

REPORT NUMBER: SPNCAP-CAL-13-002

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

**Chrysler Group LLC
2013 Dodge Dart
Four Door Sedan**

NHTSA No: MD0304

**PREPARED BY:
CALSPAN CORPORATION
P.O. BOX 400
BUFFALO, NEW YORK 14225**



October 19, 2012

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF CRASHWORTHINESS STANDARDS
MAIL CODE: NVS-111
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WASHINGTON, D.C. 20590**

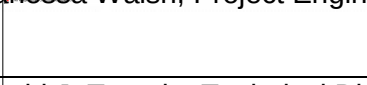
This final test report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, in response to Contract Number DTNH22-09-D-00126.

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Date: 10/5/2012

FINAL REPORT ACCEPTANCE BY OCWS:

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

Date: _____

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

Date: _____

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		14. Sponsoring Agency Code NVS-111																												
15. Supplementary Notes																														
16. Abstract A 32.20 km/h (20 mph), 75° oblique impact Side NCAP Test was conducted on the subject 2013 Dodge Dart four 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 at Calspan Corporation's Transportation Test Operations facility in Buffalo, New York on September 25, 2012. The impact velocity of the vehicle was 32.32 km/h, and the ambient temperature at the struck (driver's) side of the target vehicle was 19°C. The target vehicle's maximum post-test static crush was 348 mm located at level 3. The test vehicle's occupant performance data is as follows: <table border="1"> <thead> <tr> <th rowspan="2">Measurement Description</th> <th colspan="3">Driver ATD (SID-IIs) (Serial No. 8012)</th> </tr> <tr> <th>Units</th> <th>Threshold</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆)</td> <td></td> <td>1000</td> <td>194.82</td> </tr> <tr> <td>Resultant Lower Spine Acceleration</td> <td>G</td> <td>82</td> <td>48.14</td> </tr> <tr> <td>Total Pelvic Force (sum of acetabular and iliac forces)</td> <td>N</td> <td>5525</td> <td>2,691.44</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>38</td> <td>19.00</td> </tr> <tr> <td>Maximum Abdomen Rib Deflection</td> <td>mm</td> <td>45</td> <td>21.72</td> </tr> </tbody> </table> The driver's door on the struck side of the vehicle did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.				Measurement Description	Driver ATD (SID-IIs) (Serial No. 8012)			Units	Threshold	Result	Head Injury Criteria (HIC ₃₆)		1000	194.82	Resultant Lower Spine Acceleration	G	82	48.14	Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	2,691.44	Maximum Thoracic Rib Deflection	mm	38	19.00	Maximum Abdomen Rib Deflection	mm	45	21.72
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17. Key Words New Car Assessment Program (NCAP) Side Impact Pole Part 572V SID-IIs		18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Administration Technical Information Services Division, NPO-411 1200 New Jersey Ave. SE, Room E12-100 Washington, D.C. 20590 e-mail: tis@nhtsa.dot.gov FAX: 202-493-2833																												
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SECTION 1

TEST PURPOSE AND PROCEDURE

This side impact test was conducted as part of the FY 2013 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-09-D-00126. The purpose of this test is to generate comparative side impact performance in a 2013 Dodge Dart four door sedan. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Side NCAP Pole Laboratory Test Procedure, dated May 2012.

SECTION 2

SUMMARY OF TEST RESULTS

A rigid pole side impact test was conducted on a 2013 Dodge Dart four door sedan. The subject vehicle was towed into the rigid pole at an angle of 75° and a velocity of 32.32 km/h. The test was conducted by Calspan Corporation's Transportation Test Operations facility in Buffalo, New York on September 25, 2012. Pre-test and post-test photographs of the test vehicle and 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 May 2012. Camera locations and other pertinent camera information are included on page 3-11 in this report.

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

Head CG tri-axial accelerometers

Thorax upper, middle, and lower rib displacement potentiometers

Abdomen upper and lower rib displacement potentiometers

Lower spine tri-axial accelerometers

Iliac load cell

Acetabulum load cell

Appendix B contains the dummy response data. Dummy configuration and performance verification data can be found in Appendix C of this report. Appendix D identifies all serial numbers, manufacturers, and calibration dates for test equipment, dummy sensors, potentiometers, and load cells used to collect data during the test.

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

INJURY READINGS

Measurement Description	Driver ATD (SID-IIs)		
	Units	IARV	Result
Head Injury Criteria (HIC ₃₆)		1000	194.82
Lower Spine Resultant Acceleration	g	82	48.14
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	2,691.44
Maximum Thoracic Rib Deflection	mm	38*	19.00
Maximum Abdominal Rib Deflection	mm	45*	21.72

*Proposed IARV

Supplemental restraint information was recorded as follows:

SUPPLEMENTAL RESTRAINT INFORMATION

Restraint Type	Left Front (Driver) Occupant Location 1		Left Rear (Passenger) Occupant Location 4	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	Yes		
Knee Airbag	Yes	Yes		
Side Airbag 1 - Curtain	Yes	Yes	Yes	Yes
Side Airbag 2 - Torso/Pelvis Airbag	Yes	Yes	No	No
Side Airbag 3 - Pelvis	No	No	Yes	Yes
Seat Belt Pretensioner	Yes	Yes	No	No
Seat Belt Load Limiter	Yes	Yes	No	No
Other				

GENERAL COMMENTS:

1. P1 serial number - 8012

Data Anomalies:

- V1 LEFT MID A-POST AY is questionable after 68ms, wire was cut during impact event

SECTION 3

OCCUPANT AND VEHICLE INFORMATION

This section contains information reporting for the following Data Sheets:

Data Sheet No. 1 – General Test and Vehicle Parameter Data

Data Sheet No. 2 – Seat, Seat Belt, Steering Wheel Adjustment and Fuel Systems Data

Data Sheet No. 3 – Dummy Longitudinal Clearance Dimensions

Data Sheet No. 4 – Dummy Lateral Clearance Dimensions

Data Sheet No. 5 – Camera and instrumentation Data

Data Sheet No. 6 – Vehicle Accelerometer Data

Data Sheet No. 7 – Rigid Pole Load Cell Data

Data Sheet No. 8 – Post-Test Observations

Data Sheet No. 9 – Test Vehicle Profile Measurements

Data Sheet No. 10 – Test Vehicle Exterior Crush Measurements

Data Sheet No. 11 – FMVSS No. 301 Static Rollover Results

Data Sheet No. 12 – Dummy / Vehicle Temperature and Humidity Stabilization Data

DATA SHEET NO. 1
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2013 Dodge Dart Four Door Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
 Test Date: 9/25/2012

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	MD0304	Traction Control System (TCS)	Yes
Model Year	2013	Auto-Leveling System	No
Make	Dodge	Automatic Door Locks (ADL)	Yes
Model	Dart	Power Window Auto-Reverse	No
Body Style	Four Door Sedan	Other Optional Feature	--
VIN	1C3CDFCA7DD106439	Driver Front Airbag	Yes
Body Color	Charcoal gray	Driver Curtain Airbag	Yes
Odometer Reading (km/mi)	66 / 41	Driver Head / Torso Airbag	No
Engine Displacement (L)	2.0	Driver Torso Airbag	No
Type / No. Cylinders	I4	Driver Torso / Pelvis Airbag	Yes
Engine Placement	Transverse	Driver Pelvis Airbag	No
Transmission Type	Automatic	Driver Knee Airbag	Yes
Transmission Speeds	6-Speed	Rear Pass. Curtain Airbag	Yes
Overdrive	Yes	Rear Pass. Head / Torso Airbag	No
Final Drive	Front Wheel Drive	Rear Pass. Torso Airbag	No
Roof Rack	No	Rear Pass. Torso / Pelvis Airbag	No
Sunroof / T-Top	Yes	Rear Pass. Pelvis Airbag	Yes
Running Boards	No	Driver Seat Belt Pretensioner	Yes
Tilt Steering Wheel	Yes	Rear Pass. Seat Belt Pretensioner	No
Power Seats	Yes	Driver Load Limiter	Yes
Anti-Lock Brakes (ABS)	Yes	Rear Pass. Load Limiter	No
All-Wheel Drive (AWD)	No	Other Safety Restraint	--

Does owner's manual provide instructions to turn off automatic door locks? No

DATA FROM CERTIFICATION LABEL

Manufactured By	Chrysler Group LLC	GVWR (kg)	1,944
Date of Manufacture	Jul 12	GAWR Front (kg)	1,076
Vehicle Type	Four Door Sedan	GAWR Rear (kg)	901

VEHICLE SEATING AND WEIGHT CAPACITY DATA

Measured Parameter	Front	Rear	Third	Total	
Designated Seating Capacity (DSC)	2	3	0	5	
Capacity Weight (VCW) (kg)				374.0	(A)
DSC X 68.04 kg				340.2	(B)
Cargo Weight (RCLW) (kg)				33.8	(A-B)

VEHICLE SEAT TYPE

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

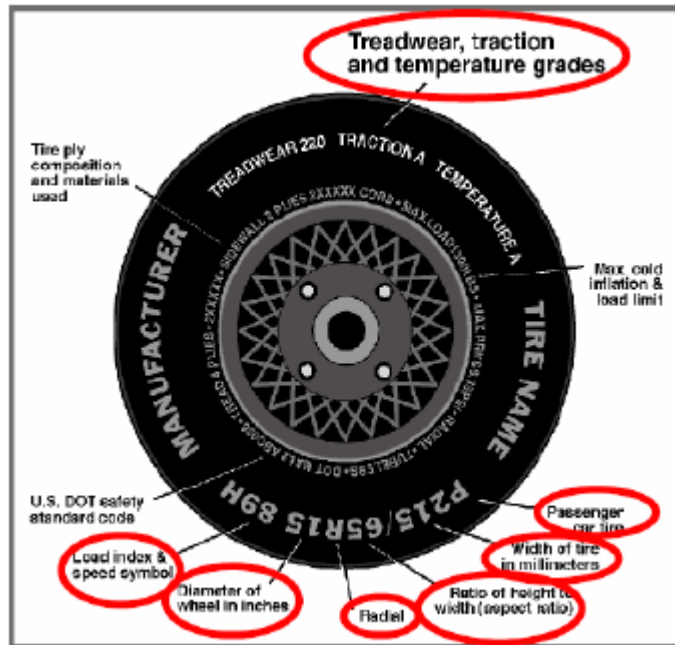
DATA SHEET NO. 1 ... (CONTINUED)
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2013 Dodge Dart Four Door Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
 Test Date: 9/25/2012

VEHICLE TIRE INFORMATION

Collected for year, make, model, & VIN, all items circled in red, tire manufacturer and tire name.



TIRE PLACARD INFORMATION

Measured Parameter	Front	Rear
Recommended Cold Tire Pressure (kPa)	235	235
Recommended Tire Size	P225/45R17	P225/45R17

TIRE SIDEWALL INFORMATION

Measured Parameter	Front	Rear
Max. Tire Pressure (kPa)	350	350
Tire Size on Vehicle	P225/45R17	P225/45R17
Tire Manufacturer	Continental	Continental
Tire Name	ContiproContact	ContiproContact
Tire Type	All season	All season
Tire Width	225	225
Aspect Ratio	45	45
Radial	Yes	Yes
Wheel Diameter	17	17
Load Index/Speed Symbol	91H	91H
Treadwear	500	500
Traction Grade	AA	AA
Temperature Grade	A	A
Tire Material	Rubber	Rubber

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

Test Vehicle: 2013 Dodge Dart Four Door Sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
 Test Date: 9/25/2012

TIRE PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kPa	235	235	235	235
Tire Placard	kPa	235	235	235	235
Owner's Manual	kPa	235	235	235	235
As Tested	kPa	235	235	235	235

TEST VEHICLE AXLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Left	kg	479.5	283.5		491.0	314.0		498.5	316.0	
Right	kg	456.0	294.5		473.5	307.5		460.5	320.5	
Ratio	%	62	38		61	39		60	40	
Totals	kg	935.5	578.0	1,513.5	964.5	621.5	1,586.0	959.0	636.5	1,595.5

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total As Delivered Weight (UVW)	kg	1,513.5	(A)
Actual Weight of 1 P572V (SID-IIs) ATD Used	kg	44.1	(B)
Rated Cargo / Luggage Weight (RCLW)	kg	33.8	(C)
Calculated Vehicle Target Weight (TVTW)	kg	1,591.4	(A+B+C)

Does the measured As Test 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)
Rear Deck Lid	14.0
Ballast / Equipment Added	0.0

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

Test Vehicle: 2013 Dodge Dart four door sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
 Test Date: 9/25/2012

TEST VEHICLE ATTITUDES AND CG

Measurement Description	Units	As Delivered	As Tested	Fully Loaded	Meets Rqmt***
Driver Door Sill Angle (front-to-rear)*	Deg	-0.2	-0.1	-0.1	Yes
Front Passenger Sill Angle (front-to-rear)*	Deg	-1.6	-1.5	-1.4	Yes
Front Bumper-Line Angle (left-to-right)**	Deg	-0.4	-0.4	-0.6	Yes
Rear Bumper-Line Angle (left-to-right)**	Deg	0.8	0.8	0.8	Yes
Vehicle CG (Aft of Front Axle)	mm	1,033	1,060	1,097	
Vehicle CG (Left (+) / Right (-) from Longitudinal Centerline)	mm	-6	-11	-4	

* 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 Requirement

DATA SHEET NO. 2
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT AND FUEL SYSTEMS DATA

Test Vehicle: 2013 Dodge Dart four door sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
 Test Date: 9/25/2012

SEAT POSITIONING

The driver's 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	18.0	13.0	15.5
Front Passenger Seat	18.4	13.9	16.15
Front Center Seat	N/A	N/A	N/A
Struck Side Rear Seat	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed

SEAT HEIGHT AND ANGLE

Seat	As Tested SCRL Angle (Mid) (°)	As Tested SCRP Height (mm)	SCRP Height Position	SCRP Height (mm)		
				Rearmost	Mid-Fore / Aft	Forward-Most
Driver Seat	15.5	17	Max	45	45	45
			Mid	17	17	17
			Min	0	0	0
Front Passenger Seat	16.5	18	Max	48	48	48
			Mid	18	18	18
			Min	0	0	0
Front Center Seat	N/A	N/A	Max	-	-	-
			Mid	-	-	-
			Min	-	-	-
Struck Side Rear Seat	Fixed	Fixed	Max	-	-	-
			Mid	-	-	-
			Min	-	-	-
Non-Struck Side Rear Seat	Fixed	Fixed	Max	-	-	-
			Mid	-	-	-
			Min	-	-	-
Rear Center Seat	Fixed	Fixed	Max	-	-	-
			Mid	-	-	-
			Min	-	-	-

DATA SHEET NO. 2 ... (CONTINUED)
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT AND FUEL SYSTEMS DATA

Test Vehicle: 2013 Dodge Dart four door sedan
 Test Program: NCAP Side Pole Impact Test

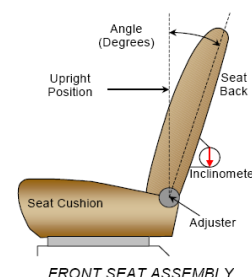
NHTSA No.: MD0304
 Test Date: 9/25/2012

SEAT FORE / AFT POSITION

Seat	Total Fore / Aft Travel		Test Position from Forwardmost Position	
	mm	Detents*	mm	Detents*
Driver Seat	220	N/A	0	N/A
Front Passenger Seat	220	23	0	0
Front Center Seat	N/A	N/A	N/A	N/A
Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed	Fixed

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 are set to match the struck-side rear seat back.



Seat	Total Seat Back Angle Range		Test Position from Most Upright	
	Degrees	Detents*	Degrees	Detents*
Driver Seat w/Seated Dummy	-13 to 42.8	N/A	-5.3	N/A
Front Passenger Seat	-14.4 to 56.8	N/A	-1.4	N/A
Front Center Seat	N/A	N/A	N/A	N/A
Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed	Fixed

SEAT BELT ANCHORAGE ADJUSTMENT

Seat belt anchorages are adjusted in accordance with the information provided by the manufacturer on Form No. 1. For this test zero is defined as full up in reference to the seat belt anchorage.

Seat	Total # of Positions	Placed in Position #
Driver Seat	4	0

HEAD RESTRAINT ADJUSTMENT

The driver's head restraint is adjusted to the lowest and most full forward in-use position. For this test zero is defined as full down in reference to the head restraint.

Seat	Total # of Positions	Placed in Position #
Driver Seat	5	0

DATA SHEET NO. 2 ... (CONTINUED)
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT AND FUEL SYSTEMS DATA

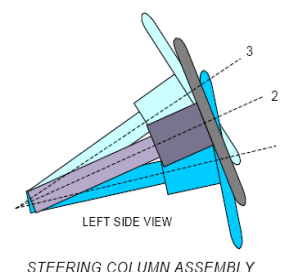
Test Vehicle: 2013 Dodge Dart four door sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
 Test Date: 9/25/2012

STEERING COLUMN ADJUSTMENT

Steering wheel and column adjustments are made so that the steering wheel hub is at the center of its geometric locus it describes when it moves through its full range of motion.

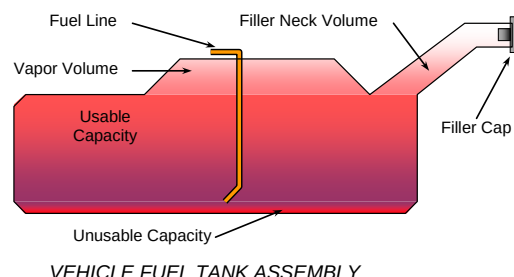
		Degrees	Fore / Aft Position (mm)
Lowermost	– Position 1	22.4	0
Geometric Center	– Position 2	24.5	20
Uppermost	– Position 3	26.6	40
Telescoping Steering Wheel Travel			40
Test Position		24.5	20



FUEL PUMP

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

The vehicle is equipped with an electric fuel pump.
The fuel filler neck is on the right side of the vehicle.
The pump creates positive pressure in the fuel lines,
pushing the gasoline to the engine. The electric fuel
pump operates when the ignition is in the 'on'
position and the engine is running.



FUEL TANK CAPACITY DATA

Description	Liters
Usable Capacity of "Standard Tank" - see Form No. 1	59.8
Usable Capacity of "Optional Tank" - see Form No. 1	49.9
Usable Capacity of "Standard Tank" - see Owner's Manual	59.8
Usable Capacity of "Optional Tank" - see Owner's Manual	N/A
93% of Usable Capacity	55.6
Actual Amount of Solvent Used in Test	55.6
1/3 of Usable Capacity	20.1

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



Yes

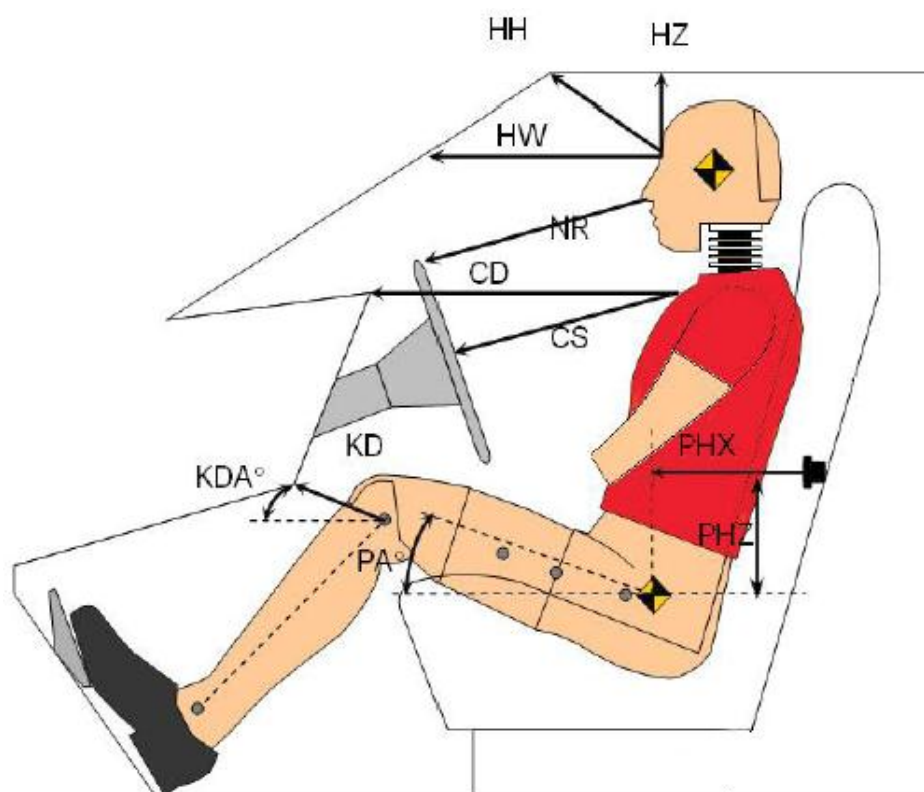


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DATA SHEET NO. 3
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2013 Dodge Dart four door sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
 Test Date: 9/25/2012



Left Side View

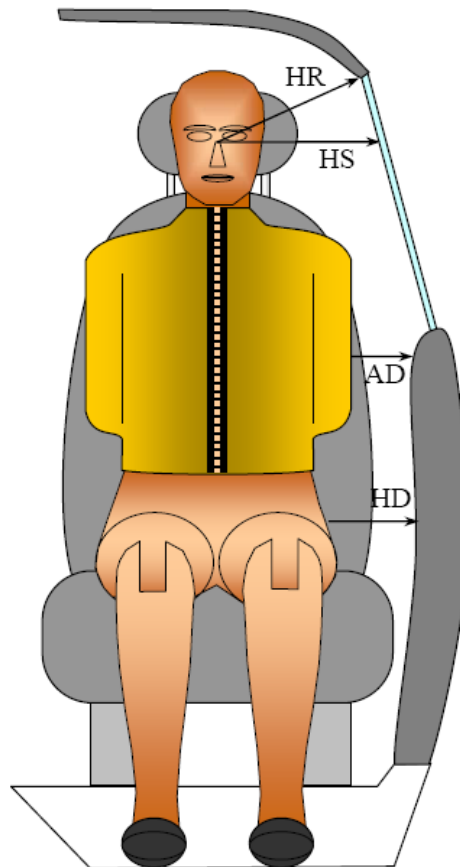
DUMMY LONGITUDINAL CLEARANCE DIMENSION INFORMATION

Driver Code	Description	Driver (Serial No. 8012)	
		Length (mm)	Angle (°)
HH	Head to Header	261	
HW	Head to Windshield	653	
HZ	Head to Roof Liner	179	
NR	Nose to Rim	244	
CD	Chest to Dash	440	
CS	Chest to Steering Wheel	192	
KD(L) / KDA(L)°	Left Knee to Dash	132	40.1
KD(R) / KDA(R)°	Right Knee to Dash	129	42.3
PAX°	Pelvic Tilt Angle (X-Axis)		19.7
PAY°	Pelvic Tilt Angle (Y-Axis)		0.6
PHX	Hip Point to Striker (X-Axis)	306	
PHZ	Hip Point to Striker (Z-Axis)	155	

DATA SHEET NO. 4
DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2013 Dodge Dart four door sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
Test Date: 9/25/2012



FRONT VIEW OF DUMMY

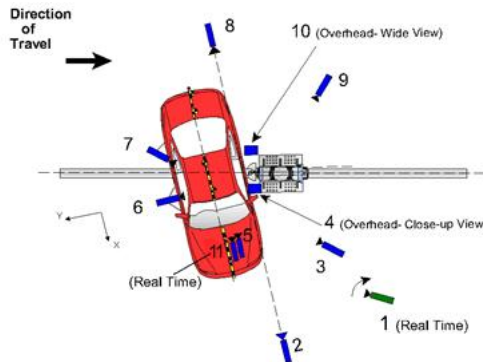
DUMMY LATERAL CLEARANCE DIMENSION INFORMATION

Code	Measurement Description	Units	Driver - Length (Serial No. 8012)
HR	Head To Side Header	mm	254
HS	Head to Side Window	mm	387
AD	Arm to Door	mm	168
HD	Hip Point to Door	mm	170

DATA SHEET NO. 5 CAMERA AND INSTRUMENTATION DATA

Test Vehicle: 2013 Dodge Dart four door sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
 Test Date: 9/25/2012



CAMERA LOCATIONS AND DATA

No.	Camera 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	1538	6363	-950	24	1000
3	Impact side 45° - forward pole view	2963	2675	-1478	28	1000
4	Overhead Close-up view of impact	-277	0	-5298	24	1000
5	Onboard - dummy front view				12.5	1000
6	Onboard - dummy side view				6.5	1000
7	Onboard - dummy rear oblique view				6.5	1000
8	Rear ground level - impact view	-1971	6706	-913	28	1000
9	Impact side 45° - rearward pole view	2400	-2523	-1480	24	1000
10	Overhead wide - view of impact	-100	0	-5298	14.5	1000
11	Real-time (24 - 30 fps) - dummy front view				Zoom	30

Notes: Reference - From Point of Impact for X and Y; from Ground for Z
 +X = Forward of vehicle, +Y = Right of vehicle, +Z = Down
 * All measurements accurate to ± 6 mm. Vehicle is at a 75° angle to the rigid pole.

Comments: All Cameras Operated Accordingly.

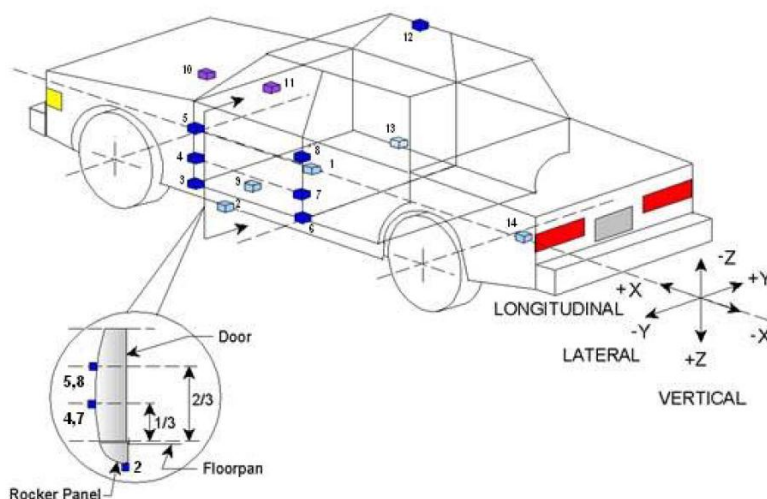
INSTRUMENTATION

Description	Number of Channels
Driver Dummy Channels	16
Vehicle Structure Accelerometers	18
Pole Load Cells	8
Total	42

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

Test Vehicle: 2013 Dodge Dart four door sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
 Test Date: 9/25/2012



TEST VEHICLE ACCELEROMETER LOCATIONS

No.	Accelerometer Location	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	2,864	4	494
2	Left Floor Sill	2,790	-654	340
3	A-Pillar Sill	3,154	-649	375
4	A-Pillar Low	3,167	-654	577
5	A-Pillar Mid	3,133	-676	1008
6	B-Pillar Sill	2,168	-676	415
7	B-Pillar Low	2,142	-676	618
8	B-Pillar Mid	2,132	-672	852
9	Driver Seat Track	2,442	-511	254
10	Engine Top	3850	361	824
11	Firewall	3672	5	894
12	Right Roof	2,032	610	1412
13	Right Floor Sill	2,725	660	328
14	Rear Floorpan	1,174	57	550

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

DATA SHEET NO. 7
RIGID POLE LOAD CELL DATA

Test Vehicle: 2013 Dodge Dart four door sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
Test Date: 9/25/2012



RIGID POLE LOAD CELL LOCATIONS

ID	Units	Height From Ground
1	mm	200
2	mm	590
3	mm	750
4	mm	1075
5	mm	1260
6	mm	1740
7	mm	1920
8	mm	2300

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

Test Vehicle: 2013 Dodge Dart four door sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
Test Date: 9/25/2012

TEST DUMMY INFORMATION AND CONTACT POINTS

Dummy Body Part	Driver Seat Dummy (SID-IIs)
Face	Torso/Pelvis Airbag and Frontal Airbag
Top of Head	Curtain Air Bag
Left Side of Head	Torso/Pelvis Airbag
Back of Head	Headrest
Left Shoulder	Torso/Pelvis Airbag
Upper Torso	Torso/Pelvis Airbag
Lower Torso	Torso/Pelvis Airbag
Left Hip	Torso/Pelvis Airbag
Left Knee	Driver's Door Panel

POST-TEST DOOR PERFORMANCE

Description	Struck Side		Non-Struck Side		Rear Hatch/ Other*
	Front	Rear	Front	Rear	
Remained Closed and Operational	No	No	Yes	Yes	NA
Total Separation from Vehicle at Hinges or Latches	0	0	0	0	NA
Latch or Hinge Systems Pulled Out of Their Anchorages	No	No	No	No	NA
Disengaged from Latched Position	No	No	No	No	NA
Latch Separated from Striker	No	No	No	No	NA
Jammed Shut	Yes	Yes	No	No	NA
If Door Opened at Striker, Width of Opening at Striker (mm)	NA	NA	NA	NA	NA

*Rear deck lid was removed to meet test weight

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

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

Test Vehicle: 2013 Dodge Dart Four Door Sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
Test Date: 9/25/2012

POST-TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	A-Pillar bent inward
Sill Separation	Sill remained attached to vehicle and deformed at impact location
Windshield Damage	Separated along the A-Pillar and cracked throughout
Side Window Damage	Driver's window shattered during the impact event
Other Notable Effects	Sunroof was ejected from the vehicle on impact

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Struck Side Driver		Struck Side Rear Passenger	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	Yes		
Knee Airbag	Yes	Yes		
Side Airbag 1 - Curtain	Yes	Yes	Yes	Yes
Side Airbag 2 - Torso/Pelvis Airbag	Yes	Yes	No	N/A
Side Airbag 3 – Pelvis Airbag	No	N/A	Yes	Yes
Seat Belt Pretensioner	Yes	Yes	No	N/A
Seat Belt Load Limiter	Yes	Yes	No	N/A
Other				

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

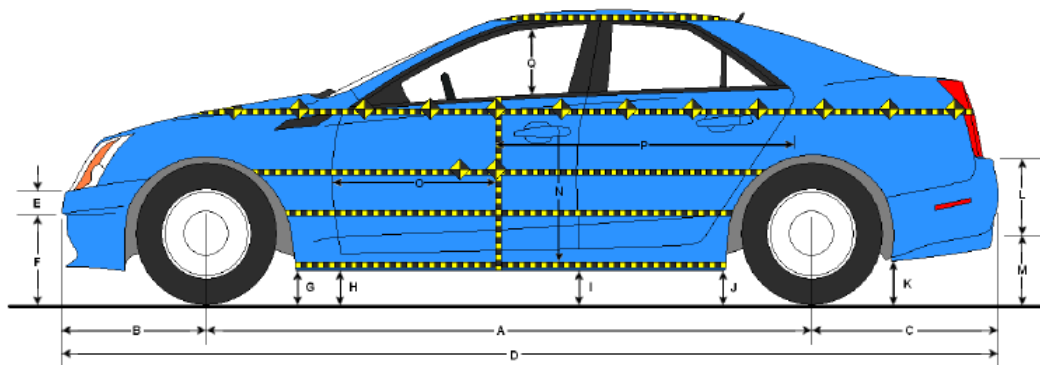
Measured Parameter	Units	Tolerance	Value
Vertical Impact Ref Line - Aft of Front Axle, Intended Impact Pt	mm		1126
Actual Impact Point - Aft of Front Axle	mm		1112
Horizontal Offset (+ forward / - rearward)	mm	+/- 38 *	14
Angle Between Vehicle's Longitudinal Centerline and Line of Forward Motion	deg	75 +/- 3	75.0
Trap No. 1 Velocity - Primary	kph	31.4 to 33.0	32.3
Trap No. 2 Velocity - Redundant	kph	31.4 to 33.0	32.3

* Of Intended Impact Point

DATA SHEET NO. 9
TEST VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2013 Dodge Dart four door sedan
Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
Test Date: 9/25/2012



LEFT SIDE VIEW

VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

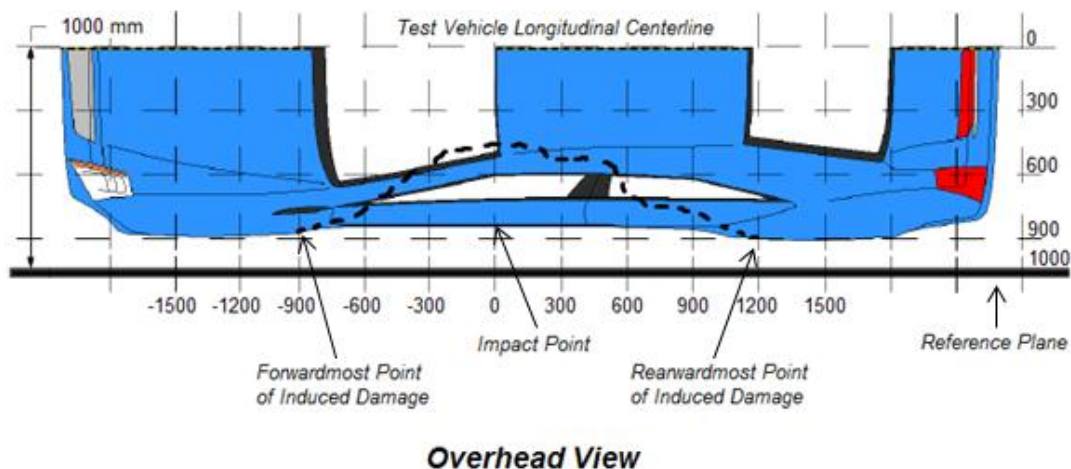
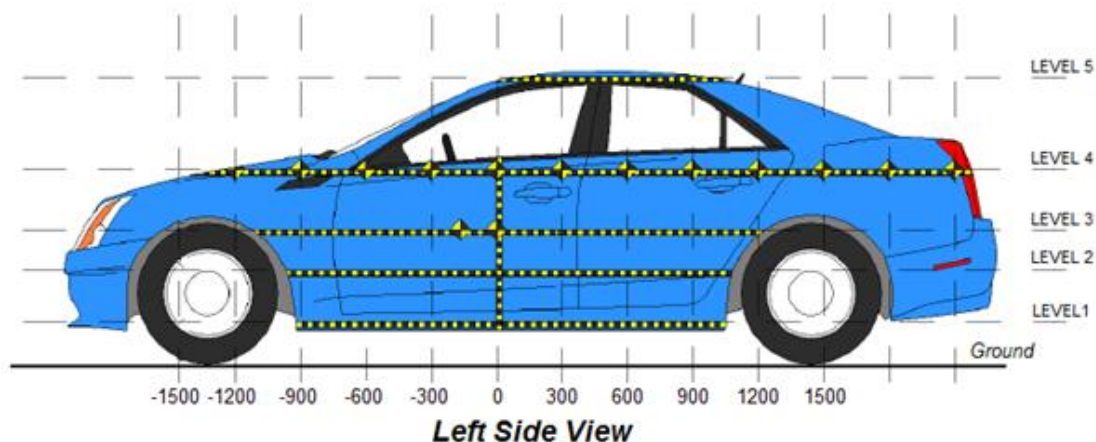
Code	Description	Pre-Test	Post-Test	Difference
A	Vehicle Wheelbase	2,704	2,678	-26
B	Front Axle to FSOV	981	974	-8
C	Rear Axle to RSOV	993	993	0
D	Total Length at Centerline	4,678	4644	-34
E	Front Bumper Thickness	120	120	0
F	Front Bumper Bottom to Ground	442	465	23
G	Sill Height at Front Wheel Well	182	181	-1
H	Sill Height at Front Door Leading Edge	188	189	1
I	Sill Height at B-Pillar	202	221	19
J1	Sill Height at Rear Wheel Well	204	235	31
J2	Pinch Weld Height at Rear Wheel Well	203	230	27
K	Sill Height Aft of Rear Wheel Well	212	234	22
L	Rear Bumper Thickness	294	294	0
M	Rear Bumper Bottom to Ground	352	361	9
N	Sill Height to Bottom of Front Window Sill	738	737	-1
O	Front Door Leading Edge to Impact CL	676	561	-115
P	Rear Door Trailing Edge to Impact CL	1,250	1,178	-72
Q	Front Window Opening	411	391	-20
R	Right Side Length	4,540	4528	-12
S	Left Side Length	4,543	4481	-62
T	Vehicle Width at B-Pillars	1,836	1758	-78

* All measurements in mm with tolerance of $\pm 3\text{mm}$

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

Test Vehicle: 2013 Dodge Dart four door sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
 Test Date: 9/25/2012



MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Measurement Description	Units	Height Above Ground	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	mm	230	268	0
2	Occupant Hip Point	mm	472	319	0
3	Mid - Door	mm	619	348	0
4	Window Sill	mm	888	312	0
5	Window Top	mm	1415	60	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)
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2013 Dodge Dart four door sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
 Test Date: 9/25/2012

EXTERIOR CRUSH MEASUREMENTS AT EACH LEVEL

	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-1500															
-1350															
-1200															
-1050															
-900			912	822				940	863				-28	-41	
-750	863	904	906	831		895	933	940	870		-32	-29	-34	-39	
-600	847	885	901	838		816	871	889	839		31	14	12	-1	
-450	842	882	904	846		753	799	808	781		89	83	96	65	
-300	842	884	907	855		688	717	725	711		154	167	182	144	
-150	842	885	910	865		613	638	636	633		229	247	274	232	
0	842	887	911	874	440	574	568	563	562	428	268	319	348	312	12
150	841	887	911	882	581	668	650	634	624	521	173	237	277	258	60
300	840	888	910	899	594	733	775	760	735	552	107	113	150	164	42
450	839	888	909	893	597	768	814	836	825	565	71	74	73	68	32
600	838	887	905	893	596	790	830	849	839	577	48	57	56	54	19
750	838	885	901	890	592	808	845	860	850	582	30	40	41	40	10
900	834	883	896	888	584	818	859	871	862	580	16	24	25	26	4
1050	843	885	892	883	564	846	877	882	871	565	-3	8	10	12	-1
1200		901	902	878			903	906	881			-2	-4	-3	
1350			911	871				906	888				5	-17	
1500				867					863					4	

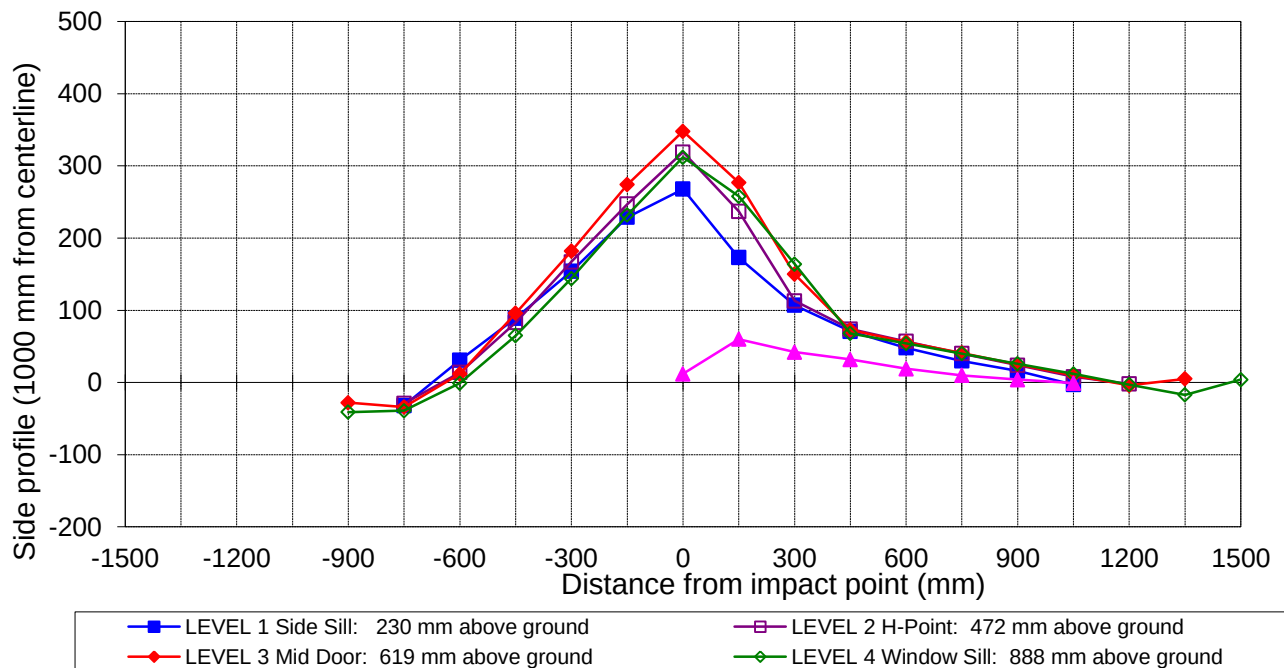
NOTE: Pre-test measurements are taken when the vehicle is in the "As Tested" weight condition. Vehicle measurements forward of the vertical impact reference line are negative. The crush profile grid is established prior to the test based on an estimated impact point. The final distance from impact is 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)
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2013 Dodge Dart four door sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
 Test Date: 9/25/2012

Vehicle Exterior Crush Measurements - Visual Representation



**DATA SHEET NO. 11
FMVSS NO. 301 STATIC ROLLOVER RESULTS**

Test Vehicle:	<u>2013 Dodge Dart four door sedan</u>	NHTSA No.:	<u>MD0304</u>
Test Program:	<u>NCAP Side MDB Impact Test</u>	Test Date:	<u>9/25/2012</u>
Test Time:	<u>3:25 PM</u>	Temperature:	<u>19° C</u>

- A. From impact until vehicle motion ceases: 0 oz.
(Maximum allowable is 1 oz.)
- B. For the 5-minute period after motion ceases: 0 oz.
(Maximum allowable is 5 oz.)
- C. For the following 25 minutes: 0 oz.
(Maximum allowable is 1 oz./minute)
- D. Spillage Details: No Spillage Occurred

FMVSS NO. 301 STATIC ROLLOVER DATA



ROLLOVER SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	69	300	369
90° to 180°	65	300	365
180° to 270°	62	300	362
270° to 360°	67	300	367

FMVSS NO. 301 ROLLOVER SPILLAGE TABLE

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

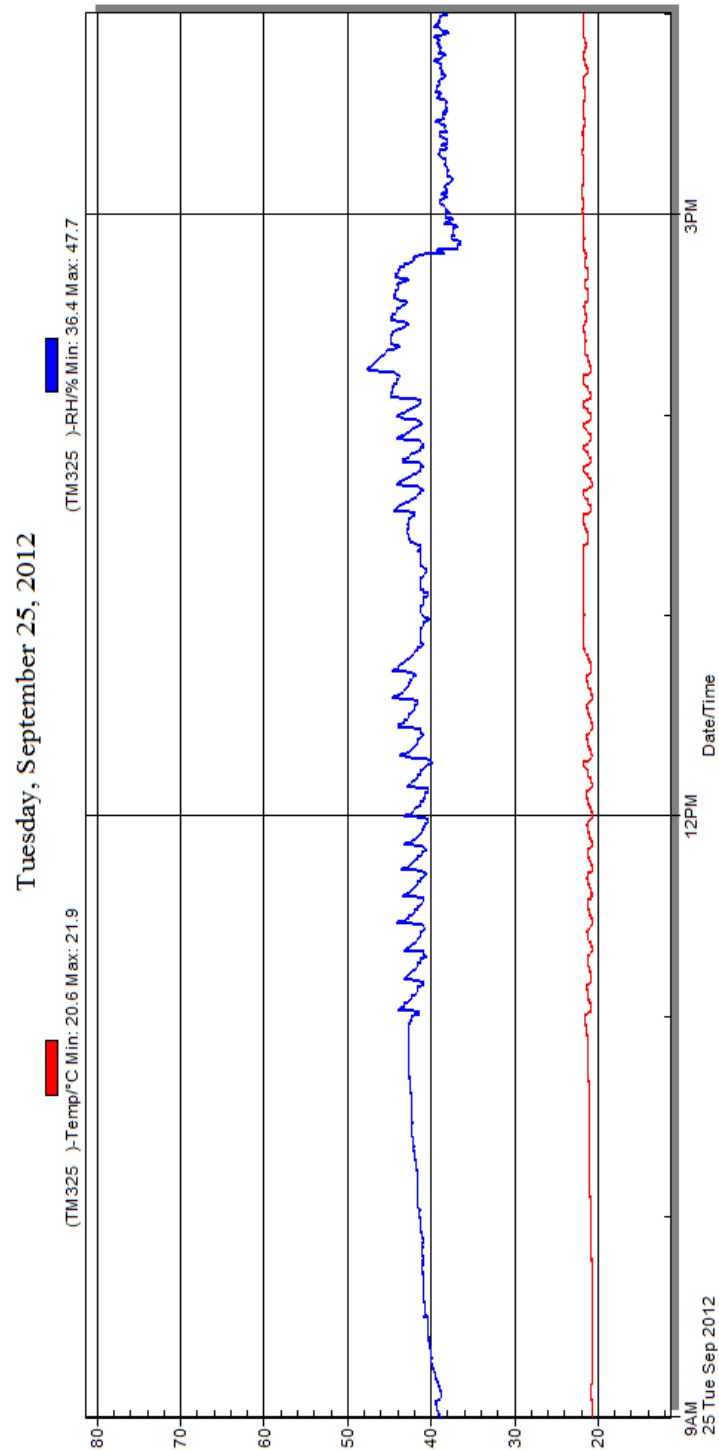
ROLLOVER SOLVENT SPILLAGE LOCATION TABLE

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

DATA SHEET NO. 12
DUMMY / VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION DATA

Test Vehicle: 2013 Dodge Dart four door sedan
 Test Program: NCAP Side Pole Impact Test

NHTSA No.: MD0304
 Test Date: 9/25/2012



Temperature and Humidity Stabilization Chart / Data for Dummies and Test Vehicle

APPENDIX A
PHOTOGRAPHS

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Figure A-1: As Delivered Right Front $\frac{3}{4}$ View of Test Vehicle



Figure A-2: As Delivered Left Rear $\frac{3}{4}$ View of Test Vehicle



Figure A-3: Pre-Test Frontal View of Test Vehicle



Figure A-4: Post-Test Frontal View of Test Vehicle



Figure A-5: Pre-Test Left Front $\frac{3}{4}$ View of Test Vehicle



Figure A-6: Post-Test Left Front $\frac{3}{4}$ View of Test Vehicle



Figure A-7: Pre-Test Left Side View of Test Vehicle

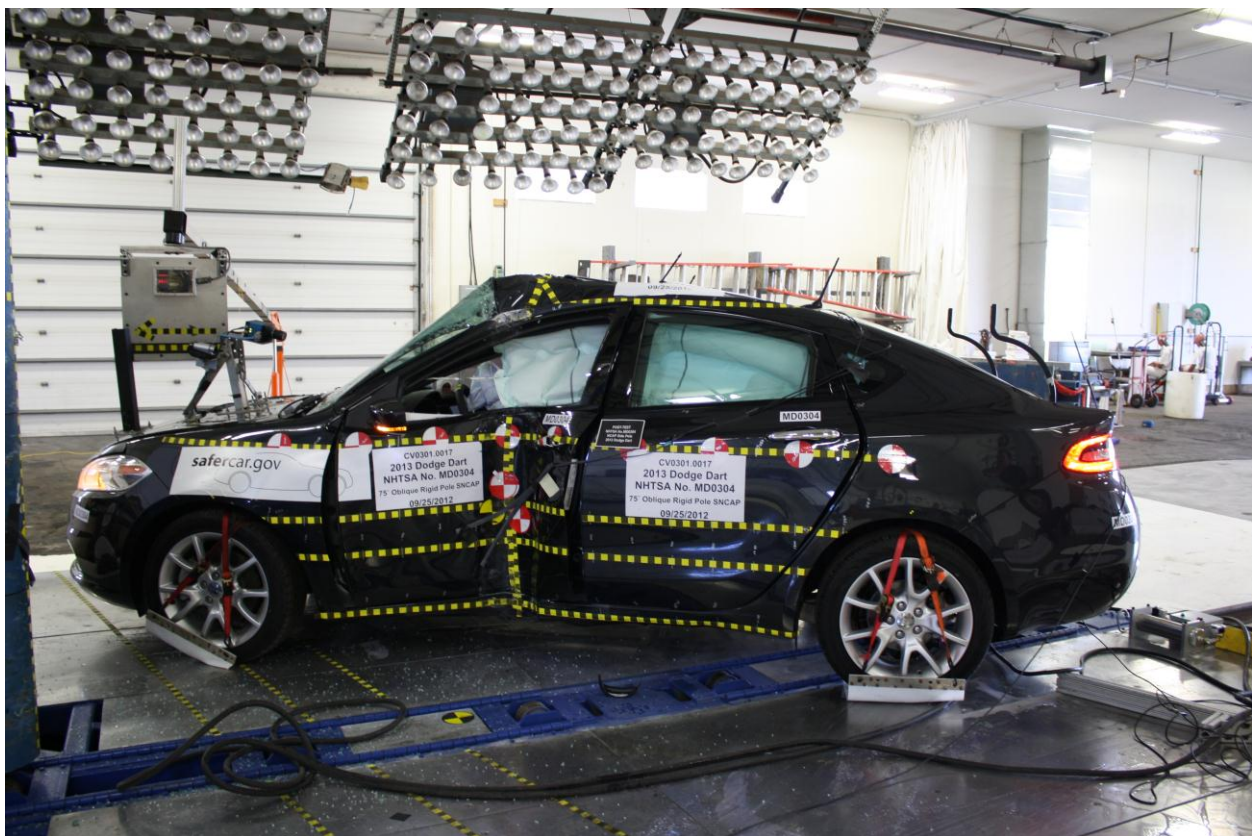


Figure A-8: Post-Test Left Side View of Test Vehicle



Figure A-9: Pre-Test Left Rear $\frac{3}{4}$ View of Test Vehicle



Figure A-10: Post-Test Left Rear $\frac{3}{4}$ View of Test Vehicle



Figure A-11: Pre-Test Rear View of Test Vehicle



Figure A-12: Post-Test Rear View of Test Vehicle



Figure A-13: Pre-Test Right Side View of Test Vehicle



Figure A-14: Post-Test Right Side View of Test Vehicle



Figure A-15: Pre-Test Overhead View of Test Area



Figure A-16: Post-Test Overhead View of Test Area



Figure A-17: Pre-Test Left Side View of Pole Positioned Against Side of Vehicle

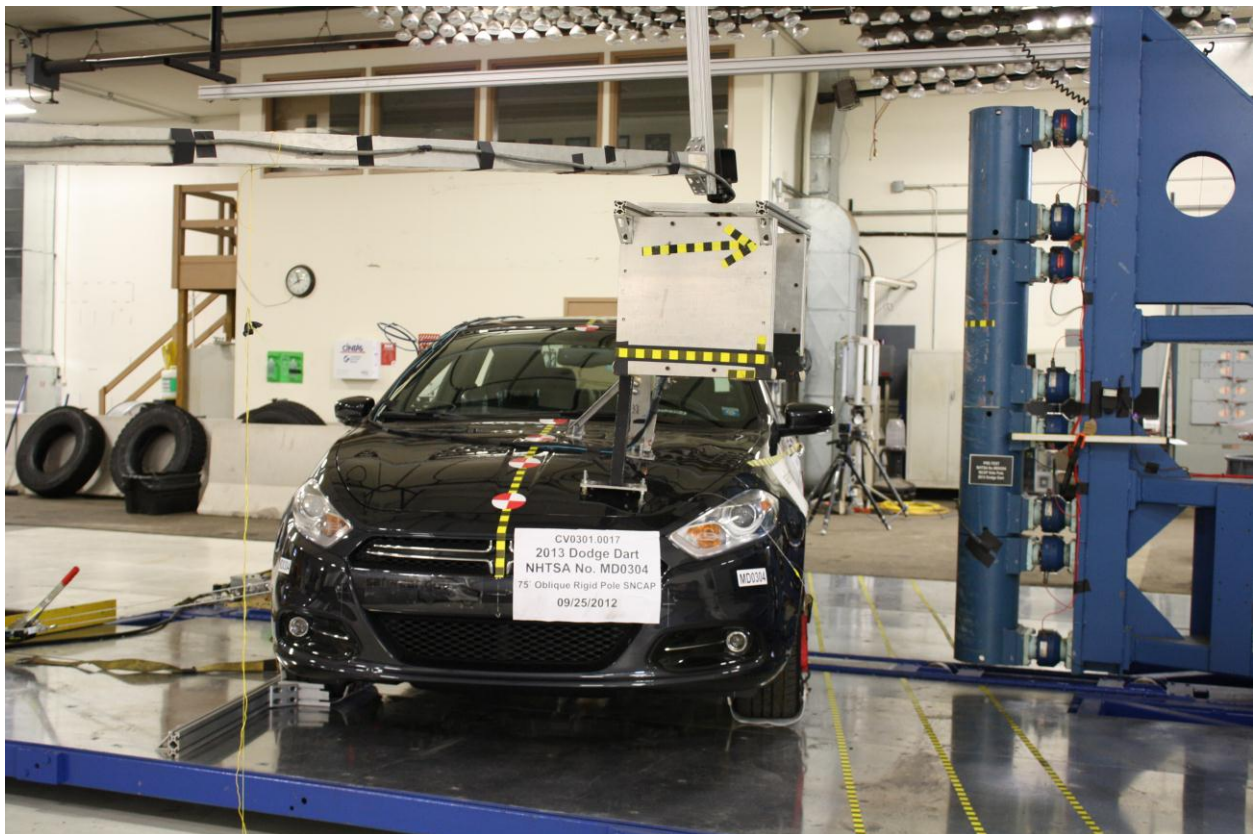


Figure A-18: Pre-Test Right Side View of Pole Positioned Against Side of Vehicle

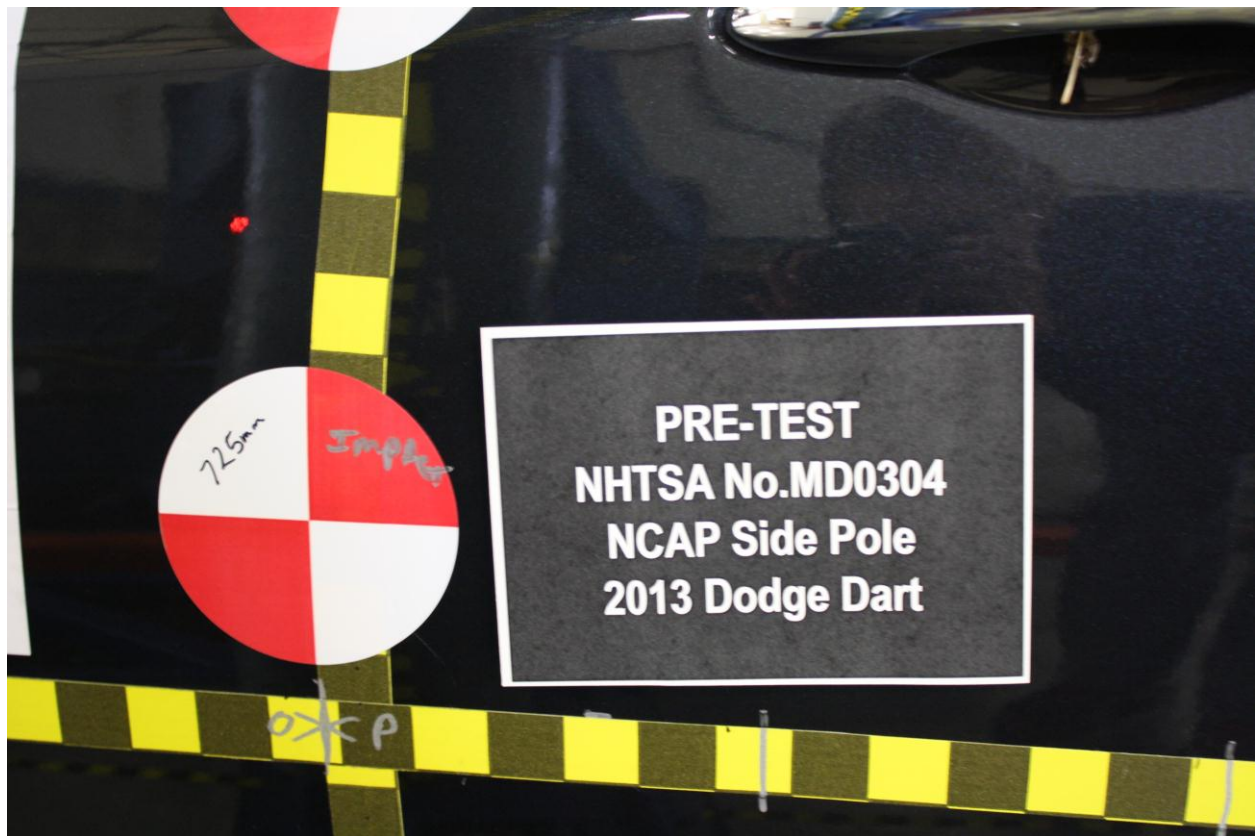


Figure A-19: Pre-Test Close-Up View of Impact Point Target



Figure A-20: Post-Test Close-Up View of Impact Point Target Showing Impact Location



Figure A-21: Pre-Test Front Close-Up View of Dummy Head and Chest



Figure A-22: Post-Test Front Close-Up View of Dummy



Figure A-23: Pre-Test Left Side View of Dummy Showing Belt and Chalking



Figure A-24: Pre-Test Left Side View of Dummy Shoulder and Door Top View



Figure A-25: Post-Test Left Side View of Dummy Shoulder and Door Top View



Figure A-26: Pre-Test Frontal View of Seat Back Prior to Dummy Positioning

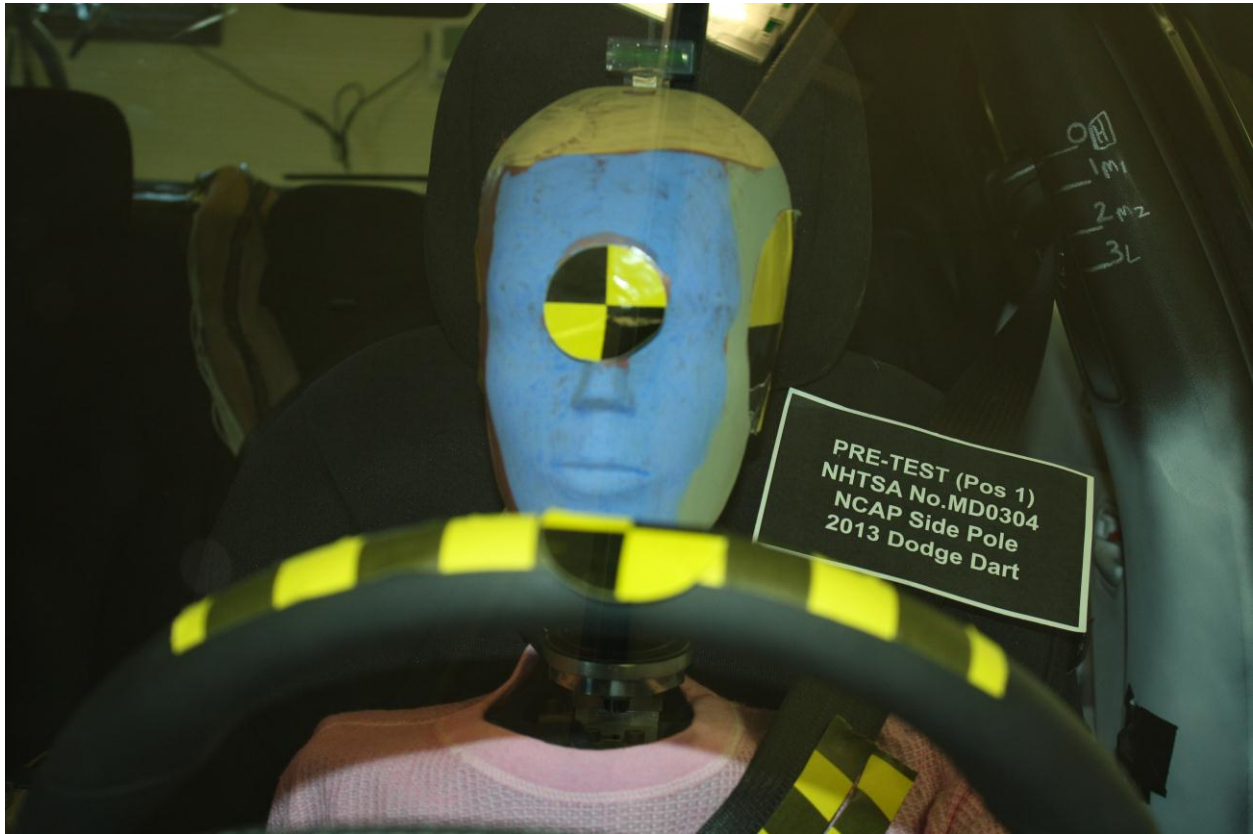


Figure A-27: Pre-Test Frontal Close-Up View of Dummy Head / Shoulders in Relation to Head Restraint



Figure A-28: Pre-Test Frontal View of Seat Pan Prior to Dummy Positioning



Figure A-29: Pre-Test Overhead View of Dummy Thighs on Seat Pan

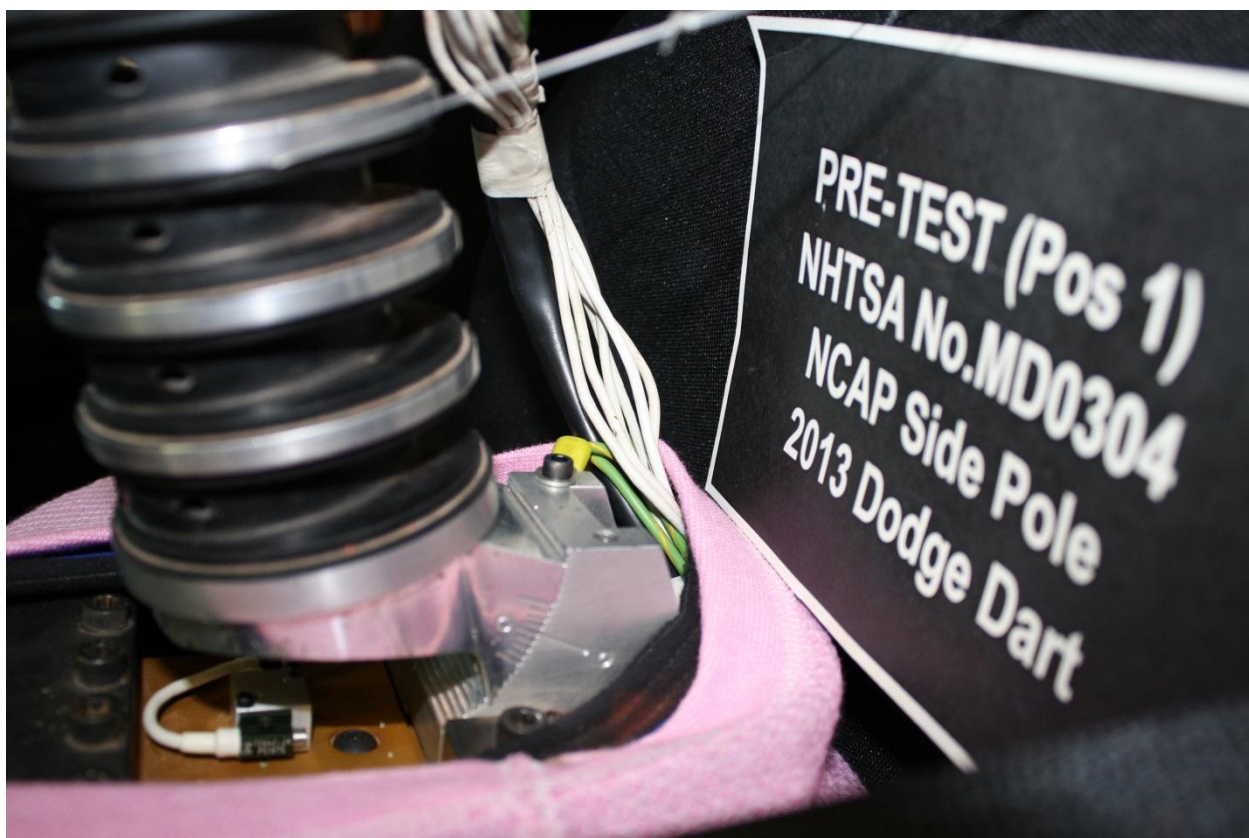


Figure A-30: Pre-Test Left Side View of Dummy's Neck Showing Position of Adjustable Neck Bracket



Figure A-31: Pre-Test Left Side View of Dummy's Head Showing Dummy's Head is Level

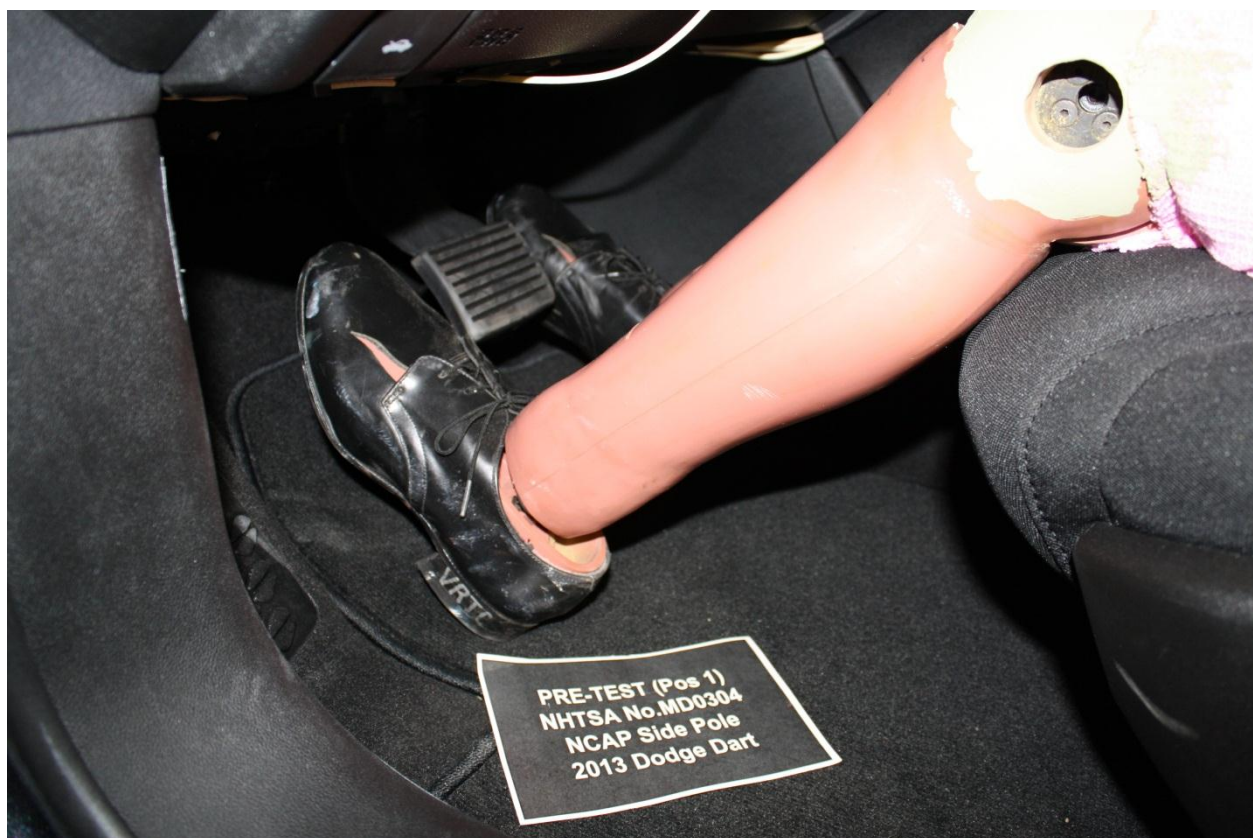


Figure A-32: Pre-Test Placement of Dummy's Feet



Figure A-33: Pre-Test View of Belt Anchorage for Dummy



Figure A-34: Pre-Test Left Side View of Steering Wheel



Figure A-35: Pre-Test View of Disengaged Parking Brake



Figure A-36: Pre-Test View of Parking Brake



Figure A-37: Pre-Test Close-Up Left Side View of Driver Seat Track



Figure A-38: Pre-Test Close-Up Left Side View of Driver Seat Back



Figure A-39: Pre-Test Close-Up View of Driver Seat Back or Head Restraint



Figure A-40: Pre-Test Dummy and Door Clearance View



Figure A-41: Post-Test Dummy and Door Clearance View



Figure A-42: Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment



Figure A-43: Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment



Figure A-44: Pre-Test Inner Door Panel View

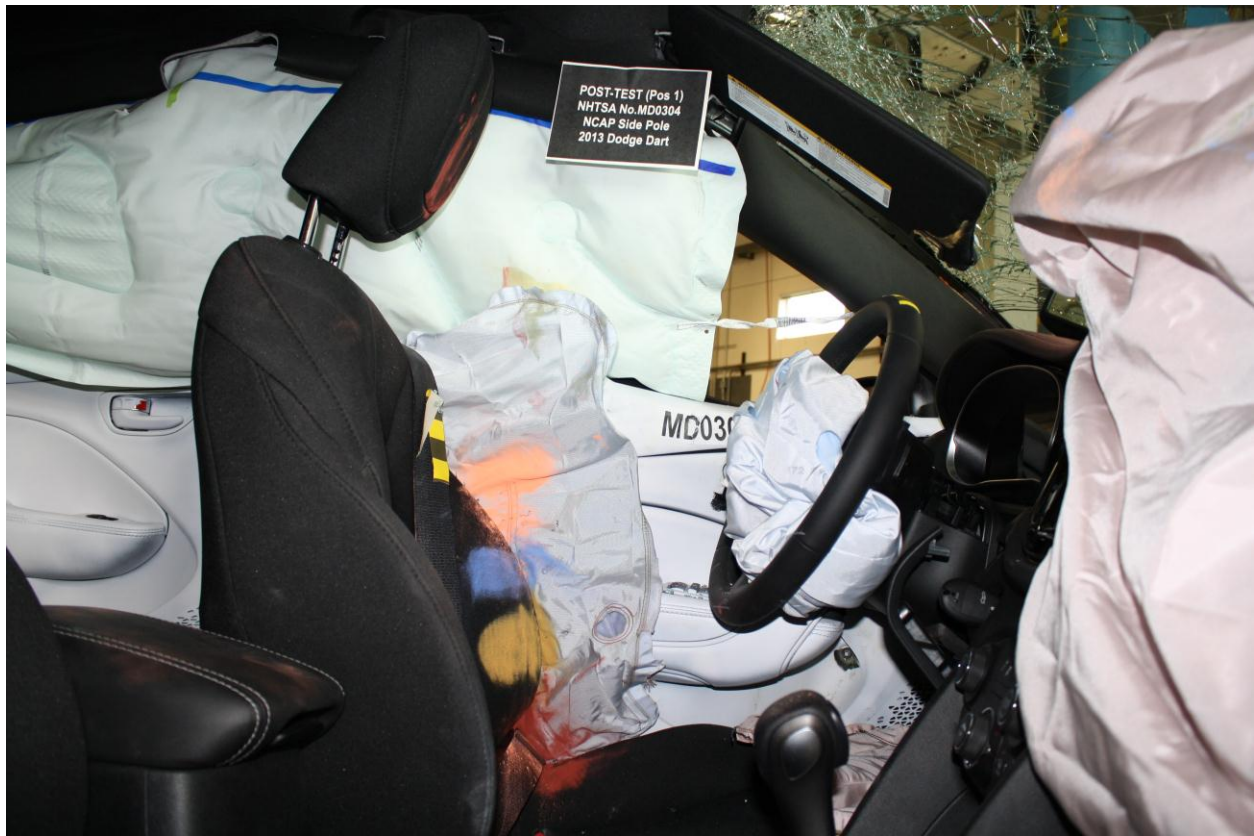


Figure A-45: Post-Test Inner Door Panel View Showing Dummy Contact Location



Figure A-46: Post-Test Dummy Close-Up Head Contact with Vehicle Interior View

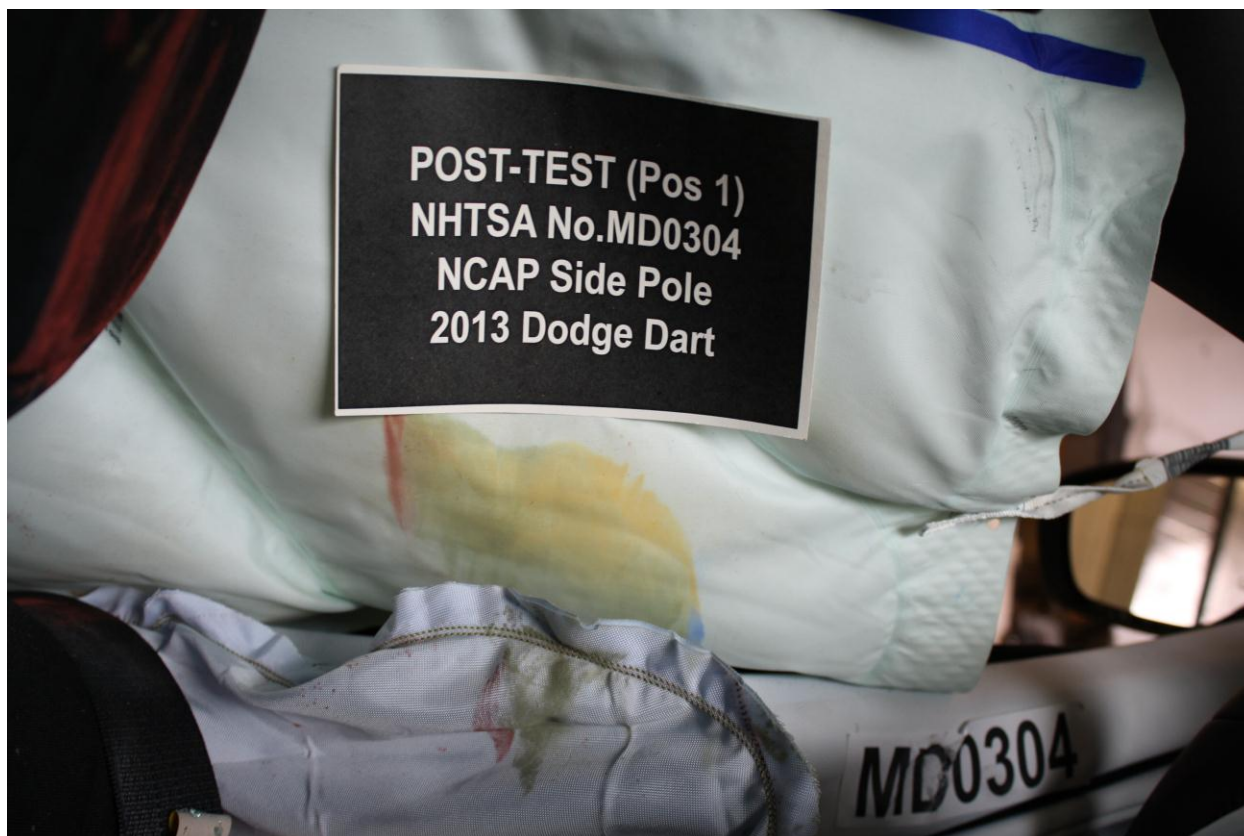


Figure A-47: Post-Test Dummy Close-Up Head Contact with Side Airbag View



Figure A-48: Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View



Figure A-49: Post-Test Dummy Close-Up Torso Contact with Side Airbag View

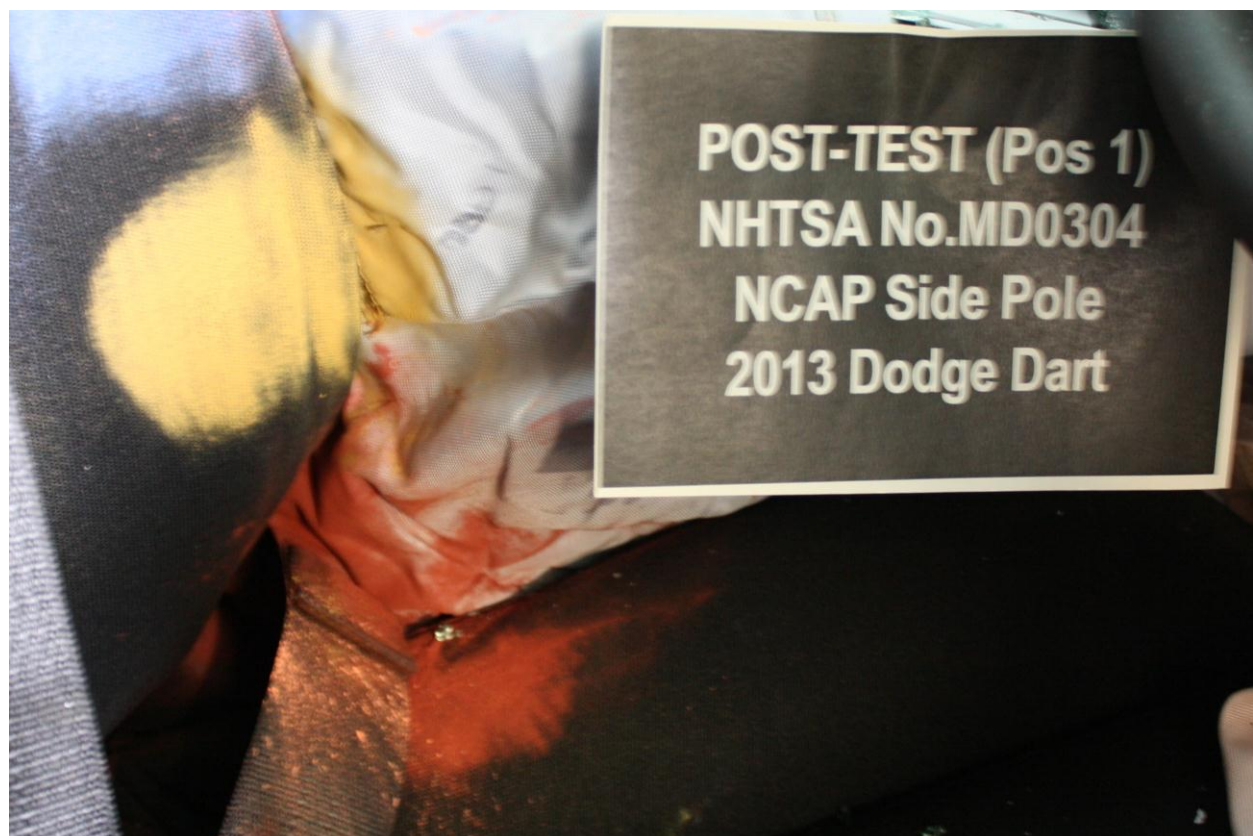


Figure A-50: Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View



Figure A-51: Post-Test Dummy Close-Up Pelvis Contact with Side Airbag View

Photo Not Applicable

Figure A-52: Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View



Figure A-53: Pre-Test View of Fuel Filler Cap or Fuel Filler Neck



Figure A-54: Post-Test View of Fuel Filler Cap or Fuel Filler Neck



Figure A-55: Close-Up View of Vehicle's Certification Label

Photo Not Applicable

Figure A-55a: Close-Up View of Reduced Load Capacity Label

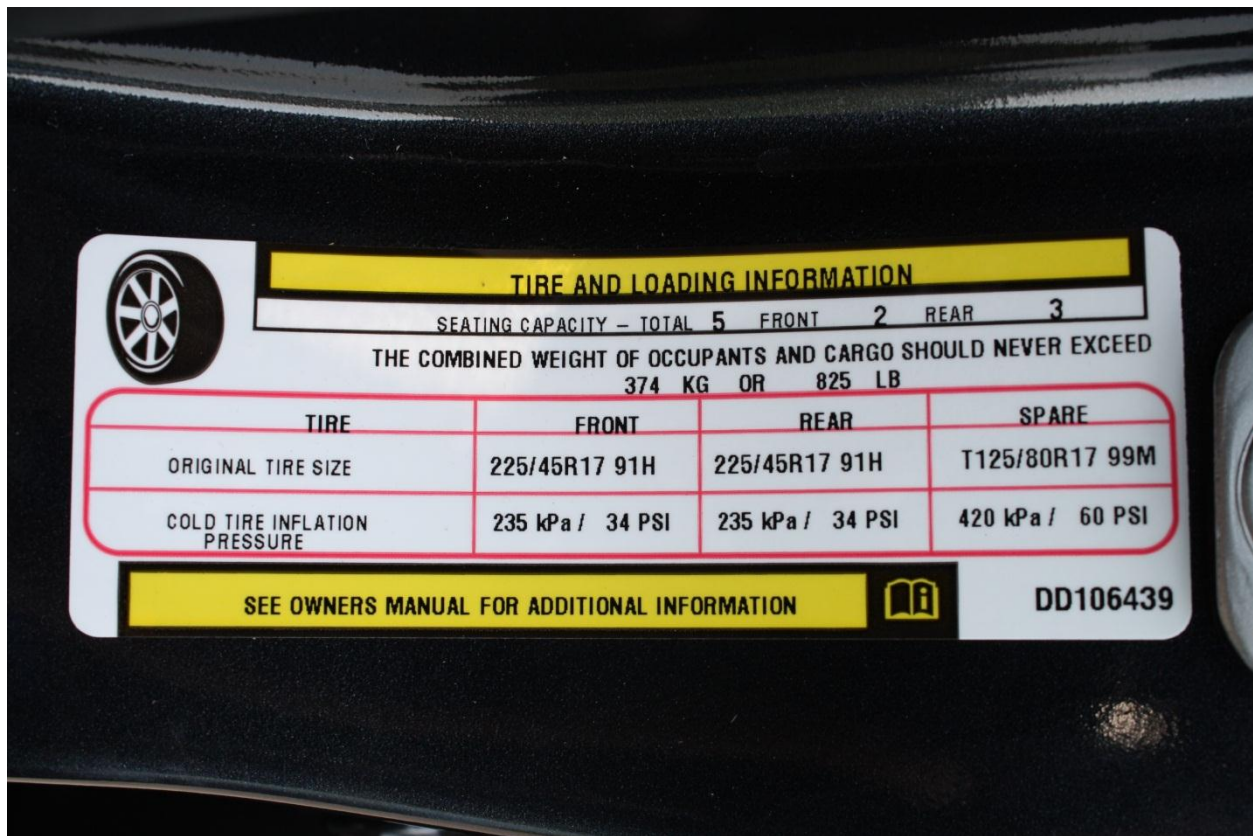


Figure A-56: Close-Up View of Vehicle's Tire Information Placard or Label



Figure A-57: Pre-Test Pole Barrier Front View



Figure A-58: Post-Test Pole Barrier Front View



Figure A-59: Pre-Test Pole Barrier Side View



Figure A-60: Post-Test Pole Barrier Side View

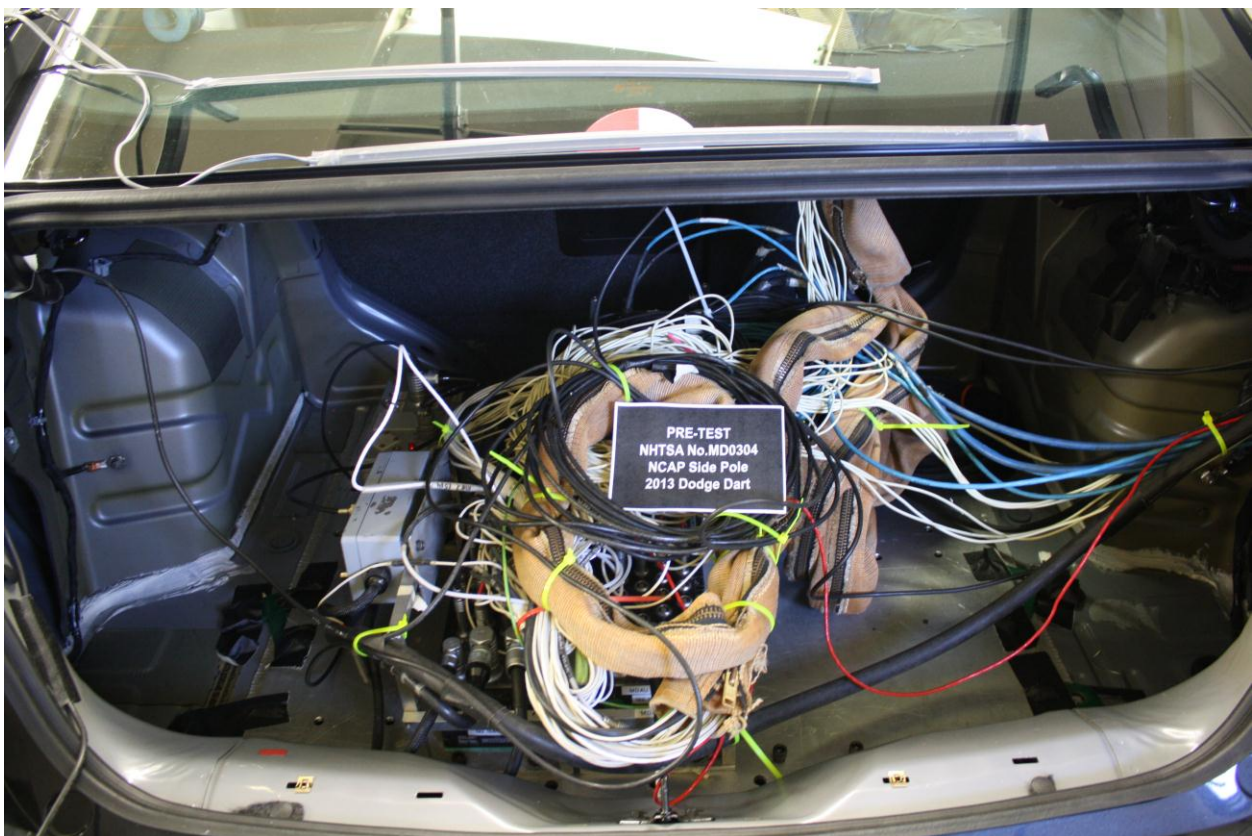


Figure A-61: Pre-Test Ballast View



Figure A-62: Post-Test Primary and Redundant Speed Trap Read-Out



Figure A-63: FMVSS No. 301 Static Rollover 0 Degrees

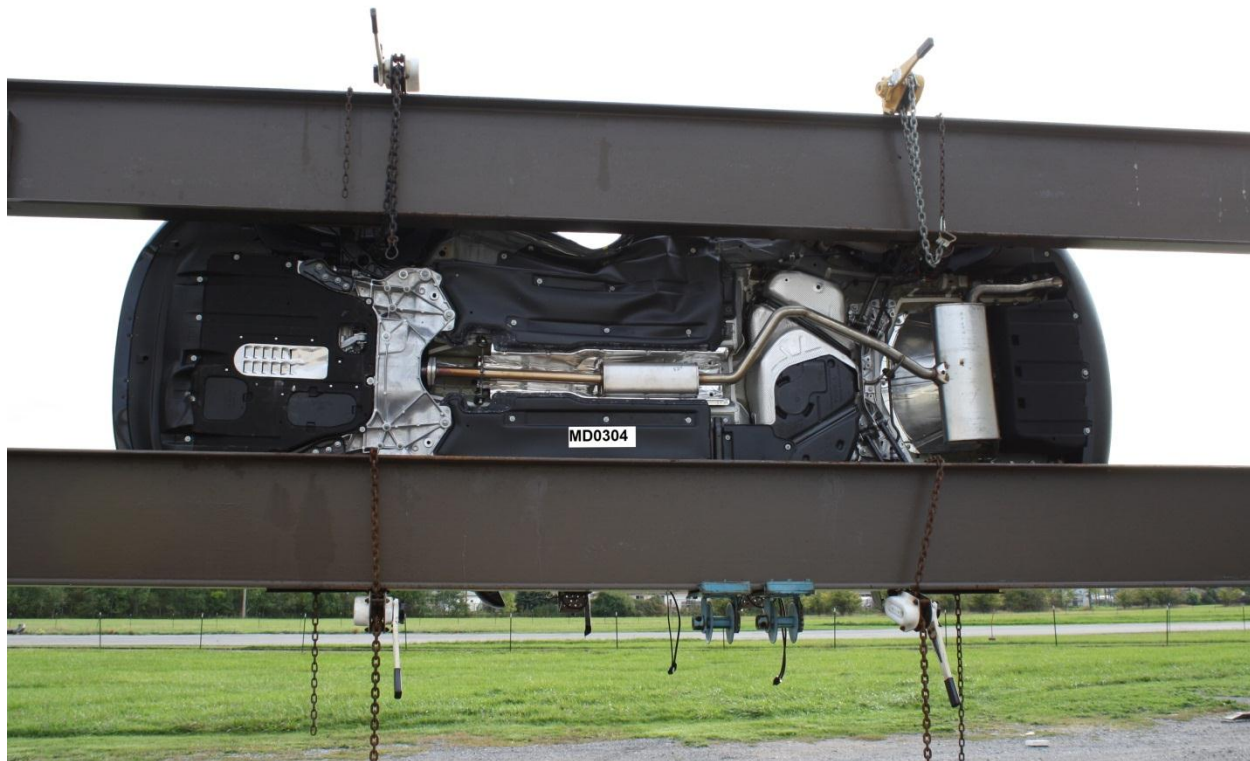


Figure A-64: FMVSS No. 301 Static Rollover 90 Degrees



Figure A-65: FMVSS No. 301 Static Rollover 180 Degrees



Figure A-66: FMVSS No. 301 Static Rollover 270 Degrees



Figure A-67: FMVSS No. 301 Static Rollover 360 Degrees



Figure A-68: Impact Event

2013 DODGE DART LIMITED

THIS VEHICLE IS MANUFACTURED TO MEET SPECIFIC UNITED STATES REQUIREMENTS. THIS VEHICLE IS NOT MANUFACTURED FOR SALE OR REGISTRATION OUTSIDE OF THE UNITED STATES.

MANUFACTURER'S SUGGESTED RETAIL PRICE OF THIS MODEL INCLUDING DEALER PREPARATION

Base Price: **\$19,995**

DODGE DART LIMITED
 Exterior Color: Maximum Steel Metallic Clear Coat Exterior Paint
 Interior Color: Black Interior Color
 Interior: Premium Cloth Seats
 Engine: 2.0-Liter I4 DOHC Engine
 Transmission: 6-Speed PowerTech Automatic Transmission

STANDARD EQUIPMENT (UNLESS REPLACED BY OPTIONAL EQUIPMENT)
 FUNCTIONAL/SAFETY FEATURES
 Advanced Multistage Front Airbags
 Supplemental Front Seat-Mounted Side Airbags
 Supplemental Side-Curtain Front and Rear Airbags
 Supplemental Rear Seat Side Airbags
 Driver Inflatable Knee-Bolster Airbag
 Passenger Inflatable Knee-Bolster Airbag
 Child Seat Anchor System-LATCH Ready
 4-Wheel Anti-Lock Disc Power Brakes
 Brake Assist
 All-Speed Traction Control
 Electronic Roll Mitigation
 ParkView Rear Back-Up Camera
 Keyless Entry with Panic Alarm
 Sentry Key® Theft Deterrent System
 Front Seat Reactive Headrests
 Power Front Windows w/ 1-Touch Up and Down Feature
 Speed Sensitive Power Locks
 Speed Control
 Active Grille Shutters

INTERIOR FEATURES
 Power 6-Way Driver Seat
 Power 4-Way Driver Lumbar Adjust
 Passenger In-Seat Cushion Storage
 60/40 Rear Seat with Trunk Pass-Thru
 7-Inch Customer Configurable Cluster Display
 Illuminated Instrument Panel Surround
 Uconnect® 8.4 AM/FM
 8.4-Inch Touch Screen Display
 Uconnect® Voice Command with Bluetooth®
 Single Disc Remote CD Player
 6 Speakers
 12-Volt Auxiliary Power Outlet
 12-Volt Auxiliary Outlet in Center Console
 iPod® Control
 Auto-Dimming Rearview Mirror w/ Microphone

OPTIONAL EQUIPMENT
Customer Preferred Package 24L
 Limited Group \$1,100
 6-Speed PowerTech Automatic Transmission AutoStick® Automatic Transmission \$895
 Power Express Open / Close Sunroof \$195
 SiriusXM Satellite Radio w/ 1-Yr Radio Subscription
 For More Information, Call 888-539-7474
 Uconnect® 8.4 AM/FM \$795

DESTINATION CHARGE \$795

TOTAL PRICE: * \$22,980

WARRANTY COVERAGE
 5-year or 100,000-mile Powertrain Limited Warranty.
 3-year or 36,000-mile Basic Limited Warranty.
 Roadside assistance; certain restrictions apply.
 Ask Dealer for a copy of the limited warranties or see your owner's manual for details.

5 YEAR/100,000 MILE POWERTRAIN WARRANTY

Assembly Point/Port of Entry: BELVIDERE, ILLINOIS, U.S.A.
 VIN: 1C3CDFCA7DD-106439 L4V0R6 9800 8730

SHIP TO: 4386 NORTHSHORE DRIVE, JEEP DODGE RAM 2013 NIAGARA FALLS BLVD TONAWANDA, NY 14150-5599
 501001 NORTHSHORE DRIVE, JEEP DODGE RAM 2013 NIAGARA FALLS BLVD TONAWANDA, NY 14150-5599

THIS LABEL IS ADDED TO THIS VEHICLE TO COMPLY WITH FEDERAL LAW. THE LABEL CANNOT BE REMOVED OR A STAMP PRIOR TO DELIVERY TO THE END USER. THIS LABEL IS ADDED TO THIS VEHICLE TO COMPLY WITH FEDERAL LAW. THE LABEL CANNOT BE REMOVED OR A STAMP PRIOR TO DELIVERY TO THE END USER.

*BASED ON PRICE OF OPTION IF PURCHASED SEPARATELY.

For more information visit: www.dodge.com or call 1-800-4ADODGE Chrysler Group LLC

EPA DOT Fuel Economy and Environment Gasoline Vehicle

Fuel Economy
27 MPG combined city/hwy
24 city
34 highway
 3.7 gallons per 100 miles

Midsize cars range from 13 to 99 MPG. The best vehicle rates 112 MPG.

You save \$1,850 in fuel costs over 5 years compared to the average new vehicle.

Annual fuel Cost \$1,950

Fuel Economy & Greenhouse Gas Rating (tailpipe only) Smog Rating (tailpipe only)

This vehicle emits 325 grams CO2 per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions. Learn more at fuelconomy.gov

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 23 MPG and cost \$11,600 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at \$3.39 per gallon. MPG is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

fuelconomy.gov
 Calculate personalized estimates and compare vehicles

GOVERNMENT 5-STAR SAFETY RATINGS
 This vehicle has not been rated by the government for frontal crash, side crash or rollover risk.

Source: National Highway Traffic Safety Administration (NHTSA) www.safercar.gov or 1-866-327-4236

Parts Content Information
 FOR VEHICLES IN THIS COUNTRY: U.S./CANADIAN PARTS CONTENT: 57% MAJOR SOURCES OF FOREIGN PARTS CONTENT: MEXICO: 19% NOTE: PARTS CONTENT DOES NOT INCLUDE FINAL ASSEMBLY, DISTRIBUTION, OR OTHER NON-PARTS COSTS.
 FOR THIS VEHICLE: FINAL ASSEMBLY POINT: BELVIDERE, ILLINOIS, U.S.A. COUNTRY OF ORIGIN: ENGINE: UNITED STATES TRANSMISSION: KOREA, RE

REMOVE THIS ENTIRE BORDER TO EXPOSE ADHESIVE

84-319-1051

Figure A-69: Monroney Label

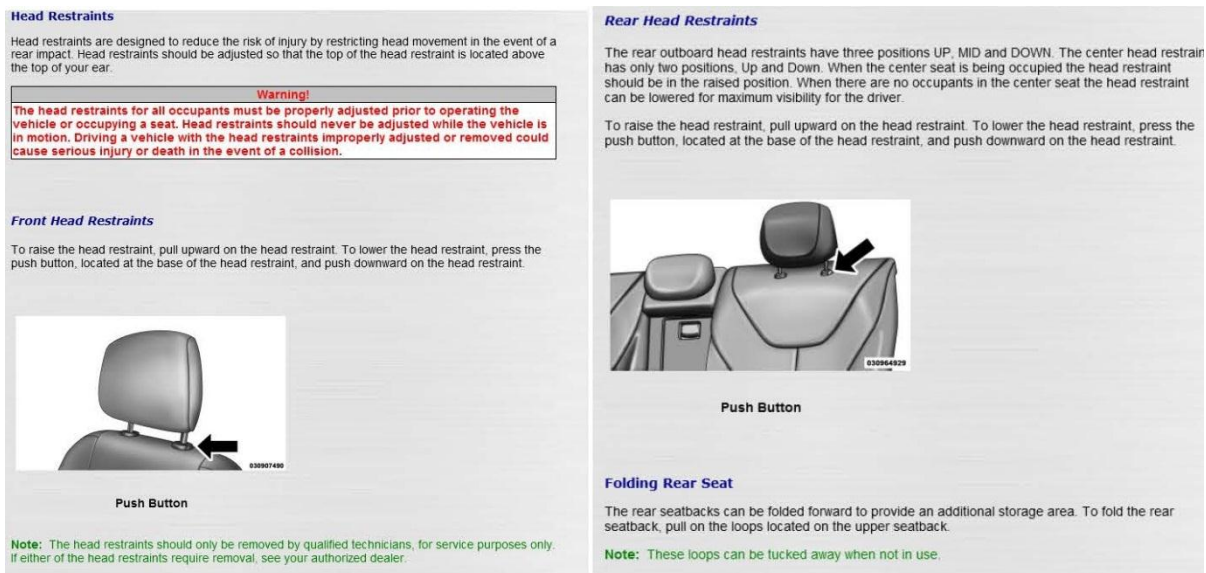


Figure A-70: Head Restraint Use and Adjustment Information from Vehicle Owner's Manual



Figure A-71: Post-Test View of Shattered Vehicle Inner Door Panel (if applicable)

APPENDIX B

VEHICLE AND DUMMY RESPONSE DATA PLOTS

TABLE OF DATA PLOTS

Driver Dummy Instrumentation Plots

Fig.	Description	Page
1	Driver Head Acceleration (X) Primary vs. Time	B-4
2	Driver Head Acceleration (Y) Primary vs. Time	B-4
3	Driver Head Acceleration (Z) Primary vs. Time	B-5
4	Driver Head Resultant Acceleration Primary vs. Time	B-5
5	Driver Lower Spine T12 Acceleration (X) vs. Time	B-6
6	Driver Lower Spine T12 Acceleration (Y) vs. Time	B-6
7	Driver Lower Spine T12 Acceleration (Z) vs. Time	B-7
8	Driver Lower Spine T12 Resultant Acceleration vs. Time	B-7
9	Driver Iliac Wing Force on Impact Side (Y) vs. Time	B-8
10	Driver Acetabulum Force on Impact Side (Y) vs. Time	B-8
11	Driver Total Pelvis Force on Impact Side (Y) vs. Time	B-9

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

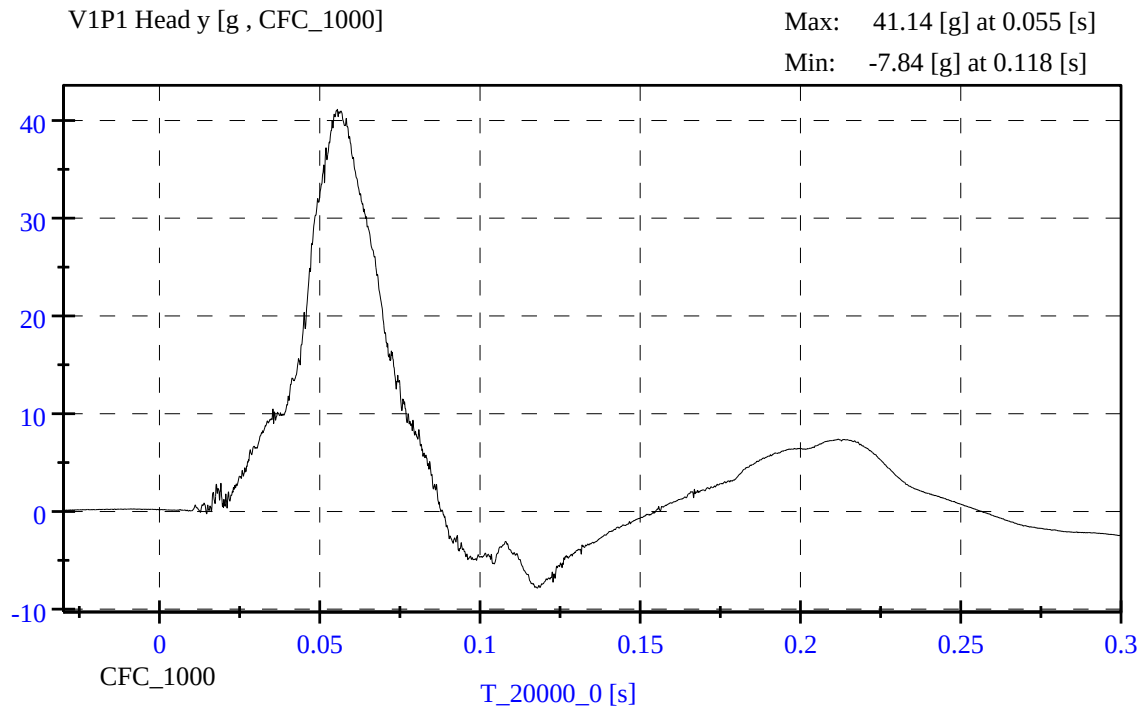
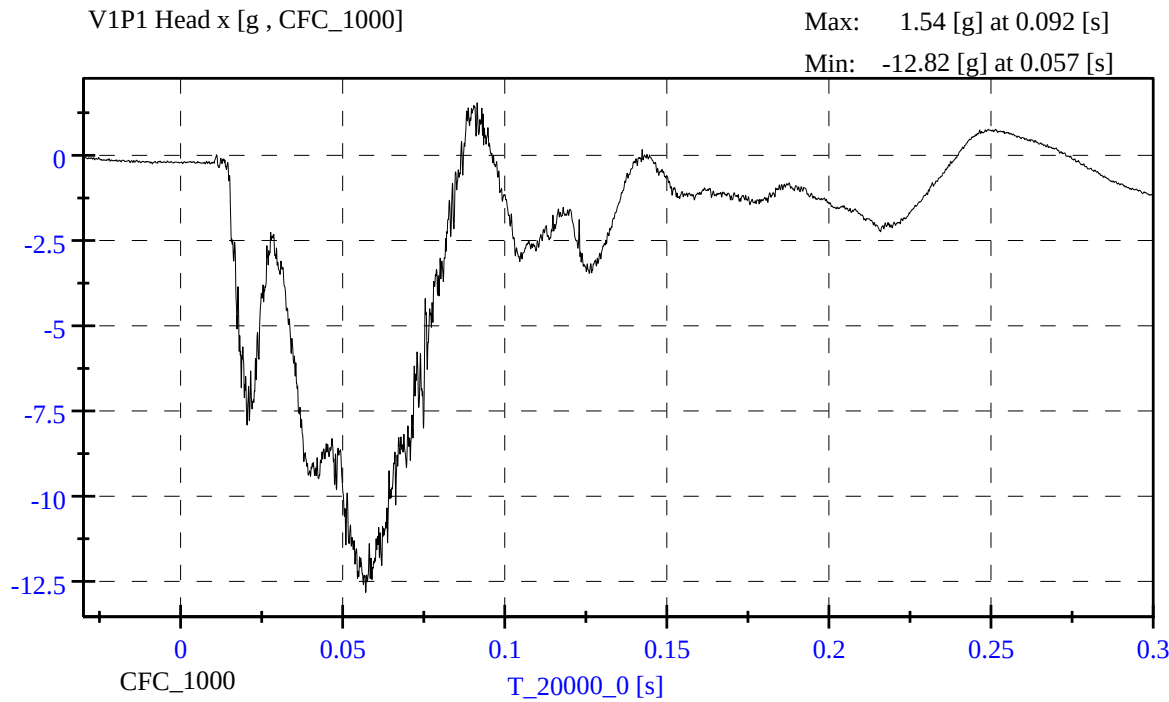
Driver Head Acceleration Redundant (X)
Driver Head Acceleration Redundant (Y)
Driver Head Acceleration Redundant (Z)
Driver Upper Thorax Rib Deflection (Y)
Driver Middle Thorax Rib Deflection (Y)
Driver Lower Thorax Rib Deflection (Y)
Driver Upper Abdomen Rib Deflection (Y)
Driver Lower Abdomen Rib Deflection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

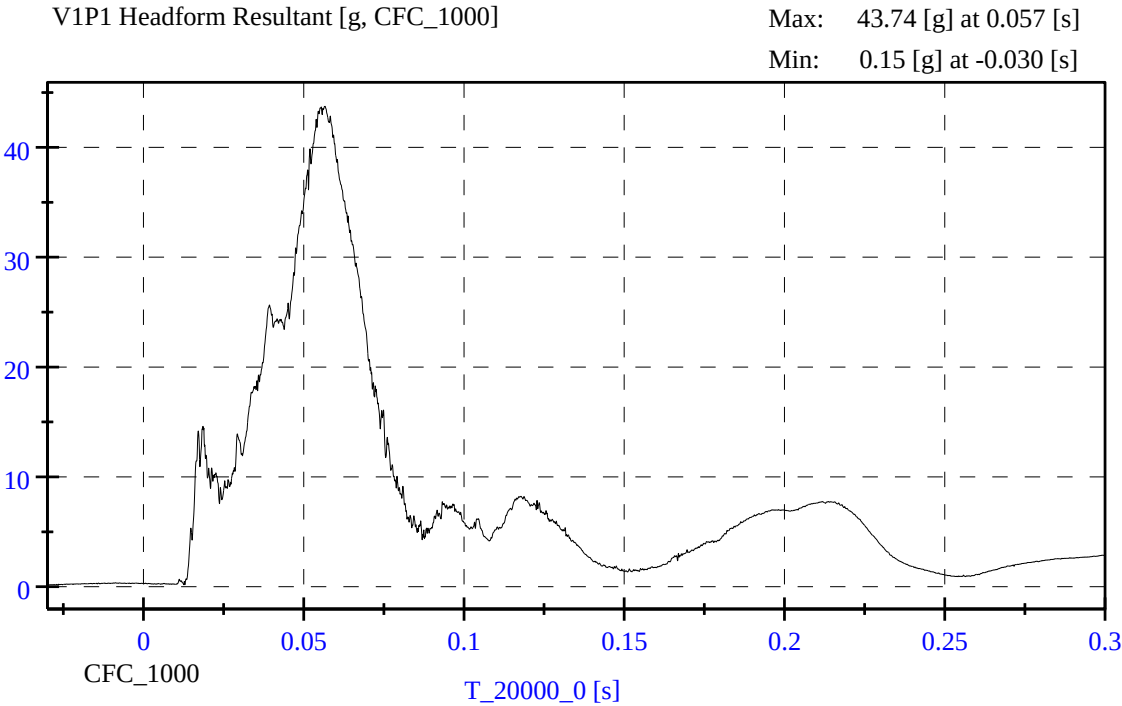
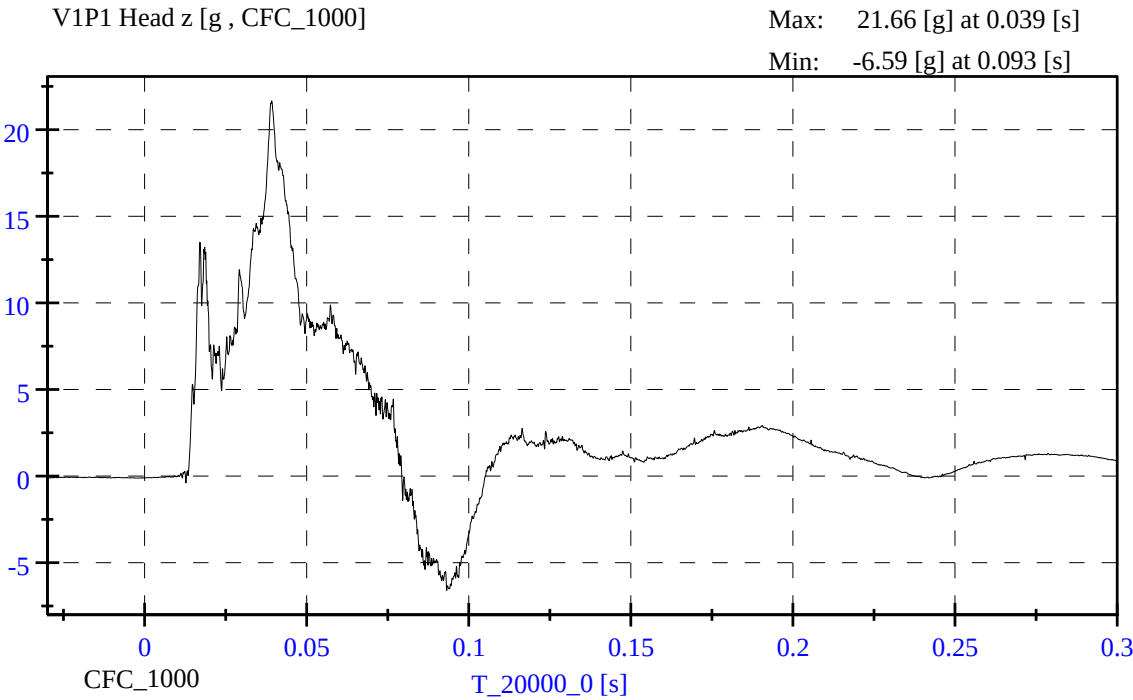
Vehicle Instrumentation Data

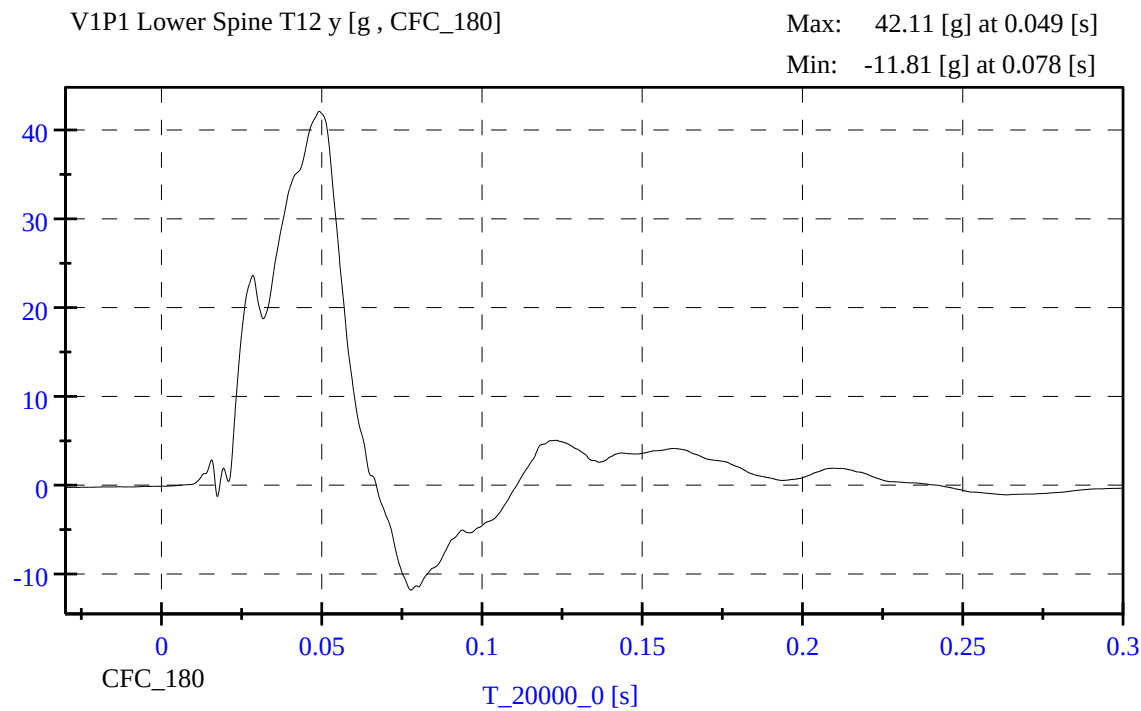
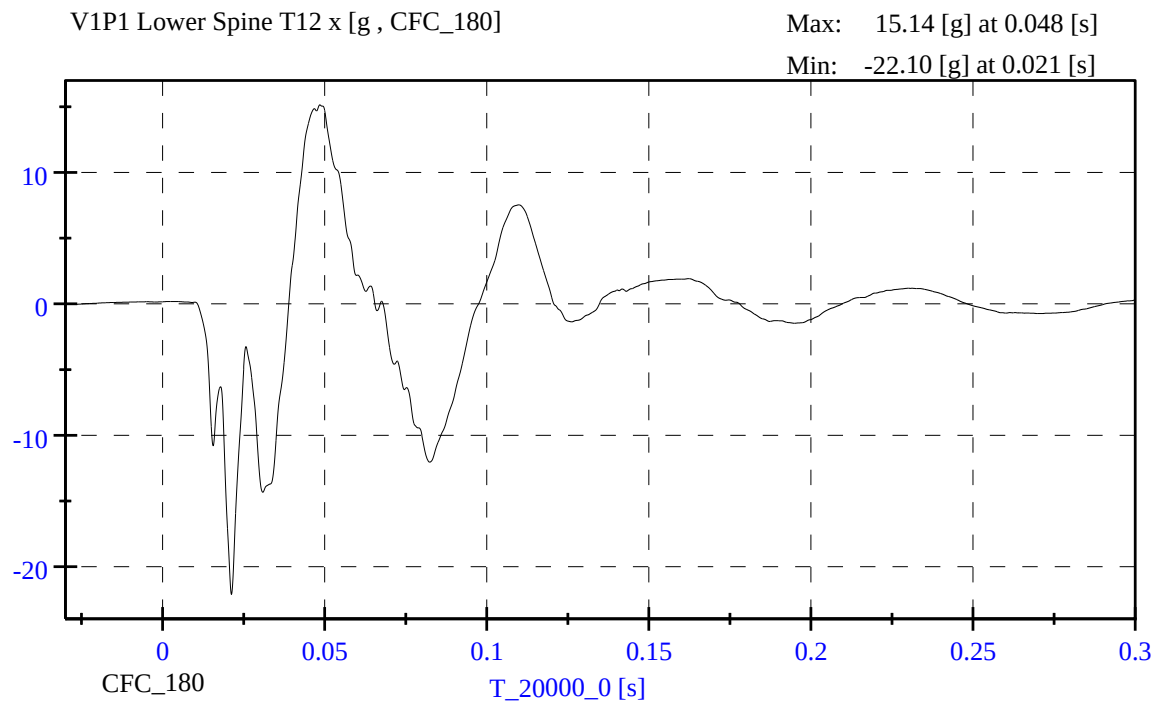
Vehicle Center of Gravity Acceleration (X)
Vehicle Center of Gravity Acceleration (Y)
Vehicle Center of Gravity Acceleration (Z)
Left Floor Sill Acceleration (Y)
Left A-Pillar Sill Acceleration (Y)
Left Lower A-Pillar Acceleration (Y)
Left Mid A-Pillar Acceleration (Y)
Left B-Pillar Sill Acceleration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

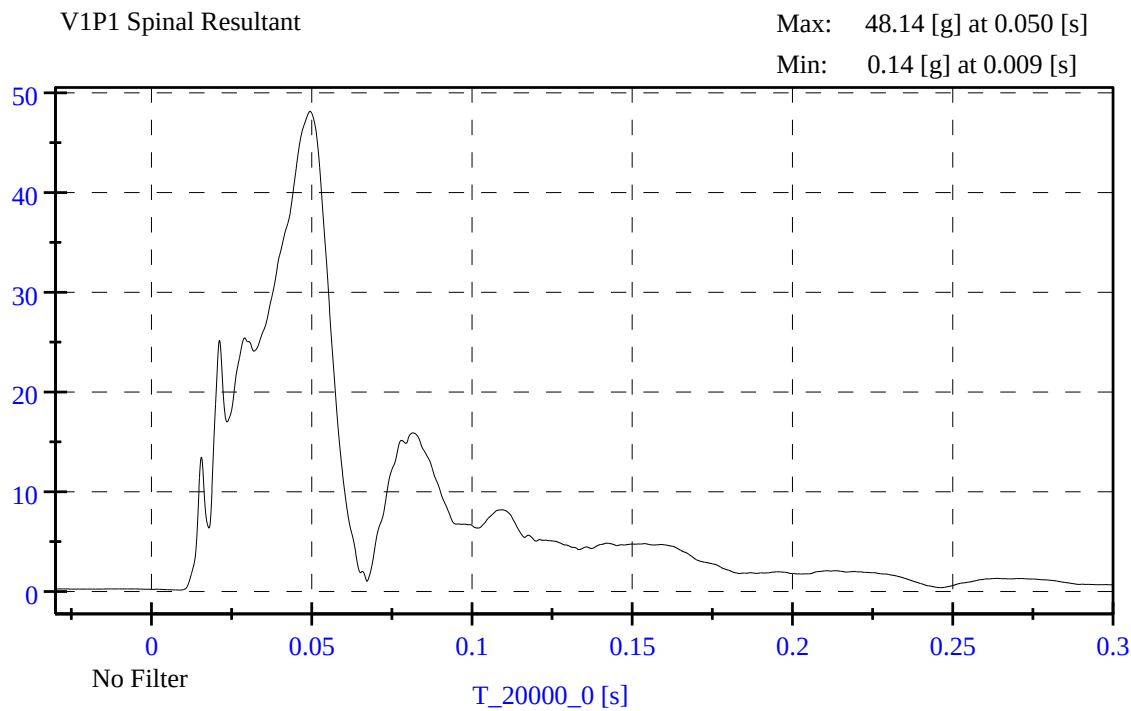
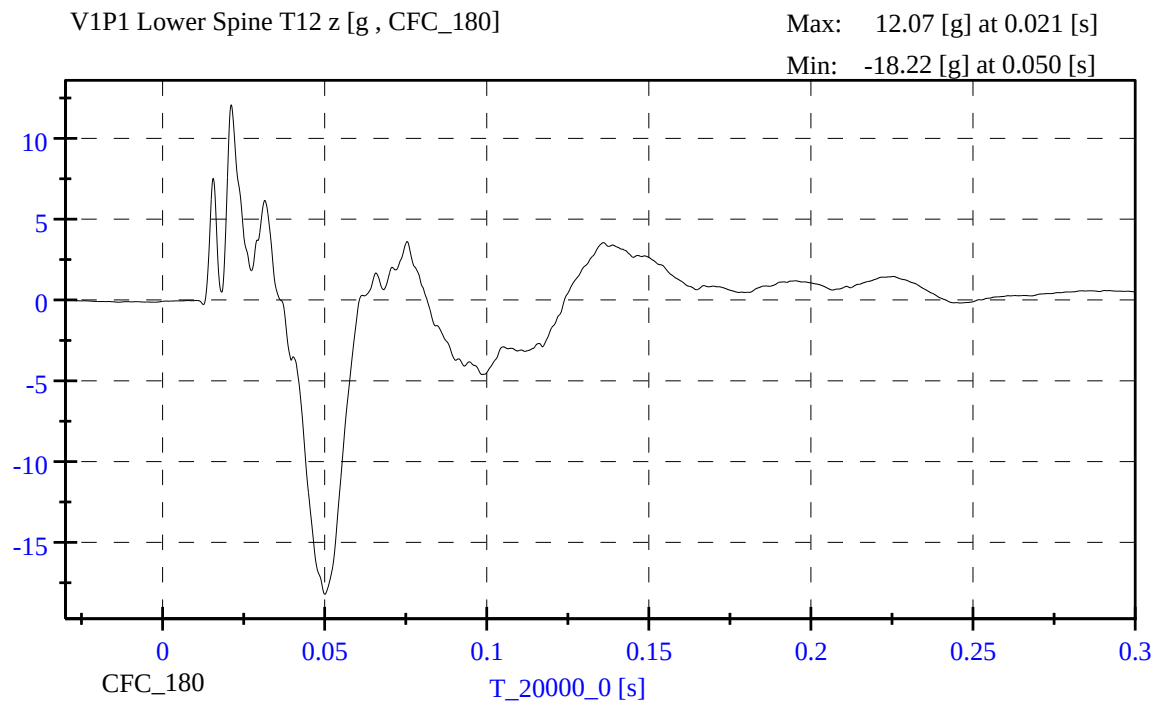
Pole Instrumentation Data

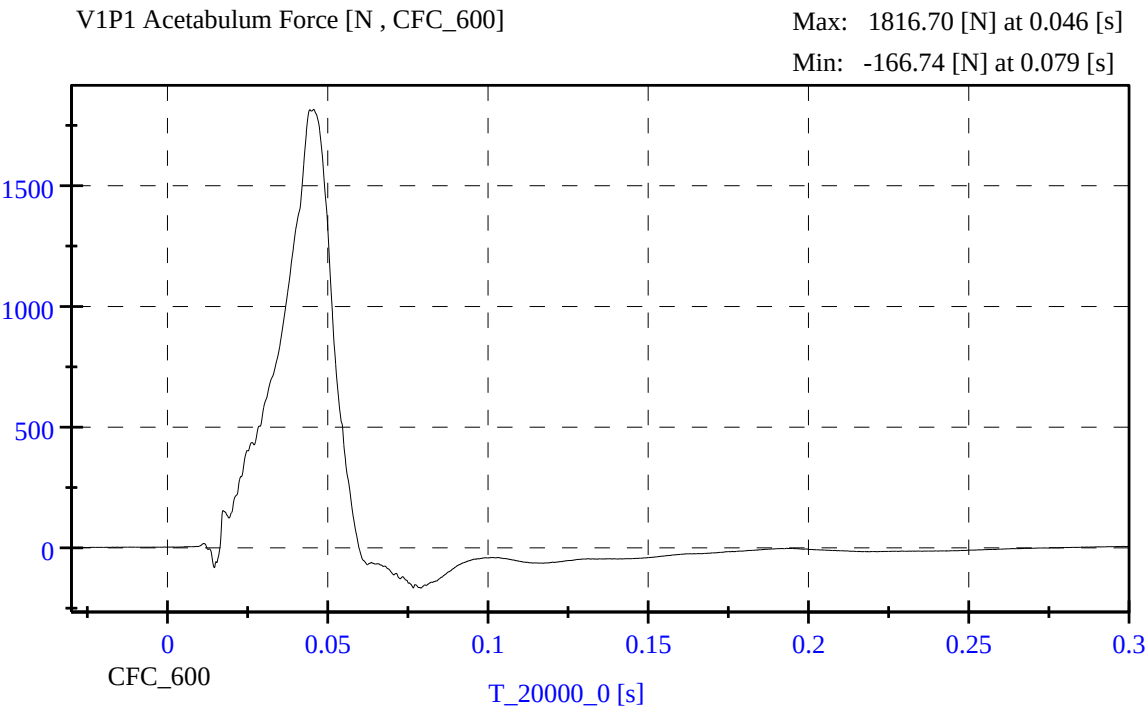
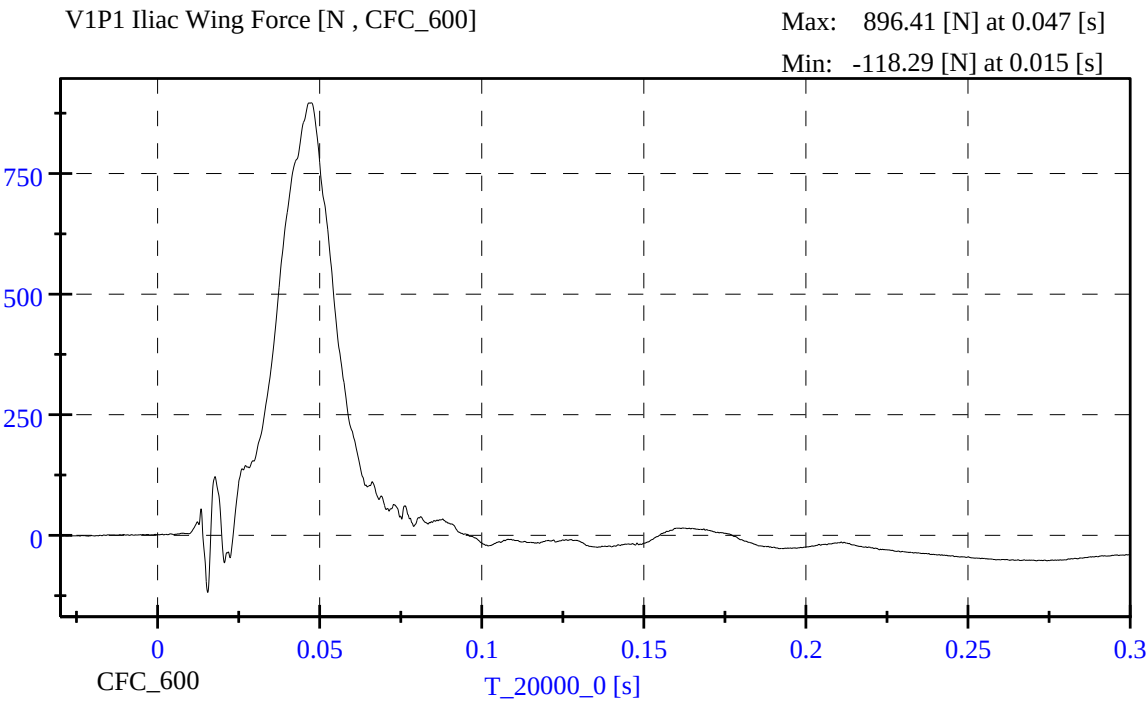
Load Cell Pole Barrier #1 Force (Y)
Load Cell Pole Barrier #2 Force (Y)
Load Cell Pole Barrier #3 Force (Y)
Load Cell Pole Barrier #4 Force (Y)
Load Cell Pole Barrier #5 Force (Y)
Load Cell Pole Barrier #6 Force (Y)
Load Cell Pole Barrier #7 Force (Y)
Load Cell Pole Barrier #8 Force (Y)

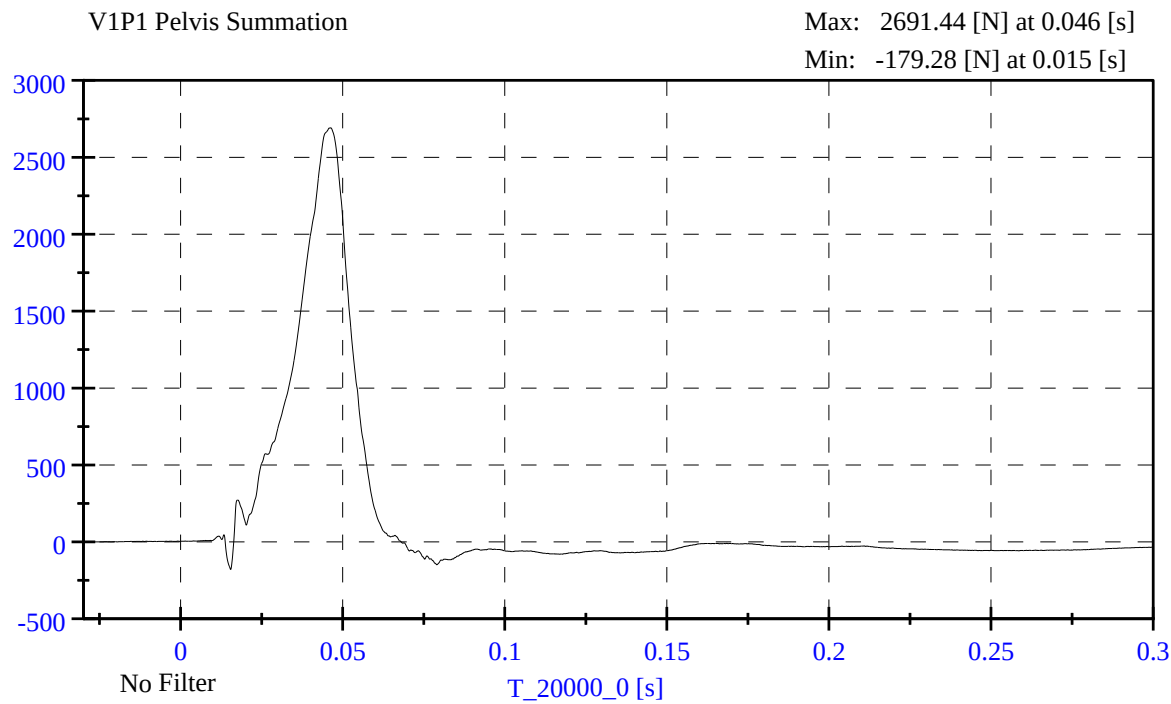












APPENDIX C

DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

CALIBRATION TEST RESULTS

PRE-TEST

SID-IIS 5TH PERCENTILE FEMALE - DRIVER ATD

SERIAL NO: 8012

(CONFIGURED FOR LEFT SIDE IMPACT)



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SID-IIsD External Measurements

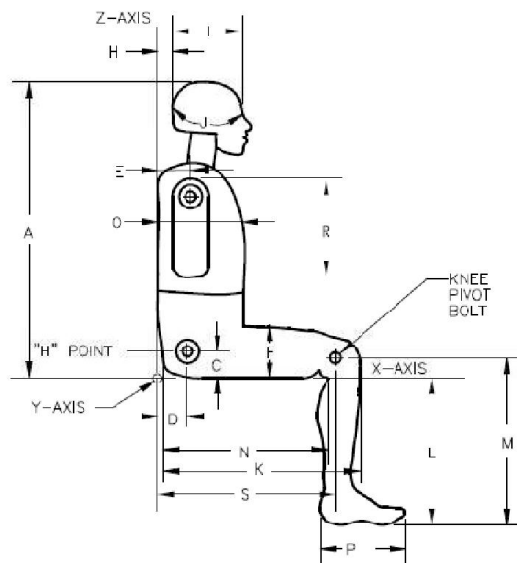
NHTSA ATD S/N DG8012

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Sitting Height	772.0 - 788.0	781	Yes
B	Shoulder Pivot Height	437.0 - 453.0	444	Yes
C	H-Point Height	79.0 - 89.0	84	Yes
D	H-Point from Seat Back	141.0 - 151.0	143	Yes
E	Shoulder Pivot from Backline	97.0 - 107.0	101	Yes
F	Thigh Clearance	119.0 - 135.0	129	Yes
G	Head Breadth	140.0 - 148.0	144	Yes
H	Head Back from Backline	40.0 - 46.0	43	Yes
I	Head Depth	178.0 - 188.0	183	Yes
J	Head Circumference	541.0 - 551.0	545	Yes
K	Buttock to Knee Length	514.0 - 540.0	530	Yes
L	Popliteal Height	343.0 - 369.0	347	Yes
M	Knee Pivot to Floor Height	393.0 - 409.0	399	Yes
N	Buttock Popliteal Length	416.0 - 442.0	434	Yes
O	Chest Depth without Jacket	195.0 - 211.0	205	Yes
P	Foot Length (right)	216.0 - 232.0	222	Yes
Q	Hip Breadth	313.0 - 323.0	316	Yes
R	Arm Length	249.0 - 259.0	254	Yes
S	Knee Joint to Seat back	478.0 - 493.0	482	Yes
V	Shoulder Width (only one arm installed)	341.0 - 357.0	350	Yes
W	Foot Width (right)	78.0 - 94.0	84	Yes
Y	Chest Circumference with Jacket	851.0 - 881.0	864	Yes
Z	Waist Circumference	761.0 - 791.0	765	Yes

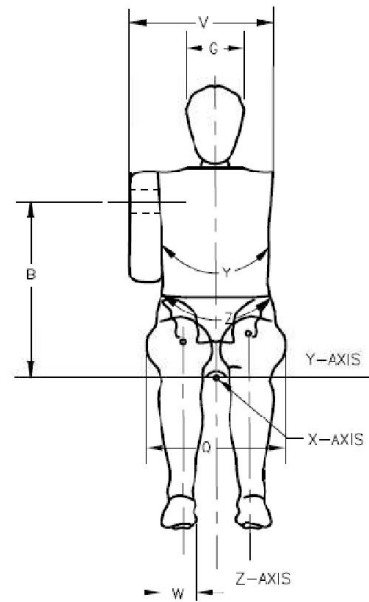
Technician : SZ

06/01/2012

SID-IIsD External Dimension Reference Diagram



SIDE VIEW



FRONT VIEW

VERIFICATION REPORT

Test Name:	Head Drop	Revision:	12/14/2006
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/18/2012
Test Number:	1	Test Time:	2:39:04 PM

Component Part Number	Component Serial Number
Head Skin - 180-1002	1362

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	22.2 deg C P
Humidity	10 -- 70	29 %RH P
Resultant Acceleration	115.0 -- 137.0	122.4 g P
Oscillation	0.0 -- 15.0	13.7 % P
Fore-Aft Acceleration	-15.0 -- 15.0	-2.6 g P

All test parameters are within specifications

Technician: **S. Zito**

Supervisor: **D. Travale**

Test Time: **2:39:04 PM**

Test Date: **5/18/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
Endevco	7264-2000	P49185	5/18/2012
Endevco	7264-2000	P51994	5/18/2012
Endevco	7264-2000	P51991	5/18/2012

Test Time: 2:39:04 PM

Test Date: 5/18/2012

Copyright 2006 Denton ATD, Inc. LabPac II Version: 1.8.5.0

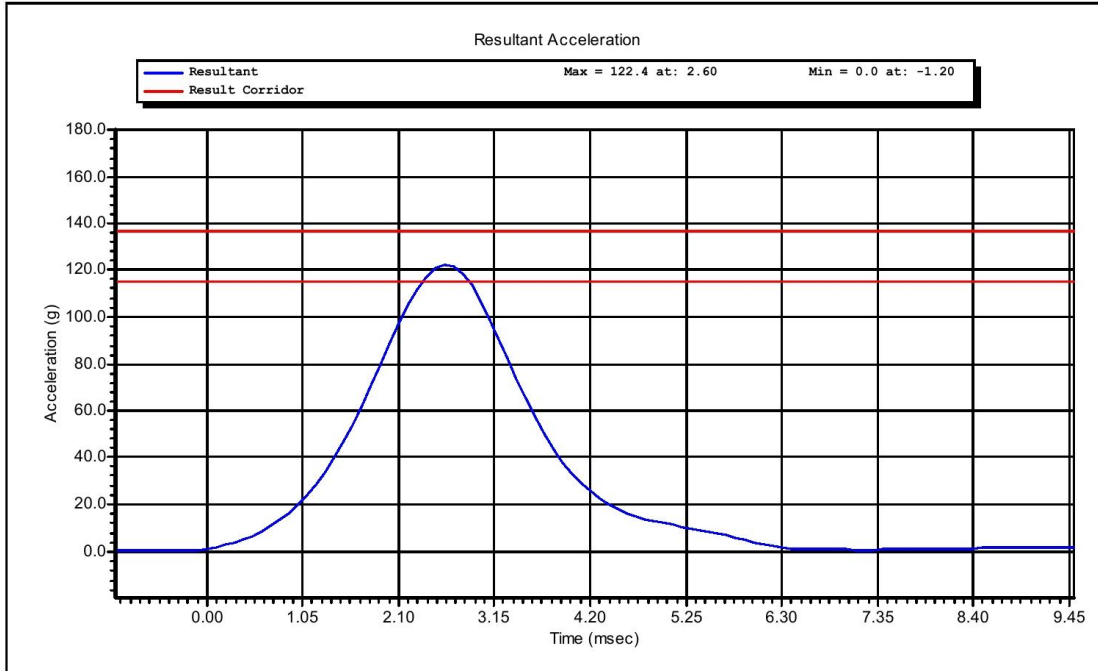


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Test Name:	Head Drop	Revision:	12/14/2006
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/18/2012
Test Number:	1	Test Time:	2:39:04 PM



Test Time: 2:39:04 PM

Test Date: 5/18/2012

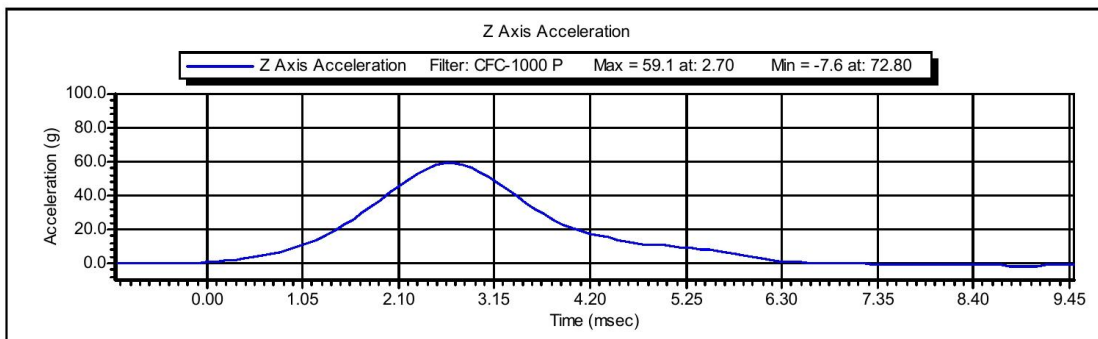
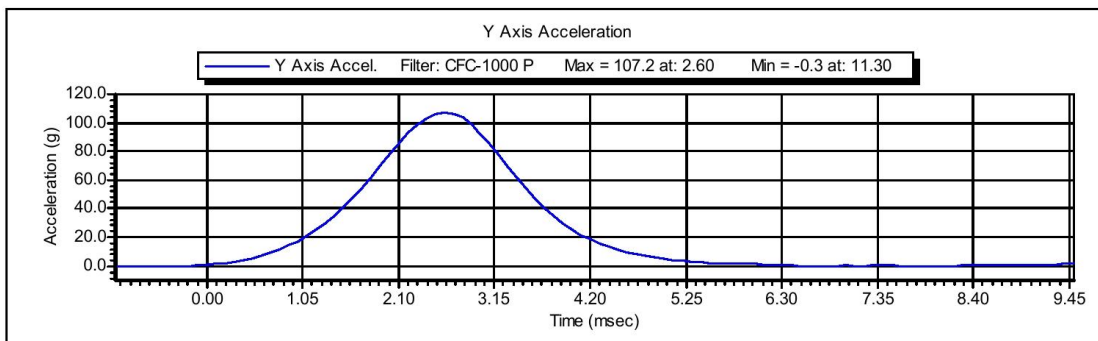
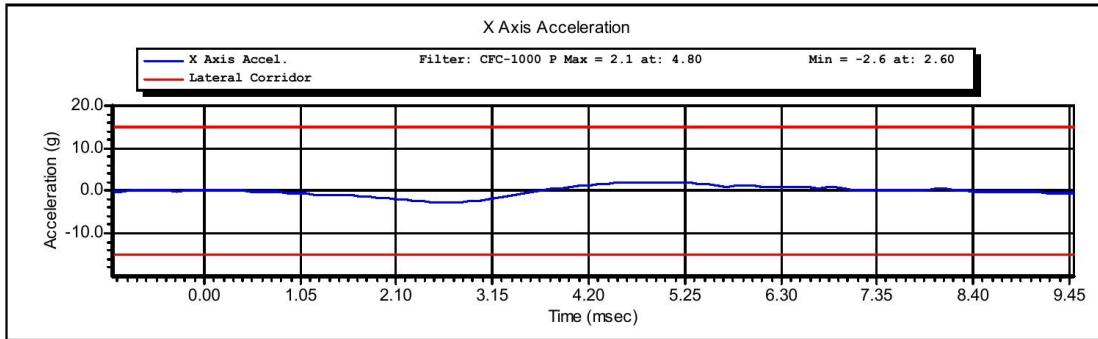
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Test Time: 2:39:04 PM

Test Date: 5/18/2012

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VERIFICATION REPORT

Test Name:	Neck Pendulum	Revision:	8/24/2009
Sub Test Name:	Left Side	Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/30/2012
Test Number:	1	Test Time:	2:09:17 PM

Component Part Number	Component Serial Number
Neck - 180-2000	DG7061

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	22.1 deg C P
Humidity	10 -- 70	46 %RH P
Velocity	5.51 -- 5.63	5.59 m/s P
Pendulum Impulse at 10 ms	2.20 -- 2.80	2.24 m/s P
Pendulum Impulse at 15 ms	3.30 -- 4.10	3.34 m/s P
Pendulum Impulse at 20 ms	4.40 -- 5.40	4.62 m/s P
Pendulum Impulse at 25 ms	5.40 -- 6.10	5.66 m/s P
Pendulum Impulse between 25 and 100 ms	5.50 -- 6.20	5.78 m/s P
Max D Plane Rotation	71.0 -- 81.0	74.4 degrees P
Time at Max Rotation	50.0 -- 70.0	60.6 ms P
Moment about OC	-44.0 -- -36.0	-41.5 Nm P
Moment Decay to Zero	102.0 -- 126.0	113.4 ms P

All test parameters are within specifications

Technician: **A. Rudniski**

Supervisor: **D. Travale**

Test Time: **2:09:17 PM**

Test Date: **5/30/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C15016	2/8/2012
Denton	1716A	LC-2192Fy	5/21/2012
Denton	1716A	LC-2192Mx	5/21/2012
DentonATD	78051-342	184	5/30/2012
DentonATD	78051-342	174	5/30/2012
DentonATD	78051-342	185	5/30/2012

Test Time: 2:09:17 PM

Test Date: 5/30/2012

Copyright 2006 Denton ATD, Inc. LabPac II Version: 1.8.5.0

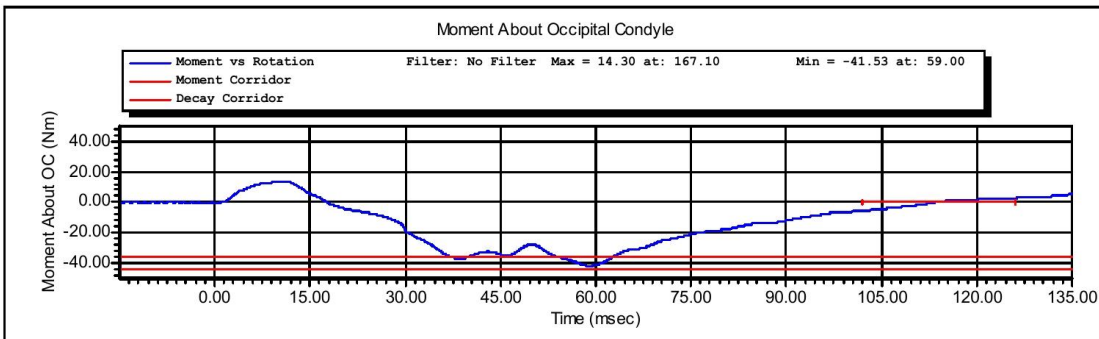
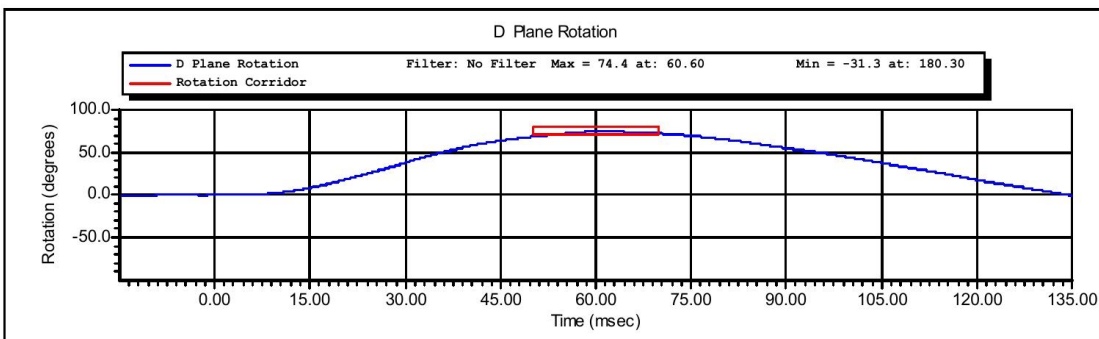


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Test Name:	Neck Pendulum	Revision:	8/24/2009
Sub Test Name:	Left Side	Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/30/2012
Test Number:	1	Test Time:	2:09:17 PM



Test Time: 2:09:17 PM

Test Date: 5/30/2012

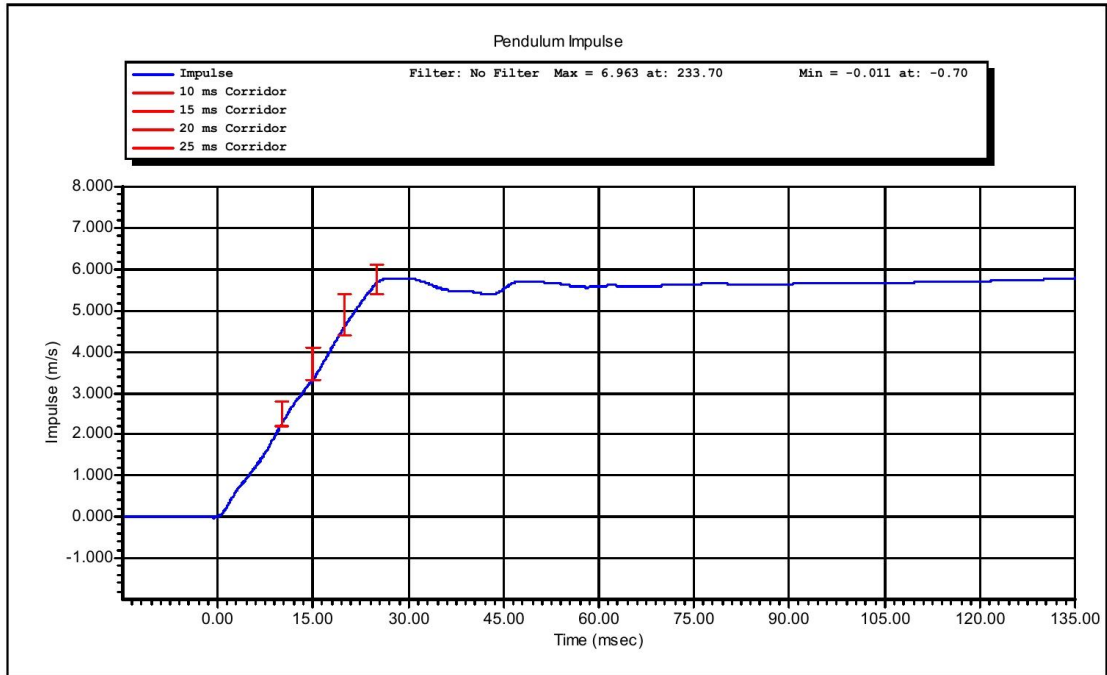
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Test Time: 2:09:17 PM

Test Date: 5/30/2012

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VERIFICATION REPORT

Test Name:	Shoulder Impact	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/29/2012
Test Number:	1	Test Time:	10:57:43 AM

Component Part Number	Component Serial Number
Left Arm 180-6011-1	1012
Shoulder Rib 180-3355	286

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	22.20 deg C P
Humidity	10.0 -- 70.0	59.1 %RH P
Velocity	4.20 -- 4.40	4.33 m/s P
Probe Acceleration	13.0 -- 18.0	14.8 g P
Shoulder Deflection	28.0 -- 37.0	28.7 mm P
T1 Acceleration	17.0 -- 22.0	19.8 g P

All test parameters are within specifications

Technician: **A. Rudniski**

Supervisor: **D. Travale**

Test Time: **10:57:43 AM**

Test Date: **5/29/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C14953	5/25/2012
FTSS	180-3881-1	DS-1845	5/17/2012
Endevco	7264-2000	P51875	5/17/2012

Test Time: 10:57:43 AM

Test Date: 5/29/2012

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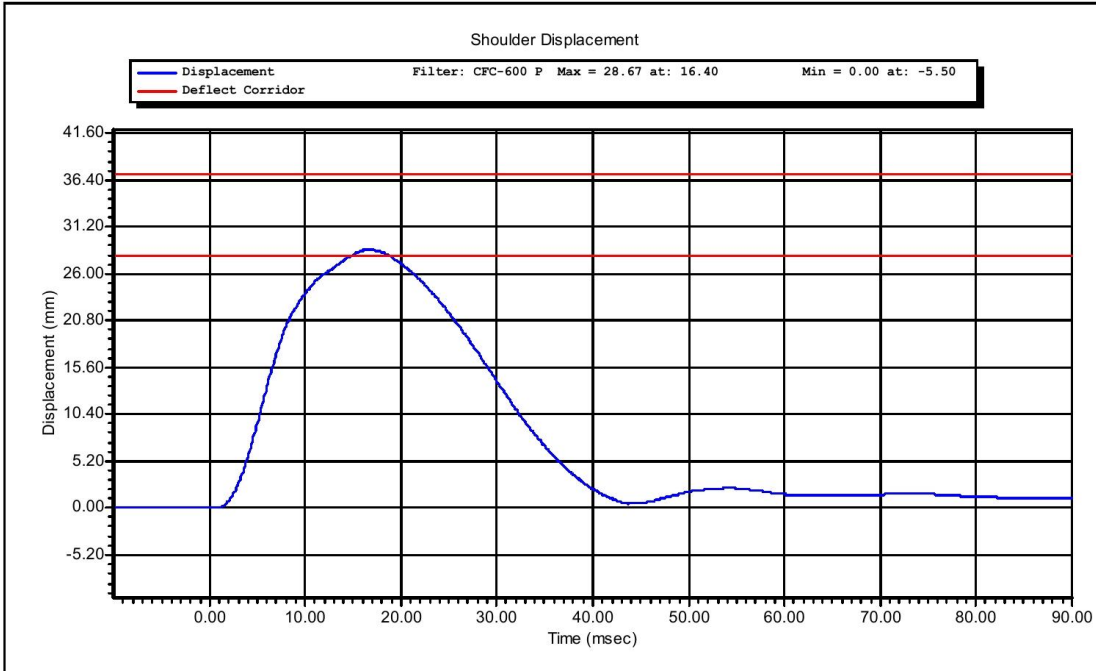


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Test Name:	Shoulder Impact	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/29/2012
Test Number:	1	Test Time:	10:57:43 AM



Test Time: 10:57:43 AM

Test Date: 5/29/2012

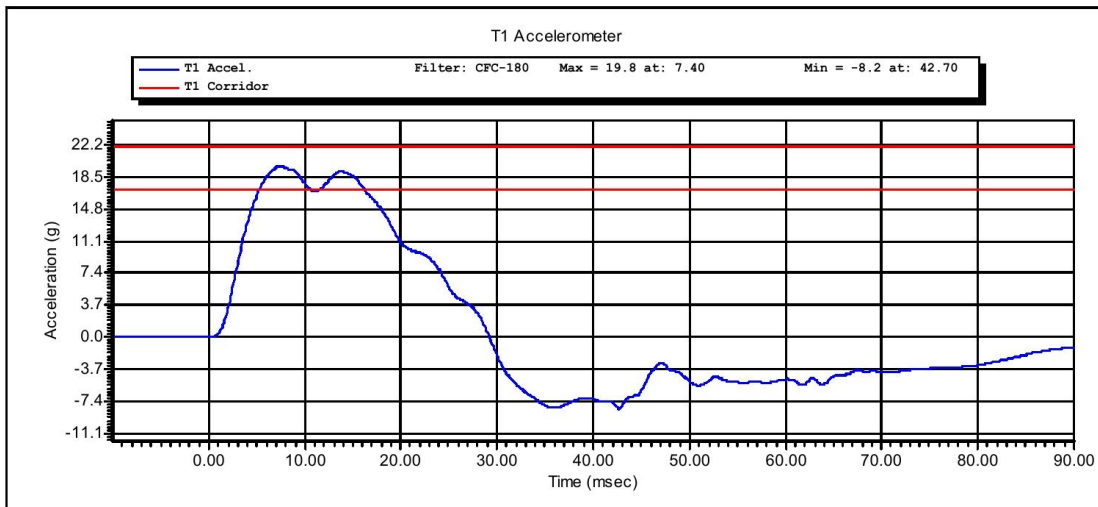
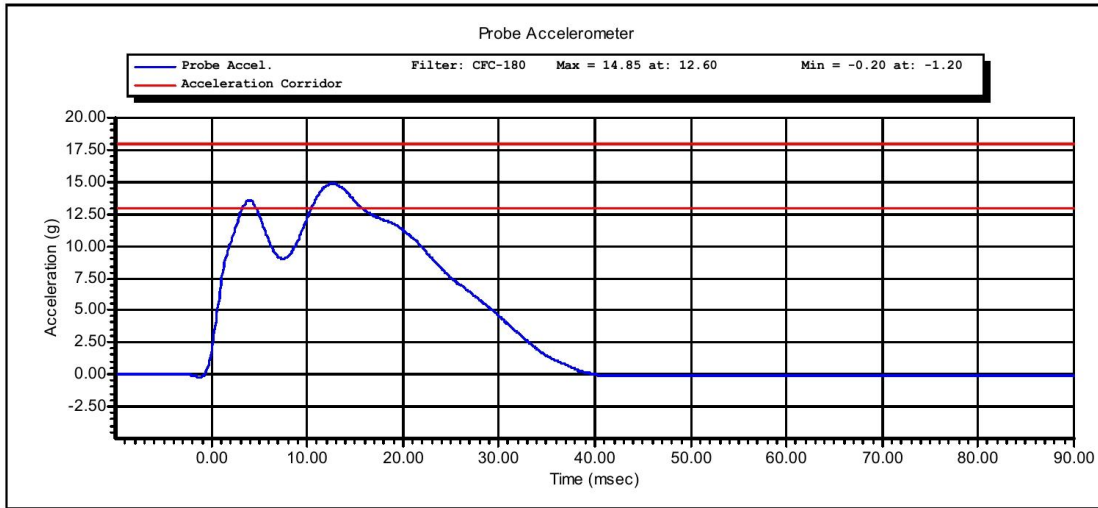
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4455 Genesee Street, Buffalo, New York 14225 - Phone (716)632-7500



Test Time: 10:57:43 AM

Test Date: 5/29/2012

Copyright 2003 Denton ATD, Inc. LabPaqII Version: 1.8.5.0

VERIFICATION REPORT

Test Name:	Thorax Impact without Arm	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/29/2012
Test Number:	1	Test Time:	11:46:31 AM

Component Part Number	Component Serial Number
Thorax Ribs 1, 2, 3 180-3362	DG6080, DG6081, DG7543

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	22.1 deg C P
Humidity	10 -- 70	58 %RH P
Velocity	4.20 -- 4.40	4.32 m/s P
Probe Acceleration	14.0 -- 18.0	16.1 g P
Upper Thorax Rib Deflection	32.0 -- 40.0	35.4 mm P
Mid Thorax Rib Deflection	39.0 -- 45.0	41.8 mm P
Lower Thorax Rib Deflection	35.0 -- 43.0	39.2 mm P
Upper Spine Acceleration T1	13.0 -- 17.0	15.2 g P
Lower Spine Acceleration T12	7.0 -- 11.0	9.9 g P

All test parameters are within specifications

Technician: **A. Rudniski**
 Supervisor: **D. Travale**

Test Time: **11:46:31 AM**

Test Date: **5/29/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C14953	5/25/2012
FTSS	180-3881-1	DS-1849	5/16/2012
Servo	180-3881-1	DS-1514	5/16/2012
FTSS	180-3881-1	DS-1859	5/16/2012
Endevco	7264-2000	P51875	5/17/2012
Endevco	7264-2000	P58796	5/17/2012

Test Time: 11:46:31 AM

Test Date: 5/29/2012

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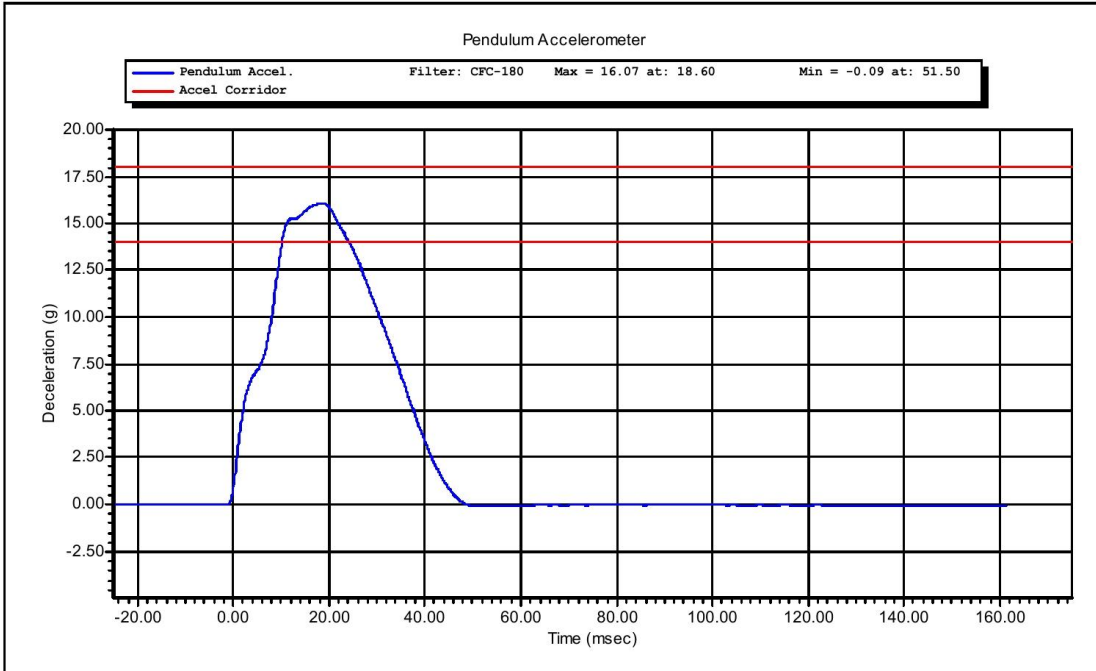


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Test Name:	Thorax Impact without Arm	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/29/2012
Test Number:	1	Test Time:	11:46:31 AM



Test Time: 11:46:31 AM

Test Date: 5/29/2012

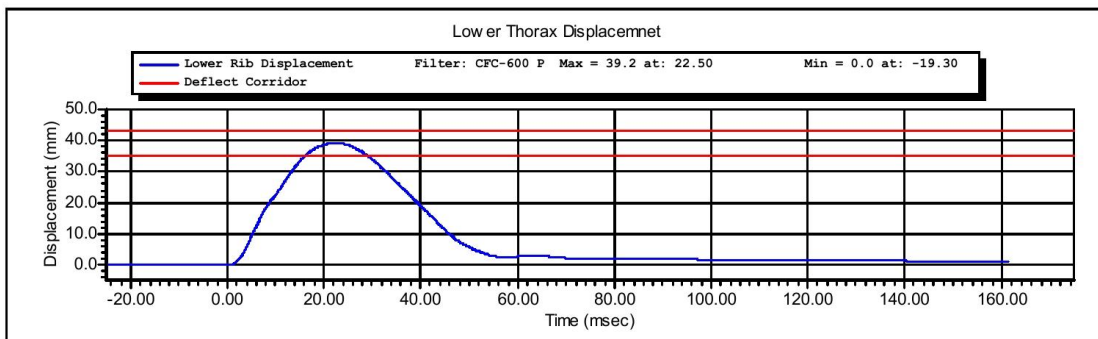
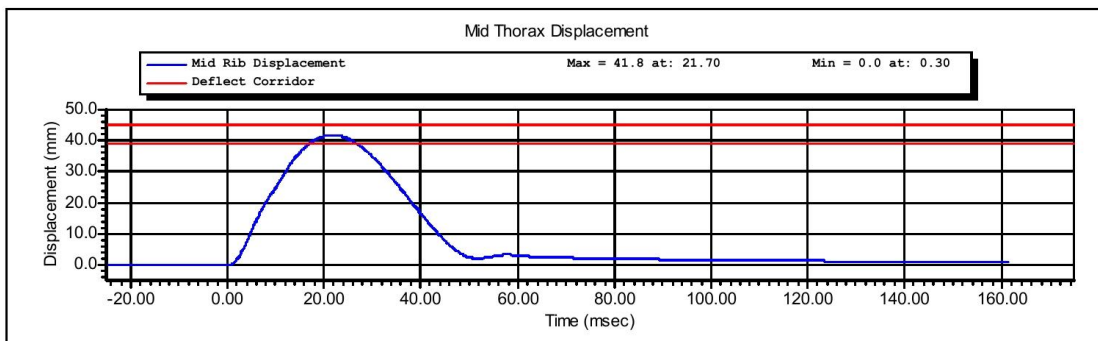
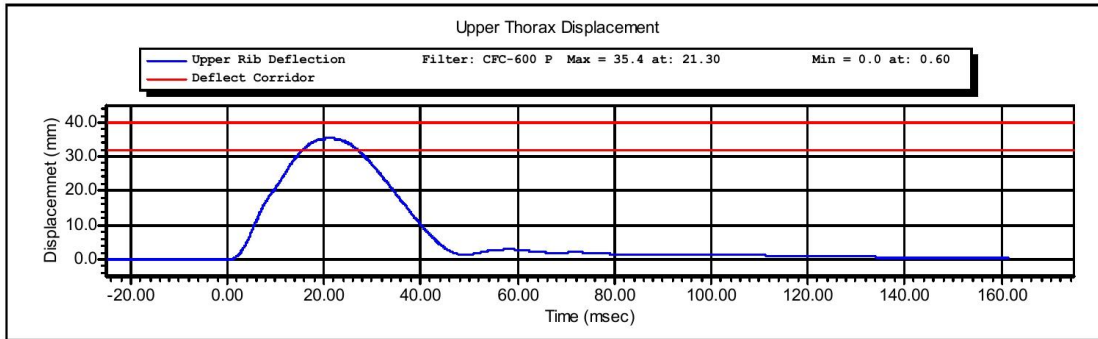
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Test Time: 11:46:31 AM

Test Date: 5/29/2012

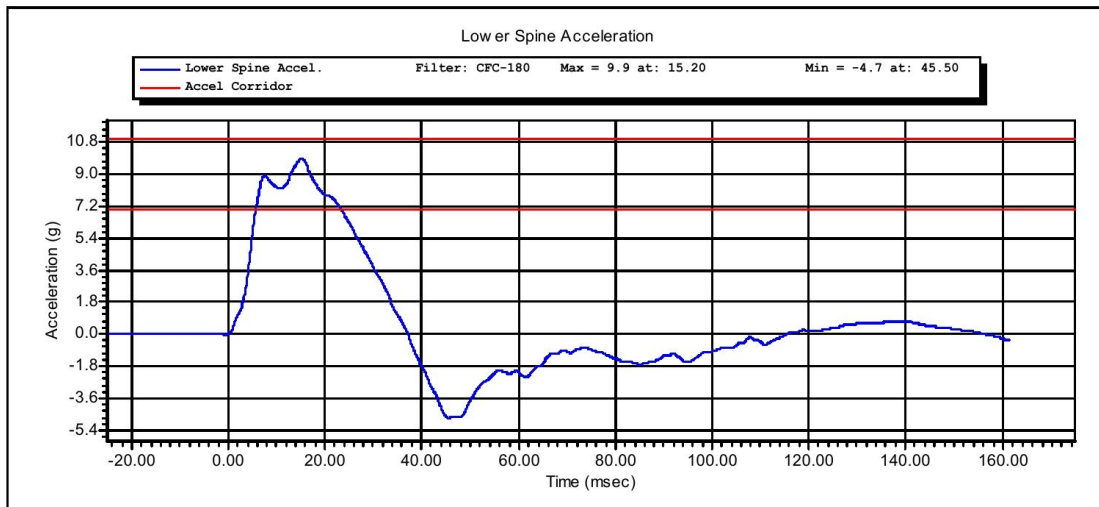
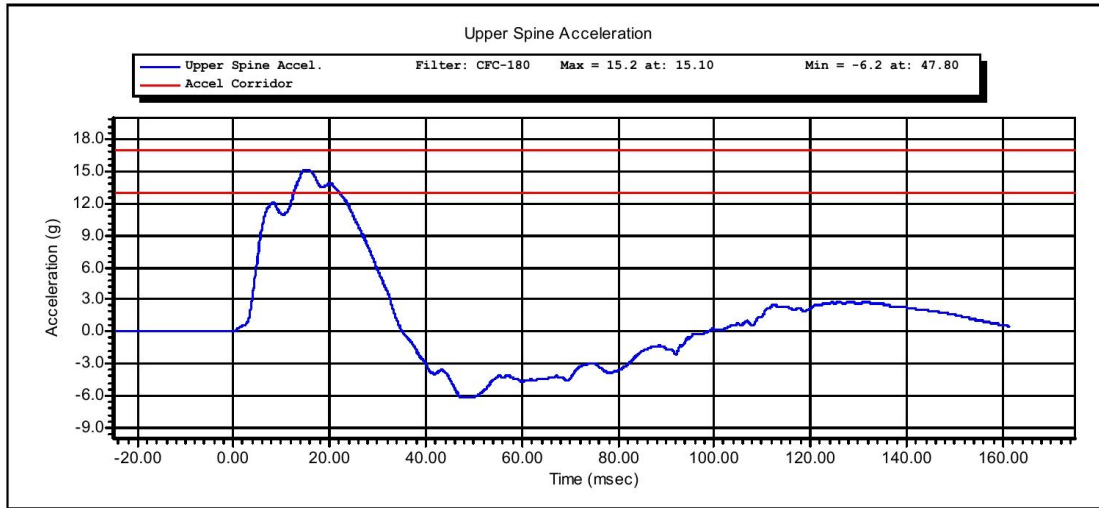
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Test Time: 11:46:31 AM

Test Date: 5/29/2012

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VERIFICATION REPORT

Test Name:	Thorax Impact with Arm	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/29/2012
Test Number:	1	Test Time:	1:38:25 PM

Component Part Number	Component Serial Number
Thorax Ribs 1, 2, 3 180-3362	DG6080, DG6081, DG7543
Shoulder Rib 180-3355	286
Left Arm 180-6011-1	1012

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	21.9 deg C P
Humidity	10 -- 70	56 %RH P
Velocity	6.60 -- 6.80	6.72 m/s P
Probe Acceleration after 5ms	30.0 -- 36.0	32.5 g P
Upper Thorax Rib Deflection	25.0 -- 32.0	26.2 mm P
Mid Thorax Rib Deflection	30.0 -- 36.0	32.0 mm P
Lower Thorax Rib Deflection	32.0 -- 38.0	35.3 mm P
Upper Spine Acceleration ("y")	34.0 -- 43.0	41.7 g P
Lower Spine Acceleration ("y")	29.0 -- 37.0	32.3 g P
Shoulder Deflection	31.0 -- 40.0	32.6 mm P

All test parameters are within specifications

Technician: **A. Rudniski**
 Supervisor: **D. Travale**

Test Time: **1:38:25 PM**

Test Date: **5/29/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C14953	5/25/2012
FTSS	180-3881-1	DS-1849	5/16/2012
Servo	180-3881-1	DS-1514	5/16/2012
FTSS	180-3881-1	DS-1859	5/16/2012
Endevco	7264-2000	P51875	5/17/2012
Endevco	7264-2000	P58796	5/17/2012
FTSS	180-3881-1	DS-1845	5/17/2012

Test Time: 1:38:25 PM

Test Date: 5/29/2012

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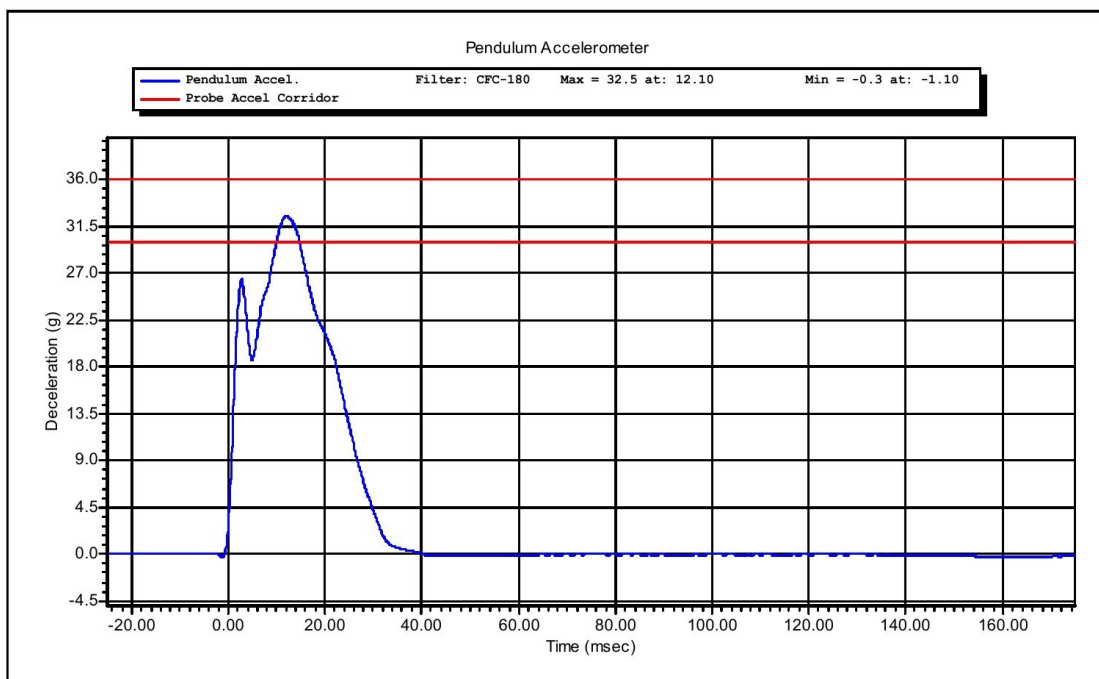


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Test Name:	Thorax Impact with Arm	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/29/2012
Test Number:	1	Test Time:	1:38:25 PM



Test Time: 1:38:25 PM

Test Date: 5/29/2012

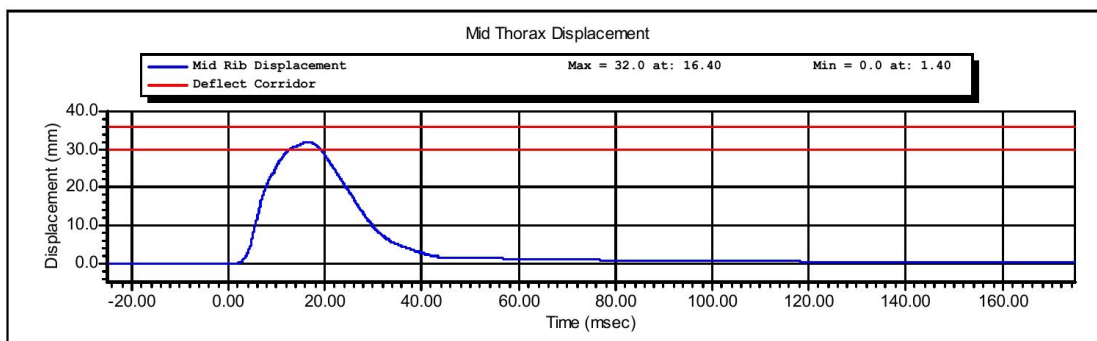
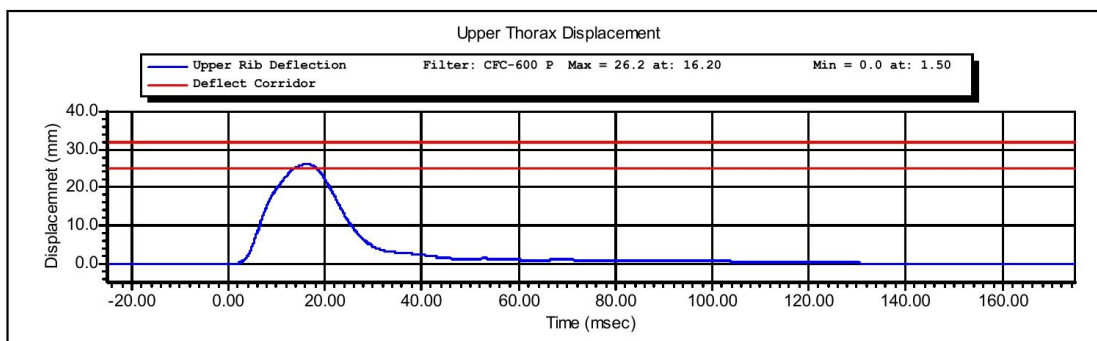
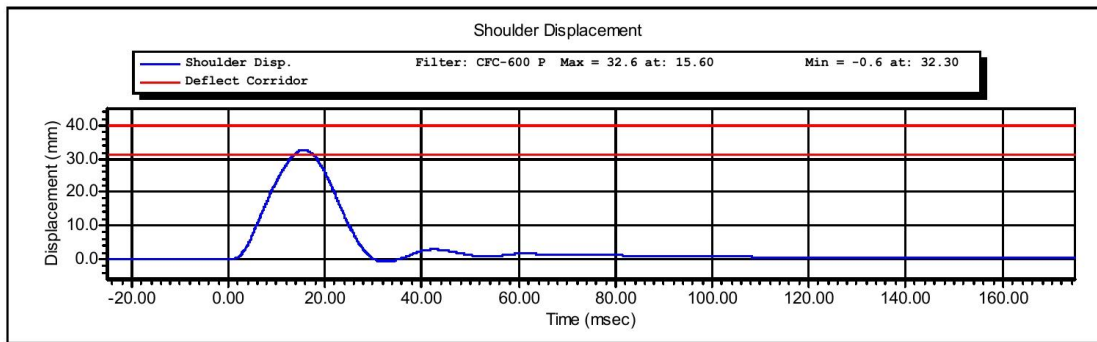
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Test Time: 1:38:25 PM

Test Date: 5/29/2012

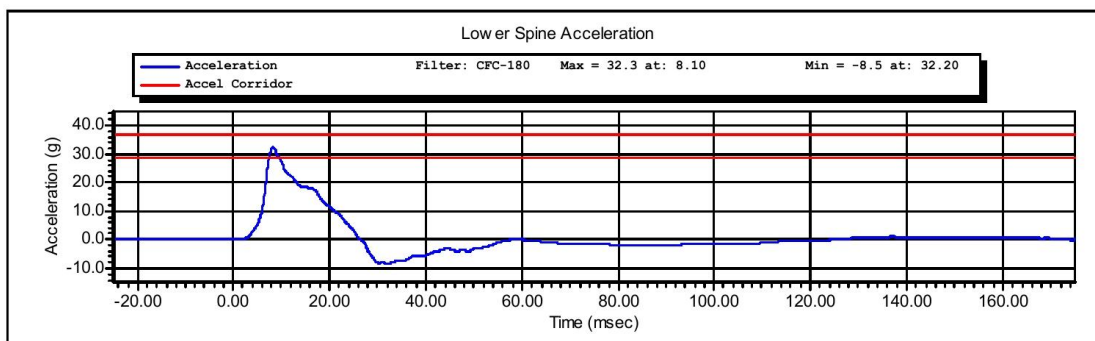
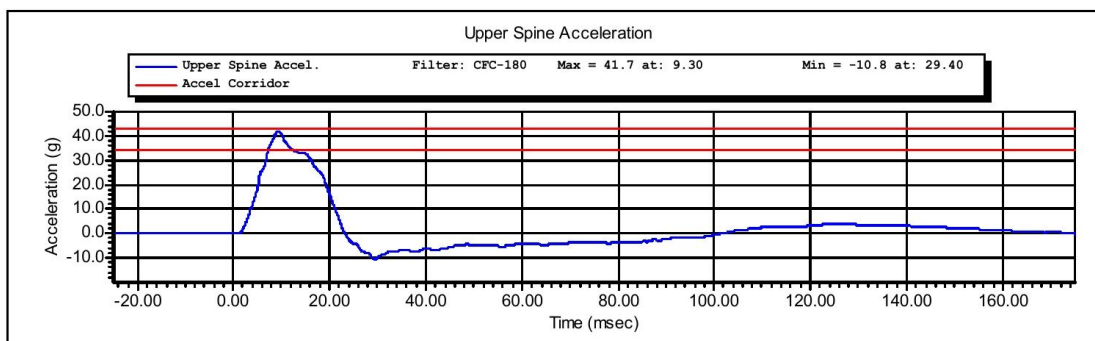
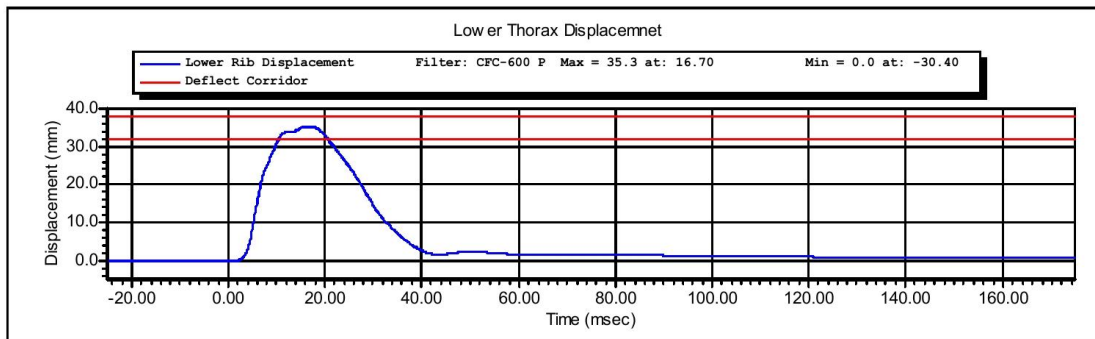
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Test Time: 1:38:25 PM

Test Date: 5/29/2012

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VERIFICATION REPORT

Test Name:	Abdominal Impact	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/29/2012
Test Number:	1	Test Time:	11:13:24 AM

Component Part Number	Component Serial Number
Abdomen Ribs 4, 5	1761, DG7012

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	22.1 deg C P
Humidity	10 -- 70	58 %RH P
Velocity	4.20 -- 4.40	4.32 m/s P
Probe Acceleration	12.0 -- 16.0	14.0 g P
Upper Abdominal Rib Deflection	36.0 -- 47.0	41.9 mm P
Lower Abdominal Rib Deflection	33.0 -- 44.0	38.6 mm P
Lower Spine Acceleration - T12	9.0 -- 14.0	10.9 g P

All test parameters are within specifications

Technician: **A. Rudniski**Supervisor: **D. Travale**Test Time: **11:13:24 AM**Test Date: **5/29/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C14953	5/25/2012
FTSS	180-3881-1	DS-1860	5/16/2012
FTSS	180-3881-1	DS-1861	5/16/2012
Endevco	7264-2000	P58796	5/17/2012

Test Time: 11:13:24 AM

Test Date: 5/29/2012

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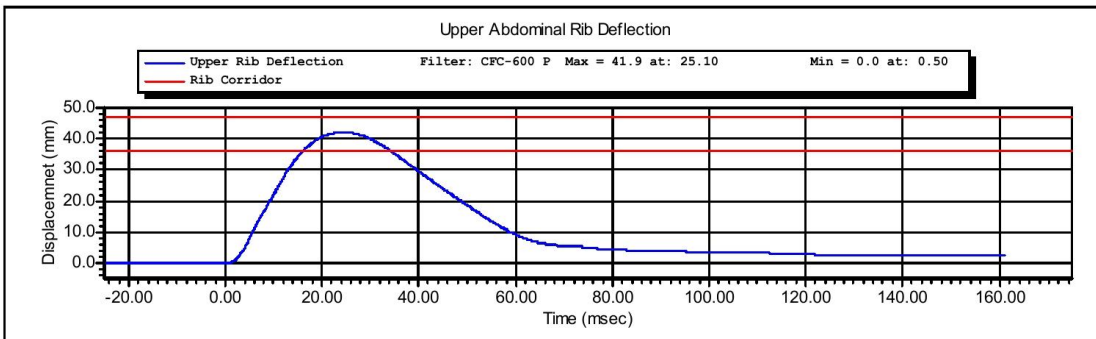
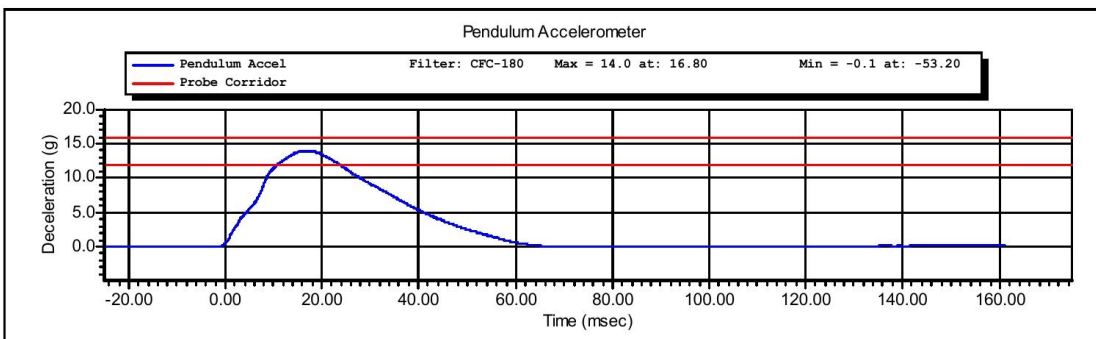


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Test Name:	Abdominal Impact	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/29/2012
Test Number:	1	Test Time:	11:13:24 AM



Test Time: 11:13:24 AM

Test Date: 5/29/2012

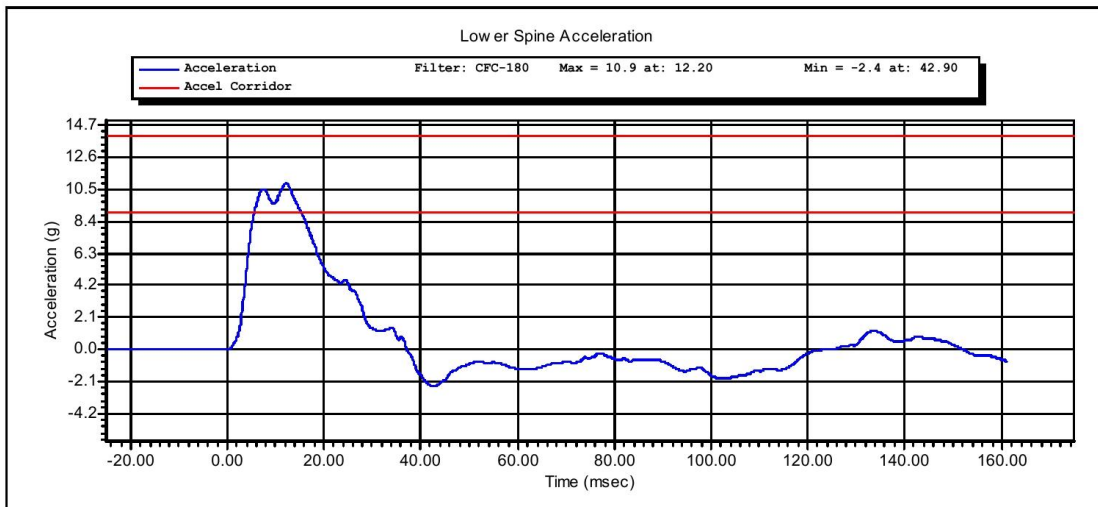
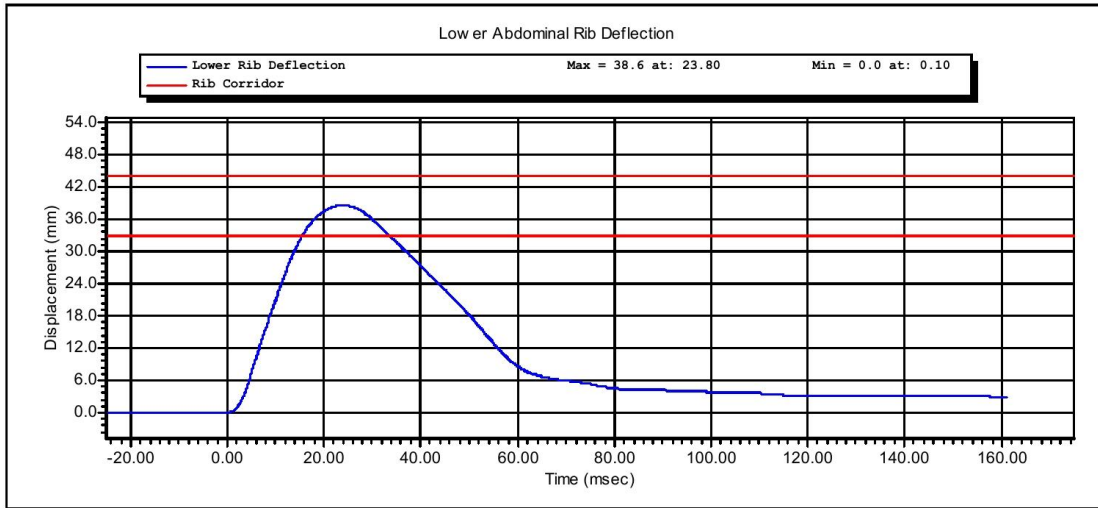
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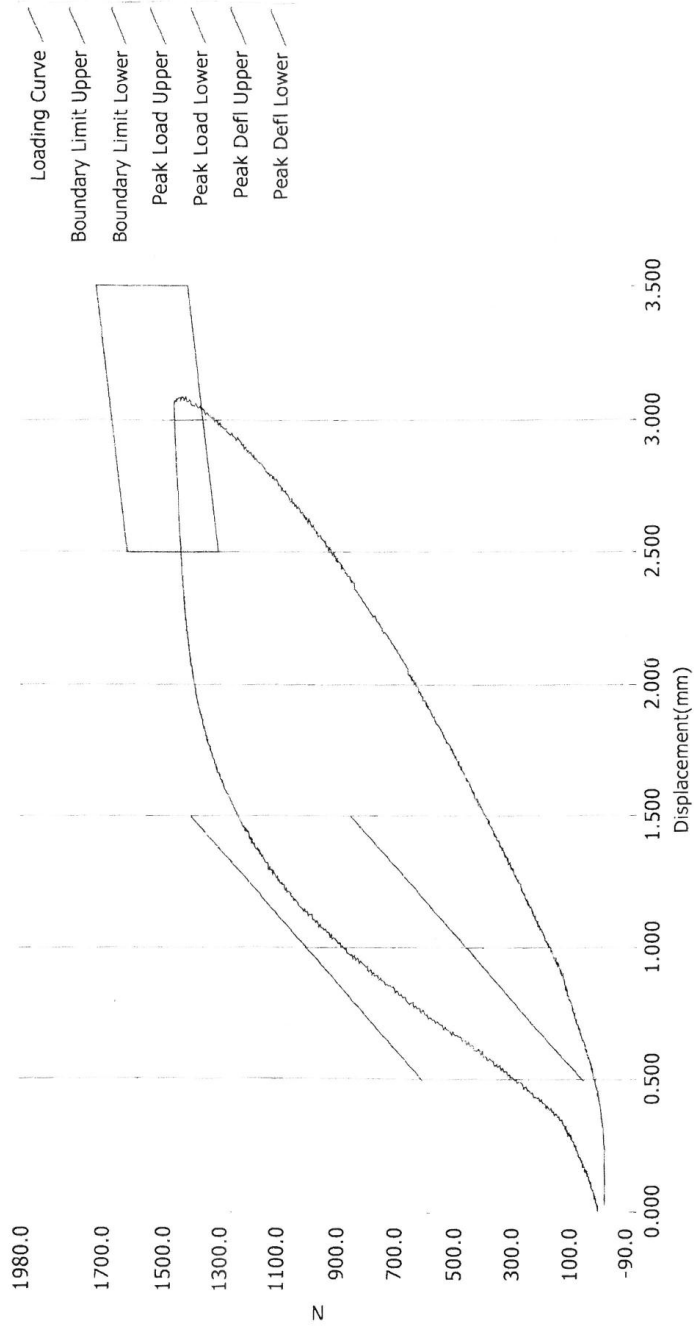


Test Time: 11:13:24 AM

Test Date: 5/29/2012

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Resultant Data - SIDIIs Plug Compression

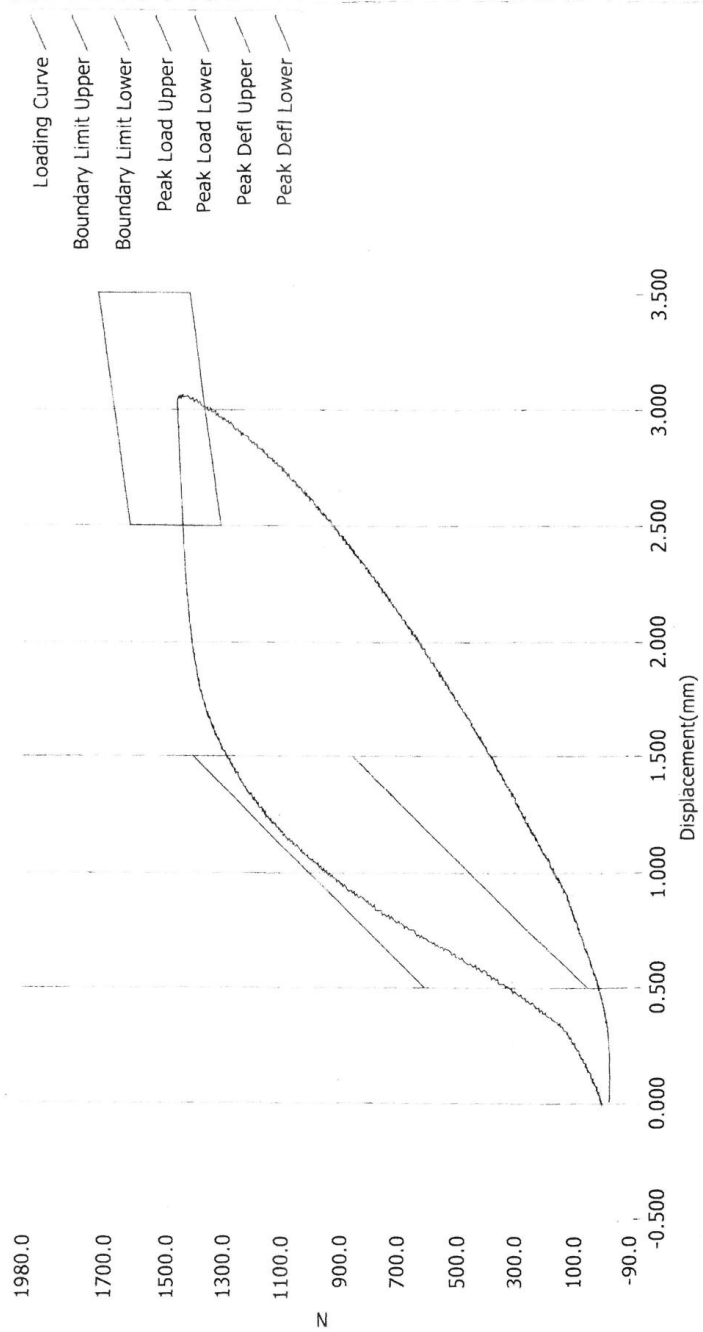


ATD Calibration Lab

Test ID	Part Serial Number	Test Date	Test Time
Cert ID	ATD Serial Number	9/22/2010	1:06 PM
	36316	ATD Type	SIDIIs

Current Date : 9/22/2010 Current Time : 13:07:19

Resultant Data - SIDIIs Plug Compression



ATD Calibration Lab

Test ID	Part Serial Number	Test Date	Test Time
Cert ID	ATD Serial Number	9/22/2010	10:19 AM
	36265	ATD Type	SIDIIs

Current Date : 9/22/2010 Current Time : 10:19:49



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VERIFICATION REPORT

Test Name:	Pelvis	Revision:	8/24/2009
Sub Test Name:	Acetabulum Impact	Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/29/2012
Test Number:	1	Test Time:	10:14:08 AM

Component Part Number	Component Serial Number
180-4343 Pelvis Flesh	DJ0959
FTSS Cert Plug - 1459N	36265
FTSS Test Plug - 1459N	36316

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	21.9 deg C P
Humidity	10 -- 70	62 %RH P
Velocity	6.60 -- 6.80	6.60 m/s P
Peak Probe Acceleration	38.0 -- 47.0	44.0 g P
Peak Pelvis Acceleration	34.0 -- 42.0	38.5 g P
Peak Acetabulum Force	3.60 -- 4.30	3.64 kN P

All test parameters are within specifications

Technician: **A. Rudniski**

Supervisor: **D. Travale**

Test Time: **10:14:08 AM**

Test Date: **5/29/2012**

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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C14953	5/25/2012
Endevco	7264-2000	P63561	5/17/2012
DentonATD	3249J	LC-267Fy	5/21/2012

Test Time: 10:14:08 AM

Test Date: 5/29/2012

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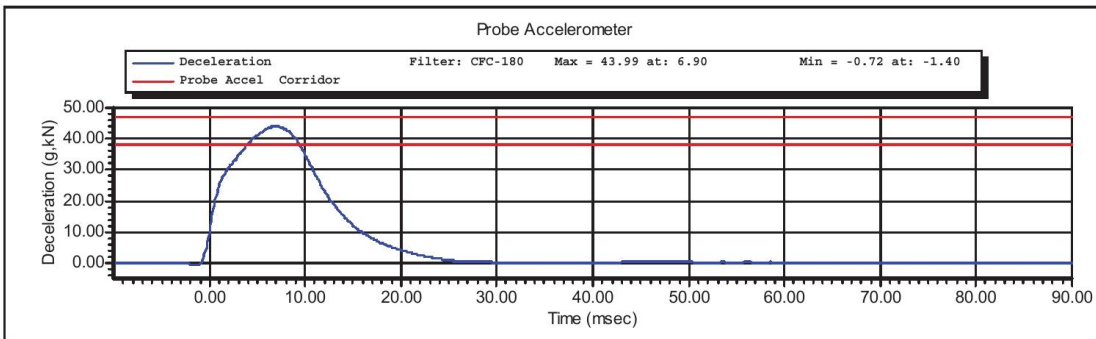
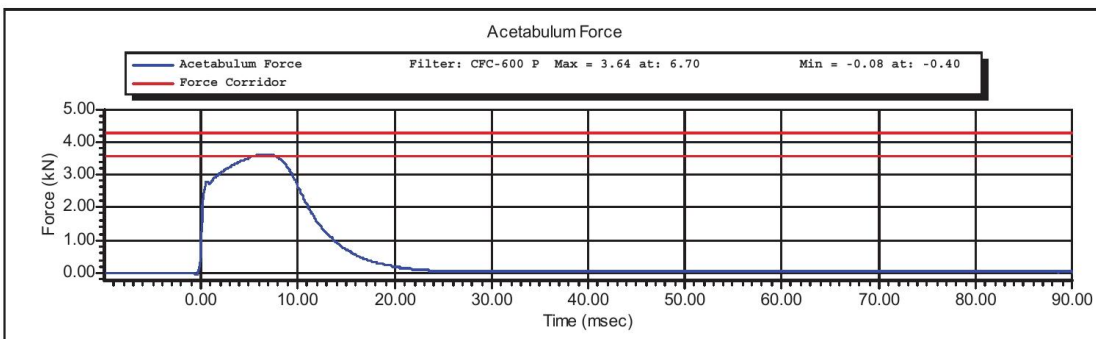


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Test Name:	Pelvis	Revision:	8/24/2009
Sub Test Name:	Acetabulum Impact	Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/29/2012
Test Number:	1	Test Time:	10:14:08 AM



Test Time: **10:14:08 AM**

Test Date: **5/29/2012**

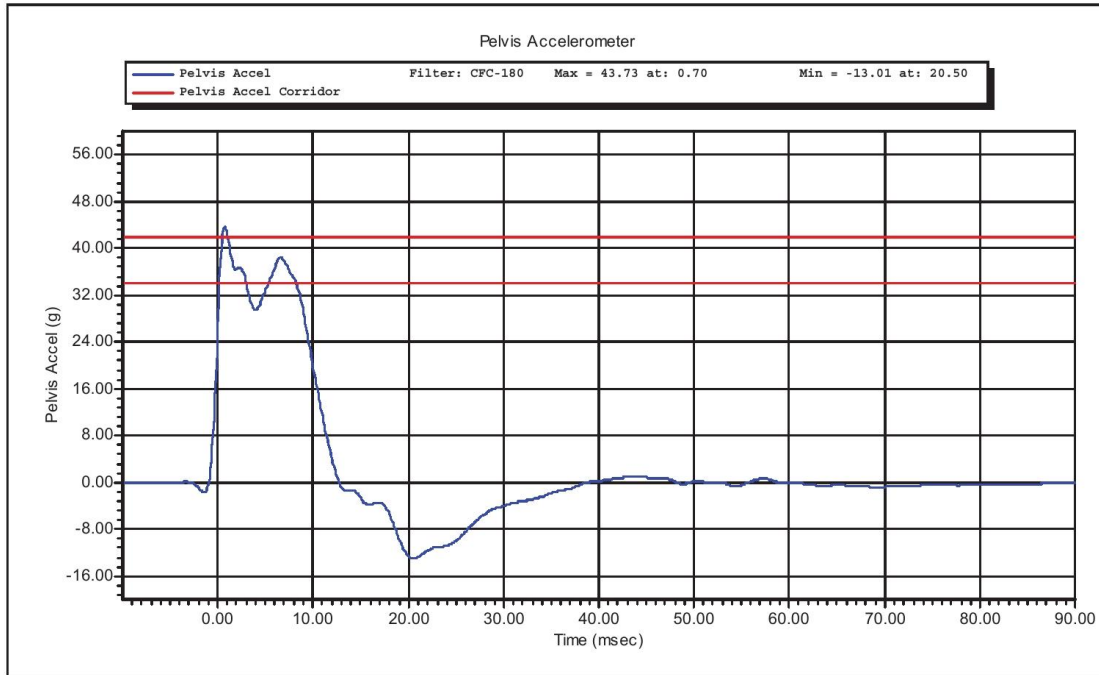
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Test Time: 10:14:08 AM

Test Date: 5/29/2012

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VERIFICATION REPORT

Test Name:	Pelvis	Revision:	8/24/2009
Sub Test Name:	Iliac Impact	Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/25/2012
Test Number:	1	Test Time:	10:23:05 AM

Component Part Number	Component Serial Number
180-4343 Pelvis Flesh	DJ0959

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	22.1 deg C P
Humidity	10 -- 70	61 %RH P
Velocity	4.20 -- 4.40	4.30 m/s P
Peak Probe Acceleration	36.0 -- 45.0	41.1 g P
Peak Pelvis Acceleration	28.0 -- 39.0	35.9 g P
Peak Iliac Force	4.10 -- 5.10	4.62 kN P

All test parameters are within specifications

Technician: **A. Rudniski**Supervisor: **D. Travale**Test Time: **10:23:05 AM**Test Date: **5/25/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C14953	2/8/2012
Endevco	7264-2000	P63561	5/17/2012
DentonATD	3228J	LC-281Fy	5/21/2012

Test Time: 10:23:05 AM

Test Date: 5/25/2012

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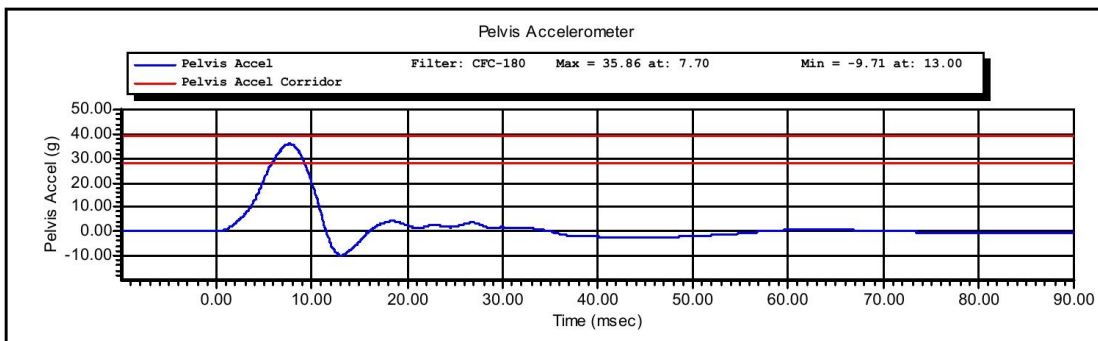
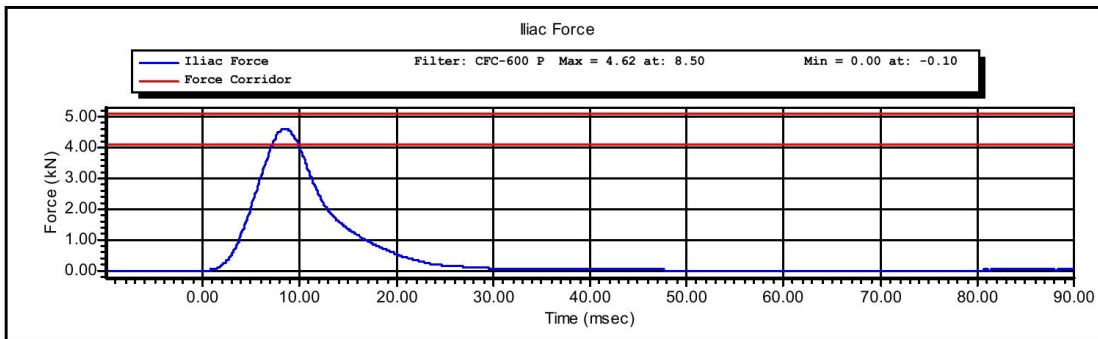


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Test Name:	Pelvis	Revision:	8/24/2009
Sub Test Name:	Iliac Impact	Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	5/25/2012
Test Number:	1	Test Time:	10:23:05 AM



Test Time: **10:23:05 AM**

Test Date: **5/25/2012**

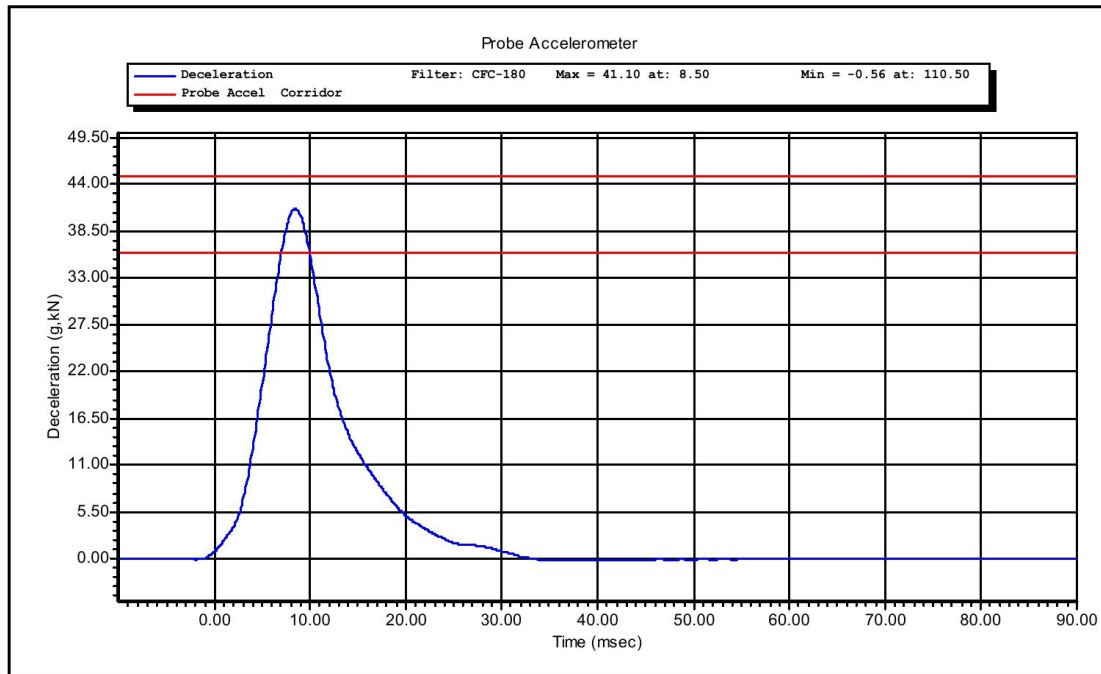
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Test Time: 10:23:05 AM

Test Date: 5/25/2012

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CALIBRATION TEST RESULTS

POST-TEST

SID-IIS 5TH PERCENTILE FEMALE - DRIVER ATD

SERIAL NO: 8012

(CONFIGURED FOR LEFT SIDE IMPACT)



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SID-IIsD External Measurements

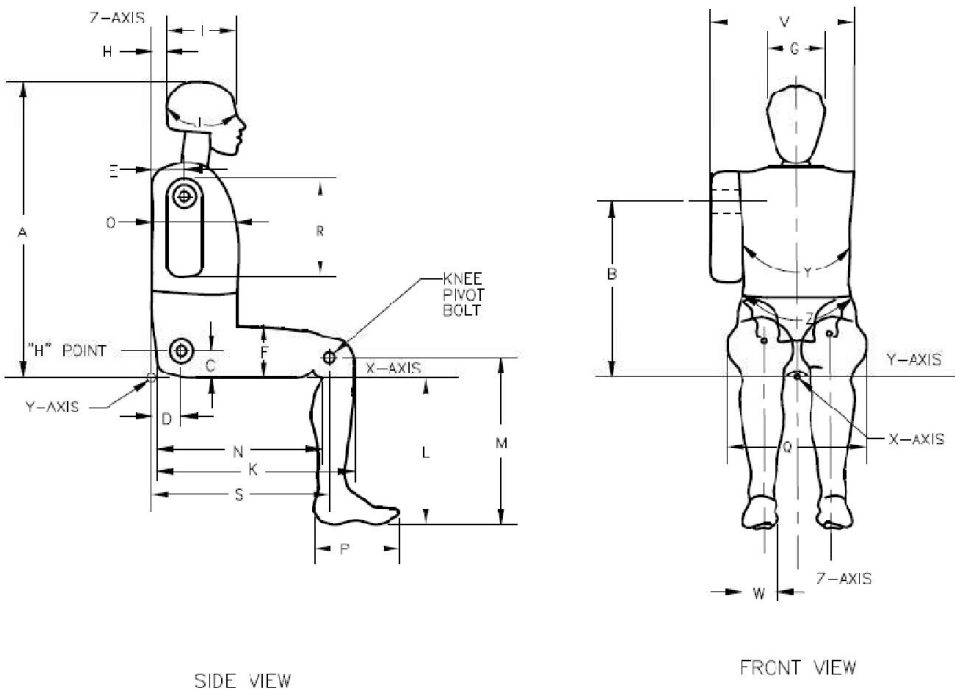
NHTSA ATD S/N DG8012

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Sitting Height	772.0 - 788.0	780	Yes
B	Shoulder Pivot Height	437.0 - 453.0	442	Yes
C	H-Point Height	79.0 - 89.0	84	Yes
D	H-Point from Seat Back	141.0 - 151.0	145	Yes
E	Shoulder Pivot from Backline	97.0 - 107.0	101	Yes
F	Thigh Clearance	119.0 - 135.0	128	Yes
G	Head Breadth	140.0 - 148.0	144	Yes
H	Head Back from Backline	40.0 - 46.0	43	Yes
I	Head Depth	178.0 - 188.0	183	Yes
J	Head Circumference	541.0 - 551.0	544	Yes
K	Buttock to Knee Length	514.0 - 540.0	530	Yes
L	Popliteal Height	343.0 - 369.0	346	Yes
M	Knee Pivot to Floor Height	393.0 - 409.0	397	Yes
N	Buttock Popliteal Length	416.0 - 442.0	431	Yes
O	Chest Depth without Jacket	195.0 - 211.0	205	Yes
P	Foot Length (right)	216.0 - 232.0	222	Yes
Q	Hip Breadth	313.0 - 323.0	318	Yes
R	Arm Length	249.0 - 259.0	253	Yes
S	Knee Joint to Seat back	478.0 - 493.0	482	Yes
V	Shoulder Width (only one arm installed)	341.0 - 357.0	350	Yes
W	Foot Width (right)	78.0 - 94.0	84	Yes
Y	Chest Circumference with Jacket	851.0 - 881.0	866	Yes
Z	Waist Circumference	761.0 - 791.0	767	Yes

Technician : Matthew Goehle

9/26/2012

SID-IIsD External Dimension Reference Diagram



VERIFICATION REPORT

Test Name:	Head Drop	Revision:	12/14/2006
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	Dg8012		
Test ID:		Test Date:	9/26/2012
Test Number:	1	Test Time:	5:19:55 PM

Component Part Number	Component Serial Number
Head Skin - 180-1002	1362

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	21.4 deg C P
Humidity	10 -- 70	59 %RH P
Resultant Acceleration	115.0 -- 137.0	125.2 g P
Oscillation	0.0 -- 15.0	1.3 % P
Fore-Aft Acceleration	-15.0 -- 15.0	5.2 g P

All test parameters are within specifications

Technician: **S. Zito**

Supervisor: **D. Travale**

Test Time: **5:19:55 PM**

Test Date: **9/26/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
Endevco	7264-2000	P49185	5/18/2012
Endevco	7264-2000	P51994	5/18/2012
Endevco	7264-2000	P51991	5/18/2012

Test Time: 5:19:55 PM

Test Date: 9/26/2012

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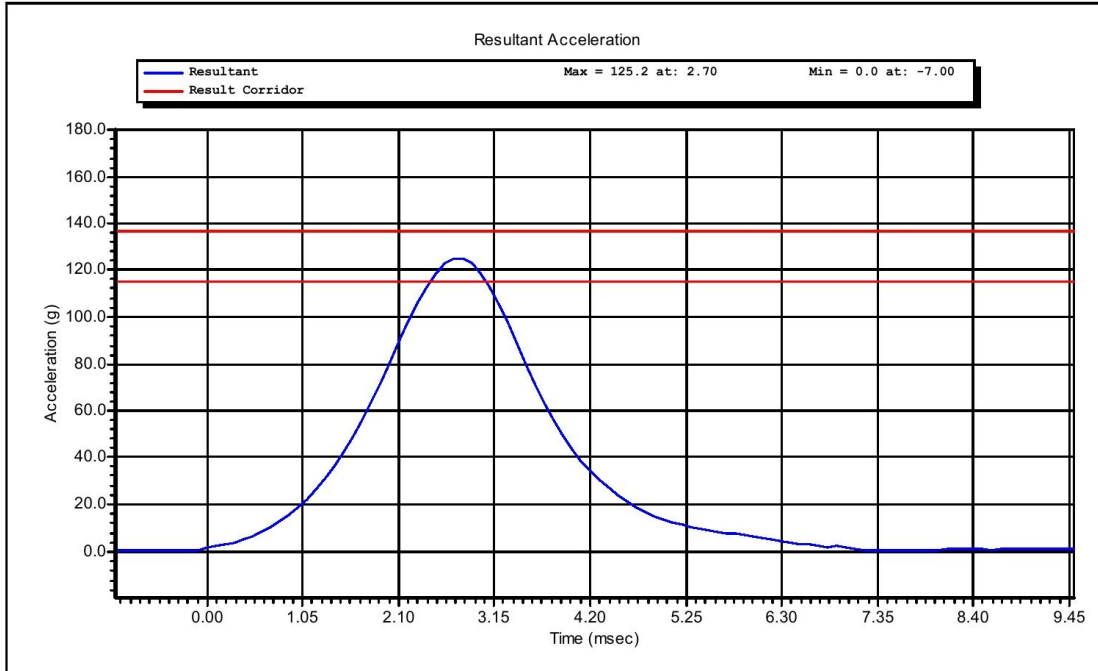


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Test Name:	Head Drop	Revision:	12/14/2006
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	Dg8012		
Test ID:		Test Date:	9/26/2012
Test Number:	1	Test Time:	5:19:55 PM



Test Time: 5:19:55 PM

Test Date: 9/26/2012

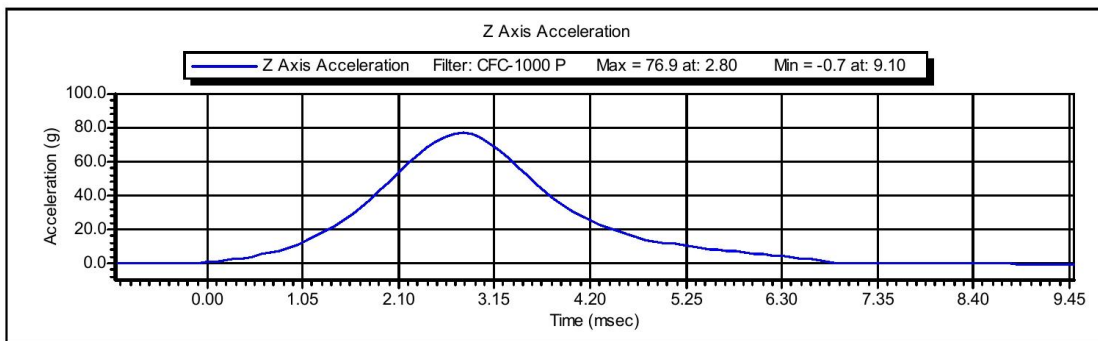
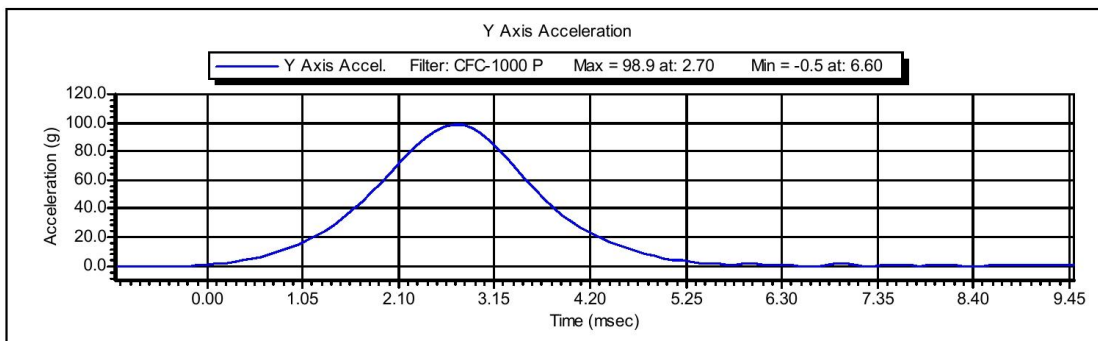
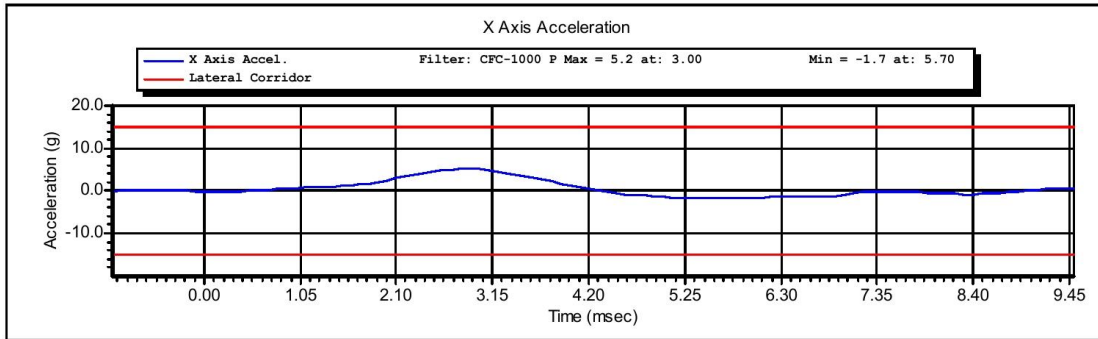
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Test Time: 5:19:55 PM

Test Date: 9/26/2012

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VERIFICATION REPORT

Test Name:	Neck Pendulum	Revision:	8/24/2009
Sub Test Name:	Left Side	Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	9/26/2012
Test Number:	2	Test Time:	7:14:57 PM

Component Part Number	Component Serial Number
Neck - 180-2000	DG7061

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	21.5 deg C P
Humidity	10 -- 70	45 %RH P
Velocity	5.51 -- 5.63	5.61 m/s P
Pendulum Impulse at 10 ms	2.20 -- 2.80	2.48 m/s P
Pendulum Impulse at 15 ms	3.30 -- 4.10	3.63 m/s P
Pendulum Impulse at 20 ms	4.40 -- 5.40	4.91 m/s P
Pendulum Impulse at 25 ms	5.40 -- 6.10	5.64 m/s P
Pendulum Impulse between 25 and 100 ms	5.50 -- 6.20	5.64 m/s P
Max D Plane Rotation	71.0 -- 81.0	74.0 degrees P
Time at Max Rotation	50.0 -- 70.0	60.4 ms P
Moment about OC	-44.0 -- -36.0	-42.7 Nm P
Moment Decay to Zero	102.0 -- 126.0	113.8 ms P

All test parameters are within specifications

Technician: **A. Rudniski**

Supervisor: **D. Travale**

Test Time: **7:14:57 PM**

Test Date: **9/26/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C15016	8/15/2012
Denton	1716A	LC-1591 Fy	5/21/2012
Denton	1716A	LC-1591 Mx	5/21/2012
DentonATD	78051-342	184	5/30/2012
DentonATD	78051-342	174	5/30/2012
DentonATD	78051-342	185	5/30/2012

Test Time: 7:14:57 PM

Test Date: 9/26/2012

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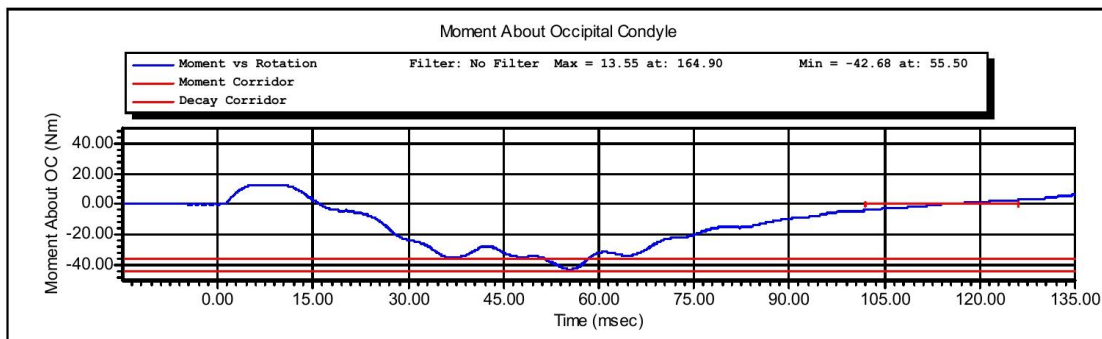
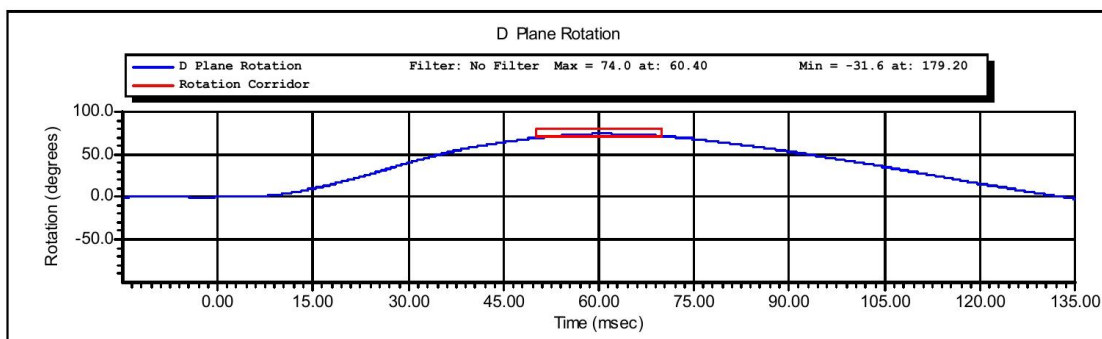


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Test Name:	Neck Pendulum	Revision:	8/24/2009
Sub Test Name:	Left Side	Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	9/26/2012
Test Number:	2	Test Time:	7:14:57 PM



Test Time: 7:14:57 PM

Test Date: 9/26/2012

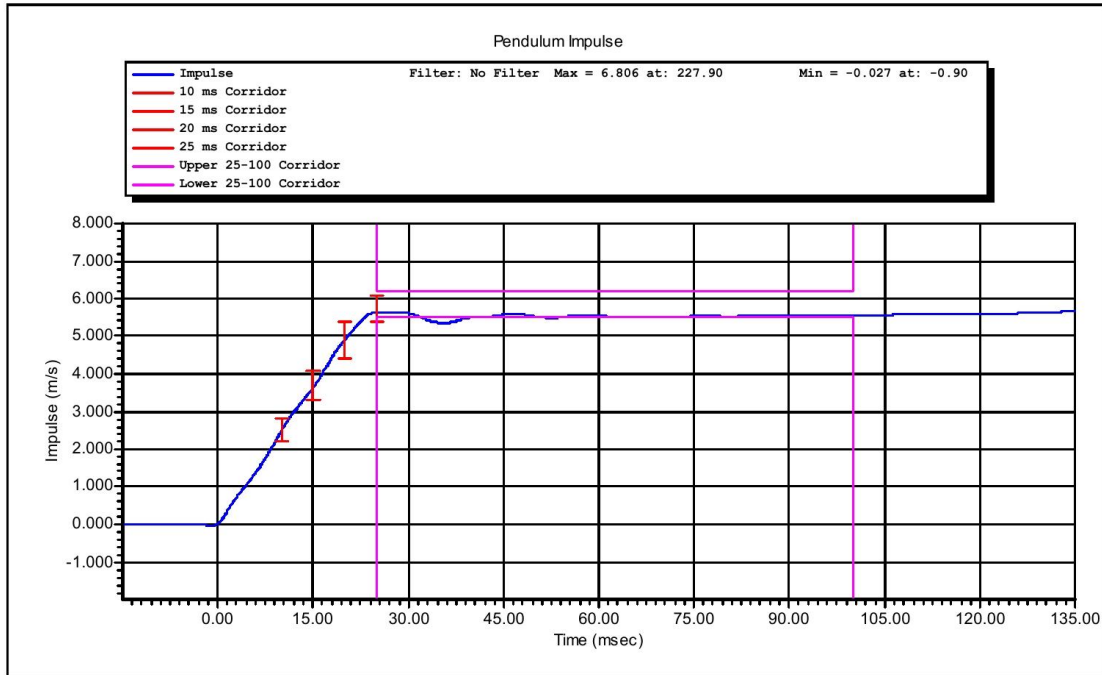
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Test Time: 7:14:57 PM

Test Date: 9/26/2012

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VERIFICATION REPORT

Test Name:	Shoulder Impact	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	9/26/2012
Test Number:	1	Test Time:	8:48:33 PM

Component Part Number	Component Serial Number
Left Arm 180-6011-1	1012
Shoulder Rib 180-3355	286

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	21.00 deg C P
Humidity	10.0 -- 70.0	45.1 %RH P
Velocity	4.20 -- 4.40	4.33 m/s P
Probe Acceleration	13.0 -- 18.0	15.2 g P
Shoulder Deflection	28.0 -- 37.0	28.0 mm P
T1 Acceleration	17.0 -- 22.0	20.0 g P

All test parameters are within specifications

Technician: **S. Zito**

Supervisor: **D. Travale**

Test Time: **8:48:33 PM**

Test Date: **9/26/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C14953	5/25/2012
FTSS	180-3881-1	DS-1845	5/17/2012
Endevco	7264-2000	P51875	5/17/2012

Test Time: 8:48:33 PM

Test Date: 9/26/2012

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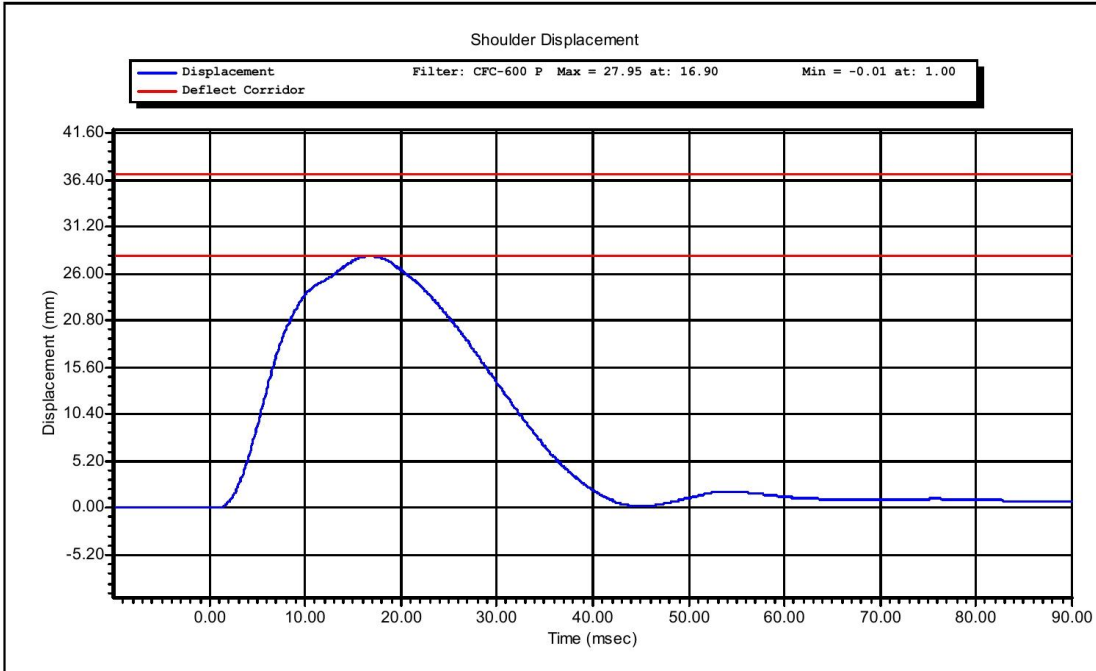


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Test Name:	Shoulder Impact	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	9/26/2012
Test Number:	1	Test Time:	8:48:33 PM



Test Time: 8:48:33 PM

Test Date: 9/26/2012

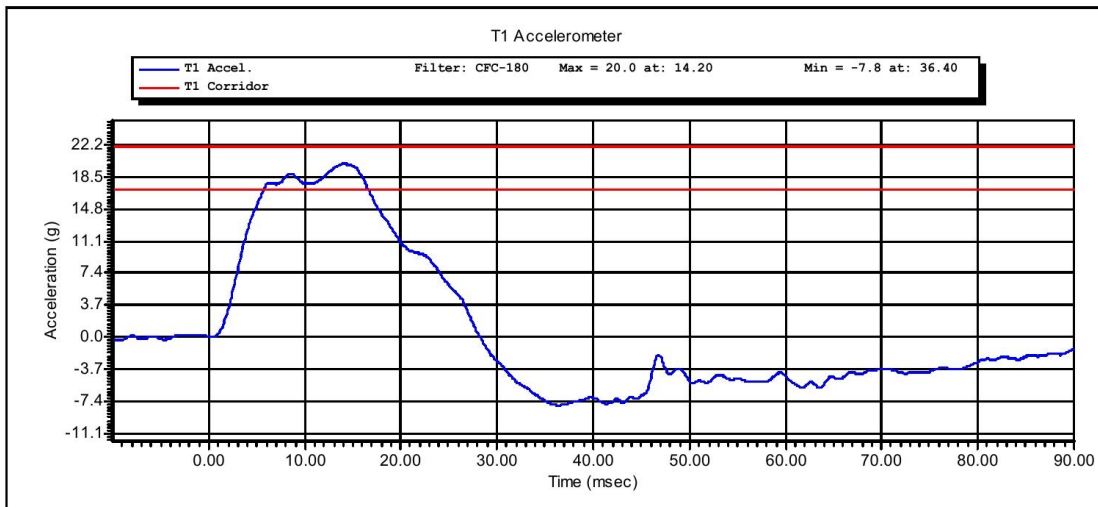
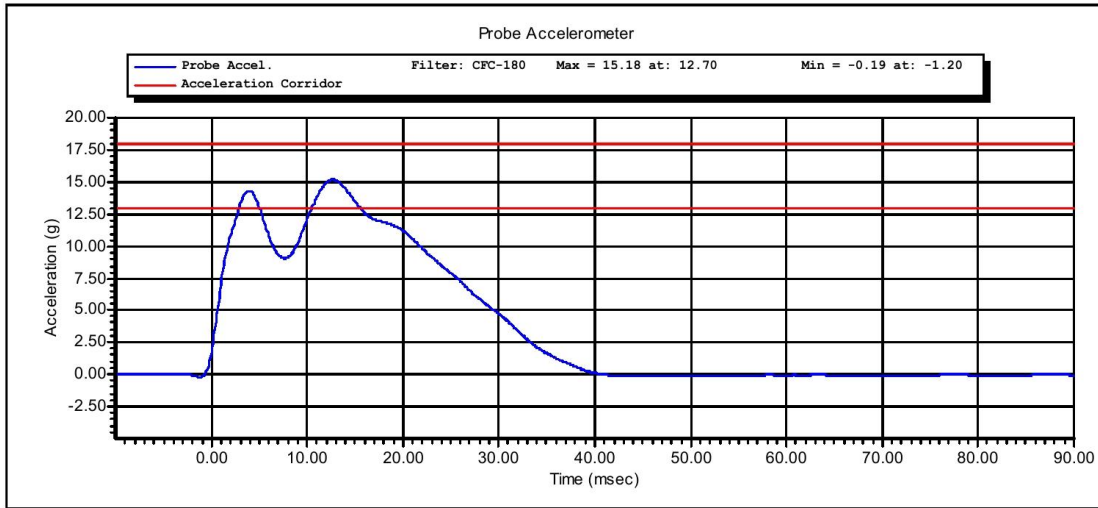
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Test Time: 8:48:33 PM

Test Date: 9/26/2012

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VERIFICATION REPORT

Test Name:	Thorax Impact without Arm	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	9/26/2012
Test Number:	1	Test Time:	8:35:34 PM

Component Part Number	Component Serial Number
Thorax Ribs 1, 2, 3 180-3362	DG6080, DG6081, DG7543

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	21.0 deg C P
Humidity	10 -- 70	46 %RH P
Velocity	4.20 -- 4.40	4.33 m/s P
Probe Acceleration	14.0 -- 18.0	16.3 g P
Upper Thorax Rib Deflection	32.0 -- 40.0	37.7 mm P
Mid Thorax Rib Deflection	39.0 -- 45.0	42.3 mm P
Lower Thorax Rib Deflection	35.0 -- 43.0	38.4 mm P
Upper Spine Acceleration T1	13.0 -- 17.0	15.9 g P
Lower Spine Acceleration T12	7.0 -- 11.0	10.1 g P

All test parameters are within specifications

Technician: **M. Goehle**

Supervisor: **D. Travale**

Test Time: **8:35:34 PM**

Test Date: **9/26/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C14953	5/25/2012
FTSS	180-3881-1	DS-1849	5/16/2012
Servo	180-3881-1	DS-1514	5/16/2012
FTSS	180-3881-1	DS-1859	5/16/2012
Endevco	7264-2000	P51875	5/17/2012
Endevco	7264-2000	P58796	5/17/2012

Test Time: 8:35:34 PM

Test Date: 9/26/2012

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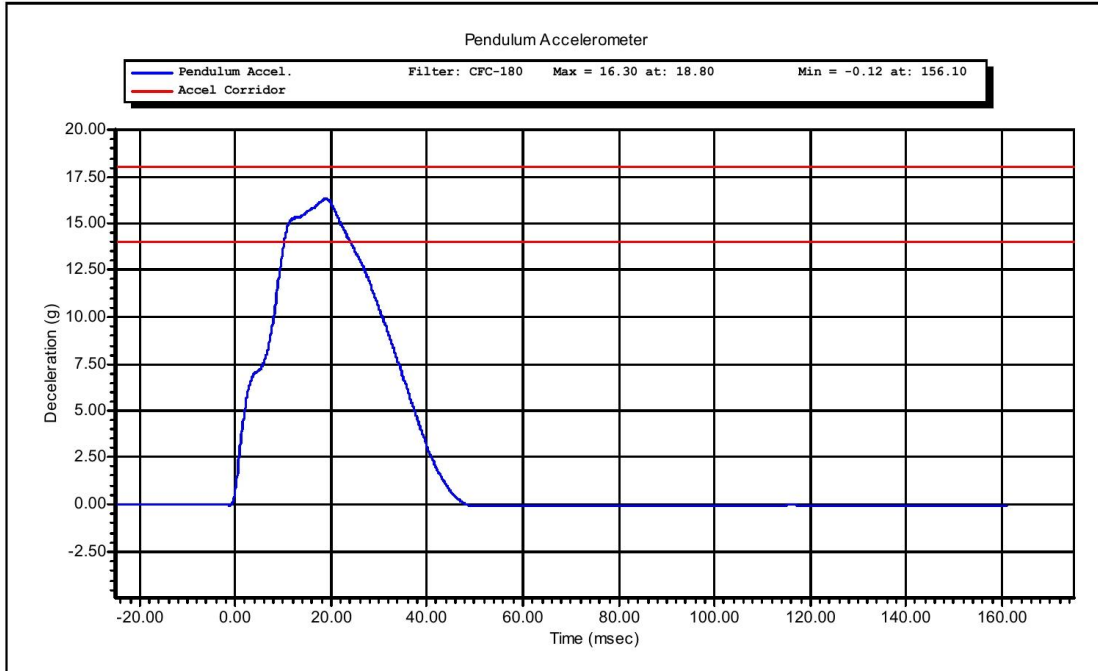


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Test Name:	Thorax Impact without Arm	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	9/26/2012
Test Number:	1	Test Time:	8:35:34 PM



Test Time: 8:35:34 PM

Test Date: 9/26/2012

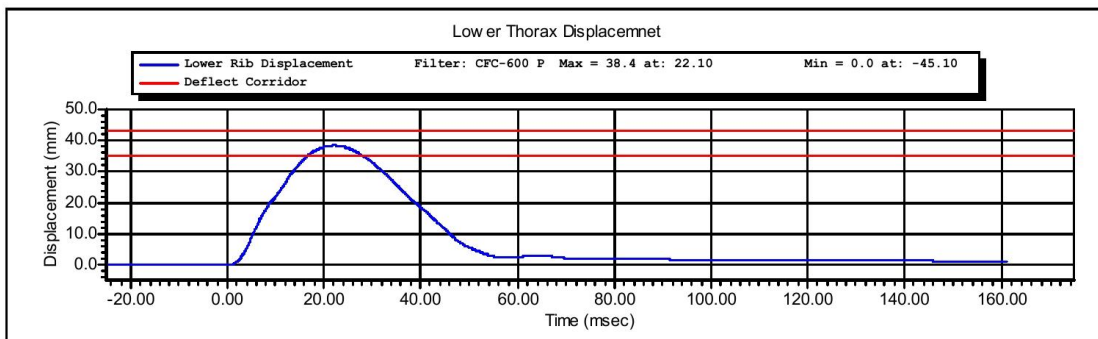
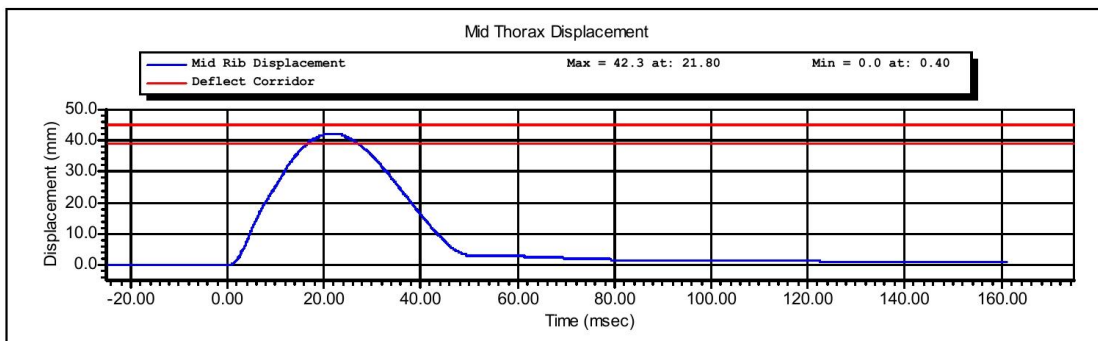
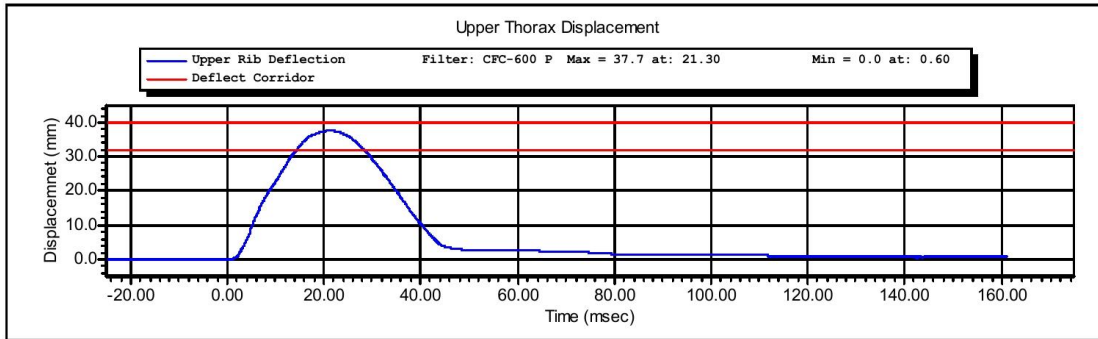
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Test Time: 8:35:34 PM

Test Date: 9/26/2012

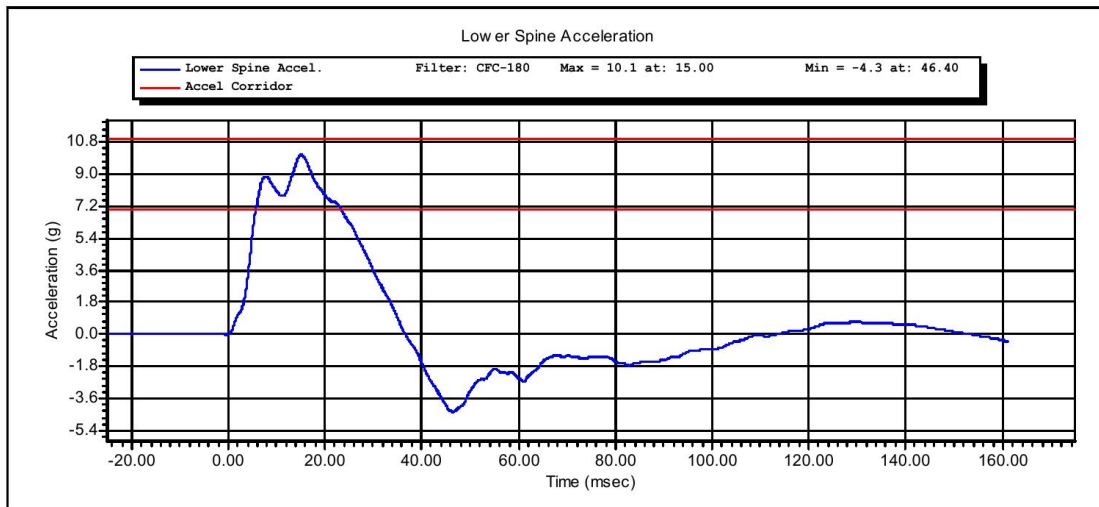
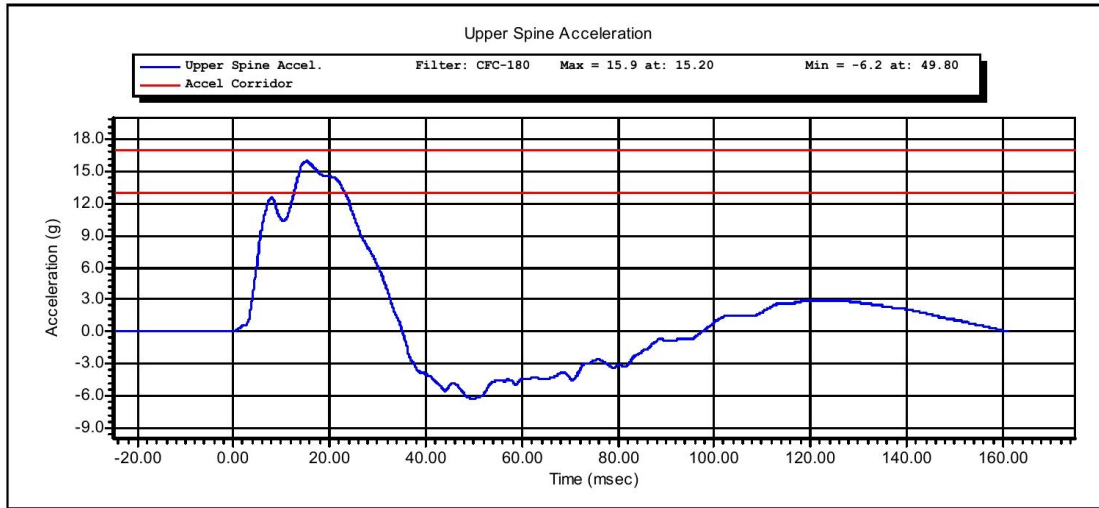
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Test Time: 8:35:34 PM

Test Date: 9/26/2012

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VERIFICATION REPORT

Test Name:	Thorax Impact with Arm	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	9/26/2012
Test Number:	1	Test Time:	9:09:32 PM

Component Part Number	Component Serial Number
Thorax Ribs 1, 2, 3 180-3362	DG6080, DG6081, DG7543
Shoulder Rib 180-3355	286
Left Arm 180-6011-1	1012

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	20.9 deg C P
Humidity	10 -- 70	45 %RH P
Velocity	6.60 -- 6.80	6.71 m/s P
Probe Acceleration after 5ms	30.0 -- 36.0	32.5 g P
Upper Thorax Rib Deflection	25.0 -- 32.0	26.2 mm P
Mid Thorax Rib Deflection	30.0 -- 36.0	31.2 mm P
Lower Thorax Rib Deflection	32.0 -- 38.0	33.3 mm P
Upper Spine Acceleration ("y")	34.0 -- 43.0	42.0 g P
Lower Spine Acceleration ("y")	29.0 -- 37.0	33.7 g P
Shoulder Deflection	31.0 -- 40.0	32.9 mm P

All test parameters are within specifications

Technician: **S. Zito**
 Supervisor: **D. Travale**

Test Time: **9:09:32 PM**

Test Date: **9/26/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C14953	5/25/2012
FTSS	180-3881-1	DS-1849	5/16/2012
Servo	180-3881-1	DS-1514	5/16/2012
FTSS	180-3881-1	DS-1859	5/16/2012
Endevco	7264-2000	P51875	5/17/2012
Endevco	7264-2000	P58796	5/17/2012
FTSS	180-3881-1	DS-1845	5/17/2012

Test Time: 9:09:32 PM

Test Date: 9/26/2012

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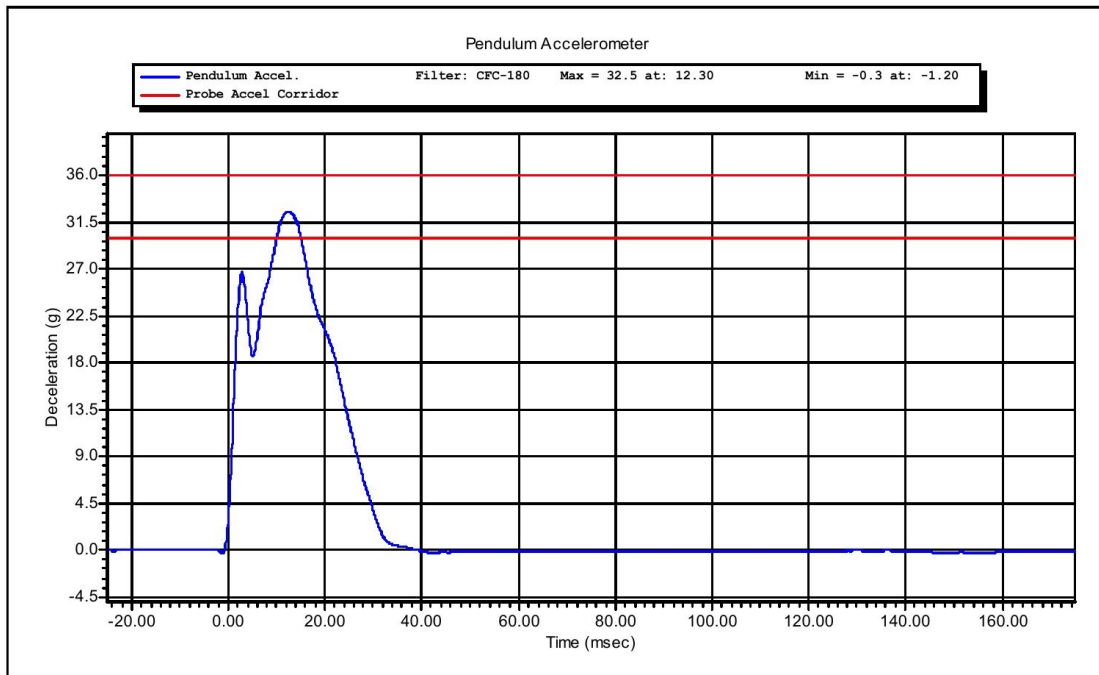


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Test Name:	Thorax Impact with Arm	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	9/26/2012
Test Number:	1	Test Time:	9:09:32 PM



Test Time: 9:09:32 PM

Test Date: 9/26/2012

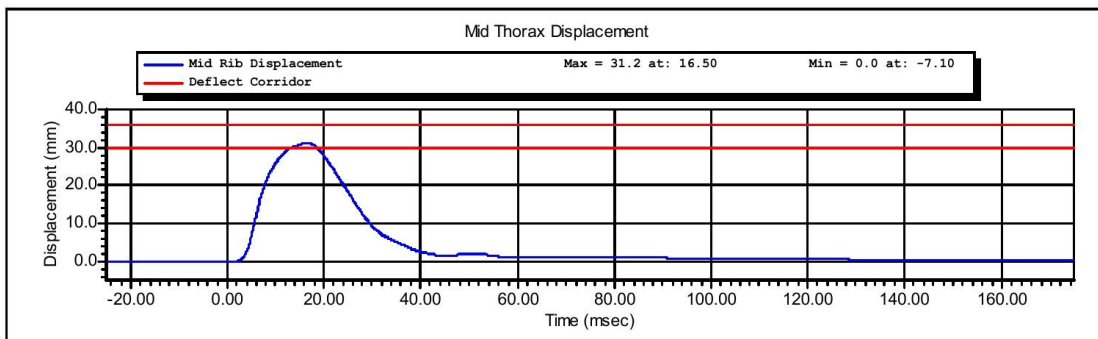
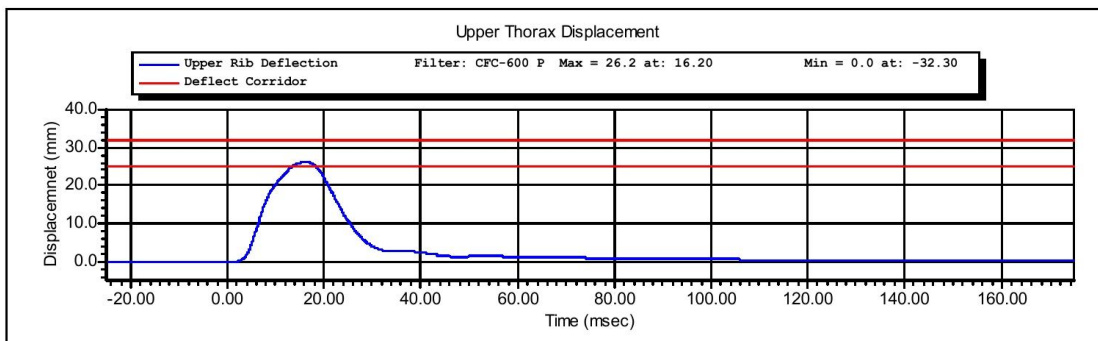
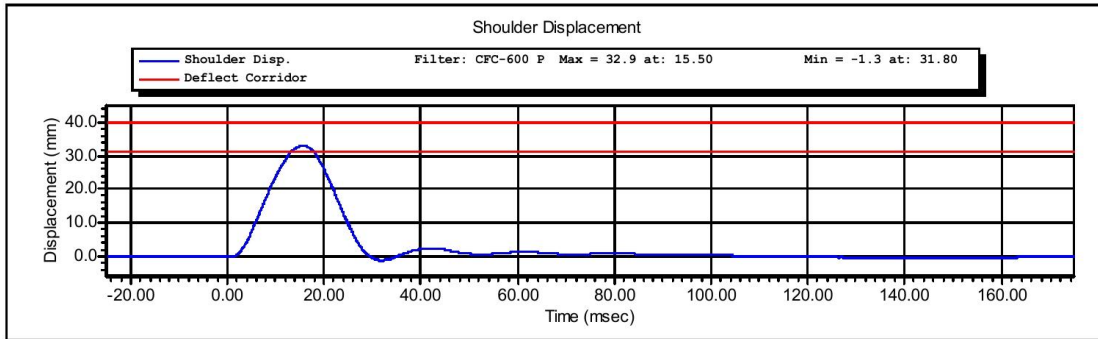
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Test Time: 9:09:32 PM

Test Date: 9/26/2012

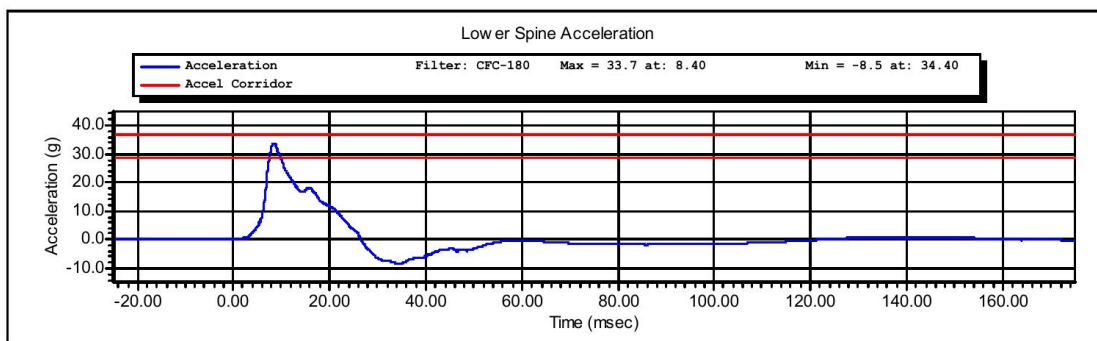
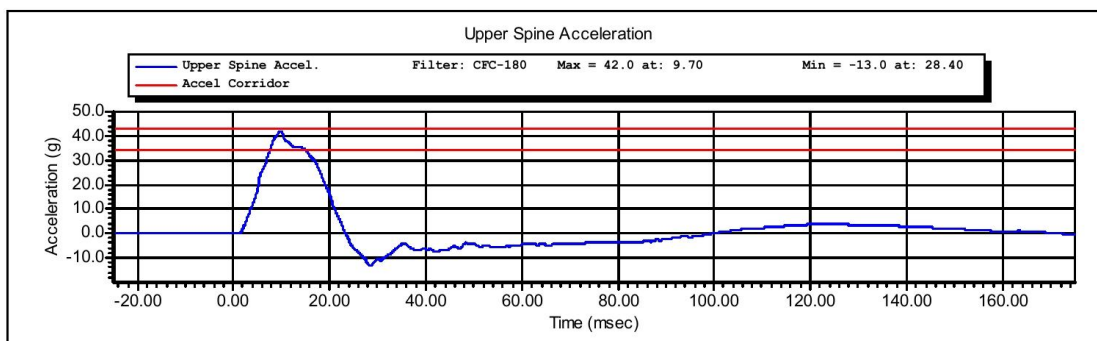
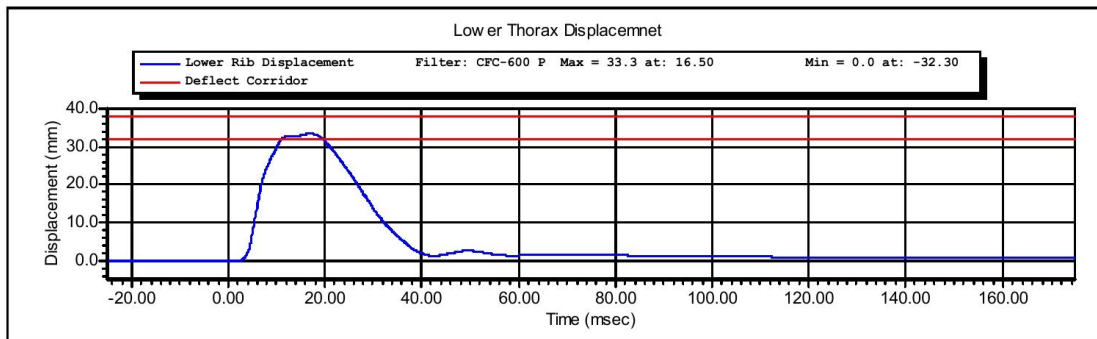
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Test Time: 9:09:32 PM

Test Date: 9/26/2012

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VERIFICATION REPORT

Test Name:	Abdominal Impact	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	9/26/2012
Test Number:	1	Test Time:	8:20:57 PM

Component Part Number	Component Serial Number
-----------------------	-------------------------

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	21.1 deg C P
Humidity	10 -- 70	46 %RH P
Velocity	4.20 -- 4.40	4.32 m/s P
Probe Acceleration	12.0 -- 16.0	13.9 g P
Upper Abdominal Rib Deflection	36.0 -- 47.0	43.9 mm P
Lower Abdominal Rib Deflection	33.0 -- 44.0	40.0 mm P
Lower Spine Acceleration - T12	9.0 -- 14.0	11.2 g P

All test parameters are within specifications

Technician: **S. Zito**

Supervisor: **D. Travale**

Test Time: **8:20:57 PM**

Test Date: **9/26/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C14953	5/25/2012
FTSS	180-3881-1	DS-1860	5/16/2012
FTSS	180-3881-1	DS-1861	5/16/2012
Endevco	7264-2000	P58796	5/17/2012

Test Time: 8:20:57 PM

Test Date: 9/26/2012

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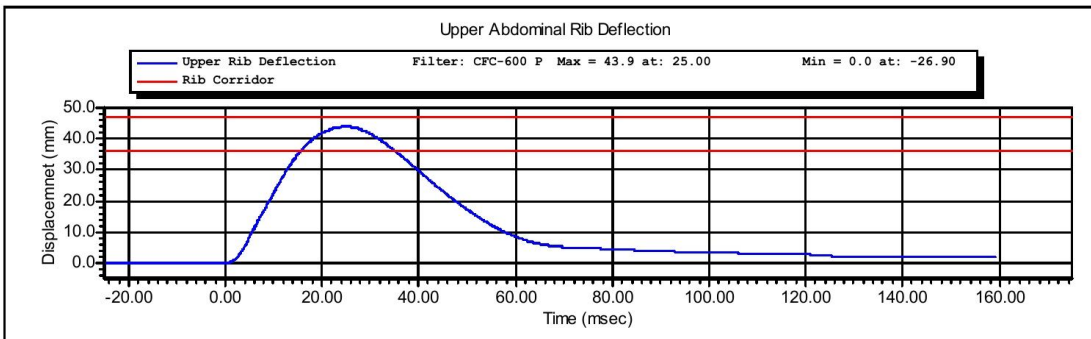
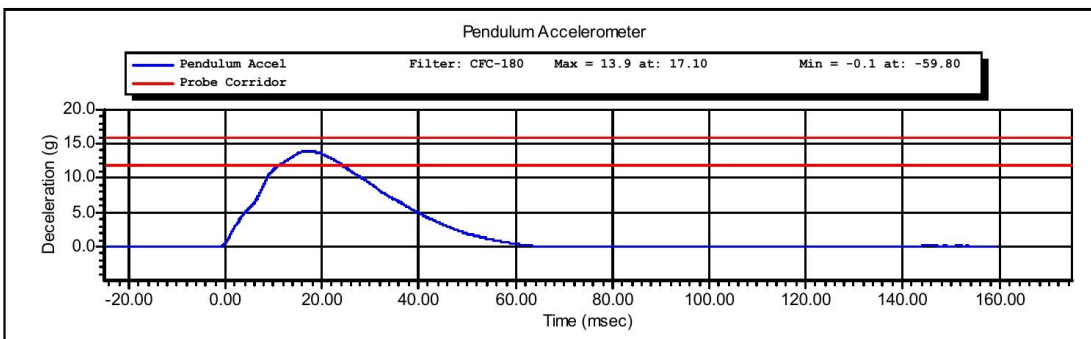


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Test Name:	Abdominal Impact	Revision:	8/24/2009
Sub Test Name:		Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	9/26/2012
Test Number:	1	Test Time:	8:20:57 PM



Test Time: 8:20:57 PM

Test Date: 9/26/2012

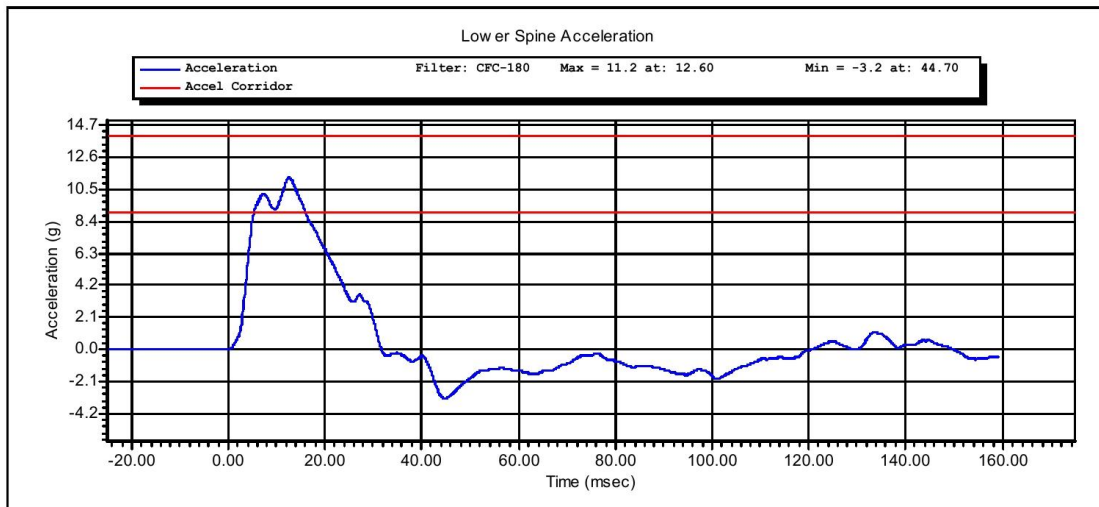
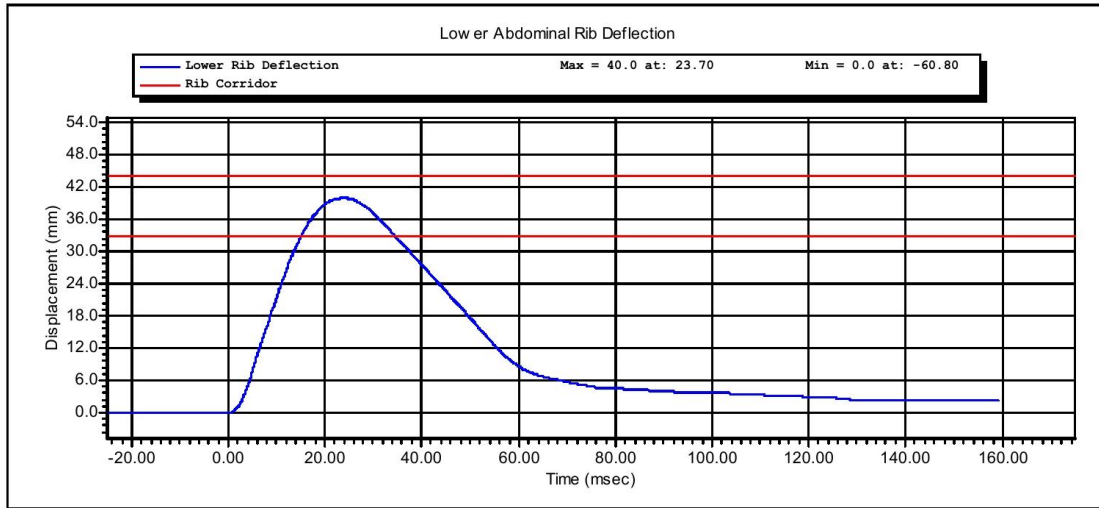
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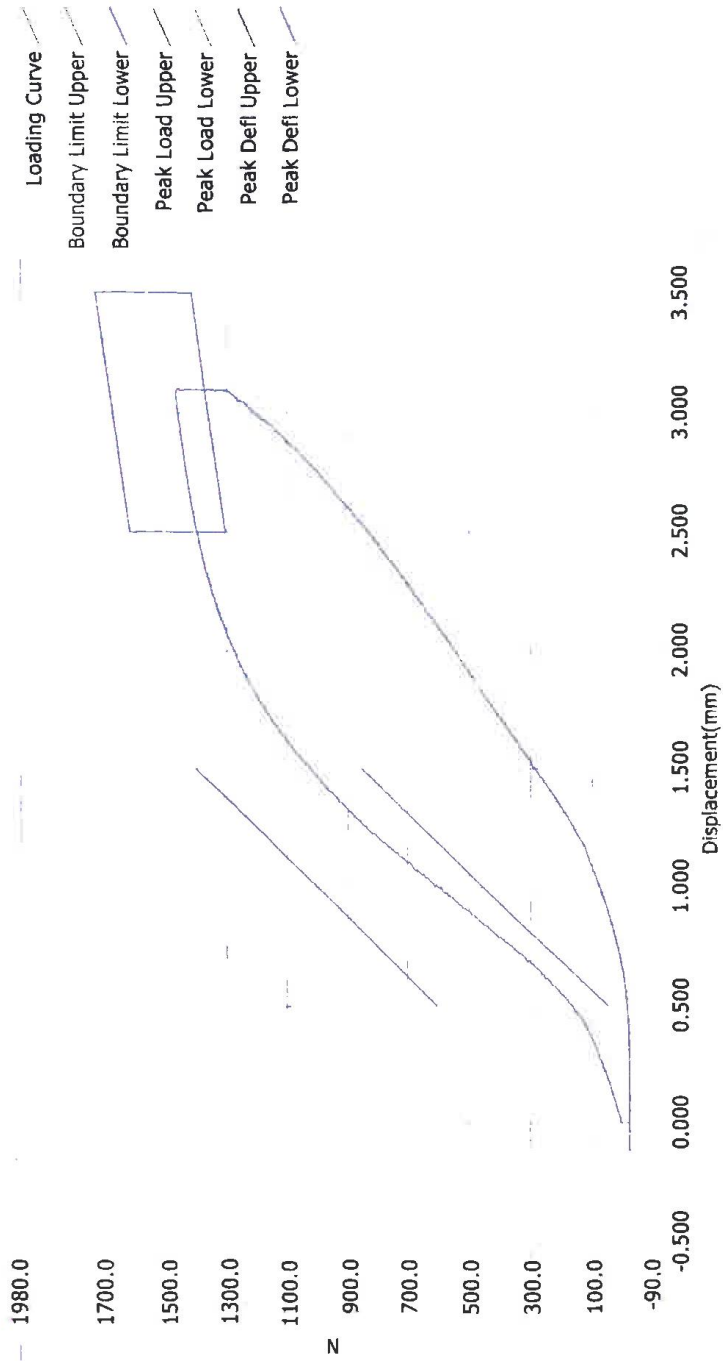
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Test Date: 9/26/2012

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Crash

Resultant Data - SIDIIs Plug Compression



ATD Calibration Lab

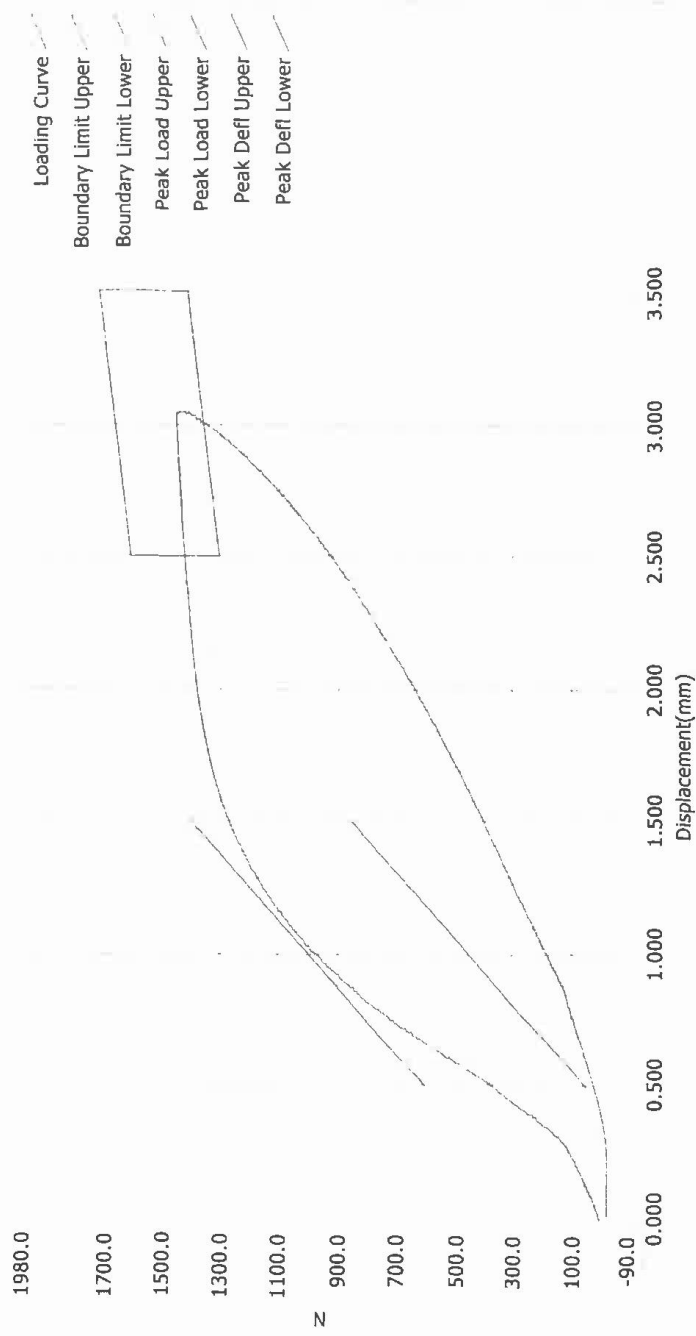
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	N/A	SIDIIs	

Current Date : 9/22/2011

Current Time : 21:06:32

Cert

Resultant Data - SIDIIs Plug Compression



ATD Calibration Lab

Test ID	Part Serial Number	Test Date	Test Time
Cert ID	ATD Serial Number	9/23/2010	2:17 AM
	36398	ATD Type	SIDIIs

Current Date : 9/23/2010 Current Time : 02:19:02

VERIFICATION REPORT

Test Name:	Pelvis	Revision:	8/24/2009
Sub Test Name:	Acetabulum Impact	Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	Dg8012		
Test ID:		Test Date:	9/26/2012
Test Number:	2	Test Time:	9:52:57 PM

Component Part Number	Component Serial Number
180-4343 Pelvis Flesh	DJ0959
FTSS Cert Plug - 1454N	36398
FTSS Test Plug 1462	46474

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	21.5 deg C P
Humidity	10 -- 70	45 %RH P
Velocity	6.60 -- 6.80	6.61 m/s P
Peak Probe Acceleration	38.0 -- 47.0	44.7 g P
Peak Pelvis Acceleration	34.0 -- 42.0	39.5 g P
Peak Acetabulum Force	3.60 -- 4.30	3.77 kN P

All test parameters are within specifications

Technician: **M. Goehle**

Supervisor: **D. Travale**

Test Time: **9:52:57 PM**

Test Date: **9/26/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C14953	5/25/2012
Endevco	7264-2000	P63561	5/17/2012
DentonATD	3249J	LC-267Fy	5/21/2012

Test Time: 9:52:57 PM

Test Date: 9/26/2012

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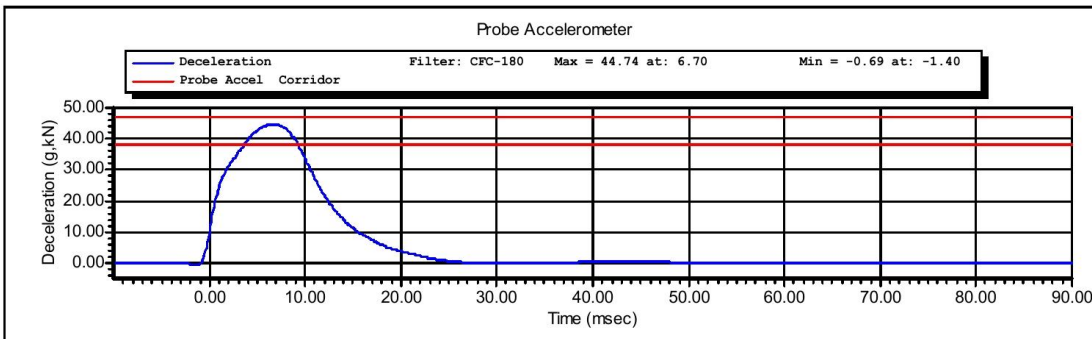
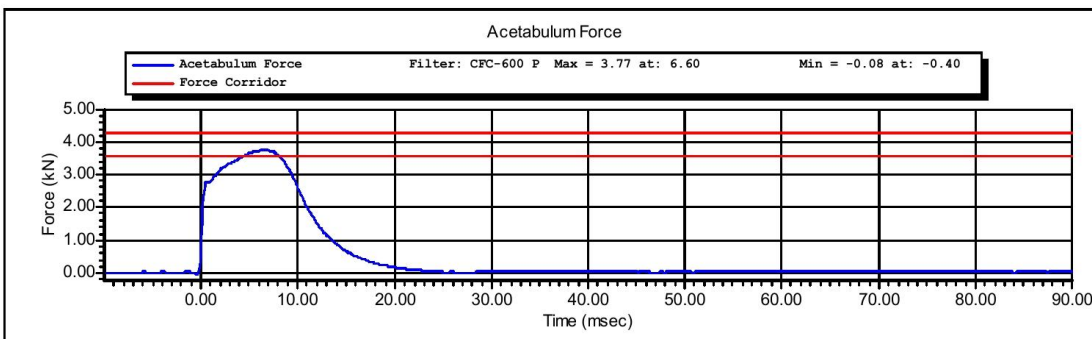


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Test Name:	Pelvis	Revision:	8/24/2009
Sub Test Name:	Acetabulum Impact	Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	Dg8012		
Test ID:		Test Date:	9/26/2012
Test Number:	2	Test Time:	9:52:57 PM



Test Time: **9:52:57 PM**

Test Date: **9/26/2012**

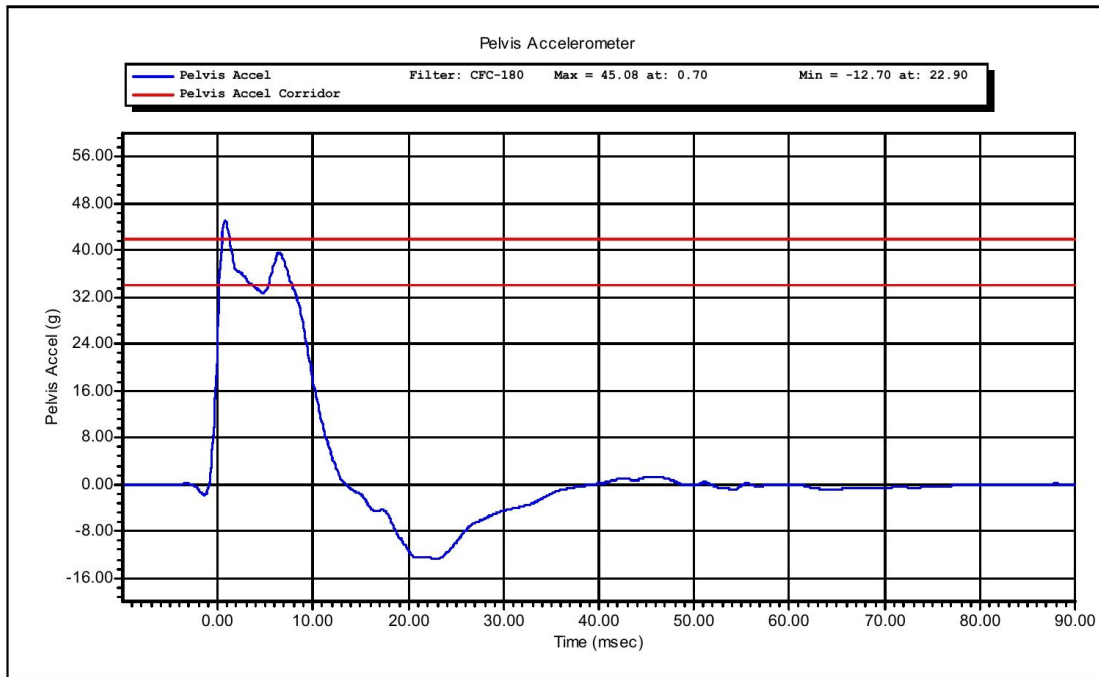
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Test Time: 9:52:57 PM

Test Date: 9/26/2012

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VERIFICATION REPORT

Test Name:	Pelvis	Revision:	8/24/2009
Sub Test Name:	Iliac Impact	Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	9/26/2012
Test Number:	1	Test Time:	10:29:29 PM

Component Part Number	Component Serial Number
180-4343 Pelvis Flesh	DJ0959

Test Parameters	Test Specifications	Test Results
Temperature	20.6 -- 22.2	21.8 deg C P
Humidity	10 -- 70	44 %RH P
Velocity	4.20 -- 4.40	4.35 m/s P
Peak Probe Acceleration	36.0 -- 45.0	42.4 g P
Peak Pelvis Acceleration	28.0 -- 39.0	37.0 g P
Peak Iliac Force	4.10 -- 5.10	4.86 kN P

All test parameters are within specifications

Technician: **S. Zito**Supervisor: **D. Travale**Test Time: **10:29:29 PM**Test Date: **9/26/2012**



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VERIFICATION REPORT

REFERENCE EQUIPMENT

<u>Manufacturer</u>	<u>Model</u>	<u>Serial Number</u>	<u>Calibration Date</u>
DentonATD	Velocity Trap	1	1/11/2012
Endevco	7231CT	C14953	5/25/2012
Endevco	7264-2000	P63561	5/17/2012
DentonATD	3228J	LC-281Fy	5/21/2012

Test Time: 10:29:29 PM

Test Date: 9/26/2012

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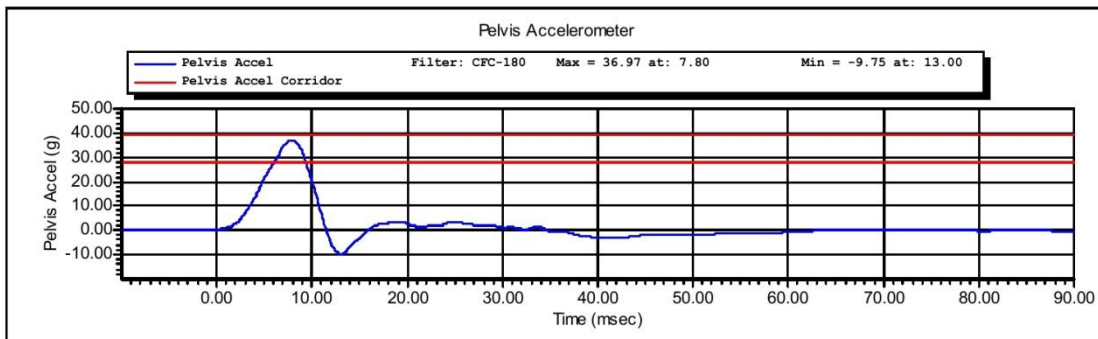
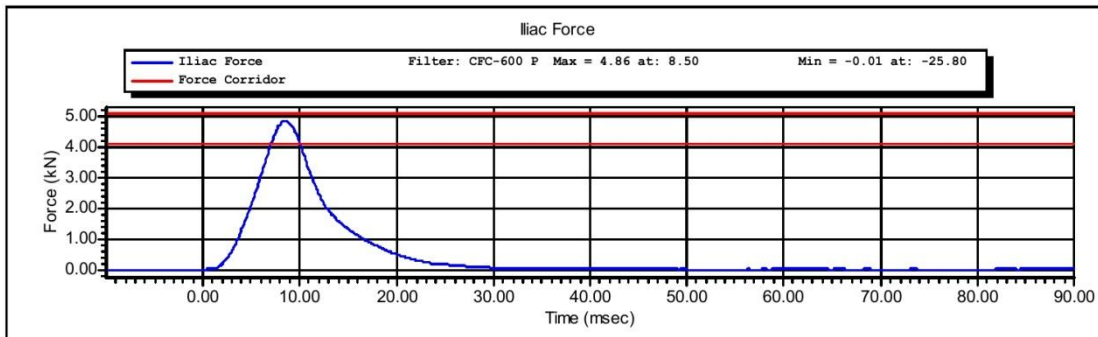


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Test Name:	Pelvis	Revision:	8/24/2009
Sub Test Name:	Iliac Impact	Spec Type:	NHTSA
ATD Type:	SID-IIs		
ATD Serial Number:	DG8012		
Test ID:		Test Date:	9/26/2012
Test Number:	1	Test Time:	10:29:29 PM



Test Time: **10:29:29 PM**

Test Date: **9/26/2012**

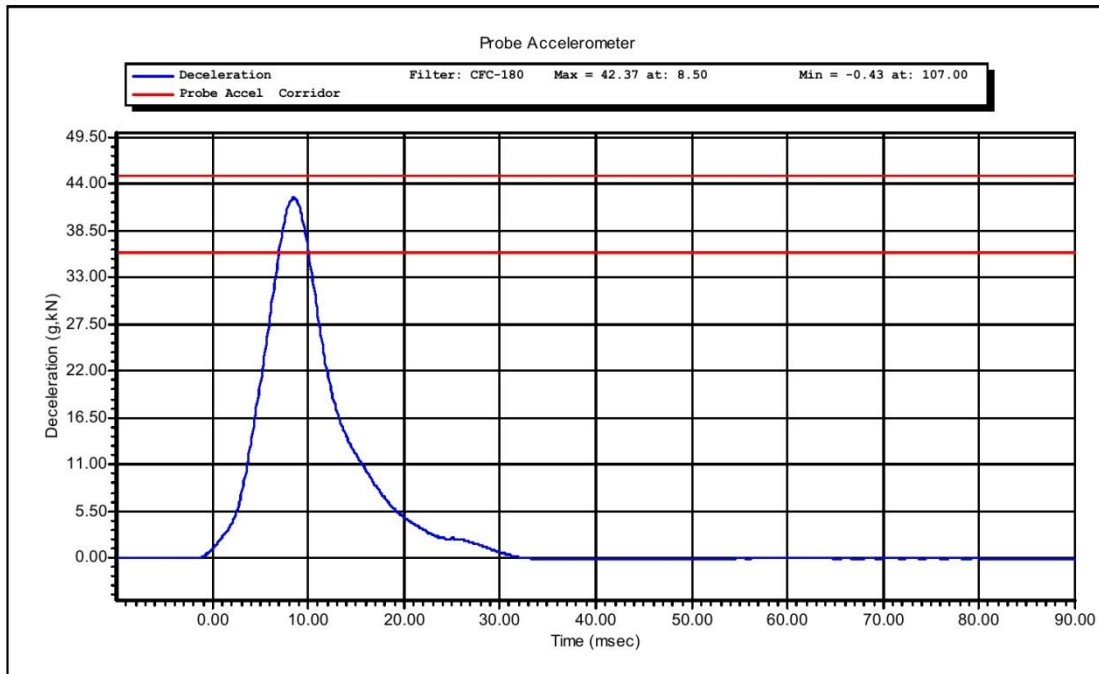
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Test Time: 10:29:29 PM

Test Date: 9/26/2012

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APPENDIX D

TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION DATA

Table 1 – Dummy Instrumentation (SID-IIs)

			SID-IIs S/N: 8012			
			Serial Number	Manufacturer	Calibration Date	
Head Accelerometers			X	P49185	ENDEVCO	5/17/2012
			Y	P51949	ENDEVCO	5/17/2012
			Z	P51991	ENDEVCO	5/17/2012
Head Accelerometers - Redundant			X	P68058	ENDEVCO	5/17/2012
			Y	P51885	ENDEVCO	5/17/2012
			Z	P68059	ENDEVCO	5/17/2012
Displacement Potentiometer	Shoulder		Y			
	Thoracic Rib	Upper	Y	1849	SERVO	5/16/2012
		Middle	Y	1514	SERVO	5/16/2012
		Lower	Y	1859	SERVO	5/16/2012
	Abdominal Rib	Upper	Y	1860	SERVO	5/16/2012
		Lower	Y	1861	SERVO	5/16/2012
Lower Spine Accelerometers (T12)			X	P52100	ENDEVCO	5/17/2012
			Y	P58796	ENDEVCO	5/17/2012
			Z	P50098	ENDEVCO	5/17/2012
Acetabulum Load Cell			Y	267FY	DENTON	5/21/2012
Lilac Wing Load Cell			Y	281FY	DENTON	5/21/2012
Pelvis Plug (Struck Side)				36316	HUMANETICS	9/22/2010
Pelvis Plug (Non-Struck Side)						

Table 2 – Vehicle Instrumentation

Vehicle Instrumentation		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	A016518	MS	8/10/2012
Vehicle Center of Gravity	Y	A070865	MS	8/10/2012
Vehicle Center of Gravity	Z	A005906	MS	8/10/2012
Left Floor Sill	Y	A081464	MS	9/5/2012
A-Pillar Sill	Y	A070859	MS	9/5/2012
A-Pillar Low	Y	A070866	MS	9/5/2012
A-Pillar Mid	Y	A081420	MS	9/5/2012
B-Pillar Sill	Y	A081444	MS	9/5/2012
B-Pillar Low	Y	A013068	MS	9/5/2012
B-Pillar Mid	Y	A002369	MS	9/5/2012
Driver Seat	Y	A070860	MS	9/5/2012
Engine Top	X	A081448	MS	8/13/2012
Engine Top	Y	A081449	MS	9/5/2012
Firewall	Y	A081442	MS	9/5/2012
Right Roof	Y	A032555	MS	9/5/2012
Right Floor Sill	Y	A031596	MS	9/5/2012
Rear Floorpan	X	A081435	MS	8/13/2012
Rear Floorpan	Y	A013060	MS	8/13/2012

Table 3 – Pole Instrumentation

Pole Instrumentation	Serial Number	Manufacturer	Calibration Date
Load Cell 1	18880	INTERFACE	6/27/2012
Load Cell 2	18850	INTERFACE	6/27/2012
Load Cell 3	46979	INTERFACE	6/27/2012
Load Cell 4	18857	INTERFACE	6/27/2012
Load Cell 5	18844	INTERFACE	6/27/2012
Load Cell 6	46933	INTERFACE	6/27/2012
Load Cell 7	18866	INTERFACE	6/27/2012
Load Cell 8	46949	INTERFACE	6/27/2012