

FINAL REPORT NUMBER: SPNCAP-TRC-14-005

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

**Mazda Motor Corporation
2014 Mazda 6 I Sport 4-Door Sedan
NHTSA NUMBER: M20145401**

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



Report Date: March 12, 2014

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Office of Crashworthiness Standards
Mail Code: NVS-111
1200 New Jersey Ave, SE
Room W43-410
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: 

Jeffery W. Sankey, Manager, Project Operations

Approval Date: March 12, 2014

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-14-005	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 2014 Mazda 6 I Sport 4-Door Sedan, NHTSA No.: M20145401		5. Report Date March 12, 2014																									
		6. Performing Organization Code TRC Inc.																									
7. Author(s) Jeffery W. Sankey, Manager, Project Operations		8. Performing Organization Report No. 140113																									
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. DTNH22-09-D-00125																									
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Crashworthiness Standards Mail Code NVS-111 1200 New Jersey Ave, SE, Room W43-410 Washington, DC 20590		13. Type of Report and Period Covered Final Test Report January 13, 2014 – March 12, 2014																									
		14. Sponsoring Agency Code NVS-111																									
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 2014 Mazda 6 I Sport 4-Door Sedan, in accordance with the specifications of the Office of Crashworthiness Standards Side NCAP Pole Laboratory Test Procedure for the generation of consumer information on vehicle side pole crash protection. This test was conducted by Transportation Research Center Inc. in East Liberty, Ohio, on January 13, 2014.</p> <p>The impact velocity was 32.42 km/h, and the ambient temperature at the struck (left) side of the target vehicle at the time of impact was 22° C. The test vehicle's post-test maximum crush was 352 mm at Level 3.</p> <p>The test or target vehicle's performance is given below:</p> <table border="1"> <thead> <tr> <th></th> <th>Unit</th> <th>Threshold</th> <th>Front SID-IIs</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆):</td> <td>NA</td> <td>1000</td> <td><u>271</u></td> </tr> <tr> <td>Resultant Lower Spine Acceleration:</td> <td>g's</td> <td>82</td> <td><u>36.3</u></td> </tr> <tr> <td>Total Pelvic Force: (sum of acetabular and iliac forces)</td> <td>N</td> <td>5525</td> <td><u>2986.4</u></td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>38</td> <td><u>20.6</u></td> </tr> <tr> <td>Maximum Abdomen Rib Deflection</td> <td>mm</td> <td>45</td> <td><u>16.5</u></td> </tr> </tbody> </table> <p>The door struck by the pole did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.</p>					Unit	Threshold	Front SID-IIs	Head Injury Criteria (HIC ₃₆):	NA	1000	<u>271</u>	Resultant Lower Spine Acceleration:	g's	82	<u>36.3</u>	Total Pelvic Force: (sum of acetabular and iliac forces)	N	5525	<u>2986.4</u>	Maximum Thoracic Rib Deflection	mm	38	<u>20.6</u>	Maximum Abdomen Rib Deflection	mm	45	<u>16.5</u>
	Unit	Threshold	Front SID-IIs																								
Head Injury Criteria (HIC ₃₆):	NA	1000	<u>271</u>																								
Resultant Lower Spine Acceleration:	g's	82	<u>36.3</u>																								
Total Pelvic Force: (sum of acetabular and iliac forces)	N	5525	<u>2986.4</u>																								
Maximum Thoracic Rib Deflection	mm	38	<u>20.6</u>																								
Maximum Abdomen Rib Deflection	mm	45	<u>16.5</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, NPO-411 1200 New Jersey Ave Washington, DC 20590 e-mail: tis@nhtsa.dot.gov FAX: 202-493-2833																									
19. Security Classification (of this report) Unclassified	20. Security Classification (of this page) Unclassified	21. Number of Pages 122	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	8
3	Dummy Longitudinal Clearance Dimensions	11
4	Dummy Lateral Clearance Dimensions	12
5	Camera and Instrumentation Data	13
6	Vehicle Accelerometer Data	14
7	Rigid Pole Load Cell Data	15
8	Post-Test Observations	16
9	Vehicle Profile Measurements	18
10	Vehicle Exterior Crush Measurements	19
11	Vehicle Damage Profile Distances	22
12	FMVSS No. 301 Fuel Integrity Post-Impact Data	23
13	Dummy/Vehicle Temperature and Humidity Stabilization Data	24
<u>Appendix</u>		<u>Page No.</u>
A	Photographs	A-1
B	Vehicle and Dummy Response Data Plots	B-1
C	Dummy Configuration and Performance Verification Data	C-1
D	Test Equipment And Instrumentation Calibration Data	D-1

SECTION 1
TEST PURPOSE AND PROCEDURE

TEST PURPOSE AND PROCEDURE

This side impact test was conducted as part of the MY14 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-09-D-00125. The purpose of this test is to generate comparative side impact performance in a 2014 Mazda 6 I Sport 4-Door Sedan manufactured by Mazda Motor Corporation. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Side NCAP Pole Laboratory Test Procedure, dated September 2013.

SECTION 2
SUMMARY OF TEST RESULTS

A rigid pole side impact test was conducted on a model year 2014 Mazda 6 I Sport 4-Door Sedan. The subject vehicle was towed into the rigid pole at an angle of 75° and a velocity of 32.42 km/h. The side impact test was conducted by Transportation Research Center Inc. in East Liberty, OH, on January 13, 2014. 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 September 2013. Camera locations and other pertinent camera information are included in this report.

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

- 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.

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	271
Lower Spine Acceleration	G	82	36.3
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	2986.4
Maximum Thoracic Rib Deflection	mm	38*	20.6
Maximum Abdominal Rib Deflection	mm	45*	16.5

* 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		
Curtain	Yes	Yes	Yes	Yes
Side Torso/Pelvis Airbag	Yes	Yes	No	N/A
Side Pelvis 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	None	N/A	None	N/A

GENERAL COMMENTS

None

SECTION 3
OCCUPANT AND VEHICLE INFORMATION

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

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan
Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
Test Date: 1/13/14

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M20145401
Model Year	2014
Make	Mazda
Model	Mazda6
Body Style	Sedan
VIN	JM1GJ1U6XE1149601
Body Color	Silver
Odometer Reading (km/mi)	39 mi
Engine Displacement (L)	2.5
Type/No. Cylinders	4
Engine Placement	Front/Transverse
Transmission Type	Automatic
Transmission Speeds	6
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	Yes
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
Other Safety Restraint	N/A

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

Yes

DATA FROM CERTIFICATION LABEL

Manufactured By	Mazda Motor Corp
Date of Manufacturer	10/13
Vehicle Type	Passenger Car

GVWR (kg)	1945
GAWR Front (kg)	1029
GAWR Rear (kg)	921

VEHICLE SEATING AND WEIGHT CAPACITY DATA

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

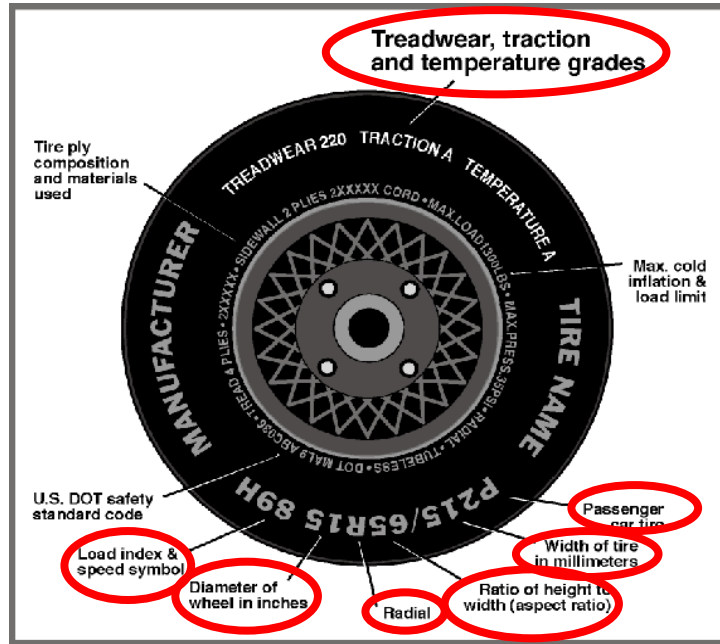
VEHICLE SEAT TYPE

Seating Location	Type of Seat Pan				Type of Seat Back		
	Bucket	Bench	Split Bench	Contoured	Fixed	Adjustable	
						W/ Lever	W/ Knob
Front Seat	Yes	No	No		No	Yes	No
Rear or Second Row Seat	No	No	Yes	No	Yes	No	No
Third row seat	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
 Test Date: 1/13/14



DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	350	350
Cold Pressure (kPa)	250	250
Recommended Tire Size	P225/55R17	P225/55R17
Tire Size on Vehicle	P225/55R17	P225/55R17
Tire Manufacturer	Yokohama	Yokohama
Tire Model	ADVAN A83	ADVAN A83
Treadwear	280	280
Traction	A	A
Temperature Grades	A	A
Tire Plies Sidewall	1	1
Tire Plies Body	4	4
Load Index/Speed Symbol	95 V	95 V
Tire Material	Polyester, Steel, Nylon	Polyester, Steel, Nylon
DOT Safety Code Left	FDUP-PFW3813	FDUP-PFW3813
DOT Safety Code Right	FDUP-PFW3813	FDUP-PFW3813

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

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan NHTSA No.: M20145401
 Test Program: SPNCAP Side Impact Test Date: 1/13/14

TIRE PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kPa	276	276	283	283
Tire Placard	kPa	250	250	250	250
Owner's Manual	kPa	N/A	N/A	N/A	N/A
As Tested	kPa	250	250	250	250

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	427.6	307.4		432.6	332.6		458.0	351.8	
Right	kg	428.8	283.6		440.4	328.2		435.8	315.0	
Ratio	%	59.2	40.8		56.9	43.1		57.3	42.7	
Totals	kg	856.4	591.0	1447.4	873.0	660.8	1533.8	893.8	666.8	1560.6

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total As Delivered Weight (UVW)	kg	1447.4	(A)
Actual Weight of 1 P572V ATD (SID-IIs) Dummy Used	kg	49	(B)
Rated Cargo/Luggage Weight (RCLW)	kg	44.8	(C)
Calculated Vehicle Target Weight (TVTWT)	kg	1541.2	(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

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
None	2.6
Components removed: Front and rear fascia, taillights, headlights, muffler, washer bottle, front calipers, left front rotor, horns, front wheel liner.	60.4

TEST VEHICLE ATTITUDES AND CG

	Units	As Delivered	As Tested	Fully Loaded	Meets Requirement***
Driver Door Sill Angle (front-to-rear)*	Deg.	-0.2	-0.1	-0.1	Yes
Front Passenger Sill Angle (front-to-rear)*	Deg.	+0.2	+0.2	+0.4	Yes
Front Bumper-Line Angle (left-to-right)**	Deg.	-0.1	-0.1	-0.4	Yes
Rear Bumper-Line Angle (left-to-right)**	Deg.	-0.2	-0.3	-0.5	Yes
Vehicle CG (Aft of Front Axle)	mm	1155	1219	1208	
Vehicle CG (Left (+) / Right (-) from longitudinal Centerline)	mm	+12	-2	+30	

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

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

DATA SHEET NO. 2

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

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan

NHTSA No.: M20145401

Test Program: SPNCAP Side Impact

Test Date: 1/13/14

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	19.2	14.3	16.7
Front Passenger Seat	N/A	N/A	15.1
Front Center Seat*	N/A	N/A	N/A
Struck Side Rear Seat	N/A	N/A	16.6
Non-Struck Side Rear Seat	N/A	N/A	15.9
Rear Center Seat*	N/A	N/A	7.5

* 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	150	Max	N/A	N/A	N/A
			Mid	123	136	150
			Min	N/A	N/A	N/A
Front Passenger Seat	15.1	150	Max	N/A	N/A	N/A
			Mid	123	136	150
			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	16.6	Fixed	Max	N/A	N/A	N/A
			Mid	N/A	N/A	N/A
			Min	N/A	N/A	N/A
Non-Struck Side Rear Seat	15.9	Fixed	Max	N/A	N/A	N/A
			Mid	N/A	N/A	N/A
			Min	N/A	N/A	N/A
Rear Center Seat*	7.5	Fixed	Max	N/A	N/A	N/A
			Mid	N/A	N/A	N/A
			Min	N/A	N/A	N/A

* If applicable.

DATA SHEET NO. 2 (CONTINUED)

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

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan

NHTSA No.: M20145401

Test Program: SPNCAP Side Impact

Test Date: 1/13/14

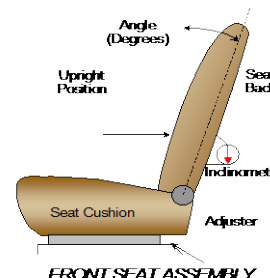
SEAT FORE/AFT POSITION

Seat	Total Fore/Aft Travel		Test Position from Forwardmost Position	
	mm	Detents*	mm	Detent*
Driver Seat	260	27	0	0
Front Passenger Seat	260	27	0	0
Front Center Seat*	N/A	N/A	N/A	N/A
Struck Side Rear Seat	Fixed	N/A	Fixed	N/A
Non-Struck Side Rear Seat	Fixed	N/A	Fixed	N/A
Rear Center Seat*	Fixed	N/A	Fixed	N/A

* If applicable.

SEAT BACK ANGLE ADJUSTMENT

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



Seat	Total Seat Back Angle Range		Test Position from Most Upright	
	Degrees	Detents*	Degrees	Detent*
Driver Seat w/ Seated Dummy	59.8	40	2.7 fwd	1
Front Passenger Seat	63.9	40	2.9 fwd	1
Front Center Seat*	N/A	N/A	N/A	N/A
Struck Side Rear Seat	Fixed	N/A	23.4	N/A
Non-Struck Side Rear Seat	Fixed	N/A	23.4	N/A
Rear Center Seat*	Fixed	N/A	25.5	N/A

* If applicable.

SEAT BELT ANCHORAGE ADJUSTMENT

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

	Total # of Positions	Placed in Position #
Driver Seat	3, numbered from 0 to 2	0, Uppermost

HEAD RESTRAINT ADJUSTMENT

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

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

DATA SHEET NO. 2 (CONTINUED)

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

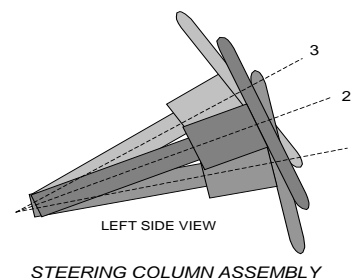
Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
 Test Date: 1/13/14

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.

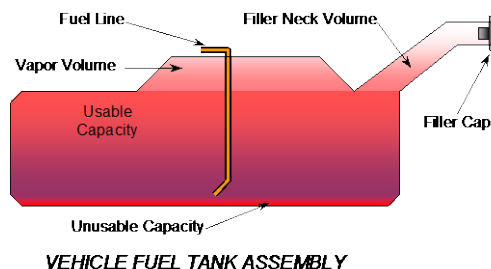
	Degrees	Fore/Aft Position, mm
Lowermost, Position No. 1	20.8	0
Geometric Center, Position No. 2	23.2	0
Uppermost, Position No. 3	25.6	0
Telescoping Steering Wheel Travel		48
Test Position	23.2	24



FUEL PUMP

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

Fuel tank is located in front of the rear axle. Filler neck enters the right side of the tank. Cap is on right rear quarter panel. Fuel pump will run when engine is running. Also, it will run briefly when ignition key is turned to the "ON" position without starting the engine.



FUEL TANK CAPACITY

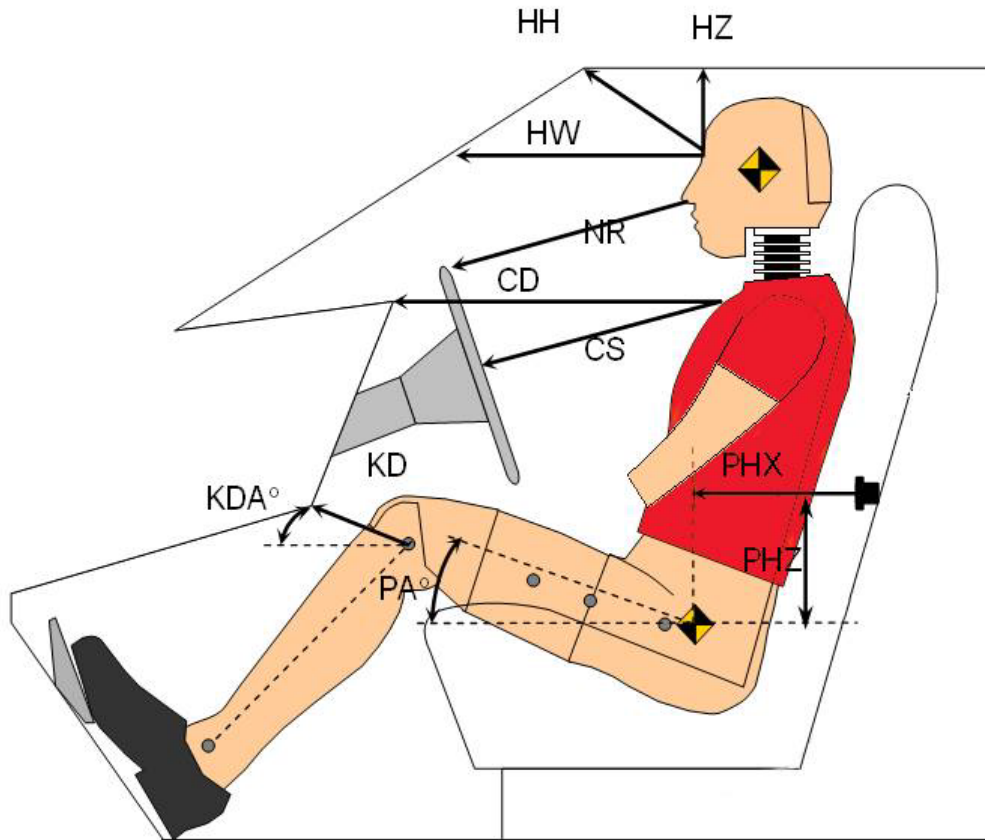
	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	62.0
Usable Capacity of "Optional" Tank (see Form No. 1)	N/A
Usable Capacity of Standard Tank (see Owner's Manual)	50.0
Usable Capacity of Optional Tank (see Owner's Manual)	N/A
93% of Usable Capacity	57.7
Actual Amount of Solvent Used in Test	57.7
1/3 of Usable Capacity	19.2

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

**DATA SHEET NO. 3
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS**

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
 Test Date: 1/13/14

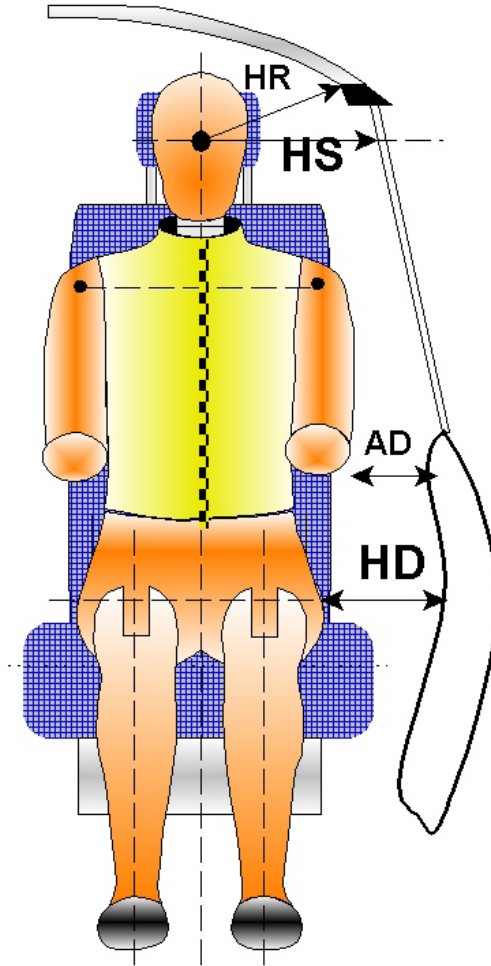


Code	Measurement Description	Driver	
		Length (mm)	Angle (°)
HH	Head to Header	198	
HW	Head to Windshield	483	
HZ	Head to Roof Liner	174	
NR	Nose to Rim	194	
CD	Chest to Dashboard	368	
CS	Chest to Steering Wheel	130	
KDL/KDLA°	Left Knee to Dash	103	41.0
KDR/KDRA°	Right Knee to Dash	115	40.0
PAX°	Pelvic Tilt Angle (X-axis)		0.3
PAY°	Pelvic Tilt Angle (Y-axis)		21.0
PHX	Hip Point to Striker (X-Axis)	348	
PHZ	Hip Point to Striker (Z-Axis)	175	

DATA SHEET NO. 4
DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
 Test Date: 1/13/14

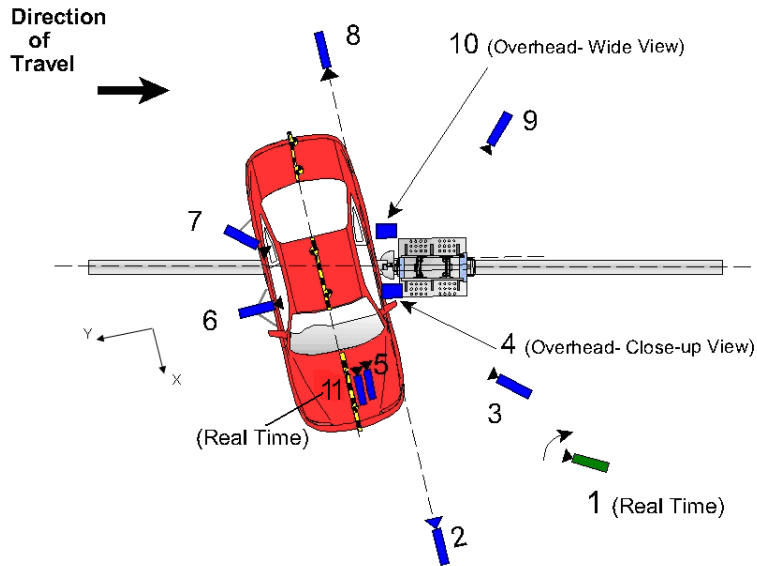


Code	Measurement Description	Length (mm)
HR	Head to Side Header	241
HS	Head to Side Window	374
AD	Arm to Door	148
HD	Hip Point to Door	173

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

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
 Test Date: 1/13/14



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	-6182	225	-1341	Zoom	1000
3	Impact side 45° – forward pole view	3339	-1064	-1318	Zoom	1000
4	Overhead Close-up view of impact	0	0	-5658	50	1000
5	Onboard – dummy front view				8.5	1000
6	Onboard – dummy side view				8.5	1000
7	Onboard – dummy rear oblique view				8.5	1000
8	Rear ground level – impact view	-6503	-135	-1304	Zoom	1000
9	Impact side 45° – rearward pole view	-3170	-3136	-1454	Zoom	1000
10	Overhead wide view of impact	-110	305	-5658	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: Not Applicable

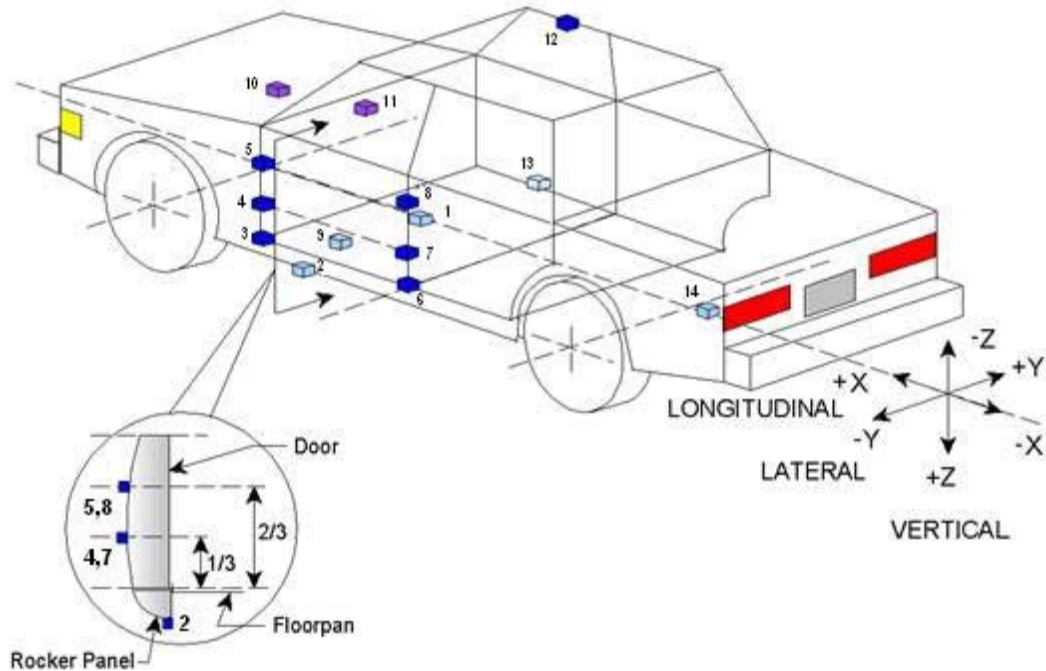
INSTRUMENTATION

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

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

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
 Test Date: 1/13/14



	Accelerometer/Sensor Location			
	ID	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	3137	70	322
2	Left Floor Sill	2945	-685	308
3	A-Pillar Sill	3275	-685	306
4	A-Pillar Low	3397	-848	460
5	A-Pillar Mid	3377	-840	823
6	B-Pillar Sill	2172	-700	345
7	B-Pillar Low	2307	-807	545
8	B-Pillar Mid	2264	-800	910
9	Driver Seat Track	2742	-595	323
10	Engine Top	3985	0	835
11	Firewall	3766	12	860
12	Right Roof	2295	650	1389
13	Right Floor Sill	2942	685	280
14	Rear Floorpan	1252	20	568

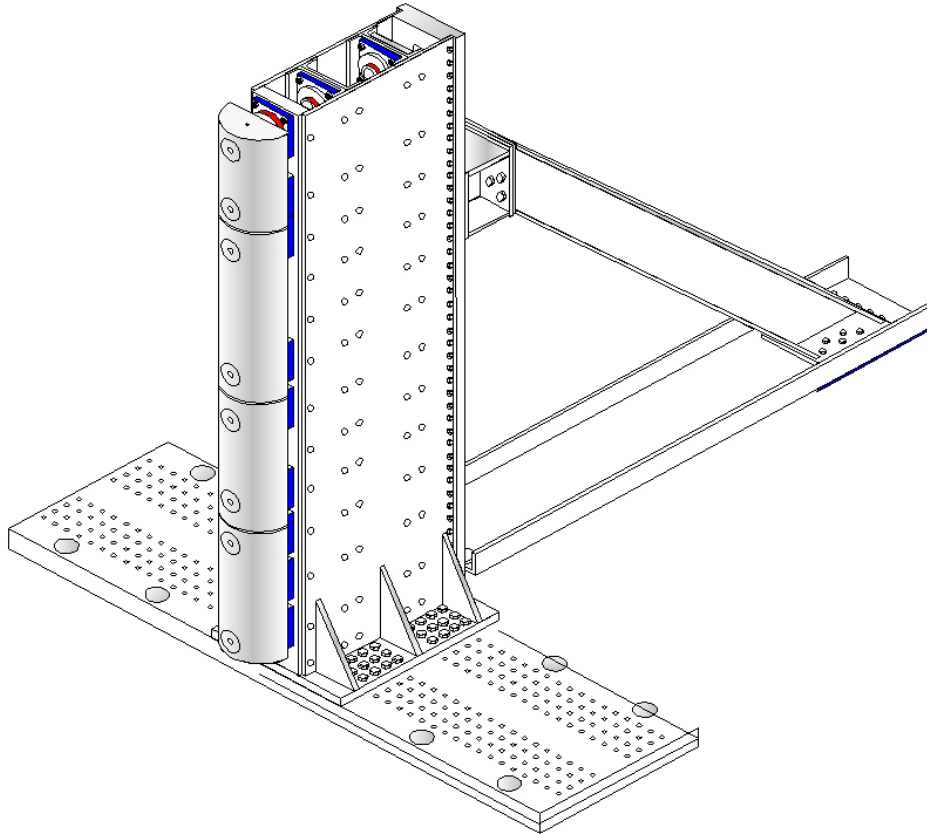
Reference: X - Test Vehicle Rear Bumper (+ forward)
 Y - Test Vehicle Centerline (+ to right)
 Z - Ground Plane (+ down)

DATA SHEET NO. 7
RIGID POLE LOAD CELL DATA

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan
Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
Test Date: 1/13/14

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: 2014 Mazda 6 I Sport 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
 Test Date: 1/13/14

TEST DUMMY INFORMATION AND CONTACT POINTS

Dummy Body Part	Driver SID-IIs Dummy
Face	SCAB
Top of Head	SCAB
Left Side of Head	SCAB
Back of Head	SCAB
Left Shoulder	Torso/Pelvis Bag
Upper Torso	Seat Side Bolster
Lower Torso	Seat Side Bolster
Left Hip	Seat Side Bolster
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

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

POST-TEST SEAT PERFORMANCE

Description	Struck Side		Non-Struck Side	
	Front	Rear	Front	Rear
Seat Movement Along Seat Track	No	No	No	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

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

POST TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	Major deformation
Sill Separation	None Visible
Windshield Damage	Broken
Side Window Damage	Left Front Shattered; Left Rear Undamaged
Other Notable Effects	N/A

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

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan
Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
Test Date: 1/13/14

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		
Curtain	Yes	Yes	Yes	Yes
Side Torso/Pelvis Airbag	Yes	Yes	No	N/A
Side Pelvis Airbag	No	N/A	No	N/A
Seat Belt Pretensioner	Yes	Yes	No	No
Seat Belt Load Limiter	Yes	No	No	N/A
Other	No	N/A	No	N/A

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

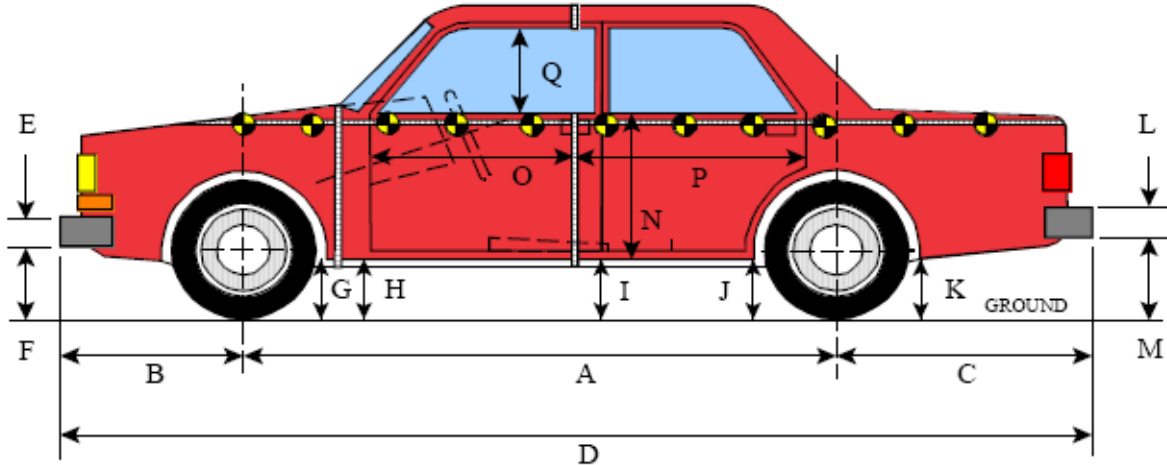
Measured Parameter	Units	Tolerance	Value
Vertical Impact Reference Line (Aft of Front Axle) (Intended Impact Point)	mm		1137
Actual Impact Point (Aft of Front Axle)	mm		1137
Horizontal Offset (+ forward / - rearward)	mm	+/- 38 of Intended Impact point	0
Angle Between Vehicle's Longitudinal Centerline and Line of Motion	degrees	75 +/- 3	75
Trap No. 1 Velocity (Primary)	km/h	31.4 to 33.0	32.42
Trap No. 2 Velocity (Redundant)	km/h	31.4 to 33.0	32.41

¹ Redundant light trap did not function properly.

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

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan
Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
Test Date: 1/13/14



LEFT SIDE VIEW

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

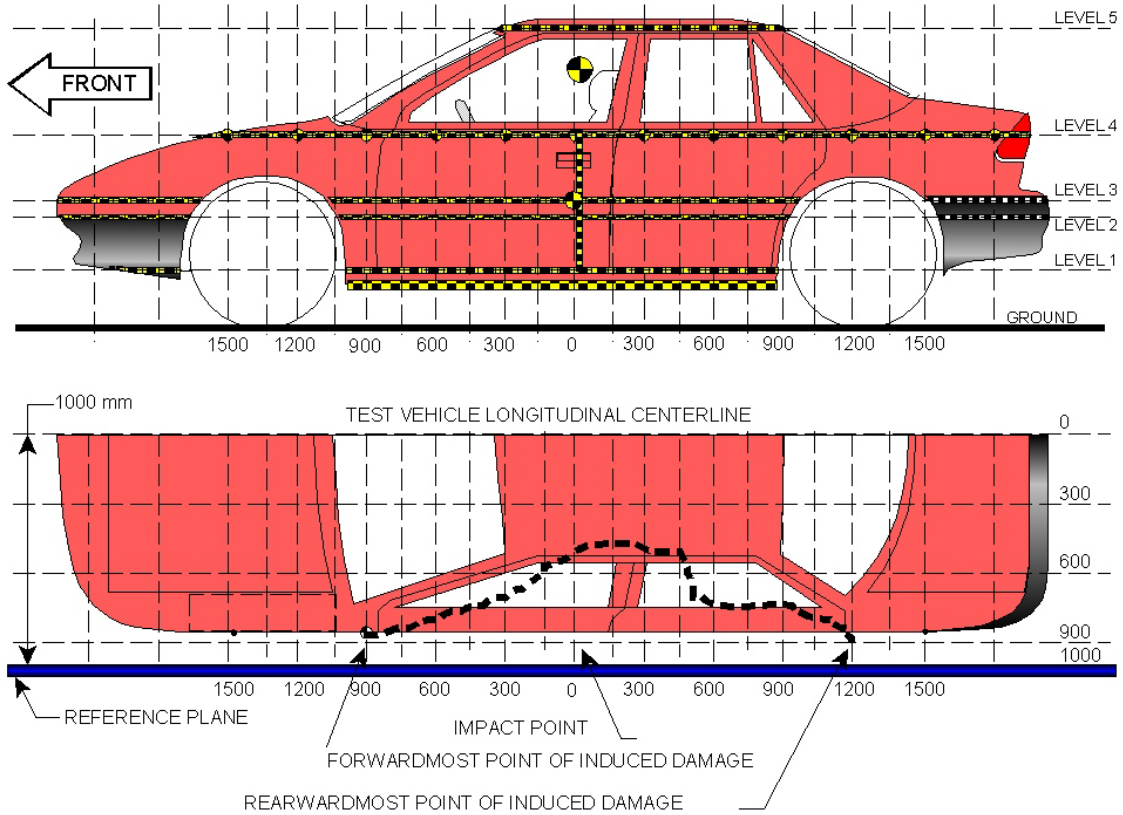
VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2830	2768	62
B	Front Axle to Front Surface of Vehicle	965	954	11
C	Rear Axle to Rear Surface of Vehicle	1090	1079	11
D	Total Length at Centerline	4885	4850	35
E	Front Bumper Thickness	130	130	0
F	Front Bumper Bottom to Ground	415	438	-23
G	Sill Height at Front Wheel Well	262	267	-5
H	Sill Height at Front Door Leading Edge	264	278	-14
I	Sill Height at B-Pillar	275	308	-33
J1	Sill Height at Rear Wheel Well	290	345	-55
J2	Pinch Weld Height at Rear Wheel Well	178	224	-46
K	Sill Height Aft of Rear Wheel Well	353	385	-32
L	Rear Bumper Thickness	165	165	0
M	Rear Bumper Bottom to Ground	540	574	-34
N	Sill Height to Bottom of Front Window Sill	710	719	-9
O	Front Door Leading Edge to Impact CL	615	613	2
P	Rear Door Trailing Edge to Impact CL	1517	1223	294
Q	Front Window Opening	360	319	41
R	Right Side Length	4600	4585	15
S	Left Side Length	4600	4518	82
T	Vehicle Width at "B" Pillars	1820	1717	103

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

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan
Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
Test Date: 1/13/14



NOTE: All measurements are in millimeters (mm)

MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Measurement Description	Height Above Ground	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	350	333	-150
2	Occupant H-Point	536	346	-150
3	Mid-Door	637	352	-150
4	Window Sill	938	289	-150
5	Window Top	1388	84	150

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: 2014 Mazda 6 I Sport 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
 Test Date: 1/13/14

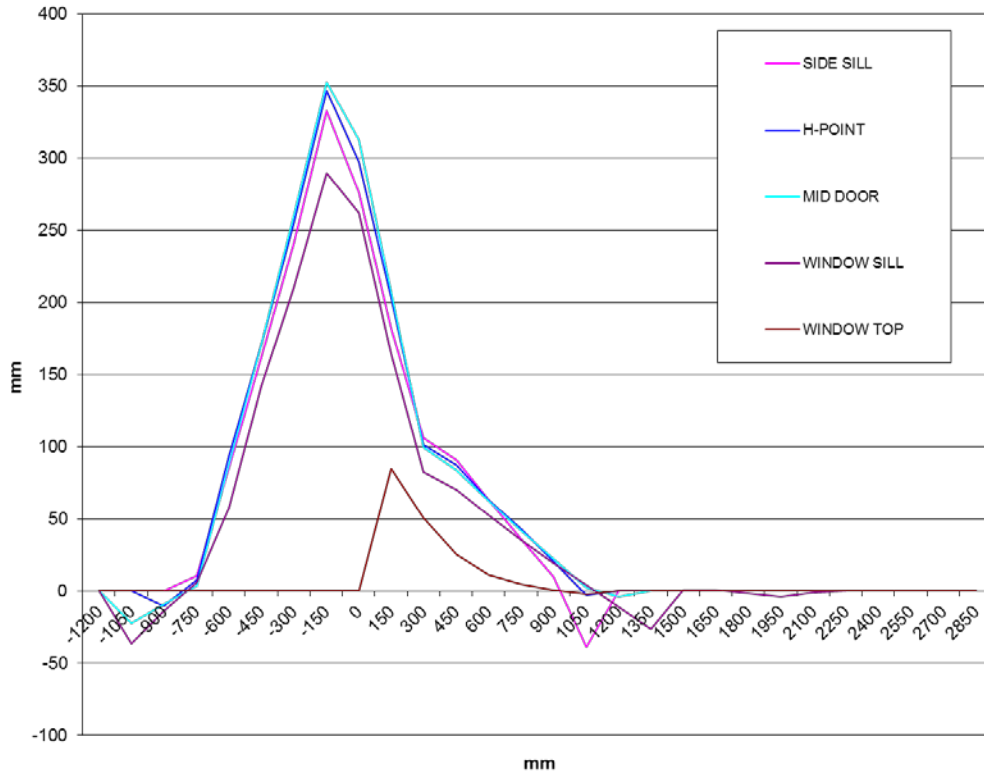
	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900	900	914	913	800	0	917	925	923	815	0	-17	-11	-10	-15	0
-750	891	907	908	812	0	881	900	905	806	0	10	7	3	6	0
-600	890	904	906	821	0	804	810	818	764	0	86	94	88	57	0
-450	891	903	906	900	0	729	732	735	758	0	162	171	171	142	0
-300	893	904	907	839	0	653	650	647	630	0	240	254	260	209	0
-150	896	904	908	844	0	563	558	556	555	0	333	346	352	289	0
0	895	905	909	851	0	619	607	597	589	0	276	298	312	262	0
150	893	905	910	857	619	712	702	702	693	535	181	203	208	164	84
300	891	904	909	862	624	785	803	810	779	574	106	101	99	83	50
450	889	904	909	865	622	798	817	825	795	597	91	87	84	70	25
600	887	904	909	867	618	824	841	846	815	607	63	63	63	52	11
750	887	904	908	868	613	851	861	866	832	608	36	43	42	36	5
900	889	905	908	867	604	879	885	886	848	603	10	20	22	19	1
1050	901	911	910	866	585	940	914	908	862	587	-39	-3	2	4	-2
1200	0	0	919	849	0	0	0	923	861	0	0	0	-4	-12	0
1350	0	0	0	861	0	0	0	0	887	0	0	0	0	-26	0
1500	0	0	0	855	0	0	0	0	854	0	0	0	0	1	0
1650	0	0	0	846	0	0	0	0	845	0	0	0	0	1	0
1800	0	0	0	833	0	0	0	0	834	0	0	0	0	-1	0
1950	0	0	0	818	0	0	0	0	822	0	0	0	0	-4	0
2100	0	0	0	798	0	0	0	0	799	0	0	0	0	-1	0
2250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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: 2014 Mazda 6 I Sport 4-Door Sedan
Test Program: SPNCAP Side Impact

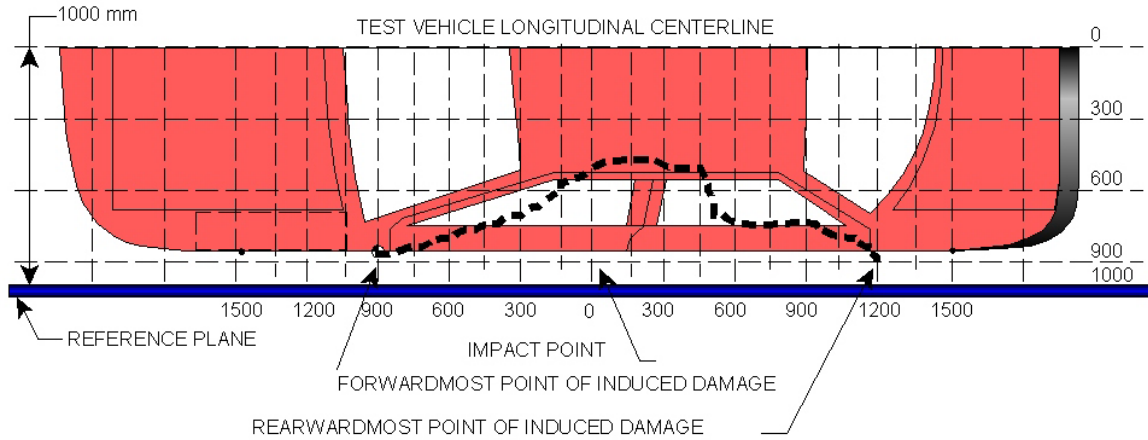
NHTSA No.: M20145401
Test Date: 1/13/14



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

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan
 Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
 Test Date: 1/13/14



VEHICLE DAMAGE PROFILE DISTANCES

DPD	Distance From Impact Point (mm)	Level	Post-Test (mm)	Pre-Test (mm)	Crush (mm)
1	-750	1	881	891	10
2	-150	3	556	908	352
3	300	2	785	891	106
4	750	2	861	904	43
5	1200	4	861	849	12
6	1650	4	845	846	1

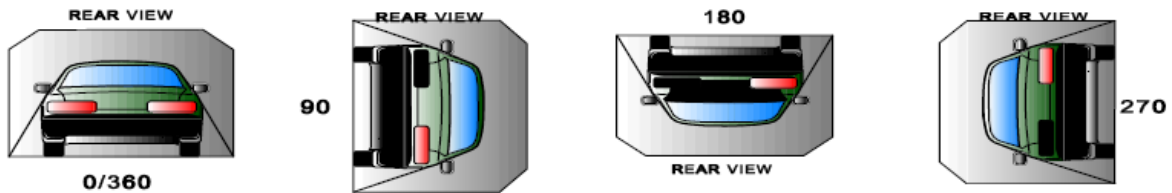
DATA SHEET NO. 12
FMVSS NO. 301 FUEL SYSTEM INTEGRITY POST-IMPACT DATA

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan NHTSA No.: M20145401
 Test Program: SPNCAP Side Impact Test Date: 1/13/14

Test Time: 14:08 Temperature: 21.9°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
 (Maximum allowable is 5 ounces)
- C. For the following 25 minutes: 0
 (Maximum allowable is 1 ounce/minute)
- D. Spillage Deta1LS: 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	N/A
90 to 180	0	0	0	N/A
180 to 270	0	0	0	N/A
270 to 360	0	0	0	N/A

ROLLOVER SOLVENT SPILLAGE LOCATION TABLE

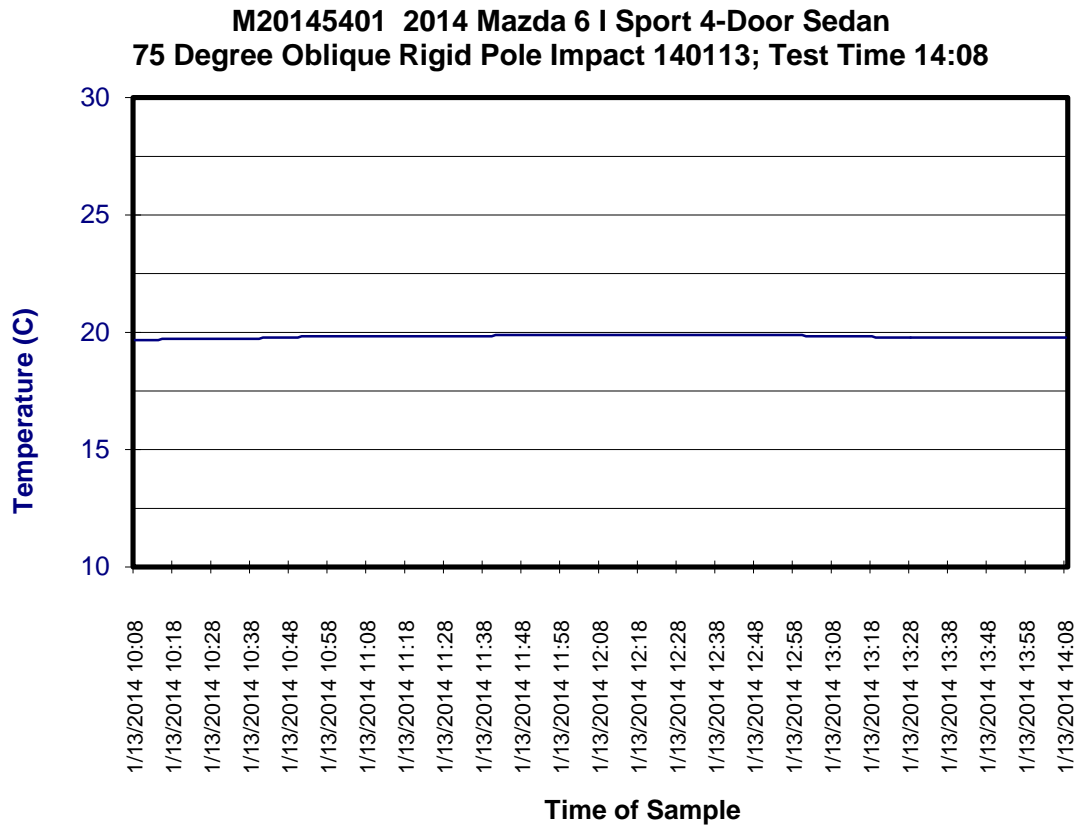
Test Phase	Spillage Location
0 to 90	None
90 to 180	None
180 to 270	None
270 to 360	None

DATA SHEET NO. 13

DUMMY/VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION DATA

Test Vehicle: 2014 Mazda 6 I Sport 4-Door Sedan
Test Program: SPNCAP Side Impact

NHTSA No.: M20145401
Test Date: 1/13/14



**APPENDIX A
PHOTOGRAPHS**

TABLE OF PHOTOGRAPHS

No.	Description	Page
1	As Delivered Right Front 3-4 View of Test Vehicle	A-4
2	As Delivered Left Rear 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 3-4 View of Test Vehicle	A-6
6	Post-Test Left Front 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 3-4 View of Test Vehicle	A-8
10	Post-Test Left Rear 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-15
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-16
27	Pre-Test Front View of Dummy Head and Shoulders in Relation to Head Restraint	A-17
28	Pre-Test Front View of Seat Pan Prior to Dummy Positioning	A-17
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-18
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-19
33	Pre-Test View of Belt Anchorage for Dummy	A-20
34	Pre-Test Left Side View of Steering Wheel	A-20

TABLE OF PHOTOGRAPHS (CONTINUED)

No.	Description	Page
35	Pre-Test View of Disengaged Parking Brake	A-21
36	Pre-Test View of Parking Brake	A-21
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-22
39	Pre-Test Close-Up View of Driver Seat Back or Head Restraint	A-23
40	Pre-Test Dummy and Door Clearance View	A-23
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-24
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-25
45	Post-Test Inner Driver Door Panel View Showing Dummy Contact Location	A-26
46	Post-Test Dummy Close-Up Head Contact with Vehicle View	A-26
47	Post-Test Dummy Close-Up Head Contact with Side Airbag View	A-27
48	Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View	A-27
49	Post-Test Dummy Close-Up Torso Contact with Side Airbag View	A-28
50	Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View	A-28
51	Post-Test Dummy Close-Up Pelvis Contact with Side Airbag View	A-29
52	Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View	A-29
53	Pre-Test View of Fuel Filler Cap or Fuel Filler Neck	A-30
54	Post-Test View of Fuel Filler Cap or Fuel Filler Neck	A-30
55	Close-Up View of Vehicle's Certification Label	A-31
56	Close-Up View of Vehicle's Tire Information Placard or Label	A-31
57	Pre-Test Pole Barrier Front View	A-32
58	Post-Test Pole Barrier Front View	A-32
59	Pre-Test Pole Barrier Side View	A-33
60	Post-Test Pole Barrier Side View	A-33
61	Pre-Test Ballast View	A-34
62	Post-Test Primary and Redundant Speed Trap Read-Out	A-34
63	FMVSS No. 301 Static Rollover 0 Degrees	A-35
64	FMVSS No. 301 Static Rollover 90 Degrees	A-35
65	FMVSS No. 301 Static Rollover 180 Degrees	A-36
66	FMVSS No. 301 Static Rollover 270 Degrees	A-36
67	FMVSS No. 301 Static Rollover 360 Degrees	A-37
68	Impact Event	A-37
69	Monroney Label	A-38
70	Head Restraint Use and Adjustment Information from Vehicle Owner's Manual	A-38
71	Post-Test View of Shattered Vehicle Inner Door Panel	A-39



001 As Delivered Right Front 3-4 View of Test Vehicle



002 As Delivered Left Rear 3-4 View of Test Vehicle



003 Pre-Test Frontal View of Test Vehicle



004 Post-Test Frontal View of Test Vehicle



005 Pre-Test Left Front 3-4 View of Test Vehicle



006 Post-Test Left Front 3-4 View of Test Vehicle



007 Pre-Test Left Side View of Test Vehicle



008 Post-Test Left Side View of Test Vehicle



009 Pre-Test Left Rear 3-4 View of Test Vehicle



010 Post-Test Left Rear 3-4 View of Test Vehicle



011 Pre-Test Rear View of Test Vehicle



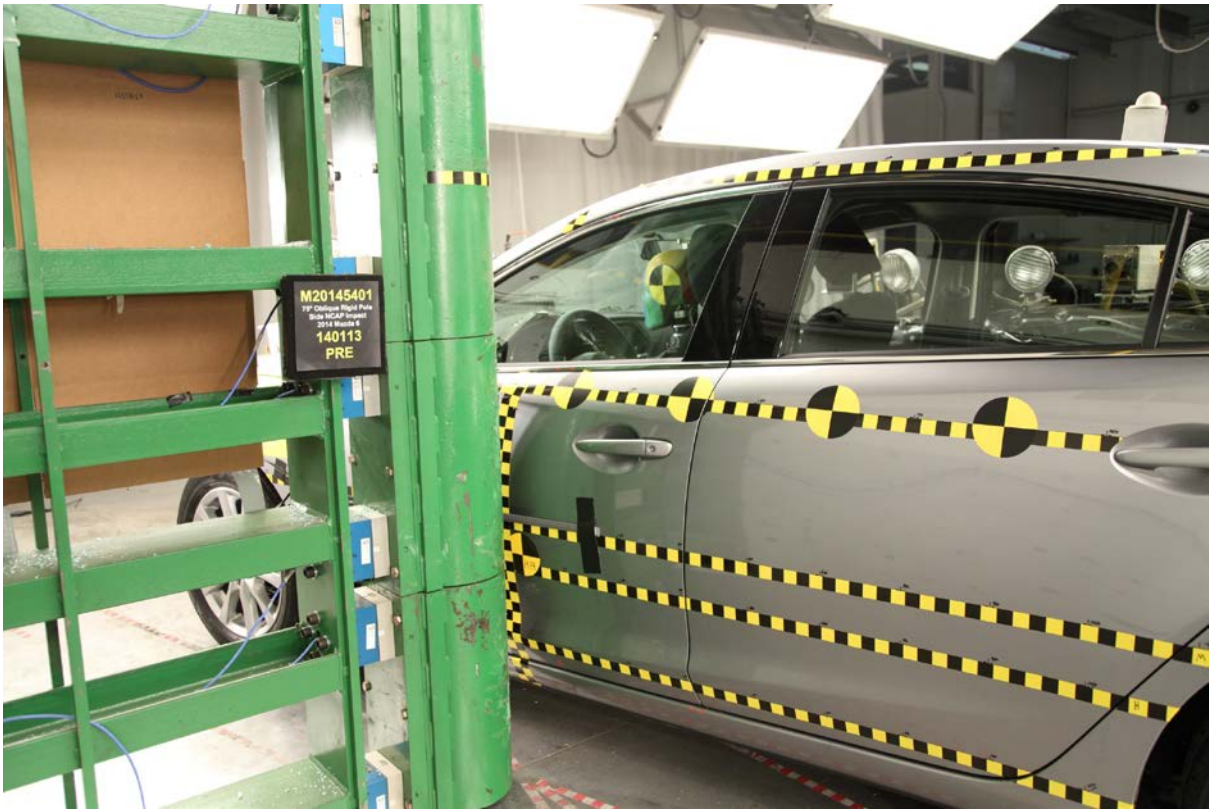
012 Post-Test Rear View of Test Vehicle



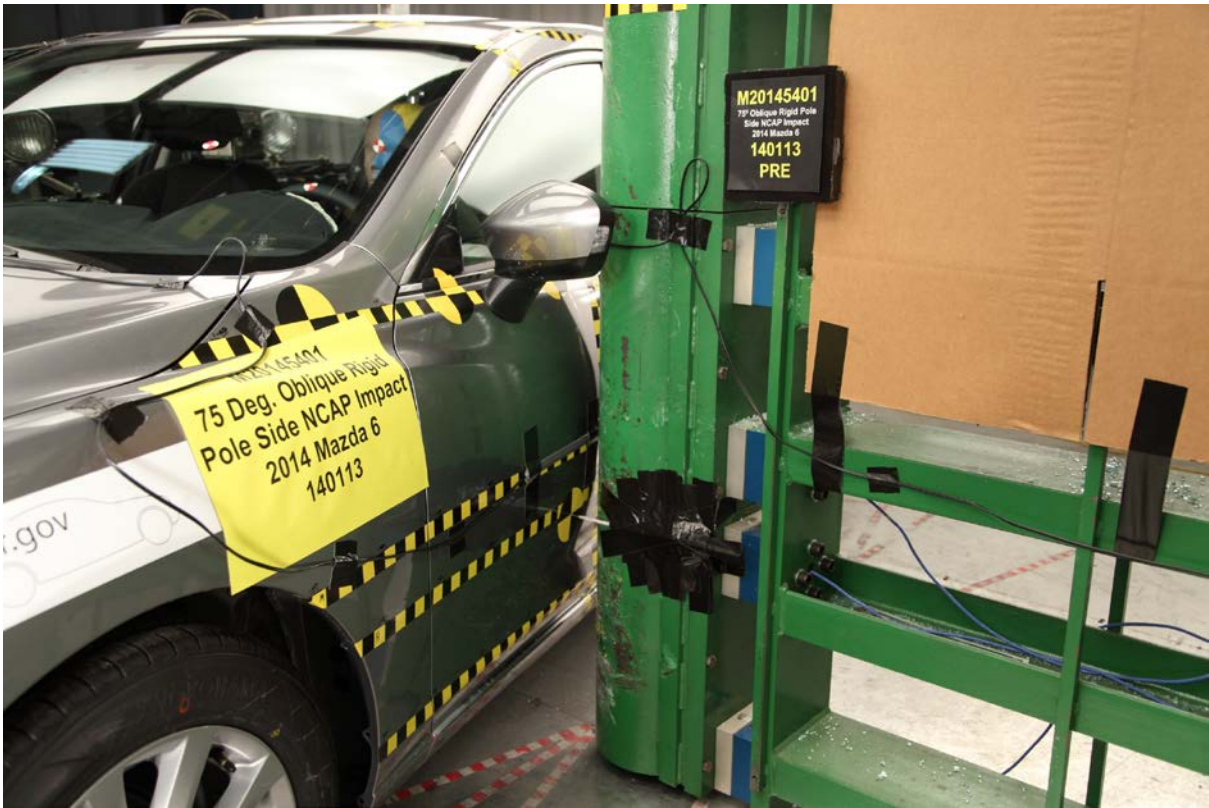
013 Pre-Test Right Side View of Test Vehicle



014 Post-Test Right Side View of Test Vehicle



017 Pre-Test Left Side View of Pole Positioned Against Side of Vehicle



018 Pre-Test Right Side View of Pole Positioned Against Side of Vehicle



019 Pre-Test Close-Up View of Impact Point Target



020 Post-Test Close-Up View of Impact Point Target Showing Impact Location



021 Pre-Test Front Close-Up View of Dummy Head and Chest



022 Post-Test Front Close-Up View of Dummy



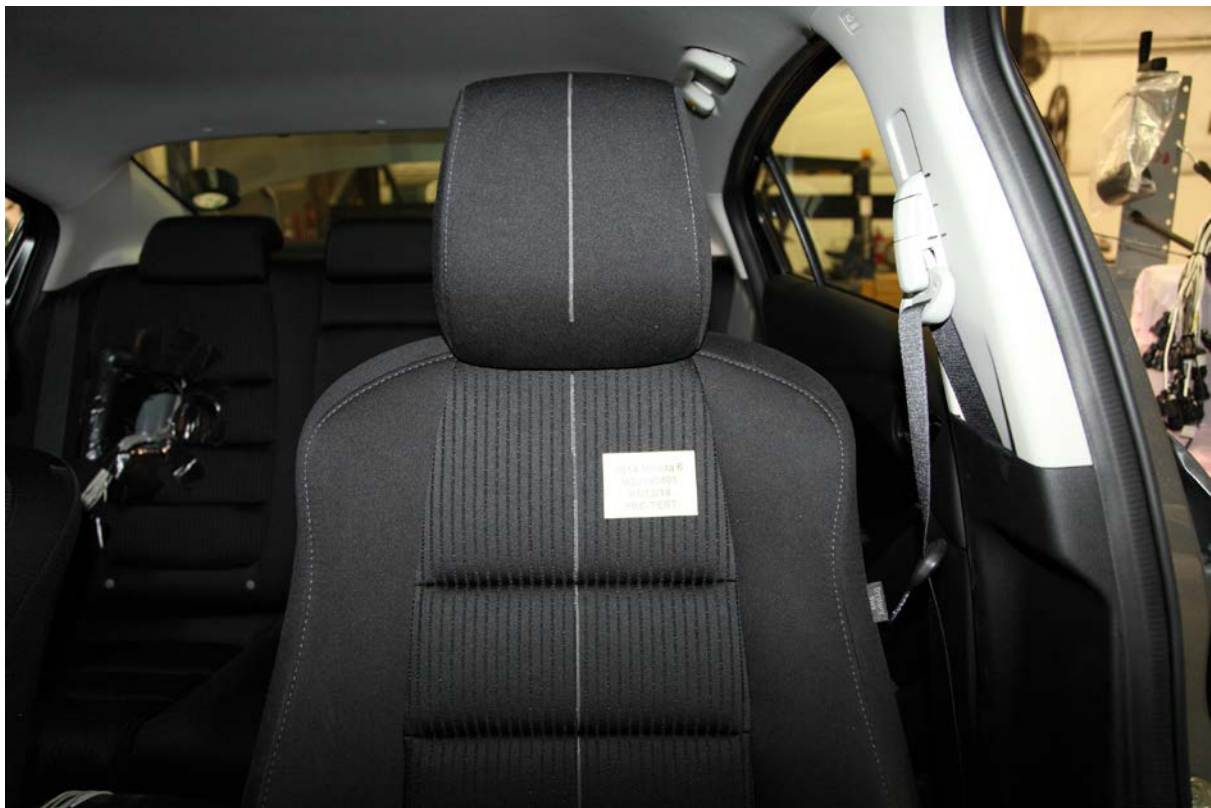
023 Pre-Test Left Side View of Dummy Showing Belt and Chalking



024 Pre-Test Left Side View of Dummy Shoulder and Door Top View



025 Post-Test Left Side View of Dummy Shoulder and Door Top View



026 Pre-Test Front View of Seat Back Prior to Dummy Positioning



027 Pre-Test Front View of Dummy Head and Shoulders in Relation to Head Restraint



028 Pre-Test Front View of Seat Pan Prior to Dummy Positioning



029 Pre-Test Overhead View of Dummy Thighs on Seat Pan



030 Pre-Test Left Side View of Dummy Neck Showing Position of Adjustable Neck Bracket



031 Pre-Test Left Side View of Dummy Head Showing Dummy Head is Level



032 Pre-Test Placement of Dummy Feet



033 Pre-Test View of Belt Anchorage for Dummy



034 Pre-Test Left Side View of Steering Wheel



035 Pre-Test View of Disengaged Parking Brake



036 Pre-Test View of Parking Brake



037 Pre-Test Close-Up Left Side View of Driver Seat Track



038 Pre-Test Close-Up Left Side View of Driver Seat Back



039 Pre-Test Close-Up View of Driver Seat Back or Head Restraint



040 Pre-Test Dummy and Door Clearance View



041 Post-Test Dummy and Door Clearance View



042 Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment



043 Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment



044 Pre-Test Inner Driver Door Panel View



045 Post-Test Inner Driver Door Panel View Showing Dummy Contact Location



046 Post-Test Dummy Close-Up Head Contact with Vehicle View



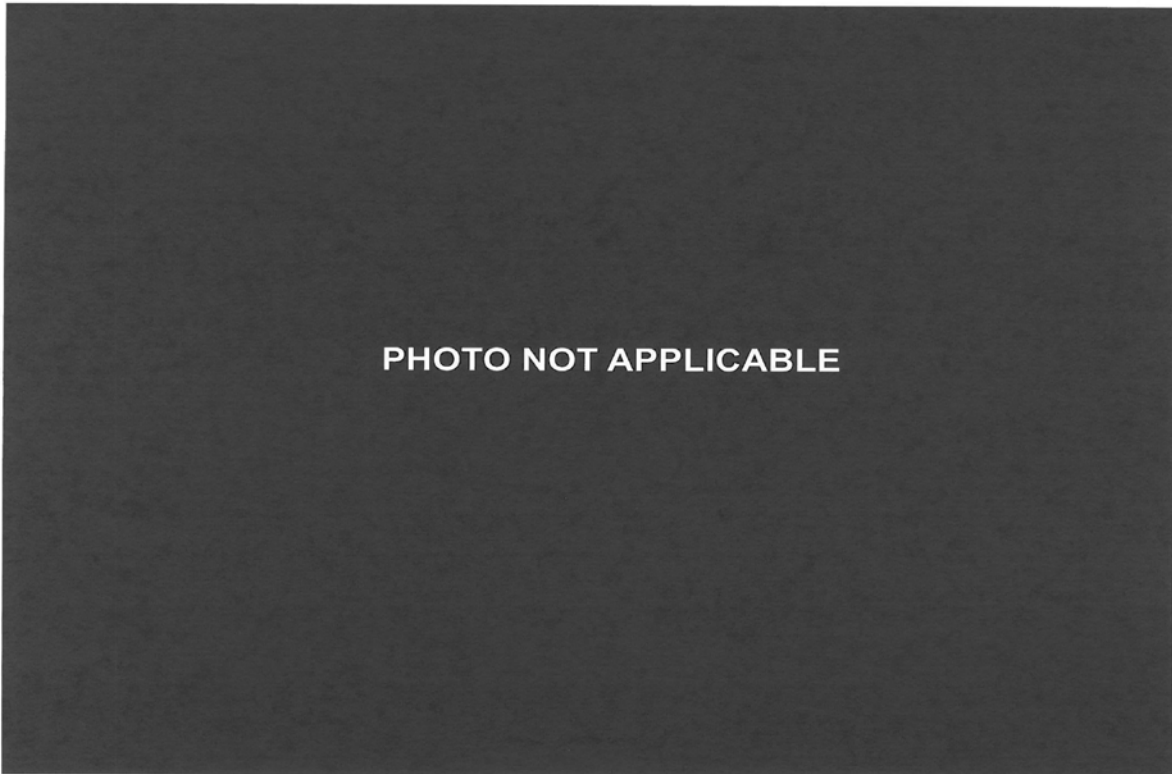
047 Post-Test Dummy Close-Up Head Contact with Side Airbag View



048 Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View



049 Post-Test Dummy Close-Up Torso Contact with Side Airbag View



050 Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View



051 Post-Test Dummy Close-Up Pelvis Contact with Side Airbag View



052 Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View



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



054 Post-Test View of Fuel Filler Cap or Fuel Filler Neck



055 Close-Up View of Vehicle Certification Label



056 Close-Up View of Vehicle Tire Information Placard or Label



057 Pre-Test Pole Barrier Front View



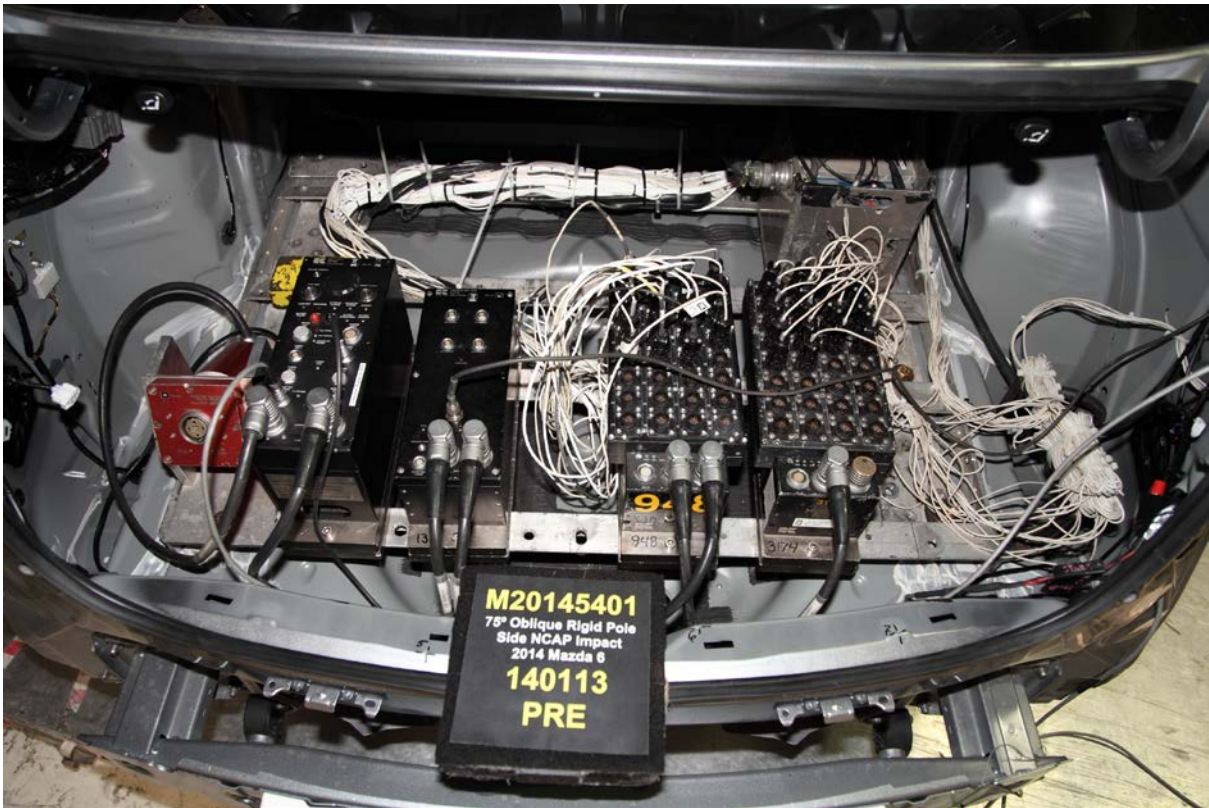
058 Post-Test Pole Barrier Front View



059 Pre-Test Pole Barrier Side View



060 Post-Test Pole Barrier Side View



061 Pre-Test Ballast View



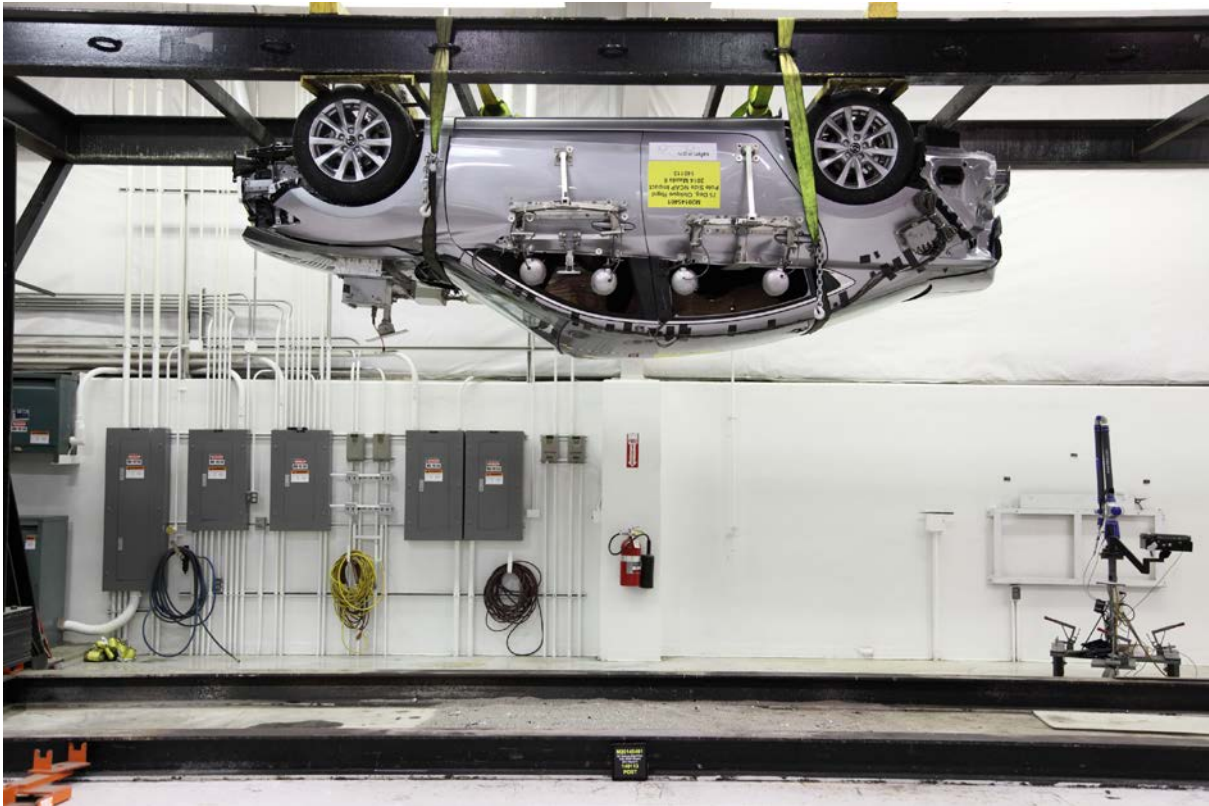
062 Post-Test Primary and Redundant Speed Trap Read-Out



063 FMVSS No. 301 Static Rollover 0 Degrees



064 FMVSS No. 301 Static Rollover 90 Degrees



065 FMVSS No. 301 Static Rollover 180 Degrees



066 FMVSS No. 301 Static Rollover 270 Degrees



067 FMVSS No. 301 Static Rollover 360 Degrees



068 Impact Event



2014 Mazda6 I SPORT

Model: 2014 MAZDA6 I SPORT
 Exterior Color: LIQUID SILVER
 Interior Color: BLACK

Fuel Economy and Environment

Fuel Economy

30 MPG
 26 combined city/hwy
 38 city
 3.3 gallons per 100 miles

You Save \$2,750
 in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost \$1,750

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

1 (EPA-est.) **8** (EPA-est.)

fuueleconomy.gov

PARTS CONTENT INFORMATION:

FOR VEHICLES IN THIS CARLINE: U.S./CANADIAN PARTS CONTENT: 5% MAJOR SOURCES OF FOREIGN PARTS: 47% (U.S. PARTS: JAPAN 96%)

NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON-PARTS COSTS.

FOR THIS VEHICLE: FINAL ASSEMBLY POINT: HONFU, JAPAN COUNTRY OF ORIGIN: CHINA, JAPAN TRANSMISSION: JAPAN

This label is a fact pursuant to the Federal Automobile Information Act. Gasoline, Lubes and Tire fees, State and Local taxes, title, Dealer rebates, options are not included.

STANDARD EQUIPMENT

ENGINE/MECHANICAL FEATURES

- SKYACTIV-G 2.5L DOHC 4-CYL. ENGINE
- SKYACTIV-DRIVE 6-SPEED SPORT AT
- 184 HORSEPOWER, 185 LB-FT TORQUE
- FRONT WHEEL DRIVE

EXTERIOR FEATURES

- 17" STANCHION WHEELS
- P225/50 R17 ALL-SEASON TIRES
- VARIABLE-INTERMITTENT WIPERS
- POWER-SIDE MIRRORS WITH TURN LAMPS
- DUAL EXHAUST WITH SPORT OUTLETS

INTERIOR FEATURES

- CLOTH-TRIMMED SPORT SEATS
- 6-WAY MANUAL DRIVER'S SEAT
- TILT & TELESCOPIC STEERING COLUMN
- 8" COLOR TOUCH-SCREEN DISPLAY
- REARVIEW CAMERA
- AMP/COMPACT/DISK 6-SPEAKER AUDIO
- USB/AUDIO INPUT & HD RADIO
- BLUETOOTH HANDS-FREE PHONE/AUDIO
- STEERING WHEEL MOUNTED CONTROLS
- LEATHER-WRAPPED STEERING WHEEL
- CRUISE CONTROL

SAFETY & SECURITY FEATURES

- 36-MONTH/50,000-MILE "BUMP-TO-BUMPER" WARRANTY
- 80-MONTH/100,000-MILE POWERTRAIN WARRANTY
- 24-HOUR ROADSIDE ASSISTANCE
- 5-SPACED DUAL FRONT SAFETY BELTS
- LATCH CHILD SAFETY SEAT ANCHORS
- ANTI-HEEP ENGINE BROW GUARD
- TIRE PRESSURE MONITORING SYSTEM

OPTIONAL EQUIPMENT

- 4-WHEEL DISC BRAKES
- ELECTRIC POWER ASSISTED STEERING
- INDEPENDENT FRONT/REAR SUSPENSIONS
- FRONT/REAR STABILIZER BARS
- HALOGEN DAY-TIME RUNNING LIGHTS
- LED COMBINATION HEADLIGHTS
- IN-GLASS ANTENNA
- REAR WINDOW DEFOGGER
- MID WTRIP COMPUTER
- POWER AUTOMATIC DOOR LOCKS
- POWER WINDOWS WITH DRIVER ONE-TOUCH
- REMOTE KEYLESS ENTRY
- PUSH BUTTON ENGINE START
- AIR CONDITIONING WITH POLLEN FILTER
- DUAL VANITY MIRRORS
- CENTER ARMREST WITH COVERED STORAGE
- 60/40 SPLIT FOLD-DOWN REAR SEAT
- REAR SEAT ARMREST WITH CUPHOLDERS
- CARPETED FLOOR MATS
- ANTI-LOCK BRAKE SYSTEM (ABS) WITH EBD & BRAKE ASSIST
- DYNAMIC STABILITY CONTROL (DSC)
- TRACTION CONTROL SYSTEM (TCS)
- HILL LAUNCH ASSIST
- ADVANCED DUAL FRONT AIR BAGS
- FRONT & REAR SIDE AIR CURTAINS
- SKYACTIV-BODY RING STRUCTURE

MSRP \$22,695

GOVERNMENT 5-STAR SAFETY RATINGS

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

Frontal Crash	Driver Passenger	Not Rated
Based on the risk of injury in a frontal impact. Should ONLY be compared to other vehicles of similar size & weight.		
Side Crash	Front seat Rear seat	Not Rated
Based on the risk of injury in a side impact.		
Rollover		Not Rated
Based on the risk of rollover in a single-lane change-of-direction maneuver.		

Star ratings range from 1 to 5 stars (★ ★ ★ ★ ★) with 5 being the highest. Source: National Highway Traffic Safety Administration (NHTSA) www.safercar.gov or 1-888-327-4239

SOLD TO: 61540 RUSSELL DARRROW MAZDA 3500 SOUTH 18TH STREET GREENFIELD, WI 53228

SHIP TO: 61540 DY RUSSELL DARRROW MAZDA 3500 SOUTH 18TH STREET GREENFIELD, WI 53228

JM1GJ1U6XE1149601

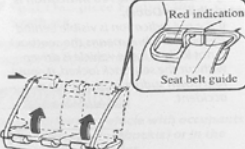
MAZDAUSA.COM

069 Monroney Label

Essential Safety Equipment

Seats

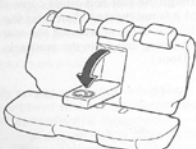
(5-Door)



2. Press the seatback rearward and lock it in place. After returning the seatback to its upright position, make sure it is securely locked.

▼ Armrest*

The rear armrest in the center of the rear seatback can be used (no occupant in the center seat) or placed upright.



▲ WARNING

Never put your hands and fingers around the moving parts of the seat and armrest. Putting your hands and fingers around the moving parts of the seat and armrest is dangerous as they could get injured.

2-10 *Some models.

Head Restraints

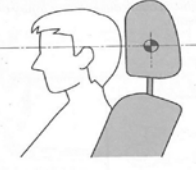
Your vehicle is equipped with head restraints on all outboard seats and the rear center seat. The head restraints are intended to help protect you and the passengers from neck injury.

▲ WARNING

Always drive with the head restraints installed when seats are being used and make sure they are properly adjusted: Driving with the head restraints adjusted too low or removed is dangerous. With no support behind your head, your neck could be seriously injured in a collision.

Height adjustment


To raise a head restraint, pull it up to the desired position. To lower the head restraint, press the stop-catch release, then push the head restraint down. Adjust the head restraint so that the center is even with the top of the passenger's ears.



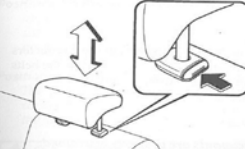
Essential Safety Equipment

Seats

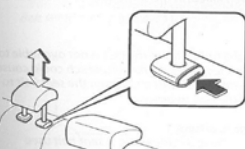
Front outboard seat



Rear outboard seat



Rear center seat*



Removal/Installation

To remove the head restraint, pull it up while pressing the stop-catch. To install the head restraint, insert the legs into the holes while pressing the stop-catch.

▲ WARNING

Always drive with the head restraints installed when seats are being used and make sure they are properly installed: Driving with the head restraints not installed is dangerous. With no support behind your head, your neck could be seriously injured in a collision.

*Some models. 2-11

070 Head Restraint Use and Adjustment Information from Vehicle Owner Manual

PHOTO NOT APPLICABLE

071 Post-Test View of Shattered Vehicle Inner Door Panel

APPENDIX B
VEHICLE AND DUMMY RESPONSE DATA PLOTS

TABLE OF DATA PLOTS

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

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

www.nhtsa.dot.gov.

Additional Driver Dummy Instrumentation Data

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

Vehicle Instrumentation Data

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

Pole Instrumentation Data

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

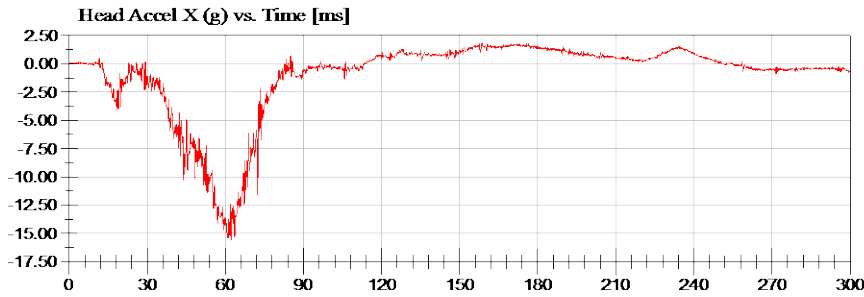
NHTSA

Position #1 SID IIs Dummy (DI8818)

Test Date: 01/13/2014

Test Lab: CTF

Test Number: 140113 (M20145401)



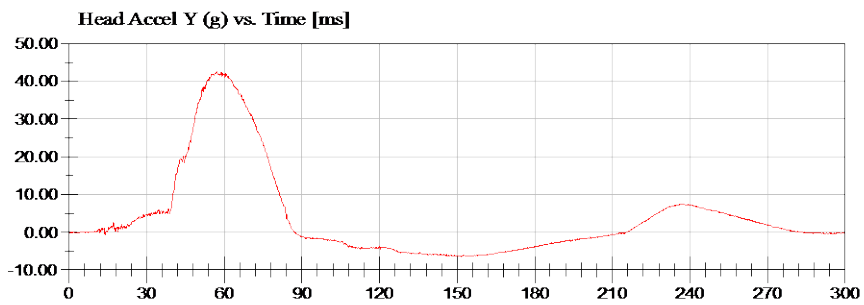
<Max>

1.87 g at 158.64 ms

<Min>

-15.59 g at 62.40 ms

CFC_1000



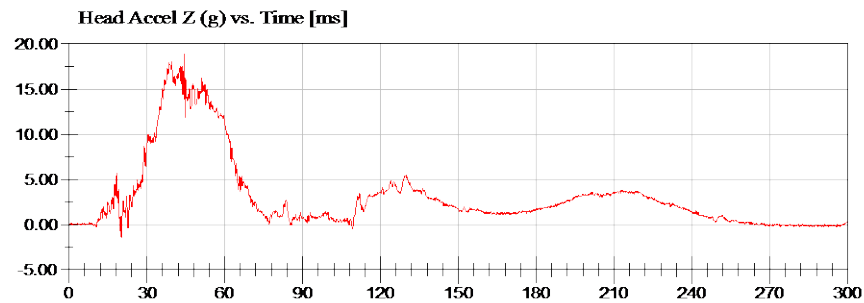
<Max>

42.64 g at 57.04 ms

<Min>

-6.52 g at 151.52 ms

CFC_1000



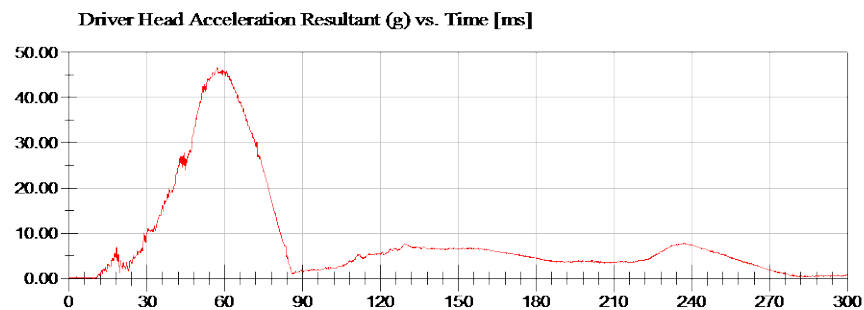
<Max>

18.89 g at 44.40 ms

<Min>

-1.39 g at 20.16 ms

CFC_1000



<Max>

46.65 g at 57.04 ms

<Min>

0.04 g at 5.60 ms

CFC_1000



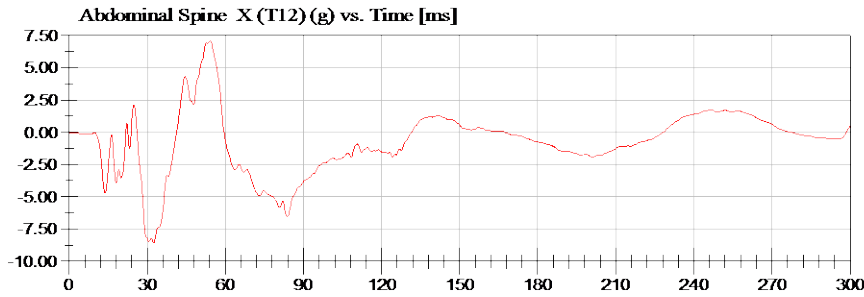
NHTSA

Position #1 SID IIs Dummy (DI8818)

Test Date: 01/13/2014

Test Lab: CTF

Test Number: 140113 (M20145401)



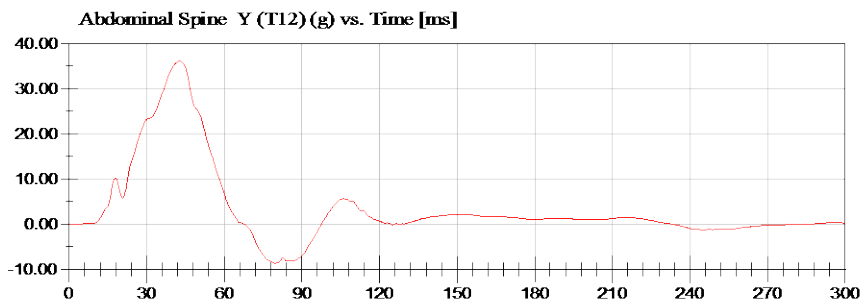
<Max>

7.11 g at 54.16 ms

<Min>

-8.55 g at 32.56 ms

CFC_180



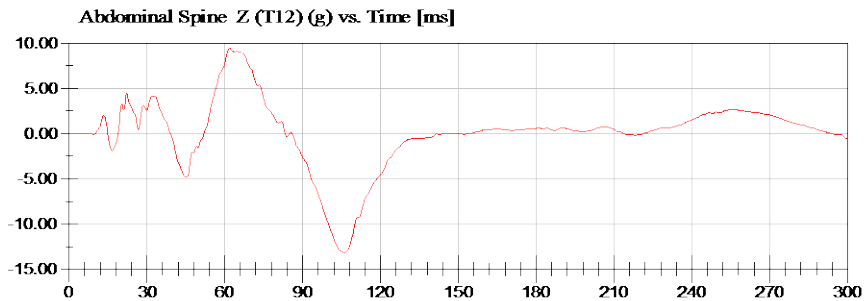
<Max>

36.04 g at 42.56 ms

<Min>

-8.66 g at 79.68 ms

CFC_180



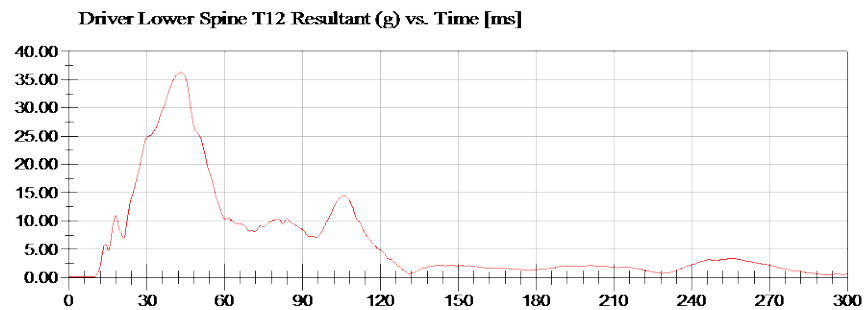
<Max>

9.48 g at 61.84 ms

<Min>

-13.15 g at 106.08 ms

CFC_180



<Max>

36.30 g at 43.04 ms

<Min>

0.07 g at 0.56 ms

CFC_180



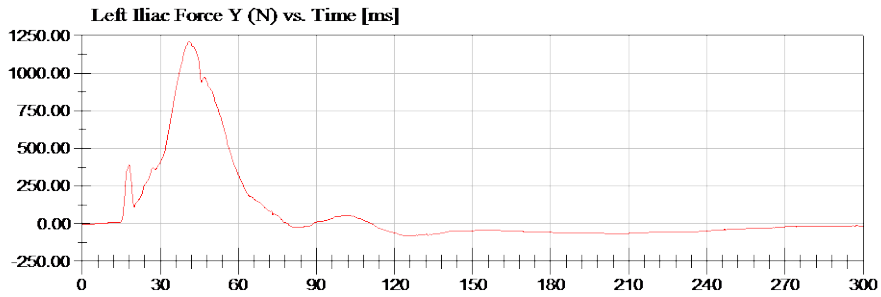
NHTSA

Test Lab: CTF

Test Number: 140113 (M20145401)

Position #1 SID IIs Dummy (DI8818)

Test Date: 01/13/2014



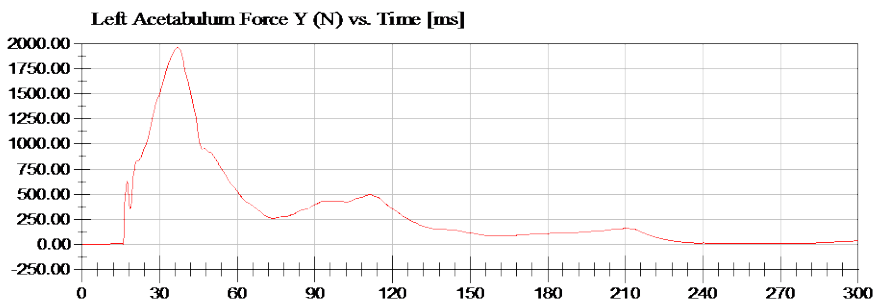
<Max>

1,211.97 N at 40.96 ms

<Min>

-80.61 N at 124.96 ms

CFC_600



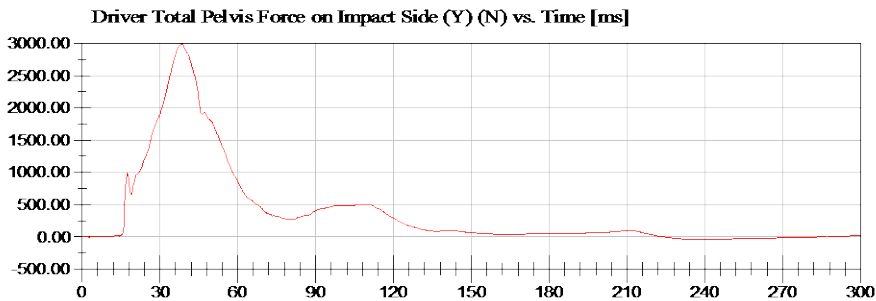
<Max>

1,957.48 N at 37.04 ms

<Min>

-4.03 N at 10.24 ms

CFC_600



<Max>

2,986.37 N at 38.08 ms

<Min>

-39.87 N at 236.24 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)

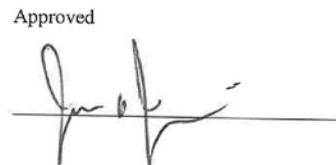
Iliac Force (N) vs. Time (ms)

**Pre-Test Calibration Sheets
Driver S/N D18818**

Transportation Research Center Inc.
SIDI's Dummy - Level D
External Dimensions
Serial No. DI8818 Calibration No.08

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Sitting Height	772.0 - 788.0	780	Yes
B	Shoulder Pivot Height	437.0 - 453.0	440	Yes
C	H-Point Height	79.0 - 89.0	82	Yes
D	H-Point from Seat Back	141.0 - 151.0	142	Yes
E	Shoulder Pivot from Backline	97.0 - 107.0	100	Yes
F	Thigh Clearance	119.0 - 135.0	129	Yes
G	Head Breadth	140.0 - 148.0	143	Yes
H	Head Back from Backline	40.0 - 46.0	45	Yes
I	Head Depth	178.0 - 188.0	182	Yes
J	Head Circumference	541.0 - 551.0	544	Yes
K	Buttock to Knee Length	514.0 - 540.0	536	Yes
L	Popliteal Height	343.0 - 369.0	352	Yes
M	Knee Pivot to Floor Height	393.0 - 409.0	397	Yes
N	Buttock Popliteal Length	416.0 - 442.0	427	Yes
O	Chest Depth without Jacket	195.0 - 211.0	203	Yes
P	Foot Length (right)	216.0 - 232.0	220	Yes
P	Foot Length (left)	216.0 - 232.0	220	Yes
Q	Hip Breadth	313.0 - 323.0	313	Yes
R	Arm Length	249.0 - 259.0	255	Yes
S	Knee Joint to seat Back	478.0 - 493.0	483	Yes
V	Shoulder Width (only one arm installed)	341.0 - 357.0	350	Yes
W	Foot Width (right)	78.0 - 94.0	84	Yes
W	Foot Width (left)	78.0 - 94.0	84	Yes
Y	Chest Circumference with Jacket	851.0 - 881.0	870	Yes
Z	Waist Circumference	761.0 - 791.0	771	Yes

Technician


Approved


Revised 9/29/2005



Transportation Research Center Inc.

Left Lateral Head Drop

SID IIs Serial No. DI8818 Certification No. 8-1

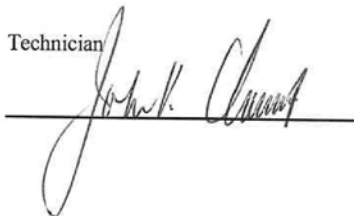
Test Date: 1/9/2014

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	31 %	Yes
Peak Head Resultant Acceleration	115 - 137 g	134.9 g	Yes
Peak Head Longitudinal Acceleration	(-15) - 15 g	5.0 g	Yes
Is Head Resultant Acceleration Curve Unimodal within 15% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician



Approved



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.09.2014 10:23:06 234

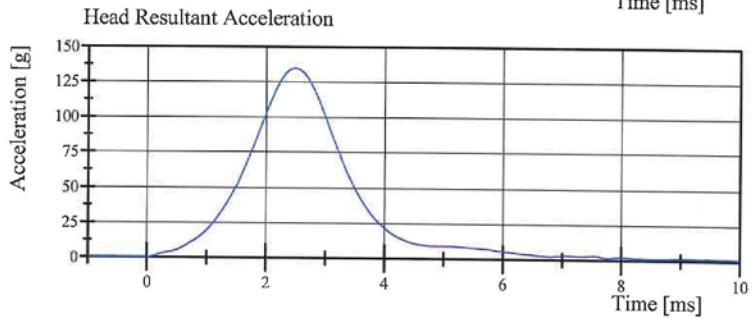
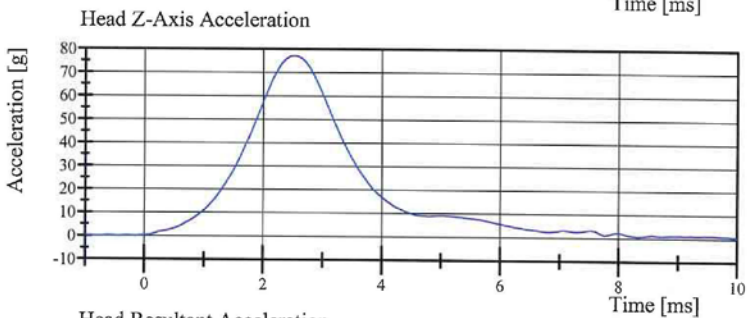
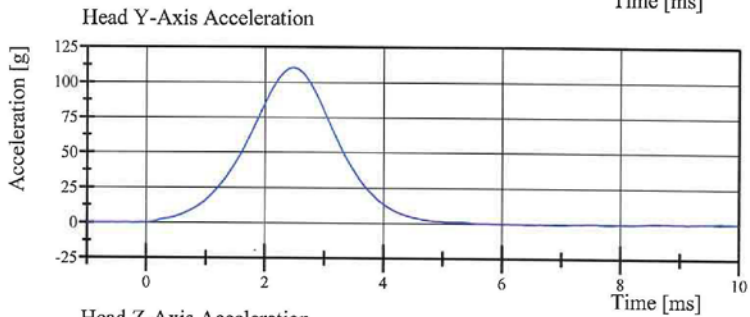
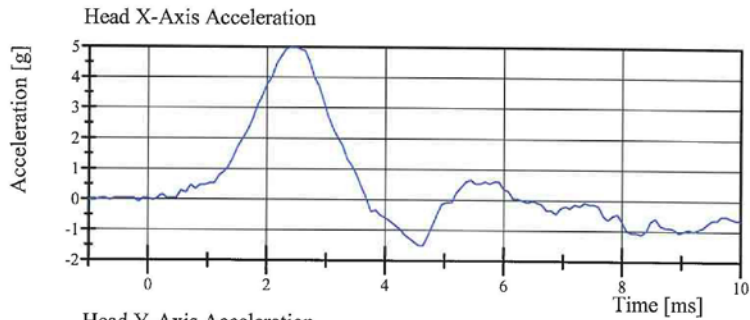


Transportation Research Center Inc.

Left Lateral Head Drop

SID IIs Serial No. DI8818 Certification No. 8-1

Test Date: 1/9/2014



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.09.2014 10:23:14 234



Transportation Research Center Inc.

Left Lateral Neck

SID IIs Serial No. DI8818 Certification No. 8-1

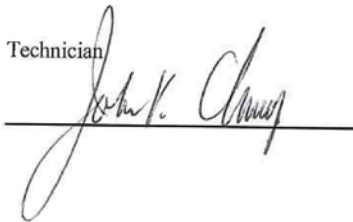
Test Date: 1/9/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	41 %	Yes
Pendulum Velocity	(-5.51) - (-5.63) m/s	-5.617 m/s	Yes
Pendulum Integrated Velocity			
Change at 10 ms	2.20 - 2.80 m/s	2.311 m/s	Yes
Change at 15 ms	3.30 - 4.10 m/s	3.344 m/s	Yes
Change at 20 ms	4.40 - 5.40 m/s	4.522 m/s	Yes
Change at 25 ms	5.40 - 6.10 m/s	5.470 m/s	Yes
Change at 25 to 100 ms	5.50 - 6.20 m/s	5.785 m/s	Yes
Maximum Headform Flexion occurring between 50ms and 70ms.			
Peak	(-71) - (-81) deg	-74.3 deg	Yes
Time of Peak	50 - 70 ms	65.8 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	113.4 ms	Yes

Test meets specifications.

Comments:

Technician



Approved



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.09.2014 11:13:16 639

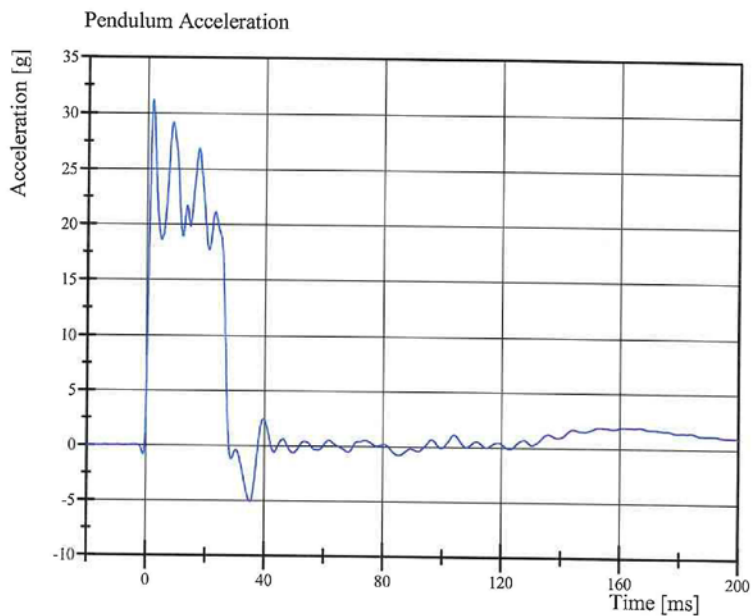


Transportation Research Center Inc.

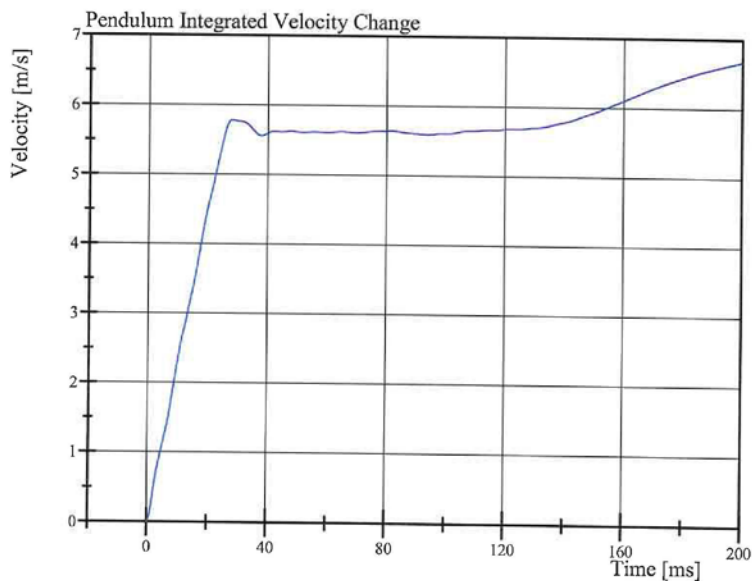
Left Lateral Neck

SID IIs Serial No. DI8818 Certification No. 8-1

Test Date: 1/9/2014



Filter Class: CFC_180
Max: 31.2 g at 1.8 ms
Min: -5.1 g at 35.2 ms



Filter Class: CFC_180
Max: 6.7 m/s at 200.0 ms
Min: 0.0 m/s at 0.0 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.09.2014 11:13:27 639

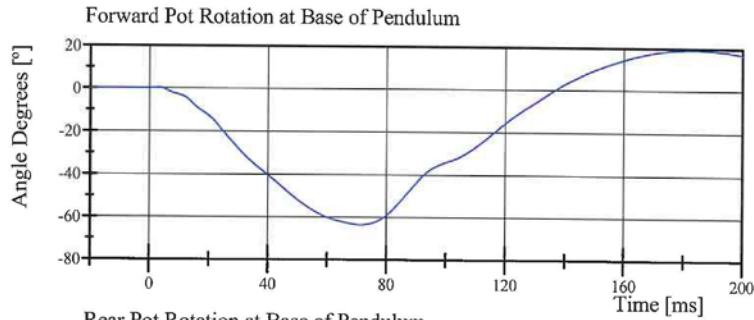


Transportation Research Center Inc.

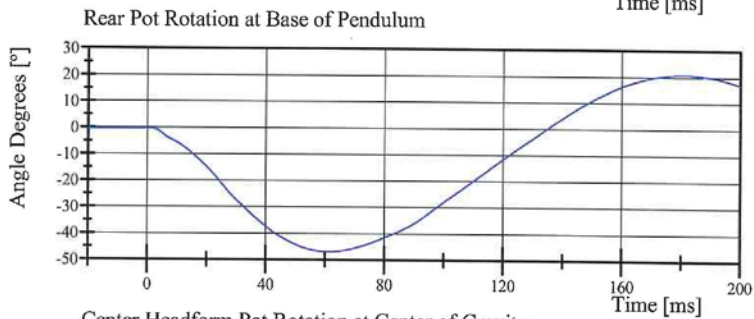
Left Lateral Neck

SID IIs Serial No. DI8818 Certification No. 8-1

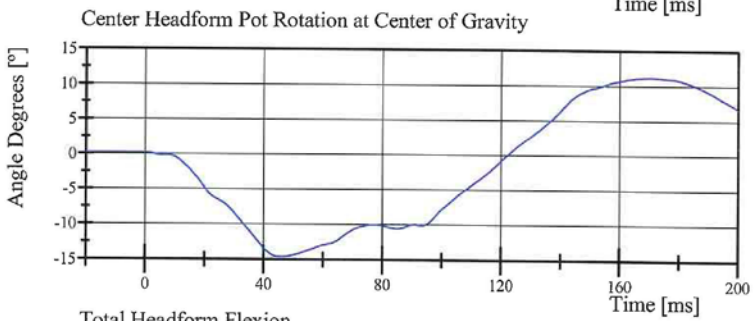
Test Date: 1/9/2014



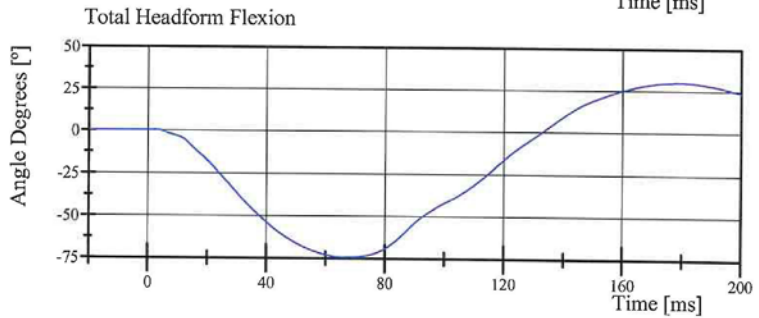
Filter Class: CFC_60
Max: 19.3 ° at 183.4 ms
Min: -63.5 ° at 71.4 ms



Filter Class: CFC_60
Max: 20.7 ° at 180.8 ms
Min: -47.0 ° at 61.3 ms



Filter Class: CFC_60
Max: 11.1 ° at 170.0 ms
Min: -14.6 ° at 45.8 ms



Filter Class: CFC_60
Max: 29.9 ° at 179.0 ms
Min: -74.3 ° at 65.8 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.09.2014 11:13:28 639

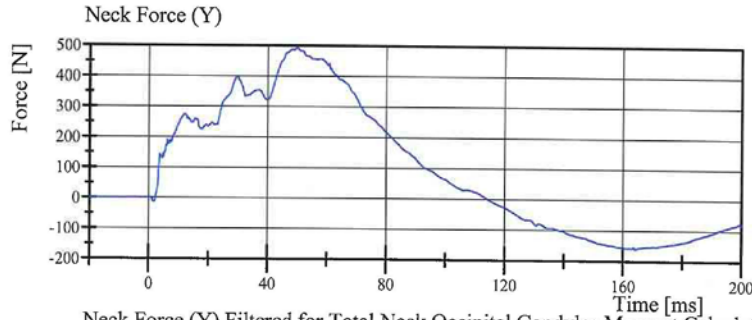


Transportation Research Center Inc.

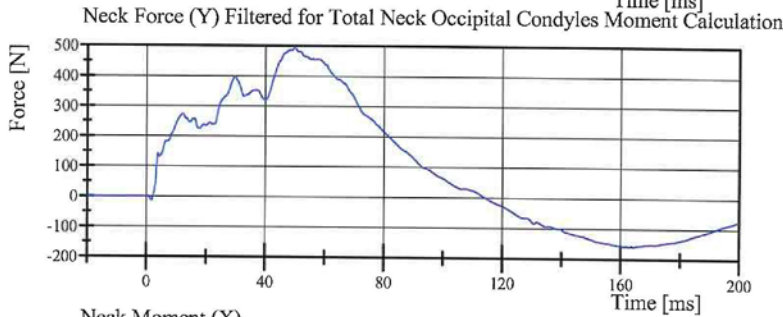
Left Lateral Neck

SID IIs Serial No. DI8818 Certification No. 8-1

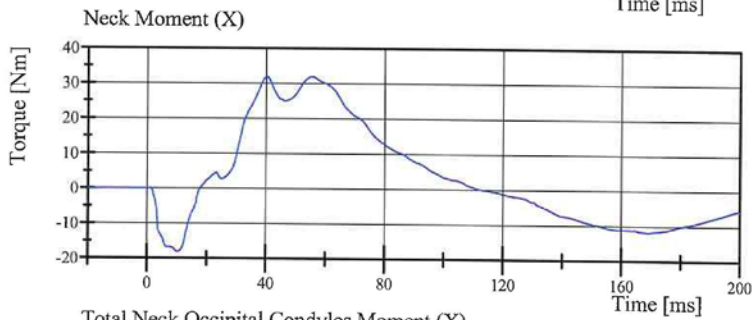
Test Date: 1/9/2014



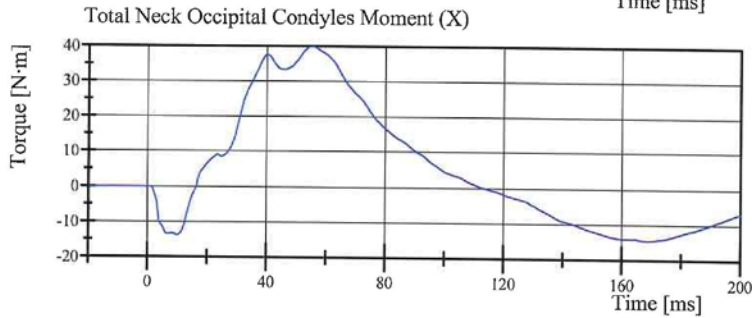
Filter Class: CFC_1000
Max: 493.0 N at 49.7 ms
Min: -160.9 N at 164.5 ms



Filter Class: CFC_600
Max: 492.8 N at 49.8 ms
Min: -159.8 N at 164.4 ms



Filter Class: CFC_600
Max: 31.8 N·m at 40.2 ms
Min: -18.2 N·m at 10.2 ms



Filter Class: Without_(Consta
Max: 39.9 N·m at 55.5 ms
Min: -14.6 N·m at 168.9 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.09.2014 11:13:28 639



Transportation Research Center Inc.

Left Lateral Shoulder

SID IIs Serial No. DI8818 Certification No. 8-1

Test Date: 1/9/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	39 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.33 m/s	Yes
Impactor Acceleration	(-13) - (-18) g	-14.6 g	Yes
Shoulder Displacement	28 - 37 mm	32.5 mm	Yes
Upper Spine Lateral Acceleration	17 - 22 g	19.9 g	Yes

Test meets specifications.

Comments:

Technician



Approved



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.09.2014 12:54:19 839

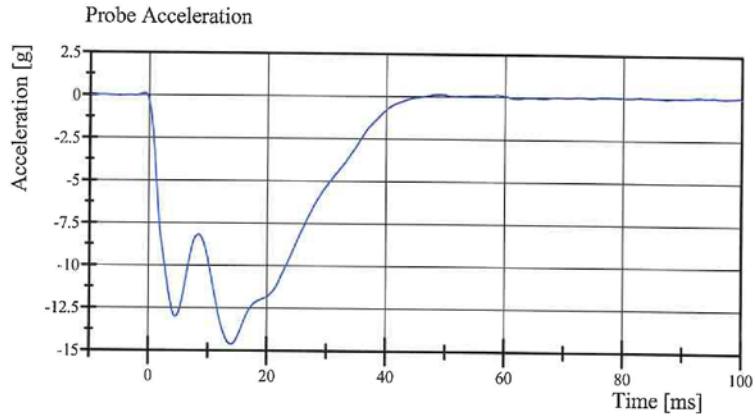


Transportation Research Center Inc.

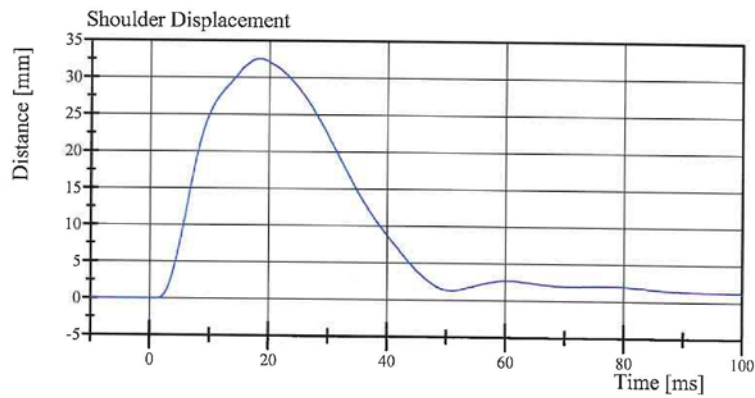
Left Lateral Shoulder

SID IIs Serial No. DI8818 Certification No. 8-1

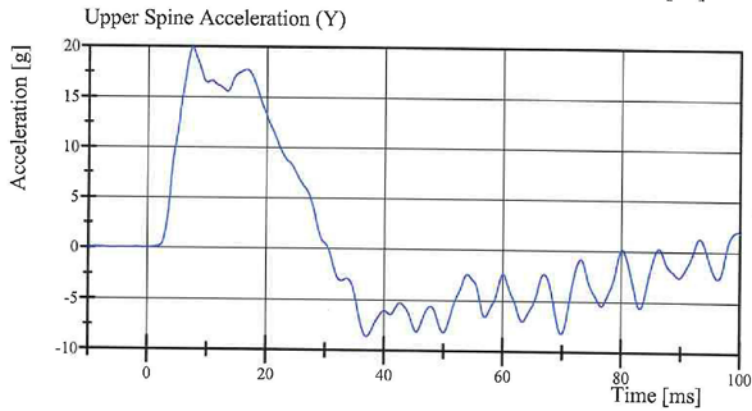
Test Date: 1/9/2014



Filter Class: CFC_180
Max: 0.1 g at 48.9 ms
Min: -14.6 g at 14.0 ms



Filter Class: CFC_600
Max: 32.5 mm at 18.2 ms
Min: -0.0 mm at -5.4 ms



Filter Class: CFC_180
Max: 19.9 g at 7.4 ms
Min: -8.6 g at 37.0 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.09.2014 12:54:30 839



Transportation Research Center Inc.

Left Lateral Thorax with Arm
SID IIs Serial No. DI8818 Certification No. 8-3
Test Date: 1/10/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	35 %	Yes
Impactor Velocity	6.60 - 6.80 m/s	6.734 m/s	Yes
Impactor Acceleration	(-30) - (-36) g	-34.0 g	Yes
Shoulder Displacement	31 - 40 mm	38.2 mm	Yes
Upper Thorax Rib Displacement	25 - 32 mm	28.9 mm	Yes
Center Thorax Rib Displacement	30 - 36 mm	31.2 mm	Yes
Lower Thorax Rib Displacement	32 - 38 mm	32.2 mm	Yes
Upper Spine Lateral Acceleration	34 - 43 g	37.6 g	Yes
Lower Spine Lateral Acceleration	29 - 37 g	34.1 g	Yes

Test meets specifications.

Comments:

Technician



Approved



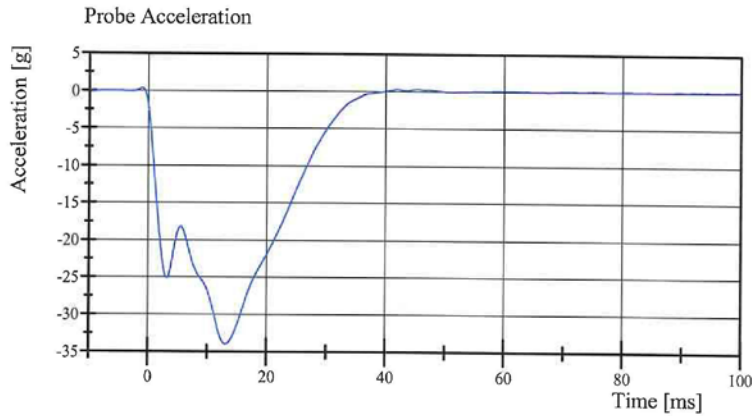
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.10.2014 08:17:59 621

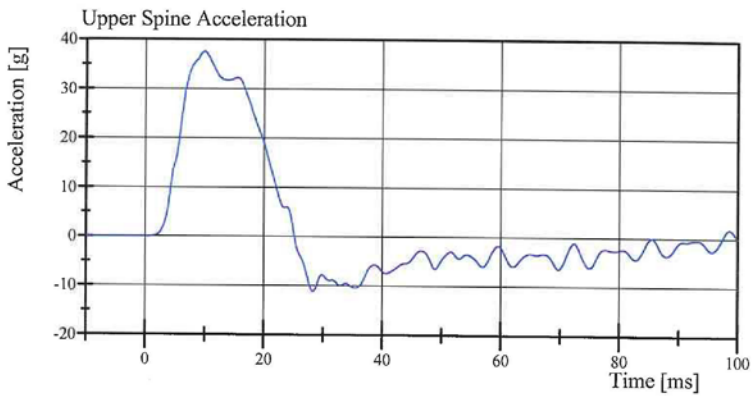


Transportation Research Center Inc.

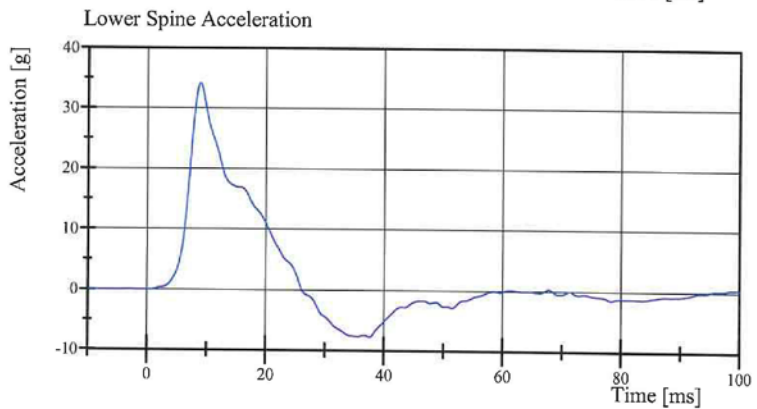
Left Lateral Thorax with Arm
SID IIs Serial No. DI8818 Certification No. 8-3
Test Date: 1/10/2014



Filter Class: CFC_180
Max: 0.3 g at -1.0 ms
Min: -34.0 g at 13.1 ms



Filter Class: CFC_180
Max: 37.6 g at 9.9 ms
Min: -11.2 g at 28.3 ms



Filter Class: CFC_180
Max: 34.1 g at 8.9 ms
Min: -7.8 g at 37.6 ms

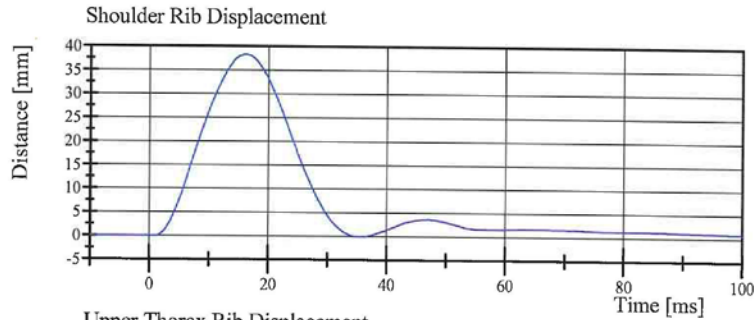
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.10.2014 08:18:12 621

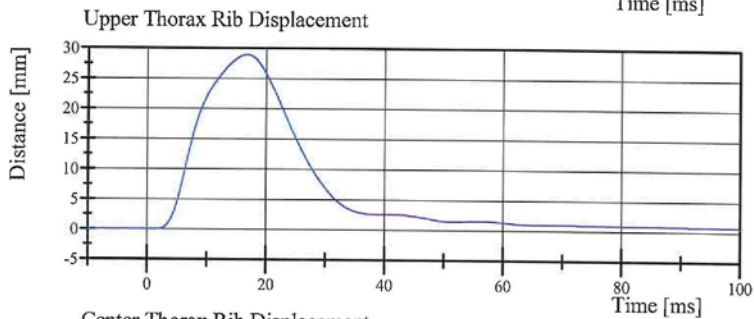


Transportation Research Center Inc.

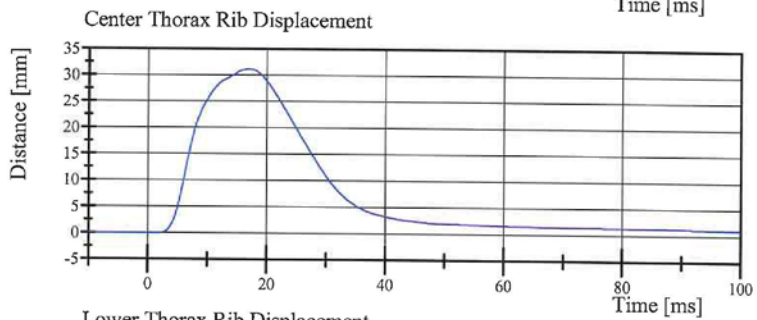
Left Lateral Thorax with Arm
SID II's Serial No. DI8818 Certification No. 8-3
Test Date: 1/10/2014



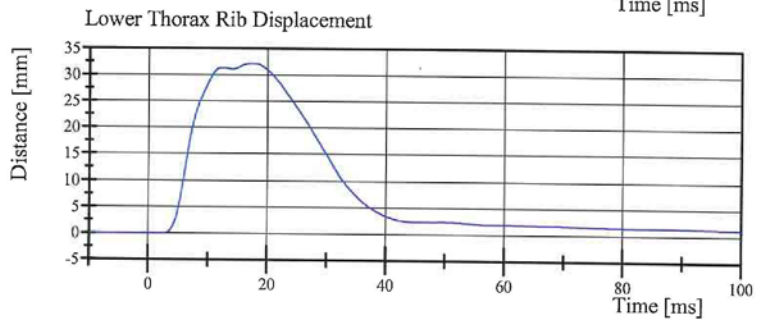
Filter Class: CFC_600
Max: 38.2 mm at 16.1 ms
Min: -0.1 mm at 35.4 ms



Filter Class: CFC_600
Max: 28.9 mm at 16.7 ms
Min: -0.0 mm at -6.6 ms



Filter Class: CFC_600
Max: 31.2 mm at 17.0 ms
Min: -0.0 mm at 1.0 ms



Filter Class: CFC_600
Max: 32.2 mm at 17.2 ms
Min: -0.0 mm at -0.3 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.10.2014 08:18:13 621



Transportation Research Center Inc.

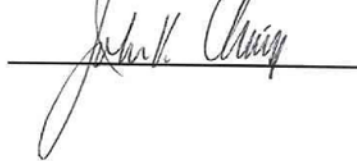
Left Lateral Thorax without Arm
SID IIs Serial No. DI8818 Certification No. 8-1
Test Date: 1/9/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	36 %	Yes
Impactor Velocity	4.20 - 4.40 m/s	4.238 m/s	Yes
Impactor Acceleration	(-14) - (-18) g	-15.6 g	Yes
Upper Thorax Rib Displacement	32 - 40 mm	38.9 mm	Yes
Center Thorax Rib Displacement	39 - 45 mm	41.3 mm	Yes
Lower Thorax Rib Displacement	35 - 43 mm	36.3 mm	Yes
Upper Spine Lateral Acceleration	13 - 17 g	15.0 g	Yes
Lower Spine Lateral Acceleration	7 - 11 g	8.9 g	Yes

Test meets specifications.

Comments:

Technician



Approved



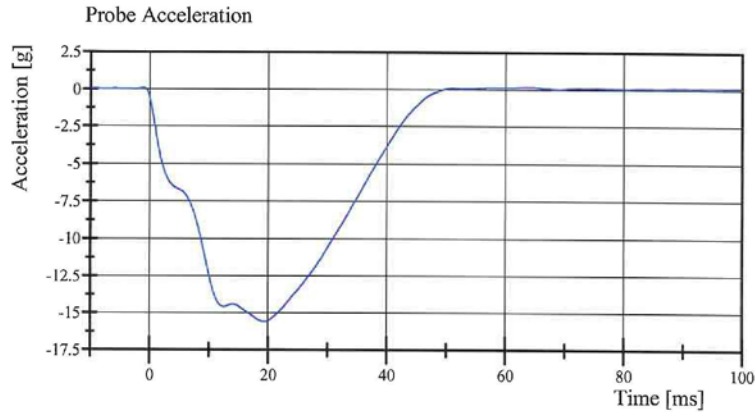
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.09.2014 14:37:14 873

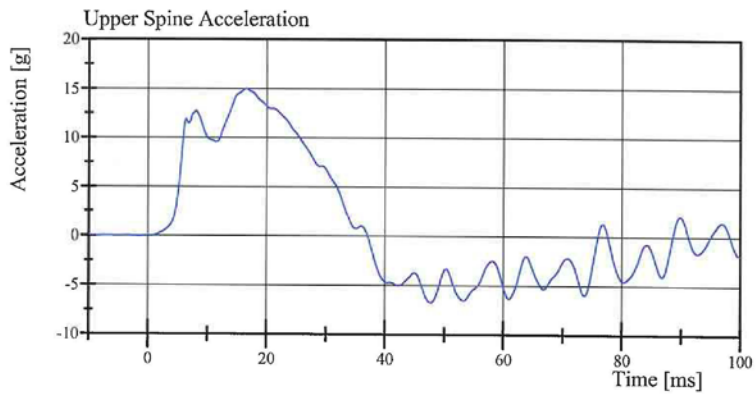


Transportation Research Center Inc.

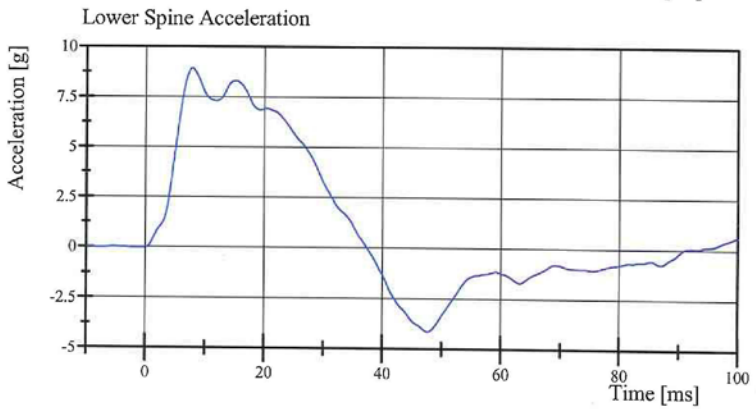
Left Lateral Thorax without Arm
SID IIs Serial No. DI8818 Certification No. 8-1
Test Date: 1/9/2014



Filter Class: CFC_180
Max: 0.1 g at 64.2 ms
Min: -15.6 g at 19.3 ms



Filter Class: CFC_180
Max: 15.0 g at 16.5 ms
Min: -6.7 g at 47.7 ms



Filter Class: CFC_180
Max: 8.9 g at 7.8 ms
Min: -4.1 g at 47.6 ms

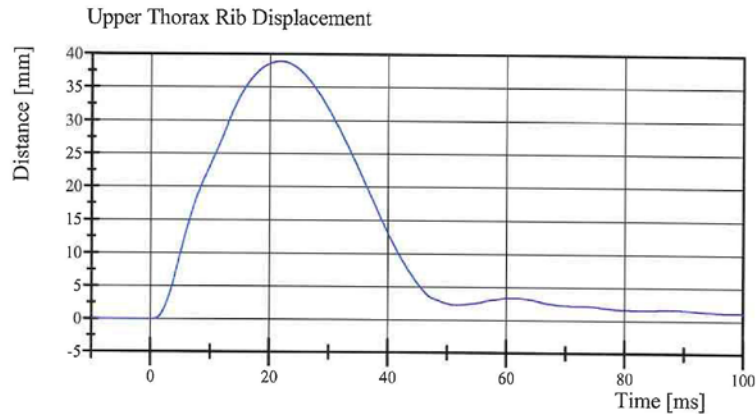
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.09.2014 14:37:28 873

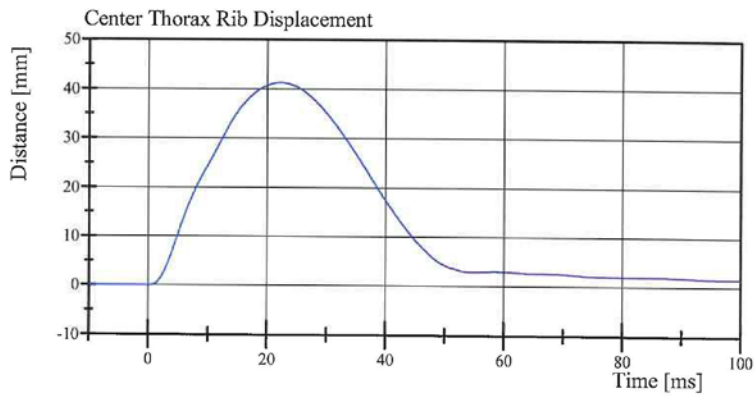


Transportation Research Center Inc.

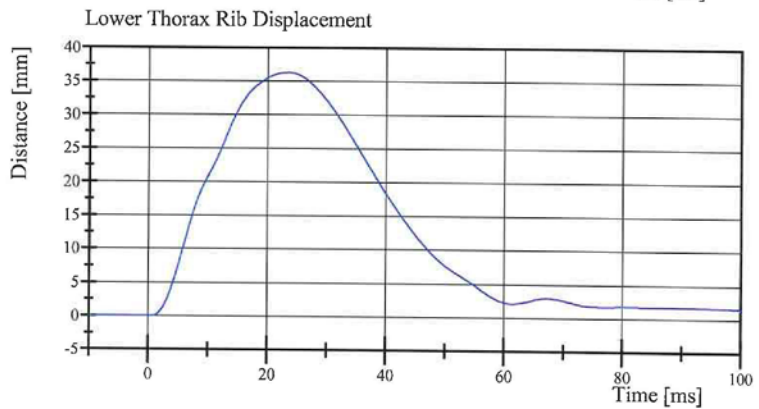
Left Lateral Thorax without Arm
SID IIs Serial No. DI8818 Certification No. 8-1
Test Date: 1/9/2014



Filter Class: CFC_600
Max: 38.9 mm at 21.8 ms
Min: -0.0 mm at 0.3 ms



Filter Class: CFC_600
Max: 41.3 mm at 22.2 ms
Min: -0.0 mm at -4.5 ms



Filter Class: CFC_600
Max: 36.3 mm at 23.4 ms
Min: -0.0 mm at 0.3 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.09.2014 14:37:29 873



Transportation Research Center Inc.

Left Lateral Abdomen

SID IIs Serial No. DI8818 Certification No. 8-3

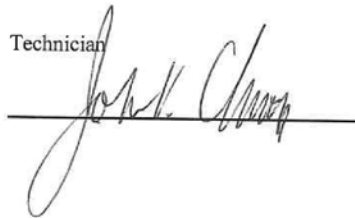
Test Date: 1/10/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	40 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.27 m/s	Yes
Impactor Acceleration	(-12) - (-16) g	-14.4 g	Yes
Upper Abdominal Rib Displacement	36 - 47 mm	40.7 mm	Yes
Lower Abdominal Rib Displacement	33 - 44 mm	34.5 mm	Yes
Lower Spine Lateral Acceleration	9 - 14.0 g	11.64 g	Yes

Test meets specifications.

Comments:

Technician



Approved



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.10.2014 14:01:29 656

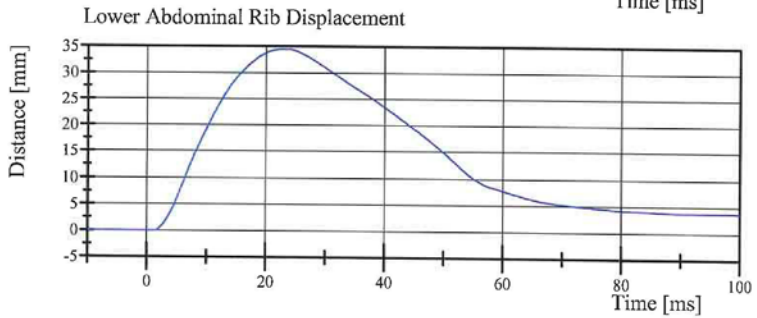
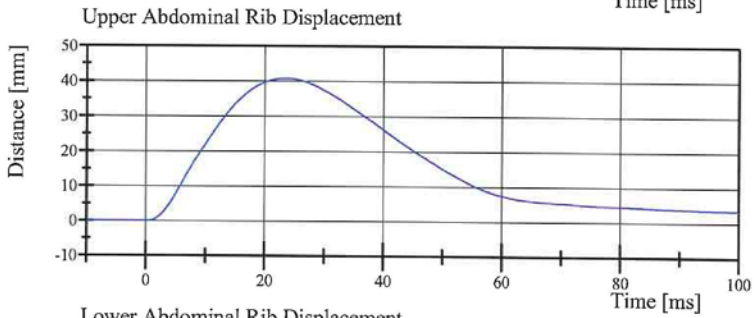
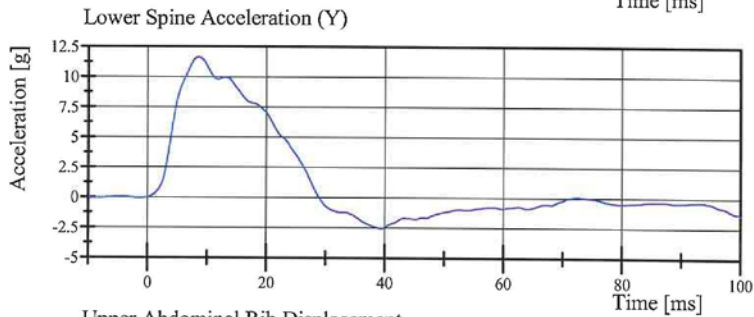
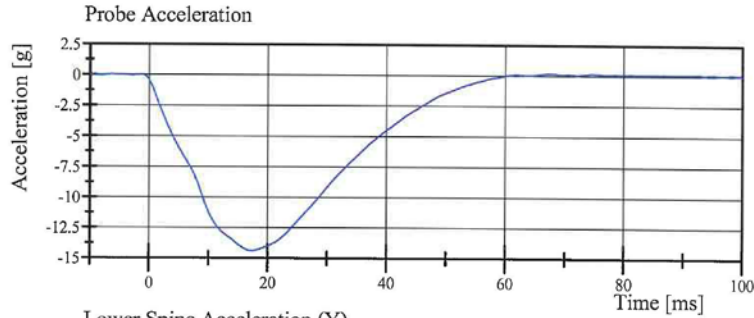


Transportation Research Center Inc.

Left Lateral Abdomen

SID IIs Serial No. DI8818 Certification No. 8-3

Test Date: 1/10/2014



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.10.2014 14:01:40 656



Transportation Research Center Inc.

Left Lateral Pelvis

SID IIs Serial No. DI8818 Certification No. 8-3

Test Date: 1/10/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	38 %	Yes
Pendulum Velocity	6.6 - 6.8 m/s	6.67 m/s	Yes
Impactor Acceleration	(-38.0) - (-47.0) g	-45.36 g	Yes
Peak Pelvis Lateral Acceleration after 6ms	34 - 42 g	42.0 g	Yes
Acetabulum Force	3,600 - 4,300 N	4,093.1 N	Yes

Test meets specifications.

Comments:

Technician



Approved



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.10.2014 08:53:50 429

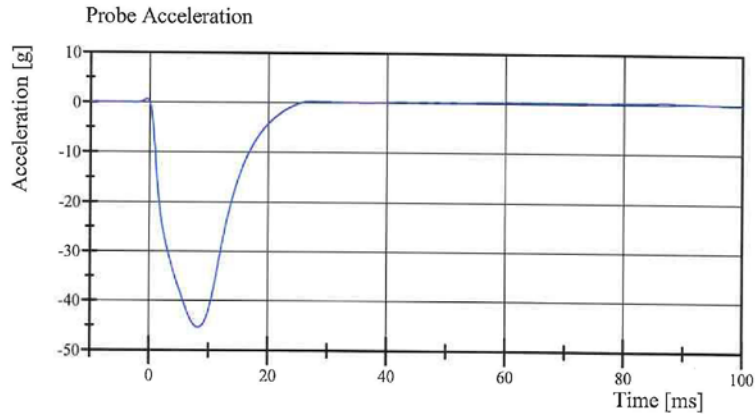


Transportation Research Center Inc.

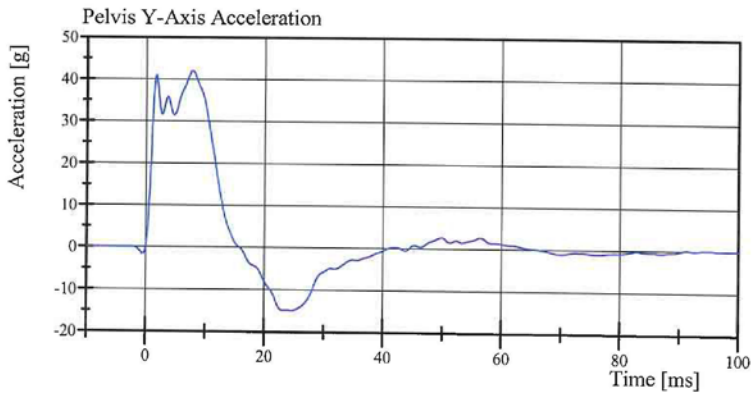
Left Lateral Pelvis

SID IIs Serial No. DI8818 Certification No. 8-3

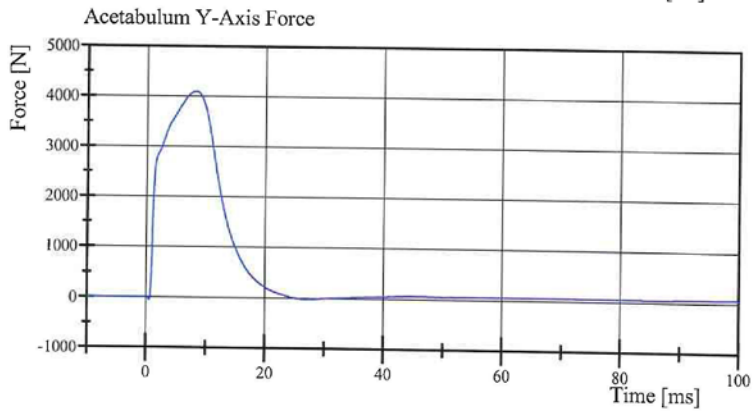
Test Date: 1/10/2014



Filter Class: CFC_180
Max: 0.6 g at -0.5 ms
Min: -45.4 g at 8.2 ms



Filter Class: CFC_180
Max: 42.0 g at 7.8 ms
Min: -14.9 g at 24.6 ms



Filter Class: CFC_600
Max: 4,093.1 N at 8.2 ms
Min: -52.6 N at 0.6 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.10.2014 08:54:13 429



Transportation Research Center Inc.

Left Lateral Iliac

SID IIs Serial No. DI8818 Certification No. 8-1

Test Date: 1/10/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	37 %	Yes
Pendulum Velocity	4.2 - 4.4 m/s	4.27 m/s	Yes
Impactor Acceleration	(-36) - (-45) g	-37.4 g	Yes
Peak Pelvis Lateral Acceleration	28 - 39 g	28.0 g	Yes
Iliac Force	4,100 - 5,100 N	4,245.5 N	Yes

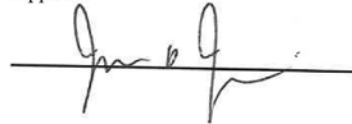
Test meets specifications.

Comments:

Technician



Approved



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.10.2014 14:50:26 681

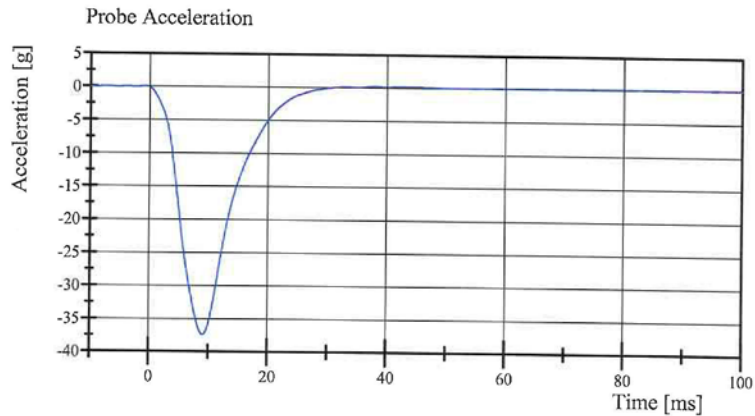


Transportation Research Center Inc.

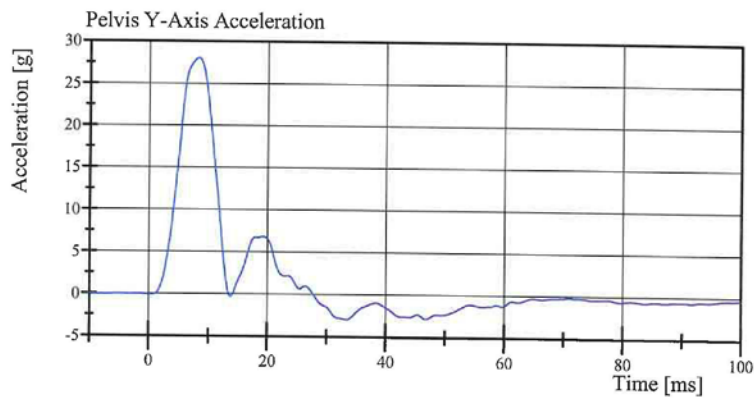
Left Lateral Iliac

SID IIs Serial No. DI8818 Certification No. 8-1

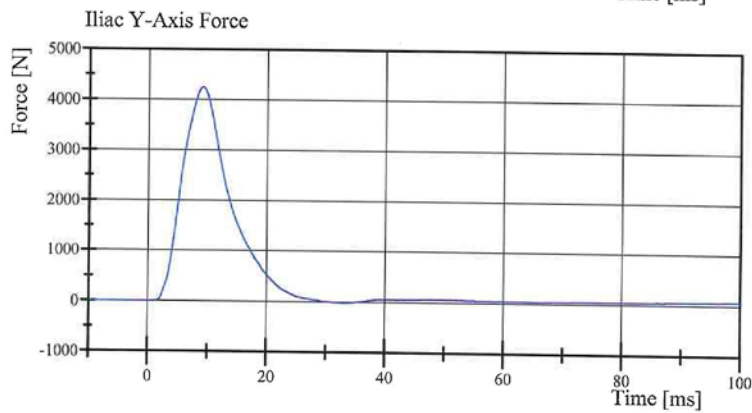
Test Date: 1/10/2014



Filter Class: CFC_180
Max: 0.2 g at 37.9 ms
Min: -37.4 g at 9.1 ms



Filter Class: CFC_180
Max: 28.0 g at 8.3 ms
Min: -2.9 g at 33.4 ms



Filter Class: CFC_600
Max: 4,245.5 N at 9.1 ms
Min: -18.1 N at 33.4 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.10.2014 14:50:36 681



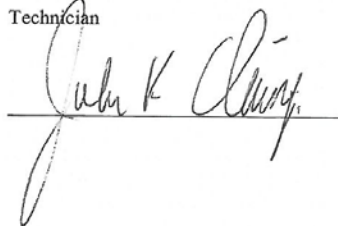
Driver S/N D18818

Post-Test Calibration Sheets

Transportation Research Center Inc.
SIDIIs Dummy - Level D
External Dimensions
Serial No. DI8818 Calibration No.09

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Sitting Height	772.0 - 788.0	779	Yes
B	Shoulder Pivot Height	437.0 - 453.0	440	Yes
C	H-Point Height	79.0 - 89.0	82	Yes
D	H-Point from Seat Back	141.0 - 151.0	142	Yes
E	Shoulder Pivot from Backline	97.0 - 107.0	100	Yes
F	Thigh Clearance	119.0 - 135.0	129	Yes
G	Head Breadth	140.0 - 148.0	143	Yes
H	Head Back from Backline	40.0 - 46.0	45	Yes
I	Head Depth	178.0 - 188.0	182	Yes
J	Head Circumference	541.0 - 551.0	544	Yes
K	Buttock to Knee Length	514.0 - 540.0	536	Yes
L	Popliteal Height	343.0 - 369.0	352	Yes
M	Knee Pivot to Floor Height	393.0 - 409.0	398	Yes
N	Buttock Popliteal Length	416.0 - 442.0	427	Yes
O	Chest Depth without Jacket	195.0 - 211.0	203	Yes
P	Foot Length (right)	216.0 - 232.0	220	Yes
P	Foot Length (left)	216.0 - 232.0	220	Yes
Q	Hip Breadth	313.0 - 323.0	313	Yes
R	Arm Length	249.0 - 259.0	255	Yes
S	Knee Joint to seat Back	478.0 - 493.0	483	Yes
V	Shoulder Width (only one arm installed)	341.0 - 357.0	350	Yes
W	Foot Width (right)	78.0 - 94.0	84	Yes
W	Foot Width (left)	78.0 - 94.0	84	Yes
Y	Chest Circumference with Jacket	851.0 - 881.0	868	Yes
Z	Waist Circumference	761.0 - 791.0	772	Yes

Technician



Approved



Revised 9/29/2005



Transportation Research Center Inc.

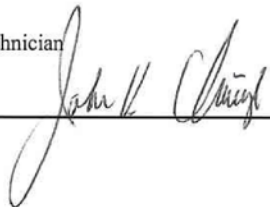
Left Lateral Head Drop
SID IIs Serial No. DI8818 Certification No. 9-1
Test Date: 1/14/2014

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.8 °C	Yes
Relative Humidity	10 - 70 %	36 %	Yes
Peak Head Resultant Acceleration	115 - 137 g	133.5 g	Yes
Peak Head Longitudinal Acceleration	(-15) - 15 g	2.5 g	Yes
Is Head Resultant Acceleration Curve Unimodal within 15% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician



Approved



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 10:43:16 234

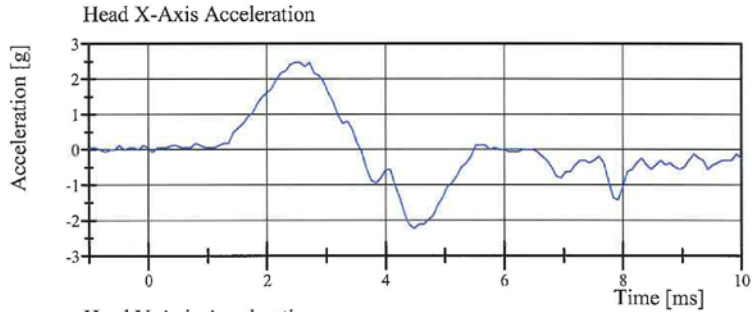


Transportation Research Center Inc.

Left Lateral Head Drop

SID IIs Serial No. DI8818 Certification No. 9-1

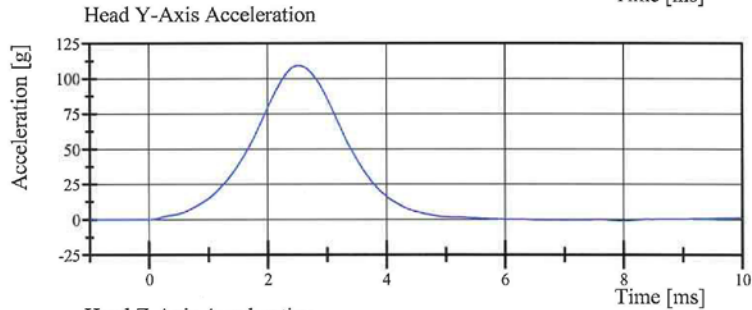
Test Date: 1/14/2014



Filter Class: CFC_1000

Max: 2.5 g at 2.5 ms

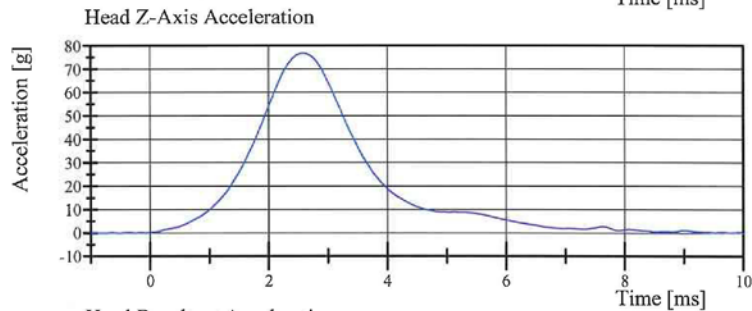
Min: -2.2 g at 4.5 ms



Filter Class: CFC_1000

Max: 109.3 g at 2.5 ms

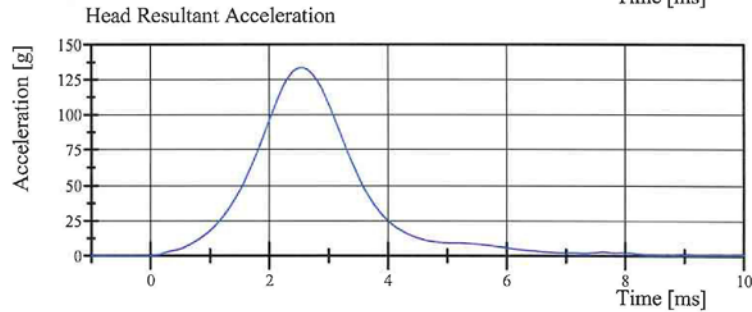
Min: -1.1 g at 7.9 ms



Filter Class: CFC_1000

Max: 76.7 g at 2.6 ms

Min: -0.1 g at -1.0 ms



Filter Class: CFC_1000

Max: 133.5 g at 2.6 ms

Min: 0.0 g at -0.6 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 10:43:25 234



Transportation Research Center Inc.

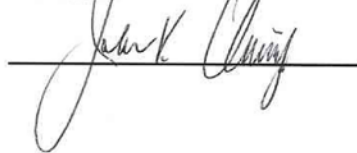
Left Lateral Neck
SID IIs Serial No. DI8818 Certification No. 9-2
Test Date: 1/14/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	37 %	Yes
Pendulum Velocity	(-5.51) - (-5.63) m/s	-5.616 m/s	Yes
Pendulum Integrated Velocity			
Change at 10 ms	2.20 - 2.80 m/s	2.256 m/s	Yes
Change at 15 ms	3.30 - 4.10 m/s	3.322 m/s	Yes
Change at 20 ms	4.40 - 5.40 m/s	4.461 m/s	Yes
Change at 25 ms	5.40 - 6.10 m/s	5.481 m/s	Yes
Change at 25 to 100 ms	5.50 - 6.20 m/s	5.801 m/s	Yes
Maximum Headform Flexion occurring between 50ms and 70ms.			
Peak	(-71) - (-81) deg	-74.3 deg	Yes
Time of Peak	50 - 70 ms	66.4 ms	Yes
Total Neck Occipital Condyles Moment	36 - 44 N·m	40.6 N·m	Yes
Total Neck Occipital Condyles Moment Decay Time to 0 N·m	102 - 126 ms	113.7 ms	Yes

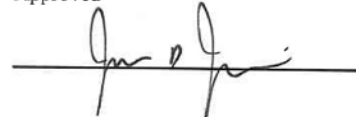
Test meets specifications.

Comments:

Technician



Approved



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 12:38:40 637

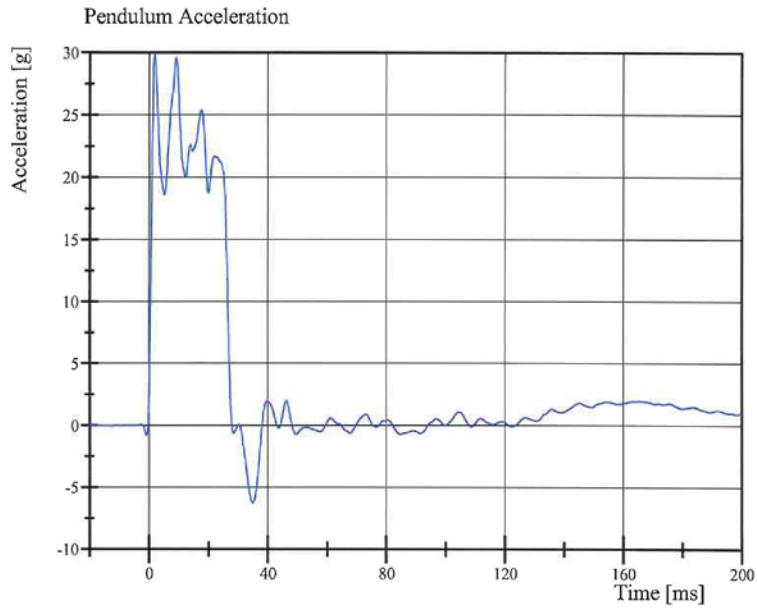


Transportation Research Center Inc.

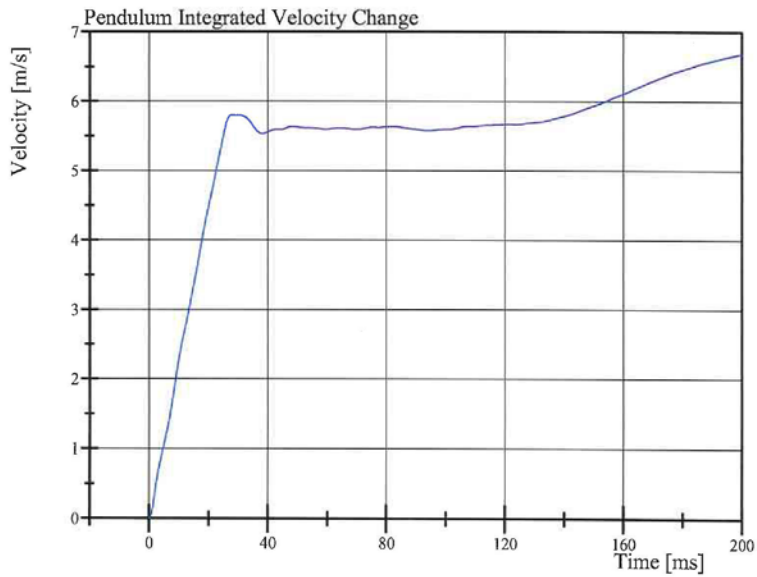
Left Lateral Neck

SID IIs Serial No. DI8818 Certification No. 9-2

Test Date: 1/14/2014



Filter Class: CFC_180
Max: 30.0 g at 1.9 ms
Min: -6.3 g at 35.0 ms



Filter Class: CFC_180
Max: 6.7 m/s at 200.0 ms
Min: 0.0 m/s at 0.0 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 12:38:50 637

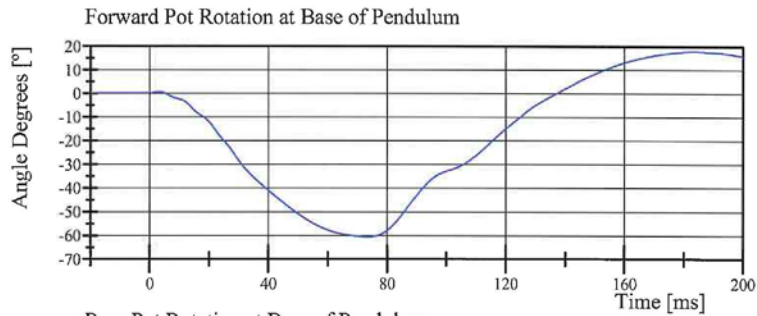


Transportation Research Center Inc.

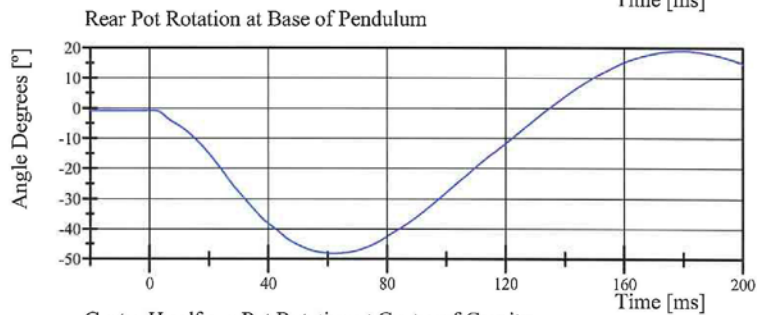
Left Lateral Neck

SID IIs Serial No. DI8818 Certification No. 9-2

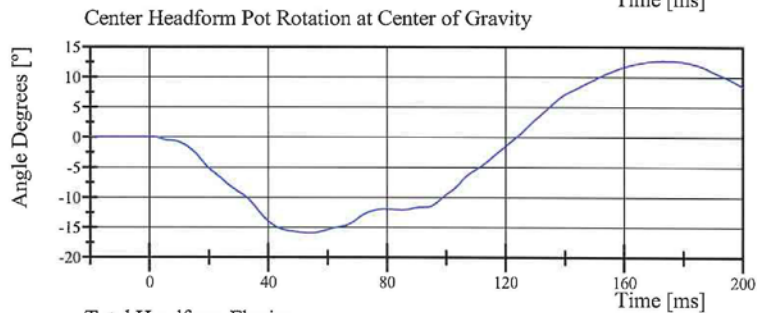
Test Date: 1/14/2014



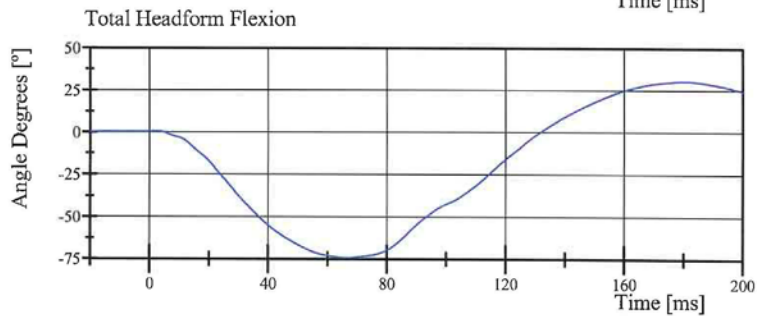
Filter Class: CFC_60
Max: 17.7 ° at 183.4 ms
Min: -60.6 ° at 73.4 ms



Filter Class: CFC_60
Max: 18.9 ° at 179.4 ms
Min: -48.1 ° at 62.1 ms



Filter Class: CFC_60
Max: 12.7 ° at 173.1 ms
Min: -15.9 ° at 54.1 ms



Filter Class: CFC_60
Max: 30.1 ° at 180.5 ms
Min: -74.3 ° at 66.4 ms

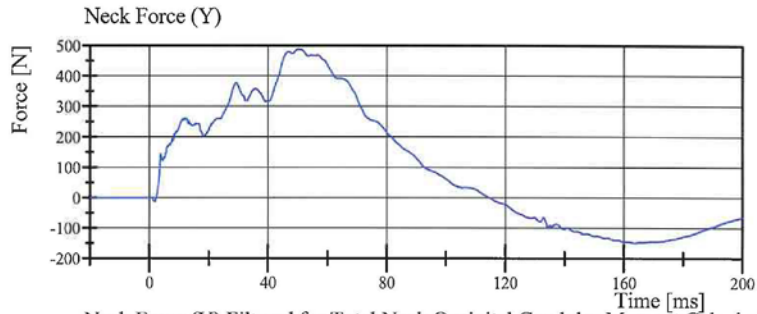
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 12:38:50 637

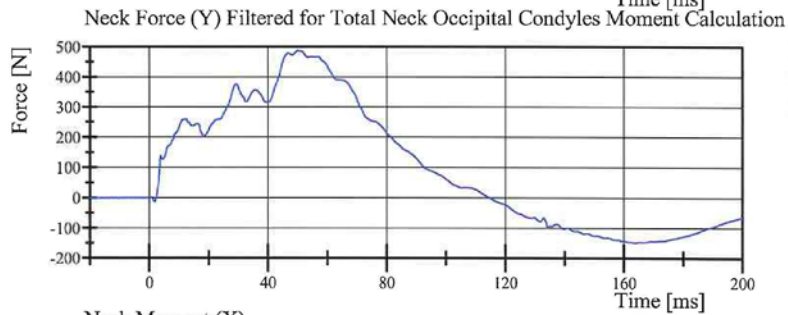


Transportation Research Center Inc.

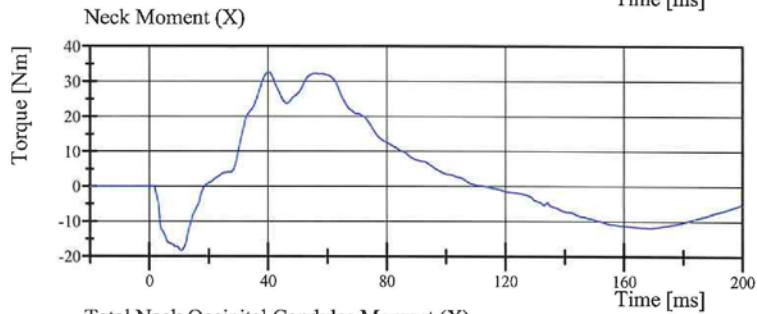
Left Lateral Neck
SID IIs Serial No. DI8818 Certification No. 9-2
Test Date: 1/14/2014



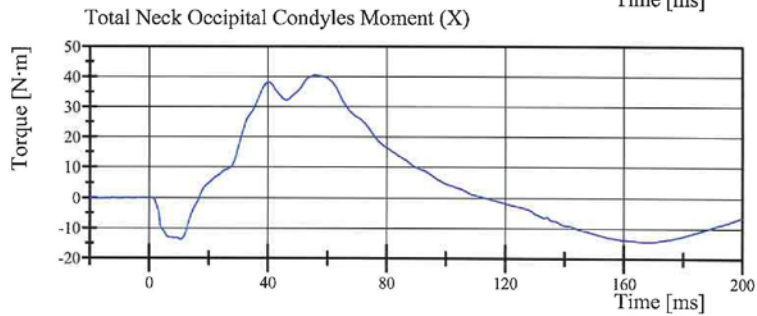
Filter Class: CFC_1000
Max: 488.4 N at 50.0 ms
Min: -149.8 N at 163.7 ms



Filter Class: CFC_600
Max: 488.1 N at 50.1 ms
Min: -149.5 N at 163.7 ms



Filter Class: CFC_600
Max: 32.6 Nm at 40.2 ms
Min: -18.3 Nm at 10.8 ms



Filter Class: Without_(Consta
Max: 40.6 N·m at 55.8 ms
Min: -14.5 N·m at 168.6 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 12:38:51 637



Transportation Research Center Inc.

Left Lateral Shoulder
SID IIs Serial No. DI8818 Certification No. 9-1
Test Date: 1/14/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	33 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.33 m/s	Yes
Impactor Acceleration	(-13) - (-18) g	-14.6 g	Yes
Shoulder Displacement	28 - 37 mm	32.6 mm	Yes
Upper Spine Lateral Acceleration	17 - 22 g	20.4 g	Yes

Test meets specifications.

Comments:

Technician



Approved



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 13:55:38 820

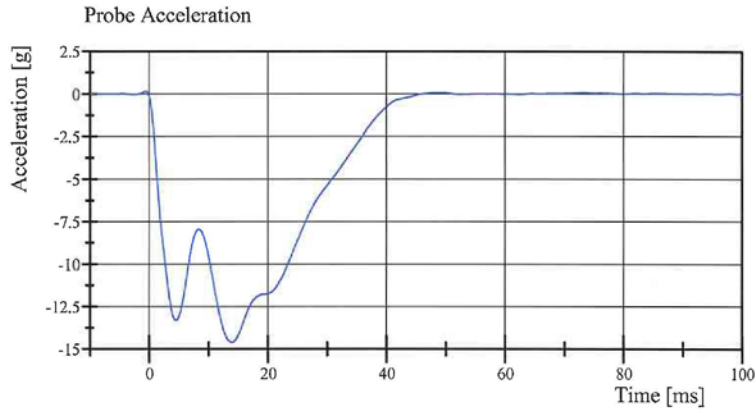


Transportation Research Center Inc.

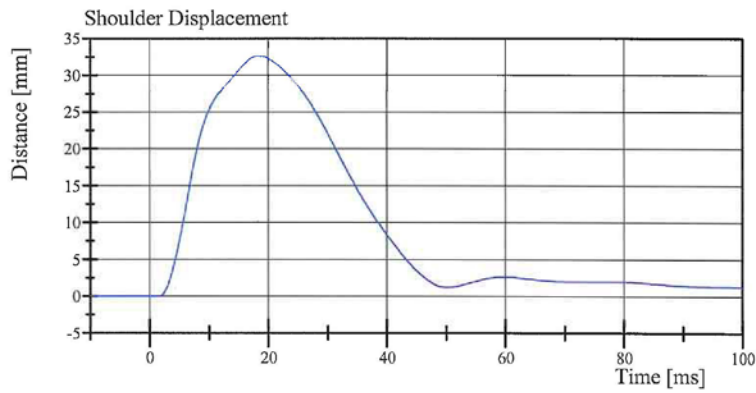
Left Lateral Shoulder

SID IIs Serial No. DI8818 Certification No. 9-1

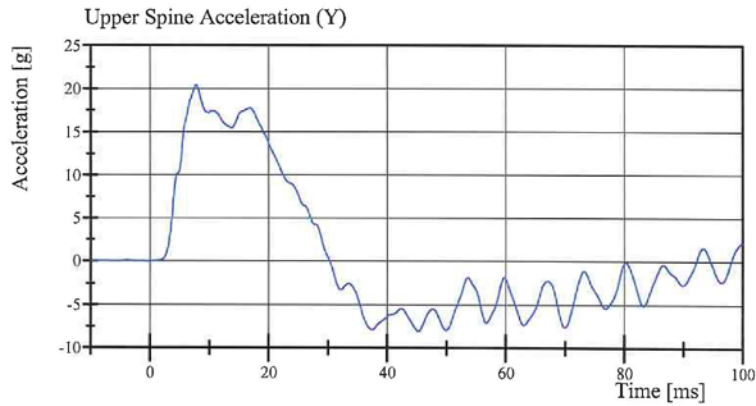
Test Date: 1/14/2014



Filter Class: CFC_180
Max: 0.2 g at -0.6 ms
Min: -14.6 g at 13.9 ms



Filter Class: CFC_600
Max: 32.6 mm at 18.4 ms
Min: -0.0 mm at 1.5 ms



Filter Class: CFC_180
Max: 20.4 g at 7.8 ms
Min: -8.0 g at 45.3 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 13:55:48 820



Transportation Research Center Inc.

Left Lateral Thorax with Arm
SID IIs Serial No. DI8818 Certification No. 9-2
Test Date: 1/14/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.8 °C	Yes
Relative Humidity	10 - 70 %	33 %	Yes
Impactor Velocity	6.60 - 6.80 m/s	6.725 m/s	Yes
Impactor Acceleration	(-30) - (-36) g	-33.7 g	Yes
Shoulder Displacement	31 - 40 mm	37.9 mm	Yes
Upper Thorax Rib Displacement	25 - 32 mm	29.4 mm	Yes
Center Thorax Rib Displacement	30 - 36 mm	31.3 mm	Yes
Lower Thorax Rib Displacement	32 - 38 mm	32.7 mm	Yes
Upper Spine Lateral Acceleration	34 - 43 g	37.3 g	Yes
Lower Spine Lateral Acceleration	29 - 37 g	34.8 g	Yes

Test meets specifications.

Comments:

Technician



Approved



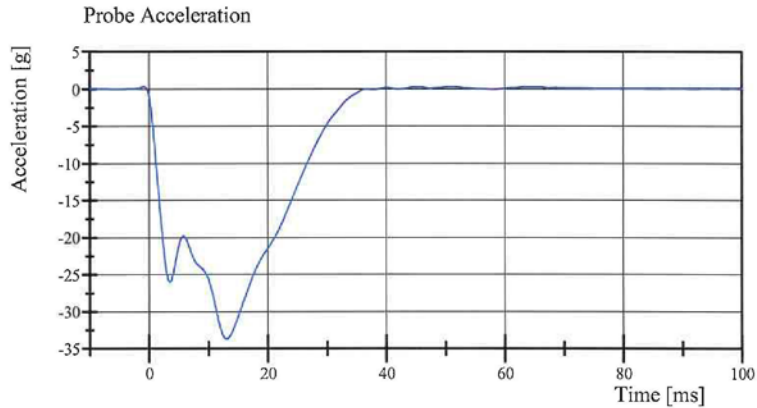
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 15:26:56 607

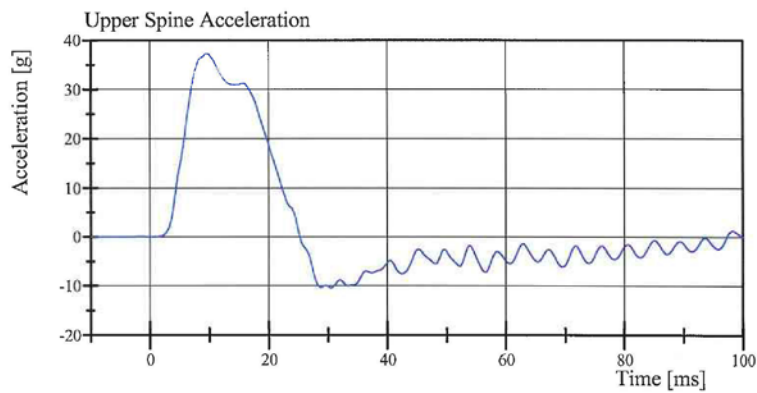


Transportation Research Center Inc.

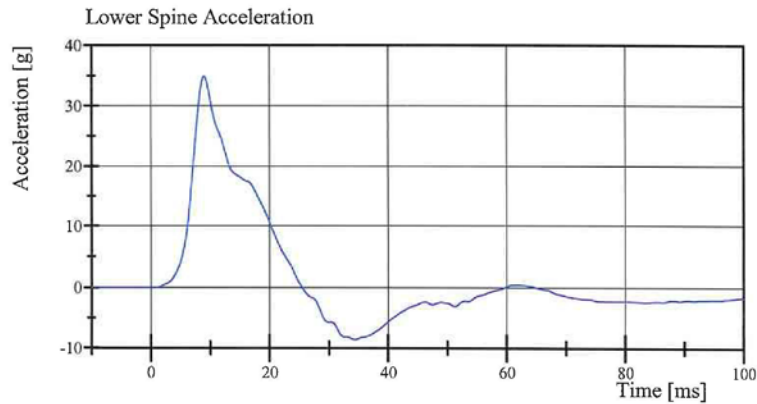
Left Lateral Thorax with Arm
SID IIs Serial No. DI8818 Certification No. 9-2
Test Date: 1/14/2014



Filter Class: CFC_180
Max: 0.3 g at -0.8 ms
Min: -33.7 g at 13.0 ms



Filter Class: CFC_180
Max: 37.3 g at 9.4 ms
Min: -10.5 g at 30.5 ms



Filter Class: CFC_180
Max: 34.8 g at 9.0 ms
Min: -8.6 g at 34.4 ms

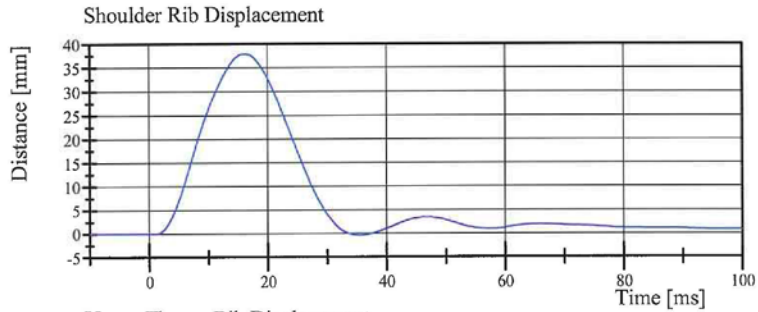
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 15:27:09 607

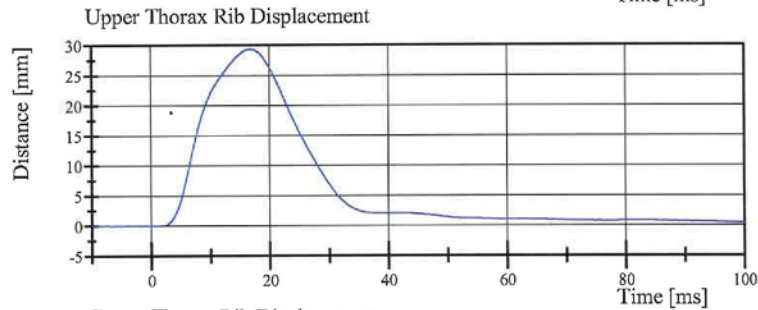


Transportation Research Center Inc.

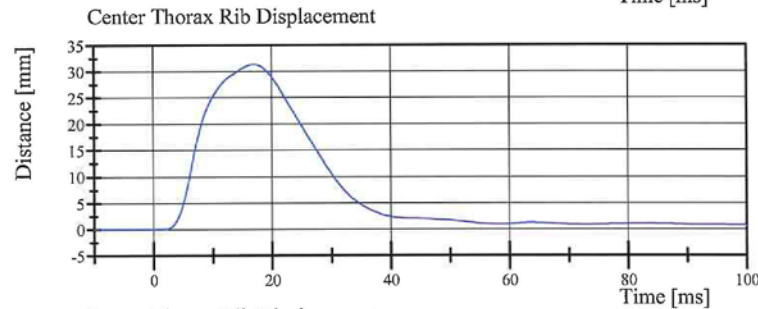
Left Lateral Thorax with Arm
SID IIs Serial No. DI8818 Certification No. 9-2
Test Date: 1/14/2014



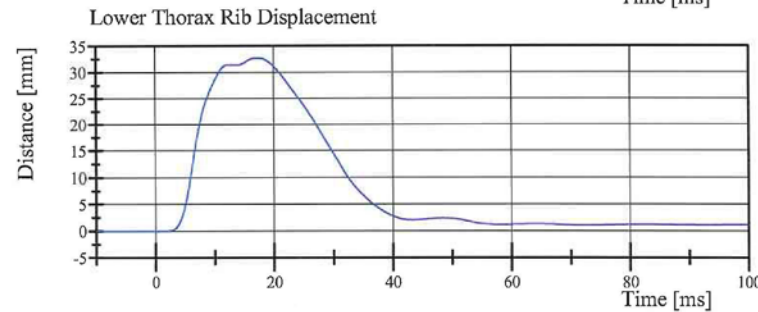
Filter Class: CFC_600
Max: 37.9 mm at 16.2 ms
Min: -0.5 mm at 35.4 ms



Filter Class: CFC_600
Max: 29.4 mm at 16.8 ms
Min: -0.0 mm at -8.6 ms



Filter Class: CFC_600
Max: 31.3 mm at 17.0 ms
Min: -0.0 mm at 0.3 ms



Filter Class: CFC_600
Max: 32.7 mm at 17.0 ms
Min: -0.0 mm at -6.9 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 15:27:09 607



Transportation Research Center Inc.

Left Lateral Thorax without Arm
SID IIs Serial No. DI8818 Certification No. 9-1
Test Date: 1/14/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.8 °C	Yes
Relative Humidity	10 - 70 %	38 %	Yes
Impactor Velocity	4.20 - 4.40 m/s	4.247 m/s	Yes
Impactor Acceleration	(-14) - (-18) g	-15.5 g	Yes
Upper Thorax Rib Displacement	32 - 40 mm	37.4 mm	Yes
Center Thorax Rib Displacement	39 - 45 mm	40.9 mm	Yes
Lower Thorax Rib Displacement	35 - 43 mm	37.2 mm	Yes
Upper Spine Lateral Acceleration	13 - 17 g	15.0 g	Yes
Lower Spine Lateral Acceleration	7 - 11 g	8.9 g	Yes

Test meets specifications.

Comments:

Technician



Approved



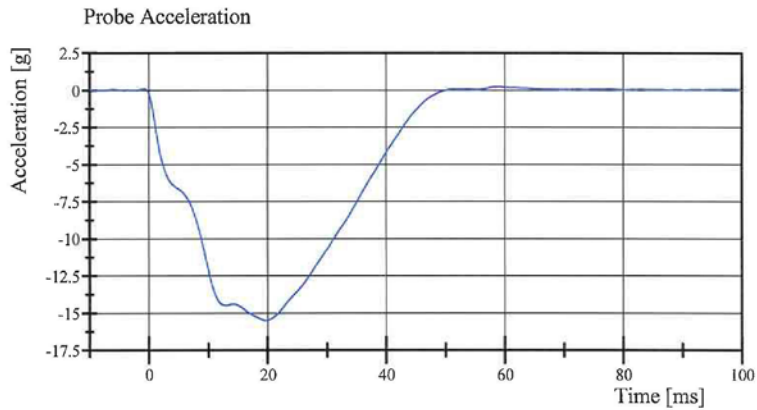
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 16:23:27 822

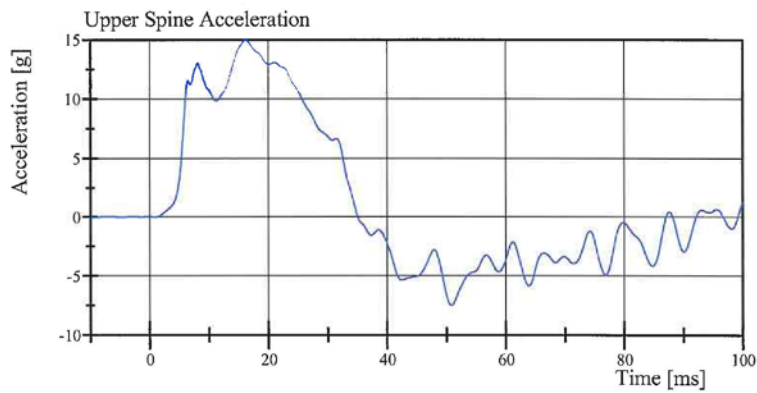


Transportation Research Center Inc.

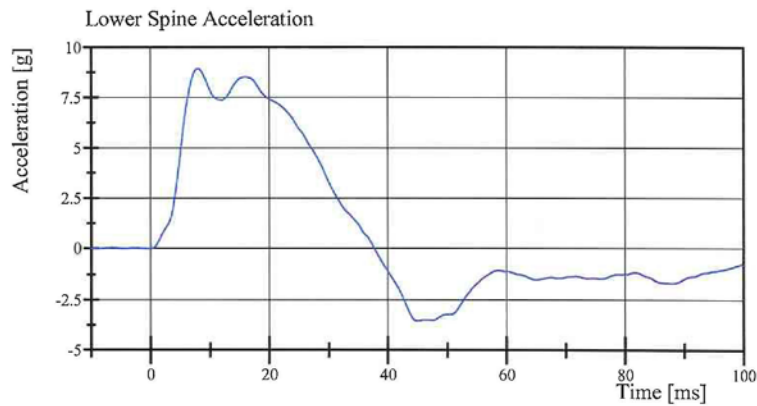
Left Lateral Thorax without Arm
SID IIs Serial No. DI8818 Certification No. 9-1
Test Date: 1/14/2014



Filter Class: CFC_180
Max: 0.2 g at 58.7 ms
Min: -15.5 g at 19.7 ms



Filter Class: CFC_180
Max: 15.0 g at 16.2 ms
Min: -7.5 g at 50.9 ms



Filter Class: CFC_180
Max: 8.9 g at 8.0 ms
Min: -3.5 g at 45.0 ms

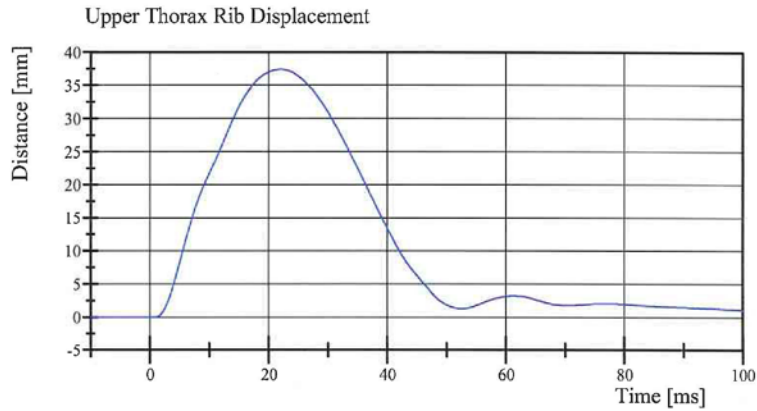
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 16:23:38 822

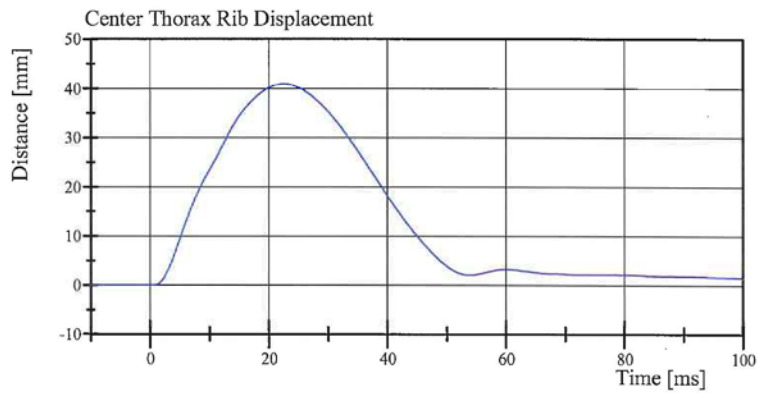


Transportation Research Center Inc.

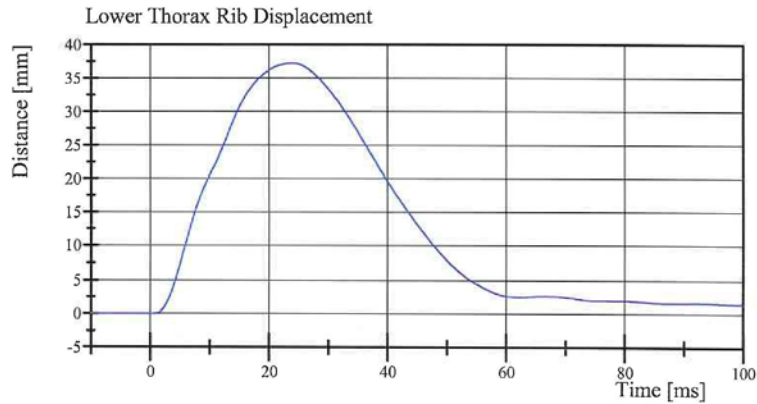
Left Lateral Thorax without Arm
SID IIs Serial No. DI8818 Certification No. 9-1
Test Date: 1/14/2014



Filter Class: CFC_600
Max: 37.4 mm at 22.0 ms
Min: -0.0 mm at -4.5 ms



Filter Class: CFC_600
Max: 40.9 mm at 22.6 ms
Min: -0.0 mm at 0.6 ms



Filter Class: CFC_600
Max: 37.2 mm at 23.8 ms
Min: -0.0 mm at -4.7 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 16:23:39 822



Transportation Research Center Inc.

Left Lateral Abdomen

SID IIs Serial No. DI8818 Certification No. 9-1

Test Date: 1/14/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	20.8 °C	Yes
Relative Humidity	10 - 70 %	38 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.26 m/s	Yes
Impactor Acceleration	(-12) - (-16) g	-14.3 g	Yes
Upper Abdominal Rib Displacement	36 - 47 mm	39.0 mm	Yes
Lower Abdominal Rib Displacement	33 - 44 mm	36.0 mm	Yes
Lower Spine Lateral Acceleration	9 - 14.0 g	11.32 g	Yes

Test meets specifications.

Comments:

Technician



Approved



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 14:18:36 664

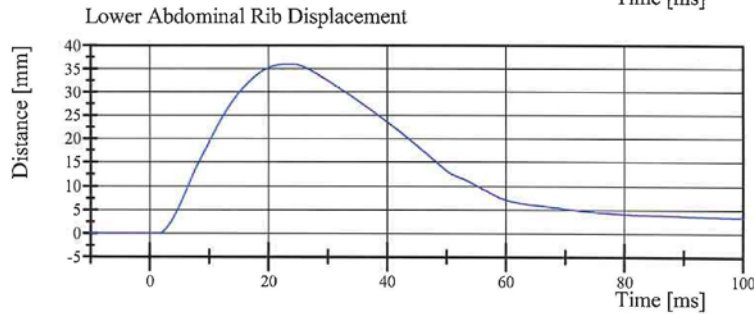
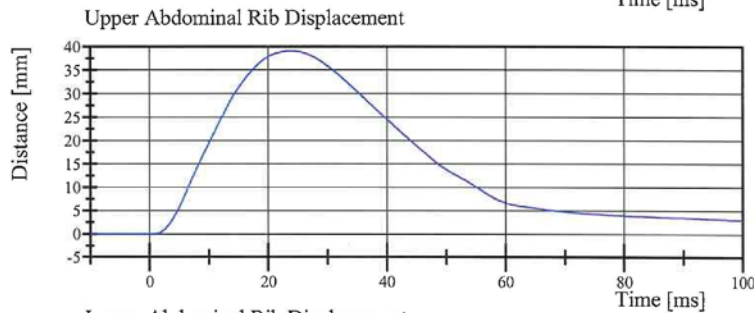
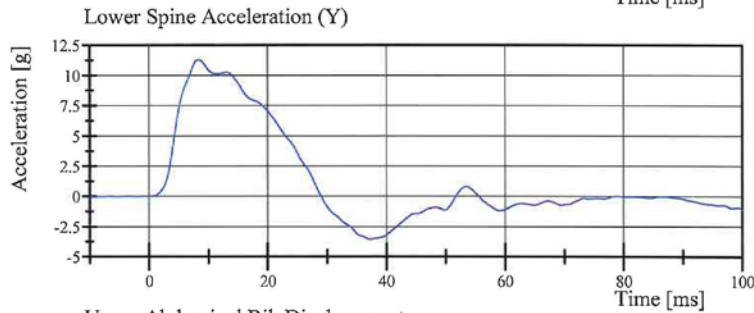
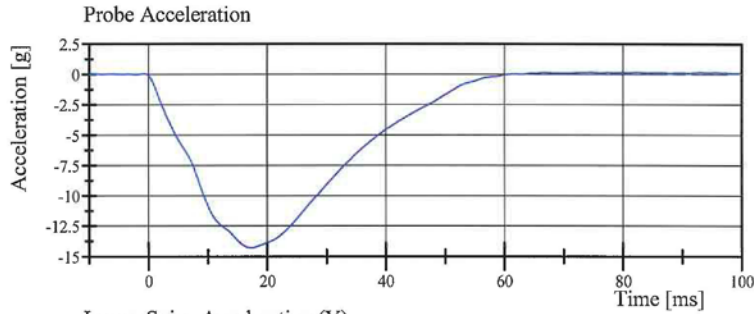


Transportation Research Center Inc.

Left Lateral Abdomen

SID IIa Serial No. DI8818 Certification No. 9-1

Test Date: 1/14/2014



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 14:18:47 664



Transportation Research Center Inc.

Left Lateral Pelvis

SID IIs Serial No. DI8818 Certification No. 9-2

Test Date: 1/14/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.9 °C	Yes
Relative Humidity	10 - 70 %	39 %	Yes
Pendulum Velocity	6.6 - 6.8 m/s	6.67 m/s	Yes
Impactor Acceleration	(-38.0) - (-47.0) g	-46.74 g	Yes
Peak Pelvis Lateral Acceleration after 6ms	34 - 42 g	41.9 g	Yes
Acetabulum Force	3,600 - 4,300 N	4,202.6 N	Yes

Test meets specifications.

Comments:

Technician



Approved



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 16:46:12.430

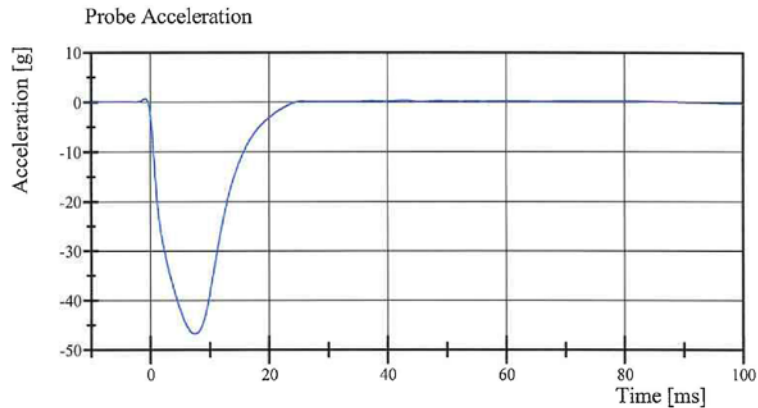


Transportation Research Center Inc.

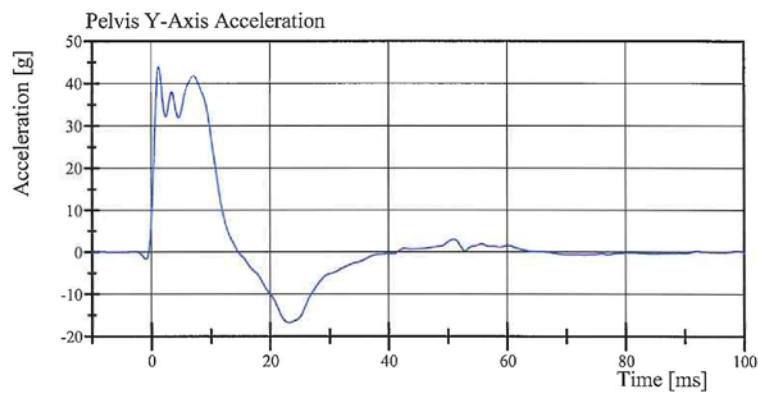
Left Lateral Pelvis

SID IIs Serial No. DI8818 Certification No. 9-2

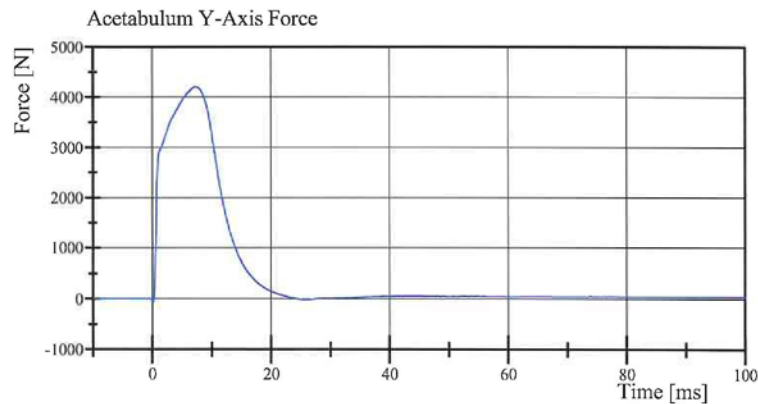
Test Date: 1/14/2014



Filter Class: CFC_180
Max: 0.6 g at -0.9 ms
Min: -46.7 g at 7.4 ms



Filter Class: CFC_180
Max: 44.2 g at 1.3 ms
Min: -16.7 g at 23.1 ms



Filter Class: CFC_600
Max: 4,202.6 N at 7.4 ms
Min: -66.4 N at 0.2 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.14.2014 16:46:24 430



Transportation Research Center Inc.

Left Lateral Iliac

SID IIs Serial No. DI8818 Certification No. 9-1

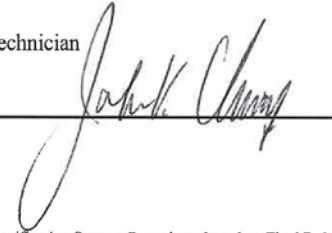
Test Date: 1/15/2014

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	35 %	Yes
Pendulum Velocity	4.2 - 4.4 m/s	4.28 m/s	Yes
Impactor Acceleration	(-36) - (-45) g	-43.2 g	Yes
Peak Pelvis Lateral Acceleration	28 - 39 g	36.3 g	Yes
Iliac Force	4,100 - 5,100 N	5,032.0 N	Yes

Test meets specifications.

Comments:

Technician



Approved



Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.15.2014 09:43:07 663

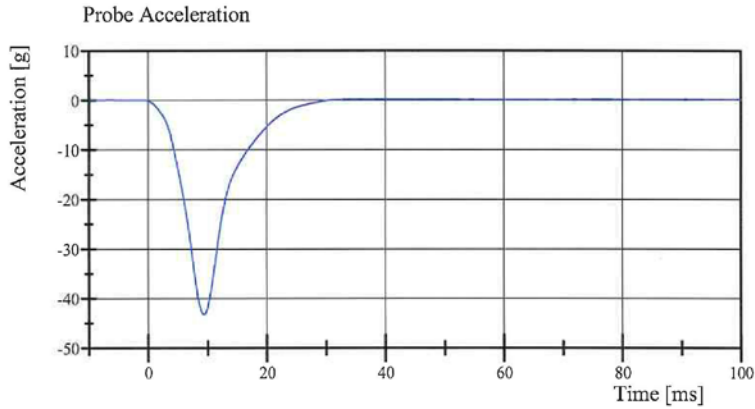


Transportation Research Center Inc.

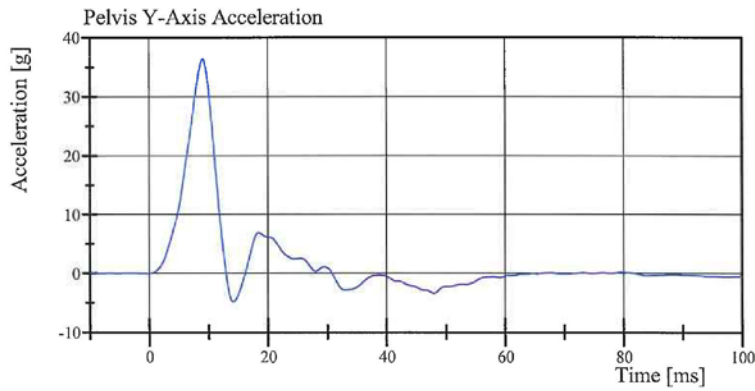
Left Lateral Iliac

SID IIs Serial No. DI8818 Certification No. 9-1

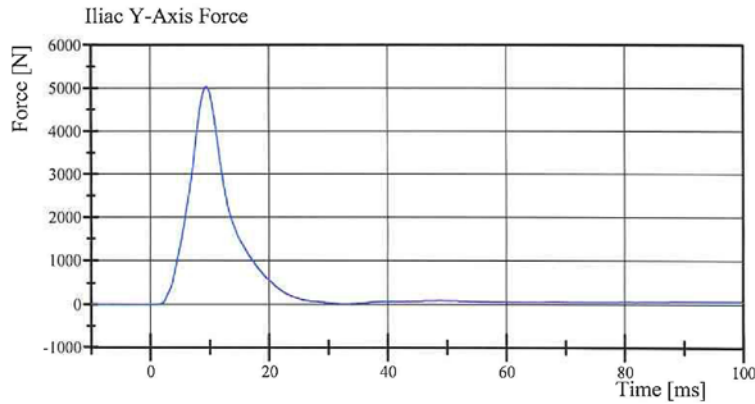
Test Date: 1/15/2014



Filter Class: CFC_180
Max: 0.2 g at 38.9 ms
Min: -43.2 g at 9.4 ms



Filter Class: CFC_180
Max: 36.3 g at 9.0 ms
Min: -4.8 g at 14.2 ms



Filter Class: CFC_600
Max: 5,032.0 N at 9.4 ms
Min: -0.7 N at -3.8 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

01.15.2014 09:43:19 663



APPENDIX D
TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION DATA

TABLE 1 – Dummy Instrumentation (SID-IIs)

			SID-IIs S/N DI8818			
			Serial Number	Manufacturer	Calibration Date	
Head Accelerometers			X	J32214	Endevco	9-Dec-2013
			Y	J27040	Endevco	9-Dec-2013
			Z	AGAC4	Endevco	9-Dec-2013
Displacement Potentiometers	Shoulder		Y	N/A	N/A	N/A
	Thoracic Rib	Upper	Y	3787-047	Servo	10-Dec-2013
		Middle	Y	3745-01815	Servo	10-Dec-2013
		Lower	Y	03745-01803	Servo	10-Dec-2013
	Abdominal Rib	Upper	Y	3745-01811	Servo	10-Dec-2013
		Lower	Y	3787-051	Servo	10-Dec-2013
Lower Spine Accelerometers (T12)			X	P81016	Entran	9-Dec-2013
			Y	P82275	Entran	9-Dec-2013
			Z	P64093	Endevco	9-Dec-2013
Acetabulum Load Cell			Y	235-FY	FTSS	6-Nov-2013
Iliac Wing Load Cell			Y	113-FY	FTSS	6-Nov-2013
Pelvis Plug (struck side)				63022	FTSS	18-Jan-2013
Pelvis Plug (non-struck side)				63609	FTSS	N/A

TABLE 2 – Vehicle Instrumentation

Vehicle Instrumentation		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	P81547	Endevco	5-Nov-2013
Vehicle Center of Gravity	Y	P81535	Endevco	5-Nov-2013
Vehicle Center of Gravity	Z	P82001	Endevco	5-Nov-2013
Left Floor Sill	Y	P81610	Endevco	14-Nov-2013
A-Pillar Sill	Y	P82003	Endevco	14-Nov-2013
A-Pillar Low	Y	P75996	Endevco	26-Sep-2013
A-Pillar Mid	Y	P80154	Endevco	21-Aug-2013
B-Pillar Sill	Y	P81650	Endevco	14-Nov-2013
B-Pillar Low	Y	P81529	Endevco	5-Nov-2013
B-Pillar Mid	Y	P80605	Endevco	5-Nov-2013
Driver Seat	Y	P76109	Endevco	2-Aug-2013
Engine Top	X	P80782	Endevco	13-Nov-2013
Engine Top	Y	P81528	Endevco	5-Nov-2013
Firewall	Y	P81647	Endevco	14-Nov-2013
Right Roof	Y	P81991	Endevco	5-Nov-2013
Right Floor Sill	Y	P82052	Endevco	17-Nov-2013
Rear Floor Pan	X	P82273	Endevco	15-Nov-2013
Rear Floor Pan	Y	P81654	Endevco	15-Nov-2013

TABLE 3 – Pole Instrumentation

Pole Instrumentation	Serial Number	Manufacturer	Calibration Date
Load Cell 1	5763-87-FX	Denton	9-Dec-2013
Load Cell 2	5763-97-FX	Denton	9-Dec-2013
Load Cell 3	5763-84-FX	Denton	9-Dec-2013
Load Cell 4	5764-81-FX	Denton	9-Dec-2013
Load Cell 5	5763-89-FX	Denton	9-Dec-2013
Load Cell 6	5763-77-FX	Denton	9-Dec-2013
Load Cell 7	5764-89-FX	Denton	9-Dec-2013
Load Cell 8	5764-77-FX	Denton	9-Dec-2013