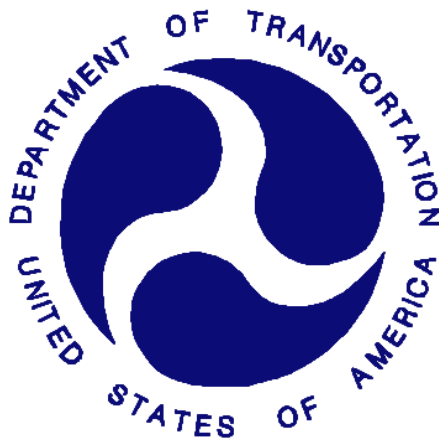


FINAL REPORT NUMBER: SPNCAP-TRC-22-003

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

**GENERAL MOTORS LLC
2022 Chevrolet Traverse
NHTSA NUMBER: M20220108**

**PREPARED BY:
Transportation Research Center Inc.
10820 State Route 347
P. O. Box B-67
East Liberty, OH 43319**



Report Date: July 26, 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**

This publication is distributed by the U.S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The opinions, findings, and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its contents or use thereof.

If trade or manufacturers' names or products are mentioned, it is only because they are considered essential to the object of the publication and should not be construed as an endorsement.

Report Prepared By: ILO Project Operations Group

Report Approved By: 
John Shultz

Approval Date: July 26, 2023

FINAL REPORT ACCEPTANCE BY OCWS:

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

Date: _____

FINAL REPORT ACCEPTANCE BY OCWS:

COTR, New Car Assessment Program
NHTSA, Office of Crashworthiness Standards

Date: _____

Technical Report Documentation Page

| 1. Report No. SPNCAP-TRC-22-003 | 2. Government Accession No. | 3. Recipient's Catalog No. | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|----------------------|--|-------------|------------------|----------------------|--|----|------|------------|-------------------------------------|-----|----|-------------|---|---|------|---------------|---------------------------------|----|-----|-------------|--------------------------------|----|-----|-------------|
| 4. Title and Subtitle Final Report of New Car Assessment Program Side Impact Pole Testing of 2022 Chevrolet Traverse NHTSA No.: M20220108 | | 5. Report Date July 26, 2023 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 6. Performing Organization Code TRC Inc. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7. Author(s) John Shultz, Project Manager | | 8. Performing Organization Report No. 220825 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9. Performing Organization Name and Address Transportation Research Center Inc. 10820 State Route 347 East Liberty, OH 43319 | | 10. Work Unit No. | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 11. Contract or Grant No. 693JJ920D000018 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Crashworthiness Standards Mail Code NRM-110 1200 New Jersey Ave, SE Washington, DC 20590 | | 13. Type of Report and Period Covered Final Test Report August 25, 2022 – July 26, 2023 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 14. Sponsoring Agency Code NRM-110 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15. Supplemental Notes | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <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 Chevrolet Traverse, 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 August 25, 2022.</p> <p>The impact velocity was 32.08 km/h, and the ambient temperature at the struck (left) side of the target vehicle at the time of impact was 22.3° C. The test vehicle's post-test maximum crush was 376 mm at Level 2.</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>340</u></td> </tr> <tr> <td>Resultant Lower Spine Acceleration:</td> <td>g's</td> <td>82</td> <td><u>38.2</u></td> </tr> <tr> <td>Total Pelvic Force: (sum of acetabular and iliac forces)</td> <td>N</td> <td>5525</td> <td><u>3034.7</u></td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>38*</td> <td><u>20.9</u></td> </tr> <tr> <td>Maximum Abdomen Rib Deflection</td> <td>mm</td> <td>45*</td> <td><u>17.8</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>340</u> | Resultant Lower Spine Acceleration: | g's | 82 | <u>38.2</u> | Total Pelvic Force: (sum of acetabular and iliac forces) | N | 5525 | <u>3034.7</u> | Maximum Thoracic Rib Deflection | mm | 38* | <u>20.9</u> | Maximum Abdomen Rib Deflection | mm | 45* | <u>17.8</u> |
| | <u>Unit</u> | <u>Threshold</u> | <u>Front SID-IIs</u> | | | | | | | | | | | | | | | | | | | | | | | | |
| Head Injury Criteria (HIC ₃₆): | NA | 1000 | <u>340</u> | | | | | | | | | | | | | | | | | | | | | | | | |
| Resultant Lower Spine Acceleration: | g's | 82 | <u>38.2</u> | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Pelvic Force: (sum of acetabular and iliac forces) | N | 5525 | <u>3034.7</u> | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum Thoracic Rib Deflection | mm | 38* | <u>20.9</u> | | | | | | | | | | | | | | | | | | | | | | | | |
| Maximum Abdomen Rib Deflection | mm | 45* | <u>17.8</u> | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19. Security Classification (of this report) Unclassified | 20. Security Classification (of this page) Unclassified | 21. Number of Pages 125 | 22. Price | | | | | | | | | | | | | | | | | | | | | | | | |

TABLE OF CONTENTS

| <u>Section</u> | | <u>Page No.</u> |
|-----------------------|--|-----------------|
| 1 | Test Purpose and Procedure | 1 |
| 2 | Summary of Test Results | 2 |
| 3 | Occupant and Vehicle Information | 4 |
| <u>Data Sheet No.</u> | | <u>Page No.</u> |
| 1 | General Test and Vehicle Parameter Data | 5 |
| 2 | Seat, Seat Belt, Steering Wheel Adjustment and Fuel Systems Data | 9 |
| 3 | Dummy Longitudinal Clearance Dimensions | 12 |
| 4 | Dummy Lateral Clearance Dimensions | 13 |
| 5 | Camera and Instrumentation Data | 14 |
| 6 | Vehicle Accelerometer Data | 15 |
| 7 | Rigid Pole Load Cell Data | 16 |
| 8 | Post-Test Observations | 17 |
| 9 | Vehicle Profile Measurements | 19 |
| 10 | Vehicle Exterior Crush Measurements | 20 |
| 11 | Vehicle Damage Profile Distances | 23 |
| 12 | FMVSS No. 301 Fuel System Integrity Post-Impact Data | 24 |
| 13 | Dummy/Vehicle Temperature and Humidity Stabilization Data | 25 |
| <u>Appendix</u> | | <u>Page No.</u> |
| A | Photographs | A-1 |
| B | Vehicle and Dummy Response Data Plots | B-1 |
| C | Dummy Configuration and Performance Verification Data | C-1 |
| D | Test Equipment And Instrumentation Calibration Data | D-1 |

SECTION 1
TEST PURPOSE AND PROCEDURE

TEST PURPOSE AND PROCEDURE

This side impact test was conducted as part of the 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 Chevrolet Traverse manufactured by GENERAL MOTORS LLC. 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 Chevrolet Traverse. The subject vehicle was towed into the rigid pole at an angle of 75° and a velocity of 32.08 km/h. The side impact test was conducted by Transportation Research Center Inc. in East Liberty, OH, on August 25, 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 | 340 |
| Lower Spine Acceleration Resultant | G | 82 | 38.2 |
| Total Pelvic Force (sum of acetabular and iliac forces) | N | 5525 | 3034.7 |
| Maximum Thoracic Rib Deflection | mm | 38* | 20.9 |
| Maximum Abdominal Rib Deflection | mm | 45* | 17.8 |

* Proposed IARV

Supplemental restraint information is given below:

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

GENERAL COMMENTS

Left B-Pillar Sill Acceleration (Y); Channel failed after 23.0 MS

Left Lower B-Pillar Acceleration (Y); Channel failed after 75.0 MS

SECTION 3
OCCUPANT AND VEHICLE INFORMATION

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

Test Vehicle: 2022 Chevrolet Traverse
Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
Test Date: 8/25/2022

TEST VEHICLE INFORMATION AND OPTIONS

| | |
|--------------------------|------------------------|
| NHTSA No. | M20220108 |
| Model Year | 2022 |
| Make | Chevrolet |
| Model | Traverse |
| Body Style | MPV |
| VIN | 1GNERFKW9NJ191667 |
| Body Color | Northsky Blue Metallic |
| Odometer Reading (km/mi) | 4 mi. |
| Engine Displacement (L) | 3.6 |
| Type/No. Cylinders | V/6 |
| Engine Placement | Transverse |
| Transmission Type | Automatic |
| Transmission Speeds | 9 |
| Overdrive | Yes |
| Final Drive | FWD |
| Roof Rack | No |
| Sunroof/T-Top | No |
| Running Boards | No |
| Tilt Steering Wheel | Yes |
| Power Seats | No |
| Anti-Lock Brakes (ABS) | Yes |

| | |
|-----------------------------------|-----|
| Traction Control System (TCS) | Yes |
| Auto-Leveling System | No |
| Automatic Door Locks (ADL) | Yes |
| Power Window Auto-Reverse | No |
| Other Optional Feature | N/A |
| Driver Front Airbag | Yes |
| Driver Curtain Airbag | Yes |
| Driver Head/Torso Airbag | No |
| Driver Torso Airbag | No |
| Driver Torso/Pelvis Airbag | Yes |
| Driver Pelvis Airbag | No |
| Driver Knee Airbag | No |
| Rear Pass. Curtain Airbag | Yes |
| Rear Pass. Head/Torso Airbag | No |
| Rear Pass. Torso Airbag | No |
| Rear Pass. Torso/Pelvis Airbag | No |
| Rear Pass. Pelvis Airbag | No |
| Driver Seat Belt Pretensioner | Yes |
| Rear Pass. Seat Belt Pretensioner | No |
| Driver Load Limiter | Yes |
| Rear Pass. Load Limiter | No |
| Front Center Seat Airbag | Yes |

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

No

DATA FROM CERTIFICATION LABEL

| | |
|----------------------|--------------------|
| Manufactured By | GENERAL MOTORS LLC |
| Date of Manufacturer | 06/22 |
| Vehicle Type | MPV |

| | |
|-----------------|------|
| GVWR (kg) | 2800 |
| GAWR Front (kg) | 1450 |
| GAWR Rear (kg) | 1600 |

VEHICLE SEATING AND WEIGHT CAPACITY DATA

| | Front | Rear | Third | Total |
|--|-------|------|-------|-------|
| Designated Seating Capacity (DSC) | 2 | 3 | 3 | 8 |
| Vehicle Capacity Weight (VCW) (kg) | | | | 828.0 |
| DSC X 68.04 kg | | | | 544.3 |
| Rated Cargo and Luggage Weight (RCLW) (kg) | | | | 283.7 |

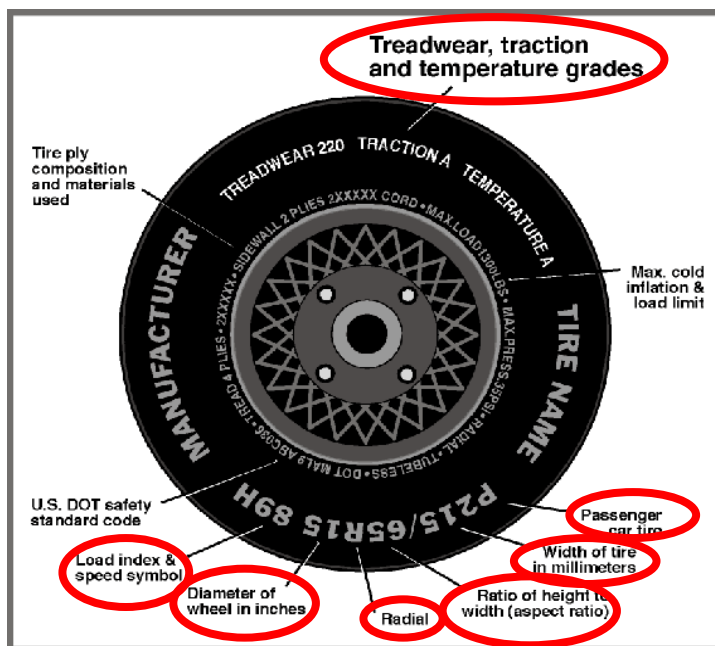
VEHICLE SEAT TYPE

| 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 | N/A | Yes | N/A |
| Third row seat | N/A | N/A | Yes | N/A | Yes | N/A | N/A |

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

Test Vehicle: 2022 Chevrolet Traverse
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
 Test Date: 8/25/2022



DATA FROM TIRE PLACARD

| Measured Parameter | Front | Rear |
|-----------------------------|-------------------------|-------------------------|
| Maximum Tire Pressure (kPa) | 300 | 300 |
| Cold Pressure (kPa) | 240 | 240 |
| Recommended Tire Size | 255/65R18 | 255/65R18 |
| Tire Size on Vehicle | 255/65R18 | 255/65R18 |
| Tire Manufacturer | Bridgestone | Bridgestone |
| Tire Model | Alenza | Alenza |
| Treadwear | 700 | 700 |
| Traction | A | A |
| Temperature Grades | B | B |
| Tire Plies Sidewall | 2 | 2 |
| Tire Plies Body | 5 | 5 |
| Load Index/Speed Symbol | 111T | 111T |
| Tire Material | Polyester, Nylon, Steel | Polyester, Nylon, Steel |
| DOT Safety Code Left | DOT 17X AXAA02 2122 | DOT 17X AXAA02 2122 |
| DOT Safety Code Right | DOT 17X AXAA02 2122 | DOT 17X AXAA02 2122 |

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

Test Vehicle: 2022 Chevrolet Traverse NHTSA No.: M20220108
 Test Program: SPNCAP Side Impact Test Date: 8/25/2022

TIRE PRESSURES

| | Units | LF | RF | LR | RR |
|----------------|-------|-----|-----|-----|-----|
| As Delivered | kPa | 221 | 221 | 221 | 221 |
| Tire Placard | kPa | 240 | 240 | 240 | 240 |
| Owner's Manual | kPa | 240 | 240 | 240 | 240 |
| As Tested | kPa | 240 | 240 | 240 | 240 |

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 | 572.0 | 421.2 | | 577.4 | 517.8 | | 590.6 | 521.0 | |
| Right | kg | 565.2 | 393.6 | | 534.4 | 501.0 | | 554.6 | 470.8 | |
| Ratio | % | 58.3 | 41.7 | | 52.2 | 47.8 | | 53.6 | 46.4 | |
| Totals | kg | 1137.2 | 814.8 | 1952.0 | 1111.8 | 1018.8 | 2130.6 | 1145.2 | 991.8 | 2137.0 |

TARGET TEST WEIGHT CALCULATION

| Measured Parameter | Units | Value | |
|---|-------|--------|---------|
| Total As Delivered Weight (UVW) | kg | 1952.0 | (A) |
| Actual Weight of 1 P572V ATD (SID-ILs) Dummy Used | kg | 49.0 | (B) |
| Rated Cargo/Luggage Weight (RCLW) | kg | 136.0 | (C) |
| Calculated Vehicle Target Weight (TVTW) | kg | 2137.0 | (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. | -1.3 | -1.3 | -0.6 | Yes |
| Front Passenger Sill Angle (front-to-rear)* | Deg. | -1.1 | -0.8 | -0.8 | Yes |
| Front Bumper-Line Angle (left-to-right)** | Deg. | -0.1 | -0.1 | -0.2 | Yes |
| Rear Bumper-Line Angle (left-to-right)** | Deg. | -0.2 | -0.1 | 0 | Yes |
| Vehicle CG (Aft of Front Axle) | mm | 1288 | 1476 | 1432 | |
| Vehicle CG (Left (+) / Right (-) from longitudinal Centerline) | mm | +15 | +25 | +35 | |

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

Test Vehicle: 2022 Chevrolet Traverse NHTSA No.: M20220108
 Test Program: SPNCAP Side Impact Test Date: 8/25/2022

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

| Component Description | Weight (kg) |
|--|-------------|
| Ballast: Steel plates and sandbags in cargo area | 165.6 |
| 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 | 1907 |
| Aft 25 mm target | 1934 |

DATA SHEET NO. 2

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

Test Vehicle: 2022 Chevrolet Traverse
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
 Test Date: 8/25/2022

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 | 14.6 | 18.8 | 16.7 |
| Front Passenger Seat | N/A | N/A | 14.7 |
| Front Center Seat* | N/A | N/A | N/A |
| Struck Side Rear Seat | N/A | N/A | 11.0 |
| Non-Struck Side Rear Seat | N/A | N/A | 9.6 |
| Rear Center Seat* | N/A | N/A | 11.8 |

* 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 | 16.7 | 303 | Max | 300 | 303 | 305 |
| | | | Mid | 268 | 271 | 274 |
| | | | Min | 253 | 257 | 260 |
| Front Passenger Seat | 14.7 | 257 | Max | N/A | N/A | N/A |
| | | | Mid | 269 | 273 | 277 |
| | | | Min | N/A | N/A | N/A |
| Front Center Seat* | N/A | N/A | Max | N/A | N/A | N/A |
| | | | Mid | N/A | N/A | N/A |
| | | | Min | N/A | N/A | N/A |
| Struck Side Rear Seat | 11 | 350 | Max | N/A | N/A | N/A |
| | | | Mid | 350 | 352 | 354 |
| | | | Min | N/A | N/A | N/A |
| Non-Struck Side Rear Seat | 9.6 | 248 | Max | N/A | N/A | N/A |
| | | | Mid | 348 | 350 | 345 |
| | | | Min | N/A | N/A | N/A |
| Rear Center Seat* | 11.8 | 380 | Max | N/A | N/A | N/A |
| | | | Mid | 380 | 381 | 382 |
| | | | 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 Chevrolet Traverse

NHTSA No.: M20220108

Test Program: SPNCAP Side Impact

Test Date: 8/25/2022

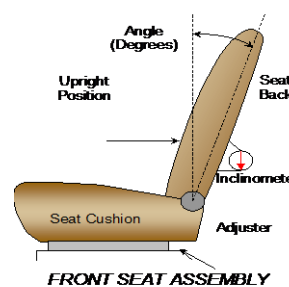
SEAT FORE/AFT POSITION

| Seat | Total Fore/Aft Travel | | Test Position from Forward most Position | |
|---------------------------|-----------------------|----------|--|-------------|
| | mm | Detents* | mm | Detent* |
| Driver Seat | 235 | 25 | 0 | 0, Full Fwd |
| Front Passenger Seat | 240 | 25 | 0 | 0, Full Fwd |
| Front Center Seat* | N/A | N/A | N/A | N/A |
| Struck Side Rear Seat | 143 | 14 | 143 | 13 |
| Non-Struck Side Rear Seat | 140 | 14 | 140 | 13 |
| Rear Center Seat* | 143 | 14 | 143 | 13 |

* 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 | 66.1 | 33 | 26.2 | 5 |
| Front Passenger Seat | 66.0 | 33 | 26.2 | 5 |
| Front Center Seat* | N/A | N/A | N/A | N/A |
| Struck Side Rear Seat | 12 | 6 | 13.7 | 5 |
| Non-Struck Side Rear Seat | 12 | 6 | 13.7 | 5 |
| Rear Center Seat* | 12 | 6 | N/A | 5 |

* 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, Full Up |

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 | 8 | 0, Full Down |

DATA SHEET NO. 2 (CONTINUED)

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

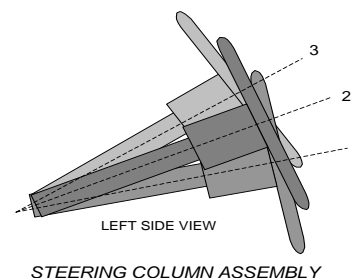
Test Vehicle: 2022 Chevrolet Traverse
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
 Test Date: 8/25/2022

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.

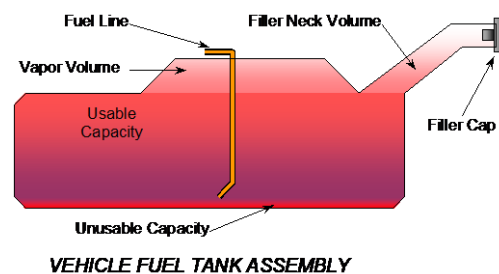
| | Degrees | Fore/Aft Position, mm |
|-----------------------------------|---------|-----------------------|
| Lowermost, Position No. 1 | 20.0 | 0 |
| Geometric Center, Position No. 2 | 22.6 | 30 |
| Uppermost, Position No. 3 | 28.8 | 60 |
| Telescoping Steering Wheel Travel | | 60 |
| Test Position | 22.6 | 30 |



FUEL PUMP

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

Pump will run for ~ 3 seconds when the key is turned on and then will not run unless the engine is cranking or running. ECM supplies voltage to the fuel pump control module when ECM detects that the ignition is ON.



FUEL TANK CAPACITY

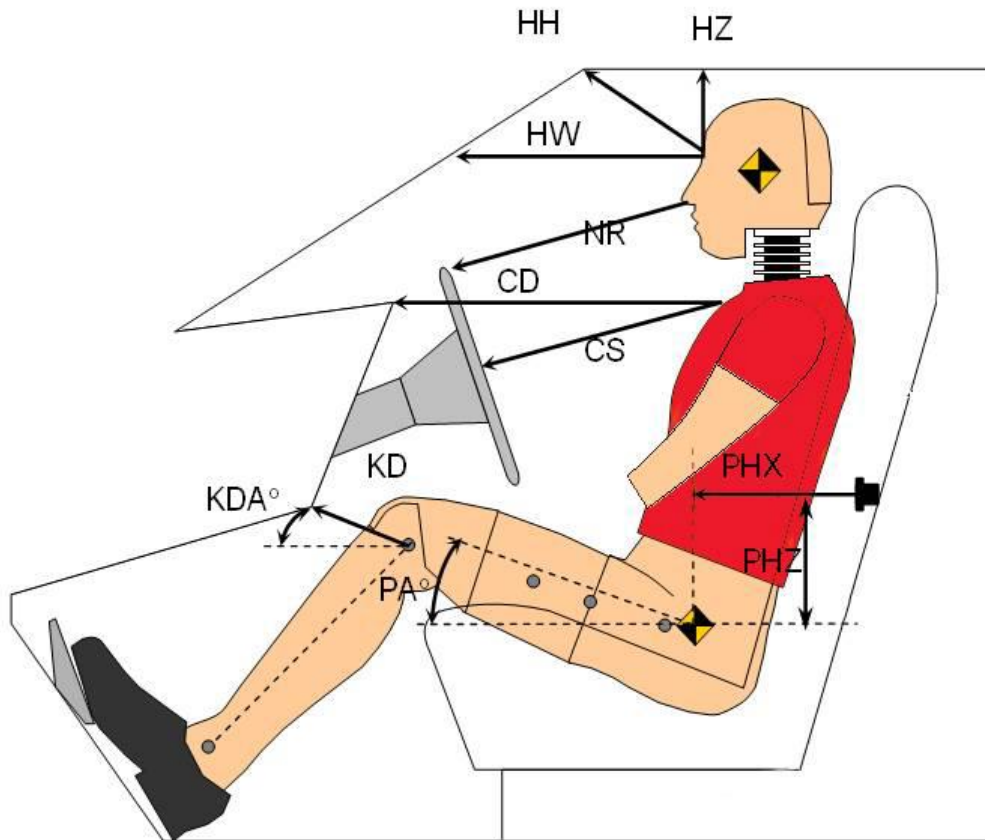
| | Liters |
|---|--------|
| Usable Capacity of "Standard Tank" (see Form No. 1) | 82.1 |
| Usable Capacity of "Optional" Tank (see Form No. 1) | N/A |
| Usable Capacity of Standard Tank (see Owner's Manual) | 82.1 |
| Usable Capacity of Optional Tank (see Owner's Manual) | N/A |
| 93% of Usable Capacity | 76.4 |
| Actual Amount of Solvent Used in Test | 76.4 |
| 1/3 of Usable Capacity | 27.4 |

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 Chevrolet Traverse
Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
Test Date: 8/25/2022

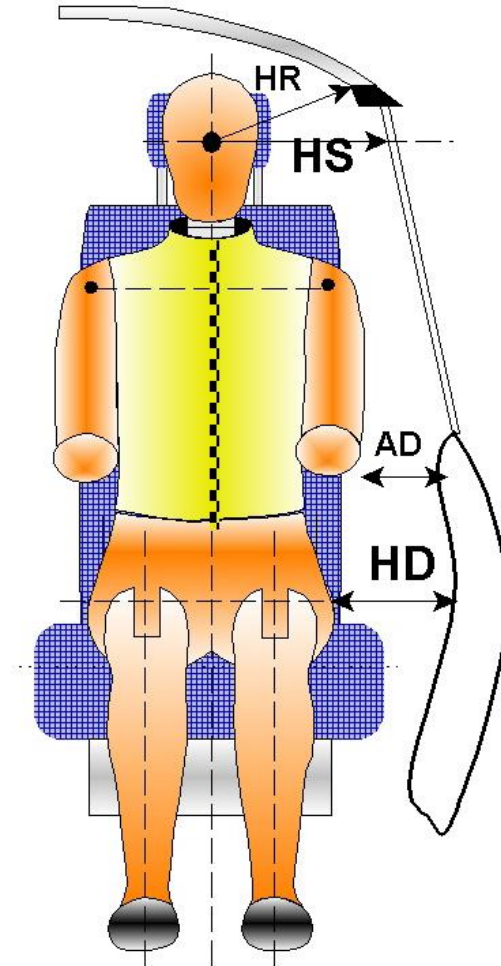


| Code | Measurement Description | Driver | |
|-----------|-------------------------------|-------------|-----------|
| | | Length (mm) | Angle (°) |
| HH | Head to Header | 365 | |
| HW | Head to Windshield | 749 | |
| HZ | Head to Visor | 292 | |
| NR | Nose to Rim | 296 | |
| CD | Chest to Dashboard | 458 | |
| CS | Chest to Steering Wheel | 235 | |
| KDL/KDLA° | Left Knee to Dash | 158 | 21.5 |
| KDR/KDRA° | Right Knee to Dash | 148 | 21.5 |
| PAX° | Pelvic Tilt Angle (X-axis) | | 0.0 |
| PAY° | Pelvic Tilt Angle (Y-axis) | | 20.3 |
| PHX | Hip Point to Striker (X-Axis) | 290 | |
| PHZ | Hip Point to Striker (Z-Axis) | 59 | |

**DATA SHEET NO. 4
DUMMY LATERAL CLEARANCE DIMENSIONS**

Test Vehicle: 2022 Chevrolet Traverse
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
 Test Date: 8/25/2022

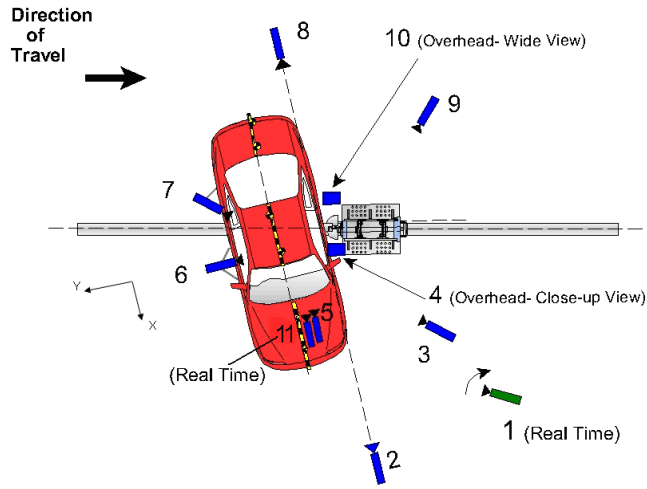


| Code | Measurement Description | Length (mm) |
|------|-------------------------|-------------|
| HR | Head to Side Header | 335 |
| HS | Head to Side Window | 425 |
| AD | Arm to Door | 102 |
| HD | Hip Point to Door | 168 |

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

Test Vehicle: 2022 Chevrolet Traverse
Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
Test Date: 8/25/2022



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 | 5133 | 81 | -1522 | 20 | 1000 |
| 3 | Impact side 45° – forward pole view | 3217 | -949 | -1425 | 20 | 1000 |
| 4 | Overhead Close-up view of impact | -77 | 150 | -4875 | 50 | 1000 |
| 5 | Onboard – dummy front view | | | | 25 | 1000 |
| 6 | Onboard – dummy side view | | | | 12.5 | 1000 |
| 7 | Onboard – dummy rear oblique view | | | | 12.5 | 1000 |
| 8 | Rear ground level – impact view | -6396 | 0 | -1541 | 20 | 1000 |
| 9 | Impact side 45° – rearward pole view | -3051 | -1386 | -1662 | 20 | 1000 |
| 10 | Overhead wide view of impact | 0 | 0 | -4881 | 12.5 | 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

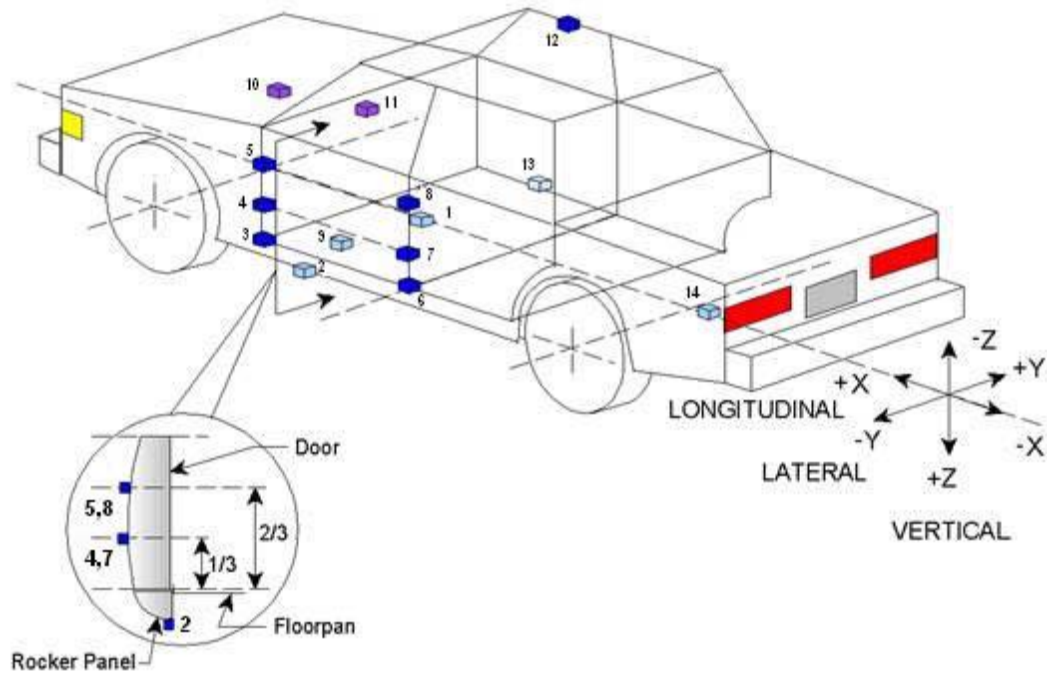
INSTRUMENTATION

| | 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 Chevrolet Traverse
Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
Test Date: 8/25/2022



| Accelerometer/Sensor Location | | | | |
|-------------------------------|-------------------|------------------|------|-------|
| ID | | Coordinates (mm) | | |
| | | X | Y | Z |
| 1 | Vehicle CG | 3328 | 135 | -379 |
| 2 | Left Floor Sill | 3285 | -765 | -432 |
| 3 | A-Pillar Sill | 3600 | -750 | -498 |
| 4 | A-Pillar Low | 3578 | -915 | -669 |
| 5 | A-Pillar Mid | 3600 | -905 | -1050 |
| 6 | B-Pillar Sill | 2500 | -820 | -450 |
| 7 | B-Pillar Low | 2590 | -900 | -639 |
| 8 | B-Pillar Mid | 2570 | -880 | -1067 |
| 9 | Driver Seat Track | 2780 | -630 | -480 |
| 10 | Engine Top | 4433 | 170 | -918 |
| 11 | Firewall | 4158 | 10 | -998 |
| 12 | Right Roof | 2750 | 675 | -1732 |
| 13 | Right Floor Sill | 3270 | 765 | -407 |
| 14 | Rear Floorpan | 820 | 0 | -612 |

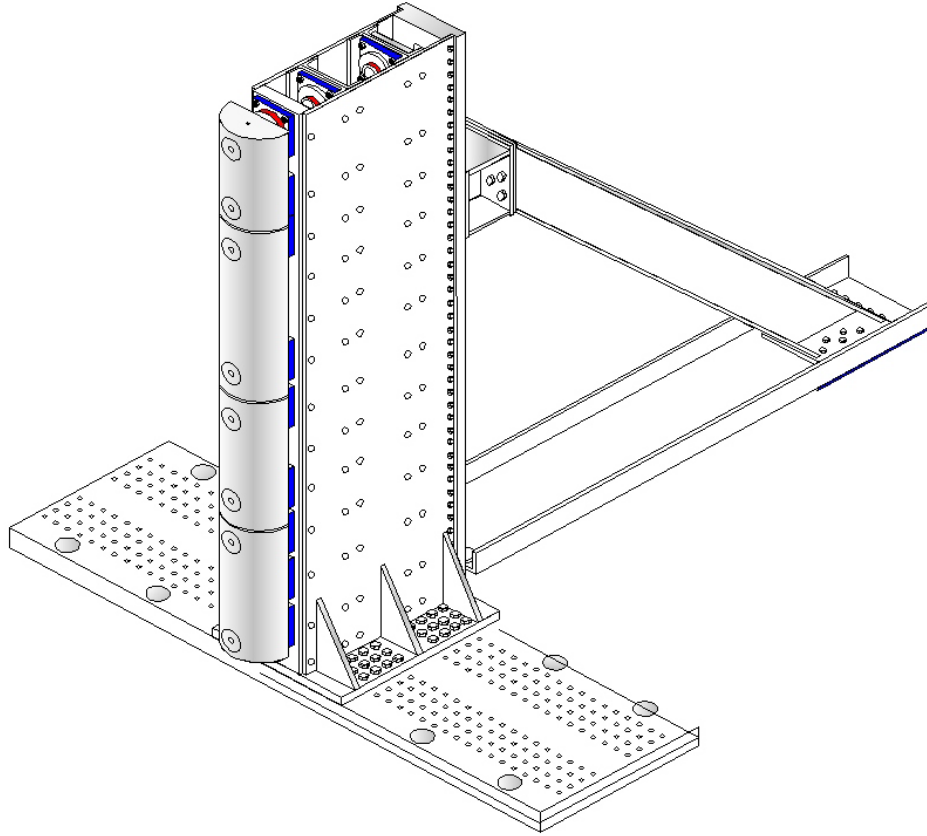
Reference: X - Test Vehicle Rear Bumper (+ forward)
Y - Test Vehicle Centerline (+ to right)
Z - Ground Plane (+ down)

DATA SHEET NO. 7
RIGID POLE LOAD CELL DATA

Test Vehicle: 2022 Chevrolet Traverse
Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
Test Date: 8/25/2022

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 Chevrolet Traverse
Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
Test Date: 8/25/2022

TEST DUMMY INFORMATION AND CONTACT POINTS

| Dummy Body Part | Driver SID-IIs Dummy |
|-------------------|----------------------------|
| Face | Driver center airbag |
| Top of Head | SCAB; driver center airbag |
| Left Side of Head | SCAB |
| Back of Head | Head restraint |
| Left Shoulder | SAB |
| Upper Torso | Side Seat Bolster |
| Lower Torso | SAB; Side Seat Bolster |
| Left Hip | SAB |
| Left Knee | Door Panel |

POST-TEST DOOR PERFORMANCE

| Description | Struck Side | | Non-Struck Side | | Rear Hatch/ Other Door |
|--|-------------|------|-----------------|------|---------------------------|
| | Front | Rear | Front | Rear | |
| Remained Closed and Operational | No | No | Yes | Yes | Yes |
| Total Separation from Vehicle at Hinges or Latches | No | No | No | No | No |
| Latch or Hinge 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 | Driver blown out, none on rear passenger |
| Other Notable Effects | None |

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

Test Vehicle: 2022 Chevrolet Traverse
Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
Test Date: 8/25/2022

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 | No | N/A |
| Seat Belt Load Limiter | Yes | No | No | N/A |
| Other: Front Center Seat Airbag | Yes | Yes | No | N/A |

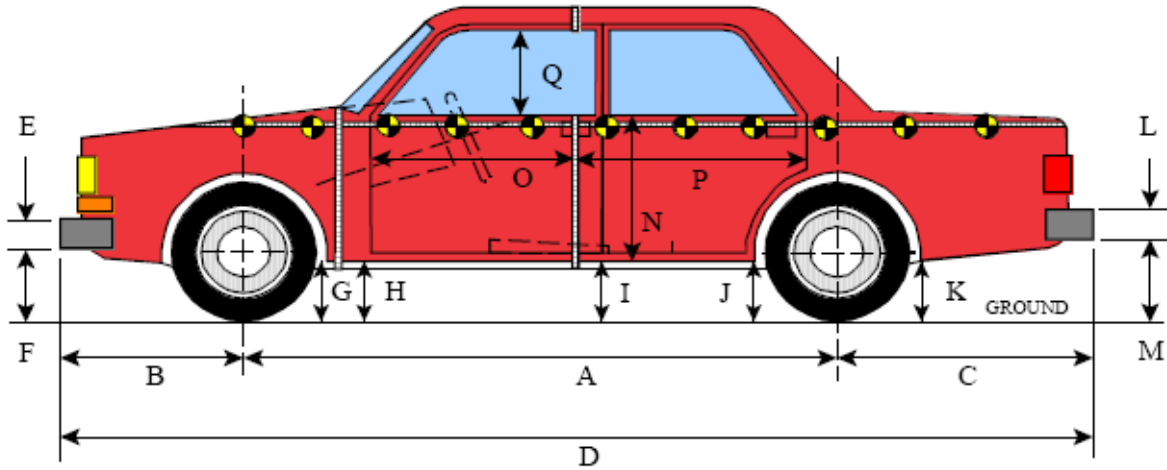
VEHICLE SPEED, VEHICLE ANGLE AT IMPACT AND IMPACT POINT LOCATION DATA

| Measured Parameter | Units | Tolerance | Value |
|--|---------|---------------------------------|-------|
| Vertical Impact Reference Line (Aft of Front Axle) (Intended Impact Point) | mm | | 1182 |
| Actual Impact Point (Aft of Front Axle) | mm | | 1177 |
| Horizontal Offset (+ forward / - rearward) | mm | +/- 38 of Intended Impact point | +5 |
| 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 | 32.08 |
| Trap No. 2 Velocity (Redundant) | km/h | 31.4 to 33.0 | 32.08 |

DATA SHEET NO. 9
VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2022 Chevrolet Traverse
Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
Test Date: 8/25/2022



LEFT SIDE VIEW

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

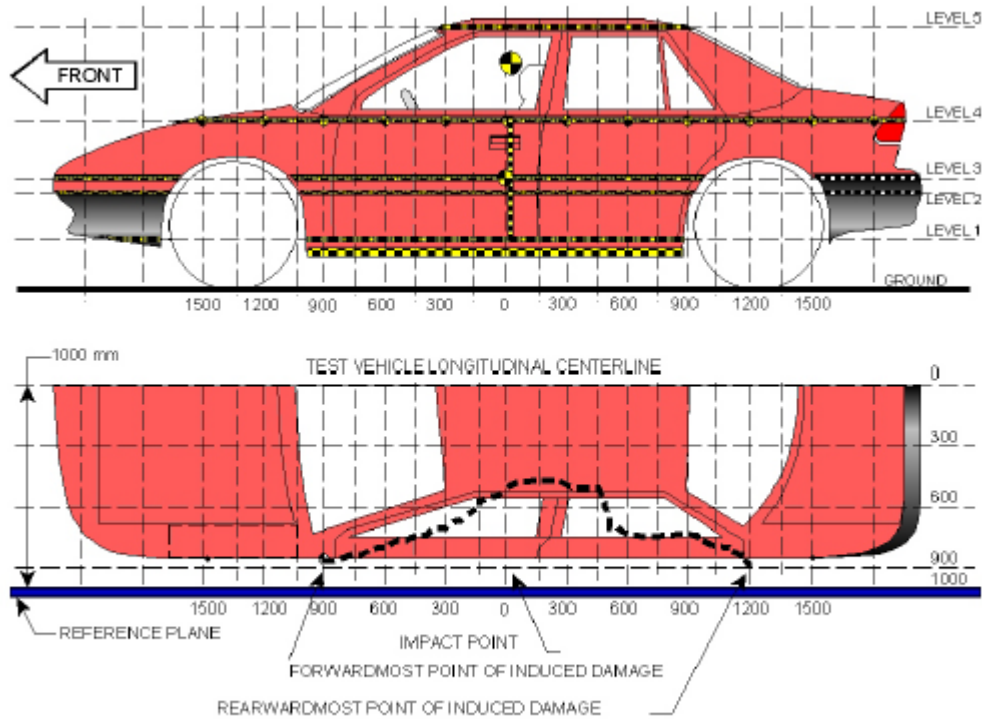
VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

| Code | Measurement Description | Pre-Test | Post-Test | Difference |
|------|--|----------|-----------|------------|
| A | Wheelbase | 3086 | 3015 | -71 |
| B | Front Axle to Front Surface of Vehicle | 1050 | 1050 | 0 |
| C | Rear Axle to Rear Surface of Vehicle | 1082 | 1082 | 0 |
| D | Total Length at Centerline | 5218 | 5187 | -31 |
| E | Front Bumper Thickness | 87 | 87 | 0 |
| F | Front Bumper Bottom to Ground | 516 | 549 | 33 |
| G | Sill Height at Front Wheel Well | 340 | 348 | 8 |
| H | Sill Height at Front Door Leading Edge | 352 | 360 | 8 |
| I | Sill Height at B-Pillar | 344 | 382 | 38 |
| J1 | Sill Height at Rear Wheel Well | 297 | 346 | 49 |
| J2 | Pinch Weld Height at Rear Wheel Well | 296 | 331 | 35 |
| K | Sill Height Aft of Rear Wheel Well | 360 | 419 | 59 |
| L | Rear Bumper Thickness | 135 | 135 | 0 |
| M | Rear Bumper Bottom to Ground | 525 | 578 | 53 |
| N | Sill Height to Bottom of Front Window Sill | 904 | 916 | 12 |
| O | Front Door Leading Edge to Impact CL | 662 | 668 | 6 |
| P | Rear Door Trailing Edge to Impact CL | 1600 | 1615 | 15 |
| Q | Front Window Opening | 460 | 420 | -40 |
| R | Right Side Length | 4926 | 5019 | 93 |
| S | Left Side Length | 4926 | 4926 | 0 |
| T | Vehicle Width at B-Pillars | 1990 | 1871 | -119 |
| U | Front Wheel Track Width | 1715 | 1720 | 5 |
| V | Rear Wheel Track Width | 1720 | 1697 | -23 |

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

Test Vehicle: 2022 Chevrolet Traverse
Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
Test Date: 8/25/2022



NOTE: All measurements are in millimeters (mm)

3

MAXIMUM EXTERIOR CRUSH MEASUREMENTS

| Level | Measurement Description | Height Above Ground | Maximum Exterior Static Crush | Distance from Impact |
|-------|-------------------------|---------------------|-------------------------------|----------------------|
| 1 | Sill Top | 417 | 299 | 0 |
| 2 | Occupant H-Point | 750 | 376 | 0 |
| 3 | Mid-Door | 779 | 375 | 0 |
| 4 | Window Sill | 1147 | 338 | 0 150 |
| 5 | Window Top | 1700 | 114 | 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 Chevrolet Traverse
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
 Test Date: 8/25/2022

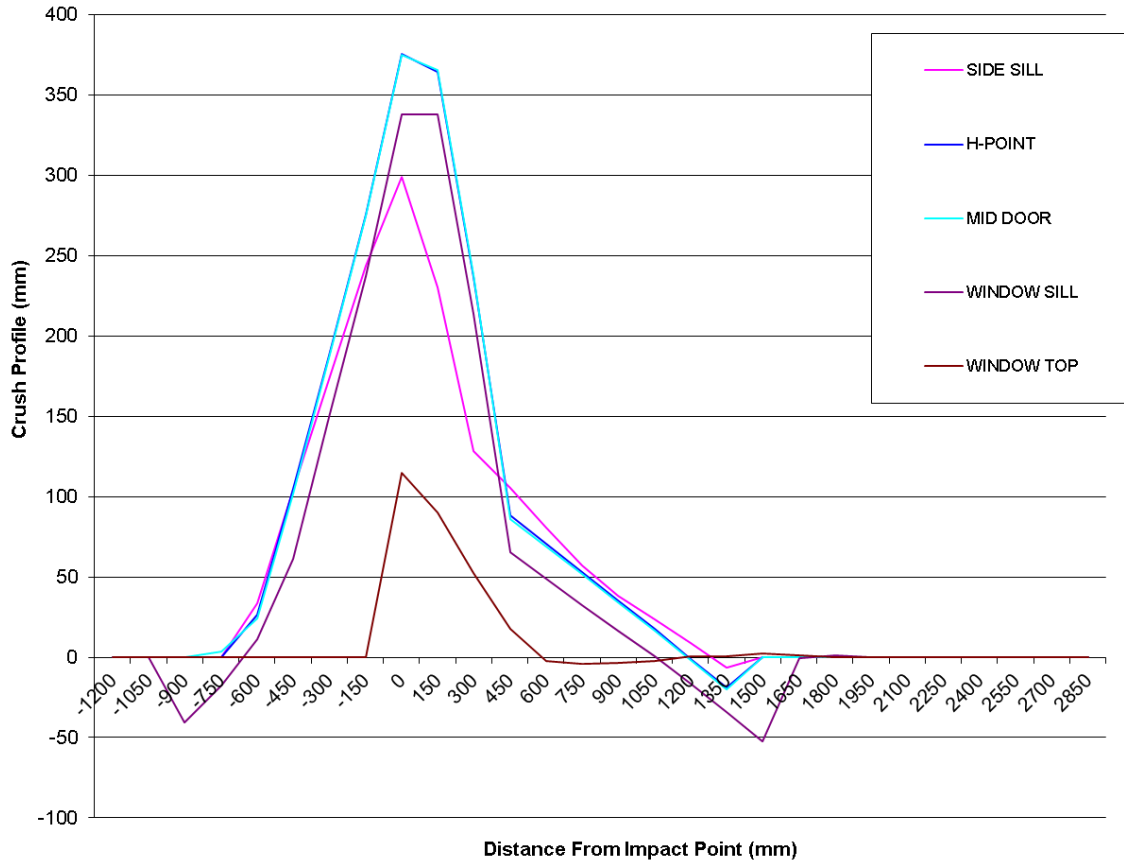
| | Pre-Test | | | | | Post-Test | | | | | Crush | | | | |
|------|----------|-----|-----|-----|-----|-----------|------|------|-----|-----|-------|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| -900 | 0 | 0 | 0 | 869 | 0 | 0 | 0 | 0 | 909 | 0 | 0 | 0 | 0 | -40 | 0 |
| -750 | 0 | 0 | 982 | 881 | 0 | 0 | 0 | 979 | 899 | 0 | 0 | 0 | 3 | -18 | 0 |
| -600 | 955 | 974 | 973 | 889 | 0 | 921 | 947 | 948 | 877 | 0 | 34 | 27 | 25 | 12 | 0 |
| -450 | 946 | 970 | 969 | 900 | 0 | 842 | 866 | 867 | 839 | 0 | 104 | 104 | 102 | 61 | 0 |
| -300 | 940 | 970 | 969 | 910 | 0 | 767 | 782 | 782 | 761 | 0 | 173 | 188 | 187 | 149 | 0 |
| -150 | 937 | 970 | 970 | 920 | 0 | 693 | 695 | 694 | 683 | 0 | 244 | 275 | 276 | 237 | 0 |
| 0 | 934 | 972 | 971 | 930 | 626 | 635 | 596 | 596 | 592 | 512 | 299 | 376 | 375 | 338 | 114 |
| 150 | 932 | 973 | 972 | 938 | 665 | 702 | 608 | 606 | 600 | 575 | 230 | 365 | 366 | 338 | 90 |
| 300 | 931 | 973 | 973 | 943 | 673 | 802 | 737 | 735 | 730 | 621 | 129 | 236 | 238 | 213 | 52 |
| 450 | 929 | 972 | 972 | 943 | 678 | 824 | 884 | 886 | 878 | 661 | 105 | 88 | 86 | 65 | 17 |
| 600 | 929 | 972 | 972 | 942 | 681 | 848 | 901 | 903 | 893 | 684 | 81 | 71 | 69 | 49 | -3 |
| 750 | 927 | 971 | 971 | 940 | 683 | 870 | 918 | 919 | 908 | 687 | 57 | 53 | 52 | 32 | -4 |
| 900 | 928 | 969 | 969 | 939 | 684 | 890 | 934 | 935 | 922 | 687 | 38 | 35 | 34 | 17 | -3 |
| 1050 | 930 | 968 | 968 | 936 | 683 | 907 | 950 | 951 | 936 | 685 | 23 | 18 | 17 | 0 | -2 |
| 1200 | 938 | 971 | 972 | 934 | 683 | 929 | 973 | 973 | 950 | 682 | 9 | -2 | -1 | -16 | 1 |
| 1350 | 949 | 981 | 981 | 923 | 681 | 955 | 1000 | 1001 | 957 | 680 | -6 | -19 | -20 | -34 | -1 |
| 1500 | 0 | 0 | 0 | 927 | 677 | 0 | 0 | 0 | 979 | 674 | 0 | 0 | 0 | -52 | 3 |
| 1650 | 0 | 0 | 0 | 923 | 670 | 0 | 0 | 0 | 924 | 669 | 0 | 0 | 0 | -1 | 1 |
| 1800 | 0 | 0 | 0 | 920 | 0 | 0 | 0 | 0 | 919 | 0 | 0 | 0 | 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 Chevrolet Traverse
Test Program: SPNCAP Side Impact

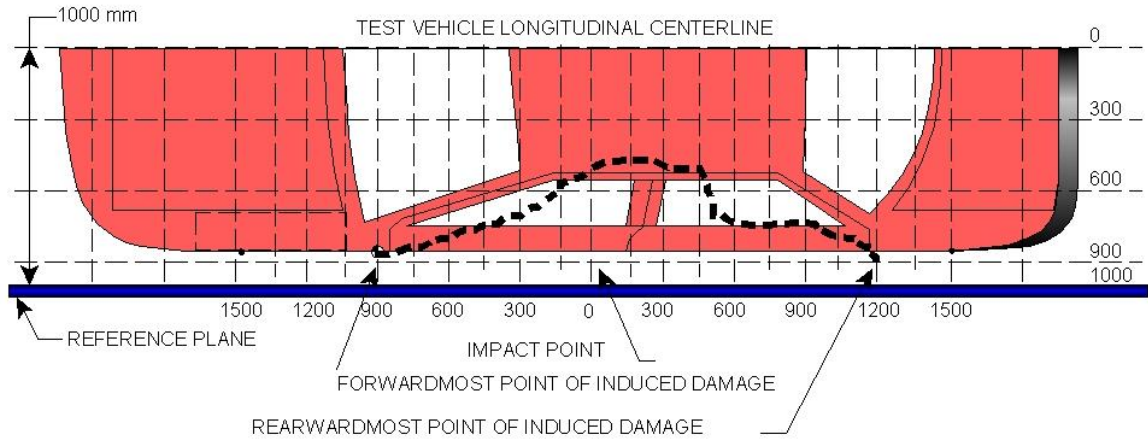
NHTSA No.: M20220108
Test Date: 8/25/2022



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

Test Vehicle: 2022 Chevrolet Traverse
Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
Test Date: 8/25/2022



VEHICLE DAMAGE PROFILE DISTANCES

| DPD | Distance From Impact Point (mm) | Level | Post-Test (mm) | Pre-Test (mm) | Crush (mm) |
|----------------|---------------------------------|-------|----------------|---------------|------------|
| 1 | 1800 | 4 | 919 | 920 | 1 |
| 2 | 1350 | 5 | 680 | 681 | 1 |
| 3 | 750 | 1 | 870 | 927 | 57 |
| 4 | 300 | 3 | 735 | 973 | 238 |
| 5 | -300 | 2 | 782 | 970 | 188 |
| 6 ¹ | -750 | 1 | 979 | 982 | 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

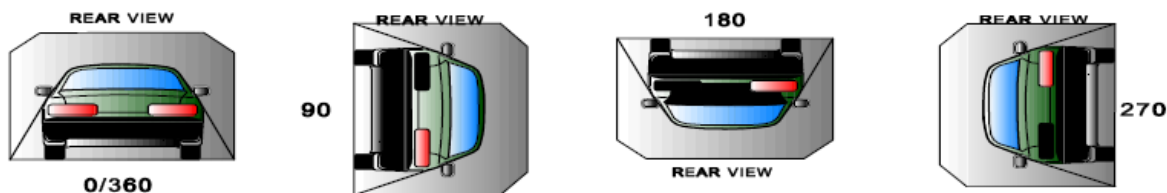
Test Vehicle: 2022 Chevrolet Traverse
 Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
 Test Date: 8/25/2022

Test Time: 14:18 **Temperature:** 22.3°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 |

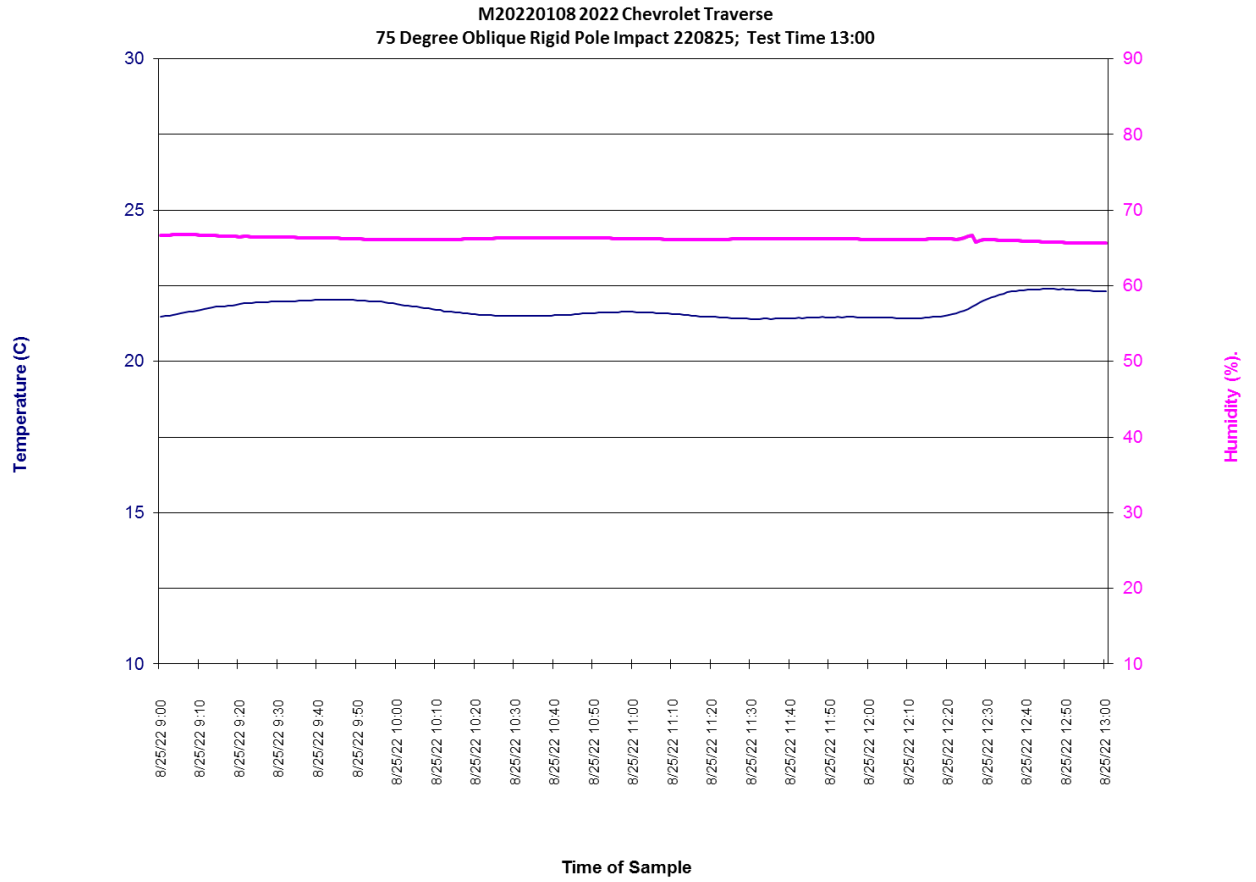
ROLLOVER SOLVENT SPILLAGE LOCATION TABLE

| 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 Chevrolet Traverse
Test Program: SPNCAP Side Impact

NHTSA No.: M20220108
Test Date: 8/25/2022



**APPENDIX A
PHOTOGRAPHS**

TABLE OF PHOTOGRAPHS

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

TABLE OF PHOTOGRAPHS (CONTINUED)

| No. | Description | Page |
|------------|---|-------------|
| 36 | Pre-Test View of Parking Brake | A-22 |
| 37 | Pre-Test Close-Up Left Side View of Driver Seat Track | A-22 |
| 38 | Pre-Test Close-Up Left Side View of Driver Seat Back | A-23 |
| 39 | Pre-Test Close-Up View of Driver Seat Back or Head Restraint | A-23 |
| 40 | Pre-Test Dummy and Door Clearance View | A-24 |
| 41 | Post-Test Dummy and Door Clearance View | A-24 |
| 42 | Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment | A-25 |
| 43 | Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment | A-25 |
| 44 | Pre-Test Inner Driver Door Panel View | A-26 |
| 45 | Post-Test Inner Driver Door Panel View Showing Dummy Contact Location | A-26 |
| 46 | Post-Test Dummy Close-Up Head Contact with Vehicle Interior View | A-27 |
| 47 | Post-Test Dummy Close-Up Head Contact with Side Airbag View | A-28 |
| 48 | Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View | A-28 |
| 49 | Post-Test Dummy Close-Up Torso Contact with Side Airbag View | A-29 |
| 50 | Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View | A-29 |
| 51 | Post-Test Dummy Close-Up Pelvis Contact with Side Airbag View | A-30 |
| 52 | Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View | A-30 |
| 53 | Post-Test Right Side View of Dummy and Rear Seat of Occupant Compartment | A-31 |
| 54 | Post-Test Inner Rear Passenger Torso Air Bag Deployment View | A-31 |
| 55 | Pre-Test View of Fuel Filler Cap or Fuel Filler Neck | A-32 |
| 56 | Post-Test View of Fuel Filler Cap or Fuel Filler Neck | A-32 |
| 57 | Close-Up View of Vehicle's Certification Label | A-33 |
| 58 | Close-Up View of Vehicle's Tire Information Placard or Label | A-33 |
| 59 | Pre-Test Pole Barrier Front View | A-34 |
| 60 | Post-Test Pole Barrier Front View | A-34 |
| 61 | Pre-Test Pole Barrier Side View | A-35 |
| 62 | Post-Test Pole Barrier Side View | A-35 |
| 63 | Pre-Test Ballast View | A-36 |
| 64 | Post-Test Primary and Redundant Speed Trap Read-Out | A-36 |
| 65 | FMVSS No. 301 Static Rollover 0 Degrees | A-37 |
| 66 | FMVSS No. 301 Static Rollover 90 Degrees | A-37 |
| 67 | FMVSS No. 301 Static Rollover 180 Degrees | A-38 |
| 68 | FMVSS No. 301 Static Rollover 270 Degrees | A-38 |
| 69 | FMVSS No. 301 Static Rollover 360 Degrees | A-39 |
| 70 | Impact Event | A-39 |
| 71 | Monroney Label | A-40 |
| 72 | Head Restraint Use and Adjustment Information from Vehicle Owner's Manual | A-40 |
| 73 | Post-Test View of Shattered Vehicle Inner Door Panel | A-41 |



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



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



No. 003 Pre-Test Frontal View of Test Vehicle



No. 004 Post-Test Frontal View of Test Vehicle



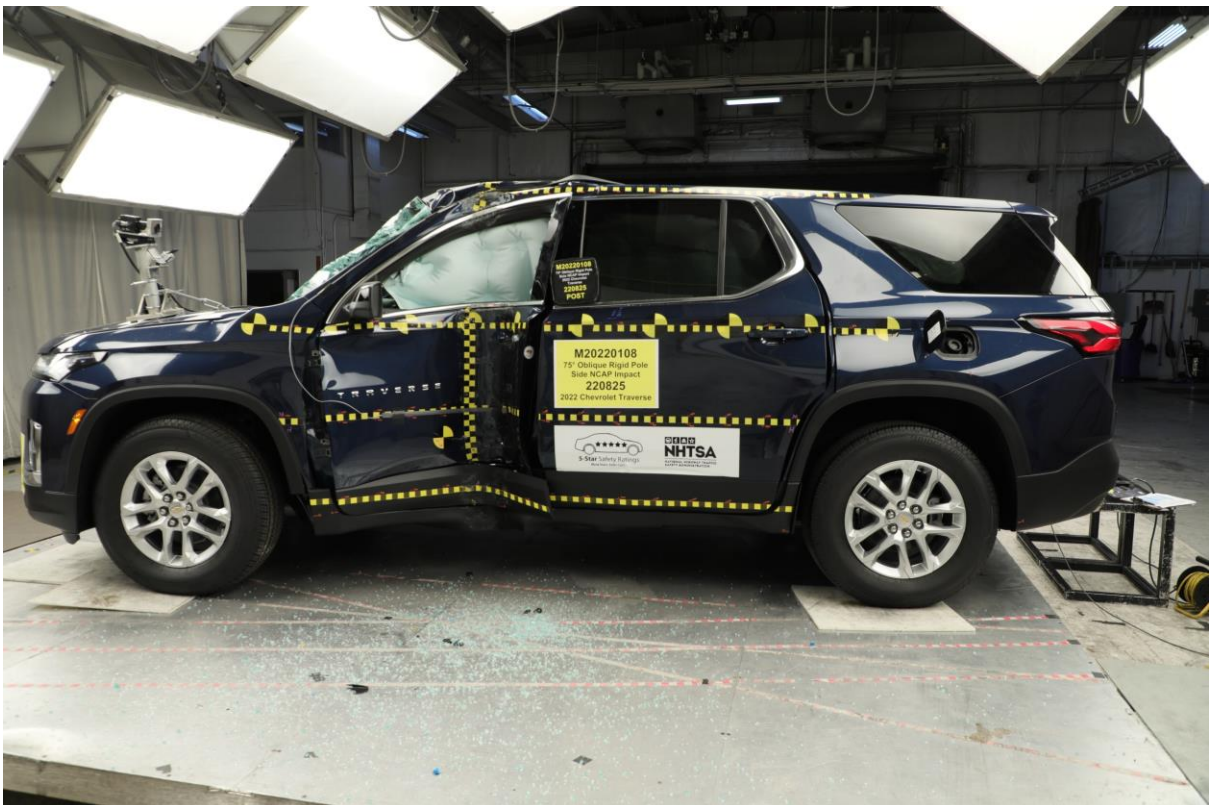
No. 005 Pre-Test Left Front $\frac{3}{4}$ View of Test Vehicle



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



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



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



No. 009 Pre-Test Left Rear 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



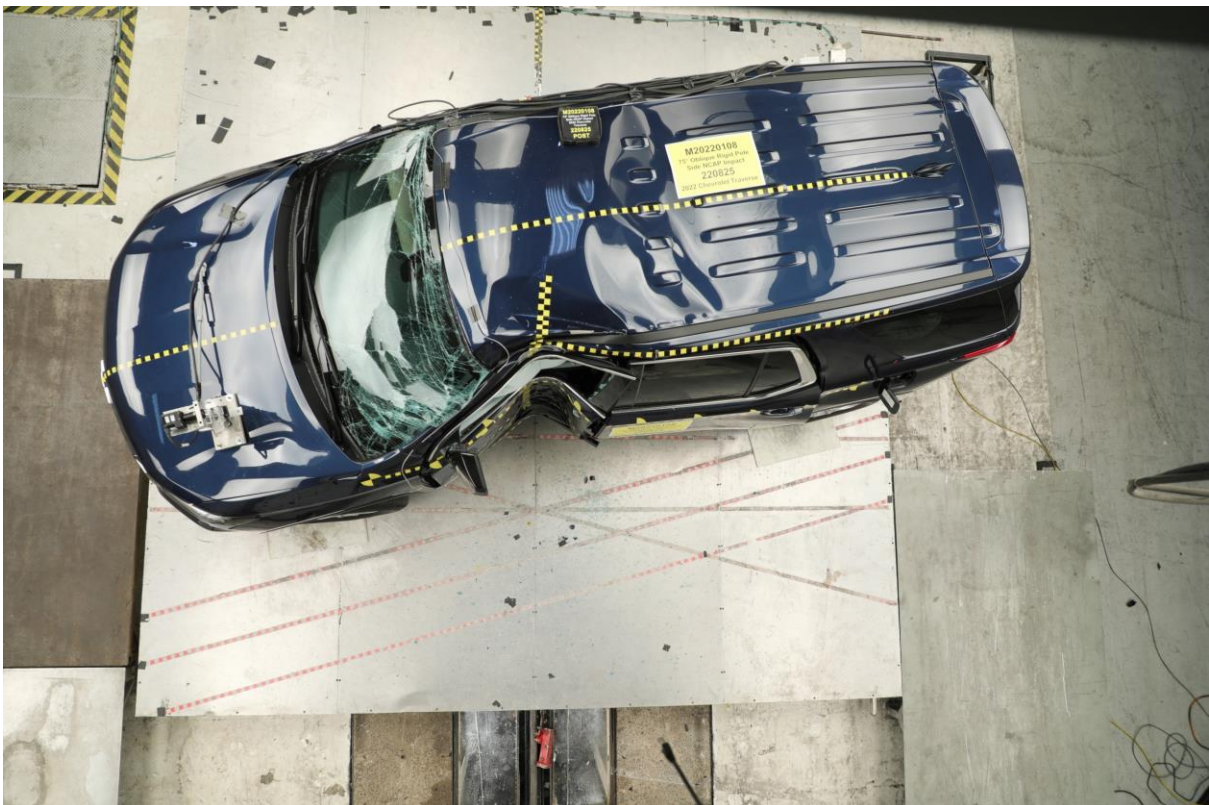
No. 013 Pre-Test Right Side View of Test Vehicle



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



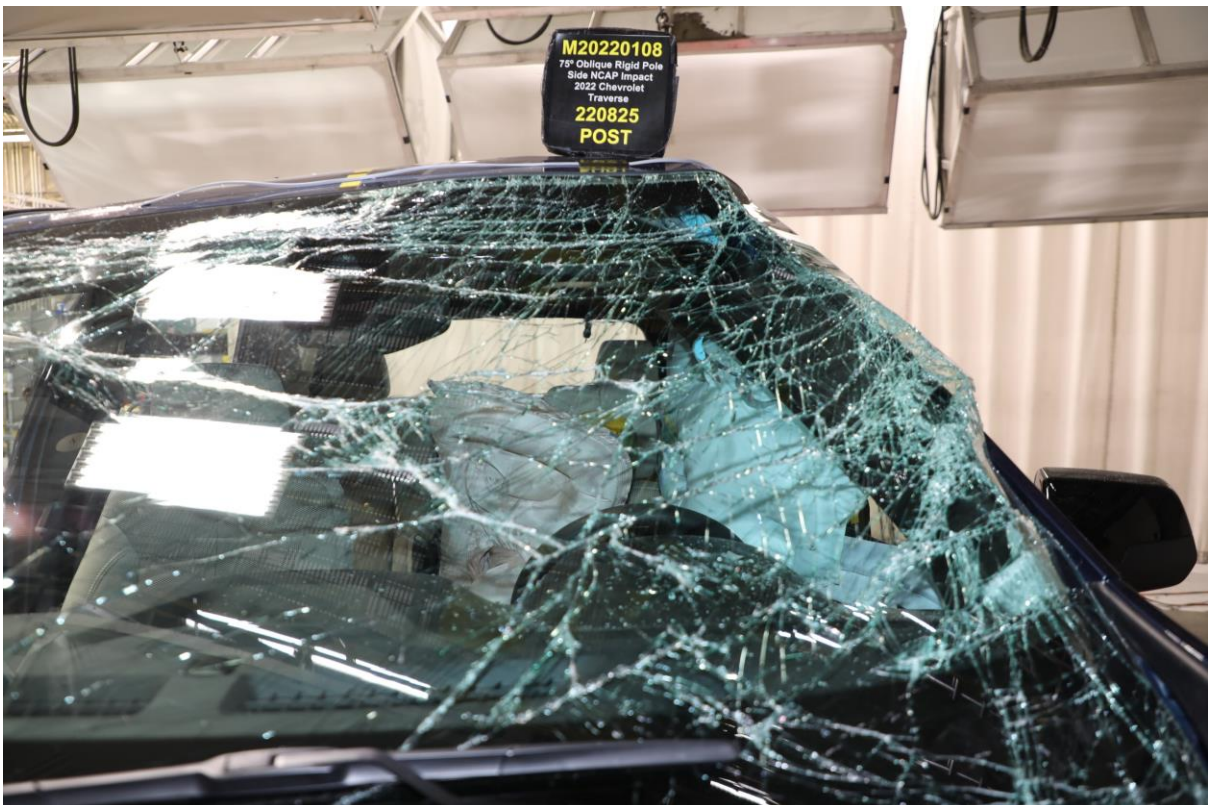
No. 019 Pre-Test Close-Up View of Impact Point Target



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



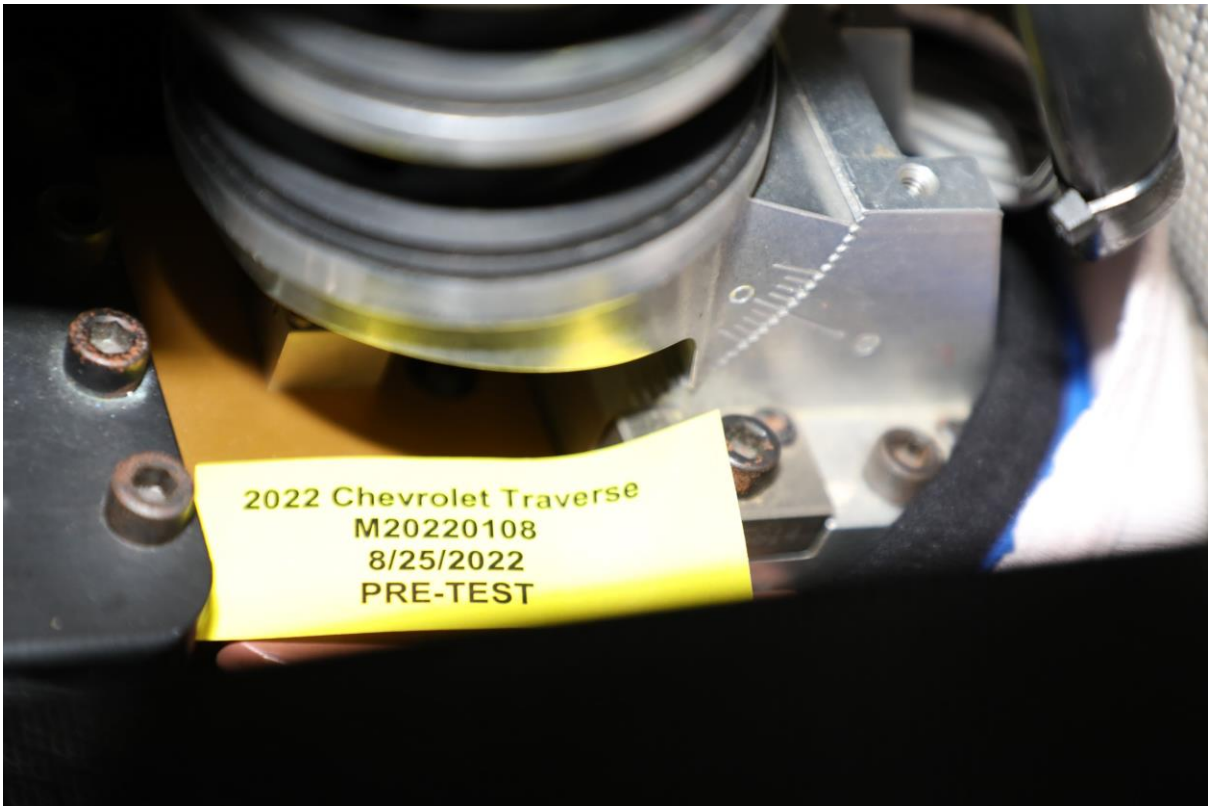
No. 027 Pre-Test Front Close-Up View of Dummy Head and Shoulders in Relation to Head Restraint



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



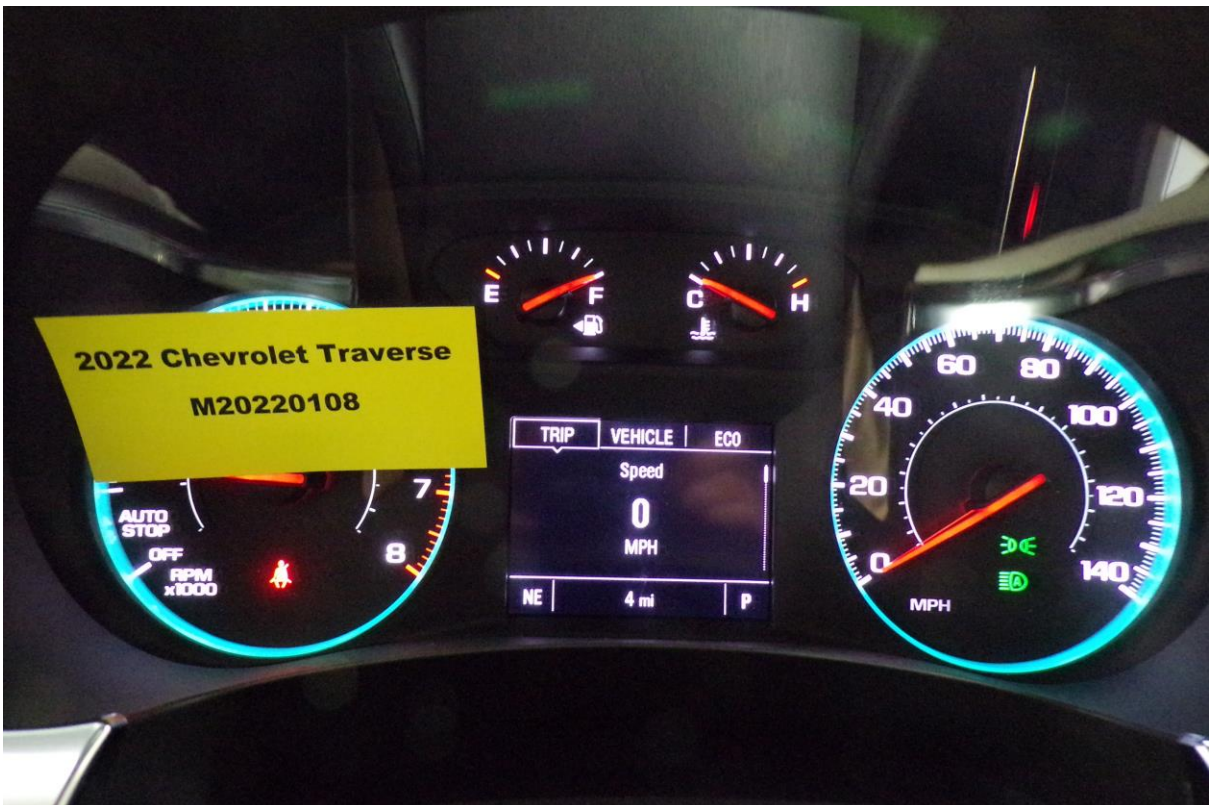
No. 032 Pre-Test Placement of Dummy Feet



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

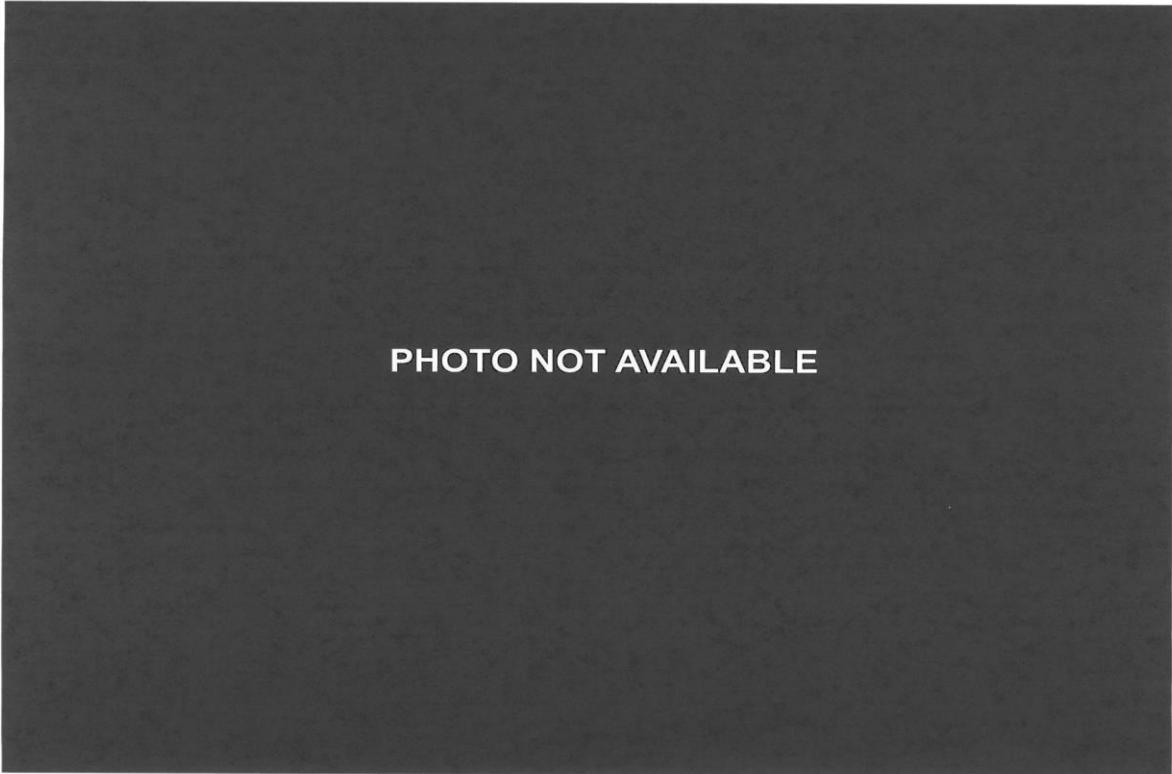
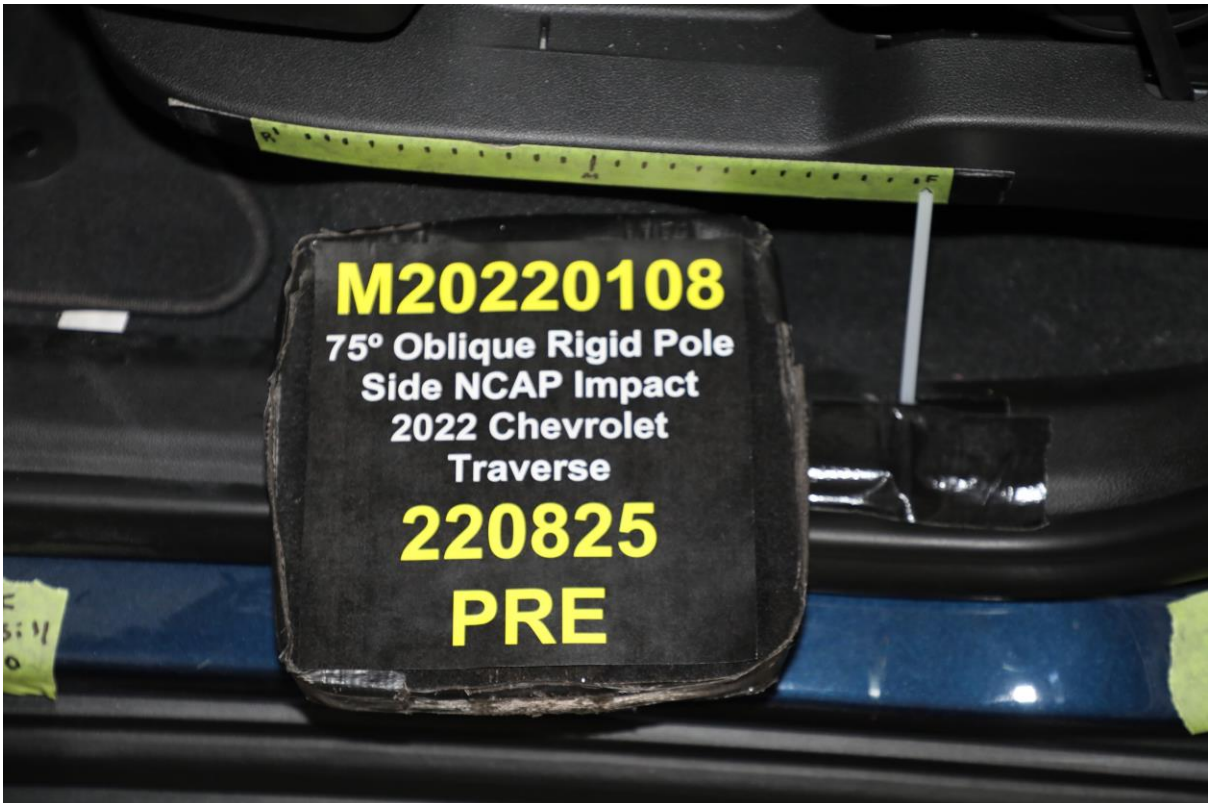


PHOTO NOT AVAILABLE

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

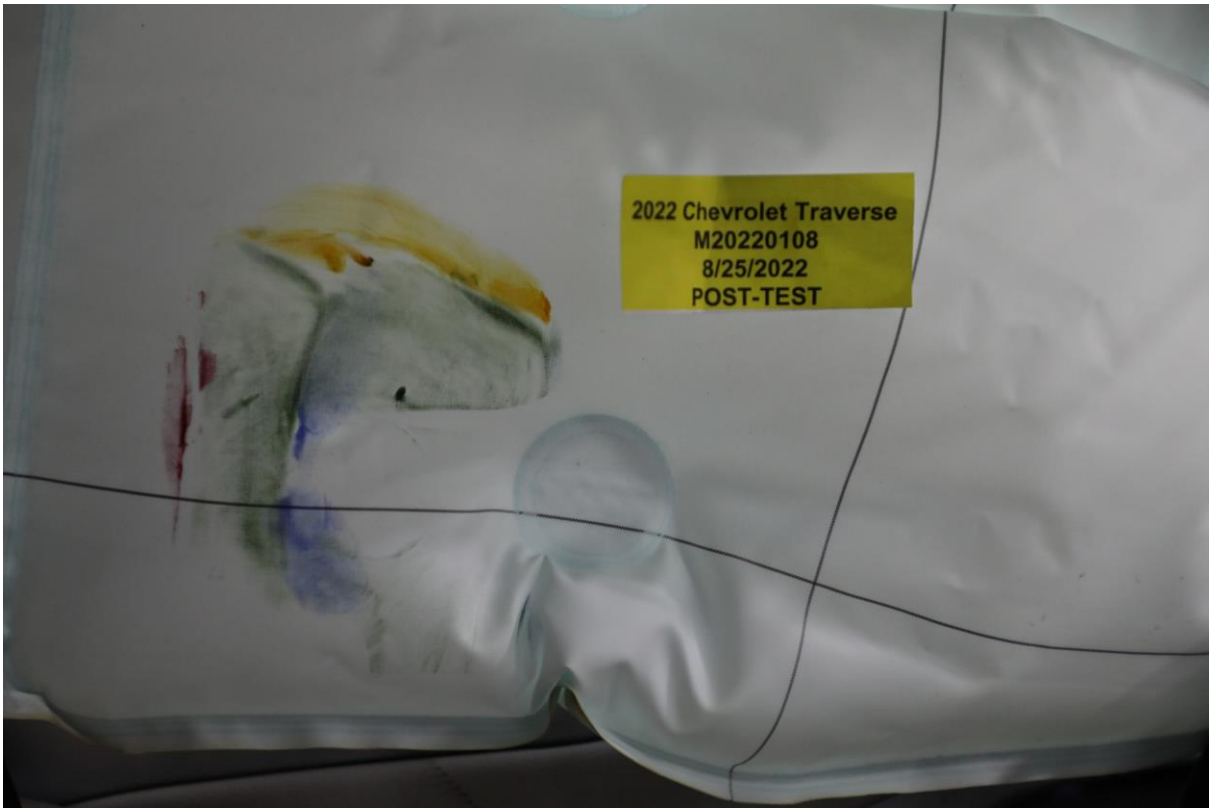


No. 045 Post-Test Inner Driver Door Panel View Showing Dummy Contact Location



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

Intentionally Left Blank



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



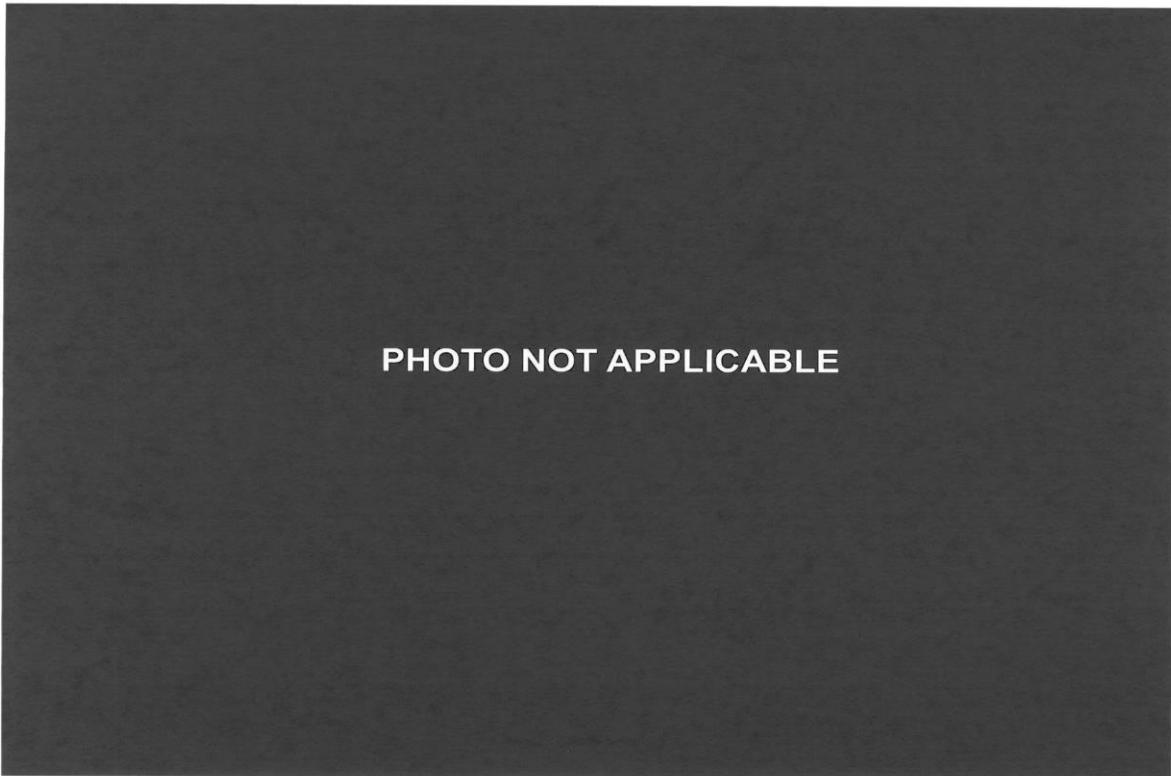
No. 051 Post-Test Dummy Close-Up Pelvis Contact with Side Airbag View



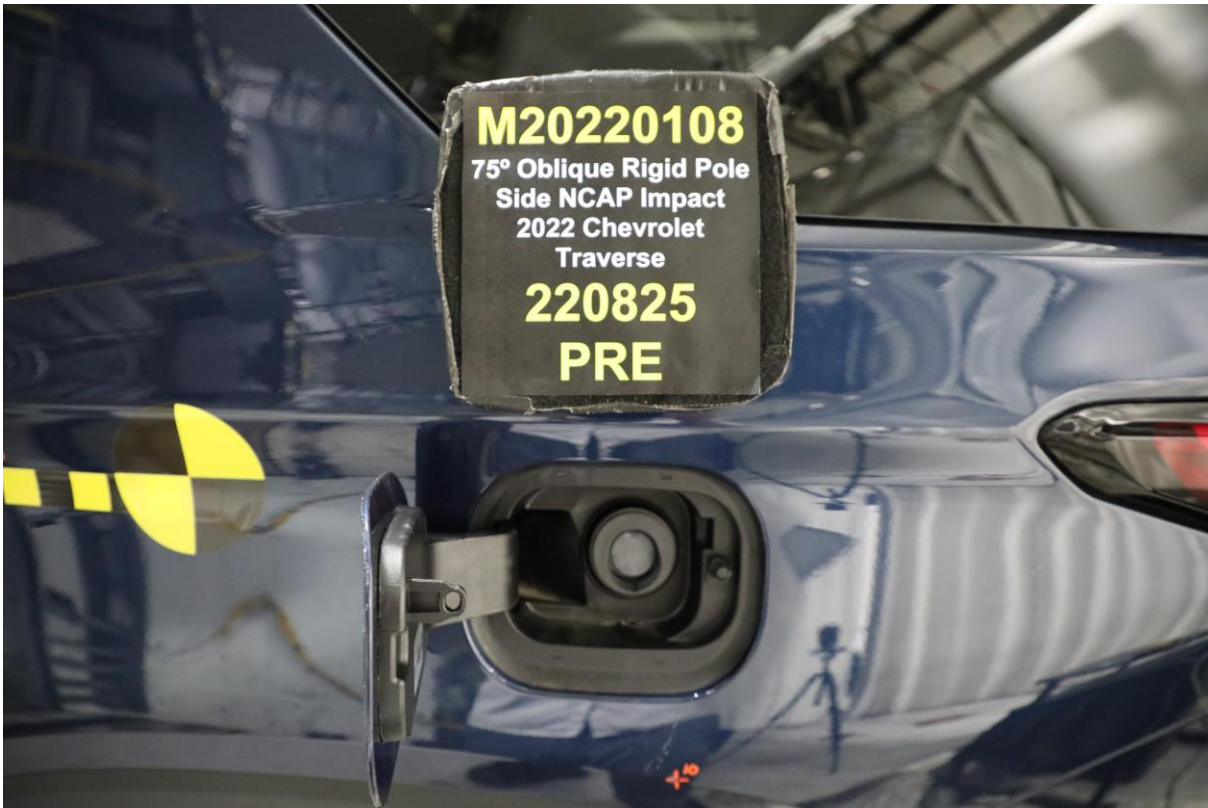
No. 052 Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View



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



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



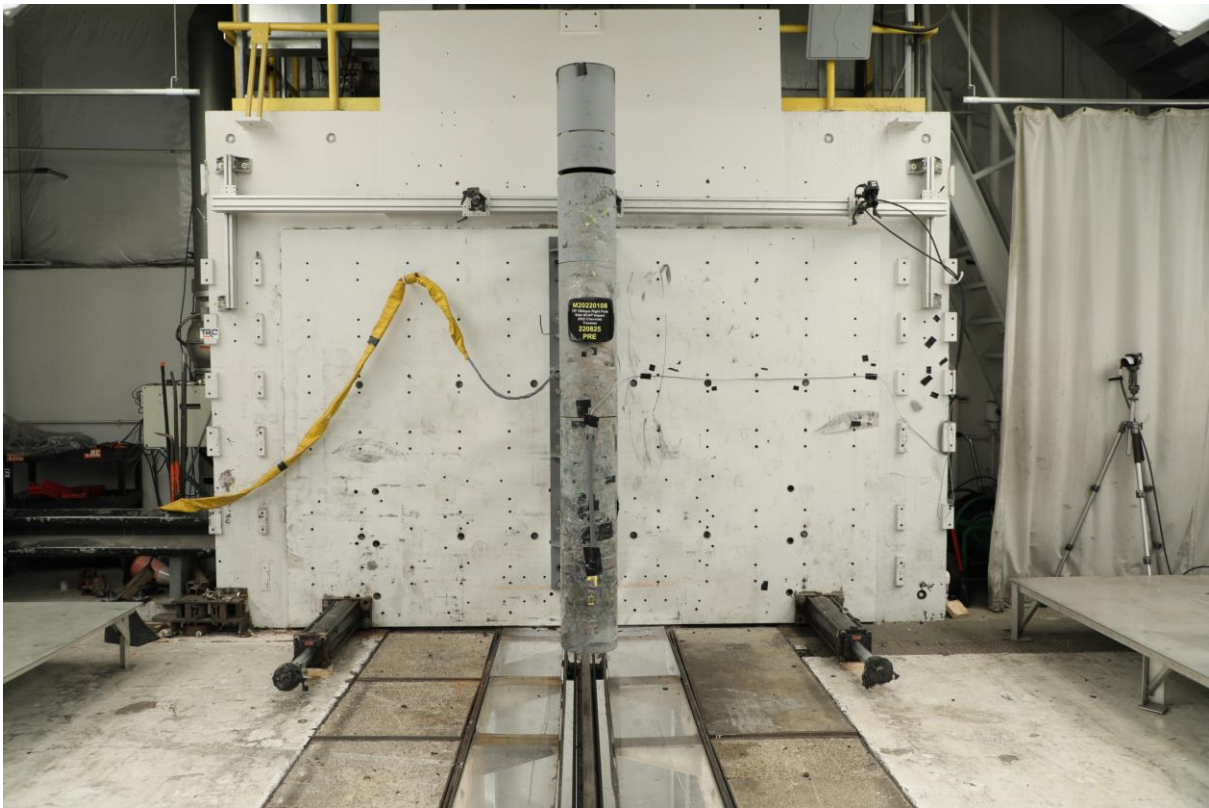
No. 056 Post-Test View of Fuel Filler Cap or Fuel Filler Neck



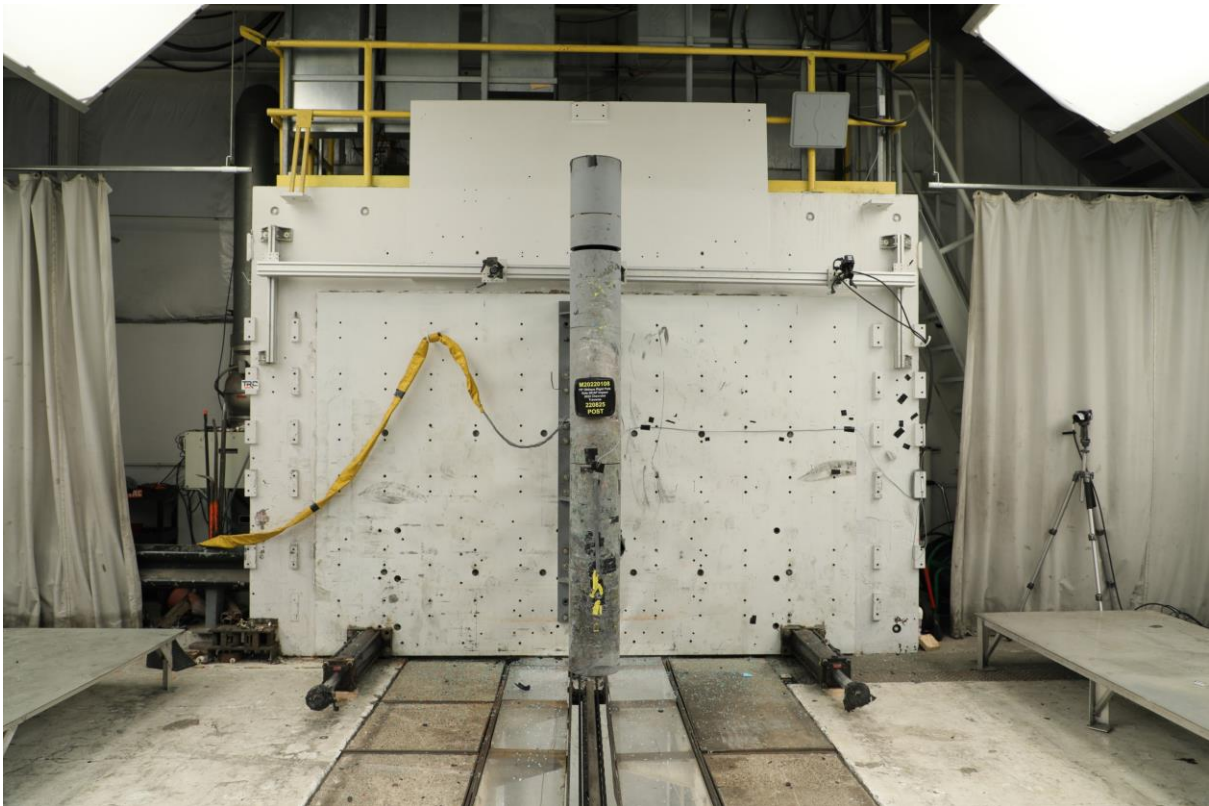
No. 057 Close-Up View of Vehicle Certification Label



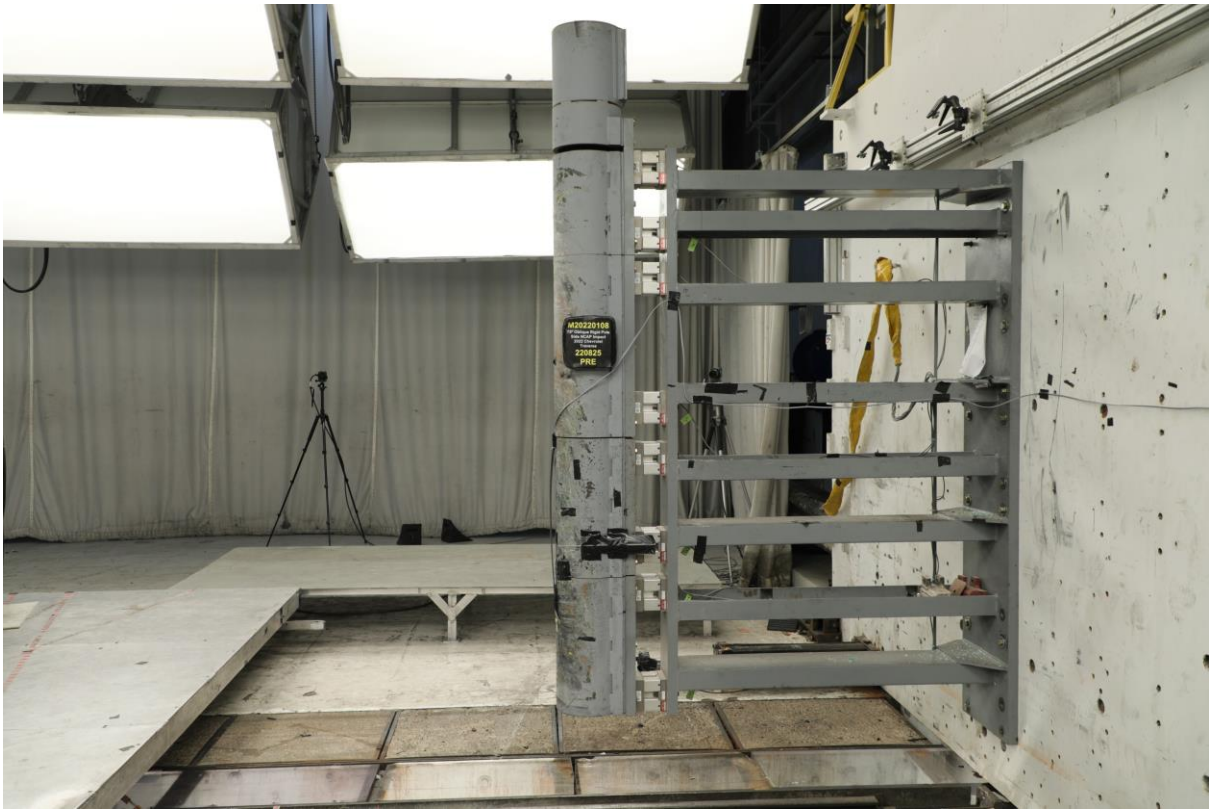
No. 058 Close-Up View of Vehicle Tire Information Placard or Label



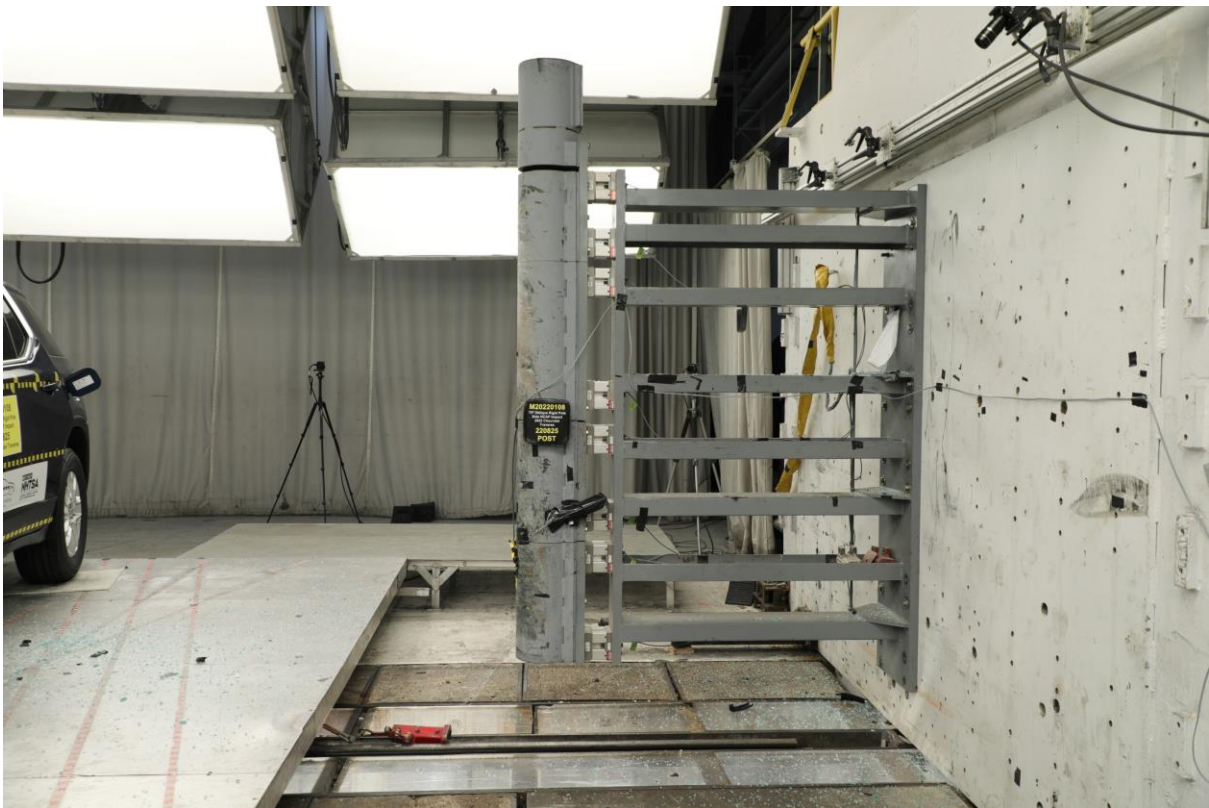
No. 059 Pre-Test Pole Barrier Front View



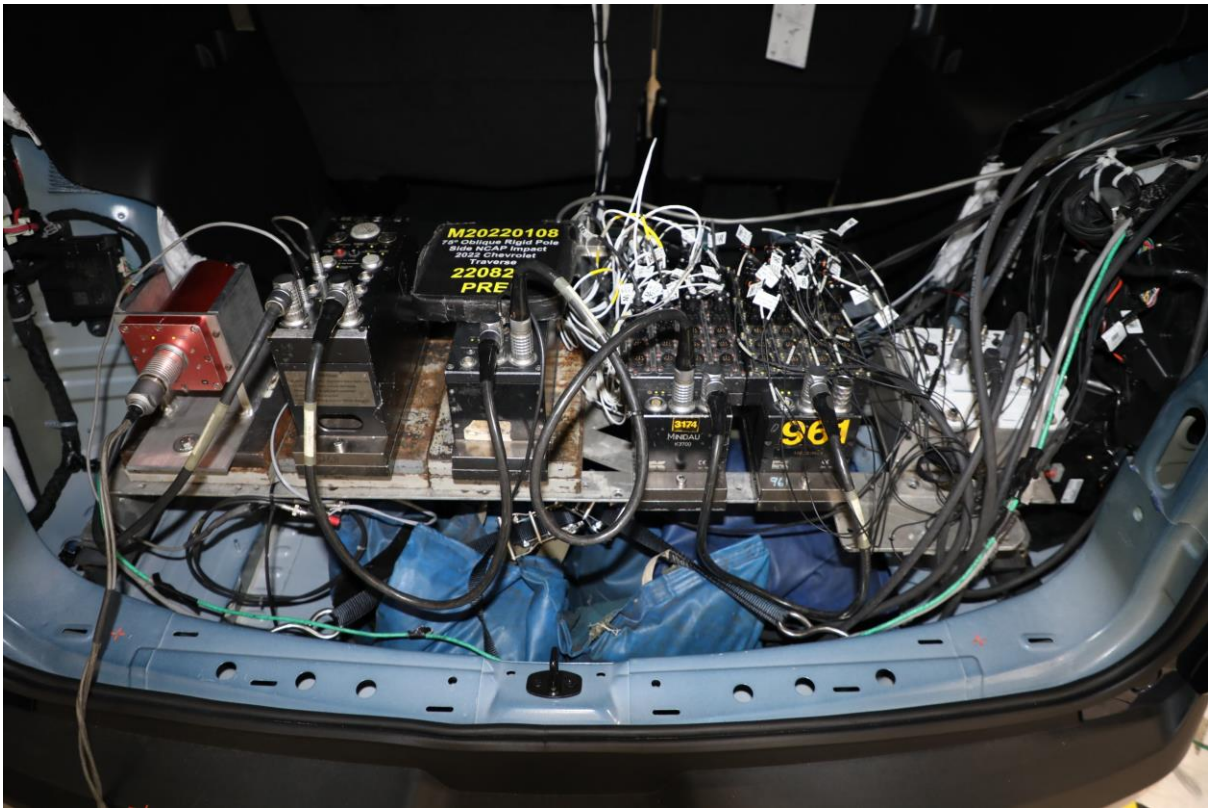
No. 060 Post-Test Pole Barrier Front View



No. 061 Pre-Test Pole Barrier Side View



No. 062 Post-Test Pole Barrier Side View



No. 063 Pre-Test Ballast View



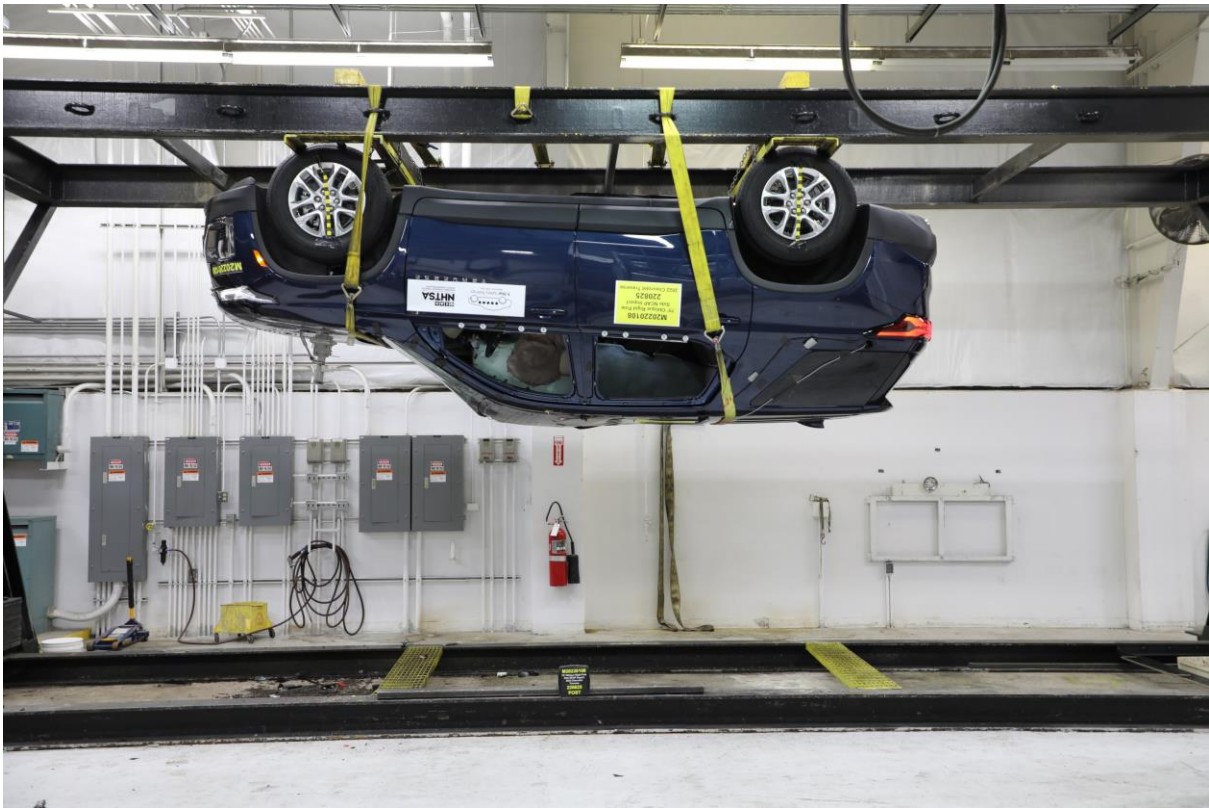
No. 064 Post-Test Primary and Redundant Speed Trap Read Out



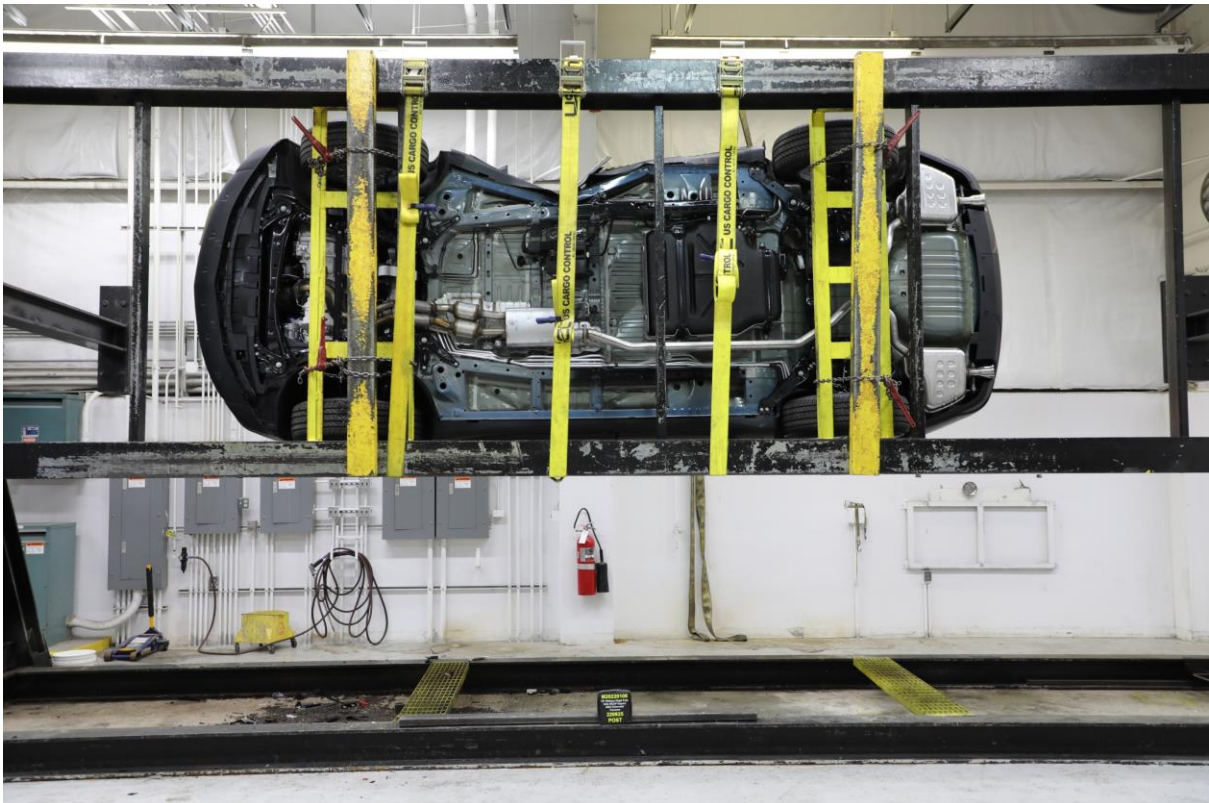
No. 065 FMVSS No. 301 Static Rollover 0 Degrees



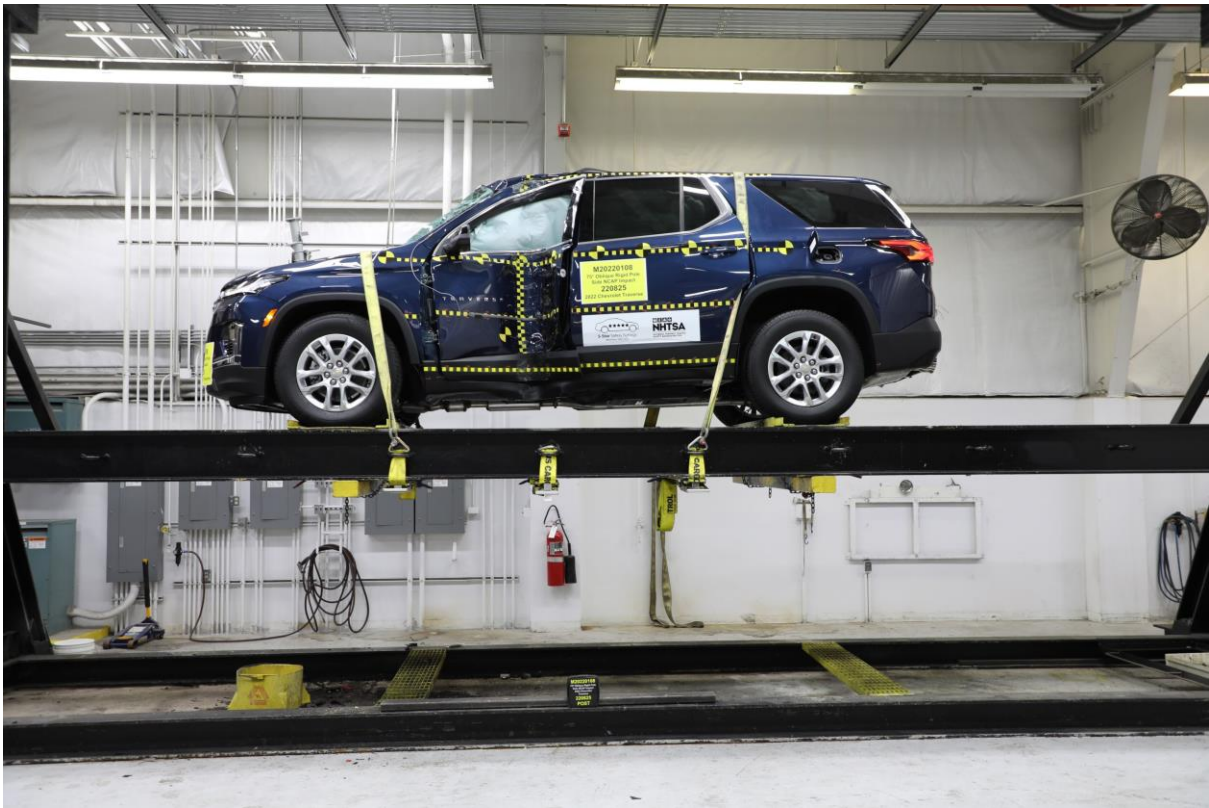
No. 066 FMVSS No. 301 Static Rollover 90 Degrees



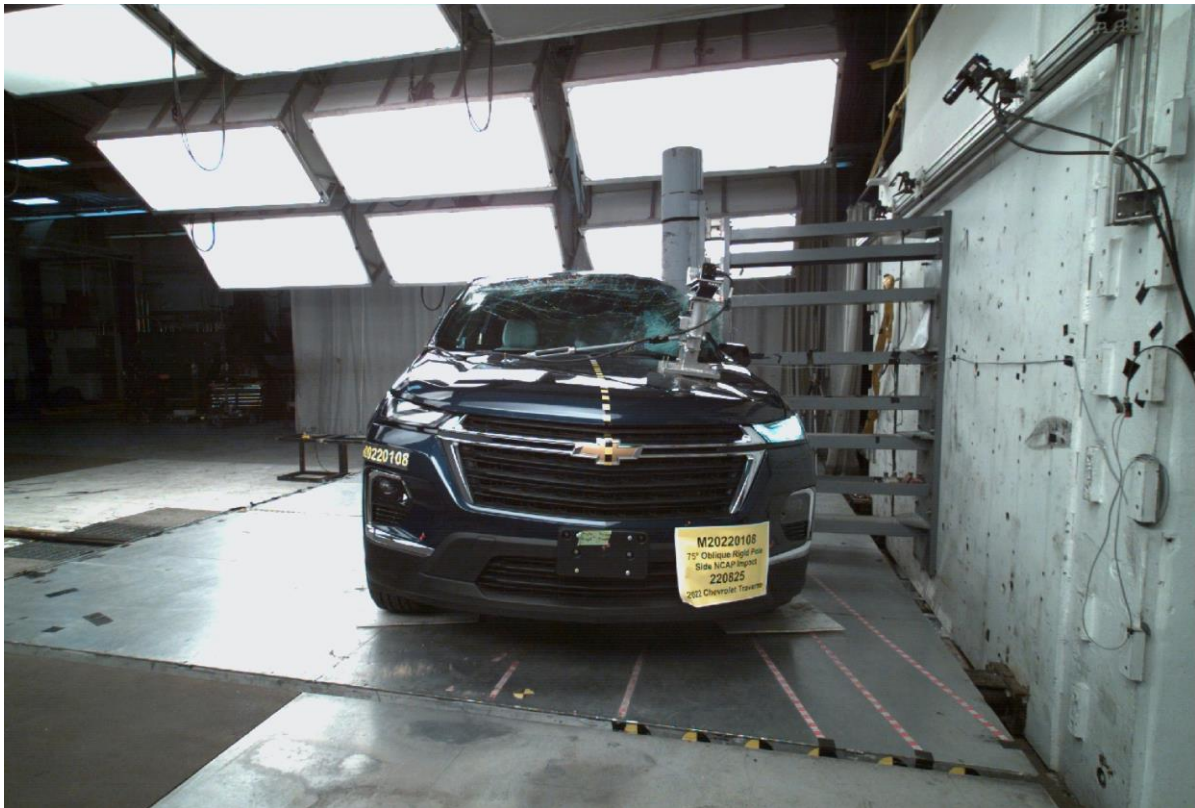
No. 067 FMVSS No. 301 Static Rollover 180 Degrees



No. 068 FMVSS No. 301 Static Rollover 270 Degrees



No. 069 FMVSS No. 301 Static Rollover 360 Degrees



No. 070 Impact Event



2022 TRAVERSE 1LS FWD

EXTERIOR: NORTHSKY BLUE METALLIC ENGINE: 3.6L V6, SIDI, VVT
INTERIOR: JET BLACK/ CHAI TRANSMISSION: 9-SPD AUTOMATIC

Visit us at www.chevy.com

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---------------|--------|-------------------------|-------------|--------------------|----------|-----------------------------|--------------------|---|---------------|--------|-----------|--|-----------|-----------|------------|------------|-----------|--|-----------|-----------|
| <p>STANDARD EQUIPMENT</p> <p>ITEMS FEATURED BELOW ARE INCLUDED AT NO EXTRA CHARGE IN THE STANDARD VEHICLE PRICE SHOWN.</p> <p>OWNER BENEFITS</p> <ul style="list-style-type: none"> • 3 YEAR/36,000 MILE* BUMPER-TO-BUMPER LIMITED WARRANTY • 5 YEAR/60,000 MILE* POWERTRAIN LIMITED WARRANTY, ROADSIDE ASSISTANCE & COURTESY TRANSPORTATION • FIRST MAINTENANCE VISIT • WHOEVER COMES FIRST • SEE CHEVROLET.COM OR DEALER FOR TERMS, DETAILS & LIMITS <p>PERFORMANCE & MECHANICAL</p> <ul style="list-style-type: none"> • WHEELS, 18" BRIGHT SILVER PAINTED ALUMINUM • WHEEL, SPARE, 18" STEEL <p>CONNECTIVITY & TECHNOLOGY</p> <ul style="list-style-type: none"> • CHEVROLET INFOTAINMENT 3.7" DIAG COLOR TOUCHSCREEN | <p>ADDITIONAL FEATURES FOR COMPATIBLE PHONES INCLUDE:</p> <ul style="list-style-type: none"> • BLUETOOTH AUDIO STREAMING • VOICE COMMAND PASSTHROUGH TO PHONE, WIRELESS APPLE CARPLAY AND WIRELESS ANDROID AUTO • KEYLESS OPEN AND START • ONSTAR (R) SERVICES & WI-FI (R) HOTSPOT CAPABLE; SEE ONSTAR.COM FOR TERMS • SIRIUSXM RADIO CAPABLE, TRIAL INCLUDED WITH SUBSCRIPTION SOLD SEPARATELY <p>INTERIOR</p> <ul style="list-style-type: none"> • SEATING, 8-PASSENGER • SEAT ADJUSTER, DRIVER 6-WAY MANUAL • SEAT, THIRD ROW, 60/40 BENCH, MANUAL FOLD • AIR CONDITIONING, TRI ZONE AUTO CLIMATE CONTROL | <p>EXTERIOR</p> <ul style="list-style-type: none"> • MIRRORS, OUTSIDE HEATED POWER ADJUSTABLE, MANUAL FOLDING • HEADLAMPS, LED • DAYTIME RUNNING LAMPS, LED • TAIL LAMP, LED <p>SAFETY & SECURITY</p> <ul style="list-style-type: none"> • TEEN DRIVER • CHEVY SAFETY ASSIST: • FOLLOWING DISTANCE INDICATOR • FORWARD COLLISION ALERT • LANE KEEP ASSIST W/ LANE DEPARTURE WARNING • FRONT PEDESTRIAN BRAKING • AUTOMATIC EMERGENCY BRAKING • INTELLIBEAM AUTO HIGH BEAM <p>MANUFACTURER'S SUGGESTED RETAIL PRICE</p> <p>STANDARD VEHICLE PRICE \$33,700.00</p> <p>OPTIONS & PRICING</p> | <p>OPTIONS INSTALLED BY THE MANUFACTURER (MAY REPLACE STANDARD EQUIPMENT SHOWN)</p> <table border="1"> <tr> <td>TOTAL OPTIONS</td> <td>\$0.00</td> </tr> <tr> <td>TOTAL VEHICLE & OPTIONS</td> <td>\$33,700.00</td> </tr> <tr> <td>DESTINATION CHARGE</td> <td>1,395.00</td> </tr> <tr> <td>TOTAL VEHICLE PRICE*</td> <td>\$35,095.00</td> </tr> </table> | TOTAL OPTIONS | \$0.00 | TOTAL VEHICLE & OPTIONS | \$33,700.00 | DESTINATION CHARGE | 1,395.00 | TOTAL VEHICLE PRICE* | \$35,095.00 | <p>GOVERNMENT 5-STAR SAFETY RATINGS</p> <p>Overall Vehicle Score Not Rated Based on the combined ratings of frontal, side and rollover. Should ONLY be compared to other vehicles of similar size and weight.</p> <table border="1"> <tr> <td>Frontal Crash</td> <td>Driver</td> <td>Not Rated</td> </tr> <tr> <td></td> <td>Passenger</td> <td>Not Rated</td> </tr> </table> <p>Based on the risk of injury in a frontal impact. Should ONLY be compared to other vehicles of similar size and weight.</p> <table border="1"> <tr> <td>Side Crash</td> <td>Front seat</td> <td>Not Rated</td> </tr> <tr> <td></td> <td>Rear seat</td> <td>Not Rated</td> </tr> </table> <p>Based on the risk of injury in a side impact.</p> <p>Rollover ★ ★ ★ ★ Based on the risk of rollover in a single-vehicle crash.</p> <p>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</p> | Frontal Crash | Driver | Not Rated | | Passenger | Not Rated | Side Crash | Front seat | Not Rated | | Rear seat | Not Rated |
| TOTAL OPTIONS | \$0.00 | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL VEHICLE & OPTIONS | \$33,700.00 | | | | | | | | | | | | | | | | | | | | | | | |
| DESTINATION CHARGE | 1,395.00 | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL VEHICLE PRICE* | \$35,095.00 | | | | | | | | | | | | | | | | | | | | | | | |
| Frontal Crash | Driver | Not Rated | | | | | | | | | | | | | | | | | | | | | | |
| | Passenger | Not Rated | | | | | | | | | | | | | | | | | | | | | | |
| Side Crash | Front seat | Not Rated | | | | | | | | | | | | | | | | | | | | | | |
| | Rear seat | Not Rated | | | | | | | | | | | | | | | | | | | | | | |

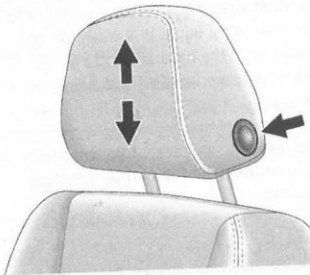
| | | |
|---|--|--|
| <p>EPA DOT Fuel Economy and Environment</p> <p>Fuel Economy</p> <p>21 MPG combined city/hwy</p> <p>18 city 27 highway</p> <p>4.8 gallons per 100 miles</p> <p>Standard SUVs range from 14 to 102 MPG. The best vehicle rates 142 MPG.</p> <p>You spend \$2,000 more in fuel costs over 5 years compared to the average new vehicle.</p> <p>Annual fuel cost \$1,700</p> <p>Fuel Economy & Greenhouse Gas Rating (tailpipe only)</p> <p>1 4 10 (Best)</p> <p>Smog Rating (tailpipe only)</p> <p>1 6 10 (Best)</p> <p>fuelconomy.gov</p> | <p>FOR VEHICLES IN THIS CARLINE:</p> <p>U.S./CANADIAN PARTS CONTENT: 47%</p> <p>MAJOR SOURCES OF FOREIGN PARTS CONTENT: MEXICO 27%</p> <p>NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON-PARTS COSTS.</p> <p>FOR THIS VEHICLE:</p> <p>FINAL ASSEMBLY POINT: LANSING, MI U.S.A.</p> <p>COUNTRY OF ORIGIN: ENGINE: MEXICO TRANSMISSION: UNITED STATES</p> | <p>ORDER NO. BK2020M SALES CODE E</p> <p>VEHICLE MODEL CODE 1N80H</p> <p>DEALER NO. 14020</p> <p>FINAL ASSEMBLY: LANSING, MI U.S.A.</p> <p>VIN 1GNERFKW9N1J191667</p> <p>VEHICLE FINANCING OFFERED BY:</p> <p>SPORT CHEVROLET COMPANY, LLC</p> <p>3101 AUTOMOBILE BLVD SILVER SPRING, MD 20904-4999</p> <p>DV 1GA3366008</p> |
|---|--|--|

No. 071 Monroney Label

36 Seats and Restraints

Adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head. This position reduces the chance of a neck injury in a crash.

The height of the head restraint can be adjusted.



To raise or lower the head restraint, press the button located on the side of the head restraint, and pull up or push the head restraint down, and pull up or push the head restraint after the button is released to make sure that it is locked in place.

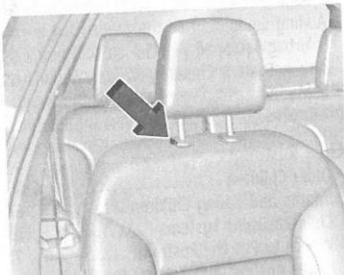
The front seat outboard head restraints are not removable.

Rear Seats

Second Row Seats

The vehicle's second row seats have adjustable head restraints in the outboard seating positions.

The height of the head restraint can be adjusted. Pull the head restraint up to raise it. Try to move the head restraint to make sure that it is locked in place.



To lower the head restraint, press the button, located on the top of the seatback, and push the head restraint down. Try to move the head restraint after the button is released to make sure that it is locked in place.

Always adjust the head restraint so that the top of the restraint is at the same height as the top of the occupant's head.

If you are installing a child restraint in the rear seat, see "Securing a Child Restraint Designed for the LATCH System" under *Lower Anchors and Tethers for Children (LATCH System)* ⇨ 72.

Third Row Seats

The vehicle's third row seats have head restraints in the outboard seating positions that cannot be adjusted up or down.

The third row outboard head restraints are not removable.

The third row outboard head restraints are designed to be folded.

The head restraint can be folded to allow for better visibility when the rear seat is unoccupied.

When folding the seatback down, the head restraint will automatically fold out of the way as the seat is folded down.

Return the lowered head restraint to the upright position until it locks into place. Push and pull on the head restraint to make sure it is locked.

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

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)

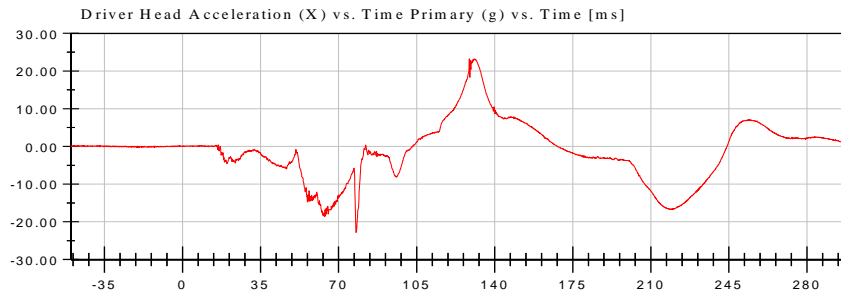
NHTSA

Position #1 SID IIs Dummy (297)

Test Date: 08/25/2022

Test Lab: CTF

Test Number: 220825 (M20220108)



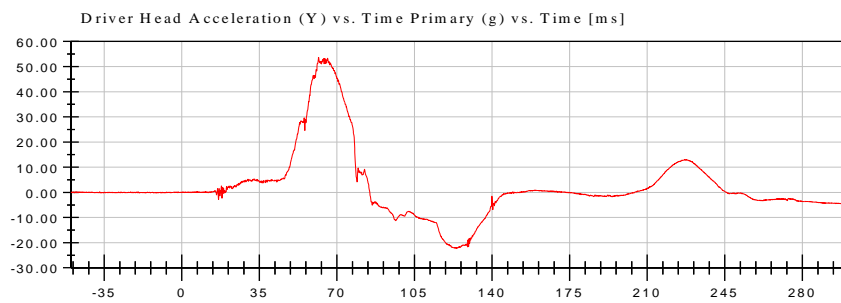
<Max>

23.23 g at 128.64 ms

<Min>

-22.84 g at 77.84 ms

CFC_1000



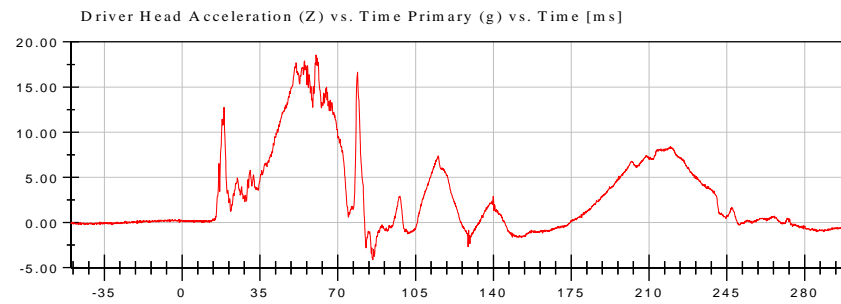
<Max>

53.66 g at 61.76 ms

<Min>

-22.20 g at 123.12 ms

CFC_1000



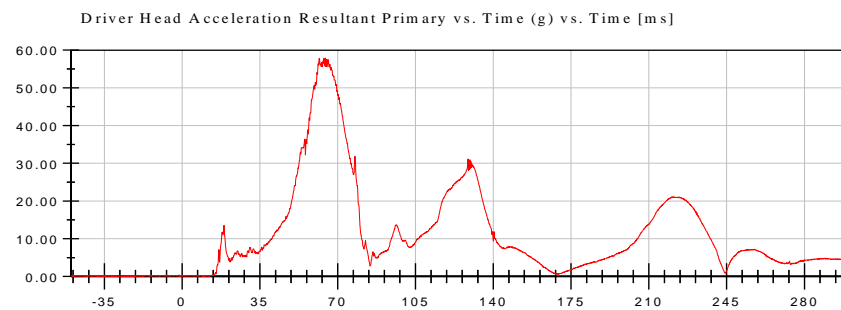
<Max>

18.54 g at 60.24 ms

<Min>

-4.13 g at 85.76 ms

CFC_1000



<Max>

57.92 g at 64.48 ms

<Min>

0.03 g at -26.08 ms

CFC_1000



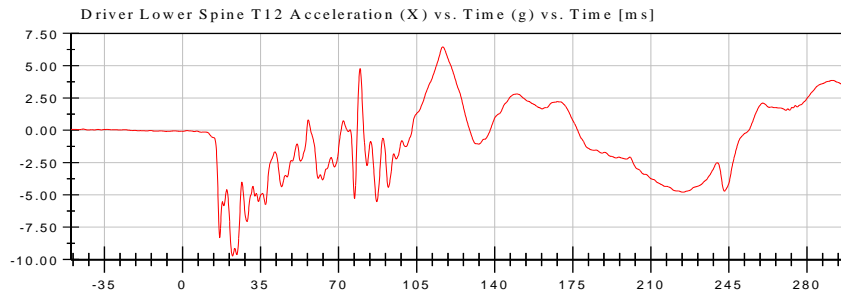
NHTSA

Position #1 SID IIs Dummy (297)

Test Date: 08/25/2022

Test Lab: CTF

Test Number: 220825 (M20220108)



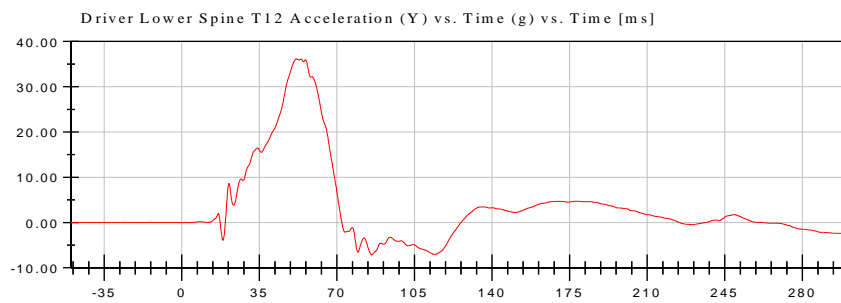
<Max>

6.45 g at 116.72 ms

<Min>

-9.73 g at 22.48 ms

CFC_180



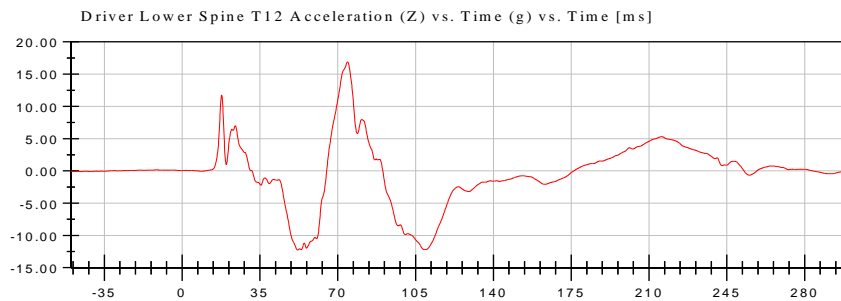
<Max>

36.15 g at 53.92 ms

<Min>

-7.14 g at 85.68 ms

CFC_180



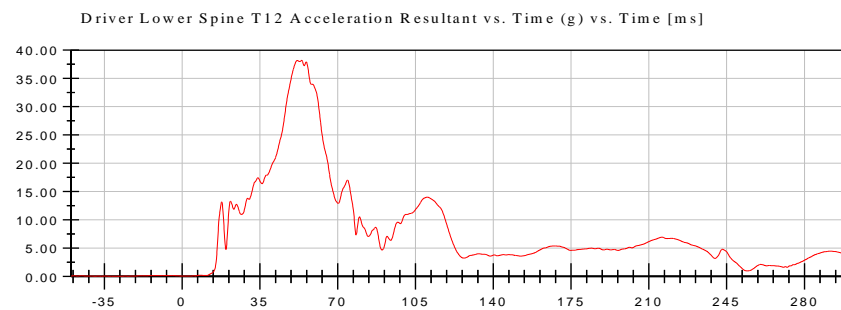
<Max>

16.90 g at 74.40 ms

<Min>

-12.27 g at 51.92 ms

CFC_180



<Max>

38.18 g at 53.84 ms

<Min>

0.04 g at -28.00 ms

CFC_180



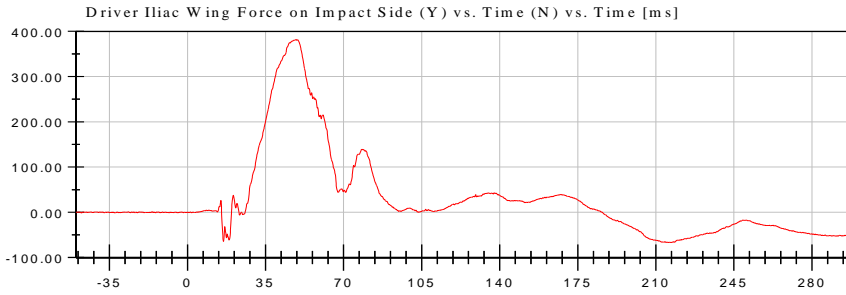
NHTSA

Position #1 SID IIs Dummy (297)

Test Date: 08/25/2022

Test Lab: CTF

Test Number: 220825 (M20220108)



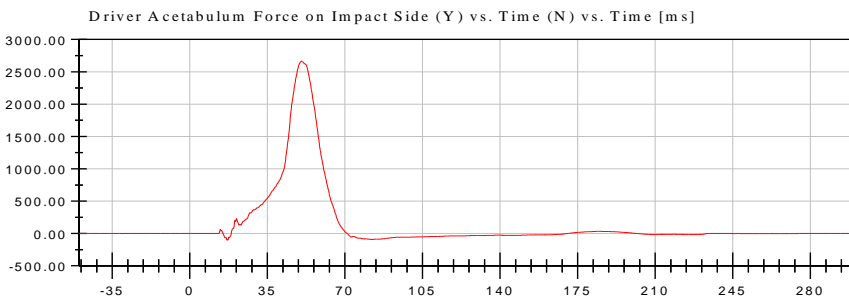
<Max>

381.86 N at 48.56 ms

<Min>

-66.97 N at 216.80 ms

CFC_600



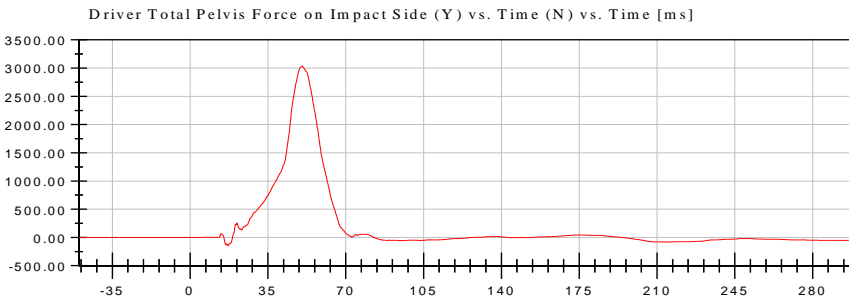
<Max>

2,664.08 N at 50.48 ms

<Min>

-101.89 N at 16.80 ms

CFC_600



<Max>

3,034.70 N at 50.32 ms

<Min>

-145.74 N at 17.20 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. 56

| 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 |

Transportation Research Center Inc.

Left Lateral Head Drop
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/2/2022

| Test Parameter | Specification | Test Results | Pass |
|---|----------------|--------------|------|
| Temperature | 18.9 - 25.6 °C | 20.8 °C | Yes |
| Relative Humidity | 10 - 70 % | 67 % | Yes |
| Peak Head Resultant Acceleration | 115 - 137 g | 115.1 g | Yes |
| Peak Head Longitudinal Acceleration | (-15) - 15 g | 2.1 g | Yes |
| Is Head Resultant Acceleration Curve Unimodal within 15% of Peak? | < 15 % | 0.99 % | 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

08.02.2022 10:56:26 232

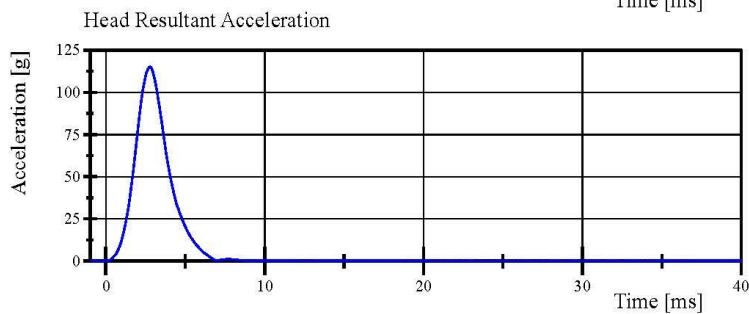
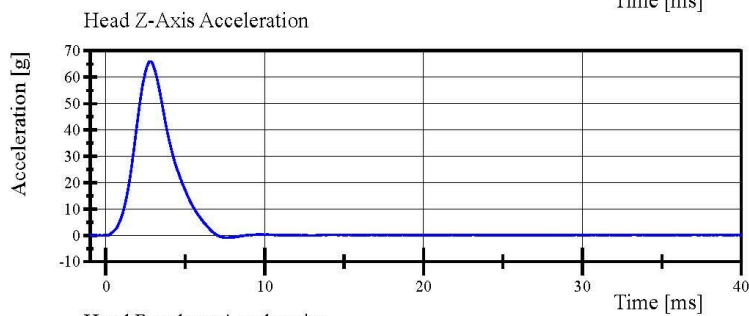
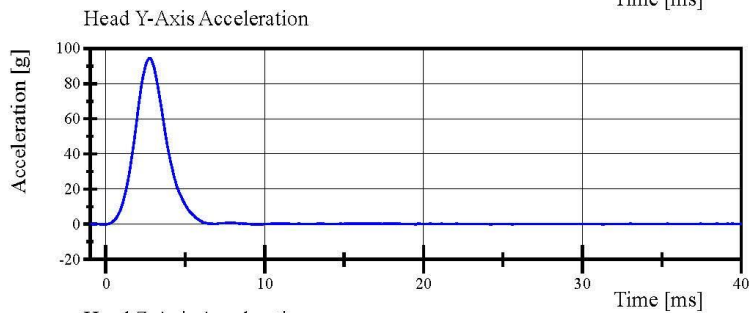
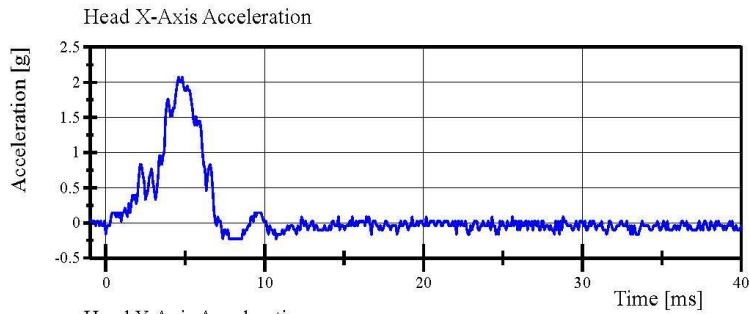


Transportation Research Center Inc.

Left Lateral Head Drop

SID IIS Serial No. 297 Certification No. 56-1

Test Date: 8/2/2022



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

08.02.2022 10:58:16 232



Transportation Research Center Inc.

Left Lateral Neck
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/2/2022

| Test Parameter | Specification | Test Results | Pass |
|--|-----------------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 20.8 °C | Yes |
| Relative Humidity | 10 - 70 % | 67 % | Yes |
| Pendulum Velocity | (-5.51) - (-5.63) m/s | -5.561 m/s | Yes |
| Pendulum Integrated Velocity | | | |
| Change at 10 ms | 2.20 - 2.80 m/s | 2.703 m/s | Yes |
| Change at 15 ms | 3.30 - 4.10 m/s | 3.996 m/s | Yes |
| Change at 20 ms | 4.40 - 5.40 m/s | 5.274 m/s | Yes |
| Change at 25 ms | 5.40 - 6.10 m/s | 5.778 m/s | Yes |
| Change at 25 to 100 ms | 5.50 - 6.20 m/s | 5.790 m/s | Yes |
| Maximum Headform Flexion occurring between 50ms and 70ms. | | | |
| Peak | (-71) - (-81) deg | -77.9 deg | Yes |
| Time of Peak | 50 - 70 ms | 63.5 ms | Yes |
| Total Neck Occipital Condyles Moment | 36 - 44 N·m | 39.9 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

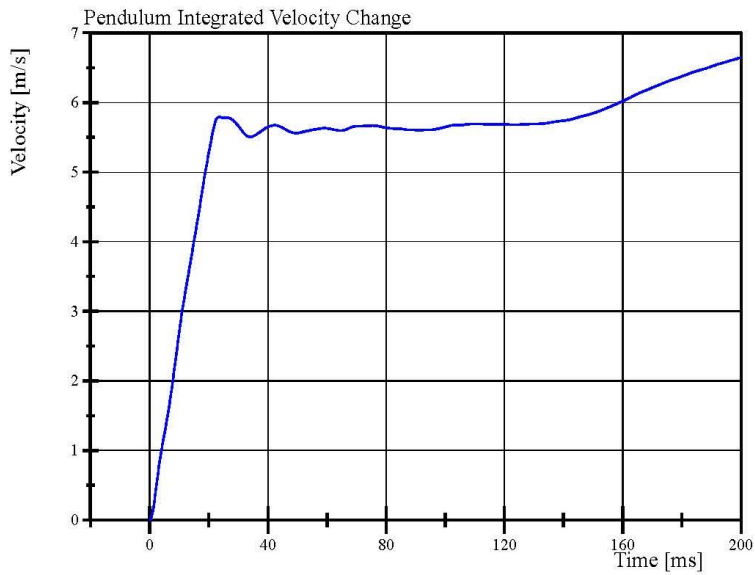
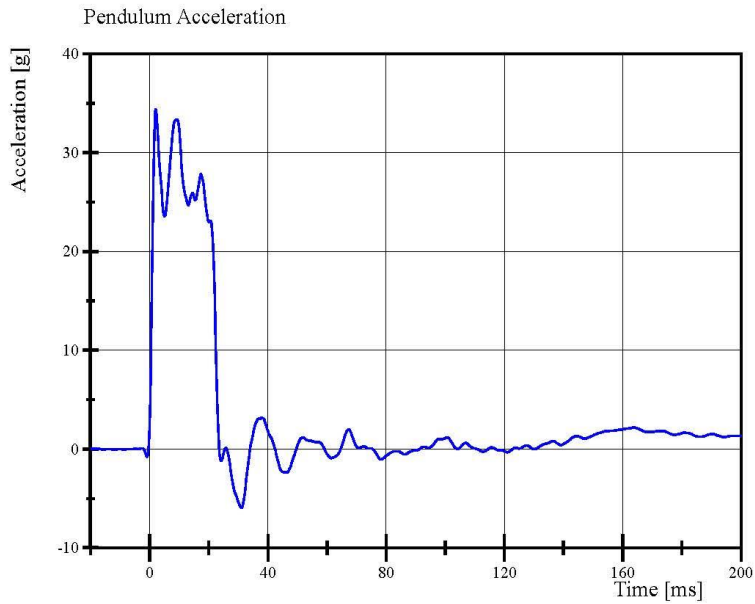
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.02.2022 13:36:21 754



Transportation Research Center Inc.

Left Lateral Neck
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/2/2022



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

08.02.2022 13:37:12 754

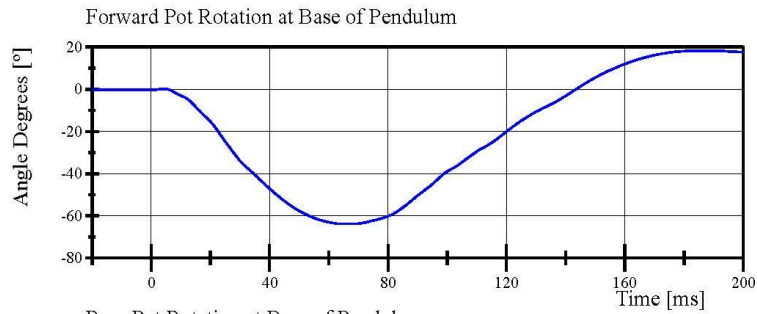


Transportation Research Center Inc.

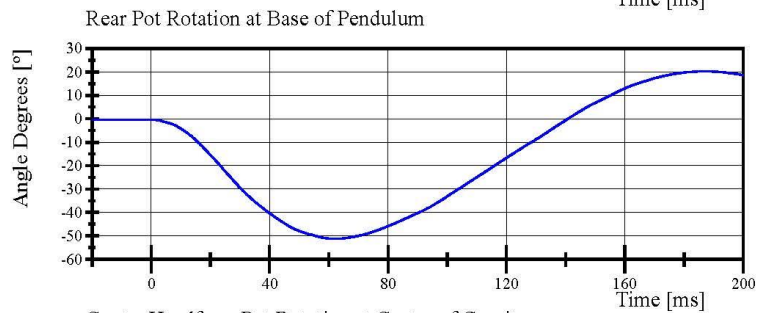
Left Lateral Neck

SID IIs Serial No. 297 Certification No. 56-1

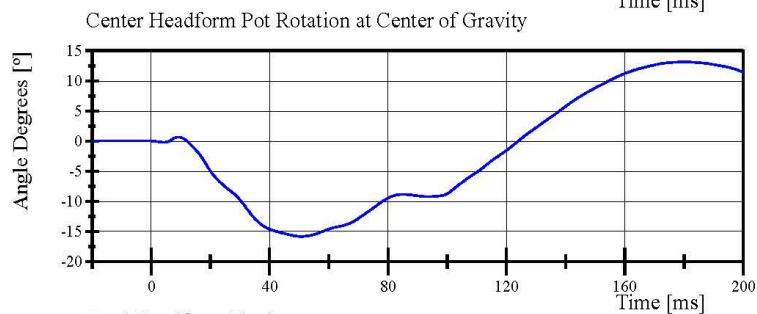
Test Date: 8/2/2022



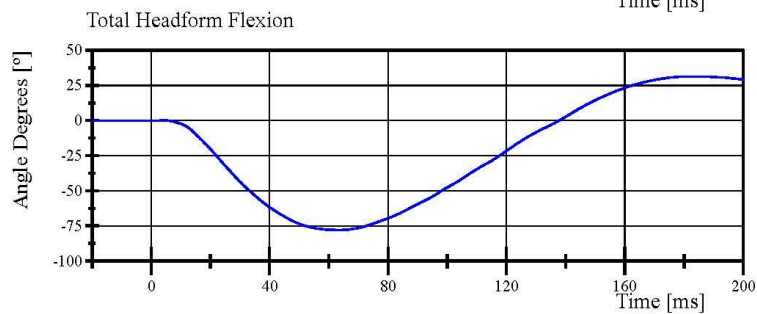
Filter Class: CFC_60
Max: 18.2 ° at 186.2 ms
Min: -63.8 ° at 65.2 ms



Filter Class: CFC_60
Max: 20.2 ° at 187.1 ms
Min: -51.2 ° at 62.2 ms



Filter Class: CFC_60
Max: 13.2 ° at 180.2 ms
Min: -15.8 ° at 50.6 ms



Filter Class: CFC_60
Max: 31.3 ° at 182.5 ms
Min: -77.9 ° at 63.5 ms

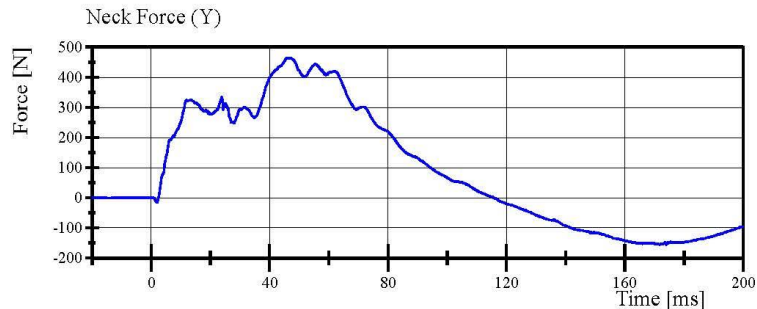
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.02.2022 13:37:12 754

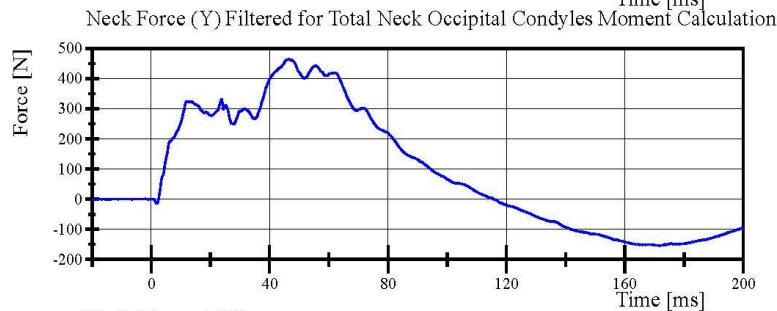


Transportation Research Center Inc.

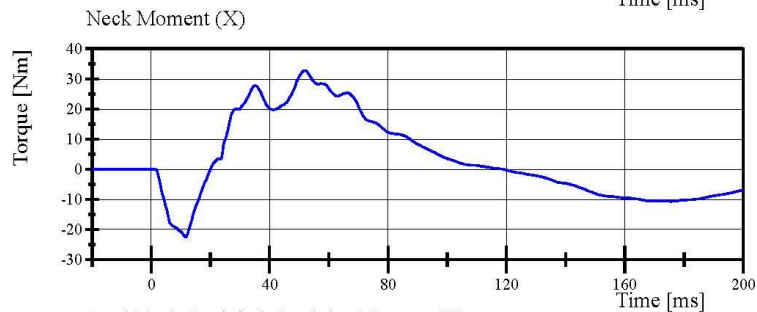
Left Lateral Neck
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/2/2022



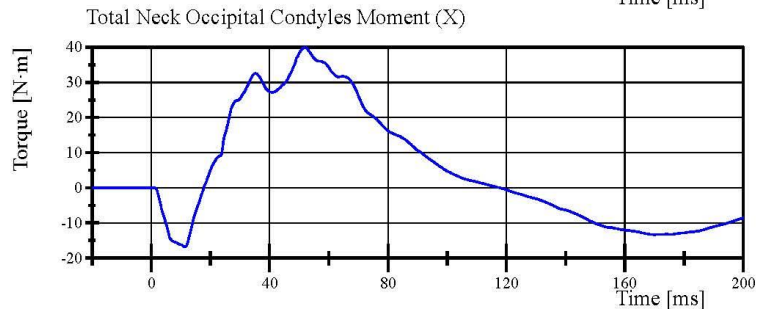
Filter Class: CFC_1000
Max: 464.1 N at 46.2 ms
Min: -155.9 N at 173.9 ms



Filter Class: CFC_600
Max: 463.9 N at 46.4 ms
Min: -154.7 N at 171.7 ms



Filter Class: CFC_600
Max: 32.8 Nm at 51.7 ms
Min: -22.5 Nm at 11.6 ms



Filter Class: Without_(Constar
Max: 39.9 N·m at 51.6 ms
Min: -16.9 N·m at 11.4 ms

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

08.02.2022 13:37:12 754



Transportation Research Center Inc.

Left Lateral Shoulder
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/2/2022

| Test Parameter | Specification | Test Results | Pass |
|----------------------------------|-----------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 20.9 °C | Yes |
| Relative Humidity | 10 - 70 % | 69 % | 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 | 31.0 mm | Yes |
| Upper Spine Lateral Acceleration | 17 - 22 g | 19.4 g | Yes |

Test meets specifications.

Condition: Used

Comments:

Left Arm S/N: 940L

Shoulder Rib S/N: 180-3355 259

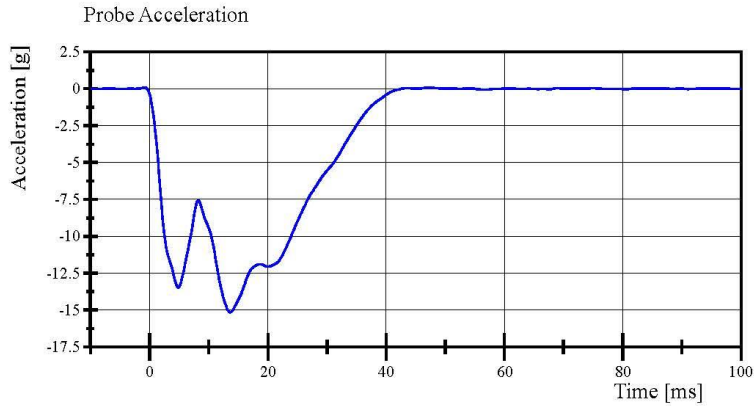
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.02.2022 15:12:40 863

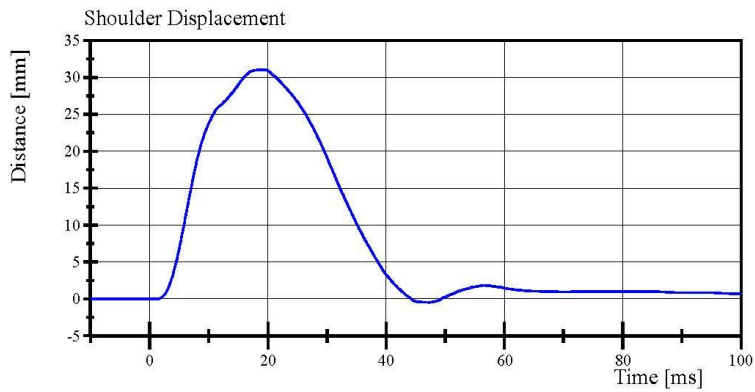


Transportation Research Center Inc.

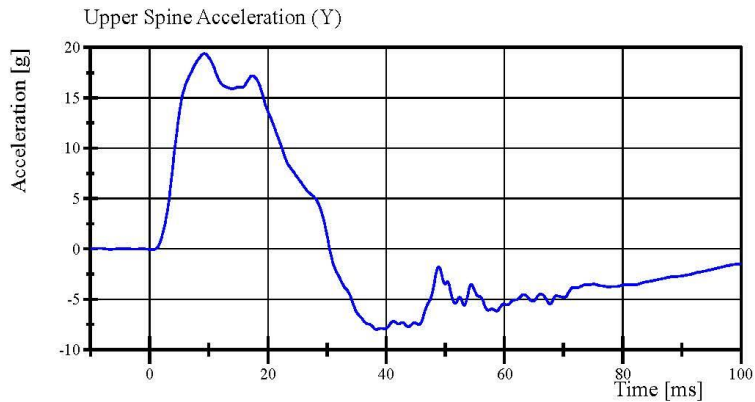
Left Lateral Shoulder
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/2/2022



Filter Class: CFC_180
Max: 0.1 g at -0.9 ms
Min: -15.1 g at 13.6 ms



Filter Class: CFC_600
Max: 31.0 mm at 19.4 ms
Min: -0.5 mm at 47.3 ms



Filter Class: CFC_180
Max: 19.4 g at 9.3 ms
Min: -8.0 g at 38.3 ms

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

08.02.2022 15:13:15 863



Transportation Research Center Inc.

Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/3/2022

| Test Parameter | Specification | Test Results | Pass |
|----------------------------------|-----------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 20.9 °C | Yes |
| Relative Humidity | 10 - 70 % | 68 % | Yes |
| Impactor Velocity | 6.60 - 6.80 m/s | 6.619 m/s | Yes |
| Impactor Acceleration | (-30) - (-36) g | -32.1 g | Yes |
| Shoulder Displacement | 31 - 40 mm | 34.3 mm | Yes |
| Upper Thorax Rib Displacement | 25 - 32 mm | 26.7 mm | Yes |
| Center Thorax Rib Displacement | 30 - 36 mm | 31.2 mm | Yes |
| Lower Thorax Rib Displacement | 32 - 38 mm | 34.2 mm | Yes |
| Upper Spine Lateral Acceleration | 34 - 43 g | 37.1 g | Yes |
| Lower Spine Lateral Acceleration | 29 - 37 g | 34.0 g | Yes |

Test meets specifications.

Condition: Used

Comments:

Left Arm S/N: 940

LShoulder Rib S/N: 180-3355 259

Upper Thorax Rib S/N: DM5020

Middle Thorax Rib S/N: DM5021

Lower Thorax Rib S/N: DM5022

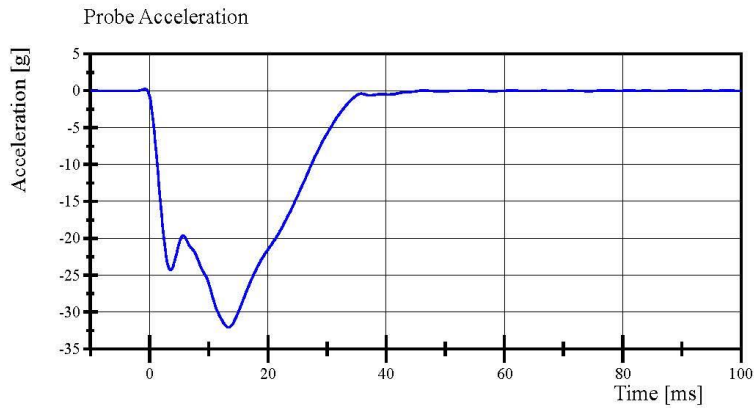
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.03.2022 10:07:47 619

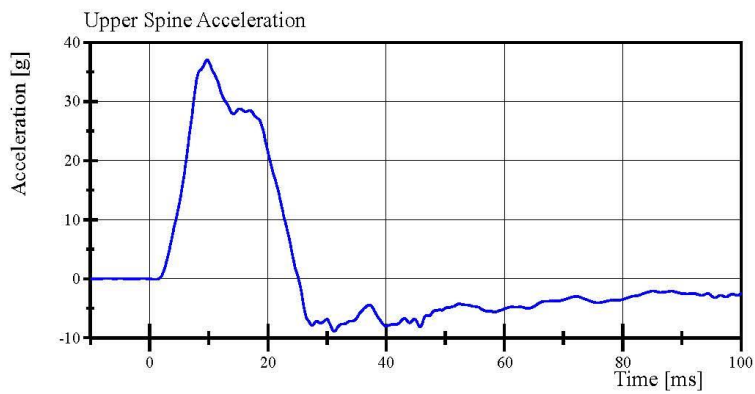


Transportation Research Center Inc.

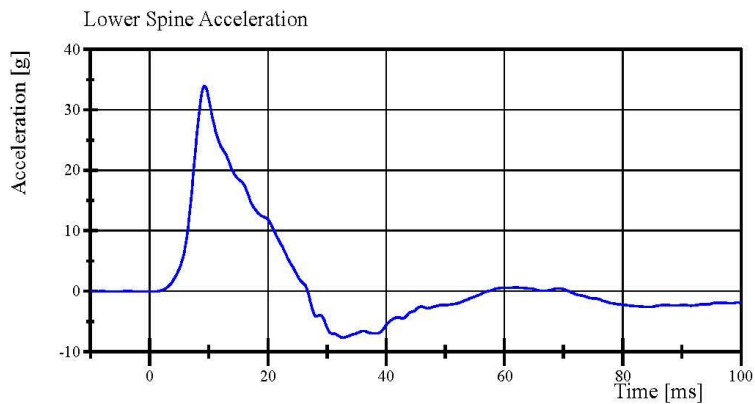
Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/3/2022



Filter Class: CFC_180
Max: 0.2 g at -0.8 ms
Min: -32.1 g at 13.4 ms



Filter Class: CFC_180
Max: 37.1 g at 9.8 ms
Min: -8.9 g at 31.2 ms



Filter Class: CFC_180
Max: 34.0 g at 9.3 ms
Min: -7.7 g at 32.7 ms

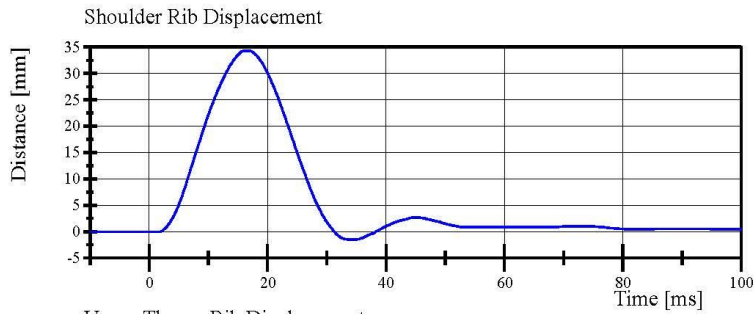
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.03.2022 10:09:22 619

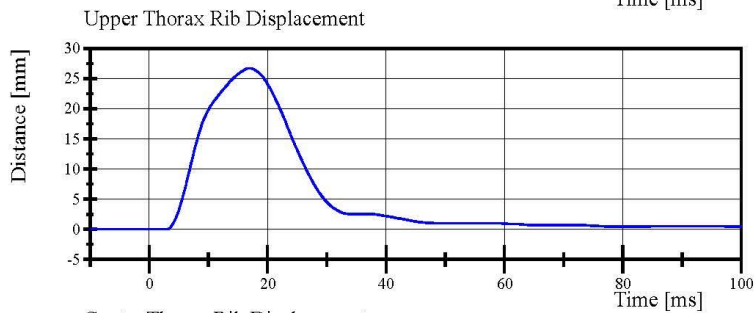


Transportation Research Center Inc.

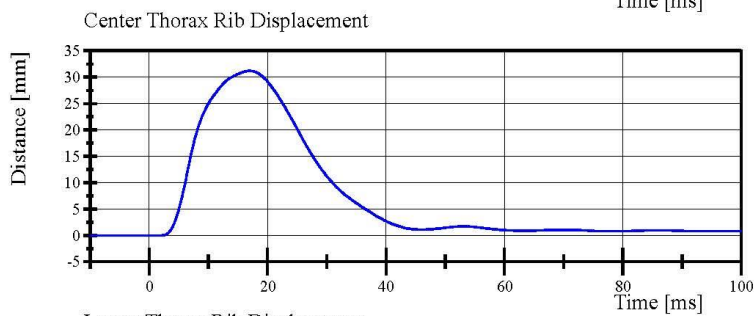
Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/3/2022



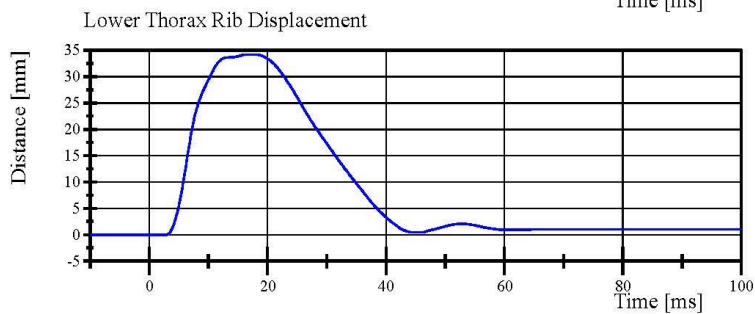
Filter Class: CFC_600
Max: 34.3 mm at 16.8 ms
Min: -1.5 mm at 33.8 ms



Filter Class: CFC_600
Max: 26.7 mm at 17.0 ms
Min: -0.0 mm at 3.0 ms



Filter Class: CFC_600
Max: 31.2 mm at 17.0 ms
Min: -0.0 mm at -4.6 ms



Filter Class: CFC_600
Max: 34.2 mm at 17.1 ms
Min: -0.0 mm at 2.8 ms

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

08.03.2022 10:09:22 619



Transportation Research Center Inc.

Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/3/2022

| Test Parameter | Specification | Test Results | Pass |
|----------------------------------|-----------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 20.8 °C | Yes |
| Relative Humidity | 10 - 70 % | 68 % | Yes |
| Impactor Velocity | 4.20 - 4.40 m/s | 4.355 m/s | Yes |
| Impactor Acceleration | (-14) - (-18) g | -15.8 g | Yes |
| Upper Thorax Rib Displacement | 32 - 40 mm | 32.3 mm | Yes |
| Center Thorax Rib Displacement | 39 - 45 mm | 40.9 mm | Yes |
| Lower Thorax Rib Displacement | 35 - 43 mm | 42.2 mm | Yes |
| Upper Spine Lateral Acceleration | 13 - 17 g | 13.5 g | Yes |
| Lower Spine Lateral Acceleration | 7 - 11 g | 10.1 g | Yes |

Test meets specifications.

Condition: Used

Comments:

Upper Thorax Rib S/N: DM5020

Middle Thorax Rib S/N: DM5021

Lower Thorax Rib S/N: DM5022

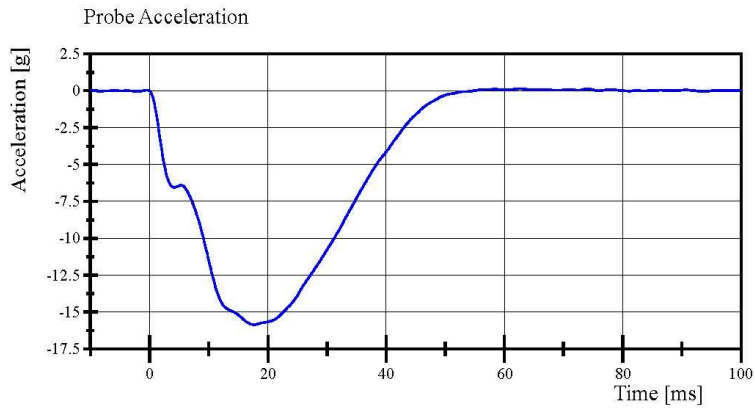
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.03.2022 09:30:37 812

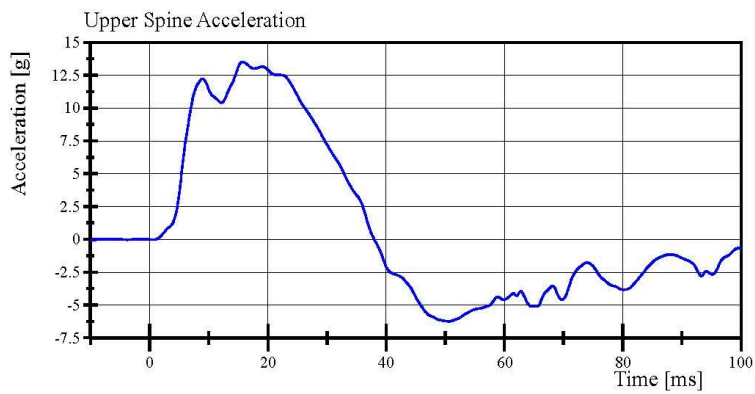


Transportation Research Center Inc.

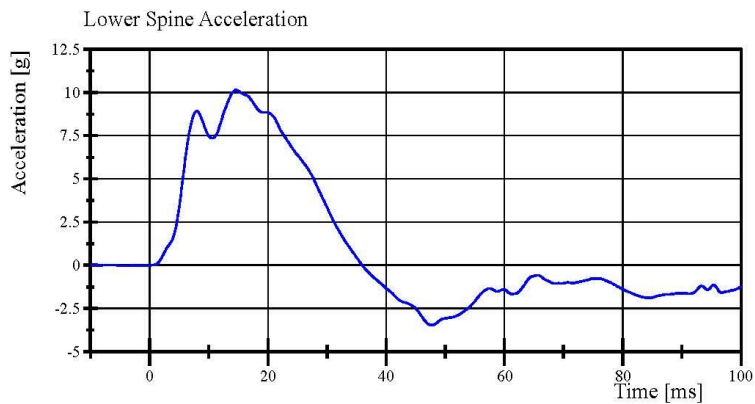
Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/3/2022



Filter Class: CFC_180
Max: 0.1 g at 62.6 ms
Min: -15.8 g at 17.6 ms



Filter Class: CFC_180
Max: 13.5 g at 15.7 ms
Min: -6.2 g at 50.6 ms



Filter Class: CFC_180
Max: 10.1 g at 14.6 ms
Min: -3.5 g at 47.7 ms

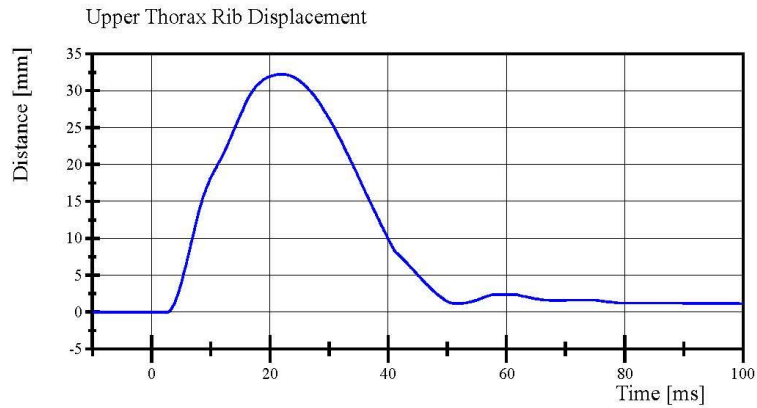
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.03.2022 09:32:34 812

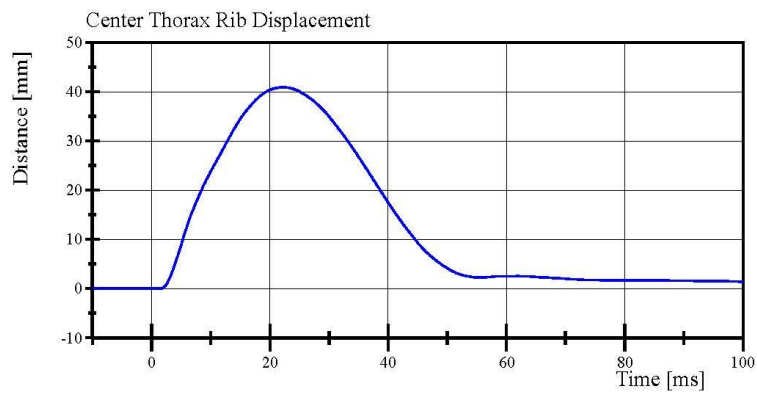


Transportation Research Center Inc.

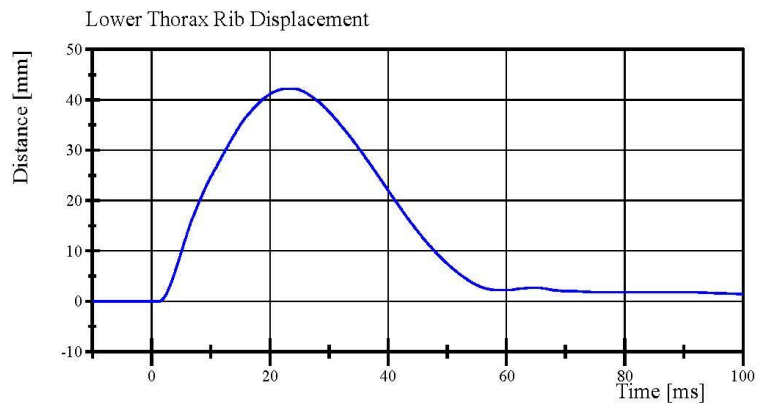
Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/3/2022



Filter Class: CFC_600
Max: 32.3 mm at 21.8 ms
Min: -0.0 mm at 2.6 ms



Filter Class: CFC_600
Max: 40.9 mm at 22.3 ms
Min: -0.0 mm at -5.0 ms



Filter Class: CFC_600
Max: 42.2 mm at 23.0 ms
Min: -0.0 mm at 1.3 ms

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

08.03.2022 09:32:35 812



Transportation Research Center Inc.

Left Lateral Abdomen
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/3/2022

| Test Parameter | Specification | Test Results | Pass |
|----------------------------------|-----------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 21.0 °C | Yes |
| Relative Humidity | 10 - 70 % | 68 % | Yes |
| Impactor Velocity | 4.2 - 4.4 m/s | 4.28 m/s | Yes |
| Impactor Acceleration | (-12) - (-16) g | -13.8 g | Yes |
| Upper Abdominal Rib Displacement | 36 - 47 mm | 42.2 mm | Yes |
| Lower Abdominal Rib Displacement | 33 - 44 mm | 37.9 mm | Yes |
| Lower Spine Lateral Acceleration | 9 - 14.0 g | 10.82 g | Yes |

Test meets specifications.

Condition: Used

Comments:

Upper Abdominal Rib S/N: DM7281

Lower Abdominal Rib S/N: DM7275

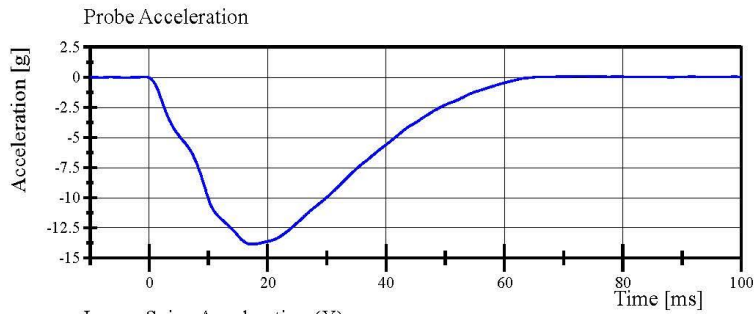
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.03.2022 09:14:13 695

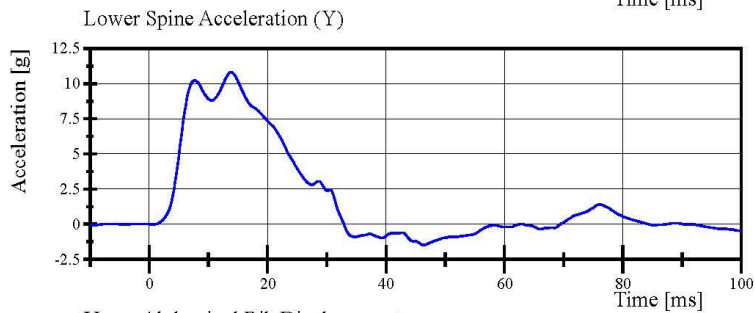


Transportation Research Center Inc.

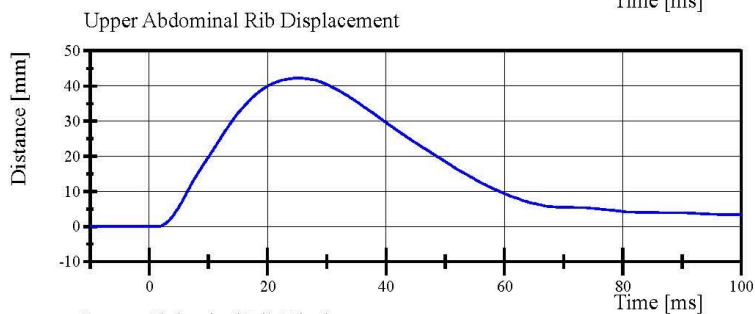
Left Lateral Abdomen
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/3/2022



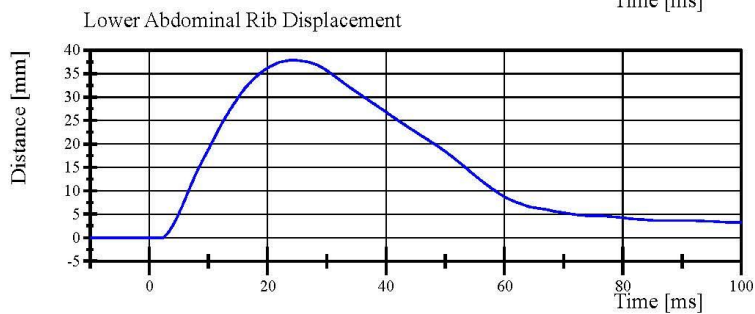
Filter Class: CFC_180
Max: 0.1 g at 73.5 ms
Min: -13.8 g at 17.3 ms



Filter Class: CFC_180
Max: 10.8 g at 13.8 ms
Min: -1.5 g at 46.3 ms



Filter Class: CFC_600
Max: 42.2 mm at 25.3 ms
Min: -0.0 mm at 1.4 ms



Filter Class: CFC_600
Max: 37.9 mm at 24.3 ms
Min: -0.0 mm at 2.1 ms

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

08.03.2022 09:15:12 695



Transportation Research Center Inc.

Left Lateral Pelvis
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/2/2022

| Test Parameter | Specification | Test Results | Pass |
|---|---------------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 20.9 °C | Yes |
| Relative Humidity | 10 - 70 % | 67 % | Yes |
| Pendulum Velocity | 6.6 - 6.8 m/s | 6.62 m/s | Yes |
| Impactor Acceleration | (-38.0) - (-47.0) g | -43.48 g | Yes |
| Peak Pelvis Lateral Acceleration after 6ms | 34 - 42 g | 37.3 g | Yes |
| Acetabulum Force | 3,600 - 4,300 N | 4,051.5 N | Yes |

Test meets specifications.

Condition: Used

Comments:

Pelvis Skin S/N: 1171

Pelvis Plug Info:

Manufacturer: Saco

S/N: 13760

Cal Date: 20200325

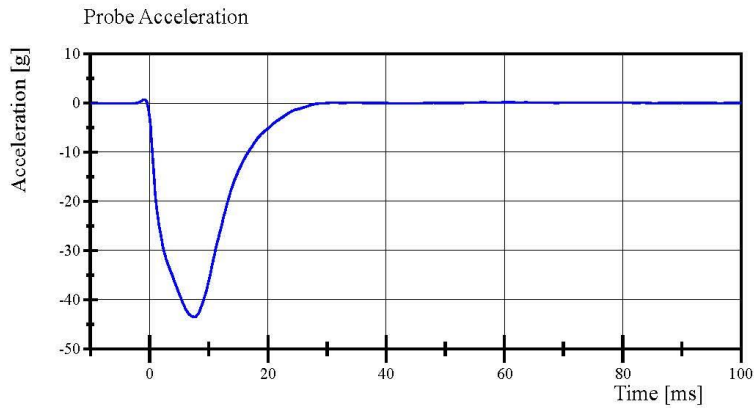
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.02.2022 14:47:35 465

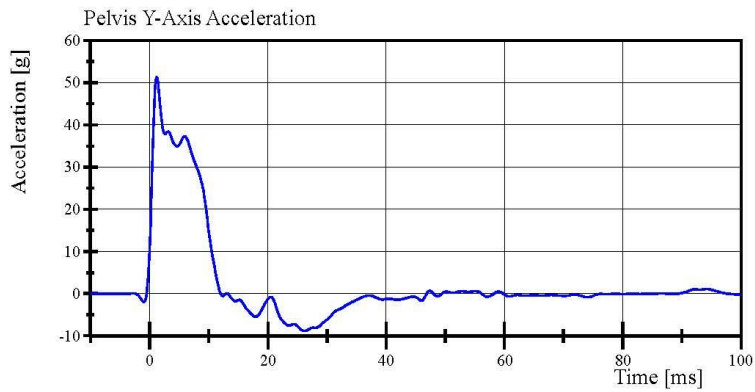


Transportation Research Center Inc.

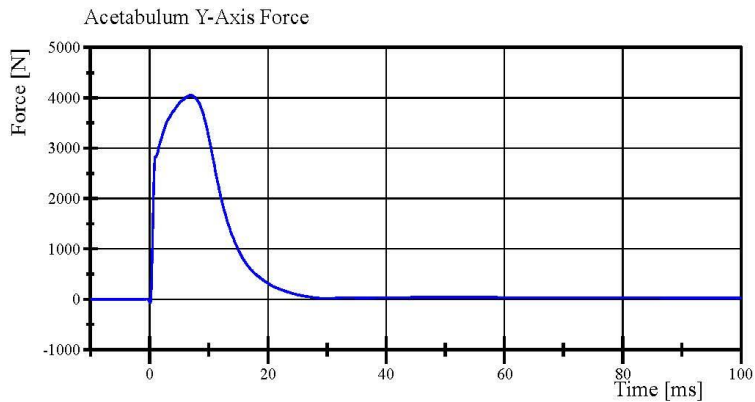
Left Lateral Pelvis
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/2/2022



Filter Class: CFC_180
Max: 0.7 g at -0.9 ms
Min: -43.5 g at 7.5 ms



Filter Class: CFC_180
Max: 51.3 g at 1.2 ms
Min: -8.9 g at 26.2 ms



Filter Class: CFC_600
Max: 4,051.5 N at 6.9 ms
Min: -66.5 N at 0.1 ms

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

08.02.2022 14:49:14 465



Transportation Research Center Inc.

Left Lateral Iliac
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/3/2022

| Test Parameter | Specification | Test Results | Pass |
|----------------------------------|-----------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 21.1 °C | Yes |
| Relative Humidity | 10 - 70 % | 69 % | Yes |
| Pendulum Velocity | 4.2 - 4.4 m/s | 4.33 m/s | Yes |
| Impactor Acceleration | (-36) - (-45) g | -39.1 g | Yes |
| Peak Pelvis Lateral Acceleration | 28 - 39 g | 31.0 g | Yes |
| Iliac Force | 4,100 - 5,100 N | 4,471.2 N | Yes |

Test meets specifications.

Condition: Used

Comments:

Pelvis Skin S/N: 1171

Pelvis Plug Info:

Manufacturer: Saco

S/N: 13760

Cal Date: 20200325

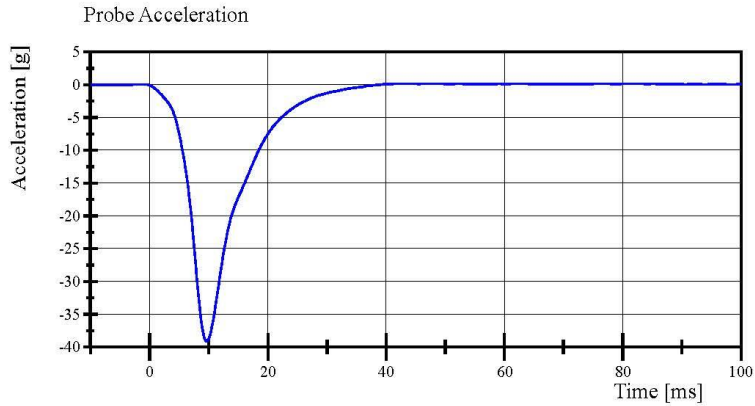
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.03.2022 10:39:11 702

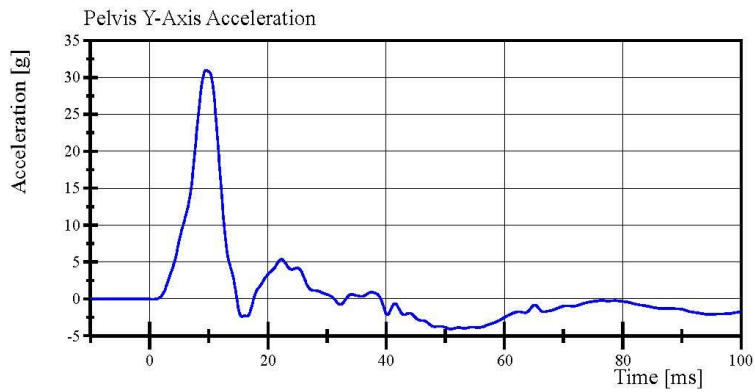


Transportation Research Center Inc.

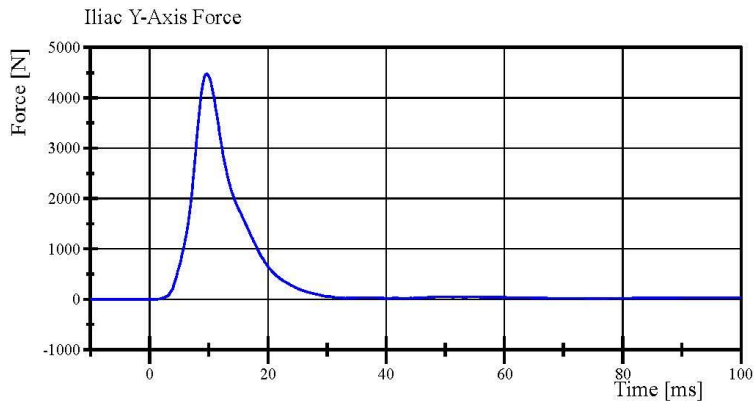
Left Lateral Iliac
SID IIs Serial No. 297 Certification No. 56-1
Test Date: 8/3/2022



Filter Class: CFC_180
Max: 0.2 g at 76.2 ms
Min: -39.1 g at 9.7 ms



Filter Class: CFC_180
Max: 31.0 g at 9.6 ms
Min: -4.1 g at 51.0 ms



Filter Class: CFC_600
Max: 4,471.2 N at 9.6 ms
Min: -0.8 N at -7.4 ms

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

08.03.2022 10:40:13 702



Post-Test Calibration Sheets
Driver S/N 297

Transportation Research Center Inc.
SIDIIs Dummy - Level D
External Dimensions
Serial No. 297 Calibration No. 57

| 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 |

Transportation Research Center Inc.

Left Lateral Head Drop
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022

| Test Parameter | Specification | Test Results | Pass |
|---|----------------|--------------|------|
| Temperature | 18.9 - 25.6 °C | 20.8 °C | Yes |
| Relative Humidity | 10 - 70 % | 69 % | Yes |
| Peak Head Resultant Acceleration | 115 - 137 g | 126.9 g | Yes |
| Peak Head Longitudinal Acceleration | (-15) - 15 g | -3.2 g | Yes |
| Is Head Resultant Acceleration Curve Unimodal within 15% of Peak? | < 15 % | 1.30 % | 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

08.26.2022 13:13:47 232

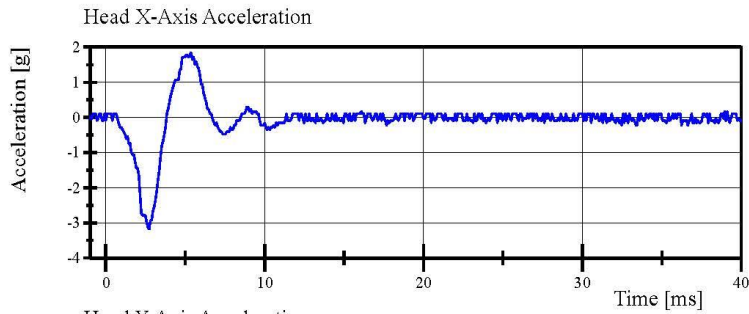


Transportation Research Center Inc.

Left Lateral Head Drop

SID IIs Serial No. 297 Certification No. 57-1

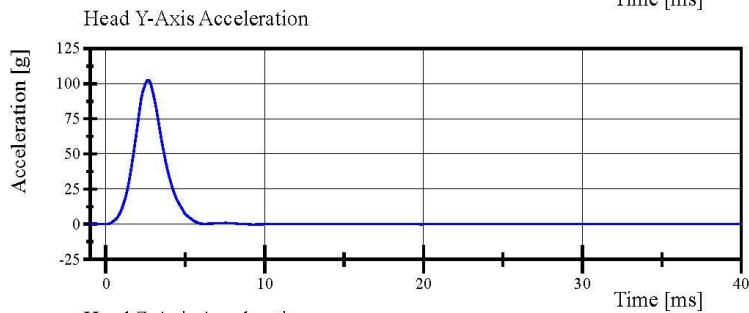
Test Date: 8/26/2022



Filter Class: CFC_1000

Max: 1.8 g at 5.4 ms

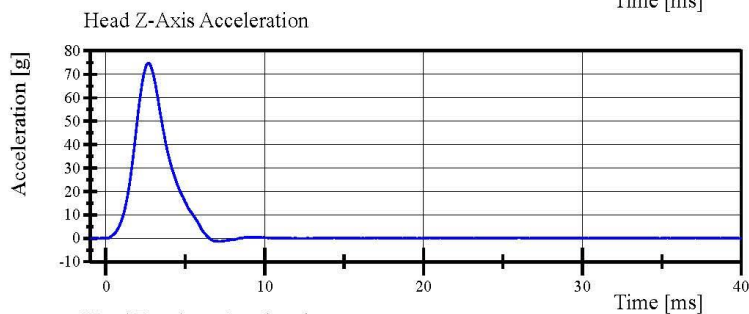
Min: -3.2 g at 2.7 ms



Filter Class: CFC_1000

Max: 102.5 g at 2.6 ms

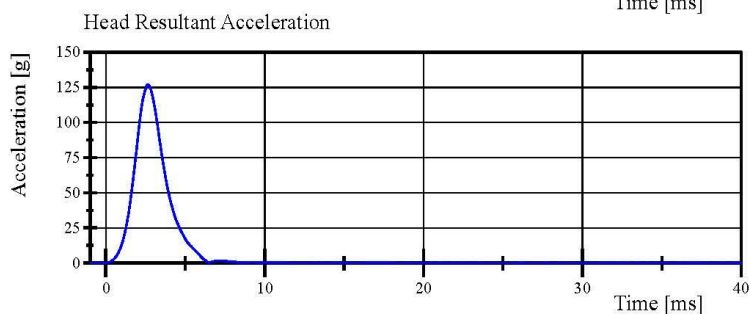
Min: -0.4 g at 9.2 ms



Filter Class: CFC_1000

Max: 74.8 g at 2.6 ms

Min: -1.4 g at 7.1 ms



Filter Class: CFC_1000

Max: 126.9 g at 2.6 ms

Min: 0.0 g at 26.6 ms

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

08.26.2022 13:14:15 232



Transportation Research Center Inc.

Left Lateral Neck
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/29/2022

| Test Parameter | Specification | Test Results | Pass |
|--|-----------------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 21.1 °C | Yes |
| Relative Humidity | 10 - 70 % | 68 % | Yes |
| Pendulum Velocity | (-5.51) - (-5.63) m/s | -5.614 m/s | Yes |
| Pendulum Integrated Velocity | | | |
| Change at 10 ms | 2.20 - 2.80 m/s | 2.673 m/s | Yes |
| Change at 15 ms | 3.30 - 4.10 m/s | 3.948 m/s | Yes |
| Change at 20 ms | 4.40 - 5.40 m/s | 5.280 m/s | Yes |
| Change at 25 ms | 5.40 - 6.10 m/s | 5.854 m/s | Yes |
| Change at 25 to 100 ms | 5.50 - 6.20 m/s | 5.855 m/s | Yes |
| Maximum Headform Flexion occurring between 50ms and 70ms. | | | |
| Peak | (-71) - (-81) deg | -80.0 deg | Yes |
| Time of Peak | 50 - 70 ms | 61.7 ms | Yes |
| Total Neck Occipital Condyles Moment | 36 - 44 N·m | 41.3 N·m | Yes |
| Total Neck Occipital Condyles Moment Decay Time to 0 N·m | 102 - 126 ms | 118.2 ms | Yes |

Test meets specifications.

Condition: Used

Comments:

Neck S/N: 779

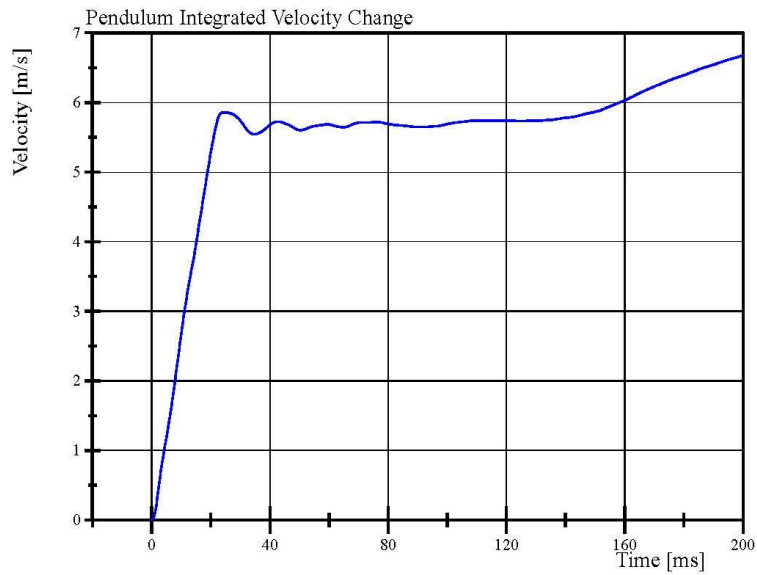
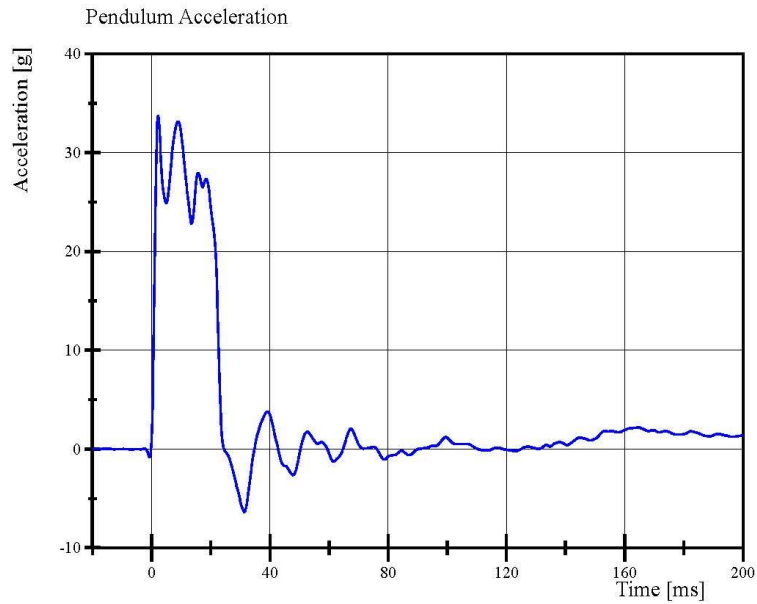
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.29.2022 09:41:32 747



Transportation Research Center Inc.

Left Lateral Neck
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/29/2022



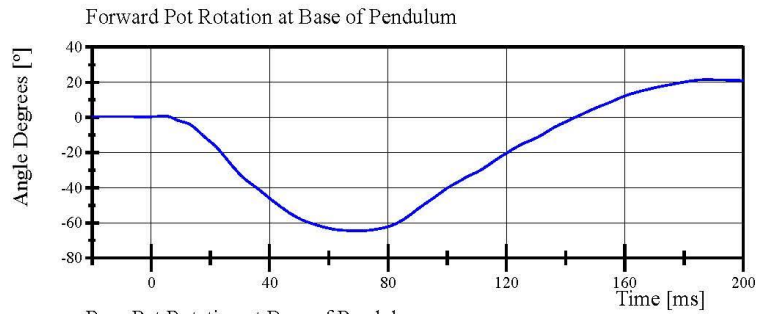
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.29.2022 09:42:08 747

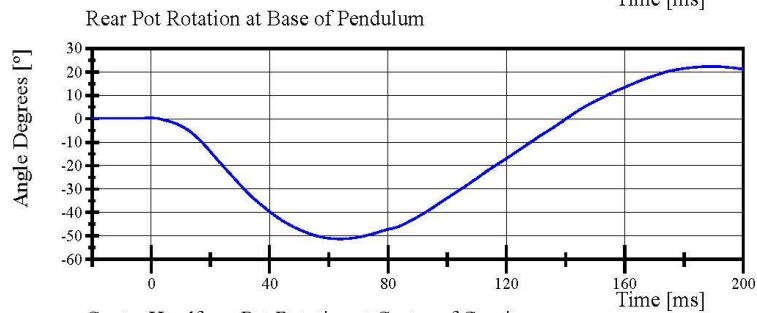


Transportation Research Center Inc.

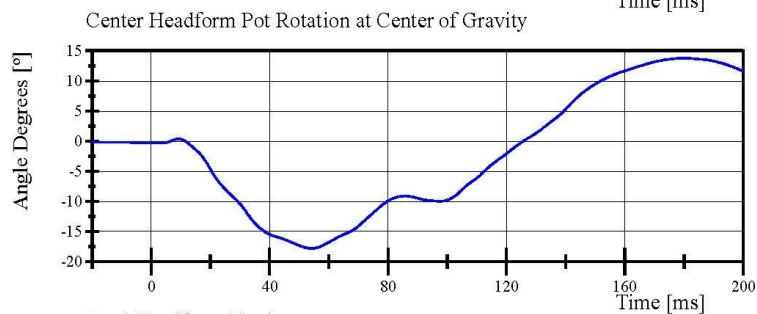
Left Lateral Neck
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/29/2022



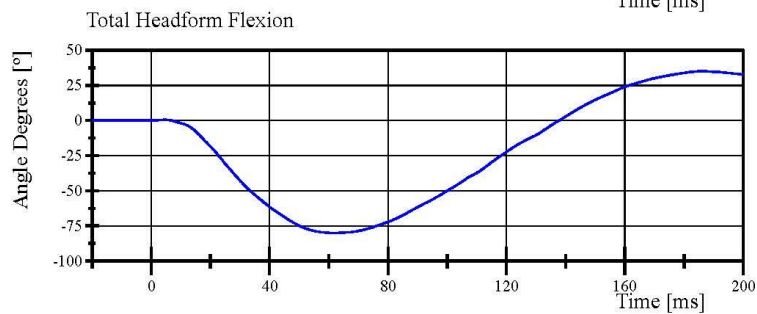
Filter Class: CFC_60
Max: 21.4 ° at 187.8 ms
Min: -64.5 ° at 71.1 ms



Filter Class: CFC_60
Max: 22.3 ° at 189.4 ms
Min: -51.3 ° at 63.8 ms



Filter Class: CFC_60
Max: 13.8 ° at 179.8 ms
Min: -17.8 ° at 54.2 ms



Filter Class: CFC_60
Max: 35.0 ° at 186.2 ms
Min: -80.0 ° at 61.7 ms

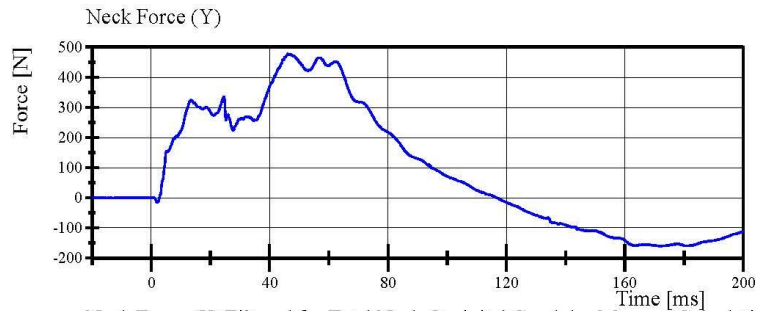
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.29.2022 09:42:09 747

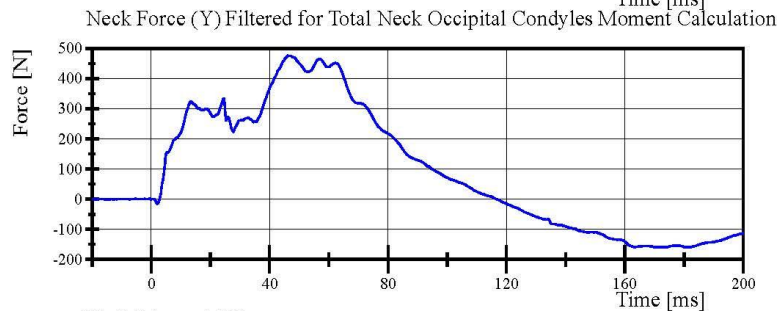


Transportation Research Center Inc.

Left Lateral Neck
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/29/2022



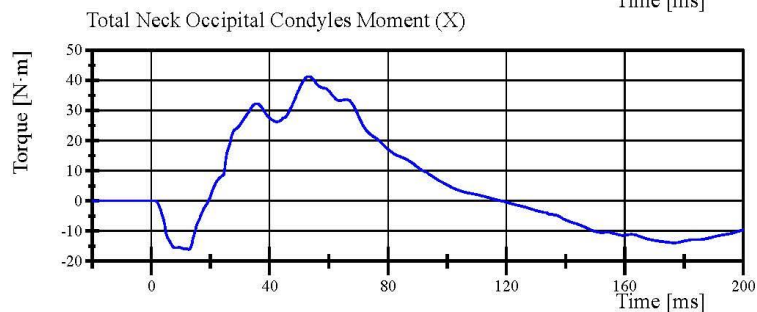
Filter Class: CFC_1000
Max: 477.6 N at 46.2 ms
Min: -160.1 N at 171.5 ms



Filter Class: CFC_600
Max: 476.5 N at 46.2 ms
Min: -159.9 N at 171.7 ms



Filter Class: CFC_600
Max: 33.8 Nm at 53.1 ms
Min: -21.7 Nm at 12.9 ms



Filter Class: Without_(Constar
Max: 41.3 N.m at 53.1 ms
Min: -16.1 N.m at 12.7 ms

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

08.29.2022 09:42:09 747



Transportation Research Center Inc.

Left Lateral Shoulder
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022

| Test Parameter | Specification | Test Results | Pass |
|----------------------------------|-----------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 20.8 °C | Yes |
| Relative Humidity | 10 - 70 % | 67 % | 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 | 31.5 mm | Yes |
| Upper Spine Lateral Acceleration | 17 - 22 g | 20.1 g | Yes |

Test meets specifications.

Condition: Used

Comments:

Left Arm S/N: 940L

Shoulder Rib S/N: 180-3355 259

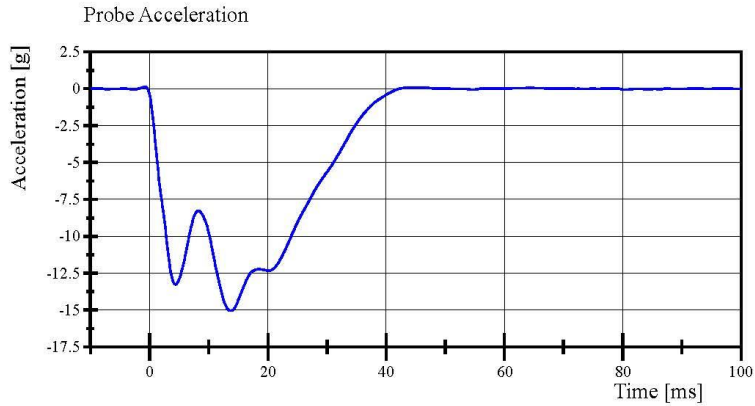
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.26.2022 10:28:18 836

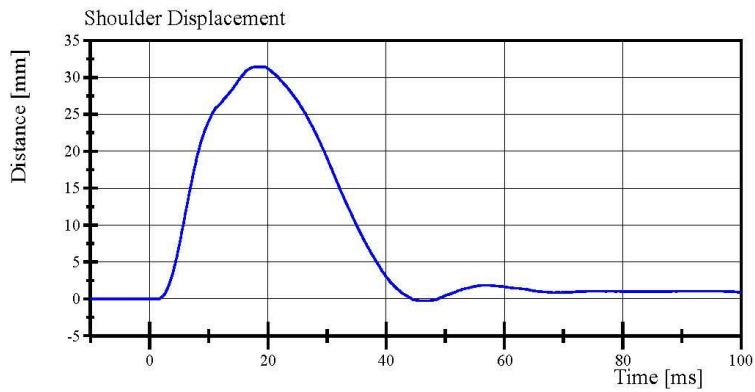


Transportation Research Center Inc.

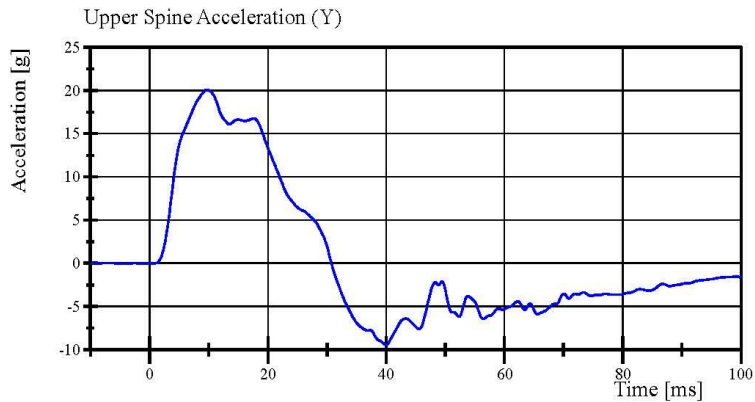
Left Lateral Shoulder
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022



Filter Class: CFC_180
Max: 0.1 g at -0.8 ms
Min: -15.1 g at 13.7 ms



Filter Class: CFC_600
Max: 31.5 mm at 19.2 ms
Min: -0.2 mm at 46.6 ms



Filter Class: CFC_180
Max: 20.1 g at 9.8 ms
Min: -9.5 g at 40.0 ms

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

08.26.2022 10:28:50 836



Transportation Research Center Inc.

Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022

| Test Parameter | Specification | Test Results | Pass |
|----------------------------------|-----------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 20.8 °C | Yes |
| Relative Humidity | 10 - 70 % | 68 % | Yes |
| Impactor Velocity | 6.60 - 6.80 m/s | 6.736 m/s | Yes |
| Impactor Acceleration | (-30) - (-36) g | -33.7 g | Yes |
| Shoulder Displacement | 31 - 40 mm | 35.4 mm | Yes |
| Upper Thorax Rib Displacement | 25 - 32 mm | 27.9 mm | Yes |
| Center Thorax Rib Displacement | 30 - 36 mm | 32.7 mm | Yes |
| Lower Thorax Rib Displacement | 32 - 38 mm | 35.7 mm | Yes |
| Upper Spine Lateral Acceleration | 34 - 43 g | 37.9 g | Yes |
| Lower Spine Lateral Acceleration | 29 - 37 g | 35.3 g | Yes |

Test meets specifications.

Condition: Used

Comments:

Left Arm S/N: 940L

Shoulder Rib S/N: 180-3355 259

Upper Thorax Rib S/N: DM5020

Middle Thorax Rib S/N: DM5021

Lower Thorax Rib S/N: DM5022

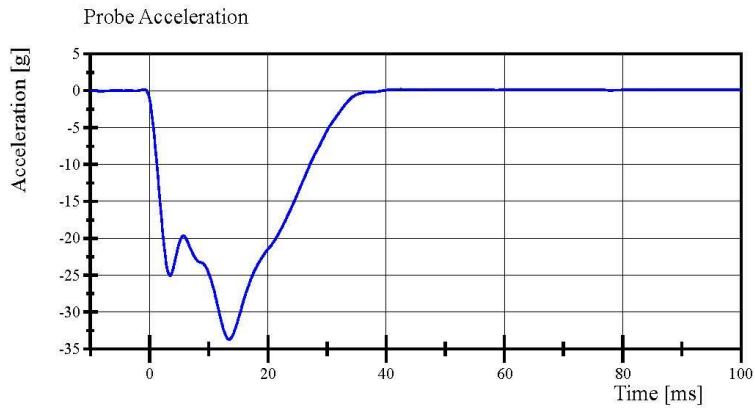
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.26.2022 11:26:44 609

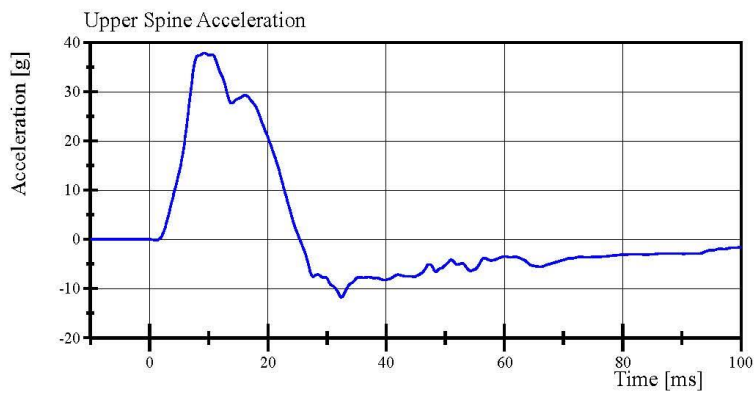


Transportation Research Center Inc.

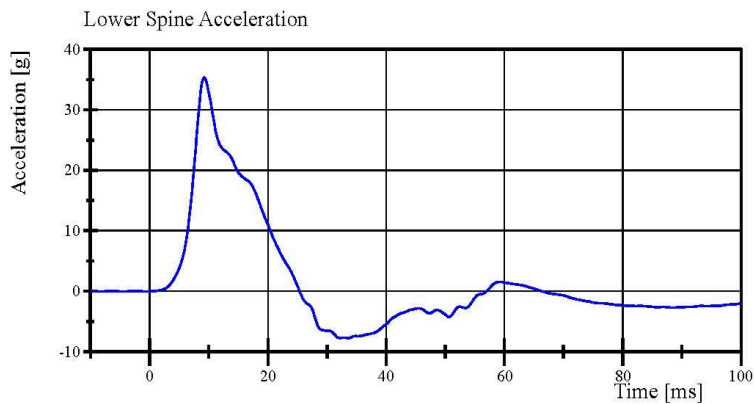
Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022



Filter Class: CFC_180
Max: 0.2 g at 42.5 ms
Min: -33.7 g at 13.4 ms



Filter Class: CFC_180
Max: 37.9 g at 9.3 ms
Min: -11.8 g at 32.4 ms



Filter Class: CFC_180
Max: 35.3 g at 9.2 ms
Min: -7.8 g at 33.5 ms

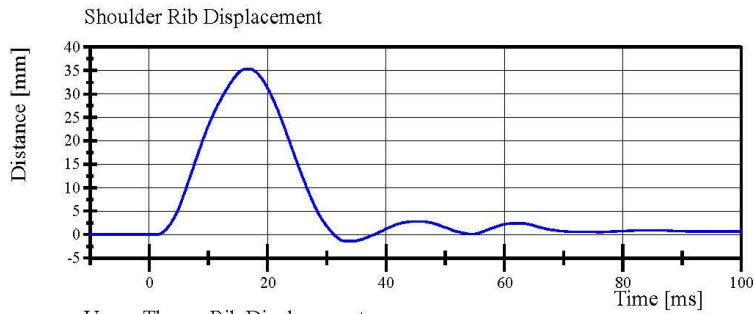
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.26.2022 11:27:42 609

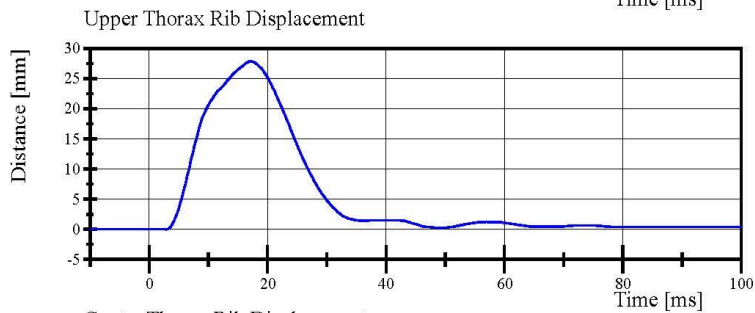


Transportation Research Center Inc.

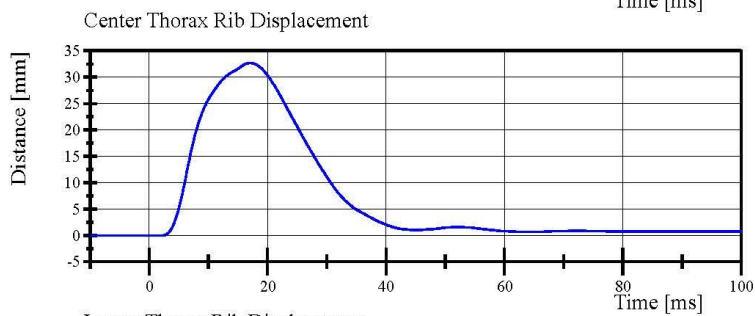
Left Lateral Thorax with Arm
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022



Filter Class: CFC_600
Max: 35.4 mm at 16.7 ms
Min: -1.4 mm at 33.2 ms



Filter Class: CFC_600
Max: 27.9 mm at 17.1 ms
Min: -0.0 mm at 2.9 ms



Filter Class: CFC_600
Max: 32.7 mm at 17.0 ms
Min: -0.0 mm at 2.2 ms



Filter Class: CFC_600
Max: 35.7 mm at 17.4 ms
Min: -0.0 mm at 2.8 ms

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

08.26.2022 11:27:42 609



Transportation Research Center Inc.

Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022

| Test Parameter | Specification | Test Results | Pass |
|----------------------------------|-----------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 20.9 °C | Yes |
| Relative Humidity | 10 - 70 % | 67 % | Yes |
| Impactor Velocity | 4.20 - 4.40 m/s | 4.364 m/s | Yes |
| Impactor Acceleration | (-14) - (-18) g | -15.3 g | Yes |
| Upper Thorax Rib Displacement | 32 - 40 mm | 36.1 mm | Yes |
| Center Thorax Rib Displacement | 39 - 45 mm | 42.5 mm | Yes |
| Lower Thorax Rib Displacement | 35 - 43 mm | 41.3 mm | Yes |
| Upper Spine Lateral Acceleration | 13 - 17 g | 14.0 g | Yes |
| Lower Spine Lateral Acceleration | 7 - 11 g | 9.5 g | Yes |

Test meets specifications.

Condition: Used

Comments:

Upper Thorax Rib S/N: DM5020

Middle Thorax Rib S/N: DM5021

Lower Thorax Rib S/N: DM5022

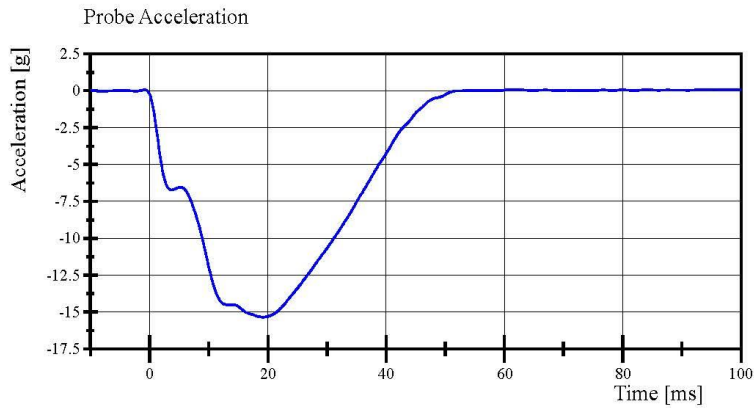
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.26.2022 10:54:16 830

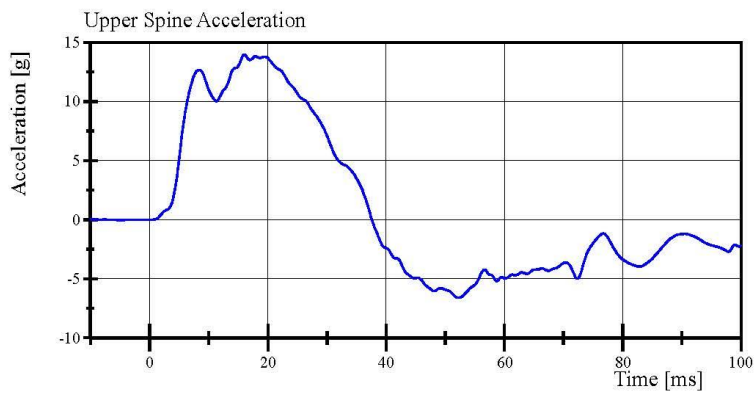


Transportation Research Center Inc.

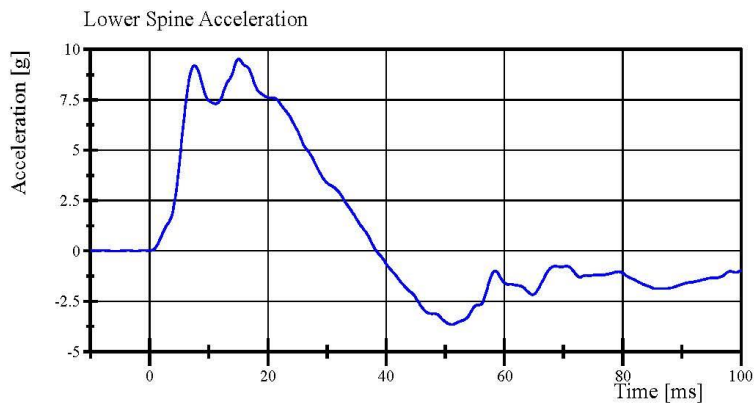
Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022



Filter Class: CFC_180
Max: 0.1 g at 95.4 ms
Min: -15.3 g at 19.2 ms



Filter Class: CFC_180
Max: 14.0 g at 16.0 ms
Min: -6.6 g at 52.2 ms



Filter Class: CFC_180
Max: 9.5 g at 15.0 ms
Min: -3.7 g at 51.0 ms

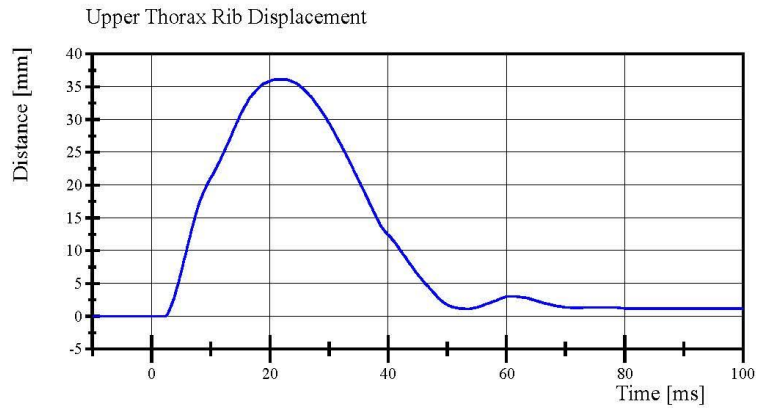
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.26.2022 10:55:01 830

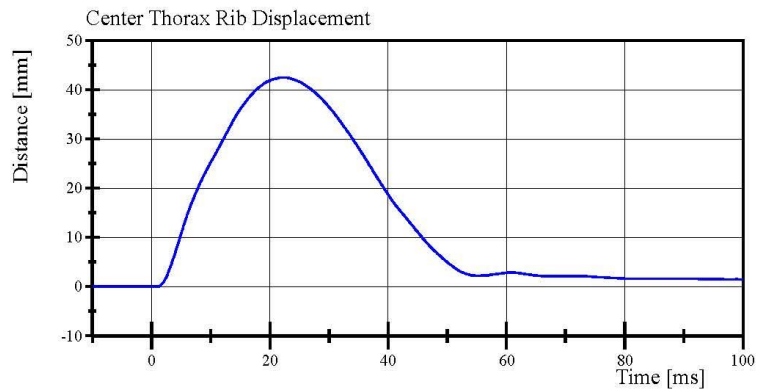


Transportation Research Center Inc.

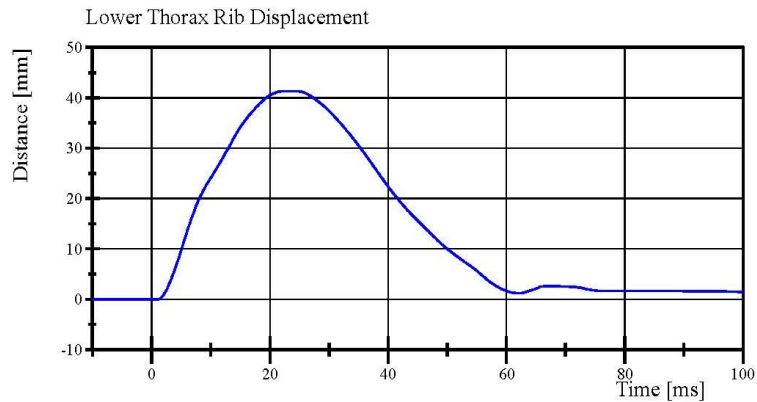
Left Lateral Thorax without Arm
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022



Filter Class: CFC_600
Max: 36.1 mm at 22.2 ms
Min: -0.0 mm at 2.2 ms



Filter Class: CFC_600
Max: 42.5 mm at 22.2 ms
Min: -0.0 mm at 0.9 ms



Filter Class: CFC_600
Max: 41.3 mm at 22.6 ms
Min: -0.0 mm at 1.0 ms

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

08.26.2022 10:55:02 830



Transportation Research Center Inc.

Left Lateral Abdomen
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022

| Test Parameter | Specification | Test Results | Pass |
|----------------------------------|-----------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 21.1 °C | Yes |
| Relative Humidity | 10 - 70 % | 69 % | Yes |
| Impactor Velocity | 4.2 - 4.4 m/s | 4.29 m/s | Yes |
| Impactor Acceleration | (-12) - (-16) g | -13.7 g | Yes |
| Upper Abdominal Rib Displacement | 36 - 47 mm | 41.9 mm | Yes |
| Lower Abdominal Rib Displacement | 33 - 44 mm | 38.0 mm | Yes |
| Lower Spine Lateral Acceleration | 9 - 14.0 g | 11.53 g | Yes |

Test meets specifications.

Condition: Used

Comments:

Upper Abdominal Rib S/N: DM7281

Lower Abdominal Rib S/N: DM7275

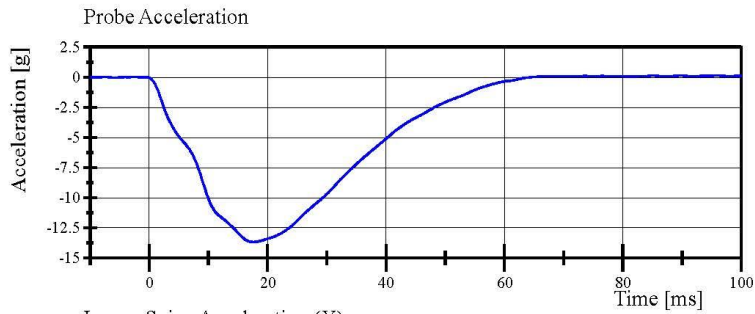
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.26.2022 10:36:51 661

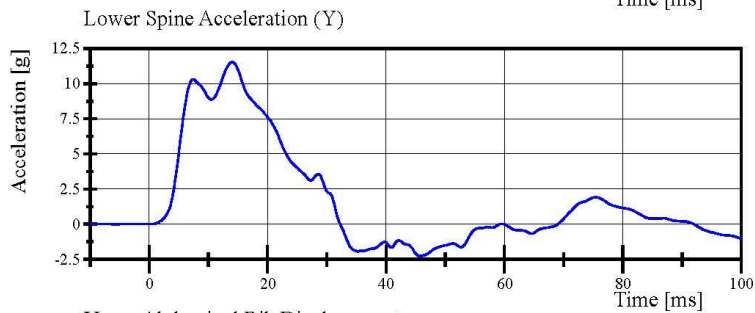


Transportation Research Center Inc.

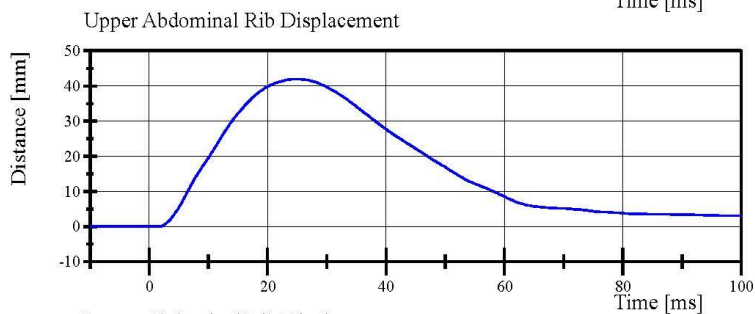
Left Lateral Abdomen
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022



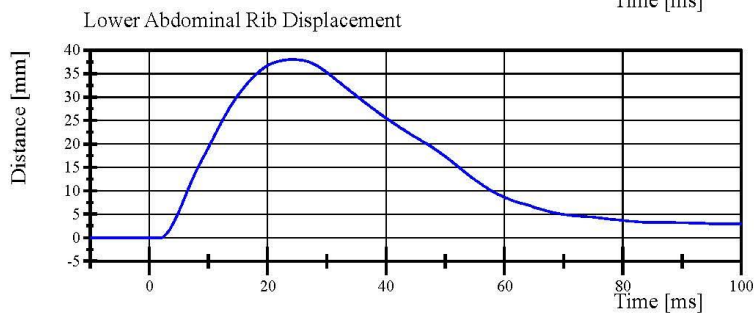
Filter Class: CFC_180
Max: 0.1 g at 95.9 ms
Min: -13.7 g at 17.6 ms



Filter Class: CFC_180
Max: 11.5 g at 14.1 ms
Min: -2.3 g at 45.7 ms



Filter Class: CFC_600
Max: 41.9 mm at 24.8 ms
Min: -0.0 mm at -10.0 ms



Filter Class: CFC_600
Max: 38.0 mm at 24.3 ms
Min: -0.0 mm at 2.0 ms

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

08.26.2022 10:37:36 661



Transportation Research Center Inc.

Left Lateral Pelvis
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022

| Test Parameter | Specification | Test Results | Pass |
|---|---------------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 20.8 °C | Yes |
| Relative Humidity | 10 - 70 % | 67 % | Yes |
| Pendulum Velocity | 6.6 - 6.8 m/s | 6.63 m/s | Yes |
| Impactor Acceleration | (-38.0) - (-47.0) g | -42.91 g | Yes |
| Peak Pelvis Lateral Acceleration after 6ms | 34 - 42 g | 36.6 g | Yes |
| Acetabulum Force | 3,600 - 4,300 N | 3,991.1 N | Yes |

Test meets specifications.

Condition: Used

Comments:

Pelvis Skin S/N: 1171

Pelvis Plug Info:

Manufacturer: Saco

S/N: 13763

Cal Date: 20200325

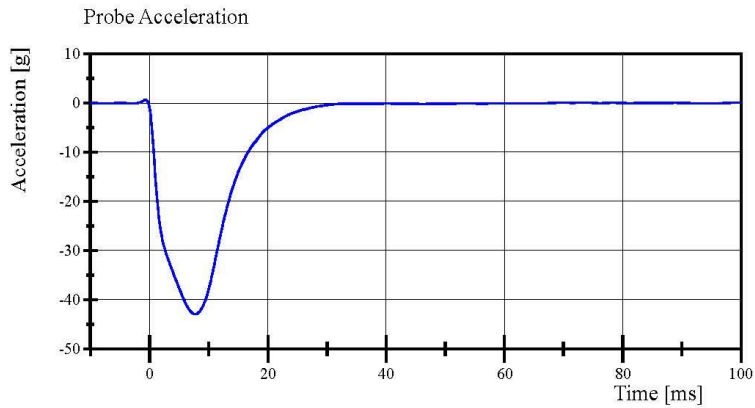
Specification Source: CFR49 Part 572 Subpart V
with Polarity in accordance with J211

08.26.2022 09:53:23.473

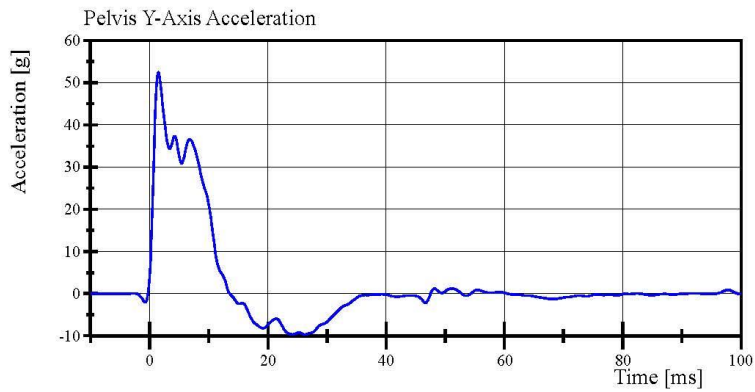


Transportation Research Center Inc.

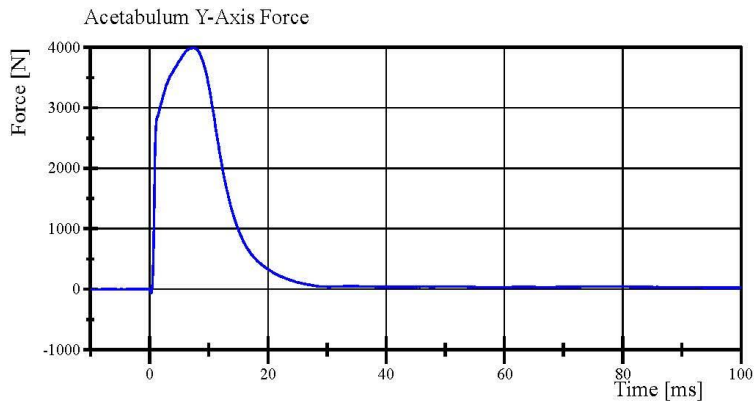
Left Lateral Pelvis
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022



Filter Class: CFC_180
Max: 0.7 g at -0.7 ms
Min: -42.9 g at 7.7 ms



Filter Class: CFC_180
Max: 52.5 g at 1.4 ms
Min: -9.7 g at 26.2 ms



Filter Class: CFC_600
Max: 3,991.1 N at 7.4 ms
Min: -63.3 N at 0.3 ms

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

08.26.2022 09:55:10 473



Transportation Research Center Inc.

Left Lateral Iliac
SID IIs Serial No. 297 Certification No. 57-1
Test Date: 8/26/2022

| Test Parameter | Specification | Test Results | Pass |
|----------------------------------|-----------------|--------------|------|
| Temperature | 20.6 - 22.2 °C | 20.8 °C | Yes |
| Relative Humidity | 10 - 70 % | 69 % | Yes |
| Pendulum Velocity | 4.2 - 4.4 m/s | 4.33 m/s | Yes |
| Impactor Acceleration | (-36) - (-45) g | -38.8 g | Yes |
| Peak Pelvis Lateral Acceleration | 28 - 39 g | 29.5 g | Yes |
| Iliac Force | 4,100 - 5,100 N | 4,451.9 N | Yes |

Test meets specifications.

Condition: Used

Comments:

Pelvis Skin S/N: 1171

Pelvis Plug Info:

Manufacturer: Saco

S/N: 13763

Cal Date: 20200325

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

08.26.2022 12:05:21 689

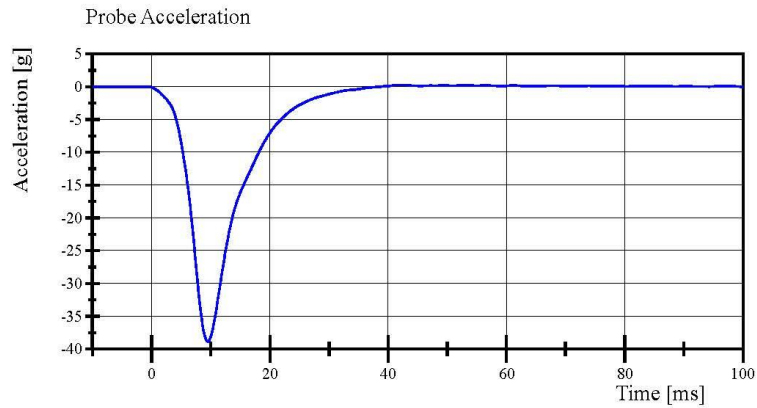


Transportation Research Center Inc.

Left Lateral Iliac

SID IIs Serial No. 297 Certification No. 57-1

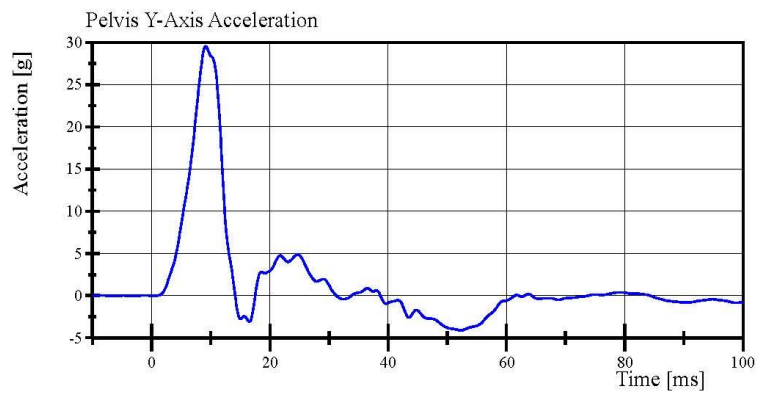
Test Date: 8/26/2022



Filter Class: CFC_180

Max: 0.2 g at 41.9 ms

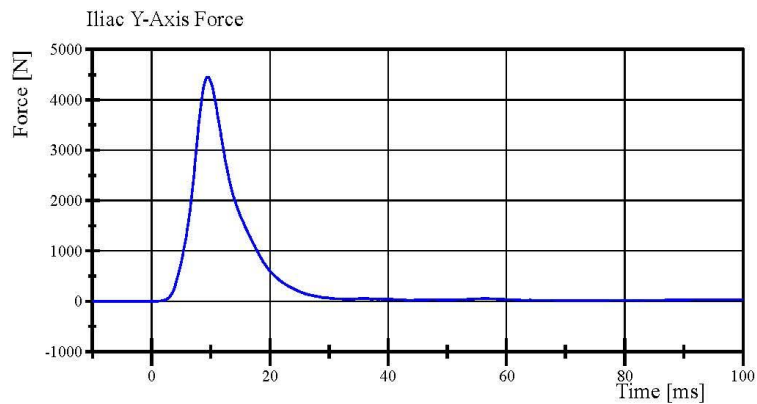
Min: -38.8 g at 9.5 ms



Filter Class: CFC_180

Max: 29.5 g at 9.1 ms

Min: -4.1 g at 52.2 ms



Filter Class: CFC_600

Max: 4,451.9 N at 9.4 ms

Min: -0.6 N at 0.0 ms

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

08.26.2022 12:06:35 689



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 | 2-Aug-2022 |
| | | | Y | P93549 | Endevco | 2-Aug-2022 |
| | | | Z | P93776 | Endevco | 2-Aug-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-2022 |
| Lower Spine Accelerometers (T12) | | | X | P94425 | Endevco | 2-Aug-2022 |
| | | | Y | P91522 | Endevco | 2-Aug-2022 |
| | | | Z | P91511 | Endevco | 2-Aug-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) | | | | 13761 | SACO | 25-Mar-2020 |
| Pelvis Plug (non-struck side) | | | | 13762 | SACO | 25-Mar-2020 |

TABLE 2 – Vehicle Instrumentation

| Vehicle Instrumentation | | Serial Number | Manufacturer | Calibration Date |
|---------------------------|---|---------------|--------------|------------------|
| Vehicle Center of Gravity | X | A377406 | Endevco | 31-Mar-22 |
| Vehicle Center of Gravity | Y | A381823 | Endevco | 31-Mar-22 |
| Vehicle Center of Gravity | Z | A381818 | Endevco | 31-Mar-22 |
| Left Floor Sill | Y | A378309 | Endevco | 31-Mar-22 |
| A-Pillar Sill | Y | A191018 | Endevco | 31-Mar-22 |
| A-Pillar Low | Y | A381835 | Endevco | 31-Mar-22 |
| A-Pillar Mid | Y | A381840 | Endevco | 31-Mar-22 |
| B-Pillar Sill | Y | A381834 | Endevco | 31-Mar-22 |
| B-Pillar Low | Y | A381829 | Endevco | 31-Mar-22 |
| B-Pillar Mid | Y | A378310 | Endevco | 31-Mar-22 |
| Driver Seat | Y | A373384 | Endevco | 31-Mar-22 |
| Engine Top | X | A400129 | Endevco | 31-Mar-22 |
| Engine Top | Y | A386357 | Endevco | 31-Mar-22 |
| Firewall | Y | A373376 | Endevco | 31-Mar-22 |
| Right Roof | Y | A400123 | Endevco | 31-Mar-22 |
| Right Floor Sill | Y | A386361 | Endevco | 31-Mar-22 |
| Rear Floor Pan | X | A381830 | Endevco | 31-Mar-22 |
| Rear Floor Pan | Y | A400107 | Endevco | 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 |