

**REPORT NUMBER: SideNCAPPole-KAR-21-013
NEW CAR ASSESSMENT PROGRAM (NCAP)
SIDE IMPACT POLE TEST**

**HYUNDAI MOTOR COMPANY
2021 GENESIS G80 4-DOOR SEDAN**

NHTSA No: O20214213

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



SEPTEMBER 15, 2021

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF CRASHWORTHINESS STANDARDS
MAIL CODE: NRM-100
1200 NEW JERSEY AVE, SE, ROOM W43-410
WASHINGTON, D.C. 20590**

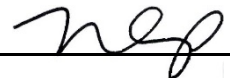
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FINAL REPORT ACCEPTANCE BY OCWS:

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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		14. Sponsoring Agency Code NRM-100																												
15. Supplementary Notes																														
16. Abstract A 32.2 km/h 75° rigid pole side NCAP impact test was conducted on the subject 2021 Genesis G80 4-door sedan 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 25, 2021. The impact velocity was 32.30 km/h and the outside ambient temperature at the struck (driver's) side of the vehicle was 31.7°C. The target vehicle's maximum post-test static crush was 335 mm located at level 3. The test vehicle's occupant performance data is as follows:																														
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 35%;">Measurement Description</th> <th colspan="3" style="text-align: center;">Driver ATD (SID-IIs)</th> </tr> <tr> <th style="width: 15%;">Units</th> <th style="width: 15%;">Threshold</th> <th style="width: 35%;">Result</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆)</td> <td></td> <td style="text-align: center;">1000</td> <td style="text-align: center;">198.0</td> </tr> <tr> <td>Resultant Lower Spine Acceleration</td> <td style="text-align: center;">g</td> <td style="text-align: center;">82</td> <td style="text-align: center;">34</td> </tr> <tr> <td>Total Pelvic Force (Sum of Acetabular and Iliac Forces)</td> <td style="text-align: center;">N</td> <td style="text-align: center;">5525</td> <td style="text-align: center;">3009</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td style="text-align: center;">mm</td> <td style="text-align: center;">38</td> <td style="text-align: center;">27</td> </tr> <tr> <td>Maximum Abdominal Rib Deflection</td> <td style="text-align: center;">mm</td> <td style="text-align: center;">45</td> <td style="text-align: center;">16</td> </tr> </tbody> </table>				Measurement Description	Driver ATD (SID-IIs)			Units	Threshold	Result	Head Injury Criteria (HIC ₃₆)		1000	198.0	Resultant Lower Spine Acceleration	g	82	34	Total Pelvic Force (Sum of Acetabular and Iliac Forces)	N	5525	3009	Maximum Thoracic Rib Deflection	mm	38	27	Maximum Abdominal Rib Deflection	mm	45	16
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The struck side doors of the vehicle were jammed shut and did not separate from the hinges. There was no separation of the latches.																														
17. Key Words New Car Assessment Program (NCAP) Side Impact Pole Part 572V SID-IIs		18. Distribution Statement National Highway Traffic Safety Admin. Technical Information Services Division 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 MY 2021 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under contract number DTNH22-14-D-00355. The purpose of this test is to generate comparative side impact performance in a 2021 Genesis G80 4-Door Sedan. 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 2021 Genesis G80 4-Door Sedan. The subject vehicle was towed into the rigid pole at an angle of 74.8° and a velocity of 32.30 km/h. The test was conducted by Applus IDIADA KARCO Engineering, LLC. in Adelanto, California on June 25, 2021. Pre-test and post-test photographs of the test vehicle and side impact dummy (SID-IIs) are included in Appendix A of this report.

One Part 572V (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 Part 572V (SID-IIs) was instrumented accordingly:

- Primary and Redundant Head CG tri-axial accelerometers
- 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.

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	198.0
Lower Spine (T12) Resultant Acceleration	g	82	34
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	3009
Maximum Thoracic Rib Deflection	mm	38*	27
Maximum Abdominal Rib Deflection	mm	45*	16

*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 Airbag	Yes	No	No	
Knee Airbag	Yes	No	No	
Side Airbag 1 (Curtain)	Yes	Yes	Yes	Yes
Side Airbag 2 (Torso)	No		Yes	Yes
Side Airbag 3 (Torso/Pelvis)	Yes	Yes	No	
Side Airbag 4 (Front Center)	Yes	Yes	No	
Seat Belt Pretensioner	Yes	Yes	No	
Seat Belt Load Limiter	Yes	Yes	No	

GENERAL COMMENTS

- LEFT LOWER A-POST AY, Channel failed at 28.6 ms
- LOAD CELL POLE #2 FY, Load cell data did not return to zero
- LOAD CELL POLE #8 FY, Noisy data throughout

SECTION 2

OCCUPANT AND VEHICLE INFORMATION/DATA SHEETS

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

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: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA Number	O20214213
Model Year	2021
Make	Genesis
Model	G80
Body Style	4-Door Sedan
VIN	KMTGB4SC3MU073242
Body Color	Savile Silver
Odometer Reading (km / mi)	55 / 34
Engine Displacement (L)	2.5
Type / No. of Cylinders	Inline 4-Cylinder
Engine Placement	Longitudinal
Transmission Type	Automatic
Transmission Speeds	8
Overdrive	Yes
Final Drive	RWD
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 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
Rear Pass. Curtain Airbag	Yes
Rear Pass. Head/Torso Airbag	No
Rear Pass. Torso Airbag	Yes
Rear Pass. Torso/Pelvis Airbag	No
Rear Pass. Pelvis Airbag	No
Driver Seat Belt Pretensioner	Yes
Rear Pass. Seat Belt Pretensioner	No
Driver Load Limiter	Yes
Rear Pass. Load Limiter	No
Other Safety Restraint	Yes

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

DATA FROM CERTIFICATION LABEL

Manufactured By	Hyundai Motor Company
Date of Manufacture	Mar-21
Vehicle Type	Passenger car

GVWR (kg)	2315
GAWR Front (kg)	1300
GAWR Rear (kg)	1405

VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total	
Designated Seating Capacity	2	3		5	
Capacity Weight (VCW) (kg)				400.0	A
DSC x 68.04 (kg)				340.2	B
Cargo Weight (RCLW) (kg)				59.8	A-B

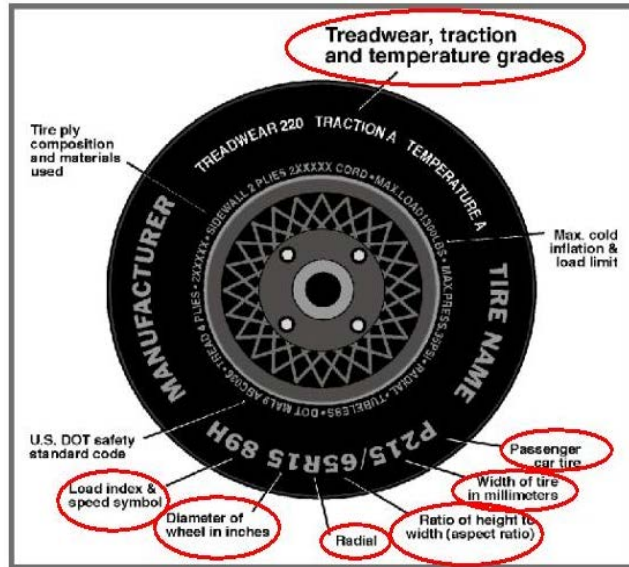
VEHICLE SEAT TYPE

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							

DATA SHEET NO. 1 ... (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21



Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	250	250
Cold Pressure (kPa)	250	250
Recommended Tire Size	P245/50R18	P245/50R18
Tire Size on Vehicle	P245/50R18	P245/50R18
Tire Manufacturer	Michellin	Michellin
Tire Model	Primacy Tour	Primacy Tour
Treadware	540	540
Traction Grade	A	A
Temperature Grade	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	104W	104W
Tire Material	Polyester, Steel, Polyamide	Polyester, Steel, Polyamide
DOT Safety Code Left	O20X 1520	O20X 1420
DOT Safety Code Right	O20X 1520	O20X 1520

DATA SHEET NO. 1 ... (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

TIRE PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kPa	250	250	250	250
Tire Placard	kPa	250	250	250	250
Owner's Manual	kPa	250	250	250	250
As Tested	kPa	250	250	250	250

TEST VEHICLE AXLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Left	kg	476.5	428.5		467.0	500.0		496.5	485.5	
Right	kg	459.0	440.0		478.0	461.5		452.5	479.0	
Ratio	%	51.9%	48.1%	100.0%	49.6%	50.4%	100.0%	49.6%	50.4%	100.0%
Total	kg	935.5	868.5	1804.0	945.0	961.5	1906.5	949.0	964.5	1913.5

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total Delivered Weight (UVW)	kg	1804.0	A
Actual Weight of 1 SID II-s ATD Used	kg	49.0	B
Rated Cargo/Luggage Wt (RCLW)	kg	59.8	C
Calculated Vehicle Target Wt (TVTWT)	kg	1912.8	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)*	°	0.6	0.5	0.5	Yes
Front Passenger Sill Angle (front-to-rear)*	°	-0.5	-0.5	-0.5	Yes
Front Bumper-Line Angle (left-to-right)**	°	-0.3	-0.3	-0.3	Yes
Rear Bumper-Line Angle (left-to-right)**	°	0.1	0.1	0.2	Yes
Vehicle CG (Aft of Front Axle)	mm	1441	1510	1509	
Vehicle CG (Left (+)/Right (-) from Longitudinal Centerline)	mm	3	12	21	

*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: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213

Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

Test Height Adjustable Setting (If Applicable)	
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WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Rear Trim	2.5
Spare Tire & Tools	13.5

TEST SURFACE MARKINGS

	Distance from 75° Impact Location Line (mm)
Fore 25 mm target	120
Aft 25 mm target	120

DATA SHEET NO. 2

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

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

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	8.1	0.0	4.1
Front Passenger Seat	7.7	0.0	3.9
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	4.1	272	Max	275	290	303
			Mid	244	259	272
			Min	212	227	240
Front Passenger Seat	3.9	260	Max	264	278	290
			Mid	236	249	260
			Min	208	220	230
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: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

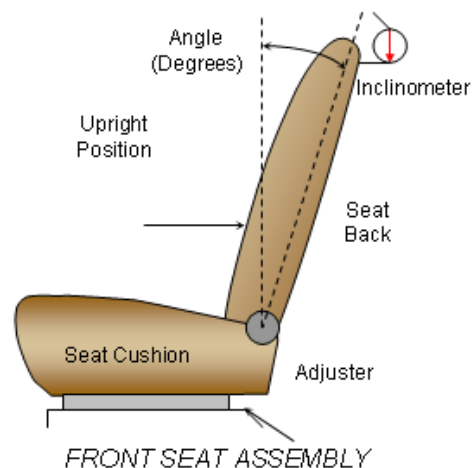
SEAT FORE/AFT POSITION

Seat	Total Fore/Aft Travel		Test Position From Forwardmost Position	
	mm	Detents*	mm	Detent*
Driver Seat	240		0	
Front Passenger Seat	248		0	
Front Center Seat				
Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Rear Center Seat				

*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 a flat bar along the seat back.



Seat	Total Seat Back Angle Range		Test Position from Most Upright	
	Degrees	Detents*	Degree	Detent*
Driver Seat w/Seated Dummy	67.7		7.0	
Front Passenger Seat	66.8		7.0	
Front Center Seat				
Struck Side Rear Seat w/Seated Dummy	Fixed	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
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: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213

Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

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	H

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	5	L

DATA SHEET NO. 2 ... (CONTINUED)

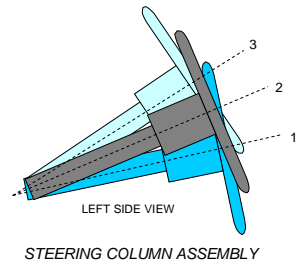
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT, AND FUEL SYSTEM DATA

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

STEERING COLUMN ADJUSTMENT

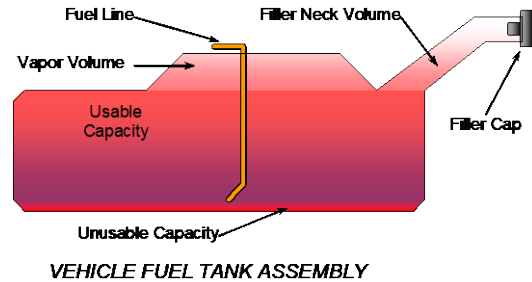
Steering wheel and column adjustments are made so that the steering wheel hub is at the center of the geometric locus it describes when it moves through its full range of motion.

	Degrees	Fore-Aft Position (mm)
Lowermost - Position 1	19.0	97
Geometric Center - Position 2	21.0	121
Uppermost - Position 3	23.0	145
Telescoping Steering Wheel Travel		48
Test Position	21.0	121



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

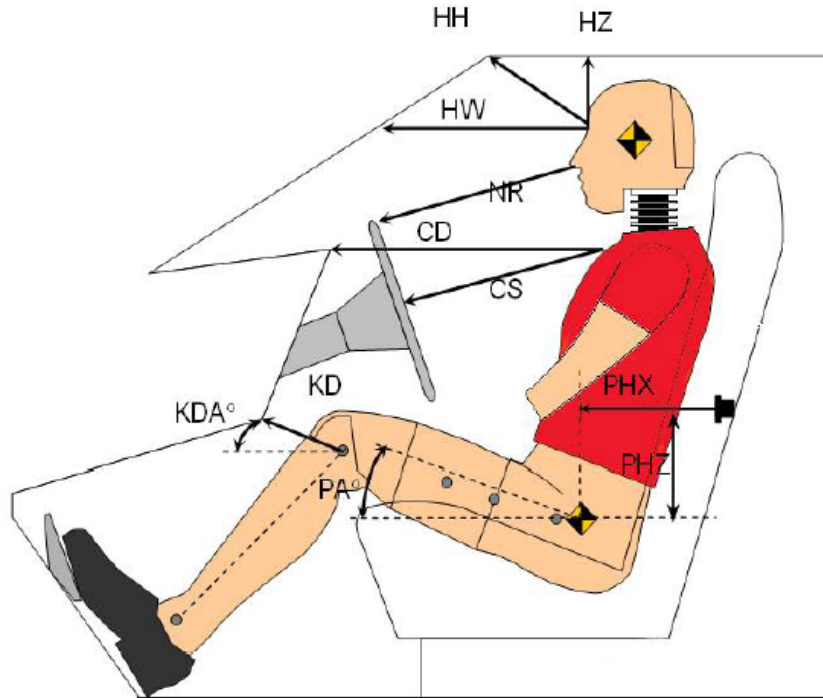
Description	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	65.11
Usable Capacity of "Optional Tank" (see Form No. 1)	
Usable Capacity of "Standard Tank" (see Owner's Manual)	65.11
Usable Capacity of "Optional Tank" (see Owner's Manual)	
93% of Usable Capacity	60.55
Actual amount of Solvent Used in Test	60.55
1/3 of Usable Capacity	21.70

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: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

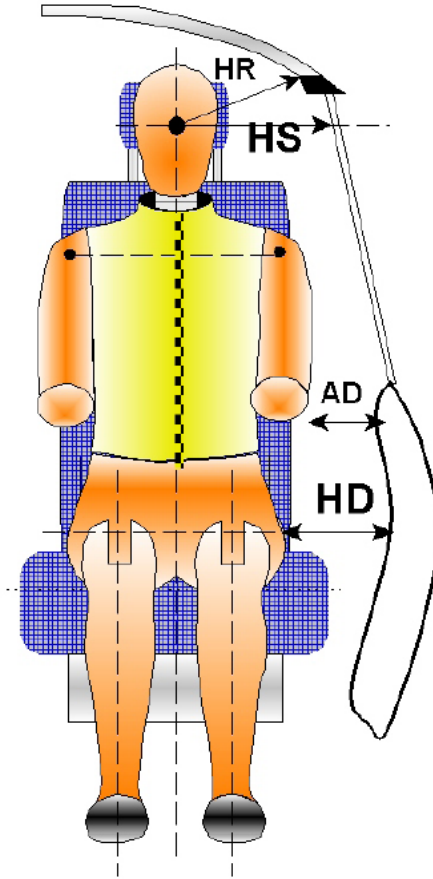


Driver Code	Description	Driver	
		Length (mm)	Angle (°)
HH	Head to Header	216	
HW	Head to Windshield	583	
HZ	Head to Roof	173	
NR	Nose to Rim	220	
CD	Chest to Dash	408	
CS	Chest to Steering Wheel	162	
KD(L)/KDA(L)°	Left Knee to Dash	130	39.6
KD(R)/KDA(R)°	Right Knee to Dash	119	37.3
PAX°	Pelvic Tilt Angle (x-axis)		19.5
PAY°	Pelvic Tilt Angle (y-axis)		0.2
PHX	Hip Point to Striker (x-axis)	289	
PHZ	Hip Point to Striker (z-axis)	175	

DATA SHEET NO. 4

DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

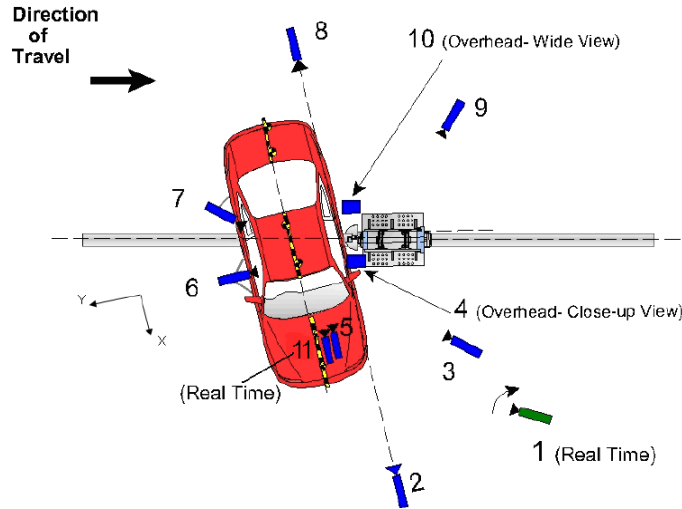


Code	Measurement Description	Units	Driver
HR	Head to Side Header	mm	229
HS	Head to Side Window	mm	380
AD	Arm to Door	mm	190
HD	Hip Point to Door	mm	206

DATA SHEET NO. 5

CAMERA AND INSTRUMENTATION DATA

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21



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	24	1000
3	Impact Side 45° - Forward Pole View	4.10	-2.15	-1.15	8.5	1000
4	Overhead Close-Up View of Impact	0.00	0.00	-5.79	12.5	1000
5	On-Board - Dummy Front View	0.94	0.15	-1.48	6	1000
6	On-Board - Dummy Side View	0.15	1.34	-1.19	6	1000
7	On-Board - Dummy Rear Oblique View	-1.18	1.36	-1.23	6	1000
8	Rear Ground Level - Impact View	-1.30	1.68	-1.26	24	1000
9	Impact Side 45° - Rearward Pole View	-8.02	0.04	-1.01	35	1000
10	Overhead Wide View of Impact	-0.06	0.22	-5.79	14	1000
11	Real Time Dummy Front View	1.00	0.19	-1.53		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

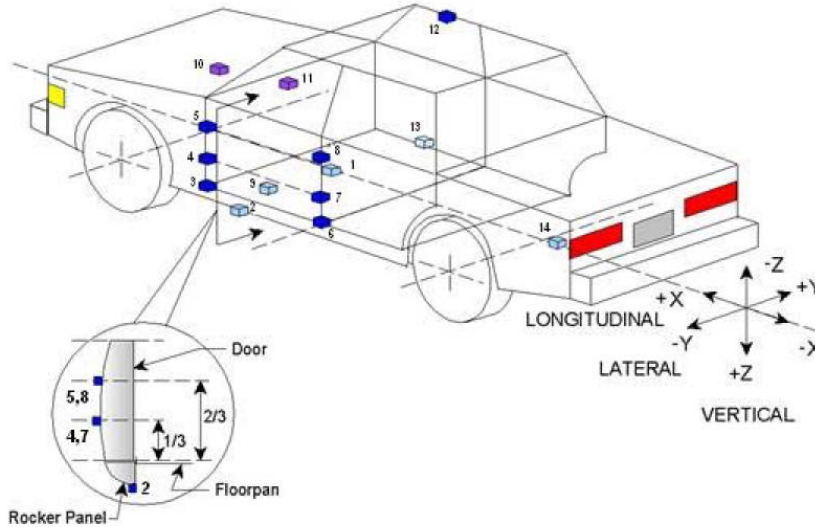
INSTRUMENTATION

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

DATA SHEET NO. 6

TEST VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

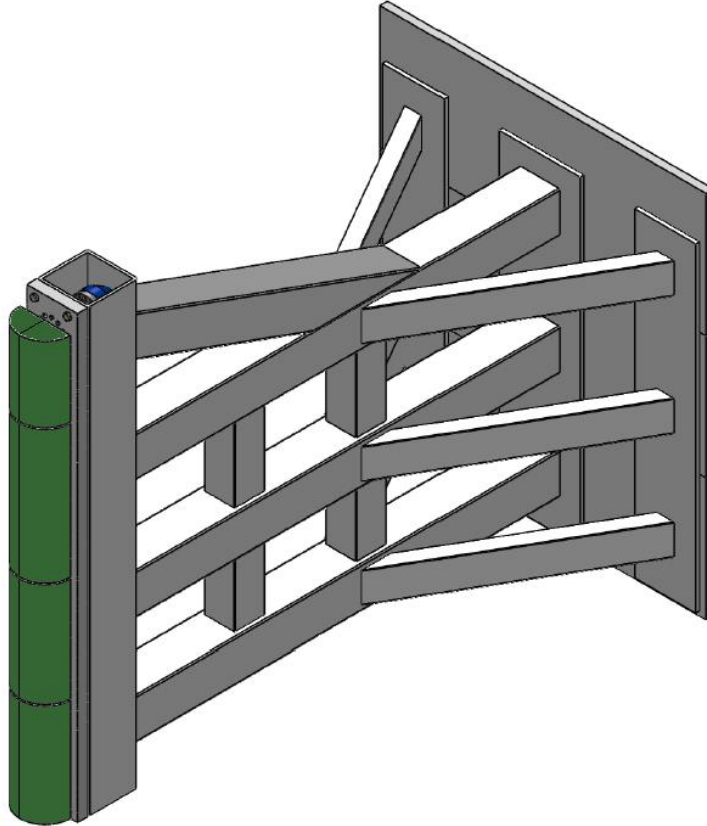


Loc. No.	Sensor Description	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	2150	0	-470
2	Left Floor Sill	3120	-870	-310
3	A-Pillar Sill	3320	-820	-420
4	A-Pillar Low	3320	-820	-730
5	A-Pillar Mid	3320	-820	-1010
6	B-Pillar Sill	2230	-830	-450
7	B-Pillar Low	2230	-830	-710
8	B-Pillar Mid	2230	-830	-920
9	Driver Seat Track	2550	-770	-670
10	Engine Top	3910	0	-930
11	Firewall	3610	400	-1010
12	Right Roof	2330	510	-1610
13	Right Floor Sill	2120	790	-450
14	Rear Floorpan	1000	0	-680

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: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21



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: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

TEST DUMMY INFORMATION AND CONTACT POINTS

Dummy Body Part	Driver SID-IIs Dummy
Face	Curtain Airbag
Top of Head	Curtain Airbag
Left Side of Head	Curtain Airbag
Back of Head	Headrest
Left Shoulder	Torso-Pelvis Airbag
Upper Torso	Torso-Pelvis Airbag, Seat bolster
Lower Torso	Torso-Pelvis Airbag, Seat bolster
Left Hip	Torso/Pelvis Airbag
Left Knee	Door Panel

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: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

POST-TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	No separation occurred
Sill Separation	No separation occurred
Windshield Damage	Broken
Side Window Damage	Broken
Other Notable Effects	Windshield Separation

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Struck Side Driver		Struck Side Rear Passenger	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes		No	
Knee Airbag	Yes		No	
Side Airbag 1 (Curtain)	Yes	Yes	Yes	Yes
Side Airbag 2 (Torso)	No		Yes	Yes
Side Airbag 3 (Torso/Pelvis)	Yes	Yes	No	
Side Airbag 4 (Front Center)	Yes	Yes	No	
Seat Belt Pretensioner	Yes	Yes	No	
Seat Belt Load Limiter	Yes	Yes	No	

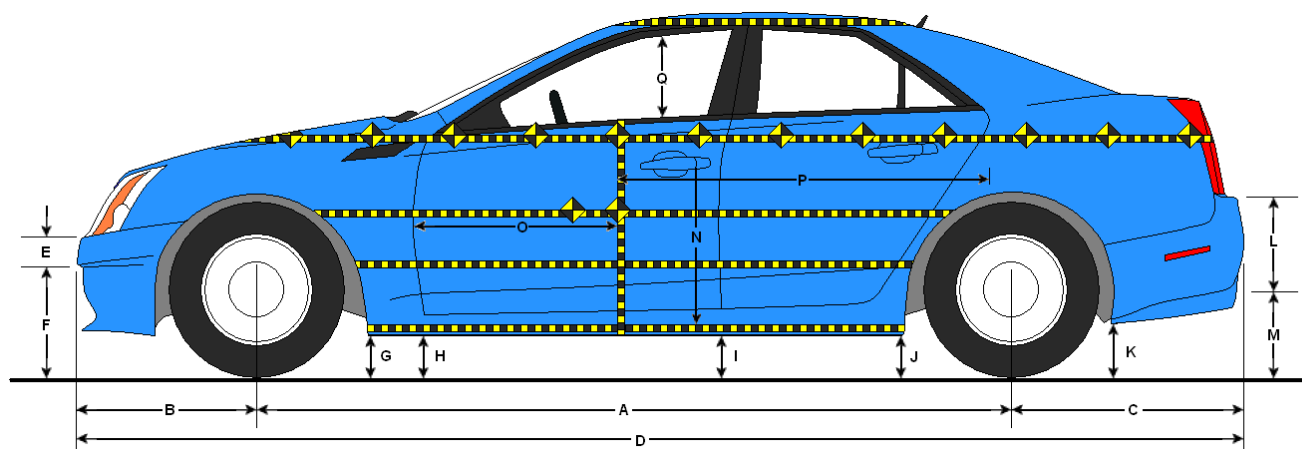
IMPACT POINT LOCATION DATA

Measured Parameter	Units	Tolerance	Value
Vertical Impact Reference Line (Aft of Front Axle)(Intended Impact Point)	mm		1361
Actual Impact Point (Aft of Front Axle)	mm		1353
Horizontal Offset (+ forward / - rearward)	mm	± 38 of Intended Impact Point	8
Angle Between Vehicle's Longitudinal Centerline and Line of Forward Motion	°	75 ± 3	74.8
Trap No. 1 Velocity (Primary)	km/h	31.4 to 33.0	32.30
Trap No. 2 Velocity (Redundant)	km/h	31.4 to 33.0	32.34

DATA SHEET NO. 9

TEST VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21



LEFT SIDE VIEW

All measurements in mm with tolerance of ± 3 mm

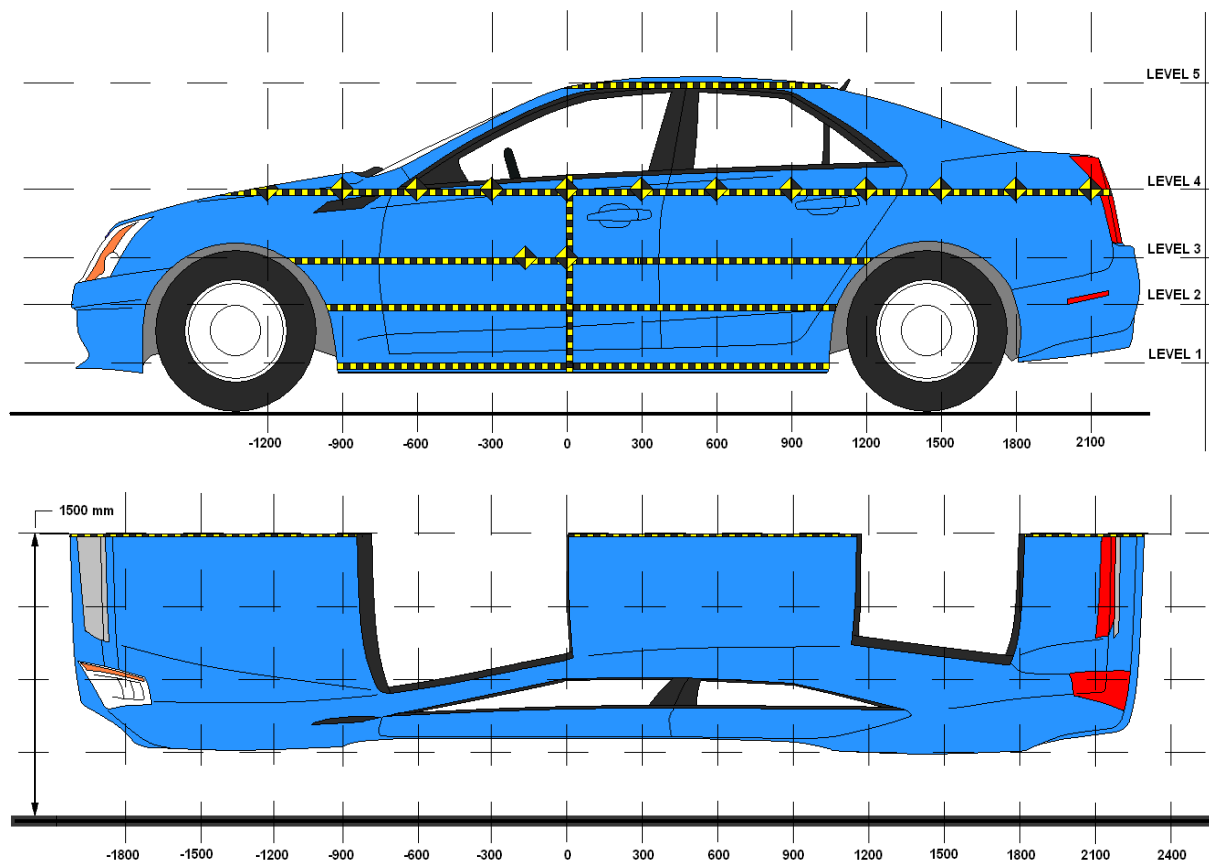
VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

Code	Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2994	2948	-46
B	Front Axle to FSOV	835	852	17
C	Rear Axle to RSOV	1165	1194	29
D	Total Length at Centerline	4989	4995	6
E	Front Bumper Thickness	128	129	1
F	Front Bumper Bottom to Ground	547	544	-3
G	Sill Height at Front Wheel Well	399	351	-48
H	Sill Height at Front Door Leading Edge	388	333	-55
I	Sill Height at B-Pillar	369	349	-20
J1	Sill Height at Rear Wheel Well	454	471	17
J2	Pinch Weld Height at Rear Wheel Well	313	317	4
K	Sill Height Aft of Rear Wheel Well	533	552	19
L	Rear Bumper Thickness	237	237	0
M	Rear Bumper Bottom to Ground	548	597	49
N	Sill Height to Bottom of Front Window Sill	709	713	4
O	Front Door Leading Edge to Impact CL	662	591	-71
P	Rear Door Trailing Edge to Impact CL	1570	1459	-111
Q	Front Window Opening	386	416	30
R	Right Side Length	3485	3497	12
S	Left Side Length	3484	3413	-71
T	Vehicle Width at B-Pillar	1873	1760	-113

DATA SHEET NO. 10

TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21



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	387	254	150
2	Occupant H-Point	686	313	0
3	Mid-Door	788	335	150
4	Window Sill	1055	299	150
5	Window Top	1539	109	150

DATA SHEET NO. 10 ... (CONTINUED)

TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213
 Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

EXTERIOR CRUSH MEASUREMENTS AT EACH LEVEL

	Pre-Test (mm)					Post-Test (mm)					Difference (mm)				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900	584	555	559	665		611	576	575	662		27	21	16	-3	
-750	594	564	560	654		631	588	577	655		37	24	17	1	
-600	597	571	563	640		646	614	599	652		49	43	36	12	
-450	598	574	564	630		669	693	671	689		71	119	107	59	
-300	599	574	563	618		700	754	743	710		101	180	180	92	
-150	598	572	561	614		761	817	806	786		163	245	245	172	
0	597	571	559	607		851	884	892	885		254	313	333	278	
150	596	570	557	604	871	850	879	892	903	980	254	309	335	299	109
300	595	569	557	601	876	770	759	770	801	962	175	190	213	200	86
450	594	569	558	599	883	714	688	675	705	950	120	119	117	106	67
600	593	571	560	600	886	674	661	648	688	941	81	90	88	88	55
750	591	571	562	603	890	639	631	620	671	929	48	60	58	68	39
900	589	568	561	604	892	606	599	593	654	916	17	31	32	50	24
1050	585	560	556	605	895	571	564	561	634	912	-14	4	5	29	17
1200				605	900				616	908				11	8
1350				604	903				595	908				-9	5
1500				606	904				576	909				-30	5
1650				610					610					0	
1800															
1950															
2100															
2250															
2400															
2550															
2700															
2850															

DATA SHEET NO. 10 ... (CONTINUED)

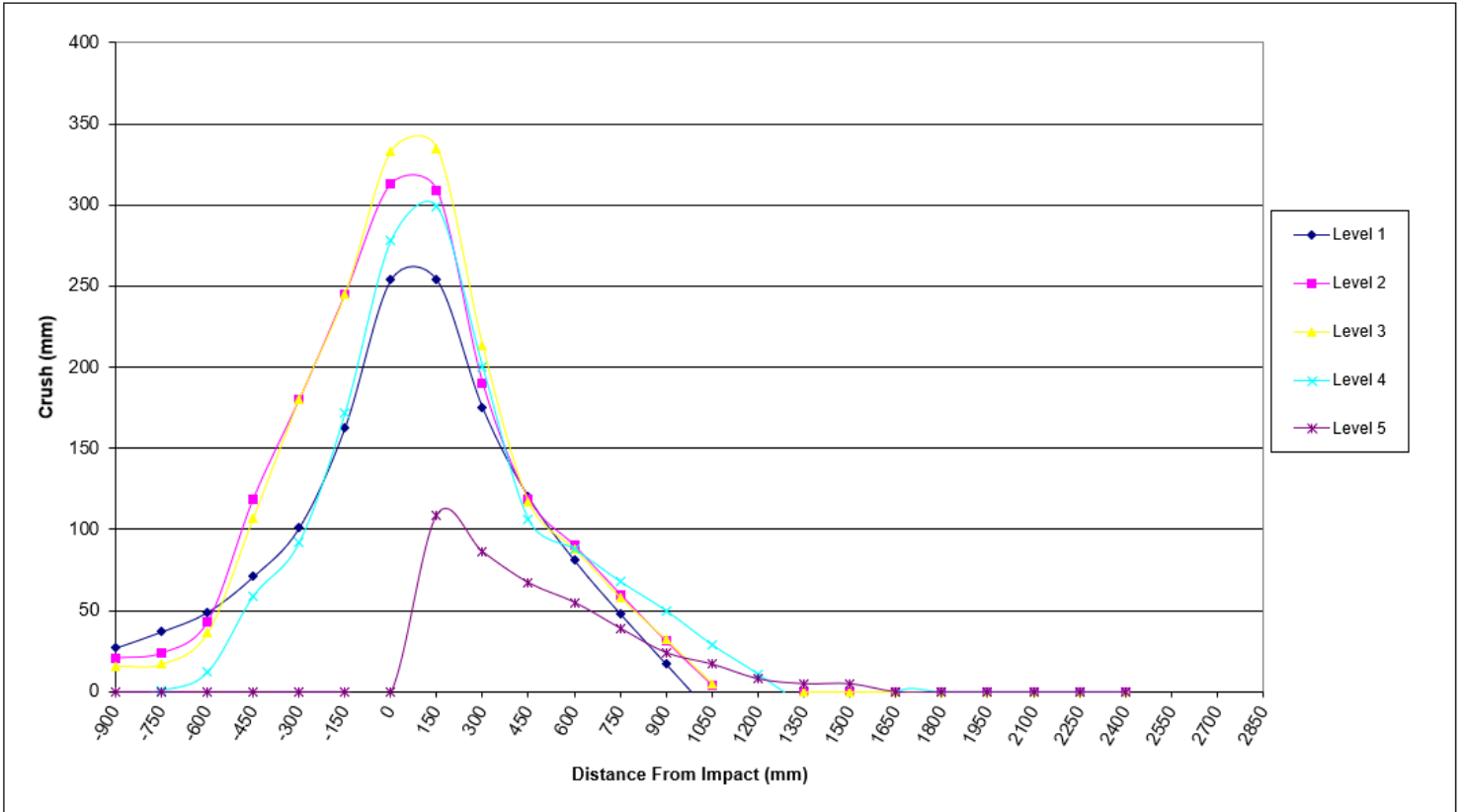
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2021 Genesis G80 4-Door Sedan

NHTSA No. O20214213

Test Program: NCAP Side Pole Impact Test

Test Date: 06/25/21

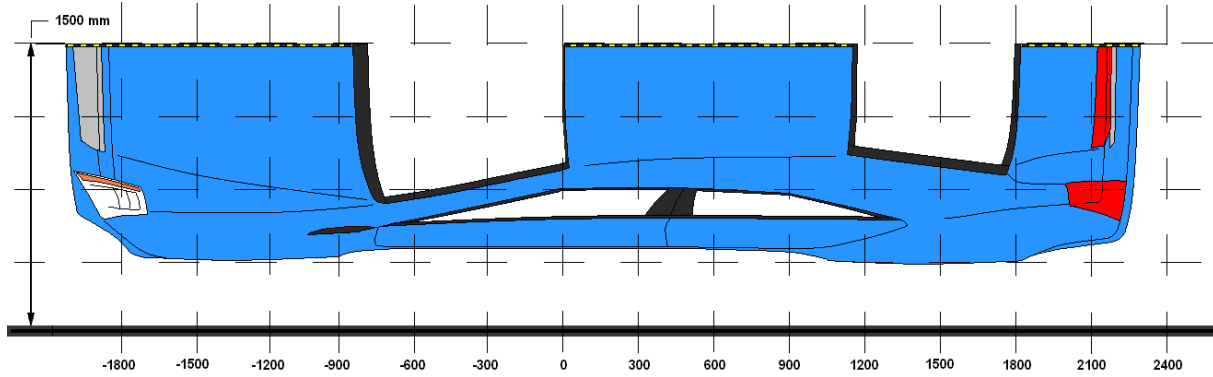


DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213

Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21



DPD	Distance From Impact Point (mm)	Level	Pre-Test (mm)	Post-Test (mm)	Crush (mm)
1	1650	4	610	610	0
2	1200	4	605	616	11
3	600	2	571	661	90
4	0	3	559	892	333
5	-450	2	574	693	119
6	-900	1	584	611	27

DATA SHEET NO. 12

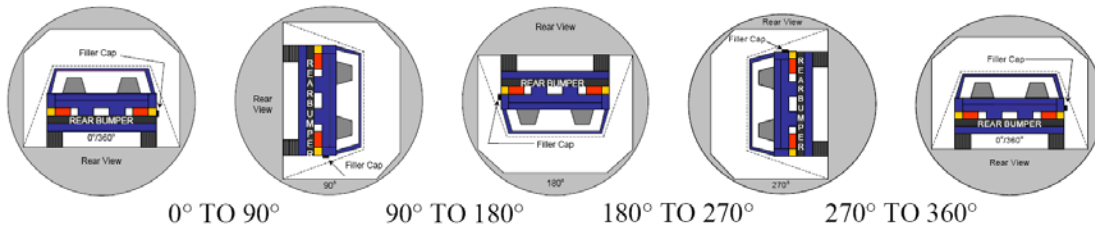
FMVSS NO. 301 STATIC ROLLOVER RESULTS

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213

Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21

Temperature at Time of Impact: 31.7° C Test Time: 12:00 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°	85	300	385
90° To 180°	81	300	381
180° To 270°	84	300	384
270° To 360°	84	300	384

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

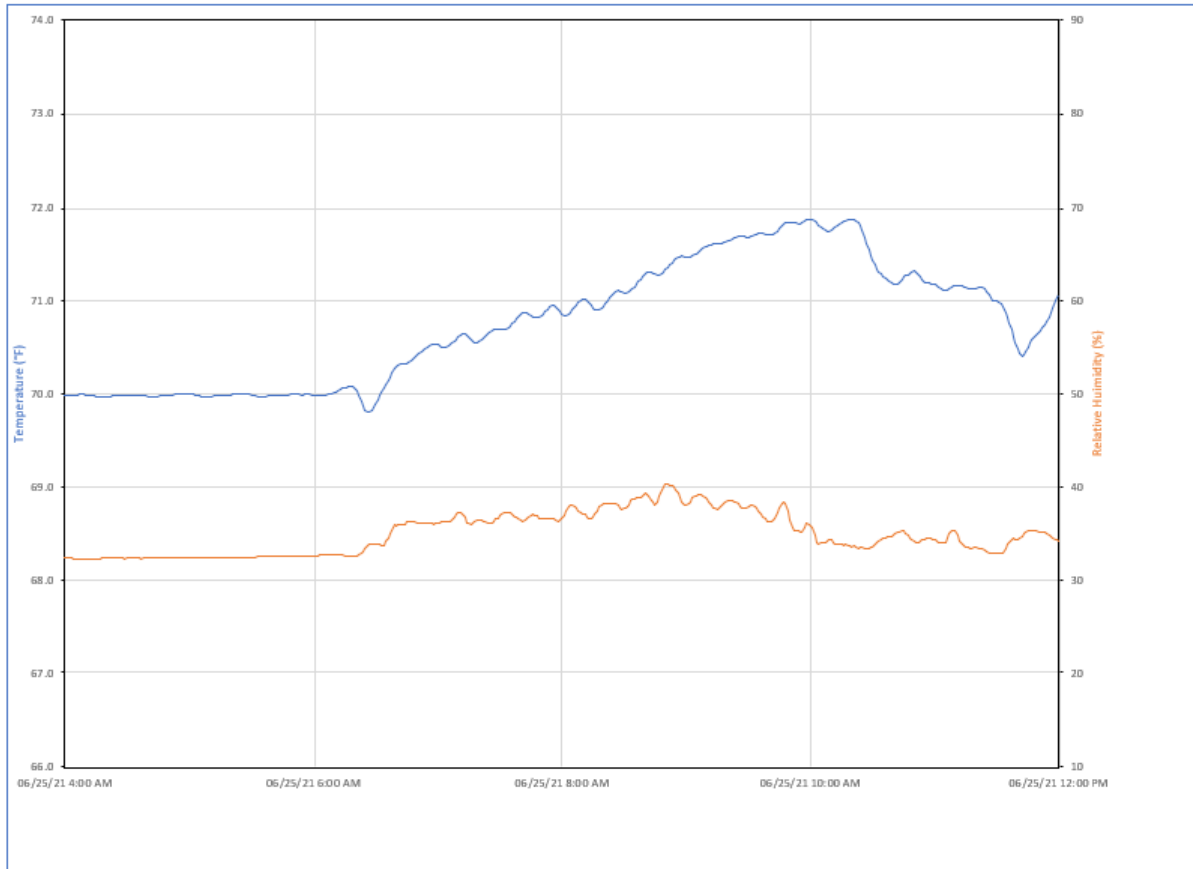
Test Phase	Spillage Location
0° To 90°	
90° To 180°	
180° To 270°	
270° To 360°	

DATA SHEET NO. 13

DUMMY/VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION

Test Vehicle: 2021 Genesis G80 4-Door Sedan NHTSA No. O20214213

Test Program: NCAP Side Pole Impact Test Test Date: 06/25/21



**APPENDIX A
PHOTOGRAPHS**

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FIGURE 1. As-Delivered Right Front $\frac{3}{4}$ View of Test Vehicle



FIGURE 2. As-Delivered Left Rear $\frac{3}{4}$ 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 $\frac{3}{4}$ View of Test Vehicle



FIGURE 10. Post-Test Left Rear $\frac{3}{4}$ 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 Close-Up View of Dummy Head and Shoulders in Relation to Head Restraint



FIGURE 28. Pre-Test Overhead 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 Dummy's 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 Airbag 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 Airbag 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 Airbag View



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 Airbag 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 67. FMVSS No. 301 Static Rollover 180 Degrees

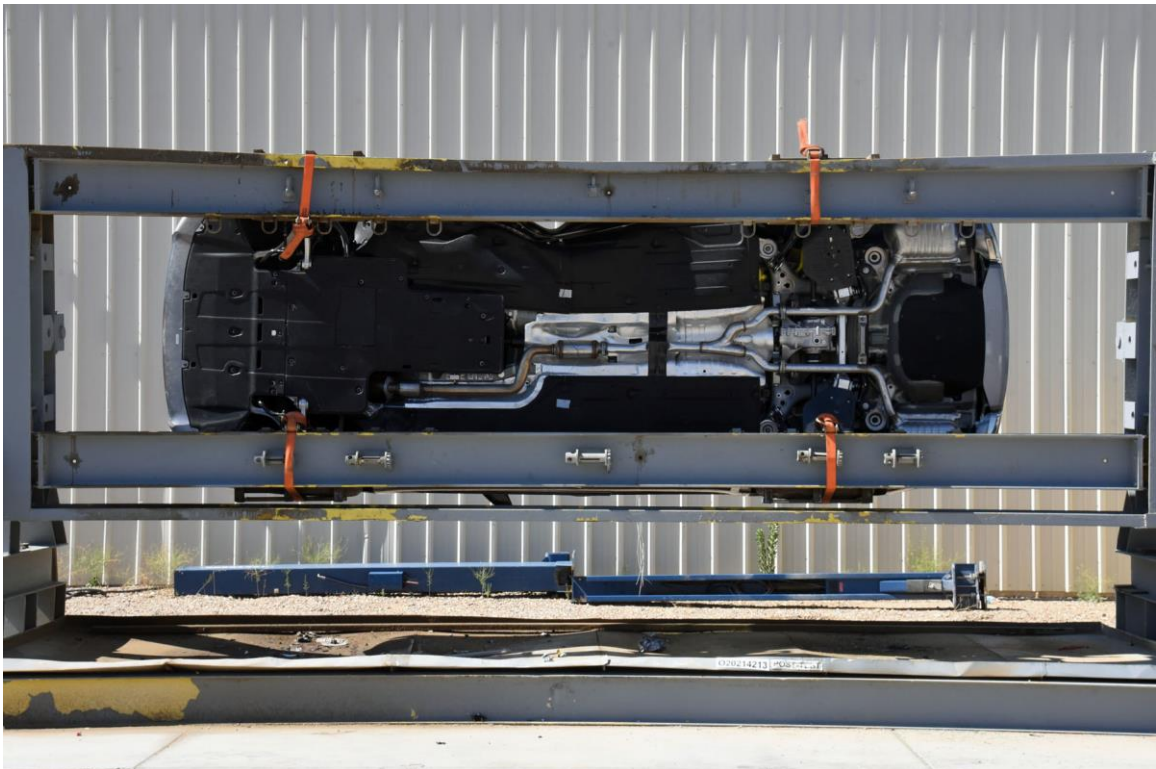


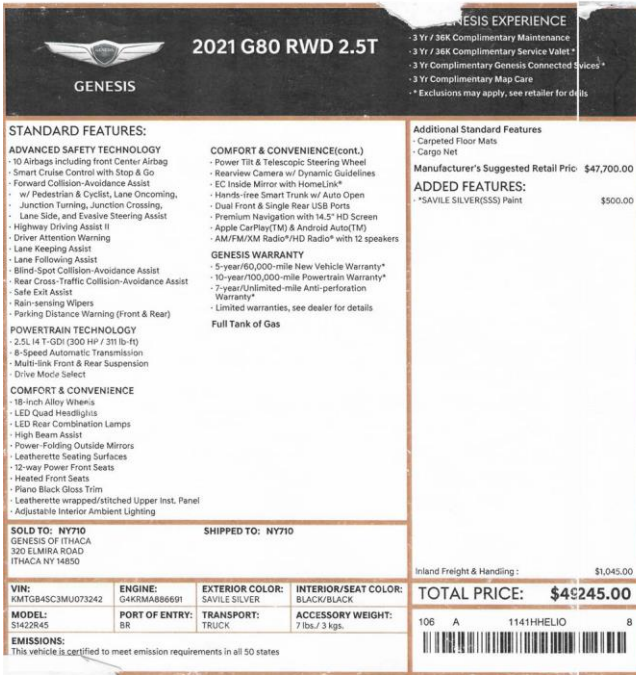
FIGURE 68. FMVSS No. 301 Static Rollover 270 Degrees



FIGURE 69. FMVSS No. 301 Static Rollover 360 Degrees



FIGURE 70. Impact Event



2021 G80 RWD 2.5T

GENESIS

STANDARD FEATURES:

ADVANCED SAFETY TECHNOLOGY

- 10 Airbags including front Center Airbag
- Smart Cruise Control with Stop & Go
- Forward Collision-Avoidance Assist
- w/ Pedestrian & Cyclist, Lane Oncoming, Junction Turning, Junction Crossing, Lane Side, and Evasive Steering Assist
- Highway Driving Assist II
- Driver Attention Warning
- Lane Keeping Assist
- Lane Following Assist
- Blind-Spot Collision-Avoidance Assist
- Rear Cross-Traffic Collision-Avoidance Assist
- Safe Exit Assist
- Rain-sensing Wipers
- Parking Distance Warning (Front & Rear)

POWERTRAIN TECHNOLOGY

- 2.5L I4 T-GDI (300 HP / 311 lb-ft)
- 8-Speed Automatic Transmission
- Multi-link Front & Rear Suspension
- Drive Mode Select

COMFORT & CONVENIENCE

- 18-inch Alloy Wheels
- LED Quad Headlights
- LED Rear Combination Lamps
- High Beam Assist
- Power-Folding Outside Mirrors
- Leatherette Seating Surfaces
- 12-way Power Front Seats
- Heated Front Seats
- Piano Black Gloss Trim
- Leatherette wrapped/stitched Upper Inst. Panel
- Adjustable Interior Ambient Lighting

COMFORT & CONVENIENCE (cont.)

- Power Tilt & Telescopic Steering Wheel
- Rearview Camera w/ Dynamic Guidelines
- EC Inside Mirror with HomeLink*
- Hands-free Smart Trunk w/ Auto Open
- Dual Front & Single Rear USB Ports
- Premium Navigation with 14.5" HD Screen
- Apple CarPlay(TM) & Android Auto(TM)
- AM/FM/XM Radio*HD Radio* with 12 speakers

GENESIS WARRANTY

- 5-year/60,000-mile New Vehicle Warranty*
- 10-year/100,000-mile Powertrain Warranty*
- 7-year/Unlimited-mile Anti-perforation Warranty*
- Limited warranties, see dealer for details.

Full Tank of Gas

Additional Standard Features

- Carpeted Floor Mats
- Cargo Net

Manufacturer's Suggested Retail Price: \$47,700.00

ADDED FEATURES:

- *SAVILE SILVER(SSS) Paint \$500.00

Additional Standard Features

- 3 Yr / 36K Complimentary Maintenance
- 3 Yr / 36K Complimentary Service Valet*
- 3 Yr Complimentary Genesis Connected Services*
- 3 Yr Complimentary Map Care
- Exclusions may apply, see retailer for details

SOLD TO: NY710
GENESIS OF ITHACA
320 ELMIRA ROAD
ITHACA NY 14850

SHIPPED TO: NY710

VIN: KMTGB45C3MU073242 **ENGINE:** G4KRMAB86691 **EXTERIOR COLOR:** SAVILE SILVER **INTERIOR/SEAT COLOR:** BLACK/BLACK


MODEL: SM229AS **PORT OF ENTRY:** BR **TRANSPORT:** TRUCK **ACCESSORY WEIGHT:** 7 lbs./ 3 kgs.

EMISSIONS:
This vehicle is certified to meet emission requirements in all 50 states

Inland Freight & Handling: \$1,045.00

TOTAL PRICE: \$49,245.00

106 A 11414-HHELIO B



Fuel Economy and Environment Gasoline Vehicle

Fuel Economy

26 MPG
combined city/hwy

23 city

32 highway

3.8 gallons per 100 miles

Large Cars range from 14 to 110 MPG. The best vehicle rates 141 MPG.

You spend \$2,000 more in fuel costs over 5 years compared to the average new vehicle.

Annual fuel Cost \$1,900

Fuel Economy & Greenhouse Gas Rating (tailpipe only)

5 (Best)

Smog Rating (tailpipe only)

1 (Best) **10** (Worst)

This vehicle emits 349 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions; learn more at fuelconomy.gov

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 27 MPG and costs \$7,500 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at \$2.20 per gallon. MPG is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

fuelconomy.gov
Calculate personalized estimates and compare vehicles

GOVERNMENT 5-STAR SAFETY RATINGS

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

Source: National Highway Traffic Safety Administration (NHTSA).
www.safercar.gov or 1-888-327-4236

Manufacturer's suggested retail price includes manufacturer's recommended pre-delivery service. Gasoline license and title fees state and local taxes and dealer installed options and accessories are not included in the manufacturer's suggested retail price. This label has been affixed to this vehicle by Hyundai Motor America, pursuant to the requirements of 15 U.S.C. 1231 et seq. which prohibits its removal or alteration prior to delivery to the ultimate purchaser.

PARTS CONTENT INFORMATION

FOR VEHICLES IN THIS CARLINE: U.S./CANADIAN PARTS CONTENT: 2 %

MAJOR SOURCES OF FOREIGN PARTS CONTENT: KOREA: 92 %


FOR THIS VEHICLE: FINAL ASSEMBLY POINT: ULSAN, KOREA

COUNTRY OF ORIGIN:

FIGURE 71. Monroney Label

MATE

Press [Climate] on the vehicle settings screen.




Press the desired item.

- [Recirculate Air]: Blocks the flow of outside air into the vehicle cabin.
- [Automatic Ventilation]: Switches the ventilation system to fresh air mode automatically after an extended use of recirculate air.
- [Defog/Defrost Options]: Directs air to the windshield to reduce moisture on the windshield glass.
- [Climate Features]: Activates the convenience functions for climate control.

SEAT

This function can adjust the seat position and angle to feel comfortable for the user. Press [Seat] on the home screen.



- [Passenger Seat Control]: Adjusts the seat as fore/aft position, seat back recline, cushion height, cushion tilt.

SEAT

- Press [Seat] on the vehicle settings screen.
- Press the desired item.
 - [Seat Switch Alert]: Details of the seat switch control and position change are shown with a seat image.
 - [Smart Posture Care]: The smart posture care suggests driving postures based on body type and displays the results of clinical testing on the back.
 - [Heated/Ventilated Features]: Sets [Auto. Controls That Use Climate control Settings] or [Seat Heater Balance].

- [Seating Easy Access]: Sets [Steering Wheel Easy Access], [Driver Seat Easy Access], [Passenger Seat Easy Access].
- [Ergo-Motion Seat]: Sets [Comfortable Stretch], [Alertness Assist], [Posture Assist], [Smart Support].

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

Photograph Not Applicable

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

APPENDIX B
DUMMY RESPONSE DATA

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)

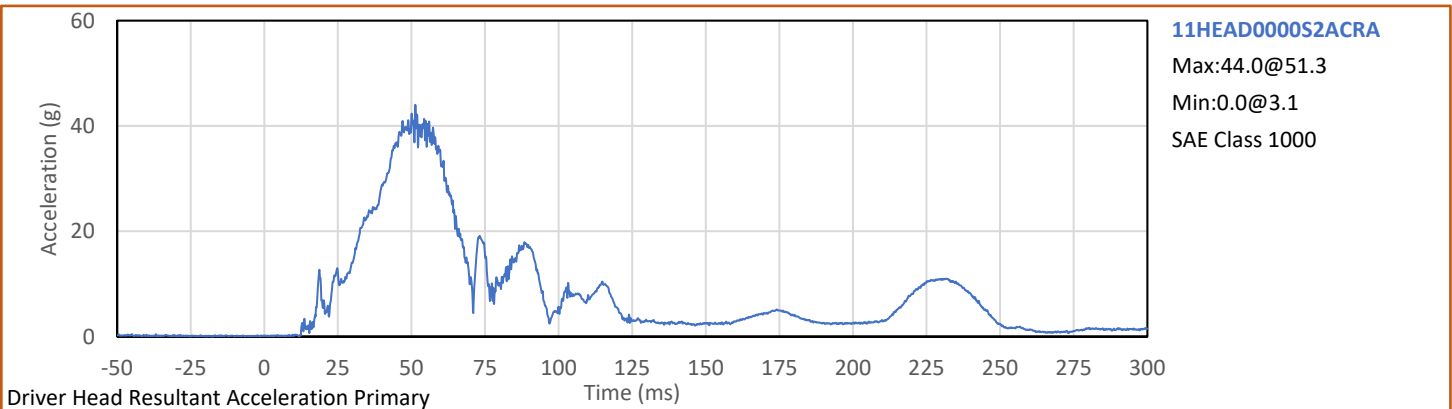
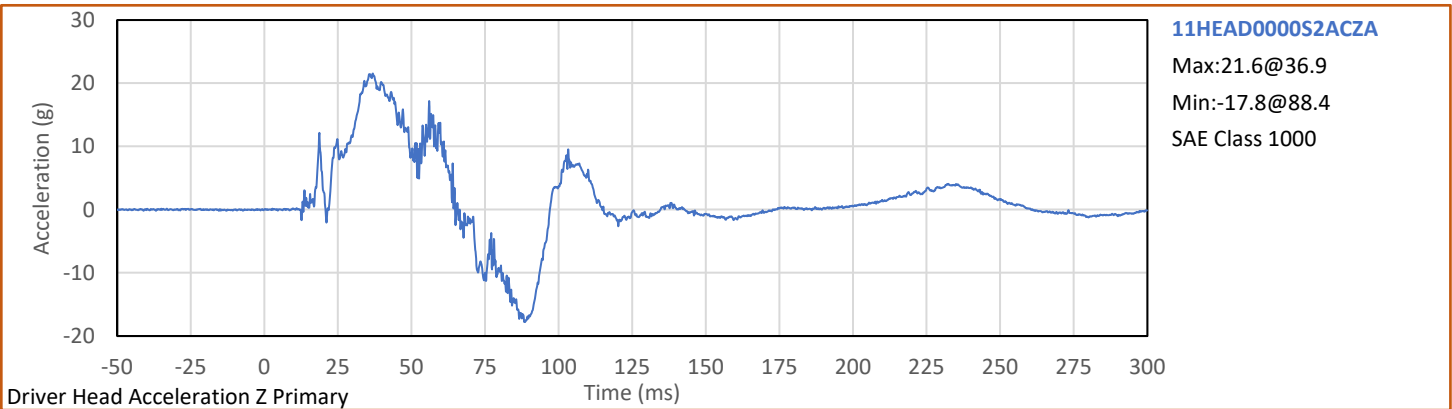
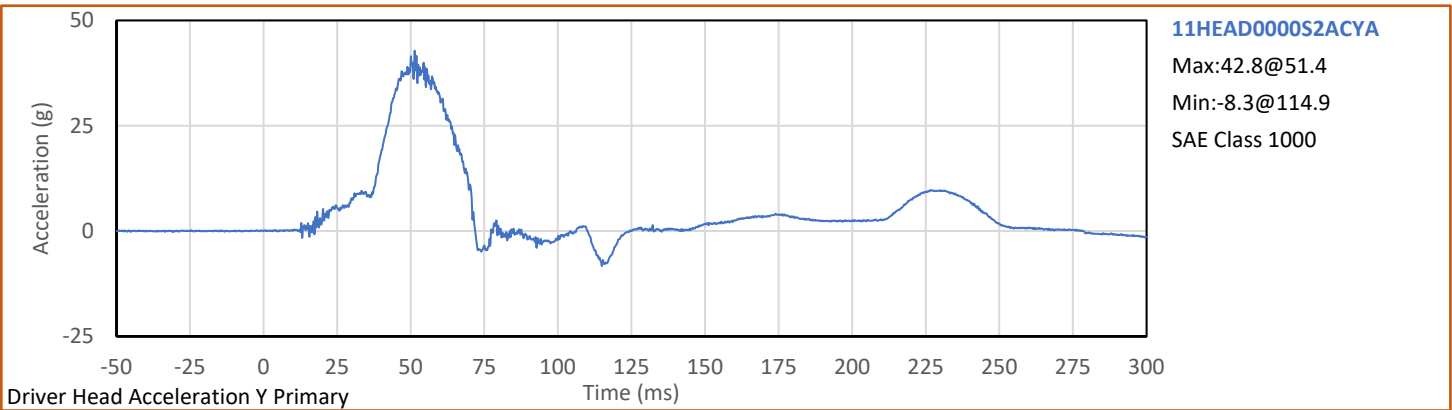
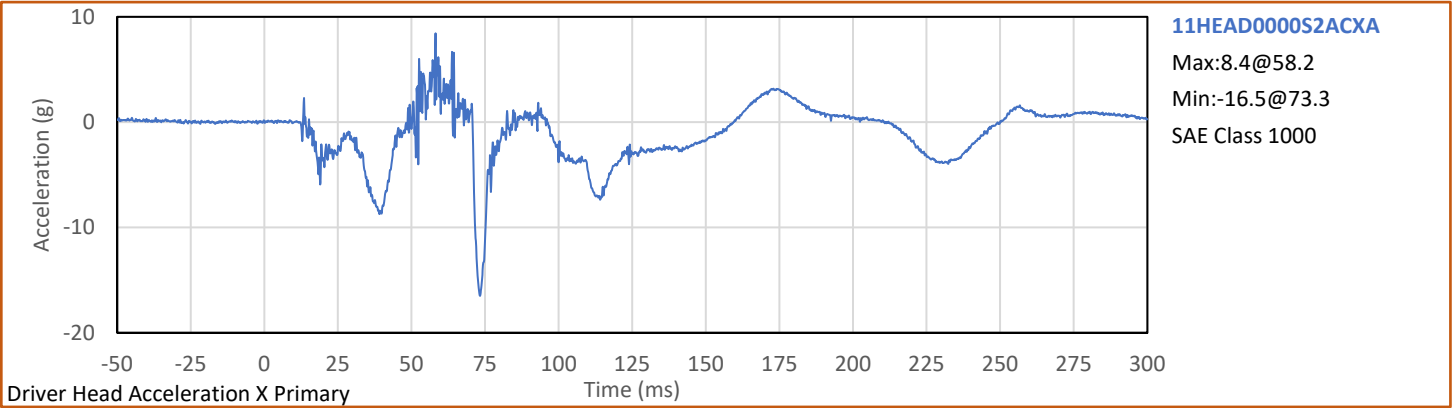
Driver Head Acceleration Redundant (Z)

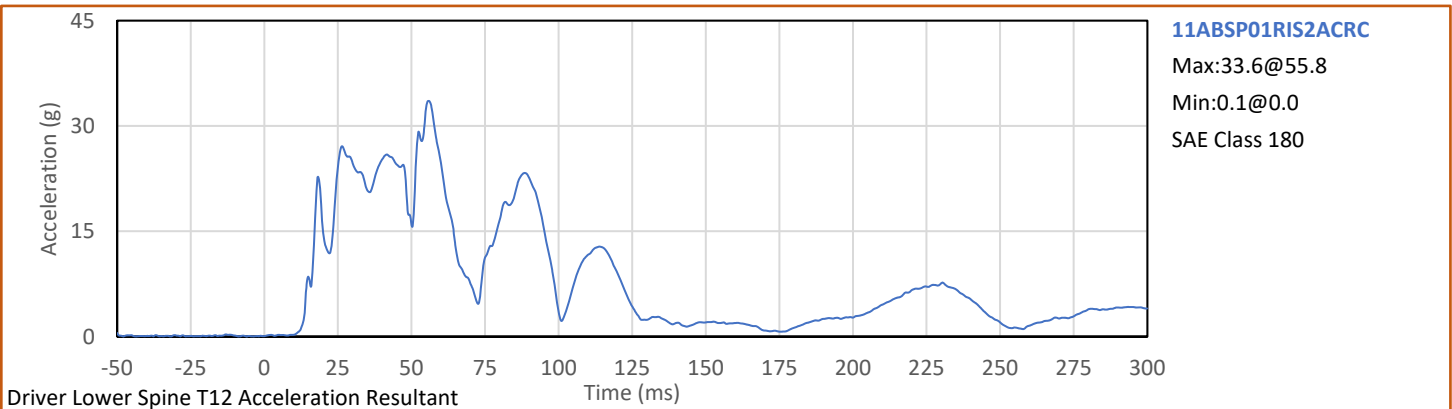
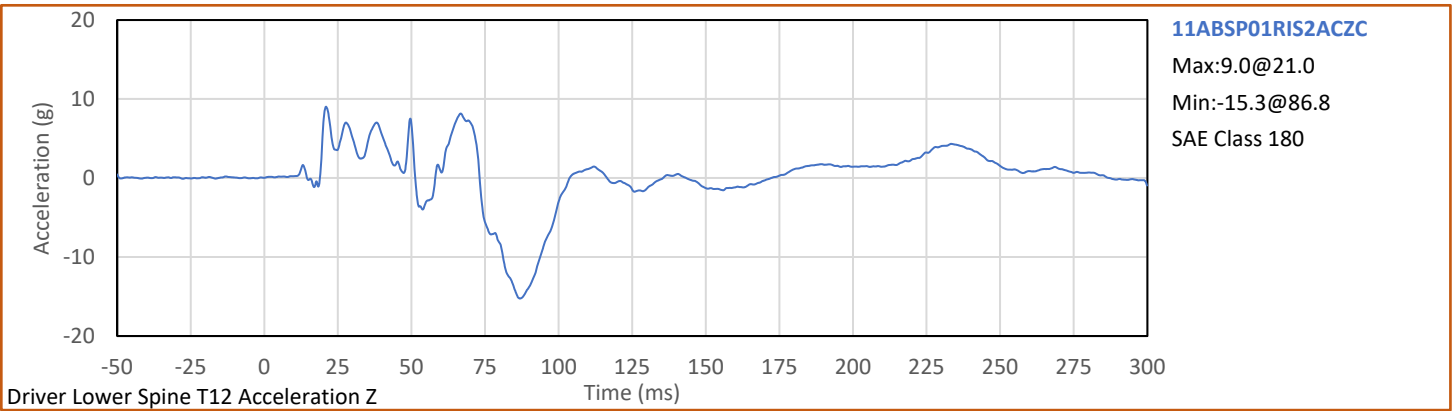
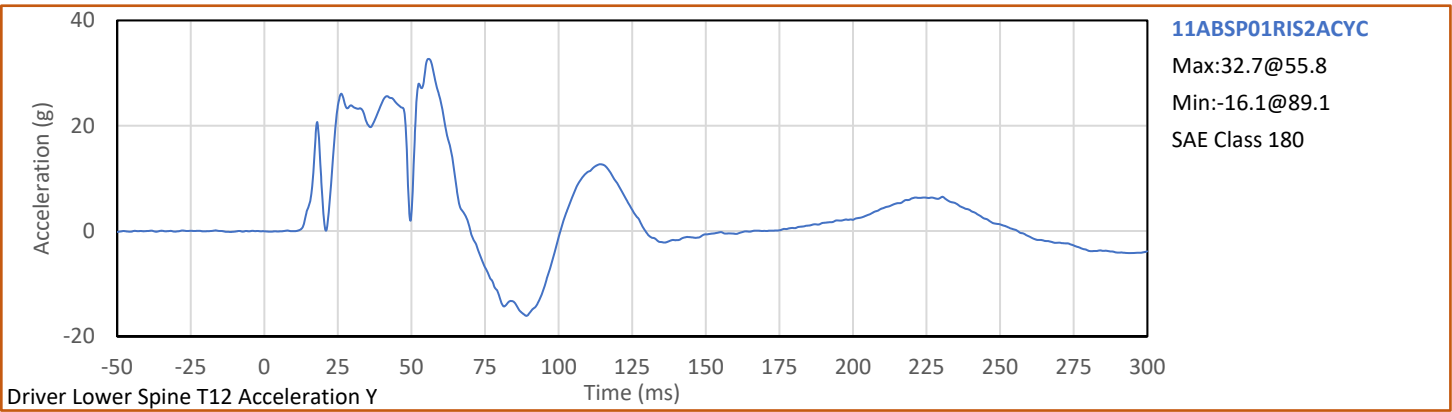
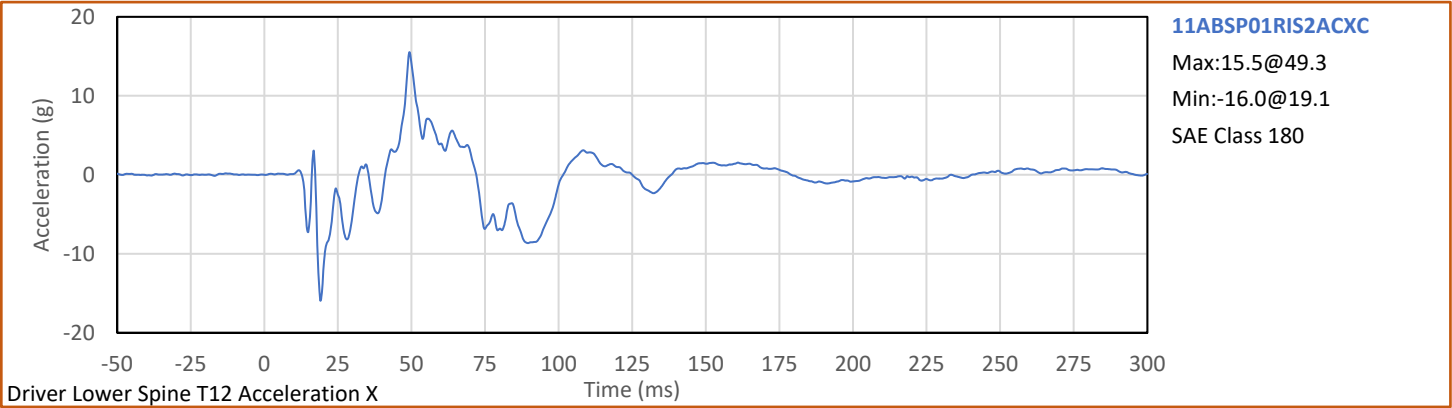
Vehicle Instrumentation Data

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)





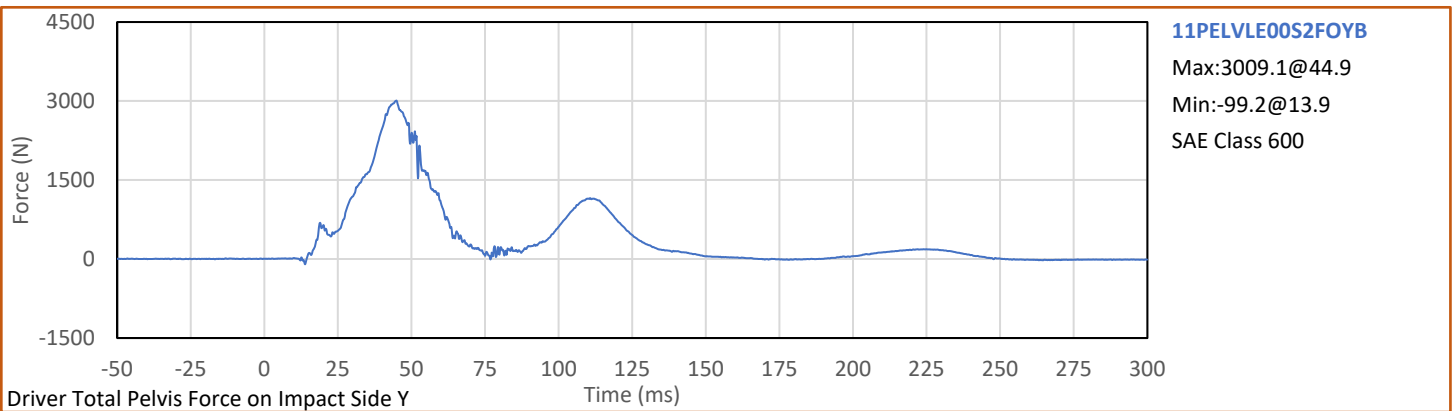
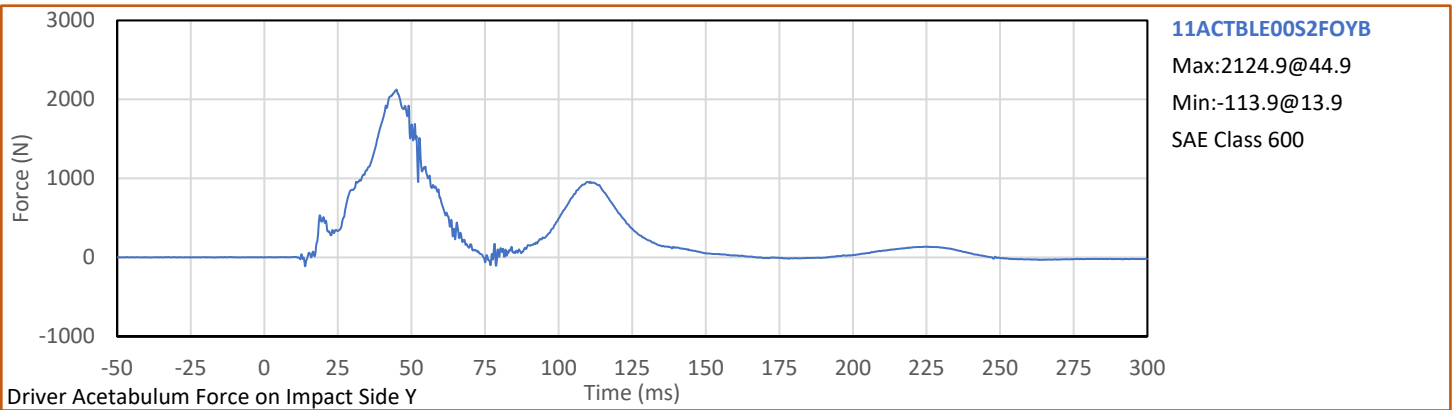
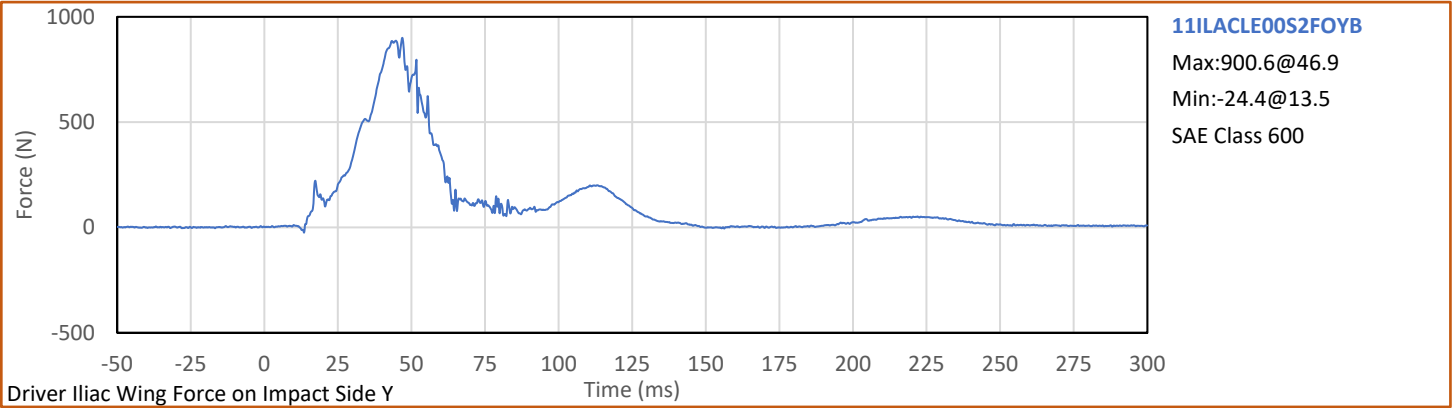
Test Vehicle: 2021 Genesis G80 4-Door Sedan

NHTSA No.: O20214213



Test Program: NCAP Side Pole Impact Test

Test Date: 6/25/2021



APPENDIX C
ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA

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

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
A - Sitting Height	mm	772	788	781	Pass
B - Shoulder Pivot Height	mm	437	453	450	Pass
C - Hpoint Height	mm	79	89	86	Pass
D - H Point From Seatback	mm	141	151	150	Pass
E - Shoulder Pivot From Backline	mm	97	107	102	Pass
F - Thigh Clearance	mm	119	135	127	Pass
G - Head Breadth	mm	140	148	144	Pass
H - Head Back From Backline	mm	40	46	42	Pass
I - Head Depth	mm	178	188	187	Pass
J - Head Circumference	mm	541	551	549	Pass
K - Buttock To Knee Length	mm	514	540	532	Pass
L - Popliteal Height	mm	343	369	357	Pass
K - Knee Pivot To Floor Height	mm	392	409	399	Pass
N - Buttock Popliteal Length	mm	416	442	431	Pass
O - Chest Depth W/O Jacket	mm	195	211	201	Pass
P - Foot Length	mm	216	232	220	Pass
Q - Hip Breadth (W/Pelvic Plugs)	mm	313	323	318	Pass
R - Arm Length	mm	249	259	255	Pass
S - Knee Joint To Seatback	mm	477	493	489	Pass
V - Shoulder Width	mm	341	357	350	Pass
W - Foot Width	mm	78	94	81	Pass
Y - Chest Circumference W/Jacket	mm	851	881	866	Pass
Z - Waist Circumference	mm	761	791	783	Pass
Overall Test Results					Pass

Technician:



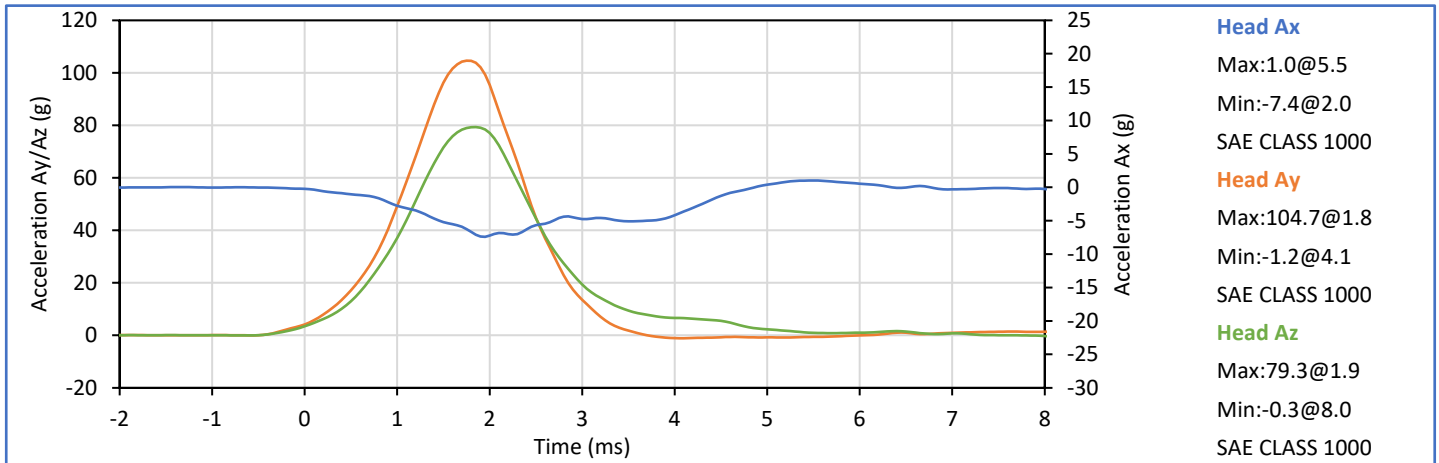
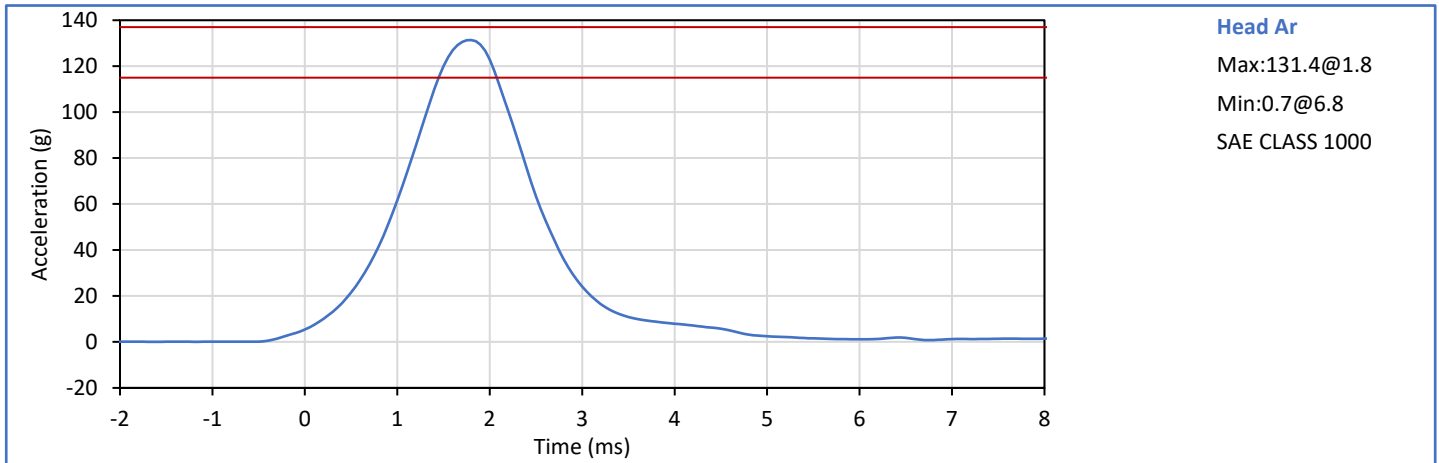
J. Hernandez

Approved By:




P. Puzzuto

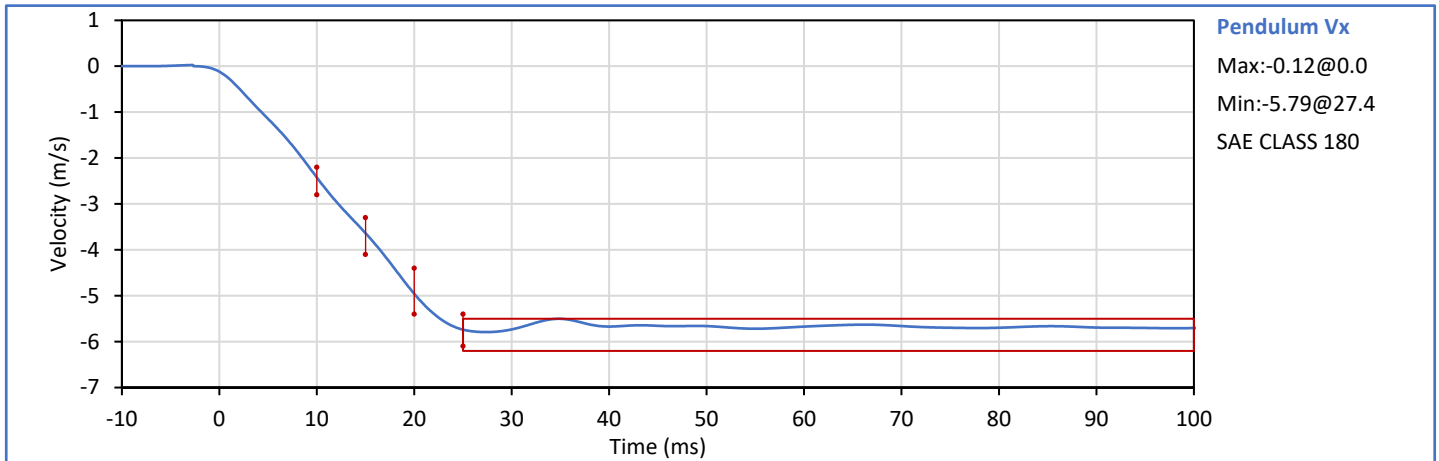
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.1	Pass
Laboratory Relative Humidity	%	10	70	26	Pass
Peak Resultant Acceleration	g	115.0	137.0	131.4	Pass
Peak Head Ax	g	-15.0	15.0	-7.4	Pass
Oscillations After Main Pulse	%	0.0	15.0	1.4	Pass
Is Acceleration Unimodal?	Yes/No	Yes		Yes	Pass
Overall Test Results					Pass




Technician: 
J. Hernandez

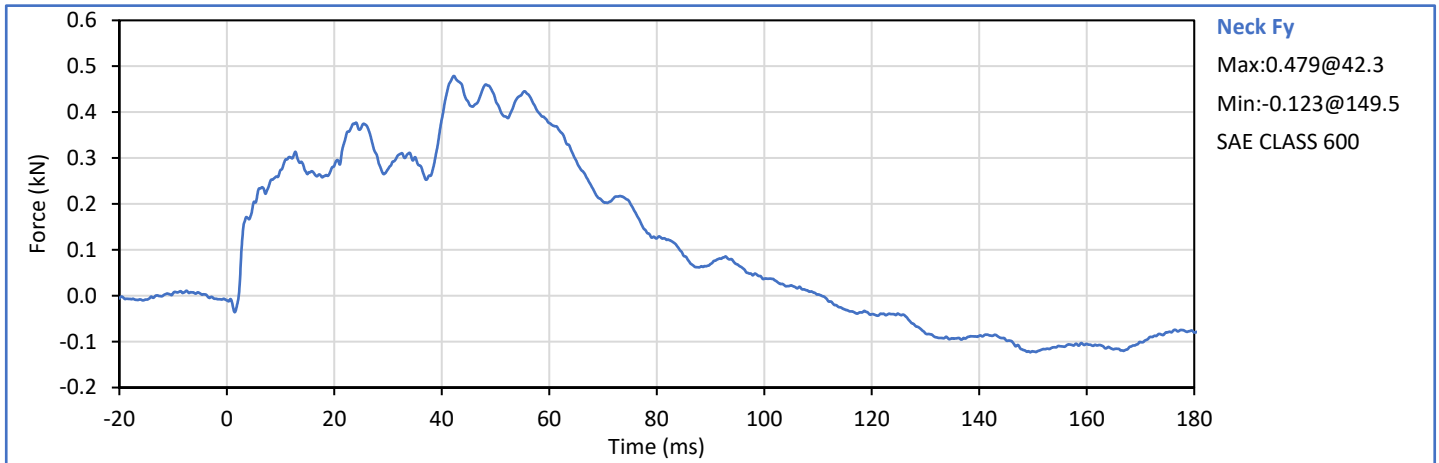
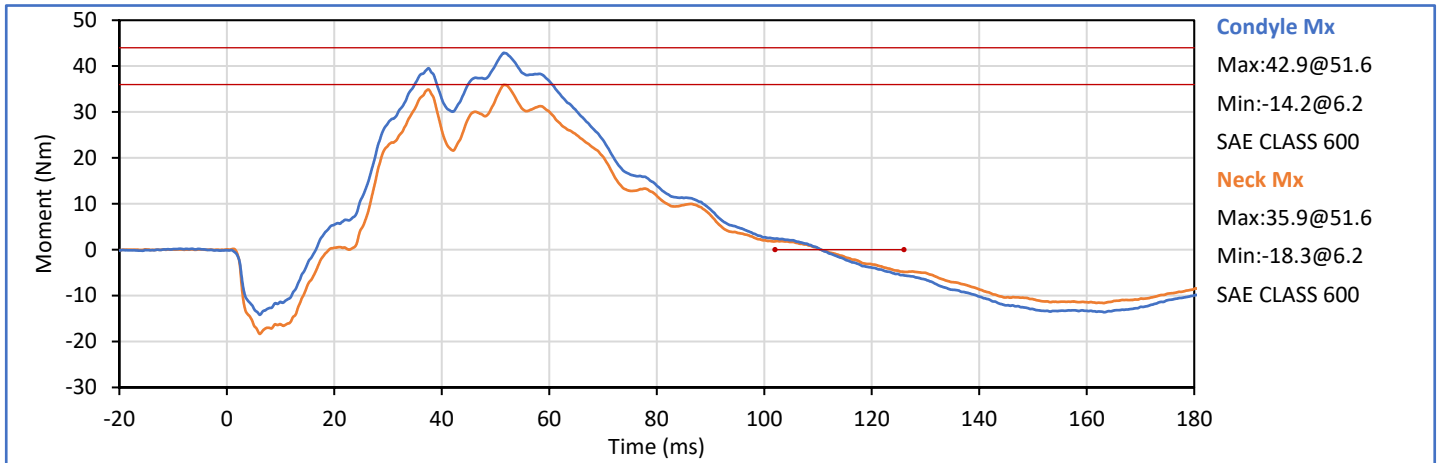
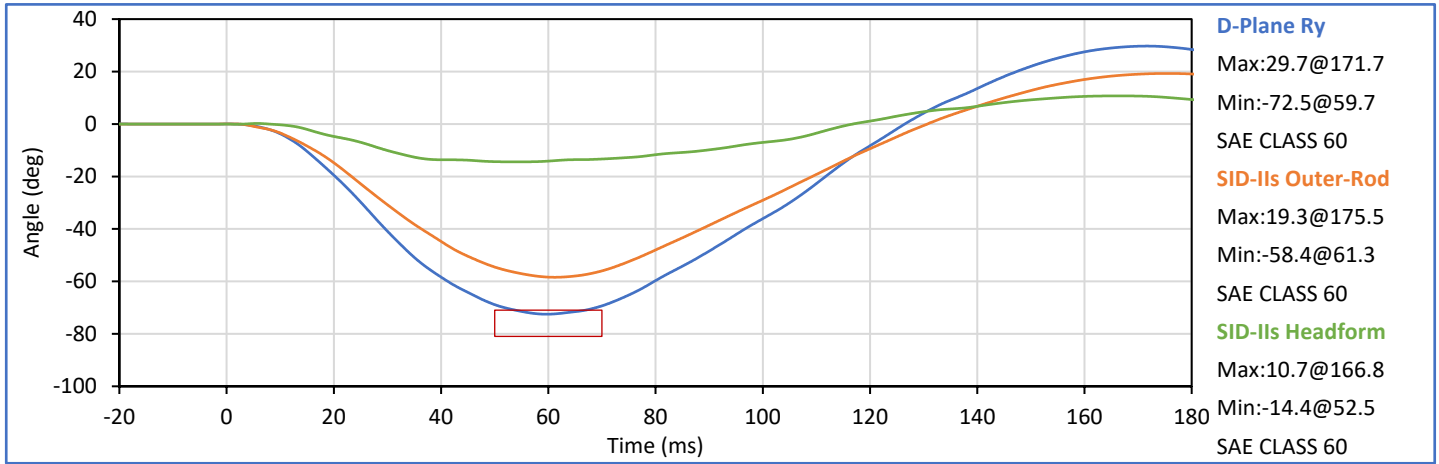
Approved By: 
P. Puzzuto

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	30	Pass
Pendulum Velocity	m/s	5.51	5.63	5.59	Pass
Pendulum Decel at 10 ms	m/s	-2.80	-2.20	-2.42	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	-4.96	Pass
Pendulum Decel at 25 ms	m/s	-6.10	-5.40	-5.74	Pass
Pendulum Decel from 25-100 ms	m/s	-6.20	-5.50	-5.79/-5.5	Pass
Peak "D" Plane Rotation	deg	-81.0	-71.0	-72.5	Pass
Time of Peak "D" Plane Rotation	ms	50.0	70.0	59.7	Pass
Peak Occ. Condyle Moment	Nm	36.0	44.0	42.9	Pass
Time of Moment Decay to 0 Nm	ms	102.0	126.0	110.6	Pass
Overall Test Results					Pass

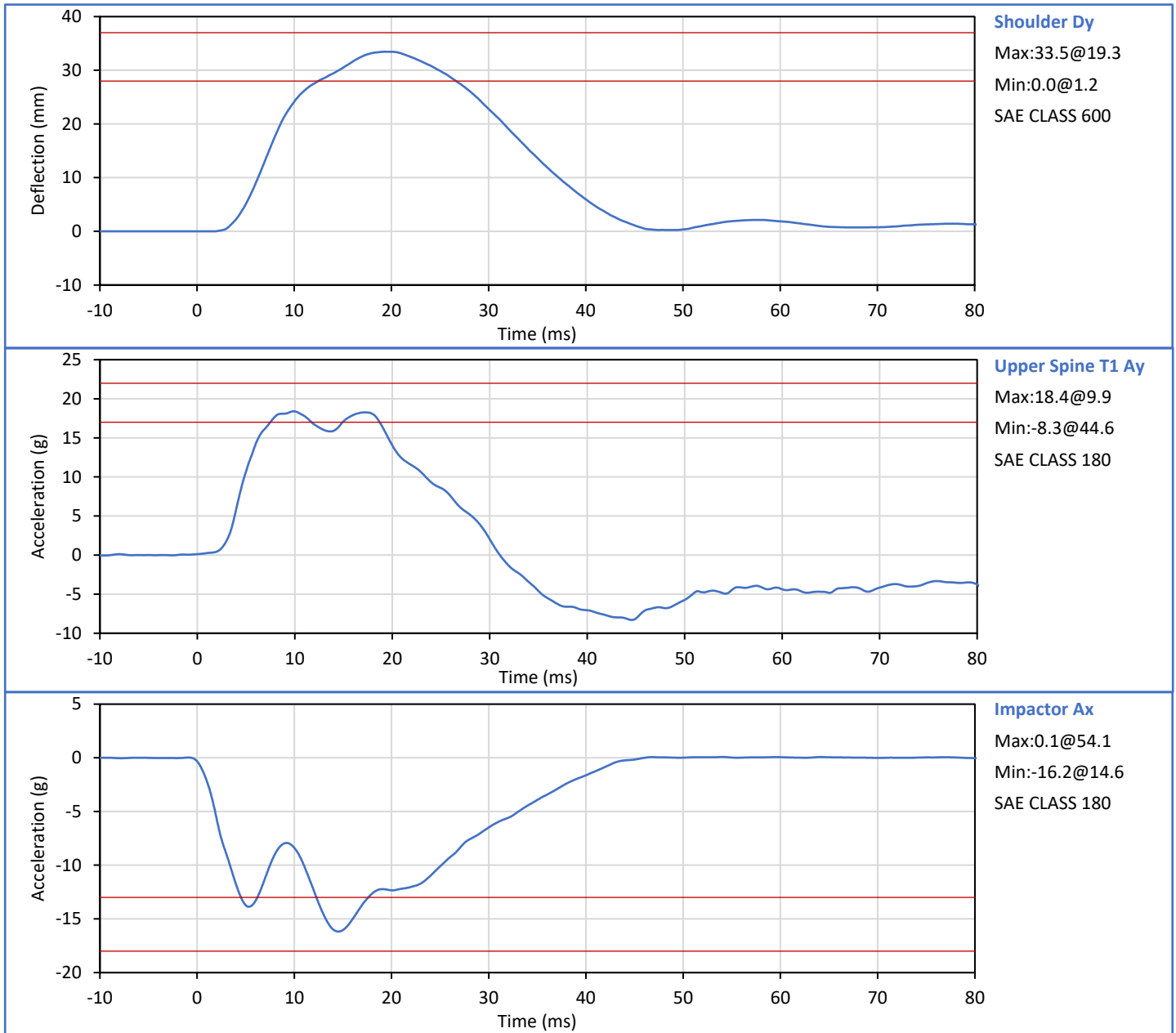


Technician: 
J. Hernandez


Approved By: 
P. Puzzuto



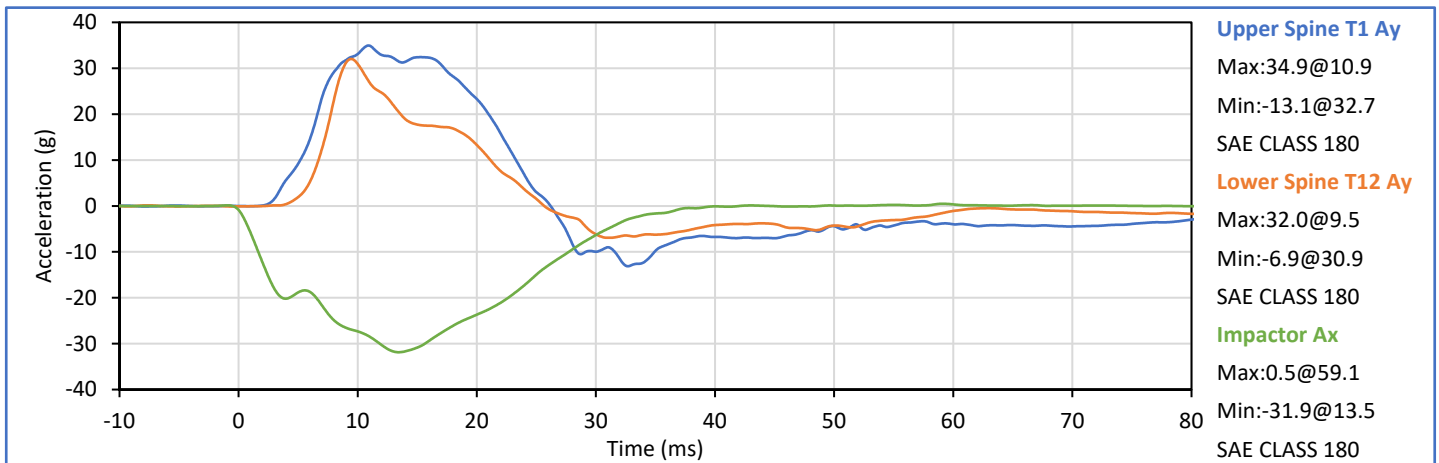
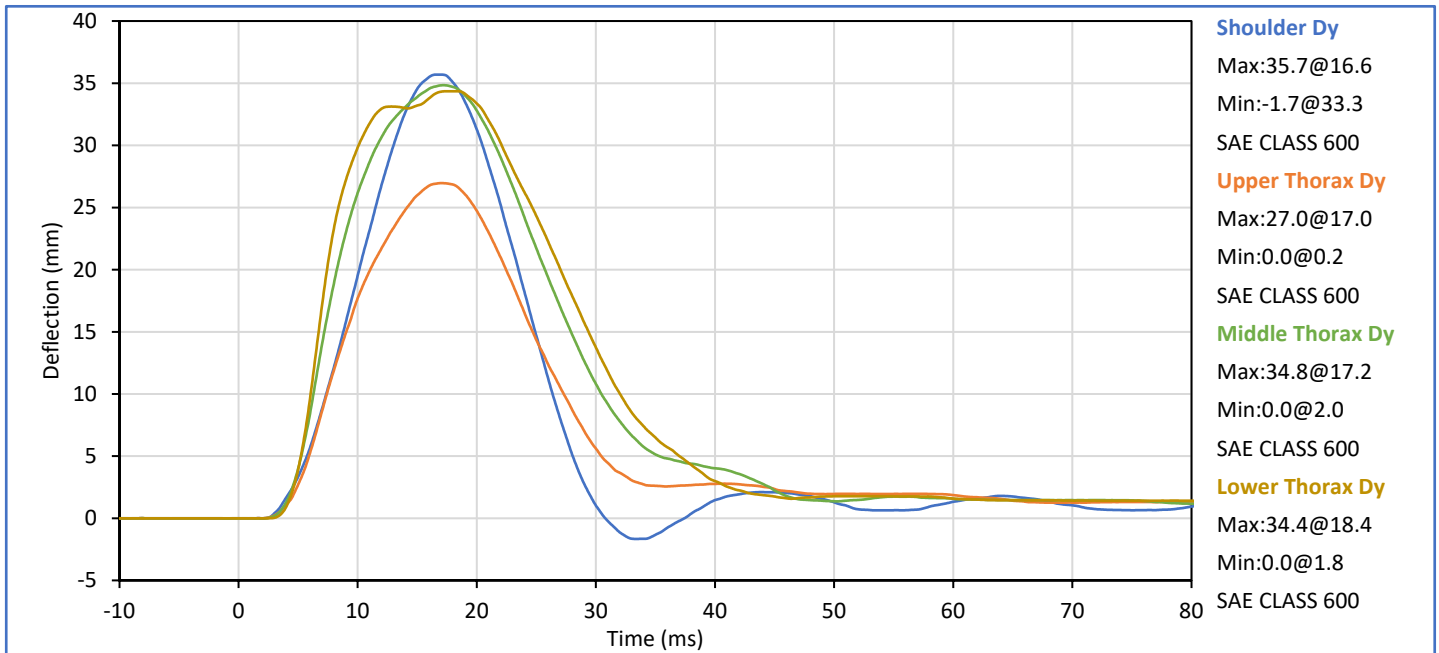
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.7	Pass
Laboratory Relative Humidity	%	10	70	33	Pass
Impactor Velocity	m/s	4.20	4.40	4.31	Pass
Peak Shoulder Dy	mm	28.0	37.0	33.5	Pass
Peak Upper Spine (T1) Ay	g	17.0	22.0	18.4	Pass
Peak Impactor Ax	g	-18.0	-13.0	-16.2	Pass
Overall Test Results					Pass




Technician: 
J. Hernandez

Approved By: 
P. Puzzuto

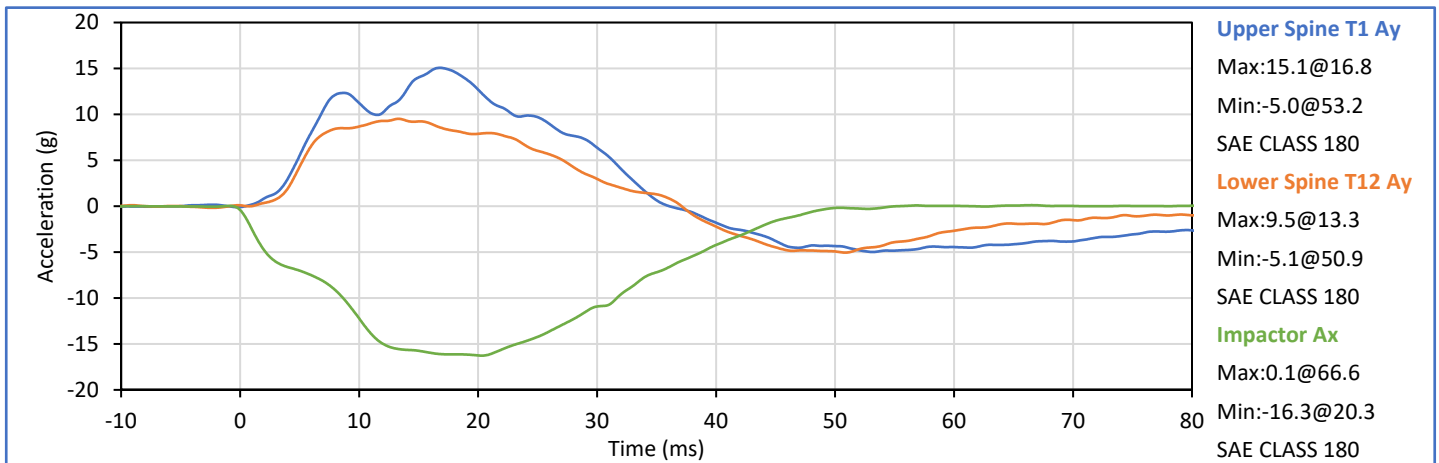
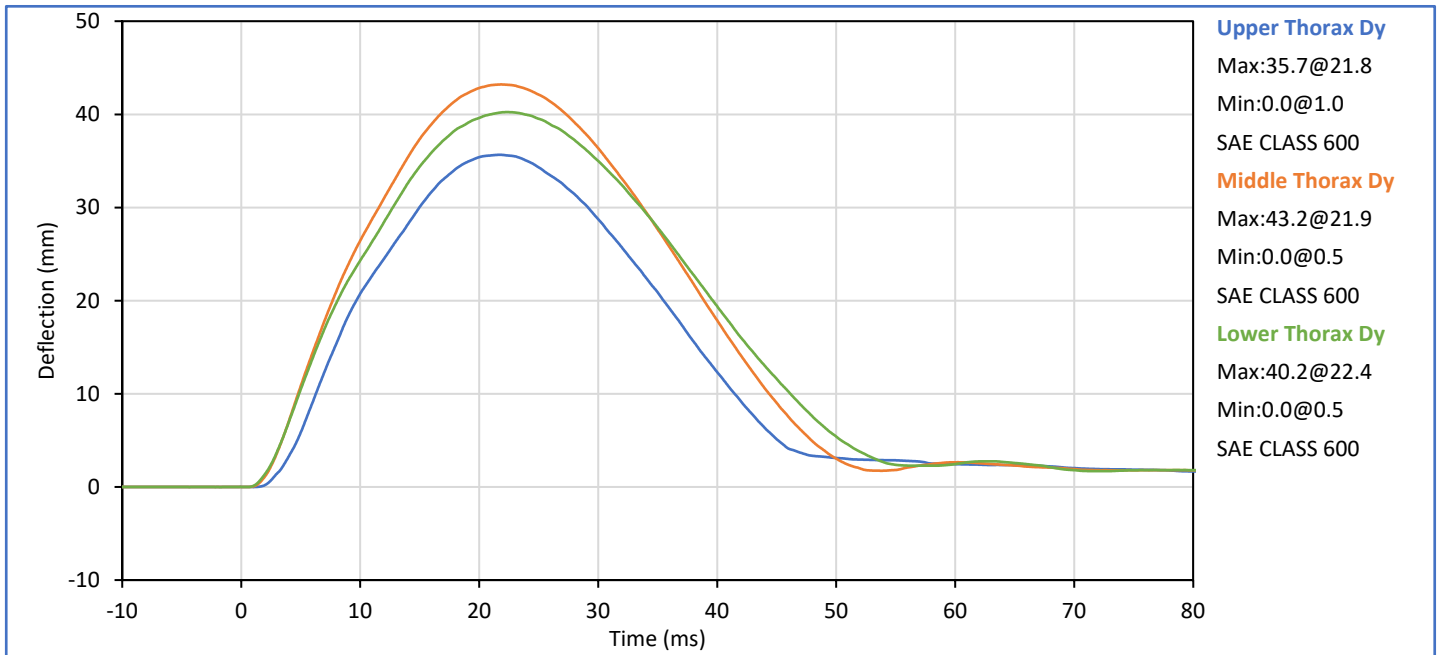
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	33	Pass
Impactor Velocity	m/s	6.60	6.80	6.70	Pass
Peak Shoulder Dy	mm	31.0	40.0	35.7	Pass
Peak Upper Rib Dy	mm	25.0	32.0	27.0	Pass
Peak Middle Rib Dy	mm	30.0	36.0	34.8	Pass
Peak Lower Rib Dy	mm	32.0	38.0	34.4	Pass
Peak Upper Spine (T1) Ay	g	34.0	43.0	34.9	Pass
Peak Lower Spine (T12) Ay	g	29.0	37.0	32.0	Pass
Peak Impactor Ax	g	-36.0	-30.0	-31.9	Pass
Overall Test Results					Pass




Technician: 
J. Hernandez

Approved By: 
P. Puzzuto

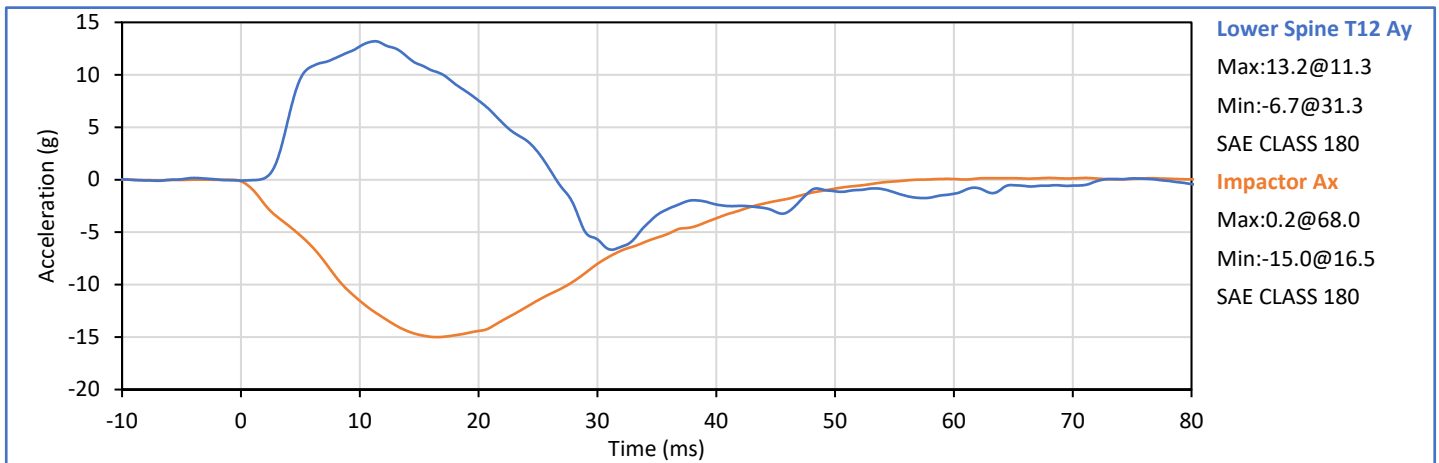
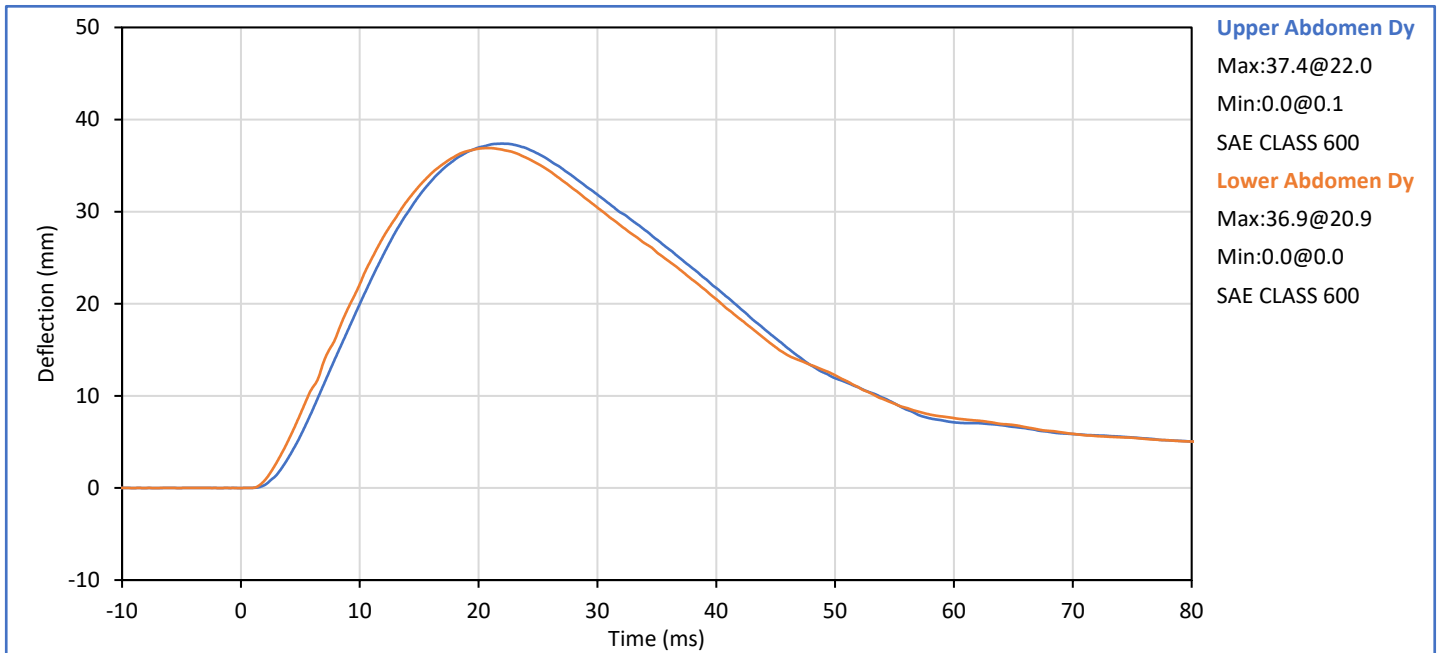
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	30	Pass
Impactor Velocity	m/s	4.20	4.40	4.32	Pass
Peak Thorax Rib Upper Dy	mm	32.0	40.0	35.7	Pass
Peak Thorax Rib Middle Dy	mm	39.0	45.0	43.2	Pass
Peak Thorax Rib Lower Dy	mm	35.0	43.0	40.2	Pass
Peak Spine Upper T1 Ay	g	13.0	17.0	15.1	Pass
Peak Spine Lower T12 Ay	g	7.0	11.0	9.5	Pass
Peak Impactor Ax	g	-18.0	-14.0	-16.3	Pass
Overall Test Results					Pass




Technician: 
J. Hernandez

Approved By: 
P. Puzzuto

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	37.4	Pass
Peak Lower Abdomen Rib Dy	mm	33.0	44.0	36.9	Pass
Peak Lower Spine T12 Ay	mm	9.0	14.0	13.2	Pass
Peak Impactor Ax	g	-16.0	-12.0	-15.0	Pass
Overall Test Results					Pass

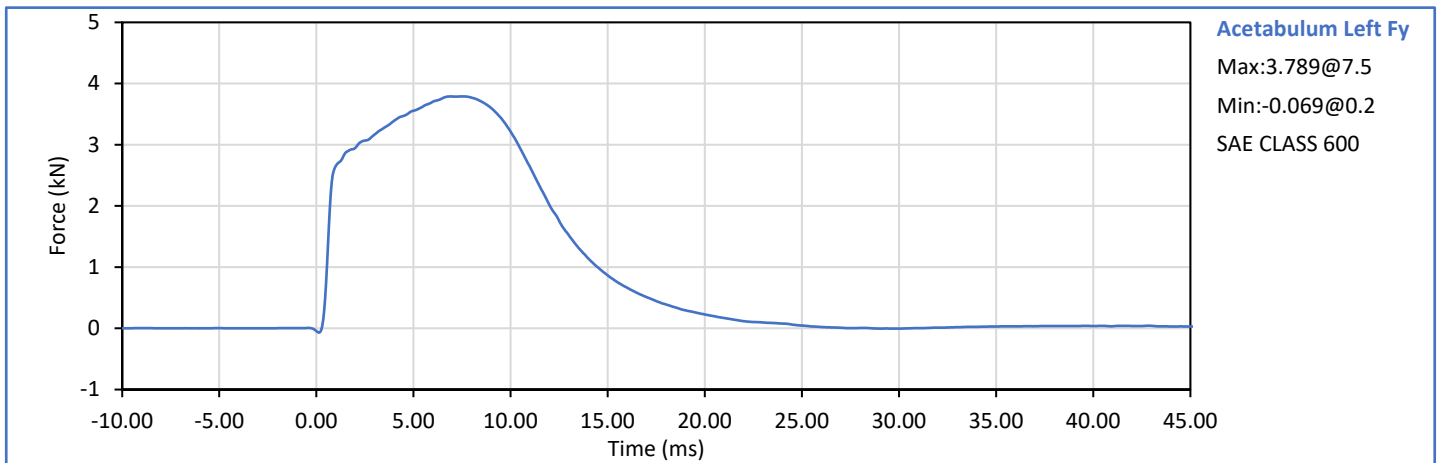
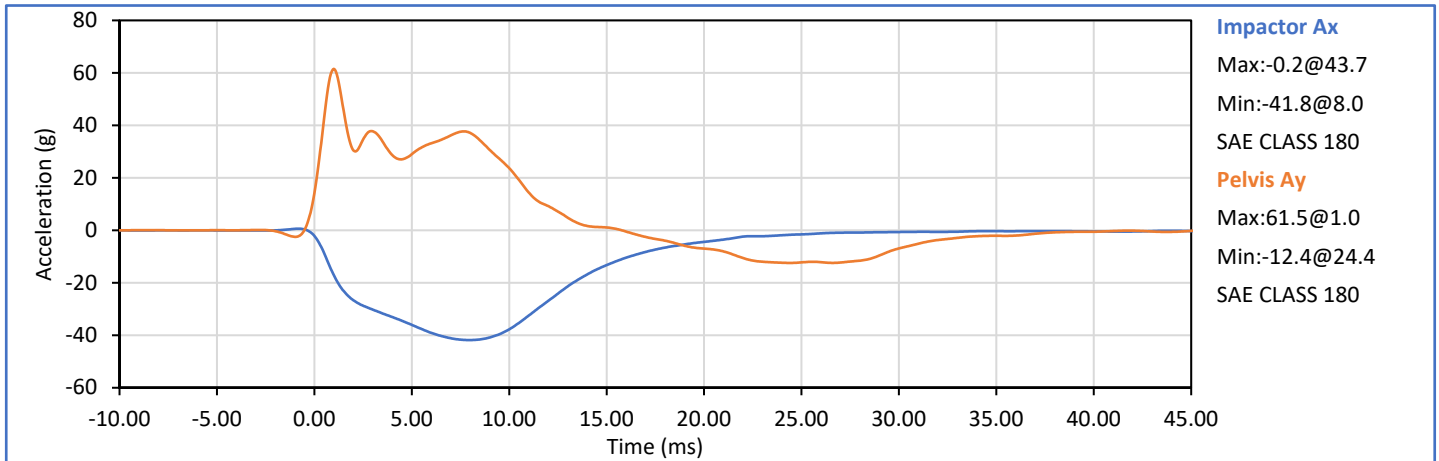



Technician: 
J. Hernandez


Approved By: 
P. Puzzuto

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	33	Pass
Impactor Velocity	m/s	6.60	6.80	6.72	Pass
Peak Acetabulum Fy	kN	3.60	4.30	3.79	Pass
Pelvis Ay after 6ms	g	34.0	42.0	37.7	Pass
Peak Impactor Ax	g	-47.0	-38.0	-41.8	Pass
Overall Test Results					Pass

Pelvis Plug S/N: 13994



Technician: 
J. Hernandez

Approved By: 
P. Puzzuto



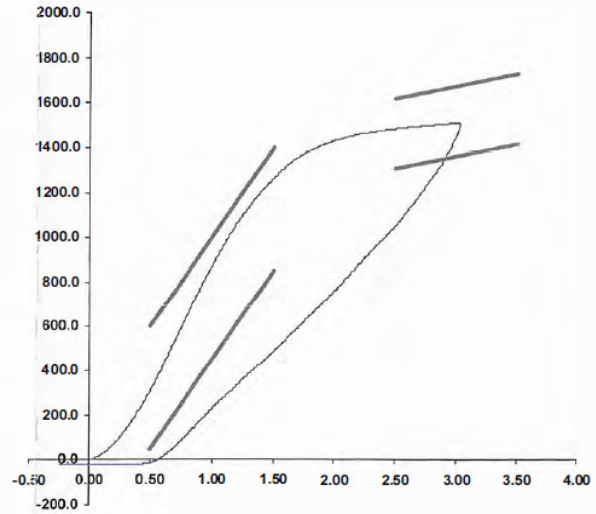
SID-IIs Pelvis Plug Certification Test

Plug S/N 13994
Test Number 13468
Report Number 13513
Test Date 5/22/2020 10:49:54 AM

	Test Results	Spec Min	Spec Max
Force @ 0.5 mm (N)	323.43	50.00	600.00
Force @ 1.5 mm (N)	1,267.05	850.00	1,400.00
Force @ 2.5 mm (N)	1,483.54	1,306.00	1,618.00
Force @ 3.0 mm (N)	1,509.14	1,361.00	1,673.00

Testing Machine STM-20 5965542
Load Cell S/N (FB60947), 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

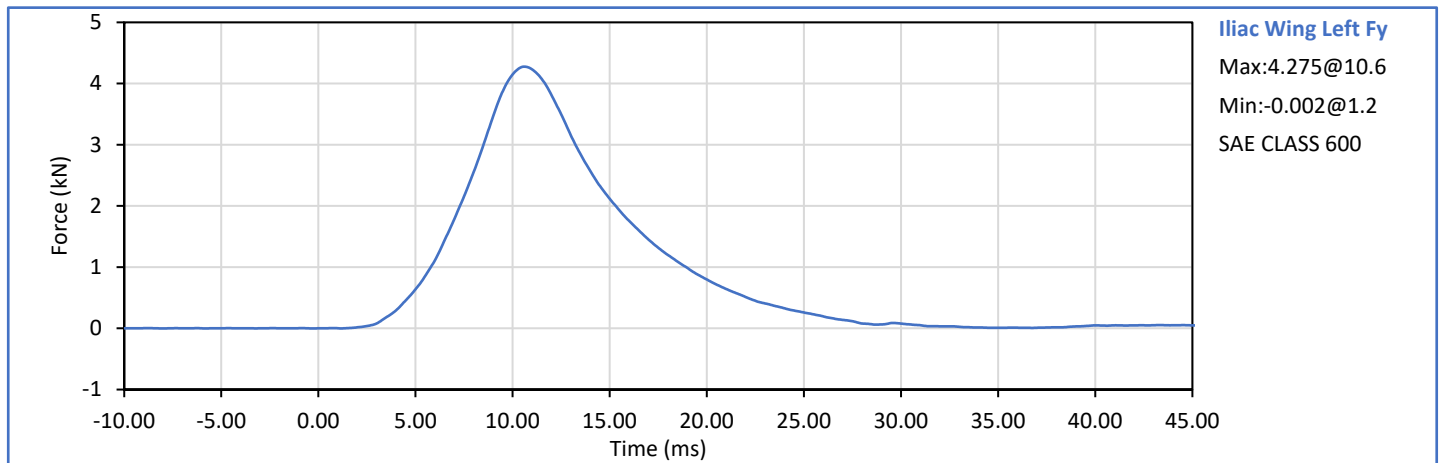
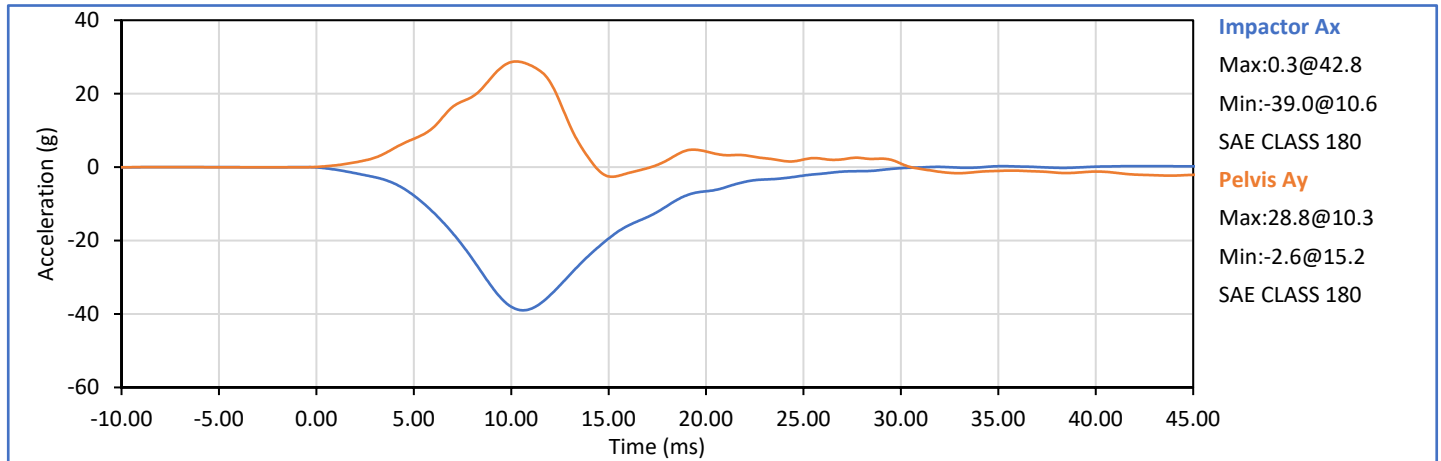
Template No 107 22-May-20
SACO Research

By: DE Date: 5-22-2020


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	32	Pass
Impactor Velocity	m/s	4.20	4.40	4.33	Pass
Peak Iliac Fy	kN	4.10	5.10	4.69	Pass
Peak Pelvis Ay	g	28.0	39.0	34.7	Pass
Peak Impactor Ax	g	-45.0	-36.0	-39.0	Pass
Overall Test Results					Pass

Pelvis Plug S/N: 12228 *

* Plug is not impacted and remains certified



Technician: 
J. Hernandez

Approved By: 
P. Puzzuto

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

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
A - Sitting Height	mm	772	788	778	Pass
B - Shoulder Pivot Height	mm	437	453	450	Pass
C - Hpoint Height	mm	79	89	86	Pass
D - H Point From Seatback	mm	141	151	149	Pass
E - Shoulder Pivot From Backline	mm	97	107	103	Pass
F - Thigh Clearance	mm	119	135	130	Pass
G - Head Breadth	mm	140	148	145	Pass
H - Head Back From Backline	mm	40	46	43	Pass
I - Head Depth	mm	178	188	184	Pass
J - Head Circumference	mm	541	551	549	Pass
K - Buttock To Knee Length	mm	514	540	528	Pass
L - Popliteal Height	mm	343	369	355	Pass
K - Knee Pivot To Floor Height	mm	392	409	402	Pass
N - Buttock Popliteal Length	mm	416	442	433	Pass
O - Chest Depth W/O Jacket	mm	195	211	201	Pass
P - Foot Length	mm	216	232	224	Pass
Q - Hip Breadth (W/Pelvic Plugs)	mm	313	323	316	Pass
R - Arm Length	mm	249	259	254	Pass
S - Knee Joint To Seatback	mm	477	493	491	Pass
V - Shoulder Width	mm	341	357	348	Pass
W - Foot Width	mm	78	94	81	Pass
Y - Chest Circumference W/Jacket	mm	851	881	862	Pass
Z - Waist Circumference	mm	761	791	780	Pass
Overall Test Results					Pass

Technician:



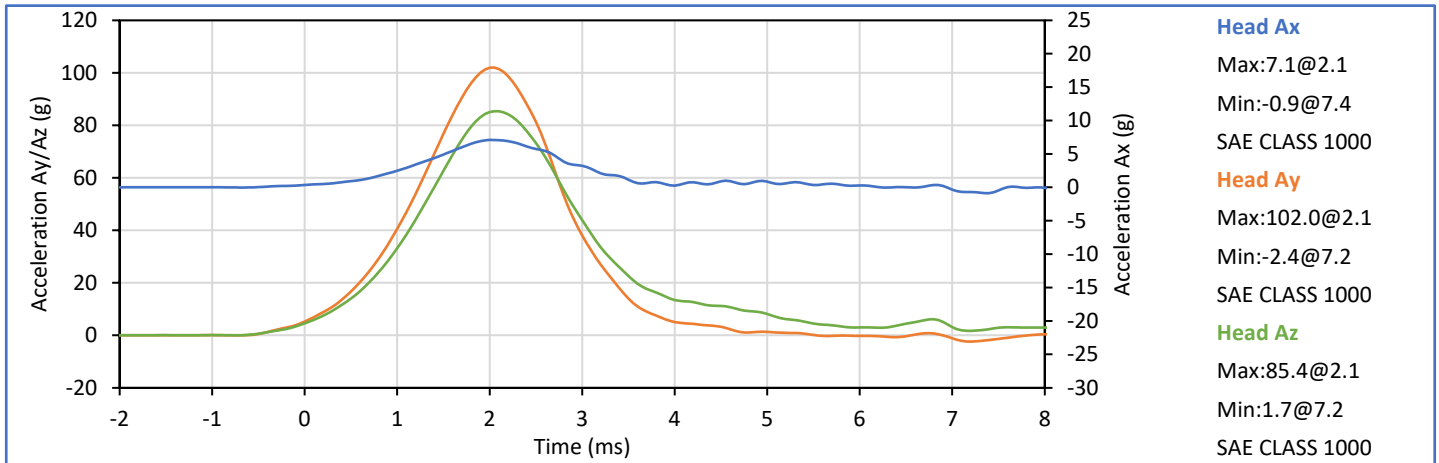
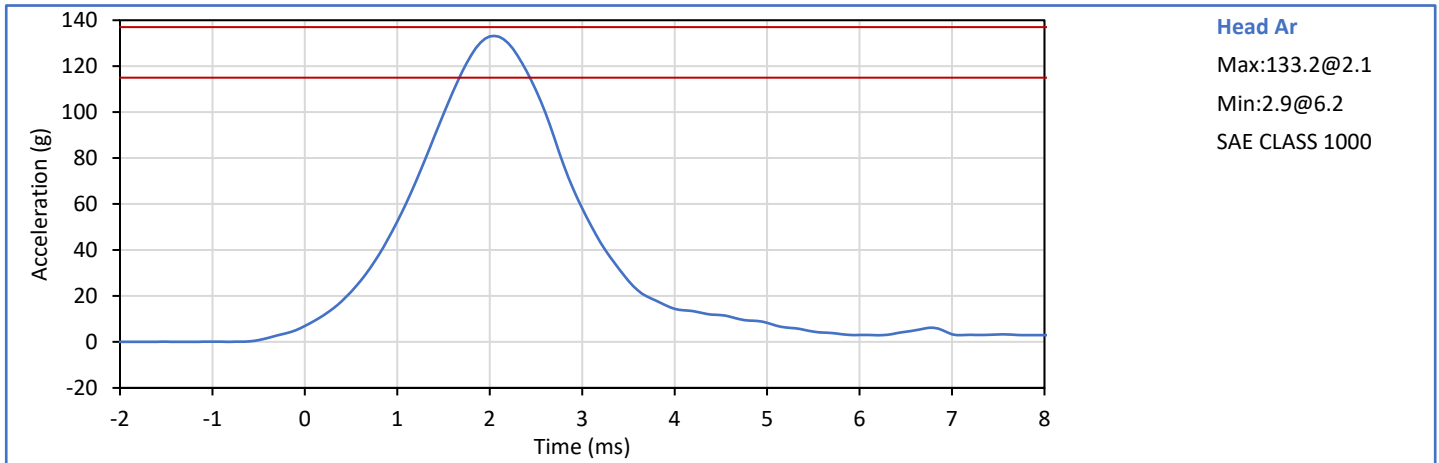
J. Hernandez

Approved By:




P. Puzzuto

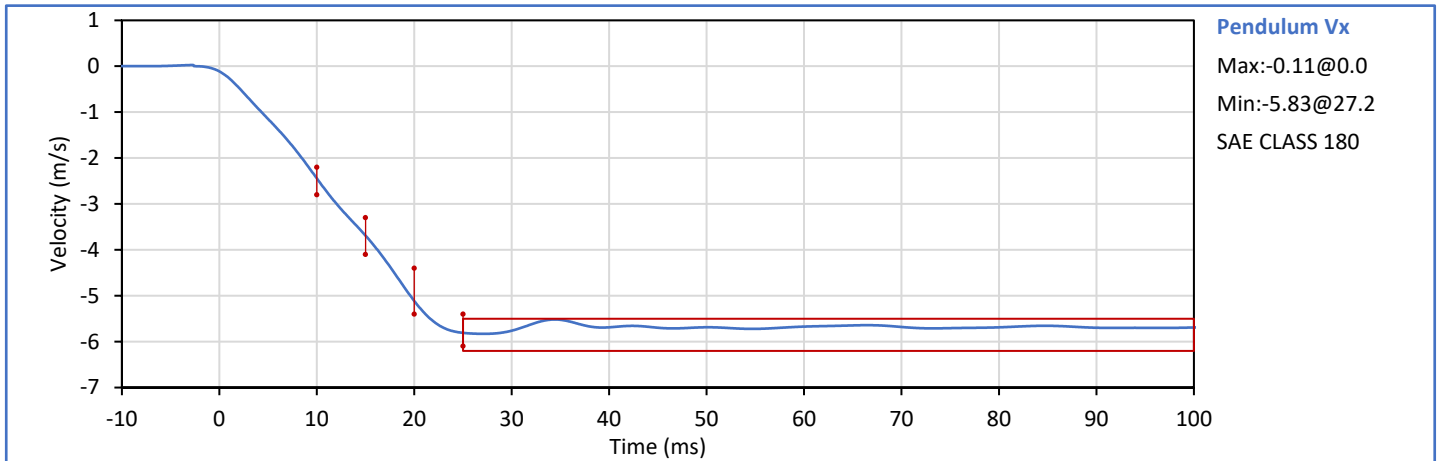
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.1	Pass
Laboratory Relative Humidity	%	10	70	26	Pass
Peak Resultant Acceleration	g	115.0	137.0	133.2	Pass
Peak Head Ax	g	-15.0	15.0	7.1	Pass
Oscillations After Main Pulse	%	0.0	15.0	4.6	Pass
Is Acceleration Unimodal?	Yes/No	Yes		Yes	Pass
Overall Test Results					Pass





Technician: 
J. Hernandez

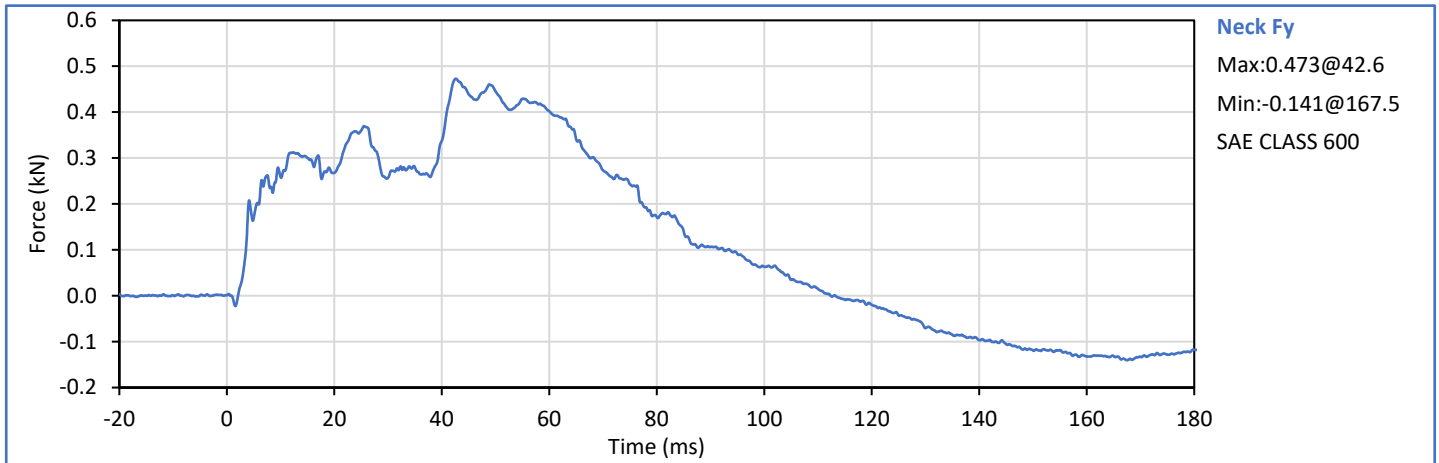
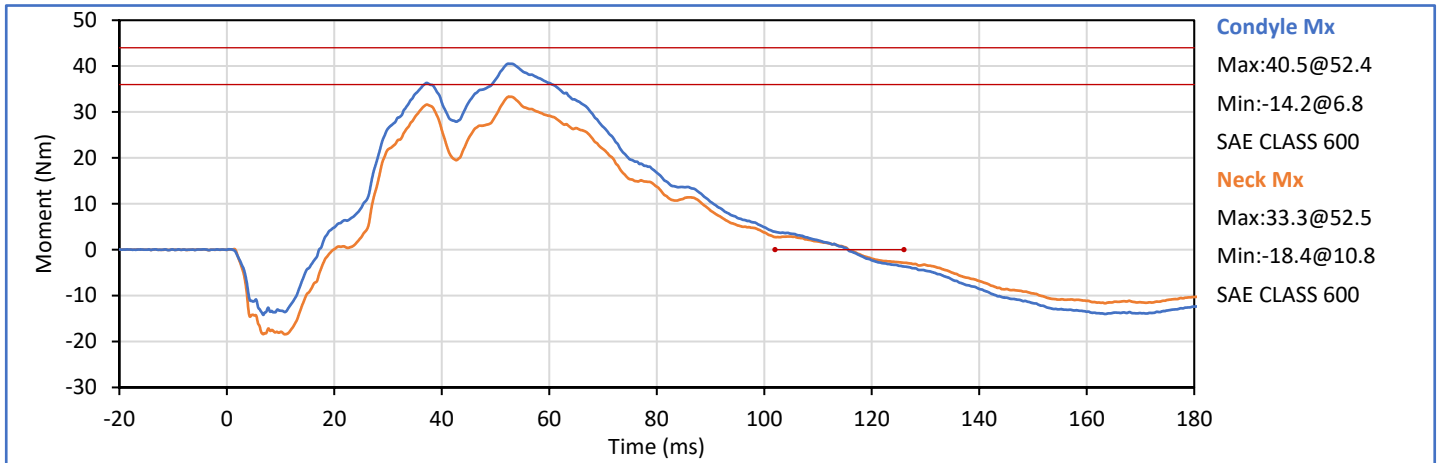
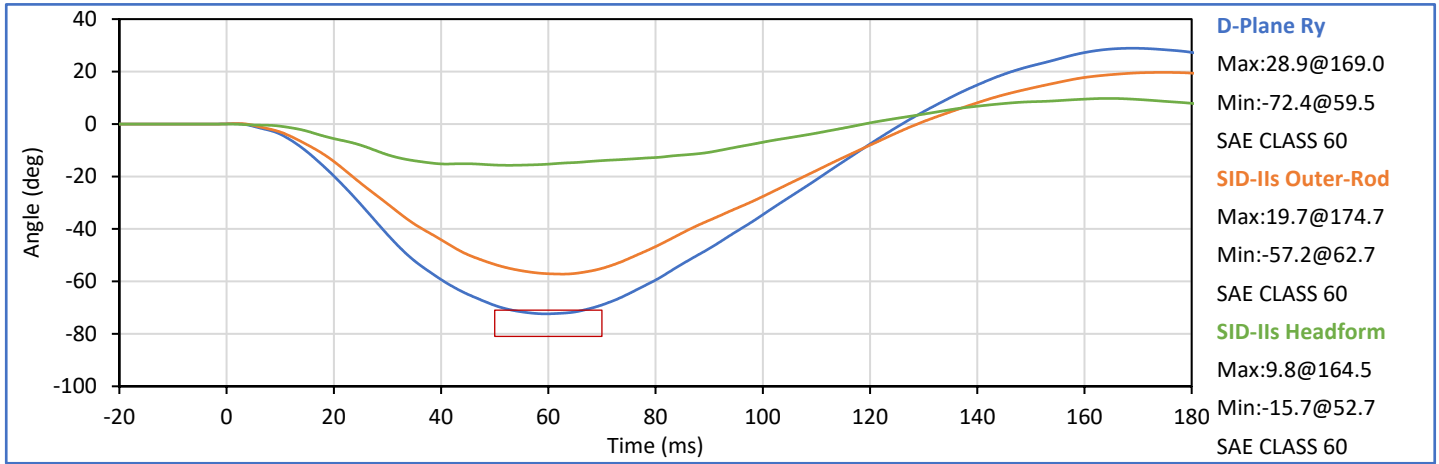
Approved By: 
P. Puzzuto

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	30	Pass
Pendulum Velocity	m/s	5.51	5.63	5.58	Pass
Pendulum Decel at 10 ms	m/s	-2.80	-2.20	-2.44	Pass
Pendulum Decel at 15 ms	m/s	-4.10	-3.30	-3.69	Pass
Pendulum Decel at 20 ms	m/s	-5.40	-4.40	-5.11	Pass
Pendulum Decel at 25 ms	m/s	-6.10	-5.40	-5.81	Pass
Pendulum Decel from 25-100 ms	m/s	-6.20	-5.50	-5.83/-5.52	Pass
Peak "D" Plane Rotation	deg	-81.0	-71.0	-72.4	Pass
Time of Peak "D" Plane Rotation	ms	50.0	70.0	59.5	Pass
Peak Occ. Condyle Moment	Nm	36.0	44.0	40.5	Pass
Time of Moment Decay to 0 Nm	ms	102.0	126.0	115.6	Pass
Overall Test Results					Pass

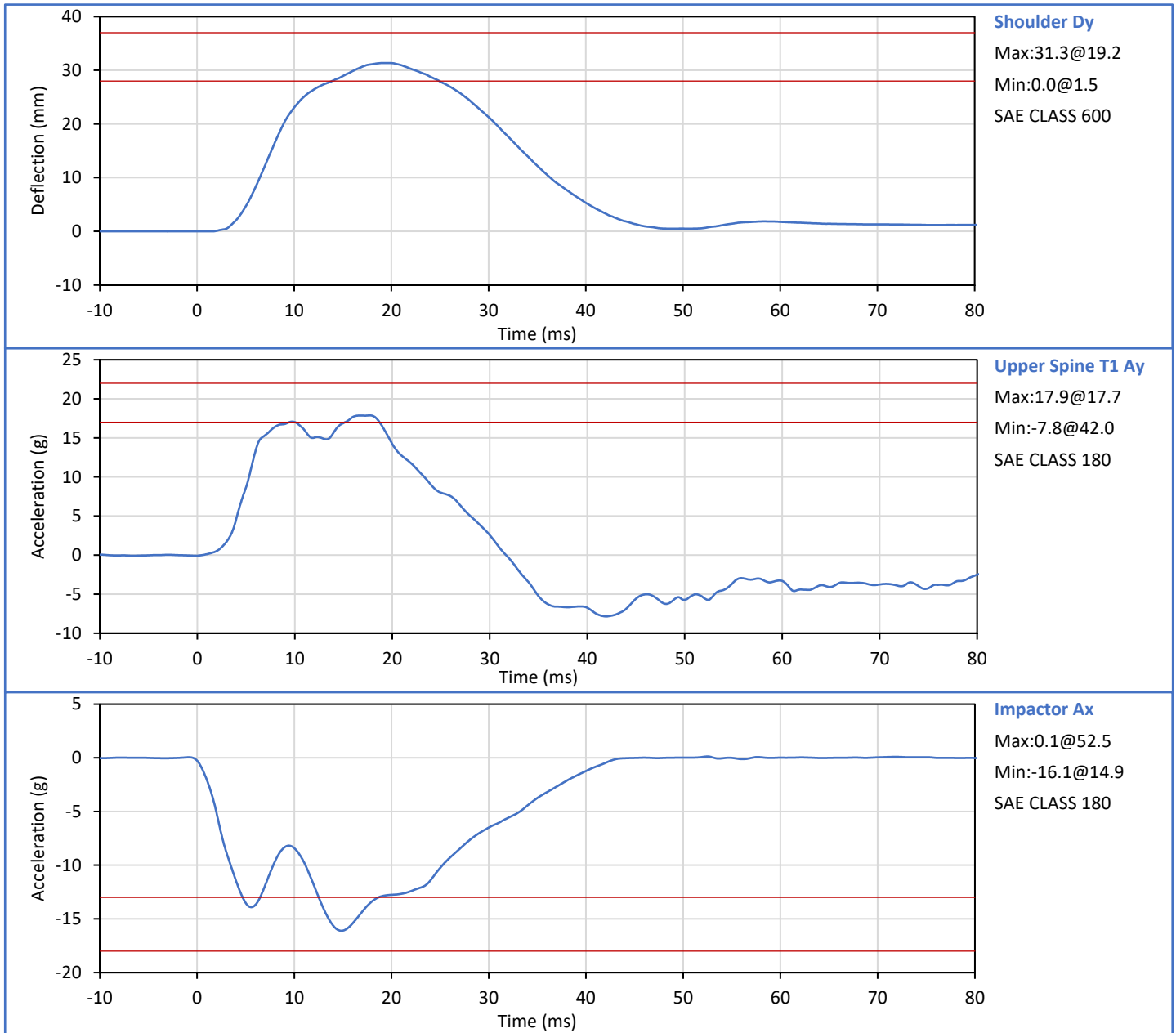


Technician: 
J. Hernandez


Approved By: 
P. Puzzuto



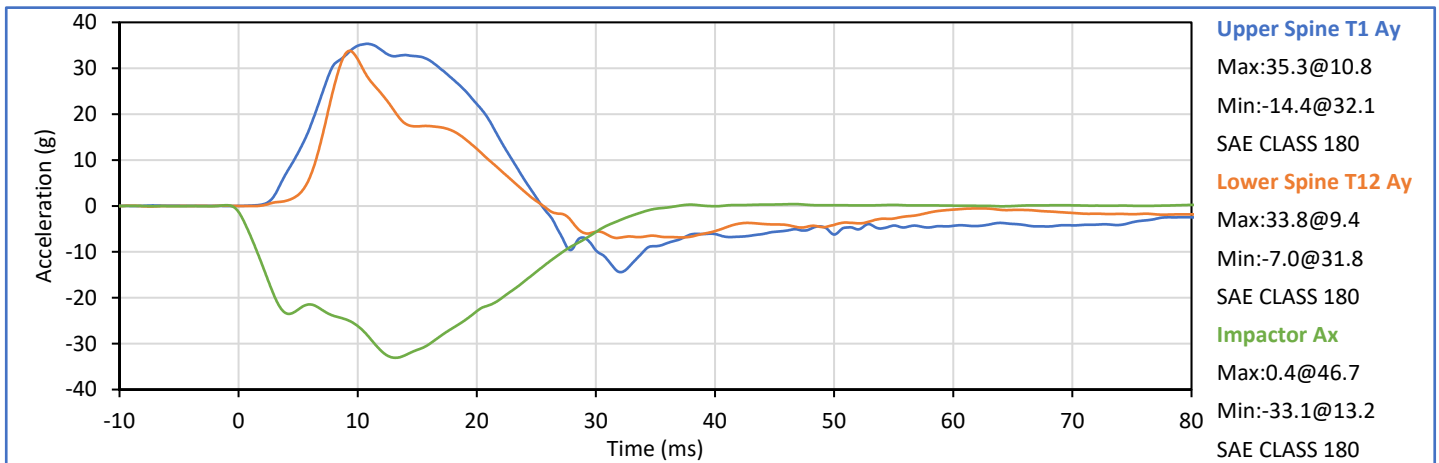
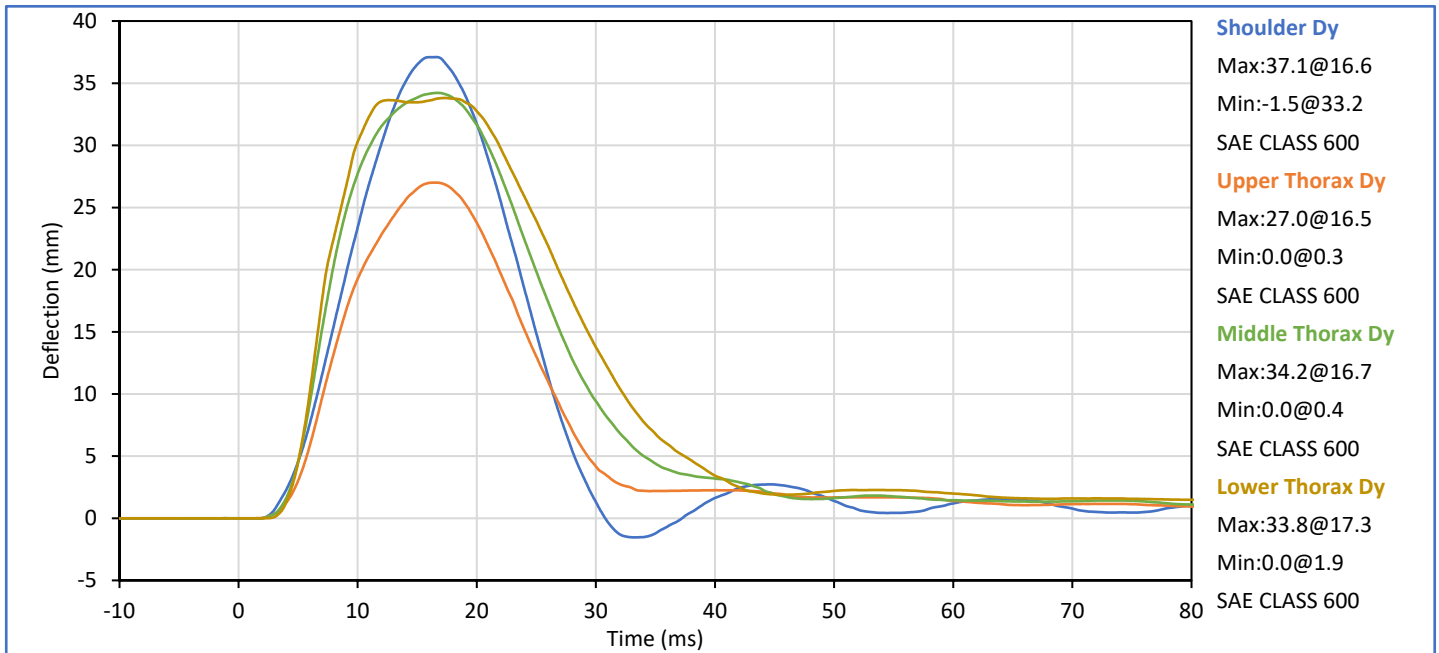
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	46	Pass
Impactor Velocity	m/s	4.20	4.40	4.32	Pass
Peak Shoulder Dy	mm	28.0	37.0	31.3	Pass
Peak Upper Spine (T1) Ay	g	17.0	22.0	17.9	Pass
Peak Impactor Ax	g	-18.0	-13.0	-16.1	Pass
Overall Test Results					Pass




Technician: 
J. Hernandez

Approved By: 
P. Puzzuto

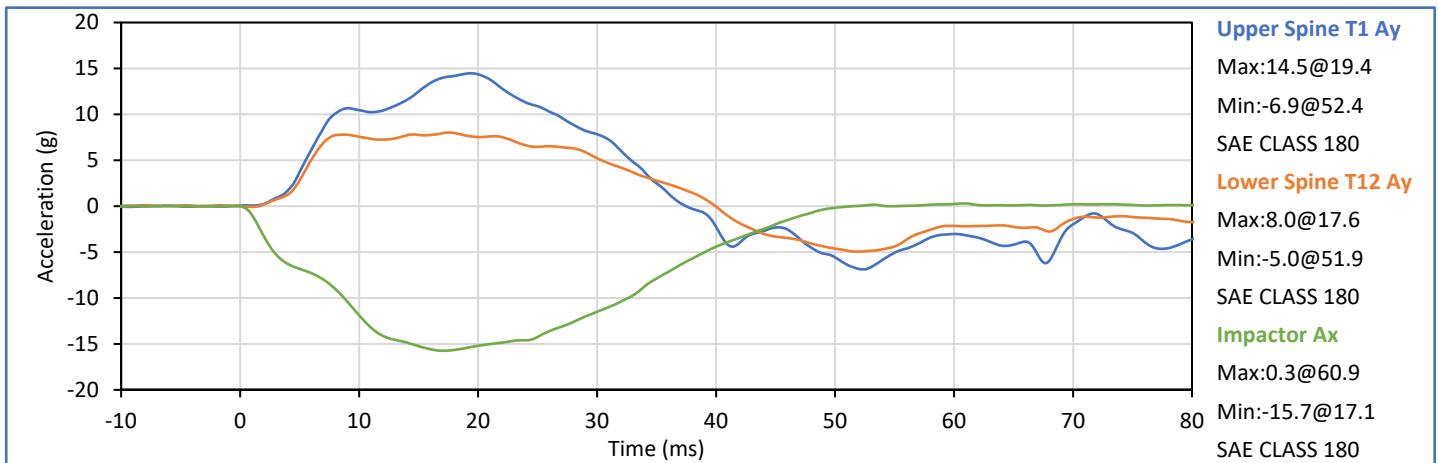
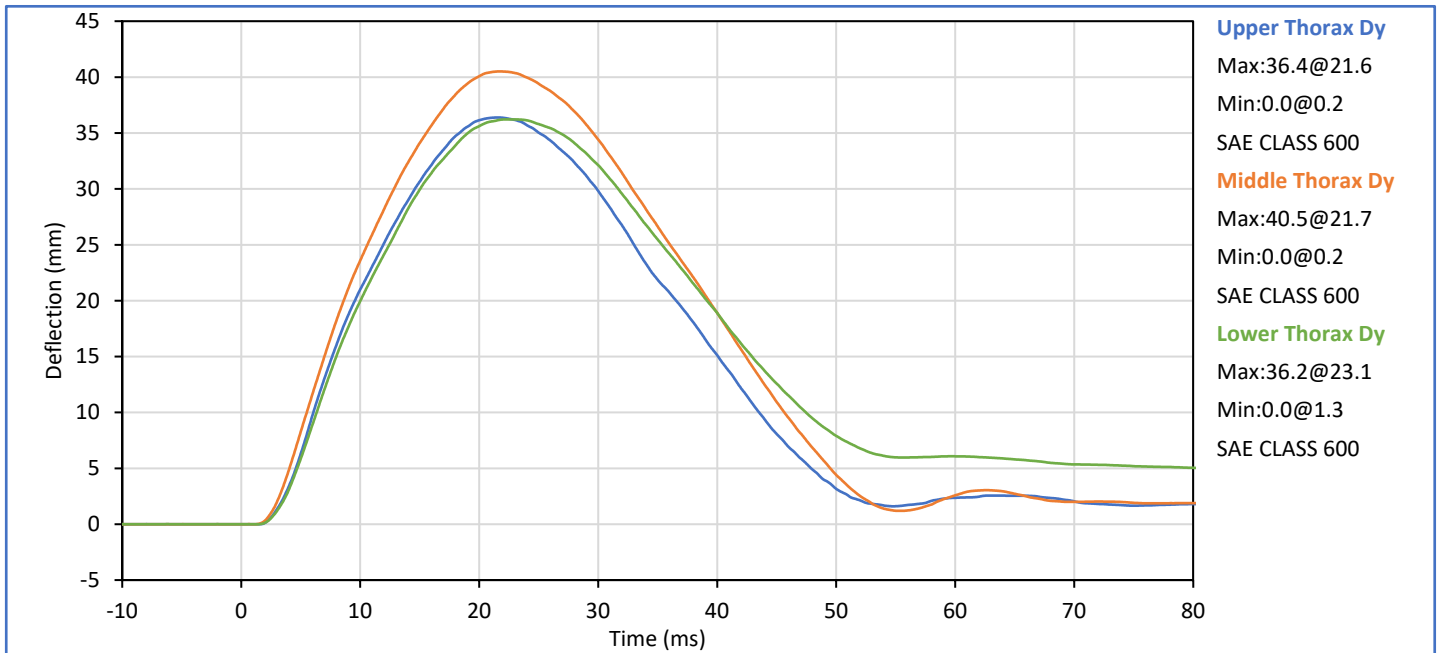
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	47	Pass
Impactor Velocity	m/s	6.60	6.80	6.65	Pass
Peak Shoulder Dy	mm	31.0	40.0	37.1	Pass
Peak Upper Rib Dy	mm	25.0	32.0	27.0	Pass
Peak Middle Rib Dy	mm	30.0	36.0	34.2	Pass
Peak Lower Rib Dy	mm	32.0	38.0	33.8	Pass
Peak Upper Spine (T1) Ay	g	34.0	43.0	35.3	Pass
Peak Lower Spine (T12) Ay	g	29.0	37.0	33.8	Pass
Peak Impactor Ax	g	-36.0	-30.0	-33.1	Pass
Overall Test Results					Pass




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J. Hernandez

Approved By: 
P. Puzzuto

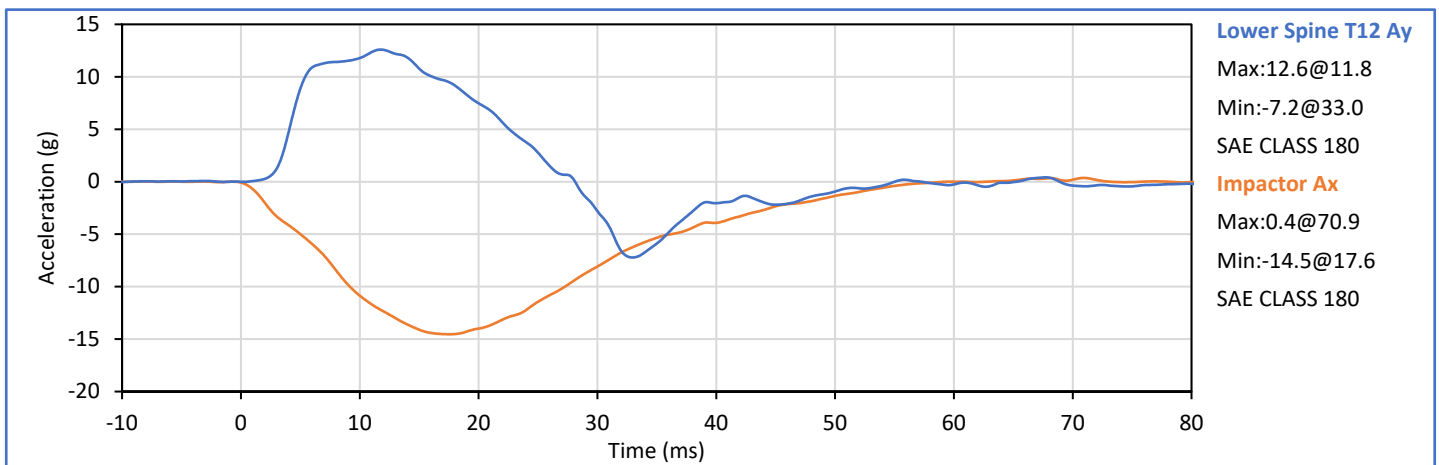
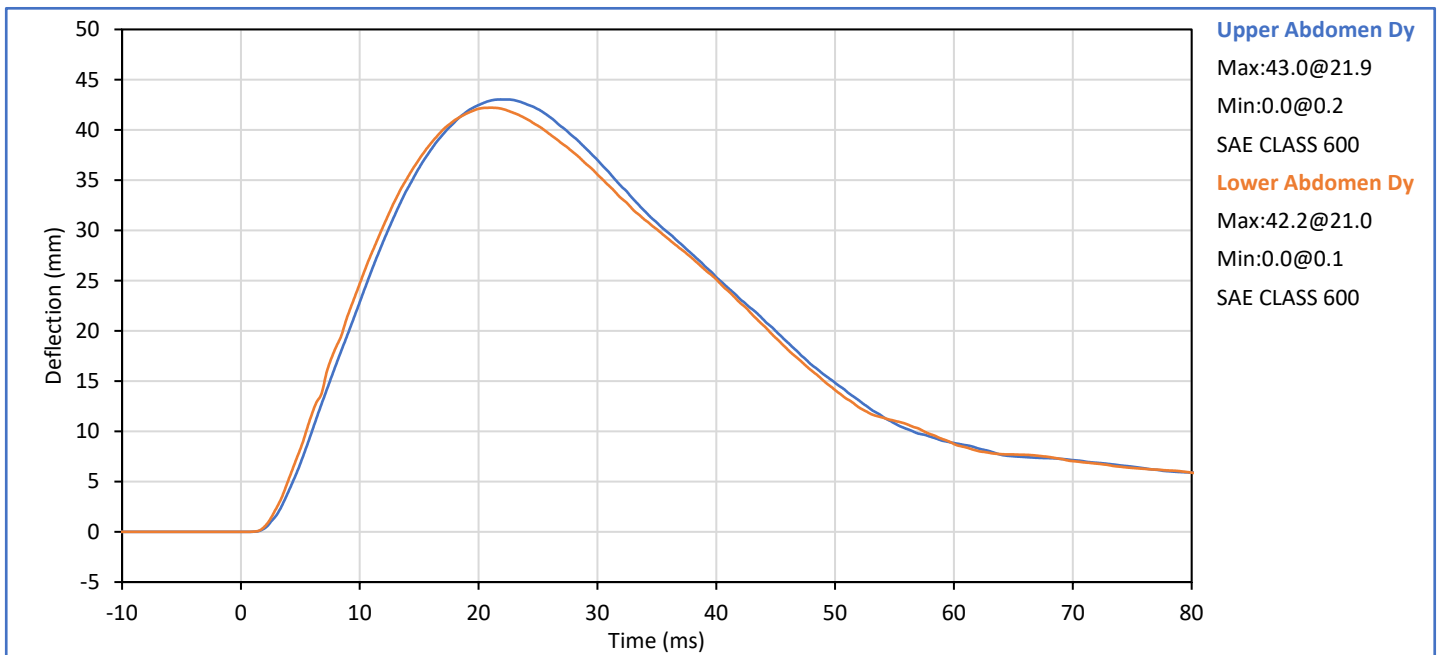
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	49	Pass
Impactor Velocity	m/s	4.20	4.40	4.34	Pass
Peak Thorax Rib Upper Dy	mm	32.0	40.0	36.4	Pass
Peak Thorax Rib Middle Dy	mm	39.0	45.0	40.5	Pass
Peak Thorax Rib Lower Dy	mm	35.0	43.0	36.2	Pass
Peak Spine Upper T1 Ay	g	13.0	17.0	14.5	Pass
Peak Spine Lower T12 Ay	g	7.0	11.0	8.0	Pass
Peak Impactor Ax	g	-18.0	-14.0	-15.7	Pass
Overall Test Results					Pass

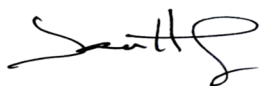



Technician: 
J. Hernandez

Approved By: 
P. Puzzuto

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	44	Pass
Impactor Velocity	m/s	4.20	4.40	4.34	Pass
Peak Upper Abdomen Rib Dy	mm	36.0	47.0	43.0	Pass
Peak Lower Abdomen Rib Dy	mm	33.0	44.0	42.2	Pass
Peak Lower Spine T12 Ay	mm	9.0	14.0	12.6	Pass
Peak Impactor Ax	g	-16.0	-12.0	-14.5	Pass
Overall Test Results					Pass

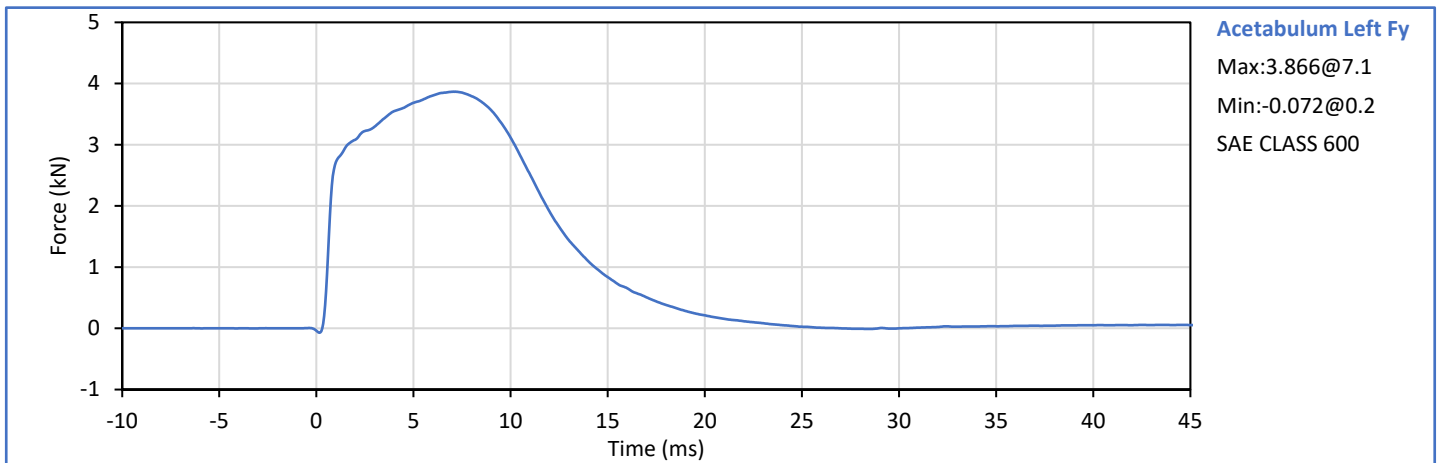
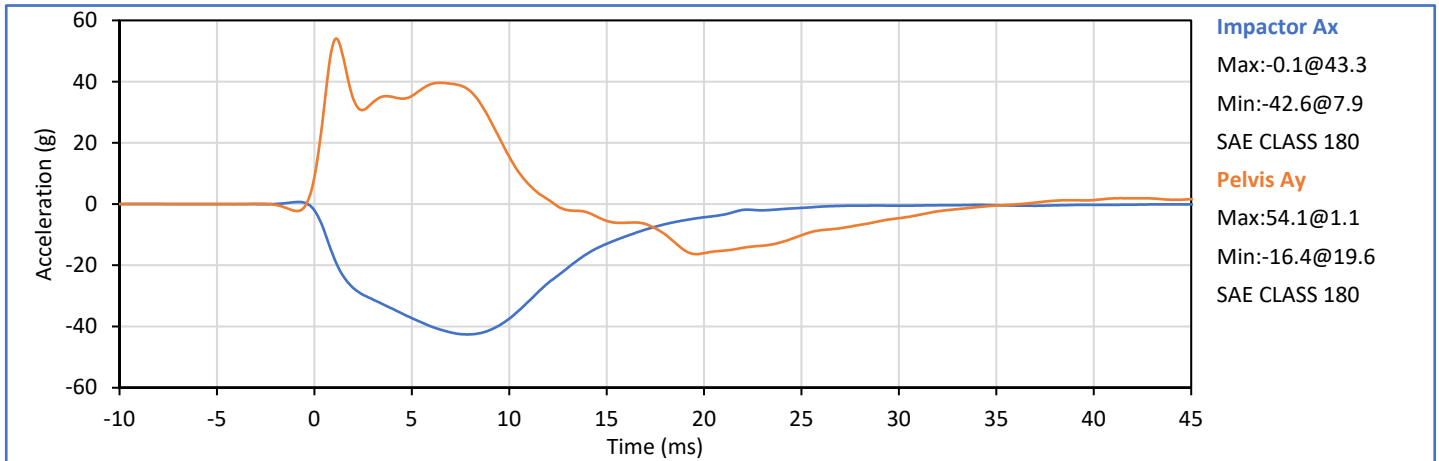


Technician: 
J. Hernandez


Approved By: 
P. Puzzuto

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	20.8	Pass
Laboratory Relative Humidity	%	10	70	47	Pass
Impactor Velocity	m/s	6.60	6.80	6.67	Pass
Peak Acetabulum Fy	kN	3.60	4.30	3.87	Pass
Pelvis Ay after 6ms	g	34.0	42.0	39.6	Pass
Peak Impactor Ax	g	-47.0	-38.0	-42.6	Pass
Overall Test Results					Pass

Pelvis Plug S/N: 13838



Technician: 
J. Hernandez

Approved By: 
P. Puzzuto



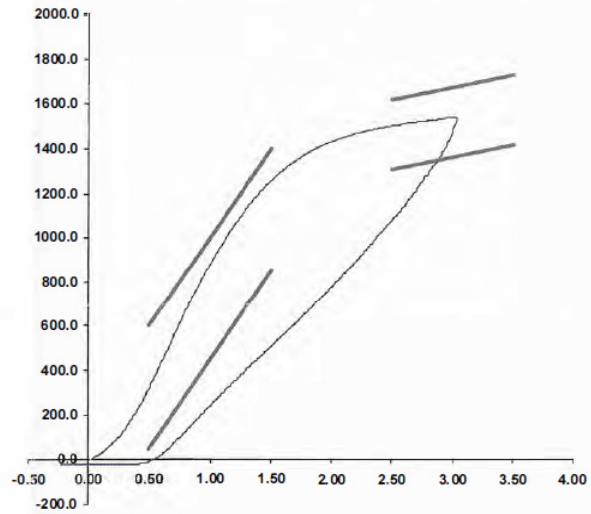
SID-IIs Pelvis Plug Certification Test

Plug S/N 13838
Test Number 13299
Report Number 13344
Test Date 5/15/2020 11:41:03 AM

	Test Results	Spec. Min	Spec. Max
Force @ 0.5 mm (N)	326.96	50.00	600.00
Force @ 1.5 mm (N)	1,254.96	850.00	1,400.00
Force @ 2.5 mm (N)	1,501.63	1,306.00	1,618.00
Force @ 3.0 mm (N)	1,538.68	1,361.00	1,673.00

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

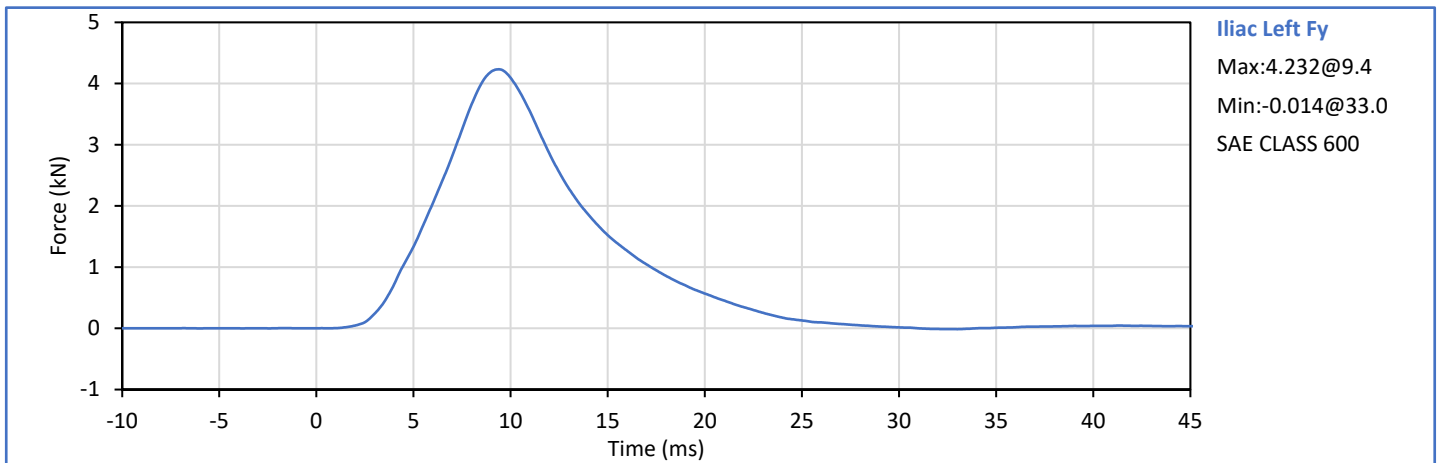
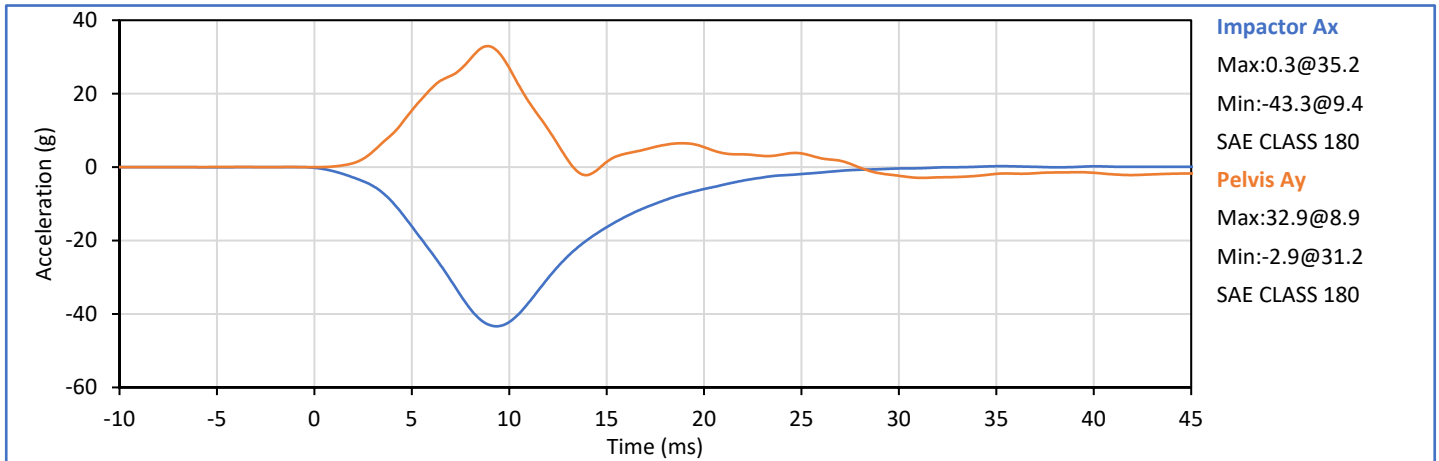
Template No 107 15-May-20
SACO Research


By: DC Date: 5/15/2020


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	43	Pass
Impactor Velocity	m/s	4.20	4.40	4.33	Pass
Peak Iliac Fy	kN	4.10	5.10	4.23	Pass
Peak Pelvis Ay	g	28.0	39.0	34.7	Pass
Peak Impactor Ax	g	-45.0	-36.0	-43.3	Pass
Overall Test Results					Pass

Pelvis Plug S/N: 12228 *

* Plug is not impacted and remains certified



Technician: 
J. Hernandez

Approved By: 
P. Puzzuto

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	2021-01-13
Head Acceleration Y Primary	P50086	Endevco	7264C-2k	2021-01-13
Head Acceleration Z Primary	P51931	Endevco	7264C-2k	2021-01-13
Head Acceleration X Redundant	P68604	Endevco	7264C-2k	2021-01-13
Head Acceleration Y Redundant	P51934	Endevco	7264C-2k	2021-01-13
Head Acceleration Z Redundant	P58736	Endevco	7264C-2k	2021-01-13
Head Rotation Rate X	ARS4062	DTS	ARS PRO-18k (2kHz)	2020-08-04
Head Rotation Rate Y	ARS5968	DTS	ARS PRO-18k (2kHz)	2020-08-04
Head Rotation Rate Z	ARS11283	DTS	ARS PRO-18k (2kHz)	2020-08-04
Upper Thorax Rib Deflection Y	1143	Servo	08TCI-3725	2021-01-19
Middle Thorax Rib Deflection Y	1075	Servo	08TCI-3725	2021-01-19
Lower Thorax Rib Deflection Y	1213	Servo	08TCI-3725	2021-01-19
Upper Abdomen Rib Deflection Y	1218	Servo	08TCI-3725	2021-01-19
Lower Abdomen Rib Deflection Y	1177	Servo	08TCI-3725	2021-01-19
Lower Spine T12 Acceleration X	P58761	Endevco	7264C-2k	2021-01-13
Lower Spine T12 Acceleration Y	P50077	Endevco	7264C-2k	2021-01-13
Lower Spine T12 Acceleration Z	P58795	Endevco	7264C-2k	2021-01-13
Iliac Wing Impact Side Force Y	289 (Iliac)	R.A. Denton	3228J	2021-01-18
Acetabulum Impact Side Force Y	277 (Acetabulum)	R.A. Denton	3249J	2021-01-18

Table 2 - Vehicle Instrumentation

Sensor Location	Sensor S\N	Mfr	Model	Cal Date
Vehicle CG Ax	A298315	MSI	52F-2k	2021-02-26
Vehicle CG Ay	A298583	MSI	52F-2k	2021-02-25
Vehicle CG Az	A298561	MSI	52F-2k	2021-02-26
Left Floor Sill Ay	A298321	MSI	52F-2k	2021-02-25
A-Pillar Sill Ay	A345127	MSI	52F-2k	2021-02-26
A-Pillar Low Ay	A345126	MSI	52F-2k	2021-02-25
A-Pillar Mid Ay	A331811	MSI	52F-2k	2021-02-25
B-Pillar Sill Ay	A336677	MSI	52F-2k	2021-02-26
B-Pillar Low Ay	A265883	MSI	52F-2k	2021-02-25
B-Pillar Mid Ay	A343474	MSI	52F-2k	2021-02-25
Driver Seat Track at H-Point Ay	A343489	MSI	52F-2k	2021-02-25
Engine Top Ax	A331800	MSI	52F-2k	2021-02-25
Engine Top Ay	A331809	MSI	52F-2k	2021-02-25
Firewall Ay	A298381	MSI	52F-2k	2021-02-25
Right Roof Ay	A345122	MSI	52F-2k	2021-02-25
Right Floor Sill Ay	A224577	MSI	52F-2k	2021-02-25
Rear Floorpan Ax	A265867	MSI	52F-2k	2021-02-26
Rear Floorpan Ay	A331791	MSI	52F-2k	2021-02-25

Table 3 - Barrier Pole Instrumentation

Sensor Location	Sensor S\N	Mfr	Model	Cal Date
Barrier Pole 01 Fx	19461A	Interface	1220FS-50k	2020-03-18
Barrier Pole 02 Fx	131822A	Interface	1220AF-50k	2020-03-18
Barrier Pole 03 Fx	131816A	Interface	1220AF-50k	2020-03-18
Barrier Pole 04 Fx	19325	Interface	1220FS-50k	2020-03-18
Barrier Pole 05 Fx	131827A	Interface	1220AF-50k	2020-03-18
Barrier Pole 06 Fx	19340	Interface	1220FS-50k	2020-03-18
Barrier Pole 07 Fx	19267	Interface	1220FS-50k	2020-03-18
Barrier Pole 08 Fx	19466A	Interface	1220FS-50k	2020-03-18