SMDB-KAR-18-001

RESEARCH MOVING DEFORMABLE BARRIER SIDE IMPACT TEST

HONDA OF AMERICA MFG INC

2018 HONDA ACCORD 4-DOOR SEDAN

NHTSA No: R20185380

PREPARED BY:

APPLUS IDIADA KARCO ENGINEERING, LLC.

9270 HOLLY ROAD

ADELANTO, CA 92301

FEBRUARY 26, 2020

FINAL REPORT

PREPARED FOR:

U.S. DEPARTMENT OF TRANSPORTATION

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

OFFICE OF CRASHWORTHINESS STANDARDS

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Date: _____

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NHTSA, Office of Vehicle Crashworthiness Research

Date: _____

TECHNICAL REPORT DUCUMENTATION PAGE

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15. Supplementary Notes

16. Abstract

A 55 / 28 km/h 90° Moving Deformable Barrier Research Side Impact Test was conducted on the subject 2018 Honda Accord 4-door Sedan in accordance with the specifications of the Laboratory Test Procedure for the Moving Deformable Barrier test. The test was conducted at the Applus IDIADA KARCO Engineering, LLC. facility in Adelanto, California on September 09, 2019.

The impact velocity of the Moving Deformable Barrier was 62.03 km/h and the outside ambient temperature at the struck (driver's) side of the vehicle was 30.0°C. The target vehicle's maximum post-test static crush was 209 mm located at level 4. The test vehicle's occupant performance data is as follows:

Measurement Description	Driver ATD (WORLDSID-50M)	
	Units	Result
Head Injury Criteria (HIC_{15})		48.1
Brain Injury Criterion (BrIC)		0.75
Peak Shoulder Force	N	-1856.3
Peak Thoracic Rib Deflection	mm	13.9
Peak Abdominal Rib Deflection	mm	18.6
Pubic Symphysis Force	N	-850.1
Peak Resultant Sacro-Iliac Force	N	-1881.9

Measurement Description	Passenger ATD (SID-IIs)	
	Units	Result
Head Injury Criteria (HIC_{15})		200.5
Brain Injury Criterion (BrIC)		0.77
Maximum Thoracic Rib Deflection	mm	28.6
Peak Abdominal Rib Deflection	mm	16.0
Lower Spine Acceleration	g	49.7
Total Pelvic Force (Sum Acetabular and Iliac Forces)	N	1010.9

Both the left front driver and left rear passenger doors were jammed shut. The doors on the struck side of the vehicle did not separate from the body at the hinges or latches. The opposite side doors did not open during the side impact event.

TECHNICAL REPORT DUCUMENTATION PAGE

Both the left front driver and left rear passenger doors were jammed shut. The doors on the struck side of the vehicle did not separate from the body at the hinges or latches. The opposite side doors did not open during the side impact event.			
17. Key Words New Car Assessment Program (NCAP) Side Impact Moving Deformable Barrier (MDB) WorldSID-50M SID-IIs		**18. Distribution Statement** Copies of this report are available from: National Highway Traffic Safety Admin. Technical Information Services Division, NPO-411 1200 New Jersey Ave, SE Washington, DC 20590	
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SECTION 1
TEST PURPOSE AND PROCEDURE

This moving deformable barrier research side impact test is a part of the MY2018 Research Side Impact Test Program. It was conducted for the National Highway Traffic Safety Administration's (NHTSA) under DTNH2214D00360L by Applus IDIADA KARCO Engineering, LLC. The purpose of this test was to evaluate the repeatability, reproducibility, and durability of the WorldSID 50th percentile male ATD (WorldSID-50M) equipped with RibEye™, to determine whether the dummy is a viable option to replace the EuroSID-2 dummy with rib extension modifiers (ES-2re) in future side impact moving deformable barrier crash tests conducted by NHTSA. The test was conducted using NHTSA's 'LABORATORY TEST PROCEDURE FOR THE NEW CAR ASSESSMENT PROGRAM SIDE IMPACT MOVING DEFORMABLE BARRIER TEST' dated October 2015 as a guideline."

SECTION 2
SUMMARY OF TEST RESULTS

A 2018 Honda Accord 4-door sedan was impacted on the left (driver's) side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 62.03 km/h (38.54 mph). The target vehicle was stationary and was positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by Applus IDIADA KARCO Engineering, LLC. in Adelanto, California, on September 09, 2019. Pre-test and post-test photographs of the test vehicle and the MDB and the dummies (WorldSID-50M and SID-IIs) are included in Appendix A.

One restrained Side Impact Dummy (WorldSID-50M) S/N EB8888, was placed in the driver (Position #1) designated seating position according to the instructions specified in the 50th Percentile Male Dummy Seating Procedure Evaluation and Revision[1].

One restrained Side Impact Dummy (SID-IIs) S/N DY8080 was placed in the left rear (Position #4) designated seating position according to instructions specified in the OCWS Side Impact Laboratory Test Procedure, dated October 2015. The dummy was calibrated prior to this test.

The side impact test was documented by two (2) real-time cameras and nine (9) high-speed digital cameras. Camera locations and other pertinent camera information are included in this report.

The passenger front airbag and torso airbags were disabled prior to the test performance.

[1]50th Percentile Male Dummy Seating Procedure Evaluation and Revision: https://rosap.ntl.bts.gov/view/dot/41900

Dummy Injury readings were recorded as follows:

Measurement Description	Driver ATD (WORLDSID-50M)	
	Units	Result
Head Injury Criteria (HIC_{15})		48.1
Brain Injury Criterion (BrIC)		0.75
Peak Shoulder Force	N	-1856.3
Peak Thoracic Rib Deflection	mm	13.9
Peak Abdominal Rib Deflection	mm	18.6
Pubic Symphysis Force	N	-850.1
Peak Resultant Sacro-Iliac Force	N	-1881.9

Measurement Description	Passenger ATD (SID-IIs)	
	Units	Result
Head Injury Criteria (HIC_{15})		200.5
Brain Injury Criterion (BrIC)		0.77
Maximum Thoracic Rib Deflection	mm	28.6
Peak Abdominal Rib Deflection	mm	16.0
Lower Spine Acceleration	g	49.7
Total Pelvic Force (Sum Acetabular and Iliac Forces)	N	1010.9

Explanations for Data Acquisition Anomalies:

Right Side Sill at Rear Seat Ax: Questionable data after 39.9 msec appears to detach from mounting

Right Side Sill at Rear Seat Ay: Questionable data after 39.9 msec appears to detach from mounting

Right Side Sill at Rear Seat Az: Questionable data after 39.9 msec appears to detach from mounting

Left Lower A-Pillar Ay: Questionable data after 10.1 msec appears to detach from mounting

Left Middle B-Pillar Ay: Channel failed at 17.6 msec Sensor and cable crushed inside pillar

Left Rear Door Mid Rear (Y): Channel failed at 57.9 msec sensor and cable crushed inside door

Head Contact: No contact recorded. Need to use a switch with lower force

Shoulder Contact: No contact recorded. Need to use a switch with lower force

Thorax Contact: No contact recorded. Need to use a switch with lower force.

SECTION 3

OCCUPANT AND VEHICLE INFORMATION/DATA SHEETS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

CONVERSION FACTORS

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

DATA SHEET NO. 1

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA Number	R20185380
Model Year	2018
Make	Honda
Model	Accord
Body Style	4-Door Sedan
VIN	1HGCV1F17JA113140
Body Color	Red
Odometer Reading (km / mi)	6 / 4
Engine Displacement (L)	1.5
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	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	No
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	Honda of America MFG., Inc
Date of Manufacture	Feb-18
Vehicle Type	Passenger Car

GVWR (kg)	1950
GAWR Front (kg)	1070
GAWR Rear (kg)	960

VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total	
Designated Seating Capacity	2	3		5	
Capacity Weight (VCW) (kg)				385.0	*A*
DSC x 68.04 (kg)				340.2	*B*
Cargo Weight (RCLW) (kg)				44.8	*A-B*

VEHICLE SEAT TYPE

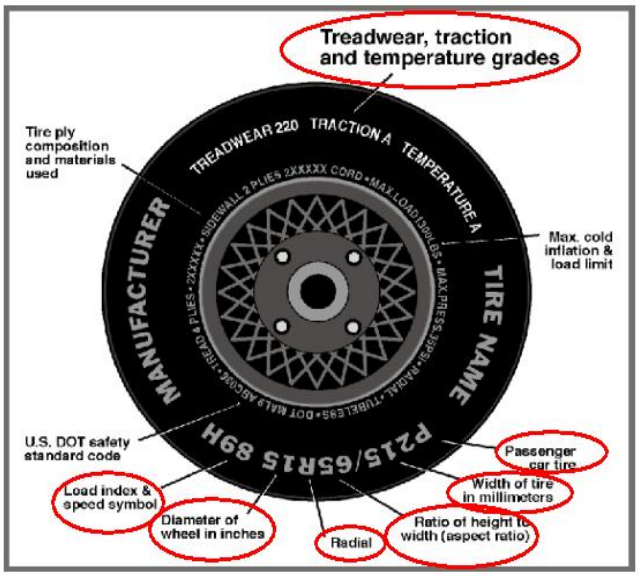
Seating Location	Type of Seat Pan				Type of Seat Back		
	Bucket	Bench	Split Bench	Contoured	Fixed	Adjustable w/ Lever	Adjustable w/ Knob
Front Seat	Yes					Yes	
Rear or Second Row Seat			Yes		Yes		
Third Row Seat							

DATA SHEET NO. 1 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19



Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	350	350
Cold Pressure (kPa)	220	220
Recommended Tire Size	225/50R17	225/50R17
Tire Size on Vehicle	225/50R17	225/50R17
Tire Manufacturer	Hankook	Hankook
Tire Model	Kinergy GT	Kinergy GT
Treadware	500	500
Traction Grade	A	A
Temperature Grade	A	A
Tire Plies Sidewall	1 Polyester	1 Polyester
Tire Plies Body	2 Steel, 1 Polyester, 1 Nylon	2 Steel, 1 Polyester, 1 Nylon
Load Index/Speed Symbol	94V	94V
Tire Material	Polyester, Steel, Nylon	Polyester, Steel, Nylon
DOT Safety Code Left	1T7AB 1BH0 4717	1T7AB 1BH0 4717
DOT Safety Code Right	1T7AB 1BH0 4717	1T7AB 1BH0 4717

DATA SHEET NO. 1 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

TIRE PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kPa	220	220	220	220
Tire Placard	kPa	220	220	220	220
Owner's Manual	kPa	220	22	220	220
As Tested	kPa	220	220	220	220

MDB TIRE SPECIFICATIONS

	Units	Requirement	LF	RF	LR	RR
Tire Size		P205/60R16	P205/60R16	P205/60R16	P205/60R16	P205/60R16
Tire Pressure	kPa	230 ± 21	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	428.5	290.5		469.0	355.0		465.0	361.0	
Right	kg	429.0	268.0		432.0	319.5		440.0	318.5	
Ratio	%	60.6%	39.4%	100.0%	57.2%	42.8%	100.0%	57.1%	42.9%	100.0%
Total	kg	857.5	558.5	1416.0	901.0	674.5	1575.5	905.0	679.5	1584.5

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total Delivered Weight (UVW)	kg	1416.0	A
Actual Weight of 1 WORLDSID & 1 SID-IIs	kg	123.0	B
Rated Cargo/Luggage Wt (RCLW)	kg	44.8	C
Calculated Vehicle Target Wt (TVTW)	kg	1583.8	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	Fully Loaded	As Tested	Meets Requirement***
LF	mm	686	688	Yes
RF	mm	695	695	Yes
LR	mm	688	680	Yes
RR	mm	700	690	Yes
Vehicle CG (Aft of Front Axle)	mm	1215	1213	
Vehicle CG (Left (+)/Right (-) from Longitudinal Centerline)	mm	34	37	

***The “As Tested” vehicle attitude measurements must be equal to or within ±10 mm of the “Fully Loaded” vehicle attitude measurements at each wheel well. Indicate “Yes” or “No” for “Meets Requirement”

DATA SHEET NO. 1 … (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Trunk Trim and Spare Tire	15.0
Ballast / Equipment Added	49.1

Test Height Adjustable Setting (If Applicable)	

DATA SHEET NO. 2

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

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

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	4.9	0.0	2.5
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	2.5	238	Max			
			Mid	230	238	254
			Min			
Front Passenger Seat	Fixed	511	Max			
			Mid	498	511	524
			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: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

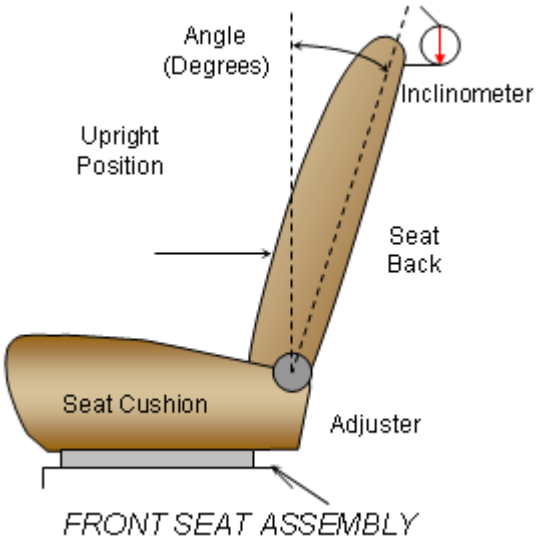
SEAT FORE/AFT POSITION

Seat	Total Fore/Aft Travel		Test Position From Forwardmost Position	
	mm	Detents*	mm	Detent*
Driver Seat	240	25	120	12
Front Passenger Seat	240	25	120	12
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 3.0° rearward measured at the head rest post per Form 1 instructions for a Side Impact using a 50th Male ATD. The right front passenger's seat back is positioned in a similar manner to the driver's seat. The seat track was positioned to mid-track fore and aft travel. The rear center and non-struck side rear outboard seat backs are positioned in a similar manner as the struck side rear seat back. Seat back angle is measured using the outboard head restraint post.



SEAT BACK POSITION

Seat	Total Seat Back Angle Range		Test Position from Most Upright	
	Degrees	Detents*	Degree	Detent*
Driver Seat w/Seated Dummy	65.1	18	3.0	4
Front Passenger Seat	63.6	24	3.0	4
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: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

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, M3, M2, …, L from top to bottom.

	Total No. of Positions	Placed in Position
Driver Seat	4	H
Rear Seat	Fixed	Fixed

HEAD RESTRAINT ADJUSTMENT

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

	Total No. of Positions	Placed in Position
Driver Seat	4	H
Rear Seat	Fixed	Fixed

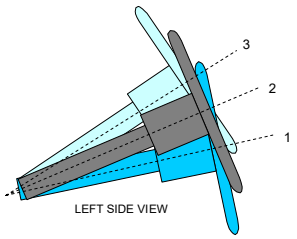
Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

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.

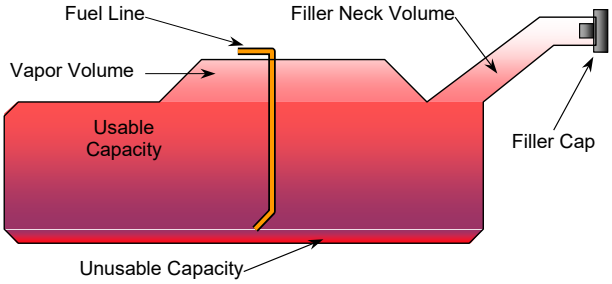
	Degrees	Fore-Aft Position (mm)
Lowermost - Position 1	16.6	92
Geometric Center - Position 2	19.4	120
Uppermost - Position 3	22.1	147
Telescoping Steering Wheel Travel		55
Test Position	19.4	120



STEERING COLUMN ASSEMBLY

FUEL PUMP

The fuel pump starts pumping fuel when the key is in the “ON” position.



VEHICLE FUEL TANK ASSEMBLY

FUEL TANK CAPACITY

Description	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	56.02
Usable Capacity of "Optional Tank" (see Form No. 1)	
Usable Capacity of "Standard Tank" (see Owner's Manual)	56.02
Usable Capacity of "Optional Tank" (see Owner's Manual)	
93% of Usable Capacity	52.10
Actual amount of Solvent Used in Test	52.10
1/3 of Usable Capacity	18.67

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

WORLDSID INSTRUMENTATION DATA

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

No.	Description	Axes	Units	Positive Direction		Negative Direction	
				Max	Time (ms)	Min	Time (ms)
1	Head Acceleration	X	g	18.7	62.9	-6.2	277.1
		Y	g	26.1	45.8	-4.8	285.5
		Z	g	1.6	80.3	-4.7	32.8
2	Head Angular Velocity	X	deg/sec	388.6	144.9	-270.0	48.1
		Y	deg/sec	482.6	233.0	-601.2	64.3
		Z	deg/sec	826.4	102.9	-1687.4	47.5
3	Upper Neck Force	X	g	216.7	270.0	-168.9	47.2
		Y	g	21.0	13.9	-319.2	62.9
		Z	g	455.7	54.9	-45.7	86.6
4	Upper Neck Moment	X	(Nm)	13.5	61.2	-9.7	32.3
		Y	(Nm)	26.2	81.9	-20.3	47.6
		Z	(Nm)	31.4	62.0	-10.0	132.7
5	Lower Neck Force	X	g	284.1	270.0	-231.3	64.3
		Y	g	183.2	35.5	-194.6	282.4
		Z	g	469.8	54.5	-72.1	86.7
6	Lower Neck Moment	X	(Nm)	3.6	35.4	-38.7	285.1
		Y	(Nm)	32.1	93.1	-56.4	269.6
		Z	(Nm)	34.6	62.4	-9.8	134.6
7	T1 Acceleration	X	g	3.5	219.1	-7.7	60.3
		Y	g	29.8	38.5	-9.9	15.7
		Z	g	4.8	39.6	-1.3	71.2
8	T4 Acceleration	X	g	4.1	39.6	-1.0	78.5
		Y	g	27.6	38.6	-5.0	15.6
		Z	g	2.5	226.7	-5.9	60.1
9	T12 Acceleration	X	g	1.9	186.5	-6.7	17.8
		Y	g	26.7	31.0	-3.8	101.4
		Z	g	3.1	39.6	-1.8	75.9
10	Shoulder Force	X	N	57.8	112.2	-315.3	61.3
		Y	N	188.4	85.9	-1856.4	46.7
		Z	N	529.5	54.1	-68.7	103.6
11	Pubic Symphysis	Y	N	19.0	181.0	-850.2	33.9
12	Sacro-Iliac Left Force	X	N	233.7	50.5	-163.1	25.9
		Y	N	62.1	184.2	-1847.7	34.8
		Z	N	9.9	104.1	-387.4	31.0
13	Sacro-Iliac Left Moment	X	Nm	18.3	281.1	-28.3	38.3
		Y	Nm	12.4	118.9	-9.0	19.0
		Z	Nm	31.5	31.5	-14.3	131.5
14	Lumbar Force	X	N	210.5	138.0	-174.3	269.5
		Y	N	475.2	36.4	-48.2	104.7
		Z	N	808.9	49.4	-5.8	2.0

DATA SHEET NO. 3…(CONTINUED)

WORLDSID INSTRUMENTATION DATA

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

No.	Description	Axes	Units	Positive Direction		Negative Direction	
				Max	Time (ms)	Min	Time (ms)
15	Lumbar Moment	X	Nm	30.0	65.3	-4.6	104.9
		Y	Nm	8.6	17.1	-9.3	141.5
		Z	Nm	8.1	36.5	-4.2	228.5
16	Pelvis Acceleration	X	g	15.9	50.0	-12.7	19.0
		Y	g	41.1	35.0	-7.3	71.7
		Z	g	13.7	31.5	-2.4	16.3
17	Left Femur Force	X	N	121.0	45.1	-252.1	29.2
		Y	N	512.0	29.9	-5.0	1.9
		Z	N	190.8	19.2	-1298.2	48.5
18	Left Femur Moment	X	Nm	204.4	32.8	-13.7	15.7
		Y	Nm	118.2	32.8	-10.7	95.7
		Z	Nm	73.8	46.0	-9.2	106.8
19	Left Femoral Neck Force	X	N	907.3	39.0	-73.0	106.9
		Y	N	126.5	14.5	-1878.7	32.9
		Z	N	568.1	48.4	-488.7	29.5
20	Shoulder Rear Ribeye Position	X	mm	-48.6	85.6	-70.0	58.3
		Y	mm	-57.6	55.1	-84.3	82.0
		Z	mm	-42.5	106.9	-66.7	68.8
		R	mm	18.5	45.9	-4.3	119.7
21	Shoulder Middle Ribeye Position	X	mm	-12.8	84.9	-32.3	114.2
		Y	mm	-57.3	51.2	-97.4	126.2
		Z	mm	-44.7	106.9	-73.2	68.8
		R	mm	37.3	51.2	-2.9	126.2
22	Shoulder Front Ribeye Position	X	mm	29.5	43.4	4.4	117.1
		Y	mm	-42.5	52.6	-85.2	129.9
		Z	mm	-50.3	107.4	-77.3	69.5
		R	mm	32.4	59.0	-0.6	16.1
23	Thorax Rib 1 Rear Ribeye Position	X	mm	-29.1	40.7	-38.1	86.8
		Y	mm	-92.9	38.4	-101.8	97.7
		Z	mm	1.8	48.9	-8.2	32.2
		R	mm	8.3	38.4	-1.9	97.9
24	Thorax Rib 1 Middle Ribeye Position	X	mm	9.5	38.3	-2.1	86.4
		Y	mm	-97.4	36.7	-110.7	97.7
		Z	mm	3.2	47.8	-9.3	30.4
		R	mm	10.1	36.7	-2.3	97.5
25	Thorax Rib 1 Front Ribeye Position	X	mm	46.5	38.5	33.0	86.3
		Y	mm	-89.4	39.1	-102.6	96.0
		Z	mm	2.9	48.9	-10.0	30.2
		R	mm	6.3	26.5	-1.7	106.5
26	Thorax Rib 2 Rear Ribeye Position	X	mm	-23.8	46.3	-32.5	141.4
		Y	mm	-86.1	30.5	-99.1	143.7
		Z	mm	40.3	1.6	33.7	57.3
		R	mm	12.7	30.6	-1.7	143.7

DATA SHEET NO. 3…(CONTINUED)

WORLDSID INSTRUMENTATION DATA

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

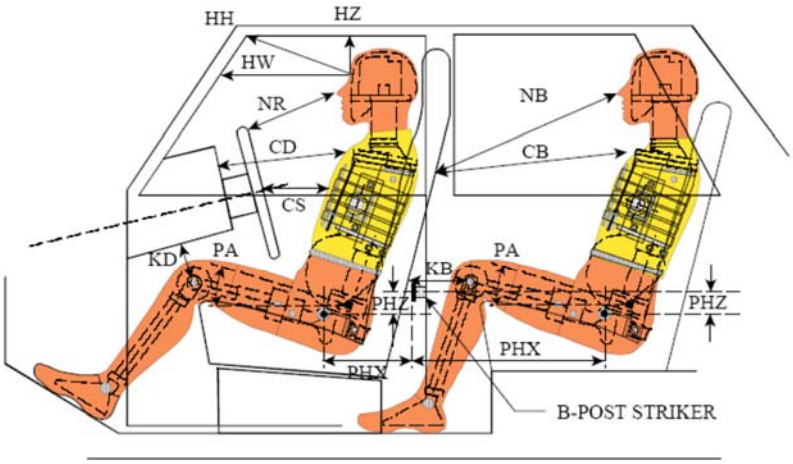
No.	Description	Axes	Units	Positive Direction		Negative Direction	
				Max	Time (ms)	Min	Time (ms)
27	Thorax Rib 2 Middle Ribeye Position	X	mm	16.6	33.2	4.4	138.2
		Y	mm	-94.6	31.5	-111.3	105.2
		Z	mm	43.4	4.1	35.7	60.0
		R	mm	13.9	31.5	-1.7	110.7
28	Thorax Rib 2 Front Ribeye Position	X	mm	54.6	32.8	39.6	85.2
		Y	mm	86.9	31.4	-102.5	106.8
		Z	mm	46.4	7.8	39.0	59.8
		R	mm	7.0	31.5	-1.7	106.8
29	Thorax Rib 3 Rear Ribeye Position	X	mm	-41.7	60.5	-49.0	84.2
		Y	mm	-84.2	33.0	-96.2	190.2
		Z	mm	-34.5	8.1	-42.3	61.3
		R	mm	10.8	33.0	-1.4	190.2
30	Thorax Rib 3 Middle Ribeye Position	X	mm	-8.6	33.1	-19.3	81.9
		Y	mm	-89.3	32.0	-103.3	235.4
		Z	mm	-33.2	4.6	-41.4	60.1
		R	mm	11.8	32.0	-1.1	235.5
31	Thorax Rib 3 Front Ribeye Position	X	mm	25.2	33.0	11.1	82.9
		Y	mm	-81.6	32.0	-94.4	319.4
		Z	mm	-33.8	5.0	-41.2	59.1
		R	mm	5.6	32.0	-1.1	66.6
32	Abdomen Rib 1 Rear Ribeye Position	X	mm	-23.6	66.1	-30.7	166.9
		Y	mm	-85.3	32.5	-96.1	350.6
		Z	mm	-0.7	303.0	-11.8	63.5
		R	mm	10.2	32.3	-1.0	158.8
33	Abdomen Rib 1 Middle Ribeye Position	X	mm	10.9	61.5	0.3	393.6
		Y	mm	-90.2	32.5	-105.0	200.3
		Z	mm	-0.6	200.5	-12.9	63.2
		R	mm	11.8	32.3	-1.3	200.2
34	Abdomen Rib 1 Front Ribeye Position	X	mm	43.4	31.2	31.0	395.1
		Y	mm	-83.3	32.0	-96.3	144.4
		Z	mm	-1.1	228.8	-12.6	63.5
		R	mm	6.5	31.9	-1.1	120.3
35	Abdomen Rib 2 Rear Ribeye Position	X	mm	-7.3	66.1	-16.0	20.2
		Y	mm	-76.1	55.6	-92.7	190.0
		Z	mm	33.6	269.9	21.7	64.7
		R	mm	15.2	55.6	-1.7	269.9
36	Abdomen Rib 2 Middle Ribeye Position	X	mm	27.9	64.1	14.2	264.6
		Y	mm	-82.0	58.3	-104.2	284.4
		Z	mm	32.1	235.2	18.1	64.7
		R	mm	18.6	58.4	-3.1	284.3
37	Abdomen Rib 2 Front Ribeye Ribeye Position	X	mm	61.2	48.7	42.7	258.0
		Y	mm	-74.9	57.9	-95.8	260.0
		Z	mm	33.2	240.7	19.7	63.5
		R	mm	12.3	57.8	-1.0	314.3

DATA SHEET NO. 4

DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19



LEFT SIDE VIEW

NOTE: 2-DOOR VEHICLE SHOWN. REAR DUMMY PHX & PHZ MEASUREMENTS FOR A 4-DOOR VEHICLE WOULD USE THE C-POST STRIKER AS A REFERENCE POINT

Driver Code	Description	Driver		Passenger	
		Length (mm)	Angle (º)	Length (mm)	Angle (º)
HH	Head to Header	364			
HW	Head to Windshield	639			
HZ	Head to Roof	205		242	
NR	Nose to Rim/Seatback	451		714	
CD	Chest to Dash/Seatback	600		684	
CS	Chest to Steering Wheel	364			
OKD	Left Knee to Dash	177	3.9	454	7.0
IKD	Right Knee to Dash*	127	16.5	471	9.7
PAX°	Pelvic Tilt Angle (x-axis)		0.5		0.0
PAY°	Pelvic Tilt Angle (y-axis)		-2.3		0.3
PHX	Hip Point to Striker (x-axis)	216		99	
PHZ	Hip Point to Striker (z-axis)	215		235	
HAX°	Head Tilt Angle X		0.1		
HAY°	Head Tilt Angle Y		-1.9		
TAX°	Thorax Tilt Angle X		1.4		
TAY°	Thorax Tilt Angle Y		-1.1		
	Head Rest Angle		3.4		28.2
	H-Point Tool Angle		39.8		22.0
	Torso Angle		80.2		
	Windshield Angle		30.5		

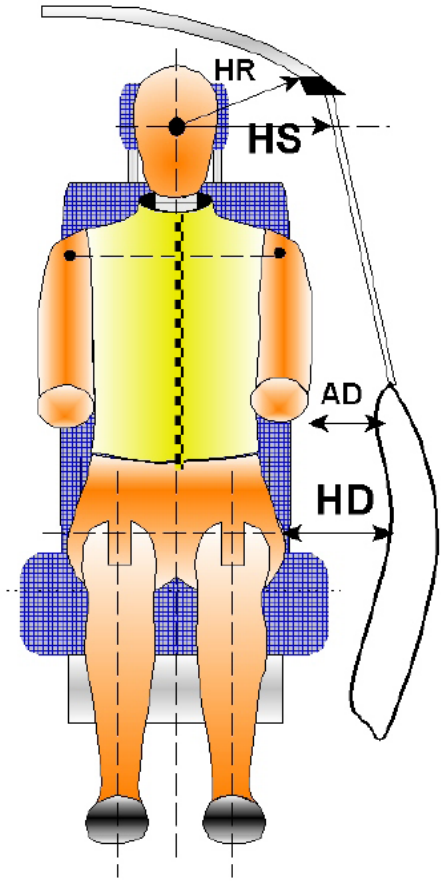
Note: All tilt sensor angles are recorded digitally. WorldSID neck was adjusted 2 notches down.

DATA SHEET NO. 5

DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19



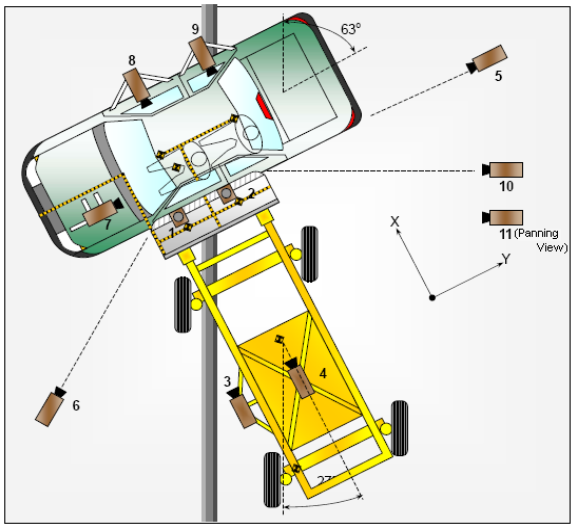
Code	Measurement Description	Units	Driver	Passenger
HR	Head to Side Header	mm	262	294
HS	Head to Side Window	mm	367	403
AD	Arm to Door	mm	164	213
HD	Hip Point to Door	mm	109	273
KK	Knee to Knee	mm	322	240
HLHL	Heel to Heel	mm	348	218

DATA SHEET NO. 6

CAMERA AND INSTRUMENTATION DATA

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19



No.	View	Coordinates (mm)			Lens Length (mm)	Operating Frame Rate (fps)
		X	Y	Z		
1	Overhead Overall	1220	2287	-5486	14	1000
2	Overhead Close-Up	609	2287	-5102	35	1000
3	Left Impact Point (MDB)	-2134	0	-1143	25	1000
4	Side Overall (MDB)	-3912	838	-1829	12.5	1000
5	Rear	-64	2485	-1348	85	1000
6	Left Front	-2266	-3564	-1475	24	1000
7	Driver Front (On-Board)	511	-308	716	8.5	1000
8	Driver Side (On-Board)	1642	765	469	8.5	1000
9	Passenger Side (On-Board)	1608	1620	550	8.5	1000
10	Real Time Overall				Zoom	30
11	Real Time Inrun				Zoom	30

Reference from Point of Impact for X and Y; from Ground for Z): +X = Forward of Vehicle, +Y = Right of Vehicle, +Z = Down
*All measurements accurate to ±6 mm

INSTRUMENTATION

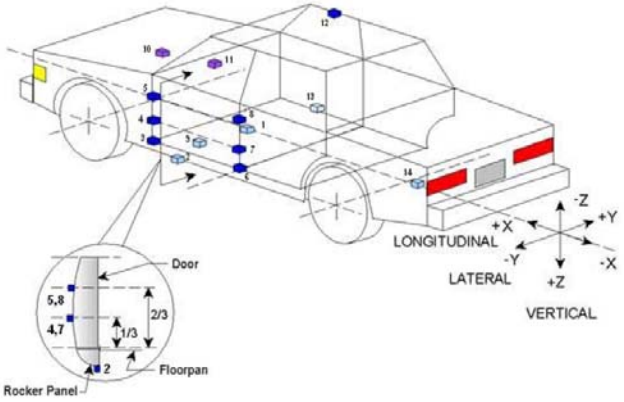
WSID Dummy Channels	117
Rear SID-IIs	28
Vehicle Structure	27
MDB	5
Contact Switches	10
Total	187

DATA SHEET NO. 7

TEST VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19



No.	Description	Coordinates (mm)			Positive Direction		Negative Direction	
		X	Y	Z	Max	Time (ms)	Min	Time (ms)
1	Vehicle CG	-2690.7	-19.0	-370.9				
	Longitudinal (g)	-2690.7	-19.0	-370.9	4.9	4.1	-11.0	10.4
	Lateral (g)	-2690.7	-19.0	-370.9	29.0	6.7	-1.4	88.0
	Vertical (g)	-2690.7	-19.0	-370.9	12.3	11.6	-5.0	21.2
	Resultant (g)	-2690.7	-19.0	-370.9				
2	Vehicle CG	-2696.4	27.6	-377.0				
	Angular Rate X (Deg/s)	-2696.4	27.6	-377.0	118.9	30.2	-139.6	31.4
	Angular Rate Y (Deg/s)	-2696.4	27.6	-377.0	68.8	67.4	-120.9	9.4
	Angular Rate Z (Deg/s)	-2696.4	27.6	-377.0	17.3	14.3	-103.2	253.0
3	Rear Deck	3783.1	66.6	-503.5				
	Longitudinal (g)	3783.1	66.6	-503.5	4.0	11.7	-7.9	8.4
	Lateral (g)	3783.1	66.6	-503.5	39.8	7.1	-1.6	101.2
	Vertical (g)	3783.1	66.6	-503.5	11.3	7.7	-6.1	12.1
	Resultant (g)	3783.1	66.6	-503.5				
4	Rear Deck	3726.4	59.8	-499.2				
	Angular Rate X (Deg/s)	3726.4	59.8	-499.2	325.7	7.5	-173.2	10.1
	Angular Rate Y (Deg/s)	3726.4	59.8	-499.2	132.3	8.6	-227.8	21.5
	Angular Rate Z (Deg/s)	3726.4	59.8	-499.2	17.5	1.4	-101.1	103.3
5	Left Side Sill at Front Seat	1704.5	-692.5	-282.5				
	Lateral (g)	1704.5	-692.5	-282.5	2.2	94.6	-26.0	7.5
6	Left Lower A-Pillar	1450.3	-853.0	-379.3				
	Lateral (g)	1450.3	-853.0	-379.3	30.6	2.5	-38.0	7.7
7	Left Mid A-Pillar	1422.0	-846.4	-539.7				
	Lateral (g)	1422.0	-846.4	-539.7	25.8	8.5	-1.8	94.9
8	Left Side Sill at Rear Seat	2511.2	-657.7	-265.3				
	Lateral (g)	2511.2	-657.7	-265.3	79.9	4.9	-47.8	10.4
9	Left Lower B-Pillar	2580.3	-745.3	-529.0				
	Lateral (g)	2580.3	-745.3	-529.0	273.5	5.2	-108.4	9.1

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

NOTE: Front Centerline was used as origin

DATA SHEET NO. 7…(CONTINUED)

TEST VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

No.	Description	Coordinates (mm)			Positive Direction		Negative Direction	
		X	Y	Z	Max	Time (ms)	Min	Time (ms)
10	Left Middle B-Pillar	2597.2	-751.7	-881.4				
	Lateral (g)	2597.2	-751.7	-881.4	104.7	5.3	-38.9	16.7
11	Front Seat Track	2307.5	-660.6	-306.6				
	Lateral (g)	2307.5	-660.6	-306.6	36.2	5.2	-1.4	94.4
12	Right Rear Occupant Compartment							
	Lateral (g)				27.1	6.6	-2.2	94.5
13	Engine Block	671.4	45.3	-760.2				
	Longitudinal (g)	671.4	45.3	-760.2	2.9	83.6	-11.7	35.9
	Lateral (g)	671.4	45.3	-760.2	34.1	31.8	-7.6	124.0
14	FloorPan Above Rear Axle	3707.0	-6.8	-454.9				
	Longitudinal (g)	3707.0	-6.8	-454.9	0.7	13.6	-7.3	23.4
	Lateral (g)	3707.0	-6.8	-454.9	27.9	6.8	-1.6	102.3
	Vertical (g)	3707.0	-6.8	-454.9	9.1	5.5	-7.3	37.7
15	Left Front Door Mid Centerline	2051.5	-798.1	-667.0				
	Lateral (g)	2051.5	-798.1	-667.0	204.8	6.7	-110.1	18.9
16	Left Front Door Mid Rear	2372.7	-787.7	-569.0				
	Lateral (g)	2372.7	-787.7	-569.0	197.7	5.5	-213.8	10.5
17	Left Front Door Upper Centerline	2079.6	-776.7	-822.6				
	Lateral (g)	2079.6	-776.7	-822.6	109.3	7.8	-54.0	31.5
18	Left Rear Door Mid Rear	3267.9	-777.5	-646.1				
	Lateral (g)	3267.9	-777.5	-646.1	162.8	20.6	-94.4	26.0
19	Left Rear Door Upper Centerline	3055.5	-787.4	-854.0				
	Lateral (g)	3055.5	-787.4	-854.0	154.3	16.4	-97.9	34.4
20	Right Side Sill at Front Seat							
	Longitudinal (g)				3.5	66.0	-6.3	10.6
	Lateral (g)				23.1	9.3	-2.4	94.9
	Vertical (g)				5.4	32.1	7.8	11.9
	Resultant (g)							
21	Right Side Sill at Rear Seat							
	Longitudinal (g)				3.7	98.2	-48.1	49.5
	Lateral (g)				55.2	49.5	-5.0	43.6
	Vertical (g)				5.5	37.9	-10.0	85.1
	Resultant (g)							
22	Left Rear Seat Structure							
	Lateral (g)				33.2	6.5	-3.0	12.0

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

NOTE: Front Centerline was used as origin

DATA SHEET NO. 8

MDB SUMMARY OF RESULTS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

MDB SPECIFICATIONS

Measurement Description	Length (mm)
Overall Width of Framework Carriage	1251
Overall Length including Honeycomb Face	4115
Wheel Base of Framework Carriage	2595
CG location aft of Front Axle	1118

MDB WEIGHTS

	Units	Front Axle	Rear Axle	Total
Left	kg	402.0	297.5	699.5
Right	kg	377.0	290.0	667.0
Ratio	%	57.0%	43.0%	100.0%
Totals	kg	779.0	587.5	1366.5

SPEED AND IMPACT DATA

Measured Parameter	Units	Requirement	Value
Trap No. 1 Velocity (Primary)	km/h	61.1 to 62.7	62.03
Trap No. 2 Velocity (Redundant)	km/h	61.1 to 62.7	62.00
MDB CL to Target Vehicle CL	degrees	88.5 to 91.5	90.1
MDB Forw ard Line of Motion to Target Vehicle CL	degrees	62.5 to 63.5	62.5
MDB Crabbed Angle to MDB Forw ard Line of Motion	degrees	26.0 to 28.0	27.6

MAXIMUM STATIC CRUSH OF HONEYCOMB FACE

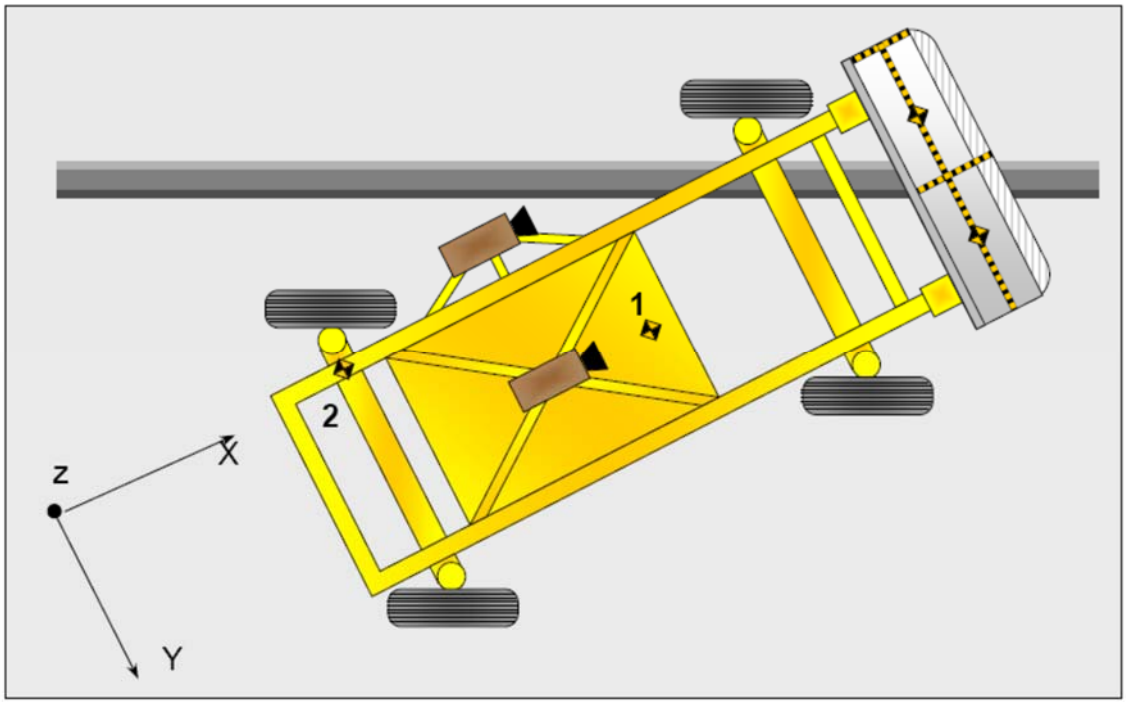
Vertical Location			From Centerline		Max. Crush (mm)
Row	Description	Height (mm)	Distance (mm)	Direction	
A	Center of Bumper	432	800	Right	222
B	Top of Bumper	533	800	Right	128
C	Mid Level	686	800	Left	118
D	Top of Stack	813	800	Left	145

DATA SHEET NO. 9

MDB ACCELEROMETER LOCATIONS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19



MDB ACCELEROMETER LOCATIONS

Loc. No.	Accelerometer Location	Measurement		
		X	Y	Z
1	MDB CG	-1195	0	-430
2	MDB Rear	-2642	-593	-608

Reference: X – Face of MDB (+ forward)
Y – MDB centerline (+ to right)
Z – Ground plane (+ down)

DATA SHEET NO. 10

POST-TEST OBSERVATIONS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

TEST DUMMY INFORMATION AND CONTACT POINTS

Dummy Body Part	Driver WorldSid Dummy	Rear Seat Dummy (SID-IIs)
Face	Curtain Airbag	Curtain Airbag
Top of Head	Curtain Airbag	Curtain Airbag, Side Header, Center Seatback, Center Headrest
Left Side of Head	Curtain Airbag	Curtain Airbag, Side Header
Back of Head	Curtain Airbag, Side Header, Headrest	Curtain Airbag, Side Header, Center Seatback, Center Headrest
Left Shoulder	Side Airbag, Door Panel	Door Panel
Upper Torso	Side Airbag, Seat	None
Lower Torso	Side Airbag, Seat	None
Left Hip	Door Panel	None
Left Knee	Door Panel	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		Yes	
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. 10 … (CONTINUED)

POST-TEST OBSERVATIONS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

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 I NFORMATION

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	No	
Seat Belt Pretensioner	Yes	Yes	No	
Seat Belt Load Limiter	Yes	Yes	No	

IMPACT POINT LOCATION DATA

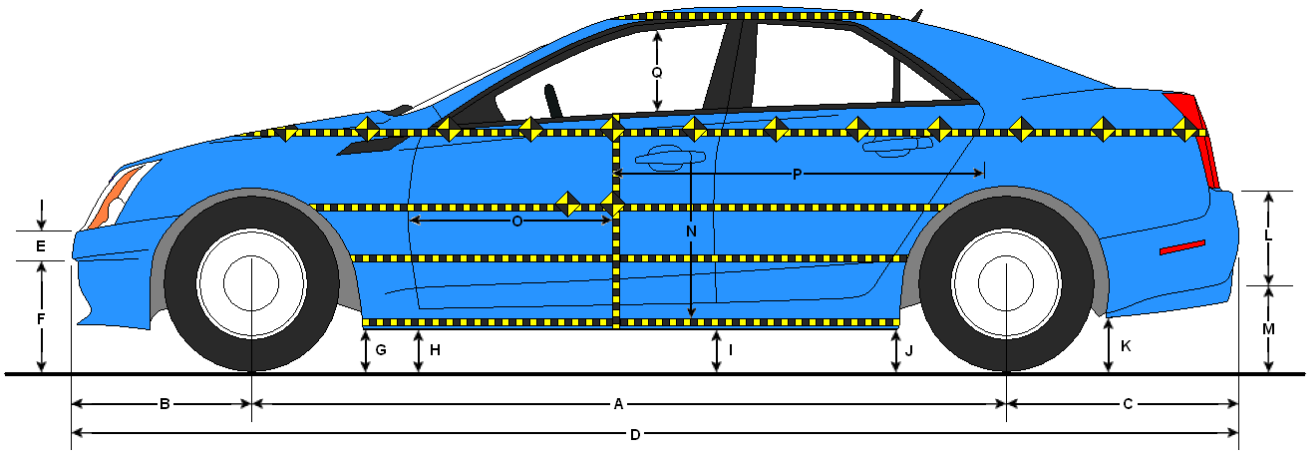
Measured Parameter	Units	Tolerance	Value
Vehicle Wheel Base	mm		2833
Vertical Impact Reference Line (Aft of Front Axle)(Intended Impact Point)	mm		476
Actual Impact Point (Aft of Front Axle)	mm		465
Horizontal Offset (+ forward / - rearward)	mm	± 50 of Intended Impact Point	11
Vertical Offset (+ down / - up)	mm	± 20 of Intended Impact Point	3

DATA SHEET NO. 11

TEST VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19



LEFT SIDE VIEW

All measurements in mm with tolerance of ± 3mm

VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

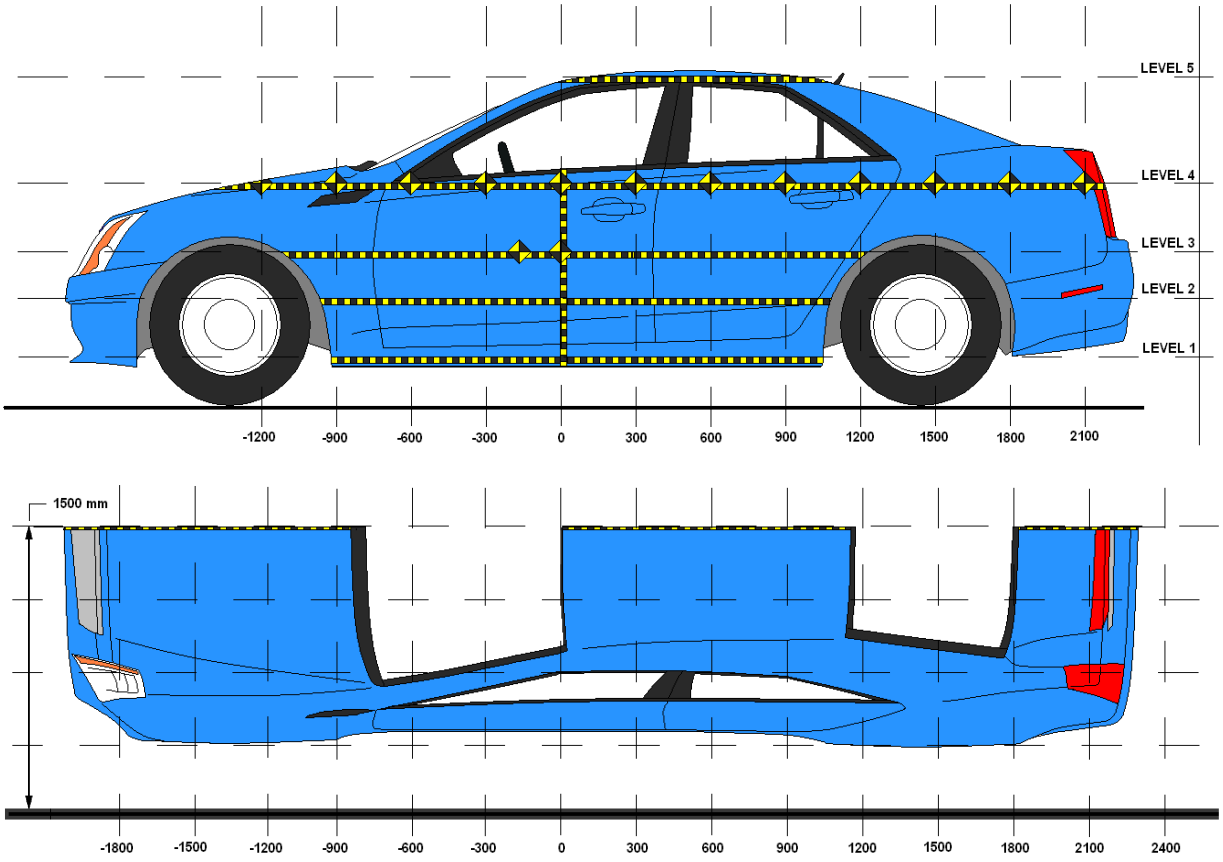
Code	Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2833	2829	-4
B	Front Axle to FSOV	929	900	-29
C	Rear Axle to RSOV	1122	1122	0
D	Total Length at Centerline	4884	4852	-32
E	Front Bumper Thickness	77	75	-2
F	Fromt Bumper Bottom to Ground	403	414	11
G	Sill Height at Front Wheel Well	194	206	12
H	Sill Height at Front Door Leading Edge	198	212	14
I	Sill Height at B-Pillar	216	245	29
J1	Sill Height at Rear Wheel Well	193	209	16
J2	Pinch Weld Height at Rear Wheel Well	162	160	-2
K	Sill Height Aft of Rear Wheel Well	242	245	3
L	Rear Bumper Thickness	205	205	0
M	Rear Bumper Bottom to Ground	401	403	2
N	Sill Height to Bottom of Front Window Sill	641	634	-7
O	Front Door Leading Edge to Impact CL	840	731	-109
P	Rear Door Trailing Edge to Impact CL	1384	1331	-53
Q	Front Window Opening	384	396	12
R	Right Side Length	3386	3387	1
S	Left Side Length	3383	3459	76
T	Vehicle Width at B-Pillar	1837	1817	-20

DATA SHEET NO. 12

TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19



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

MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Description	Height Above Ground (mm)	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	229	14	1650
2	Occupant H-Point	494	180	1650
3	Mid-Door	657	208	1650
4	Window Sill	831	209	1650
5	Window Top	1375	7	1350

DATA SHEET NO. 12 … (CONTINUED)

TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

EXTERIOR CRUSH MEASUREMENTS AT EACH LEVEL

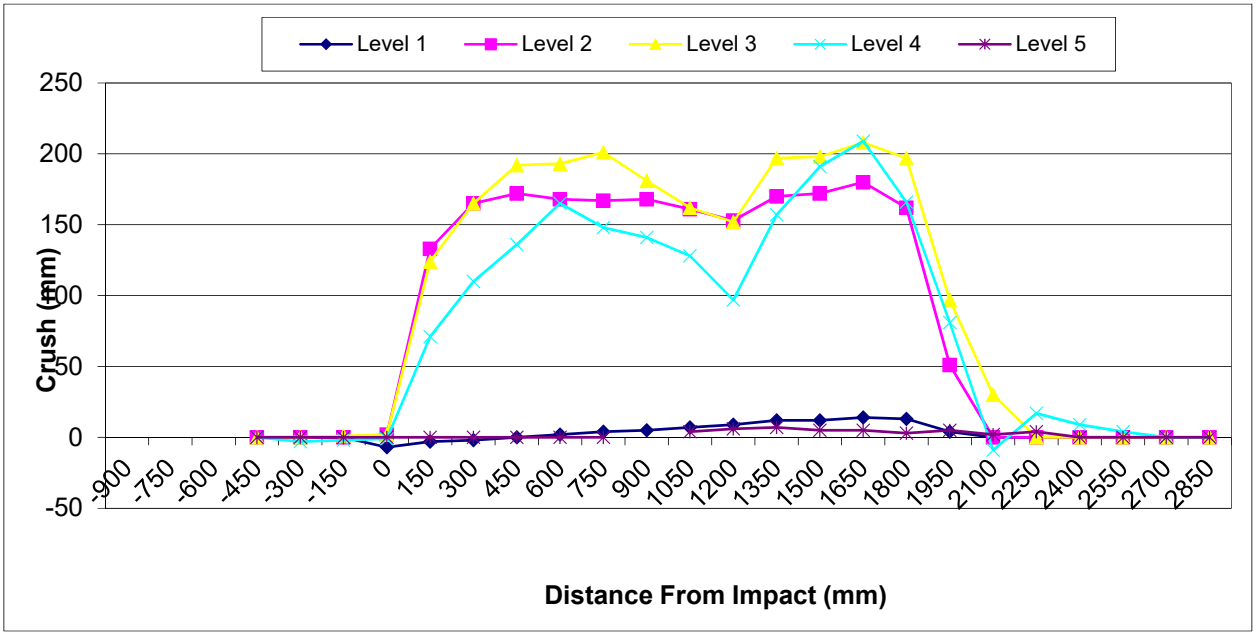
	Pre-Test (mm)					Post-Test (mm)					Difference (mm)				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900															
-750															
-600															
-450															
-300				647					644					-3	
-150			572	637				573	635				1	-2	
0	609	577	575	628		602	579	577	627		-7	2	2	-1	
150	612	581	576	622		609	714	700	693		-3	133	124	71	
300	629	583	575	615		627	748	740	725		-2	165	165	110	
450	626	584	575	611		626	756	767	747		0	172	192	136	
600	621	585	575	606		623	753	768	771		2	168	193	165	
750	615	586	575	604		619	753	776	752		4	167	201	148	
900	609	588	576	602		614	756	757	743		5	168	181	141	
1050	603	589	577	601	884	610	750	739	729	888	7	161	162	128	4
1200	597	592	579	598	889	606	745	731	695	895	9	153	152	97	6
1350	592	593	581	598	890	604	763	778	755	897	12	170	197	157	7
1500	592	593	582	598	891	604	765	780	789	896	12	172	198	191	5
1650	596	590	581	599	890	610	770	789	808	895	14	180	208	209	5
1800	603	584	578	599	889	616	746	775	765	892	13	162	197	166	3
1950	608	577	573	602	886	612	628	670	683	891	4	51	97	81	5
2100			567	601	885			597	592	887			30	-9	2
2250				600	885				617	889				17	4
2400				605					614					9	
2550				616					620					4	
2700															
2850															

DATA SHEET NO. 12 … (CONTINUED)

TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

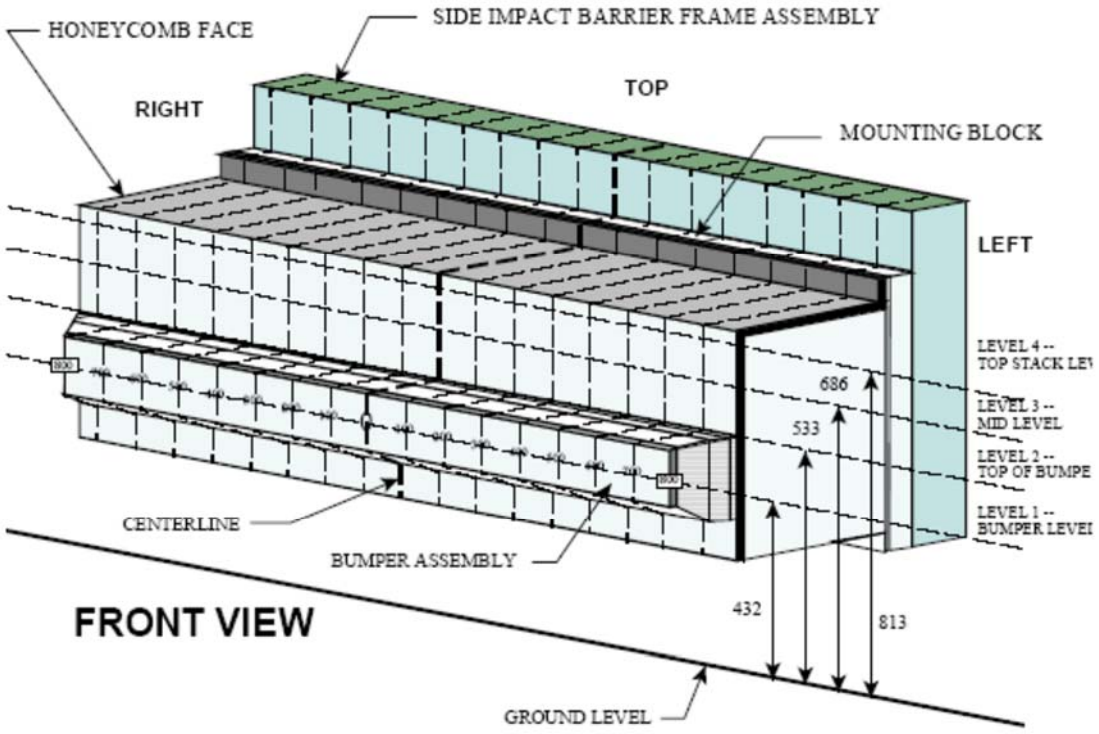


DATA SHEET NO. 13

MDB EXTERIOR STATIC CRUSH MEASUREMENTS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19



NOTE: Dimensions are shown in millimeters, mm

DEFORMABLE BARRIER STATIC CRUSH

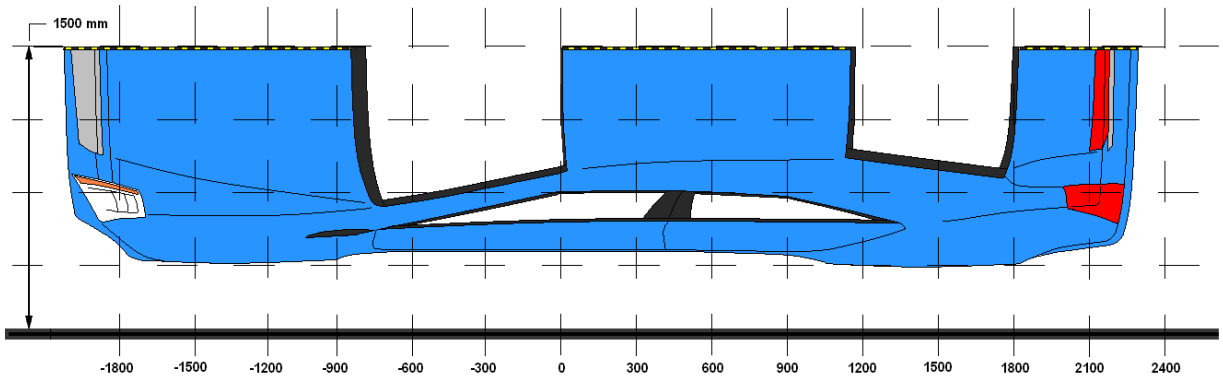
Stack Level	Distance Right of Center								C/L	Distance Left of Center							
	800	700	600	500	400	300	200	100	0	100	200	300	400	500	600	700	800
1	222	204	200	192	189	194	192	201	189	181	180	182	184	180	186	186	207
2	128	112	100	94	84	87	101	94	86	93	93	98	100	103	104	107	122
3	69	34	29	35	43	77	87	88	57	42	34	30	32	44	60	82	118
4	62	11	11	30	60	103	117	90	62	64	57	46	48	67	90	114	145

All dimensions in millimeters.

DATA SHEET NO. 14
VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19



DPD	Distance From Impact Point (mm)	Level	Pre-Test (mm)	Post-Test (mm)	Crush (mm)
1	2550	4	616	620	4
2	1950	3	573	670	97
3	1350	3	581	778	197
4	900	3	576	757	181
5	300	3	575	740	165
6	-300	4	647	644	-3

MDB DAMAGE PROFILE DISTANCES

DPD	From MDB Centerline		Level	Crush (mm)
	Distance (mm)	Direction		
1	800	Left	1	207
2	500	Left	1	180
3	200	Left	1	180
4	200	Right	1	192
5	500	Right	1	192
6	800	Right	1	222

DATA SHEET NO. 15

FMVSS NO. 301 STATIC ROLLOVER RESULTS

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19

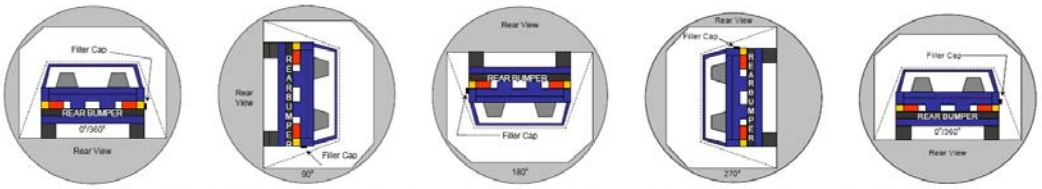
Temperature at Time of Impact: 30.0° C Test Time: 6:50 PM

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°	78	300	378
90° To 180°	80	300	380
180° To 270°	82	300	382
270° To 360°	78	300	378

FMVSS 301 SPILLAGE TABLE

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

SOLVENT SPILLAGE LOCATION TABLE

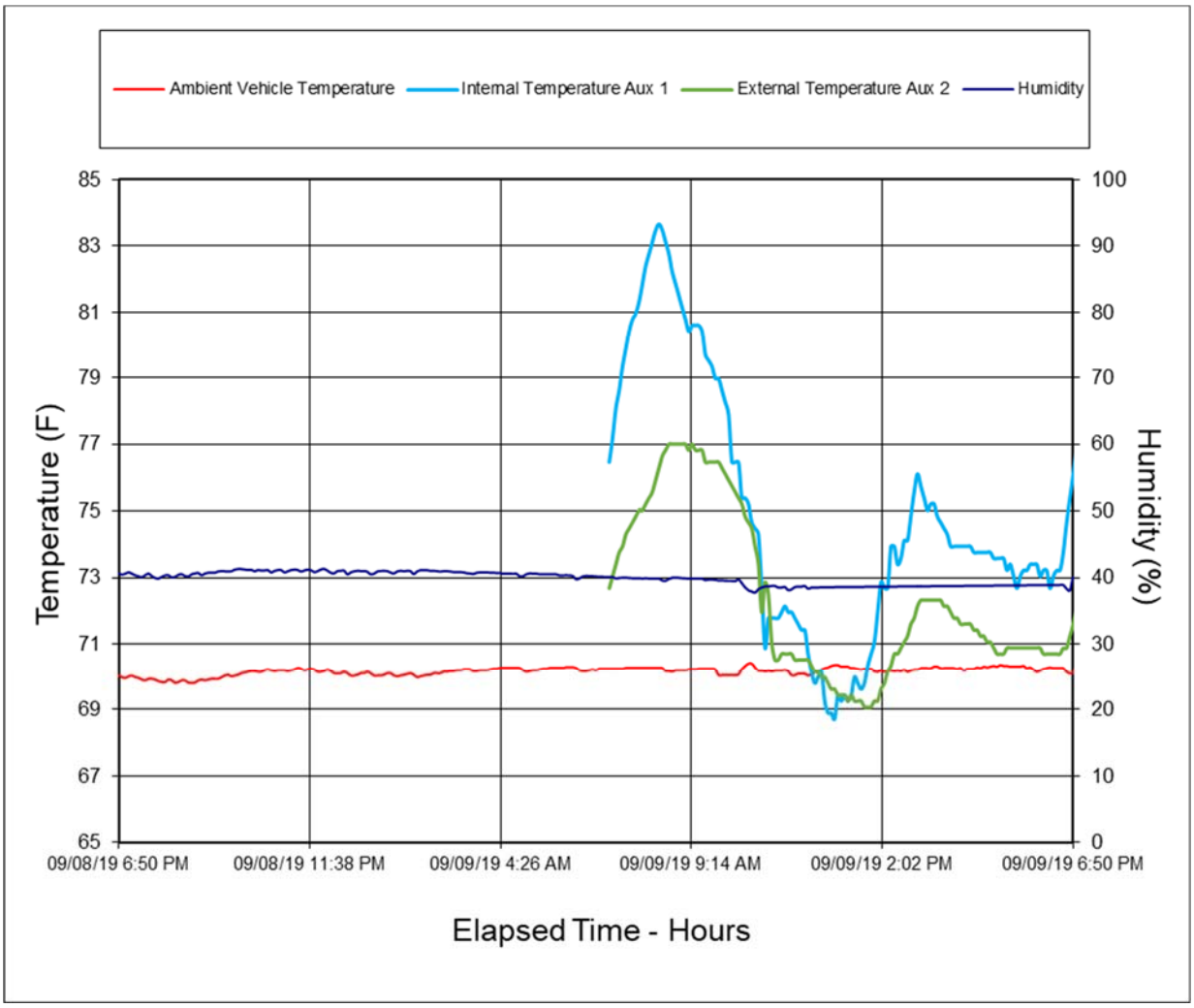
Test Phase	Spillage Location
0° To 90°	No Spillage Occurred
90° To 180°	No Spillage Occurred
180° To 270°	No Spillage Occurred
270° To 360°	No Spillage Occurred

DATA SHEET NO. 16

DUMMY/VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION

Test Vehicle: 2018 Honda Accord 4-Door Sedan NHTSA No. R20185380

Test Program: 55/28 km/h 90° Research Side Impact (MDB) Test Date: 09/09/19



Temperature Data

Time of Impact	6:50 P.M.
Temperature at Time of Impact	
Measurement Location	**°F**
Ambient Vehicle Temperature	70.1
WorldSid Internal Temperature	76.1
WorldSid External Temperature	71.6

APPENDIX A
PHOTOGRAPHS

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FIGURE 1. As-Delivered Right Front ¾ View of Test Vehicle



FIGURE 2. As-Delivered Left Rear ¾ 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 ¾ View of Test Vehicle



FIGURE 6. Post-Test Left Front ¾ 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 ¾ View of Test Vehicle



FIGURE 10. Post-Test Left Rear ¾ 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

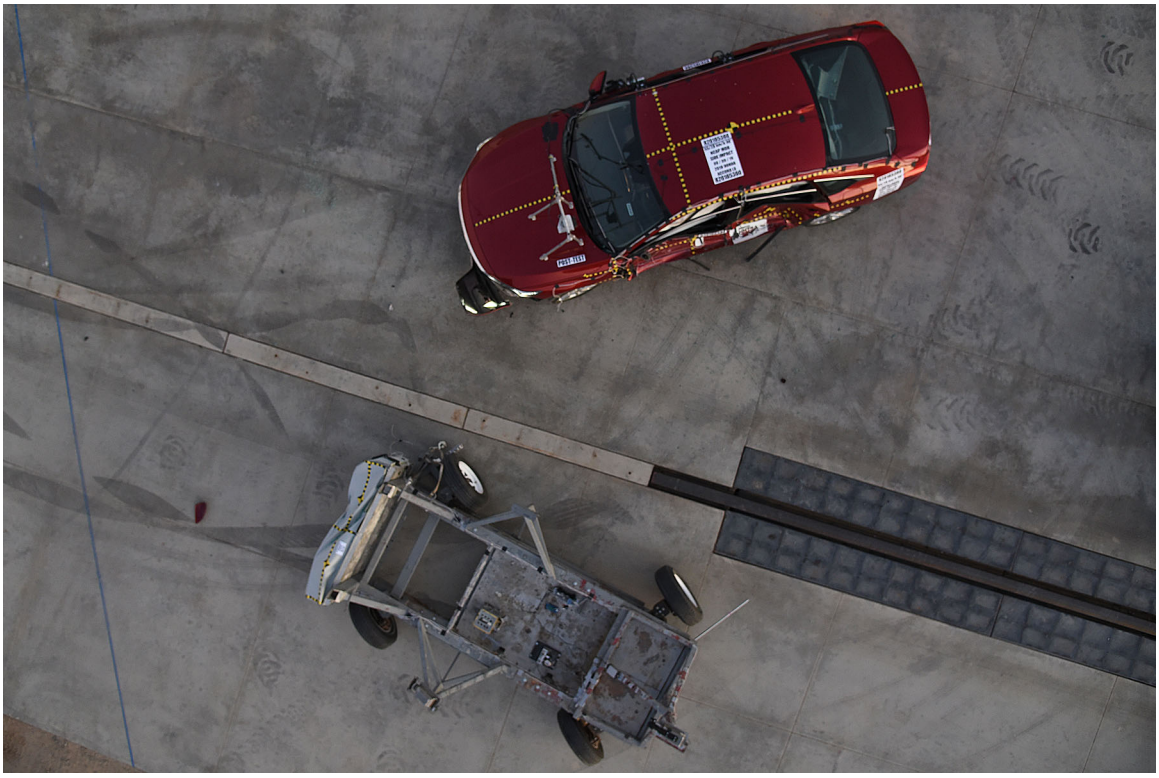


FIGURE 16. Post-Test Overhead View of Test Area



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



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



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

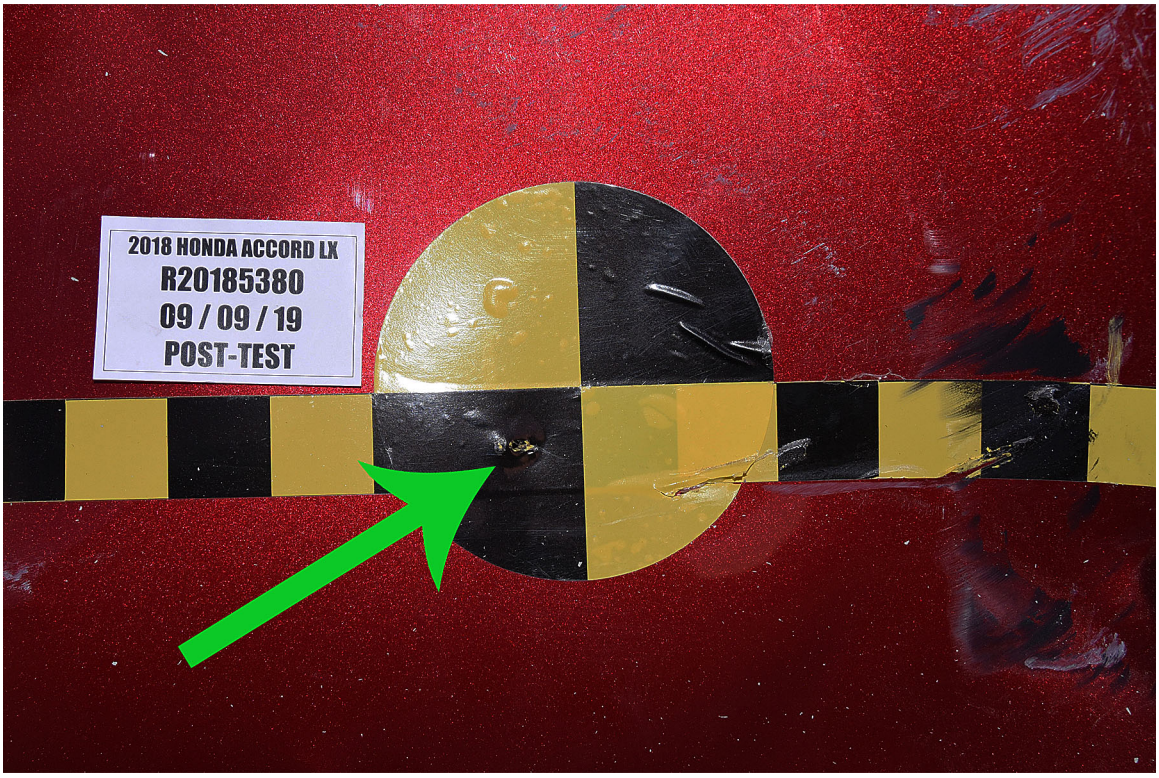


FIGURE 20. Post-Test Close-Up View of Impact Point Target



FIGURE 21. Pre-Test Left Front Door Latch Close-Up



FIGURE 22. Post-Test Left Front Door Latch Close-Up



FIGURE 23. Pre-Test Left Rear Door Latch Close-Up



FIGURE 24. Post-Test Left Rear Door Latch Close-Up



FIGURE 25. Pre-Test Front Close-Up View of Driver Dummy



FIGURE 26. Post-Test Front Close-Up View of Driver Dummy



FIGURE 27. Pre-Test Left Side View of Driver Dummy
Showing Belt and Chalking



FIGURE 28. Pre-Test Left Side View of Driver Dummy Shoulder and Door Top View



FIGURE 29. Post-Test Left Side View of Driver Dummy Shoulder and Door Top View



FIGURE 30. Pre-Test Frontal View of Driver Seat Back Prior to Dummy Positioning



FIGURE 31. Pre-Test Frontal View of Driver Dummy Head and Shoulders in Relation to Head Restraint



FIGURE 32. Pre-Test Overhead View of Driver Seat Pan Prior to Dummy Positioning



FIGURE 33. Pre-Test Overhead View of Driver Dummy Thighs on Seat Pan



FIGURE 34. Pre-Test Placement of Driver Dummy's Feet

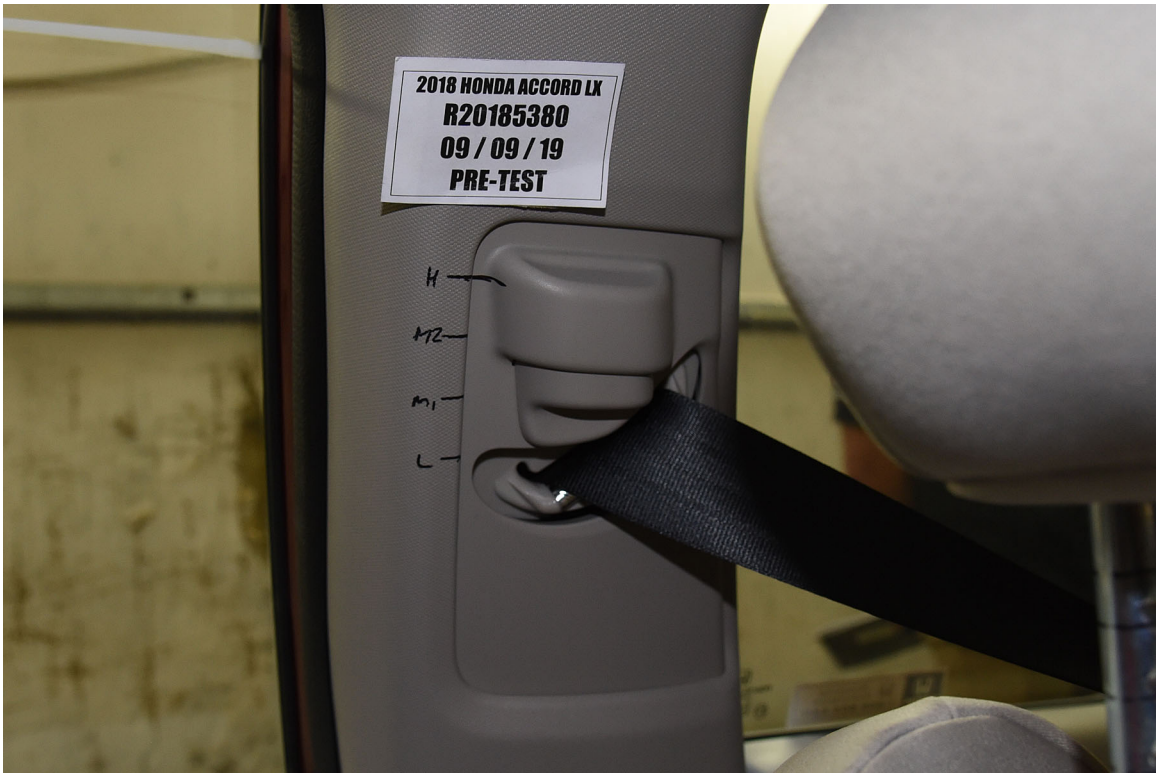


FIGURE 35. Pre-Test View of Belt Anchorage for Driver Dummy



FIGURE 36. Pre-Test Left Side View of Steering Wheel



FIGURE 37. View of Disengaged Parking Brake



FIGURE 38. Pre-Test View of Parking Brake



FIGURE 39. Pre-Test Close-Up Left Side View of Driver Seat Track



FIGURE 40. Pre-Test Close-Up Left Side View of Driver Seat Back



FIGURE 41. Pre-Test Close-Up View of Driver Seat Back or Head Restraint



FIGURE 42. Pre-Test Driver Dummy and Door Clearance View



FIGURE 43. Post-Test Driver Dummy and Door Clearance View



FIGURE 44. Pre-Test Right Side View of Driver Dummy
and Front Seat Occupant Compartment

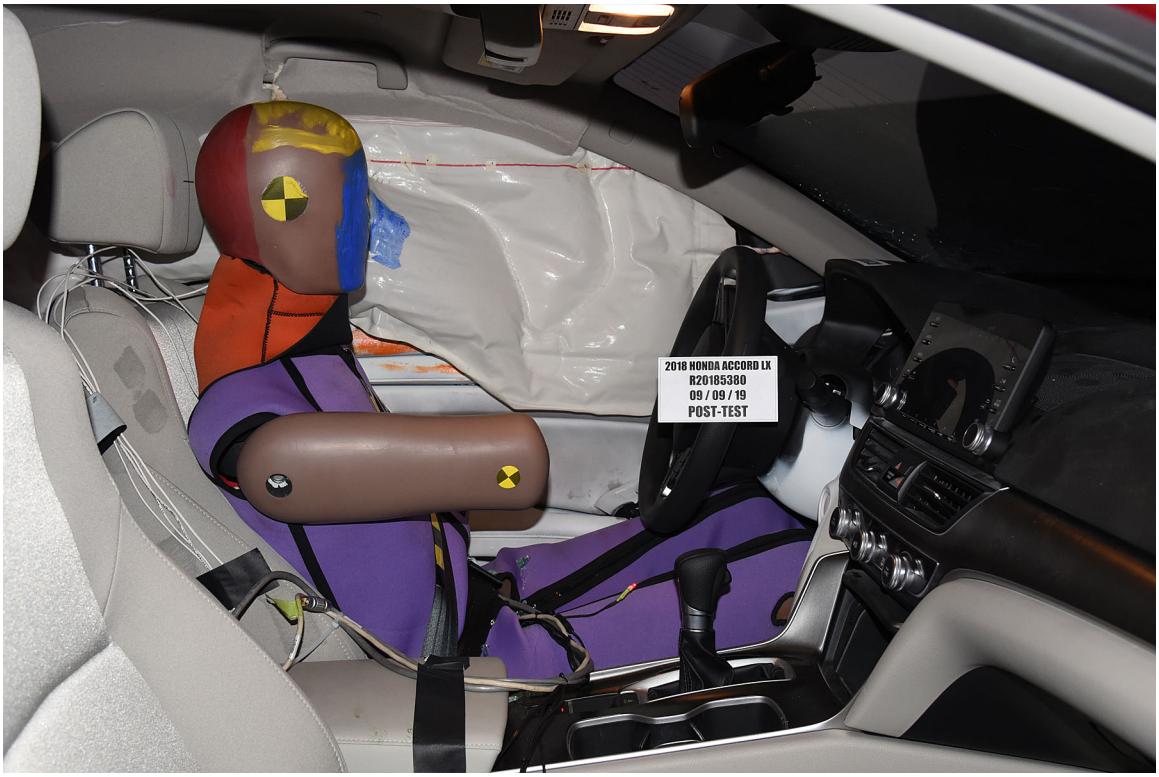


FIGURE 45. Post-Test Right Side View of Driver Dummy
and Front Seat Occupant Compartment



FIGURE 46. Pre-Test Driver Inner Door Panel View



FIGURE 47. Post-Test Driver Inner Door Panel View
Showing Driver Dummy Contact Locations



FIGURE 48. Post-Test Driver Dummy Close-Up Head Contact
with Vehicle Interior View

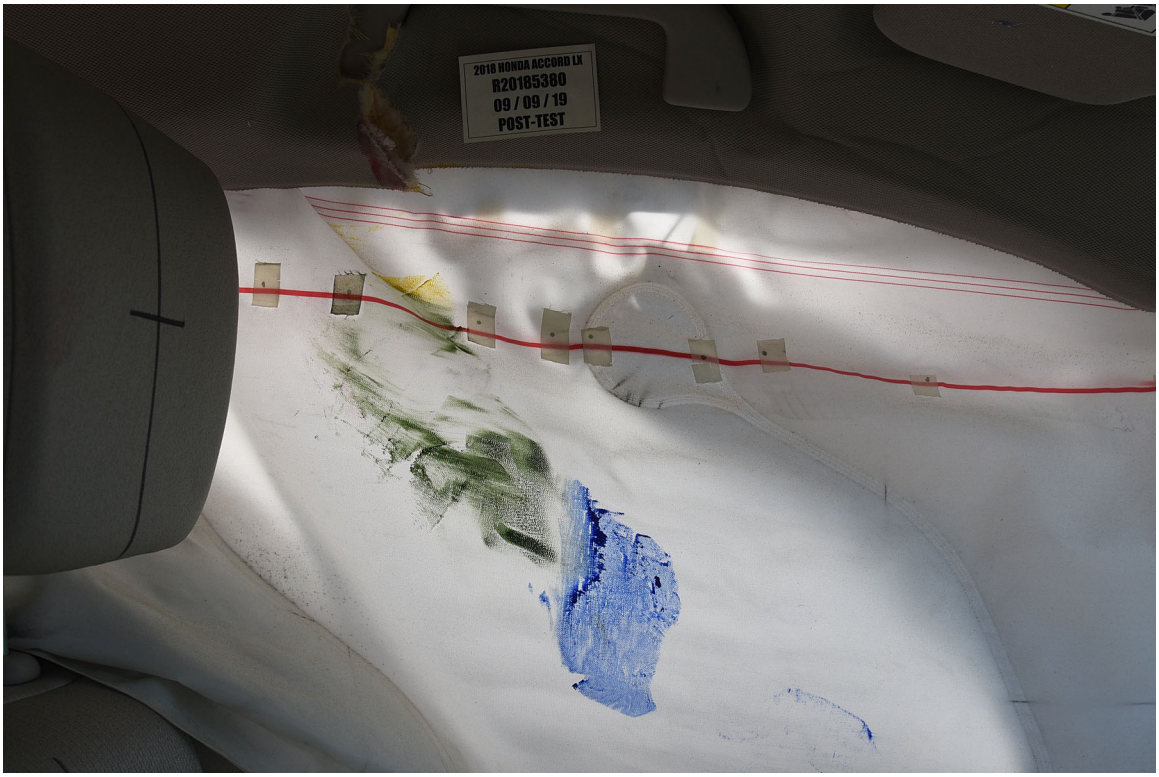


FIGURE 49. Post-Test Driver Dummy Close-Up Head Contact with Side Airbag View



FIGURE 50. Post-Test Driver Dummy Close-Up Torso Contact with Vehicle Interior View



FIGURE 51. Post-Test Driver Dummy Close-Up Torso Contact with Side Airbag View

Photograph Not Applicable

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

Photograph Not Applicable

FIGURE 53. Post-Test Driver Dummy Close-Up Pelvis Contact with Side Airbag View

Photograph Not Applicable

FIGURE 54. Post-Test Driver Dummy Close-Up Knee Contact View



FIGURE 55. Pre-Test Left Side View of Rear Passenger Dummy Showing Belt and Chalking



FIGURE 56. Pre-Test Left Side View of Rear Passenger Dummy Shoulder and Door Top View



FIGURE 57. Post-Test Left Side View of Rear Passenger Dummy Shoulder and Door Top View



FIGURE 58. Pre-Test Frontal View of Rear Passenger Seat Back Prior to Dummy Positioning

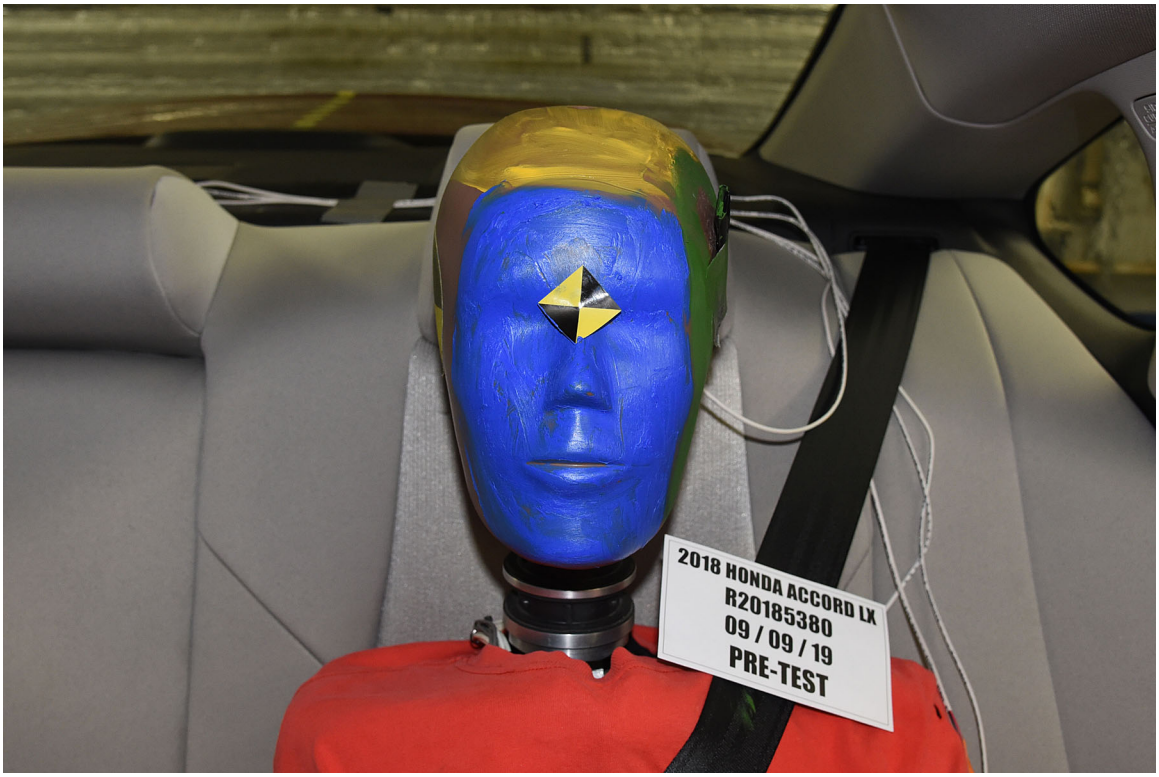


FIGURE 59. Pre-Test Frontal View of Rear Passenger Dummy Head and Shoulders in Relation to Head Restraint



FIGURE 60. Pre-Test Overhead View of Rear Passenger Seat Pan Prior to Dummy Positioning



FIGURE 61. Pre-Test Overhead View of Rear Passenger Dummy Thighs on Seat Pan



FIGURE 62. Pre-Test View of Rear Passenger Dummy's Neck
Showing Position of Adjustable Neck Bracket



FIGURE 63. Pre-Test View of Rear Passenger Dummy's Head
Showing Dummy’s Head is Level

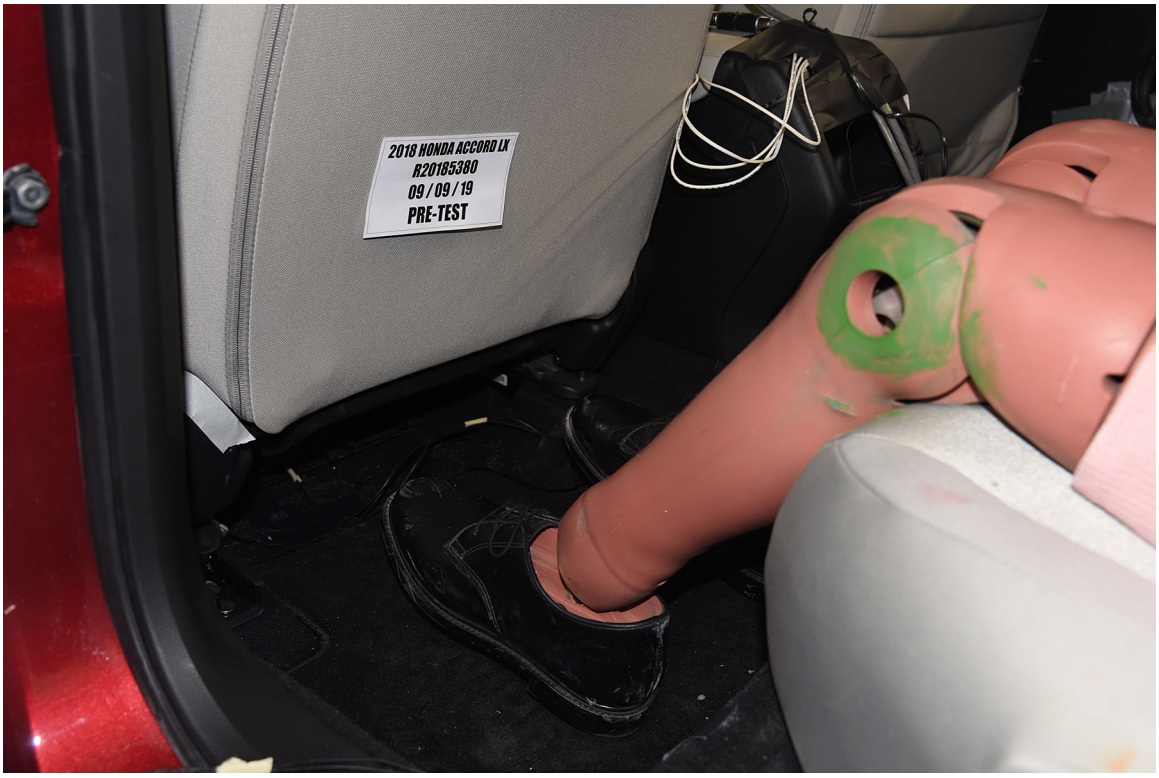


FIGURE 64. Pre-Test Placement of Rear Passenger Dummy's Feet



FIGURE 65. Pre-Test View of Belt Anchorage for Rear Passenger Dummy



FIGURE 66. Pre-Test Close-Up Left Side View of Rear Passenger Seat Track



FIGURE 67. Pre-Test Close-Up Left Side View of Rear Passenger Seat Back



FIGURE 68. Pre-Test Close-Up View of Rear Passenger Seat Back or Head Restraint



FIGURE 69. Pre-Test Rear Passenger Dummy and Door Clearance View



FIGURE 70. Post-Test Rear Passenger Dummy and Door Clearance View

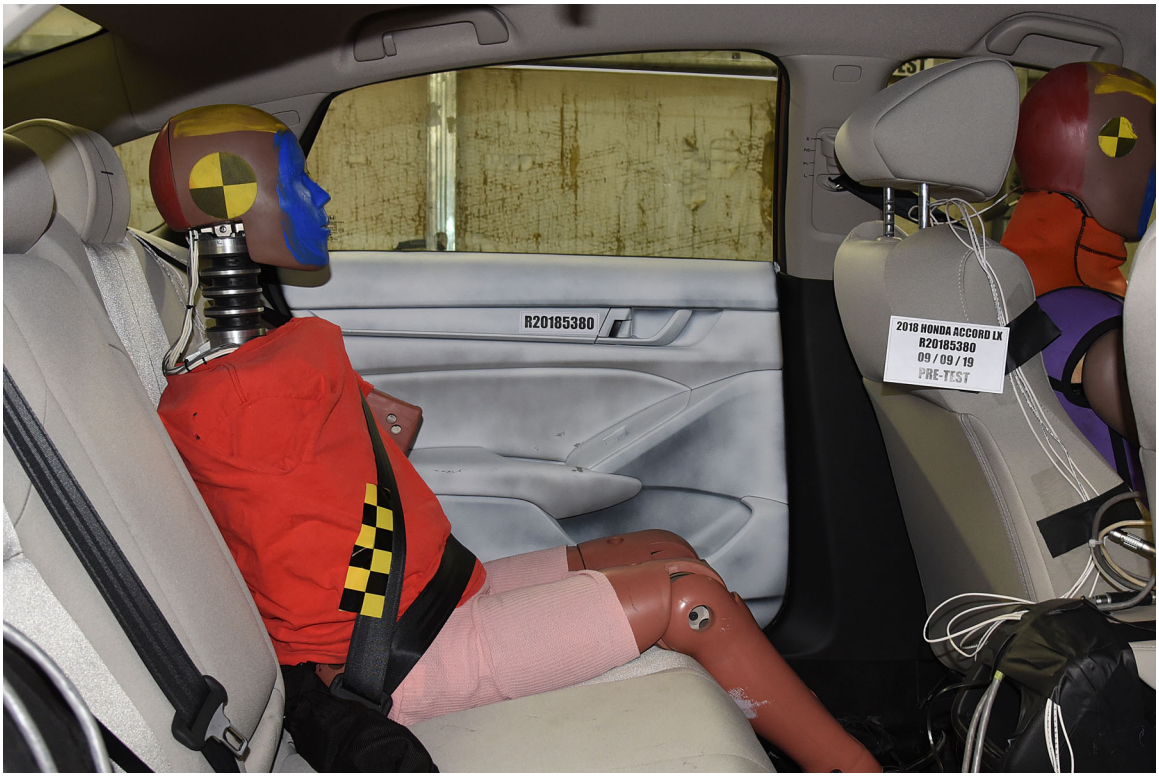


FIGURE 71. Pre-Test Right Side View of Rear Passenger Dummy
and Rear Seat Occupant Compartment

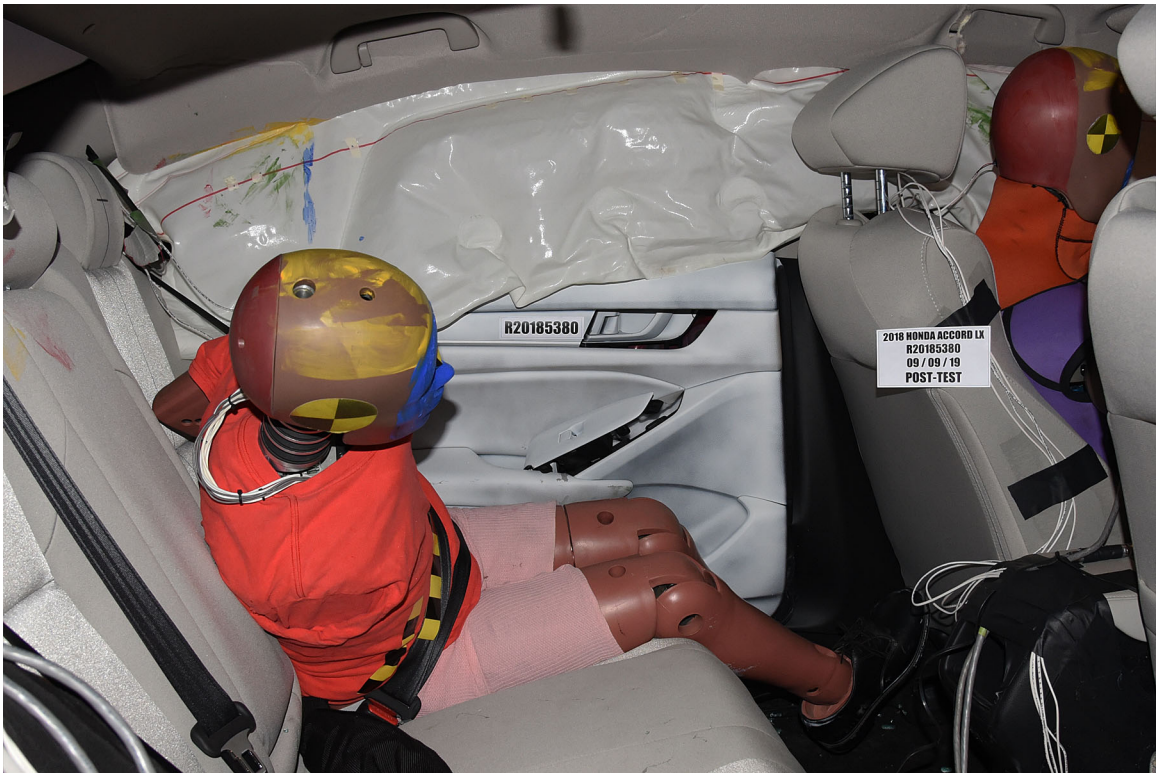


FIGURE 72. Post-Test Right Side View of Rear Passenger Dummy
and Rear Seat Occupant Compartment



FIGURE 73. Pre-Test Rear Passenger Inner Door Panel View



FIGURE 74. Post-Test Rear Passenger Inner Door Panel View
Showing Rear Passenger Dummy Contact Locations



FIGURE 75. Post-Test Rear Passenger Dummy Close-Up
Head Contact with Vehicle Interior View



FIGURE 76. Post-Test Rear Passenger Dummy Close-Up
Head Contact with Side Airbag View



FIGURE 77. Post-Test Rear Passenger Dummy Close-Up

Torso Contact with Vehicle Interior View



FIGURE 78. Post-Test Rear Passenger Dummy Close-Up

Torso Contact with Side Airbag View



FIGURE 79. Post-Test Rear Passenger Dummy Close-Up
Pelvis Contact with Vehicle Interior View

Photograph Not Applicable

FIGURE 80. Post-Test Rear Passenger Dummy Close-Up
Pelvis Contact with Side Airbag View

Photograph Not Applicable

FIGURE 81. Post-Test Rear Passenger Dummy Close-Up Knee Contact View



FIGURE 82. Pre-Test View of Fuel Filler Cap or Fuel Filler Neck



FIGURE 83. Post-Test View of Fuel Filler Cap or Fuel Filler Neck



FIGURE 84. Pre-Test Front View of MDB Impactor Face



FIGURE 85. Post-Test Front View of MDB Impactor Face



FIGURE 86. Pre-Test Top View of MDB Impactor Face



FIGURE 87. Post-Test Top View of MDB Impactor Face



FIGURE 88. Pre-Test Left Side View of MDB Impactor Face



FIGURE 89. Post-Test Left Side View of MDB Impactor Face



FIGURE 90. Pre-Test Right Side View of MDB Impactor Face

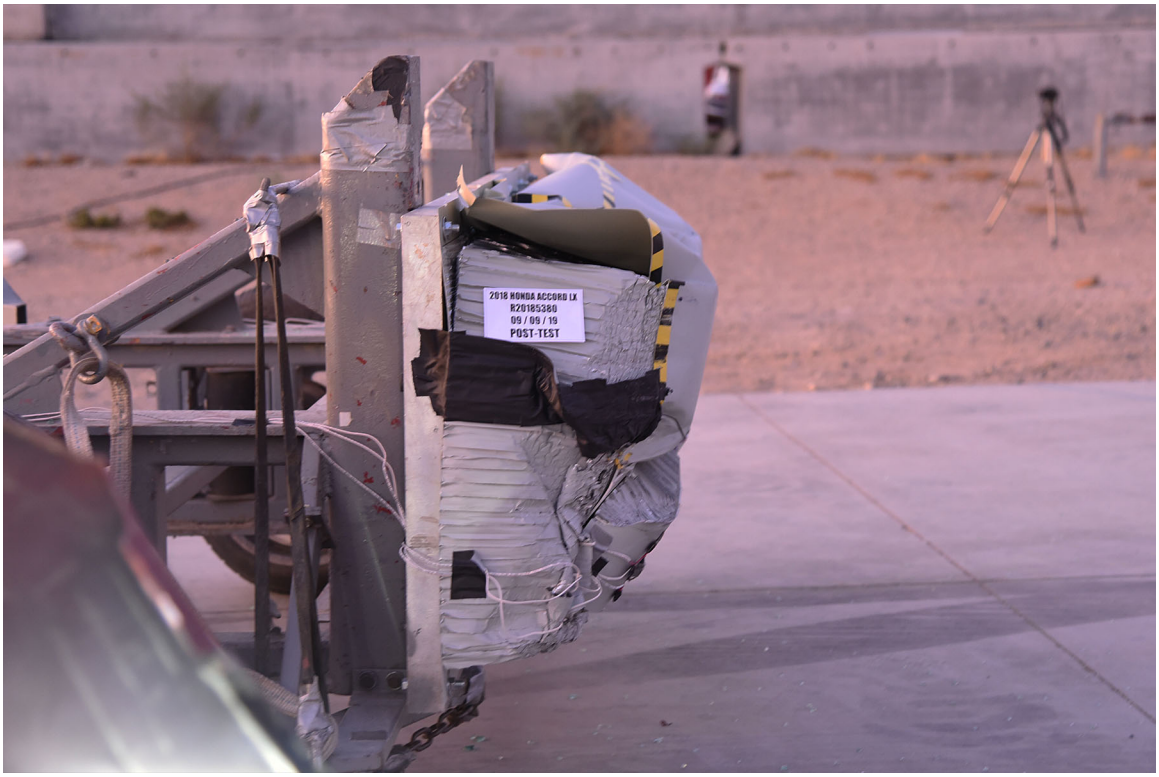


FIGURE 91. Post-Test Right Side View of MDB Impactor Face

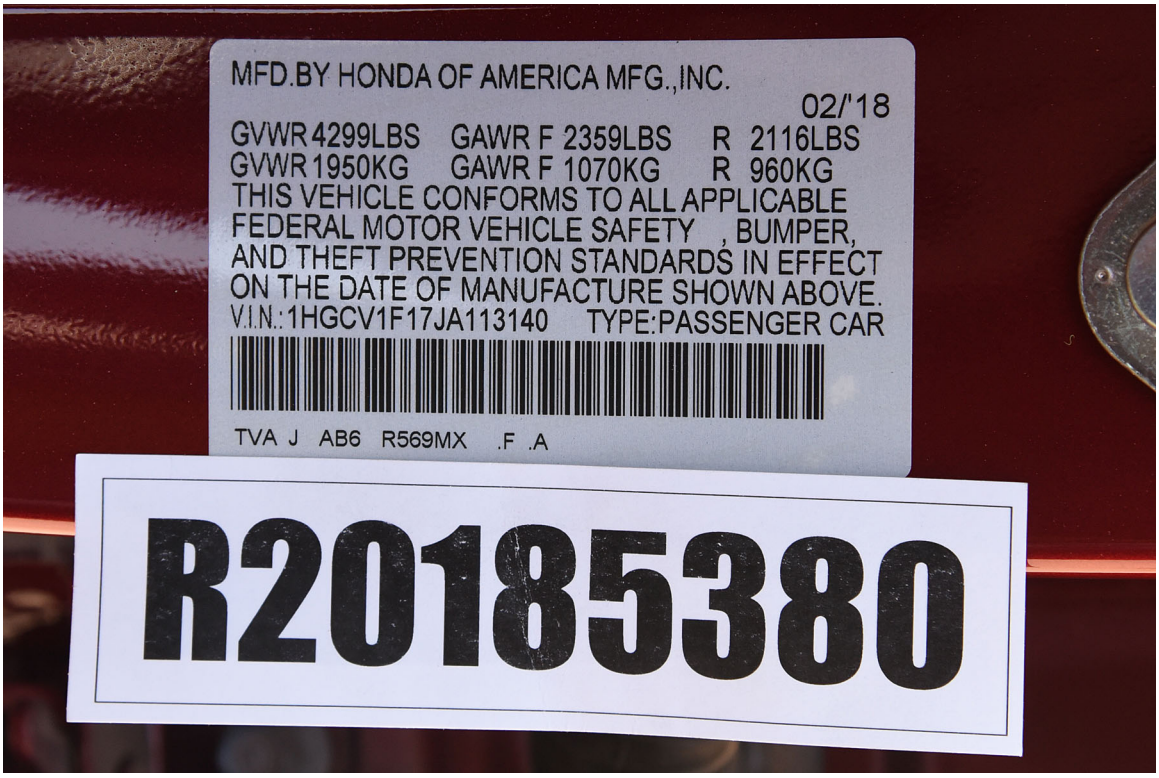


FIGURE 92. Close-Up View of Vehicle's Certification Label

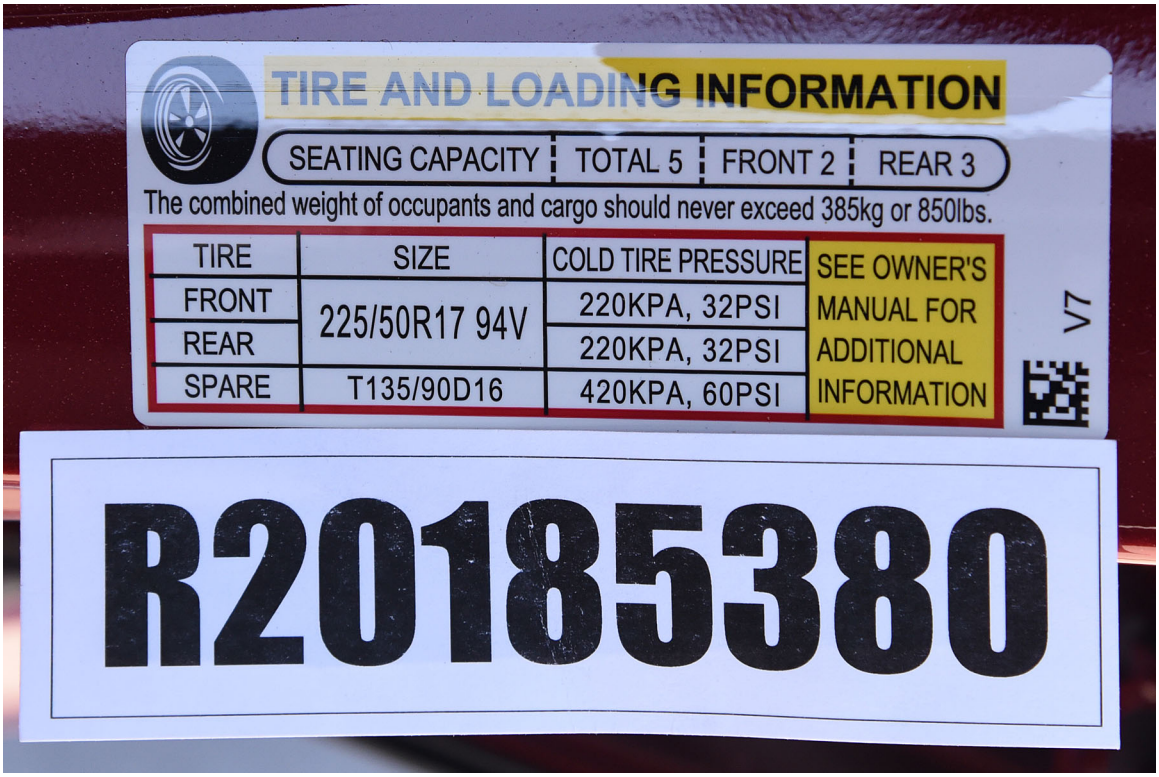


FIGURE 93. Close-Up View of Vehicle's Tire Information Placard or Label



FIGURE 94. Pre-Test Ballast View



FIGURE 95. Post-Test Primary and Redundant Speed Trap Read-Out

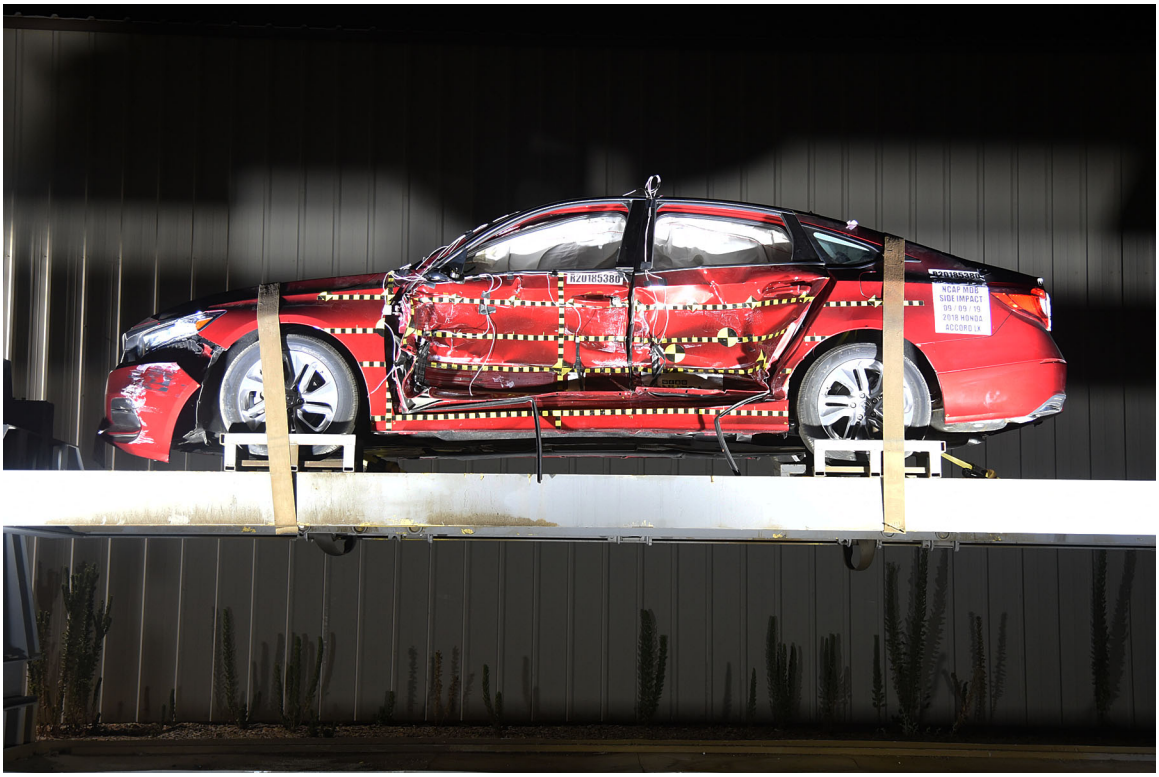


FIGURE 96. FMVSS No. 301 Static Rollover 0 Degrees

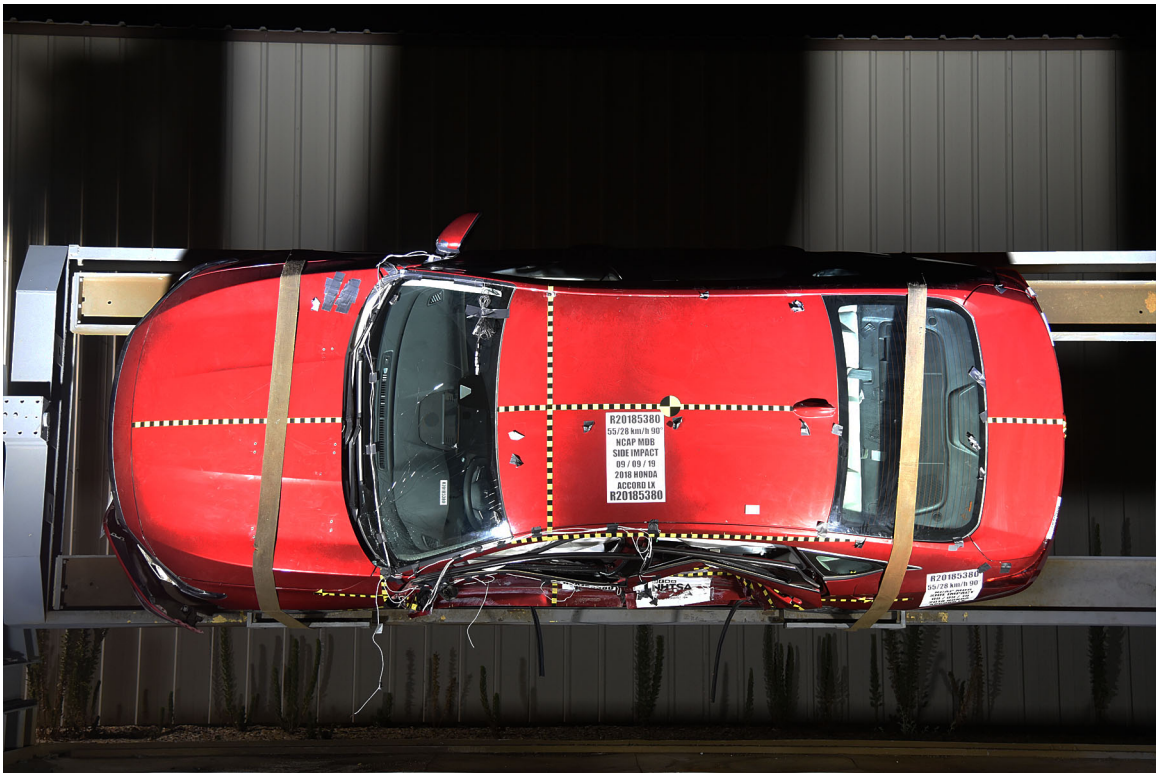


FIGURE 97. FMVSS No. 301 Static Rollover 90 Degrees

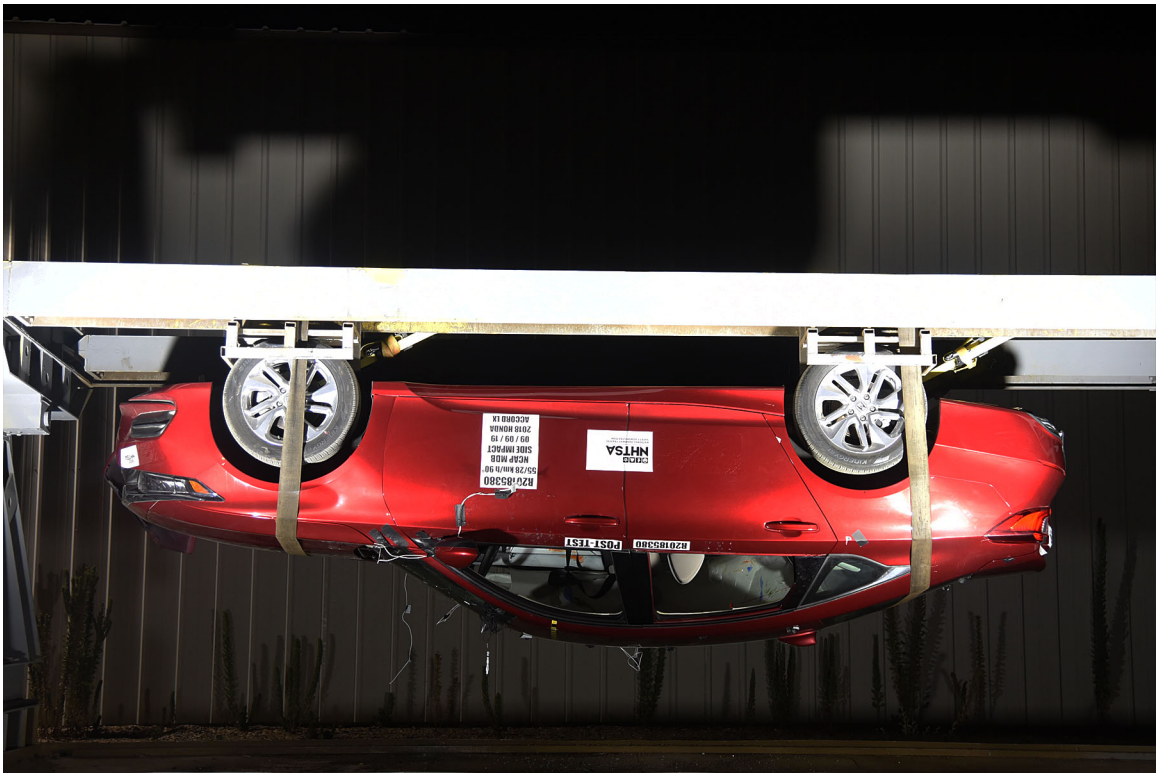


FIGURE 98. FMVSS No. 301 Static Rollover 180 Degrees

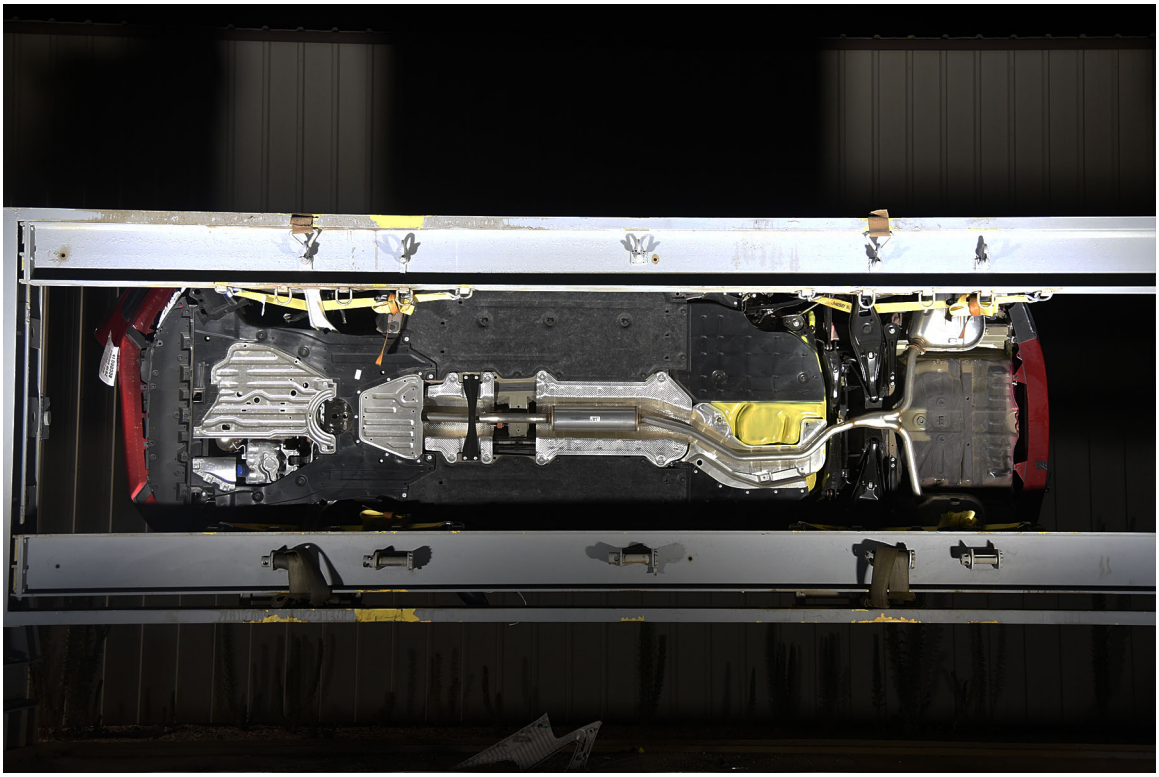


FIGURE 99. FMVSS No. 301 Static Rollover 270 Degrees

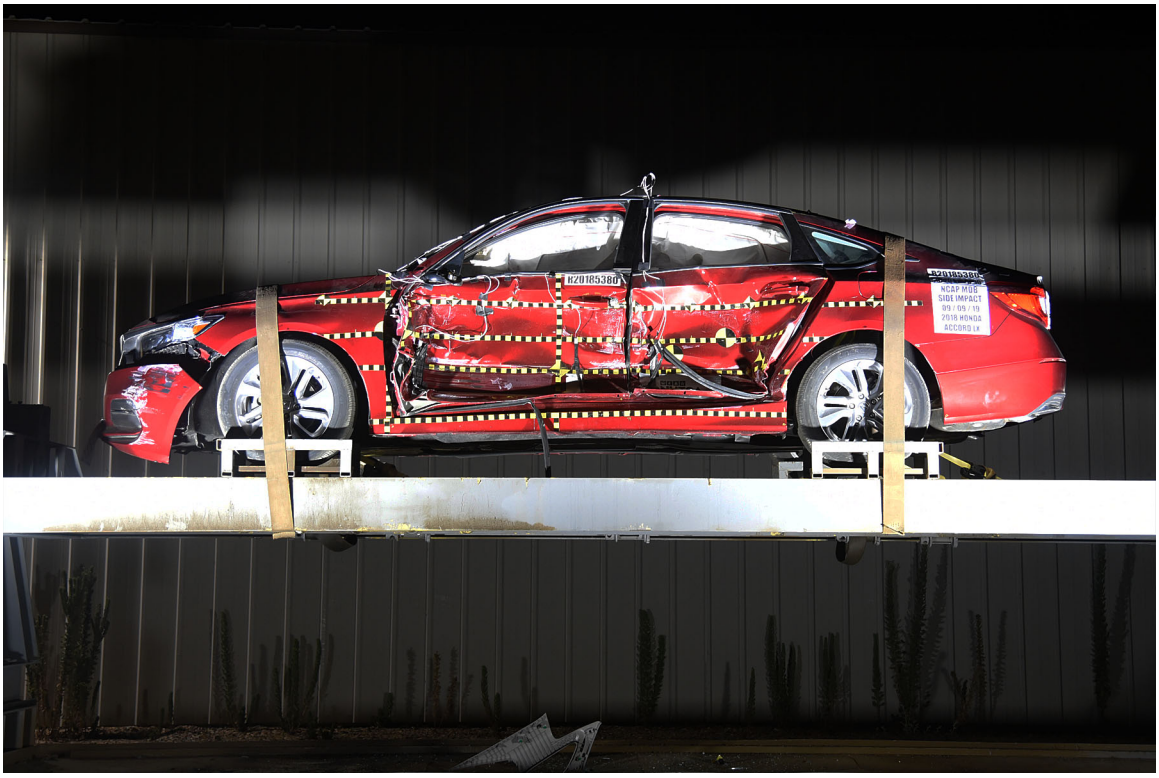


FIGURE 100. FMVSS No. 301 Static Rollover 360 Degrees



FIGURE 101. Impact Event

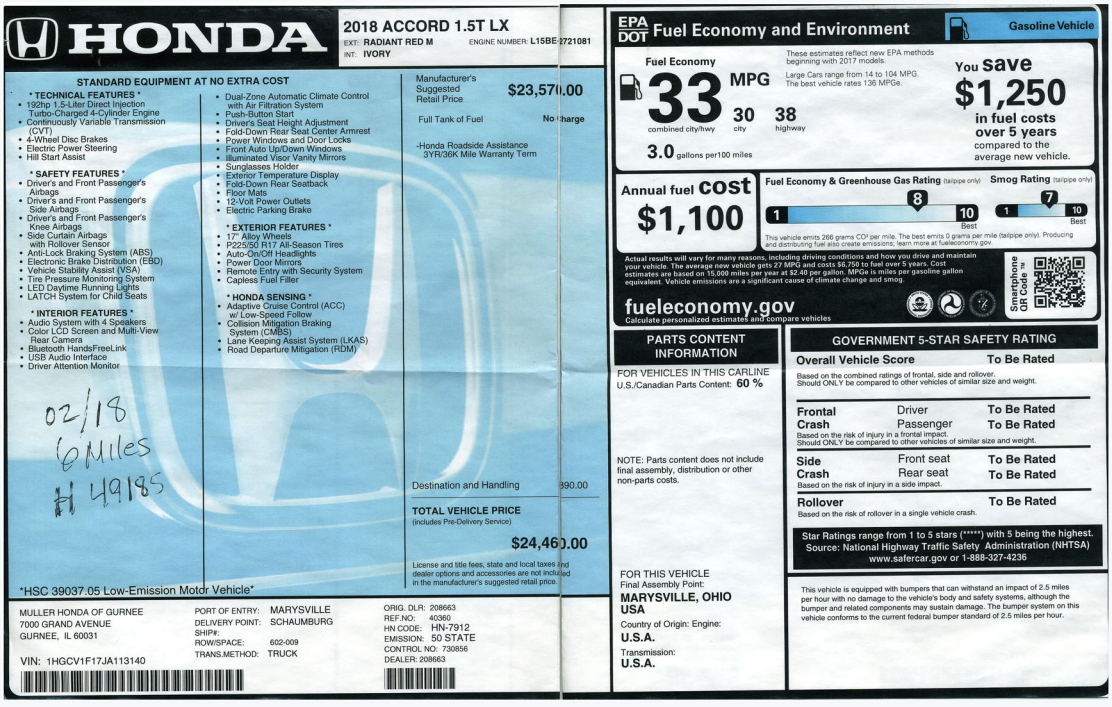


FIGURE 102. Monroney Label

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FIGURE 103. Driver Head Restraint Use and Adjustment Information
from Vehicle Owner's Manual

Photograph Not Available

FIGURE 104. Left Rear Passenger Head Restraint Use and Adjustment Information
from Vehicle Owner’s Manual

APPENDIX B
DUMMY AND VEHICLE RESPONSE DATA

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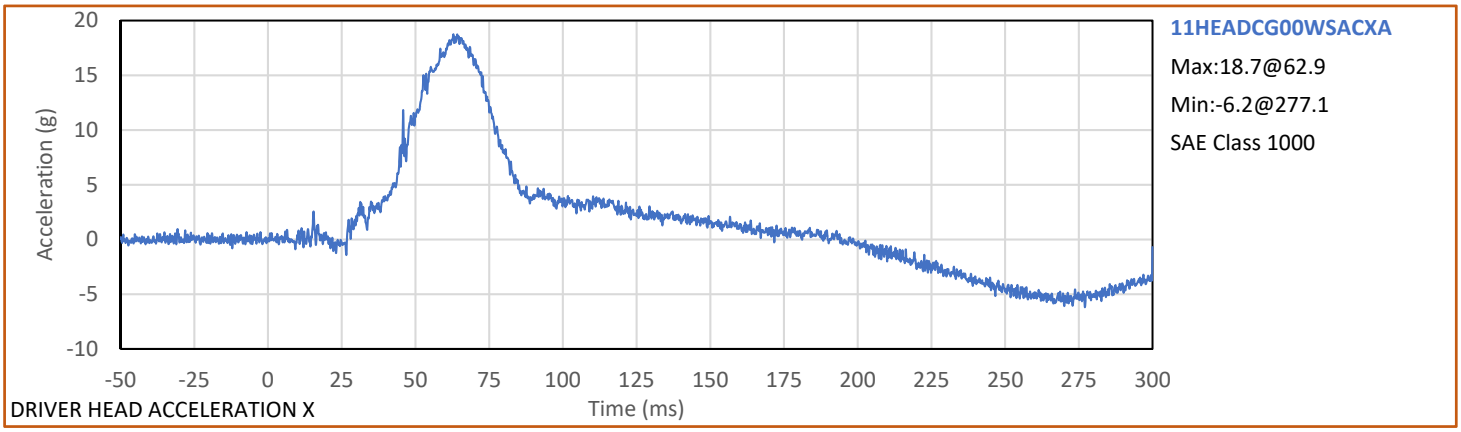
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213	MDB REAR AY	B-55
214	LEFT MDB CONTACT	B-55
215	RIGHT MDB CONTACT	B-55

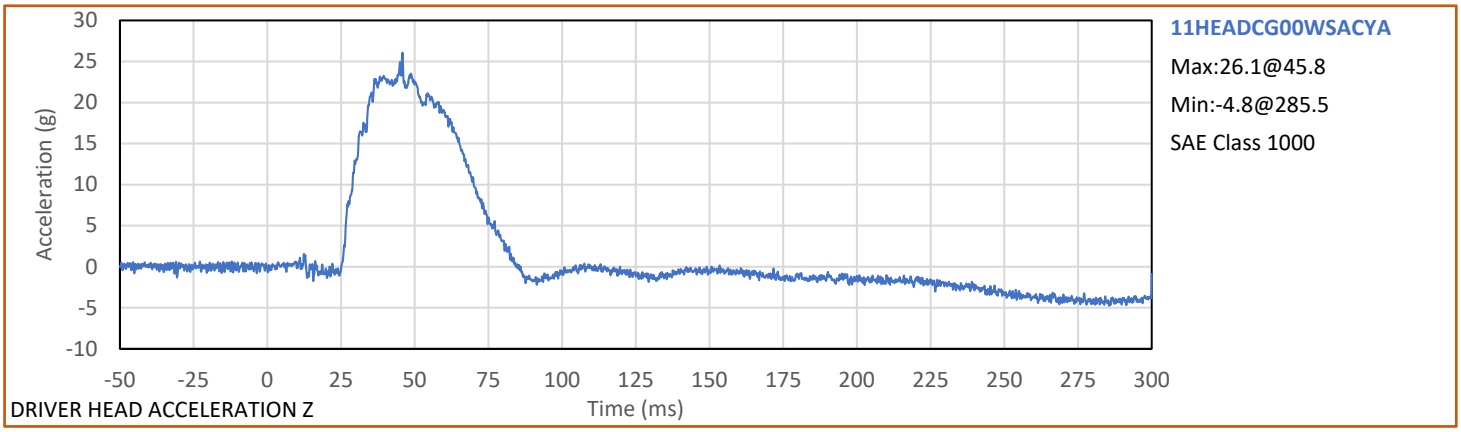
APPENDIX B
WORLDSID DRIVER PLOTS

Test Vehicle:	2018 Honda Accord LX 4-Door Sedan	NHTSA No.:	R20185380
Test Program:	55/28 km/h 90° Research Side Impact (MDB)	Test Date:	9/9/2019

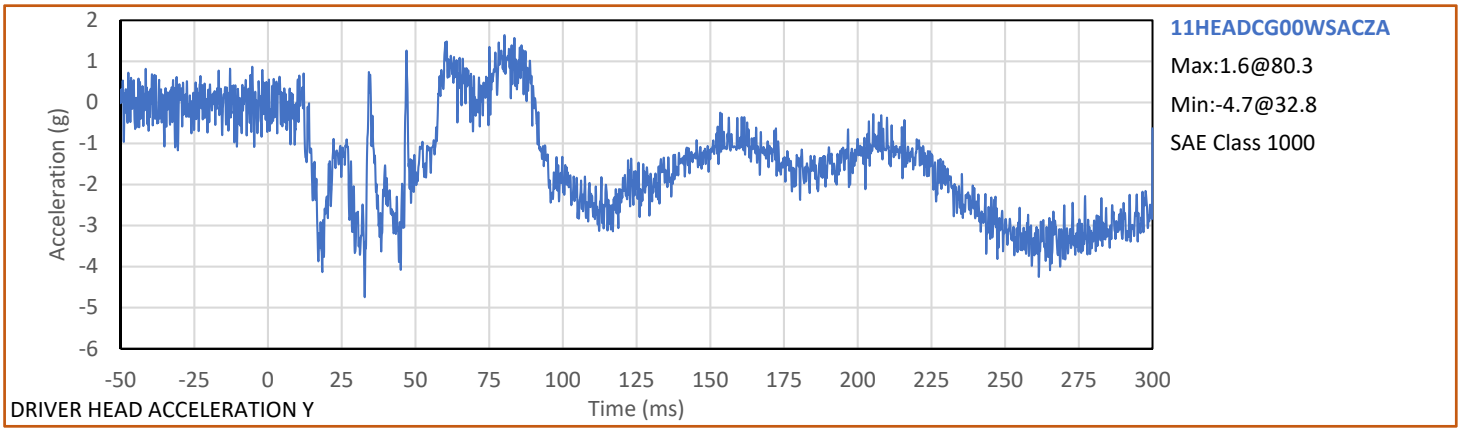
Applus IDIADA KARCO



DRIVER HEAD ACCELERATION X

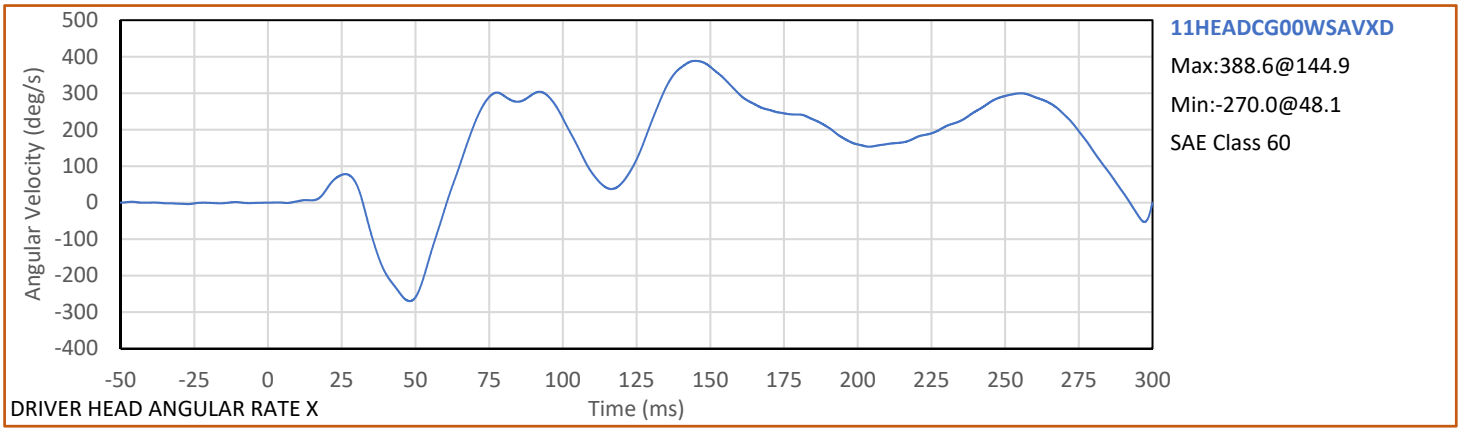


DRIVER HEAD ACCELERATION Z



DRIVER HEAD ACCELERATION Y

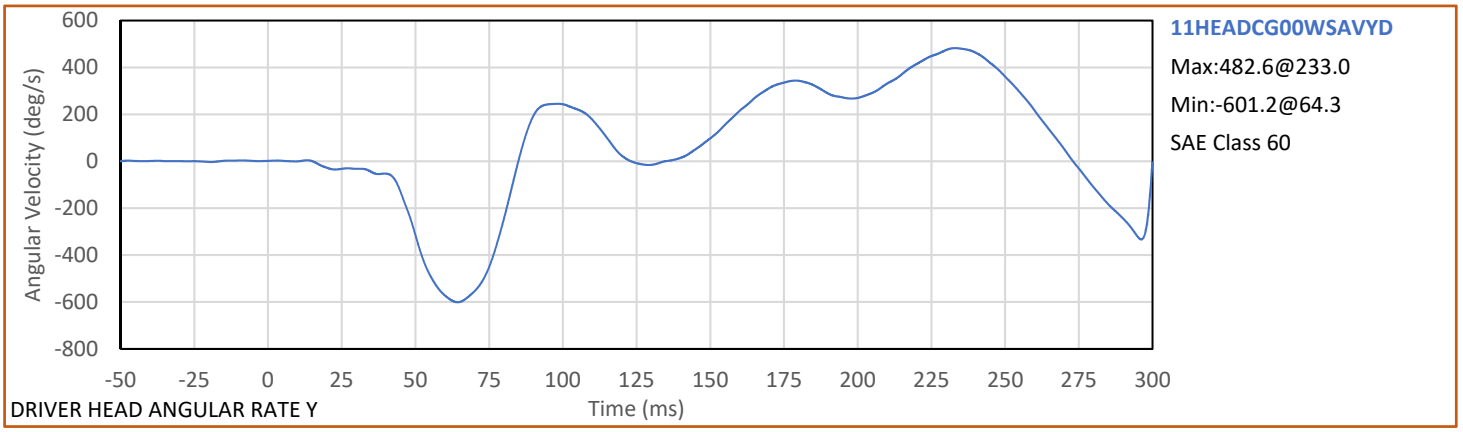
E



DRIVER HEAD ANGULAR RATE X

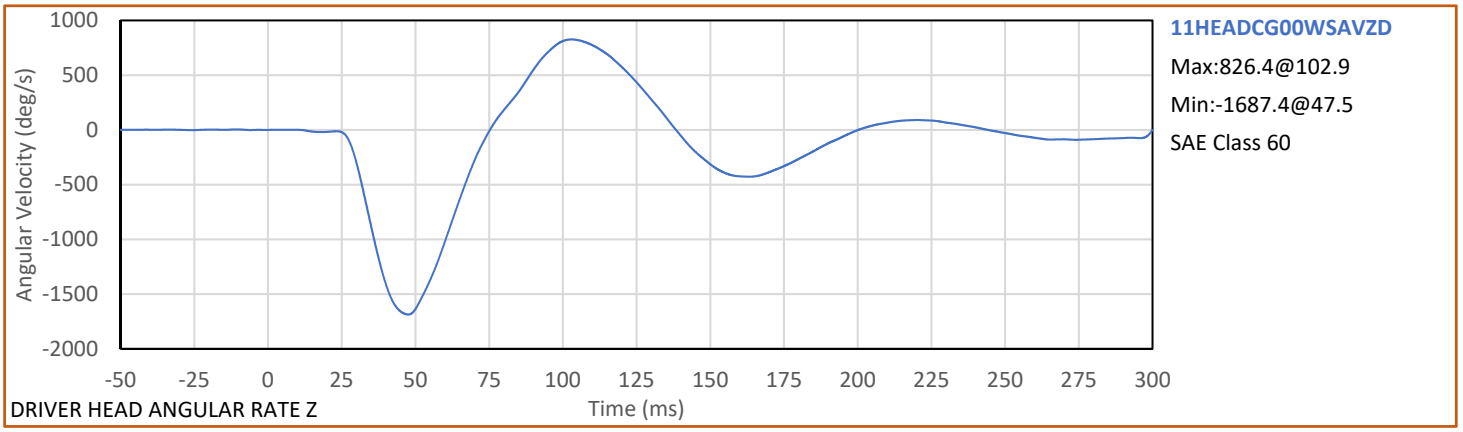
Test Vehicle:	2018 Honda Accord LX 4-Door Sedan	NHTSA No.:	R20185380
Test Program:	55/28 km/h 90° Research Side Impact (MDB)	Test Date:	9/9/2019

Applus IDIADA KARCO



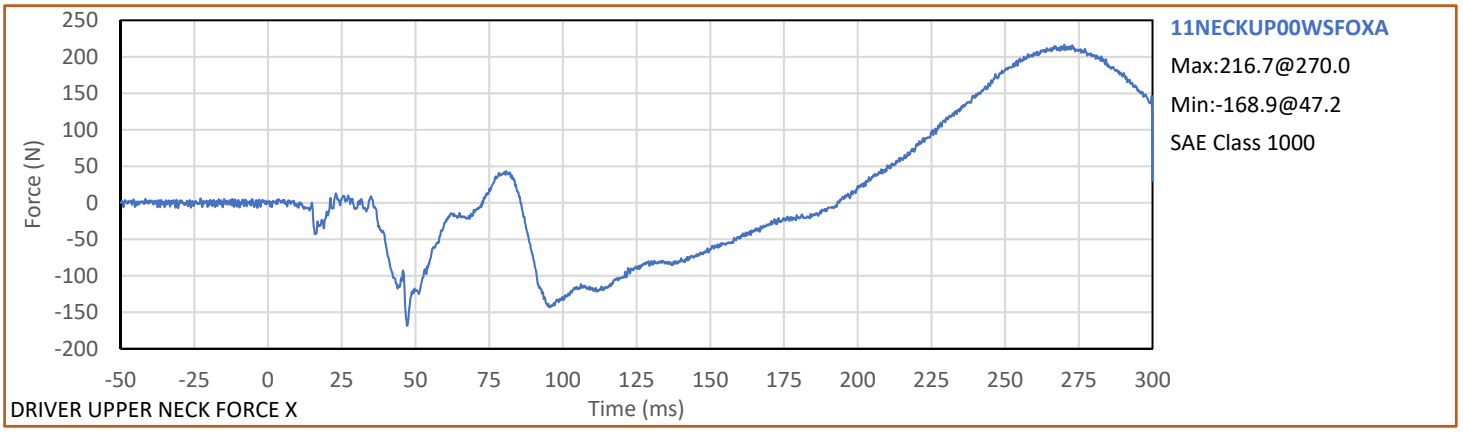
DRIVER HEAD ANGULAR RATE Y

11HEADCG00WSAVYD
Max:482.6@233.0
Min:-601.2@64.3
SAE Class 60



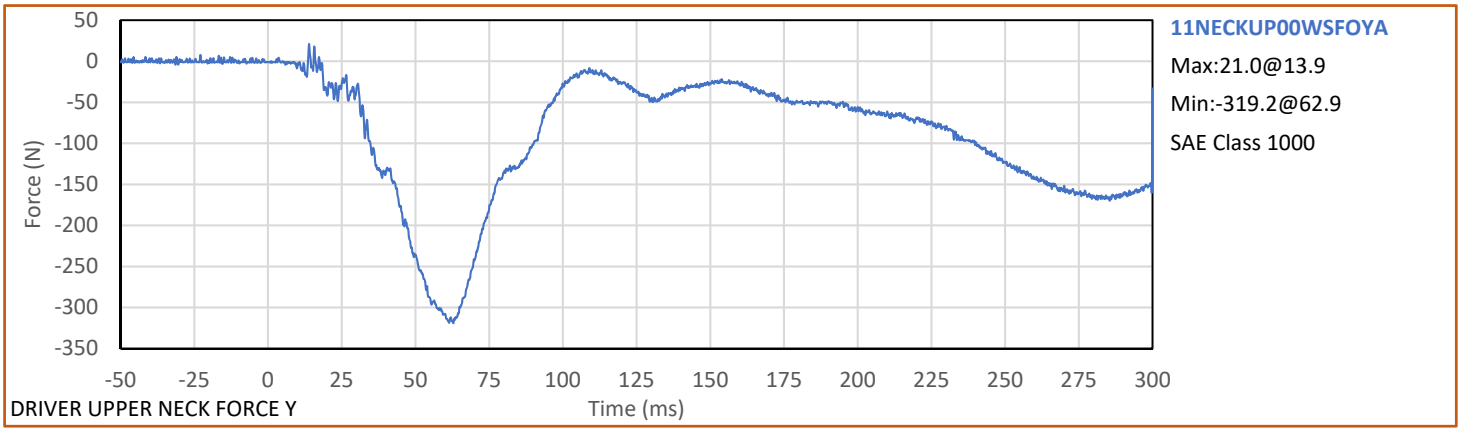
DRIVER HEAD ANGULAR RATE Z

11HEADCG00WSAVZD
Max:826.4@102.9
Min:-1687.4@47.5
SAE Class 60



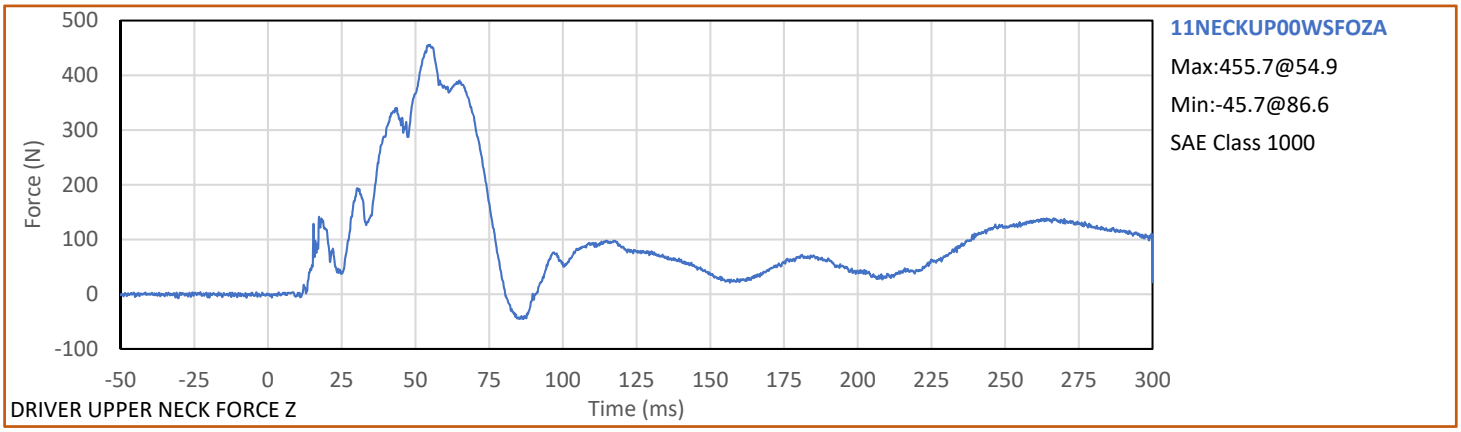
DRIVER UPPER NECK FORCE X

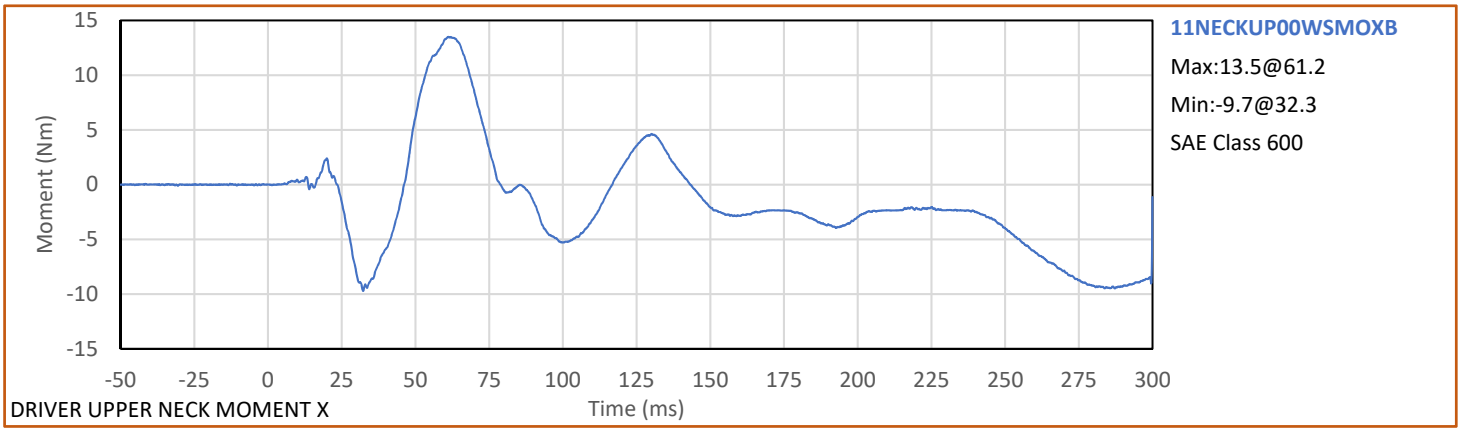
11NECKUP00WSFOXA
Max:216.7@270.0
Min:-168.9@47.2
SAE Class 1000

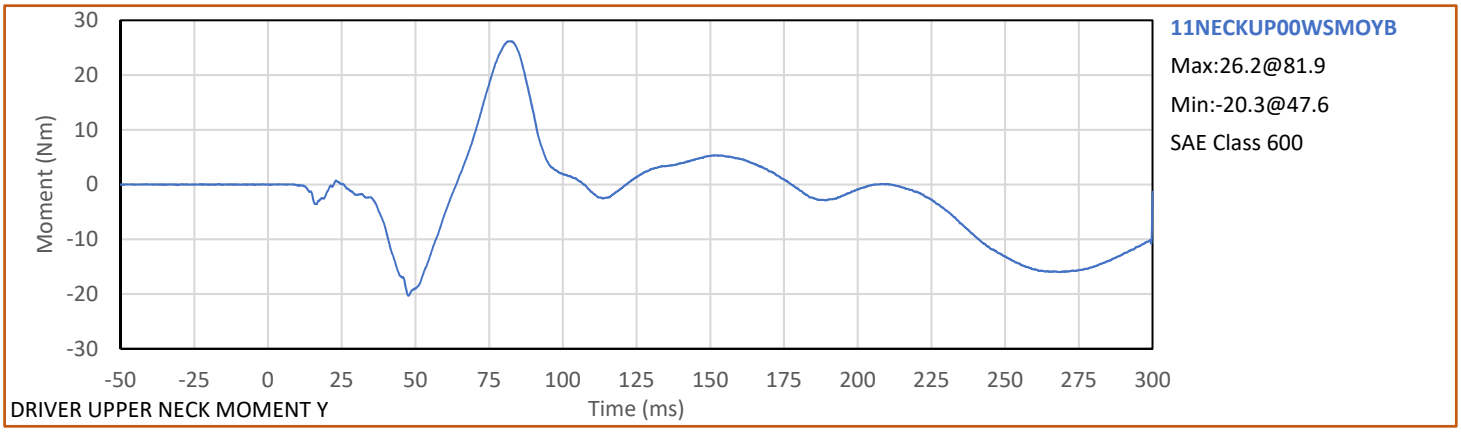


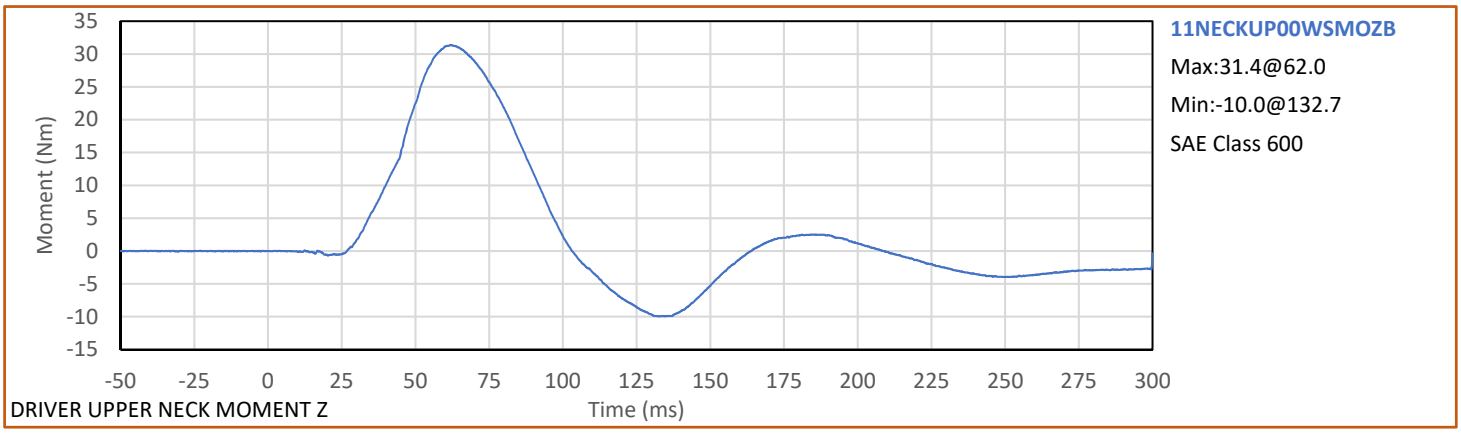
DRIVER UPPER NECK FORCE Y

11NECKUP00WSFOYA
Max:21.0@13.9
Min:-319.2@62.9
SAE Class 1000


11NECKUP00WSFOZA
Max:455.7@54.9
Min:-45.7@86.6
SAE Class 1000
Force (N)
Time (ms)
DRIVER UPPER NECK FORCE Z


11NECKUP00WSMOXB
Max:13.5@61.2
Min:-9.7@32.3
SAE Class 600
Moment (Nm)
Time (ms)
DRIVER UPPER NECK MOMENT X


11NECKUP00WSMOYB
Max:26.2@81.9
Min:-20.3@47.6
SAE Class 600
Moment (Nm)
Time (ms)
DRIVER UPPER NECK MOMENT Y


11NECKUP00WSMOZB
Max:31.4@62.0
Min:-10.0@132.7
SAE Class 600
Moment (Nm)
Time (ms)
DRIVER UPPER NECK MOMENT Z

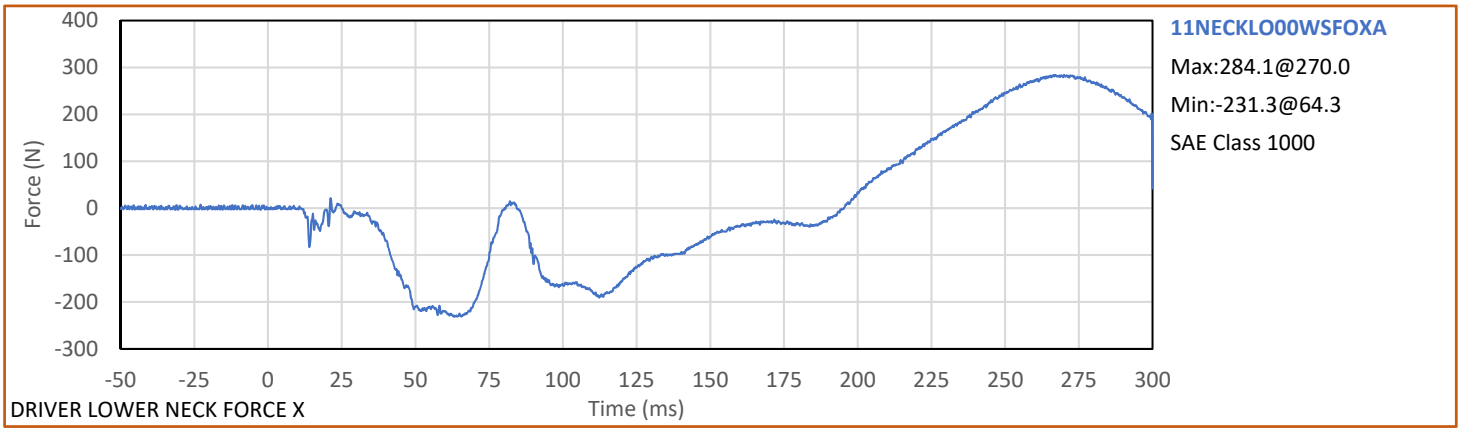
Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

Test Program: 55/28 km/h 90° Research Side Impact (MDB)

NHTSA No.: R20185380

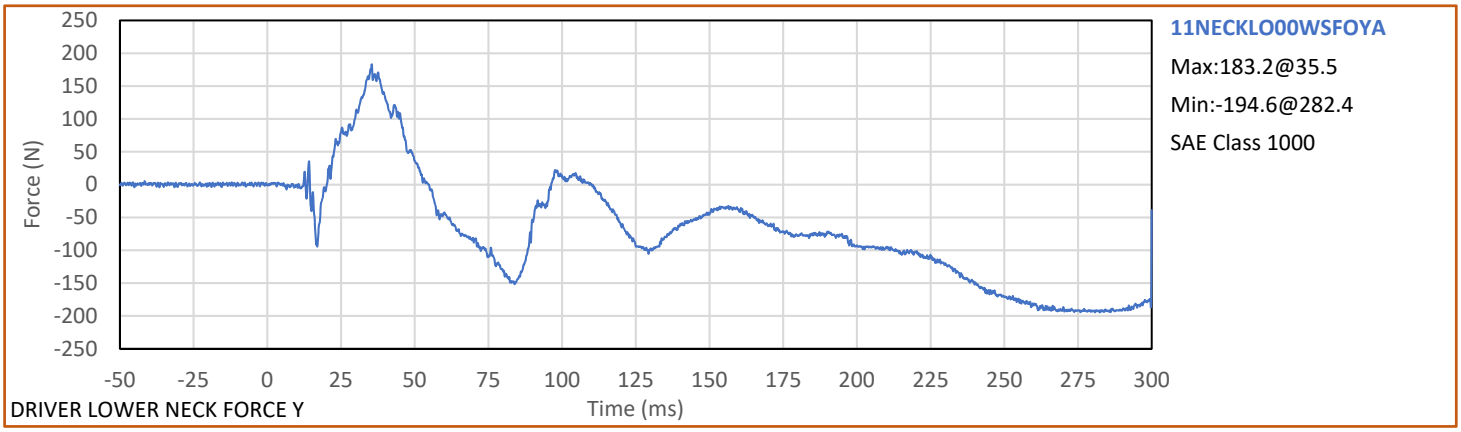
Test Date: 9/9/2019

Applus IDIADA KARCO



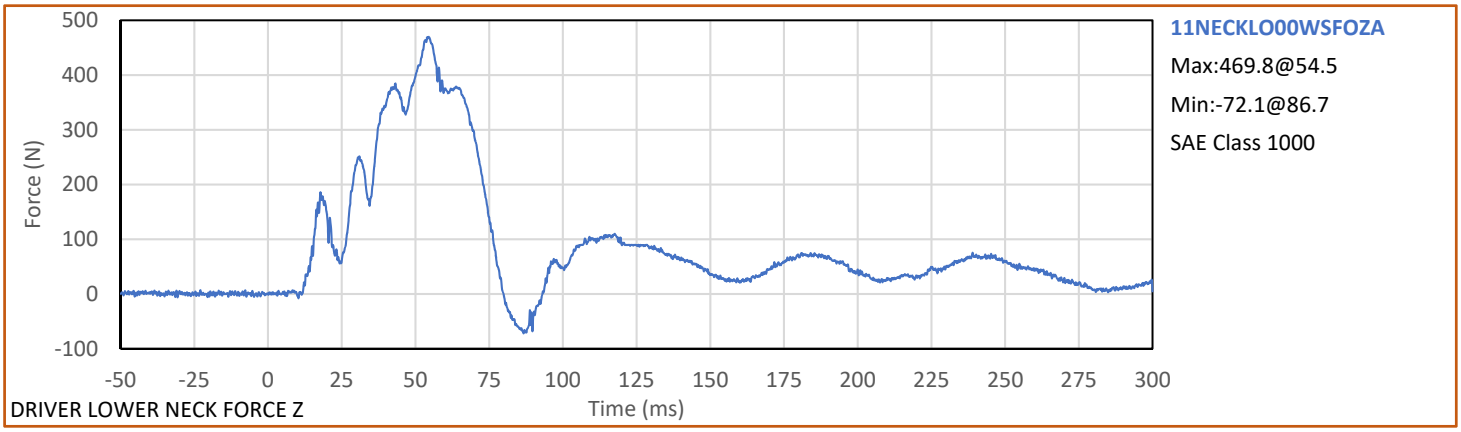
DRIVER LOWER NECK FORCE X

11NECKLO00WSFOXA
Max:284.1@270.0
Min:-231.3@64.3
SAE Class 1000



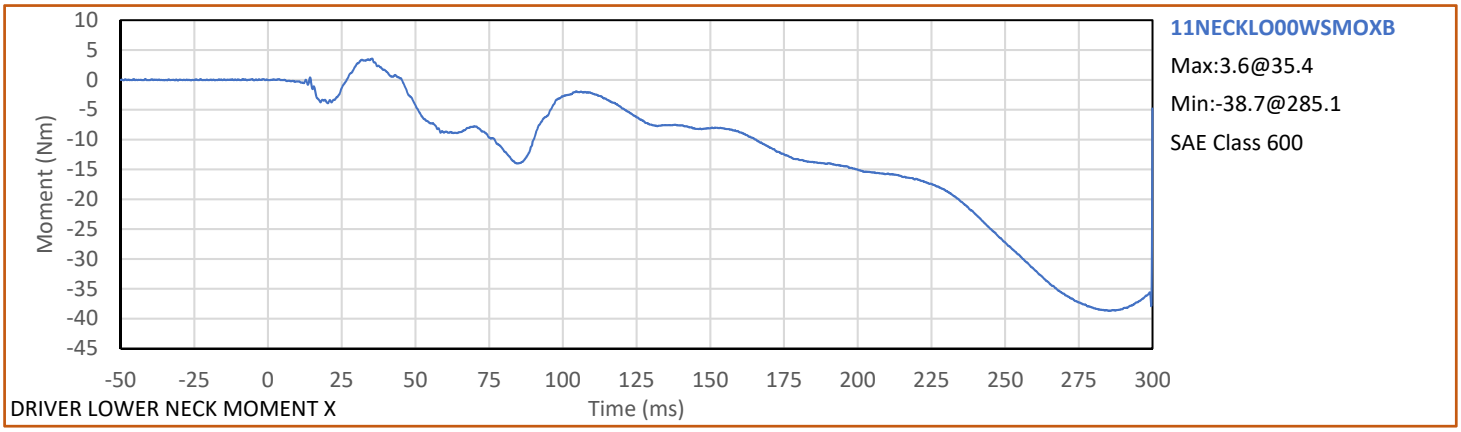
DRIVER LOWER NECK FORCE Y

11NECKLO00WSFOYA
Max:183.2@35.5
Min:-194.6@282.4
SAE Class 1000



DRIVER LOWER NECK FORCE Z

11NECKLO00WSFOZA
Max:469.8@54.5
Min:-72.1@86.7
SAE Class 1000



DRIVER LOWER NECK MOMENT X

11NECKLO00WSMOXB
Max:3.6@35.4
Min:-38.7@285.1
SAE Class 600

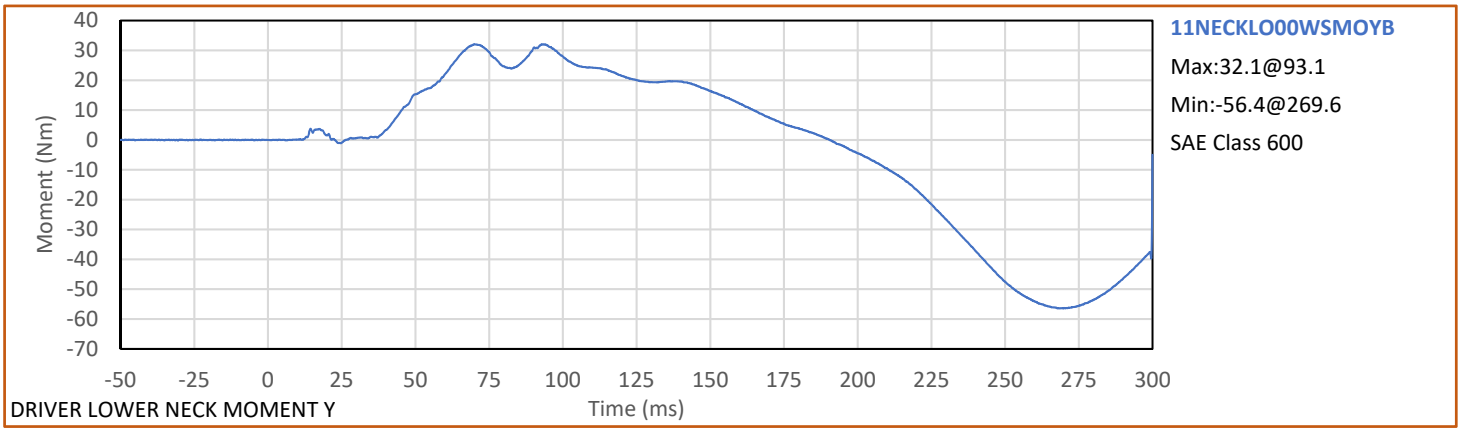
Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

Test Program: 55/28 km/h 90° Research Side Impact (MDB)

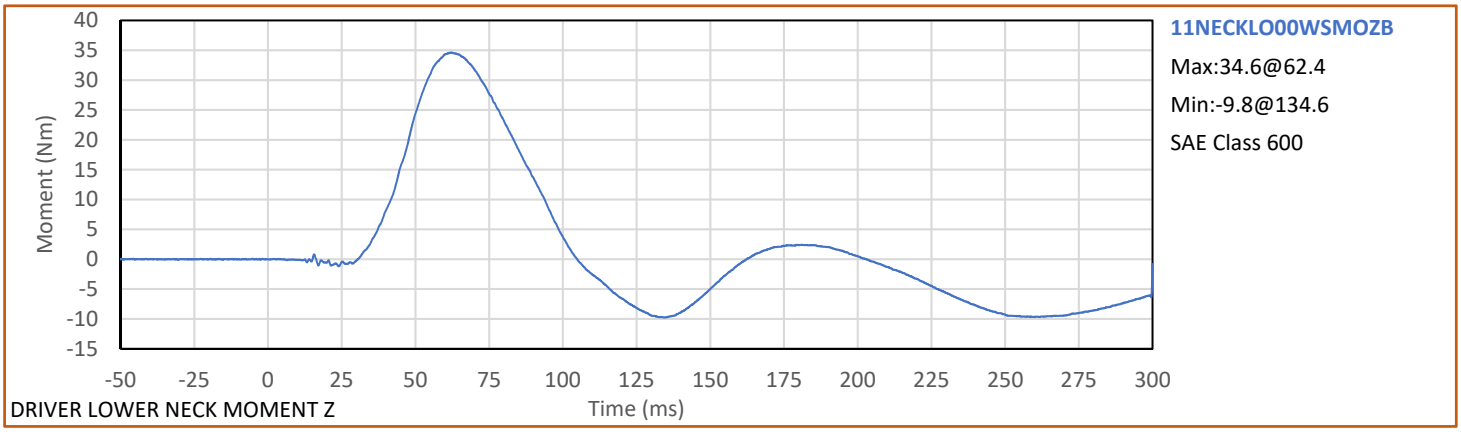
NHTSA No.: R20185380

Test Date: 9/9/2019

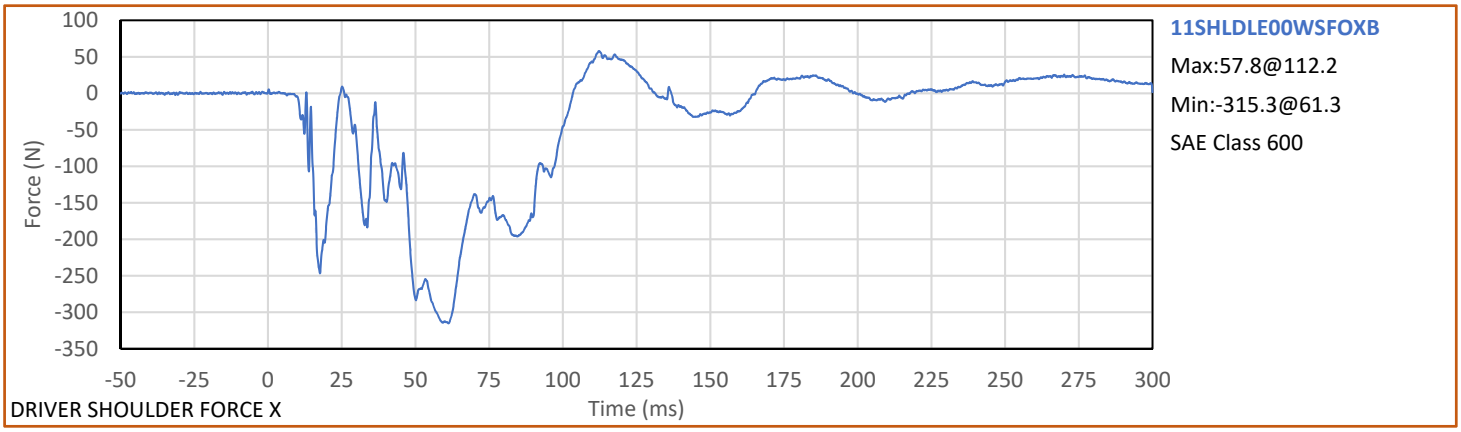
Applus IDIADA KARCO



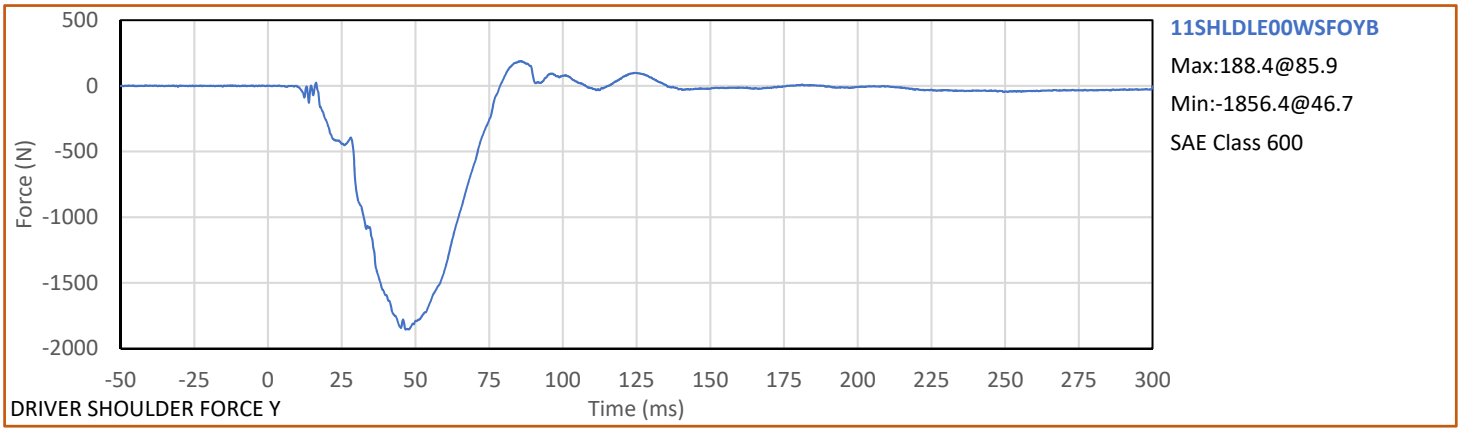
DRIVER LOWER NECK MOMENT Y



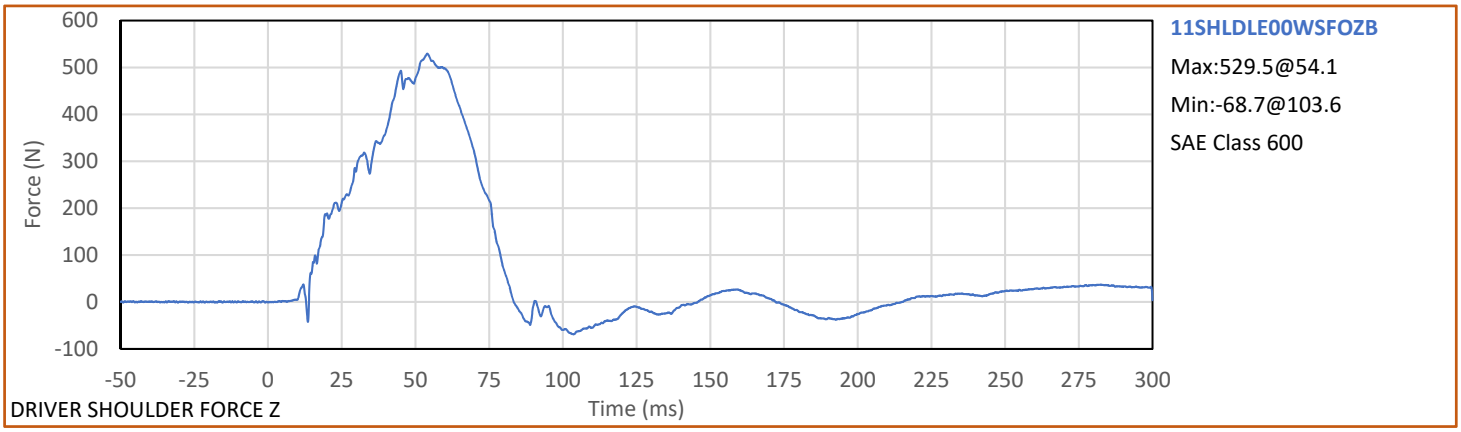
DRIVER LOWER NECK MOMENT Z

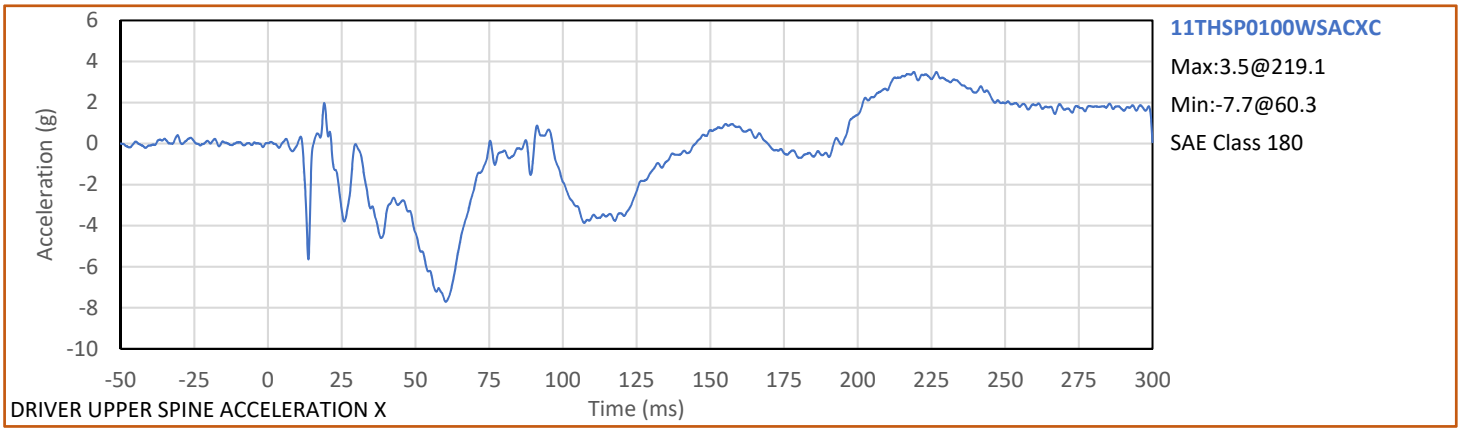


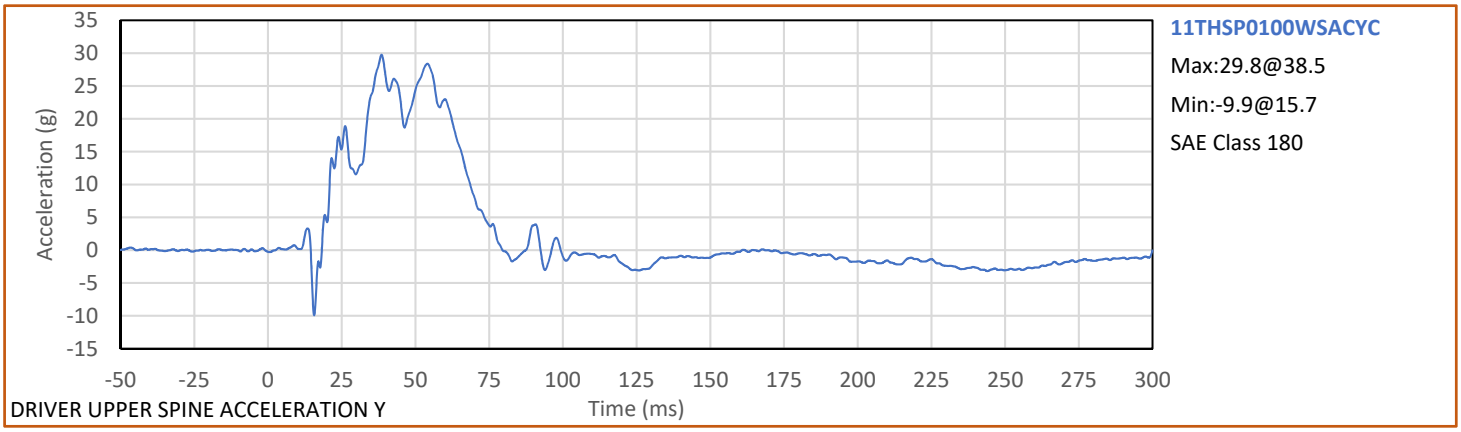
DRIVER SHOULDER FORCE X

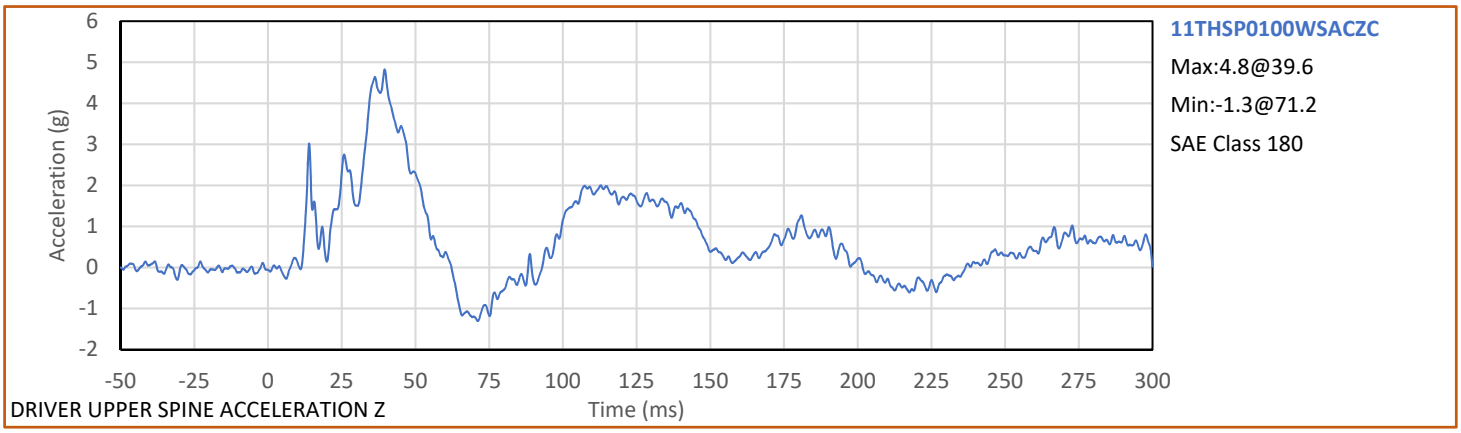


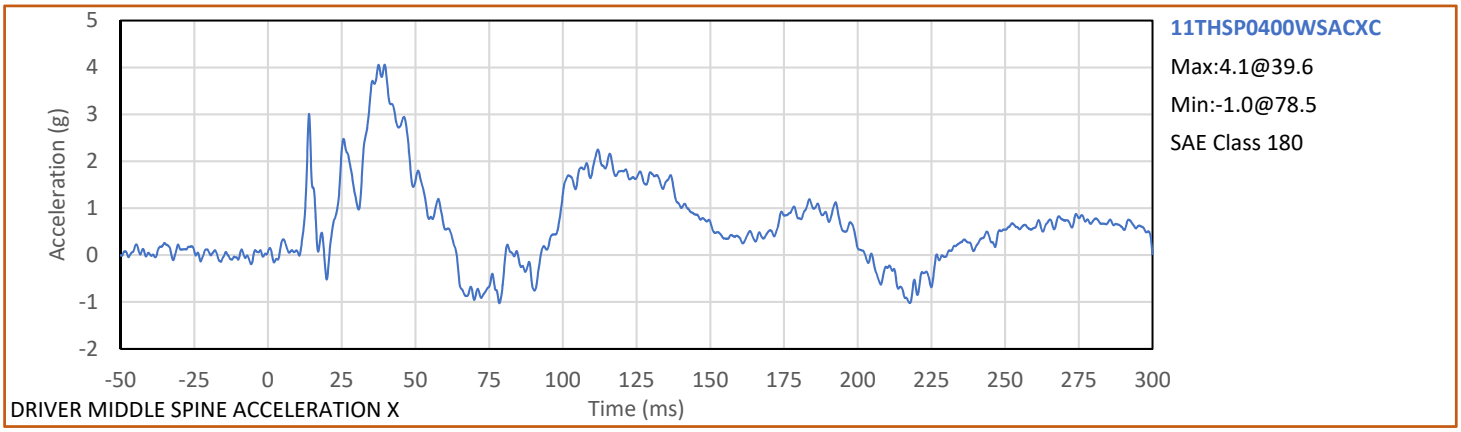
DRIVER SHOULDER FORCE Y

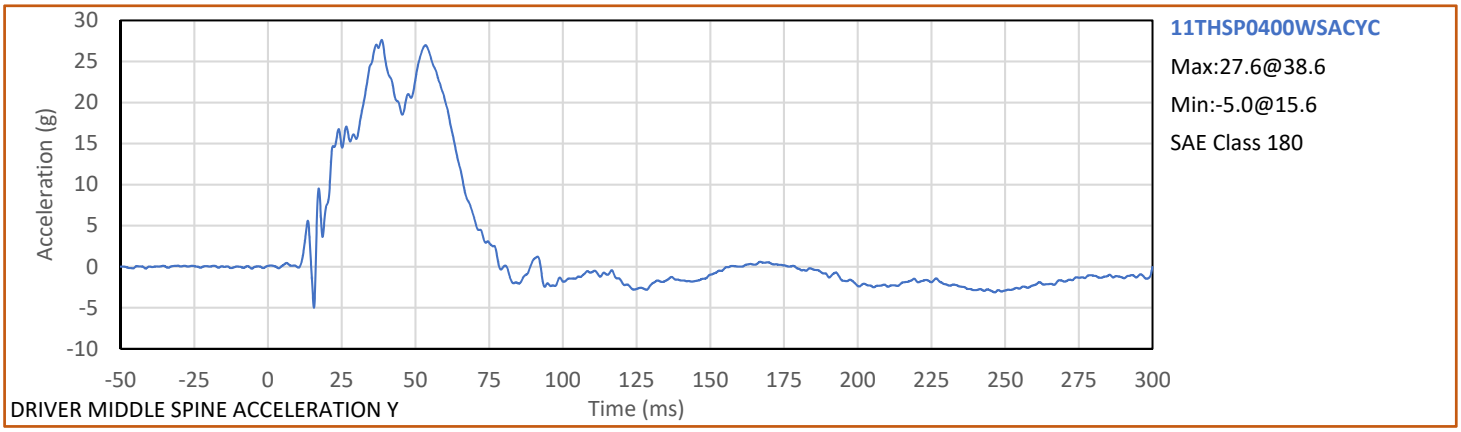

11SHLDLE00WSFOZB
Max:529.5@54.1
Min:-68.7@103.6
SAE Class 600
Force (N)
Time (ms)
DRIVER SHOULDER FORCE Z

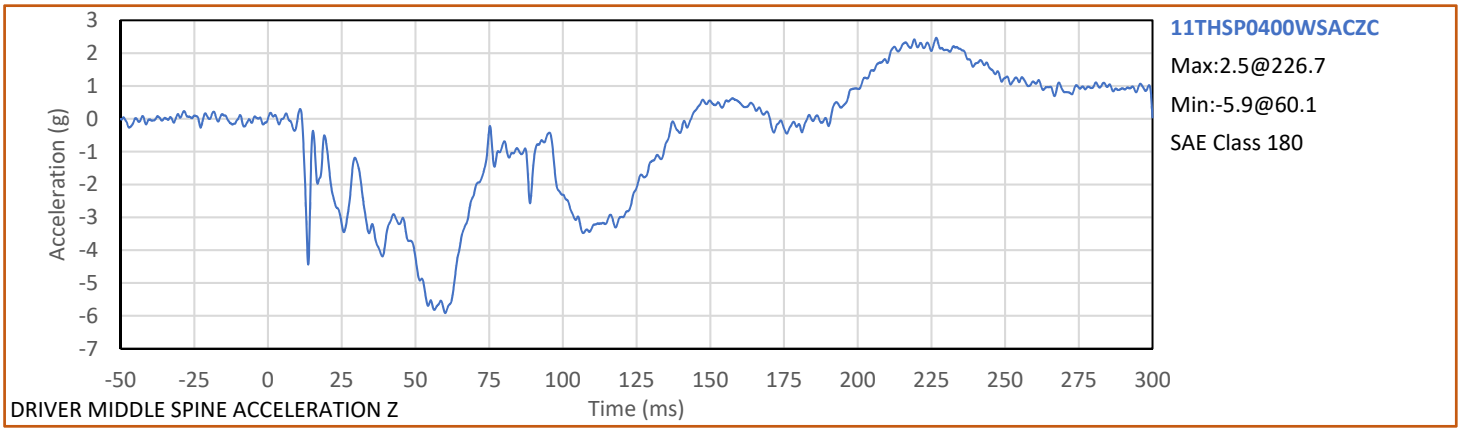

11THSP0100WSACXC
Max:3.5@219.1
Min:-7.7@60.3
SAE Class 180
Acceleration (g)
Time (ms)
DRIVER UPPER SPINE ACCELERATION X

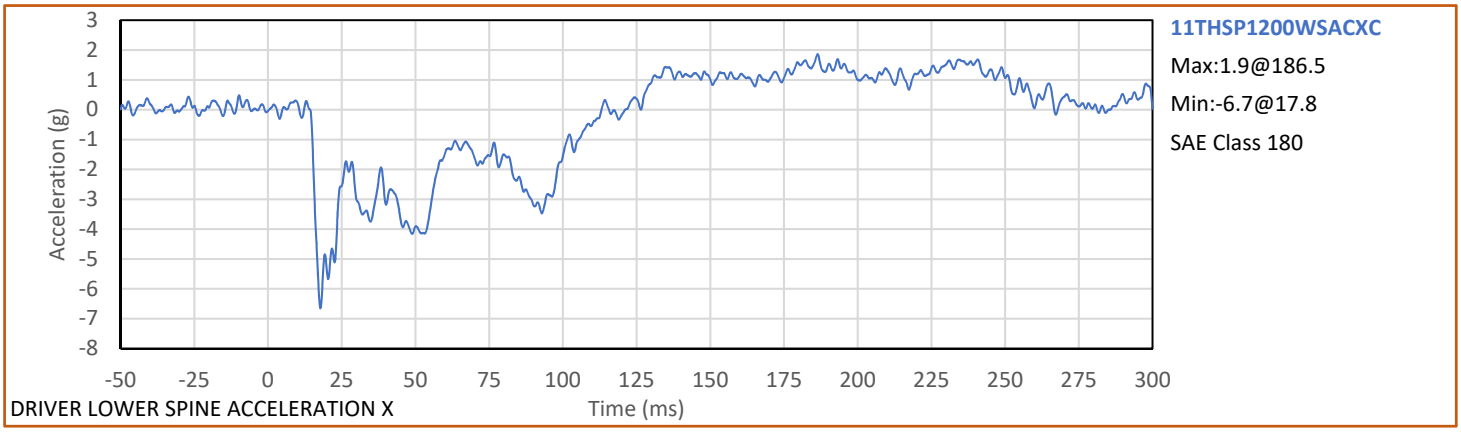

11THSP0100WSACYC
Max:29.8@38.5
Min:-9.9@15.7
SAE Class 180
Acceleration (g)
Time (ms)
DRIVER UPPER SPINE ACCELERATION Y

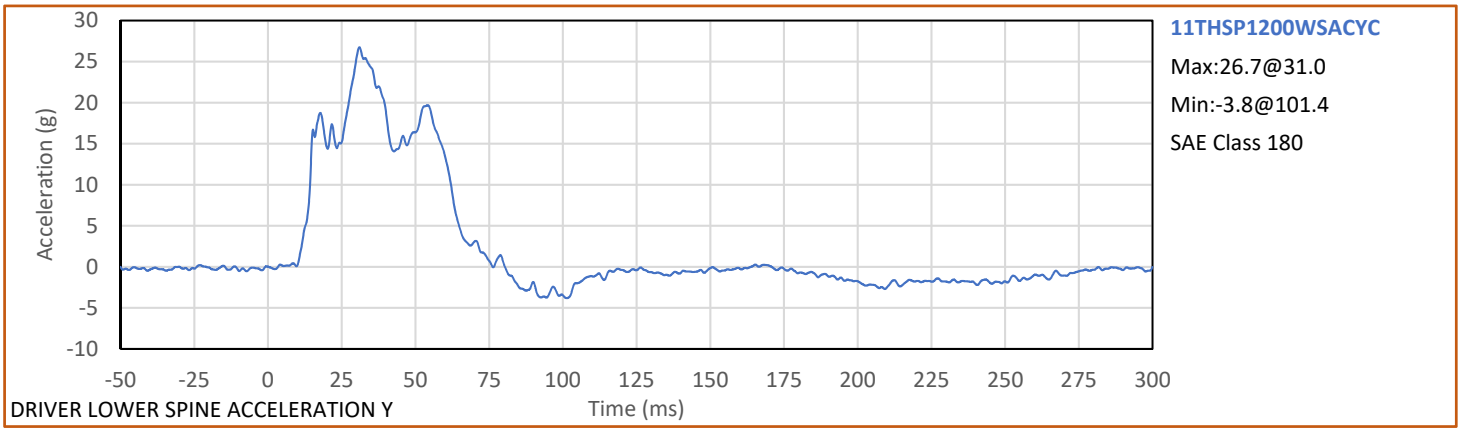

11THSP0100WSACZC
Max:4.8@39.6
Min:-1.3@71.2
SAE Class 180
Acceleration (g)
Time (ms)
DRIVER UPPER SPINE ACCELERATION Z

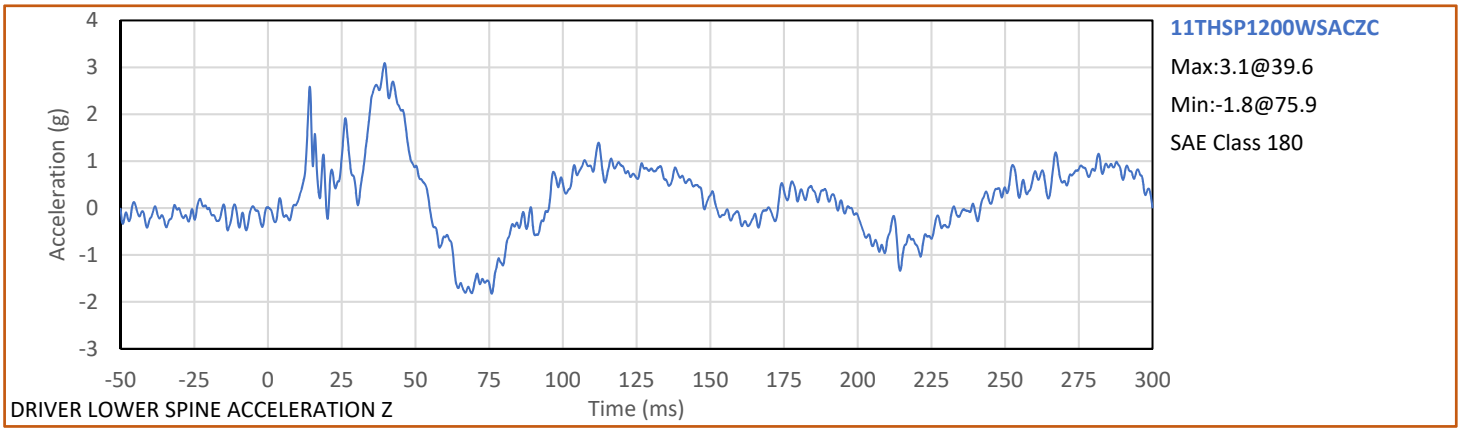

11THSP0400WSACXC
Max:4.1@39.6
Min:-1.0@78.5
SAE Class 180
Acceleration (g)
Time (ms)
DRIVER MIDDLE SPINE ACCELERATION X

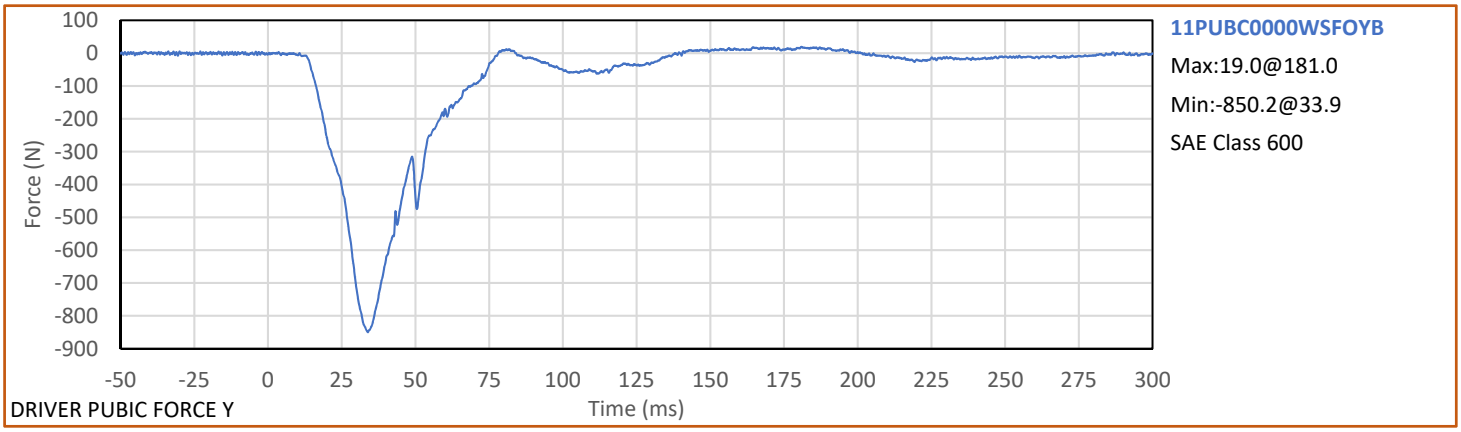

11THSP0400WSACYC
Max:27.6@38.6
Min:-5.0@15.6
SAE Class 180
Acceleration (g)
Time (ms)
DRIVER MIDDLE SPINE ACCELERATION Y

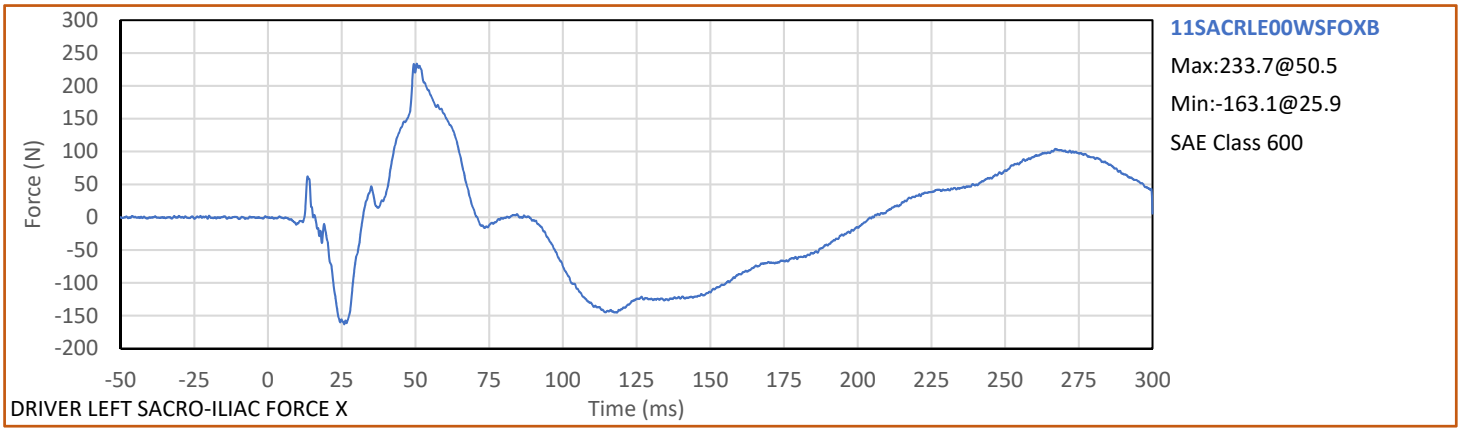

11THSP0400WSACZC
Max:2.5@226.7
Min:-5.9@60.1
SAE Class 180
Acceleration (g)
Time (ms)
DRIVER MIDDLE SPINE ACCELERATION Z

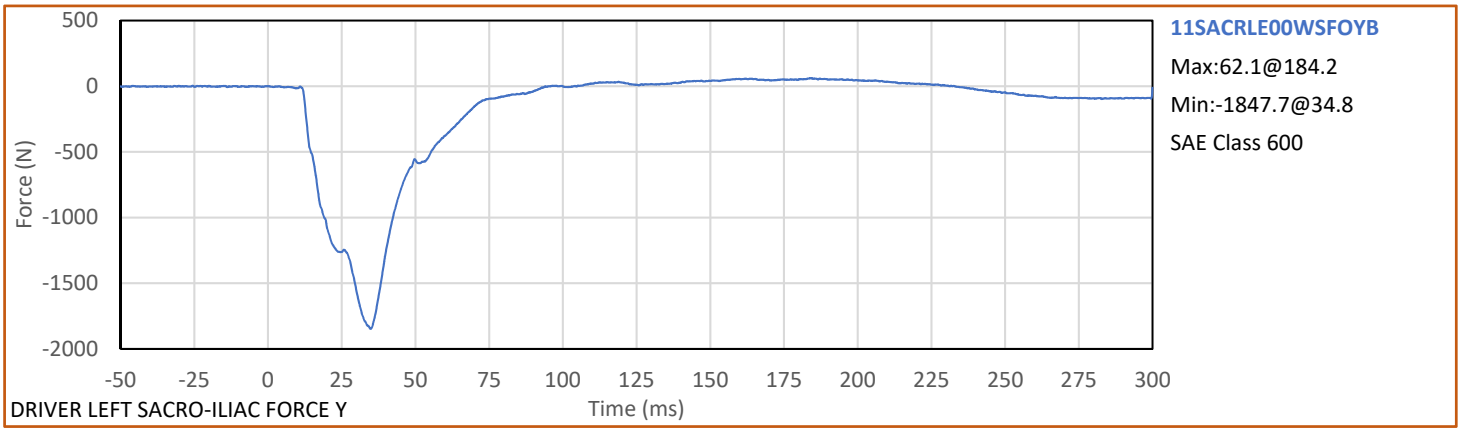

11THSP1200WSACXC
Max:1.9@186.5
Min:-6.7@17.8
SAE Class 180
Acceleration (g)
Time (ms)
DRIVER LOWER SPINE ACCELERATION X

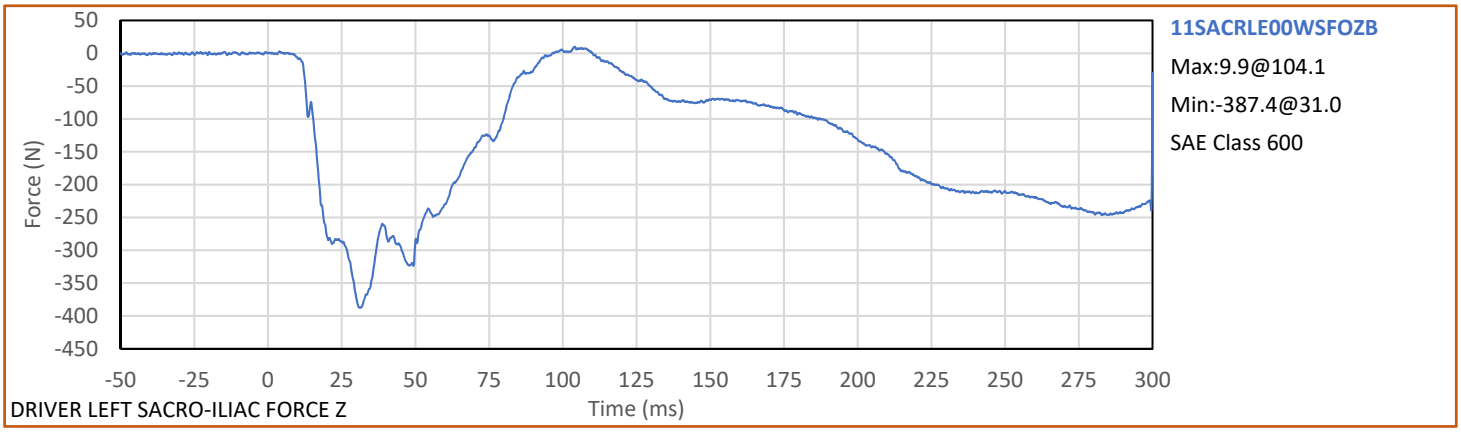

Acceleration (g)
Time (ms)
11THSP1200WSACYC
Max:26.7@31.0
Min:-3.8@101.4
SAE Class 180
DRIVER LOWER SPINE ACCELERATION Y

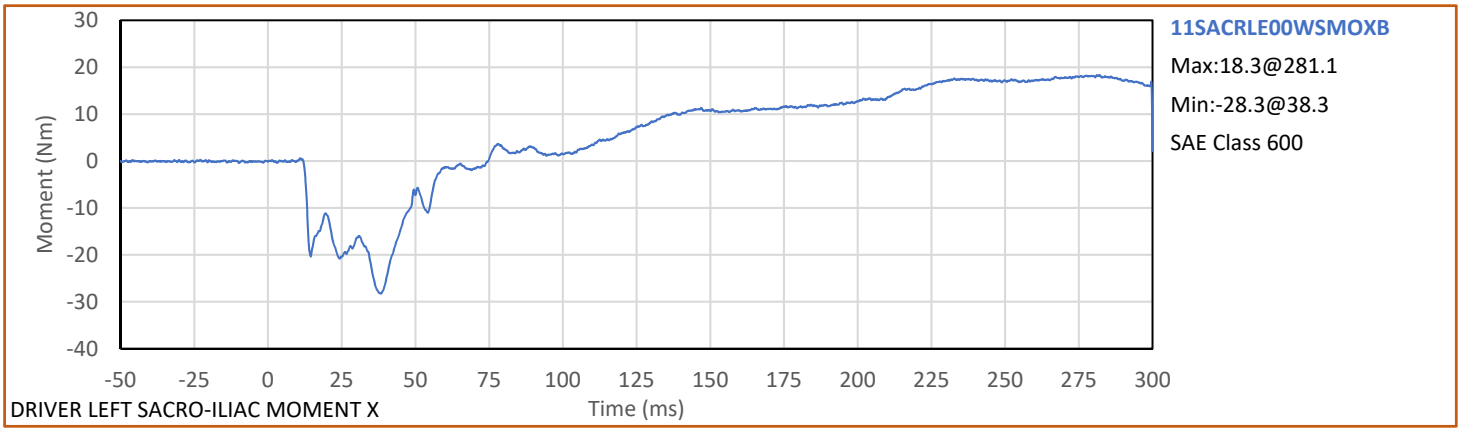

Acceleration (g)
Time (ms)
11THSP1200WSACZC
Max:3.1@39.6
Min:-1.8@75.9
SAE Class 180
DRIVER LOWER SPINE ACCELERATION Z

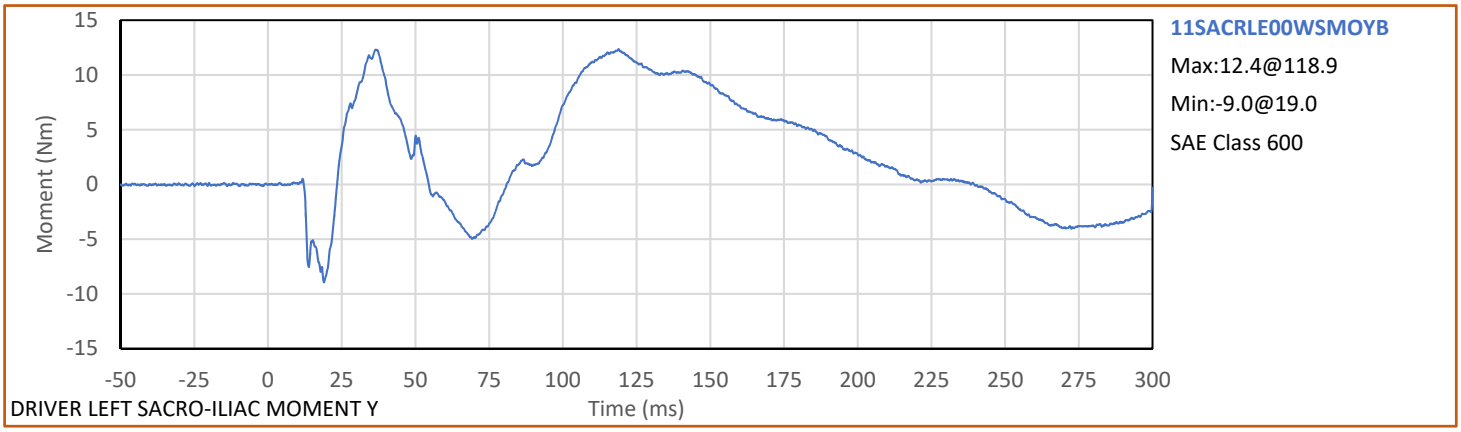

Force (N)
Time (ms)
11PUBC0000WSFOYB
Max:19.0@181.0
Min:-850.2@33.9
SAE Class 600
DRIVER PUBIC FORCE Y

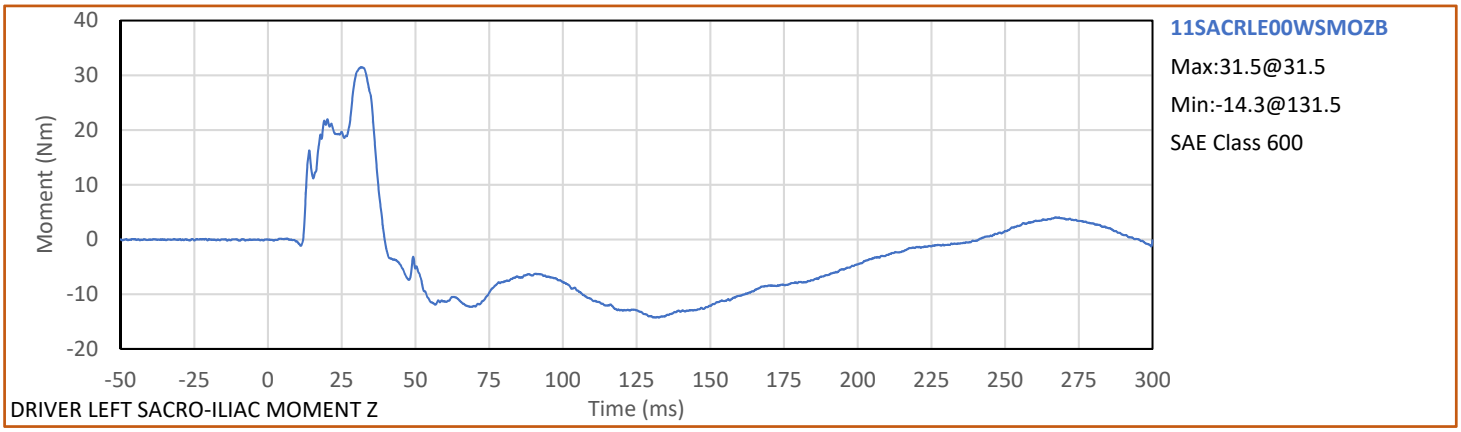

Force (N)
Time (ms)
11SACRLE00WSFOXB
Max:233.7@50.5
Min:-163.1@25.9
SAE Class 600
DRIVER LEFT SACRO-ILIAC FORCE X


11SACRLE00WSFOYB
Max:62.1@184.2
Min:-1847.7@34.8
SAE Class 600
Force (N)
Time (ms)
DRIVER LEFT SACRO-ILIAC FORCE Y

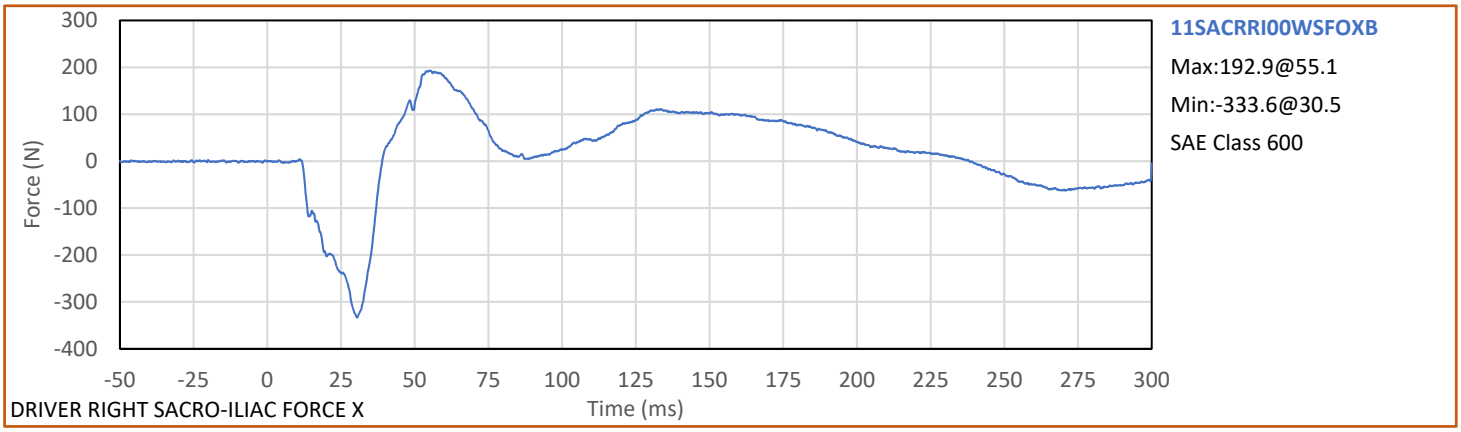

11SACRLE00WSFOZB
Max:9.9@104.1
Min:-387.4@31.0
SAE Class 600
Force (N)
Time (ms)
DRIVER LEFT SACRO-ILIAC FORCE Z


11SACRLE00WSMOXB
Max:18.3@281.1
Min:-28.3@38.3
SAE Class 600
Moment (Nm)
Time (ms)
DRIVER LEFT SACRO-ILIAC MOMENT X

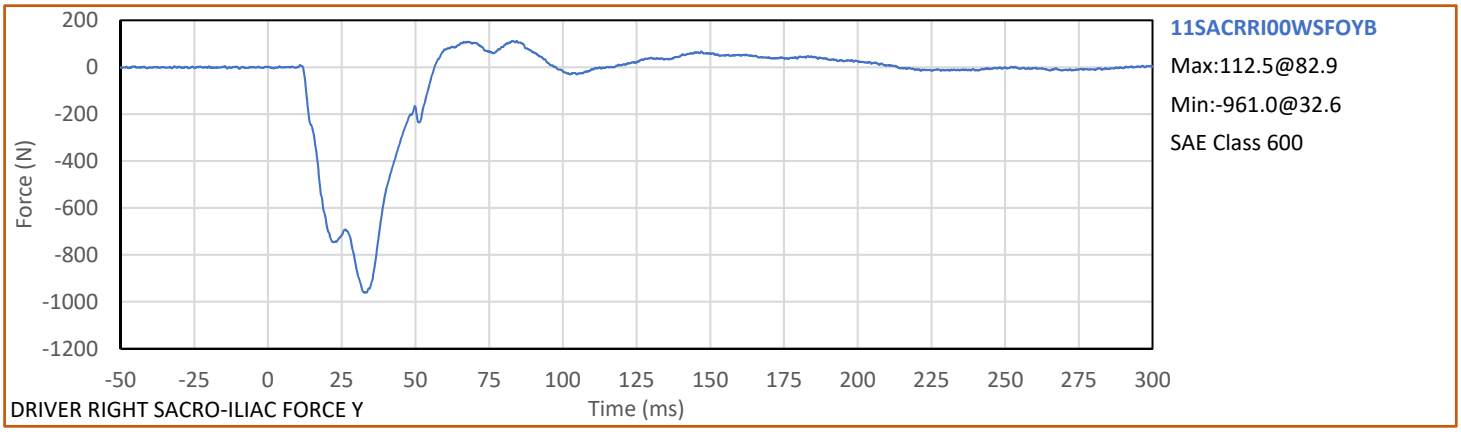

11SACRLE00WSMOYB
Max:12.4@118.9
Min:-9.0@19.0
SAE Class 600
Moment (Nm)
Time (ms)
DRIVER LEFT SACRO-ILIAC MOMENT Y



DRIVER LEFT SACRO-ILIAC MOMENT Z

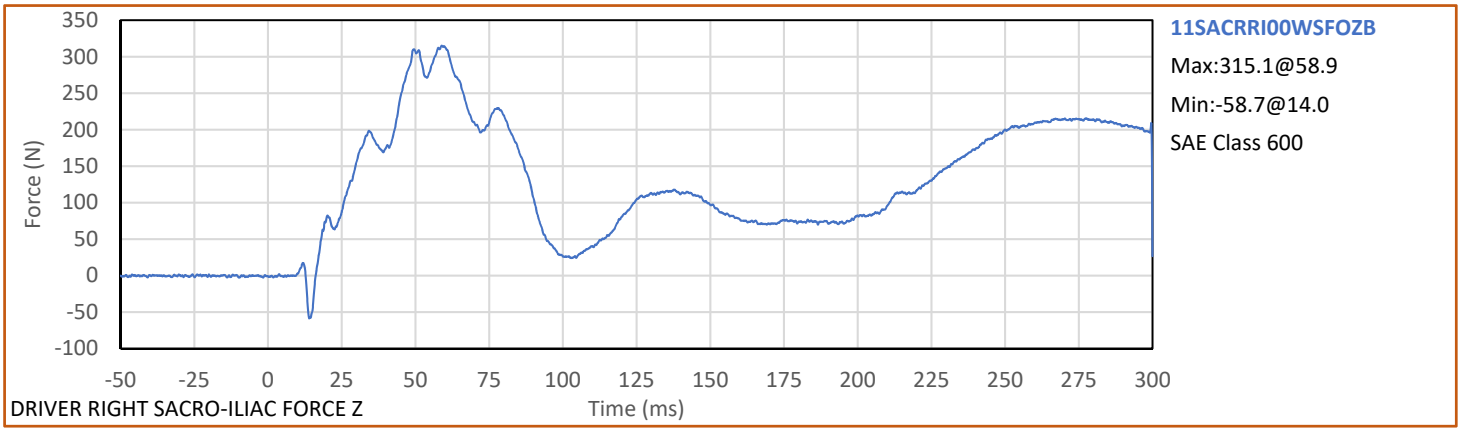


DRIVER RIGHT SACRO-ILIAC FORCE X

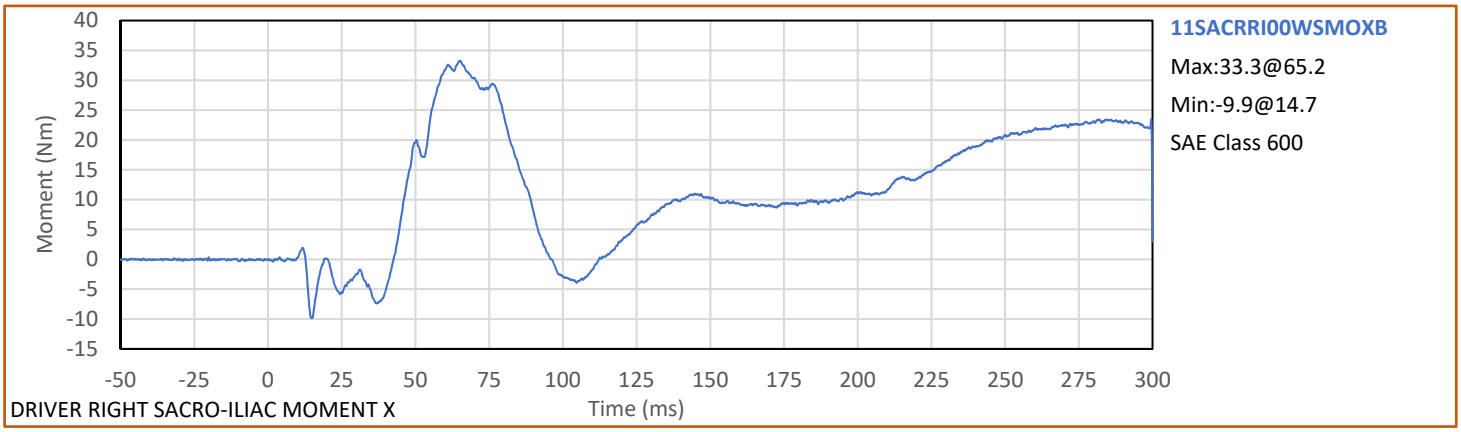


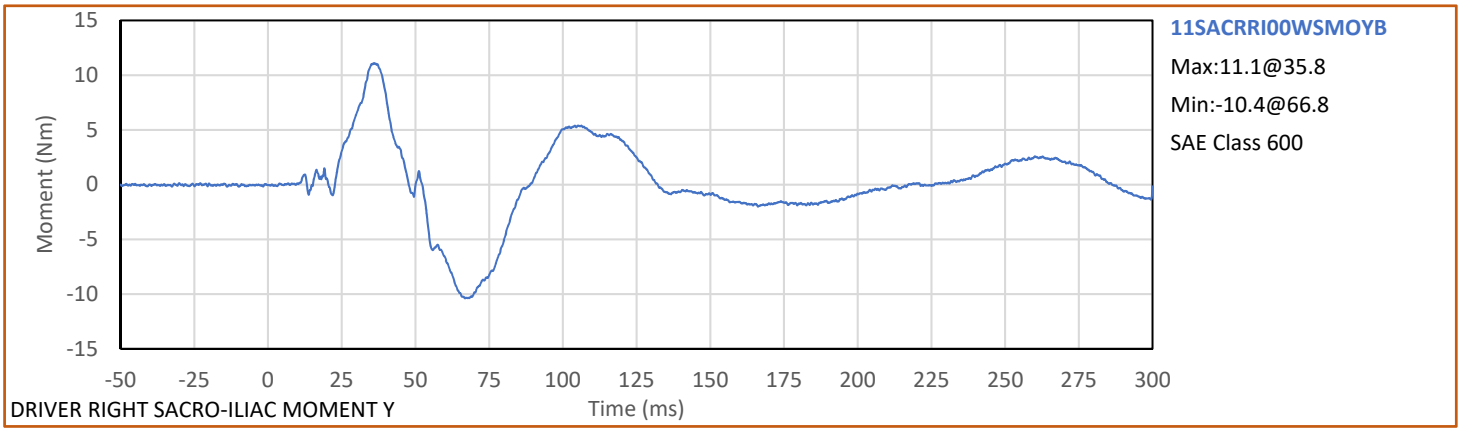
DRIVER RIGHT SACRO-ILIAC FORCE Y

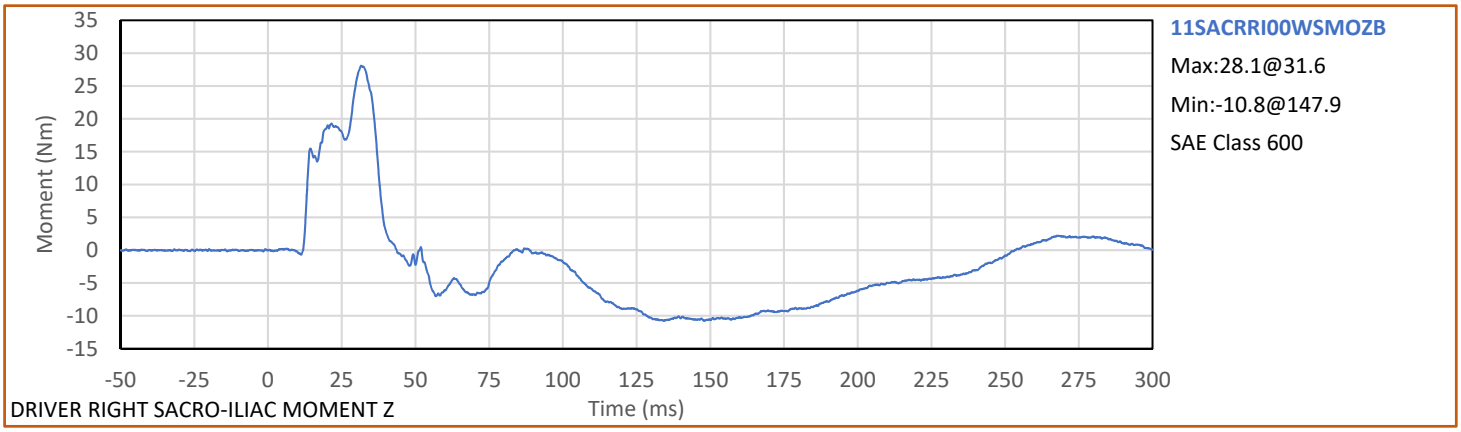
E

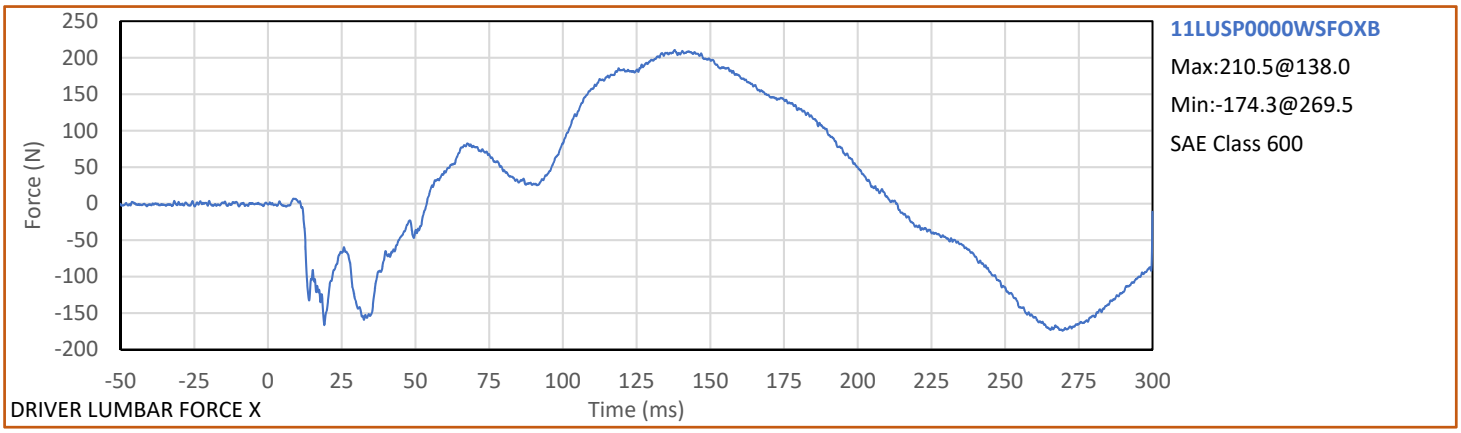


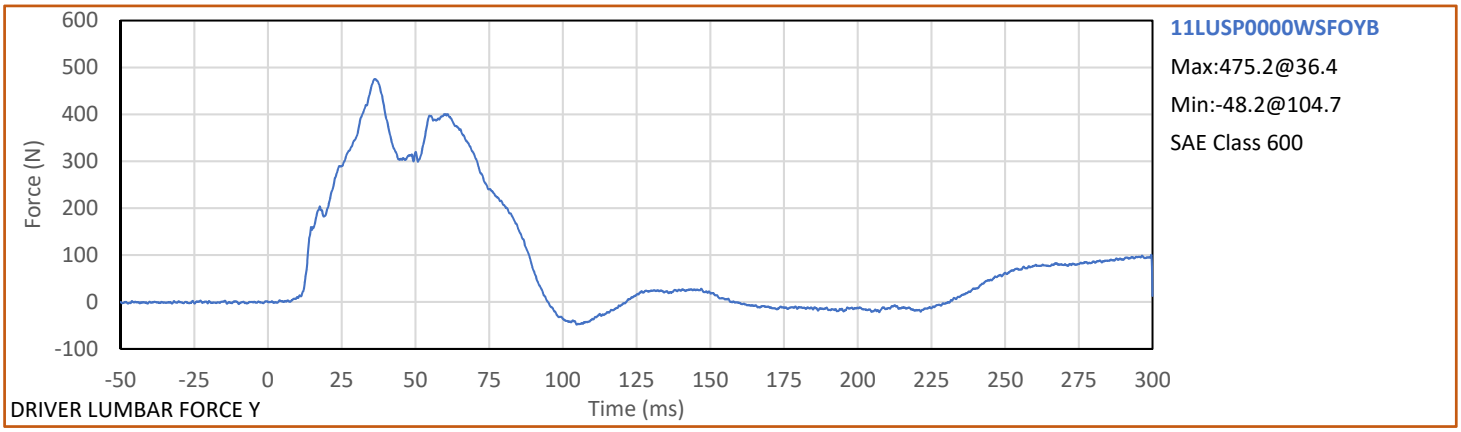
DRIVER RIGHT SACRO-ILIAC FORCE Z

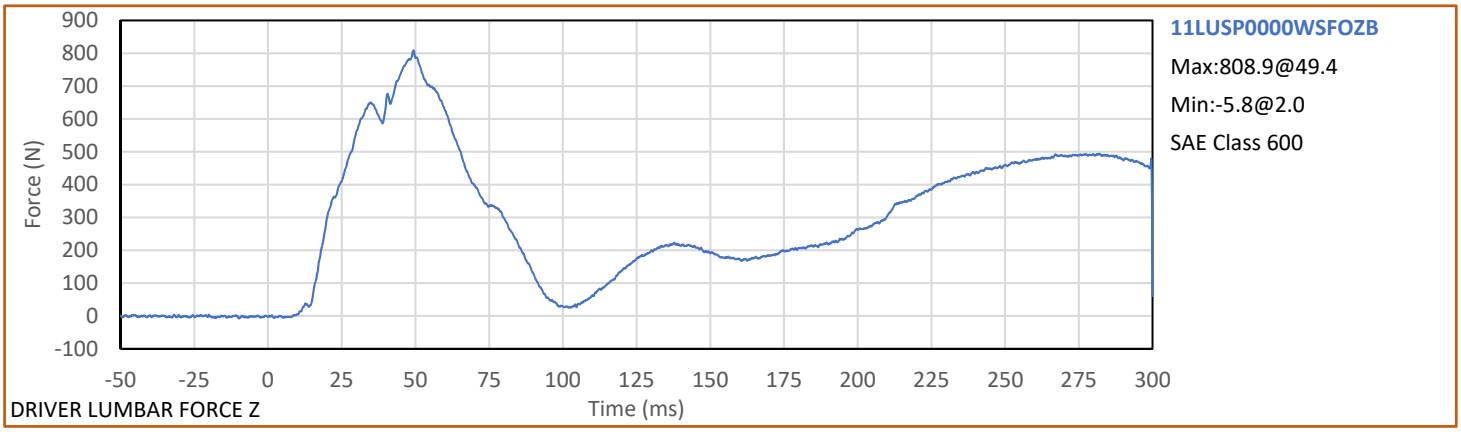

Moment (Nm)
Time (ms)
11SACRRI00WSMOXB
Max:33.3@65.2
Min:-9.9@14.7
SAE Class 600
DRIVER RIGHT SACRO-ILIAC MOMENT X

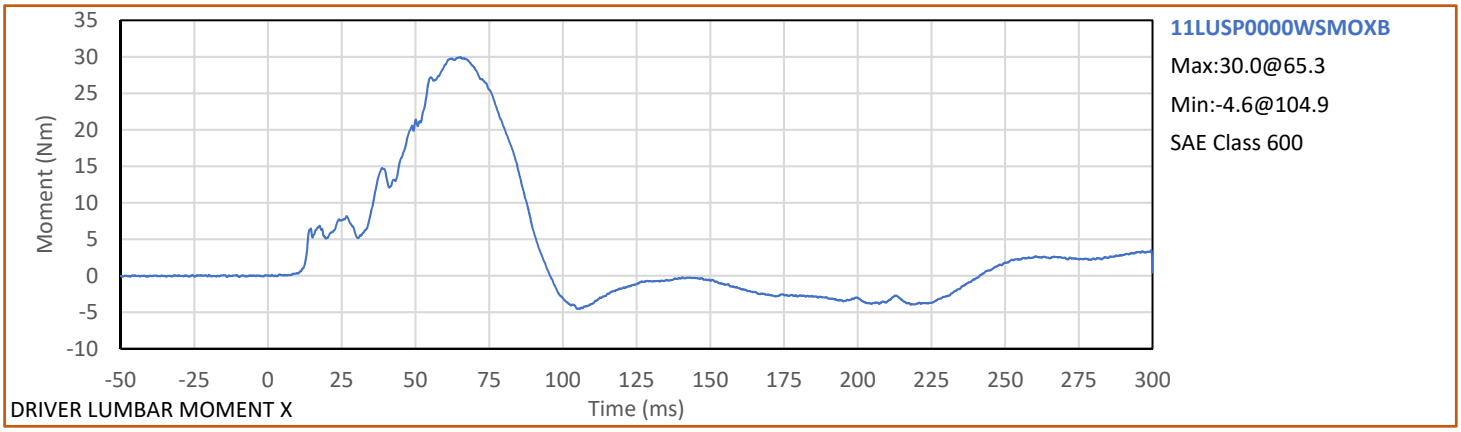

Moment (Nm)
Time (ms)
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Max:11.1@35.8
Min:-10.4@66.8
SAE Class 600
DRIVER RIGHT SACRO-ILIAC MOMENT Y

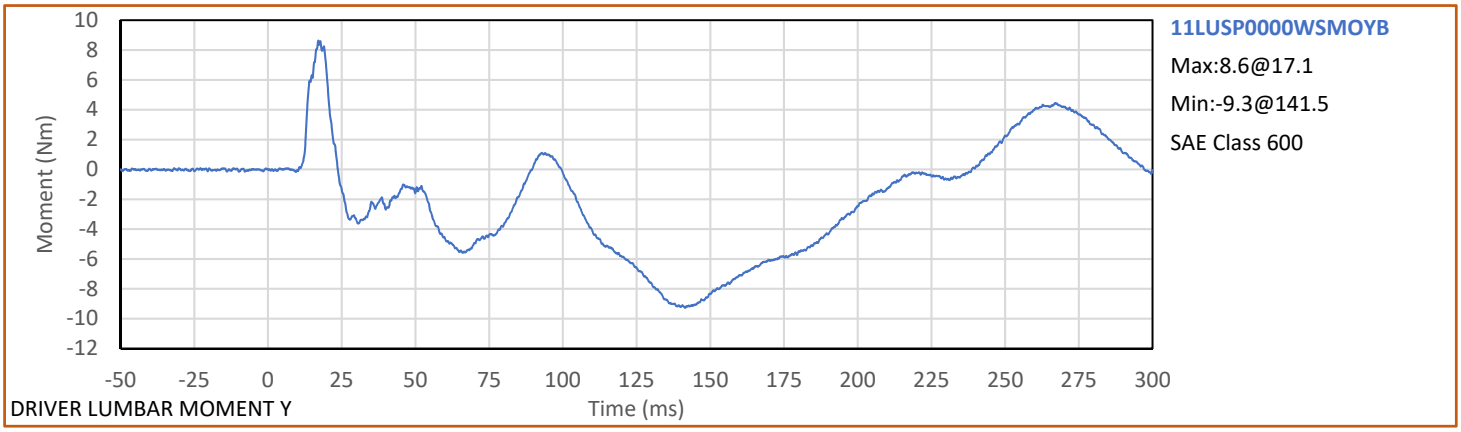

Moment (Nm)
Time (ms)
11SACRRI00WSMOZB
Max:28.1@31.6
Min:-10.8@147.9
SAE Class 600
DRIVER RIGHT SACRO-ILIAC MOMENT Z


Force (N)
Time (ms)
11LUSP0000WSFOXB
Max:210.5@138.0
Min:-174.3@269.5
SAE Class 600
DRIVER LUMBAR FORCE X


11LUSP0000WSFOYB
Max:475.2@36.4
Min:-48.2@104.7
SAE Class 600
Force (N)
Time (ms)
DRIVER LUMBAR FORCE Y


11LUSP0000WSFOZB
Max:808.9@49.4
Min:-5.8@2.0
SAE Class 600
Force (N)
Time (ms)
DRIVER LUMBAR FORCE Z


11LUSP0000WSMOXB
Max:30.0@65.3
Min:-4.6@104.9
SAE Class 600
Moment (Nm)
Time (ms)
DRIVER LUMBAR MOMENT X

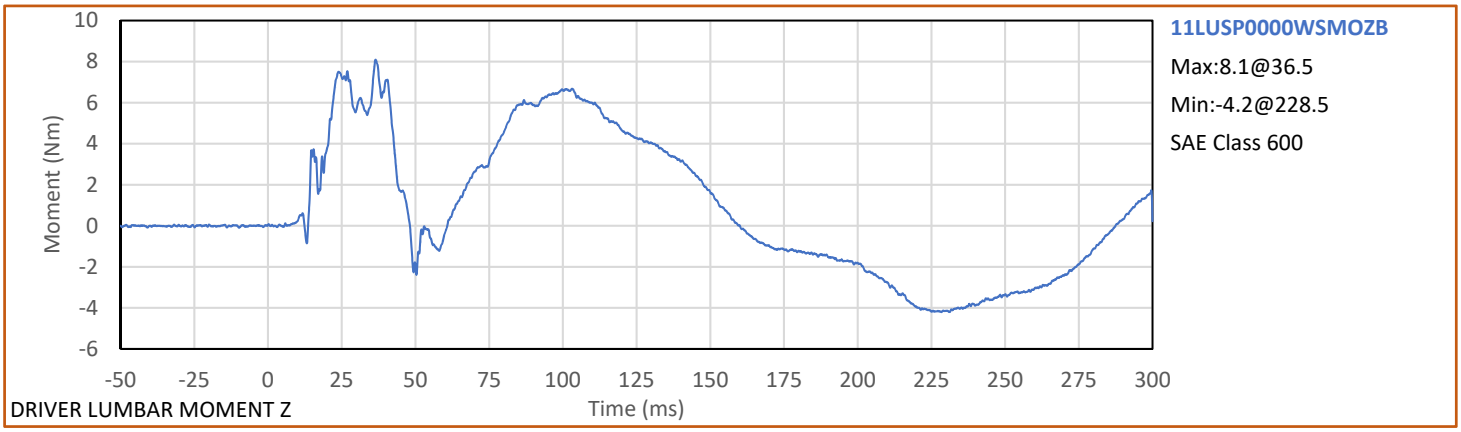

11LUSP0000WSMOYB
Max:8.6@17.1
Min:-9.3@141.5
SAE Class 600
Moment (Nm)
Time (ms)
DRIVER LUMBAR MOMENT Y

Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

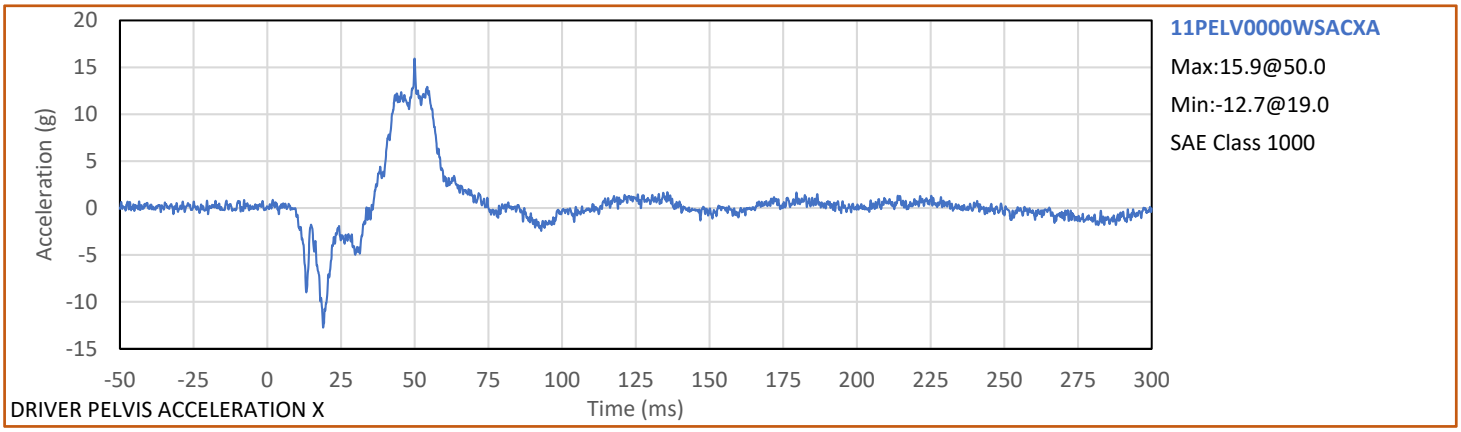
Test Program: 55/28 km/h 90° Research Side Impact (MDB)

NHTSA No.: R20185380

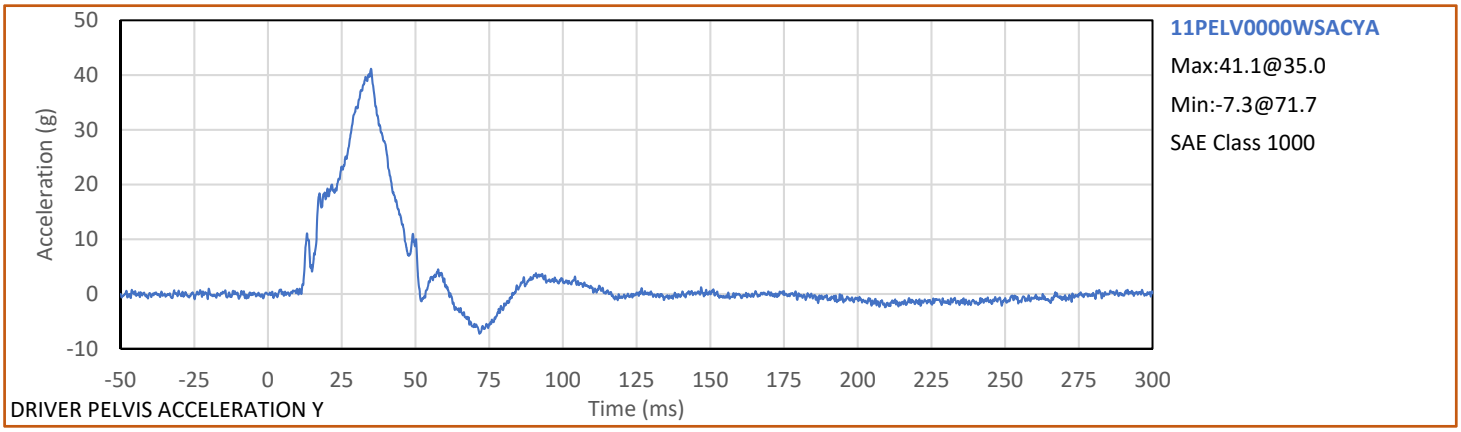
Test Date: 9/9/2019



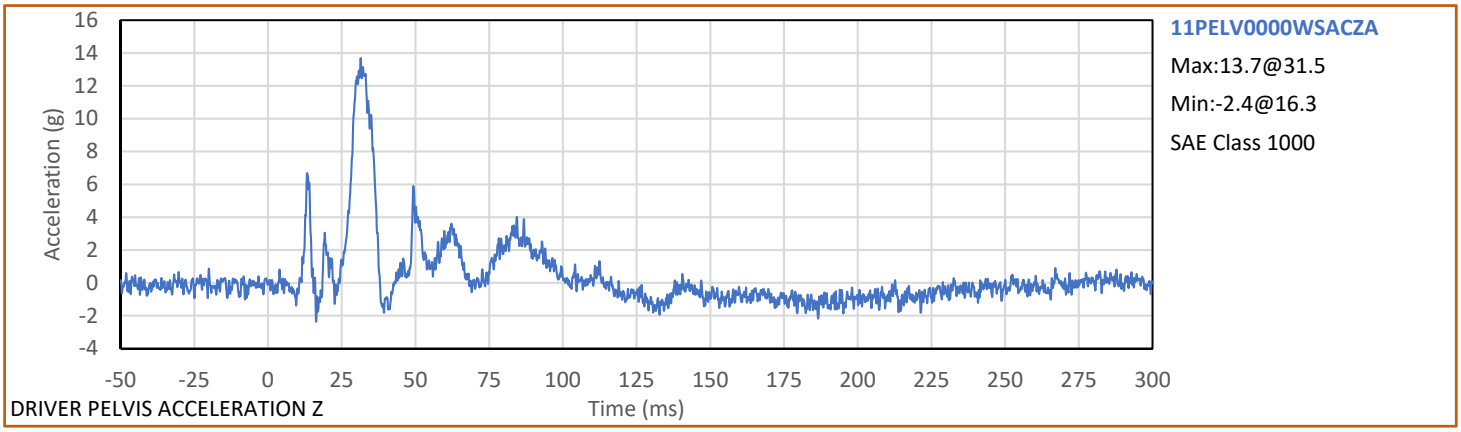
DRIVER LUMBAR MOMENT Z



DRIVER PELVIS ACCELERATION X



DRIVER PELVIS ACCELERATION Y



DRIVER PELVIS ACCELERATION Z

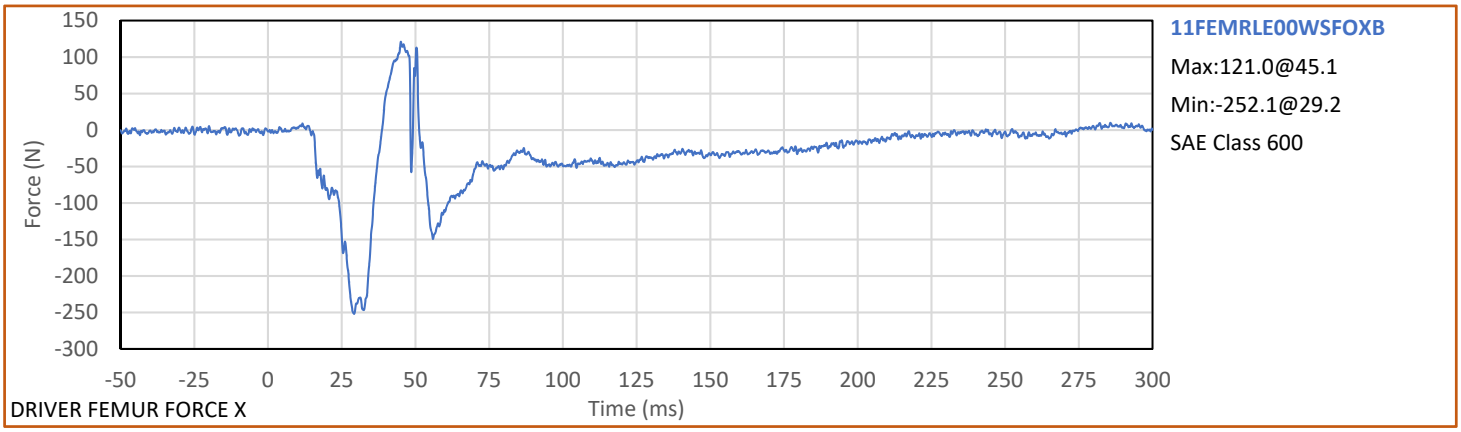
Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

Test Program: 55/28 km/h 90° Research Side Impact (MDB)

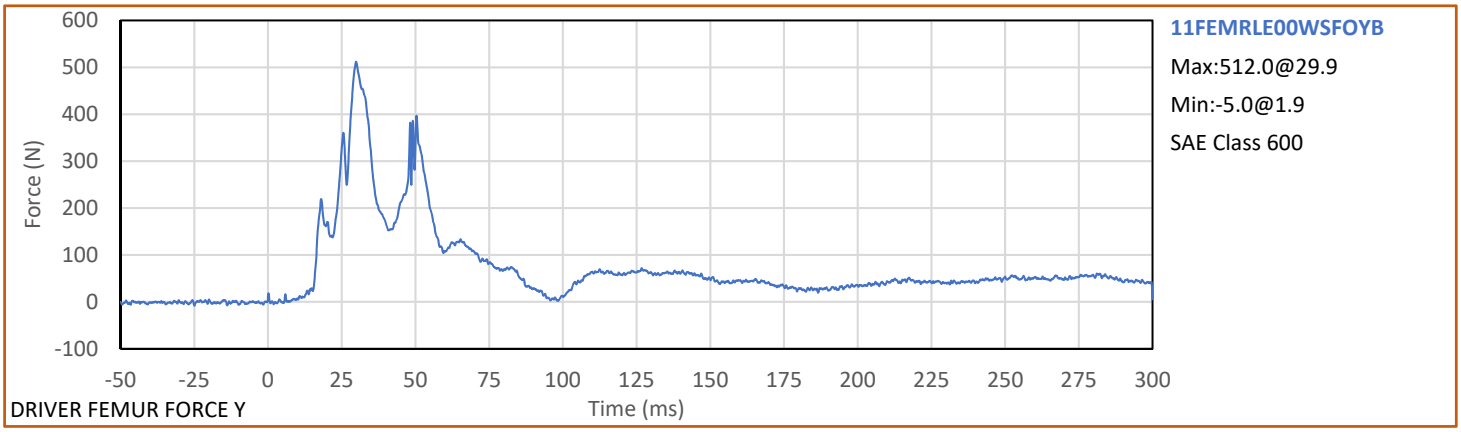
NHTSA No.: R20185380

Test Date: 9/9/2019

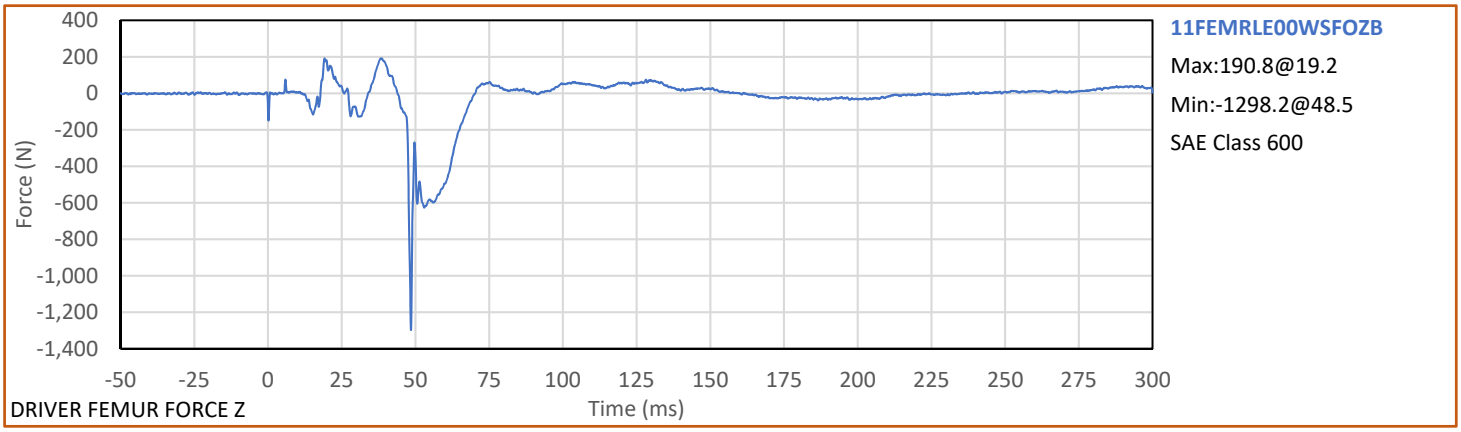
Applus IDIADA KARCO



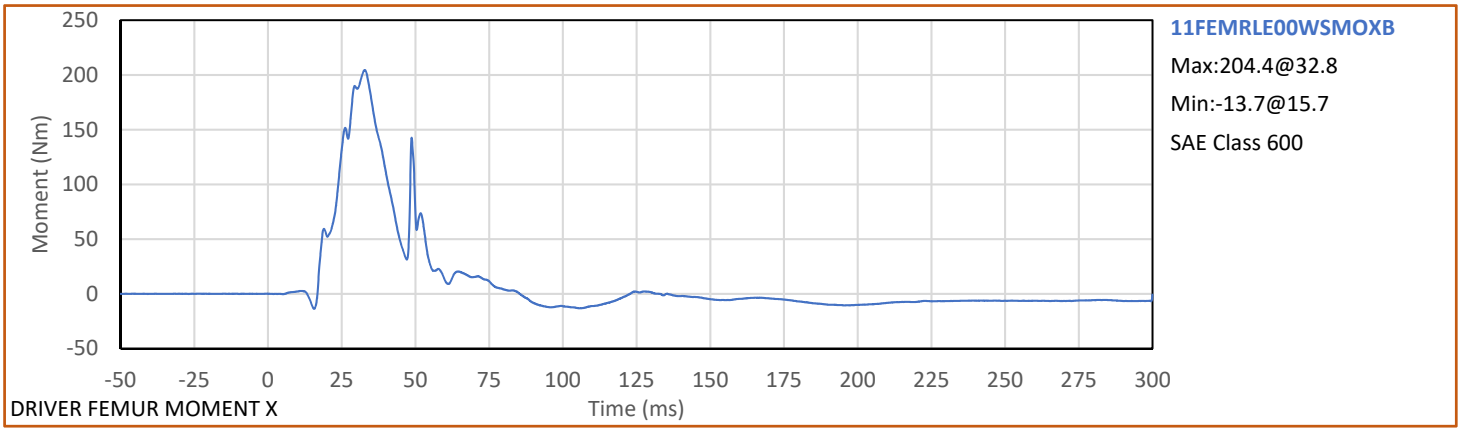
DRIVER FEMUR FORCE X



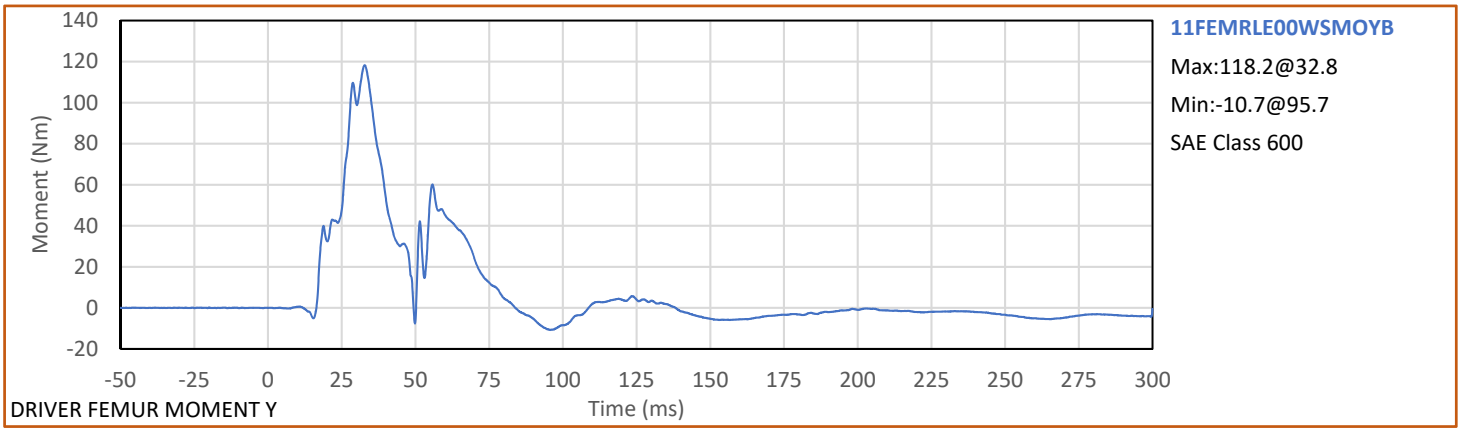
DRIVER FEMUR FORCE Y

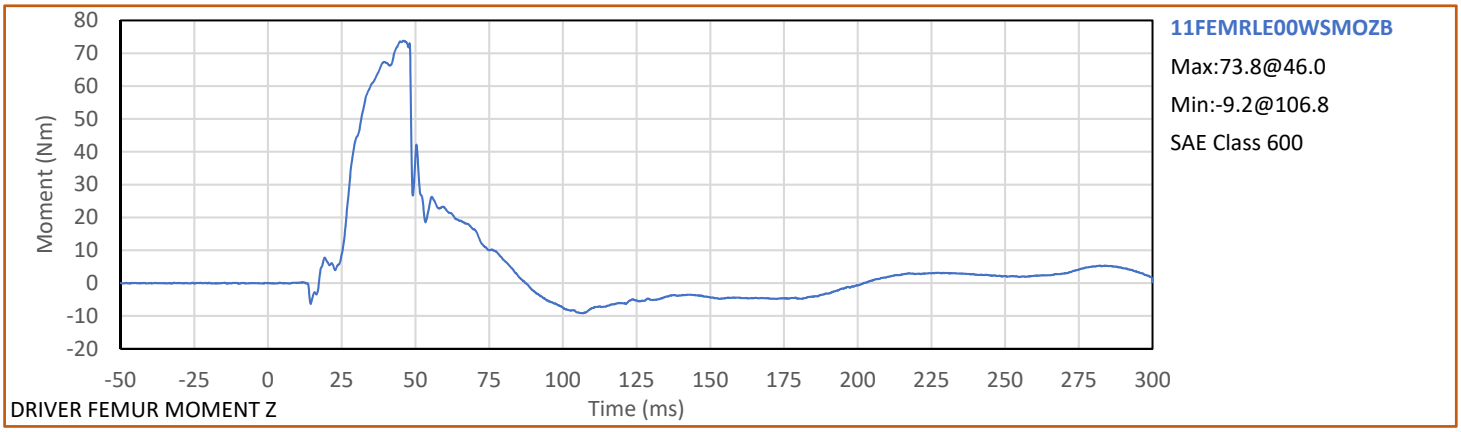


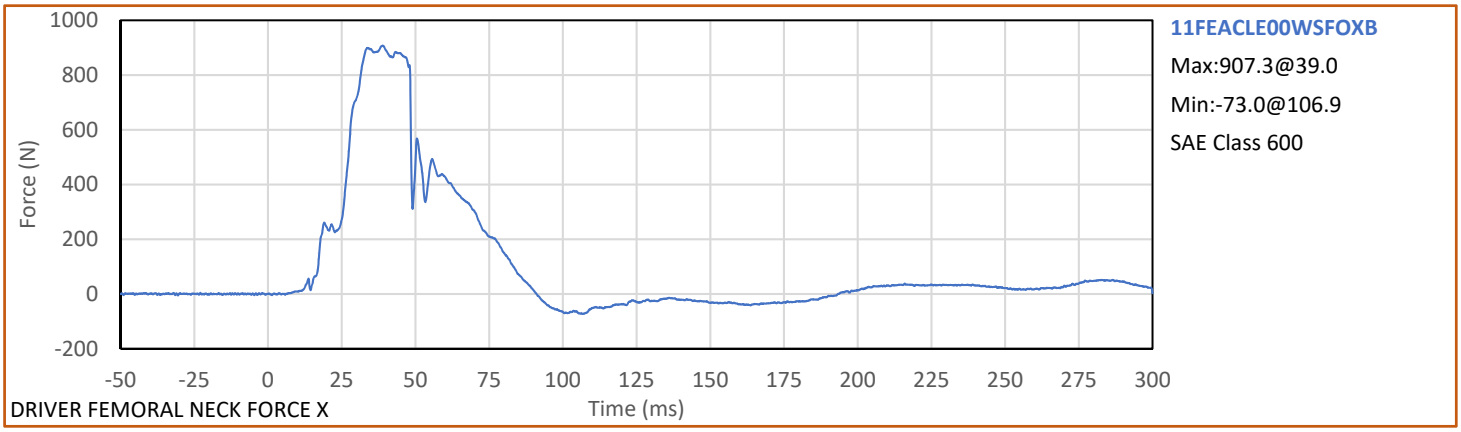
DRIVER FEMUR FORCE Z

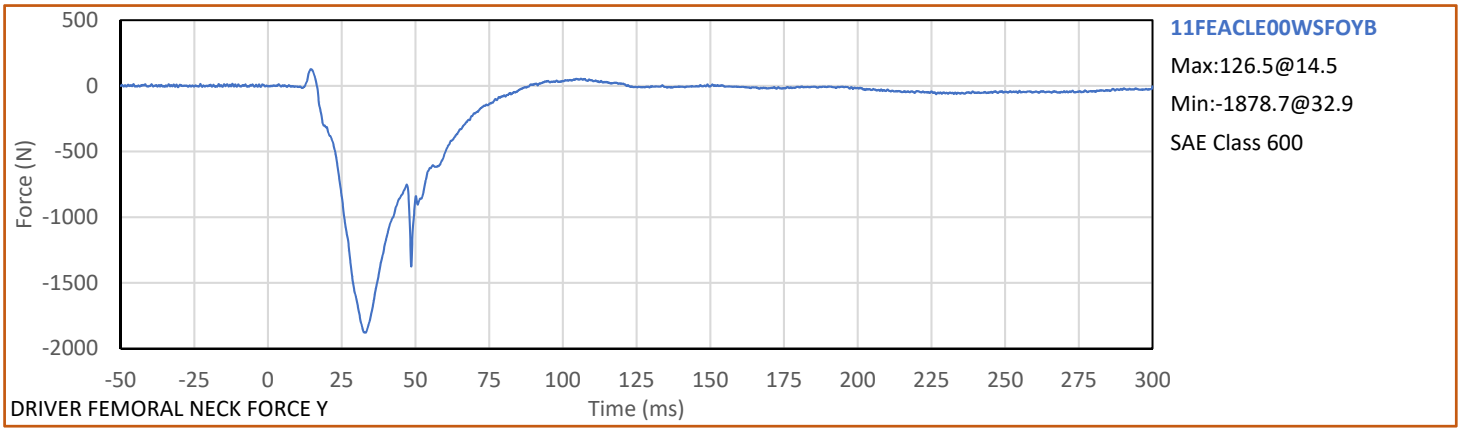


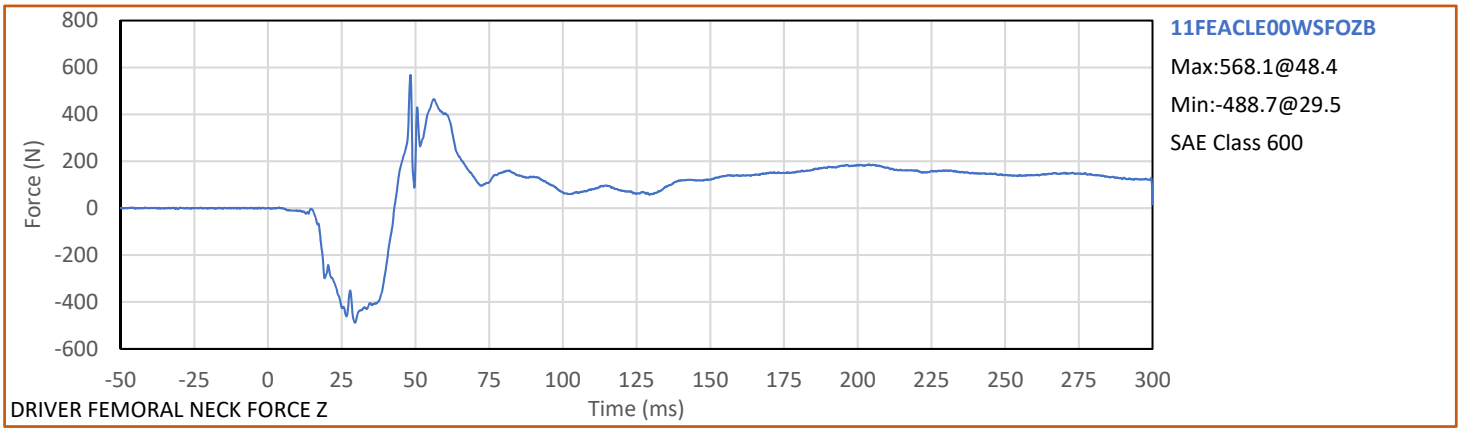
DRIVER FEMUR MOMENT X

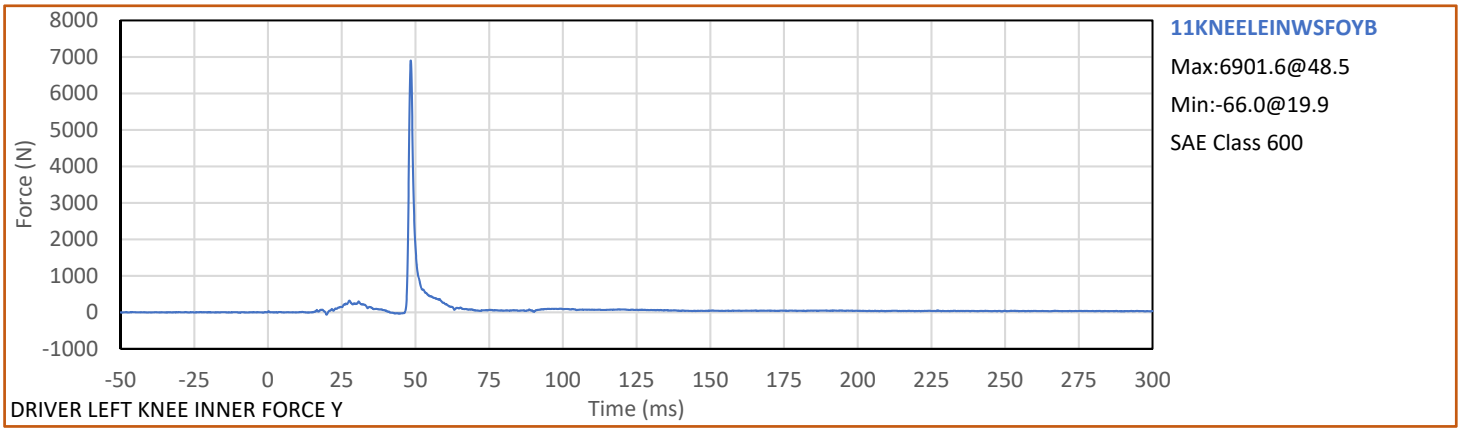

11FEMRLE00WSMOYB
Max:118.2@32.8
Min:-10.7@95.7
SAE Class 600
Moment (Nm)
Time (ms)
DRIVER FEMUR MOMENT Y

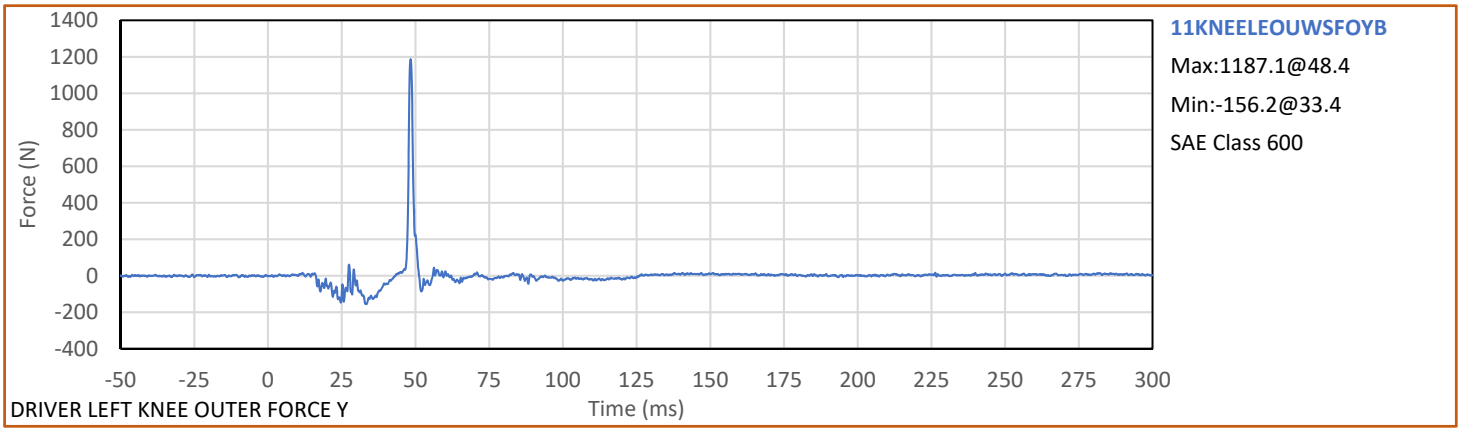

11FEMRLE00WSMOZB
Max:73.8@46.0
Min:-9.2@106.8
SAE Class 600
Moment (Nm)
Time (ms)
DRIVER FEMUR MOMENT Z


11FEACLE00WSFOXB
Max:907.3@39.0
Min:-73.0@106.9
SAE Class 600
Force (N)
Time (ms)
DRIVER FEMORAL NECK FORCE X


11FEACLE00WSFOYB
Max:126.5@14.5
Min:-1878.7@32.9
SAE Class 600
Force (N)
Time (ms)
DRIVER FEMORAL NECK FORCE Y


11FEACLE00WSFOZB
Max:568.1@48.4
Min:-488.7@29.5
SAE Class 600
Force (N)
Time (ms)
DRIVER FEMORAL NECK FORCE Z


11KNEELEINWSFOYB
Max:6901.6@48.5
Min:-66.0@19.9
SAE Class 600
Force (N)
Time (ms)
DRIVER LEFT KNEE INNER FORCE Y


11KNEELEOUWSFOYB
Max:1187.1@48.4
Min:-156.2@33.4
SAE Class 600
Force (N)
Time (ms)
DRIVER LEFT KNEE OUTER FORCE Y

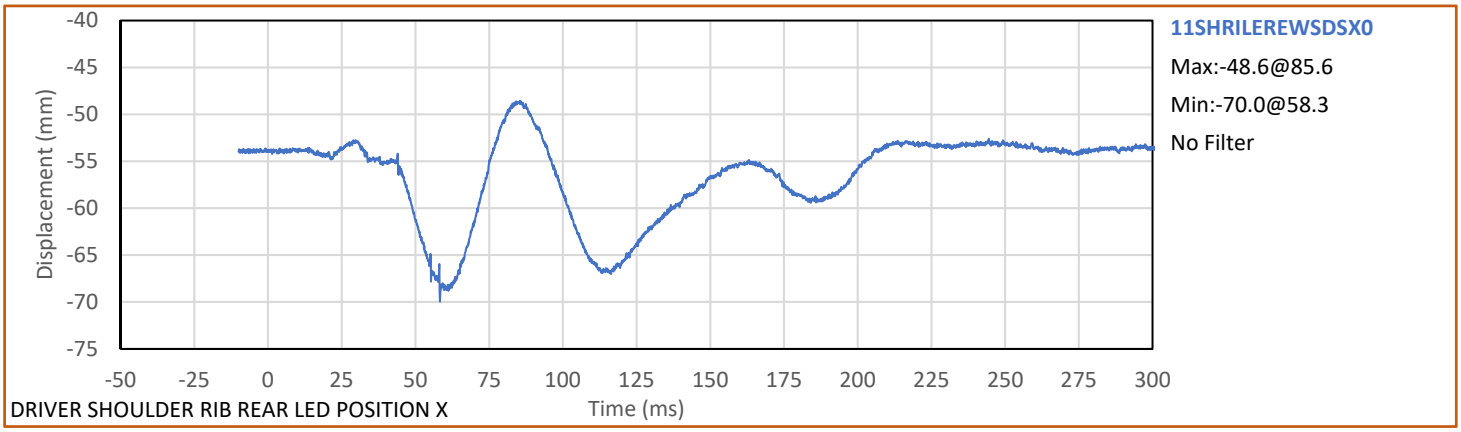
APPENDIX B
WORLDSID RIBEYE PLOTS

Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

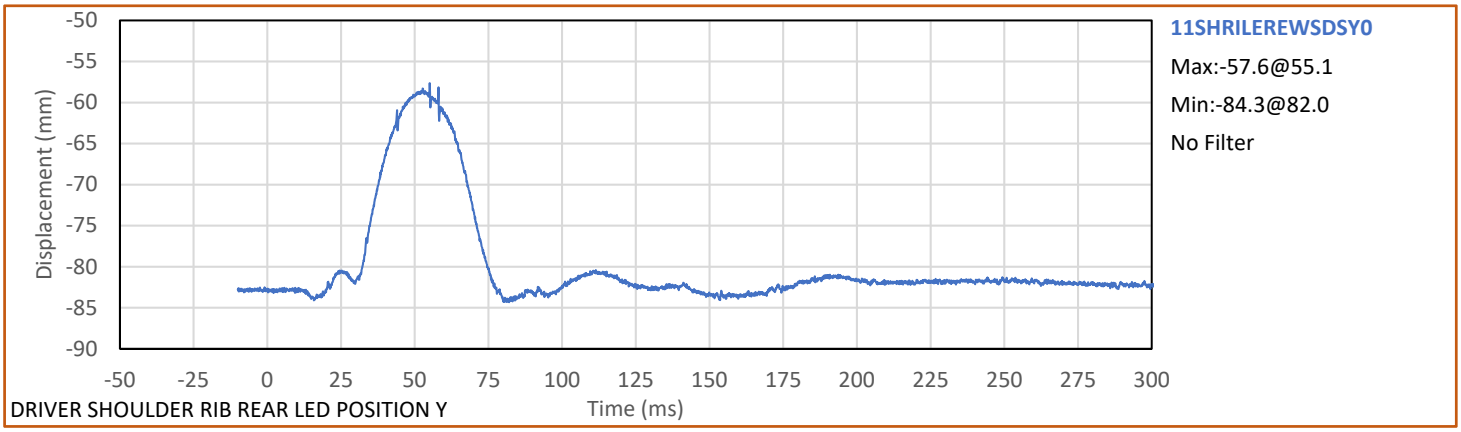
Test Program: 55/28 km/h 90° Research Side Impact (MDB)

NHTSA No.: R20185380

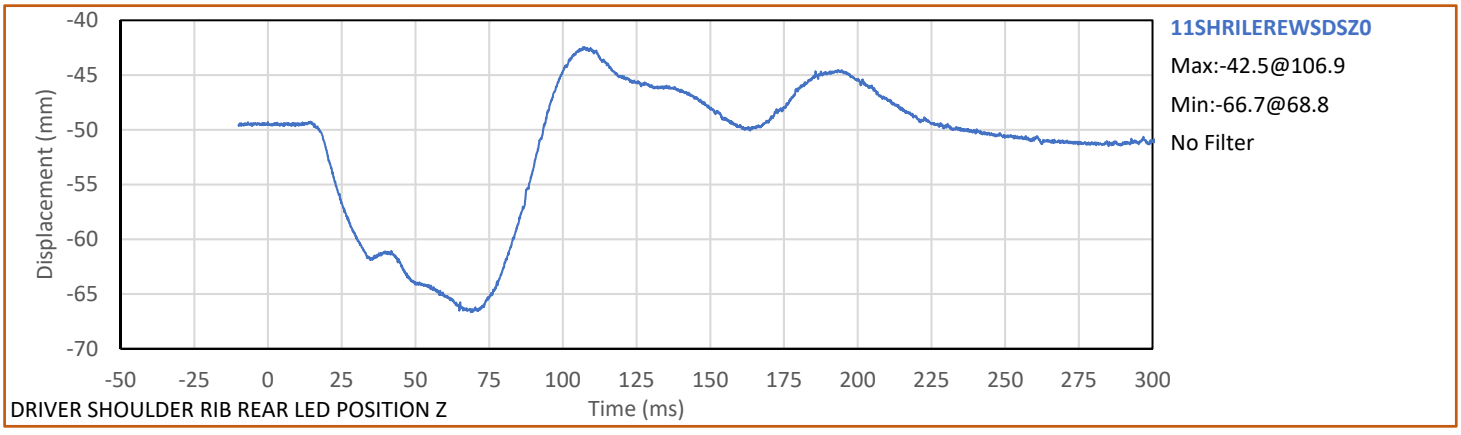
Test Date: 9/9/2019



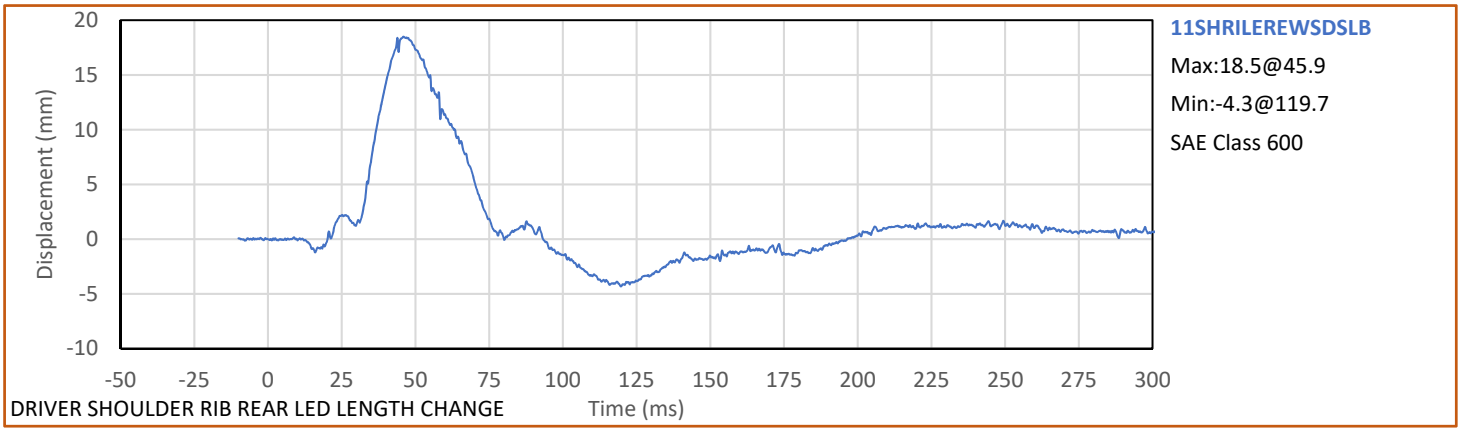
DRIVER SHOULDER RIB REAR LED POSITION X



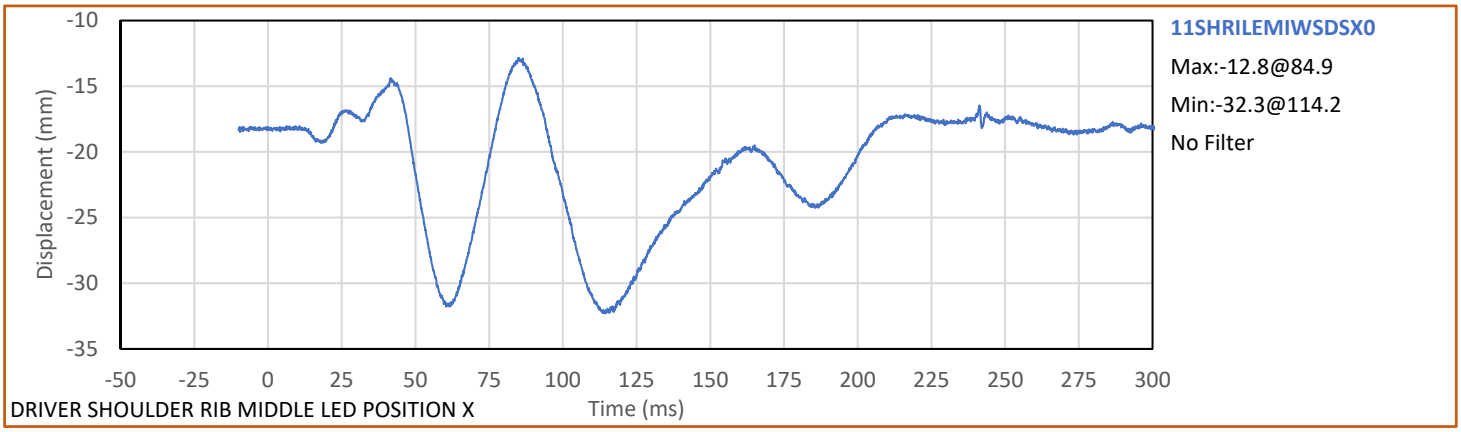
DRIVER SHOULDER RIB REAR LED POSITION Y



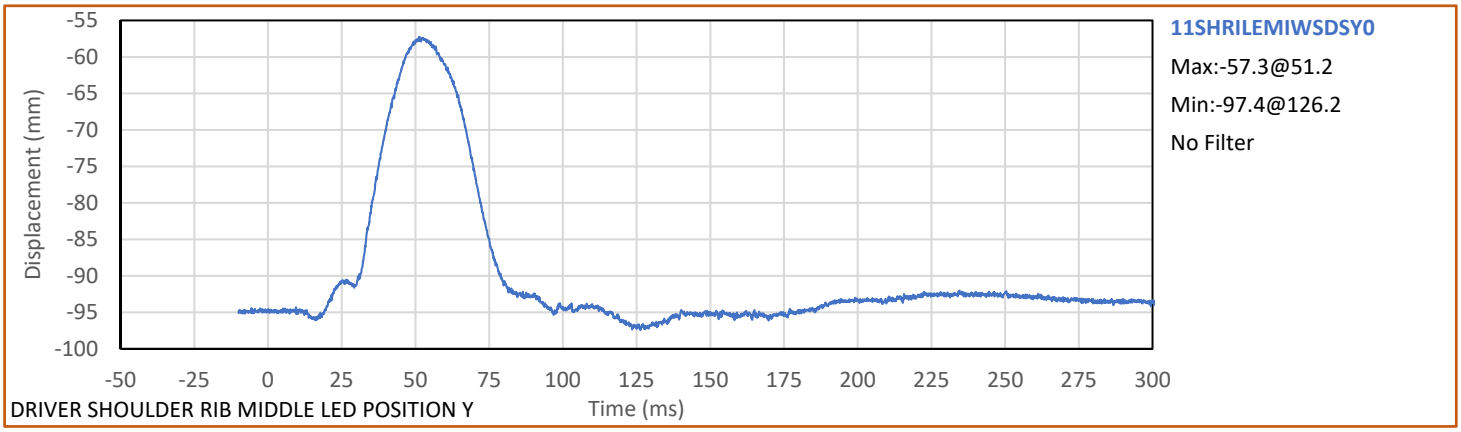
DRIVER SHOULDER RIB REAR LED POSITION Z



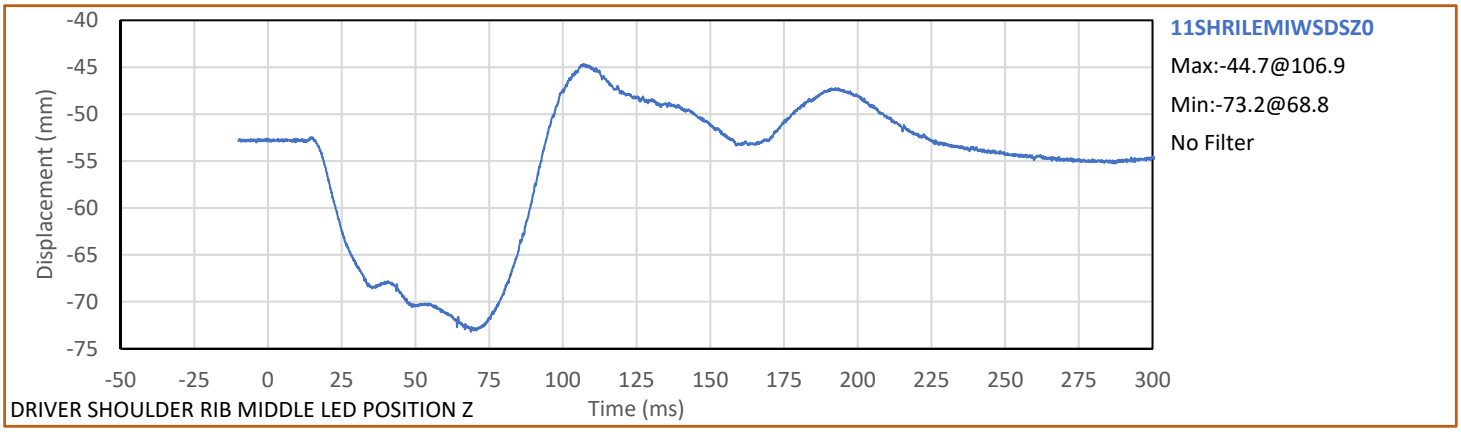
DRIVER SHOULDER RIB REAR LED LENGTH CHANGE



DRIVER SHOULDER RIB MIDDLE LED POSITION X



DRIVER SHOULDER RIB MIDDLE LED POSITION Y



DRIVER SHOULDER RIB MIDDLE LED POSITION Z



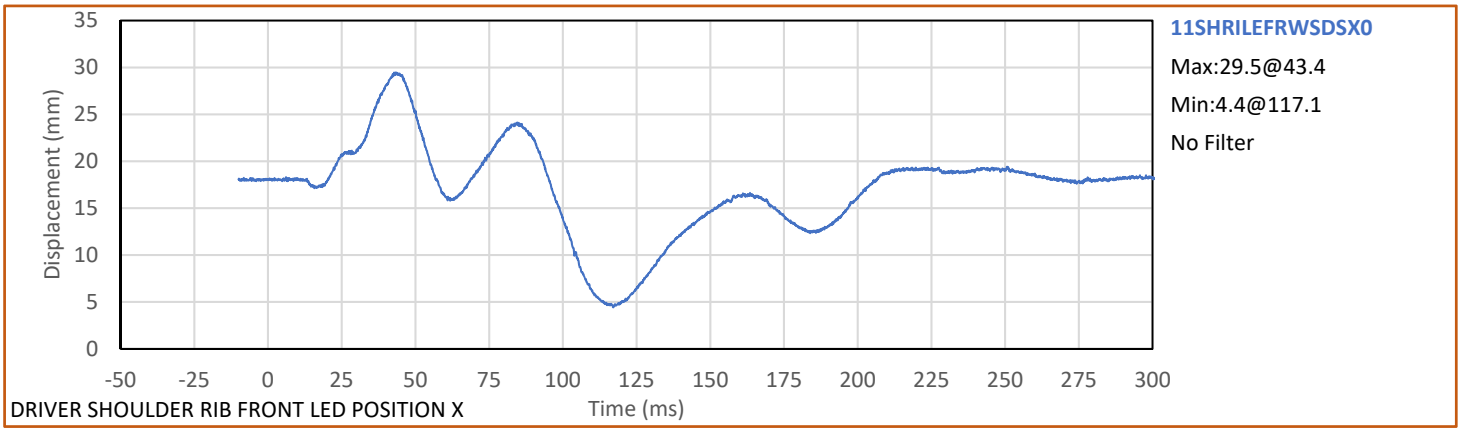
DRIVER SHOULDER RIB MIDDLE LED LENGTH CHANGE

Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

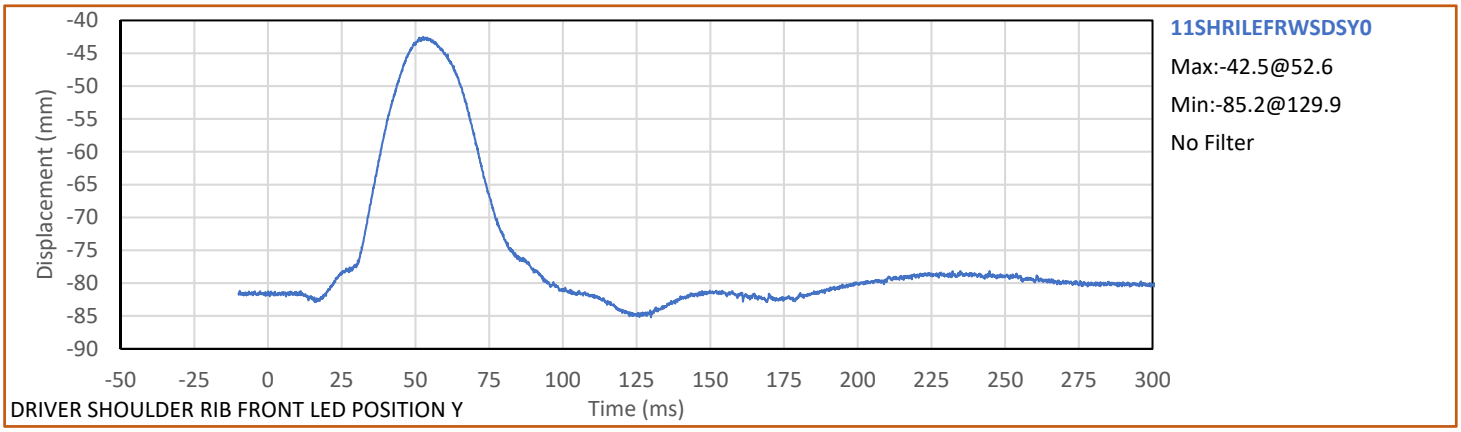
Test Program: 55/28 km/h 90° Research Side Impact (MDB)

NHTSA No.: R20185380

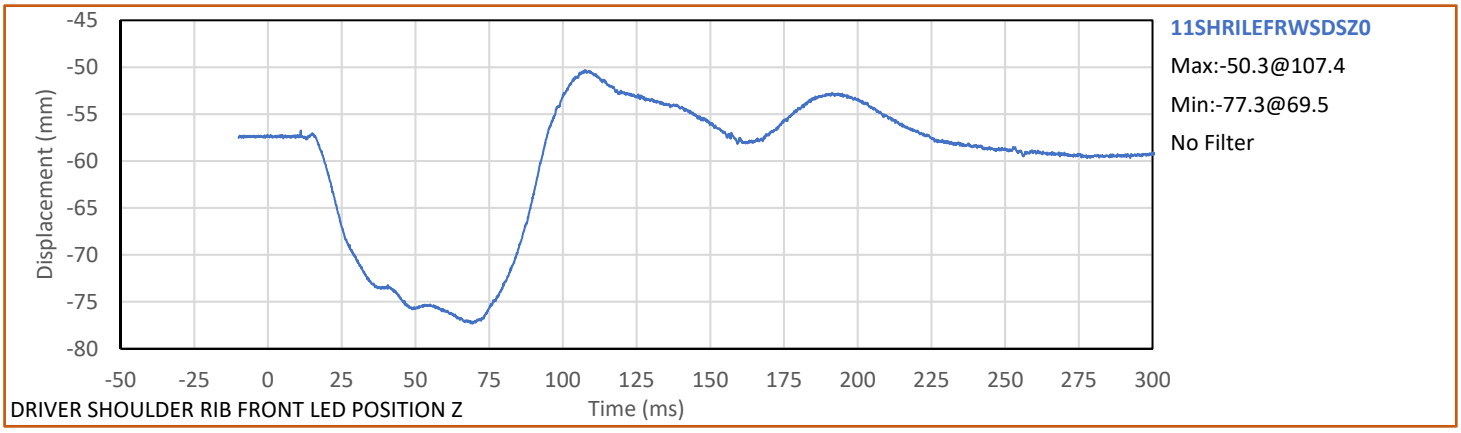
Test Date: 9/9/2019



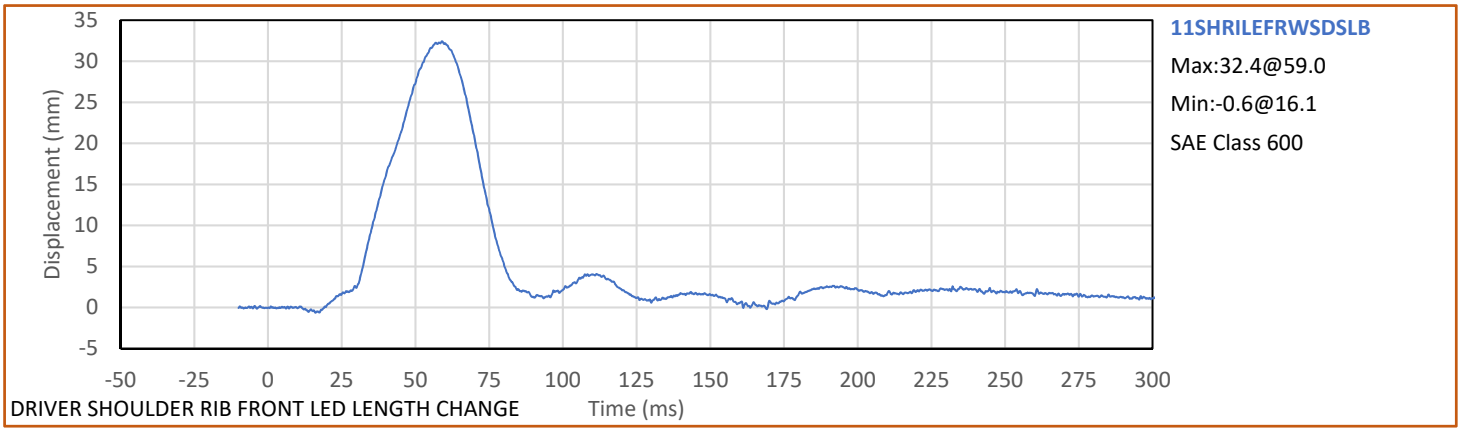
DRIVER SHOULDER RIB FRONT LED POSITION X



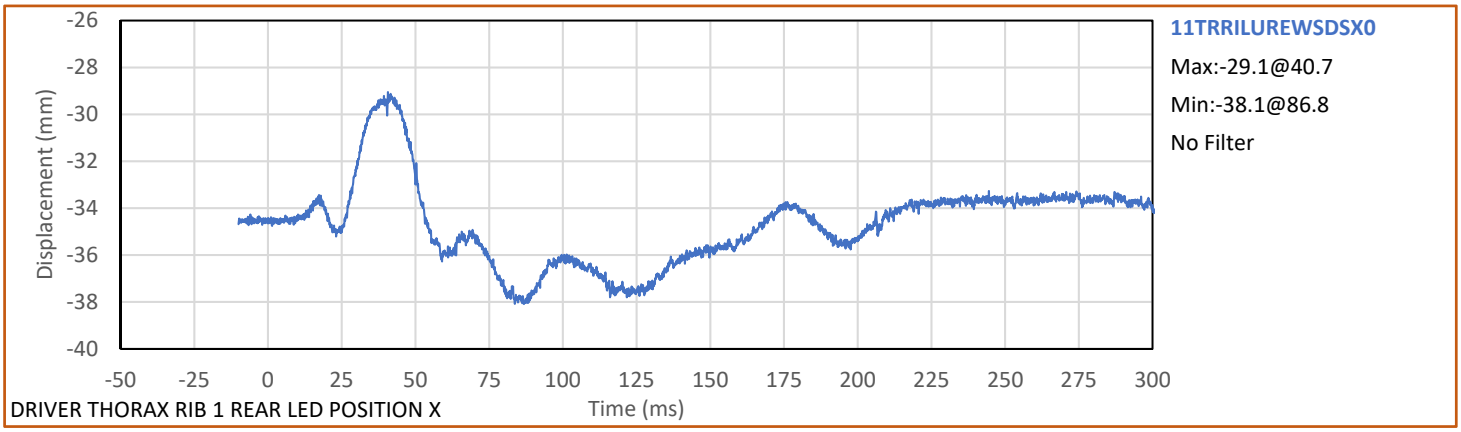
DRIVER SHOULDER RIB FRONT LED POSITION Y

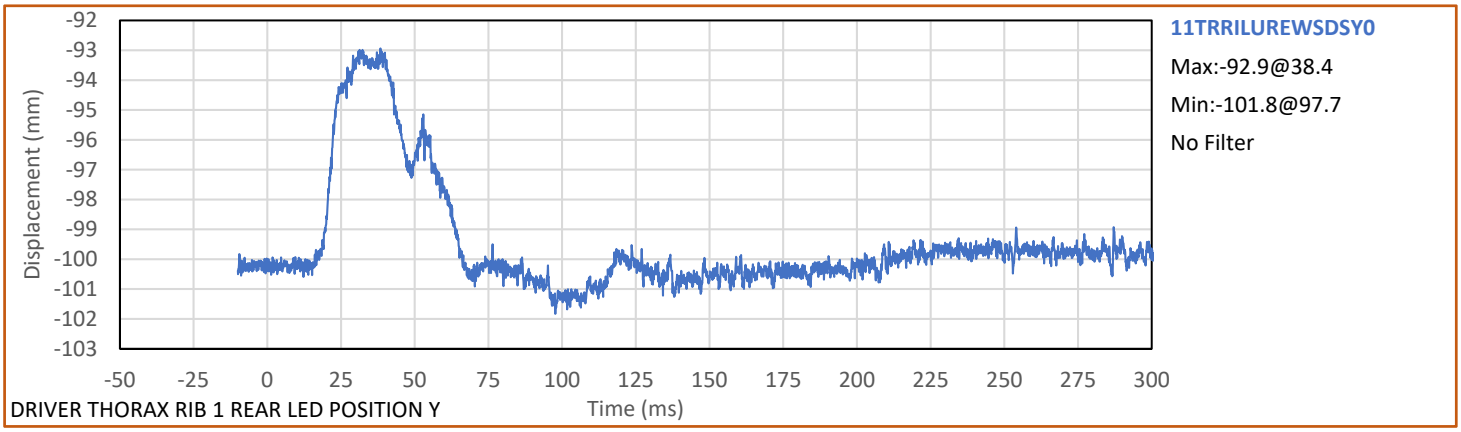


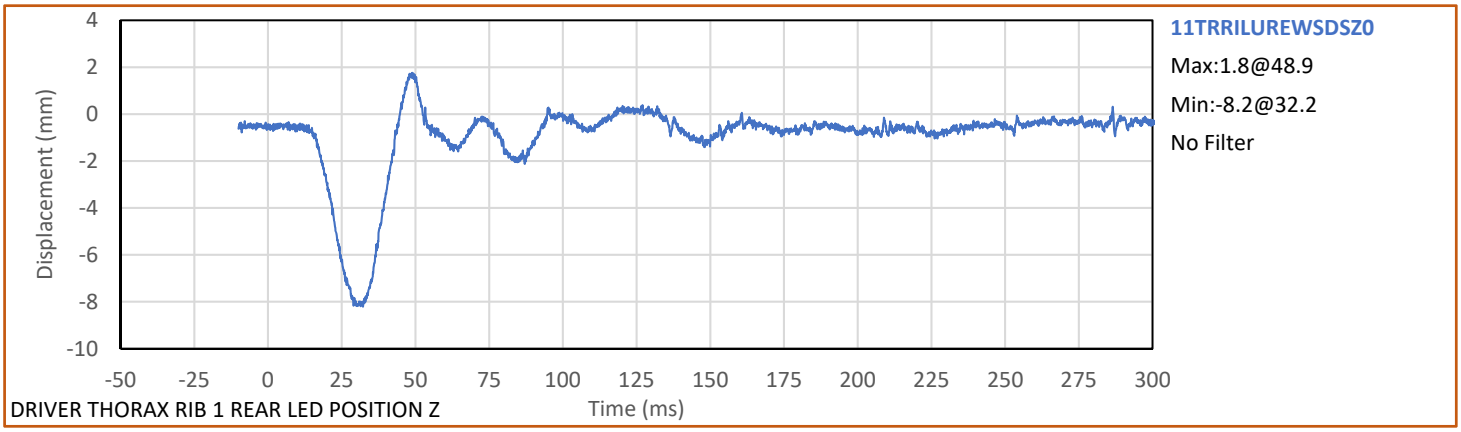
DRIVER SHOULDER RIB FRONT LED POSITION Z

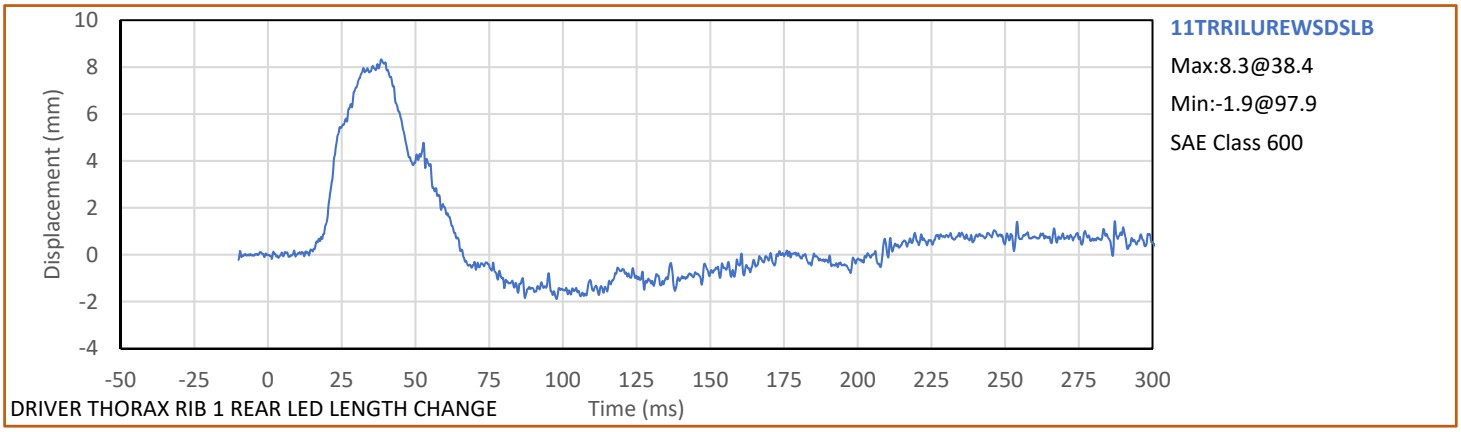


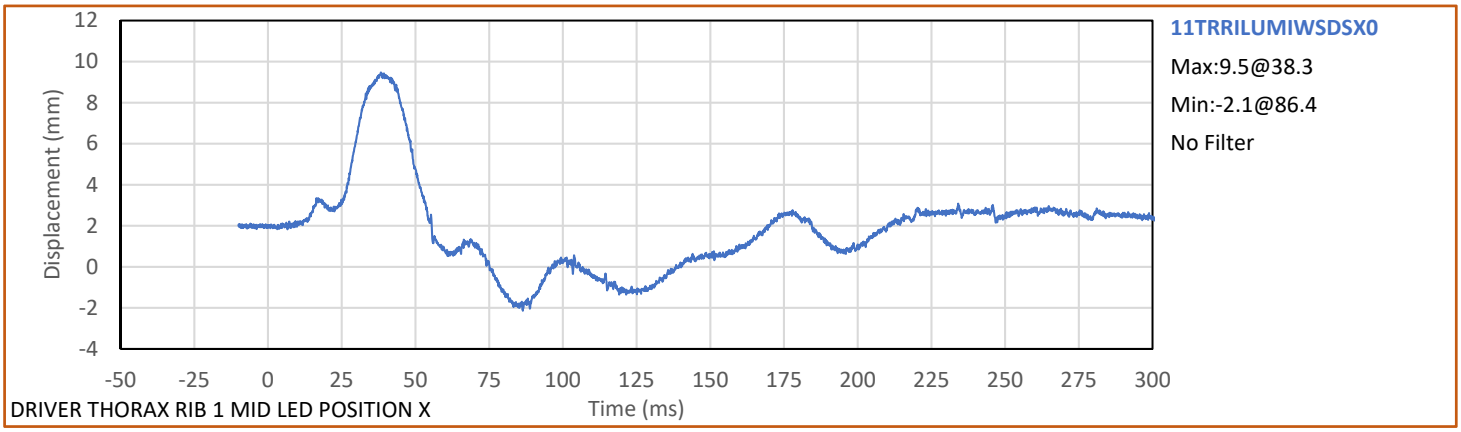
DRIVER SHOULDER RIB FRONT LED LENGTH CHANGE


11TRRILUREWSDSX0
Max:-29.1@40.7
Min:-38.1@86.8
No Filter
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 1 REAR LED POSITION X

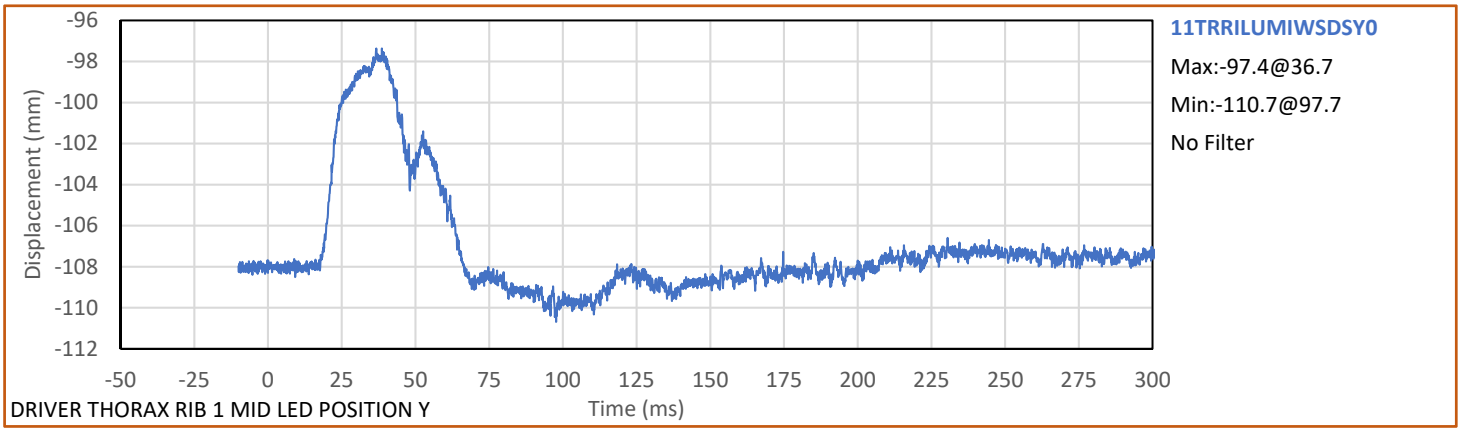

11TRRILUREWSDSY0
Max:-92.9@38.4
Min:-101.8@97.7
No Filter
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 1 REAR LED POSITION Y


11TRRILUREWSDSZ0
Max:1.8@48.9
Min:-8.2@32.2
No Filter
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 1 REAR LED POSITION Z

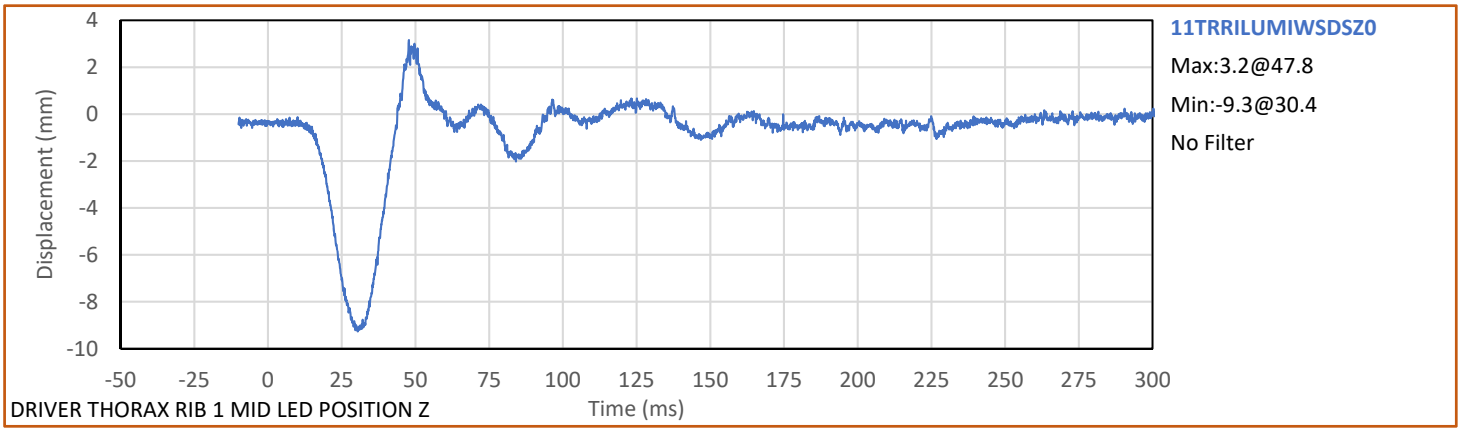

11TRRILUREWSDSLB
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Min:-1.9@97.9
SAE Class 600
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 1 REAR LED LENGTH CHANGE



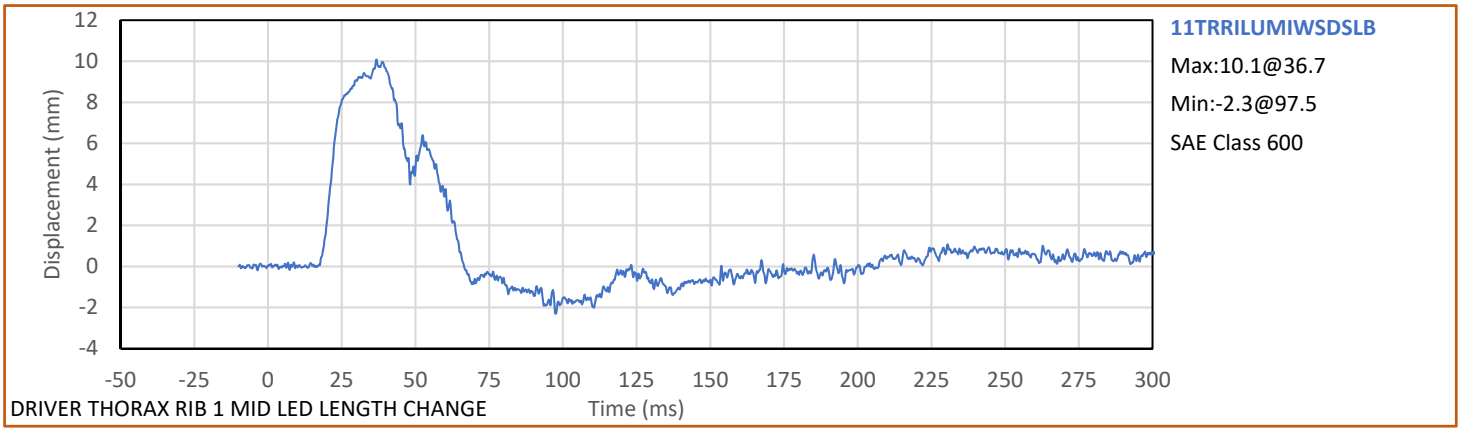
DRIVER THORAX RIB 1 MID LED POSITION X



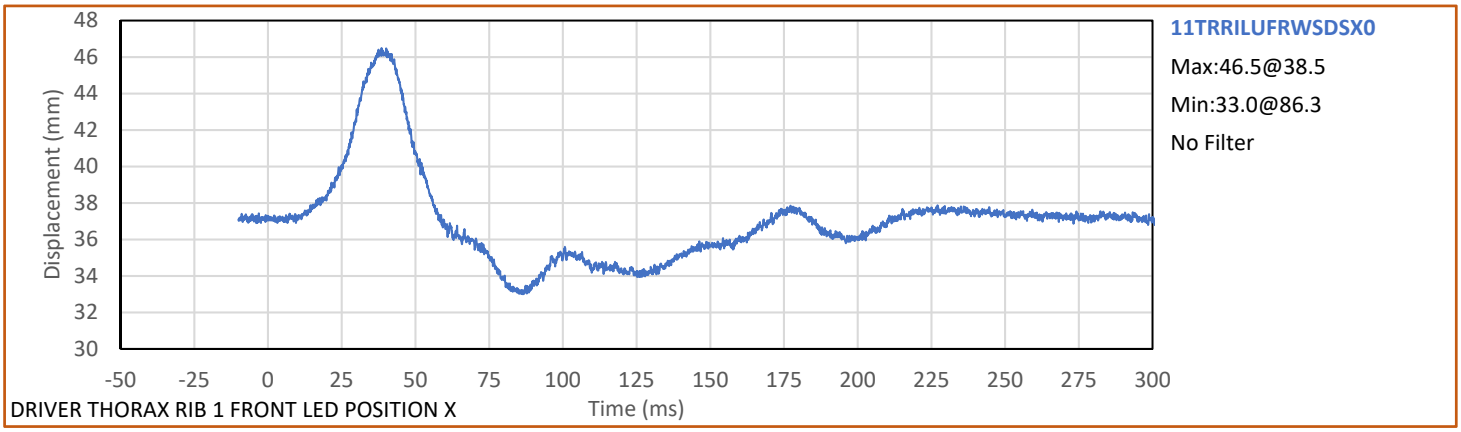
DRIVER THORAX RIB 1 MID LED POSITION Y

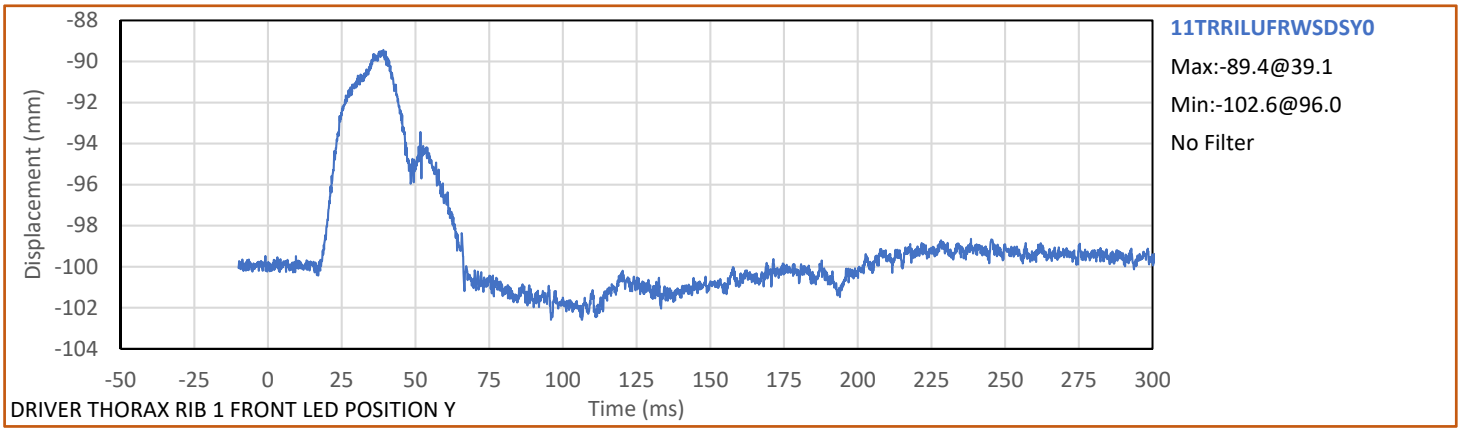


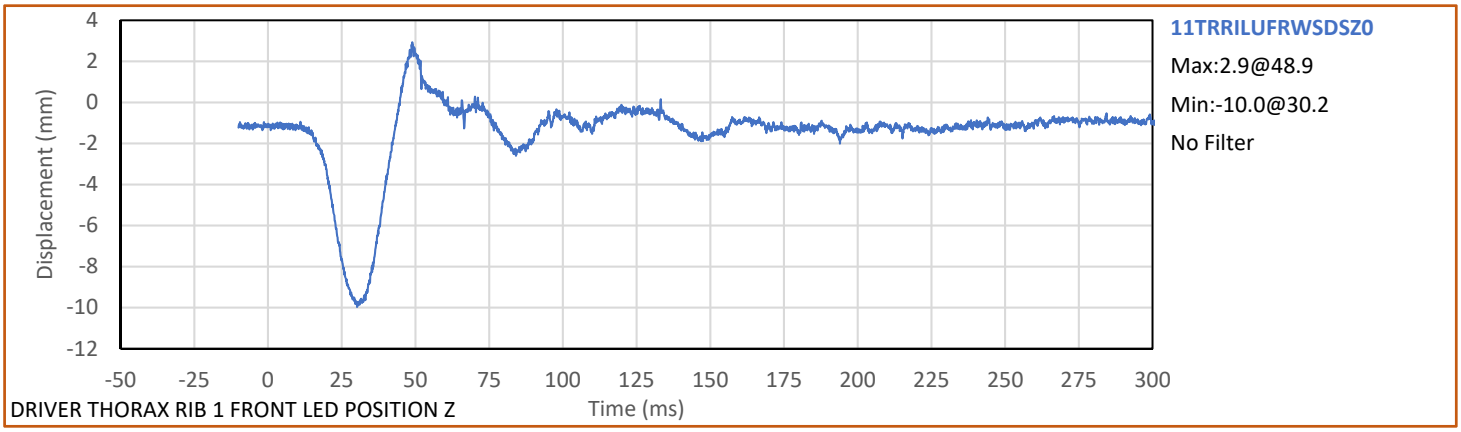
DRIVER THORAX RIB 1 MID LED POSITION Z

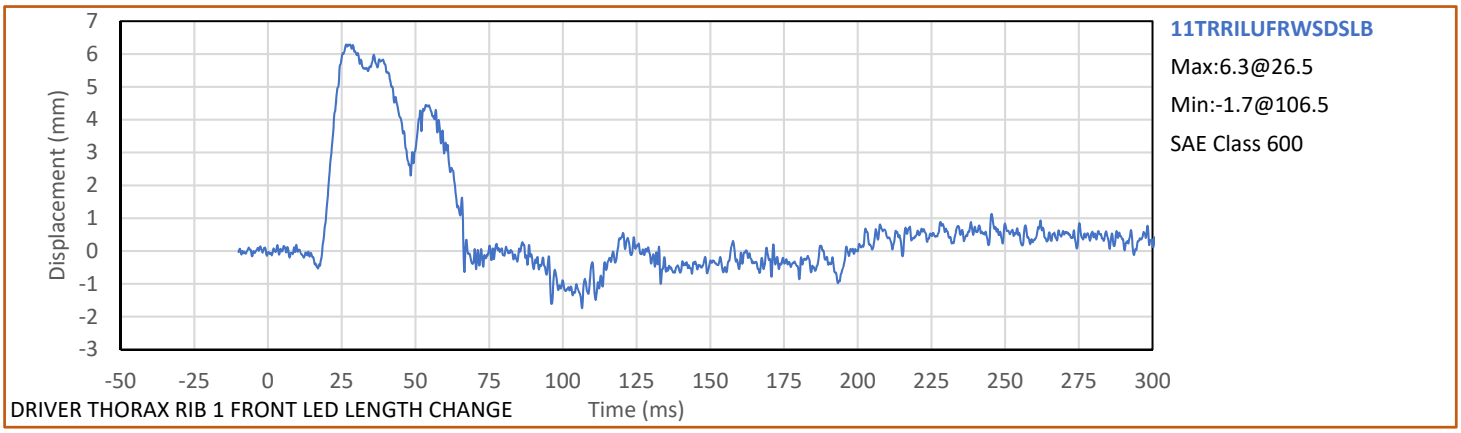


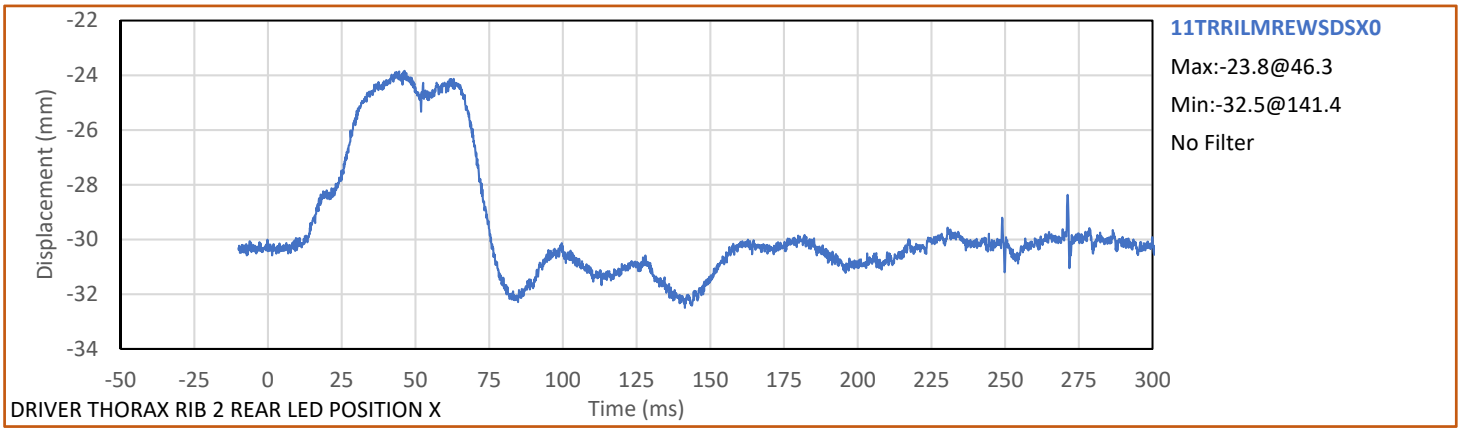
DRIVER THORAX RIB 1 MID LED LENGTH CHANGE

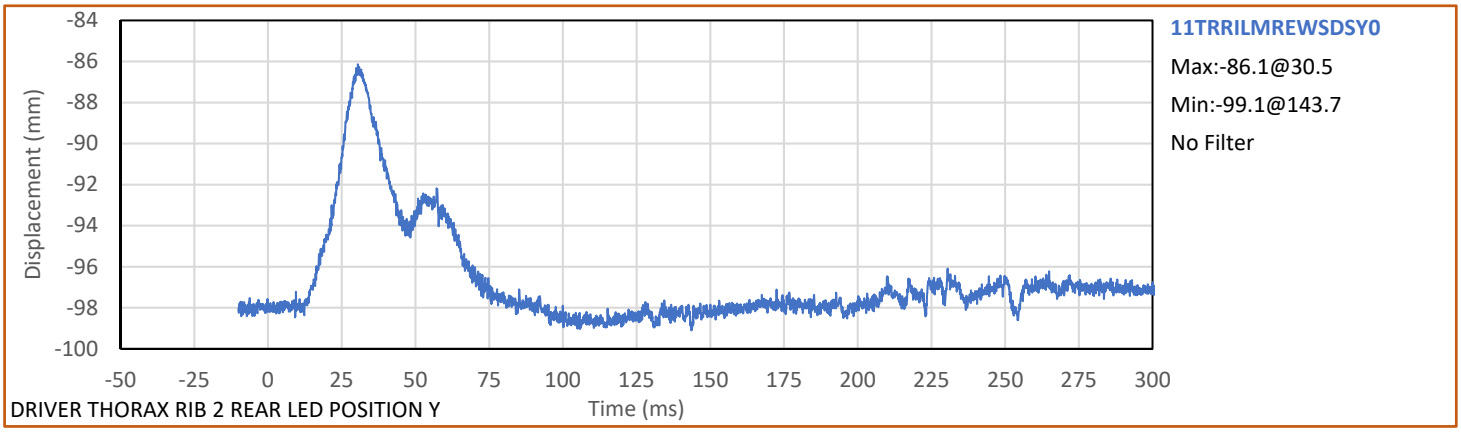

11TRRILUFRWSDSX0
Max:46.5@38.5
Min:33.0@86.3
No Filter
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 1 FRONT LED POSITION X

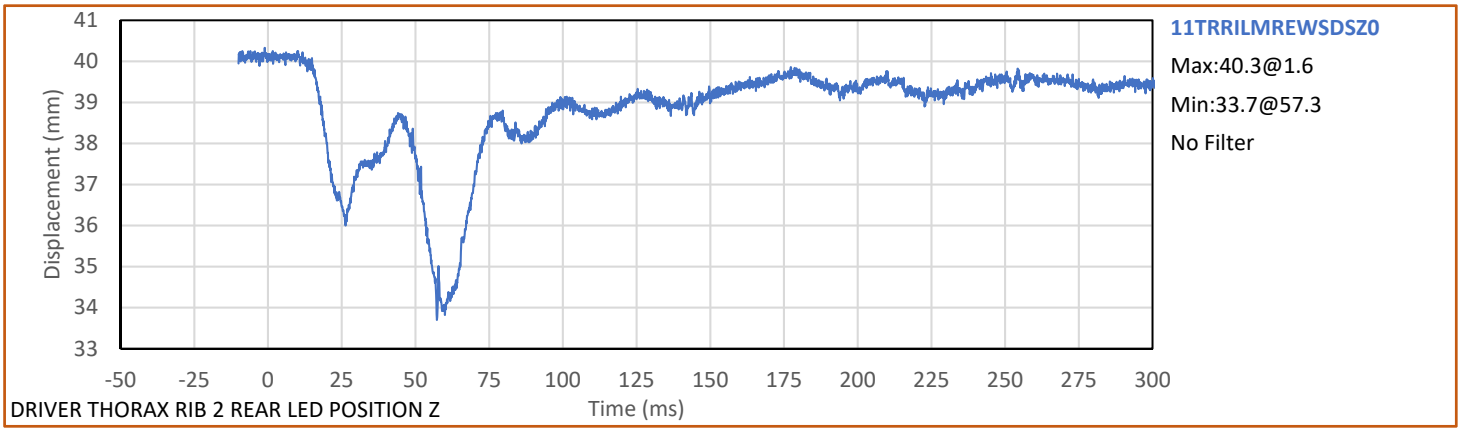

11TRRILUFRWSDSY0
Max:-89.4@39.1
Min:-102.6@96.0
No Filter
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 1 FRONT LED POSITION Y

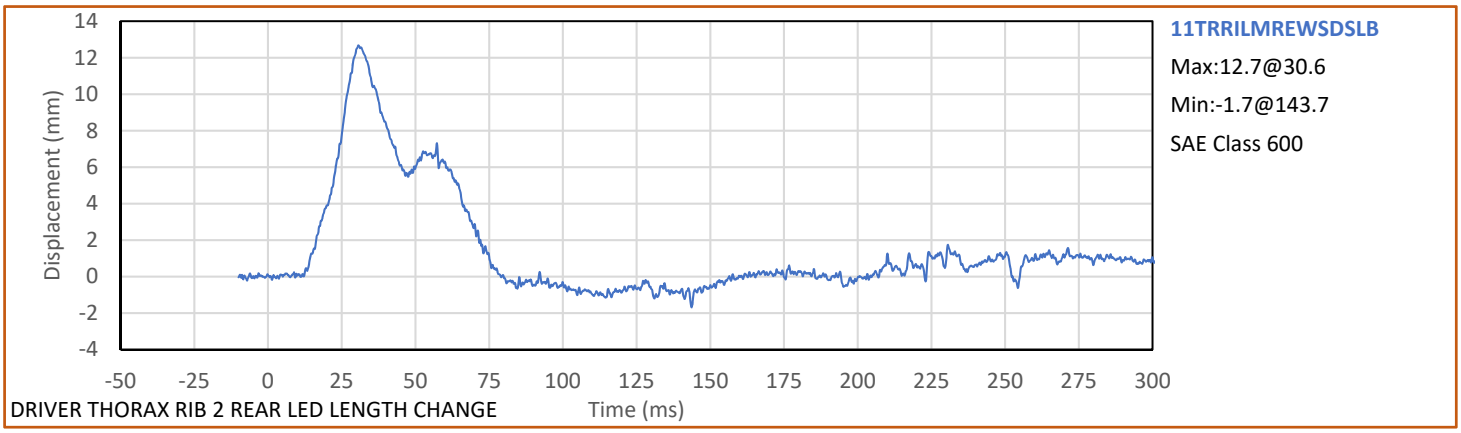

11TRRILUFRWSDSZ0
Max:2.9@48.9
Min:-10.0@30.2
No Filter
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 1 FRONT LED POSITION Z

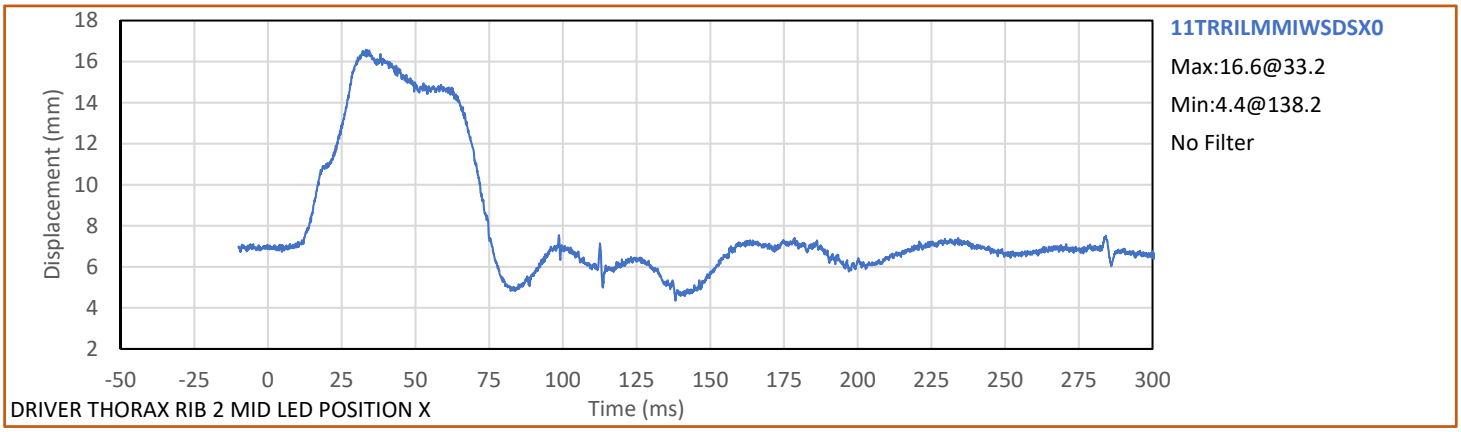

11TRRILUFRWSDSLB
Max:6.3@26.5
Min:-1.7@106.5
SAE Class 600
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 1 FRONT LED LENGTH CHANGE


11TRRILMREWSDSX0
Max:-23.8@46.3
Min:-32.5@141.4
No Filter
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 2 REAR LED POSITION X

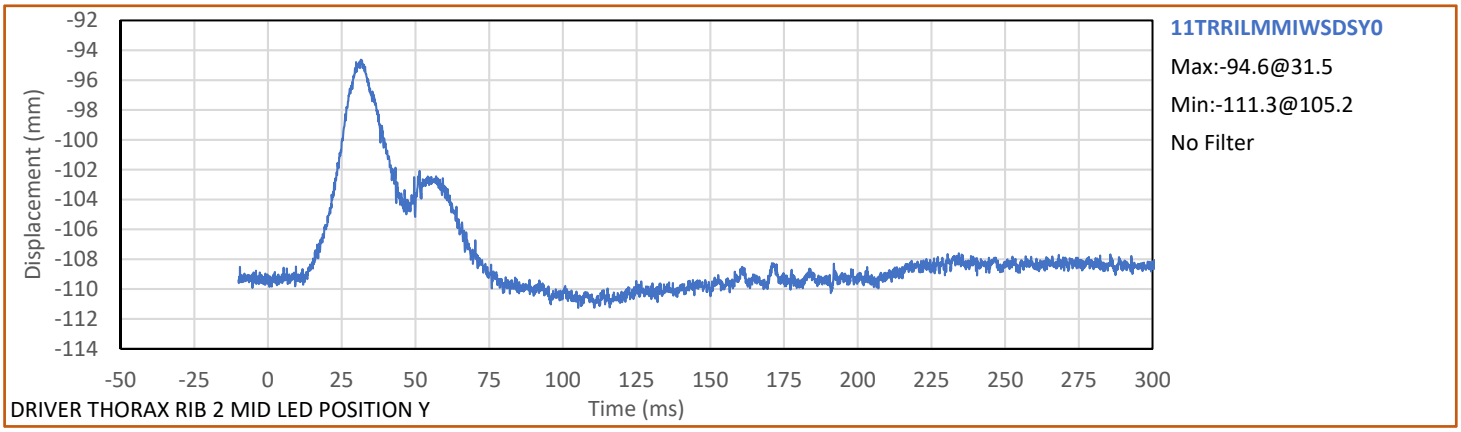

11TRRILMREWSDSY0
Max:-86.1@30.5
Min:-99.1@143.7
No Filter
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 2 REAR LED POSITION Y


11TRRILMREWSDSZ0
Max:40.3@1.6
Min:33.7@57.3
No Filter
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 2 REAR LED POSITION Z

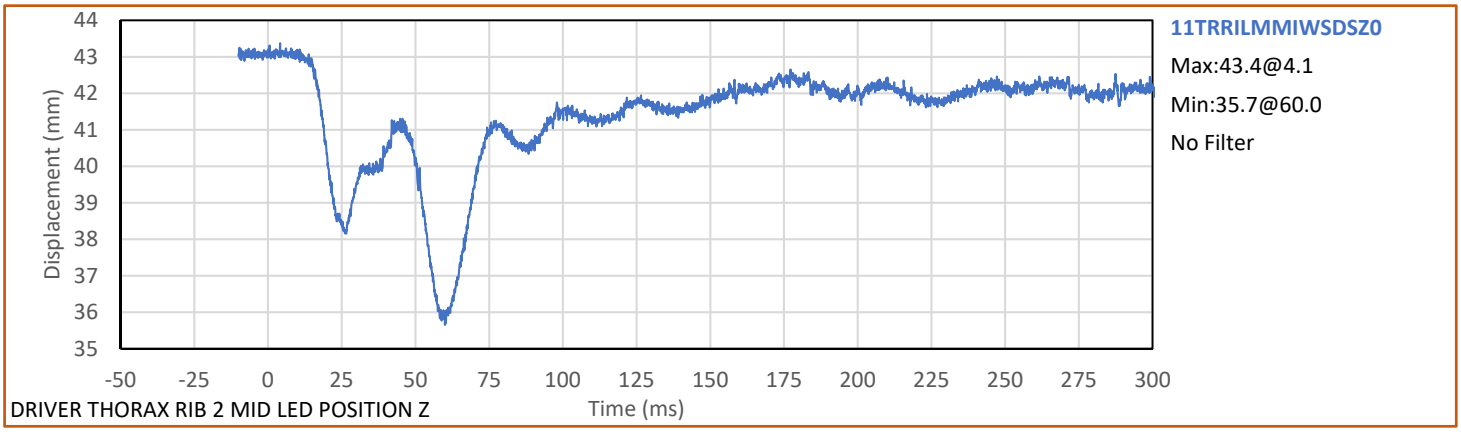

11TRRILMREWSDSLB
Max:12.7@30.6
Min:-1.7@143.7
SAE Class 600
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 2 REAR LED LENGTH CHANGE



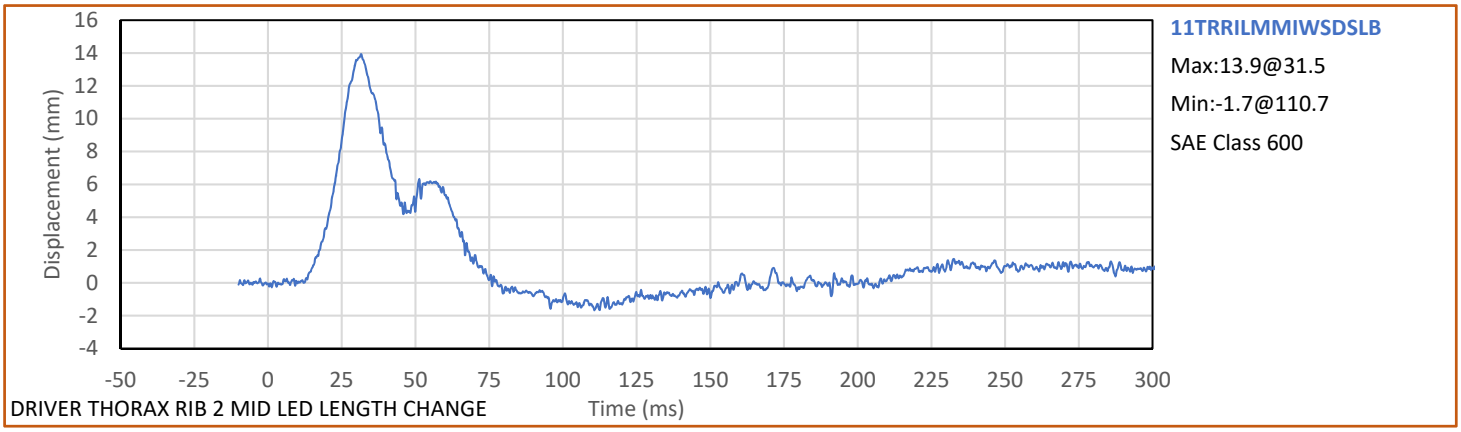
DRIVER THORAX RIB 2 MID LED POSITION X



DRIVER THORAX RIB 2 MID LED POSITION Y



DRIVER THORAX RIB 2 MID LED POSITION Z



DRIVER THORAX RIB 2 MID LED LENGTH CHANGE

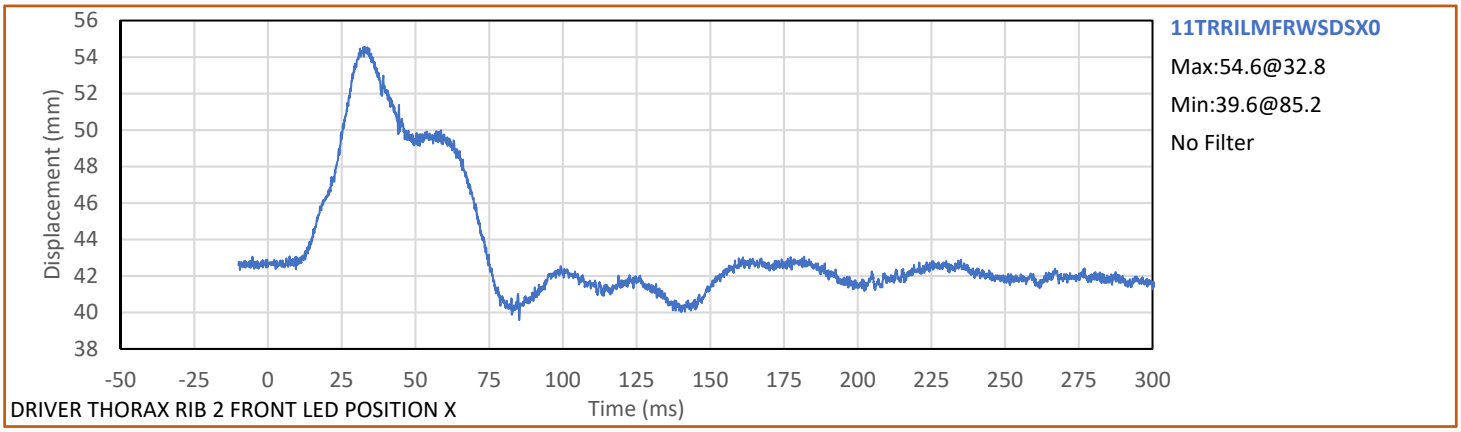
Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

Test Program: 55/28 km/h 90° Research Side Impact (MDB)

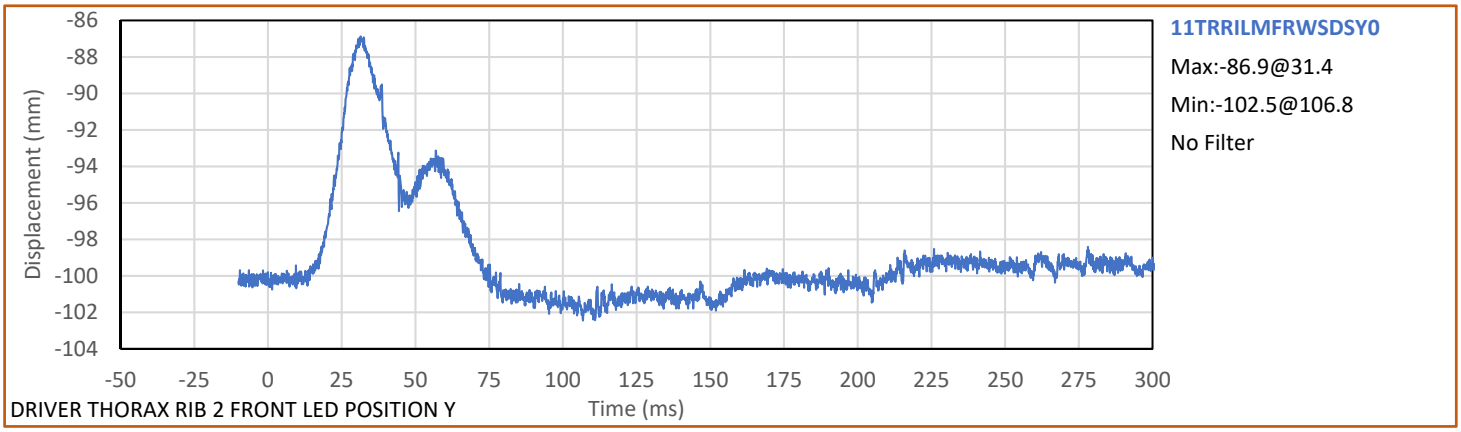
NHTSA No.: R20185380

Test Date: 9/9/2019

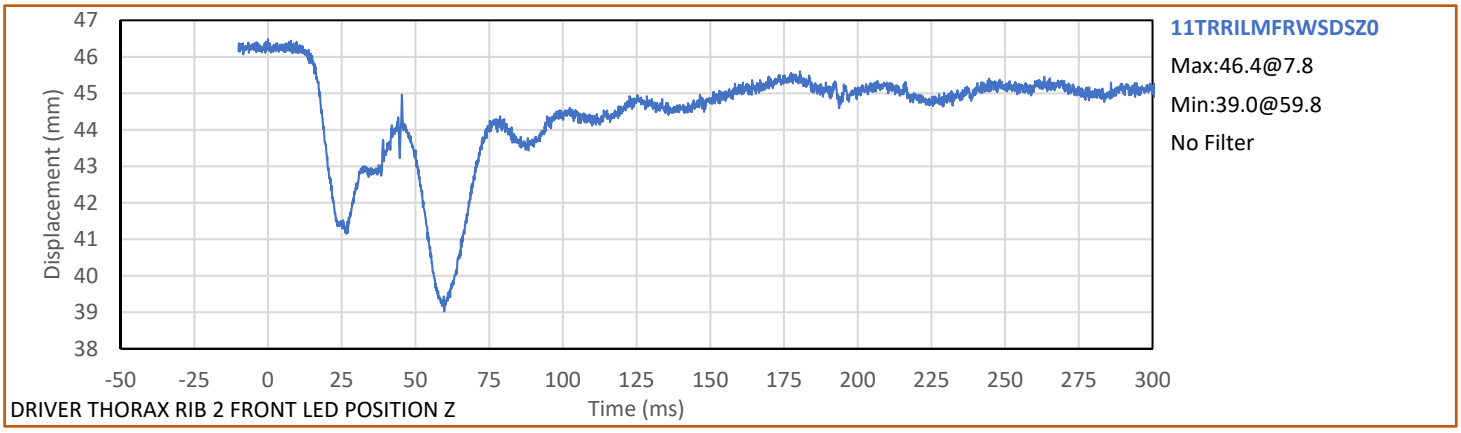
Applus IDIADA KARCO



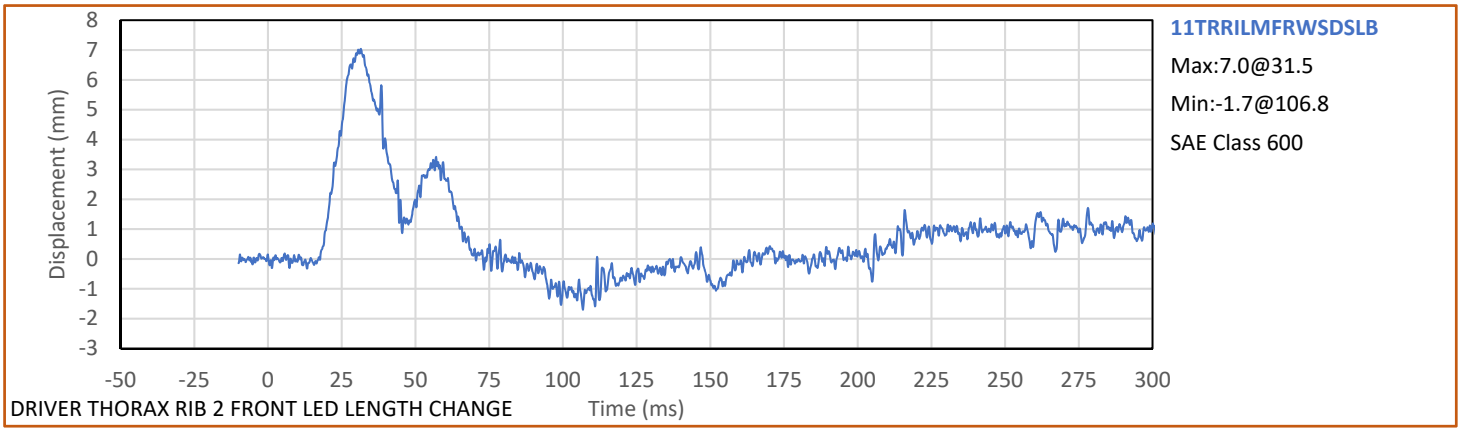
DRIVER THORAX RIB 2 FRONT LED POSITION X



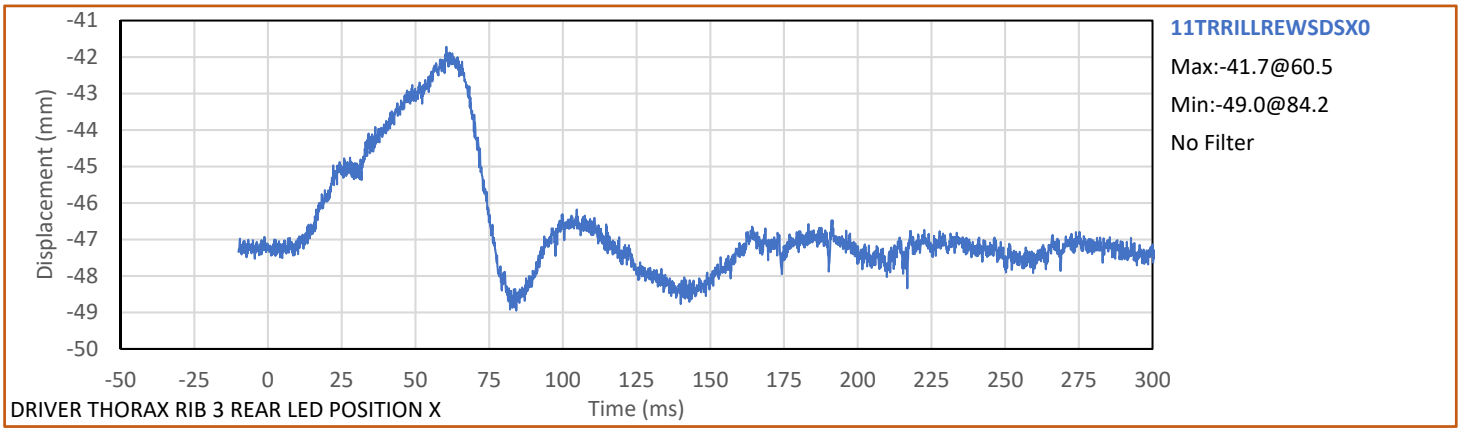
DRIVER THORAX RIB 2 FRONT LED POSITION Y



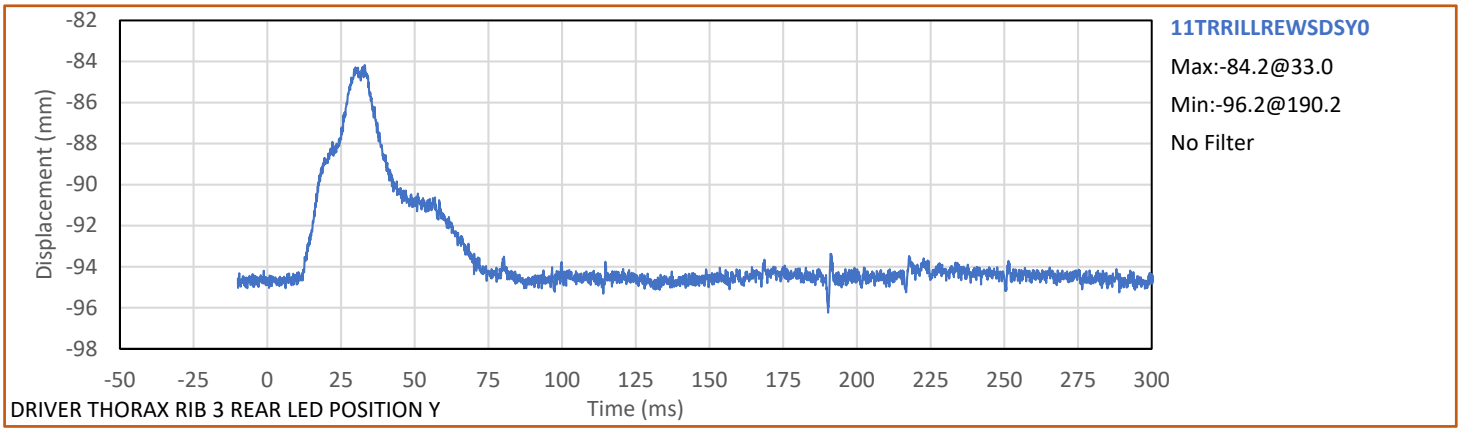
DRIVER THORAX RIB 2 FRONT LED POSITION Z



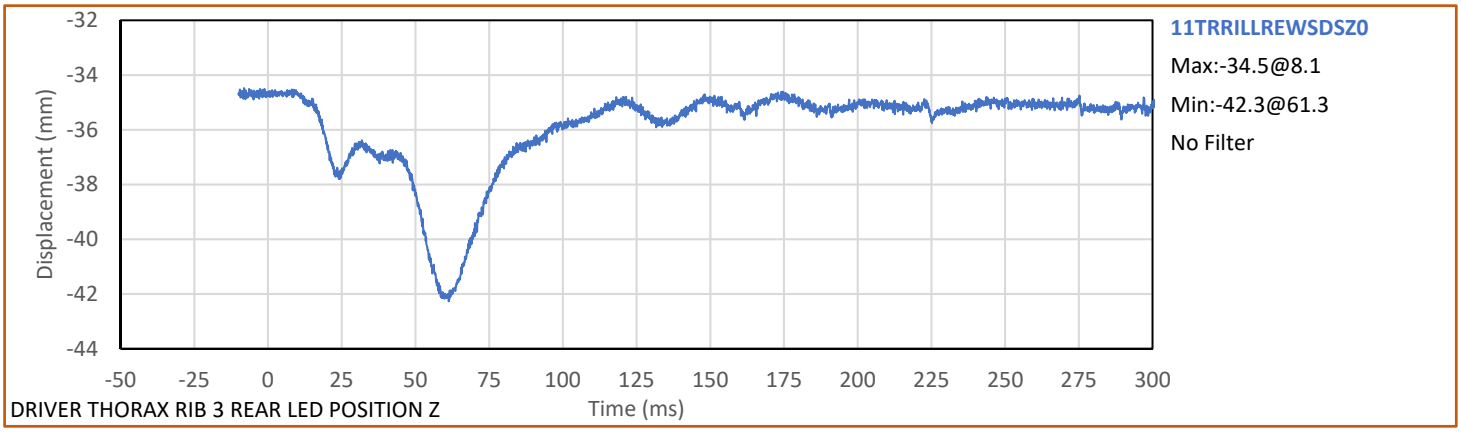
DRIVER THORAX RIB 2 FRONT LED LENGTH CHANGE



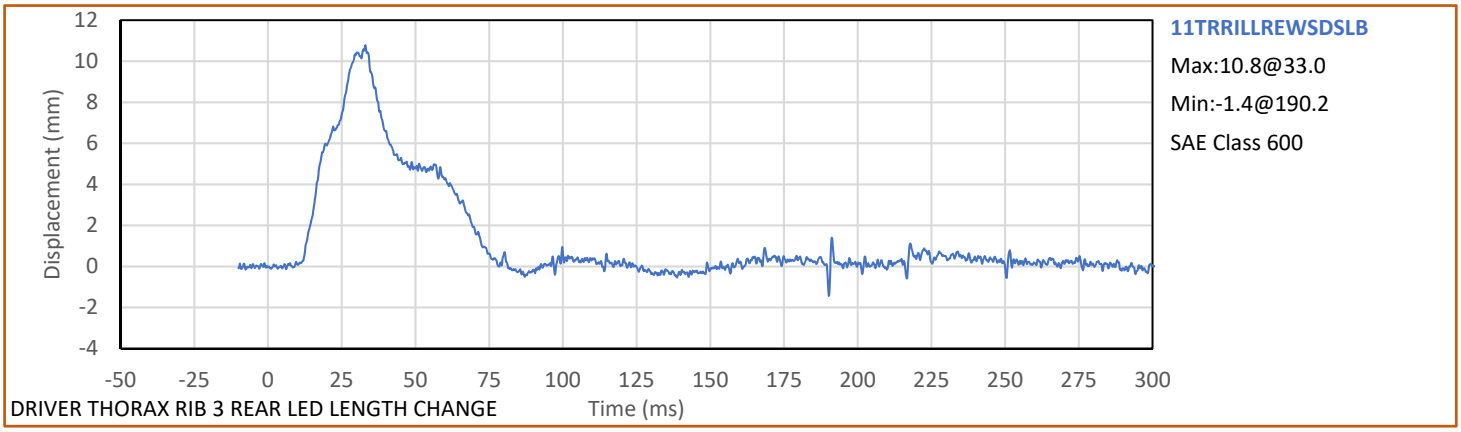
DRIVER THORAX RIB 3 REAR LED POSITION X



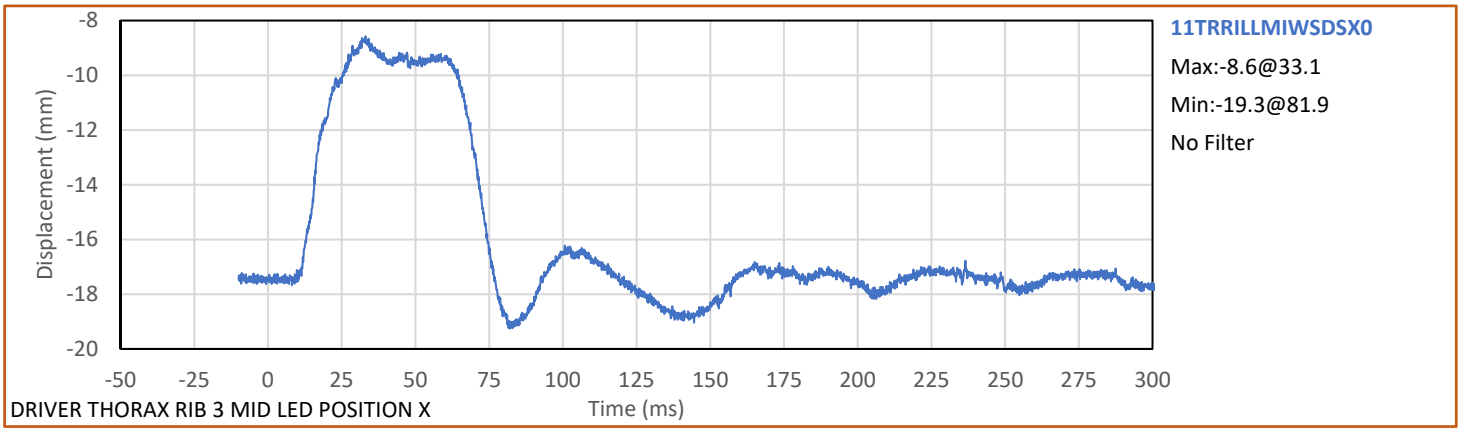
DRIVER THORAX RIB 3 REAR LED POSITION Y

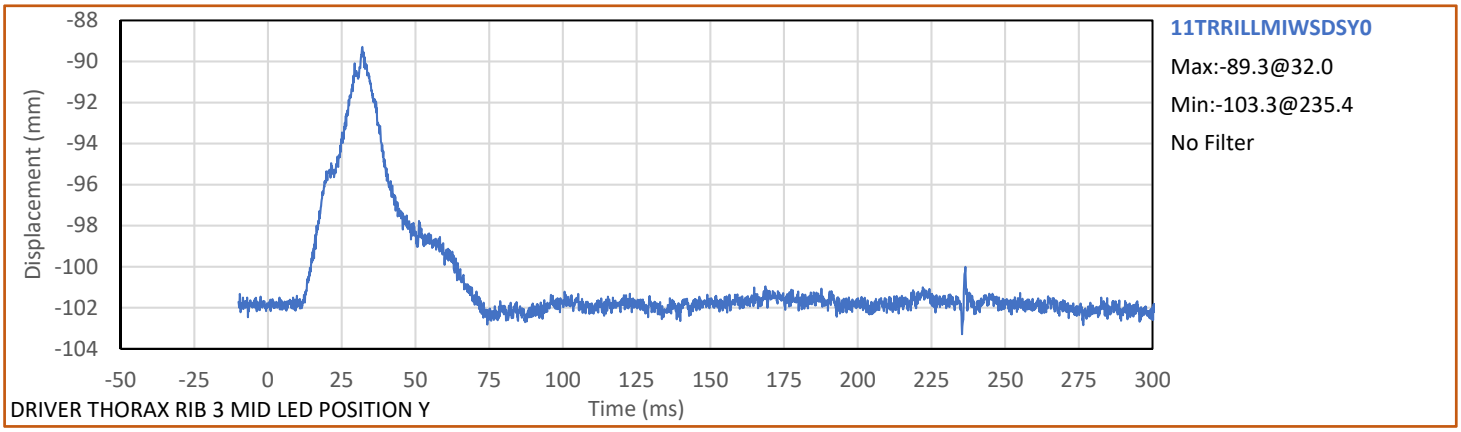


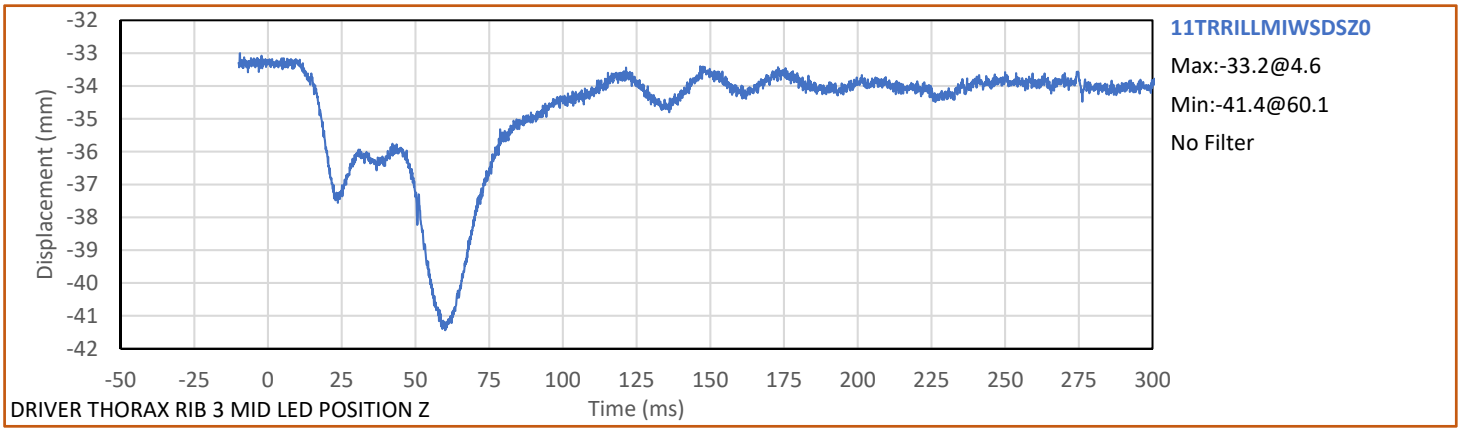
DRIVER THORAX RIB 3 REAR LED POSITION Z

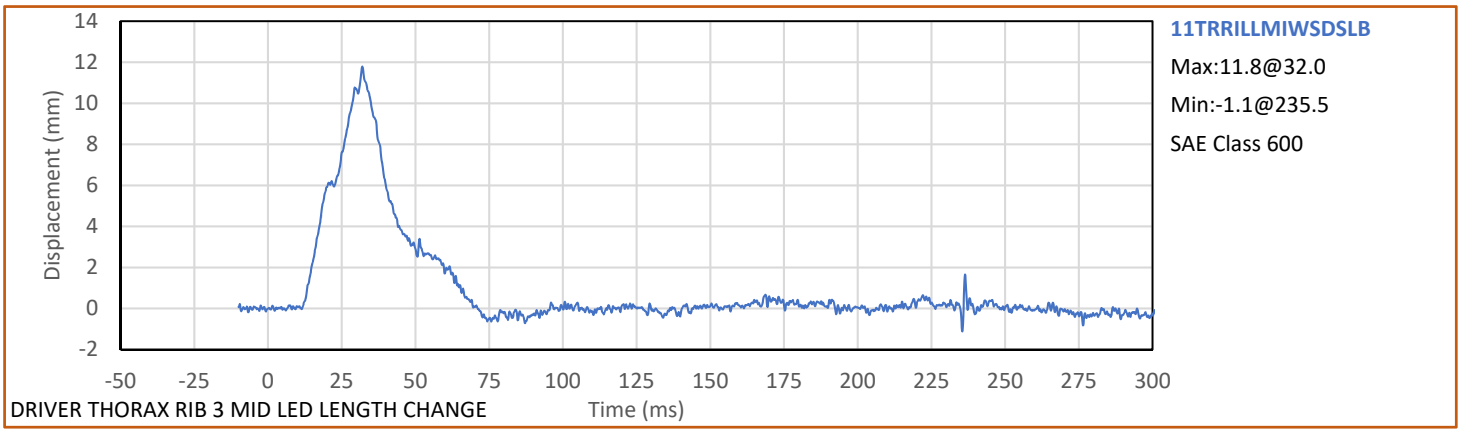


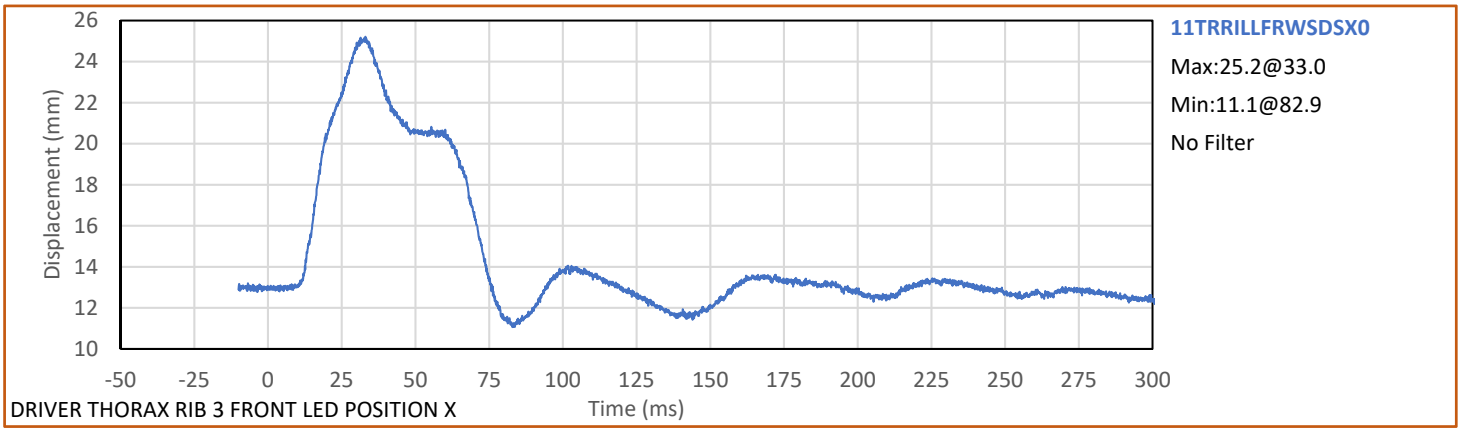
DRIVER THORAX RIB 3 REAR LED LENGTH CHANGE


11TRRILLMIWSDSX0
Max:-8.6@33.1
Min:-19.3@81.9
No Filter
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 3 MID LED POSITION X

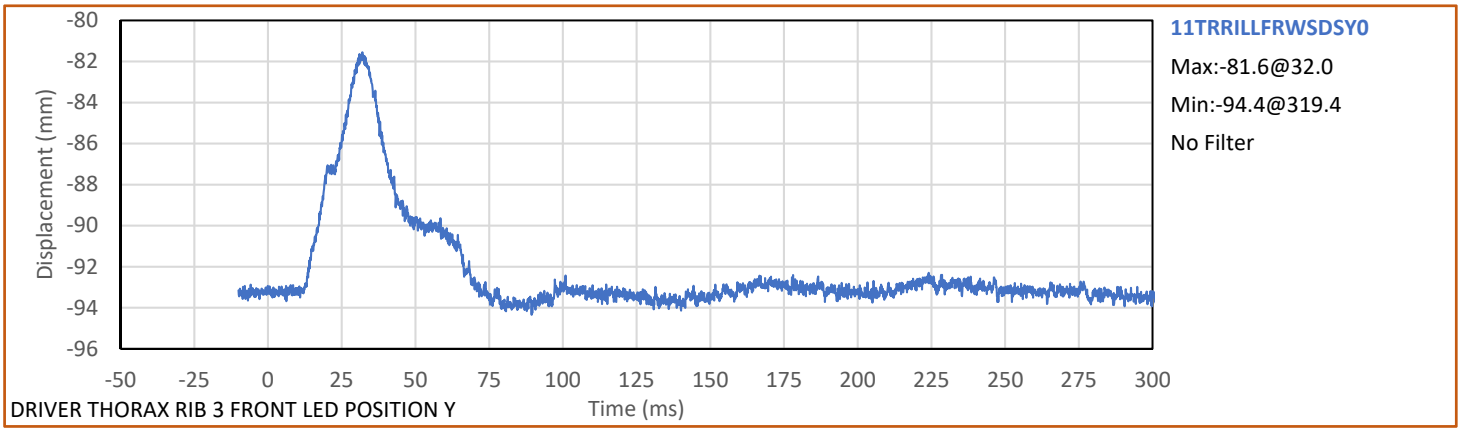

11TRRILLMIWSDSY0
Max:-89.3@32.0
Min:-103.3@235.4
No Filter
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 3 MID LED POSITION Y


11TRRILLMIWSDSZ0
Max:-33.2@4.6
Min:-41.4@60.1
No Filter
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 3 MID LED POSITION Z

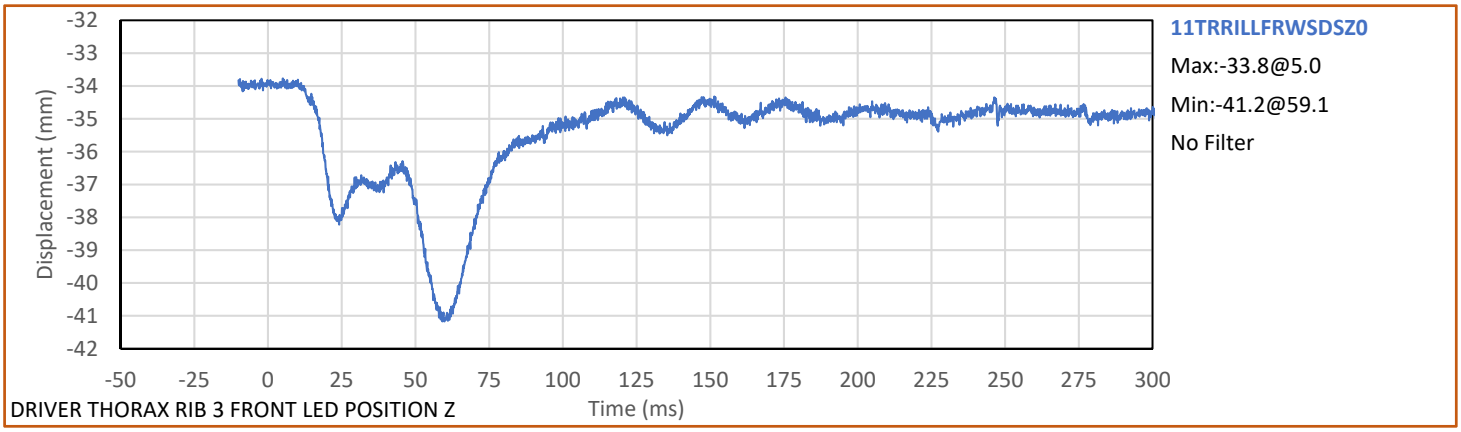

11TRRILLMIWSDSLB
Max:11.8@32.0
Min:-1.1@235.5
SAE Class 600
Displacement (mm)
Time (ms)
DRIVER THORAX RIB 3 MID LED LENGTH CHANGE



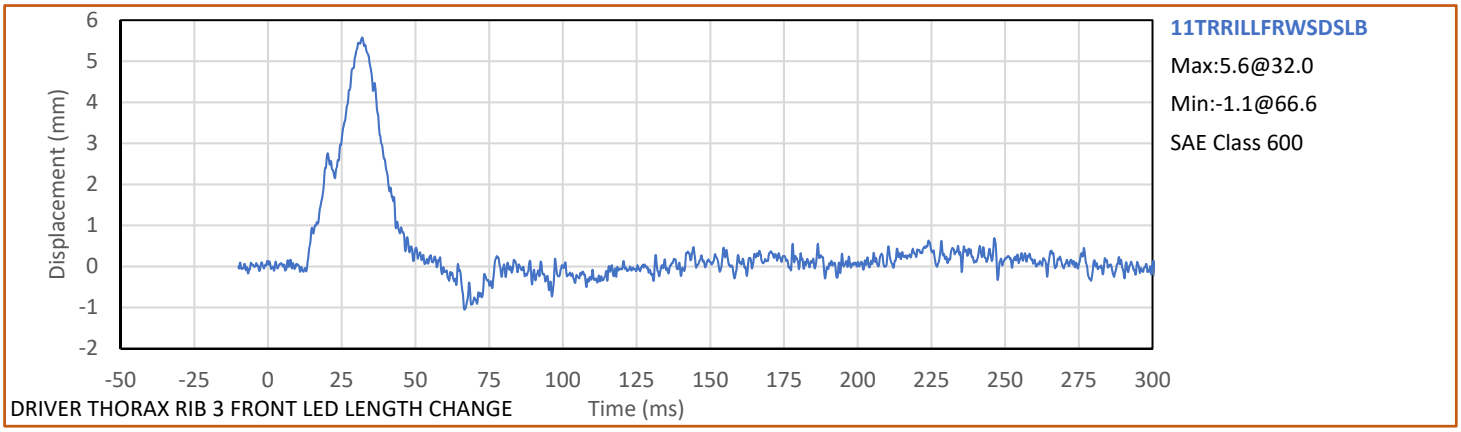
DRIVER THORAX RIB 3 FRONT LED POSITION X



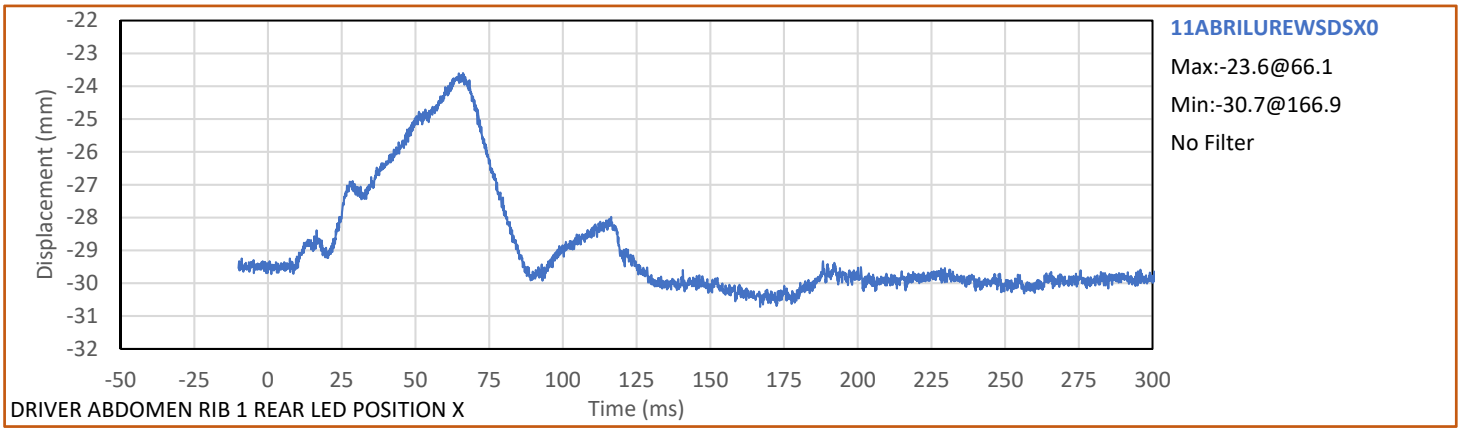
DRIVER THORAX RIB 3 FRONT LED POSITION Y

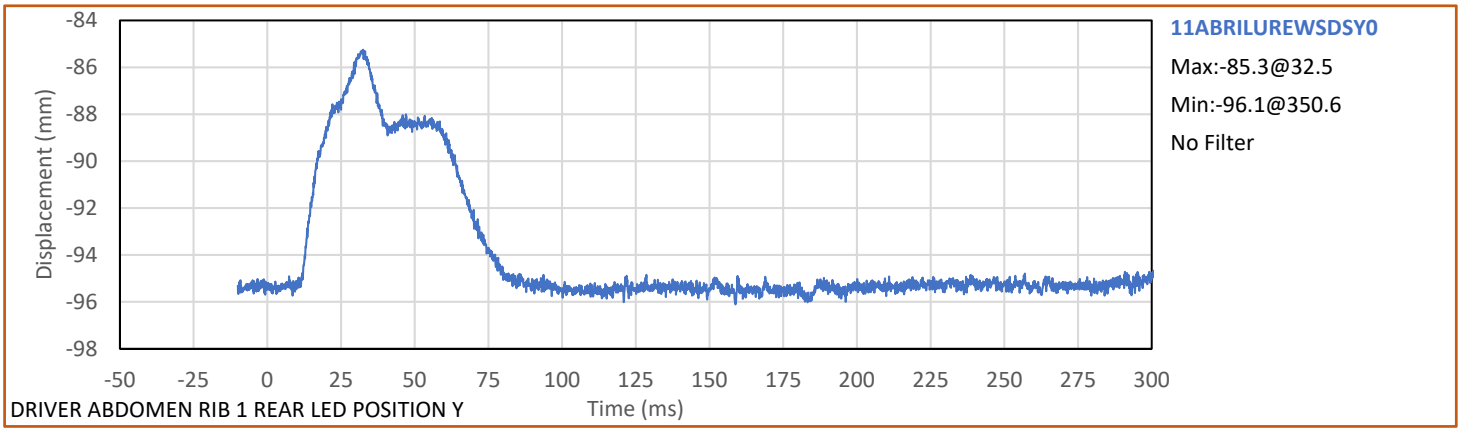


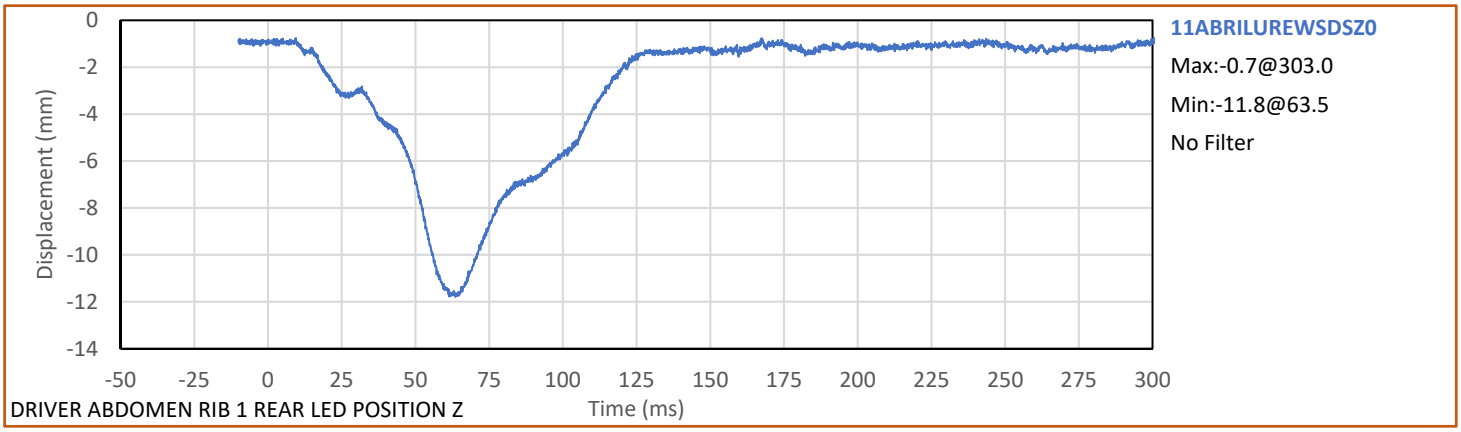
DRIVER THORAX RIB 3 FRONT LED POSITION Z

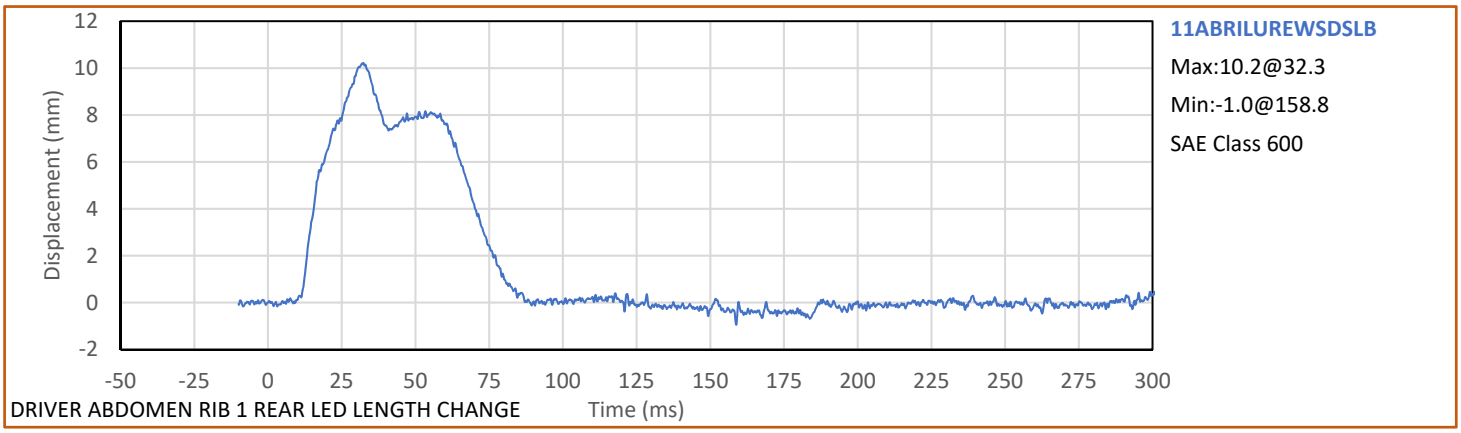


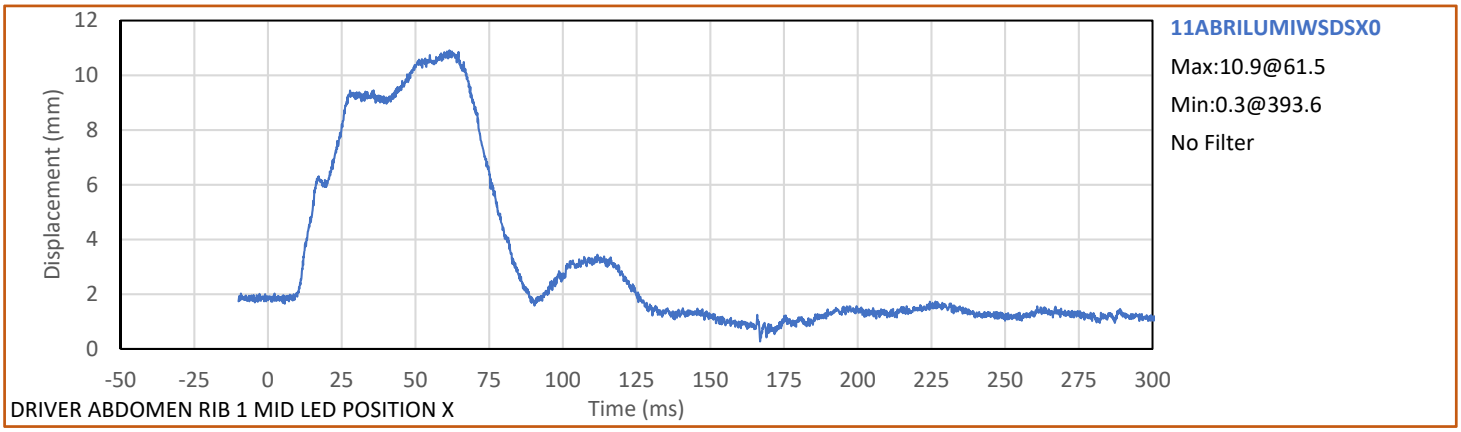
DRIVER THORAX RIB 3 FRONT LED LENGTH CHANGE

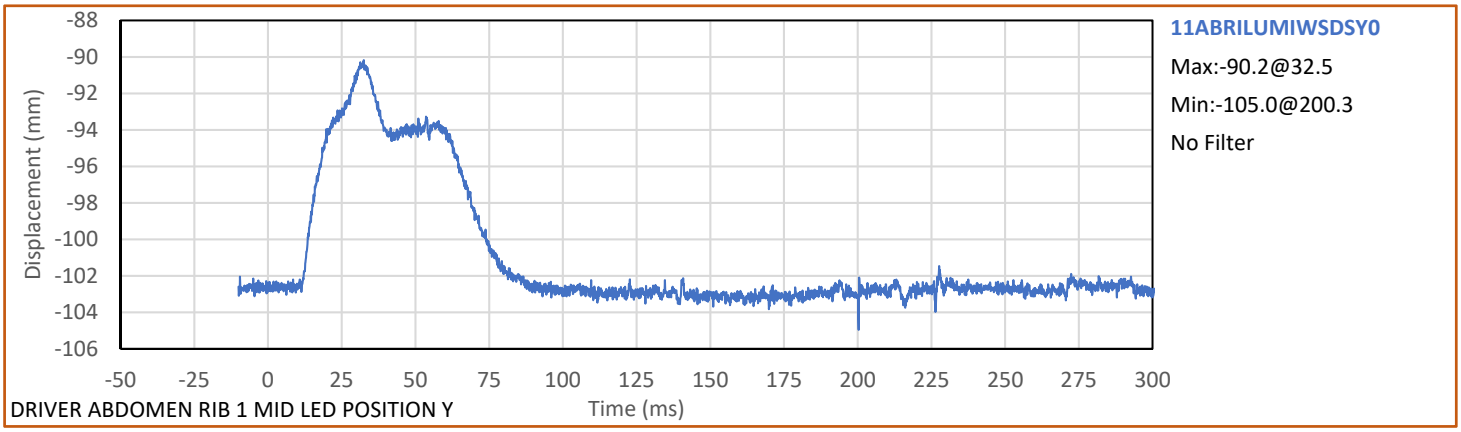

11ABRILUREWSDSX0
Max:-23.6@66.1
Min:-30.7@166.9
No Filter
Displacement (mm)
Time (ms)
DRIVER ABDOMEN RIB 1 REAR LED POSITION X

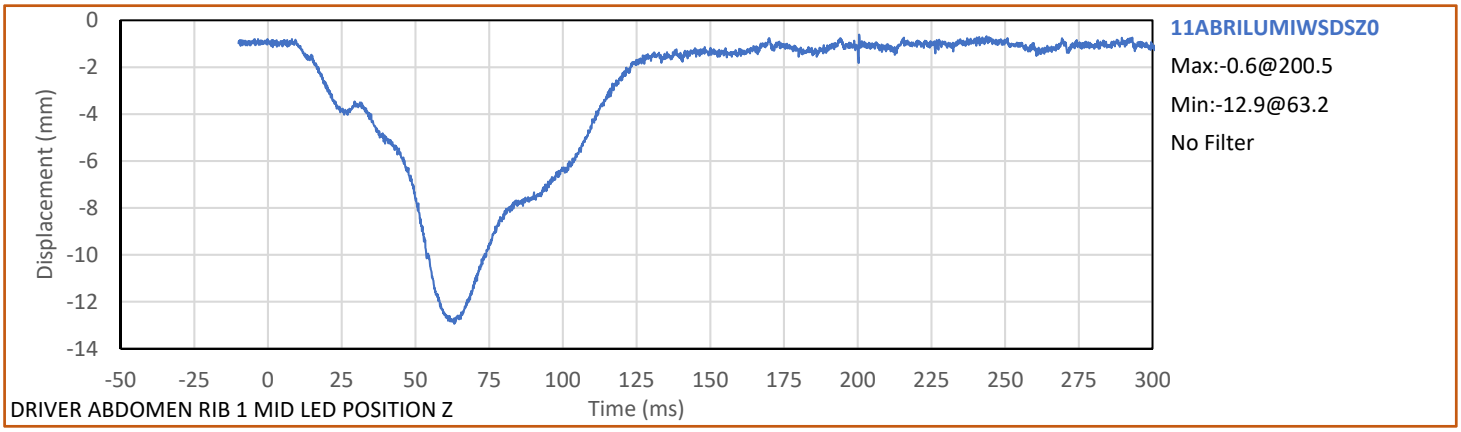

11ABRILUREWSDSY0
Max:-85.3@32.5
Min:-96.1@350.6
No Filter
Displacement (mm)
Time (ms)
DRIVER ABDOMEN RIB 1 REAR LED POSITION Y

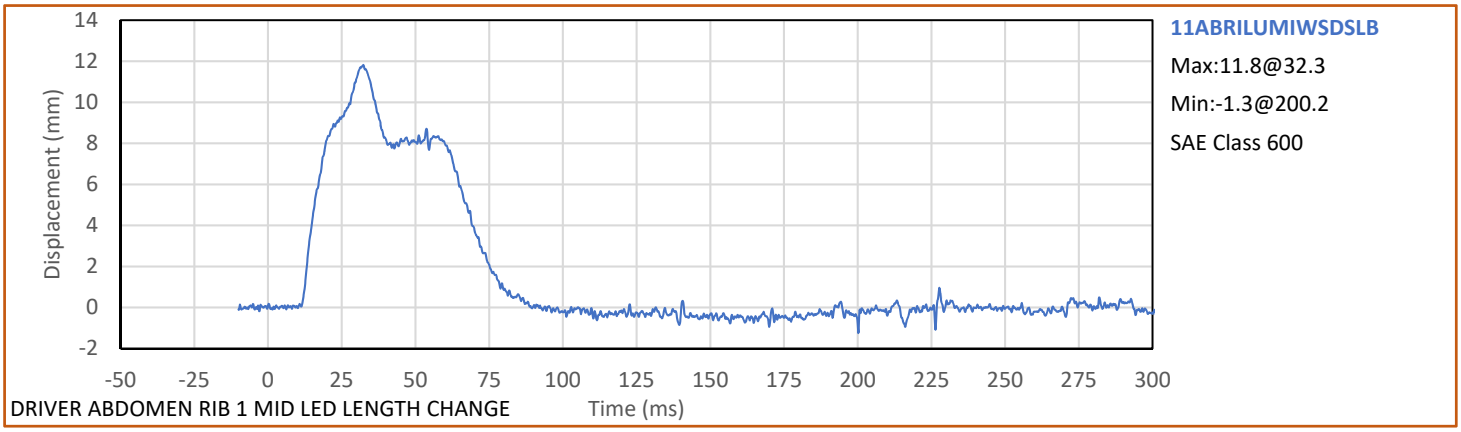

11ABRILUREWSDSZ0
Max:-0.7@303.0
Min:-11.8@63.5
No Filter
Displacement (mm)
Time (ms)
DRIVER ABDOMEN RIB 1 REAR LED POSITION Z

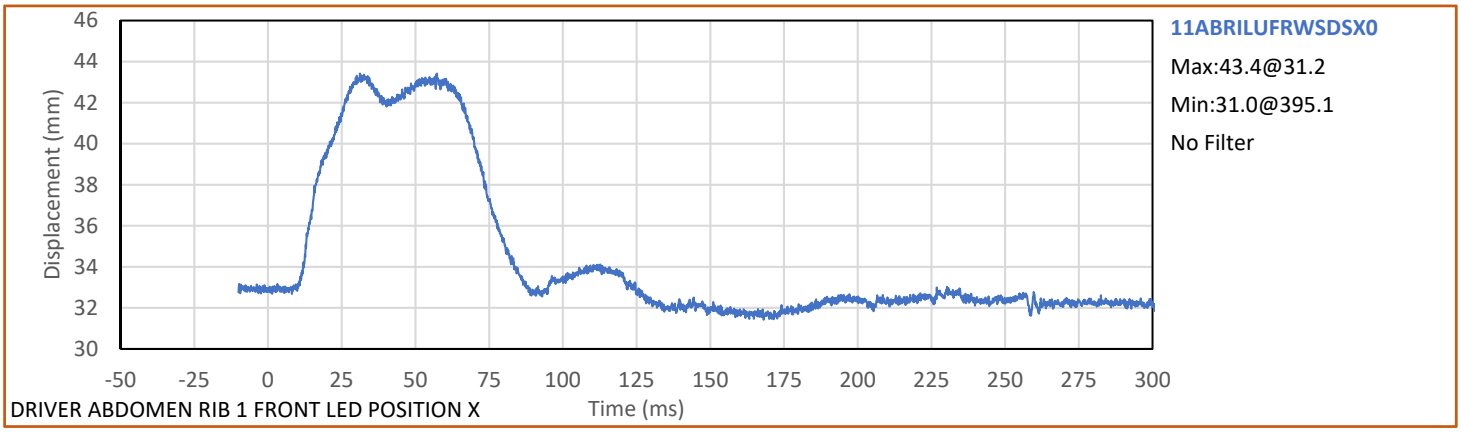

11ABRILUREWSDSLB
Max:10.2@32.3
Min:-1.0@158.8
SAE Class 600
Displacement (mm)
Time (ms)
DRIVER ABDOMEN RIB 1 REAR LED LENGTH CHANGE


Displacement (mm)
Time (ms)
11ABRILUMIWSDSX0
Max:10.9@61.5
Min:0.3@393.6
No Filter
DRIVER ABDOMEN RIB 1 MID LED POSITION X

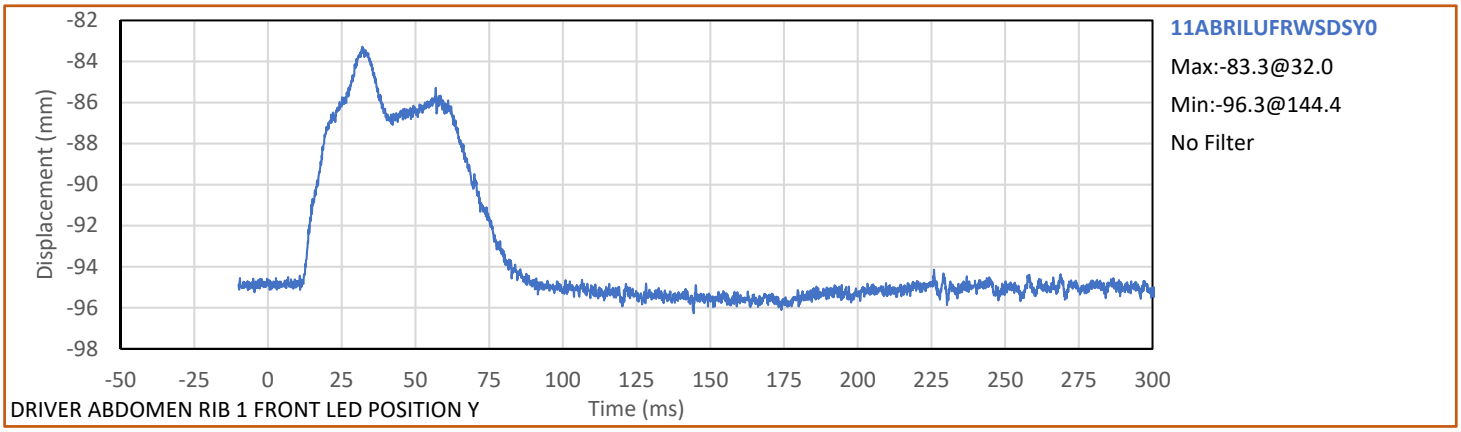

Displacement (mm)
Time (ms)
11ABRILUMIWSDSY0
Max:-90.2@32.5
Min:-105.0@200.3
No Filter
DRIVER ABDOMEN RIB 1 MID LED POSITION Y


Displacement (mm)
Time (ms)
11ABRILUMIWSDSZ0
Max:-0.6@200.5
Min:-12.9@63.2
No Filter
DRIVER ABDOMEN RIB 1 MID LED POSITION Z

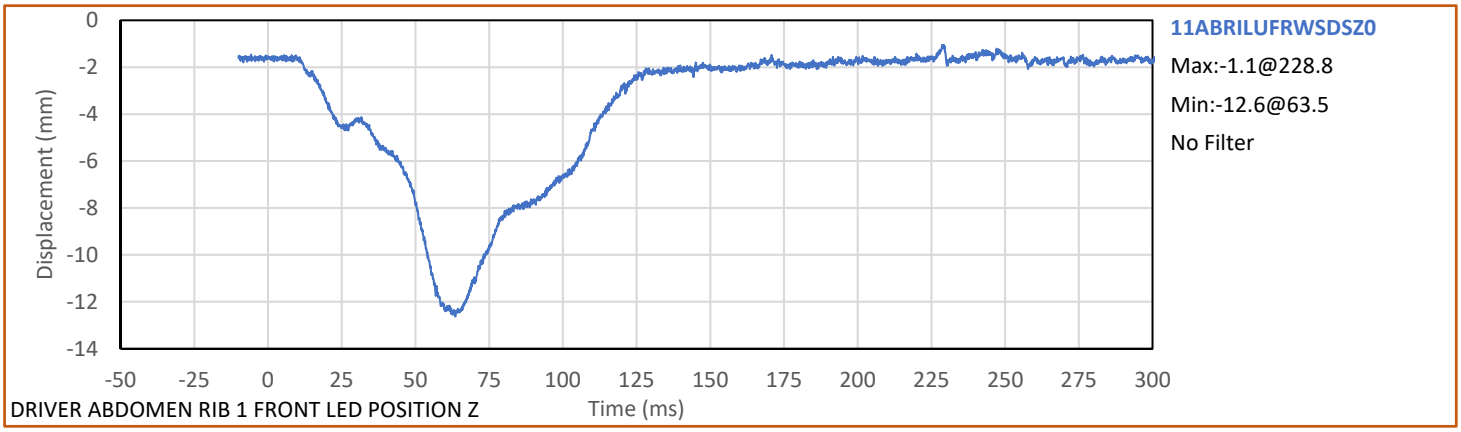

Displacement (mm)
Time (ms)
11ABRILUMIWSDSLB
Max:11.8@32.3
Min:-1.3@200.2
SAE Class 600
DRIVER ABDOMEN RIB 1 MID LED LENGTH CHANGE



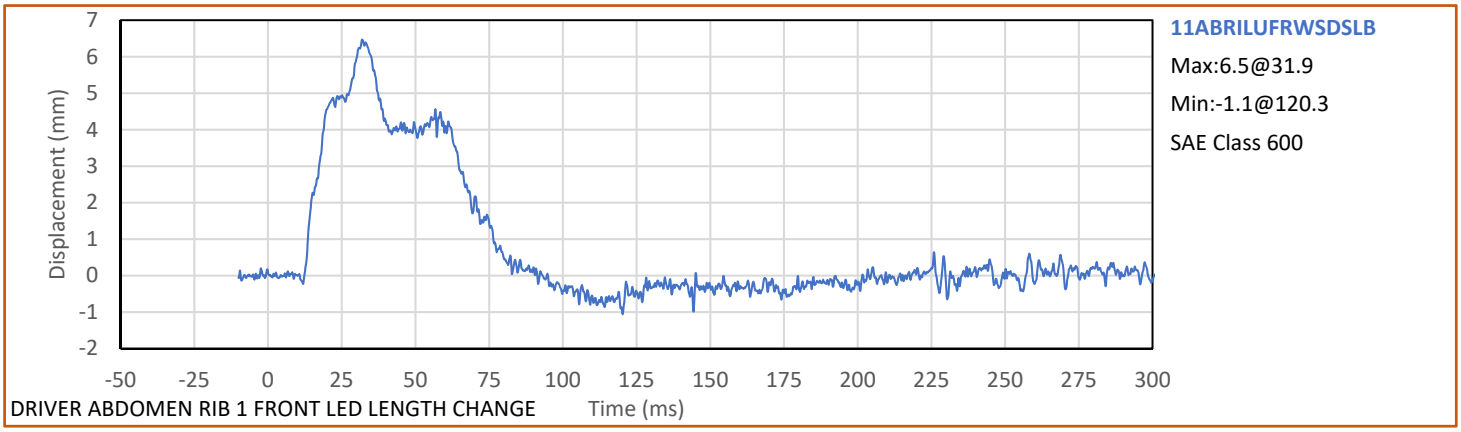
DRIVER ABDOMEN RIB 1 FRONT LED POSITION X



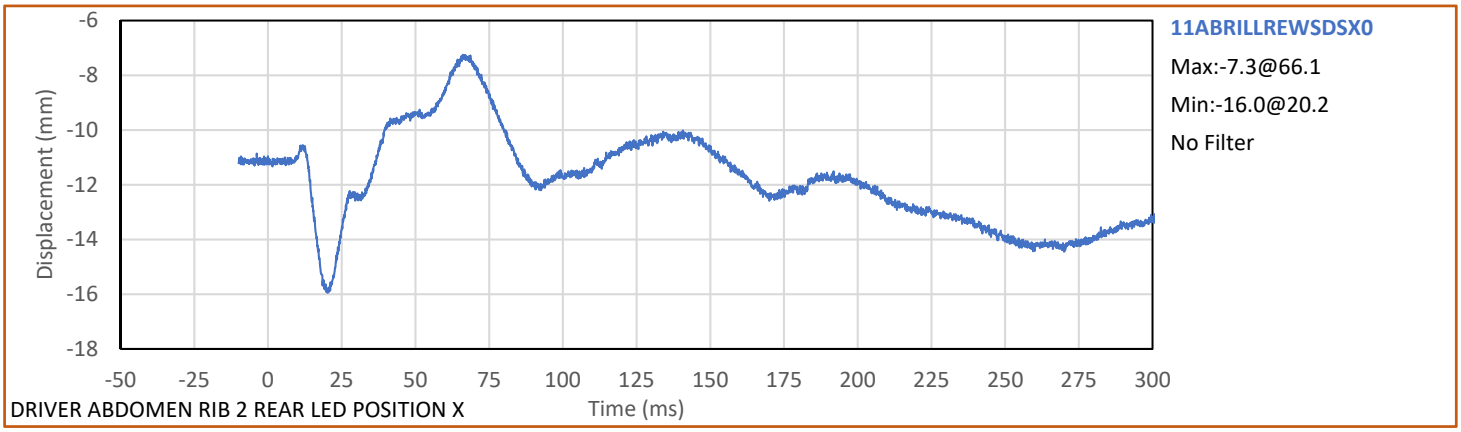
DRIVER ABDOMEN RIB 1 FRONT LED POSITION Y



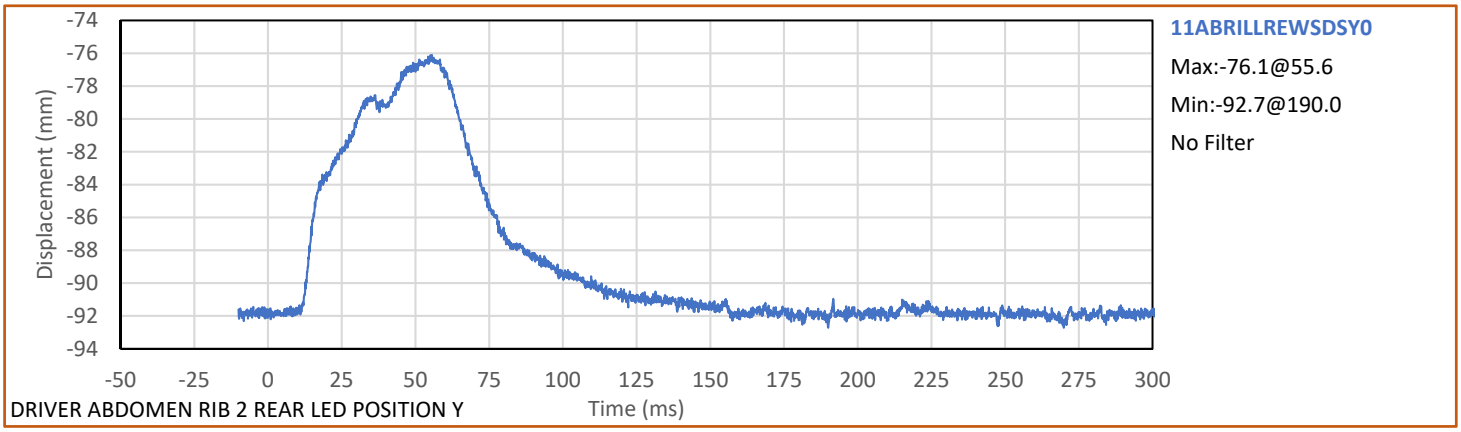
DRIVER ABDOMEN RIB 1 FRONT LED POSITION Z



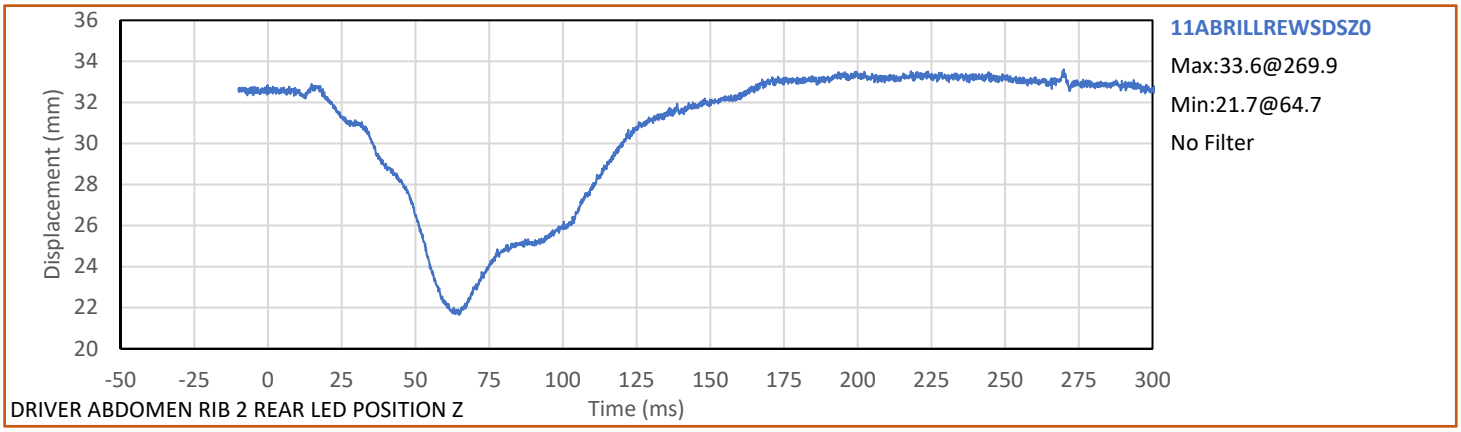
DRIVER ABDOMEN RIB 1 FRONT LED LENGTH CHANGE



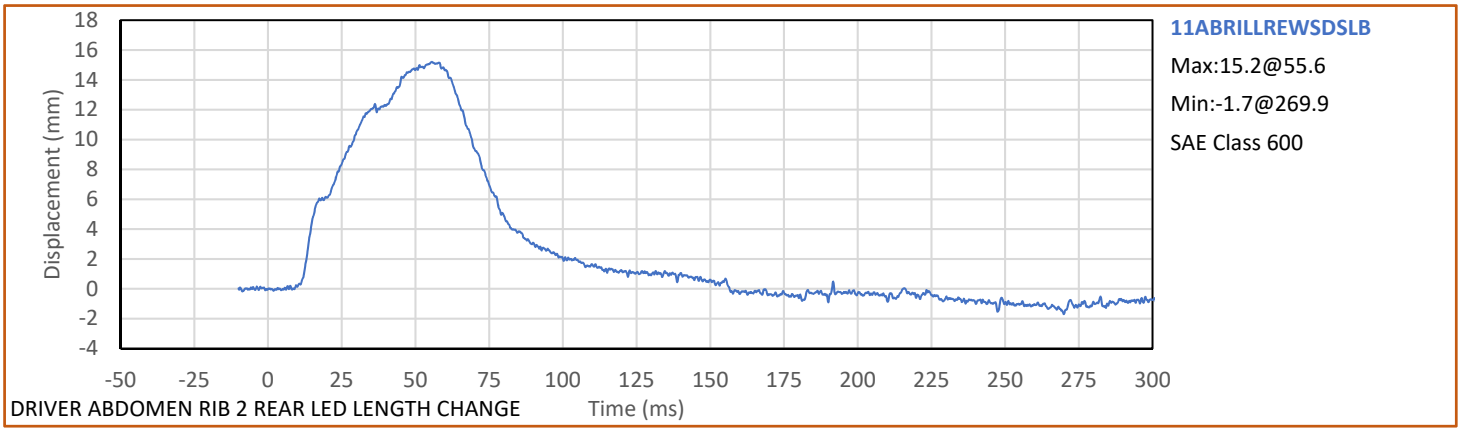
DRIVER ABDOMEN RIB 2 REAR LED POSITION X



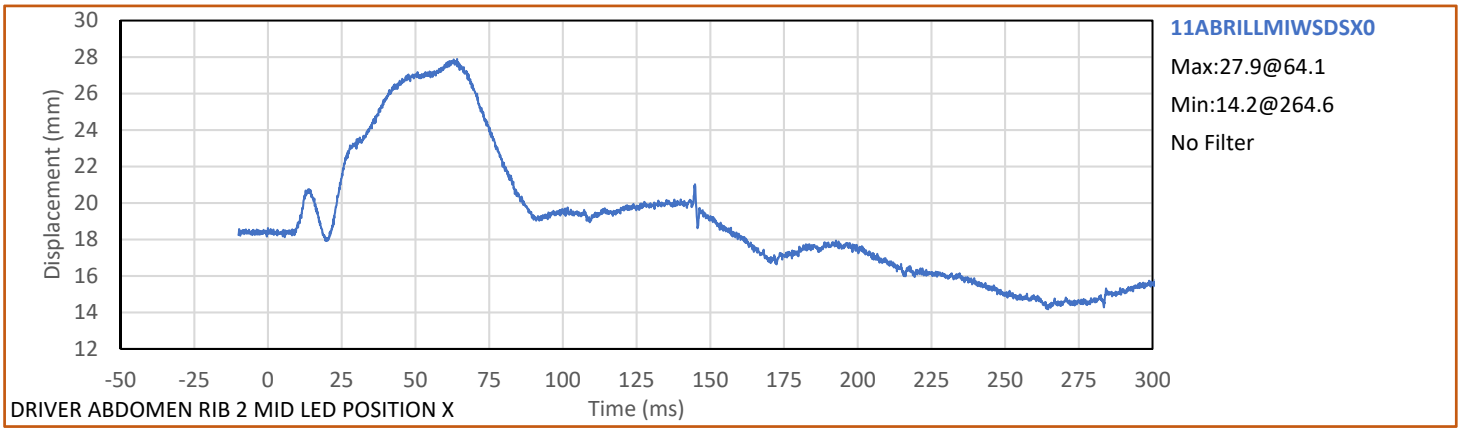
DRIVER ABDOMEN RIB 2 REAR LED POSITION Y



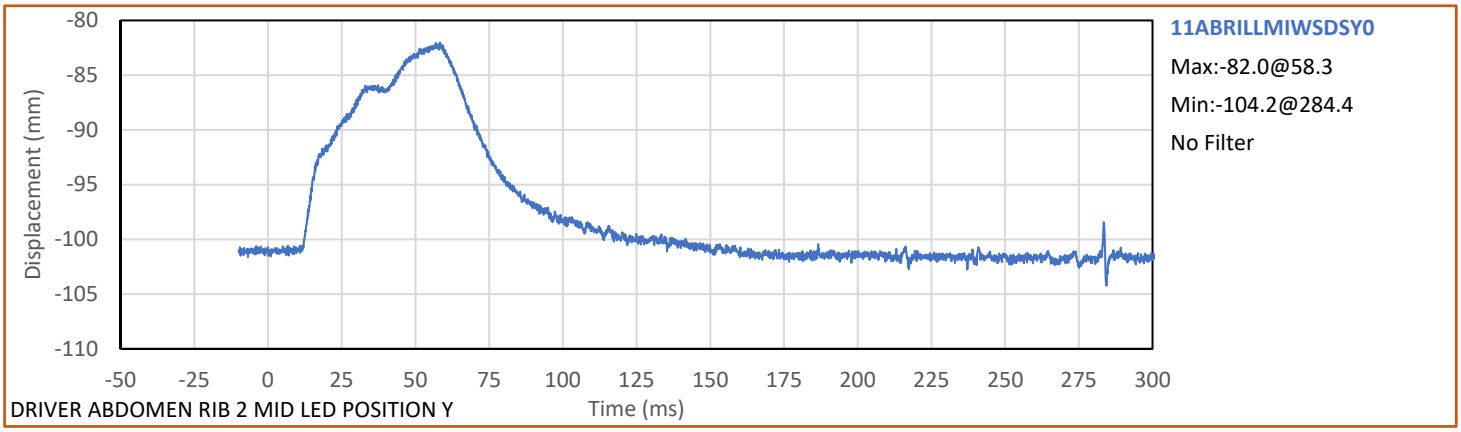
DRIVER ABDOMEN RIB 2 REAR LED POSITION Z



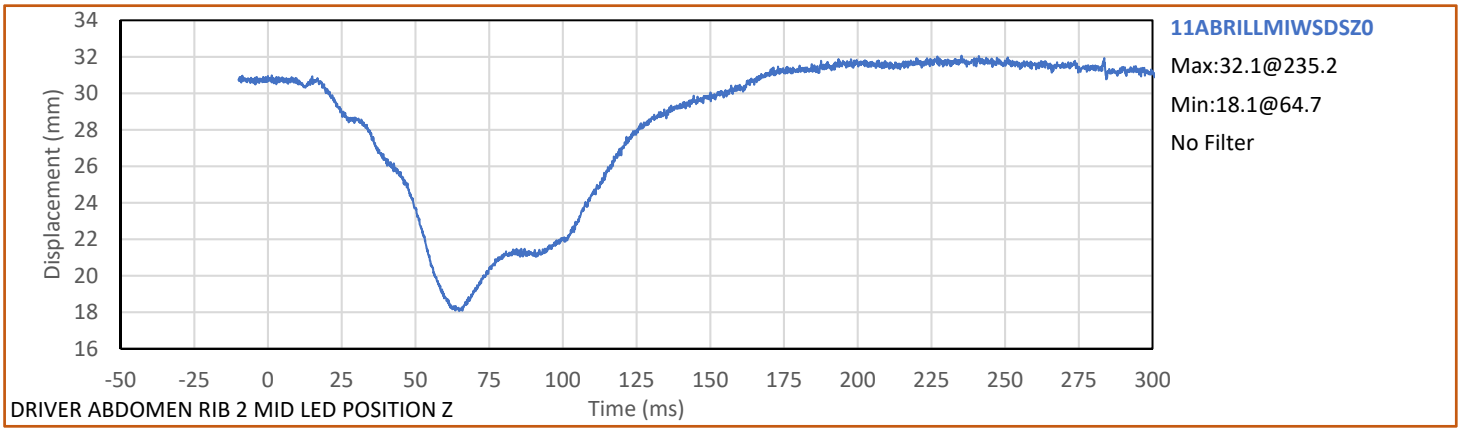
DRIVER ABDOMEN RIB 2 REAR LED LENGTH CHANGE



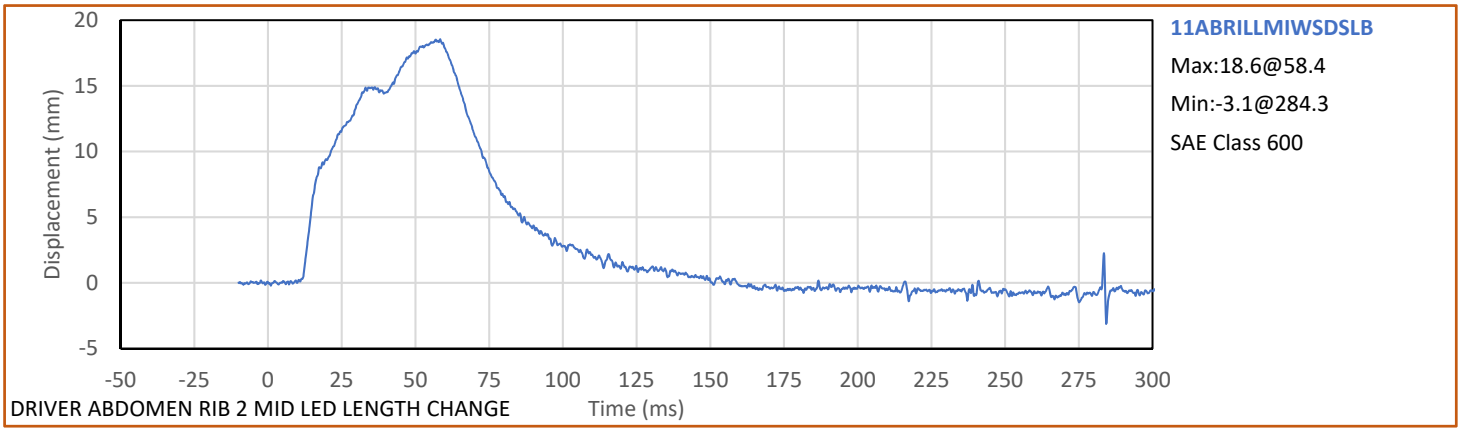
DRIVER ABDOMEN RIB 2 MID LED POSITION X



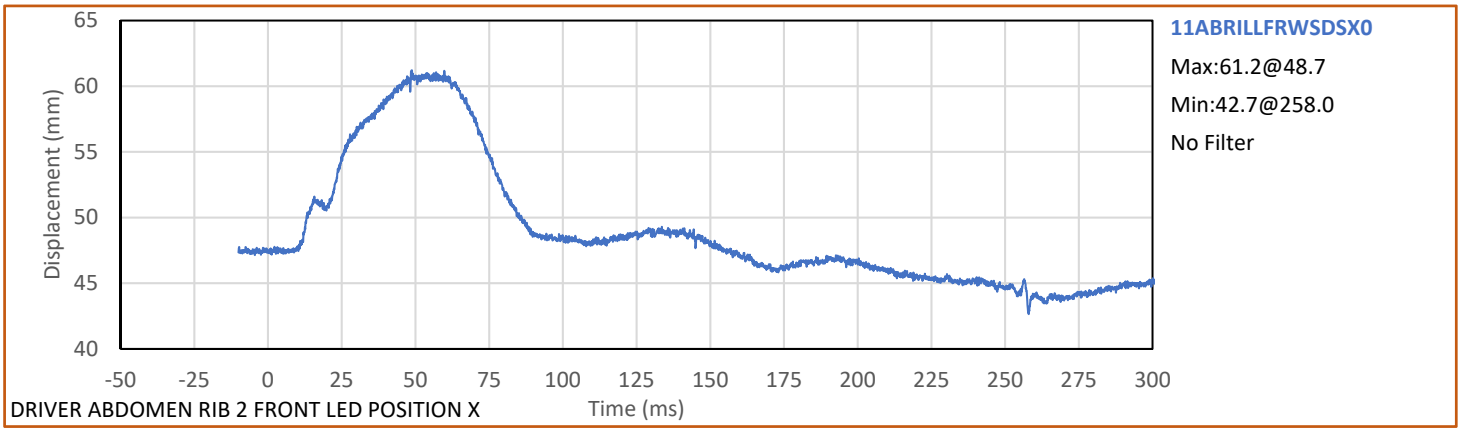
DRIVER ABDOMEN RIB 2 MID LED POSITION Y

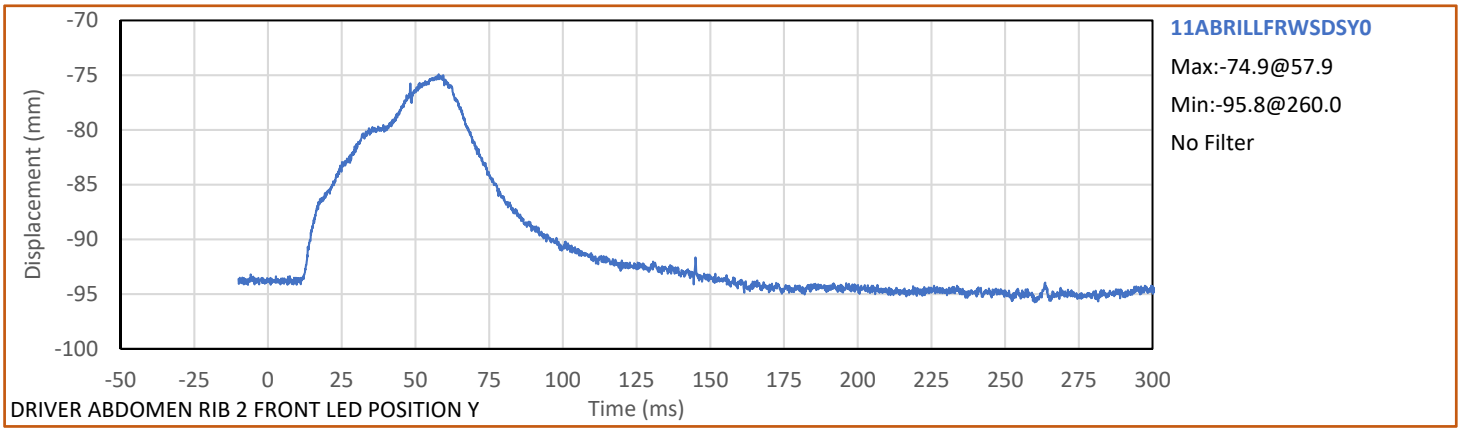


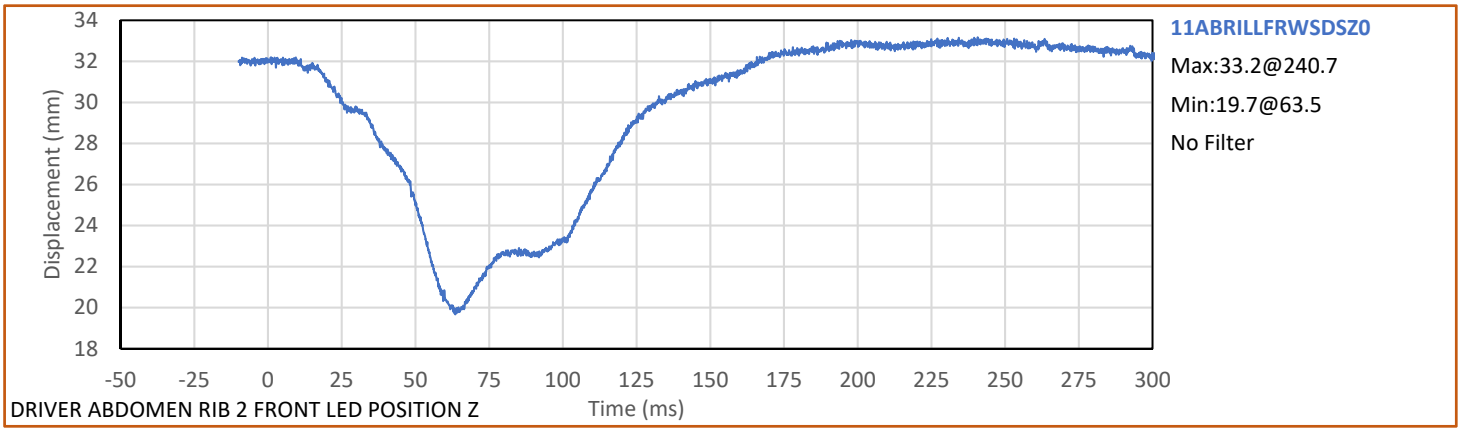
DRIVER ABDOMEN RIB 2 MID LED POSITION Z

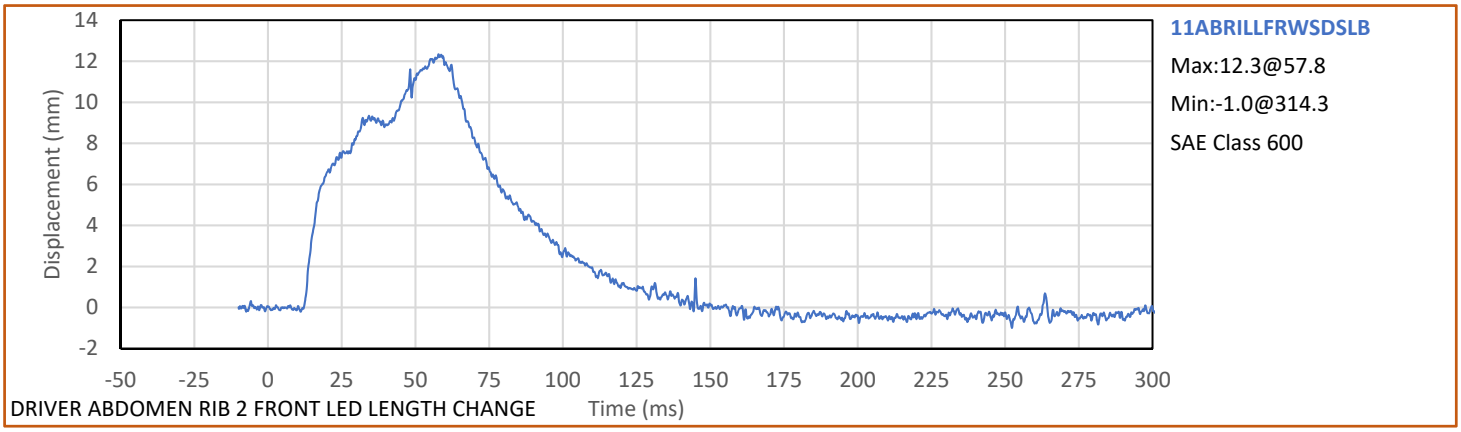


DRIVER ABDOMEN RIB 2 MID LED LENGTH CHANGE


11ABRILLFRWSDSX0
Max:61.2@48.7
Min:42.7@258.0
No Filter
Displacement (mm)
Time (ms)
DRIVER ABDOMEN RIB 2 FRONT LED POSITION X


11ABRILLFRWSDSY0
Max:-74.9@57.9
Min:-95.8@260.0
No Filter
Displacement (mm)
Time (ms)
DRIVER ABDOMEN RIB 2 FRONT LED POSITION Y


11ABRILLFRWSDSZ0
Max:33.2@240.7
Min:19.7@63.5
No Filter
Displacement (mm)
Time (ms)
DRIVER ABDOMEN RIB 2 FRONT LED POSITION Z


11ABRILLFRWSDSLB
Max:12.3@57.8
Min:-1.0@314.3
SAE Class 600
Displacement (mm)
Time (ms)
DRIVER ABDOMEN RIB 2 FRONT LED LENGTH CHANGE

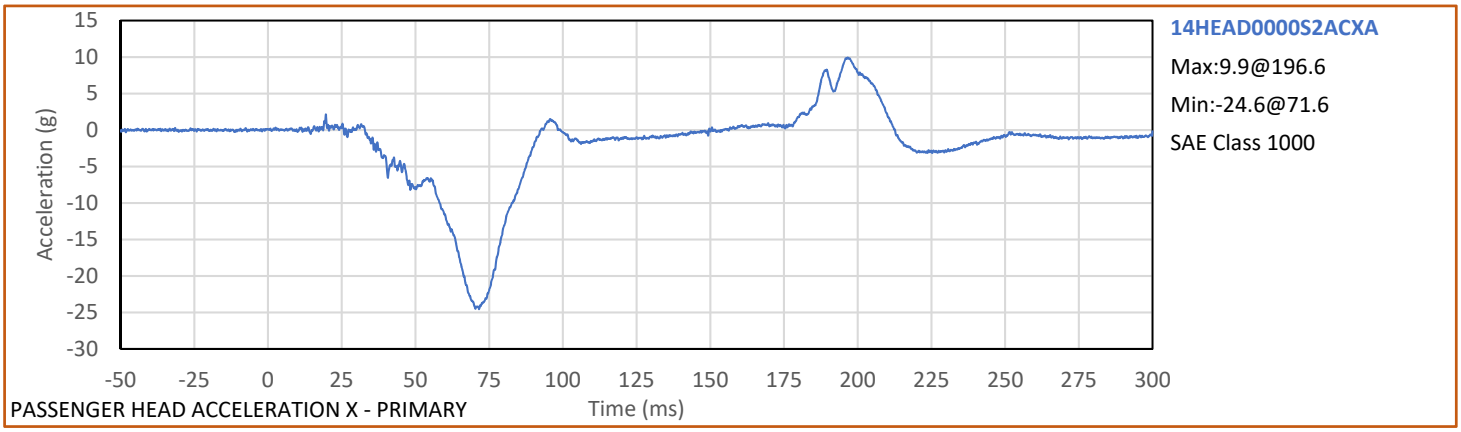
APPENDIX B
SID-IIS PASSENGER PLOTS

Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

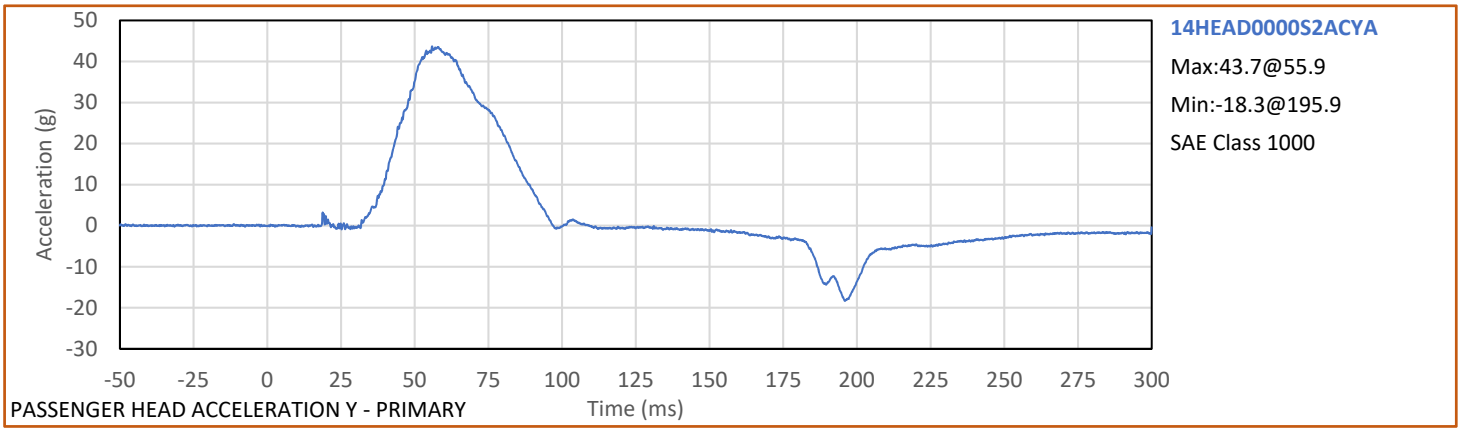
Test Program: 55/28 km/h 90° Research Side Impact (MDB)

NHTSA No.: R20185380

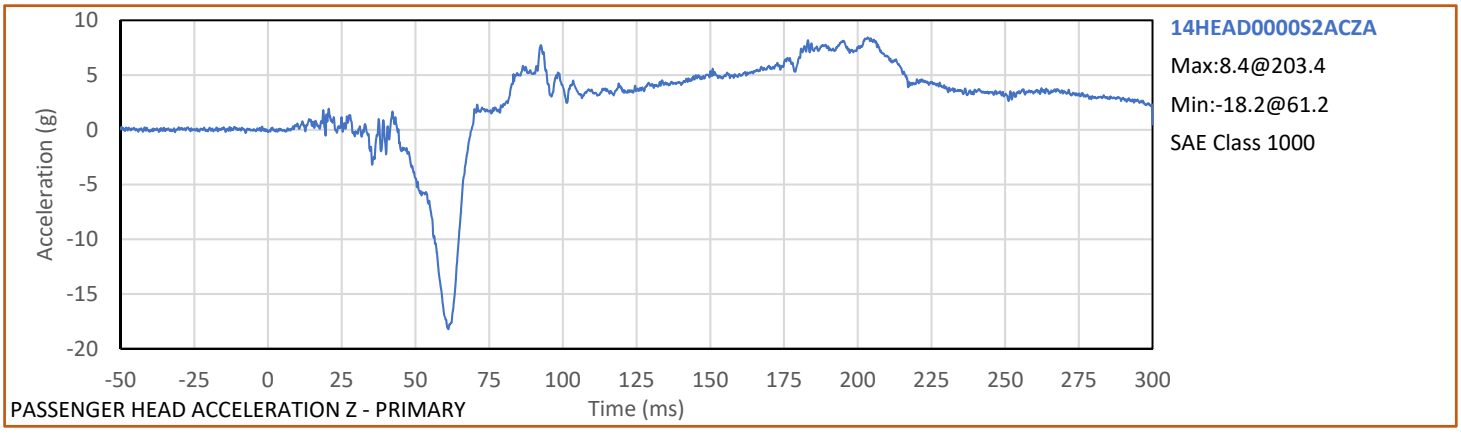
Test Date: 9/9/2019



PASSENGER HEAD ACCELERATION X - PRIMARY

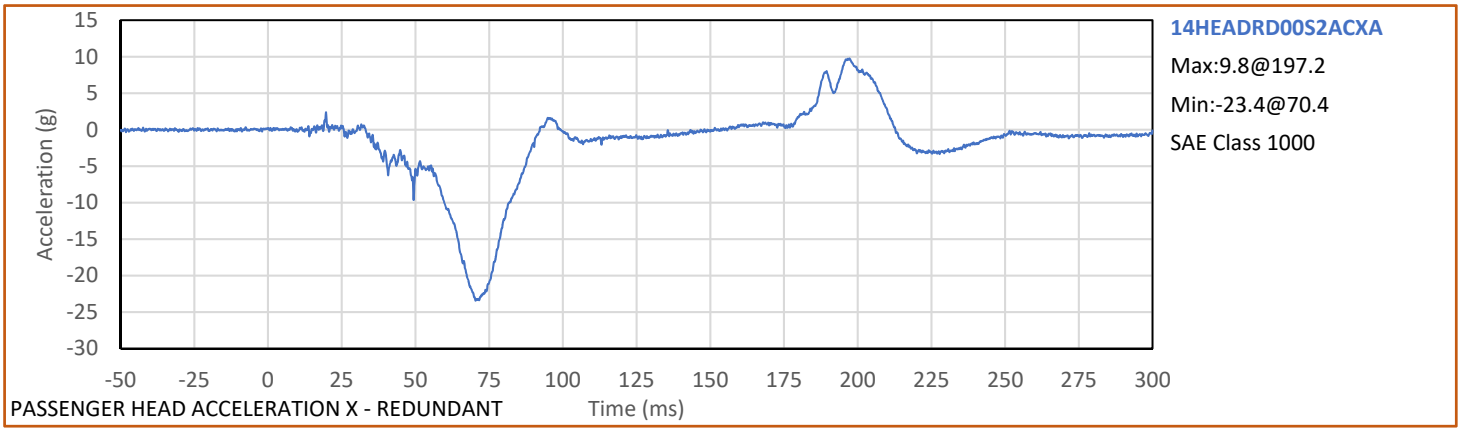


PASSENGER HEAD ACCELERATION Y - PRIMARY

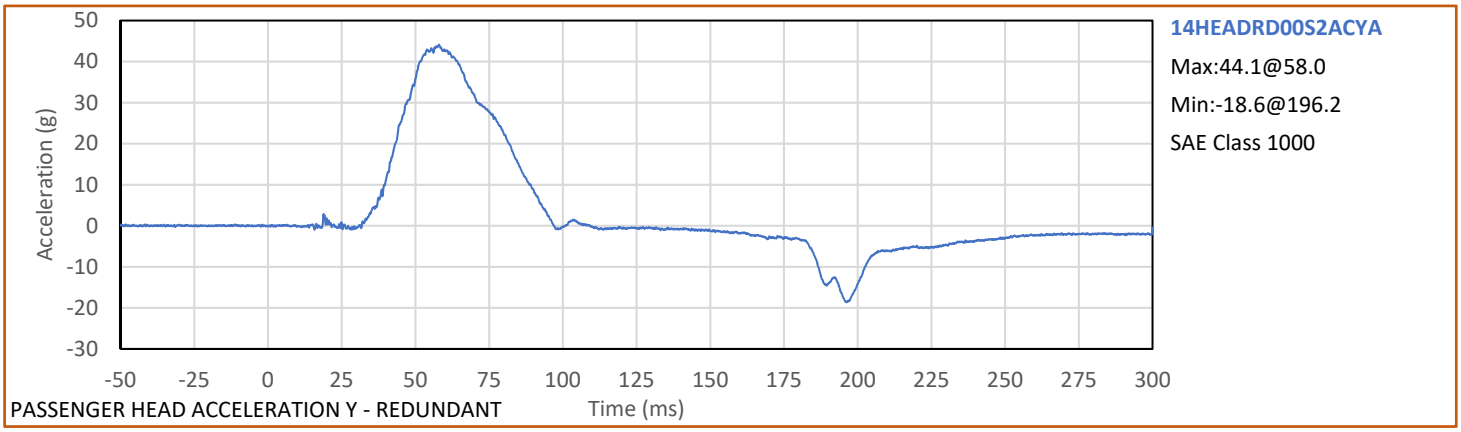


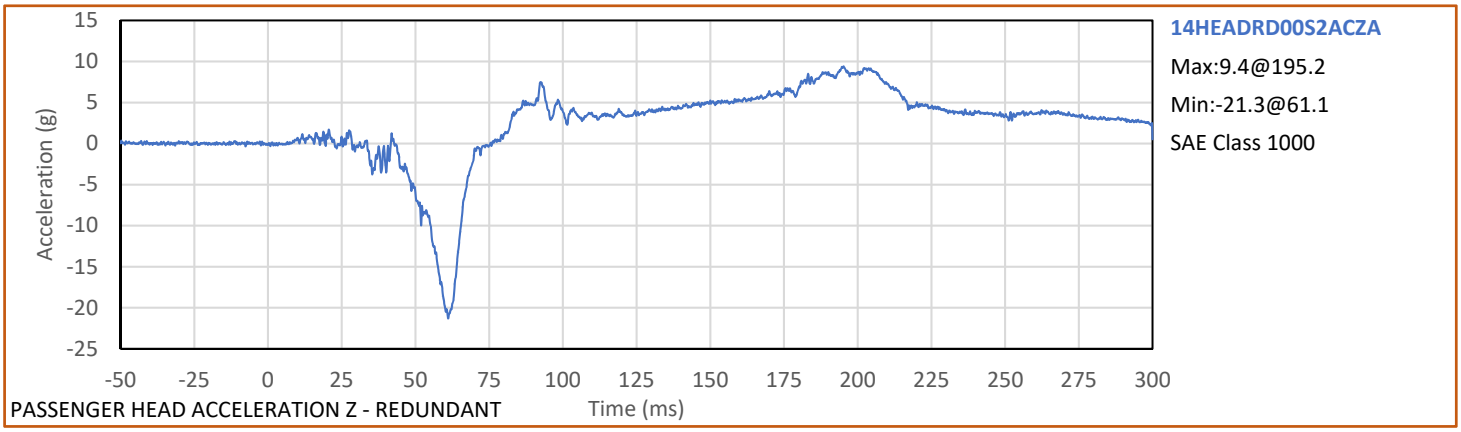
PASSENGER HEAD ACCELERATION Z - PRIMARY

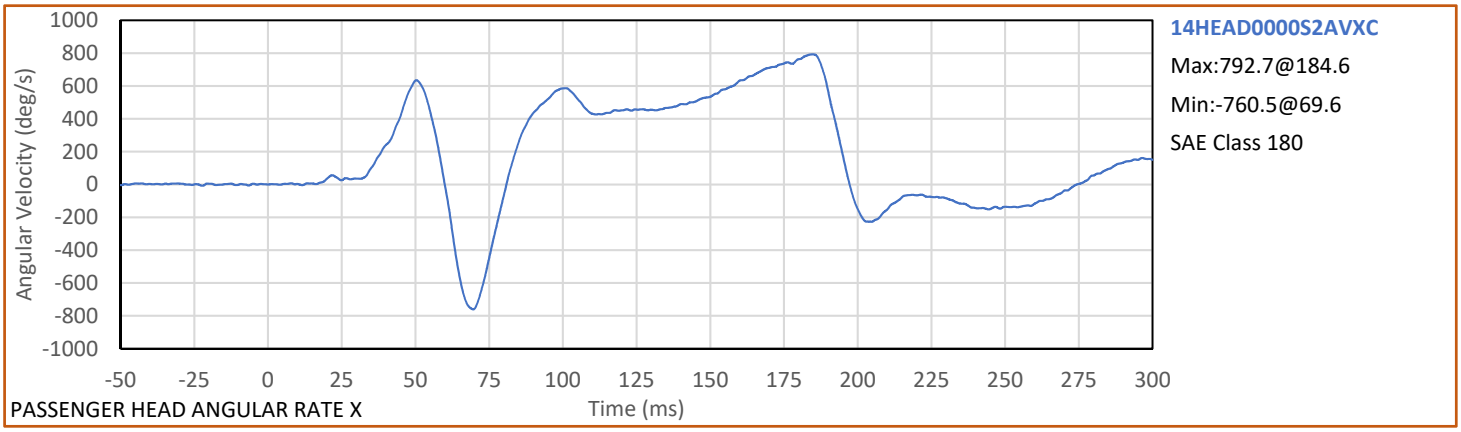
E

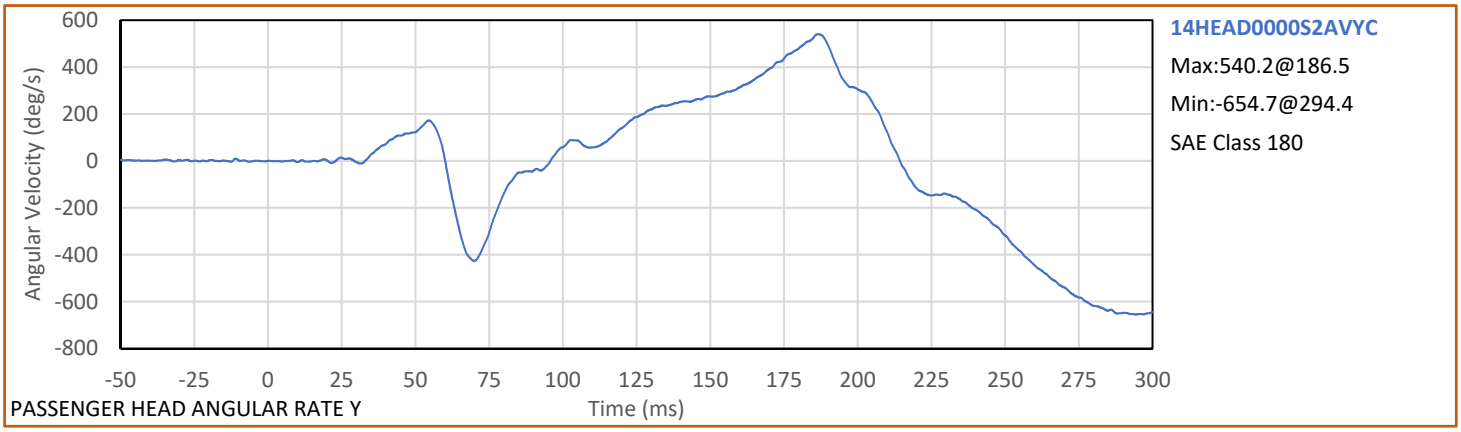


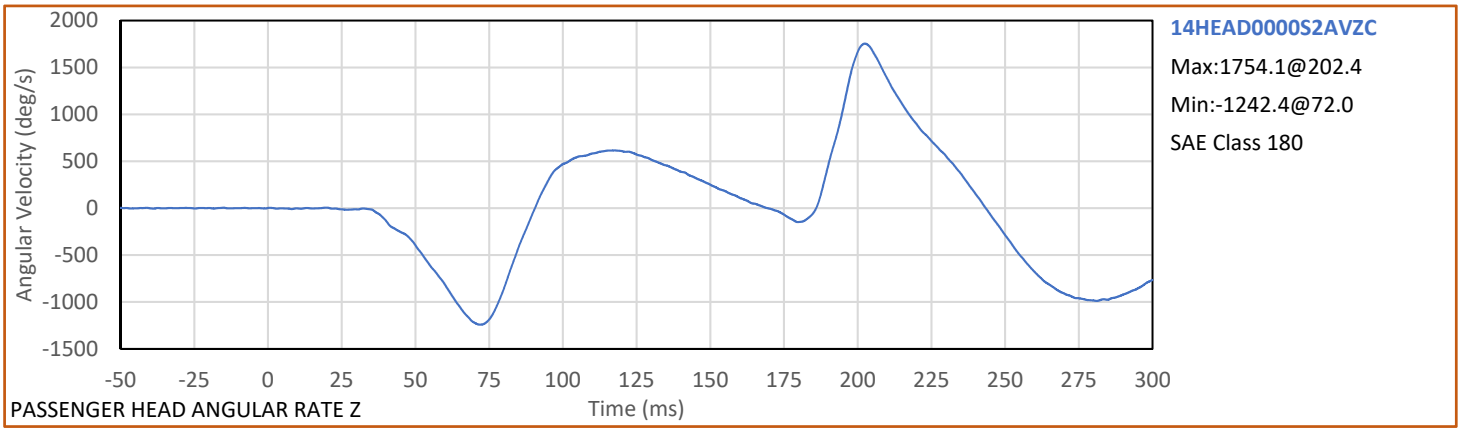
PASSENGER HEAD ACCELERATION X - REDUNDANT


14HEADRD00S2ACYA
Max:44.1@58.0
Min:-18.6@196.2
SAE Class 1000
Acceleration (g)
Time (ms)
PASSENGER HEAD ACCELERATION Y - REDUNDANT

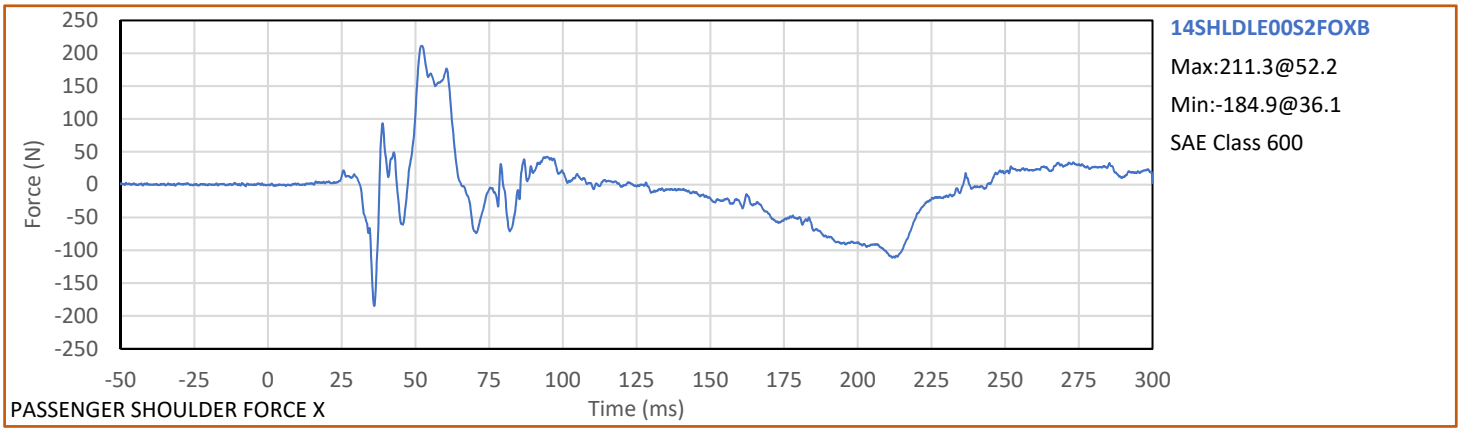

14HEADRD00S2ACZA
Max:9.4@195.2
Min:-21.3@61.1
SAE Class 1000
Acceleration (g)
Time (ms)
PASSENGER HEAD ACCELERATION Z - REDUNDANT


14HEAD0000S2AVXC
Max:792.7@184.6
Min:-760.5@69.6
SAE Class 180
Angular Velocity (deg/s)
Time (ms)
PASSENGER HEAD ANGULAR RATE X

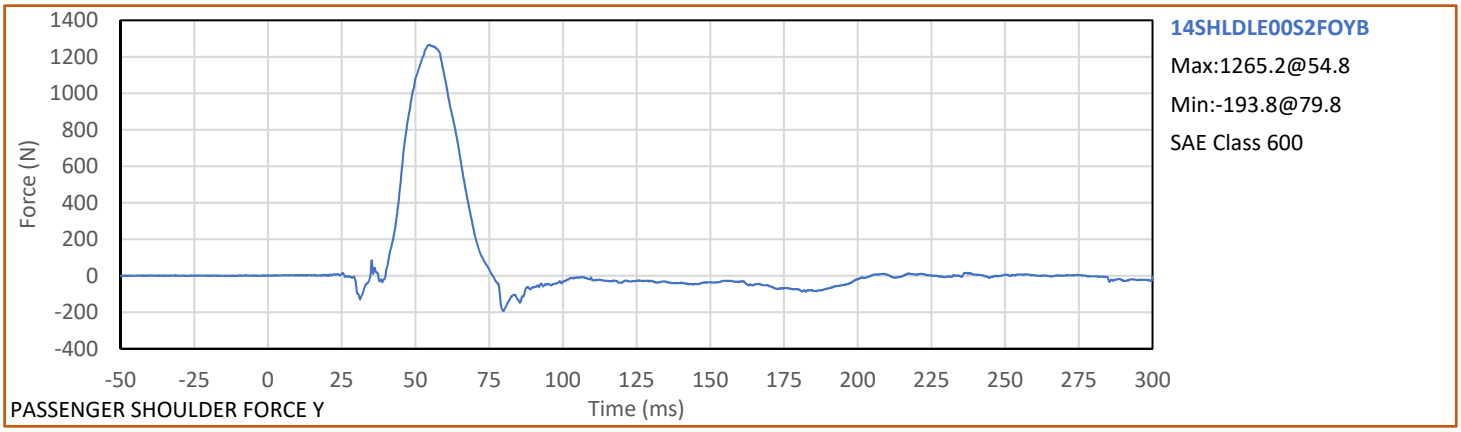

14HEAD0000S2AVYC
Max:540.2@186.5
Min:-654.7@294.4
SAE Class 180
Angular Velocity (deg/s)
Time (ms)
PASSENGER HEAD ANGULAR RATE Y



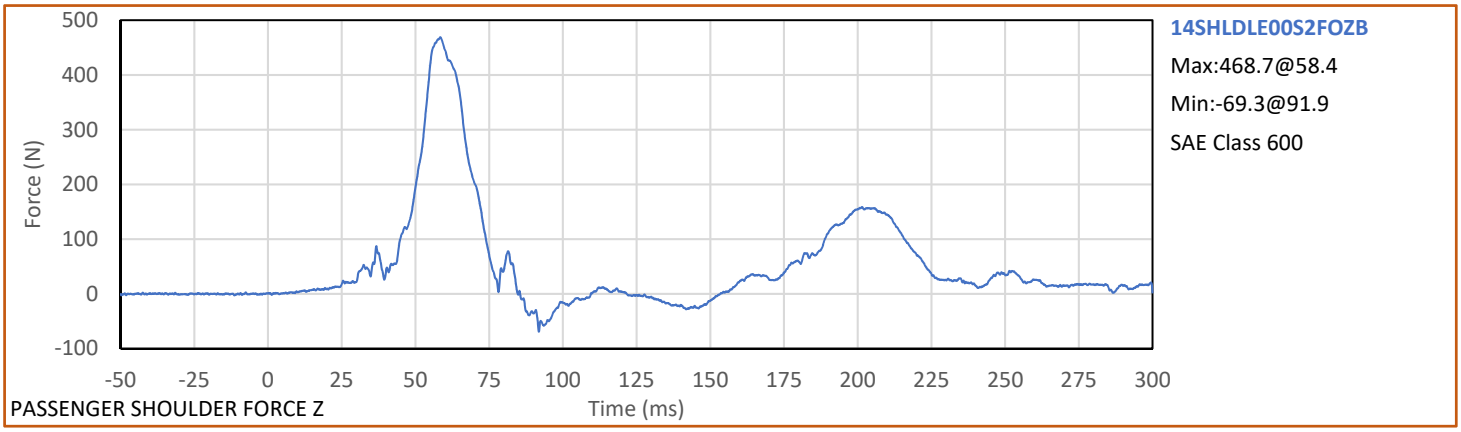
PASSENGER HEAD ANGULAR RATE Z



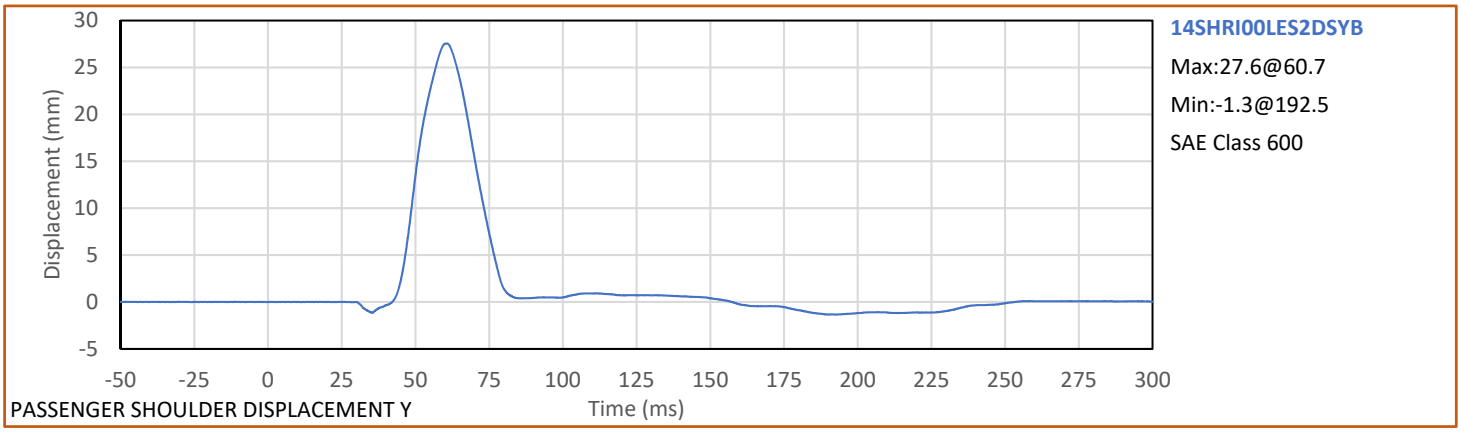
PASSENGER SHOULDER FORCE X

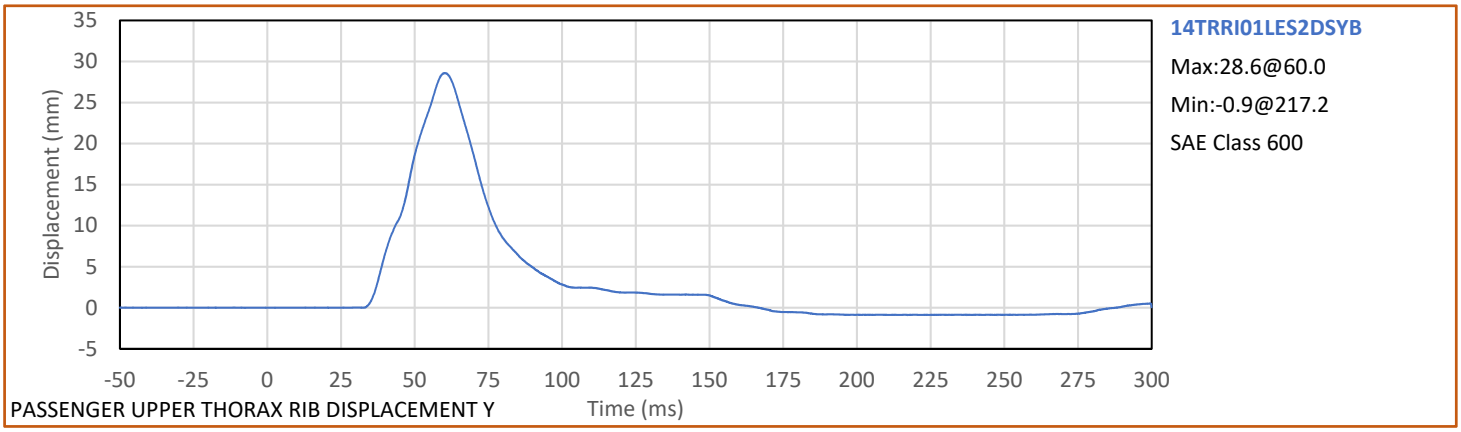


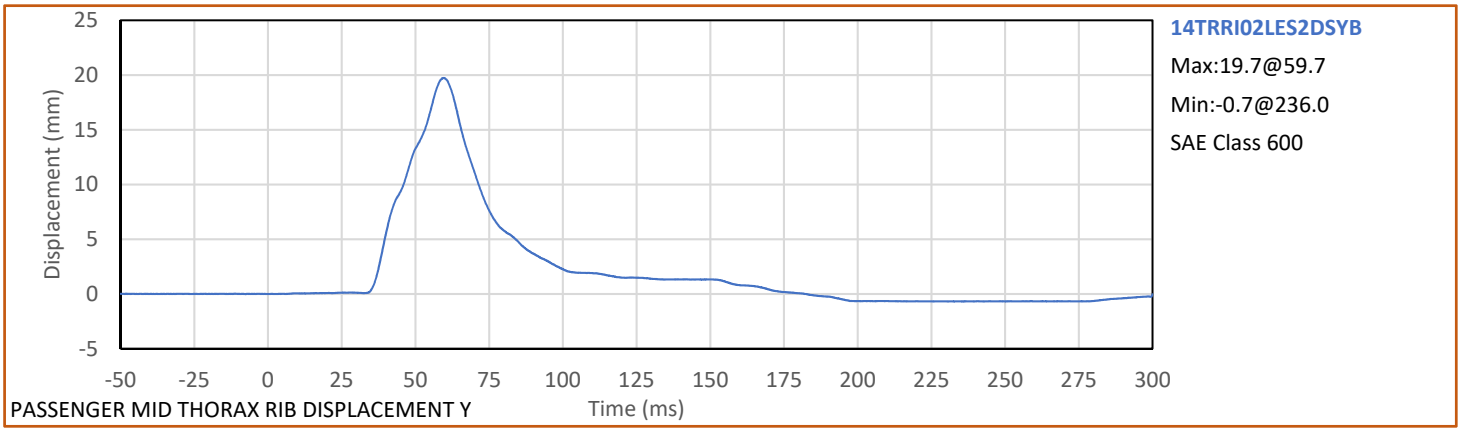
PASSENGER SHOULDER FORCE Y

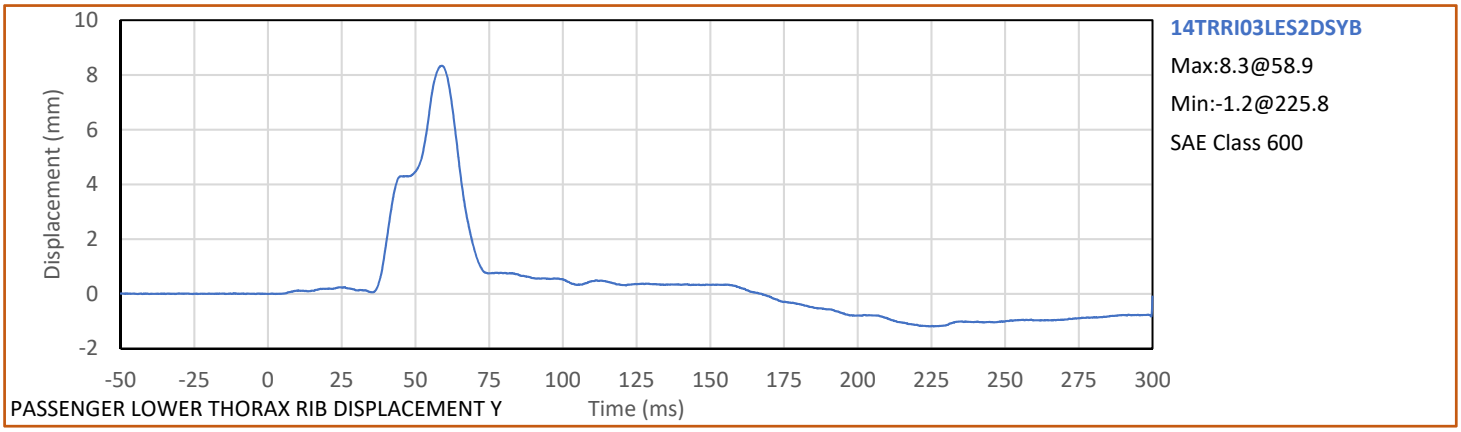


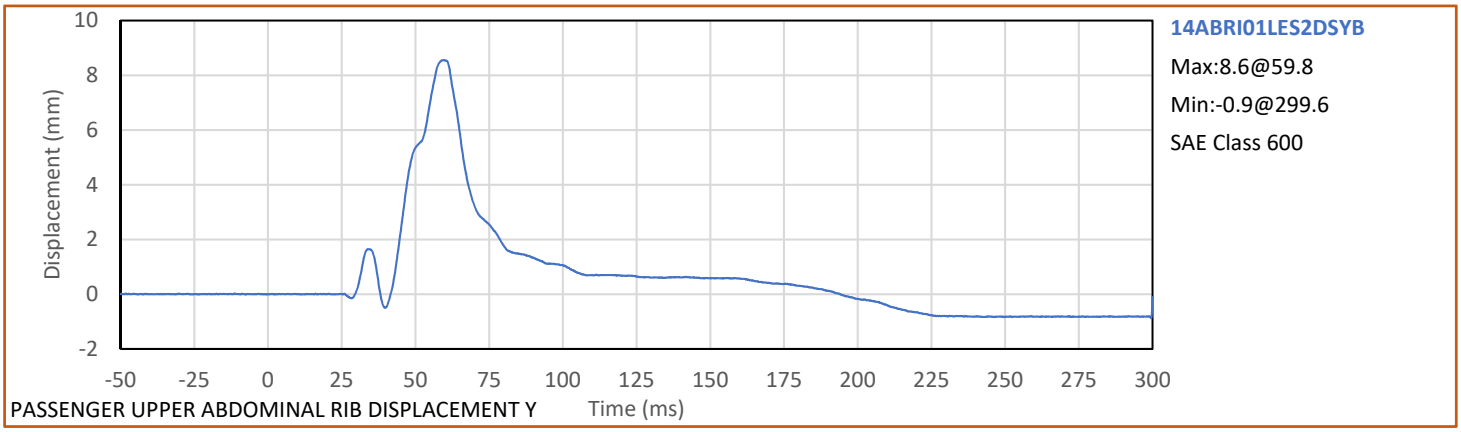
PASSENGER SHOULDER FORCE Z

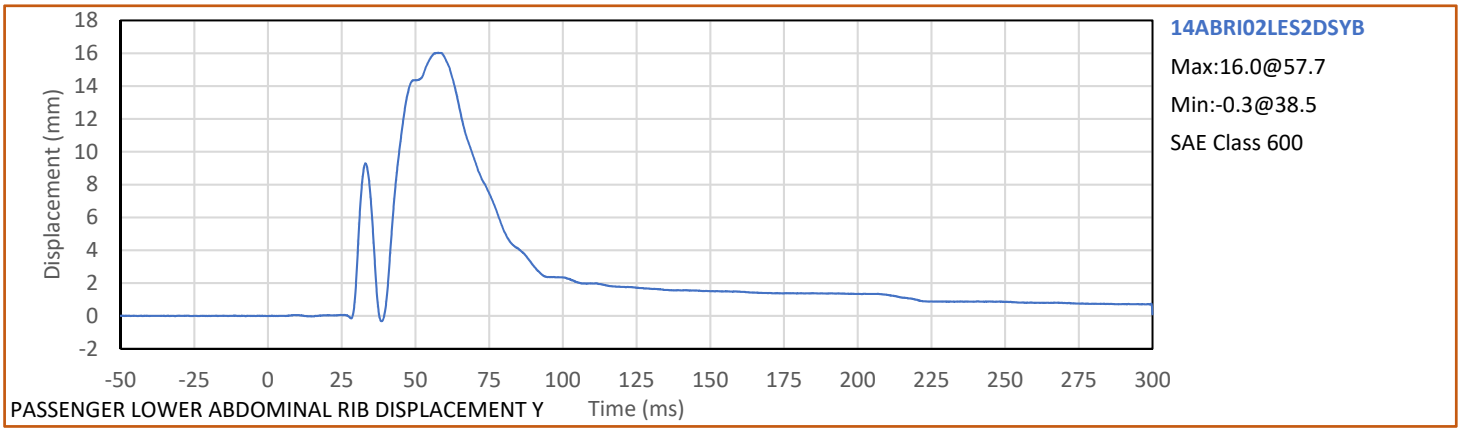

Displacement (mm)
Time (ms)
14SHRI00LES2DSYB
Max:27.6@60.7
Min:-1.3@192.5
SAE Class 600
PASSENGER SHOULDER DISPLACEMENT Y

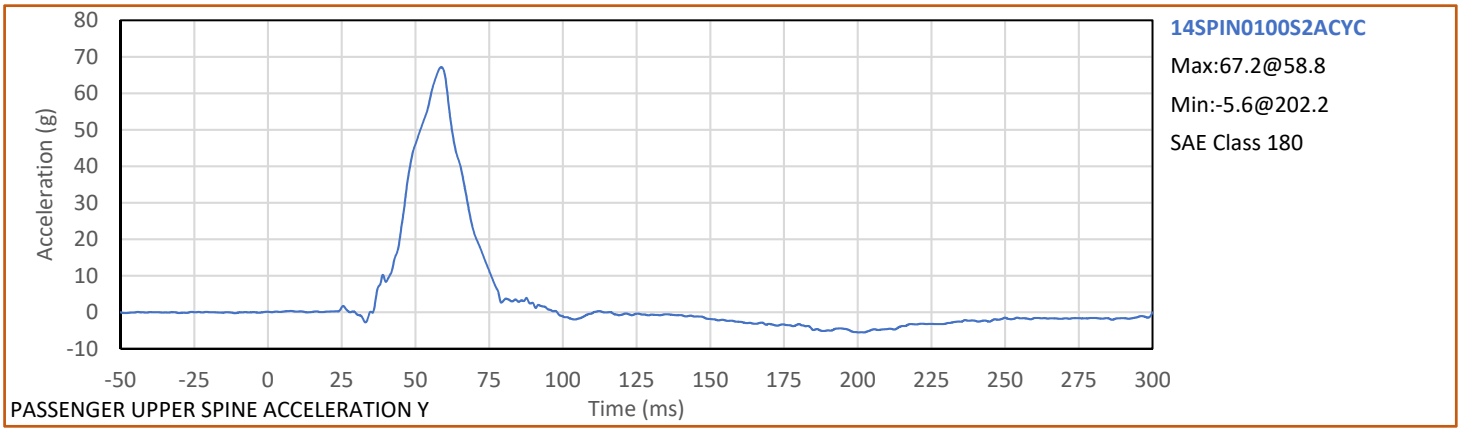

Displacement (mm)
Time (ms)
14TRRI01LES2DSYB
Max:28.6@60.0
Min:-0.9@217.2
SAE Class 600
PASSENGER UPPER THORAX RIB DISPLACEMENT Y

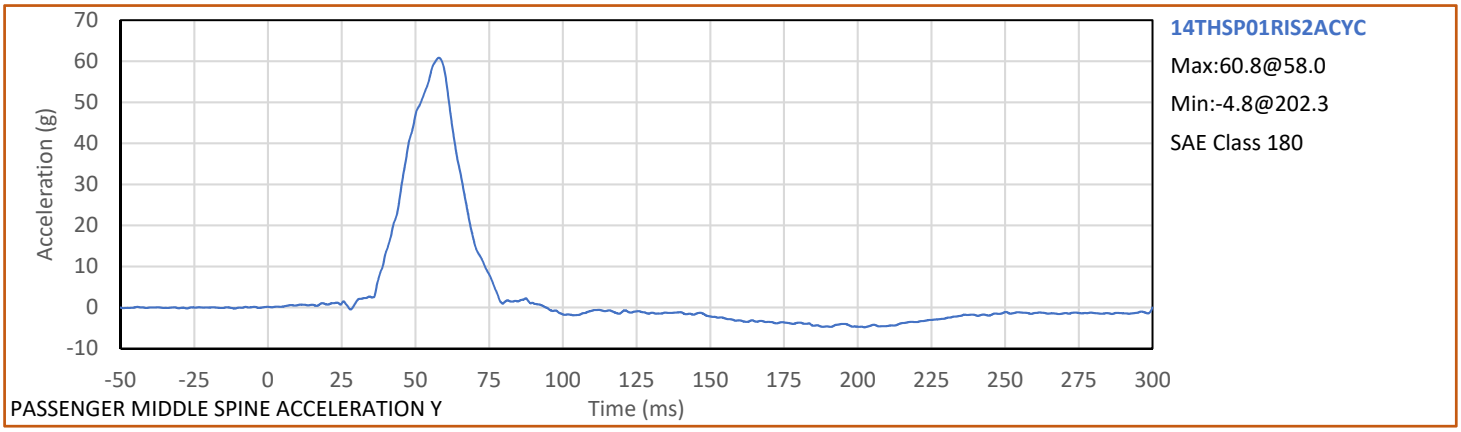

Displacement (mm)
Time (ms)
14TRRI02LES2DSYB
Max:19.7@59.7
Min:-0.7@236.0
SAE Class 600
PASSENGER MID THORAX RIB DISPLACEMENT Y

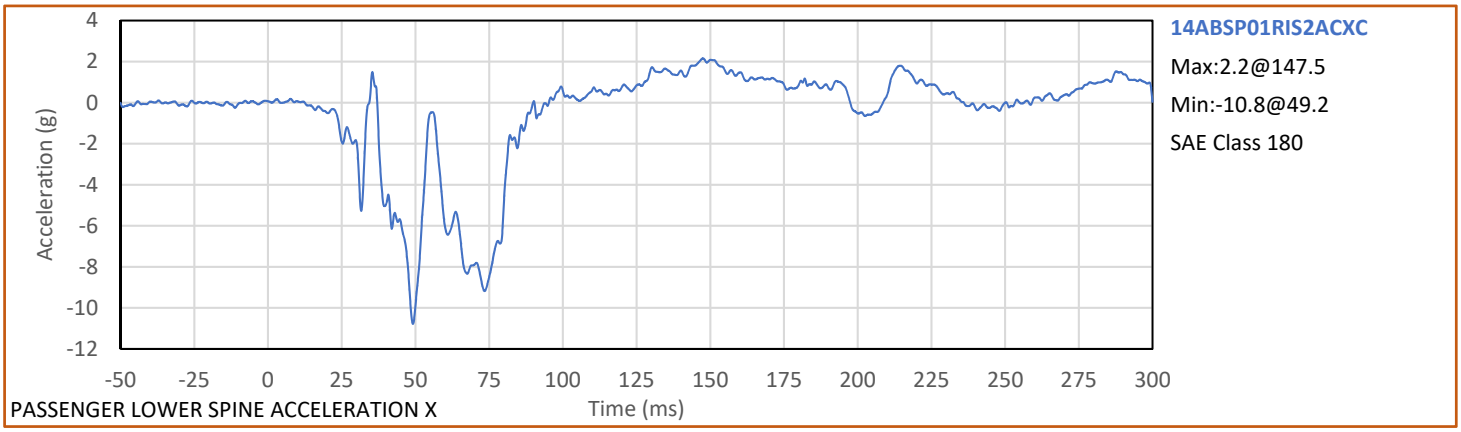

Displacement (mm)
Time (ms)
14TRRI03LES2DSYB
Max:8.3@58.9
Min:-1.2@225.8
SAE Class 600
PASSENGER LOWER THORAX RIB DISPLACEMENT Y

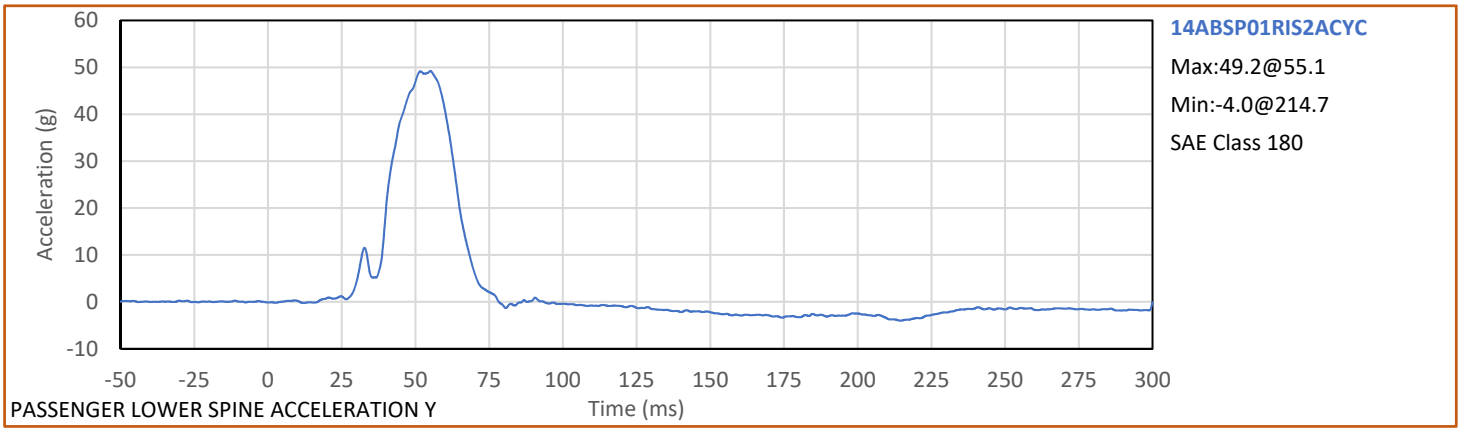

Displacement (mm)
Time (ms)
PASSENGER UPPER ABDOMINAL RIB DISPLACEMENT Y
14ABRI01LES2DSYB
Max:8.6@59.8
Min:-0.9@299.6
SAE Class 600

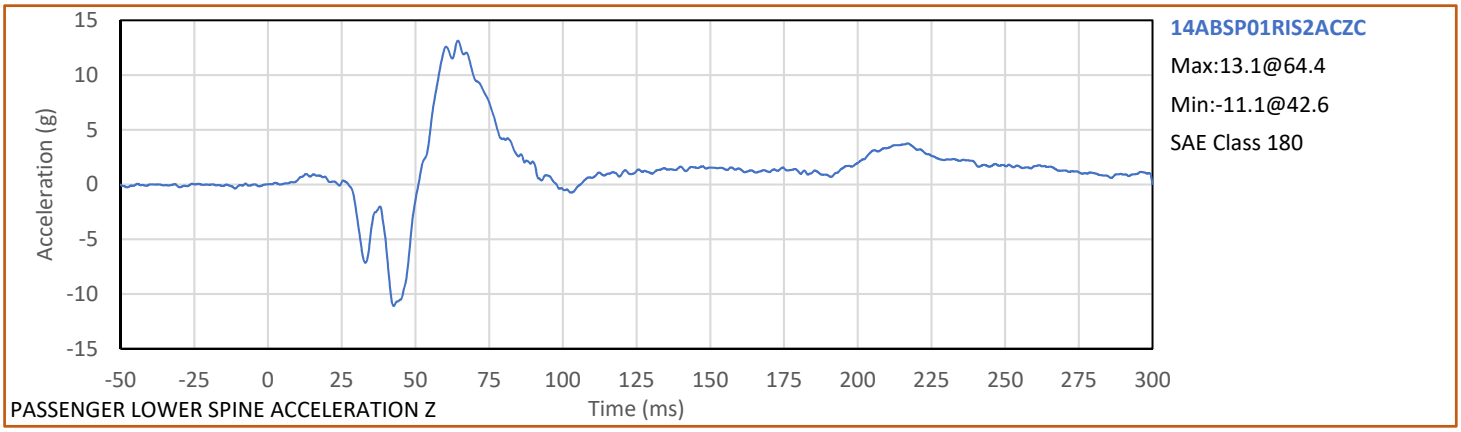

Displacement (mm)
Time (ms)
PASSENGER LOWER ABDOMINAL RIB DISPLACEMENT Y
14ABRI02LES2DSYB
Max:16.0@57.7
Min:-0.3@38.5
SAE Class 600

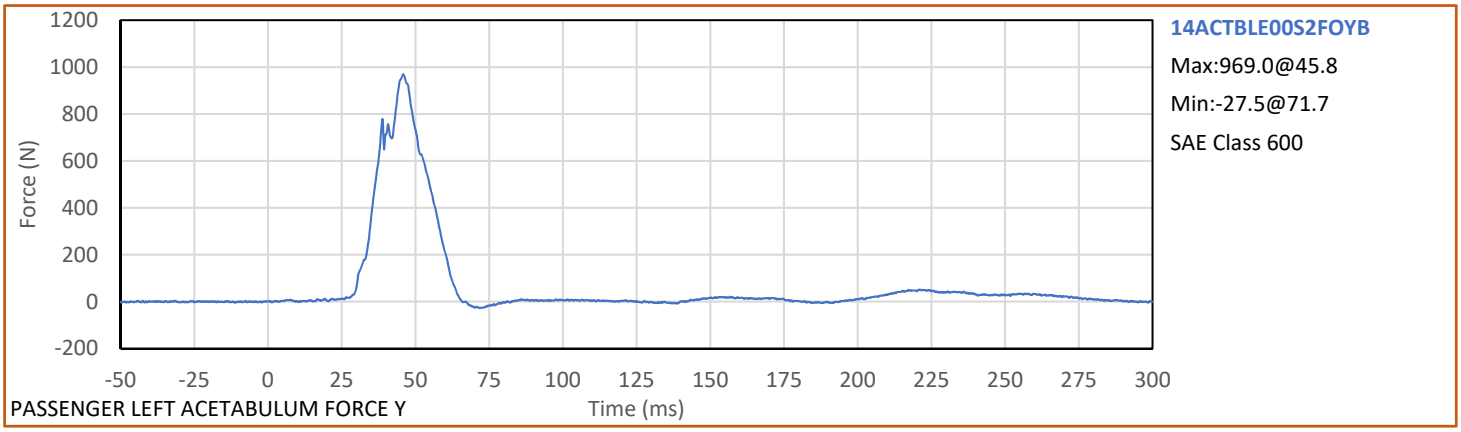

Acceleration (g)
Time (ms)
PASSENGER UPPER SPINE ACCELERATION Y
14SPIN0100S2ACYC
Max:67.2@58.8
Min:-5.6@202.2
SAE Class 180


Acceleration (g)
Time (ms)
PASSENGER MIDDLE SPINE ACCELERATION Y
14THSP01RIS2ACYC
Max:60.8@58.0
Min:-4.8@202.3
SAE Class 180


14ABSP01RIS2ACXC
Max:2.2@147.5
Min:-10.8@49.2
SAE Class 180
Acceleration (g)
Time (ms)
PASSENGER LOWER SPINE ACCELERATION X


14ABSP01RIS2ACYC
Max:49.2@55.1
Min:-4.0@214.7
SAE Class 180
Acceleration (g)
Time (ms)
PASSENGER LOWER SPINE ACCELERATION Y


14ABSP01RIS2ACZC
Max:13.1@64.4
Min:-11.1@42.6
SAE Class 180
Acceleration (g)
Time (ms)
PASSENGER LOWER SPINE ACCELERATION Z

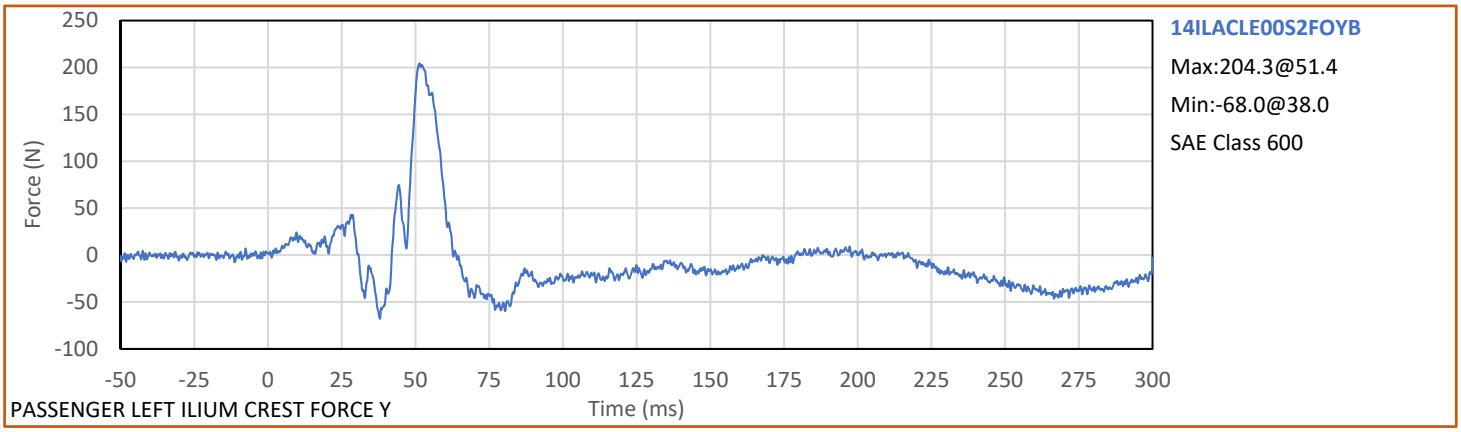

14ACTBLE00S2FOYB
Max:969.0@45.8
Min:-27.5@71.7
SAE Class 600
Force (N)
Time (ms)
PASSENGER LEFT ACETABULUM FORCE Y

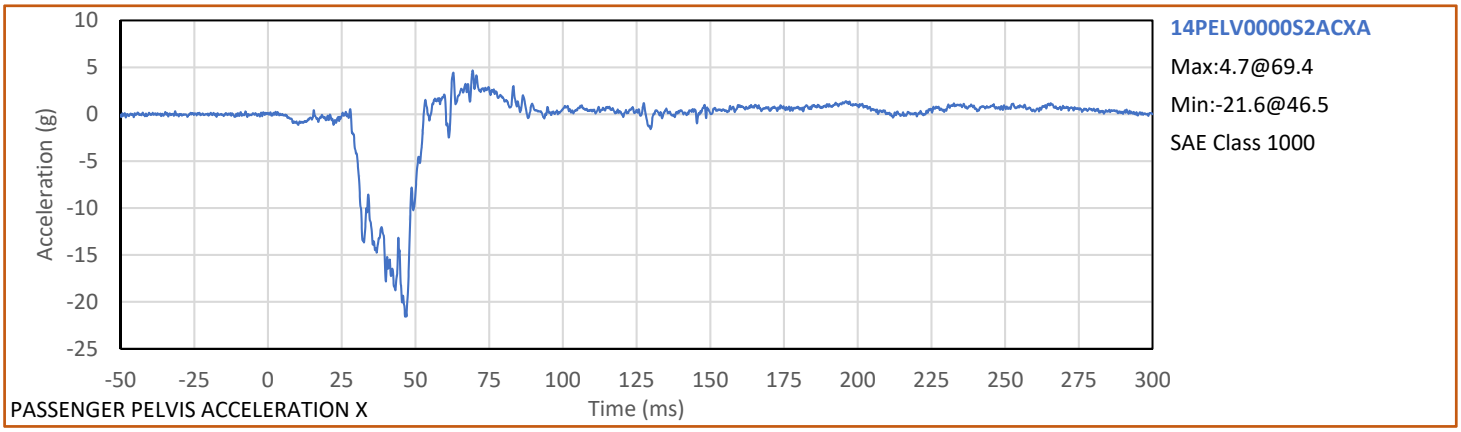
Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

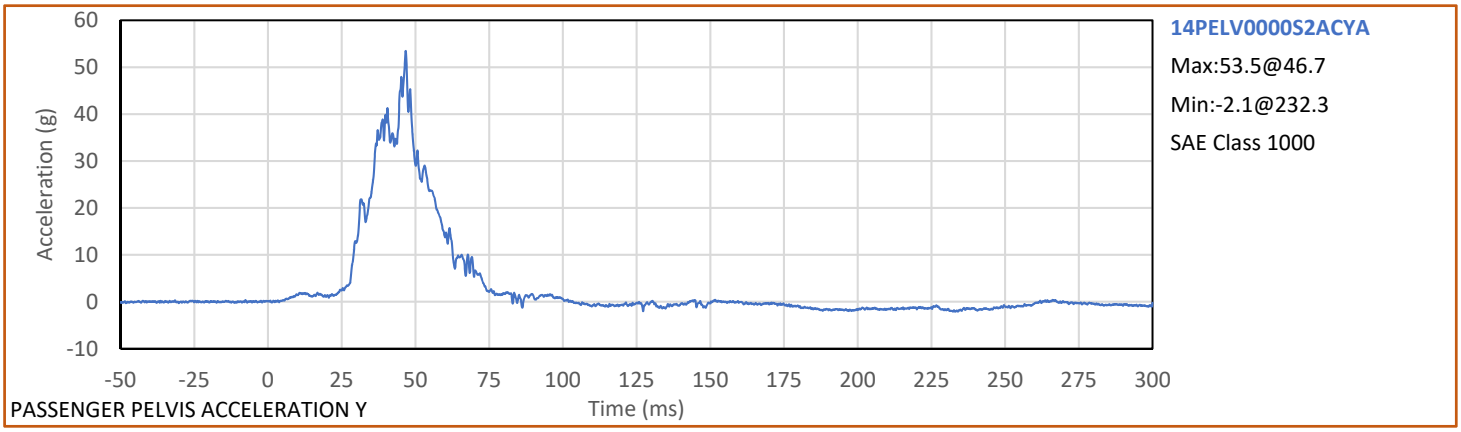
Test Program: 55/28 km/h 90° Research Side Impact (MDB)

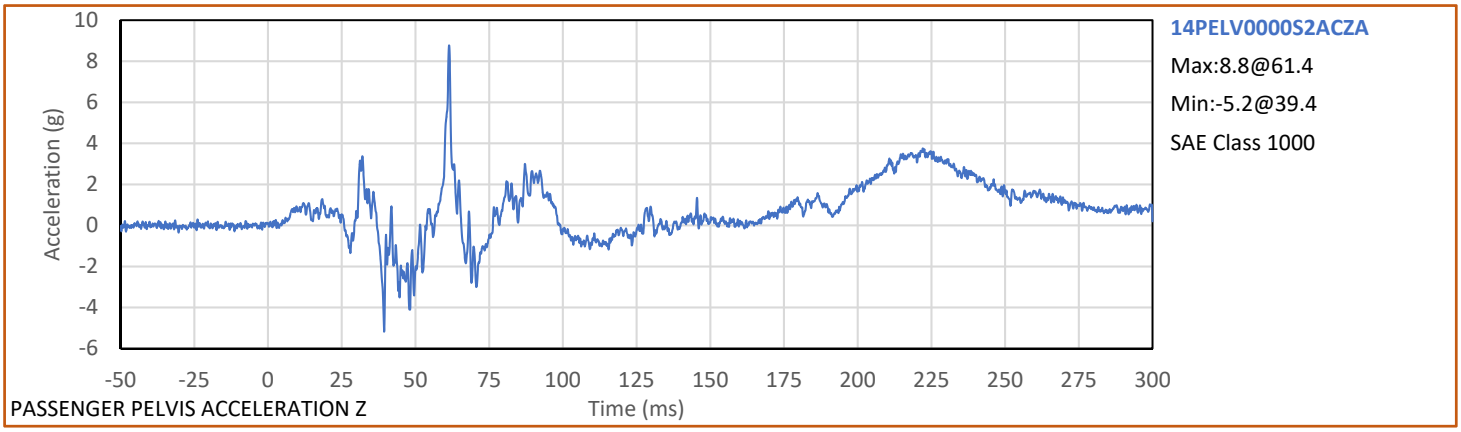
NHTSA No.: R20185380

Test Date: 9/9/2019







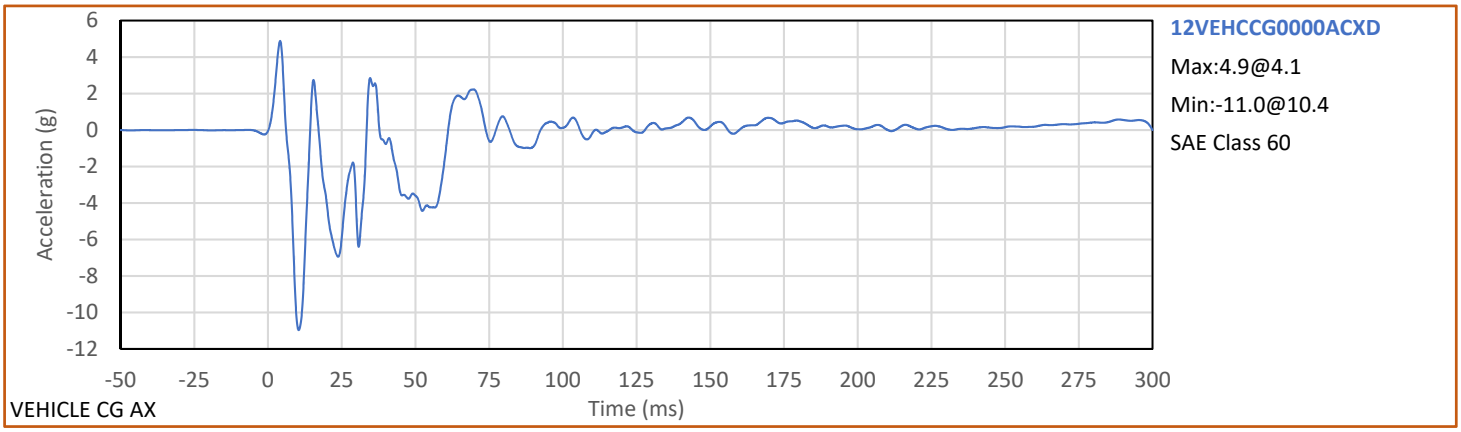


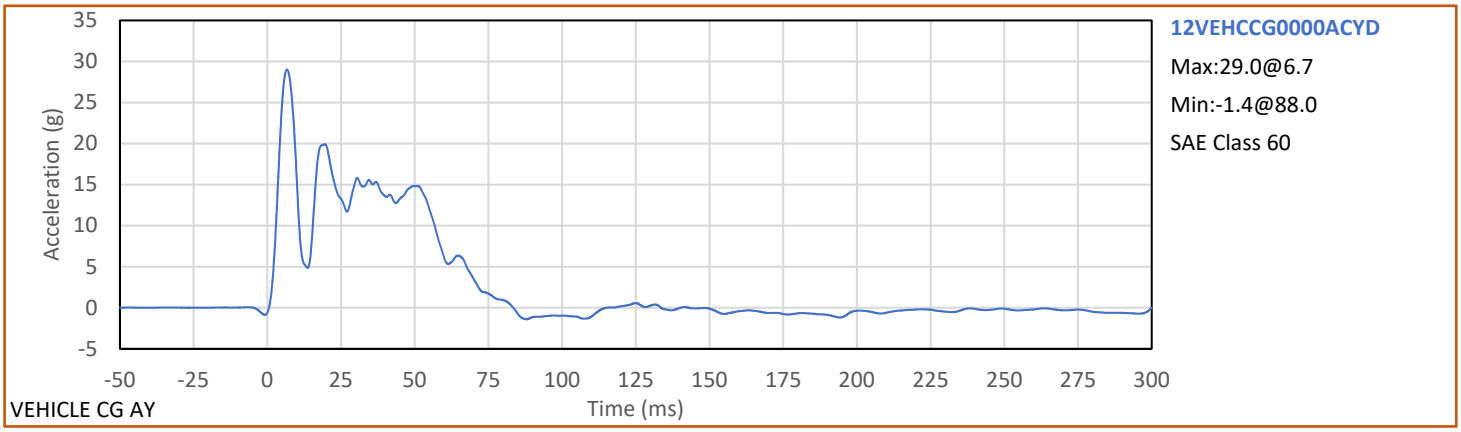
Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

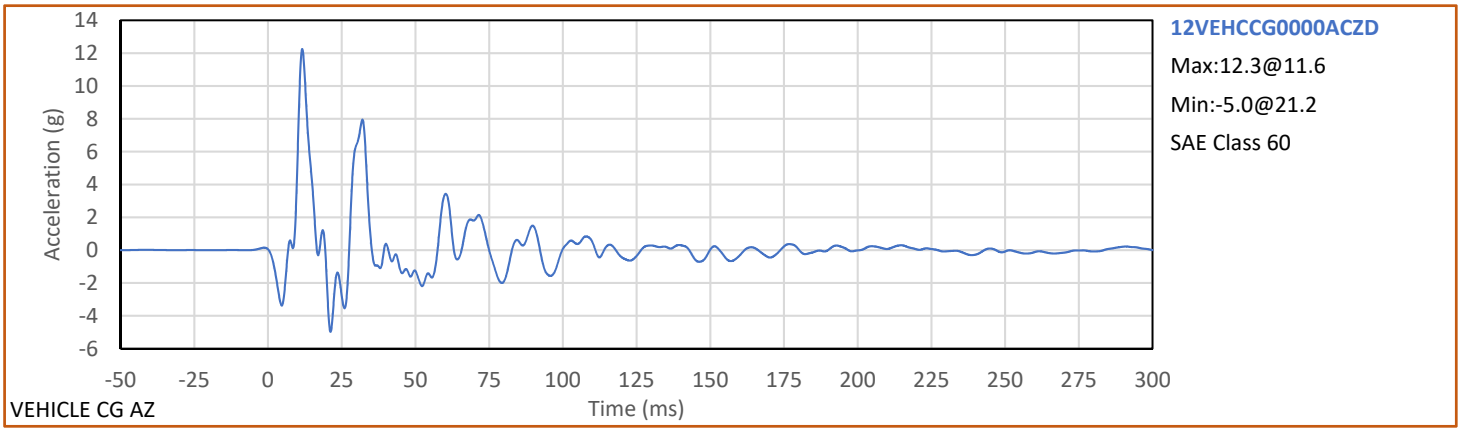
Test Program: 55/28 km/h 90° Research Side Impact (MDB)

NHTSA No.: R20185380

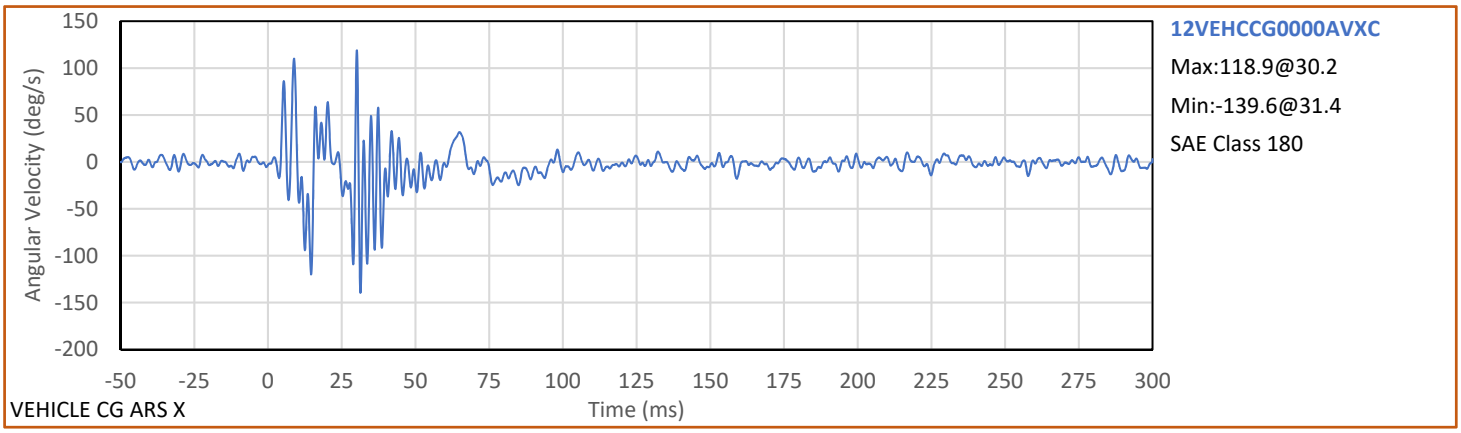
Test Date: 9/9/2019



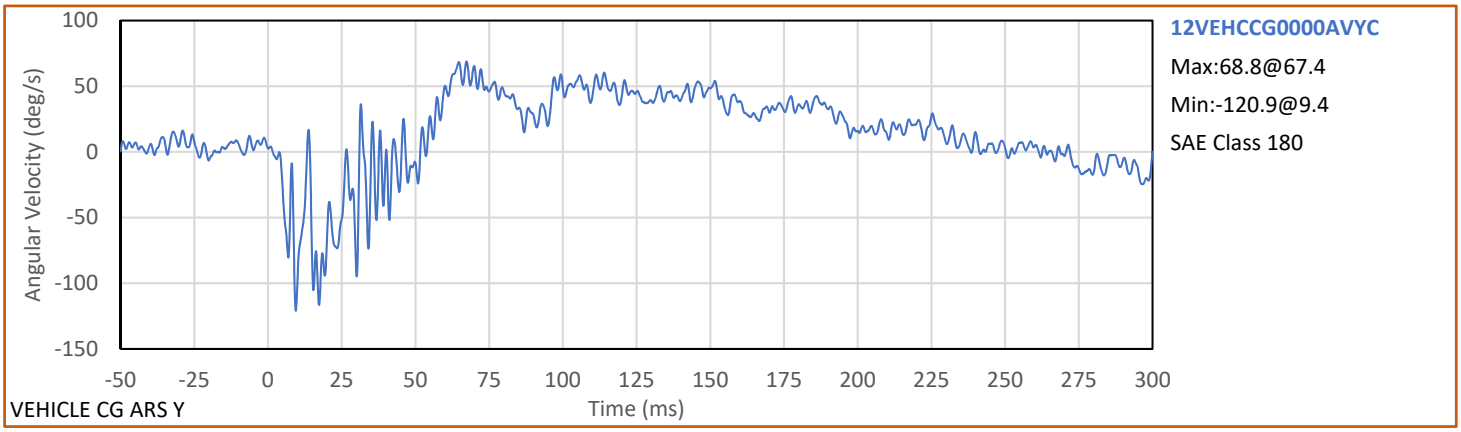


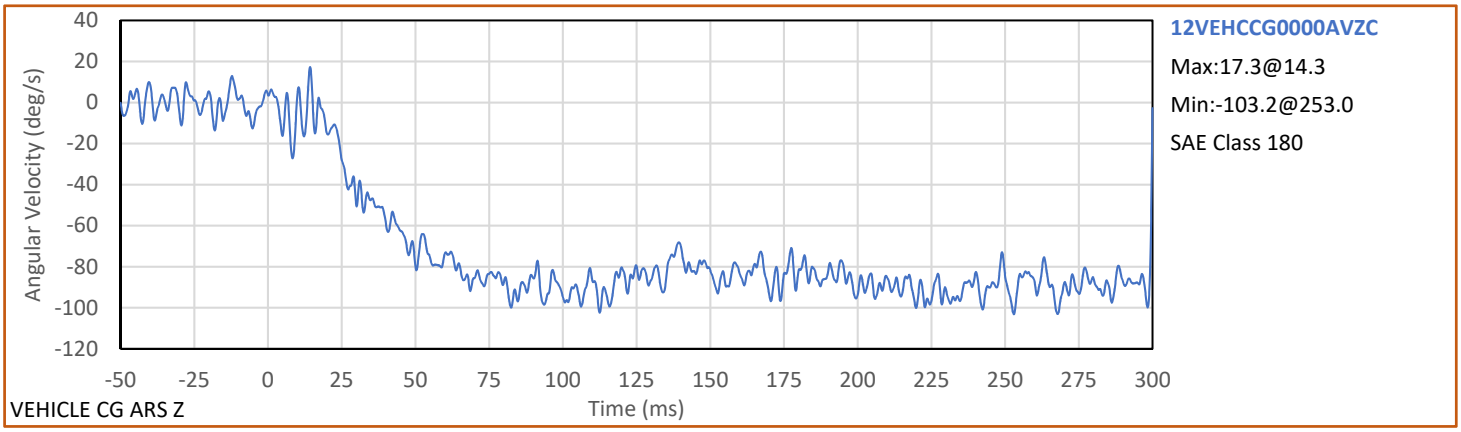


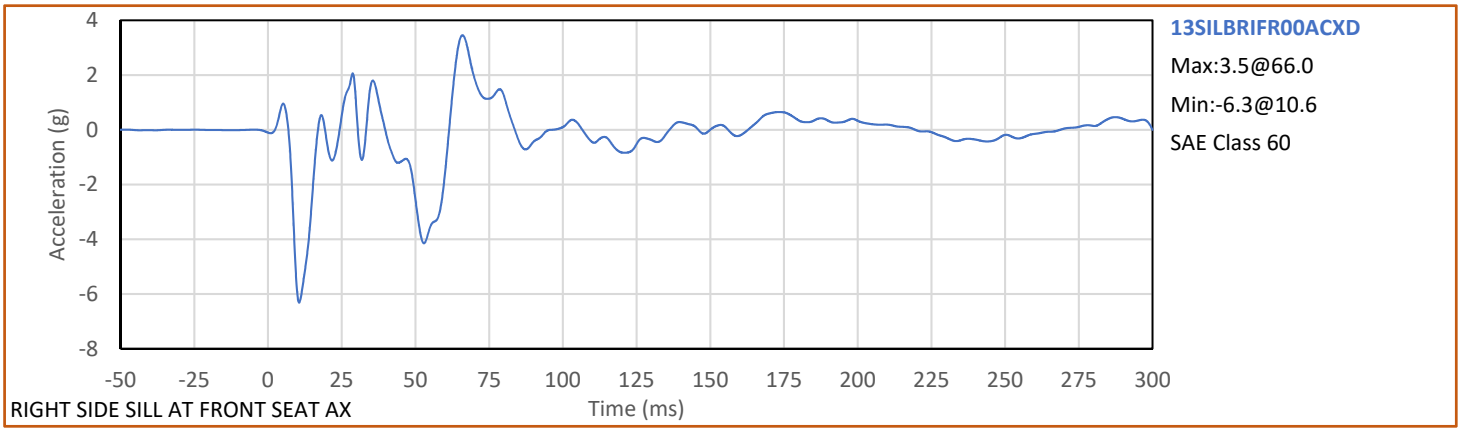
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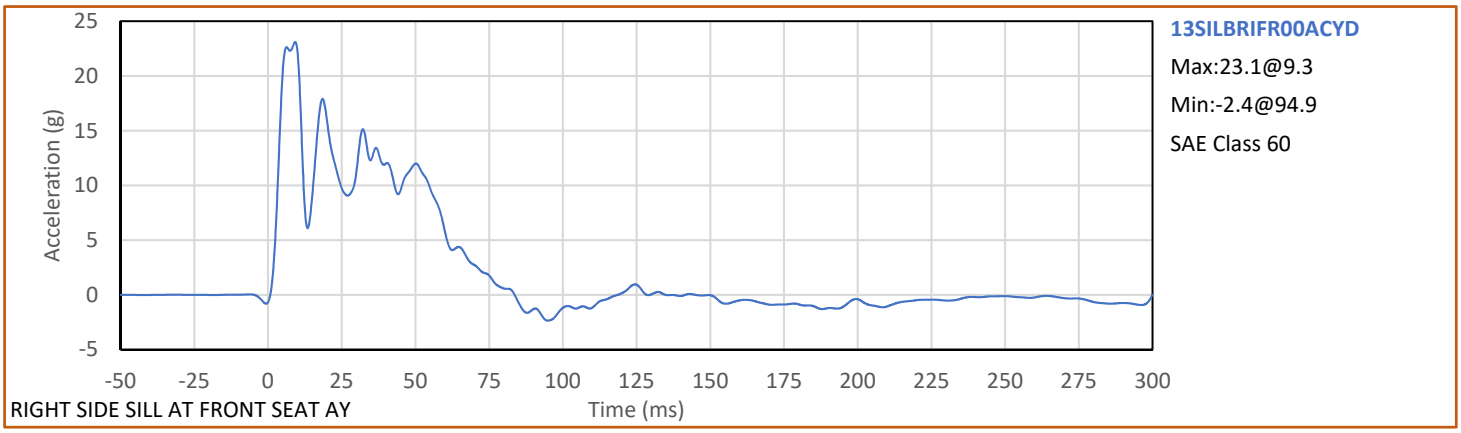


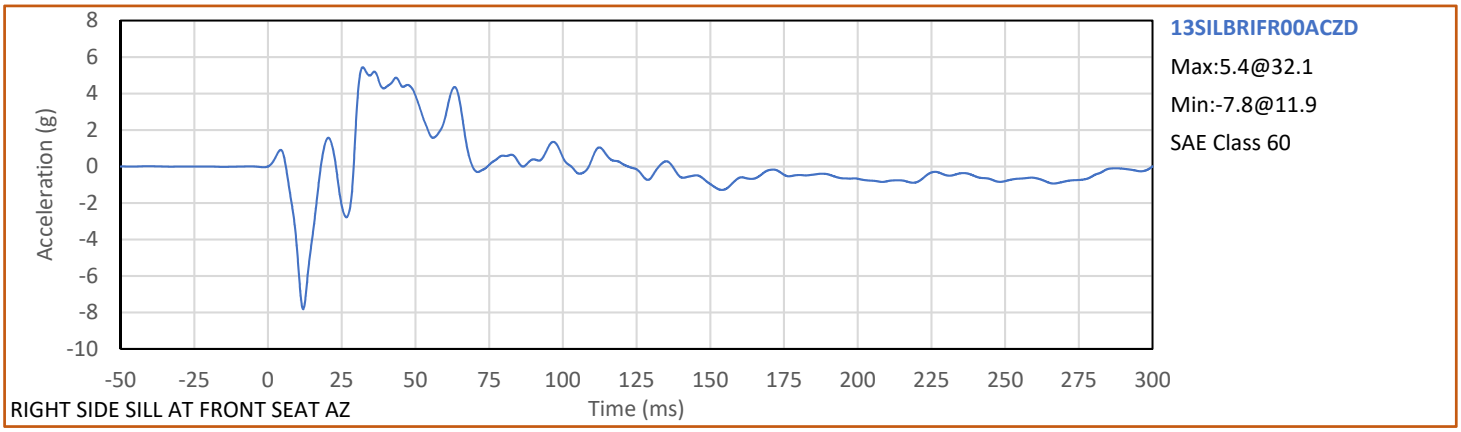
APPENDIX B
VEHICLE INSTRUMENTATION PLOTS

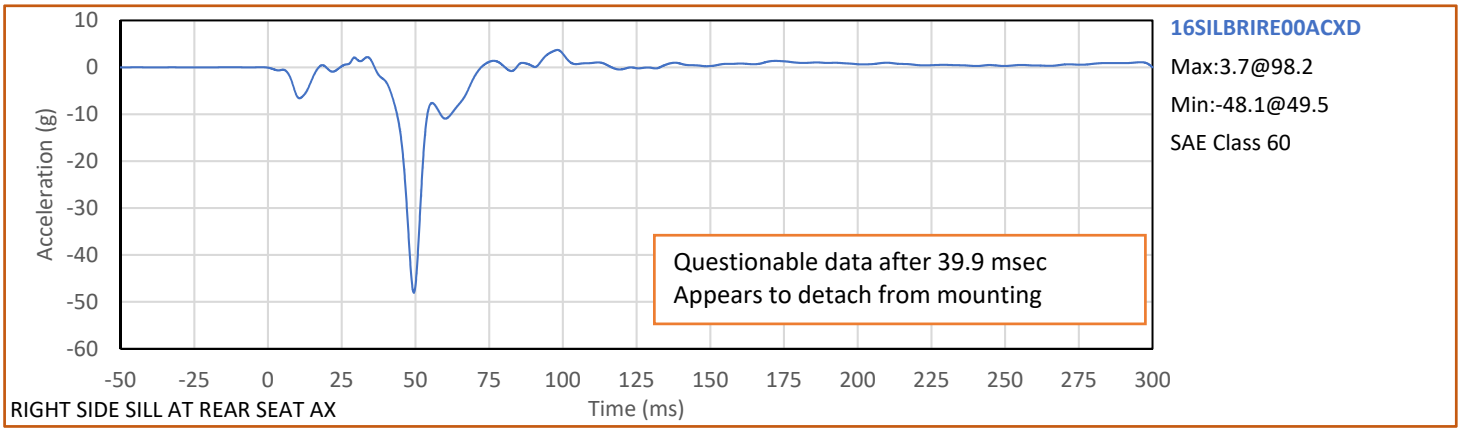

12VEHCCG0000AVYC
Max:68.8@67.4
Min:-120.9@9.4
SAE Class 180
Angular Velocity (deg/s)
Time (ms)
VEHICLE CG ARS Y

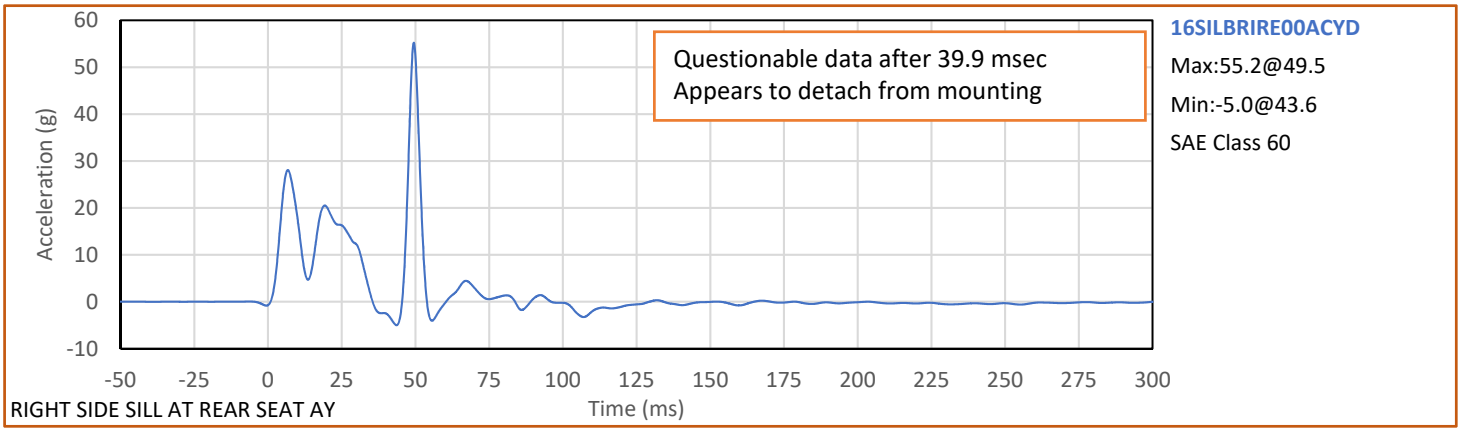

12VEHCCG0000AVZC
Max:17.3@14.3
Min:-103.2@253.0
SAE Class 180
Angular Velocity (deg/s)
Time (ms)
VEHICLE CG ARS Z

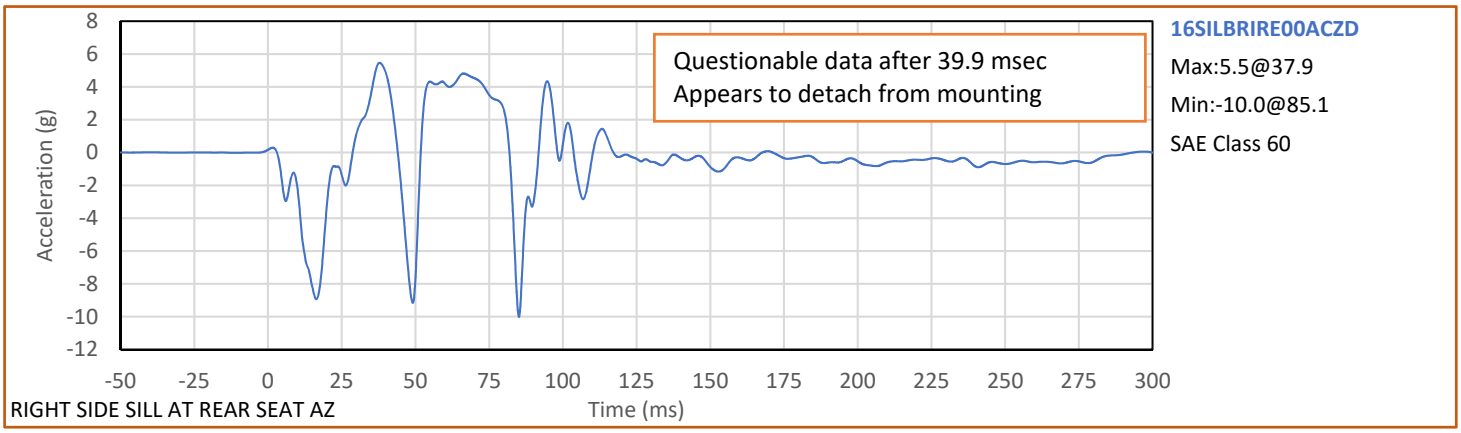

13SILBRIFR00ACXD
Max:3.5@66.0
Min:-6.3@10.6
SAE Class 60
Acceleration (g)
Time (ms)
RIGHT SIDE SILL AT FRONT SEAT AX


13SILBRIFR00ACYD
Max:23.1@9.3
Min:-2.4@94.9
SAE Class 60
Acceleration (g)
Time (ms)
RIGHT SIDE SILL AT FRONT SEAT AY


13SILBRIFR00ACZD
Max:5.4@32.1
Min:-7.8@11.9
SAE Class 60
Acceleration (g)
Time (ms)
RIGHT SIDE SILL AT FRONT SEAT AZ


16SILBRIRE00ACXD
Max:3.7@98.2
Min:-48.1@49.5
SAE Class 60
Questionable data after 39.9 msec
Appears to detach from mounting
Acceleration (g)
Time (ms)
RIGHT SIDE SILL AT REAR SEAT AX


16SILBRIRE00ACYD
Max:55.2@49.5
Min:-5.0@43.6
SAE Class 60
Questionable data after 39.9 msec
Appears to detach from mounting
Acceleration (g)
Time (ms)
RIGHT SIDE SILL AT REAR SEAT AY


16SILBRIRE00ACZD
Max:5.5@37.9
Min:-10.0@85.1
SAE Class 60
Questionable data after 39.9 msec
Appears to detach from mounting
Acceleration (g)
Time (ms)
RIGHT SIDE SILL AT REAR SEAT AZ

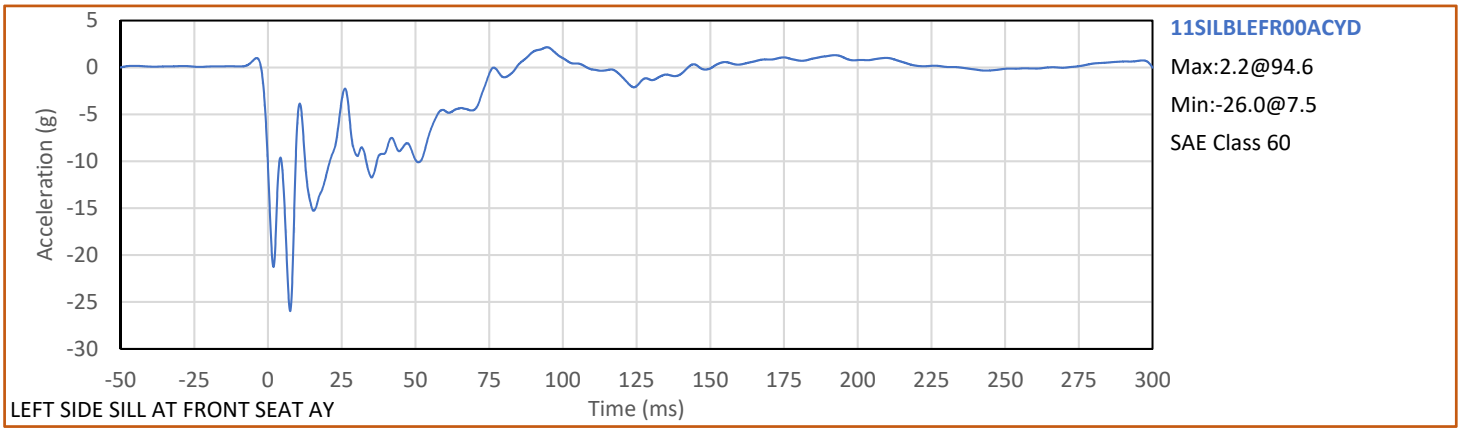
Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

Test Program: 55/28 km/h 90° Research Side Impact (MDB)

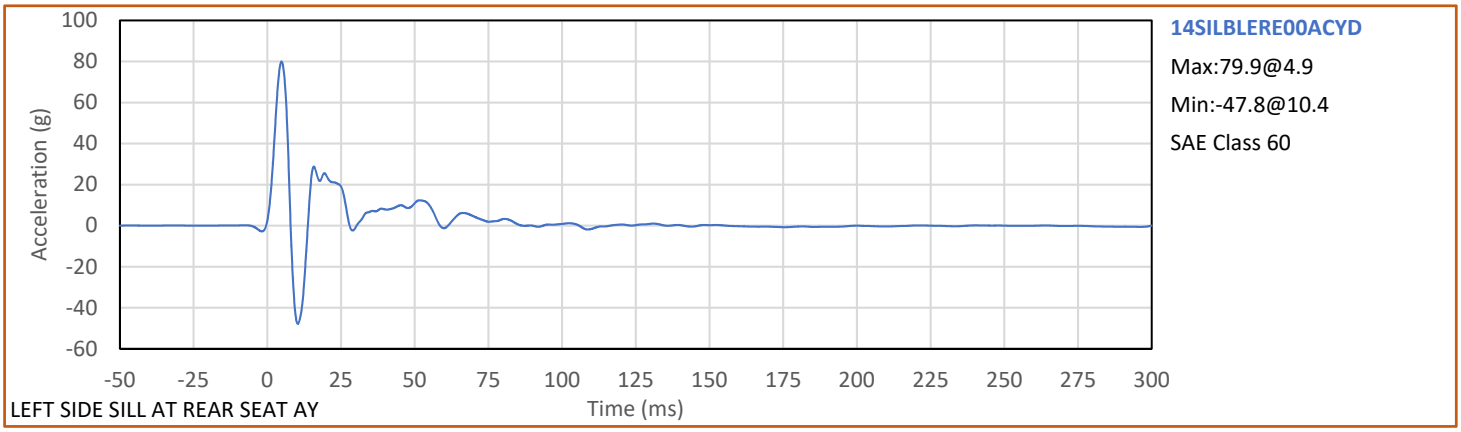
NHTSA No.: R20185380

Test Date: 9/9/2019

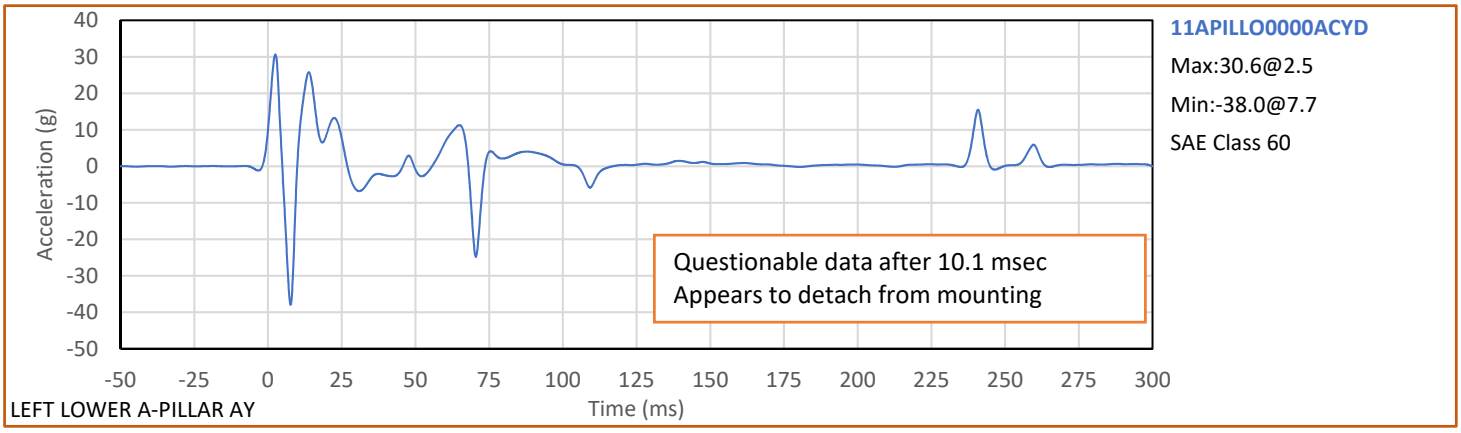
Applus IDIADA KARCO



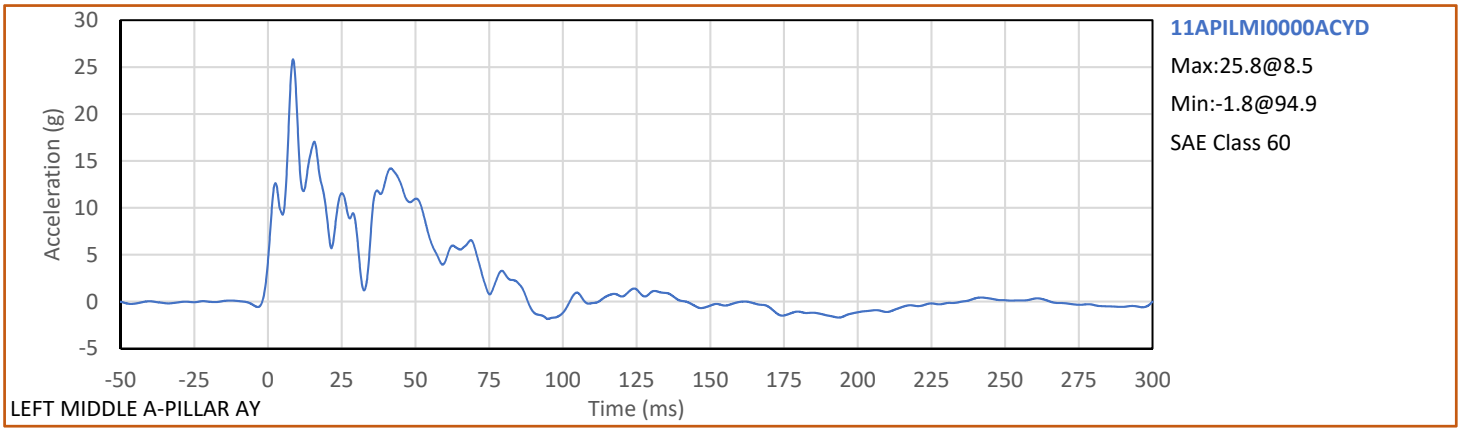
LEFT SIDE SILL AT FRONT SEAT AY



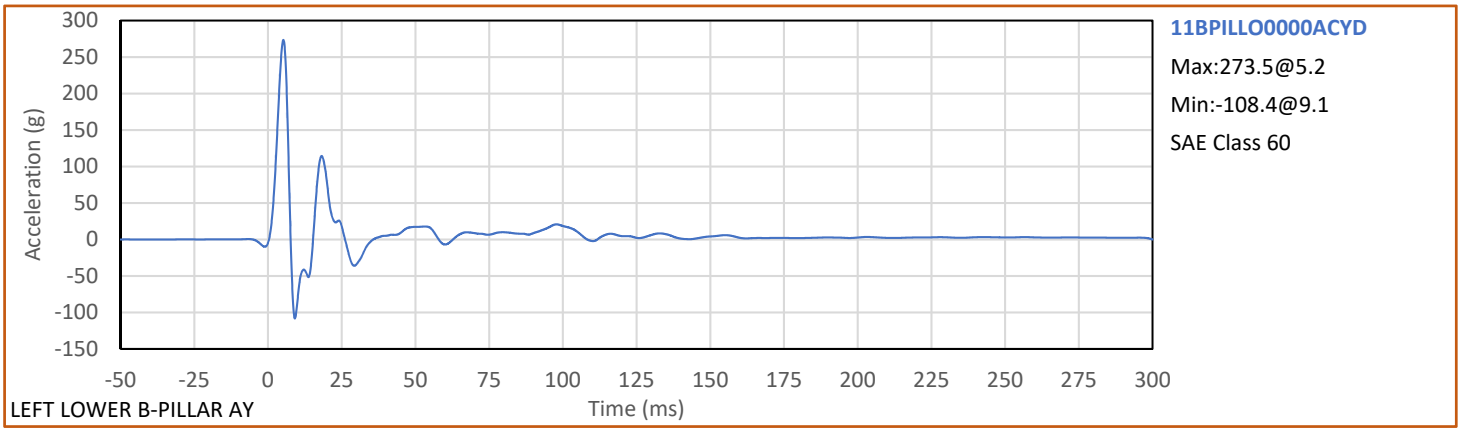
LEFT SIDE SILL AT REAR SEAT AY

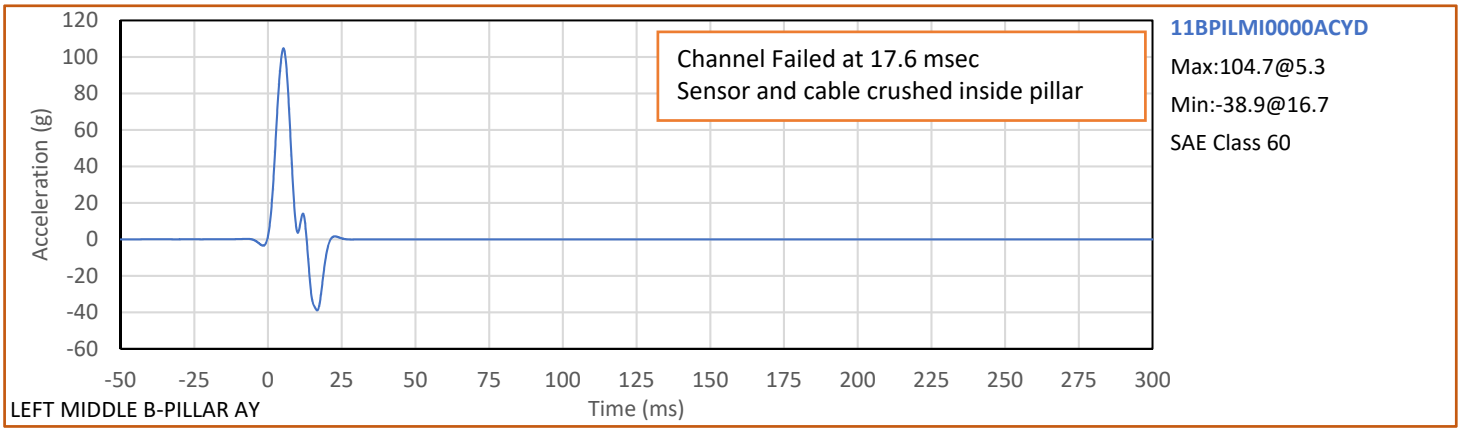


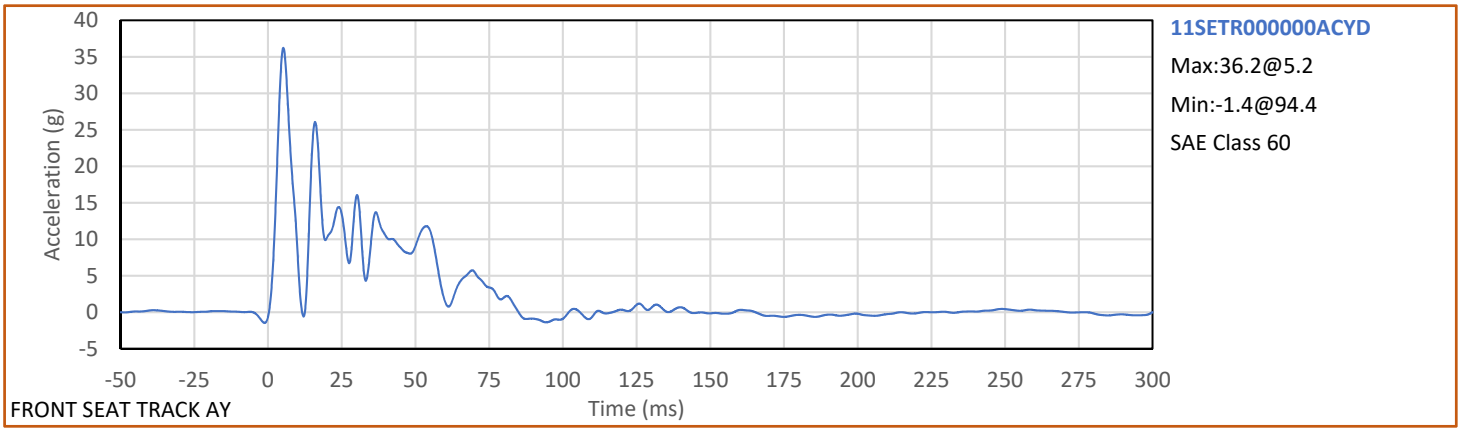
LEFT LOWER A-PILLAR AY

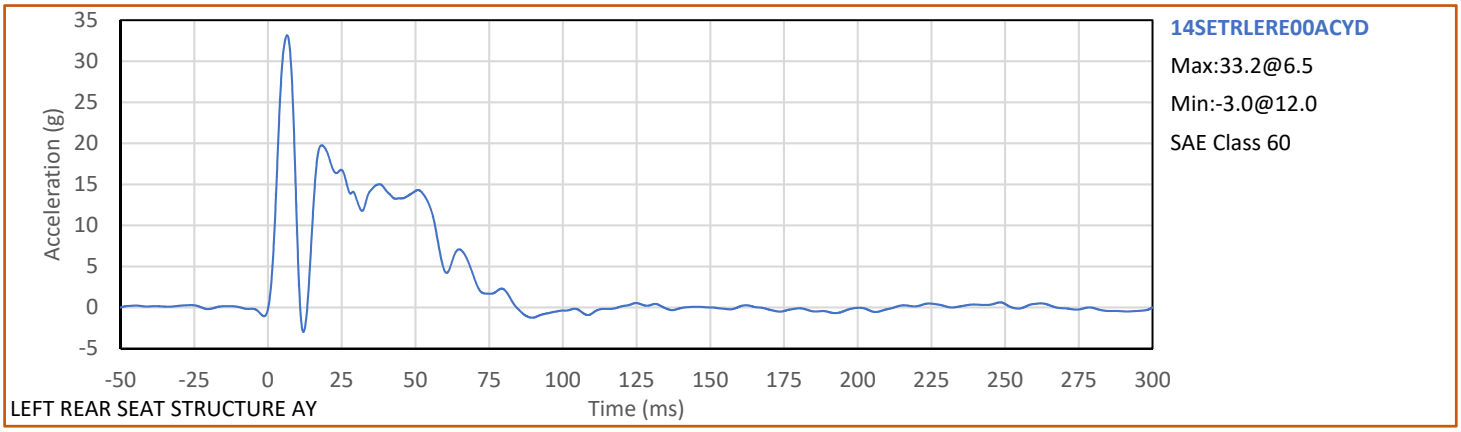


LEFT MIDDLE A-PILLAR AY


11BPILLO0000ACYD
Max:273.5@5.2
Min:-108.4@9.1
SAE Class 60
Acceleration (g)
Time (ms)
LEFT LOWER B-PILLAR AY


Channel Failed at 17.6 msec
Sensor and cable crushed inside pillar
11BPILMI0000ACYD
Max:104.7@5.3
Min:-38.9@16.7
SAE Class 60
Acceleration (g)
Time (ms)
LEFT MIDDLE B-PILLAR AY


11SETR000000ACYD
Max:36.2@5.2
Min:-1.4@94.4
SAE Class 60
Acceleration (g)
Time (ms)
FRONT SEAT TRACK AY

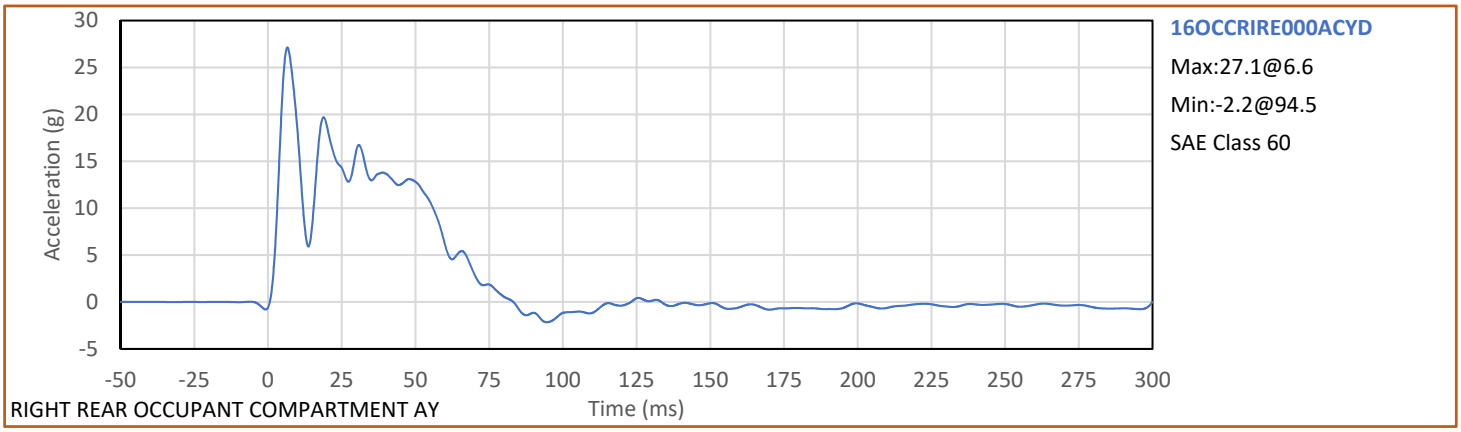

14SETRLERE00ACYD
Max:33.2@6.5
Min:-3.0@12.0
SAE Class 60
Acceleration (g)
Time (ms)
LEFT REAR SEAT STRUCTURE AY

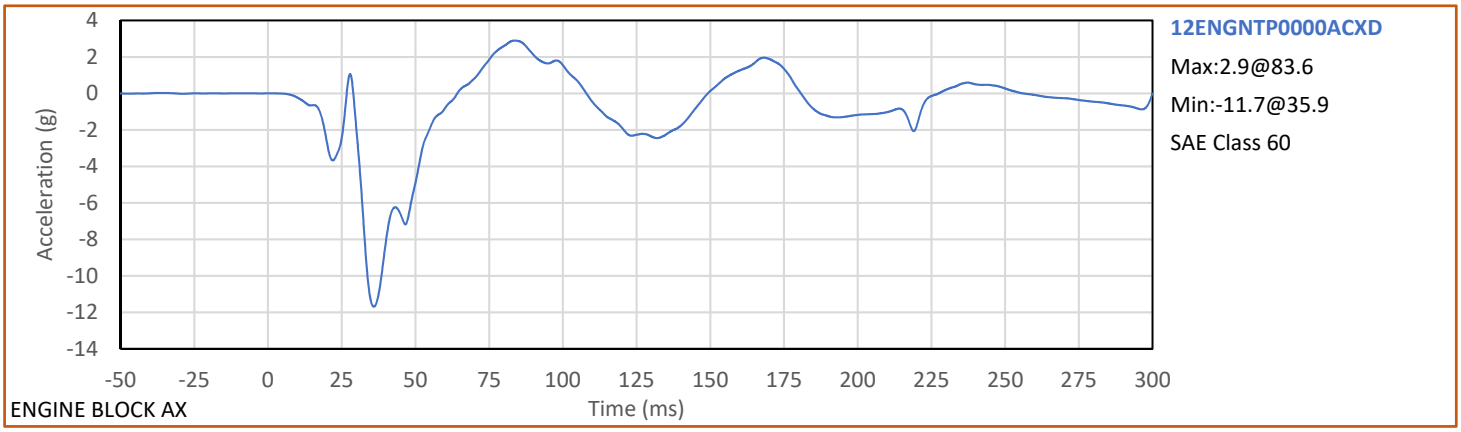
Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

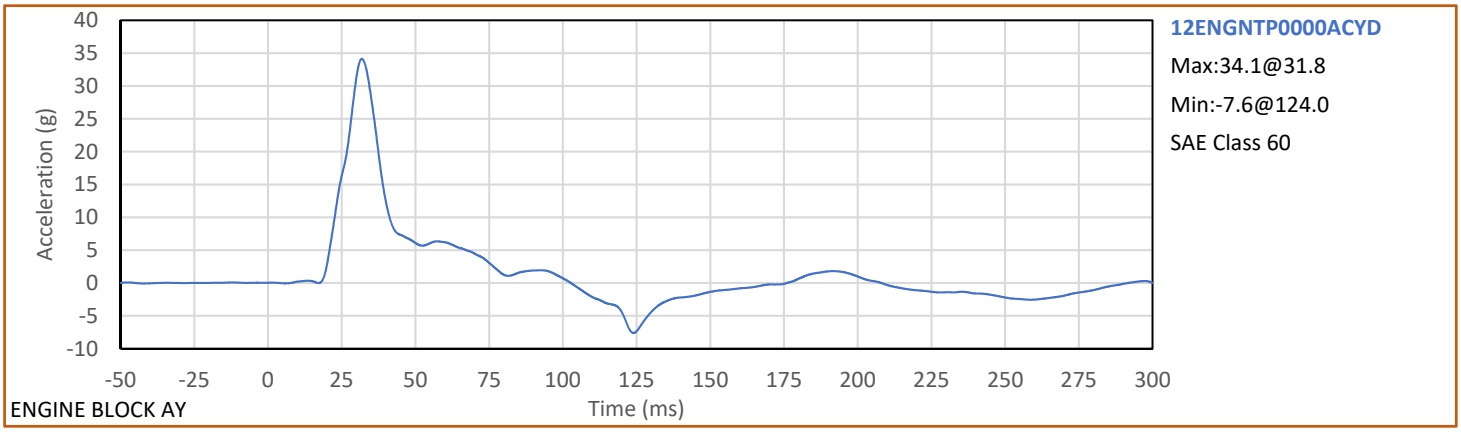
Test Program: 55/28 km/h 90° Research Side Impact (MDB)

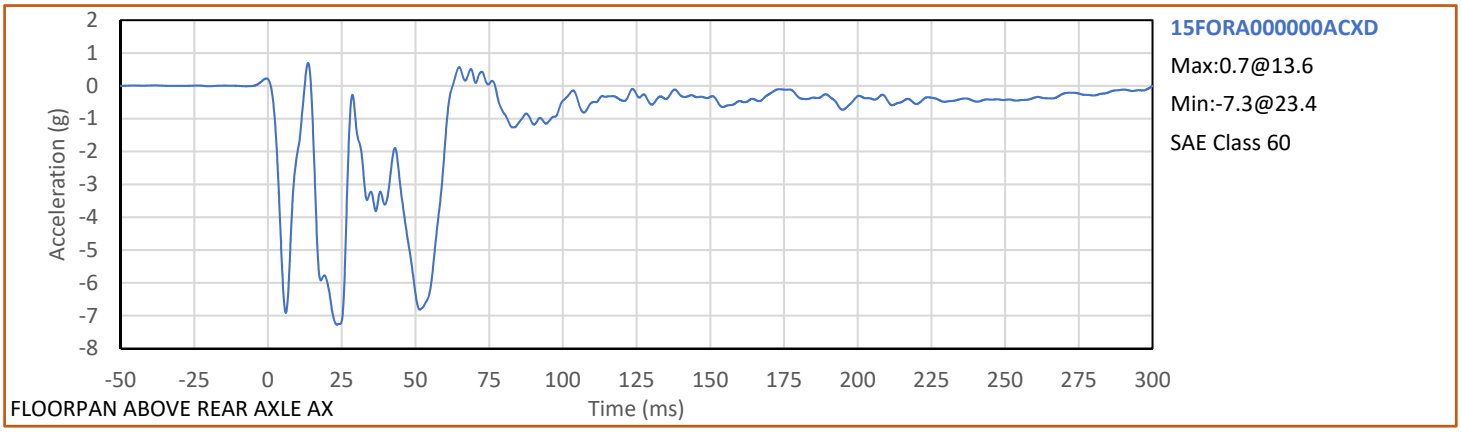
NHTSA No.: R20185380

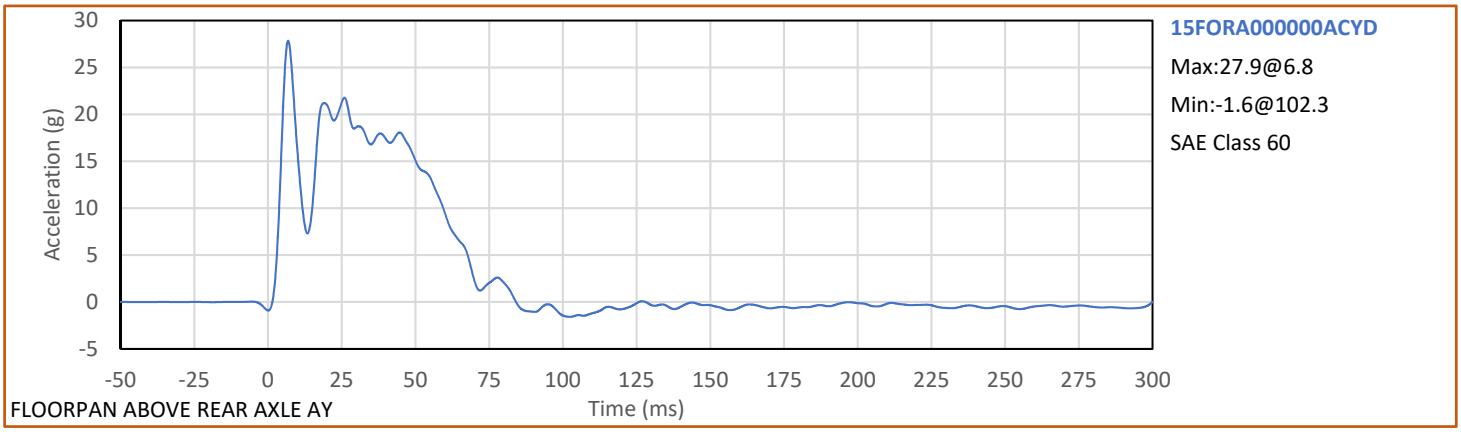
Test Date: 9/9/2019

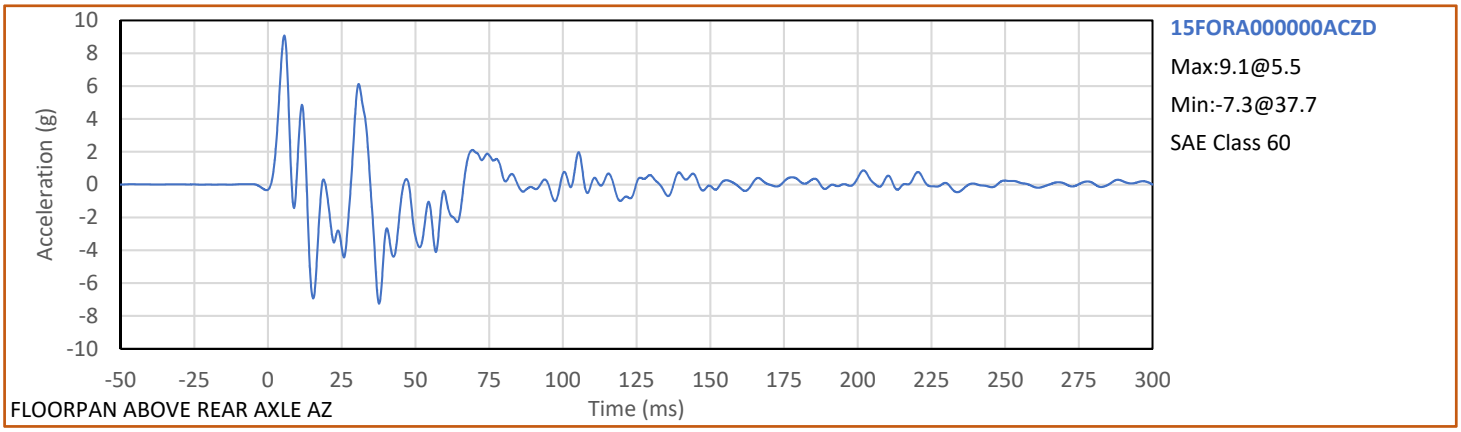


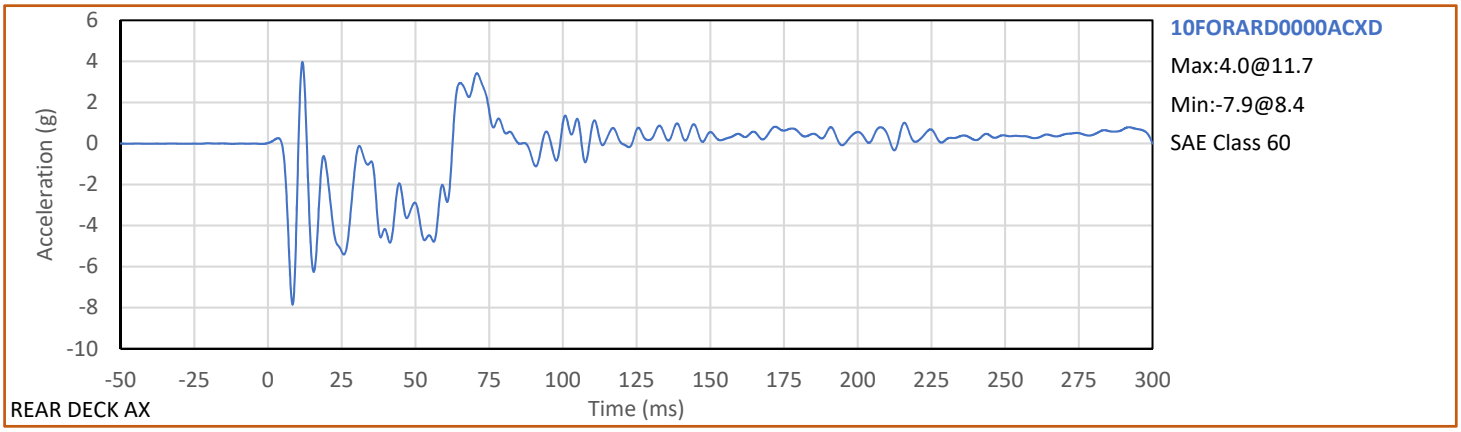


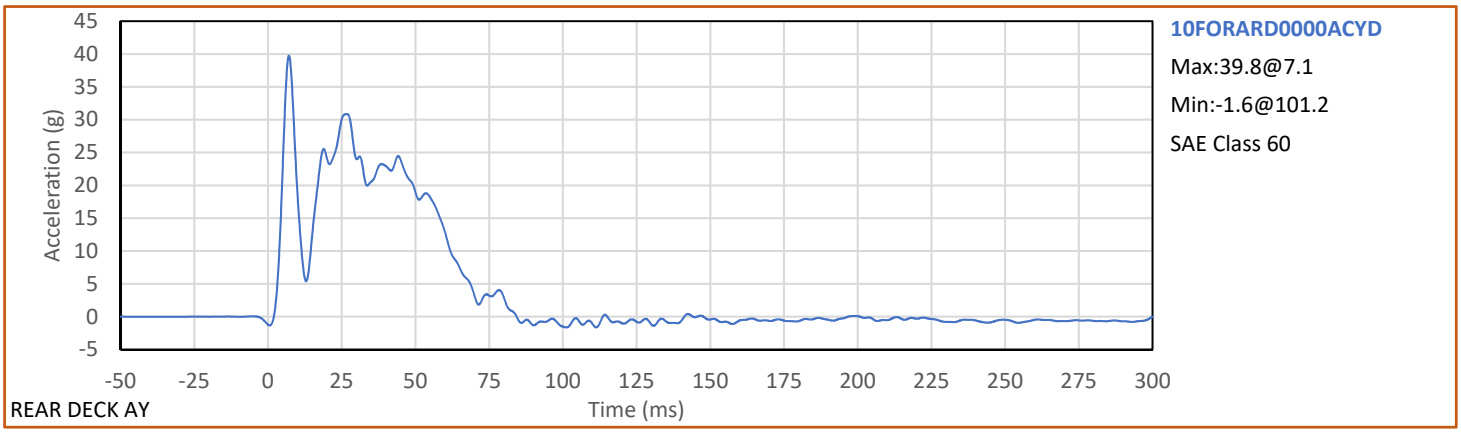





15FORA000000ACYD
Max:27.9@6.8
Min:-1.6@102.3
SAE Class 60
Acceleration (g)
Time (ms)
FLOORPAN ABOVE REAR AXLE AY


15FORA000000ACZD
Max:9.1@5.5
Min:-7.3@37.7
SAE Class 60
Acceleration (g)
Time (ms)
FLOORPAN ABOVE REAR AXLE AZ


10FORARD0000ACXD
Max:4.0@11.7
Min:-7.9@8.4
SAE Class 60
Acceleration (g)
Time (ms)
REAR DECK AX

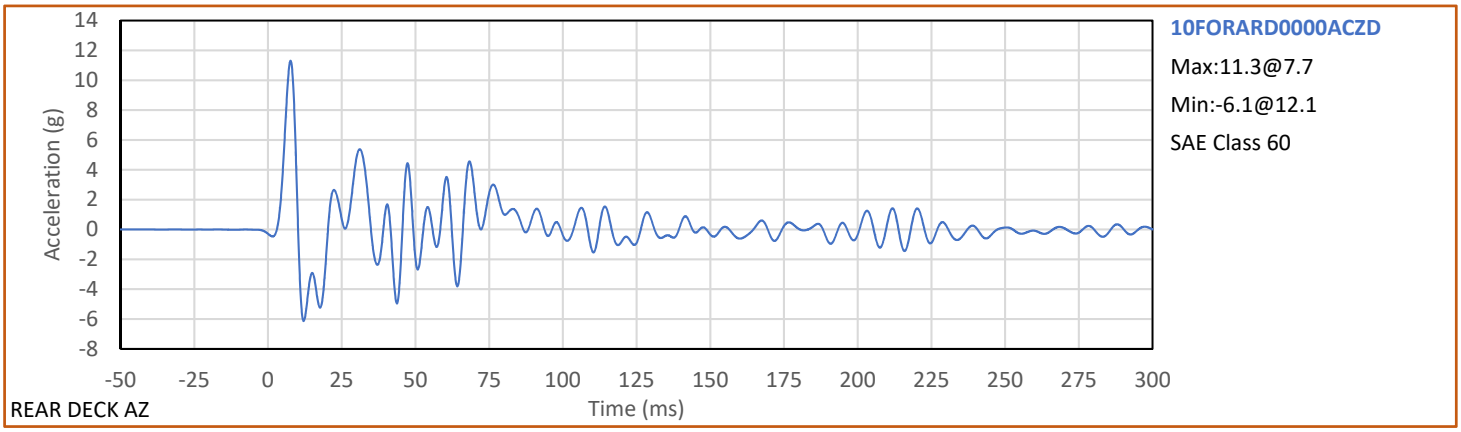

10FORARD0000ACYD
Max:39.8@7.1
Min:-1.6@101.2
SAE Class 60
Acceleration (g)
Time (ms)
REAR DECK AY

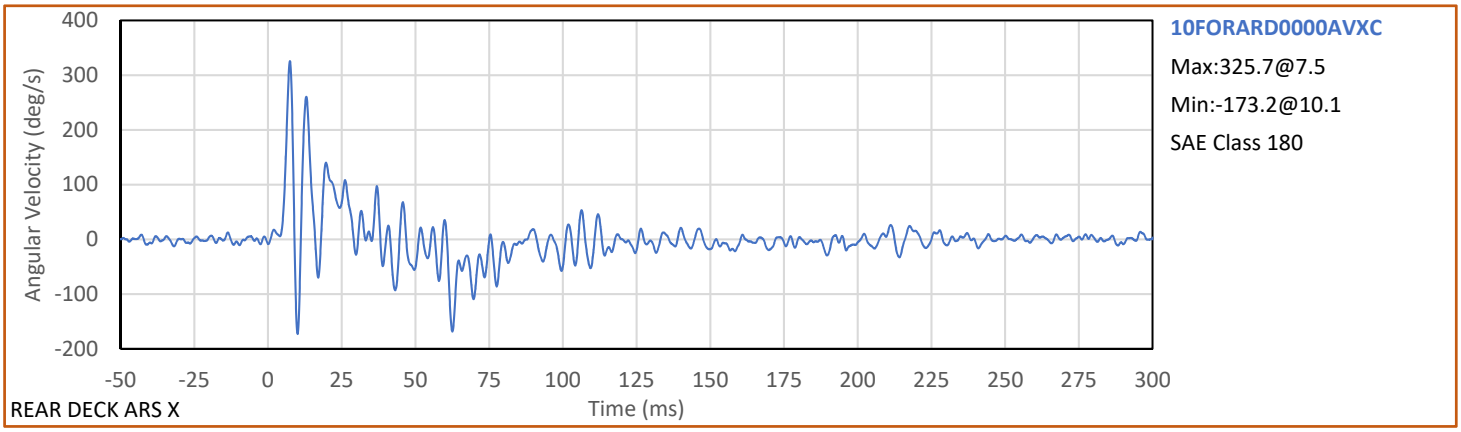
Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

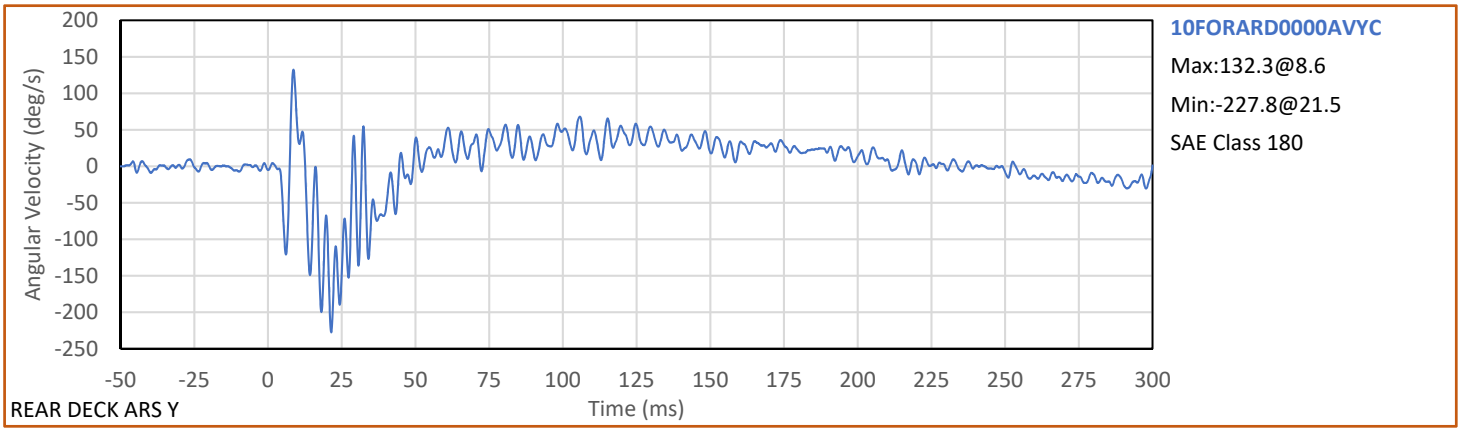
Test Program: 55/28 km/h 90° Research Side Impact (MDB)

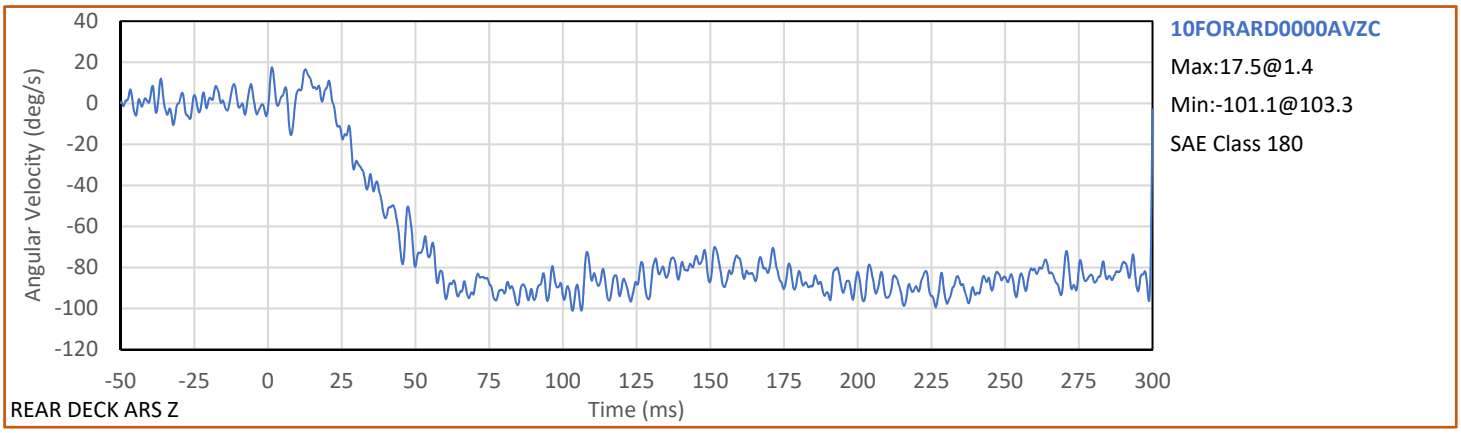
NHTSA No.: R20185380

Test Date: 9/9/2019









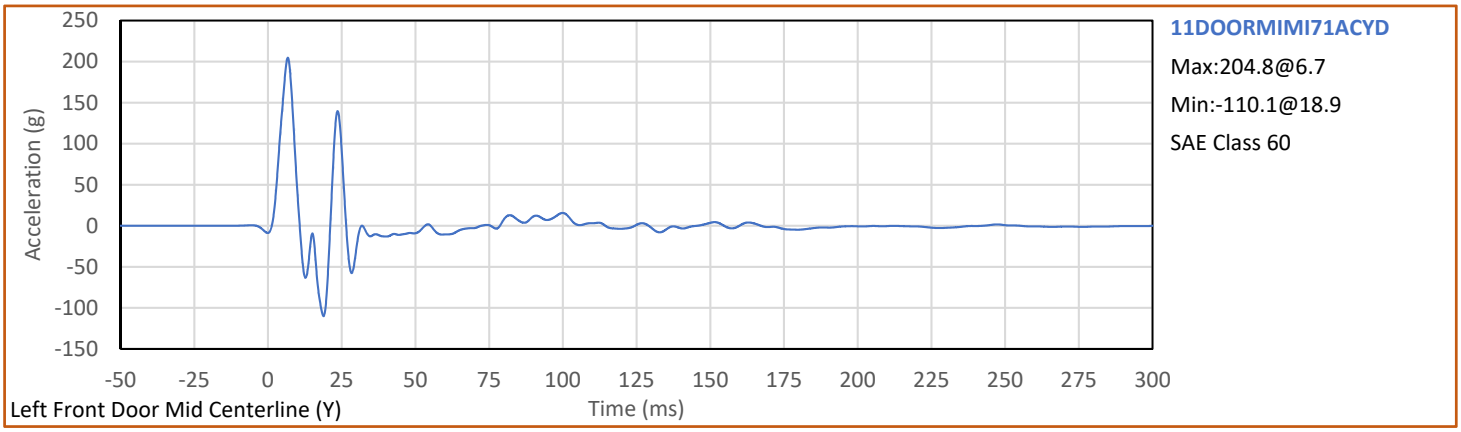
Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

Test Program: 55/28 km/h 90° Research Side Impact (MDB)

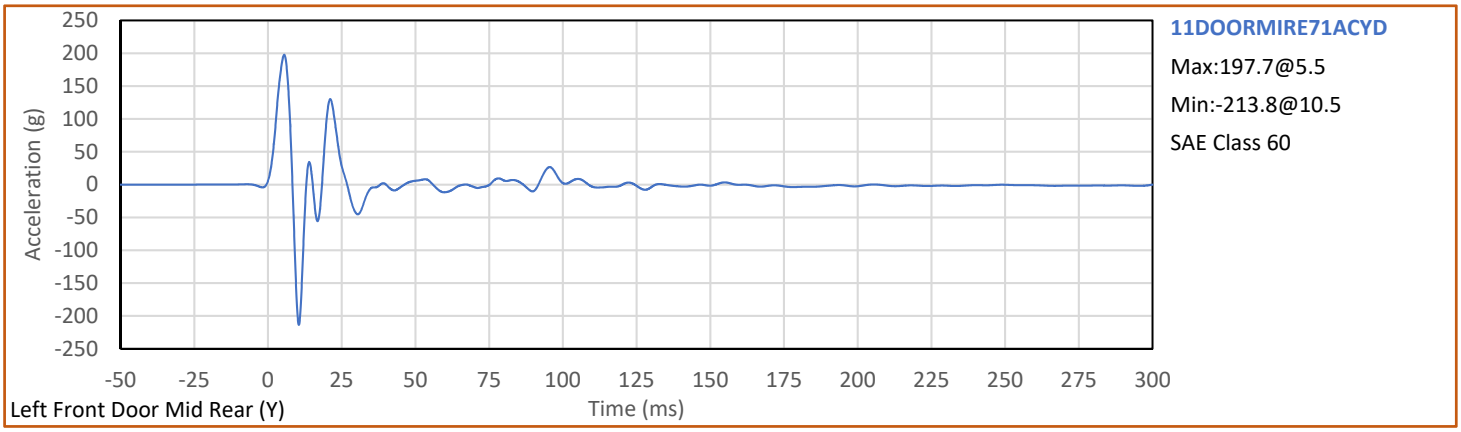
NHTSA No.: R20185380

Test Date: 9/9/2019

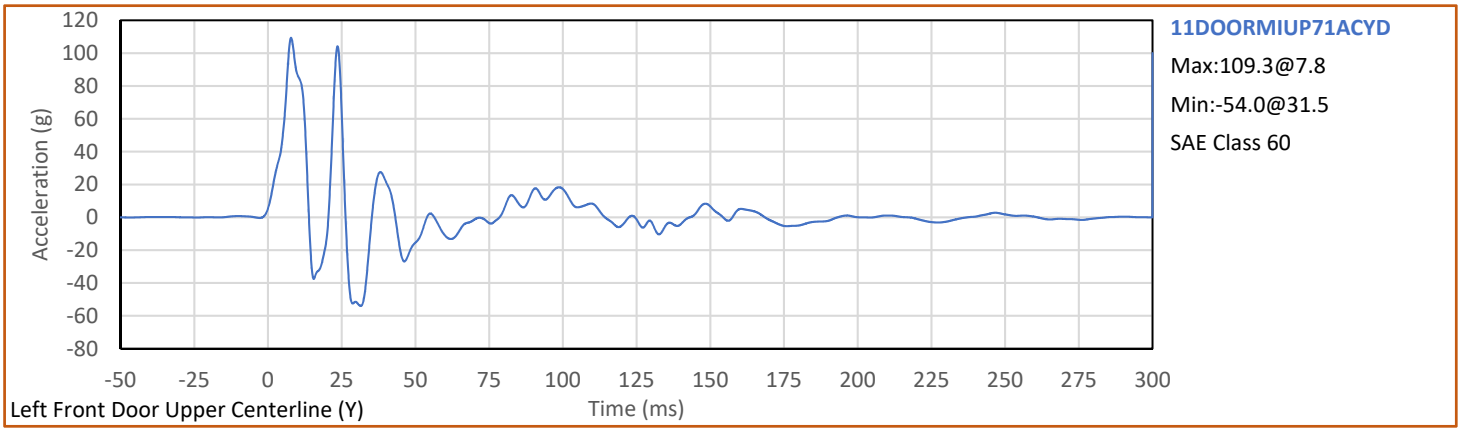
Applus IDIADA KARCO



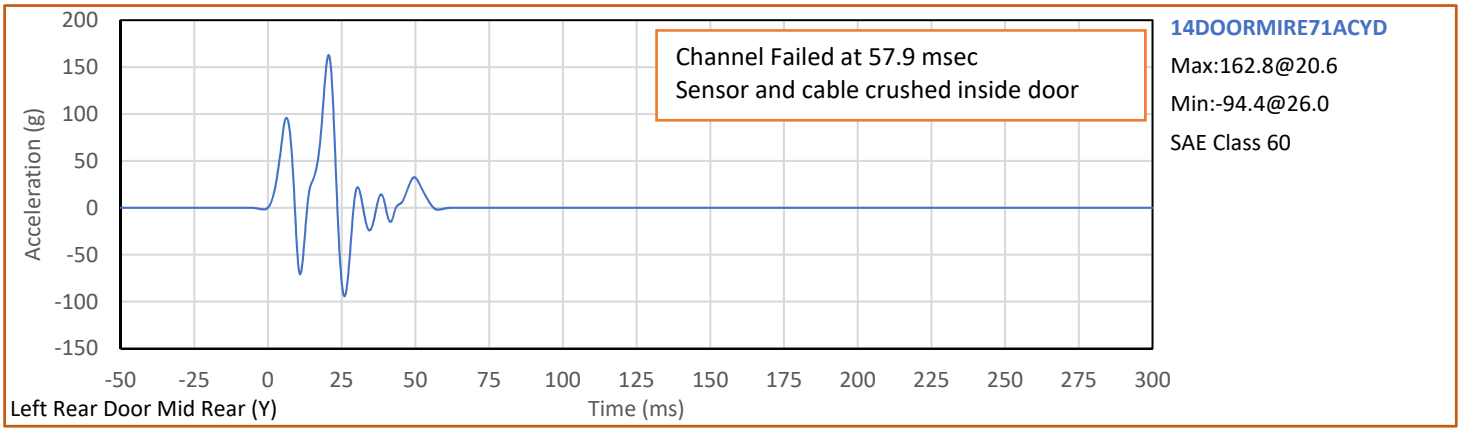
11DOORMIMI71ACYD
Max:204.8@6.7
Min:-110.1@18.9
SAE Class 60



11DOORMIRE71ACYD
Max:197.7@5.5
Min:-213.8@10.5
SAE Class 60



11DOORMIUP71ACYD
Max:109.3@7.8
Min:-54.0@31.5
SAE Class 60



14DOORMIRE71ACYD
Max:162.8@20.6
Min:-94.4@26.0
SAE Class 60

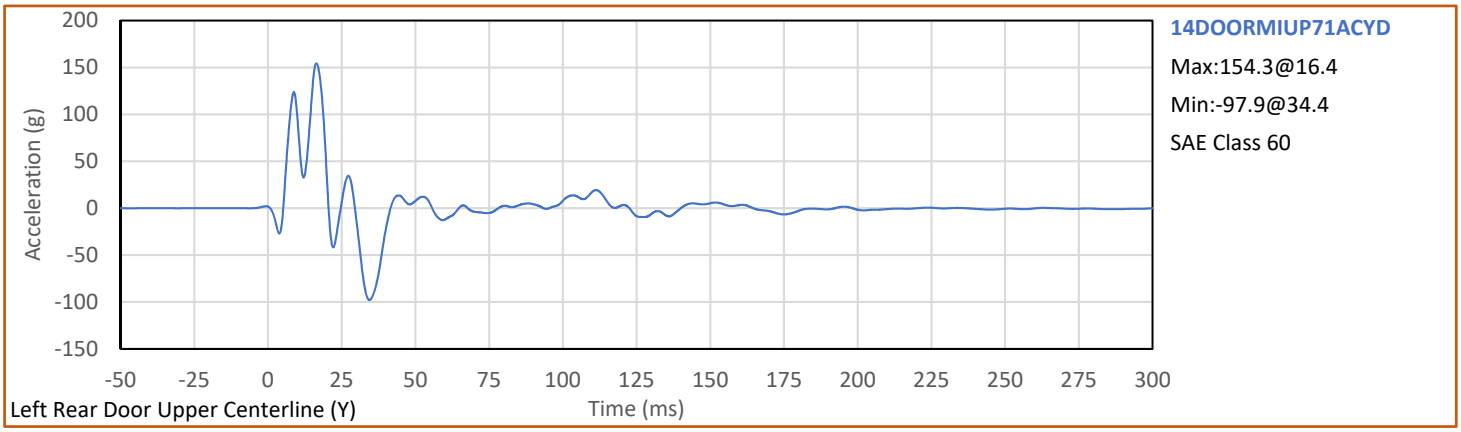
Test Vehicle: 2018 Honda Accord LX 4-Door Sedan

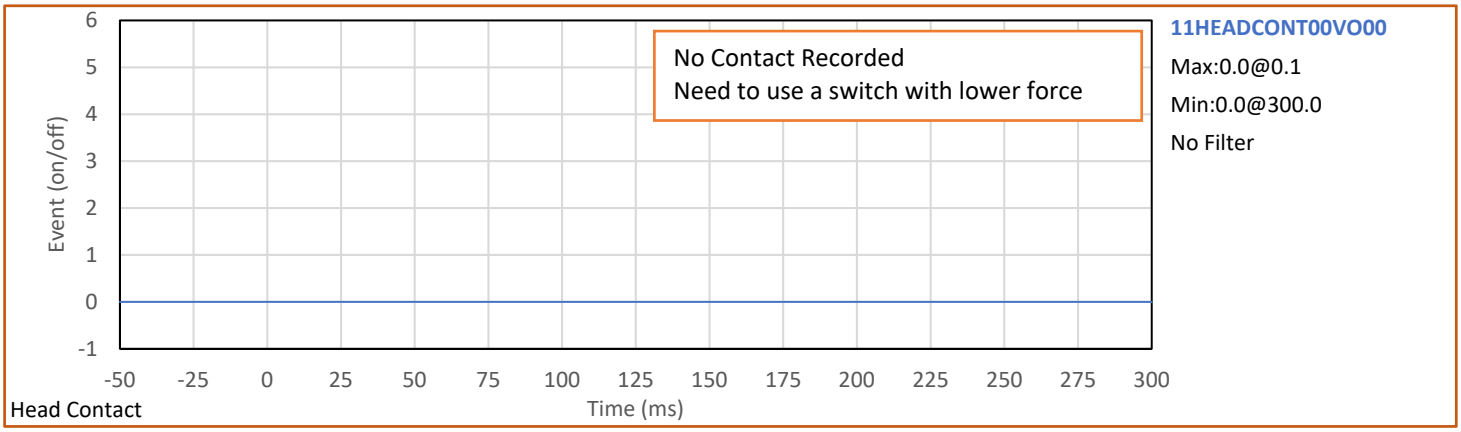
Test Program: 55/28 km/h 90° Research Side Impact (MDB)

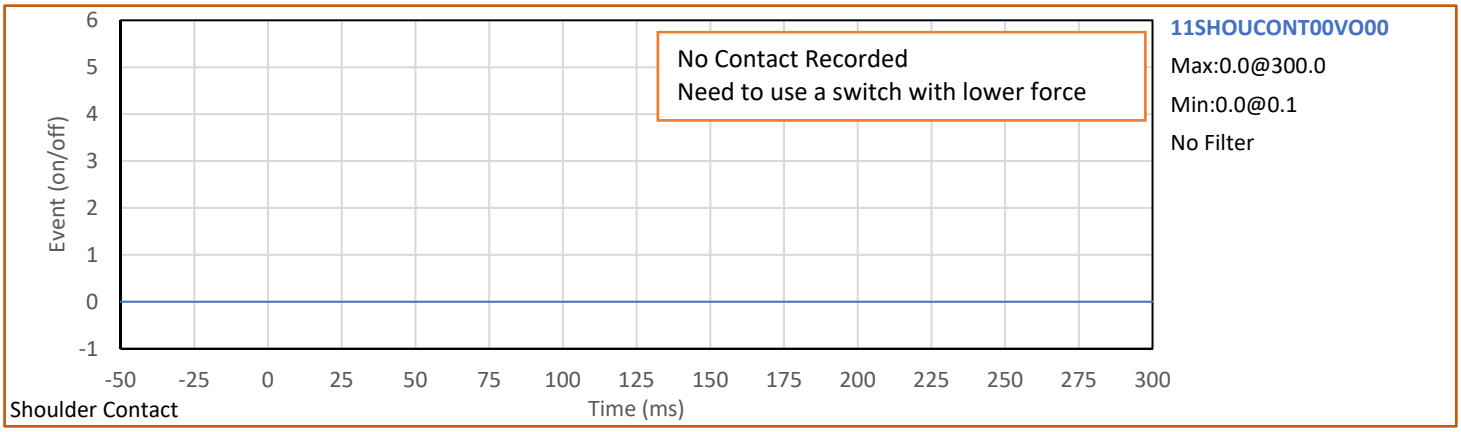
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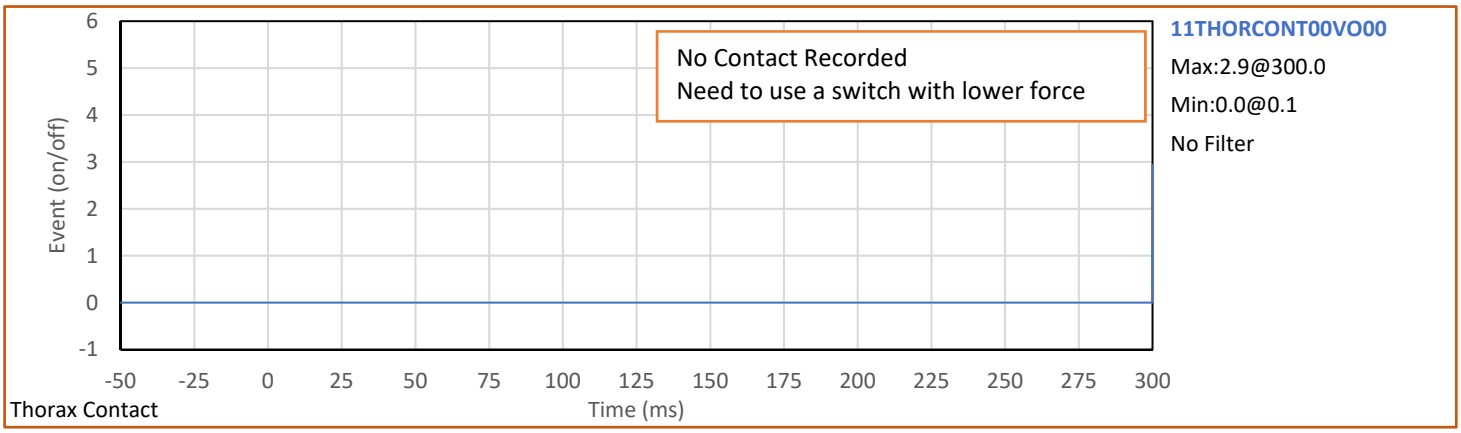
Test Date: 9/9/2019

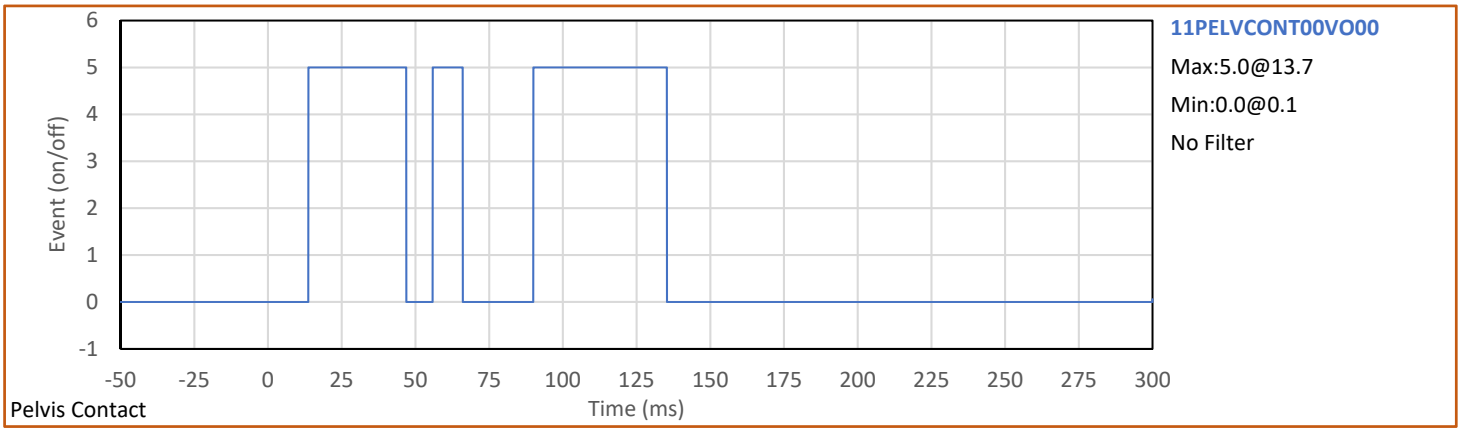
Applus IDIADA KARCO

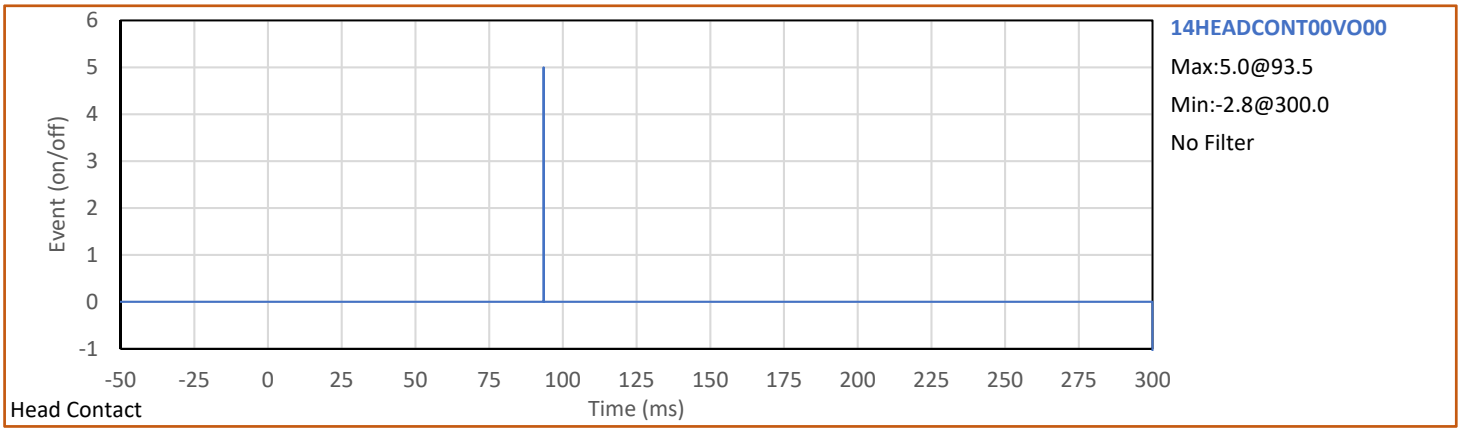


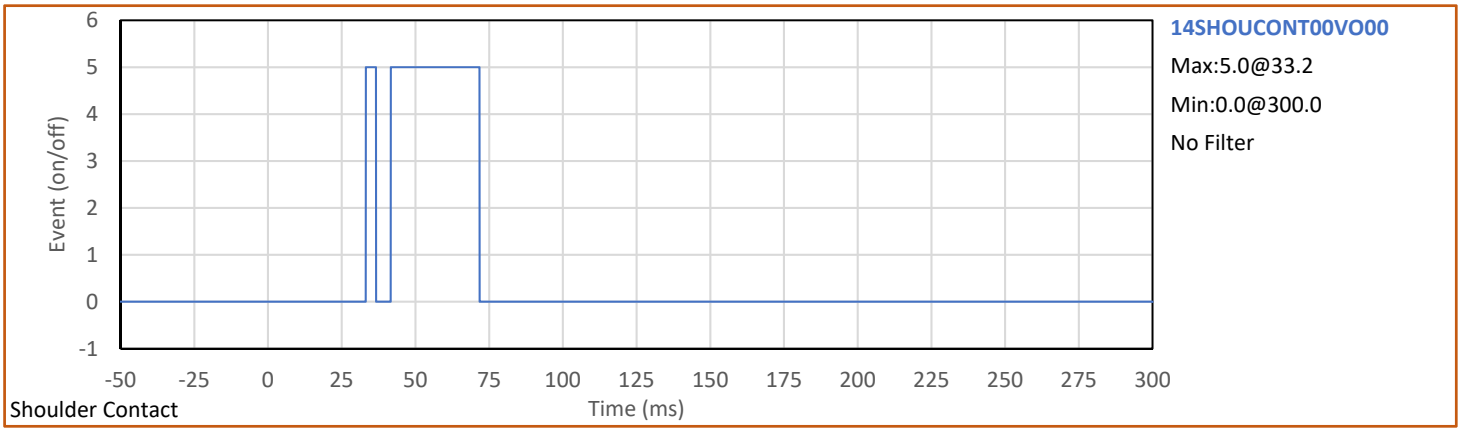


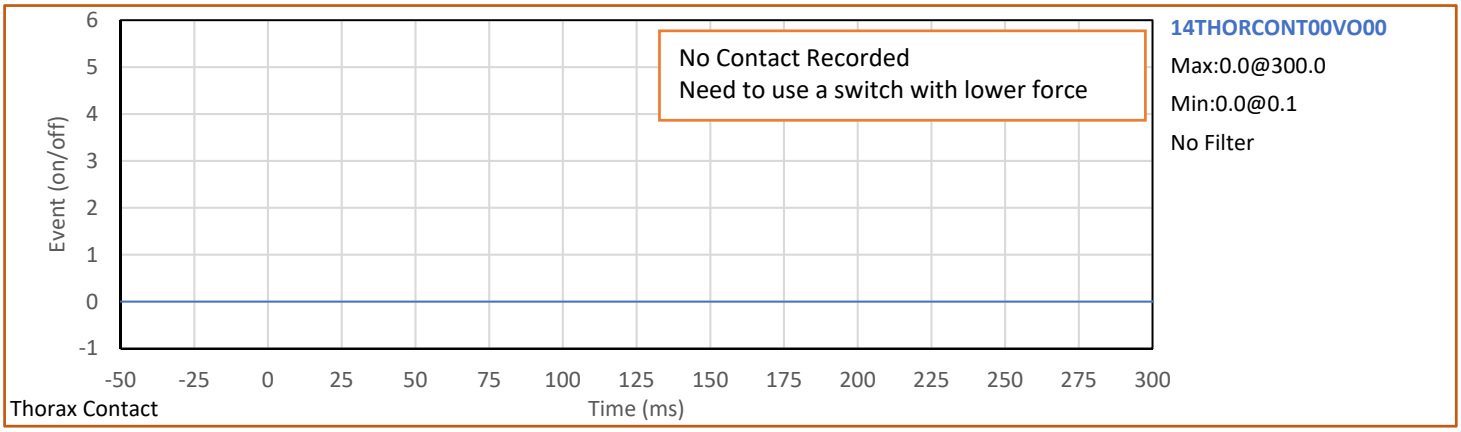


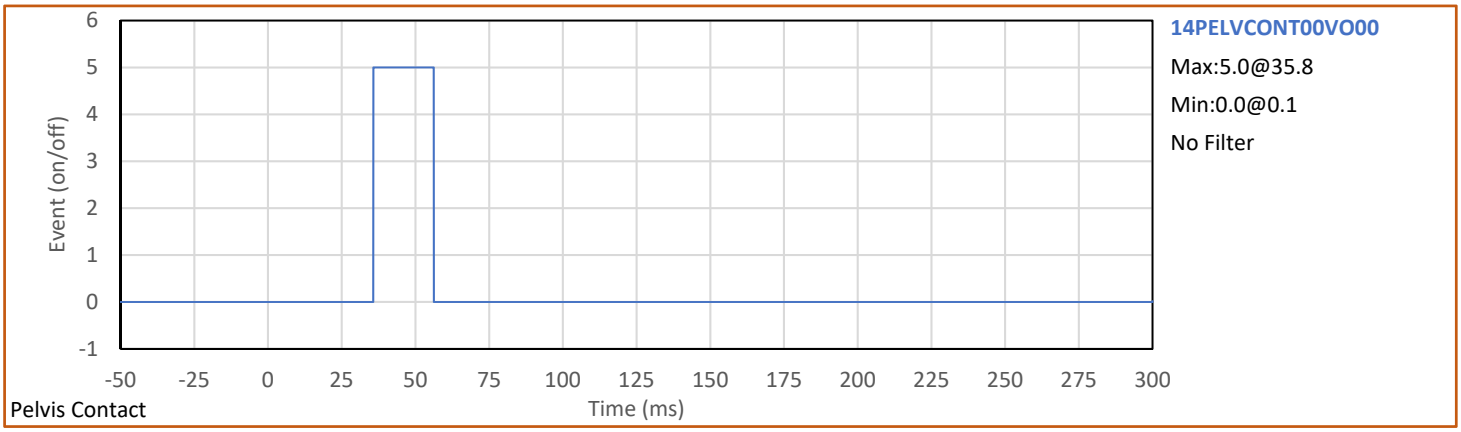



11PELVCONT00VO00
Max:5.0@13.7
Min:0.0@0.1
No Filter
Event (on/off)
Time (ms)
Pelvis Contact


14HEADCONT00VO00
Max:5.0@93.5
Min:-2.8@300.0
No Filter
Event (on/off)
Time (ms)
Head Contact


14SHOUCONT00VO00
Max:5.0@33.2
Min:0.0@300.0
No Filter
Event (on/off)
Time (ms)
Shoulder Contact

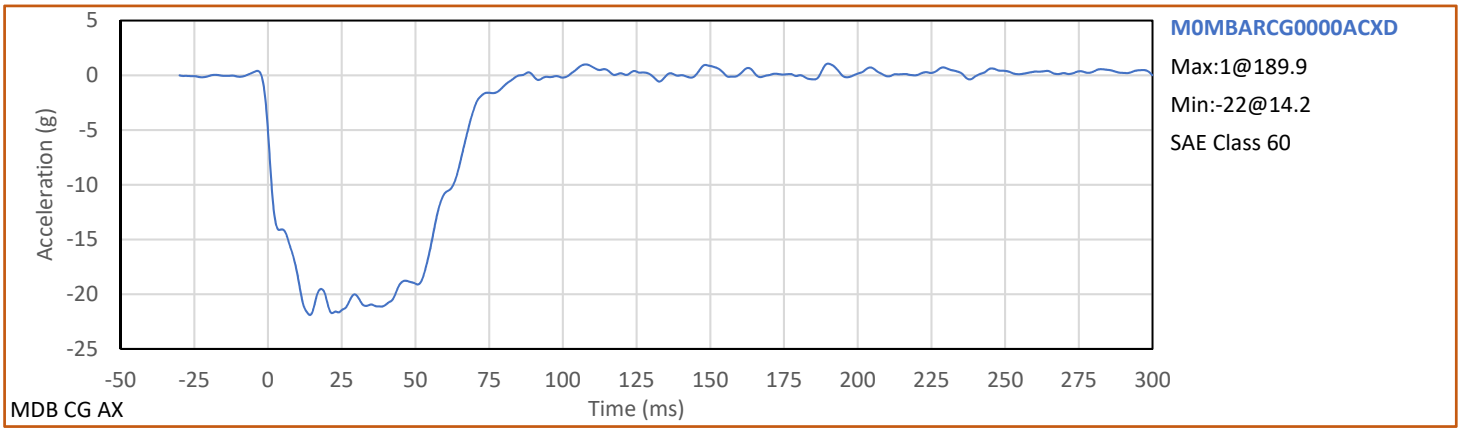

No Contact Recorded
Need to use a switch with lower force
14THORCONT00VO00
Max:0.0@300.0
Min:0.0@0.1
No Filter
Event (on/off)
Time (ms)
Thorax Contact

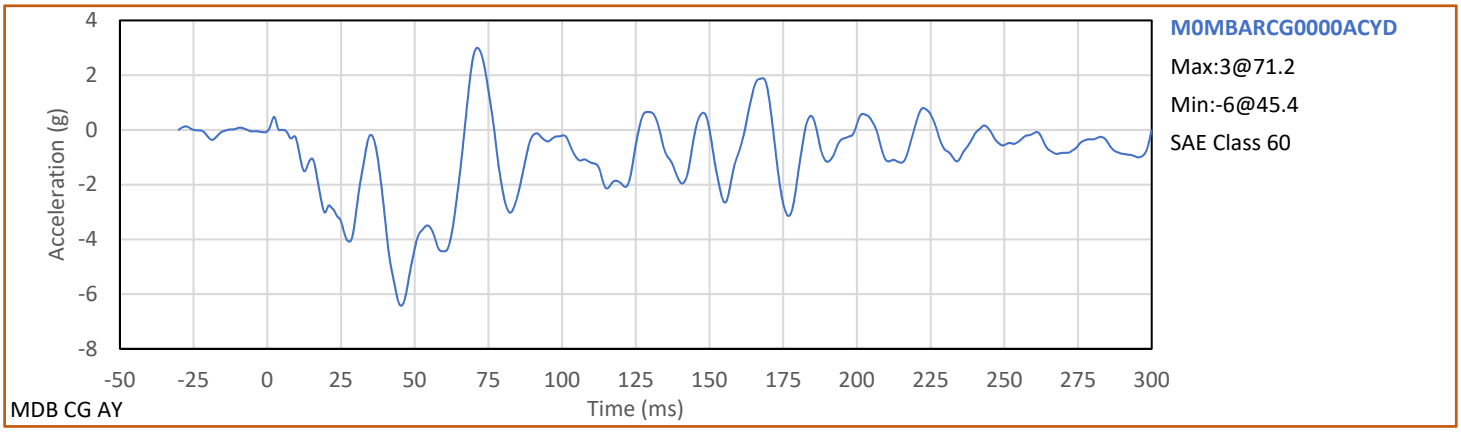


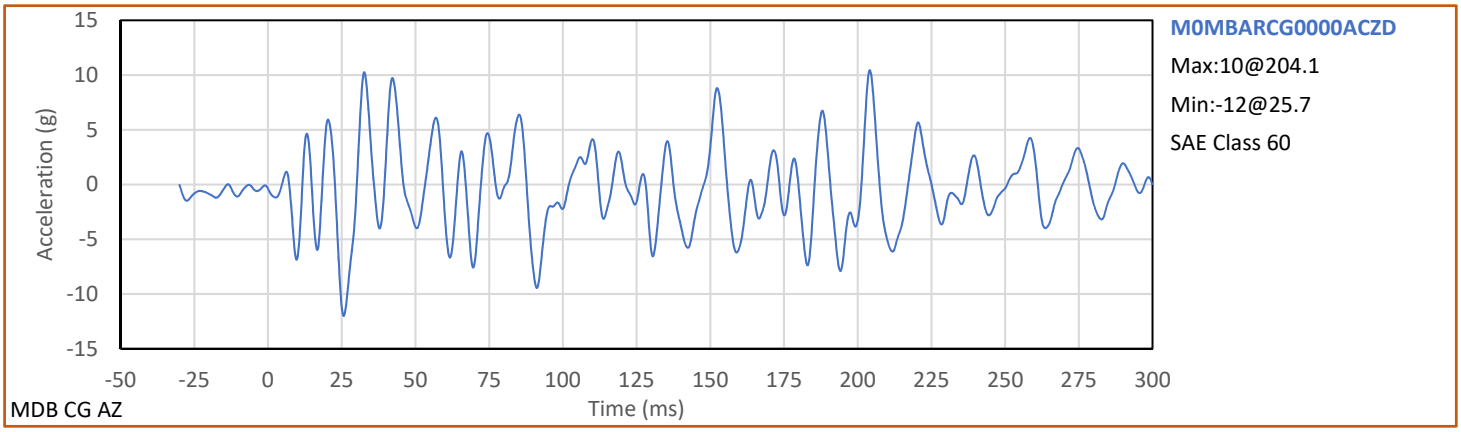
Pelvis Contact

APPENDIX B

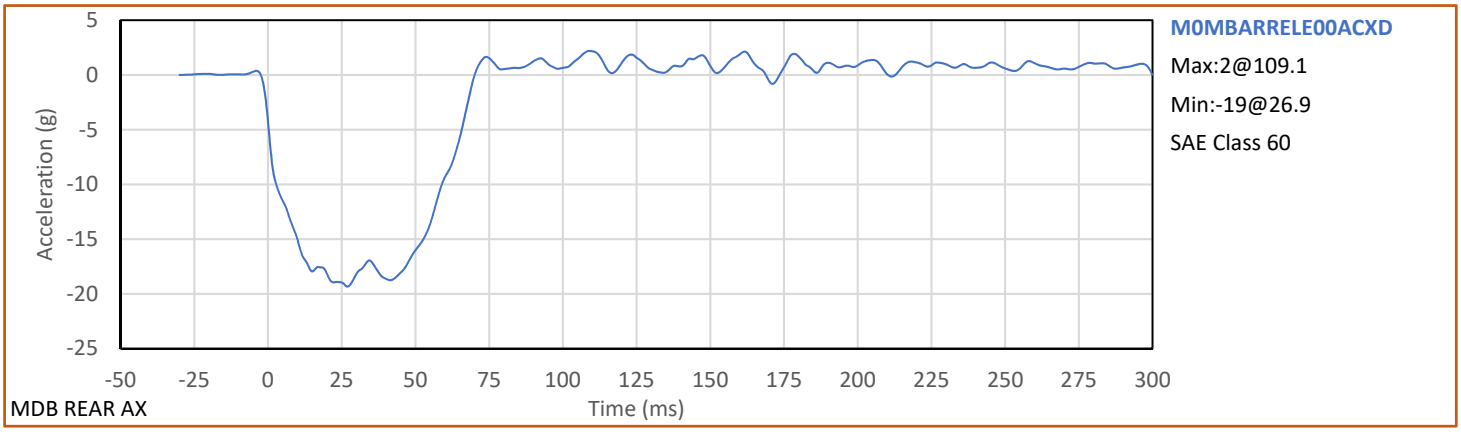
MOVING DEFORMABLE BARRIER INSTRUMENTATION PLOTS

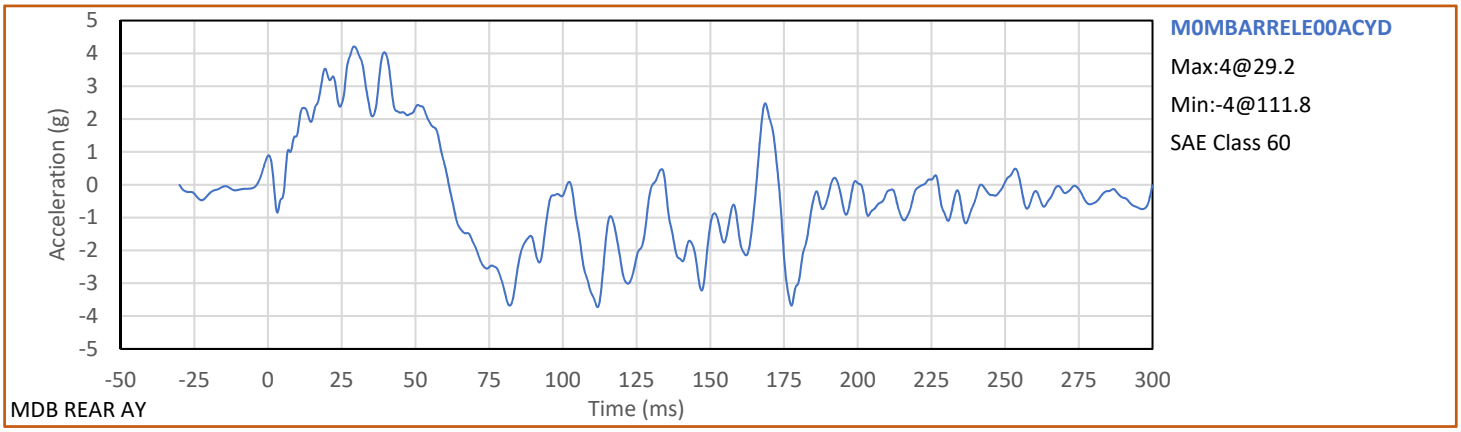

Acceleration (g)
Time (ms)
M0MBARCG0000ACXD
Max:1@189.9
Min:-22@14.2
SAE Class 60
MDB CG AX

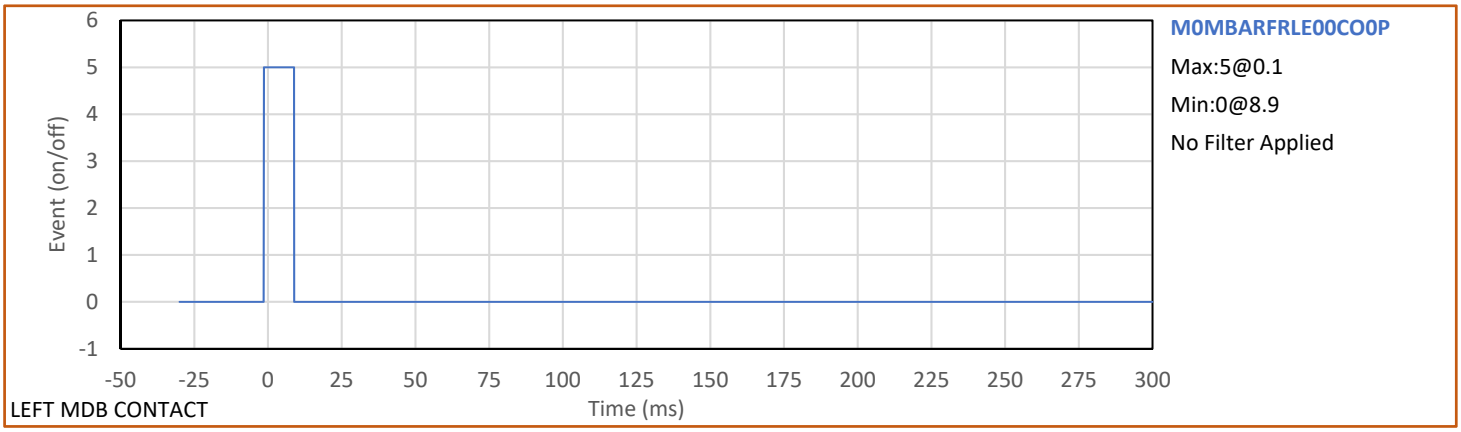

Acceleration (g)
Time (ms)
M0MBARCG0000ACYD
Max:3@71.2
Min:-6@45.4
SAE Class 60
MDB CG AY

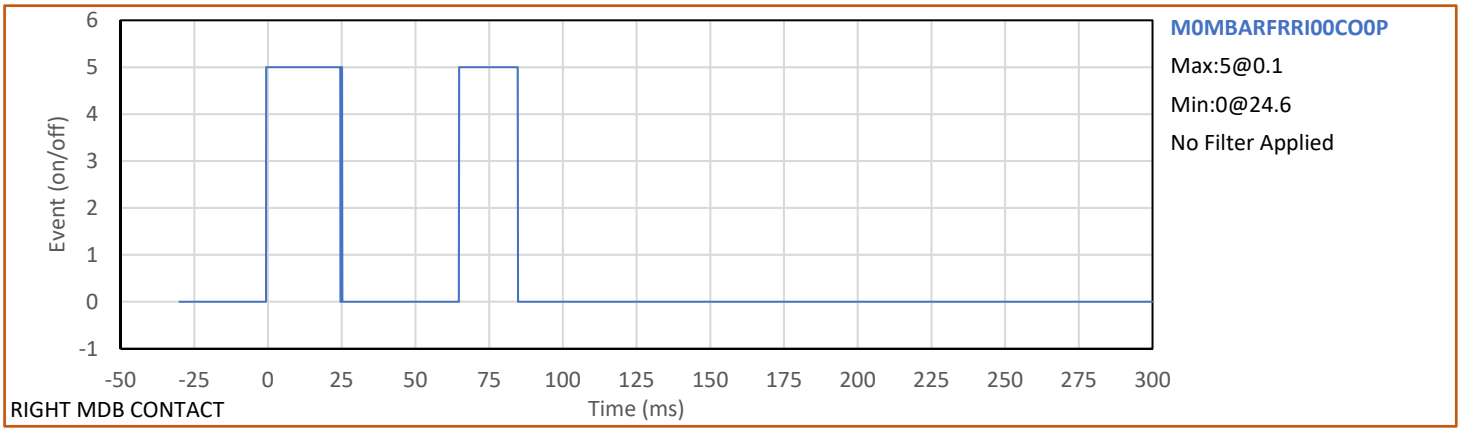

Acceleration (g)
Time (ms)
M0MBARCG0000ACZD
Max:10@204.1
Min:-12@25.7
SAE Class 60
MDB CG AZ

E


Acceleration (g)
Time (ms)
M0MBARRELE00ACXD
Max:2@109.1
Min:-19@26.9
SAE Class 60
MDB REAR AX


M0MBARRELE00ACYD
Max:4@29.2
Min:-4@111.8
SAE Class 60
Acceleration (g)
Time (ms)
MDB REAR AY


M0MBARFRLE00CO0P
Max:5@0.1
Min:0@8.9
No Filter Applied
Event (on/off)
Time (ms)
LEFT MDB CONTACT


M0MBARFRRI00CO0P
Max:5@0.1
Min:0@24.6
No Filter Applied
Event (on/off)
Time (ms)
RIGHT MDB CONTACT

APPENDIX C
ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA

APPENDIX C
Pre-Test ATD Configuration and Performance Verification Data
WorldSID 50th Male Side Impact ATD, Left Side Configuration*
S/N: EB8888

Note:

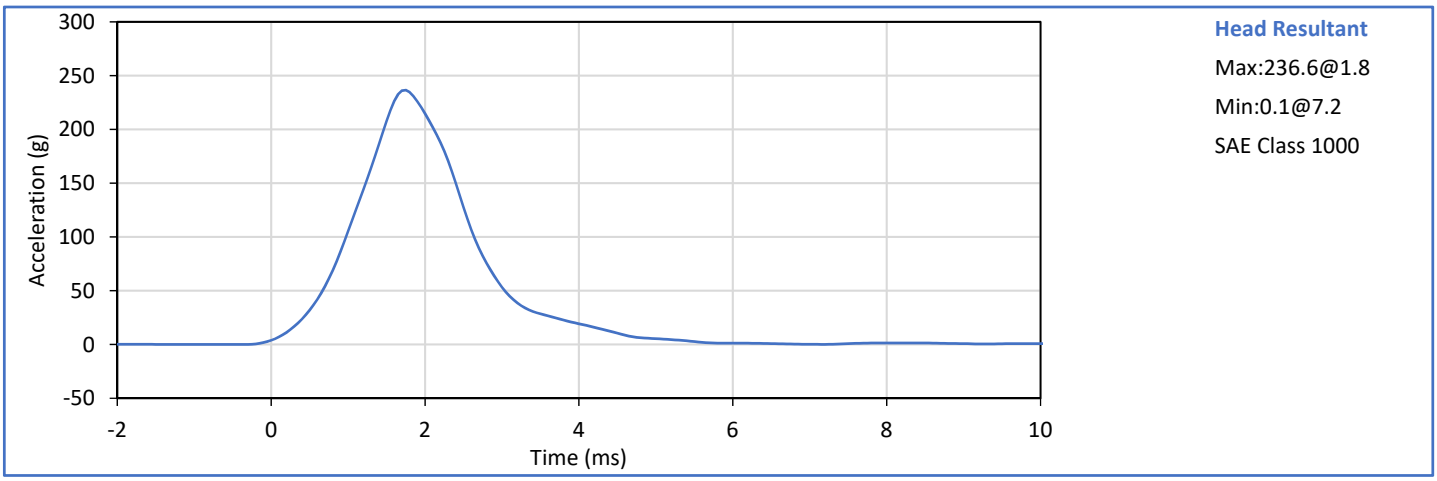
* *Pre-Test Head Drop (Lateral Right) has been performed after the first of two dynamic tests*
* *Neck Lateral Flexion (Right) performed with one velocity criteria out of the corridor. This test was not repeated due to time constraints of the ATD availability before testing*
* *Neck Torsion (Right) not performed due to time constraints of the ATD availability before testing*

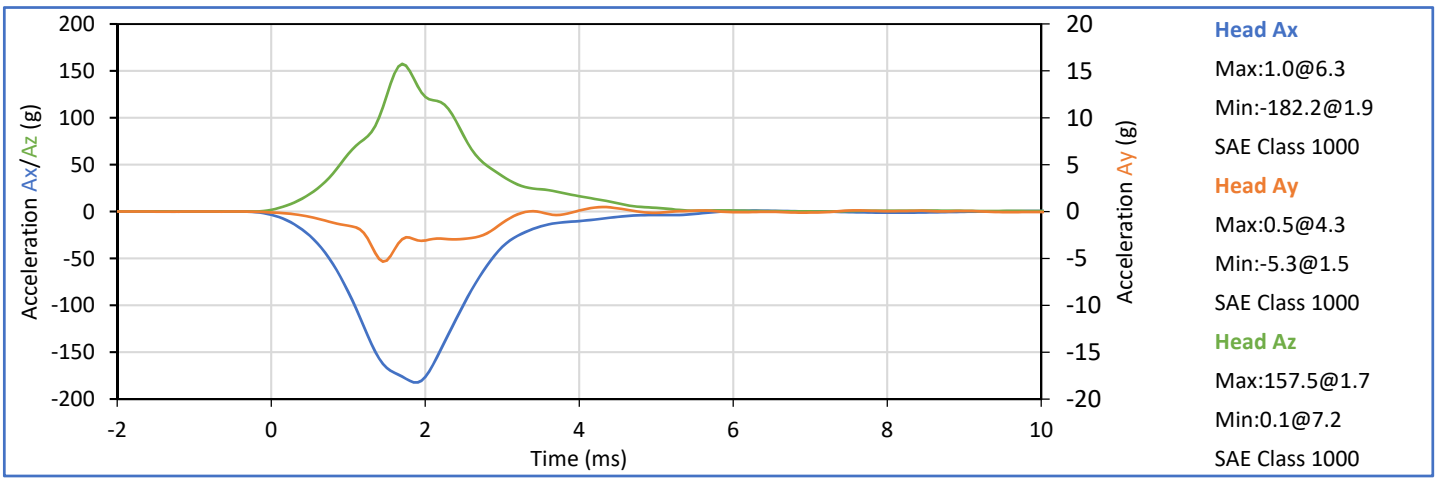
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Head Drop (Frontal)

ATD S/N: EB8888 Test Date: 2019-09-05

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	45	Pass
Peak Resultant Acceleration	g	211.0	261.0	236.6	Pass
Peak Ay	g	-15.0	15.0	-5.3	Pass
Oscillations After Main Pulse	%	-10.0	10.0	0.6	Pass
			Overall Test Results		Pass





Technician: J. Hernandez

Approved By: C-1 P. Puzzuto

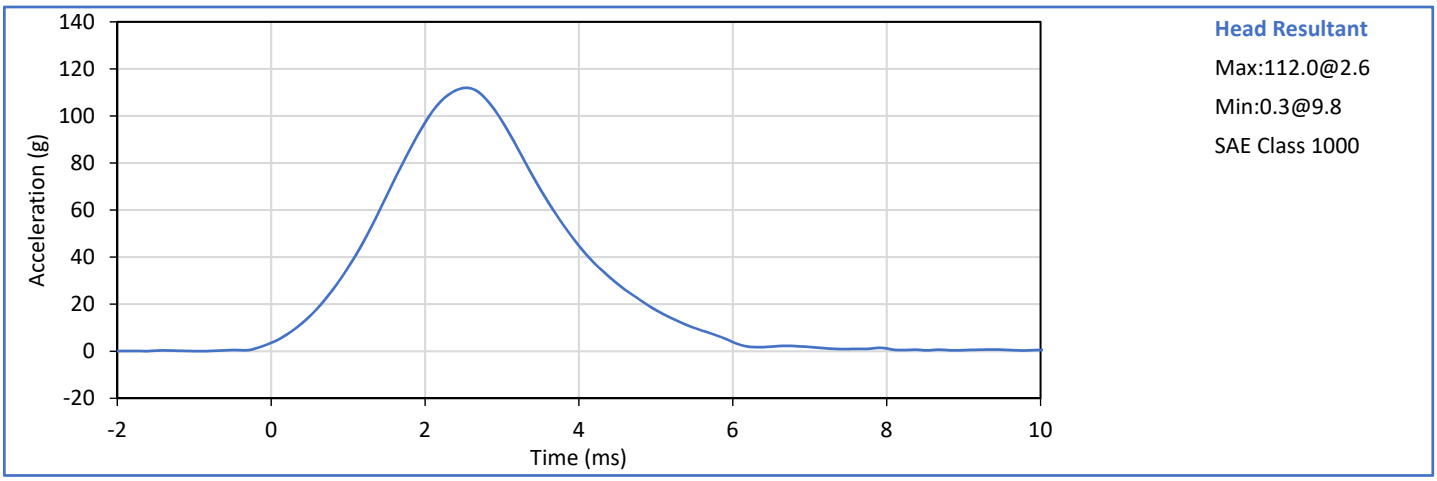
TR-P39012-01-NC

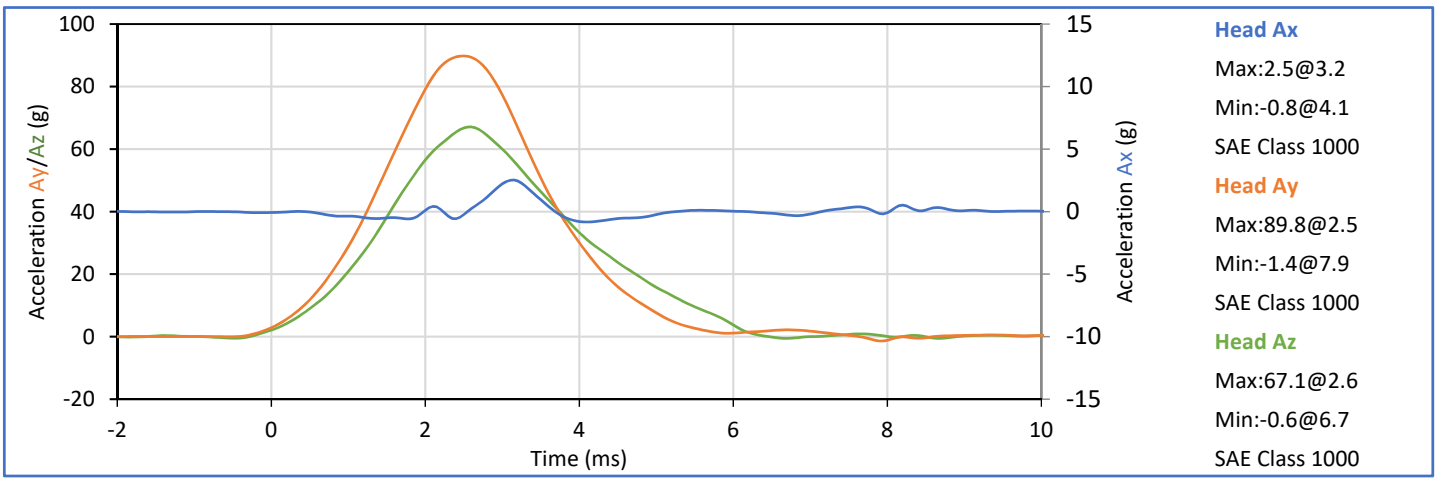
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Head Drop (Lateral Left)

ATD S/N: EB8888 Test Date: 2019-09-05

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	45	Pass
Peak Resultant Acceleration	g	107.0	126.0	112.0	Pass
Peak Ax	g	-15.0	15.0	2.5	Pass
Oscillations After Main Pulse	%	-10.0	10.0	2.0	Pass
			Overall Test Results		Pass





Technician: J. Hernandez

Approved By: C-2 P. Puzzuto

TR-P39012-01-NC

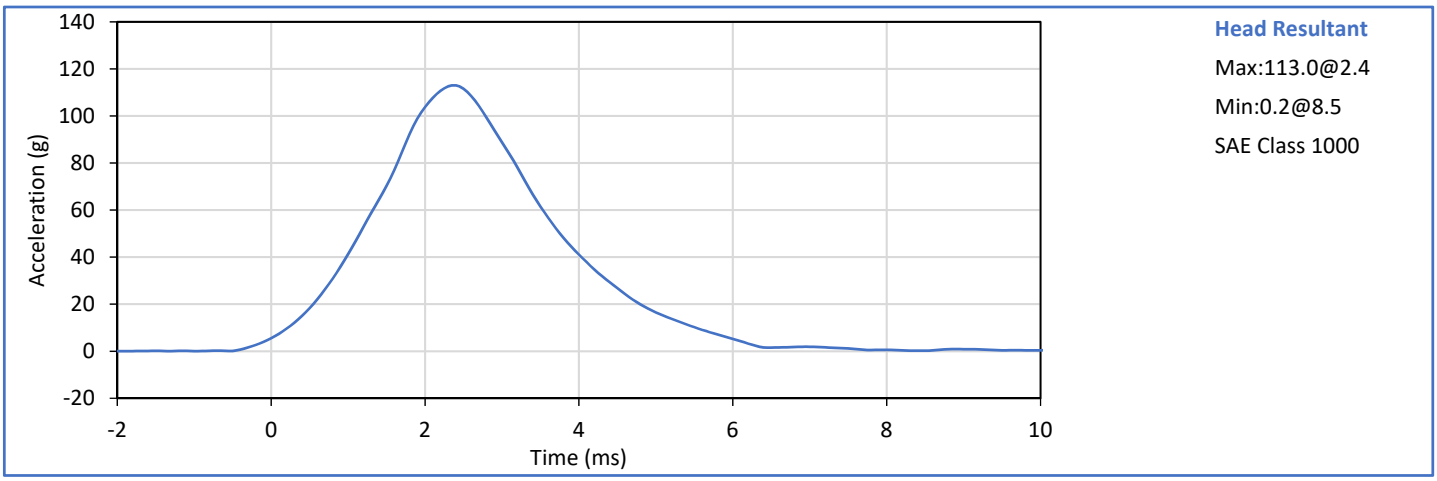
Applus IDIADA
KARCO

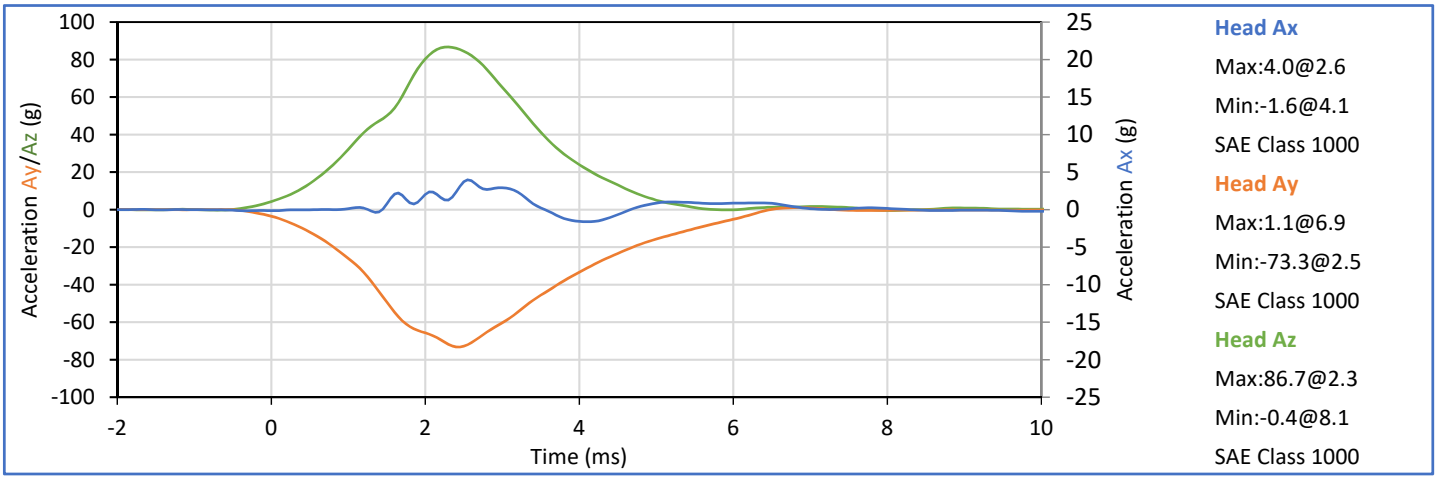
WorldSID 50th Male Side Impact ATD
Head Drop (Lateral Right)

ATD S/N: EB8888

Test Date: 2019-09-10

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	45	Pass
Peak Resultant Acceleration	g	107.0	126.0	113.0	Pass
Peak Ax	g	-15.0	15.0	4.0	Pass
Oscillations After Main Pulse	%	-10.0	10.0	1.7	Pass
			Overall Test Results		Pass





Technician: J. Hernandez

Approved By: C-3 P. Puzzuto

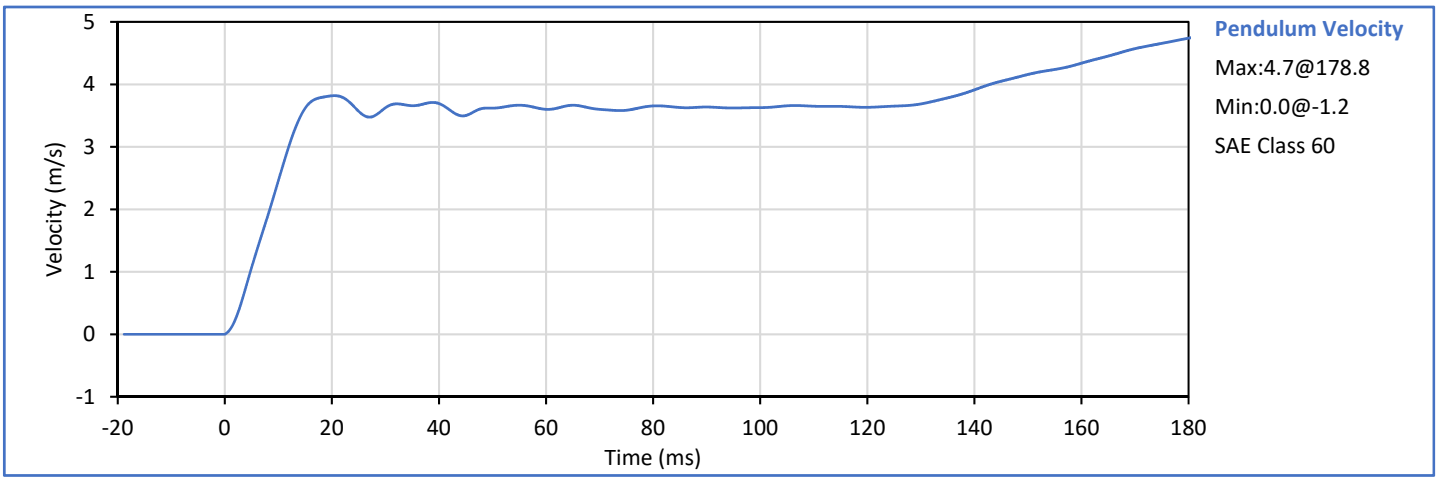
TR-P39012-01-NC

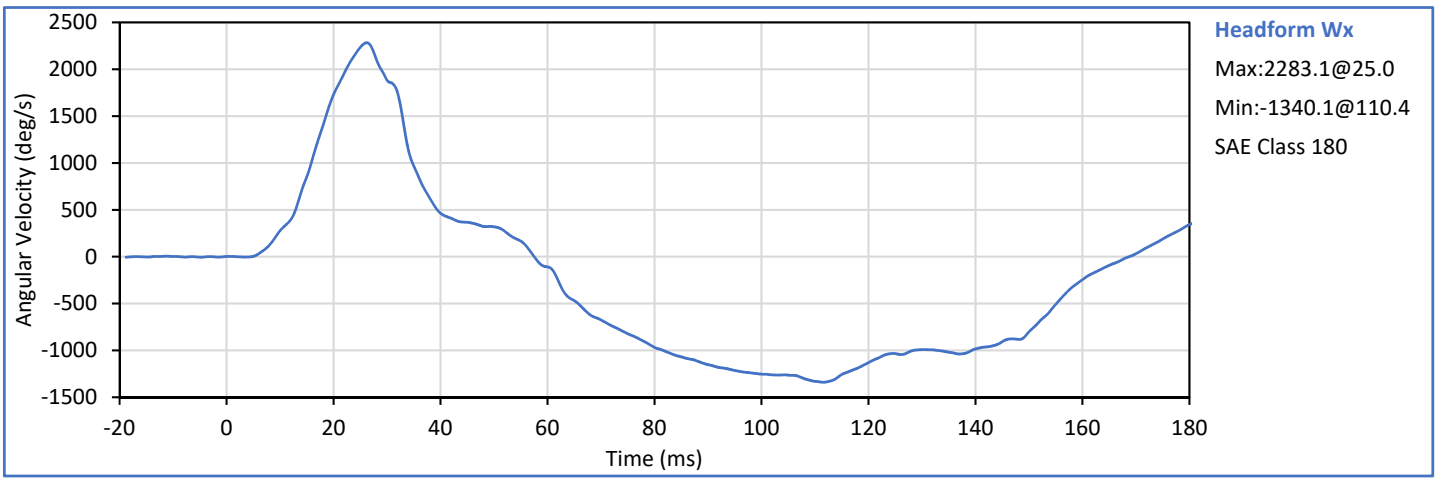
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Neck Lateral Flexion (Left)

ATD S/N: EB8888 Test Date: 2019-09-06

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	47	Pass
Pendulum Velocity	m/s	3.30	3.50	3.45	Pass
Pendulum Velocity at 4 ms	m/s	0.77	1.04	0.77	Pass
Pendulum Velocity at 8 ms	m/s	1.60	1.90	1.89	Pass
Pendulum Velocity at 12 ms	m/s	2.43	3.29	3.02	Pass
Headform Flexion Angle	deg	50.0	61.0	56.5	Pass
Headform Flexion Decay to 0 deg	ms	58.0	72.0	60.4	Pass
Peak Occipital Condyle Moment	Nm	54.0	67.0	60.3	Pass
Peak Occipital Condyle Moment deca	ms	71.0	87.0	74.5	Pass
Peak Forward Rotation	deg	32.0	39.0	35.1	Pass
	ms	56.0	68.0	61.1	Pass
Peak Rearward Rotation	deg	29.0	36.0	31.6	Pass
	ms	56.0	68.0	60.4	Pass
Peak Headform ωx	deg/s	2163	2393	2283	Pass
			Overall Test Results		Pass





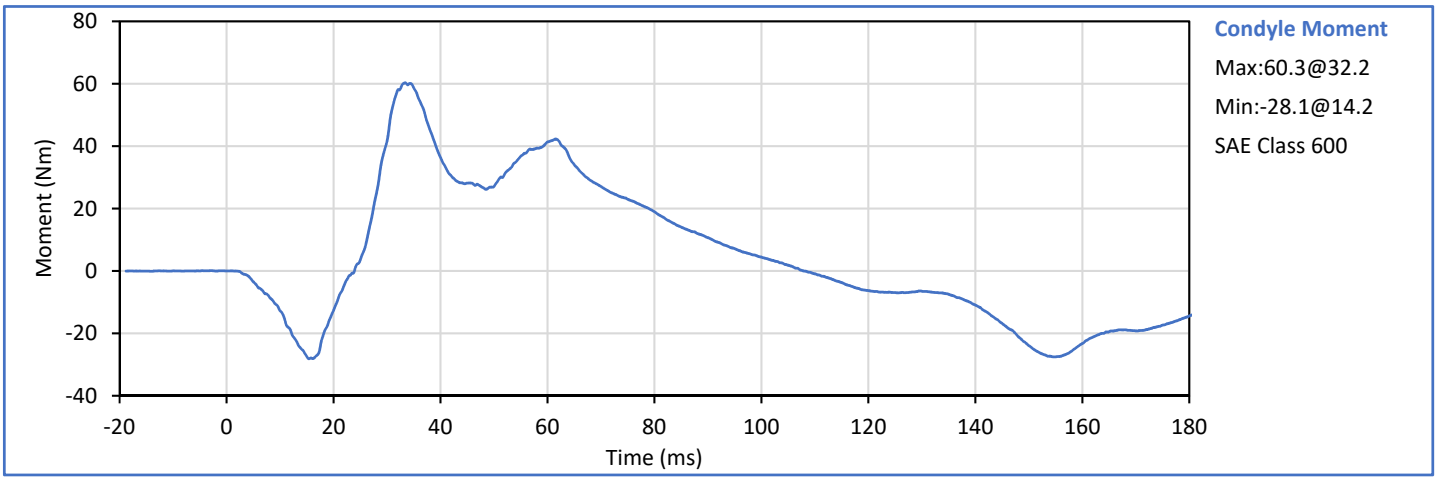
Technician: J. Hernandez

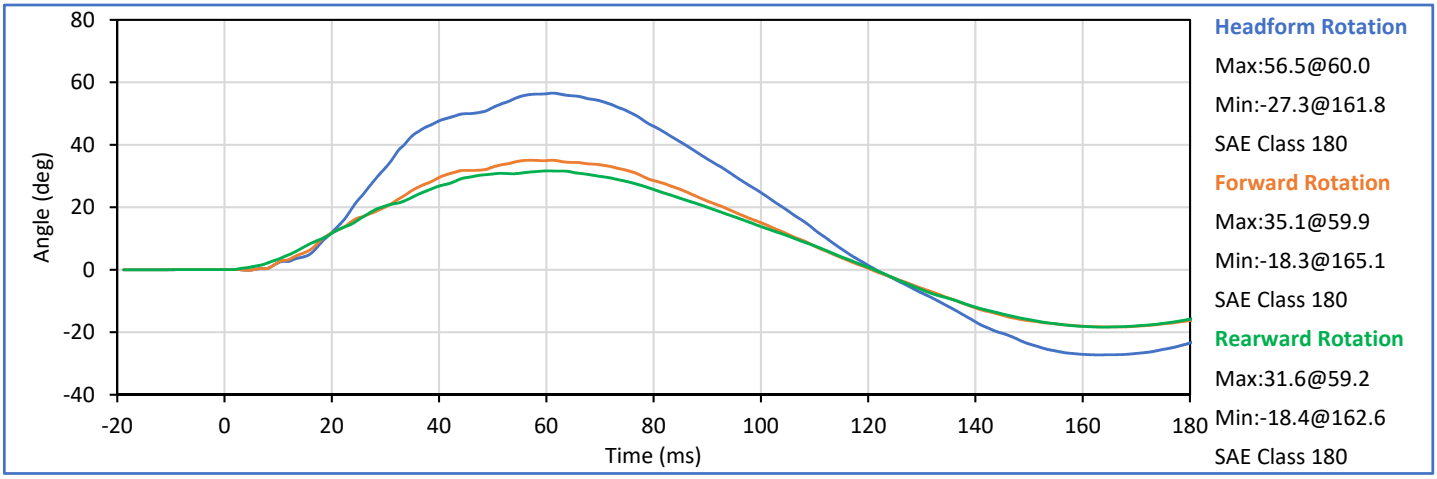
Approved By: C-4 P. Puzzuto

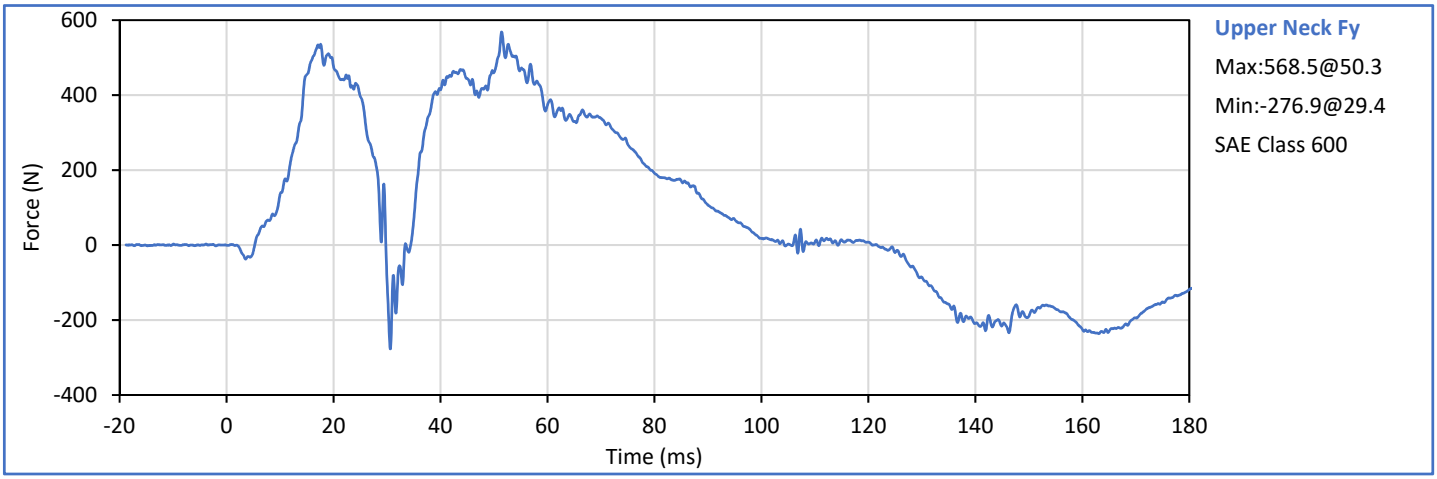
TR-P39012-01-NC

WorldSID 50th Male Side Impact ATD
Neck Lateral Flexion (Left)

ATD S/N: EB8888 Test Date: 2019-09-06





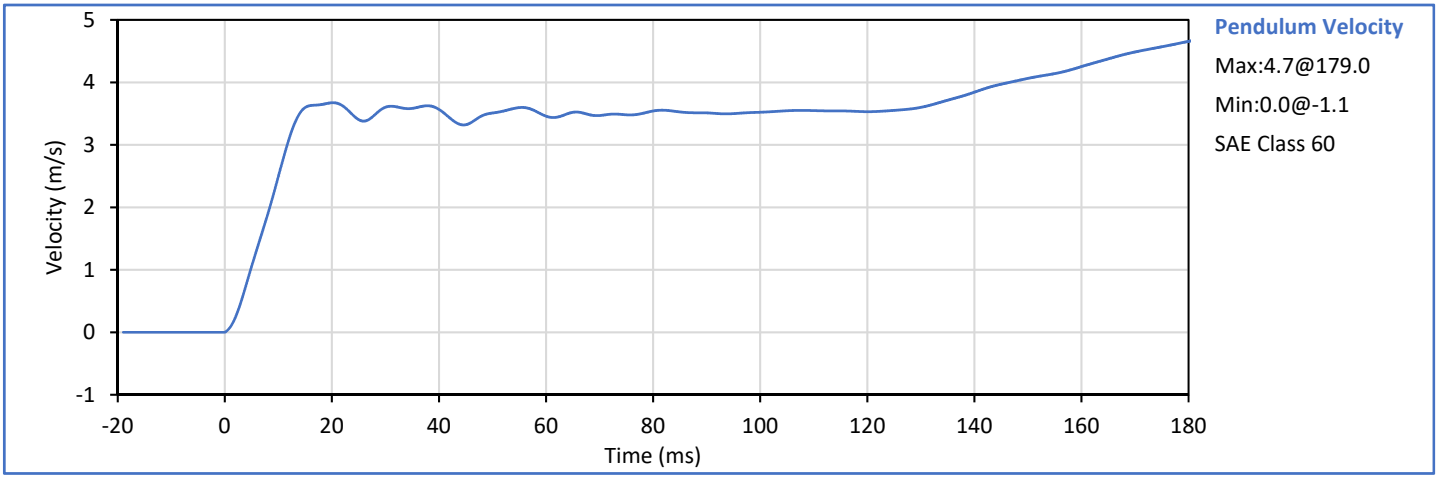


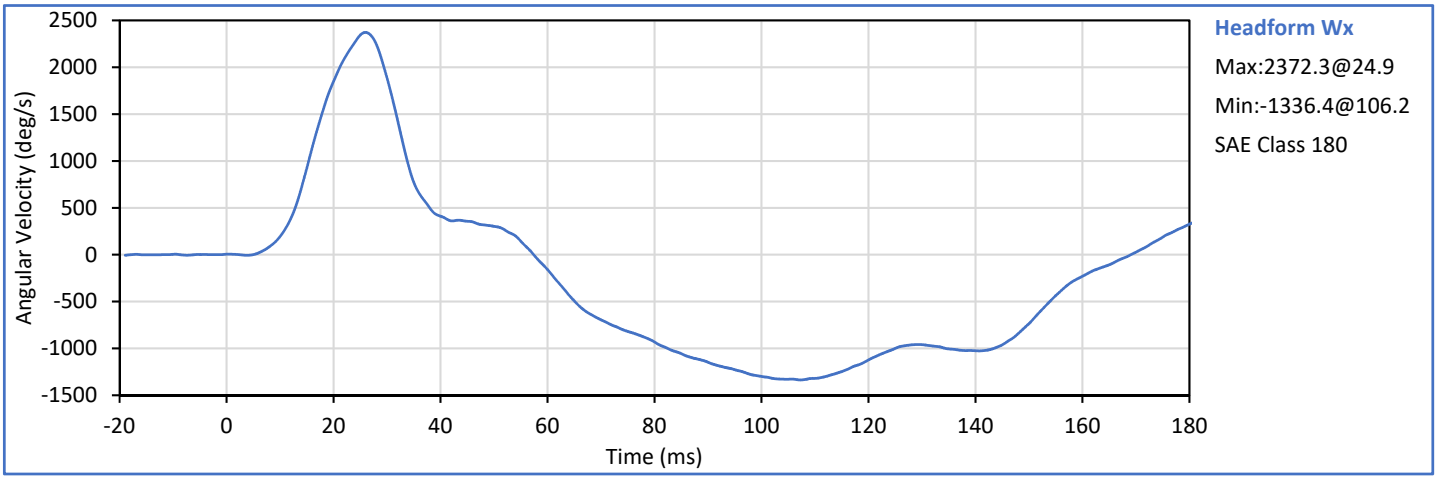
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Neck Lateral Flexion (Right)

ATD S/N: EB8888 Test Date: 2019-09-10

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	47	Pass
Pendulum Velocity	m/s	3.30	3.50	3.45	Pass
Pendulum Velocity at 4 ms	m/s	0.77	1.04	0.76	**Fail**
Pendulum Velocity at 8 ms	m/s	1.60	1.90	1.89	Pass
Pendulum Velocity at 12 ms	m/s	2.43	3.29	3.10	Pass
Headform Flexion Angle	deg	50.0	61.0	56.7	Pass
Headform Flexion Decay to 0 deg	ms	58.0	72.0	58.8	Pass
Peak Occipital Condyle Moment	Nm	-67.0	-54.0	-63.6	Pass
Peak Occipital Condyle Moment deca	ms	71.0	87.0	74.5	Pass
Peak Forward Rotation	deg	32.0	39.0	33.8	Pass
	ms	56.0	68.0	60.9	Pass
Peak Rearward Rotation	deg	29.0	36.0	30.7	Pass
	ms	56.0	68.0	57.6	Pass
Peak Headform ωx	deg/s	2163	2393	2372	Pass
			Overall Test Results		**Fail**





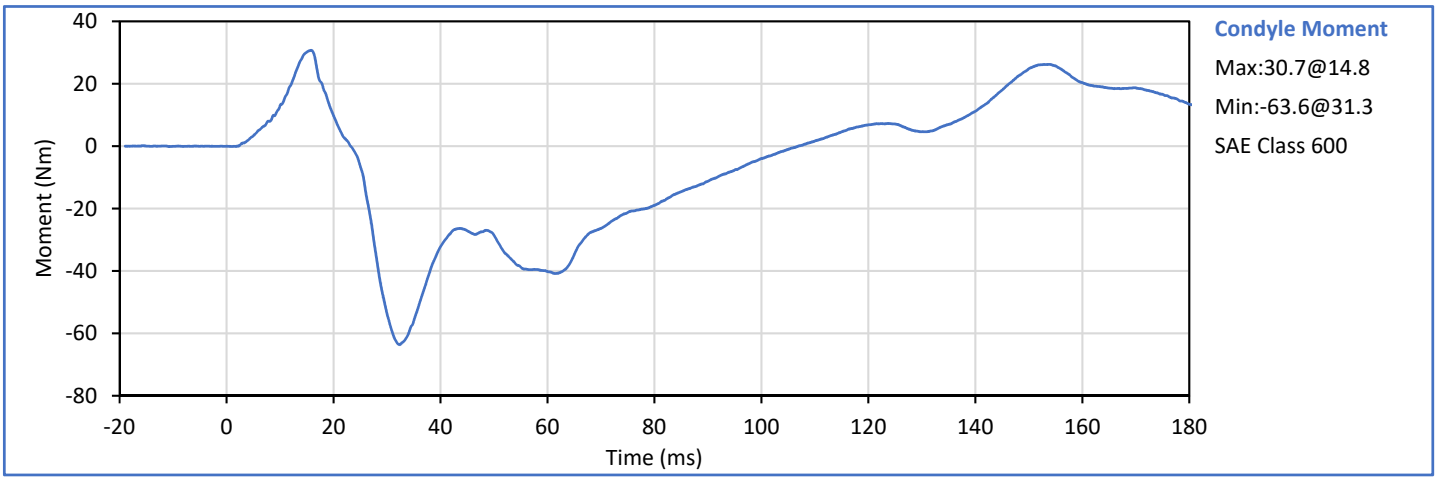
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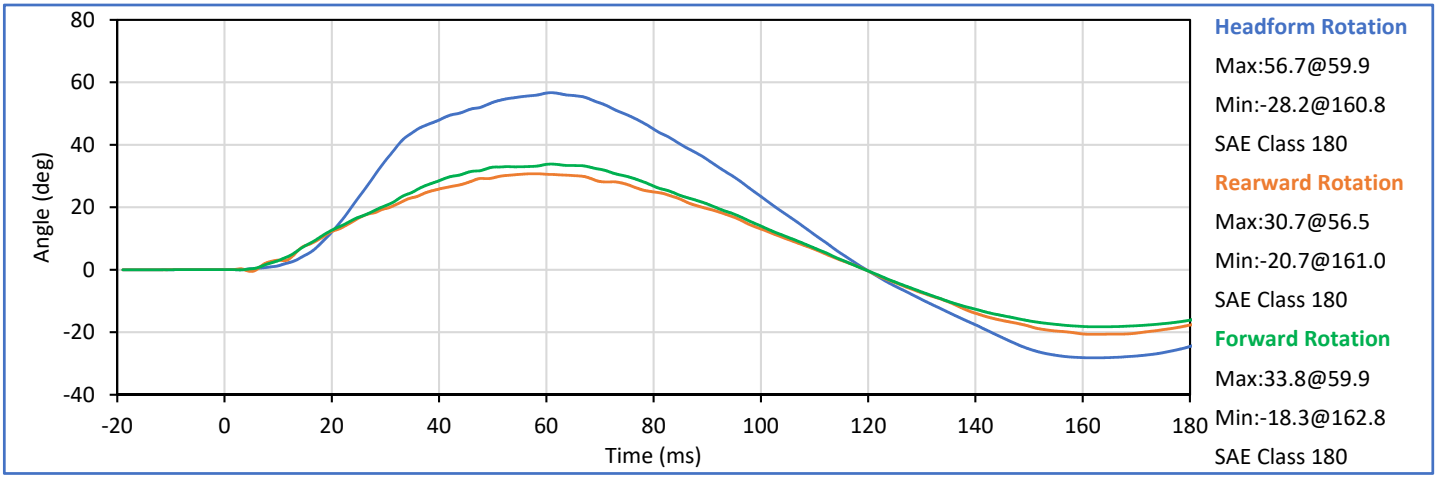
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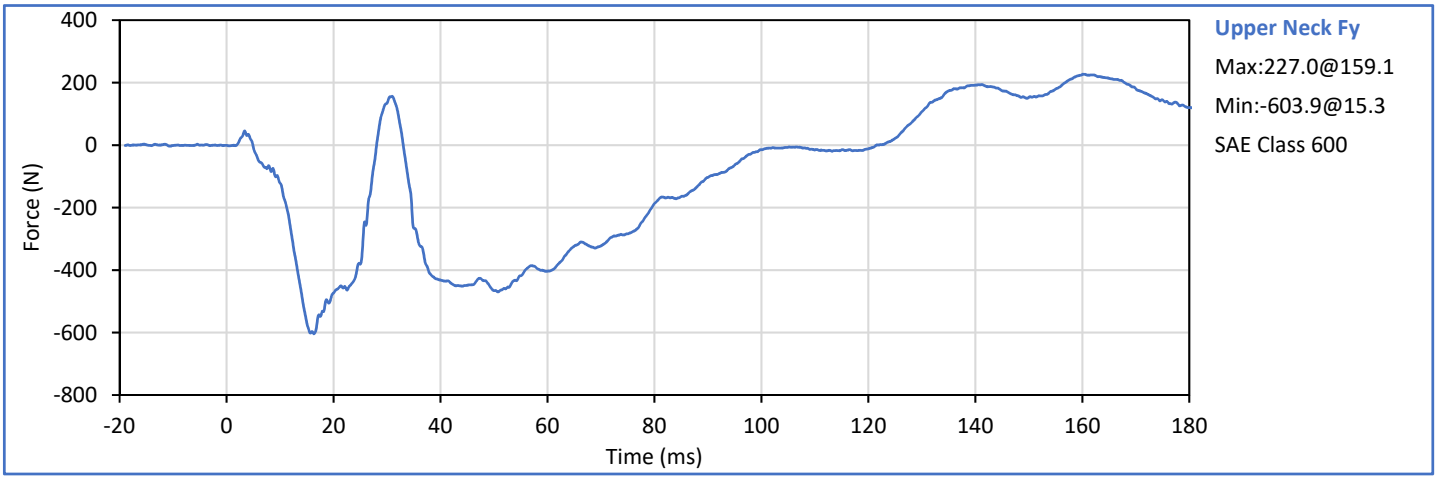
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WorldSID 50th Male Side Impact ATD
Neck Lateral Flexion (Right)

ATD S/N: EB8888 Test Date: 2019-09-10





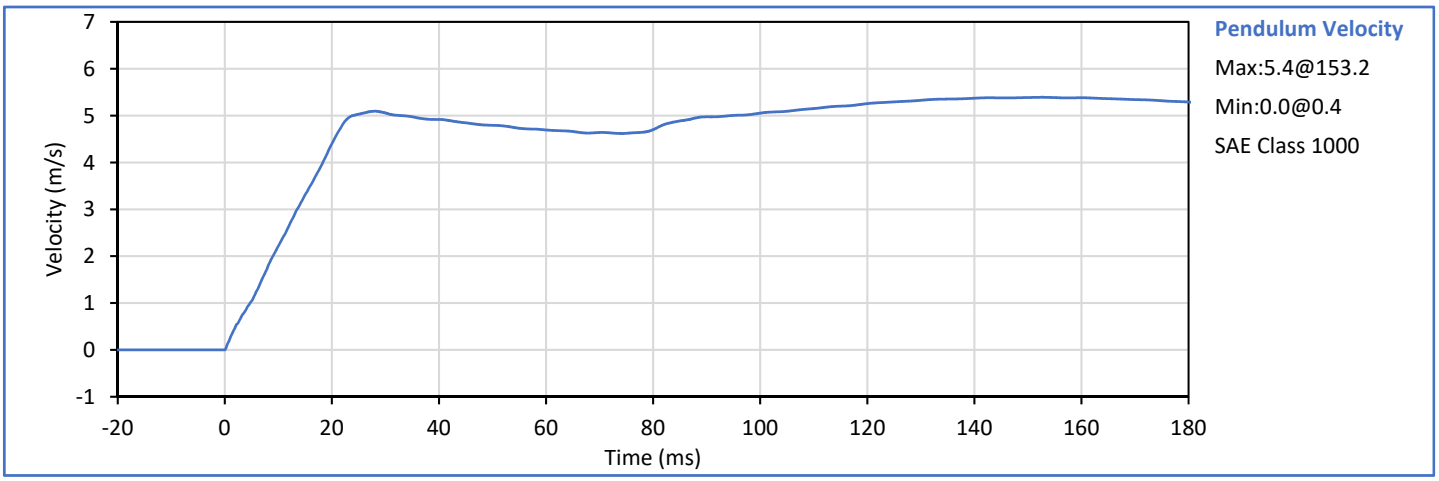


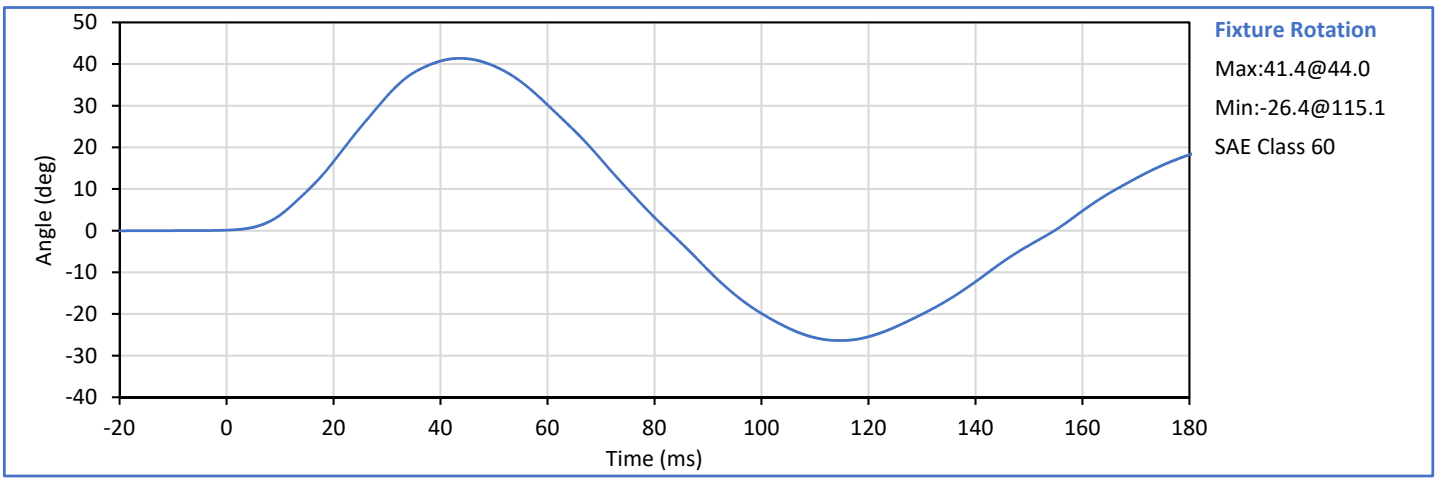
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Neck Torsion (Left)

ATD S/N: EB8888 Test Date: 2019-09-05

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	46	Pass
Pendulum Velocity	m/s	5.10	5.30	5.14	Pass
Pendulum Velocity at 10 ms	m/s	2.04	2.28	2.22	Pass
Pendulum Velocity at 15 ms	m/s	3.20	3.57	3.31	Pass
Pendulum Velocity at 20 ms	m/s	4.32	4.83	4.40	Pass
Peak Fixture Rotation	deg	45.0	48.0	41.4	**Fail**
Fixture Decay from peak to 0 deg	ms	37.0	41.0	39.0	Pass
Peak Head ωz	deg/s	1450	1560	1425	**Fail**
Peak Lower Neck Mz	Nm	36.0	40.0	36.8	Pass
			Overall Test Results		**Fail**





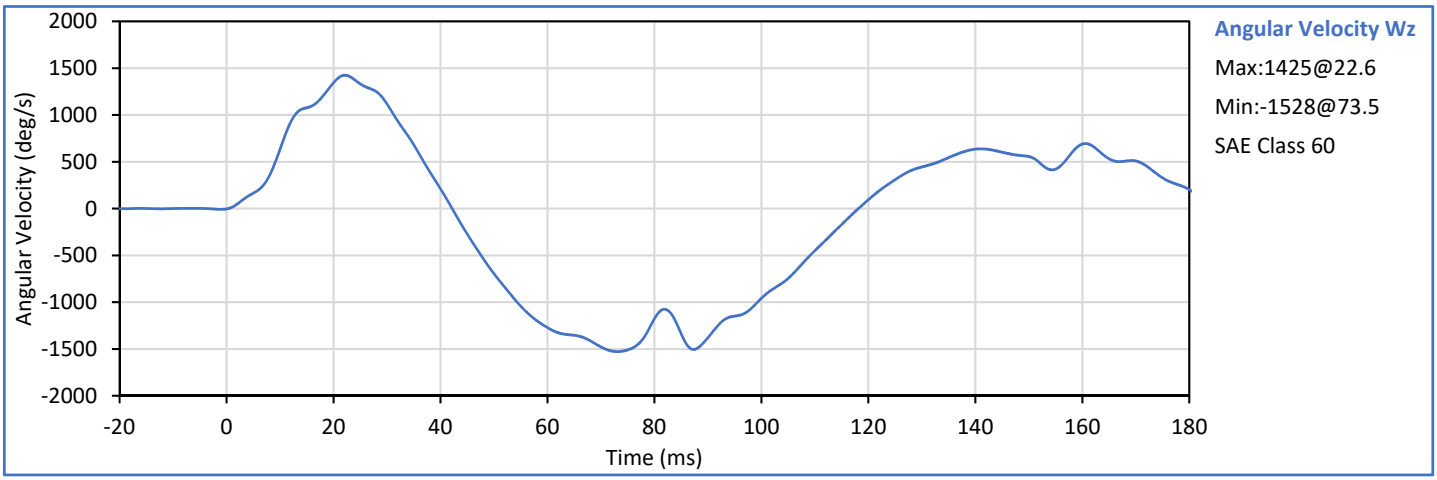
Technician: J. Hernandez

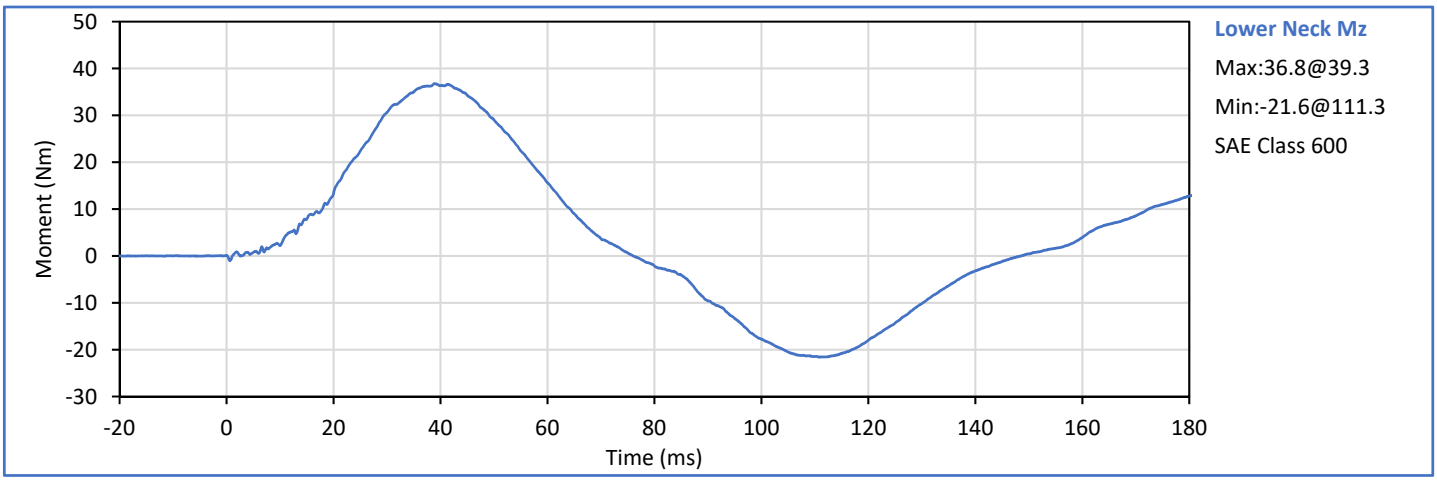
Approved By: C-8 P. Puzzuto

Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Neck Torsion (Left)

ATD S/N: EB8888 Test Date: 2019-09-05





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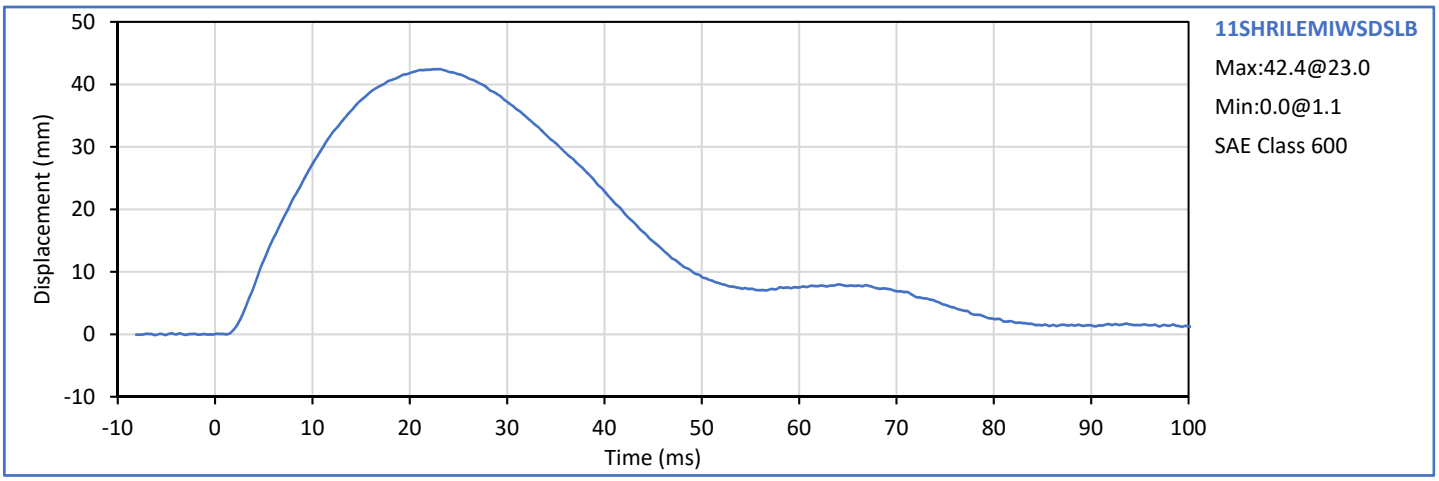
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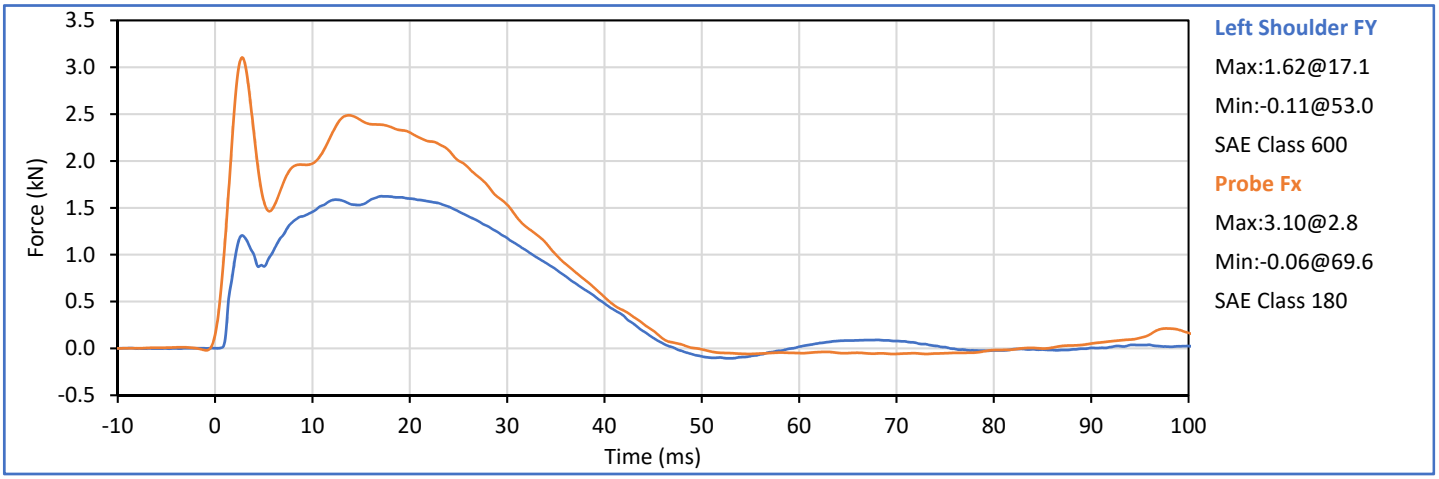
Applus IDIADA
KARCO

WorldSID 50th Male Side Impact ATD
Shoulder Qualification

ATD S/N: EB8888 Test Date: 2019-09-06

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	47	Pass
Probe Velocity	m/s	4.20	4.40	4.30	Pass
Peak Shoulder Deflection	mm	37.0	46.0	42.4	Pass
Peak Shoulder Fy	kN	1.50	1.70	1.62	Pass
Peak Pendulum Fx	kN	2.60	3.30	3.10	Pass
			Overall Test Results		Pass





Technician: J. Hernandez

Approved By: C-12 P. Puzzuto

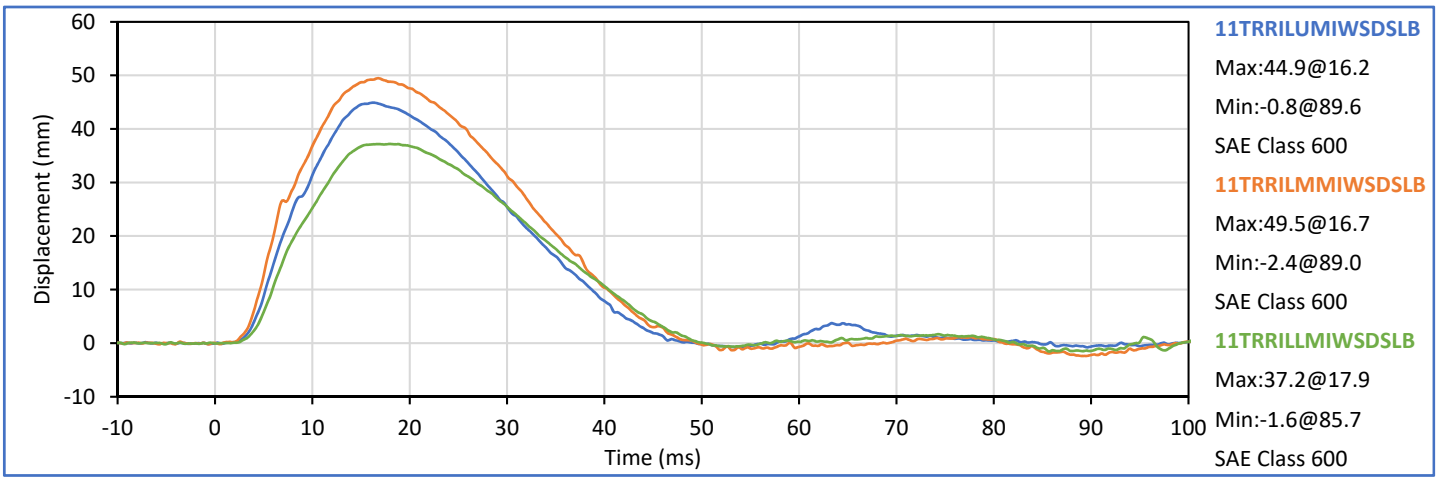
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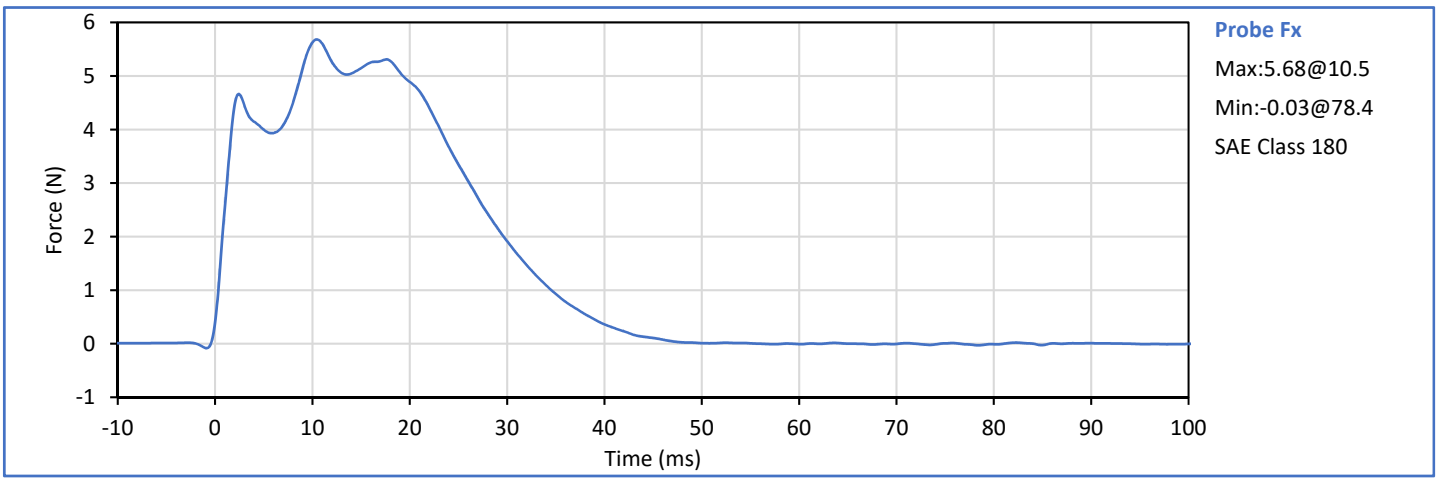
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Thorax With Arm Qualification

ATD S/N: EB8888 Test Date: 2019-09-04

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	43	Pass
Probe Velocity	m/s	6.60	6.80	6.73	Pass
Peak Thorax Rib 1 Deflection	mm	35.0	47.0	44.9	Pass
Peak Thorax Rib 2 Deflection	mm	46.0	56.0	49.5	Pass
Peak Thorax Rib 3 Deflection	mm	33.5	40.5	37.2	Pass
Peak Pendulum Fx	kN	5.30	6.20	5.68	Pass
Peak T4 Ay Acceleration	g	28.0	37.0	34.5	Pass
Peak T12 Ay Acceleration	g	22.0	28.0	24.2	Pass
			Overall Test Results		Pass





Technician: J. Hernandez

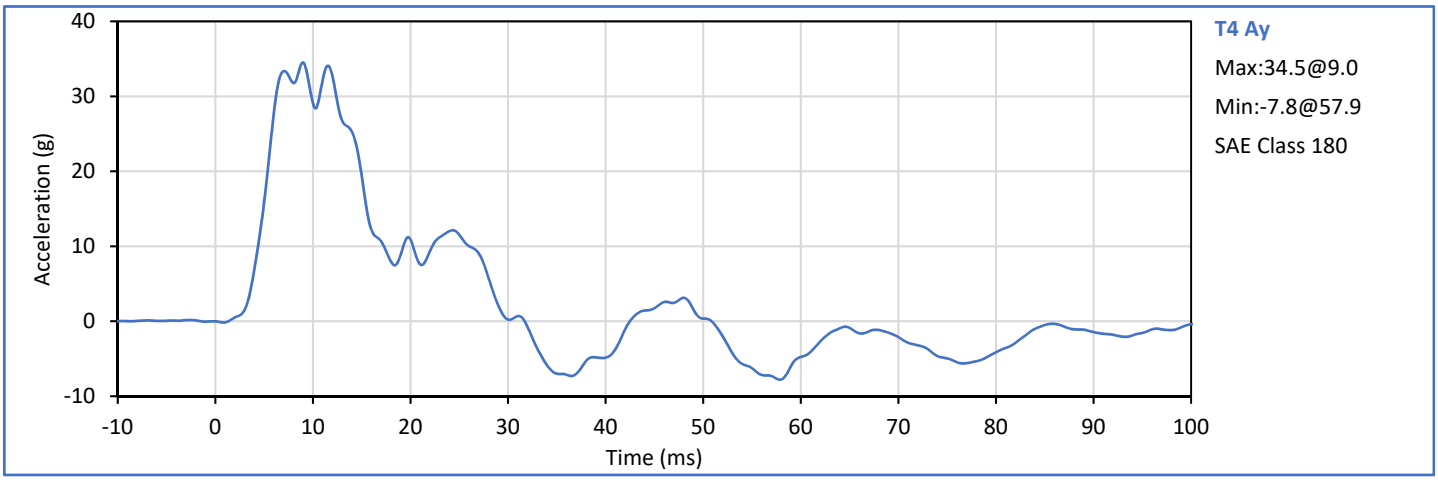
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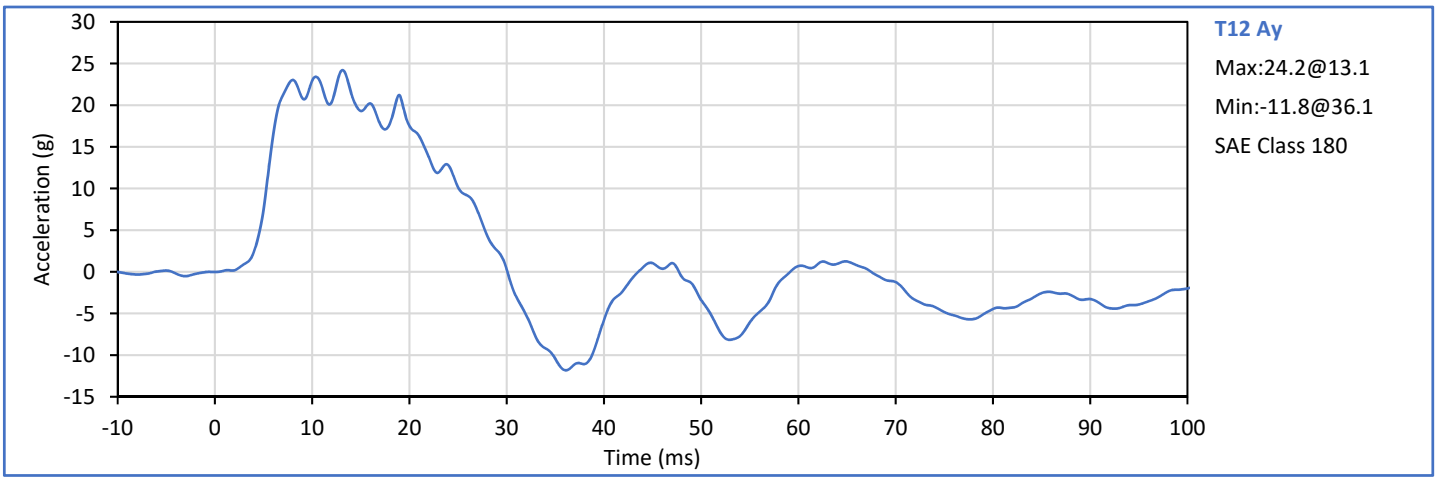
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Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Thorax With Arm Qualification

ATD S/N: EB8888 Test Date: 2019-09-04





Technician: J. Hernandez

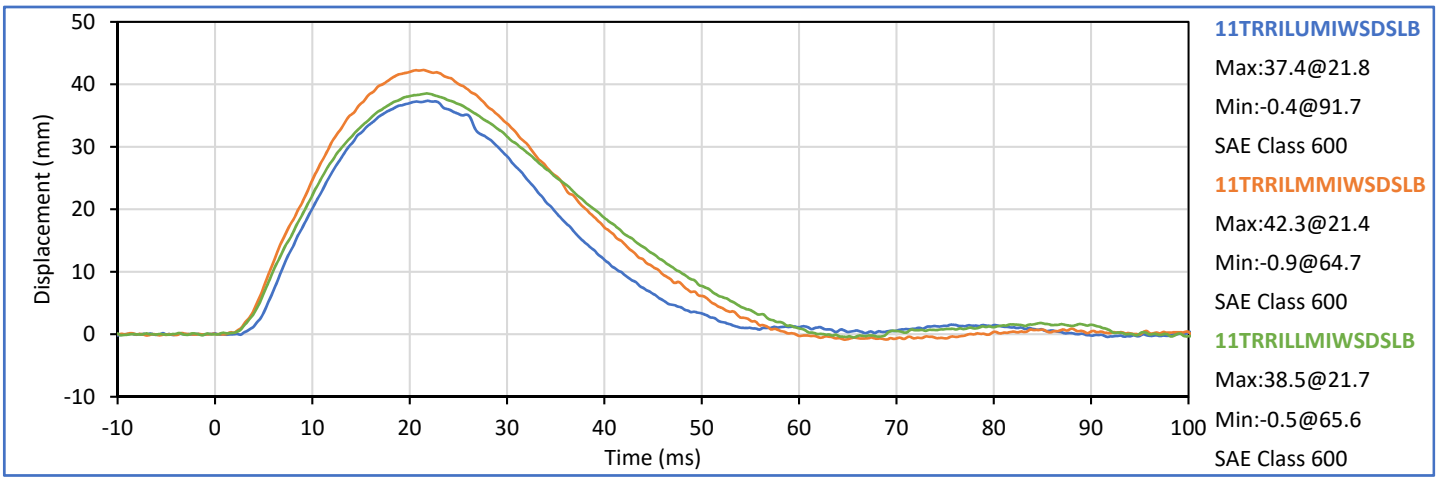
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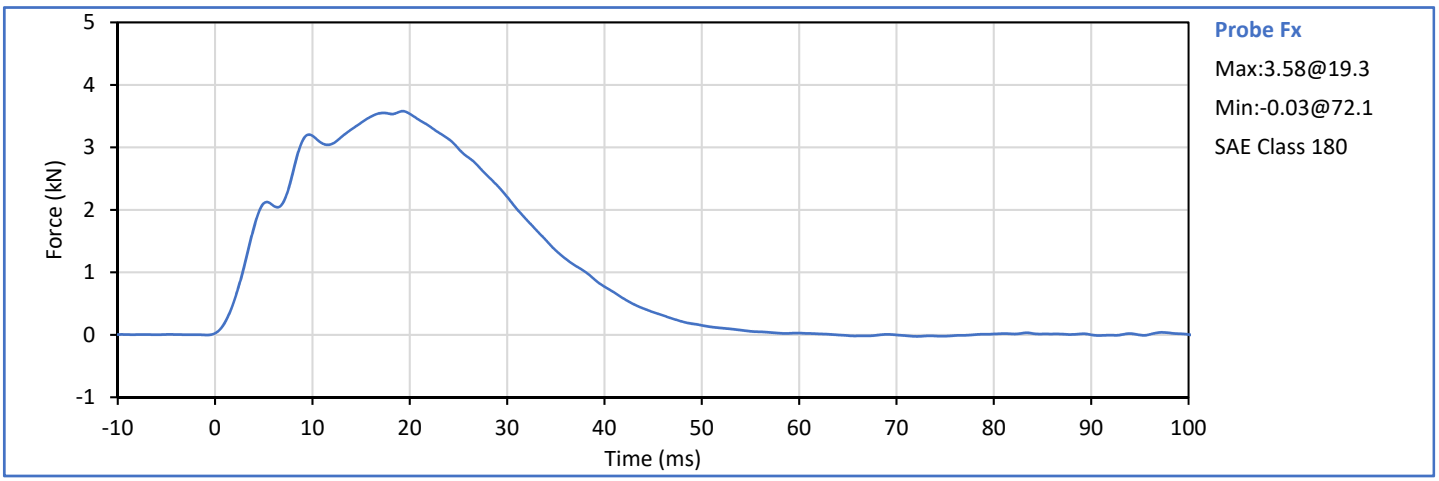
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Thorax Without Arm Qualification

ATD S/N: EB8888 Test Date: 2019-09-04

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
Probe Velocity	m/s	4.20	4.40	4.31	Pass
Peak Thorax Rib 1 Deflection	mm	33.0	43.0	37.4	Pass
Peak Thorax Rib 2 Deflection	mm	35.0	43.0	42.3	Pass
Peak Thorax Rib 3 Deflection	mm	32.0	40.0	38.5	Pass
Peak Pendulum Fx	kN	3.20	3.80	3.58	Pass
Peak T4 Ay Acceleration	g	14.0	20.0	17.1	Pass
Peak T12 Ay Acceleration	g	14.0	22.0	14.1	Pass
			Overall Test Results		Pass





Technician: J. Hernandez

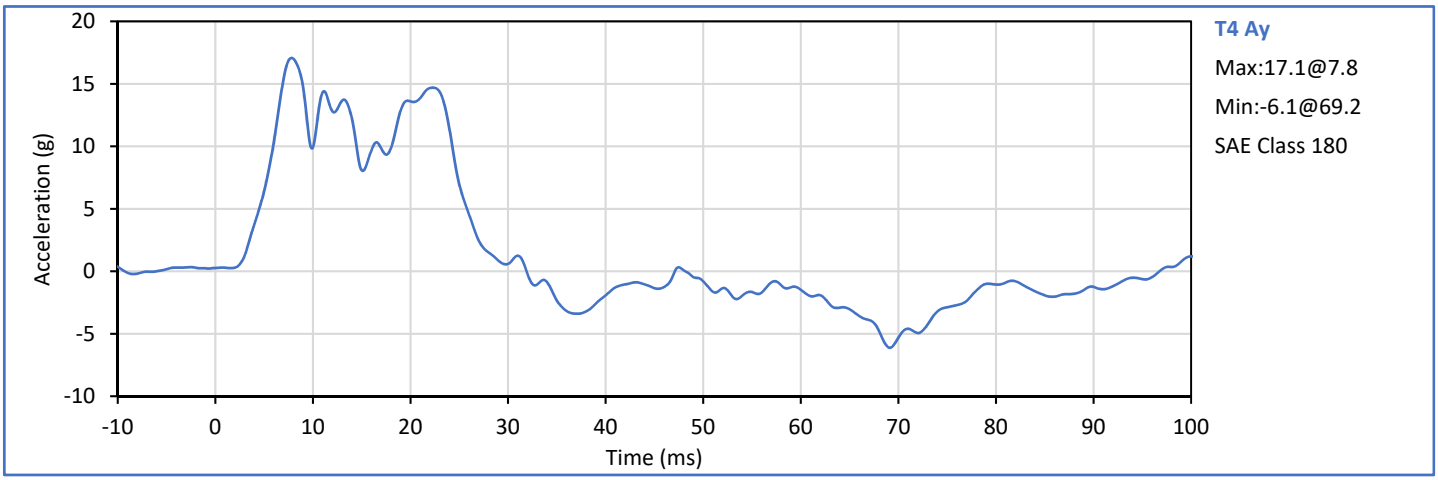
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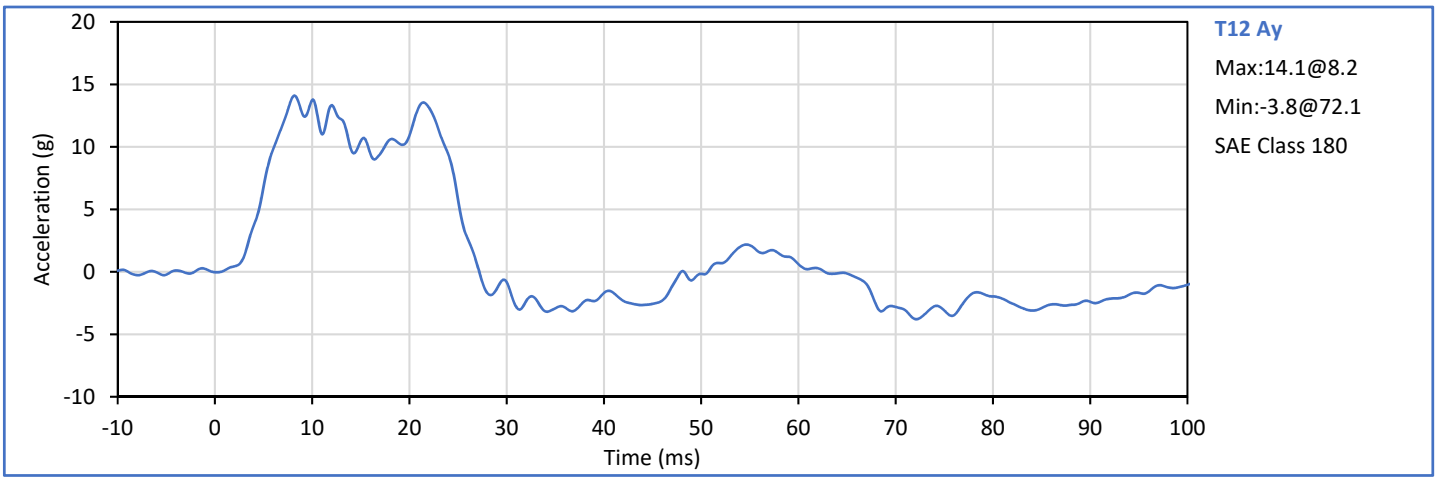
TR-P39012-01-NC

Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Thorax Without Arm Qualification

ATD S/N: EB8888 Test Date: 2019-09-04





Technician: J. Hernandez

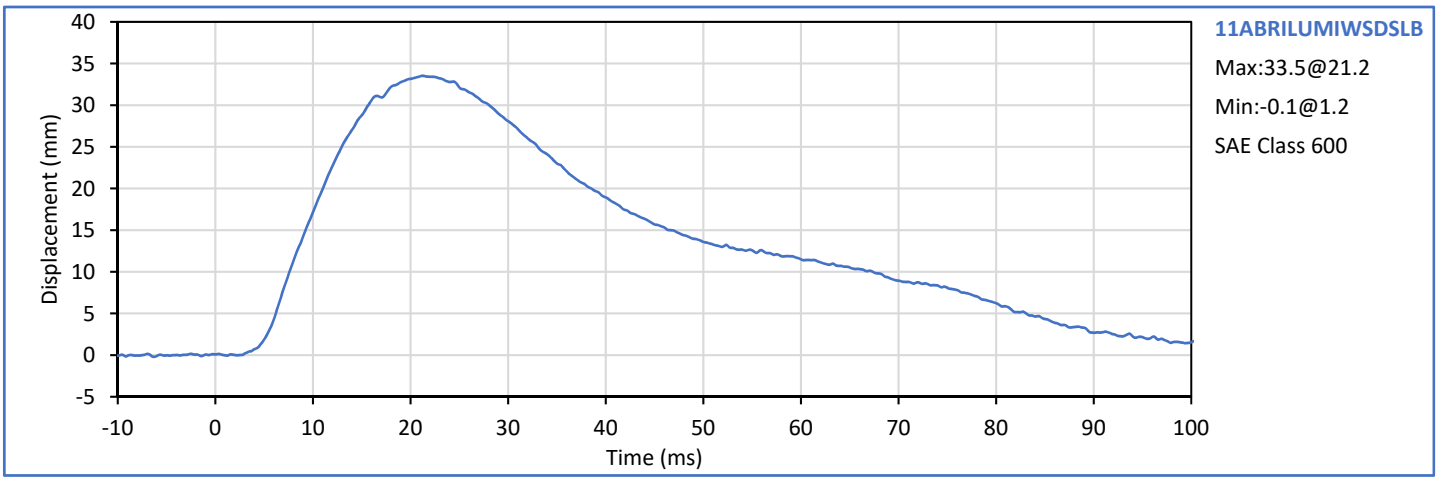
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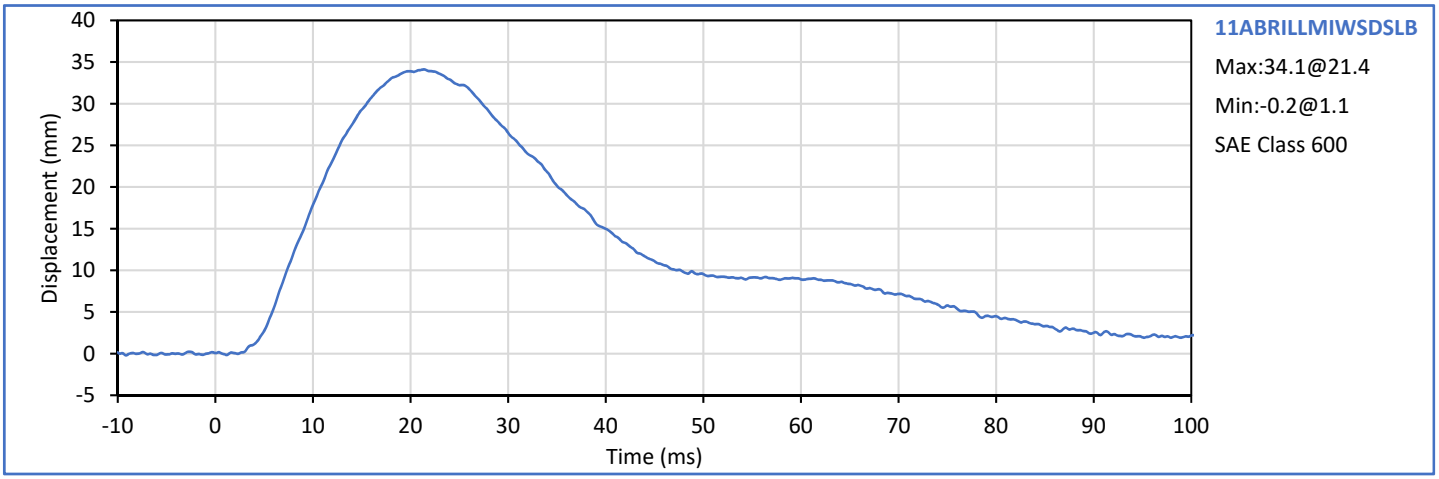
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Abdomen Qualification

ATD S/N: EB8888 Test Date: 2019-09-04

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
Probe Velocity	m/s	4.20	4.40	4.27	Pass
Peak Abdomen Rib 1 Deflection	mm	32.5	39.5	33.5	Pass
Peak Abdomen Rib 2 Deflection	mm	32.0	38.0	34.1	Pass
Peak Pendulum Fx	kN	2.70	3.10	3.04	Pass
Peak T12y Acceleration	g	14.5	19.5	17.5	Pass
			Overall Test Results		Pass





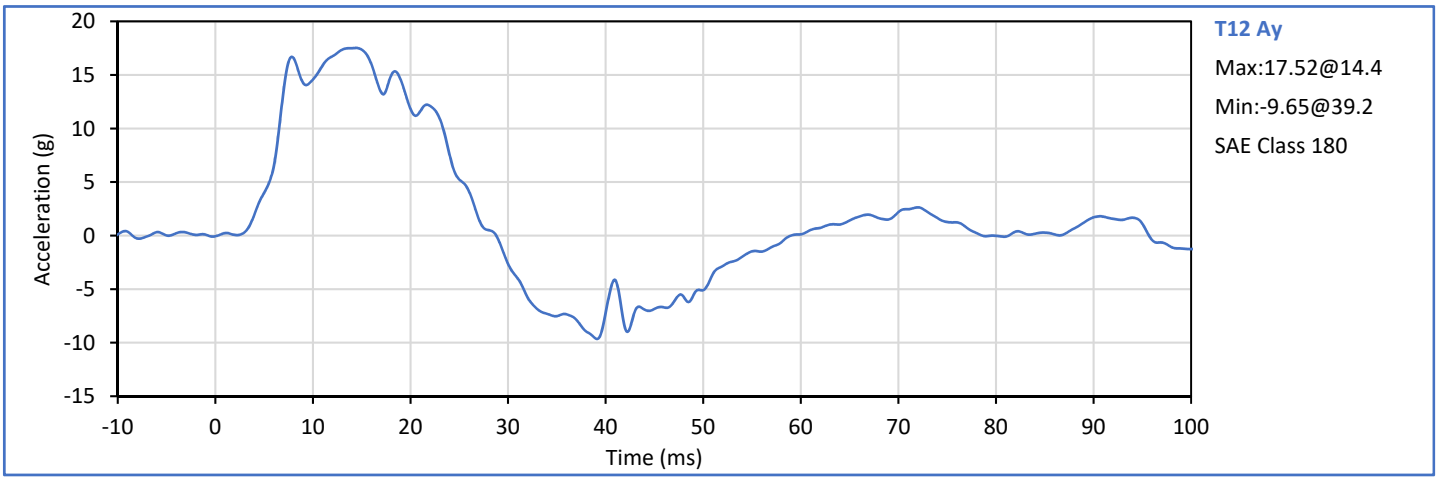
Technician: J. Hernandez

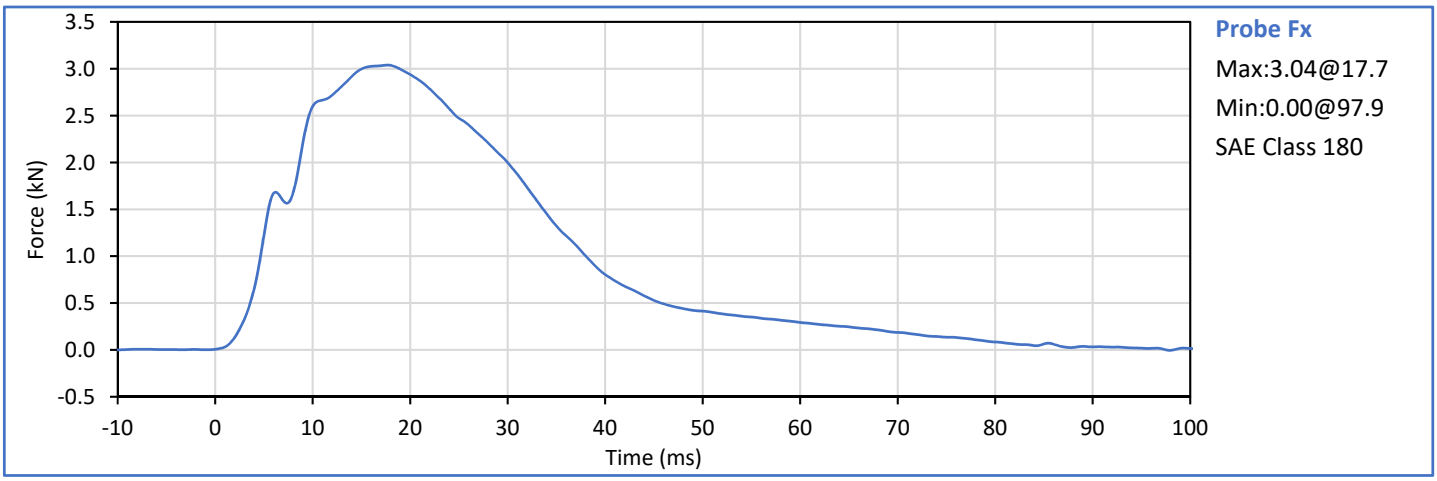
Approved By: C-17 P. Puzzuto

Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Abdomen Qualification

ATD S/N: EB8888 Test Date: 2019-09-04





Technician: J. Hernandez

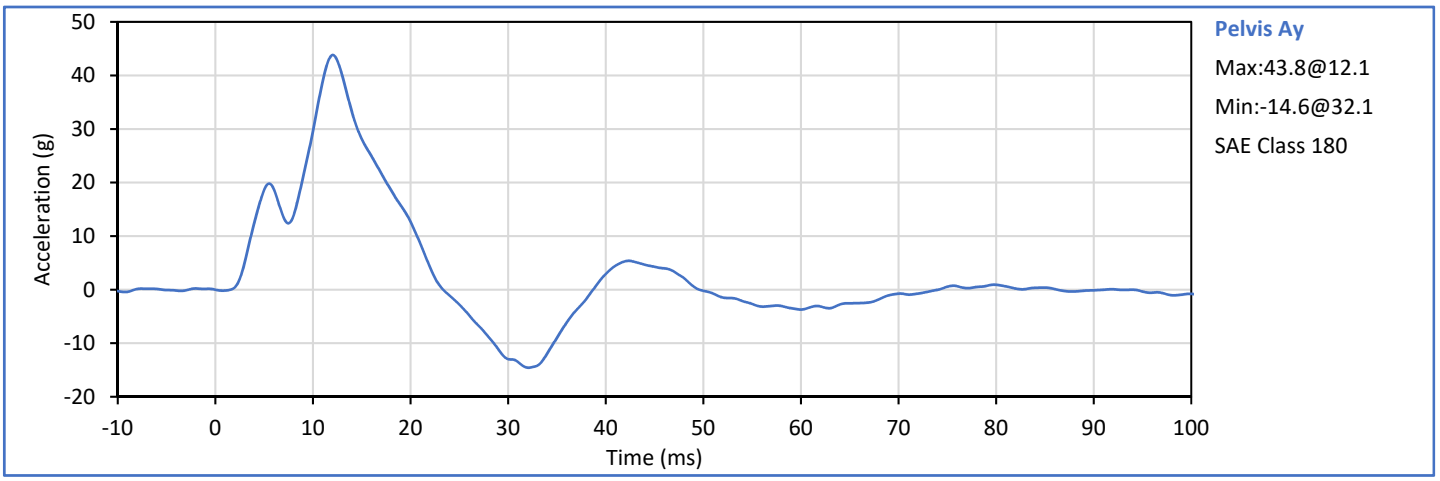
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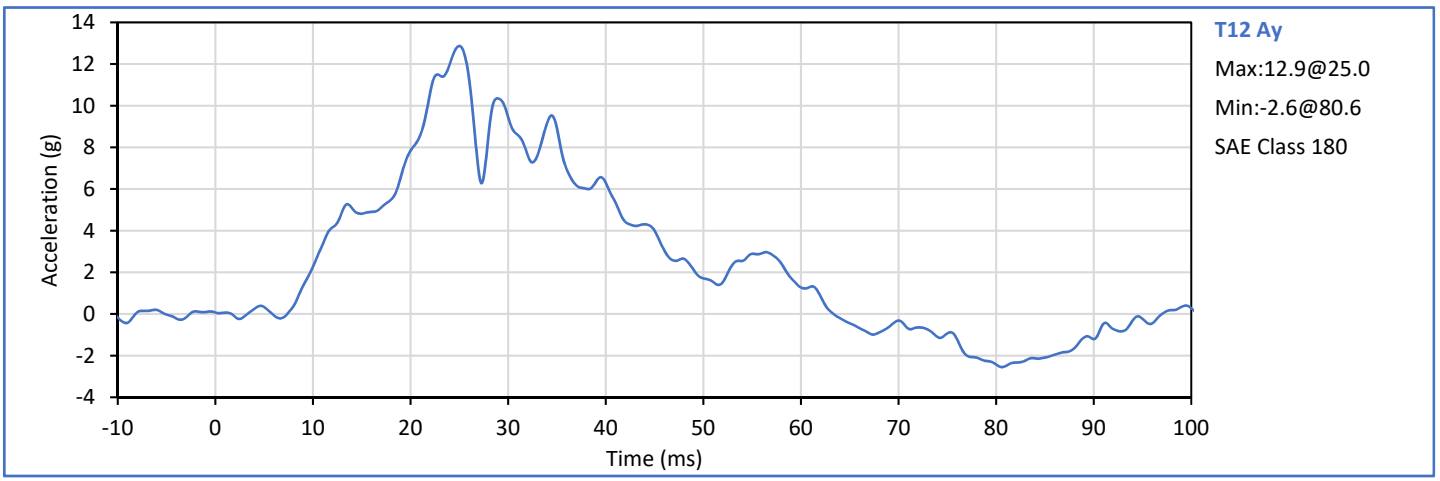
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Pelvis Qualification

ATD S/N: EB8888 Test Date: 2019-09-04

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	43	Pass
Probe Velocity	m/s	6.60	6.80	6.76	Pass
Peak Pendulum Force	kN	6.80	8.20	7.70	Pass
Peak T12 Ay	g	10.0	14.0	12.9	Pass
Peak Pelvis Ay	g	38.5	48.5	43.8	Pass
Peak Pubic Fy	kN	1.30	1.59	1.39	Pass
Peak Sacroiliac Fy	kN	1.93	2.21	2.11	Pass
			Overall Test Results		Pass





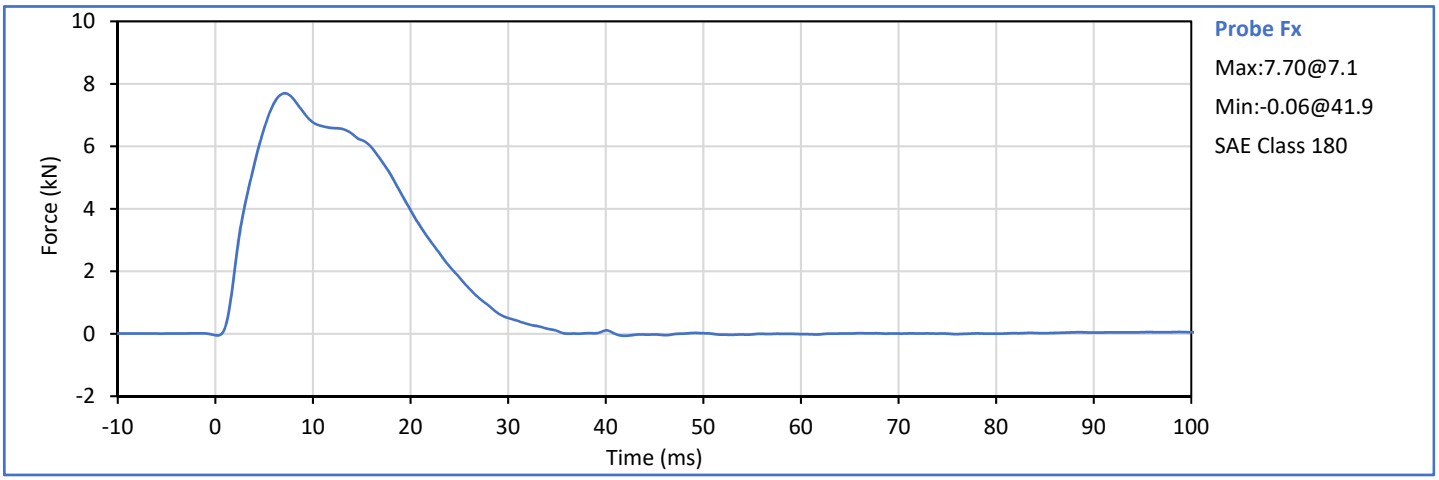
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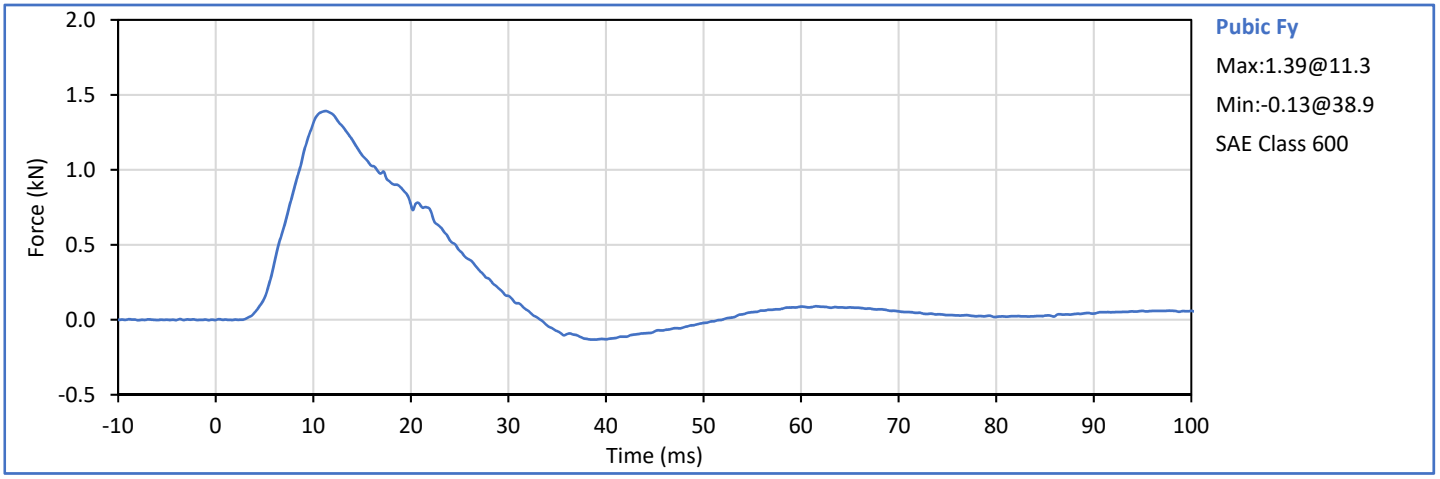
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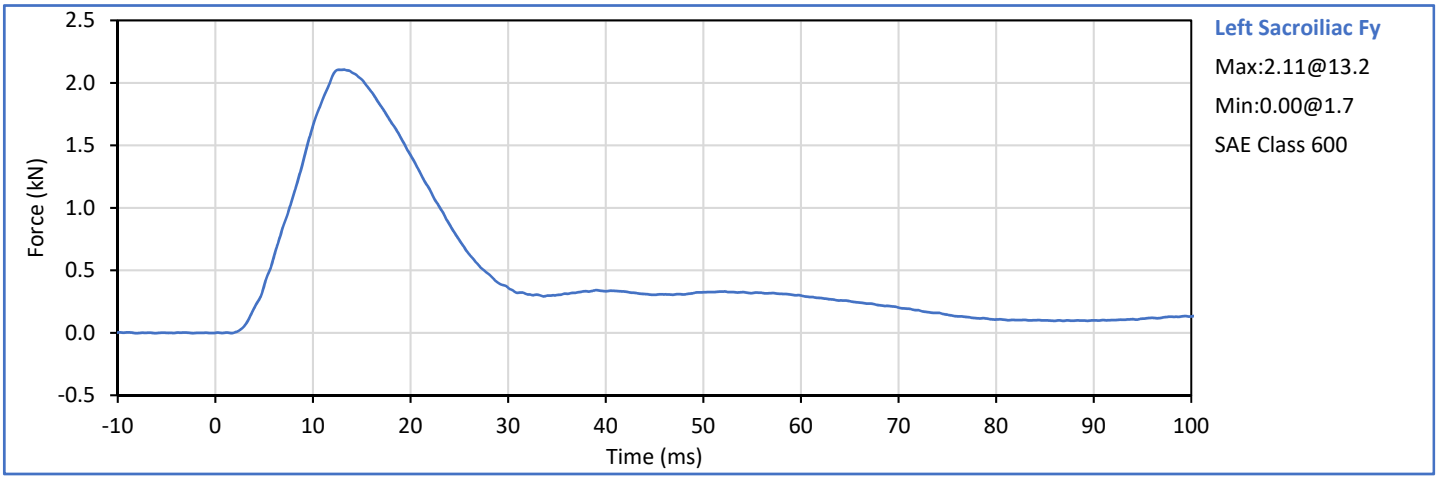
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Pelvis Qualification

ATD S/N: EB8888 Test Date: 2019-09-04







Technician: J. Hernandez

Approved By: C-20 P. Puzzuto

TR-P39012-01-NC

APPENDIX C
Pre-Test ATD Configuration and Performance Verification Data
SID-IIs Small Side Impact ATD, Left Side Configuration
S/N: DY8080

Applus IDIADA
KARCO

SID-IIs Small Side Impact ATD
External Measurements

ATD Serial No.: DY8080 Test Date: 2019-08-26

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
A - Sitting Height	mm	772	788	779	Pass
B - Shoulder Pivot Height	mm	437	453	450	Pass
C - Hpoint Height	mm	79	89	85	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	130	Pass
G - Head Breadth	mm	140	148	146	Pass
H - Head Back From Backline	mm	40	46	42	Pass
I - Head Depth	mm	178	188	185	Pass
J - Head Circumference	mm	541	551	548	Pass
K - Buttock To Knee Length	mm	514	540	525	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	435	Pass
O - Chest Depth W/O Jacket	mm	195	211	209	Pass
P - Foot Length	mm	216	232	219	Pass
Q - Hip Breadth (W/Pelvic Plugs)	mm	313	323	318	Pass
R - Arm Length	mm	249	259	257	Pass
S - Knee Joint To Seatback	mm	477	493	483	Pass
V - Shoulder Width	mm	341	357	346	Pass
W - Foot Width	mm	78	94	88	Pass
Y - Chest Circumference W/Jacket	mm	851	881	861	Pass
Z - Waist Circumference	mm	761	791	773	Pass
			Overall Test Results		Pass

Technician: J. Hernandez

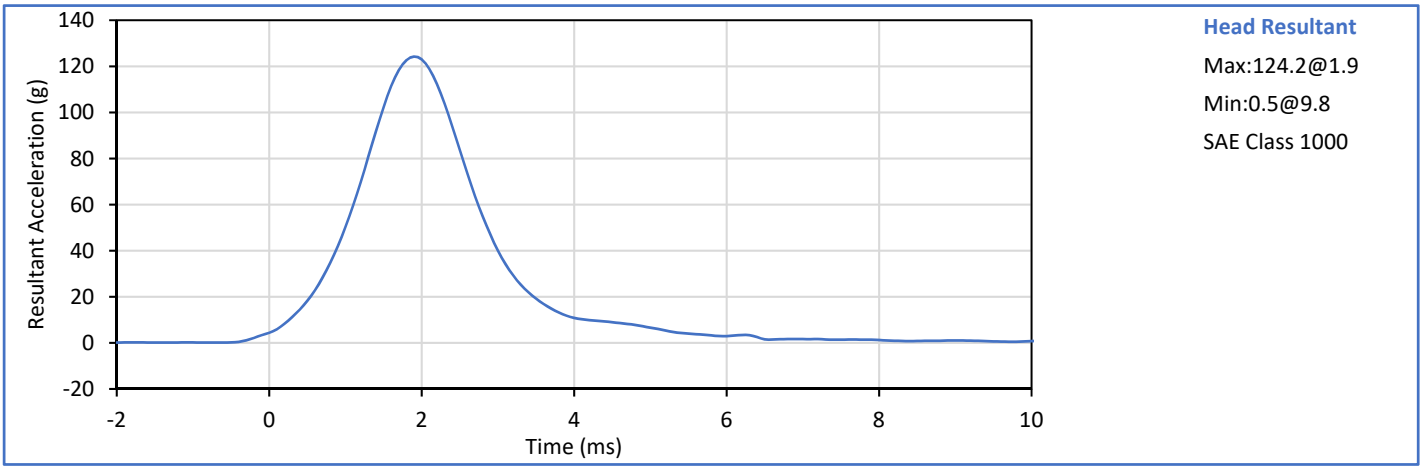
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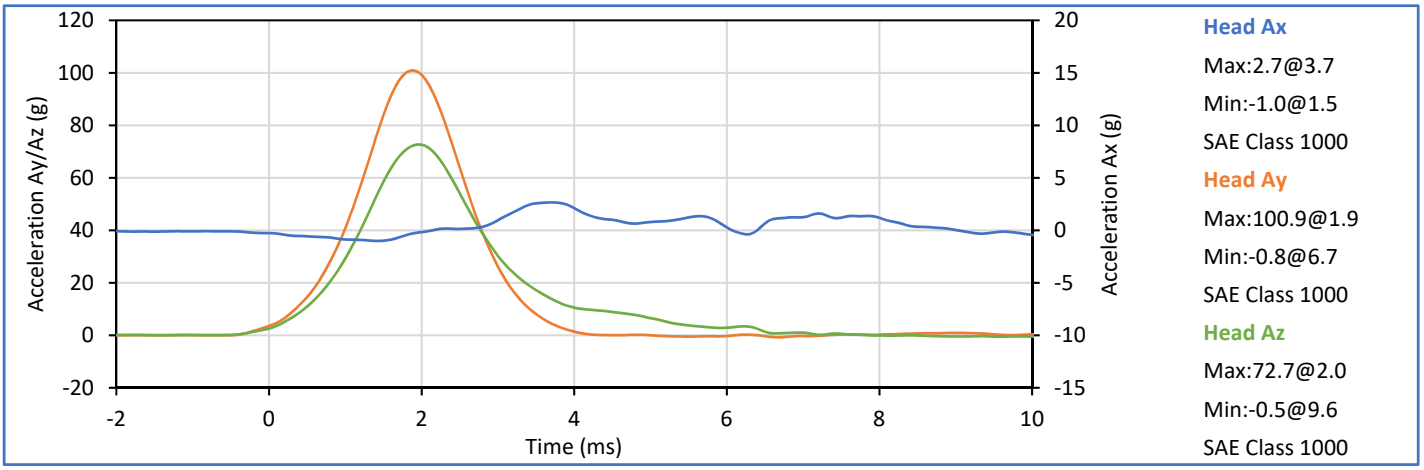
Applus IDIADA
KARCO

SID-IIs Small Side Impact ATD
Head Drop

ATD Serial No.: DY8080 Test Date: 2019-08-26

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	18.9	25.6	21.7	Pass
Laboratory Humidity	%	10	70	44	Pass
Peak Resultant Acceleration	g	115.0	137.0	124.2	Pass
Peak Head Ax	g	-15.0	15.0	-1.0	Pass
Oscillations After Main Pulse	%	0.0	15.0	2.8	Pass
Is Acceleration Unimodal?	Yes/No	Yes		Yes	Pass
			Overall Test Results		Pass





Technician: J. Hernandez

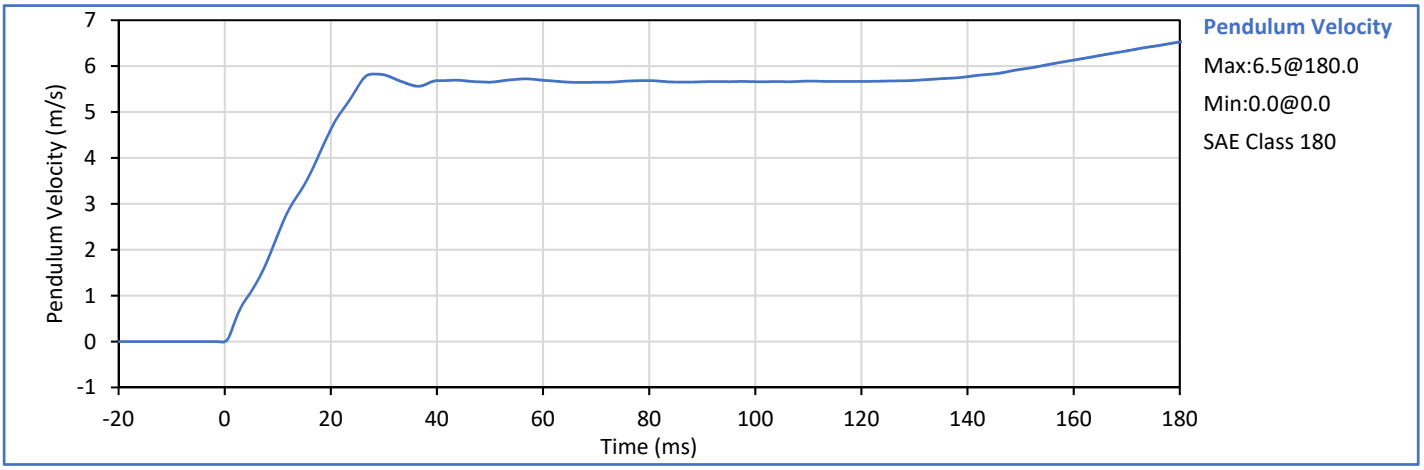
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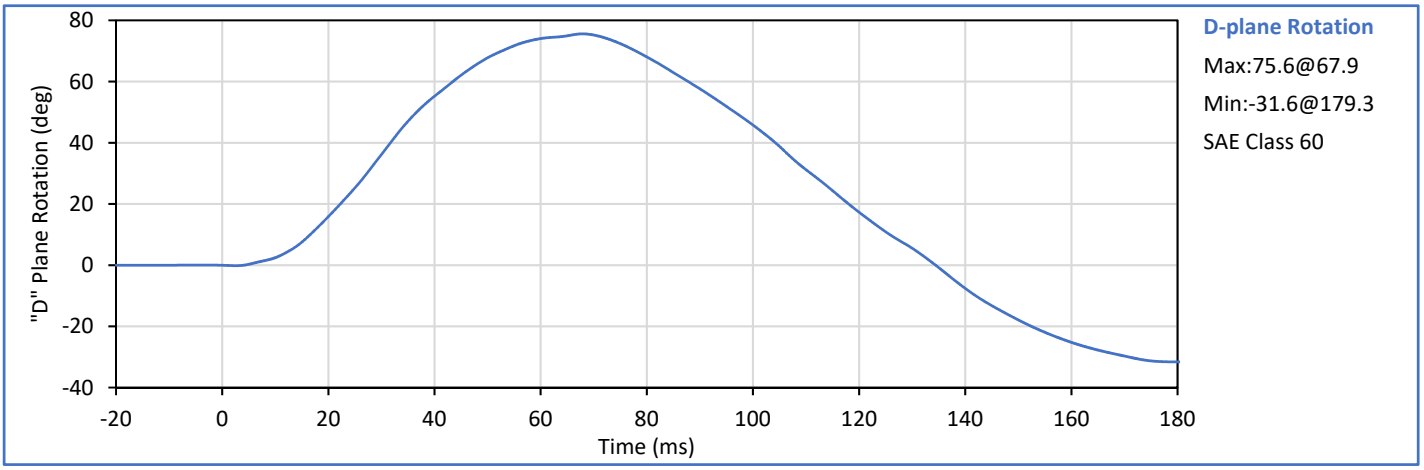
Applus IDIADA KARCO

SID-IIs Small Side Impact ATD
Neck Flexion

ATD Serial No.: DY8080 Test Date: 2019-08-26

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.7	Pass
Laboratory Humidity	%	10	70	43	Pass
Pendulum Velocity	m/s	5.51	5.63	5.57	Pass
Pendulum Decel at 10 ms	m/s	2.20	2.80	2.32	Pass
Pendulum Decel at 15 ms	m/s	3.30	4.10	3.42	Pass
Pendulum Decel at 20 ms	m/s	4.40	5.40	4.62	Pass
Pendulum Decel at 25 ms	m/s	5.40	6.10	5.53	Pass
Pendulum Decel from 25-100 ms	m/s	5.50	6.20	5.83	Pass
Peak "D" Plane Rotation	deg	71.0	81.0	75.6	Pass
Time of Peak "D" Plane Rotation	ms	50.0	70.0	67.9	Pass
Peak Occ. Condyle Moment	Nm	-44.0	-36.0	-40.6	Pass
Time of Moment Decay to 0 Nm	ms	102.0	126.0	111.9	Pass
			Overall Test Results		Pass



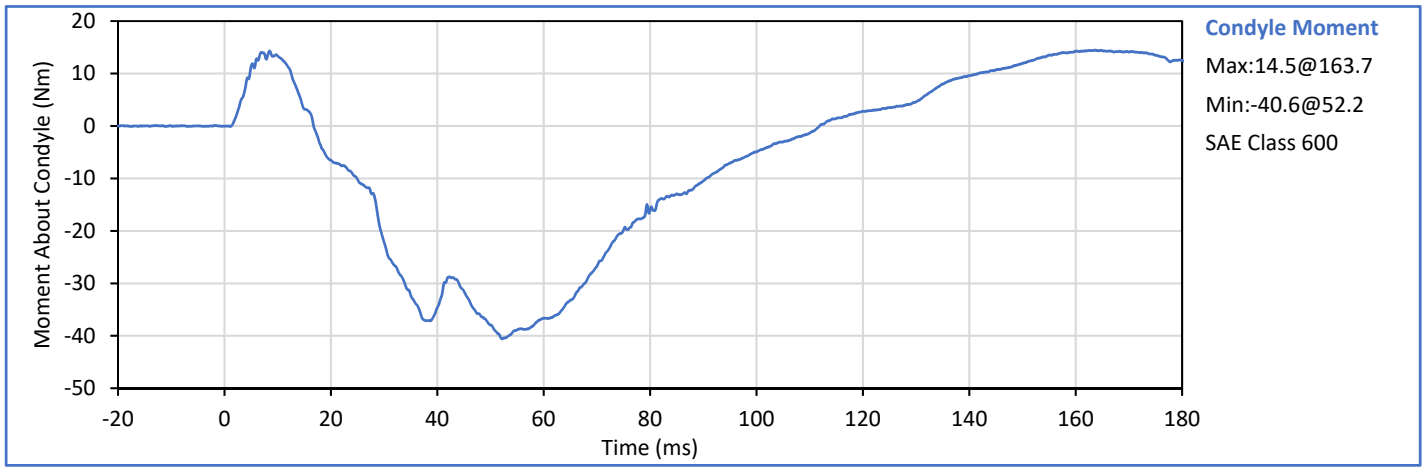


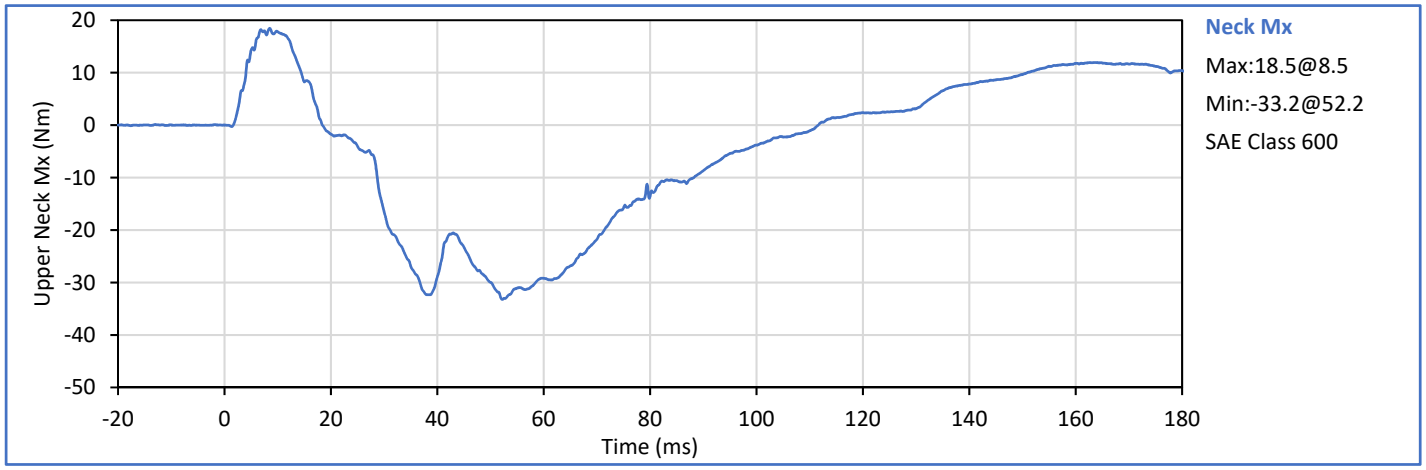
Technician: J. Hernandez

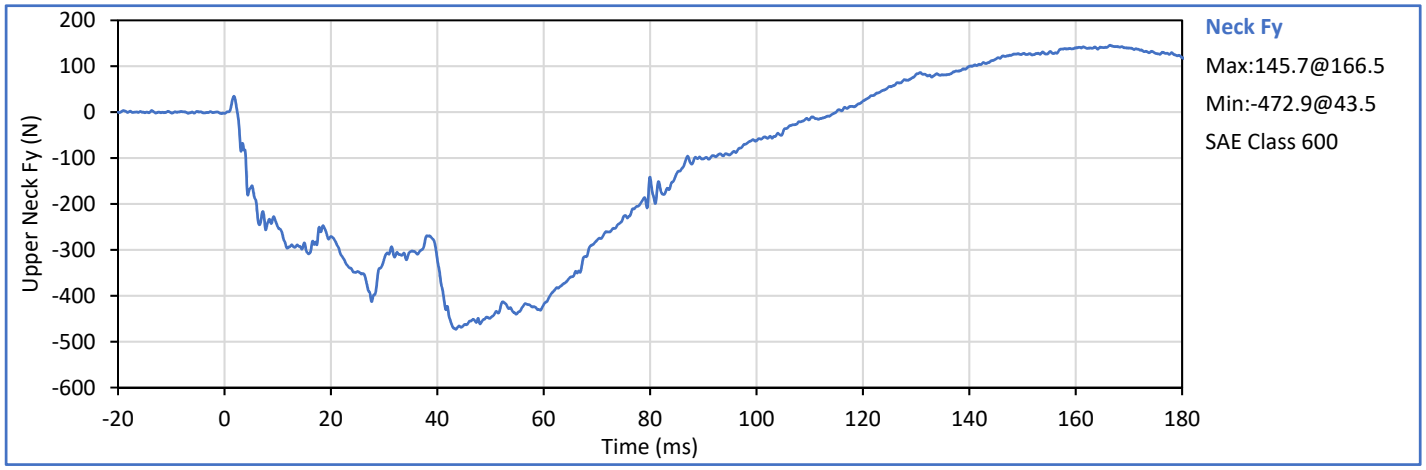
Approved By: P. Puzzuto

SID-IIs Small Side Impact ATD
Neck Flexion

ATD Serial No.: DY8080 Test Date: 2019-08-26





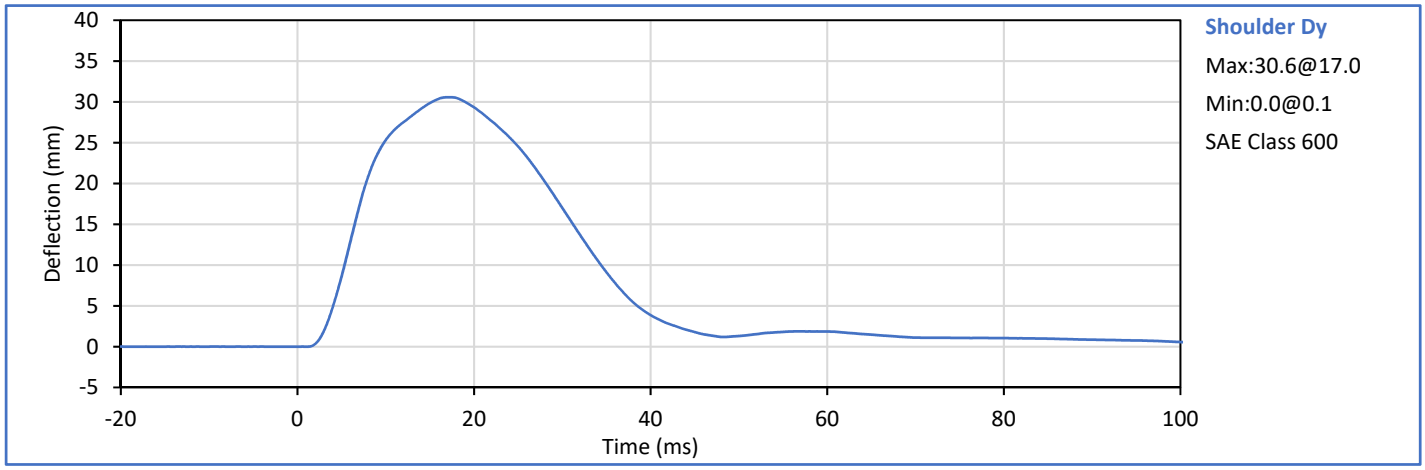


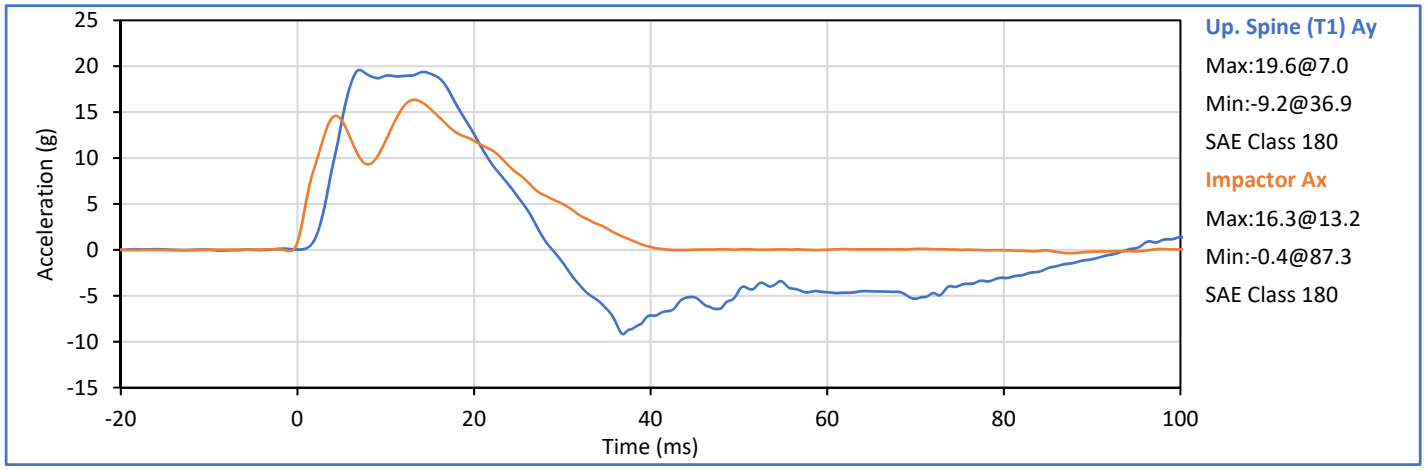
Applus IDIADA
KARCO

SID-IIs Small Side Impact ATD
Shoulder Impact Test

ATD Serial No.: DY8080 Test Date: 2019-08-27

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Humidity	%	10	70	39	Pass
Impactor Velocity	m/s	4.20	4.40	4.30	Pass
Peak Shoulder Dy	mm	28.0	37.0	30.6	Pass
Peak Upper Spine (T1) Ay	g	17.0	22.0	19.6	Pass
Peak Impactor Ax	g	13.0	18.0	16.3	Pass
			Overall Test Results		Pass





Technician: J. Hernandez

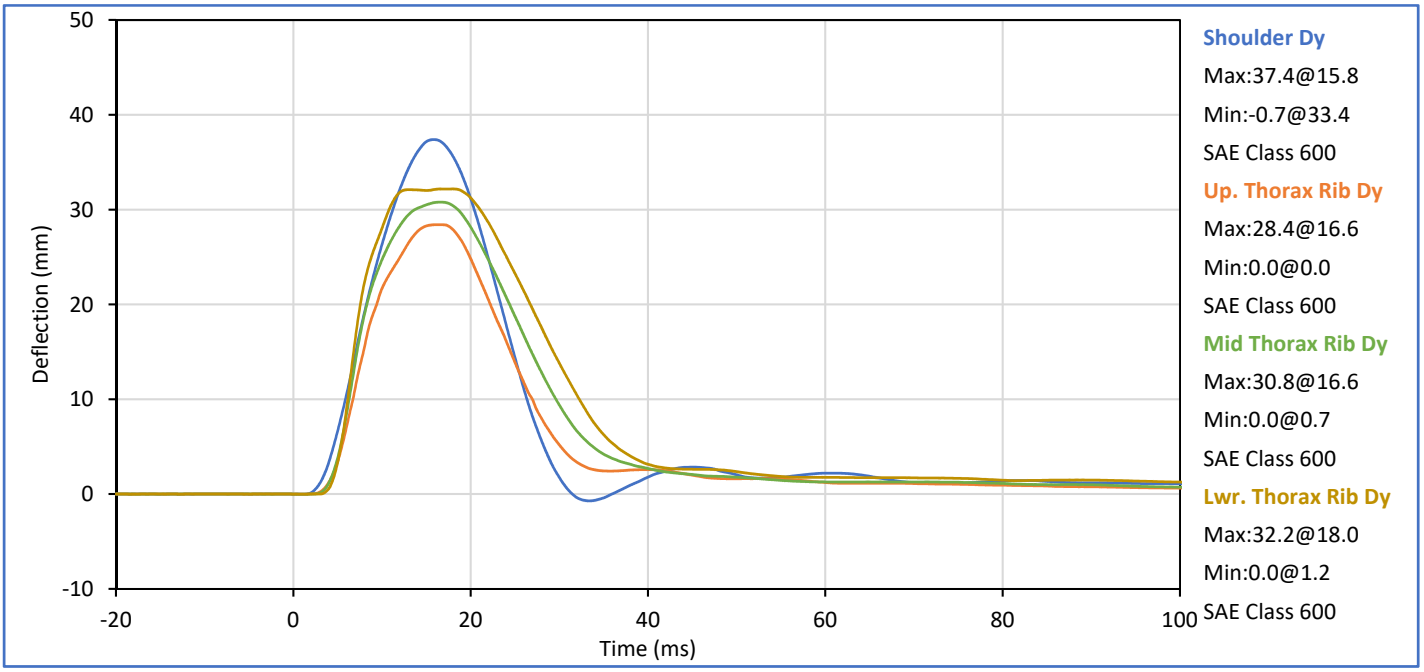
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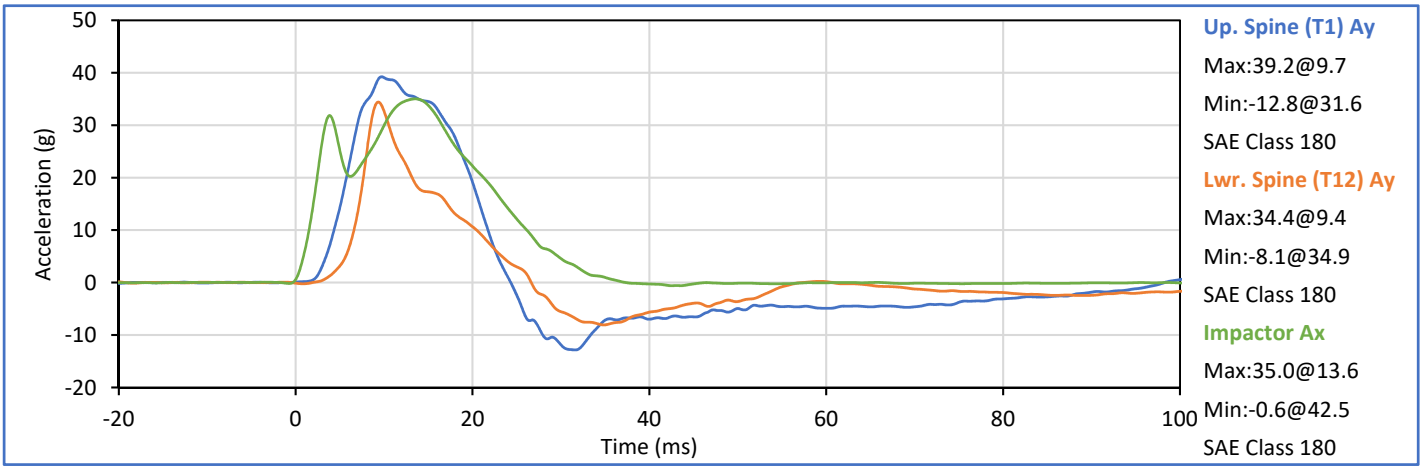
Applus IDIADA
KARCO

SID-IIs Small Side Impact ATD
Thorax (With Arm)

ATD Serial No.: DY8080 Test Date: 2019-08-27

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.7	Pass
Laboratory Humidity	%	10	70	45	Pass
Impactor Velocity	m/s	6.60	6.80	6.66	Pass
Peak Shoulder Dy	mm	31.0	40.0	37.4	Pass
Peak Upper Rib Dy	mm	25.0	32.0	28.4	Pass
Peak Middle Rib Dy	mm	30.0	36.0	30.8	Pass
Peak Lower Rib Dy	mm	32.0	38.0	32.2	Pass
Peak Upper Spine (T1) Ay	g	34.0	43.0	39.2	Pass
Peak Lower Spine (T12) Ay	g	29.0	37.0	34.4	Pass
Peak Impactor Ax	g	30.0	36.0	35.0	Pass
			Overall Test Results		Pass





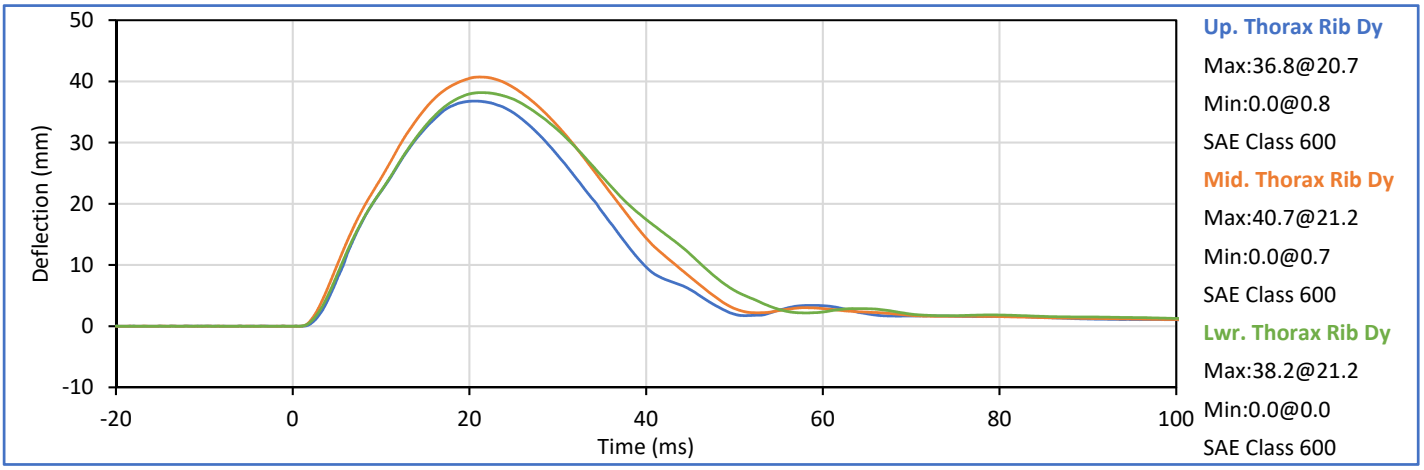
Technician: J. Hernandez Approved By: P. Puzzuto

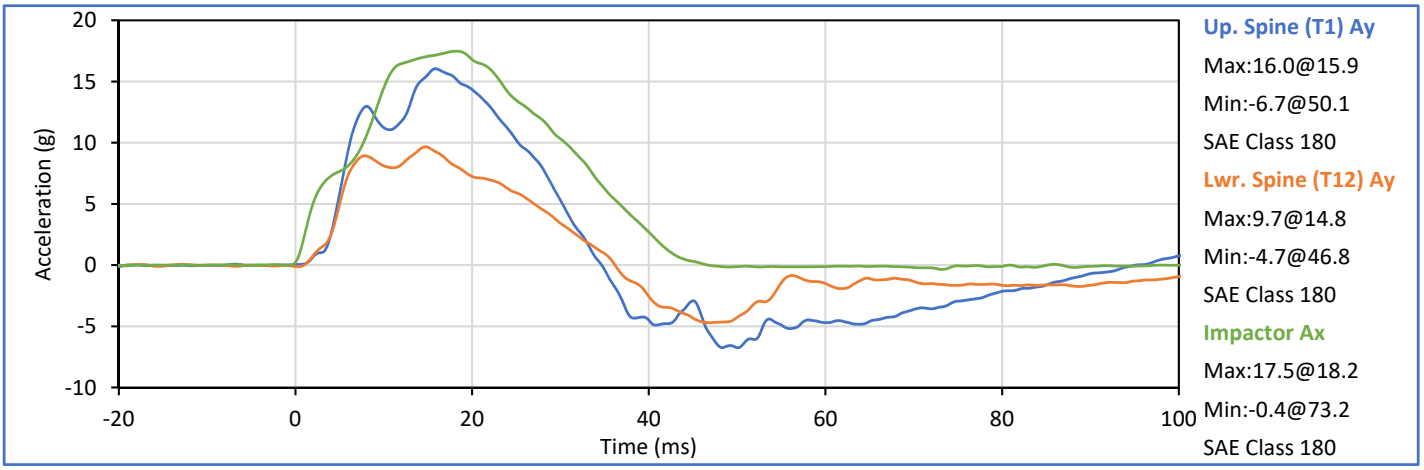
Applus IDIADA
KARCO

SID-IIs Small Side Impact ATD
Thorax (No Arm)

ATD Serial No.: DY8080 Test Date: 2019-08-27

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 Rib Dy	mm	32.0	40.0	36.8	Pass
Peak Middle Rib Dy	mm	39.0	45.0	40.7	Pass
Peak Lower Rib Dy	mm	35.0	43.0	38.2	Pass
Peak Upper Spine (T1) Ay	g	13.0	17.0	16.0	Pass
Peak Lower Spine (T12) Ay	g	7.0	11.0	9.7	Pass
Peak Impactor Ax	g	14.0	18.0	17.5	Pass
			Overall Test Results		Pass





Technician: J. Hernandez

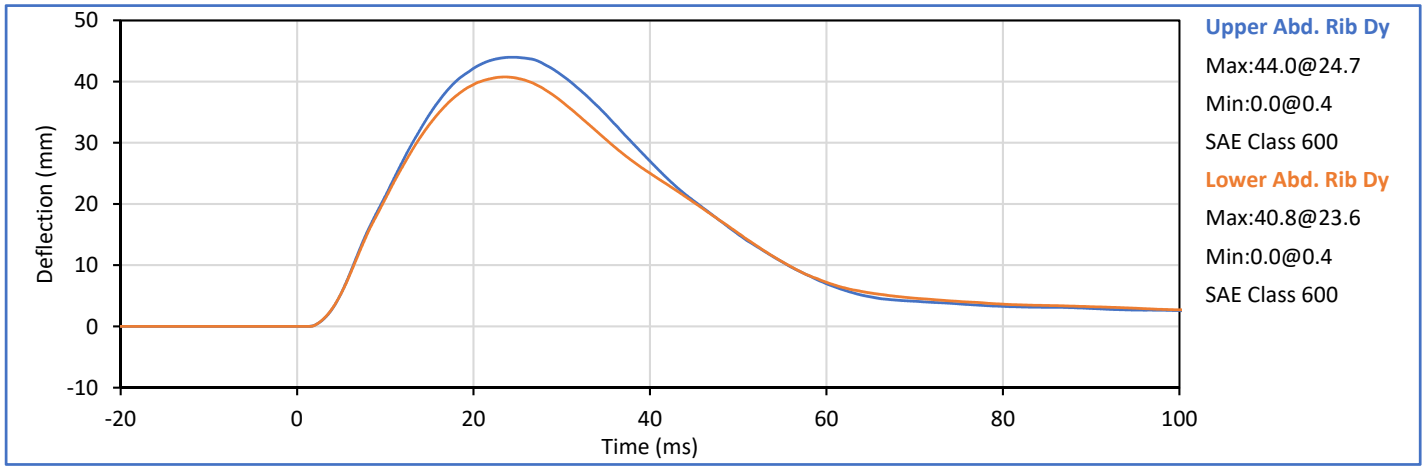
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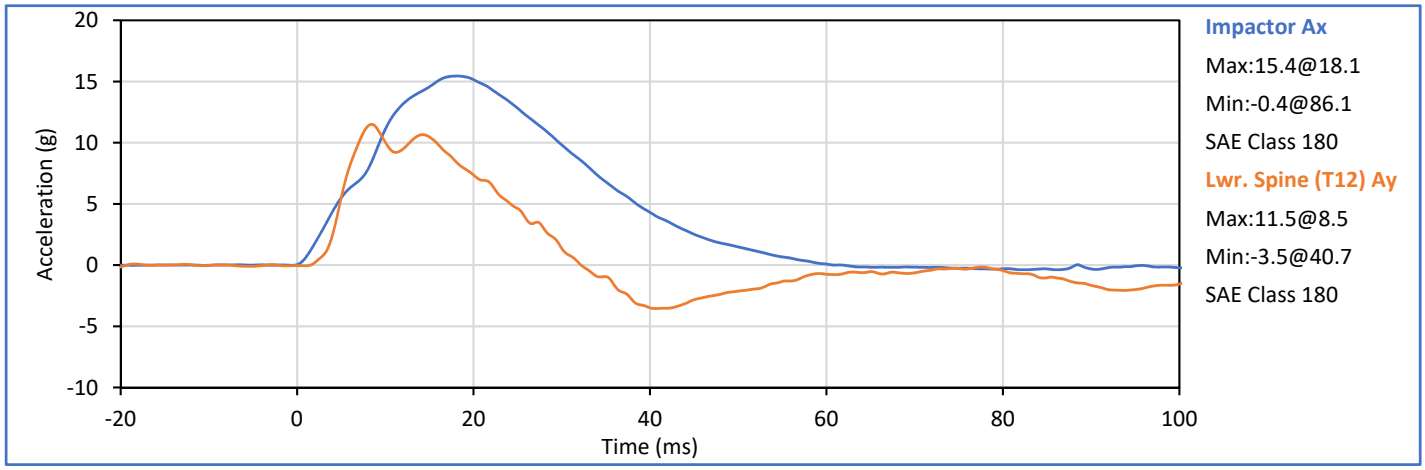
Applus IDIADA
KARCO

SID-IIs Small Side Impact ATD
Abdomen Impact

ATD Serial No.: DY8080 Test Date: 2019-08-27

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	44.0	Pass
Peak Lower Abdomen Rib Dy	mm	33.0	44.0	40.8	Pass
Peak Lower Spine T12 Ay	mm	9.0	14.0	11.5	Pass
Peak Impactor Ax	g	12.0	16.0	15.4	Pass
			Overall Test Results		Pass





Technician: J. Hernandez

Approved By: P. Puzzuto

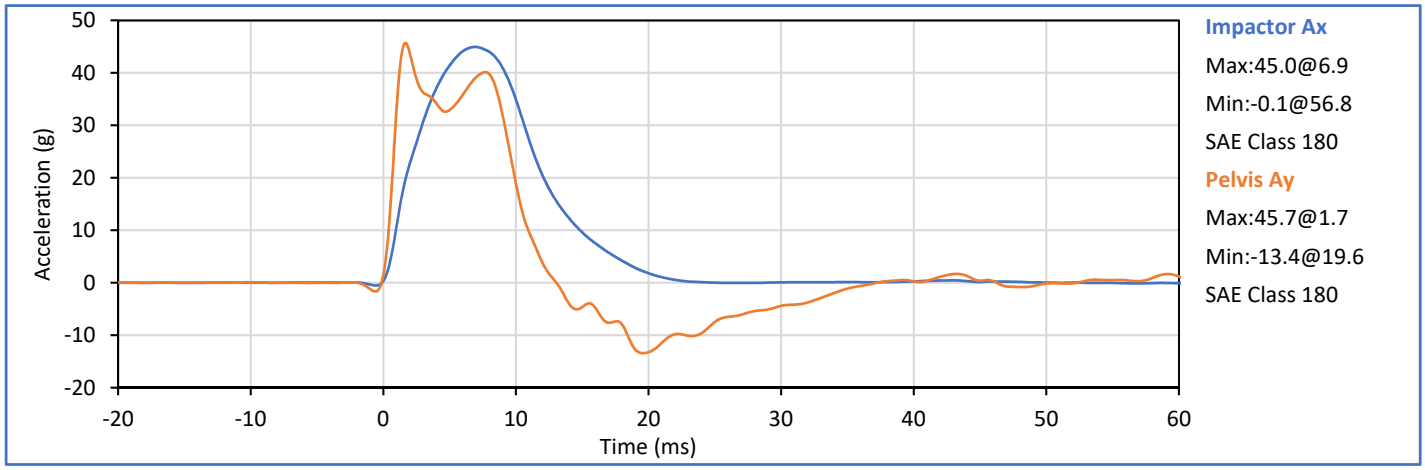
Applus IDIADA KARCO

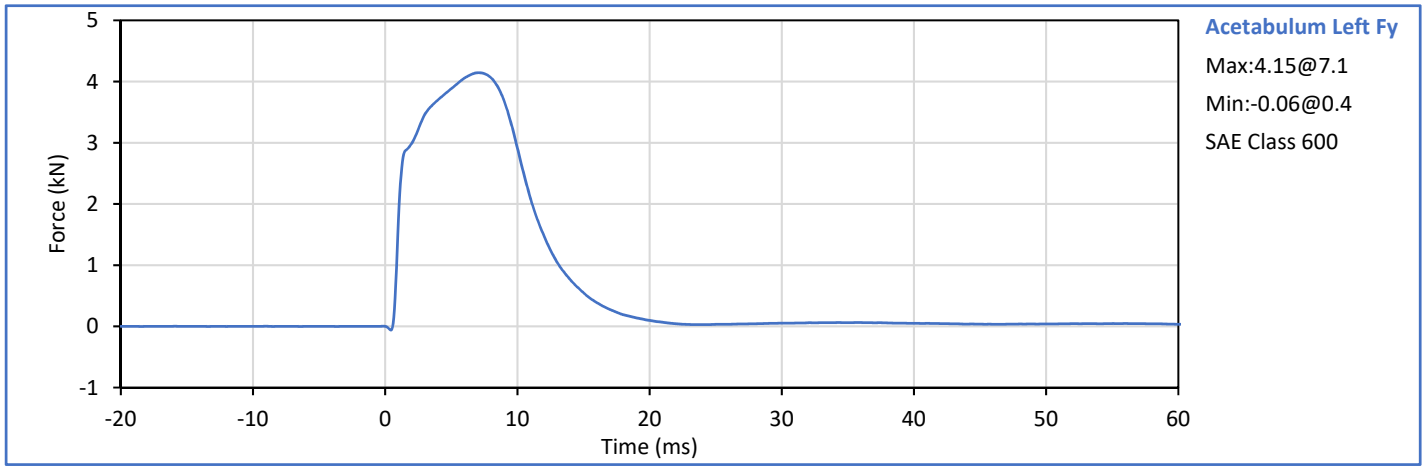
SID-IIs Small Side Impact ATD
Pelvis Acetabulum Impact

ATD Serial No.: DY8080 Test Date: 2019-08-27

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	6.71	Pass
Peak Acetabulum Fy	kN	3.60	4.30	4.15	Pass
Pelvis Ay after 6ms	g	34.0	42.0	40.1	Pass
Peak Impactor Ax	g	38.0	47.0	45.0	Pass
			Overall Test Results		Pass

Pelvis Plug S/N: 12693 (SACO)





Technician: J. Hernandez

Approved By: P. Puzzuto

ATD Serial No.: DY8080 Test Date: 2019-08-27

Pelvis Plug S/N: 12693 (SACO)

SACO RESEARCH

SID-IIs Pelvis Plug Certification Test

Plug S/N 12693
Test Number 7697
Report Number 7726
Test Date 11/21/2018 3:24:28 PM

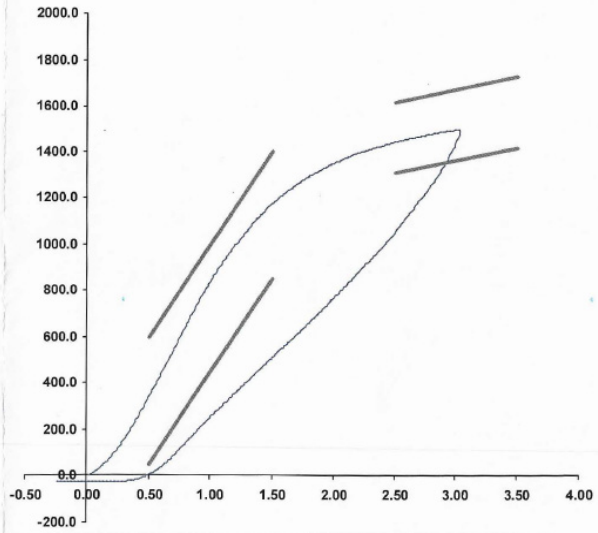
	Test Results	Spec Min	Spec Max
Force @ 0.5 mm (N)	346.62	50.00	600.00
Force @ 1.5 mm (N)	1,175.19	850.00	1,400.00
Force @ 2.5 mm (N)	1,440.77	1,306.00	1,618.00
Force @ 3.0 mm (N)	1,493.64	1,361.00	1,673.00

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

Crosshead Speed (mm / min) or 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 21-Nov-18
SACO Research

By : DC Date : 11/21/2018

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

Applus IDIADA
KARCO

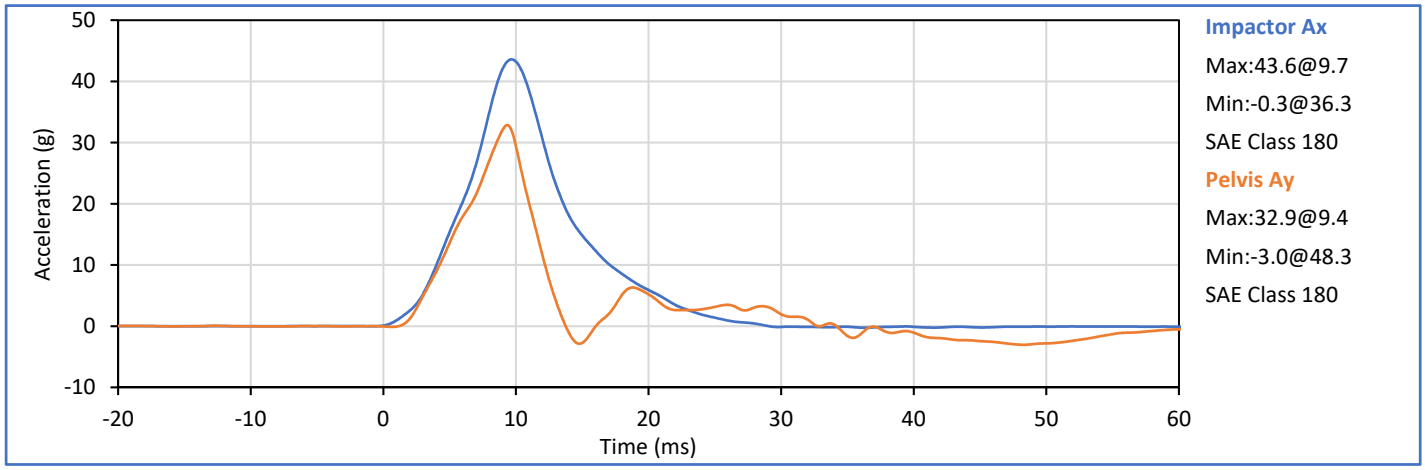
SID-IIs Small Side Impact ATD
Pelvis Iliac Impact

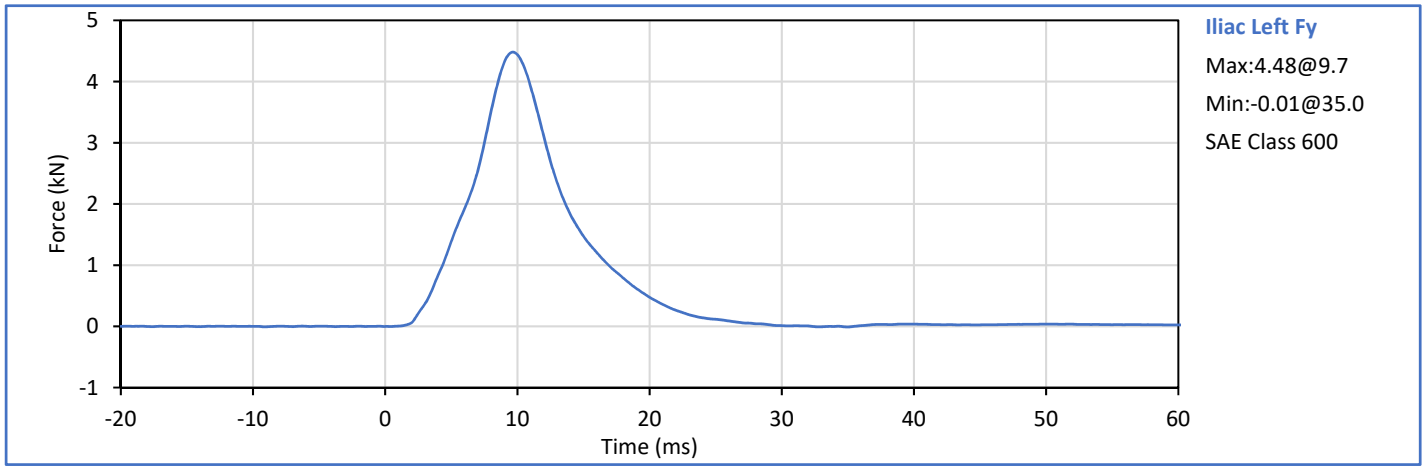
ATD Serial No.: DY8080 Test Date: 2019-08-27

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	4.32	Pass
Peak Iliac Fy	kN	4.10	5.10	4.48	Pass
Pelvis Ay after 6ms	g	28.0	39.0	32.9	Pass
Peak Impactor Ax	g	36.0	45.0	43.6	Pass
			Overall Test Results		Pass

Pelvis Plug S/N: 12228 (SACO) *

* Plug is not impacted and remains certified





Technician: J. Hernandez

Approved By: P. Puzzuto

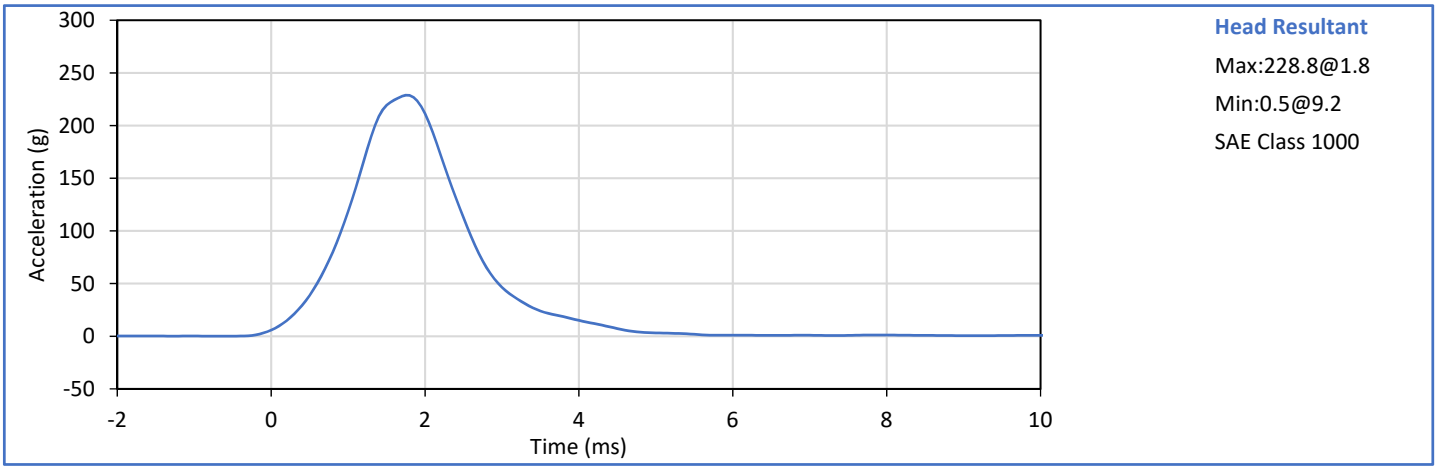
APPENDIX C
Post-Test ATD Configuration and Performance Verification Data
WorldSID 50th Male Side Impact ATD, Left Side Configuration
S/N: EB8888

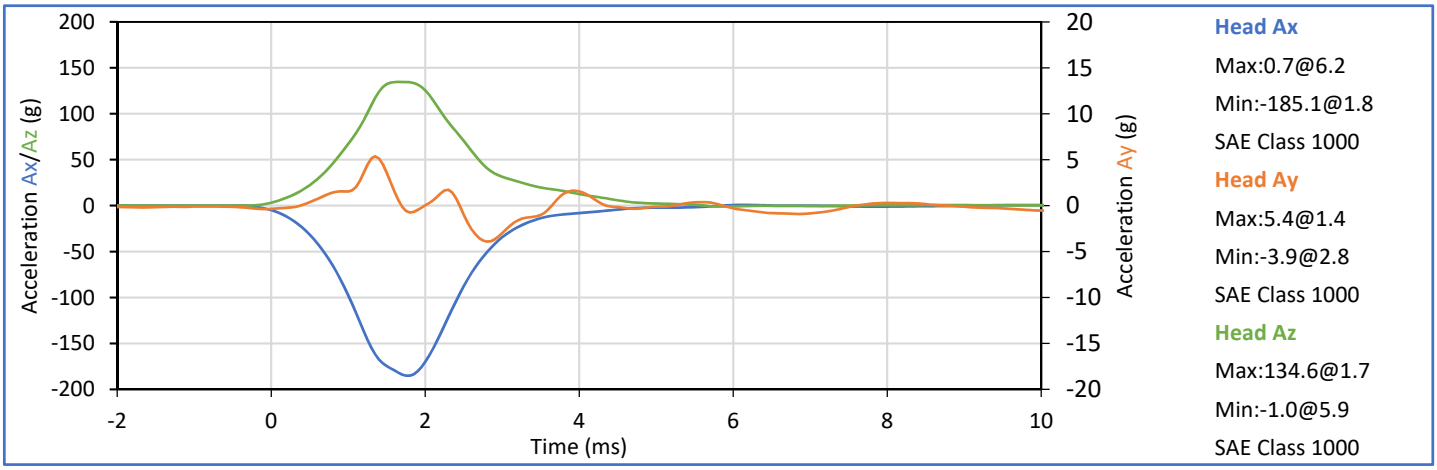
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Head Drop (Frontal)

ATD S/N: EB8888 Test Date: 2019-09-12

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	33	Pass
Peak Resultant Acceleration	g	211.0	261.0	228.8	Pass
Peak Ay	g	-15.0	15.0	5.4	Pass
Oscillations After Main Pulse	%	-10.0	10.0	0.5	Pass
			Overall Test Results		Pass





Technician: J. Hernandez

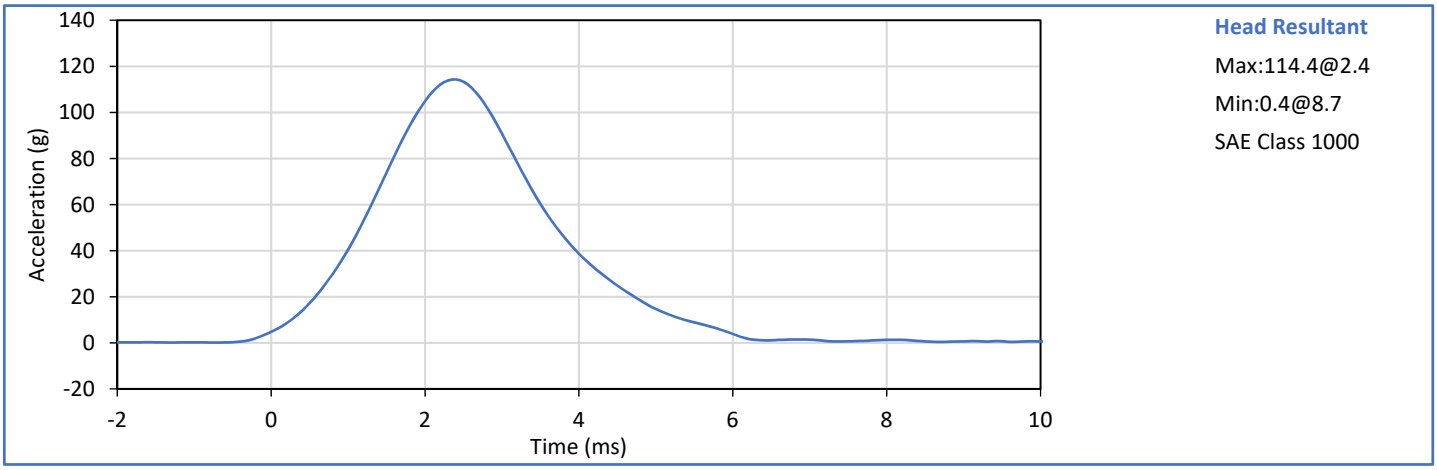
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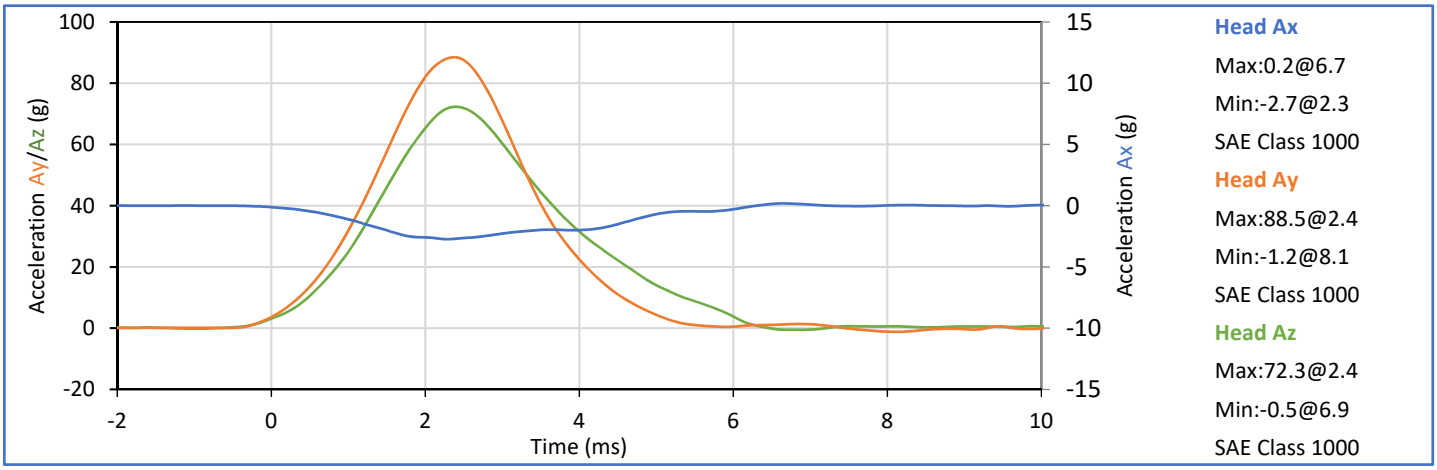
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Head Drop (Lateral Left)

ATD S/N: EB8888 Test Date: 2019-09-12

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	33	Pass
Peak Resultant Acceleration	g	107.0	126.0	114.3	Pass
Peak Ax	g	-15.0	15.0	-2.7	Pass
Oscillations After Main Pulse	%	-10.0	10.0	1.3	Pass
			Overall Test Results		Pass





Technician: J. Hernandez

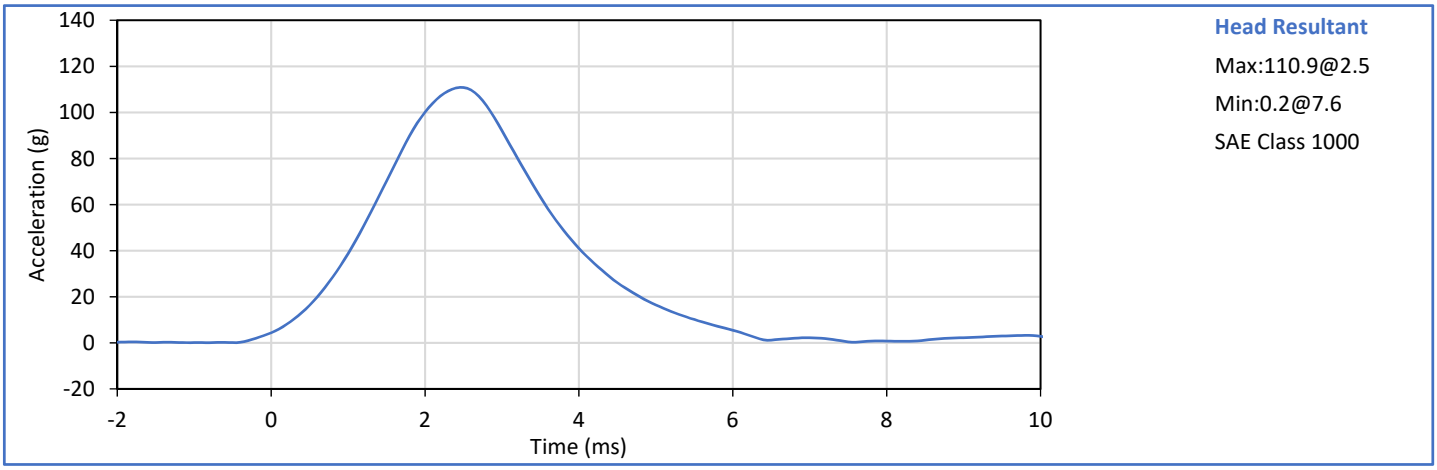
Approved By: P. Puzzuto

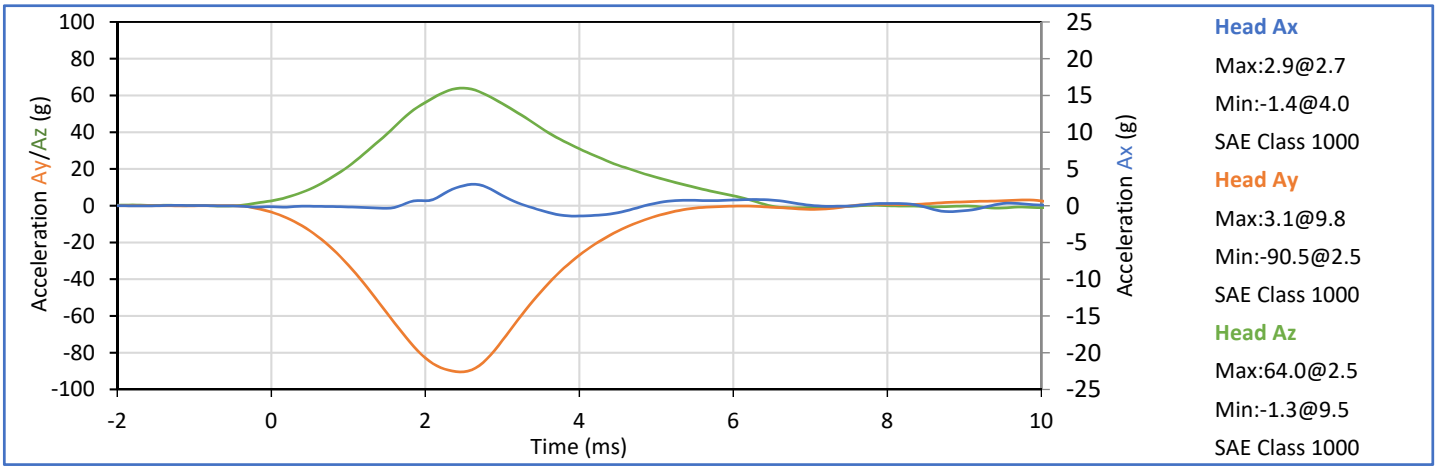
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Head Drop (Lateral Right)

ATD S/N: EB8888 Test Date: 2019-09-12

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	32	Pass
Peak Resultant Acceleration	g	107.0	126.0	110.9	Pass
Peak Ax	g	-15.0	15.0	2.9	Pass
Oscillations After Main Pulse	%	-10.0	10.0	2.9	Pass
			Overall Test Results		Pass





Technician: J. Hernandez

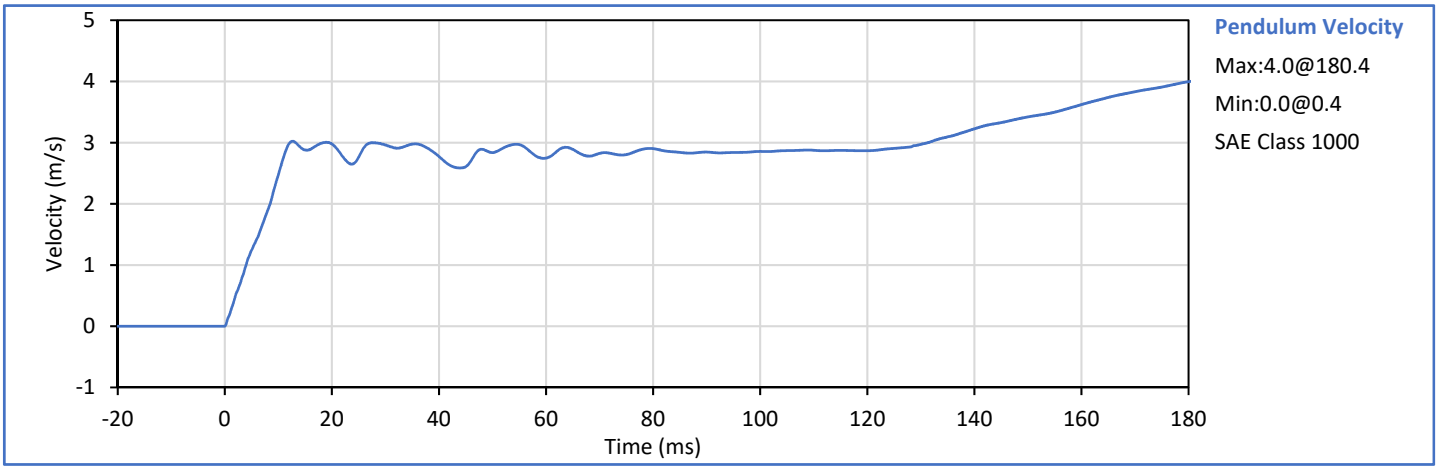
Approved By: P. Puzzuto

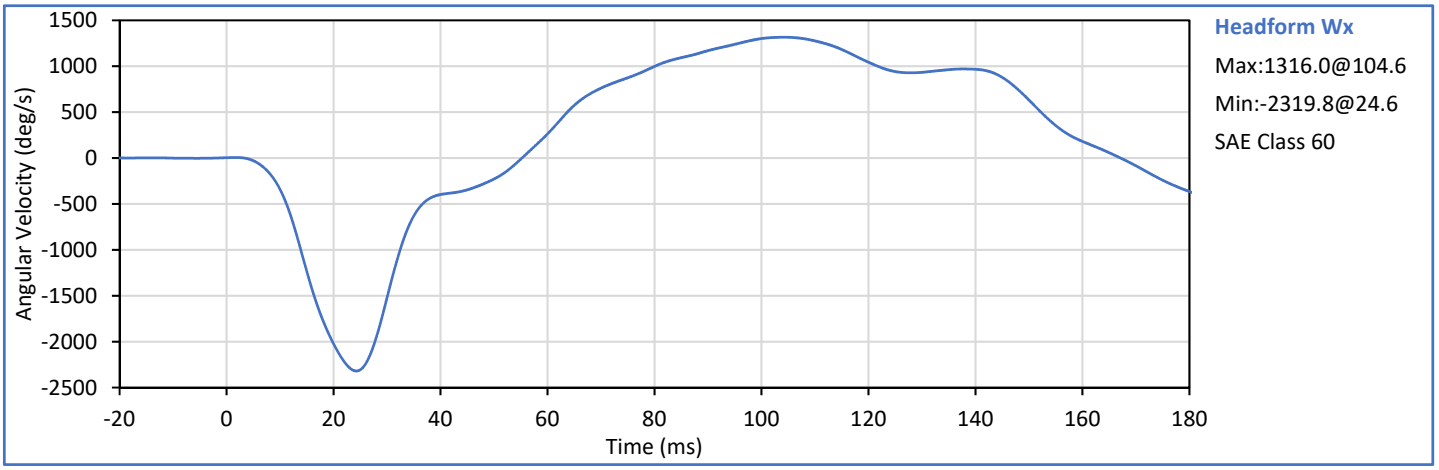
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Neck Lateral Flexion (Left)

ATD S/N: EB8888 Test Date: 2019-09-12

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	34	Pass
Pendulum Velocity	m/s	3.30	3.50	3.39	Pass
Pendulum Velocity at 4 ms	m/s	0.77	1.04	1.01	Pass
Pendulum Velocity at 8 ms	m/s	1.60	1.90	1.89	Pass
Pendulum Velocity at 12 ms	m/s	2.43	3.29	2.98	Pass
Headform Flexion Angle	deg	-61.0	-50.0	-56.5	Pass
Headform Flexion Decay to 0 deg	ms	58.0	72.0	60.4	Pass
Peak Occipital Condyle Moment	Nm	54.0	67.0	61.6	Pass
Peak Occipital Condyle Moment deca	ms	71.0	87.0	74.1	Pass
Peak Forward Rotation	deg	-39.0	-32.0	-35.2	Pass
	ms	56.0	68.0	56.2	Pass
Peak Rearward Rotation	deg	-36.0	-29.0	-31.5	Pass
	ms	56.0	68.0	56.2	Pass
Peak Headform ωx	deg/s	-2393	-2163	-2320	Pass
			Overall Test Results		Pass



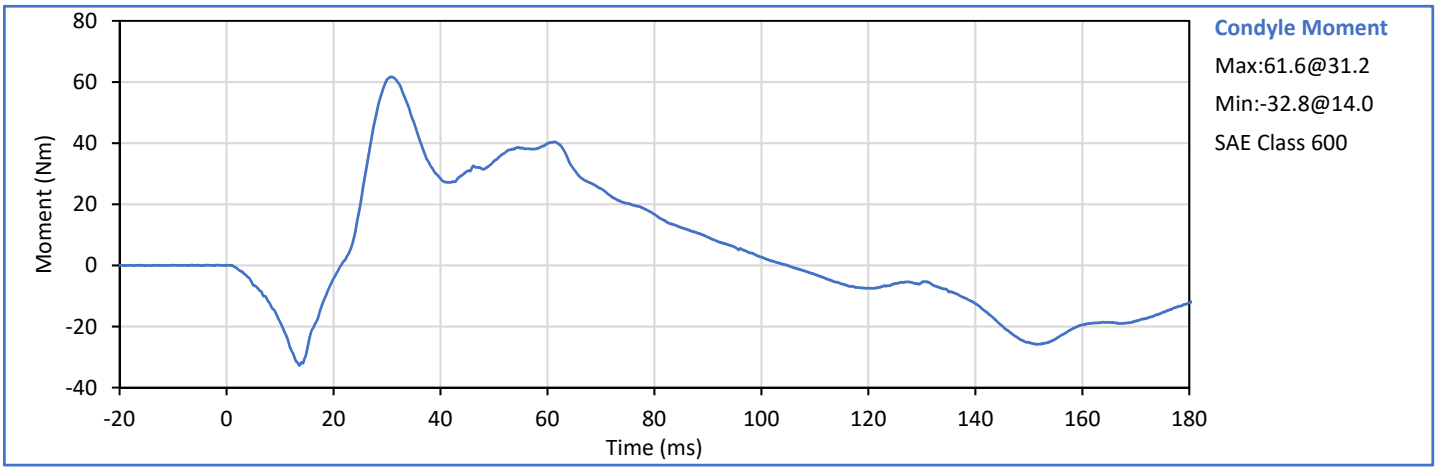


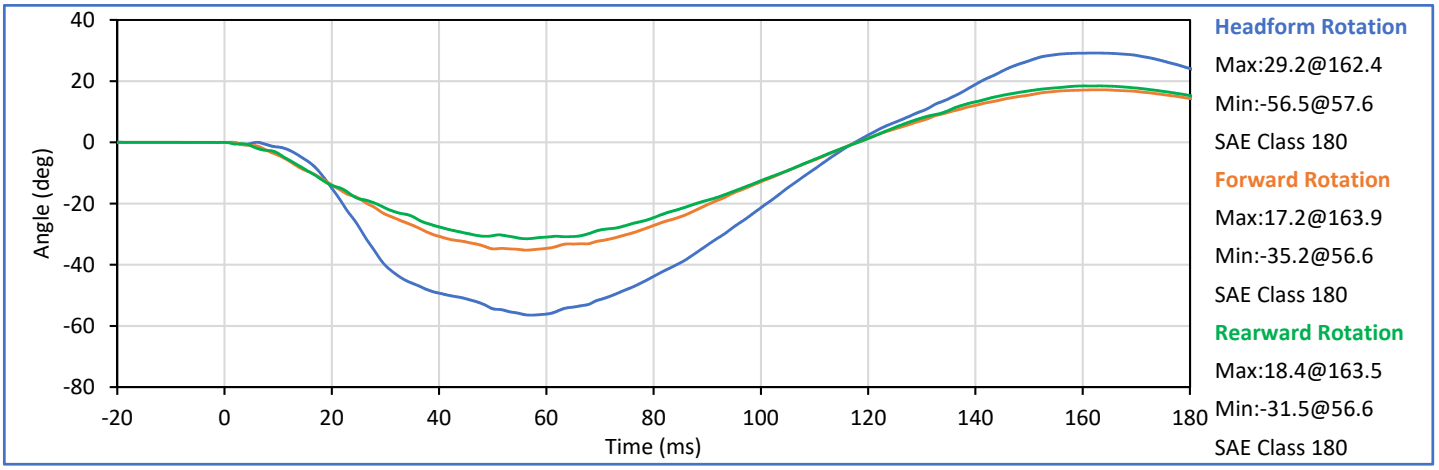
Technician: J. Hernandez

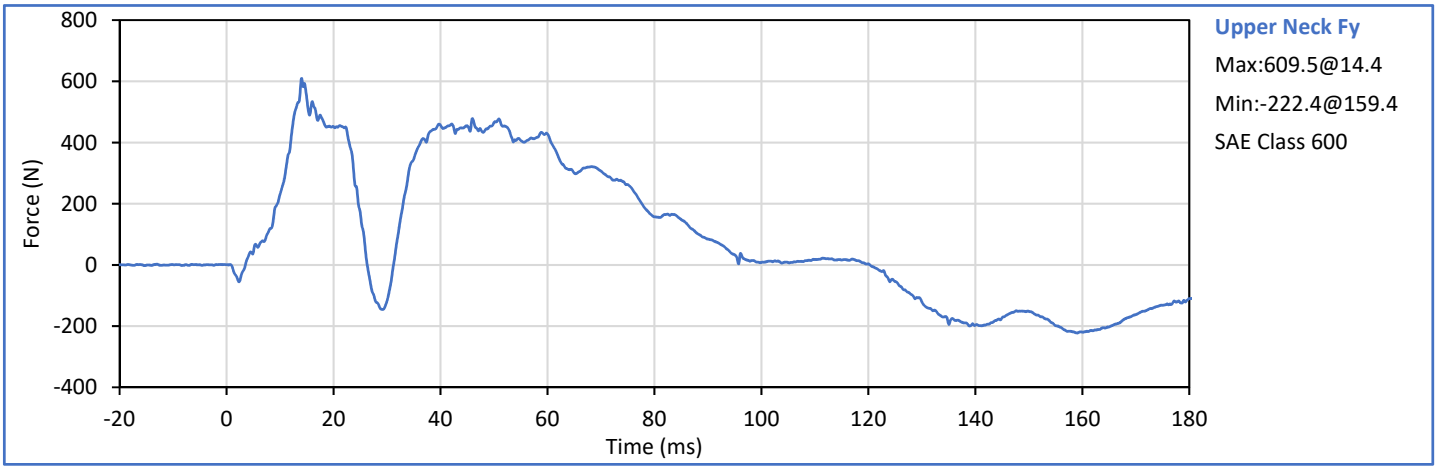
Approved By: P. Puzzuto

WorldSID 50th Male Side Impact ATD
Neck Lateral Flexion (Left)

ATD S/N: EB8888 Test Date: 2019-09-12





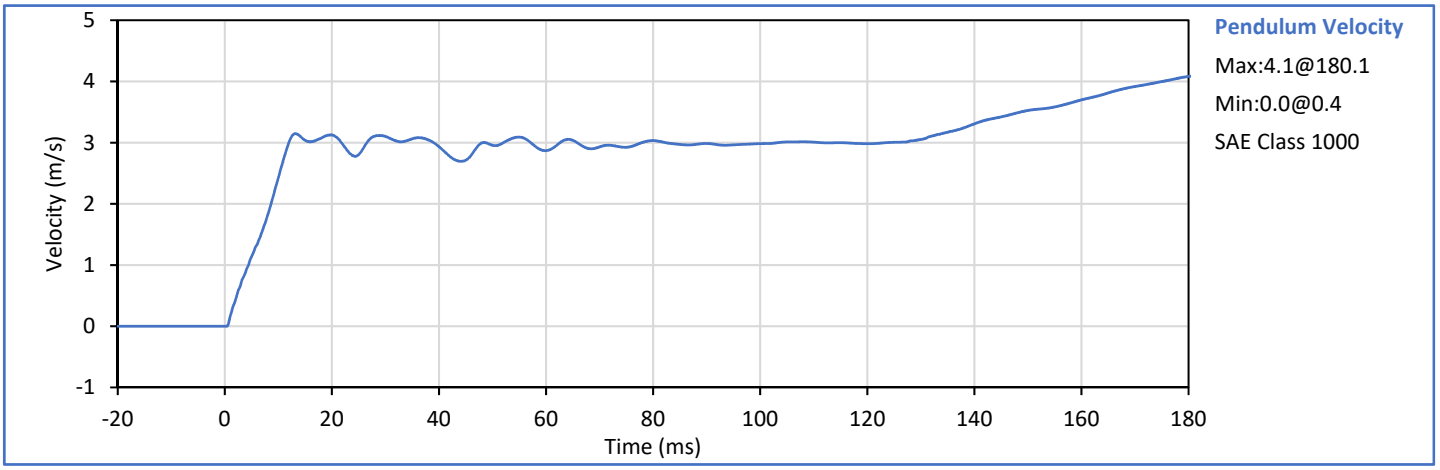


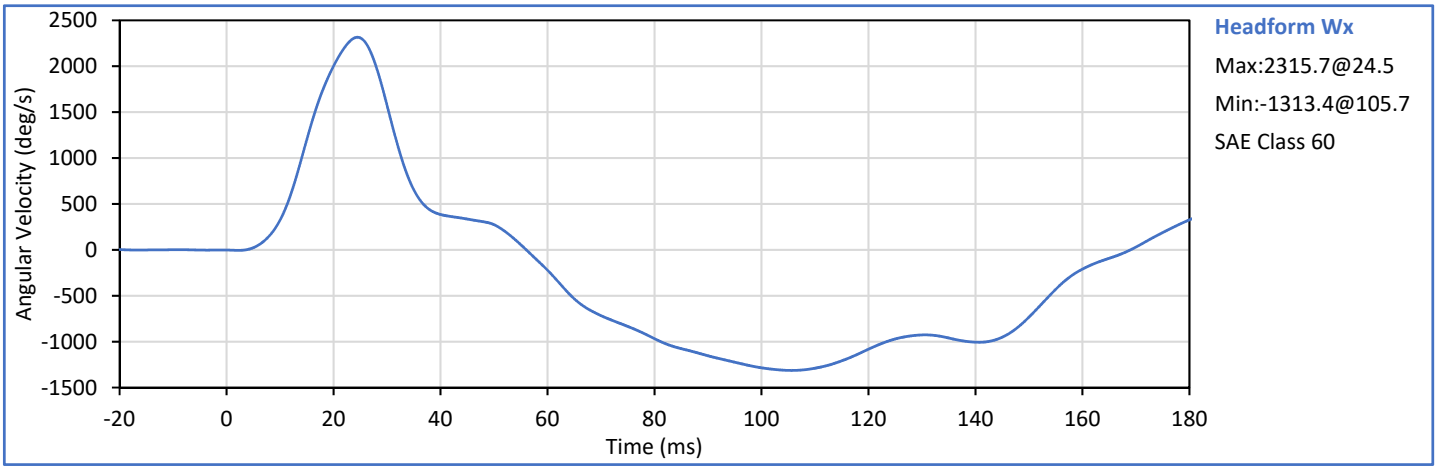
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Neck Lateral Flexion (Right)

ATD S/N: EB8888 Test Date: 2019-09-12

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
Pendulum Velocity	m/s	3.30	3.50	3.39	Pass
Pendulum Velocity at 4 ms	m/s	0.77	1.04	0.92	Pass
Pendulum Velocity at 8 ms	m/s	1.60	1.90	1.82	Pass
Pendulum Velocity at 12 ms	m/s	2.43	3.29	3.01	Pass
Headform Flexion Angle	deg	50.0	61.0	56.4	Pass
Headform Flexion Decay to 0 deg	ms	58.0	72.0	61.5	Pass
Peak Occipital Condyle Moment	Nm	-67.0	-54.0	-61.0	Pass
Peak Occipital Condyle Moment deca	ms	71.0	87.0	74.4	Pass
Peak Forward Rotation	deg	32.0	39.0	33.8	Pass
	ms	56.0	68.0	56.4	Pass
Peak Rearward Rotation	deg	29.0	36.0	33.5	Pass
	ms	56.0	68.0	61.3	Pass
Peak Headform ωx	deg/s	2163	2393	2316	Pass
			Overall Test Results		Pass



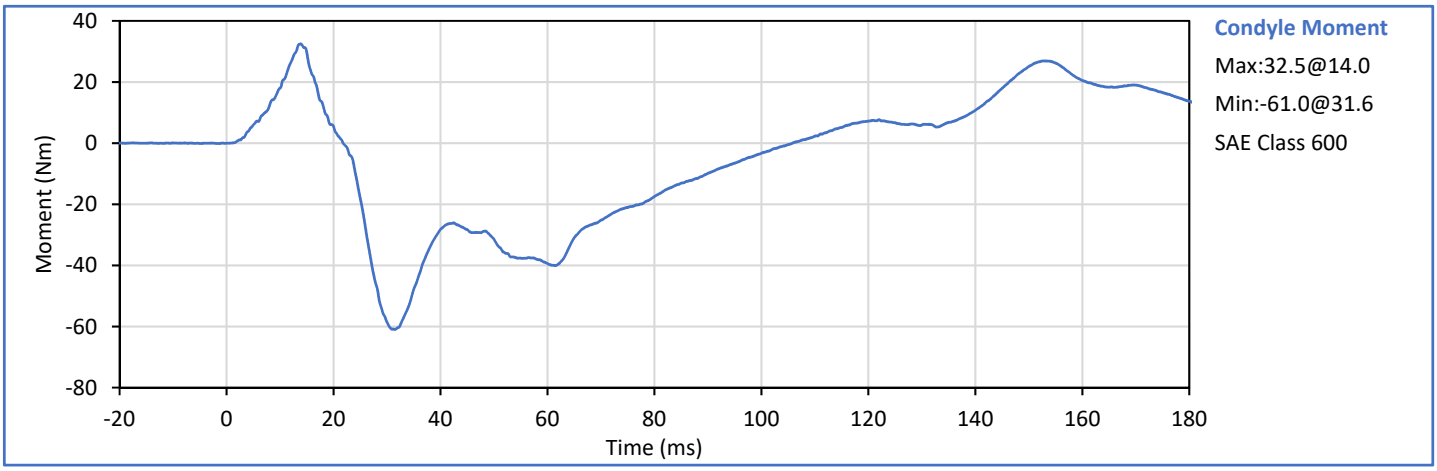


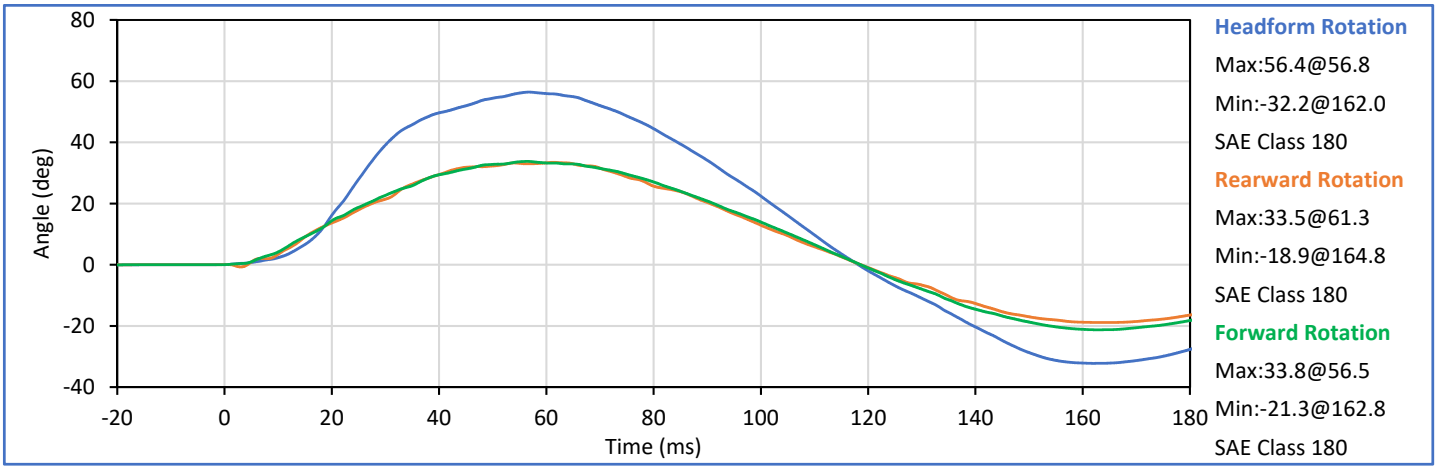
Technician: J. Hernandez

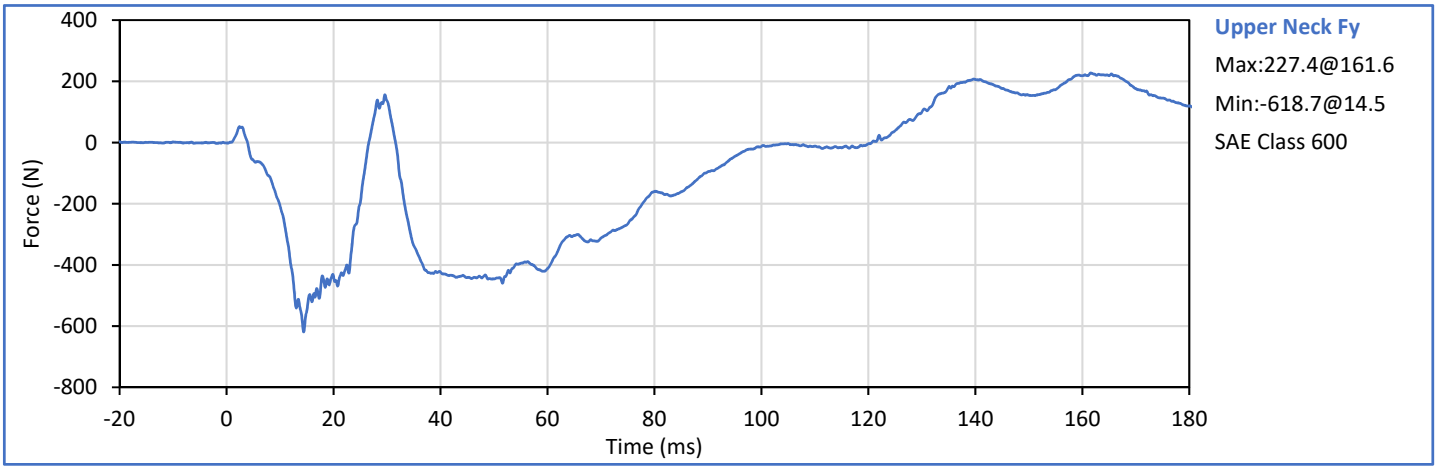
Approved By: P. Puzzuto

WorldSID 50th Male Side Impact ATD
Neck Lateral Flexion (Right)

ATD S/N: EB8888 Test Date: 2019-09-12





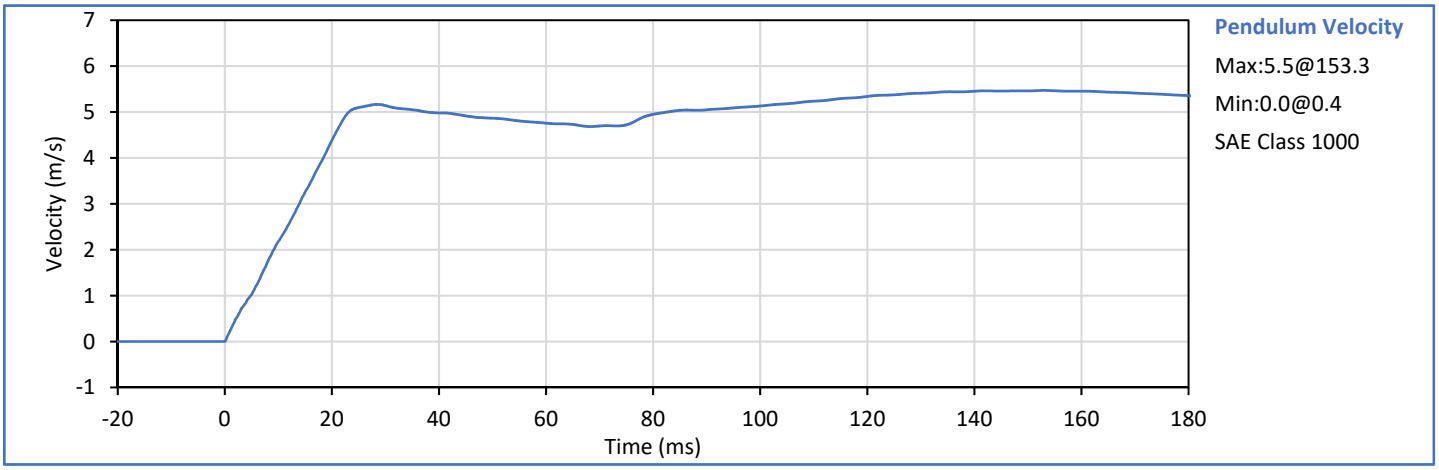


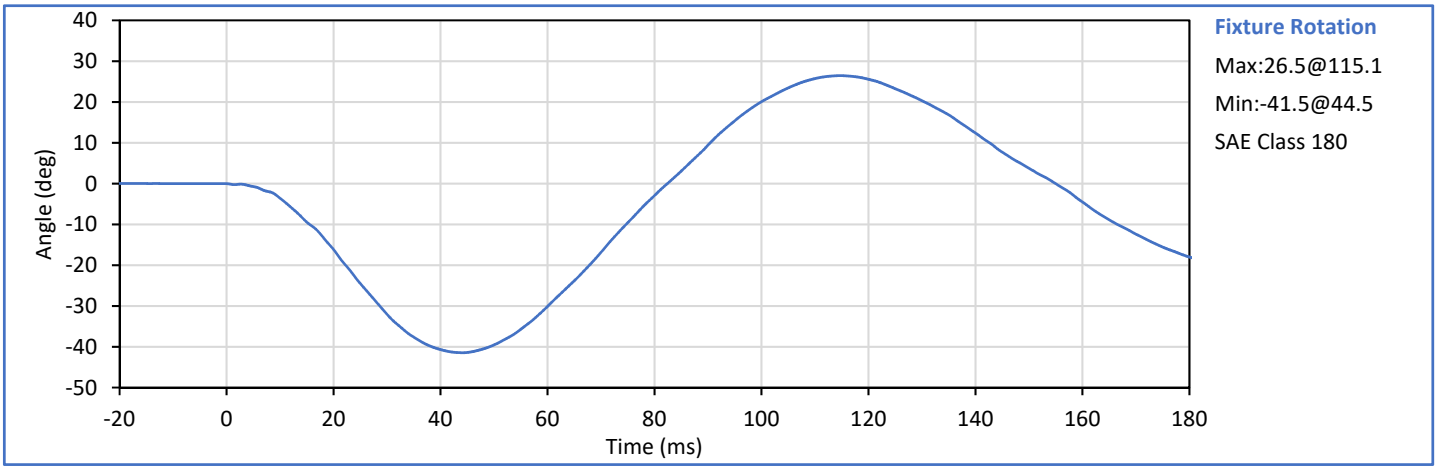
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Neck Torsion (Left)

ATD S/N: EB8888 Test Date: 2019-09-12

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	34	Pass
Pendulum Velocity	m/s	5.10	5.30	5.14	Pass
Pendulum Velocity at 10 ms	m/s	2.04	2.28	2.18	Pass
Pendulum Velocity at 15 ms	m/s	3.20	3.57	3.26	Pass
Pendulum Velocity at 20 ms	m/s	4.32	4.83	4.38	Pass
Peak Fixture Rotation	deg	-48.0	-45.0	-41.5	**Fail**
Fixture Decay from peak to 0 deg	ms	37.0	41.0	38.7	Pass
Peak Head ωz	deg/s	-1560	-1450	-1417	**Fail**
Peak Lower Neck Mz	Nm	36.0	40.0	37.3	Pass
			Overall Test Results		**Fail**



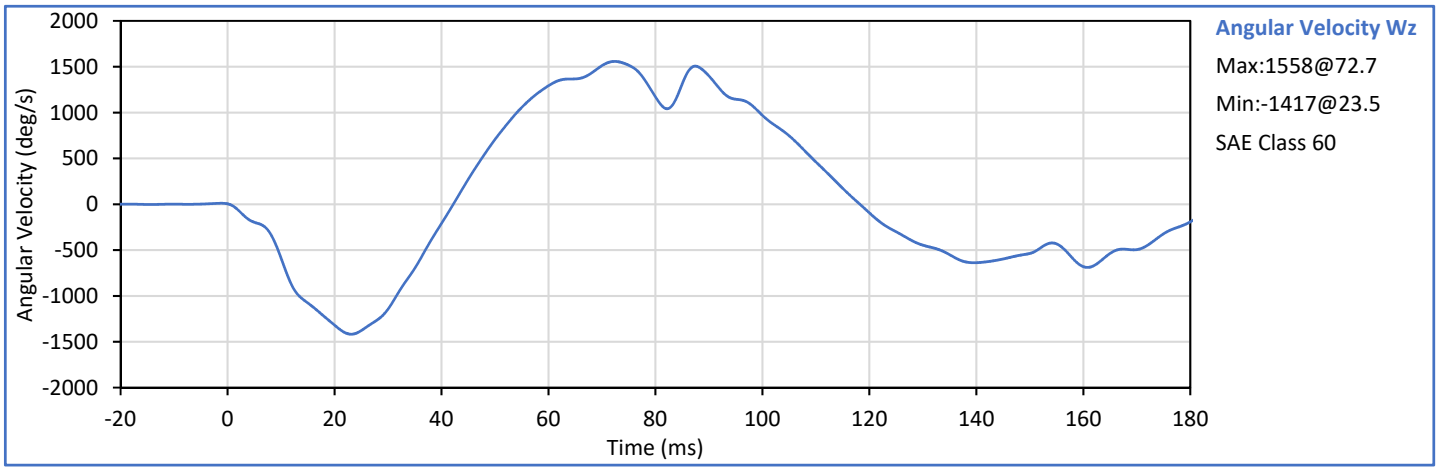


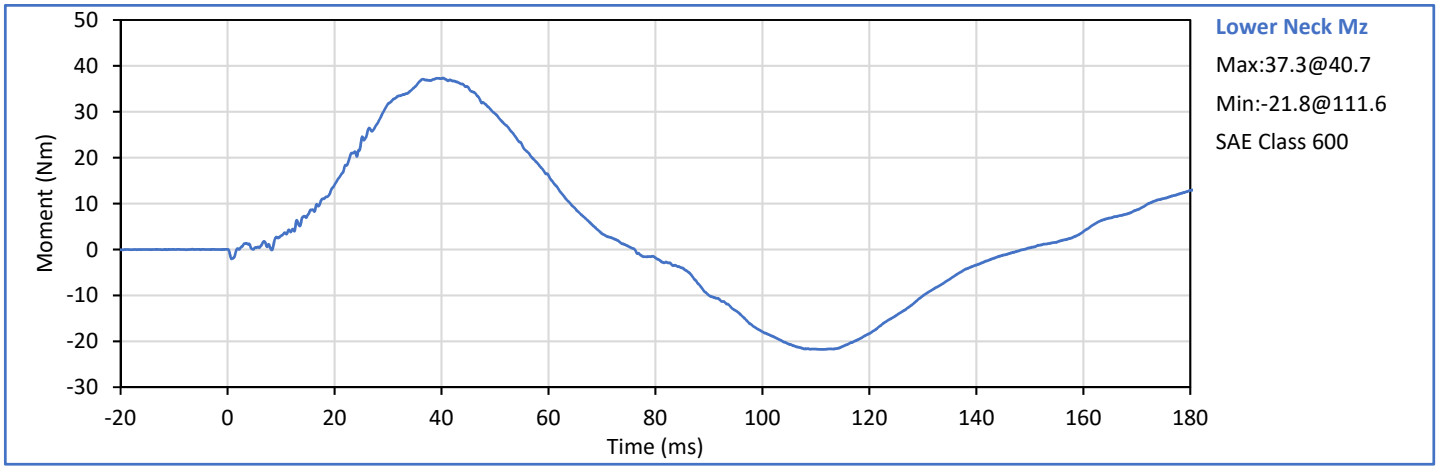
Technician: J. Hernandez

Approved By: P. Puzzuto

WorldSID 50th Male Side Impact ATD
Neck Torsion (Left)

ATD S/N: EB8888 Test Date: 2019-09-12



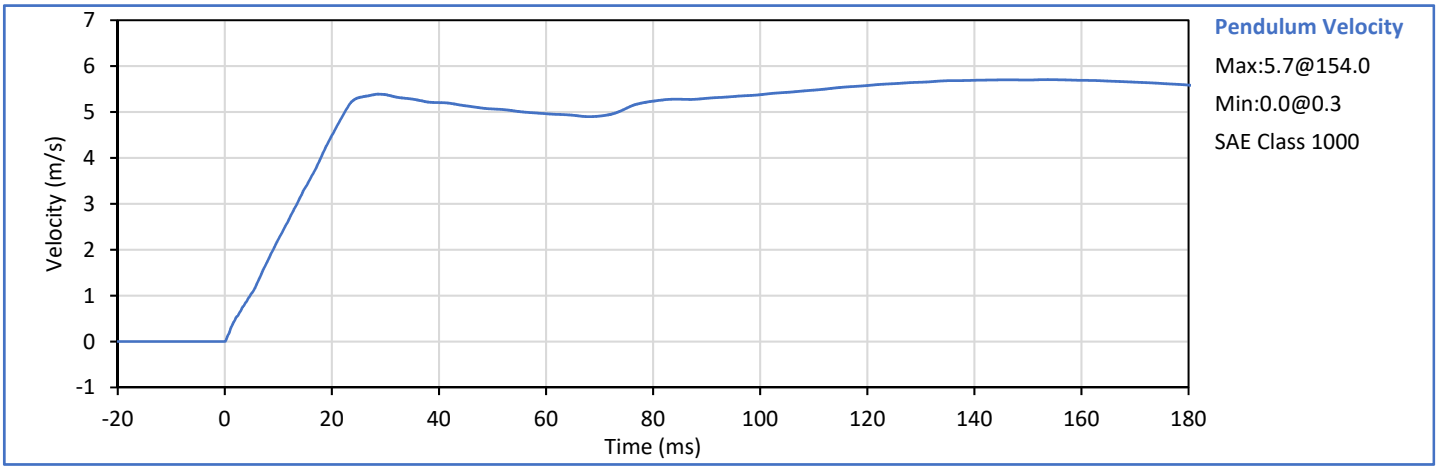


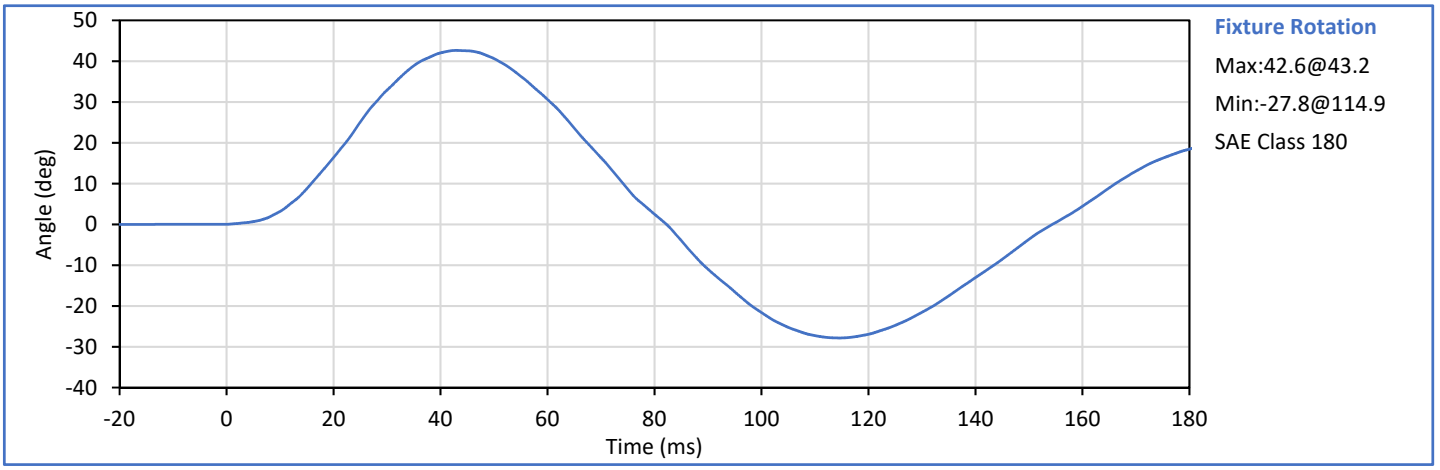
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Neck Torsion (Right)

ATD S/N: EB8888 Test Date: 2019-09-12

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.1	Pass
Laboratory Relative Humidity	%	10	70	32	Pass
Pendulum Velocity	m/s	5.10	5.30	5.19	Pass
Pendulum Velocity at 10 ms	m/s	2.04	2.28	2.23	Pass
Pendulum Velocity at 15 ms	m/s	3.20	3.57	3.35	Pass
Pendulum Velocity at 20 ms	m/s	4.32	4.83	4.49	Pass
Peak Fixture Rotation	deg	45.0	48.0	42.6	**Fail**
Fixture Decay from peak to 0 deg	ms	37.0	41.0	39.7	Pass
Peak Head ωz	deg/s	1450	1560	1481	Pass
Peak Lower Neck Mz	Nm	-40.0	-36.0	-39.4	Pass
			Overall Test Results		**Fail**



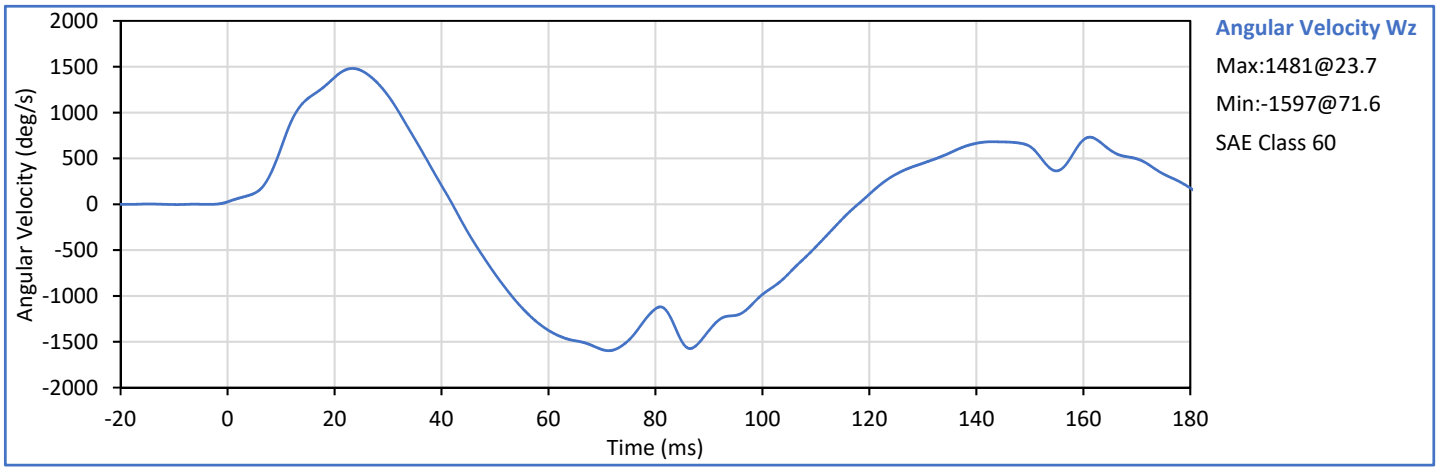


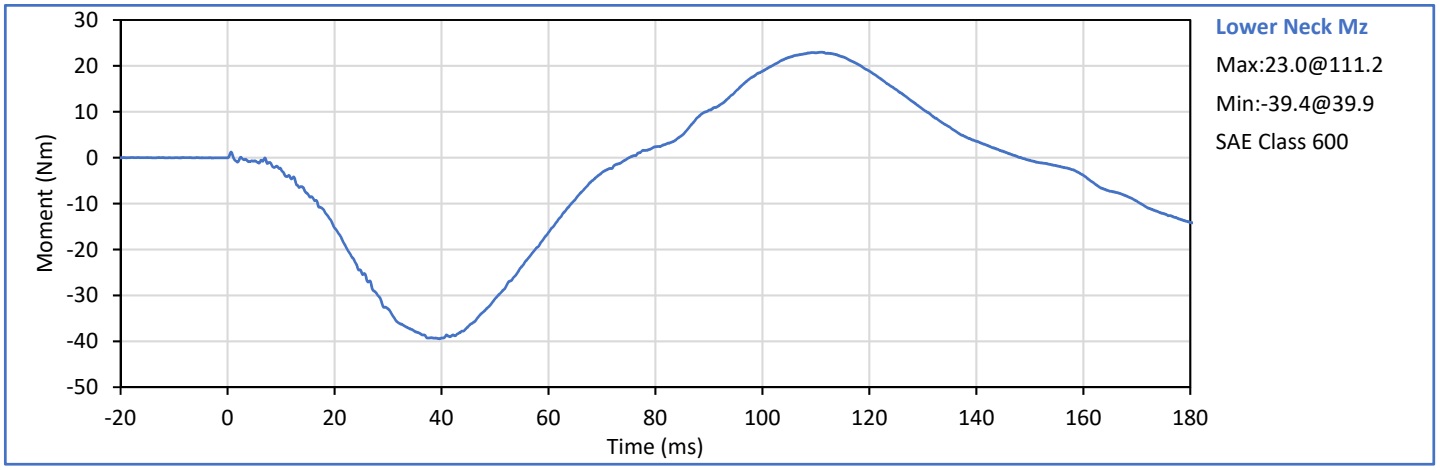
Technician: J. Hernandez

Approved By: P. Puzzuto

WorldSID 50th Male Side Impact ATD
Neck Torsion (Right)

ATD S/N: EB8888 Test Date: 2019-09-12





Applus IDIADA KARCO

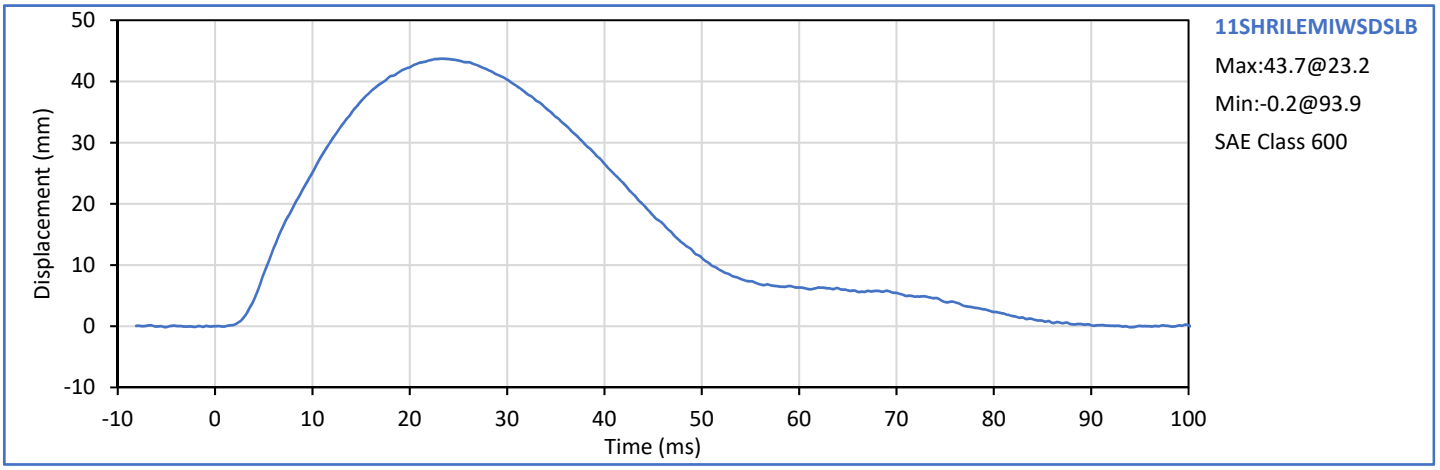
WorldSID 50th Male Side Impact ATD
Shoulder Qualification

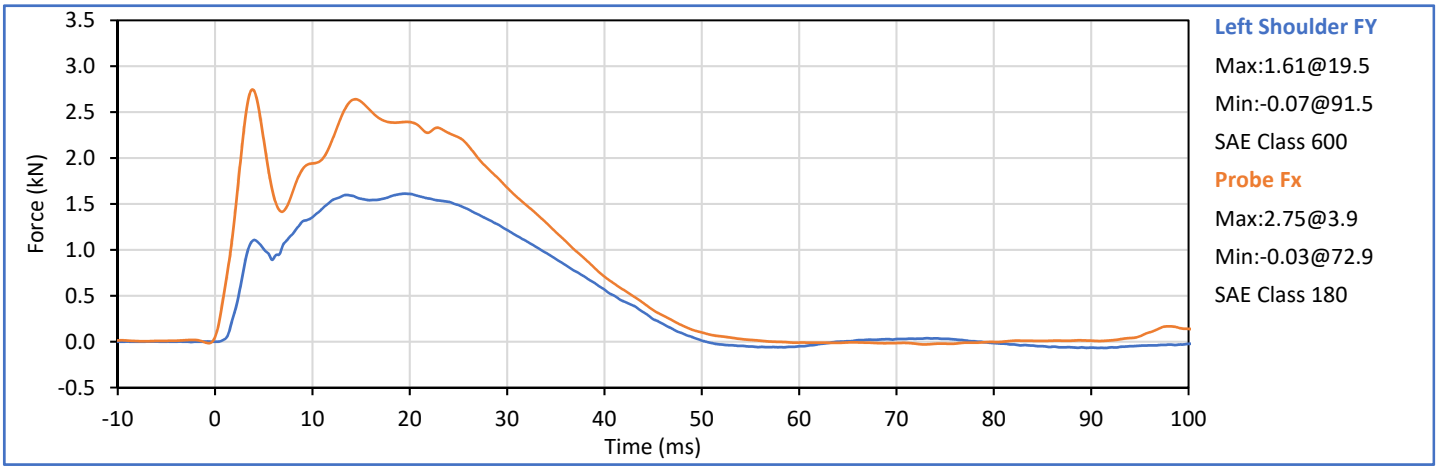
ATD S/N: EB8888 Test Date: 2019-09-13

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	30	Pass
Probe Velocity	m/s	4.20	4.40	4.31	Pass
Peak Shoulder Deflection	mm	37.0	46.0	43.7	Pass
Peak Shoulder Fy	kN	1.50	1.70	1.61	Pass
Peak Pendulum Fx	kN	2.60	3.30	2.75	Pass
			Overall Test Results		Pass

Test Angles and Temperatures

Head (deg)		Spine (deg)		Pelvis		H-Point	Temp (degC)	
X	Y	X	Y	X	Y	X	T Int	T Ext
-0.3	0.1	-0.4	0.2	0.0	5.2	39.7	21.3	20.0





Technician: J. Hernandez

Approved By: P. Puzzuto

Applus IDIADA KARCO

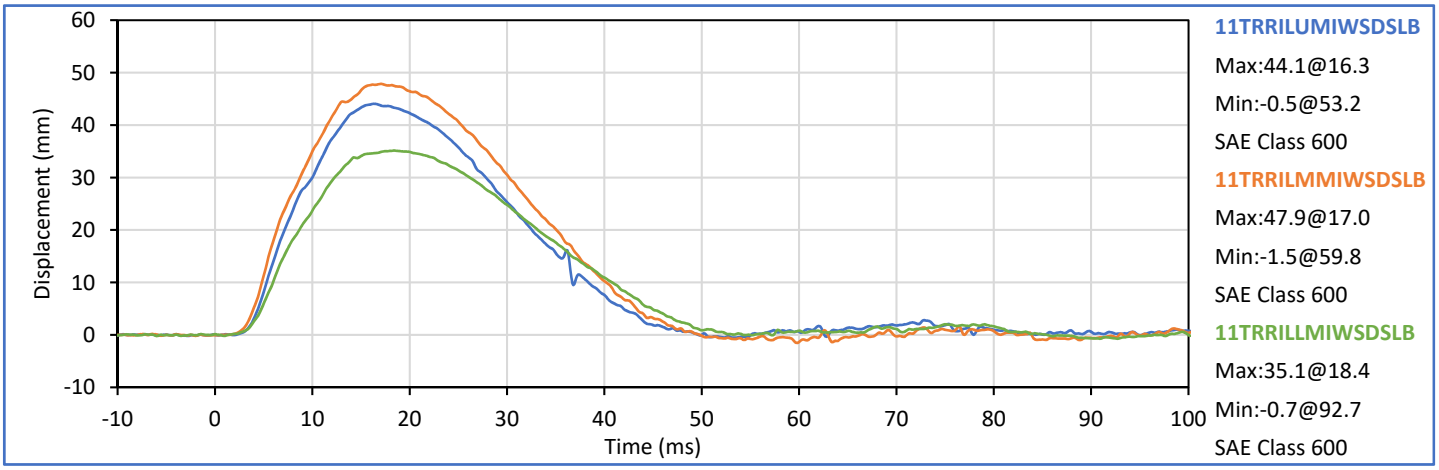
WorldSID 50th Male Side Impact ATD
Thorax With Arm Qualification

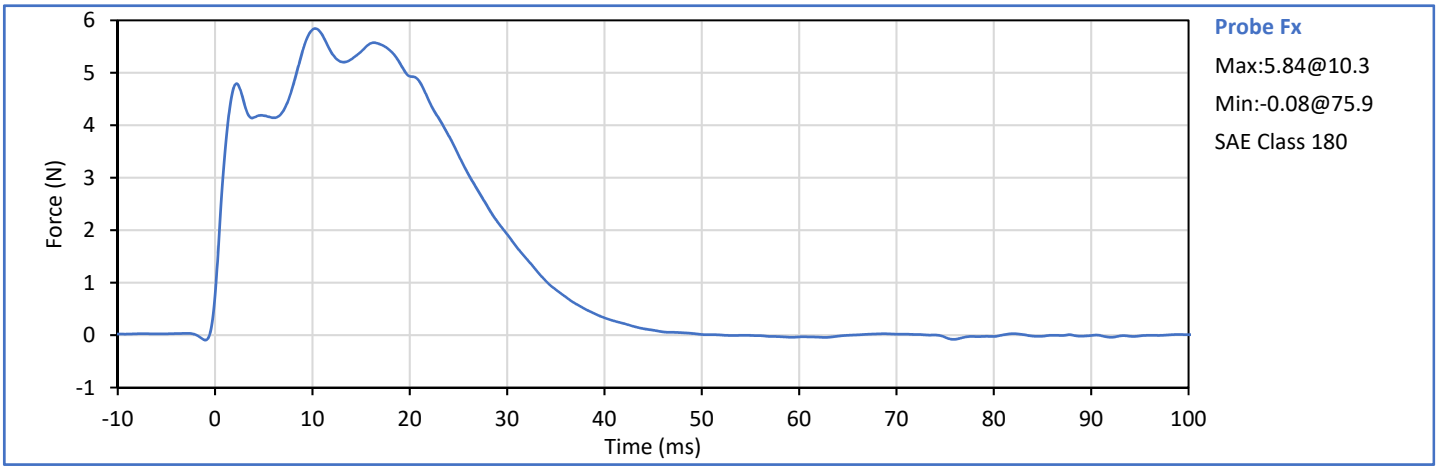
ATD S/N: EB8888 Test Date: 2019-09-13

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	32	Pass
Probe Velocity	m/s	6.60	6.80	6.72	Pass
Peak Thorax Rib 1 Deflection	mm	35.0	47.0	44.1	Pass
Peak Thorax Rib 2 Deflection	mm	46.0	56.0	47.9	Pass
Peak Thorax Rib 3 Deflection	mm	33.5	40.5	35.1	Pass
Peak Pendulum Fx	kN	5.30	6.20	5.84	Pass
Peak T4 Ay Acceleration	g	28.0	37.0	35.4	Pass
Peak T12 Ay Acceleration	g	22.0	28.0	22.9	Pass
			Overall Test Results		Pass

Test Angles and Temperatures

Head (deg)		Spine (deg)		Pelvis		H-Point	Temp (degC)	
X	Y	X	Y	X	Y	X	T Int	T Ext
-0.3	0.4	-0.2	0.7	0.2	5.7	39.6	21.9	19.7





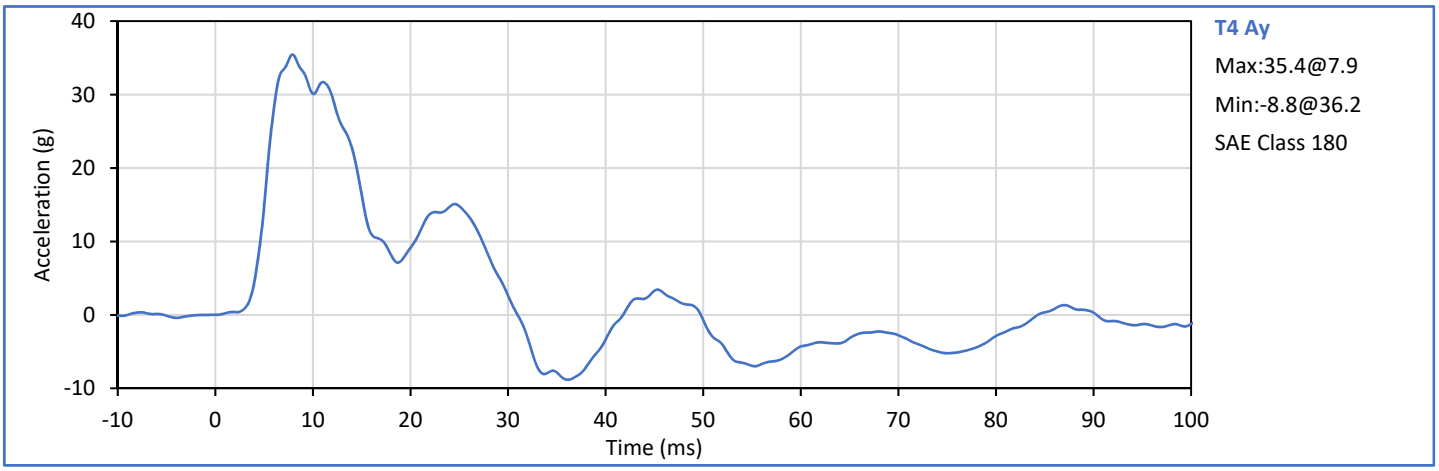
Technician: J. Hernandez

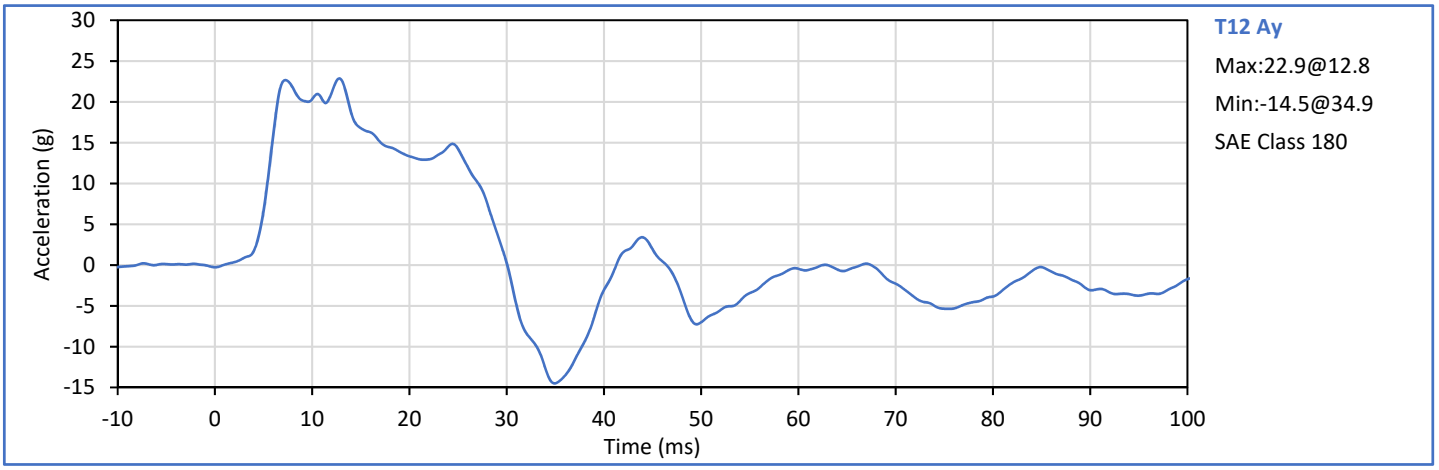
Approved By: P. Puzzuto

Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Thorax With Arm Qualification

ATD S/N: EB8888 Test Date: 2019-09-13





Technician: J. Hernandez

Approved By: P. Puzzuto

Applus IDIADA KARCO

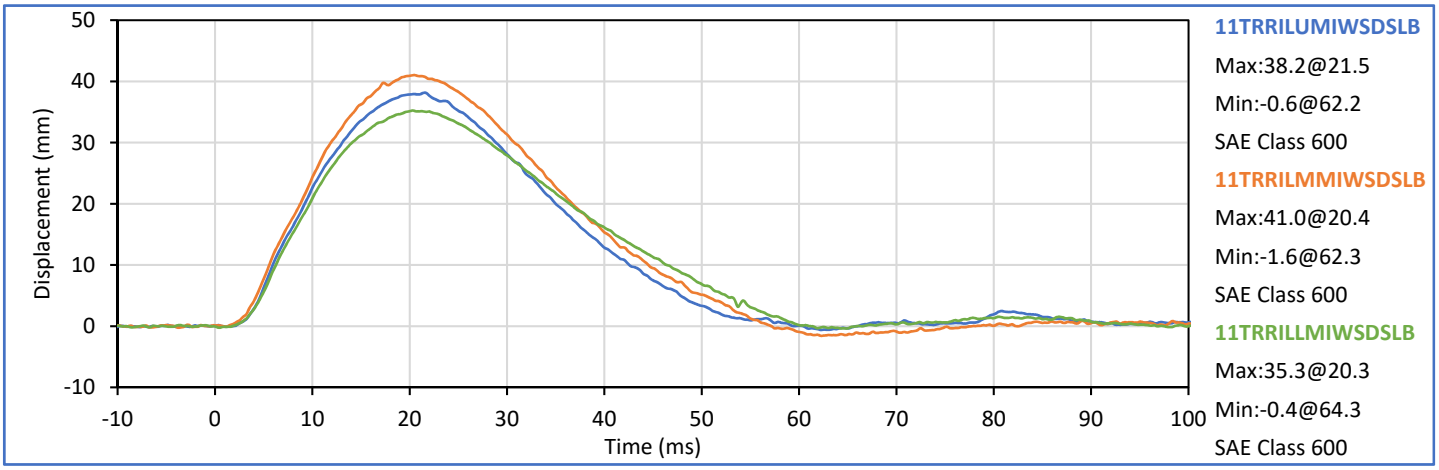
WorldSID 50th Male Side Impact ATD
Thorax Without Arm Qualification

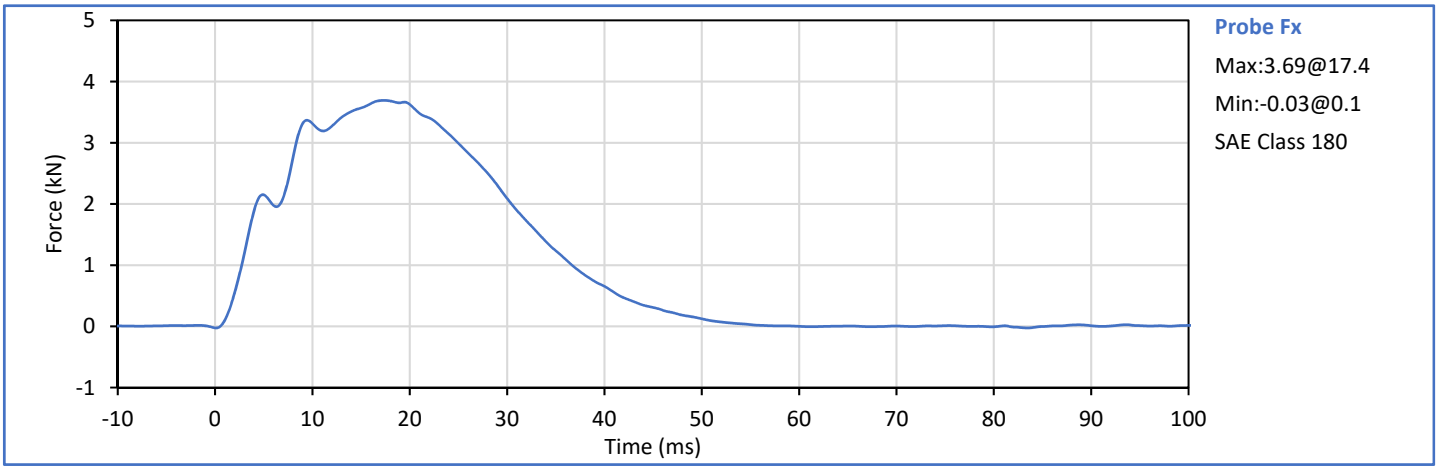
ATD S/N: EB8888 Test Date: 2019-09-13

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	21.3	Pass
Laboratory Relative Humidity	%	10	70	31	Pass
Probe Velocity	m/s	4.20	4.40	4.32	Pass
Peak Thorax Rib 1 Deflection	mm	33.0	43.0	38.2	Pass
Peak Thorax Rib 2 Deflection	mm	35.0	43.0	41.0	Pass
Peak Thorax Rib 3 Deflection	mm	32.0	40.0	35.3	Pass
Peak Pendulum Fx	kN	3.20	3.80	3.69	Pass
Peak T4 Ay Acceleration	g	14.0	20.0	17.2	Pass
Peak T12 Ay Acceleration	g	14.0	22.0	16.2	Pass
			Overall Test Results		Pass

Test Angles and Temperatures

Head (deg)		Spine (deg)		Pelvis		H-Point	Temp (degC)	
X	Y	X	Y	X	Y	X	T Int	T Ext
0.2	-0.4	-0.3	0.3	0.4	5.7	39.4	24.3	20.8





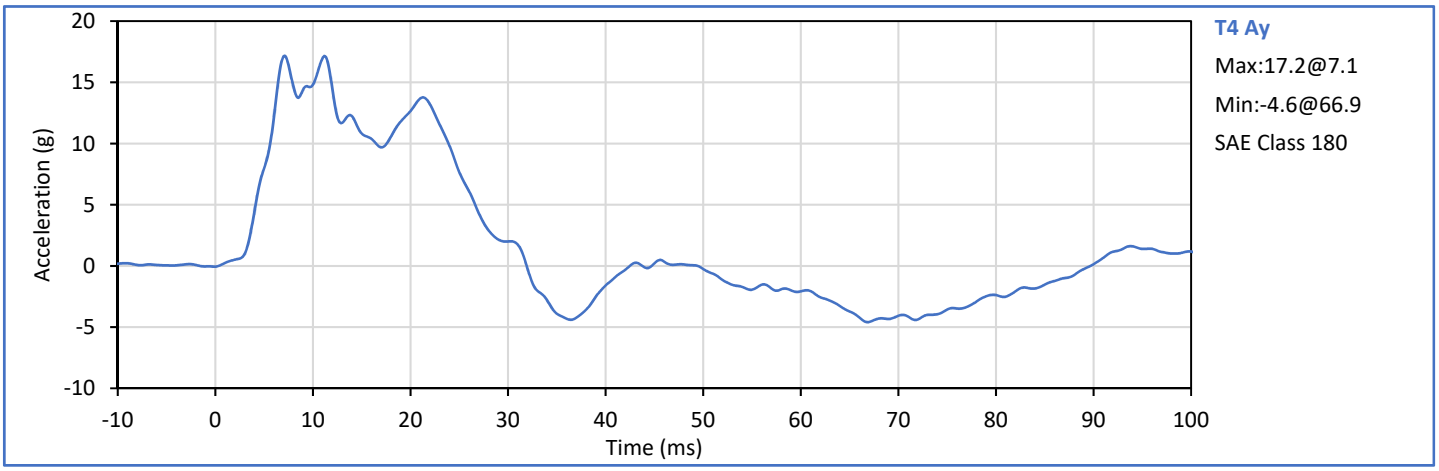
Technician: J. Hernandez

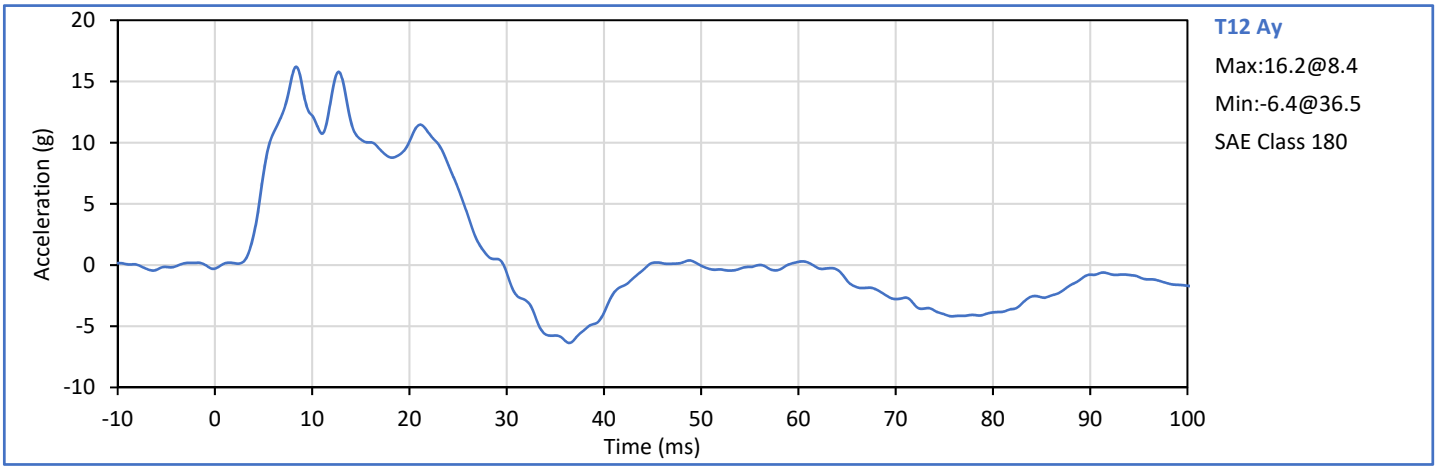
Approved By: P. Puzzuto

Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Thorax Without Arm Qualification

ATD S/N: EB8888 Test Date: 2019-09-13





Technician: J. Hernandez

Approved By: P. Puzzuto

Applus IDIADA KARCO

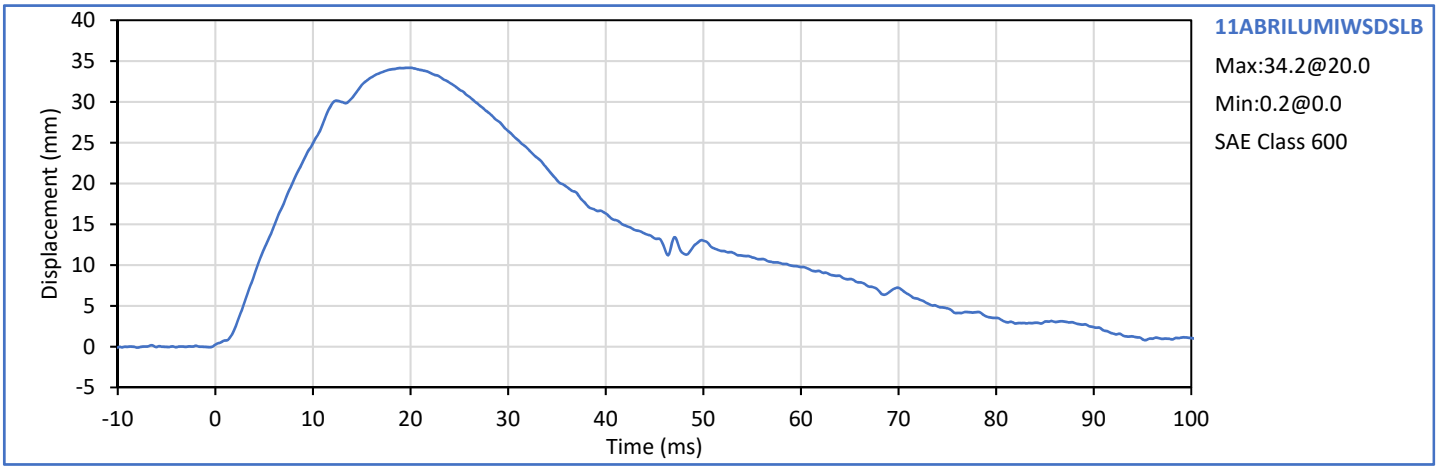
WorldSID 50th Male Side Impact ATD
Abdomen Qualification

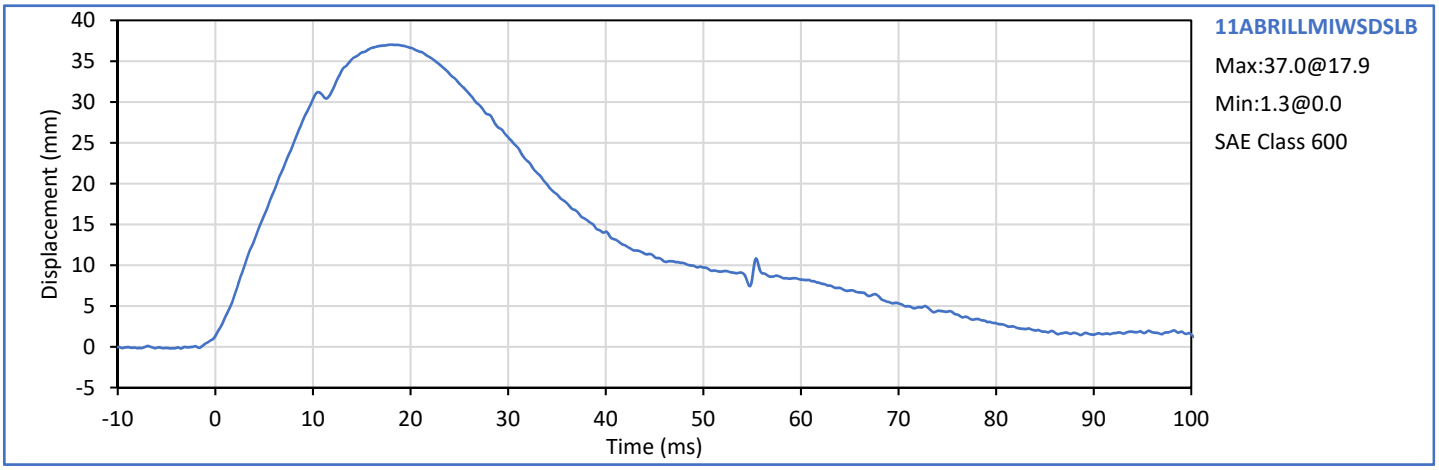
ATD S/N: EB8888 Test Date: 2019-09-13

Tested Parameter	Units	Spec. Low	Spec. High	Result	Pass/Fail
Laboratory Temperature	°C	20.6	22.2	20.9	Pass
Laboratory Relative Humidity	%	10	70	30	Pass
Probe Velocity	m/s	4.20	4.40	4.40	Pass
Peak Abdomen Rib 1 Deflection	mm	32.5	39.5	34.2	Pass
Peak Abdomen Rib 2 Deflection	mm	32.0	38.0	37.0	Pass
Peak Pendulum Fx	kN	2.70	3.10	3.05	Pass
Peak T12y Acceleration	g	14.5	19.5	18.2	Pass
			Overall Test Results		Pass

Test Angles and Temperatures

Head (deg)		Spine (deg)		Pelvis		H-Point	Temp (degC)	
X	Y	X	Y	X	Y	X	T Int	T Ext
-0.2	-0.4	-0.2	0.4	0.2	5.2	39.7	23.9	20.4





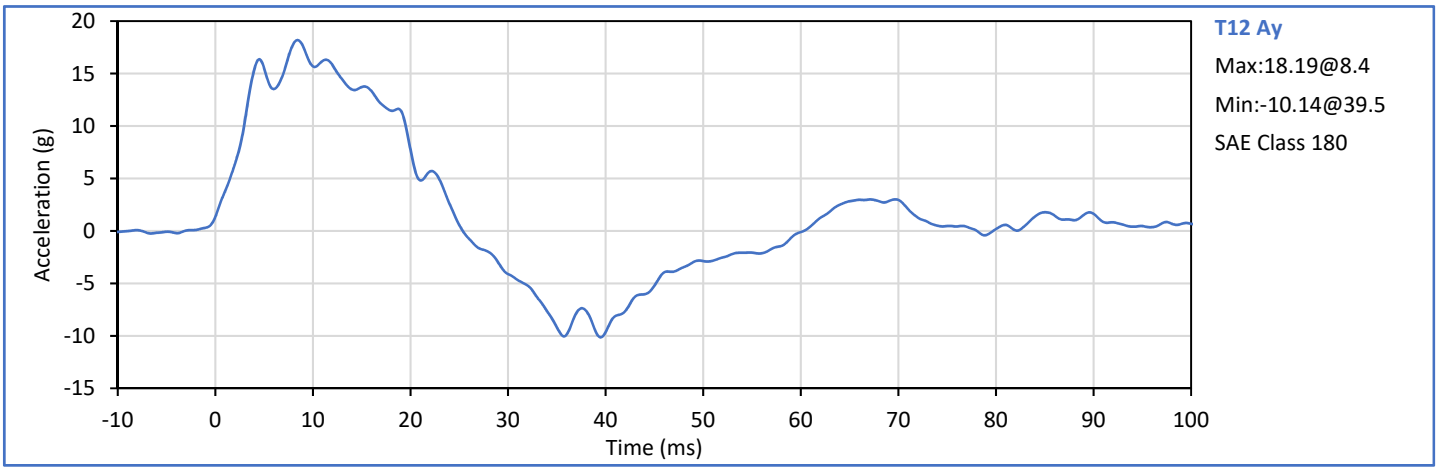
Technician: J. Hernandez

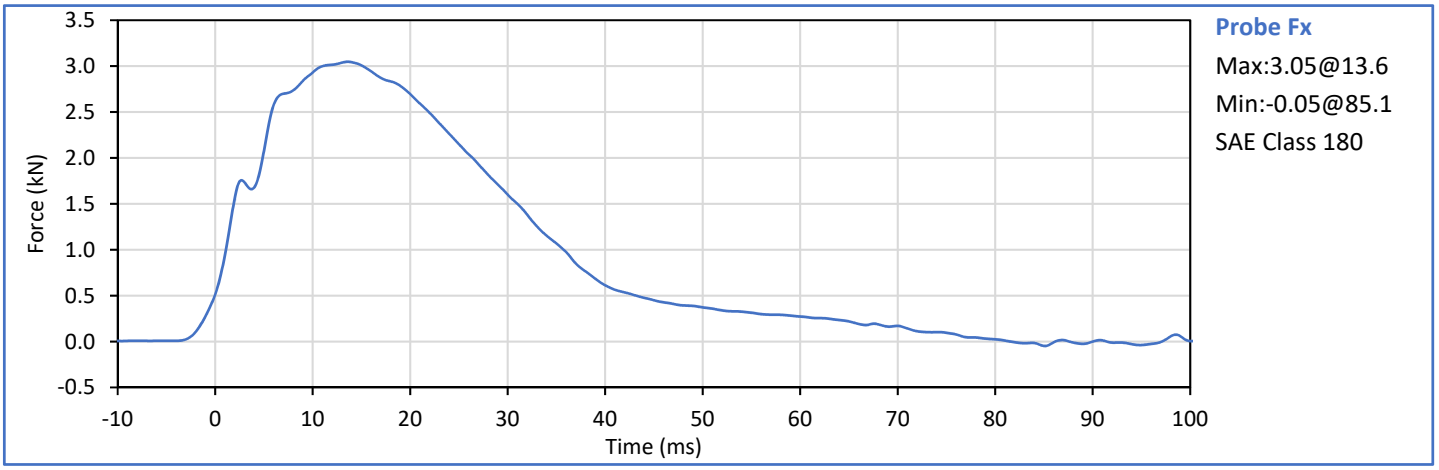
Approved By: P. Puzzuto

Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Abdomen Qualification

ATD S/N: EB8888 Test Date: 2019-09-13





Technician: J. Hernandez

Approved By: P. Puzzuto

Applus IDIADA KARCO

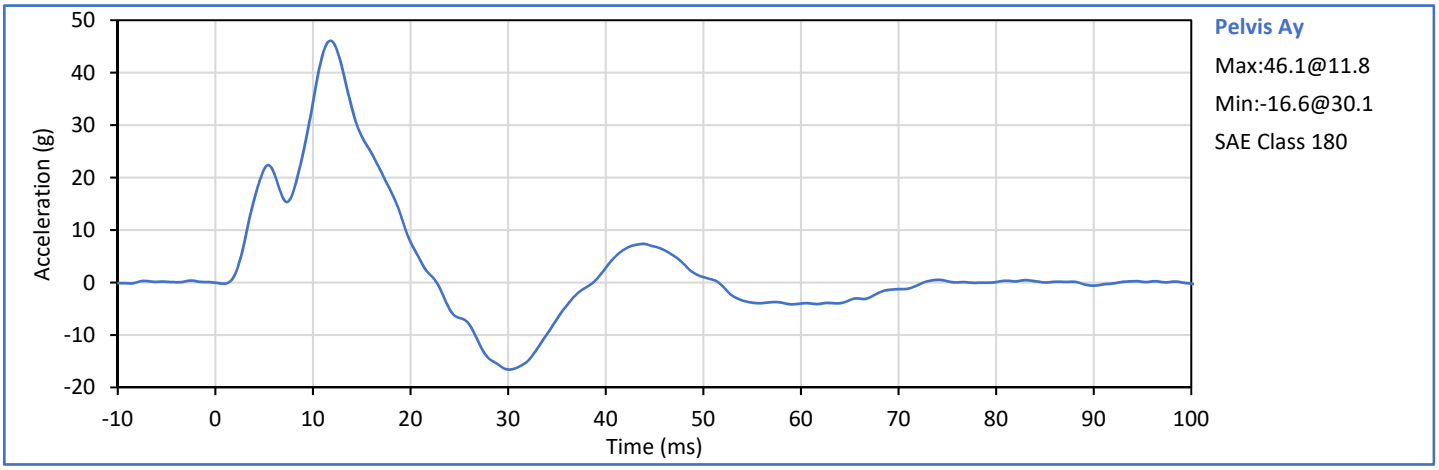
WorldSID 50th Male Side Impact ATD
Pelvis Qualification

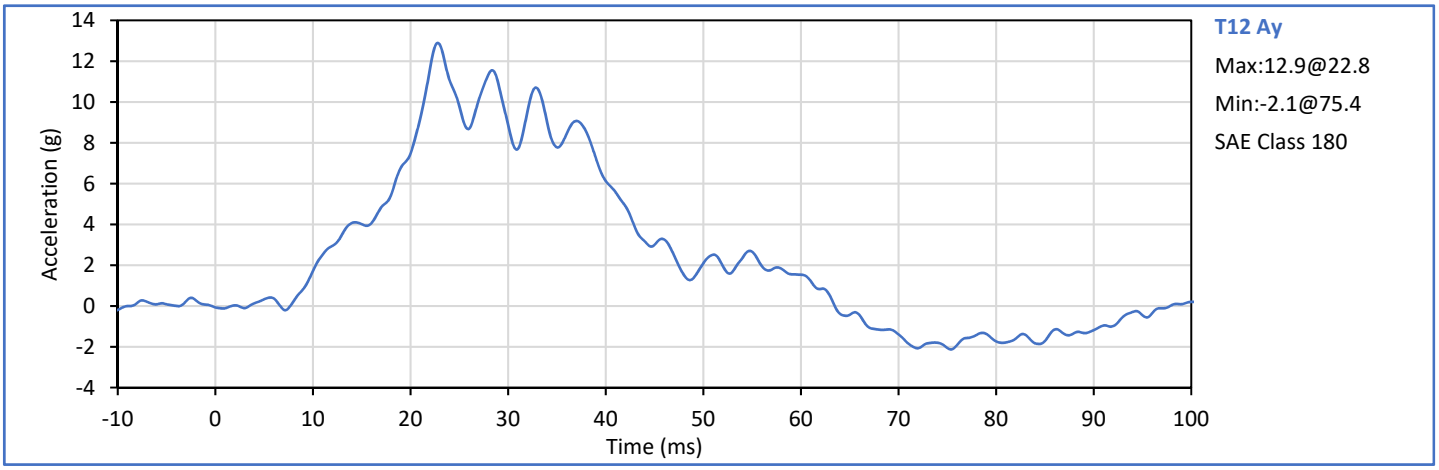
ATD S/N: EB8888 Test Date: 2019-09-13

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
Probe Velocity	m/s	6.60	6.80	6.77	Pass
Peak Pendulum Force	kN	6.80	8.20	7.75	Pass
Peak T12 Ay	g	10.0	14.0	12.9	Pass
Peak Pelvis Ay	g	38.5	48.5	46.1	Pass
Peak Pubic Fy	kN	1.30	1.59	1.38	Pass
Peak Sacroiliac Fy	kN	1.93	2.21	2.16	Pass
			Overall Test Results		Pass

Test Angles and Temperatures

Head (deg)		Spine (deg)		Pelvis		H-Point	Temp (degC)	
X	Y	X	Y	X	Y	X	T Int	T Ext
-0.3	0.4	-0.4	0.0	0.3	5.3	39.8	22.8	20.1





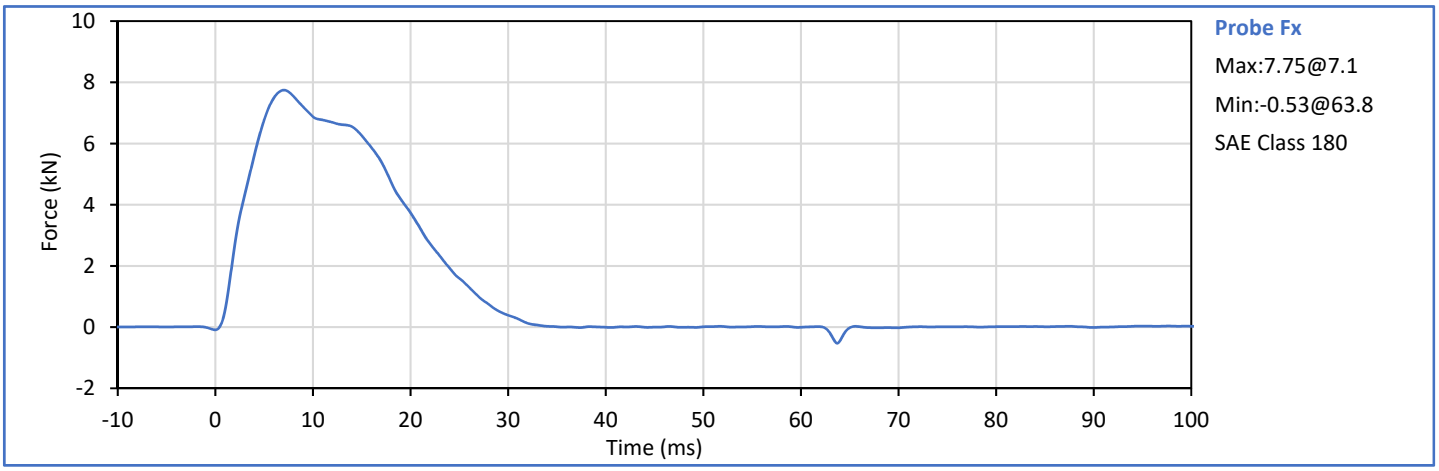
Technician: J. Hernandez

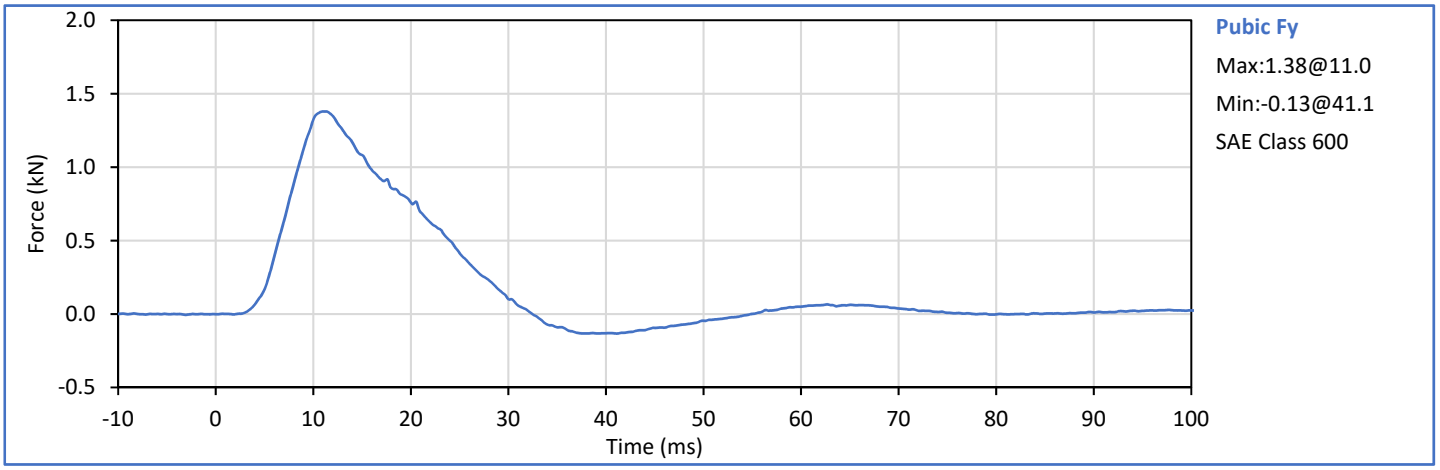
Approved By: P. Puzzuto

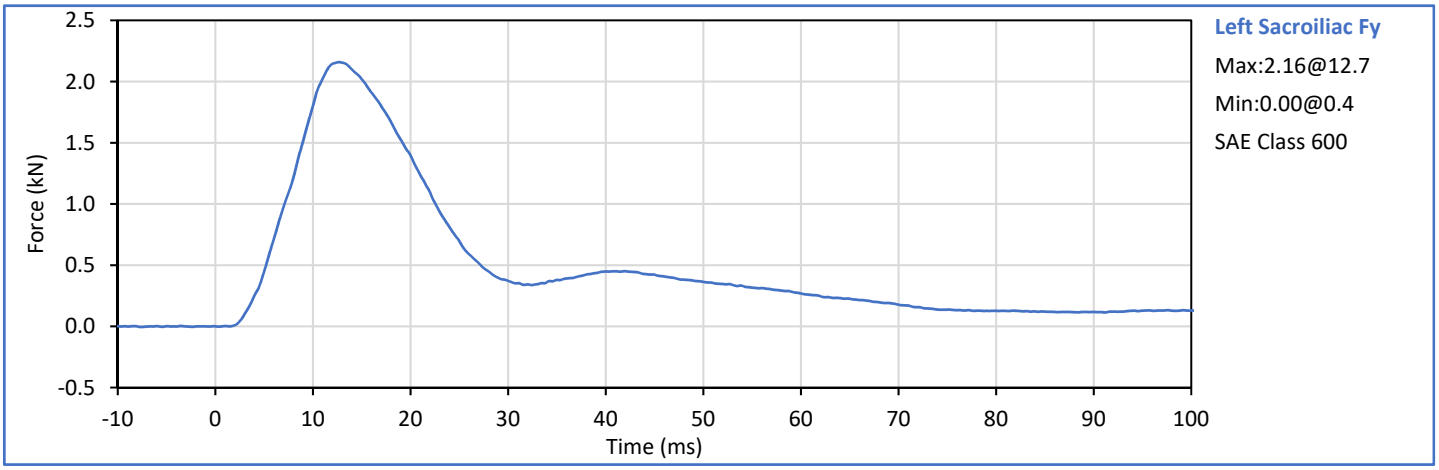
Applus IDIADA KARCO

WorldSID 50th Male Side Impact ATD
Pelvis Qualification

ATD S/N: EB8888 Test Date: 2019-09-13







Technician: J. Hernandez

Approved By: P. Puzzuto

APPENDIX D
TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION DATA

WSID-50 ATD S/N: EB8888

Table 1a - Driver ATD Instrumentation

Sensor Location	ISO Code	Sensor S/N	Mfr	Model	Cal Date
Head CG Ax	11HEADCG00WSACXP	7268C-12362-1	Endevco	7268C-2000	2019-05-23
Head CG Az	11HEADCG00WSACZP	7268C-12362-2	Endevco	7268C-2000	2019-05-23
Head CG Ay	11HEADCG00WSACYP	7268C-12362-3	Endevco	7268C-2000	2019-05-23
Head Wx	11HEADCG00WSAVXP	ARS15092	DTS	ARS PRO-8k	2018-10-01
Head Wy	11HEADCG00WSAVYP	ARS PRO-8K-ARS12311	DTS	ARS PRO-8k	2019-04-10
Head Wz	11HEADCG00WSAVZP	ARS15089	DTS	ARS PRO-8k	2018-10-01
Upper Neck Fx	11NECKUP00WSFOXP	W50-71005-110-FX	Humanetics	W50-71005	2018-11-27
Upper Neck Fy	11NECKUP00WSFOYP	W50-71005-110-FY	Humanetics	W50-71005	2018-11-27
Upper Neck Fz	11NECKUP00WSFOZP	W50-71005-110-FZ	Humanetics	W50-71005	2018-11-27
Upper Neck Mx	11NECKUP00WSMOXP	W50-71005-110-MX	Humanetics	W50-71005	2018-11-27
Upper Neck My	11NECKUP00WSMOYP	W50-71005-110-MY	Humanetics	W50-71005	2018-11-27
Upper Neck Mz	11NECKUP00WSMOZP	W50-71005-110-MZ	Humanetics	W50-71005	2018-11-27
Lower Neck Fx	11NECKLO00WSFOXP	W50-71000S4-EB8143-FX	Humanetics	W50-71000S4	2018-11-27
Lower Neck Fy	11NECKLO00WSFOYP	W50-71000S4-EB8143-FY	Humanetics	W50-71000S4	2018-11-27
Lower Neck Fz	11NECKLO00WSFOZP	W50-71000S4-EB8143-FZ	Humanetics	W50-71000S4	2018-11-27
Lower Neck Mx	11NECKLO00WSMOXP	W50-71000S4-EB8143-MX	Humanetics	W50-71000S4	2018-11-27
Lower Neck My	11NECKLO00WSMOYP	W50-71000S4-EB8143-MY	Humanetics	W50-71000S4	2018-11-27
Lower Neck Mz	11NECKLO00WSMOZP	W50-71000S4-EB8143-MZ	Humanetics	W50-71000S4	2018-11-27
Left Shoulder Fx	11SHLDLE00WSFOXP	W50-71090S4-EA8982-FX	Humanetics	W50-71090S4	2018-11-27
Left Shoulder Fy	11SHLDLE00WSFOYP	W50-71090S4-EA8982-FY	Humanetics	W50-71090S4	2018-11-27
Left Shoulder Fz	11SHLDLE00WSFOZP	W50-71090S4-EA8982-FZ	Humanetics	W50-71090S4	2018-11-27
T1 Ax	11THSP0100WSACXP	7268C-12040-3	Endevco	7268C-2000	2019-05-23
T1 Ay	11THSP0100WSACYP	7268C-12040-2	Endevco	7268C-2000	2019-05-23
T1 Az	11THSP0100WSACZP	7268C-12040-1	Endevco	7268C-2000	2019-05-23
T4 Ax	11THSP0400WSACXP	7268C-12078-1	Endevco	7268C-2000	2019-05-21
T4 Ay	11THSP0400WSACYP	7268C-12078-2	Endevco	7268C-2000	2019-05-21
T4 Az	11THSP0400WSACZP	7268C-12078-3	Endevco	7268C-2000	2019-05-22
T12 Ax	11THSP1200WSACXP	7268C-12058-3	Endevco	7268C-2000	2019-05-23
T12 Ay	11THSP1200WSACYP	7268C-12058-2	Endevco	7268C-2000	2019-05-23
T12 Az	11THSP1200WSACZP	7268C-12058-1	Endevco	7268C-2000	2019-05-23
Pelvis Ax	11PELV0000WSACXP	7268C-12300-1	Endevco	7268C-2000	2019-05-23
Pelvis Ay	11PELV0000WSACYP	7268C-12300-2	Endevco	7268C-2000	2019-05-23
Pelvis Az	11PELV0000WSACZP	7268C-12300-3	Endevco	7268C-2000	2019-05-23
Lumbar Fx	11LUSP0000WSFOXP	W50-71120S4-EB8157-FX	Humanetics	W50-71120S4	2018-11-27
Lumbar Fy	11LUSP0000WSFOYP	W50-71120S4-EB8157-FY	Humanetics	W50-71120S4	2018-11-27
Lumbar Fz	11LUSP0000WSFOZP	W50-71120S4-EB8157-FZ	Humanetics	W50-71120S4	2018-11-27
Lumbar Mx	11LUSP0000WSMOXP	W50-71120S4-EB8157-MX	Humanetics	W50-71120S4	2018-11-27
Lumbar My	11LUSP0000WSMOYP	W50-71120S4-EB8157-MY	Humanetics	W50-71120S4	2018-11-27
Lumbar Mz	11LUSP0000WSMOZP	W50-71120S4-EB8157-MZ	Humanetics	W50-71120S4	2018-11-27
Pubic Fy	11PUBC0000WSFOYP	W50-71051-EB8675-FY	Humanetics	W50-71051	2018-11-27

WSID-50 ATD S/N: EB8888

Table 1a - Driver ATD Instrumentation (continued)

Sensor Location	ISO Code	Sensor S/N	Mfr	Model	Cal Date
Left Sacroiliac Fx	11SACRLE00WSFOXP	W50-71130S5L-EA8971-FX	Humanetics	W50-71130S5L	2019-02-28
Left Sacroiliac Fy	11SACRLE00WSFOYP	W50-71130S5L-EA8971-FY	Humanetics	W50-71130S5L	2019-02-28
Left Sacroiliac Fz	11SACRLE00WSFOZP	W50-71130S5L-EA8971-FZ	Humanetics	W50-71130S5L	2019-02-28
Left Sacroiliac Mx	11SACRLE00WSMOXP	W50-71130S5L-EA8971-MX	Humanetics	W50-71130S5L	2019-02-28
Left Sacroiliac My	11SACRLE00WSMOYP	W50-71130S5L-EA8971-MY	Humanetics	W50-71130S5L	2019-02-28
Left Sacroiliac Mz	11SACRLE00WSMOZP	W50-71130S5L-EA8971-MZ	Humanetics	W50-71130S5L	2019-02-28
Right Sacroiliac Fx	11SACRRI00WSFOXP	W50-71130S5R-EA8971-FX	Humanetics	W50-71130S5R	2019-02-28
Right Sacroiliac Fy	11SACRRI00WSFOYP	W50-71130S5R-EA8971-FY	Humanetics	W50-71130S5R	2019-02-28
Right Sacroiliac Fz	11SACRRI00WSFOZP	W50-71130S5R-EA8971-FZ	Humanetics	W50-71130S5R	2019-02-28
Right Sacroiliac Mx	11SACRRI00WSMOXP	W50-71130S5R-EA8971-MX	Humanetics	W50-71130S5R	2019-02-28
Right Sacroiliac My	11SACRRI00WSMOYP	W50-71130S5R-EA8971-MY	Humanetics	W50-71130S5R	2019-02-28
Right Sacroiliac Mz	11SACRRI00WSMOZP	W50-71130S5R-EA8971-MZ	Humanetics	W50-71130S5R	2019-02-28
Left Femoral Neck Fx	11FEACLE00WSFOXP	W50-71081S4-EB8707-FX	Humanetics	W50-71081S4	2018-11-27
Left Femoral Neck Fy	11FEACLE00WSFOYP	W50-71081S4-EB8707-FY	Humanetics	W50-71081S4	2018-11-27
Left Femoral Neck Fz	11FEACLE00WSFOZP	W50-71081S4-EB8707-FZ	Humanetics	W50-71081S4	2018-11-27
Left Femur Fx	11FEMRLE00WSFOXP	W50-71010S4-DZ5708T-FX	Humanetics	W50-71010S4	2018-11-27
Left Femur Fy	11FEMRLE00WSFOYP	W50-71010S4-DZ5708T-FY	Humanetics	W50-71010S4	2018-11-27
Left Femur Fz	11FEMRLE00WSFOZP	W50-71010S4-DZ5708T-FZ	Humanetics	W50-71010S4	2018-11-27
Left Femur Mx	11FEMRLE00WSMOXP	W50-71010S4-DZ5708T-MX	Humanetics	W50-71010S4	2018-11-27
Left Femur My	11FEMRLE00WSMOYP	W50-71010S4-DZ5708T-MY	Humanetics	W50-71010S4	2018-11-27
Left Femur Mz	11FEMRLE00WSMOZP	W50-71010S4-DZ5708T-MZ	Humanetics	W50-71010S4	2018-11-27
Left Knee Outer Fy	11KNEELEINWSFOYP	W50-71020 EA8972_FY	Humanetics	W50-71020	2019-02-28
Left Knee Inner Fy	11KNEELEOUWSFOYP	W50-71020 EA8973_FY	Humanetics	W50-71020	2019-02-28

WSID-50 ATD S/N: EB8888

Table 1b - Driver ATD Instrumentation, RibEye

Sensor Location	ISO Code	Sensor S/N	Mfr	Model	Cal Date
Shoulder/Thorax/Abdomen Ribs	N/A	123	Boxboro	WS-50 RibEye	2018-11-13

SID-IIs ATD S/N: DY8080

Table 2 - Left Rear Passenger ATD Instrumentation

Sensor Location	ISO Code	Sensor S/N	Mfr	Model	Cal Date
Head Primary Ax	14HEAD0000S2ACXP	T15747	Endevco	7264C-2KTZ	2018-12-04
Head Primary Ay	14HEAD0000S2ACYP	T15748	Endevco	7264C-2KTZ	2018-12-04
Head Primary Az	14HEAD0000S2ACZP	T15750	Endevco	7264C-2KTZ	2018-12-04
Head Ax Redundant	14HEADRD00S2ACXP	A301128	TE	64X-2000	2019-07-14
Head Ay Redundant	14HEADRD00S2ACYP	A301129	TE	64X-2000	2019-07-14
Head Az Redundant	14HEADRD00S2ACZP	A301130	TE	64X-2000	2019-07-14
Head Wx	14HEAD0000S2AVXP	ARS14099	DTS	ARS PRO-8k (2000Hz)	2019-08-26
Head Wy	14HEAD0000S2AVYP	ARS14100	DTS	ARS PRO-8k (2000Hz)	2019-08-26
Head Wz	14HEAD0000S2AVZP	ARS14101	DTS	ARS PRO-8k (2000Hz)	2019-08-26
Shoulder Fx	14SHLDLE00S2FOXP	171 Fx	FTSS	IF-344	2019-08-22
Shoulder Fy	14SHLDLE00S2FOYP	171 Fy	FTSS	IF-344	2019-08-22
Shoulder Fz	14SHLDLE00S2FOZP	171 Fz	FTSS	IF-344	2019-08-22
Shoulder Dy	14SHRI00LES2DSYP	3037	Servo	08TCI-3745	2018-12-20
Upper Thorax Rib Dy	14TRRI01LES2DSYP	3042	Servo	08TCI-3745	2018-12-20
Mid Thorax Rib Dy	14TRRI02LES2DSYP	3042	Servo	08TCI-3745	2018-12-20
Lower Thorax Rib Dy	14TRRI03LES2DSYP	3044	Servo	08TCI-3745	2018-12-20
Upper Abdominal Rib Dy	14ABRI01LES2DSYP	3045	Servo	08TCI-3745	2018-12-20
Lower Abdominal Rib Dy	14ABRI02LES2DSYP	3078	Servo	08TCI-3745	2018-12-20
Upper Spine Ay	14SPIN0100S2ACXP	T15770	Endevco	7264C-2KTZ	2018-12-04
Middle Spine Ay	14THSP01RIS2ACYP	A285186	TE	64X-2000	2019-06-08
Lower Spine Ax	14ABSP01RIS2ACXP	T15751	Endevco	7264C-2KTZ	2018-12-04
Lower Spine Ay	14ABSP01RIS2ACYP	T15757	Endevco	7264C-2KTZ	2018-12-04
Lower Spine Az	14ABSP01RIS2ACZP	T15769	Endevco	7264C-2KTZ	2018-12-04
Left Ilium Crest Fy	14ILACLE00S2FOYP	EF8578S	Humanetics	IF-507	2018-12-03
Left Acetabulum Fy	14ACTBLE00S2FOYP	EF8602S	Humanetics	IF-520	2018-12-03
Pelvis Ax	14PELV0000S2ACXP	A301095	TE	64X-2000	2019-06-14
Pelvis Ay	14PELV0000S2ACYP	T15776	Endevco	7264C-2KTZ	2018-12-04
Pelvis Az	14PELV0000S2ACZP	A301099	TE	64X-2000	2019-07-14

Table 3 - Vehicle Instrumentation

Sensor Location	ISO Code	Sensor S/N	Mfr	Model	Cal Date
Vehicle CG Ax	12VEHCCG0000ACXA	A273392	MSI	52F-2000	2018-09-17
Vehicle CG Ay	12VEHCCG0000ACYA	A273398	MSI	52F-2000	2018-09-17
Vehicle CG Az	12VEHCCG0000ACZA	A273389	MSI	52F-2000	2018-09-17
Right Side Sill at Front Seat Ax	12VEHCCG0000AVXA	ARS13159	DTS	ARS PRO 18k-2k	2019-07-03
Right Side Sill at Front Seat Ay	12VEHCCG0000AVYA	ARS14228	DTS	ARS PRO 18k-2k	2019-07-08
Right Side Sill at Front Seat Az	12VEHCCG0000AVZA	ARS6733	DTS	ARS PRO 18k-2k	2019-07-03
Right Side Sill at Rear Seat Ax	13SILBRIFR00ACXA	A254710	MSI	52M30-2000	2019-03-16
Right Side Sill at Rear Seat Ay	13SILBRIFR00ACYA	A253264	MSI	52M30-2000	2019-02-27
Right Side Sill at Rear Seat Az	13SILBRIFR00ACZA	A254681	MSI	52M30-2000	2019-03-16
Left Side Sill at Front Seat Ay	16SILBRIRE00ACXA	A254712	MSI	52M30-2000	2019-03-15
Left Side Sill at Rear Seat Ay	16SILBRIRE00ACYA	A254714	MSI	52M30-2000	2019-03-16
Left Lower A-Pillar Ay	16SILBRIRE00ACZA	A232025	MSI	52M30-2000	2019-03-15
Left Middle A-Pillar Ay	11SILBLEFR00ACYA	A273029	MSI	52F-2000	2018-09-12
Left Lower B-Pillar Ay	14SILBLERE00ACYA	A185568	MSI	52F-2000	2018-09-25
Left Middle B-Pillar Ay	11APILLO0000ACYA	A273395	MSI	52F-2000	2018-09-17
Driver Seat Track at H-Point Ay	11APILMI0000ACYA	A273436	MSI	52F-2000	2018-09-11
Rear Seat Structure Ay	11BPILLO0000ACYA	10245	Endevco	757F-2k	2019-01-29
Right Rear Occupant Comp. Ay	11BPILMI0000ACYA	A147428	MSI	52F-2000	2018-11-06
Engine Block Top Ax	11SETR000000ACYA	A273452	MSI	52F-2000	2018-09-11
Engine Block Top Ay	14SETRLERE00ACYA	A267286	MSI	52F-2000	2018-08-02
Right Side Sill at Front Seat Ax	16OCCRIRE000ACYA	A224490	MSI	52F-2000	2018-09-17
Right Side Sill at Front Seat Ay	12ENGNTP0000ACXA	10863	Endevco	757F-2k	2019-05-25
Right Side Sill at Front Seat Az	12ENGNTP0000ACYA	10247	Endevco	757F-2k	2019-01-29
Right Side Sill at Rear Seat Ax	15FORA000000ACXA	A185683	MSI	52F-2000	2018-11-07
Right Side Sill at Rear Seat Ay	15FORA000000ACYA	A185575	MSI	52F-2000	2018-09-21
Right Side Sill at Rear Seat Az	15FORA000000ACZA	A273415	MSI	52F-2000	2018-09-17
Left Side Sill at Front Seat Ay	10FORARD0000ACXA	A273037	MSI	52F-2000	2018-09-12
Left Side Sill at Rear Seat Ay	10FORARD0000ACYA	A273386	MSI	52F-2000	2018-09-17
Left Lower A-Pillar Ay	10FORARD0000ACZA	A273040	MSI	52F-2000	2018-09-12
Left Middle A-Pillar Ay	10FORARD0000AVXA	ARS14262	DTS	ARS PRO 18k-2k	2019-07-03
Left Lower B-Pillar Ay	10FORARD0000AVYA	ARS14260	DTS	ARS PRO 18k-2k	2019-07-03
Left Middle B-Pillar Ay	10FORARD0000AVZA	ARS14303	DTS	ARS PRO 18k-2k	2019-07-08
Driver Seat Track at H-Point Ay	11DOORMIMI71ACYA	A227277	MSI	52F-2000	2018-09-25
Rear Seat Structure Ay	11DOORMIRE71ACYA	A254700	MSI	52M30-2000	2019-03-16
Right Rear Occupant Comp. Ay	11DOORMIUP71ACYA	A267278	MSI	52F-2000	2018-08-02
Engine Block Top Ax	14DOORMIRE71ACYA	A227260	MSI	52F-2000	2018-09-17
Engine Block Top Ay	14DOORMIUP71ACYA	A248837	MSI	52F-2000	2018-09-17

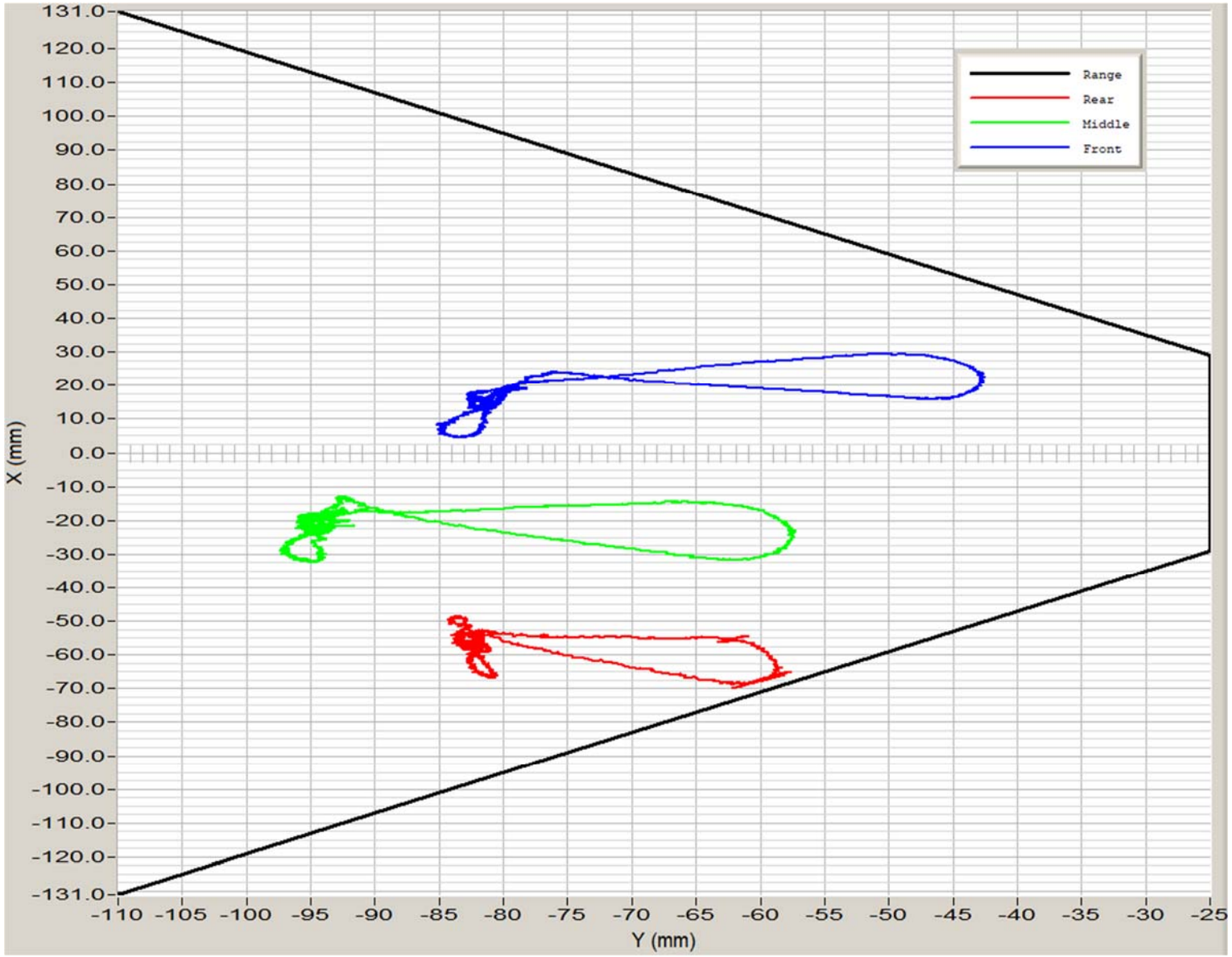
Table 4 - Moving Deformable Barrier (MDB) Instrumentation

Sensor Location	ISO Code		Mfr	Model	Cal Date
MDB CG Ax	M0MBARCG0000ACXP	10390	Endevco	757F-2k	09-04-2018
MDB CG Ay	M0MBARCG0000ACYP	10405	Endevco	757F-2k	09-04-2018
MDB CG Az	M0MBARCG0000ACZP	10421	Endevco	757F-2k	09-05-2018
MDB Left Side at Rear Axle Ax	M0MBARRELE00ACXP	A224516	MSI	52F-2000	2018-09-21
MDB Left Side at Rear Axle Ay	M0MBARRELE00ACYP	A160734	MSI	52F-2000	2018-11-28

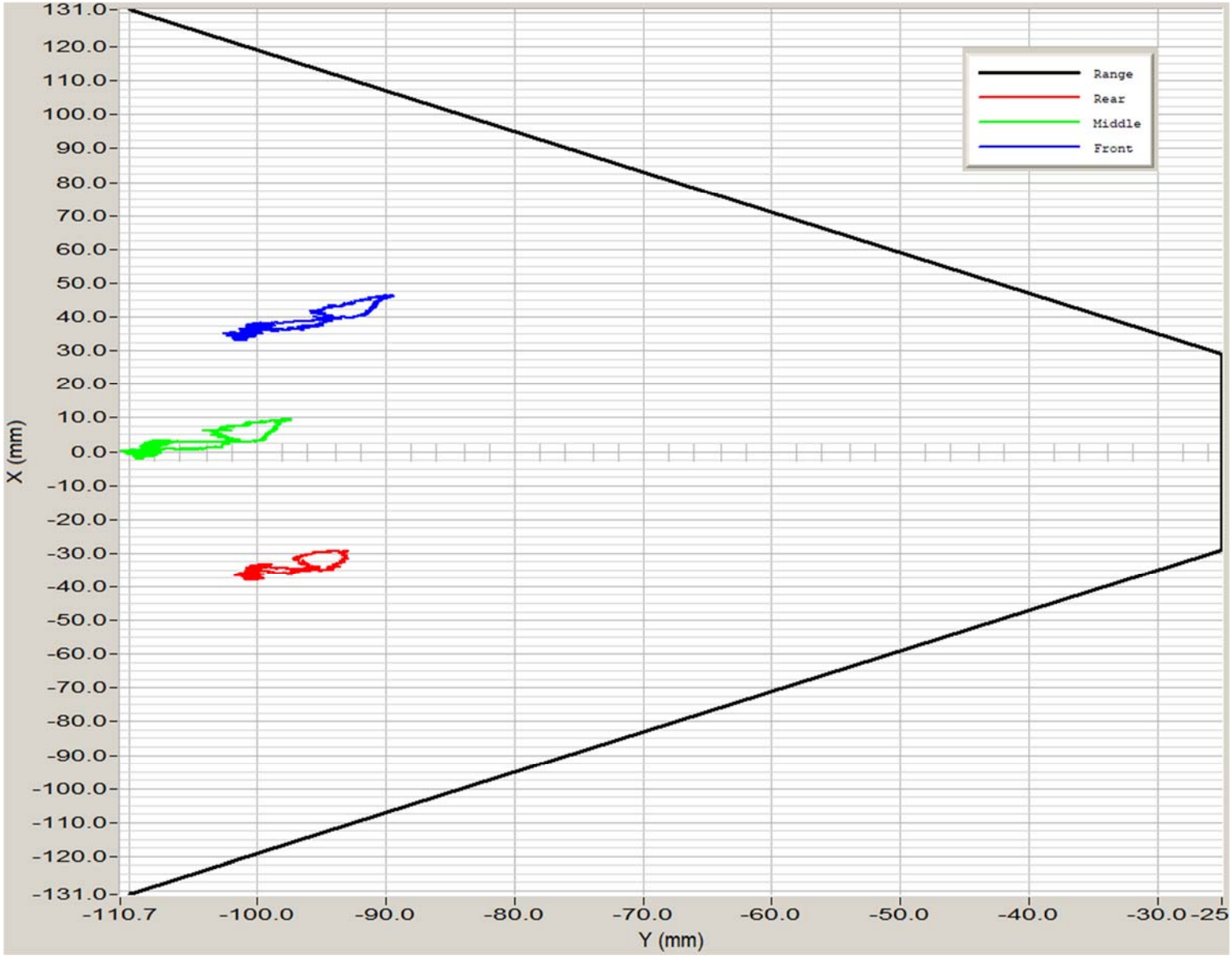
APPENDIX E

RIBEYE XY DATA PLOTS

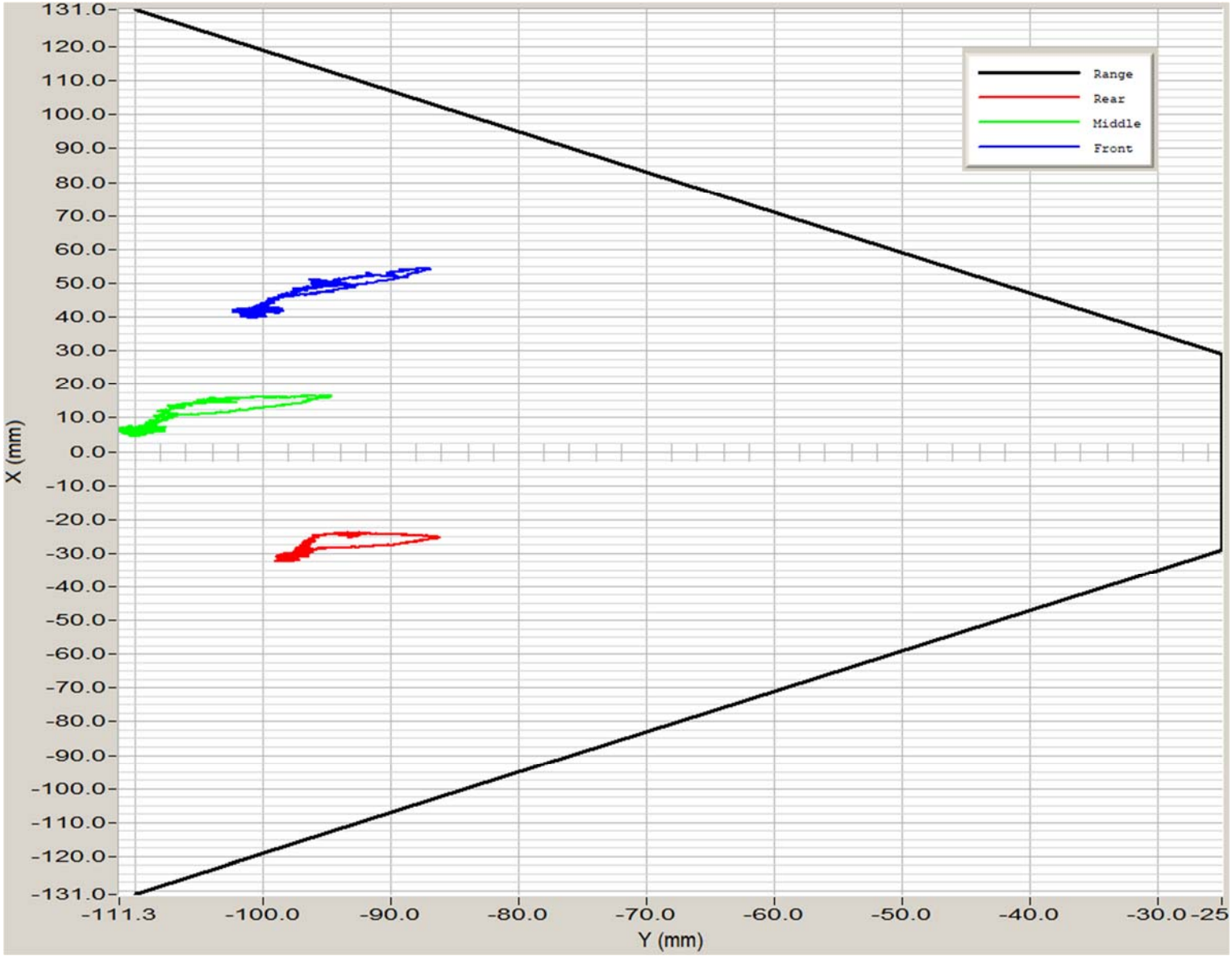
WORLD SID SIDE MDB RIBEYE SHOULDER XY PLOTS



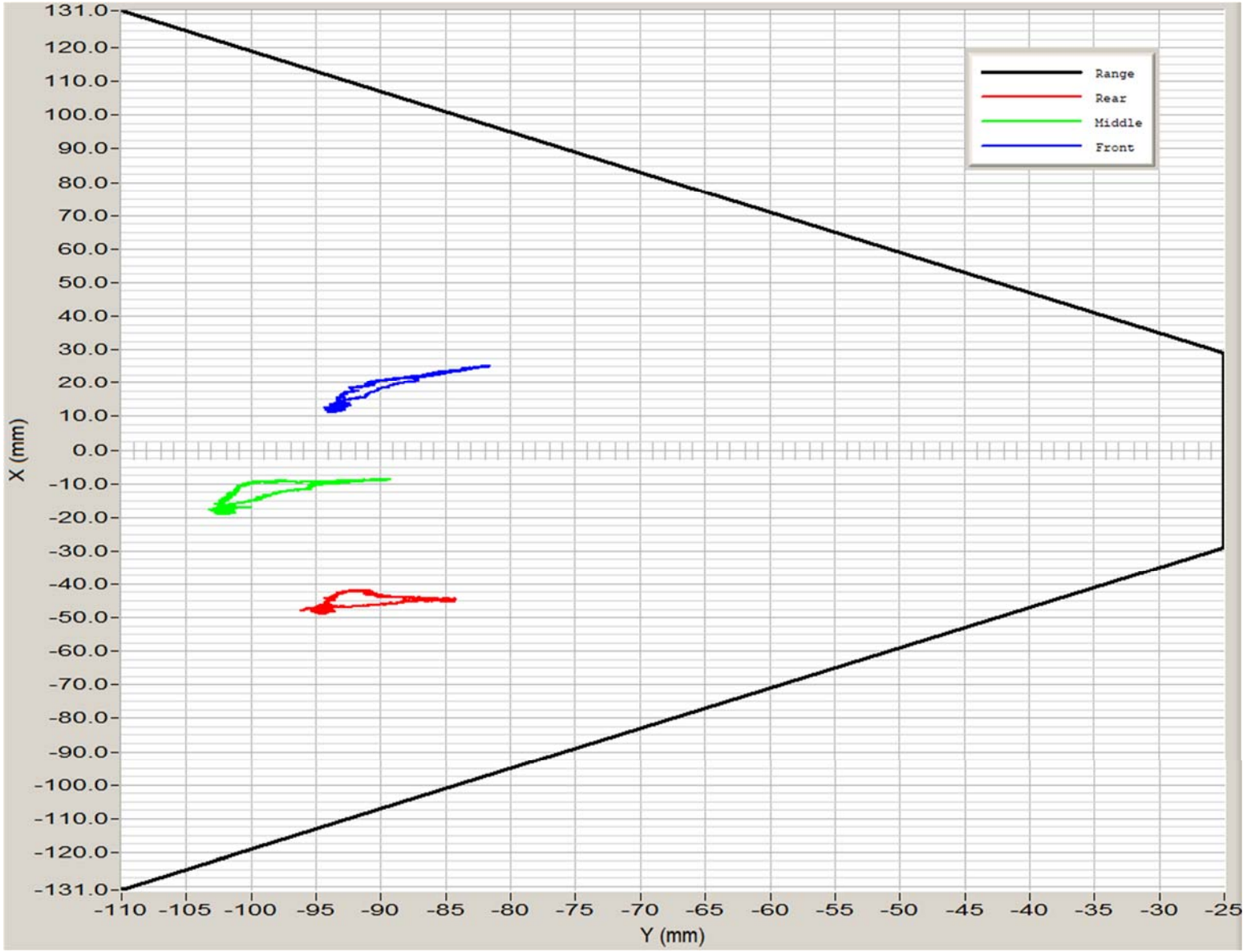
WORLD SID SIDE MDB RIBEYE THORAX_1_XY PLOTS



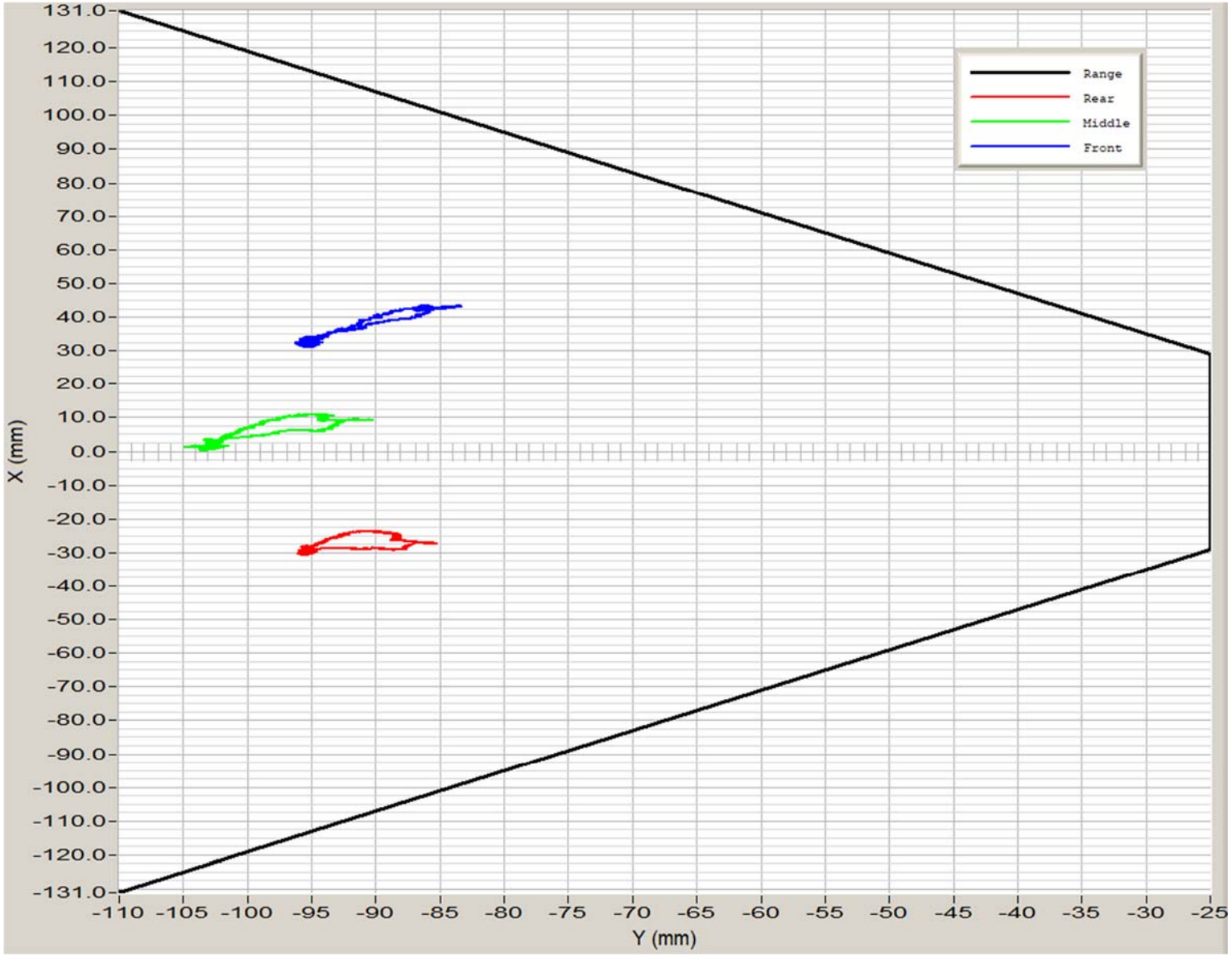
WORLD SID SIDE MDB RIBEYE THORAX_2_XY PLOTS



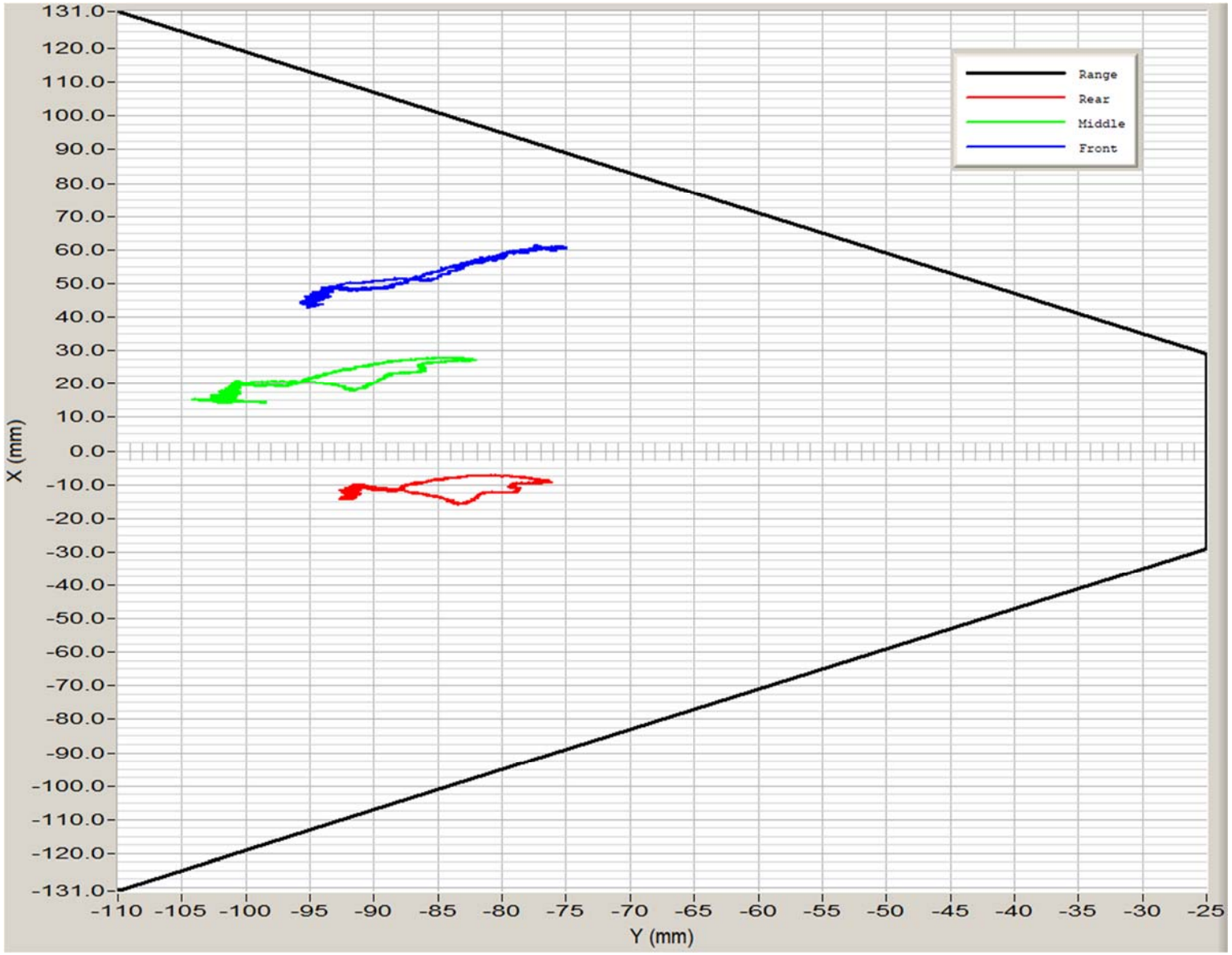
WORLDS SID SIDE MDB RIBEYE THORAX_3_XY PLOTS



WORLD SID SIDE MDB RIBEYE ABDOMEN_1_XY PLOTS



WORLD SID SIDE MDB RIBEYE ABDOMEN_2_XY PLOTS



APPENDIX F
ATD SEATING TABLES

WSID SEATING TABLES

15.26

Oscar H-point location	
Torso Angle	25 °
X (Positive (+) forward of striker)	248.1 mm
Z (Positive (+) below striker)	274.1 mm

15.27

Seat Tracking Point (STP) location at mid-position	
X (Positive (+) forward of striker)	267.084 mm
Z (Positive (+) below striker)	342.746 mm

16.1

WSID Target H-point at Mid-position					
	Oscar H-point (15.26)	+/-	20mm	=	WSID H-Point at Mid-position
X (Positive (+) forward of striker)	248.14	+	20	=	268.14 mm
Z (Positive (+) below striker)	274.073	-	20	=	254.073 mm

18.6

Seat Tracking Point location	
X (Positive (+) forward of striker)	147.878 mm
Z (Positive (+) below striker)	355.415 mm
Seat Tracking Point location Trial 2 (if applicable)	
X (Positive (+) forward of striker)	246.89 mm
Z (Positive (+) below striker)	345.147 mm
Seat Tracking Point location Trial 3 (if applicable)	
X (Positive (+) forward of striker)	266.791 mm
Z (Positive (+) below striker)	343.009 mm

DRIVER

Fill in cells to calculate H-point Location

WSID H-point Target

WSID H-point Target at midtrack

18.6.1

Trial 1

	Results from (18.6)	-	Results from (15.27)	=	STPD
X (Positive (+) forward of striker)	147.878	-	267.084	=	-119.206 mm
Z (Positive (+) below striker)	355.415	-	342.746	=	12.669 mm

Trial 2

	Results from (18.6)	-	Results from (15.27)	=	STPD
X (Positive (+) forward of striker)	246.89	-	267.084	=	-20.194 mm
Z (Positive (+) below striker)	345.147	-	342.746	=	2.401 mm

Trial 3

	Results from (18.6)	-	Results from (15.27)	=	STPD
X (Positive (+) forward of striker)	266.791	-	267.084	=	-0.293 mm
Z (Positive (+) below striker)	343.009	-	342.746	=	0.263 mm

18.6.2

Trial 1

	Results from (16.1)	+	Results from (18.6.1)	=	Current H-point Target
X (Positive (+) forward of striker)	268.14	+	-119.206	=	148.934 mm
Z (Positive (+) below striker)	254.073	+	12.669	=	266.742 mm

Trial 2

	Results from (16.1)	+	Results from (18.6.1)	=	Current H-point Target
X (Positive (+) forward of striker)	268.14	+	-20.194	=	247.946 mm
Z (Positive (+) below striker)	254.073	+	2.401	=	256.474 mm

Trial 3

	Results from (16.1)	+	Results from (18.6.1)	=	Current H-point Target
X (Positive (+) forward of striker)	268.14	+	-0.293	=	267.847 mm
Z (Positive (+) below striker)	254.073	+	0.263	=	254.336 mm

Driver WSID 50th Seating Worksheet

Vehicle	2018 Honda Accord 1.5T LX	**Technician**	Malo Tauaese
VIN #	1HGCV1F17JA113140	**Position**	1
ATD	EB8888	**Date**	9/9/2019
Test #	R20185380		

SCRL Angle			**WSID 50th Tilt Sensors**		**X**	**Y**
	Max	11.4	Head	0°±2	0.1	-1.9
	Min -	6.5				
	Difference	4.9				
	/2	2.45	T6	0°±2	1.4	-1.1
	Min +	2.45				
	Mid Angle	8.95	Pelvis	0°±2	0.5	-2.3

Seat Back Angle	W/Level °	3.4	**HEAD REST POST ANGLE**	3.4	**FINAL HEAD REST POST ANGLE**	3.4
Seat Pan Angle	W/Level °	9				

Pelvis Angle	WSID 50th 0° +/-2.5°	Manual Inclinometer	39.8	Tilt Sensor	-2.3	

Collected Points			
Name	**Meas X**	**Meas Y**	**Meas Z**
SBU -	-35.15652515	2.1978636	-13.67021253
SBL -	-31.08905129	0.627674132	22.07551756
STRIKER -	0	0	0
FOSB -	496.0626633	207.11353	495.148
FISB -	496.6482741	642.2347826	495.7348
ROSB -			
RISB -			
PCP-(Pedal Center Point)	1125.016	624.690	366.992
RHP - (Right Heel Point)	999.587	268.527	519.353
LHP -(Left Heel Point)	1001.374	600.091	520.634
S0 -	563.366	440.037	-102.160
TS -	646.434	440.374	-283.440
BS -	514.361	440.133	67.117
SC1 -	721.804	440.336	-117.856
OSCAR H-POINT -	248.624	243.719	274.449
DR PROJECTED WSID H-POINT AT MID-POSITION -	268.624	243.719	254.449
DRIVER STP 15.27 MID-POSITION -	267.084	183.490	342.746
DRIVER STP STEP 18.6 TRIAL 1 -	148.361	183.490	355.790
DR PROJECTED WSID H-POINT STEP 18.6.2 TRIAL 1 -	148.934	213.967	266.742
DRIVER STP STEP 18.6 TRIAL 2 -	249.235	213.967	266.365
DR PROJECTED WSID H-POINT STEP 18.6.2 TRIAL 2 -	247.373	183.543	345.523
DRIVER STP STEP 18.6 TRIAL 3 -	267.274	183.380	343.385
DR PROJECTED WSID H-POINT STEP 18.6.2 TRIAL 3 -	267.847	213.967	254.336
RHDCG -	108.563	517.134	-403.634
3DLHCG -	130.053	360.438	-403.162
LHDCG -	109.118	358.765	-403.581
BON -	201.830	439.028	-379.407
TN -	201.242	438.679	-354.907
TC -	184.213	439.583	-276.998
SHLD R1 -	160.348	440.041	-173.573
THX R1 -	194.806	439.152	-99.129
THX R2 -	229.410	438.574	-34.485
THX R3 -	245.8056488	439.0144	12.29124222
ABD R1 -	265.6696247	435.5386574	66.02814679
ABD R2 -	305.4578145	435.6705855	146.5083
TPS -	172.2932219	439.5082178	-151.8620706
C1 -	169.79	440.4132937	-151.6318916
C2 -	199.2067447	439.4754	-102.2766
C3 -	265.48858	440.8338533	67.00168676
SHT -	85.25879387	219.7951646	-139.06109
E1 -	285.0971144	203.9474317	3.18772284
P1 -	216.14092	214.812	214.8662444
H-POINT -	268.6247073	213.8026752	265.1051238
OK -	654.8751173	204.7542757	127.0152854
IK -	671.0487464	526.3418594	118.9517574
OA -	973.5978678	221.766	395.474
IA -	974.245667	563.611924	399.1014491
OH -	1008.171131	243.605	521.7543882
IH -	988.1324058	591.8323093	508.5674324
OP -	-132.0948329	359.2486473	-276.38
R -	201.8375637	439.155281	-584.771745
H -	535.5247834	439.157	-525.6355746
W1 -	841.167	438.4888295	-378.8183447
W1 Outside -	1095.7673	439.261344	-229.0636772
W2 Outside -			
D1 -	762.8633121	440.4756812	-243.3322319
D2 -	776.3085375	204.055363	90.95445924
D3 -	847.2746069	531.1254136	107.0637334
HRP -	202.0109	212.5798872	-511.1928111
HSP -	201.94194	71.84132948	-377.523
ADP -	284.906522	40.1537442	2.66091
HDP -	265.267427	105.2576	263.987208

Calculated Measurements					
Name	**Cal X**	**Cal Y**	**Cal Z**	**Cal 3D Distance**	**Deg**
HZ -			205.365		
HH -				364.32	
HW -	639.338				
NR -				450.895	
CD -				600.121	
CS -	364.159				
IKD -				176.691147	
OKD -				126.6765456	-16.5392951
HR -				262.0041339	
HS -		367.186			
AD -		-244.1011759			
HD -		348.2273093			
HLHL -					
KK -		321.5875837		433.764	
SH -				322.095	
TORSO ANGLE -					80.1821468
WINDSHIELD ANGLE -					30.46383707

HR	262.0041339
HS	367.186
AD	163.7936875
HD	108.5450752
KK	321.5875837
HLHL	348.2273093

Rear Passenger SIDIIS Seating Worksheet

Vehicle	2018 Honda Accord 1.5T LX	**Technician**	Malo Tauaese
VIN #	1HGCV1F17JA113140	**Position**	1
ATD	EB8888	**Date**	9/9/2019
SEATING #	R20185380		

Seat Back Angle	W/Level °	Fixed	**HEAD REST**		**FINAL HEAD REST**		
Seat Pan Angle	W/Level °	Fixed	**POST ANGLE**	Fixed	**POST ANGLE**	Fixed	
Pelvis Angle			Manual Inclinometer	22			

Collected Points			
Name	Meas X	Meas Y	Meas Z
SBU -	-984.164	24.296	-16.070
SBL -	-966.900	21.110	14.961
STRIKER -	-947.088	19.823	-16.736
FOSB -			
FISB -			
ROSB -			
RISB -			
RHP -			
LHP -			
OSCAR H-POINT -			
LHDCG -	-949.373	388.960	-330.588
BON -	-865.277	461.925	-345.022
TN -	-837.356	463.370	-315.175
TC -	-842.674	465.583	-238.594
C1 -	-836.924	464.656	-112.951
SHT -	-953.589	276.422	-80.296
E1 -	-754.587	277.215	-0.492
P1 -	-848.372	335.774	218.650
H-POINT -	-765.884	373.343	240.401
OK -	-434.244	336.002	186.099
IK -	-428.513	575.859	176.640
OA -	-252.047	319.411	434.834
IA -	-221.416	579.266	414.301
OH -	-250.344	349.972	538.370
IH -	-245.177	568.258	525.458
R -	-867.843	461.493	-587.060
SB -	-947.088	19.823	-16.736
HRP -	-865.322	191.862	-461.876
HSP -	-868.074	58.697	-342.550
ADP -	-754.455	63.808	0.160
HDP -	-765.852	100.706	243.512
B1-	-153.278	466.393	-112.050
B2-	-45.392	338.526	119.450
B3-	-33.553	577.393	128.217

Calculated Measurements					
Name	Cal X	Cal Y	Cal Z	Cal 3D Distance	Deg
HZ -			242.038		
NR -				713.604	
CD -				683.649	
IKD -				454.290	-6.990
OKD -				471.352	-9.726
HR -				294.259	
HS -		403.228			
AD -		213.407			
HD -		272.637			
HLHL -				218.286	
KK -				239.857	
SH -				473.214	
H-POINT TOOL ANGLE -					22.0
TORSO ANGLE -					79.580
SEATBACK ANGLE -					28.200

HR	294.2593151
HS	403.228
AD	213.4068986
HD	272.637
KK	239.857
HLHL	218.286