

FINAL REPORT NUMBER: SPNCAP-TRC-22-002

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

**FORD MOTOR CO.
2022 Ford F-250 Super Cab
NHTSA NUMBER: M20220207**

**PREPARED BY:
Transportation Research Center Inc.
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Report Date: May 17, 2023


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
Washington, D.C. 20590**

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Report Prepared By: ILO Project Operations Group

Report Approved By: 
John Shultz

Approval Date: May 17, 2023

FINAL REPORT ACCEPTANCE BY OCWS:

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

Date: _____

FINAL REPORT ACCEPTANCE BY OCWS:

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NHTSA, Office of Crashworthiness Standards

Date: _____

Technical Report Documentation Page

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<p>16. Abstract</p> <p>A 32.2 km/h (20 mph), 75° oblique impact Side NCAP Test was conducted on the subject vehicle, a 2022 Ford F-250 Super Cab, 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 June 27, 2022.</p> <p>The impact velocity was 32.36 km/h, and the ambient temperature at the struck (left) side of the target vehicle at the time of impact was 21.6° C. The test vehicle's post-test maximum crush was 404 mm at Level 1.</p> <p>The test or target vehicle's performance is given below:</p> <table border="1"> <thead> <tr> <th></th> <th><u>Unit</u></th> <th><u>Threshold</u></th> <th><u>Front SID-IIs</u></th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆):</td> <td>NA</td> <td>1000</td> <td><u>227</u></td> </tr> <tr> <td>Resultant Lower Spine Acceleration:</td> <td>g's</td> <td>82</td> <td><u>34.6</u></td> </tr> <tr> <td>Total Pelvic Force: (sum of acetabular and iliac forces)</td> <td>N</td> <td>5525</td> <td><u>2552.4</u></td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>38*</td> <td><u>20.7</u></td> </tr> <tr> <td>Maximum Abdomen Rib Deflection</td> <td>mm</td> <td>45*</td> <td><u>18.7</u></td> </tr> </tbody> </table> <p>* Proposed IARV</p> <p>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.</p>					<u>Unit</u>	<u>Threshold</u>	<u>Front SID-IIs</u>	Head Injury Criteria (HIC ₃₆):	NA	1000	<u>227</u>	Resultant Lower Spine Acceleration:	g's	82	<u>34.6</u>	Total Pelvic Force: (sum of acetabular and iliac forces)	N	5525	<u>2552.4</u>	Maximum Thoracic Rib Deflection	mm	38*	<u>20.7</u>	Maximum Abdomen Rib Deflection	mm	45*	<u>18.7</u>
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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 1200 New Jersey Ave Washington, DC 20590																									
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SECTION 1
TEST PURPOSE AND PROCEDURE

TEST PURPOSE AND PROCEDURE

This side impact test was conducted as part of the MY22 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. 693JJ920D000018. The purpose of this test is to generate comparative side impact performance in a 2022 Ford F-250 Super Cab manufactured by FORD MOTOR CO.. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Side NCAP Pole Laboratory Test Procedure, dated March 2020.

SECTION 2

SUMMARY OF TEST RESULTS

A rigid pole side impact test was conducted on a model year 2022 Ford F-250 Super Cab. The subject vehicle was towed into the rigid pole at an angle of 75° and a velocity of 32.36 km/h. The side impact test was conducted by Transportation Research Center Inc. in East Liberty, OH, on June 27, 2022. 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 March 2020. 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	227
Lower Spine Acceleration Resultant	G	82	34.6
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	2552.4
Maximum Thoracic Rib Deflection	mm	38*	20.7
Maximum Abdominal Rib Deflection	mm	45*	18.7

* 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	Yes	No
Seat Belt Load Limiter	Yes	No	Yes	No
Other Safety Restraint	No	N/A	No	N/A

GENERAL COMMENTS

LEFT MID A-POST AY; Questionable data throughout

SECTION 3
OCCUPANT AND VEHICLE INFORMATION

**DATA SHEET NO. 1
GENERAL TEST AND VEHICLE PARAMETER DATA**

Test Vehicle: 2022 Ford F-250 Super Cab
Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
Test Date: 6/27/2022

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M20220207
Model Year	2022
Make	Ford
Model	F-250 Super Cab
Body Style	Truck
VIN	1FT7X2A64NEE48857
Body Color	Iconic Silver
Odometer Reading (km/mi)	4 mi
Engine Displacement (L)	6.2
Type/No. Cylinders	V/8
Engine Placement	Inline
Transmission Type	Automatic
Transmission Speeds	6
Overdrive	Yes
Final Drive	RWD
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	Yes
Driver Load Limiter	Yes
Rear Pass. Load Limiter	Yes
Other Safety Restraint	No

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

No

DATA FROM CERTIFICATION LABEL

Manufactured By	FORD MOTOR CO.
Date of Manufacturer	05/22
Vehicle Type	Truck

GVWR (kg)	4536
GAWR Front (kg)	1792
GAWR Rear (kg)	2876

VEHICLE SEATING AND WEIGHT CAPACITY DATA

	Front	Rear	Third	Total
Designated Seating Capacity (DSC)	3	3	N/A	6
Vehicle Capacity Weight (VCW) (kg)				1803.0
DSC X 68.04 kg				408.24
Rated Cargo and Luggage Weight (RCLW) (kg)				1394.76

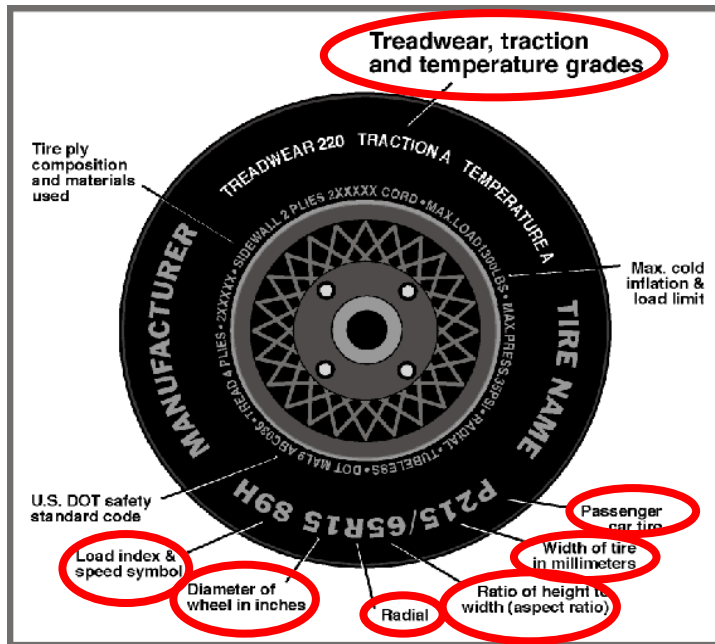
VEHICLE SEAT TYPE

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	N/A	Yes	N/A	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: 2022 Ford F-250 Super Cab
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
 Test Date: 6/27/2022



DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	550	550
Cold Pressure (kPa)	450	550
Recommended Tire Size	LT245/75R17E	LT245/75R17E
Tire Size on Vehicle	LT245/75R17E	LT245/75R17E
Tire Manufacturer	Michelin	Michelin
Tire Model	LTX M/S2	LTX M/S2
Treadwear	N/A	N/A
Traction	N/A	N/A
Temperature Grades	N/A	N/A
Tire Plies Sidewall	2	2
Tire Plies Body	5	5
Load Index/Speed Symbol	121/118R	121/118R
Tire Material	Polyamide, Steel, Polyester	Polyamide, Steel, Polyester
DOT Safety Code Left	1M 43 007X 1722	1M 43 007X 1622
DOT Safety Code Right	1M 43 007X 1722	1M 43 007X 1722

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

Test Vehicle: 2022 Ford F-250 Super Cab NHTSA No.: M20220207
 Test Program: SPNCAP Side Impact Test Date: 6/27/2022

TIRE PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kPa	379	379	441	379
Tire Placard	kPa	448	448	552	552
Owner's Manual	kPa	448	448	552	552
As Tested	kPa	448	448	552	552

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	757.0	583.4		795.4	658.8		780.4	754.6	
Right	kg	749.2	576.8		748.8	643.0		664.2	652.2	
Ratio	%	56.5	43.5		54.3	45.7		50.7	49.3	
Totals	kg	1506.2	1160.2	2666.4	1544.2	1301.8	2846.0	1444.6	1406.8	2851.4

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total As Delivered Weight (UVW)	kg	2666.4	(A)
Actual Weight of 1 P572V ATD (SID-ILs) Dummy Used	kg	49.0	(B)
Rated Cargo/Luggage Weight (RCLW) ¹	kg	136.0	(C)
Calculated Vehicle Target Weight (TVT _W)	kg	2851.4	(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.	-1.9	-1.9	-1.7	Yes
Front Passenger Sill Angle (front-to-rear)*	Deg.	-1.6	-1.6	-1.5	Yes
Front Bumper-Line Angle (left-to-right)**	Deg.	-0.5	-0.5	-0.4	Yes
Rear Bumper-Line Angle (left-to-right)**	Deg.	-0.3	-0.4	-0.4	Yes
Vehicle CG (Aft of Front Axle)	mm	1639	1723	1858	
Vehicle CG (Left (+) / Right (-) from longitudinal Centerline)	mm	5	19	66	

*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".

¹Rated cargo and luggage weight limited to 136.0 kg or 300.0 lbs.

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

Test Vehicle: 2022 Ford F-250 Super Cab NHTSA No.: M20220207
Test Program: SPNCAP Side Impact Test Date: 6/27/2022

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Ballast: Plate weight	99.2
Components Removed: None	0.0

Test height adjustable suspension setting, if applicable:

N/A

TEST SURFACE MARKINGS

	Distance from 75° Impact Location Line (mm)
Fore 25 mm target	1635
Aft 25 mm target	1939

DATA SHEET NO. 2

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

Test Vehicle: 2022 Ford F-250 Super Cab

NHTSA No.: M20220207

Test Program: SPNCAP Side Impact

Test Date: 6/27/2022

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	N/A	N/A	16.4
Front Passenger Seat	N/A	N/A	16.3
Front Center Seat*	N/A	N/A	8.6
Struck Side Rear Seat	N/A	N/A	17.3
Non-Struck Side Rear Seat	N/A	N/A	17.2
Rear Center Seat*	N/A	N/A	17.7

* 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	16.4	349	Max	N/A	N/A	N/A
			Mid	346	349	352
			Min	N/A	N/A	N/A
Front Passenger Seat	16.3	348	Max	N/A	N/A	N/A
			Mid	345	348	351
			Min	N/A	N/A	N/A
Front Center Seat*	8.6	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	17.3	280	Max	N/A	N/A	N/A
			Mid	N/A	280	N/A
			Min	N/A	N/A	N/A
Non-Struck Side Rear Seat	17.2	285	Max	N/A	N/A	N/A
			Mid	N/A	285	N/A
			Min	N/A	N/A	N/A
Rear Center Seat*	17.7	N/A	Max	N/A	N/A	N/A
			Mid	N/A	N/A	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: 2022 Ford F-250 Super Cab

NHTSA No.: M20220207

Test Program: SPNCAP Side Impact

Test Date: 6/27/2022

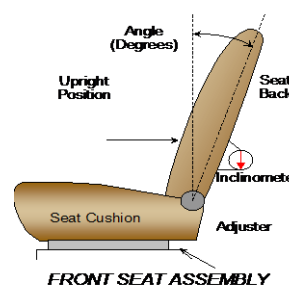
SEAT FORE/AFT POSITION

Seat	Total Fore/Aft Travel		Test Position from Forward most Position	
	mm	Detents*	mm	Detent*
Driver Seat	255	37	0	0
Front Passenger Seat	255	37	0	0
Front Center Seat*	Fixed	0	Fixed	0
Struck Side Rear Seat	Fixed	0	Fixed	0
Non-Struck Side Rear Seat	Fixed	0	Fixed	0
Rear Center Seat*	Fixed	0	Fixed	0

* 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	50.9	14	4.6	5
Front Passenger Seat	50.4	14	3.7	5
Front Center Seat*	Fixed	0	Fixed	0
Struck Side Rear Seat	Fixed	0	Fixed	0
Non-Struck Side Rear Seat	Fixed	0	Fixed	0
Rear Center Seat*	Fixed	0	Fixed	0

* 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	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	3	3, Lowermost

DATA SHEET NO. 2 (CONTINUED)

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

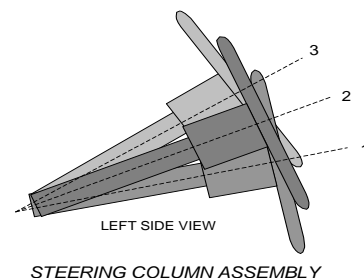
Test Vehicle: 2022 Ford F-250 Super Cab
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
 Test Date: 6/27/2022

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.

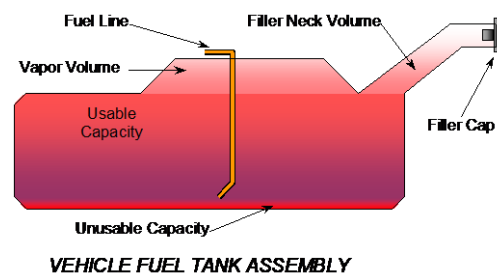
	Degrees	Fore/Aft Position, mm
Lowermost, Position No. 1	25.7	
Geometric Center, Position No. 2	24.8	
Uppermost, Position No. 3	22.8	
Telescoping Steering Wheel Travel		40
Test Position	24.8	20



FUEL PUMP

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

The electric fuel pump operates for 3 seconds to pressurize the fuel system following the actuation of the ignition. If no attempt has been made to start the engine within 3 seconds following ignition actuation the fuel pump will shut off. The fuel pump operates continuously while the engine is running. If the engine stalls the fuel pump is deactivated. Also, the fuel pump is shut-off by the restraint control module to stop fuel flow to the engine if the vehicle sustains an impact above a certain magnitude.



FUEL TANK CAPACITY

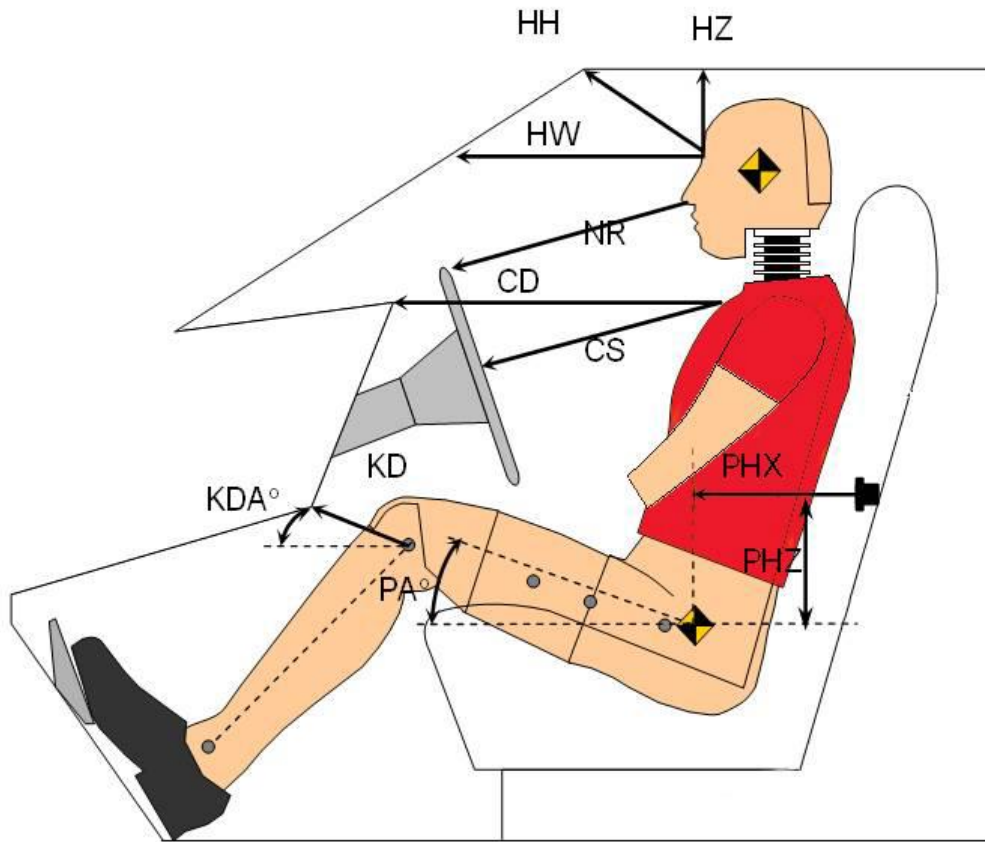
	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	128.7
Usable Capacity of "Optional" Tank (see Form No. 1)	N/A
Usable Capacity of Standard Tank (see Owner's Manual)	128.7
Usable Capacity of Optional Tank (see Owner's Manual)	N/A
93% of Usable Capacity	119.7
Actual Amount of Solvent Used in Test	119.7
1/3 of Usable Capacity	42.9

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

DATA SHEET NO. 3
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2022 Ford F-250 Super Cab
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
 Test Date: 6/27/2022

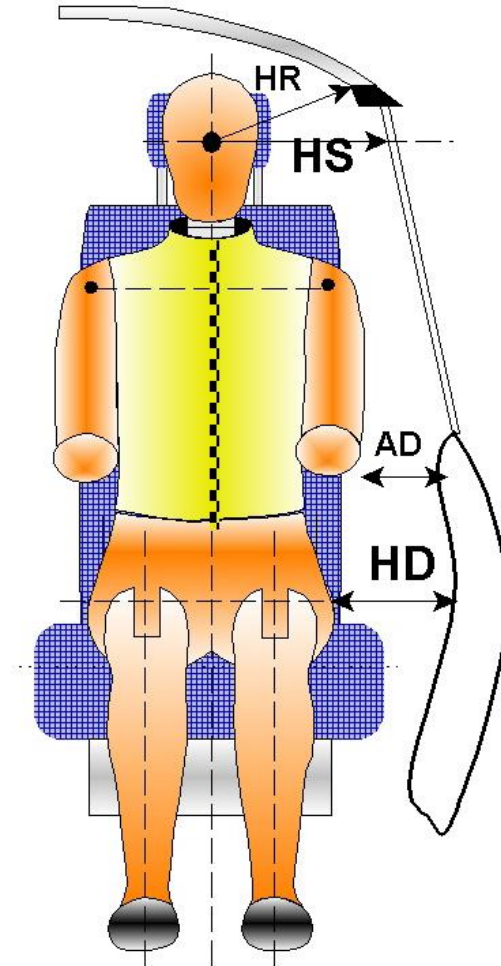


Code	Measurement Description	Driver	
		Length (mm)	Angle (°)
HH	Head to Header	361	
HW	Head to Windshield	670	
HZ	Head to Visor	220	
NR	Nose to Rim	255	
CD	Chest to Dashboard	458	
CS	Chest to Steering Wheel	189	
KDL/KDLA°	Left Knee to Dash	80	15.1
KDR/KDRA°	Right Knee to Dash	83	15.3
PAX°	Pelvic Tilt Angle (X-axis)		0.6
PAY°	Pelvic Tilt Angle (Y-axis)		21.4
PHX	Hip Point to Striker (X-Axis)	469	
PHZ	Hip Point to Striker (Z-Axis)	60	

DATA SHEET NO. 4
DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2022 Ford F-250 Super Cab
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
 Test Date: 6/27/2022

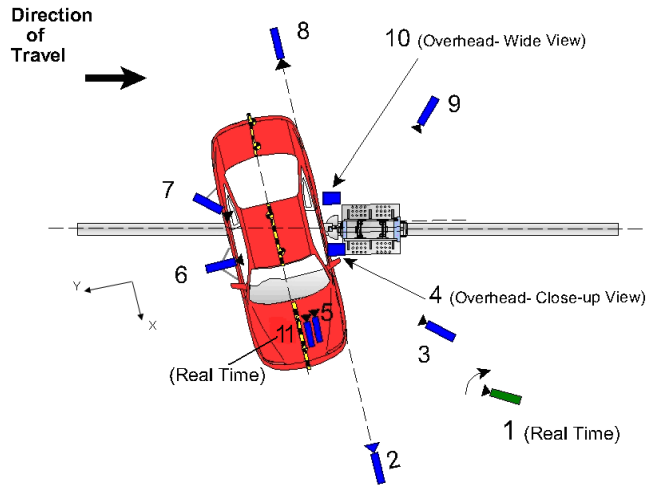


Code	Measurement Description	Length (mm)
HR	Head to Side Header	282
HS	Head to Side Window	408
AD	Arm to Door	188
HD	Hip Point to Door	182

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

Test Vehicle: 2022 Ford F-250 Super Cab
Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
Test Date: 6/27/2022



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	3100	-1500	-1500	20	1000
3	Impact side 45° – forward pole view	5300	-2300	-1500	20	1000
4	Overhead Close-up view of impact	0	0	-4500	25	1000
5	Onboard – dummy front view				25	1000
6	Onboard – dummy side view				8.5	1000
7	Onboard – dummy rear oblique view				8.5	1000
8	Rear ground level – impact view	-6300	-2100	-1400	20	1000
9	Impact side 45° – rearward pole view	-3800	-1300	-1200	20	1000
10	Overhead wide view of impact	0	0	-4500	18.5	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: N/A

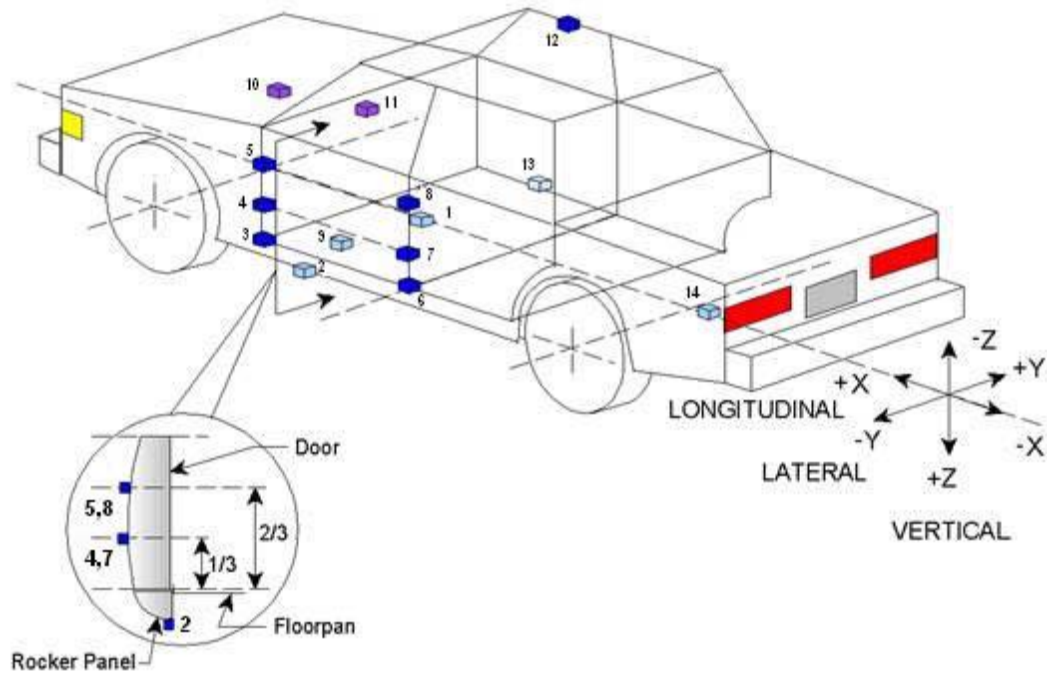
INSTRUMENTATION

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

**DATA SHEET NO. 6
VEHICLE ACCELEROMETER DATA**

Test Vehicle: 2022 Ford F-250 Super Cab
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
 Test Date: 6/27/2022



Accelerometer/Sensor Location				
ID		Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	3922	0	-568
2	Left Floor Sill	3970	-721	-637
3	A-Pillar Sill	4296	-821	-590
4	A-Pillar Low	4390	-924	-740
5	A-Pillar Mid	4400	-902	-1230
6	B-Pillar Sill	3235	-705	-697
7	B-Pillar Low	3325	-870	-745
8	B-Pillar Mid	3287	-860	-1190
9	Driver Seat Track	3500	-645	-767
10	Engine Top	4952	85	-1160
11	Firewall	4870	-55	-1333
12	Right Roof	3560	704	-1915
13	Right Floor Sill	3975	721	-619
14	Rear Floorpan	1398	0	-889

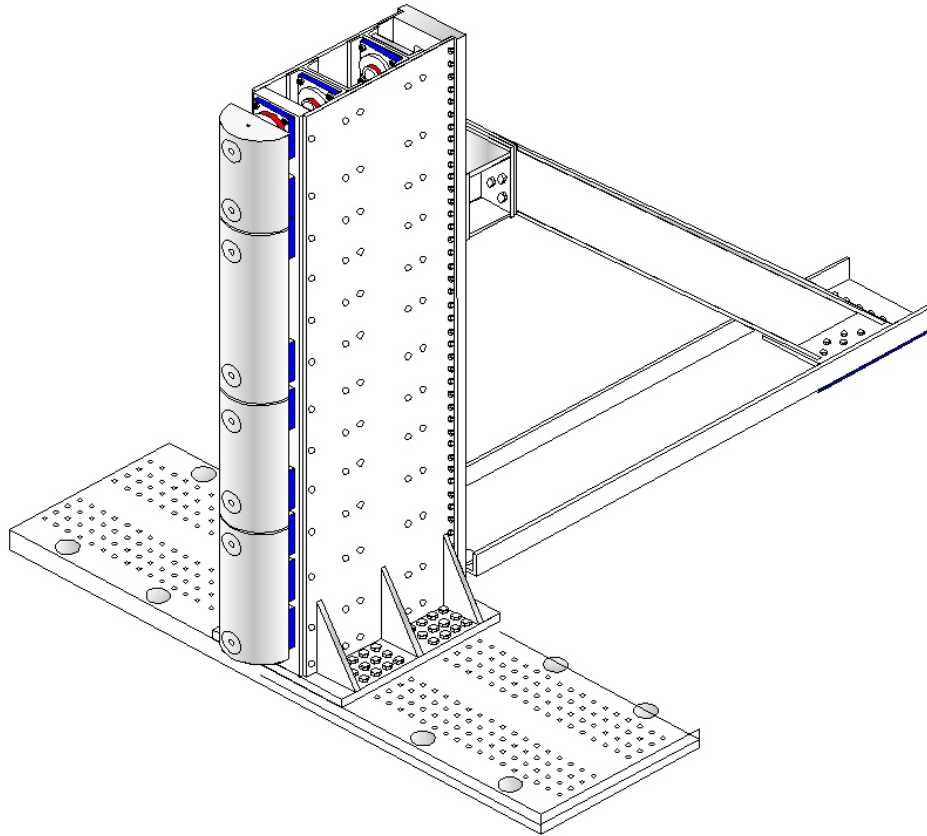
Reference: X - Test Vehicle Rear Bumper (+ forward)
 Y - Test Vehicle Centerline (+ to right)
 Z - Ground Plane (+ down)

**DATA SHEET NO. 7
RIGID POLE LOAD CELL DATA**

Test Vehicle: 2022 Ford F-250 Super Cab
Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
Test Date: 6/27/2022

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: 2022 Ford F-250 Super Cab
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
 Test Date: 6/27/2022

TEST DUMMY INFORMATION AND CONTACT POINTS

Dummy Body Part	Driver SID-IIs Dummy
Face	SCAB
Top of Head	SCAB
Left Side of Head	SCAB
Back of Head	Head Restraint
Left Shoulder	SCAB, SAB, Side bolster
Upper Torso	Side bolster
Lower Torso	Side bolster
Left Hip	SAB, Door panel
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

POST-TEST SEAT PERFORMANCE

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

POST-TEST STRUCTURAL OBSERVATIONS

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

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

Test Vehicle: 2022 Ford F-250 Super Cab
Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
Test Date: 6/27/2022

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	Yes	No
Seat Belt Load Limiter	Yes	No	Yes	No
Other	No	N/A	No	N/A

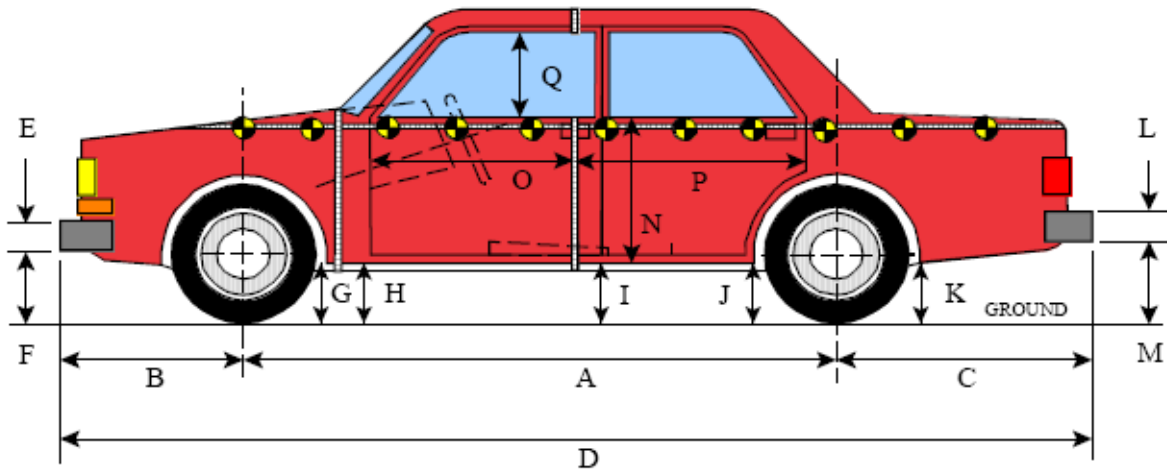
VEHICLE SPEED, VEHICLE ANGLE AT IMPACT AND IMPACT POINT LOCATION DATA

Measured Parameter	Units	Tolerance	Value
Vertical Impact Reference Line (Aft of Front Axle) (Intended Impact Point)	mm		1315
Actual Impact Point (Aft of Front Axle)	mm		1318
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	32.36
Trap No. 2 Velocity (Redundant)	km/h	31.4 to 33.0	32.37

**DATA SHEET NO. 9
VEHICLE PROFILE MEASUREMENTS**

Test Vehicle: 2022 Ford F-250 Super Cab
Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
Test Date: 6/27/2022



LEFT SIDE VIEW

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

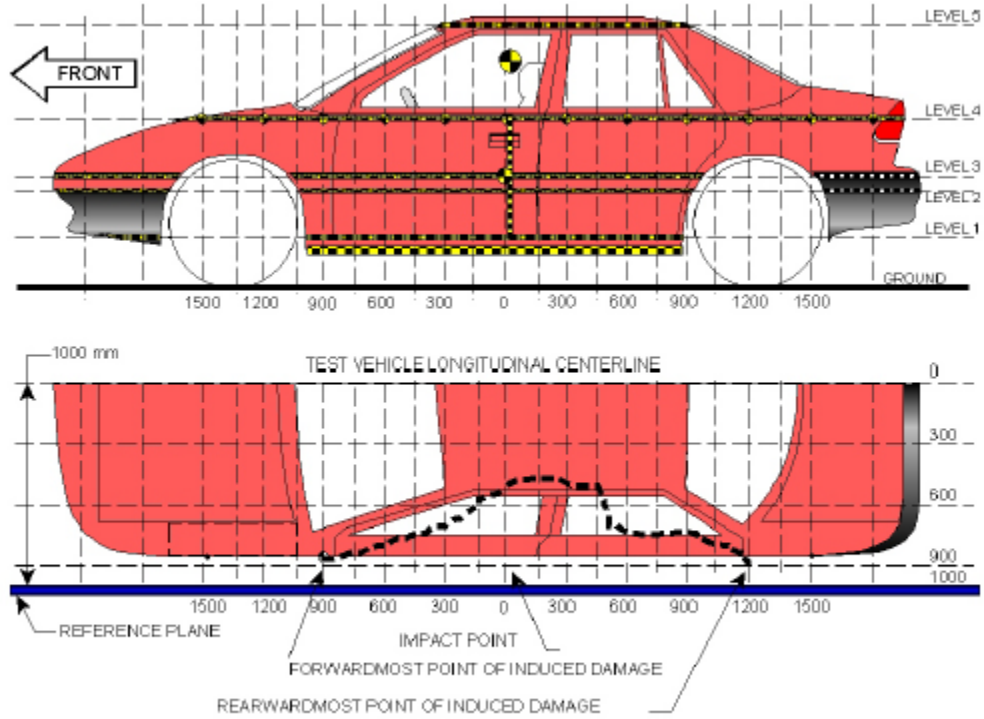
VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	3766	3738	28
B	Front Axle to Front Surface of Vehicle	937	937	0
C	Rear Axle to Rear Surface of Vehicle	1327	1327	0
D	Total Length at Centerline	6030	6030	0
E	Front Bumper Thickness	273	273	0
F	Front Bumper Bottom to Ground	378	425	-47
G	Sill Height at Front Wheel Well	520	538	-18
H	Sill Height at Front Door Leading Edge	525	541	-16
I	Sill Height at B-Pillar	555	601	-46
J1	Sill Height at Rear Wheel Well	570	596	-26
J2	Pinch Weld Height at Rear Wheel Well	484	509	-25
K	Sill Height Aft of Rear Wheel Well	579	619	-40
L	Rear Bumper Thickness	178	178	0
M	Rear Bumper Bottom to Ground	586	627	-41
N	Sill Height to Bottom of Front Window Sill	952	922	30
O	Front Door Leading Edge to Impact CL	647	509	138
P	Rear Door Trailing Edge to Impact CL	1267	1200	67
Q	Front Window Opening	512	476	36
R	Right Side Length	5833	5825	8
S	Left Side Length	5833	5790	43
T	Vehicle Width at B-Pillars	2023	1960	63
U	Front Wheel Track Width	1730	1730	0
V	Rear Wheel Track Width	1710	1710	0

**DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH MEASUREMENTS**

Test Vehicle: 2022 Ford F-250 Super Cab
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
 Test Date: 6/27/2022



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	637	404	0
2	Occupant H-Point	1032	400	0
3	Mid-Door	883	402	0
4	Window Sill	1232	375	0
5	Window Top	1891	111	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: 2022 Ford F-250 Super Cab
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
 Test Date: 6/27/2022

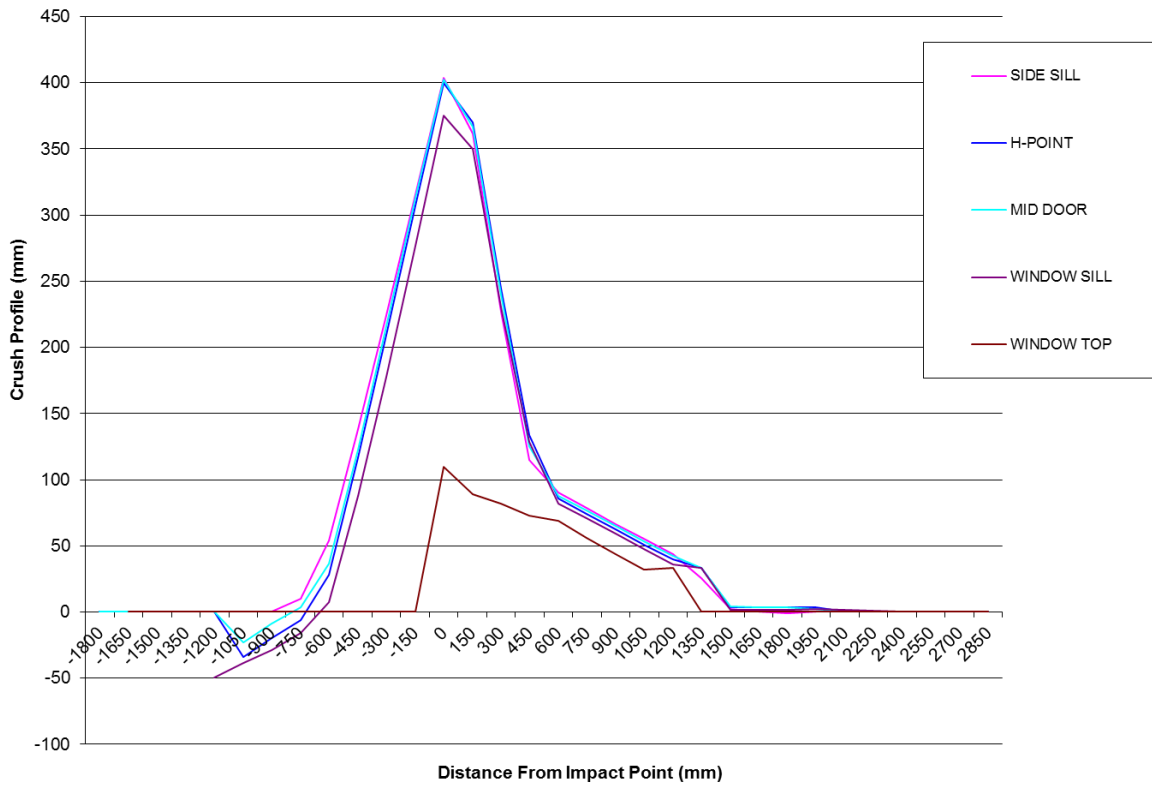
	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-1800	0	931	0	0	0	0	1026	0	0	0	0	-95	0	0	0
-1650	0	955	0	892	0	0	1038	0	981	0	0	-83	0	-89	0
-1500	0	987	0	916	0	0	1056	0	991	0	0	-69	0	-75	0
-1350	0	1002	0	931	0	0	1059	0	994	0	0	-57	0	-63	0
-1200	0	1005	0	943	0	0	1050	0	993	0	0	-45	0	-50	0
-1050	0	999	1015	952	0	0	1033	1037	991	0	0	-34	-22	-39	0
-900	0	991	1012	960	0	0	1011	1021	989	0	0	-20	-9	-29	0
-750	1000	962	995	967	0	990	968	991	983	0	10	-6	4	-16	0
-600	992	997	996	975	0	938	969	960	968	0	54	28	36	7	0
-450	993	1000	999	968	0	854	883	876	881	0	139	117	123	87	0
-300	994	1003	1001	979	0	770	794	785	802	0	224	209	216	177	0
-150	995	1005	1002	985	0	680	698	689	708	0	315	307	313	277	0
0	996	1007	1003	989	707	592	607	601	614	596	404	400	402	375	111
150	996	1009	1005	993	720	634	639	638	643	631	362	370	367	350	89
300	997	1010	1006	996	727	770	766	766	765	645	227	244	240	231	82
450	997	1012	1007	999	732	881	879	882	871	659	116	133	125	128	73
600	994	1010	1005	999	734	903	924	917	918	665	91	86	88	81	69
750	992	1009	1004	1000	737	913	936	928	929	681	79	73	76	71	56
900	991	1009	1004	1000	741	924	947	940	941	697	67	62	64	59	44
1050	990	1009	1004	1000	744	935	958	951	953	712	55	51	53	47	32
1200	988	1008	1003	1000	720	945	968	961	964	686	43	40	42	36	34
1350	957	979	976	971	0	931	945	943	938	0	26	34	33	33	0
1500	976	997	991	992	0	975	993	987	990	0	1	4	4	2	0
1650	976	998	991	992	0	976	994	987	990	0	0	4	4	2	0
1800	991	998	995	992	0	992	994	991	990	0	-1	4	4	2	0
1950	0	1004	1014	990	0	0	1001	1012	988	0	0	3	2	2	0
2100	0	1014	0	988	0	0	1013	0	987	0	0	1	0	1	0
2250	0	1013	0	987	0	0	1014	0	986	0	0	-1	0	1	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: 2022 Ford F-250 Super Cab
Test Program: SPNCAP Side Impact

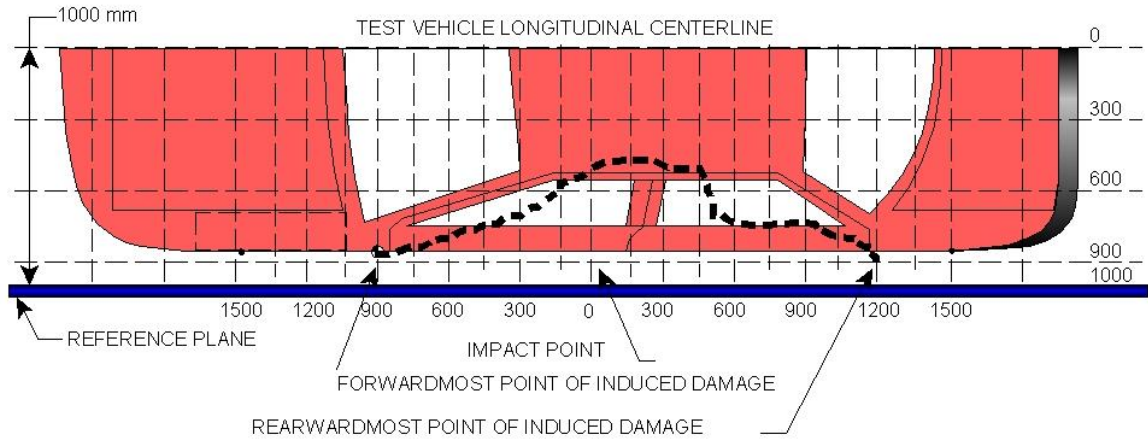
NHTSA No.: M20220207
Test Date: 6/27/2022



**DATA SHEET NO. 11
VEHICLE DAMAGE PROFILE DISTANCES**

Test Vehicle: 2022 Ford F-250 Super Cab
Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
Test Date: 6/27/2022



VEHICLE DAMAGE PROFILE DISTANCES

DPD	Distance From Impact Point (mm)	Level	Post-Test (mm)	Pre-Test (mm)	Crush (mm)
1	2250	4	9867	987	1
2	1650	2	994	998	4
		3	987	991	4
3	1050	1	935	990	55
4	450	2	879	1012	133
5	-150	1	680	995	315
6 ¹	-750	3	991	995	0

¹ DPD 6 is 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

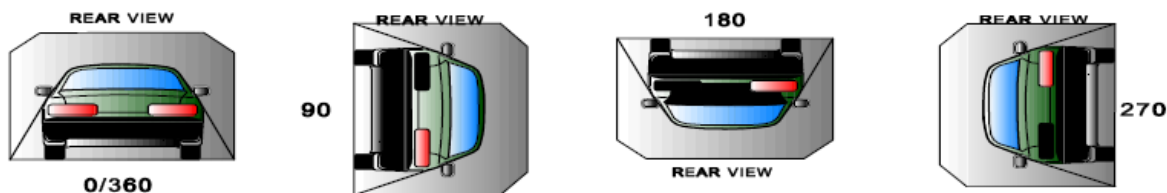
Test Vehicle: 2022 Ford F-250 Super Cab
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
 Test Date: 6/27/2022

Test Time: 12:54 **Temperature:** 21.6°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

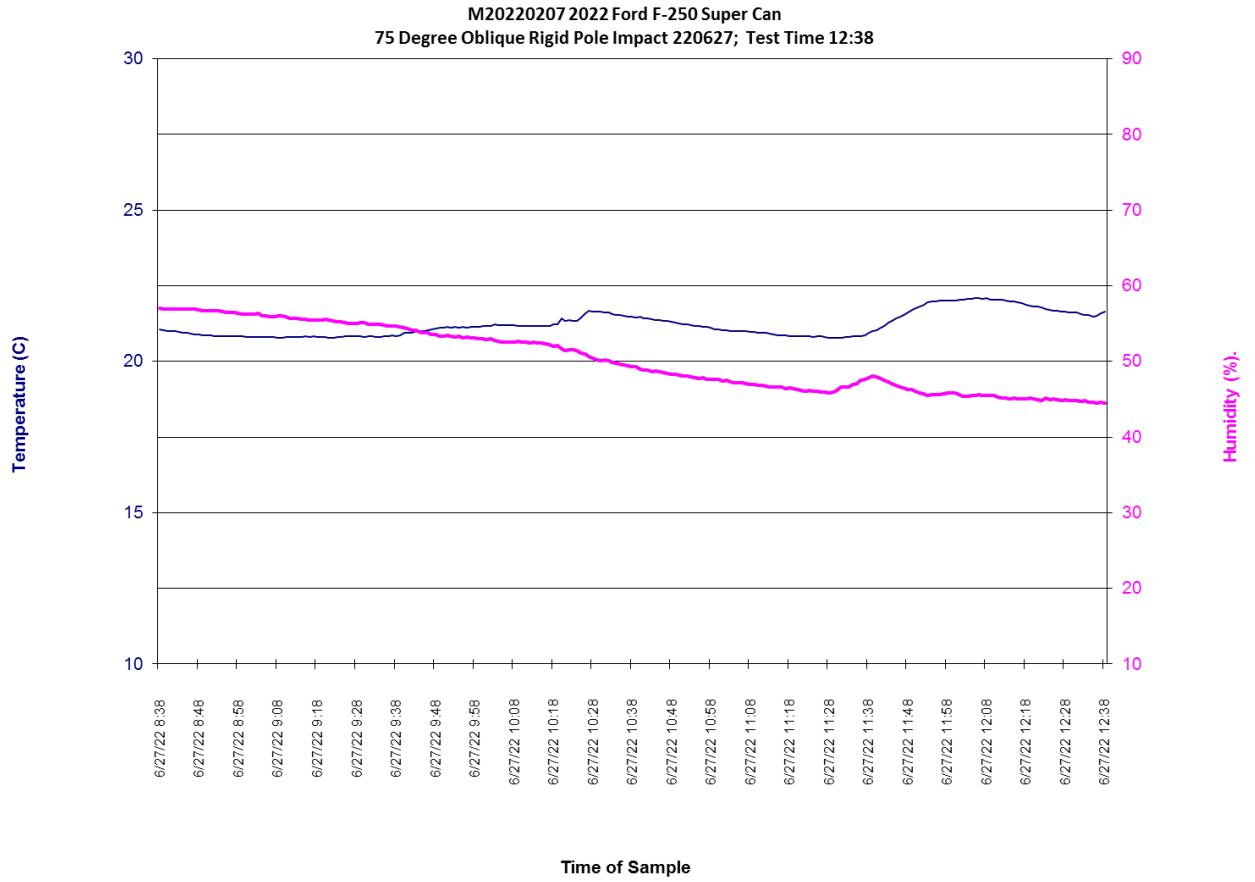
ROLLOVER SOLVENT SPILLAGE LOCATION TABLE

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: 2022 Ford F-250 Super Cab
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220207
 Test Date: 6/27/2022



**APPENDIX A
PHOTOGRAPHS**

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50	Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View	A-29
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73	Post-Test View of Shattered Vehicle Inner Door Panel	A-41



No. 001 As Delivered Right Front ¾ View of Test Vehicle



No. 002 As Delivered Left Rear ¾ View of Test Vehicle



No. 003 Pre-Test Frontal View of Test Vehicle



No. 004 Post-Test Frontal View of Test Vehicle



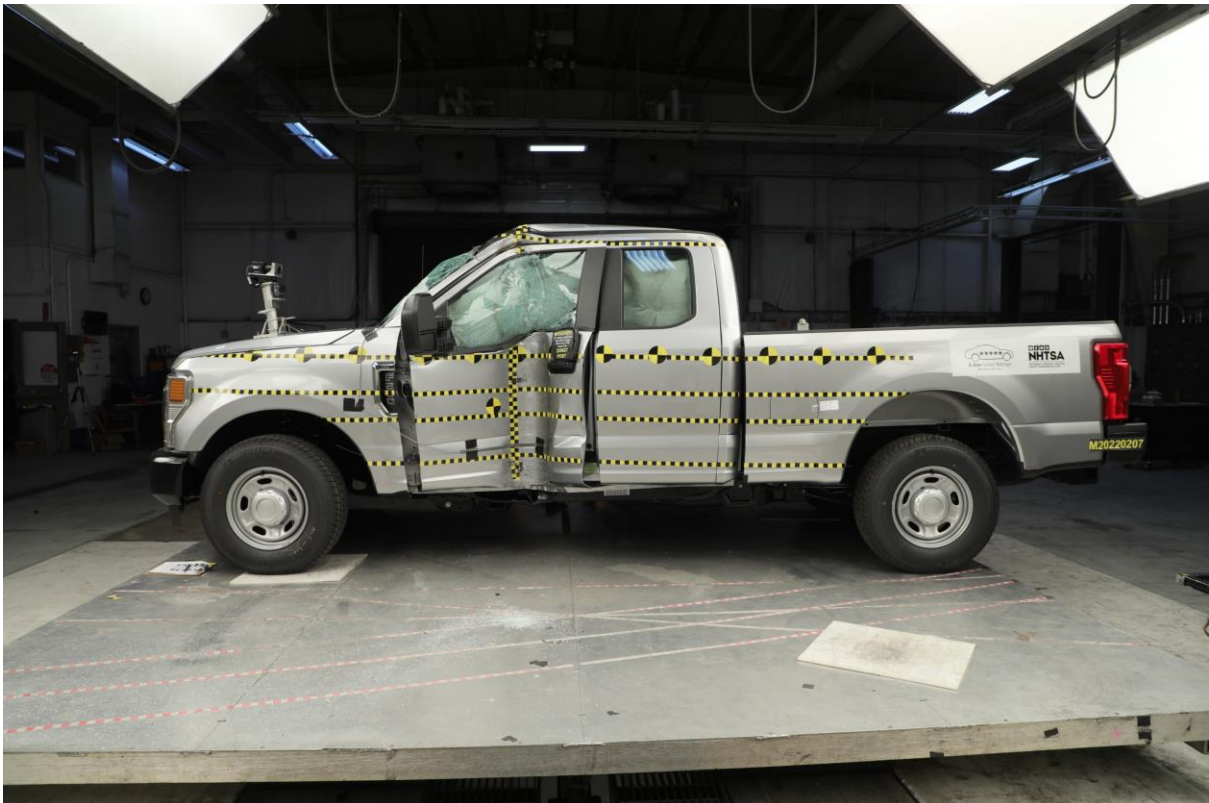
No. 005 Pre-Test Left Front ¾ View of Test Vehicle



No. 006 Post-Test Left Front ¾ 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 3/4 View of Test Vehicle



No. 010 Post-Test Left Rear 3/4 View of Test Vehicle



No. 011 Pre-Test Rear View of Test Vehicle



No. 012 Post-Test Rear View of Test Vehicle



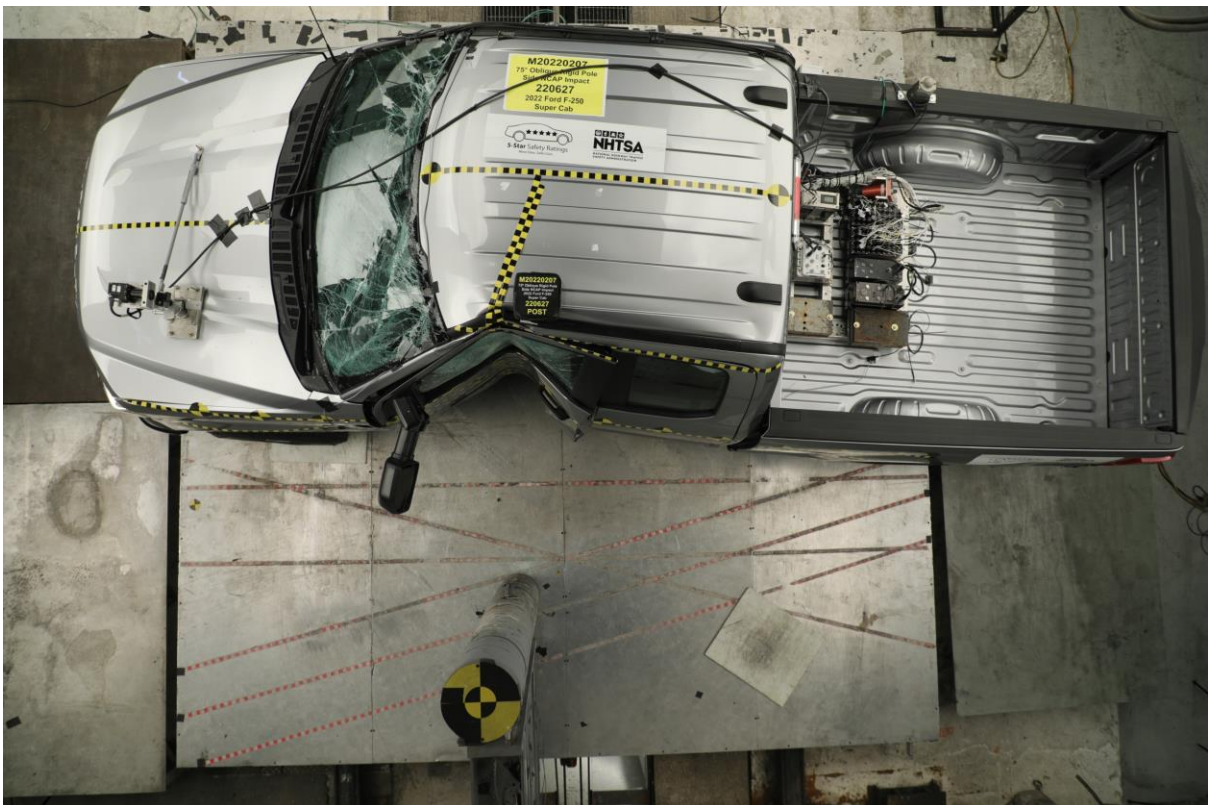
No. 013 Pre-Test Right Side View of Test Vehicle



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

Intentionally Left Blank



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



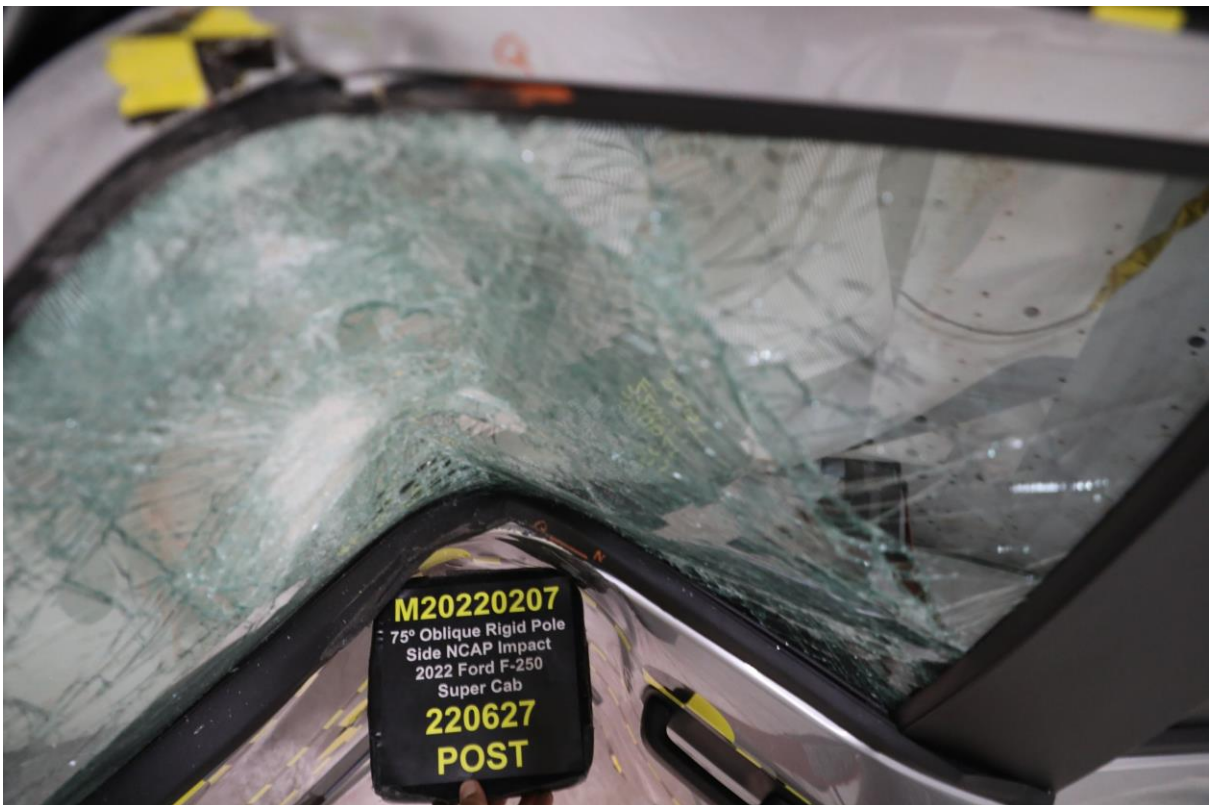
No. 038 Pre-Test Close-Up Left Side View of Driver Seat Back



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



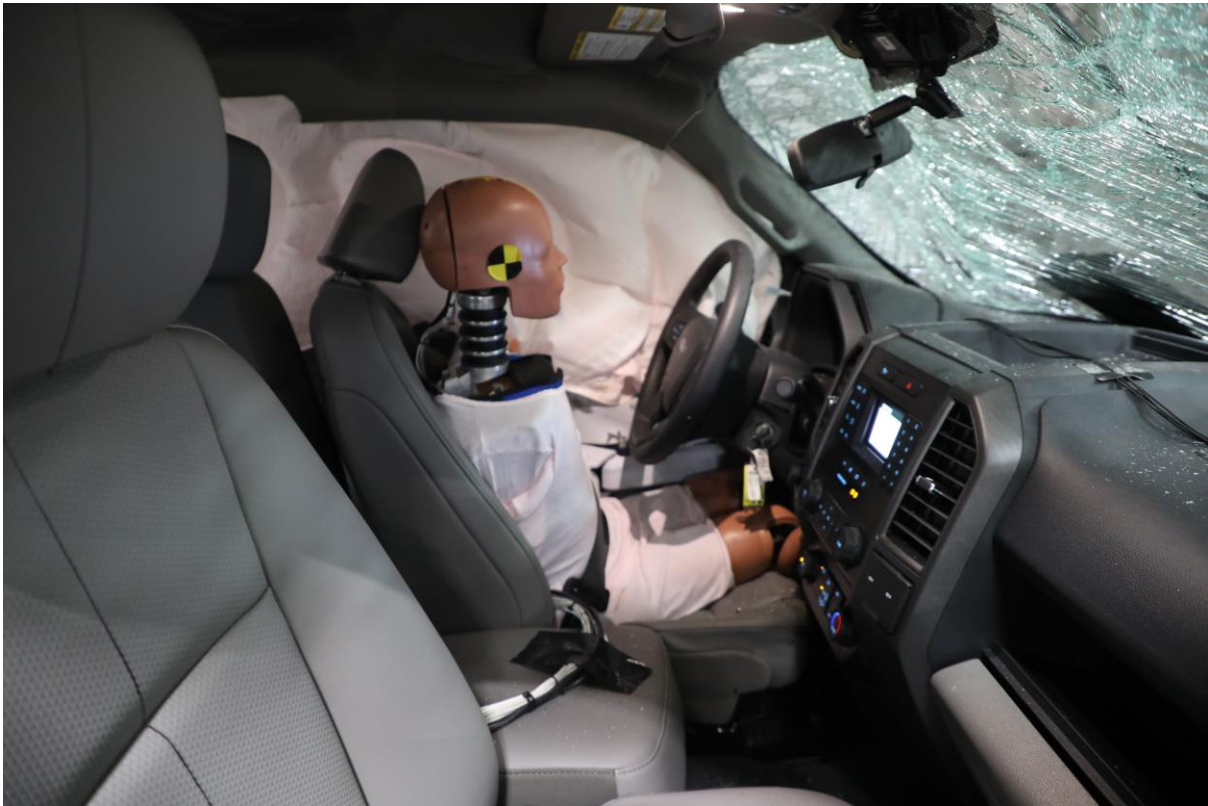
No. 040 Pre-Test Dummy and Door Clearance View



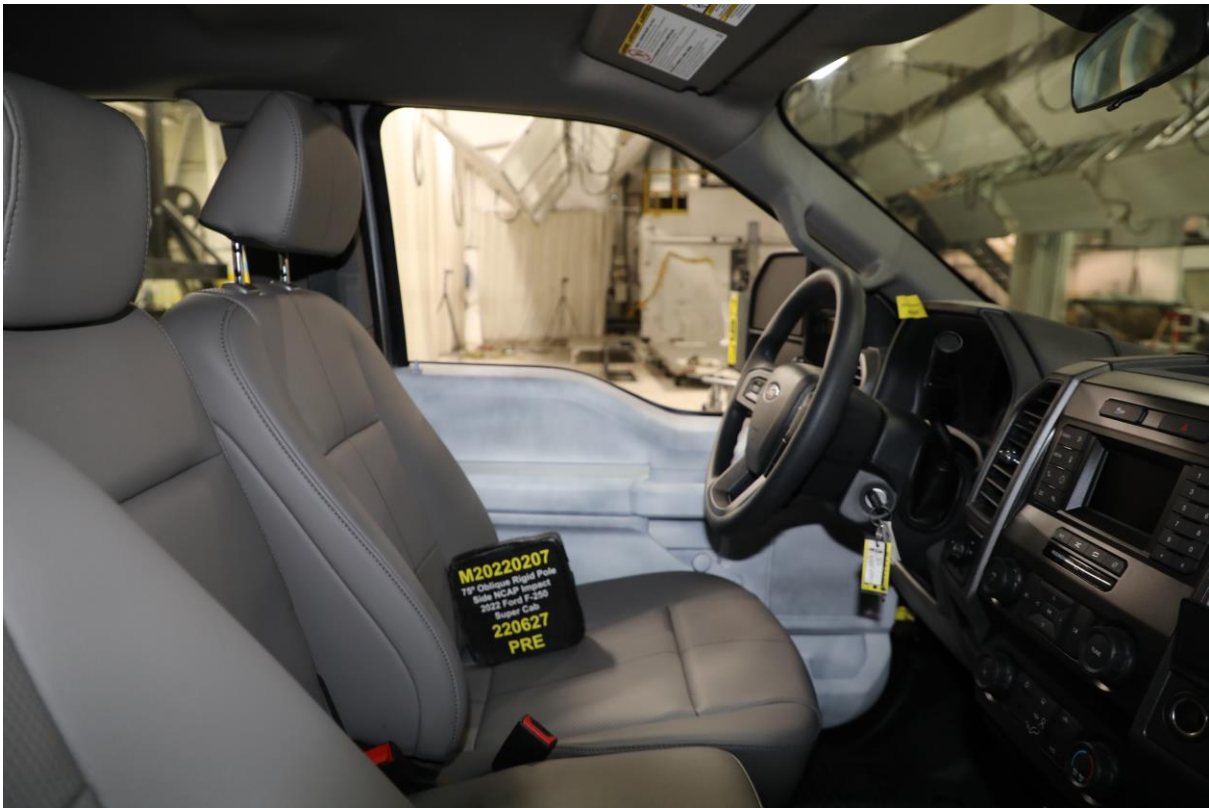
No. 041 Post-Test Dummy and Door Clearance View



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

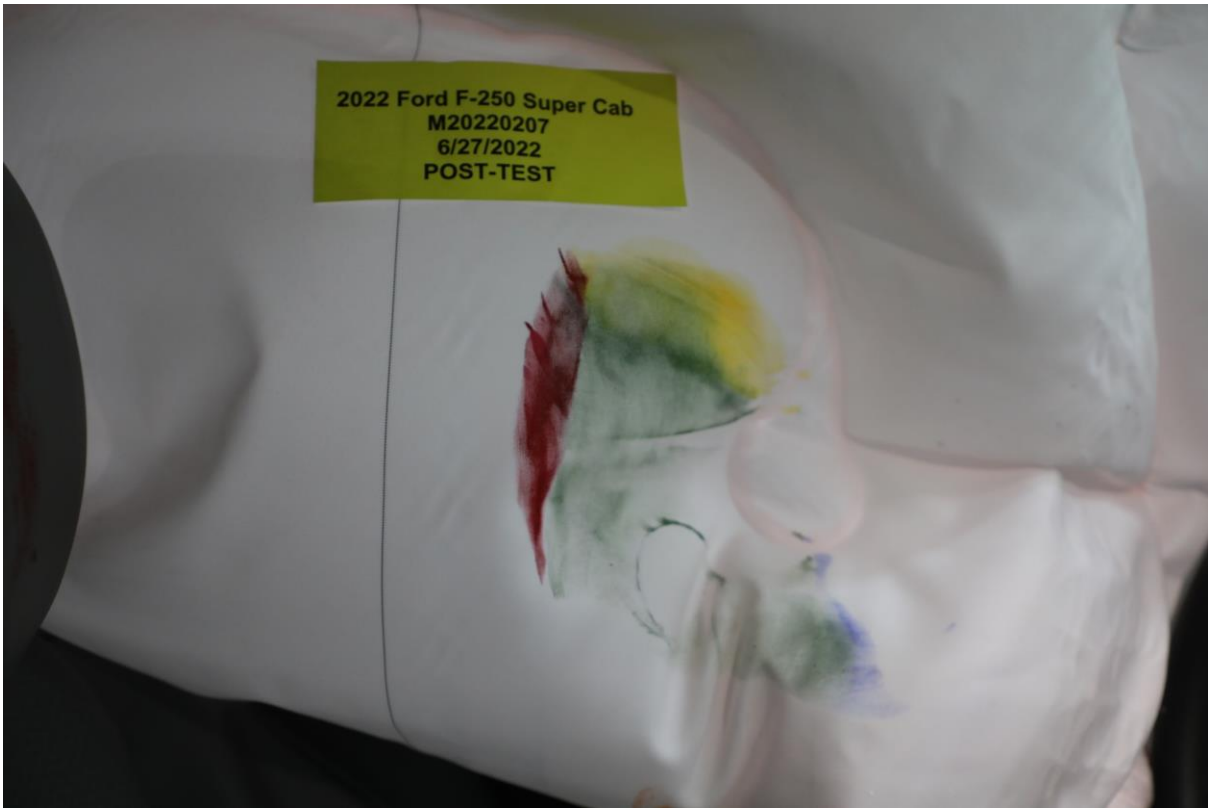


No. 045 Post-Test Inner Door Panel View Showing Dummy Contact Location

PHOTO NOT APPLICABLE

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

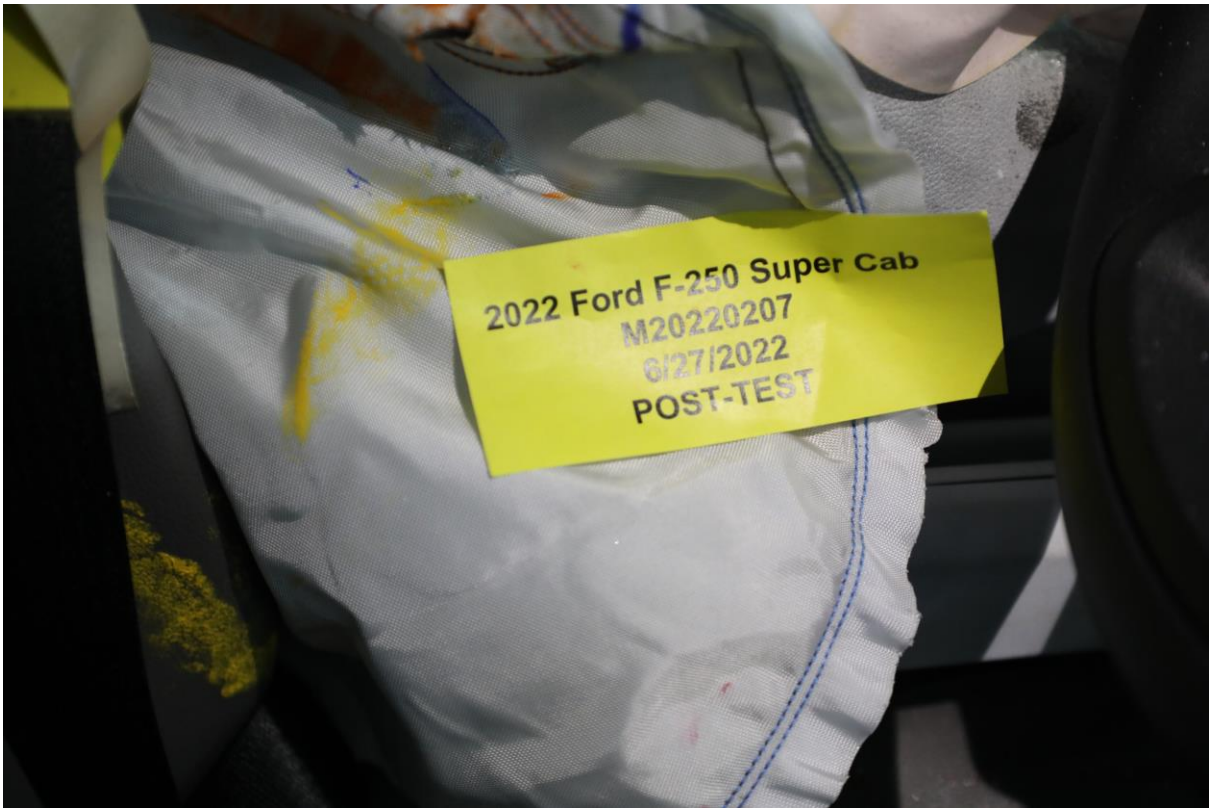
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No. 047 Post-Test Dummy Close-Up Head Contact with Side Airbag View



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



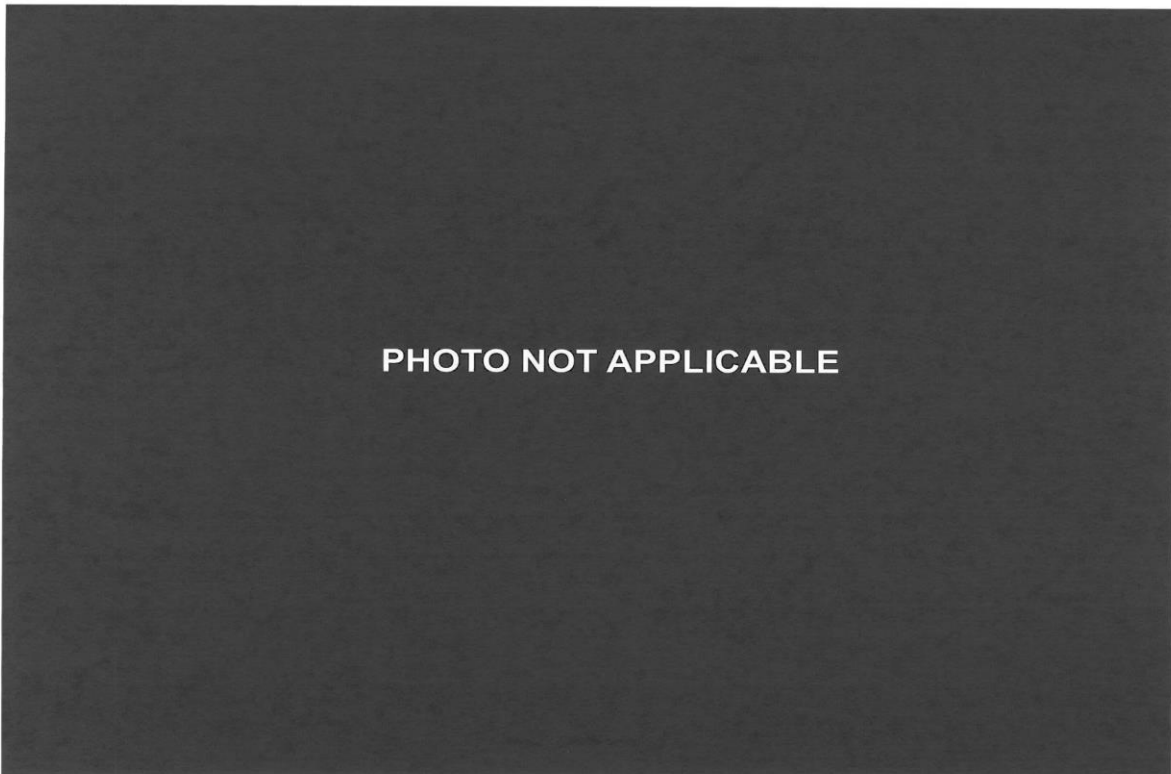
No. 049 Post-Test Dummy Close-Up Torso Contact with Side Airbag View



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



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



PHOTO NOT AVAILABLE

**No. 053 Post-Test Right Side View of Dummy and Rear Seat of Occupant
Compartment**



PHOTO NOT APPLICABLE

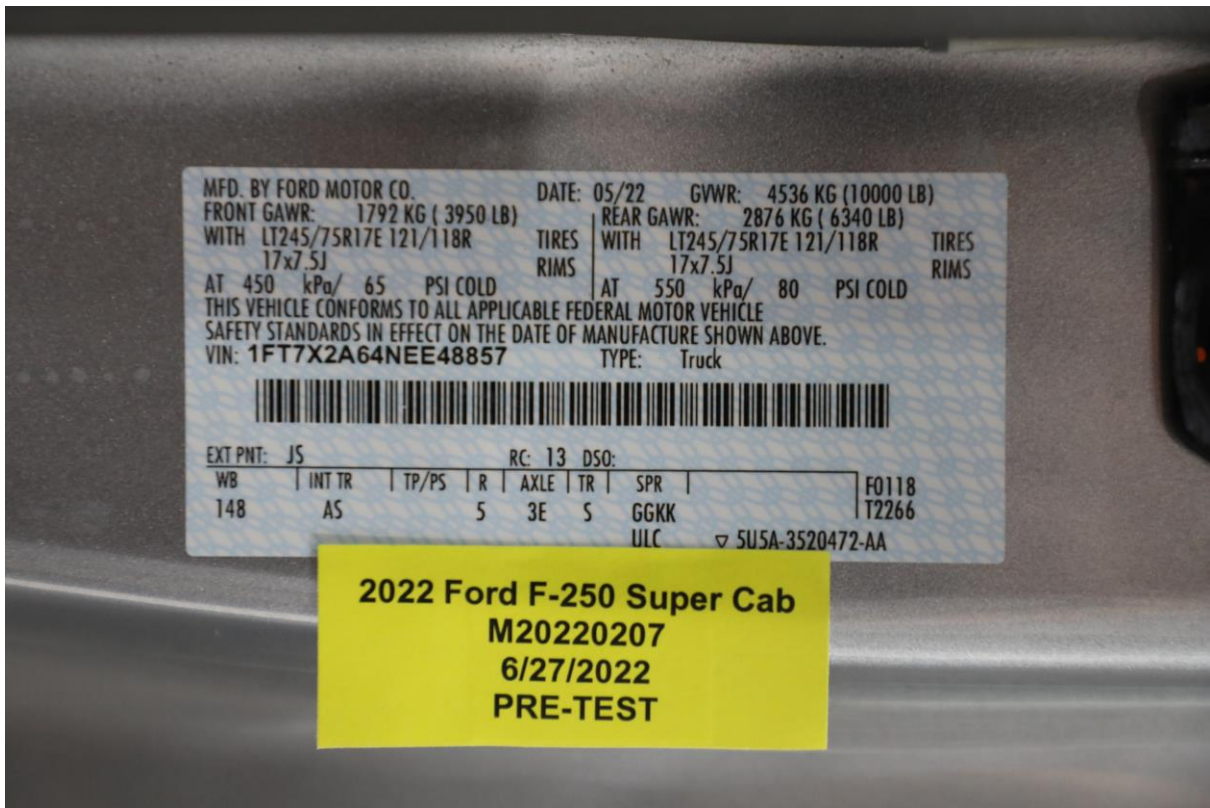
No. 054 Post-Test Inner Rear Passenger Torso Air Bag Deployment View



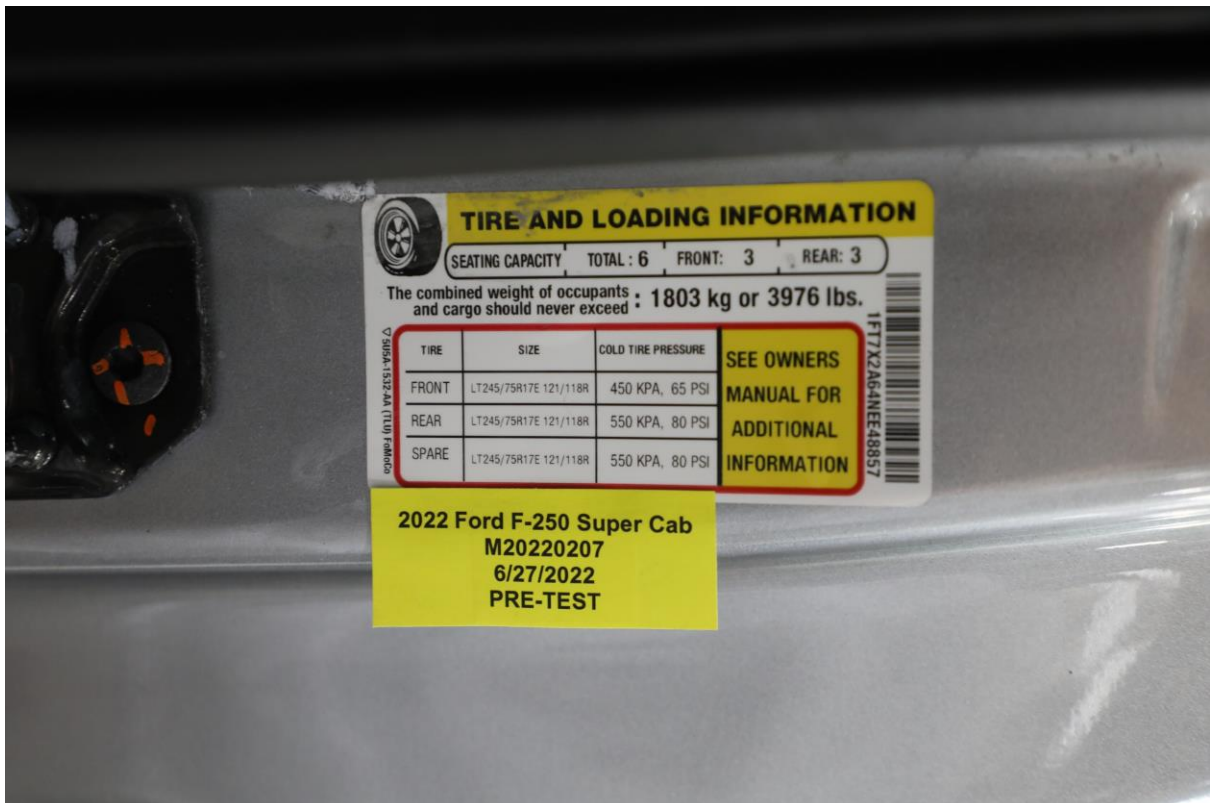
No. 55 Pre-Test View of Fuel Filler Cap or Fuel Filler Neck



No. 056 Post-Test View of Fuel Filler Cap or Fuel Filler Neck



No. 057 Close-Up View of Vehicle Certification Label



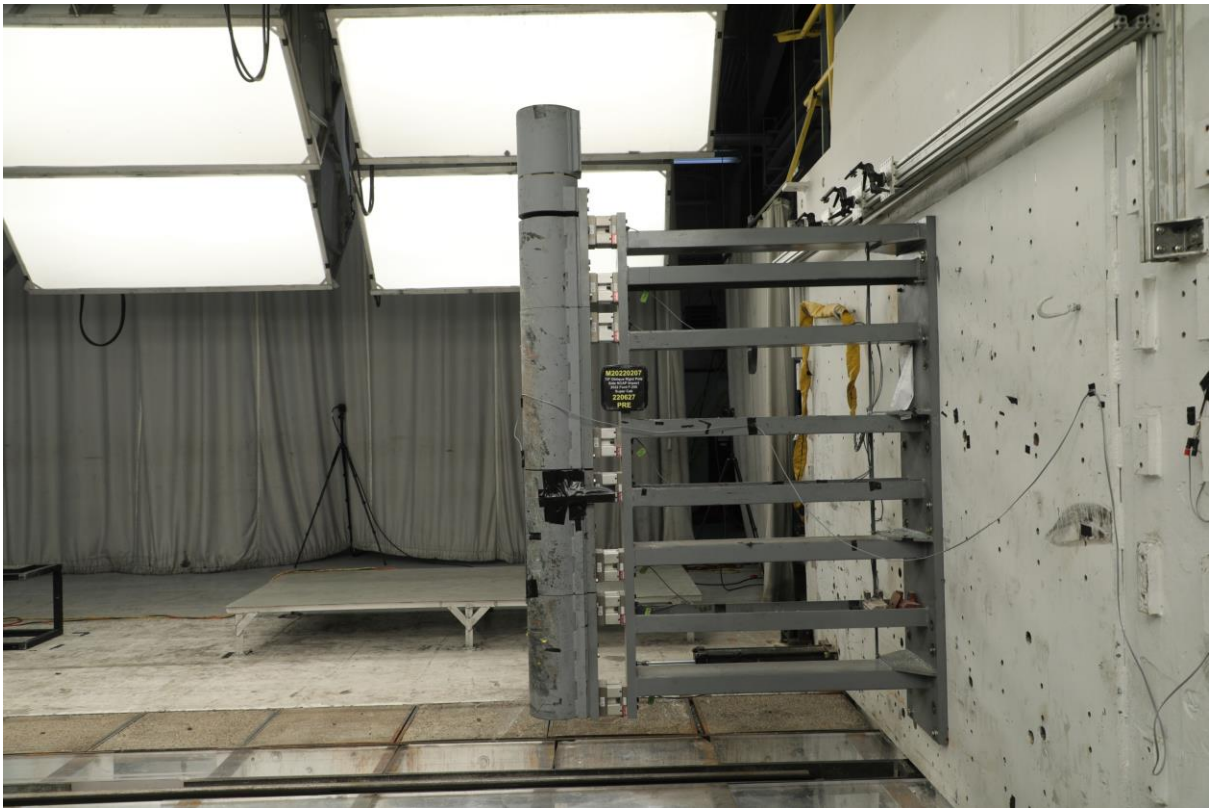
No. 058 Close-Up View of Vehicle Tire Information Placard or Label



No. 059 Pre-Test Pole Barrier Front View



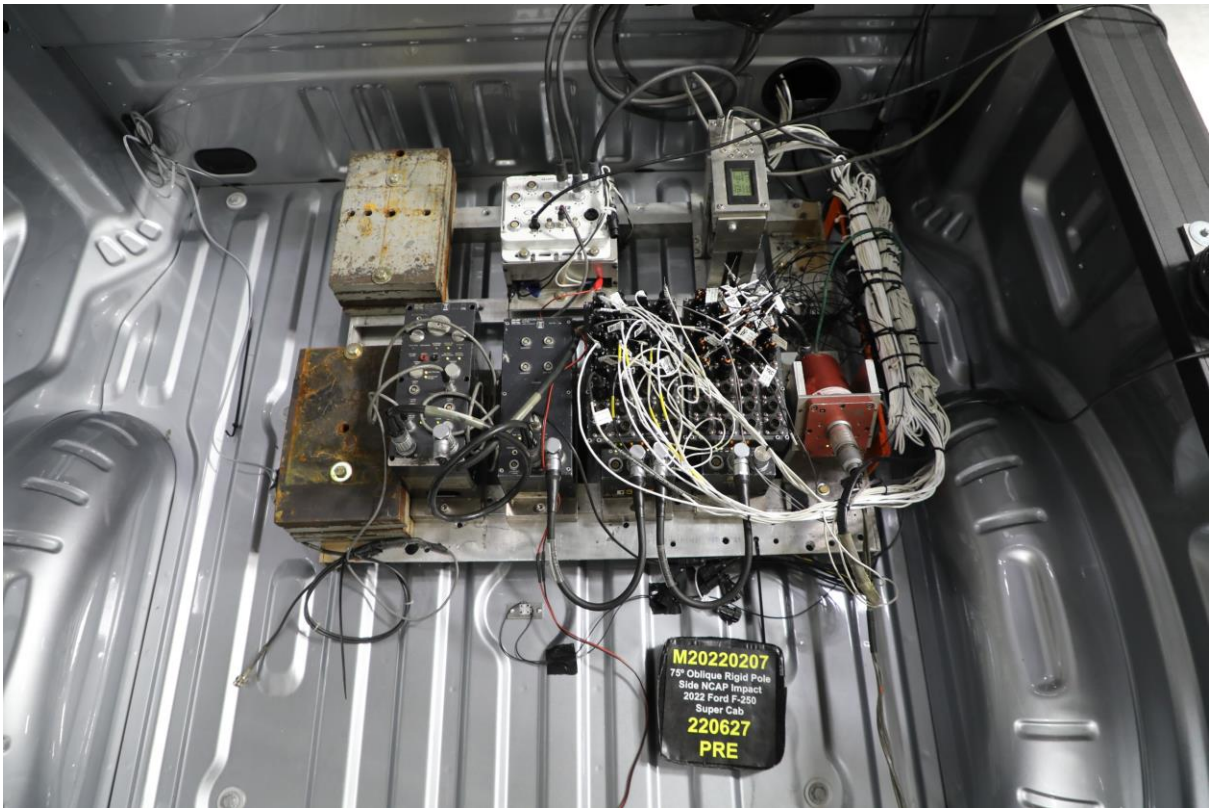
No. 060 Post-Test Pole Barrier Front View



No. 061 Pre-Test Pole Barrier Side View



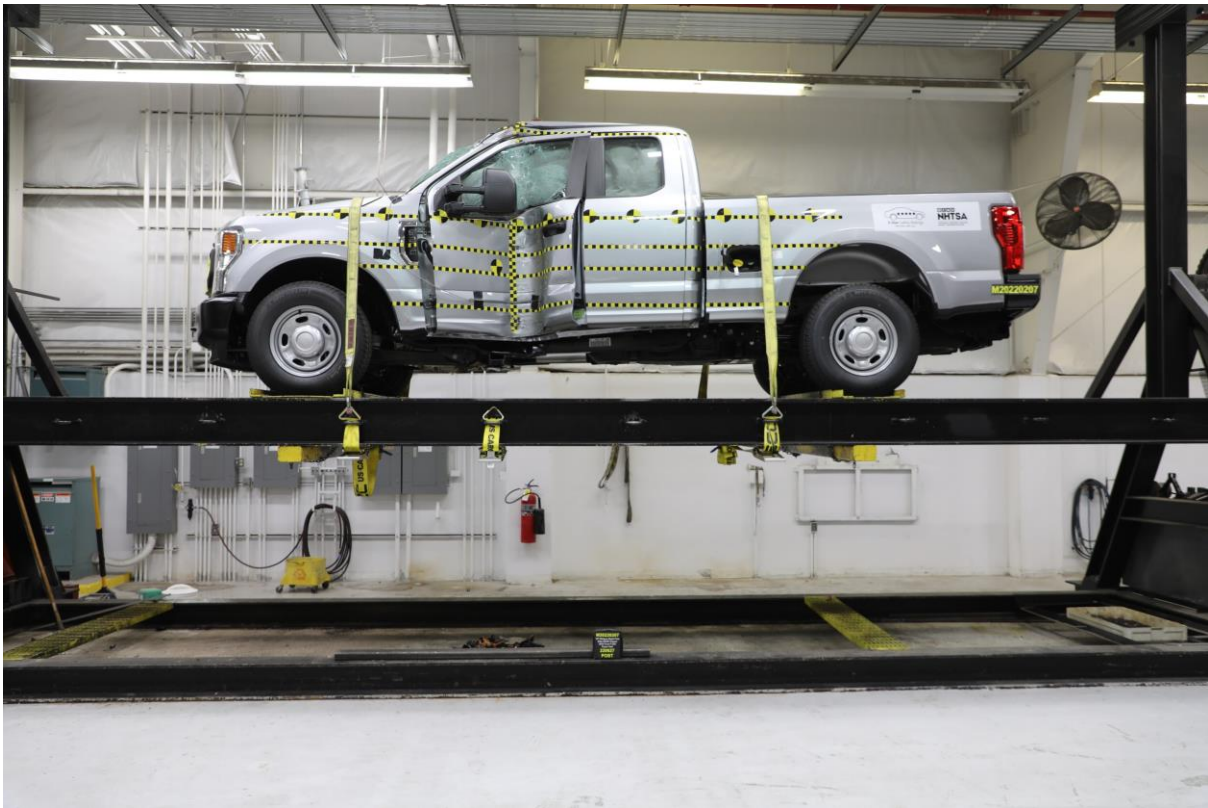
No. 062 Post-Test Pole Barrier Side View



No. 063 Pre-Test Ballast View



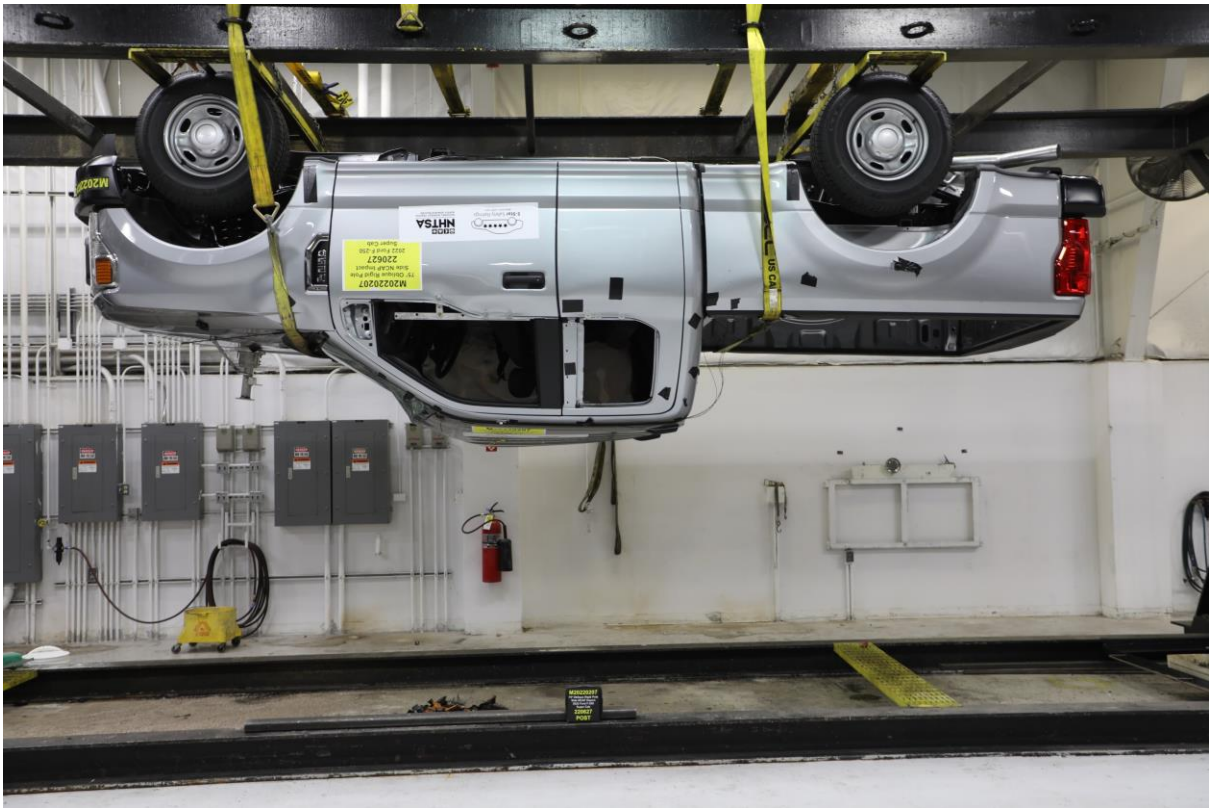
No. 064 Post-Test Primary and Redundant Speed Trap Read Out



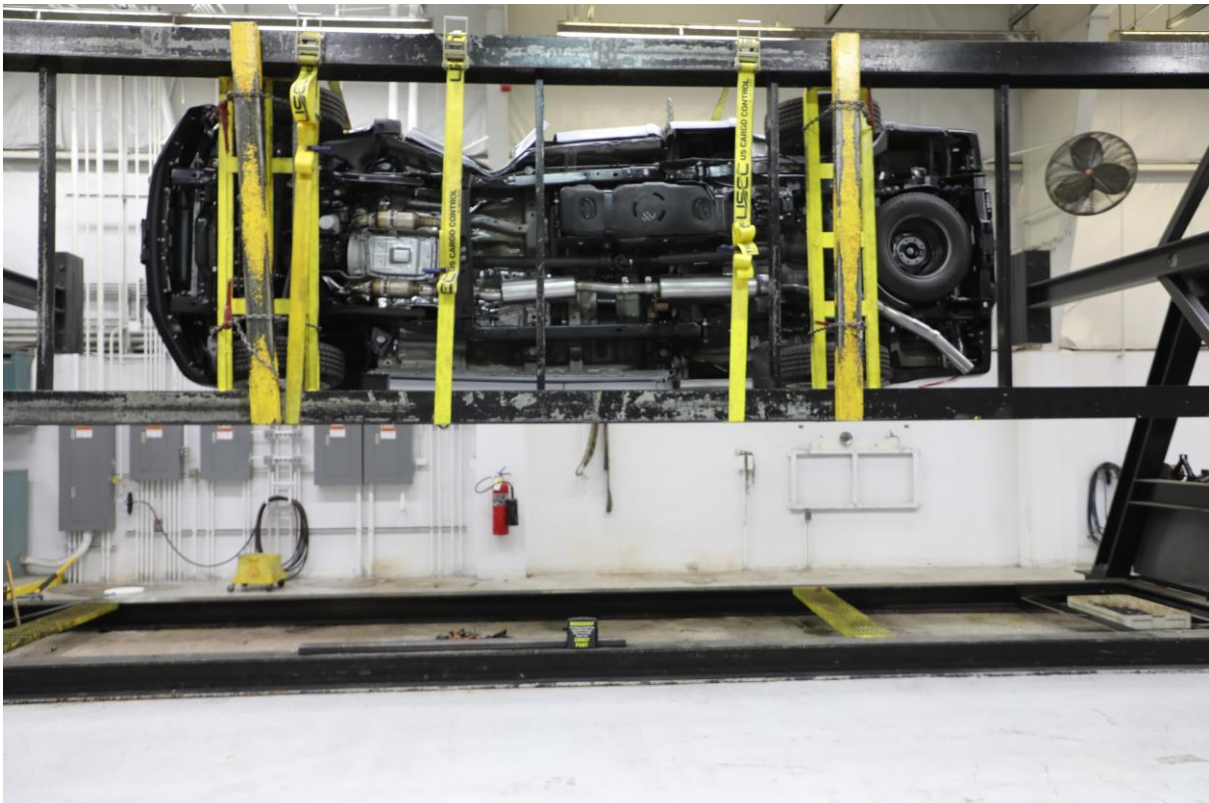
No. 065 FMVSS No. 301 Static Rollover 0 Degrees



No. 066 FMVSS No. 301 Static Rollover 90 Degrees



No. 067 FMVSS No. 301 Static Rollover 180 Degrees




No. 068 FMVSS No. 301 Static Rollover 270 Degrees



No. 069 FMVSS No. 301 Static Rollover 360 Degrees



No. 070 Impact Event

 Go Further ford.com		VEHICLE DESCRIPTION SUPER DUTY 2022 F250 SRW 4x2 SUPER CAB XL 146" WB STYLE SIDE 6.2L EFI V-8 ENGINE 6-SPEED AUTOMATIC TRANS G		NE E48857 EXTERIOR ICONIC SILVER INTERIOR MEDIUM EARTH GRAY VINYL		California Air Resources Board Flexible-Fuel Vehicle Gasoline-Ethanol (E85)			
STANDARD EQUIPMENT INCLUDED AT NO EXTRA CHARGE									
EXTERIOR • BOX RAIL/TAILGATE MOLDINGS • DOOR HANDLES - BLACK • HEADLAMPS - AUTOLAMP (ON/OFF) • LOCKING REMOVABLE TAILGATE • PICKUP BOX, TIE DOWN HOOKS • NA W/BOX DLT • SPARE TIRE AND WHEEL LOCK • NA W/BOX DLT • TOW HOOKS • TRAILER SWAY CONTROL • WIPERS - INTERMITTENT		INTERIOR • 60/40 FOLD-UP REAR BENCH SEAT • AIR COND. MANUAL FRONT • DRIVER SEAT MANUAL LUMBAR • OUTSIDE TEMP DISPLAY • PARTICULATE AIR FILTER • STEERING - 13.7" TELESCOPIC • WHEEL WITH AUDIO • VINYL SUN VISORS		FUNCTIONAL • 4-WHEEL ANTILOCK BRAKE SYS • FORDPASSIVE CONNECT 4GV-F1 • HOTSPOT TELEMATICS MODEM • HILL START ASSIST • JEWEL EFFECT HEADLAMPS • MYKEY • REAR VIEW CAMERA • NA W/BOX DLT • TWIN I-BEAM INDEPENDENT FRNT SUSPENSION W/STAB BAR		SAFETY/SECURITY • ADVANCEDTRAC SM WITH RSCB • AIRBAGS - SAFETY CANOPY SM • BELT-MINDER CHIME • DRIVER/PASSENGER AIR BAGS • SECURILOCK SM ANTI-THEFT SYS SM • SOS POST-CRASH ALERT SYS SM		WARRANTY • 3YR/50,000 BUMPER / BUMPER • 5YR/60,000 POWERTRAIN • 5YR/100,000 ROADSIDE ASSIST • 5YR/100,000 DIESEL ENGINE	
INCLUDED ON THIS VEHICLE OPTIONAL EQUIPMENT/OTHER PREFERRED EQUIPMENT PKG.00A 6-SPEED AUTOMATIC TRANS G 3.73 ELECTRONIC-LOCKING AXLE FRONT LICENSE PLATE BRACKET 10000R GWHV PACKAGE 50 STATE EMISSIONS SPARE TIRE AND WHEEL JACK		(MSRP) NO CHARGE 430.00 NO CHARGE NO CHARGE		PRICE INFORMATION BASE PRICE \$40,230.00 TOTAL OPTIONS/OTHER 430.00 TOTAL VEHICLE & OPTIONS/OTHER 40,660.00 DESTINATION & DELIVERY 1,795.00		(MSRP) \$40,230.00 430.00 40,660.00 1,795.00			
SOLD TO Ferrario Ford 2472 Corning Road Elmira NY 14903 <small>MSRP TO OTHER THAN SOLD TO</small>		RAAMP ONE RA46 METHOD OF TRANSF. RAIL ITEM # 13-B223 O/T 1		RAAMP TWO		TOTAL MSRP \$42,455.00 Whether you decide to lease or finance your vehicle, you'll find the choices that are right for you. See your dealer for details or visit www.ford.com/finance . SPECIAL ORDER NE021 N RB 2X 260 001323 05 02 22			
<small>MSRP THROUGHOUT</small> This label is affixed pursuant to the Federal Automobile Information Disclosure Act. Gasoline, License, and Title Fees, State and Local taxes are not included. Dealer installed options or accessories are not included unless listed above.		FORD CREDIT		FORD PROTECT Insist on Ford Protect! The only extended service plan fully backed by Ford and honored at every Ford dealership in the U.S., Canada and Mexico. See your Ford dealer or visit www.FordOwner.com .		45 YEARS BUILT TOUGH F-SERIES AMERICA'S BEST SELLING TRUCKS The FordPass SM Connect system is active and sending vehicle data (e.g., diagnostics) to Ford SM . See in-vehicle settings for connectivity options. <small>*Based on 1977-2021 CY total sales. **FordPass Connect (option on select vehicles), the FordPass App and companion(s) Connected Service are required for remote features. See FordPass Terms for details. Connected service and features depend on connectivity, AT&T network availability. Evolving technology/vulnerability network/cybersecurity capability may limit functionality and prevent operation of connected features. Connected service excludes 911/first-aid.</small>			
GOVERNMENT 5-STAR SAFETY RATINGS Overall Vehicle Score Not Rated <small>Based on the combined ratings of frontal, side and rollover. Should ONLY be compared to other vehicles of similar size and weight.</small>		Frontal Crash Driver Passenger ★★★★★ <small>Based on the risk of injury in a frontal impact. Should ONLY be compared to other vehicles of similar size and weight.</small>		Side Crash Front seat Not Rated Rear seat Not Rated <small>Based on the risk of injury in a side impact.</small>		Rollover ★★★★★ <small>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</small>			
Environmental Performance These ratings are not directly comparable to the U.S. EPA/DOT light-duty vehicle label ratings. For information on how to compare, please see www.arb.ca.gov/ep_label .		Greenhouse Gas Rating (tailpipe only) Cleaner D		Smog Rating (tailpipe only) Cleaner B+		Using alternative fuels may change scores. Vehicle emissions are a primary contributor to climate change and smog. Ratings are determined by the California Air Resources Board based on this vehicle's measured emissions.			
California Air Resources Board Flexible-Fuel Vehicle Gasoline-Ethanol (E85)		Protect the environment. Choose vehicles with higher ratings:		Government 5-Star Safety Ratings		45 YEARS BUILT TOUGH F-SERIES AMERICA'S BEST SELLING TRUCKS			
Environmental Performance These ratings are not directly comparable to the U.S. EPA/DOT light-duty vehicle label ratings. For information on how to compare, please see www.arb.ca.gov/ep_label .		Greenhouse Gas Rating (tailpipe only) Cleaner D		Smog Rating (tailpipe only) Cleaner B+		Using alternative fuels may change scores. Vehicle emissions are a primary contributor to climate change and smog. Ratings are determined by the California Air Resources Board based on this vehicle's measured emissions.			
GOVERNMENT 5-STAR SAFETY RATINGS Overall Vehicle Score Not Rated <small>Based on the combined ratings of frontal, side and rollover. Should ONLY be compared to other vehicles of similar size and weight.</small>		Frontal Crash Driver Passenger ★★★★★ <small>Based on the risk of injury in a frontal impact. Should ONLY be compared to other vehicles of similar size and weight.</small>		Side Crash Front seat Not Rated Rear seat Not Rated <small>Based on the risk of injury in a side impact.</small>		Rollover ★★★★★ <small>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</small>			
California Air Resources Board Flexible-Fuel Vehicle Gasoline-Ethanol (E85)		Protect the environment. Choose vehicles with higher ratings:		Government 5-Star Safety Ratings		45 YEARS BUILT TOUGH F-SERIES AMERICA'S BEST SELLING TRUCKS			

No. 071 Monroney Label

REMOVING THE HEAD RESTRAINT

1. Pull up the head restraint until it reaches the highest adjustment position.
2. Press and hold the adjust and release button and the unlock and remove button.
3. Pull up the head restraint.

Note: Your vehicle may have a front row center head restraint that you cannot adjust or remove.

Front Seats

INSTALLING THE HEAD RESTRAINT

Align the steel stems into the guide sleeves and push the head restraint down until locks.

MOVING THE SEAT BACKWARD AND FORWARD

WARNING: Do not adjust the driver seat or seat backrest when your vehicle is moving. This may result in sudden seat movement, causing the loss of control of your vehicle.

WARNING: Make sure the seat fully locks into place by rocking it backward and forward. Not securing the seat into the locked position can be dangerous in a crash and could cause serious personal injury or death.



No. 072 Head Restraint Use and Adjustment Information from Vehicle Owner Manual

A-40

PHOTO NOT APPLICABLE

No. 073 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.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)
Driver Head Angular Velocity (X)
Driver Head Angular Velocity (Y)
Driver Head Angular Velocity (Z)

Vehicle Instrumentation Data

- Vehicle Center of Gravity Acceleration (X)
- Vehicle Center of Gravity Acceleration (Y)
- Vehicle Center of Gravity Acceleration (Z)
- Left Floor Sill Acceleration (Y)
- Left A-Pillar Sill Acceleration (Y)
- Left Lower A-Pillar Acceleration (Y)
- Left Mid A-Pillar Acceleration (Y)
- Left B-Pillar Sill Acceleration (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

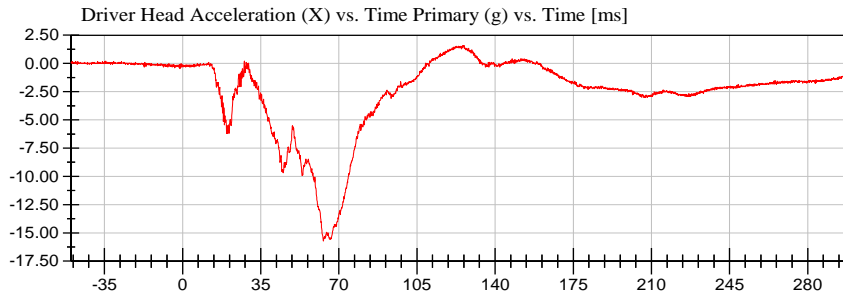
- Load Cell Pole Barrier #1 Force (X)
- Load Cell Pole Barrier #2 Force (X)
- Load Cell Pole Barrier #3 Force (X)
- Load Cell Pole Barrier #4 Force (X)
- Load Cell Pole Barrier #5 Force (X)
- Load Cell Pole Barrier #6 Force (X)
- Load Cell Pole Barrier #7 Force (X)
- Load Cell Pole Barrier #8 Force (X)

NHTSA

Test Lab: CTF
Test Number: 220627 (M20220207)

Position #1 SID IIs Dummy (297)

Test Date: 06/27/2022



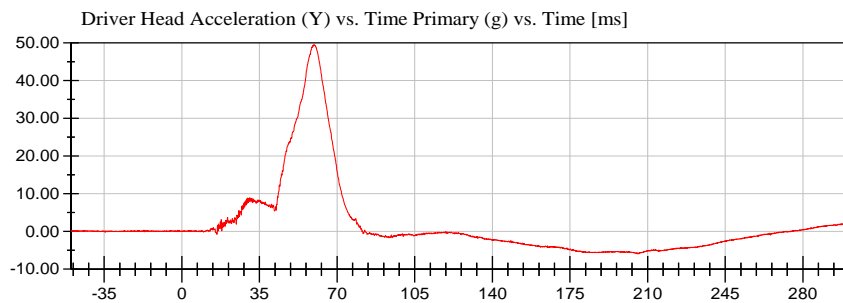
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-15.74 g at 63.04 ms

CFC_1000



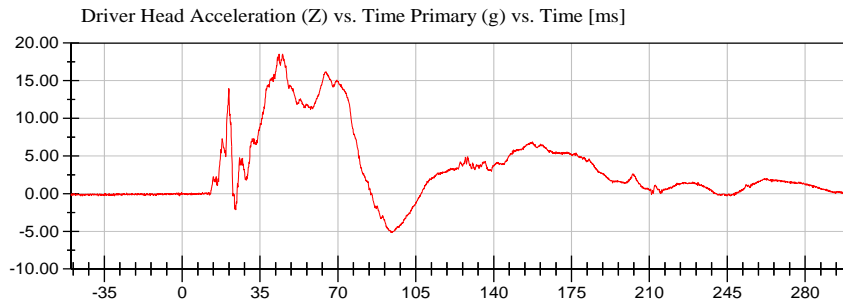
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49.54 g at 59.52 ms

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-5.93 g at 204.80 ms

CFC_1000



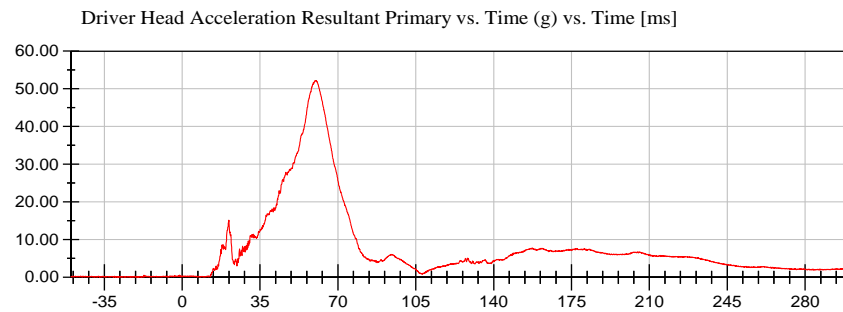
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18.54 g at 43.60 ms

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-5.16 g at 93.76 ms

CFC_1000



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52.22 g at 60.08 ms

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0.04 g at 8.00 ms

CFC_1000



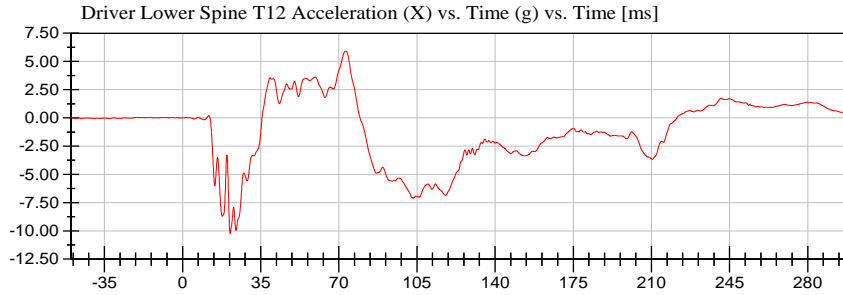
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Position #1 SID IIs Dummy (297)

Test Date: 06/27/2022

Test Lab: CTF

Test Number: 220627 (M20220207)



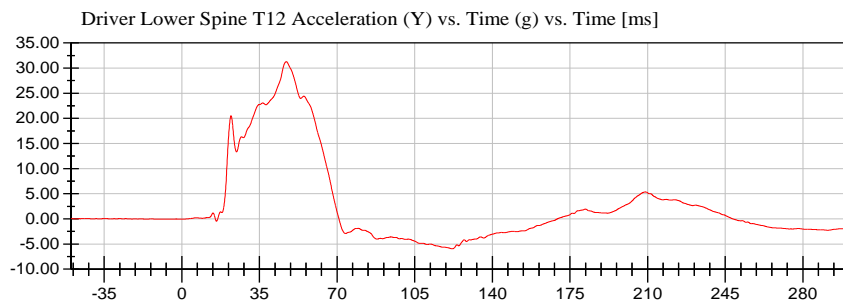
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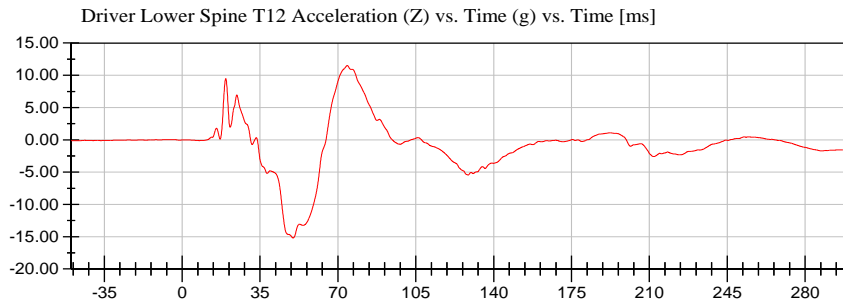
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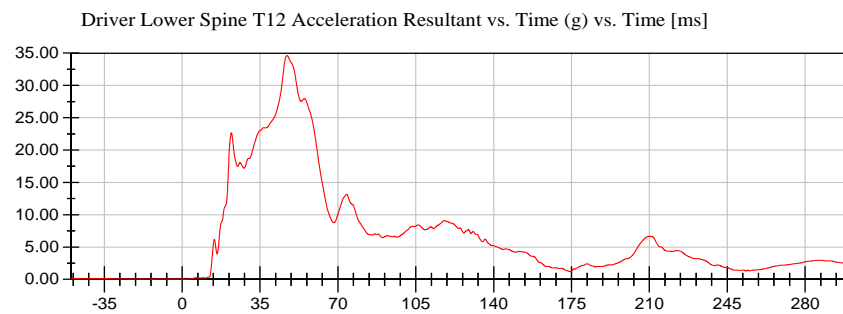
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CFC_180



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0.02 g at -13.12 ms

CFC_180



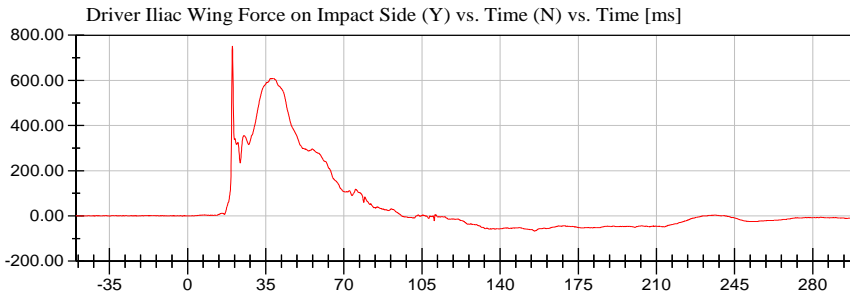
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Position #1 SID IIs Dummy (297)

Test Date: 06/27/2022

Test Lab: CTF

Test Number: 220627 (M20220207)



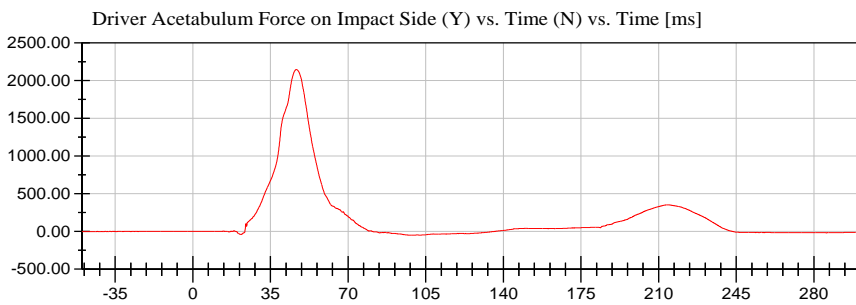
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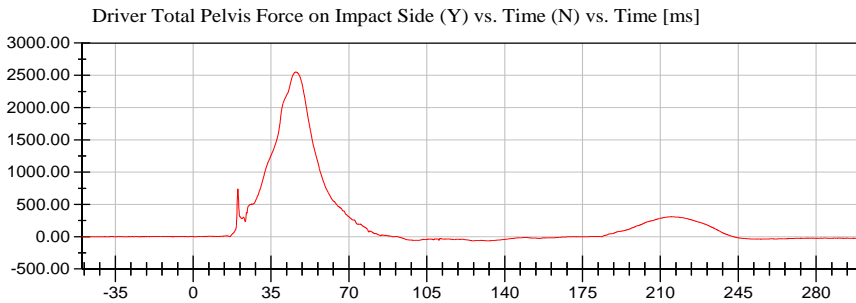
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2,147.57 N at 46.72 ms

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-49.21 N at 102.64 ms

CFC_600



<Max>

2,552.37 N at 46.16 ms

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-64.72 N at 133.36 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. 54

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Sitting Height	772.0 - 788.0	780	Yes
B	Shoulder Pivot Height	437.0 - 453.0	450	Yes
C	H-Point Height	79.0 - 89.0	85	Yes
D	H-Point from Seat Back	141.0 - 151.0	147	Yes
E	Shoulder Pivot from Backline	97.0 - 107.0	102	Yes
F	Thigh Clearance	119.0 - 135.0	129	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	528	Yes
L	Popliteal Height	343.0 - 369.0	353	Yes
M	Knee Pivot to Floor Height	393.0 - 409.0	400	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	223	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	485	Yes
V	Shoulder Width (only one arm installed)	341.0 - 357.0	347	Yes
W	Foot Width (right)	78.0 - 94.0	85	Yes
W	Foot Width (left)	78.0 - 94.0	85	Yes
Y	Chest Circumference with Jacket	851.0 - 881.0	878	Yes
Z	Waist Circumference	761.0 - 791.0	782	Yes

Revised 9/29/2005

Report Number: 297_S2F54

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Transportation Research Center Inc.

Left Lateral Head Drop
SID IIs Serial No. 297 Certification No. 54-1
Test Date: 6/8/2022

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	20.9 °C	Yes
Relative Humidity	10 - 70 %	63 %	Yes
Peak Head Resultant Acceleration	115 - 137 g	132.7 g	Yes
Peak Head Longitudinal Acceleration	(-15) - 15 g	2.0 g	Yes
Is Head Resultant Acceleration Curve Unimodal within 15% of Peak?	< 15 %	1.19 %	Yes

Test meets specifications.

Condition: Used

Comments:

Head Skin S/N: 1330

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

06.08.2022 13:34:11 229

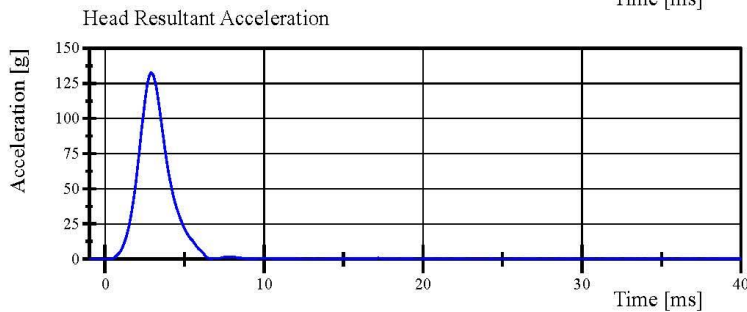
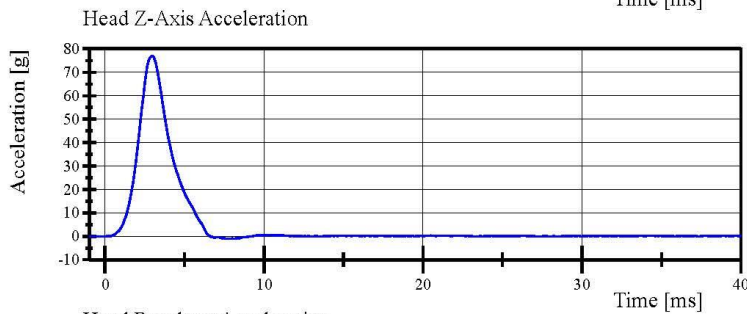
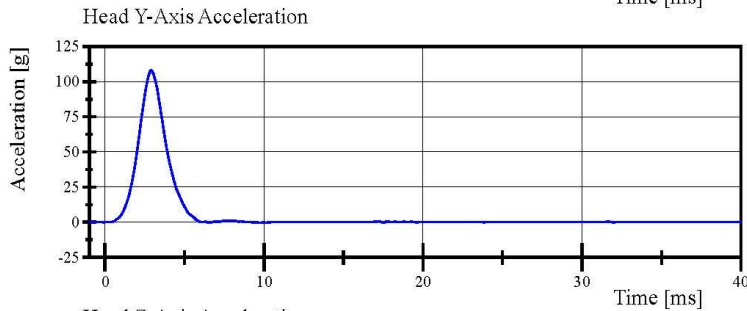
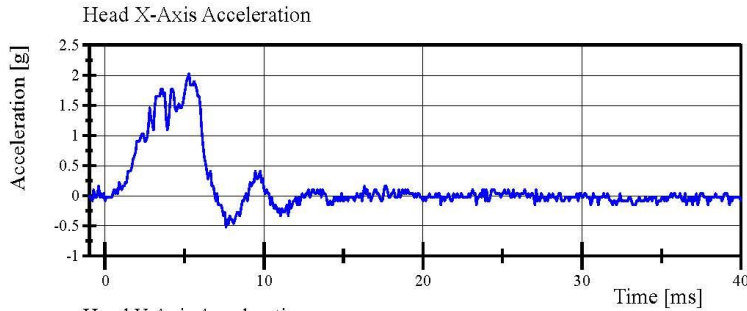


Transportation Research Center Inc.

Left Lateral Head Drop

SID IIs Serial No. 297 Certification No. 54-1

Test Date: 6/8/2022



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

06.08.2022 13:35:24 229



Transportation Research Center Inc.

Left Lateral Neck
SID IIs Serial No. 297 Certification No. 54-2
Test Date: 6/9/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.8 °C	Yes
Relative Humidity	10 - 70 %	66 %	Yes
Pendulum Velocity	(-5.51) - (-5.63) m/s	-5.611 m/s	Yes
Pendulum Integrated Velocity			
Change at 10 ms	2.20 - 2.80 m/s	2.617 m/s	Yes
Change at 15 ms	3.30 - 4.10 m/s	3.828 m/s	Yes
Change at 20 ms	4.40 - 5.40 m/s	5.101 m/s	Yes
Change at 25 ms	5.40 - 6.10 m/s	5.851 m/s	Yes
Change at 25 to 100 ms	5.50 - 6.20 m/s	5.852 m/s	Yes
Maximum Headform Flexion occurring between 50ms and 70ms.			
Peak	(-71) - (-81) deg	-75.8 deg	Yes
Time of Peak	50 - 70 ms	63.8 ms	Yes
Total Neck Occipital Condyles Moment	36 - 44 N·m	41.2 N·m	Yes
Total Neck Occipital Condyles Moment Decay Time to 0 N·m	102 - 126 ms	114.0 ms	Yes

Test meets specifications.

Condition: Used

Comments:

Neck S/N: 779

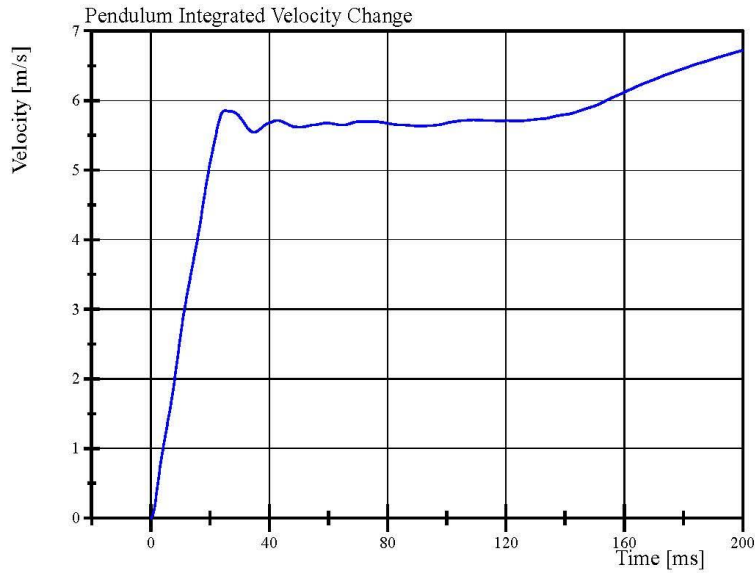
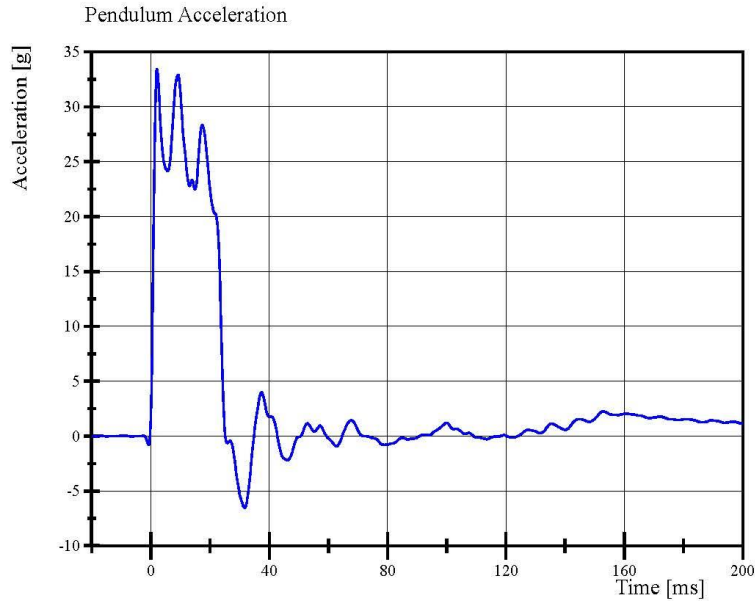
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.09.2022 08:25:43 751



Transportation Research Center Inc.

Left Lateral Neck
SID IIs Serial No. 297 Certification No. 54-2
Test Date: 6/9/2022



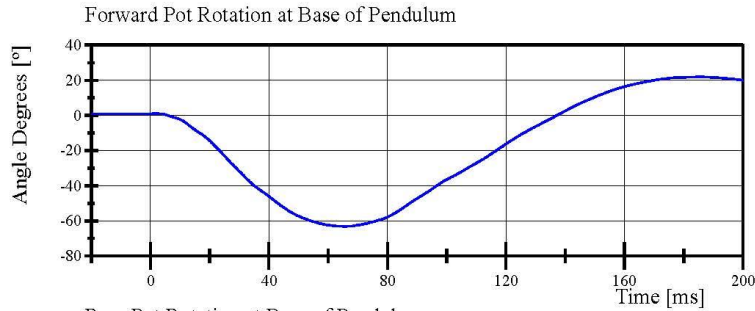
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.09.2022 08:26:32 751

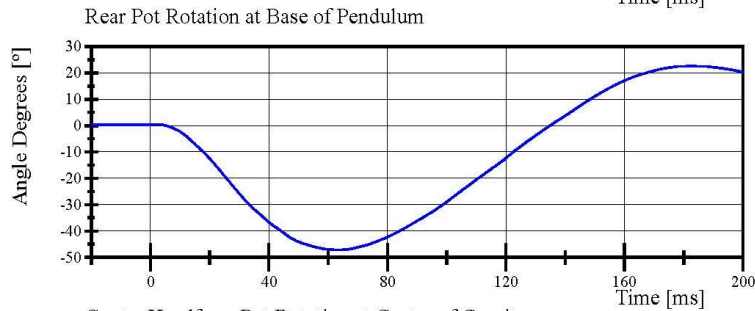


Transportation Research Center Inc.

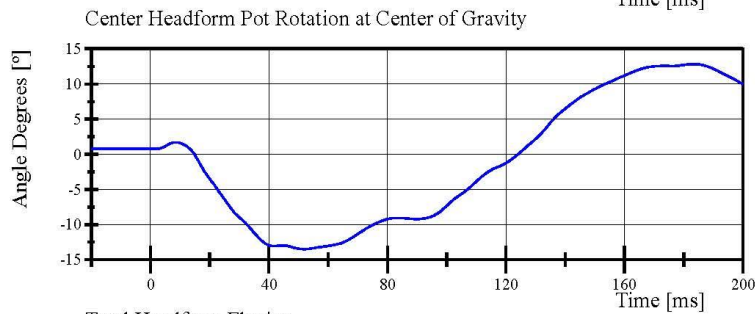
Left Lateral Neck
SID IIs Serial No. 297 Certification No. 54-2
Test Date: 6/9/2022



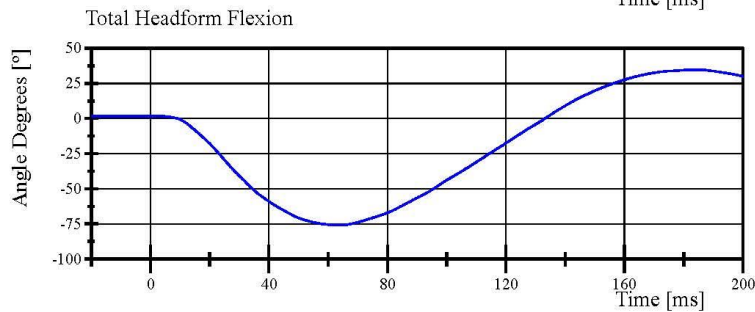
Filter Class: CFC_60
Max: 21.9 ° at 185.6 ms
Min: -63.2 ° at 65.7 ms



Filter Class: CFC_60
Max: 22.6 ° at 182.5 ms
Min: -47.2 ° at 63.4 ms



Filter Class: CFC_60
Max: 12.8 ° at 183.3 ms
Min: -13.5 ° at 52.0 ms



Filter Class: CFC_60
Max: 34.7 ° at 184.4 ms
Min: -75.8 ° at 63.8 ms

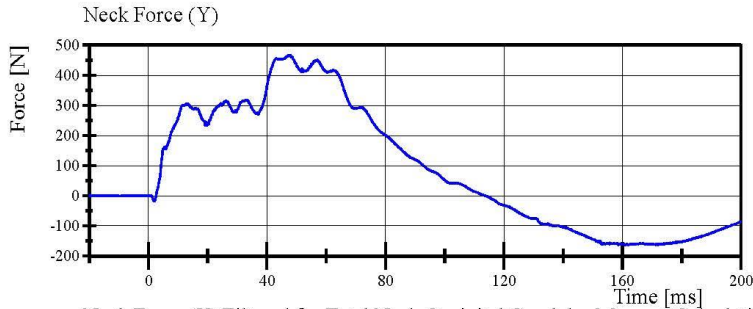
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.09.2022 08:26:32 751

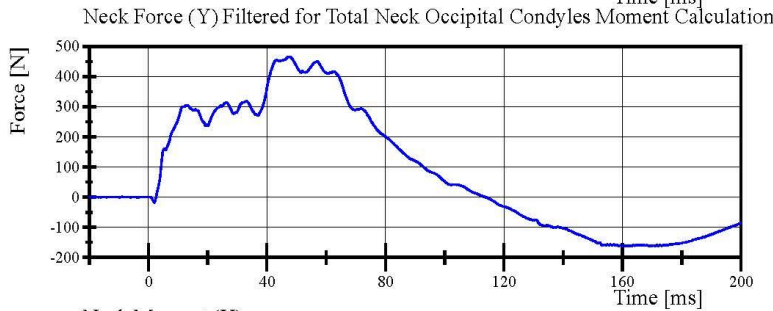


Transportation Research Center Inc.

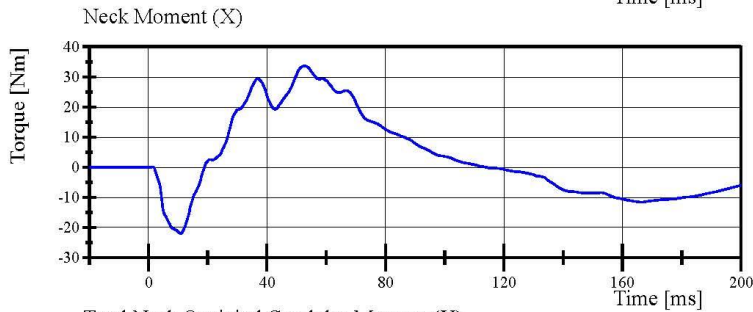
Left Lateral Neck
SID IIs Serial No. 297 Certification No. 54-2
Test Date: 6/9/2022



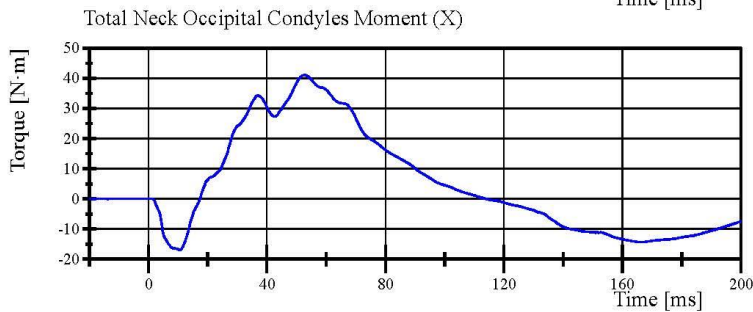
Filter Class: CFC_1000
Max: 466.6 N at 47.1 ms
Min: -163.2 N at 161.1 ms



Filter Class: CFC_600
Max: 465.6 N at 47.4 ms
Min: -162.5 N at 162.0 ms



Filter Class: CFC_600
Max: 33.8 Nm at 52.8 ms
Min: -22.0 Nm at 11.0 ms



Filter Class: Without_(Constar
Max: 41.2 N·m at 52.8 ms
Min: -16.9 N·m at 10.6 ms

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

06.09.2022 08:26:32 751



Transportation Research Center Inc.

Left Lateral Shoulder
SID IIs Serial No. 297 Certification No. 54-1
Test Date: 6/8/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	59 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.27 m/s	Yes
Impactor Acceleration	(-13) - (-18) g	-15.1 g	Yes
Shoulder Displacement	28 - 37 mm	30.8 mm	Yes
Upper Spine Lateral Acceleration	17 - 22 g	19.7 g	Yes

Test meets specifications.

Condition: Used

Comments:

Left Arm S/N: 940L

Shoulder Rib S/N: 180-3355 259

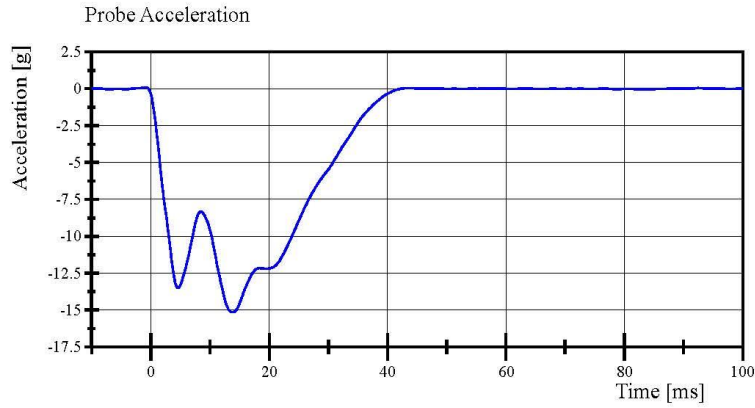
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.09.2022 13:13:04 883

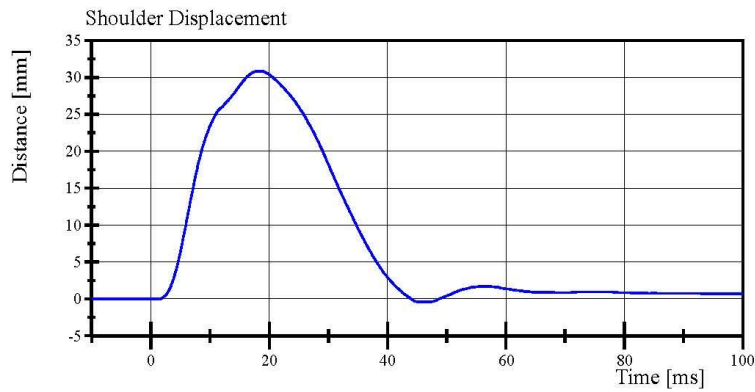


Transportation Research Center Inc.

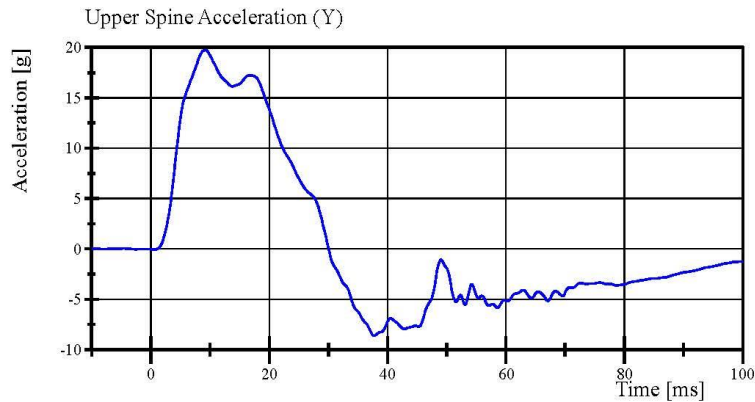
Left Lateral Shoulder
SID IIs Serial No. 297 Certification No. 54-1
Test Date: 6/8/2022



Filter Class: CFC_180
Max: 0.1 g at -0.9 ms
Min: -15.1 g at 13.8 ms



Filter Class: CFC_600
Max: 30.8 mm at 18.0 ms
Min: -0.4 mm at 47.0 ms



Filter Class: CFC_180
Max: 19.7 g at 9.2 ms
Min: -8.6 g at 37.7 ms

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

06.09.2022 13:15:29 883



Transportation Research Center Inc.

Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 54-1
Test Date: 6/8/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.9 °C	Yes
Relative Humidity	10 - 70 %	60 %	Yes
Impactor Velocity	6.60 - 6.80 m/s	6.728 m/s	Yes
Impactor Acceleration	(-30) - (-36) g	-33.4 g	Yes
Shoulder Displacement	31 - 40 mm	35.9 mm	Yes
Upper Thorax Rib Displacement	25 - 32 mm	27.7 mm	Yes
Center Thorax Rib Displacement	30 - 36 mm	31.7 mm	Yes
Lower Thorax Rib Displacement	32 - 38 mm	34.4 mm	Yes
Upper Spine Lateral Acceleration	34 - 43 g	37.7 g	Yes
Lower Spine Lateral Acceleration	29 - 37 g	36.1 g	Yes

Test meets specifications.

Condition: Used

Comments:

Left Arm S/N: 940L

Shoulder Rib S/N: 180-3355 259

Upper Thorax Rib #1 S/N: DM5020

Middle Thorax Rib #2 S/N: DM5021

Lower Thorax Rib #3 S/N: DM5022

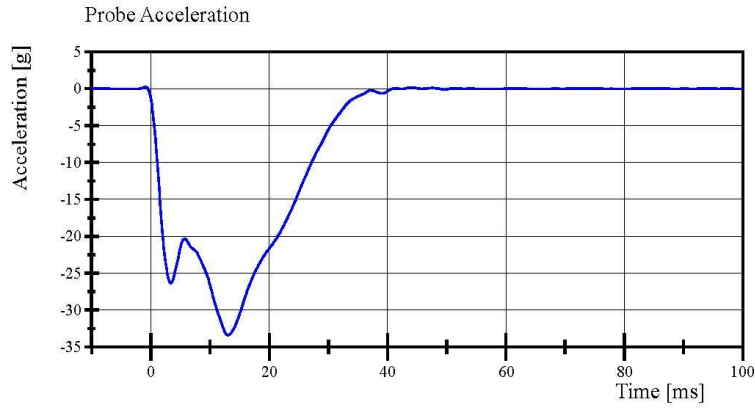
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.08.2022 12:48:55 629

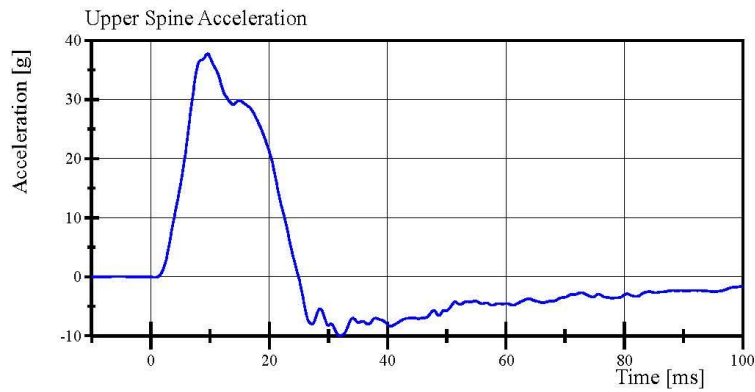


Transportation Research Center Inc.

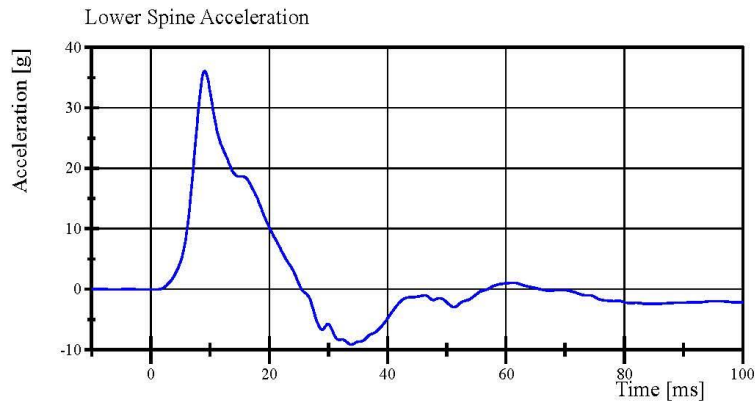
Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 54-1
Test Date: 6/8/2022



Filter Class: CFC_180
Max: 0.3 g at -1.0 ms
Min: -33.4 g at 13.0 ms



Filter Class: CFC_180
Max: 37.7 g at 9.6 ms
Min: -10.0 g at 32.0 ms



Filter Class: CFC_180
Max: 36.1 g at 9.1 ms
Min: -9.2 g at 33.8 ms

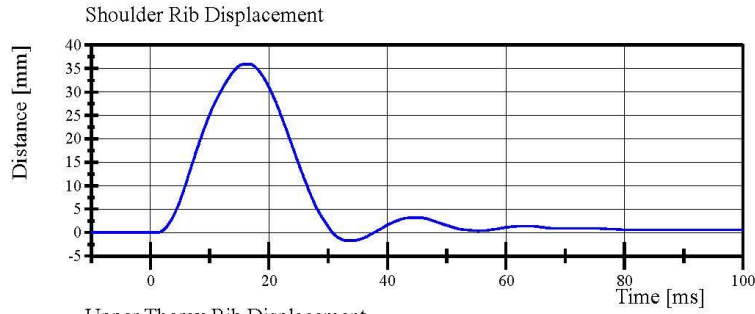
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.08.2022 12:50:50 629

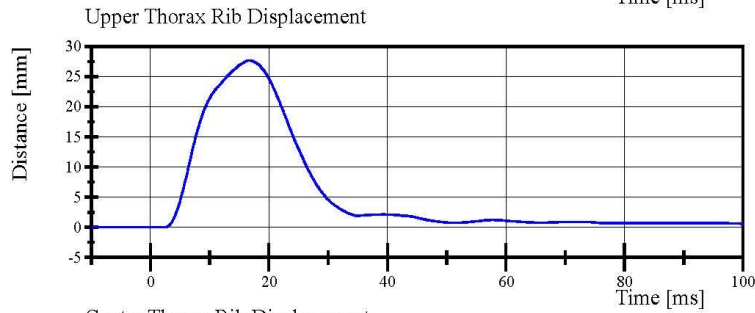


Transportation Research Center Inc.

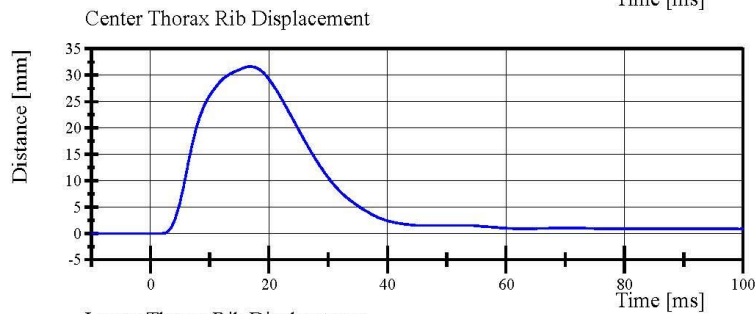
Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 54-1
Test Date: 6/8/2022



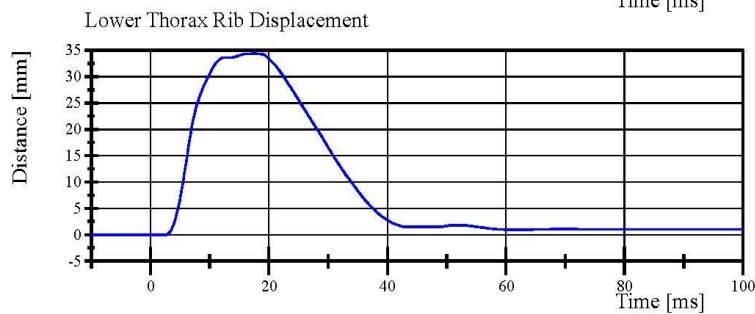
Filter Class: CFC_600
Max: 35.9 mm at 15.9 ms
Min: -1.7 mm at 33.2 ms



Filter Class: CFC_600
Max: 27.7 mm at 16.6 ms
Min: -0.0 mm at 2.5 ms



Filter Class: CFC_600
Max: 31.7 mm at 16.8 ms
Min: -0.0 mm at -2.2 ms



Filter Class: CFC_600
Max: 34.4 mm at 17.4 ms
Min: -0.0 mm at 2.6 ms

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

06.08.2022 12:50:50 629



Transportation Research Center Inc.

Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 54-3
Test Date: 6/8/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	60 %	Yes
Impactor Velocity	4.20 - 4.40 m/s	4.358 m/s	Yes
Impactor Acceleration	(-14) - (-18) g	-15.4 g	Yes
Upper Thorax Rib Displacement	32 - 40 mm	37.6 mm	Yes
Center Thorax Rib Displacement	39 - 45 mm	42.4 mm	Yes
Lower Thorax Rib Displacement	35 - 43 mm	39.6 mm	Yes
Upper Spine Lateral Acceleration	13 - 17 g	14.4 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: DM5020

Middle Thorax Rib #2 S/N: DM5021

Lower Thorax Rib #3 S/N: DM5022

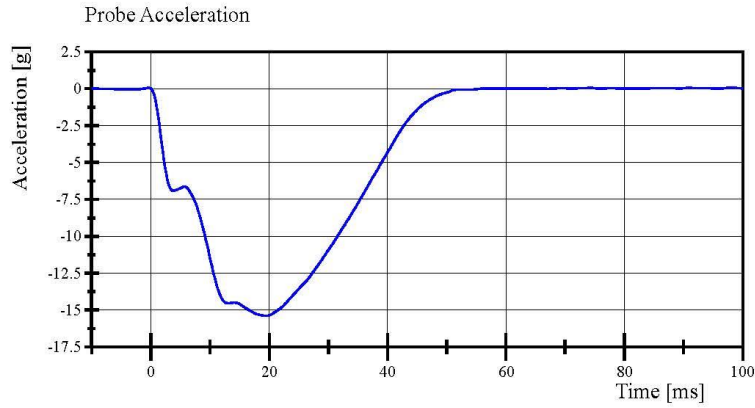
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.08.2022 11:46:23 851

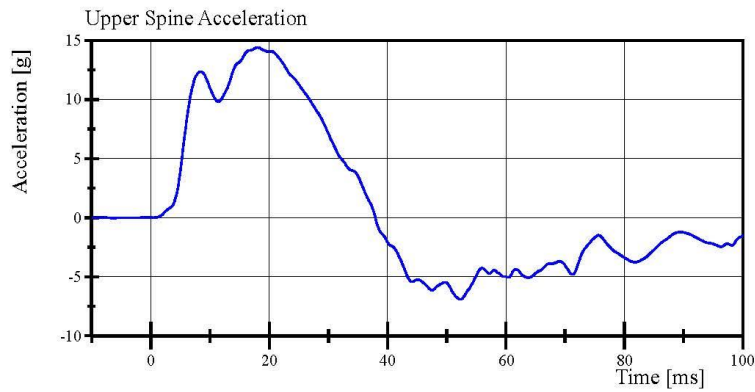


Transportation Research Center Inc.

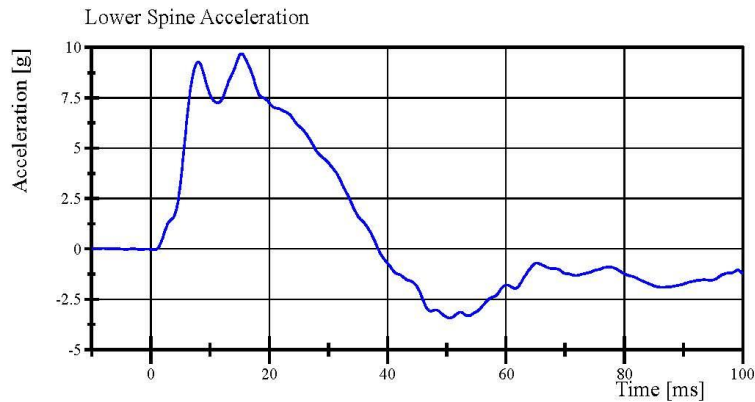
Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 54-3
Test Date: 6/8/2022



Filter Class: CFC_180
Max: 0.1 g at 97.8 ms
Min: -15.4 g at 19.5 ms



Filter Class: CFC_180
Max: 14.4 g at 18.0 ms
Min: -6.9 g at 52.3 ms



Filter Class: CFC_180
Max: 9.7 g at 15.3 ms
Min: -3.4 g at 50.5 ms

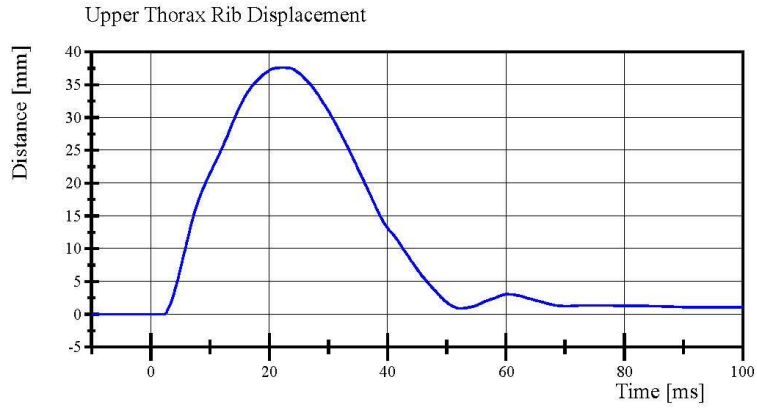
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.08.2022 11:47:29 851

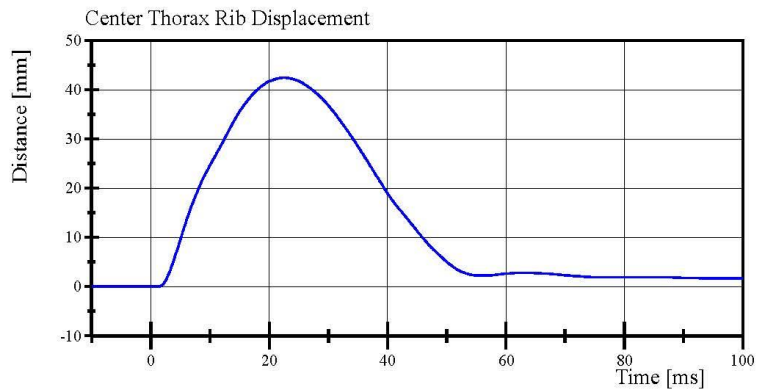


Transportation Research Center Inc.

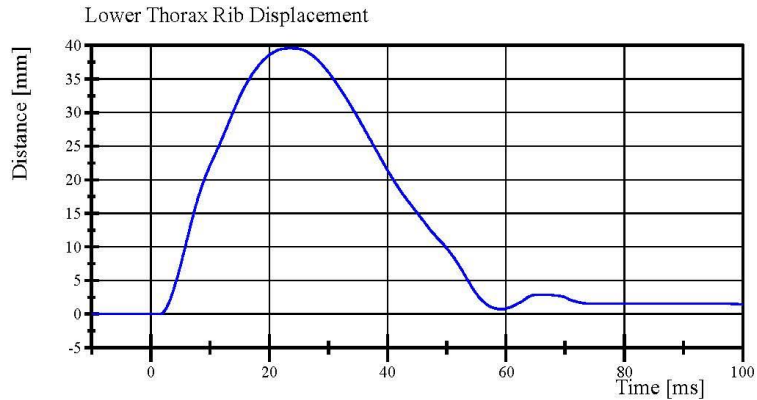
Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 54-3
Test Date: 6/8/2022



Filter Class: CFC_600
Max: 37.6 mm at 22.2 ms
Min: -0.0 mm at 2.2 ms



Filter Class: CFC_600
Max: 42.4 mm at 22.5 ms
Min: -0.0 mm at 1.1 ms



Filter Class: CFC_600
Max: 39.6 mm at 23.4 ms
Min: -0.0 mm at 1.5 ms

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

06.08.2022 11:47:29 851



Transportation Research Center Inc.

Left Lateral Abdomen
SID IIs Serial No. 297 Certification No. 54-2
Test Date: 6/8/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.8 °C	Yes
Relative Humidity	10 - 70 %	63 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.27 m/s	Yes
Impactor Acceleration	(-12) - (-16) g	-13.6 g	Yes
Upper Abdominal Rib Displacement	36 - 47 mm	40.6 mm	Yes
Lower Abdominal Rib Displacement	33 - 44 mm	39.1 mm	Yes
Lower Spine Lateral Acceleration	9 - 14.0 g	10.86 g	Yes

Test meets specifications.

Condition: Used

Comments:

Upper Abdominal Rib S/N: DM7281

Lower Abdominal Rib S/N: DM7275

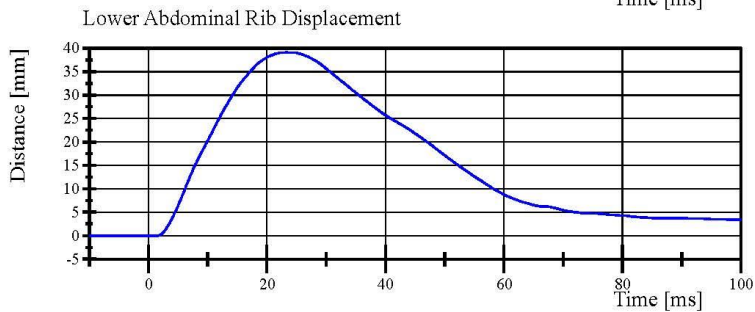
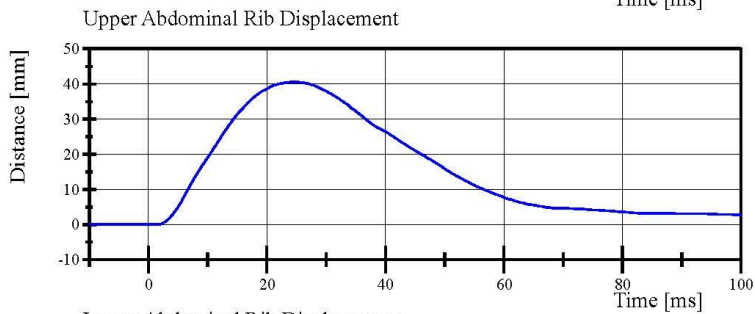
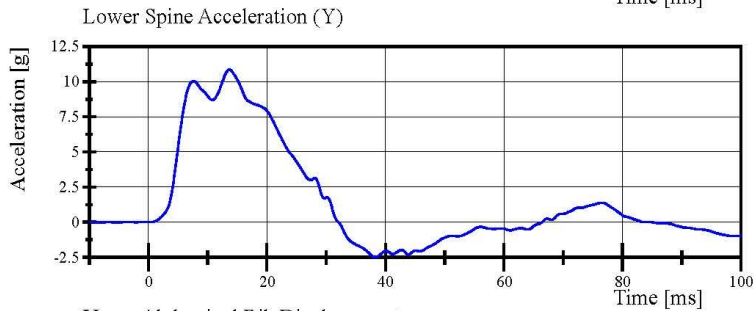
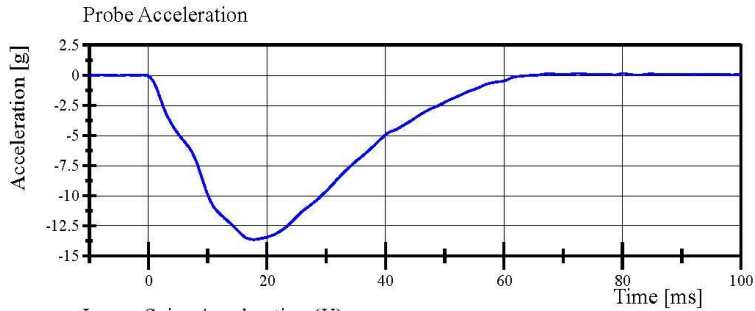
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.08.2022 12:57:13 653



Transportation Research Center Inc.

Left Lateral Abdomen
SID IIs Serial No. 297 Certification No. 54-2
Test Date: 6/8/2022



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

06.08.2022 12:58:05 653



Transportation Research Center Inc.

Left Lateral Pelvis
SID IIs Serial No. 297 Certification No. 54-1
Test Date: 6/8/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.8 °C	Yes
Relative Humidity	10 - 70 %	61 %	Yes
Pendulum Velocity	6.6 - 6.8 m/s	6.61 m/s	Yes
Impactor Acceleration	(-38.0) - (-47.0) g	-44.05 g	Yes
Peak Pelvis Lateral Acceleration after 6ms	34 - 42 g	36.7 g	Yes
Acetabulum Force	3,600 - 4,300 N	4,087.0 N	Yes

Test meets specifications.

Condition: Used

Comments:

Pelvis Skin S/N: 1171

Pelvis Plug Info: 132749

Manufacturer: Saco

S/N: 13725

Cal Date: 20200325

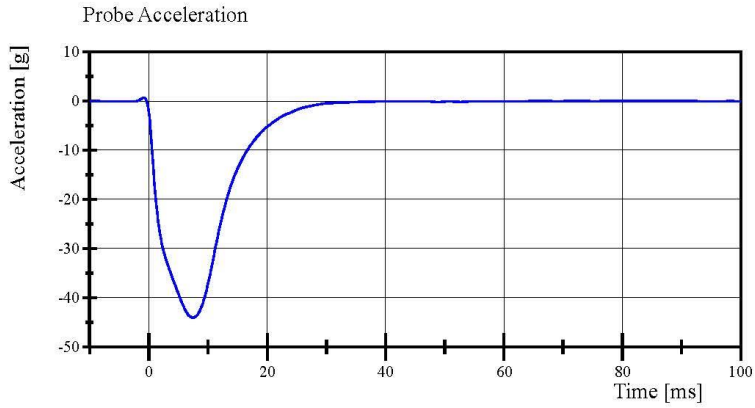
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.08.2022 10:16:39 474

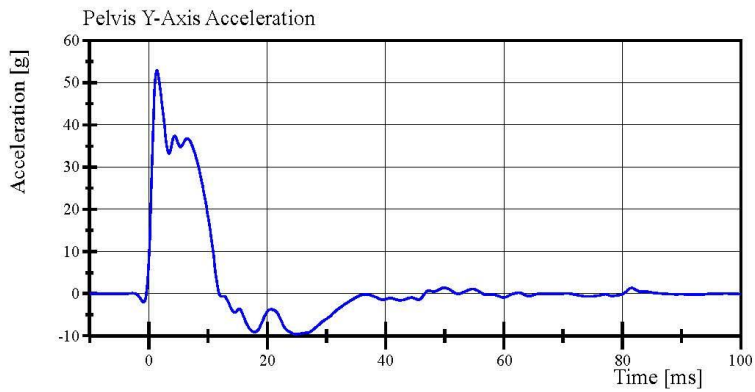


Transportation Research Center Inc.

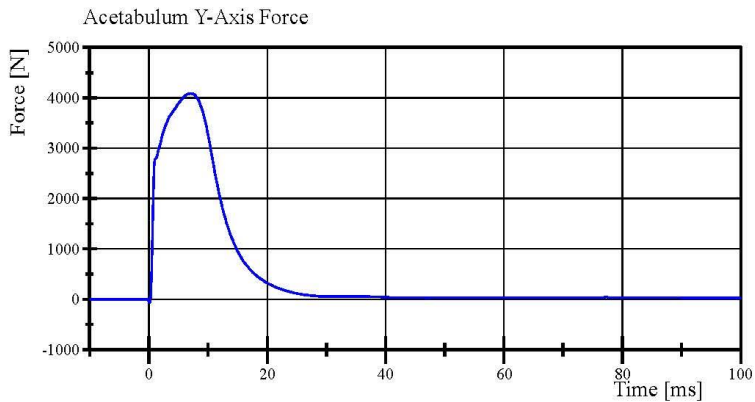
Left Lateral Pelvis
SID IIs Serial No. 297 Certification No. 54-1
Test Date: 6/8/2022



Filter Class: CFC_180
Max: 0.7 g at -0.8 ms
Min: -44.0 g at 7.4 ms



Filter Class: CFC_180
Max: 53.0 g at 1.4 ms
Min: -9.6 g at 24.8 ms



Filter Class: CFC_600
Max: 4,087.0 N at 7.1 ms
Min: -67.8 N at 0.2 ms

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

06.08.2022 10:22:19.474



Transportation Research Center Inc.

Left Lateral Iliac
SID IIs Serial No. 297 Certification No. 54-1
Test Date: 6/8/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.8 °C	Yes
Relative Humidity	10 - 70 %	61 %	Yes
Pendulum Velocity	4.2 - 4.4 m/s	4.27 m/s	Yes
Impactor Acceleration	(-36) - (-45) g	-41.3 g	Yes
Peak Pelvis Lateral Acceleration	28 - 39 g	33.8 g	Yes
Iliac Force	4,100 - 5,100 N	4,886.4 N	Yes

Test meets specifications.

Condition: Used

Comments:

Pelvis S/N: 1171

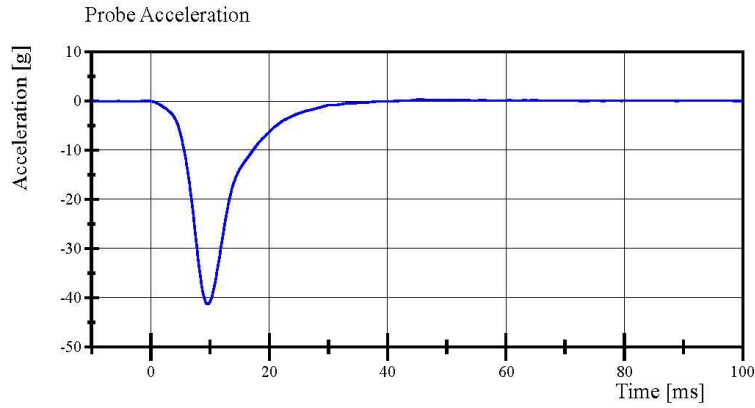
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.08.2022 13:14:35 693

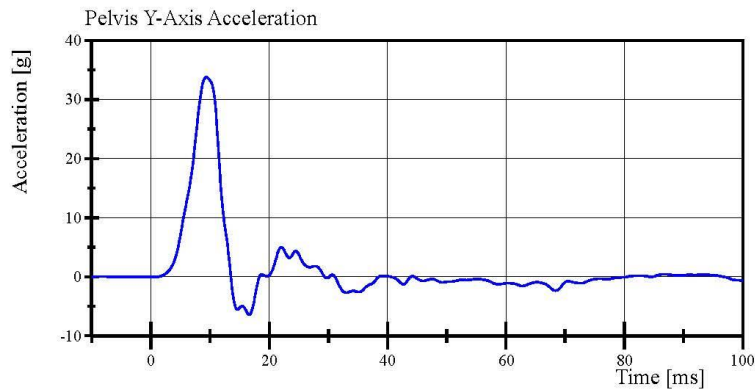


Transportation Research Center Inc.

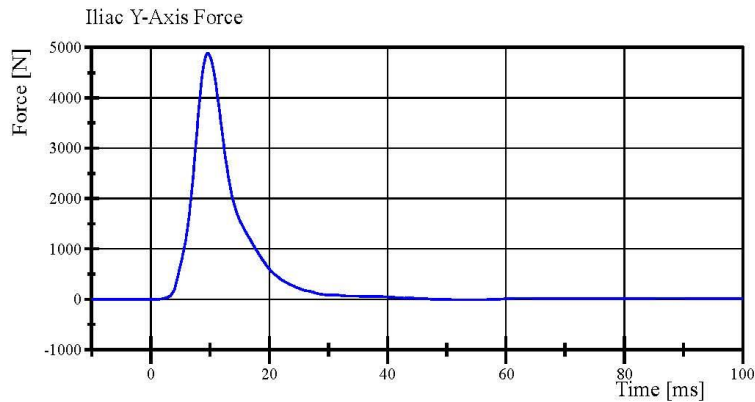
Left Lateral Iliac
SID IIs Serial No. 297 Certification No. 54-1
Test Date: 6/8/2022



Filter Class: CFC_180
Max: 0.3 g at 45.4 ms
Min: -41.3 g at 9.6 ms



Filter Class: CFC_180
Max: 33.8 g at 9.4 ms
Min: -6.4 g at 16.6 ms



Filter Class: CFC_600
Max: 4,886.4 N at 9.6 ms
Min: -12.9 N at 54.2 ms

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

06.08.2022 13:15:09 693



Post-Test Calibration Sheets
Driver S/N 297

Transportation Research Center Inc.
SIDI's Dummy - Level D
External Dimensions
Serial No. 297 Calibration No. 55

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Sitting Height	772.0 - 788.0	780	Yes
B	Shoulder Pivot Height	437.0 - 453.0	450	Yes
C	H-Point Height	79.0 - 89.0	85	Yes
D	H-Point from Seat Back	141.0 - 151.0	147	Yes
E	Shoulder Pivot from Backline	97.0 - 107.0	102	Yes
F	Thigh Clearance	119.0 - 135.0	129	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	528	Yes
L	Popliteal Height	343.0 - 369.0	353	Yes
M	Knee Pivot to Floor Height	393.0 - 409.0	400	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	223	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	485	Yes
V	Shoulder Width (only one arm installed)	341.0 - 357.0	347	Yes
W	Foot Width (right)	78.0 - 94.0	85	Yes
W	Foot Width (left)	78.0 - 94.0	85	Yes
Y	Chest Circumference with Jacket	851.0 - 881.0	878	Yes
Z	Waist Circumference	761.0 - 791.0	782	Yes

Revised 9/29/2005

Report Number: 297_S2F55

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Transportation Research Center Inc.

Left Lateral Head Drop

SID IIS Serial No. 297 Certification No. 55-1

Test Date: 6/28/2022

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	20.8 °C	Yes
Relative Humidity	10 - 70 %	45 %	Yes
Peak Head Resultant Acceleration	115 - 137 g	128.8 g	Yes
Peak Head Longitudinal Acceleration	(-15) - 15 g	-2.1 g	Yes
Is Head Resultant Acceleration Curve Unimodal within 15% of Peak?	< 15 %	1.07 %	Yes

Test meets specifications.

Condition: Used

Comments:

Head Skin S/N: 1330

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

06.28.2022 10:12:44 233

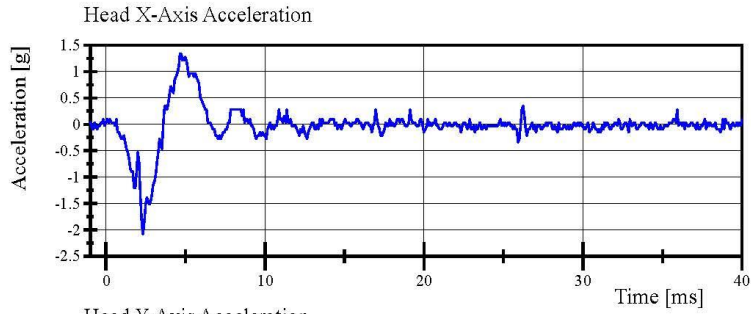


Transportation Research Center Inc.

Left Lateral Head Drop

SID IIS Serial No. 297 Certification No. 55-1

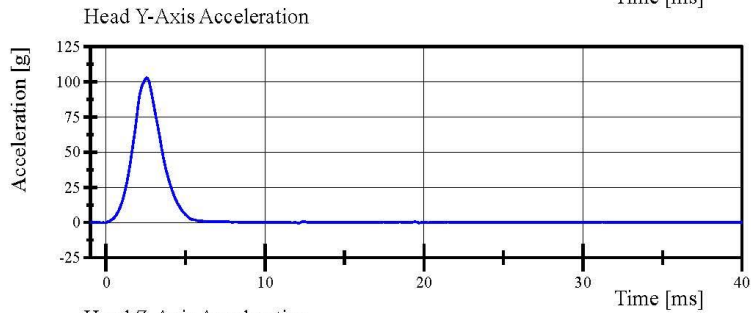
Test Date: 6/28/2022



Filter Class: CFC_1000

Max: 1.3 g at 4.6 ms

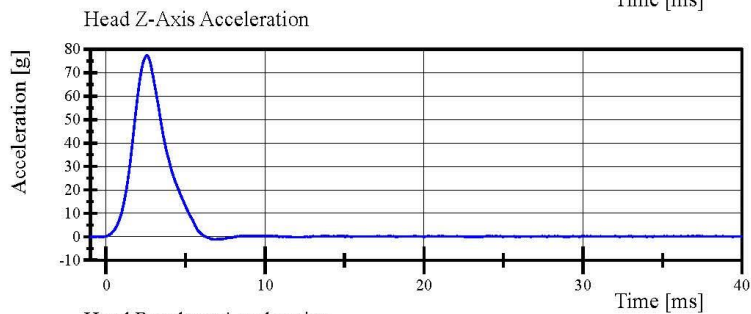
Min: -2.1 g at 2.3 ms



Filter Class: CFC_1000

Max: 102.9 g at 2.6 ms

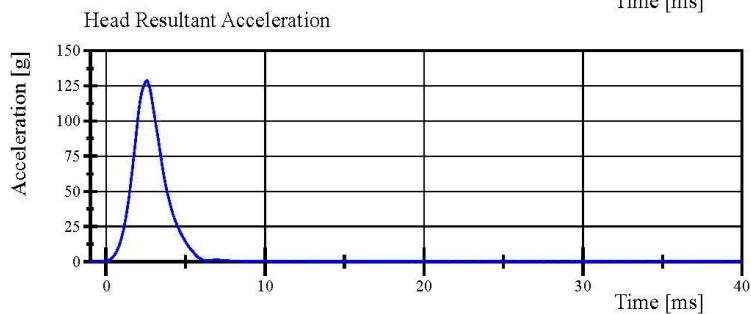
Min: -0.3 g at 12.1 ms



Filter Class: CFC_1000

Max: 77.4 g at 2.6 ms

Min: -1.1 g at 6.8 ms



Filter Class: CFC_1000

Max: 128.8 g at 2.6 ms

Min: 0.0 g at 22.6 ms

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

06.28.2022 10:14:23 233



Transportation Research Center Inc.

Left Lateral Neck
SID IIS Serial No. 297 Certification No. 55-1
Test Date: 6/28/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.8 °C	Yes
Relative Humidity	10 - 70 %	50 %	Yes
Pendulum Velocity	(-5.51) - (-5.63) m/s	-5.603 m/s	Yes
Pendulum Integrated Velocity			
Change at 10 ms	2.20 - 2.80 m/s	2.630 m/s	Yes
Change at 15 ms	3.30 - 4.10 m/s	3.855 m/s	Yes
Change at 20 ms	4.40 - 5.40 m/s	5.171 m/s	Yes
Change at 25 ms	5.40 - 6.10 m/s	5.839 m/s	Yes
Change at 25 to 100 ms	5.50 - 6.20 m/s	5.854 m/s	Yes
Maximum Headform Flexion occurring between 50ms and 70ms.			
Peak	(-71) - (-81) deg	-78.9 deg	Yes
Time of Peak	50 - 70 ms	62.2 ms	Yes
Total Neck Occipital Condyles Moment	36 - 44 N·m	41.1 N·m	Yes
Total Neck Occipital Condyles Moment Decay Time to 0 N·m	102 - 126 ms	117.8 ms	Yes

Test meets specifications.

Condition: Used

Comments:

Neck S/N: 779

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

06.28.2022 10:51:50 752

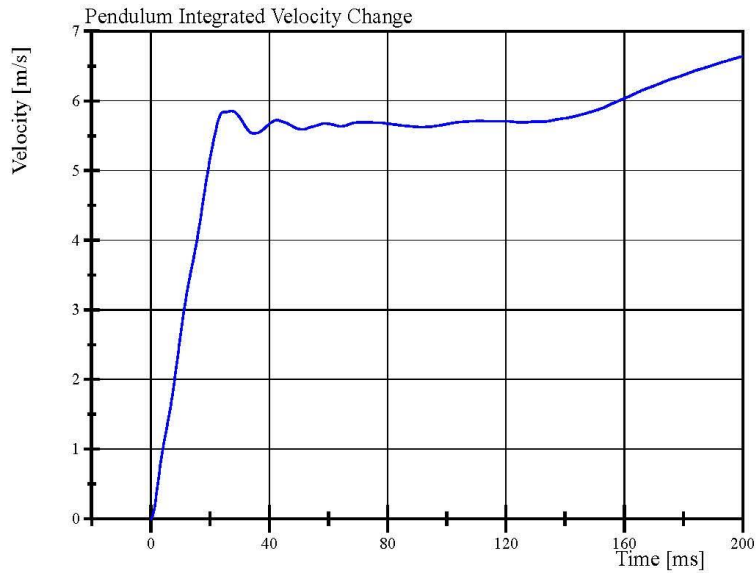
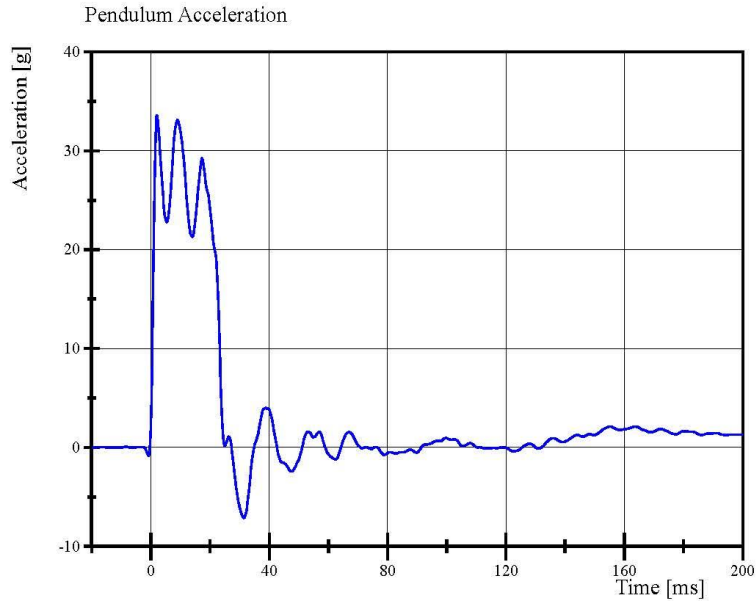


Transportation Research Center Inc.

Left Lateral Neck

SID IIs Serial No. 297 Certification No. 55-1

Test Date: 6/28/2022



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

06.28.2022 10:53:03 752

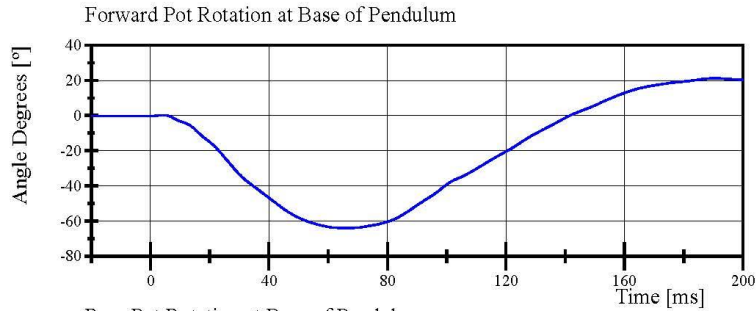


Transportation Research Center Inc.

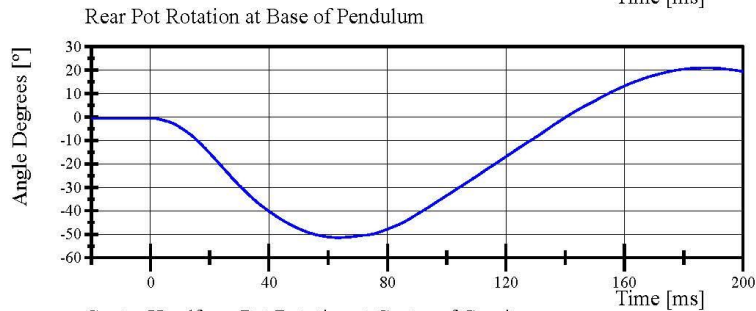
Left Lateral Neck

SID IIs Serial No. 297 Certification No. 55-1

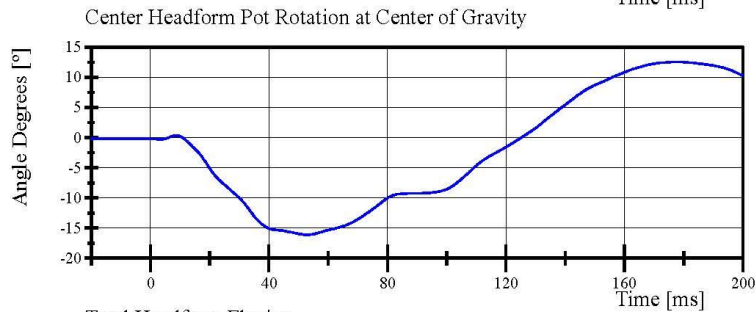
Test Date: 6/28/2022



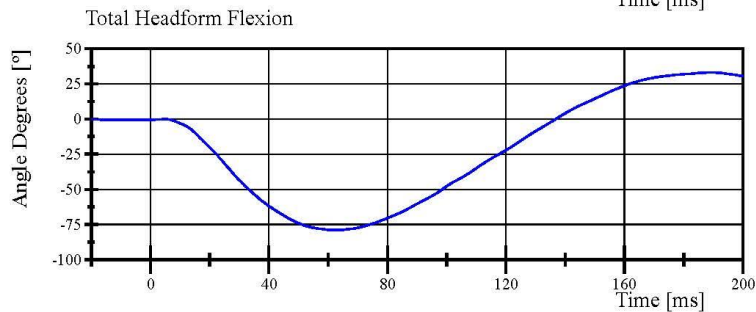
Filter Class: CFC_60
Max: 21.2 ° at 190.6 ms
Min: -64.0 ° at 65.0 ms



Filter Class: CFC_60
Max: 21.0 ° at 187.8 ms
Min: -51.4 ° at 63.4 ms



Filter Class: CFC_60
Max: 12.6 ° at 177.8 ms
Min: -16.1 ° at 52.9 ms



Filter Class: CFC_60
Max: 33.2 ° at 189.3 ms
Min: -78.9 ° at 62.2 ms

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

06.28.2022 10:53:03 752

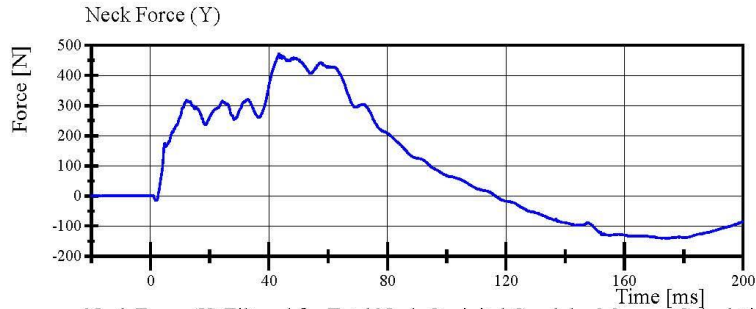


Transportation Research Center Inc.

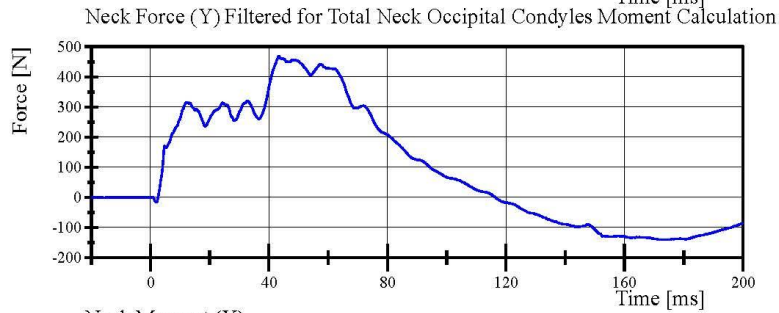
Left Lateral Neck

SID IIs Serial No. 297 Certification No. 55-1

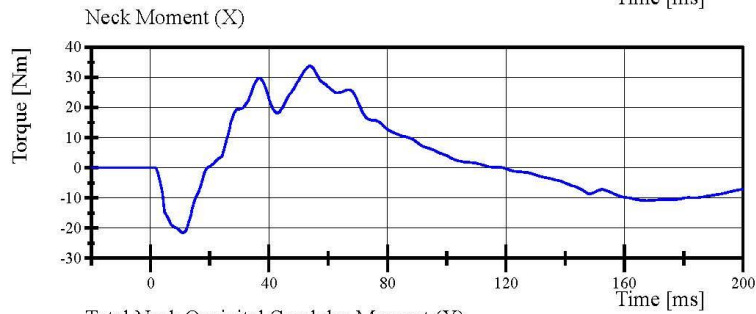
Test Date: 6/28/2022



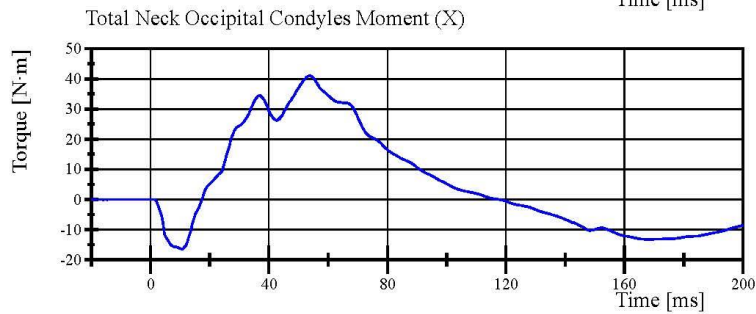
Filter Class: CFC_1000
Max: 472.9 N at 43.4 ms
Min: -140.8 N at 175.0 ms



Filter Class: CFC_600
Max: 469.0 N at 43.4 ms
Min: -140.4 N at 175.0 ms



Filter Class: CFC_600
Max: 33.9 Nm at 53.8 ms
Min: -21.6 Nm at 10.8 ms



Filter Class: Without_(Constar
Max: 41.1 N·m at 53.8 ms
Min: -16.5 N·m at 10.7 ms

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

06.28.2022 10:53:03 752



Transportation Research Center Inc.

Left Lateral Shoulder
SID IIS Serial No. 297 Certification No. 55-1
Test Date: 6/28/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	49 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.28 m/s	Yes
Impactor Acceleration	(-13) - (-18) g	-15.1 g	Yes
Shoulder Displacement	28 - 37 mm	31.4 mm	Yes
Upper Spine Lateral Acceleration	17 - 22 g	19.3 g	Yes

Test meets specifications.

Condition: Used

Comments:

Left Arm S/N: 940L

Shoulder Rib S/N: 180-3355 259

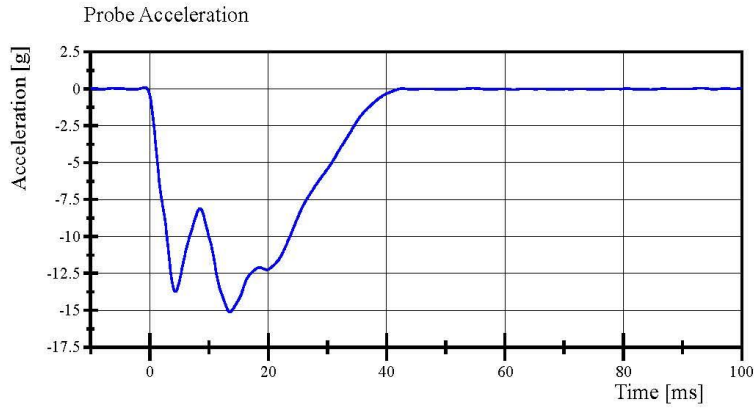
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.28.2022 12:50:22 869

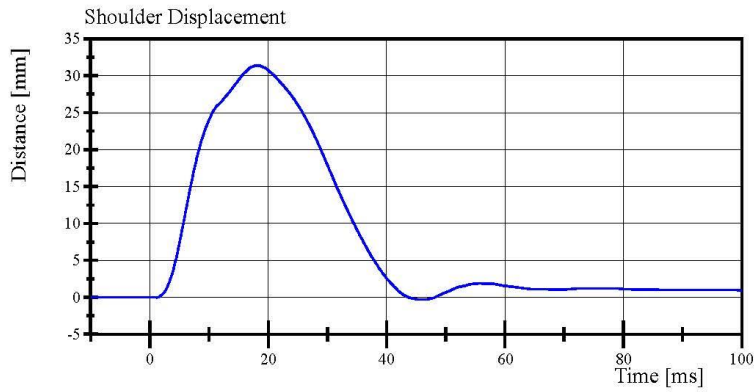


Transportation Research Center Inc.

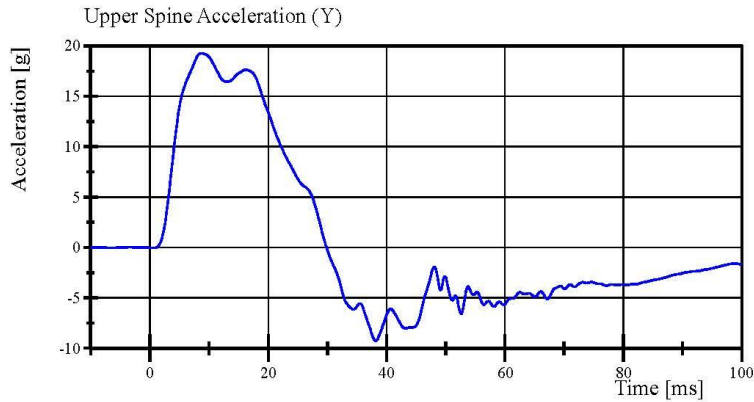
Left Lateral Shoulder
SID IIs Serial No. 297 Certification No. 55-1
Test Date: 6/28/2022



Filter Class: CFC_180
Max: 0.1 g at -0.9 ms
Min: -15.1 g at 13.5 ms



Filter Class: CFC_600
Max: 31.4 mm at 18.2 ms
Min: -0.3 mm at 45.5 ms



Filter Class: CFC_180
Max: 19.3 g at 8.7 ms
Min: -9.3 g at 38.2 ms

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

06.28.2022 12:50:51 869



Transportation Research Center Inc.

Left Lateral Thorax with Arm
SID IIS Serial No. 297 Certification No. 55-1
Test Date: 6/28/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.0 °C	Yes
Relative Humidity	10 - 70 %	49 %	Yes
Impactor Velocity	6.60 - 6.80 m/s	6.732 m/s	Yes
Impactor Acceleration	(-30) - (-36) g	-32.7 g	Yes
Shoulder Displacement	31 - 40 mm	33.0 mm	Yes
Upper Thorax Rib Displacement	25 - 32 mm	26.7 mm	Yes
Center Thorax Rib Displacement	30 - 36 mm	32.0 mm	Yes
Lower Thorax Rib Displacement	32 - 38 mm	35.9 mm	Yes
Upper Spine Lateral Acceleration	34 - 43 g	36.1 g	Yes
Lower Spine Lateral Acceleration	29 - 37 g	34.5 g	Yes

Test meets specifications.

Condition: Used

Comments:

Left Arm S/N: 940L

Shoulder Rib S/N: 180-3355 259

Upper Thorax Rib #1 S/N: DM5020

Middle Thorax Rib #2 S/N: DM5021

Lower Thorax Rib #3 S/N: DM5022

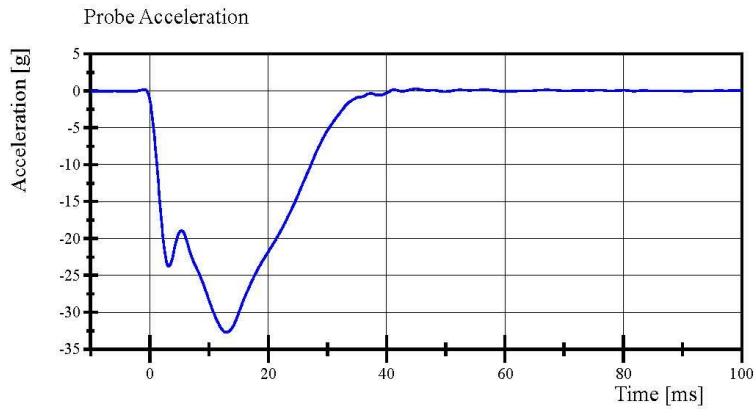
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.28.2022 13:45:18 631

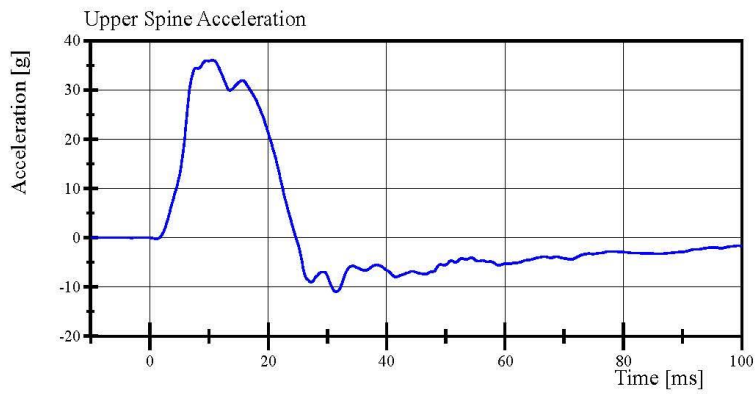


Transportation Research Center Inc.

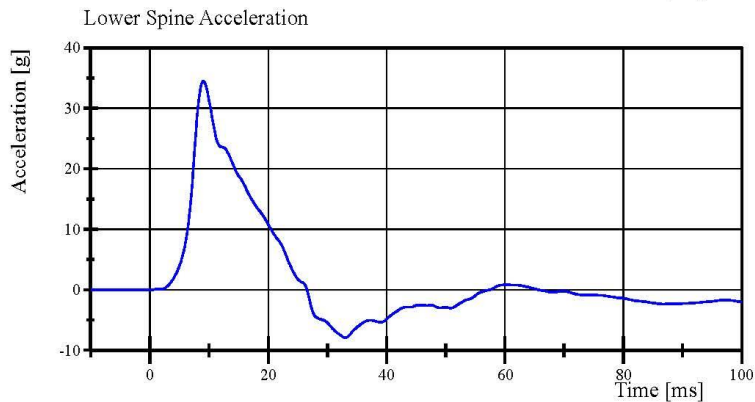
Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 55-1
Test Date: 6/28/2022



Filter Class: CFC_180
Max: 0.3 g at 44.9 ms
Min: -32.7 g at 13.0 ms



Filter Class: CFC_180
Max: 36.1 g at 10.6 ms
Min: -11.0 g at 31.5 ms



Filter Class: CFC_180
Max: 34.5 g at 9.0 ms
Min: -7.9 g at 33.0 ms

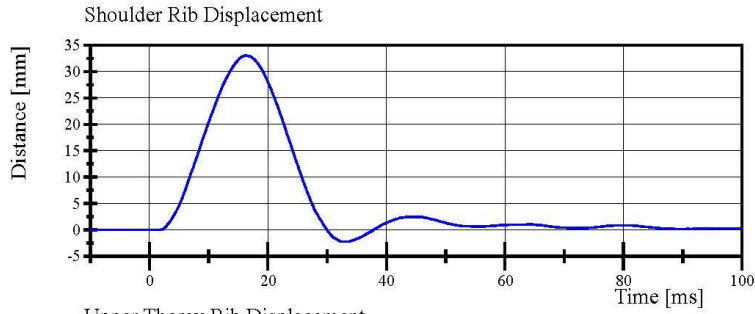
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.28.2022 13:46:20 631

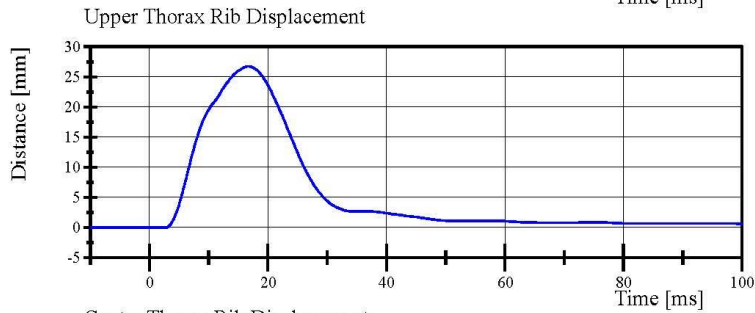


Transportation Research Center Inc.

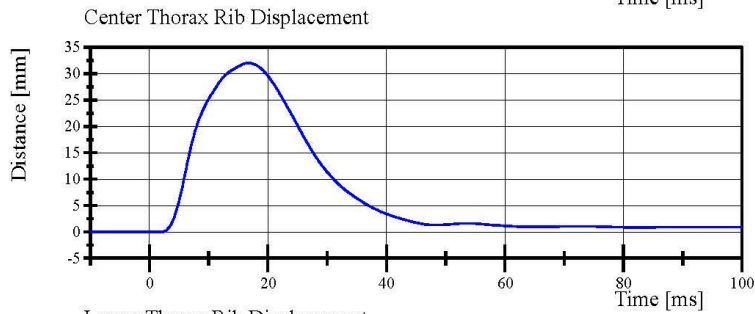
Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 55-1
Test Date: 6/28/2022



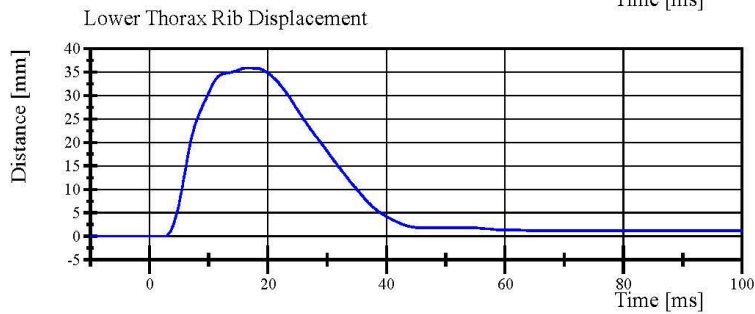
Filter Class: CFC_600
Max: 33.0 mm at 16.2 ms
Min: -2.3 mm at 32.9 ms



Filter Class: CFC_600
Max: 26.7 mm at 16.6 ms
Min: -0.0 mm at 2.7 ms



Filter Class: CFC_600
Max: 32.0 mm at 16.7 ms
Min: -0.0 mm at -6.7 ms



Filter Class: CFC_600
Max: 35.9 mm at 16.4 ms
Min: -0.0 mm at 2.6 ms

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

06.28.2022 13:46:20 631



Transportation Research Center Inc.

Left Lateral Thorax without Arm
SID IIS Serial No. 297 Certification No. 55-1
Test Date: 6/28/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.9 °C	Yes
Relative Humidity	10 - 70 %	49 %	Yes
Impactor Velocity	4.20 - 4.40 m/s	4.358 m/s	Yes
Impactor Acceleration	(-14) - (-18) g	-15.4 g	Yes
Upper Thorax Rib Displacement	32 - 40 mm	36.3 mm	Yes
Center Thorax Rib Displacement	39 - 45 mm	42.1 mm	Yes
Lower Thorax Rib Displacement	35 - 43 mm	41.3 mm	Yes
Upper Spine Lateral Acceleration	13 - 17 g	14.4 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: DM5020
Middle Thorax Rib #2 S/N: DM5021
Lower Thorax Rib #3 S/N: DM5022

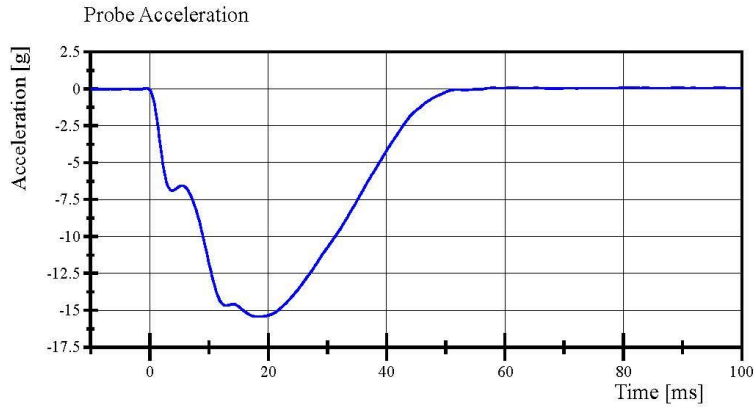
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.28.2022 13:12:28 851

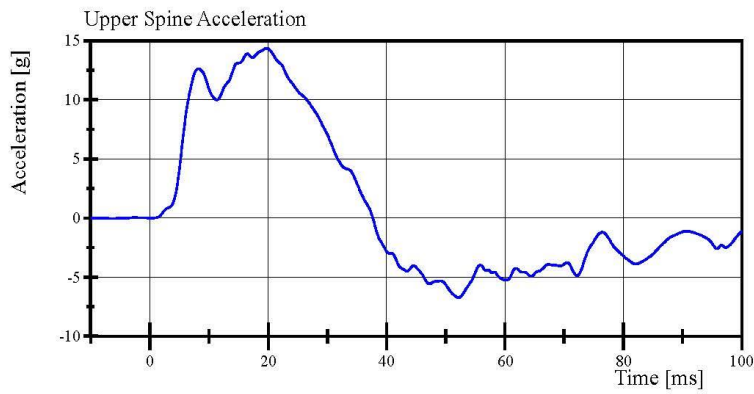


Transportation Research Center Inc.

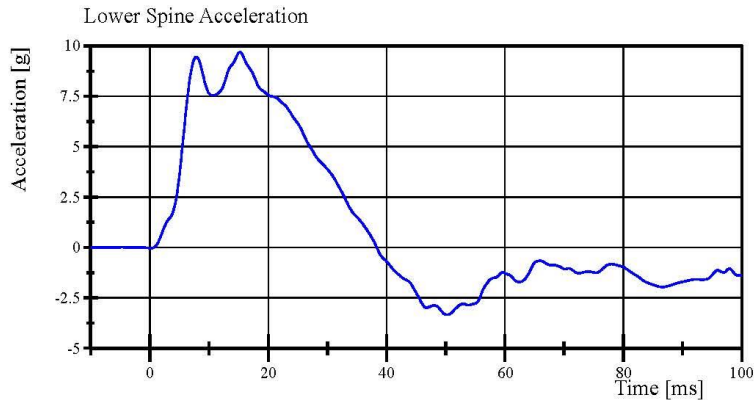
Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 55-1
Test Date: 6/28/2022



Filter Class: CFC_180
Max: 0.1 g at 61.3 ms
Min: -15.4 g at 18.6 ms



Filter Class: CFC_180
Max: 14.4 g at 19.7 ms
Min: -6.7 g at 52.1 ms



Filter Class: CFC_180
Max: 9.7 g at 15.2 ms
Min: -3.3 g at 50.2 ms

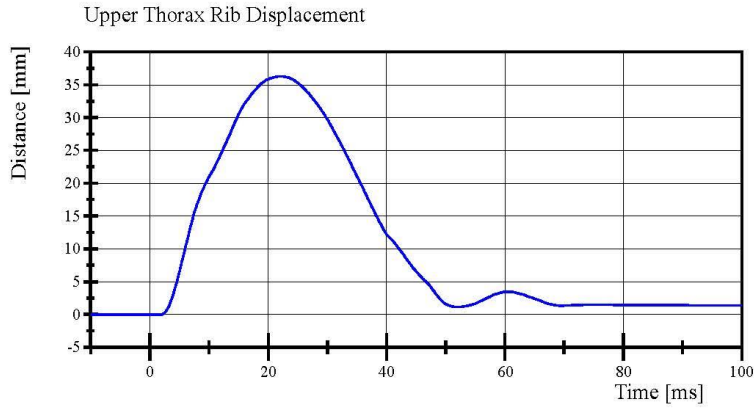
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.28.2022 13:13:07 851

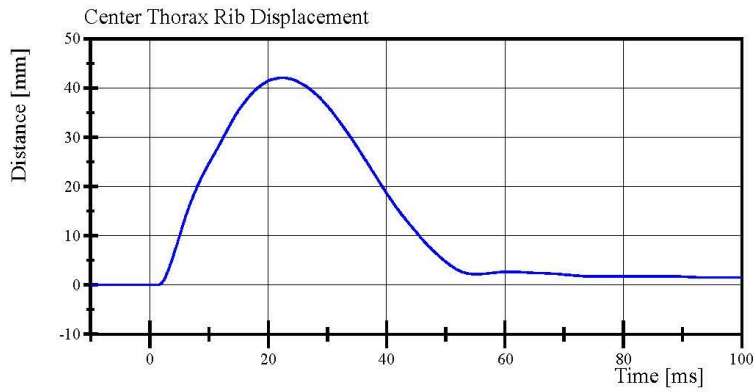


Transportation Research Center Inc.

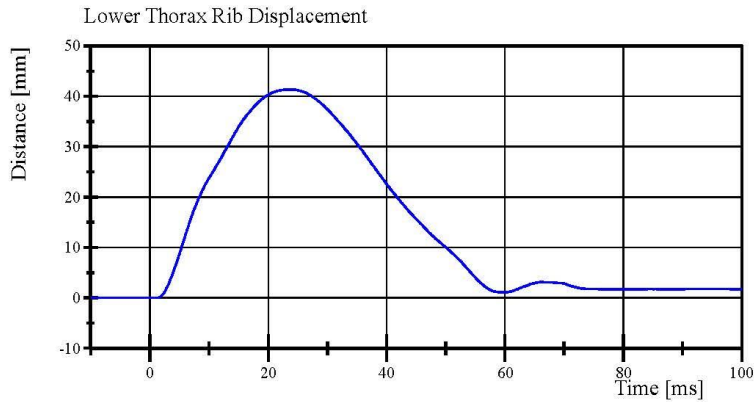
Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 55-1
Test Date: 6/28/2022



Filter Class: CFC_600
Max: 36.3 mm at 22.1 ms
Min: -0.0 mm at 1.8 ms



Filter Class: CFC_600
Max: 42.1 mm at 22.4 ms
Min: -0.0 mm at -7.2 ms



Filter Class: CFC_600
Max: 41.3 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

06.28.2022 13:13:07 851



Transportation Research Center Inc.

Left Lateral Abdomen
SID IIs Serial No. 297 Certification No. 55-1
Test Date: 6/28/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	47 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.28 m/s	Yes
Impactor Acceleration	(-12) - (-16) g	-14.1 g	Yes
Upper Abdominal Rib Displacement	36 - 47 mm	41.0 mm	Yes
Lower Abdominal Rib Displacement	33 - 44 mm	39.6 mm	Yes
Lower Spine Lateral Acceleration	9 - 14.0 g	11.23 g	Yes

Test meets specifications.

Condition: Used

Comments:

Upper Abdominal Rib S/N: DM7281

Lower Abdominal Rib S/N: DM7275

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

06.30.2022 09:36:50 678

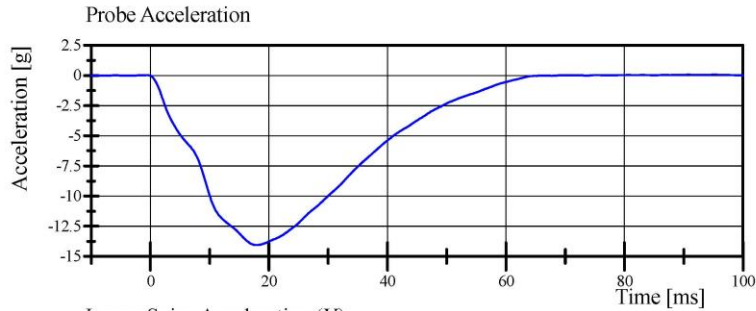


Transportation Research Center Inc.

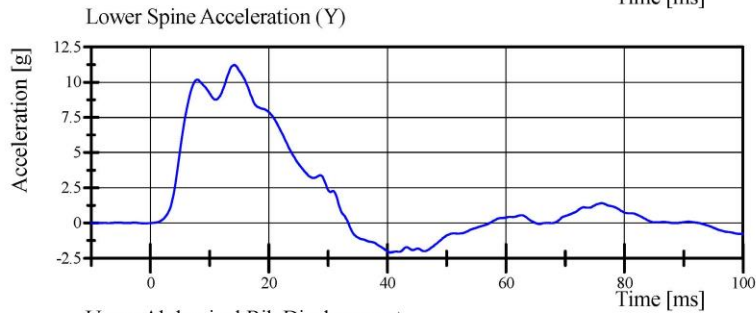
Left Lateral Abdomen

SID IIs Serial No. 297 Certification No. 55-1

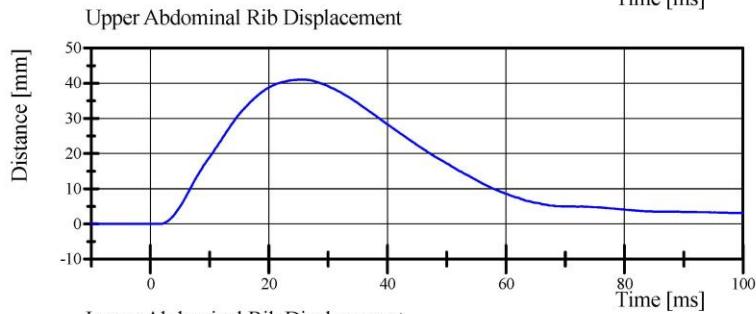
Test Date: 6/28/2022



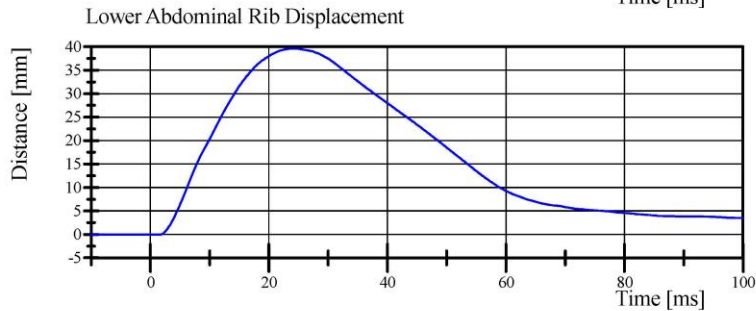
Filter Class: CFC_180
Max: 0.1 g at 95.1 ms
Min: -14.1 g at 17.9 ms



Filter Class: CFC_180
Max: 11.2 g at 14.2 ms
Min: -2.1 g at 40.5 ms



Filter Class: CFC_600
Max: 41.0 mm at 25.2 ms
Min: -0.0 mm at -2.6 ms



Filter Class: CFC_600
Max: 39.6 mm at 24.2 ms
Min: -0.0 mm at 1.7 ms

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

06.30.2022 09:37:44 678



Transportation Research Center Inc.

Left Lateral Pelvis
SID II: Serial No. 297 Certification No. 55-1
Test Date: 6/28/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.8 °C	Yes
Relative Humidity	10 - 70 %	50 %	Yes
Pendulum Velocity	6.6 - 6.8 m/s	6.61 m/s	Yes
Impactor Acceleration	(-38.0) - (-47.0) g	-43.18 g	Yes
Peak Pelvis Lateral Acceleration after 6ms	34 - 42 g	36.7 g	Yes
Acetabulum Force	3,600 - 4,300 N	4,090.8 N	Yes

Test meets specifications.

Condition: Used

Comments:

Pelvis Skin S/N: 1171

Pelvis Plug Info:

Manufacturer: Saco

S/N: 13758

Cal Date: 20200325

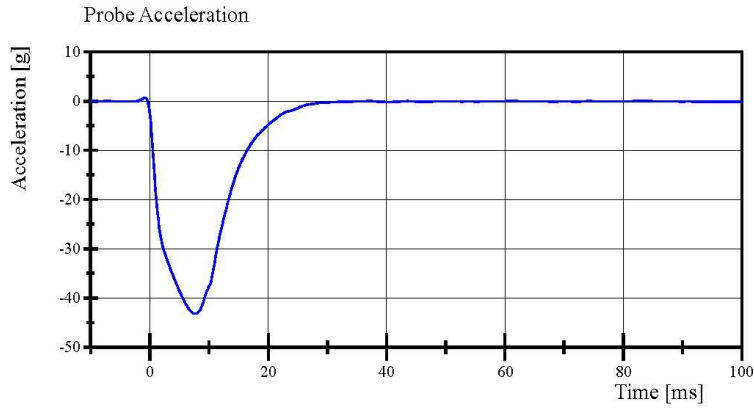
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

06.28.2022 11:32:42 464

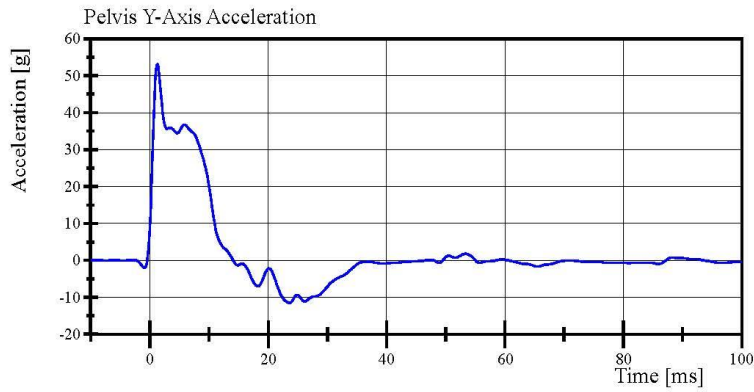


Transportation Research Center Inc.

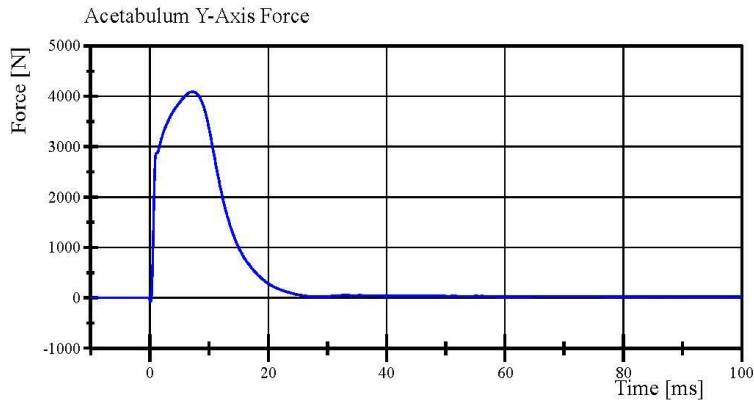
Left Lateral Pelvis
SID IIs Serial No. 297 Certification No. 55-1
Test Date: 6/28/2022



Filter Class: CFC_180
Max: 0.7 g at -0.9 ms
Min: -43.2 g at 7.7 ms



Filter Class: CFC_180
Max: 53.1 g at 1.3 ms
Min: -11.5 g at 23.6 ms



Filter Class: CFC_600
Max: 4,090.8 N at 7.2 ms
Min: -68.7 N at 0.2 ms

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

06.28.2022 11:35:36 464



Transportation Research Center Inc.

Left Lateral Iliac

SID IIS Serial No. 297 Certification No. 55-1

Test Date: 6/28/2022

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	46 %	Yes
Pendulum Velocity	4.2 - 4.4 m/s	4.27 m/s	Yes
Impactor Acceleration	(-36) - (-45) g	-39.3 g	Yes
Peak Pelvis Lateral Acceleration	28 - 39 g	31.8 g	Yes
Iliac Force	4,100 - 5,100 N	4,565.1 N	Yes

Test meets specifications.

Condition: Used

Comments:

Pelvis Skin S/N: 1171

Pelvis Plug Info:

Manufacturer: Saco

S/N: 13748

Cal Date: 20200325

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

06.28.2022 09:19:19 700

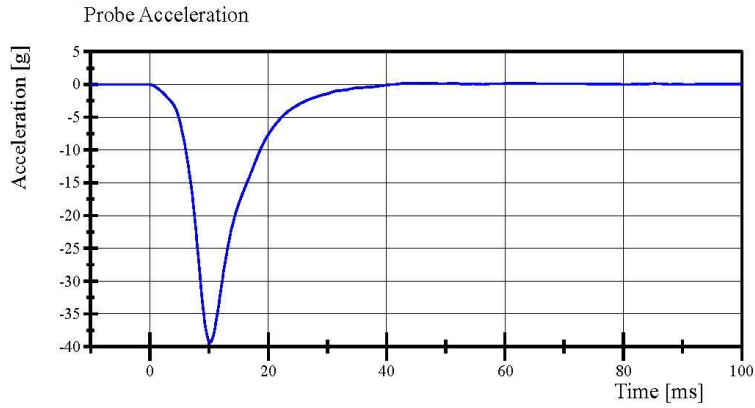


Transportation Research Center Inc.

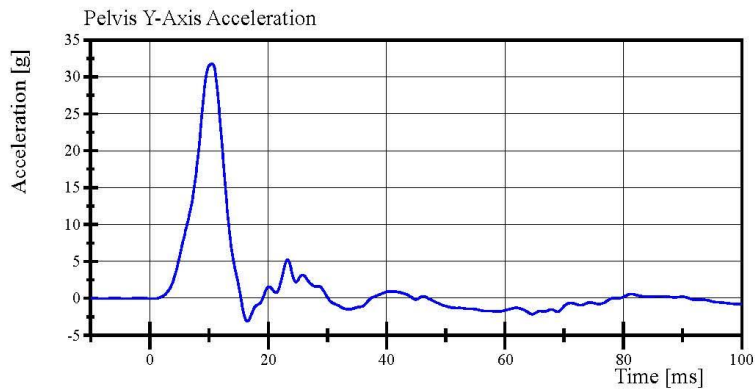
Left Lateral Iliac

SID IIs Serial No. 297 Certification No. 55-1

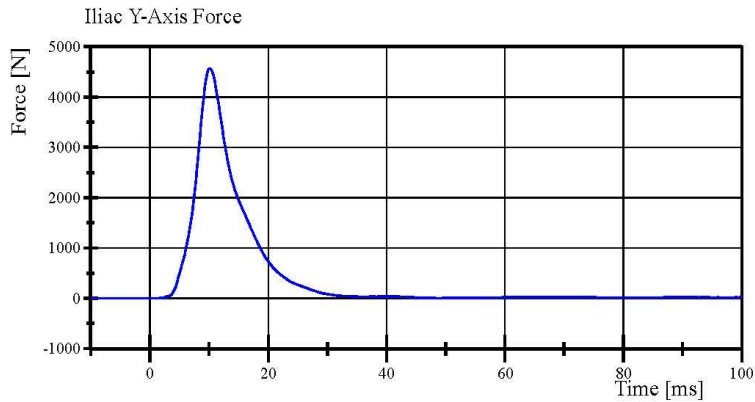
Test Date: 6/28/2022



Filter Class: CFC_180
Max: 0.2 g at 46.3 ms
Min: -39.3 g at 10.2 ms



Filter Class: CFC_180
Max: 31.8 g at 10.5 ms
Min: -3.1 g at 16.5 ms



Filter Class: CFC_600
Max: 4,565.1 N at 10.1 ms
Min: -0.8 N at 0.0 ms

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

06.28.2022 09:23:32 700



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	1-Mar-2022
			Y	P93549	Endevco	1-Mar-2022
			Z	P93776	Endevco	1-Mar-2022
Displacement Potentiometers	Shoulder		Y	N/A	N/A	N/A
	Thoracic Rib	Upper	Y	023	Servo	1-Mar-2022
		Middle	Y	063	Servo	1-Mar-2022
		Lower	Y	043	Servo	1-Mar-2022
	Abdominal Rib	Upper	Y	1152	Servo	1-Mar-2022
		Lower	Y	051	Servo	1-Mar-2022v
Lower Spine Accelerometers (T12)			X	P94425	Endevco	1-Mar-2022
			Y	P91522	Endevco	1-Mar-2022
			Z	P91511	Endevco	1-Mar-2022
Acetabulum Load Cell			Y	235-FY	FTSS	28-Feb-2022
Iliac Wing Load Cell			Y	320-FY	FTSS	28-Feb-2022
Pelvis Plug (struck side)				13748	SACO	25-Mar-2020
Pelvis Plug (non-struck side)				13751	SACO	25-Mar-2020

TABLE 2 – Vehicle Instrumentation

Vehicle Instrumentation		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	A400097	Measurement Specialties	31-Mar-22
Vehicle Center of Gravity	Y	A381839	Measurement Specialties	31-Mar-22
Vehicle Center of Gravity	Z	A381818	Measurement Specialties	31-Mar-22
Left Floor Sill	Y	A373384	Measurement Specialties	31-Mar-22
A-Pillar Sill	Y	A386358	Measurement Specialties	31-Mar-22
A-Pillar Low	Y	A378325	Measurement Specialties	31-Mar-22
A-Pillar Mid	Y	A400126	Measurement Specialties	31-Mar-22
B-Pillar Sill	Y	A400129	Measurement Specialties	31-Mar-22
B-Pillar Low	Y	A381829	Measurement Specialties	31-Mar-22
B-Pillar Mid	Y	A400117	Measurement Specialties	31-Mar-22
Driver Seat	Y	A381835	Measurement Specialties	31-Mar-22
Engine Top	X	A377406	Measurement Specialties	31-Mar-22
Engine Top	Y	A381837	Measurement Specialties	31-Mar-22
Firewall	Y	A373334	Measurement Specialties	31-Mar-22
Right Roof	Y	A381830	Measurement Specialties	31-Mar-22
Right Floor Sill	Y	A378311	Measurement Specialties	4-Apr-22
Rear Floor Pan	X	A400114	Measurement Specialties	31-Mar-22
Rear Floor Pan	Y	A381823	Measurement Specialties	31-Mar-22

TABLE 3 – Pole Instrumentation

Pole Instrumentation	Serial Number	Manufacturer	Calibration Date
Load Cell 1	DK7091S	Humanetics	28-Dec-2021
Load Cell 2	DK7120S	Humanetics	28-Dec-2021
Load Cell 3	DK7118S	Humanetics	28-Dec-2021
Load Cell 4	DK7124S	Humanetics	28-Dec-2021
Load Cell 5	DK7111S	Humanetics	28-Dec-2021
Load Cell 6	DK7126S	Humanetics	28-Dec-2021
Load Cell 7	DK7112S	Humanetics	28-Dec-2021
Load Cell 8	DK7074S	Humanetics	28-Dec-2021