

FINAL REPORT NUMBER: SPNCAP-TRC-18-004

**NEW CAR ASSESSMENT PROGRAM (NCAP)
SIDE IMPACT POLE TEST**

**NISSAN MOTOR CO., LTD.
2018 Nissan Versa 4-Door Sedan
NHTSA NUMBER: M20185207**

**PREPARED BY:
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10820 State Route 347
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Report Date: January 11, 2018

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Office of Crashworthiness Standards
Mail Code: NRM-110
1200 New Jersey Ave, SE
Room W43-410
Washington, D.C. 20590**

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Report Prepared By: ILO Project Operations Group

Report Approved By: _____



John Shultz

Approval Date: January 11, 2018

FINAL REPORT ACCEPTANCE BY OCWS:

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

Date: _____

FINAL REPORT ACCEPTANCE BY OCWS:

COTR, New Car Assessment Program
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Date: _____

Technical Report Documentation Page

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16. Abstract A 32.2 km/h (20 mph), 75° oblique impact Side NCAP Test was conducted on the subject vehicle, a 2018 Nissan Versa 4-Door Sedan, in accordance with the specifications of the Office of Crashworthiness Standards Side NCAP Pole Laboratory Test Procedure for the generation of consumer information on vehicle side pole crash protection. This test was conducted by Transportation Research Center Inc. in East Liberty, Ohio, on December 6, 2017. The impact velocity was 32.19 km/h, and the ambient temperature at the struck (left) side of the target vehicle at the time of impact was 21.1° C. The test vehicle's post-test maximum crush was 365 mm at Level 3. The test or target vehicle's performance is given below: <table border="1"> <thead> <tr> <th></th><th>Unit</th><th>Threshold</th><th>Front SID-IIs</th></tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆):</td><td>NA</td><td>1000</td><td>279</td></tr> <tr> <td>Resultant Lower Spine Acceleration:</td><td>g's</td><td>82</td><td>31.7</td></tr> <tr> <td>Total Pelvic Force: (sum of acetabular and iliac forces)</td><td>N</td><td>5525</td><td>2599.7</td></tr> <tr> <td>Maximum Thoracic Rib Deflection</td><td>mm</td><td>38*</td><td>21.8</td></tr> <tr> <td>Maximum Abdomen Rib Deflection</td><td>mm</td><td>45*</td><td>20.8</td></tr> </tbody> </table> * Proposed IARV The doors on the struck side did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.					Unit	Threshold	Front SID-IIs	Head Injury Criteria (HIC ₃₆):	NA	1000	279	Resultant Lower Spine Acceleration:	g's	82	31.7	Total Pelvic Force: (sum of acetabular and iliac forces)	N	5525	2599.7	Maximum Thoracic Rib Deflection	mm	38*	21.8	Maximum Abdomen Rib Deflection	mm	45*	20.8
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17. Key Words New Car Assessment Program (NCAP) Side Impact Pole Part 572V SID-IIs		18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Administration Technical Information Services Division, NPO-411 1200 New Jersey Ave Washington, DC 20590 e-mail: tis@nhtsa.dot.gov FAX: 202-493-2833																									
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TABLE OF CONTENTS

<u>Section</u>		<u>Page No.</u>
1	Test Purpose and Procedure	1
2	Summary of Test Results	2
3	Occupant and Vehicle Information	4
<u>Data Sheet No.</u>		<u>Page No.</u>
1	General Test and Vehicle Parameter Data	5
2	Seat, Seat Belt, Steering Wheel Adjustment and Fuel Systems Data	8
3	Dummy Longitudinal Clearance Dimensions	11
4	Dummy Lateral Clearance Dimensions	12
5	Camera and Instrumentation Data	13
6	Vehicle Accelerometer Data	14
7	Rigid Pole Load Cell Data	15
8	Post-Test Observations	16
9	Vehicle Profile Measurements	18
10	Vehicle Exterior Crush Measurements	19
11	Vehicle Damage Profile Distances	22
12	FMVSS No. 301 Fuel Integrity Post-Impact Data	23
13	Dummy/Vehicle Temperature and Humidity Stabilization Data	24
<u>Appendix</u>		<u>Page No.</u>
A	Photographs	A-1
B	Vehicle and Dummy Response Data Plots	B-1
C	Dummy Configuration and Performance Verification Data	C-1
D	Test Equipment And Instrumentation Calibration Data	D-1

SECTION 1

TEST PURPOSE AND PROCEDURE

TEST PURPOSE AND PROCEDURE

This side impact test was conducted as part of the MY 18 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-14-D-00354. The purpose of this test is to generate comparative side impact performance in a 2018 Nissan Versa 4-Door Sedan manufactured by NISSAN MOTOR CO., LTD.. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Side NCAP Pole Laboratory Test Procedure, dated October 2015.

SECTION 2

SUMMARY OF TEST RESULTS

A rigid pole side impact test was conducted on a model year 2018 Nissan Versa 4-Door Sedan. The subject vehicle was towed into the rigid pole at an angle of 75° and a velocity of 32.19 km/h. The side impact test was conducted by Transportation Research Center Inc. in East Liberty, OH, on December 6, 2017. Pre-test and post-test photographs of the test vehicle and the side impact dummy (SID-IIs) are included in Appendix A of this report.

One Part 572V (SID-IIs) dummy was placed in the driver designated seating position according to instructions specified in the OCWS Side NCAP Pole Laboratory Test Procedure, dated October 2015. Camera locations and other pertinent camera information are included in this report.

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

- Primary and Redundant Head CG Triaxial Accelerometers
- Thorax Upper, Middle, and Lower Rib Displacement Potentiometers
- Abdomen Upper and Lower Rib Displacement Potentiometers
- Lower Spine (T12) Triaxial Accelerometers
- Iliac Load Cell
- Acetabulum Load Cell

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

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

Measurement Description	Driver ATD (SID-IIs)		
	Units	IARV	Result
Head Injury Criteria (HIC ₃₆)	NA	1000	279
Lower Spine Acceleration Resultant	G	82	31.7
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	2599.7
Maximum Thoracic Rib Deflection	mm	38*	21.8
Maximum Abdominal Rib Deflection	mm	45*	20.8

* Proposed IARV

Supplemental restraint information is given below:

Restraint Type	Left Front (Driver) Occupant Location 1		Left Rear (Passenger) Occupant Location 4	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	No		
Knee Airbag	No	N/A		
Side Curtain Airbag	Yes	Yes	Yes	Yes
Side Torso/Pelvis Airbag	Yes	Yes	No	N/A
Side Torso Airbag	No	N/A	No	N/A
Seat Belt Pretensioner	Yes	Yes	No	N/A
Seat Belt Load Limiter	Yes	Unknown	No	N/A
Other Safety Restraint	No	N/A	No	N/A

GENERAL COMMENTS

None

SECTION 3
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 1
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
 Test Date: 12/6/17

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M20185207
Model Year	2018
Make	Nissan
Model	Versa S
Body Style	4-Door Sedan
VIN	3N1CN7APXJL828955
Body Color	Brilliant Silver
Odometer Reading (km/mi)	20 mi
Engine Displacement (L)	1.6
Type/No. Cylinders	Straight/4
Engine Placement	Front/Transverse
Transmission Type	Manual
Transmission Speeds	5
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 (ADL)	No
Power Window Auto-Reverse	No
Other Optional Feature	No
Driver Front Airbag	Yes
Driver Curtain Airbag	Yes
Driver Head/Torso Airbag	No
Driver Torso Airbag	No
Driver Torso/Pelvis Airbag	Yes
Driver Pelvis Airbag	No
Driver Knee Airbag	No
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	No

Does owner's manual provide instructions to turn off automatic door locks?

N/A

DATA FROM CERTIFICATION LABEL

Manufactured By	NISSAN MOTOR CO., LTD.
Date of Manufacturer	10/17
Vehicle Type	Passenger Car

GVWR (lbs)	3389
GAWR Front (lbs)	1750
GAWR Rear (lbs)	1708

VEHICLE SEATING AND WEIGHT CAPACITY DATA

	Front	Rear	Third	Total
Designated Seating Capacity (DSC)	2	3	N/A	5
Vehicle Capacity Weight (VCW) (kg)				385
DSC X 68.04 kg				340.2
Rated Cargo and Luggage Weight (RCLW) (kg)				44.8

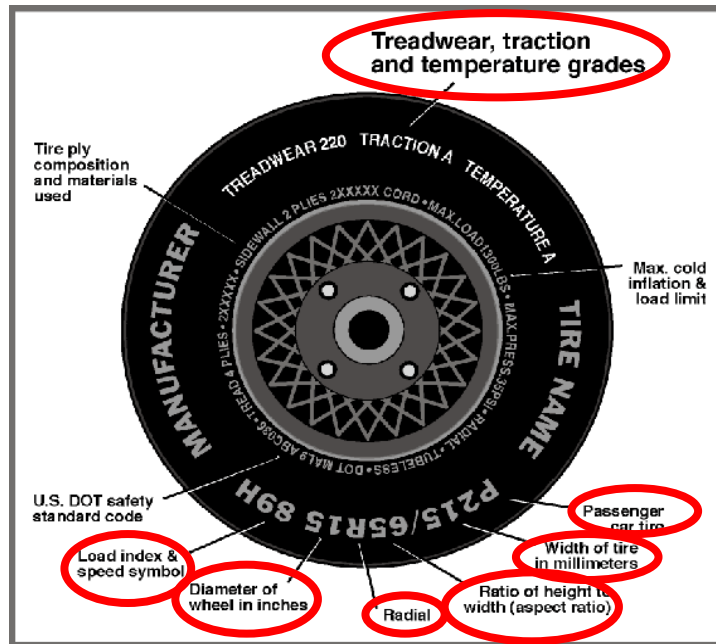
VEHICLE SEAT TYPE

Seating Location	Type of Seat Pan				Type of Seat Back		
	Bucket	Bench	Split Bench	Contoured	Fixed	Adjustable	
						W/ Lever	W/ Knob
Front Seat	Yes	N/A	N/A		N/A	Yes	N/A
Rear or Second Row Seat	N/A	Yes	N/A	Yes	Yes	N/A	N/A
Third row seat	N/A	N/A	N/A	N/A	N/A	N/A	N/A

DATA SHEET NO. 1 (CONTINUED)
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
 Test Date: 12/6/17



DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	300	300
Cold Pressure (kPa)	230	230
Recommended Tire Size	P185/ 65R15	P185/ 65R15
Tire Size on Vehicle	P185/ 65R15	P185/ 65R15
Tire Manufacturer	Continental	Continental
Tire Model	ContiProContact ^E	ContiProContact ^E
Treadwear	500	500
Traction	AA	AA
Temperature Grades	A	A
Tire Plies Sidewall	1	1
Tire Plies Body	4	4
Load Index/Speed Symbol	86H	86H
Tire Material	Polyester, Steel, Polyamide	Polyester, Steel, Polyamide
DOT Safety Code Left	P5FP 3YR 4017	P5FP 3YR 4017
DOT Safety Code Right	P5FP 3YR 4017	P5FP 3YR 4017

DATA SHEET NO. 1 (CONTINUED)
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
 Test Date: 12/6/17

TIRE PRESSURES

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

TEST VEHICLE AXLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	324.2	229.0		351.6	254.0		345.0	265.8	
Right	kg	303.4	228.8		314.4	253.0		305.6	262.8	
Ratio	%	57.8	42.2		56.8	43.2		55.2	44.8	
Totals	kg	627.6	457.8	1085.4	666.0	507.0	1173.0	650.6	528.6	1179.2

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total As Delivered Weight (UVW)	kg	1085.4
Actual Weight of 1 P572V ATD (SID-ILs) Dummy Used	kg	49.0
Rated Cargo/Luggage Weight (RCLW)	kg	44.8
Calculated Vehicle Target Weight (TVTW)	kg	1179.2

(A)
 (B)
 (C)
 (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 kg)? ☒ YES ☐ NO

TEST VEHICLE ATTITUDES AND CG

	Units	As Delivered	As Tested	Fully Loaded	Meets Requirement***
Driver Door Sill Angle (front-to-rear)*	Deg.	-0.6	+0.2	+0.2	Yes
Front Passenger Sill Angle (front-to-rear)*	Deg.	-0.9	-0.6	+0.1	Yes
Front Bumper-Line Angle (left-to-right)**	Deg.	-0.4	-0.4	-0.5	Yes
Rear Bumper-Line Angle (left-to-right)**	Deg.	-0.2	0.0	0.0	Yes
Vehicle CG (Aft of Front Axle)	mm	1097	1124	1165	
Vehicle CG (Left (+) / Right (-) from longitudinal Centerline)	mm	+14	+24	+26	

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

*** The "As Tested" vehicle attitude measurements must be equal to or between the "As Delivered" and "Fully Loaded" vehicle attitude measurements. Indicate "Yes" or "No" for "Meets Requirements".

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Ballast: None	0.0
Components removed: tail lights, right side speakers, rear bumper, fascia, muffler, front fascia, bumper foam and right side hubcaps	28.6

Test height adjustable suspension setting, if applicable:

N/A

DATA SHEET NO. 2

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

Test Vehicle: 2018 Nissan Versa 4-Door Sedan

NHTSA No.: M20185207

Test Program: SPNCAP Side Impact

Test Date: 12/6/17

SEAT POSITIONING

The driver seat, front center seat (if applicable), and right 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 seats should be set to the rear-most, lowest, mid-angle position.

SCRL ANGLE RANGE

Seat	SCRL(°)		
	Max.	Min.	Mid
Driver Seat	Fixed	N/A	18.4
Front Passenger Seat	Fixed	N/A	18.0
Front Center Seat*	N/A	N/A	N/A
Struck Side Rear Seat	Fixed	N/A	6.4
Non-Struck Side Rear Seat	Fixed	N/A	5.9
Rear Center Seat*	Fixed	N/A	10.3

* If applicable.

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	Forward-Most
Driver Seat	18.4	215	Max	N/A	N/A	N/A
			Mid	186	201	215
			Min	N/A	N/A	N/A
Front Passenger Seat	18.0	210	Max	N/A	N/A	N/A
			Mid	176	196	210
			Min	N/A	N/A	N/A
Front Center Seat*	N/A	N/A	Max	N/A	N/A	N/A
			Mid	N/A	N/A	N/A
			Min	N/A	N/A	N/A
Struck Side Rear Seat	6.4	Fixed	Max	N/A	N/A	N/A
			Mid	N/A	Fixed	N/A
			Min	N/A	N/A	N/A
Non-Struck Side Rear Seat	5.9	Fixed	Max	N/A	N/A	N/A
			Mid	N/A	Fixed	N/A
			Min	N/A	N/A	N/A
Rear Center Seat*	10.3	Fixed	Max	N/A	N/A	N/A
			Mid	N/A	Fixed	N/A
			Min	N/A	N/A	N/A

* If applicable.

DATA SHEET NO. 2 (CONTINUED)

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

Test Vehicle: 2018 Nissan Versa 4-Door Sedan

NHTSA No.: M20185207

Test Program: SPNCAP Side Impact

Test Date: 12/6/17

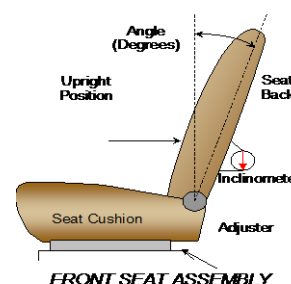
SEAT FORE/AFT POSITION

Seat	Total Fore/Aft Travel		Test Position from Forwardmost Position	
	mm	Detents*	mm	Detent*
Driver Seat	240	25	0	0
Front Passenger Seat	240	25	0	0
Front Center Seat*	N/A	N/A	N/A	N/A
Struck Side Rear Seat	Fixed	N/A	Fixed	N/A
Non-Struck Side Rear Seat	Fixed	N/A	Fixed	N/A
Rear Center Seat*	Fixed	N/A	Fixed	N/A

* If applicable.

SEAT BACK ANGLE ADJUSTMENT

The driver's seat back is positioned such that the dummy's head is level. The front center and front passenger's seat backs are positioned in a similar manner as the driver's seat back. The struck-side rear passenger seat back is positioned in accordance with the information provided by the manufacturer on Form No. 1. For the 5th percentile female dummy in a Side NCAP MDB test. The rear center and non-struck side rear passenger's seat back is set to match the struck-side rear seat back.



Seat	Total Seat Back Angle Range		Test Position from Most Upright	
	Degrees	Detents*	Degrees	Detent*
Driver Seat w/ Seated Dummy	57.4	29	7.6	1
Front Passenger Seat	57.2	29	7.3	1
Front Center Seat*	N/A	N/A	N/A	N/A
Struck Side Rear Seat	0	Fixed	24.5 RWD	N/A
Non-Struck Side Rear Seat	0	Fixed	23.9 RWD	N/A
Rear Center Seat*	0	Fixed	23.6 RWD	N/A

* If applicable.

SEAT BELT ANCHORAGE ADJUSTMENT

Seat belt anchorages are adjusted with the information provided by the manufacturer on Form No. 1

	Total # of Positions	Placed in Position #
Driver Seat	4, numbered from 0 to 3	0, Uppermost

HEAD RESTRAINT ADJUSTMENT

Head restraints are adjusted to the lowest and most full forward in-use position.

	Total # of Positions	Placed in Position #
Driver Seat	6, numbered from 0 to 5	0, Lowermost

DATA SHEET NO. 2 (CONTINUED)

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

Test Vehicle: 2018 Nissan Versa 4-Door Sedan

NHTSA No.: M20185207

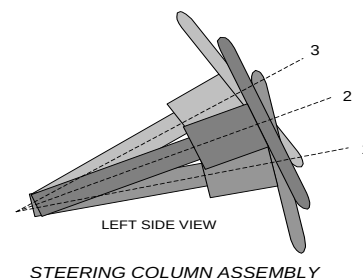
Test Program: SPNCAP Side Impact

Test Date: 12/6/17

STEERING COLUMN ADJUSTMENT

Steering wheel and column adjustments are made so that the steering wheel geometric locus it describes when moved through its full range of motion.

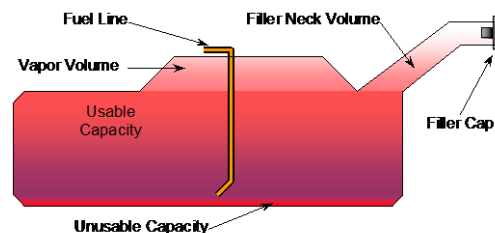
	Degrees	Fore/Aft Position, mm
Lowermost, Position No. 1	25.0	N/A
Geometric Center, Position No. 2	27.2	N/A
Uppermost, Position No. 3	29.3	N/A
Telescoping Steering Wheel Travel		Fixed
Test Position	27.3	N/A



FUEL PUMP

Describe the fuel pump type, details about how it operates and the location of the fuel filler neck:

The electric fuel pump will pump fuel for 1.0 seconds after the ignition is switched to "ON" while the engine is running.



FUEL TANK CAPACITY

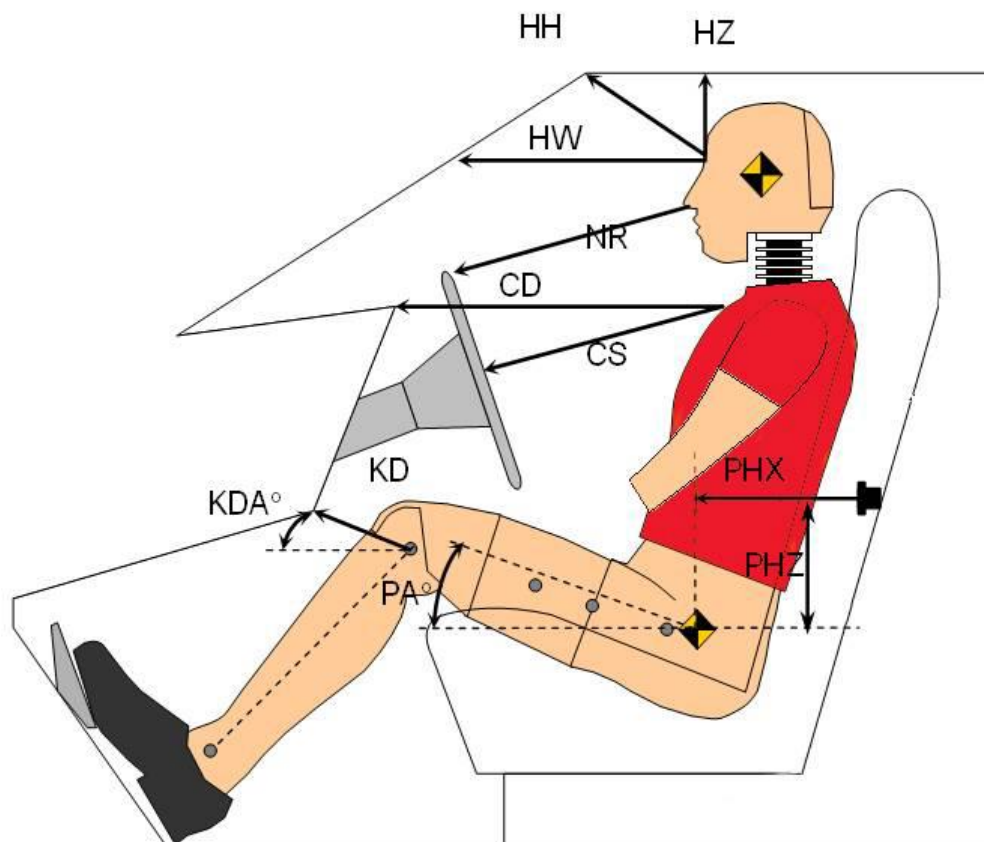
	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	40.9
Usable Capacity of "Optional" Tank (see Form No. 1)	N/A
Usable Capacity of Standard Tank (see Owner's Manual)	41.0
Usable Capacity of Optional Tank (see Owner's Manual)	N/A
93% of Usable Capacity	38.0
Actual Amount of Solvent Used in Test	37.9
1/3 of Usable Capacity	13.6

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

DATA SHEET NO. 3
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
 Test Date: 12/6/17

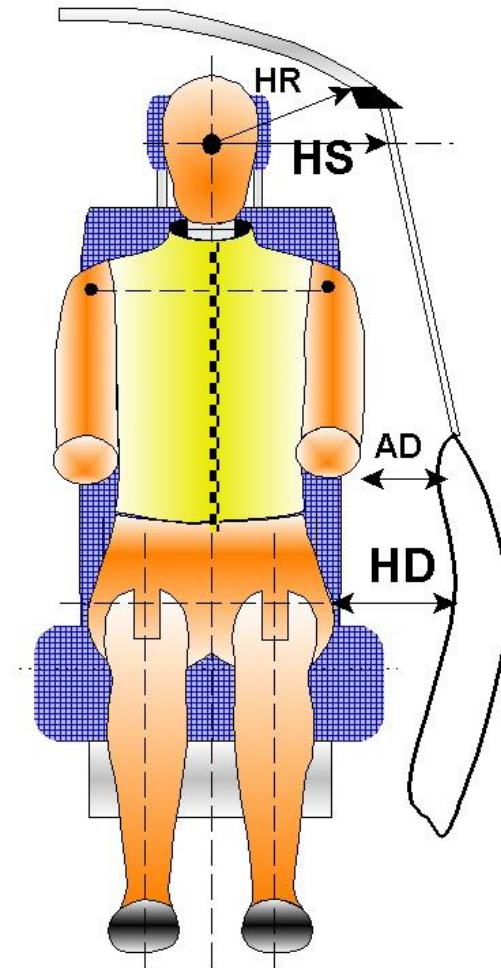


Code	Measurement Description	Driver	
		Length (mm)	Angle (°)
HH	Head to Header	380	
HW	Head to Windshield	578	
HZ	Head to Visor	189	
NR	Nose to Rim	268	
CD	Chest to Dashboard	431	
CS	Chest to Steering Wheel	184	
KDL/KDLA°	Left Knee to Dash	80	25.6
KDR/KDRA°	Right Knee to Dash	86	26.3
PAX°	Pelvic Tilt Angle (X-axis)		0.2
PAY°	Pelvic Tilt Angle (Y-axis)		19.2
PHX	Hip Point to Striker (X-Axis)	390	
PHZ	Hip Point to Striker (Z-Axis)	84	

DATA SHEET NO. 4
DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
Test Date: 12/6/17

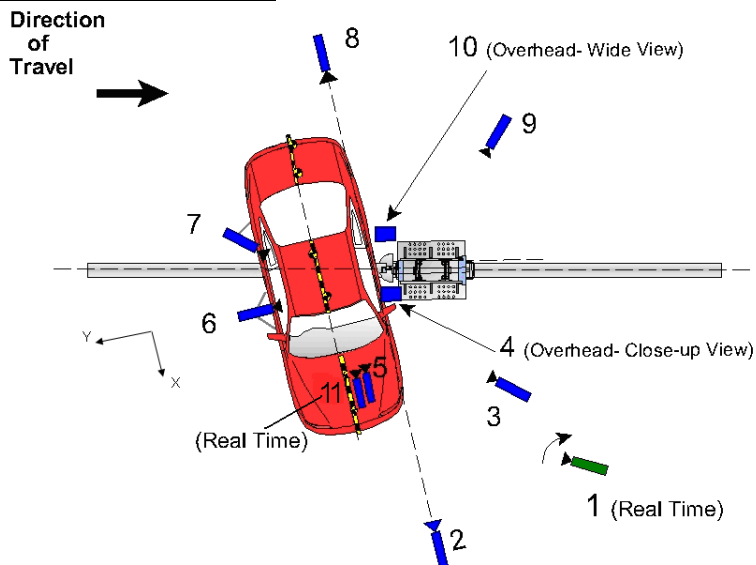


Code	Measurement Description	Length (mm)
HR	Head to Side Header	224
HS	Head to Side Window	340
AD	Arm to Door	97
HD	Hip Point to Door	131

DATA SHEET NO. 5 **CAMERA AND INSTRUMENTATION DATA**

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
 Test Date: 12/6/17



REFERENCE: (from point of impact for X and Y; from ground for Z)
 + X = Forward of vehicle, + Y = Right of vehicle, + Z = Down

Camera No.	View	Coordinates (mm)			Lens Length (mm)	Operating Frame Rate (fps)
		X	Y	Z		
1	Real time (24-30 fps) pan view of impact				Zoom	30
2	Front ground level – impact view	0	4839	-1539	20	1000
3	Impact side 45° – forward pole view	1685	3562	-1389	20	1000
4	Overhead Close-up view of impact	0	0	-1536	25	1000
5	Onboard – dummy front view				25	1000
6	Onboard – dummy side view				12.5	1000
7	Onboard – dummy rear oblique view				12.5	1000
8	Rear ground level – impact view	0	-6708	-1521	20	1000
9	Impact side 45° – rearward pole view	2998	-4067	-1550	20	1000
10	Overhead wide view of impact	-305	0	-1536	18	1000
11	Real time dummy front view				Zoom	30

All measurements accurate to +/- 6 mm.

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

If applicable, explain why camera(s) did not run: Camera 1 and 11 were not turned on, resulting in videos being not available

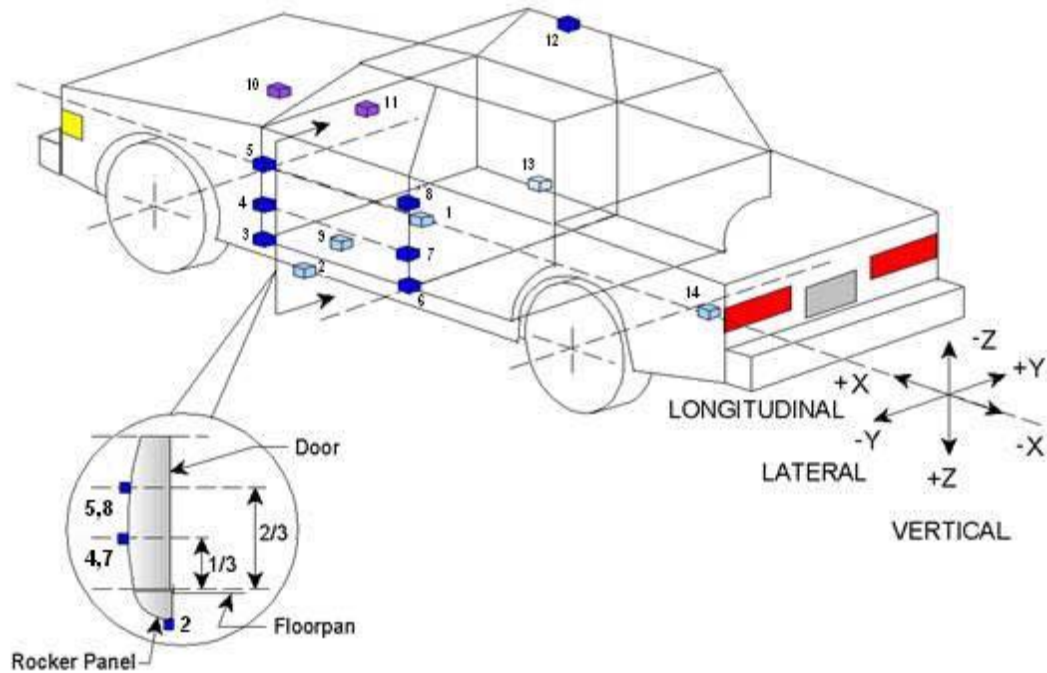
INSTRUMENTATION

	Number of Channels
Driver Dummy	16
Vehicle Structure	18
Pole Load Cells	8
TOTAL	42

DATA SHEET NO. 6
VEHICLE ACCELEROMETER DATA

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
Test Date: 12/6/17



Accelerometer/Sensor Location				
	ID	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	2895	115	-330
2	Left Floor Sill	2788	-670	-325
3	A-Pillar Sill	3040	-655	-314
4	A-Pillar Low	3215	-750	-507
5	A-Pillar Mid	3200	-740	-835
6	B-Pillar Sill	1960	-690	-345
7	B-Pillar Low	2095	-755	-530
8	B-Pillar Mid	2060	-755	-869
9	Driver Seat Track	2468	-615	-353
10	Engine Top	3765	200	-855
11	Firewall	3600	20	-915
12	Right Roof	2335	543	-1447
13	Right Floor Sill	2765	670	-328
14	Rear Floorpan	1020	0	-443

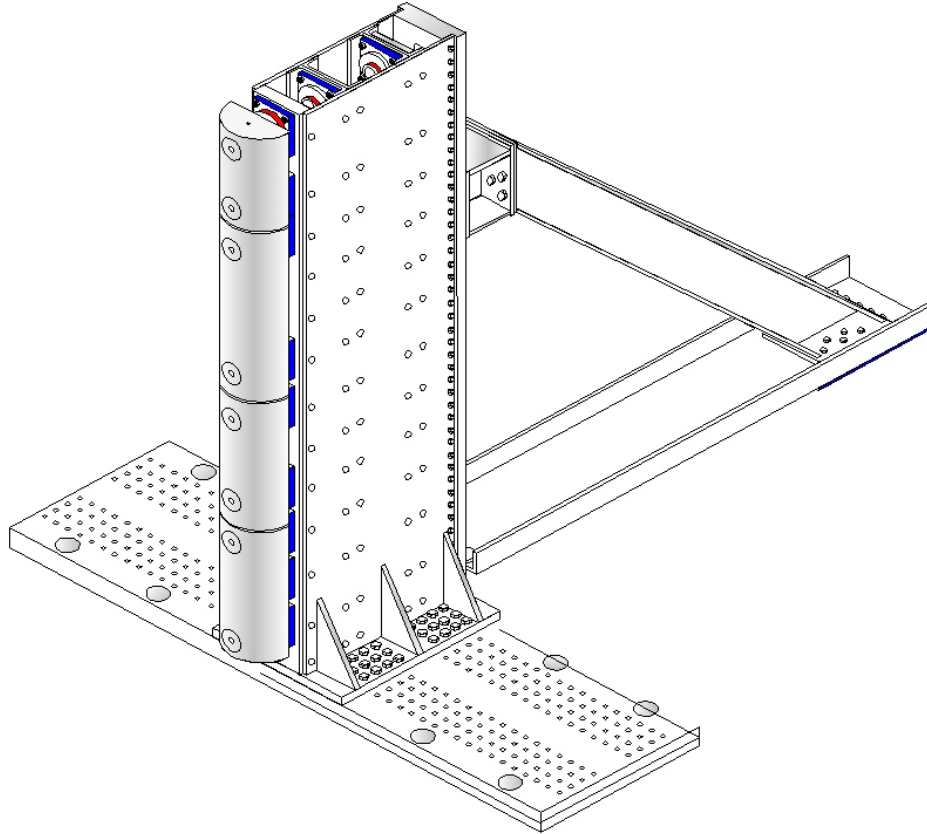
Reference: X - Test Vehicle Rear Bumper (+ forward)
Y - Test Vehicle Centerline (+ to right)
Z - Ground Plane (+ down)

DATA SHEET NO. 7
RIGID POLE LOAD CELL DATA

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
Test Date: 12/6/17

FOIL 300K RIGID POLE



Load Cell Locations	
ID	Height From Top of Carrier (mm)
1	87
2	468
3	648
4	978
5	1168
6	1651
7	1816
8	2057

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

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
Test Date: 12/6/17

TEST DUMMY INFORMATION AND CONTACT POINTS

Dummy Body Part	Driver SID-IIs Dummy
Face	SCAB
Top of Head	SCAB, Head Restraint
Left Side of Head	SCAB, Head Restraint
Back of Head	Head Restraint
Left Shoulder	Seatback bolster, SAB
Upper Torso	Seatback bolster, SAB
Lower Torso	Seatback bolster, SAB
Left Hip	Seat cushion bolster, SAB
Left Knee	None

POST-TEST DOOR PERFORMANCE

Description	Struck Side		Non-Struck Side		Rear Hatch/ Other Door
	Front	Rear	Front	Rear	
Remained Closed and Operational	No	No	Yes	Yes	Yes
Total Separation from Vehicle at Hinges or Latches	No	No	No	No	No
Latch or Hinge Systems 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

* Indicate "Yes", "No", or "NA".

POST-TEST SEAT PERFORMANCE

Description	Struck Side		Non-Struck Side	
	Front	Rear	Front	Rear
Seat Movement Along Seat Track	No	No	No	N/A
Seat Disengagement from Floor pan	No	No	No	N/A
Seat Back Movement from Initial Position	No	No	No	No
Seat Back Collapse	No	No	No	No

* Indicate "Yes", "No", or "NA".

POST-TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	Good
Sill Separation	None
Windshield Damage	Cracked along driver's A pillar
Side Window Damage	Driver's side window broken out
Other Notable Effects	None

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

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
Test Date: 12/6/17

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Struck Side (Driver)		Struck Side (Rear Passenger)	
	Mounted	Deployed	Mounted	Deployed
Front Airbag	Yes	No		
Knee Airbag	No	N/A		
Side Curtain Airbag	Yes	Yes	Yes	Yes
Side Torso/Pelvis Airbag	Yes	Yes	No	N/A
Side Torso Airbag	No	N/A	No	N/A
Seat Belt Pretensioner	Yes	Yes	No	N/A
Seat Belt Load Limiter	Yes	Unknown	No	N/A
Other	No	N/A	No	N/A

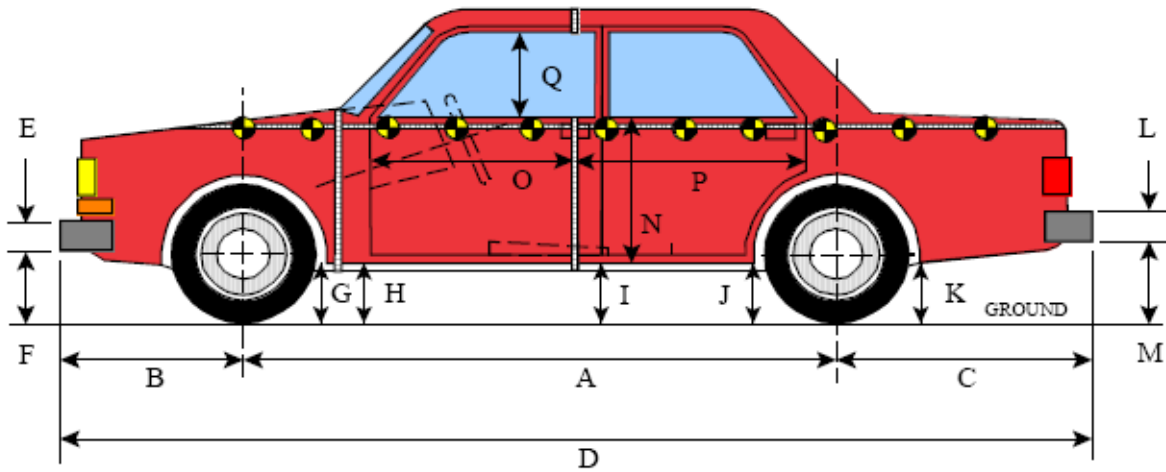
VEHICLE SPEED, VEHICLE ANGLE AT IMPACT AND IMPACT POINT LOCATION DATA

Measured Parameter	Units	Tolerance	Value
Vertical Impact Reference Line (Aft of Front Axle) (Intended Impact Point)	mm		1042
Actual Impact Point (Aft of Front Axle)	mm		1045
Horizontal Offset (+ forward / - rearward)	mm	+/- 38 of Intended Impact point	-3
Angle Between Vehicle's Longitudinal Centerline and Line of Motion	degrees	75 +/- 3	75
Trap No. 1 Velocity (Primary)	km/h	31.4 to 33.0	32.19
Trap No. 2 Velocity (Redundant)	km/h	31.4 to 33.0	32.18

DATA SHEET NO. 9
VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
 Test Date: 12/6/17



LEFT SIDE VIEW

All MEASUREMENTS IN (mm) WITH TOLERANCE OF ± 3 mm

VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

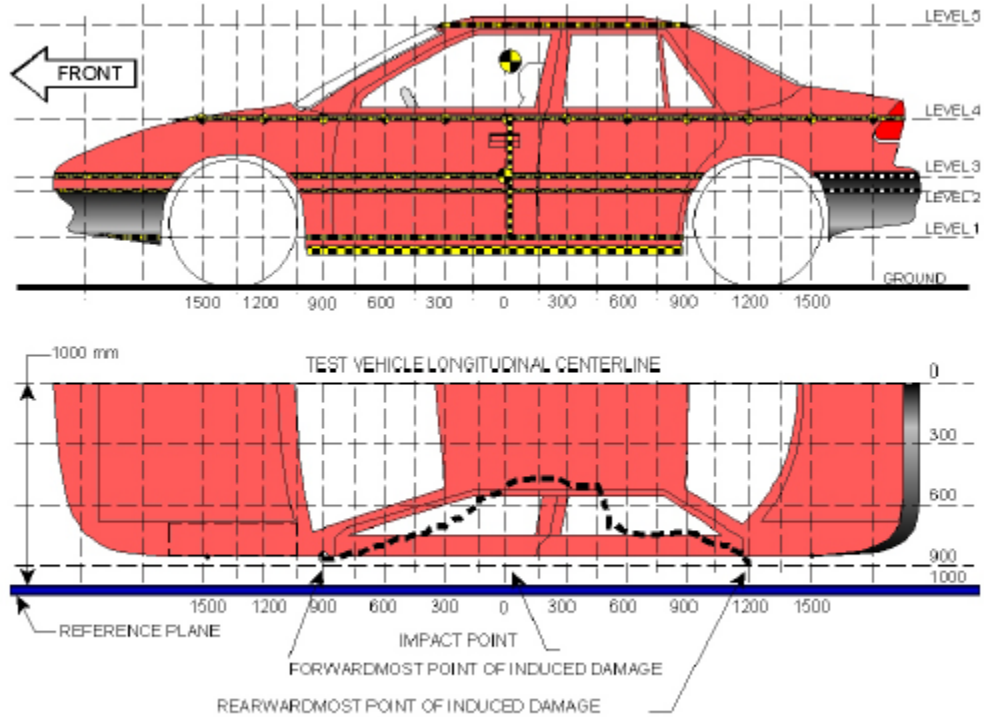
Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2601	2510	91
B	Front Axle to Front Surface of Vehicle	860	860	0
C	Rear Axle to Rear Surface of Vehicle	1040	1085	-45
D	Total Length at Centerline	4500	4455	45
E	Front Bumper Thickness	120	120	0
F	Front Bumper Bottom to Ground	445	465	-20
G	Sill Height at Front Wheel Well	273	270	3
H	Sill Height at Front Door Leading Edge	283	282	1
I	Sill Height at B-Pillar	280	288	-8
J1	Sill Height at Rear Wheel Well	285	318	-33
J2	Pinch Weld Height at Rear Wheel Well	186	212	-26
K	Sill Height Aft of Rear Wheel Well	402	415	-13
L	Rear Bumper Thickness	165	165	0
M	Rear Bumper Bottom to Ground	476	479	-3
N	Sill Height to Bottom of Front Window Sill	725	725	0
O	Front Door Leading Edge to Impact CL	620	482	138
P	Rear Door Trailing Edge to Impact CL	1510	1401	109
Q	Front Window Opening	423	395	28
R	Right Side Length	4242	4290	-48
S	Left Side Length	4242	4230	12
T ¹	Vehicle Width at B-Pillars	1690	1580	110

¹ Maximum width is not a B-Pillars; maximum width is 1700

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
 Test Date: 12/6/17



NOTE: All measurements are in millimeters (mm)

MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Measurement Description	Height Above Ground	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	335	307	0
2	Occupant H-Point	586	358	0
3	Mid-Door	648	365	0
4	Window Sill	941	318	0
5	Window Top	1428	162	0

NOTE: The above measurements should be taken along the vertical impact reference line. Vehicle measurements forward of the vertical impact reference line are negative.

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

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
 Test Date: 12/6/17

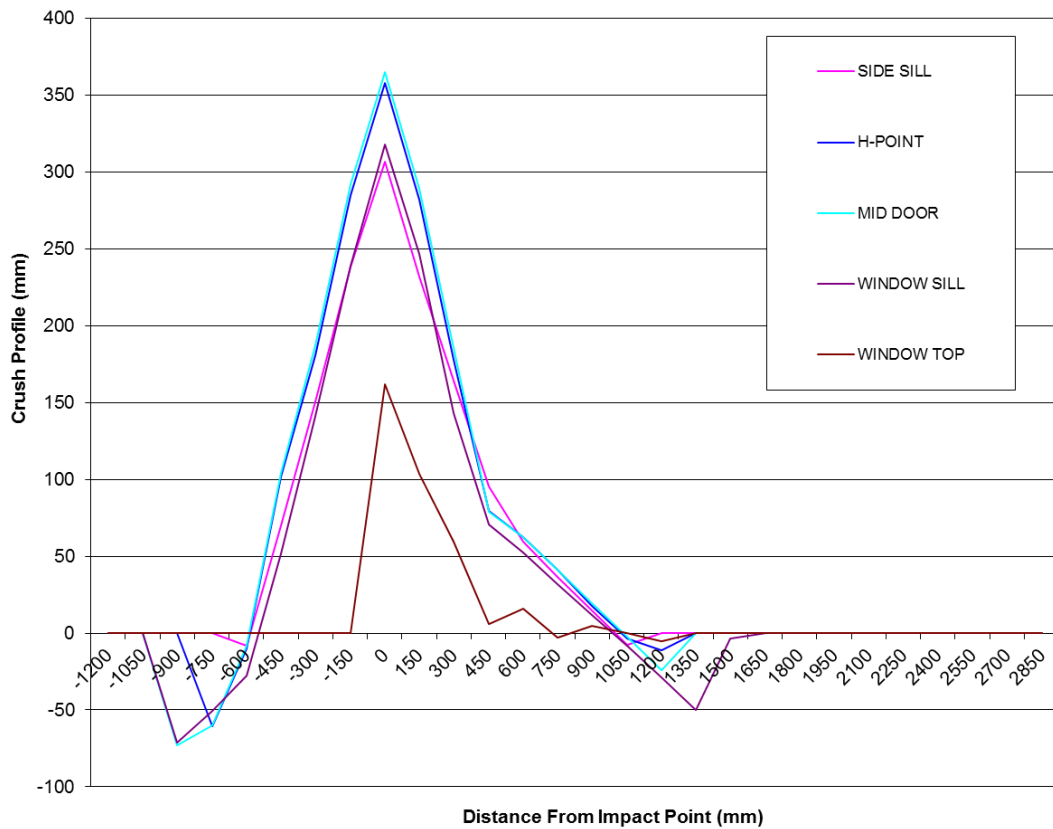
	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900	0	0	848	728	0	0	0	922	799	0	0	0	-74	-71	0
-750	0	843	841	744	0	0	903	901	795	0	0	-60	-60	-51	0
-600	809	835	837	756	0	817	846	846	784	0	-8	-11	-9	-28	0
-450	809	838	840	764	0	739	736	736	712	0	70	102	104	52	0
-300	810	840	843	771	0	659	659	656	630	0	151	181	187	141	0
-150	810	841	845	776	0	572	556	553	537	0	238	285	292	239	0
0	810	842	845	779	565	503	484	480	461	403	307	358	365	318	162
150	810	842	845	783	574	578	560	556	536	470	232	282	289	247	104
300	808	840	844	786	575	644	663	659	643	515	164	177	185	143	60
450	806	840	843	787	575	711	760	764	717	569	95	80	79	70	6
600	803	838	843	788	573	744	776	780	736	558	59	62	63	52	15
750	800	837	841	788	570	764	796	799	756	574	36	41	42	32	-4
900	798	835	839	788	567	783	817	819	776	562	15	18	20	12	5
1050	799	835	838	790	557	806	839	841	798	557	-7	-4	-3	-8	0
1200	0	845	842	793	508	0	856	866	822	513	0	-11	-24	-29	-5
1350	0	0	846	796	0	0	0	846	846	0	0	0	0	-50	0
1500	0	0	0	797	0	0	0	0	801	0	0	0	0	-4	0

NOTE: Pre-test measurements are taken when the vehicle is in the "As Tested" weight condition. Vehicle measurements forward of the vertical impact reference line are negative. The crush profile grid is established prior to the test based on an estimated impact point. The final distance from impact is determined after the final dummy positioning and the pole is aligned with the center of gravity of the dummy's head.

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

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
Test Program: SPNCAP Side Impact

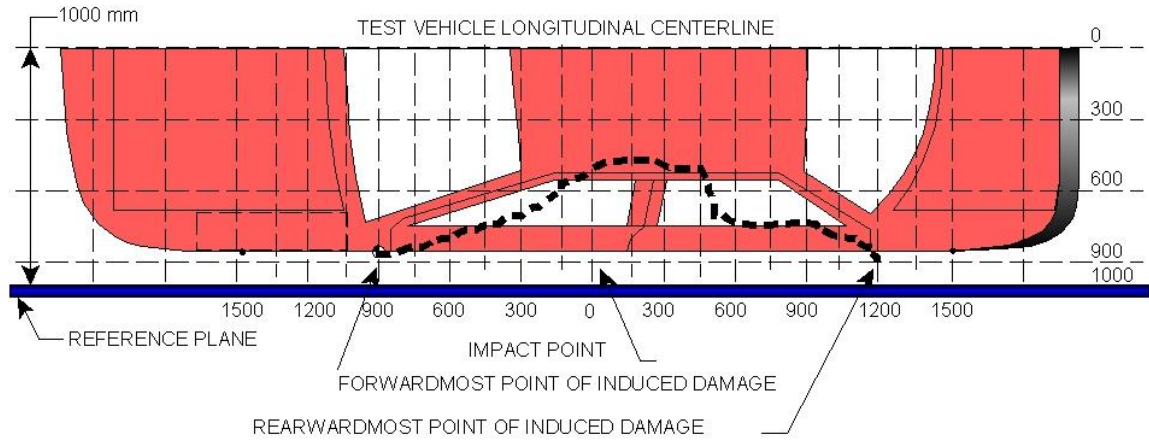
NHTSA No.: M20185207
Test Date: 12/6/17



DATA SHEET NO. 11
VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2018 Nissan Versa 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20185207
 Test Date: 12/6/17



VEHICLE DAMAGE PROFILE DISTANCES

DPD	Distance From Impact Point (mm)	Level	Post-Test (mm)	Pre-Test (mm)	Crush (mm)
1 ¹	900	3	819	839	0
2	600	3	780	843	63
3	300	3	659	844	185
4	150	3	556	845	289
5	-150	3	553	845	292
6 ¹	-450	3	736	840	0

¹ DPD 1 and 6 are defined as zero crush since the crush does not extend to the end of the vehicle.

DATA SHEET NO. 12

FMVSS NO. 301 FUEL SYSTEM INTEGRITY POST-IMPACT DATA

Test Vehicle: 2018 Nissan Versa 4-Door Sedan

NHTSA No.: M20185207

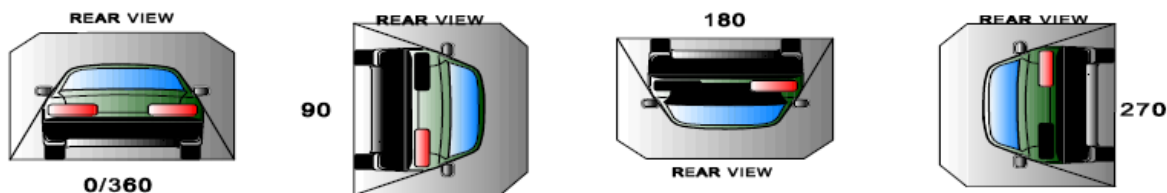
Test Program: SPNCAP Side Impact

Test Date: 12/6/17

Test Time: 15:00 Temperature: 21.1°C

- A. From impact until vehicle motion ceases: 0 oz.
(Maximum allowable is 1 ounce)
- B. For the 5 minute period after motion ceases: 0 oz.
(Maximum allowable is 5 ounces)
- C. For the following 25 minutes: 0 oz.
(Maximum allowable is 1 ounce/minute)
- D. Spillage Details: None

FMVSS 301 STATIC ROLLOVER DATA



ROLLOVER SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0 to 90	90	330	420
90 to 180	90	330	840
180 to 270	90	330	1260
270 to 360	90	330	1680

FMVSS NO. 301 ROLLOVER SPILLAGE TABLE

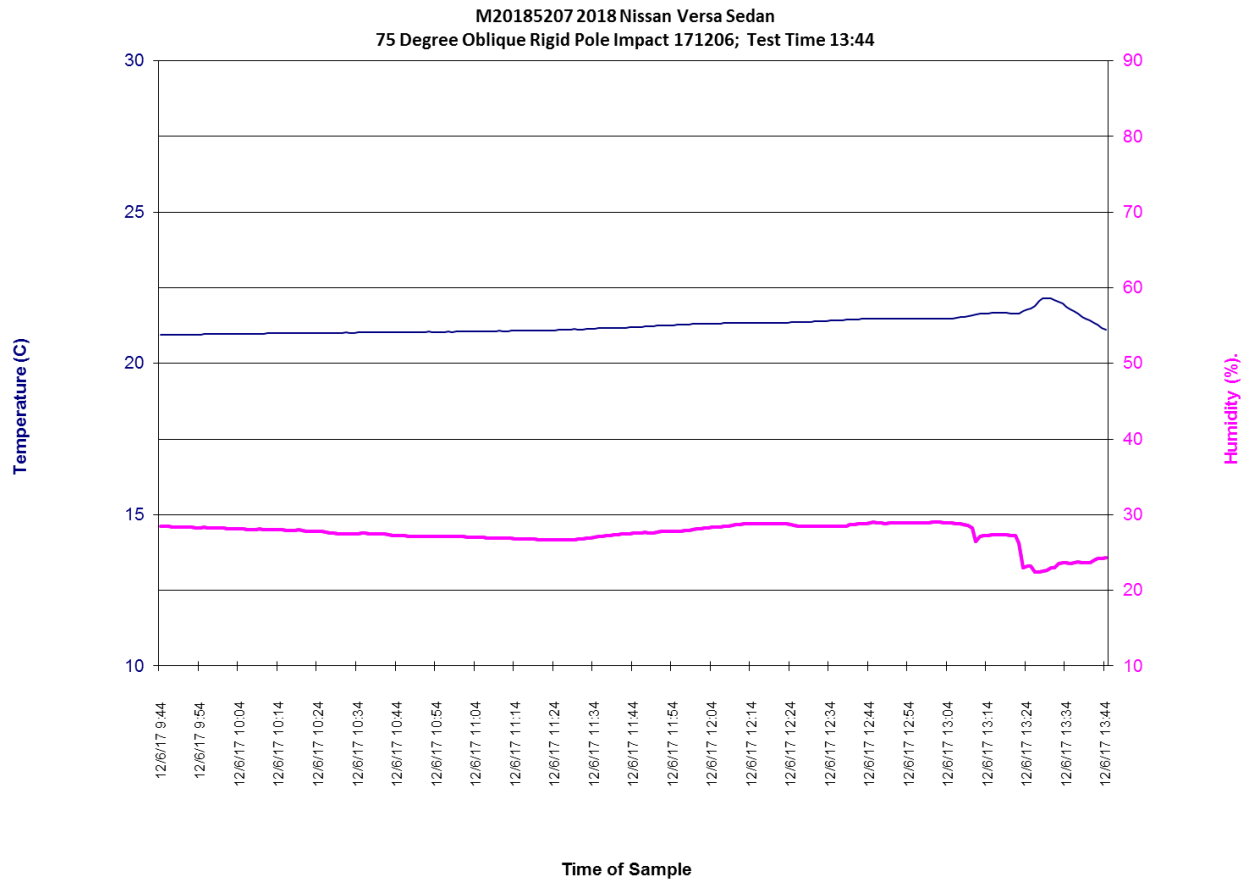
Test Phase	First 5 Minutes	Sixth Minute	Seventh Minute	Eighth Minute
0 to 90	0	0	0	0
90 to 180	0	0	0	0
180 to 270	0	0	0	0
270 to 360	0	0	0	0

ROLLOVER SOLVENT SPILLAGE LOCATION TABLE

Test Phase	Spillage Location
0 to 90	None
90 to 180	None
180 to 270	None
270 to 360	None

DATA SHEET NO. 13
DUMMY/VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION DATA

Test Vehicle: 2018 Nissan Versa 4-Door Sedan NHTSA No.: M20185207
Test Program: SPNCAP Side Impact Test Date: 12/6/17



APPENDIX A
PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

No.	Description	Page
1	As Delivered Right Front $\frac{3}{4}$ View of Test Vehicle	A-4
2	As Delivered Left Rear $\frac{3}{4}$ View of Test Vehicle	A-4
3	Pre-Test Frontal View of Test Vehicle	A-5
4	Post-Test Frontal View of Test Vehicle	A-5
5	Pre-Test Left Front $\frac{3}{4}$ View of Test Vehicle	A-6
6	Post-Test Left Front $\frac{3}{4}$ View of Test Vehicle	A-6
7	Pre-Test Left Side View of Test Vehicle	A-7
8	Post-Test Left Side View of Test Vehicle	A-7
9	Pre-Test Left Rear $\frac{3}{4}$ View of Test Vehicle	A-8
10	Post-Test Left Rear $\frac{3}{4}$ View of Test Vehicle	A-8
11	Pre-Test Rear View of Test Vehicle	A-9
12	Post-Test Rear View of Test Vehicle	A-9
13	Pre-Test Right Side View of Test Vehicle	A-10
14	Post-Test Right Side View of Test Vehicle	A-10
15	Pre-Test Overhead View of Test Area	A-11
16	Post-Test Overhead View of Test Area	A-11
17	Pre-Test Left Side View of Pole Positioned Against Side of Vehicle	A-12
18	Pre-Test Right Side View of Pole Positioned Against Side of Vehicle	A-12
19	Pre-Test Close-Up View of Impact Point Target	A-13
20	Post-Test Close-Up View of Impact Point Target Showing Impact Location	A-13
21	Pre-Test Front Close-Up View of Dummy Head and Chest	A-14
22	Post-Test Front Close-Up View of Dummy	A-14
23	Pre-Test Left Side View of Dummy Showing Belt and Chalking	A-15
24	Pre-Test Left Side View of Dummy Shoulder and Door Top View	A-16
25	Post-Test Left Side View of Dummy Shoulder and Door Top View	A-16
26	Pre-Test Front View of Seat Back Prior to Dummy Positioning	A-17
27	Pre-Test Front View of Dummy Head and Shoulders in Relation to Head Restraint	A-17
28	Pre-Test Front View of Seat Pan Prior to Dummy Positioning	A-18
29	Pre-Test Overhead View of Dummy Thighs on Seat Pan	A-18
30	Pre-Test Left Side View of Dummy's Neck Showing Position of Adjustable Neck Bracket	A-19
31	Pre-Test Left Side View of Dummy's Head Showing Dummy's Head is Level	A-19
32	Pre-Test Placement of Dummy's Feet	A-20
33	Pre-Test View of Belt Anchorage for Dummy	A-20
34	Pre-Test Left Side View of Steering Wheel	A-21
35	Pre-Test View of Disengaged Parking Brake	A-21

TABLE OF PHOTOGRAPHS (CONTINUED)

No.	Description	Page
36	Pre-Test View of Parking Brake	A-22
37	Pre-Test Close-Up Left Side View of Driver Seat Track	A-22
38	Pre-Test Close-Up Left Side View of Driver Seat Back	A-23
39	Pre-Test Close-Up View of Driver Seat Back or Head Restraint	A-23
40	Pre-Test Dummy and Door Clearance View	A-24
41	Post-Test Dummy and Door Clearance View	A-24
42	Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment	A-25
43	Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment	A-25
44	Pre-Test Inner Driver Door Panel View	A-26
45	Post-Test Inner Driver Door Panel View Showing Dummy Contact Location	A-26
46	Post-Test Dummy Close-Up Head Contact with Vehicle Interior View	A-27
47	Post-Test Dummy Close-Up Head Contact with Side Airbag View	A-27
48	Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View	A-28
49	Post-Test Dummy Close-Up Torso Contact with Side Airbag View	A-28
50	Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View	A-29
51	Post-Test Dummy Close-Up Pelvis Contact with Side Airbag View	A-29
52	Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View	A-30
53	Pre-Test View of Fuel Filler Cap or Fuel Filler Neck	A-31
54	Post-Test View of Fuel Filler Cap or Fuel Filler Neck	A-31
55	Close-Up View of Vehicle's Certification Label	A-32
56	Close-Up View of Vehicle's Tire Information Placard or Label	A-32
57	Pre-Test Pole Barrier Front View	A-33
58	Post-Test Pole Barrier Front View	A-33
59	Pre-Test Pole Barrier Side View	A-34
60	Post-Test Pole Barrier Side View	A-34
61	Pre-Test Ballast View	A-35
62	Post-Test Primary and Redundant Speed Trap Read-Out	A-35
63	FMVSS No. 301 Static Rollover 0 Degrees	A-36
64	FMVSS No. 301 Static Rollover 90 Degrees	A-36
65	FMVSS No. 301 Static Rollover 180 Degrees	A-37
66	FMVSS No. 301 Static Rollover 270 Degrees	A-37
67	FMVSS No. 301 Static Rollover 360 Degrees	A-38
68	Impact Event	A-38
69	Monroney Label	A-39
70	Head Restraint Use and Adjustment Information from Vehicle Owner's Manual	A-39
71	Post-Test View of Shattered Vehicle Inner Door Panel	A-40



No. 001 As Delivered Right Front $\frac{3}{4}$ View of Test Vehicle



No. 002 As Delivered Left Rear $\frac{3}{4}$ View of Test Vehicle



No. 003 Pre-Test Frontal View of Test Vehicle



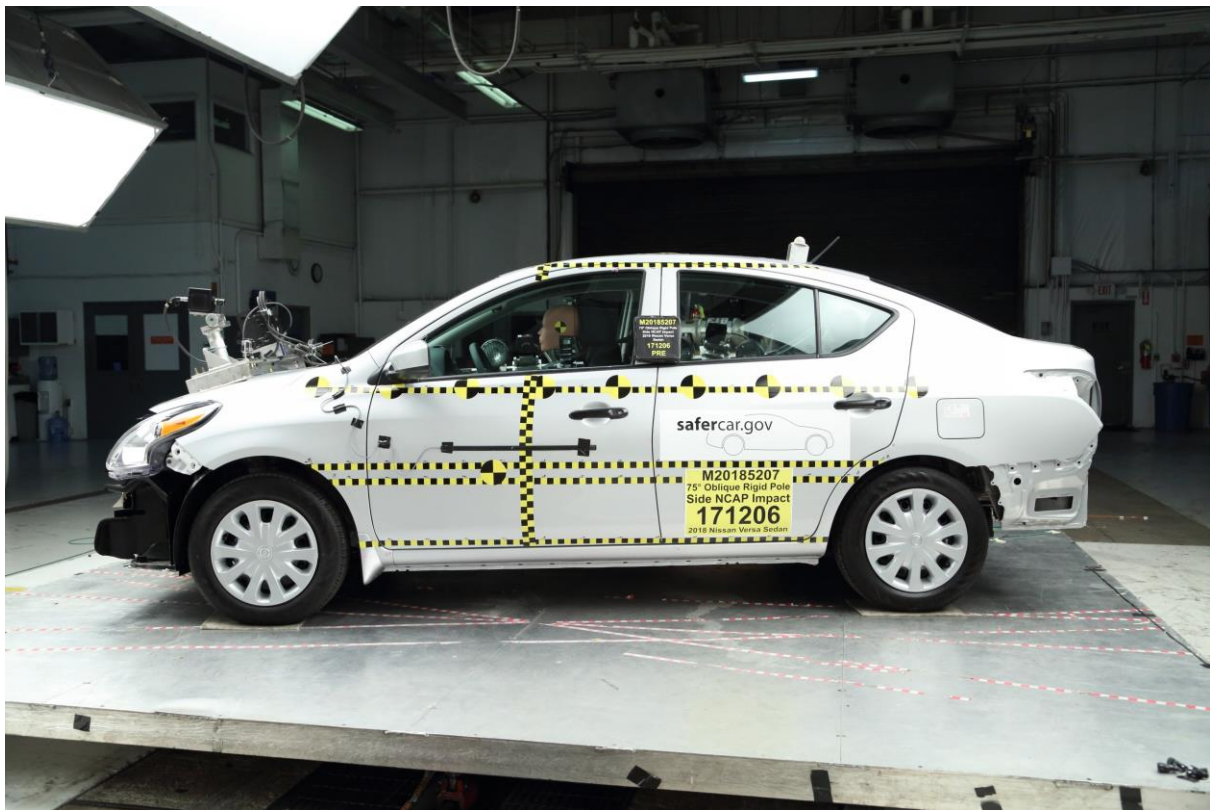
No. 004 Post-Test Frontal View of Test Vehicle



No. 005 Pre-Test Left Front $\frac{3}{4}$ View of Test Vehicle



No. 006 Post-Test Left Front $\frac{3}{4}$ View of Test Vehicle



No. 007 Pre-Test Left Side View of Test Vehicle



No. 008 Post-Test Left Side View of Test Vehicle



No. 009 Pre-Test Left Rear $\frac{3}{4}$ View of Test Vehicle



No. 010 Post-Test Left Rear $\frac{3}{4}$ View of Test Vehicle



No. 011 Pre-Test Rear View of Test Vehicle



No. 012 Post-Test Rear View of Test Vehicle



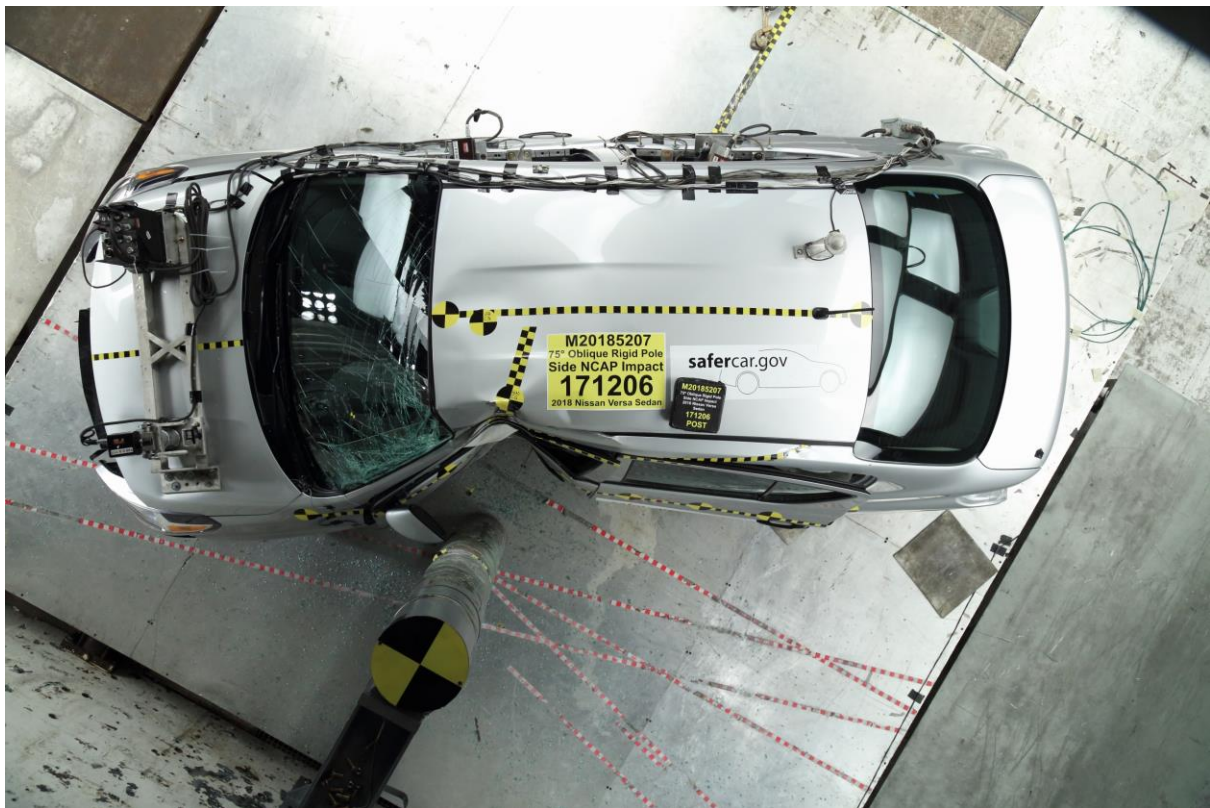
No. 013 Pre-Test Right Side View of Test Vehicle



No. 014 Post-Test Right Side View of Test Vehicle



No. 015 Pre-Test Overhead View of Test Area



No. 016 Post-Test Overhead View of Test Area



No. 017 Pre-Test Left Side View of Pole Positioned Against Side of Vehicle



No. 018 Pre-Test Right Side View of Pole Positioned Against Side of Vehicle



No. 019 Pre-Test Close-Up View of Impact Point Target



No. 020 Post-Test Close-Up View of Impact Point Target Showing Impact Location



No. 021 Pre-Test Front Close-Up View of Dummy Head and Chest

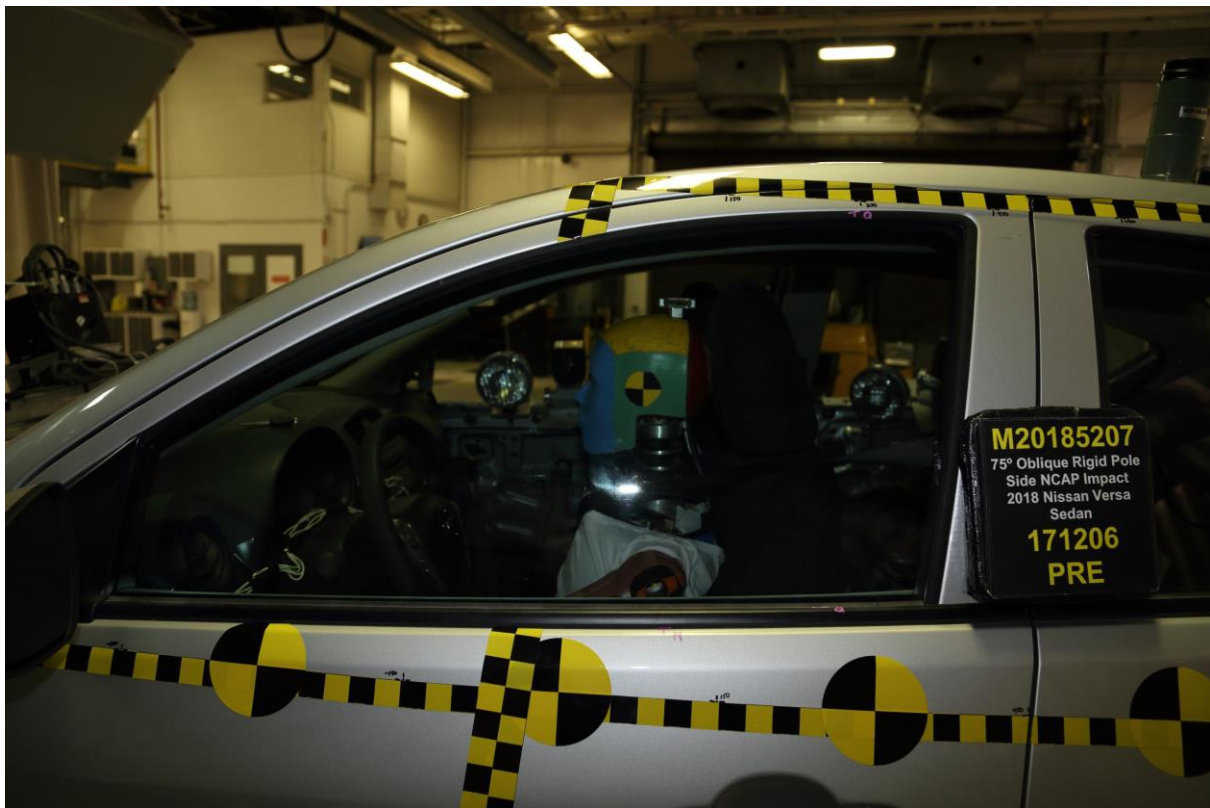


No. 022 Post-Test Front Close-Up View of Dummy

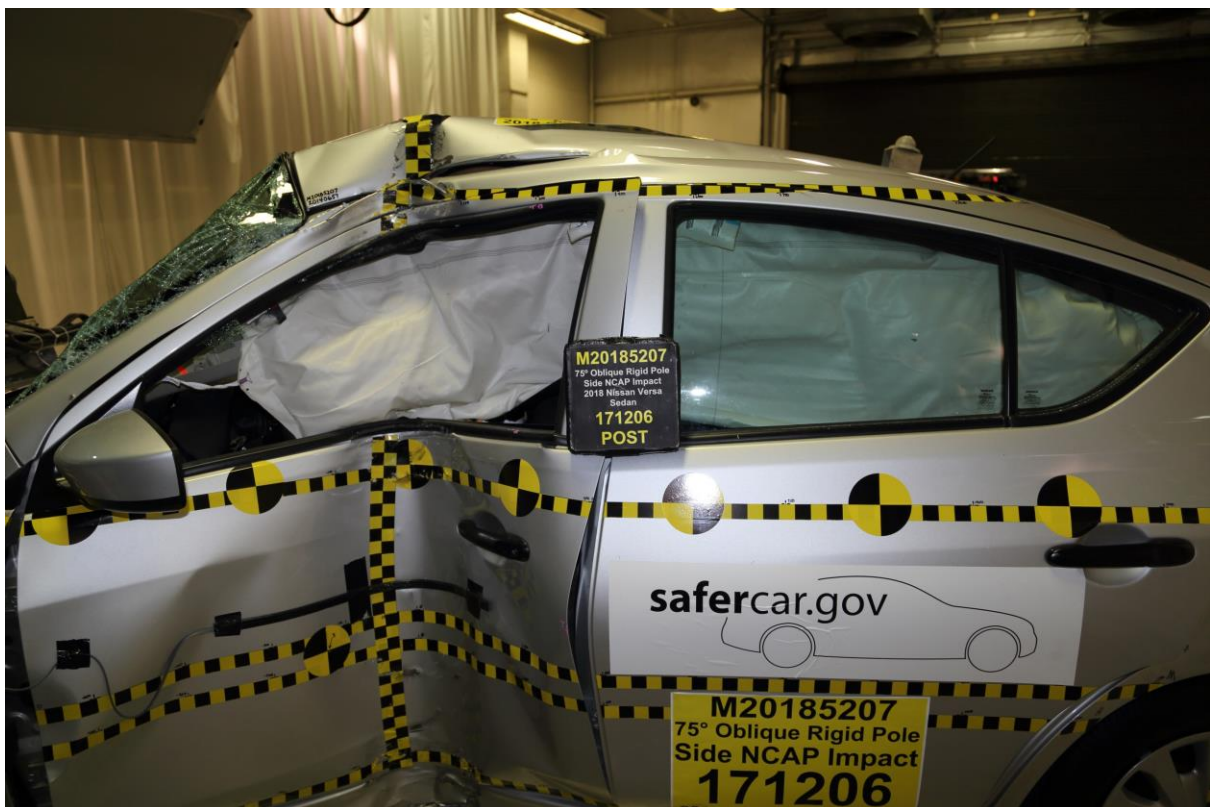


No. 023 Pre-Test Left Side View of Dummy Showing Belt and Chalking

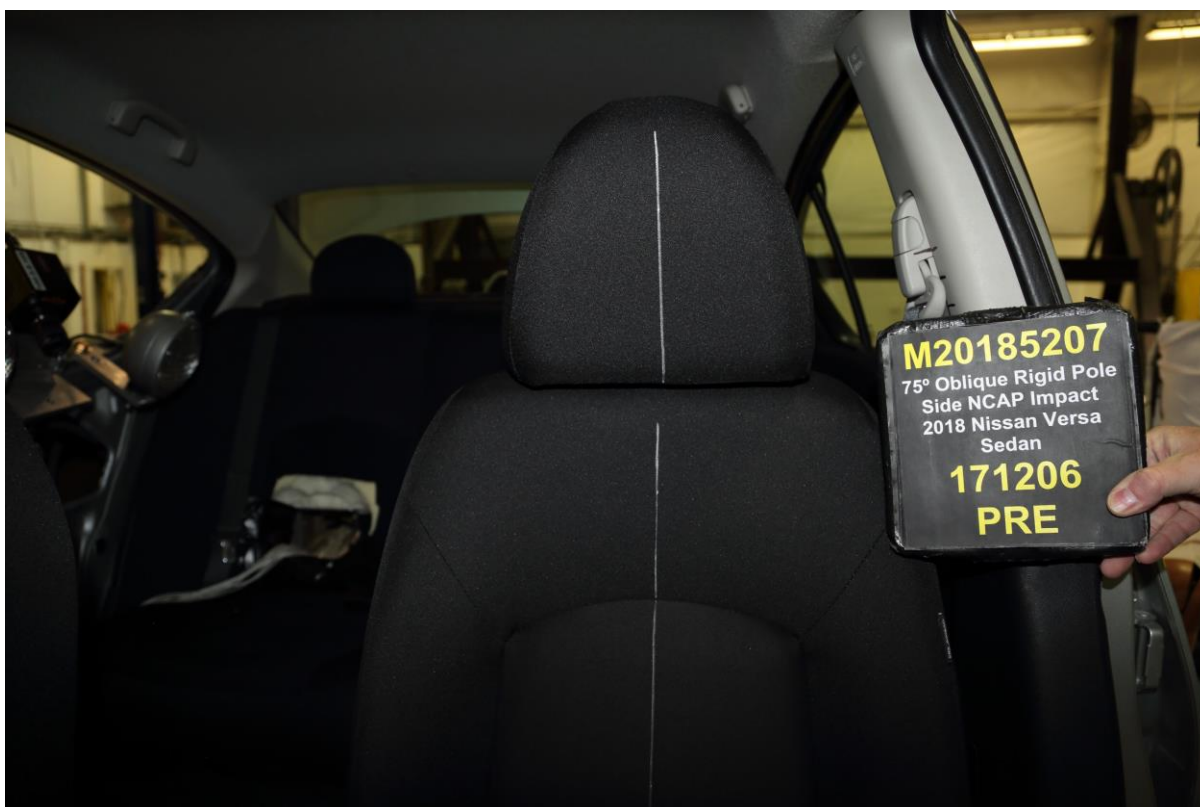
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No. 024 Pre-Test Left Side View of Dummy Shoulder and Door Top View



No. 025 Post-Test Left Side View of Dummy Shoulder and Door Top View



No. 026 Pre-Test Front View of Seat Back Prior to Dummy Positioning



No. 027 Pre-Test Front Close-Up View of Dummy Head and Shoulders in Relation to Head Restraint



No. 028 Pre-Test Front View of Seat Pan Prior to Dummy Positioning



No. 029 Pre-Test Overhead View of Dummy Thighs on Seat Pan



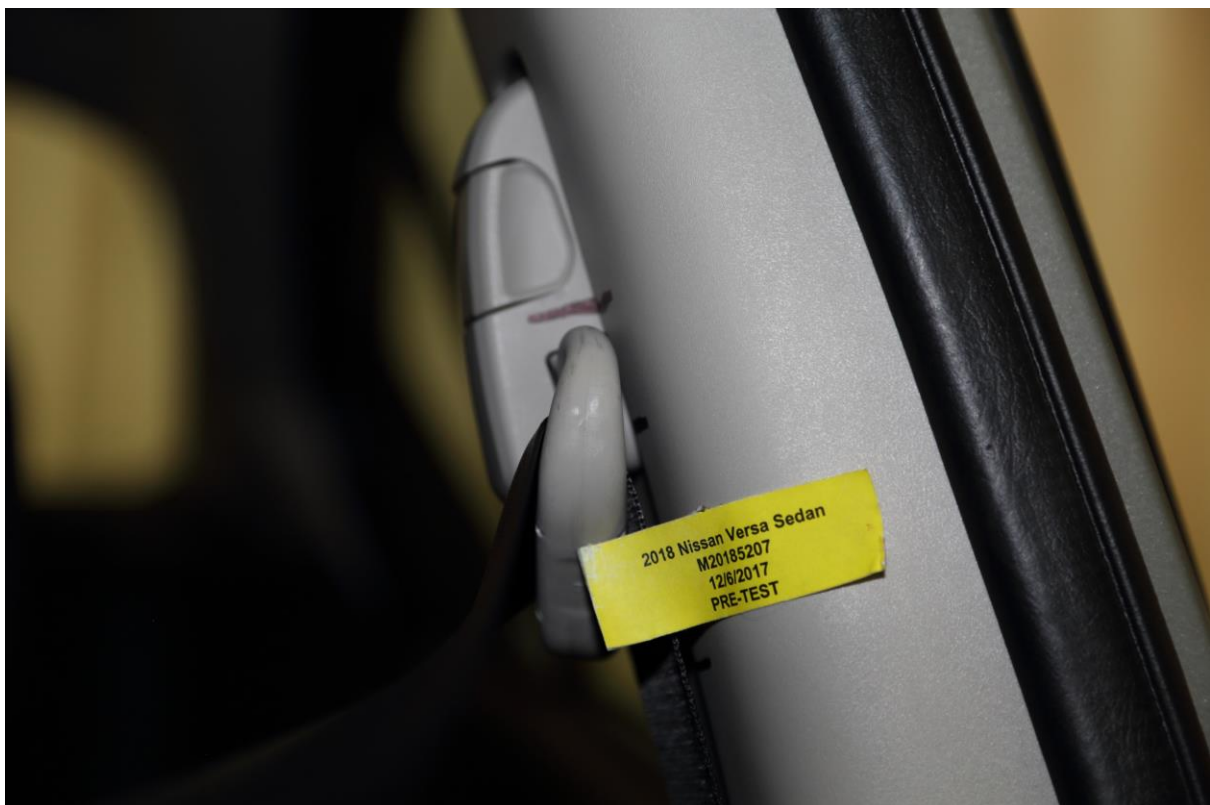
No. 030 Pre-Test Left Side View of Dummy Neck Showing Position of Adjustable Neck Bracket



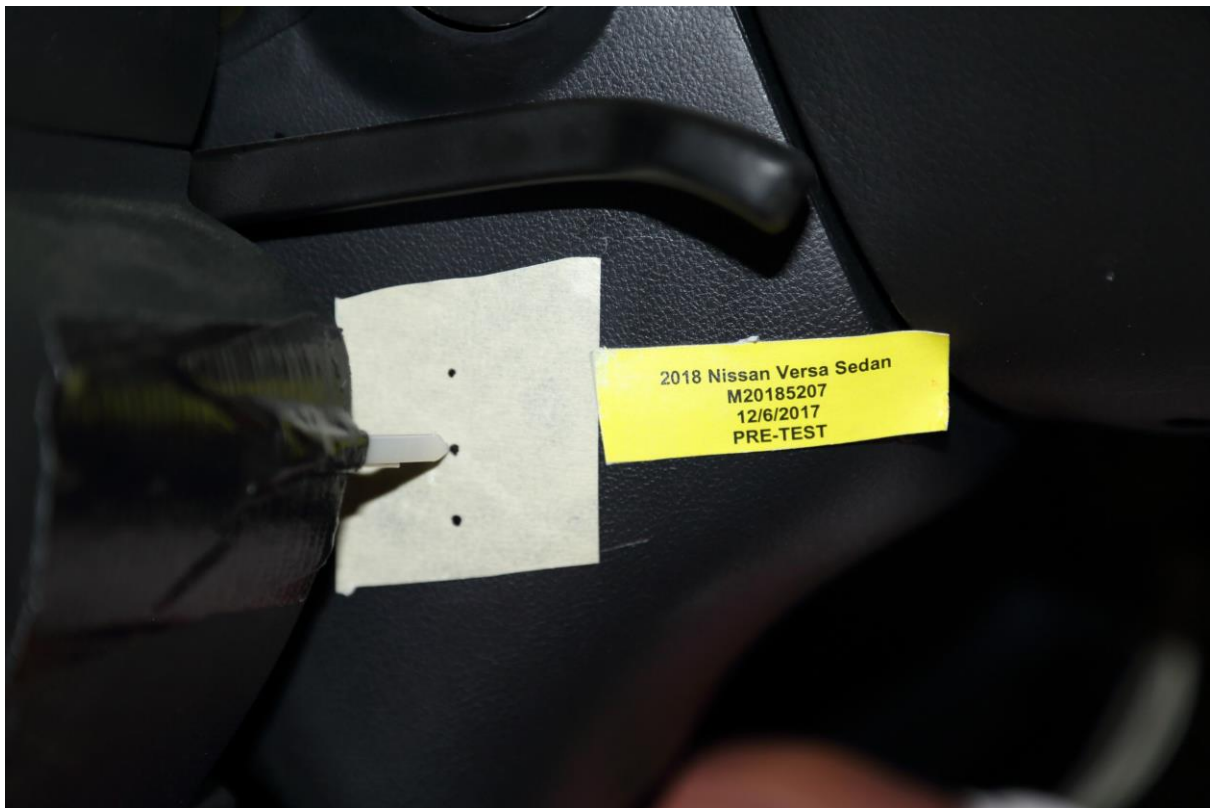
No. 031 Pre-Test Left Side View of Dummy Head Showing Dummy Head is Level



No. 032 Pre-Test Placement of Dummy Feet



No. 033 Pre-Test View of Belt Anchorage for Dummy



No. 034 Pre-Test Left Side View of Steering Wheel



No. 035 Pre-Test View of Disengaged Parking Brake



No. 036 Pre-Test View of Parking Brake



No. 037 Pre-Test Close-Up Left Side View of Driver Seat Track



No. 038 Pre-Test Close-Up Left Side View of Driver Seat Back



No. 039 Pre-Test Close-Up View of Driver Seat Back or Head Restraint



No. 040 Pre-Test Dummy and Door Clearance View



No. 041 Post-Test Dummy and Door Clearance View



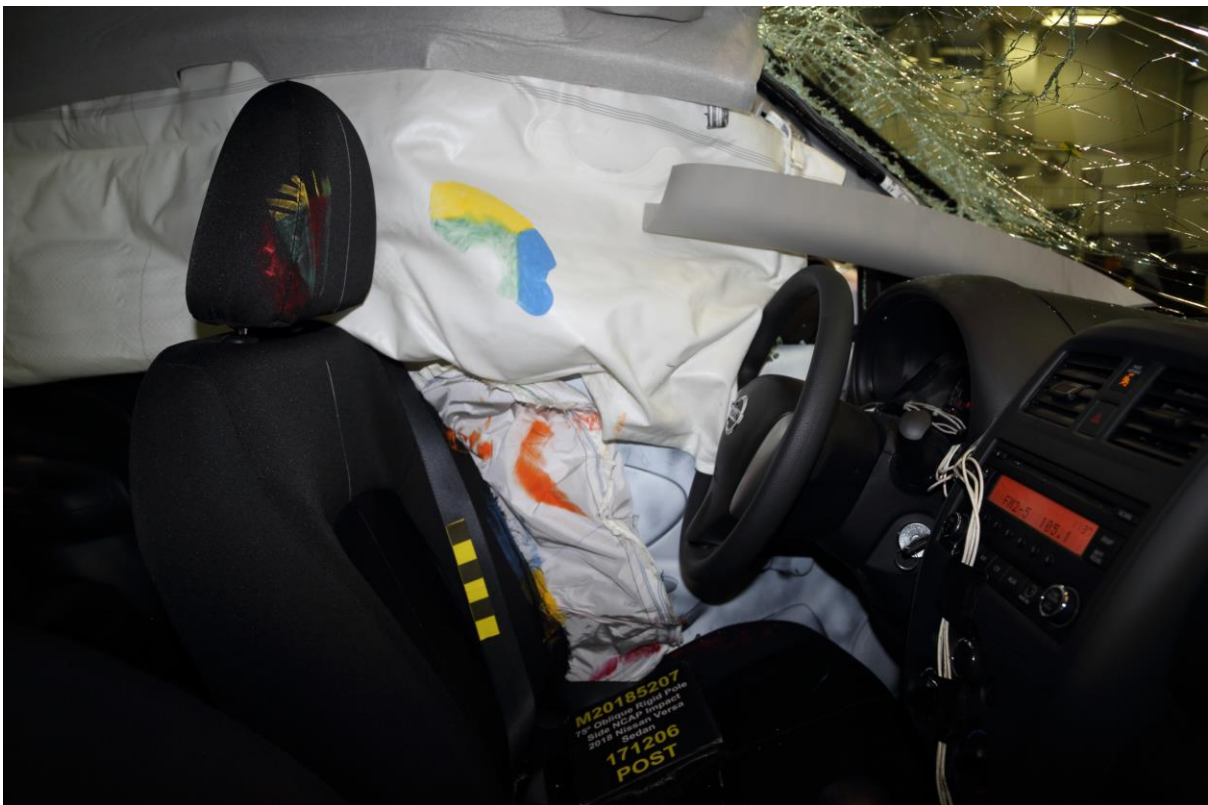
No. 042 Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment



No. 043 Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment



No. 044 Pre-Test Inner Door Panel View



No. 045 Post-Test Inner Door Panel View Showing Dummy Contact Location



No. 046 Post-Test Dummy Close-Up Head Contact with Vehicle Interior View



No. 047 Post-Test Dummy Close-Up Head Contact with Side Airbag View



No. 048 Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View



No. 049 Post-Test Dummy Close-Up Torso Contact with Side Airbag View



No. 050 Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View



No. 051 Post-Test Dummy Close-Up Pelvis Contact with Side Airbag View

PHOTO NOT APPLICABLE

No. 052 Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View

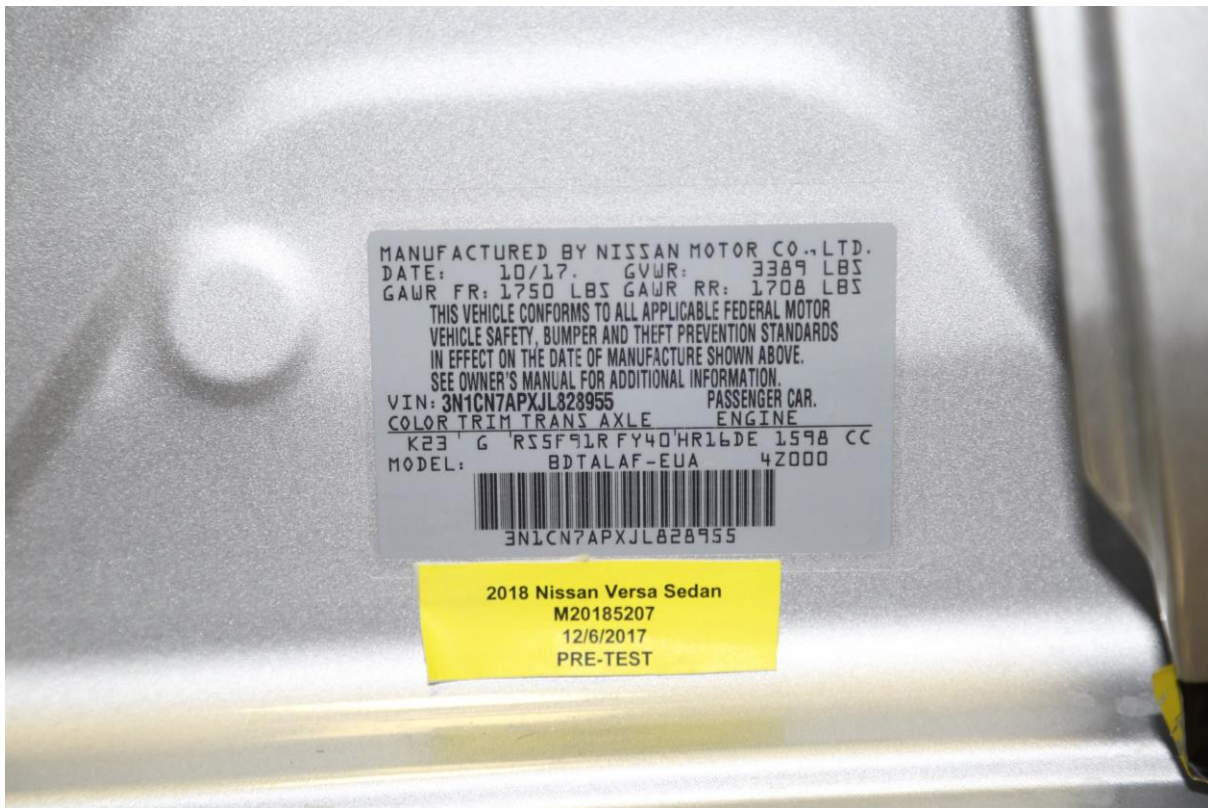
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No. 053 Pre-Test View of Fuel Filler Cap or Fuel Filler Neck



No. 054 Post-Test View of Fuel Filler Cap or Fuel Filler Neck



No. 055 Close-Up View of Vehicle Certification Label



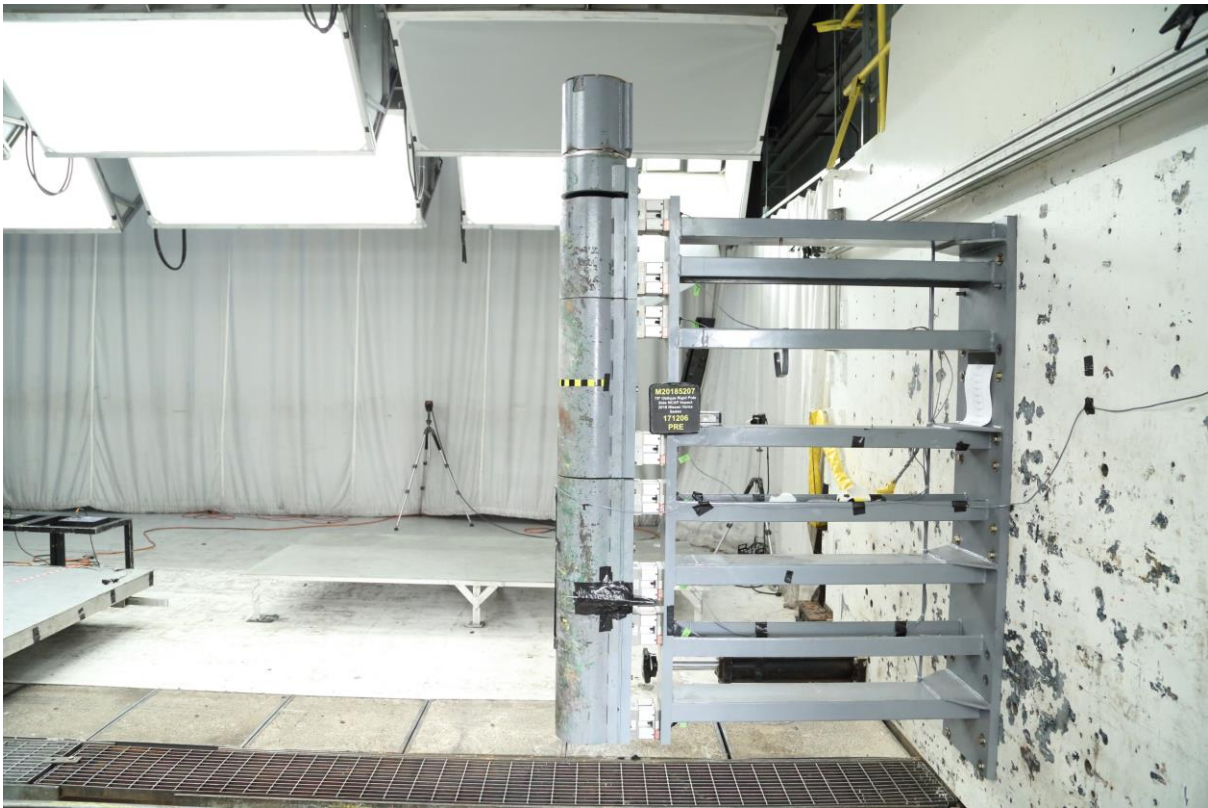
No. 056 Close-Up View of Vehicle Tire Information Placard or Label



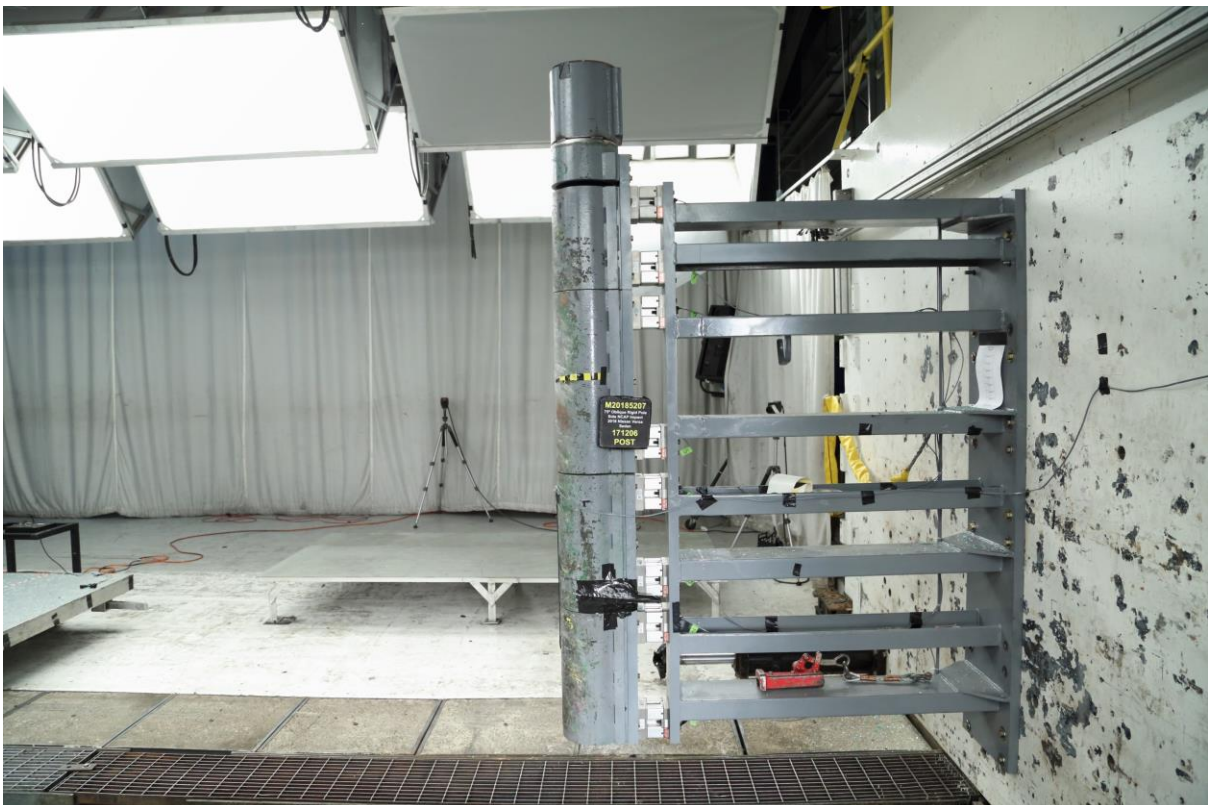
No. 057 Pre-Test Pole Barrier Front View



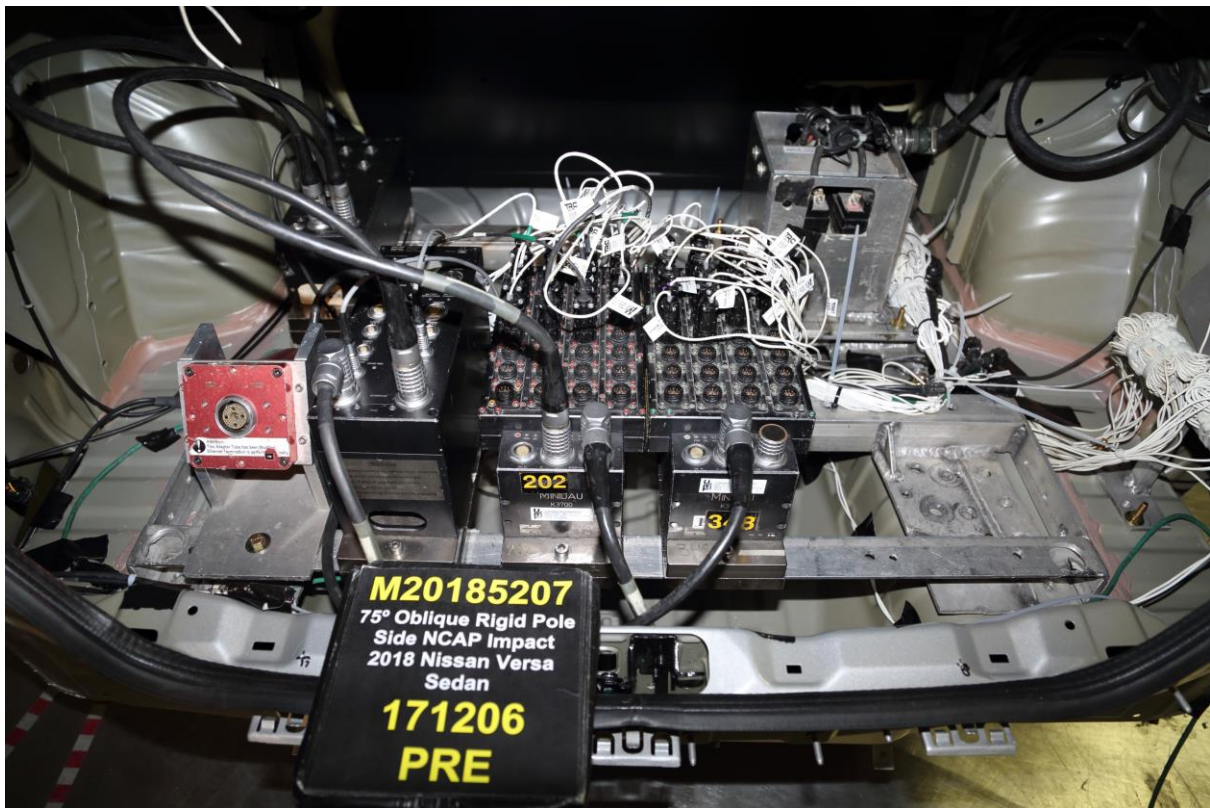
No. 058 Post-Test Pole Barrier Front View



No. 059 Pre-Test Pole Barrier Side View



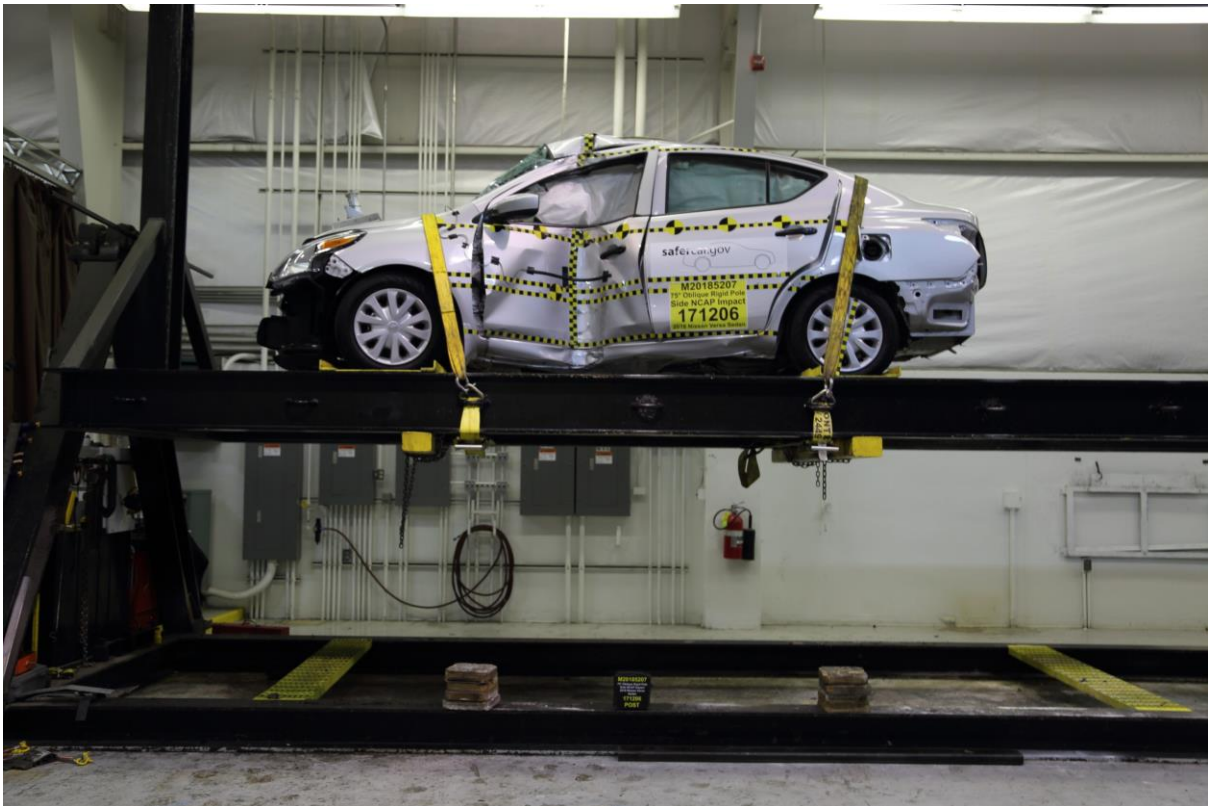
No. 060 Post-Test Pole Barrier Side View



No. 061 Pre-Test Ballast View



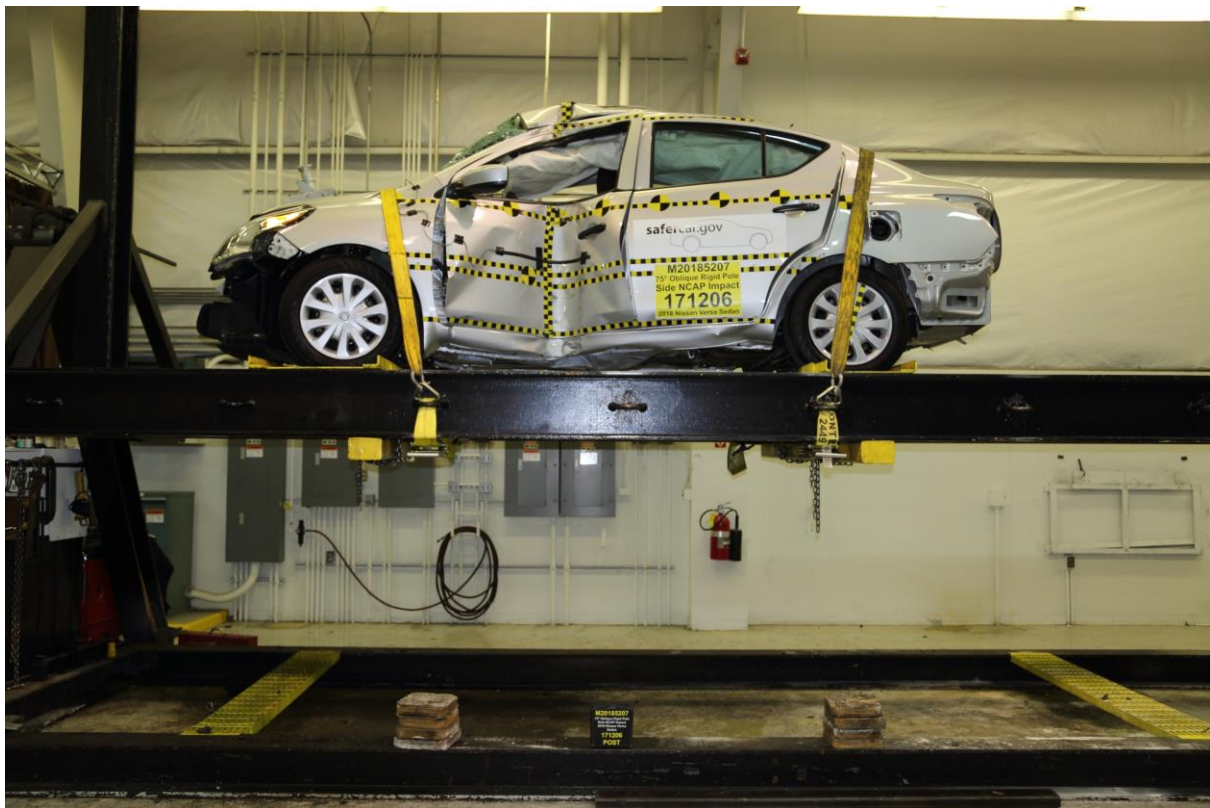
No. 062 Post-Test Primary and Redundant Speed Trap Read Out



No. 063 FMVSS No. 301 Static Rollover 0 Degrees



No. 064 FMVSS No. 301 Static Rollover 90 Degrees



No. 067 FMVSS No. 301 Static Rollover 360 Degrees



No. 068 Impact Event



2018 NISSAN VERSA S 5 SPEED MANUAL



Scan QR code for general model information & options

Standard Equipment Included at No Extra Charge

MECHANICAL & PERFORMANCE
1.6 L DOHC 16-Valve 4-Cylinder Engine
5-Speed Manual Transmission
Front and Rear Stabilizer Bars
Power-Assisted Vented Front Disc / Rear Drum Brakes
15" Steel Wheels w/ Full Wheel Covers

SAFETY & SECURITY
Driver and Front Passenger, Side-Impact, and Curtain Airbags
Lower Anchors and Tethers for Children (LATCH)
Anti-Lock Braking System (ABS)
Traction Control System (TCS)
Vehicle Dynamic Control (VDC)
Electronic Brake Force Distribution (EBD) and Brake Assist
Tire Pressure Monitoring System (TPMS)

COMFORT & CONVENIENCE
4-Way Adjustable Cloth Front Bucket Seats
AM/FM/CB/Aux-In Audio System
Bluetooth® Hands-free Phone System+
Steering Wheel-Mounted Audio & Bluetooth® Controls+
Adjustable Front Headrests
Map Light

EXTERIOR
Chrome-Accented Multi-Reflector Halogen Headlights
Body-Color Power Outside Mirrors
Variable Intermittent Windshield Wipers

+Compatible smartphone required. Text rates and/or data usage may apply.

Manufacturer's Suggested Retail Base Price:	\$11,990.00
Options Included by Manufacturer	
SPLASH GUARDS	190.00
CARPETED FLOOR MATS & TRUNK MAT	195.00
DESTINATION CHARGES	885.00
Total	\$13,260.00

Fuel Economy and Environment

30 MPG
combined city/hwy

3.3 gallons per 100 miles

You Save \$750
in fuel costs over 5 years compared to the average new vehicle.

Annual fuel Cost \$1,200

Fuel Economy & Greenhouse Gas Rating

7 (Best)

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 22 MPG and costs \$6,790 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at \$2.40 per gallon. MPG is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

fuel economy.gov
Calculate personalized estimates and compare vehicles

GOVERNMENT 5-STAR SAFETY RATINGS

Overall Vehicle Score Not Rated
Based on the combined ratings of frontal, side and rollover. Should ONLY be compared to other vehicles of similar size and weight.

Frontal Crash Driver: ★★★★★ Passenger: ★★★★★
Based on the risk of injury in a frontal impact. Should ONLY be compared to other vehicles of similar size and weight.

Side Crash Front seat: Not Rated Rear seat: Not Rated
Based on the risk of injury in a side impact.

Rollover ★★★★★
Based on the risk of rollover in a single-vehicle crash.

Star ratings range from 1 to 5 stars (★★★★★) with 5 being the highest.
Source: National Highway Traffic Safety Administration (NHTSA)
www.safercar.gov or 1-888-327-4236

DELIVERY

VEHICLE COLORS:
EXT: BRILLIANT SILVER
INT: CHARCOAL

FINAL ASSEMBLY POINT:
AGUAS (ABV) MEX

TRANSPORT METHOD:
TRUCK

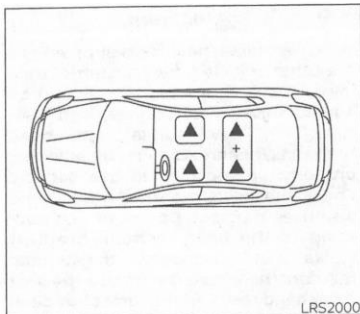
DEALER:
FONTANA NISSAN
16444 S HIGHLAND AVE
FONTANA CA 92336

VIN: 3N1CN7APXJL828955
EMS-80 STATE EMISSIONS: HDL: 11058-828955 K23-G
OPT: 8-B92C03L52

2017102320557A05159

*Does not include dealer installed options and accessories, local taxes or license fees. This label has been applied pursuant to federal law. Do not remove prior to delivery to the ultimate purchaser.

No. 069 Monroney Label



The illustration shows the seating positions equipped with head restraints.

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

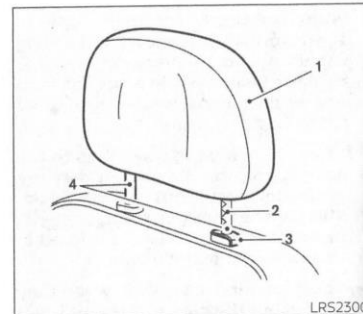
■ Indicates the seating position is equipped with a headrest.

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

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

1-6 Safety—Seats, seat belts and supplemental restraint system

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



ADJUSTABLE HEAD RESTRAINT/HEADREST COMPONENTS

- Removable head restraint/headrest
- Multiple notches
- Lock knob
- Stalks

No. 070 Head Restraint Use and Adjustment Information from Vehicle Owner Manual

PHOTO NOT APPLICABLE

No. 071 Post-Test View of Shattered Vehicle Inner Door Panel

APPENDIX B
VEHICLE AND DUMMY RESPONSE DATA PLOTS

TABLE OF DATA PLOTS

No.	Description	Page
1	Driver Head Acceleration (X) vs. Time	B-4
2	Driver Head Acceleration (Y) vs. Time	B-4
3	Driver Head Acceleration (Z) vs. Time	B-4
4	Driver Head Acceleration Resultant vs. Time	B-4
5	Driver Lower Spine T12 Acceleration (X) vs. Time	B-5
6	Driver Lower Spine T12 Acceleration (Y) vs. Time	B-5
7	Driver Lower Spine T12 Acceleration (Z) vs. Time	B-5
8	Driver Lower Spine T12 Acceleration Resultant vs. Time	B-5
9	Driver Iliac Wing Force on Impact Side (Y) vs. Time	B-6
10	Driver Acetabulum Force on Impact Side (Y) vs. Time	B-6
11	Driver Total Pelvis Force on Impact Side (Y) vs. Time	B-6

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

www.nhtsa.dot.gov.

Additional Driver Dummy Instrumentation Data

Driver Head Acceleration (X) Redundant
Driver Head Acceleration (Y) Redundant
Driver Head Acceleration (Z) Redundant
Driver Upper Thorax Rib Deflection (Y)
Driver Middle Thorax Rib Deflection (Y)
Driver Lower Thorax Rib Deflection (Y)
Driver Upper Abdomen Rib Deflection (Y)
Driver Lower Abdomen Rib Deflection (Y)

Vehicle Instrumentation Data

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

Pole Instrumentation Data

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

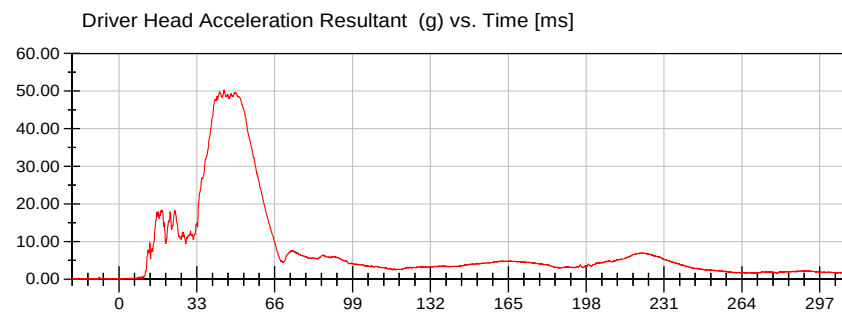
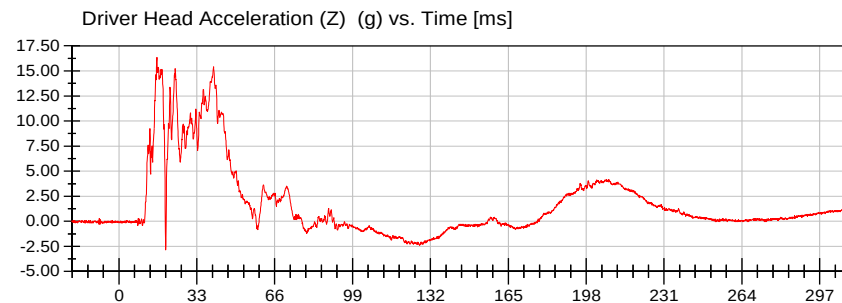
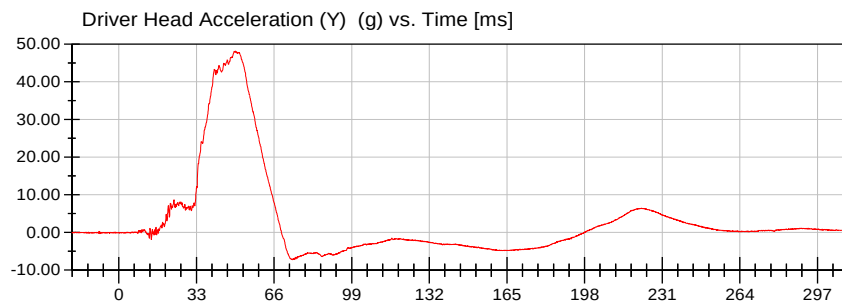
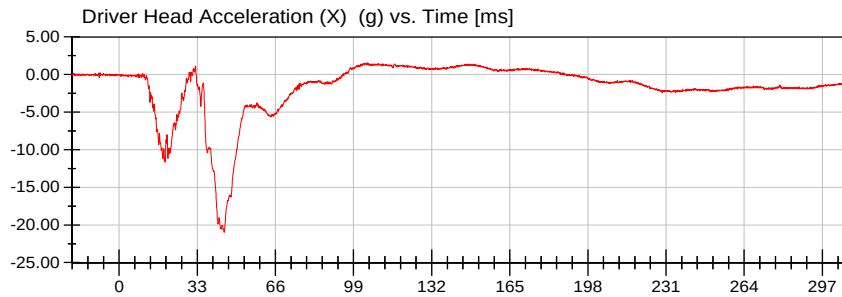
NHTSA

Test Lab: CTF

Test Number: 171206 (M20185804)

Position #1 SID IIs Dummy (297)

Test Date: 12/06/2017



NHTSA

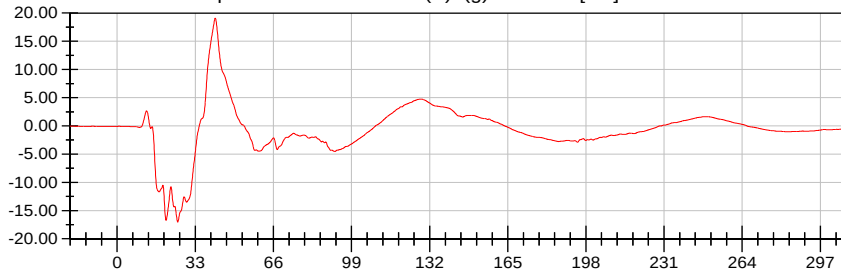
Test Lab: CTF

Test Number: 171206 (M20185804)

Position #1 SID IIs Dummy (297)

Test Date: 12/06/2017

Driver Lower Spine T12 Acceleration (X) (g) vs. Time [ms]



<Max>

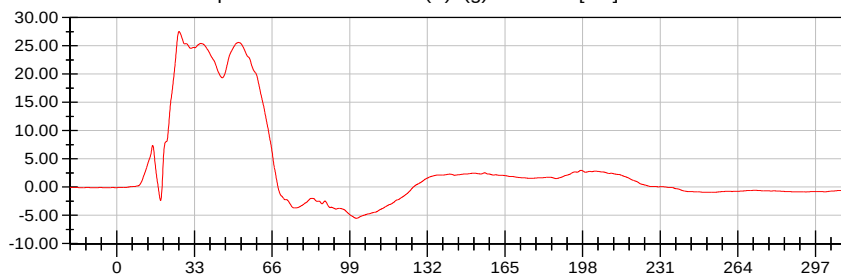
19.09 g at 41.44 ms

<Min>

-17.03 g at 25.60 ms

CFC_180

Driver Lower Spine T12 Acceleration (Y) (g) vs. Time [ms]



<Max>

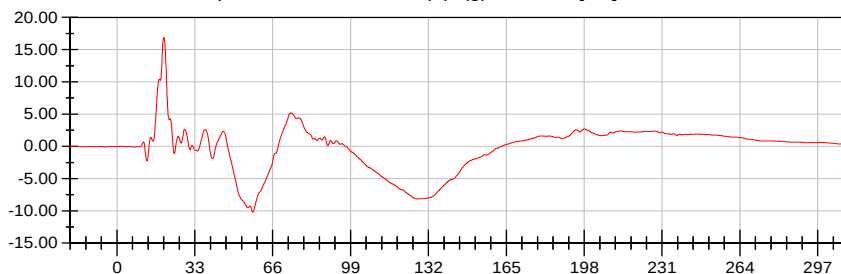
27.53 g at 26.48 ms

<Min>

-5.51 g at 101.84 ms

CFC_180

Driver Lower Spine T12 Acceleration (Z) (g) vs. Time [ms]



<Max>

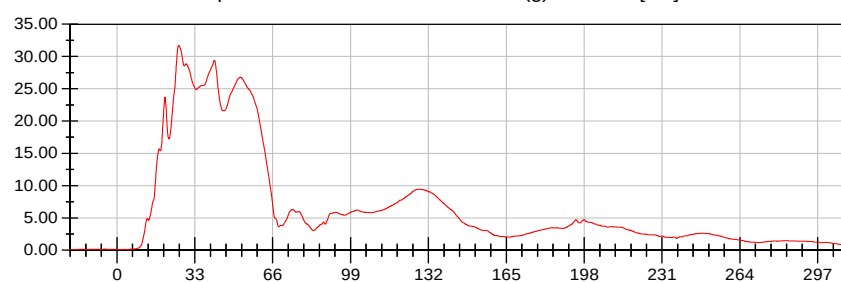
16.86 g at 19.92 ms

<Min>

-10.19 g at 57.52 ms

CFC_180

Driver Lower Spine T12 Acceleration Resultant (g) vs. Time [ms]



<Max>

31.72 g at 26.16 ms

<Min>

0.09 g at -18.80 ms

CFC_180



NHTSA

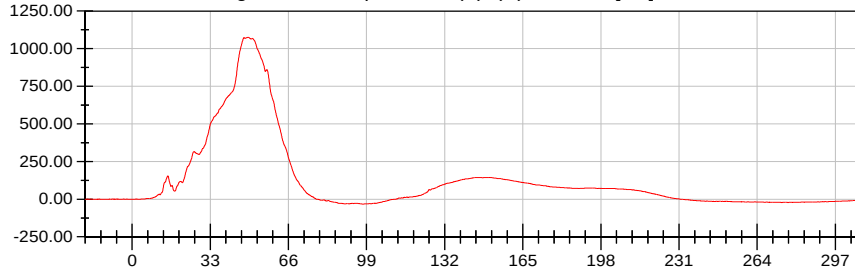
Test Lab: CTF

Test Number: 171206 (M20185804)

Position #1 SID IIs Dummy (297)

Test Date: 12/06/2017

Driver Iliac Wing Force on Impact Side (Y) (N) vs. Time [ms]



<Max>

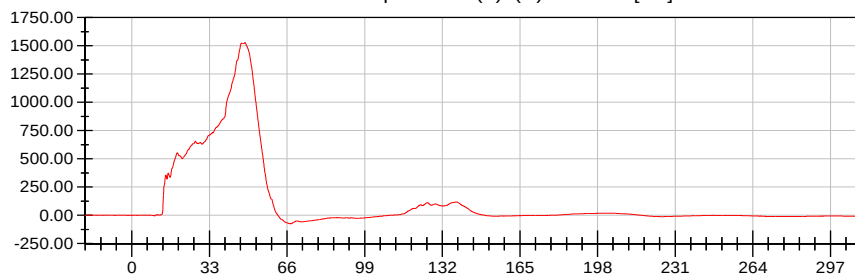
1,075.73 N at 49.04 ms

<Min>

-32.24 N at 97.76 ms

CFC_600

Driver Acetabulum Force on Impact Side (Y) (N) vs. Time [ms]



<Max>

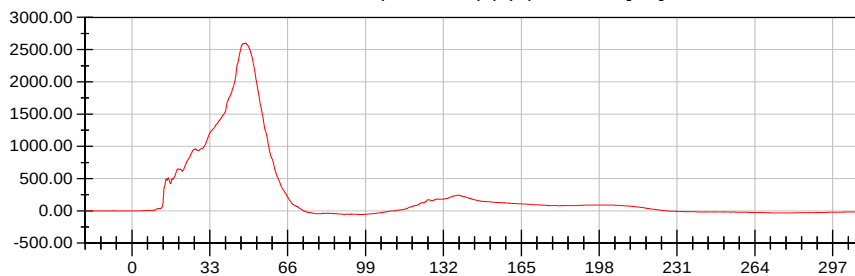
1,528.50 N at 48.16 ms

<Min>

-74.35 N at 67.60 ms

CFC_600

Driver Total Pelvis Force on Impact Side (Y) (N) vs. Time [ms]



<Max>

2,599.74 N at 48.16 ms

<Min>

-56.62 N at 97.12 ms

CFC_600



APPENDIX C
DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

TABLE OF CALIBRATION MEASUREMENTS AND PLOTS
SID-IIs (Driver) Dummy
Description

Table 1. External Measurements

Table 2. Head Drop Test

Resultant Head Acceleration (G's) vs. Time (ms)
Head (X) Acceleration (G's) vs. Time (ms)
Head (Y) Acceleration (G's) vs. Time (ms)
Head (Z) Acceleration (G's) vs. Time (ms)

Table 3. Lateral Neck Pendulum Test

Pendulum Velocity (m/s) vs. Time (ms)
Flexion Angle (°) vs. Time (ms)
Moment About Occipital Condyle (Nm) vs. Time (ms)

Table 4. Shoulder Impact Test

Impactor Acceleration (G's) vs. Time (ms)
Shoulder Displacement (mm) vs. Time (ms)
Upper Spine Acceleration (G's) vs. Time (ms)

Table 5. Thorax (With Arm) Impact Test

Impactor Acceleration (G's) vs. Time (ms)
Shoulder Displacement (mm) vs. Time (ms)
Upper Rib Displacement (mm) vs. Time (ms)
Middle Rib Displacement (mm) vs. Time (ms)
Lower Rib Displacement (mm) vs. Time (ms)
Upper Spine Acceleration (G's) vs. Time (ms)
Lower Spine Acceleration (G's) vs. Time (ms)

Table 6. Thorax (Without Arm) Impact Test

Impactor Acceleration (G's) vs. Time (ms)
Upper Rib Displacement (mm) vs. Time (ms)
Middle Rib Displacement (mm) vs. Time (ms)
Lower Rib Displacement (mm) vs. Time (ms)
Upper Spine Acceleration (G's) vs. Time (ms)
Lower Spine Acceleration (G's) vs. Time (ms)

Table 7. Abdomen Impact Test

Impactor Acceleration (G's) vs. Time (ms)
Upper Abdominal Rib Displacement (mm) vs. Time (ms)
Lower Abdominal Rib Displacement (mm) vs. Time (ms)
Lower Spine Acceleration (G's) vs. Time (ms)

Table 8. Pelvis Plug Quasi-Static Test (Optional*)

Table 9. Pelvis Acetabulum Impact Test

Impactor Acceleration (G's) vs. Time (ms)
Pelvis (Y) Acceleration (G's) vs. Time (ms)
Acetabulum Force (N) vs. Time (ms)

Table 10. Pelvis Iliac Impact Test

Impactor Acceleration (G's) vs. Time (ms)
Pelvis (Y) Acceleration (G's) vs. Time (ms)
Iliac Force (N) vs. Time (ms)

Pre-Test Calibration Sheets
Driver S/N 297

Transportation Research Center Inc.
SIDIIs Dummy - Level D
External Dimensions
Serial No. 297 Calibration No.22

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Sitting Height	772.0 - 788.0	781	Yes
B	Shoulder Pivot Height	437.0 - 453.0	447	Yes
C	H-Point Height	79.0 - 89.0	85	Yes
D	H-Point from Seat Back	141.0 - 151.0	148	Yes
E	Shoulder Pivot from Backline	97.0 - 107.0	100	Yes
F	Thigh Clearance	119.0 - 135.0	133	Yes
G	Head Breadth	140.0 - 148.0	145	Yes
H	Head Back from Backline	40.0 - 46.0	45	Yes
I	Head Depth	178.0 - 188.0	183	Yes
J	Head Circumference	541.0 - 551.0	545	Yes
K	Buttock to Knee Length	514.0 - 540.0	526	Yes
L	Popliteal Height	343.0 - 369.0	355	Yes
M	Knee Pivot to Floor Height	393.0 - 409.0	401	Yes
N	Buttock Popliteal Length	416.0 - 442.0	430	Yes
O	Chest Depth without Jacket	195.0 - 211.0	202	Yes
P	Foot Length (right)	216.0 - 232.0	223	Yes
P	Foot Length (left)	216.0 - 232.0	221	Yes
Q	Hip Breadth	313.0 - 323.0	320	Yes
R	Arm Length	249.0 - 259.0	254	Yes
S	Knee Joint to seat Back	478.0 - 493.0	488	Yes
V	Shoulder Width (only one arm installed)	341.0 - 357.0	347	Yes
W	Foot Width (right)	78.0 - 94.0	83	Yes
W	Foot Width (left)	78.0 - 94.0	82	Yes
Y	Chest Circumference with Jacket	851.0 - 881.0	875	Yes
Z	Waist Circumference	761.0 - 791.0	780	Yes

Revised 9/29/2005



Transportation Research Center Inc.

Left Lateral Head Drop

SID IIs Serial No. 297 Certification No. 22-2

Test Date: 11/30/2017

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	39 %	Yes
Peak Head Resultant Acceleration	115 - 137 g	127.9 g	Yes
Peak Head Longitudinal Acceleration	(-15) - 15 g	-8.5 g	Yes
Is Head Resultant Acceleration Curve Unimodal within 15% of Peak?	Yes	Yes	Yes

Test meets specifications.

Condition: Used

Comments:

Head Skin S/N: 1330

Skull S/N: 180/1001/C

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

11.30.2017 15:55:54 197



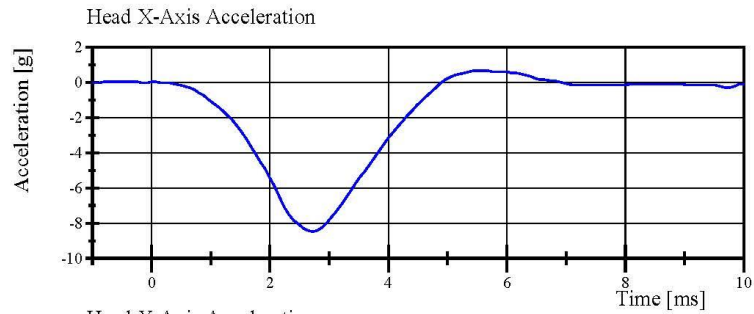
Page 9 of 31

Transportation Research Center Inc.

Left Lateral Head Drop

SID IIs Serial No. 297 Certification No. 22-2

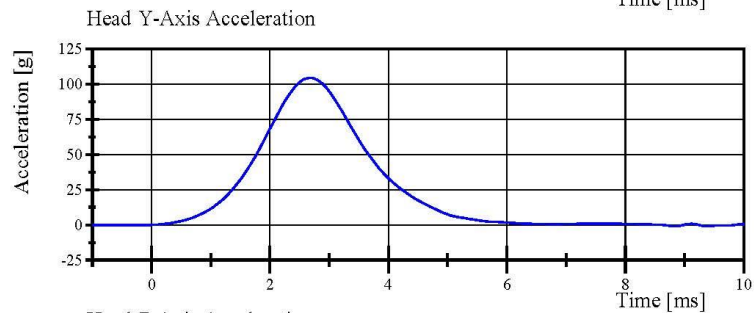
Test Date: 11/30/2017



Filter Class: CFC_1000

Max: 0.7 g at 5.4 ms

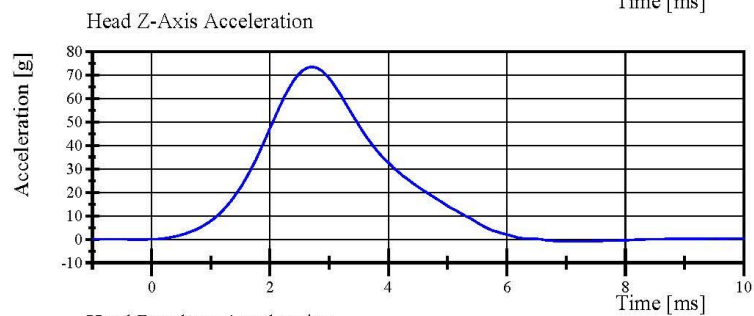
Min: -8.5 g at 2.7 ms



Filter Class: CFC_1000

Max: 104.4 g at 2.6 ms

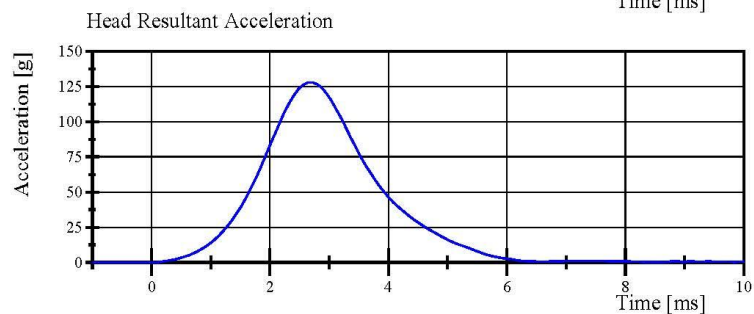
Min: -0.9 g at 8.8 ms



Filter Class: CFC_1000

Max: 73.5 g at 2.7 ms

Min: -1.0 g at 7.1 ms



Filter Class: CFC_1000

Max: 127.9 g at 2.7 ms

Min: 0.0 g at -1.0 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

11.30.2017 15:56:55 197



Transportation Research Center Inc.

Left Lateral Neck

SID IIs Serial No. 297 Certification No. 22-5

Test Date: 11/30/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	40 %	Yes
Pendulum Velocity	(-5.51) - (-5.63) m/s	-5.622 m/s	Yes
Pendulum Integrated Velocity			
Change at 10 ms	2.20 - 2.80 m/s	2.411 m/s	Yes
Change at 15 ms	3.30 - 4.10 m/s	3.570 m/s	Yes
Change at 20 ms	4.40 - 5.40 m/s	4.914 m/s	Yes
Change at 25 ms	5.40 - 6.10 m/s	6.007 m/s	Yes
Change at 25 to 100 ms	5.50 - 6.20 m/s	6.061 m/s	Yes
Maximum Headform Flexion occurring between 50ms and 70ms.			
Peak	(-71) - (-81) deg	-74.9 deg	Yes
Time of Peak	50 - 70 ms	61.5 ms	Yes
Total Neck Occipital Condyles Moment	36 - 44 N·m	40.9 N·m	Yes
Total Neck Occipital Condyles Moment			
Decay Time to 0 N·m	102 - 126 ms	121.2 ms	Yes

Test meets specifications.

Condition: Used

Comments:

Neck S/N: 180-2001 AB8241

Neck Cable S/N: N/A

Nodding Blocks S/N: N/A

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

Page 11 of 31

11.30.2017 15:00:02 719

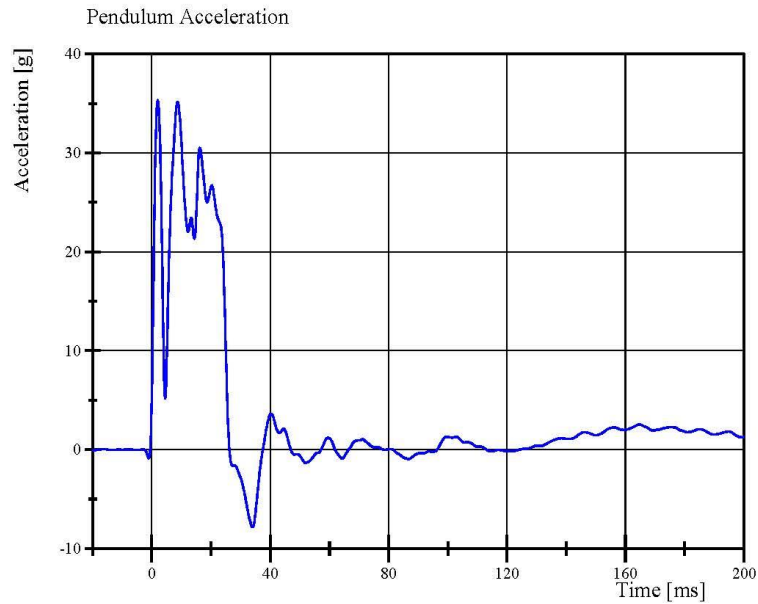


Transportation Research Center Inc.

Left Lateral Neck

SID IIs Serial No. 297 Certification No. 22-5

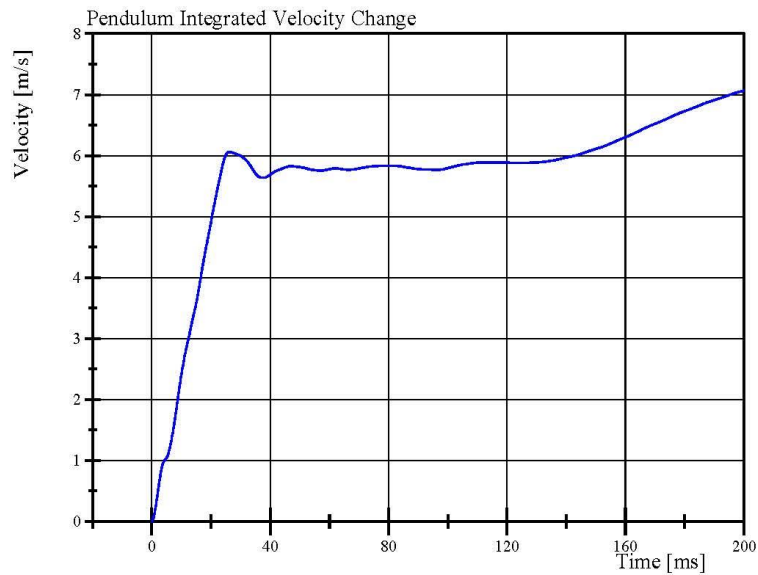
Test Date: 11/30/2017



Filter Class: CFC_180

Max: 35.3 g at 2.0 ms

Min: -7.8 g at 34.0 ms



Filter Class: CFC_180

Max: 7.1 m/s at 200.0 ms

Min: 0.0 m/s at 0.0 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

11.30.2017 15:01:31 719

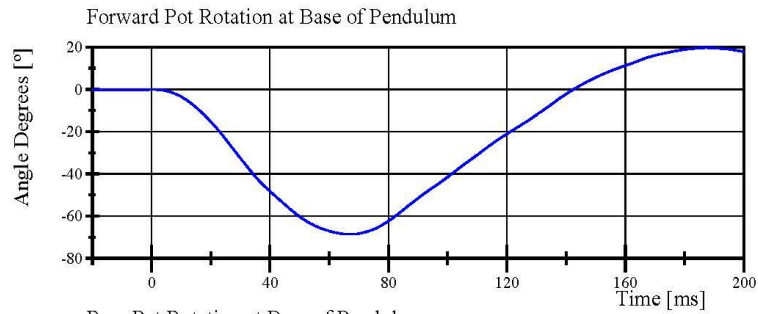


Transportation Research Center Inc.

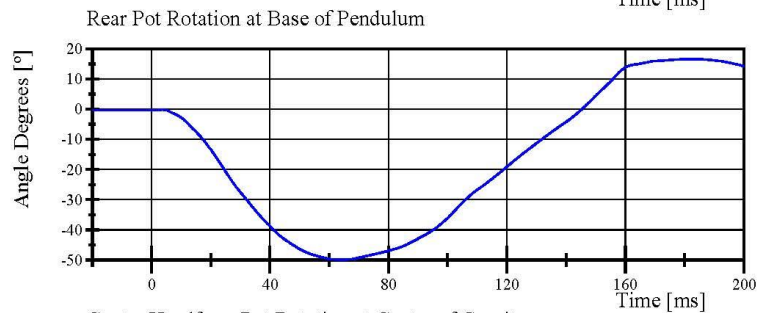
Left Lateral Neck

SID IIs Serial No. 297 Certification No. 22-5

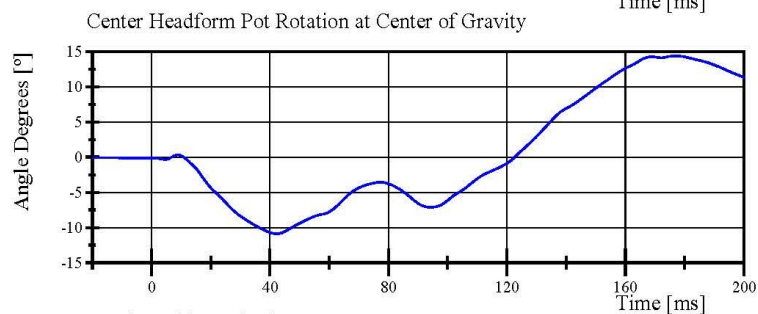
Test Date: 11/30/2017



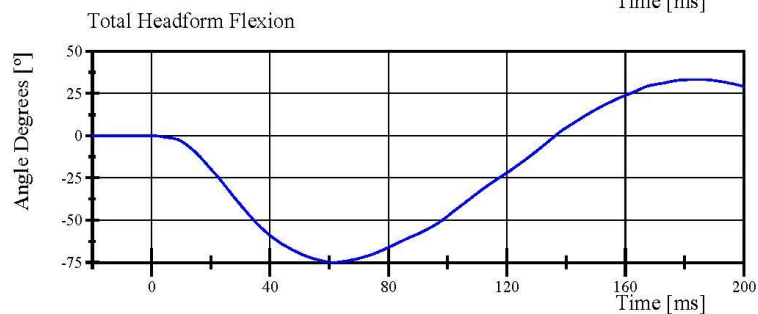
Filter Class: CFC_60
Max: 19.7 ° at 187.2 ms
Min: -68.6 ° at 67.3 ms



Filter Class: CFC_60
Max: 16.6 ° at 183.4 ms
Min: -49.9 ° at 64.4 ms



Filter Class: CFC_60
Max: 14.4 ° at 176.9 ms
Min: -10.9 ° at 42.2 ms



Filter Class: CFC_60
Max: 33.4 ° at 184.6 ms
Min: -74.9 ° at 61.5 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

11.30.2017 15:01:32 719

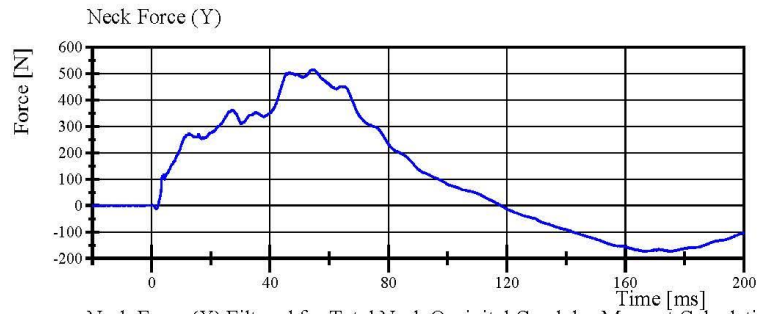


Transportation Research Center Inc.

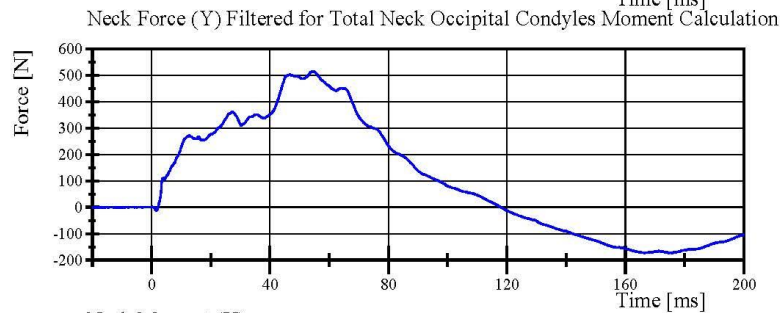
Left Lateral Neck

SID IIs Serial No. 297 Certification No. 22-5

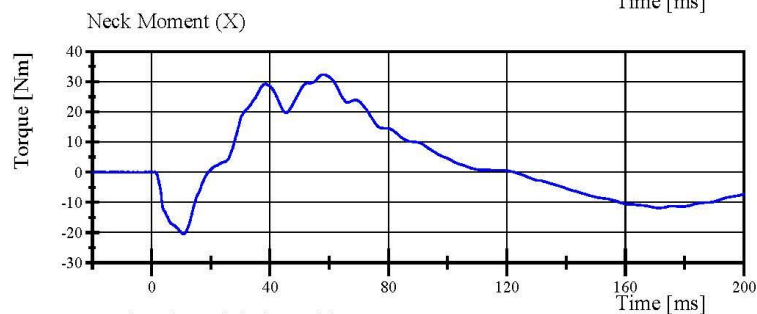
Test Date: 11/30/2017



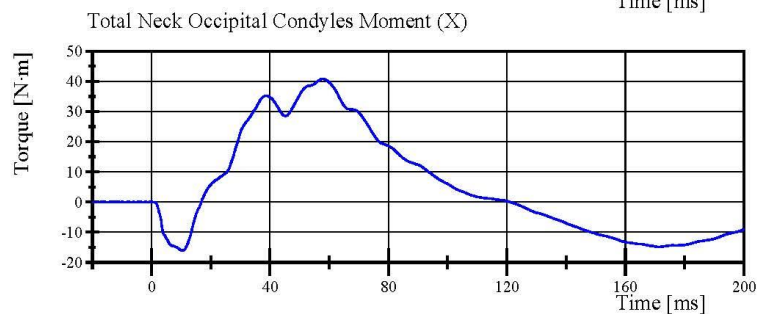
Filter Class: CFC_1000
Max: 514.8 N at 54.6 ms
Min: -173.7 N at 175.8 ms



Filter Class: CFC_600
Max: 514.6 N at 54.6 ms
Min: -173.1 N at 175.8 ms



Filter Class: CFC_600
Max: 32.4 Nm at 57.8 ms
Min: -20.4 Nm at 10.9 ms



Filter Class: Without_(Consta
Max: 40.9 N·m at 57.6 ms
Min: -16.0 N·m at 10.5 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

11.30.2017 15:01:33 719



Transportation Research Center Inc.

Left Lateral Shoulder
SID IIs Serial No. 297 Certification No. 22-1
Test Date: 11/30/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.9 °C	Yes
Relative Humidity	10 - 70 %	36 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.29 m/s	Yes
Impactor Acceleration	(-13) - (-18) g	-15.2 g	Yes
Shoulder Displacement	28 - 37 mm	30.2 mm	Yes
Upper Spine Lateral Acceleration	17 - 22 g	19.2 g	Yes

Test meets specifications.

Condition: Used

Comments:

Left Arm S/N: 940L

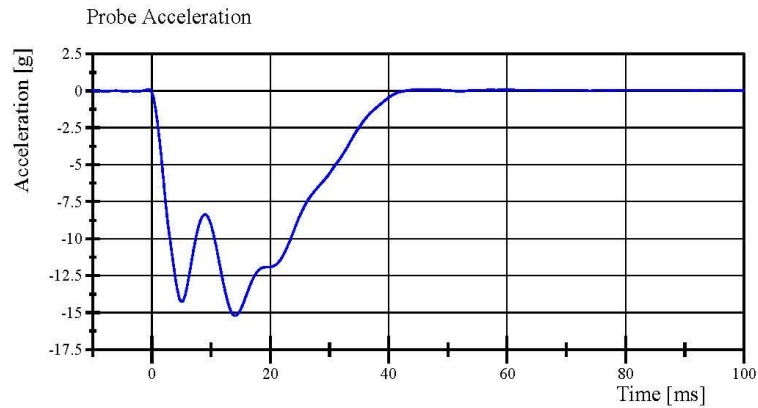
Shoulder Rib S/N: 180-3366 259

Transportation Research Center Inc.

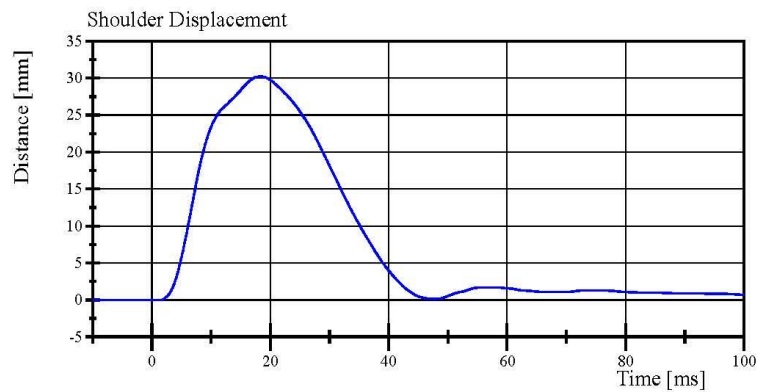
Left Lateral Shoulder

SID IIs Serial No. 297 Certification No. 22-1

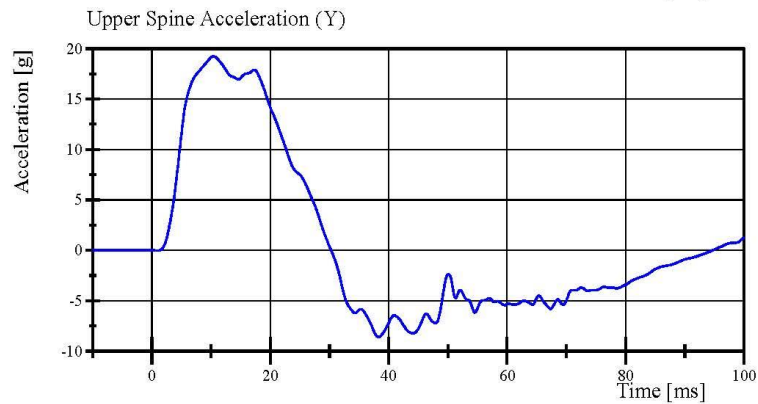
Test Date: 11/30/2017



Filter Class: CFC_180
Max: 0.1 g at -0.6 ms
Min: -15.2 g at 14.1 ms



Filter Class: CFC_600
Max: 30.2 mm at 18.3 ms
Min: -0.0 mm at 1.6 ms



Filter Class: CFC_180
Max: 19.2 g at 10.4 ms
Min: -8.6 g at 38.2 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

11.30.2017 07:53:18 823



Transportation Research Center Inc.

Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 22-1
Test Date: 11/30/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.9 °C	Yes
Relative Humidity	10 - 70 %	36 %	Yes
Impactor Velocity	6.60 - 6.80 m/s	6.732 m/s	Yes
Impactor Acceleration	(-30) - (-36) g	-34.0 g	Yes
Shoulder Displacement	31 - 40 mm	34.3 mm	Yes
Upper Thorax Rib Displacement	25 - 32 mm	26.4 mm	Yes
Center Thorax Rib Displacement	30 - 36 mm	31.8 mm	Yes
Lower Thorax Rib Displacement	32 - 38 mm	35.9 mm	Yes
Upper Spine Lateral Acceleration	34 - 43 g	36.5 g	Yes
Lower Spine Lateral Acceleration	29 - 37 g	35.8 g	Yes

Test meets specifications.

Condition: Used

Comments:

Left Arm S/N: 940L

Shoulder Rib S/N: 180-3366 259

Upper Thorax Rib #1 S/N: 2009

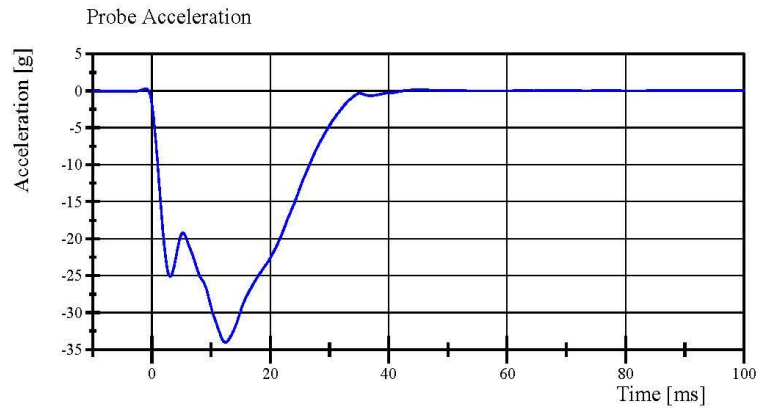
MiddleThorax Rib #2 S/N: 2010

LowerThorax Rib #3 S/N: 2029

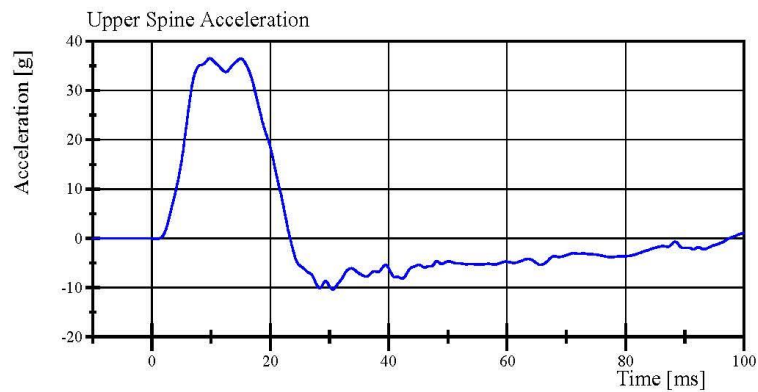
Thorax Pad S/N: N/A

Transportation Research Center Inc.

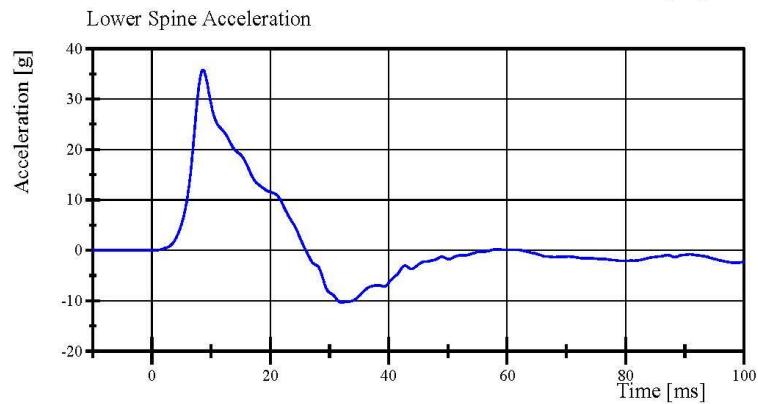
Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 22-1
Test Date: 11/30/2017



Filter Class: CFC_180
Max: 0.3 g at -1.0 ms
Min: -34.0 g at 12.4 ms



Filter Class: CFC_180
Max: 36.5 g at 9.8 ms
Min: -10.4 g at 30.6 ms



Filter Class: CFC_180
Max: 35.8 g at 8.6 ms
Min: -10.3 g at 32.1 ms

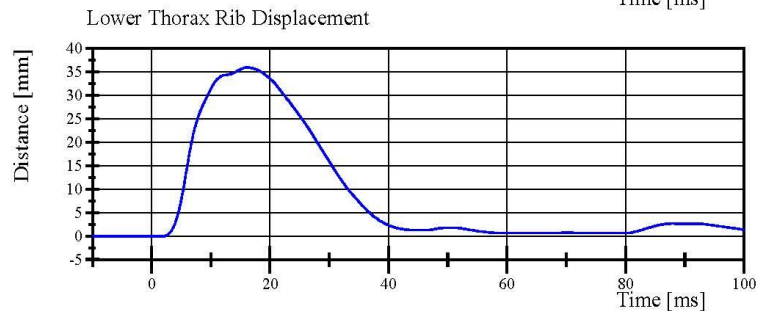
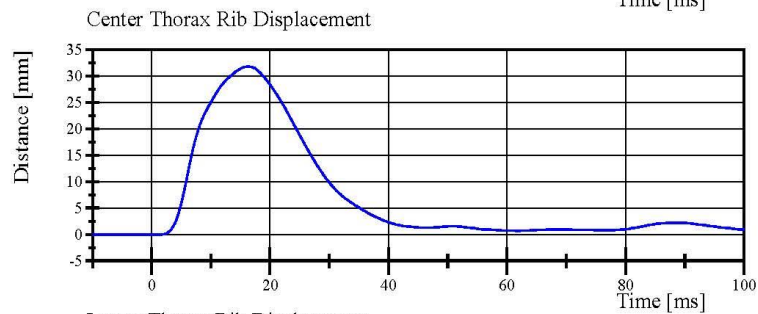
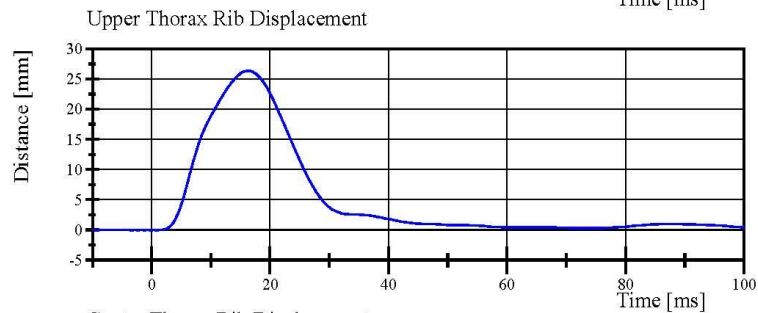
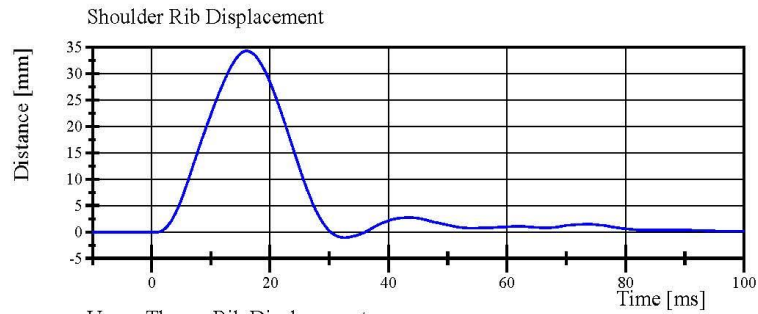
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

11.30.2017 09:02:22 612



Transportation Research Center Inc.

Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 22-1
Test Date: 11/30/2017



Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

11.30.2017 09:02:23 612



Transportation Research Center Inc.

Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 22-1
Test Date: 11/30/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.8 °C	Yes
Relative Humidity	10 - 70 %	33 %	Yes
Impactor Velocity	4.20 - 4.40 m/s	4.325 m/s	Yes
Impactor Acceleration	(-14) - (-18) g	-16.2 g	Yes
Upper Thorax Rib Displacement	32 - 40 mm	33.3 mm	Yes
Center Thorax Rib Displacement	39 - 45 mm	40.6 mm	Yes
Lower Thorax Rib Displacement	35 - 43 mm	39.8 mm	Yes
Upper Spine Lateral Acceleration	13 - 17 g	15.1 g	Yes
Lower Spine Lateral Acceleration	7 - 11 g	10.4 g	Yes

Test meets specifications.

Condition: Used

Comments:

Upper Thorax Rib #1 S/N: 2009

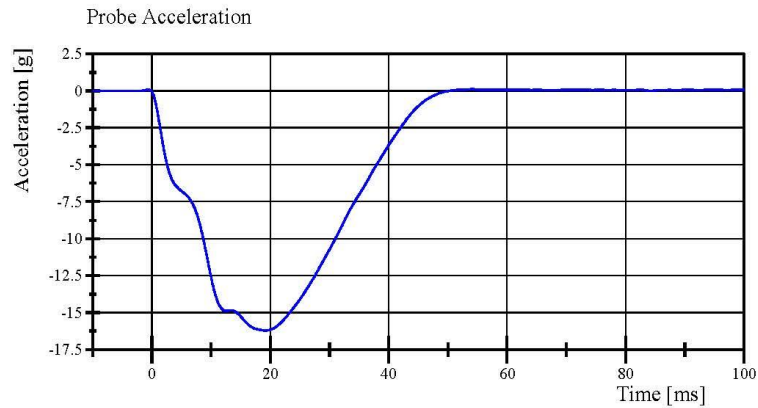
MiddleThorax Rib #2 S/N: 2010

LowerThorax Rib #3 S/N: 2029

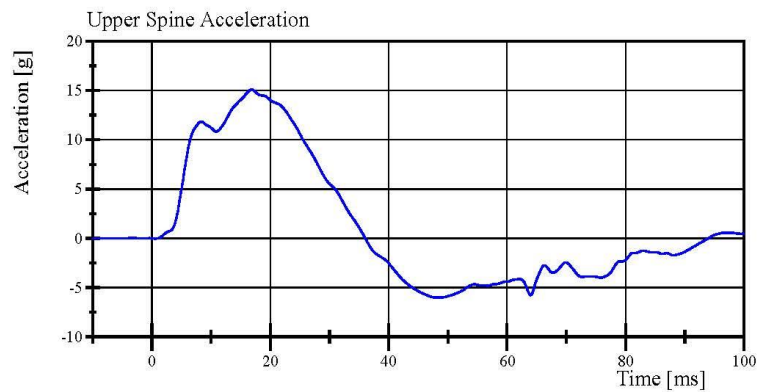
Thorax Pad S/N: N/A

Transportation Research Center Inc.

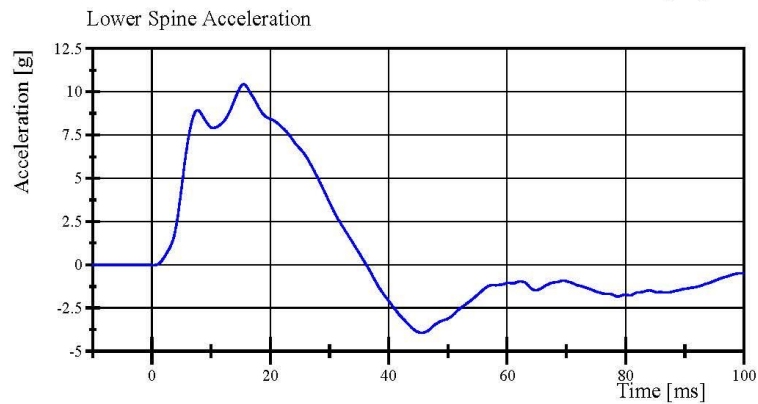
Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 22-1
Test Date: 11/30/2017



Filter Class: CFC_180
Max: 0.1 g at 54.1 ms
Min: -16.2 g at 19.2 ms



Filter Class: CFC_180
Max: 15.1 g at 16.9 ms
Min: -6.0 g at 48.1 ms



Filter Class: CFC_180
Max: 10.4 g at 15.5 ms
Min: -3.9 g at 45.5 ms

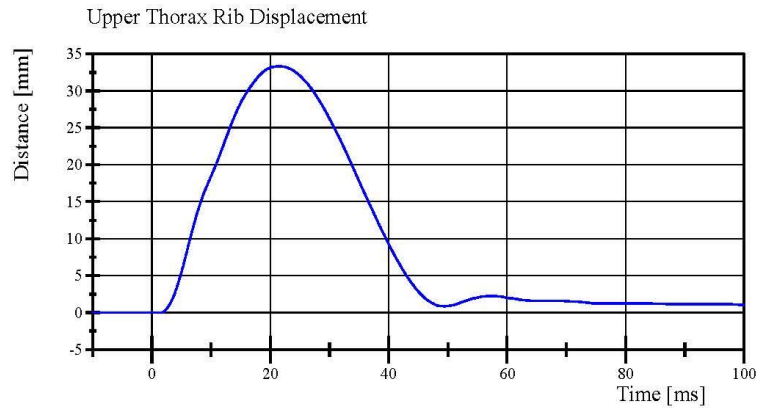
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

11.30.2017 08:33:17 833

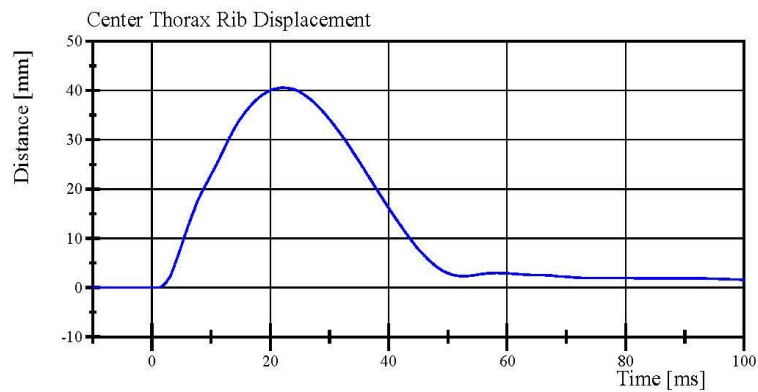


Transportation Research Center Inc.

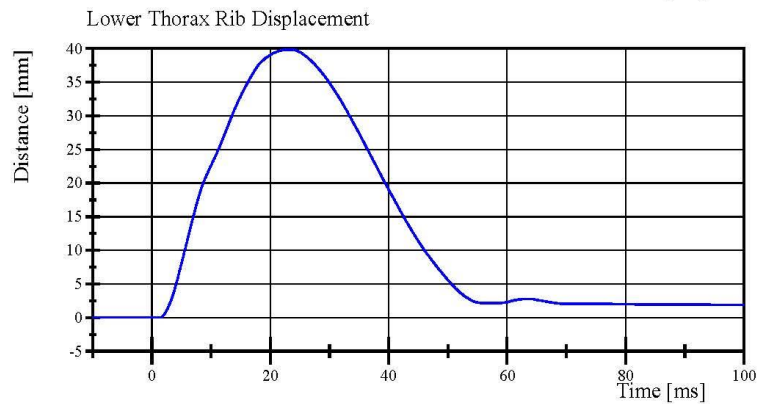
Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 22-1
Test Date: 11/30/2017



Filter Class: CFC_600
Max: 33.3 mm at 21.6 ms
Min: -0.0 mm at 1.3 ms



Filter Class: CFC_600
Max: 40.6 mm at 22.2 ms
Min: -0.0 mm at 0.9 ms



Filter Class: CFC_600
Max: 39.8 mm at 23.0 ms
Min: -0.0 mm at 1.2 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

11.30.2017 08:33:18 833



Transportation Research Center Inc.

Left Lateral Abdomen

SID IIs Serial No. 297 Certification No. 22-1

Test Date: 11/30/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	34 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.32 m/s	Yes
Impactor Acceleration	(-12) - (-16) g	-14.4 g	Yes
Upper Abdominal Rib Displacement	36 - 47 mm	40.7 mm	Yes
Lower Abdominal Rib Displacement	33 - 44 mm	39.5 mm	Yes
Lower Spine Lateral Acceleration	9 - 14.0 g	10.58 g	Yes

Test meets specifications.

Condition: Used

Comments:

Upper Abdominal Rib S/N: 1747

Lower Abdominal Rib S/N: 1748

Abdominal Pad S/N: N/A

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

Page 23 of 31

11.30.2017 08:17:28 618

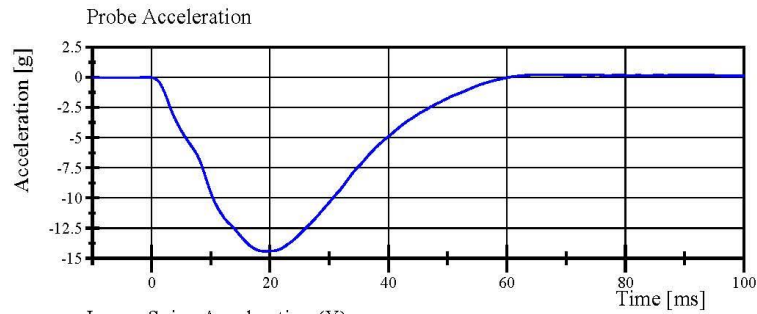


Transportation Research Center Inc.

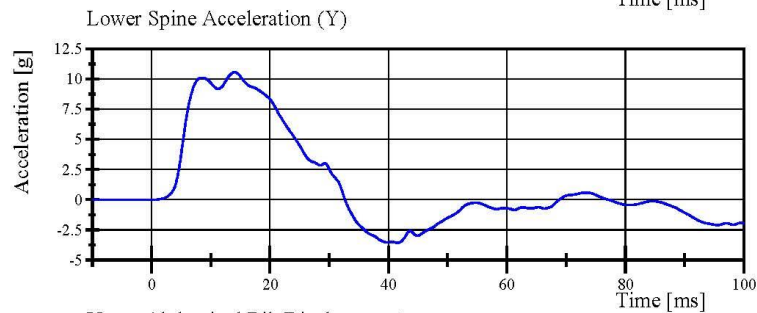
Left Lateral Abdomen

SID IIs Serial No. 297 Certification No. 22-1

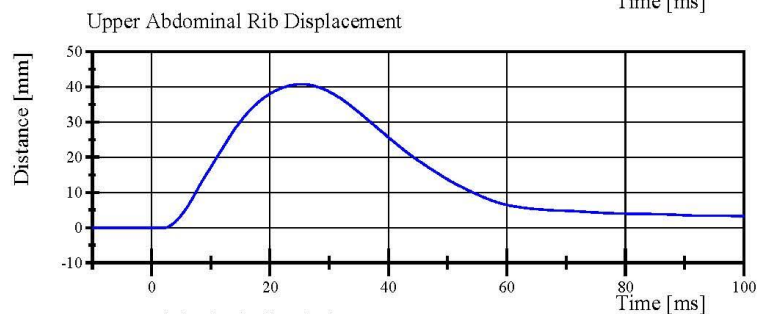
Test Date: 11/30/2017



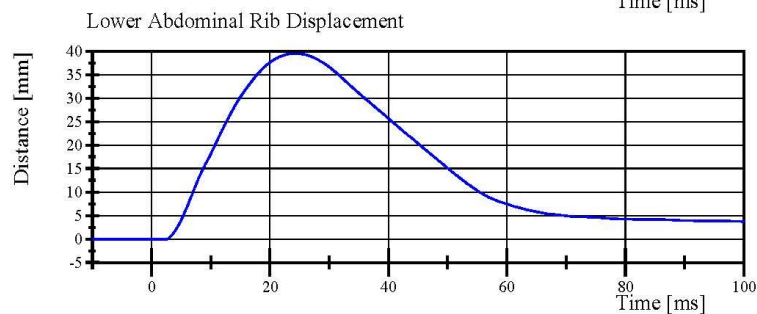
Filter Class: CFC_180
Max: 0.2 g at 65.4 ms
Min: -14.4 g at 19.2 ms



Filter Class: CFC_180
Max: 10.6 g at 14.1 ms
Min: -3.6 g at 41.4 ms



Filter Class: CFC_600
Max: 40.7 mm at 25.2 ms
Min: -0.0 mm at 2.1 ms



Filter Class: CFC_600
Max: 39.5 mm at 24.2 ms
Min: -0.0 mm at 2.5 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

11.30.2017 08:18:55 618



Transportation Research Center Inc.

Left Lateral Pelvis

SID IIs Serial No. 297 Certification No. 22-1

Test Date: 11/30/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	36 %	Yes
Pendulum Velocity	6.6 - 6.8 m/s	6.63 m/s	Yes
Impactor Acceleration	(-38.0) - (-47.0) g	-44.48 g	Yes
Peak Pelvis Lateral Acceleration after 6ms	34 - 42 g	40.8 g	Yes
Acetabulum Force	3,600 - 4,300 N	3,741.1 N	Yes

Test meets specifications.

Condition: Used

Comments:

Pelvis Skin S/N: DY5517

Pelvis Plug Info:

Manufacturer: Saco

S/N: 11157

Cal Date: 20160418

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

Page 27 of 31

11.30.2017 10:41:54 438

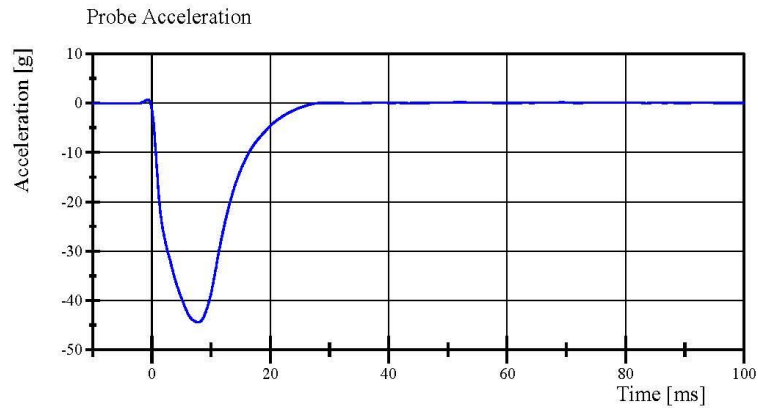


Transportation Research Center Inc.

Left Lateral Pelvis

SID IIs Serial No. 297 Certification No. 22-1

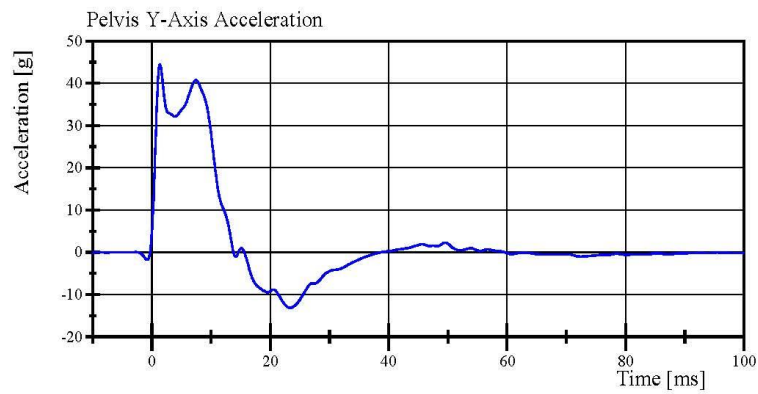
Test Date: 11/30/2017



Filter Class: CFC_180

Max: 0.7 g at -0.7 ms

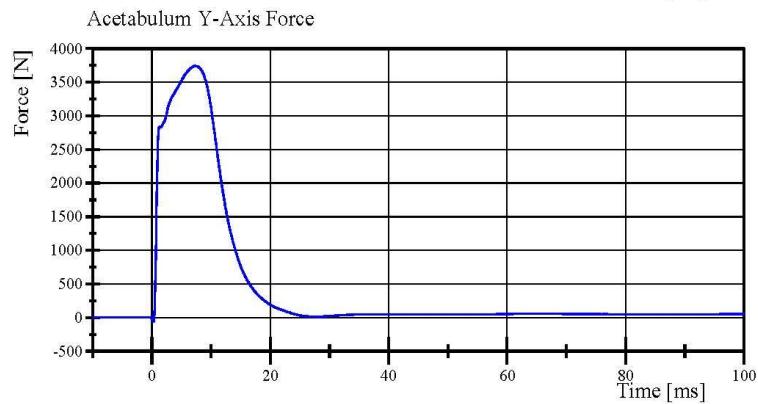
Min: -44.5 g at 7.8 ms



Filter Class: CFC_180

Max: 44.5 g at 1.4 ms

Min: -13.1 g at 23.4 ms



Filter Class: CFC_600

Max: 3,741.1 N at 7.3 ms

Min: -64.4 N at 0.2 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

11.30.2017 10:43:56 438



Transportation Research Center Inc.

Left Lateral Iliac

SID IIs Serial No. 297 Certification No. 22-1

Test Date: 11/30/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	37 %	Yes
Pendulum Velocity	4.2 - 4.4 m/s	4.29 m/s	Yes
Impactor Acceleration	(-36) - (-45) g	-44.3 g	Yes
Peak Pelvis Lateral Acceleration	28 - 39 g	30.5 g	Yes
Iliac Force	4,100 - 5,100 N	4,969.5 N	Yes

Test meets specifications.

Condition: Used

Comments:

Pelvis S/N: DY5517

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

Page 25 of 31

11.30.2017 07:07:53 637

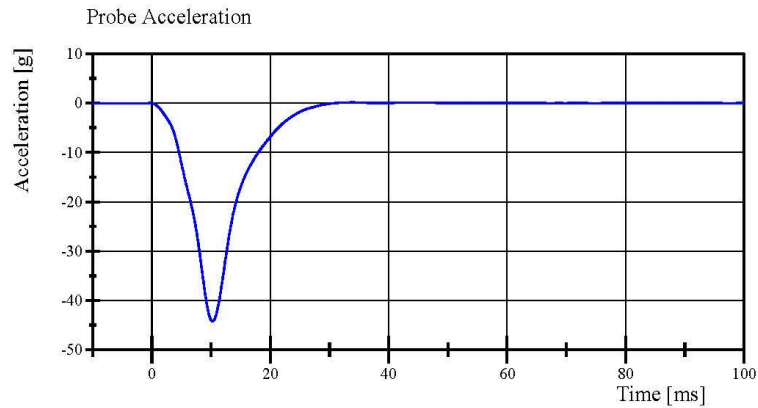


Transportation Research Center Inc.

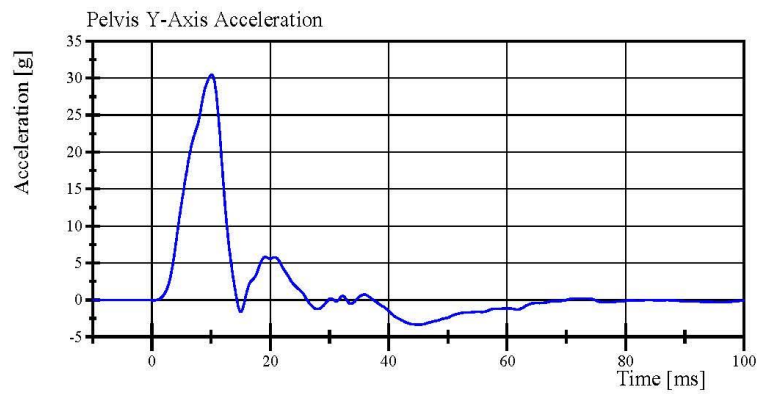
Left Lateral Iliac

SID IIs Serial No. 297 Certification No. 22-1

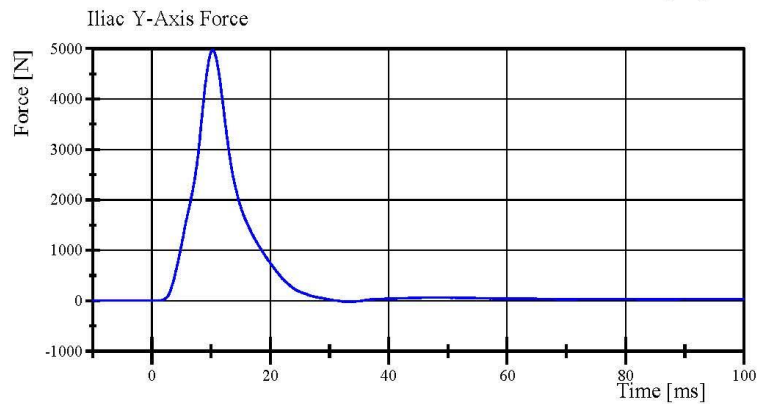
Test Date: 11/30/2017



Filter Class: CFC_180
Max: 0.1 g at 33.8 ms
Min: -44.3 g at 10.2 ms



Filter Class: CFC_180
Max: 30.5 g at 10.1 ms
Min: -3.4 g at 45.0 ms



Filter Class: CFC_600
Max: 4,969.5 N at 10.2 ms
Min: -18.3 N at 33.5 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

11.30.2017 07:08:31 637



Post-Test Calibration Sheets
Driver S/N 297

Transportation Research Center Inc.
SIDIIs Dummy - Level D
External Dimensions
Serial No. 297 Calibration No. 23

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Sitting Height	772.0 - 788.0	782	Yes
B	Shoulder Pivot Height	437.0 - 453.0	448	Yes
C	H-Point Height	79.0 - 89.0	84	Yes
D	H-Point from Seat Back	141.0 - 151.0	147	Yes
E	Shoulder Pivot from Backline	97.0 - 107.0	100	Yes
F	Thigh Clearance	119.0 - 135.0	131	Yes
G	Head Breadth	140.0 - 148.0	147	Yes
H	Head Back from Backline	40.0 - 46.0	45	Yes
I	Head Depth	178.0 - 188.0	183	Yes
J	Head Circumference	541.0 - 551.0	544	Yes
K	Buttock to Knee Length	514.0 - 540.0	526	Yes
L	Popliteal Height	343.0 - 369.0	353	Yes
M	Knee Pivot to Floor Height	393.0 - 409.0	401	Yes
N	Buttock Popliteal Length	416.0 - 442.0	430	Yes
O	Chest Depth without Jacket	195.0 - 211.0	200	Yes
P	Foot Length (right)	216.0 - 232.0	223	Yes
P	Foot Length (left)	216.0 - 232.0	221	Yes
Q	Hip Breadth	313.0 - 323.0	319	Yes
R	Arm Length	249.0 - 259.0	254	Yes
S	Knee Joint to seat Back	478.0 - 493.0	486	Yes
V	Shoulder Width (only one arm installed)	341.0 - 357.0	347	Yes
W	Foot Width (right)	78.0 - 94.0	84	Yes
W	Foot Width (left)	78.0 - 94.0	82	Yes
Y	Chest Circumference with Jacket	851.0 - 881.0	877	Yes
Z	Waist Circumference	761.0 - 791.0	780	Yes

Revised 9/29/2005



Transportation Research Center Inc.

Left Lateral Head Drop

SID IIs Serial No. 297 Certification No. 23-1

Test Date: 12/7/2017

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	33 %	Yes
Peak Head Resultant Acceleration	115 - 137 g	128.1 g	Yes
Peak Head Longitudinal Acceleration	(-15) - 15 g	-2.7 g	Yes
Is Head Resultant Acceleration Curve Unimodal within 15% of Peak?	Yes	Yes	Yes

Test meets specifications.

Condition: Used

Comments:

Head Skin S/N: 1330

Skull S/N: 180/1001/C

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

Page 9 of 31

12.07.2017 10:20:34 200

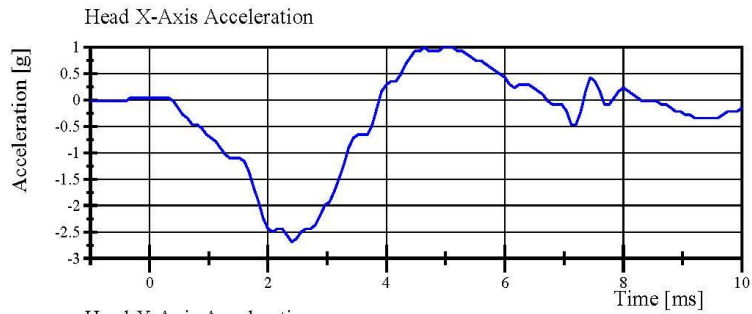


Transportation Research Center Inc.

Left Lateral Head Drop

SID IIs Serial No. 297 Certification No. 23-1

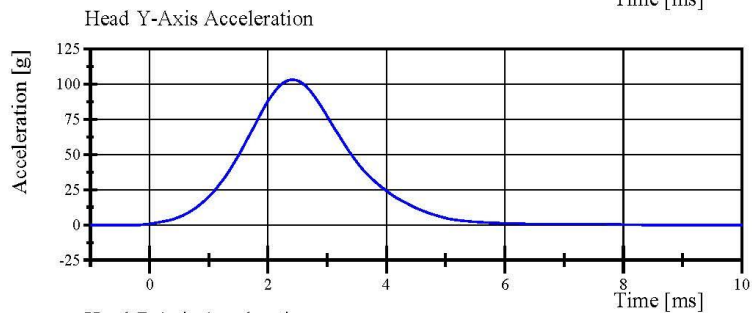
Test Date: 12/7/2017



Filter Class: CFC_1000

Max: 1.0 g at 4.6 ms

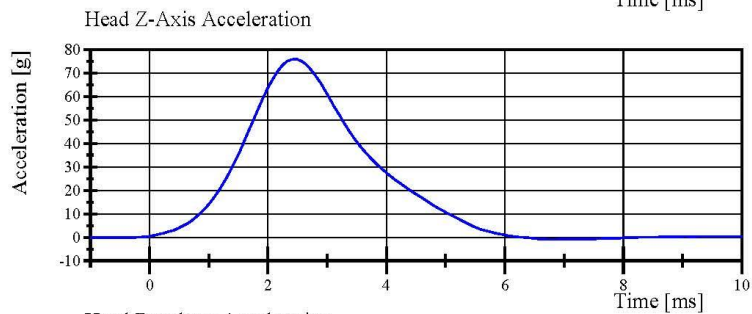
Min: -2.7 g at 2.4 ms



Filter Class: CFC_1000

Max: 103.2 g at 2.4 ms

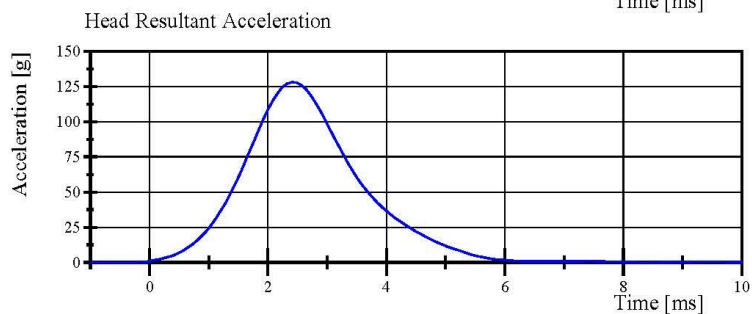
Min: -0.1 g at 9.8 ms



Filter Class: CFC_1000

Max: 75.9 g at 2.5 ms

Min: -0.8 g at 6.7 ms



Filter Class: CFC_1000

Max: 128.1 g at 2.4 ms

Min: 0.0 g at -1.0 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

12.07.2017 10:22:08 200



Transportation Research Center Inc.

Left Lateral Neck

SID IIs Serial No. 297 Certification No. 23-1

Test Date: 12/7/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	32 %	Yes
Pendulum Velocity	(-5.51) - (-5.63) m/s	-5.618 m/s	Yes
Pendulum Integrated Velocity			
Change at 10 ms	2.20 - 2.80 m/s	2.731 m/s	Yes
Change at 15 ms	3.30 - 4.10 m/s	4.033 m/s	Yes
Change at 20 ms	4.40 - 5.40 m/s	5.320 m/s	Yes
Change at 25 ms	5.40 - 6.10 m/s	5.374 m/s	No
Change at 25 to 100 ms	5.50 - 6.20 m/s	5.374 m/s	No
Maximum Headform Flexion occurring between 50ms and 70ms.			
Peak	(-71) - (-81) deg	-75.6 deg	Yes
Time of Peak	50 - 70 ms	60.0 ms	Yes
Total Neck Occipital Condyles Moment	36 - 44 N·m	44.4 N·m	No
Total Neck Occipital Condyles Moment			
Decay Time to 0 N·m	102 - 126 ms	118.1 ms	Yes

Test does not meet specifications.

Condition: Used

Comments:

Neck S/N: AB8241

Nodding Block's S/N's:

Front: N/A

Rear: N/A

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

Page 11 of 31

12.13.2017 07:15:44 715

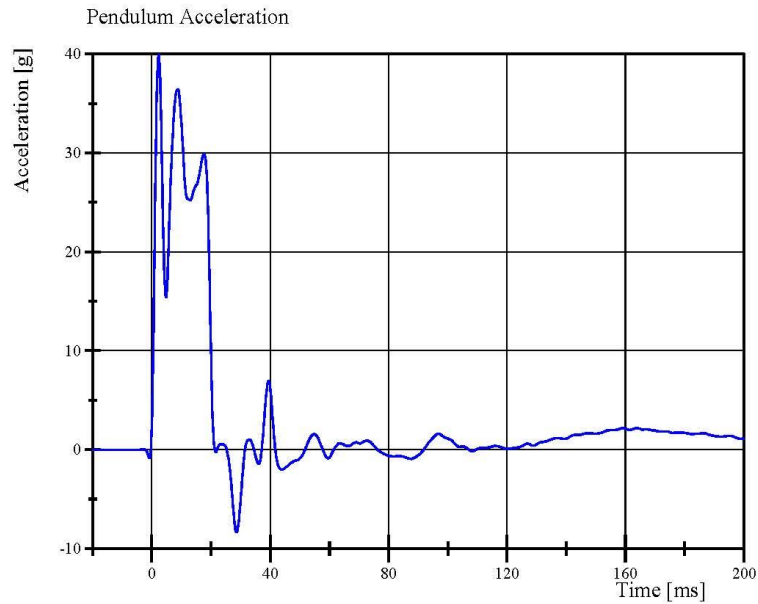


Transportation Research Center Inc.

Left Lateral Neck

SID IIS Serial No. 297 Certification No. 23-1

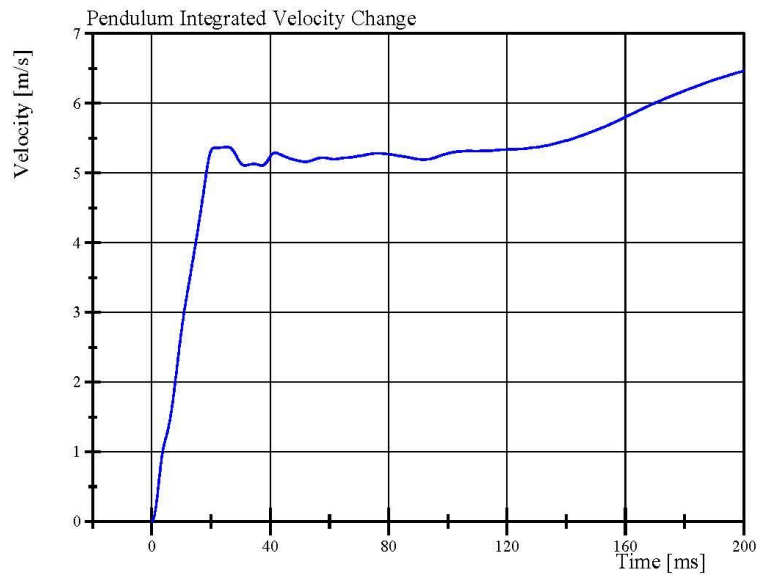
Test Date: 12/7/2017



Filter Class: CFC_180

Max: 39.9 g at 2.3 ms

Min: -8.3 g at 28.6 ms



Filter Class: CFC_180

Max: 6.5 m/s at 200.0 ms

Min: 0.0 m/s at 0.0 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

12.13.2017 07:17:05 715

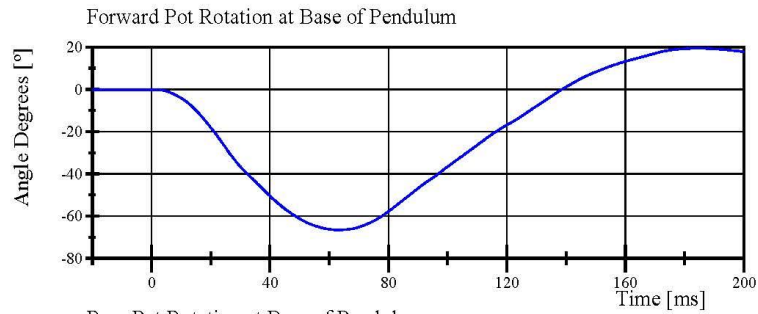


Transportation Research Center Inc.

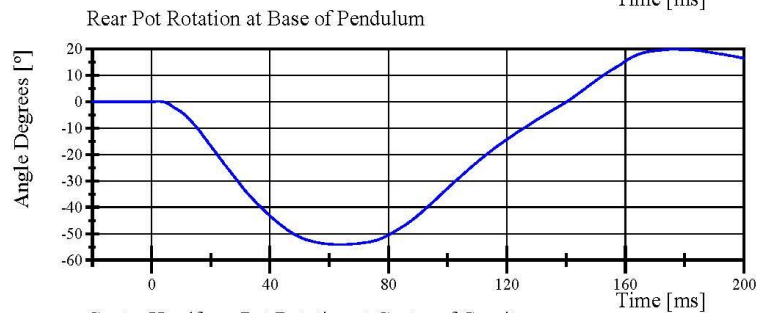
Left Lateral Neck

SID IIs Serial No. 297 Certification No. 23-1

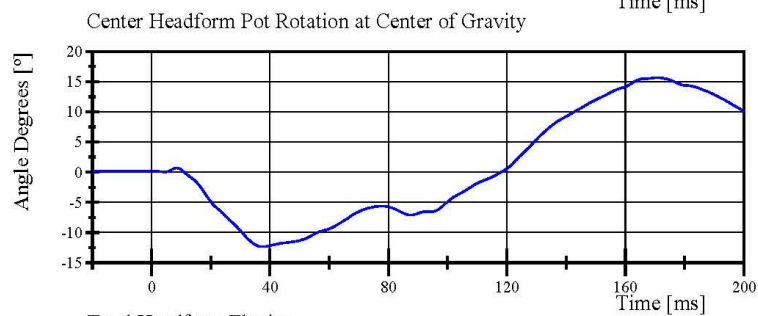
Test Date: 12/7/2017



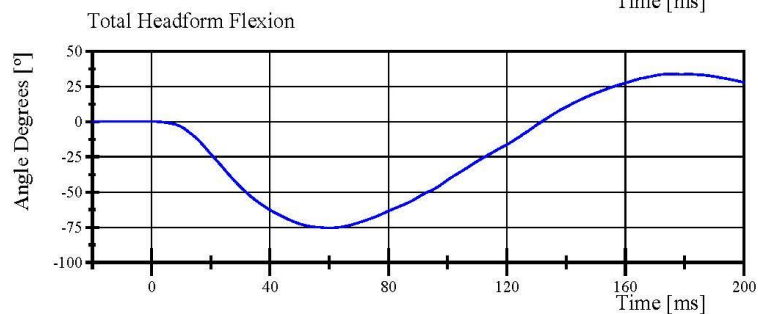
Filter Class: CFC_60
Max: 19.5 ° at 183.9 ms
Min: -66.5 ° at 62.9 ms



Filter Class: CFC_60
Max: 19.8 ° at 176.2 ms
Min: -54.1 ° at 63.6 ms



Filter Class: CFC_60
Max: 15.7 ° at 170.7 ms
Min: -12.3 ° at 37.5 ms



Filter Class: CFC_60
Max: 33.9 ° at 175.0 ms
Min: -75.6 ° at 60.0 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

12.13.2017 07:17:06 715

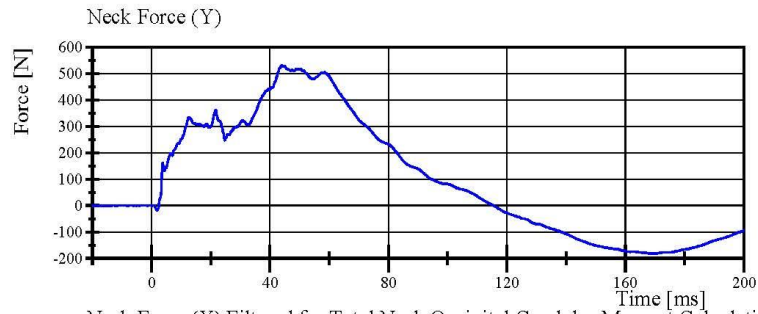


Transportation Research Center Inc.

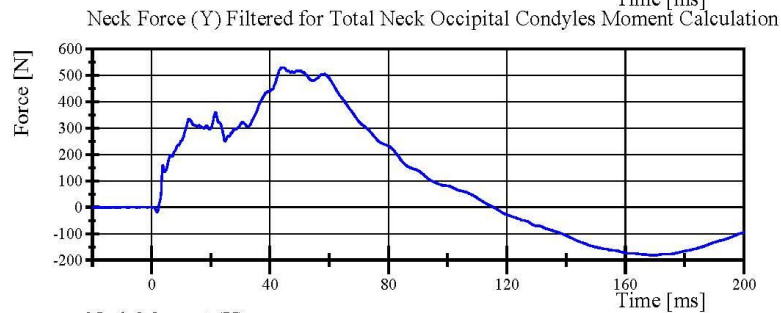
Left Lateral Neck

SID IIs Serial No. 297 Certification No. 23-1

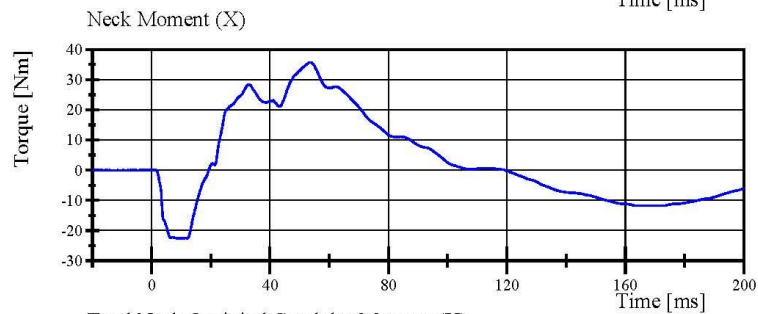
Test Date: 12/7/2017



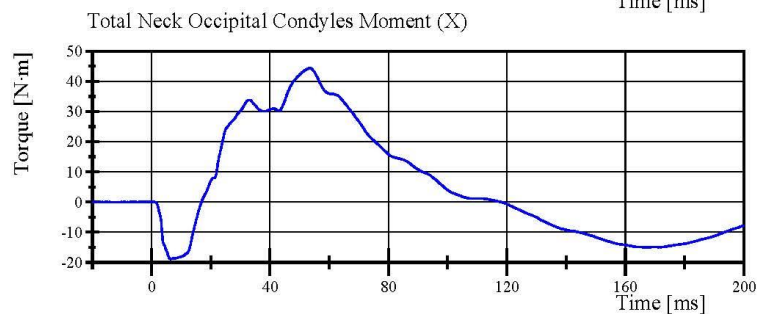
Filter Class: CFC_1000
Max: 530.7 N at 44.0 ms
Min: -182.0 N at 168.4 ms



Filter Class: CFC_600
Max: 529.7 N at 44.0 ms
Min: -181.9 N at 169.7 ms



Filter Class: CFC_600
Max: 35.8 Nm at 53.6 ms
Min: -22.7 Nm at 8.7 ms



Filter Class: Without_(Consta
Max: 44.4 N·m at 53.4 ms
Min: -18.8 N·m at 6.4 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

12.13.2017 07:17:06 715



Transportation Research Center Inc.

Left Lateral Shoulder

SID IIs Serial No. 297 Certification No. 23-1

Test Date: 12/7/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	34 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.28 m/s	Yes
Impactor Acceleration	(-13) - (-18) g	-15.4 g	Yes
Shoulder Displacement	28 - 37 mm	31.0 mm	Yes
Upper Spine Lateral Acceleration	17 - 22 g	18.7 g	Yes

Test meets specifications.

Condition: Used

Comments:

Left Arm S/N: 940L

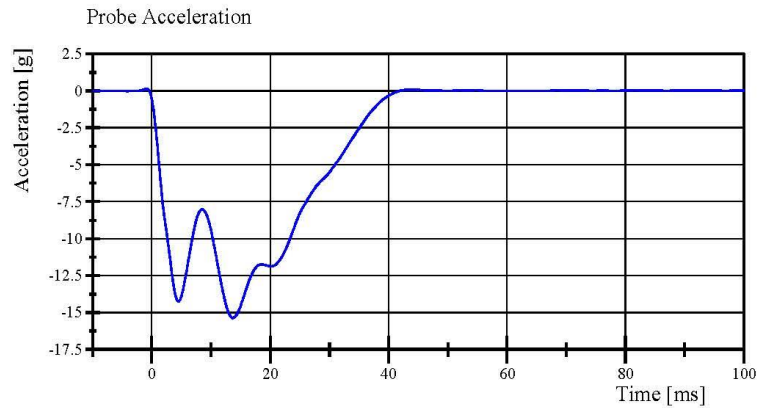
Shoulder Rib S/N: 180-3366 259

Transportation Research Center Inc.

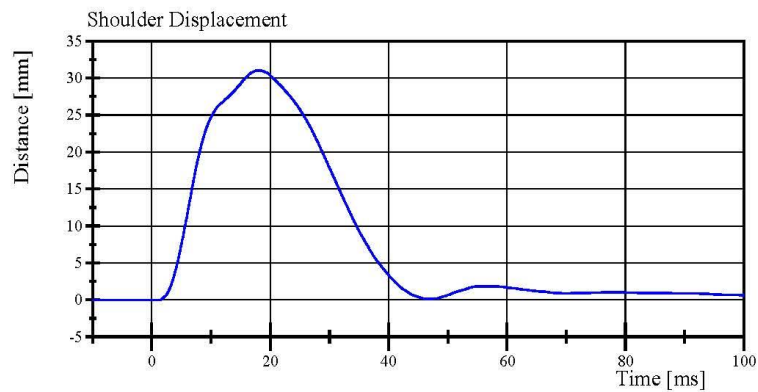
Left Lateral Shoulder

SID IIs Serial No. 297 Certification No. 23-1

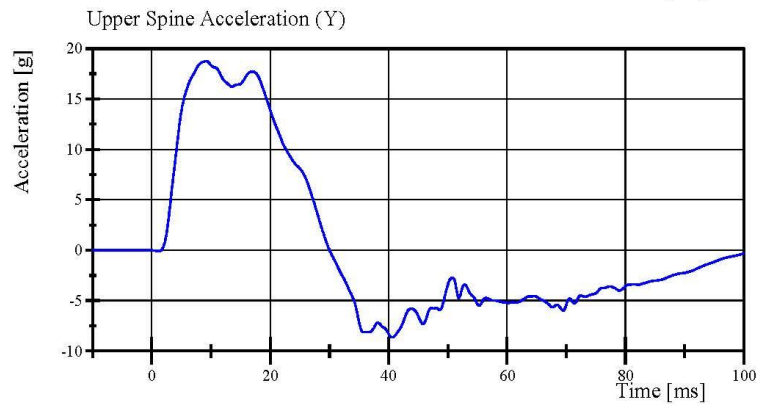
Test Date: 12/7/2017



Filter Class: CFC_180
Max: 0.1 g at -0.9 ms
Min: -15.4 g at 13.7 ms



Filter Class: CFC_600
Max: 31.0 mm at 17.9 ms
Min: -0.0 mm at 1.4 ms



Filter Class: CFC_180
Max: 18.7 g at 9.2 ms
Min: -8.6 g at 40.6 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

12.07.2017 07:39:06 807



Transportation Research Center Inc.

Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 23-1
Test Date: 12/7/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	33 %	Yes
Impactor Velocity	6.60 - 6.80 m/s	6.731 m/s	Yes
Impactor Acceleration	(-30) - (-36) g	-33.1 g	Yes
Shoulder Displacement	31 - 40 mm	35.3 mm	Yes
Upper Thorax Rib Displacement	25 - 32 mm	27.2 mm	Yes
Center Thorax Rib Displacement	30 - 36 mm	32.1 mm	Yes
Lower Thorax Rib Displacement	32 - 38 mm	35.6 mm	Yes
Upper Spine Lateral Acceleration	34 - 43 g	36.0 g	Yes
Lower Spine Lateral Acceleration	29 - 37 g	35.4 g	Yes

Test meets specifications.

Condition: Used

Comments:

Left Arm S/N: 940L

Shoulder Rib S/N: 180-3366 259

Upper Thorax Rib #1 S/N: 2009

MiddleThorax Rib #2 S/N: 2010

LowerThorax Rib #3 S/N: 2029

Thorax Pad S/N: N/A

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

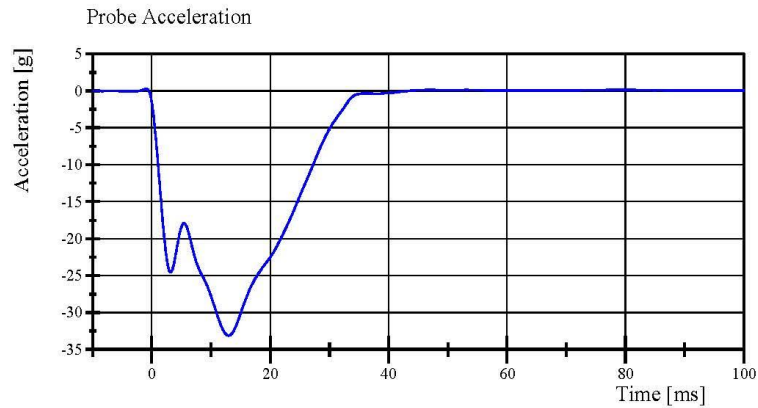
Page 17 of 31

12.07.2017 08:51:08 592

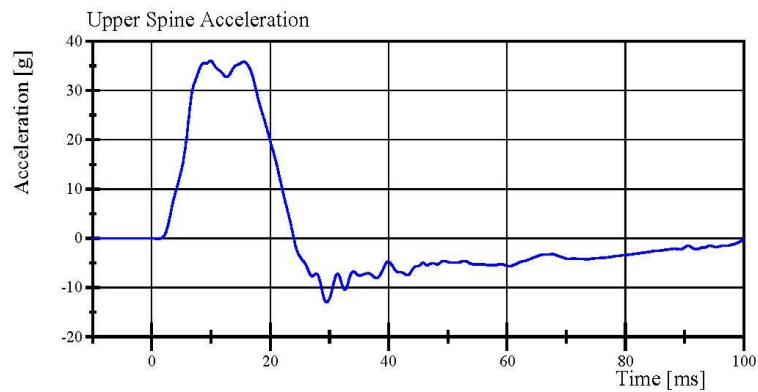


Transportation Research Center Inc.

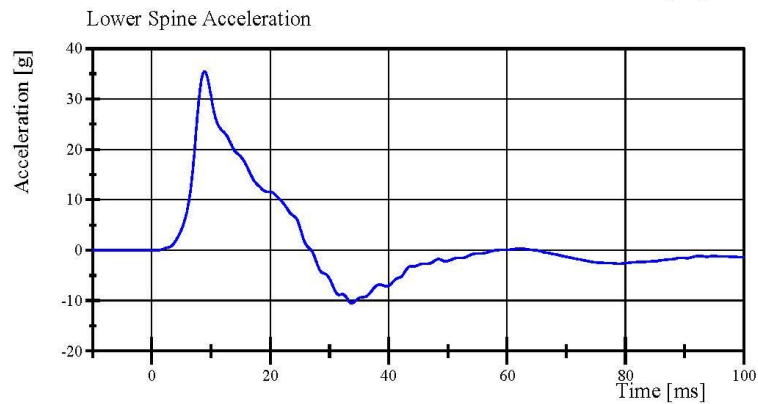
Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 23-1
Test Date: 12/7/2017



Filter Class: CFC_180
Max: 0.3 g at -1.0 ms
Min: -33.1 g at 13.0 ms



Filter Class: CFC_180
Max: 36.0 g at 9.9 ms
Min: -13.0 g at 29.5 ms



Filter Class: CFC_180
Max: 35.4 g at 8.9 ms
Min: -10.5 g at 33.8 ms

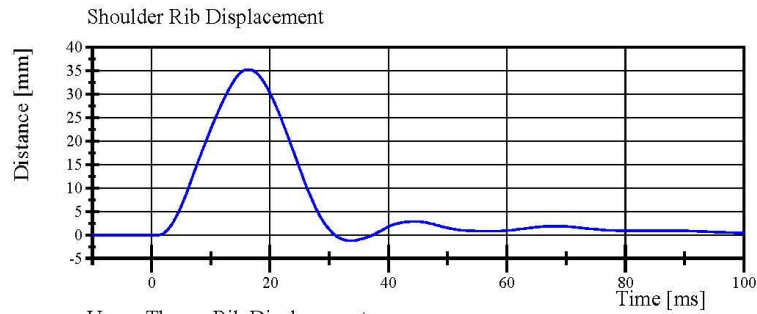
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

12.07.2017 08:53:10 592

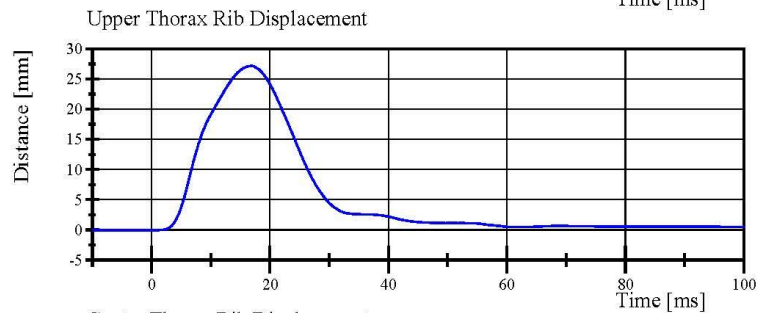


Transportation Research Center Inc.

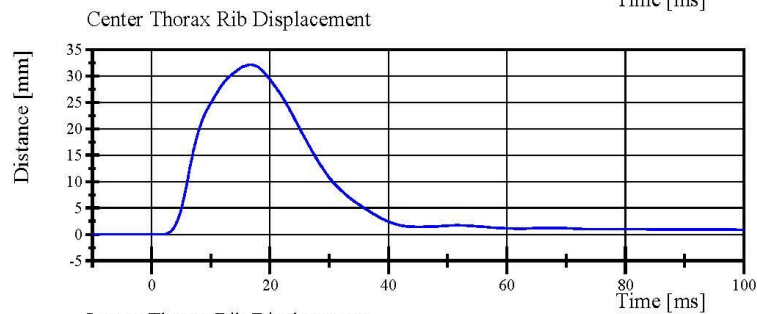
Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 23-1
Test Date: 12/7/2017



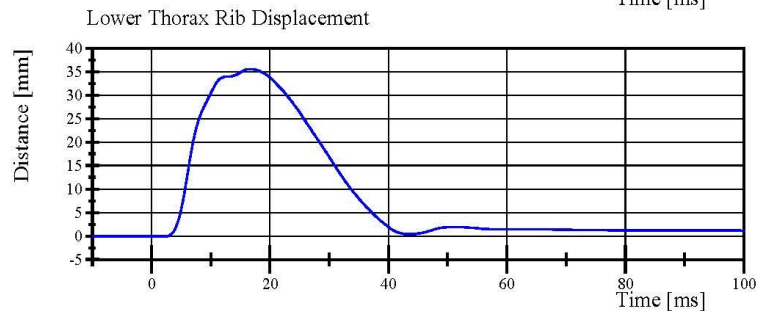
Filter Class: CFC_600
Max: 35.3 mm at 16.5 ms
Min: -1.2 mm at 33.7 ms



Filter Class: CFC_600
Max: 27.2 mm at 16.9 ms
Min: -0.0 mm at 1.2 ms



Filter Class: CFC_600
Max: 32.1 mm at 16.7 ms
Min: -0.0 mm at -6.2 ms



Filter Class: CFC_600
Max: 35.6 mm at 16.5 ms
Min: -0.0 mm at 2.5 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

12.07.2017 08:53:10 592



Transportation Research Center Inc.

Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 23-1
Test Date: 12/7/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	22.1 °C	Yes
Relative Humidity	10 - 70 %	36 %	Yes
Impactor Velocity	4.20 - 4.40 m/s	4.310 m/s	Yes
Impactor Acceleration	(-14) - (-18) g	-15.9 g	Yes
Upper Thorax Rib Displacement	32 - 40 mm	35.0 mm	Yes
Center Thorax Rib Displacement	39 - 45 mm	41.0 mm	Yes
Lower Thorax Rib Displacement	35 - 43 mm	39.3 mm	Yes
Upper Spine Lateral Acceleration	13 - 17 g	14.5 g	Yes
Lower Spine Lateral Acceleration	7 - 11 g	9.7 g	Yes

Test meets specifications.

Condition: Used

Comments:

Upper Thorax Rib #1 S/N: 2009

MiddleThorax Rib #2 S/N: 2010

LowerThorax Rib #3 S/N: 2029

Thorax Pad S/N: N/A

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

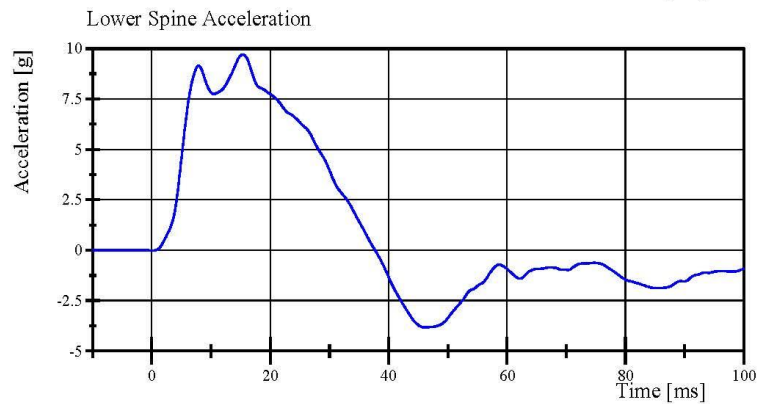
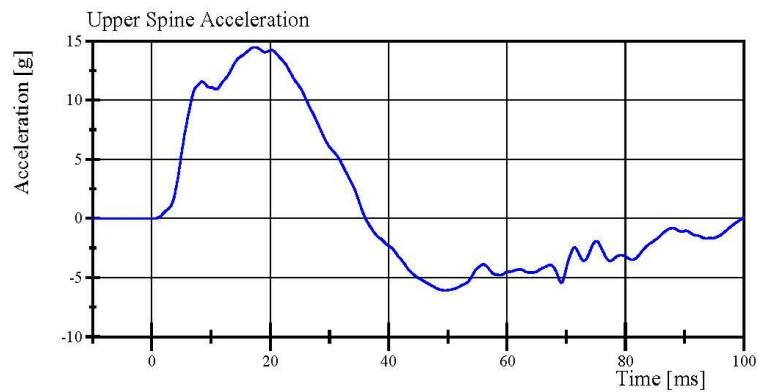
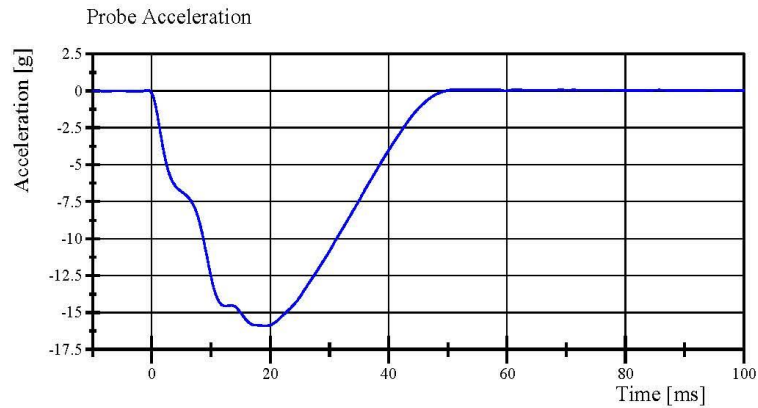
Page 20 of 31

12.07.2017 08:18:36 805



Transportation Research Center Inc.

Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 23-1
Test Date: 12/7/2017



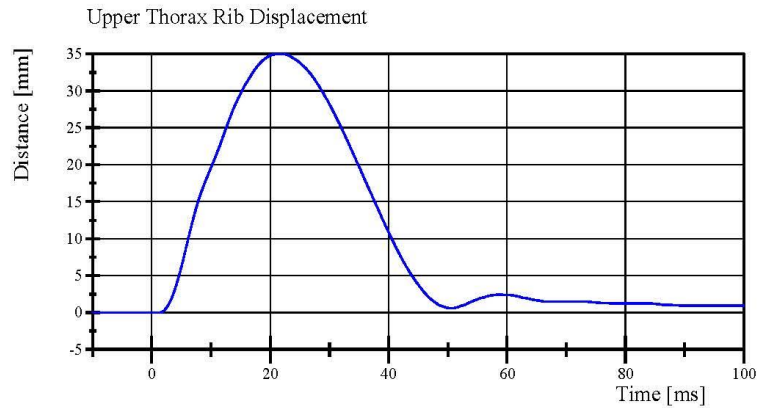
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

12.07.2017 08:20:15 805

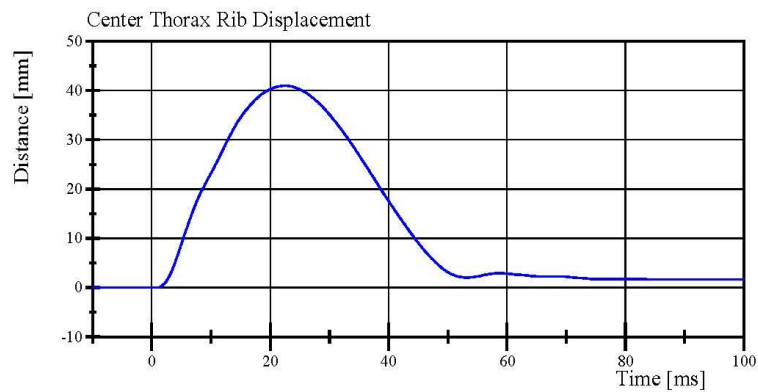


Transportation Research Center Inc.

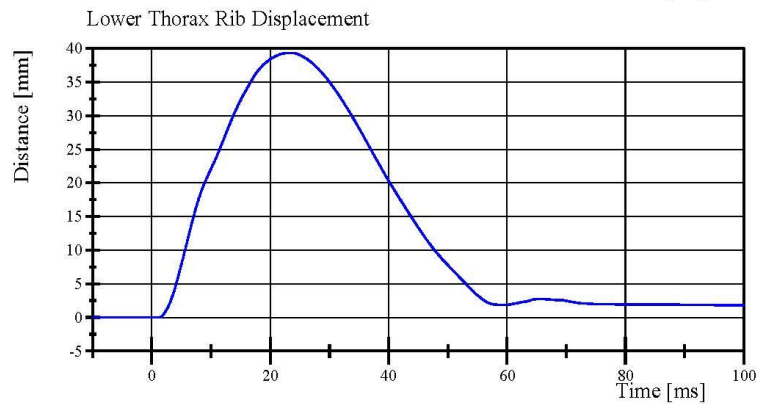
Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 23-1
Test Date: 12/7/2017



Filter Class: CFC_600
Max: 35.0 mm at 21.5 ms
Min: -0.0 mm at 0.7 ms



Filter Class: CFC_600
Max: 41.0 mm at 22.5 ms
Min: -0.0 mm at -6.5 ms



Filter Class: CFC_600
Max: 39.3 mm at 23.8 ms
Min: -0.0 mm at 0.8 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

12.07.2017 08:20:16 805



Transportation Research Center Inc.

Left Lateral Abdomen

SID IIs Serial No. 297 Certification No. 23-1

Test Date: 12/7/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	33 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.31 m/s	Yes
Impactor Acceleration	(-12) - (-16) g	-14.0 g	Yes
Upper Abdominal Rib Displacement	36 - 47 mm	42.6 mm	Yes
Lower Abdominal Rib Displacement	33 - 44 mm	39.1 mm	Yes
Lower Spine Lateral Acceleration	9 - 14.0 g	10.62 g	Yes

Test meets specifications.

Condition: Used

Comments:

Upper Abdominal Rib S/N: 1747

Lower Abdominal Rib S/N: 1748

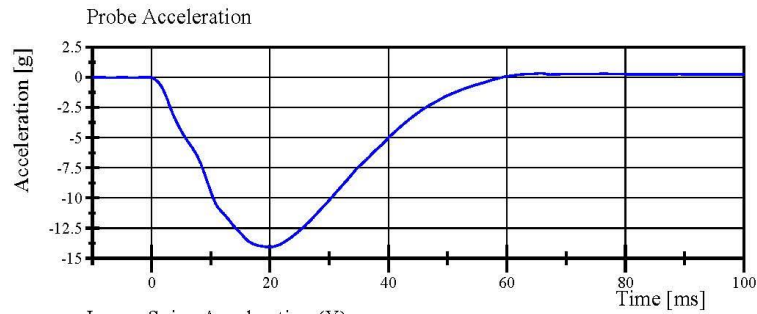
Abdominal Pad S/N: N/A

Transportation Research Center Inc.

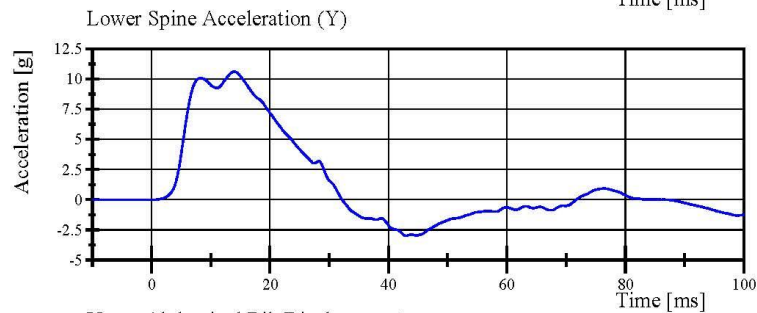
Left Lateral Abdomen

SID IIs Serial No. 297 Certification No. 23-1

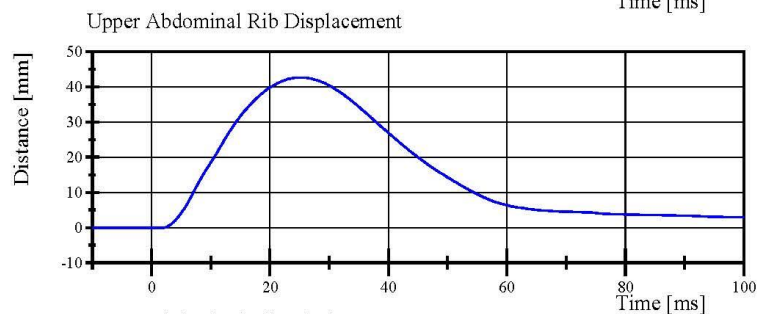
Test Date: 12/7/2017



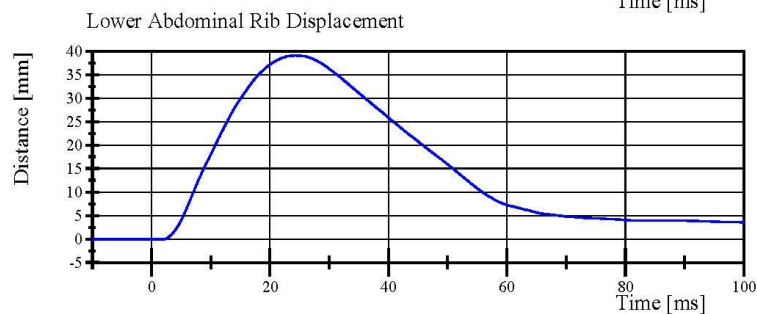
Filter Class: CFC_180
Max: 0.3 g at 65.8 ms
Min: -14.0 g at 19.8 ms



Filter Class: CFC_180
Max: 10.6 g at 13.9 ms
Min: -3.0 g at 43.0 ms



Filter Class: CFC_600
Max: 42.6 mm at 25.0 ms
Min: -0.0 mm at 1.9 ms



Filter Class: CFC_600
Max: 39.1 mm at 24.3 ms
Min: -0.0 mm at 2.1 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

12.07.2017 07:56:27 587



Transportation Research Center Inc.

Left Lateral Iliac

SID IIs Serial No. 297 Certification No. 23-1

Test Date: 12/7/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.8 °C	Yes
Relative Humidity	10 - 70 %	35 %	Yes
Pendulum Velocity	4.2 - 4.4 m/s	4.29 m/s	Yes
Impactor Acceleration	(-36) - (-45) g	-44.3 g	Yes
Peak Pelvis Lateral Acceleration	28 - 39 g	31.4 g	Yes
Iliac Force	4,100 - 5,100 N	5,009.2 N	Yes

Test meets specifications.

Condition: Used

Comments:

Pelvis S/N: DY5517

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

Page 25 of 31

12.07.2017 09:49:36 725

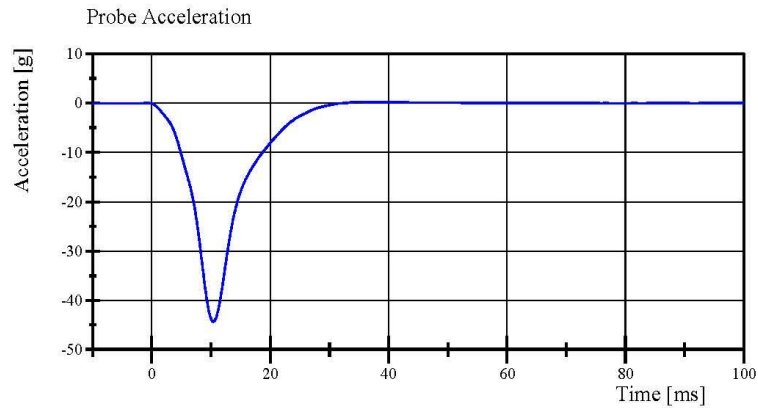


Transportation Research Center Inc.

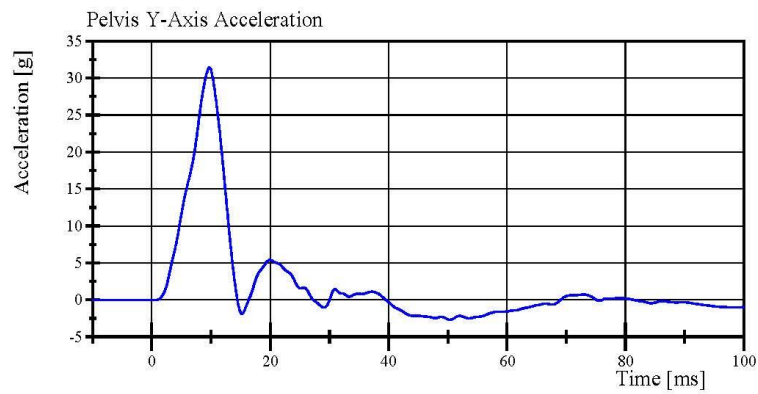
Left Lateral Iliac

SID IIs Serial No. 297 Certification No. 23-1

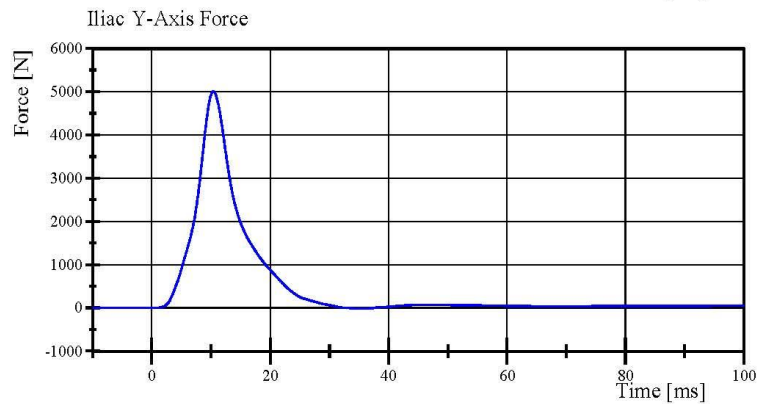
Test Date: 12/7/2017



Filter Class: CFC_180
Max: 0.2 g at 34.9 ms
Min: -44.3 g at 10.4 ms



Filter Class: CFC_180
Max: 31.4 g at 9.8 ms
Min: -2.7 g at 50.3 ms



Filter Class: CFC_600
Max: 5,009.2 N at 10.4 ms
Min: -20.3 N at 35.8 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

12.07.2017 09:54:42 725



Transportation Research Center Inc.

Left Lateral Pelvis

SID IIs Serial No. 297 Certification No. 23-1

Test Date: 12/7/2017

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	33 %	Yes
Pendulum Velocity	6.6 - 6.8 m/s	6.63 m/s	Yes
Impactor Acceleration	(-38.0) - (-47.0) g	-43.80 g	Yes
Peak Pelvis Lateral Acceleration after 6ms	34 - 42 g	37.7 g	Yes
Acetabulum Force	3,600 - 4,300 N	3,795.6 N	Yes

Test meets specifications.

Condition: Used

Comments:

Pelvis Skin S/N: DY5517

Pelvis Plug Info:

Manufacturer: Saco

S/N: 11165

Cal Date: 20160415

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

Page 27 of 31

12.07.2017 07:17:57 416

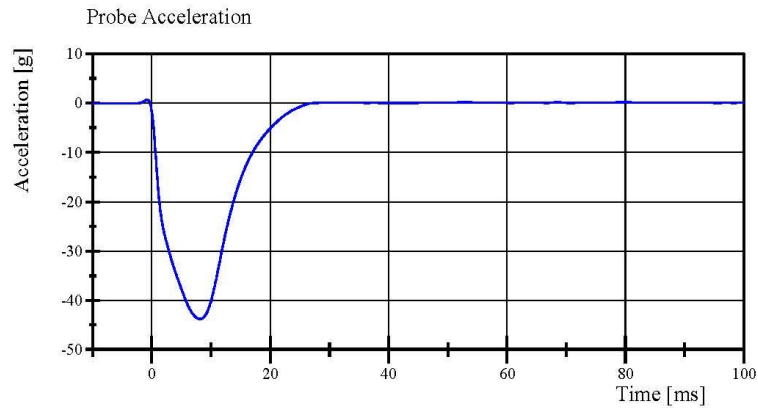


Transportation Research Center Inc.

Left Lateral Pelvis

SID IIs Serial No. 297 Certification No. 23-1

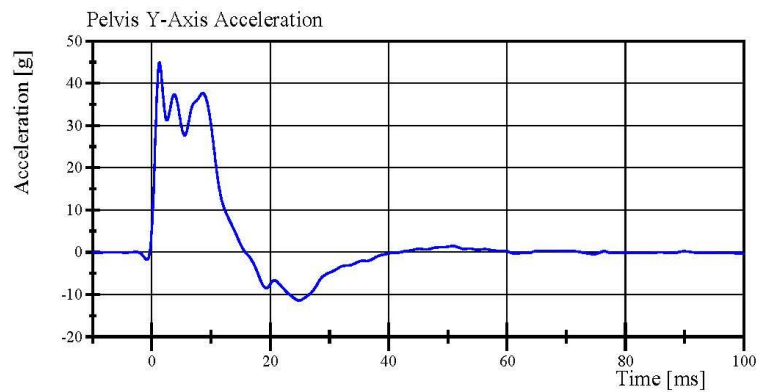
Test Date: 12/7/2017



Filter Class: CFC_180

Max: 0.7 g at -0.8 ms

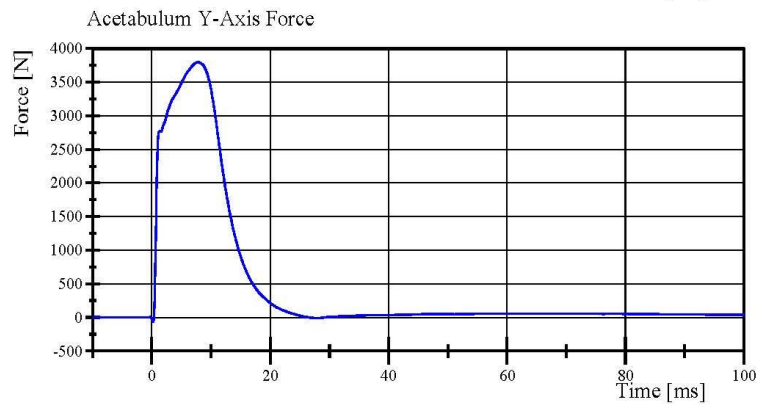
Min: -43.8 g at 8.2 ms



Filter Class: CFC_180

Max: 45.0 g at 1.3 ms

Min: -11.4 g at 24.9 ms



Filter Class: CFC_600

Max: 3,795.6 N at 7.8 ms

Min: -60.9 N at 0.2 ms

Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

12.07.2017 07:20:47 416



APPENDIX D
TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION DATA

TABLE 1 – Dummy Instrumentation (SID-IIs)

				SID-IIs S/N 297			
				Serial Number	Manufacturer	Calibration Date	
Head Accelerometers				X	P93539	Endevco	29-Sep-2017
				Y	P93549	Endevco	29-Sep-2017
				Z	P93776	Endevco	29-Sep-2017
Displacement Potentiometers	Shoulder			Y	N/A	N/A	N/A
	Thoracic Rib	Upper	Y	047	Servo	28-Sep-2017	
		Middle	Y	01815	Servo	28-Sep-2017	
		Lower	Y	043	Servo	28-Sep-2017	
	Abdominal Rib	Upper	Y	01811	Servo	28-Sep-2017	
		Lower	Y	051	Servo	28-Sep-2017	
Lower Spine Accelerometers (T12)				X	P94425	Endevco	29-Sep-2017
				Y	P91522	Endevco	29-Sep-2017
				Z	P91511	Endevco	29-Sep-2017
Acetabulum Load Cell				Y	235-FY	FTSS	28-Sep-2017
Iliac Wing Load Cell				Y	320-FY	FTSS	22-Nov-2017
Pelvis Plug (struck side)					11156	SACO	15-Apr-2017
Pelvis Plug (non-struck side)					36505	FTSS	24-Aug-2010

TABLE 2 – Vehicle Instrumentation

Vehicle Instrumentation		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	T10333	Endevco	8-Nov-2017
Vehicle Center of Gravity	Y	P97697	Endevco	8-Nov-2017
Vehicle Center of Gravity	Z	P97887	Endevco	8-Nov-2017
Left Floor Sill	Y	P88038	Endevco	7-Aug-2017
A-Pillar Sill	Y	P41055	Endevco	13-Nov-2017
A-Pillar Low	Y	P87164	Endevco	12-Sep-2017
A-Pillar Mid	Y	P94512	Endevco	12-Sep-2017
B-Pillar Sill	Y	P81034	Endevco	26-Sep-2017
B-Pillar Low	Y	P94551	Endevco	13-Nov-2017
B-Pillar Mid	Y	P87978	Endevco	13-Nov-2017
Driver Seat	Y	P93518	Endevco	2-Oct-2017
Engine Top	X	P97716	Endevco	26-Sep-2017
Engine Top	Y	P97875	Endevco	26-Sep-2017
Firewall	Y	P94580	Endevco	8-Nov-2017
Right Roof	Y	P97889	Endevco	2-Oct-2017
Right Floor Sill	Y	T11386	Endevco	3-Oct-2017
Rear Floor Pan	X	P97717	Endevco	2-Oct-2017
Rear Floor Pan	Y	P97631	Endevco	2-Oct-2017

TABLE 3 – Pole Instrumentation

Pole Instrumentation	Serial Number	Manufacturer	Calibration Date
Load Cell 1	DK7091S	Humanetics	20-Nov-2017
Load Cell 2	DK7120S	Humanetics	20-Nov-2017
Load Cell 3	DK7118S	Humanetics	20-Nov-2017
Load Cell 4	DK7124S	Humanetics	20-Nov-2017
Load Cell 5	DK7111S	Humanetics	20-Nov-2017
Load Cell 6	DK7126S	Humanetics	20-Nov-2017
Load Cell 7	DK7112S	Humanetics	20-Nov-2017
Load Cell 8	DK7074S	Humanetics	20-Nov-2017