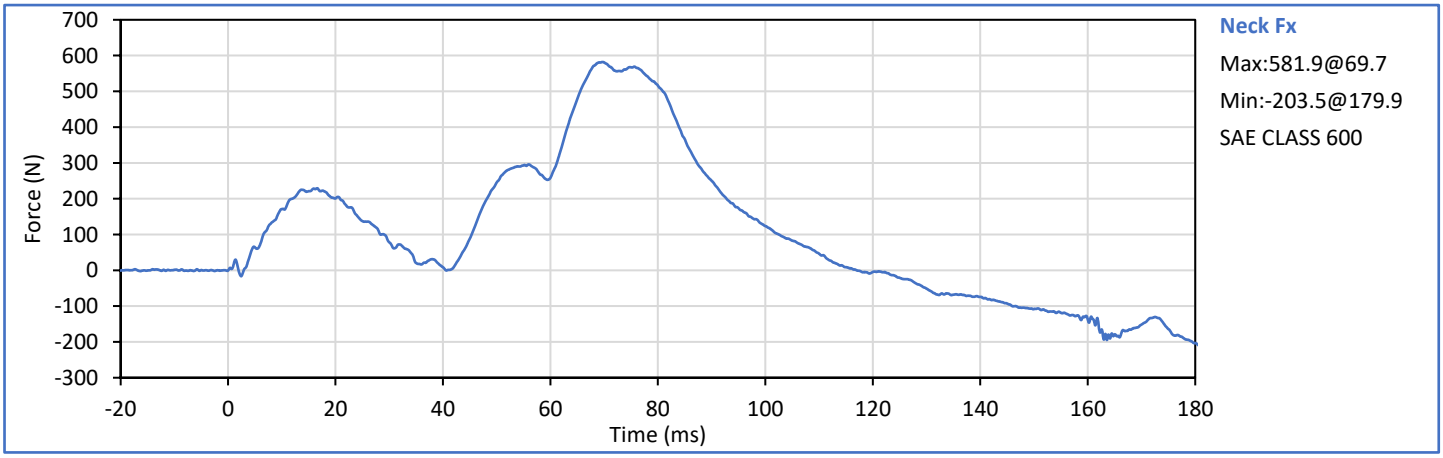
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Neck Extension Test

ATD Serial No.: 360 Test Date: 2025-06-09





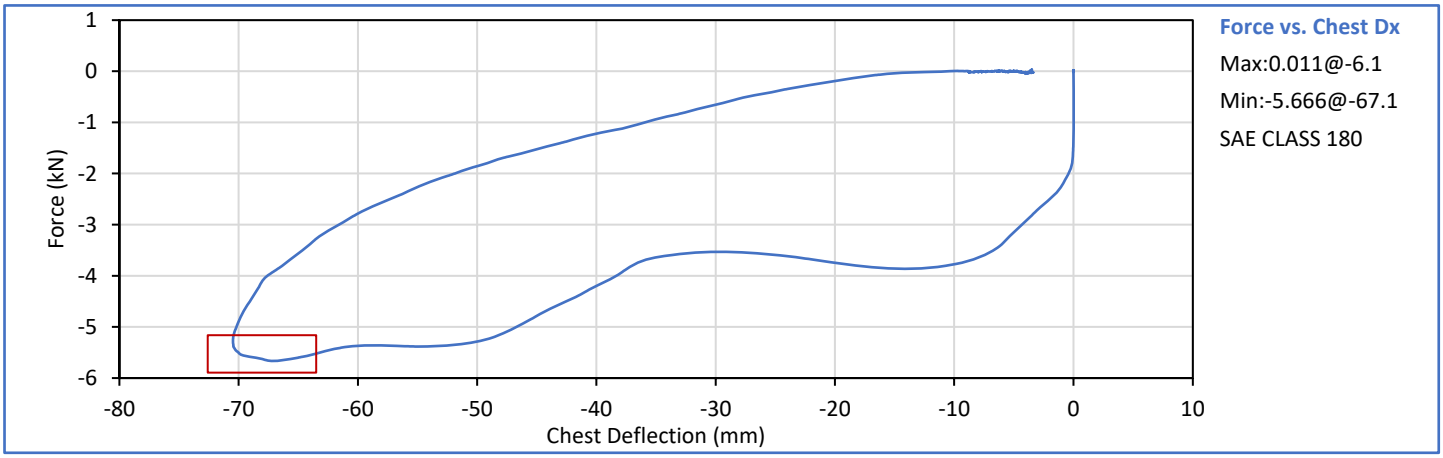


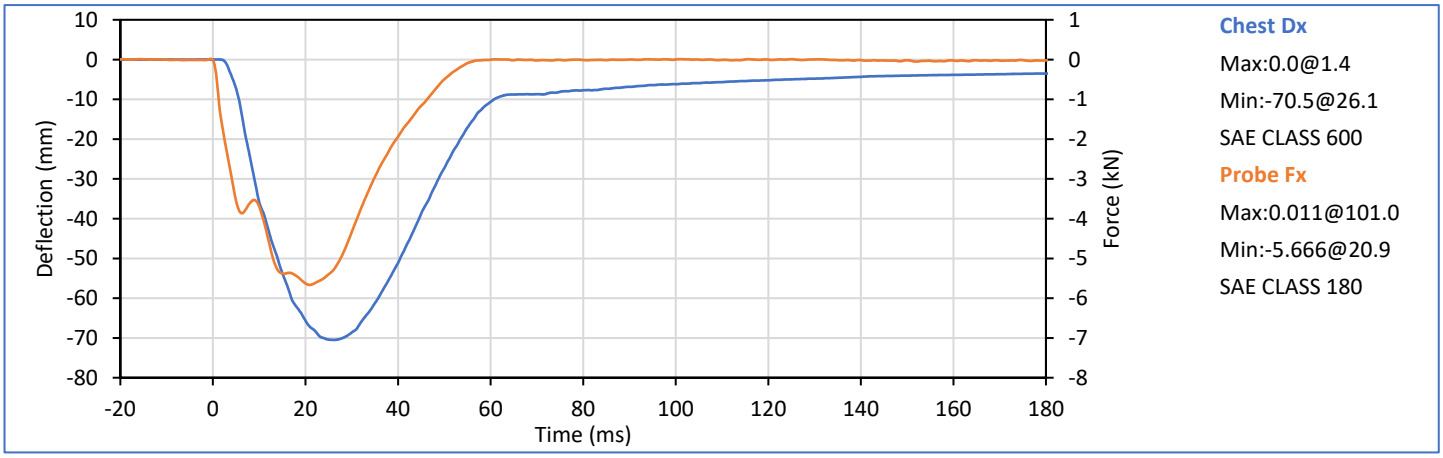
Applus IDIADA
KARCO

Hybrid III 50th Percentile Male ATD
Thorax Impact

ATD Serial No.: 360 Test Date: 2025-06-04

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.4	Pass
Laboratory Relative Humidity	%	10	70	41	Pass
Probe Velocity	m/s	6.58	6.82	6.71	Pass
Peak Chest Deflection	mm	-72.6	-63.5	-70.5	Pass
Peak Probe Force	kN	-5.893	-5.159	-5.666	Pass
Internal Hysterisis	%	69.0	85.0	69.9	Pass
			Overall Test Results		Pass





Technician: J. Perez

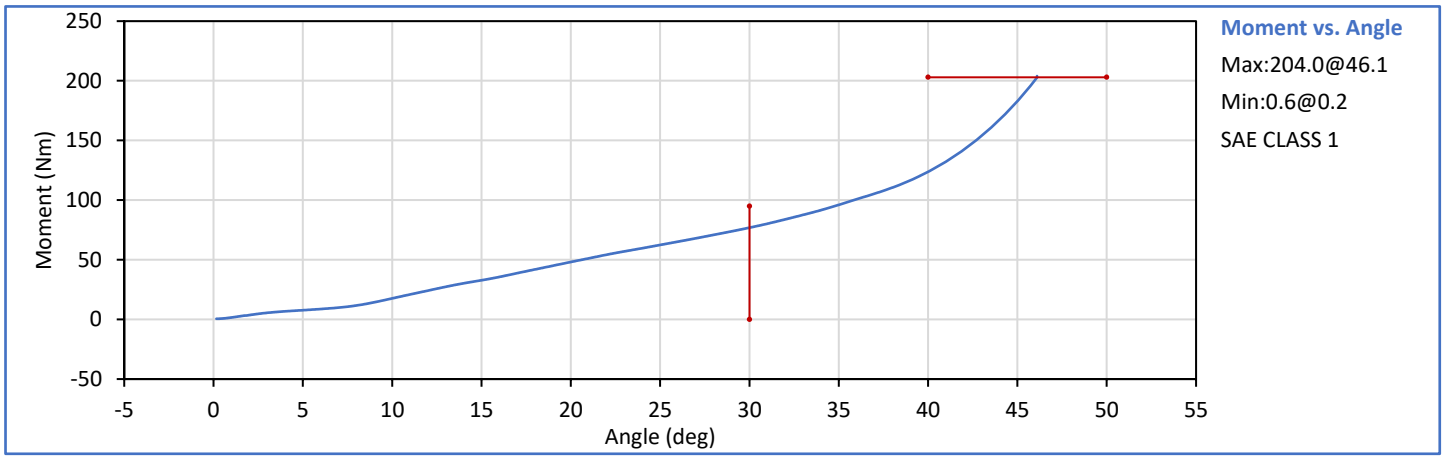
Approved By: J. Hernandez

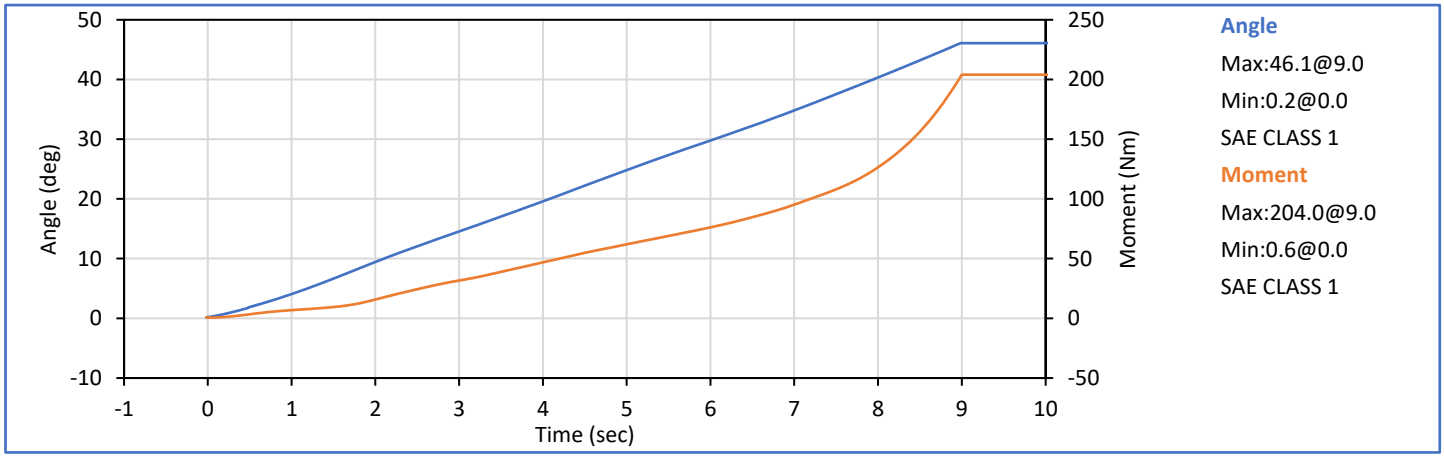
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Hip Range of Motion (Left)

ATD Serial No.: 360 Test Date: 2025-06-06

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	20.5	Pass
Laboratory Relative Humidity	%	10	70	44	Pass
Left Hip Rotation Rate	deg/s	5.0	10.0	5.1	Pass
Left Femur Torque at 30°	Nm	0.0	95.0	76.8	Pass
Left Hip Rotation at 203 Nm	deg	40.0	50.0	46.1	Pass
			Overall Test Results		Pass





Technician: J. Perez

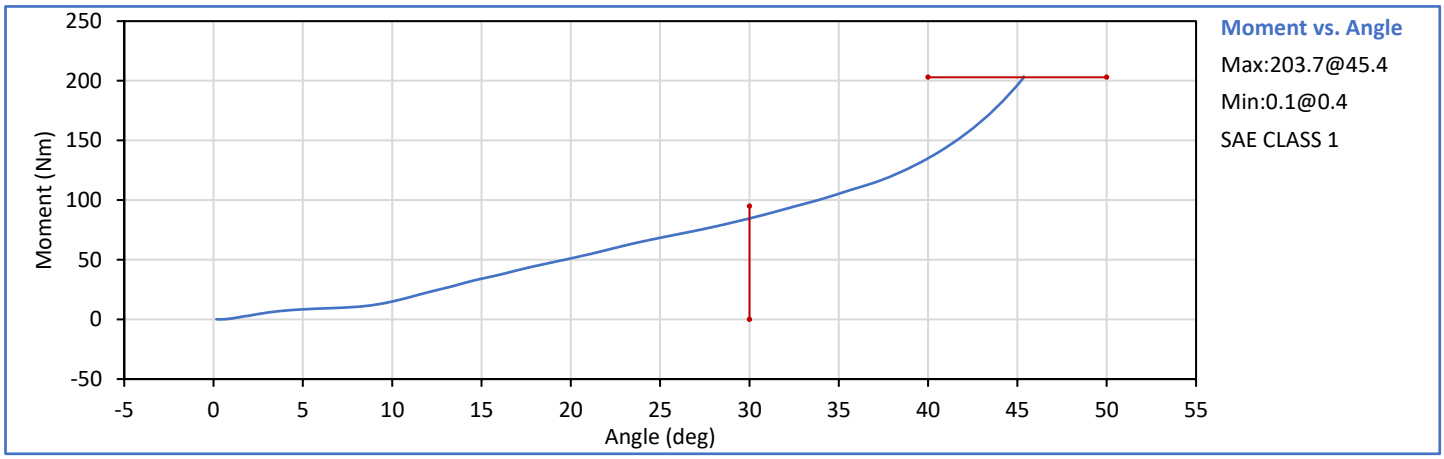
Approved By: J. Hernandez

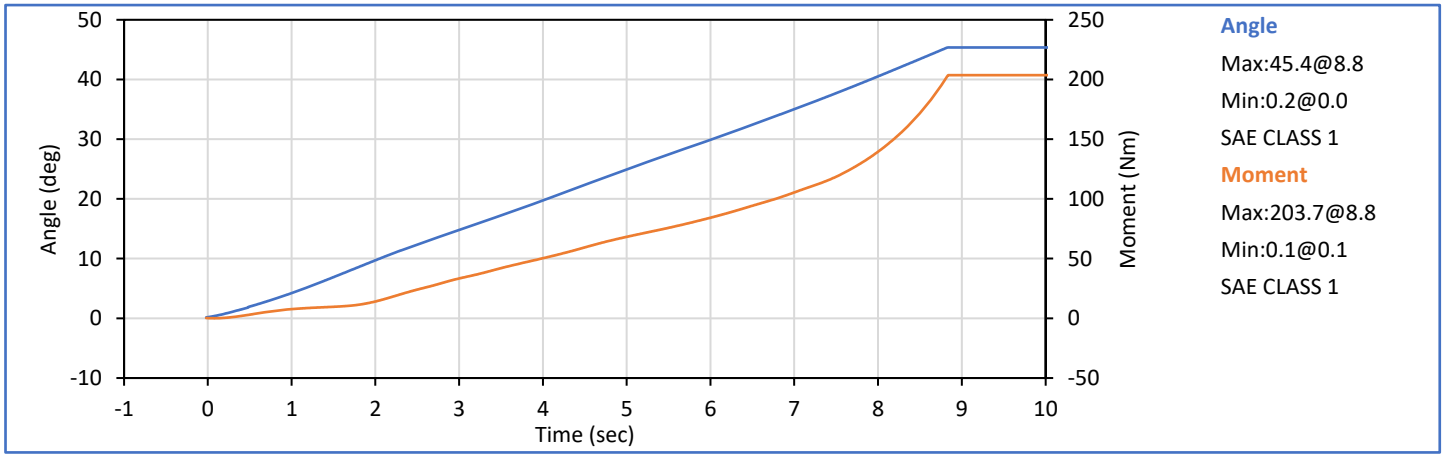
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Hip Range of Motion (Right)

ATD Serial No.: 360 Test Date: 2025-06-06

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	20.4	Pass
Laboratory Relative Humidity	%	10	70	44	Pass
Right Hip Rotation Rate	deg/s	5.0	10.0	5.1	Pass
Right Femur Torque at 30°	Nm	0.0	95.0	84.6	Pass
Right Hip Rotation at 203 Nm	deg	40.0	50.0	45.4	Pass
			Overall Test Results		Pass





Technician: J. Perez

Approved By: J. Hernandez

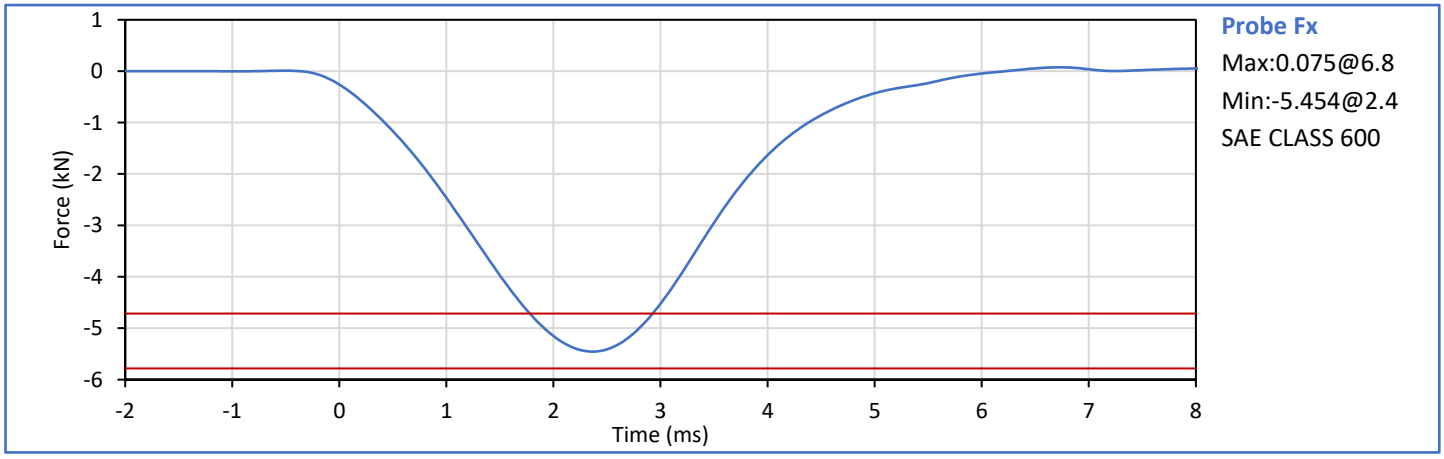
Applus IDIADA
KARCO

Hybrid III 50th Percentile Male ATD
Knee Impact (Left)

ATD Serial No.: 360

Test Date: 2025-06-05

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.3	Pass
Laboratory Relative Humidity	%	10	70	39	Pass
Probe Velocity	m/s	2.070	2.130	2.102	Pass
Peak Resistive Force	kN	-5.782	-4.715	-5.454	Pass
			Overall Test Results		Pass



Technician: J. Perez

Approved By: J. Hernandez

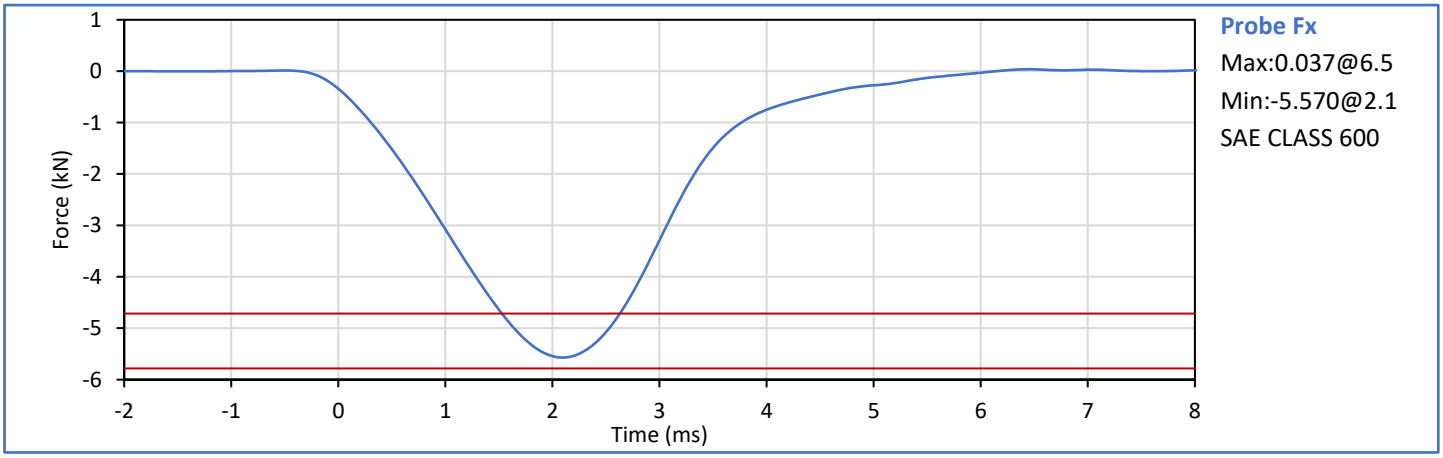
Applus IDIADA
KARCO

Hybrid III 50th Percentile Male ATD
Knee Impact (Right)

ATD Serial No.: 360

Test Date: 2025-06-05

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.3	Pass
Laboratory Relative Humidity	%	10	70	39	Pass
Probe Velocity	m/s	2.070	2.130	2.104	Pass
Peak Resistive Force	kN	-5.782	-4.715	-5.570	Pass
			Overall Test Results		Pass



Technician: J. Perez

Approved By: J. Hernandez

APPENDIX C
Pre-Test ATD Qualification and Performance Verification
Hybrid III 5th Percentile Female ATD
S/N: DH1644

Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Damage Checklist

ATD Serial No.: DH1644 Test Date: 2025-06-04

Dummy Item	Inspect for	Comments	Damage	Okay
Entire ATD	Perform general cleaning			✓
Outer Skin	Gashes, rips, cracks			✓
Head	Ballast secure			✓
	General appearance			✓
Neck bracket	Upper neck firmly attached to lower bracket			✓
Neck	Broken or cracked rubber			✓
	Looseness at the condyle joint			✓
Nodding block	Cracked or out of position			✓
Lumbar Spine	Broken or cracked rubber			✓
Ribs	Broken or bent ribs			✓
	Broken or bent rib supports			✓
	Damping material separated or cracked			✓
	Rubber bumpers in place			✓
Chest Displ.	Bent shaft			✓
Assembly	Slider arm riding in track			✓
Sensors	Check cables for cuts, tears			✓
	Check for damaged insulation			✓
Accelerometer	Head mounting secure			✓
Mounting	Chest mounting secure			✓
Knees	Skin condition			✓
	Insert (do not remove)			✓
	Casting			✓
Limbs	Normal movement and adjustment			✓
Knee Sliders	Wires intact			✓
	Rubber returned to "resting" position			✓
Pelvis	Broken			✓
Other	Describe below as needed			✓

Describe any repairs or replacement of parts or other findings:

No Problems Found

Technician: J. Perez

Approved By: J. Hernandez

Applus IDIADA
KARCO

Hybrid III 5th Percentile Female ATD
External Measurements

ATD Serial No.: DH1644 Test Date: 2025-06-04

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	20.8	Pass
Laboratory Relative Humidity	%	10	70	45	Pass
A - Total sitting height	mm	775	800	792	Pass
B - Shoulder pivot height	mm	432	457	445	Pass
C - 'H' point height	mm	81	86	84	Pass
D - 'H' point location from backline	mm	145	150	148	Pass
E - Shoulder pivot from backline	mm	69	84	72	Pass
F - Thigh clearance	mm	119	135	129	Pass
G - Back of elbow to wrist pivot	mm	244	259	247	Pass
H - Head back to backline	mm	41	46	44	Pass
I - Shoulder to elbow length	mm	277	297	292	Pass
J - Elbow rest height	mm	183	203	190	Pass
K - Buttock to knee length	mm	521	546	537	Pass
L - Popliteal length	mm	356	376	361	Pass
M - Knee pivot height	mm	394	419	407	Pass
N - Buttock popliteal length	mm	414	439	426	Pass
O - Chest depth without jacket	mm	175	191	188	Pass
P - Foot length	mm	219	234	225	Pass
R - Buttock to Knee Pivot Length	mm	457	483	467	Pass
S - Head Breadth	mm	137	147	142	Pass
T - Head Depth	mm	178	188	186	Pass
U - Hip Breadth	mm	300	315	307	Pass
V - Shoulder breadth	mm	351	366	357	Pass
W - Foot breadth	mm	79	94	91	Pass
X - Head circum.	mm	528	549	538	Pass
Y - Chest circum. (w/chest jacket)	mm	851	881	868	Pass
Z - Waist circum.	mm	760	790	773	Pass
AA - Location for chest circum.	mm	333	358	345	Pass
BB - Location for waist circum.	mm	160	170	167	Pass
			Overall Test Results		Pass

Technician: J. Perez

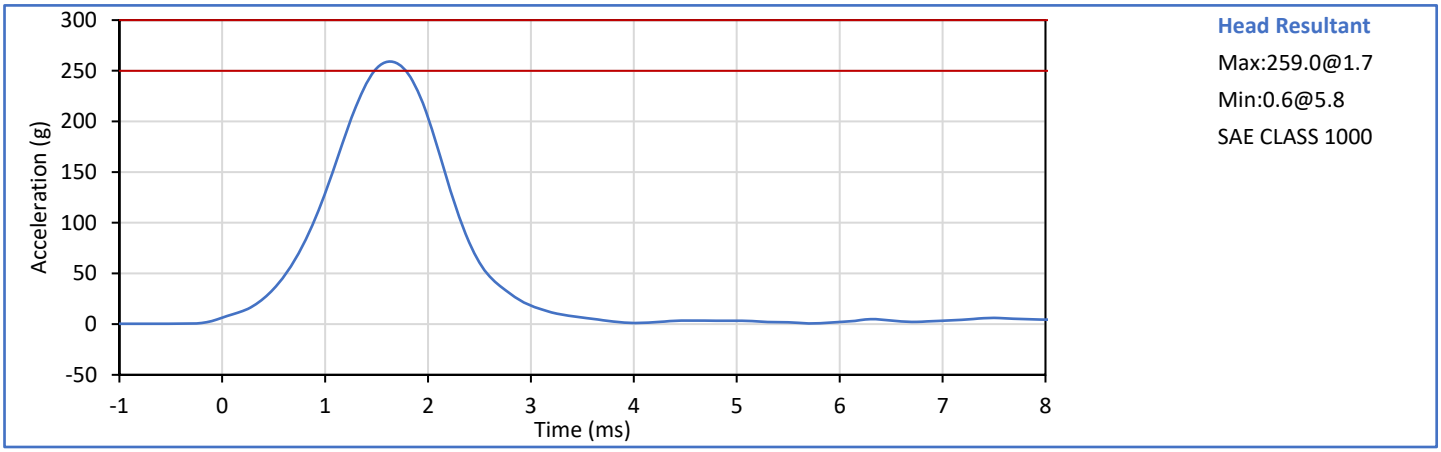
Approved By: J. Hernandez

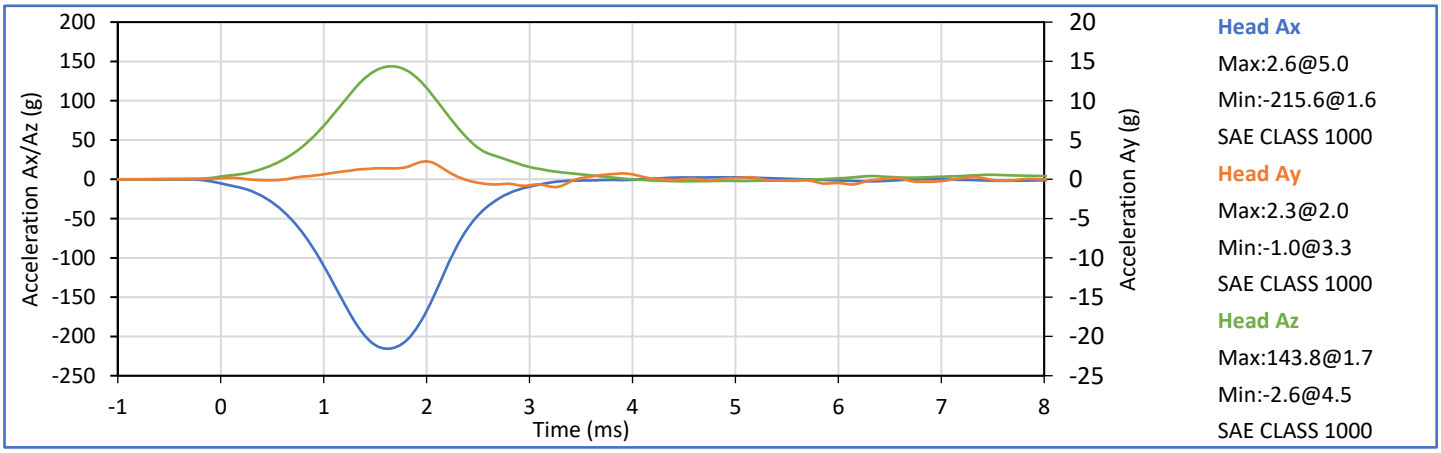
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Head Drop Test

ATD Serial No.: DH1644 Test Date: 2025-06-09

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.4	Pass
Laboratory Humidity	%	10	70	42	Pass
Peak Resultant Acceleration	g	250.0	300.0	259.0	Pass
Peak Lateral Acceleration	g	-15.0	15.0	2.3	Pass
Oscillations After Main Pulse	%	0.0	10.0	2.4	Pass
Is Acceleration Unimodal?	Yes/No	Yes		Yes	Pass
			Overall Test Results		Pass





Technician: J. Perez

Approved By: J. Hernandez

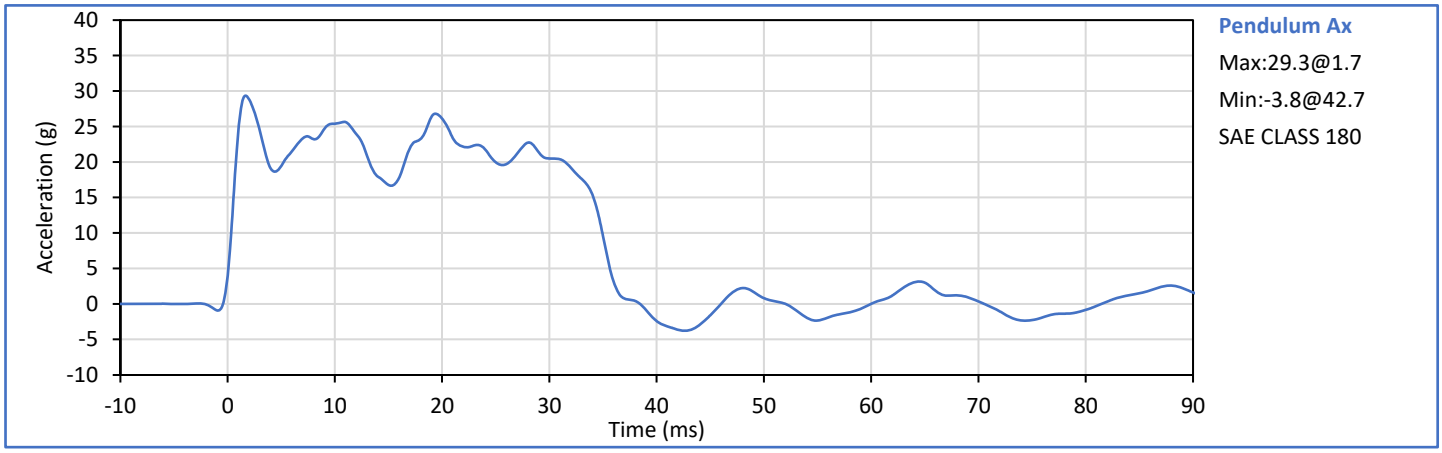
Applus IDIADA KARCO

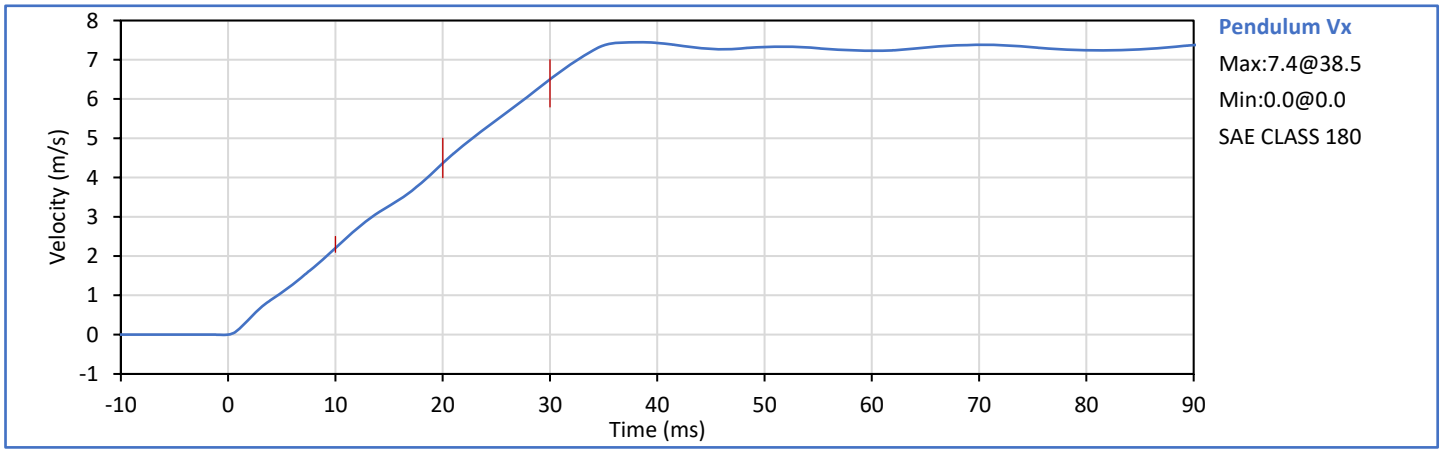
Hybrid III 5th Percentile Female ATD
Neck Flexion Test

ATD Serial No.: DH1644

Test Date: 2025-06-09

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	20.9	Pass
Laboratory Humidity	%	10	70	43	Pass
Pendulum Velocity	m/s	6.89	7.13	7.04	Pass
Pendulum Velocity at 10 ms	m/s	2.10	2.50	2.20	Pass
Pendulum Velocity at 20 ms	m/s	4.00	5.00	4.36	Pass
Pendulum Velocity at 30 ms	m/s	5.80	7.00	6.50	Pass
Peak "D" Plane Rotation	deg	77.0	91.0	82.6	Pass
Peak Moment in Rotation	Nm	69.0	83.0	80.7	Pass
Positive Moment Decay to 10 Nm	ms	80.0	100.0	87.1	Pass
			Overall Test Results		Pass





Technician: J. Perez

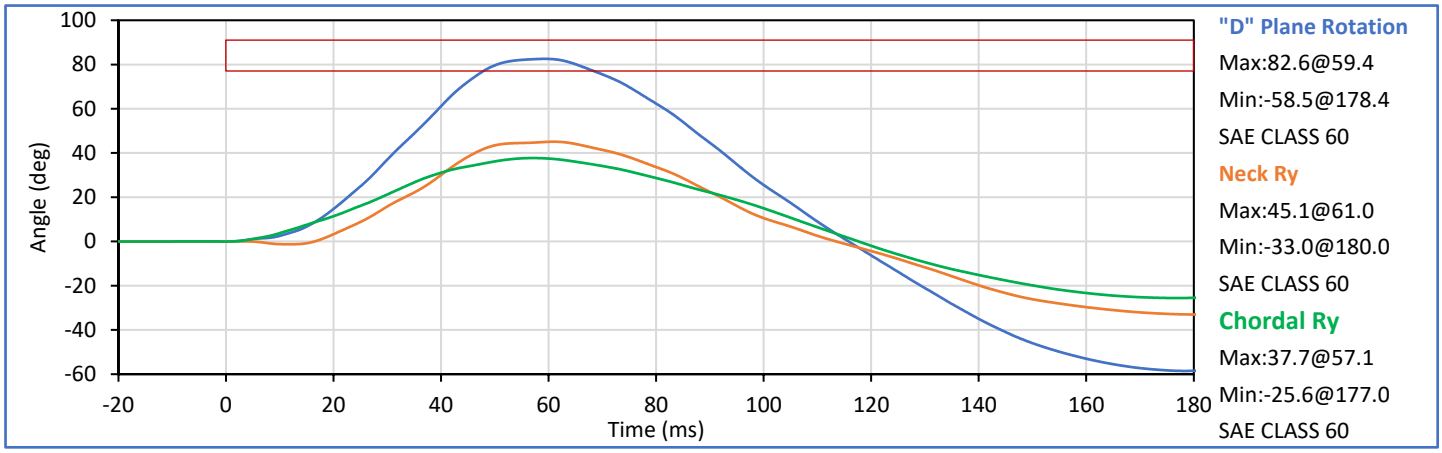
Approved By: J. Hernandez

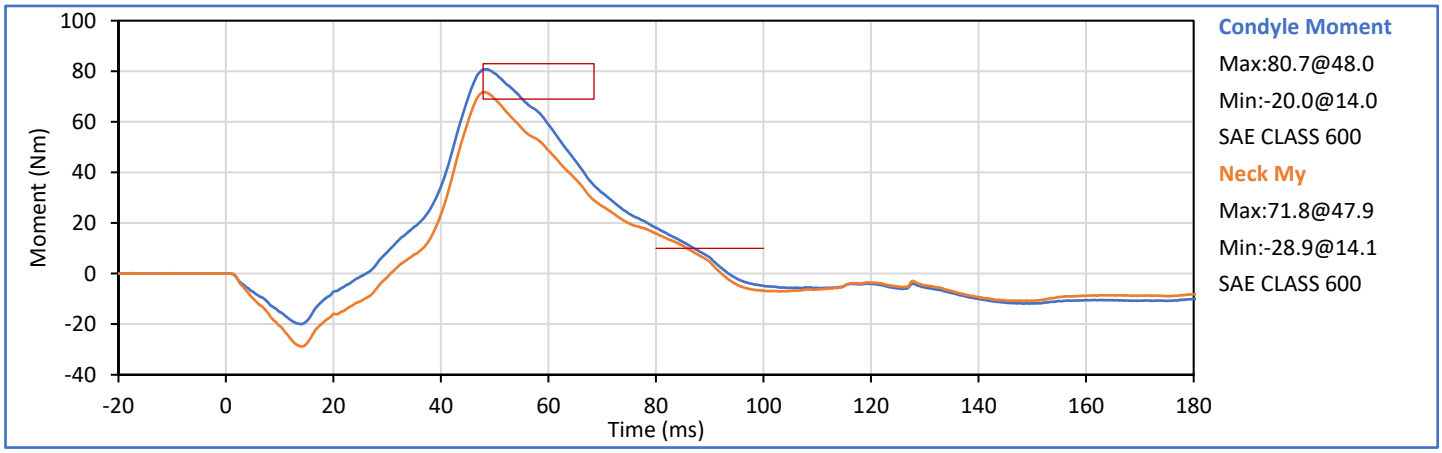
Applus IDIADA KARCO

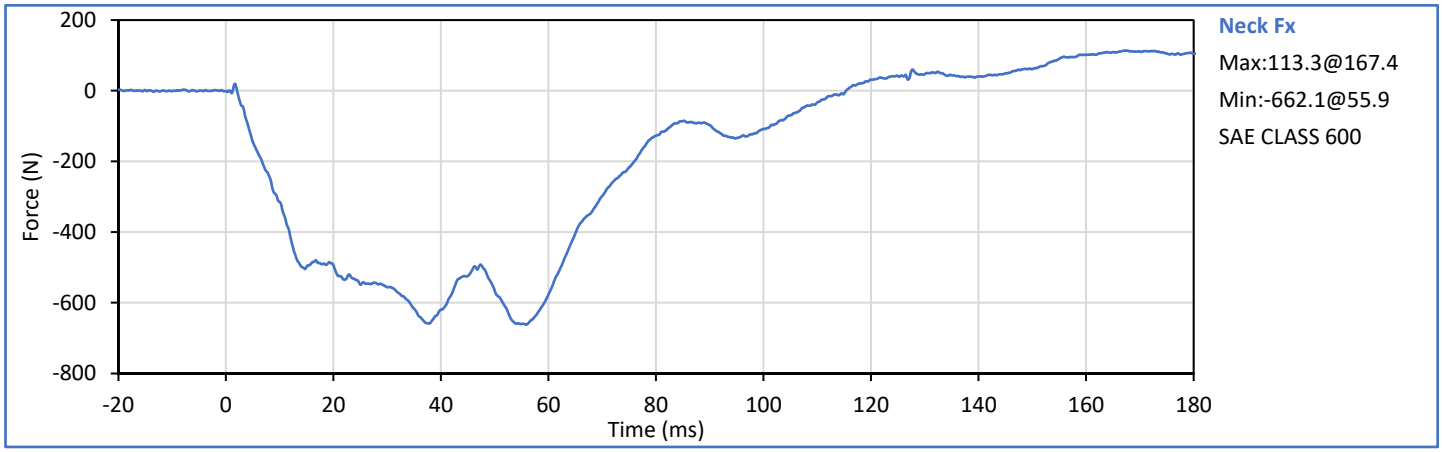
Hybrid III 5th Percentile Female ATD
Neck Flexion Test

ATD Serial No.: DH1644

Test Date: 2025-06-09





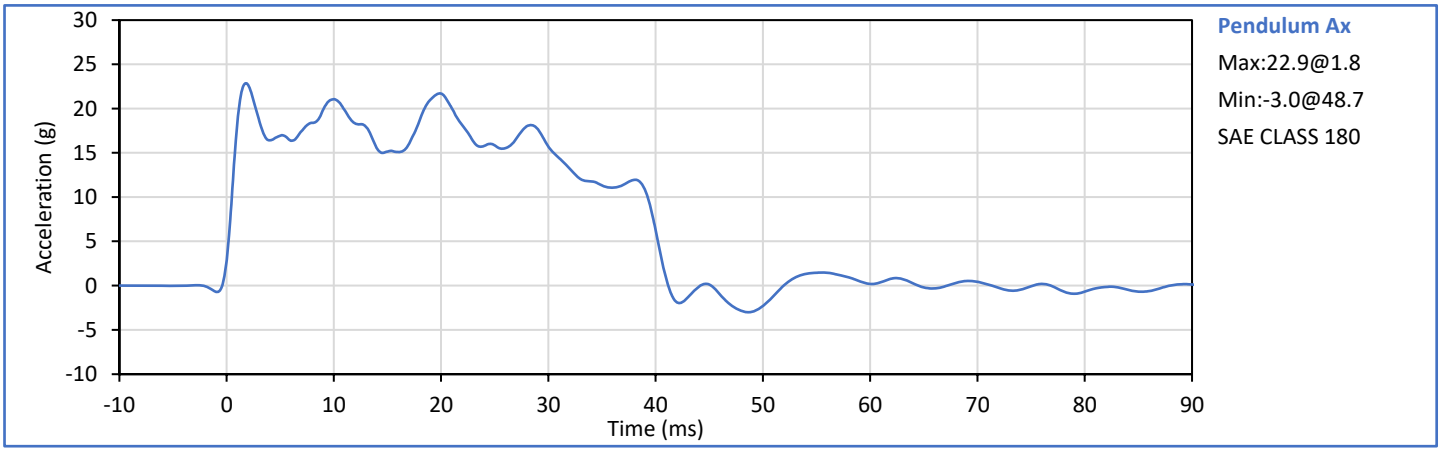


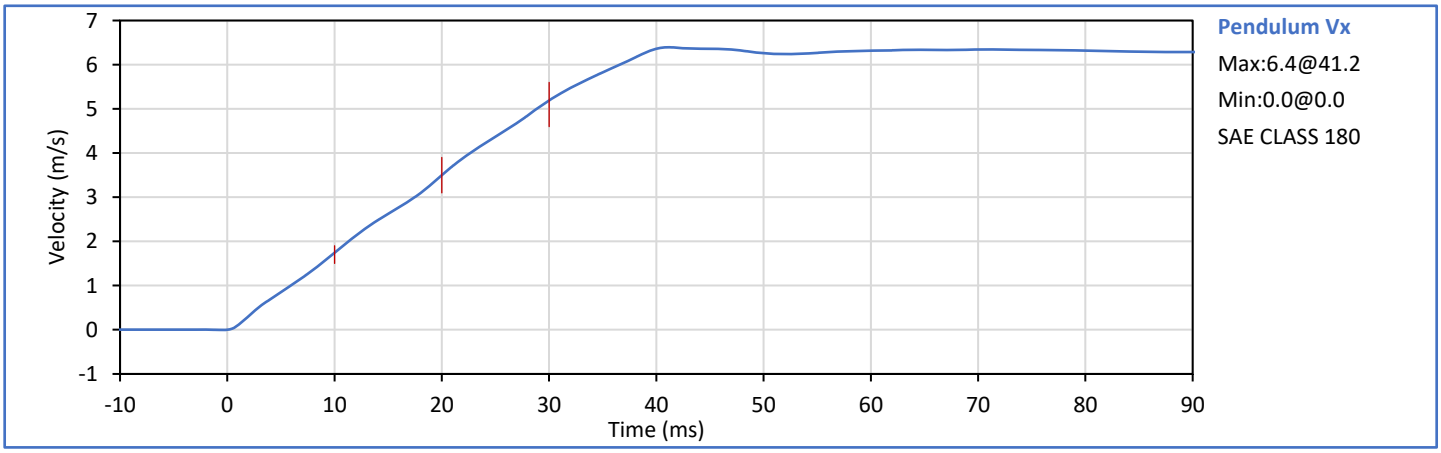
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Neck Extension Test

ATD Serial No.: DH1644 Test Date: 2025-06-09

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	20.8	Pass
Laboratory Relative Humidity	%	10	70	44	Pass
Pendulum Velocity	m/s	5.95	6.19	6.11	Pass
Pendulum Velocity at 10 ms	m/s	1.50	1.90	1.74	Pass
Pendulum Velocity at 20 ms	m/s	3.10	3.90	3.50	Pass
Pendulum Velocity at 30 ms	m/s	4.60	5.60	5.19	Pass
Peak "D" Plane Rotation	deg	99.0	114.0	103.5	Pass
Peak Moment in Rotation	Nm	-65.0	-53.0	-56.1	Pass
Negative Moment Decay to -10 Nm	ms	94.0	114.0	101.6	Pass
			Overall Test Results		Pass





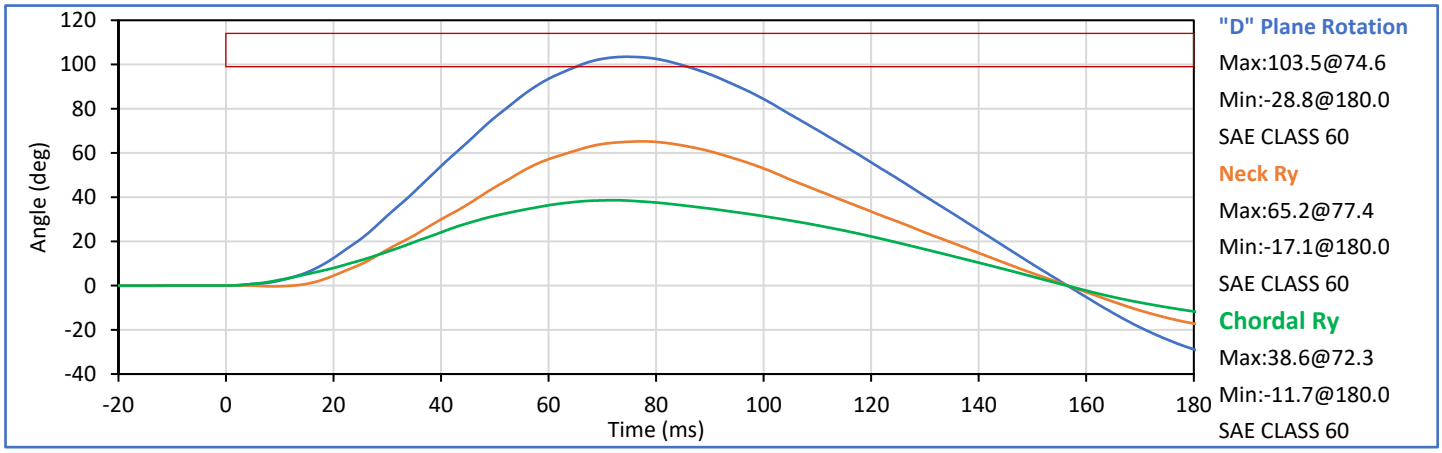
Technician: J. Perez

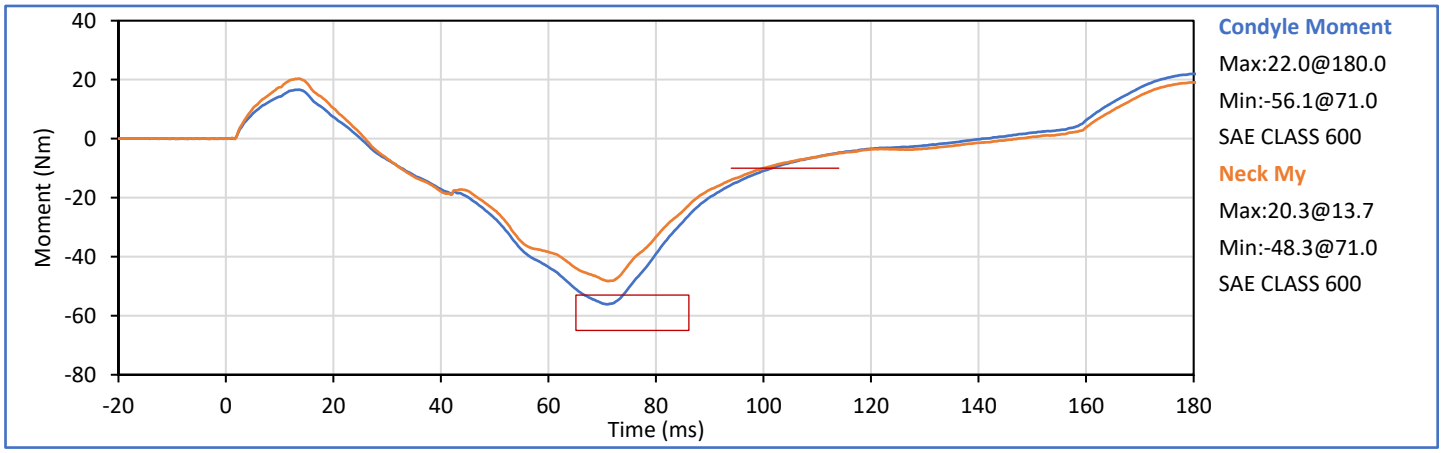
Approved By: J. Hernandez

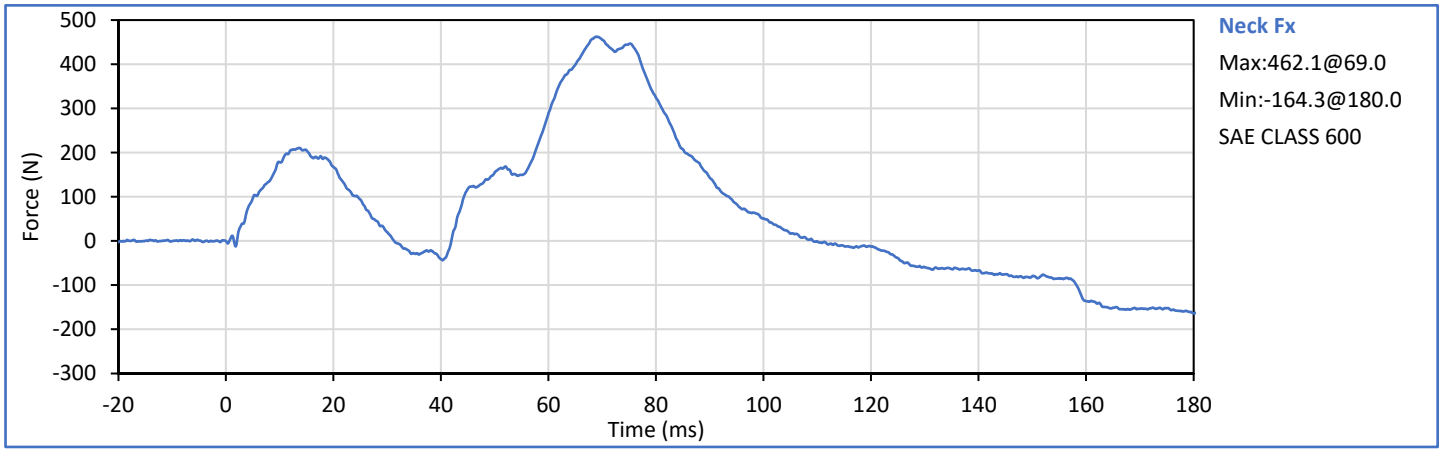
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Neck Extension Test

ATD Serial No.: DH1644 Test Date: 2025-06-09





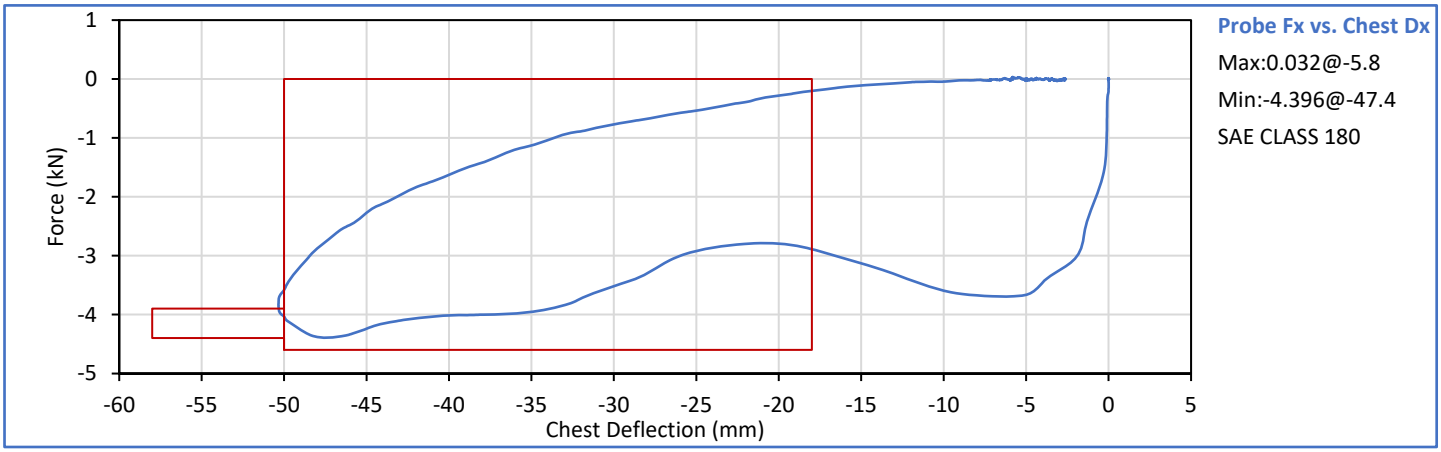


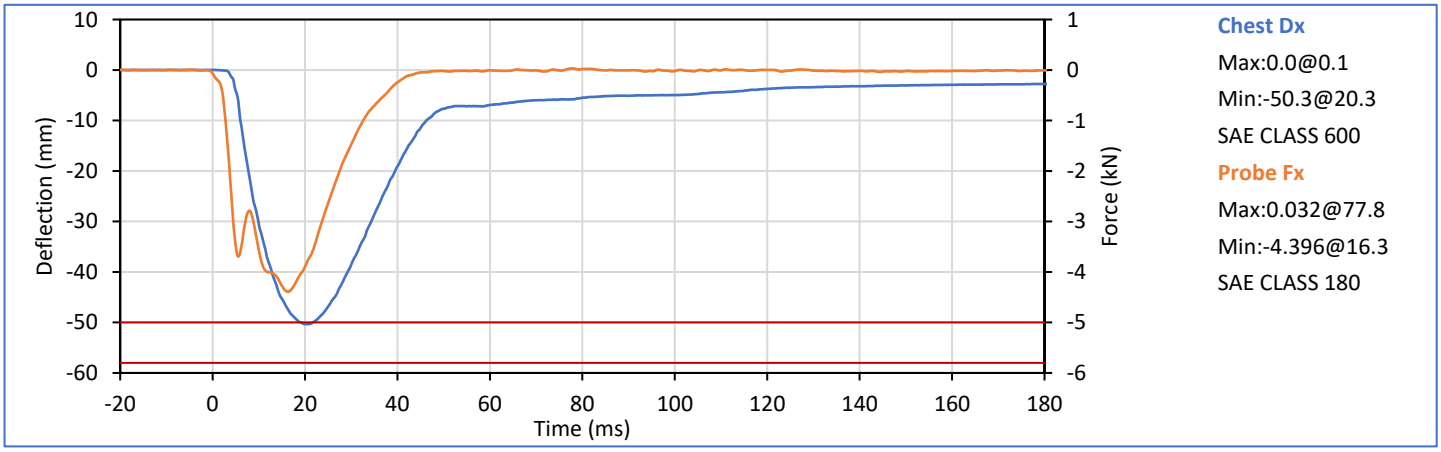
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Thorax Impact

ATD Serial No.: DH1644 Test Date: 2025-06-04

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.4	Pass
Laboratory RelativeHumidity	%	10	70	38	Pass
Probe Velocity	m/s	6.59	6.83	6.71	Pass
Peak Chest Deflection	mm	-58.0	-50.0	-50.3	Pass
Peak Probe Force, 50 and 58 mm	kN	-4.400	-3.900	-4.037	Pass
Peak Probe Force, 18 and 50 mm	kN	-4.600	0.000	-4.396	Pass
Internal Hysterisis	%	69.0	85.0	75.6	Pass
			Overall Test Results		Pass





Technician: J. Perez

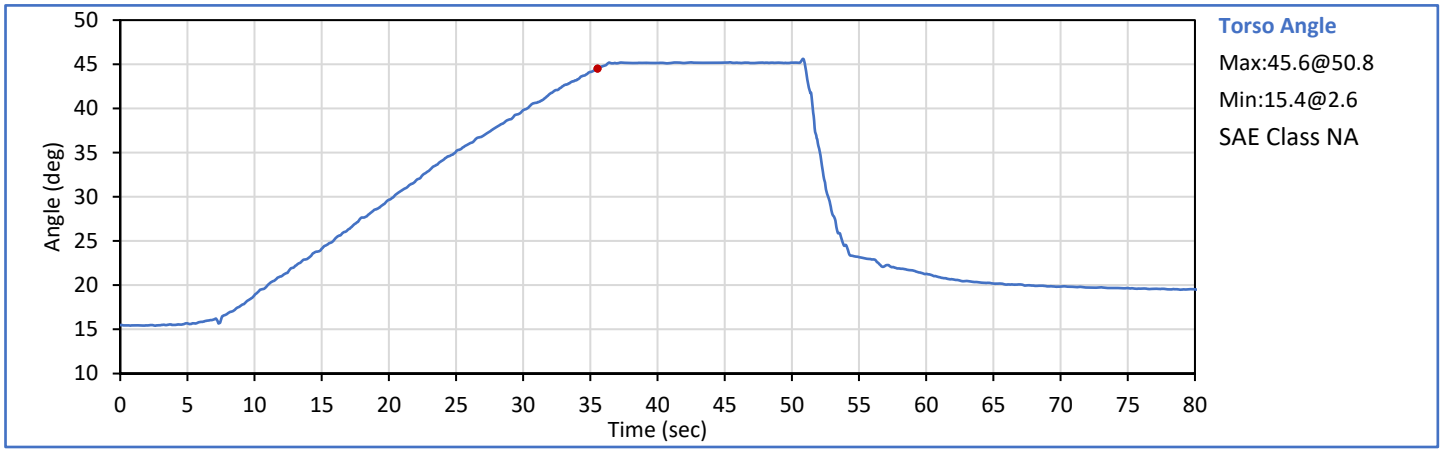
Approved By: J. Hernandez

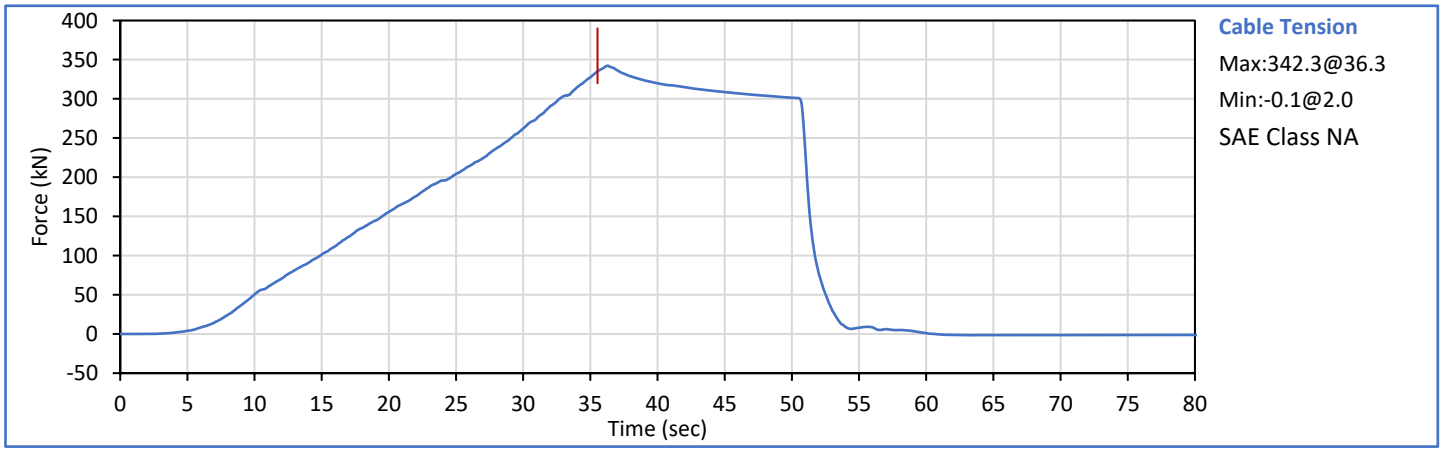
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Torso Flexion Test

ATD Serial No.: DH1644 Test Date: 2025-06-08

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.5	Pass
Laboratory Humidity	%	10	70	43	Pass
Orientation Angle	deg	0.0	20.0	17.1	Pass
Test Initial Angle	deg	11.0	19.0	15.5	Pass
Peak Force at 45° (+/-0.5°)	N	320.0	390.0	335.2	Pass
Torso Flexion Rate	deg/s	0.50	1.50	1.02	Pass
Final Reference Plane Angle	deg	-8.0	8.0	3.1	Pass
			Overall Test Results		Pass





Technician: J. Perez

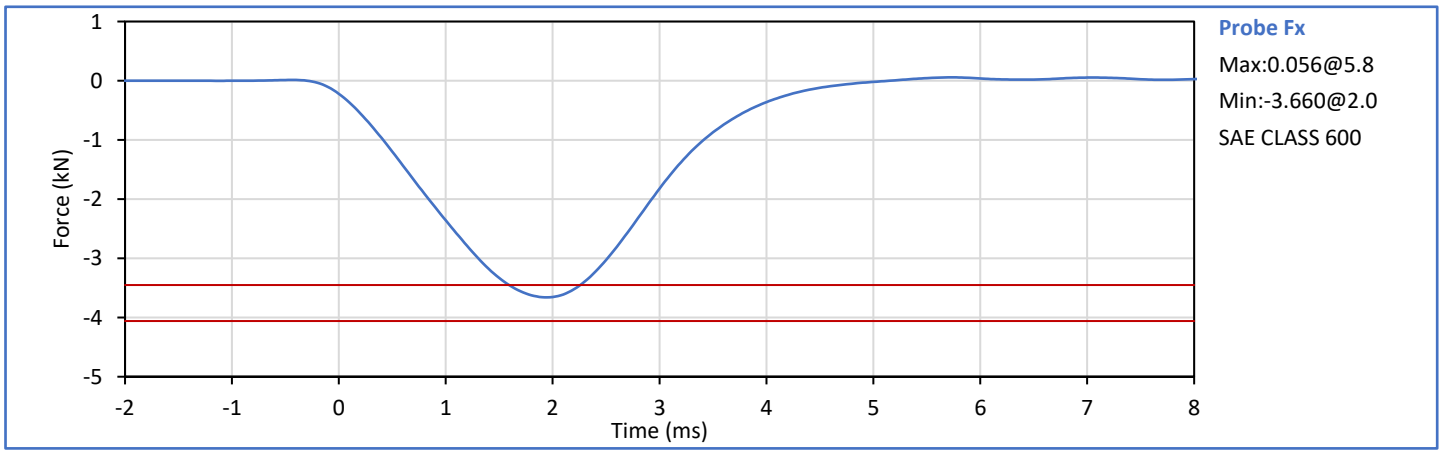
Approved By: J. Hernandez

Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Knee Impact (Left)

ATD Serial No.: DH1644 Test Date: 2025-06-05

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.2	Pass
Laboratory Relative Humidity	%	10	70	41	Pass
Probe Velocity	m/s	2.070	2.130	2.105	Pass
Peak Resistive Force	kN	-4.060	-3.450	-3.660	Pass
			Overall Test Results		Pass



Technician: J. Perez

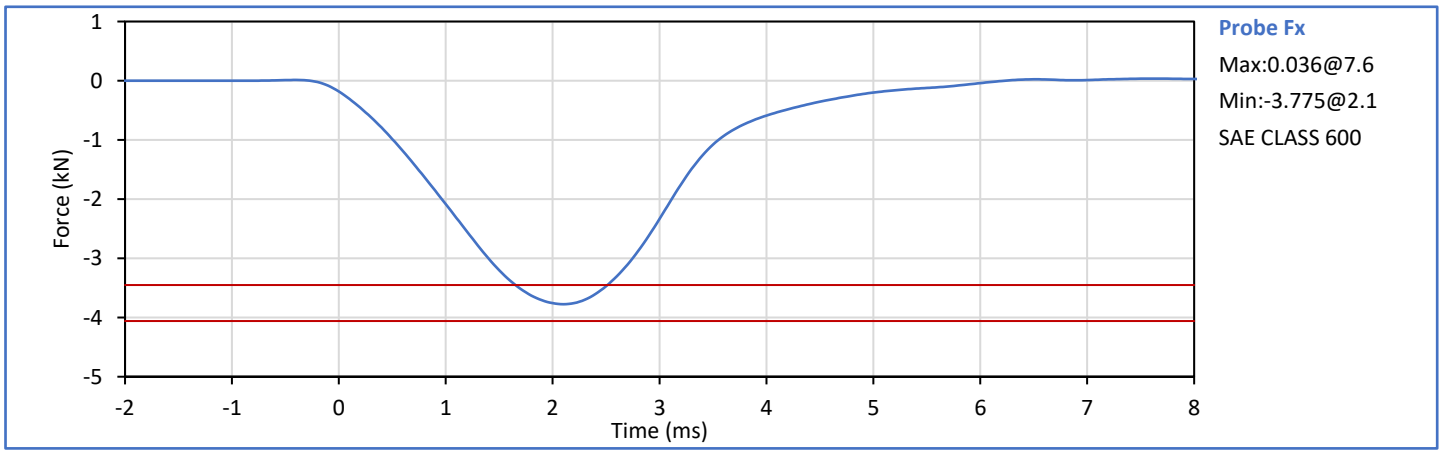
Approved By: J. Hernandez

Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Knee Impact (Right)

ATD Serial No.: DH1644 Test Date: 2025-06-05

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.2	Pass
Laboratory Relative Humidity	%	10	70	41	Pass
Probe Velocity	m/s	2.070	2.130	2.102	Pass
Peak Resistive Force	kN	-4.060	-3.450	-3.775	Pass
			Overall Test Results		Pass



Technician: J. Perez

Approved By: J. Hernandez

APPENDIX C
Post-Test ATD Qualification and Performance Verification
Hybrid III 50th Percentile Male ATD
S/N: 360

Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
ATD Damage Checklist

ATD Serial No.: 360 Test Date: 2025-06-12

Dummy Item	Inspect for	Comments	Damage	OK
Entire ATD	Perform general cleaning			✓
Outer Skin	Gashes, rips, cracks			✓
Head	Ballast secure			✓
	General appearance			✓
Neck bracket	Upper neck firmly attached to lower bracket			✓
Neck	Broken or cracked rubber			✓
	Looseness at the condyle joint			✓
Nodding block	Cracked or out of position			✓
Lumbar Spine	Broken or cracked rubber			✓
Ribs	Broken or bent ribs			✓
	Broken or bent rib supports			✓
	Damping material separated or cracked			✓
	Rubber bumpers in place			✓
Chest Displ.	Bent shaft			✓
Assembly	Slider arm riding in track			✓
Sensors	Check cables for cuts, tears			✓
	Check for damaged insulation			✓
Accelerometer	Head mounting secure			✓
Mounting	Chest mounting secure			✓
Knees	Skin condition			✓
	Insert (do not remove)			✓
	Casting			✓
Limbs	Normal movement and adjustment			✓
Knee Sliders	Wires intact			✓
	Rubber returned to "resting" position			✓
Pelvis	Broken			✓
Other	Describe below as needed			✓

Describe any repairs or replacement of parts or other findings:

No Problems Found

Technician: J. Perez

Approved By: J. Hernandez

Applus IDIADA
KARCO

Hybrid III 50th Percentile Male ATD
External Measurements

ATD Serial No.: 360 Test Date: 2025-06-12

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	30	Pass
A - Total sitting height	mm	879	889	883	Pass
B - Shoulder pivot height	mm	505	521	512	Pass
C - 'H' point height	mm	84	89	87	Pass
D - 'H' point location from backline	mm	135	140	137	Pass
E - Shoulder pivot from backline	mm	84	94	86	Pass
F - Thigh clearance	mm	140	155	145	Pass
G - Back of elbow to wrist pivot	mm	290	305	299	Pass
H - Head back to backline	mm	41	46	43	Pass
I - Shoulder to elbow length	mm	330	345	339	Pass
J - Elbow rest height	mm	190	211	206	Pass
K - Buttock to knee length	mm	579	604	586	Pass
L - Popliteal length	mm	429	455	442	Pass
M - Knee pivot height	mm	485	500	488	Pass
N - Buttock popliteal length	mm	452	477	465	Pass
O - Chest depth without jacket	mm	213	229	227	Pass
P - Foot length	mm	251	267	262	Pass
V - Shoulder breadth	mm	422	437	431	Pass
W - Foot breadth	mm	91	107	101	Pass
Y - Chest circum. (w/chest jacket)	mm	970	1001	991	Pass
Z - Waist circum.	mm	836	866	850	Pass
AA - Location for chest circum.	mm	429	434	433	Pass
BB - Location for waist circum.	mm	226	231	230	Pass
			Overall Test Results		Pass

Technician. J. Perez

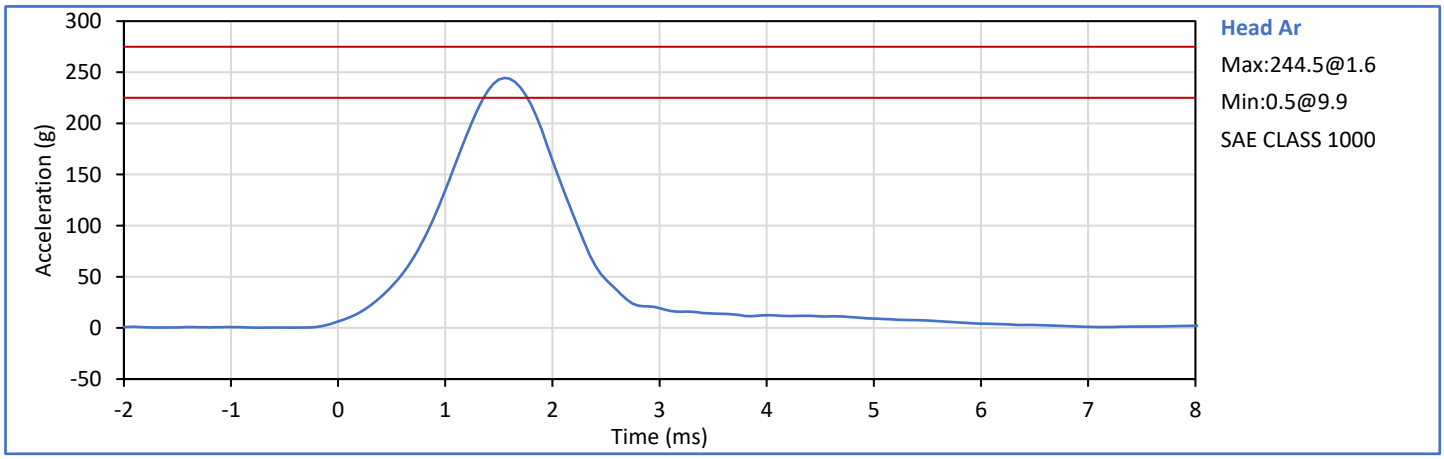
Approved By: J. Hernandez

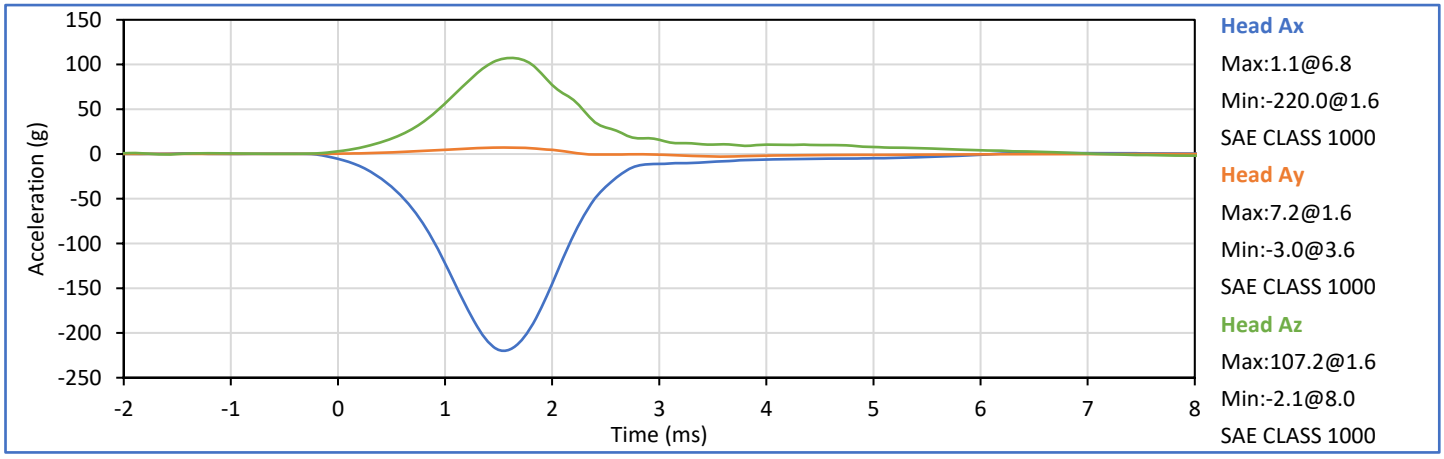
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Head Drop

ATD Serial No.: 360 Test Date: 2025-06-13

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.2	Pass
Laboratory Relative Humidity	%	10	70	33	Pass
Peak Resultant Acceleration	g	225.0	275.0	244.5	Pass
Peak Lateral Acceleration	g	-15.0	15.0	7.2	Pass
Oscillations After Main Pulse	%	0.0	10.0	0.0	Pass
Is Acceleration Unimodal?	Yes/No	Yes		Yes	Pass
			Overall Test Results		Pass





Technician: J. Perez

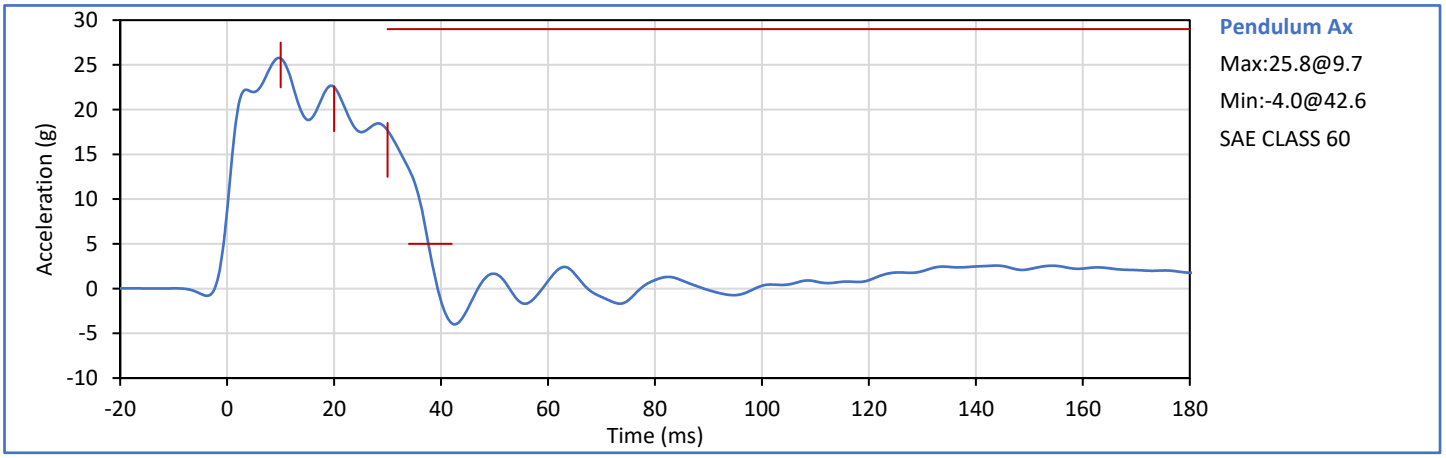
Approved By: J. Hernandez

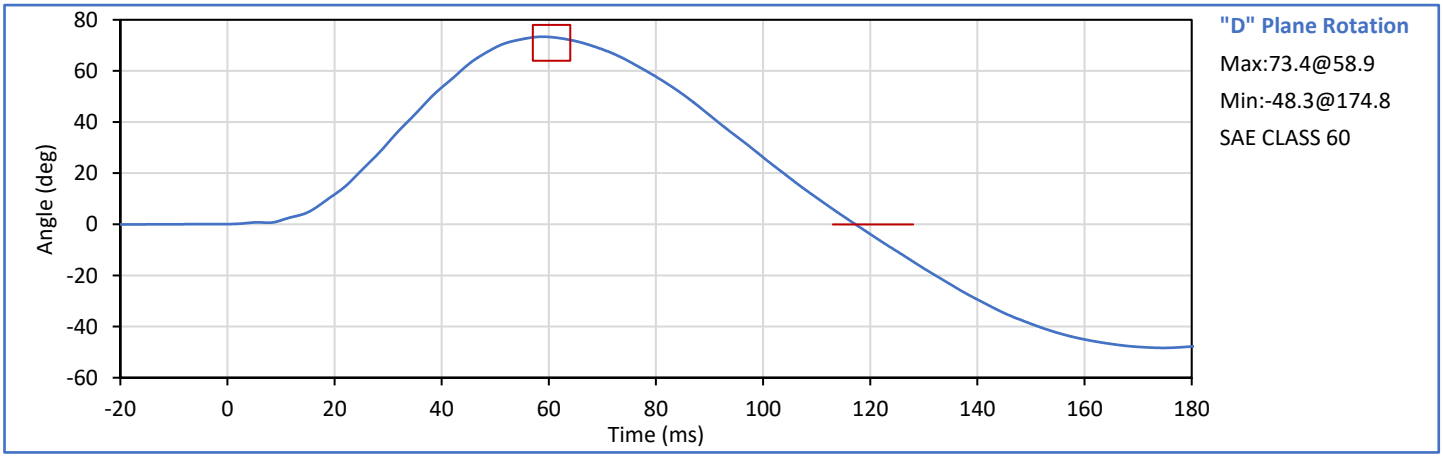
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Neck Flexion Test

ATD Serial No.: 360 Test Date: 2025-06-16

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	34	Pass
Pendulum Velocity	m/s	6.89	7.13	6.99	Pass
Pendulum Deceleration at 10 ms	g	22.5	27.5	25.7	Pass
Pendulum Deceleration at 20 ms	g	17.6	22.6	22.5	Pass
Pendulum Deceleration at 30 ms	g	12.5	18.5	17.7	Pass
Peak Pendulum Decel After 30 ms	g	0.0	29.0	17.7	Pass
Deceleration Decay to Cross 5g	ms	34.0	42.0	37.6	Pass
"D" Plane Rotation peak	deg	64.0	78.0	73.4	Pass
	ms	57.0	64.0	58.9	Pass
"D" Plane Rotation Decay to Zero	ms	113.0	128.0	117.3	Pass
Moment About Occipital Condyle	Nm	88.1	108.5	96.8	Pass
	ms	47.0	58.0	50.3	Pass
Moment Decay, Peak to Zero	ms	97.0	107.0	99.0	Pass
			Overall Test Results		Pass





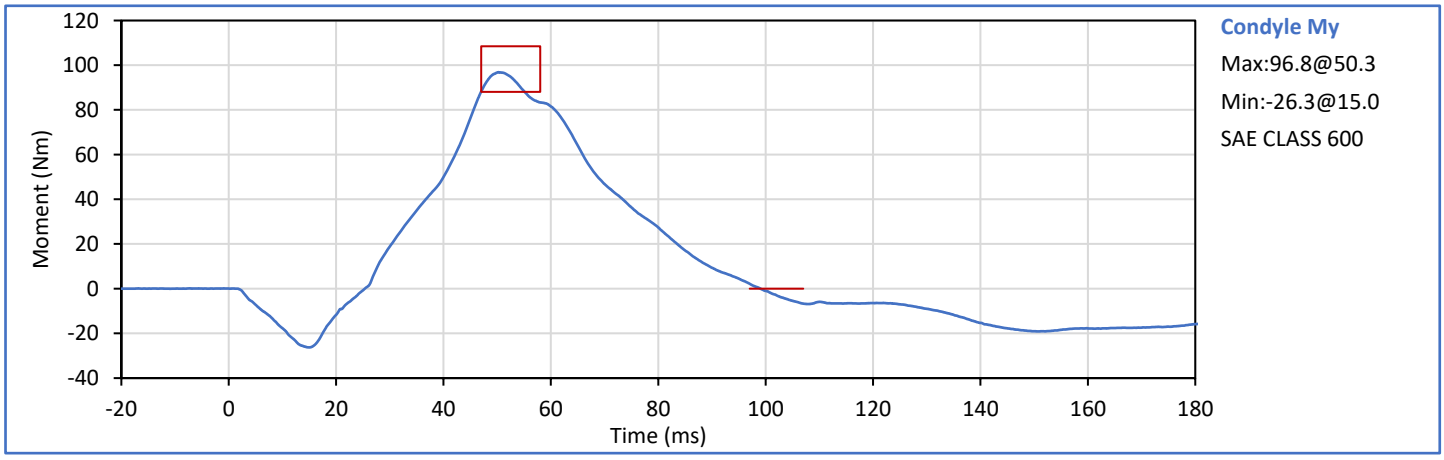
Technician: J. Perez

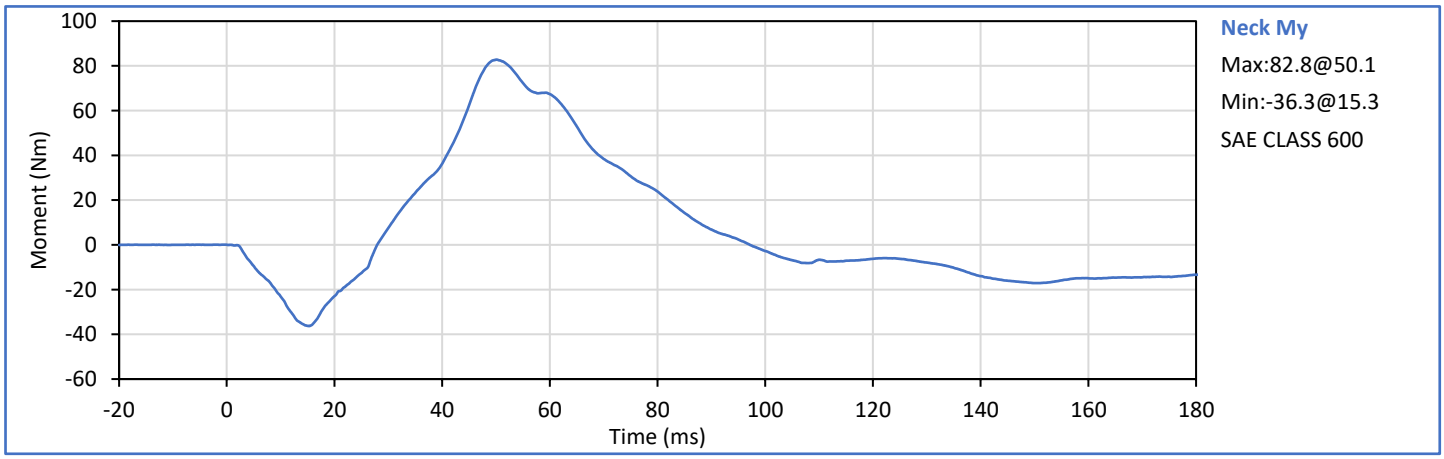
Approved By: J. Hernandez

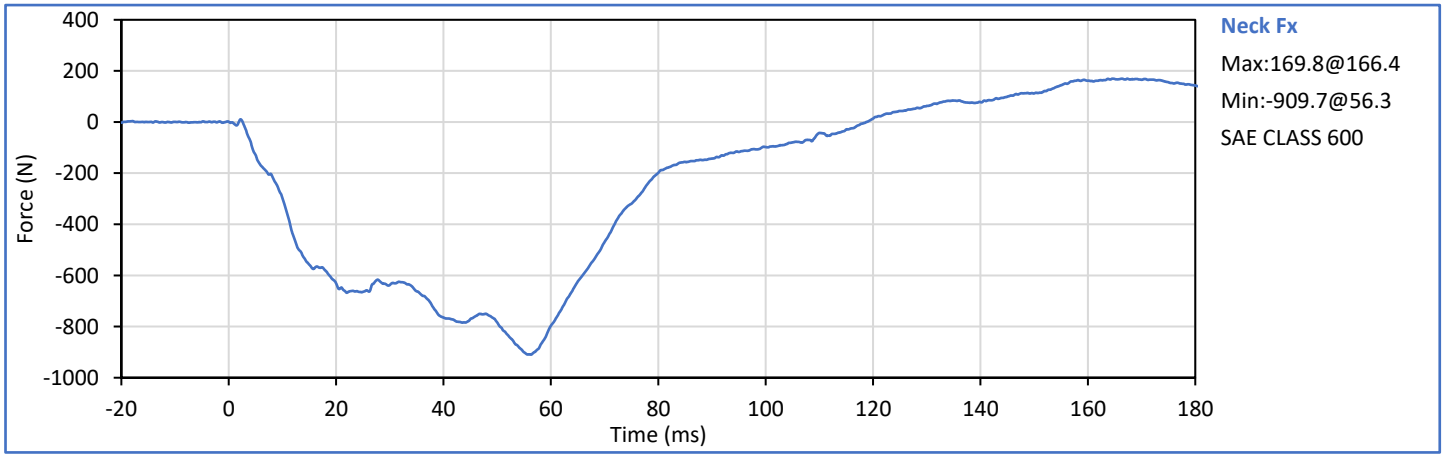
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Neck Flexion Test

ATD Serial No.: 360 Test Date: 2025-06-16





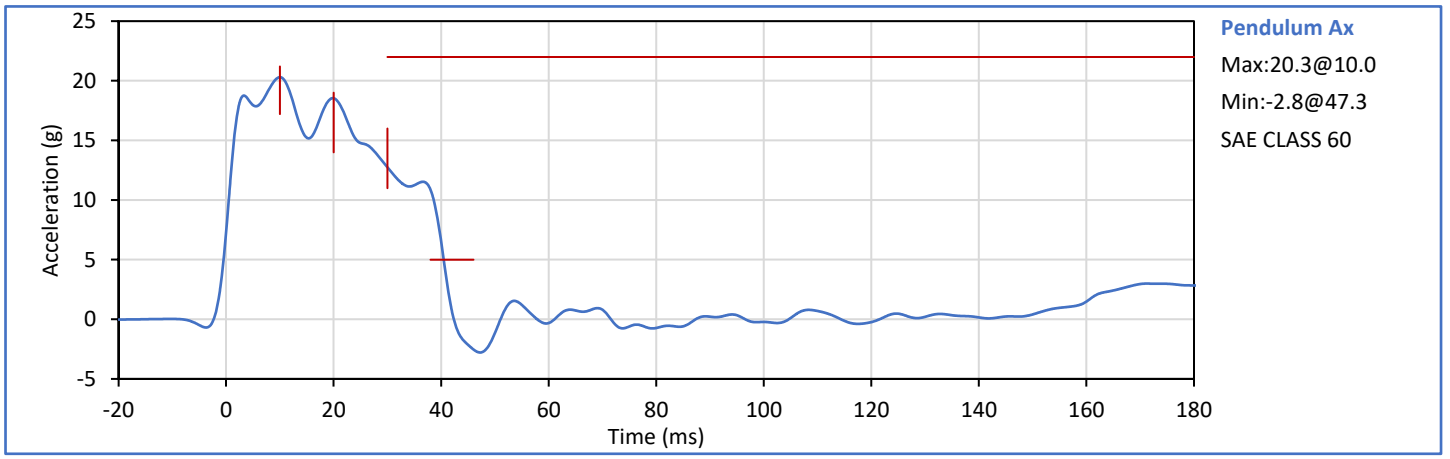


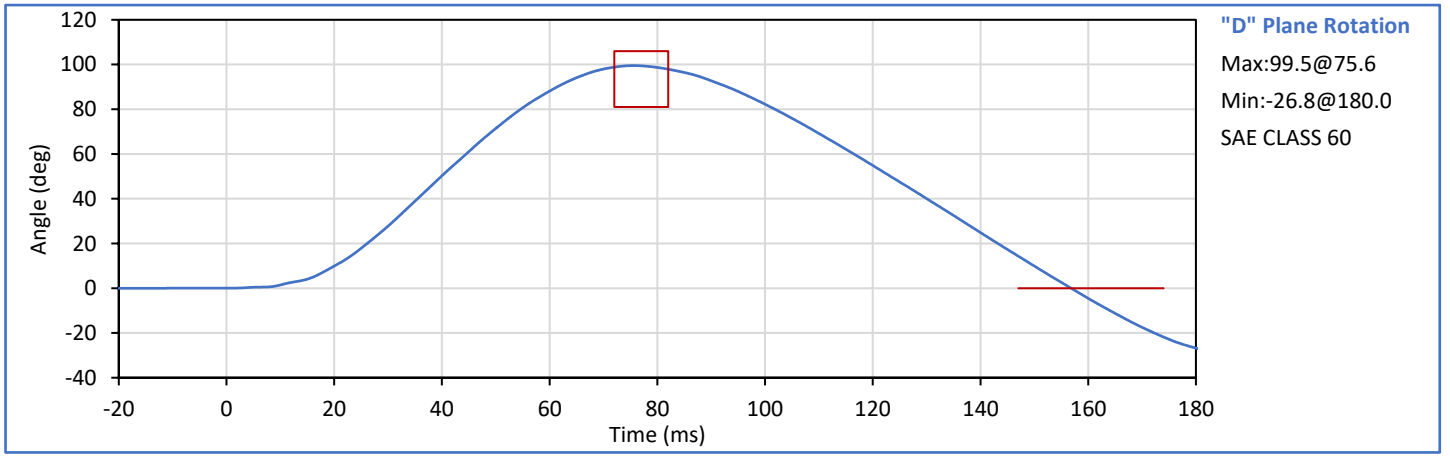
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Neck Extension Test

ATD Serial No.: 360 Test Date: 2025-06-16

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	39	Pass
Pendulum Velocity	m/s	5.94	6.19	6.09	Pass
Pendulum Deceleration at 10 ms	g	17.2	21.2	20.3	Pass
Pendulum Deceleration at 20 ms	g	14.0	19.0	18.5	Pass
Pendulum Deceleration at 30 ms	g	11.0	16.0	12.8	Pass
Peak Pendulum Decel After 30 ms	g	0.0	22.0	12.8	Pass
Deceleration Decay to Cross 5g	ms	38.0	46.0	40.5	Pass
"D" Plane Rotation peak	deg	81.0	106.0	99.5	Pass
	ms	72.0	82.0	75.6	Pass
"D" Plane Rotation Decay to Zero	ms	147.0	174.0	156.9	Pass
Moment About Occipital Condyle	Nm	-79.9	-52.9	-71.8	Pass
	ms	65.0	79.0	71.5	Pass
Moment Decay, Peak to Zero	ms	120.0	148.0	139.3	Pass
			Overall Test Results		Pass





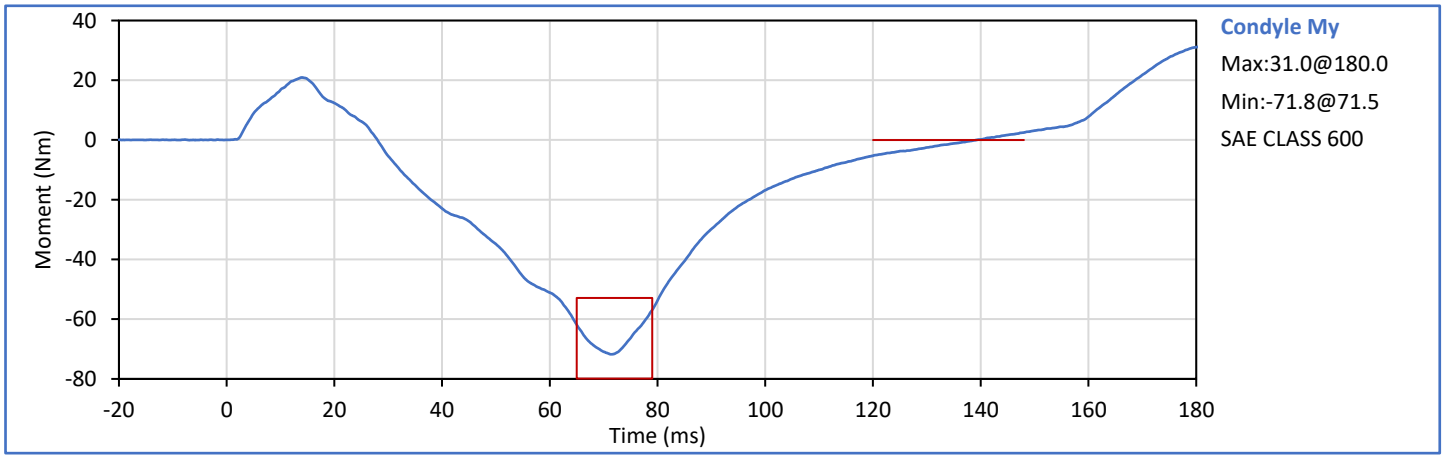
Technician: J. Perez

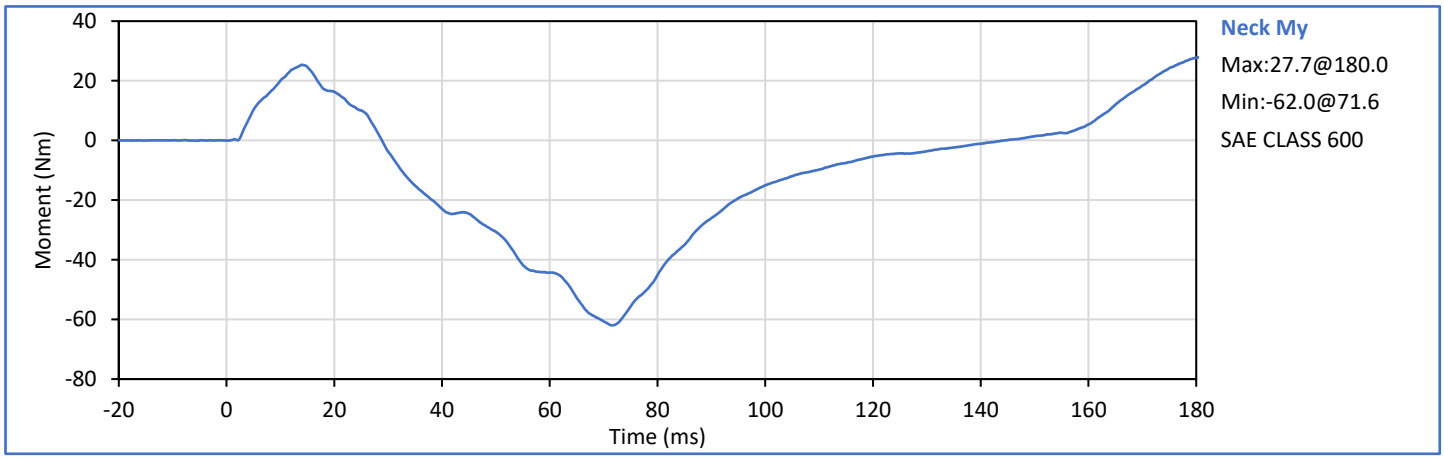
Approved By: J. Hernandez

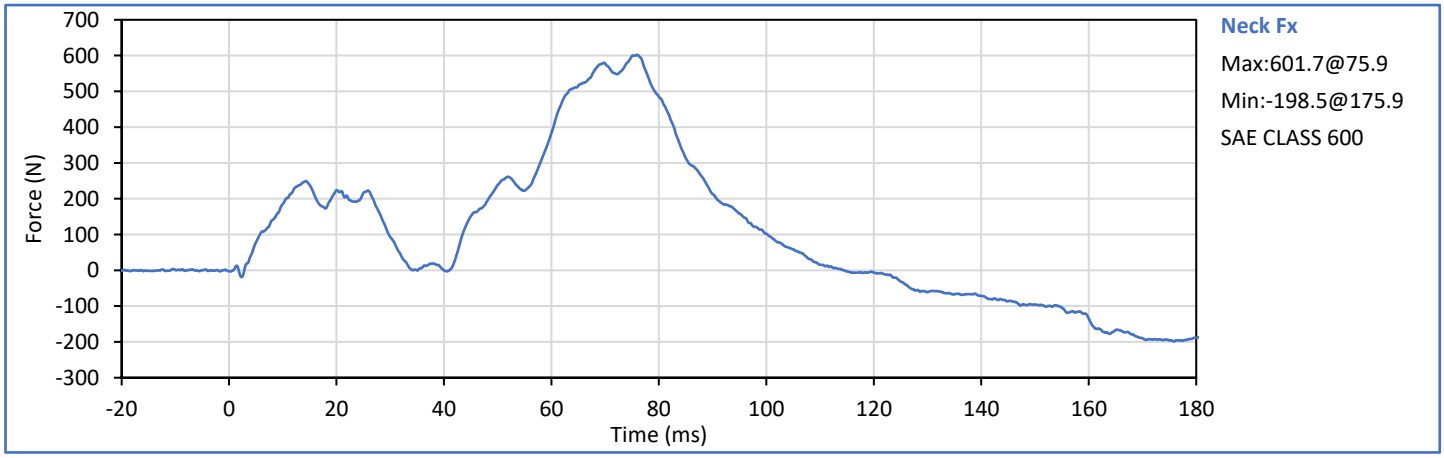
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Neck Extension Test

ATD Serial No.: 360 Test Date: 2025-06-16





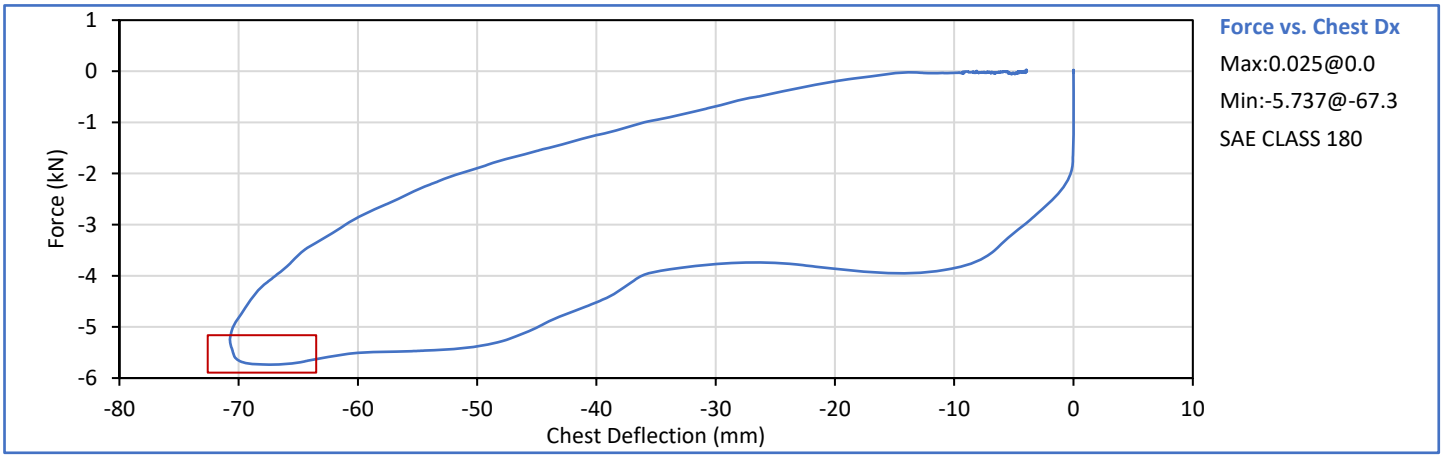


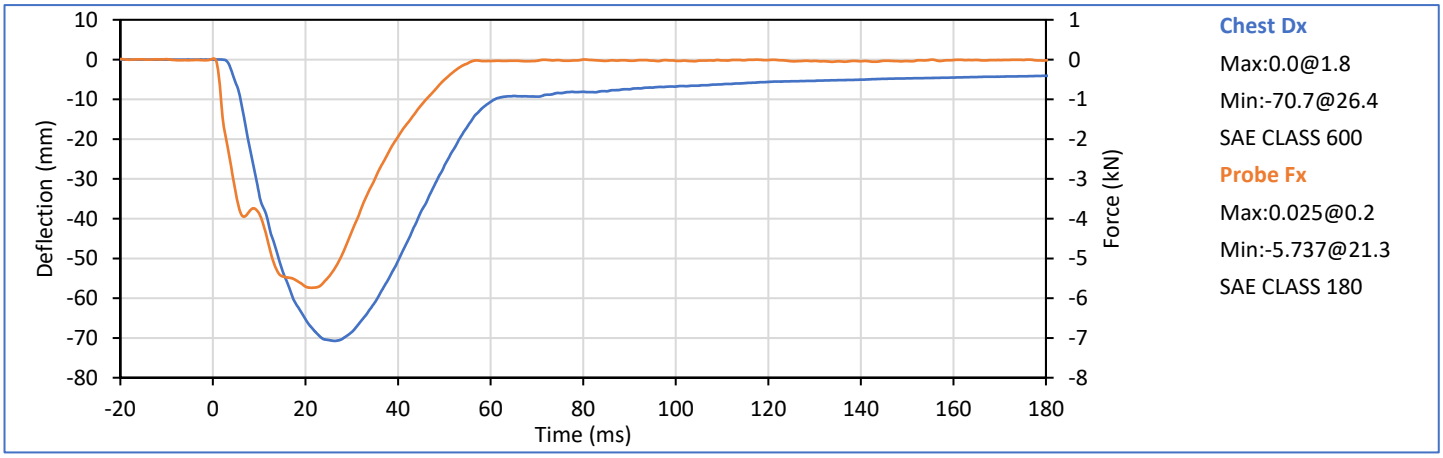
Applus IDIADA
KARCO

Hybrid III 50th Percentile Male ATD
Thorax Impact

ATD Serial No.: 360 Test Date: 2025-06-13

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.4	Pass
Laboratory Relative Humidity	%	10	70	40	Pass
Probe Velocity	m/s	6.58	6.82	6.71	Pass
Peak Chest Deflection	mm	-72.6	-63.5	-70.7	Pass
Peak Probe Force	kN	-5.893	-5.159	-5.737	Pass
Internal Hysterisis	%	69.0	85.0	69.9	Pass
			Overall Test Results		Pass





Technician: J. Perez

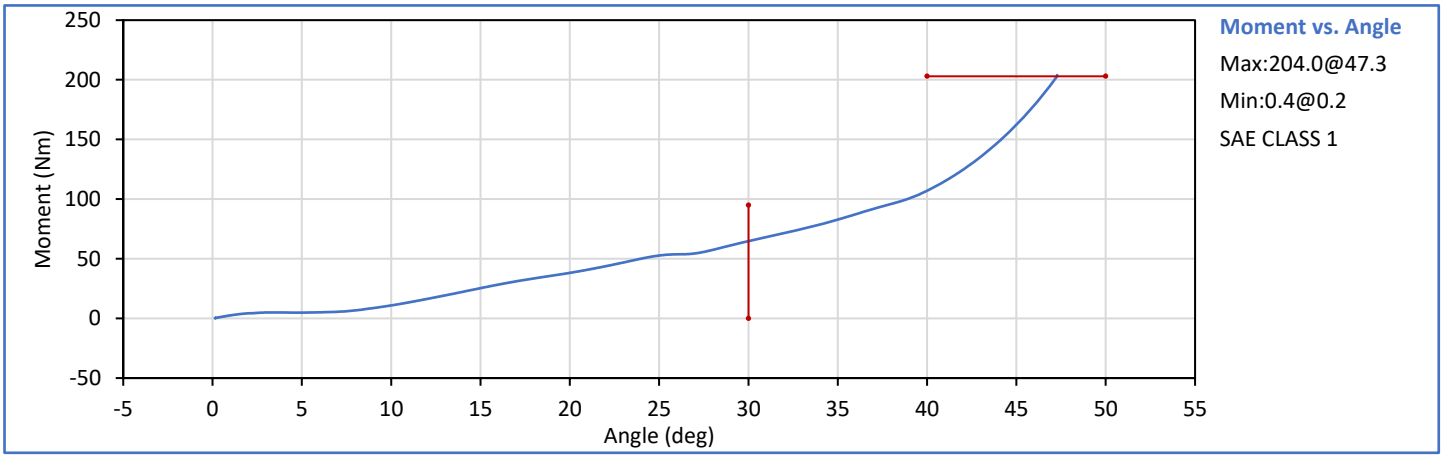
Approved By: J. Hernandez

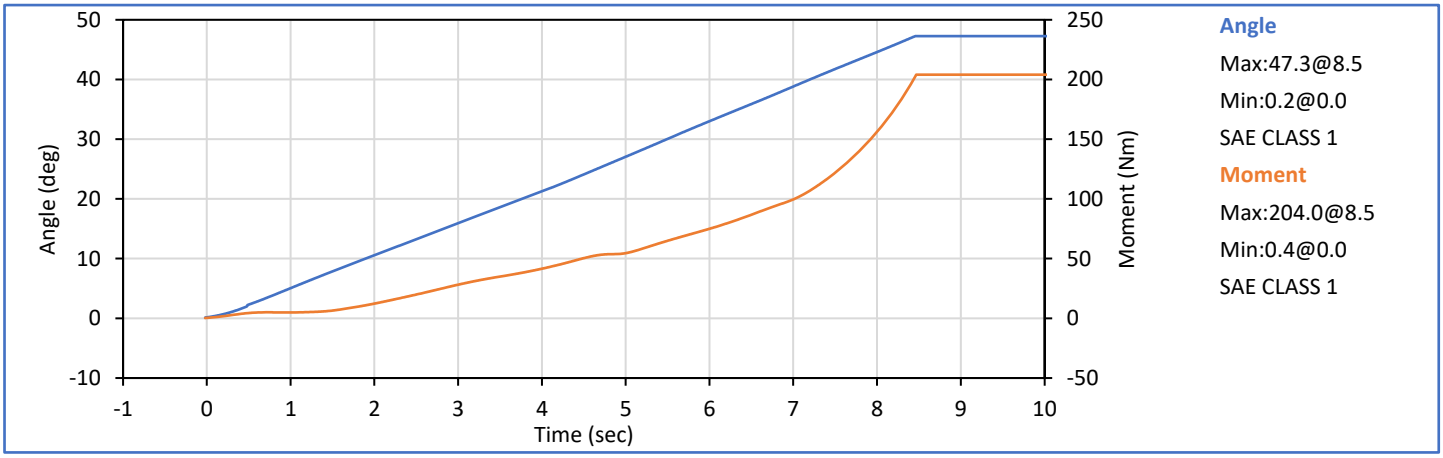
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Hip Range of Motion (Left)

ATD Serial No.: 360 Test Date: 2025-06-18

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.1	Pass
Laboratory Relative Humidity	%	10	70	34	Pass
Left Hip Rotation Rate	deg/s	5.0	10.0	5.6	Pass
Left Femur Torque at 30°	Nm	0.0	95.0	64.7	Pass
Left Hip Rotation at 203 Nm	deg	40.0	50.0	47.3	Pass
			Overall Test Results		Pass





Technician: J. Perez

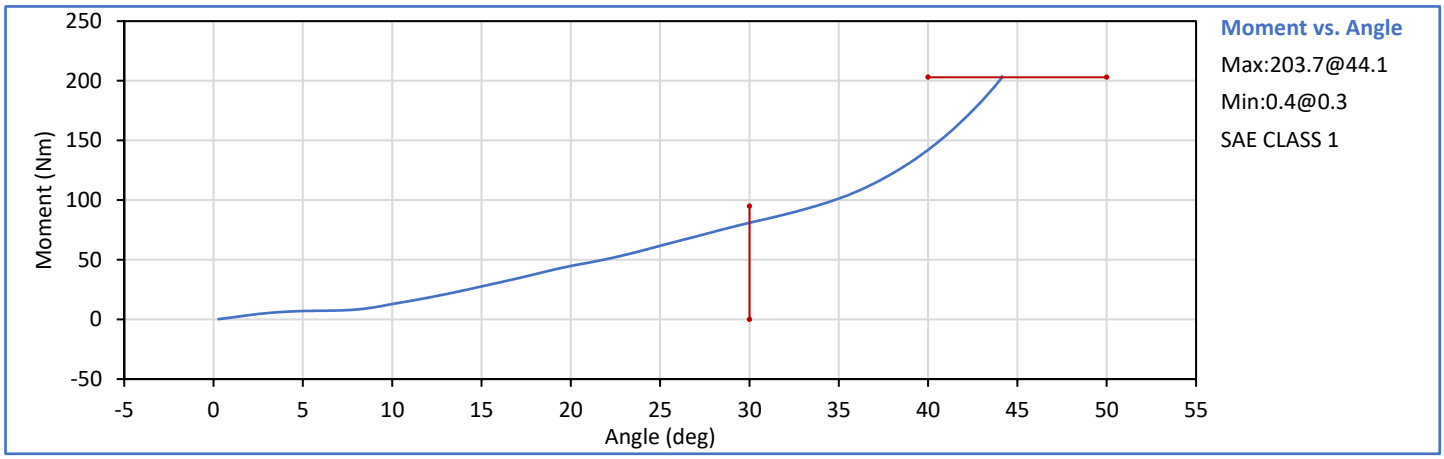
Approved By: J. Hernandez

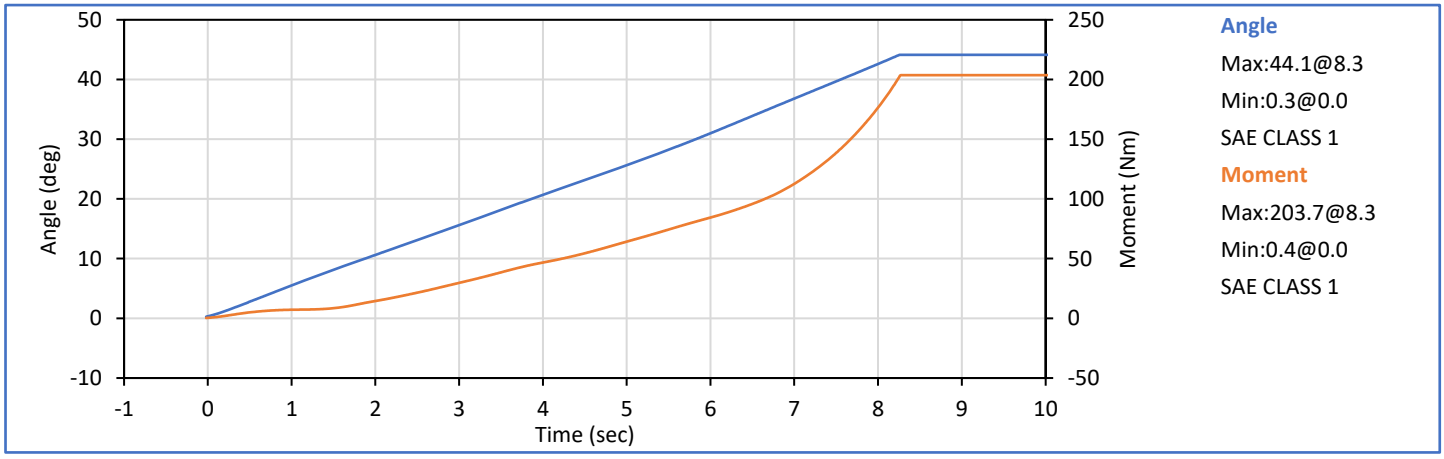
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Hip Range of Motion (Right)

ATD Serial No.: 360 Test Date: 2025-06-18

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	20.4	Pass
Laboratory Relative Humidity	%	10	70	44	Pass
Right Hip Rotation Rate	deg/s	5.0	10.0	5.3	Pass
Right Femur Torque at 30°	Nm	0.0	95.0	80.9	Pass
Right Hip Rotation at 203 Nm	deg	40.0	50.0	44.1	Pass
			Overall Test Results		Pass





Technician: J. Perez

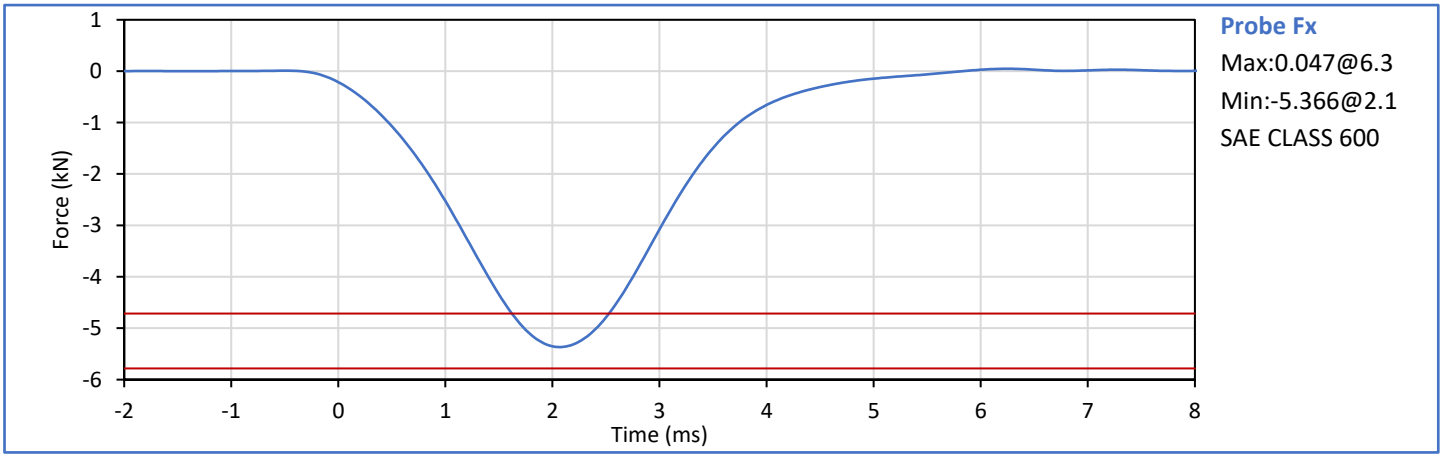
Approved By: J. Hernandez

Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Knee Impact (Left)

ATD Serial No.: 360 Test Date: 2025-06-17

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.4	Pass
Laboratory Relative Humidity	%	10	70	33	Pass
Probe Velocity	m/s	2.070	2.130	2.098	Pass
Peak Resistive Force	kN	-5.782	-4.715	-5.366	Pass
			Overall Test Results		Pass



Technician: J. Perez

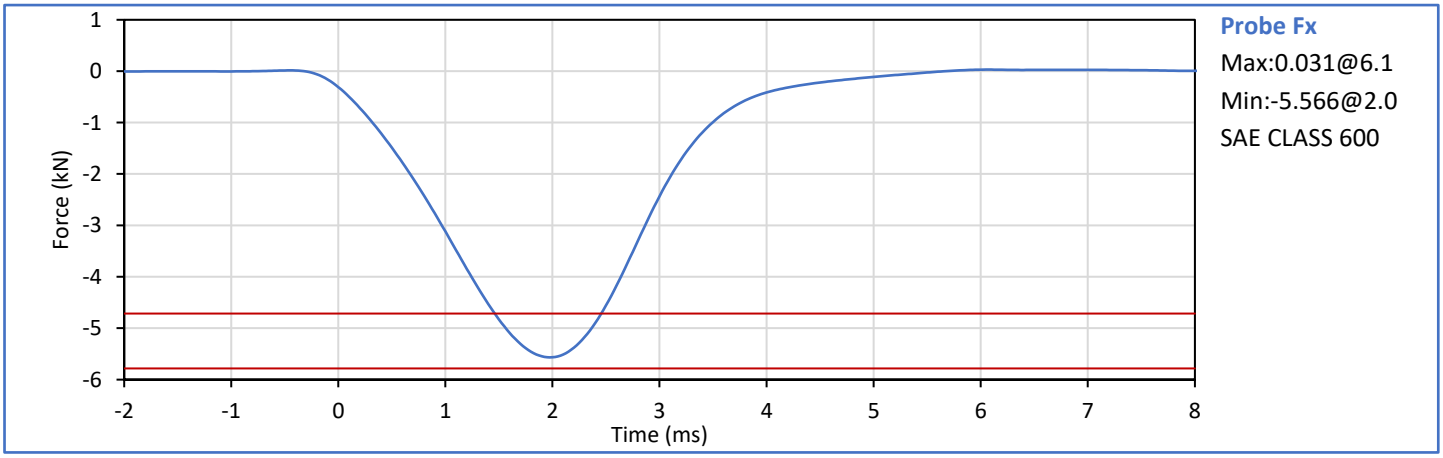
Approved By: J. Hernandez

Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Knee Impact (Right)

ATD Serial No.: 360 Test Date: 2025-06-17

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.2	Pass
Laboratory Relative Humidity	%	10	70	34	Pass
Probe Velocity	m/s	2.070	2.130	2.101	Pass
Peak Resistive Force	kN	-5.782	-4.715	-5.566	Pass
			Overall Test Results		Pass



Technician: J. Perez

Approved By: J. Hernandez

APPENDIX C
Post-Test ATD Qualification and Performance Verification
Hybrid III 5th Percentile Female ATD
S/N: DH1644

Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Damage Checklist

ATD Serial No.: DH1644 Test Date: 2025-06-12

Dummy Item	Inspect for	Comments	Damage	Okay
Entire ATD	Perform general cleaning			✓
Outer Skin	Gashes, rips, cracks			✓
Head	Ballast secure			✓
	General appearance			✓
Neck bracket	Upper neck firmly attached to lower bracket			✓
Neck	Broken or cracked rubber			✓
	Looseness at the condyle joint			✓
Nodding block	Cracked or out of position			✓
Lumbar Spine	Broken or cracked rubber			✓
Ribs	Broken or bent ribs			✓
	Broken or bent rib supports			✓
	Damping material separated or cracked			✓
	Rubber bumpers in place			✓
Chest Displ.	Bent shaft			✓
Assembly	Slider arm riding in track			✓
Sensors	Check cables for cuts, tears			✓
	Check for damaged insulation			✓
Accelerometer	Head mounting secure			✓
Mounting	Chest mounting secure			✓
Knees	Skin condition			✓
	Insert (do not remove)			✓
	Casting			✓
Limbs	Normal movement and adjustment			✓
Knee Sliders	Wires intact			✓
	Rubber returned to "resting" position			✓
Pelvis	Broken			✓
Other	Describe below as needed			✓

Describe any repairs or replacement of parts or other findings:

No Problems Found

Technician: J. Perez

Approved By: J. Hernandez

Applus IDIADA
KARCO

Hybrid III 5th Percentile Female ATD
External Measurements

ATD Serial No.: DH1644 Test Date: 2025-06-12

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	30	Pass
A - Total sitting height	mm	775	800	786	Pass
B - Shoulder pivot height	mm	432	457	443	Pass
C - 'H' point height	mm	81	86	84	Pass
D - 'H' point location from backline	mm	145	150	147	Pass
E - Shoulder pivot from backline	mm	69	84	77	Pass
F - Thigh clearance	mm	119	135	132	Pass
G - Back of elbow to wrist pivot	mm	244	259	246	Pass
H - Head back to backline	mm	41	46	43	Pass
I - Shoulder to elbow length	mm	277	297	289	Pass
J - Elbow rest height	mm	183	203	195	Pass
K - Buttock to knee length	mm	521	546	542	Pass
L - Popliteal length	mm	356	376	360	Pass
M - Knee pivot height	mm	394	419	405	Pass
N - Buttock popliteal length	mm	414	439	426	Pass
O - Chest depth without jacket	mm	175	191	187	Pass
P - Foot length	mm	219	234	227	Pass
R - Buttock to Knee Pivot Length	mm	457	483	471	Pass
S - Head Breadth	mm	137	147	144	Pass
T - Head Depth	mm	178	188	187	Pass
U - Hip Breadth	mm	300	315	306	Pass
V - Shoulder breadth	mm	351	366	358	Pass
W - Foot breadth	mm	79	94	87	Pass
X - Head circum.	mm	528	549	543	Pass
Y - Chest circum. (w/chest jacket)	mm	851	881	875	Pass
Z - Waist circum.	mm	760	790	778	Pass
AA - Location for chest circum.	mm	333	358	344	Pass
BB - Location for waist circum.	mm	160	170	169	Pass
			Overall Test Results		Pass

Technician: J. Perez

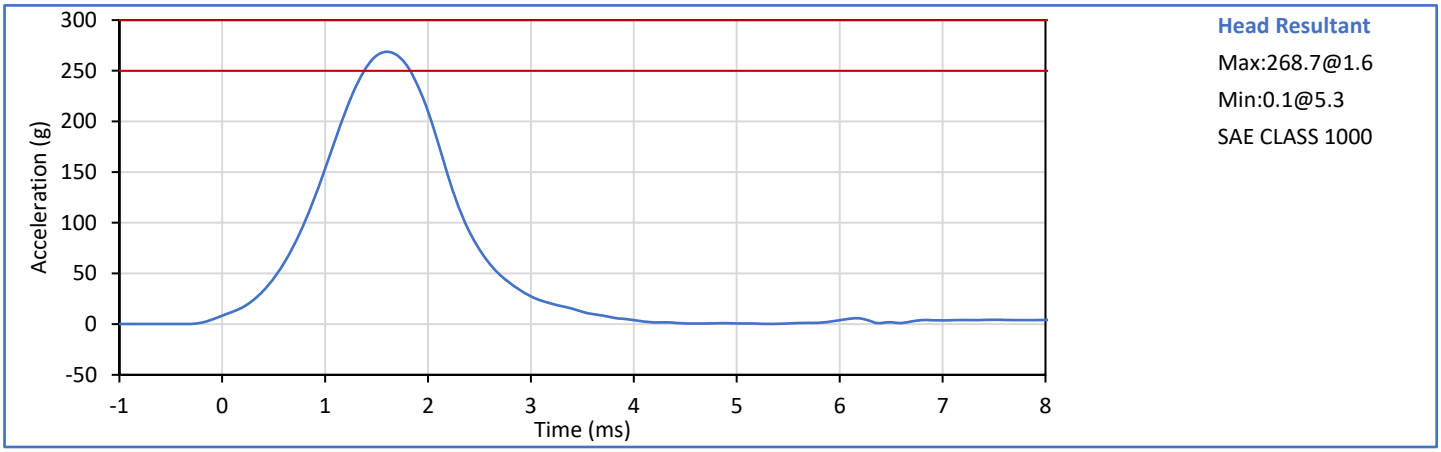
Approved By: J. Hernandez

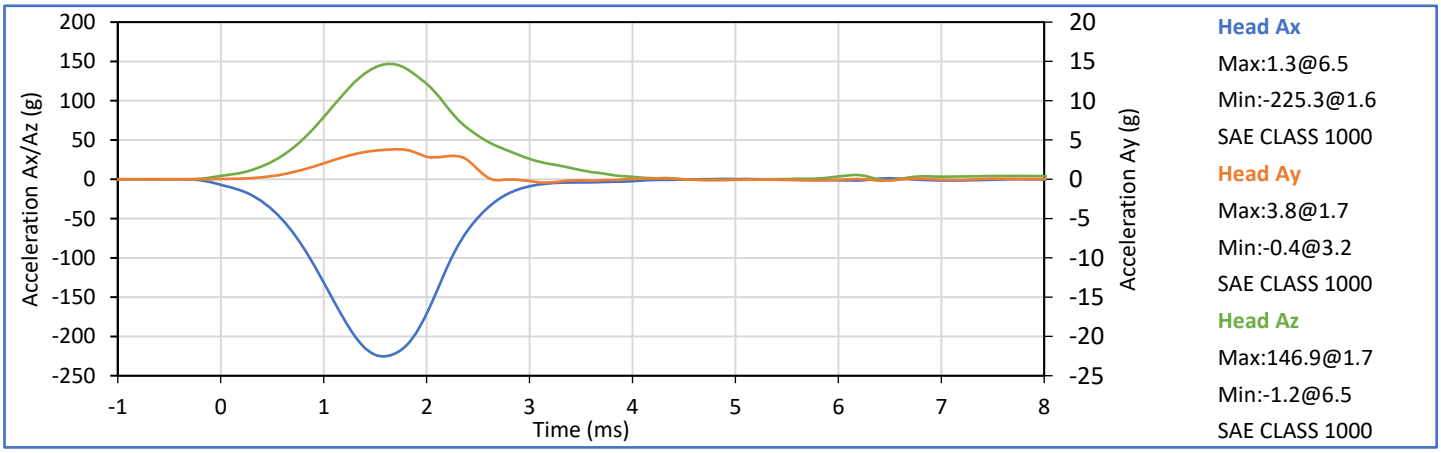
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Head Drop Test

ATD Serial No.: DH1644 Test Date: 2025-06-13

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.1	Pass
Laboratory Humidity	%	10	70	33	Pass
Peak Resultant Acceleration	g	250.0	300.0	268.7	Pass
Peak Lateral Acceleration	g	-15.0	15.0	3.8	Pass
Oscillations After Main Pulse	%	0.0	10.0	2.2	Pass
Is Acceleration Unimodal?	Yes/No	Yes		Yes	Pass
			Overall Test Results		Pass





Technician: J. Perez

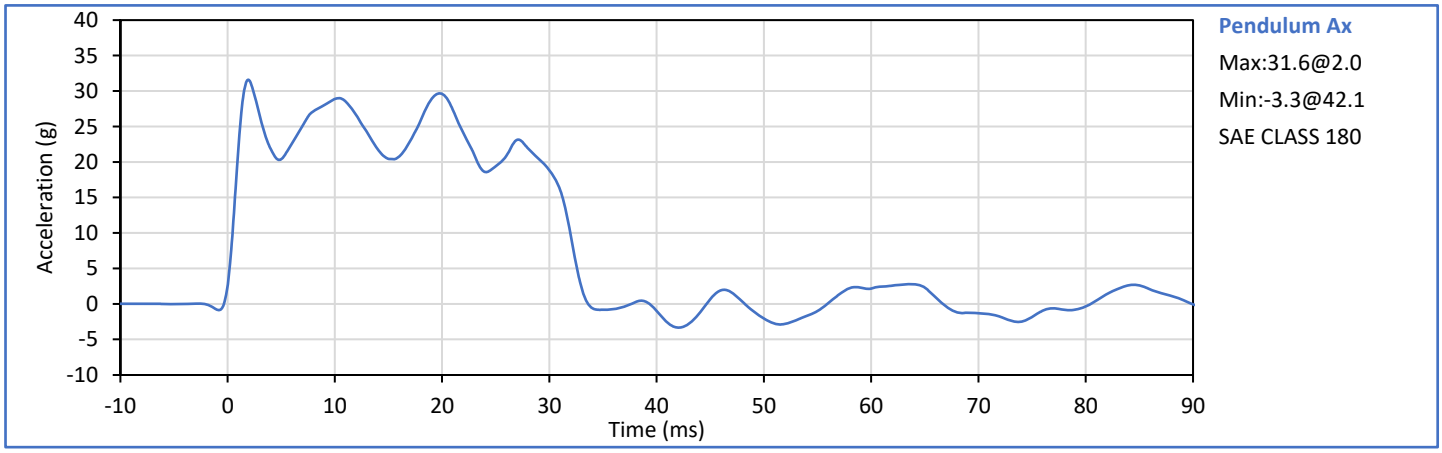
Approved By: J. Hernandez

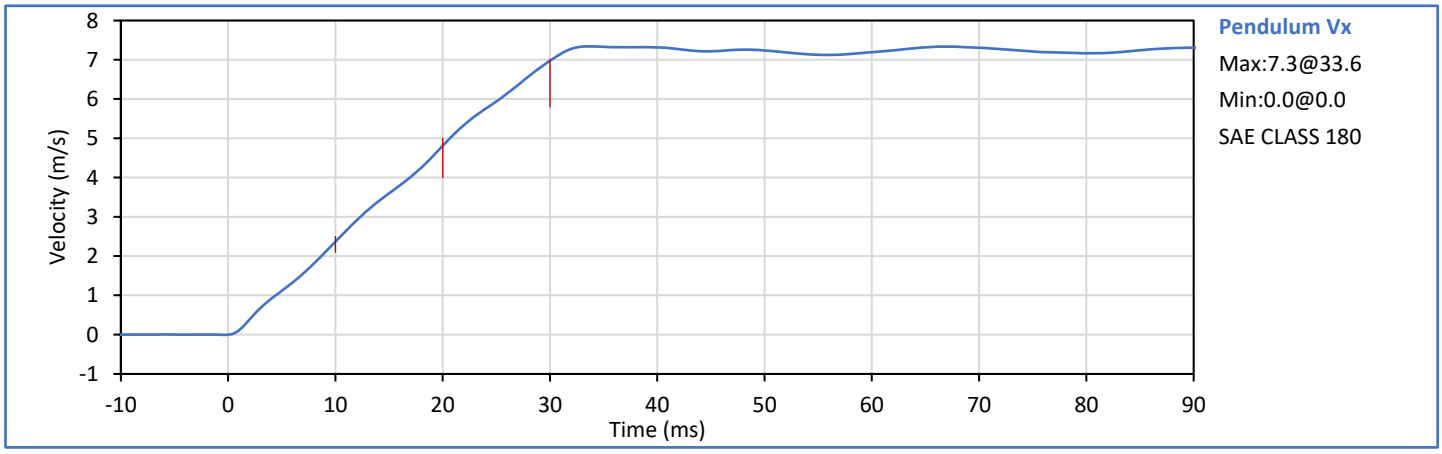
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Neck Flexion Test

ATD Serial No.: DH1644 Test Date: 2025-06-19

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Humidity	%	10	70	37	Pass
Pendulum Velocity	m/s	6.89	7.13	6.95	Pass
Pendulum Velocity at 10 ms	m/s	2.10	2.50	2.36	Pass
Pendulum Velocity at 20 ms	m/s	4.00	5.00	4.81	Pass
Pendulum Velocity at 30 ms	m/s	5.80	7.00	6.97	Pass
Peak "D" Plane Rotation	deg	77.0	91.0	79.9	Pass
Peak Moment in Rotation	Nm	69.0	83.0	78.4	Pass
Positive Moment Decay to 10 Nm	ms	80.0	100.0	84.5	Pass
			Overall Test Results		Pass





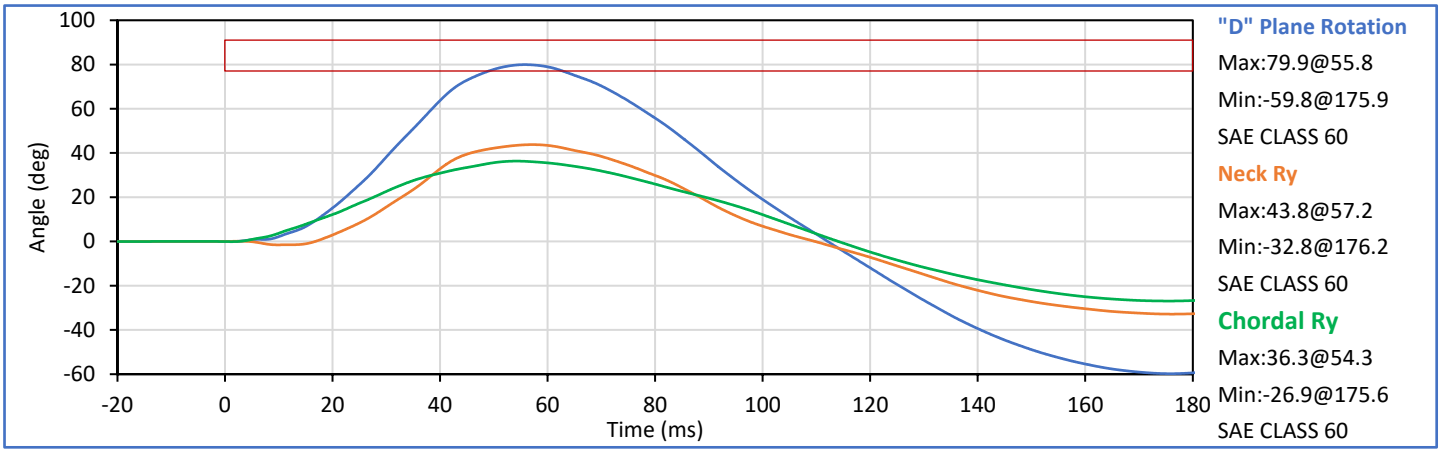
Technician: J. Perez

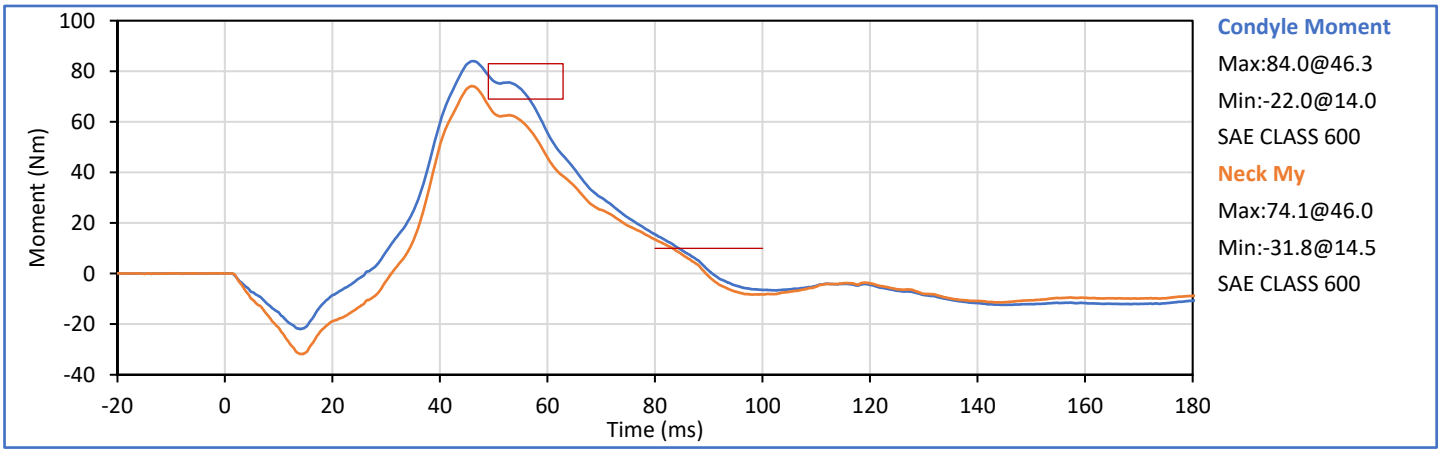
Approved By: J. Hernandez

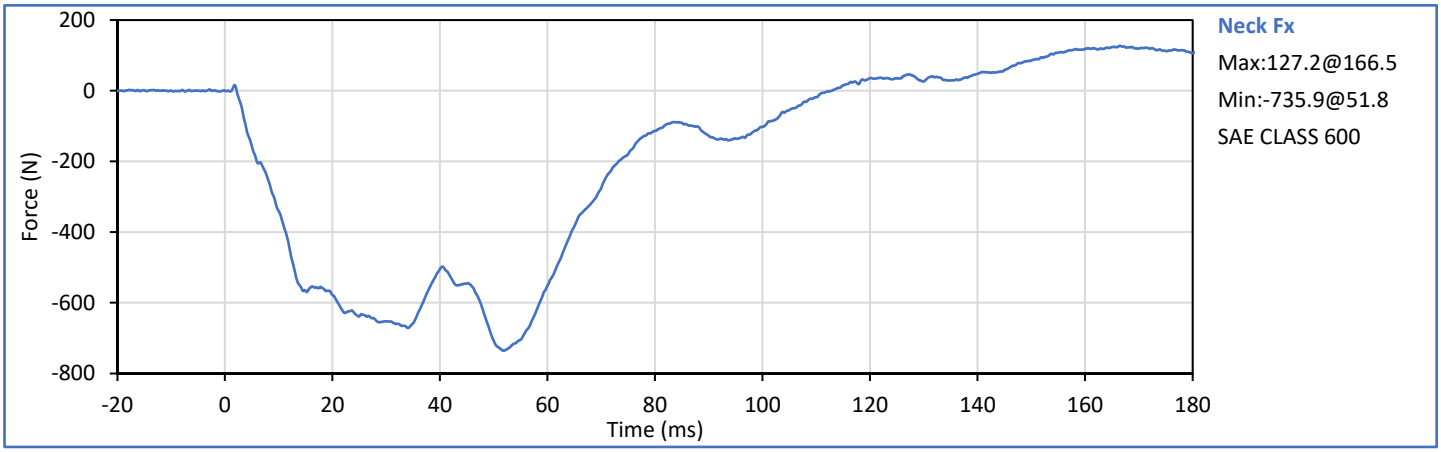
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Neck Flexion Test

ATD Serial No.: DH1644 Test Date: 2025-06-19





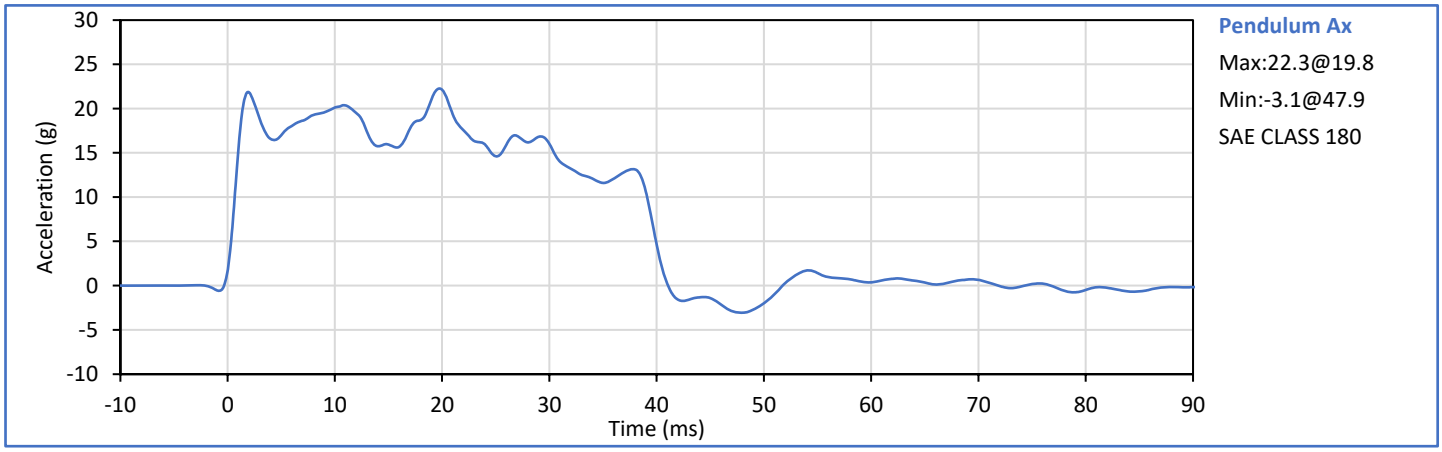


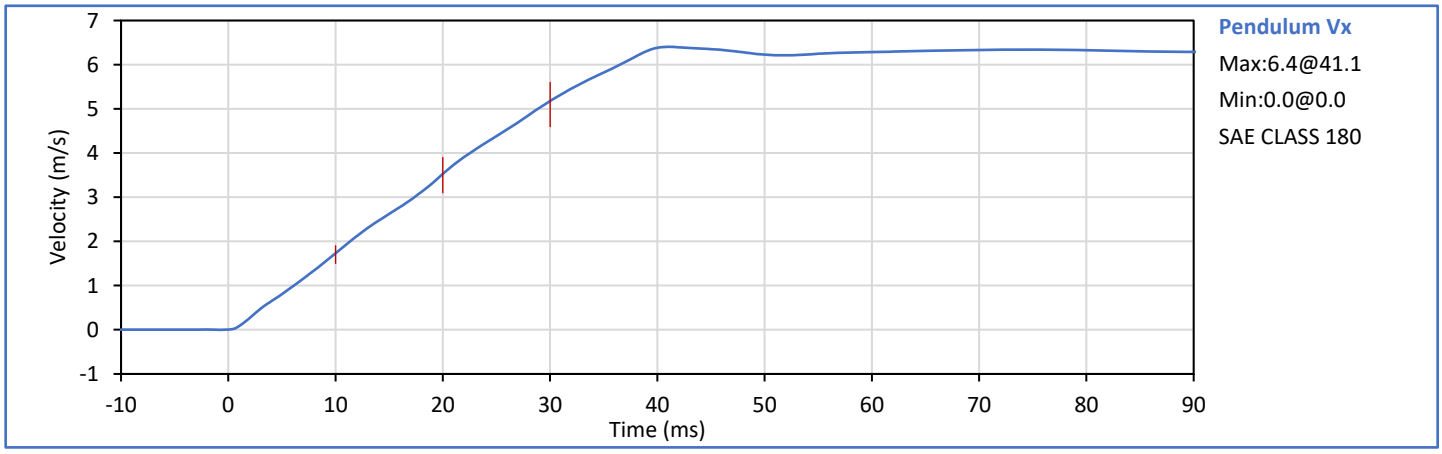
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Neck Extension Test

ATD Serial No.: DH1644 Test Date: 2025-06-19

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	20.8	Pass
Laboratory Relative Humidity	%	10	70	44	Pass
Pendulum Velocity	m/s	5.95	6.19	6.01	Pass
Pendulum Velocity at 10 ms	m/s	1.50	1.90	1.73	Pass
Pendulum Velocity at 20 ms	m/s	3.10	3.90	3.52	Pass
Pendulum Velocity at 30 ms	m/s	4.60	5.60	5.18	Pass
Peak "D" Plane Rotation	deg	99.0	114.0	103.2	Pass
Peak Moment in Rotation	Nm	-65.0	-53.0	-57.1	Pass
Negative Moment Decay to -10 Nm	ms	94.0	114.0	104.4	Pass
			Overall Test Results		Pass





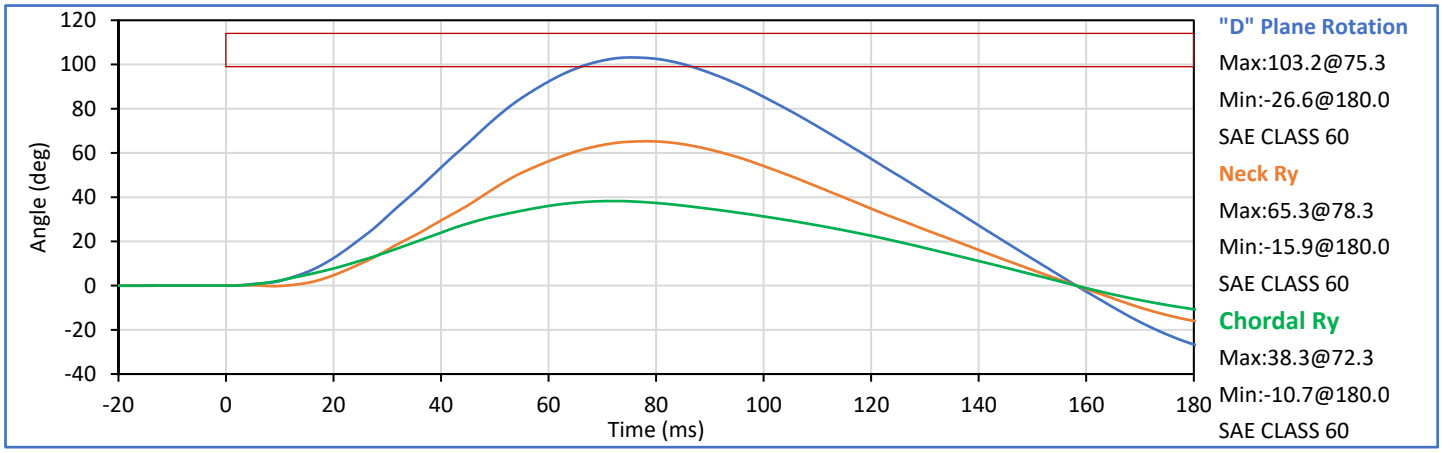
Technician: J. Perez

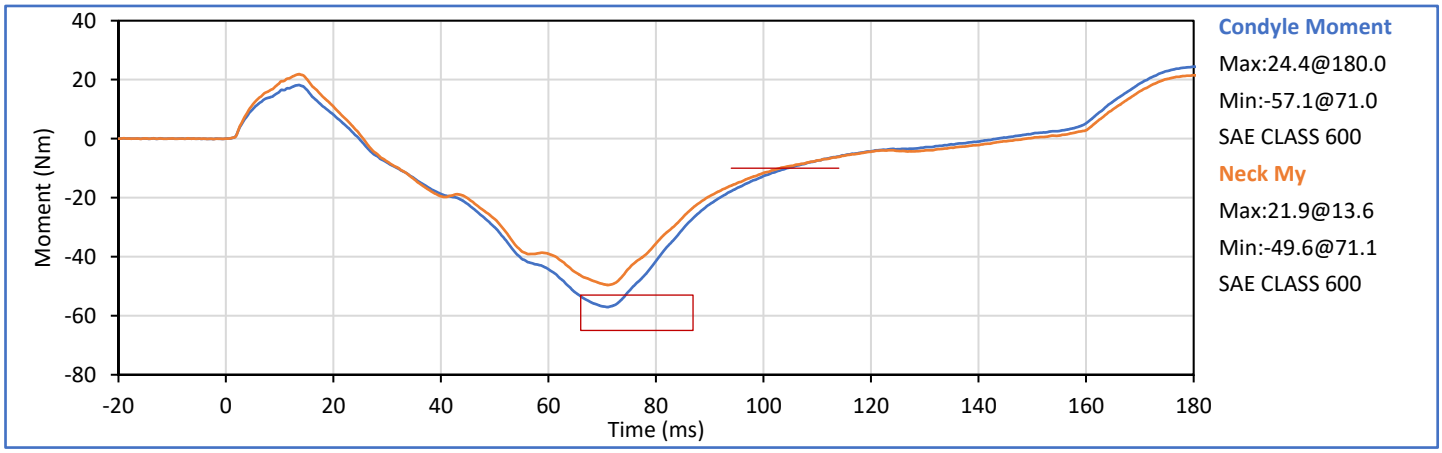
Approved By: J. Hernandez

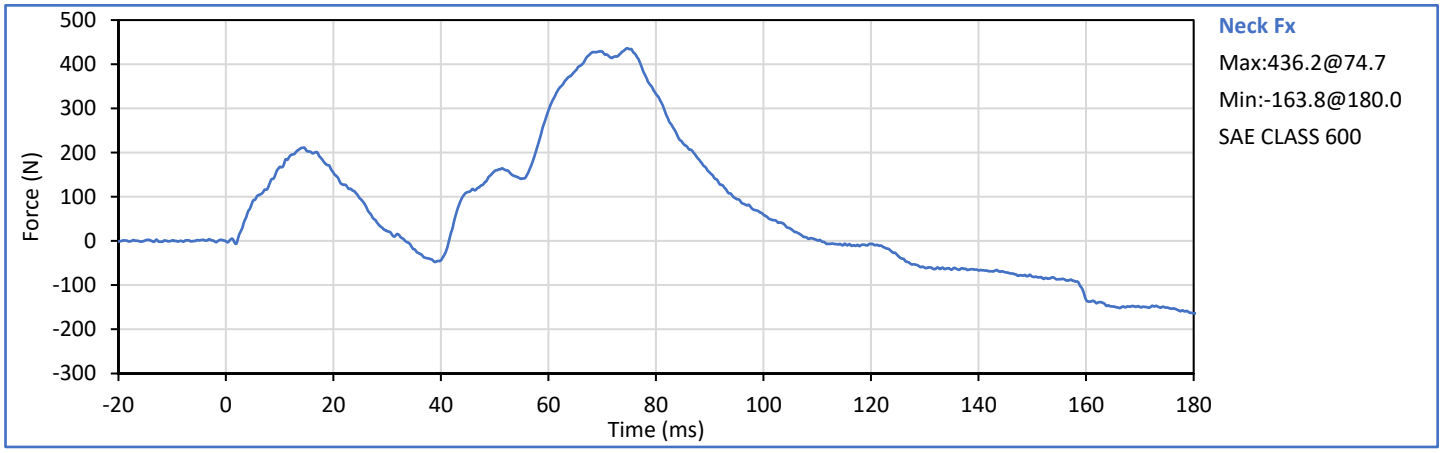
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Neck Extension Test

ATD Serial No.: DH1644 Test Date: 2025-06-19







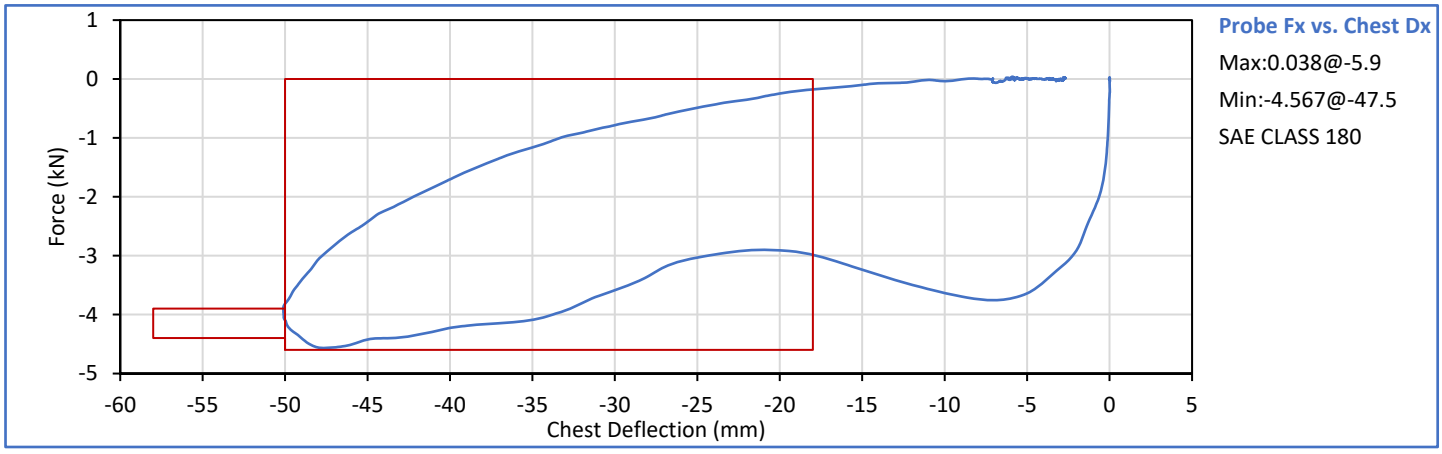
Applus IDIADA KARCO

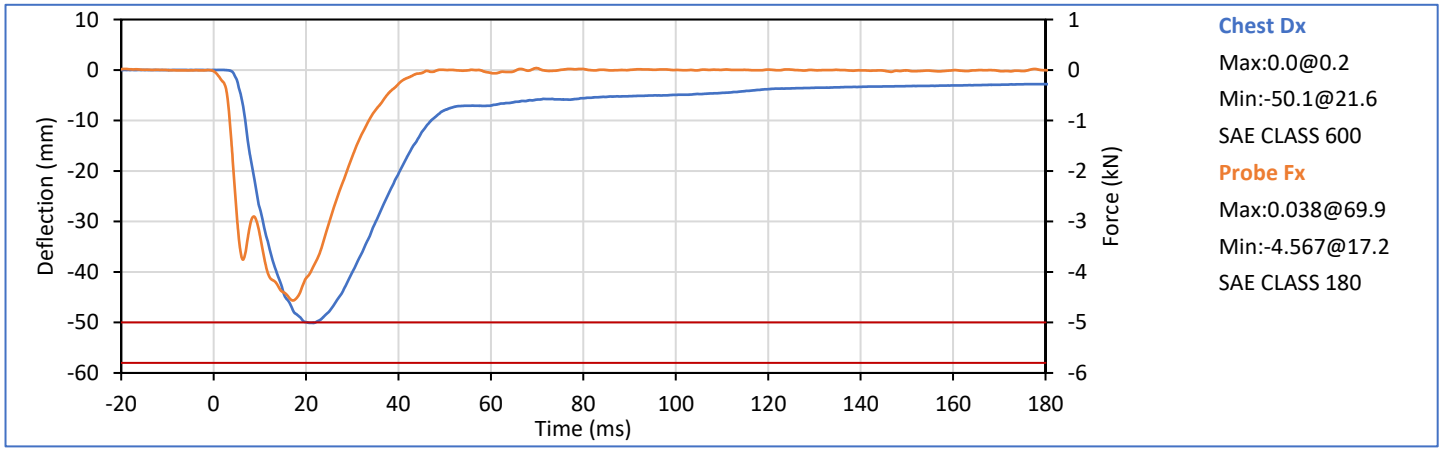
Hybrid III 5th Percentile Female ATD
Thorax Impact

ATD Serial No.: DH1644

Test Date: 2025-06-18

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.4	Pass
Laboratory RelativeHumidity	%	10	70	38	Pass
Probe Velocity	m/s	6.59	6.83	6.71	Pass
Peak Chest Deflection	mm	-58.0	-50.0	-50.1	Pass
Peak Probe Force, 50 and 58 mm	kN	-4.400	-3.900	-4.095	Pass
Peak Probe Force, 18 and 50 mm	kN	-4.600	0.000	-4.567	Pass
Internal Hysterisis	%	69.0	85.0	75.8	Pass
			Overall Test Results		Pass





Technician: J. Perez

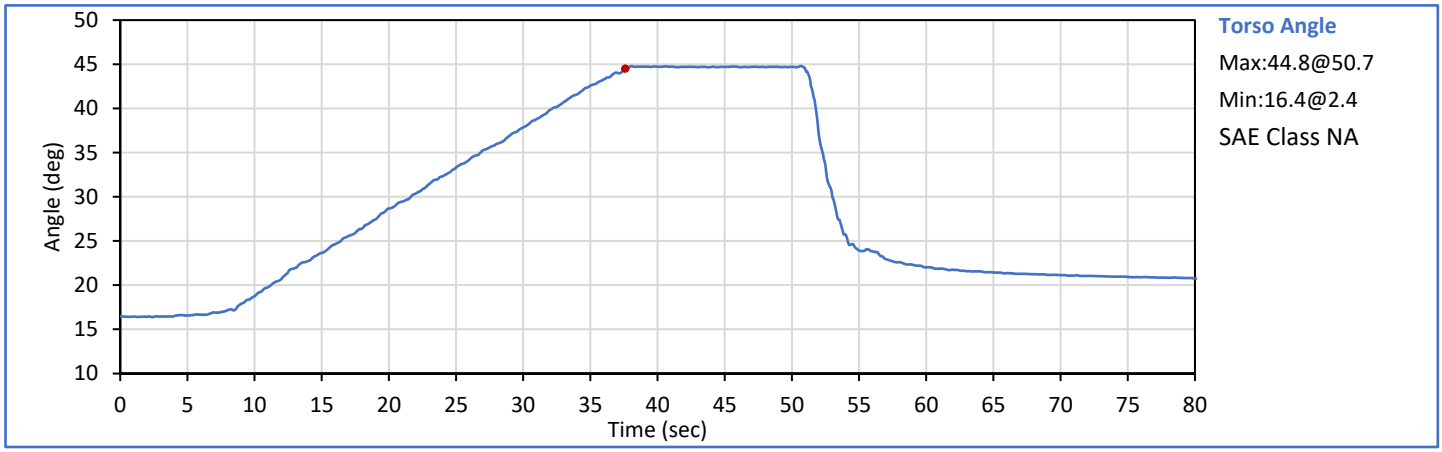
Approved By: J. Hernandez

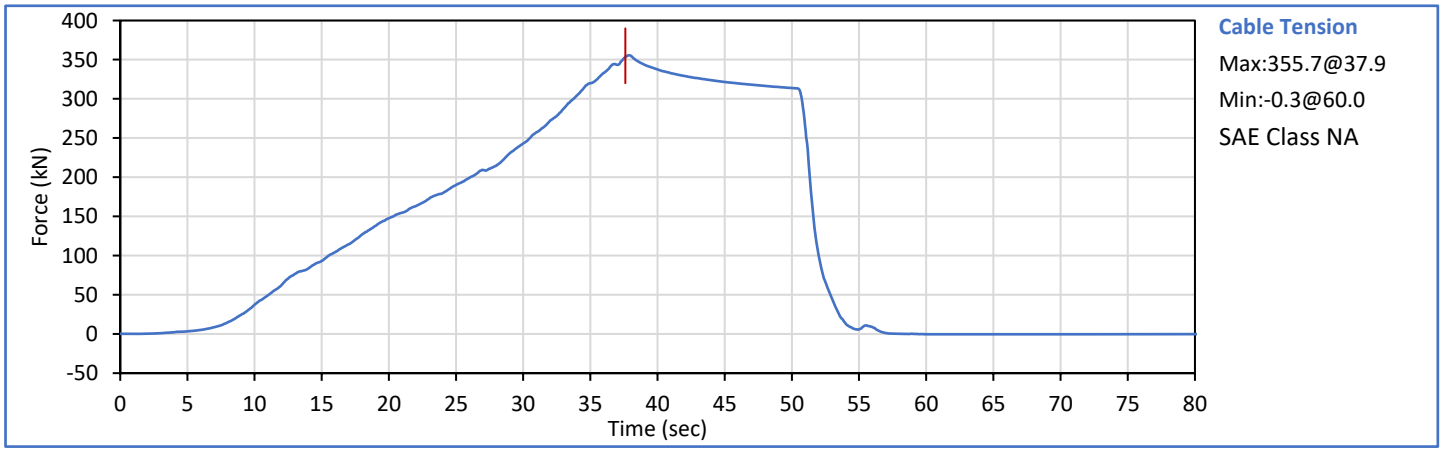
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Torso Flexion Test

ATD Serial No.: DH1644 Test Date: 2025-06-18

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.1	Pass
Laboratory Humidity	%	10	70	31	Pass
Orientation Angle	deg	0.0	20.0	15.8	Pass
Test Initial Angle	deg	11.0	19.0	16.4	Pass
Peak Force at 45° (+/-0.5°)	N	320.0	390.0	353.3	Pass
Torso Flexion Rate	deg/s	0.50	1.50	0.94	Pass
Final Reference Plane Angle	deg	-8.0	8.0	3.1	Pass
			Overall Test Results		Pass





Technician: J. Perez

Approved By: J. Hernandez

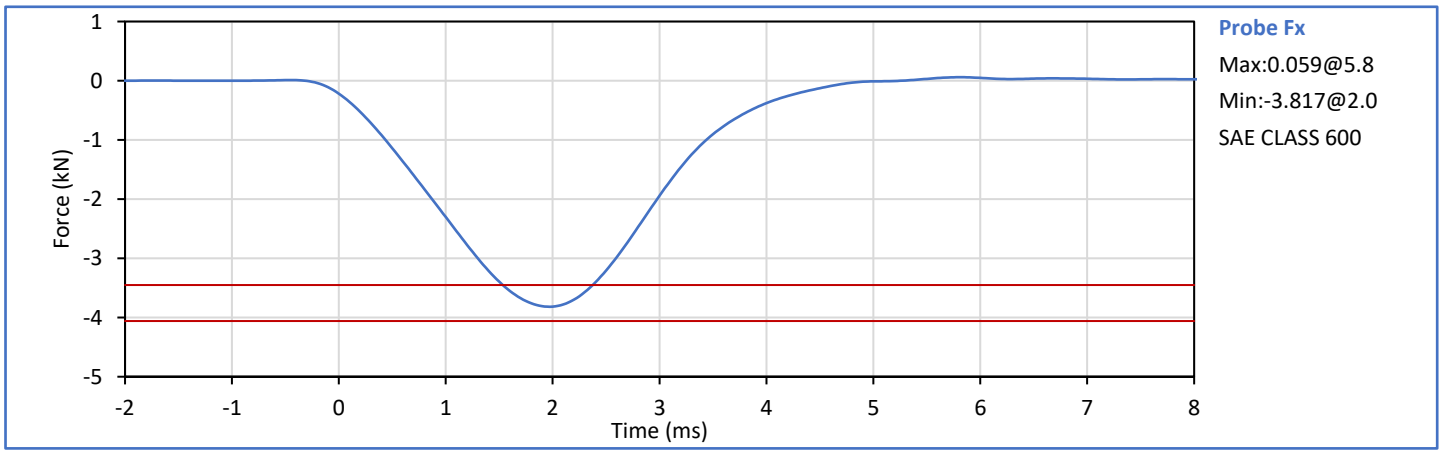
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Knee Impact (Left)

ATD Serial No.: DH1644

Test Date: 2025-06-16

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.2	Pass
Laboratory Relative Humidity	%	10	70	34	Pass
Probe Velocity	m/s	2.070	2.130	2.101	Pass
Peak Resistive Force	kN	-4.060	-3.450	-3.817	Pass
			Overall Test Results		Pass



Technician: J. Perez

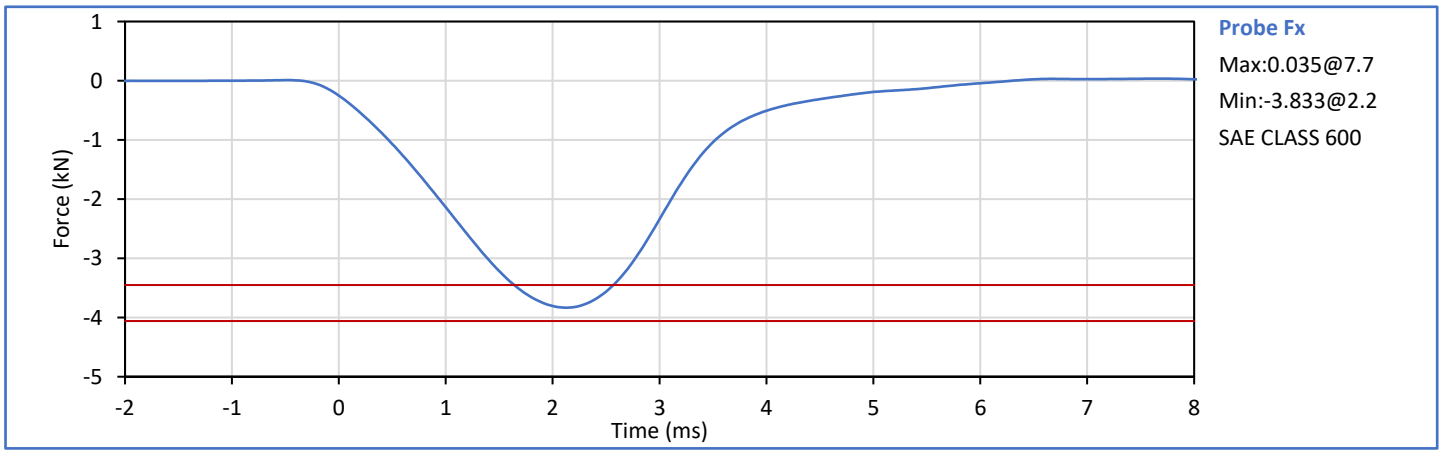
Approved By: J. Hernandez

Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Knee Impact (Right)

ATD Serial No.: DH1644 Test Date: 2025-06-16

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.2	Pass
Laboratory Relative Humidity	%	10	70	33	Pass
Probe Velocity	m/s	2.070	2.130	2.103	Pass
Peak Resistive Force	kN	-4.060	-3.450	-3.833	Pass
			Overall Test Results		Pass



Technician: J. Perez

Approved By: J. Hernandez

APPENDIX D
TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION

H3-50M ATD S/N: 360

Table 1 - Driver ATD Instrumentation

Sensor Location	Sensor S\N	Mfr	Model	Cal Date
Head Acceleration X Primary	P49209	Endevco	7264C-2k	2025-05-29
Head Acceleration Y Primary	P49228	Endevco	7264C-2k	2025-05-29
Head Acceleration Z Primary	P50101	Endevco	7264C-2k	2025-05-29
Head Acceleration X Redundant	P50103	Endevco	7264C-2k	2025-05-29
Head Acceleration Y Redundant	P49210	Endevco	7264C-2k	2025-05-29
Head Acceleration Z Redundant	P58713	Endevco	7264C-2k	2025-05-29
Head Rotation Rate X	ARS7426	DTS	ARS PRO-8k (2kHz)	2024-07-26
Head Rotation Rate Y	ARS7587	DTS	ARS PRO-8k (2kHz)	2024-07-31
Head Rotation Rate Z	ARS7480	DTS	ARS PRO-8k (2kHz)	2024-07-31
Upper Neck Force X	1646 Fx	R.A. Denton	1716A	2024-09-20
Upper Neck Force Y	1646 Fy	R.A. Denton	1716A	2024-09-20
Upper Neck Force Z	1646 Fz	R.A. Denton	1716A	2024-09-20
Upper Neck Moment X	1646 Mx	R.A. Denton	1716A	2024-09-20
Upper Neck Moment Y	1646 My	R.A. Denton	1716A	2024-09-20
Upper Neck Moment Z	1646 Mz	R.A. Denton	1716A	2024-09-20
Chest Acceleration X Primary	P52072	Endevco	7264C-2k	2025-05-28
Chest Acceleration Y Primary	P49208	Endevco	7264C-2k	2025-05-28
Chest Acceleration Z Primary	P51264	Endevco	7264C-2k	2025-05-28
Chest Acceleration X Redundant	P49461	Endevco	7264C-2k	2025-05-28
Chest Acceleration Y Redundant	P58774	Endevco	7264C-2k	2025-05-28
Chest Acceleration Z Redundant	P49168	Endevco	7264C-2k	2025-05-28
Chest Deflection	0606 (H3)	Servo	14CBI-3615	2025-05-31
Pelvis Acceleration X	P49238	Endevco	7264C-2k	2025-05-28
Pelvis Acceleration Y	P51278	Endevco	7264C-2KTZ	2025-05-28
Pelvis Acceleration Z	P50087	Endevco	7264C-2k	2025-05-28
Left Femur Force Z	DT0999 (pri)	Humanetics	3821JLN2	2024-07-25
Right Femur Force Z	DS4141 (pri)	Humanetics	3821JLN2	2024-07-25
Left Femur Force Z Redundant	DT0999 (red)	Humanetics	3821JLN2	2024-07-25
Right Femur Force Z Redundant	DS4141 (red)	Humanetics	3821JLN2	2024-07-25
Left Upper Tibia Moment X	481 Mx	R.A. Denton	3643	2025-01-30
Left Upper Tibia Moment Y	481 My	R.A. Denton	3643	2025-01-30
Left Upper Tibia Force Z	481 Fz	R.A. Denton	3643	2025-01-30
Left Lower Tibia Moment X	DI4209 Mx	FTSS	IF-853	2025-02-04
Left Lower Tibia Moment Y	DI4209 My	FTSS	IF-853	2025-02-04
Left Lower Tibia Force Z	DI4209 Fz	FTSS	IF-853	2025-02-04
Right Upper Tibia Moment X	482 Mx	R.A. Denton	3643	2024-09-20
Right Upper Tibia Moment Y	482 My	R.A. Denton	3643	2024-09-20
Right Upper Tibia Force Z	482 Fz	R.A. Denton	3643	2024-09-20
Right Lower Tibia Moment X	503 Mx	R.A. Denton	3644	2024-09-20
Right Lower Tibia Moment Y	503 My	R.A. Denton	3644	2024-09-20
Right Lower Tibia Force Z	503 Fz	R.A. Denton	3644	2024-09-20
Left Ankle Acceleration X	03E20-N09	Entran	EGEB6Q-2k	2025-05-30
Left Ankle Acceleration Z	P68074	Endevco	7264C-2k	2025-05-30
Left Toe Acceleration Z	0IJ02-F22	Entran	EGEB6Q-2k	2025-06-09
Right Ankle Acceleration X	06E20-R08	Entran	EGEB6Q-2k	2025-05-30
Right Ankle Acceleration Z	06A07-R08	Entran	EGEB6Q-2k	2025-05-30
Right Toe Acceleration Z	02I10-N27	Entran	EGEB6Q-2k	2025-05-30
Seat Belt Outside Lap Force	263	FTSS	IF-964	2025-04-03
Seat Belt Upper Diagonal Force	251	FTSS	IF-964	2025-04-03

Table 2 - Right Front Passenger ATD Instrumentation

Sensor Location	Sensor S\N	Mfr	Model	Cal Date
Head Acceleration X Primary	P51889	Endevco	7264C-2k	2025-04-03
Head Acceleration Y Primary	P51861	Endevco	7264C-2k	2025-04-03
Head Acceleration Z Primary	P52077	Endevco	7264C-2k	2025-04-03
Head Acceleration X Redundant	P58835	Endevco	7264C-2k	2025-04-03
Head Acceleration Y Redundant	P51703	Endevco	7264C-2k	2025-04-03
Head Acceleration Z Redundant	P52096	Endevco	7264C-2k	2025-04-03
Head Rotation Rate X	ARS7510	DTS	ARS PRO-8k (2kHz)	2024-07-31
Head Rotation Rate Y	ARS7548	DTS	ARS PRO-8k (2kHz)	2024-07-31
Head Rotation Rate Z	ARS7573	DTS	ARS PRO-8k (2kHz)	2024-07-31
Upper Neck Force X	2254 Fx	R.A. Denton	1716ATF	2025-01-23
Upper Neck Force Y	2254 Fy	R.A. Denton	1716ATF	2025-01-23
Upper Neck Force Z	2254 Fz	R.A. Denton	1716ATF	2025-01-23
Upper Neck Moment X	2254 Mx	R.A. Denton	1716ATF	2025-01-23
Upper Neck Moment Y	2254 My	R.A. Denton	1716ATF	2025-01-23
Upper Neck Moment Z	2254 Mz	R.A. Denton	1716ATF	2025-01-23
Chest Acceleration X Primary	P58860	Endevco	7264C-2k	2025-04-02
Chest Acceleration Y Primary	P51724	Endevco	7264C-2k	2025-04-02
Chest Acceleration Z Primary	P58711	Endevco	7264C-2k	2025-04-02
Chest Acceleration X Redundant	P52049	Endevco	7264C-2k	2025-04-02
Chest Acceleration Y Redundant	P49241	Endevco	7264C-2k	2025-04-02
Chest Acceleration Z Redundant	P52048	Endevco	7264C-2k	2025-04-02
Chest Deflection	0724 (HF)	Servo	14CBI-3615	2025-05-23
Pelvis Acceleration X	P52090	Endevco	7264C-2k	2025-04-02
Pelvis Acceleration Y	P58849	Endevco	7264C-2k	2025-04-02
Pelvis Acceleration Z	P58756	Endevco	7264C-2k	2025-04-02
Left Femur Force Z	DS4137 (pri)	Humanetics	3821JLN2	2025-01-23
Right Femur Force Z	DS9756 (pri)	Humanetics	3821JLN2	2025-01-23
Left Femur Force Z Redundant	DS4137 (red)	Humanetics	3821JLN2	2025-01-23
Right Femur Force Z Redundant	DS9756 (red)	Humanetics	3821JLN2	2025-01-23
Left Upper Tibia Moment X	468 Mx	R.A. Denton	3643	2025-05-15
Left Upper Tibia Moment Y	468 My	R.A. Denton	3643	2025-05-25
Left Upper Tibia Force Z	468 Fz	R.A. Denton	3643	2025-05-15
Left Lower Tibia Moment X	499 Mx	R.A. Denton	3644	2025-05-15
Left Lower Tibia Moment Y	499 My	R.A. Denton	3644	2025-05-15
Left Lower Tibia Force Z	499 Fz	R.A. Denton	3644	2025-05-15
Right Upper Tibia Moment X	DH3302 Mx	FTSS	IF-857	2025-05-15
Right Upper Tibia Moment Y	DH3302 My	FTSS	IF-857	2025-05-15
Right Upper Tibia Force Z	DH3302 Fz	FTSS	IF-857	2025-05-15
Right Lower Tibia Moment X	399 Mx	R.A. Denton	3644	2025-05-15
Right Lower Tibia Moment Y	399 My	R.A. Denton	3644	2025-05-15
Right Lower Tibia Force Z	399 Fz	R.A. Denton	3644	2025-05-15
Left Ankle Acceleration X	P49224	Endevco	7264C-2k	2025-05-06
Left Ankle Acceleration Z	P52057	Endevco	7264C-2k	2025-05-06
Left Toe Acceleration Z	P58897	Endevco	7264C-2k	2025-05-06
Right Ankle Acceleration X	P52019	Endevco	7264C-2k	2025-05-06
Right Ankle Acceleration Z	P58755	Endevco	7264C-2k	2025-05-06
Right Toe Acceleration Z	P52076	Endevco	7264C-2k	2025-05-06
Seat Belt Outside Lap Force	315	FTSS	IF-964	2025-04-03
Seat Belt Upper Diagonal Force	313	FTSS	IF-964	2025-04-03

Table 3 - Vehicle Instrumentation

Sensor Location	Sensor S\N	Mfr	Model	Cal Date
Left Rear Primary Ax	M13962	Endevco	758H-2k	2025-05-31
Right Rear Primary Ax	M14002	Endevco	7264HM6-2k-360	2025-05-30
Engine Top Ax	M11229	Endevco	758H-2k	2025-05-23
Engine Bottom Ax	M14044	Endevco	758HM6-2k	2025-05-23
Left Rear Az	A359354	MSI	52F-2k	2025-05-31
Right Rear Az	M13998	Endevco	7264HM6-2k-360	2025-05-30
Left Rear Redundant Ax	M13992	Endevco	758H-2k	2025-05-30
Right Rear Redundant Ax	M13991	Endevco	758H-2k	2025-05-29