

REPORT NUMBER: SideNCAPPole-KAR-25-007
NEW CAR ASSESSMENT PROGRAM (NCAP)
SIDE IMPACT POLE TEST

MITSUBISHI MOTORS CORPORATION
2025 MITSUBISHI OUTLANDER 5-DOOR MPV

NHTSA NO. M20255601

PREPARED BY:
APPLUS IDIADA KARCO ENGINEERING, LLC.
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JUNE 20, 2025

FINAL REPORT

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF CRASHWORTHINESS STANDARDS
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FINAL REPORT ACCEPTANCE BY OCWS:

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

Date: _____

COTR, New Car Assessment Program
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Date: _____

TECHNICAL REPORT DOCUMENTATION PAGE

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16. Abstract A 32.2 km/h 75° rigid pole side NCAP impact test was conducted on the subject 2025 Mitsubishi Outlander 5-Door MPV in accordance with the specifications of the Office of Crashworthiness Standards Side NCAP Pole Laboratory Test Procedure for the generation of consumer information on vehicle side pole crash protection. The test was conducted at the Applus IDIADA KARCO Engineering, LLC. facility in Adelanto, California on June 5, 2025. The impact velocity was 32.07 km/h and the outside ambient temperature at the struck (driver's) side of the vehicle was 30.0°C. The target vehicle's maximum post-test static crush was 334 mm located at level 3. The test vehicle's occupant performance data is as follows: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Measurement Description</th> <th colspan="3">Driver ATD (SID-IIs)</th> </tr> <tr> <th>Units</th> <th>Threshold</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆)</td> <td></td> <td>1000</td> <td>304.354</td> </tr> <tr> <td>Resultant Lower Spine Acceleration</td> <td>g</td> <td>82</td> <td>33.692</td> </tr> <tr> <td>Total Pelvic Force (Sum of Acetabular and Iliac Forces)</td> <td>N</td> <td>5525</td> <td>2754.786</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>38</td> <td>21.523</td> </tr> <tr> <td>Maximum Abdominal Rib Deflection</td> <td>mm</td> <td>45</td> <td>16.797</td> </tr> </tbody> </table>				Measurement Description	Driver ATD (SID-IIs)			Units	Threshold	Result	Head Injury Criteria (HIC ₃₆)		1000	304.354	Resultant Lower Spine Acceleration	g	82	33.692	Total Pelvic Force (Sum of Acetabular and Iliac Forces)	N	5525	2754.786	Maximum Thoracic Rib Deflection	mm	38	21.523	Maximum Abdominal Rib Deflection	mm	45	16.797
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17. Key Words New Car Assessment Program (NCAP) Side Impact Pole Part 572V SID-IIs		18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Admin. Office of Crashworthiness Standards (NRM-110) 1200 New Jersey Ave., SE Washington, DC 20590																												
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SECTION 1

TEST PURPOSE AND SUMMARY OF TEST

PURPOSE

This side impact test is part of the 2025 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under contract number 693JJ920D000015. The purpose of this test is to generate comparative side impact performance in a 2025 Mitsubishi Outlander 5-Door MPV. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Laboratory Test Procedure date March 2020.

SUMMARY

A rigid pole side impact test was conducted on a 2025 Mitsubishi Outlander 5-Door MPV. The subject vehicle was towed into the rigid pole at an angle of 74.1° and a velocity of 32.07 km/h. The test was conducted by Applus IDIADA KARCO Engineering, LLC. in Adelanto, California on June 5, 2025. Pre- and post-test photographs of the test vehicle and side impact dummy (SID-IIs) are included in Appendix A of this report.

One 299 (SID-IIs) dummy was placed in the driver designated seating position according to instructions specified in the OCWS Side NCAP Pole Laboratory Test Procedure, dated March 2020. Camera locations and other pertinent camera information are included in this report.

The 299 (SID-IIs) was instrumented accordingly:

- Primary and redundant head CG tri-axial accelerometers
- Head triaxial angular rate sensors
- Thorax upper, middle and lower rib displacement potentiometers
- Abdomen upper and lower rib displacement potentiometers
- Lower spine (12) tri-axial accelerometers
- Iliac load cell
- Acetabulum load cell

Appendix B contains the vehicle and dummy response data. Dummy configuration and performance verification data can be found in Appendix C of this report. Appendix D contains the test equipment and instrumentation calibration data.

SECTION 1 ...(CONTINUED)
TEST PURPOSE AND SUMMARY OF TEST

Injury readings for the SID-IIs dummy were recorded as follows:

Measurement Description	Units	Driver ATD (SID-IIs)	
		IARV	Result
Head Injury Criteria (HIC ₃₆)		1000	304.354
Lower Spine (T12) Resultant Acceleration	g	82	33.692
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	2754.786
Maximum Thoracic Rib Deflection	mm	38*	21.523
Maximum Abdominal Rib Deflection	mm	45*	16.797

**Proposed IARV*

Supplemental restraint information is given below:

Restraint Type	Left Front (Driver) Occupant Location 1		Left Rear (Passenger) Occupant Location 4	
	Mounted	Deployed	Mounted	Deployed
Frontal Air Bag	Yes	No		
Knee Air Bag	Yes	No		
Side Air Bag 1 (Curtain)	Yes	Yes	Yes	Yes
Side Air Bag 2 (Torso/Pelvis)	Yes	Yes	Yes	Yes
Seat Belt Pretensioner	Yes	Yes	Yes	Yes
Seat Belt Load Limiter	Yes	Yes	Yes	Yes
Other (Center Air Bag)	Yes	Yes		

GENERAL COMMENTS: DRIVER CENTER AIR BAG DEPLOYED

SECTION 2

OCCUPANT AND VEHICLE INFORMATION/DATA SHEETS

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025

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	°F	°C	$=(T_f - 32)/1.8$
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 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA Number	M20255601
Model Year	2025
Make	Mitsubishi
Model	Outlander
Body Style	5-Door MPV
VIN	JA4J3UA89SZ024295
Body Color	Alloy Silver Metallic
Odometer Reading (km / mi)	18/11
Engine Displacement (L)	2.5
Type / No. of Cylinders	4-Cylinder
Engine Placement	Inline
Transmission Type	Automatic
Transmission Speeds	8
Overdrive	Yes
Final Drive	FWD
Roof Rack	No
Sunroof / T-Top	No
Running Boards	No
Tilt Steering Wheel	Yes
Power Seats	Yes
Anti-Lock Brakes (ABS)	Yes

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

Does Owner's Manual provide instructions to turn off automatic door locks?

Yes; Page 4-5

DATA FROM CERTIFICATION LABEL

Manufactured By	Mitsubishi Motors Corporation
Date of Manufacture	Feb-25
Vehicle Type	MPV

GVWR (kg)	2350
GAWR Front (kg)	1210
GAWR Rear (kg)	1365

VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total
Designated Seating Capacity	2	3	2	7
Capacity Weight (VCW) (kg)				525.0
DSC x 68 (kg)				476.0
Cargo Weight (RCLW) (kg)				49.0

*For trucks or MPVs, if A-B>136, RCLW=136 kg

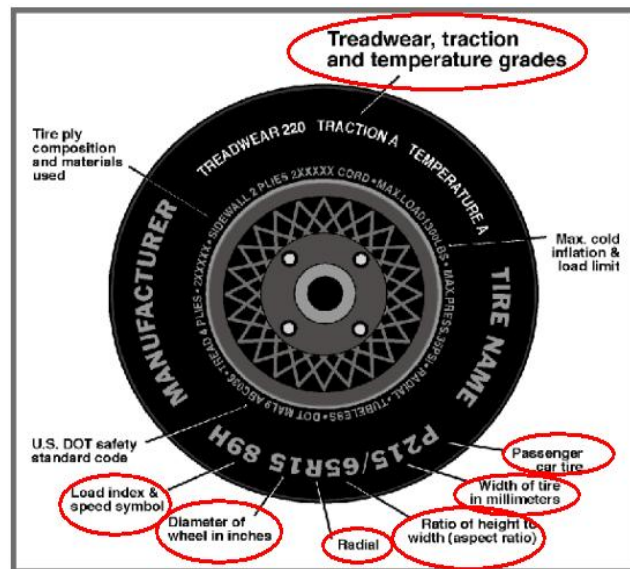
VEHICLE SEAT TYPE

Seating Location	Type of Seat Pan				Type of Seat Back		
	Bucket	Bench	Split Bench	Contoured	Fixed	Adjustable	
						w/ Lever	w/ Knob
Front Seat	Yes					Yes	
Rear or Second Row Seat		Yes				Yes	
Third Row Seat		Yes			Yes		

DATA SHEET NO. 1 ... (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601
 Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025



Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	350	350
Cold Pressure (kPa)	240	240
Recommended Tire Size	P235/60 R18	P235/60 R18
Tire Size on Vehicle	P235/60 R18	P235/60 R18
Tire Manufacturer	Toyo Tires	Toyo Tires
Tire Model	Toyo A45	Toyo A45
Treadware	300	300
Traction Grade	A	A
Temperature Grade	A	A
Tire Plies Sidewall	2 Polyester	Polyester
Tire Plies Body	2 Polyester, 2 Steel, 1 Nylon	2 Polyester, 2 Steel, 1 Nylon
Load Index/Speed Symbol	102 H	105
Tire Material	Rubber	Rubber
DOT Safety Code Left	23 EV0 725	23 EV0 625
DOT Safety Code Right	23 EV0 725	23 EV0 625

DATA SHEET NO. 1 ... (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601
 Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025

TIRE PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kPa	240	240	240	240
Tire Placard	kPa	240	240	240	240
Owner's Manual	kPa	240	240	240	240
As Tested	kPa	240	240	240	240

TEST VEHICLE AXLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Left	kg	494.5	358.5		508.5	400.0		503.5	404.5	
Right	kg	480.5	349.5		466.0	400.0		485.0	387.0	
Ratio	%	57.9%	42.1%	100.0%	54.9%	45.1%	100.0%	55.5%	44.5%	100.0%
Total	kg	975.0	708.0	1683.0	974.5	800.0	1774.5	988.5	791.5	1780.0

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total Delivered Weight (UVW)	kg	1683.0	A
Actual Weight of 1 SID II-s ATD Used	kg	49.0	B
Rated Cargo/Luggage Wt (RCLW)	kg	49.0	C
Calculated Vehicle Target Wt (TVTW)	kg	1781.0	A+B+C

Does the measured As Tested Vehicle Weight lie within the required weight range (i.e.

Calculated Test Vehicle Target Weight -4.5 kg to -9.0 kg)? ☒ Yes ☐ No

TEST VEHICLE ATTITUDE AND CG

Measurement Description	Units	As Delivered	As Tested	Fully Loaded	Meets Requirement***
Driver Door Sill Angle (front-to-rear)*	°	0.0	-0.1	-0.3	Yes
Front Passenger Sill Angle (front-to-rear)*	°	1.5	1.2	0.9	Yes
Front Bumper-Line Angle (left-to-right)**	°	1.0	1.0	1.0	Yes
Rear Bumper-Line Angle (left-to-right)**	°	-0.4	-0.9	-1.0	Yes
Vehicle CG (Aft of Front Axle)	mm	1137	1218	1202	
Vehicle CG (Left (+)/Right (-) from Longitudinal Centerline)	mm	11	19	16	

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

***The "As Tested" vehicle attitude angle measurements must be within "As Delivered" and the "Fully Loaded" vehicle attitude measurements at each location. Indicate "Yes" or "No" for "Meets Requirement"

DATA SHEET NO. 1 ... (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Rear Trim Removed	3.5
Tire Pump Removed	5.0

TEST SURFACE MARKINGS

	Distance from 75° Impact Location Line (mm)
Fore 25 mm target	0
Aft 25 mm target	0

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

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601
 Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025

SEAT POSITIONING

The driver's seat, front center seat (if applicable), and front passenger's seat should be set to the forward most, mid-height, mid-angle position. The struck side rear passenger's seat, rear center seat, and non-struck side rear passenger's seat should be set to the rear most, lowest, mid-angle position.

SCRL ANGLE RANGE

Seat	SCRL (°)		
	Max	Min	Mid
Driver Seat	18.9	14.3	16.6
Front Passenger Seat			15.6
Front Center Seat			
Struck Side Rear Seat	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed

SEAT HEIGHT AND ANGLE

Seat	As Tested SCRL Angle (Mid) (°)	As Tested SCRP Height (mm)	SCRP Height Position	SCRP Height (mm)		
				Rearmost	Mid Fore/Aft	Forwardmost
Driver Seat	16.6	717	Max			
			Mid	707	717	728
			Min			
Front Passenger Seat	20.9	713	Max			
			Mid	705	713	721
			Min			
Front Center Seat			Max			
			Mid			
			Min			
Struck Side Rear Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
			Mid	Fixed	Fixed	Fixed
			Min	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
			Mid	Fixed	Fixed	Fixed
			Min	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
			Mid	Fixed	Fixed	Fixed
			Min	Fixed	Fixed	Fixed

DATA SHEET NO. 2 ... (CONTINUED)

SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT, AND FUEL SYSTEM DATA

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV

NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test

Test Date: 06/05/2025

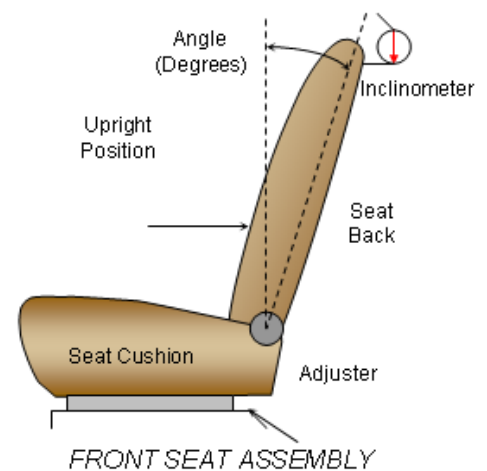
SEAT FORE/AFT POSITION

Seat	Total Fore/Aft Travel		Test Position From Forwardmost Position	
	mm	Detents*	mm	Detent*
Driver Seat	260	26	0	0
Front Passenger Seat	240	22	0	0
Front Center Seat				
Struck Side Rear Seat	240	22	240	22
Non-Struck Side Rear Seat	240	22	240	22
Rear Center Seat	Fixed	Fixed	Fixed	Fixed

*Detent zero (0) is the forward most detent

SEAT BACK ADJUSTMENT

The driver's seat back is positioned such that the dummy's head is level. The front passenger's seat back is positioned in a similar manner to the driver's seat. The struck side rear passenger seat back is positioned in accordance with the information provided by the manufacturer in Form 1 for the 5th percentile female dummy in a Side NCAP MDB Test. The rear center and non-struck side rear passenger's seat back is set to match the struck side rear seat back. Seat back angle is measured using an inclinometer at the headrest post.



Seat	Total Seat Back Angle Range		Test Position from Most Upright	
	Degrees	Detents*	Degree	Detent*
Driver Seat w/Seated Dummy	68.4	34	2.9	
Front Passenger Seat	75.2	40	3.0	
Front Center Seat				
Struck Side Rear Seat	29.0	11	10.5	4
Non-Struck Side Rear Seat	29.0	11	10.5	4
Rear Center Seat	Fixed	Fixed	Fixed	Fixed

*Detent zero (0) is the forward most detent

DATA SHEET NO. 2 ... (CONTINUED)**SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT, AND FUEL SYSTEM DATA**Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025**SEAT BELT ANCHORAGE ADJUSTMENT**

Seat belt anchorages are adjusted in accordance with the information provided by the manufacturer on Form No. 1. The positions are marked H, M2, M1, L from top to bottom.

	Total No. of Positions	Placed in Position
Driver Seat	4	M2

HEAD RESTRAINT ADJUSTMENT

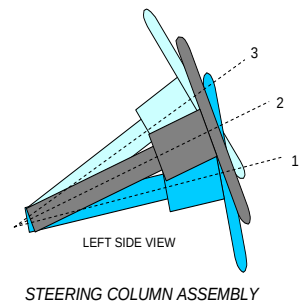
The driver's head restraint is adjusted to the lowest and most full forward in-use position.

	Total No. of Positions	Placed in Position
Driver Seat	4	L

STEERING COLUMN ADJUSTMENT

Steering wheel and column adjustments are made so that the steering wheel hub is at the center of the geometric locus it describes when it moves through its full range of motion.

	Degrees	Fore-Aft Position (mm)
Lowermost - Position 1	23.2	0
Geometric Center - Position 2	25.6	29
Uppermost - Position 3	28.0	58
Telescoping Steering Wheel Travel		58
Test Position	25.6	29



DATA SHEET NO. 2 ... (CONTINUED)

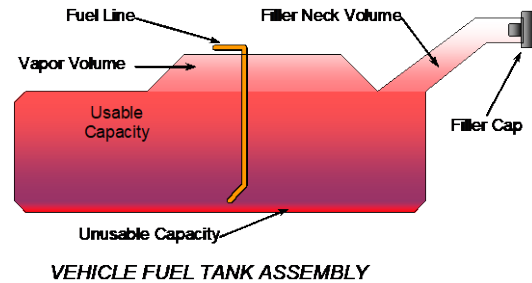
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT, AND FUEL SYSTEM DATA

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025

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.



FUEL TANK CAPACITY

Description	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	54.88
Usable Capacity of "Optional Tank" (see Form No. 1)	
Usable Capacity of "Standard Tank" (see Owner's Manual)*	54.88
Usable Capacity of "Optional Tank" (see Owner's Manual)*	
93% of Usable Capacity	51.04
Actual amount of Solvent Used in Test	51.04
1/3 of Usable Capacity	18.29

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

DATA SHEET NO. 3

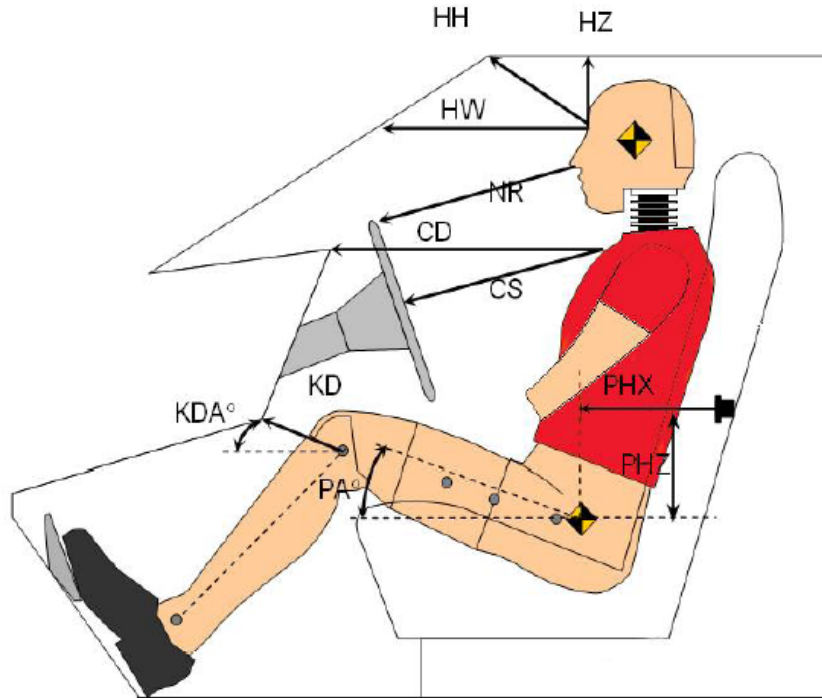
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV

NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test

Test Date: 06/05/2025



Driver Code	Description	Driver	
		Length (mm)	Angle (°)
HH	Head to Header	312	
HW	Head to Windshield	578	
HZ	Head to Roof	203	
NR	Nose to Rim	223	
CD	Chest to Dash	392	
CS	Chest to Steering Wheel	157	
KD(L)/KDA(L)°	Left Knee to Dash	117	29.5
KD(R)/KDA(R)°	Right Knee to Dash	90	3.5
PAX°	Pelvic Tilt Angle (x-axis)		18.8
PAY°	Pelvic Tilt Angle (y-axis)		0.0
PHX	Hip Point to Striker (x-axis)	405	
PHZ	Hip Point to Striker (z-axis)	231	

DATA SHEET NO. 4

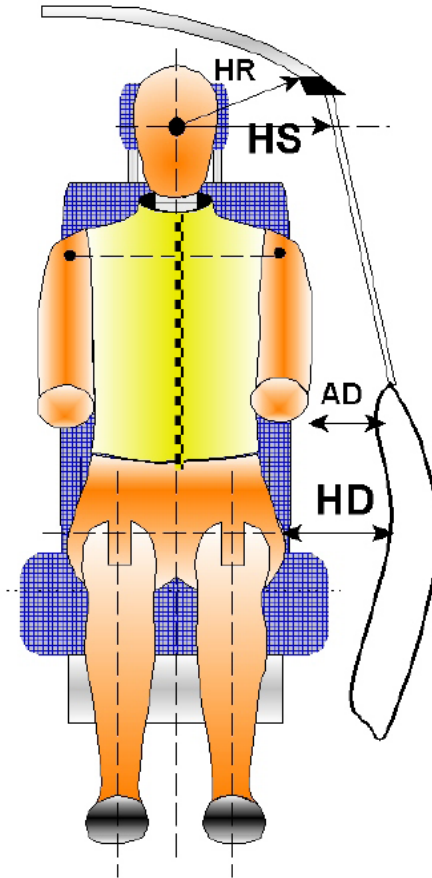
DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV

NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test

Test Date: 06/05/2025

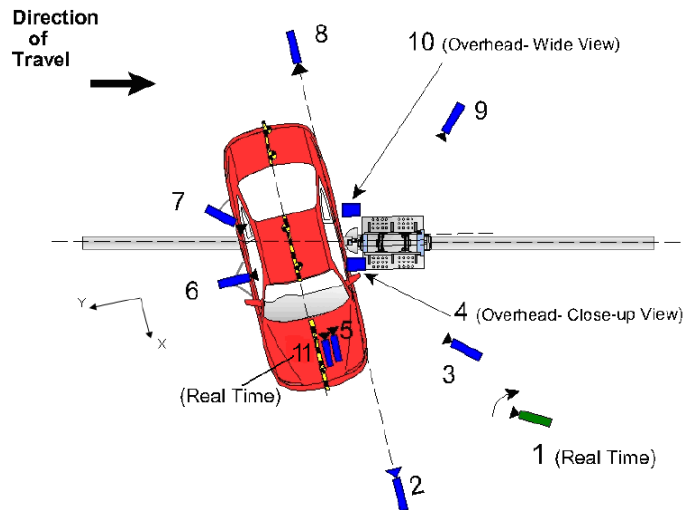


Code	Measurement Description	Units	Driver
HR	Head to Side Header	mm	310
HS	Head to Side Window	mm	390
AD	Arm to Door	mm	166
HD	Hip Point to Door	mm	175

DATA SHEET NO. 5

CAMERA AND INSTRUMENTATION DATA

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601
 Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025



Reference from Point of Impact for X and Y; from Ground for Z):
 +X = Forward of Vehicle, +Y = Right of Vehicle, +Z = Down

Camera No.	View	Coordinates (m)			Lens (mm)	Film Speed (fps)
		X*	Y*	Z*		
1	Real Time Pan View of Impact	8.89	46.57	-3.04		30
2	Front Ground Level - Impact View	8.34	-0.05	-0.93	35	1000
3	Impact Side 45° - Forward Pole View	4.10	-2.15	-1.15	25	1000
4	Overhead Close-Up View of Impact	0.00	0.00	-5.79	35	1000
5	On-Board - Dummy Front View	-1.18	-0.84	-0.83	8	1000
6	On-Board - Dummy Side View	-1.19	-0.84	-0.82	6	1000
7	On-Board - Dummy Rear Oblique View	0.90	-0.92	-0.55	6	1000
8	Rear Ground Level - Impact View	-1.30	1.68	-1.26	35	1000
9	Impact Side 45° - Rearward Pole View	-8.02	0.04	-1.01	25	1000
10	Overhead Wide View of Impact	-0.06	0.22	-5.79	15	1000
11	Real Time Dummy Front View	0.88	-0.96	-0.54		30

*All measurements accurate to ± 6 mm

NOTE: Vehicle is at a 75 angle to the rigid pole.

If applicable, explain why camera(s) did not operate as intended: N/A

INSTRUMENTATION

Driver Dummy Channels	19
Vehicle Structure Accelerometers	18
Pole Load Cells	8
Total	45

DATA SHEET NO. 6

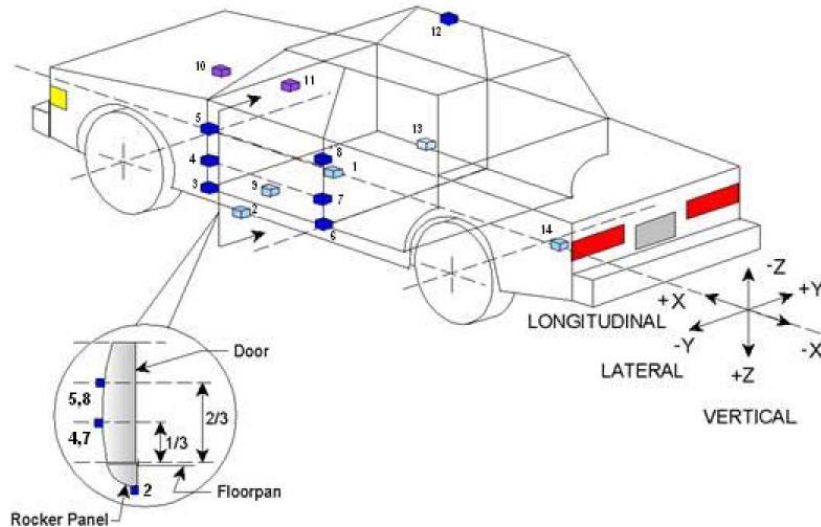
TEST VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV

NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test

Test Date: 06/05/2025



Loc. No.	Sensor Description	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	2610	0	460
2	Left Floor Sill	1900	730	470
3	A-Pillar Sill	1550	730	540
4	A-Pillar Low	1550	730	610
5	A-Pillar Mid	1550	730	700
6	B-Pillar Sill	2530	750	700
7	B-Pillar Low	2530	750	970
8	B-Pillar Mid	2530	750	1090
9	Driver Seat Track	2220	620	480
10	Engine Top	780	100	970
11	Firewall	1130	170	990
12	Right Roof	2170	700	1670
13	Right Floor Sill	1980	700	470
14	Rear Floorpan	3960	0	440

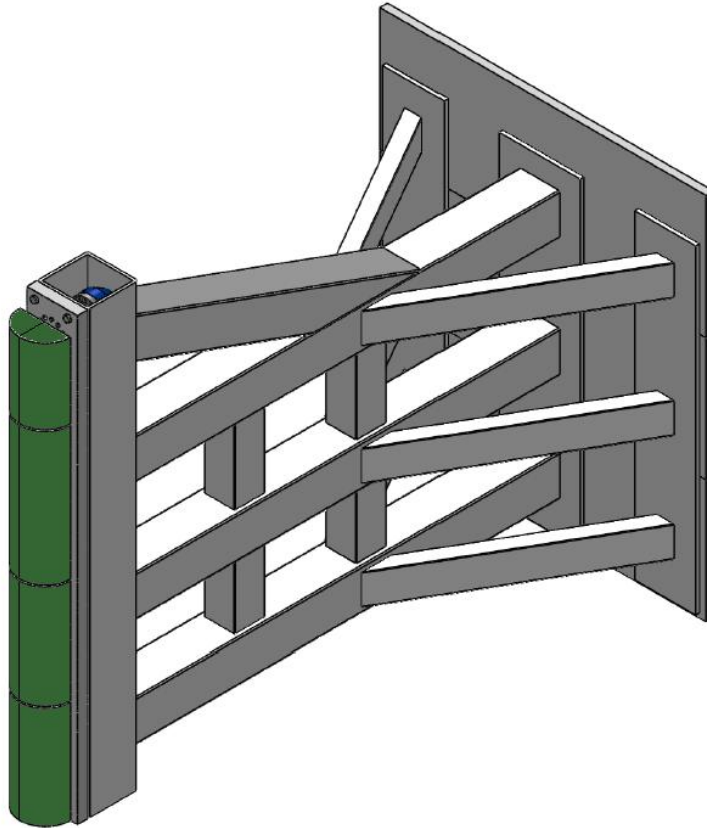
Reference: X – Rear surface of vehicle (+ forward)
 Y – Vehicle centerline (+ to right)
 Z – Ground plane (+ down)

DATA SHEET NO. 7

RIGID POLE LOAD CELL DATA

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025



ID	Units	Height From Ground
1	mm	87
2	mm	468
3	mm	648
4	mm	978
5	mm	1168
6	mm	1651
7	mm	1816
8	mm	2057

DATA SHEET NO. 8**POST-TEST OBSERVATIONS**

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601
 Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025

TEST DUMMY INFORMATION AND CONTACT POINTS

Dummy Body Part	Driver SID-IIs Dummy
Face	Curtain Air Bag, Center Air Bag
Top of Head	Curtain Air Bag, Headrest
Left Side of Head	Curtain Air Bag
Back of Head	Curtain Air Bag, Headrest
Left Shoulder	Curtain Air Bag, Torso/Pelvis Air Bag
Upper Torso	Torso/Pelvis Air Bag, Seat Bolster
Lower Torso	Torso/Pelvis Air Bag, Seat Bolster
Left Hip	Torso/Pelvis Air Bag
Left Knee	None

POST-TEST DOOR PERFORMANCE

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

POST-TEST SEAT PERFORMANCE

Description	Struck Side		Non-Struck Side	
	Front	Rear	Front	Rear
Seat Movement Along Seat Track	No	No	No	No
Seat Disengagement from Floor Pan	No	No	No	No
Seat Back Movement from Initial Position	No	No	No	No
Seat Back Collapse	No	No	No	No

DATA SHEET NO. 8 ... (CONTINUED)**POST-TEST OBSERVATIONS**

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601
 Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025

POST-TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	Good
Sill Separation	None
Windshield Damage	Shattered
Side Window Damage	Broken
Other Notable Effects	None

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Struck Side		Struck Side	
	Driver		Rear Passenger	
	Mounted	Deployed	Mounted	Deployed
Frontal Air Bag	Yes	No		
Knee Air Bag	Yes	No		
Side Air Bag 1 (Curtain)	Yes	Yes	Yes	Yes
Side Air Bag 2 (Torso/Pelvis)	Yes	Yes	Yes	Yes
Seat Belt Pretensioner	Yes	Yes	Yes	Yes
Seat Belt Load Limiter	Yes	Yes	Yes	Yes
Other (Center Air Bag)	Yes	Yes	Yes	Yes

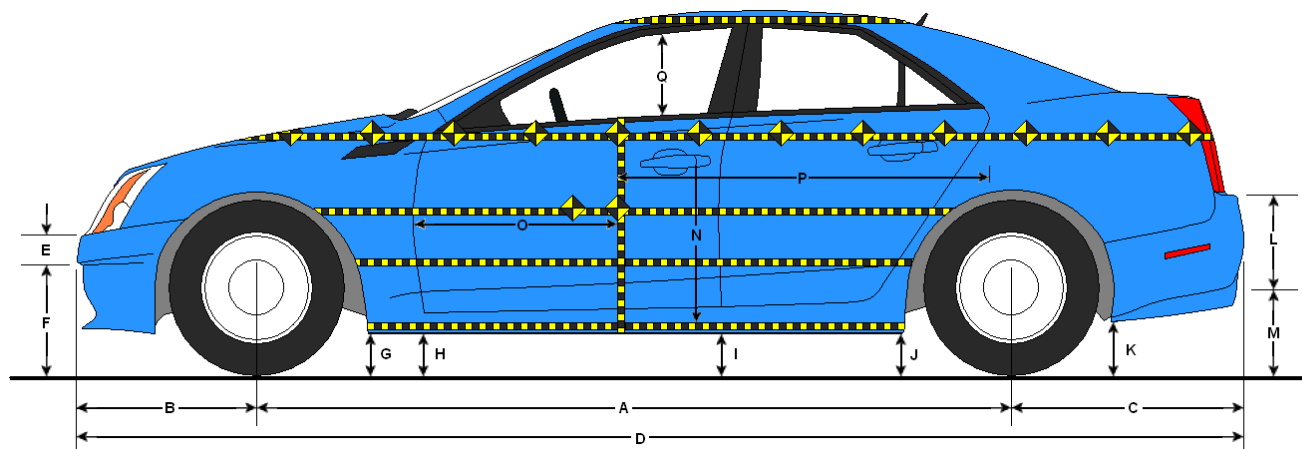
IMPACT POINT LOCATION DATA

Measured Parameter	Units	Tolerance	Value
Vertical Impact Reference Line (Aft of Front Axle)(Intended Impact Point)	mm		1048
Actual Impact Point (Aft of Front Axle)	mm		1047
Horizontal Offset (+ forward / - rearward)	mm	± 38 of Intended Impact Point	1
Angle Between Vehicle's Longitudinal Centerline and Line of Forward Motion	°	75 ± 3	74.4
Trap No. 1 Velocity (Primary)	km/h	31.4 to 33.0	
Trap No. 2 Velocity (Redundant)	km/h	31.4 to 33.0	32.07

DATA SHEET NO. 9

TEST VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601
 Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025



LEFT SIDE VIEW

All measurements in mm with tolerance of $\pm 3\text{mm}$

VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

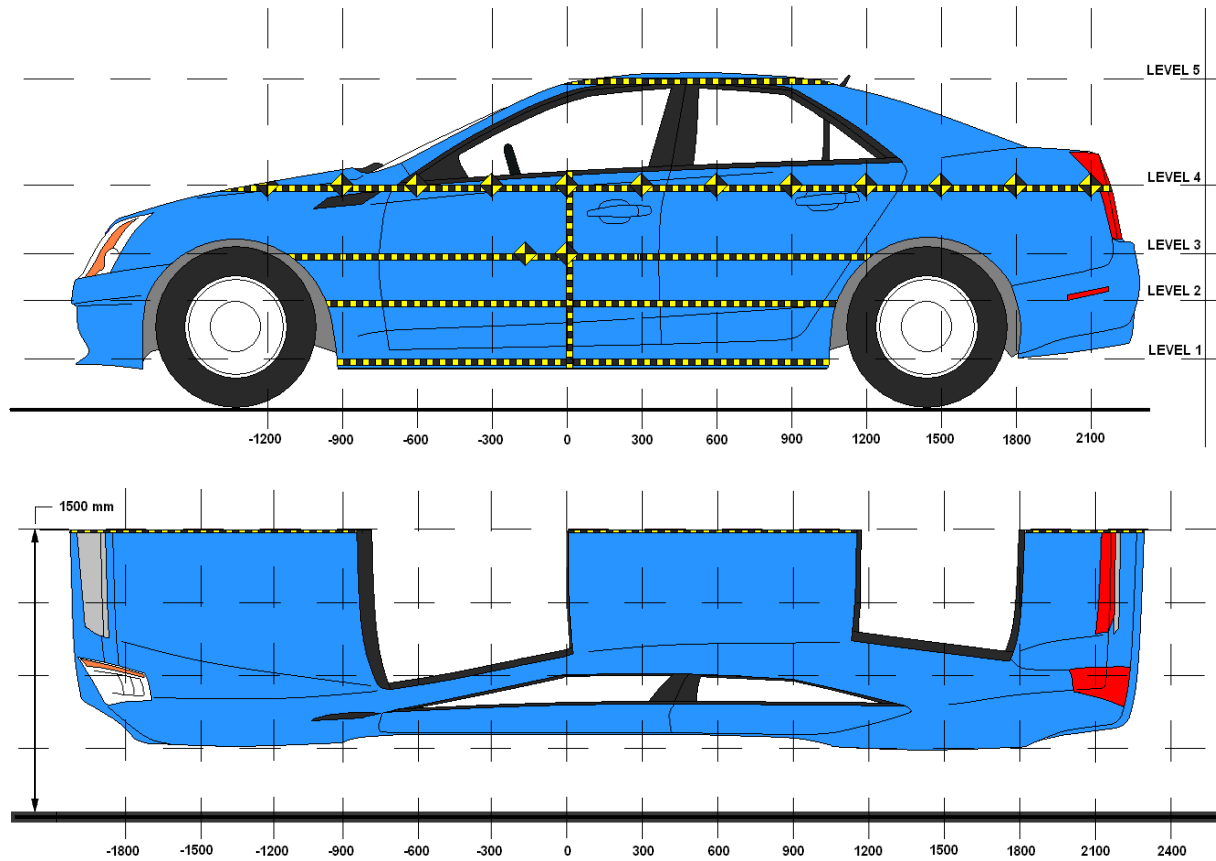
Code	Description	Pre-Test	Post-Test	Change
A	Wheelbase	2703	2657	-46
B	Front Axle to FSOV	980	1001	21
C	Rear Axle to RSOV	1034	1037	3
D	Total Length at Centerline	4717	4695	-22
E	Front Bumper Thickness	80	80	0
F	Front Bumper Bottom to Ground	440	409	-31
G	Sill Height at Front Wheel Well	670	691	21
H	Sill Height at Front Door Leading Edge	664	685	21
I	Sill Height at B-Pillar	651	653	2
J1	Sill Height at Rear Wheel Well	653	631	-22
J2	Pinch Weld Height at Rear Wheel Well	676	667	-9
K	Sill Height Aft of Rear Wheel Well	578	581	3
L	Rear Bumper Thickness	180	180	0
M	Rear Bumper Bottom to Ground	423	424	1
N	Sill Height to Bottom of Front Window Sill	702	726	24
O	Front Door Leading Edge to Impact CL	607	492	-115
P	Rear Door Trailing Edge to Impact CL	1566	1476	-90
Q	Front Window Opening	420	408	-12
R	Right Side Length	3253	3260	7
S	Left Side Length	3253	3191	-62
T	Vehicle Width at B-Pillar	1788	1735	-53

DATA SHEET NO. 10

TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025



NOTE: All measurements in mm with tolerance of $\pm 3\text{mm}$

MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Description	Height Above Ground (mm)	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	168	289	150
2	Occupant H-Point	471	326	0
3	Mid-Door	504	334	0
4	Window Sill	813	278	150
5	Window Top	1358	104	150

DATA SHEET NO. 10 ... (CONTINUED)

TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025

EXTERIOR CRUSH MEASUREMENTS AT EACH LEVEL

	Pre-Test (mm)					Post-Test (mm)					Crush (mm)				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900															
-750			563	677				561	657				-2	-20	
-600	592	565	565	673		622	574	571	665		30	9	6	-8	
-450	600	572	570	669		638	617	613	704		38	45	43	35	
-300	606	580	576	660		688	713	716	759		82	133	140	99	
-150	608	585	580	652		787	815	814	835		179	230	234	183	
0	609	588	581	643		878	914	915	917		269	326	334	274	
150	612	589	583	637	873	901	890	892	915	977	289	301	309	278	104
300	615	590	584	631	870	770	768	769	817	938	155	178	185	186	68
450	617	591	585	625	871	682	647	654	727	921	65	56	69	102	50
600	617	593	586	622	870	688	657	653	682	907	71	64	67	60	37
750	615	593	586	621	872	659	632	631	667	896	44	39	45	46	24
900	614	589	584	620	875	629	600	604	654	888	15	11	20	34	13
1050	610	582	579	619	878	593	565	570	639	884	-17	-17	-9	20	6
1200	607	573	571	618	882	548	570	557	627	884	-59	-3	-14	9	2
1350				603	885				597	887				-6	2
1500				620	891				603	892				-17	1
1650				632	896				634	897				2	1
1800				639	904				641	905				2	1
1950															
2100															
2250															
2400															
2550															
2700															
2850															

DATA SHEET NO. 10 ... (CONTINUED)

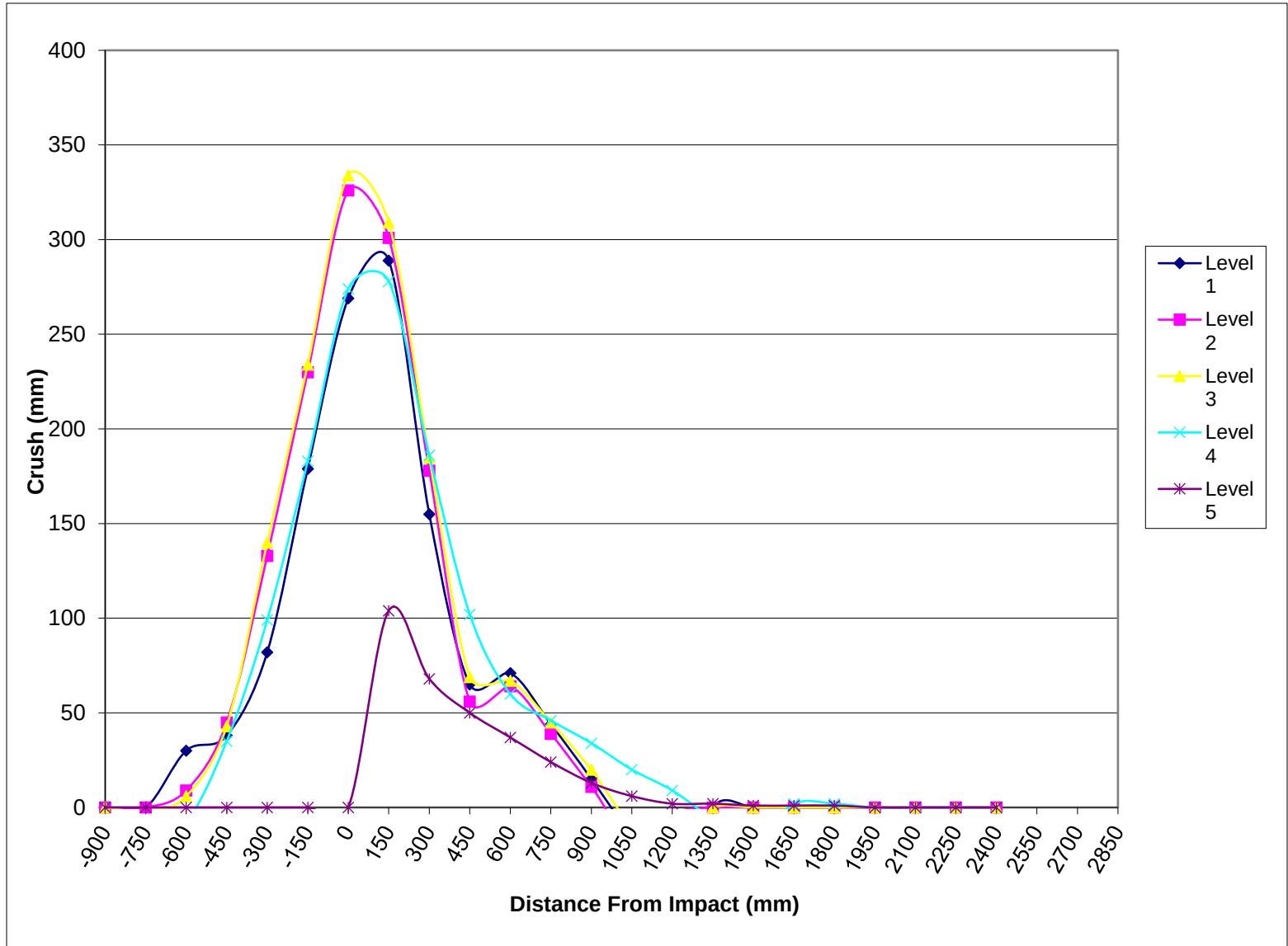
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV

NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test

Test Date: 06/05/2025

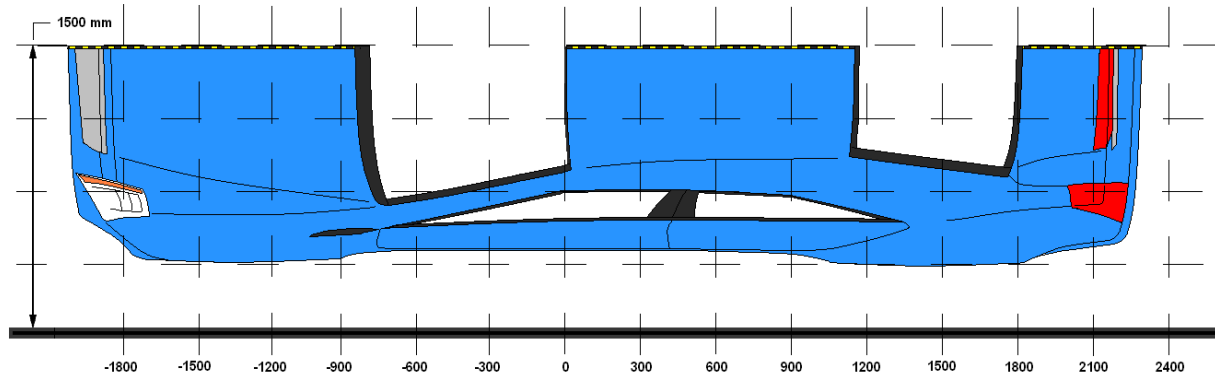


DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025



DPD	Distance From Impact Point (mm)	Level	Pre-Test (mm)	Post-Test (mm)	Crush (mm)
1	1800	4	639	641	2
2	1200	1	607	548	-59
3	750	4	621	667	46
4	150	3	583	892	309
5	-300	3	576	716	140
6	-750	1	677	657	-20

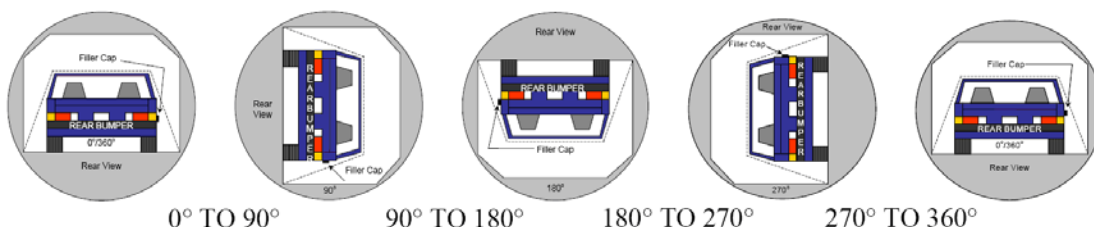
DATA SHEET NO. 12

FMVSS NO. 301 STATIC ROLLOVER RESULTS

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV NHTSA No. M20255601
 Test Program: NCAP Side Pole Impact Test Test Date: 06/05/2025

Temperature at Time of Impact: 30.0° C Test Time: 1:00 PM

- A. From impact until vehicle motion ceases: 0 oz.
 (Maximum allowable = 1 oz.)
- B. For the 5 minute period after motion ceases: 0 oz.
 (Maximum allowable = 5 oz.)
- C. For the following 25 minutes: 0 oz.
 (Maximum allowable = 1 oz./minute)
- D. Spillage Details: There was no Stoddard solvent spillage.



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°	80	300	380
270° To 360°	82	300	382

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. 13

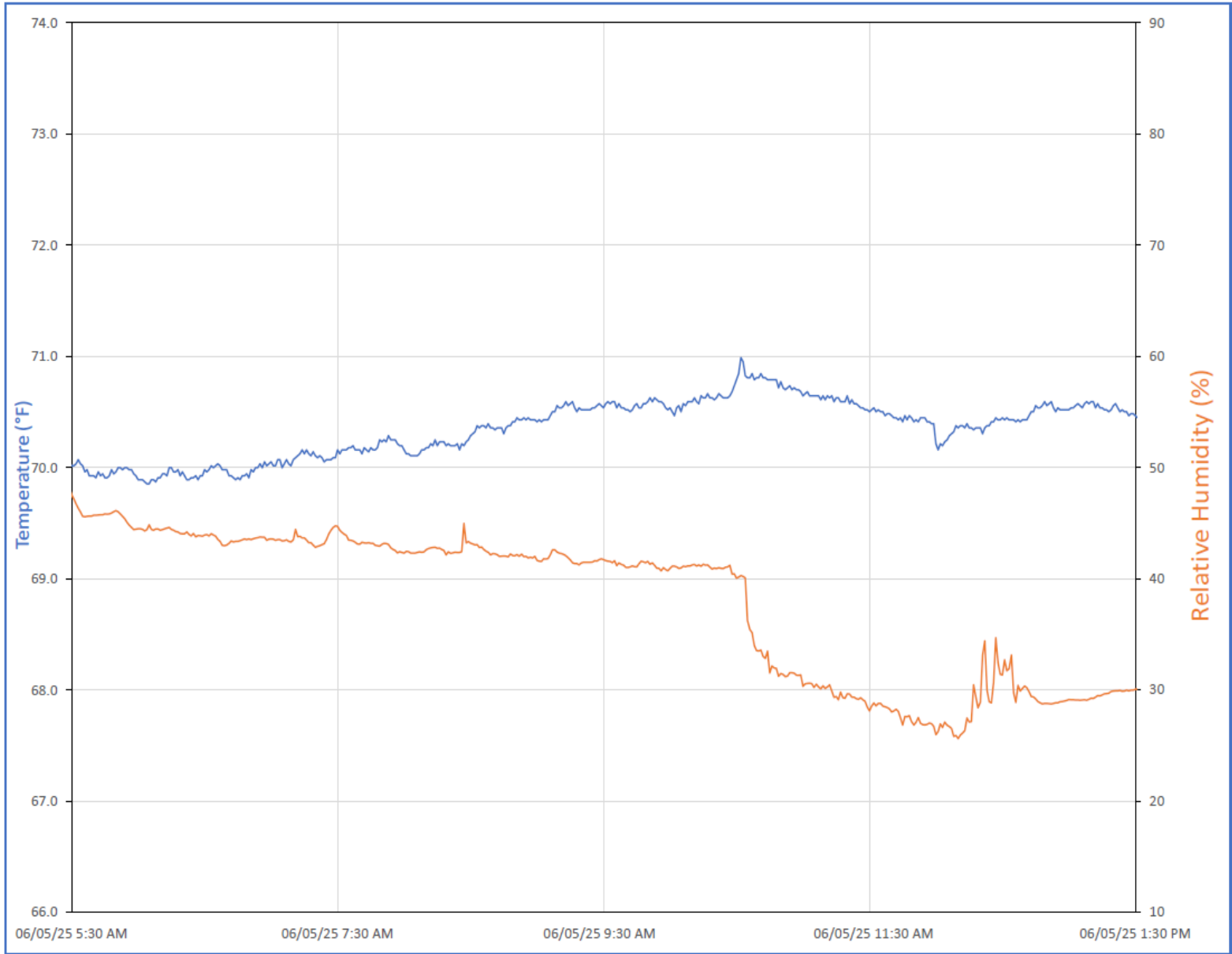
DUMMY/VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION

Test Vehicle: 2025 Mitsubishi Outlander 5-Door MPV

NHTSA No. M20255601

Test Program: NCAP Side Pole Impact Test

Test Date: 06/05/2025



APPENDIX A
PHOTOGRAPHS

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FIGURE 1. As-Delivered Right Front 3/4 View of Test Vehicle



FIGURE 2. As-Delivered Left Rear 3/4 View of Test Vehicle



FIGURE 3. Pre-Test Frontal View of Test Vehicle



FIGURE 4. Post-Test Frontal View of Test Vehicle



FIGURE 5. Pre-Test Left Front 3/4 View of Test Vehicle



FIGURE 6. Post-Test Left Front 3/4 View of Test Vehicle



FIGURE 7. Pre-Test Left Side View of Test Vehicle



FIGURE 8. Post-Test Left Side View of Test Vehicle



FIGURE 9. Pre-Test Left Rear 3/4 View of Test Vehicle



FIGURE 10. Post-Test Left Rear 3/4 View of Test Vehicle



FIGURE 11. Pre-Test Rear View of Test Vehicle



FIGURE 12. Post-Test Rear View of Test Vehicle



FIGURE 13. Pre-Test Right Side View of Test Vehicle



FIGURE 14. Post-Test Right Side View of Test Vehicle



FIGURE 15. Pre-Test Overhead View of Test Area

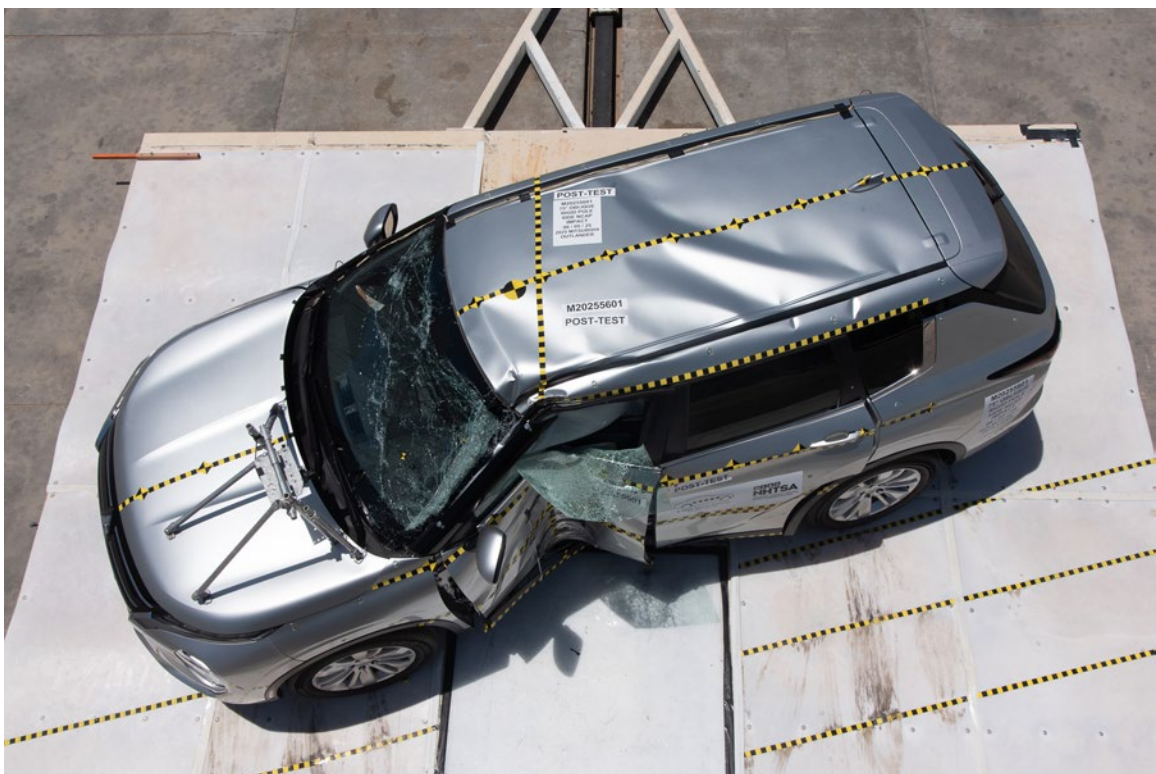


FIGURE 16. Post-Test Overhead View of Test Area



FIGURE 17. Pre-Test Left Side View of Pole Positioned Against Side of Vehicle



FIGURE 18. Pre-Test Right Side View of Pole Positioned Against Side of Vehicle



FIGURE 19. Pre-Test Close-Up View of Impact Point Target



FIGURE 20. Post-Test Close-Up View of Impact Point Target Showing Impact Location



FIGURE 21. Pre-Test Front Close-Up View of Dummy Head and Chest

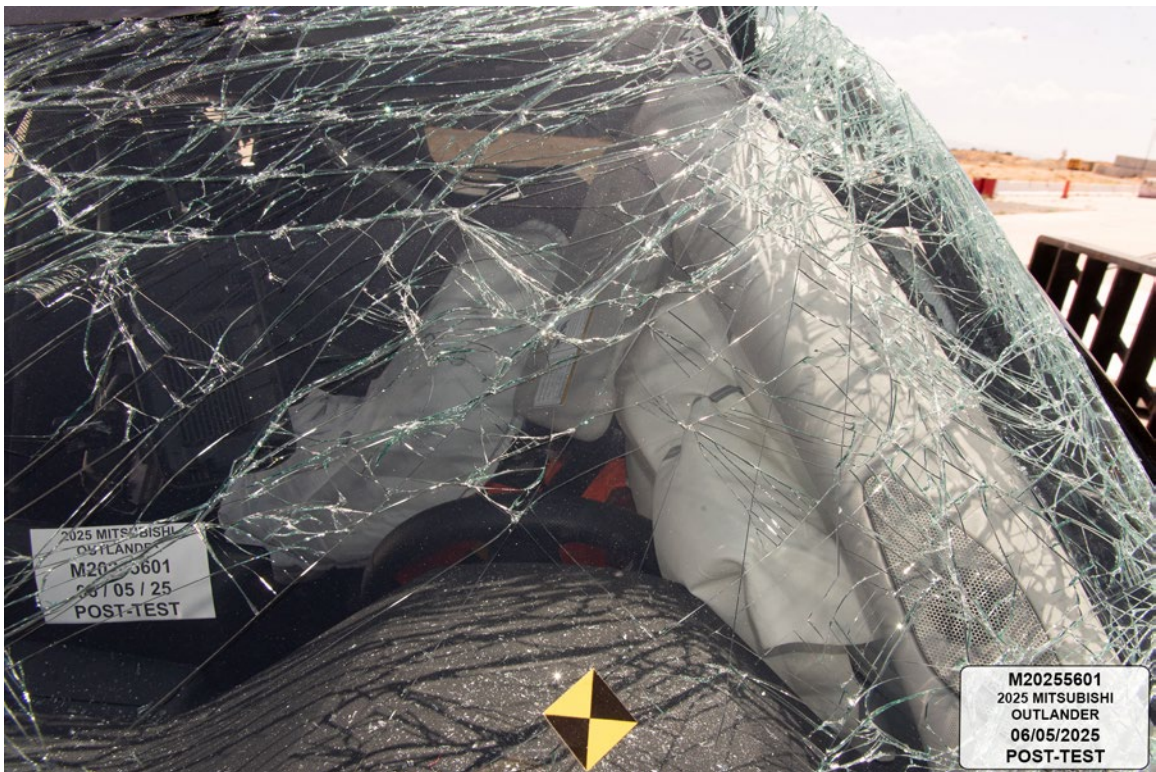


FIGURE 22. Post-Test Front Close-Up View of Dummy



FIGURE 23. Pre-Test Left Side View of Dummy Showing Belt and Chalking



FIGURE 24. Pre-Test Left Side View of Dummy Shoulder and Door Top View



FIGURE 25. Post-Test Left Side View of Dummy Shoulder and Door Top View

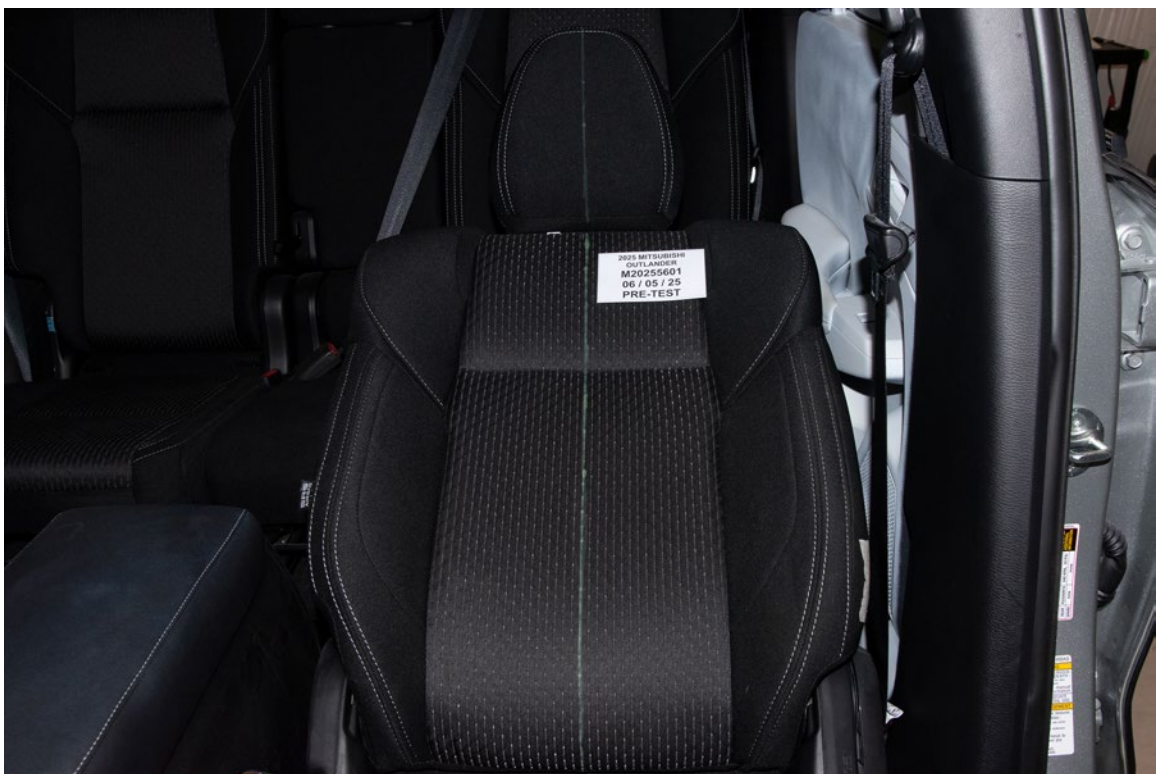


FIGURE 26. Pre-Test Frontal View of Seat Back Prior to Dummy Positioning



FIGURE 27. Pre-Test Frontal View of Dummy Head and Shoulders in Relation to Head Restraint



FIGURE 28. Pre-Test Frontal View of Seat Pan Prior to Dummy Positioning



FIGURE 29. Pre-Test Overhead View of Dummy Thighs on Seat Pan



FIGURE 30. Pre-Test Left Side View of Dummy's Neck Showing Position of Adjustable Neck Bracket



FIGURE 31. Pre-Test Left Side View of Dummy's Head Showing Head is Level



FIGURE 32. Pre-Test Placement of Dummy's Feet



FIGURE 33. Pre-Test View of Belt Anchorage for Dummy



FIGURE 34. Pre-Test Left Side View of Steering Wheel



FIGURE 35. View of Disengaged Parking Brake



FIGURE 36. Pre-Test View of Parking Brake



FIGURE 37. Pre-Test Close-Up Left Side View of Driver Seat Track



FIGURE 38. Pre-Test Close-Up Left Side View of Driver Seat Back



FIGURE 39. Pre-Test Close-Up View of Driver Seat Back or Head Restraint



FIGURE 40. Pre-Test Dummy and Door Clearance View



FIGURE 41. Post-Test Dummy and Door Clearance View



FIGURE 42. Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment



FIGURE 43. Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment



FIGURE 44. Pre-Test Inner Door Panel View



FIGURE 45. Post-Test Inner Door Panel View Showing Dummy Contact Locations



FIGURE 46. Post-Test Dummy Close-Up Head Contact With Vehicle Interior View



FIGURE 47. Post-Test Dummy Close-Up Head Contact With Side Air Bag View



FIGURE 48. Post-Test Dummy Close-Up Torso Contact With Vehicle Interior View



FIGURE 49. Post-Test Dummy Close-Up Torso Contact With Side Air Bag View



FIGURE 50. Post-Test Dummy Close-Up Pelvis Contact With Vehicle Interior View



FIGURE 51. Post-Test Dummy Close-Up Pelvis Contact With Side Air Bag View

Photograph Not Applicable
No Driver Dummy Close-Up Knee Contact

FIGURE 52. Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View



FIGURE 53. Post-Test Right Side View of Dummy and Rear Seat of Occupant Compartment



FIGURE 54. Pre-Test Inner Rear Passenger Torso Air Bag Deployment View



FIGURE 55. Pre-Test View of Fuel Filler Cap or Fuel Filler Neck



FIGURE 56. Post-Test View of Fuel Filler Cap or Fuel Filler Neck

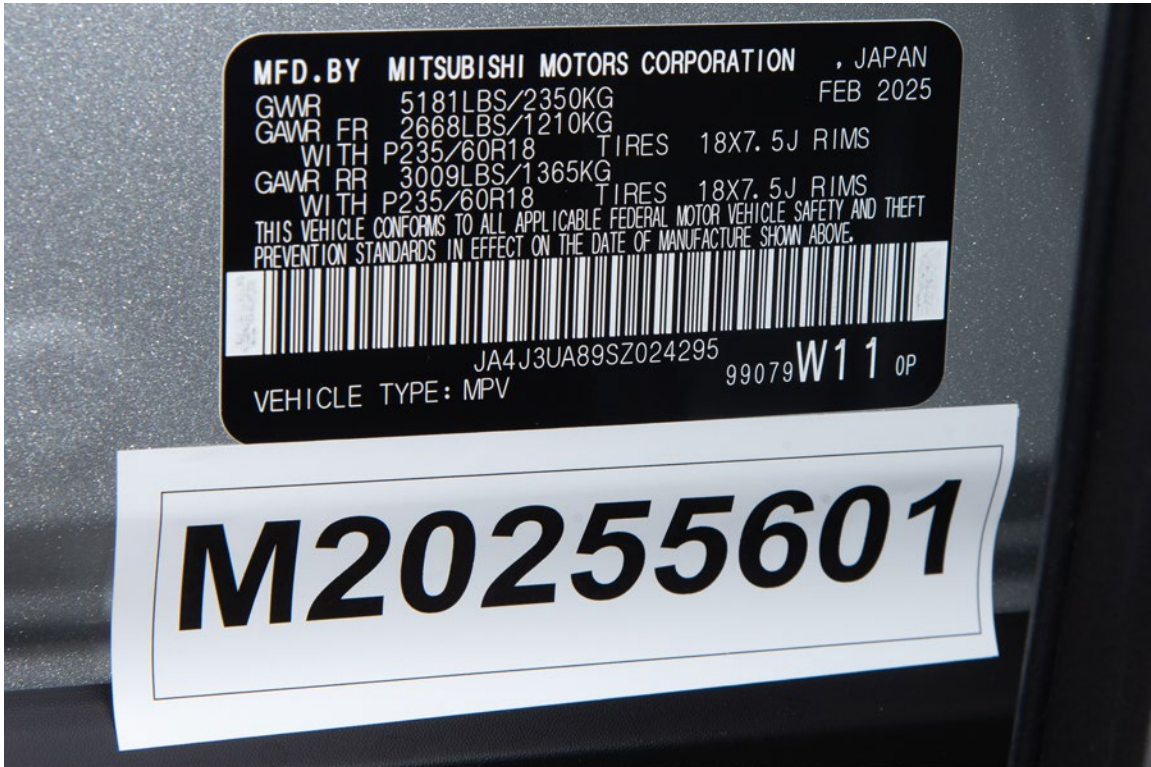


FIGURE 57. Close-Up View of Vehicle's Certification Label

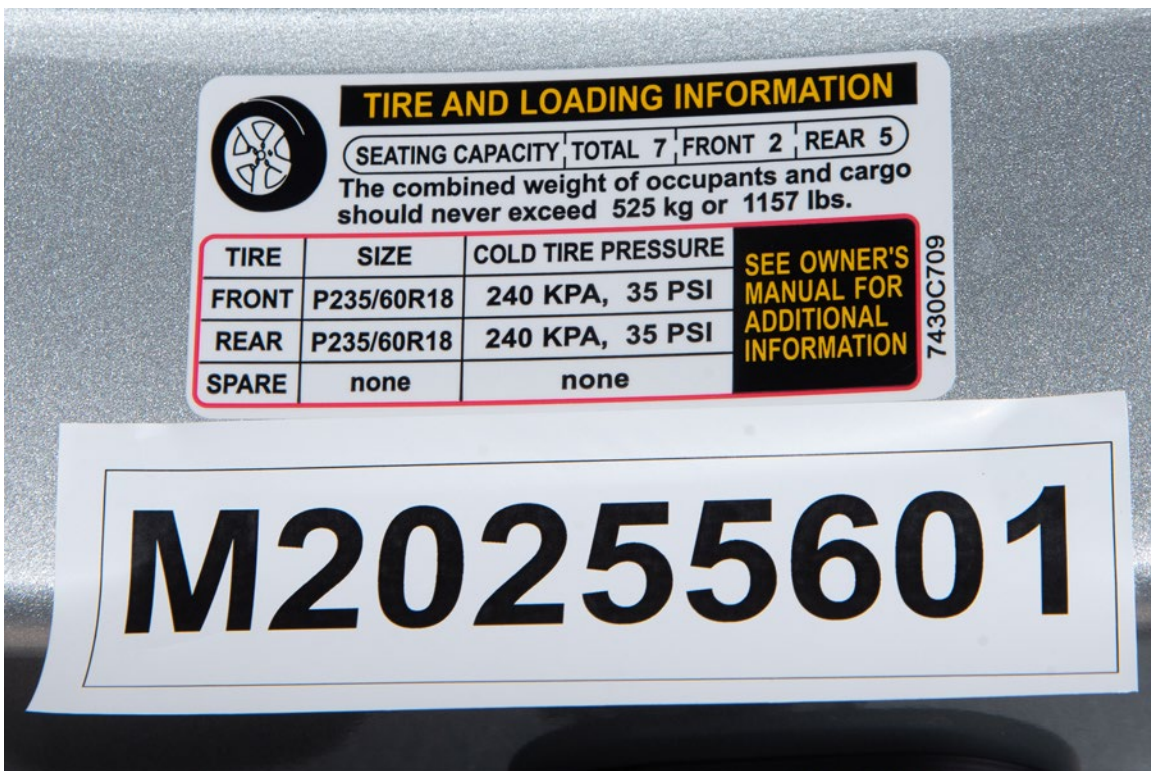


FIGURE 58. Close-Up View of Vehicle's Tire Information Placard or Label



FIGURE 59. Pre-Test Pole Barrier Front View



FIGURE 60. Post-Test Pole Barrier Front View



FIGURE 61. Pre-Test Pole Barrier Side View



FIGURE 62. Post-Test Pole Barrier Side View



FIGURE 63. Pre-Test Ballast View

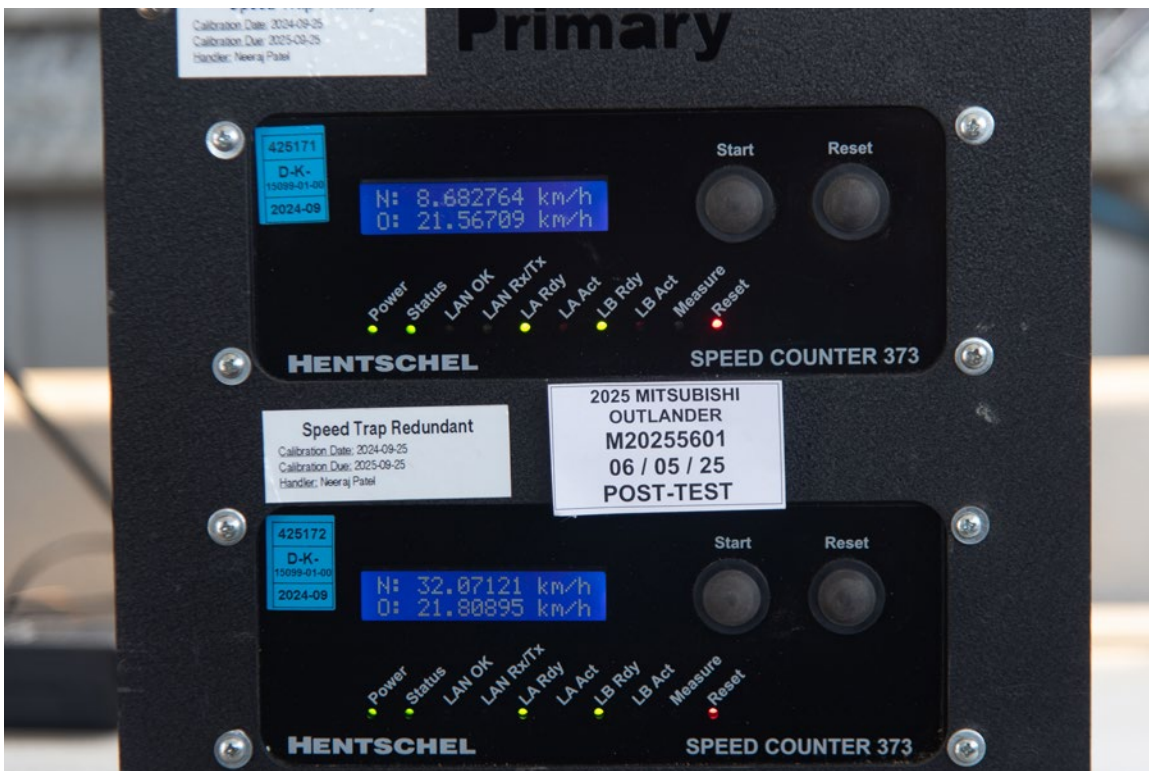


FIGURE 64. Post-Test Primary and Redundant Speed Trap Read-Out

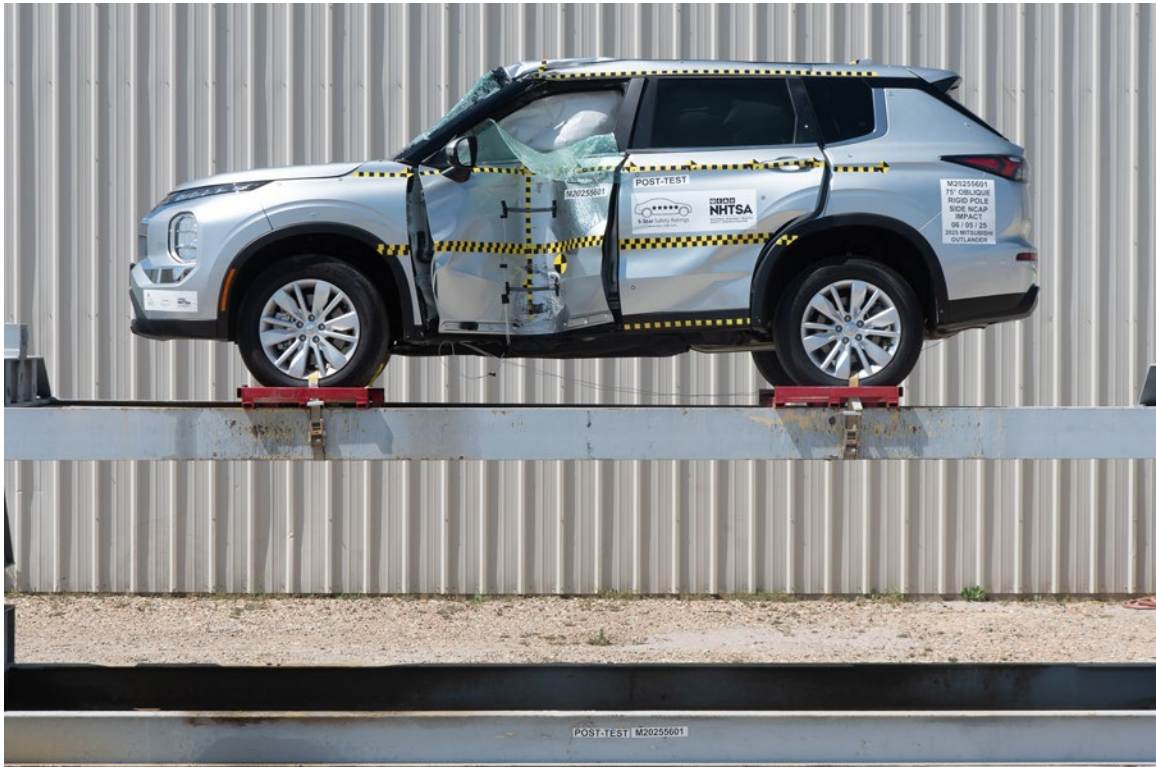


FIGURE 65. FMVSS No. 301 Static Rollover 0 Degrees



FIGURE 66. FMVSS No. 301 Static Rollover 90 Degrees



FIGURE 69. FMVSS No. 301 Static Rollover 360 Degrees



FIGURE 70. Impact Event

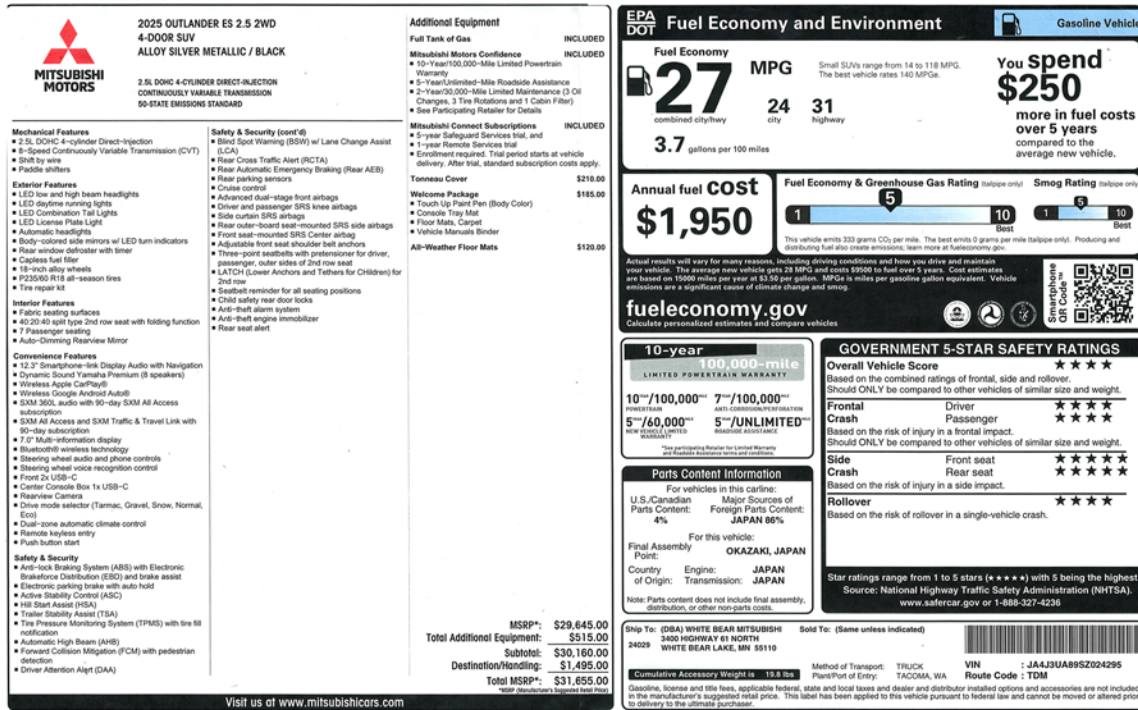
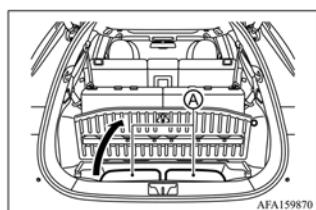
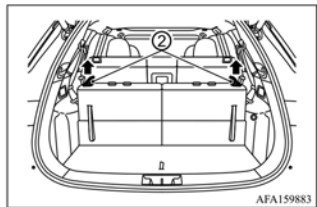


FIGURE 71. Monroney Label



Open the luggage floor board and put the head restraints ① in the storage area.



After storing the head restraints, pull the strap ② and fold the seatback.

WARNING

- Never allow anyone to ride in the cargo area or on the third row seat when it is in the fold-down position. Use of these areas by passengers without proper restraints could result in serious injury in an accident or sudden stop.
- Properly secure all cargo with ropes or straps to help prevent it from sliding or shifting. Do not place cargo higher than the seatbacks. In a sudden stop or collision, unsecured cargo could cause personal injury.
- When returning the seatbacks to the upright position, be certain they are completely secured in the latched position. If they are not completely secured, passengers may be injured in an accident or sudden stop.

Returning

- Pull the strap, then raise the seatback until it locks securely into place. Push lightly on the seatback to confirm that it has actually been secured.
- Install the head restraints.

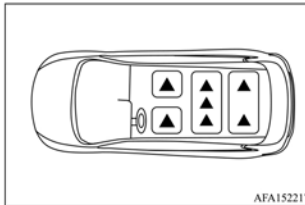
Head restraints

N07300500052

2

WARNING

- Head restraints supplement the other vehicle safety systems. They may provide additional protection against injury in certain rear end collisions. Adjustable head restraints must be adjusted properly, as specified in this section. Check the adjustment after someone else uses the seat. Do not attach anything to the head restraint stalks or remove the head restraint. Do not use the seat if the head restraint has been removed. If the head restraint was removed, reinstall and properly adjust the head restraint before an occupant uses the seat. Failure to follow these instructions can reduce the effectiveness of the head restraint. This may increase the risk of serious injury or death in a collision.



Safety - Seats, seat belts and supplemental restraint system 2-9

FIGURE 72. Head Restraint Use and Adjustment Information from Vehicle Owner's Manual

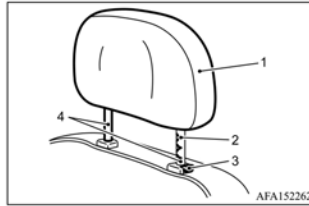
Head restraints

2

▲ Indicates the seating position is equipped with a head restraint.

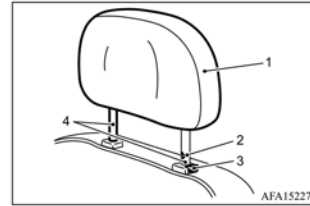
- Your vehicle is equipped with a head restraint that may be integrated, adjustable or non-adjustable.
- Adjustable head restraints have multiple notches along the stalk to lock them in a desired adjustment position.
- The non-adjustable head restraints have a single locking notch to secure them to the seat frame.
- The head restraints of the second row seats and third row seats are non-adjustable head restraints.
- Proper Adjustment:
 - For the adjustable type, align the head restraint so the center of your ear is approximately level with the center of the head restraint.
 - If your ear position is still higher than the recommended alignment, place the head restraint at the highest position.
- If the head restraint has been removed, ensure that it is reinstalled and locked in place before riding in that designated seating position.

Adjustable head restraint components



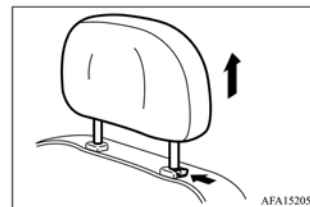
1. Removable head restraint
2. Multiple notches
3. Lock knob
4. Stalks

Non-adjustable head restraint components



1. Removable head restraint
2. Single notch
3. Lock knob
4. Stalks

Remove



2-10 Safety - Seats, seat belts and supplemental restraint system

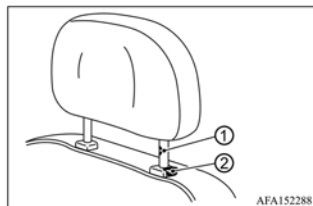
FIGURE 72a. Head Restraint Use and Adjustment Information from Vehicle Owner's Manual

Head restraints

Use the following procedure to remove the head restraint.

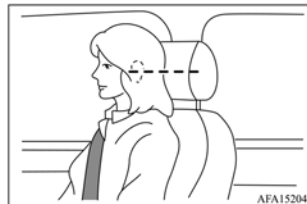
1. Pull the head restraint up to the highest position.
2. Push and hold the lock knob.
3. Remove the head restraint from the seat.
4. Store the head restraint properly in a secure place so it is not loose in the vehicle.
5. Reinstall and properly adjust the head restraint before an occupant uses the seating position.

Install



1. Align the head restraint stalks with the holes in the seat. Make sure that the head restraint is facing the correct direction. The stalk with the adjustment notch ① must be installed in the hole with the lock knob ②.
2. Push and hold the lock knob and push the head restraint down.
3. Properly adjust the head restraint before an occupant uses the seating position.

Adjust



For adjustable head restraint

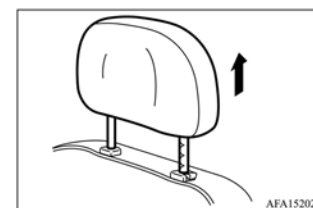
Adjust the head restraint so the center is level with the center of your ears. If your ear position is still higher than the recommended alignment, place the head restraint at the highest position.

For non-adjustable head restraint

Make sure the head restraint is positioned so the lock knob is engaged in the notch before riding in that designated seating position.

2

Raise



To raise the head restraint, pull it up. Make sure the head restraint is positioned so the lock knob is engaged in the notch before riding in that designated seating position.

Safety - Seats, seat belts and supplemental restraint system 2-11

FIGURE 72b. Head Restraint Use and Adjustment Information from Vehicle Owner's Manual

Photograph Not Applicable

Inner Door Panel Was Not Shattered

FIGURE 73. Post-Test View of Shattered Vehicle Inner Door Panel

APPENDIX B
VEHICLE AND DUMMY RESPONSE DATA PLOTS

TABLE OF DATA PLOTS

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

The following additional data for this test can be obtained from the Research and Development section of the NHTSA website. The website can be found at

www.NHTSA.gov

Additional Driver Dummy Instrumentation Data

Driver Head Acceleration Redundant (X)

Driver Head Acceleration Redundant (Y)

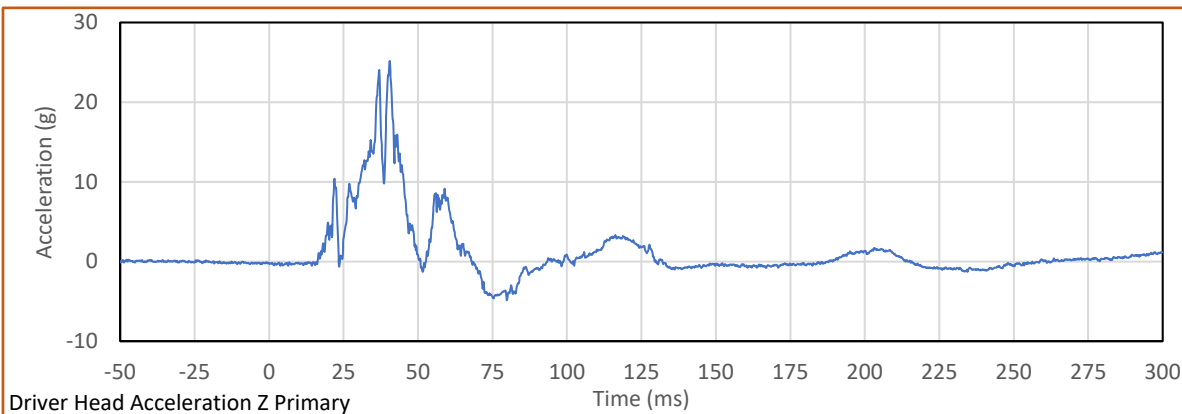
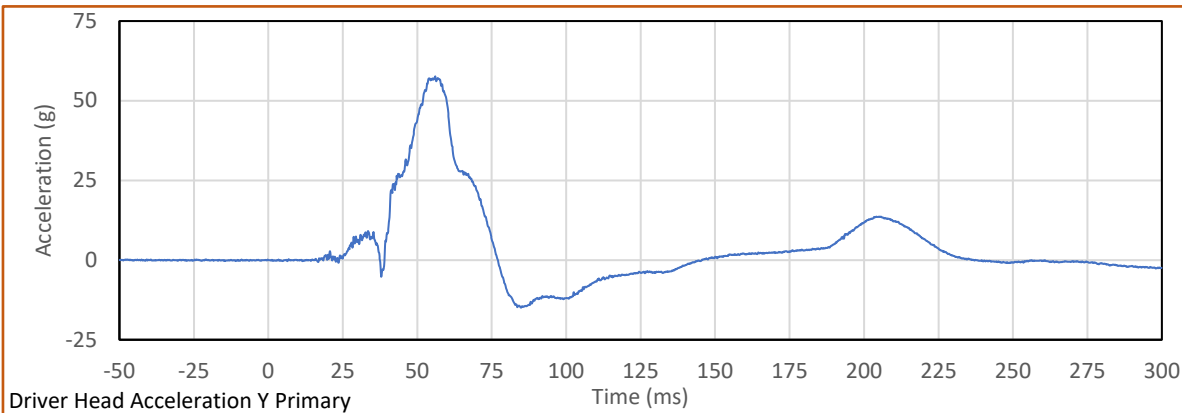
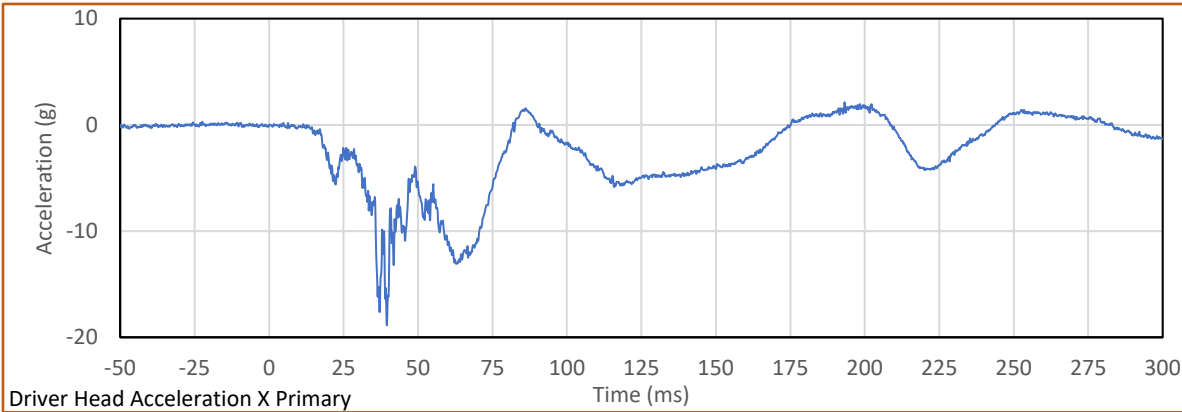
Driver Head Acceleration Redundant (Z)

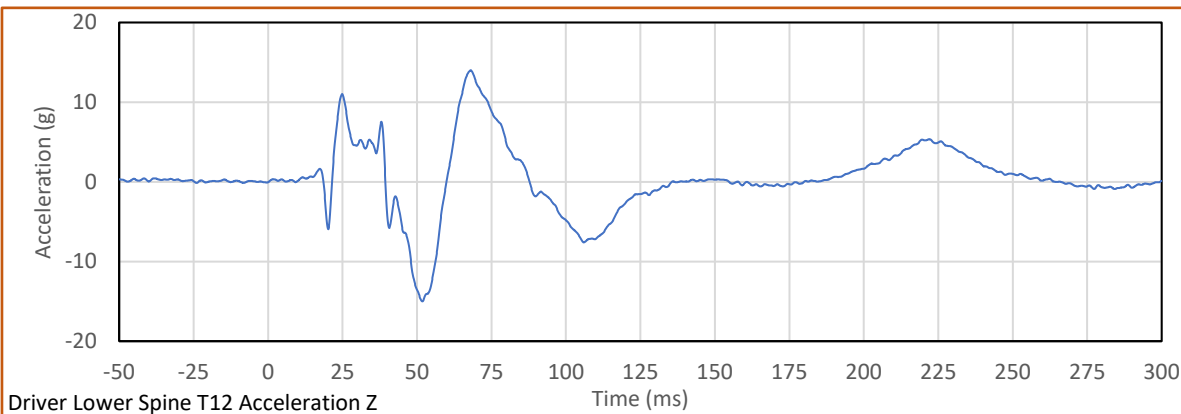
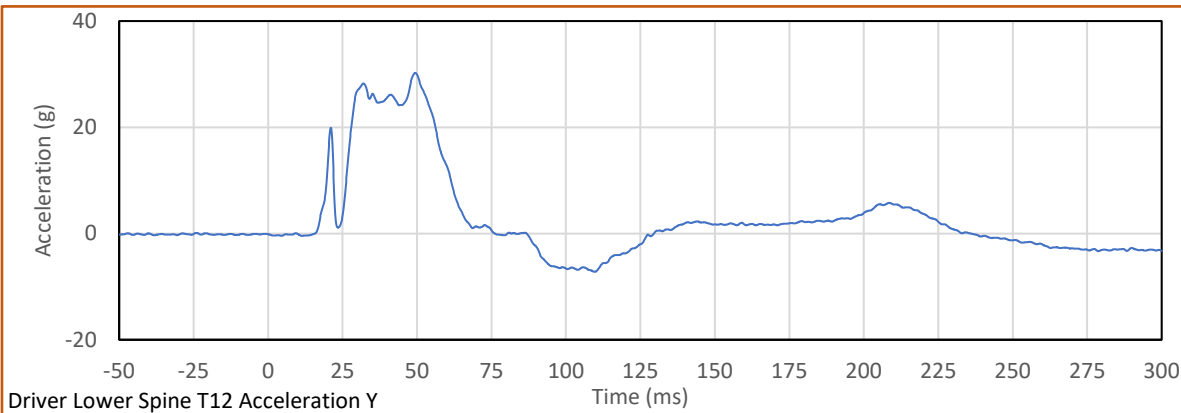
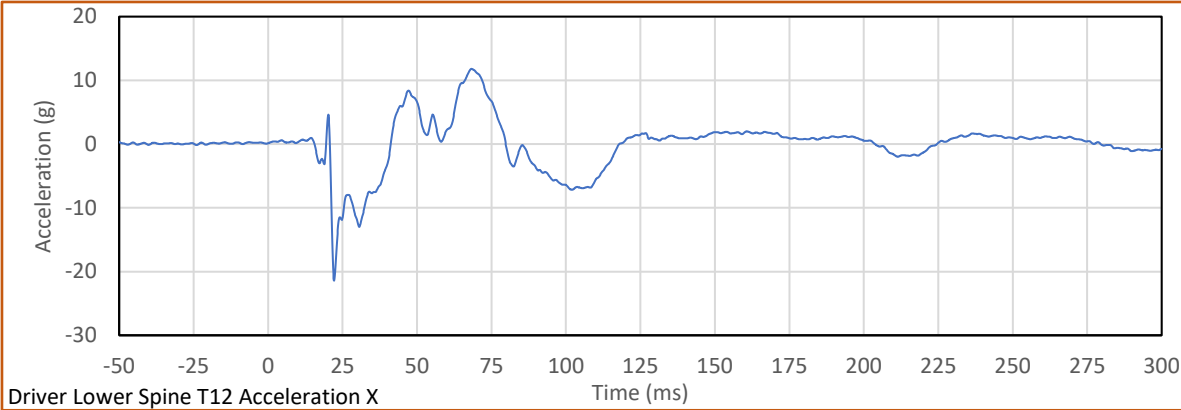
Vehicle Instrumentation Data

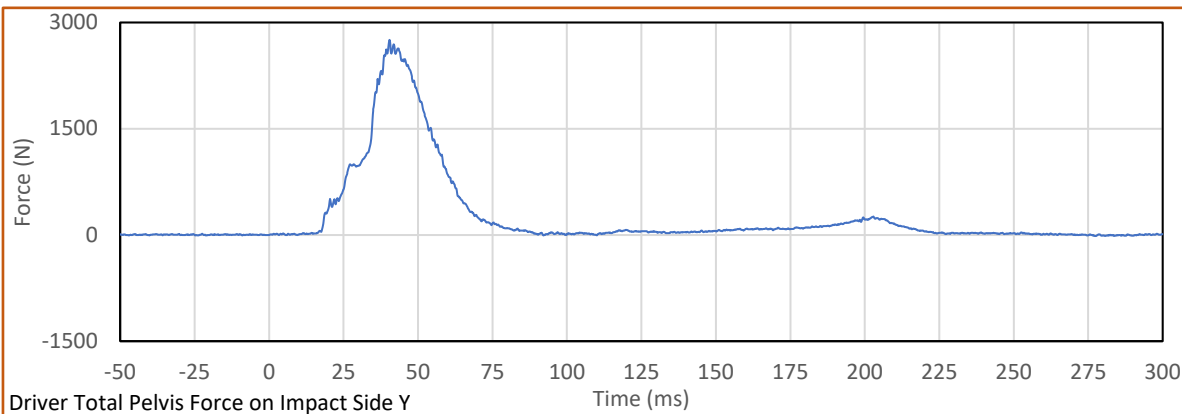
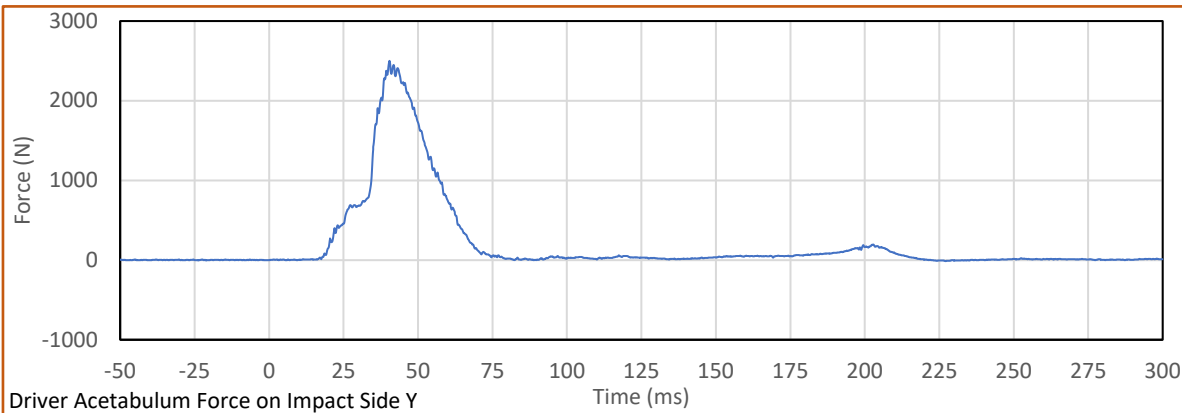
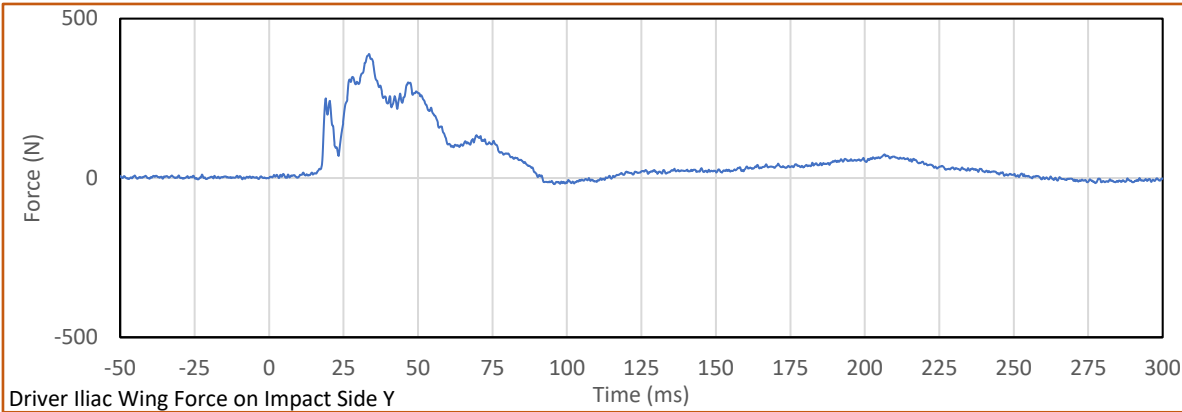
Vehicle Center of Gravity Acceleration (X)
Vehicle Center of Gravity Acceleration (Y)
Vehicle Center of Gravity Acceleration (Z)
Left Floor Sill Acceleration (Y)
Left A-Pillar Sill Acceleration (Y)
Left Lower A-Pillar Acceleration (Y)
Left Mid A-Pillar Acceleration (Y)
Left B-Pillar Sill Acceleration
Left Lower B-Pillar Acceleration (Y)
Left Mid B-Pillar Acceleration (Y)
Driver Seat Track at Dummy Hip Point Acceleration (Y)
Engine Top Acceleration (X)
Engine Top Acceleration (Y)
Firewall Center Acceleration (Y)
Right Roof at Vertical Impact Reference Line Acceleration (Y)
Right Sill at Vertical Impact Reference Line Acceleration (Y)
Rear Floorpan Behind Rear Axle at Centerline Acceleration (X)
Rear Floorpan Behind Rear Axle at Centerline Acceleration (Y)

Pole Instrumentation Data

Load Cell Pole Barrier #1 Force (Y)
Load Cell Pole Barrier #2 Force (Y)
Load Cell Pole Barrier #3 Force (Y)
Load Cell Pole Barrier #4 Force (Y)
Load Cell Pole Barrier #5 Force (Y)
Load Cell Pole Barrier #6 Force (Y)
Load Cell Pole Barrier #7 Force (Y)
Load Cell Pole Barrier #8 Force (Y)







APPENDIX C
ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA

APPENDIX C

Pre-Test ATD Qualification and Performance Verification

SID-1Is Small Side Impact ATD, Left Side Configuration

S/N: 299

ATD Serial No.: 299

Test Date: 2025-05-21

Tested Parameter	Units	Spec Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	31	Pass
A - Sitting Height	mm	772	788	779	Pass
B - Shoulder Pivot Height	mm	437	453	450	Pass
C - Hpoint Height	mm	79	89	88	Pass
D - H Point From Seatback	mm	141	151	145	Pass
E - Shoulder Pivot From Backline	mm	97	107	102	Pass
F - Thigh Clearance	mm	119	135	129	Pass
G - Head Breadth	mm	140	148	145	Pass
H - Head Back From Backline	mm	40	46	44	Pass
I - Head Depth	mm	178	188	184	Pass
J - Head Circumference	mm	541	551	548	Pass
K - Buttock To Knee Length	mm	514	540	534	Pass
L - Popliteal Height	mm	343	369	358	Pass
K - Knee Pivot To Floor Height	mm	392	409	404	Pass
N - Buttock Popliteal Length	mm	416	442	432	Pass
O - Chest Depth W/O Jacket	mm	195	211	207	Pass
P - Foot Length	mm	216	232	226	Pass
Q - Hip Breadth (W/Pelvic Plugs)	mm	313	323	319	Pass
R - Arm Length	mm	249	259	252	Pass
S - Knee Joint To Seatback	mm	477	493	486	Pass
V - Shoulder Width	mm	341	357	350	Pass
W - Foot Width	mm	78	94	87	Pass
Y - Chest Circumference W/Jacket	mm	851	881	876	Pass
Z - Waist Circumference	mm	761	791	771	Pass
				Overall Test Results	Pass

Technician:



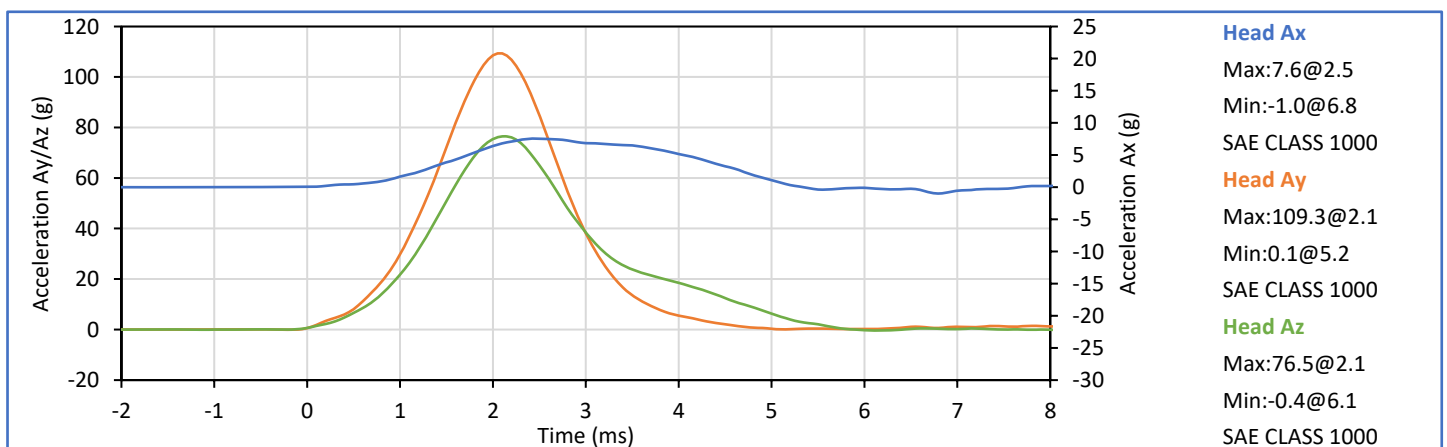
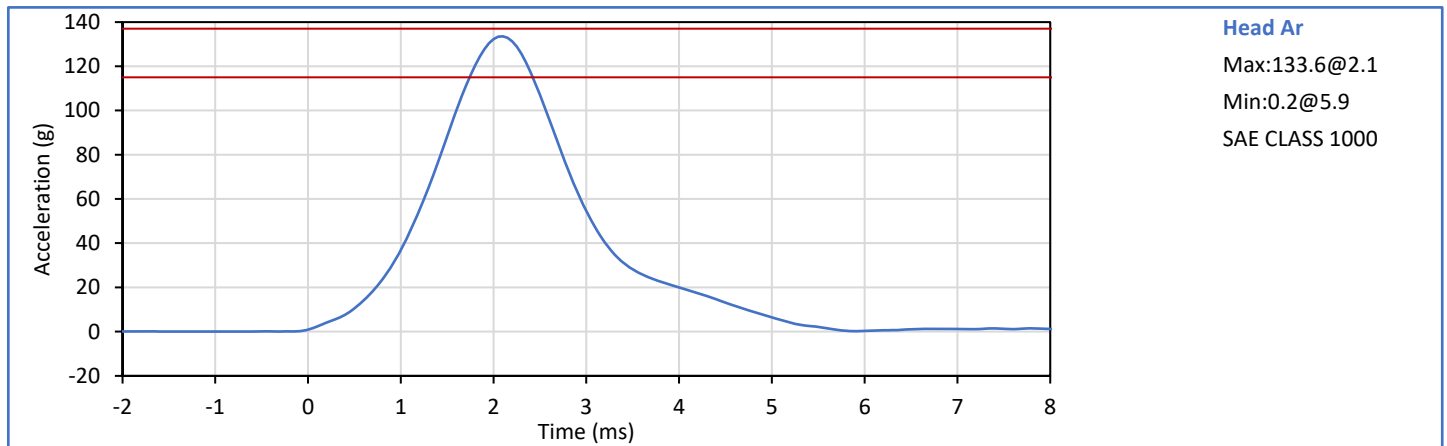
J. Perez

Approved By:



J. Hernandez

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	34	Pass
Peak Resultant Acceleration	g	115.0	137.0	133.6	Pass
Peak Head Ax	g	-15.0	15.0	7.6	Pass
Oscillations After Main Pulse	%	0.0	15.0	1.1	Pass
Is Acceleration Unimodal?	Yes/No	Yes		Yes	Pass
			Overall Test Results	Pass	



Technician:

J. Perez

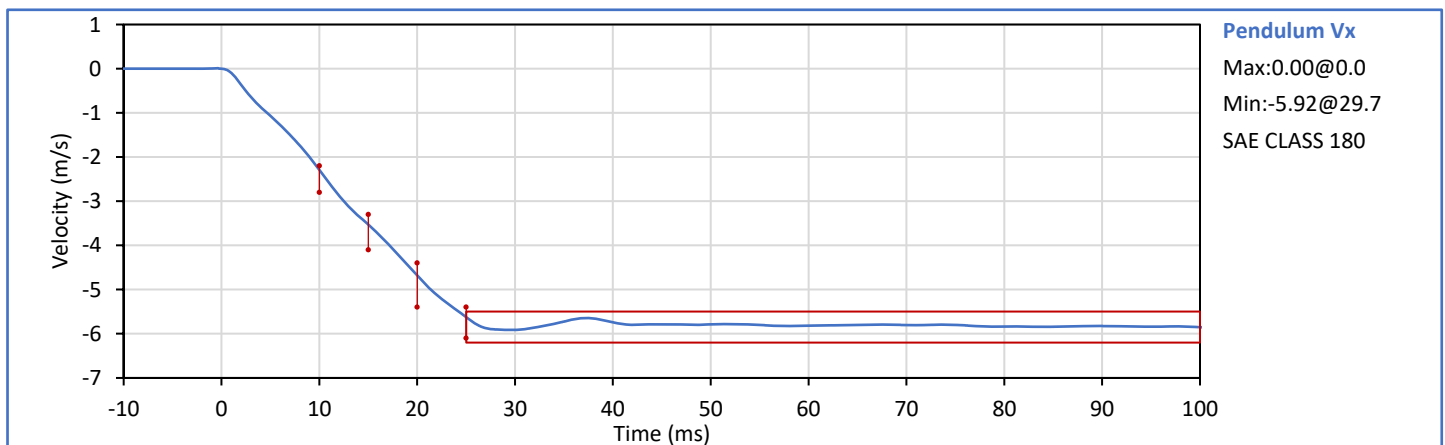
J. Perez

Approved By:

J. Hernandez

J. Hernandez

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	32	Pass
Pendulum Velocity	m/s	5.51	5.63	5.56	Pass
Pendulum Decel at 10 ms	m/s	-2.80	-2.20	-2.29	Pass
Pendulum Decel at 15 ms	m/s	-4.10	-3.30	-3.53	Pass
Pendulum Decel at 20 ms	m/s	-5.40	-4.40	-4.68	Pass
Pendulum Decel at 25 ms	m/s	-6.10	-5.40	-5.63	Pass
Pendulum Decel from 25-100 ms	m/s	-6.20	-5.50	-5.92/-5.63	Pass
Peak "D" Plane Rotation	deg	-81.0	-71.0	-73.6	Pass
Time of Peak "D" Plane Rotation	ms	50.0	70.0	57.8	Pass
Peak Occ. Condyle Moment	Nm	36.0	44.0	42.6	Pass
Time of Moment Decay to 0 Nm	ms	102.0	126.0	106.9	Pass
				Overall Test Results	Pass



Technician:

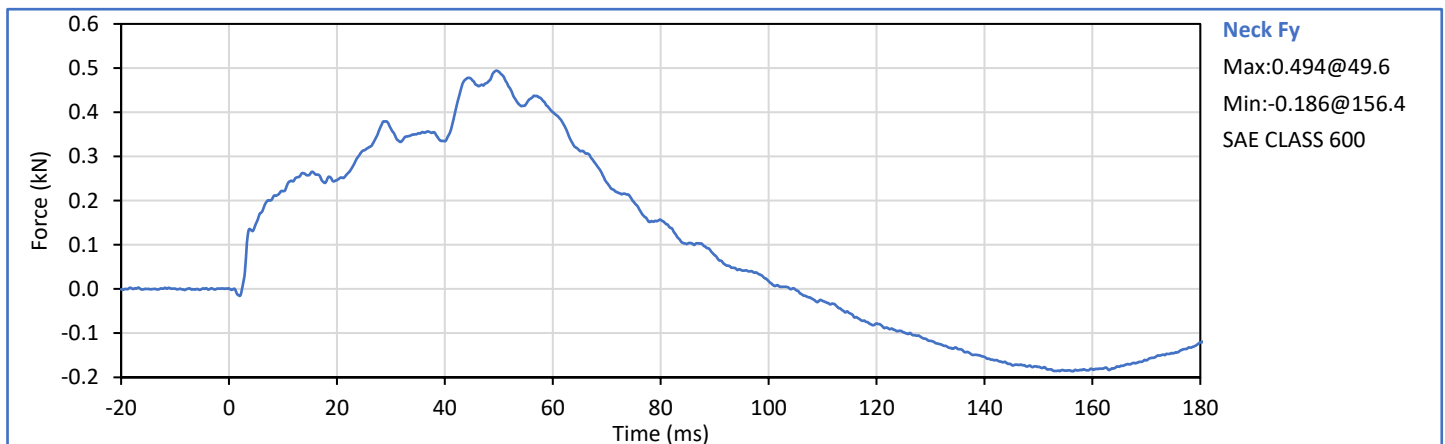
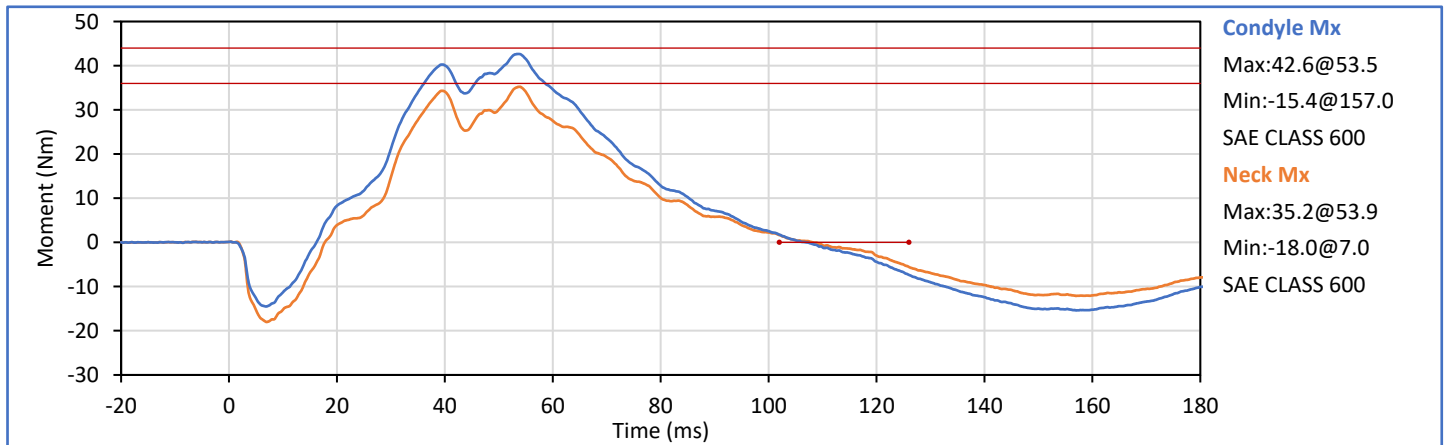
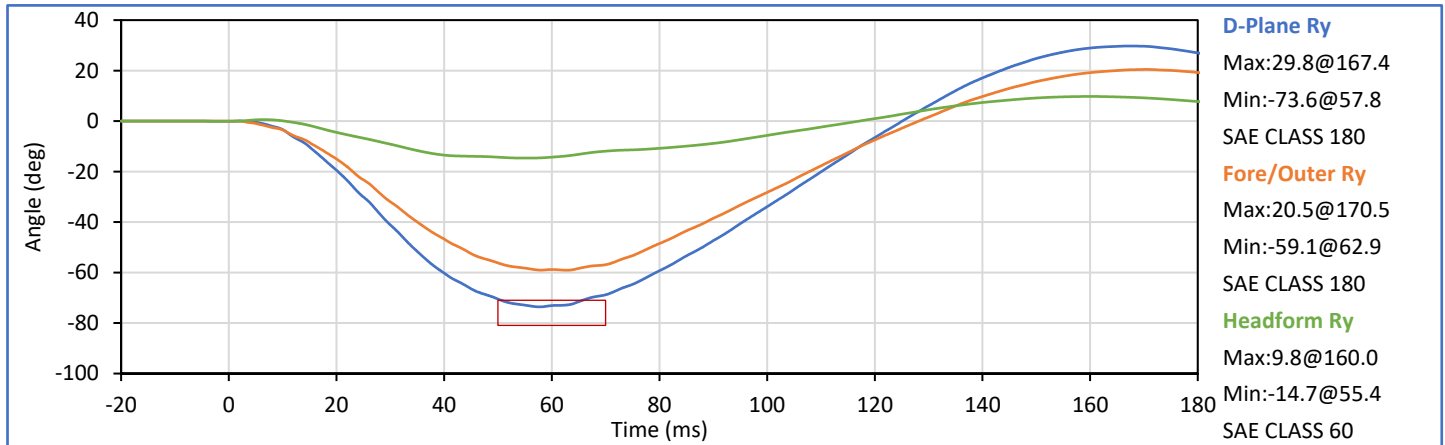
J. Perez

J. Perez

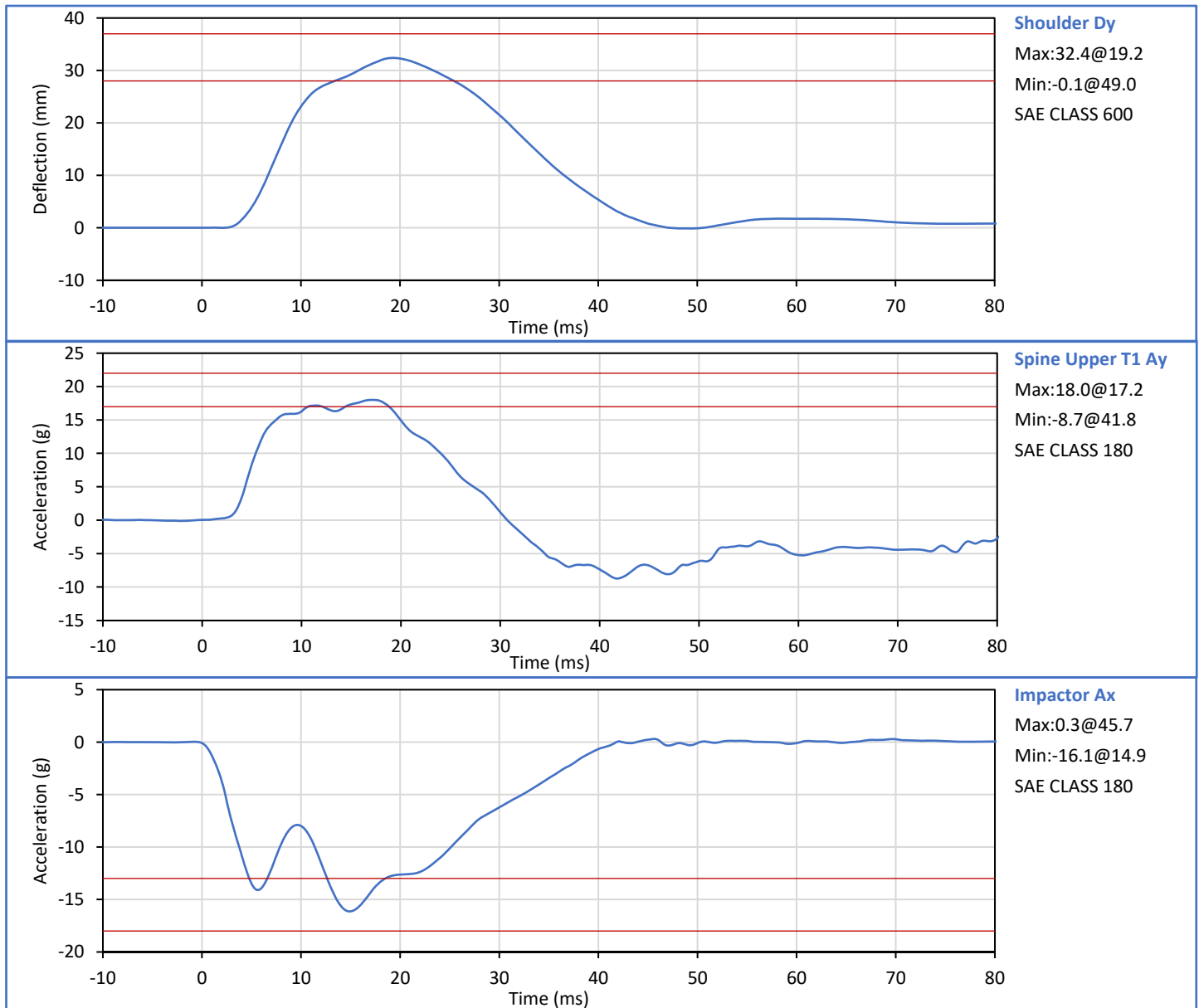
Approved By:

J. Hernandez

J. Hernandez



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	31	Pass
Impactor Velocity	m/s	4.20	4.40	4.35	Pass
Peak Shoulder Dy	mm	28.0	37.0	32.4	Pass
Peak Upper Spine (T1) Ay	g	17.0	22.0	18.0	Pass
Peak Impactor Ax	g	-18.0	-13.0	-16.1	Pass
Overall Test Results					Pass



Technician:

J. Perez

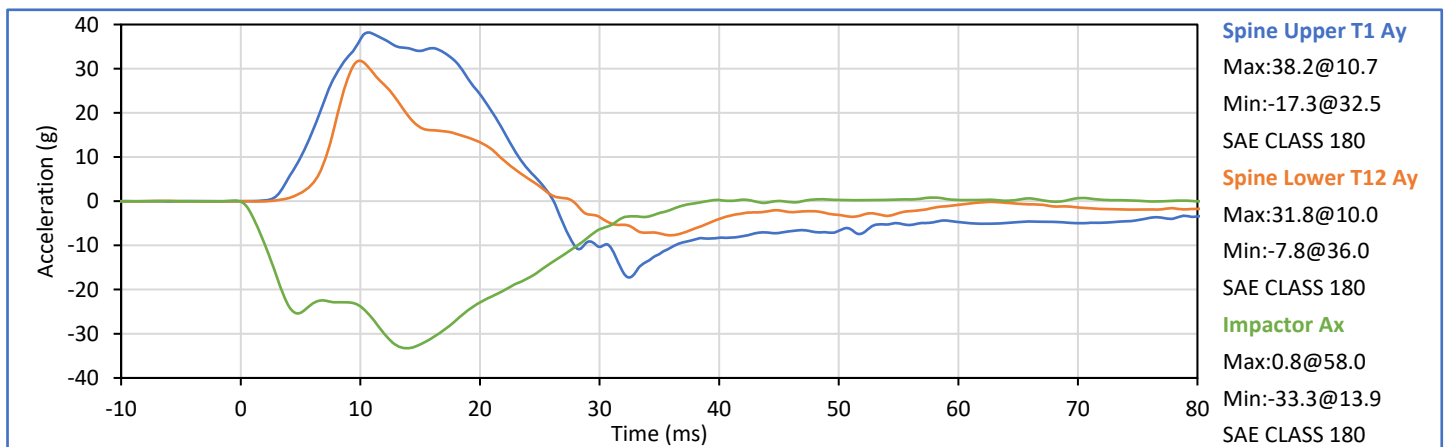
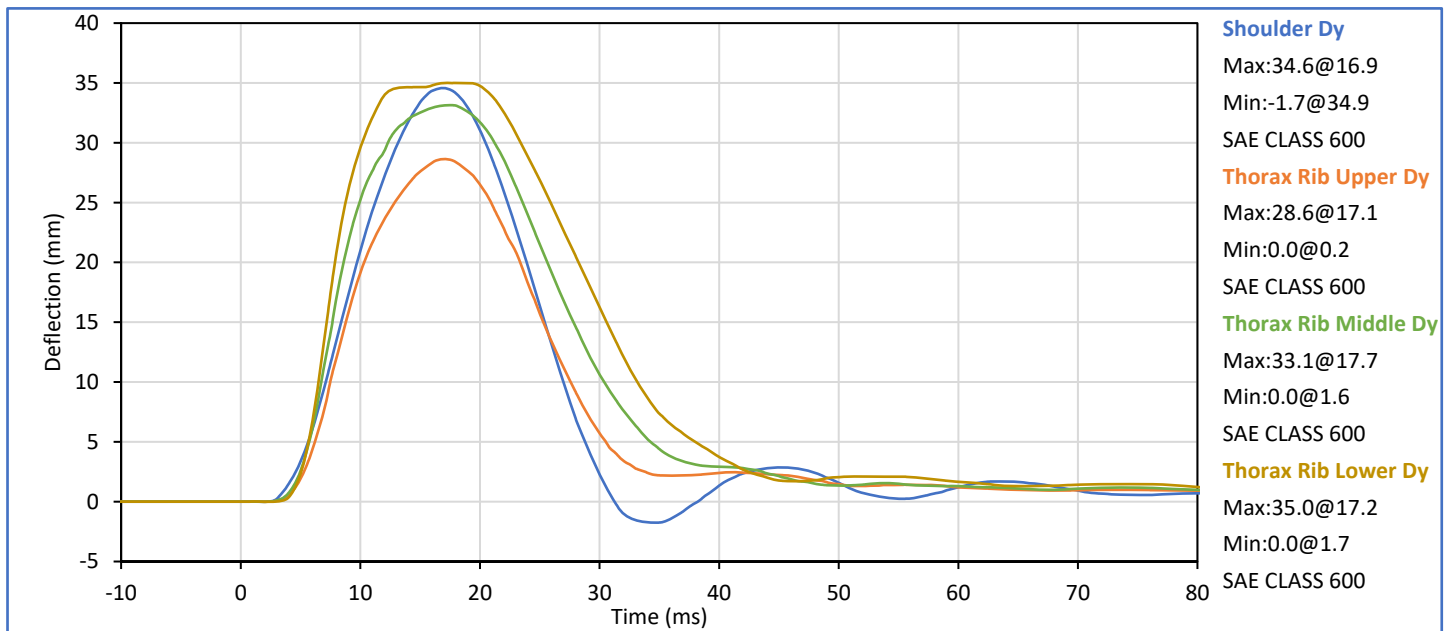
J. Perez

Approved By:

J. Hernandez

J. Hernandez

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	35	Pass
Impactor Velocity	m/s	6.60	6.80	6.71	Pass
Peak Shoulder Dy	mm	31.0	40.0	34.6	Pass
Peak Upper Rib Dy	mm	25.0	32.0	28.6	Pass
Peak Middle Rib Dy	mm	30.0	36.0	33.1	Pass
Peak Lower Rib Dy	mm	32.0	38.0	35.0	Pass
Peak Upper Spine (T1) Ay	g	34.0	43.0	38.2	Pass
Peak Lower Spine (T12) Ay	g	29.0	37.0	31.8	Pass
Peak Impactor Ax	g	-36.0	-30.0	-33.3	Pass
Overall Test Results					Pass



Technician:

J. Perez

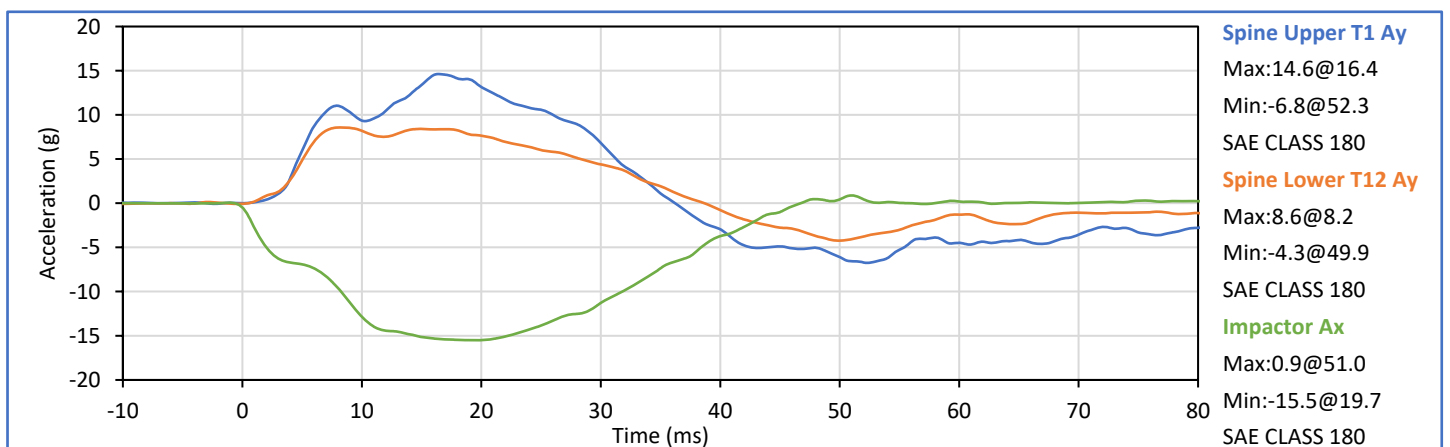
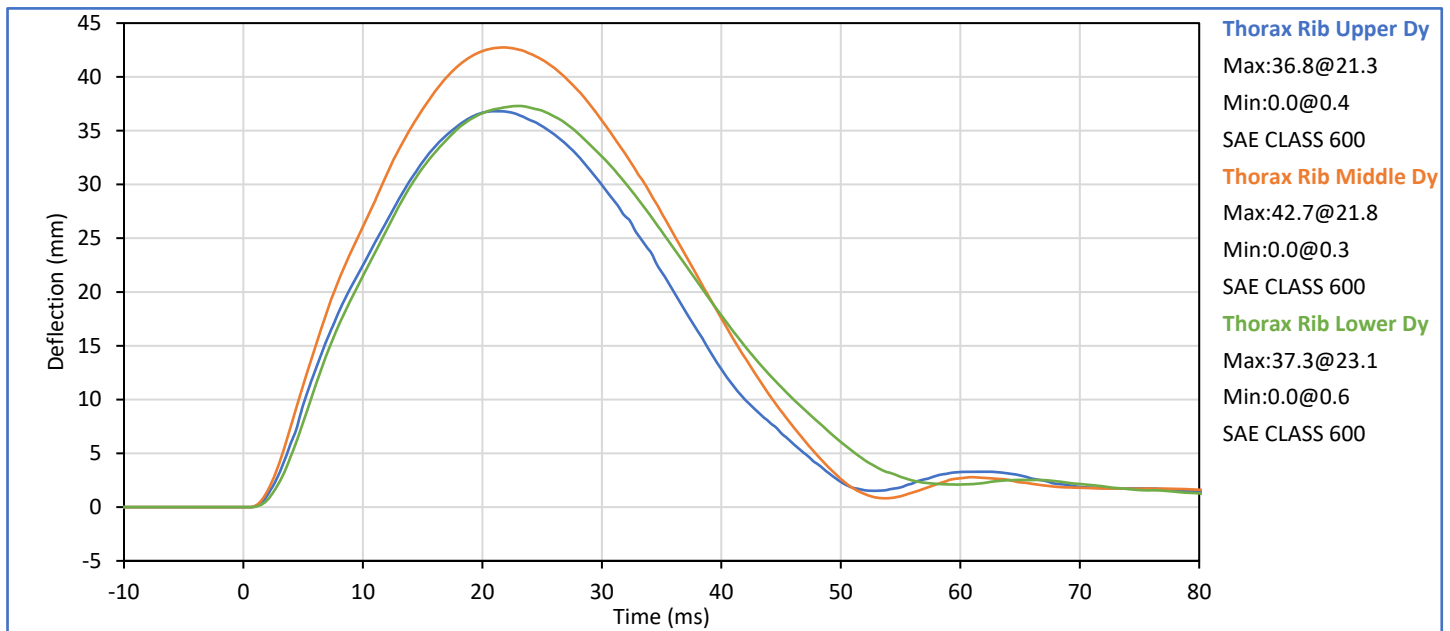
J. Perez

Approved By:

J. Hernandez

J. Hernandez

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	42	Pass
Impactor Velocity	m/s	4.20	4.40	4.32	Pass
Peak Thorax Rib Upper Dy	mm	32.0	40.0	36.8	Pass
Peak Thorax Rib Middle Dy	mm	39.0	45.0	42.7	Pass
Peak Thorax Rib Lower Dy	mm	35.0	43.0	37.3	Pass
Peak Spine Upper T1 Ay	g	13.0	17.0	14.6	Pass
Peak Spine Lower T12 Ay	g	7.0	11.0	8.6	Pass
Peak Impactor Ax	g	-18.0	-14.0	-15.5	Pass
Overall Test Results					Pass



Technician:

J. Perez

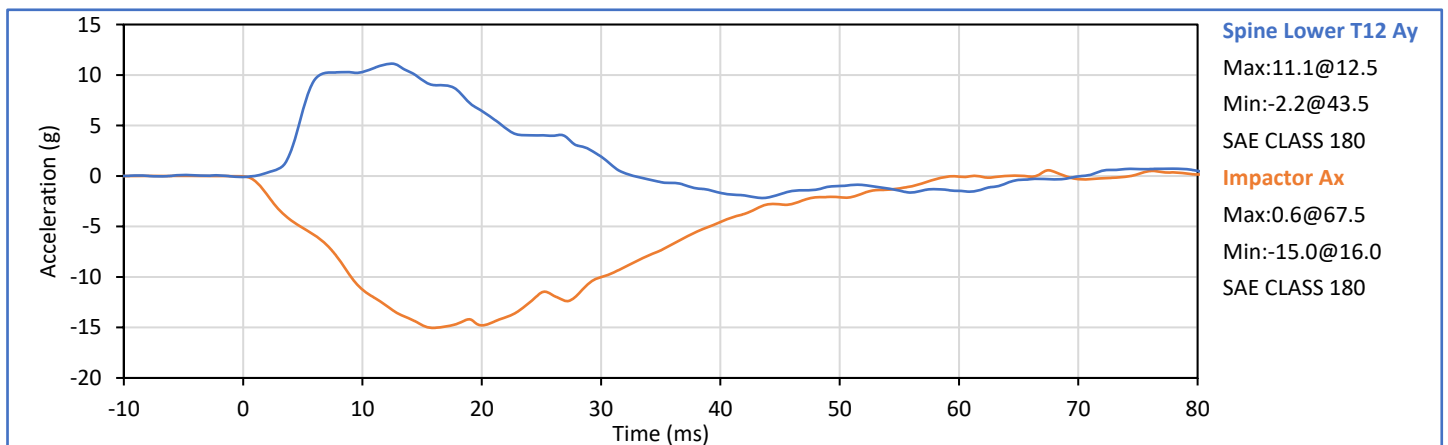
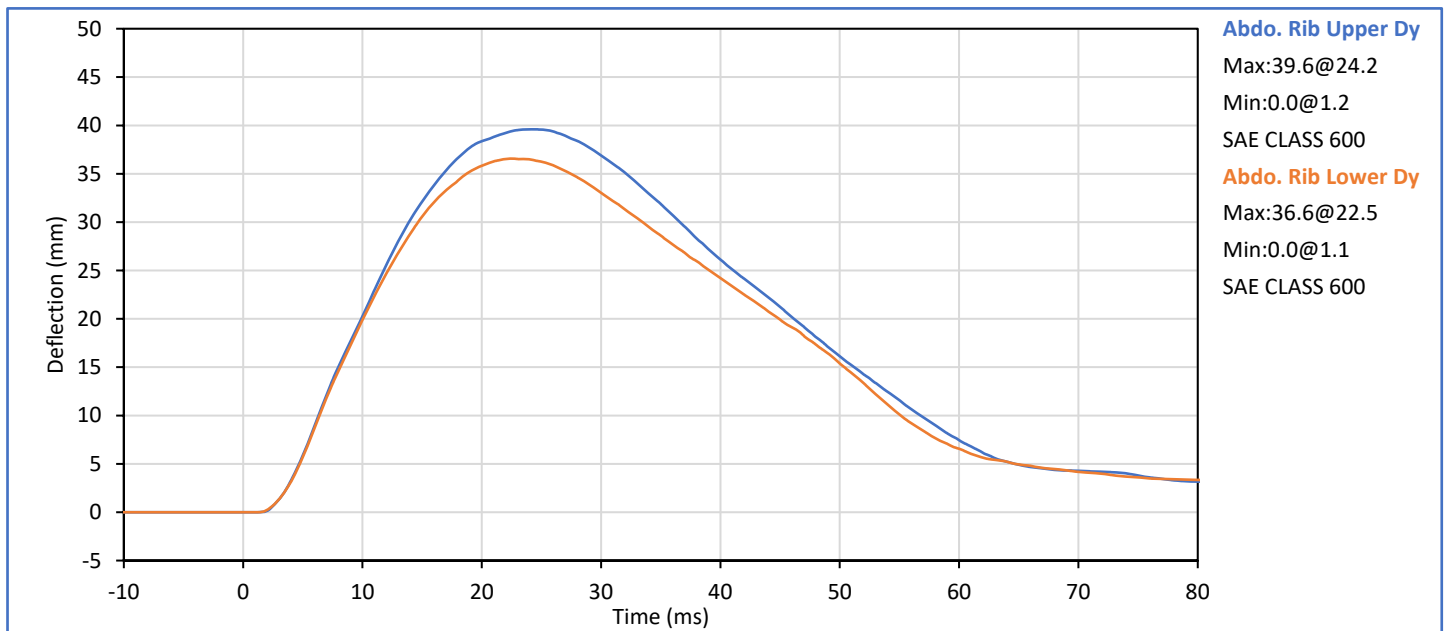
J. Perez

Approved By:

J. Hernandez

J. Hernandez

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	34	Pass
Impactor Velocity	m/s	4.20	4.40	4.31	Pass
Peak Upper Abdomen Rib Dy	mm	36.0	47.0	39.6	Pass
Peak Lower Abdomen Rib Dy	mm	33.0	44.0	36.6	Pass
Peak Lower Spine T12 Ay	mm	9.0	14.0	11.1	Pass
Peak Impactor Ax	g	-16.0	-12.0	-15.0	Pass
Overall Test Results					Pass



Technician:

J. Perez

J. Perez

Approved By:

J. Hernandez

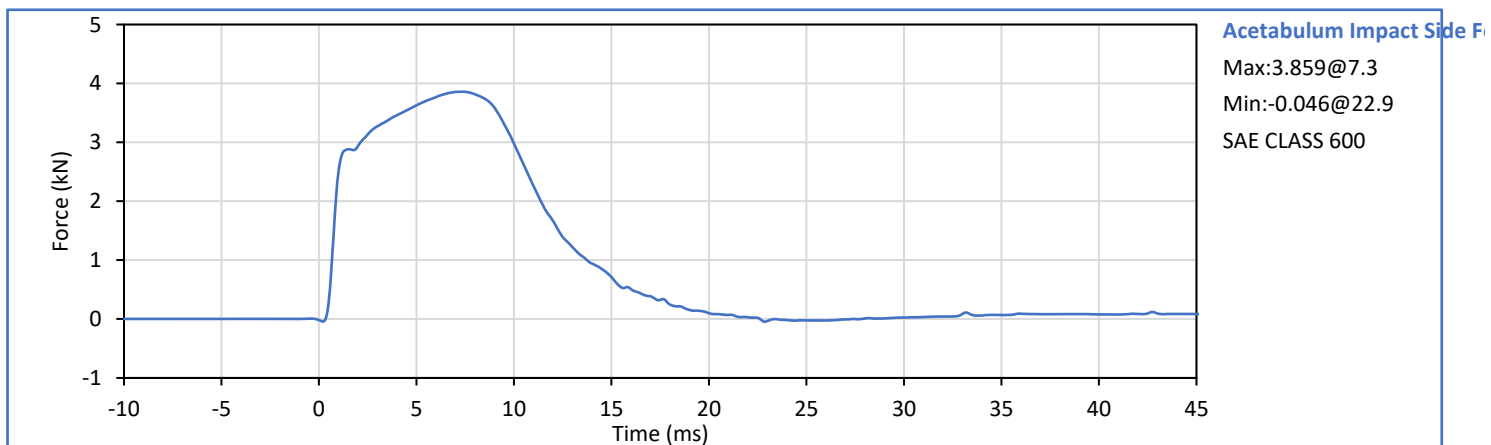
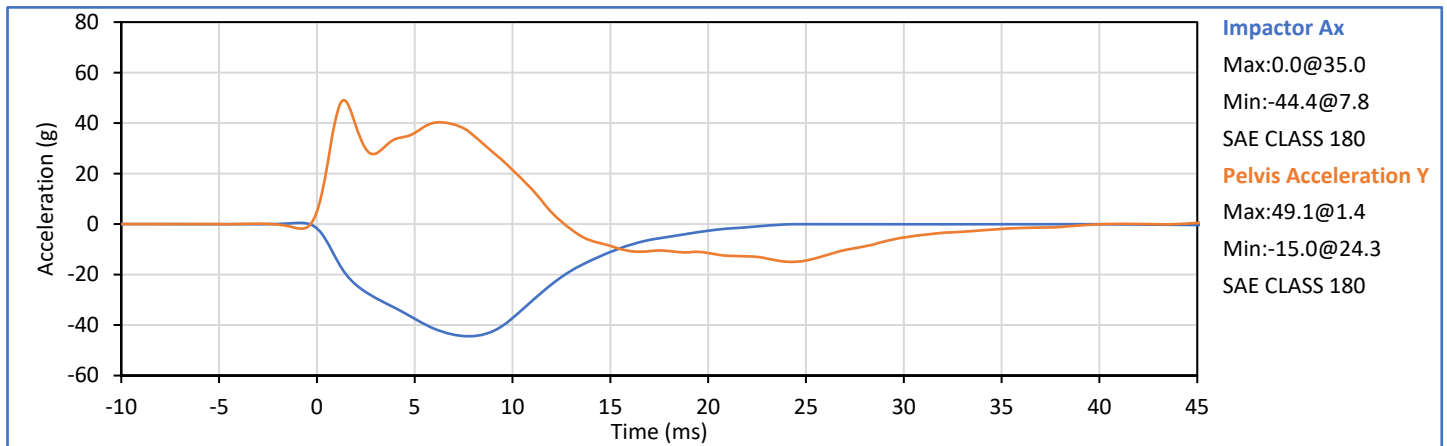
J. Hernandez

ATD Serial No.: 299

Test Date: 2025-05-21

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
Impactor Velocity	m/s	6.60	6.80	6.71	Pass
Peak Acetabulum Fy	kN	3.60	4.30	3.86	Pass
Pelvis Ay after 6ms	g	34.0	42.0	40.3	Pass
Peak Impactor Ax	g	-47.0	-38.0	-44.4	Pass
Overall Test Results					Pass

Pelvis Plug S/N: 17857



Technician:

J. Perez

J. Perez

Approved By:

J. Hernandez

J. Hernandez

ATD Serial No.: 299

Test Date: 2025-05-21

Pelvis Plug S/N: 17857



SID-IIs Pelvis Plug Certification Test

Plug S/N 17857

Test Number 26504

Report Number 26567

Test Date 8/18/2023 12:47:10 PM

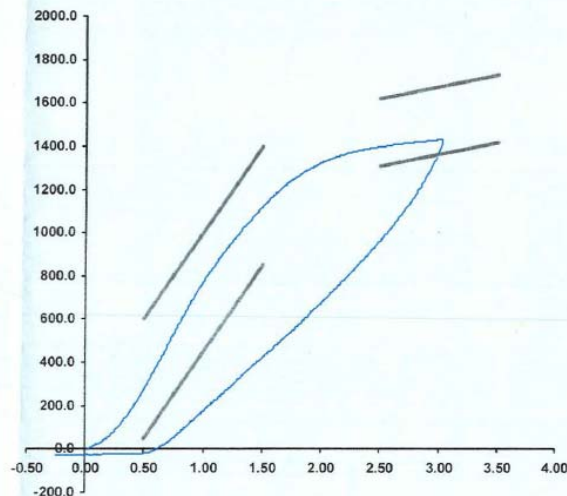
	Test Results	Spec Min	Spec Max
Force @ 0.5 mm (N)	283	50	600
Force @ 1.5 mm (N)	1,122	850	1,400
Force @ 2.5 mm (N)	1,400	1,306	1,618
Force @ 3.0 mm (N)	1,433	1,361	1,673

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

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

Notes:

Force (-N) vs Extension (-mm)



Operator

Part Number 180-4450

Template No 107 18-Aug-23
SACO Research

By: DC

Date: 8/18/23

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

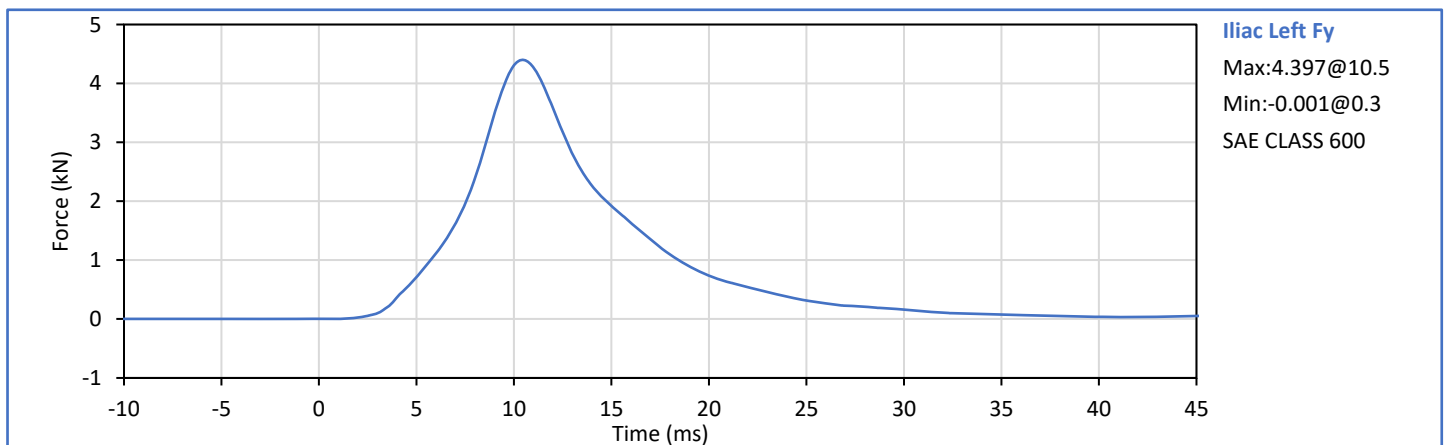
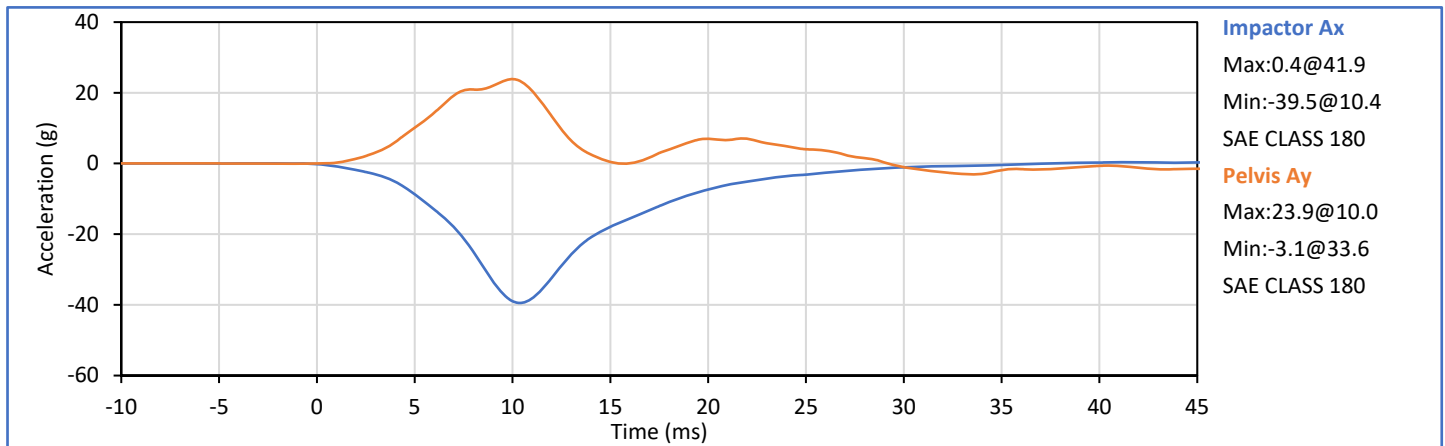
ATD Serial No.: 299

Test Date: 2025-05-20

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	32	Pass
Impactor Velocity	m/s	4.20	4.40	4.32	Pass
Peak Iliac Fy	kN	4.10	5.10	4.40	Pass
Peak Pelvis Ay	g	28.0	39.0	34.7	Pass
Peak Impactor Ax	g	-45.0	-36.0	-39.5	Pass
Overall Test Results					Pass

Pelvis Plug S/N: 17751 *

* Plug is not impacted and remains certified



Technician:

J. Perez
J. Perez

Approved By:

J. Hernandez
J. Hernandez

APPENDIX C
Post-Test ATD Qualification and Performance Verification
SID-IIs Small Side Impact ATD, Left Side Configuration
S/N: 299

ATD Serial No.: 299

Test Date: 2025-06-12

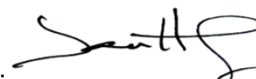
Tested Parameter	Units	Spec Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.4	Pass
Laboratory Relative Humidity	%	10	70	35	Pass
A - Sitting Height	mm	772	788	781	Pass
B - Shoulder Pivot Height	mm	437	453	450	Pass
C - Hpoint Height	mm	79	89	87	Pass
D - H Point From Seatback	mm	141	151	149	Pass
E - Shoulder Pivot From Backline	mm	97	107	104	Pass
F - Thigh Clearance	mm	119	135	128	Pass
G - Head Breadth	mm	140	148	145	Pass
H - Head Back From Backline	mm	40	46	42	Pass
I - Head Depth	mm	178	188	183	Pass
J - Head Circumference	mm	541	551	547	Pass
K - Buttock To Knee Length	mm	514	540	533	Pass
L - Popliteal Height	mm	343	369	356	Pass
K - Knee Pivot To Floor Height	mm	392	409	401	Pass
N - Buttock Popliteal Length	mm	416	442	428	Pass
O - Chest Depth W/O Jacket	mm	195	211	204	Pass
P - Foot Length	mm	216	232	223	Pass
Q - Hip Breadth (W/Pelvic Plugs)	mm	313	323	320	Pass
R - Arm Length	mm	249	259	253	Pass
S - Knee Joint To Seatback	mm	477	493	490	Pass
V - Shoulder Width	mm	341	357	350	Pass
W - Foot Width	mm	78	94	89	Pass
Y - Chest Circumference W/Jacket	mm	851	881	878	Pass
Z - Waist Circumference	mm	761	791	772	Pass
				Overall Test Results	Pass

Technician:



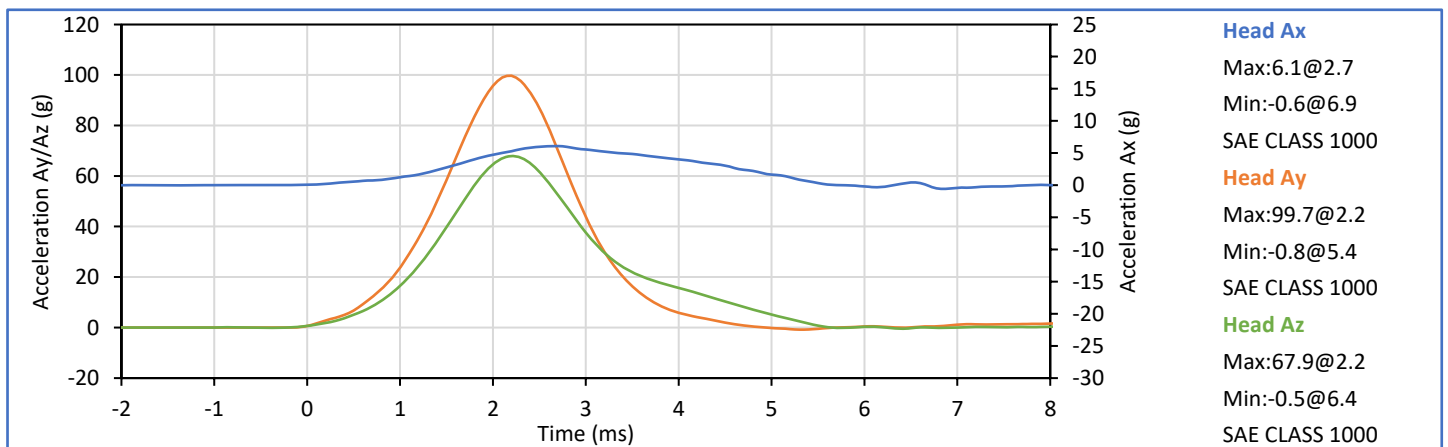
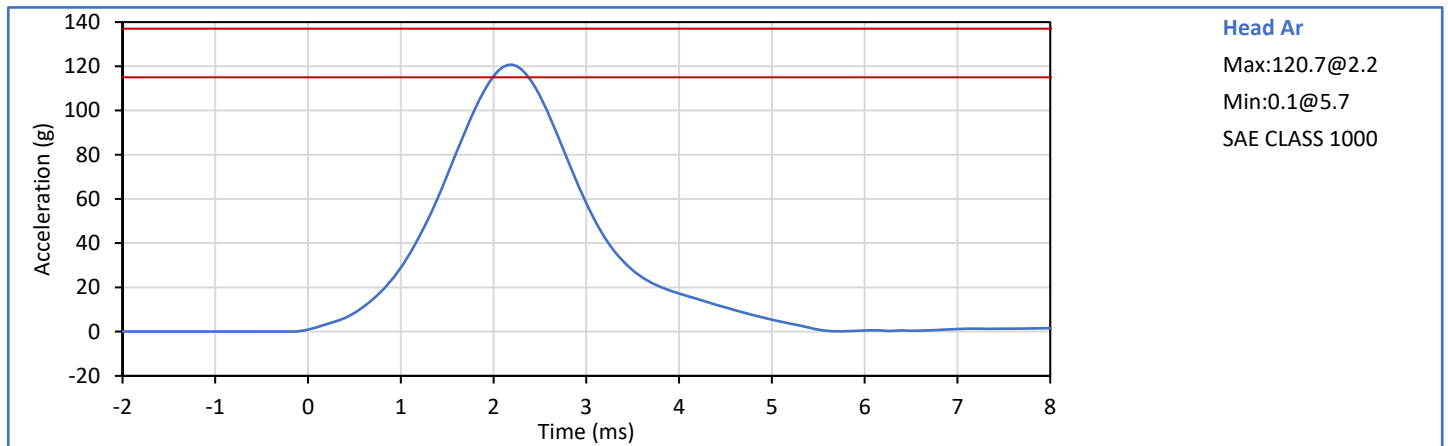
J. Perez

Approved By:



J. Hernandez

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	35	Pass
Peak Resultant Acceleration	g	115.0	137.0	120.7	Pass
Peak Head Ax	g	-15.0	15.0	6.1	Pass
Oscillations After Main Pulse	%	0.0	15.0	1.4	Pass
Is Acceleration Unimodal?	Yes/No	Yes		Yes	Pass
			Overall Test Results	Pass	



Technician:

J. Perez

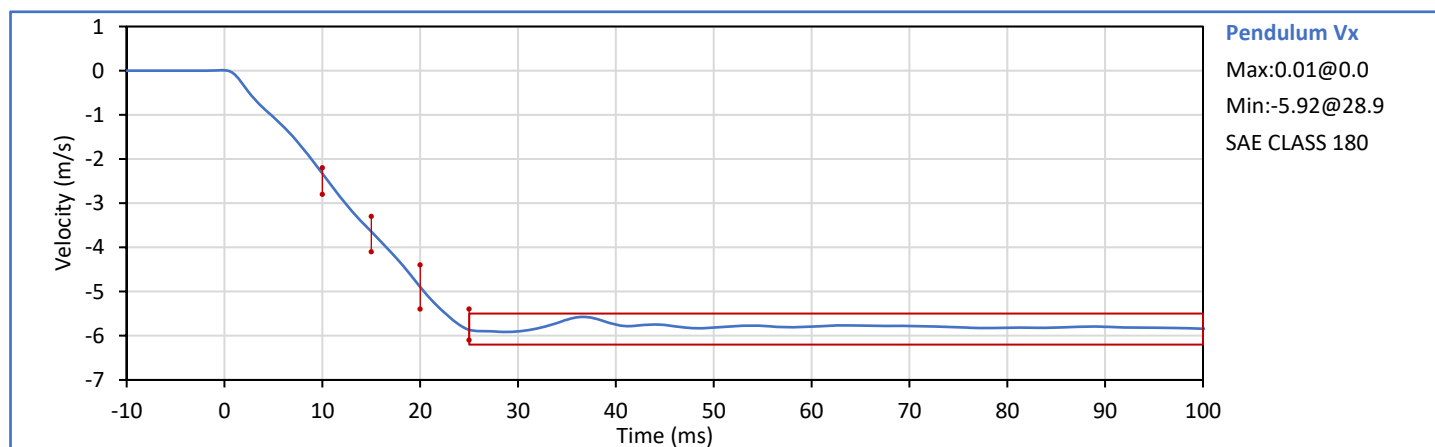
J. Perez

Approved By:

J. Hernandez

J. Hernandez

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.5	Pass
Laboratory Relative Humidity	%	10	70	37	Pass
Pendulum Velocity	m/s	5.51	5.63	5.57	Pass
Pendulum Decel at 10 ms	m/s	-2.80	-2.20	-2.33	Pass
Pendulum Decel at 15 ms	m/s	-4.10	-3.30	-3.64	Pass
Pendulum Decel at 20 ms	m/s	-5.40	-4.40	-4.90	Pass
Pendulum Decel at 25 ms	m/s	-6.10	-5.40	-5.87	Pass
Pendulum Decel from 25-100 ms	m/s	-6.20	-5.50	-5.92/-5.58	Pass
Peak "D" Plane Rotation	deg	-81.0	-71.0	-75.0	Pass
Time of Peak "D" Plane Rotation	ms	50.0	70.0	58.2	Pass
Peak Occ. Condyle Moment	Nm	36.0	44.0	41.9	Pass
Time of Moment Decay to 0 Nm	ms	102.0	126.0	108.8	Pass
				Overall Test Results	Pass



Technician:

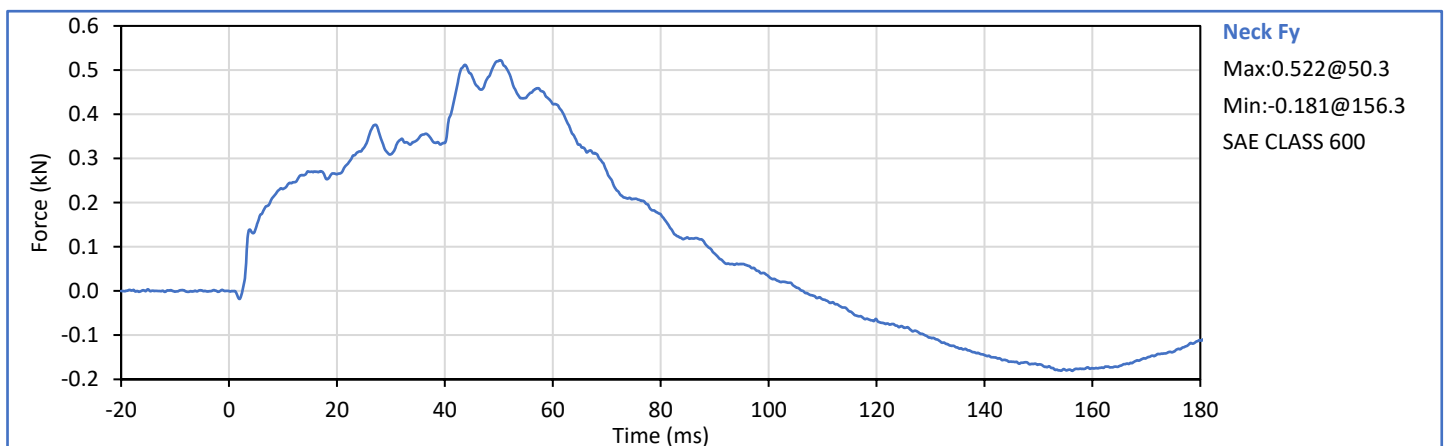
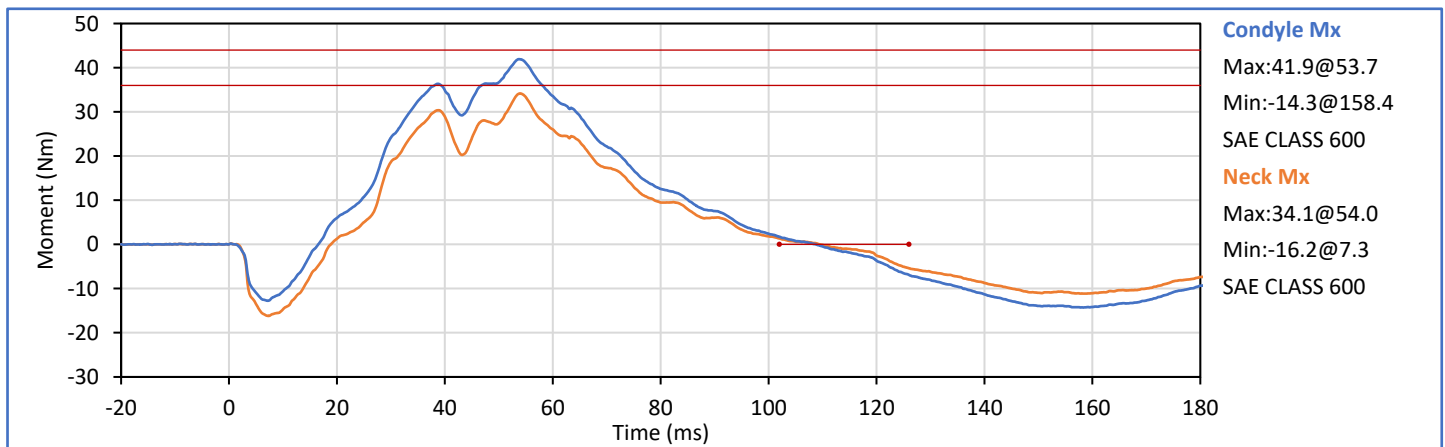
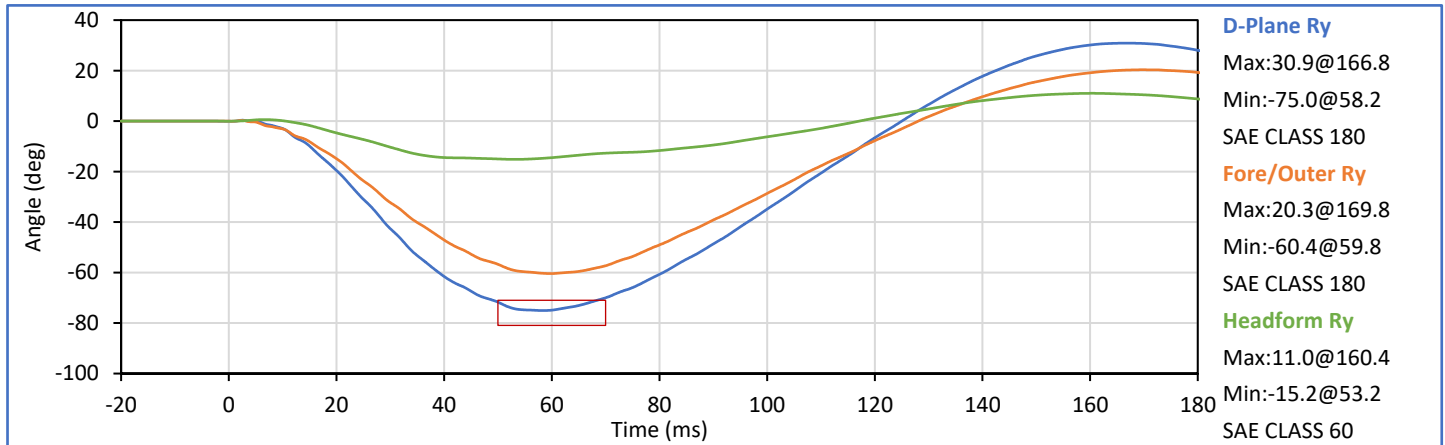
J. Perez

J. Perez

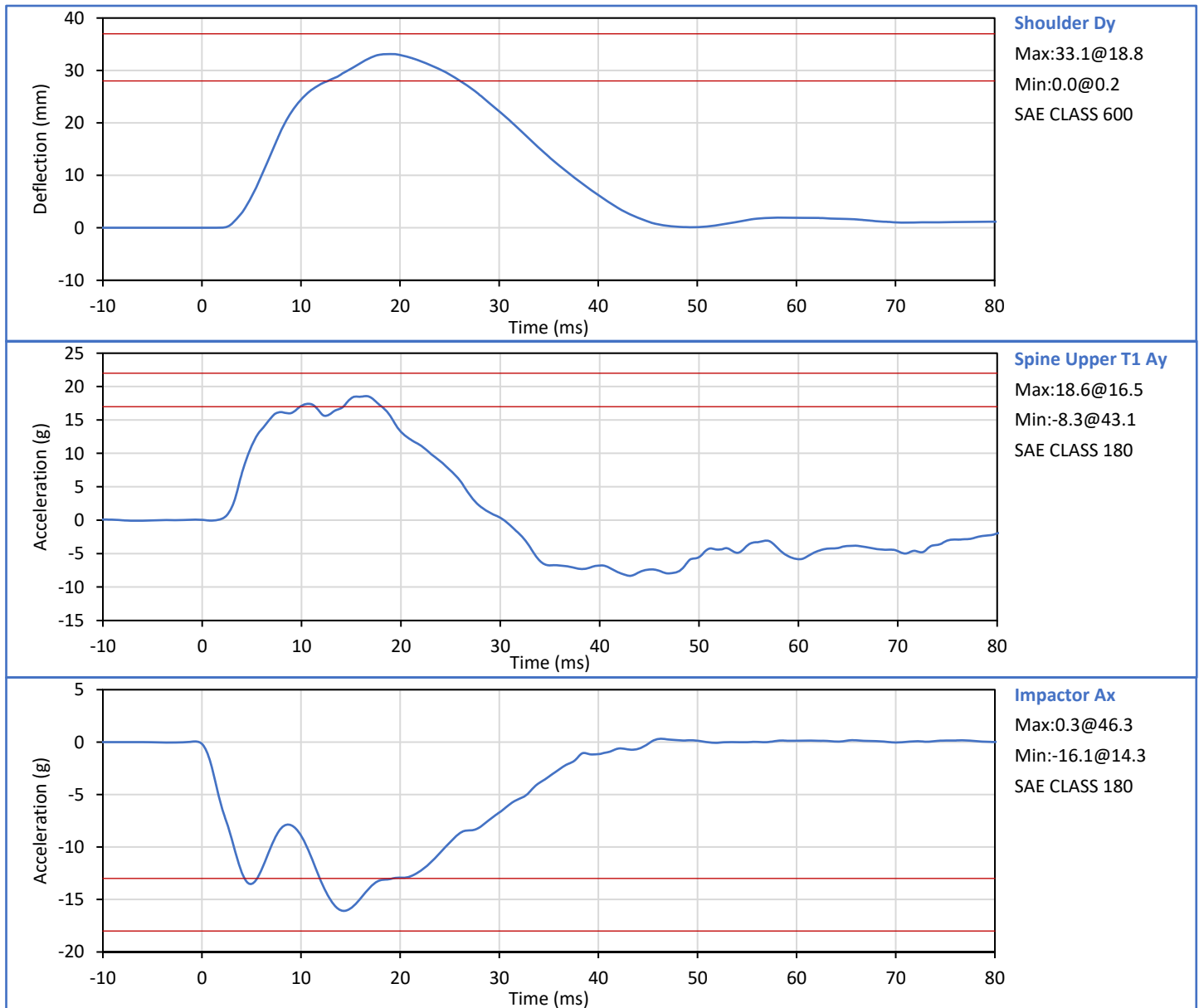
Approved By:

J. Hernandez

J. Hernandez



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	36	Pass
Impactor Velocity	m/s	4.20	4.40	4.34	Pass
Peak Shoulder Dy	mm	28.0	37.0	33.1	Pass
Peak Upper Spine (T1) Ay	g	17.0	22.0	18.6	Pass
Peak Impactor Ax	g	-18.0	-13.0	-16.1	Pass
Overall Test Results					Pass



Technician:

J. Perez

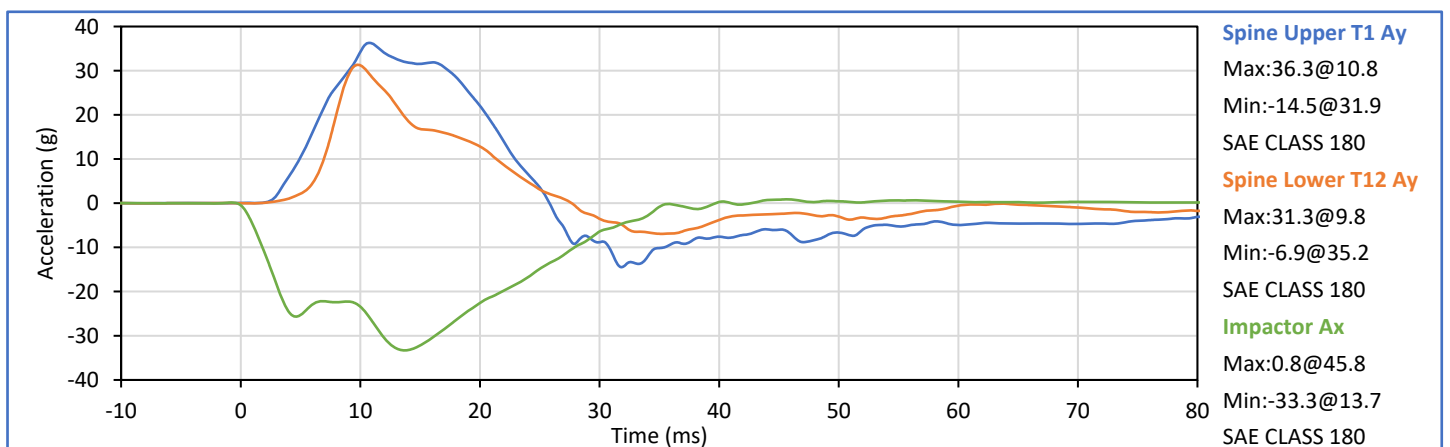
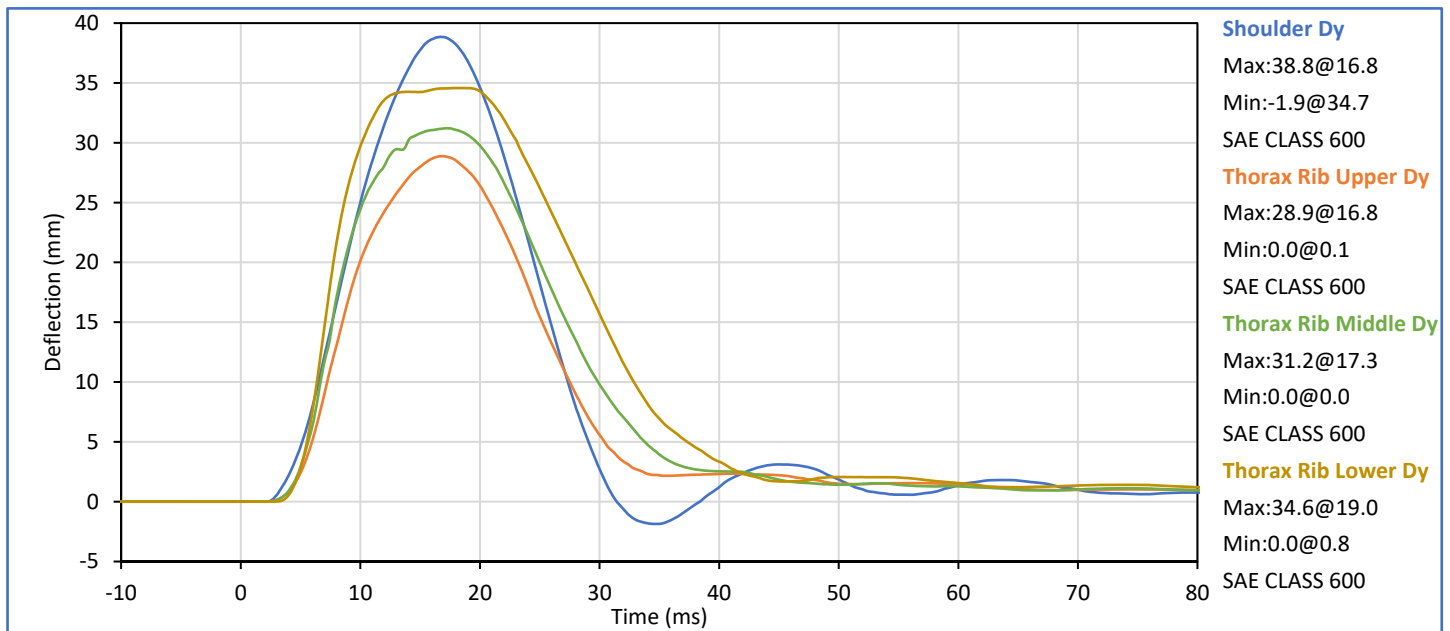
J. Perez

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J. Hernandez

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	35	Pass
Impactor Velocity	m/s	6.60	6.80	6.72	Pass
Peak Shoulder Dy	mm	31.0	40.0	38.8	Pass
Peak Upper Rib Dy	mm	25.0	32.0	28.9	Pass
Peak Middle Rib Dy	mm	30.0	36.0	31.2	Pass
Peak Lower Rib Dy	mm	32.0	38.0	34.6	Pass
Peak Upper Spine (T1) Ay	g	34.0	43.0	36.3	Pass
Peak Lower Spine (T12) Ay	g	29.0	37.0	31.3	Pass
Peak Impactor Ax	g	-36.0	-30.0	-33.3	Pass
Overall Test Results				Pass	Pass



Technician:

J. Perez

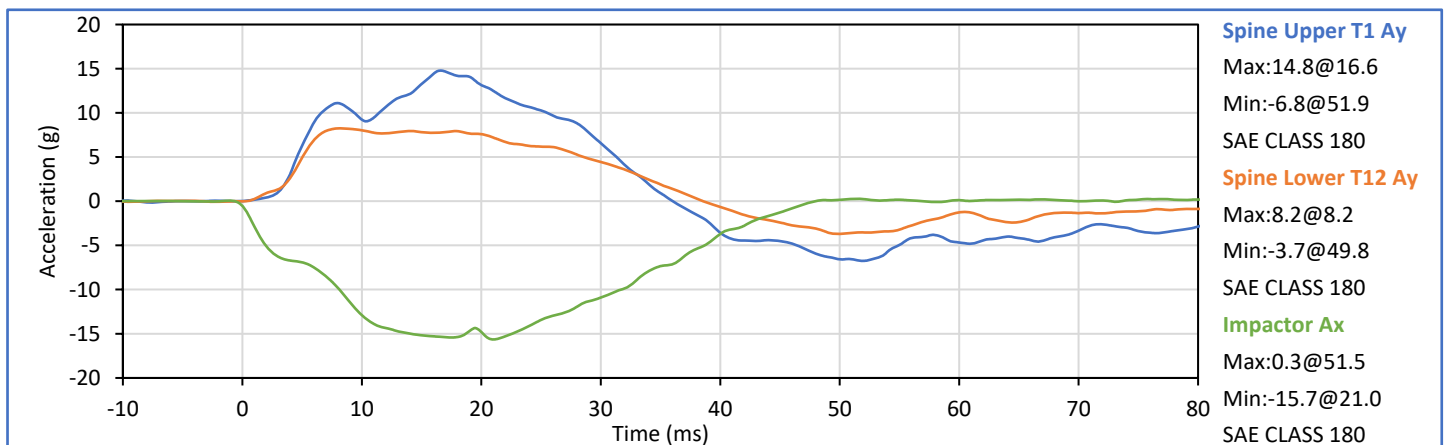
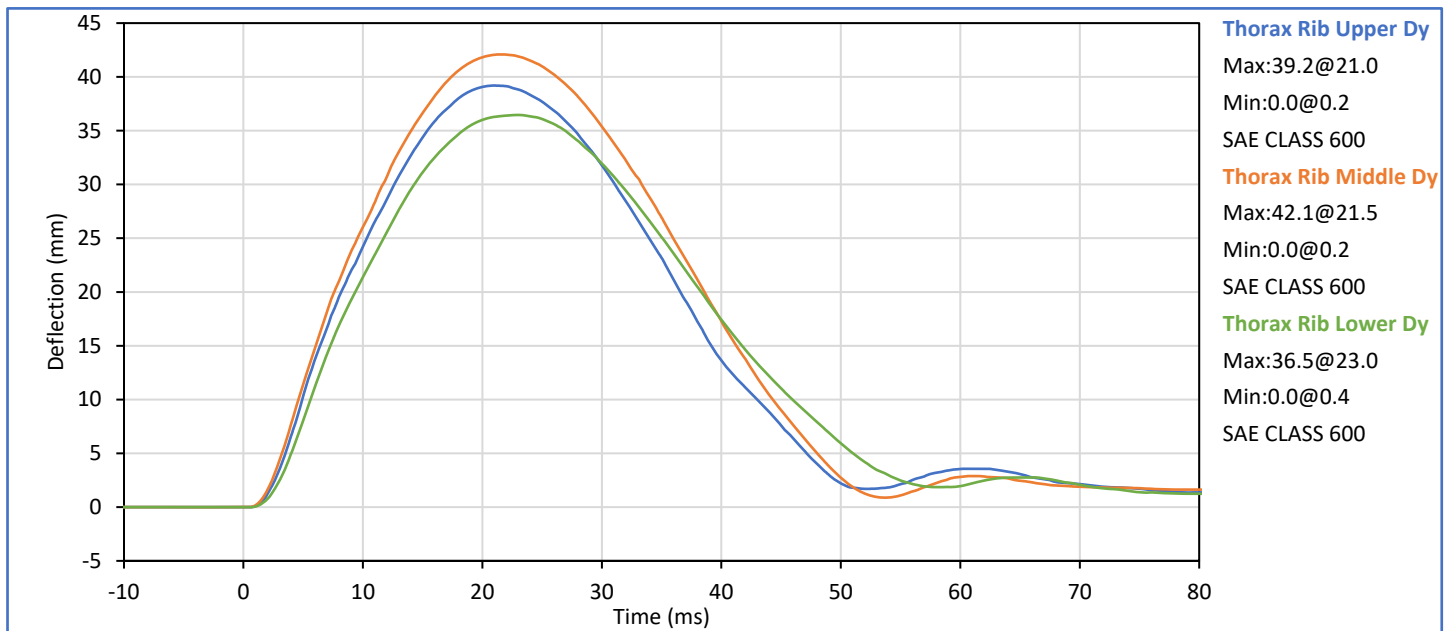
J. Perez

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J. Hernandez

J. Hernandez

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	32	Pass
Impactor Velocity	m/s	4.20	4.40	4.32	Pass
Peak Thorax Rib Upper Dy	mm	32.0	40.0	39.2	Pass
Peak Thorax Rib Middle Dy	mm	39.0	45.0	42.1	Pass
Peak Thorax Rib Lower Dy	mm	35.0	43.0	36.5	Pass
Peak Spine Upper T1 Ay	g	13.0	17.0	14.8	Pass
Peak Spine Lower T12 Ay	g	7.0	11.0	8.2	Pass
Peak Impactor Ax	g	-18.0	-14.0	-15.7	Pass
Overall Test Results					Pass



Technician:

J. Perez

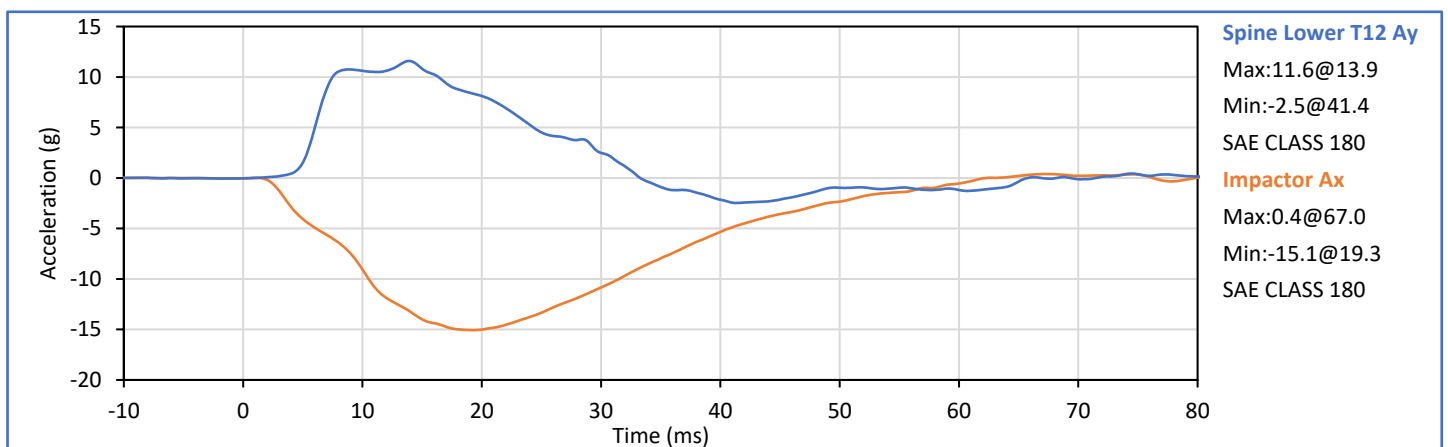
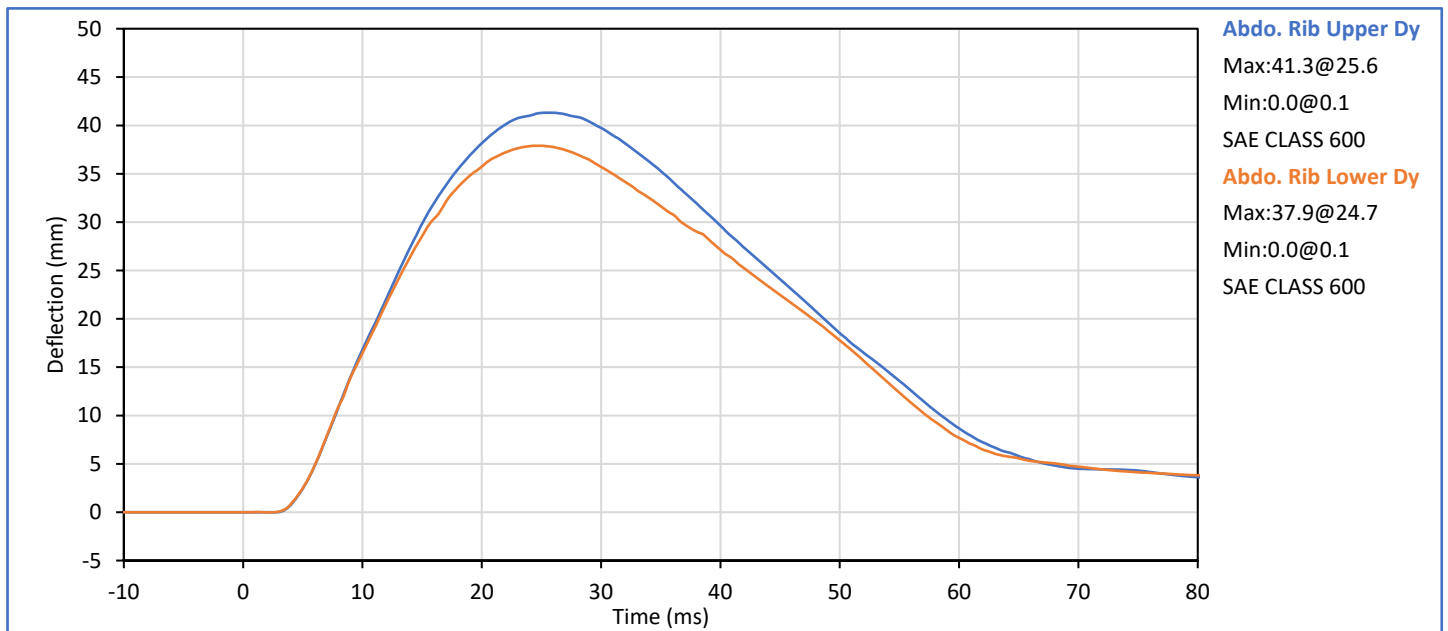
J. Perez

Approved By:

J. Hernandez

J. Hernandez

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.6	Pass
Laboratory Relative Humidity	%	10	70	33	Pass
Impactor Velocity	m/s	4.20	4.40	4.32	Pass
Peak Upper Abdomen Rib Dy	mm	36.0	47.0	41.3	Pass
Peak Lower Abdomen Rib Dy	mm	33.0	44.0	37.9	Pass
Peak Lower Spine T12 Ay	mm	9.0	14.0	11.6	Pass
Peak Impactor Ax	g	-16.0	-12.0	-15.1	Pass
Overall Test Results					Pass



Technician:

J. Perez

J. Perez

Approved By:

J. Hernandez

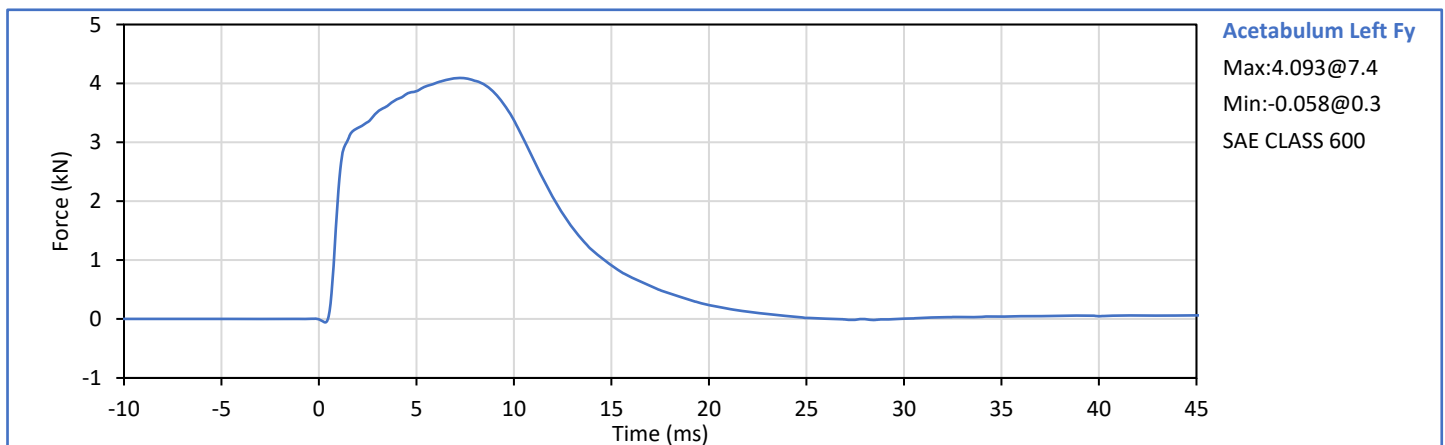
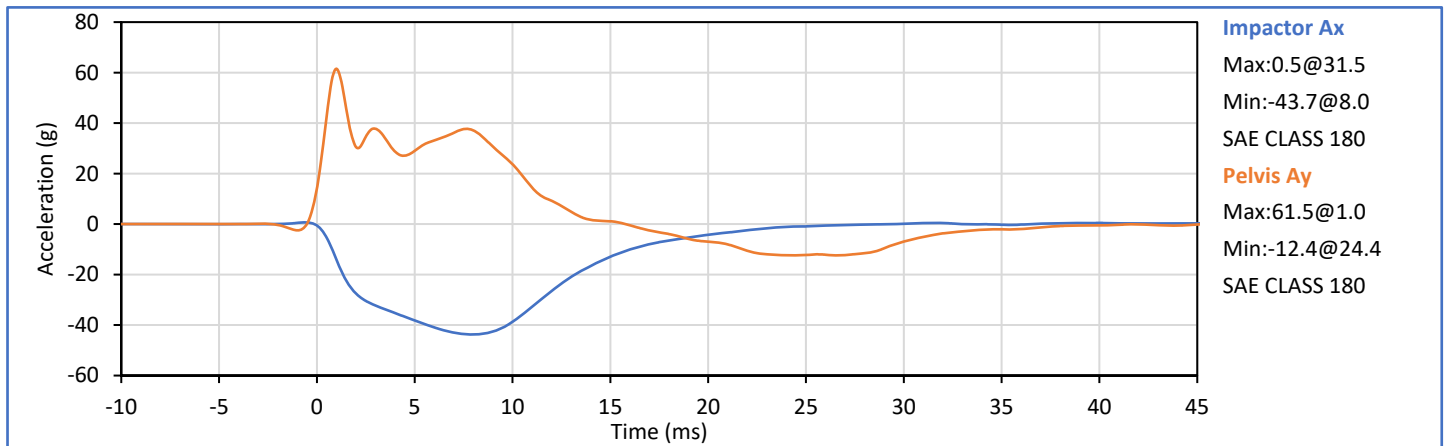
J. Hernandez

ATD Serial No.: 299

Test Date: 2025-06-12

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
Impactor Velocity	m/s	6.60	6.80	6.71	Pass
Peak Acetabulum Fy	kN	3.60	4.30	4.09	Pass
Pelvis Ay after 6ms	g	34.0	42.0	37.7	Pass
Peak Impactor Ax	g	-47.0	-38.0	-43.7	Pass
Overall Test Results					Pass

Pelvis Plug S/N: 17884



Technician:

J. Perez

J. Perez

Approved By:

J. Hernandez

J. Hernandez

ATD Serial No.: 299

Test Date: 2025-06-12

Pelvis Plug S/N: 17884



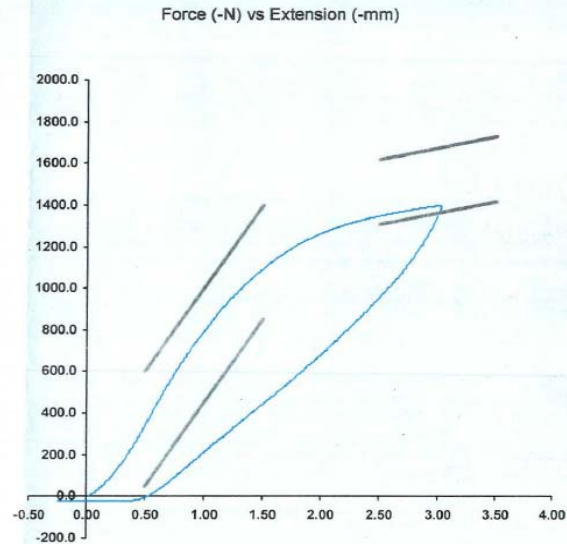
SID-IIs Pelvis Plug Certification Test

Plug S/N 17884
Test Number 26536
Report Number 26599
Test Date 8/20/2023 12:03:50 PM

	Test Results	Spec. Min	Spec. Max
Force @ 0.5 mm (N)	352	50	600
Force @ 1.5 mm (N)	1,097	850	1,400
Force @ 2.5 mm (N)	1,351	1,306	1,618
Force @ 3.0 mm (N)	1,400	1,361	1,673

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

Notes:



Operator

Part Number 180-4450

Template No 107 20-Aug-23
SACO Research

By: DC Date: 8/20/23
SACO Research 41735 Elm St, #401 Murrieta, CA 92562 Tel 310-694-2082 FAX

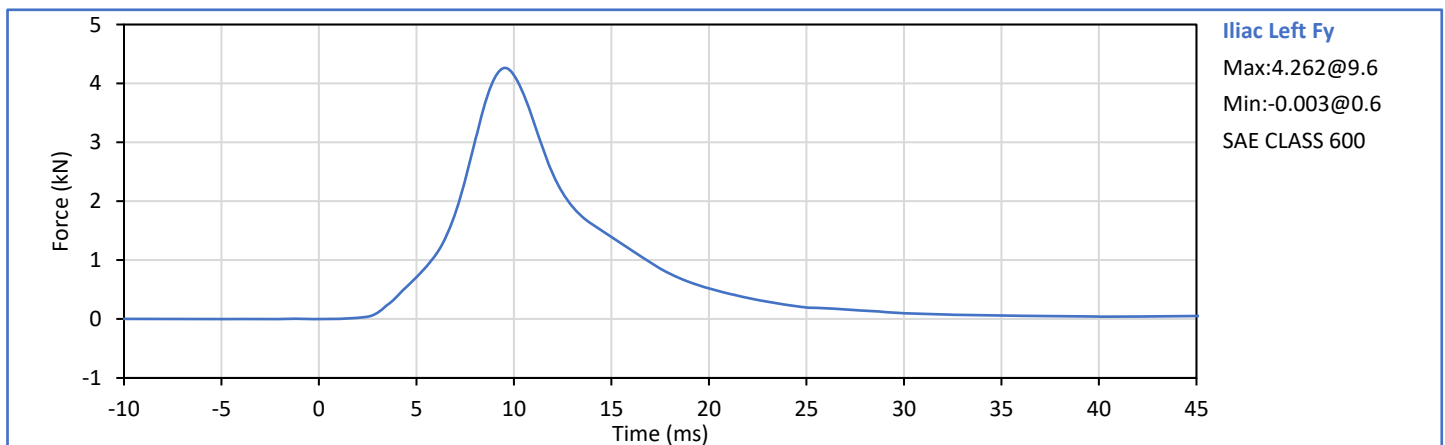
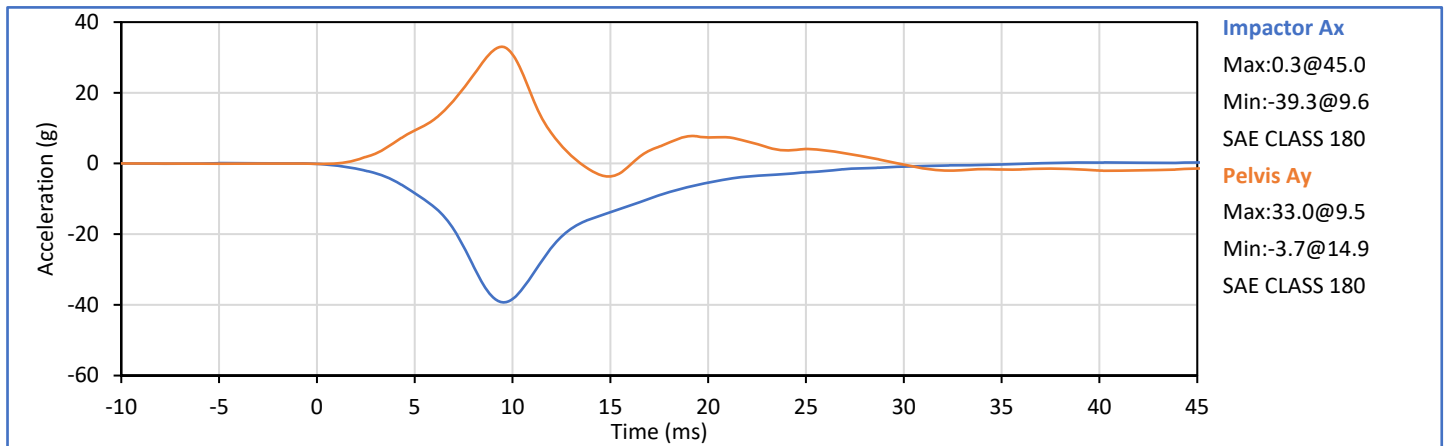
ATD Serial No.: 299

Test Date: 2025-06-13

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.6	Pass
Laboratory Relative Humidity	%	10	70	34	Pass
Impactor Velocity	m/s	4.20	4.40	4.31	Pass
Peak Iliac Fy	kN	4.10	5.10	4.26	Pass
Peak Pelvis Ay	g	28.0	39.0	34.7	Pass
Peak Impactor Ax	g	-45.0	-36.0	-39.3	Pass
Overall Test Results					Pass

Pelvis Plug S/N: 17751 *

* Plug is not impacted and remains certified



Technician:

J. Perez
J. Perez

Approved By:

J. Hernandez
J. Hernandez

APPENDIX D
TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION DATA

Table 1 - Driver ATD Instrumentation

Sensor Location	Sensor S\N	Mfr	Model	Cal Date
Head Acceleration X Primary	P51929	Endevco	7264C-2k	2024-12-11
Head Acceleration Y Primary	P50086	Endevco	7264C-2k	2024-12-11
Head Acceleration Z Primary	P51931	Endevco	7264C-2k	2024-12-11
Head Acceleration X Redundant	P68604	Endevco	7264C-2k	2024-12-11
Head Acceleration Y Redundant	P51934	Endevco	7264C-2k	2024-12-11
Head Acceleration Z Redundant	P58736	Endevco	7264C-2k	2024-12-11
Head Rotation Rate X	ARS7342	DTS	ARS PRO-8k (2kHz)	2024-07-31
Head Rotation Rate Y	ARS7473	DTS	ARS PRO-8k (2kHz)	2024-07-31
Head Rotation Rate Z	ARS7598	DTS	ARS PRO-8k (2kHz)	2024-07-31
Upper Thorax Rib Deflection Y	1143	Servo	08TCI-3725	2024-12-12
Middle Thorax Rib Deflection Y	1075	Servo	08TCI-3725	2024-12-12
Lower Thorax Rib Deflection Y	1213	Servo	08TCI-3725	2024-12-12
Upper Abdomen Rib Deflection Y	1218	Servo	08TCI-3725	2024-12-12
Lower Abdomen Rib Deflection Y	1177	Servo	08TCI-3725	2024-12-12
Lower Spine T12 Acceleration X	P58761	Endevco	7264C-2k	2024-12-11
Lower Spine T12 Acceleration Y	P50077	Endevco	7264C-2k	2024-12-11
Lower Spine T12 Acceleration Z	P58795	Endevco	7264C-2k	2024-12-11
Iliac Wing Impact Side Force Y	284 (Iliac)	R.A. Denton	3228J	2025-05-15
Acetabulum Impact Side Force Y	260 (Acetabulum)	R.A. Denton	3249J	2025-05-15

Table 2 - Vehicle Instrumentation

Sensor Location	Sensor S\N	Mfr	Model	Cal Date
Vehicle CG Ax	M11246	Endevco	758H-2k	2025-04-10
Vehicle CG Ay	M13674	Endevco	758H-2k	2025-04-09
Vehicle CG Az	M11278	Endevco	758H-2k	2025-04-11
Left Floor Sill Ay	M11363	Endevco	758H-2k	2025-04-01
A-Pillar Sill Ay	M13691	Endevco	758H-2k	2025-04-01
A-Pillar Low Ay	M11169	Endevco	758H-2k	2025-04-10
A-Pillar Mid Ay	M11059	Endevco	758H-2k	2025-04-29
B-Pillar Sill Ay	220265	BST	11CF-2k	2025-04-17
B-Pillar Low Ay	220317	BST	11CF-2k	2025-04-17
B-Pillar Mid Ay	M11048	Endevco	758H-2k	2025-04-11
Driver Seat Track at H-Point Ay	M12827	Endevco	758H-2k	2025-04-09
Engine Top Ax	M13673	Endevco	758H-2k	2025-04-09
Engine Top Ay	M12881	Endevco	758H-2k	2025-04-09
Firewall Ay	M12855	Endevco	758H-2k	2025-04-01
Right Roof Ay	M11101	Endevco	758H-2k	2025-04-10
Right Floor Sill Ay	M11258	Endevco	758H-2k	2025-04-09
Rear Floorpan Ax	M11082	Endevco	758H-2k	2025-04-29
Rear Floorpan Ay	M11214	Endevco	758H-2k	2025-04-17

Table 3 - Barrier Pole Instrumentation

Sensor Location	Sensor S\N	Mfr	Model	Cal Date
Barrier Pole 01 Fx	48760	Interface	1220FS-50k	2025-05-07
Barrier Pole 02 Fx	132304A	Interface	1220-FS	2025-05-08
Barrier Pole 03 Fx	131211A	Interface	1220-FS	2025-05-07
Barrier Pole 04 Fx	19346	Interface	1220FS-50k	2025-05-08
Barrier Pole 05 Fx	131827A	Interface	1220AF-50k	2025-05-07
Barrier Pole 06 Fx	19322	Interface	1220FS-50k	2025-05-08
Barrier Pole 07 Fx	132302A	Interface	1220-FS	2025-05-08
Barrier Pole 08 Fx	19340	Interface	1220FS-50k	2025-05-07