

**REPORT NUMBER: SPNCAP-KAR-20-023
NEW CAR ASSESSMENT PROGRAM (NCAP)
SIDE IMPACT POLE TEST**

**NISSAN MOTOR CO., LTD.
2020 NISSAN SENTRA 4-DOOR SEDAN**

NHTSA No: M20205210

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




MAY 28, 2020

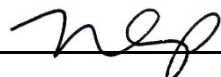
FINAL REPORT

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U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF CRASHWORTHINESS STANDARDS
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Approval Date: May 28, 2020

FINAL REPORT ACCEPTANCE BY OCWS:

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

Date: _____

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Date: _____

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16. Abstract <p>A 32.20 km/h 75° rigid pole side NCAP impact test was conducted on the subject 2020 Nissan Sentra 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 May 28, 2020.</p> <p>The impact velocity was 32.27 km/h and the outside ambient temperature at the struck (driver's) side of the vehicle was 28.9°C. The target vehicle's maximum post-test static crush was 297 mm located at level 3. The test vehicle's occupant performance data is as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th rowspan="2" style="text-align: center;">Measurement Description</th> <th colspan="3" style="text-align: center;">Driver ATD (SID-IIs)</th> </tr> <tr> <th style="text-align: center;">Units</th> <th style="text-align: center;">Threshold</th> <th style="text-align: center;">Result</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆)</td> <td style="text-align: center;">g</td> <td style="text-align: center;">1000</td> <td style="text-align: center;">160.2</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;">36</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;">2934</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;">20</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;">20</td> </tr> </tbody> </table> <p>The struck side doors of the vehicle were jammed shut and did not separate from the body at the hinges or latches. The remaining doors did not open during or after the side impact event.</p>				Measurement Description	Driver ATD (SID-IIs)			Units	Threshold	Result	Head Injury Criteria (HIC ₃₆)	g	1000	160.2	Resultant Lower Spine Acceleration	g	82	36	Total Pelvic Force (Sum of Acetabular and Iliac Forces)	N	5525	2934	Maximum Thoracic Rib Deflection	mm	38	20	Maximum Abdominal Rib Deflection	mm	45	20
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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. Technical Information Services Division 1200 New Jersey Ave., SE Washington, DC 20590																												
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SECTION 1
TEST PURPOSE AND PROCEDURE

This side impact test is part of the MY 2020 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under contract number DTNH22-14-D-00355L. The purpose of this test is to generate comparative side impact performance in a 2020 Nissan Sentra 4-door sedan. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Laboratory Test Procedure date October 2015.

SECTION 2

SUMMARY OF TEST RESULTS

A rigid pole side impact test was conducted on a 2020 Nissan Sentra 4-door sedan. The subject vehicle was towed into the rigid pole at an angle of 75.3° and a velocity of 32.27 km/h. The test was conducted by Applus+ IDIADA KARCO Engineering, LLC. in Adelanto, California on May 14, 2020. Pre- 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 October 2015. 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	160.2
Lower Spine (T12) Resultant Acceleration	g	82	36
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	2934
Maximum Thoracic Rib Deflection	mm	38*	20
Maximum Abdominal Rib Deflection	mm	45*	20

*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/Pelvis)	Yes	Yes	Yes	Yes
Seat Belt Pretensioner	Yes	Yes	Yes	
Seat Belt Load Limiter	Yes	Yes	Yes	

GENERAL COMMENTS

The struck side doors of the vehicle were jammed shut. There was no separation at the hinges or latches. The remaining doors remained closed and latched. There were no ATD values that exceeded limits.

The following data channels were not collected or failed during the test:

- Channel 20: Left Floor Sill Ay failed at 61.8 ms
- Channel 24: Left B-Post at Sill Ay was not installed
- Channel 25: Left Lower B-Post Ay was not installed
- Channel 26: Left Mid B-Post Ay was not installed

SECTION 3

OCCUPANT AND VEHICLE INFORMATION/DATA SHEETS

Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

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: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA Number	M20205210
Model Year	2020
Make	Nissan
Model	Sentra
Body Style	4-Door Sedan
VIN	3N1AB8BV7LY216446
Body Color	Gun Metallic
Odometer Reading (km / mi)	77 / 48
Engine Displacement (L)	2.0
Type / No. of Cylinders	Inline 4
Engine Placement	Transverse
Transmission Type	Automatic
Transmission Speeds	CVT
Overdrive	Yes
Final Drive	FWD
Roof Rack	No
Sunroof / T-Top	No
Running Boards	No
Tilt Steering Wheel	Yes
Power Seats	No
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	No
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	No
Rear Pass. Torso/Pelvis Airbag	Yes
Rear Pass. Pelvis Airbag	No
Driver Seat Belt Pretensioner	Yes
Rear Pass. Seat Belt Pretensioner	Yes
Driver Load Limiter	Yes
Rear Pass. Load Limiter	Yes
Other Safety Restraint	No

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

DATA FROM CERTIFICATION LABEL

Manufactured By	Nissan Motor Co., Ltd.
Date of Manufacture	01/20
Vehicle Type	Passenger Car

GVWR (kg)	1795
GAWR Front (kg)	960
GAWR Rear (kg)	840

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

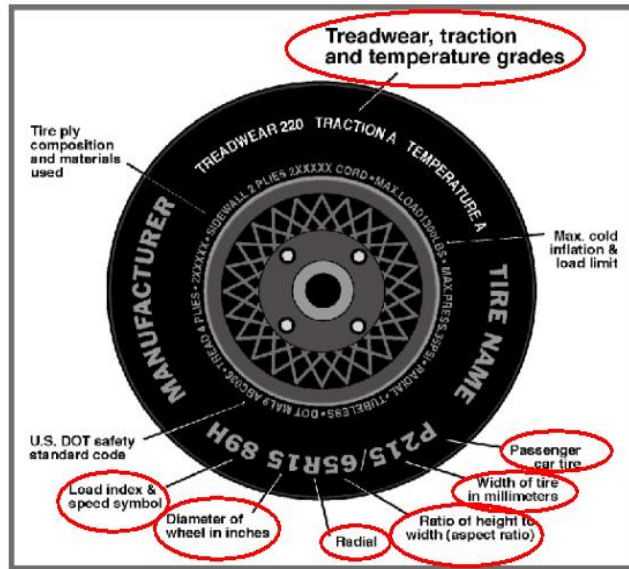
VEHICLE SEAT TYPE

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: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20



Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	300	300
Cold Pressure (kPa)	230	230
Recommended Tire Size	205/60R16	205/60R16
Tire Size on Vehicle	205/60R16	205/60R16
Tire Manufacturer	Firestone	Firestone
Tire Model	FT 140	FT 140
Treadware	560	560
Traction Grade	A	A
Temperature Grade	A	A
Tire Plies Sidewall	1 Polyester	1 Polyester
Tire Plies Body	1 Polyester, 2 Steel, 1 Nylon	1 Polyester, 2 Steel, 1 Nylon
Load Index/Speed Symbol	92H	92H
Tire Material	Polyester, Steel, Nylon	Polyester, Steel, Nylon
DOT Safety Code Left	1V6 XWFT01 3219	1V6 XWFT01 3219
DOT Safety Code Right	1V6 XWFT01 3219	1V6 XWFT01 3219

DATA SHEET NO. 1 ... (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

TIRE PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kPa	230	230	230	230
Tire Placard	kPa	230	230	230	230
Owner's Manual	kPa	230	230	230	230
As Tested	kPa	230	230	230	230

TEST VEHICLE AXLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Left	kg	419.0	272.5		443.0	326.5		444.0	330.0	
Right	kg	422.0	261.5		418.5	287.0		419.0	293.0	
Ratio	%	61.2%	38.8%	100.0%	58.4%	41.6%	100.0%	58.1%	41.9%	100.0%
Total	kg	841.0	534.0	1375.0	861.5	613.5	1475.0	863.0	623.0	1486.0

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total Delivered Weight (UVW)	kg	1375.0	A
Actual Weight of 1 P572V ATD Used	kg	49.0	B
Rated Cargo/Luggage Wt (RCLW)	kg	59.8	C
Calculated Vehicle Target Wt (TVTW)	kg	1483.8	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)*	°	-1.6	-1.5	-1.5	Yes
Front Passenger Sill Angle (front-to-rear)*	°	-1.4	-1.0	-0.9	Yes
Front Bumper-Line Angle (left-to-right)**	°	0.9	-0.5	-0.5	Yes
Rear Bumper-Line Angle (left-to-right)**	°	0.0	-0.2	-0.4	Yes
Vehicle CG (Aft of Front Axle)	mm	1054	1128	1137	
Vehicle CG (Left (+)/Right (-) from Longitudinal Centerline)	mm	5	34	33	

*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: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Spare Tire	16.0
Trim	3.5
Ballast / Equipment Added	51.0

Test Height Adjustable Setting (If Applicable)	N/A
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DATA SHEET NO. 2

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

Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

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	4.3	0.0	2.1
Front Passenger Seat	Fixed	Fixed	Fixed
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	2.1	195	Max			
			Mid	178	187	195
			Min			
Front Passenger Seat	Fixed	190	Max			
			Mid	175	183	190
			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: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

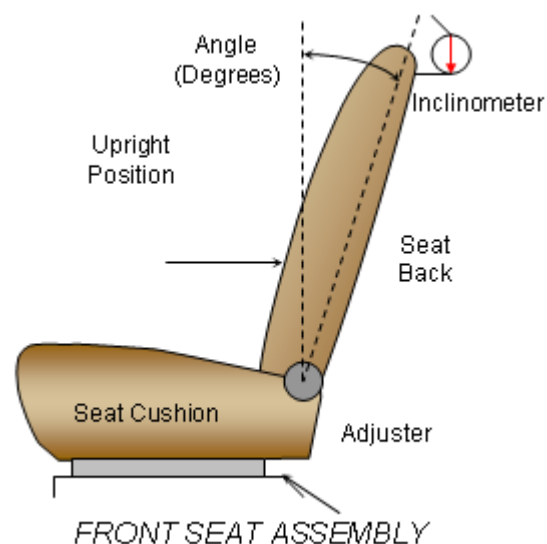
SEAT FORE/AFT POSITION

Seat	Total Fore/Aft Travel		Test Position From Forwardmost Position	
	mm	Detents*	mm	Detent*
Driver Seat	240	25	0	0
Front Passenger Seat	240	25	0	0
Front Center Seat				
Struck Side Rear Seat	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

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 from the headrest post.



Seat	Total Seat Back Angle Range		Test Position from Most Upright	
	Degrees	Detents*	Degree	Detent*
Driver Seat w/Seated Dummy	73.4	40	1.7	6
Front Passenger Seat	73.6	40	1.7	6
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: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210

Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

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	3	Full Down

DATA SHEET NO. 2 ... (CONTINUED)

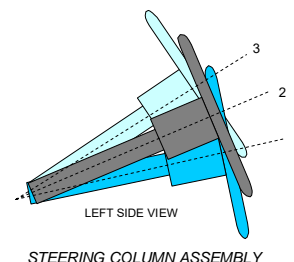
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT, AND FUEL SYSTEM DATA

Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

STEERING COLUMN ADJUSTMENT

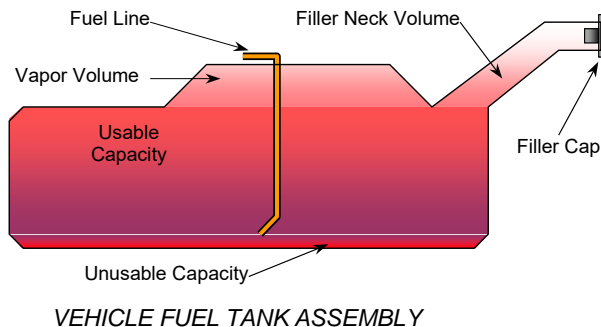
Steering wheel and column adjustments are made so that the steering wheel hub is at the center of the geometric locus it describes when it moves through its full range of motion.

	Degrees	Fore-Aft Position (mm)
Lowermost - Position 1	21.5	90
Geometric Center - Position 2	23.5	110
Uppermost - Position 3	25.5	130
Telescoping Steering Wheel Travel		40
Test Position	23.5	110



FUEL PUMP

The vehicle is equipped with an electronic fuel pump. The fuel pump operates for 1.0 s after the ignition is switched to the "ON" position, while the engine is running, and for 1.5 s after the engine stops.



FUEL TANK CAPACITY

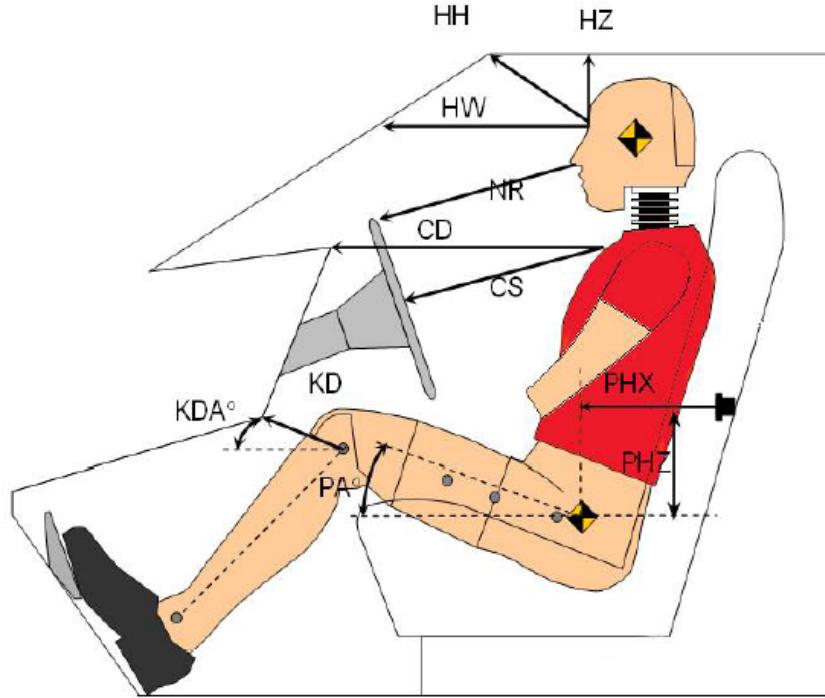
Description	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	46.56
Usable Capacity of "Optional Tank" (see Form No. 1)	
Usable Capacity of "Standard Tank" (see Owner's Manual)	46.56
Usable Capacity of "Optional Tank" (see Owner's Manual)	
93% of Usable Capacity	43.30
Actual amount of Solvent Used in Test	43.30
1/3 of Usable Capacity	15.52

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: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20



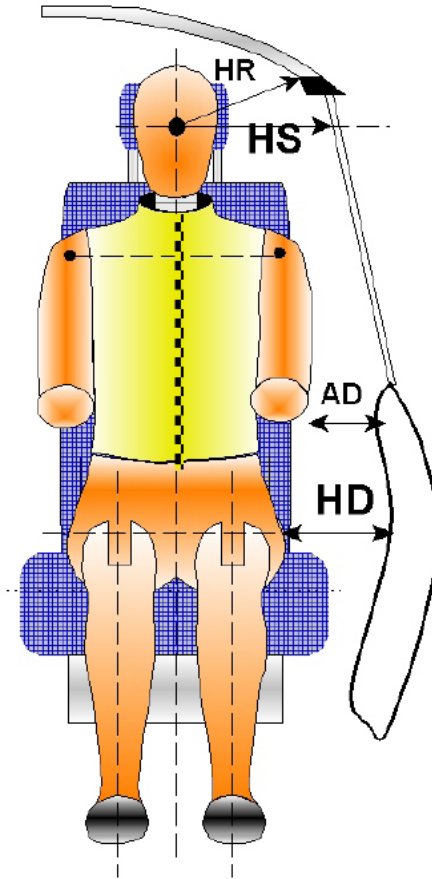
Driver Code	Description	Driver	
		Length (mm)	Angle (°)
HH	Head to Header	270	
HW	Head to Windshield	574	
HZ	Head to Roof	195	
NR	Nose to Rim	253	
CD	Chest to Dash	420	
CS	Chest to Steering Wheel	185	
KD(L)/KDA(L)°	Left Knee to Dash	114	39.2
KD(R)/KDA(R)°	Right Knee to Dash	76	41.5
PAX°	Pelvic Tilt Angle (x-axis)		20.5
PAY°	Pelvic Tilt Angle (y-axis)		0.1
PHX	Hip Point to Striker (x-axis)	365	
PHZ	Hip Point to Striker (z-axis)	152	

DATA SHEET NO. 4

DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210

Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

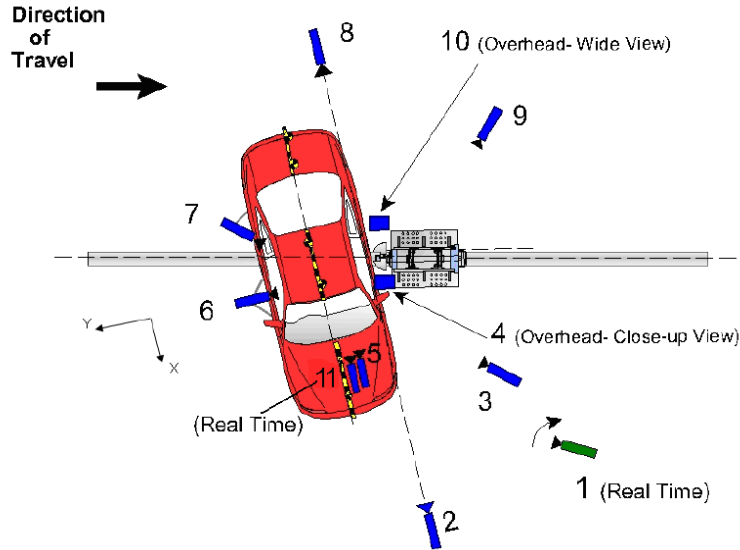


Code	Measurement Description	Units	Driver
HR	Head to Side Header	mm	238
HS	Head to Side Window	mm	390
AD	Arm to Door	mm	140
HD	Hip Point to Door	mm	145

DATA SHEET NO. 5

CAMERA AND INSTRUMENTATION DATA

Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20



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	-0.14	2.63	-1.02	8.5	1000
6	On-Board - Dummy Side View	-1.37	2.60	-1.04	8.5	1000
7	On-Board - Dummy Rear Oblique View	-0.54	4.65	-0.94	8.5	1000
8	Rear Ground Level - Impact View	-6.12	-6.23	-0.96	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	0.99	1.36	-1.28		30

*All measurements accurate to ±6 mm

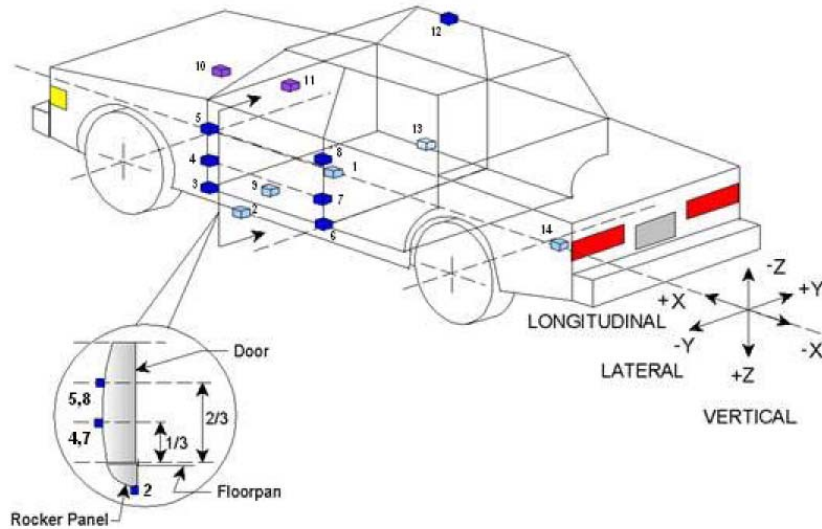
INSTRUMENTATION

Driver Dummy Channels	19
Vehicle Structure Accelerometers	15
Pole Load Cells	8
Total	42

DATA SHEET NO. 6

TEST VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

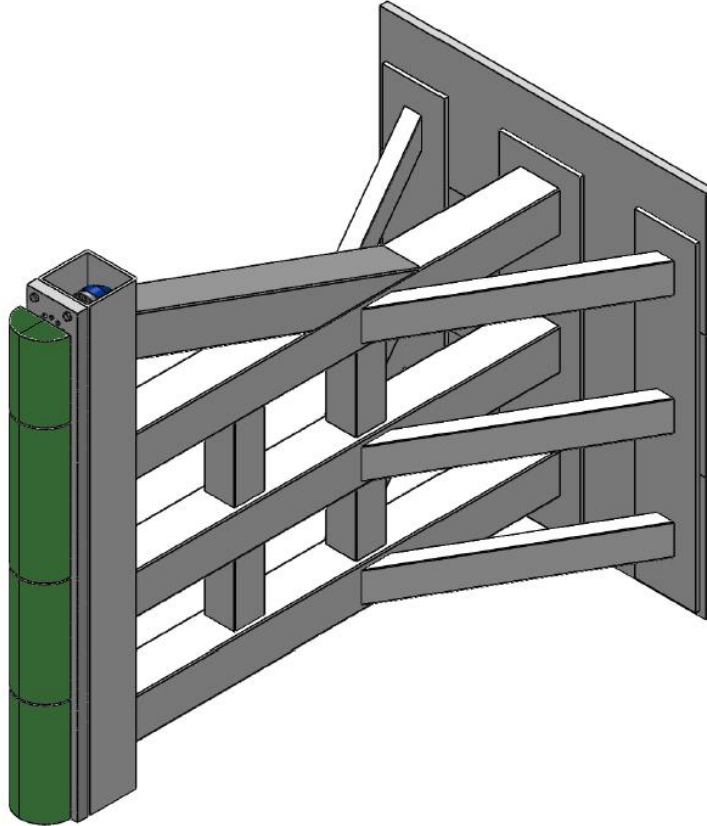


Loc. No.	Sensor Description	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	1890	0	-325
2	Left Floor Sill	2390	-760	-180
3	A-Pillar Sill	3140	-825	-325
4	A-Pillar Low	3140	-825	-530
5	A-Pillar Mid	3140	-825	-795
6	B-Pillar Sill			
7	B-Pillar Low			
8	B-Pillar Mid			
9	Driver Seat Track	2345	-215	-295
10	Engine Top	3750	155	-730
11	Firewall	3550	150	-780
12	Right Roof	2170	480	-1440
13	Right Floor Sill	2060	825	-330
14	Rear Floorpan	920	0	-475

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: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20



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: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

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	Curtain Airbag, Headrest, Seat Back
Left Shoulder	Curtain Airbag, Side Airbag, Door Panel
Upper Torso	Side Airbag, Seat Bolster
Lower Torso	Side Airbag, Seat Bolster
Left Hip	Side Airbag, Seat Bolster, Door Panel
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	N/A	No	N/A
Seat Disengagement from Floor Pan	No	N/A	No	N/A
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: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

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	Left front window broken
Other Notable Effects	None

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Struck Side Driver		Struck Side Rear Passenger	
	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/Pelvis)	Yes	Yes	Yes	Yes
Seat Belt Pretensioner	Yes	Yes	Yes	
Seat Belt Load Limiter	Yes	Yes	Yes	

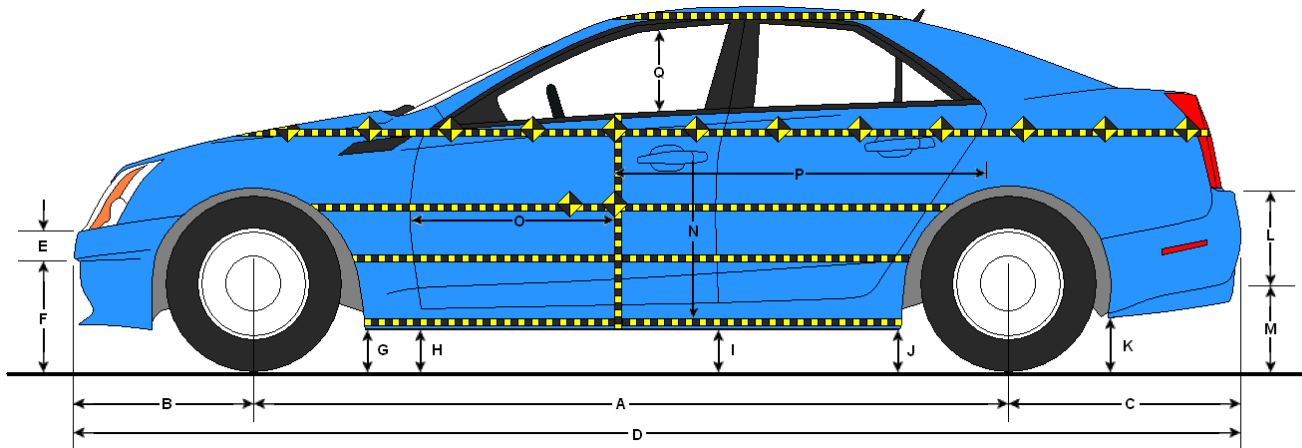
IMPACT POINT LOCATION DATA

Measured Parameter	Units	Tolerance	Value
Vertical Impact Reference Line (Aft of Front Axle)(Intended Impact Point)	mm		1093
Actual Impact Point (Aft of Front Axle)	mm		1103
Horizontal Offset (+ forward / - rearward)	mm	± 38 of Intended Impact Point	-10
Angle Between Vehicle's Longitudinal Centerline and Line of Forward Motion	°	75 ± 3	75.3
Trap No. 1 Velocity (Primary)	km/h	31.4 to 33.0	32.27
Trap No. 2 Velocity (Redundant)	km/h	31.4 to 33.0	32.27

DATA SHEET NO. 9

TEST VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20



LEFT SIDE VIEW

All measurements in mm with tolerance of ± 3 mm

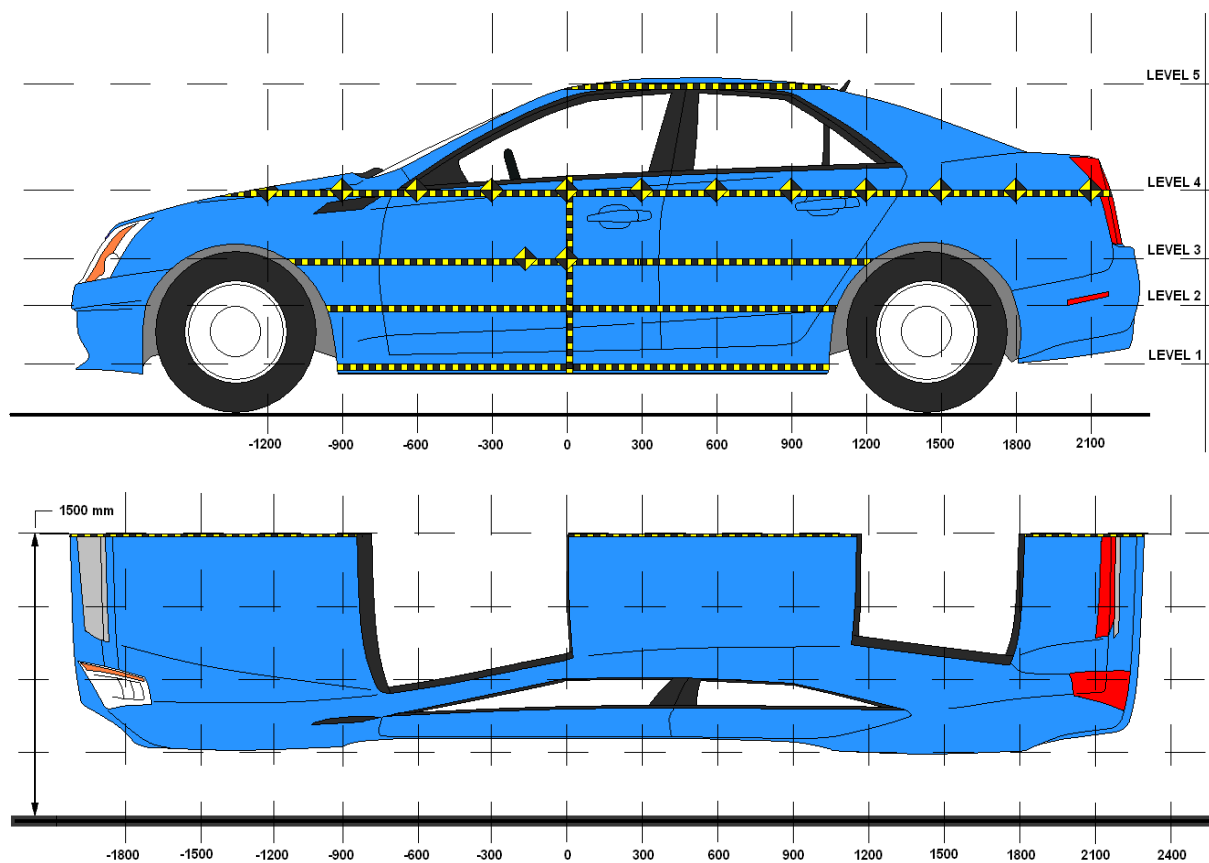
VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

Code	Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2713	2663	-50
B	Front Axle to FSOV	912	936	24
C	Rear Axle to RSOV	1018	1024	6
D	Total Length at Centerline	4637	4623	-14
E	Front Bumper Thickness	194	190	-4
F	Front Bumper Bottom to Ground	285	317	32
G	Sill Height at Front Wheel Well	198	203	5
H	Sill Height at Front Door Leading Edge	204	209	5
I	Sill Height at B-Pillar	233	242	9
J1	Sill Height at Rear Wheel Well	245	261	16
J2	Pinch Weld Height at Rear Wheel Well	194	202	8
K	Sill Height Aft of Rear Wheel Well	447	456	9
L	Rear Bumper Thickness	144	144	0
M	Rear Bumper Bottom to Ground	474	480	6
N	Sill Height to Bottom of Front Window Sill	636	682	46
O	Front Door Leading Edge to Impact CL	263	533	270
P	Rear Door Trailing Edge to Impact CL	1865	1479	-386
Q	Front Window Opening	373	381	8
R	Right Side Length	3189	3197	8
S	Left Side Length	3189	3135	-54
T	Vehicle Width at B-Pillar	1806	1714	-92

DATA SHEET NO. 10

TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20



NOTE: All measurements in mm with tolerance of ± 3 mm

MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Description	Height Above Ground (mm)	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	248	248	0
2	Occupant H-Point	525	285	0
3	Mid-Door	636	297	0
4	Window Sill	892	257	150
5	Window Top	1375	108	0

DATA SHEET NO. 10 ... (CONTINUED)

TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

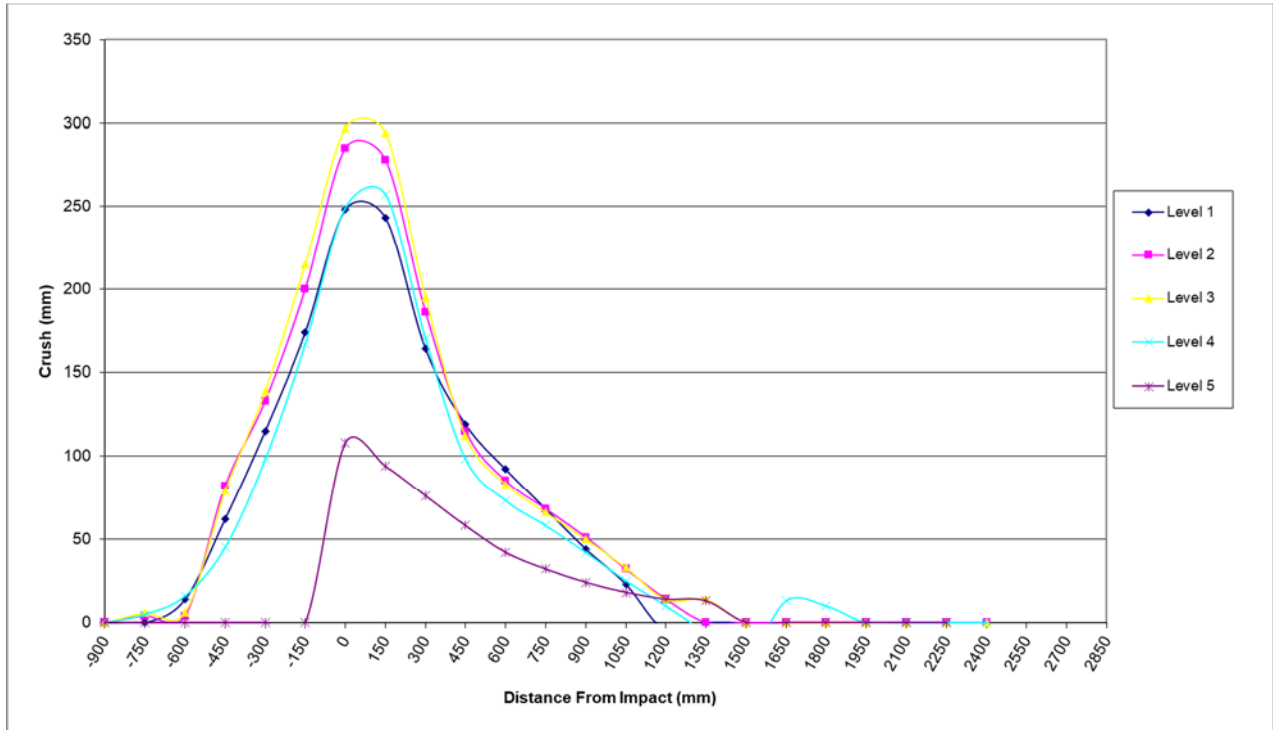
Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
 Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

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															
-750		596	600	694			600	606	699			4	6	5	
-600	631	604	609	685		645	608	615	701		14	4	6	16	
-450	635	610	610	679		697	692	689	724		62	82	79	45	
-300	634	610	607	672		749	743	746	770		115	133	139	98	
-150	631	608	605	668		805	808	820	835		174	200	215	167	
0	629	606	603	663	886	877	891	900	912	994	248	285	297	249	108
150	626	605	601	658	907	869	883	895	915	1001	243	278	294	257	94
300	625	604	600	654	909	789	790	795	824	985	164	186	195	170	76
450	624	604	600	652	913	743	719	712	750	971	119	115	112	98	58
600	623	602	599	651	916	715	687	682	724	958	92	85	83	73	42
750	623	603	601	650	917	691	671	667	708	949	68	68	66	58	32
900	624	604	603	646	919	668	655	653	688	943	44	51	50	42	24
1050	622	600	602	642	922	645	632	635	667	940	23	32	33	25	18
1200	615	594	597	638	926	610	608	611	648	940	-5	14	14	10	14
1350			594	609	933			608	603	946			14	-6	13
1500				635					614						-21
1650				637					650						13
1800				647					657						10
1950															
2100															
2250															
2400															
2550															
2700															
2850															

DATA SHEET NO. 10 ... (CONTINUED)
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210
Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

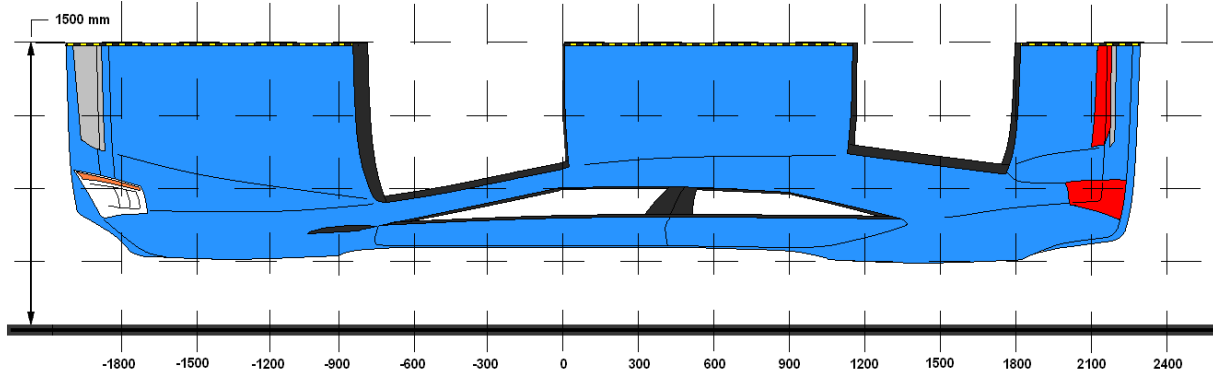


DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210

Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20



DPD	Distance From Impact Point (mm)	Level	Pre-Test (mm)	Post-Test (mm)	Crush (mm)
1	1800	4	647	657	10
2	1200	2	594	608	14
3	750	1	623	691	68
4	300	3	600	795	195
5	-150	3	605	820	215
6	-750	3	600	606	6

DATA SHEET NO. 12

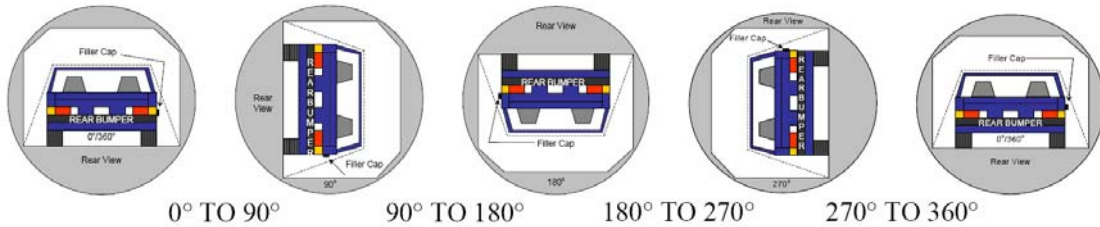
FMVSS NO. 301 STATIC ROLLOVER RESULTS

Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210

Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20

Temperature at Time of Impact: 28.9° C Test Time: 3:08 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°	86	300	386
90° To 180°	78	300	378
180° To 270°	77	300	377
270° To 360°	82	300	382

FMVSS 301 SPILLAGE TABLE

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

SOLVENT SPILLAGE LOCATION TABLE

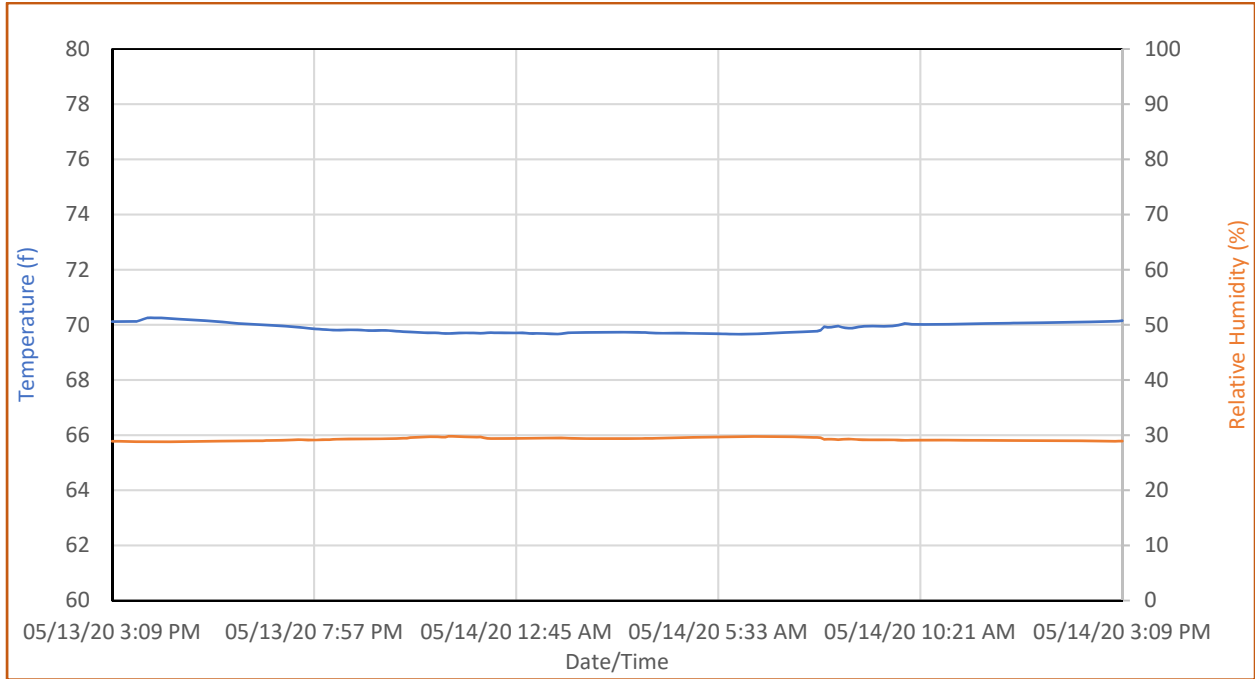
Test Phase	Spillage Location
0° To 90°	No Spillage Occurred
90° To 180°	No Spillage Occurred
180° To 270°	No Spillage Occurred
270° To 360°	No Spillage Occurred

DATA SHEET NO. 13

DUMMY/VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION

Test Vehicle: 2020 Nissan Sentra 4-Door Sedan NHTSA No. M20205210

Test Program: NCAP Side Pole Impact Test Test Date: 05/14/20



**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 $\frac{3}{4}$ View of Test Vehicle



FIGURE 6. Post-Test Left Front $\frac{3}{4}$ 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

Photograph Not Available

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

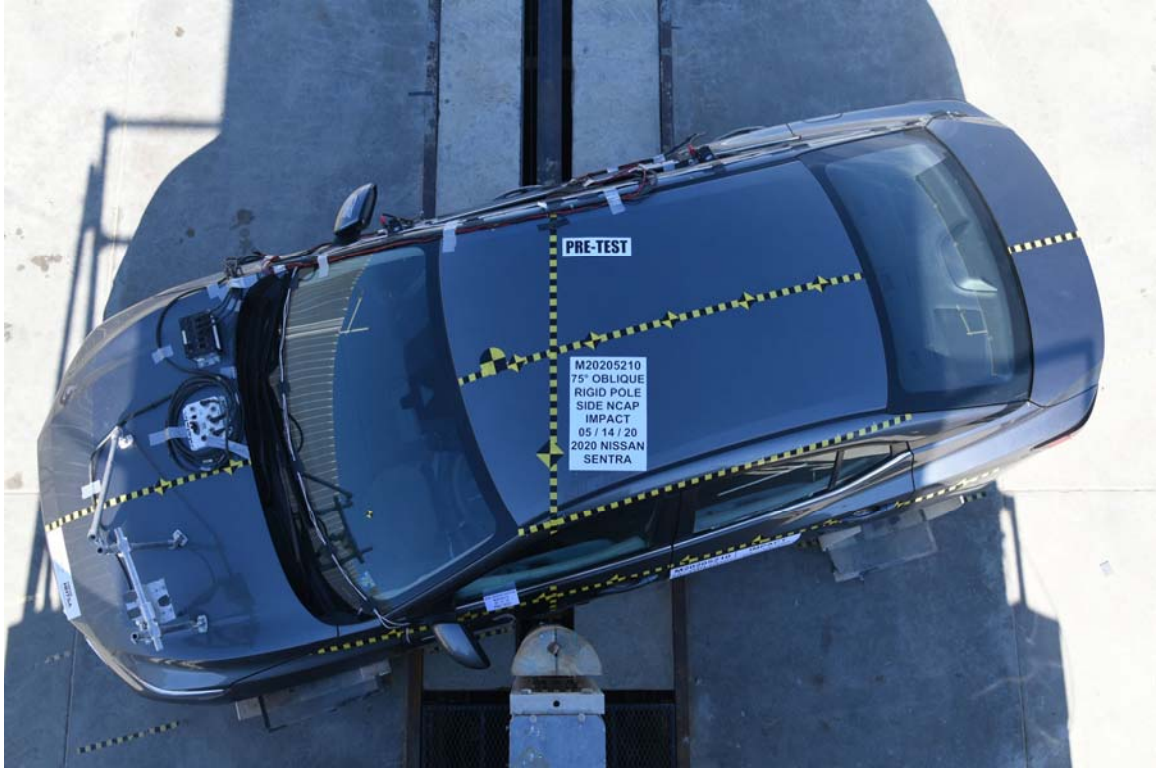


FIGURE 15. Pre-Test Overhead View of Test Area

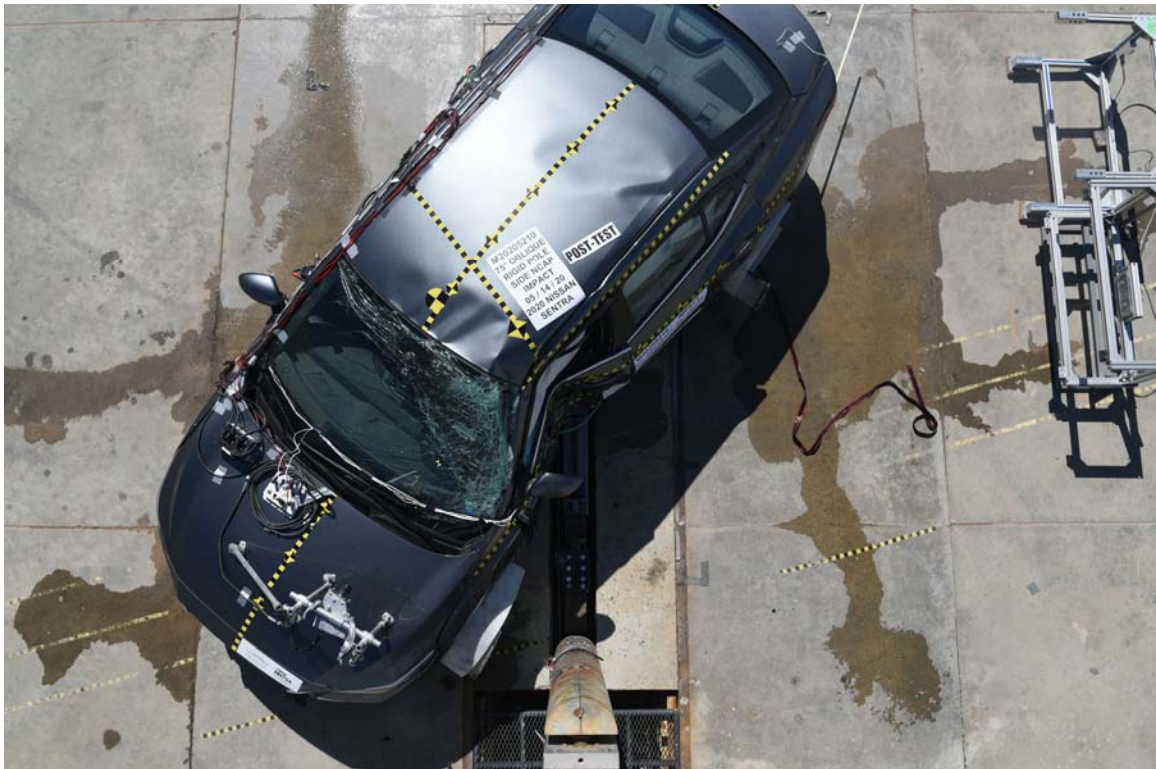


FIGURE 16. Post-Test Overhead View of Test Area



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

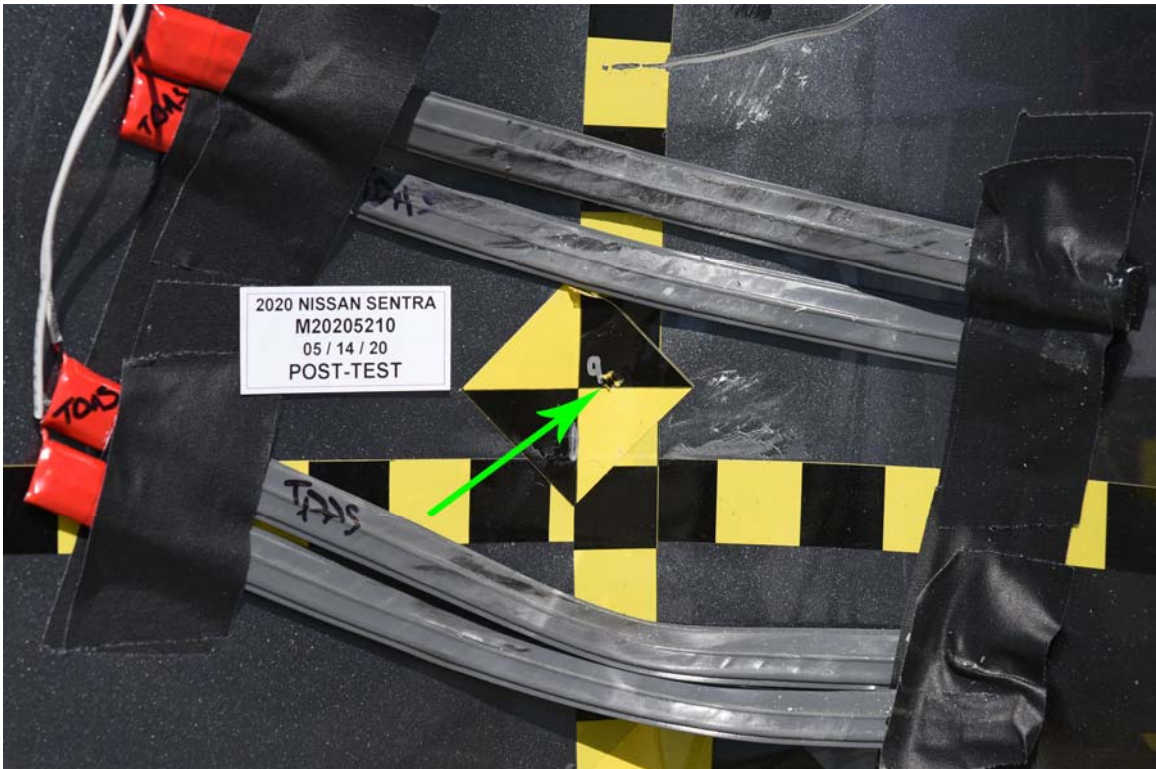


FIGURE 20. Post-Test Close-Up View of Impact Point Target Showing Impact Location



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

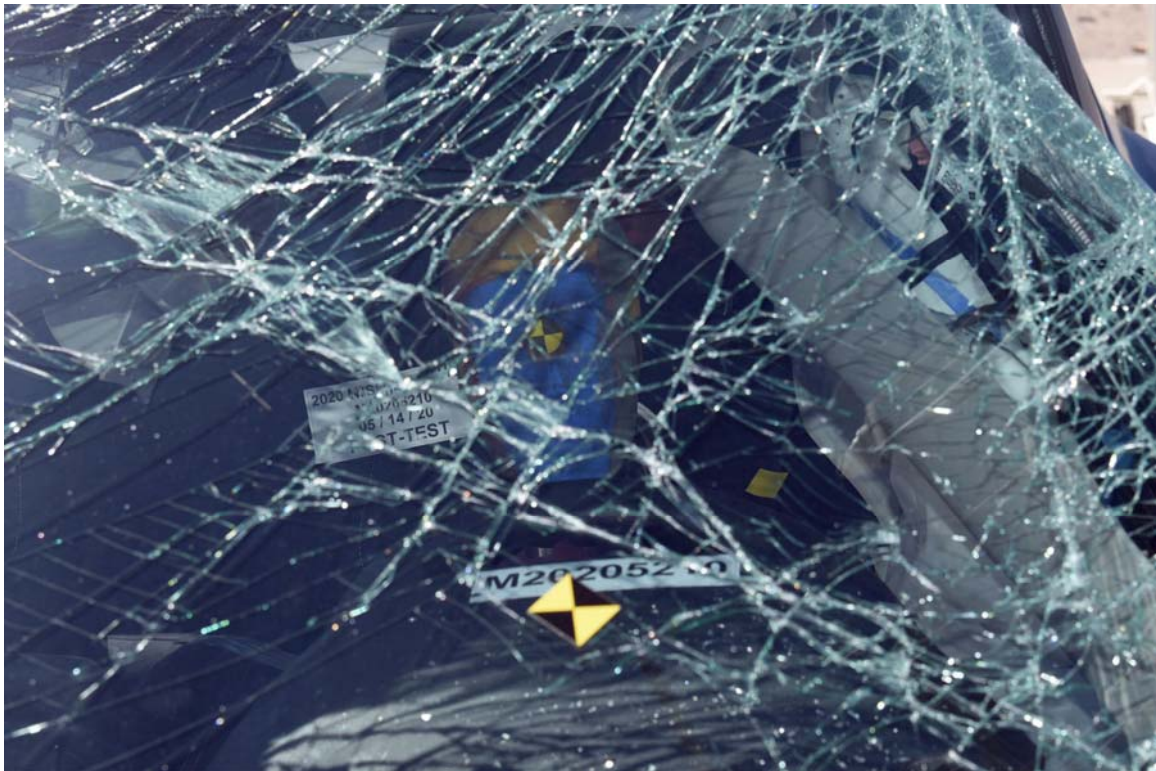


FIGURE 22. Post-Test Front Close-Up View of Dummy



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

Photograph Not Available

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

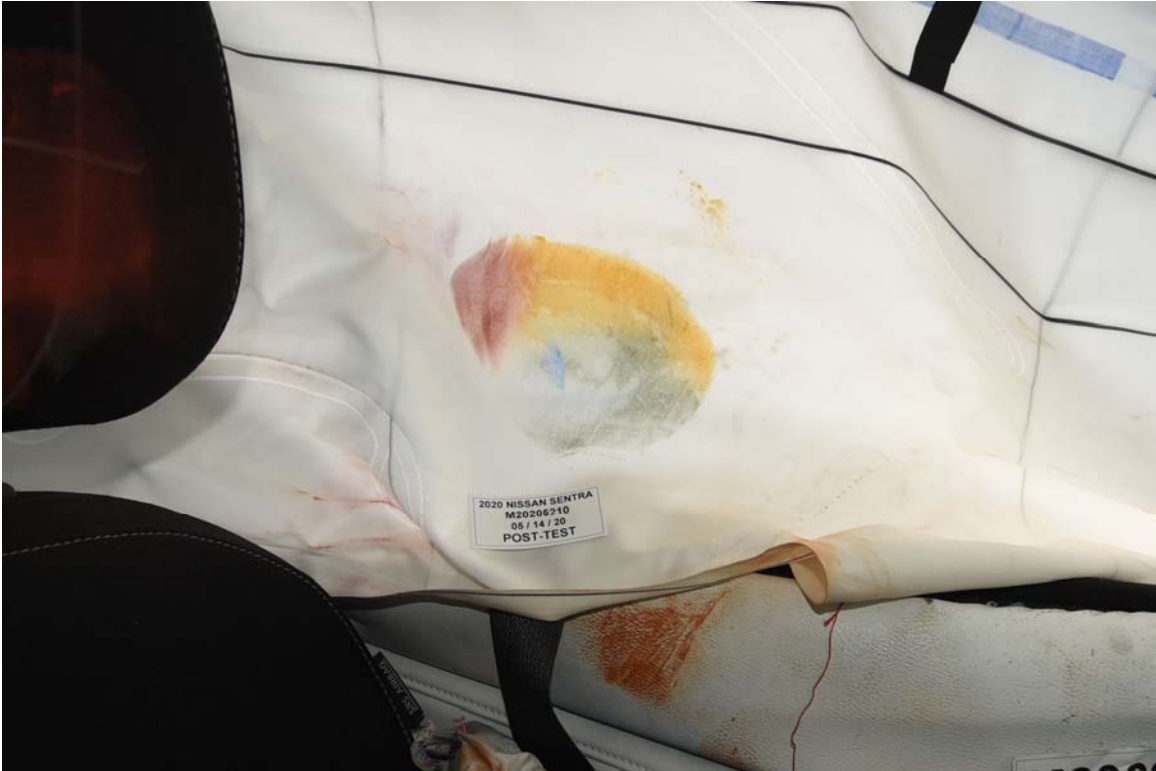


FIGURE 47. Post-Test Dummy Close-Up Head Contact With Side Airbag View



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



FIGURE 54. Post-Test View of Fuel Filler Cap or Fuel Filler Neck



FIGURE 55. Close-Up View of Vehicle's Certification Label



FIGURE 56. Close-Up View of Vehicle's Tire Information Placard or Label



FIGURE 57. Pre-Test Pole Barrier Front View



FIGURE 58. Post-Test Pole Barrier Front View



FIGURE 59. Pre-Test Pole Barrier Side View



FIGURE 60. Post-Test Pole Barrier Side View



FIGURE 61. Pre-Test Ballast View



FIGURE 62. Post-Test Primary and Redundant Speed Trap Read-Out



FIGURE 63. FMVSS No. 301 Static Rollover 0 Degrees



FIGURE 64. FMVSS No. 301 Static Rollover 90 Degrees



FIGURE 65. FMVSS No. 301 Static Rollover 180 Degrees

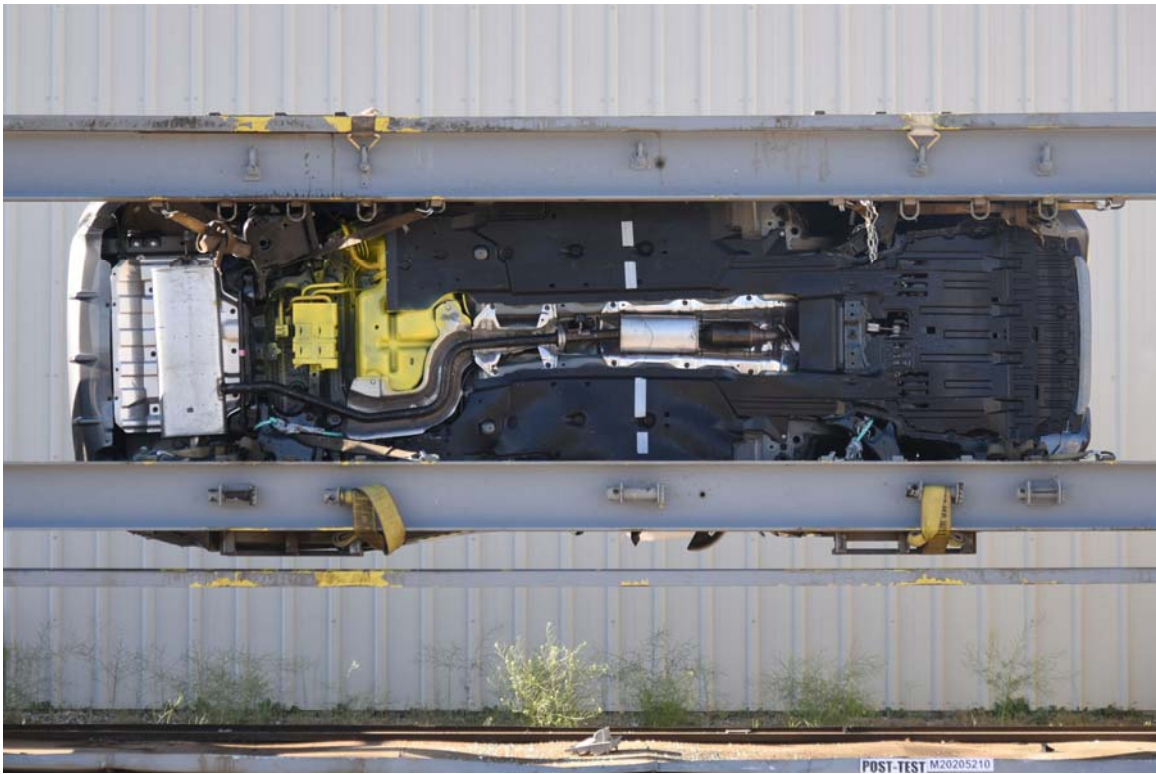


FIGURE 66. FMVSS No. 301 Static Rollover 270 Degrees



FIGURE 67. FMVSS No. 301 Static Rollover 360 Degrees



FIGURE 68. Impact Event



2020 NISSAN SENTRA 2.0 S CVT

Scan QR code for general model information & options

Manufacturer's Suggested Retail Base Price: \$19,090.00

Options Included by Manufacturer: SPLASH GUARDS 200.00, CARPETED FLOOR MATS WITH TRUNK MAT 209.00

DESTINATION CHARGES: \$25.00

Total* \$20,428.00

Fuel Economy and Environment

33 MPG combined city/hwy

29 city 39 highway

3.0 gallons per 100 miles

You Save \$1,250 in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost \$1,250

Fuel Economy & Greenhouse Gas Rating (EPA est.) Smog Rating (EPA est.)

7 / 10

The vehicle emits 288 grams CO₂ per mile. The best emits 0 grams per mile (airplane only). Producing and distributing fuel also create emissions. Learn more at fuelconomy.gov

GOVERNMENT 5-STAR SAFETY RATINGS

Overall Vehicle Score: **Not Rated**

Frontal Crash: **Not Rated**

Driver Passenger: **Not Rated**

Side Crash: **Not Rated**

Front seat: **Not Rated**

Rear seat: **Not Rated**

Rollover: **Not Rated**

Star ratings range from 1 to 5 stars (*****) with 5 being the highest.

Source: National Highway Traffic Safety Administration (NHTSA)

www.safercar.gov or 1-888-327-4236

This Vehicle qualifies for Nissan's **Security+Plus Extended Protection Plan**

The only service agreement backed by Nissan Extended Services (North America)

Ask your dealer for details, or call 1-800-NISSAN-1 for more information

Standard Equipment Included at No Extra Charge

MECHANICAL & PERFORMANCE

2.0 Liter CO₂ & Cylinder Engine
149 Horsepower & 146 lb-ft Torque
Xtronic CVT™
Dual-Pinion Electric Power Steering (DP-EPS)
Active Understeer Control (AUC)
Independent Strut Front and Multi-link Rear Suspension
Intelligent Trac Control (ITC)
Intelligent Ride Control (IRC)

SAFETY AND SECURITY

Automatic Emergency Braking w/ Pedestrian Detection (AEB w/ Ped.)
Intelligent Forward Collision Warning (i-FCW)
Rear Automatic Braking (RAB)
Blind Spot Warning (BSW)
Rear Cross Traffic Alert (RCTA)
Intelligent Driver Alertness (i-DA)
Lane Departure Warning (LDW) w/ Haptic Steering Wheel
High Beam Assist (HBA)
Rear Door Alert
RearView Monitor
Nissan Advanced Air Bag System (AABS) w/ Dual-Stage Supplemental Driver and Passenger Front Airbags
Roof-mounted Curtain Side-impact and Rollover Supplemental Air Bags
Seat-mounted Driver and Front-passenger Side-impact Supplemental Air Bags
Seat-mounted Rear Outboard Side-impact Supplemental Air Bags
Driver and Passenger Supplemental Knee Air Bags
Front Seat Belts w/ Pretensioners and Load Limiters
Height Adjustable Front Seats
Anti-lock Braking System (ABS)
Electronic Brake Force Distribution (EBD)
Vehicle Dynamic Control System (VDC)
Traction Control System (TCS)
Tire Pressure Monitoring System (TPMS) and Easy Fill Tire Alert
LATCH System (Lower Anchors and Tethers for Children)
Nissan Vehicle Immobilizer System

COMFORT & CONVENIENCE

Remote Keyless Entry w/ Push Button Ignition
Power Windows w/ Driver's One-Touch Auto Up/Down Feature
Power Door Locks w/ Speed Sensing Auto-Lock Feature
Cruise Control
Manual Tilt and Telescoping Steering Column
Intelligent Auto Headlamps
Rear Window Defogger w/ Timer

AUDIO AND ENTERTAINMENT

7" Color Touch-Screen Display
Bluetooth® Hands-free Phone System+ Streaming Audio via Bluetooth®
(1) Front USB port (Type A) for compatible iPod™, iPad™ and other devices+ Hands-Free Text Messaging Assistant+ Split Eyes Free+ Voice Recognition+ 4.2 Multi-Information Display +

EXTERIOR

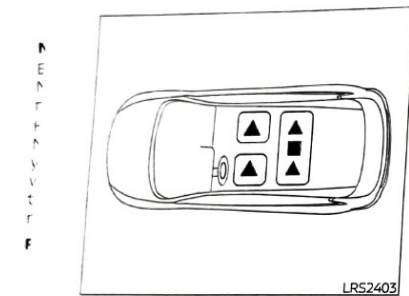
18" Steel Wheels w/ Full Wheel Covers
Front Disc/Rear Drum Brakes
205/55R16 All-Season Tires
Halogen Headlamps w/ Chrome Signature

INTERIOR

6-Way Manual Driver's Seat
60/40 Split Folding rear bench seat

*For more information, see dealer, owner's manual, or www.NissanUSA.com/connect/important-information
**Optional Equipment Replaces Standard Features

FIGURE 69. Monroney Label



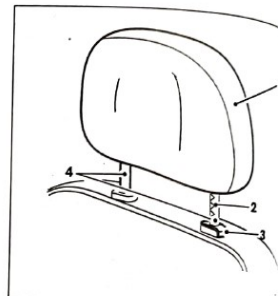
1-8 Safety-Seats, seat belts and supplemental restraint system

The illustration shows the seating positions equipped with head restraints/headrests.

- ▲ Indicates the seating position is equipped with a head restraint.
- Indicates the seating position is equipped with a headrest.
- + Indicates the seating position is not equipped with a head restraint or headrest (if applicable).

Your vehicle is equipped with a head restraint/headrest that may be integrated, adjustable or non-adjustable.

- Adjustable head restraints/headrests have multiple notches along the stalk(s) to lock them in a desired adjustment position.
- The non-adjustable head restraints/headrests have a single locking notch to secure them to the seat frame.
- Proper Adjustment:
 - For the adjustable type, align the head restraint/headrest so the center of your ear is approximately level with the center of the head restraint/headrest.
 - If your ear position is still higher than the recommended alignment, place the head restraint/headrest at the highest position.
- If the head restraint/headrest has been removed, ensure that it is reinstalled and locked in place before riding in that designated seating position.



ADJUSTABLE HEAD RESTRAINT/HEADREST COMPONENTS

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

FIGURE 70. Head Restraint Use and Adjustment Information from Vehicle Owner's Manual

Photograph Not Applicable

FIGURE 71. 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 Upper Thorax Rib Deflection (Y)	B-3
10	Driver Middle Thorax Rib Deflection (Y)	B-3
11	Driver Lower Thorax Rib Deflection (Y)	B-3
12	Driver Upper Abdomen Rib Deflection (Y)	B-3
13	Driver Lower Abdomen Rib Deflection (Y)	B-4
14	Driver Acetabulum Force on Impact Side (Y)	B-4
15	Driver Iliac Wing Force on Impact Side (Y)	B-4
16	Driver Total Pelvis Force on Impact Side (Y)	B-4

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)

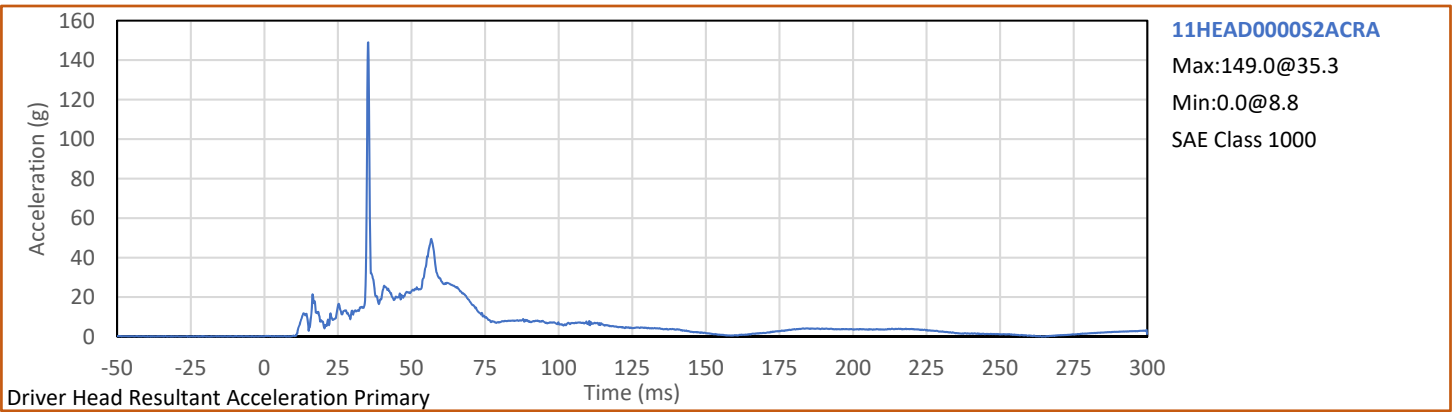
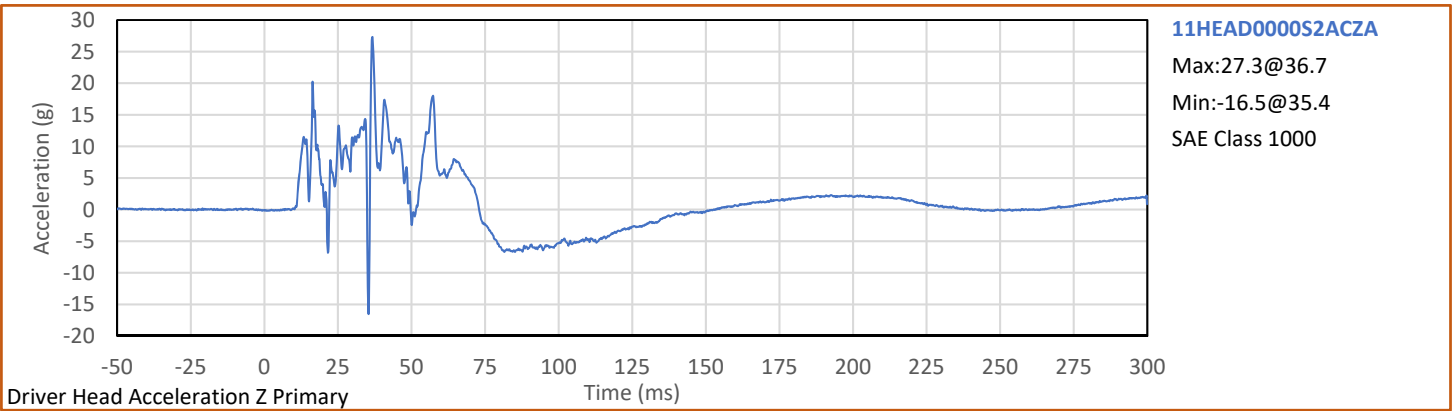
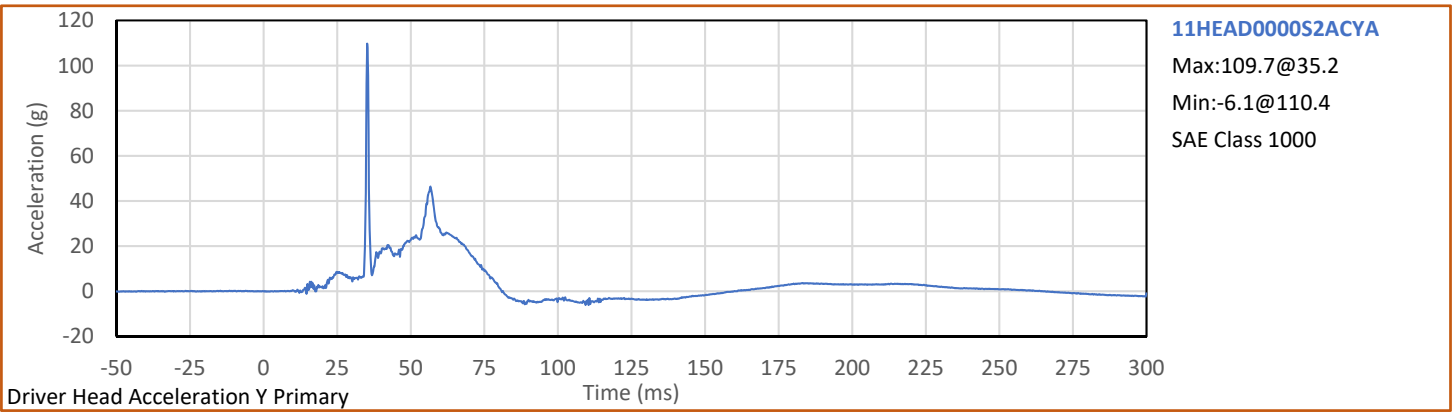
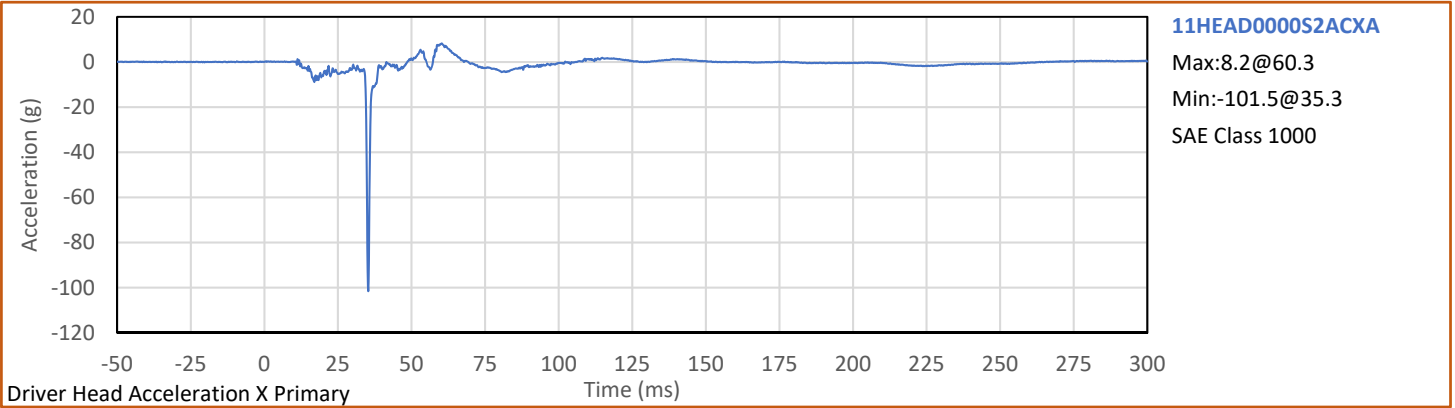
Test Vehicle: 2020 Nissan Sentra 4-Door Sedan

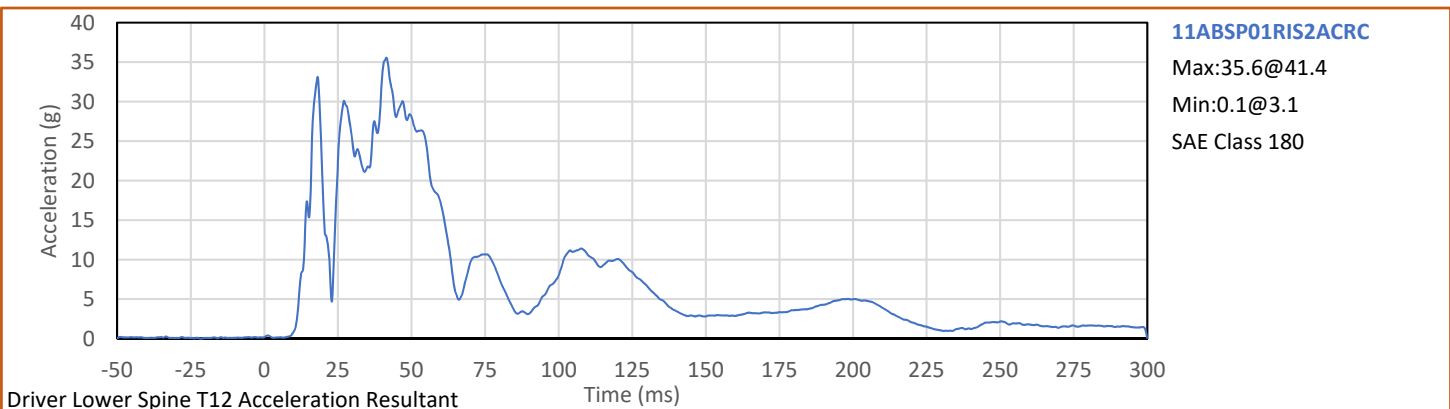
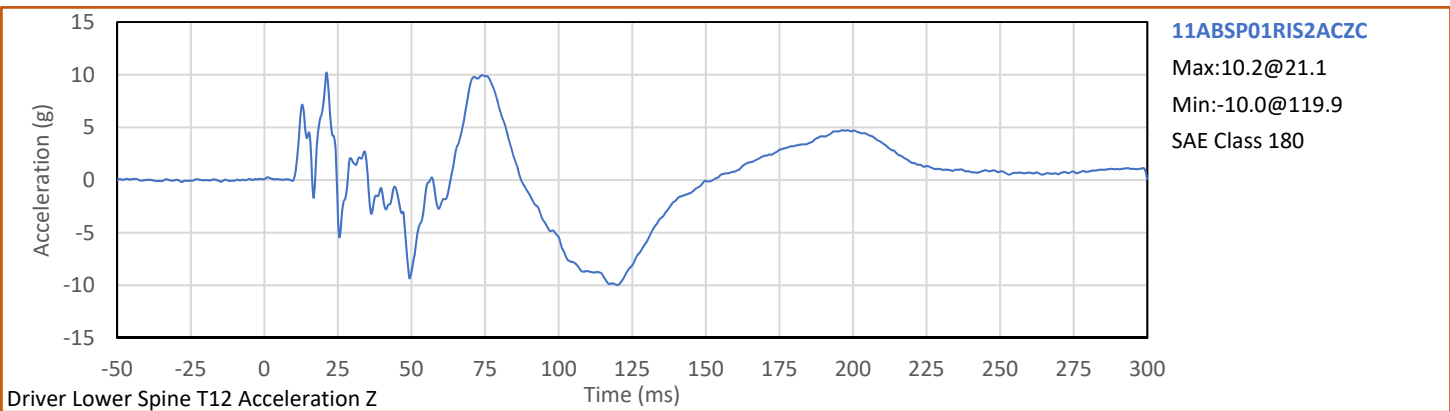
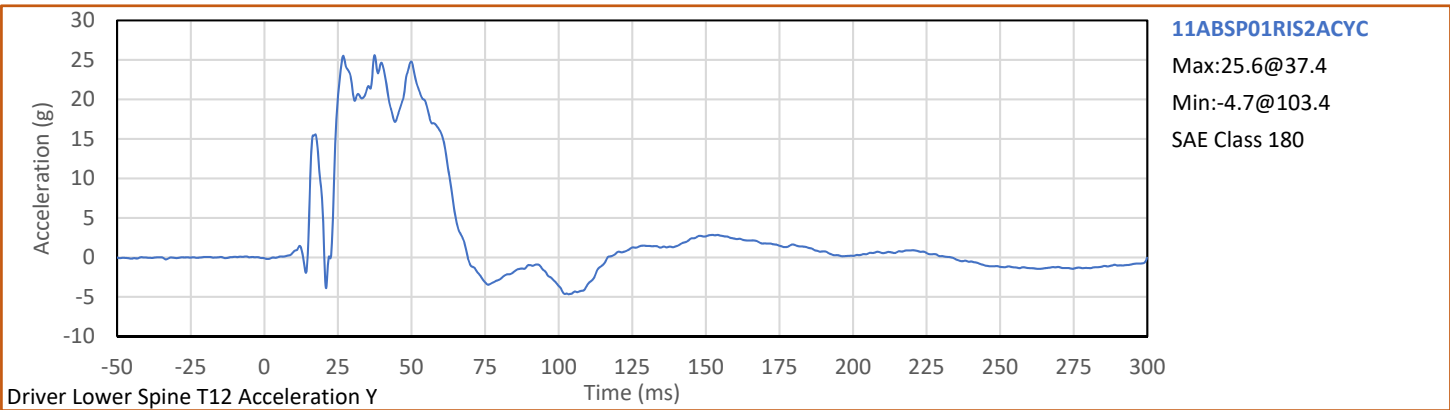
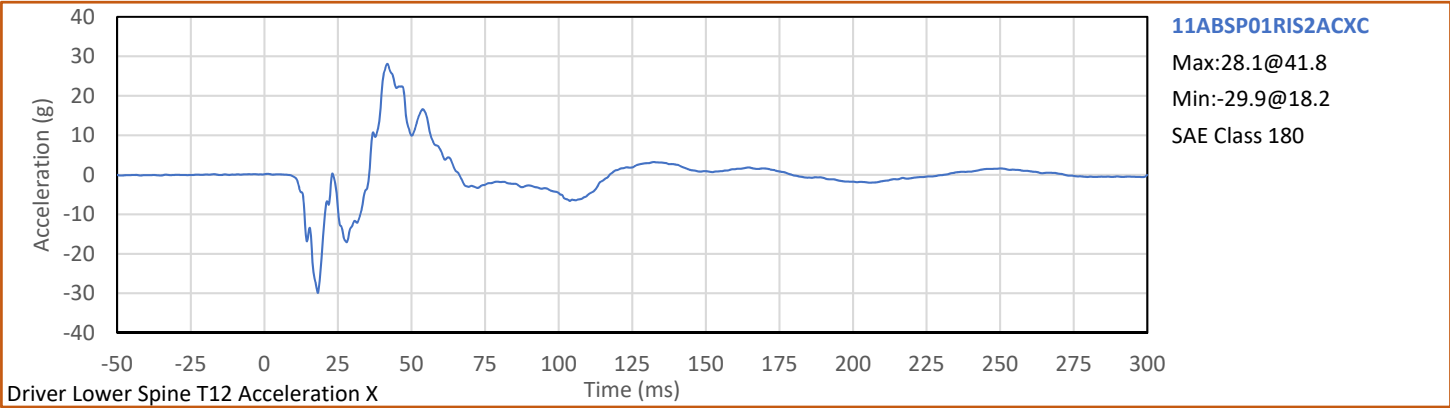
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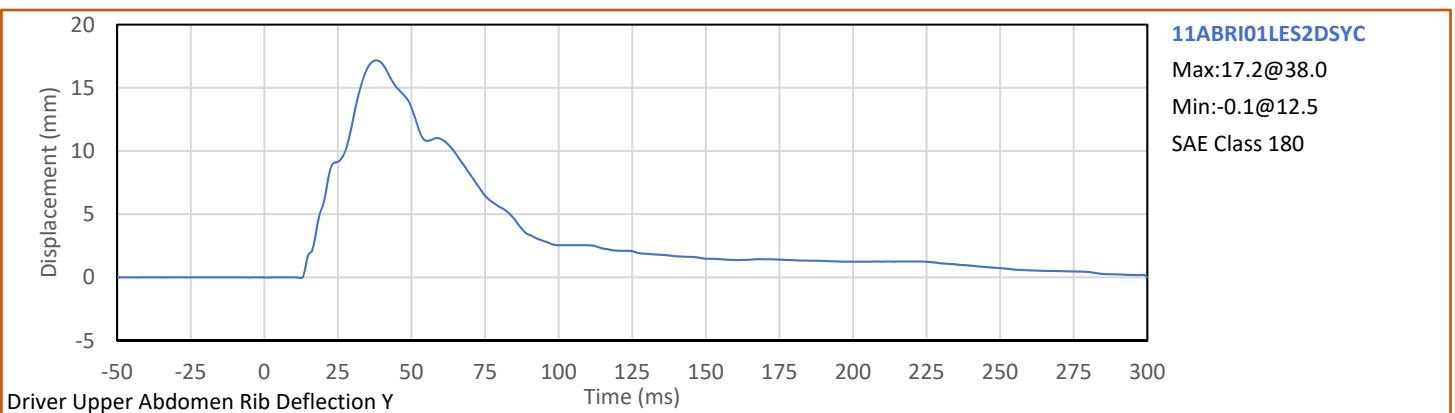
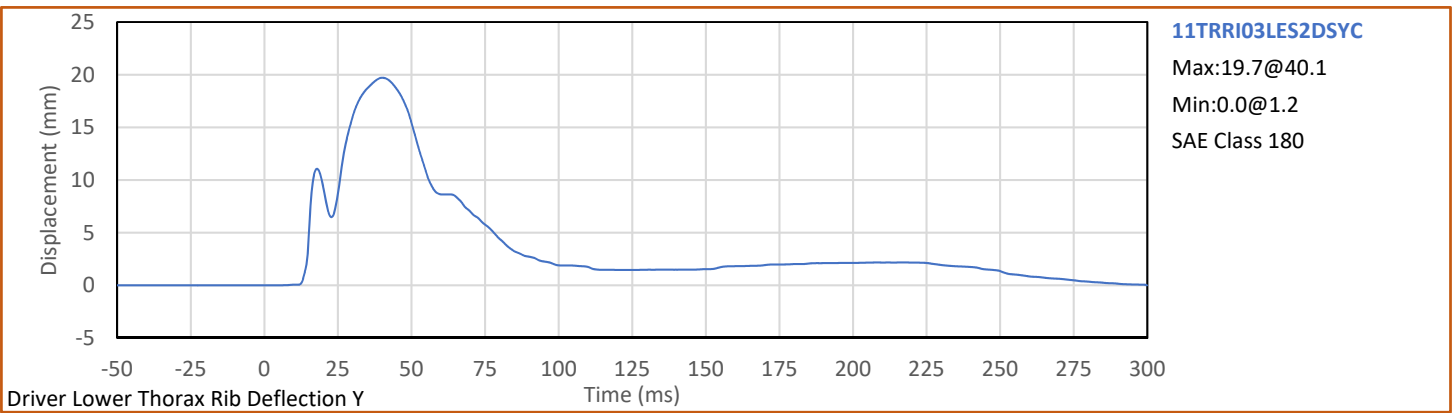
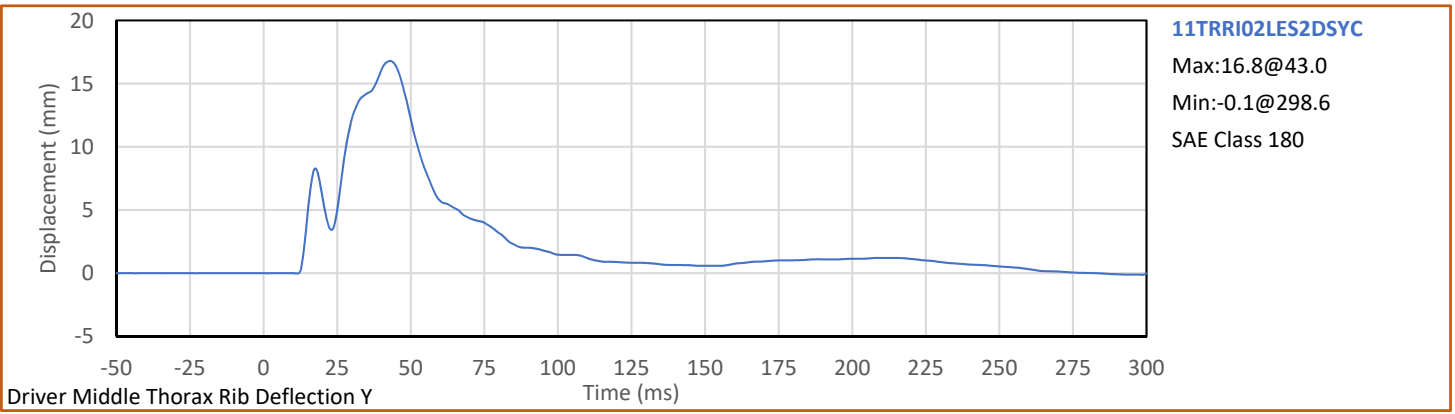
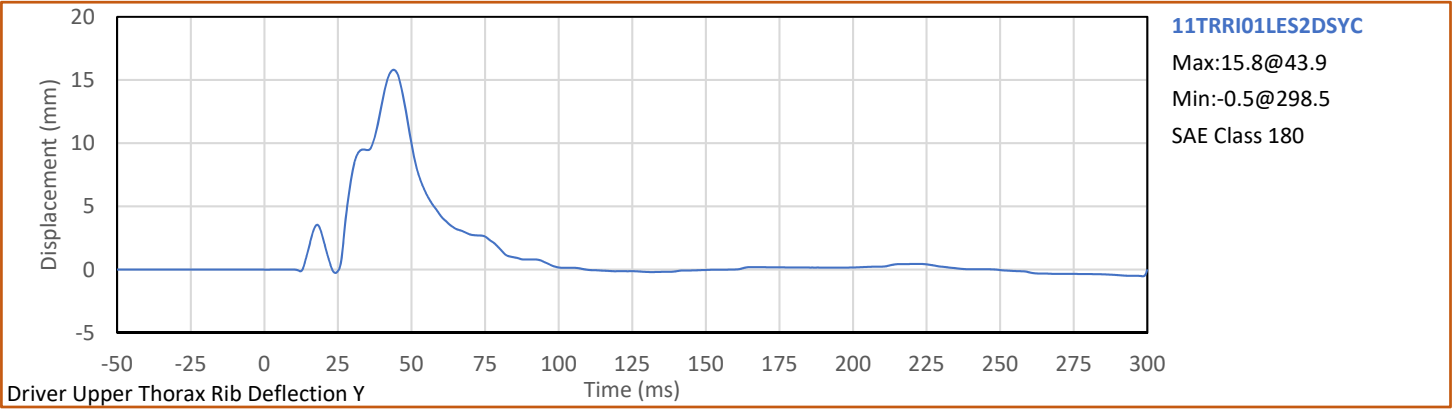


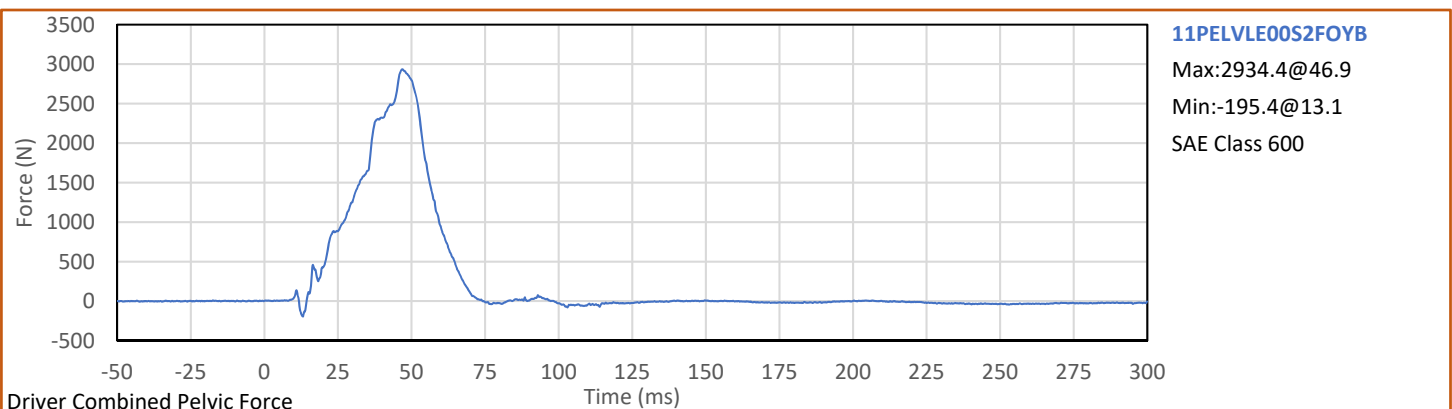
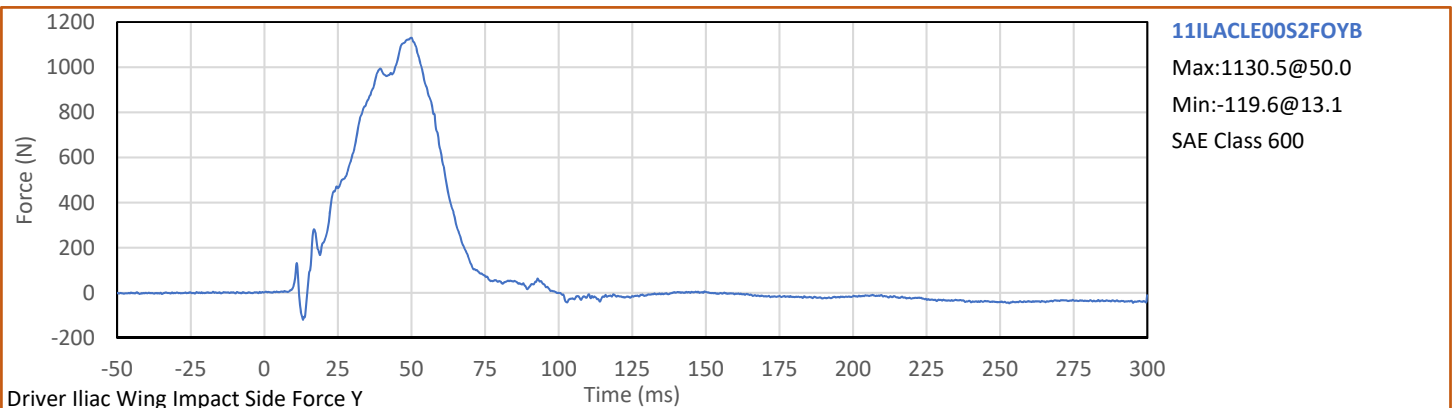
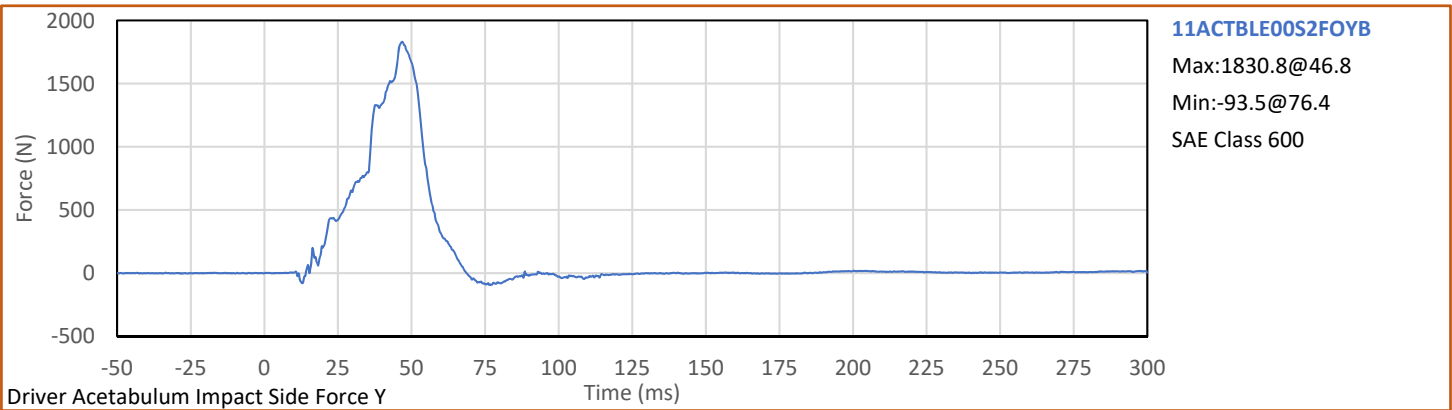
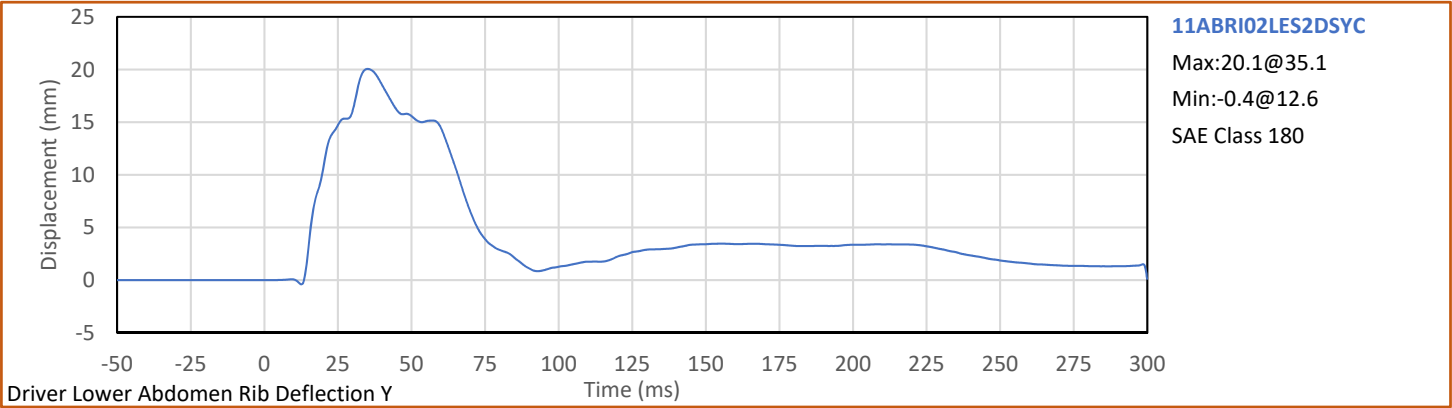
Test Program: NCAP Side Pole Impact Test

Test Date: 5/14/2020









APPENDIX C
ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA

APPENDIX C
Pre-Test ATD Qualification and Performance Verification
SID-IIs Small Side Impact ATD
S/N: 308

ATD Serial No.: 308

Test Date: 2020-04-22

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	37	Pass
A - Sitting Height	mm	772	788	784	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	104	Pass
F - Thigh Clearance	mm	119	135	128	Pass
G - Head Breadth	mm	140	148	143	Pass
H - Head Back From Backline	mm	40	46	44	Pass
I - Head Depth	mm	178	188	182	Pass
J - Head Circumference	mm	541	551	544	Pass
K - Buttock To Knee Length	mm	514	540	527	Pass
L - Popliteal Height	mm	343	369	347	Pass
K - Knee Pivot To Floor Height	mm	392	409	401	Pass
N - Buttock Popliteal Length	mm	416	442	430	Pass
O - Chest Depth W/O Jacket	mm	195	211	209	Pass
P - Foot Length	mm	216	232	225	Pass
Q - Hip Breadth (W/Pelvic Plugs)	mm	313	323	321	Pass
R - Arm Length	mm	249	259	257	Pass
S - Knee Joint To Seatback	mm	477	493	488	Pass
V - Shoulder Width	mm	341	357	345	Pass
W - Foot Width	mm	78	94	81	Pass
Y - Chest Circumference W/Jacket	mm	851	881	869	Pass
Z - Waist Circumference	mm	761	791	775	Pass
Overall Test Results					Pass

Technician:



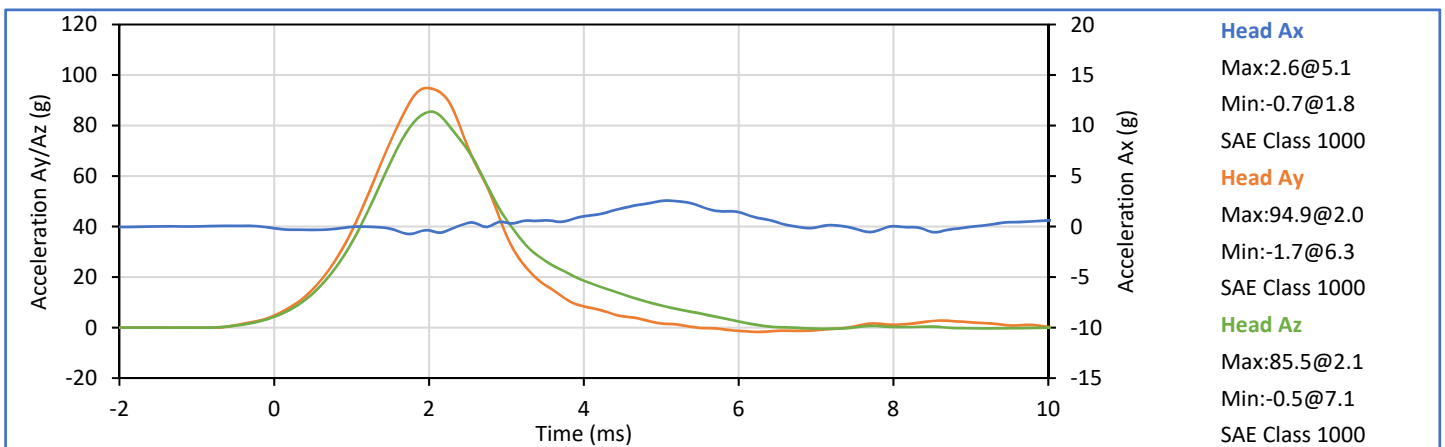
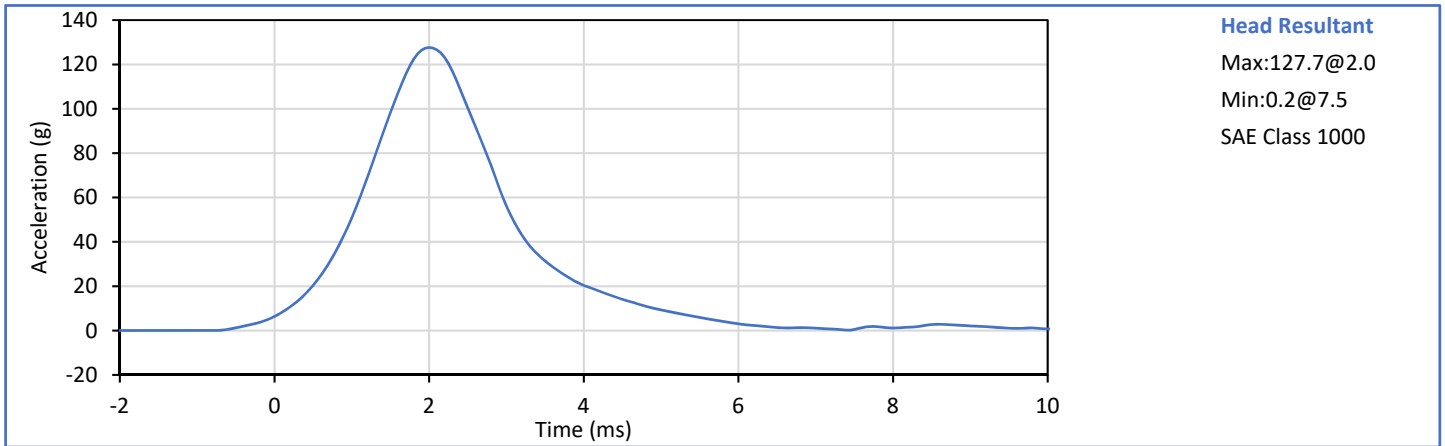
J. Hernandez


Approved By:




P. Puzuto

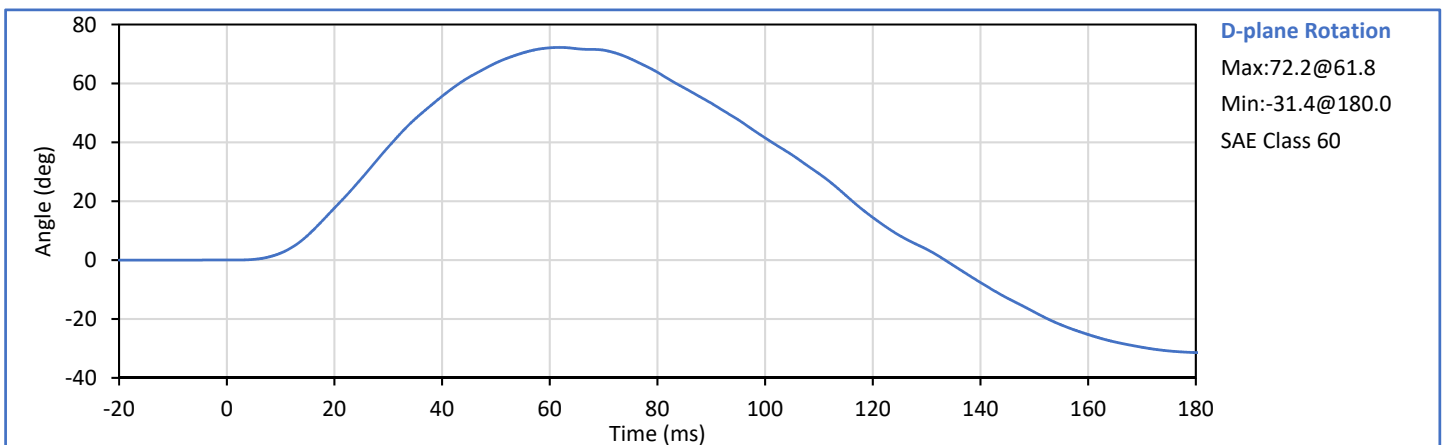
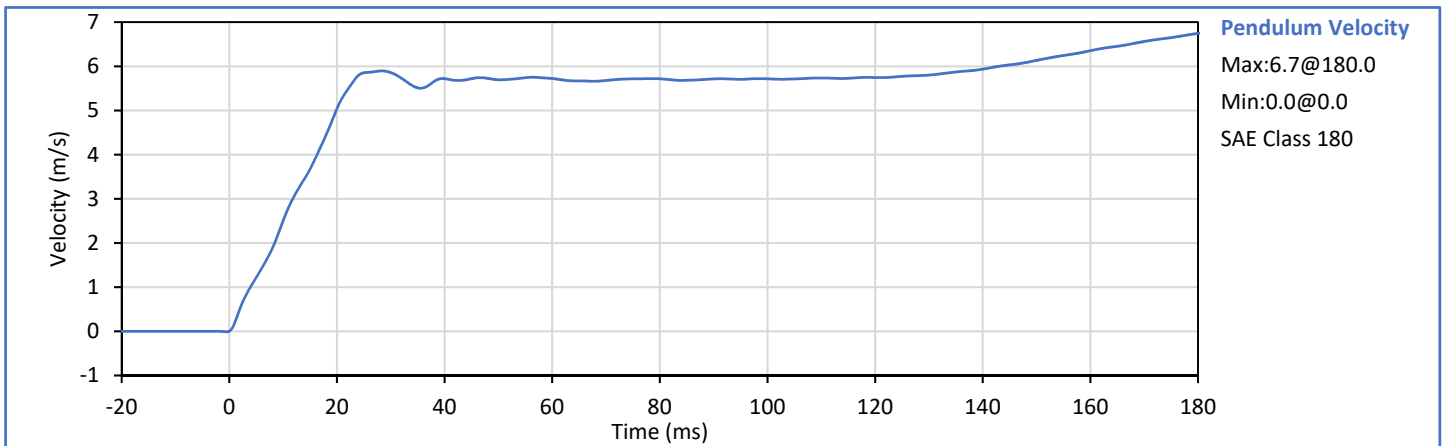
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.2	Pass
Laboratory Humidity	%	10	70	40	Pass
Peak Resultant Acceleration	g	115.0	137.0	127.7	Pass
Peak Head Ax	g	-15.0	15.0	-0.7	Pass
Oscillations After Main Pulse	%	0.0	15.0	2.4	Pass
Is Acceleration Unimodal?	Yes/No	Yes		Yes	Pass
Overall Test Results					Pass





Technician: 
J. Hernandez

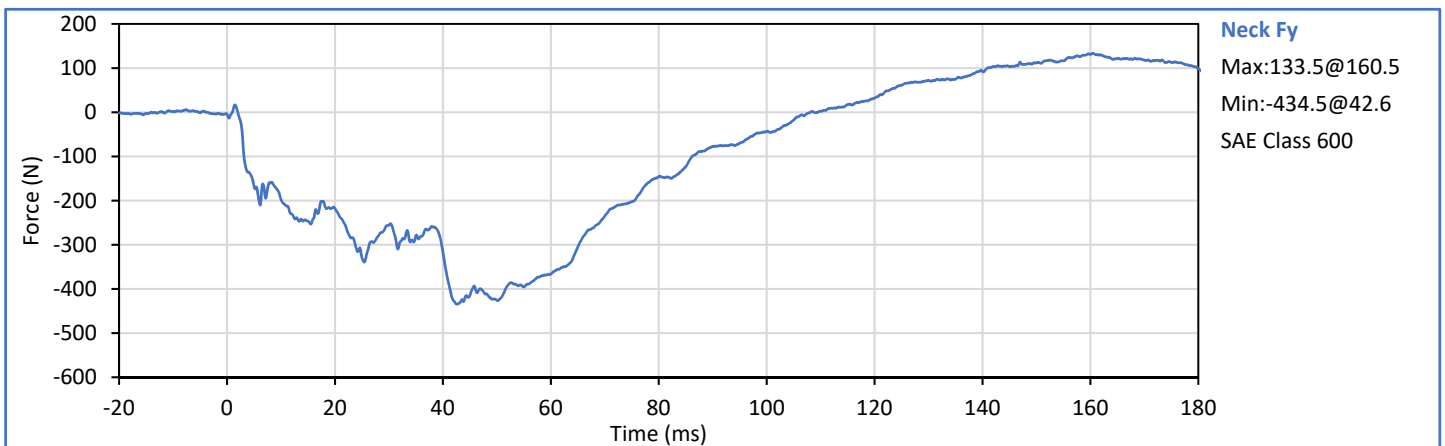
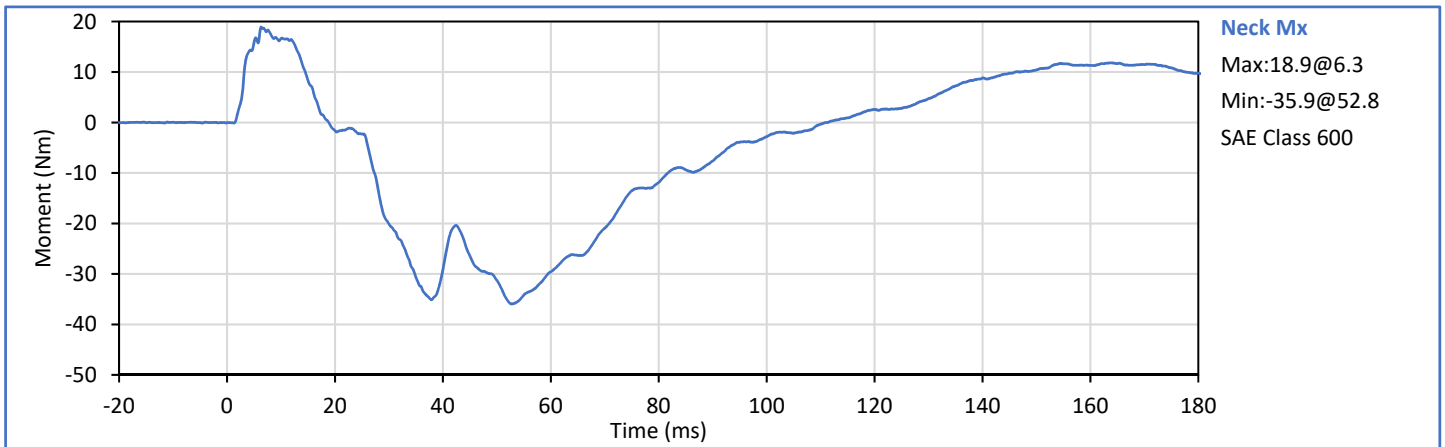
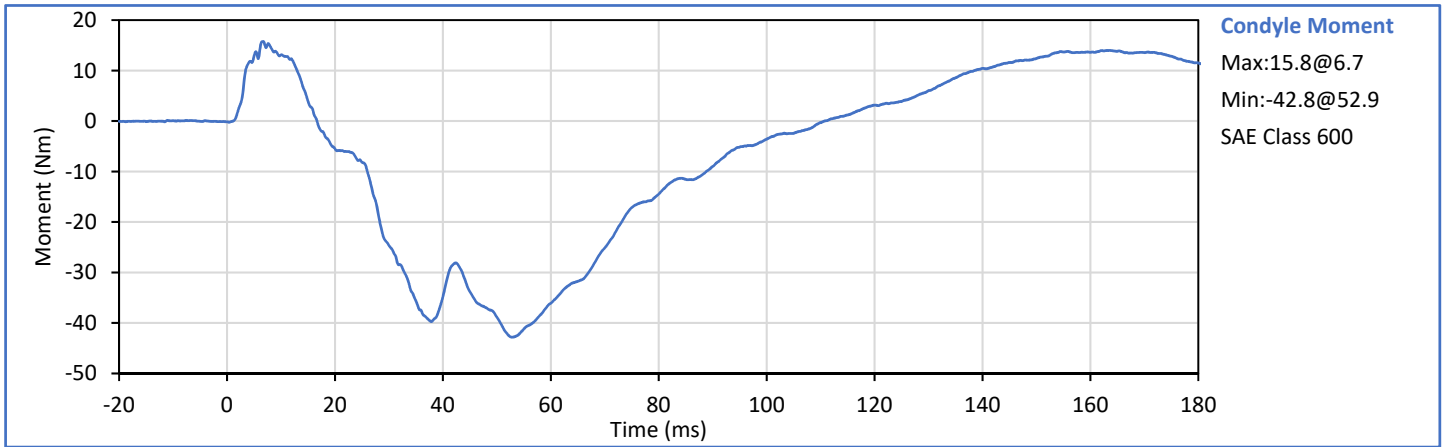
Approved By: 
P. Puzzuto

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Humidity	%	10	70	30	Pass
Pendulum Velocity	m/s	5.51	5.63	5.62	Pass
Pendulum Decel at 10 ms	m/s	2.20	2.80	2.50	Pass
Pendulum Decel at 15 ms	m/s	3.30	4.10	3.67	Pass
Pendulum Decel at 20 ms	m/s	4.40	5.40	5.04	Pass
Pendulum Decel at 25 ms	m/s	5.40	6.10	5.85	Pass
Pendulum Decel from 25-100 ms	m/s	5.50	6.20	5.90	Pass
Peak "D" Plane Rotation	deg	71.0	81.0	72.2	Pass
Time of Peak "D" Plane Rotation	ms	50.0	70.0	61.8	Pass
Peak Occ. Condyle Moment	Nm	-44.0	-36.0	-42.8	Pass
Time of Moment Decay to 0 Nm	ms	102.0	126.0	110.8	Pass
Overall Test Results					Pass

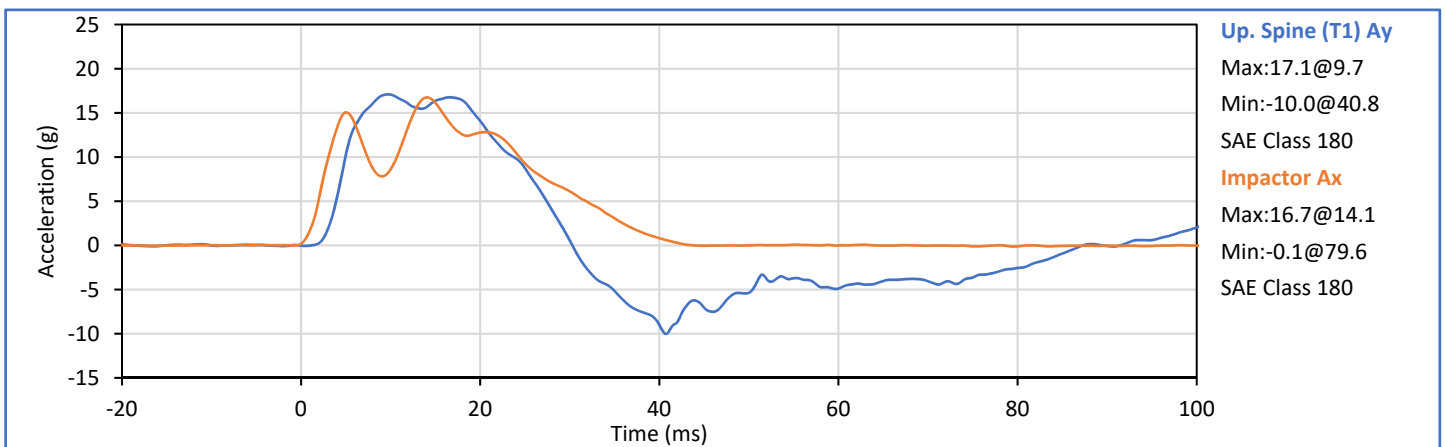
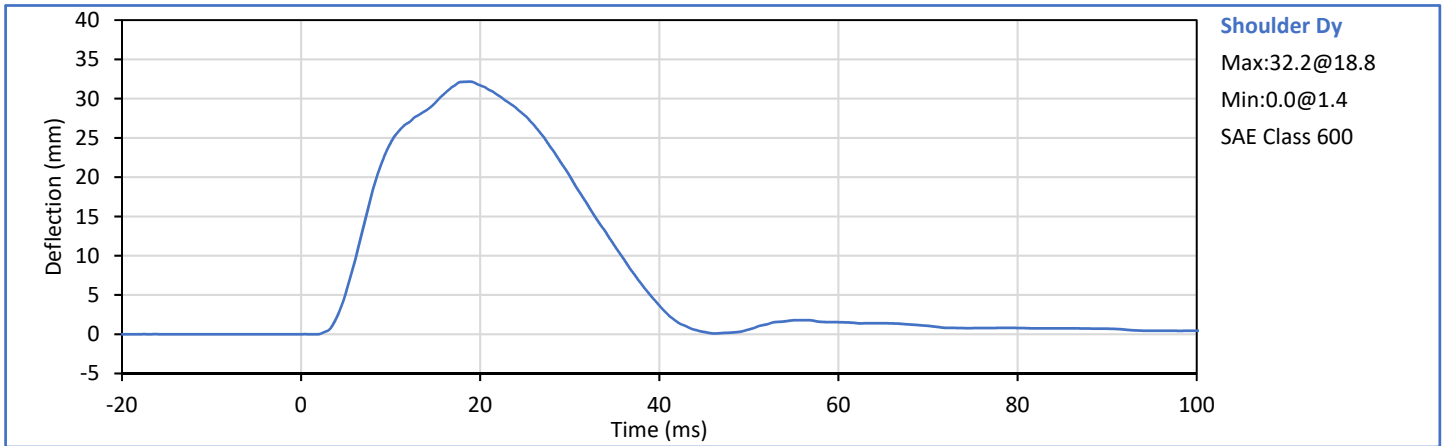



Technician: 
J. Hernandez


Approved By: 
P. Puzuto



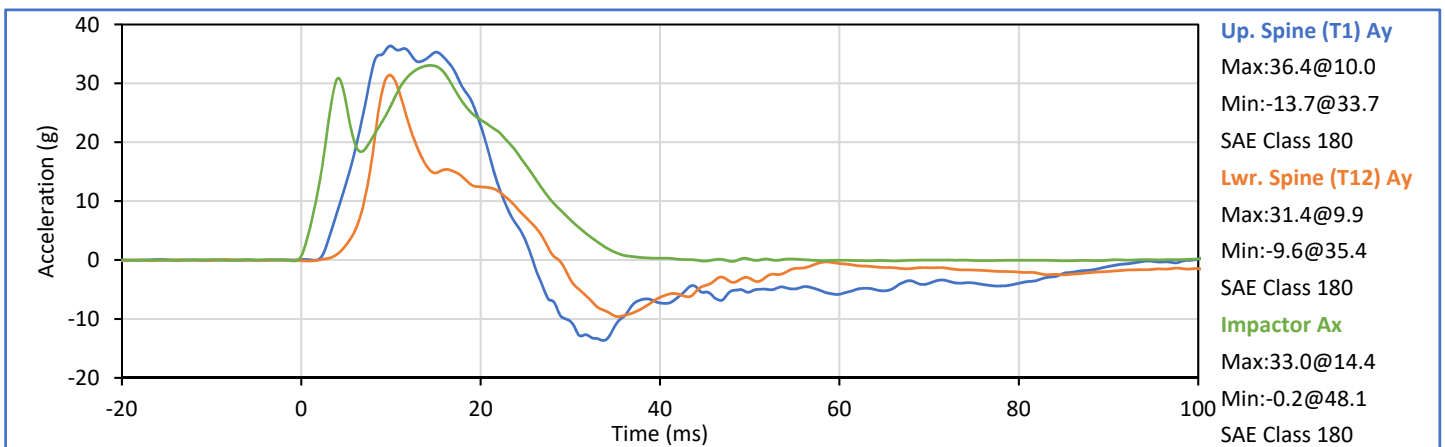
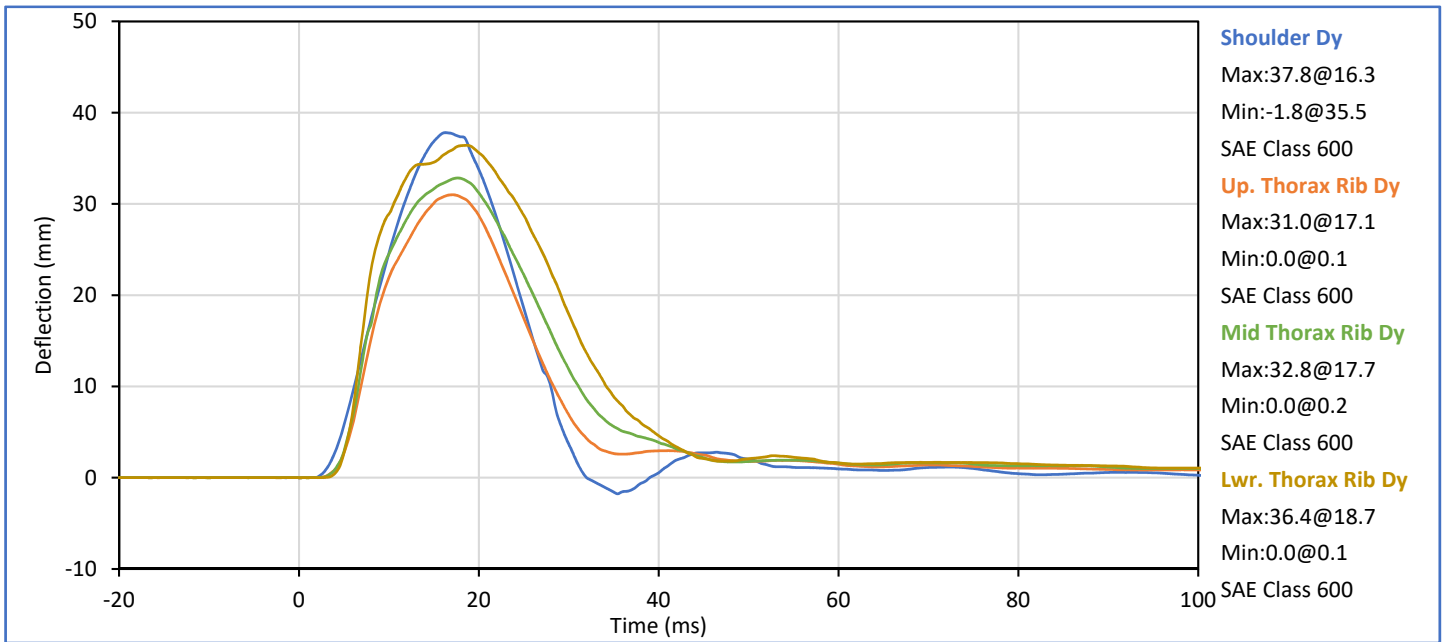
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.7	Pass
Laboratory Humidity	%	10	70	37	Pass
Impactor Velocity	m/s	4.20	4.40	4.25	Pass
Peak Shoulder Dy	mm	28.0	37.0	32.2	Pass
Peak Upper Spine (T1) Ay	g	17.0	22.0	17.1	Pass
Peak Impactor Ax	g	13.0	18.0	16.7	Pass
Overall Test Results					Pass

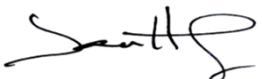



Technician: 
J. Hernandez

Approved By: 
P. Puzuto

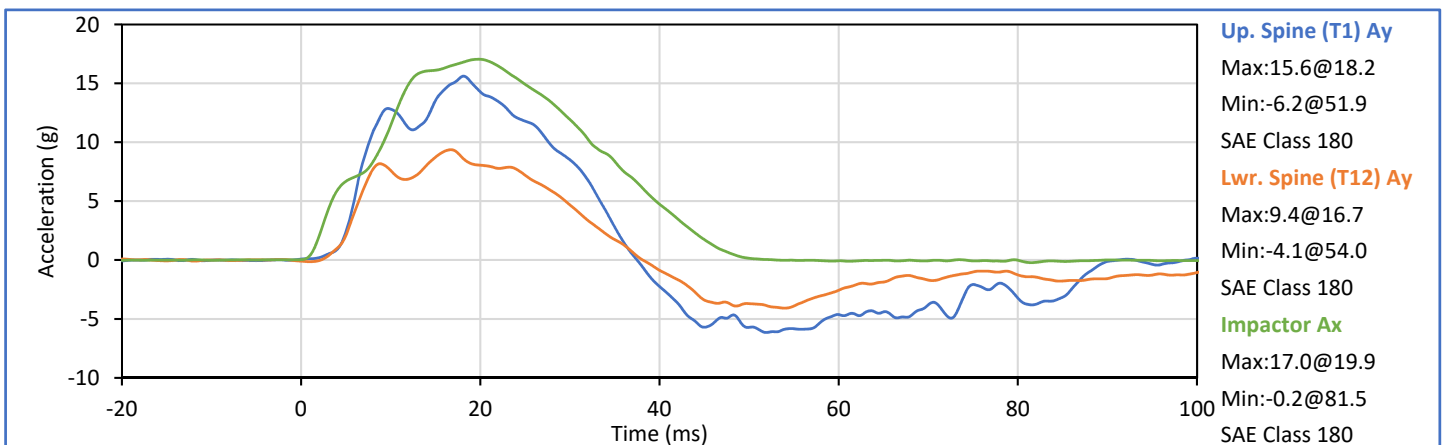
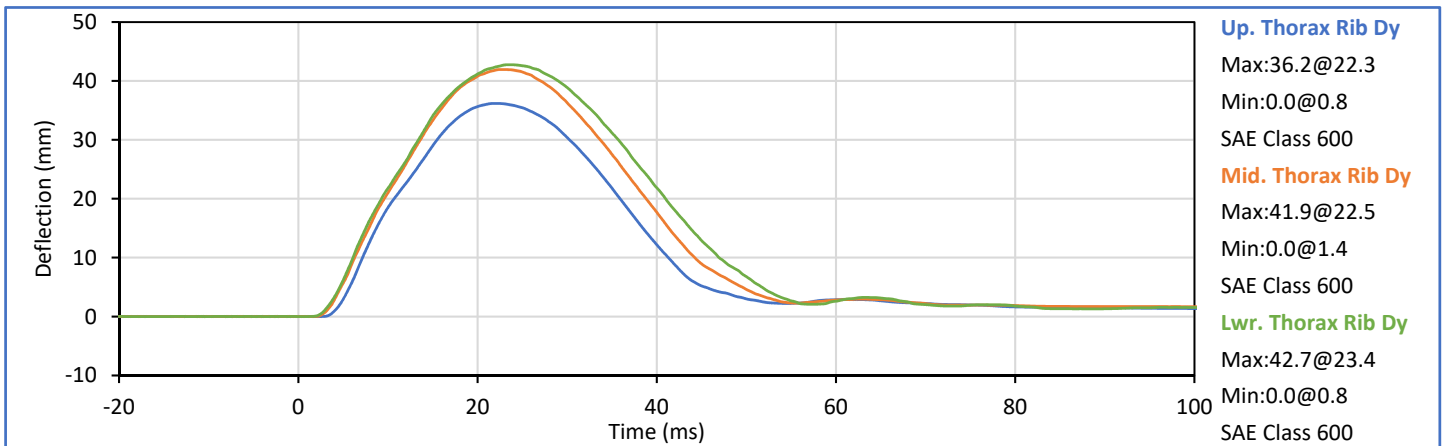
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.7	Pass
Laboratory Humidity	%	10	70	35	Pass
Impactor Velocity	m/s	6.60	6.80	6.62	Pass
Peak Shoulder Dy	mm	31.0	40.0	37.8	Pass
Peak Upper Rib Dy	mm	25.0	32.0	31.0	Pass
Peak Middle Rib Dy	mm	30.0	36.0	32.8	Pass
Peak Lower Rib Dy	mm	32.0	38.0	36.4	Pass
Peak Upper Spine (T1) Ay	g	34.0	43.0	36.4	Pass
Peak Lower Spine (T12) Ay	g	29.0	37.0	31.4	Pass
Peak Impactor Ax	g	30.0	36.0	33.0	Pass
Overall Test Results					Pass

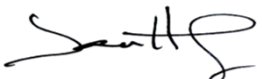



Technician: 
J. Hernandez

Approved By: 
P. Puzuto

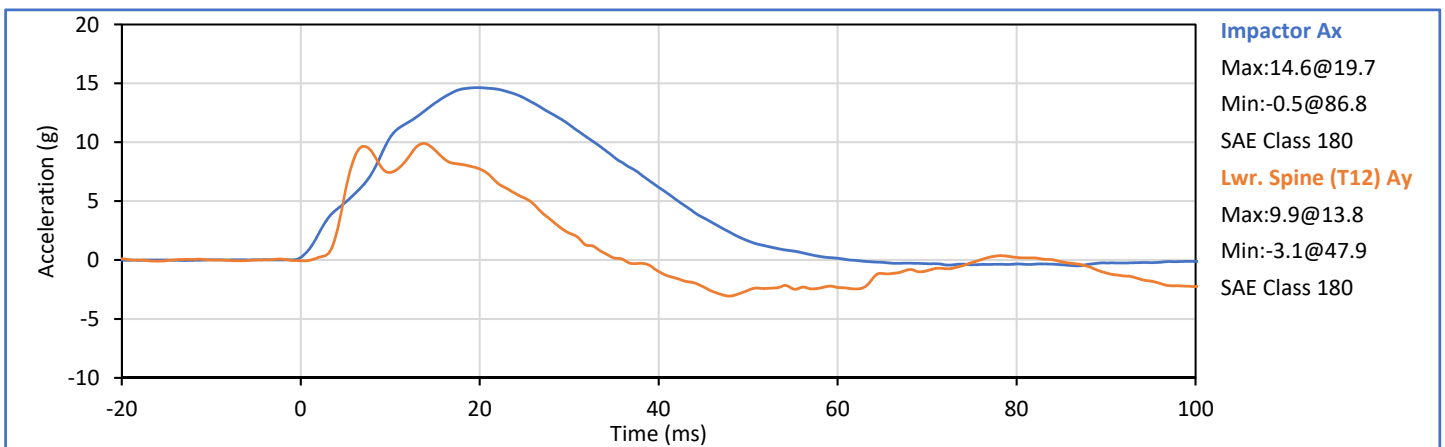
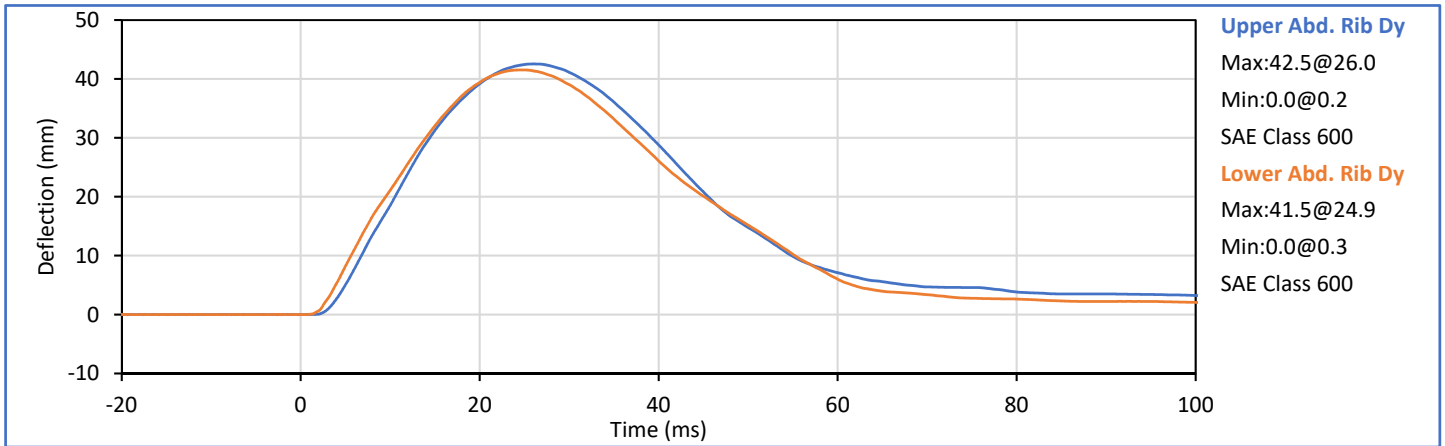
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.7	Pass
Laboratory Humidity	%	10	70	35	Pass
Impactor Velocity	m/s	4.20	4.40	4.32	Pass
Peak Upper Rib Dy	mm	32.0	40.0	36.2	Pass
Peak Middle Rib Dy	mm	39.0	45.0	41.9	Pass
Peak Lower Rib Dy	mm	35.0	43.0	42.7	Pass
Peak Upper Spine (T1) Ay	g	13.0	17.0	15.6	Pass
Peak Lower Spine (T12) Ay	g	7.0	11.0	9.4	Pass
Peak Impactor Ax	g	14.0	18.0	17.0	Pass
Overall Test Results					Pass





Technician: 
J. Hernandez

Approved By: 
P. Puzuto

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Humidity	%	10	70	40	Pass
Impactor Velocity	m/s	4.20	4.40	4.31	Pass
Peak Upper Abdomen Rib Dy	mm	36.0	47.0	42.5	Pass
Peak Lower Abdomen Rib Dy	mm	33.0	44.0	41.5	Pass
Peak Lower Spine T12 Ay	mm	9.0	14.0	9.9	Pass
Peak Impactor Ax	g	12.0	16.0	14.6	Pass
Overall Test Results					Pass

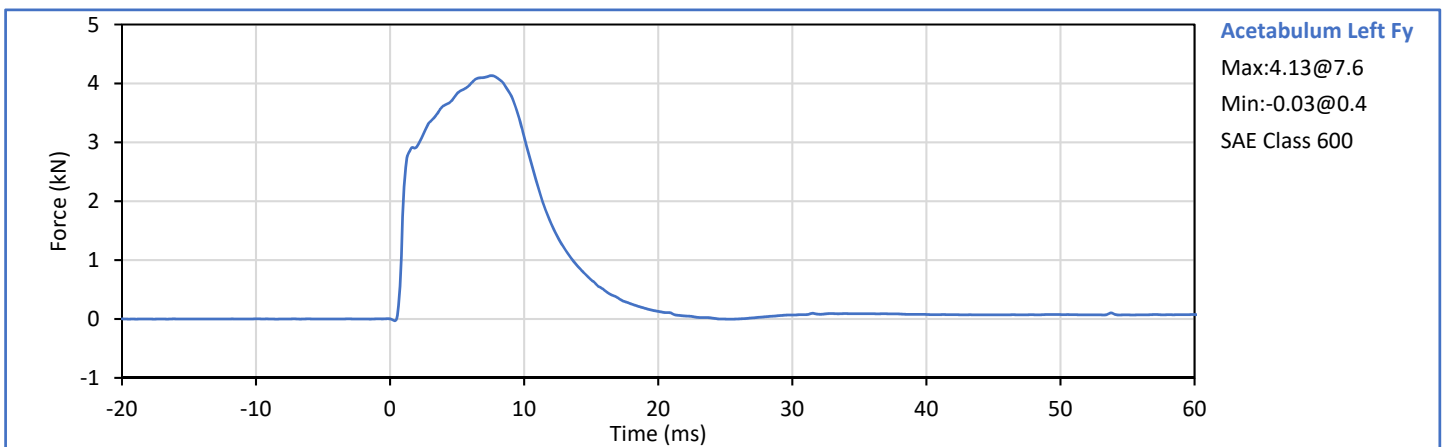
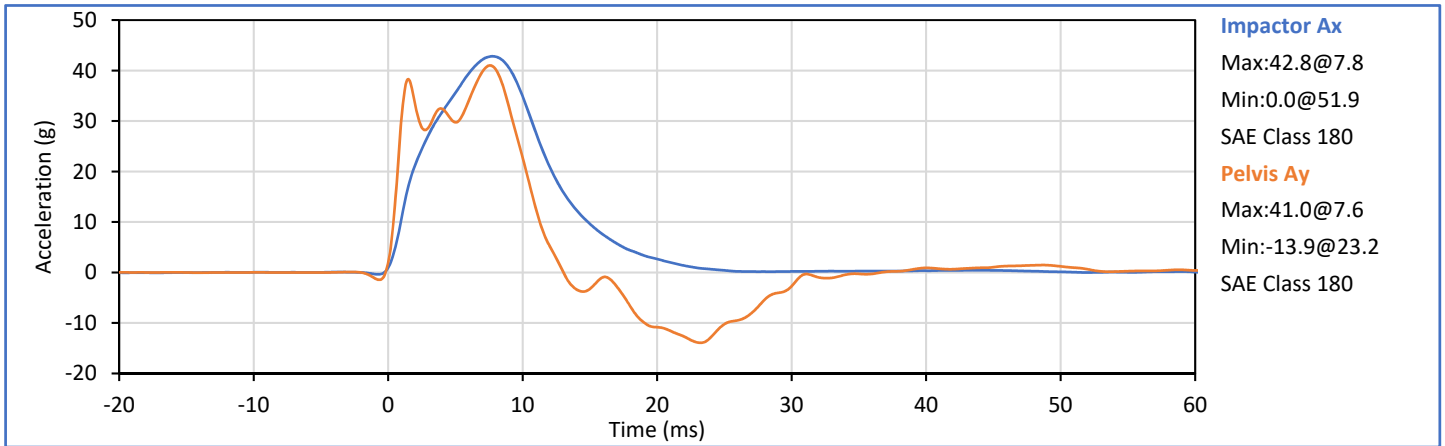


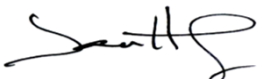
Technician: 
J. Hernandez


Approved By: 
P. Puzuto

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.7	Pass
Laboratory Humidity	%	10	70	41	Pass
Impactor Velocity	m/s	6.60	6.80	6.61	Pass
Peak Acetabulum Fy	kN	3.60	4.30	4.13	Pass
Pelvis Ay after 6ms	g	34.0	42.0	41.0	Pass
Peak Impactor Ax	g	38.0	47.0	42.8	Pass
Overall Test Results					Pass

Pelvis Plug S/N: 13459



Technician: 
J. Hernandez

Approved By: 
P. Puzuto

ATD Serial No.: 308

Test Date: 2020-04-23

Pelvis Plug S/N: 13459



SID-IIs Pelvis Plug Certification Test

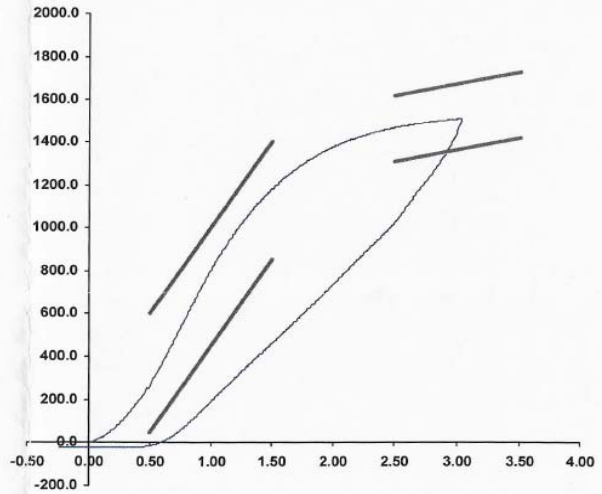
Plug S/N 13459
Test Number 11102
Report Number 11140
Test Date 9/20/2019 10:24:29 AM

	Test Results	Spec Min	Spec Max
Force @ 0.5 mm (N)	279.17	50.00	600.00
Force @ 1.5 mm (N)	1,182.63	850.00	1,400.00
Force @ 2.5 mm (N)	1,468.05	1,306.00	1,618.00
Force @ 3.0 mm (N)	1,513.64	1,361.00	1,673.00

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

Notes:

Force (-N) vs Extension (-mm)



Operator

Part Number 180-4450

Template No 107 20-Sep-19
SACO Research

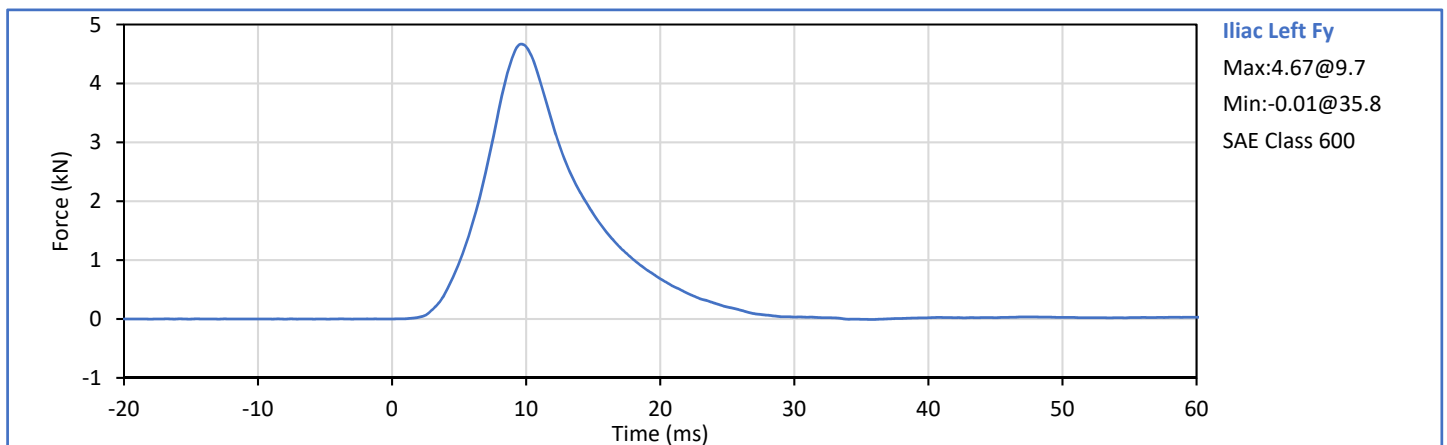
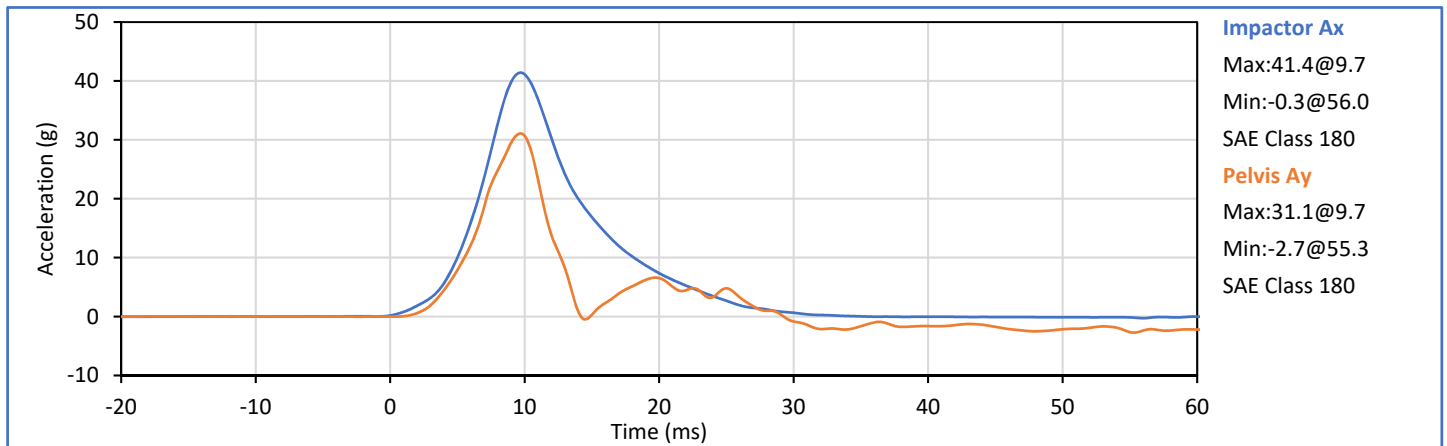
By: DC Date: 9/20/2019


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


Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.7	Pass
Laboratory Humidity	%	10	70	41	Pass
Impactor Velocity	m/s	4.20	4.40	4.33	Pass
Peak Iliac Fy	kN	4.10	5.10	4.67	Pass
Pelvis Ay after 6ms	g	28.0	39.0	31.1	Pass
Peak Impactor Ax	g	36.0	45.0	41.4	Pass
Overall Test Results					Pass

Pelvis Plug S/N: 12228 *

* Plug is not impacted and remains certified



Technician: 
J. Hernandez

Approved By: 
P. Puzuto

APPENDIX C
Post-Test ATD Qualification and Performance Verification
SID-IIs Small Side Impact ATD
S/N: 308

ATD Serial No.: 308

Test Date: 2020-05-18

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	44	Pass
A - Sitting Height	mm	772	788	784	Pass
B - Shoulder Pivot Height	mm	437	453	450	Pass
C - Hpoint Height	mm	79	89	84	Pass
D - H Point From Seatback	mm	141	151	149	Pass
E - Shoulder Pivot From Backline	mm	97	107	102	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	186	Pass
J - Head Circumference	mm	541	551	545	Pass
K - Buttock To Knee Length	mm	514	540	526	Pass
L - Popliteal Height	mm	343	369	355	Pass
K - Knee Pivot To Floor Height	mm	392	409	403	Pass
N - Buttock Popliteal Length	mm	416	442	430	Pass
O - Chest Depth W/O Jacket	mm	195	211	201	Pass
P - Foot Length	mm	216	232	223	Pass
Q - Hip Breadth (W/Pelvic Plugs)	mm	313	323	319	Pass
R - Arm Length	mm	249	259	254	Pass
S - Knee Joint To Seatback	mm	477	493	482	Pass
V - Shoulder Width	mm	341	357	345	Pass
W - Foot Width	mm	78	94	85	Pass
Y - Chest Circumference W/Jacket	mm	851	881	865	Pass
Z - Waist Circumference	mm	761	791	778	Pass
				Overall Test Results	Pass

Technician:



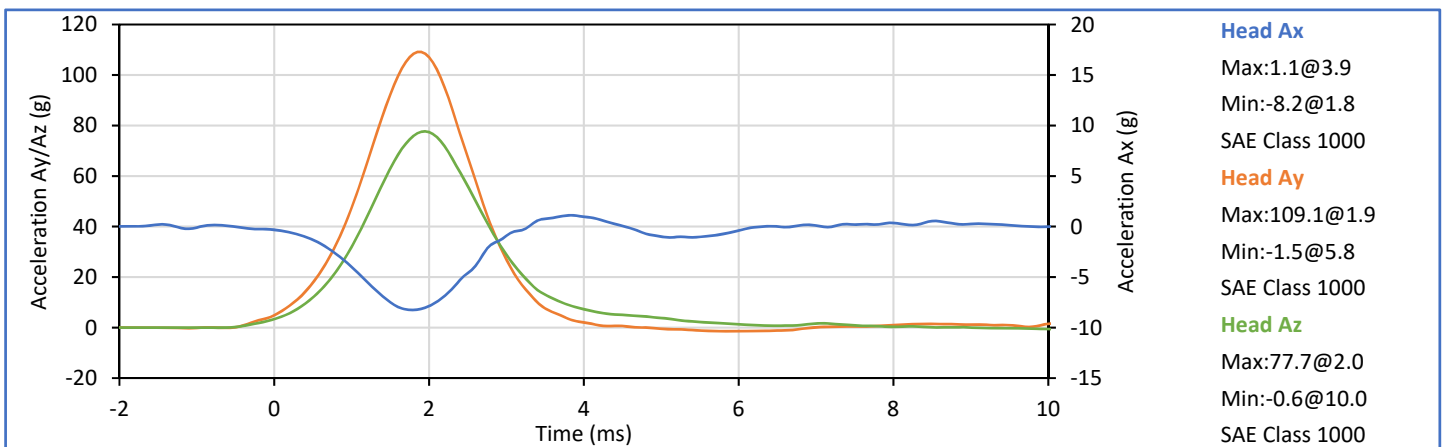
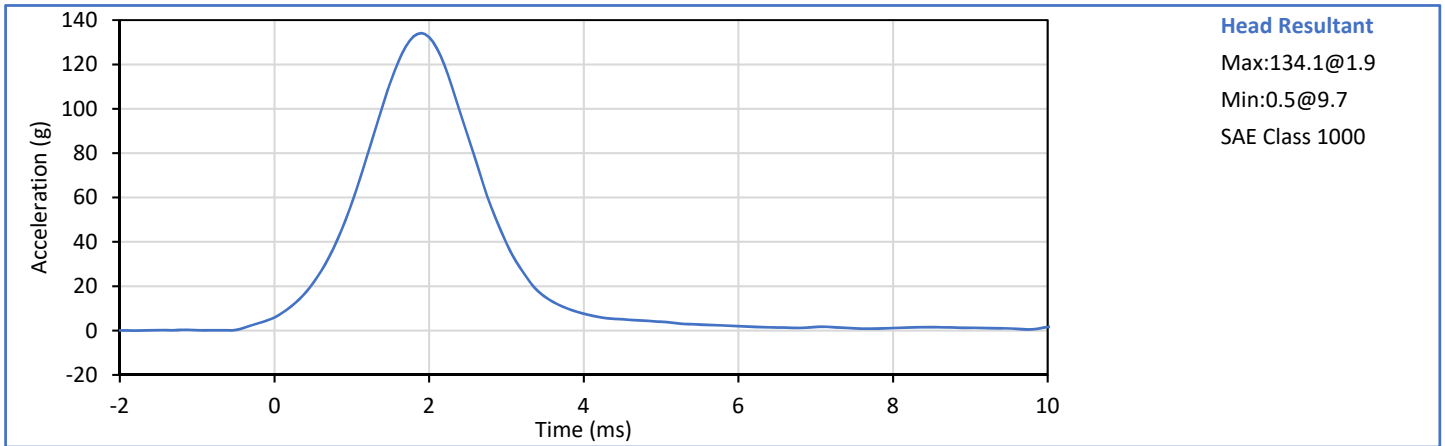
J. Hernandez

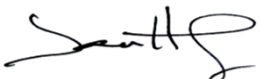
Approved By:




P. Puzuto

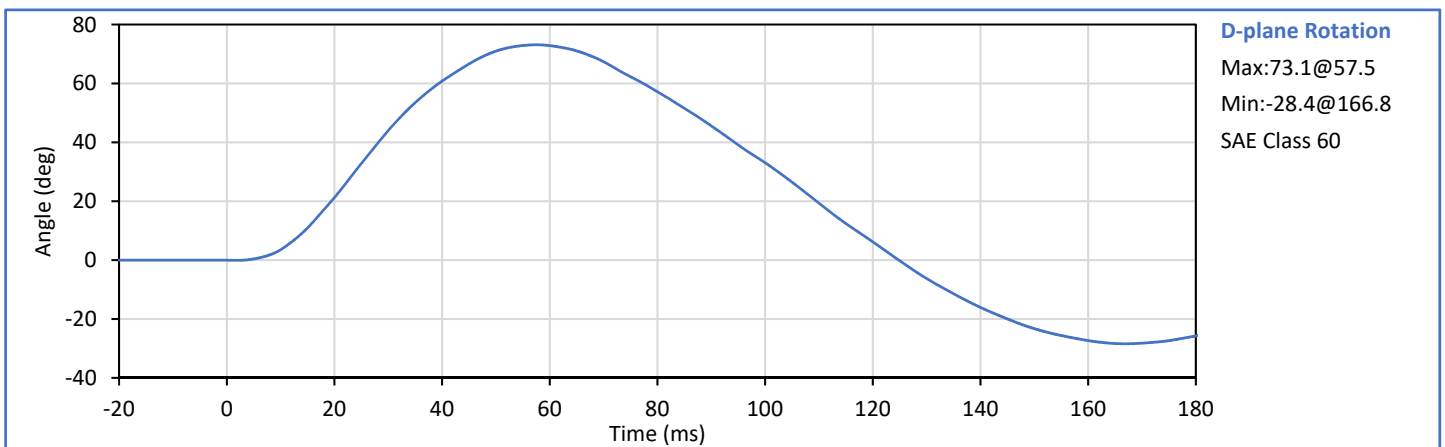
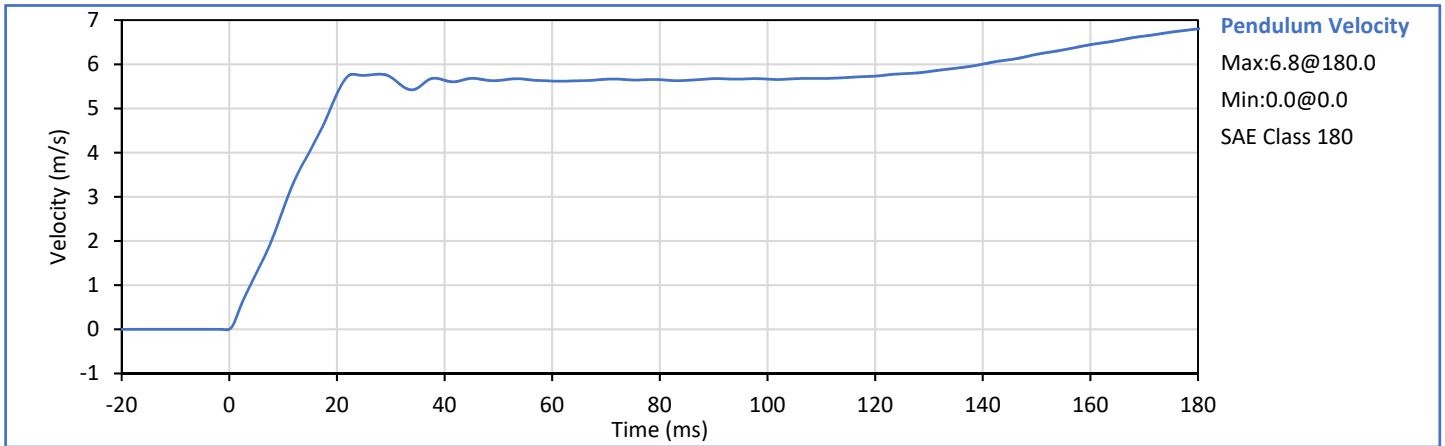
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.1	Pass
Laboratory Humidity	%	10	70	45	Pass
Peak Resultant Acceleration	g	115.0	137.0	134.1	Pass
Peak Head Ax	g	-15.0	15.0	-8.2	Pass
Oscillations After Main Pulse	%	0.0	15.0	1.6	Pass
Is Acceleration Unimodal?	Yes/No	Yes		Yes	Pass
Overall Test Results					Pass

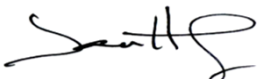



Technician: 
J. Hernandez

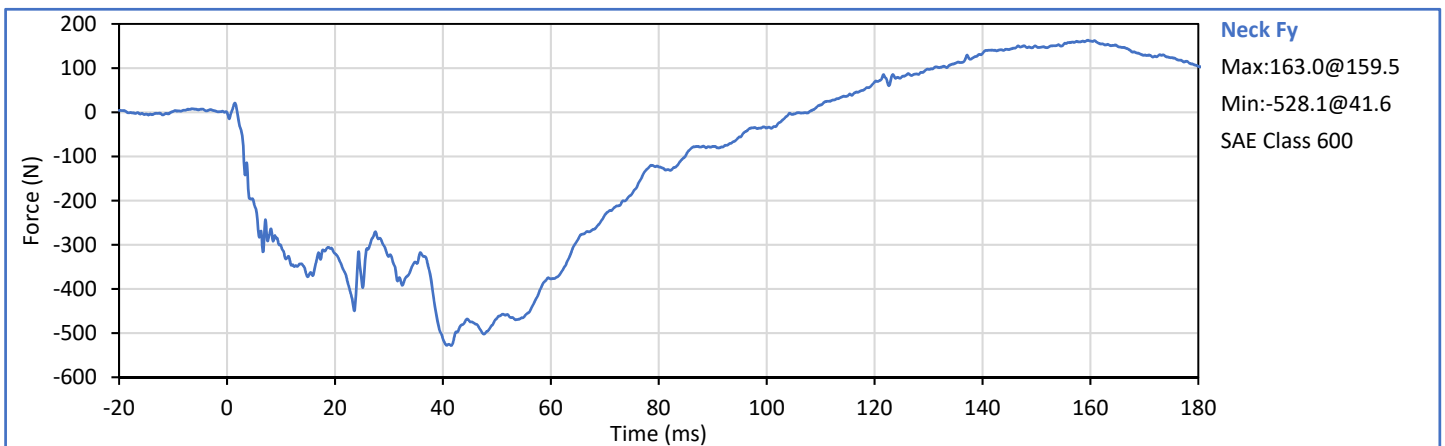
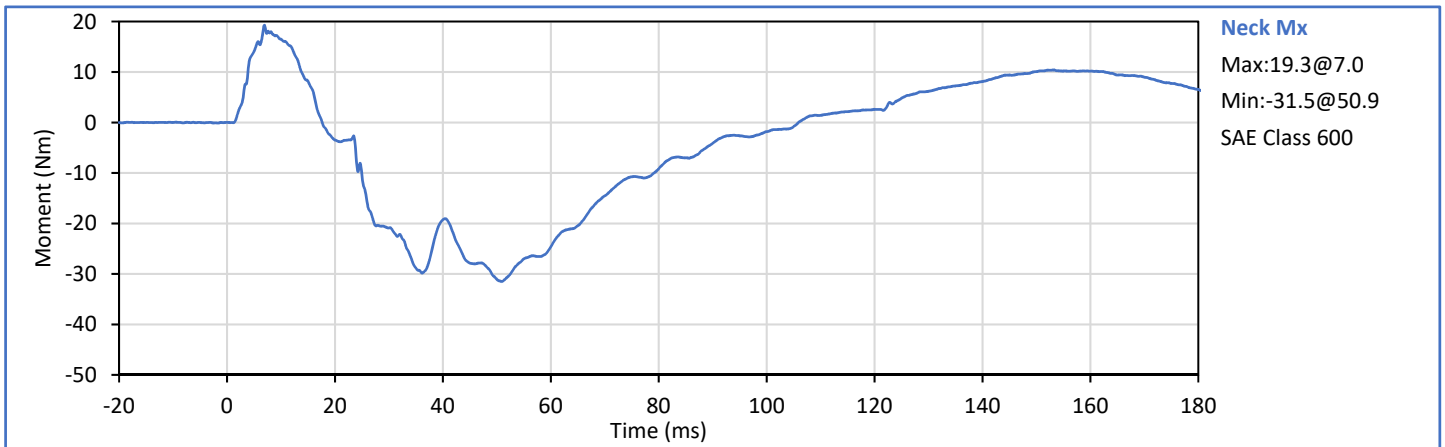
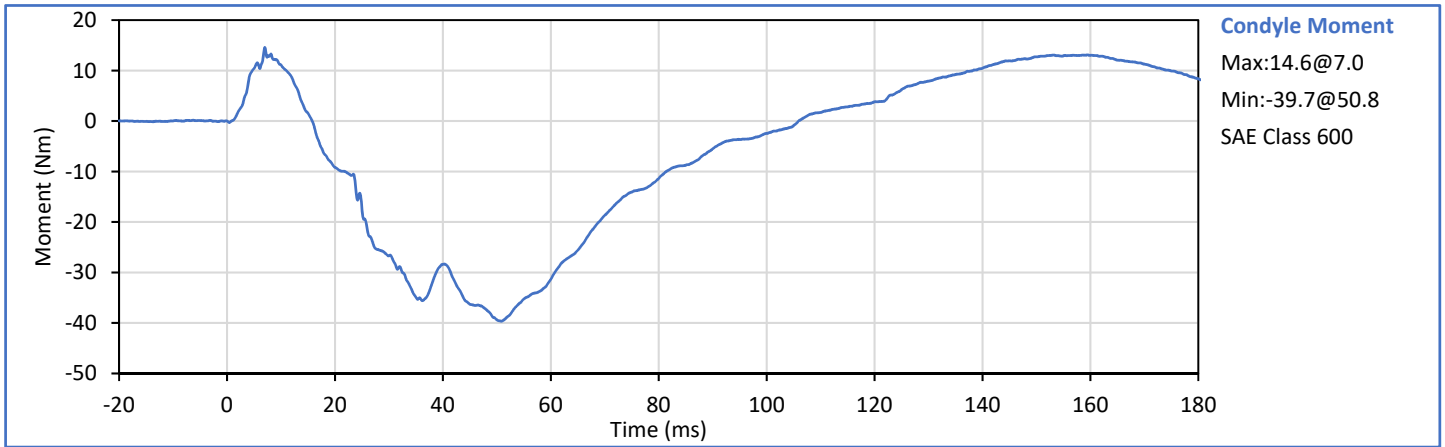
Approved By: 
P. Puzzuto

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Humidity	%	10	70	34	Pass
Pendulum Velocity	m/s	5.51	5.63	5.52	Pass
Pendulum Decel at 10 ms	m/s	2.20	2.80	2.72	Pass
Pendulum Decel at 15 ms	m/s	3.30	4.10	4.04	Pass
Pendulum Decel at 20 ms	m/s	4.40	5.40	5.33	Pass
Pendulum Decel at 25 ms	m/s	5.40	6.10	5.75	Pass
Pendulum Decel from 25-100 ms	m/s	5.50	6.20	5.78	Pass
Peak "D" Plane Rotation	deg	71.0	81.0	73.1	Pass
Time of Peak "D" Plane Rotation	ms	50.0	70.0	57.5	Pass
Peak Occ. Condyle Moment	Nm	-44.0	-36.0	-39.7	Pass
Time of Moment Decay to 0 Nm	ms	102.0	126.0	105.9	Pass
Overall Test Results					Pass

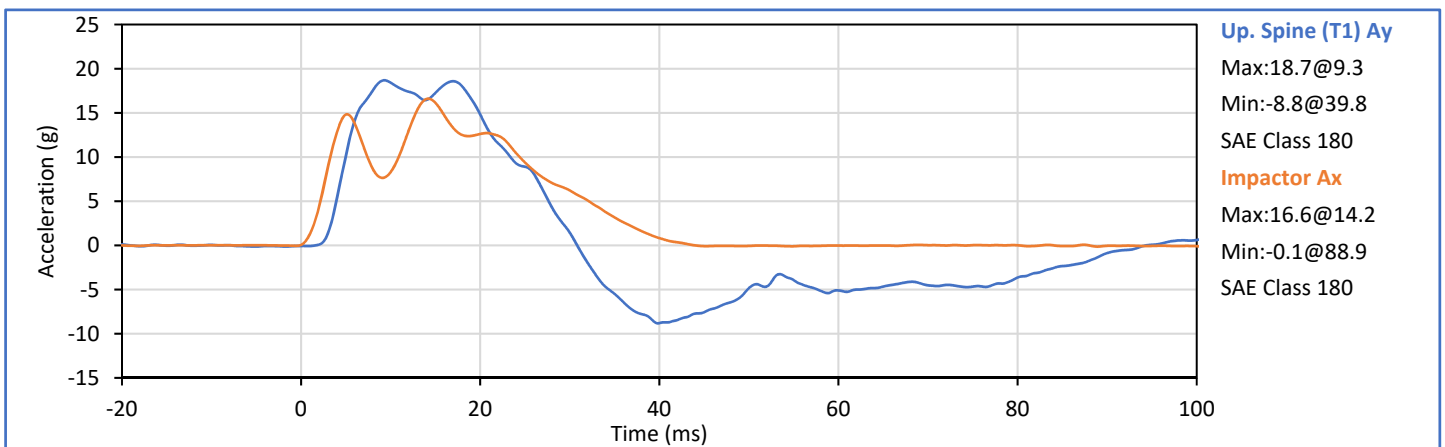
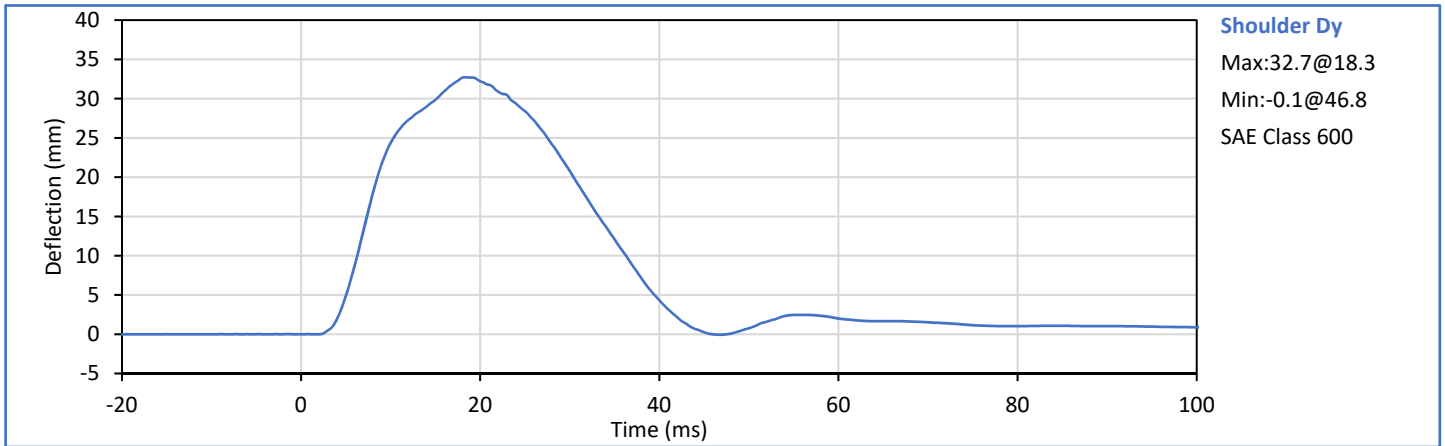



Technician: 
J. Hernandez


Approved By: 
P. Puzuto



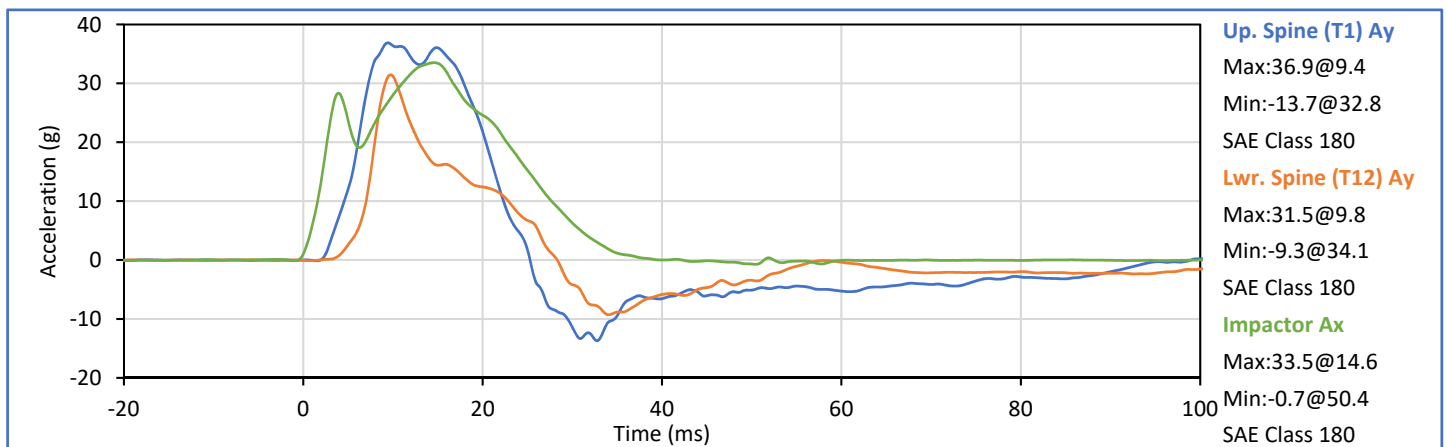
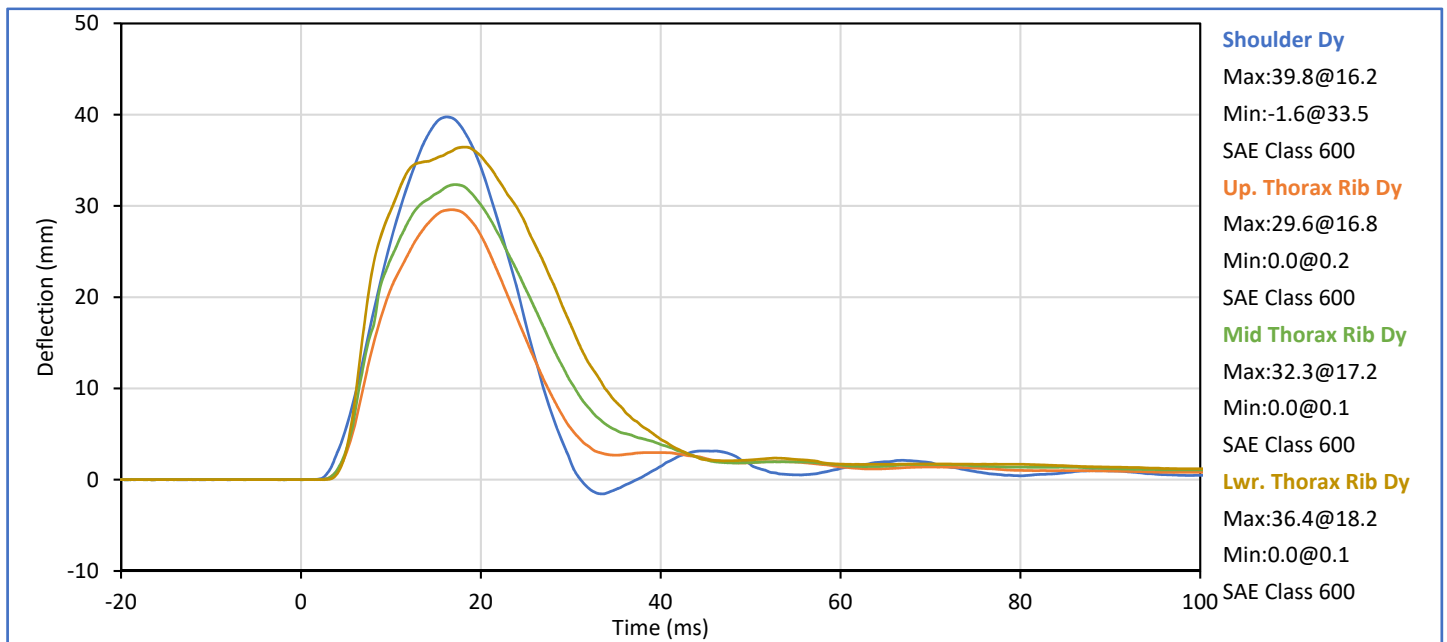
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Humidity	%	10	70	30	Pass
Impactor Velocity	m/s	4.20	4.40	4.32	Pass
Peak Shoulder Dy	mm	28.0	37.0	32.7	Pass
Peak Upper Spine (T1) Ay	g	17.0	22.0	18.7	Pass
Peak Impactor Ax	g	13.0	18.0	16.6	Pass
Overall Test Results					Pass

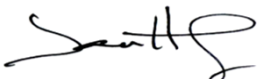



Technician: 
J. Hernandez

Approved By: 
P. Puzzuto

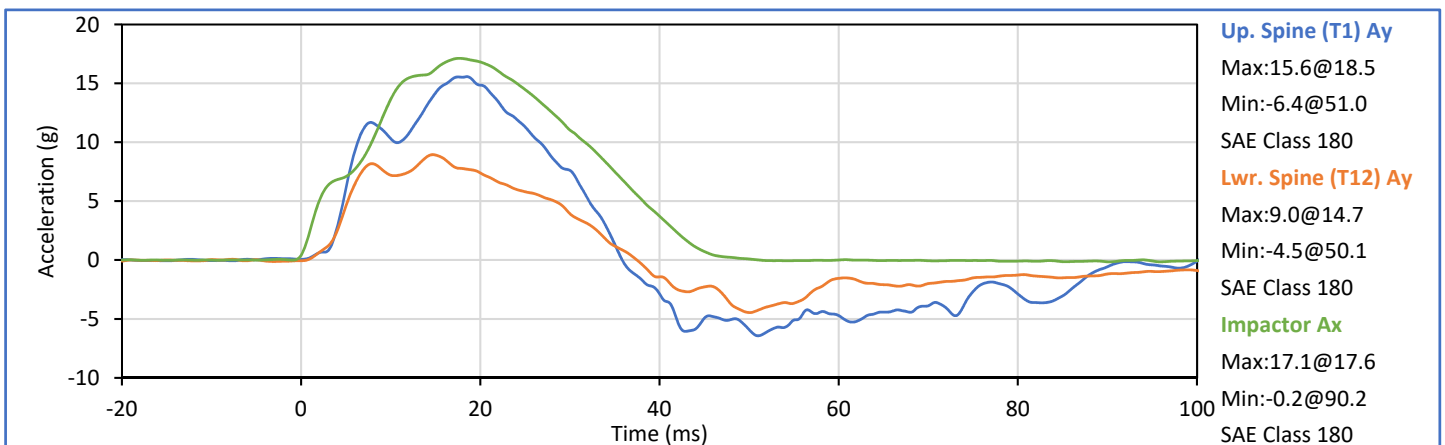
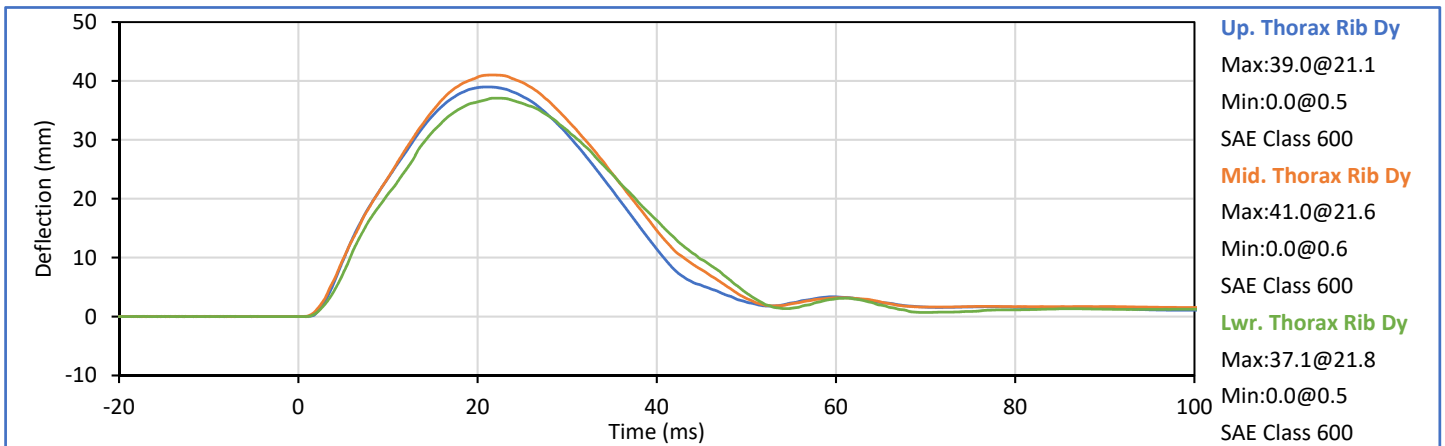
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Humidity	%	10	70	30	Pass
Impactor Velocity	m/s	6.60	6.80	6.63	Pass
Peak Shoulder Dy	mm	31.0	40.0	39.8	Pass
Peak Upper Rib Dy	mm	25.0	32.0	29.6	Pass
Peak Middle Rib Dy	mm	30.0	36.0	32.3	Pass
Peak Lower Rib Dy	mm	32.0	38.0	36.4	Pass
Peak Upper Spine (T1) Ay	g	34.0	43.0	36.9	Pass
Peak Lower Spine (T12) Ay	g	29.0	37.0	31.5	Pass
Peak Impactor Ax	g	30.0	36.0	33.5	Pass
Overall Test Results					Pass

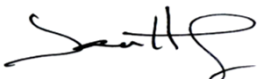



Technician: 
J. Hernandez

Approved By: 
P. Puzuto

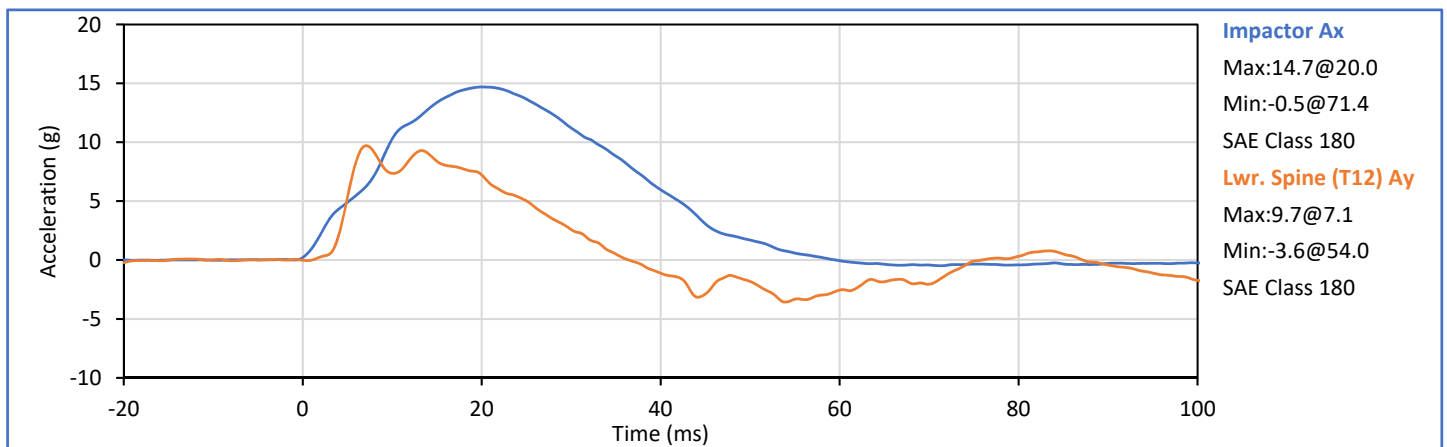
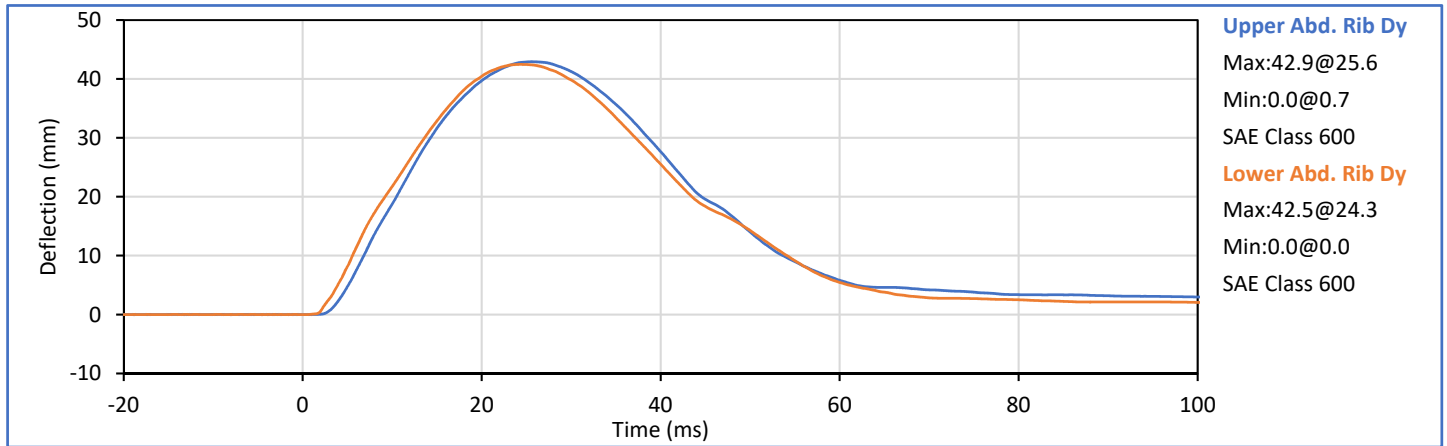
Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Humidity	%	10	70	30	Pass
Impactor Velocity	m/s	4.20	4.40	4.32	Pass
Peak Upper Rib Dy	mm	32.0	40.0	39.0	Pass
Peak Middle Rib Dy	mm	39.0	45.0	41.0	Pass
Peak Lower Rib Dy	mm	35.0	43.0	37.1	Pass
Peak Upper Spine (T1) Ay	g	13.0	17.0	15.6	Pass
Peak Lower Spine (T12) Ay	g	7.0	11.0	9.0	Pass
Peak Impactor Ax	g	14.0	18.0	17.1	Pass
Overall Test Results					Pass





Technician: 
J. Hernandez

Approved By: 
P. Puzuto

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Humidity	%	10	70	40	Pass
Impactor Velocity	m/s	4.20	4.40	4.32	Pass
Peak Upper Abdomen Rib Dy	mm	36.0	47.0	42.9	Pass
Peak Lower Abdomen Rib Dy	mm	33.0	44.0	42.5	Pass
Peak Lower Spine T12 Ay	mm	9.0	14.0	9.7	Pass
Peak Impactor Ax	g	12.0	16.0	14.7	Pass
Overall Test Results					Pass



Technician: 
J. Hernandez

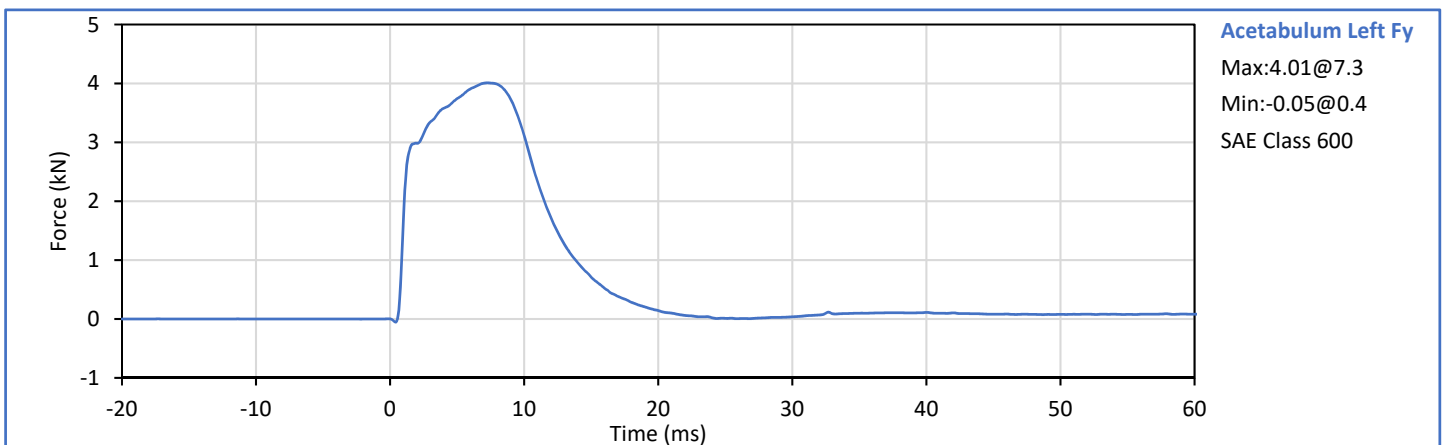
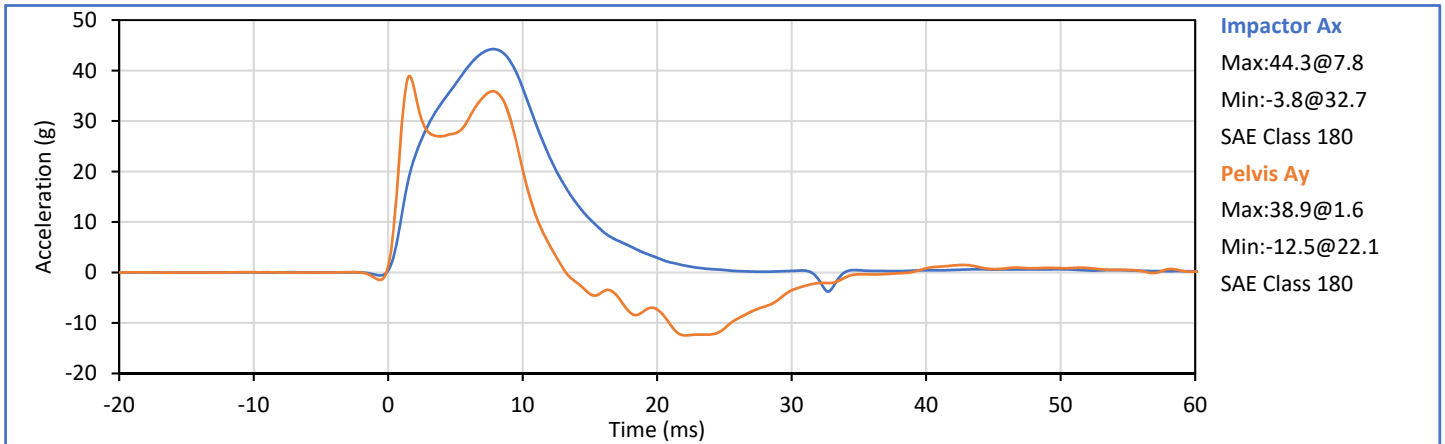
Approved By: 
P. Puzuto

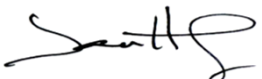
ATD Serial No.: 308


Test Date: 2020-05-19

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Humidity	%	10	70	30	Pass
Impactor Velocity	m/s	6.60	6.80	6.72	Pass
Peak Acetabulum Fy	kN	3.60	4.30	4.01	Pass
Pelvis Ay after 6ms	g	34.0	42.0	35.9	Pass
Peak Impactor Ax	g	38.0	47.0	44.3	Pass
Overall Test Results					Pass

Pelvis Plug S/N: 13466



Technician: 
J. Hernandez

Approved By: 
P. Puzuto

ATD Serial No.: 308

Test Date: 2020-05-19

Pelvis Plug S/N: 13466



SID-IIs Pelvis Plug Certification Test

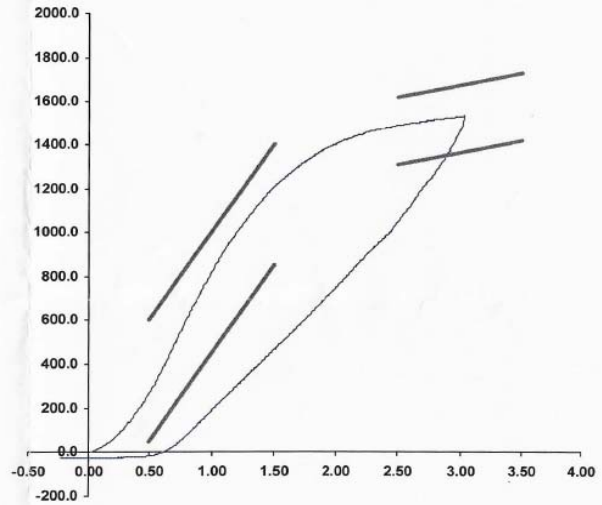
Plug S/N 13466
Test Number 11109
Report Number 11147
Test Date 9/20/2019 10:35:05 AM

	Test Results	Spec Min	Spec Max
Force @ 0.5 mm (N)	279.14	50.00	600.00
Force @ 1.5 mm (N)	1,208.63	850.00	1,400.00
Force @ 2.5 mm (N)	1,490.31	1,306.00	1,618.00
Force @ 3.0 mm (N)	1,533.30	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 20-Sep-19
SACO Research

By: DC Date: 9/20/2019

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

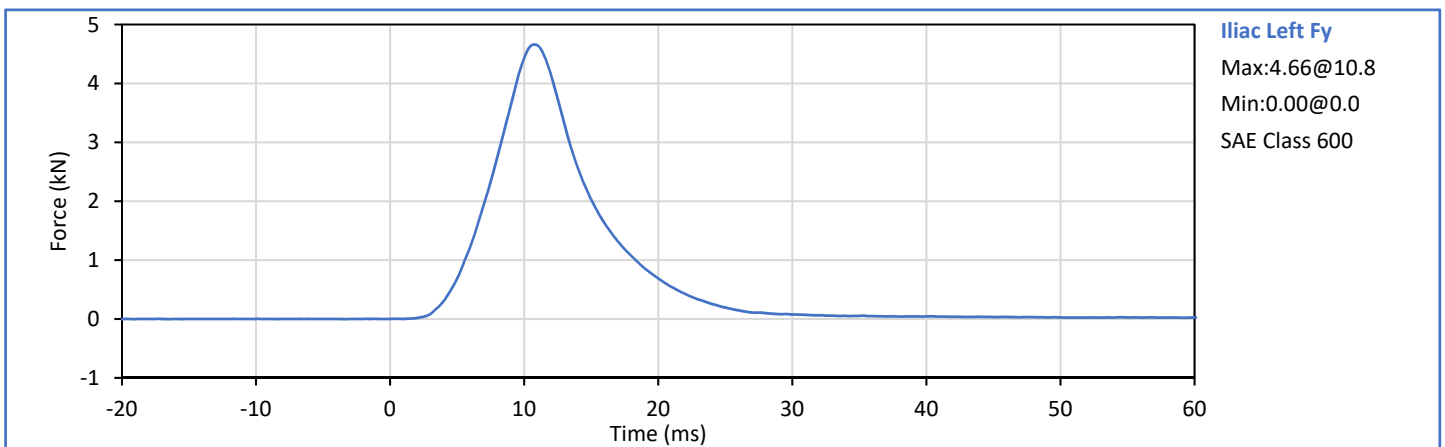
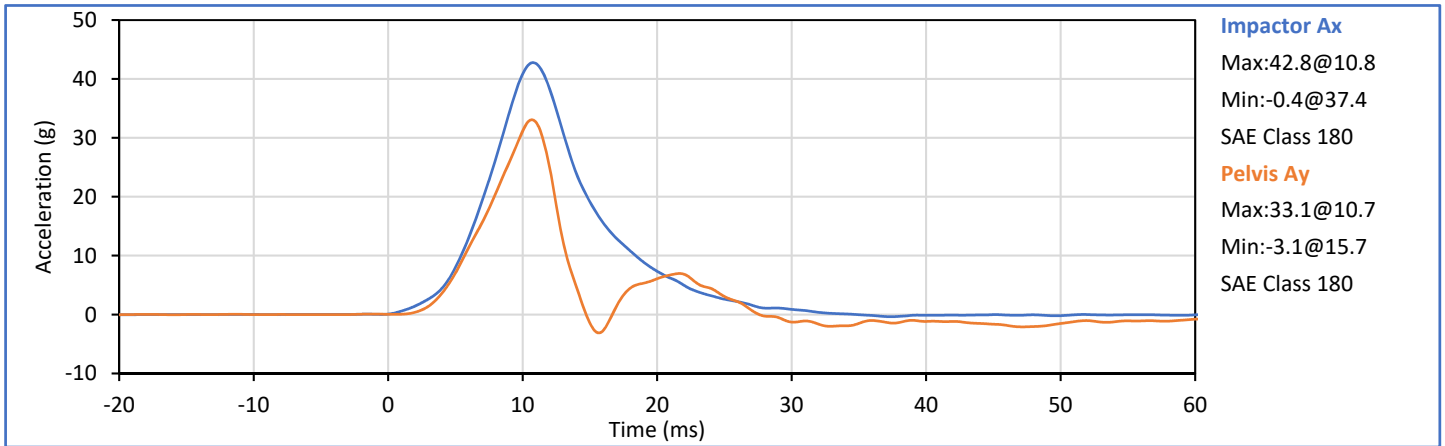
ATD Serial No.: 308


Test Date: 2020-05-20


Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Humidity	%	10	70	30	Pass
Impactor Velocity	m/s	4.20	4.40	4.35	Pass
Peak Iliac Fy	kN	4.10	5.10	4.66	Pass
Pelvis Ay after 6ms	g	28.0	39.0	33.1	Pass
Peak Impactor Ax	g	36.0	45.0	42.8	Pass
Overall Test Results					Pass

Pelvis Plug S/N: 12228 *

* Plug is not impacted and remains certified



Technician: 
J. Hernandez

Approved By: 
P. Puzuto

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	P63980	Endevco	7264C-2k	2020-01-02
Head Acceleration Y Primary	P58861	Endevco	7264C-2k	2020-01-02
Head Acceleration Z Primary	P51261	Endevco	7264C-2k	2020-01-02
Head Acceleration X Redundant	P58808	Endevco	7264C-2k	2020-01-02
Head Acceleration Y Redundant	P63310	Endevco	7264C-2k	2020-01-02
Head Acceleration Z Redundant	P49189	Endevco	7264C-2k	2020-01-02
Head Rotation Rate X	ARS7498	DTS	ARS PRO-8k (2000Hz)	2019-07-08
Head Rotation Rate Y	ARS7367	DTS	ARS PRO-8k (2000Hz)	2019-07-08
Head Rotation Rate Z	ARS7377	DTS	ARS PRO-8k (2000Hz)	2019-07-08
Upper Thorax Rib Deflection Y	1249	Servo	08TCI-3725	2020-01-02
Middle Thorax Rib Deflection Y	1219	Servo	08TCI-3725	2020-01-02
Lower Thorax Rib Deflection Y	1221	Servo	08TCI-3725	2020-01-02
Upper Abdomen Rib Deflection Y	1252	Servo	08TCI-3725	2020-01-02
Lower Abdomen Rib Deflection Y	1283	Servo	08TCI-3725	2020-01-02
Lower Spine T12 Acceleration X	P52108	Endevco	7264C-2k	2020-01-02
Lower Spine T12 Acceleration Y	P63970	Endevco	7264C-2k	2020-01-02
Lower Spine T12 Acceleration Z	P51712	Endevco	7264C-2k	2020-01-02
Iliac Wing Impact Side Force Y	289 Fy (Iliac)	R.A. Denton	3228J	2019-10-17
Acetabulum Impact Side Force Y	277 Fy (Acetabulum)	R.A. Denton	3249J	2019-10-07

Table 2 - Vehicle Instrumentation

Sensor Location	Sensor S\N	Mfr	Model	Cal Date
Vehicle CG Ax	10847	Endevco	757F-2k	2019-12-18
Vehicle CG Ay	11151	Endevco	757F-2k	2019-12-18
Vehicle CG Az	10907	Endevco	757F-2k	2019-12-18
Left Floor Sill Ay	A264073	MSI	52F-2000	2019-12-02
A-Pillar Sill Ay	A265924	MSI	52F-2000	2019-12-11
A-Pillar Low Ay	10854	Endevco	757F-2k	2019-12-17
A-Pillar Mid Ay	11163	Endevco	757F-2k	2019-12-17
B-Pillar Sill Ay	Not installed			
B-Pillar Low Ay	Not installed			
B-Pillar Mid Ay	Not installed			
Driver Seat Track at H-Point Ay	A145910	MSI	52F-2000	2019-12-18
Engine Top Ax	A265843	MSI	52F-2000	2019-12-16
Engine Top Ay	10435	Endevco	757F-2k	2019-11-25
Firewall Ay	10377	Endevco	757F-2k	2019-12-09
Right Roof Ay	A247108	MSI	52F-2000	2019-12-18
Right Floor Sill Ay	10109	Endevco	757F-2k	2019-11-27
Rear Floorpan Ax	10880	Endevco	757F-2k	2019-12-17
Rear Floorpan Ay	A265846	MSI	52F-2000	2019-12-02

Table 3 - Barrier Pole Instrumentation

Sensor Location	Sensor S\N	Mfr	Model	Cal Date
Barrier Pole 01 Fx	19461A	Interface	1220FS-50k	2020-03-16
Barrier Pole 02 Fx	131822A	Interface	1220-FS	2020-03-16
Barrier Pole 03 Fx	131816A	Interface	1220AF-50k	2020-03-16
Barrier Pole 04 Fx	19325	Interface	1220-FS	2020-03-16
Barrier Pole 05 Fx	131827A	Interface	1220-FS	2020-03-16
Barrier Pole 06 Fx	19340	Interface	1220FS-50k	2020-03-16
Barrier Pole 07 Fx	19267	Interface	1220-FS	2020-03-16
Barrier Pole 08 Fx	19466A	Interface	1220FS-50k	2020-03-16