

REPORT NUMBER: SPNCAP-KAR-14-008

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

**VOLKSWAGEN DE MEXICO S.A. DE C.V.
2014 VOLKSWAGEN JETTA S 4-DOOR SEDAN**

NHTSA No: O20145800

**PREPARED BY:
KARCO ENGINEERING, LLC.
9270 HOLLY ROAD
ADELANTO, CA 92301**



DECEMBER 10, 2013

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF CRASHWORTHINESS STANDARDS
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				14. Sponsoring Agency Code NVS-111																												
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16. Abstract A 32.2 km/h (20 mph) 75 deg. oblique impact Side NCAP Test was conducted on the subject 2014 Volkswagen Jetta S 4-door sedan in accordance with the specifications of the Office of Crashworthiness Standards Side NCAP Pole Laboratory Test Procedure for the generation of consumer information on vehicle side pole crash protection. The test was conducted at the KARCO Engineering, LLC. facility in Adelanto, California on November 26, 2013. The impact velocity was 32.80 km/h and the outside ambient temperature at the struck (driver's) side of the vehicle was 23.8 deg. C. The target vehicle's maximum post-test static crush was 461 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)</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>204.1</td> </tr> <tr> <td>Resultant Lower Spine Acceleration</td> <td>g</td> <td>82</td> <td>54.0</td> </tr> <tr> <td>Total Pelvic Force (Sum of Acetabular and Iliac Forces)</td> <td>N</td> <td>5525</td> <td>3204</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>38</td> <td>20</td> </tr> <tr> <td>Maximum Abdominal Rib Deflection</td> <td>mm</td> <td>45</td> <td>26</td> </tr> </tbody> </table> The two doors on the struck side of the vehicle did not separate from the body at the hinges or latches. The opposite doors did not open during the side impact event.						Measurement Description	Driver ATD (SID-IIs)			Units	Threshold	Result	Head Injury Criteria (HIC ₃₆)		1000	204.1	Resultant Lower Spine Acceleration	g	82	54.0	Total Pelvic Force (Sum of Acetabular and Iliac Forces)	N	5525	3204	Maximum Thoracic Rib Deflection	mm	38	20	Maximum Abdominal Rib Deflection	mm	45	26
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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 Admin. Technical Information Services Division, NPO-411 1200 New Jersey Ave., SE Washington, DC 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 is part of the MY 2014 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under contract number DTNH22-09-D-00122. The purpose of this test is to generate comparative side impact performance in a 2014 Volkswagen Jetta S 4-door sedan. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Laboratory Test Procedure dated September 2013.

SECTION 2

SUMMARY OF TEST RESULTS

A rigid pole side impact test was conducted on a 2014 Volkswagen Jetta S 4-door sedan. The subject vehicle was towed into the rigid pole at an angle of 75.6° and a velocity of 32.80 km/h. The test was conducted by KARCO Engineering, LLC. in Adelanto, California on November 26, 2013. Pre- 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 September 2013. Camera locations and other pertinent camera information are included in this report.

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

- Primary and Redundant Head CG tri-axial accelerometers
- Thorax upper, middle and lower rib displacement potentiometers
- Abdomen upper and lower rib displacement potentiometers
- Lower spine (12) tri-axial accelerometers
- Iliac load cell
- Acetabulum load cell

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

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

Measurement Description	Units	Passenger ATD (SID-IIs)	
		IARV	Result
Head Injury Criteria (HIC ₃₆)		1000	204.1
Lower Spine (T12) Resultant Acceleration	g	82	54
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	3204
Maximum Thoracic Rib Deflection	mm	38*	20
Maximum Abdominal Rib Deflection	mm	45*	26

*Proposed IARV

Supplemental restraint information is given below:

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

GENERAL COMMENTS

Both the front and rear doors on the struck side of the vehicle remained closed and latched. There was no separation at the hinges or latches. Both doors on the non-struck side remained closed and latched. There were no ATD values that exceeded limits.

SECTION 3

OCCUPANT AND VEHICLE INFORMATION/DATA SHEETS

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13

CONVERSION FACTORS

Quantity	Typical Application	Std Units	Metric Unit	Multiply By
Mass	Vehicle Weight	lb	kg	0.4536
Linear Velocity	Impact Velocity	miles/hr	km/hr	1.609344
Length or Distance	Measurements	in	mm	25.4
Volume	Fuel Systems	gal	liter	3.785
Volume	Small Fluids	oz	mL	29.574
Pressure	Tire Pressures	lbf/in ²	kPa	6.895
Temperature	General Use	°F	°C	$=(T_f - 32)/1.8$
Force	Dynamic Forces	lbf	N	4.448
Moment	Torque	lbf-ft	N•m	1.355

DATA SHEET NO. 1

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
 Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA Number	O20145800
Model Year	2014
Make	Volkswagen
Model	Jetta S
Body Style	4-Door Sedan
VIN	3VW1K7AJ9EM353871
Body Color	Platinum Grey Metallic
Odometer Reading (km / mi)	122 / 76
Engine Displacement (L)	2.0
Type / No. of Cylinders	Inline 4
Engine Placement	Transverse
Transmission Type	Manual
Transmission Speeds	5
Overdrive	Yes
Final Drive	Front
Roof Rack	No
Sunroof / T-Top	No
Running Boards	No
Tilt Steering Wheel	Yes
Power Seats	No
Anti-Lock Brakes (ABS)	Yes

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

Does Owner's Manual provide instructions to turn off automatic door locks?

No

DATA FROM CERTIFICATION LABEL

Manufactured By	Volkswagen De Mexico S.A. De C.V.
Date of Manufacture	Jul-13
Vehicle Type	Passenger Car

GVWR (lbs)	1820
GAWR Front (lbs)	910
GAWR Rear (lbs)	960

VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total	
Designated Seating Capacity	2	3		5	
Capacity Weight (VCW) (kg)				512.0	A
DSC x 68.04 (kg)				340.2	B
Cargo Weight (RCLW) (kg)				171.8	A-B

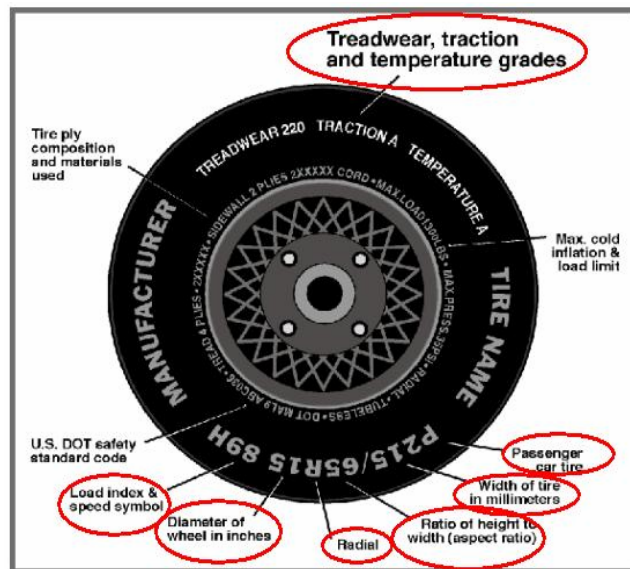
VEHICLE SEAT TYPE

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

DATA SHEET NO. 1 ... (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
 Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13



Measured Parameter	Front	Rear
Max. Tire Pressure (kpa)	350	350
Cold Pressure (kPa)	230	230
Recommended Tire Size	P195/65R15	P195/65R15
Tire Size on Vehicle	P195/65R15	P195/65R15
Tire Manufacturer	Continental	Continental
Tire Model	ContiProContact	ContiProContact
Treadware	400	400
Traction Grade	AA	AA
Temperature Grade	A	A
Tire Plies Sidewall	1 Polyester	1 Polyester
Tire Plies Body	1 Polyester, 2 Steel, 1 Polyamide	1 Polyester, 2 Steel, 1 Polyamide
Load Index/Speed Symbol	91H	91H
Tire Material	Polyester, Steel, Polyamide	Polyester, Steel, Polyamide
DOT Safety Code Left	P5PC AXH6 2013	P5PC AXH6 2013
DOT Safety Code Right	P5PC AXH6 2013	P5PC AXH6 2013

DATA SHEET NO. 1 ... (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
 Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13

TIRE PRESSURES

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

TEST VEHICLE AXLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Left	kg	376.5	289.5		375.0	390.5		369.0	406.5	
Right	kg	377.5	281.0		388.5	383.0		377.0	392.5	
Ratio	%	56.9%	43.1%	100.0%	49.7%	50.3%	100.0%	48.3%	51.7%	100.0%
Total	kg	754.0	570.5	1324.5	763.5	773.5	1537.0	746.0	799.0	1545.0

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total Delivered Weight (UVW)	kg	1324.5	A
Actual Weight of 1 P572 O ATD Used	kg	49.0	B
Rated Cargo/Luggage Wt (RCLW)	kg	171.8	C
Calculated Vehicle Target Wt (TVTW)	kg	1545.3	A+B+C

Does the measured As Tested Vehicle Weight lie within the required weight range (i.e.

Calculated Test Vehicle Target Weight -4.5 kg to -9.0 kg)? ☒ Yes ☐ No

TEST VEHICLE ATTITUDE AND CG

Measurement Description	Units	As Delivered	As Tested	Fully Loaded	Meets Requirement***
Driver Door Sill Angle (front-to-rear)*	°	0.6	0.5	0.4	Yes
Front Passenger Sill Angle (front-to-rear)*	°	0.4	0.4	0.5	Yes
Front Bumper-Line Angle (left-to-right)**	°	0.0	0.0	0.0	Yes
Rear Bumper-Line Angle (left-to-right)**	°	0.0	0.1	0.1	Yes
Vehicle CG (Aft of Front Axle)	mm	1142	1335	1371	
Vehicle CG (Left (+)/Right (-) from Longitudinal Centerline)	mm	4	-3	3	

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

***The "As Tested" vehicle attitude angle measurements must be within "As Delivered" and the "Fully Loaded" vehicle attitude measurements at each location. Indicate "Yes" or "No" for "Meets Requirement"

DATA SHEET NO. 1 ... (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Trunk Trim	6.5
Spare Tire	17.0
Spare Tire Tools	3.0
Ballast / Equipment Added	26.5

Test Height Adjustable Setting (If Applicable)	
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DATA SHEET NO. 2**SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT AND FUEL SYSTEM DATA**

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
 Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13

SEAT POSITIONING

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

SCRL ANGLE RANGE

Seat	SCRL (°)		
	Max	Min	Mid
Driver Seat	5.0	0.0	2.5
Front Passenger Seat	4.0	0.0	2.0
Front Center Seat			
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	As Tested SCRP Height	SCRP Height Position	SCRP Height (mm)		
				Rearmost	Mid Fore/Aft	Forwardmost
Driver Seat	2.5	449	Max	429	439	449
			Mid	429	439	449
			Min	429	439	449
Front Passenger Seat	2.0	493	Max	479	486	493
			Mid	479	486	493
			Min	479	486	493
Front Center Seat			Max			
			Mid			
			Min			
Struck Side Rear Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
			Mid	Fixed	Fixed	Fixed
			Min	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
			Mid	Fixed	Fixed	Fixed
			Min	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
			Mid	Fixed	Fixed	Fixed
			Min	Fixed	Fixed	Fixed

DATA SHEET NO. 2 ... (CONTINUED)

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

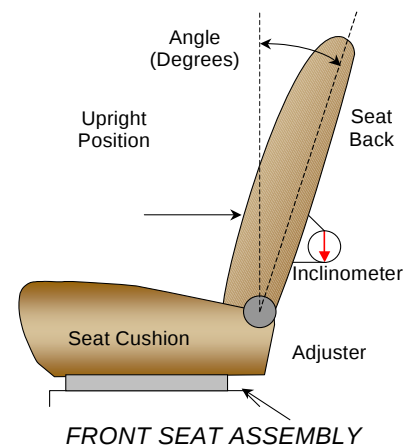
Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
 Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13

SEAT FORE/AFT POSITION

Seat	Total Fore/Aft Travel		Test Position From Forwardmost Position	
	mm	Detents*	mm	Detent*
Driver Seat	252	38	0	0
Front Passenger Seat	173	26	0	0
Front Center Seat				
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 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 to the driver's seat. The struck side rear passenger seat back is positioned in accordance with the information provided by the manufacturer in Form 1 for the 5th percentile female dummy in a Side NCAP MDB Test. The rear center and non-struck side rear passenger's seat back is set to match the struck side rear seat back. Seat back angle is measured at the seat back.



Seat	Total Seat Back Angle Range		Test Position from Most Upright	
	Degrees	Detents*	Degree	Detent*
Driver Seat w/Seated Dummy	71.0	41	11.4	6
Front Passenger Seat	71.0	38	11.4	
Front Center Seat				
Struck Side Rear Seat w/Seated Dummy	Fixed	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed	Fixed

DATA SHEET NO. 2 ... (CONTINUED)

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

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13

SEAT BELT ANCHORAGE ADJUSTMENT

Seat belt anchorages are adjusted in accordance with the information provided by the manufacturer on Form No. 1. The positions are marked H, M1, ... , L from top to bottom.

	Total No. of Positions	Placed in Position
Driver Seat	4	L

HEAD RESTRAINT ADJUSTMENT

The driver's head restraint is adjusted to the lowest and most full forward in-use position.

	Total No. of Positions	Placed in Position
Driver Seat	5	Full Down

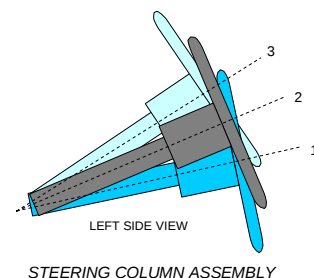
DATA SHEET NO. 2 ... (CONTINUED)

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

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13

STEERING COLUMN ADJUSTMENT

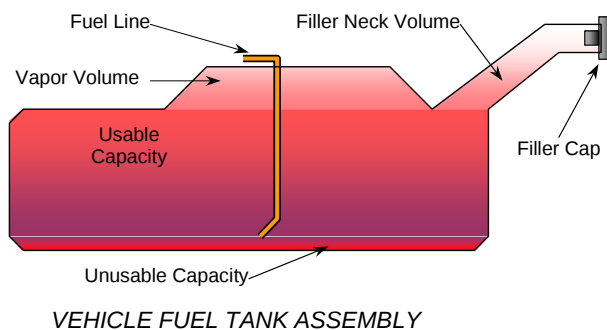
Steering wheel and column adjustments are made so that the steering wheel hub is at the center of the geometric locus it describes when it moves through its full range of motion.



	Degrees	Fore-Aft Position (mm)
Lowermost - Position 1	20.6	61
Geometric Center - Position 2	23.0	90
Uppermost - Position 3	25.4	119
Telescoping Steering Wheel Travel		58
Test Position	23.0	90

FUEL PUMP

The vehicle is equipped with an electric fuel pump. The fuel pump runs for 2 seconds after ignition is switched on. If the engine doesn't run, the fuel pump stops running. If there is a crash signal, it will also stop running.



FUEL TANK CAPACITY

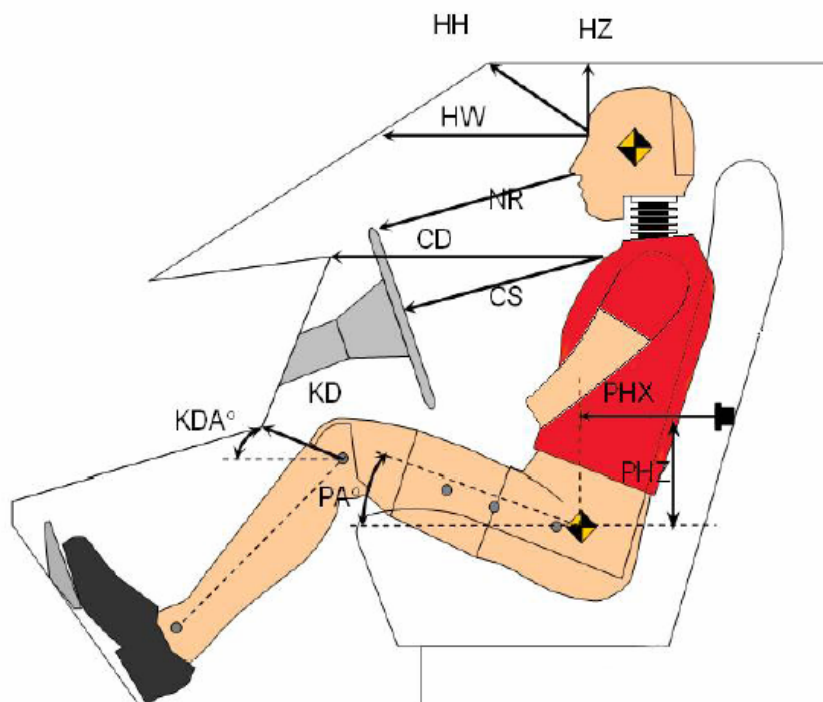
Description	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	55.00
Usable Capacity of "Optional Tank" (see Form No. 1)	
Usable Capacity of "Standard Tank" (see Owner's Manual)	
Usable Capacity of "Optional Tank" (see Owner's Manual)	
93% of Usable Capacity	51.15
Actual amount of Solvent Used in Test	51.15
1/3 of Usable Capacity	18.33

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

DATA SHEET NO. 3

DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
 Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13

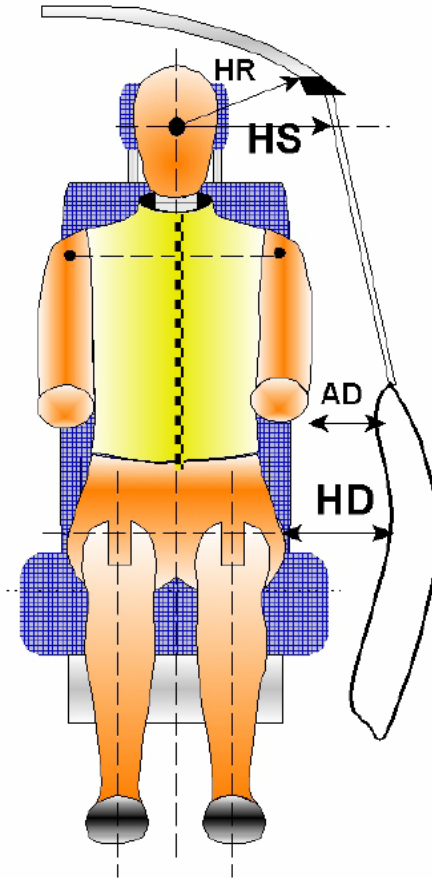


Driver Code	Description	Driver	
		Length (mm)	Angle (°)
HH	Head to Header	291	
HW	Head to Windshield	659	
HZ	Head to Roof	210	
NR	Nose to Rim	257	
CD	Chest to Dash	437	
CS	Chest to Steering Wheel	199	
KD(L)/KDA(L)°	Left Knee to Dash	152	40.1
KD(R)/KDA(R)°	Right Knee to Dash	124	31.2
PAX°	Pelvic Tilt Angle (x-axis)		21.1
PAY°	Pelvic Tilt Angle (y-axis)		0.3
PHX	Hip Point to Striker (x-axis)	349	
PHZ	Hip Point to Striker (z-axis)	202	

DATA SHEET NO. 4

DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13

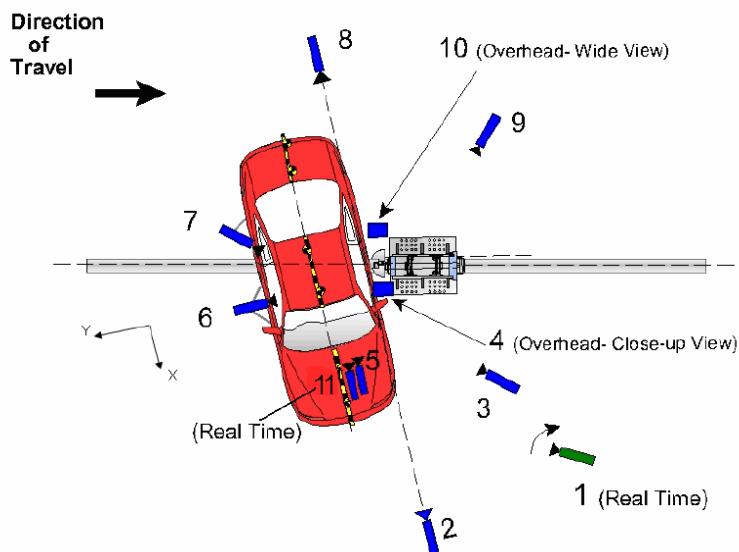


Code	Measurement Description	Units	Driver
HR	Head to Side Header	mm	252
HS	Head to Side Window	mm	376
AD	Arm to Door	mm	167
HD	Hip Point to Door	mm	163

DATA SHEET NO. 5

CAMERA AND INSTRUMENTATION DATA

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
 Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13



Reference from Point of Impact for X and Y; from Ground for Z):
 +X = Forward of Vehicle, +Y = Right of Vehicle, +Z = Down

Camera No.	View	Coordinates (m)			Lens (mm)	Film Speed (fps)
		X*	Y*	Z*		
1	Real Time Pan View of Impact	8.89	46.57	-3.04		30
2	Front Ground Level - Impact View	8.34	-0.05	-0.93	24	1000
3	Impact Side 45° - Forward Pole View	4.10	-2.15	-1.15	8.5	1000
4	Overhead Close-Up View of Impact	0.00	0.00	-5.79	12.5	1000
5	On-Board - Dummy Front View	1.42	0.57	-1.35	35	1000
6	On-Board - Dummy Side View	-0.09	1.69	-1.07	14	1000
7	On-Board - Dummy Rear Oblique View	-1.03	1.65	-1.12	20	1000
8	Rear Ground Level - Impact View	-6.12	-6.23	-0.96	24	1000
9	Impact Side 45° - Rearward Pole View	-8.02	0.04	-1.01	35	1000
10	Overhead Wide View of Impact	-0.06	0.22	-5.79	14	1000
11	Real Time Dummy Front View	1.44	0.60	-1.32		30

*All measurements accurate to ± 6 mm

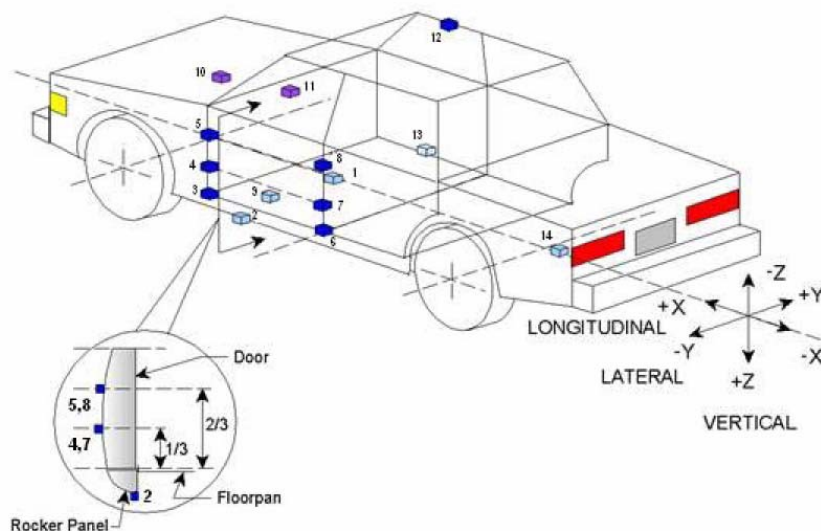
INSTRUMENTATION

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

DATA SHEET NO. 6

TEST VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
 Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13

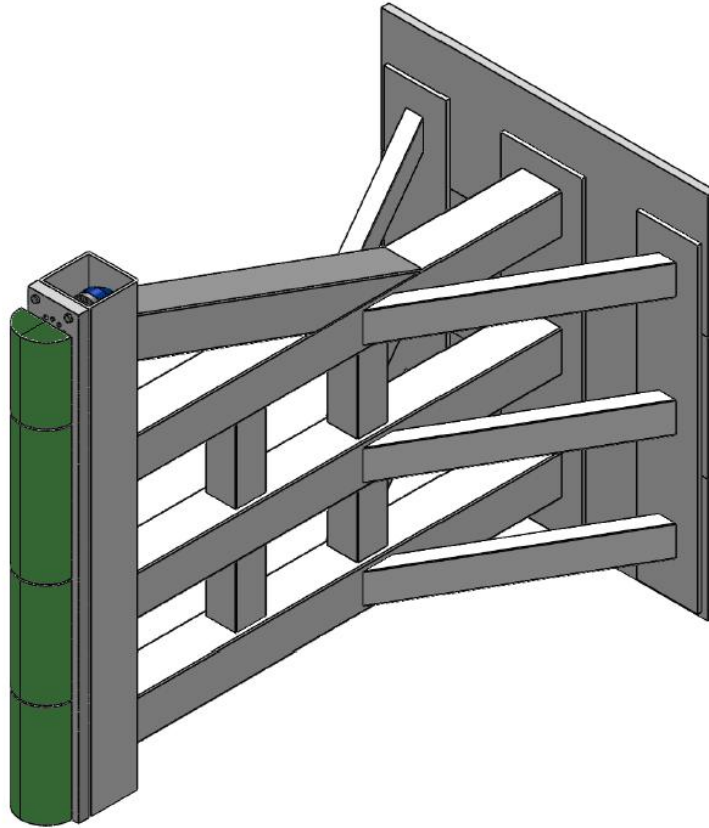


Loc. No.	Sensor Description	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	1862	0	-357
2	Left Floor Sill	2880	-804	-185
3	A-Pillar Sill	3420	-802	-383
4	A-Pillar Low	3420	-802	-566
5	A-Pillar Mid	3420	-802	-744
6	B-Pillar Sill	2162	754	-360
7	B-Pillar Low	2162	754	-604
8	B-Pillar Mid	2162	754	-845
9	Driver Seat Track	2375	605	-215
10	Engine Top	3922	63	-807
11	Firewall	3684	120	-865
12	Right Roof	2293	515	-1340
13	Right Floor Sill	2070	692	-323
14	Rear Floorpan	1205	0	-422

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: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13



ID	Units	Height From Ground
1	mm	87
2	mm	468
3	mm	648
4	mm	978
5	mm	1168
6	mm	1651
7	mm	1816
8	mm	2057

DATA SHEET NO. 8**POST-TEST OBSERVATIONS**Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13**TEST DUMMY INFORMATION AND CONTACT POINTS**

Dummy Body Part	Driver SID-IIs Dummy
Face	Curtain Airbag
Top of Head	Curtain Airbag
Left Side of Head	Curtain Airbag, Headrest
Back of Head	Curtain Airbag, Headrest, Seatback
Left Shoulder	Seat, Torso/Pelvis Airbag, Door Panel
Upper Torso	Seat
Lower Torso	Seat, Torso/Pelvis Airbag
Left Hip	Seat, Torso/Pelvis Airbag
Left Knee	Door Panel

POST-TEST DOOR PERFORMANCE

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

POST-TEST SEAT PERFORMANCE

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

POST-TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	No Separation
Sill Separation	No Separation
Windshield Damage	Broken
Side Window Damage	Left Front Window Broken
Other Notable Effects	None

DATA SHEET NO. 8 ... (CONTINUED)**POST-TEST OBSERVATIONS**Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13**SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION**

Restraint Type	Struck Side Driver		Struck Side Rear Passenger	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	No	No	
Knee Airbag	No		No	
Side Airbag 1 (Curtain)	Yes	Yes	Yes	Yes
Side Airbag 2 (Torso/Pelvis)	Yes	Yes	No	
Seat Belt Pretensioner	Yes	Yes	No	
Seat Belt Load Limiter	Yes	Yes	No	
Other	No		No	

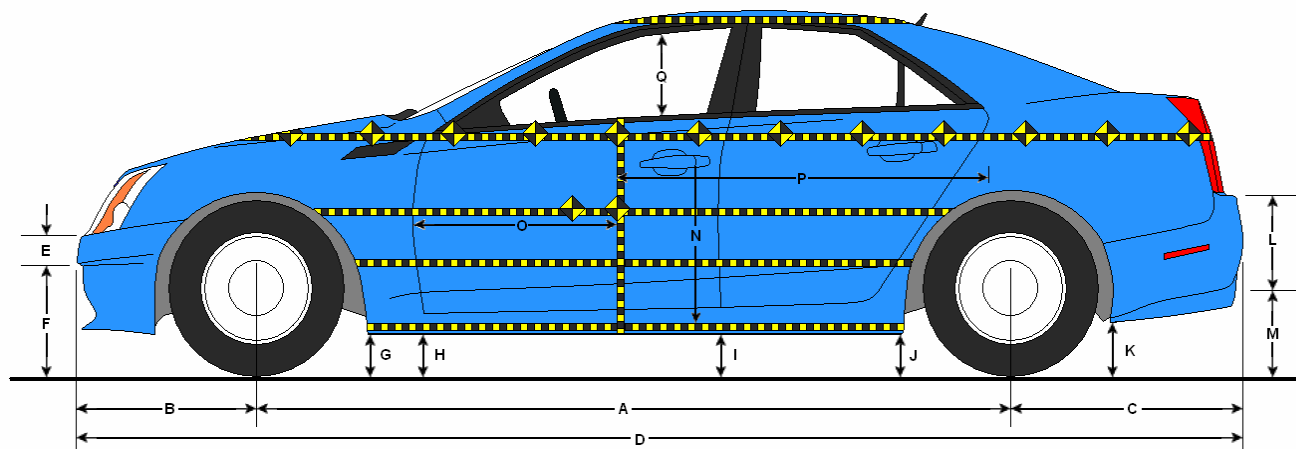
IMPACT POINT LOCATION DATA

Measured Parameter	Units	Tolerance	Value
Vertical Impact Reference Line (Aft of Front Axle)(Intended Impact Point)	mm		1102
Actual Impact Point (Aft of Front Axle)	mm		1096
Horizontal Offset (+ forward / - rearward)	mm	± 38 of Intended Impact Point	6
Angle Between Vehicle's Longitudinal Centerline and Line of Forward Motion	°	75 ± 3	75.6
Trap No. 1 Velocity (Primary)	km/h	31.4 to 33.0	32.80
Trap No. 2 Velocity (Redundant)	km/h	31.4 to 33.0	32.84

DATA SHEET NO. 9

TEST VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
 Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13



LEFT SIDE VIEW

All measurements in mm with tolerance of ± 3 mm

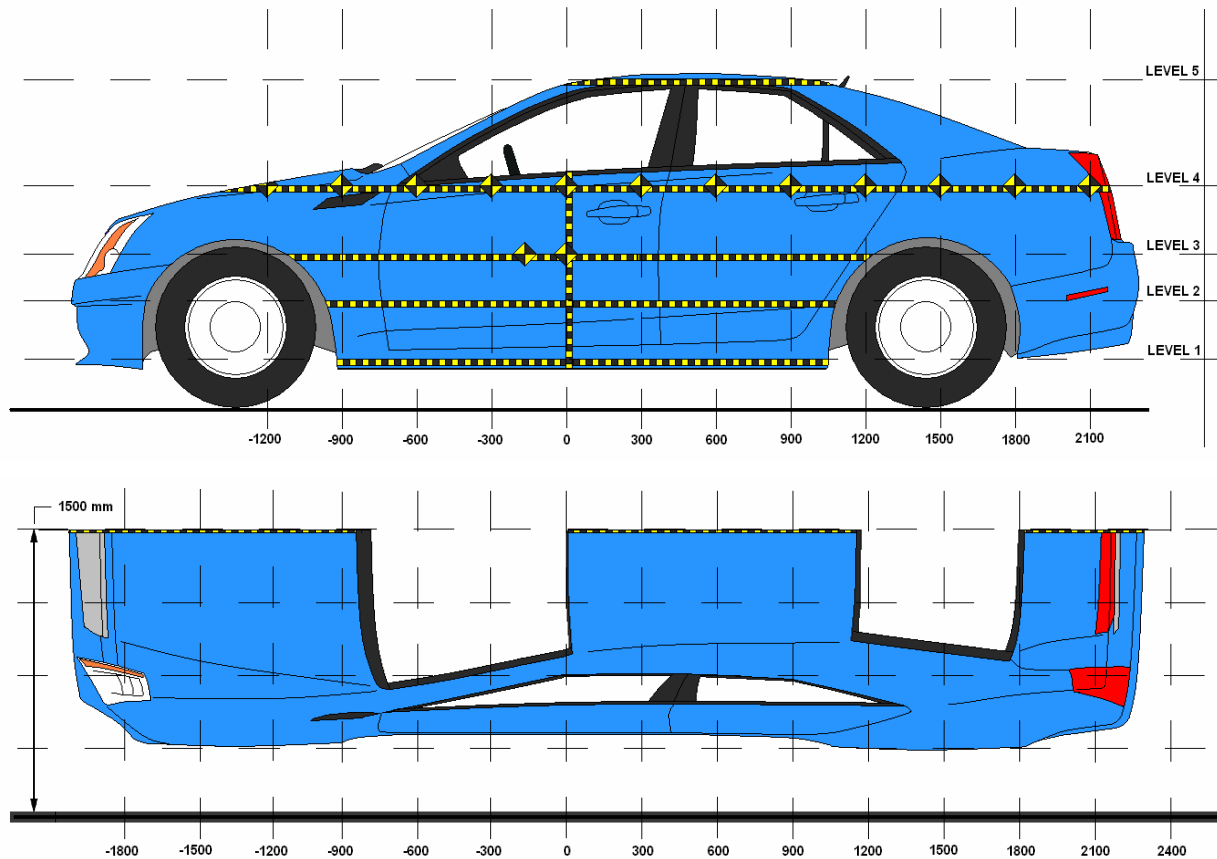
VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

Code	Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2652	2539	-113
B	Front Axle to FSOV	891	934	43
C	Rear Axle to RSOV	1091	1122	31
D	Total Length at Centerline	4633	4594	-39
E	Front Bumper Thickness	142	140	-2
F	Front Bumper Bottom to Ground	424	444	20
G	Sill Height at Front Wheel Well	208	203	-5
H	Sill Height at Front Door Leading Edge	202	200	-2
I	Sill Height at B-Pillar	196	220	24
J1	Sill Height at Rear Wheel Well	178	220	42
J2	Pinch Weld Height at Rear Wheel Well	146	180	34
K	Sill Height Aft of Rear Wheel Well	189	218	29
L	Rear Bumper Thickness	174	174	0
M	Rear Bumper Bottom to Ground	400	413	13
N	Sill Height to Bottom of Front Window Sill	533	608	75
O	Front Door Leading Edge to Impact CL	624	529	-95
P	Rear Door Trailing Edge to Impact CL	1512	1412	-100
Q	Front Window Opening	381	418	37
R	Right Side Length	3128	3146	18
S	Left Side Length	3126	2997	-129
T	Vehicle Width at B-Pillar	1780	1658	-122

DATA SHEET NO. 10

TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
 Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13



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

MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Description	Height Above Ground (mm)	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	222	446	0
2	Occupant H-Point	482	449	0
3	Mid-Door	605	461	0
4	Window Sill	874	422	0
5	Window Top	1342	210	0

DATA SHEET NO. 10 ... (CONTINUED)

TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
 Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13

EXTERIOR CRUSH MEASUREMENTS AT EACH LEVEL

	Pre-Test (mm)					Post-Test (mm)					Difference (mm)				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900				728					779					51	
-750		624	627	712			699	704	775			75	77	63	
-600	647	636	632	699		766	734	724	778		119	98	92	79	
-450	642	636	629	689		833	809	803	816		191	173	174	127	
-300	638	634	627	679		907	888	887	894		269	254	260	215	
-150	636	633	625	673		1002	997	993	992		366	364	368	319	
0	634	632	623	667	926	1080	1081	1084	1089	1136	446	449	461	422	210
150	633	631	622	663	925	1004	1018	1030	1057	1133	371	387	408	394	208
300	633	631	622	659	925	903	894	908	948	1107	270	263	286	289	182
450	634	631	624	659	928	843	814	805	861	1085	209	183	181	202	157
600	636	633	625	658	931	798	786	780	823	1065	162	153	155	165	134
750	640	635	627	660	934	756	757	758	800	1051	116	122	131	140	117
900	644	638	630	662	935	720	735	736	779	1034	76	97	106	117	99
1050	646	641	634	662	936	691	714	716	760	1020	45	73	82	98	84
1200		624	632	666	941		674	689	742	1011		50	57	76	70
1350			622	673	951			675	726	1013			53	53	62
1500				682					731					49	
1650				692					735					43	
1800				703					740					37	
1950				719					750					31	
2100				738					762					24	
2250				762					783					21	
2400															
2550															
2700															
2850															

DATA SHEET NO. 10 ... (CONTINUED)

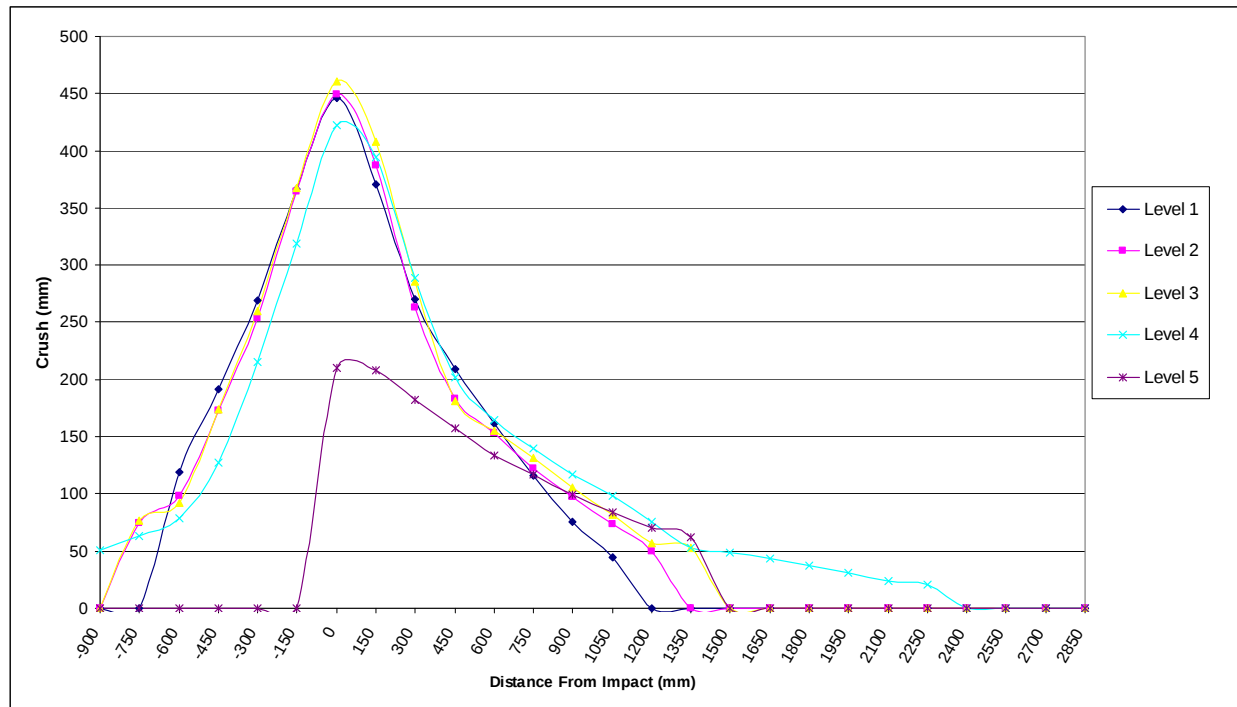
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan

NHTSA No. O20145800

Test Program: NCAP Side Pole Impact Test

Test Date: 11/26/13

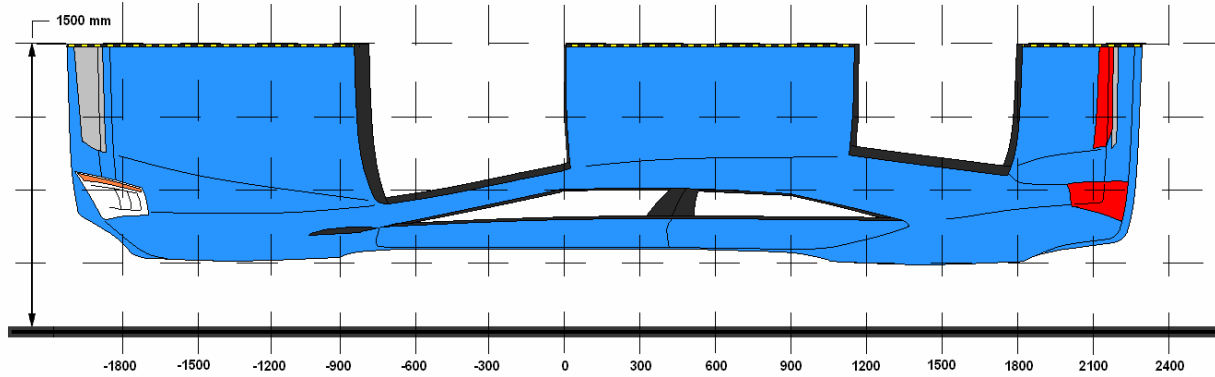


DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800

Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13



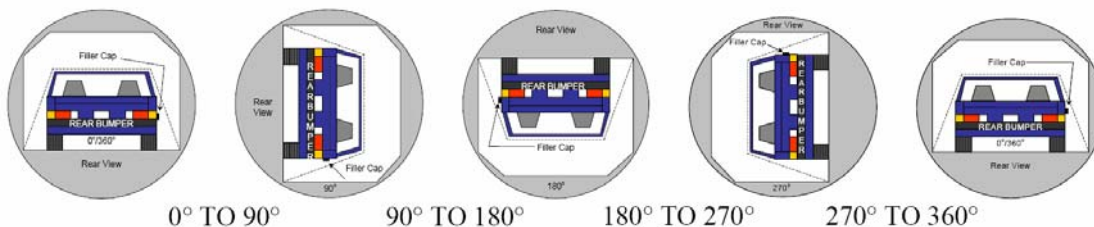
DPD	Distance From Impact Point (mm)	Level	Pre-Test (mm)	Post-Test (mm)	Crush (mm)
1	2250	4	762	783	21
2	1650	4	692	735	43
3	1050	4	662	760	98
4	300	4	659	948	289
5	-300	1	638	907	269
6	-900	4	728	779	51

DATA SHEET NO. 12

FMVSS NO. 301 STATIC ROLLOVER RESULTS

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800
 Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13
 Temperature at Time of Impact: 23.8° C Test Time: 11:15 AM

- A. From impact until vehicle motion ceases: 0 oz.
 (Maximum allowable = 1 oz.)
- B. For the 5 minute period after motion ceases: 0 oz.
 (Maximum allowable = 5 oz.)
- C. For the following 25 minutes: 0 oz.
 (Maximum allowable = 1 oz./minute)
- D. Spillage Details: There was no Stoddard solvent spillage.



SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° To 90°	83	300	383
90° To 180°	79	300	379
180° To 270°	79	300	379
270° To 360°	82	300	382

FMVSS 301 SPILLAGE TABLE

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

SOLVENT SPILLAGE LOCATION TABLE

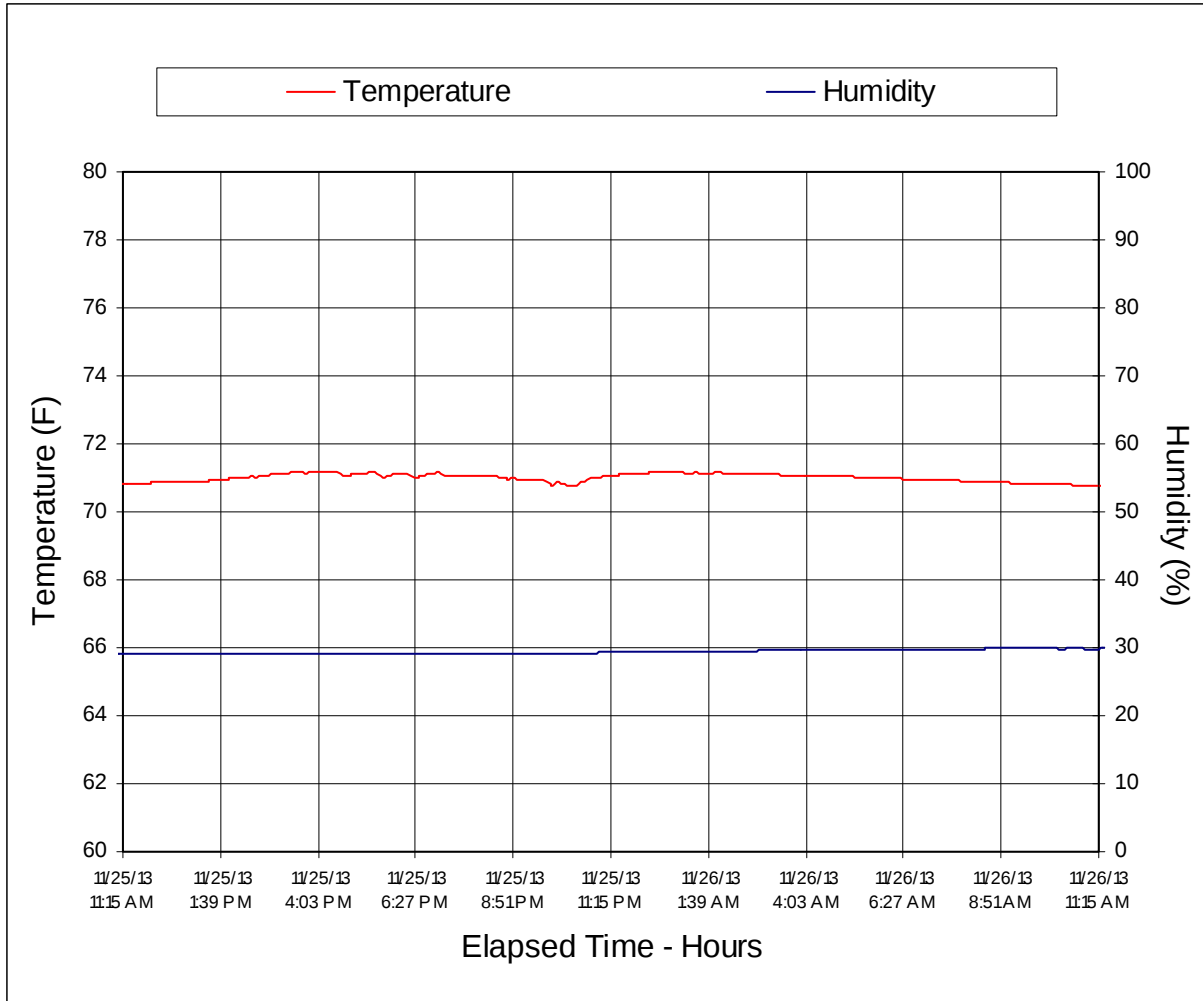
Test Phase	Spillage Location
0° To 90°	No Spillage Occurred
90° To 180°	No Spillage Occurred
180° To 270°	No Spillage Occurred
270° To 360°	No Spillage Occurred

DATA SHEET NO. 13

DUMMY/VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan NHTSA No. O20145800

Test Program: NCAP Side Pole Impact Test Test Date: 11/26/13



APPENDIX A
PHOTOGRAPHS

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FIGURE 1. As-Delivered Right Front $\frac{3}{4}$ View of Test Vehicle



FIGURE 2. As-Delivered Left Rear $\frac{3}{4}$ View of Test Vehicle



FIGURE 3. Pre-Test Frontal View of Test Vehicle

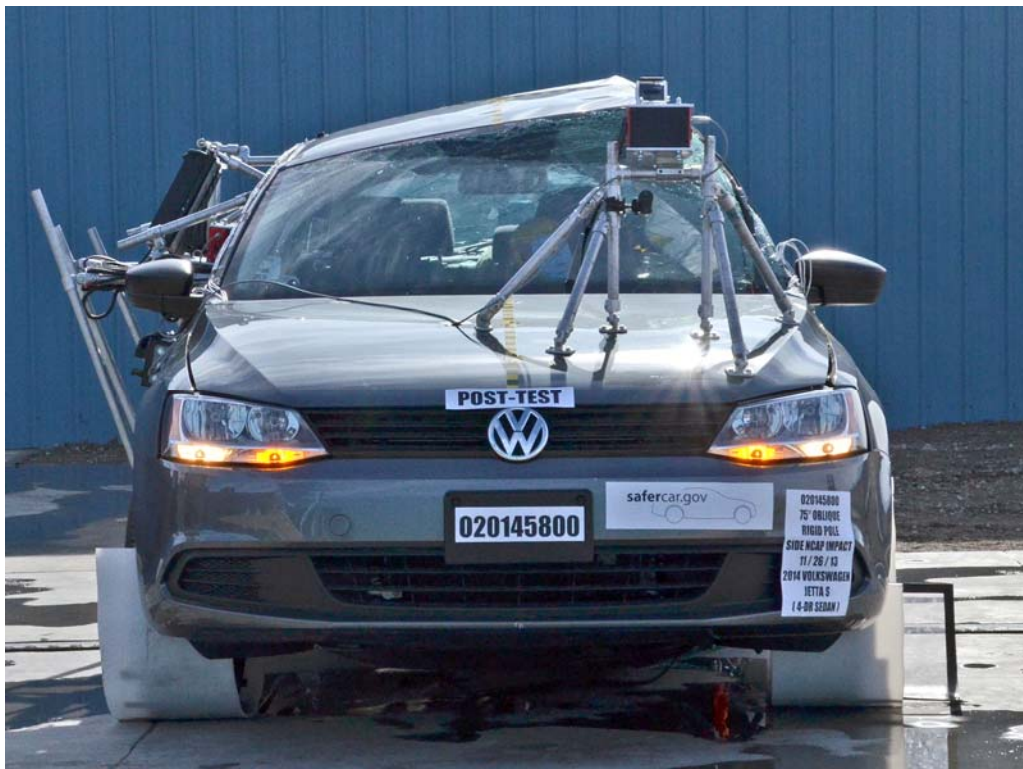


FIGURE 4. Post-Test Frontal View of Test Vehicle



FIGURE 5. Pre-Test Left Front $\frac{3}{4}$ View of Test Vehicle

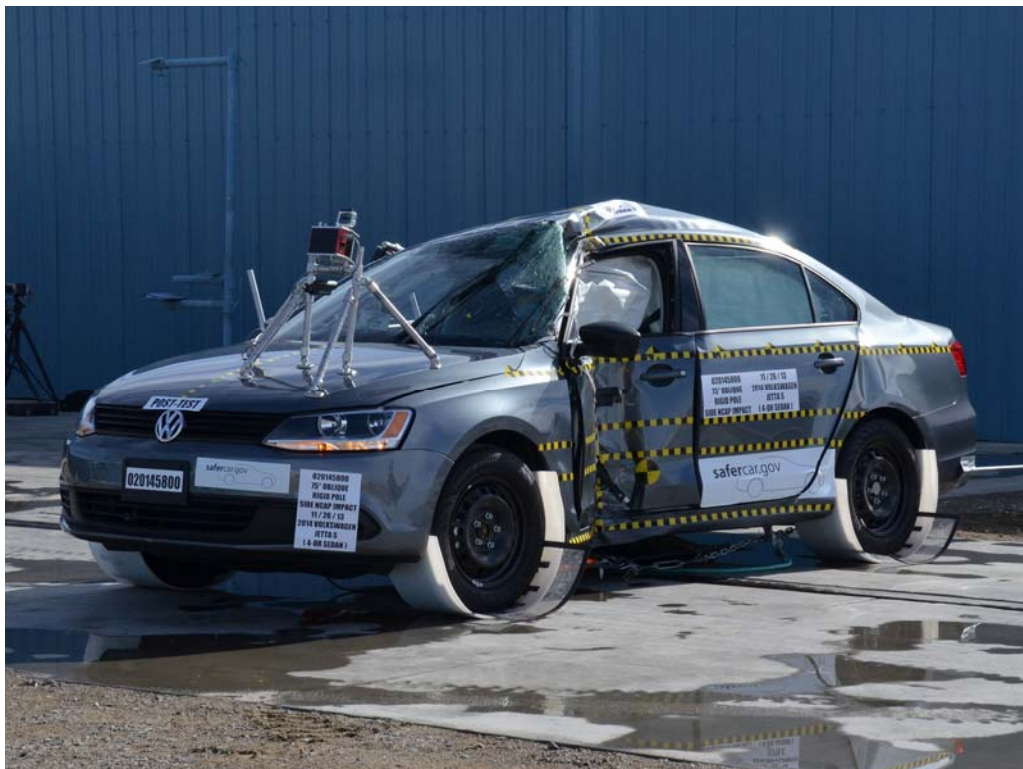


FIGURE 6. Post-Test Left Front $\frac{3}{4}$ View of Test Vehicle



FIGURE 7. Pre-Test Left Side View of Test Vehicle

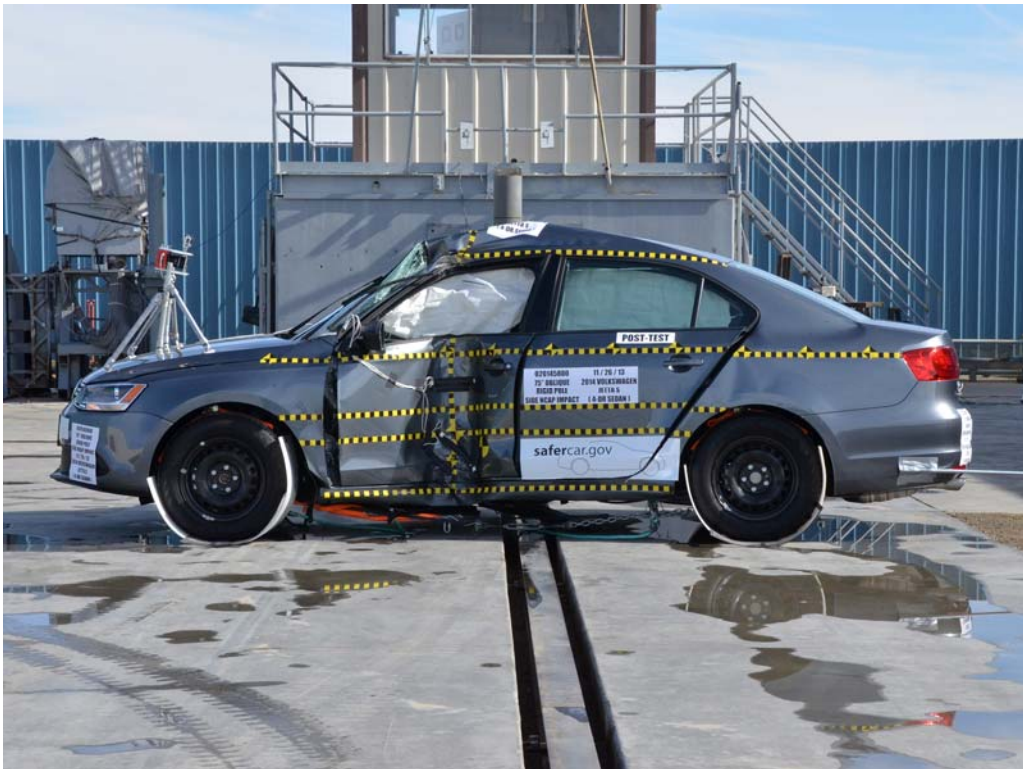


FIGURE 8. Post-Test Left Side View of Test Vehicle



FIGURE 9. Pre-Test Left Rear $\frac{3}{4}$ View of Test Vehicle



FIGURE 10. Post-Test Left Rear $\frac{3}{4}$ View of Test Vehicle



FIGURE 11. Pre-Test Rear View of Test Vehicle



FIGURE 12. Post-Test Rear View of Test Vehicle



FIGURE 13. Pre-Test Right Side View of Test Vehicle

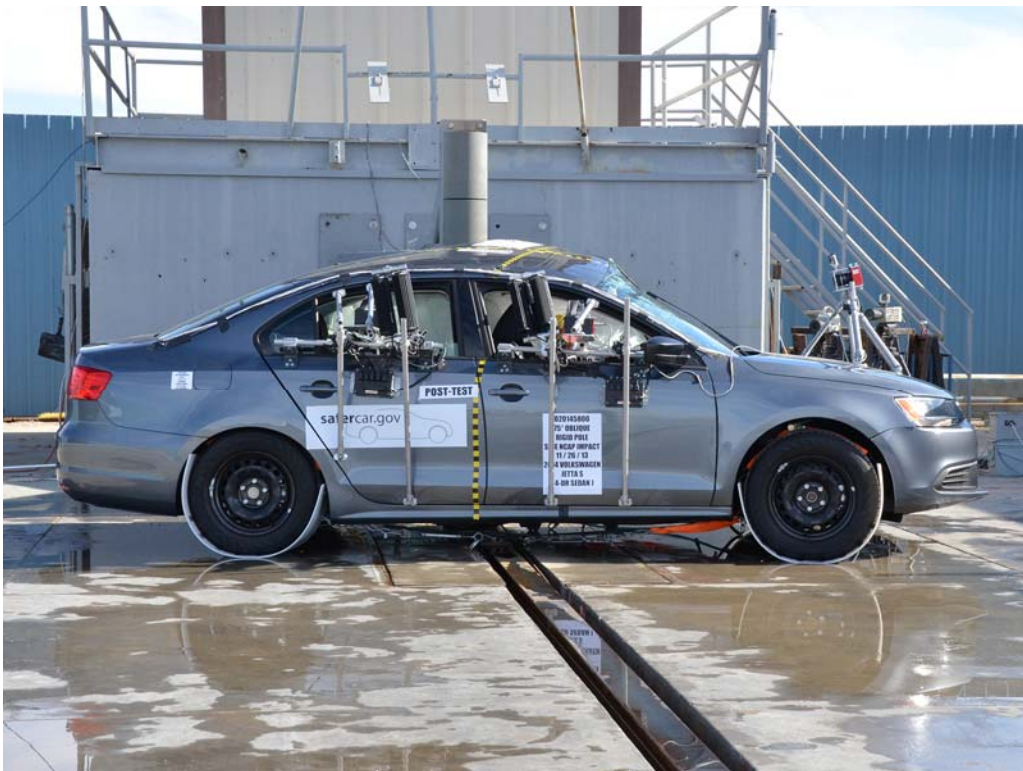


FIGURE 14. Post-Test Right Side View of Test Vehicle

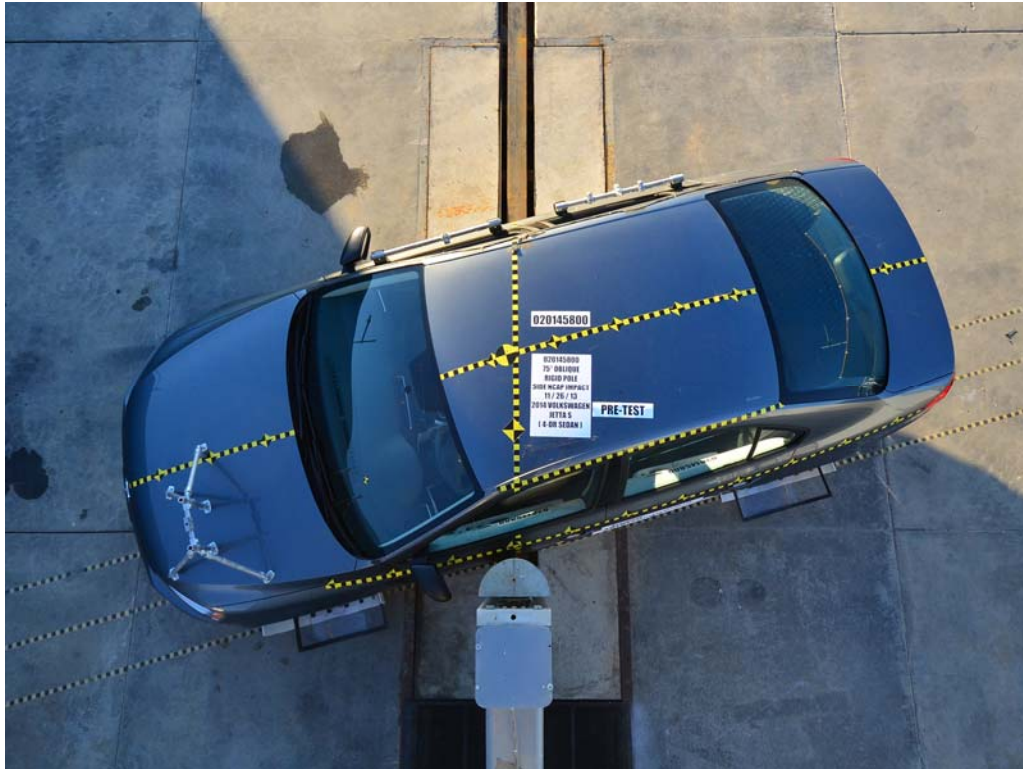




FIGURE 17. Pre-Test Left Side View of Pole
Positioned Against Side of Vehicle



FIGURE 18. Pre-Test Right Side View of Pole
Positioned Against Side of Vehicle



FIGURE 19. Pre-Test Close-Up View of Impact Point Target



FIGURE 20. Post-Test Close-Up View of Impact Point Target
Showing Impact Location



FIGURE 21. Pre-Test Front Close-Up View of Dummy Head and Chest



FIGURE 22. Post-Test Front Close-Up View of Dummy



FIGURE 23. Pre-Test Left Side View of Dummy
Showing Belt and Chalking



FIGURE 24. Pre-Test Left Side View of Dummy Shoulder and Door Top View



FIGURE 25. Post-Test Left Side View of Dummy Shoulder and Door Top View

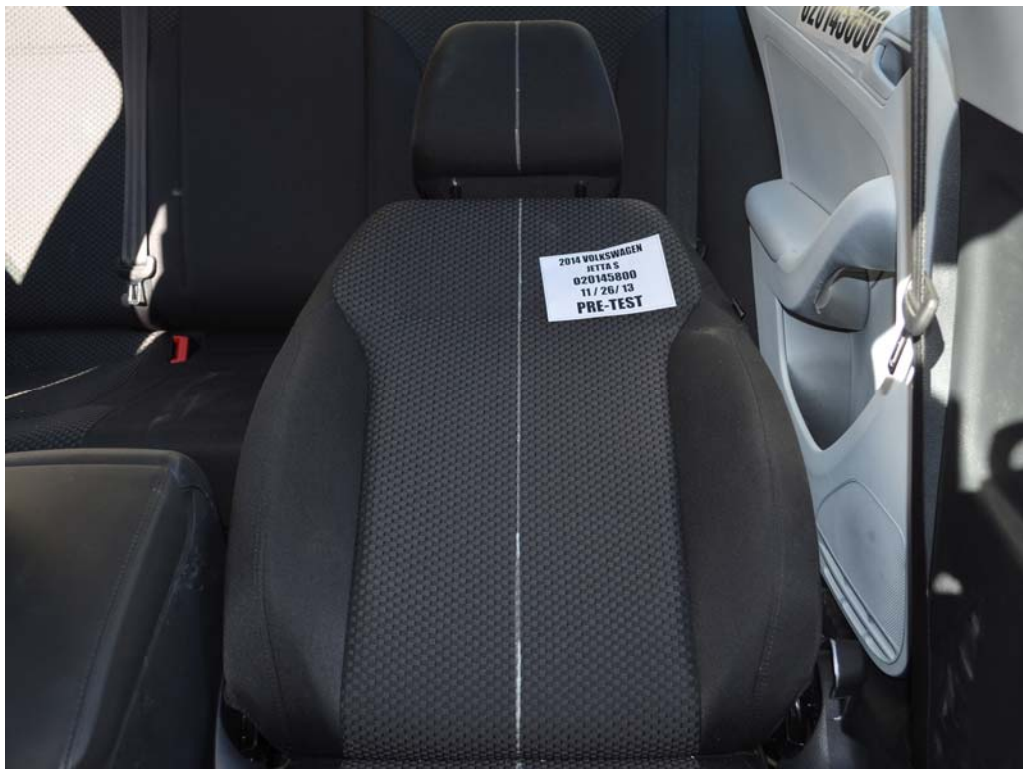


FIGURE 26. Pre-Test Frontal View of Seat Back Prior to Dummy Positioning



FIGURE 27. Pre-Test Frontal Close-Up View of Dummy Head and Shoulders in Relation to Head Restraint



FIGURE 28. Pre-Test Overhead View of Seat Pan Prior to Dummy Positioning



FIGURE 29. Pre-Test Overhead View of Dummy Thighs on Seat Pan

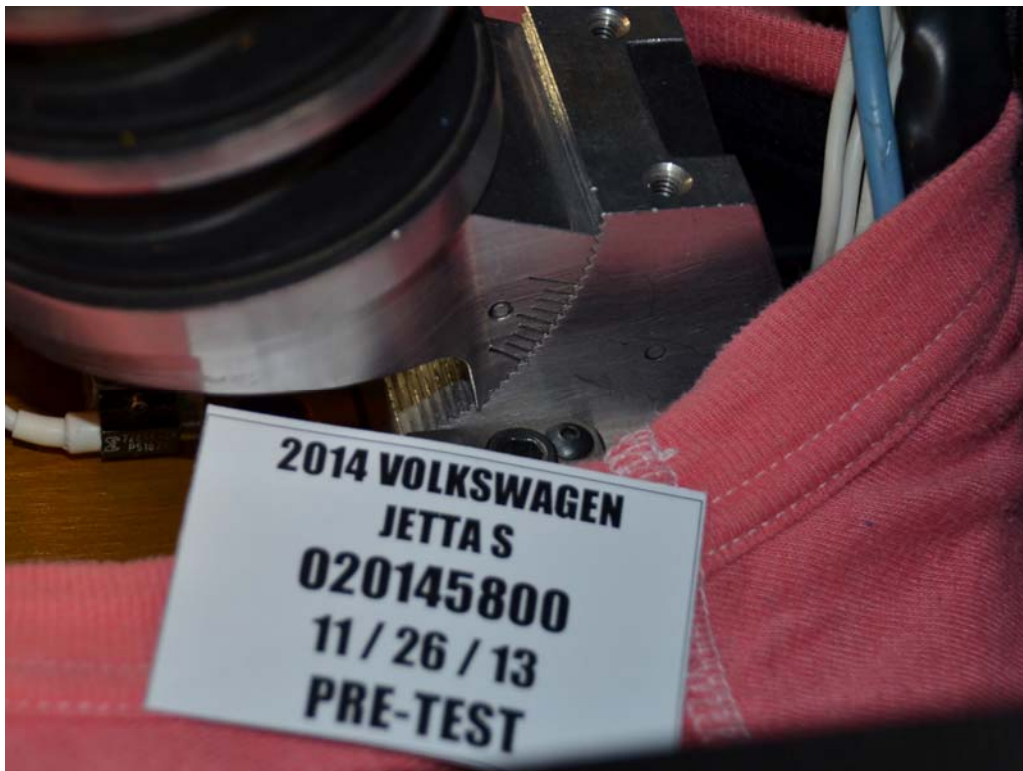


FIGURE 30. Pre-Test Left Side View of Dummy's Neck
Showing Position of Adjustable Neck Bracket

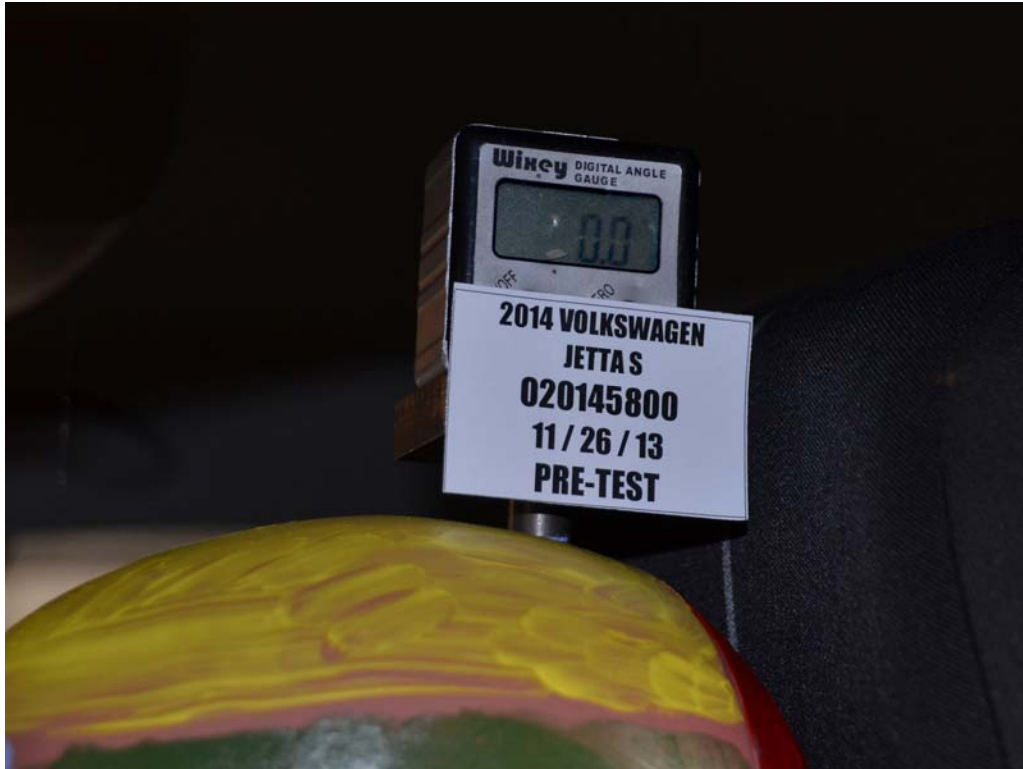


FIGURE 31. Pre-Test Left Side View of Dummy's Head Showing Head is Level



FIGURE 32. Pre-Test Placement of Dummy's Feet

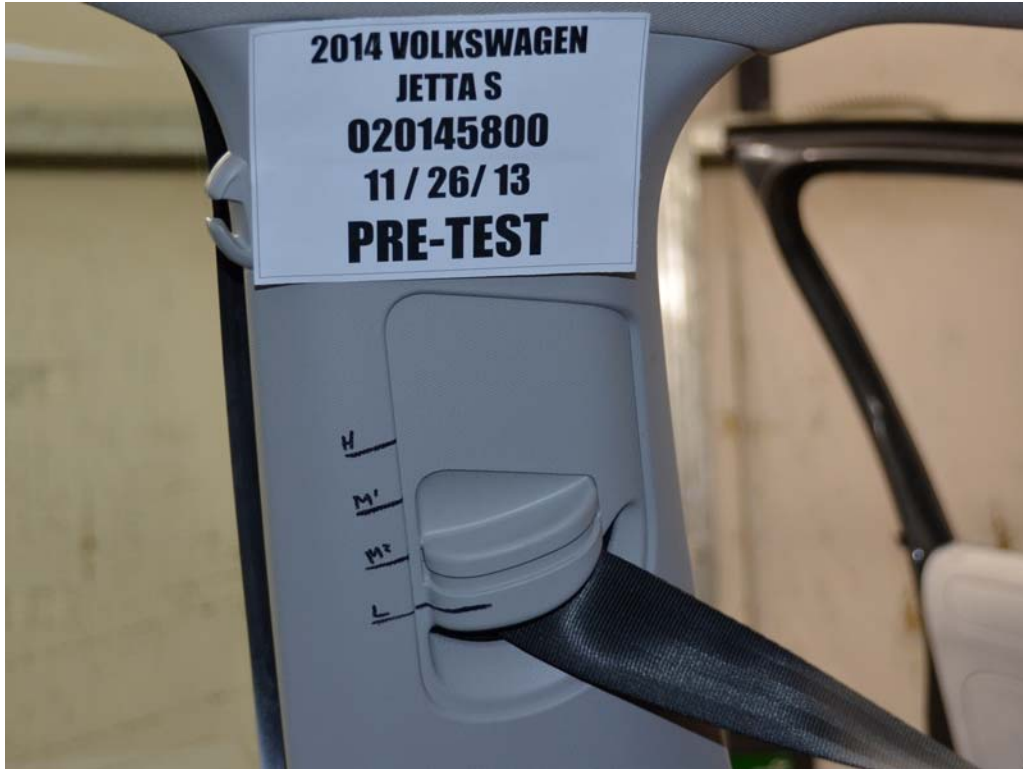


FIGURE 33. Pre-Test View of Belt Anchorage for Dummy

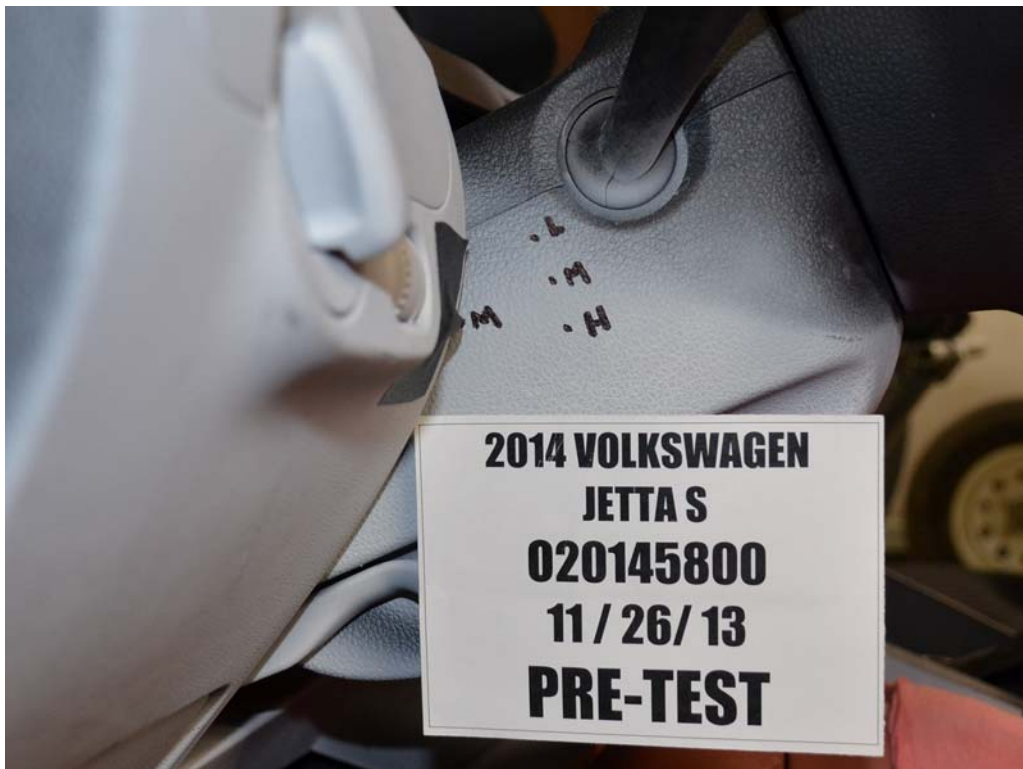


FIGURE 34. Pre-Test Left Side View of Steering Wheel



FIGURE 35. View of Disengaged Parking Brake



FIGURE 36. Pre-Test View of Parking Brake

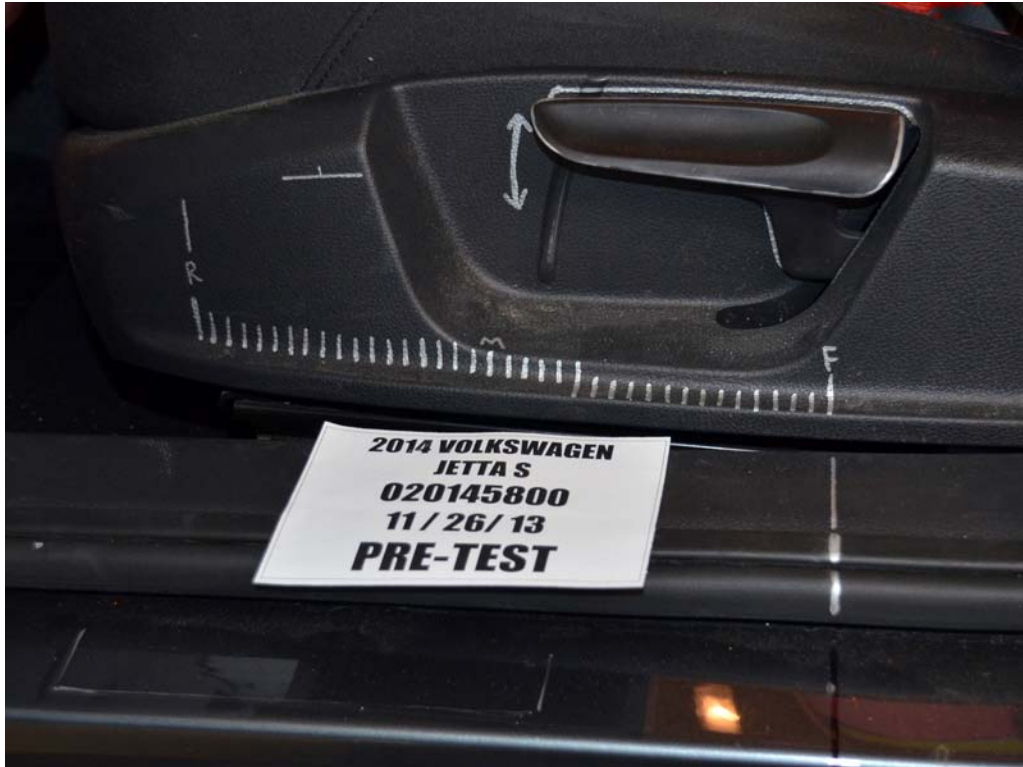


FIGURE 37. Pre-Test Close-Up Left Side View of Driver Seat Track



FIGURE 38. Pre-Test Close-Up Left Side View of Driver Seat Back



FIGURE 39. Pre-Test Close-Up View of Driver Seat Back or Head Restraint



FIGURE 40. Pre-Test Dummy and Door Clearance View



FIGURE 41. Post-Test Dummy and Door Clearance View



FIGURE 42. Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment



FIGURE 43. Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment



FIGURE 44. Pre-Test Inner Door Panel View



FIGURE 45. Post-Test Inner Door Panel View
Showing Dummy Contact Locations



FIGURE 46. Post-Test Dummy Close-Up Head Contact with Vehicle Interior View

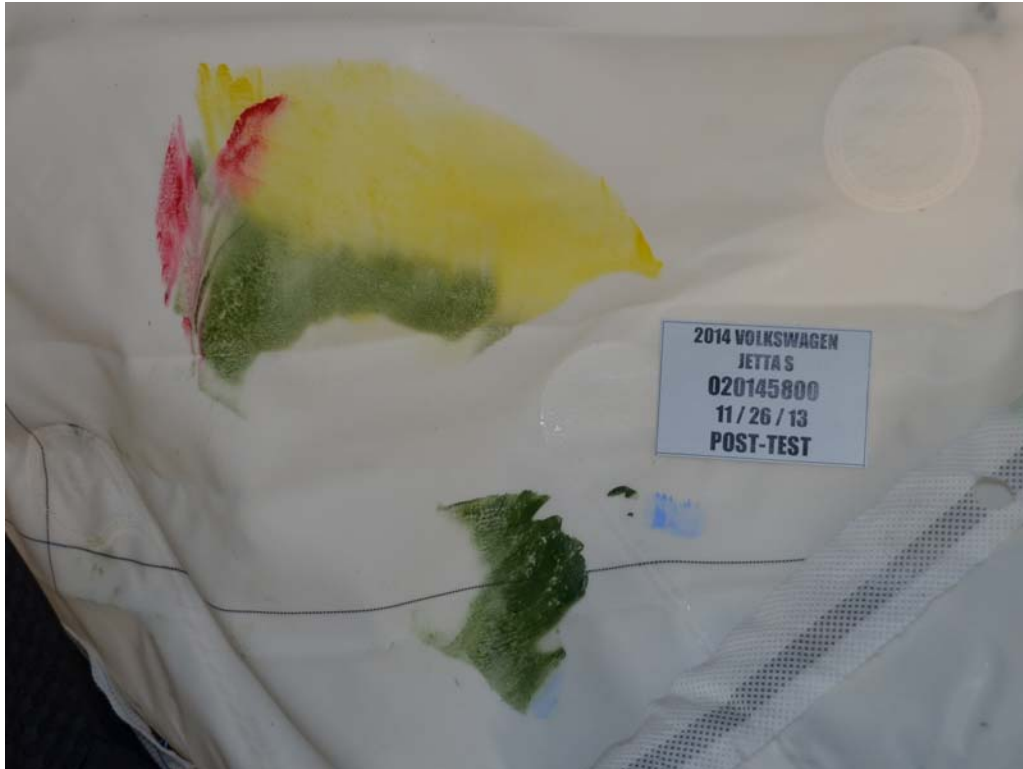


FIGURE 47. Post-Test Dummy Close-Up Head Contact With Side Airbag View



FIGURE 48. Post-Test Dummy Close-Up Torso Contact With Vehicle Interior View



FIGURE 49. Post-Test Dummy Close-Up Torso Contact With Side Airbag View



FIGURE 50. Post-Test Dummy Close-Up Pelvis Contact With Vehicle Interior View



FIGURE 51. Post-Test Dummy Close-Up Pelvis Contact With Side Airbag View



FIGURE 52. Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View



FIGURE 53. Pre-Test View of Fuel Filler Cap or Fuel Filler Neck



FIGURE 54. Post-Test View of Fuel Filler Cap or Fuel Filler Neck



FIGURE 55. Close-Up View of Vehicle's Certification Label

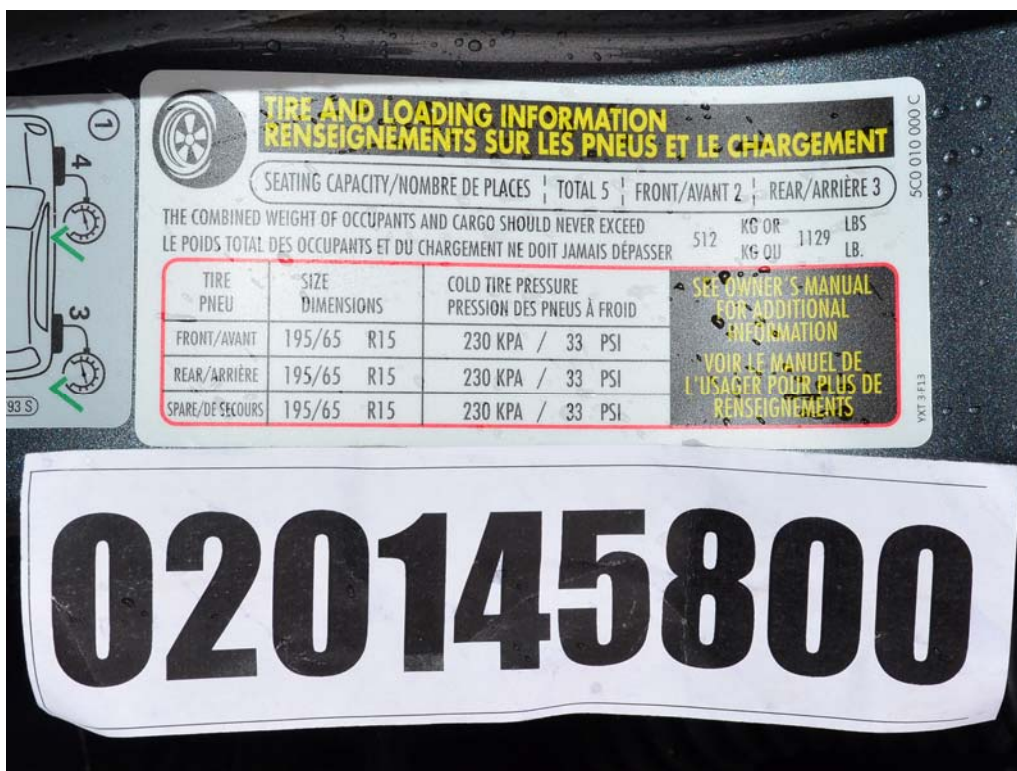


FIGURE 56. Close-Up View of Vehicle's Tire Information Placard or Label



FIGURE 57. Pre-Test Pole Barrier Front View



FIGURE 58. Post-Test Pole Barrier Front View



FIGURE 59. Pre-Test Pole Barrier Side View



FIGURE 60. Post-Test Pole Barrier Side View

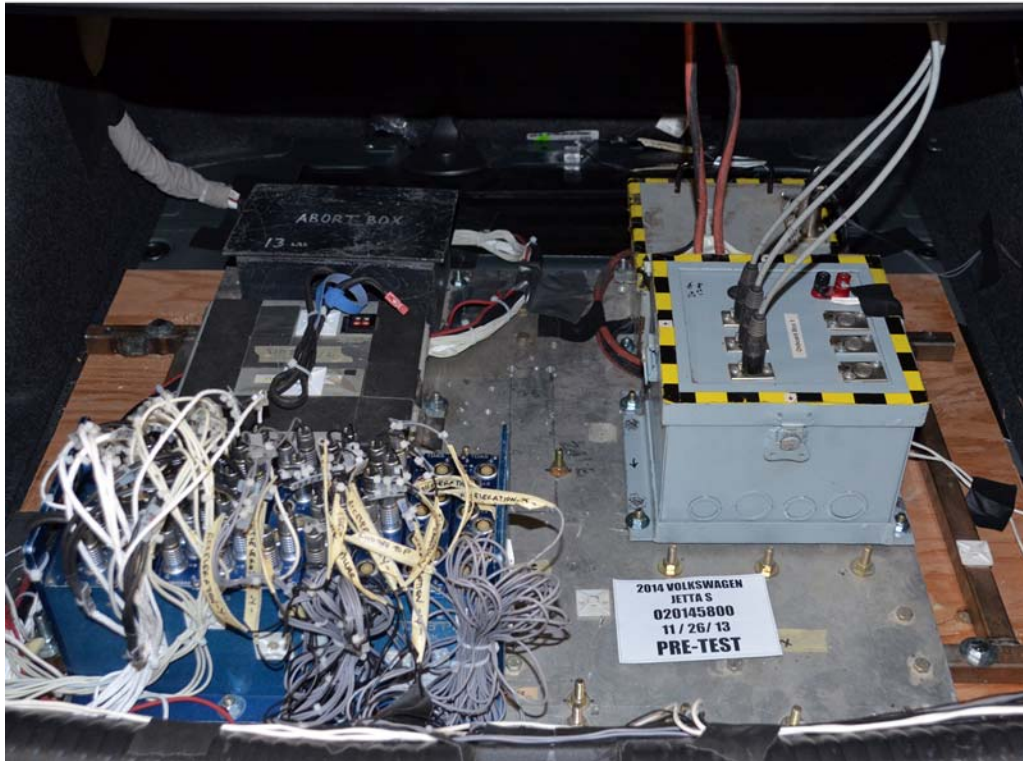


FIGURE 61. Pre-Test Ballast View



FIGURE 62. Post-Test Primary and Redundant Speed Trap Read-Out



FIGURE 63. FMVSS No. 301 Static Rollover 0 Degrees



FIGURE 64. FMVSS No. 301 Static Rollover 90 Degrees

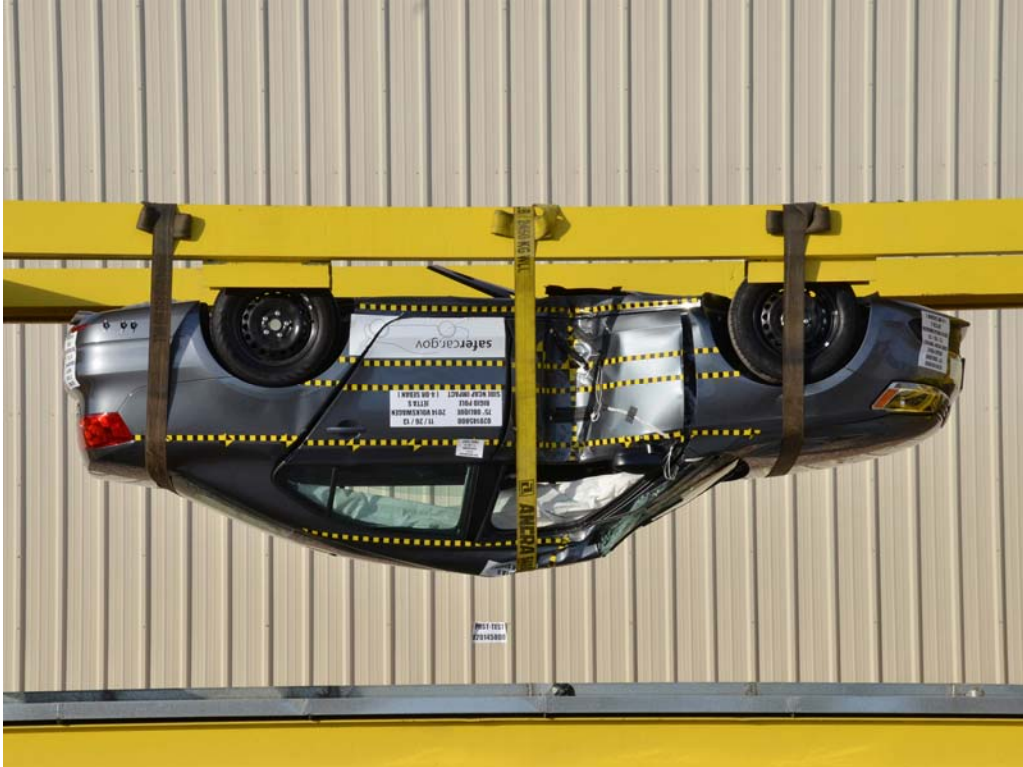


FIGURE 65. FMVSS No. 301 Static Rollover 180 Degrees



FIGURE 66. FMVSS No. 301 Static Rollover 270 Degrees



FIGURE 67. FMVSS No. 301 Static Rollover 360 Degrees



FIGURE 68. Impact Event

2014 Jetta S

Exterior: Platinum Gray Metallic Exterior Interior: Titan Black Interior

STANDARD FEATURES (unless indicated by asterisk)

PERFORMANCE/HANDLING

- 2.5L 115-horsepower, 125-hp turbo, inline 4-cylinder engine
- From Manual Drive
- Anti-lock Braking System (ABS)
- Anti-theft Registration (ARS)
- Electronic Stability Control (ESC)
- Electronic Differential Lock (EDL)
- 17" steel wheels w/ full wheel covers & all-season tires

SAFETY/DURABILITY

- Driver & front passenger air bag supplemental restraint system
- Driver & front passenger side-impact supplemental restraint system
- Side Curtain Protection head-impact sidebags, front & rear
- 3-point safety belts, all seating positions
- Head restraints for all seating positions
- Lower Anchors & Tethers for Children (LATCH)
- Child safety rear door locks
- Daytime Running Lights (DRL)
- Height adjustable front safety belts
- Side protection door beams
- Tire Pressure Monitoring System (TPMS)

COMFORT/CONVENIENCE

- Air conditioning
- 160W 315 radio w/ single CD player, aux, input & 4 speakers
- 6-way adjustable driver's seat
- 60W 100W 150W 200W 250W 300W 350W 400W 450W 500W 550W 600W 650W 700W 750W 800W 850W 900W 950W 1000W 1050W 1100W 1150W 1200W 1250W 1300W 1350W 1400W 1450W 1500W 1550W 1600W 1650W 1700W 1750W 1800W 1850W 1900W 1950W 2000W 2050W 2100W 2150W 2200W 2250W 2300W 2350W 2400W 2450W 2500W 2550W 2600W 2650W 2700W 2750W 2800W 2850W 2900W 2950W 3000W 3050W 3100W 3150W 3200W 3250W 3300W 3350W 3400W 3450W 3500W 3550W 3600W 3650W 3700W 3750W 3800W 3850W 3900W 3950W 4000W 4050W 4100W 4150W 4200W 4250W 4300W 4350W 4400W 4450W 4500W 4550W 4600W 4650W 4700W 4750W 4800W 4850W 4900W 4950W 5000W 5050W 5100W 5150W 5200W 5250W 5300W 5350W 5400W 5450W 5500W 5550W 5600W 5650W 5700W 5750W 5800W 5850W 5900W 5950W 6000W 6050W 6100W 6150W 6200W 6250W 6300W 6350W 6400W 6450W 6500W 6550W 6600W 6650W 6700W 6750W 6800W 6850W 6900W 6950W 7000W 7050W 7100W 7150W 7200W 7250W 7300W 7350W 7400W 7450W 7500W 7550W 7600W 7650W 7700W 7750W 7800W 7850W 7900W 7950W 8000W 8050W 8100W 8150W 8200W 8250W 8300W 8350W 8400W 8450W 8500W 8550W 8600W 8650W 8700W 8750W 8800W 8850W 8900W 8950W 9000W 9050W 9100W 9150W 9200W 9250W 9300W 9350W 9400W 9450W 9500W 9550W 9600W 9650W 9700W 9750W 9800W 9850W 9900W 9950W 10000W 10050W 10100W 10150W 10200W 10250W 10300W 10350W 10400W 10450W 10500W 10550W 10600W 10650W 10700W 10750W 10800W 10850W 10900W 10950W 11000W 11050W 11100W 11150W 11200W 11250W 11300W 11350W 11400W 11450W 11500W 11550W 11600W 11650W 11700W 11750W 11800W 11850W 11900W 11950W 12000W 12050W 12100W 12150W 12200W 12250W 12300W 12350W 12400W 12450W 12500W 12550W 12600W 12650W 12700W 12750W 12800W 12850W 12900W 12950W 13000W 13050W 13100W 13150W 13200W 13250W 13300W 13350W 13400W 13450W 13500W 13550W 13600W 13650W 13700W 13750W 13800W 13850W 13900W 13950W 14000W 14050W 14100W 14150W 14200W 14250W 14300W 14350W 14400W 14450W 14500W 14550W 14600W 14650W 14700W 14750W 14800W 14850W 14900W 14950W 15000W 15050W 15100W 15150W 15200W 15250W 15300W 15350W 15400W 15450W 15500W 15550W 15600W 15650W 15700W 15750W 15800W 15850W 15900W 15950W 16000W 16050W 16100W 16150W 16200W 16250W 16300W 16350W 16400W 16450W 16500W 16550W 16600W 16650W 16700W 16750W 16800W 16850W 16900W 16950W 17000W 17050W 17100W 17150W 17200W 17250W 17300W 17350W 17400W 17450W 17500W 17550W 17600W 17650W 17700W 17750W 17800W 17850W 17900W 17950W 18000W 18050W 18100W 18150W 18200W 18250W 18300W 18350W 18400W 18450W 18500W 18550W 18600W 18650W 18700W 18750W 18800W 18850W 18900W 18950W 19000W 19050W 19100W 19150W 19200W 19250W 19300W 19350W 19400W 19450W 19500W 19550W 19600W 19650W 19700W 19750W 19800W 19850W 19900W 19950W 20000W 20050W 20100W 20150W 20200W 20250W 20300W 20350W 20400W 20450W 20500W 20550W 20600W 20650W 20700W 20750W 20800W 20850W 20900W 20950W 21000W 21050W 21100W 21150W 21200W 21250W 21300W 21350W 21400W 21450W 21500W 21550W 21600W 21650W 21700W 21750W 21800W 21850W 21900W 21950W 22000W 22050W 22100W 22150W 22200W 22250W 22300W 22350W 22400W 22450W 22500W 22550W 22600W 22650W 22700W 22750W 22800W 22850W 22900W 22950W 23000W 23050W 23100W 23150W 23200W 23250W 23300W 23350W 23400W 23450W 23500W 23550W 23600W 23650W 23700W 23750W 23800W 23850W 23900W 23950W 24000W 24050W 24100W 24150W 24200W 24250W 24300W 24350W 24400W 24450W 24500W 24550W 24600W 24650W 24700W 24750W 24800W 24850W 24900W 24950W 25000W 25050W 25100W 25150W 25200W 25250W 25300W 25350W 25400W 25450W 25500W 25550W 25600W 25650W 25700W 25750W 25800W 25850W 25900W 25950W 26000W 26050W 26100W 26150W 26200W 26250W 26300W 26350W 26400W 26450W 26500W 26550W 26600W 26650W 26700W 26750W 26800W 26850W 26900W 26950W 27000W 27050W 27100W 27150W 27200W 27250W 27300W 27350W 27400W 27450W 27500W 27550W 27600W 27650W 27700W 27750W 27800W 27850W 27900W 27950W 28000W 28050W 28100W 28150W 28200W 28250W 28300W 28350W 28400W 28450W 28500W 28550W 28600W 28650W 28700W 28750W 28800W 28850W 28900W 28950W 29000W 29050W 29100W 29150W 29200W 29250W 29300W 29350W 29400W 29450W 29500W 29550W 29600W 29650W 29700W 29750W 29800W 29850W 29900W 29950W 30000W 30050W 30100W 30150W 30200W 30250W 30300W 30350W 30400W 30450W 30500W 30550W 30600W 30650W 30700W 30750W 30800W 30850W 30900W 30950W 31000W 31050W 31100W 31150W 31200W 31250W 31300W 31350W 31400W 31450W 31500W 31550W 31600W 31650W 31700W 31750W 31800W 31850W 31900W 31950W 32000W 32050W 32100W 32150W 32200W 32250W 32300W 32350W 32400W 32450W 32500W 32550W 32600W 32650W 32700W 32750W 32800W 32850W 32900W 32950W 33000W 33050W 33100W 33150W 33200W 33250W 33300W 33350W 33400W 33450W 33500W 33550W 33600W 33650W 33700W 33750W 33800W 33850W 33900W 33950W 34000W 34050W 34100W 34150W 34200W 34250W 34300W 34350W 34400W 34450W 34500W 34550W 34600W 34650W 34700W 34750W 34800W 34850W 34900W 34950W 35000W 35050W 35100W 35150W 35200W 35250W 35300W 35350W 35400W 35450W 35500W 35550W 35600W 35650W 35700W 35750W 35800W 35850W 35900W 35950W 36000W 36050W 36100W 36150W 36200W 36250W 36300W 36350W 36400W 36450W 36500W 36550W 36600W 36650W 36700W 36750W 36800W 36850W 36900W 36950W 37000W 37050W 37100W 37150W 37200W 37250W 37300W 37350W 37400W 37450W 37500W 37550W 37600W 37650W 37700W 37750W 37800W 37850W 37900W 37950W 38000W 38050W 38100W 38150W 38200W 38250W 38300W 38350W 38400W 38450W 38500W 38550W 38600W 38650W 38700W 38750W 38800W 38850W 38900W 38950W 39000W 39050W 39100W 39150W 39200W 39250W 39300W 39350W 39400W 39450W 39500W 39550W 39600W 39650W 39700W 39750W 39800W 39850W 39900W 39950W 40000W 40050W 40100W 40150W 40200W 40250W 40300W 40350W 40400W 40450W 40500W 40550W 40600W 40650W 40700W 40750W 40800W 40850W 40900W 40950W 41000W 41050W 41100W 41150W 41200W 41250W 41300W 41350W 41400W 41450W 41500W 41550W 41600W 41650W 41700W 41750W 41800W 41850W 41900W 41950W 42000W 42050W 42100W 42150W 42200W 42250W 42300W 42350W 42400W 42450W 42500W 42550W 42600W 42650W 42700W 42750W 42800W 42850W 42900W 42950W 43000W 43050W 43100W 43150W 43200W 43250W 43300W 43350W 43400W 43450W 43500W 43550W 43600W 43650W 43700W 43750W 43800W 43850W 43900W 43950W 44000W 44050W 44100W 44150W 44200W 44250W 44300W 44350W 44400W 44450W 44500W 44550W 44600W 44650W 44700W 44750W 44800W 44850W 44900W 44950W 45000W 45050W 45100W 45150W 45200W 45250W 45300W 45350W 45400W 45450W 45500W 45550W 45600W 45650W 45700W 45750W 45800W 45850W 45900W 45950W 46000W 46050W 46100W 46150W 46200W 46250W 46300W 46350W 46400W 46450W 46500W 46550W 46600W 46650W 46700W 46750W 46800W 46850W 46900W 46950W 47000W 47050W 47100W 47150W 47200W 47250W 47300W 47350W 47400W 47450W 47500W 47550W 47600W 47650W 47700W 47750W 47800W 47850W 47900W 47950W 48000W 48050W 48100W 48150W 48200W 48250W 48300W 48350W 48400W 48450W 48500W 48550W 48600W 48650W 48700W 48750W 48800W 48850W 48900W 48950W 49000W 49050W 49100W 49150W 49200W 49250W 49300W 49350W 49400W 49450W 49500W 49550W 49600W 49650W 49700W 49750W 49800W 49850W 49900W 49950W 50000W 50050W 50100W 50150W 50

APPENDIX B
DUMMY RESPONSE DATA

TABLE OF DATA PLOTS

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

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)

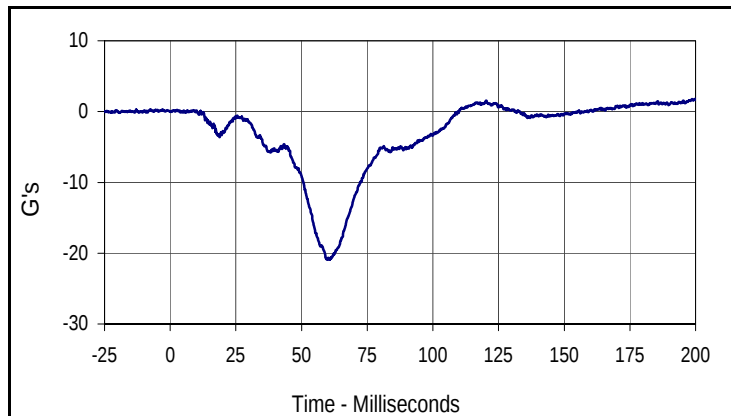
Left B-Pillar Sill Acceleration
Left Lower B-Pillar Acceleration (Y)
Left Mid B-Pillar Acceleration (Y)
Driver Seat Track at Dummy Hip Point Acceleration (Y)
Engine Top Acceleration (X)
Engine Top Acceleration (Y)
Firewall Center Acceleration (Y)
Right Roof at Vertical Impact Reference Line Acceleration (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

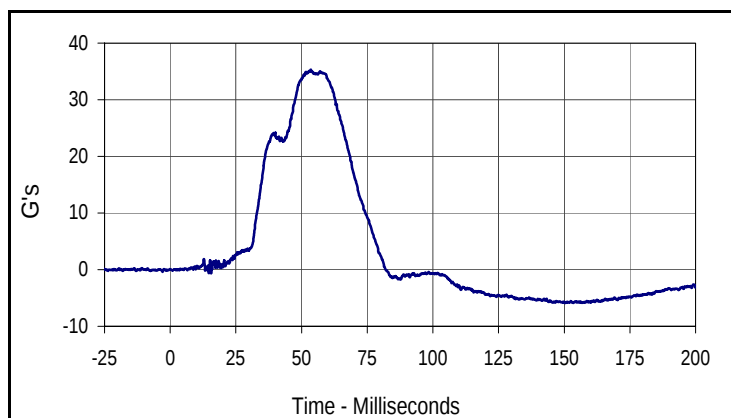
Load Cell Pole Barrier #1 Force (Y)
Load Cell Pole Barrier #2 Force (Y)
Load Cell Pole Barrier #3 Force (Y)
Load Cell Pole Barrier #4 Force (Y)
Load Cell Pole Barrier #5 Force (Y)
Load Cell Pole Barrier #6 Force (Y)
Load Cell Pole Barrier #7 Force (Y)
Load Cell Pole Barrier #8 Force (Y)

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan
 Test Program: 32 km/h (20 mph) Side Impact NCAP 75° Rigid Pole Test

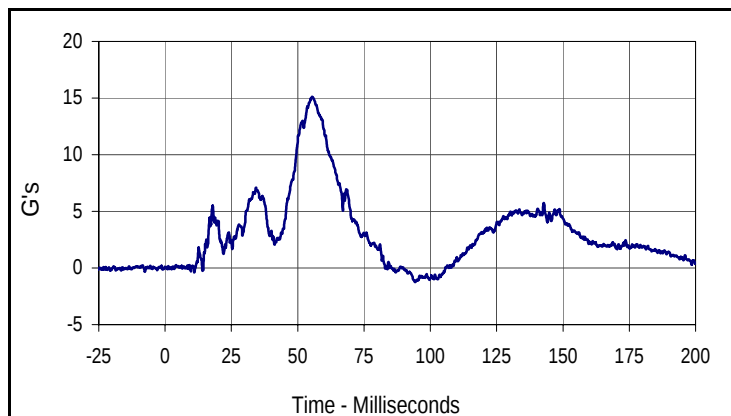
Test Date: 11/26/13
 NHTSA No.: O20145800



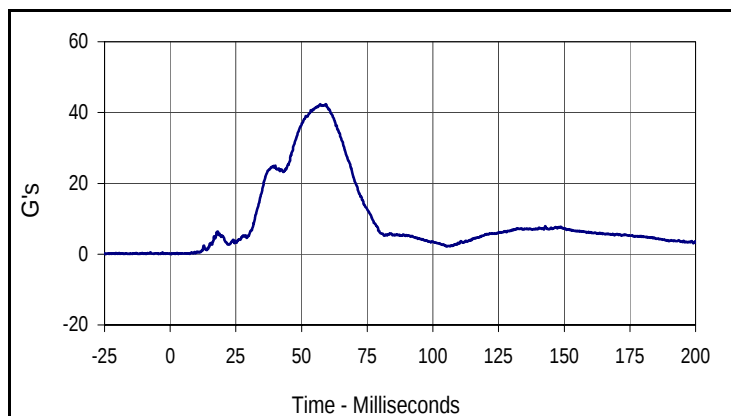
Curve Description			
Driver Head Acceleration X Primary			
Plot No.	Type	SAE Class	Units
001	FIL	1000	G's
Max	Time	Min	Time
1.8	199.9	-20.9	60.8



Curve Description			
Driver Head Acceleration Y Primary			
Plot No.	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
35.3	53.5	-5.9	153.4



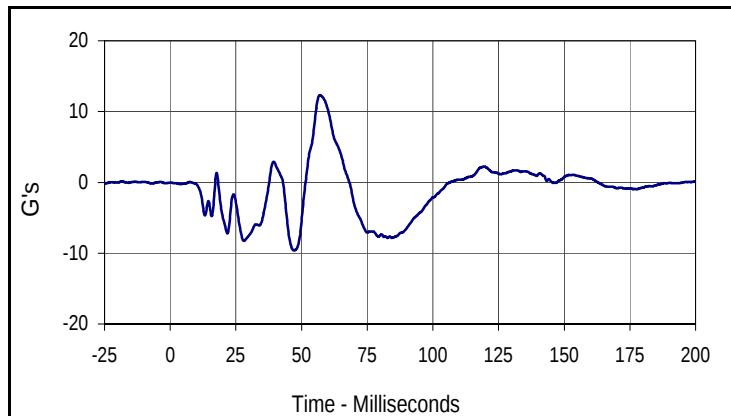
Curve Description			
Driver Head Acceleration Z Primary			
Plot No.	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
15.1	55.4	-1.2	94.3



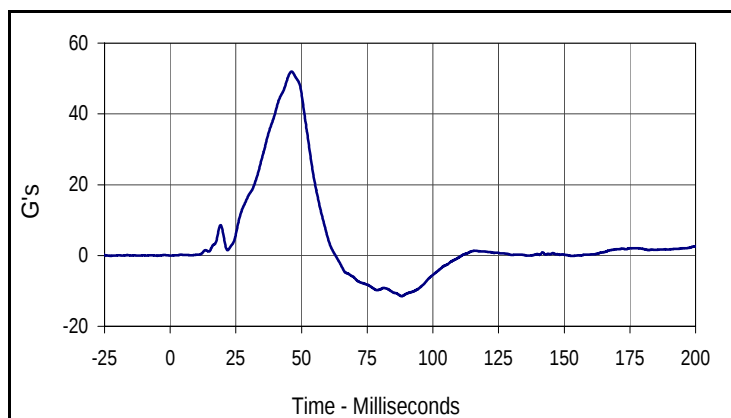
Curve Description			
Driver Head Acceleration Primary Res.			
Plot No.	Type	SAE Class	Units
004	RES	1000	G's
Max	Time	Min	Time
42.4	57.1	0.0	0.4

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan
 Test Program: 32 km/h (20 mph) Side Impact NCAP 75° Rigid Pole Test

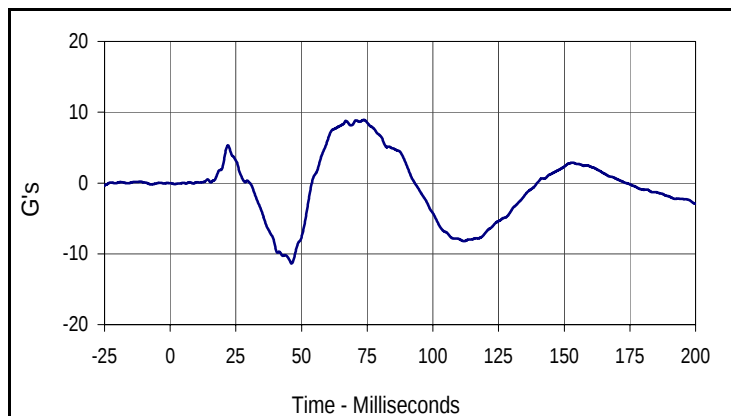
Test Date: 11/26/13
 NHTSA No.: O20145800



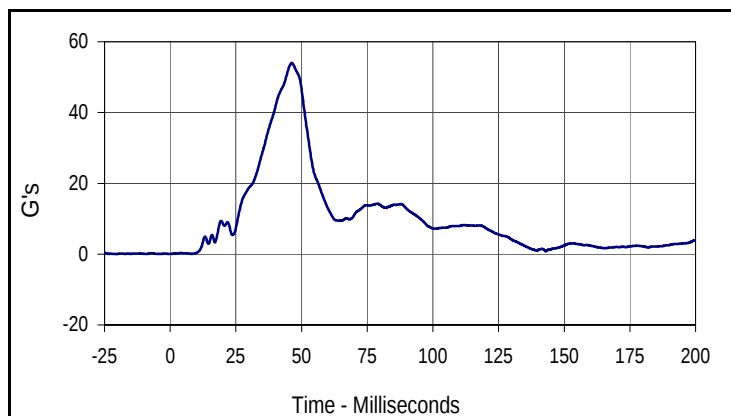
Curve Description			
Driver Lower Spine T12 Acceleration X			
Plot No.	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
12.3	57.0	-9.6	47.1



Curve Description			
Driver Lower Spine T12 Acceleration Y			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
52.0	46.2	-11.5	88.1



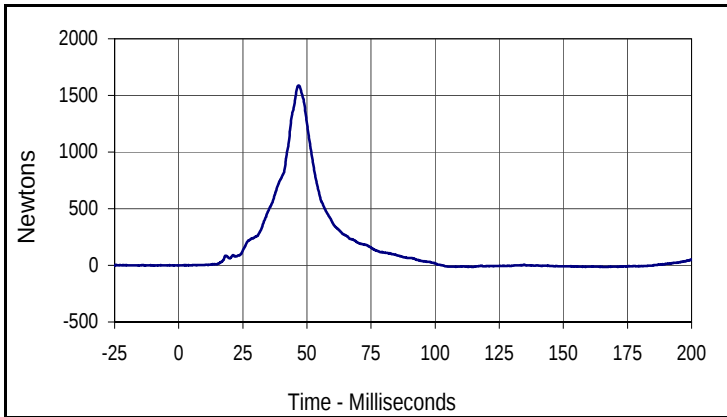
Curve Description			
Driver Lower Spine T12 Acceleration Z			
Plot No.	Type	SAE Class	Units
007	FIL	180	G's
Max	Time	Min	Time
8.9	73.8	-11.3	46.2



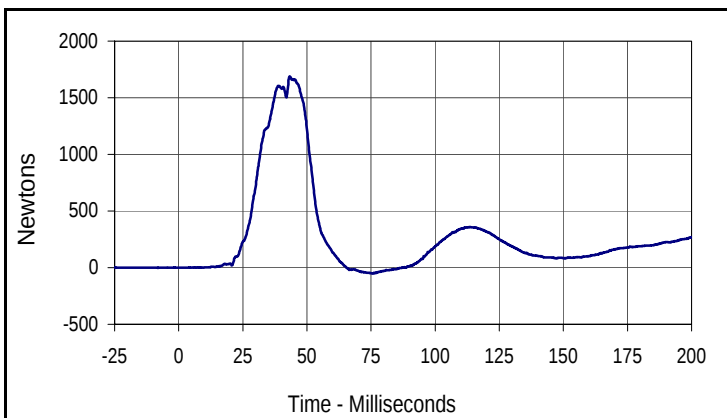
Curve Description			
Driver Lower Spine T12 Acceleration Res.			
Plot No.	Type	SAE Class	Units
008	RES	180	G's
Max	Time	Min	Time
54.0	46.3	0.1	0.0

Test Vehicle: 2014 Volkswagen Jetta S 4-Door Sedan
 Test Program: 32 km/h (20 mph) Side Impact NCAP 75° Rigid Pole Test

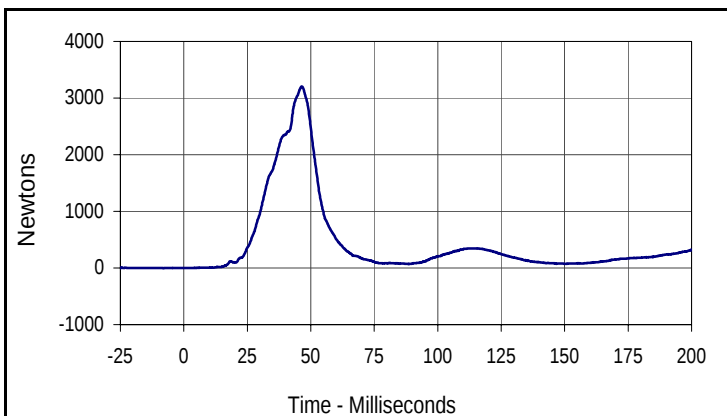
Test Date: 11/26/13
 NHTSA No.: O20145800



Curve Description			
Driver Iliac Wing Force on Impact Side Y			
Plot No.	Type	SAE Class	Units
009	FIL	600	Newtons
Max	Time	Min	Time
1588.2	46.7	-15.4	166.4



Curve Description			
Driver Acetabulum Force on Impact Side Y			
Plot No.	Type	SAE Class	Units
010	FIL	600	Newtons
Max	Time	Min	Time
1688.2	43.3	-51.1	75.7



Curve Description			
Driver Total Pelvic Force on Impact Side Y			
Plot No.	Type	SAE Class	Units
011	SUM	600	Newtons
Max	Time	Min	Time
3203.7	46.5	-0.1	1.2

APPENDIX C
DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

APPENDIX C
PRE-TEST / ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Test Program: SID IIs External Measurements
 ATD Serial No.: 299

Test Date: 11/13/13
 Test I.D.: N/A



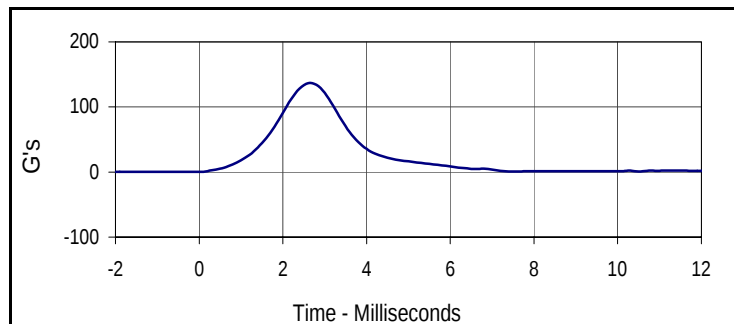
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.3	Pass
Laboratory Relative Humidity		%	10 to 70	34	Pass
A	Sitting Height	mm	772 - 788	780	Pass
B	Shoulder Pivot Height	mm	437 - 453	445	Pass
C	H-Point Height	mm	79 - 89	85	Pass
D	H-Point from Seatback	mm	141 - 151	145	Pass
E	Shoulder Pivot from Backline	mm	97 - 107	102	Pass
F	Thigh Clearance	mm	119 - 135	125	Pass
G	Head Breadth	mm	140 - 148	145	Pass
H	Head Back from Backline	mm	40 - 46	44	Pass
I	Head Depth	mm	178 - 188	184	Pass
J	Head Circumference	mm	541 - 551	545	Pass
K	Buttock to Knee Length	mm	514 - 540	527	Pass
L	Popliteal Height	mm	343 - 369	352	Pass
M	Knee Pivot to Floor Height	mm	392 - 409	401	Pass
N	Buttock Popliteal Length	mm	416 - 442	432	Pass
O	Chest Depth w/o Jacket	mm	195 - 211	202	Pass
P	Foot Length	mm	216 - 232	221	Pass
Q	Hip Breadth with Pelvic Plug	mm	313 - 323	315	Pass
R	Arm Length	mm	249 - 259	252	Pass
S	Knee Joint to Seatback	mm	477 - 493	481	Pass
V	Shoulder Width	mm	341 - 357	352	Pass
W	Foot Width	mm	78 - 94	86	Pass
Y	Chest Circumference with Jacket	mm	851 - 881	872	Pass
Z	Waist Circumference	mm	760 - 791	774	Pass
Overall Test Results					Pass

Test Program: SID IIs Head Drop Test
 ATD Serial No.: 299

Test Date: 11/13/13
 Test I.D.: 299HD065



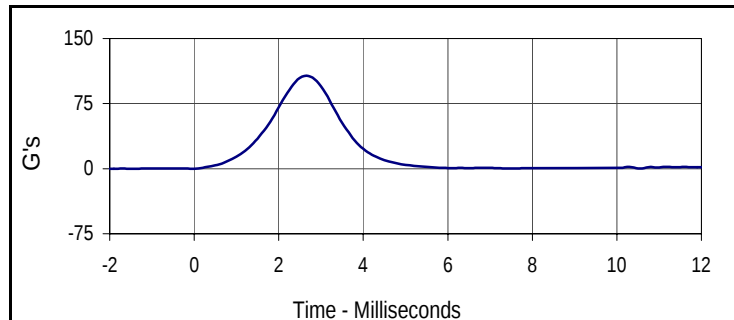
Tested Parameter		Units	Specification	Result	Pass/Fail
Head Assembly Soak Time		Minutes	≥240	265	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.5	Pass
	Min	°C		21.3	Pass
Humidity During Soak	Max	%	10.0 to 70.0	33.6	Pass
	Min	%		33.4	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.3	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	33.6	Pass
Peak Head Resultant Acceleration		G's	115 to 137	136.7	Pass
Peak Head X Acceleration		G's	<15	4.4	Pass
Is Acceleration Unimodal?		Yes/No	Yes	Yes	Pass
Oscillations After Main Pulse		%	<15	2.7	Pass
Overall Test Results				Pass	



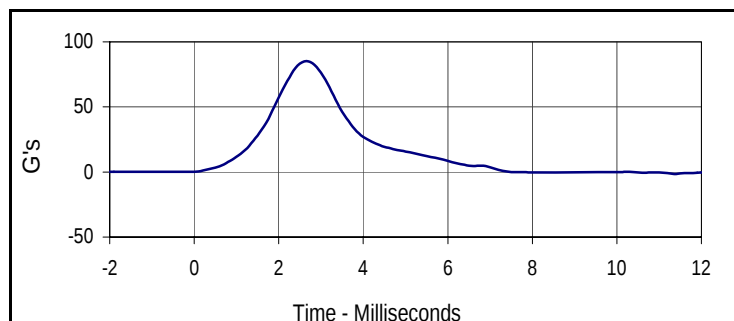
Curve Description			
Head Resultant			
Plot No.	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
136.7	2.7	0.1	-2.0



Curve Description			
Head X			
Plot No.	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
4.4	2.6	0.0	-1.7



Curve Description			
Head Y			
Plot No.	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
107.0	2.7	0.0	0.0



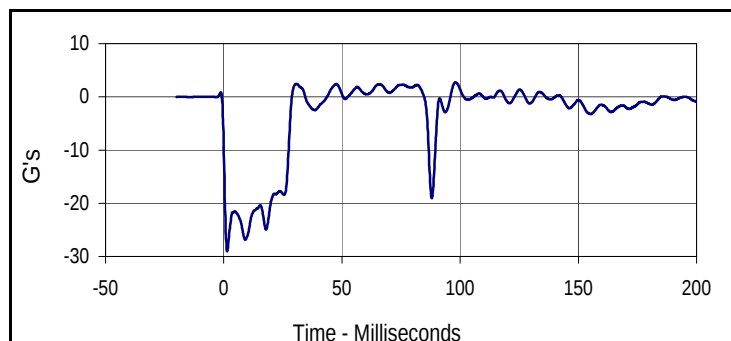
Curve Description			
Head Z			
Plot No.	Type	SAE Class	Units
004	FIL	1000	G's
Max	Time	Min	Time
85.0	2.7	-1.4	11.4

Test Program: SID IIs Neck Flexion Test
 ATD Serial No.: 299

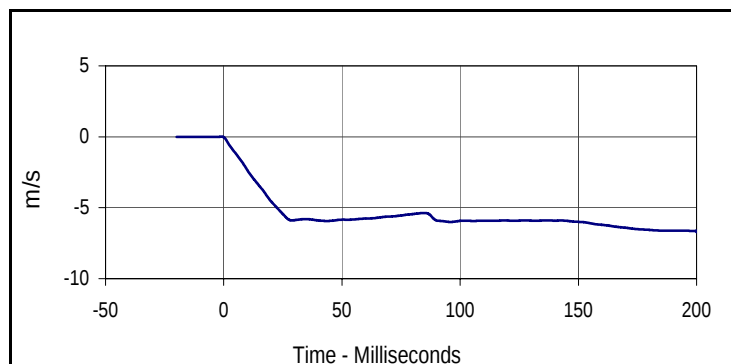
Test Date: 11/13/13
 Test I.D.: 299NB065



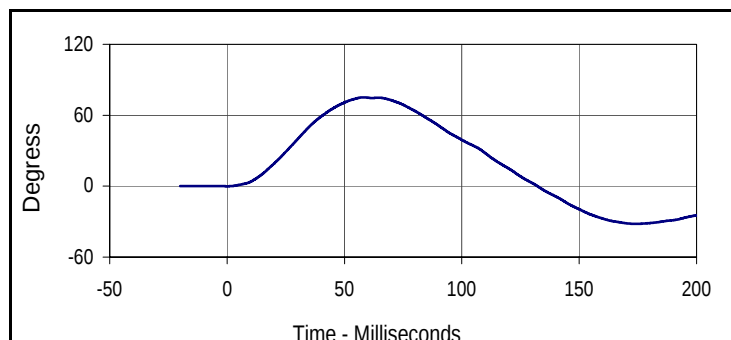
Tested Parameter		Units	Specification	Result	Pass/Fail
Neck Assembly Soak Time		Minutes	≥240	330	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.5	Pass
	Min	°C		21.3	Pass
Humidity During Soak	Max	%	10.0 to 70.0	33.6	Pass
	Min	%		33.4	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.4	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	33.5	Pass
Pendulum Velocity		m/s	5.51 to 5.63	5.61	Pass
Pendulum Deceleration	10 msec	m/s	-2.20 to -2.80	-2.35	Pass
	15 msec	m/s	-3.30 to -4.10	-3.45	Pass
	20 msec	m/s	-4.40 to -5.40	-4.55	Pass
	25 msec	m/s	-5.40 to -6.10	-5.44	Pass
	25-100 msec	m/s	-5.50 to -6.20	-6.01	Pass
D-Plane Rotation	Max	Degrees	71 to 81	75.2	Pass
	Time	msec	50 to 70	58.0	Pass
Peak Occipital Condyle Moment		Nm	-36 to -44	-43.9	Pass
Decaying Moment Time to Cross 0 Nm		msec	102 to 126	113.8	Pass
Overall Test Results				Pass	



Curve Description			
Pendulum Deceleration			
Plot No.	Type	SAE Class	Units
001	FIL	180	G's
Max	Time	Min	Time
2.7	0.0	-29.0	0.0



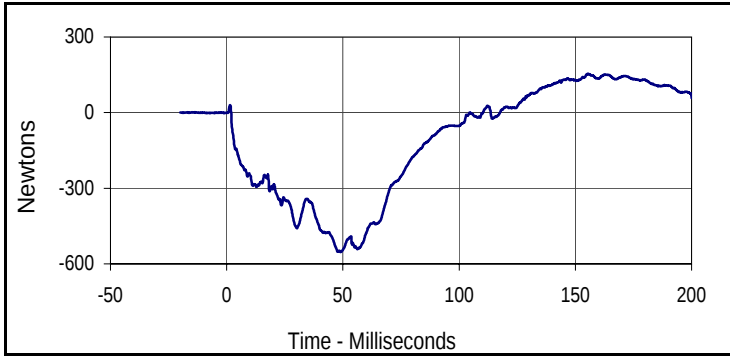
Curve Description			
Pendulum Velocity			
Plot No.	Type	SAE Class	Units
002	FIL	180	m/s
Max	Time	Min	Time
0.0	-0.8	-6.7	200.0



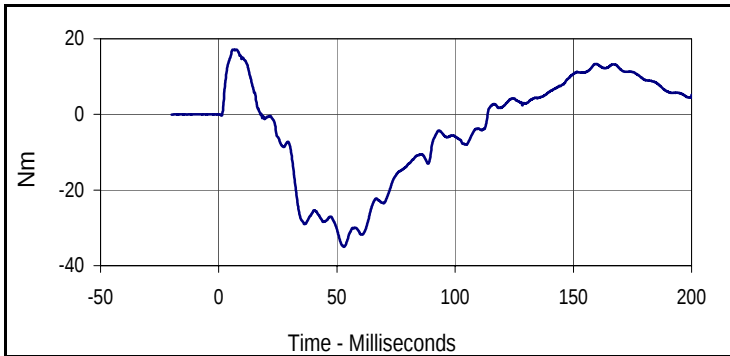
Curve Description			
D-Plane Rotation			
Plot No.	Type	SAE Class	Units
003	FIL	60	Degress
Max	Time	Min	Time
75.2	58.0	-31.8	174.0

Test Program: SID IIs Neck Flexion Test
 ATD Serial No.: 299

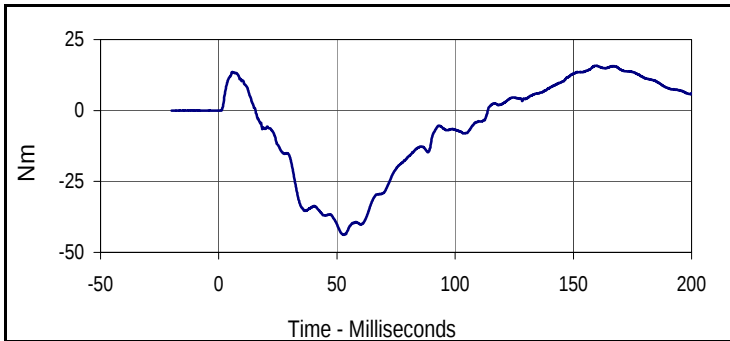
Test Date: 11/13/13
 Test I.D.: 299NB065



Curve Description			
Neck Force Y			
Plot No.	Type	SAE Class	Units
004	FIL	600	Newtons
Max	Time	Min	Time
153.8	155.4	-553.1	48.9



Curve Description			
Neck Moment X			
Plot No.	Type	SAE Class	Units
005	FIL	600	Nm
Max	Time	Min	Time
17.2	7.5	-35.0	52.9



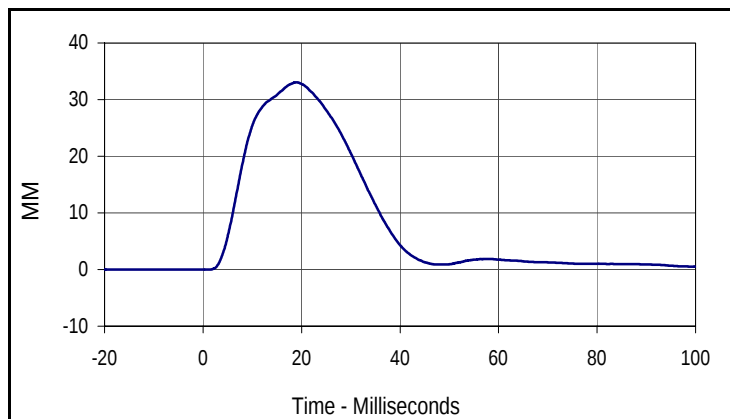
Curve Description			
Moment About Occipital Condyle			
Plot No.	Type	SAE Class	Units
006	FIL	600	Nm
Max	Time	Min	Time
15.7	159.5	-43.9	52.9

Test Program: SID IIs Shoulder Impact Test
 ATD Serial No.: 299

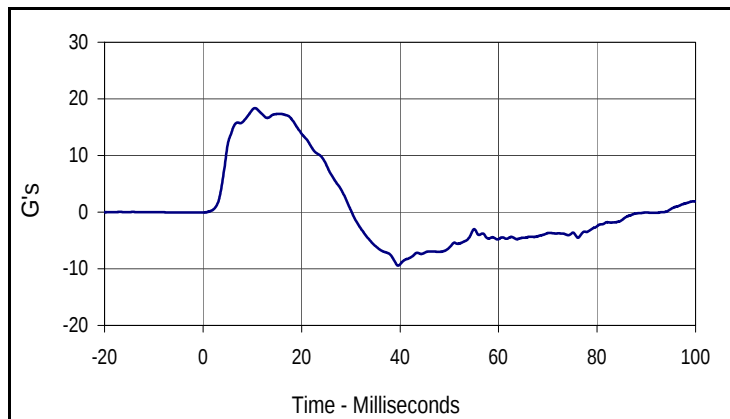
Test Date: 11/13/13
 Test I.D.: 299SH065



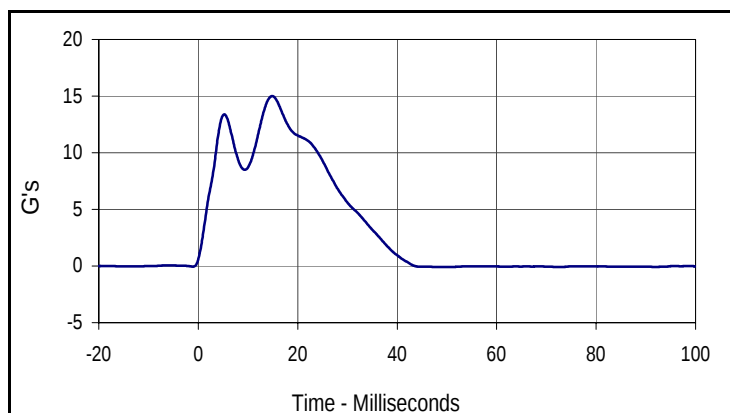
Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥180	405	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.5	Pass
	Min	°C		21.3	Pass
Humidity During Soak	Max	%	10.0 to 70.0	33.6	Pass
	Min	%		33.4	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.4	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	33.5	Pass
Impactor Velocity		m/s	4.20 to 4.40	4.31	Pass
Peak Shoulder Deflection		mm	28 to 37	33.0	Pass
Peak Lateral Spine Acceleration Y		G's	17 to 22	18.4	Pass
Peak Impactor Acceleration		G's	13 to 18	15.0	Pass
Overall Test Results				Pass	



Curve Description			
Shoulder Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
33.0	18.9	0.0	-17.8



Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
18.4	10.5	-9.5	39.6



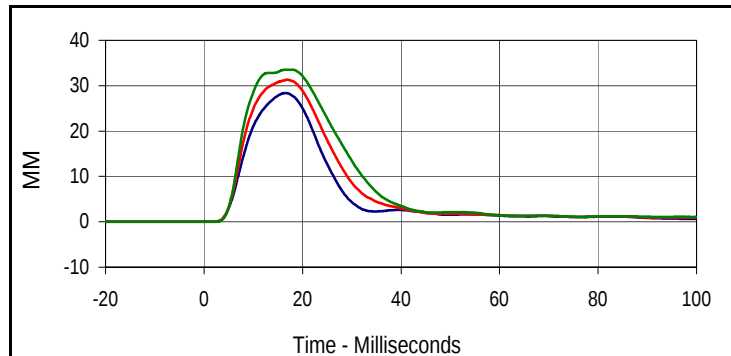
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
15.0	14.9	-0.1	48.1

Test Program: SID IIs Thorax with Arm Impact Test
 ATD Serial No.: 299

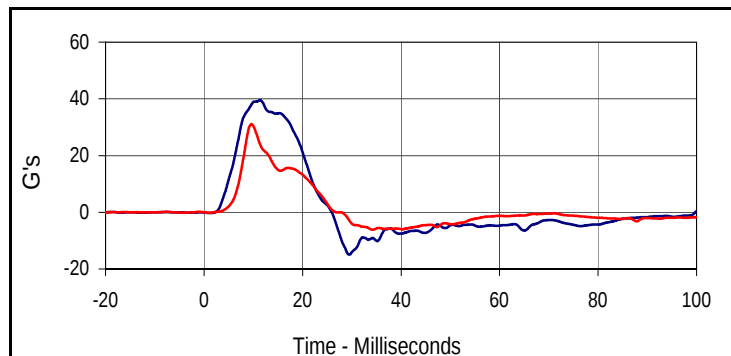
Test Date: 11/13/13
 Test I.D.: 299TWA065



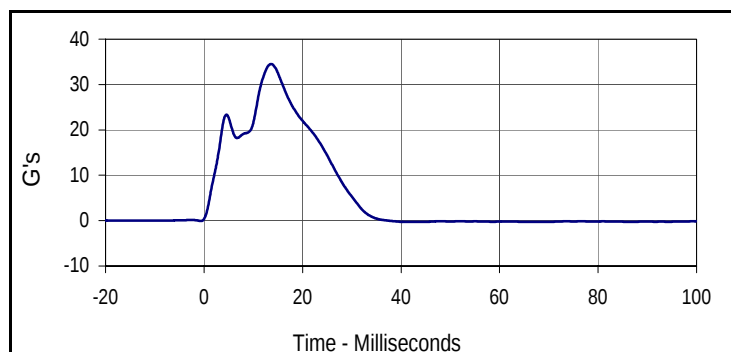
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	455	Pass
Temperature During Soak	Max	20.6 to 22.2	21.5	Pass
	Min		21.3	Pass
Humidity During Soak	Max	10.0 to 70.0	33.6	Pass
	Min		33.4	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.4	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	33.5	Pass
Impactor Velocity	m/s	6.6 to 6.8	6.70	Pass
Peak Shoulder Deflection	mm	31 to 40	36.9	Pass
Peak Upper Thorax Rib Deflection	mm	25 to 32	28.4	Pass
Peak Middle Thorax Rib Deflection	mm	30 to 36	31.3	Pass
Peak Lower Thorax Rib Deflection	mm	32 to 38	33.5	Pass
Peak Upper Spine Y Acceleration	G's	34 to 43	39.5	Pass
Peak Lower Spine Y Acceleration	G's	29 to 37	31.1	Pass
Peak Impactor Acceleration	G's	30 to 36	34.5	Pass
Overall Test Results			Pass	



Curve Description			
Upper Thorax Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
28.4	16.5	0.0	-8.8
Middle Thorax Deflection			
Max	Time	Min	Time
31.3	16.9	0.0	-15.7
Lower Thorax Deflection			
Max	Time	Min	Time
33.5	17.2	0.0	-10.7



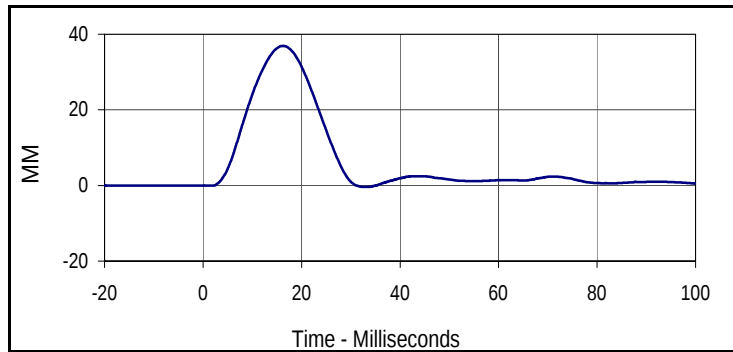
Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
39.5	11.4	-15.0	29.5
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
31.1	9.6	-6.1	34.2



Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
34.5	13.6	-0.3	40.8

Test Program: SID IIs Thorax with Arm Impact Test
 ATD Serial No.: 299

Test Date: 11/13/13
 Test I.D.: 299TWA065



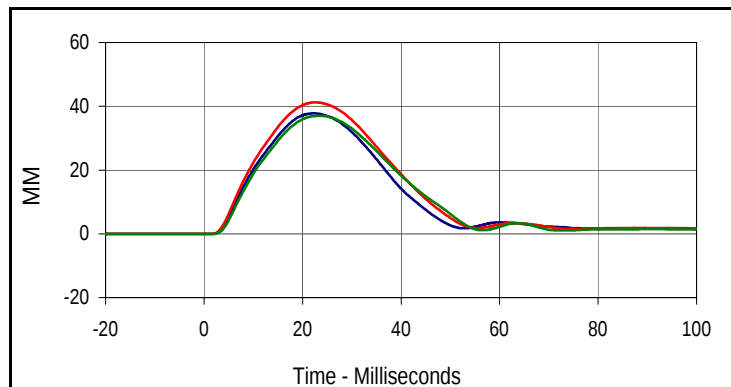
Curve Description			
Shoulder Deflection			
Plot No.	Type	SAE Class	Units
007	FIL	600	MM
Max	Time	Min	Time
36.9	16.3	-0.4	33.3

Test Program: SID IIs Thorax without Arm Impact Test
 ATD Serial No.: 299

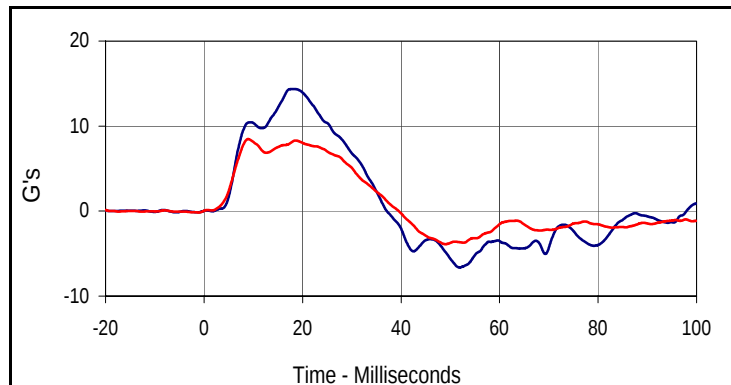
Test Date: 11/13/13
 Test I.D.: 299TWOA065



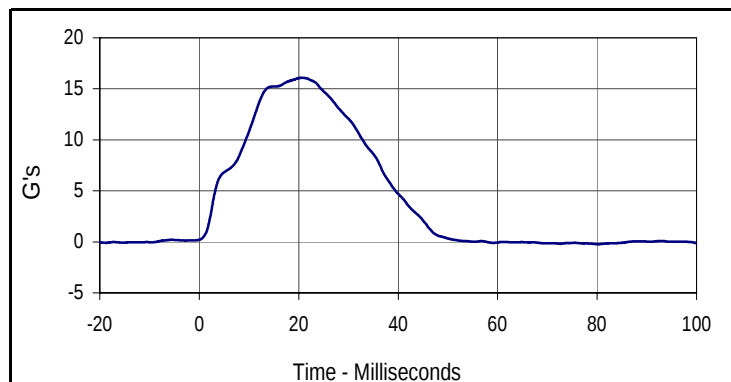
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	510	Pass
Temperature During Soak	Max	18.9 to 25.6	21.5	Pass
	Min		21.3	Pass
Humidity During Soak	Max	10.0 to 70.0	33.6	Pass
	Min		33.4	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.4	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	33.5	Pass
Impactor Velocity	m/s	4.2 to 4.4	4.34	Pass
Peak Upper Thorax Rib Deflection	mm	32 to 40	37.8	Pass
Peak Middle Thorax Rib Deflection	mm	39 to 45	41.2	Pass
Peak Lower Thorax Rib Deflection	mm	35 to 43	37.0	Pass
Peak Upper Spine Y Acceleration	G's	13 to 17	14.4	Pass
Peak Lower Spine Y Acceleration	G's	7 to 11	8.5	Pass
Peak Impactor Acceleration	G's	14 to 18	16.1	Pass
Overall Test Results			Pass	



Curve Description			
Upper Thorax Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
37.8	22.2	0.0	-19.5
Middle Thorax Deflection			
Max	Time	Min	Time
41.2	22.3	0.0	-18.8
Lower Thorax Deflection			
Max	Time	Min	Time
37.0	23.4	0.0	-18.6



Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
14.4	18.4	-6.6	51.8
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
8.5	9.0	-3.9	49.0



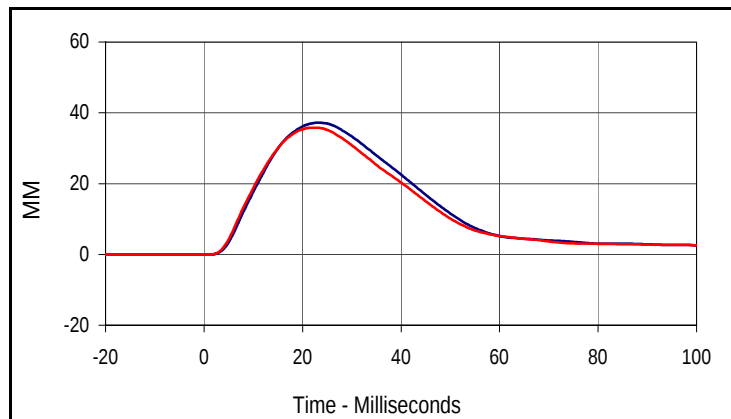
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
16.1	20.7	-0.2	80.1

Test Program: SID IIs Abdomen Impact Test
 ATD Serial No.: 299

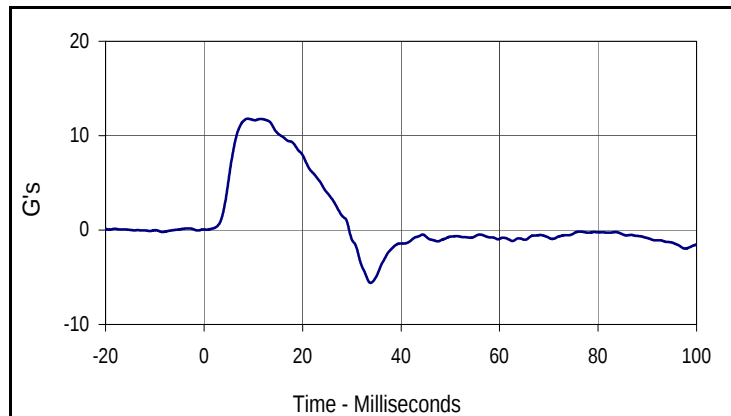
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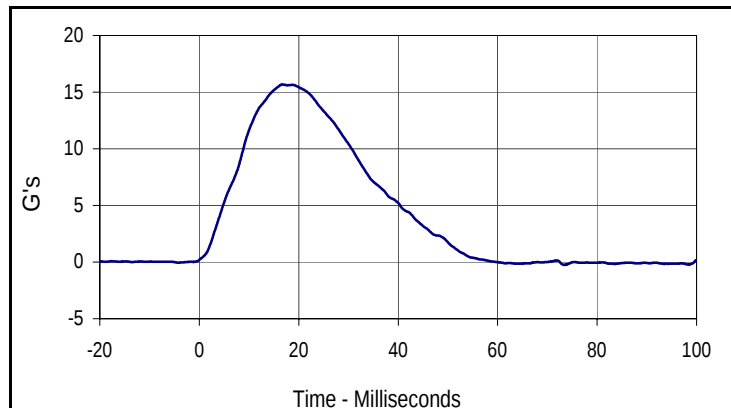
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	570	Pass
Temperature During Soak	Max	20.6 to 22.2	21.5	Pass
	Min		21.3	Pass
Humidity During Soak	Max	10.0 to 70.0	33.6	Pass
	Min		33.4	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.4	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	33.5	Pass
Impactor Velocity	m/s	4.2 to 4.4	4.31	Pass
Peak Upper Abdominal Rib Deflection	mm	36 to 47	37.2	Pass
Peak Lower Abdominal Rib Deflection	mm	33 to 44	35.8	Pass
Peak Lower Spine Y Acceleration	G's	9 to 14	11.8	Pass
Peak Impactor Acceleration	G's	12 to 16	15.7	Pass
Overall Test Results			Pass	



Curve Description			
Upper Abdominal Rib Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
37.2	23.0	0.0	1.2
Curve Description			
Lower Abdominal Rib Deflection			
Plot No.	Type	SAE Class	Units
002	FIL	600	MM
Max	Time	Min	Time
35.8	22.3	0.0	-1.7

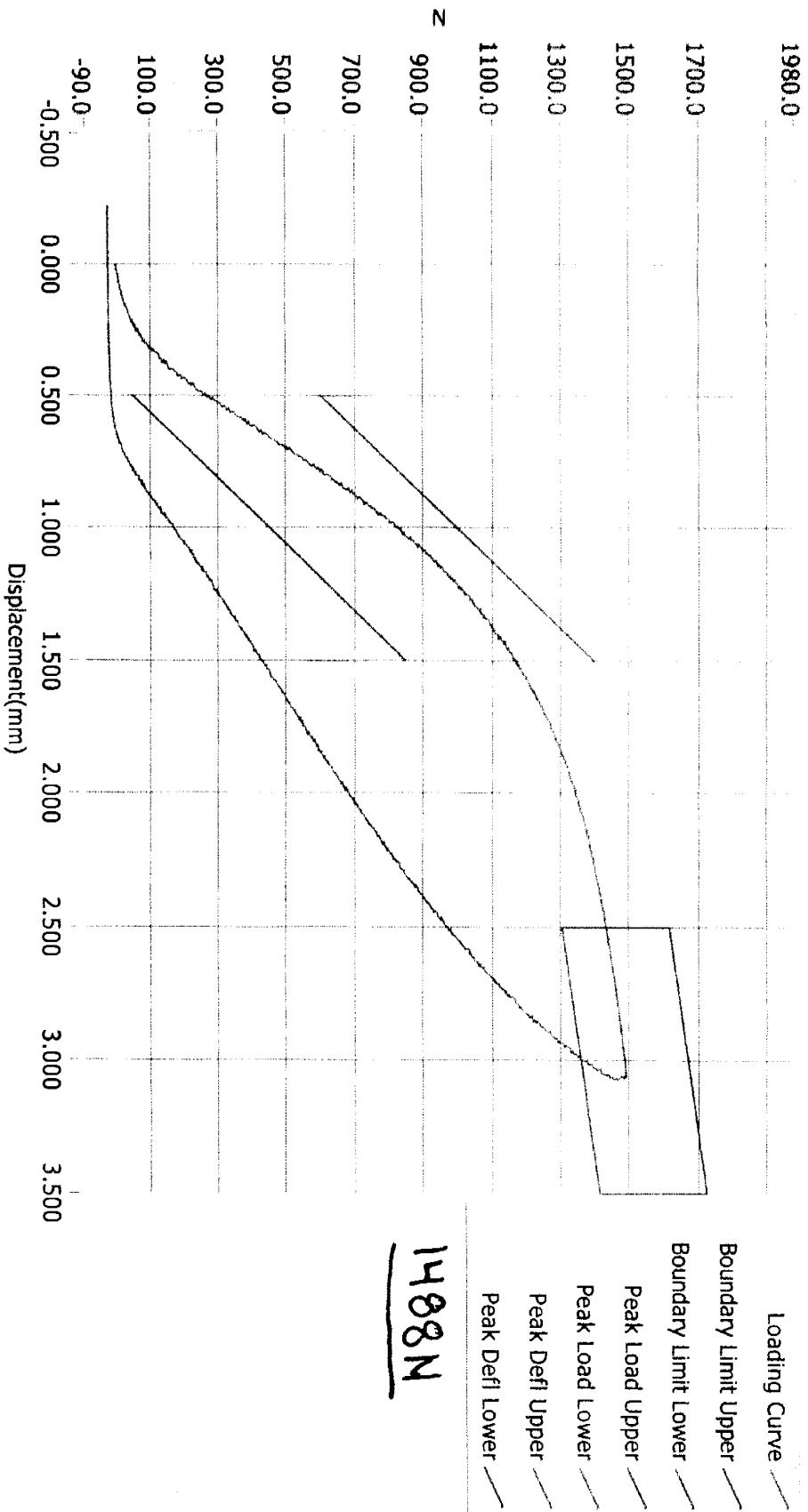


Curve Description			
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
11.8	8.9	-5.6	33.8



Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
15.7	16.8	-0.2	73.5

Resultant Data - SIDIIs Plug Compression



1488N

ATD Calibration Lab

Test ID

Part Serial Number

Test Date

Test Time

63009

1/18/2013

9:26 PM

Cert ID

ATD Serial Number

ATD Type

N/A

SIDIIs

O20145800 PRE TEST

Current Date : 1/18/2013

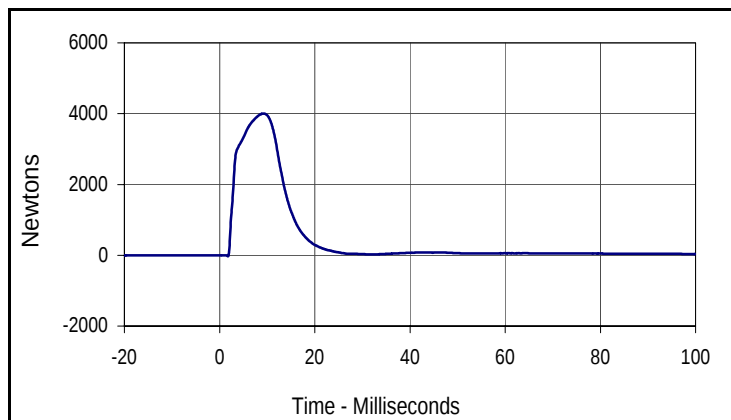
Current Time : 21:26:51

Test Program: SID IIs Pelvis Acetabulum Impact Test
 ATD Serial No.: 299

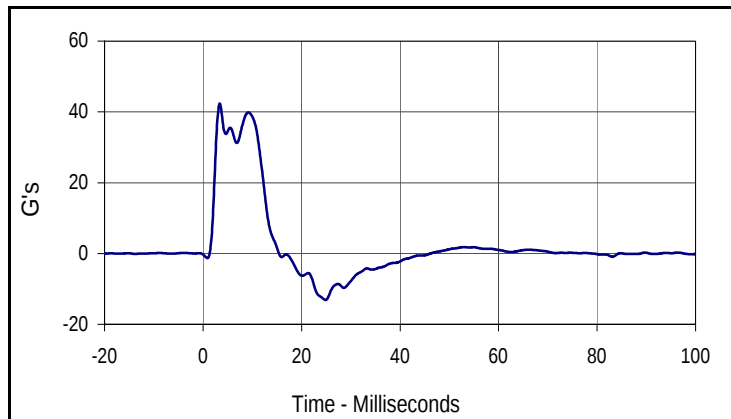
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 Test I.D.: 299ACET065



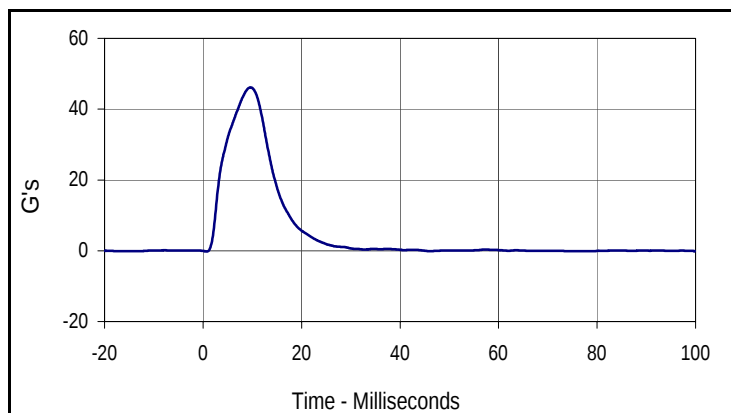
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	645	Pass
Temperature During Soak	Max	20.6 to 22.2	21.5	Pass
	Min		21.3	Pass
Humidity During Soak	Max	10.0 to 70.0	33.6	Pass
	Min		33.4	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.4	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	33.5	Pass
Impactor Velocity	m/s	6.6 to 6.8	6.68	Pass
Peak Acetabulum Force Y	Newtons	3600 to 4300	4003.1	Pass
Peak Pelvis Y Acceleration After 6 msec.	G's	34 to 42	39.8	Pass
Peak Impactor Acceleration	G's	38 to 47	46.1	Pass
Overall Test Results			Pass	



Curve Description			
Pelvis Acetabulum Force			
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
4003.1	9.2	-27.4	1.8



Curve Description			
Pelvis Y Acceleration			
Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
42.4	3.4	-13.1	24.9



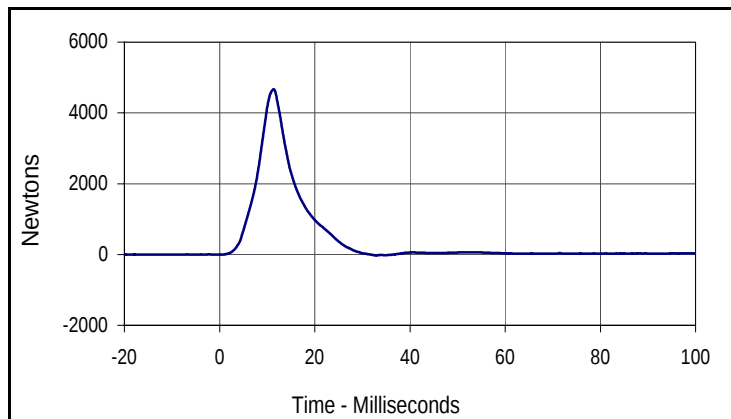
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
46.1	9.6	-0.2	0.8

Test Program: SID IIs Pelvis Iliac Calibration
 ATD Serial No.: 299

Test Date: 11/13/13
 Test I.D.: 299PL065



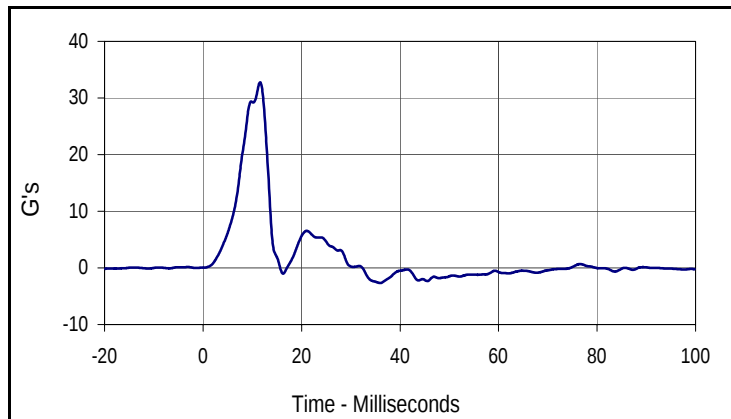
Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥180	710	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.5	Pass
	Min	°C		21.3	Pass
Humidity During Soak	Max	%	10.0 to 70.0	33.6	Pass
	Min	%		33.4	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.4	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	33.5	Pass
Impactor Velocity		m/s	4.2 to 4.4	4.32	Pass
Peak Iliac Force		Newtons	4100 to 5100	4667.6	Pass
Peak Pelvis Y Acceleration		G's	28 to 39	32.8	Pass
Peak Impactor Acceleration		G's	36 to 45	43.0	Pass
Overall Test Results				Pass	



Curve Description

Pelvis Iliac Force

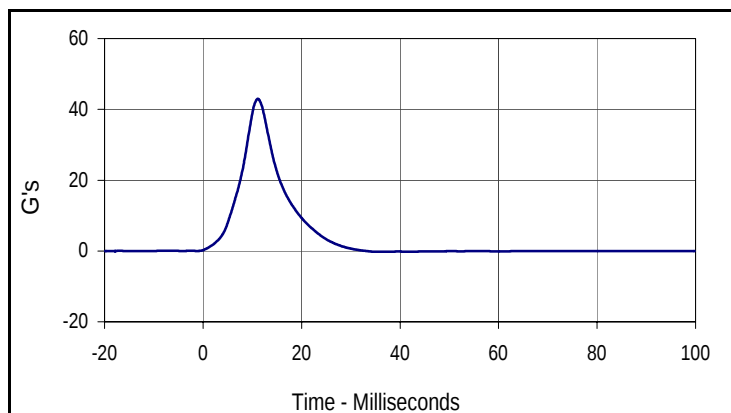
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
4667.6	11.4	-26.2	32.8



Curve Description

Pelvis Y Acceleration

Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
32.8	11.6	-2.7	35.9



Curve Description

Impactor Acceleration

Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
43.0	11.1	-0.2	37.0

APPENDIX C
POST-TEST / ATD CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Test Program: SID IIs External Measurements
 ATD Serial No.: 299

Test Date: 12/3/13
 Test I.D.: N/A



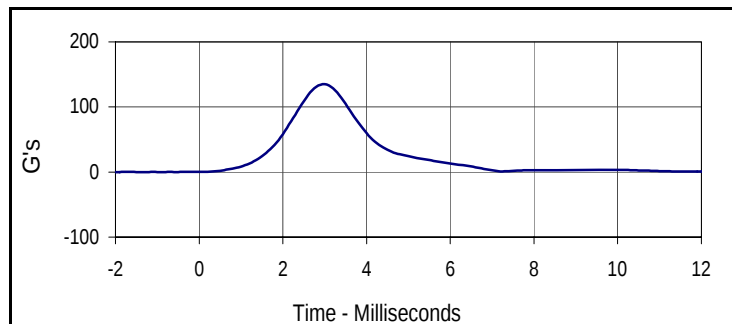
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.5	Pass
Laboratory Relative Humidity		%	10 to 70	25	Pass
A	Sitting Height	mm	772 - 788	780	Pass
B	Shoulder Pivot Height	mm	437 - 453	445	Pass
C	H-Point Height	mm	79 - 89	85	Pass
D	H-Point from Seatback	mm	141 - 151	145	Pass
E	Shoulder Pivot from Backline	mm	97 - 107	102	Pass
F	Thigh Clearance	mm	119 - 135	125	Pass
G	Head Breadth	mm	140 - 148	145	Pass
H	Head Back from Backline	mm	40 - 46	44	Pass
I	Head Depth	mm	178 - 188	184	Pass
J	Head Circumference	mm	541 - 551	545	Pass
K	Buttock to Knee Length	mm	514 - 540	527	Pass
L	Popliteal Height	mm	343 - 369	352	Pass
M	Knee Pivot to Floor Height	mm	392 - 409	401	Pass
N	Buttock Popliteal Length	mm	416 - 442	432	Pass
O	Chest Depth w/o Jacket	mm	195 - 211	202	Pass
P	Foot Length	mm	216 - 232	221	Pass
Q	Hip Breadth with Pelvic Plug	mm	313 - 323	315	Pass
R	Arm Length	mm	249 - 259	252	Pass
S	Knee Joint to Seatback	mm	477 - 493	481	Pass
V	Shoulder Width	mm	341 - 357	352	Pass
W	Foot Width	mm	78 - 94	86	Pass
Y	Chest Circumference with Jacket	mm	851 - 881	872	Pass
Z	Waist Circumference	mm	760 - 791	774	Pass
Overall Test Results					Pass

Test Program: SID IIs Head Drop Test
 ATD Serial No.: 299

Test Date: 12/3/13
 Test I.D.: 299HD066



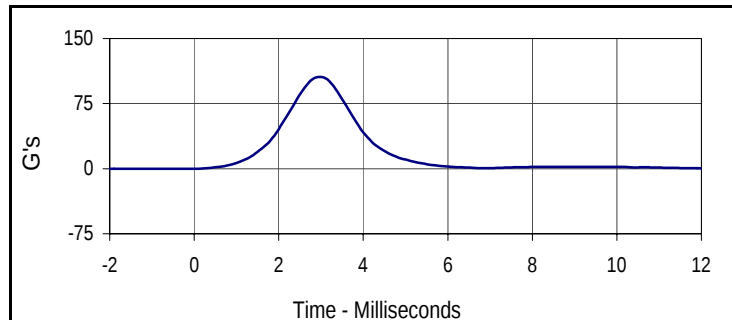
Tested Parameter		Units	Specification	Result	Pass/Fail
Head Assembly Soak Time		Minutes	≥240	280	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	22.0	Pass
	Min	°C		21.0	Pass
Humidity During Soak	Max	%	10.0 to 70.0	26.2	Pass
	Min	%		24.6	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	22.0	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	26.2	Pass
Peak Head Resultant Acceleration		G's	115 to 137	134.8	Pass
Peak Head X Acceleration		G's	<15	2.3	Pass
Is Acceleration Unimodal?		Yes/No	Yes	Yes	Pass
Oscillations After Main Pulse		%	<15	2.3	Pass
Overall Test Results				Pass	



Curve Description			
Head Resultant			
Plot No.	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
134.8	3.0	0.0	-2.0



Curve Description			
Head X			
Plot No.	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
2.3	3.0	0.0	-0.2



Curve Description			
Head Y			
Plot No.	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
105.9	3.0	-0.1	-1.6



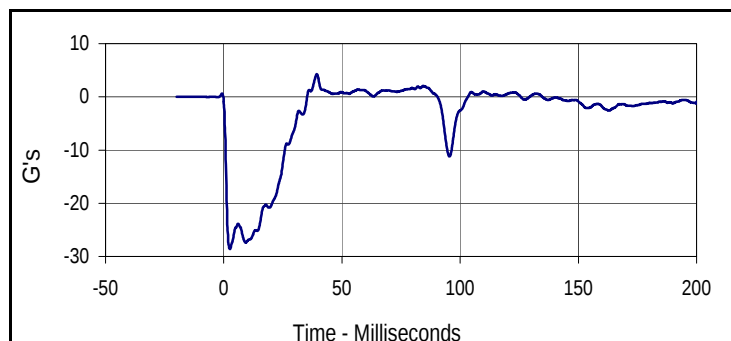
Curve Description			
Head Z			
Plot No.	Type	SAE Class	Units
004	FIL	1000	G's
Max	Time	Min	Time
83.4	3.0	-2.4	10.2

Test Program: SID IIs Neck Flexion Test
 ATD Serial No.: 299

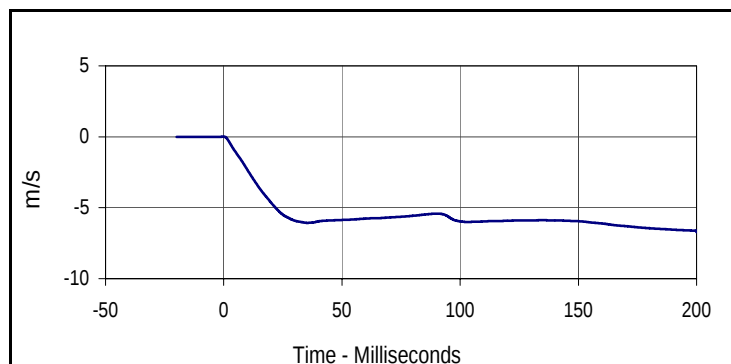
Test Date: 12/3/13
 Test I.D.: 299NB066



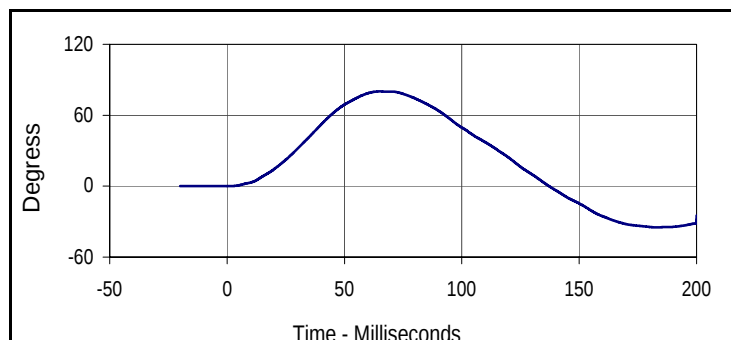
Tested Parameter	Units	Specification	Result	Pass/Fail
Neck Assembly Soak Time	Minutes	≥240	345	Pass
Temperature During Soak	Max	20.6 to 22.2	22.0	Pass
	Min		21.0	Pass
Humidity During Soak	Max	10.0 to 70.0	26.2	Pass
	Min		24.6	Pass
Laboratory Temperature During Test	°C	20.6 to 22.2	21.8	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	24.9	Pass
Pendulum Velocity	m/s	5.51 to 5.63	5.59	Pass
Pendulum Deceleration	10 msec	-2.20 to -2.80	-2.33	Pass
	15 msec	-3.30 to -4.10	-3.60	Pass
	20 msec	-4.40 to -5.40	-4.64	Pass
	25 msec	-5.40 to -6.10	-5.49	Pass
	25-100 msec	-5.50 to -6.20	-6.07	Pass
D-Plane Rotation	Max	71 to 81	80.1	Pass
	Time	50 to 70	64.9	Pass
Peak Occipital Condyle Moment	Nm	-36 to -44	-41.4	Pass
Decaying Moment Time to Cross 0 Nm	msec	102 to 126	117.7	Pass
Overall Test Results			Pass	



Curve Description			
Pendulum Deceleration			
Plot No.	Type	SAE Class	Units
001	FIL	180	G's
Max	Time	Min	Time
4.3	0.0	-28.6	0.0



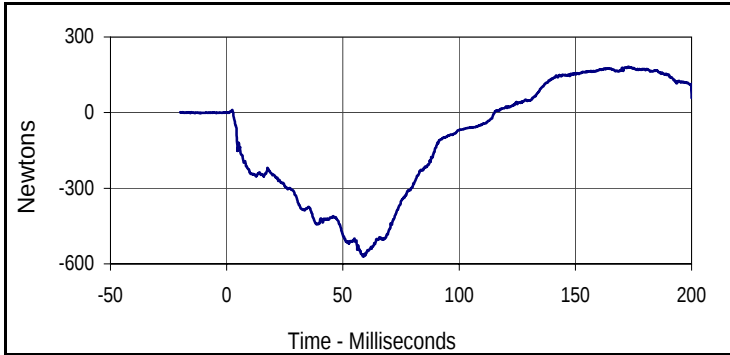
Curve Description			
Pendulum Velocity			
Plot No.	Type	SAE Class	Units
002	FIL	180	m/s
Max	Time	Min	Time
0.0	-0.2	-6.7	200.0



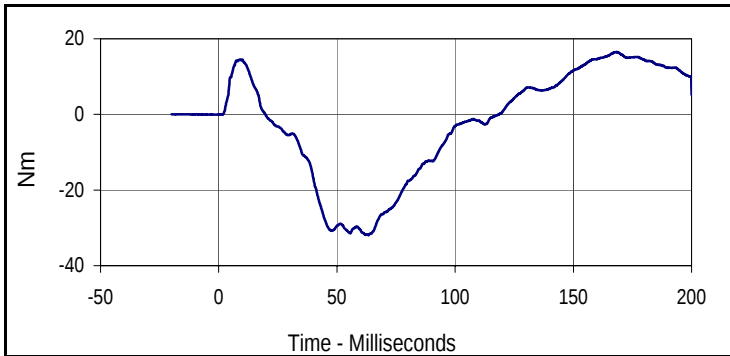
Curve Description			
D-Plane Rotation			
Plot No.	Type	SAE Class	Units
003	FIL	60	Degress
Max	Time	Min	Time
80.1	64.9	-34.8	182.6

Test Program: SID IIs Neck Flexion Test
 ATD Serial No.: 299

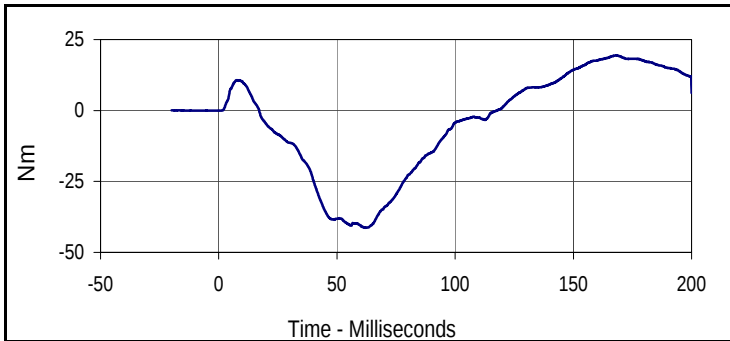
Test Date: 12/3/13
 Test I.D.: 299NB066



Curve Description			
Neck Force Y			
Plot No.	Type	SAE Class	Units
004	FIL	1000	Newtons
Max	Time	Min	Time
182.4	173.0	-570.7	58.6



Curve Description			
Neck Moment X			
Plot No.	Type	SAE Class	Units
005	FIL	600	Nm
Max	Time	Min	Time
16.5	168.4	-31.9	63.4



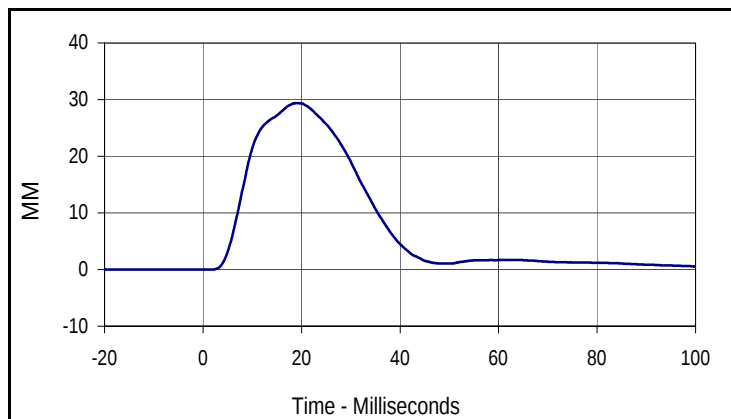
Curve Description			
Moment About Occipital Condyle			
Plot No.	Type	SAE Class	Units
006	FIL	600	Nm
Max	Time	Min	Time
19.4	168.3	-41.4	61.9

Test Program: SID IIs Shoulder Impact Test
 ATD Serial No.: 299

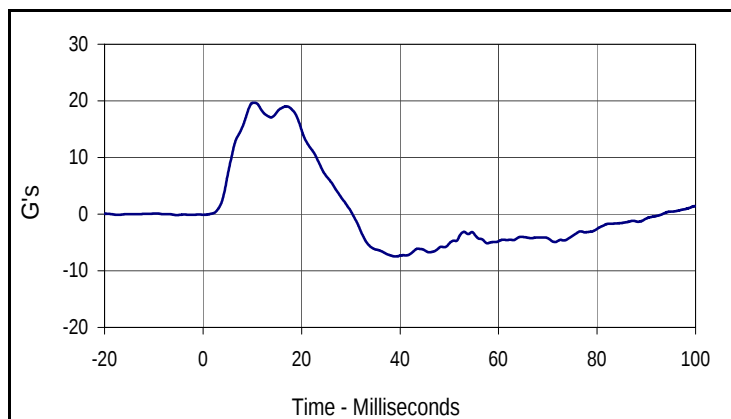
Test Date: 12/3/13
 Test I.D.: 299SH066



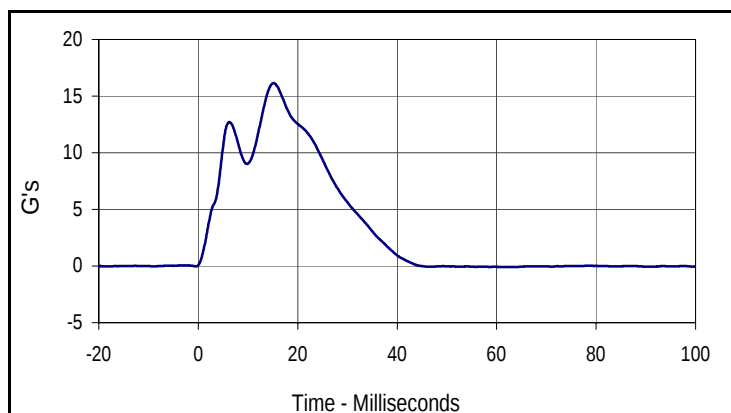
Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥180	420	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	22.0	Pass
	Min	°C		21.0	Pass
Humidity During Soak	Max	%	10.0 to 70.0	26.2	Pass
	Min	%		24.6	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.6	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	24.6	Pass
Impactor Velocity		m/s	4.20 to 4.40	4.29	Pass
Peak Shoulder Deflection		mm	28 to 37	29.4	Pass
Peak Lateral Spine Acceleration Y		G's	17 to 22	19.7	Pass
Peak Impactor Acceleration		G's	13 to 18	16.1	Pass
Overall Test Results				Pass	



Curve Description			
Shoulder Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
29.4	19.0	0.0	-16.6



Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
19.7	10.4	-7.4	38.9



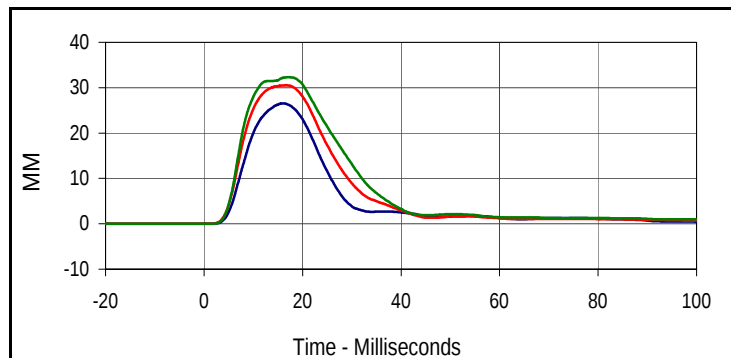
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
16.1	15.1	-0.1	63.7

Test Program: SID IIs Thorax with Arm Impact Test
 ATD Serial No.: 299

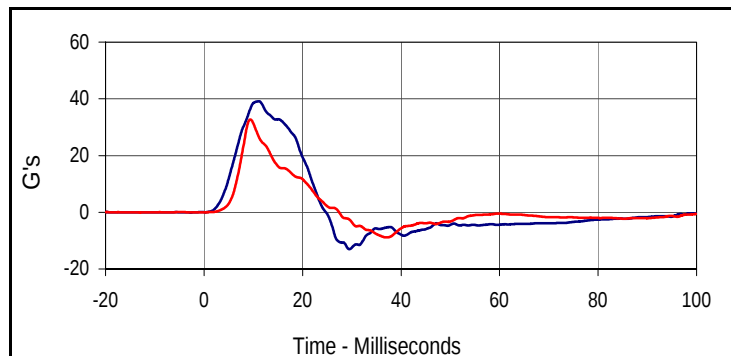
Test Date: 12/3/13
 Test I.D.: 299TWA066



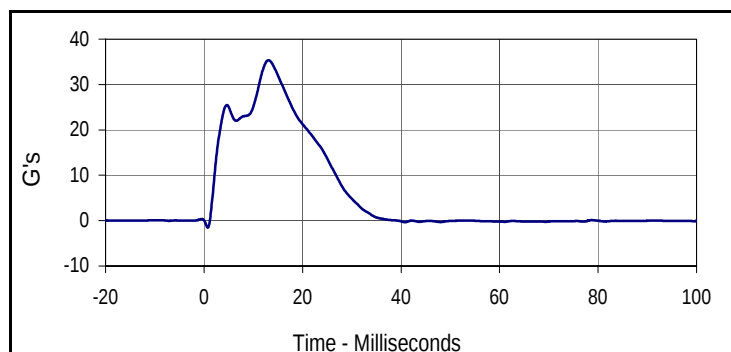
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	470	Pass
Temperature During Soak	Max	20.6 to 22.2	22.0	Pass
	Min		21.0	Pass
Humidity During Soak	Max	10.0 to 70.0	26.2	Pass
	Min		24.6	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.5	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	24.6	Pass
Impactor Velocity	m/s	6.6 to 6.8	6.74	Pass
Peak Shoulder Deflection	mm	31 to 40	35.9	Pass
Peak Upper Thorax Rib Deflection	mm	25 to 32	26.5	Pass
Peak Middle Thorax Rib Deflection	mm	30 to 36	30.5	Pass
Peak Lower Thorax Rib Deflection	mm	32 to 38	32.3	Pass
Peak Upper Spine Y Acceleration	G's	34 to 43	39.1	Pass
Peak Lower Spine Y Acceleration	G's	29 to 37	32.7	Pass
Peak Impactor Acceleration	G's	30 to 36	35.3	Pass
Overall Test Results			Pass	



Curve Description			
Upper Thorax Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
26.5	16.0	0.0	-2.0
Middle Thorax Deflection			
Max	Time	Min	Time
30.5	16.6	0.0	0.8
Lower Thorax Deflection			
Max	Time	Min	Time
32.3	17.0	0.0	1.2



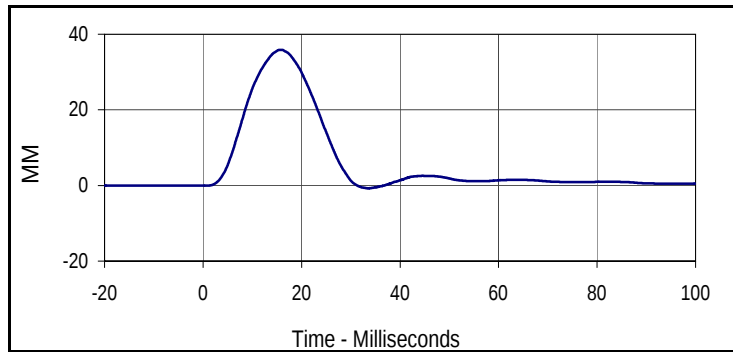
Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
39.1	11.1	-13.0	29.5
Lower Spine Y Acceleration			
Max	Time	Min	Time
32.7	9.4	-8.9	37.0



Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
35.3	13.1	-1.5	0.8

Test Program: SID IIs Thorax with Arm Impact Test
 ATD Serial No.: 299

Test Date: 12/3/13
 Test I.D.: 299TWA066



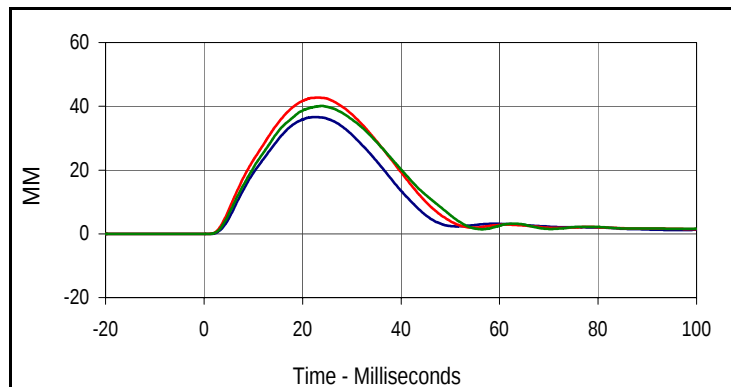
Curve Description			
Shoulder Deflection			
Plot No.	Type	SAE Class	Units
007	FIL	600	MM
Max	Time	Min	Time
35.9	15.8	-0.8	33.5

Test Program: SID IIs Thorax without Arm Impact Test
 ATD Serial No.: 299

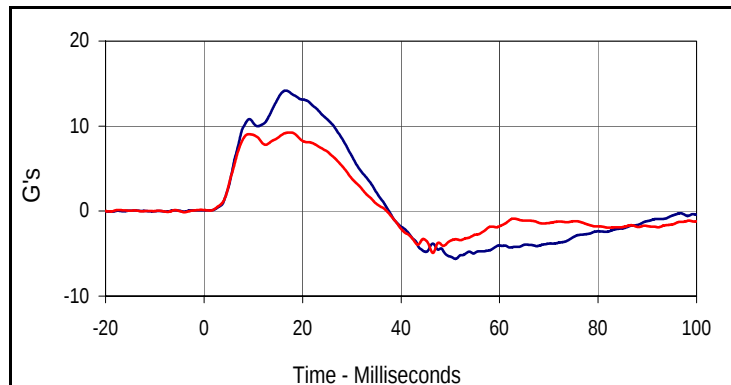
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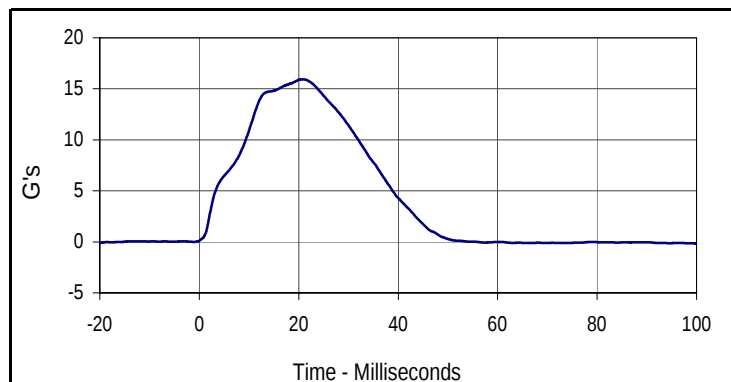
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	525	Pass
Temperature During Soak	Max	18.9 to 25.6	22.0	Pass
	Min		21.0	Pass
Humidity During Soak	Max	10.0 to 70.0	26.2	Pass
	Min		24.6	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.3	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	24.7	Pass
Impactor Velocity	m/s	4.2 to 4.4	4.29	Pass
Peak Upper Thorax Rib Deflection	mm	32 to 40	36.6	Pass
Peak Middle Thorax Rib Deflection	mm	39 to 45	42.7	Pass
Peak Lower Thorax Rib Deflection	mm	35 to 43	40.1	Pass
Peak Upper Spine Y Acceleration	G's	13 to 17	14.2	Pass
Peak Lower Spine Y Acceleration	G's	7 to 11	9.2	Pass
Peak Impactor Acceleration	G's	14 to 18	15.9	Pass
Overall Test Results			Pass	



Curve Description			
Upper Thorax Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
36.6	22.5	0.0	-20.0
Middle Thorax Deflection			
Max	Time	Min	Time
42.7	23.1	0.0	-18.9
Lower Thorax Deflection			
Max	Time	Min	Time
40.1	24.0	0.0	-18.8



Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
14.2	16.6	-5.6	51.1
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
9.2	17.5	-4.9	46.5



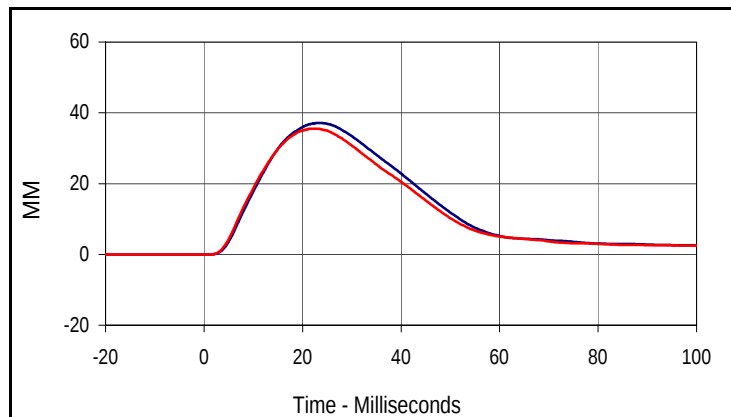
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
15.9	20.7	-0.2	99.9

Test Program: SID IIs Abdomen Impact Test
 ATD Serial No.: 299

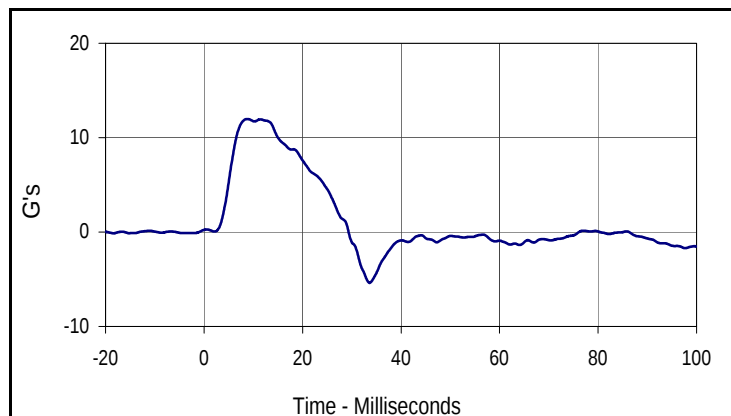
Test Date: 12/3/13
 Test I.D.: 299ABD066



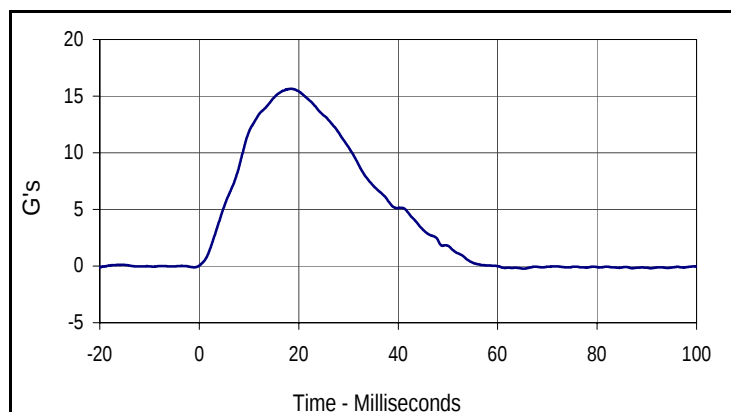
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	585	Pass
Temperature During Soak	Max °C	20.6 to 22.2	22.0	Pass
	Min °C		21.0	Pass
Humidity During Soak	Max %	10.0 to 70.0	26.2	Pass
	Min %		24.6	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	24.8	Pass
Impactor Velocity	m/s	4.2 to 4.4	4.25	Pass
Peak Upper Abdominal Rib Deflection	mm	36 to 47	37.1	Pass
Peak Lower Abdominal Rib Deflection	mm	33 to 44	35.5	Pass
Peak Lower Spine Y Acceleration	G's	9 to 14	12.0	Pass
Peak Impactor Acceleration	G's	12 to 16	15.6	Pass
Overall Test Results			Pass	



Curve Description			
Upper Abdominal Rib Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
37.1	23.2	0.0	0.8
Curve Description			
Lower Abdominal Rib Deflection			
Plot No.	Type	SAE Class	Units
002	FIL	600	MM
Max	Time	Min	Time
35.5	22.1	0.0	-6.8

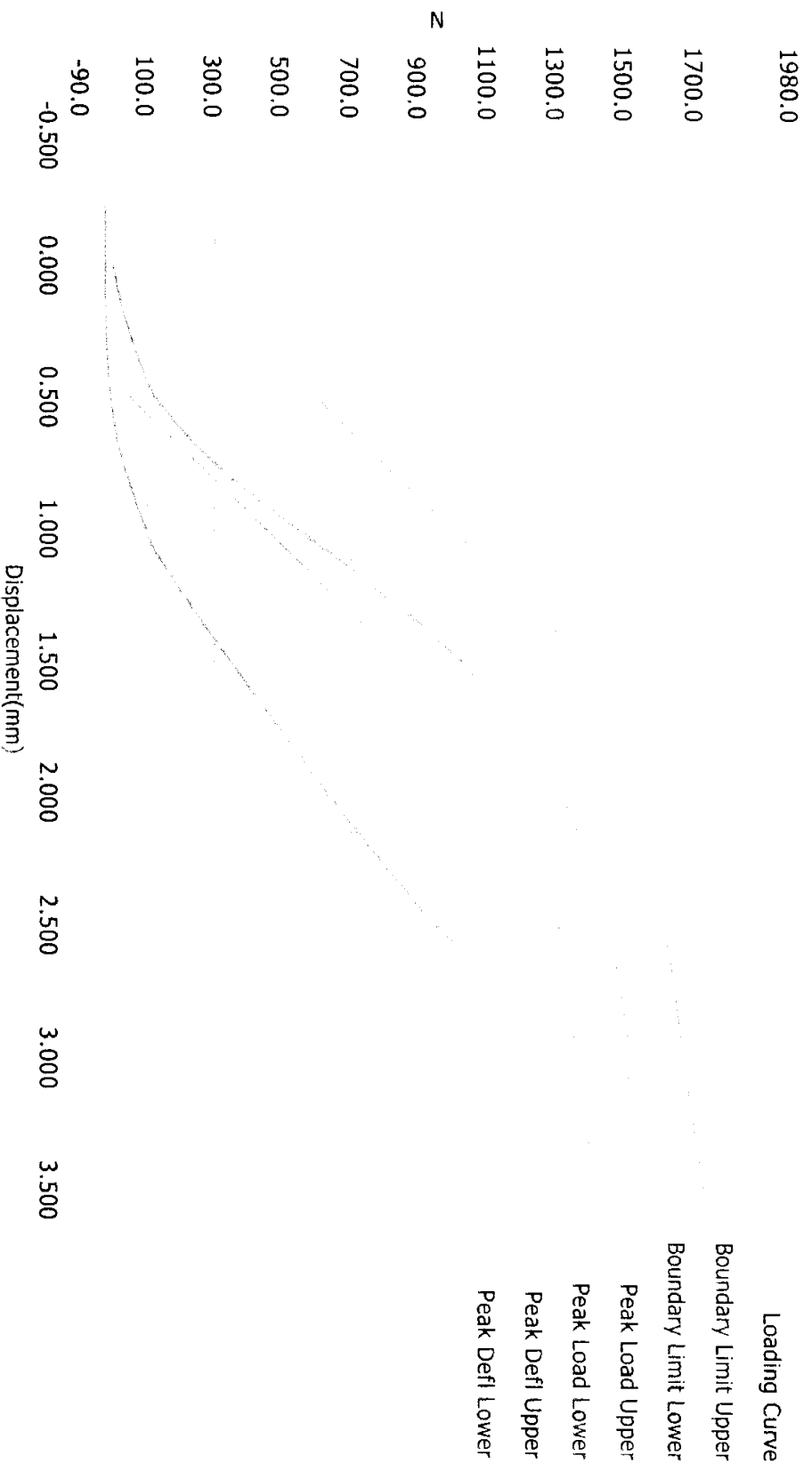


Curve Description			
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
12.0	8.7	-5.4	33.6



Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
15.6	18.4	-0.2	65.3

Resultant Data - SIDIIs Plug Compression



ATD Calibration Lab

<u>Test ID</u>	<u>Part Serial Number</u>	<u>Test Date</u>	<u>Test Time</u>
46675		9/28/2011	10:13 PM
<u>Cert ID</u>	<u>ATD Serial Number</u>	<u>ATD Type</u>	
N/A		SIDIIs	

O20145800 POST TEST

Current Date : 9/28/2011

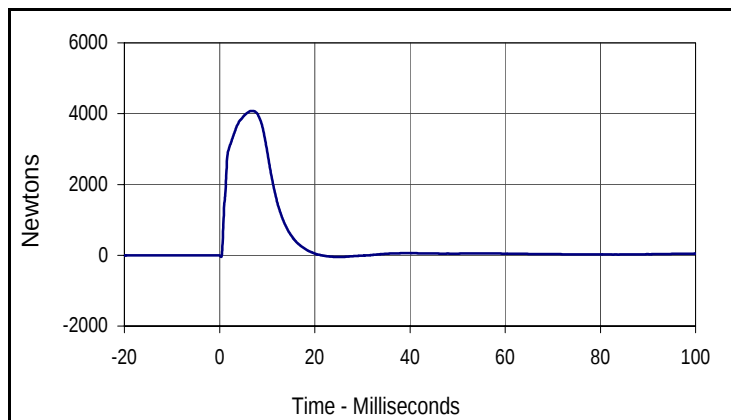
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Test Program: SID IIs Pelvis Acetabulum Impact Test
 ATD Serial No.: 299

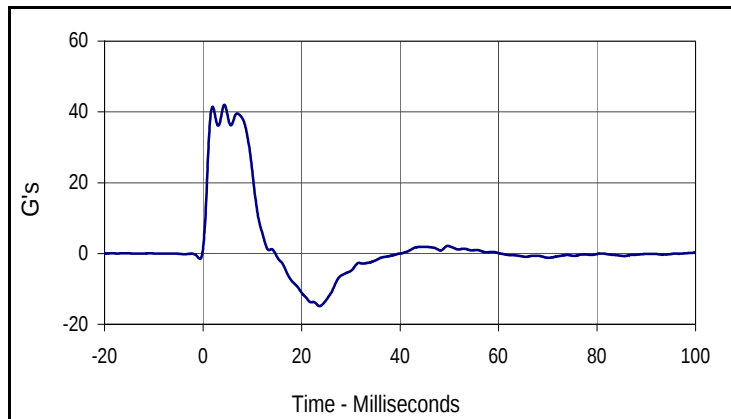
Test Date: 12/3/13
 Test I.D.: 299ACET066



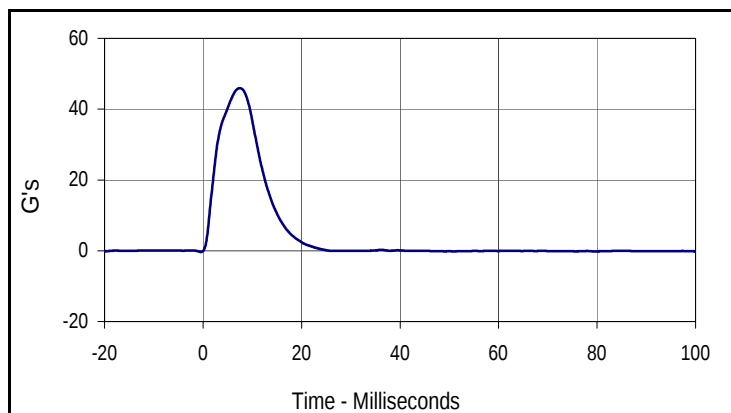
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	660	Pass
Temperature During Soak	Max	20.6 to 22.2	22.0	Pass
	Min		21.0	Pass
Humidity During Soak	Max	10.0 to 70.0	26.2	Pass
	Min		24.6	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.1	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	24.9	Pass
Impactor Velocity	m/s	6.6 to 6.8	6.72	Pass
Peak Acetabulum Force Y	Newtons	3600 to 4300	4076.6	Pass
Peak Pelvis Y Acceleration After 6 msec.	G's	34 to 42	39.6	Pass
Peak Impactor Acceleration	G's	38 to 47	45.9	Pass
Overall Test Results			Pass	



Curve Description			
Pelvis Acetabulum Force			
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
4076.6	7.0	-49.3	25.2



Curve Description			
Pelvis Y Acceleration			
Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
42.0	4.3	-14.9	23.7



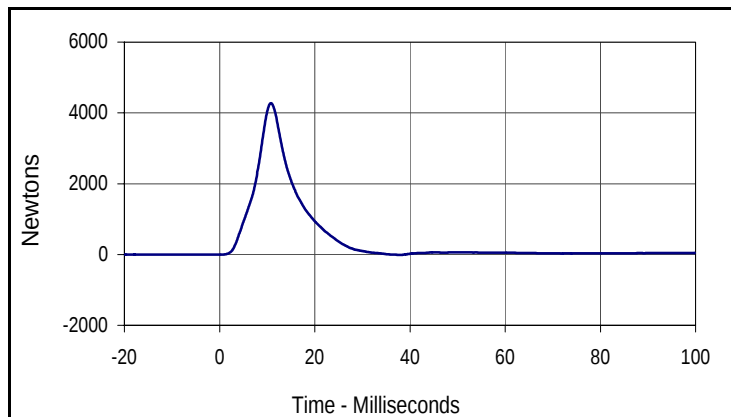
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
45.9	7.5	-0.3	-0.4

Test Program: SID IIs Pelvis Iliac Calibration
 ATD Serial No.: 299

Test Date: 12/3/13
 Test I.D.: 299PL066



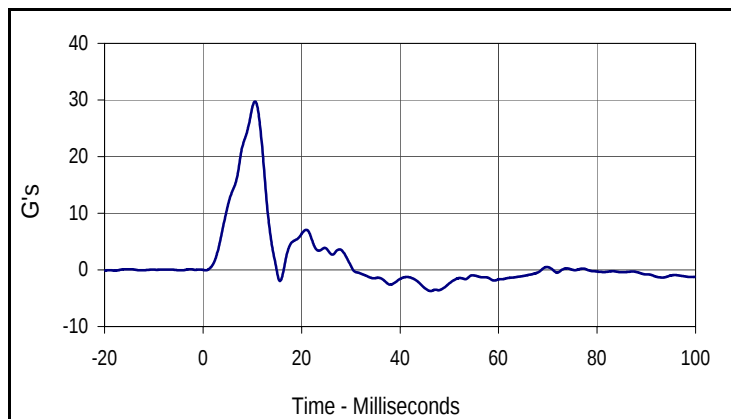
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	725	Pass
Temperature During Soak	Max	20.6 to 22.2	22.0	Pass
	Min		21.0	Pass
Humidity During Soak	Max	10.0 to 70.0	26.2	Pass
	Min		24.6	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.0	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	24.9	Pass
Impactor Velocity	m/s	4.2 to 4.4	4.27	Pass
Peak Iliac Force	Newtons	4100 to 5100	4273.8	Pass
Peak Pelvis Y Acceleration	G's	28 to 39	29.7	Pass
Peak Impactor Acceleration	G's	36 to 45	39.5	Pass
Overall Test Results			Pass	



Curve Description

Pelvis Iliac Force

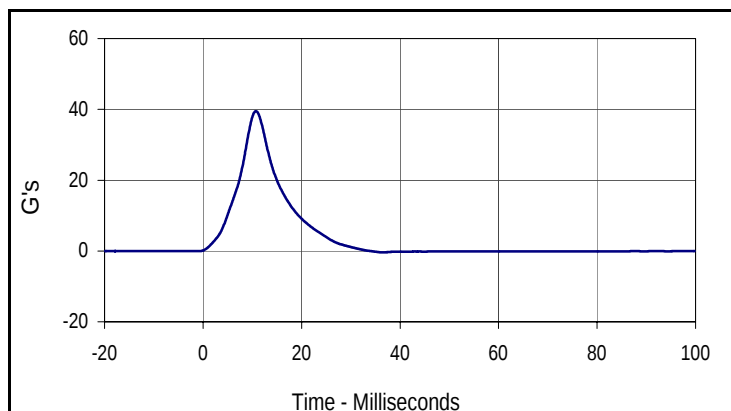
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
4273.8	10.8	-12.8	37.7



Curve Description

Pelvis Y Acceleration

Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
29.7	10.6	-3.7	46.2



Curve Description

Impactor Acceleration

Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
39.5	10.7	-0.4	36.4

APPENDIX D
TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION DATA

TABLE 1 – Dummy Instrumentation (SID-IIs)

				SID-IIs S/N 299		
				Serial Number	Manufacturer	Calibration
Head Accelerometers	Primary		X	P51926	Endevco	10/14/13
			Y	P51929	Endevco	10/14/13
			Z	P51934	Endevco	10/14/13
	Redundant		X	P68604	Endevco	10/14/13
			Y	P51931	Endevco	10/14/13
			Z	P51939	Endevco	10/14/13
Displacement Potentiometers	Shoulder		Y	1074	FTSS	10/15/13
	Thoracic Rib	Upper	Y	1143	FTSS	10/15/13
		Middle	Y	1160	FTSS	10/15/13
		Lower	Y	1213	FTSS	10/15/13
	Abdominal Rib	Upper	Y	1218	FTSS	10/15/13
		Lower	Y	1234	FTSS	10/15/13
Lower Spine Accelerometers (T12)			X	P63999	Endevco	10/15/13
			Y	P58872	Endevco	10/15/13
			Z	P58795	Endevco	10/15/13
Acetabulum Load Cell			Y	272	Denton	4/19/13
Iliac Wing Load Cell			Y	284	Denton	4/19/13
Pelvis Plug (Struck Side)				47618	FTSS	10/27/11
Pelvis Plug (Non-Struck Side)				63446	FTSS	1/28/13

TABLE 2 – Vehicle Instrumentation

Vehicle Instrumentation		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	Ketx5x	ICSensor	6/28/13
Vehicle Center of Gravity	Y	Ketx5y	ICSensor	6/28/13
Vehicle Center of Gravity	Z	Ketx5z	ICSensor	6/28/13
Left Floor Sill	Y	13745	Endevco	10/22/13
A-Pillar Sill	Y	13746	Endevco	10/22/13
A-Pillar Low	Y	13729	Endevco	10/22/13
A-Pillar Mid	Y	13486	Endevco	6/26/13
B-Pillar Sill	Y	13337	Endevco	10/29/13
B-Pillar Low	Y	13740	Endevco	10/22/13
B-Pillar Mid	Y	13734	Endevco	10/22/13
Driver Seat	Y	13375	Endevco	6/25/13
Engine Top	X	13316	Endevco	6/25/13
Engine Top	Y	13331	Endevco	6/26/13
Firewall	Y	13730	Endevco	10/22/13
Right Roof	Y	13700	Endevco	10/22/13
Right Floor Sill	Y	13727	Endevco	10/22/13
Rear Floorpan	X	13717	Endevco	6/17/13
Rear Floorpan	Y	12906	Endevco	10/2/13

TABLE 3 – Pole Instrumentation

	Serial Number	Manufacturer	Calibration Date
Load Cell 1	131822A	Interface	10/21/13
Load Cell 2	132304A	Interface	10/21/13
Load Cell 3	19477	Interface	10/21/13
Load Cell 4	19325	Interface	10/22/13
Load Cell 5	131827A	Interface	10/22/13
Load Cell 6	132302A	Interface	10/22/13
Load Cell 7	19267	Interface	10/22/13
Load Cell 8	19321	Interface	10/22/13