Report Number: NCAP-KAR-25-002

NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST

GENERAL MOTORS LLC
2025 CADILLAC CT5 WITH V6 4-DOOR SEDAN

NHTSA NUMBER: M20250101

PREPARED BY:
APPLUS+ IDIADA KARCO ENGINEERING, LLC.
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APRIL 18, 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: April 18, 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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	11. Contract or Grant No. 693JJ919D000004
12. Sponsoring Agency Name and Address U. S. Department of Transportation National Highway Traffic Safety Administration Office of Crashworthiness Standards (NRM-100) 1200 New Jersey Ave., SE Washington, D.C. 20590	**13. Type of Report and Period Covered** Final Test Report, April 4 - April 18, 2025
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15. Supplementary Notes

16. Abstract

A 56.3 km/h NCAP Frontal Impact Test was conducted on a 2025 Cadillac CT5 with V6 4-Door Sedan 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 April 4, 2025.

The impact velocity of the vehicle was 56.21 km/h and the ambient temperature at the barrier face at the time of impact was 18.3°C. The target vehicle's post-test maximum crush was 407 mm at DPD 3 to the left 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	160.922	700	463.418
Maximum Chest Compression	mm	63	26.350	52	19.365
Nij	N/A	1	0.247	1	0.303
Neck Tension	N	4170	1221.408	2620	768.675
Neck Compression	N	4000	305.191	2520	417.503
Left Femur Force	N	10008	1398.446	6805	718.286
Right Femur Force	N	10008	2061.345	6805	1595.680

17. Key Words	18. Distribution Statement
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

19. Security Classification of this report	20. Security Classification of this page	21. No. of Pages	22. Price
UNCLASSIFIED	UNCLASSIFIED	148	

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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 load cell barrier consisting of 176 load cells was impacted by a 2025 Cadillac CT5 with V6 4-Door Sedan at a velocity of 56.21 km/h. The test was performed at Applus+ IDIADA KARCO Engineering, LLC. on April 4, 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 lap and shoulder belts to measure dummy torso and pelvic 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 106 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 Stoddard solvent leakage after the event or during any phase of the static rollover.

The maximum static crush of the test vehicle was 407 mm at DPD 3 to the left 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. Both left and right knees contacted the knee 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. Both left and right knees contacted the knee 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)	160.922	0.247	1221.408	305.191	41.195	26.350	1398.446	2061.345
Passenger (5th Female)	463.418	0.303	768.675	417.503	50.786	19.365	718.286	1595.680

GENERAL COMMENTS:

None.

SECTION 2

OCCUPANT AND VEHICLE INFORMATION / DATA SHEETS

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

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 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA Number	M20250101
Model Year	2025
Make	Cadillac
Model	CT5 with V6
Body Style	4-Door Sedan
VIN	1G6DS5RW2S0114152
Body Color	Black Raven
Odometer Reading (km / mi)	66/41
Engine Displacement (L)	3.0
Type / No. of Cylinders	Twin Turbo V6
Engine Placement	Longitudinal
Transmission Type	Automatic
Transmission Speeds	6
Overdrive	Yes
Final Drive	AWD
Roof Rack	No
Sunroof / T-Top	Yes
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	None

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

DATA FROM CERTIFICATION LABEL

Manufactured By	General Motors LLC
Date of Manufacture	Dec-24

GVWR (kg)	2300
GAWR Front (kg)	1130
GAWR Rear (kg)	1170

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)				396.0	*A*
DSC x 68.0 (kg)				340.0	*B*
Cargo Weight (RCLW) (kg)				56.0	*A-B*

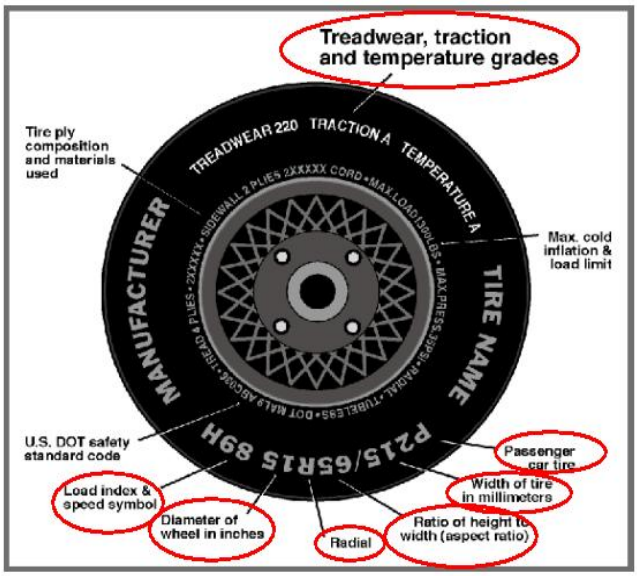
*For trucks, MPVs, or buses – if the RCLW calculated above is greater than 136 kg, use 136 kg as the RCLW.

DATA SHEET NO. 1 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025



VEHICLE TIRE INFORMATION

Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	300	300
Cold Pressure (kPa)	210	230
Recommended Tire Size	245/45 R18	245/45 R18
Tire Size on Vehicle	245/45 R18	245/45 R18
Tire Manufacturer	Michelin	Michelin
Tire Model	Primacy Tour	Primacy Tour
Treadwear	540	540
Traction	A	A
Temperature Grades	A	A
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		
Tire Material	Rubber	Rubber
DOT Safety Code Left	B7 04DX 4024	B7 04DX 4024
DOT Safety Code Right	B7 04DX 4024	B7 04DX 4024

DATA SHEET NO. 1 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	524.0	419.0		558.0	487.0	
Right	kg	496.0	425.5		498.5	513.0	
Ratio	%	54.7%	45.3%	100.0%	51.4%	48.6%	100.0%
Total	kg	1020.0	844.5	1864.5	1056.5	1000.0	2056.5

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total Delivered Weight (UVW)	kg	1864.5	A
Weight of 1 P572E ATD & 1 P572O ATD	kg	141.0	B
Rated Cargo/Luggage Weight (RCLW)	kg	56.0	C
Calculated Vehicle Target Weight (TVTW)	kg	2061.5	A+B+C

TEST VEHICLE ATTITUDES

Condition	Units	LF	RF	LR	RR	CG Aft of Front Axle
As Delivered	mm	729	732	733	733	1334
As Tested	mm	721	730	716	716	1432
Post-Test	mm	805	789	735	719	

GENERAL TEST VEHICLE DATA

Measurement Description	Units	Value
Total Vehicle Wheelbase	mm	2946
Total Vehicle Length at Left Side	mm	4724
Total Vehicle Length at Centerline	mm	4931
Total Vehicle Length at Right Side	mm	4725
Weight of Ballast in Cargo Area	kg	0.0
Weight of Vehicle Components Removed	kg	3.0
Amount of Stoddard Solvent in Fuel Tank	L	61.26

VEHICLE COMPONENTS REMOVED TO MEET TEST WEIGHT:

Rear trim (3.0 kg).

DATA SHEET NO. 1 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

TARGET VEHICLE STRUCTURAL MEASUREMENTS

No.	Description	Pre-Test
1	Total Length	4931
2	Total Width	1897
3	Bumper Top Height	507
4	Bumper Bottom Height	414
5	Longitudinal Member Top Height	523
6	Distance Between Longitudinal Members	884
7	Longitudinal Member Width	45
8	Engine Top Height	934
9	Engine Bottom Height	685
10	Engine and Gearbox Width	692
11	Front Bumper to Engine Distance	705
12	Front Shock Absorber Fixing Height	888
13	Bonnet Leading Edge Height	622
14	Front Shock Absorber Fixing Width	90
15	Front Bumper to Front Axle Distance	888
16	Front Axle to A-Pillar Distance	698
17	A-Pillar to B-Pillar Distance	893
18	B-Pillar to Rear Axle Distance	1355
19	B-Pillar to C-Pillar Distance	865
20	Roof Sill Bottom Height	1406
21	Roof Sill Top Height	1439
22	Floor Sill Bottom Height	278
23	Floor Sill Top Height	391

*All measurements in millimeters.

DATA SHEET NO. 2

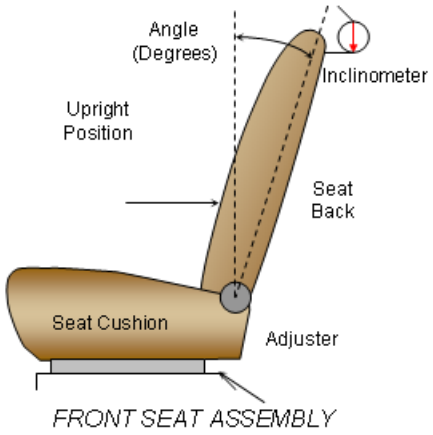
SEAT ADJUSTMENT, FUEL SYSTEM, AND STEERING WHEEL DATA

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

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 seatback with a straight edge.

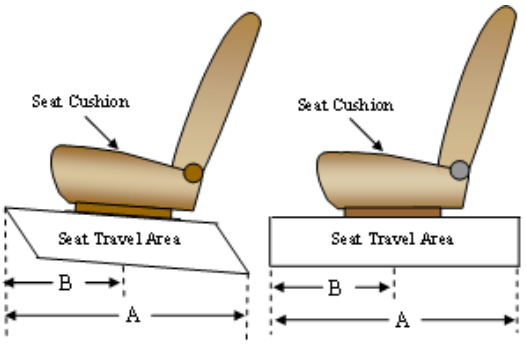


SEAT BACK ANGLE

Seating Position	Degrees
Driver Seat Back Angle	6.4
Passenger Seat Back Angle	13.4

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	300	150
Passenger Seat	300	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)

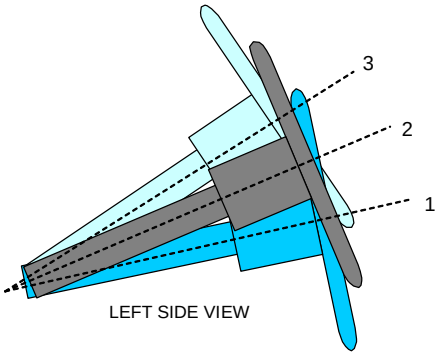
SEAT ADJUSTMENT, FUEL SYSTEM, AND STEERING WHEEL DATA

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

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.



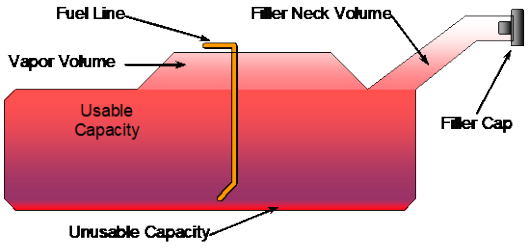
STEERING COLUMN ASSEMBLY

STEERING COLUMN POSITIONING

	Degrees	Fore-Aft Position (mm)
Lowermost Position, No. 1	16.8	0
Geometric Center Position, No. 2	18.8	19.0
Uppermost Position, No. 3	20.8	38
Telescoping Steering Wheel Travel		38
Test Position	18.8	19.0

FUEL PUMP

The vehicle is equipped with an electric fuel pump. The pump will work at “ignition on” until pressure in the system has reached working pressure in the system; then it will stop pumping fuel until the engine has been started.



VEHICLE FUEL TANK ASSEMBLY

FUEL TANK CAPACITY

Description	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	65.87
Usable Capacity of "Optional Tank" (see Form No. 1)	
Usable Capacity of "Standard Tank" (see Owner's Manual)	65.87
Usable Capacity of "Optional Tank" (see Owner's Manual)	
93% of Usable Capacity	61.26
Actual Amount of Solvent Used in Test	61.26
1/3 of Usable Capacity	21.96

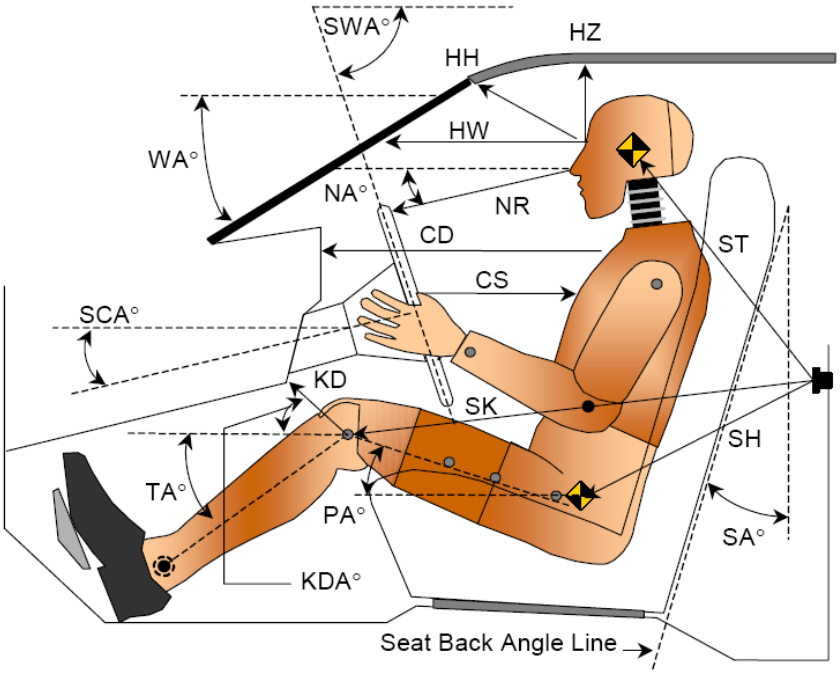
Is the Actual Amount of Solvent Used in the test equal to 93% ± 1% of the Usable Capacity stated in the Form No. 1? ☒ **Yes** ☐ **No**

DATA SHEET NO. 3

DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025



LEFT SIDE VIEW

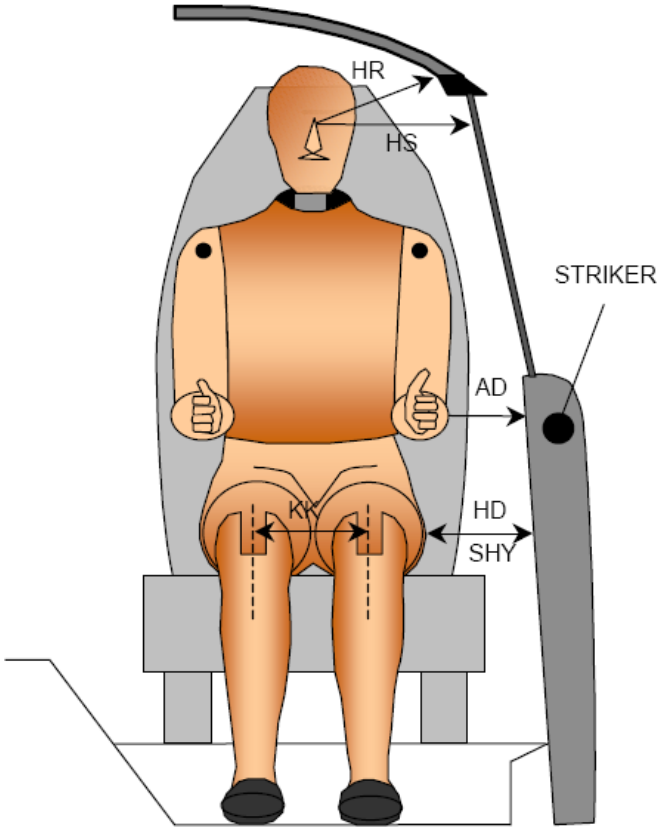
Code	Measurement Description	Driver		Passenger	
		Length (mm)	Angle (°)	Length (mm)	Angle (°)
WA°	Windshield Angle		24.4		
SWA°	Steering Wheel Angle		67.8		
SCA°	Steering Column Angle		22.2		
SA°	Seat Back Angle (On Headrest Post)		6.4		13.4
HZ	Head to Roof	192	90.0	215	90.0
HH	Head to Header	375	25.5	342	26.0
HW	Head to Windshield	582	0.0	600	0.0
NR	Nose to Rim	393	22.5	501	32.2
CD	Chest to Dash	573	16.8	432	10.3
CS	Chest to Steering Hub	296	0.0		
RA	Rim to Abdomen	224	0.0		
KDL	Left Knee to Dash	230	22.8	130	24.0
KDR	Right Knee to Dash	189	15.6	136	30.0
PA°	Pelvic Angle		24.6		20.5
TA°	Tibia Angle		29.2		51.9
SK	Striker to Knee	618	12.5	665	4.2
ST	Striker to Head	556	78.8	542	75.7
SH	Striker to H-Point	303	49.3	355	26.7

DATA SHEET NO. 4

DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025



Code	Description	Driver (mm)	Passenger (mm)
AD	Arm to Door	105	98
HD	H-Point to Door	163	181
HR	Head to Side Header	233	255
HS	Head to Side Window	365	415
KK	Knee to Knee	300	170
AA	Ankle to Ankle	320	175

DATA SHEET NO. 5

SEAT BELT POSITIONING DATA

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

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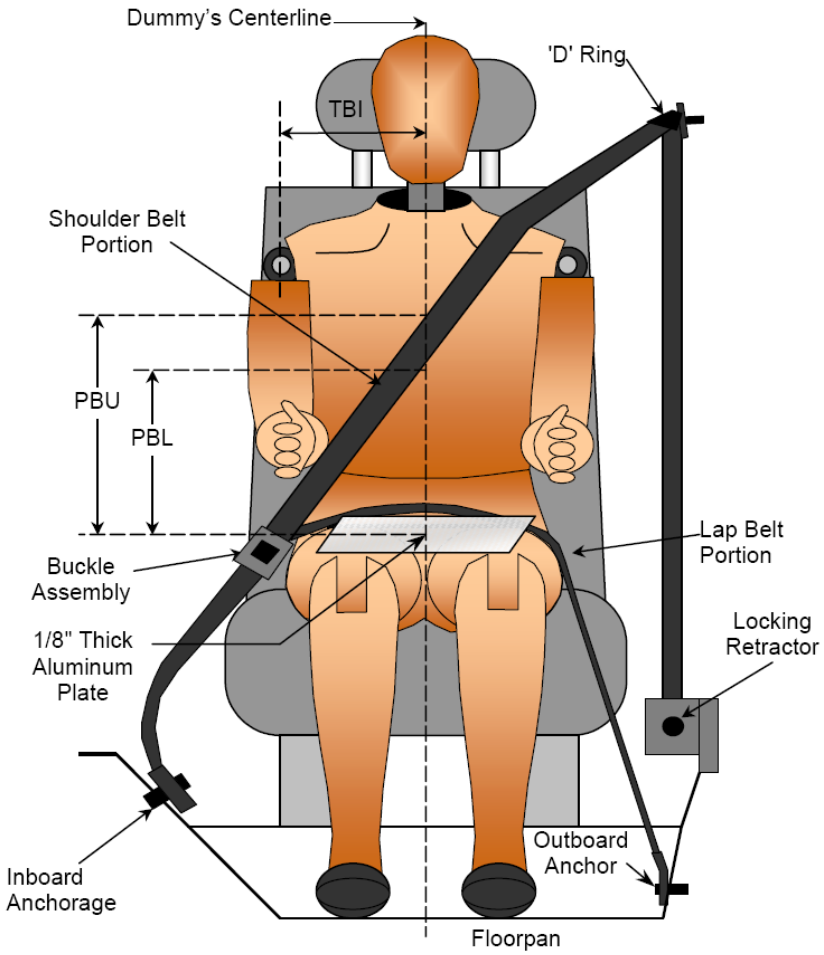


FRONT VIEW OF DUMMY

SEAT BELT POSITIONING MEASUREMENTS

Code	Measurement Description	Units	Driver	Passenger
PBU	Top Surface of Aluminum Plate to Belt Upper Edge	mm	300	285
PBL	Top Surface of Aluminum Plate to Belt Lower Edge	mm	225	200

BELT LENGTH DATA

Measurement Description	Units	Driver	Passenger
Shoulder Belt Length as Measured on ATD	mm	815	850
Lap Belt Length as Measured on ATD	mm	595	650
Remainder of Belt on Reel	mm	790	830
Total Belt Length for Continuous Webbing Systems	mm	2200	2330

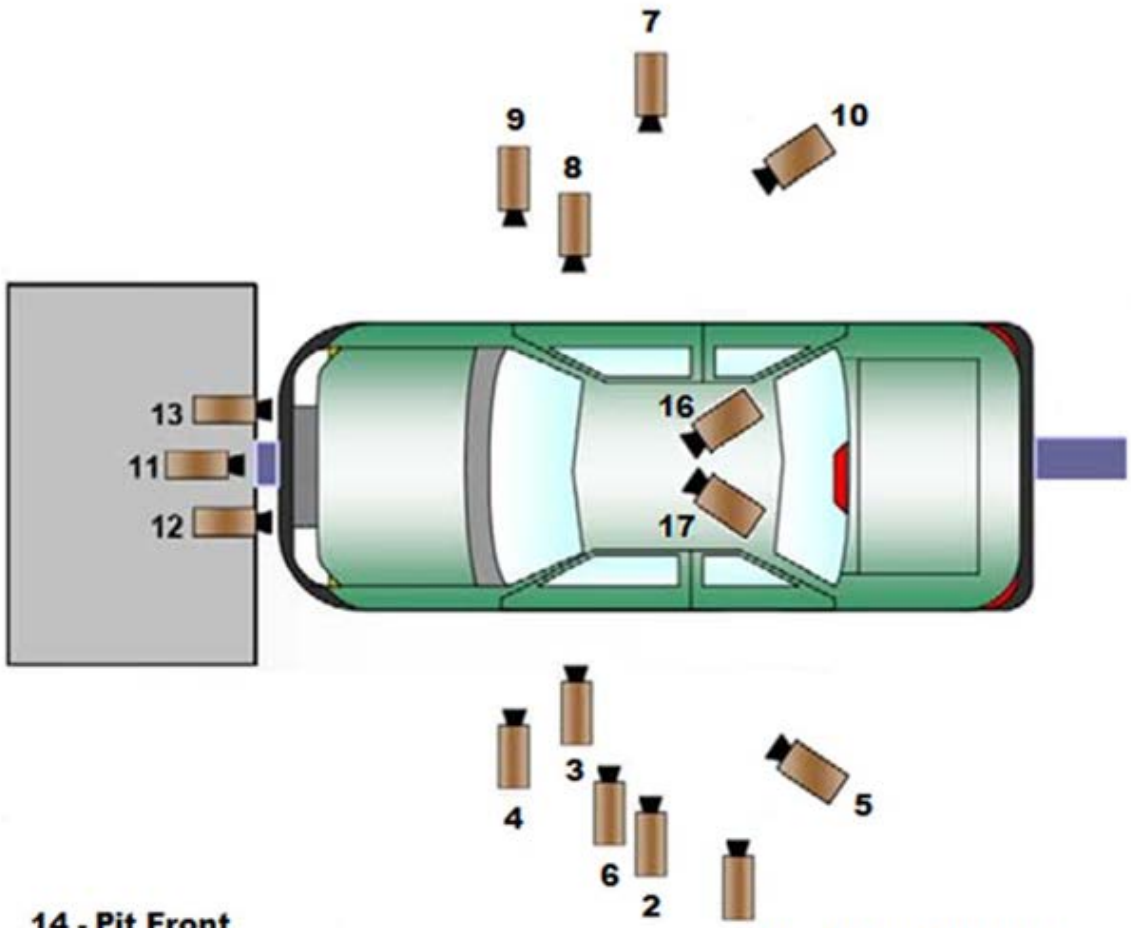
DATA SHEET NO. 6

HIGH-SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

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 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

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

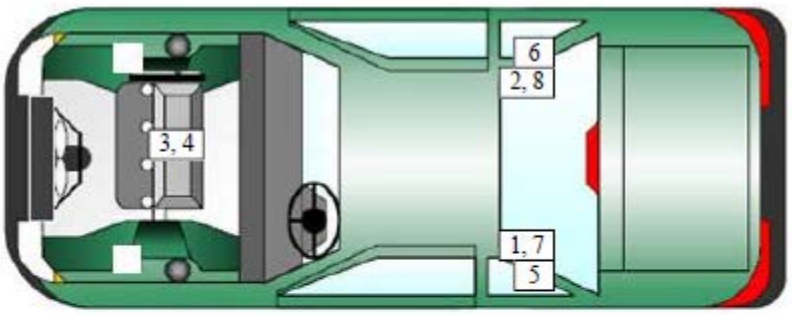
+Z = into ground

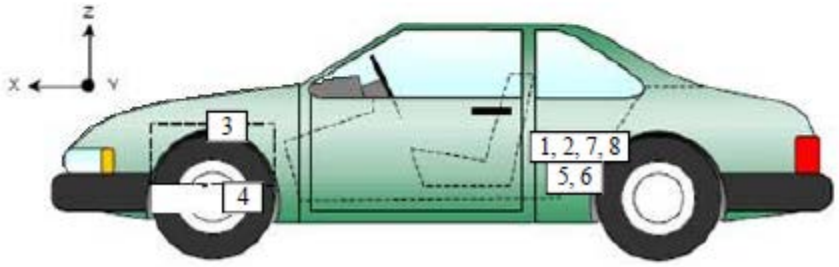
DATA SHEET NO. 7

VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025





VEHICLE ACCELEROMETER PRE-TEST LOCATIONS

No.	Description	Location		
		X	Y	Z
1	Left Rear Accelerometer X-Direction	820	-645	410
2	Right Rear Accelerometer X-Direction	820	645	410
3	Engine Top X	1560	90	900
4	Engine Bottom X	1570	170	192
5	Left Rear Accelerometer Z-Direction	820	-645	410
6	Right Rear Accelerometer Z-Direction	820	645	410
7	Left Rear Accelerometer X-Direction Redundant	820	-645	410
8	Right Rear Accelerometer X-Direction Redundant	820	645	410

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

Y – Vehicle Centerline (+ to right)

Z – Ground Plane (+ down)

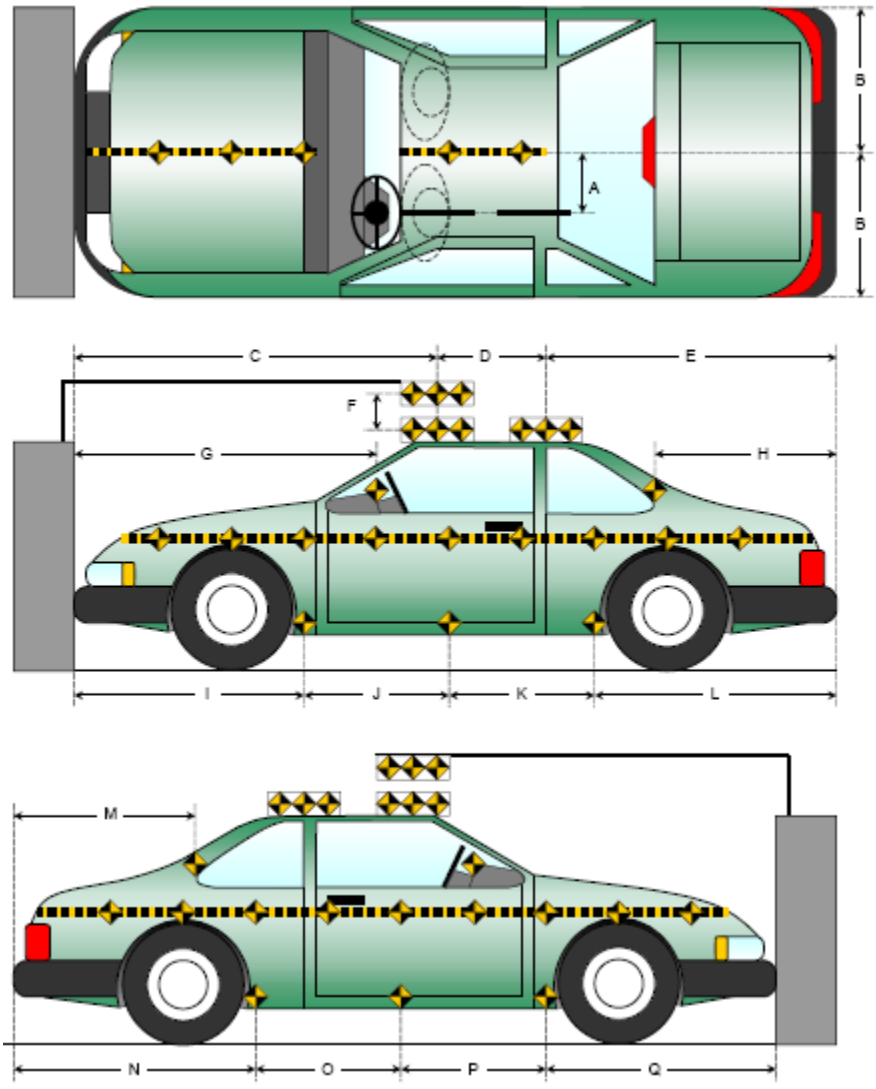
DATA SHEET NO. 8

PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

Item	Value
A	360
B	962
C	
D	
E	
F	
G	1935
H	565
I	1361
J	1037
K	1043
L	1490
M	565
N	1490
O	1043
P	1037
Q	1361



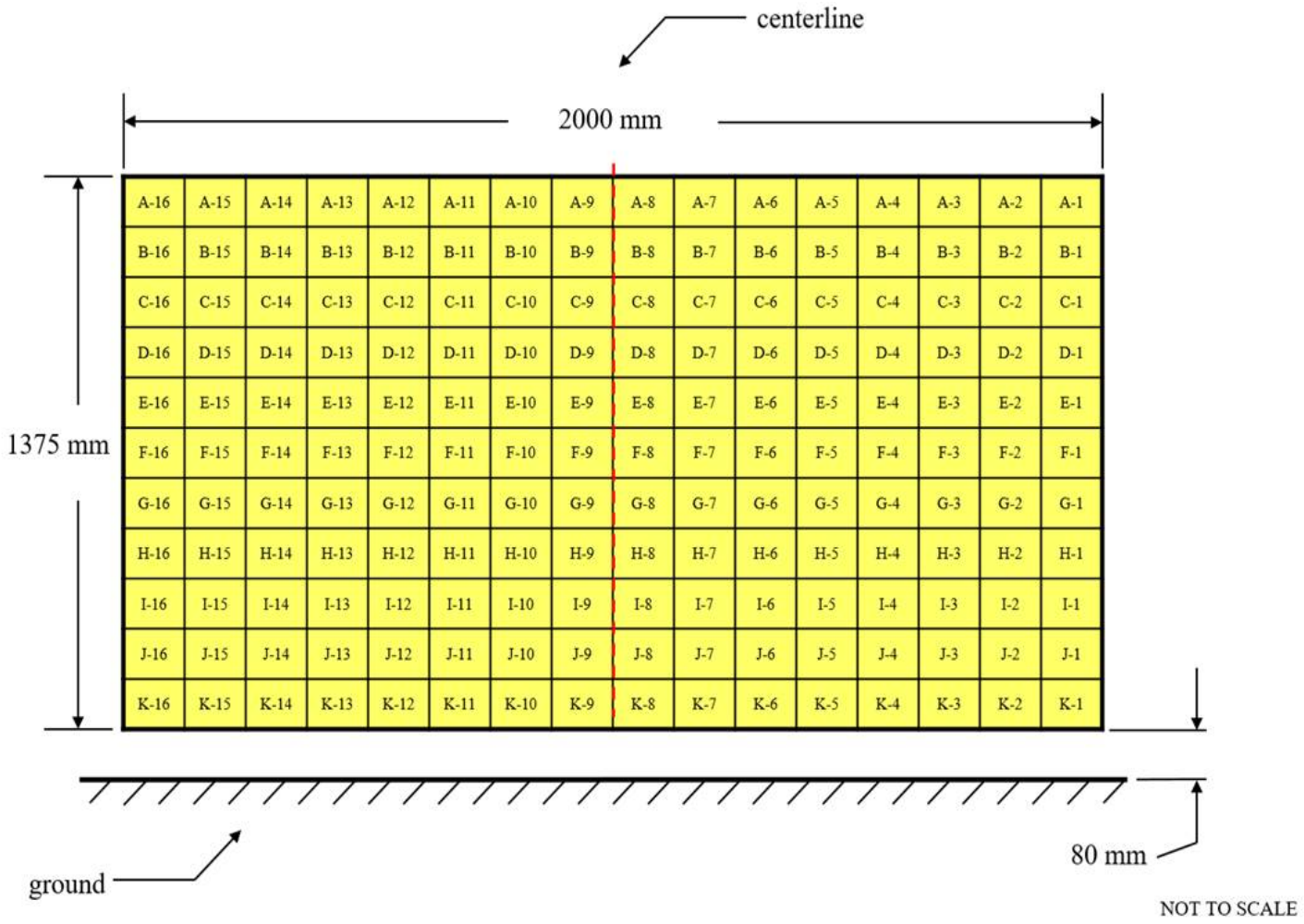
*All measurements in millimeters.

DATA SHEET NO. 9

LOAD CELL LOCATIONS ON FIXED BARRIER

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025



DATA SHEET NO. 10

TEST VEHICLE SUMMARY OF RESULTS

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

INSTRUMENTATION

Instrumentation	Number of Channels Collected
Driver Dummy Sensors	47
Passenger Dummy Sensors	47
Vehicle Structure Accelerometers	8
Seat Belt Load Cells	4
Load Cell Barrier	528
Total	634

CAMERA COVERAGE

Type of Camera	Number Used in this Test
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 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

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	Knee Air Bag	Knee Air Bag
Right Knee Contact	Knee Air Bag	Knee Air Bag

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	Slight crackage
Window Damage	None
Other Notable Effects	None

VEHICLE REBOUND FROM BARRIER

Measured Parameter	Units	Value
Left Side	mm	3405
Center	mm	2835
Right Side	mm	3400
Average	mm	3213

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

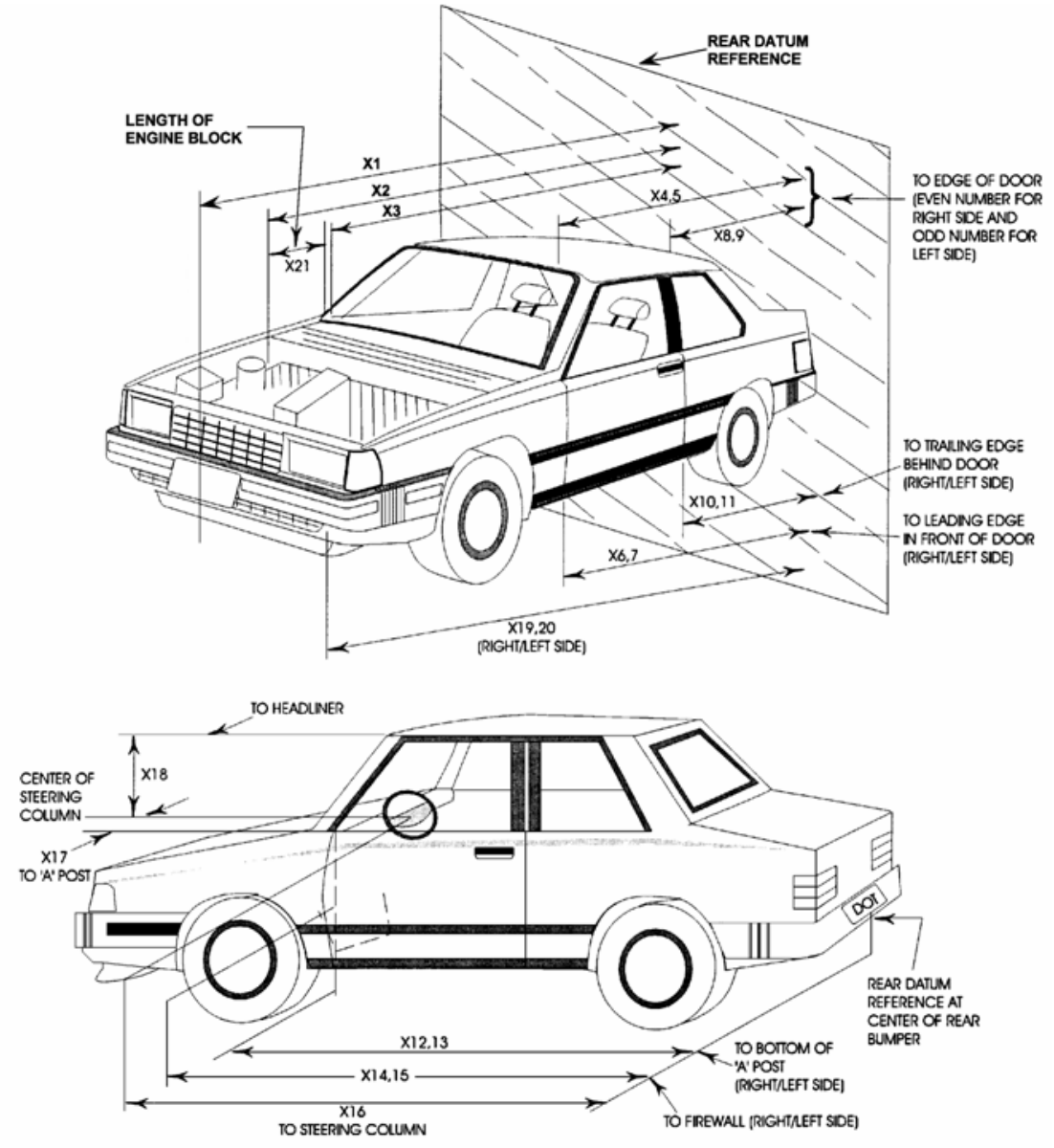
Restraint Type	Driver		Passenger	
	Installed	Operated	Installed	Operated
Front Air Bag	Yes	Yes	Yes	Yes
Side Air Bag 1 (Curtain)	Yes	Yes	Yes	Yes
Side Air Bag 2 (Torso/Pelvis)	Yes	No	Yes	No
Knee Air Bag	Yes	Yes	Yes	Yes
Seat Belt Pretensioner	Yes	Yes	Yes	Yes
Seat Belt Load Limiter	Yes	Yes	Yes	Yes

DATA SHEET NO. 12

VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025



DATA SHEET NO. 12 … (CONTINUED)

VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

No.	Description	Pre-Test	Post-Test	Change
1	Total Length of Vehicle at Centerline	4931	4529	-402
2	Rear Surface of Vehicle to Front of Engine	4113	4035	-78
3	RSOV to Firewall	3538	3534	-4
4	RSOV to Upper Leading Edge of Right Door	3415	3417	2
5	RSOV to Upper Leading Edge of Left Door	3414	3413	-1
6	RSOV to Lower Leading Edge of Right Door	3389	3390	1
7	RSOV to Lower Leading Edge of Left Door	3390	3381	-9
8	RSOV to Upper Trailing Edge of Right Door	2271	2273	2
9	RSOV to Upper Trailing Edge of Left Door	2271	2266	-5
10	RSOV to Lower Trailing Edge of Right Door	2278	2277	-1
11	RSOV to Lower Trailing Edge of Left Door	2279	2270	-9
12	RSOV to Bottom of A-Pillar, Right Side	3348	3346	-2
13	RSOV to Bottom of A-Pillar, Left Side	3347	3309	-38
14	RSOV to Firewall, Right Side	3538	3534	-4
15	RSOV to Firewall, Left Side	3538	3541	3
16	RSOV to Steering Column	2839	2931	92
17	Center of Steering Column to A-Pillar	405	378	-27
18	Center of Steering Column to Headliner	508	513	5
19	RSOV to Right Side of Front Bumper	4718	4420	-298
20	RSOV to Left Side of Front Bumper	4717	4420	-297
21	Length of Engine Block	406	323	-83
RD	RSOV to Right Side of Dash Panel	3042	3042	0
CD	RSOV to Center of Dash Panel	2997	2997	0
LD	RSOV to Left Side of Dash Panel	3042	3036	-6

*All measurements in millimeters.

DATA SHEET NO. 13

ACCIDENT INVESTIGATION DIVISION DATA

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

VEHICLE INFORMATION

VIN: 1G6DS5RW2S0114152 Wheelbase (mm): 2946

Vehicle Size Category: Sedan Test Weight (kg): 2056.5

ACCELEROMETER DATA

Accelerometer Locations: Left Rear Crossmember

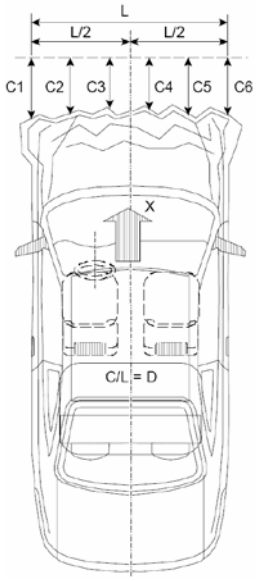
Cal. Procedure/Interval: Vibration Test / 6 months

Integration Algorithm: NHTSA Standard Linearity: Good

Impact Velocity (km/h): 56.21

Velocity Change (km/h): 65.00

Time of Separation (msec): 72.30



CRUSH PROFILE

Collision Deformation Classification: 12FDEW2

Midpoint of Damage: Vehicle Centerline

Damage Region Length (mm): 1272

Impact Mode: Full Frontal

No.	Measurement Description	Units	Pre-Test	Post-Test	Crush
C1	Crush Zone 1 at Left Side	mm	213	512	299
C2	Crush Zone 2 at Left Side	mm	75	477	402
C3	Crush Zone 3 at Left Side	mm	-3	404	407
C4	Crush Zone 4 at Right Side	mm	-4	390	393
C5	Crush Zone 5 at Right Side	mm	73	435	362
C6	Crush Zone 6 at Right Side	mm	212	512	300
L	C1 to C6	mm	1272		

DATA SHEET NO. 14

VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

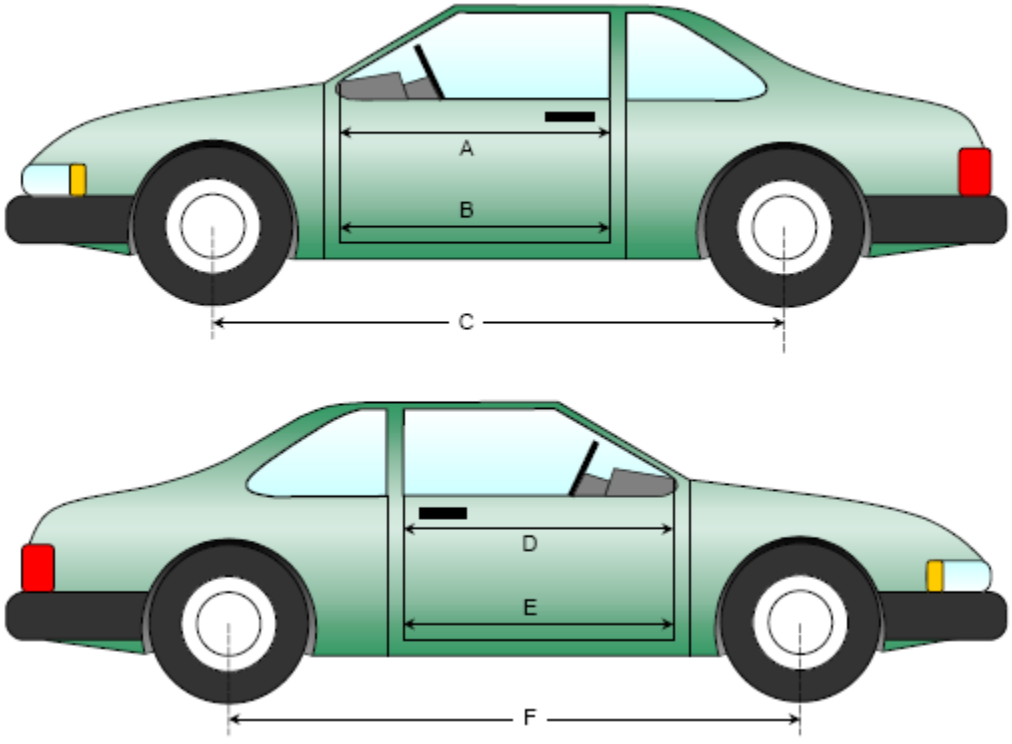
Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

DOOR OPENING WIDTH

Item	Description	Units	Pre-Test	Post-Test	Change
A	Left Side Upper	mm	1144	1146	3
B	Left Side Lower	mm	1111	1111	0
D	Right Side Upper	mm	1144	1144	0
E	Right Side Lower	mm	1111	1113	1

WHEELBASE MEASUREMENTS

Item	Description	Units	Pre-Test	Post-Test	Change
C	Left Side Wheelbase	mm	2946	2859	-87
F	Right Side Wheelbase	mm	2946	2846	-100



DATA SHEET NO. 14 … (CONTINUED)

VEHICLE INTRUSION MEASUREMENTS

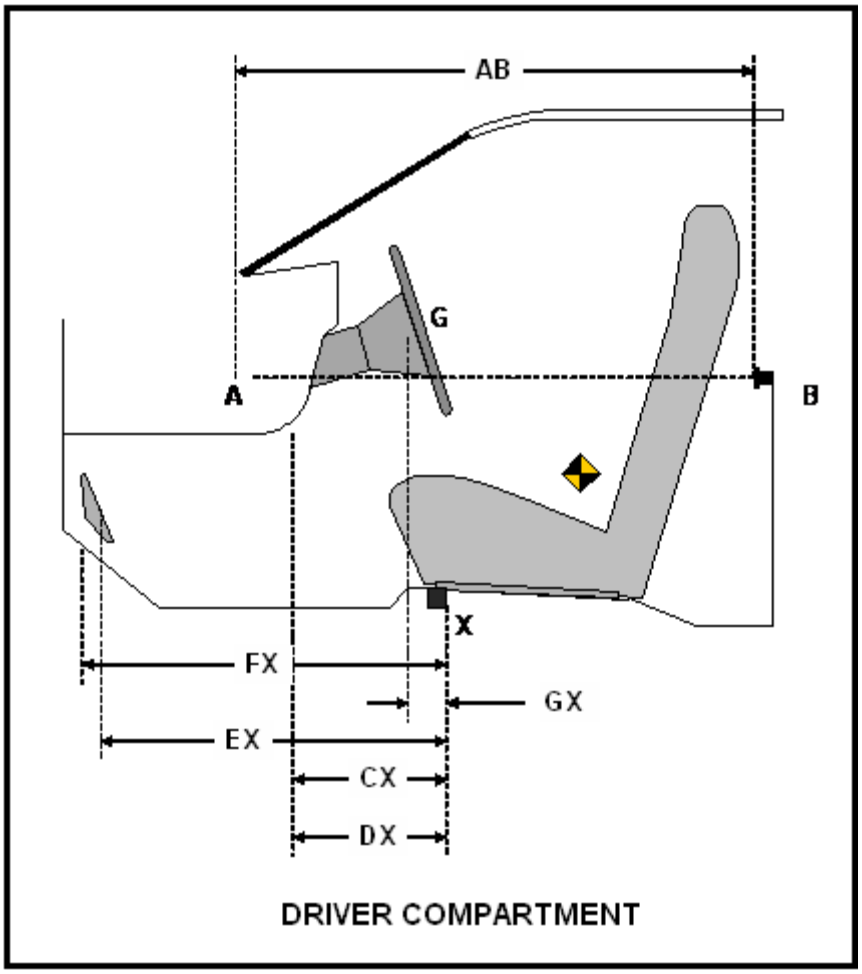
Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

DRIVER COMPARTMENT INTRUSION

Item	Description	Units	Pre-Test	Post-Test	Change
AB	Door Opening (Inside Window Jam)	mm	1032	1032	0
CX	Left Knee Bolster to X	mm	280	276	-4
DX	Right Knee Bolster to X	mm	281	277	-4
EX	Brake Pedal to X	mm	581	598	17
FX	Foot Rest to X	mm	650	639	-10
GX	Center of Steering Wheel Hub to X	mm	36	124	88

X = Front of Seat Track (Stationary)



DATA SHEET NO. 15

SUMMARY OF INDICANT FMVSS 212 AND 219 (PARTIAL) DATA

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

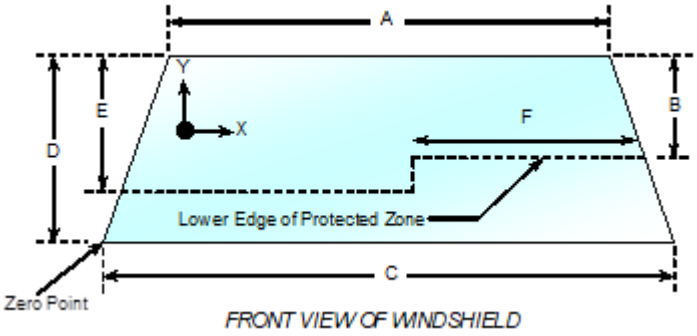
Windshield Mounting Details: Windshield glass is secured to the vehicle frame with an adhesive and rubber molding.

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: 18.3°C

WINDSHIELD PERIPHERY MEASUREMENTS

Measurement	Pre-Test (mm)	Post-Test (mm)	% Retention
Left Side	2150	2150	100.0%
Right Side	2150	2150	100.0%
Total	4300	4300	100.0%



FRONT VIEW OF WINDSHIELD

Item	Units	Value
A	mm	1210
B	mm	338
C	mm	1476
D	mm	807
E	mm	476
F	mm	543

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 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

Temperature at Time of Impact: 18.3.°C Test Time: 3:30 PM

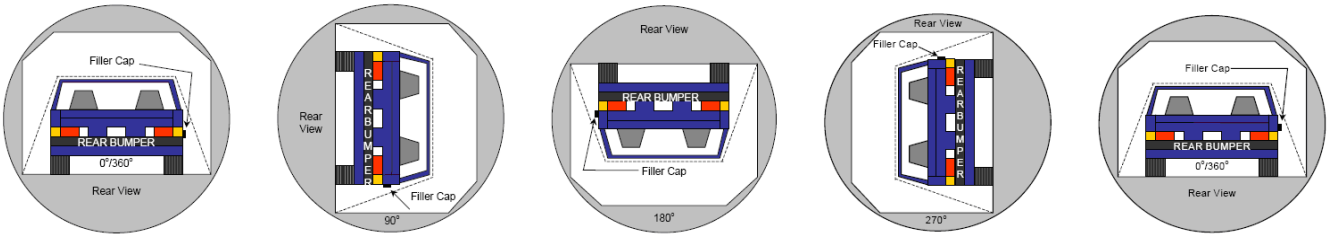
Stoddard Solvent Spillage Measurements

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

SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° To 90°	80	300	380
90° To 180°	80	300	380
180° To 270°	81	300	381
270° To 360°	81	300	381

DATA SHEET NO. 16 … (CONTINUED)

FMVSS 301 BARRIER IMPACT AND STATIC ROLLOVER RESULTS

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025

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

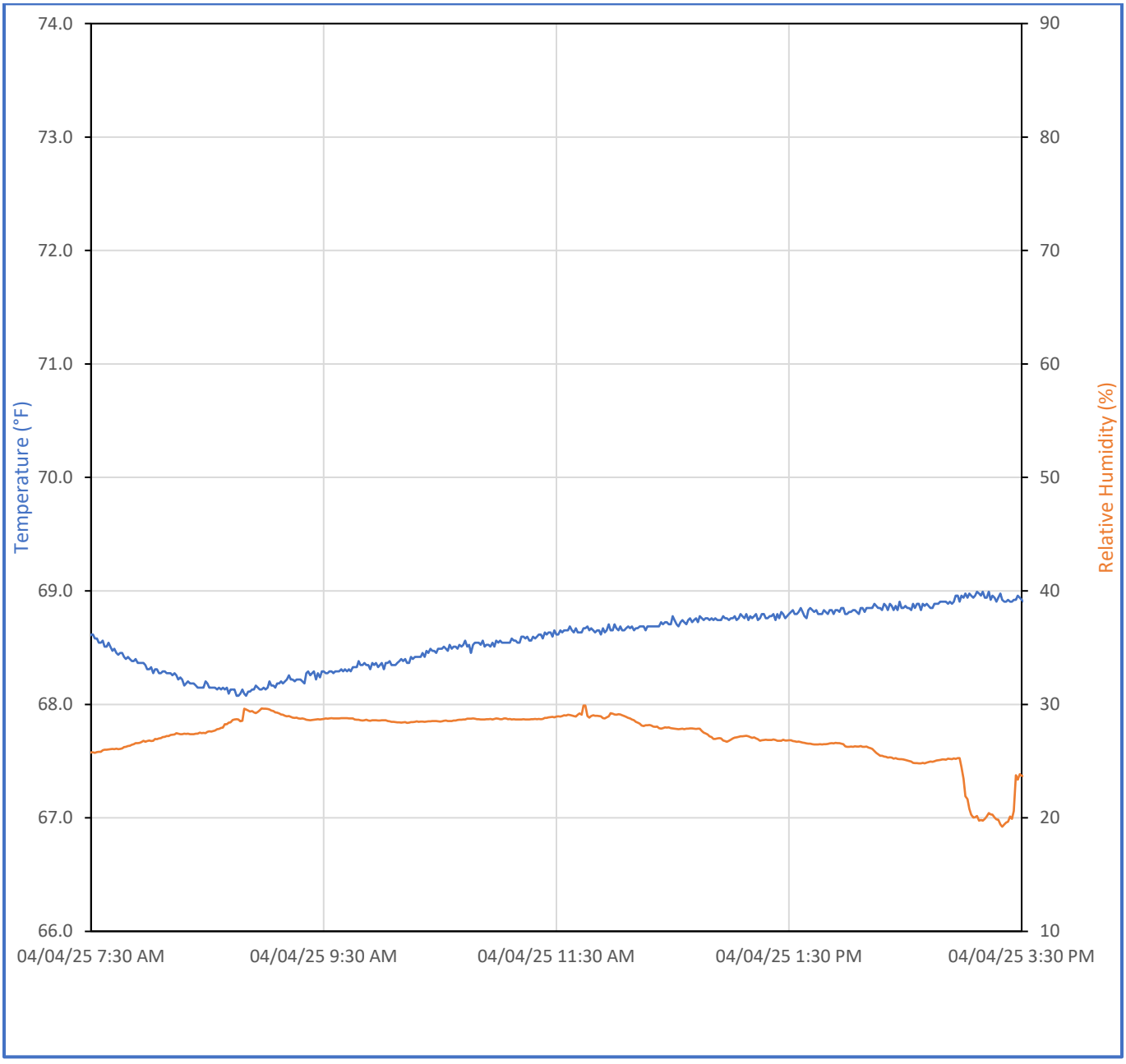
Test Phase	Spillage Location
0° To 90°	
90° To 180°	
180° To 270°	
270° To 360°	

DATA SHEET NO. 17

DUMMY / VEHICLE TEMPERATURE STABILIZATION CHART

Test Vehicle: 2025 Cadillac CT5 with V6 4-Door Sedan NHTSA No.: M20250101

Test Program: 56.3 km/h Frontal Impact NCAP Test Test Date: 04/04/2025



APPENDIX A

PHOTOGRAPHIC DOCUMENTATION

TABLE OF PHOTOGRAPHS

TABLE OF PHOTOGRAPHS … (CONTINUED)

TABLE OF PHOTOGRAPHS … (CONTINUED)

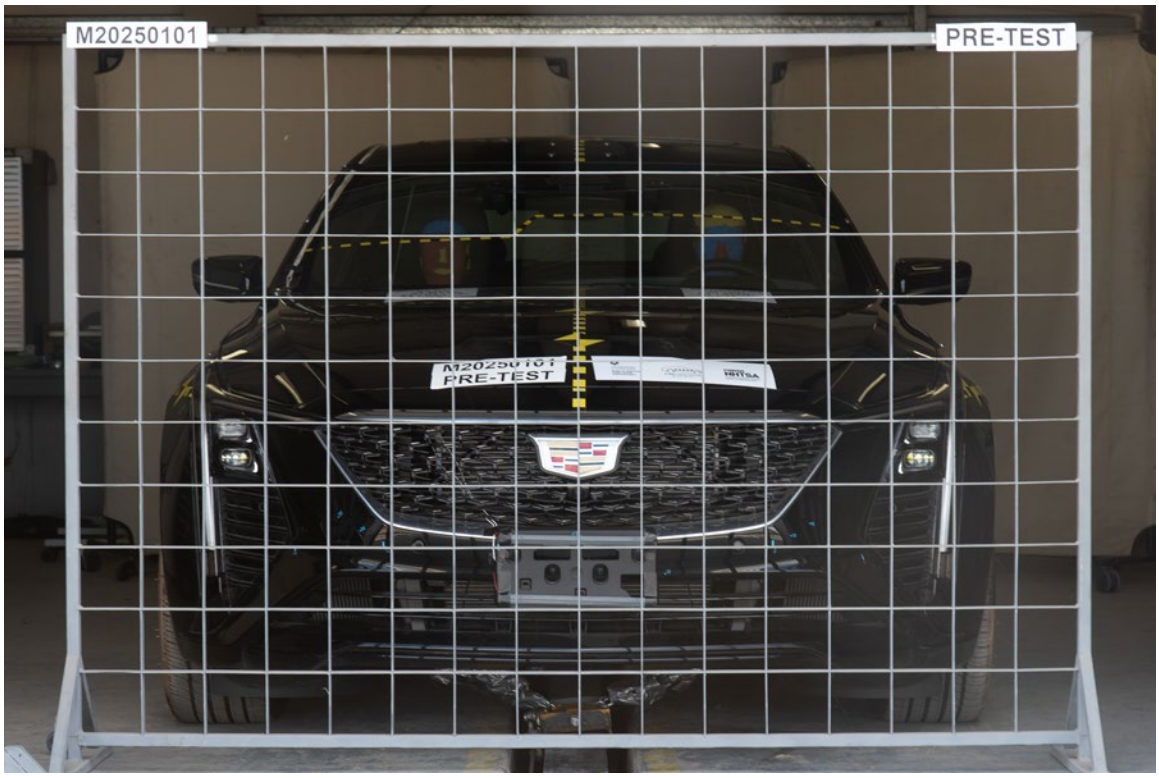


FIGURE 1. Load Cell Location

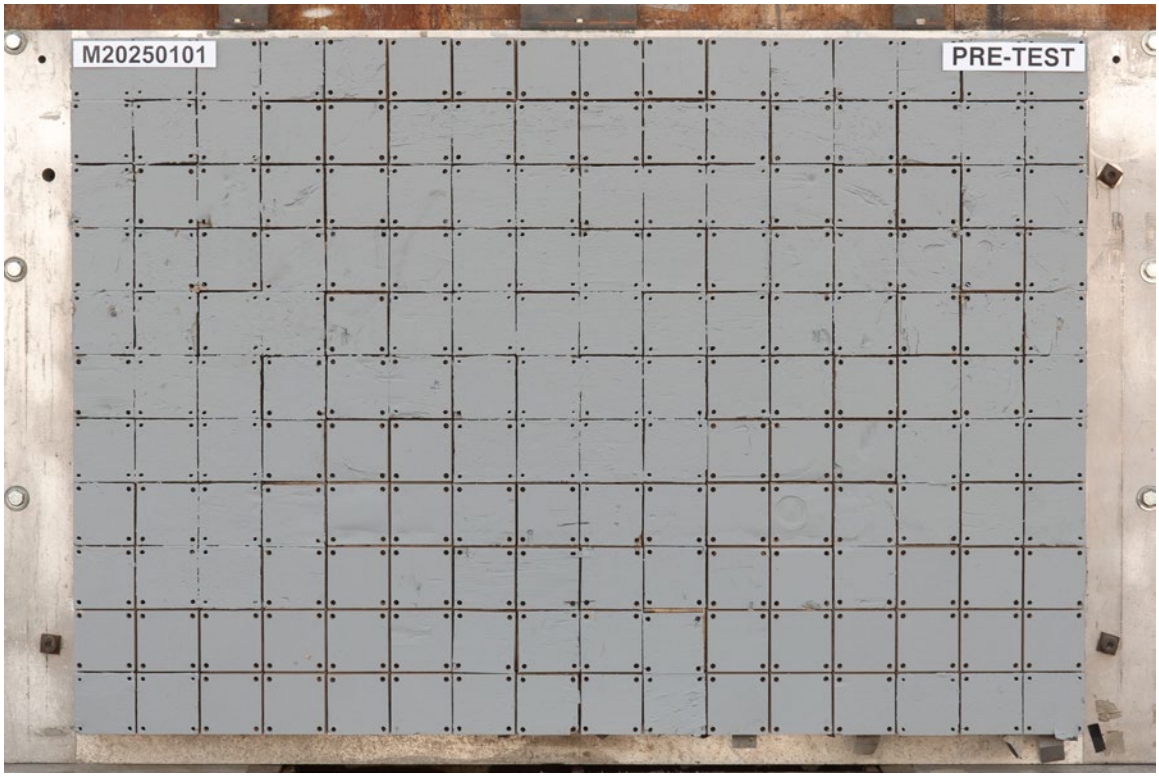


FIGURE 2. Pre-Test Load Cell Wall

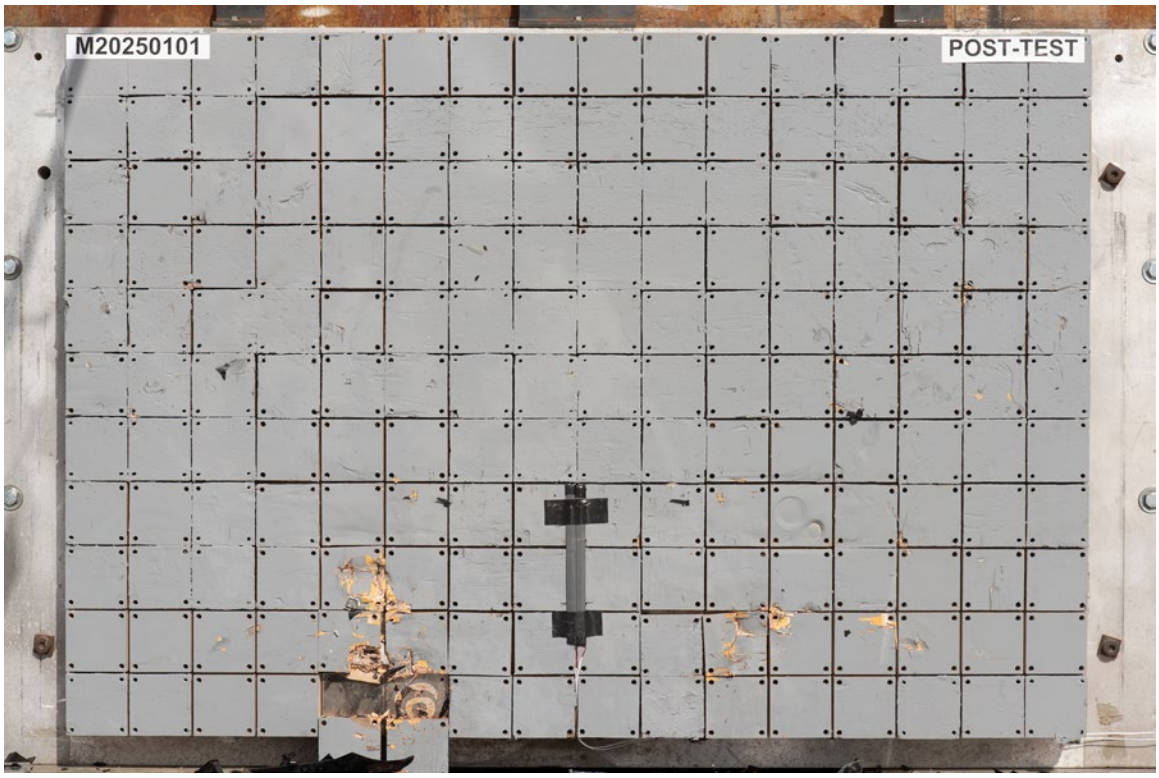


FIGURE 3. Post-Test Load Cell Wall

FIGURE 4. Manufacturer's Label

FIGURE 5. Tire Placard

FIGURE 6. 2025 Cadillac CT5 Frontal As Delivered

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

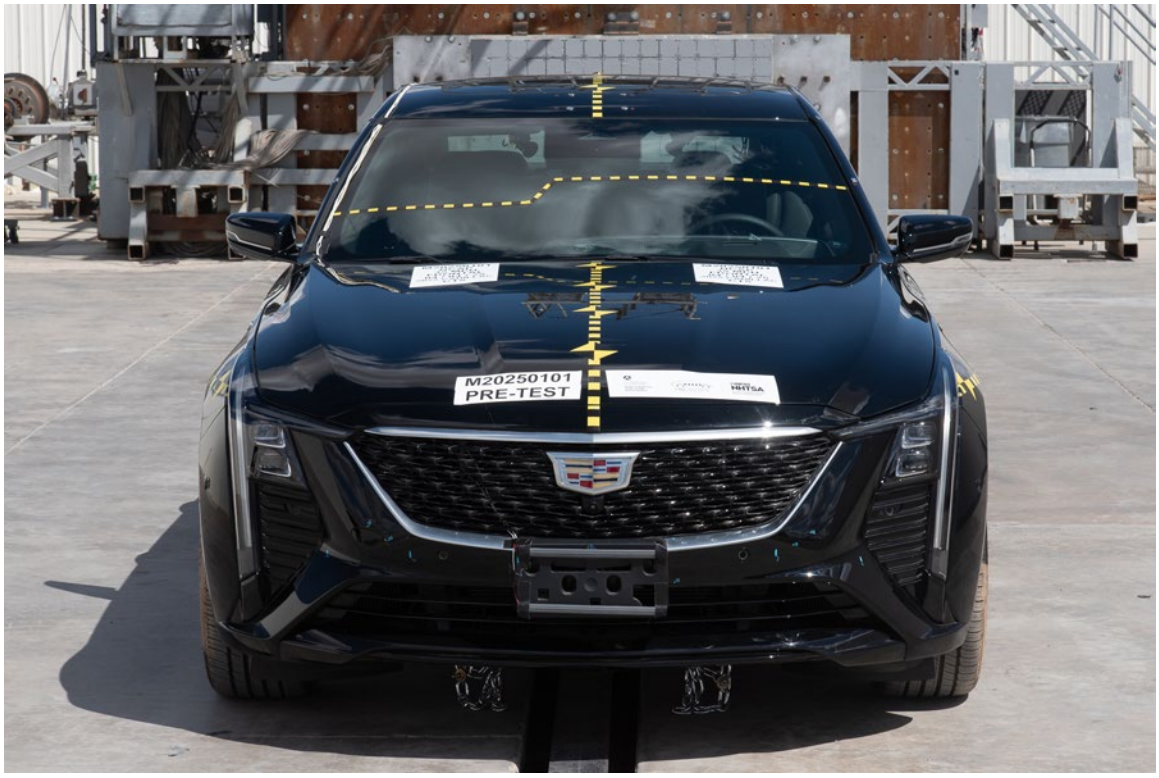


FIGURE 8. Pre-Test Front View of Test Vehicle

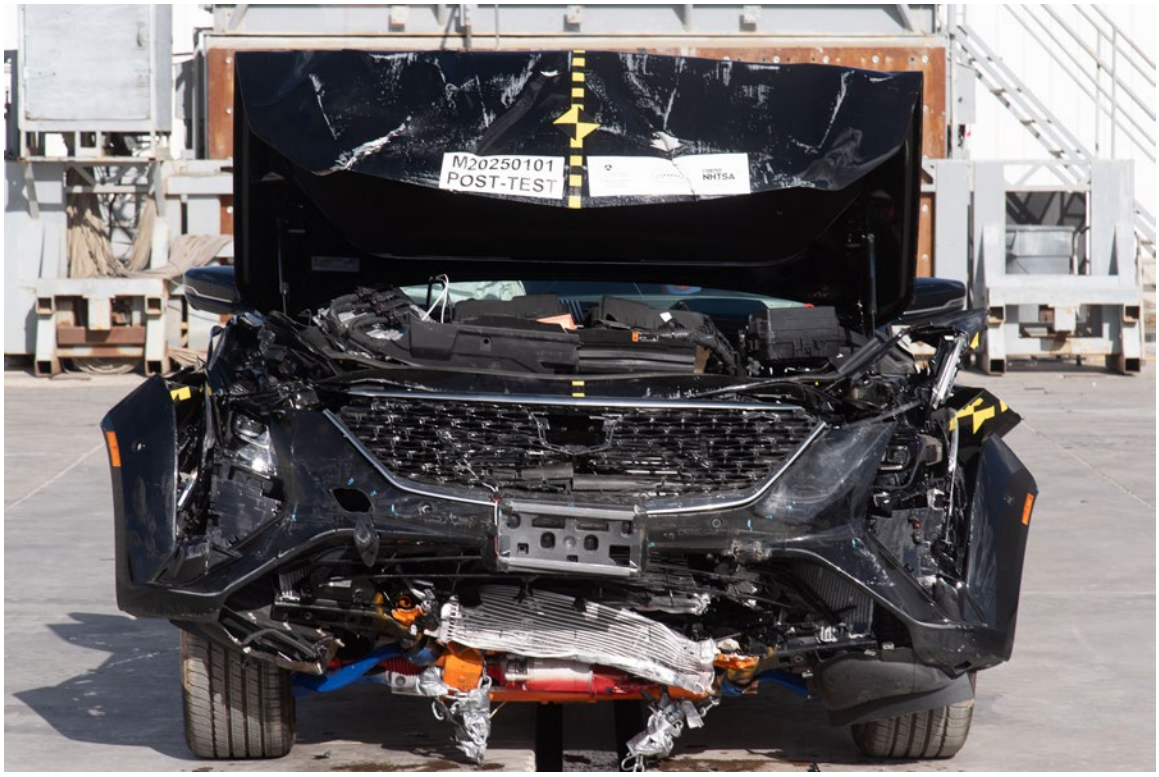


FIGURE 9. Post-Test Front View of Test Vehicle

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 Vehicle 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

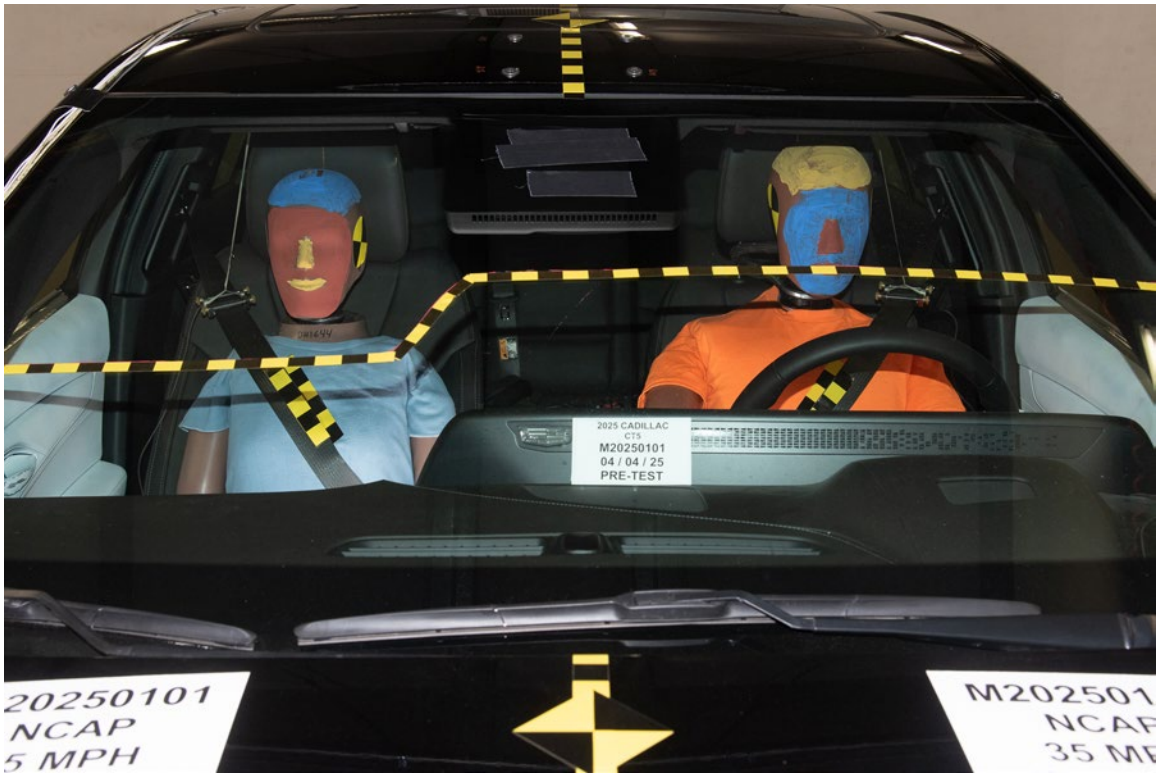


FIGURE 18. Pre-Test Windshield View

FIGURE 19. Post-Test Windshield View

FIGURE 20. Pre-Test Engine Compartment View

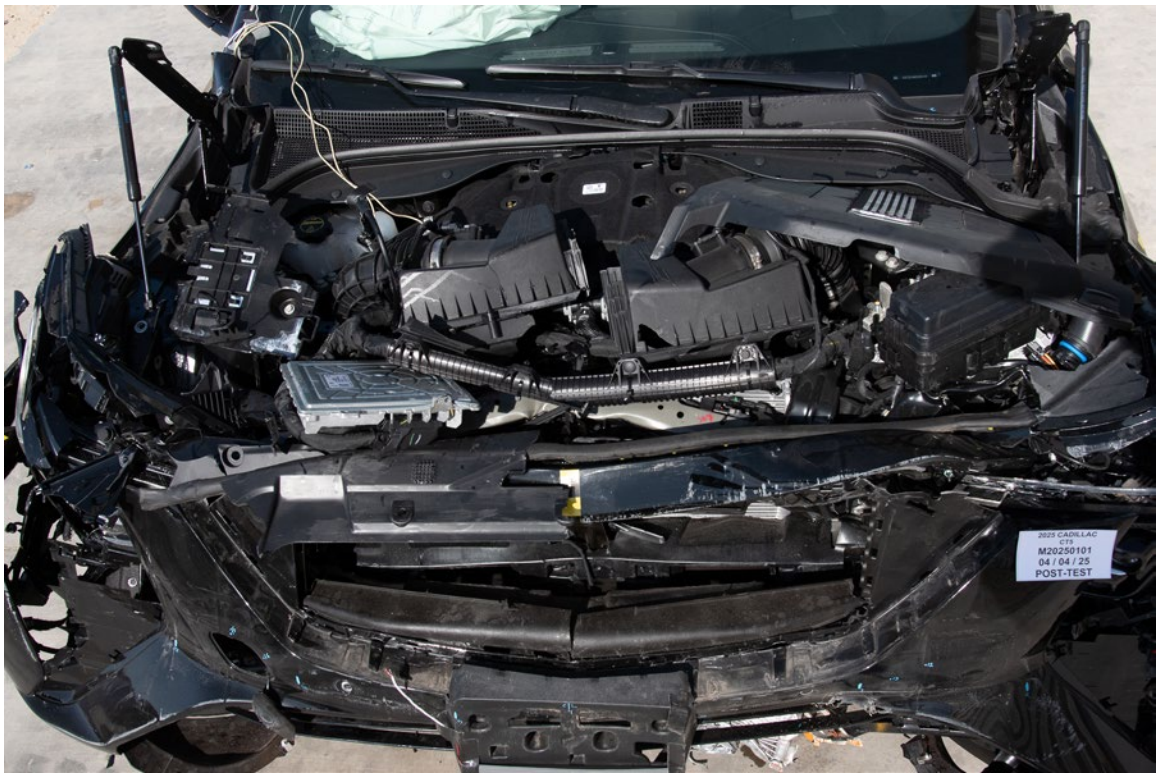


FIGURE 21. Post-Test Engine Compartment View

FIGURE 22. Pre-Test Fuel Filler Cap View

FIGURE 23. Post-Test Fuel Filler Cap View

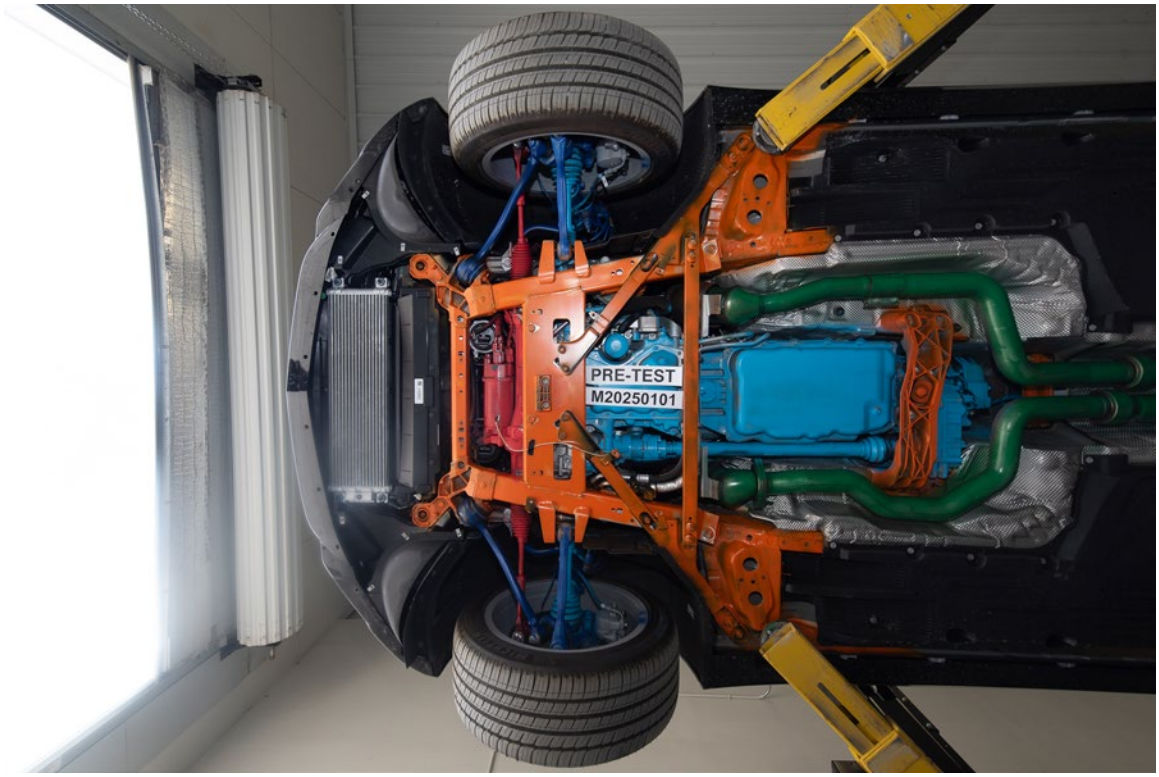


FIGURE 24. Pre-Test Front Underbody View

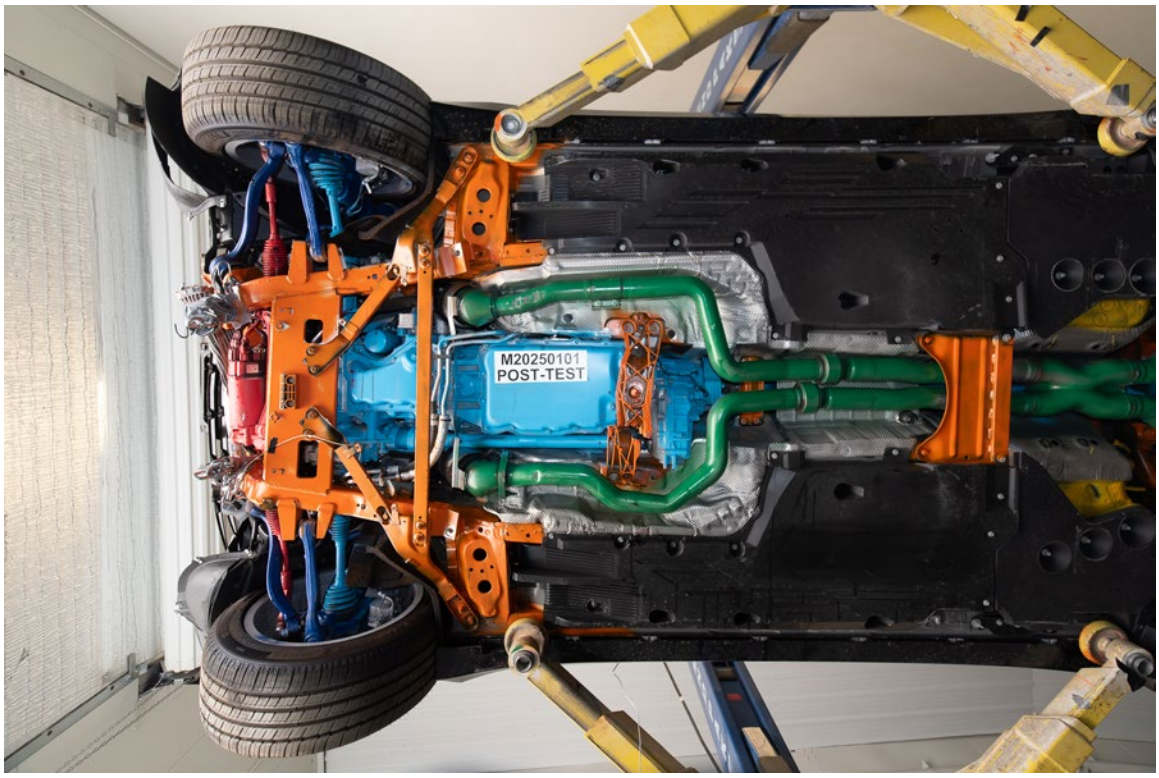


FIGURE 25. Post-Test Front Underbody View

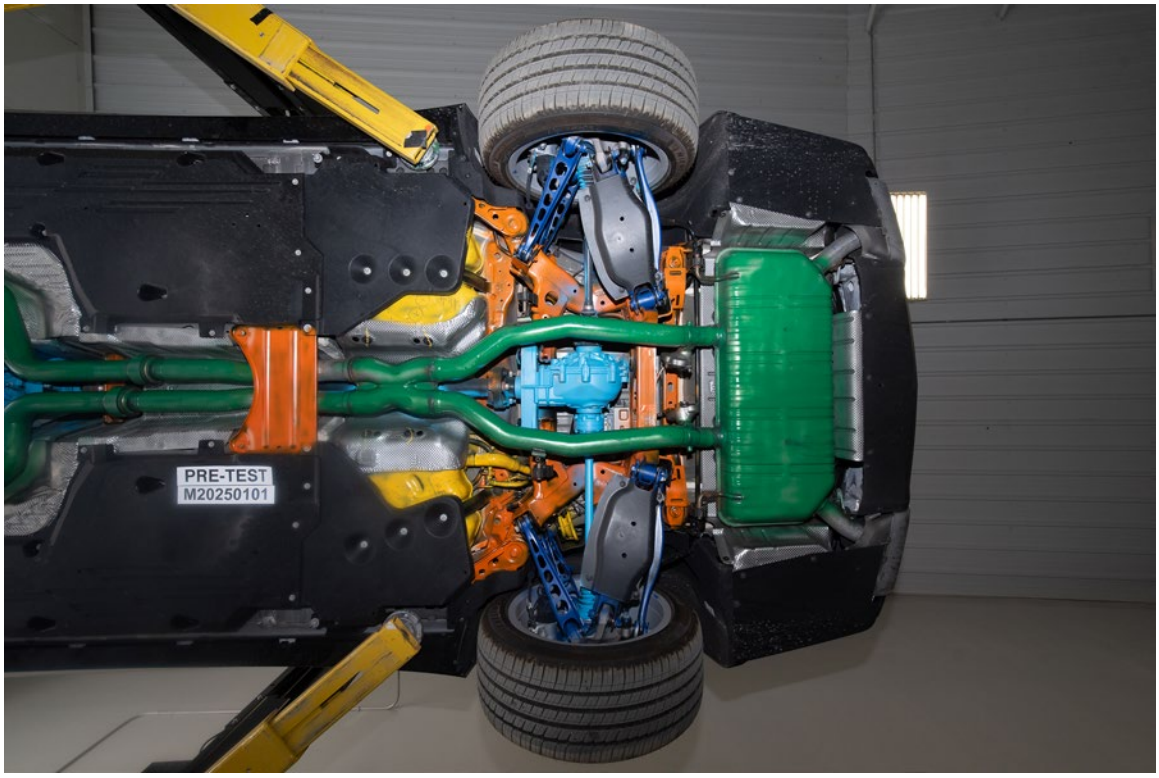


FIGURE 26. Pre-Test Rear Underbody View

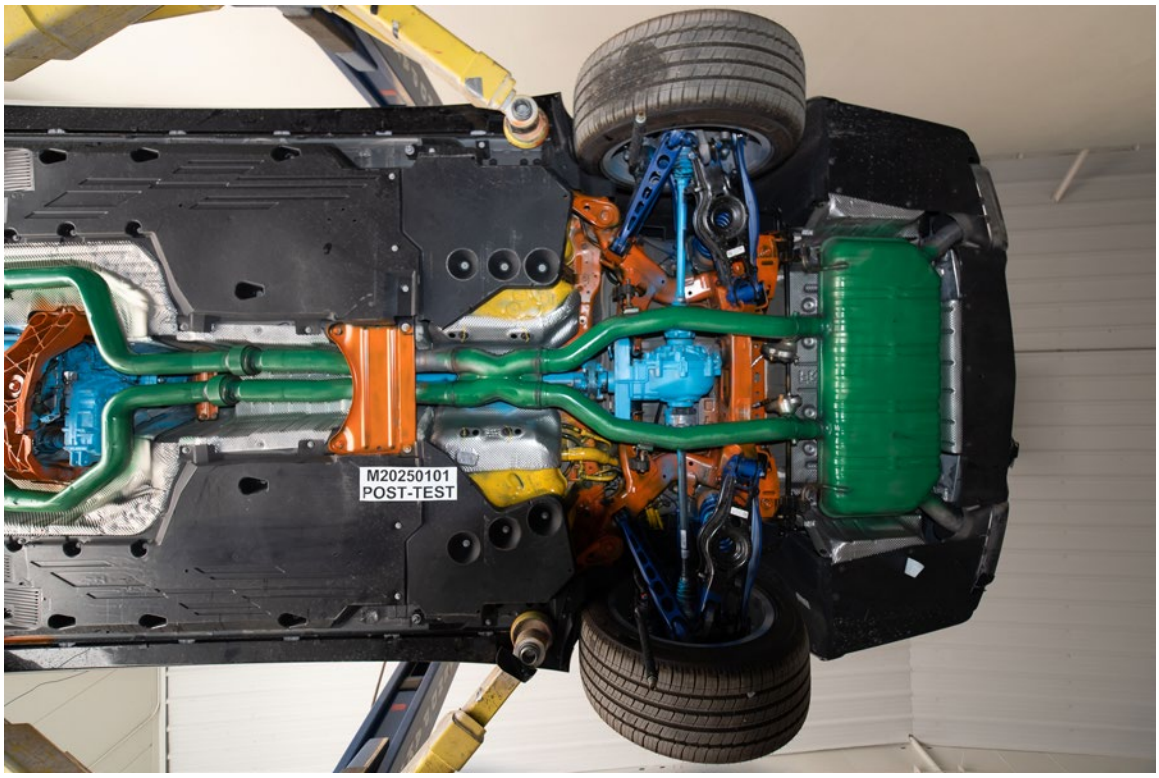


FIGURE 27. Post-Test Rear Underbody View

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

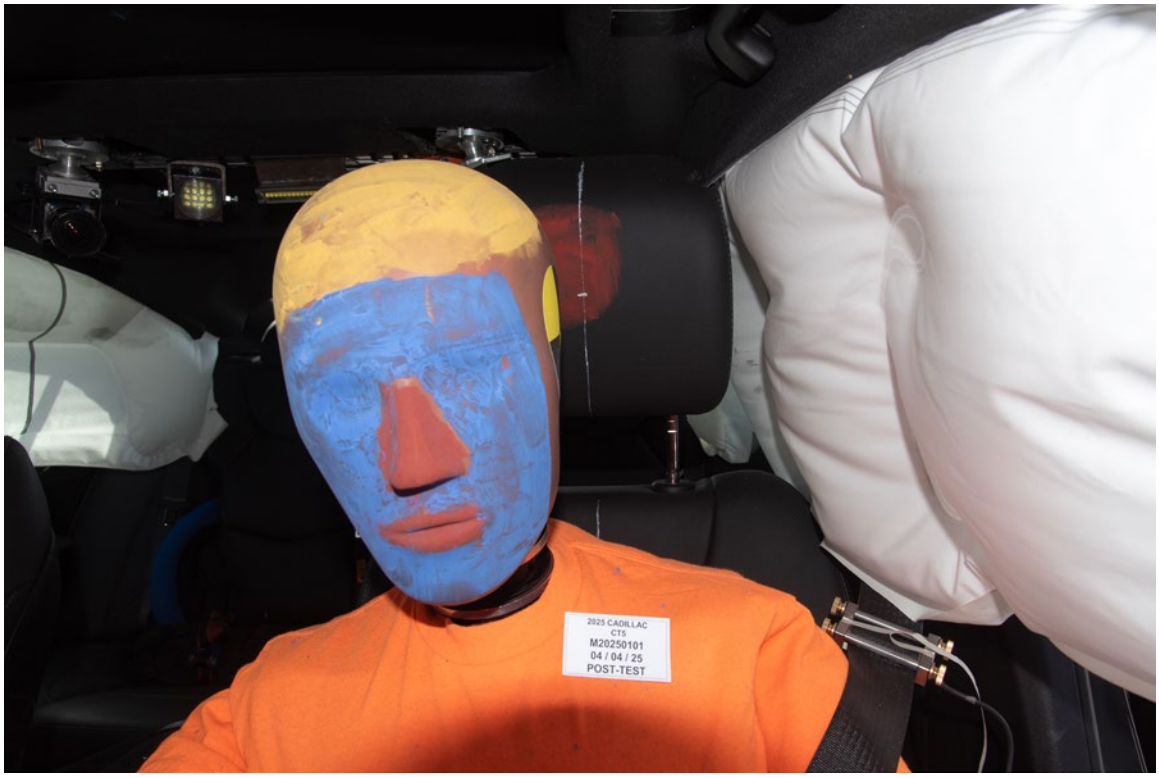


FIGURE 48. Post-Test Driver Dummy Face

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

FIGURE 50. Post-Test Driver Dummy Contact with Headrest

FIGURE 50a. Post-Test Driver Dummy Contact with Knee Air Bag

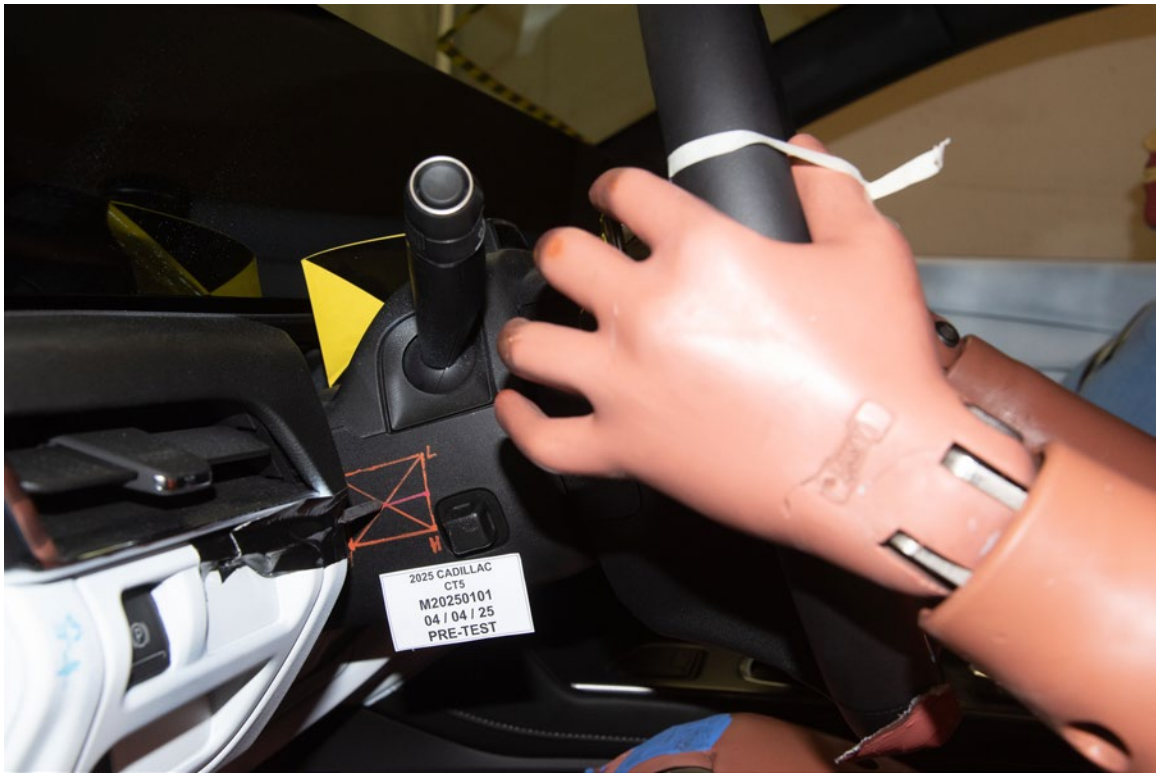


FIGURE 51. Pre-Test View of the Steering Wheel

FIGURE 52. Post-Test View of the Steering Wheel

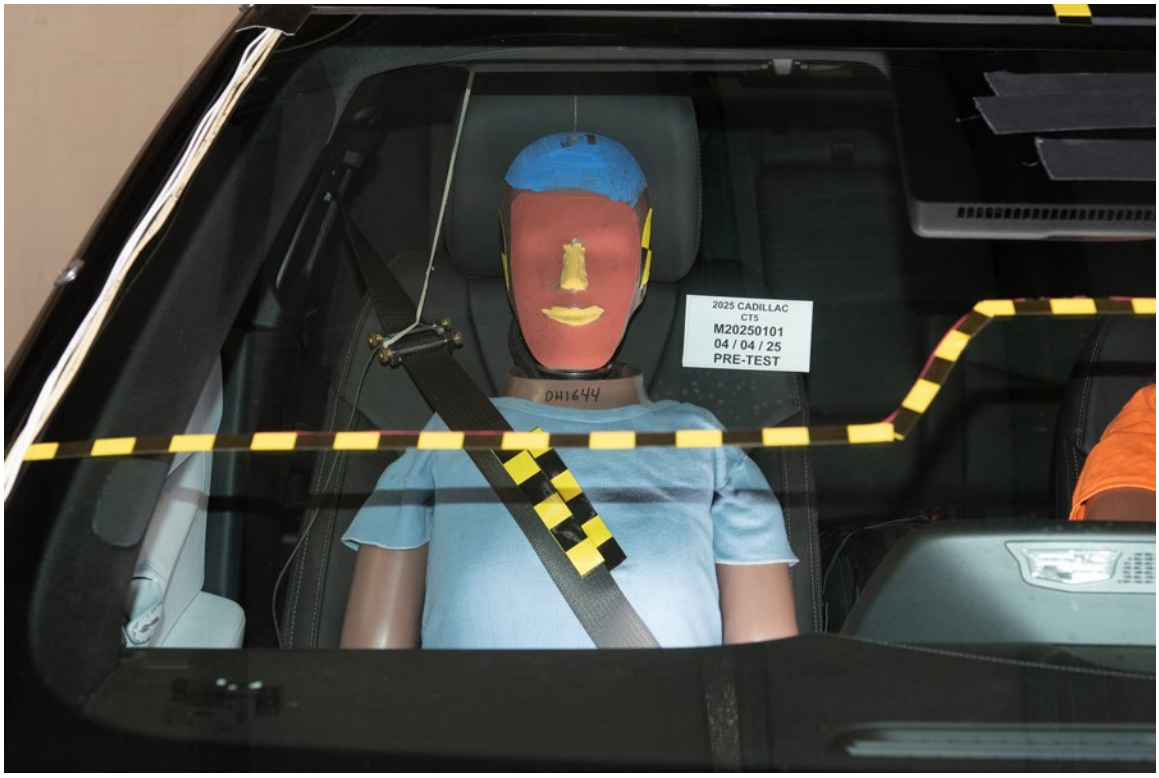


FIGURE 53. Pre-Test Passenger Dummy Front View

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

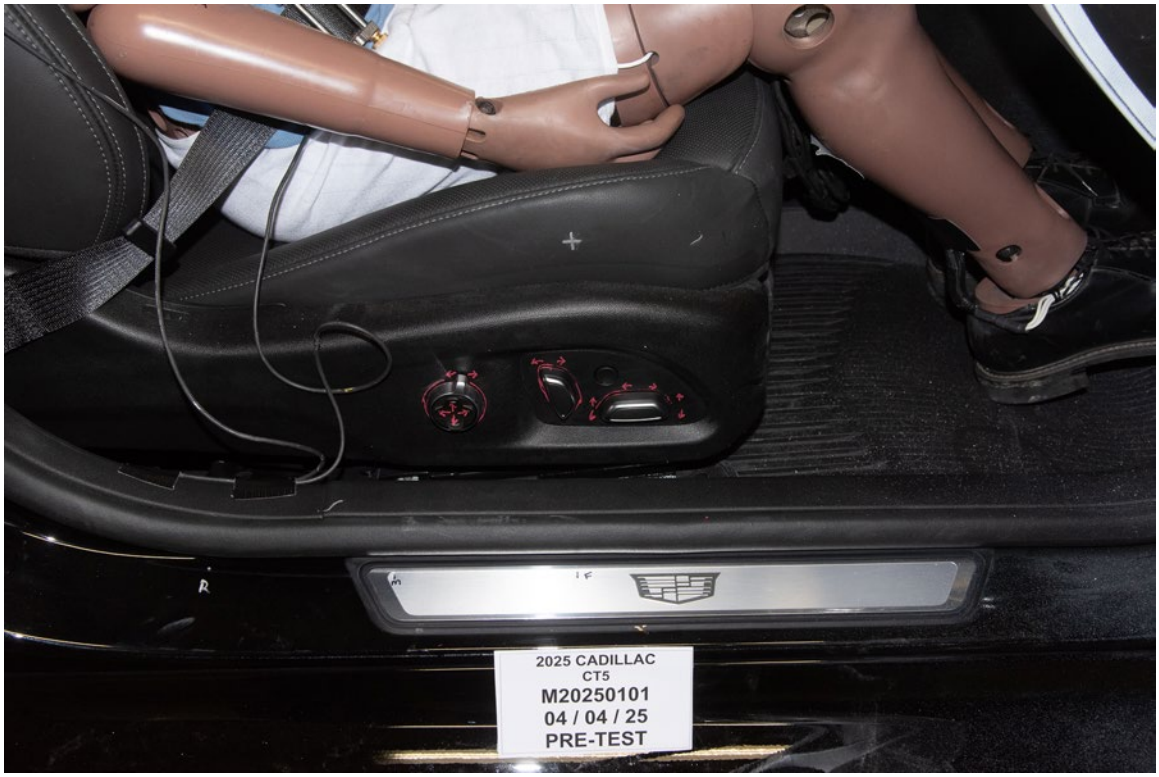


FIGURE 59. Pre-Test Passenger's Seat Fore-Aft Markings

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

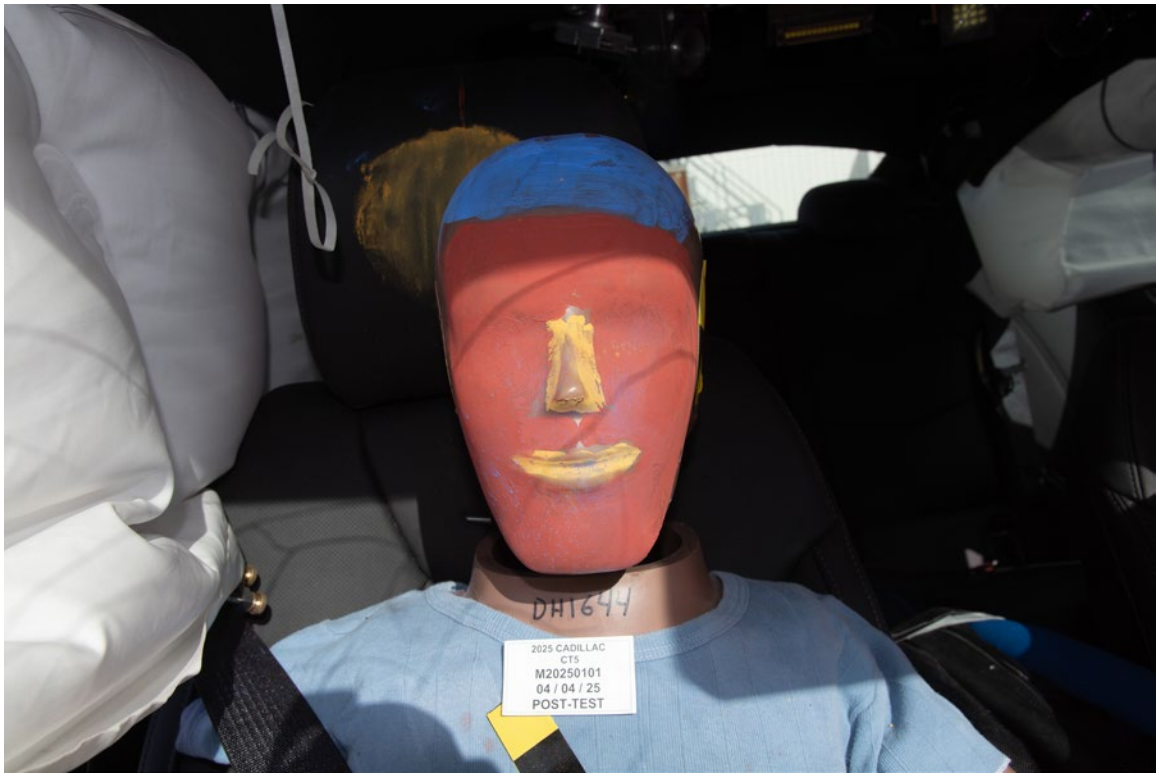


FIGURE 71. Post-Test Passenger Dummy Face

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

FIGURE 73. Post-Test Passenger Dummy Contact with Headrest

FIGURE 73a. Post-Test Passenger Dummy Contact with Knee Air Bag

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

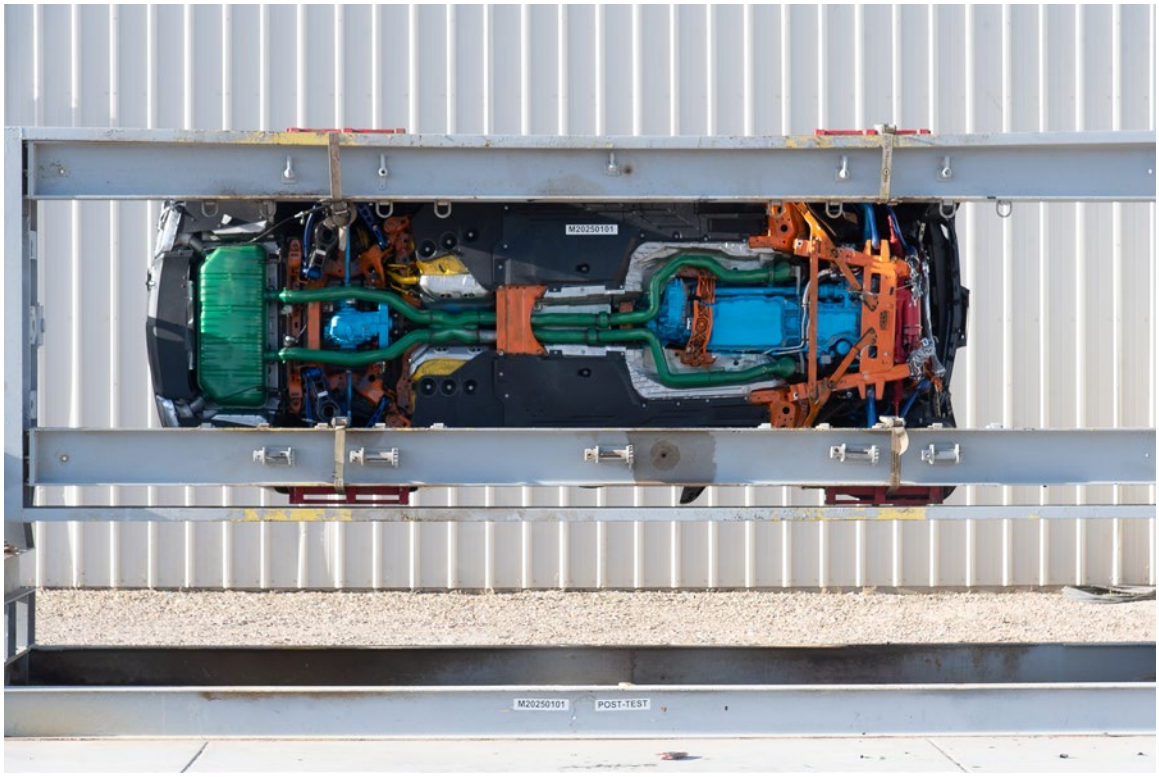


FIGURE 80. Vehicle at 270° on Static Rollover Device

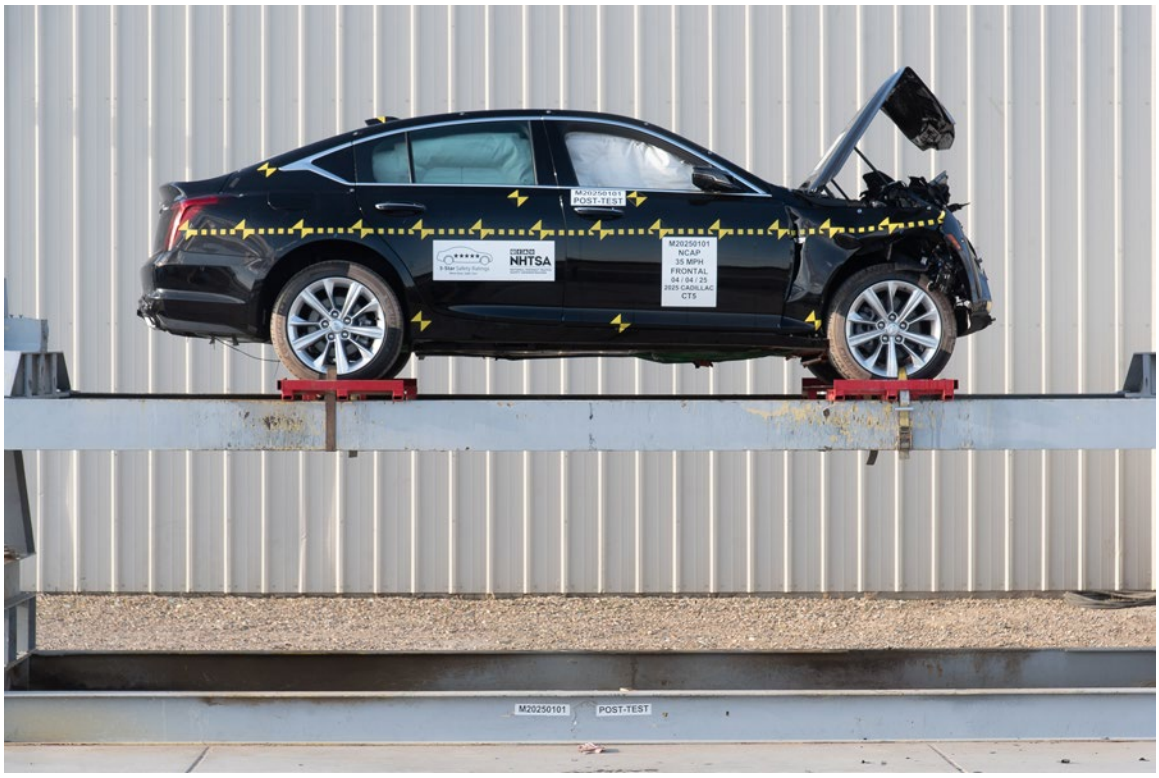


FIGURE 81. Vehicle at 360° on Static Rollover Device

FIGURE 82. 2025 Cadillac CT5 Frontal Impact Event

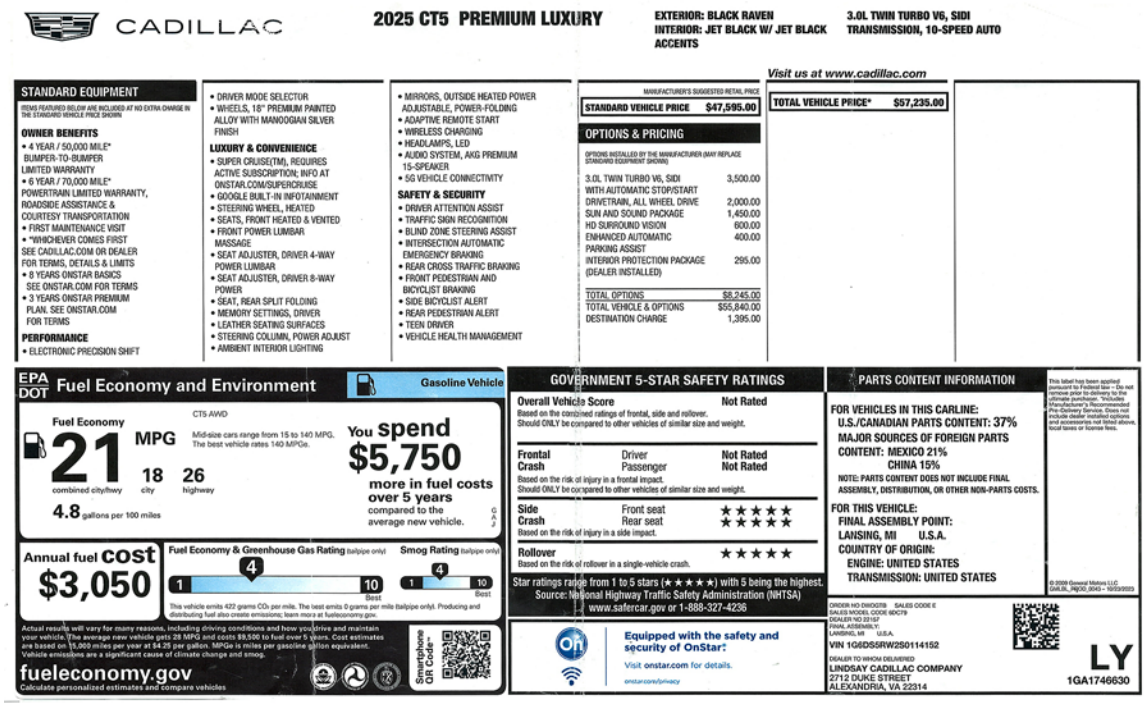


FIGURE 83. Monroney Label Photograph

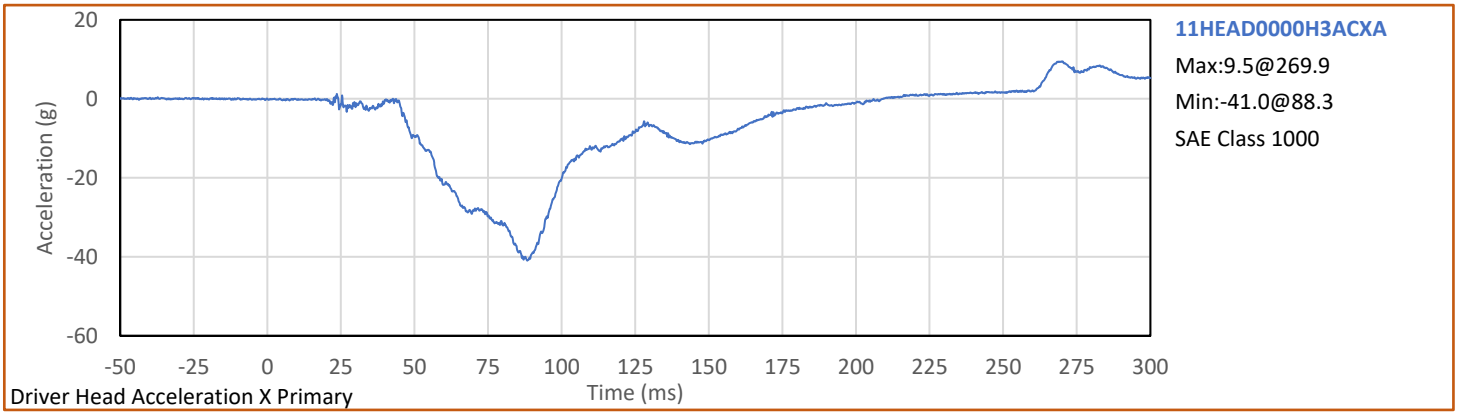
APPENDIX B
DUMMY RESPONSE DATA TRACES

TABLE OF DATA PLOTS

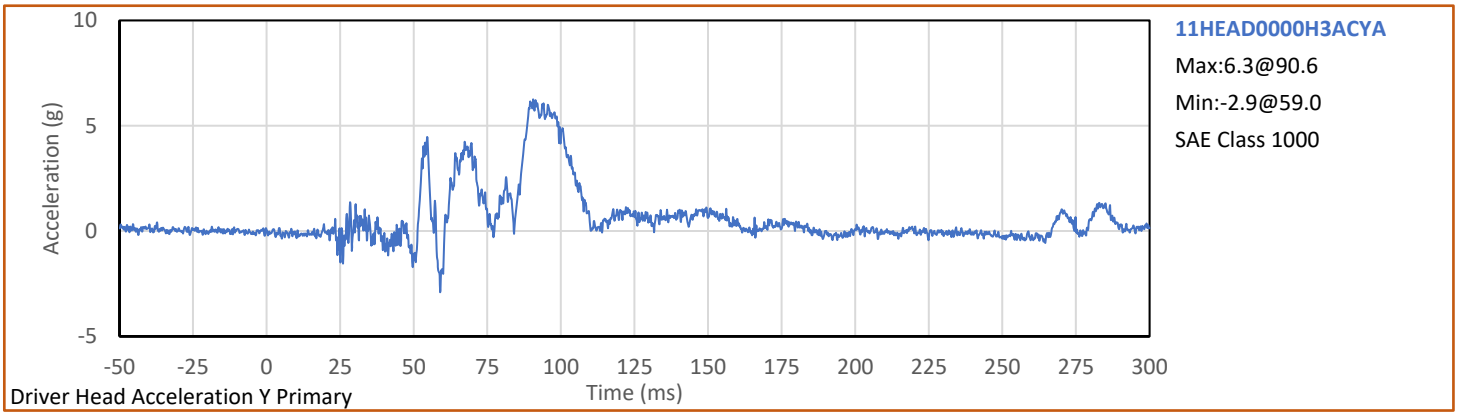
The following additional dummy and vehicle response data can be found in the R&D section of the NHTSA website at www.nhtsa.gov

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

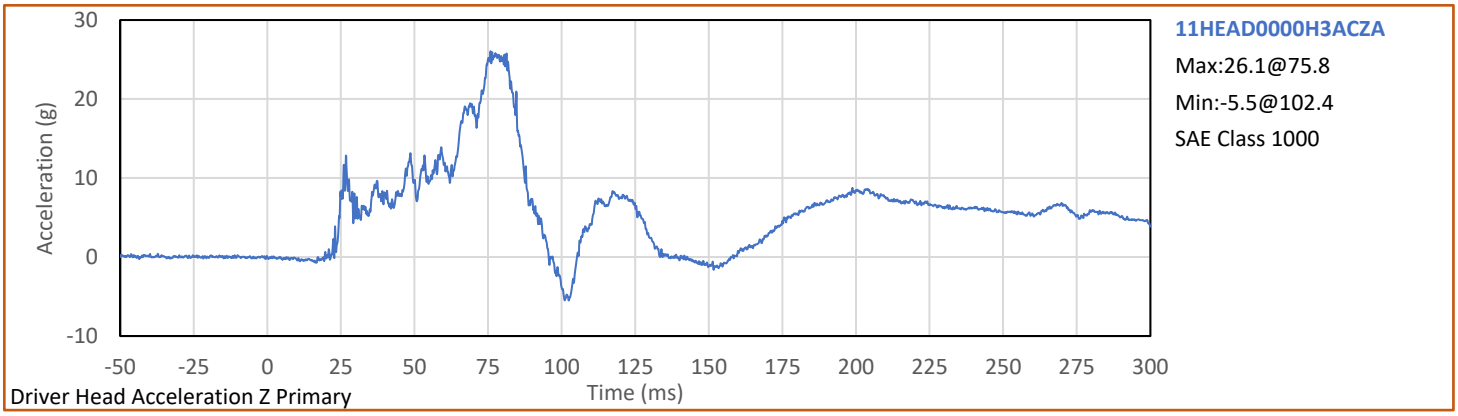
Passenger Chest X Acceleration Redundant
Passenger Chest Y Acceleration Redundant
Passenger Chest Z Acceleration Redundant
Passenger Pelvis X
Passenger Pelvis Y
Passenger Pelvis Z
Passenger Left Femur Force Redundant
Passenger Right Femur Force Redundant
Passenger Left Upper Tibia Moment X
Passenger 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



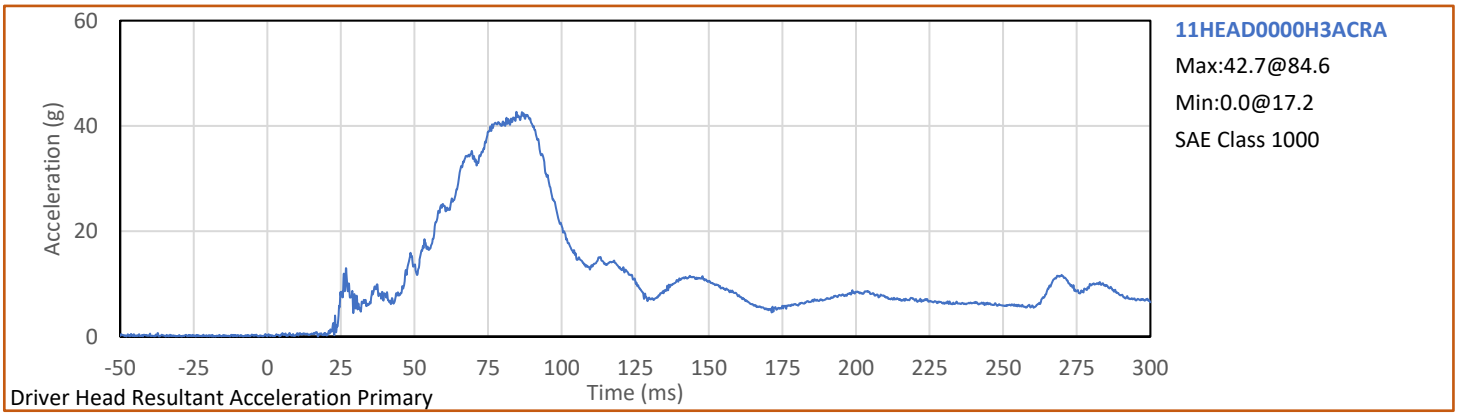
Driver Head Acceleration X Primary



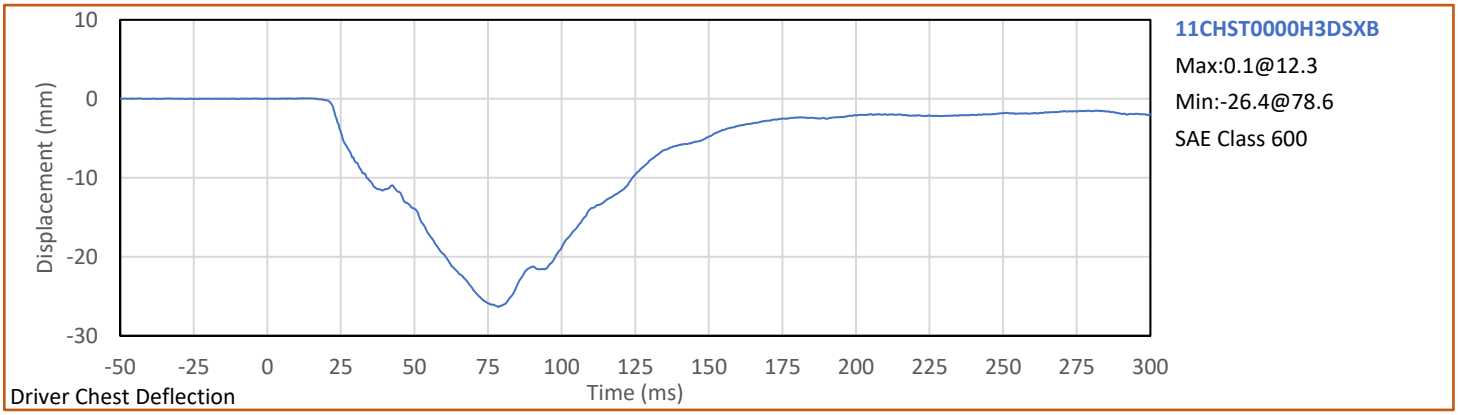
Driver Head Acceleration Y Primary



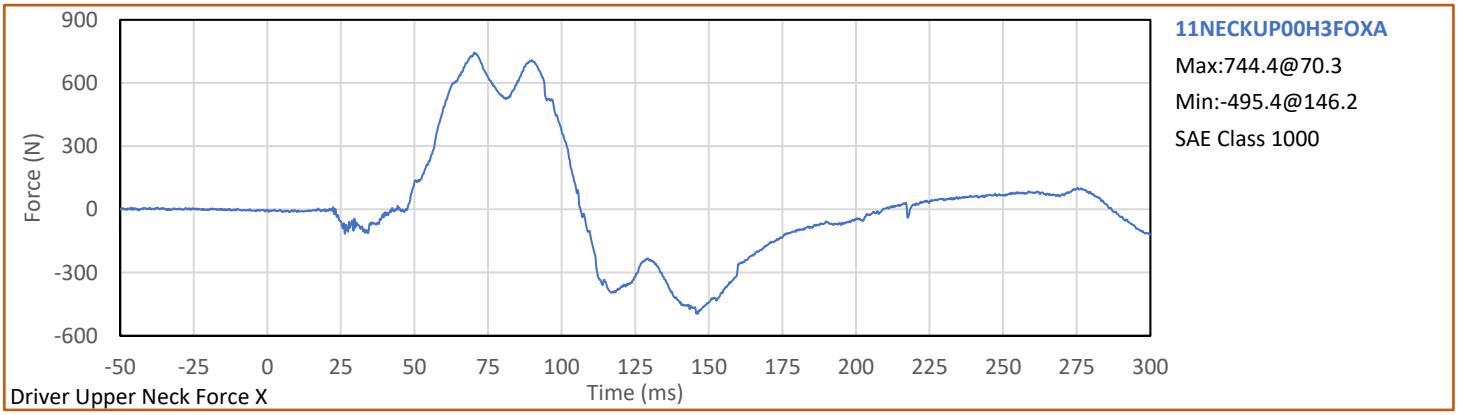
Driver Head Acceleration Z Primary



Driver Head Resultant Acceleration Primary

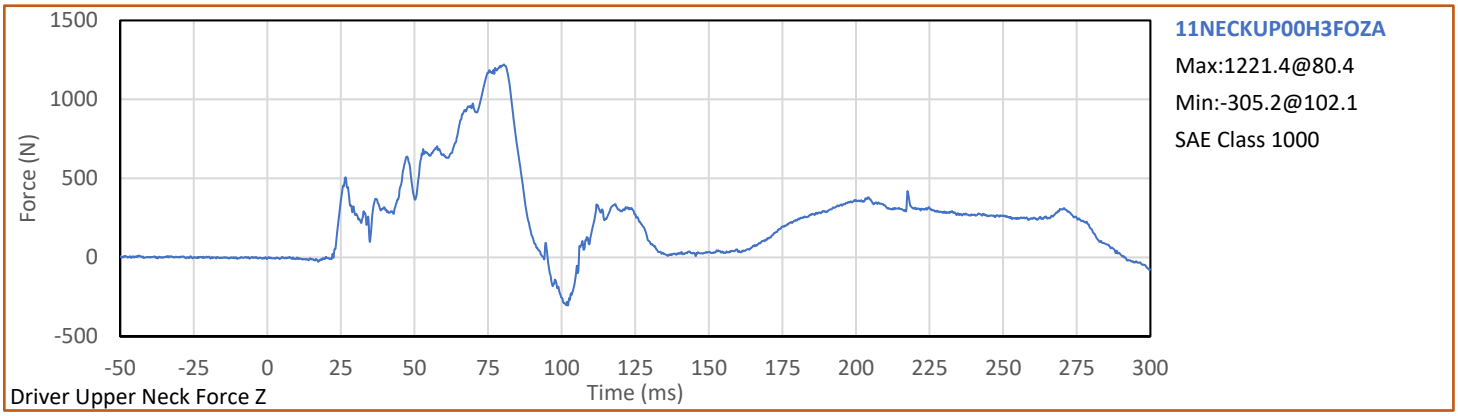


Driver Chest Deflection



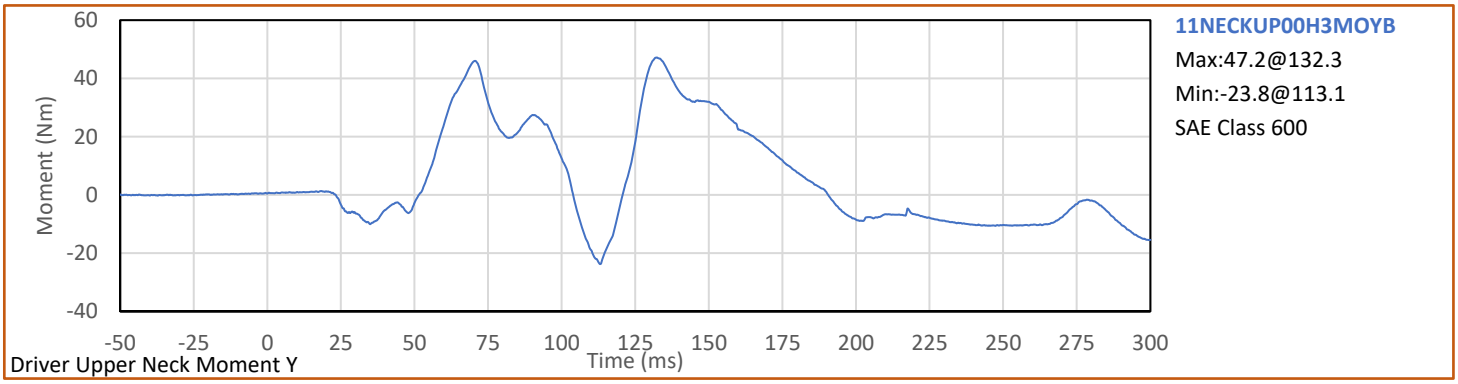
Driver Upper Neck Force X

11NECKUP00H3FOXA
Max:744.4@70.3
Min:-495.4@146.2
SAE Class 1000



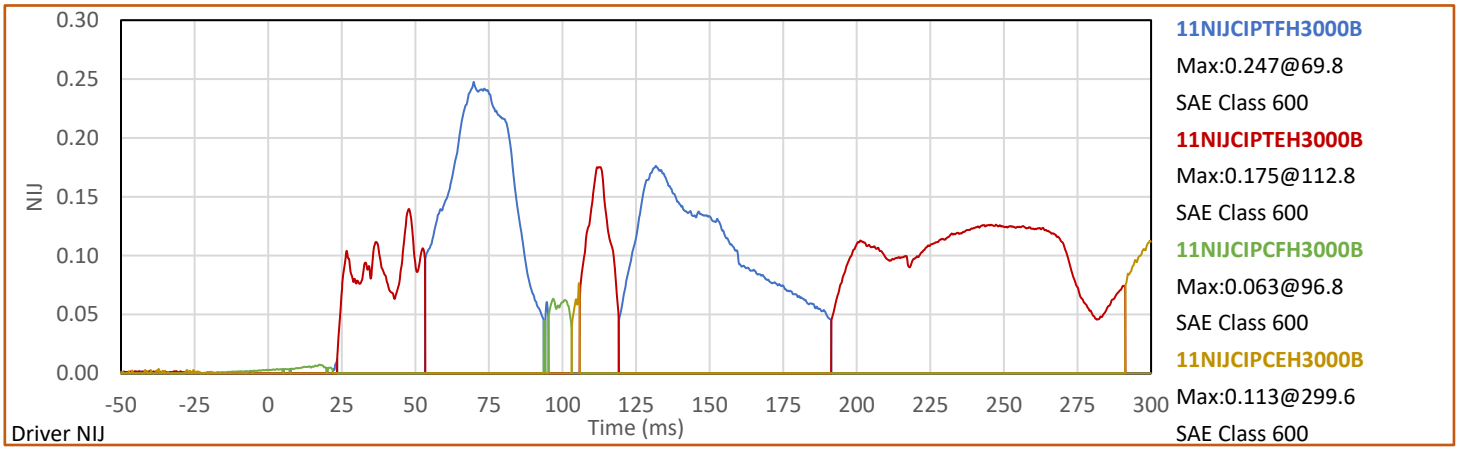
Driver Upper Neck Force Z

11NECKUP00H3FOZA
Max:1221.4@80.4
Min:-305.2@102.1
SAE Class 1000



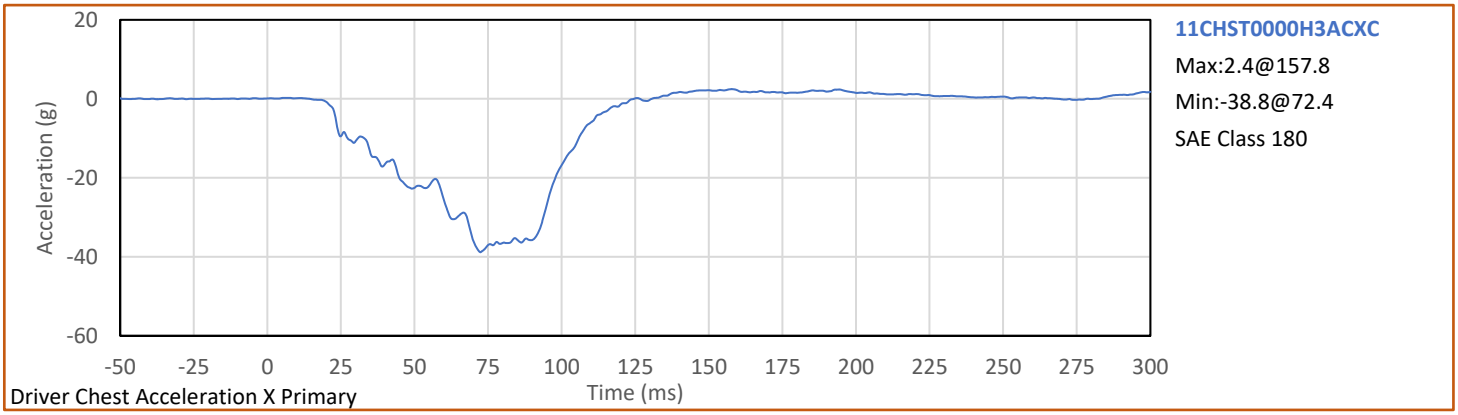
Driver Upper Neck Moment Y

11NECKUP00H3MOYB
Max:47.2@132.3
Min:-23.8@113.1
SAE Class 600



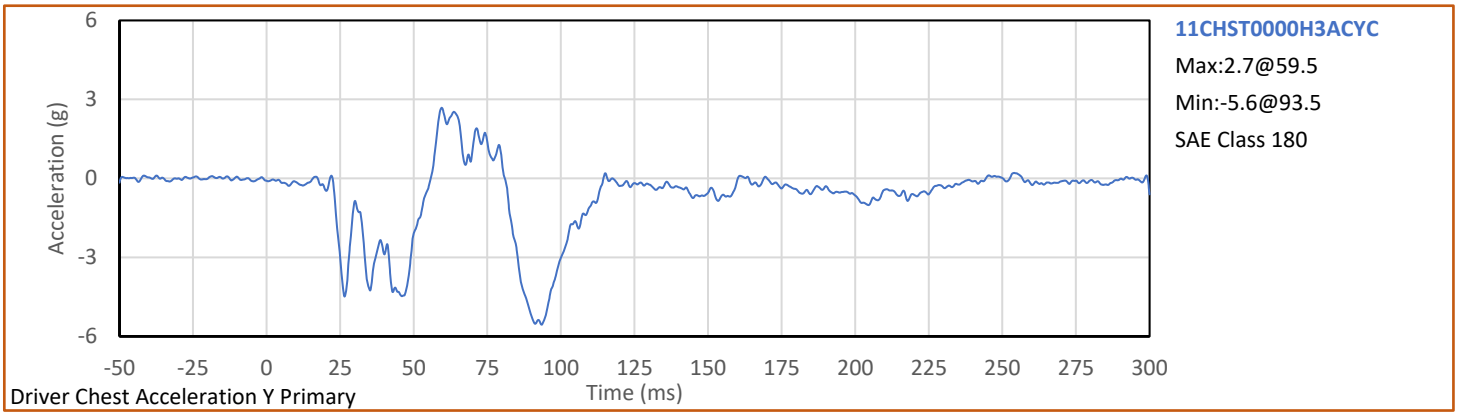
Driver NIJ

11NIJCIPTFH3000B
Max:0.247@69.8
SAE Class 600
11NIJCIPTEH3000B
Max:0.175@112.8
SAE Class 600
11NIJCIPCFH3000B
Max:0.063@96.8
SAE Class 600
11NIJCIPCEH3000B
Max:0.113@299.6
SAE Class 600



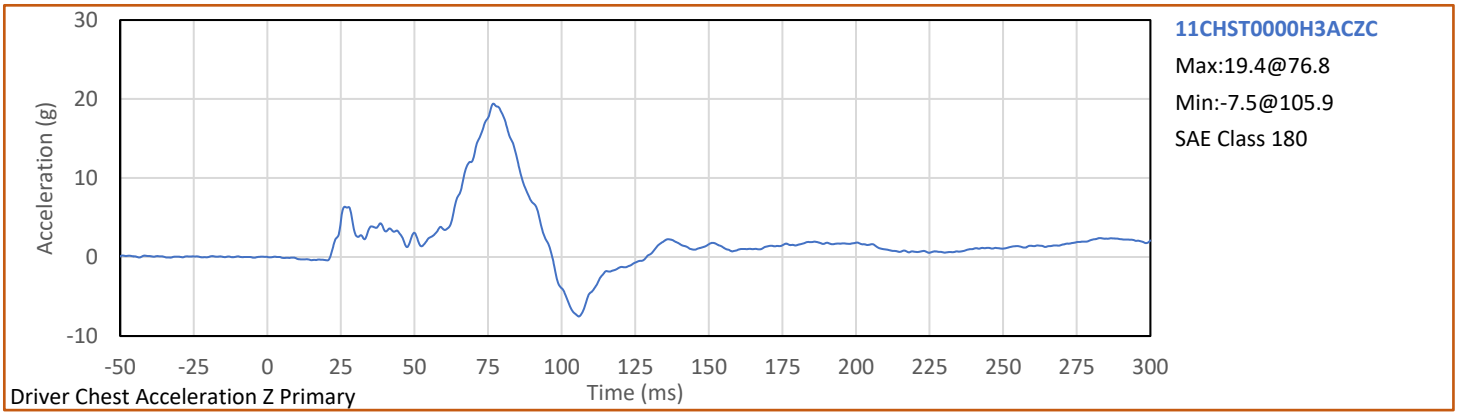
11CHST0000H3ACXC
Max:2.4@157.8
Min:-38.8@72.4
SAE Class 180

Driver Chest Acceleration X Primary



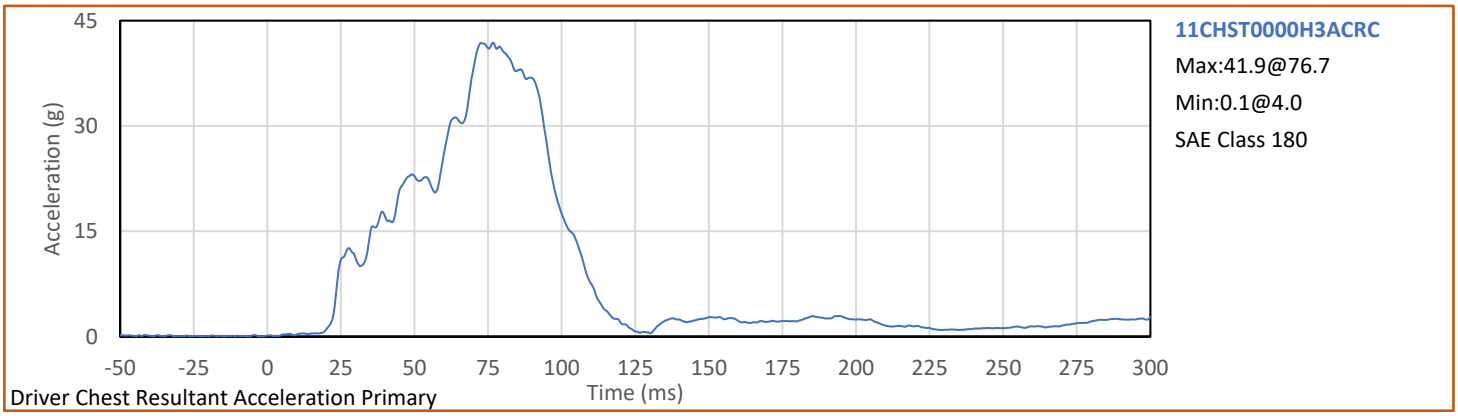
11CHST0000H3ACYC
Max:2.7@59.5
Min:-5.6@93.5
SAE Class 180

Driver Chest Acceleration Y Primary



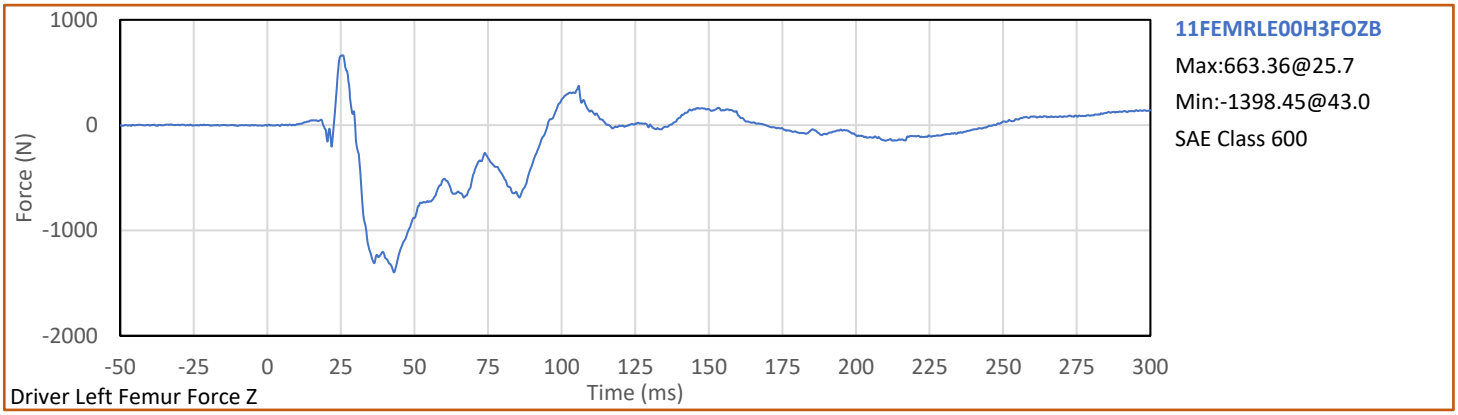
11CHST0000H3ACZC
Max:19.4@76.8
Min:-7.5@105.9
SAE Class 180

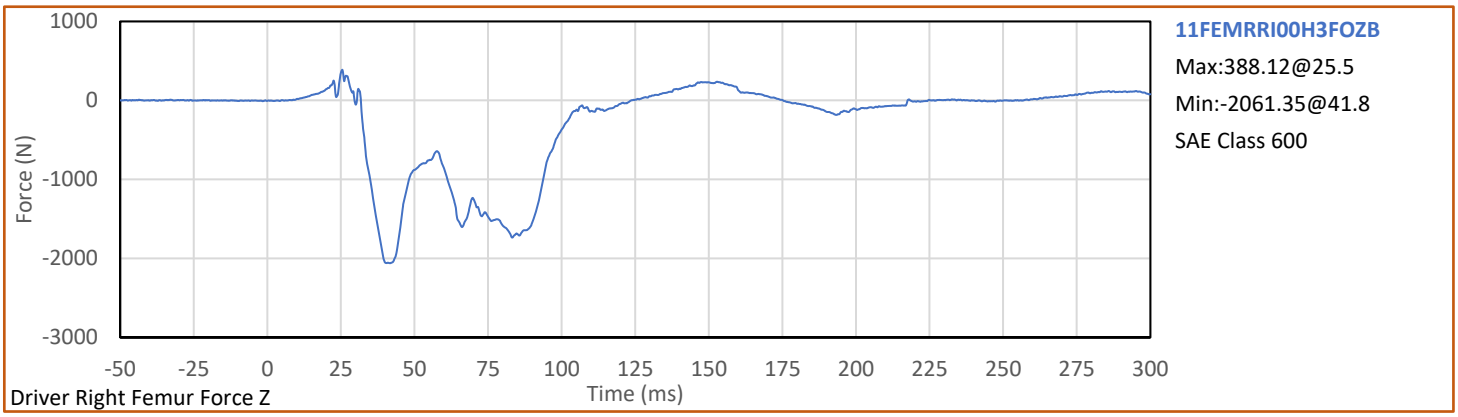
Driver Chest Acceleration Z Primary



11CHST0000H3ACRC
Max:41.9@76.7
Min:0.1@4.0
SAE Class 180

Driver Chest Resultant Acceleration Primary


1000
0
-1000
-2000
Force (N)
-50 -25 0 25 50 75 100 125 150 175 200 225 250 275 300
Time (ms)
11FEMRLE00H3FOZB
Max:663.36@25.7
Min:-1398.45@43.0
SAE Class 600
Driver Left Femur Force Z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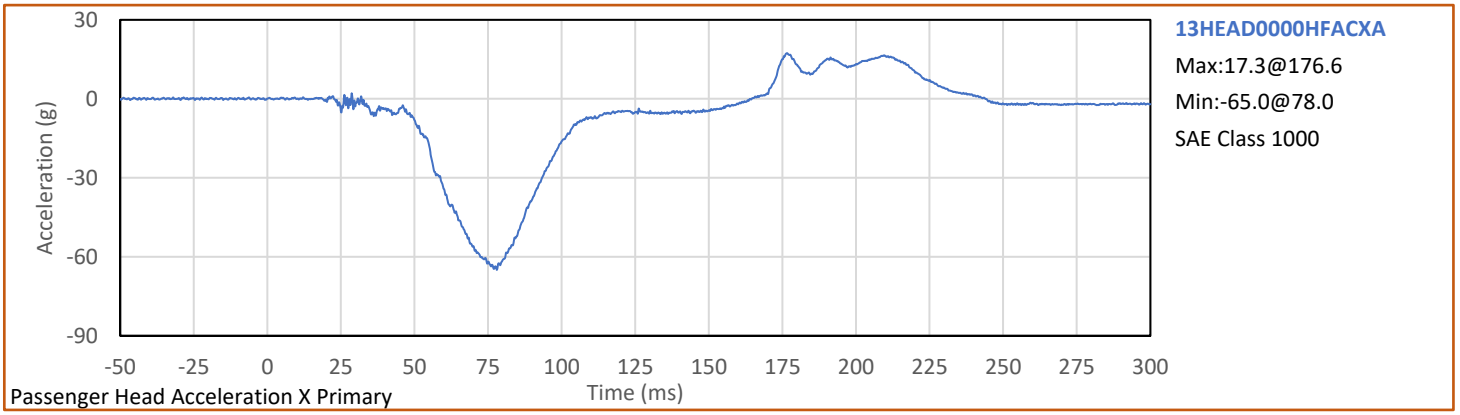
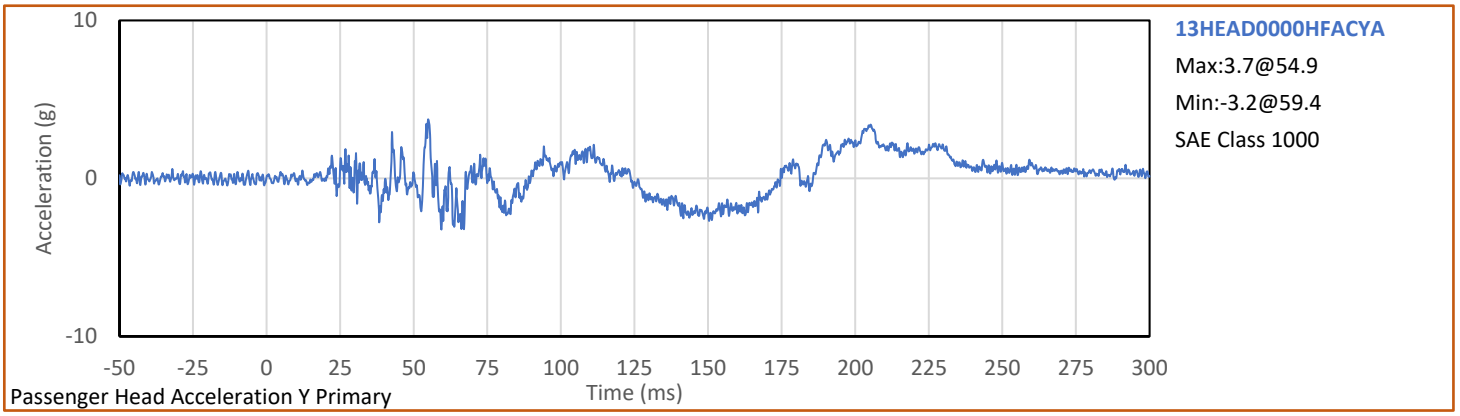
0
-1000
-2000
-3000
Force (N)
-50 -25 0 25 50 75 100 125 150 175 200 225 250 275 300
Time (ms)
11FEMRRI00H3FOZB
Max:388.12@25.5
Min:-2061.35@41.8
SAE Class 600
Driver Right Femur Force Z



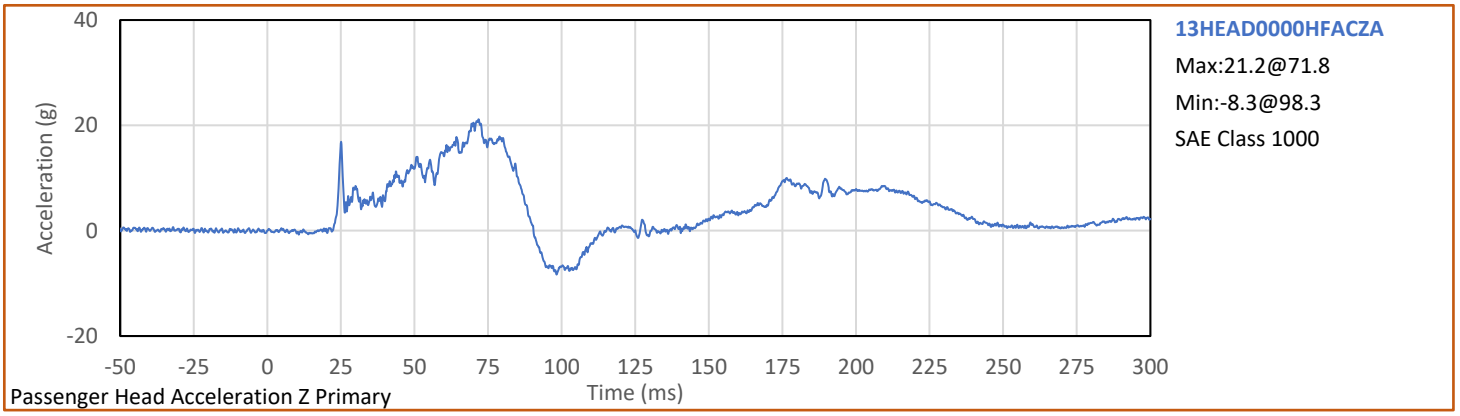
13HEAD0000HFACXA
Max:17.3@176.6
Min:-65.0@78.0
SAE Class 1000

Passenger Head Acceleration X Primary



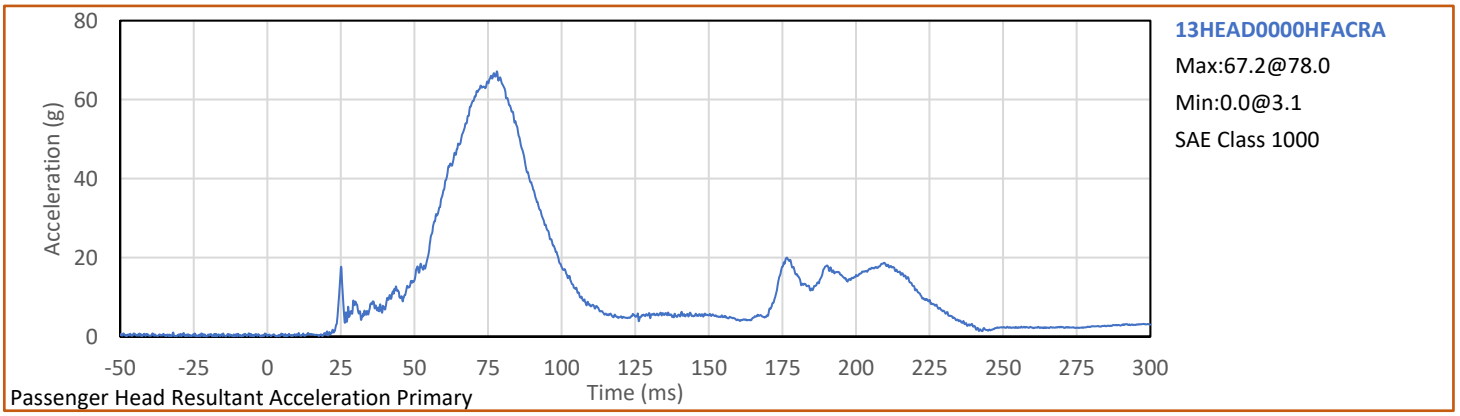
13HEAD0000HFACYA
Max:3.7@54.9
Min:-3.2@59.4
SAE Class 1000

Passenger Head Acceleration Y Primary



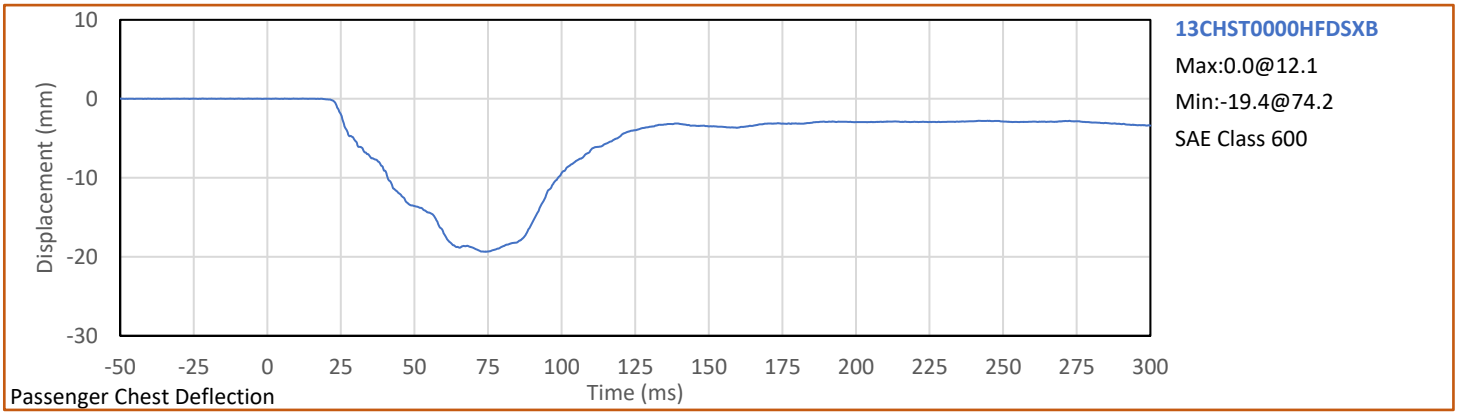
13HEAD0000HFACZA
Max:21.2@71.8
Min:-8.3@98.3
SAE Class 1000

Passenger Head Acceleration Z Primary

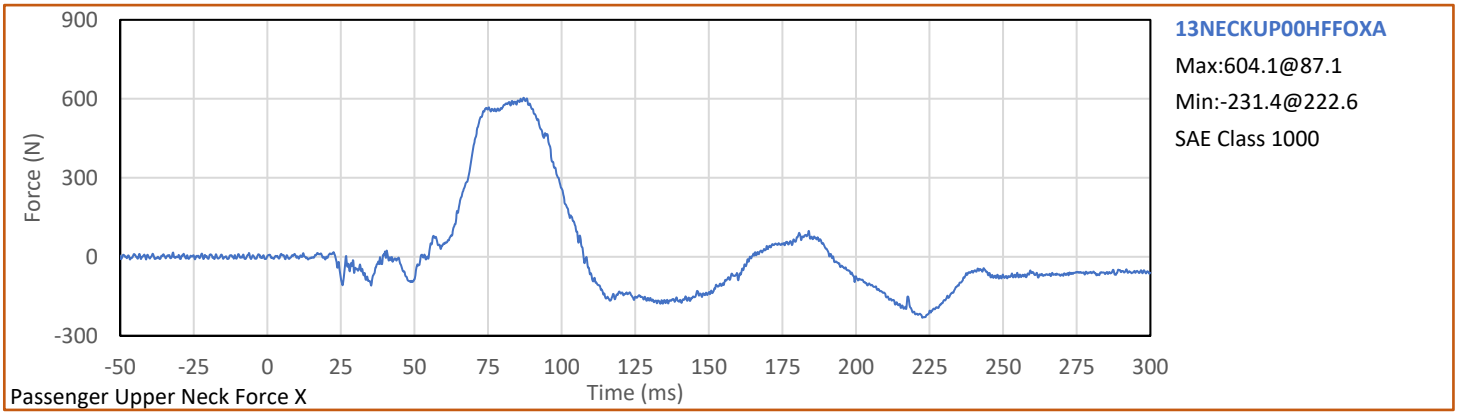


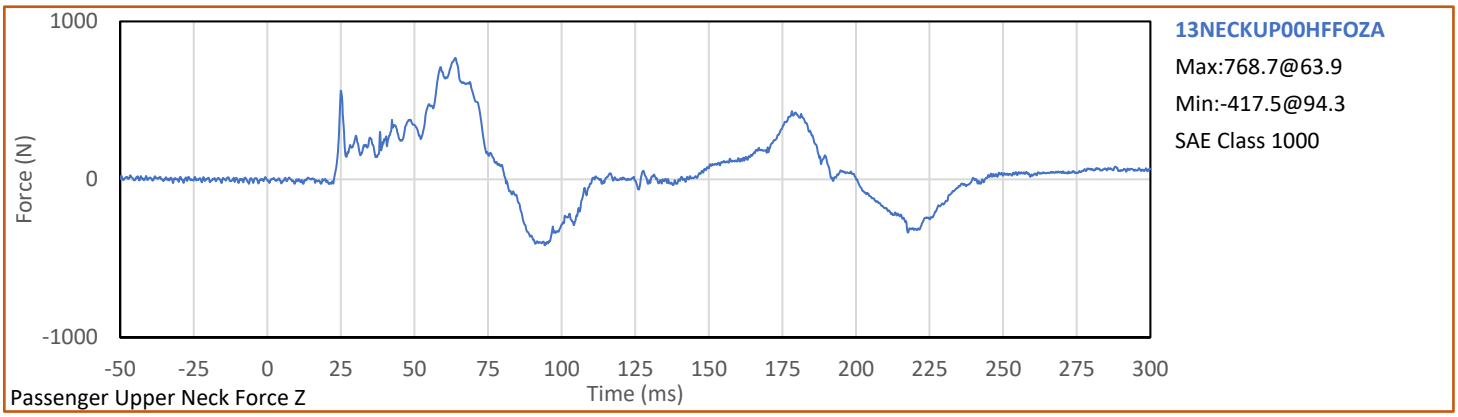
13HEAD0000HFACRA
Max:67.2@78.0
Min:0.0@3.1
SAE Class 1000

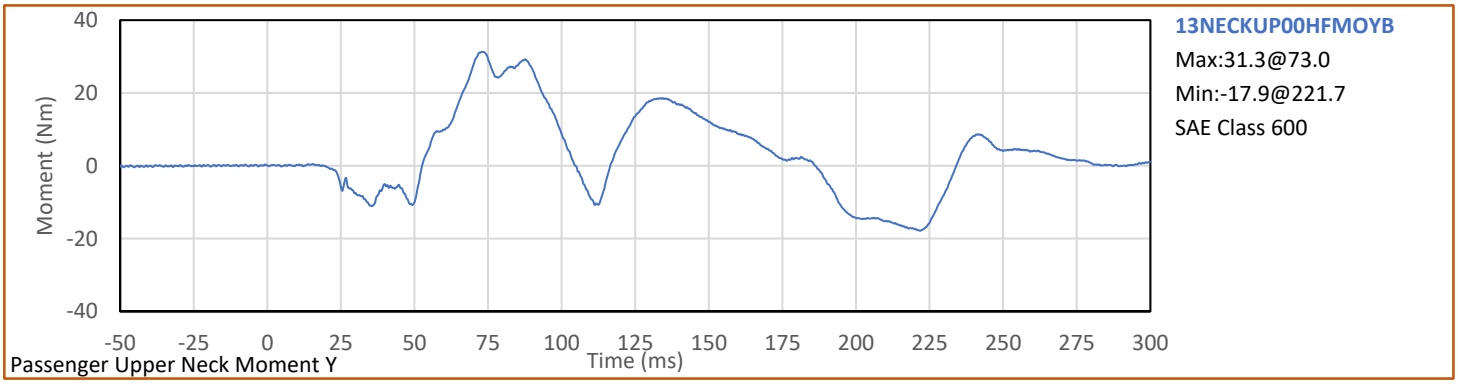
Passenger Head Resultant Acceleration Primary

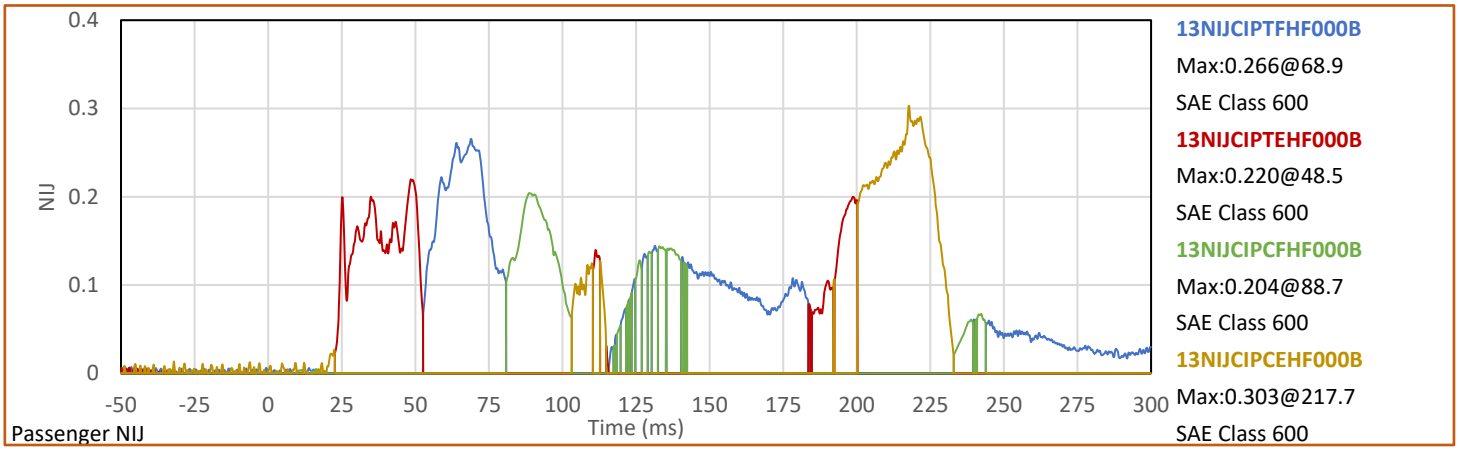


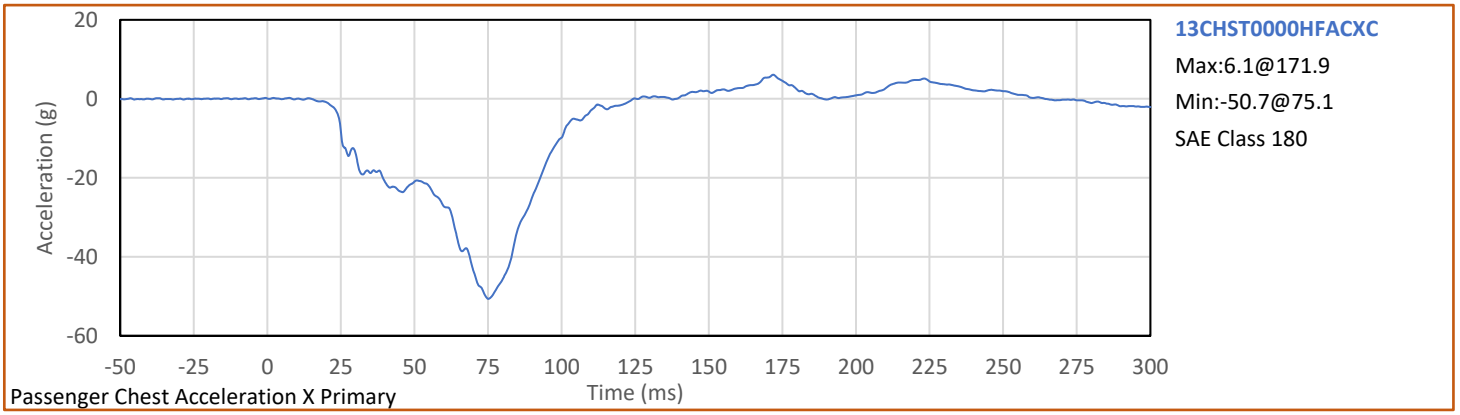
Passenger Chest Deflection


900
600
300
0
-300
Force (N)
-50 -25 0 25 50 75 100 125 150 175 200 225 250 275 300
Time (ms)
Passenger Upper Neck Force X
13NECKUP00HFFOXA
Max:604.1@87.1
Min:-231.4@222.6
SAE Class 1000


1000
0
-1000
Force (N)
-50 -25 0 25 50 75 100 125 150 175 200 225 250 275 300
Time (ms)
Passenger Upper Neck Force Z
13NECKUP00HFFOZA
Max:768.7@63.9
Min:-417.5@94.3
SAE Class 1000

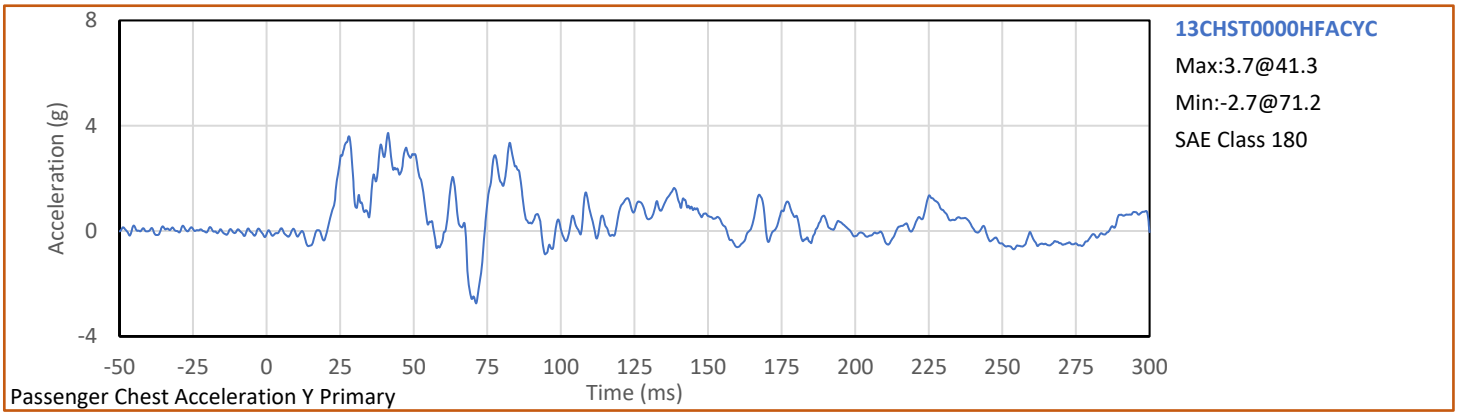

40
20
0
-20
-40
Moment (Nm)
-50 -25 0 25 50 75 100 125 150 175 200 225 250 275 300
Time (ms)
Passenger Upper Neck Moment Y
13NECKUP00HFMOYB
Max:31.3@73.0
Min:-17.9@221.7
SAE Class 600


0.4
0.3
0.2
0.1
0
NIJ
-50 -25 0 25 50 75 100 125 150 175 200 225 250 275 300
Time (ms)
Passenger NIJ
13NIJCIPTFHF000B
Max:0.266@68.9
SAE Class 600
13NIJCIPTEHF000B
Max:0.220@48.5
SAE Class 600
13NIJCIPCFHF000B
Max:0.204@88.7
SAE Class 600
13NIJCIPCEHF000B
Max:0.303@217.7
SAE Class 600



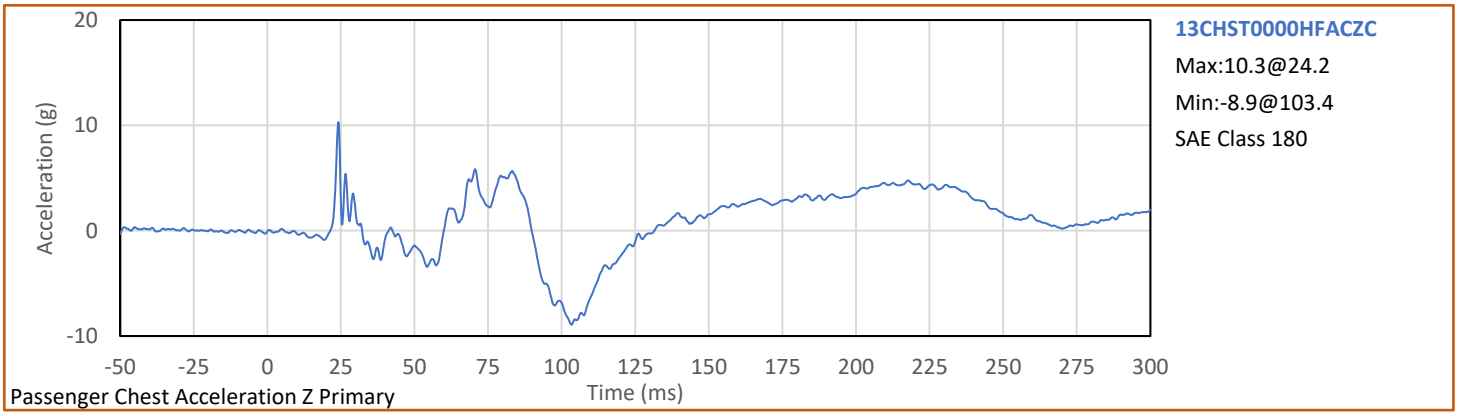
Passenger Chest Acceleration X Primary

13CHST0000HFACXC
Max:6.1@171.9
Min:-50.7@75.1
SAE Class 180



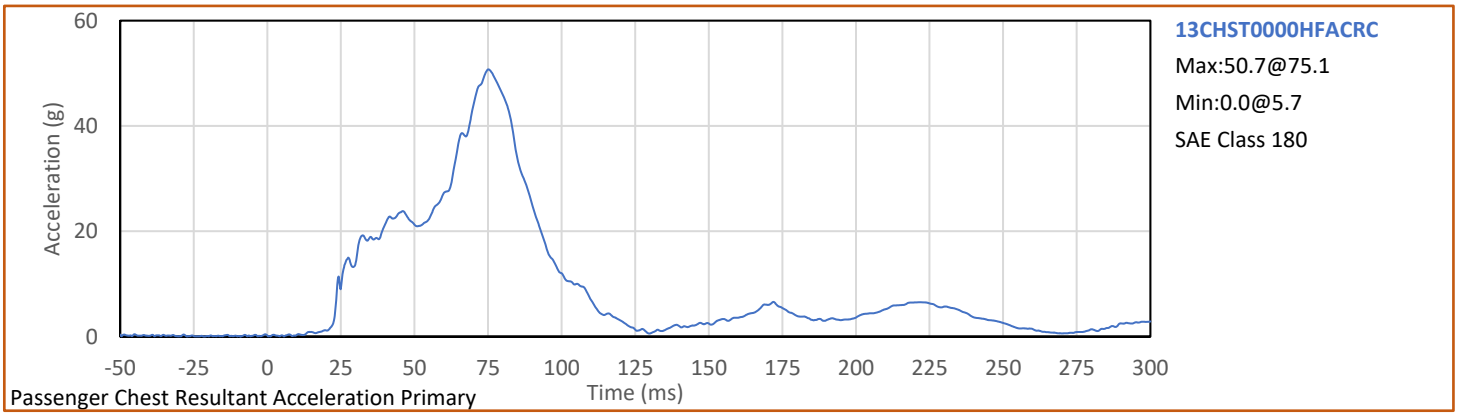
Passenger Chest Acceleration Y Primary

13CHST0000HFACYC
Max:3.7@41.3
Min:-2.7@71.2
SAE Class 180



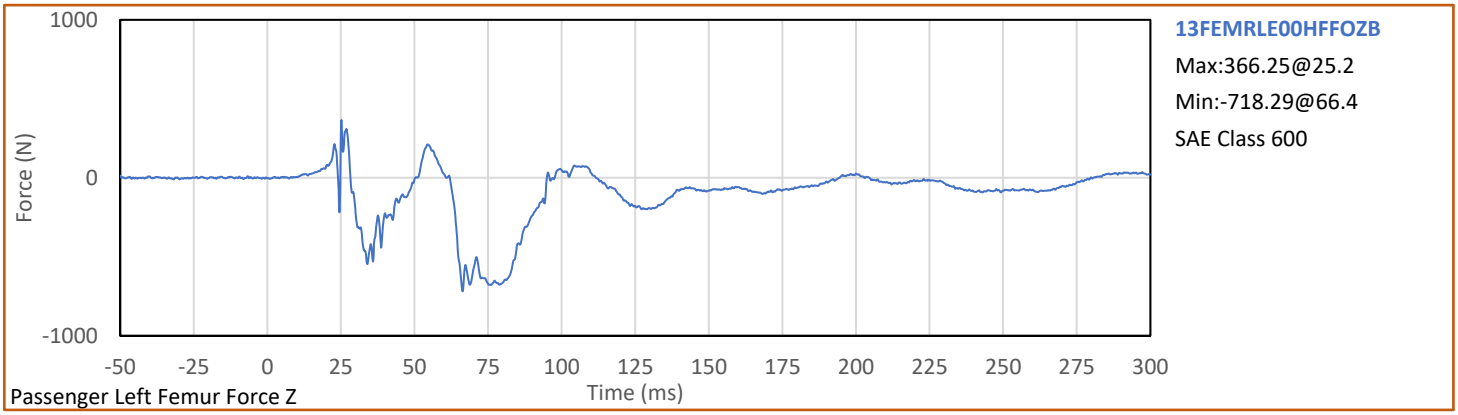
Passenger Chest Acceleration Z Primary

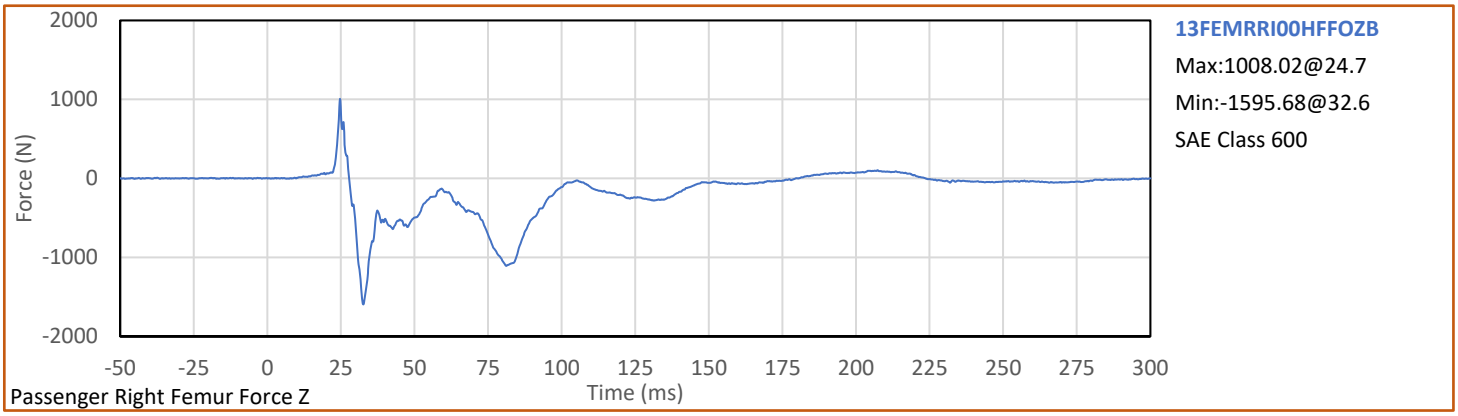
13CHST0000HFACZC
Max:10.3@24.2
Min:-8.9@103.4
SAE Class 180



Passenger Chest Resultant Acceleration Primary

13CHST0000HFACRC
Max:50.7@75.1
Min:0.0@5.7
SAE Class 180


1000
0
-1000
Force (N)
-50 -25 0 25 50 75 100 125 150 175 200 225 250 275 300
Time (ms)
Passenger Left Femur Force Z
13FEMRLE00HFFOZB
Max:366.25@25.2
Min:-718.29@66.4
SAE Class 600


2000
1000
0
-1000
-2000
Force (N)
-50 -25 0 25 50 75 100 125 150 175 200 225 250 275 300
Time (ms)
Passenger Right Femur Force Z
13FEMRRI00HFFOZB
Max:1008.02@24.7
Min:-1595.68@32.6
SAE Class 600

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: 2025-03-28

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: 2025-03-28

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.8	Pass
Laboratory Relative Humidity	%	10	70	37	Pass
A - Total sitting height	mm	879	889	885	Pass
B - Shoulder pivot height	mm	505	521	519	Pass
C - 'H' point height	mm	84	89	87	Pass
D - 'H' point location from backline	mm	135	140	136	Pass
E - Shoulder pivot from backline	mm	84	94	90	Pass
F - Thigh clearance	mm	140	155	146	Pass
G - Back of elbow to wrist pivot	mm	290	305	299	Pass
H - Head back to backline	mm	41	46	44	Pass
I - Shoulder to elbow length	mm	330	345	340	Pass
J - Elbow rest height	mm	190	211	200	Pass
K - Buttock to knee length	mm	579	604	590	Pass
L - Popliteal length	mm	429	455	443	Pass
M - Knee pivot height	mm	485	500	491	Pass
N - Buttock popliteal length	mm	452	477	466	Pass
O - Chest depth without jacket	mm	213	229	221	Pass
P - Foot length	mm	251	267	256	Pass
V - Shoulder breadth	mm	422	437	430	Pass
W - Foot breadth	mm	91	107	99	Pass
Y - Chest circum. (w/chest jacket)	mm	970	1001	984	Pass
Z - Waist circum.	mm	836	866	844	Pass
AA - Location for chest circum.	mm	429	434	431	Pass
BB - Location for waist circum.	mm	226	231	230	Pass
			Overall Test Results		Pass

Technician. J. Perez

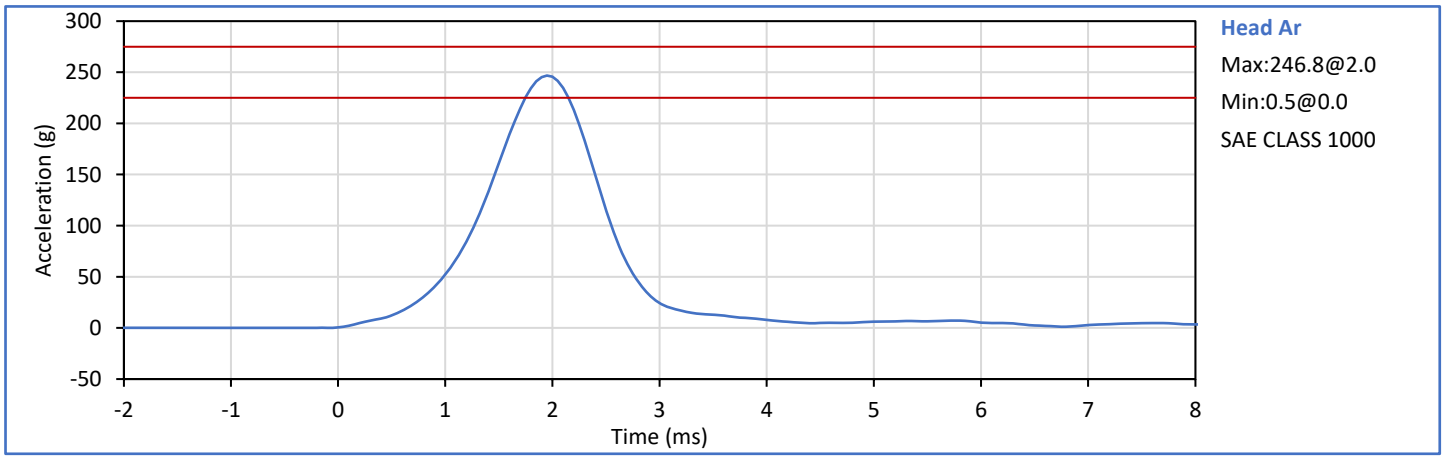
Approved By: J. Hernandez

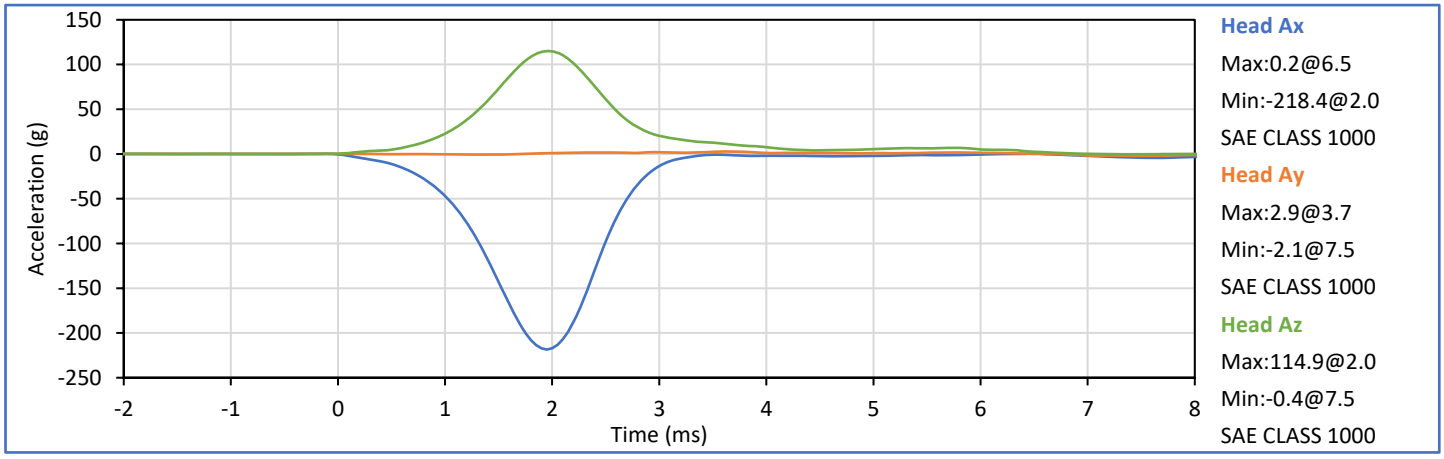
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Head Drop

ATD Serial No.: 360 Test Date: 2025-03-28

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.7	Pass
Laboratory Relative Humidity	%	10	70	35	Pass
Peak Resultant Acceleration	g	225.0	275.0	246.8	Pass
Peak Lateral Acceleration	g	-15.0	15.0	2.9	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

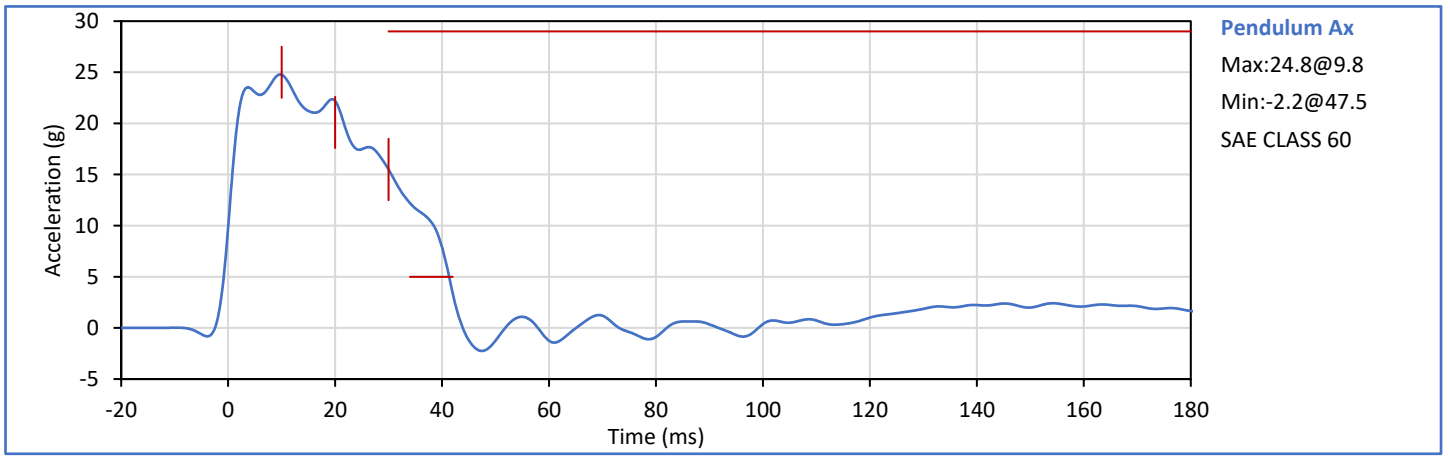
Approved By: J. Hernandez

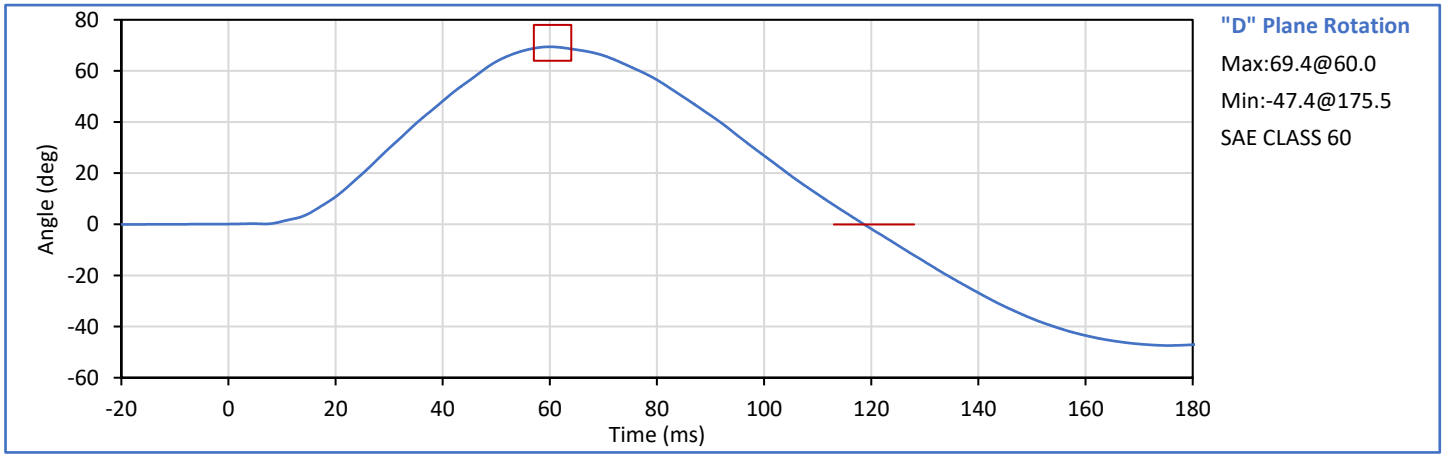
Applus IDIADA
KARCO

Hybrid III 50th Percentile Male ATD
Neck Flexion Test

ATD Serial No.: 360 Test Date: 2025-03-28

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.7	Pass
Laboratory Relative Humidity	%	10	70	38	Pass
Pendulum Velocity	m/s	6.89	7.13	7.04	Pass
Pendulum Deceleration at 10 ms	g	22.5	27.5	24.8	Pass
Pendulum Deceleration at 20 ms	g	17.6	22.6	22.2	Pass
Pendulum Deceleration at 30 ms	g	12.5	18.5	15.5	Pass
Peak Pendulum Decel After 30 ms	g	0.0	29.0	15.5	Pass
Deceleration Decay to Cross 5g	ms	34.0	42.0	41.3	Pass
"D" Plane Rotation peak	deg	64.0	78.0	69.4	Pass
	ms	57.0	64.0	60.0	Pass
"D" Plane Rotation Decay to Zero	ms	113.0	128.0	118.7	Pass
Moment About Occipital Condyle	Nm	88.1	108.5	95.1	Pass
	ms	47.0	58.0	54.1	Pass
Moment Decay, Peak to Zero	ms	97.0	107.0	99.1	Pass
			Overall Test Results		Pass





Technician: J. Perez

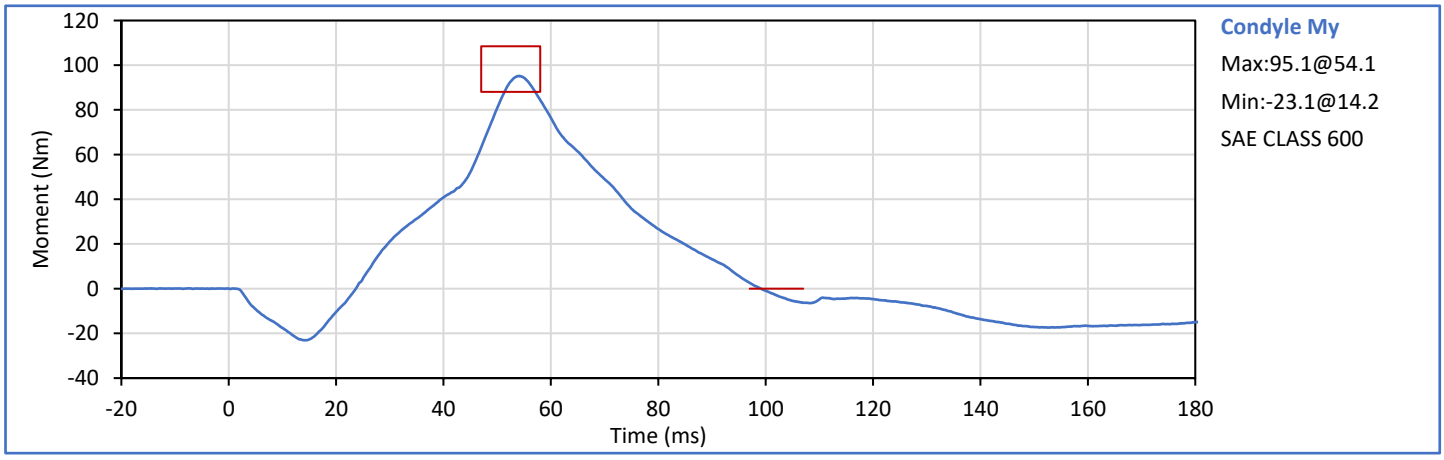
Approved By: J. Hernandez

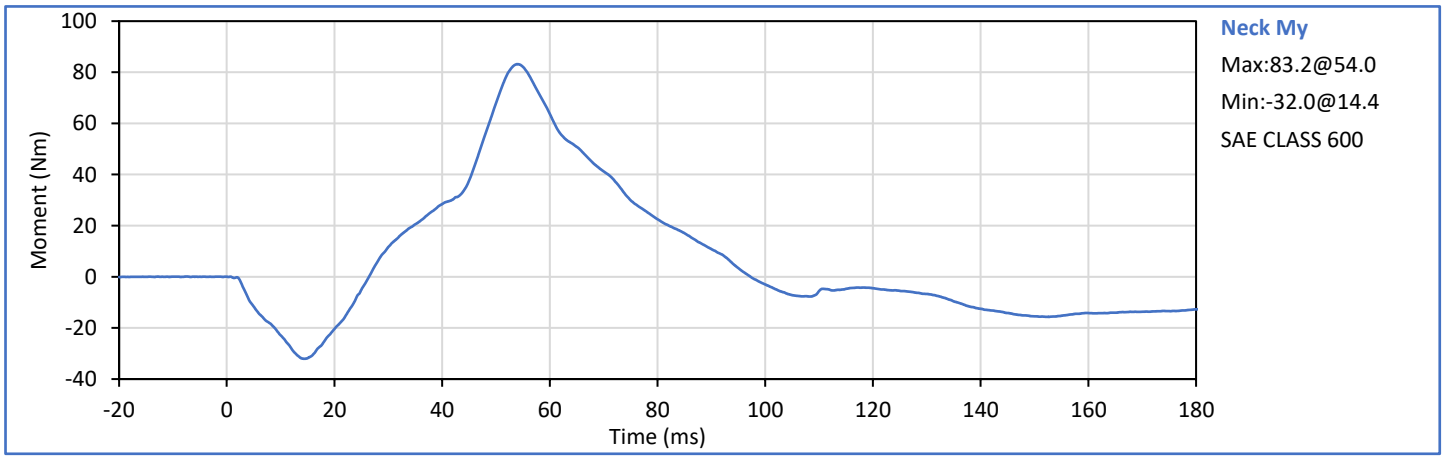
Applus IDIADA
KARCO

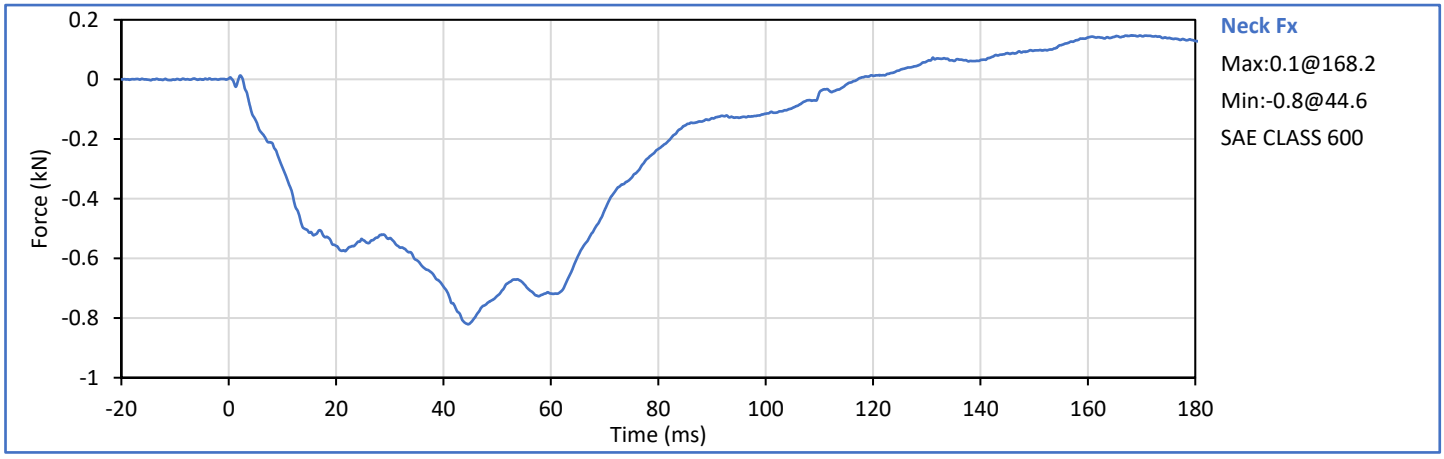
Hybrid III 50th Percentile Male ATD
Neck Flexion Test

ATD Serial No.: 360

Test Date: 2025-03-28





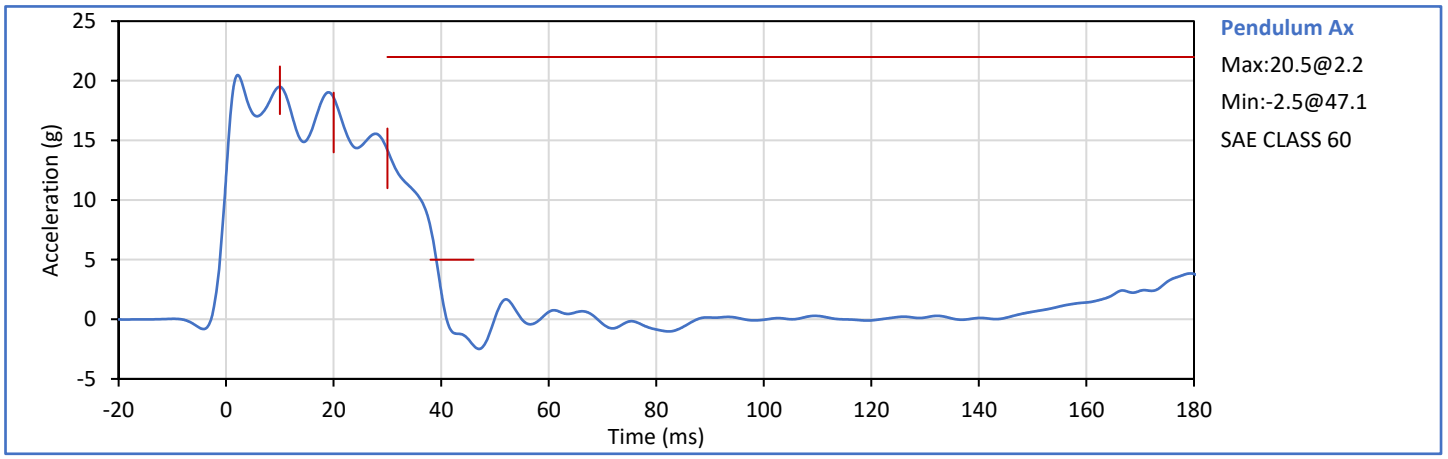


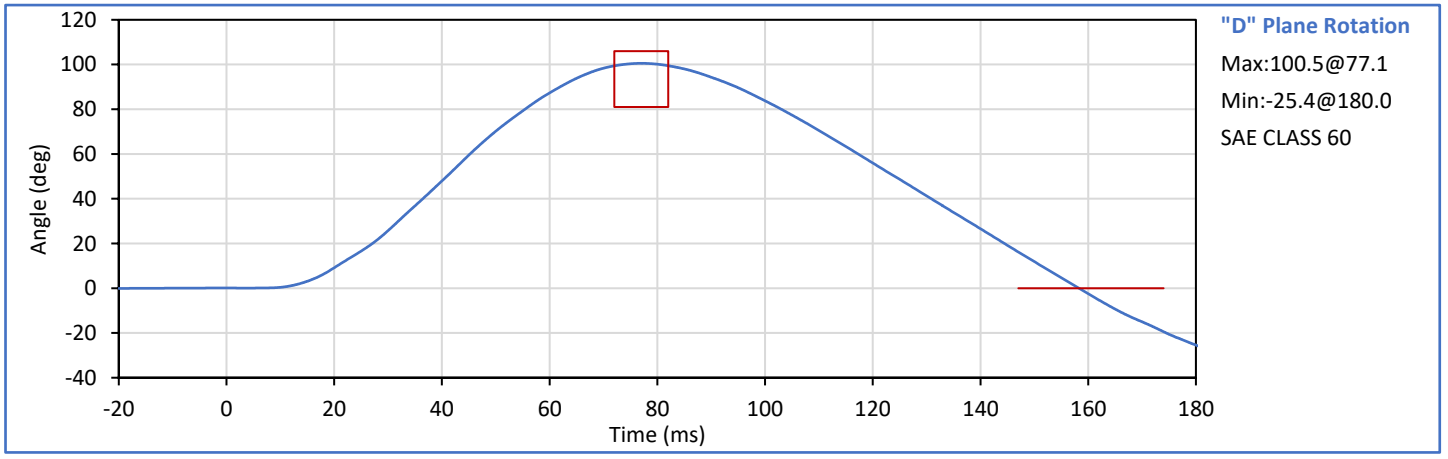
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Neck Extension Test

ATD Serial No.: 360 Test Date: 2025-03-28

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.7	Pass
Laboratory Relative Humidity	%	10	70	38	Pass
Pendulum Velocity	m/s	5.94	6.19	6.07	Pass
Pendulum Deceleration at 10 ms	g	17.2	21.2	19.5	Pass
Pendulum Deceleration at 20 ms	g	14.0	19.0	18.6	Pass
Pendulum Deceleration at 30 ms	g	11.0	16.0	14.2	Pass
Peak Pendulum Decel After 30 ms	g	0.0	22.0	14.2	Pass
Deceleration Decay to Cross 5g	ms	38.0	46.0	39.1	Pass
"D" Plane Rotation peak	deg	81.0	106.0	100.5	Pass
	ms	72.0	82.0	77.1	Pass
"D" Plane Rotation Decay to Zero	ms	147.0	174.0	158.3	Pass
Moment About Occipital Condyle	Nm	-79.9	-52.9	-75.2	Pass
	ms	65.0	79.0	71.0	Pass
Moment Decay, Peak to Zero	ms	120.0	148.0	143.8	Pass
			Overall Test Results		Pass



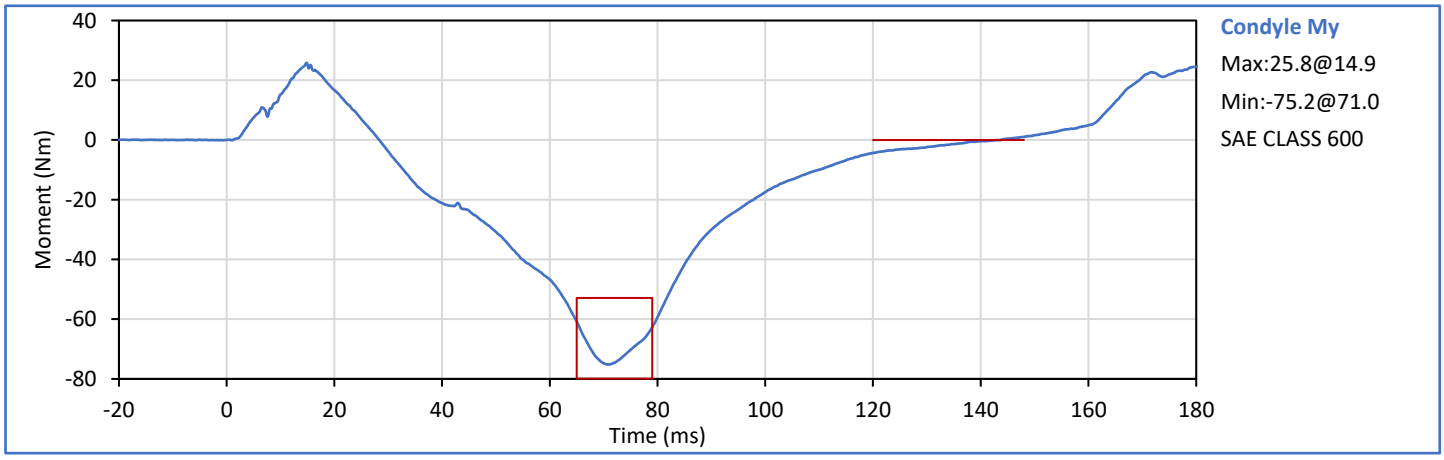


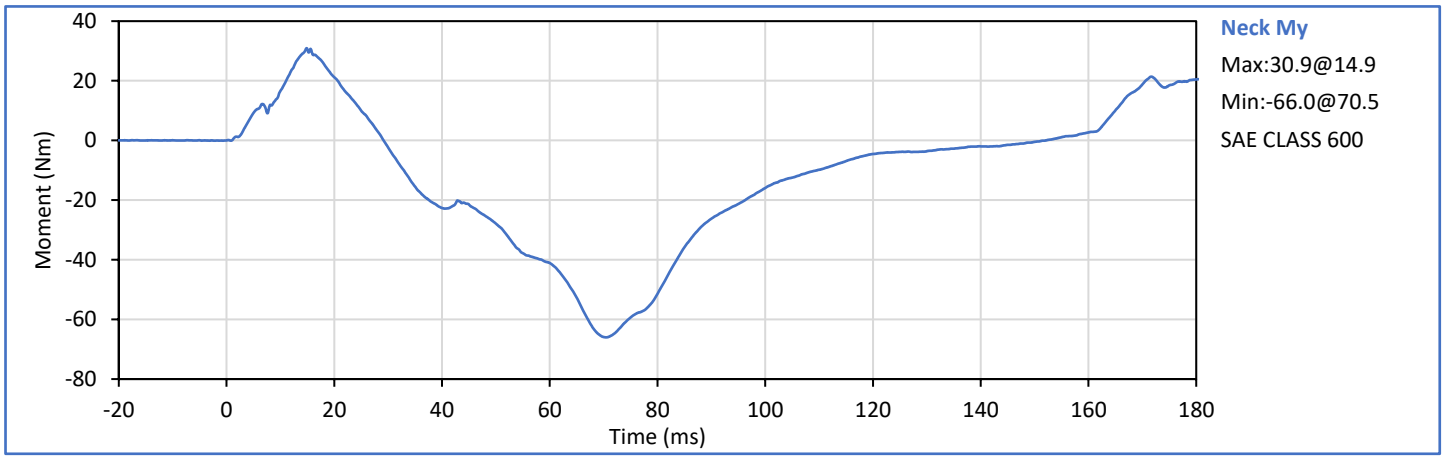
Technician: J. Perez

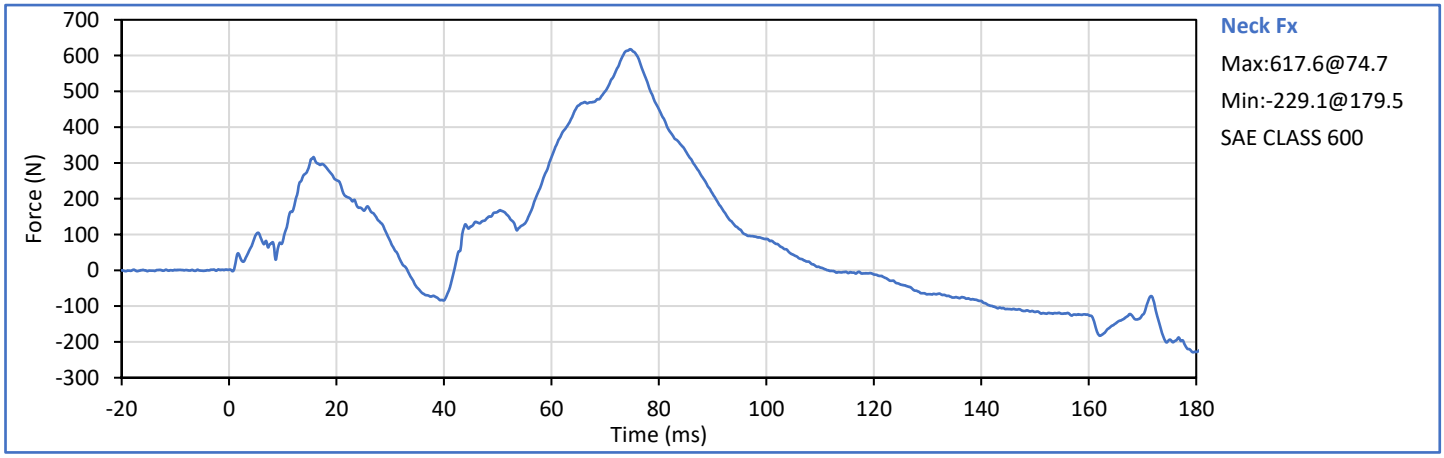
Approved By: J. Hernandez

Hybrid III 50th Percentile Male ATD
Neck Extension Test

ATD Serial No.: 360 Test Date: 2025-03-28





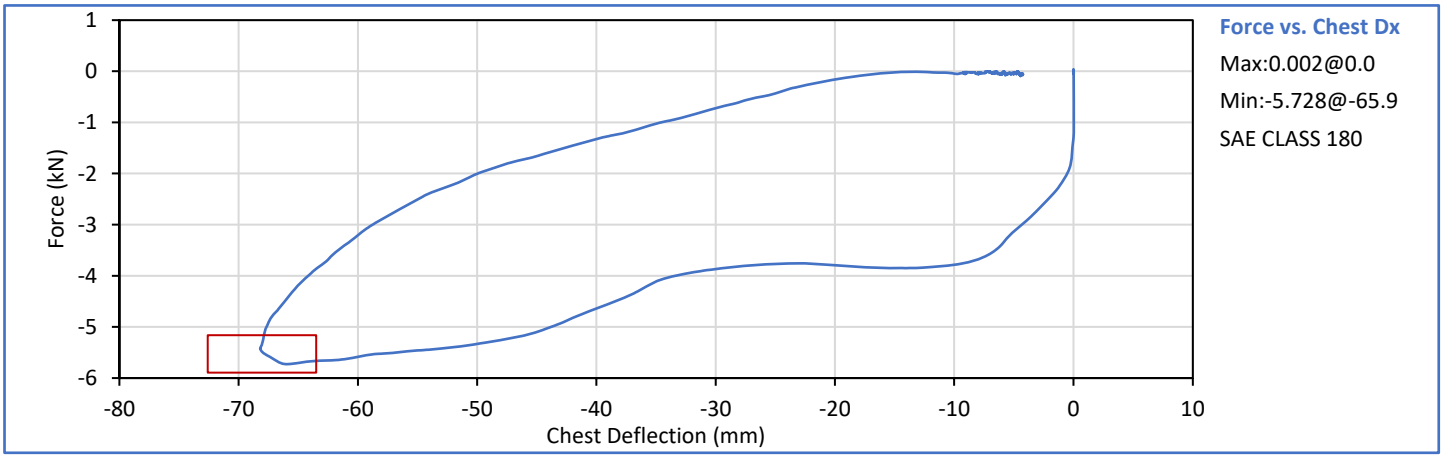


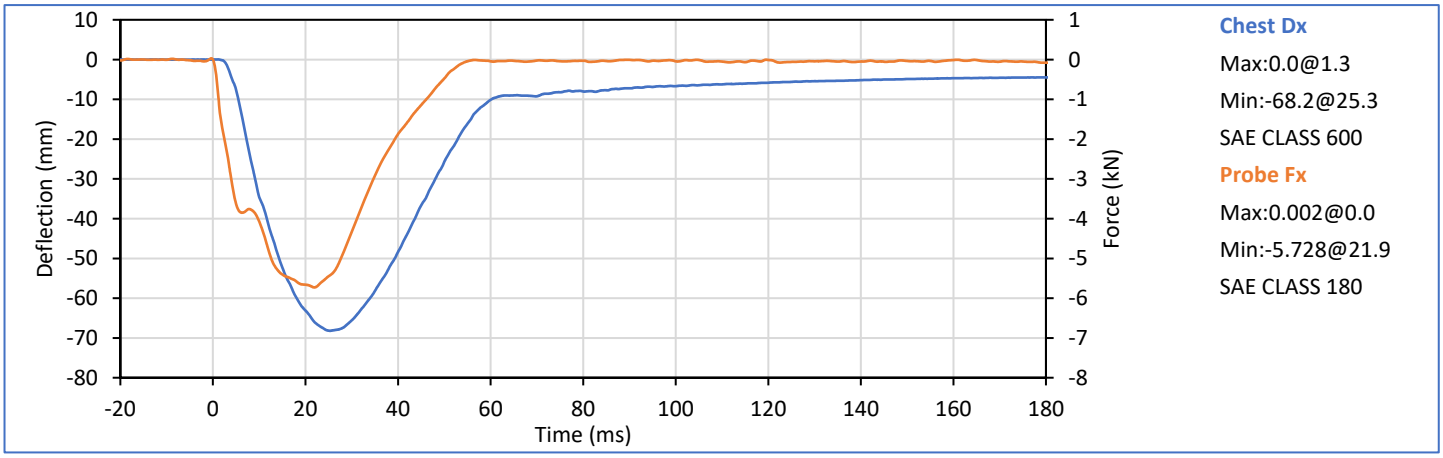
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Thorax Impact

ATD Serial No.: 360 Test Date: 2025-03-28

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	32	Pass
Probe Velocity	m/s	6.58	6.82	6.71	Pass
Peak Chest Deflection	mm	-72.6	-63.5	-68.2	Pass
Peak Probe Force	kN	-5.893	-5.159	-5.728	Pass
Internal Hysterisis	%	69.0	85.0	69.8	Pass
			Overall Test Results		Pass





Technician: J. Perez

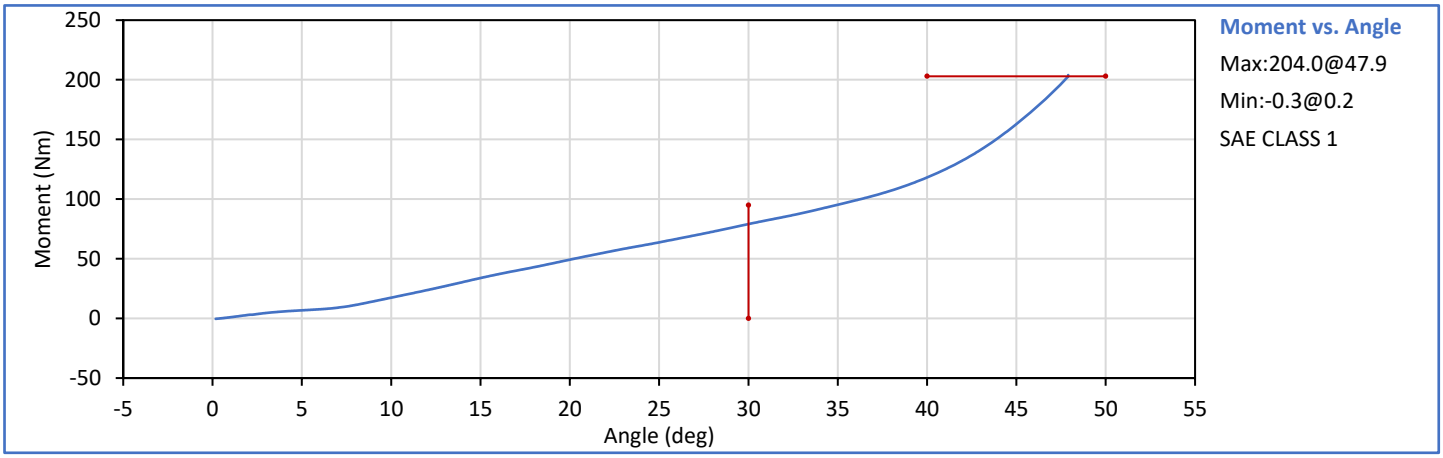
Approved By: J. Hernandez

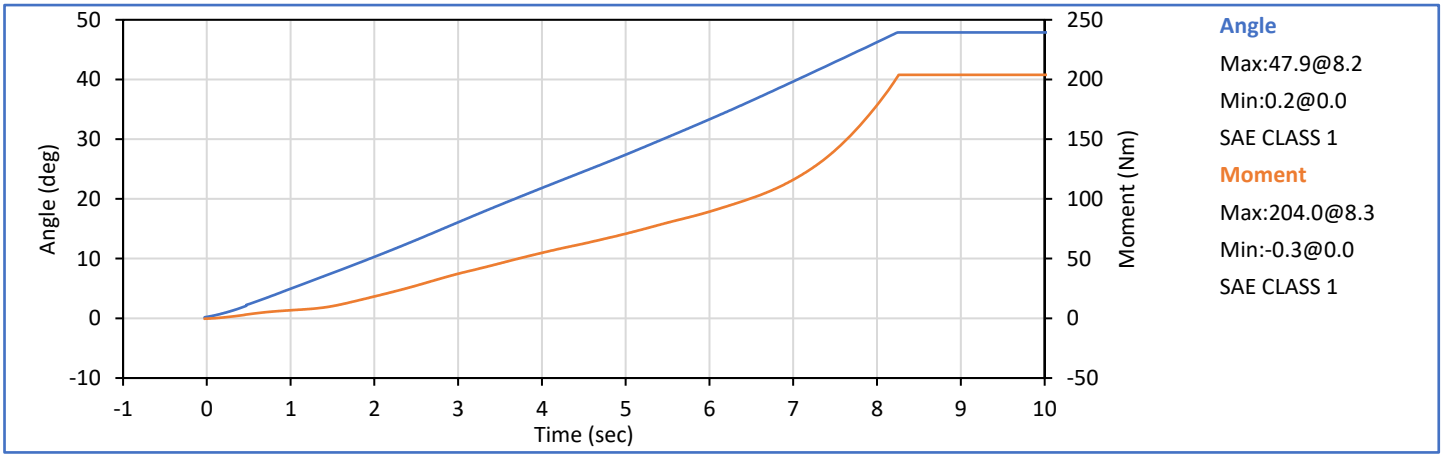
Applus IDIADA KARCO

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

ATD Serial No.: 360 Test Date: 2025-04-02

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	38	Pass
Left Hip Rotation Rate	deg/s	5.0	10.0	5.7	Pass
Left Femur Torque at 30°	Nm	0.0	95.0	79.0	Pass
Left Hip Rotation at 203 Nm	deg	40.0	50.0	47.9	Pass
			Overall Test Results		Pass





Technician: J. Perez

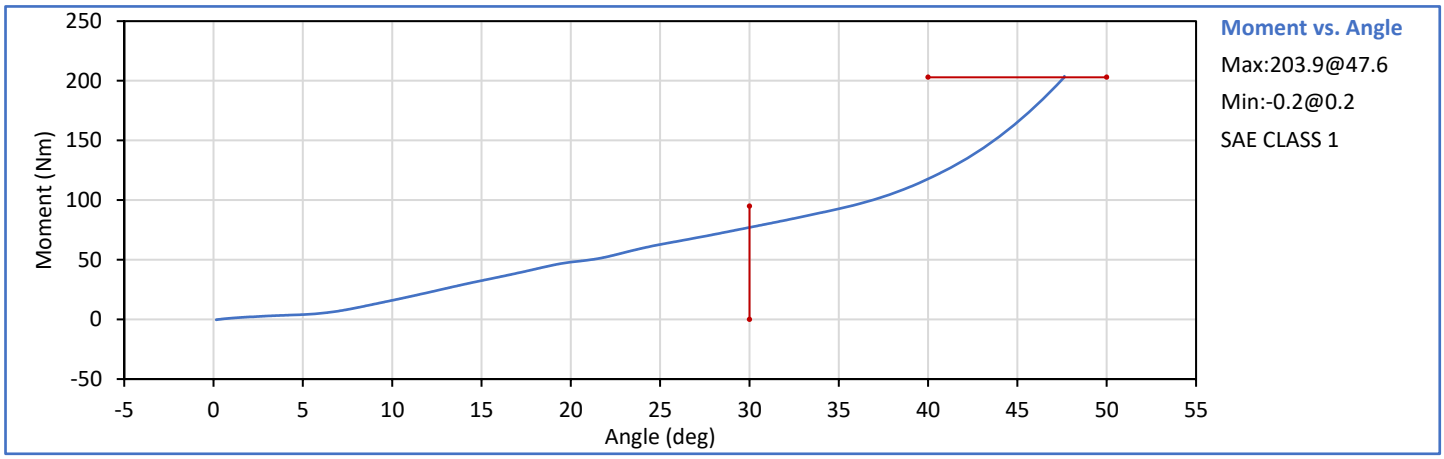
Approved By: J. Hernandez

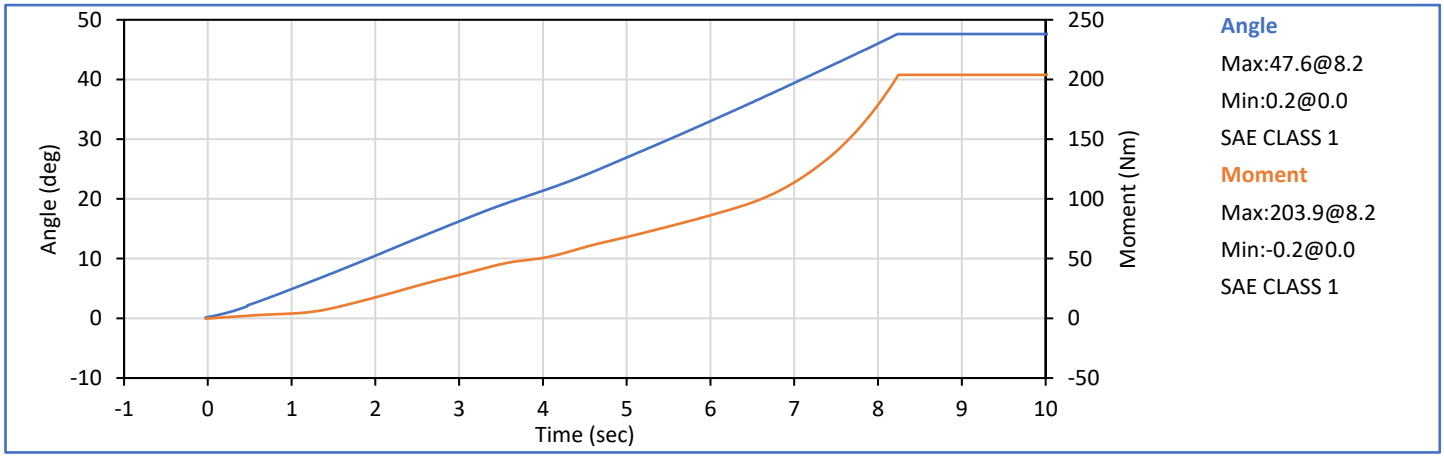
Applus IDIADA
KARCO

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

ATD Serial No.: 360 Test Date: 2025-04-02

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	37	Pass
Right Hip Rotation Rate	deg/s	5.0	10.0	5.7	Pass
Right Femur Torque at 30°	Nm	0.0	95.0	77.0	Pass
Right Hip Rotation at 203 Nm	deg	40.0	50.0	47.6	Pass
			Overall Test Results		Pass





Technician: J. Perez

Approved By: J. Hernandez

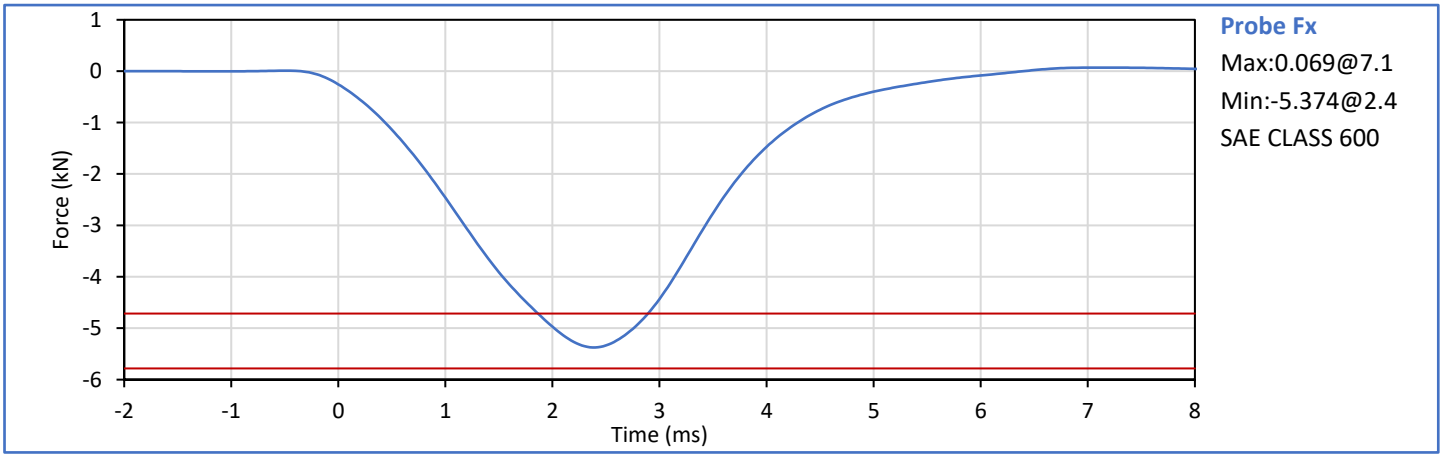
Applus IDIADA
KARCO

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

ATD Serial No.: 360

Test Date: 2025-03-29

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.7	Pass
Laboratory Relative Humidity	%	10	70	36	Pass
Probe Velocity	m/s	2.070	2.130	2.103	Pass
Peak Resistive Force	kN	-5.782	-4.715	-5.374	Pass
			Overall Test Results		Pass



Technician: J. Perez

Approved By: J. Hernandez

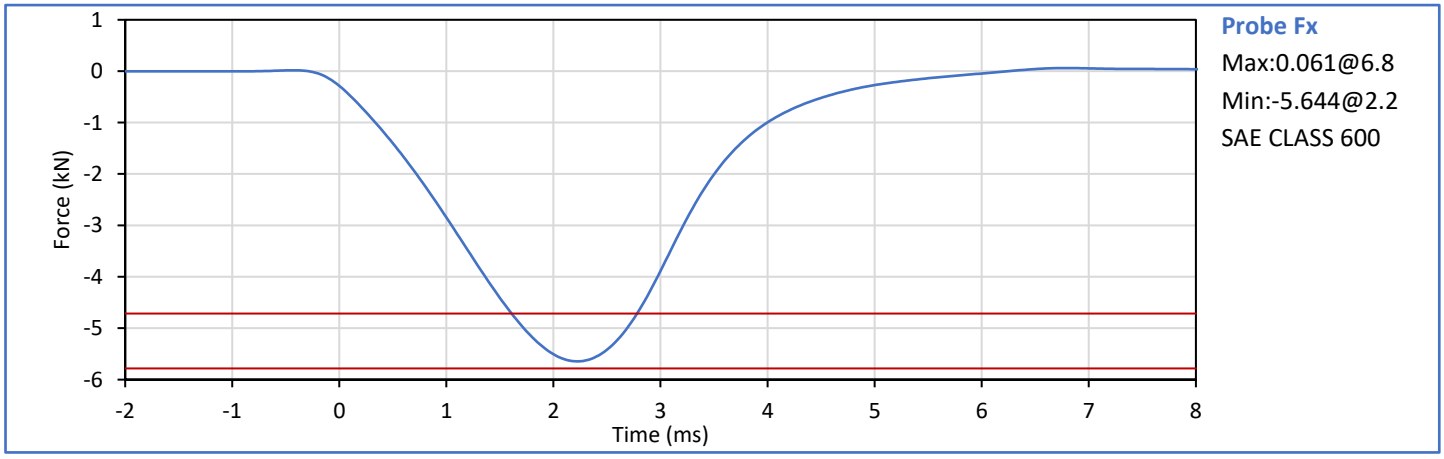
Applus IDIADA
KARCO

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

ATD Serial No.: 360

Test Date: 2025-03-29

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.7	Pass
Laboratory Relative Humidity	%	10	70	36	Pass
Probe Velocity	m/s	2.070	2.130	2.105	Pass
Peak Resistive Force	kN	-5.782	-4.715	-5.644	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: 2025-03-28

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: 2025-03-28

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	38	Pass
A - Total sitting height	mm	775	800	793	Pass
B - Shoulder pivot height	mm	432	457	449	Pass
C - 'H' point height	mm	81	86	85	Pass
D - 'H' point location from backline	mm	145	150	149	Pass
E - Shoulder pivot from backline	mm	69	84	81	Pass
F - Thigh clearance	mm	119	135	126	Pass
G - Back of elbow to wrist pivot	mm	244	259	257	Pass
H - Head back to backline	mm	41	46	44	Pass
I - Shoulder to elbow length	mm	277	297	285	Pass
J - Elbow rest height	mm	183	203	195	Pass
K - Buttock to knee length	mm	521	546	539	Pass
L - Popliteal length	mm	356	376	365	Pass
M - Knee pivot height	mm	394	419	408	Pass
N - Buttock popliteal length	mm	414	439	434	Pass
O - Chest depth without jacket	mm	175	191	184	Pass
P - Foot length	mm	219	234	230	Pass
R - Buttock to Knee Pivot Length	mm	457	483	470	Pass
S - Head Breadth	mm	137	147	143	Pass
T - Head Depth	mm	178	188	184	Pass
U - Hip Breadth	mm	300	315	307	Pass
V - Shoulder breadth	mm	351	366	361	Pass
W - Foot breadth	mm	79	94	87	Pass
X - Head circum.	mm	528	549	538	Pass
Y - Chest circum. (w/chest jacket)	mm	851	881	869	Pass
Z - Waist circum.	mm	760	790	770	Pass
AA - Location for chest circum.	mm	333	358	345	Pass
BB - Location for waist circum.	mm	160	170	163	Pass
			Overall Test Results		Pass

Technician: J. Perez

Approved By: J. Hernandez

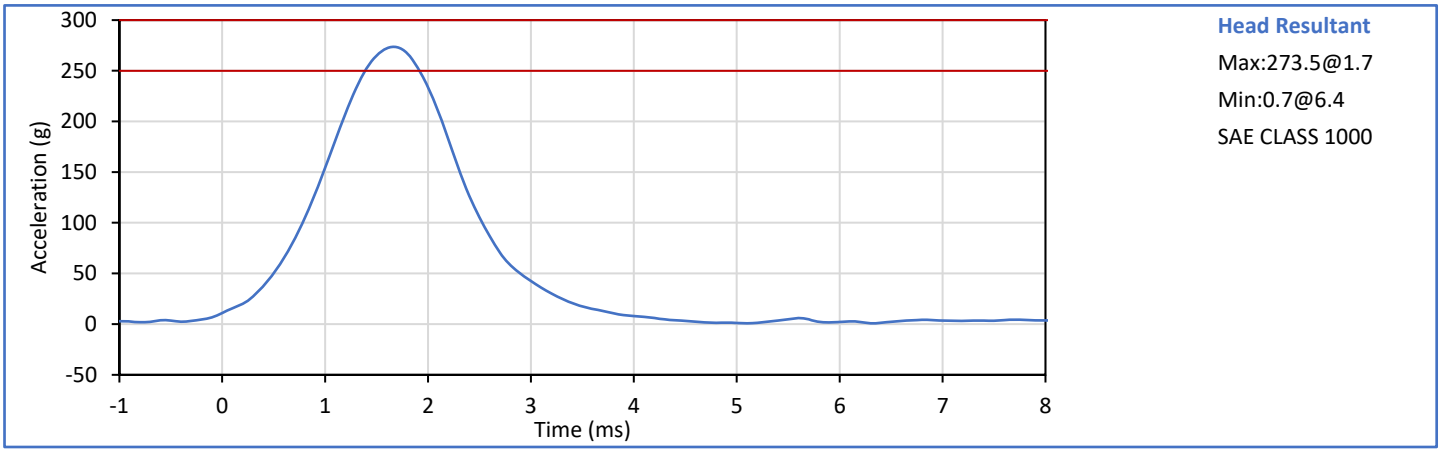
Applus IDIADA KARCO

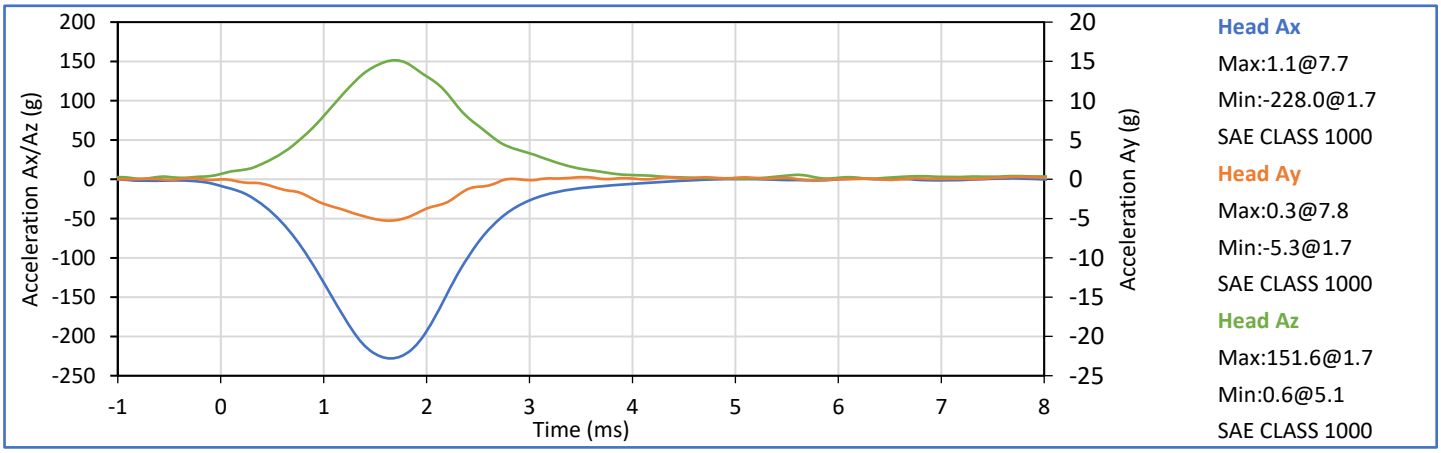
Hybrid III 5th Percentile Female ATD
Head Drop Test

ATD Serial No.: DH1644

Test Date: 2025-03-28

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.4	Pass
Laboratory Humidity	%	10	70	38	Pass
Peak Resultant Acceleration	g	250.0	300.0	273.5	Pass
Peak Lateral Acceleration	g	-15.0	15.0	-5.3	Pass
Oscillations After Main Pulse	%	0.0	10.0	2.0	Pass
Is Acceleration Unimodal?	Yes/No	Yes		Yes	Pass
			Overall Test Results		Pass





Technician: J. Perez

Approved By: J. Hernandez

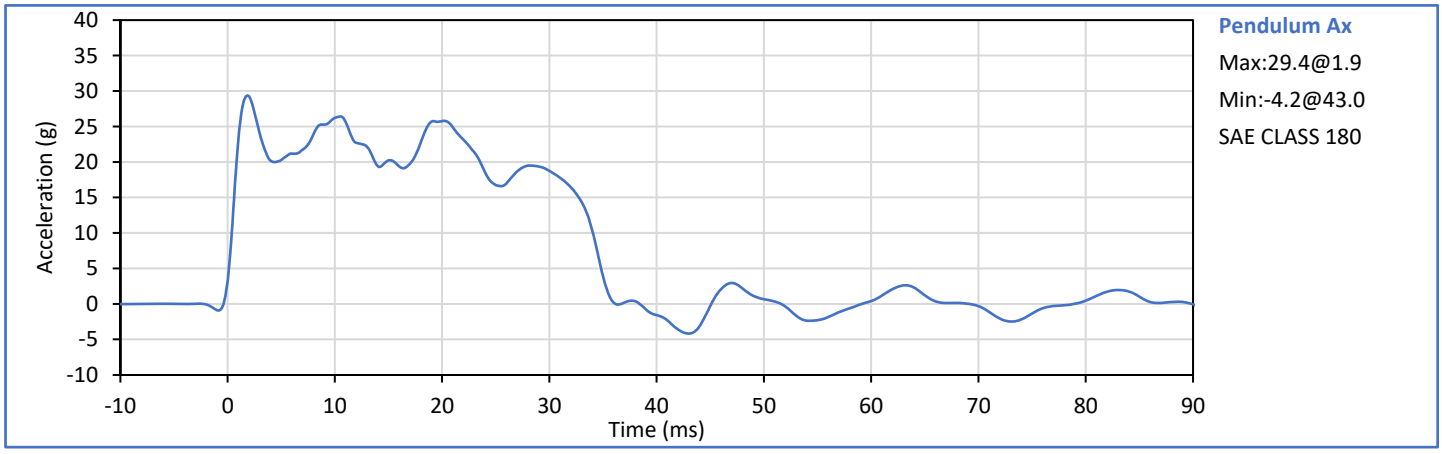
Applus IDIADA KARCO

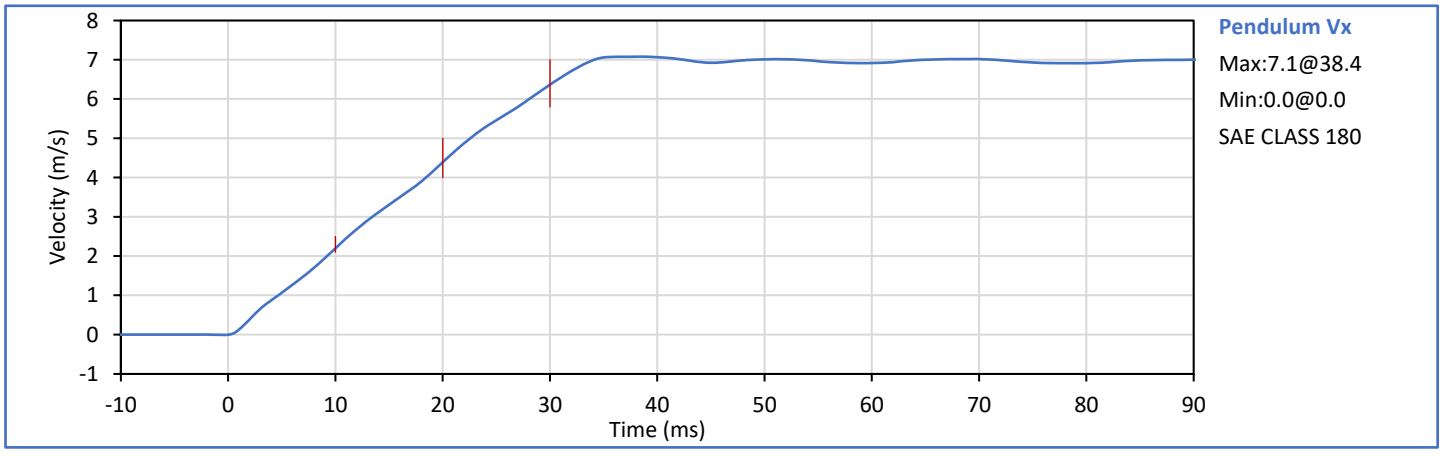
Hybrid III 5th Percentile Female ATD
Neck Flexion Test

ATD Serial No.: DH1644

Test Date: 2025-03-28

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.2	Pass
Laboratory Humidity	%	10	70	38	Pass
Pendulum Velocity	m/s	6.89	7.13	7.04	Pass
Pendulum Velocity at 10 ms	m/s	2.10	2.50	2.19	Pass
Pendulum Velocity at 20 ms	m/s	4.00	5.00	4.39	Pass
Pendulum Velocity at 30 ms	m/s	5.80	7.00	6.36	Pass
Peak "D" Plane Rotation	deg	77.0	91.0	83.9	Pass
Peak Moment in Rotation	Nm	69.0	83.0	78.1	Pass
Positive Moment Decay to 10 Nm	ms	80.0	100.0	86.5	Pass
			Overall Test Results		Pass





Technician: J. Perez

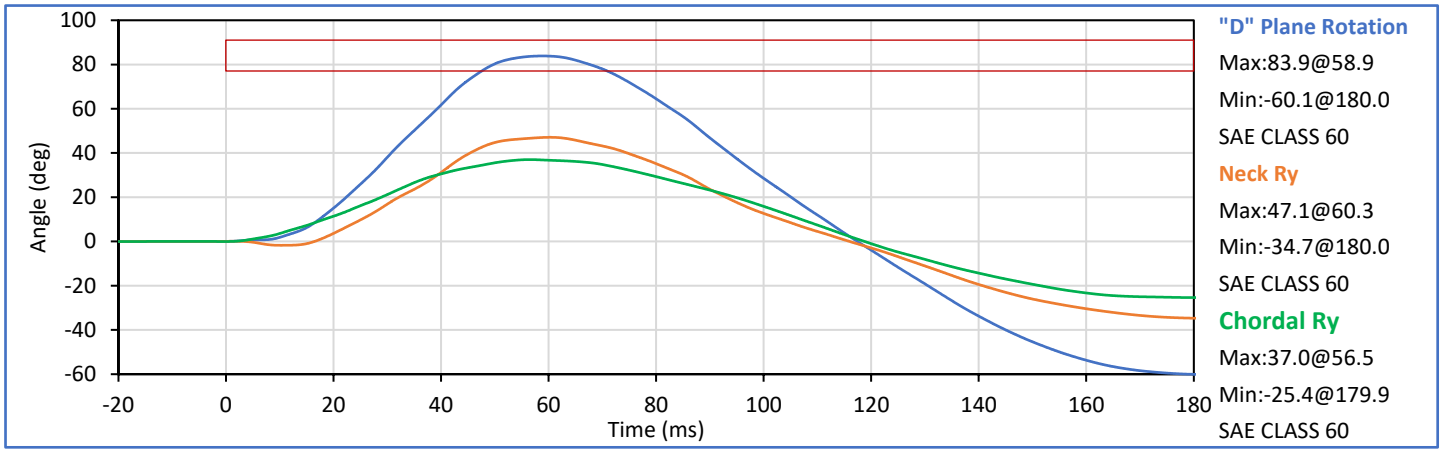
Approved By: J. Hernandez

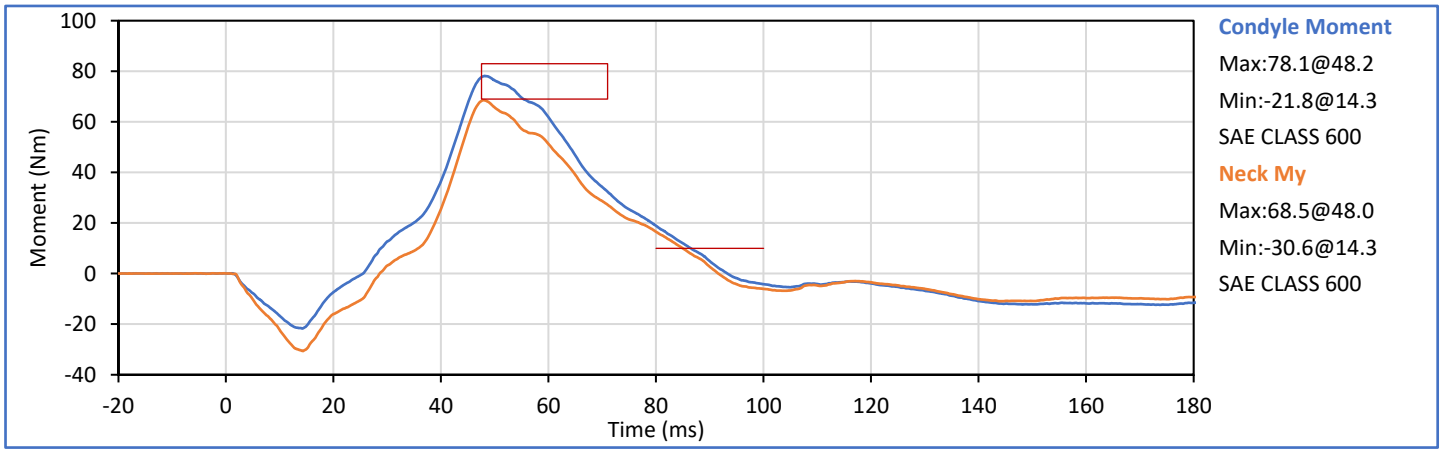
Applus IDIADA KARCO

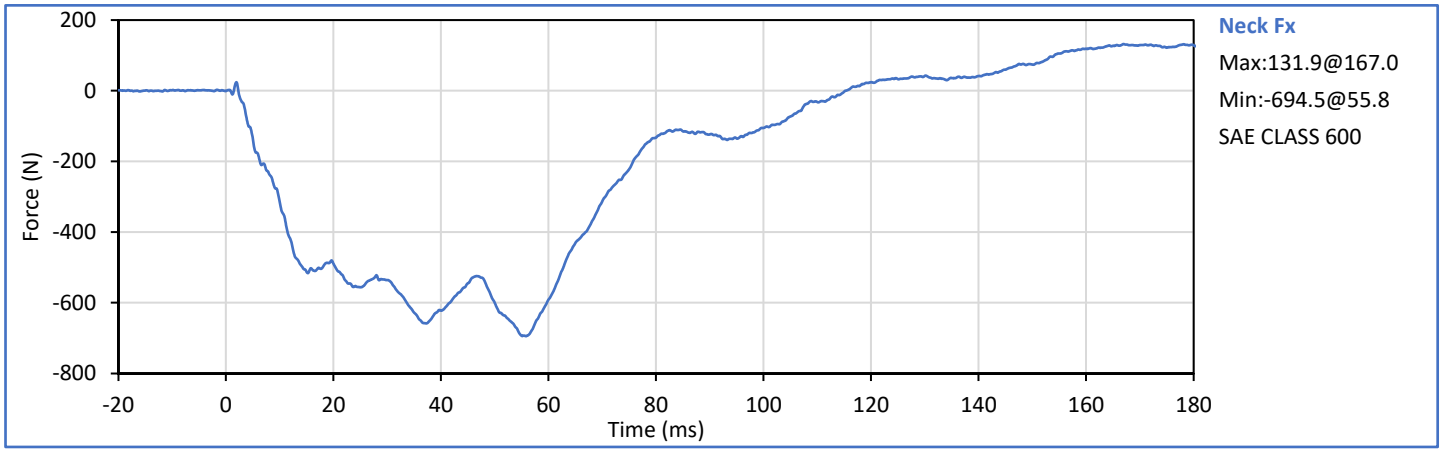
Hybrid III 5th Percentile Female ATD
Neck Flexion Test

ATD Serial No.: DH1644

Test Date: 2025-03-28





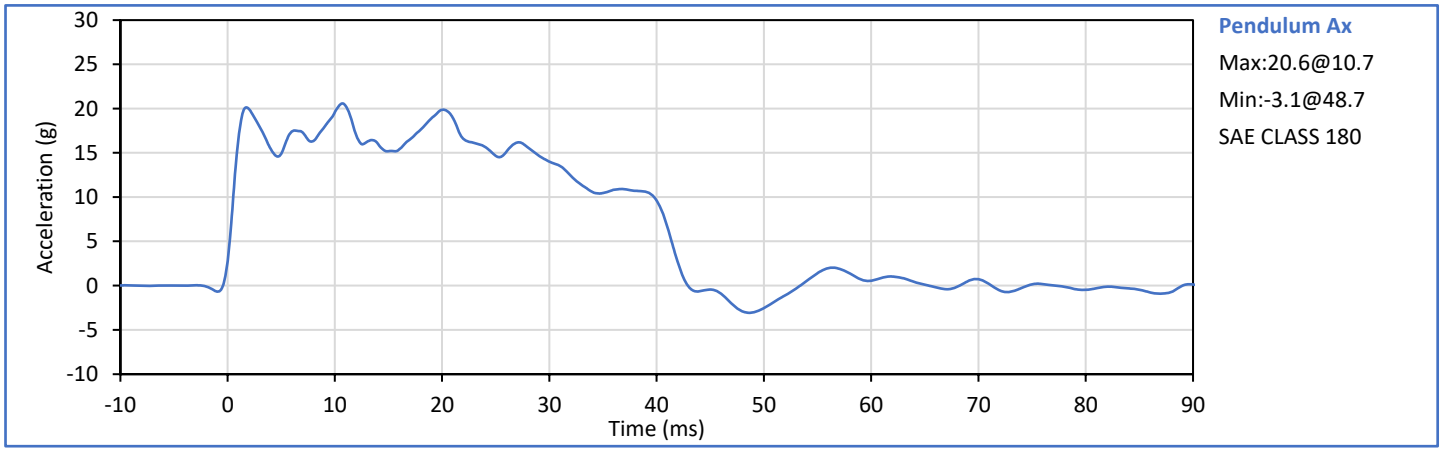


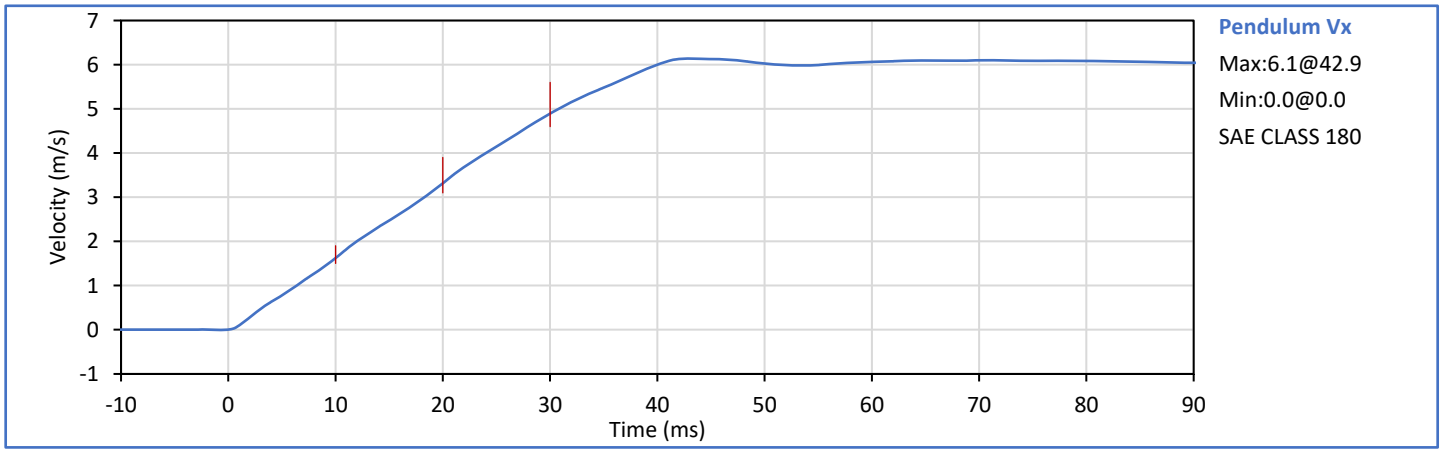
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Neck Extension Test

ATD Serial No.: DH1644 Test Date: 2025-03-28

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.2	Pass
Laboratory Relative Humidity	%	10	70	37	Pass
Pendulum Velocity	m/s	5.95	6.19	6.10	Pass
Pendulum Velocity at 10 ms	m/s	1.50	1.90	1.62	Pass
Pendulum Velocity at 20 ms	m/s	3.10	3.90	3.32	Pass
Pendulum Velocity at 30 ms	m/s	4.60	5.60	4.89	Pass
Peak "D" Plane Rotation	deg	99.0	114.0	104.0	Pass
Peak Moment in Rotation	Nm	-65.0	-53.0	-56.3	Pass
Negative Moment Decay to -10 Nm	ms	94.0	114.0	106.4	Pass
			Overall Test Results		Pass





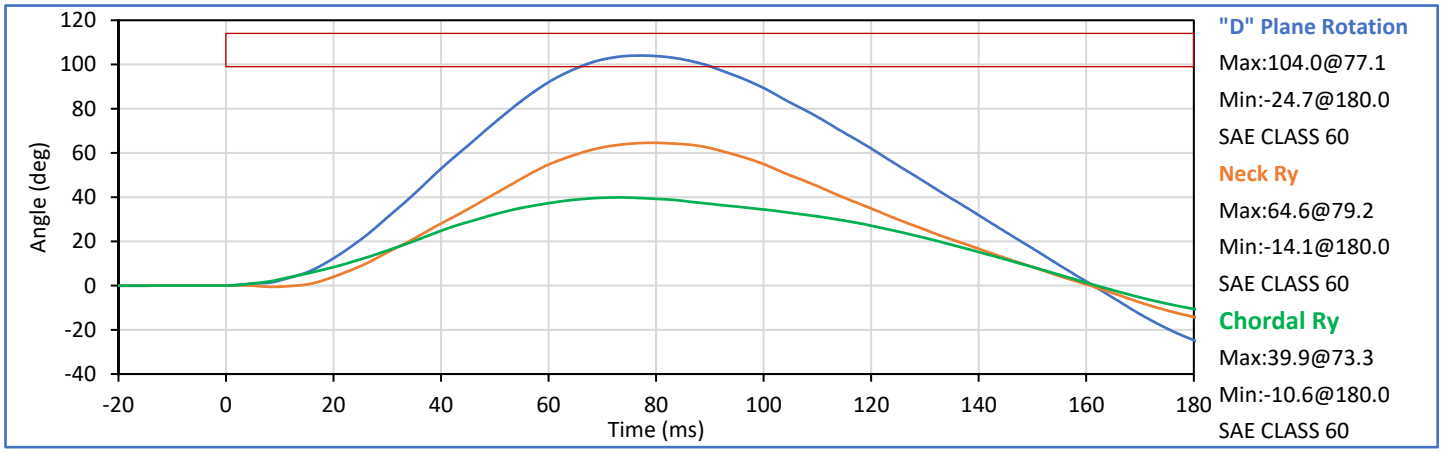
Technician: J. Perez

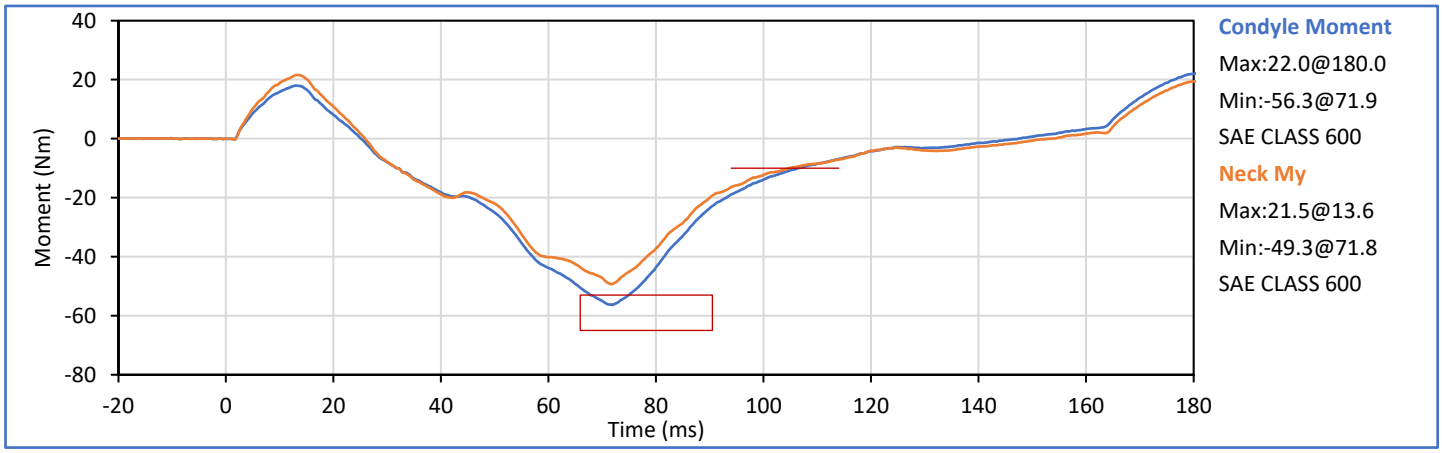
Approved By: J. Hernandez

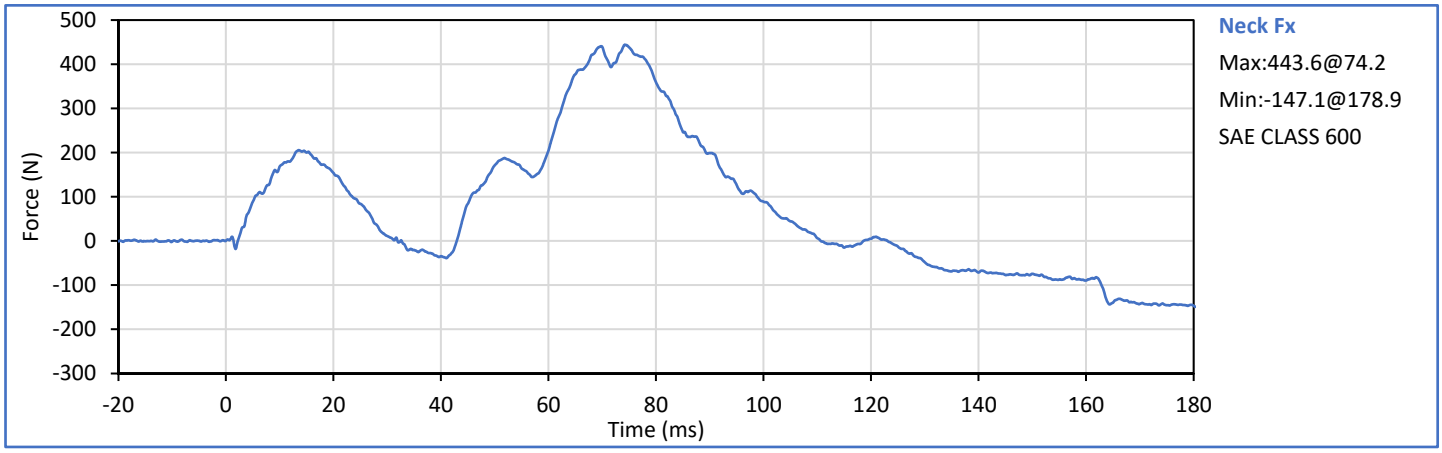
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Neck Extension Test

ATD Serial No.: DH1644 Test Date: 2025-03-28





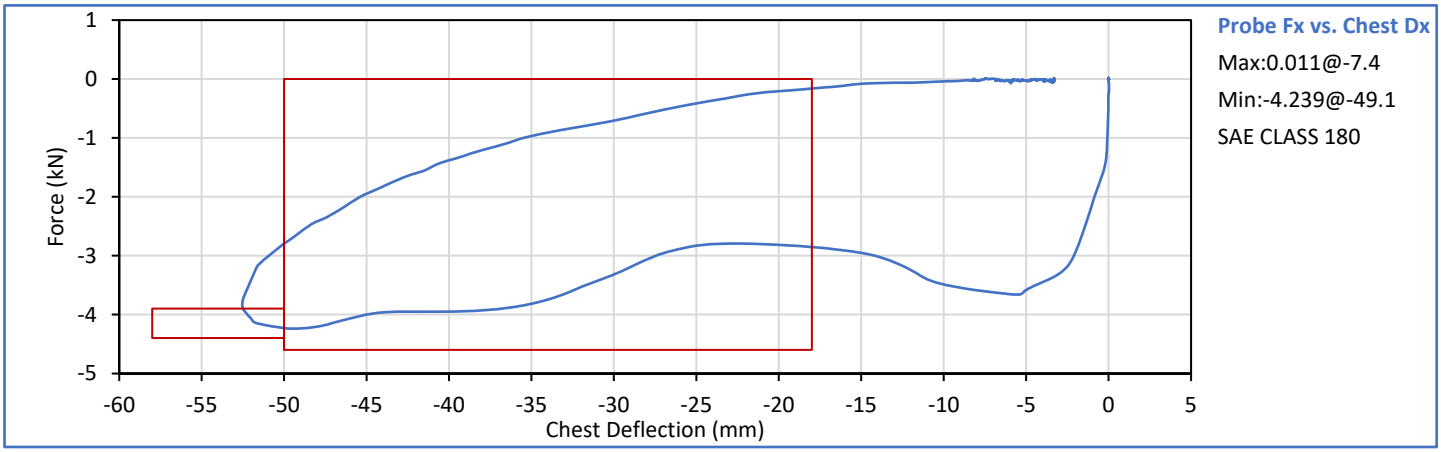


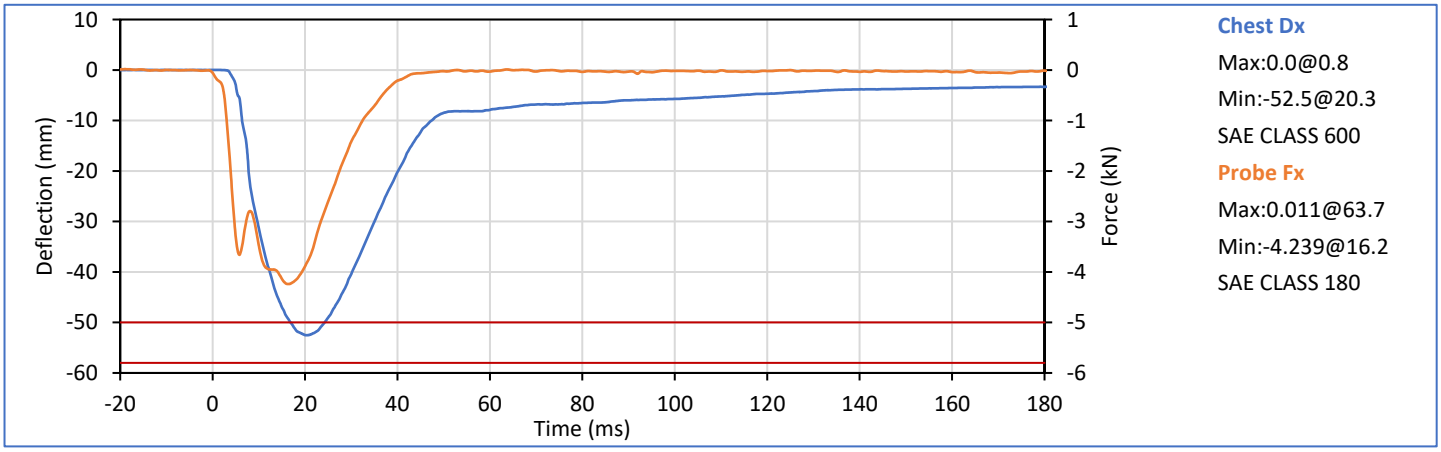
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Thorax Impact

ATD Serial No.: DH1644 Test Date: 2025-04-02

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.3	Pass
Laboratory RelativeHumidity	%	10	70	38	Pass
Probe Velocity	m/s	6.59	6.83	6.70	Pass
Peak Chest Deflection	mm	-58.0	-50.0	-52.5	Pass
Peak Probe Force, 50 and 58 mm	kN	-4.400	-3.900	-4.232	Pass
Peak Probe Force, 18 and 50 mm	kN	-4.600	0.000	-4.239	Pass
Internal Hysterisis	%	69.0	85.0	75.8	Pass
			Overall Test Results		Pass





Technician: J. Perez

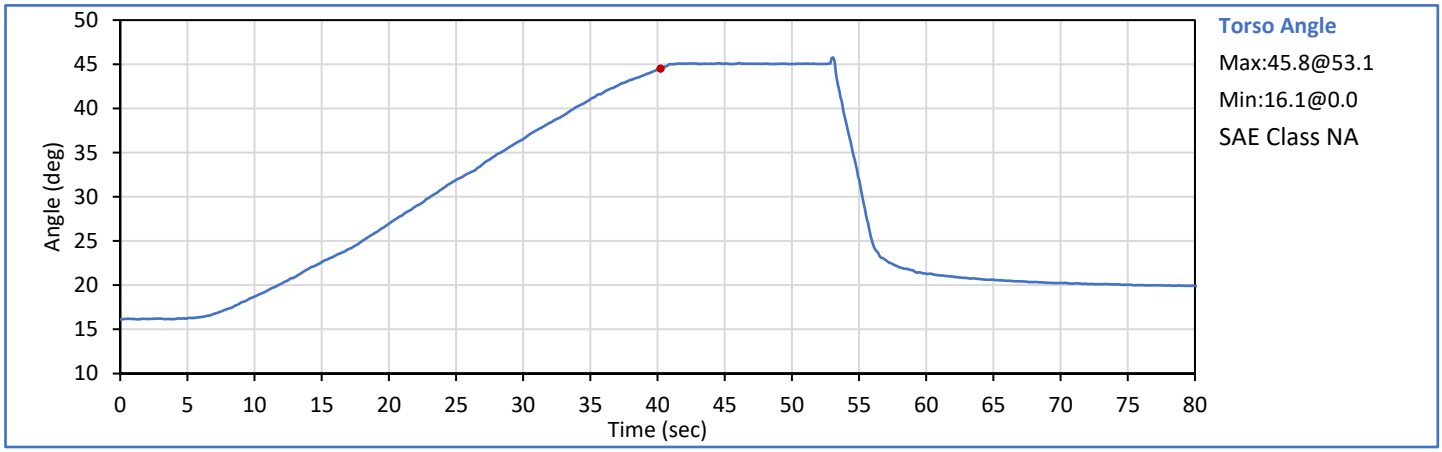
Approved By: J. Hernandez

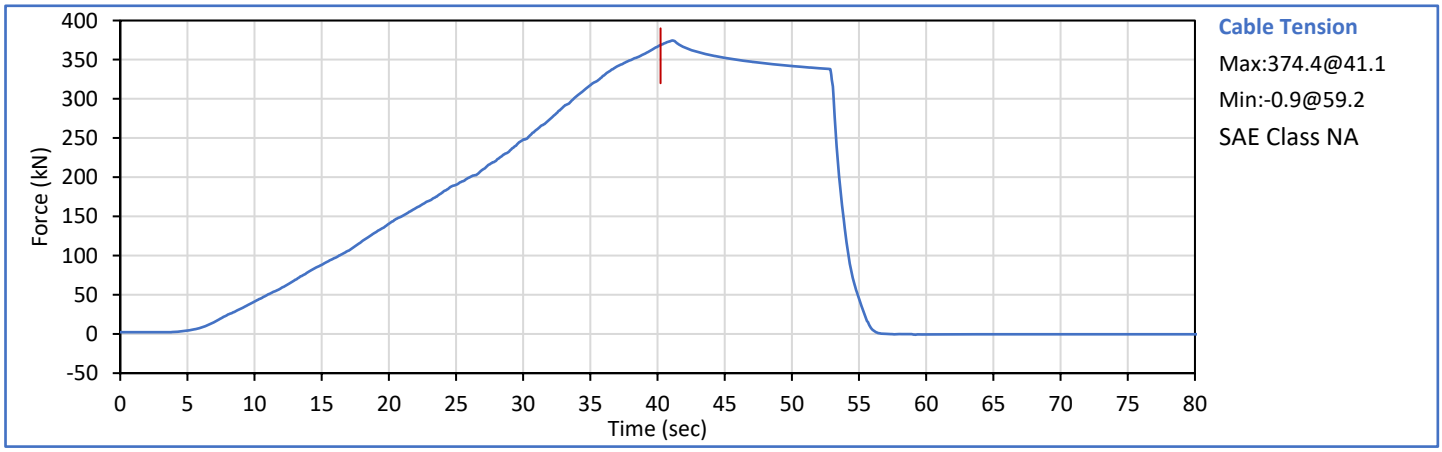
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Torso Flexion Test

ATD Serial No.: DH1644 Test Date: 2025-03-29

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.7	Pass
Laboratory Humidity	%	10	70	37	Pass
Orientation Angle	deg	0.0	20.0	16.0	Pass
Test Initial Angle	deg	11.0	19.0	16.1	Pass
Peak Force at 45° (+/-0.5°)	N	320.0	390.0	368.5	Pass
Torso Flexion Rate	deg/s	0.50	1.50	0.86	Pass
Final Reference Plane Angle	deg	-8.0	8.0	2.9	Pass
			Overall Test Results		Pass





Technician: J. Perez

Approved By: J. Hernandez

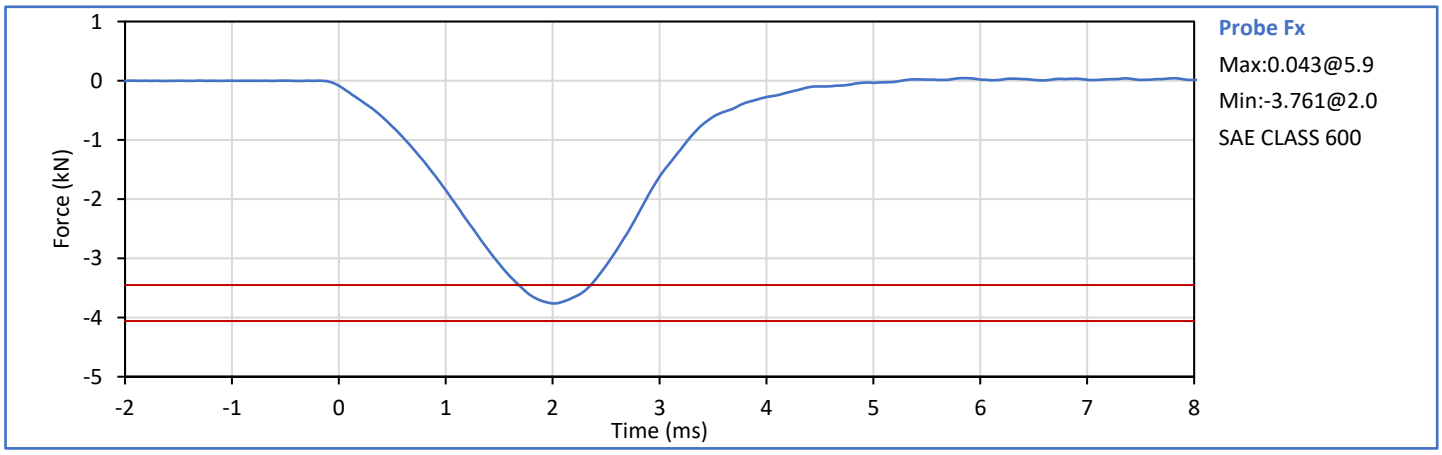
Applus IDIADA KARCO

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

ATD Serial No.: DH1644

Test Date: 2025-03-29

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	37	Pass
Probe Velocity	m/s	2.070	2.130	2.105	Pass
Peak Resistive Force	kN	-4.060	-3.450	-3.761	Pass
			Overall Test Results		Pass



Technician: J. Perez

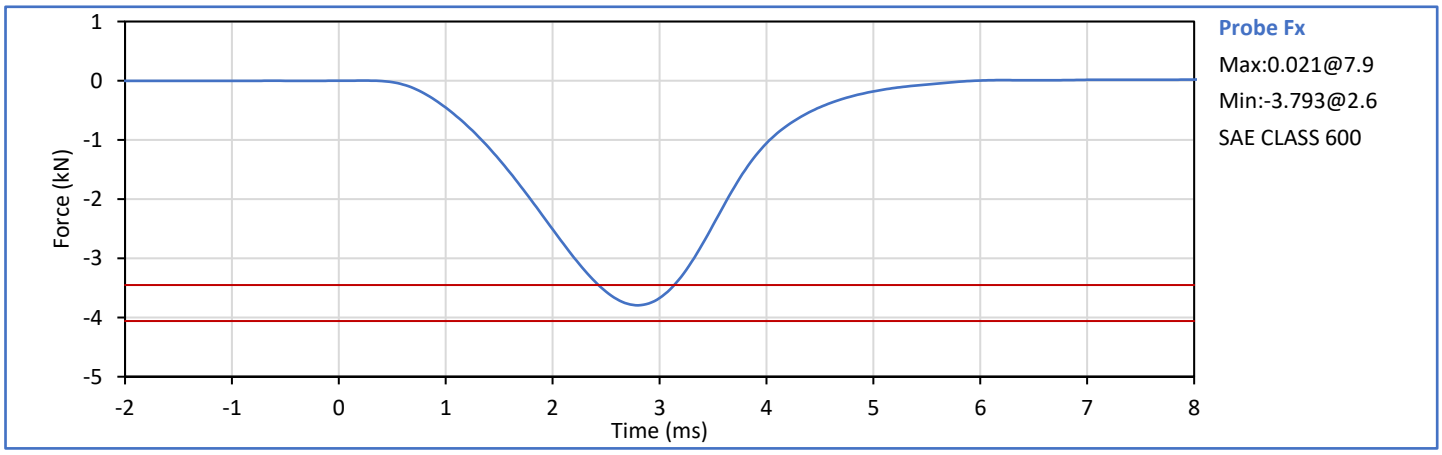
Approved By: J. Hernandez

Applus IDIADA KARCO

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

ATD Serial No.: DH1644 Test Date: 2025-03-29

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	38	Pass
Probe Velocity	m/s	2.070	2.130	2.102	Pass
Peak Resistive Force	kN	-4.060	-3.450	-3.793	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: 2025-04-09

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: 2025-04-09

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.8	Pass
Laboratory Relative Humidity	%	10	70	38	Pass
A - Total sitting height	mm	879	889	882	Pass
B - Shoulder pivot height	mm	505	521	516	Pass
C - 'H' point height	mm	84	89	86	Pass
D - 'H' point location from backline	mm	135	140	138	Pass
E - Shoulder pivot from backline	mm	84	94	88	Pass
F - Thigh clearance	mm	140	155	150	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	338	Pass
J - Elbow rest height	mm	190	211	206	Pass
K - Buttock to knee length	mm	579	604	596	Pass
L - Popliteal length	mm	429	455	442	Pass
M - Knee pivot height	mm	485	500	493	Pass
N - Buttock popliteal length	mm	452	477	463	Pass
O - Chest depth without jacket	mm	213	229	219	Pass
P - Foot length	mm	251	267	255	Pass
V - Shoulder breadth	mm	422	437	434	Pass
W - Foot breadth	mm	91	107	99	Pass
Y - Chest circum. (w/chest jacket)	mm	970	1001	982	Pass
Z - Waist circum.	mm	836	866	849	Pass
AA - Location for chest circum.	mm	429	434	431	Pass
BB - Location for waist circum.	mm	226	231	229	Pass
			Overall Test Results		Pass

Technician. J. Perez

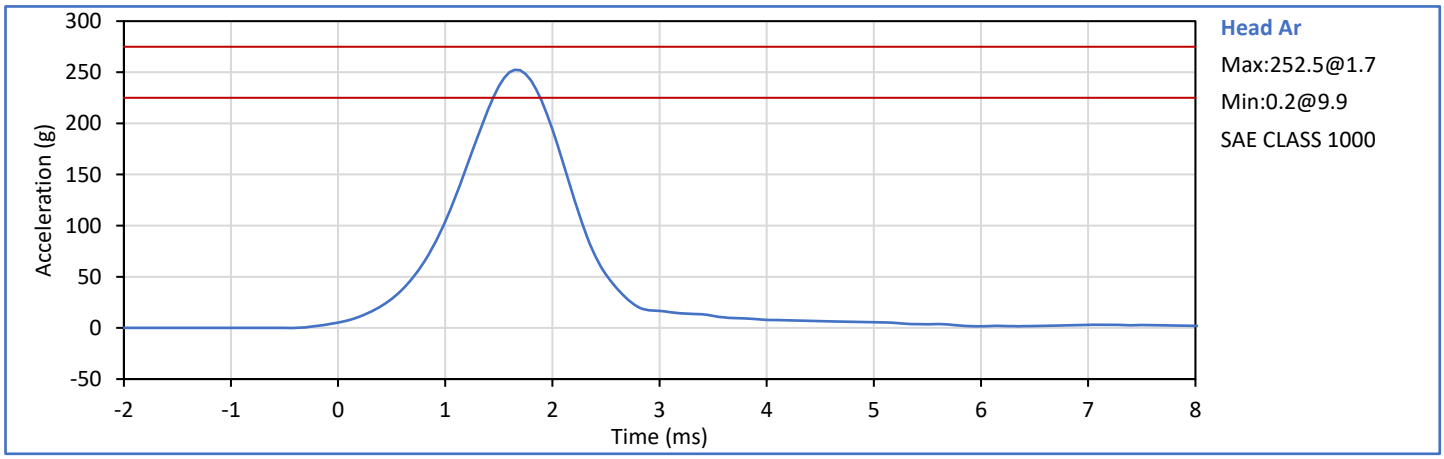
Approved By: J. Hernandez

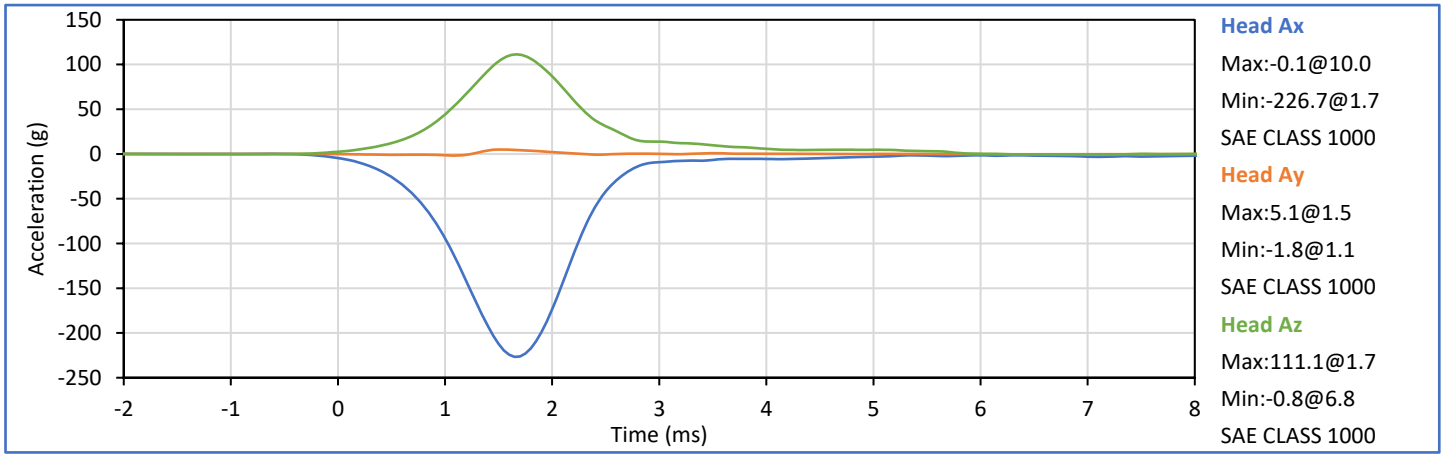
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Head Drop

ATD Serial No.: 360 Test Date: 2025-04-09

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.8	Pass
Laboratory Relative Humidity	%	10	70	38	Pass
Peak Resultant Acceleration	g	225.0	275.0	252.5	Pass
Peak Lateral Acceleration	g	-15.0	15.0	5.1	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

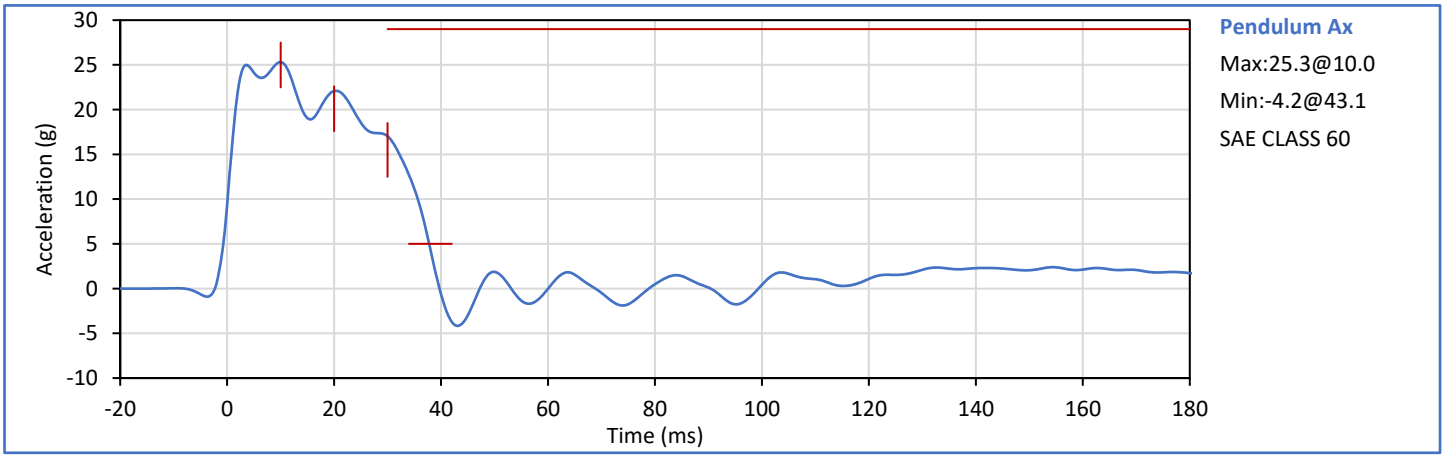
Approved By: J. Hernandez

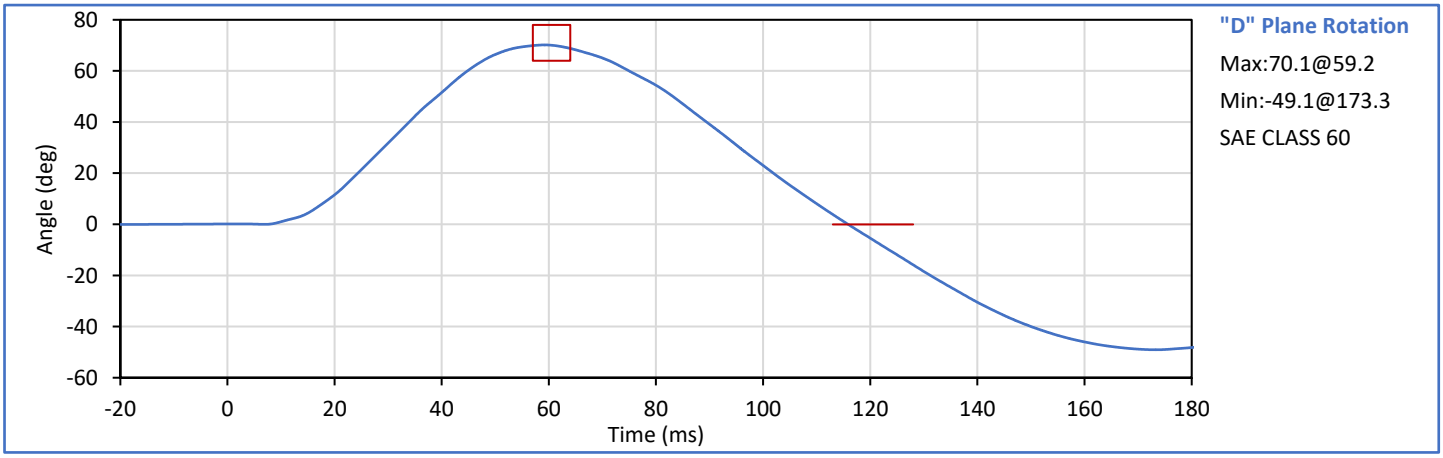
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Neck Flexion Test

ATD Serial No.: 360 Test Date: 2025-04-10

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.8	Pass
Laboratory Relative Humidity	%	10	70	38	Pass
Pendulum Velocity	m/s	6.89	7.13	7.04	Pass
Pendulum Deceleration at 10 ms	g	22.5	27.5	25.3	Pass
Pendulum Deceleration at 20 ms	g	17.6	22.6	22.1	Pass
Pendulum Deceleration at 30 ms	g	12.5	18.5	17.0	Pass
Peak Pendulum Decel After 30 ms	g	0.0	29.0	17.0	Pass
Deceleration Decay to Cross 5g	ms	34.0	42.0	37.8	Pass
"D" Plane Rotation peak	deg	64.0	78.0	70.1	Pass
	ms	57.0	64.0	59.2	Pass
"D" Plane Rotation Decay to Zero	ms	113.0	128.0	115.9	Pass
Moment About Occipital Condyle	Nm	88.1	108.5	96.7	Pass
	ms	47.0	58.0	50.5	Pass
Moment Decay, Peak to Zero	ms	97.0	107.0	97.8	Pass
			Overall Test Results		Pass





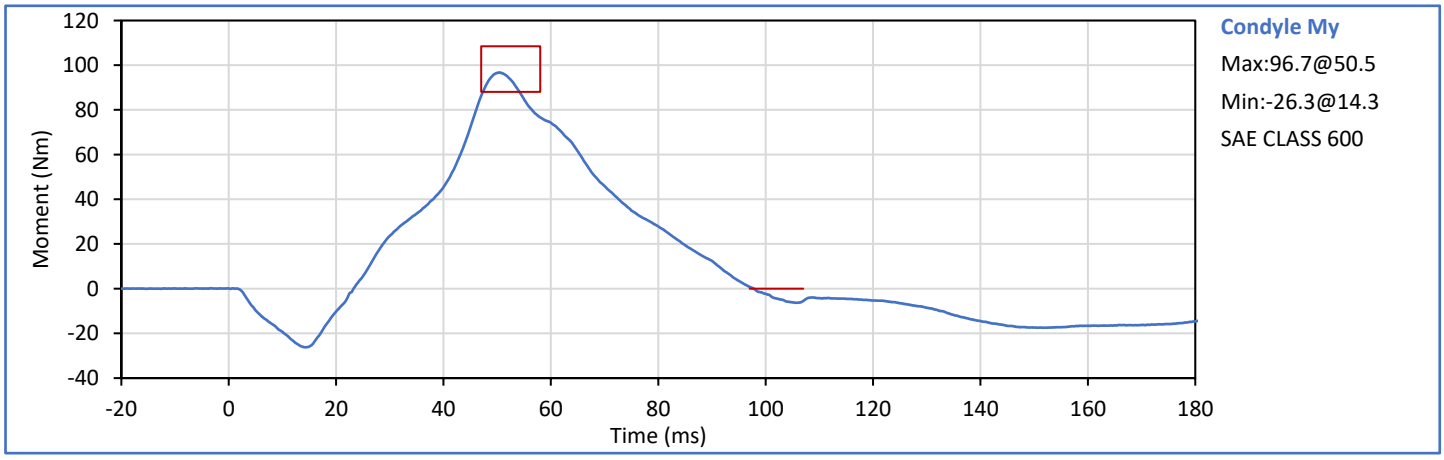
Technician: J. Perez

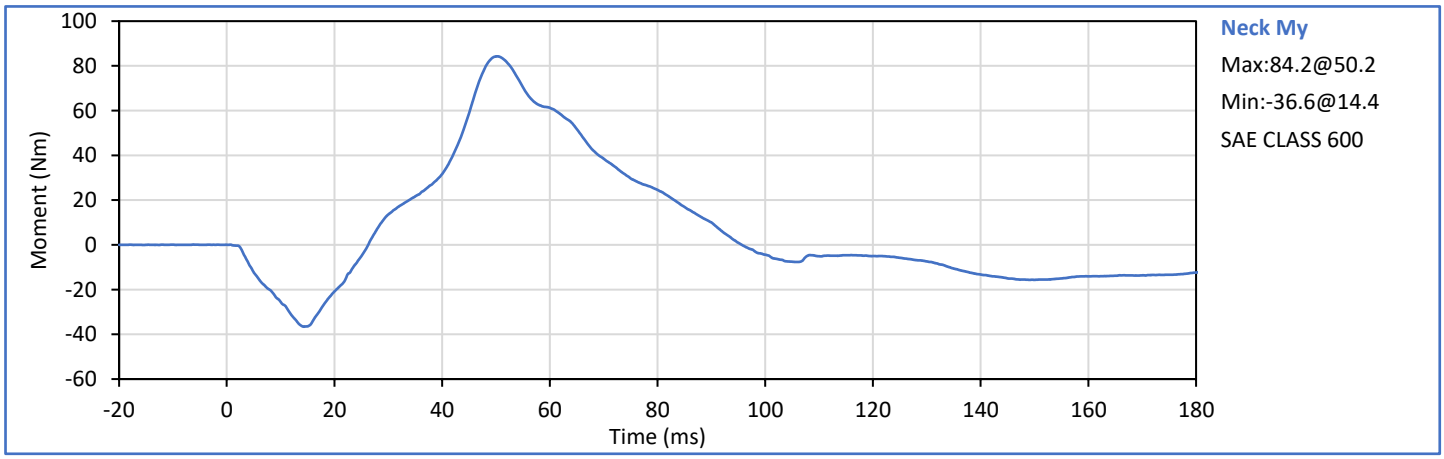
Approved By: J. Hernandez

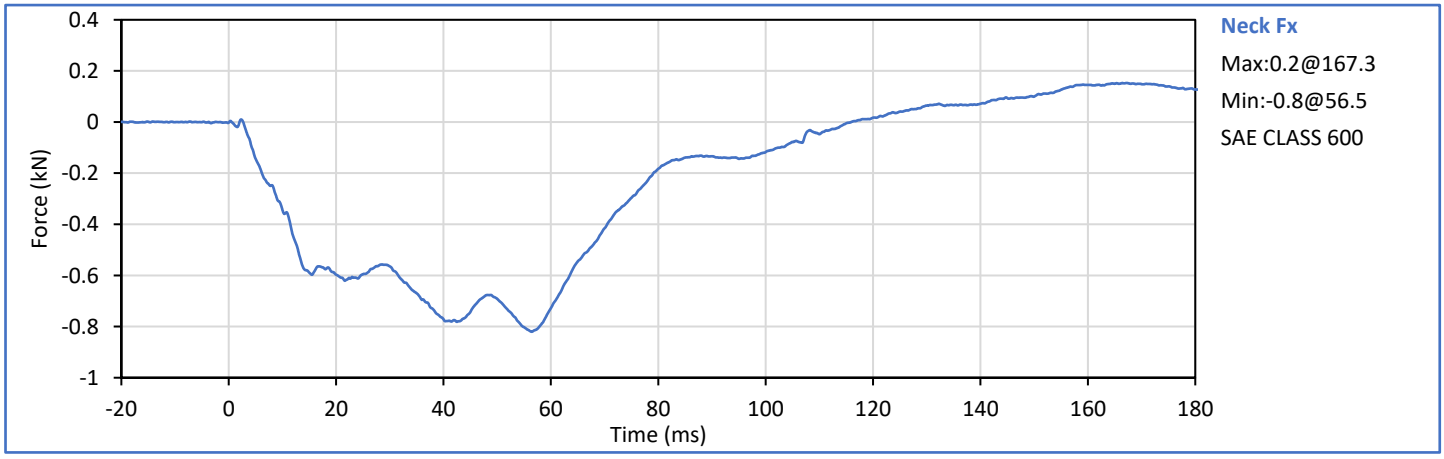
Applus IDIADA KARCO

Hybrid III 50th Percentile Male ATD
Neck Flexion Test

ATD Serial No.: 360 Test Date: 2025-04-10





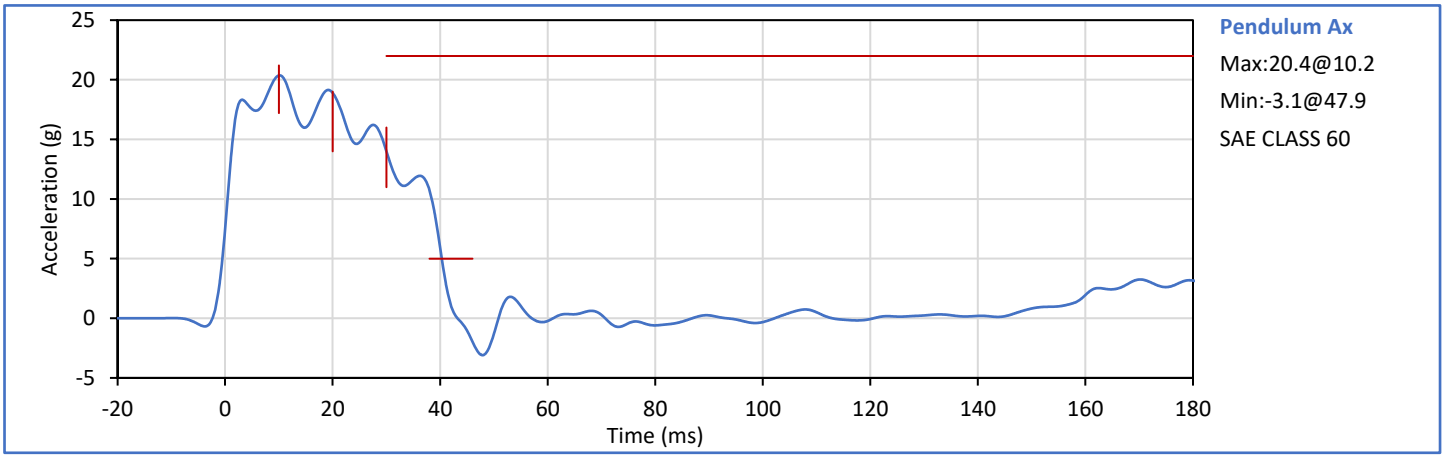


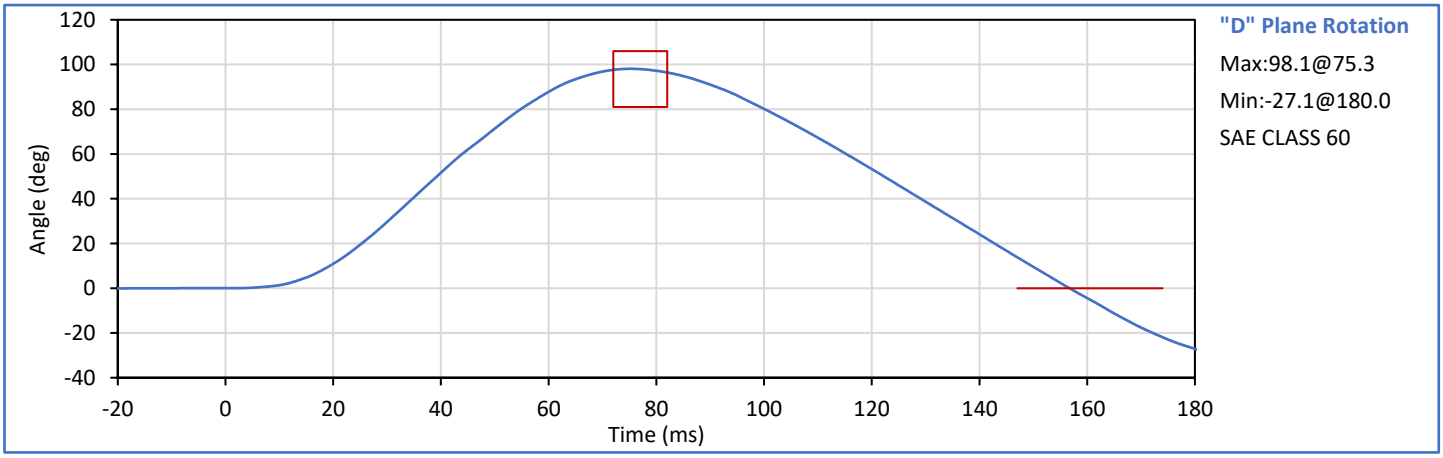
Applus IDIADA
KARCO

Hybrid III 50th Percentile Male ATD
Neck Extension Test

ATD Serial No.: 360 Test Date: 2025-04-09

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.7	Pass
Laboratory Relative Humidity	%	10	70	38	Pass
Pendulum Velocity	m/s	5.94	6.19	6.07	Pass
Pendulum Deceleration at 10 ms	g	17.2	21.2	20.4	Pass
Pendulum Deceleration at 20 ms	g	14.0	19.0	18.9	Pass
Pendulum Deceleration at 30 ms	g	11.0	16.0	14.0	Pass
Peak Pendulum Decel After 30 ms	g	0.0	22.0	14.0	Pass
Deceleration Decay to Cross 5g	ms	38.0	46.0	40.3	Pass
"D" Plane Rotation peak	deg	81.0	106.0	98.1	Pass
	ms	72.0	82.0	75.3	Pass
"D" Plane Rotation Decay to Zero	ms	147.0	174.0	156.8	Pass
Moment About Occipital Condyle	Nm	-79.9	-52.9	-72.4	Pass
	ms	65.0	79.0	70.9	Pass
Moment Decay, Peak to Zero	ms	120.0	148.0	140.2	Pass
			Overall Test Results		Pass



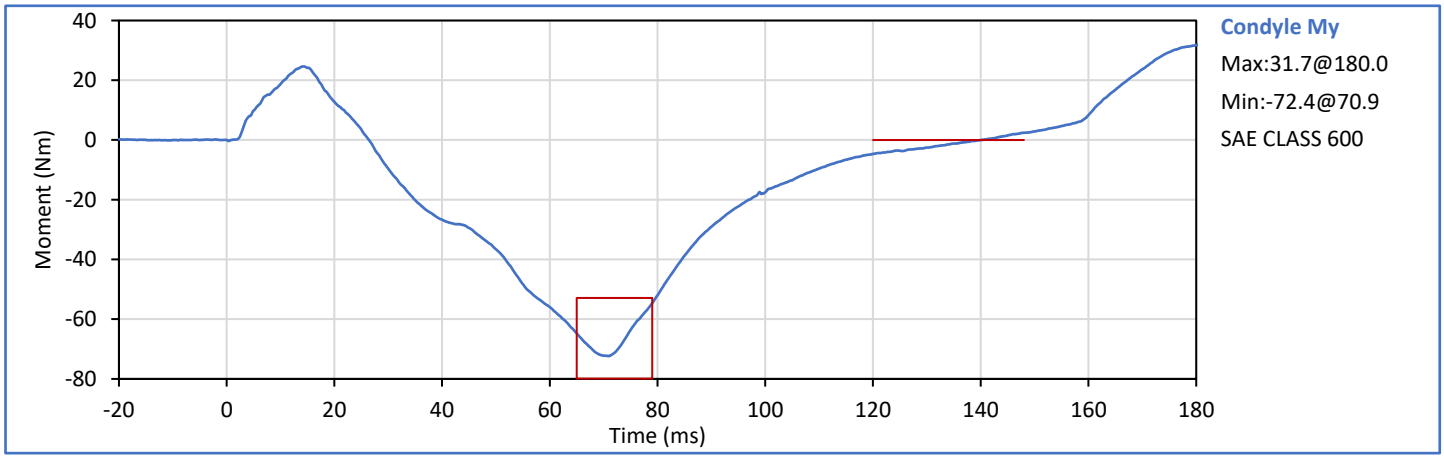


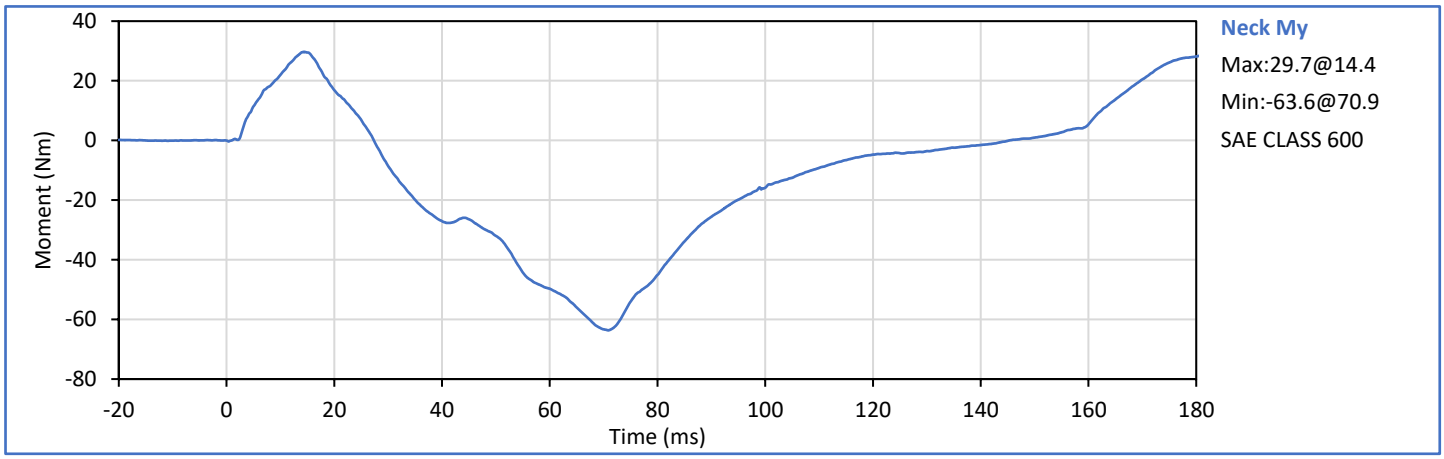
Technician: J. Perez

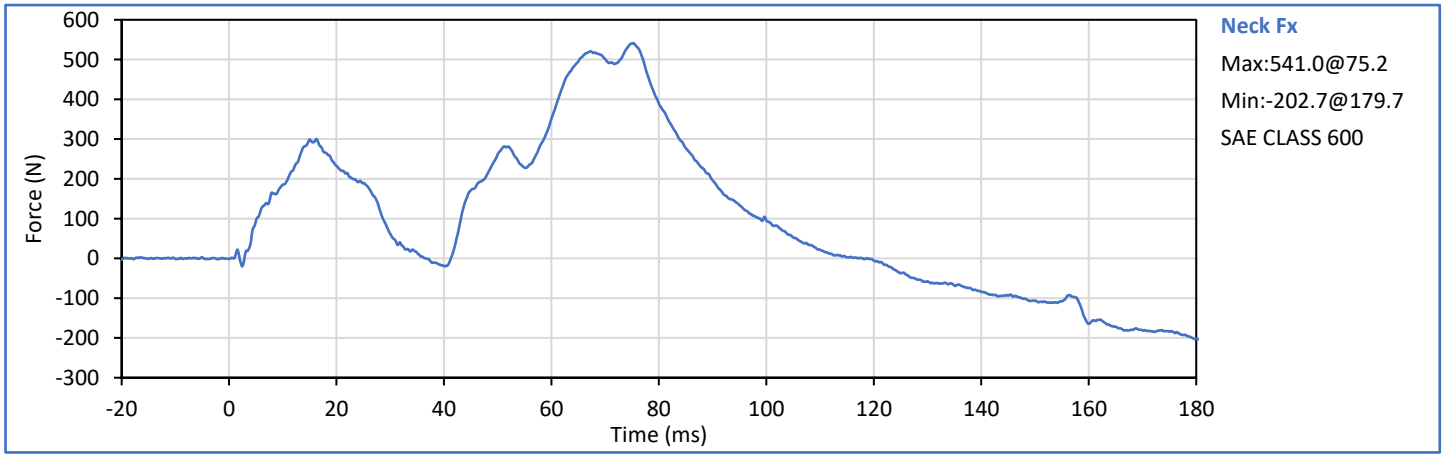
Approved By: J. Hernandez

Hybrid III 50th Percentile Male ATD
Neck Extension Test

ATD Serial No.: 360 Test Date: 2025-04-09





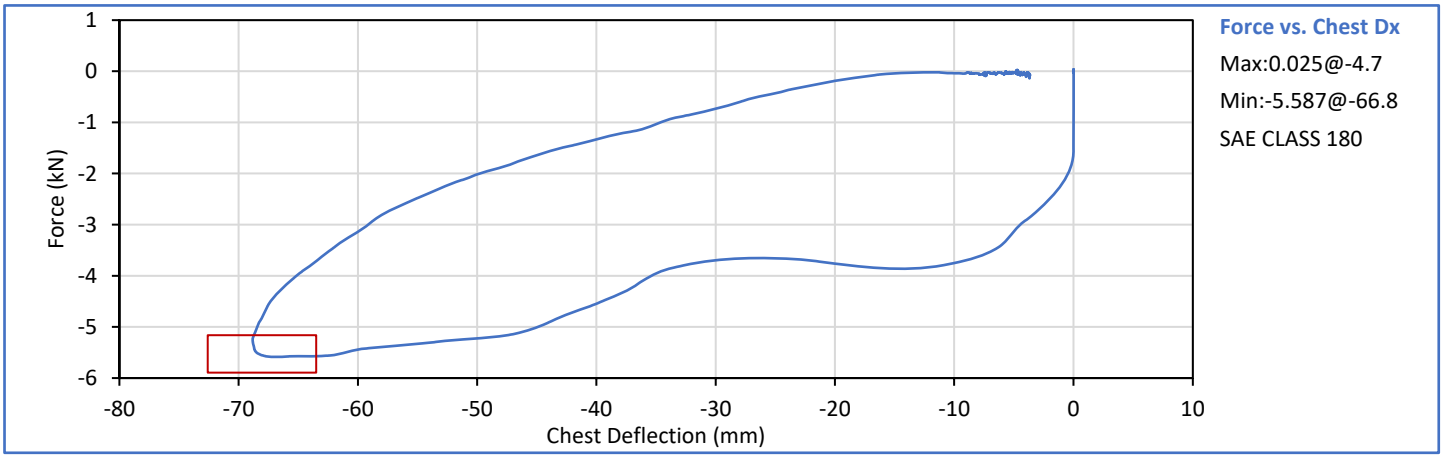


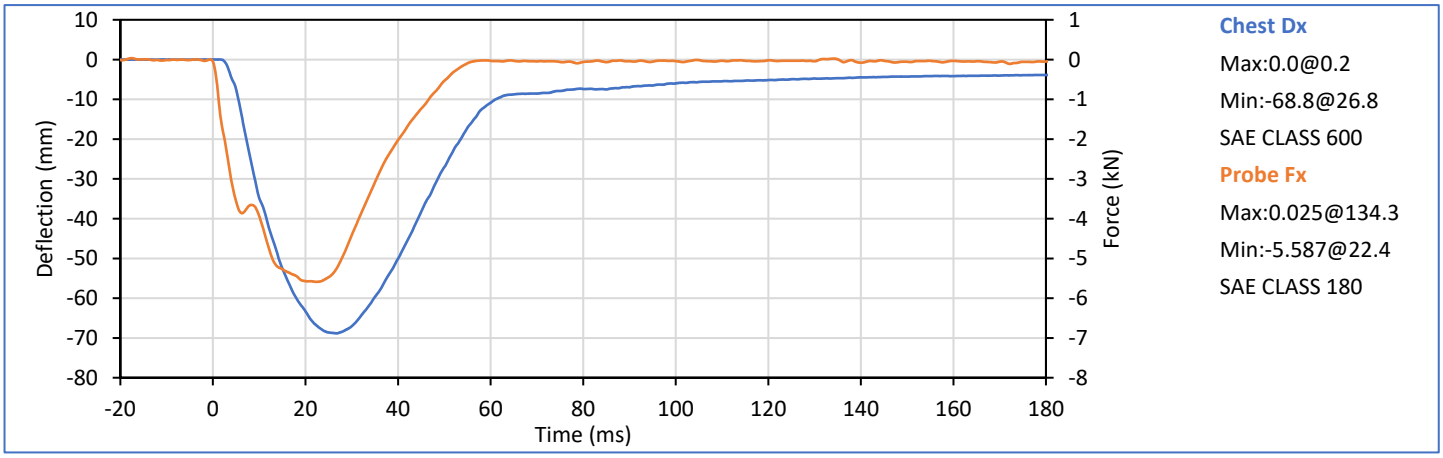
Applus IDIADA
KARCO

Hybrid III 50th Percentile Male ATD
Thorax Impact

ATD Serial No.: 360 Test Date: 2025-04-09

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.7	Pass
Laboratory Relative Humidity	%	10	70	38	Pass
Probe Velocity	m/s	6.58	6.82	6.72	Pass
Peak Chest Deflection	mm	-72.6	-63.5	-68.8	Pass
Peak Probe Force	kN	-5.893	-5.159	-5.587	Pass
Internal Hysterisis	%	69.0	85.0	69.1	Pass
			Overall Test Results		Pass





Technician: J. Perez

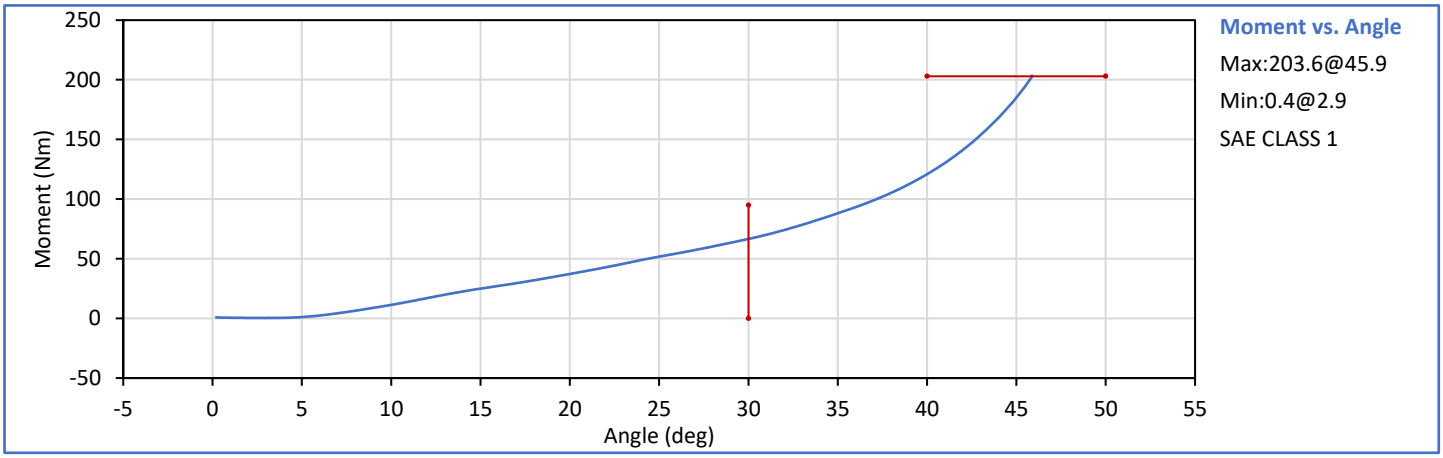
Approved By: J. Hernandez

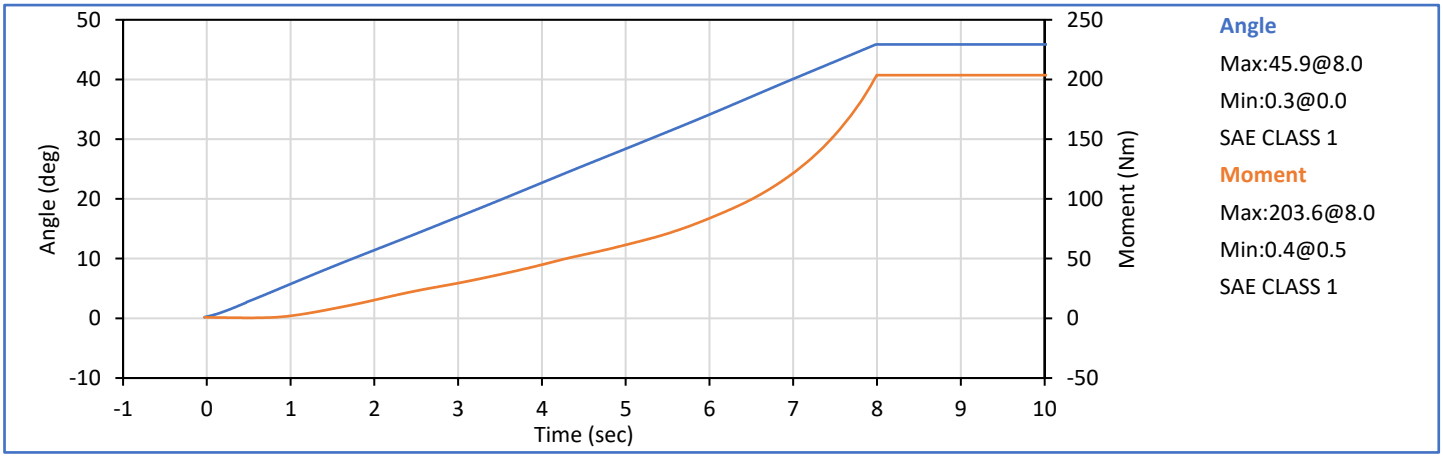
Applus IDIADA KARCO

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

ATD Serial No.: 360 Test Date: 2025-04-10

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.8	Pass
Laboratory Relative Humidity	%	10	70	38	Pass
Left Hip Rotation Rate	deg/s	5.0	10.0	5.7	Pass
Left Femur Torque at 30°	Nm	0.0	95.0	66.6	Pass
Left Hip Rotation at 203 Nm	deg	40.0	50.0	45.9	Pass
			Overall Test Results		Pass





Technician: J. Perez

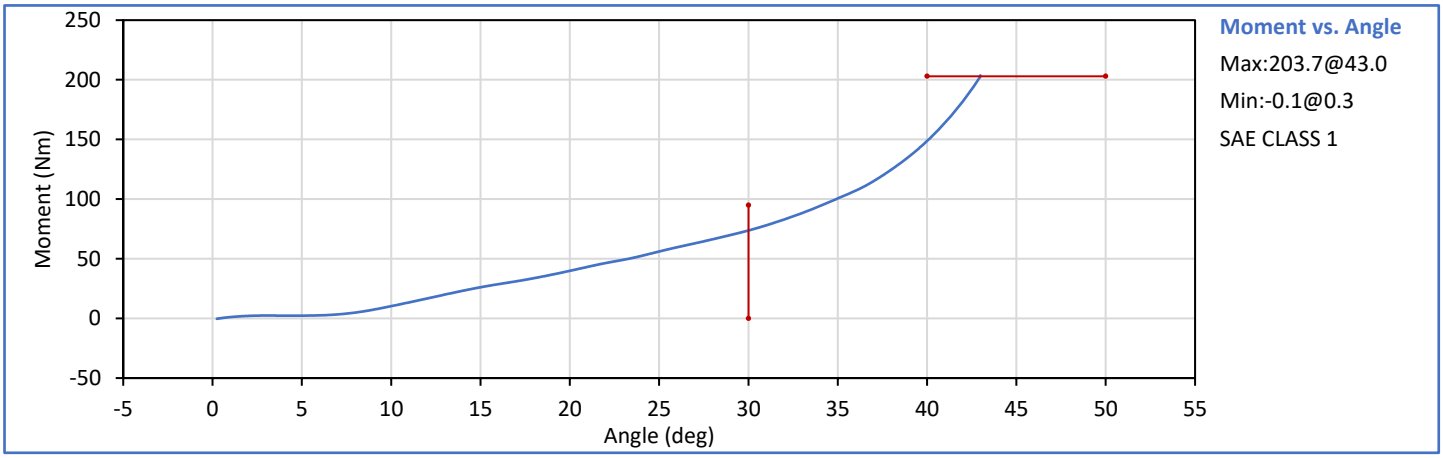
Approved By: J. Hernandez

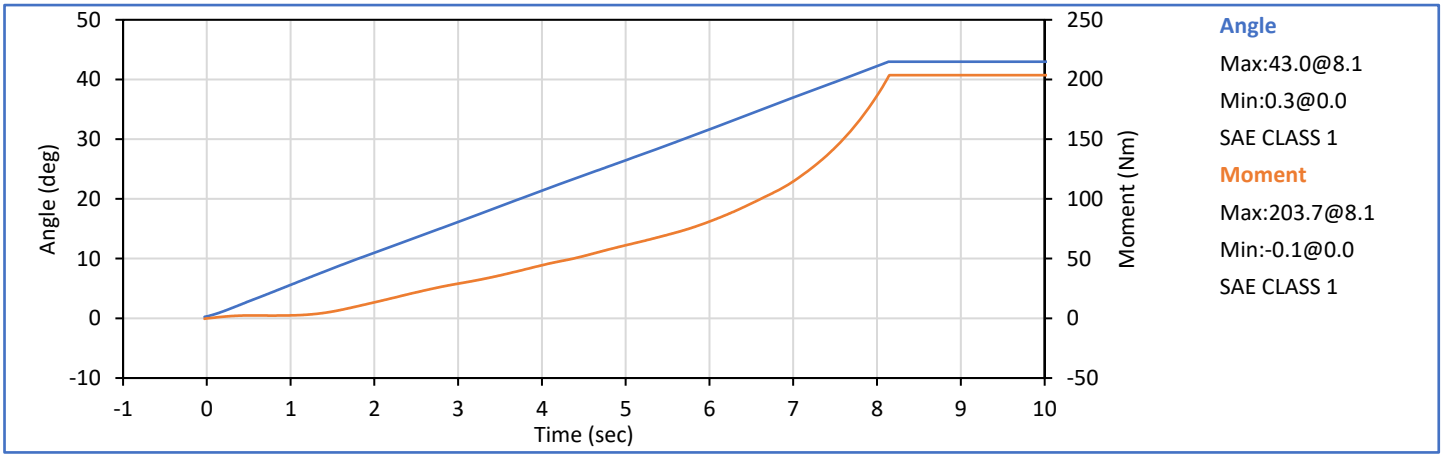
Applus IDIADA KARCO

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

ATD Serial No.: 360 Test Date: 2025-04-10

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.8	Pass
Laboratory Relative Humidity	%	10	70	38	Pass
Right Hip Rotation Rate	deg/s	5.0	10.0	5.3	Pass
Right Femur Torque at 30°	Nm	0.0	95.0	73.7	Pass
Right Hip Rotation at 203 Nm	deg	40.0	50.0	43.0	Pass
			Overall Test Results		Pass





Technician: J. Perez

Approved By: J. Hernandez

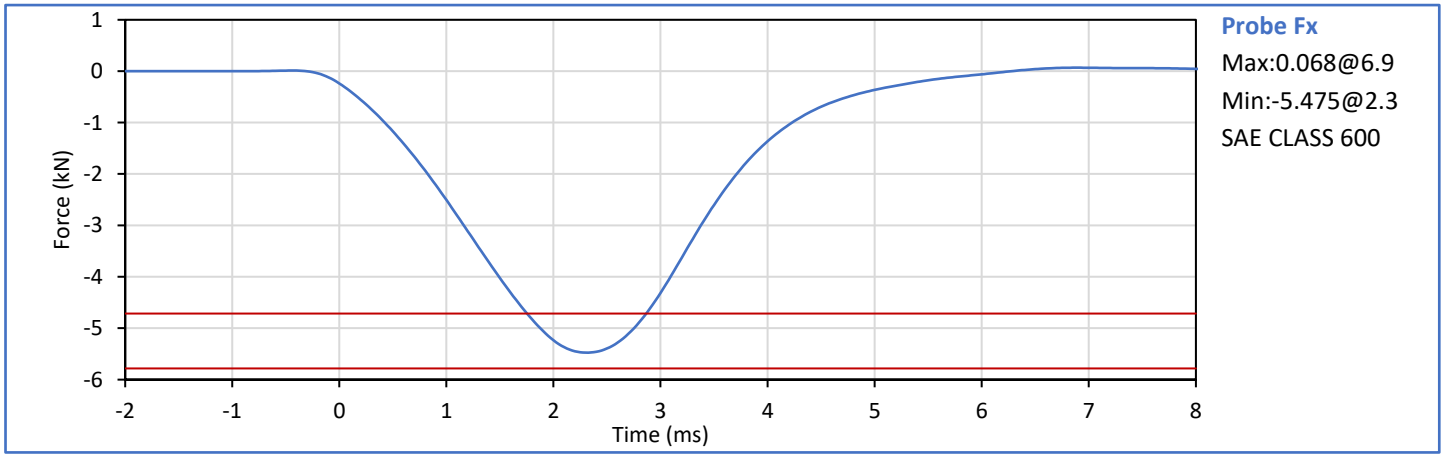
Applus IDIADA
KARCO

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

ATD Serial No.: 360

Test Date: 2025-04-09

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.7	Pass
Laboratory Relative Humidity	%	10	70	38	Pass
Probe Velocity	m/s	2.070	2.130	2.109	Pass
Peak Resistive Force	kN	-5.782	-4.715	-5.475	Pass
			Overall Test Results		Pass



Technician: J. Perez

Approved By: J. Hernandez

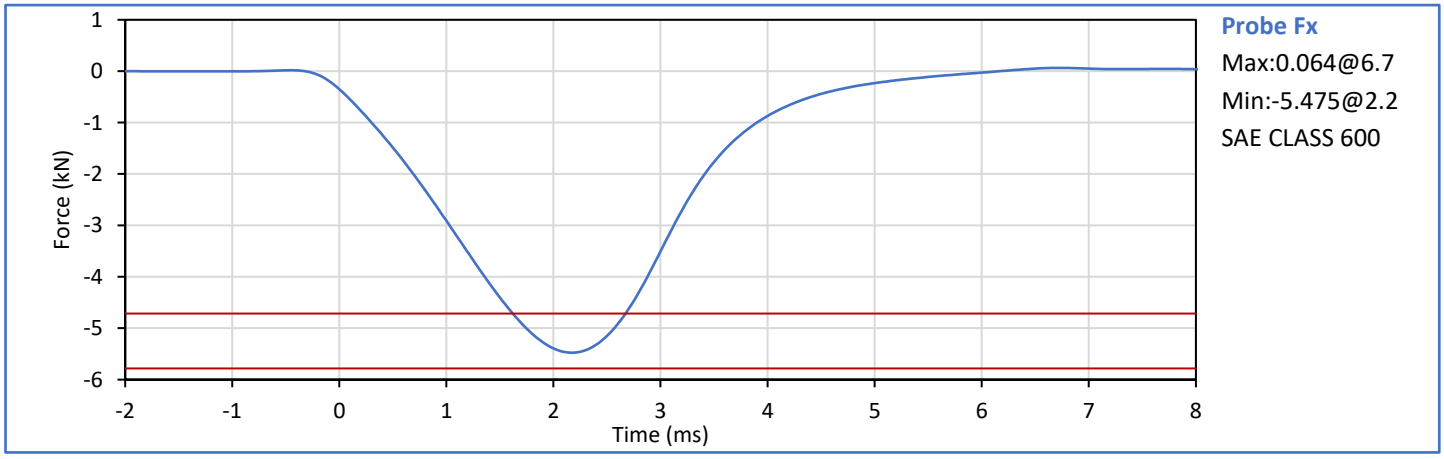
Applus IDIADA
KARCO

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

ATD Serial No.: 360

Test Date: 2025-04-09

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.7	Pass
Laboratory Relative Humidity	%	10	70	38	Pass
Probe Velocity	m/s	2.070	2.130	2.105	Pass
Peak Resistive Force	kN	-5.782	-4.715	-5.475	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: 2025-04-07

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

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Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
External Measurements

ATD Serial No.: DH1644 Test Date: 2025-04-07

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	37	Pass
A - Total sitting height	mm	775	800	787	Pass
B - Shoulder pivot height	mm	432	457	444	Pass
C - 'H' point height	mm	81	86	86	Pass
D - 'H' point location from backline	mm	145	150	148	Pass
E - Shoulder pivot from backline	mm	69	84	74	Pass
F - Thigh clearance	mm	119	135	128	Pass
G - Back of elbow to wrist pivot	mm	244	259	251	Pass
H - Head back to backline	mm	41	46	45	Pass
I - Shoulder to elbow length	mm	277	297	291	Pass
J - Elbow rest height	mm	183	203	192	Pass
K - Buttock to knee length	mm	521	546	530	Pass
L - Popliteal length	mm	356	376	366	Pass
M - Knee pivot height	mm	394	419	406	Pass
N - Buttock popliteal length	mm	414	439	426	Pass
O - Chest depth without jacket	mm	175	191	181	Pass
P - Foot length	mm	219	234	224	Pass
R - Buttock to Knee Pivot Length	mm	457	483	476	Pass
S - Head Breadth	mm	137	147	142	Pass
T - Head Depth	mm	178	188	184	Pass
U - Hip Breadth	mm	300	315	308	Pass
V - Shoulder breadth	mm	351	366	356	Pass
W - Foot breadth	mm	79	94	83	Pass
X - Head circum.	mm	528	549	536	Pass
Y - Chest circum. (w/chest jacket)	mm	851	881	874	Pass
Z - Waist circum.	mm	760	790	776	Pass
AA - Location for chest circum.	mm	333	358	340	Pass
BB - Location for waist circum.	mm	160	170	164	Pass
			Overall Test Results		Pass

Technician: J. Perez

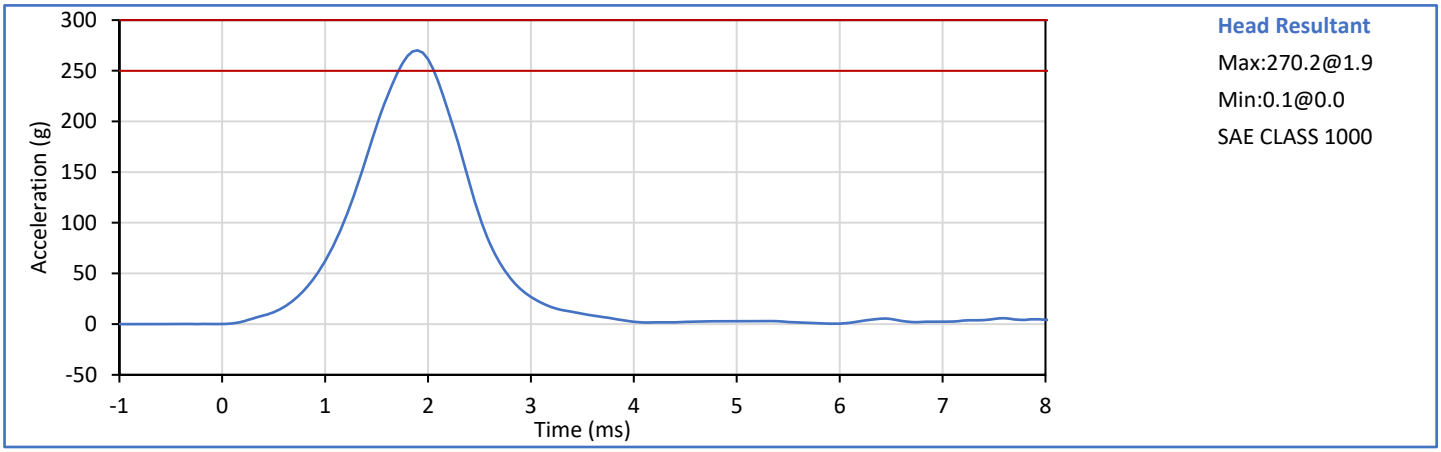
Approved By: J. Hernandez

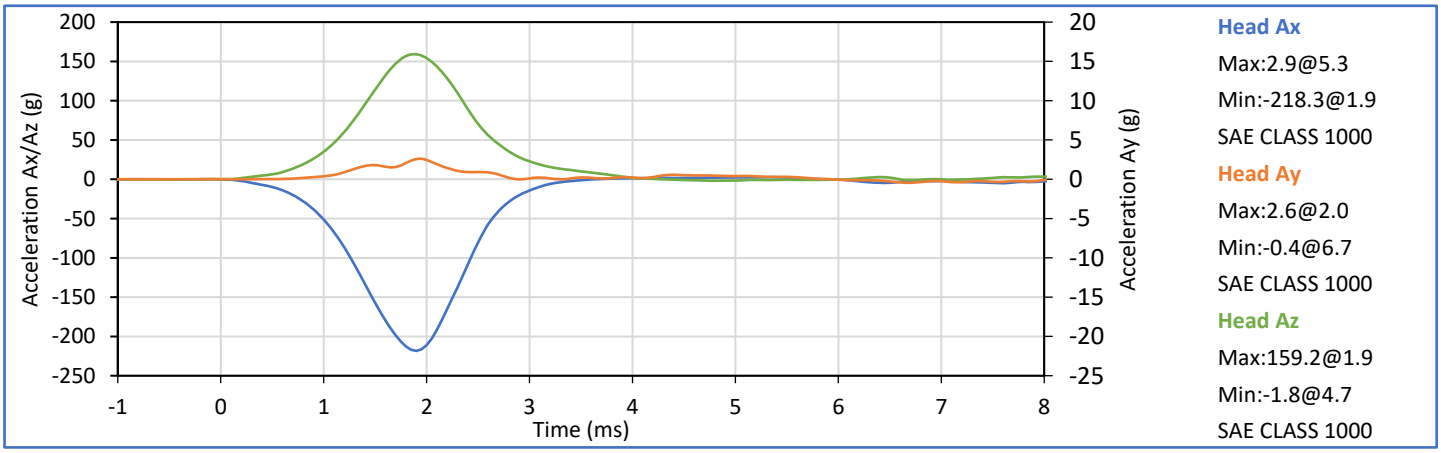
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Head Drop Test

ATD Serial No.: DH1644 Test Date: 2025-04-07

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.5	Pass
Laboratory Humidity	%	10	70	38	Pass
Peak Resultant Acceleration	g	250.0	300.0	270.2	Pass
Peak Lateral Acceleration	g	-15.0	15.0	2.6	Pass
Oscillations After Main Pulse	%	0.0	10.0	2.1	Pass
Is Acceleration Unimodal?	Yes/No	Yes		Yes	Pass
			Overall Test Results		Pass





Technician: J. Perez

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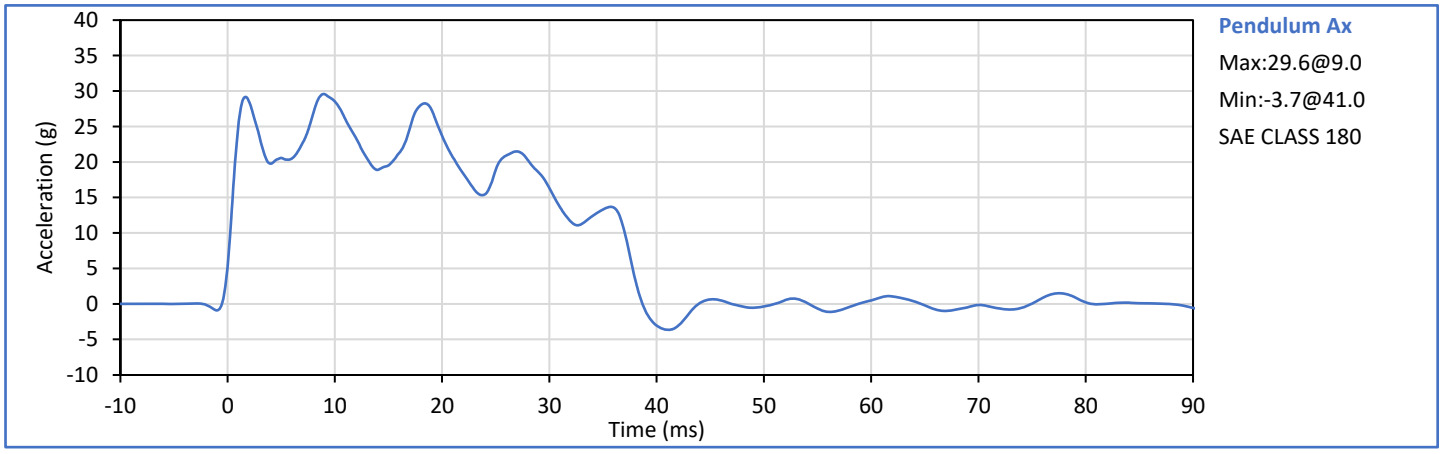
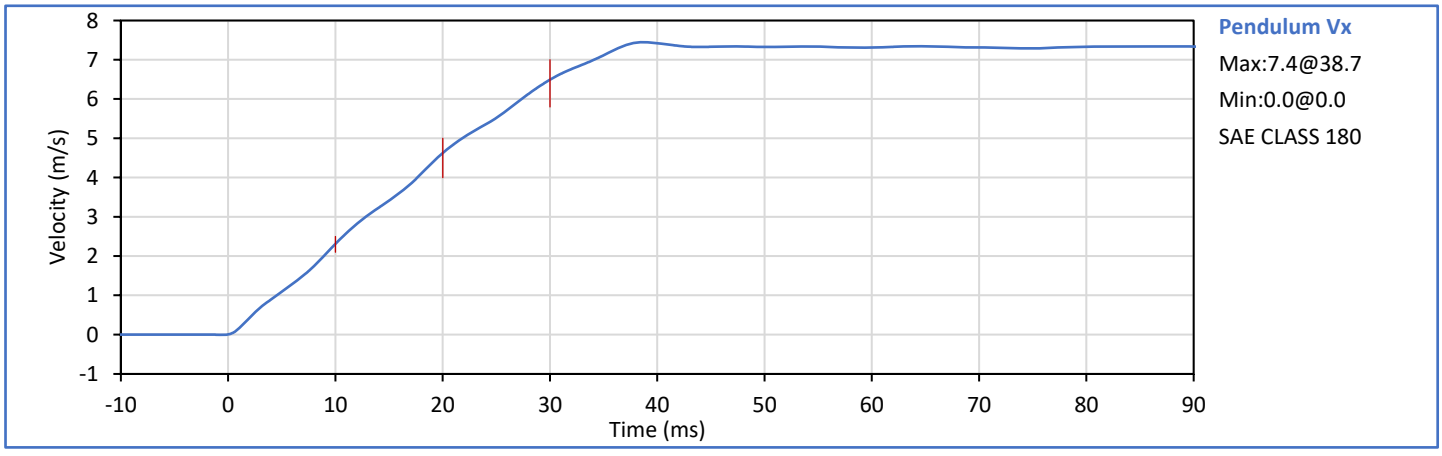
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Neck Flexion Test

ATD Serial No.: DH1644 Test Date: 2025-04-07

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.2	Pass
Laboratory Humidity	%	10	70	37	Pass
Pendulum Velocity	m/s	6.89	7.13	7.04	Pass
Pendulum Velocity at 10 ms	m/s	2.10	2.50	2.31	Pass
Pendulum Velocity at 20 ms	m/s	4.00	5.00	4.62	Pass
Pendulum Velocity at 30 ms	m/s	5.80	7.00	6.49	Pass
Peak "D" Plane Rotation	deg	77.0	91.0	83.4	Pass
Peak Moment in Rotation	Nm	69.0	83.0	75.9	Pass
Positive Moment Decay to 10 Nm	ms	80.0	100.0	85.0	Pass
			Overall Test Results		Pass





Technician: J. Perez

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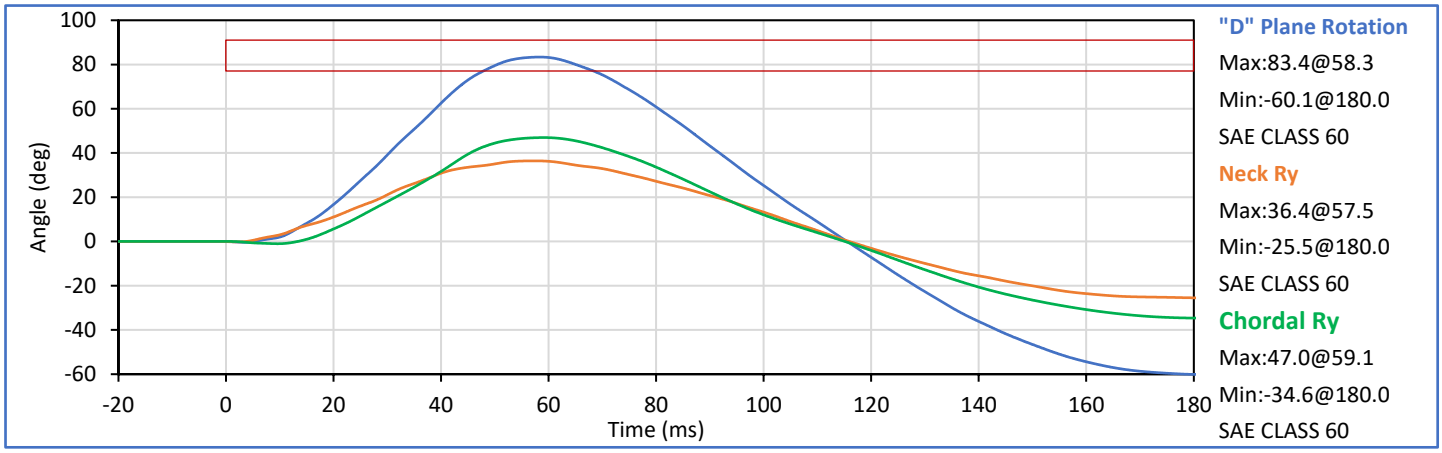
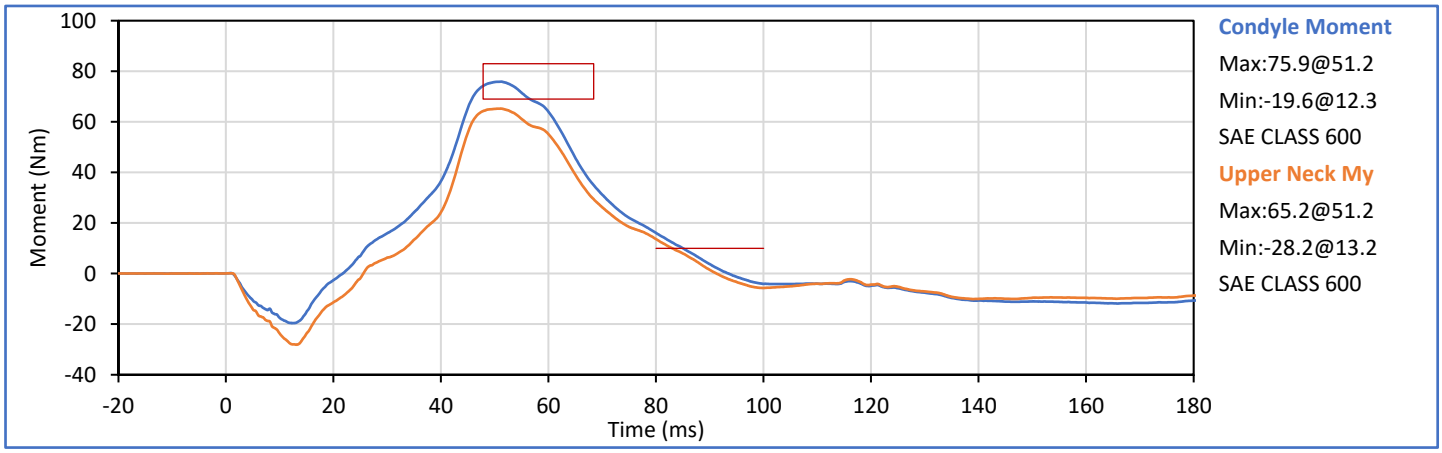
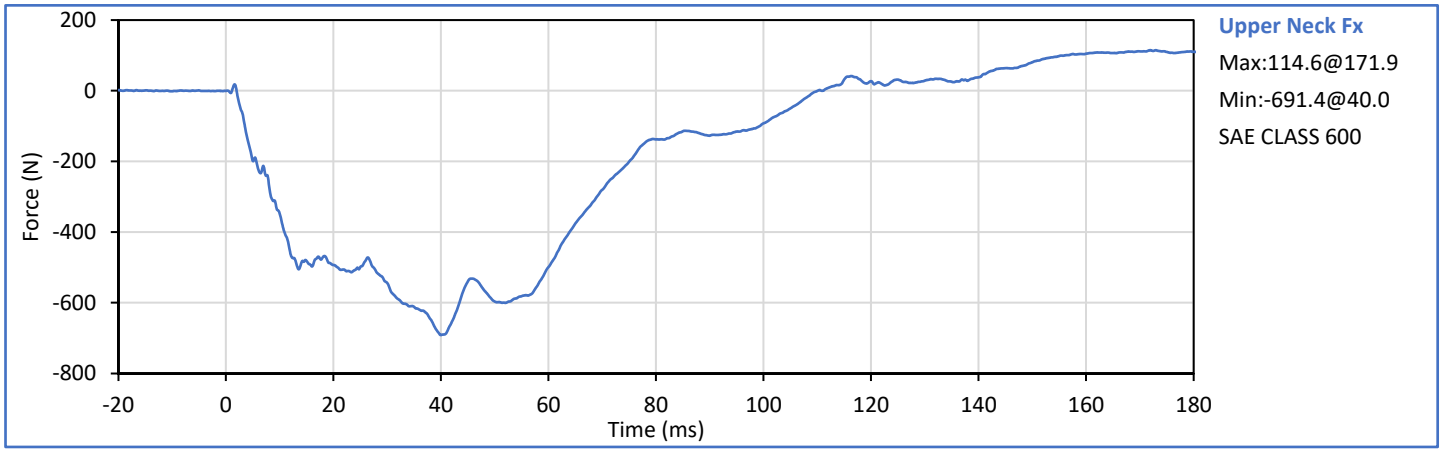
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Neck Flexion Test

ATD Serial No.: DH1644 Test Date: 2025-04-07





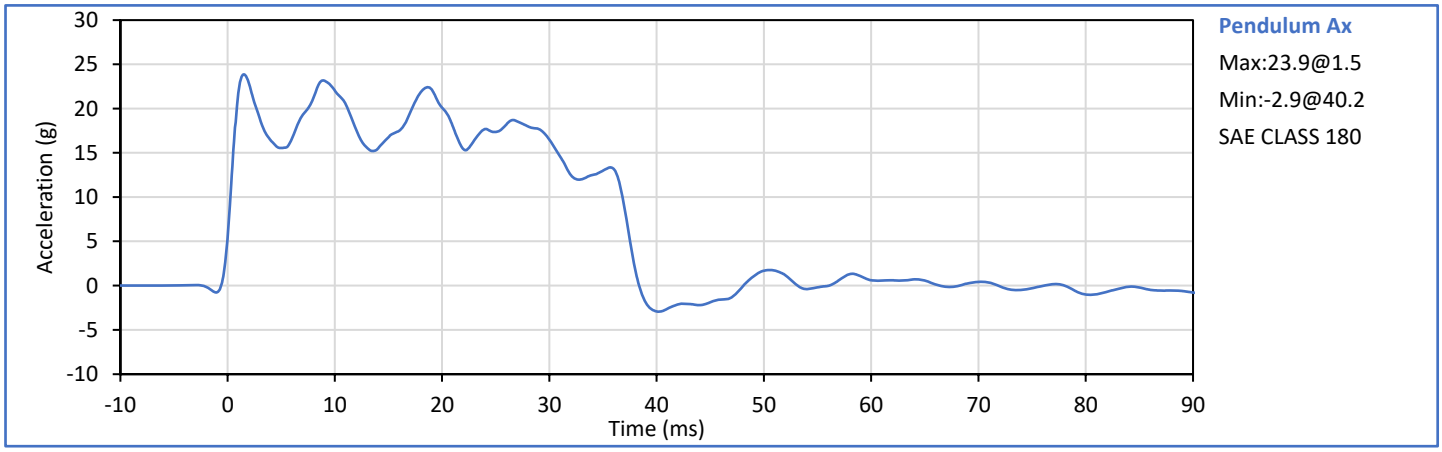


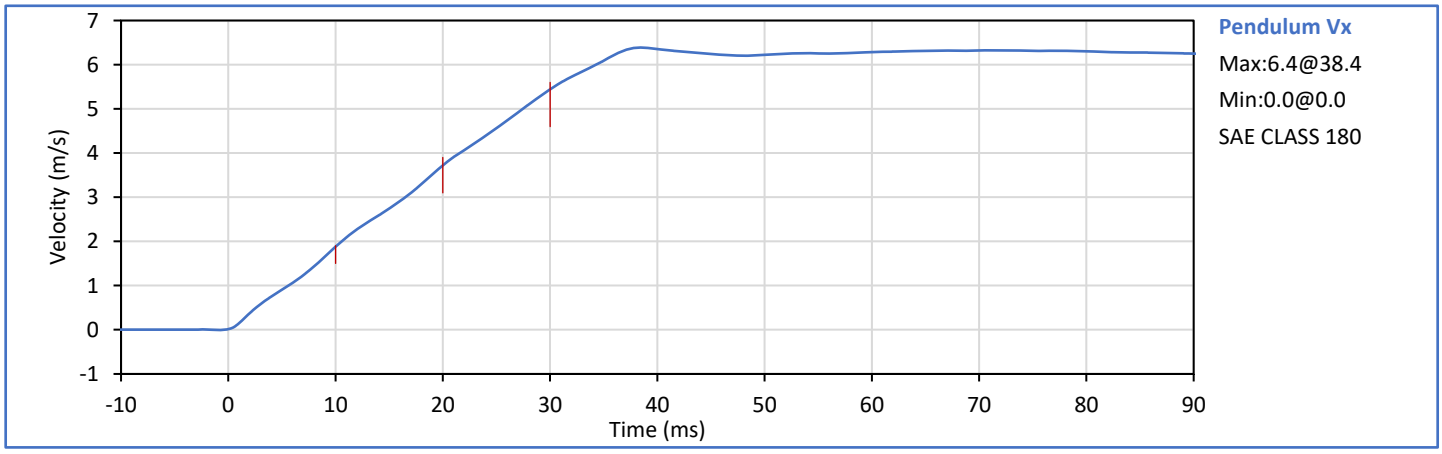
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Neck Extension Test

ATD Serial No.: DH1644 Test Date: 2025-04-07

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.7	Pass
Laboratory Relative Humidity	%	10	70	38	Pass
Pendulum Velocity	m/s	5.95	6.19	6.13	Pass
Pendulum Velocity at 10 ms	m/s	1.50	1.90	1.88	Pass
Pendulum Velocity at 20 ms	m/s	3.10	3.90	3.72	Pass
Pendulum Velocity at 30 ms	m/s	4.60	5.60	5.44	Pass
Peak "D" Plane Rotation	deg	99.0	114.0	110.9	Pass
Peak Moment in Rotation	Nm	-65.0	-53.0	-55.2	Pass
Negative Moment Decay to -10 Nm	ms	94.0	114.0	103.5	Pass
			Overall Test Results		Pass





Technician: J. Perez

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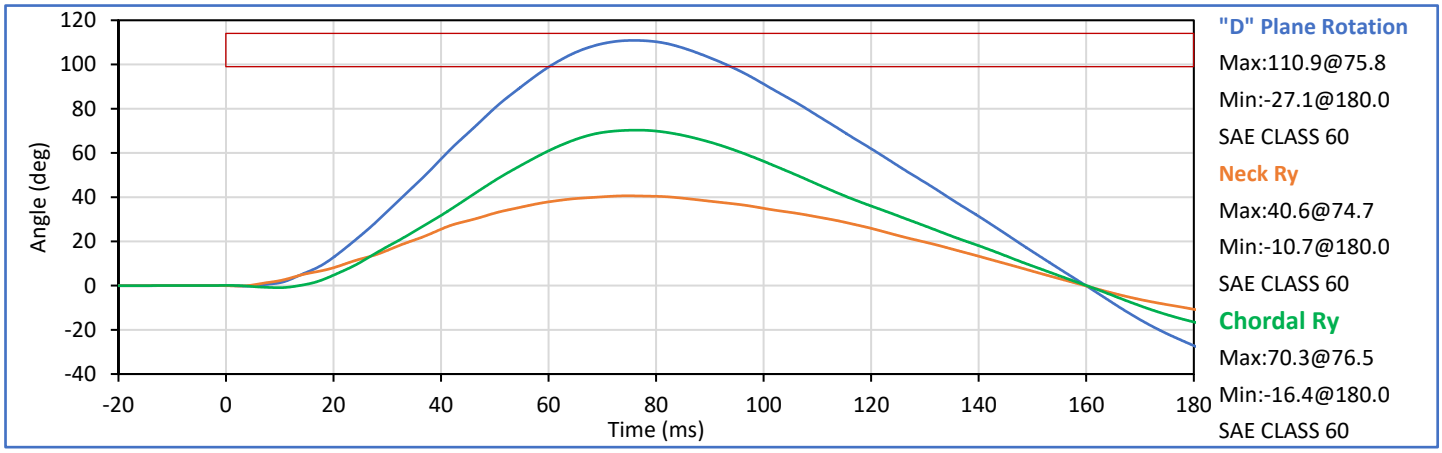
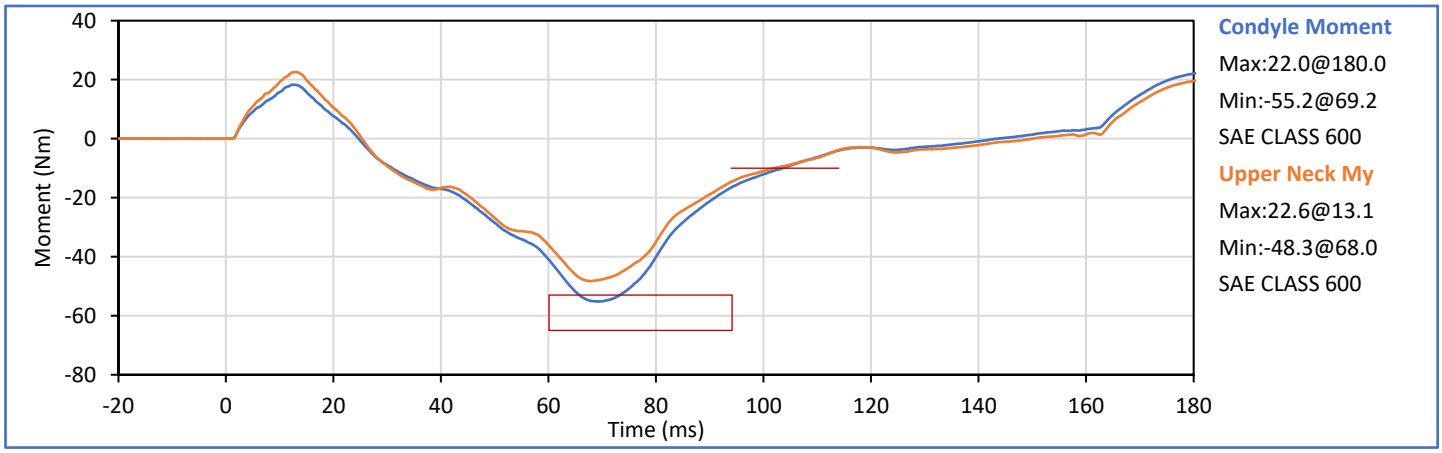
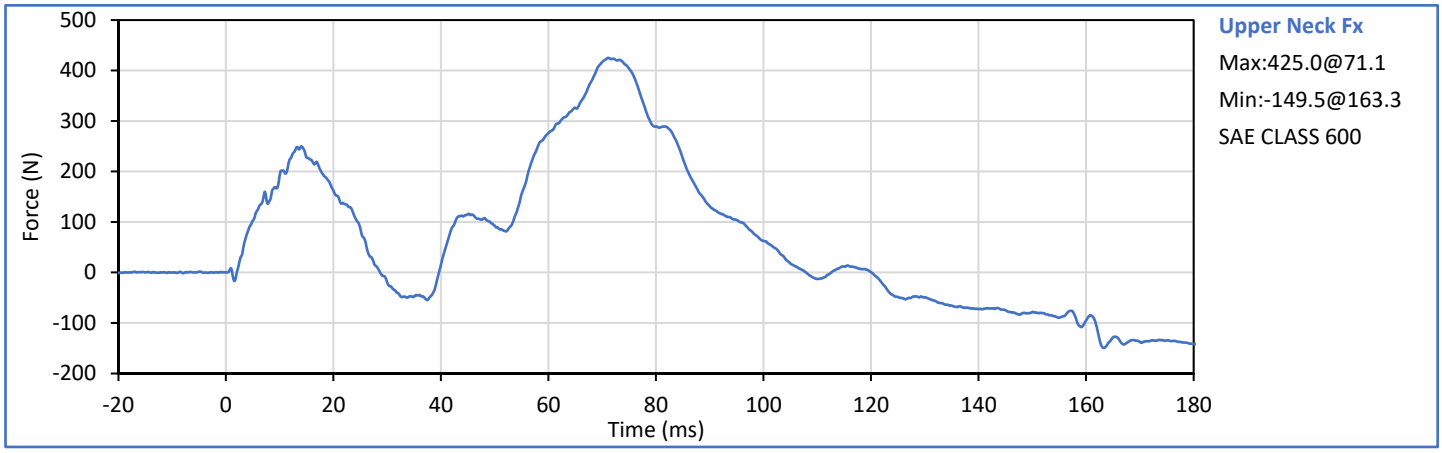
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Neck Extension Test

ATD Serial No.: DH1644 Test Date: 2025-04-07







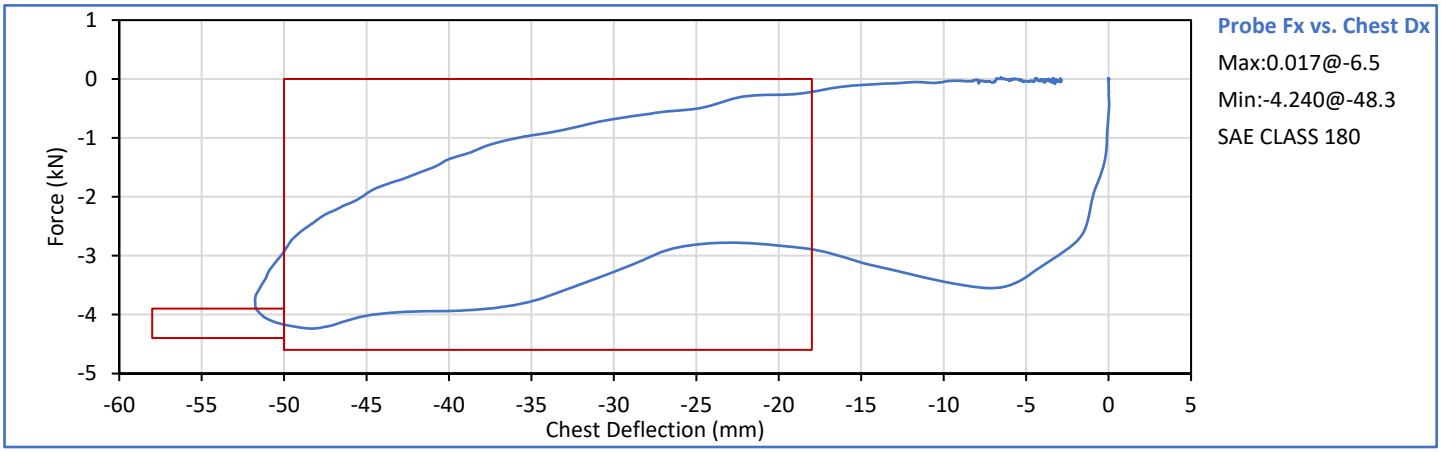
Applus IDIADA KARCO

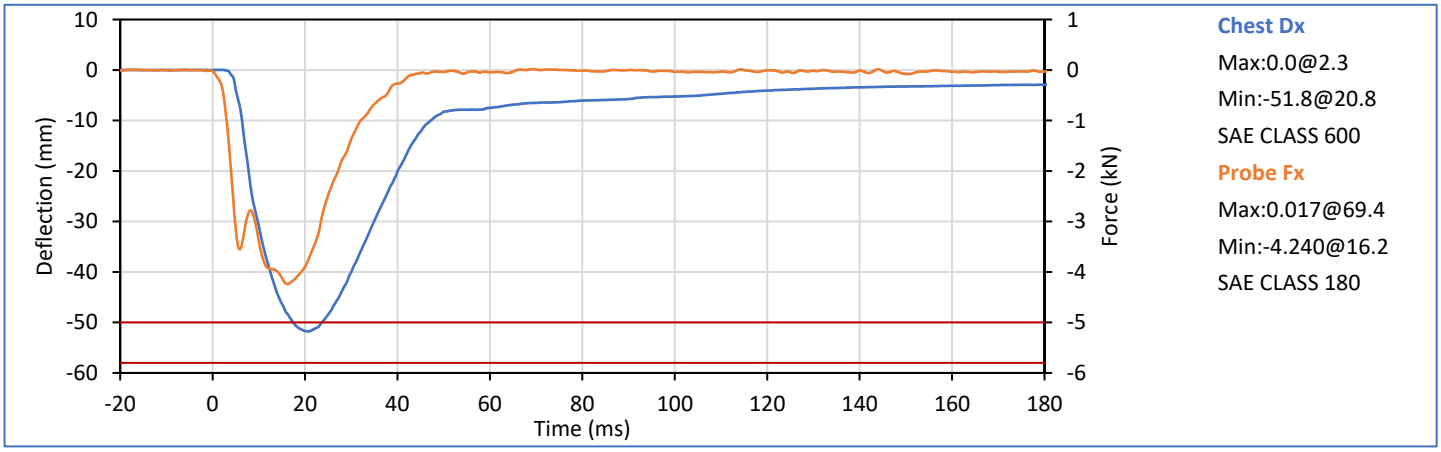
Hybrid III 5th Percentile Female ATD
Thorax Impact

ATD Serial No.: DH1644

Test Date: 2025-04-08

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	-51.8	Pass
Peak Probe Force, 50 and 58 mm	kN	-4.400	-3.900	-4.174	Pass
Peak Probe Force, 18 and 50 mm	kN	-4.600	0.000	-4.240	Pass
Internal Hysterisis	%	69.0	85.0	76.2	Pass
			Overall Test Results		Pass





Technician: J. Perez

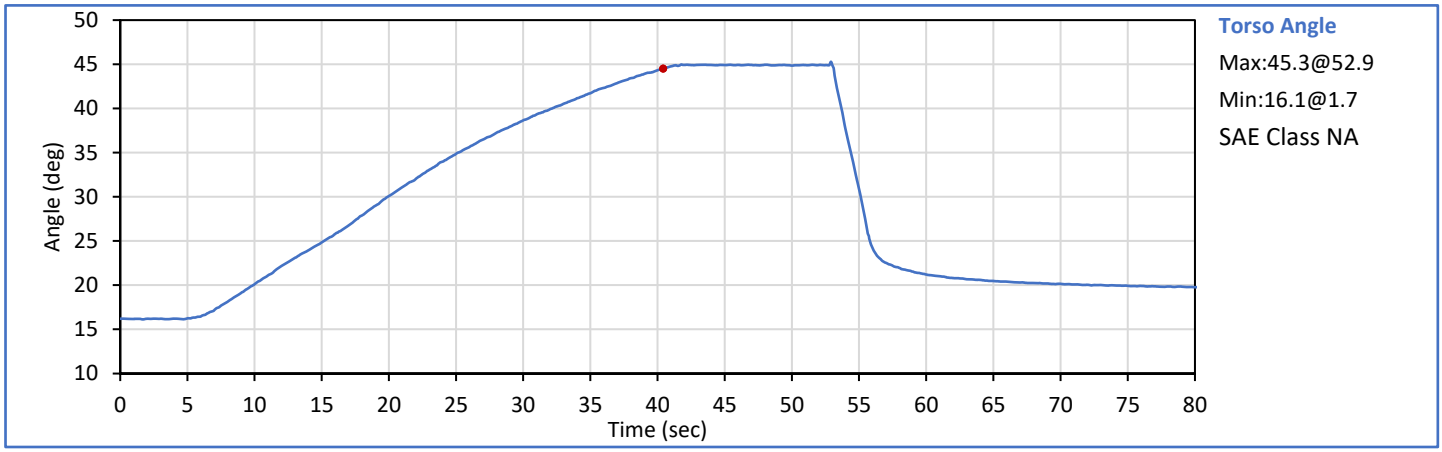
Approved By: J. Hernandez

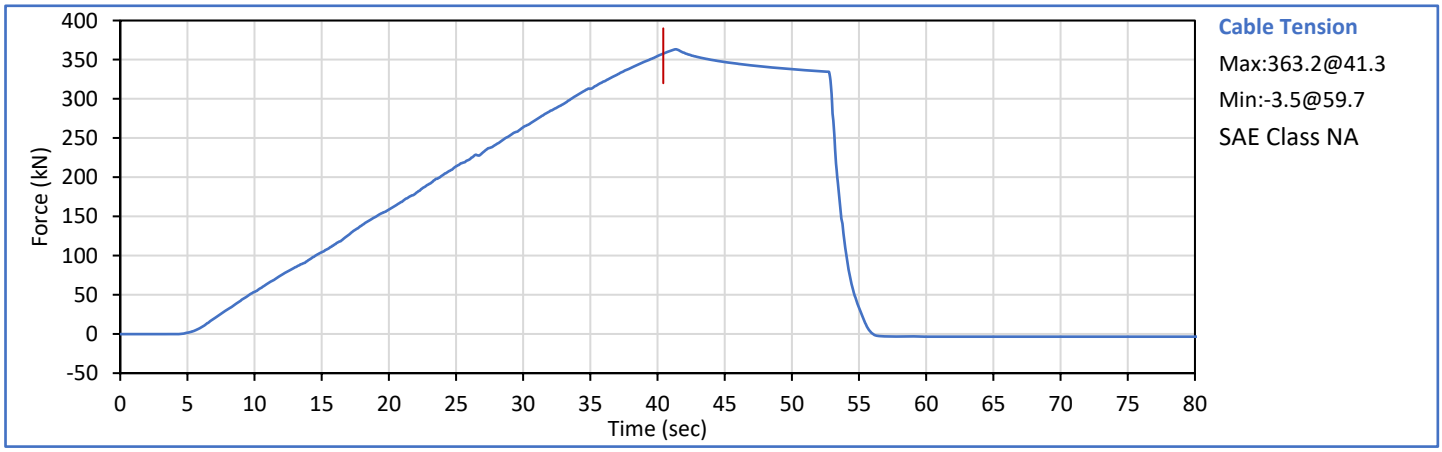
Applus IDIADA KARCO

Hybrid III 5th Percentile Female ATD
Torso Flexion Test

ATD Serial No.: DH1644 Test Date: 2025-04-11

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.6	Pass
Laboratory Humidity	%	10	70	38	Pass
Orientation Angle	deg	0.0	20.0	16.0	Pass
Test Initial Angle	deg	11.0	19.0	16.2	Pass
Peak Force at 45° (+/-0.5°)	N	320.0	390.0	357.8	Pass
Torso Flexion Rate	deg/s	0.50	1.50	0.84	Pass
Final Reference Plane Angle	deg	-8.0	8.0	2.7	Pass
			Overall Test Results		Pass





Technician: J. Perez

Approved By: J. Hernandez

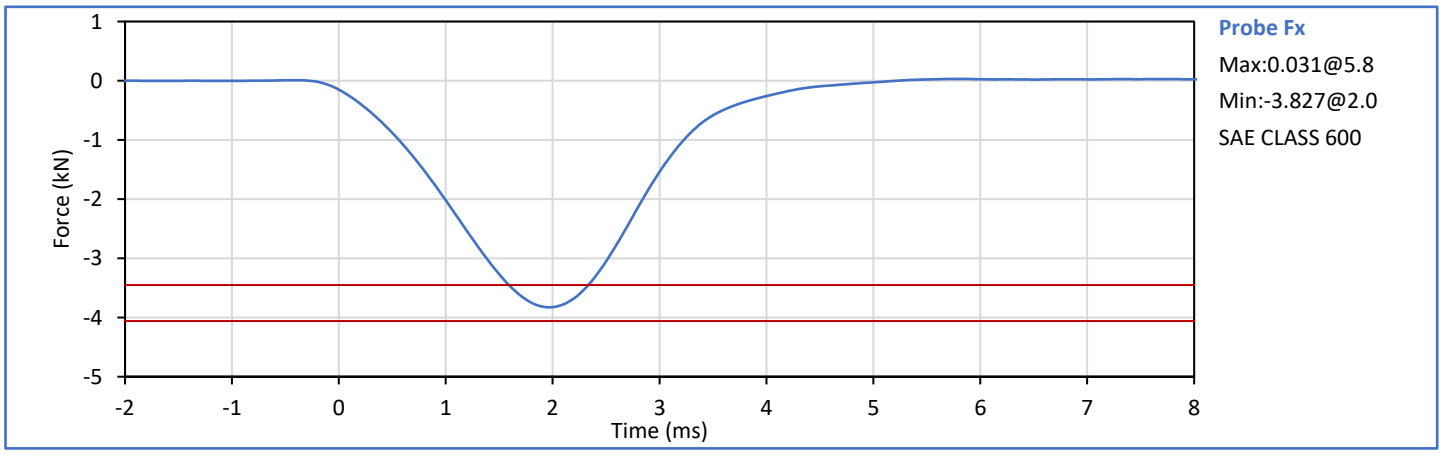
Applus IDIADA KARCO

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

ATD Serial No.: DH1644

Test Date: 2025-04-09

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	38	Pass
Probe Velocity	m/s	2.070	2.130	2.103	Pass
Peak Resistive Force	kN	-4.060	-3.450	-3.827	Pass
			Overall Test Results		Pass



Technician: J. Perez

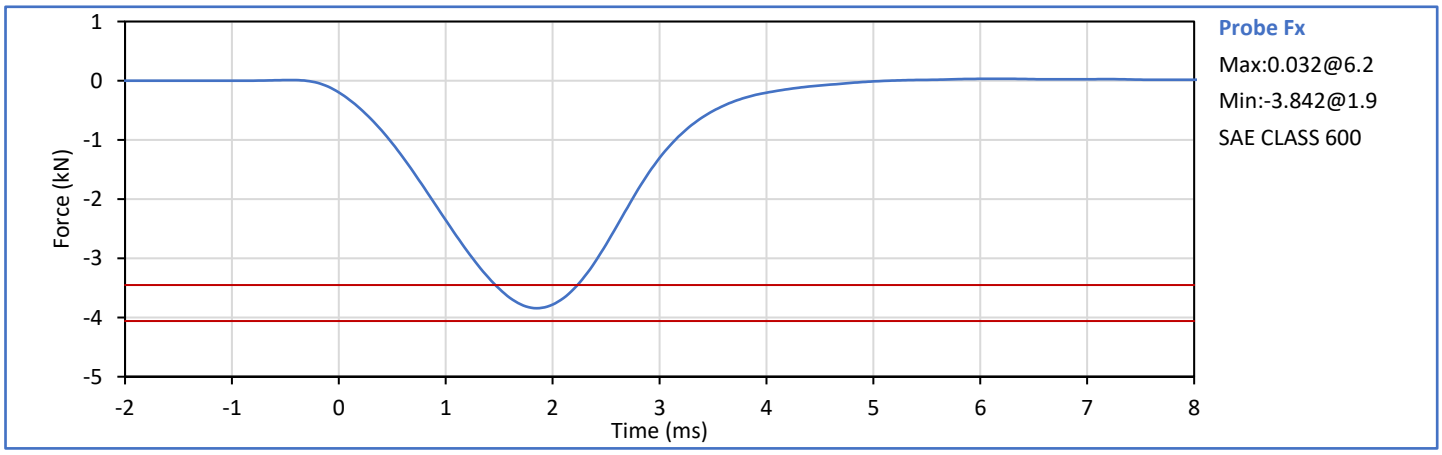
Approved By: J. Hernandez

Applus IDIADA KARCO

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

ATD Serial No.: DH1644 Test Date: 2025-04-09

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	38	Pass
Probe Velocity	m/s	2.070	2.130	2.102	Pass
Peak Resistive Force	kN	-4.060	-3.450	-3.842	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	2024-11-16
Head Acceleration Y Primary	P49228	Endevco	7264C-2k	2024-11-16
Head Acceleration Z Primary	P50101	Endevco	7264C-2k	2024-11-16
Head Acceleration X Redundant	P50103	Endevco	7264C-2k	2024-11-16
Head Acceleration Y Redundant	P49210	Endevco	7264C-2k	2024-11-16
Head Acceleration Z Redundant	P58713	Endevco	7264C-2k	2024-11-16
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	2024-11-15
Chest Acceleration Y Primary	P49208	Endevco	7264C-2k	2024-11-15
Chest Acceleration Z Primary	P51264	Endevco	7264C-2k	2024-11-15
Chest Acceleration X Redundant	P49461	Endevco	7264C-2k	2024-11-15
Chest Acceleration Y Redundant	P58774	Endevco	7264C-2k	2024-11-15
Chest Acceleration Z Redundant	P49168	Endevco	7264C-2k	2024-11-15
Chest Deflection	0606 (H3)	Servo	14CBI-3615	2024-11-16
Pelvis Acceleration X	P49238	Endevco	7264C-2k	2024-11-15
Pelvis Acceleration Y	P51278	Endevco	7264C-2KTZ	2024-11-15
Pelvis Acceleration Z	P50087	Endevco	7264C-2k	2024-11-15
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	374 Mx	R.A. Denton	3643	2024-05-24
Left Upper Tibia Moment Y	374 My	R.A. Denton	3643	2024-05-24
Left Upper Tibia Force Z	374 Fz	R.A. Denton	3643	2024-05-24
Left Lower Tibia Moment X	DH3317 Mx	FTSS	IF-853	2024-05-24
Left Lower Tibia Moment Y	DH3317 My	FTSS	IF-853	2024-05-24
Left Lower Tibia Force Z	DH3317 Fz	FTSS	IF-853	2024-05-24
Right Upper Tibia Moment X	414 Mx	R.A. Denton	3643	2024-05-24
Right Upper Tibia Moment Y	414 My	R.A. Denton	3643	2024-05-24
Right Upper Tibia Force Z	414 Fz	R.A. Denton	3643	2024-05-24
Right Lower Tibia Moment X	405 Mx	R.A. Denton	3644	2024-05-24
Right Lower Tibia Moment Y	405 My	R.A. Denton	3644	2024-05-24
Right Lower Tibia Force Z	405 Fz	R.A. Denton	3644	2024-05-24
Left Ankle Acceleration X	03E20-N09	Entran	EGEB6Q-2k	2024-11-16
Left Ankle Acceleration Z	P68074	Endevco	7264C-2k	2024-11-16
Left Toe Acceleration Z	03H07-Z10	Entran	EGEB6Q-2k	2024-11-16
Right Ankle Acceleration X	06E20-R08	Entran	EGEB6Q-2k	2024-11-16
Right Ankle Acceleration Z	06A07-R08	Entran	EGEB6Q-2k	2024-11-16
Right Toe Acceleration Z	02I10-N27	Entran	EGEB6Q-2k	2024-11-16
Seat Belt Outside Lap Force	313	FTSS	IF-964	2025-04-03
Seat Belt Upper Diagonal Force	315	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	452 Fx	R.A. Denton	1716A	2024-06-04
Upper Neck Force Y	452 Fy	R.A. Denton	1716A	2024-06-04
Upper Neck Force Z	452 Fz	R.A. Denton	1716A	2024-06-04
Upper Neck Moment X	452 Mx	R.A. Denton	1716A	2024-06-04
Upper Neck Moment Y	452 My	R.A. Denton	1716A	2024-06-04
Upper Neck Moment Z	452 Mz	R.A. Denton	1716A	2024-06-04
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	2024-11-15
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	112 (pri)	R.A. Denton	3821JTF	2024-06-05
Right Femur Force Z	132 (pri)	R.A. Denton	3821JTF	2024-06-05
Left Femur Force Z Redundant	112 (red)	R.A. Denton	3821JTF	2024-06-05
Right Femur Force Z Redundant	132 (red)	R.A. Denton	3821JTF	2024-06-05
Left Upper Tibia Moment X	468 Mx	R.A. Denton	3643	2024-05-10
Left Upper Tibia Moment Y	468 My	R.A. Denton	3643	2024-05-10
Left Upper Tibia Force Z	468 Fz	R.A. Denton	3643	2024-05-10
Left Lower Tibia Moment X	499 Mx	R.A. Denton	3644	2024-05-10
Left Lower Tibia Moment Y	499 My	R.A. Denton	3644	2024-05-10
Left Lower Tibia Force Z	499 Fz	R.A. Denton	3644	2024-05-10
Right Upper Tibia Moment X	DH3302 Mx	FTSS	IF-857	2024-05-10
Right Upper Tibia Moment Y	DH3302 My	FTSS	IF-857	2024-05-10
Right Upper Tibia Force Z	DH3302 Fz	FTSS	IF-857	2024-05-10
Right Lower Tibia Moment X	399 Mx	R.A. Denton	3644	2024-05-10
Right Lower Tibia Moment Y	399 My	R.A. Denton	3644	2024-05-10
Right Lower Tibia Force Z	399 Fz	R.A. Denton	3644	2024-05-10
Left Ankle Acceleration X	P58897	Endevco	7264C-2k	2024-11-12
Left Ankle Acceleration Z	P52057	Endevco	7264C-2k	2024-11-12
Left Toe Acceleration Z	P49224	Endevco	7264C-2k	2024-11-12
Right Ankle Acceleration X	P52019	Endevco	7264C-2k	2024-11-12
Right Ankle Acceleration Z	P58755	Endevco	7264C-2k	2024-11-12
Right Toe Acceleration Z	P52076	Endevco	7264C-2k	2024-11-12
Seat Belt Outside Lap Force	251	FTSS	IF-964	2025-04-03
Seat Belt Upper Diagonal Force	263	FTSS	IF-964	2025-04-03

Table 3 - Vehicle Instrumentation

Sensor Location	Sensor S\N	Mfr	Model	Cal Date
Left Rear Primary Ax	M11232	Endevco	758H-2k	2025-02-24
Right Rear Primary Ax	M11370	Endevco	758H-2k	2025-02-07
Engine Top Ax	M12808	Endevco	758H-2k	2025-02-22
Engine Bottom Ax	M12890	Endevco	758H-2k	2025-02-22
Left Rear Az	M13681	Endevco	758H-2k	2025-02-22
Right Rear Az	M13682	Endevco	758H-2k	2025-02-11
Left Rear Redundant Ax	M12872	Endevco	758H-2k	2025-02-06
Right Rear Redundant Ax	M12831	Endevco	758H-2k	2025-02-22