

**REPORT NUMBER: SPNCAP-KAR-15-035**

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

**FORD MOTOR CO.  
2015 FORD EDGE SEL FWD 5-DOOR MPV**

**NHTSA No: M20150207**

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



**MAY 6, 2015**

**FINAL REPORT**

**PREPARED FOR:  
U.S. DEPARTMENT OF TRANSPORTATION  
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
OFFICE OF CRASHWORTHINESS STANDARDS  
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Prepared By: \_\_\_\_\_  
Mr. Robert S. Ramos, Project Engineer  
KARCO Engineering, LLC.

Reviewed By: \_\_\_\_\_  
Mr. Michael L. Dunlap, Director of Operations  
KARCO Engineering, LLC.

Approved By: \_\_\_\_\_  
Mr. Frank D. Richardson, Program Manager  
KARCO Engineering, LLC.

Approval Date: \_\_\_\_\_ May 6, 2015

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: \_\_\_\_\_

## TECHNICAL REPORT DOCUMENTATION PAGE

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<b>4. Title and Subtitle</b> Final Report of New Car Assessment Program Side Impact Pole Testing of a 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207		<b>5. Report Date</b> May 6, 2015																												
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		<b>15. Supplementary Notes</b>																												
<b>16. Abstract</b> A 32.2 km/h (20 mph) 75° oblique impact Side NCAP Test was conducted on the subject 2015 Ford Edge SEL FWD 5-door MPV 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 April 22, 2015.  The impact velocity was 31.88 km/h and the outside ambient temperature at the struck (driver's) side of the vehicle was 18.3° C. The target vehicle's maximum post-test static crush was 455 mm located at level 2. The test vehicle's occupant performance data is as follows:																														
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="width: 35%;">Measurement Description</th> <th colspan="3" style="text-align: center;">Driver ATD (SID-IIs)</th> </tr> <tr> <th style="width: 15%;">Units</th> <th style="width: 15%;">Threshold</th> <th style="width: 35%;">Result</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC<sub>36</sub>)</td> <td></td> <td style="text-align: center;">1000</td> <td style="text-align: center;">297.2</td> </tr> <tr> <td>Resultant Lower Spine Acceleration</td> <td style="text-align: center;">g</td> <td style="text-align: center;">82</td> <td style="text-align: center;">53</td> </tr> <tr> <td>Total Pelvic Force (Sum of Acetabular and Iliac Forces)</td> <td style="text-align: center;">N</td> <td style="text-align: center;">5525</td> <td style="text-align: center;">2601</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td style="text-align: center;">mm</td> <td style="text-align: center;">38</td> <td style="text-align: center;">25</td> </tr> <tr> <td>Maximum Abdominal Rib Deflection</td> <td style="text-align: center;">mm</td> <td style="text-align: center;">45</td> <td style="text-align: center;">21</td> </tr> </tbody> </table>				Measurement Description	Driver ATD (SID-IIs)			Units	Threshold	Result	Head Injury Criteria (HIC <sub>36</sub> )		1000	297.2	Resultant Lower Spine Acceleration	g	82	53	Total Pelvic Force (Sum of Acetabular and Iliac Forces)	N	5525	2601	Maximum Thoracic Rib Deflection	mm	38	25	Maximum Abdominal Rib Deflection	mm	45	21
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The 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.																														
<b>17. Key Words</b> New Car Assessment Program (NCAP) Side Impact Pole Part 572V SID-IIs		<b>18. Distribution Statement</b> 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 MY2015 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 2015 Ford Edge SEL FWD 5-door MPV. 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 2015 Ford Edge SEL FWD 5-door MPV. The subject vehicle was towed into the rigid pole at an angle of 75.4° and a velocity of 31.88 km/h. The test was conducted by KARCO Engineering, LLC. in Adelanto, California on April 22, 2015. 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 <sub>36</sub> )		1000	297.2
Lower Spine (T12) Resultant Acceleration	g	82	53
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	2601
Maximum Thoracic Rib Deflection	mm	38*	25
Maximum Abdominal Rib Deflection	mm	45*	21

\*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	Yes	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

The doors on the struck side of the vehicle remained closed and latched. There was no separation at the hinges or latches. The doors on the non-struck side remained closed and latched. There was no ATD injury value that exceeded its limit.

### SECTION 3

#### OCCUPANT AND VEHICLE INFORMATION/DATA SHEETS

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15

#### 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 <sup>2</sup>	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: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15

**TEST VEHICLE INFORMATION AND OPTIONS**

NHTSA Number	M20150207
Model Year	2015
Make	Ford
Model	Edge SEL FWD
Body Style	5-Door MPV
VIN	2FMTK3J80FBB05248
Body Color	Ingot Silver Metallic
Odometer Reading (km / mi)	449.5/279.3
Engine Displacement (L)	3.5
Type / No. of Cylinders	V6
Engine Placement	Transverse
Transmission Type	Automatic
Transmission Speeds	6
Overdrive	Yes
Final Drive	Front
Roof Rack	No
Sunroof / T-Top	No
Running Boards	No
Tilt Steering Wheel	Yes
Power Seats	Yes
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	N/A
Driver Front Airbag	Yes
Driver Curtain Airbag	Yes
Driver Head/Torso Airbag	No
Driver Torso Airbag	No
Driver Torso/Pelvis Airbag	Yes
Driver Pelvis Airbag	No
Driver Knee Airbag	Yes
Rear Pass. Curtain Airbag	Yes
Rear Pass. Head/Torso Airbag	No
Rear Pass. Torso Airbag	No
Rear Pass. Torso/Pelvis Airbag	No
Rear Pass. Pelvis Airbag	No
Driver Seat Belt Pretensioner	Yes
Rear Pass. Seat Belt Pretensioner	No
Driver Load Limiter	Yes
Rear Pass. Load Limiter	No
Other Safety Restraint	N/A

Does Owner's Manual provide instructions to turn off automatic door locks? No

**DATA FROM CERTIFICATION LABEL**

Manufactured By	Ford Motor Co.
Date of Manufacture	Feb-15
Vehicle Type	MPV

GVWR (kg)	2422
GAWR Front (kg)	1293
GAWR Rear (kg)	1154

**VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION**

Measured Parameter	Front	Rear	Third	Total	
Designated Seating Capacity	2	3		5	
Capacity Weight (VCW) (kg)				430.0	A
DSC x 68.04 (kg)				340.2	B
Cargo Weight (RCLW) (kg)				89.8	A-B

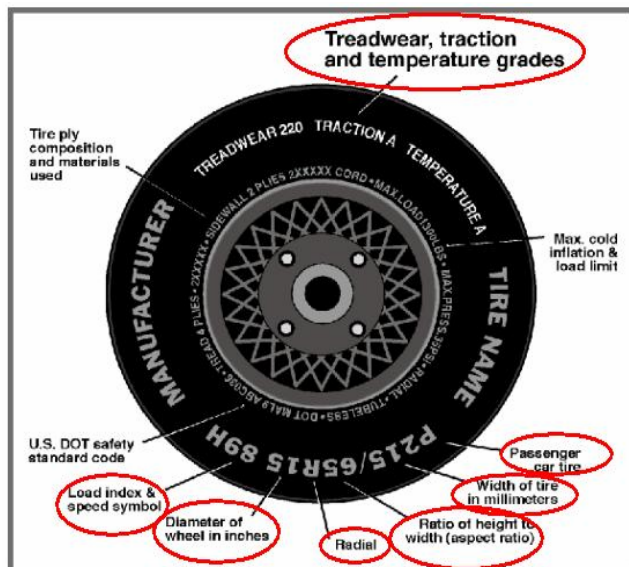
**VEHICLE SEAT TYPE**

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: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15



Measured Parameter	Front	Rear
Max. Tire Pressure (kpa)	300	300
Cold Pressure (kPa)	240	240
Recommended Tire Size	P245/60R18	P245/60R18
Tire Size on Vehicle	P245/60R18	P245/60R18
Tire Manufacturer	Michelin	Michelin
Tire Model	Latitude	Latiude
Treadware	440	440
Traction Grade	A	A
Temperature Grade	A	A
Tire Plies Sidewall	2 Polyester	2 Polyester
Tire Plies Body	2 Polyester, 1 Polyamide, 2 Steel	2 Polyester, 1 Polyamide, 2 Steel
Load Index/Speed Symbol	104 H	104 H
Tire Material	Polyester, Polyamide, Steel	Polyester, Polyamide, Steel
DOT Safety Code Left	B94A 00AX 0515	B94A 00AX 0515
DOT Safety Code Right	B94A 00AX 0515	B94A 00AX 0515

**DATA SHEET NO. 1 ... (CONTINUED)**

**GENERAL TEST AND VEHICLE PARAMETER DATA**

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15

**TIRE PRESSURES**

	Units	LF	RF	LR	RR
As Delivered	kPa	285	280	275	275
Tire Placard	kPa	240	240	240	240
Owner's Manual	kPa	240	240	240	240
As Tested	kPa	240	240	240	240

**TEST VEHICLE AXLE WEIGHTS**

	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front	Rear	Total	Front	Rear	Total	Front	Rear	Total
Left	kg	566.5	386.0		580.5	437.5		579.0	449.5	
Right	kg	537.0	339.0		547.0	394.0		540.0	397.5	
Ratio	%	60.4%	39.6%	100.0%	57.6%	42.4%	100.0%	56.9%	43.1%	100.0%
Total	kg	1103.5	725.0	1828.5	1127.5	831.5	1959.0	1119.0	847.0	1966.0

**TARGET TEST WEIGHT CALCULATION**

Measured Parameter	Units	Value	
Total Delivered Weight (UVW)	kg	1828.5	A
Actual Weight of 1 P572 O ATD Used	kg	49.0	B
Rated Cargo/Luggage Wt (RCLW)	kg	89.8	C
Calculated Vehicle Target Wt (TVTW)	kg	1967.3	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)*	°	0.0	0.3	0.4	Yes
Front Passenger Sill Angle (front-to-rear)*	°	0.0	0.3	0.4	Yes
Front Bumper-Line Angle (left-to-right)**	°	-0.2	-0.2	-0.2	Yes
Rear Bumper-Line Angle (left-to-right)**	°	0.4	0.4	0.4	Yes
Vehicle CG (Aft of Front Axle)	mm	1130	1210	1228	
Vehicle CG (Left (+)/Right (-) from Longitudinal Centerline)	mm	34	32	38	

\*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: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15

**WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW**

Component Description	Weight (kg)
Spare Tire	19.5
Tools	3.0
Rear Trunk Trim	6.0
Ballast / Equipment Added	28.5

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: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15

**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	9.1	0.0	4.5
Front Passenger Seat	Fixed	Fixed	Fixed
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	4.5	713	Max	726	729	734
			Mid	702	707	713
			Min	678	685	691
Front Passenger Seat	Fixed	724	Max	720	722	724
			Mid	720	722	724
			Min	720	722	724
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: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15

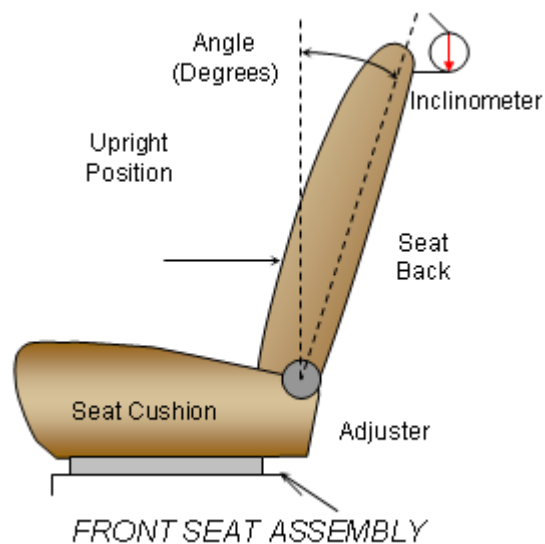
**SEAT FORE/AFT POSITION**

Seat	Total Fore/Aft Travel		Test Position From Forwardmost Position	
	mm	Detents*	mm	Detent*
Driver Seat	255		0	
Front Passenger Seat	241	36	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

\*Detent zero (0) is the forward most detent

**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 5<sup>th</sup> 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 head rest post.



Seat	Total Seat Back Angle Range		Test Position from Most Upright	
	Degrees	Detents*	Degree	Detent*
Driver Seat w/Seated Dummy	57.8		3.6	
Front Passenger Seat	50.5	28	3.6	
Front Center Seat				
Struck Side Rear Seat w/Seated Dummy	18.0	10	4.5	0
Non-Struck Side Rear Seat	18.4	10	4.2	0
Rear Center Seat	Fixed to LR	Fixed to LR	Fixed to LR	Fixed to LR

\*Detent zero (0) is the forward most detent

**DATA SHEET NO. 2 ... (CONTINUED)**

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

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15

**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	H

**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	3 Vertical, 12 Horizontal	Full Down, Full Forward

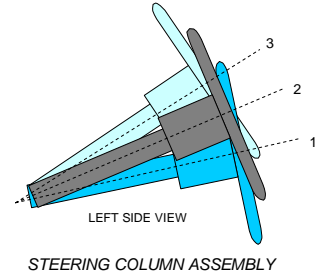
**DATA SHEET NO. 2 ... (CONTINUED)**

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

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15

**STEERING COLUMN ADJUSTMENT**

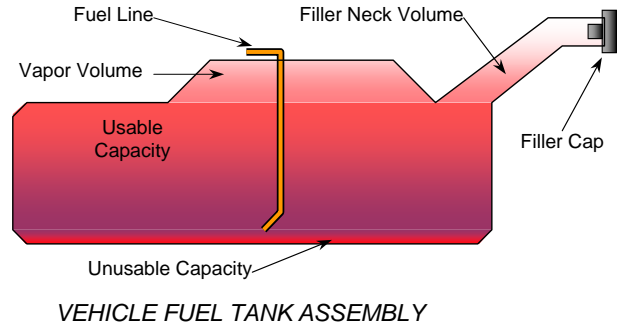
Steering wheel and column adjustments are made so that the steering wheel hub is at the center of the geometric locus it describes when it moves through its full range of motion.



	Degrees	Fore-Aft Position (mm)
Lowermost - Position 1	24.9	93
Geometric Center - Position 2	27.5	115
Uppermost - Position 3	30.2	137
Telescoping Steering Wheel Travel		44
Test Position	27.5	115

**FUEL PUMP**

The vehicle is equipped with an electric fuel pump. The fuel pump cycles for a brief period when key is moved to "ON" position, but does not pump fuel unless the engine is running.



**FUEL TANK CAPACITY**

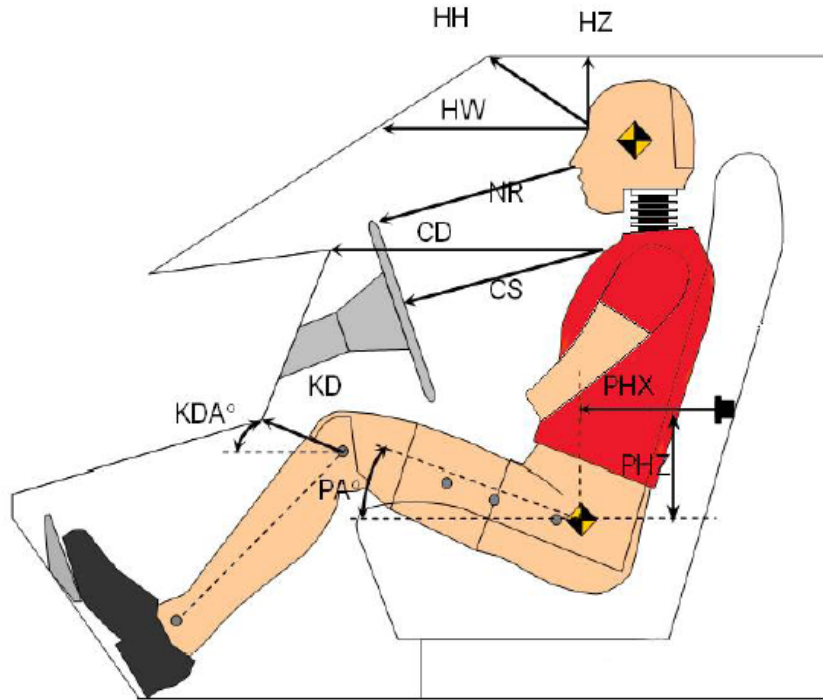
Description	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	69.65
Usable Capacity of "Optional Tank" (see Form No. 1)	
Usable Capacity of "Standard Tank" (see Owner's Manual)	
Usable Capacity of "Optional Tank" (see Owner's Manual)	
93% of Usable Capacity	64.76
Actual amount of Solvent Used in Test	64.76
1/3 of Usable Capacity	21.59

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

### DATA SHEET NO. 3

#### DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV      NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test      Test Date: 04/22/15

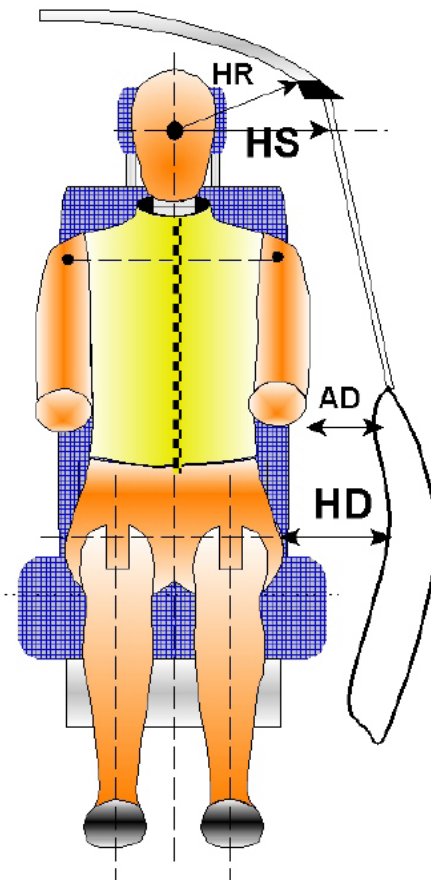


Driver Code	Description	Driver	
		Length (mm)	Angle (°)
HH	Head to Header	320	
HW	Head to Windshield	774	
HZ	Head to Roof	220	
NR	Nose to Rim	255	
CD	Chest to Dash	425	
CS	Chest to Steering Wheel	185	
KD(L)/KDA(L)°	Left Knee to Dash	106	28.4
KD(R)/KDA(R)°	Right Knee to Dash	106	23.5
PAX°	Pelvic Tilt Angle (x-axis)		20.8
PAY°	Pelvic Tilt Angle (y-axis)		0.1
PHX	Hip Point to Striker (x-axis)	367	
PHZ	Hip Point to Striker (z-axis)	135	

## DATA SHEET NO. 4

### DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15

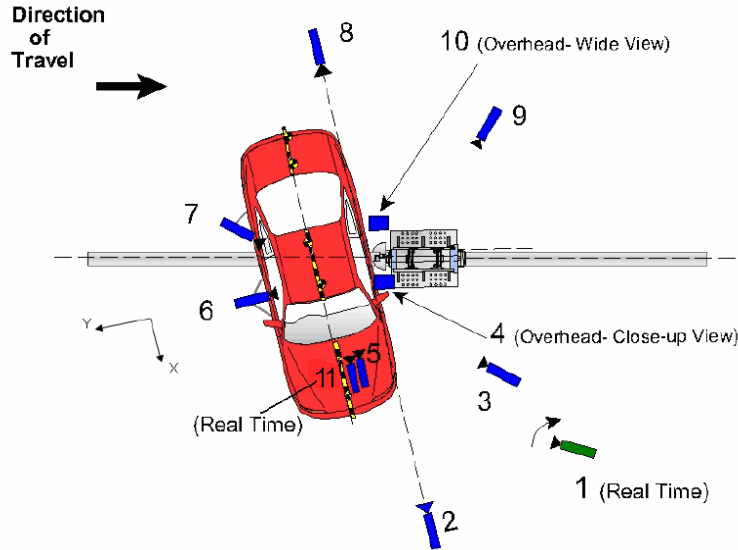


Code	Measurement Description	Units	Driver
HR	Head to Side Header	mm	282
HS	Head to Side Window	mm	425
AD	Arm to Door	mm	202
HD	Hip Point to Door	mm	168

**DATA SHEET NO. 5**

**CAMERA AND INSTRUMENTATION DATA**

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15



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	1.68	0.66	-1.59	24	1000
6	On-Board - Dummy Side View	-0.07	1.95	-1.30	12	1000
7	On-Board - Dummy Rear Oblique View	-1.09	1.89	-1.35	14	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	1.64	0.71	-1.62		30

\*All measurements accurate to ±6 mm

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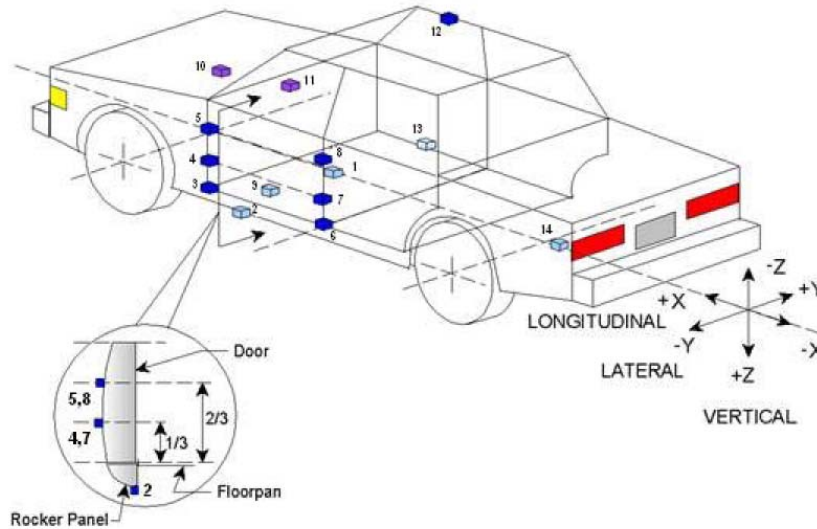
**INSTRUMENTATION**

Driver Dummy Channels	16
Vehicle Structure Accelerometers	18
Pole Load Cells	8
<b>Total</b>	<b>42</b>

**DATA SHEET NO. 6**

**TEST VEHICLE ACCELEROMETER LOCATIONS**

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15

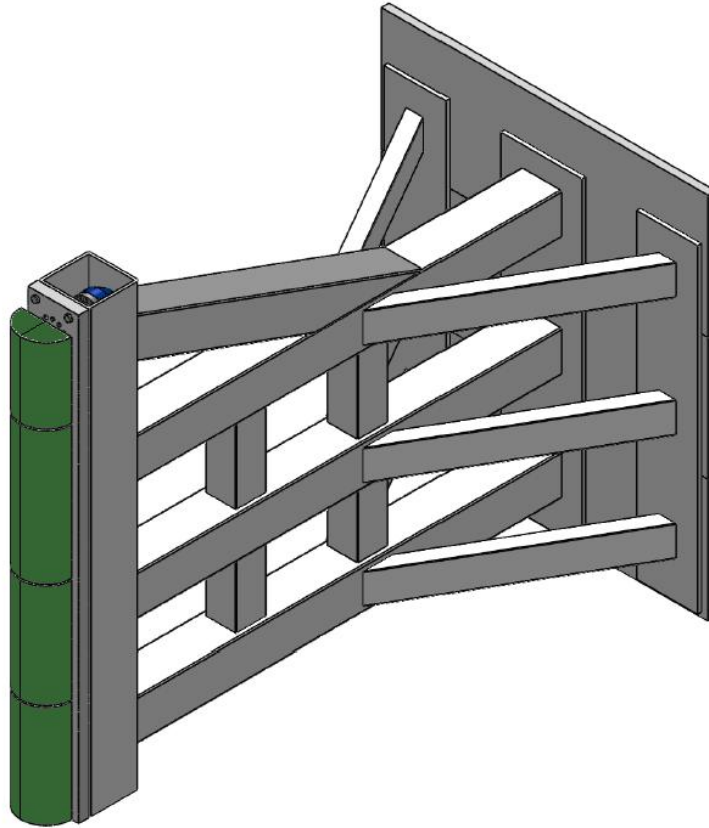


Loc. No.	Sensor Description	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	1919	0	-486
2	Left Floor Sill	2934	-766	-268
3	A-Pillar Sill	3237	-796	-558
4	A-Pillar Low	3237	-796	-641
5	A-Pillar Mid	3237	-796	-874
6	B-Pillar Sill	2134	-714	-443
7	B-Pillar Low	2134	-714	-857
8	B-Pillar Mid	2134	-714	-1038
9	Driver Seat Track	2443	-197	-532
10	Engine Top	3928	164	-887
11	Firewall	3593	352	-1015
12	Right Roof	2198	556	-1656
13	Right Floor Sill	2104	815	-284
14	Rear Floorpan	896	0	-615

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: 2015 Ford Edge SEL FWD 5-Door MPV      NHTSA No. M20150207  
Test Program: NCAP Side Pole Impact Test      Test Date: 04/22/15



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: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15

**TEST DUMMY INFORMATION AND CONTACT POINTS**

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

**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 occurred
Sill Separation	No separation occurred
Windshield Damage	Broken
Side Window Damage	Left front window broken
Other Notable Effects	None

**DATA SHEET NO. 8 ... (CONTINUED)**

**POST-TEST OBSERVATIONS**

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15

**SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION**

Restraint Type	Struck Side Driver		Struck Side Rear Passenger	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	No	No	
Knee Airbag	Yes	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	

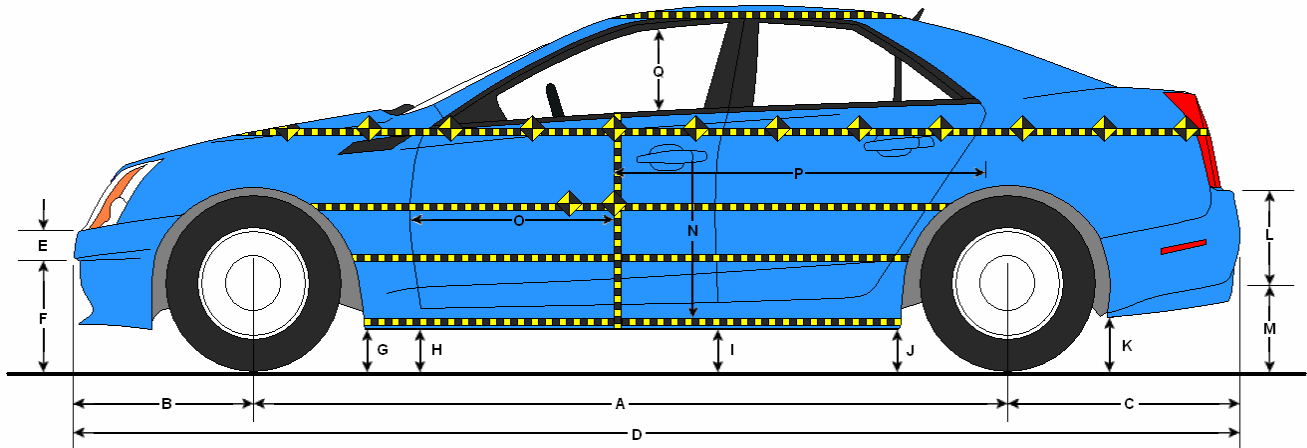
**IMPACT POINT LOCATION DATA**

Measured Parameter	Units	Tolerance	Value
Vertical Impact Reference Line (Aft of Front Axle)(Intended Impact Point)	mm		1100
Actual Impact Point (Aft of Front Axle)	mm		1086
Horizontal Offset (+ forward / - rearward)	mm	± 38 of Intended Impact Point	14
Angle Between Vehicle's Longitudinal Centerline and Line of Forward Motion	°	75 ± 3	75.4
Trap No. 1 Velocity (Primary)	km/h	31.4 to 33.0	31.88
Trap No. 2 Velocity (Redundant)	km/h	31.4 to 33.0	31.86

**DATA SHEET NO. 9**

**TEST VEHICLE PROFILE MEASUREMENTS**

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15



**LEFT SIDE VIEW**

All measurements in mm with tolerance of  $\pm 3$ mm

**VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION**

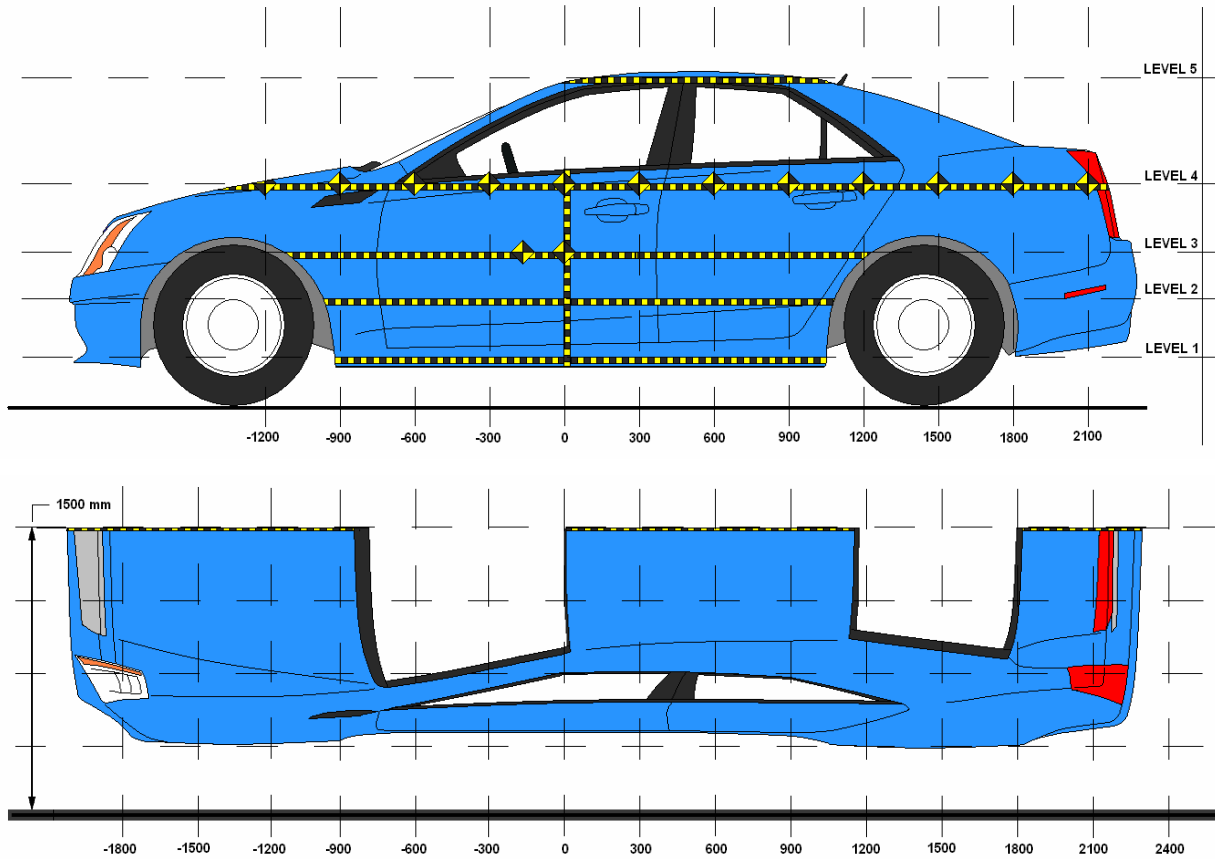
Code	Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2850	2769	-81
B	Front Axle to FSOV	957	978	21
C	Rear Axle to RSOV	972	995	23
D	Total Length at Centerline	4778	4743	-35
E	Front Bumper Thickness	88	88	0
F	Front Bumper Bottom to Ground	539	566	27
G	Sill Height at Front Wheel Well	277	295	18
H	Sill Height at Front Door Leading Edge	277	298	21
I	Sill Height at B-Pillar	257	288	31
J1	Sill Height at Rear Wheel Well	258	309	51
J2	Pinch Weld Height at Rear Wheel Well	241	279	38
K	Sill Height Aft of Rear Wheel Well	300	339	39
L	Rear Bumper Thickness	193	195	2
M	Rear Bumper Bottom to Ground	438	472	34
N	Sill Height to Bottom of Front Window Sill	634	666	32
O	Front Door Leading Edge to Impact CL	595	452	-143
P	Rear Door Trailing Edge to Impact CL	1600	1483	-117
Q	Front Window Opening	469	473	4
R	Right Side Length	3359	3374	15
S	Left Side Length	3360	3256	-104
T	Vehicle Width at B-Pillar	1921	1778	-143

**DATA SHEET NO. 10**

**TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS**

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207

Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15



**NOTE:** All measurements in mm with tolerance of  $\pm 3$ mm

**MAXIMUM EXTERIOR CRUSH MEASUREMENTS**

Level	Description	Height Above Ground (mm)	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	364	345	0
2	Occupant H-Point	714	455	0
3	Mid-Door	675	452	0
4	Window Sill	1054	424	0
5	Window Top	1598	215	150

**DATA SHEET NO. 10 ... (CONTINUED)**

**TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS**

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15

**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				643					691					48	
-750		544	543	633			609	610	695			65	67	62	
-600	566	557	557	621		633	622	622	697		67	65	65	76	
-450	567	560	562	614		672	708	709	737		105	148	147	123	
-300	570	558	562	602		763	806	803	819		193	248	241	217	
-150	568	557	561	596		858	908	905	913		290	351	344	317	
0	568	556	560	588		913	1011	1012	1012		345	455	452	424	
150	567	555	560	583	862	837	987	985	1000	1077	270	432	425	417	215
300	567	555	560	578	858	773	855	860	891	1039	206	300	300	313	181
450	566	555	560	576	858	725	756	752	779	1009	159	201	192	203	151
600	566	558	563	573	859	723	723	718	739	982	157	165	155	166	123
750	566	560	565	573	860	690	692	690	715	957	124	132	125	142	97
900	567	563	567	571	859	658	667	668	691	937	91	104	101	120	78
1050	568	563	566	572	858	626	643	647	668	920	58	80	81	96	62
1200	568	560	560	572	858	597	598	607	645	910	29	38	47	73	52
1350		549	548	548	860		560	560	597	903		11	12	49	43
1500				578	865				602	902				24	37
1650				585	875				619	911				34	36
1800				594	901				624	932				30	31
1950				604	909				627	936				23	27
2100				611					633					22	
2250															
2400															
2550															
2700															
2850															

DATA SHEET NO. 10 ... (CONTINUED)

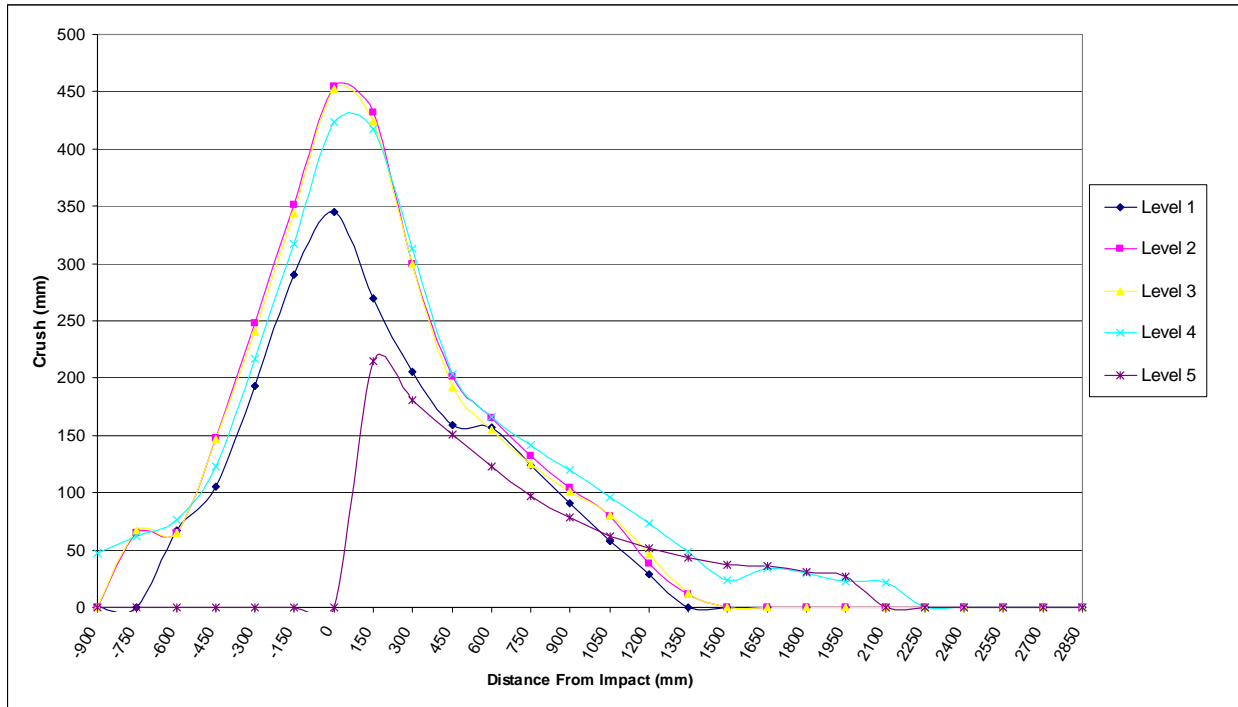
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV

NHTSA No. M20150207

Test Program: NCAP Side Pole Impact Test

Test Date: 04/22/15

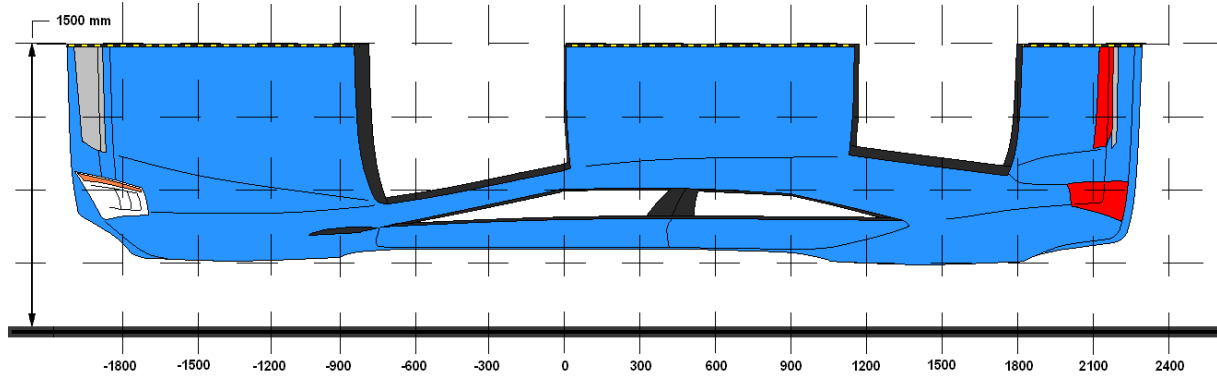


**DATA SHEET NO. 11**

**VEHICLE DAMAGE PROFILE DISTANCES**

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207

Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15



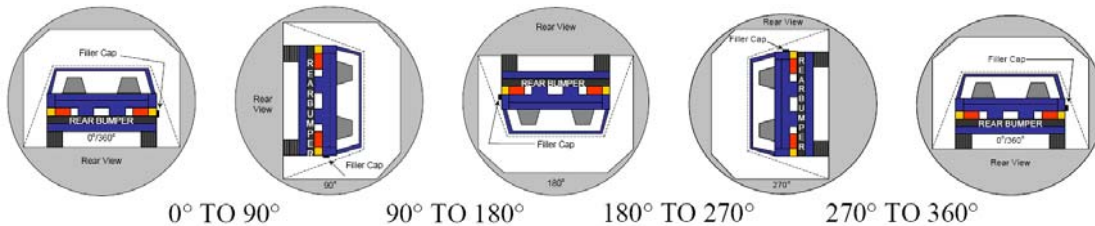
DPD	Distance From Impact Point (mm)	Level	Pre-Test (mm)	Post-Test (mm)	Crush (mm)
1	2100	4	611	633	22
2	1500	5	865	902	37
3	900	4	571	691	120
4	300	4	578	891	313
5	-300	2	558	806	248
6	-900	4	643	691	48

**DATA SHEET NO. 12**

**FMVSS NO. 301 STATIC ROLLOVER RESULTS**

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207  
 Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15  
 Temperature at Time of Impact: 18.3° C Test Time: 12:15 PM

- 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°	82	300	382
90° To 180°	81	300	381
180° To 270°	78	300	378
270° To 360°	83	300	383

**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**

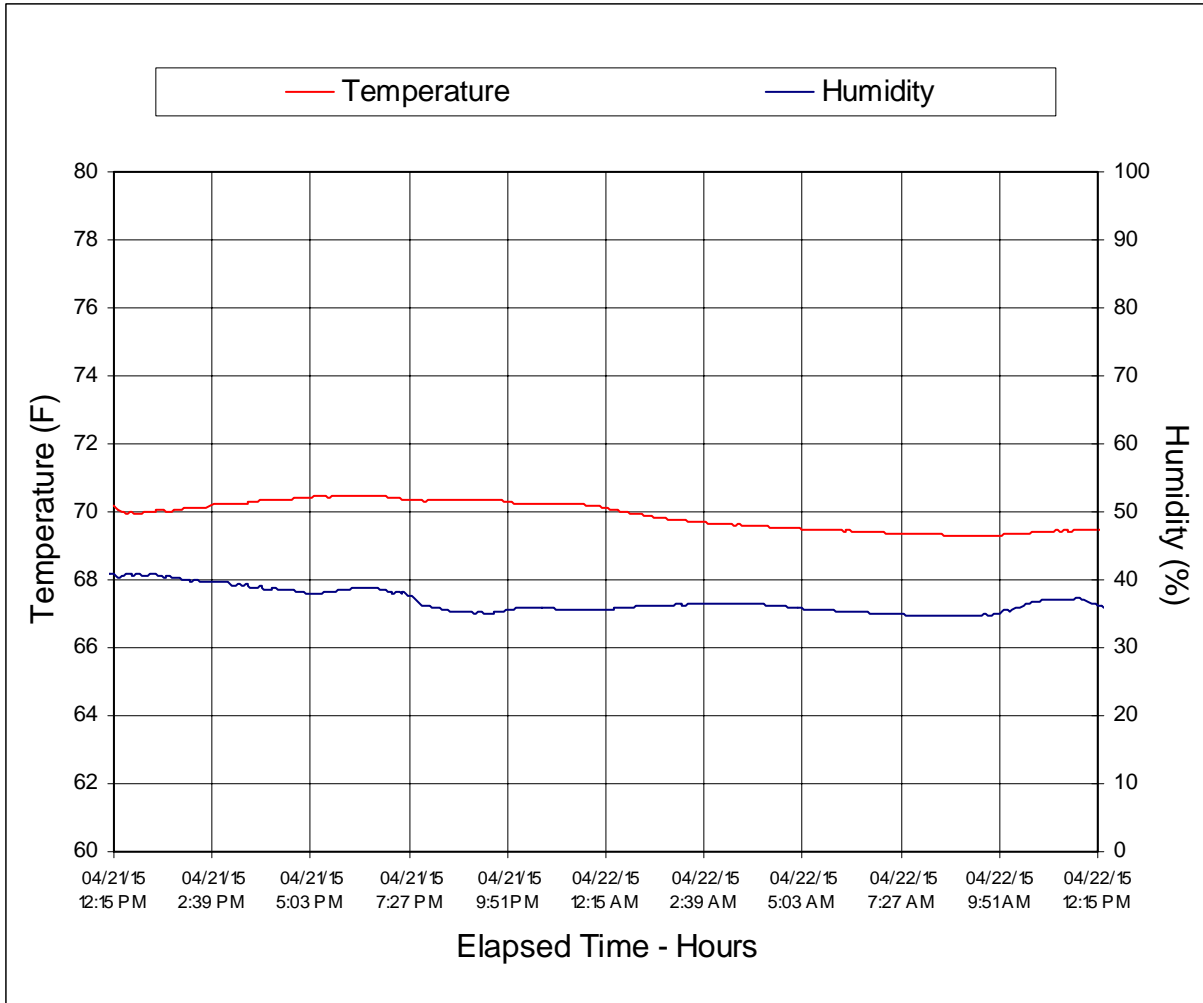
Test Phase	Spillage Location
0° To 90°	No Spillage Occurred
90° To 180°	No Spillage Occurred
180° To 270°	No Spillage Occurred
270° To 360°	No Spillage Occurred

**DATA SHEET NO. 13**

**DUMMY/VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION**

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV NHTSA No. M20150207

Test Program: NCAP Side Pole Impact Test Test Date: 04/22/15



**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 15. Pre-Test Overhead View of Test Area

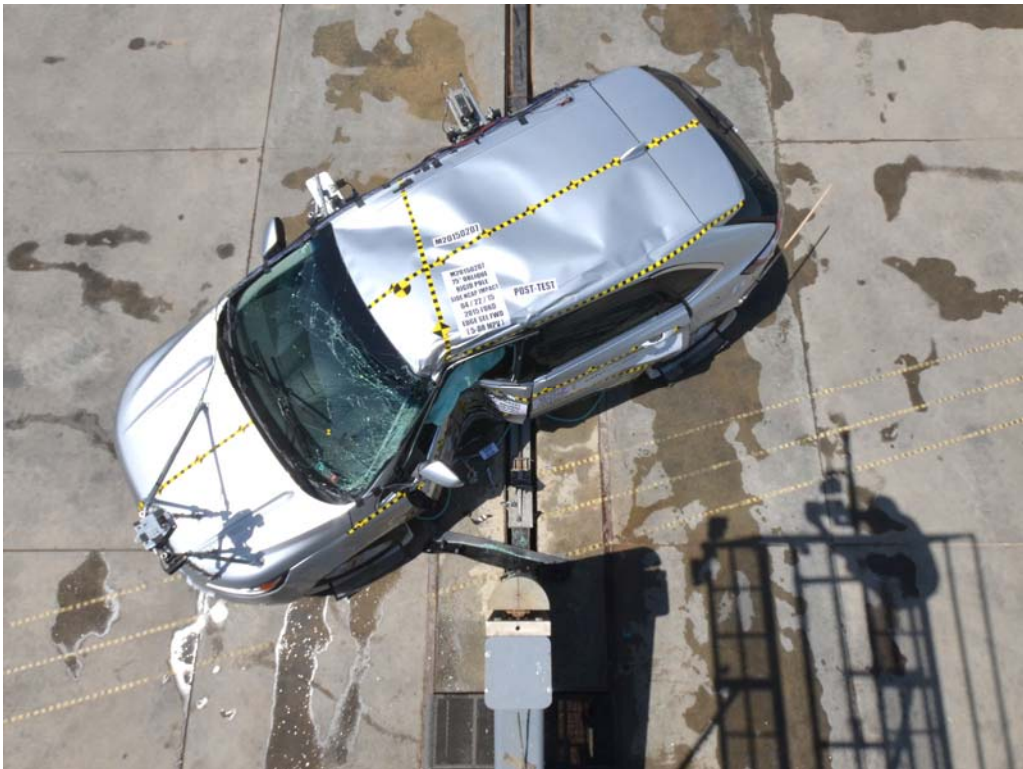


FIGURE 16. Post-Test Overhead View of Test Area



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

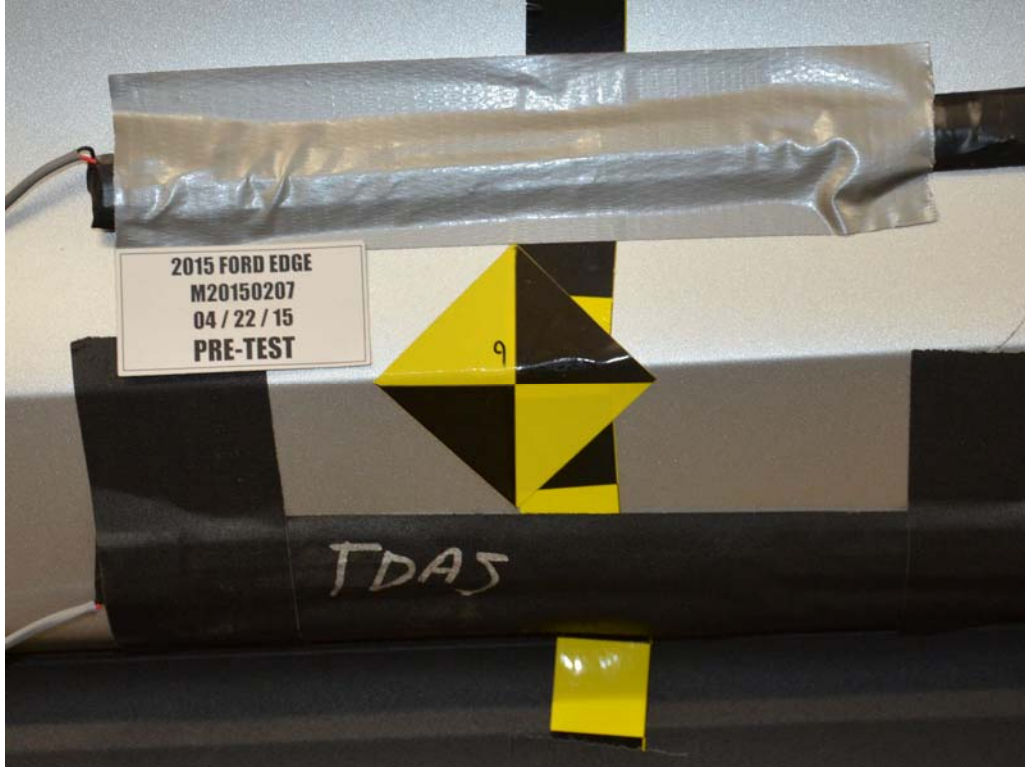


FIGURE 19. Pre-Test Close-Up View of Impact Point Target

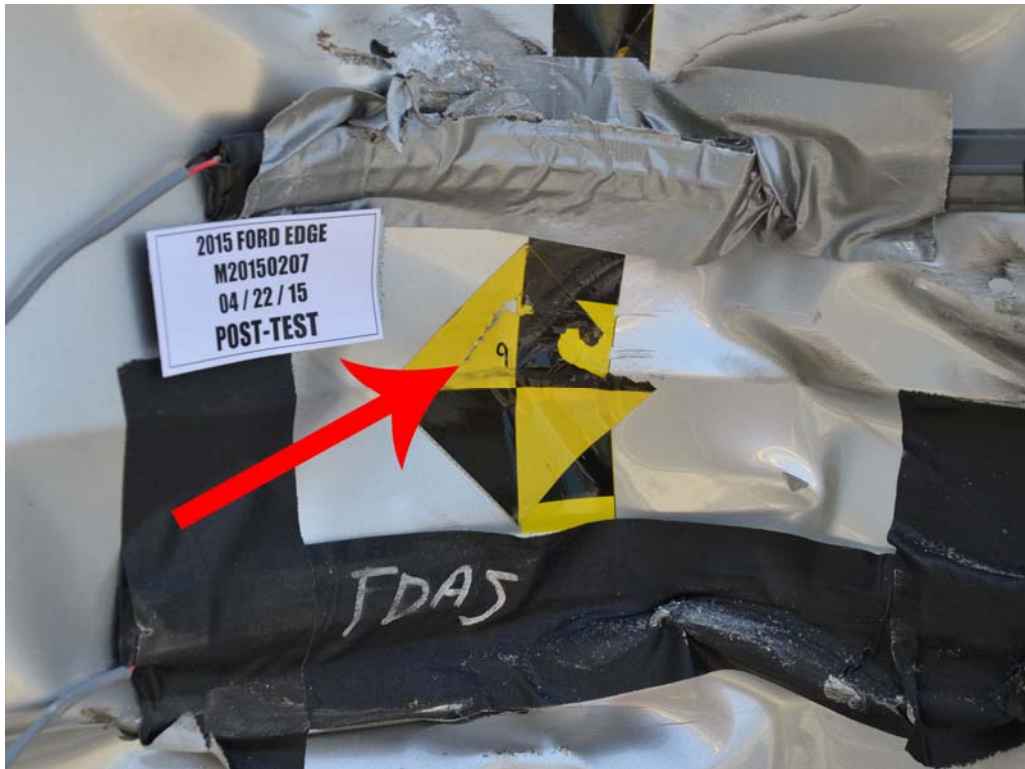


FIGURE 20. Post-Test Close-Up View of Impact Point Target  
Showing Impact Location



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

# Photograph Not Available

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

# Photograph Not Available

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

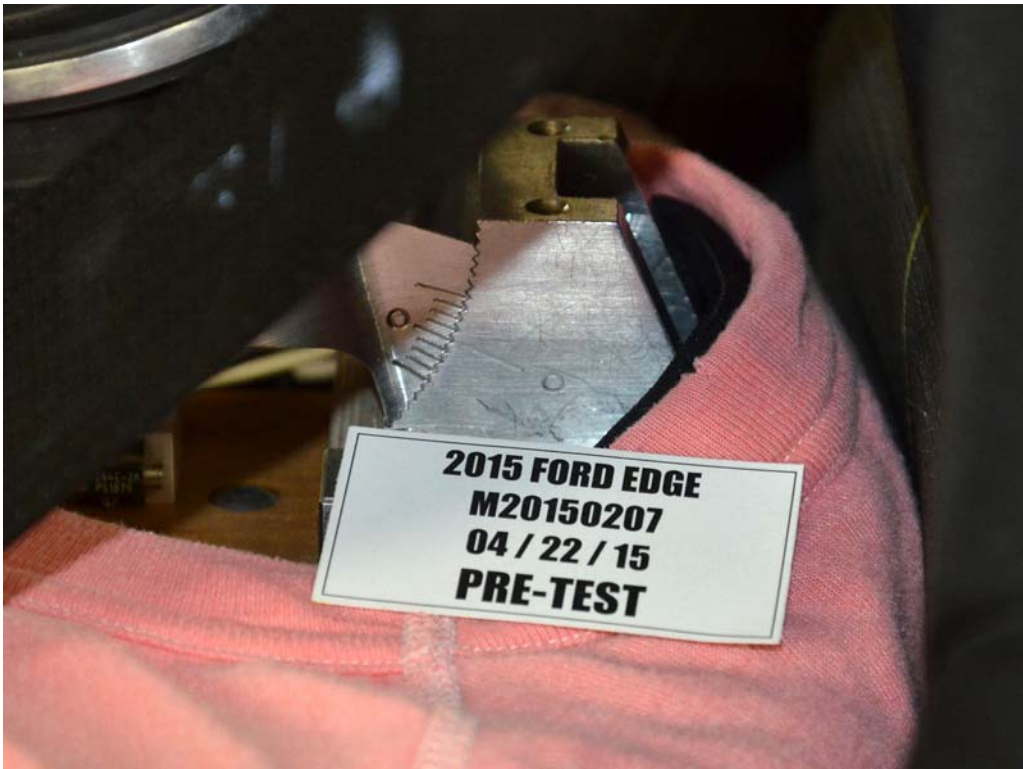


FIGURE 30. Pre-Test Left Side View of Dummy's Neck  
Showing Position of Adjustable Neck Bracket



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

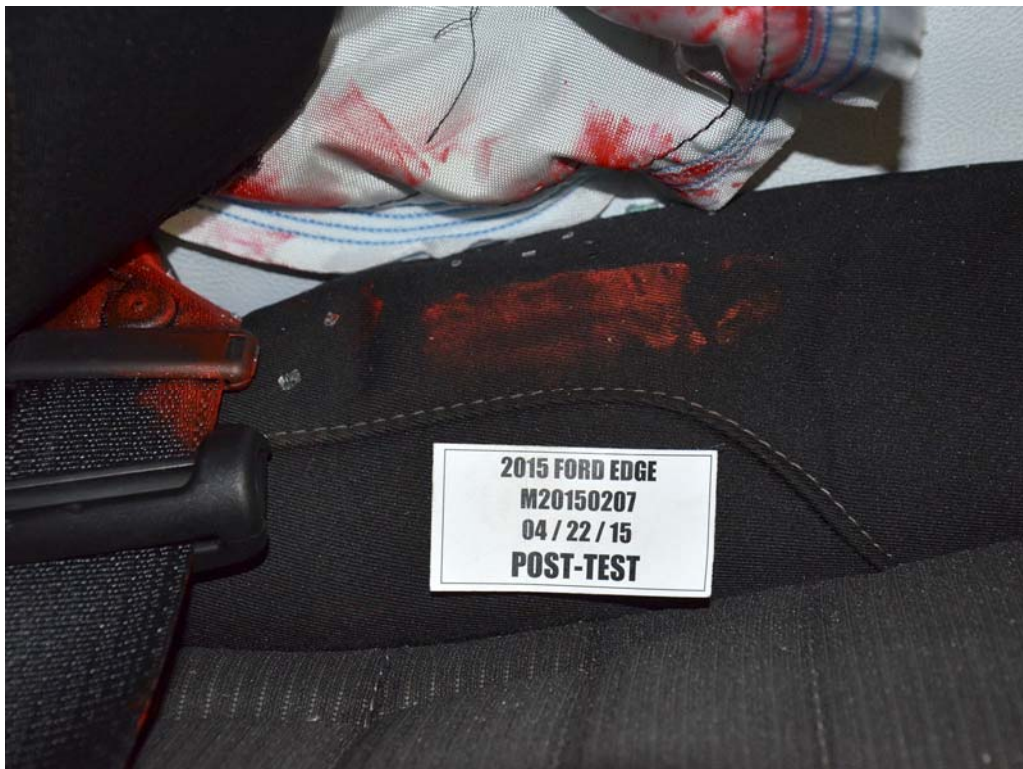


FIGURE 50. Post-Test Dummy Close-Up Pelvis Contact With Vehicle Interior View



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

Photograph Not Applicable

No Driver Dummy Knee  
Contact with Vehicle  
Interior

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

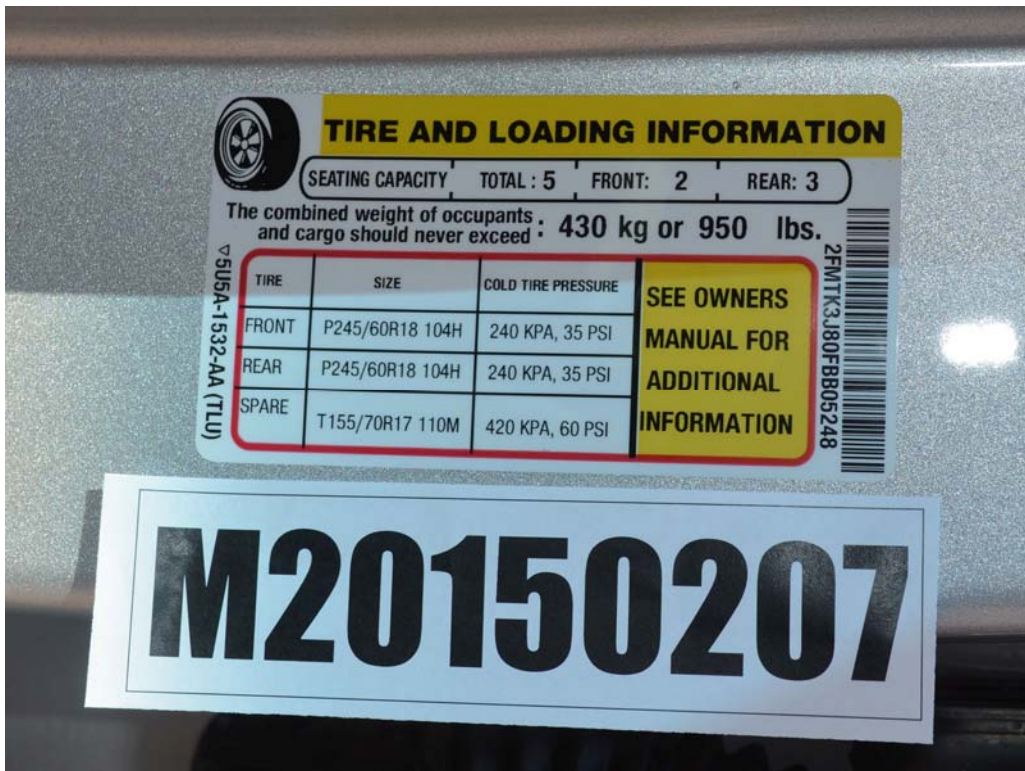


FIGURE 56. Close-Up View of Vehicle's Tire Information Placard or Label



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

<b>EDGE</b> 2015 FORD EDGE-SEL FWD 3.5L IECY V6 ENGINE 6-SPD SELECTSHIFT TRANS		<b>FB B05248</b> EXTERIOR INTERIOR SILVER METALLIC INTERIOR EBONY CLOTH	<b>EPA DOT Fuel Economy and Environment</b> Gasoline Vehicle <b>Fuel Economy</b> <b>21</b> MPG 18 26 city highway 4.8 gallons per 100 miles You spend <b>\$1,500</b> more in fuel costs over 5 years compared to the average new vehicle.
<b>STANDARD EQUIPMENT INCLUDED AT NO EXTRA CHARGE</b>			
<b>EXTERIOR</b> 18" PAINTED ALUM WHEELS BRIGHT METALIC MOLDING DOOR HANDLES - BODY COLOR DUAL EXHAUST TIPS ORILLER - PAINTED BRIGHT INTEGRATED BOOTER MIRRORS LED SIGNATURE LAMPS LED TAIL LAMPS MIRRORS - PWR/HEATED/MAN FOLD HELED 100 & 8-SPD/REAR LAMP PRIVACY GLASS WRELED REAR HALOGEN HEADLAMP REAR SPOILER, BODY COLOR	<b>INTERIOR</b> TOUCH UPDOWN GRIP/ABS W/IN REAR SARKFOLD REAR SEACH A/C W/LOCAL CLIMATE CONTROL AUTO DIM REARVIEW MIRROR GARAGE MANAGEMENT SYSTEM CLOTH HEATING SURFACES CUPHOLDERS - 8 DUAL ALUM VANITY MIRRORS FLOORMATS-1ST AND 2ND ROW GL CRAL CRPS W/NOOKS LEATHER WRAPPED STR WHEEL INCURSE AND AUDIO CONTRL SEATS-10-MAY PWR CR & 8-WAY MANUAL PASS TELESCOPE STR COLUMN	<b>FUNCTIONAL</b> 4-SPED 101 W/PACKLE SHIFT AM/FM SINGLE CO/MPL, ESPOR CRUISE CONTROL SAFETYLE, CAPLESS FILLER HILL START ASSIST INTELLIGENT ACCESS W/PUSH BUTTON START MEDIA PWR WITH AUX INPUT P/POWERPOINTS 4E REAR VIEW CAMERA REAR WIPER/WASHER/DEFYER REVERSE SENSING SYSTEM SIRIUS SAT 3VC W/A-RASTR SYNC	<b>SAFETY/SECURITY</b> ANTILOCKING WITH ESC AIRBAGS- DUAL STAGE FRONT AIRBAGS- FRONT SEAT MOUNTED SIDE IMPACT AIRBAGS- SAFETY CANOPY AUTO LAMBRANK ASSP LATCH CHILD SAFETY SYSTEM RECCURRING RET LENS W/PAD SOE POST CRASH ALERT SYS THE PRESSURE MONITOR SYS <b>WARRANTY</b> 3YR/50,000 BUMPER TO BUMPER 5YR/100,000 POWERTRAIN 5YR/100,000 ROADSIDE ASSIST
<b>INCLUDED ON THIS VEHICLE</b> EQUIPMENT GROUP 205A 3.5L IECY V6 ENGINE 6-SPD SELECTSHIFT TRANS P/WEARER AIR TRES ALL WEATHER FLOOR MATS CALIFORNIA/GREEN STATES EMBIS		<b>PRICE INFORMATION</b> MSRP \$32,895.00 SALES PRICE \$30,500.00 TOTAL OPTIONS/OTHER \$900.00 TOTAL VEHICLE & OPTIONS/OTHER \$32,000.00 DESTINATION & DELIVERY \$895.00	
<b>SALE TO:</b> John Kennedy Ford Jacksonville 1600 The Parkway Jacksonville, PA 15046		<b>DEALER NO.:</b> 168 017	
<b>SALE TYPE:</b> CONVOY		<b>FINAL ASSEMBLY PLANT:</b> OAKVILLE	
<b>SALE METHOD:</b> CONVOY		<b>ITEM #:</b> 16-2265 OT 2	
<b>SALE DATE:</b> 02/01/15		<b>SALE NO.:</b> FB091 N RB X2 520 000495 02 0015	
<b>SALE PRICE:</b> \$32,895.00		<b>TOTAL MSRP:</b> \$32,895.00	

FIGURE 69. Monroney Label

### Seats

**SITTING IN THE CORRECT POSITION**

**WARNINGS**

- Sitting improperly, out of position or with the seatback reclined too far can take weight off the seat cushion and affect the decision of the passenger sensing system, resulting in serious injury or death in the event of a crash. Always sit upright against your seat back, with your feet on the floor.
- Do not recline the seatback as this can cause the occupant to slide under the safety belt, resulting in serious injury in the event of a crash.
- Do not place objects higher than the seatback to reduce the risk of serious injury in the event of a crash or during heavy braking.

When you use them properly, the seat, head restraint, safety belt and airbags will provide optimum protection in the event of a crash.

We recommend that you follow these guidelines:

- Sit in an upright position with the base of your spine as far back as possible.
- Do not recline the seatback more than 30 degrees.
- Adjust the head restraint so that the top of it is level with the top of your head and as far forward as possible. Make sure that you remain comfortable.
- Keep sufficient distance between yourself and the steering wheel. We recommend a minimum of 10 in (25 cm) between your breastbone and the airbag cover.
- Hold the steering wheel with your arms slightly bent.
- Bend your legs slightly so that you can press the pedals fully.
- Position the shoulder strap of the safety belt over the center of your shoulder and position the lap strap tightly across your hips.
- Make sure that your driving position is comfortable and that you can maintain full control of your vehicle.

**HEAD RESTRAINTS**

**WARNINGS**

- Fully adjust the head restraints before you sit in or operate your vehicle. This will help minimize the risk of neck injury in the event of a crash. Do not adjust the head restraint when your vehicle is moving.
- The head restraint is a safety device. Whenever possible it should be installed and properly adjusted when the seat is occupied.

### Seats

**WARNINGS**

- Install the head restraint properly to help minimize the risk of neck injury in the event of a crash.

**Note:** Adjust the seatback to an upright driving position before adjusting the head restraint. Adjust the head restraint so that the top of it is level with the top of your head and as far forward as possible. Make sure that you remain comfortable. If you are extremely tall, adjust the head restraint to its highest position.

**Front seat and rear seat outboard head restraints**

**Rear center head restraint**

The head restraints consist of:

- A An energy absorbing head restraint.
- B Two steel stems.
- C Guide sleeve adjust and unlock button.
- D Guide sleeve unlock and remove button.

**Adjusting the Head Restraint**

**Raising the Head Restraint**  
Pull the head restraint up.

**Lowering the Head Restraint**  
1. Press and hold button C.  
2. Push the head restraint down.

**Removing the Head Restraint**  
1. Pull the head restraint up until it reaches its highest position.  
2. Press and hold buttons C and D.  
3. Pull the head restraint up.

**Installing the Head Restraint**  
Align the steel stems into the guide sleeves and push the head restraint down until it locks.

**Tilting Head Restraints**  
The front head restraints tilt for extra comfort. To tilt the head restraint, do the following:

FIGURE 70. Head Restraint Use and Adjustment Information from Vehicle Owner's Manual

**APPENDIX B**  
**VEHICLE AND 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](http://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)

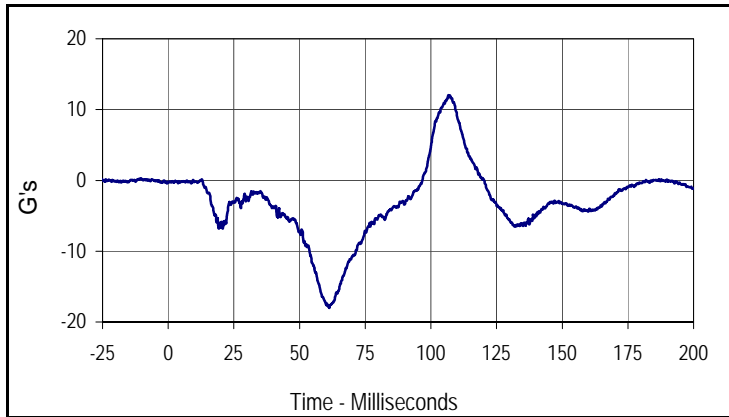
Left B-Pillar Sill Acceleration  
Left Lower B-Pillar Acceleration (Y)  
Left Mid B-Pillar Acceleration (Y)  
Driver Seat Track at Dummy Hip Point Acceleration (Y)  
Engine Top Acceleration (X)  
Engine Top Acceleration (Y)  
Firewall Center Acceleration (Y)  
Right Roof at Vertical Impact Reference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

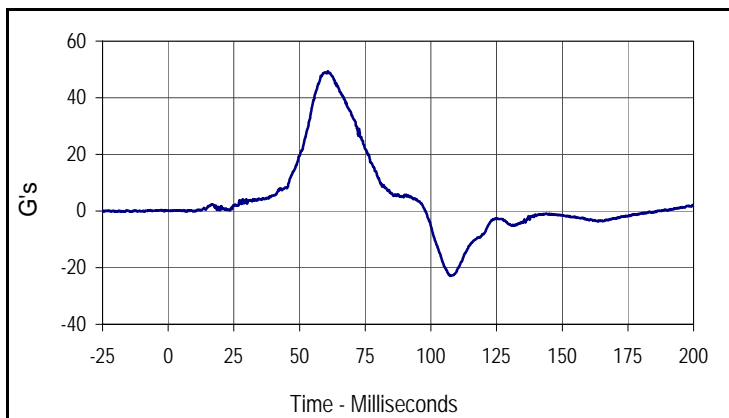
Load Cell Pole Barrier #1 Force (Y)  
Load Cell Pole Barrier #2 Force (Y)  
Load Cell Pole Barrier #3 Force (Y)  
Load Cell Pole Barrier #4 Force (Y)  
Load Cell Pole Barrier #5 Force (Y)  
Load Cell Pole Barrier #6 Force (Y)  
Load Cell Pole Barrier #7 Force (Y)  
Load Cell Pole Barrier #8 Force (Y)

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV  
 Test Program: NCAP Side Pole Impact Test

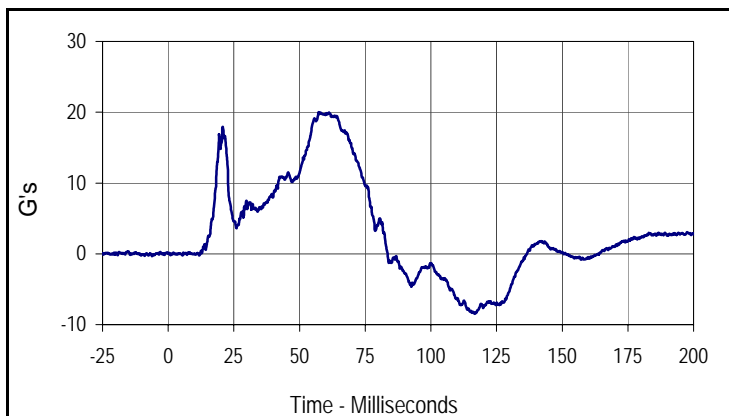
Test Date: 4/22/15  
 NHTSA No.: M20150207



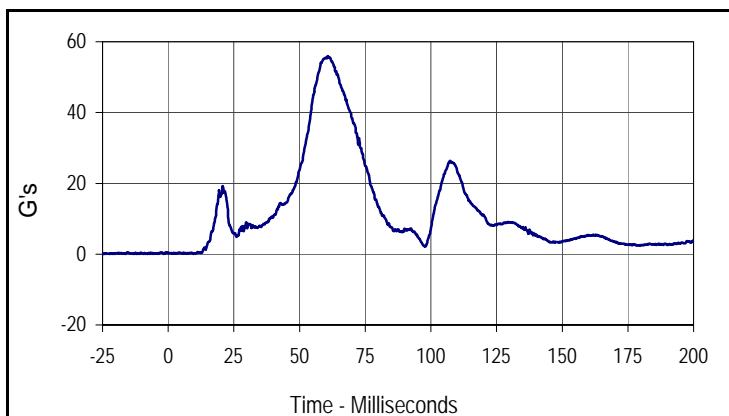
Curve Description			
Driver Head Acceleration X Primary			
Plot No.	Type	SAE Class	Units
001	FIL	1000	G's
Max	Time	Min	Time
12.0	106.7	-18.0	61.3



Curve Description			
Driver Head Acceleration Y Primary			
Plot No.	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
49.2	60.7	-22.9	107.3



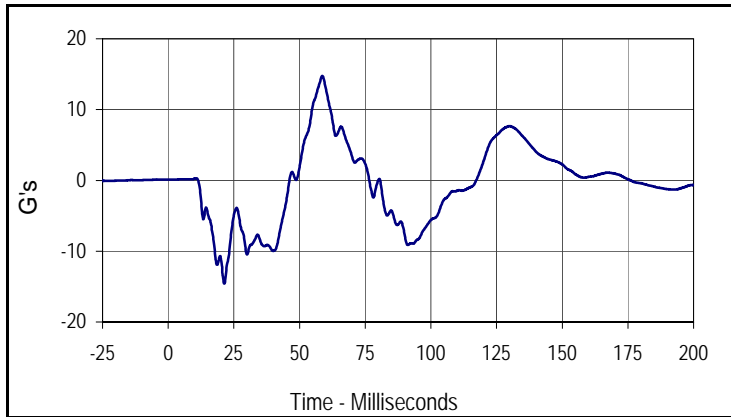
Curve Description			
Driver Head Acceleration Z Primary			
Plot No.	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
20.0	57.3	-8.5	116.7



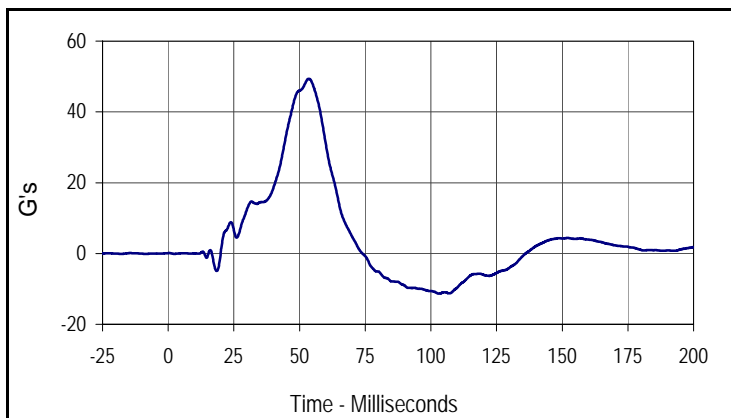
Curve Description			
Driver Head Acceleration Primary Res.			
Plot No.	Type	SAE Class	Units
004	RES	1000	G's
Max	Time	Min	Time
56.0	60.8	0.1	9.7

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV  
 Test Program: NCAP Side Pole Impact Test

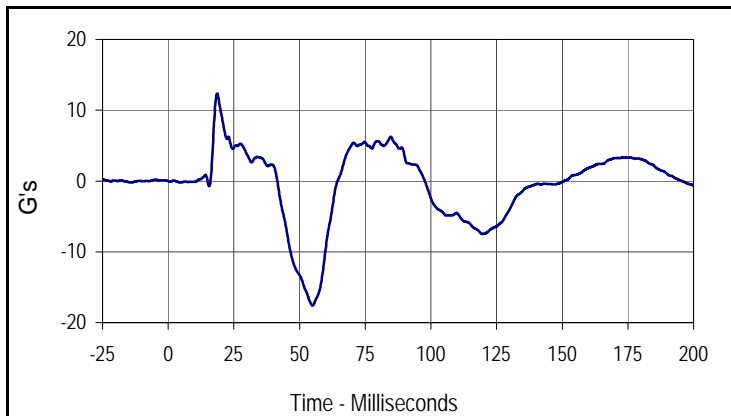
Test Date: 4/22/15  
 NHTSA No.: M20150207



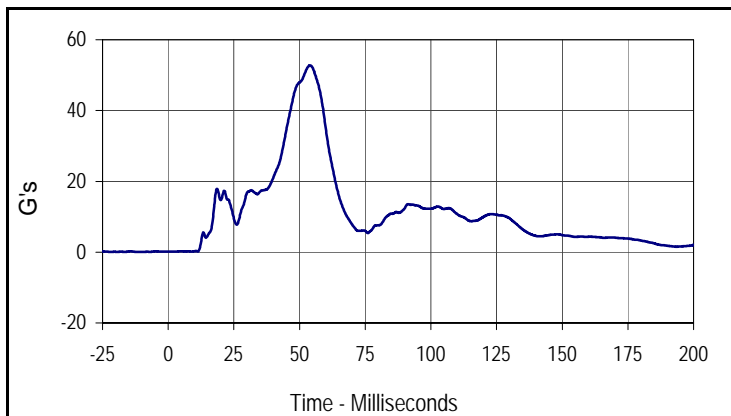
Curve Description			
Driver Lower Spine T12 Acceleration X			
Plot No.	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
14.7	58.7	-14.6	21.4



Curve Description			
Driver Lower Spine T12 Acceleration Y			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
49.4	53.6	-11.3	103.2



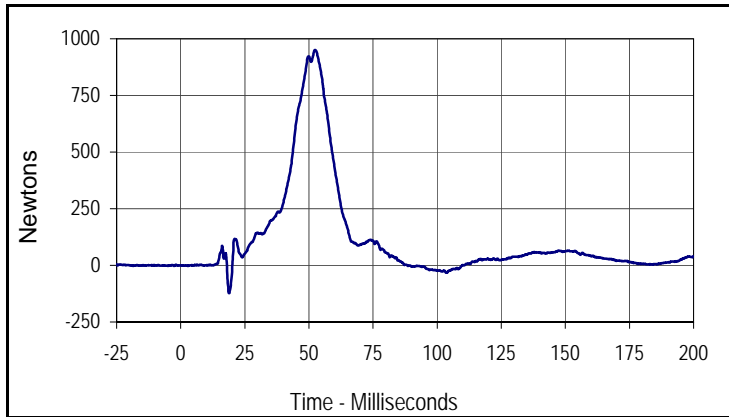
Curve Description			
Driver Lower Spine T12 Acceleration Z			
Plot No.	Type	SAE Class	Units
007	FIL	180	G's
Max	Time	Min	Time
12.4	18.6	-17.6	55.0



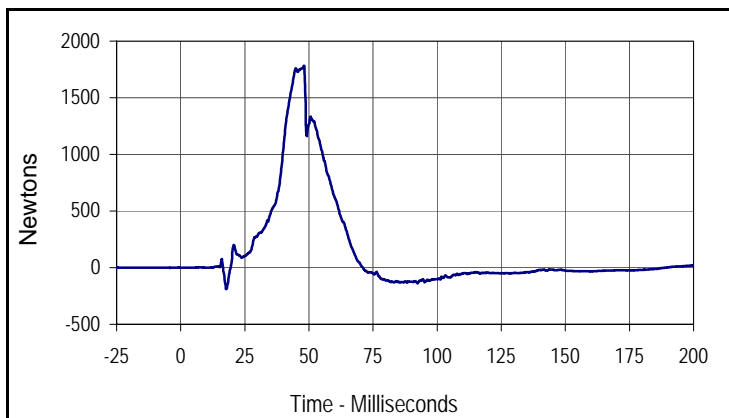
Curve Description			
Driver Lower Spine T12 Acceleration Res.			
Plot No.	Type	SAE Class	Units
008	RES	180	G's
Max	Time	Min	Time
52.7	54.0	0.1	1.4

Test Vehicle: 2015 Ford Edge SEL FWD 5-Door MPV  
 Test Program: NCAP Side Pole Impact Test

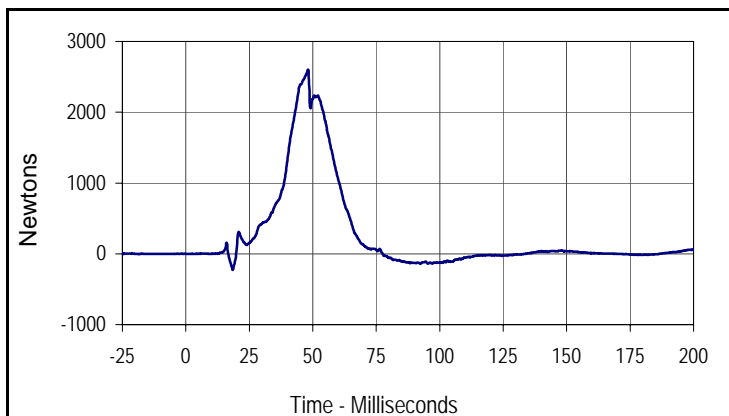
Test Date: 4/22/15  
 NHTSA No.: M20150207



Curve Description			
Driver Iliac Wing Force on Impact Side Y			
Plot No.	Type	SAE Class	Units
009	FIL	600	Newtons
Max	Time	Min	Time
950.7	52.4	-123.2	18.9



Curve Description			
Driver Acetabulum Force on Impact Side Y			
Plot No.	Type	SAE Class	Units
010	FIL	600	Newtons
Max	Time	Min	Time
1781.8	48.0	-190.3	17.8



Curve Description			
Driver Total Pelvic Force on Impact Side Y			
Plot No.	Type	SAE Class	Units
011	SUM	600	Newtons
Max	Time	Min	Time
2600.5	48.1	-225.4	18.5

**APPENDIX C**  
**DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA**

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

Test Program: SID IIs External Measurements

Test Date: 4/14/15



ATD Serial No.: 299

Test I.D.: N/A

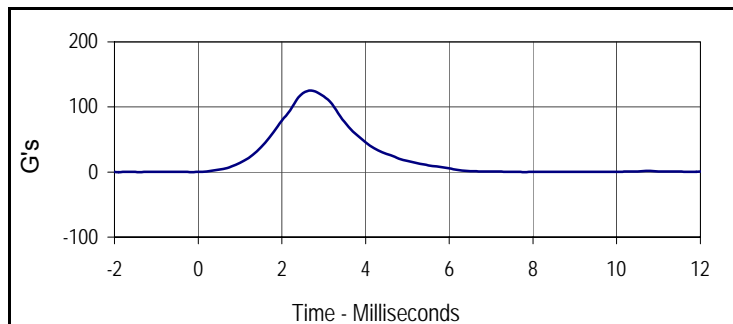
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	34	Pass
A Sitting Height	mm	772 - 788	780	Pass
B Shoulder Pivot Height	mm	437 - 453	445	Pass
C H-Point Height	mm	79 - 89	85	Pass
D H-Point from Seatback	mm	141 - 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

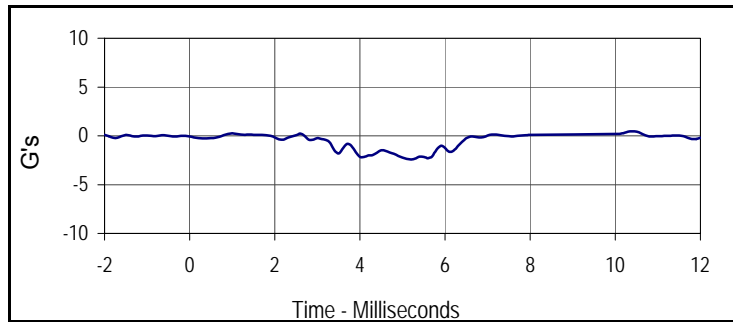
Test Date: 4/14/15  
 Test I.D.: 299HD085



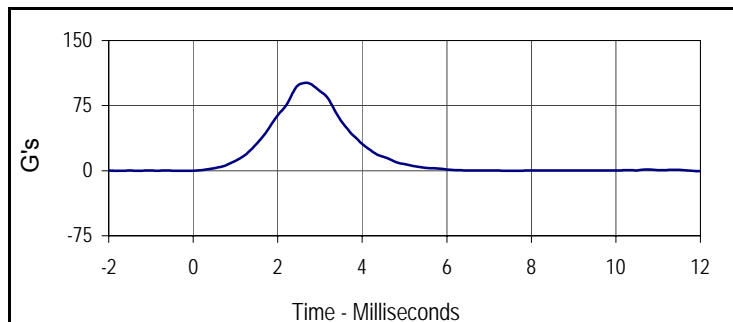
Tested Parameter	Units	Specification	Result	Pass/Fail
Head Assembly Soak Time	Minutes	≥240	320	Pass
Temperature During Soak	Max	18.9 to 25.6	21.4	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	34.1	Pass
	Min		33.7	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	33.7	Pass
Peak Head Resultant Acceleration	G's	115 to 137	125.0	Pass
Peak Head X Acceleration	G's	<15	2.4	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Oscillations After Main Pulse	%	<15	0.6	Pass
Overall Test Results				Pass



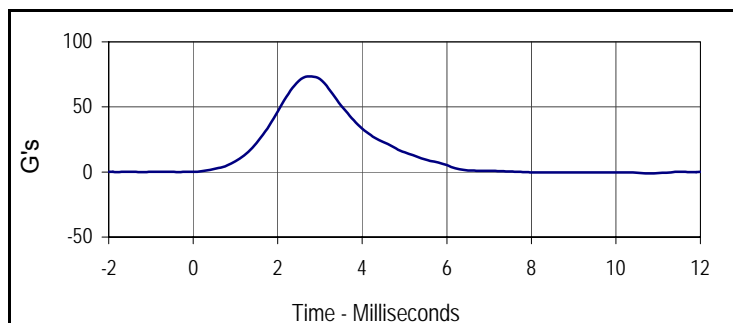
Curve Description			
Head Resultant			
Plot No.	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
125.0	2.7	0.0	-18.8



Curve Description			
Head X			
Plot No.	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
0.5	10.4	-2.4	5.2



Curve Description			
Head Y			
Plot No.	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
101.2	2.7	-0.6	12.0



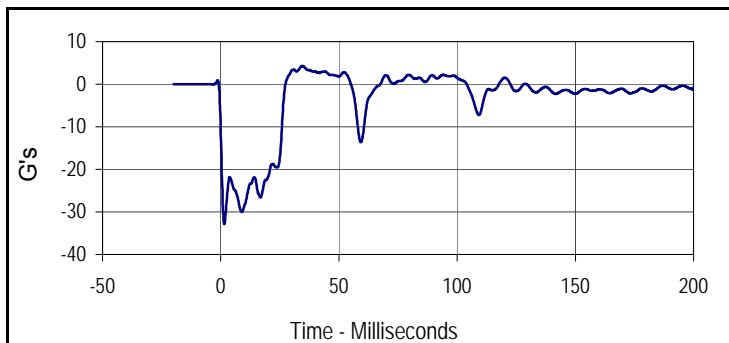
Curve Description			
Head Z			
Plot No.	Type	SAE Class	Units
004	FIL	1000	G's
Max	Time	Min	Time
73.5	2.8	-1.1	10.8

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

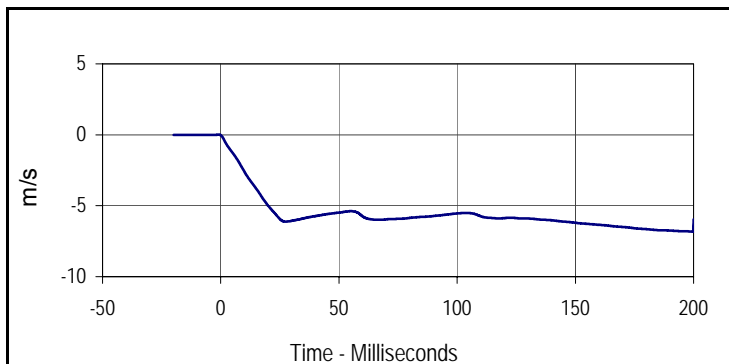
Test Date: 4/14/15  
 Test I.D.: 299NB085



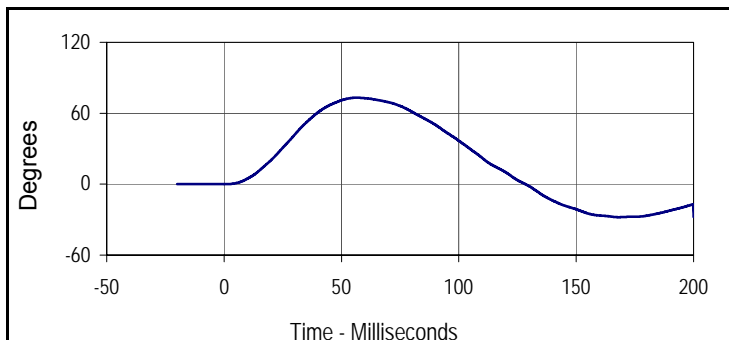
Tested Parameter	Units	Specification	Result	Pass/Fail	
Neck Assembly Soak Time	Minutes	≥240	365	Pass	
Temperature During Soak	Max	20.6 to 22.2	21.4	Pass	
	Min		21.2	Pass	
Humidity During Soak	Max	10.0 to 70.0	34.1	Pass	
	Min		33.7	Pass	
Laboratory Temperature During Test	°C	20.6 to 22.2	21.2	Pass	
Laboratory Humidity During Test	%	10.0 to 70.0	33.8	Pass	
Pendulum Velocity	m/s	5.51 to 5.63	5.55	Pass	
Pendulum Deceleration	10 msec	m/s	-2.20 to -2.80	-2.60	Pass
	15 msec	m/s	-3.30 to -4.10	-3.79	Pass
	20 msec	m/s	-4.40 to -5.40	-4.98	Pass
	25 msec	m/s	-5.40 to -6.10	-5.94	Pass
	25-100 msec	m/s	-5.50 to -6.20	-6.12	Pass
D-Plane Rotation	Max	Degrees	71 to 81	73.1	Pass
	Time	msec	50 to 70	56.4	Pass
Peak Occipital Condyle Moment	Nm	-36 to -44	-38.3	Pass	
Decaying Moment Time to Cross 0 Nm	msec	102 to 126	106.3	Pass	
Overall Test Results			Pass	Pass	



Curve Description			
Pendulum Deceleration			
Plot No.	Type	SAE Class	Units
001	FIL	180	G's
Max	Time	Min	Time
4.3	0.0	-32.8	0.0



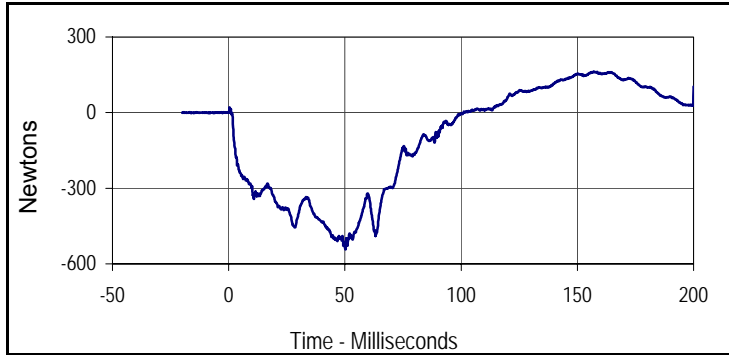
Curve Description			
Pendulum Velocity			
Plot No.	Type	SAE Class	Units
002	FIL	180	m/s
Max	Time	Min	Time
0.0	-0.8	-6.8	199.9



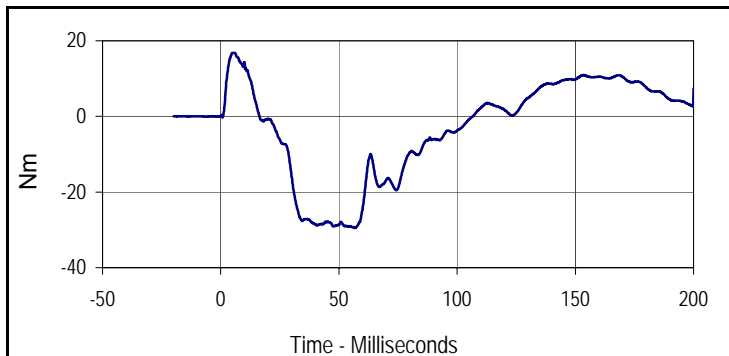
Curve Description			
D-Plane Rotation			
Plot No.	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
73.1	56.4	-27.9	168.1

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

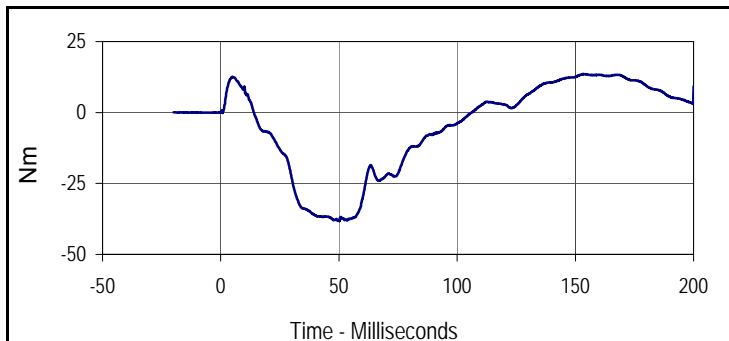
Test Date: 4/14/15  
 Test I.D.: 299NB085



Curve Description			
Neck Force Y			
Plot No.	Type	SAE Class	Units
004	FIL	1000	Newtons
Max	Time	Min	Time
162.4	157.1	-543.2	50.2



Curve Description			
Neck Moment X			
Plot No.	Type	SAE Class	Units
005	FIL	600	Nm
Max	Time	Min	Time
16.8	5.5	-29.5	56.6



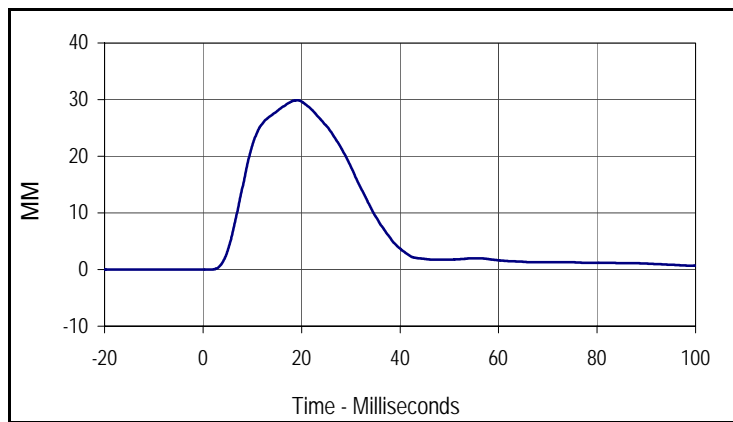
Curve Description			
Moment About Occipital Condyle			
Plot No.	Type	SAE Class	Units
006	FIL	600	Nm
Max	Time	Min	Time
13.6	153.3	-38.3	50.2

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

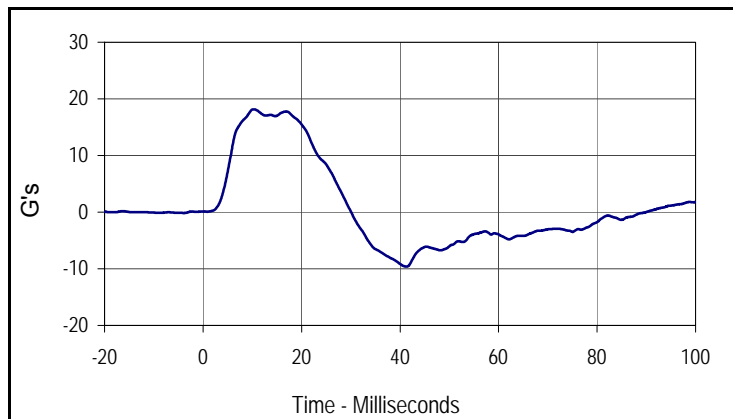
Test Date: 4/14/15  
 Test I.D.: 299SH085



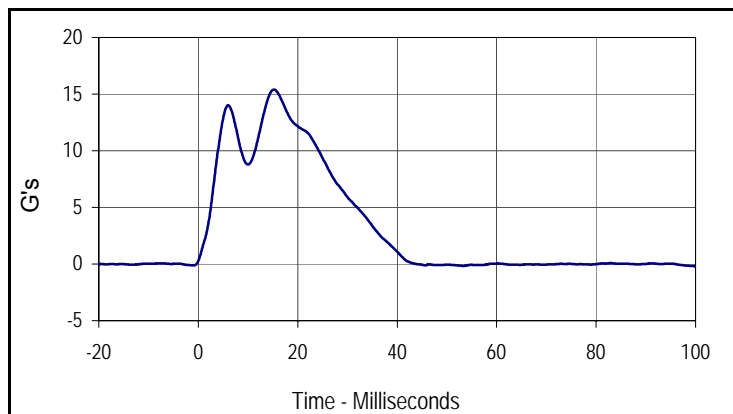
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	410	Pass
Temperature During Soak	Max	20.6 to 22.2	21.4	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	34.1	Pass
	Min		33.7	Pass
Laboratory Temperature During Test	°C	20.6 to 22.2	21.3	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	33.8	Pass
Impactor Velocity	m/s	4.20 to 4.40	4.36	Pass
Peak Shoulder Deflection	mm	28 to 37	29.9	Pass
Peak Lateral Spine Acceleration Y	G's	17 to 22	18.2	Pass
Peak Impactor Acceleration	G's	13 to 18	15.4	Pass
Overall Test Results			Pass	Pass



Curve Description			
Shoulder Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
29.9	19.2	0.0	-18.9



Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
18.2	10.3	-9.6	41.3



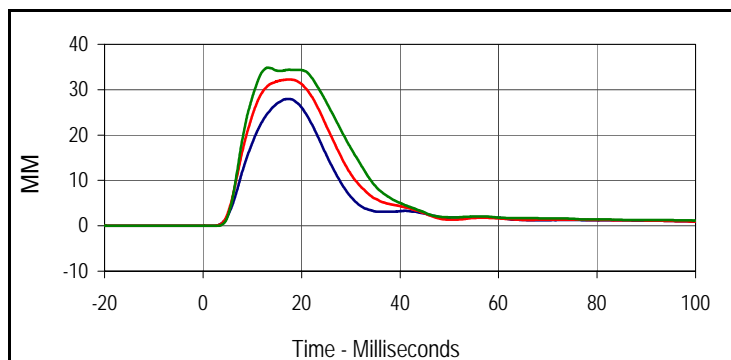
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
15.4	15.2	-0.2	99.9

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

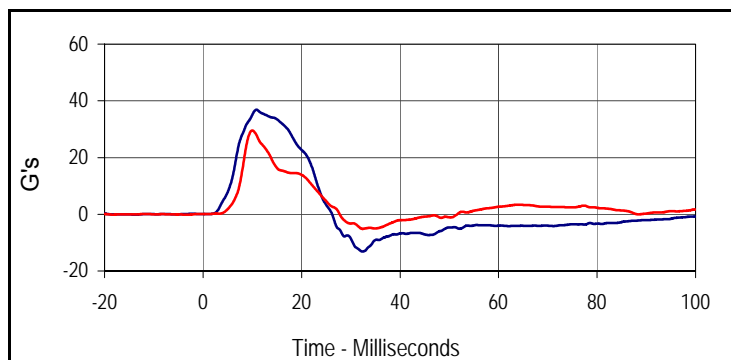
Test Date: 4/14/15  
 Test I.D.: 299TWA085



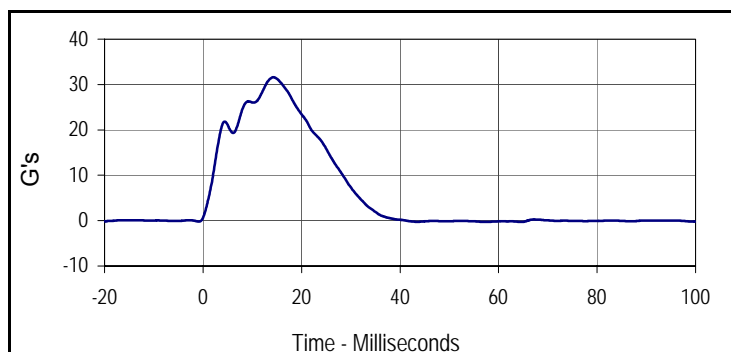
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	455	Pass
Temperature During Soak	Max	20.6 to 22.2	21.4	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	34.1	Pass
	Min		33.7	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.4	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	33.8	Pass
Impactor Velocity	m/s	6.6 to 6.8	6.73	Pass
Peak Shoulder Deflection	mm	31 to 40	35.8	Pass
Peak Upper Thorax Rib Deflection	mm	25 to 32	27.9	Pass
Peak Middle Thorax Rib Deflection	mm	30 to 36	32.2	Pass
Peak Lower Thorax Rib Deflection	mm	32 to 38	34.8	Pass
Peak Upper Spine Y Acceleration	G's	34 to 43	36.9	Pass
Peak Lower Spine Y Acceleration	G's	29 to 37	29.6	Pass
Peak Impactor Acceleration	G's	30 to 36	31.6	Pass
<b>Overall Test Results</b>				<b>Pass</b>



Curve Description			
<b>Upper Thorax Deflection</b>			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
27.9	17.4	0.0	-5.3
<b>Middle Thorax Deflection</b>			
Max	Time	Min	Time
32.2	17.5	0.0	1.4
<b>Lower Thorax Deflection</b>			
Max	Time	Min	Time
34.8	13.2	0.0	-6.5



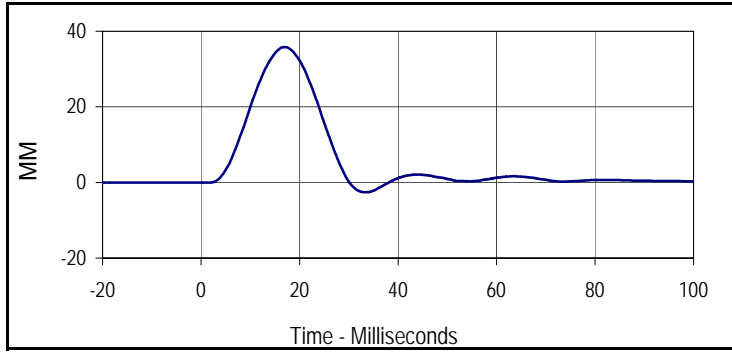
Curve Description			
<b>Upper Spine Y Acceleration</b>			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
36.9	10.8	-13.1	32.4
<b>Lower Spine Y Acceleration</b>			
Plot No.	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
29.6	10.0	-5.2	32.4



Curve Description			
<b>Impactor Acceleration</b>			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
31.6	14.3	-0.3	64.7

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

Test Date: 4/14/15  
 Test I.D.: 299TWA085



Curve Description			
Shoulder Deflection			
Plot No.	Type	SAE Class	Units
007	FIL	600	MM
Max	Time	Min	Time
35.8	17.1	-2.6	33.5

Test Program: SID IIs Thorax without Arm Impact Test

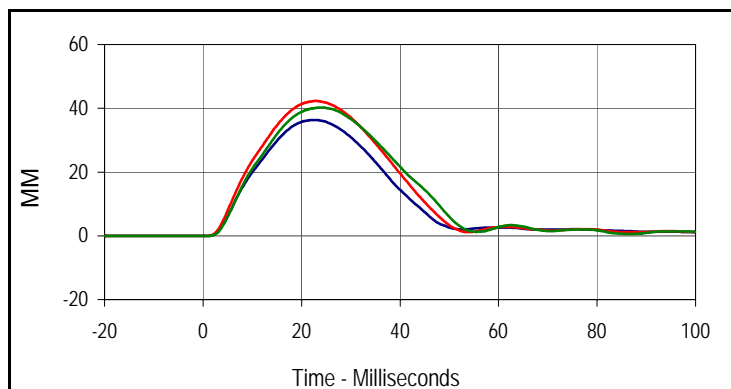
Test Date: 4/14/15



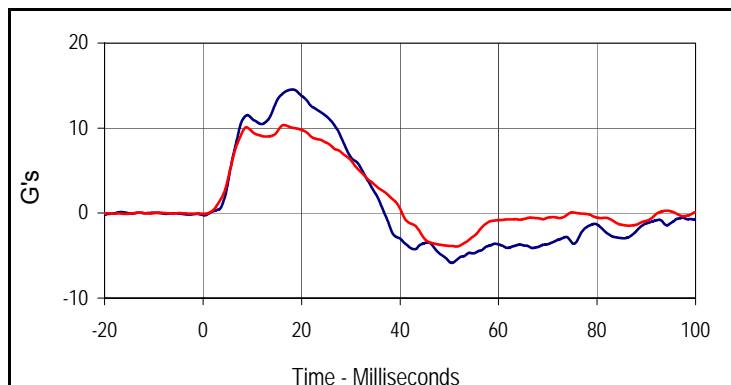
ATD Serial No.: 299

Test I.D.: 299TWOA085

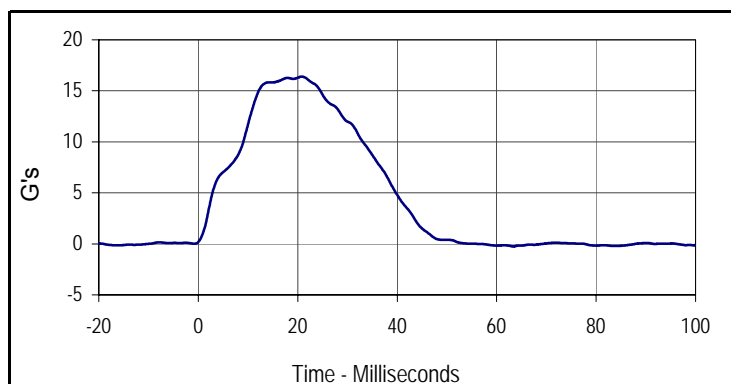
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	500	Pass
Temperature During Soak	Max	18.9 to 25.6	21.4	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	34.1	Pass
	Min		33.7	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.4	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	33.9	Pass
Impactor Velocity	m/s	4.2 to 4.4	4.22	Pass
Peak Upper Thorax Rib Deflection	mm	32 to 40	36.3	Pass
Peak Middle Thorax Rib Deflection	mm	39 to 45	42.3	Pass
Peak Lower Thorax Rib Deflection	mm	35 to 43	40.2	Pass
Peak Upper Spine Y Acceleration	G's	13 to 17	14.5	Pass
Peak Lower Spine Y Acceleration	G's	7 to 11	10.4	Pass
Peak Impactor Acceleration	G's	14 to 18	16.4	Pass
Overall Test Results				Pass



Curve Description			
Upper Thorax Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
36.3	22.6	0.0	-11.5
Middle Thorax Deflection			
Max	Time	Min	Time
42.3	22.9	0.0	-16.6
Lower Thorax Deflection			
Max	Time	Min	Time
40.2	24.0	0.0	-16.4



Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
14.5	18.2	-5.9	50.5
Curve Description			
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
10.4	16.4	-3.9	51.4



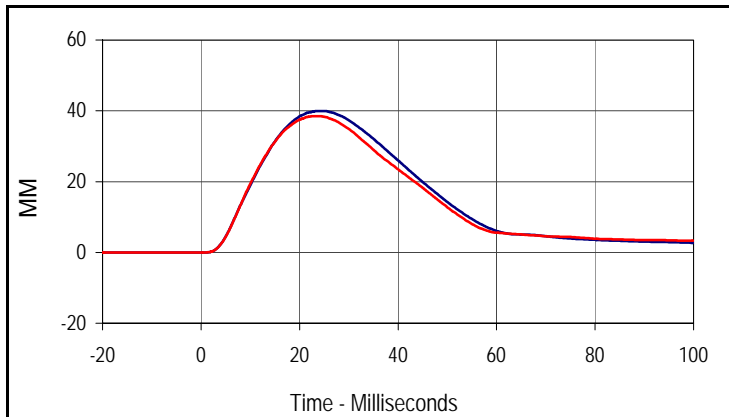
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
16.4	20.8	-0.3	63.4

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

Test Date: 4/14/15  
 Test I.D.: 299ABD085



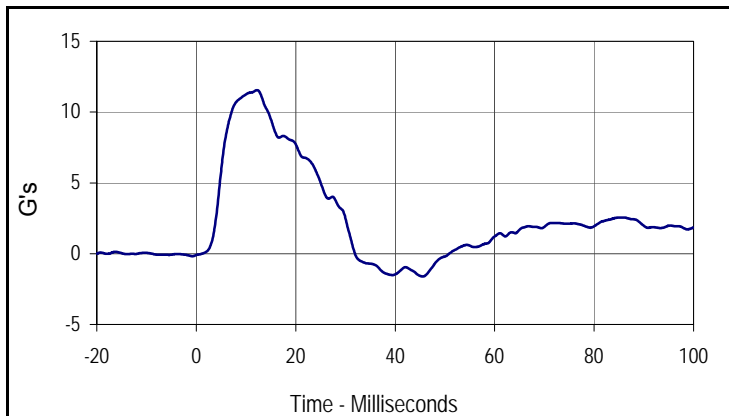
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	545	Pass
Temperature During Soak	Max	20.6 to 22.2	21.4	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	34.1	Pass
	Min		33.7	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.4	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	34.0	Pass
Impactor Velocity	m/s	4.2 to 4.4	4.37	Pass
Peak Upper Abdominal Rib Deflection	mm	36 to 47	40.0	Pass
Peak Lower Abdominal Rib Deflection	mm	33 to 44	38.5	Pass
Peak Lower Spine Y Acceleration	G's	9 to 14	11.6	Pass
Peak Impactor Acceleration	G's	12 to 16	15.5	Pass
Overall Test Results				Pass



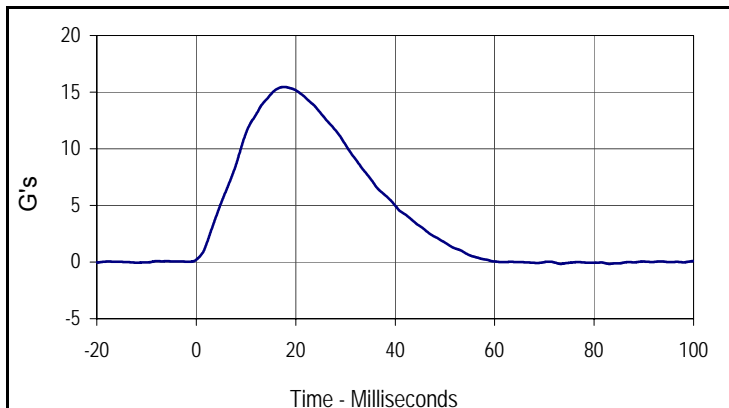
Curve Description			
Upper Abdominal Rib Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
40.0	24.2	0.0	-12.4

Curve Description			
Lower Abdominal Rib Deflection			
Plot No.	Type	SAE Class	Units
002	FIL	600	MM
Max	Time	Min	Time
38.5	23.3	0.0	-12.4

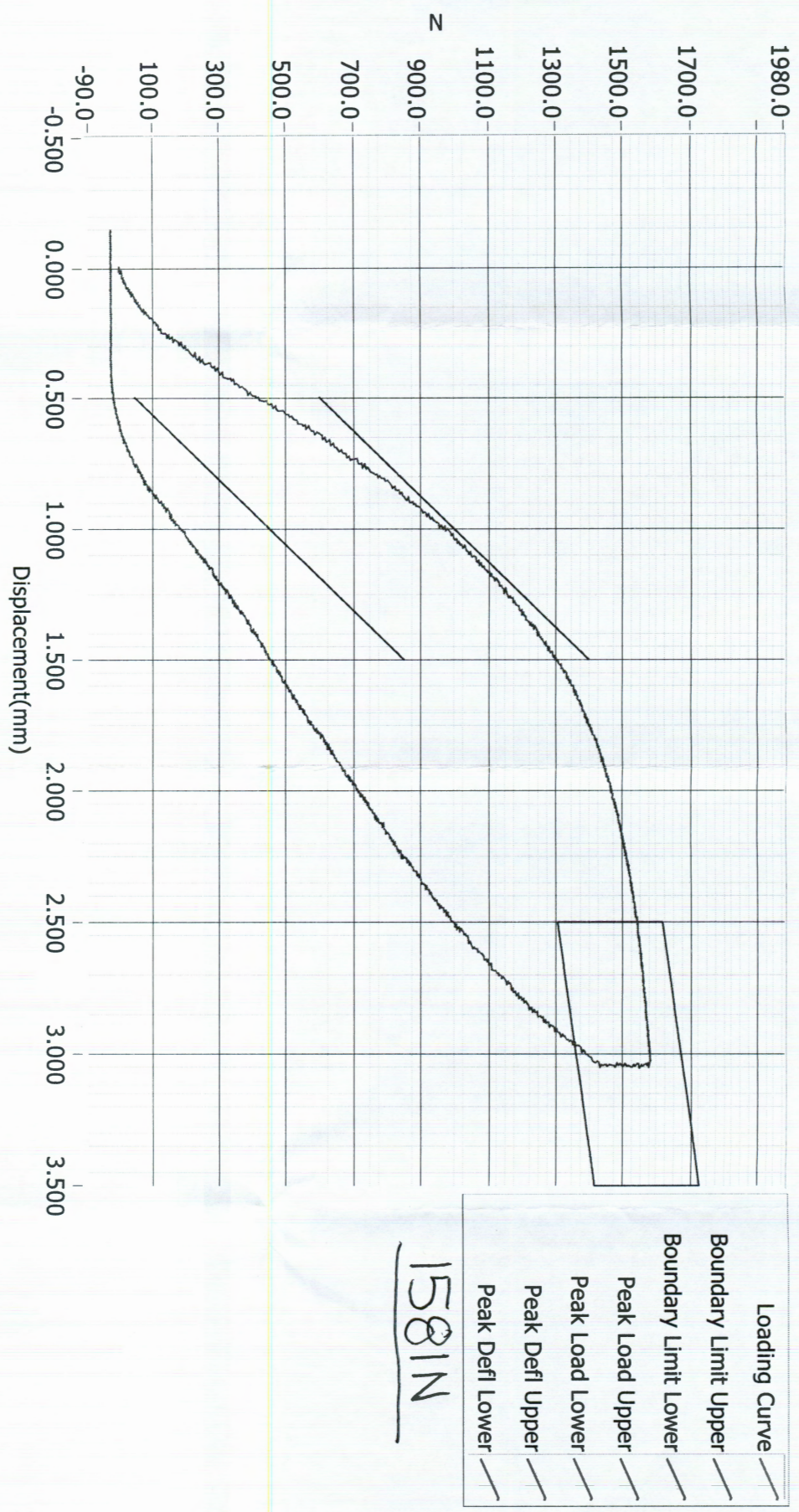


Curve Description			
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
11.6	12.2	-1.6	45.5



Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
15.5	17.6	-0.2	73.3

# Resultant Data - SIDIIS Plug Compression



## ATD Calibration Lab

M20150207 Pre Test

Test ID	Part Serial Number	Test Date	Test Time
	70951	12/13/2013	8:54 PM
Cert ID	ATD Serial Number	ATD Type	
	N/A	SIDIIS	

Current Date : 12/13/2013

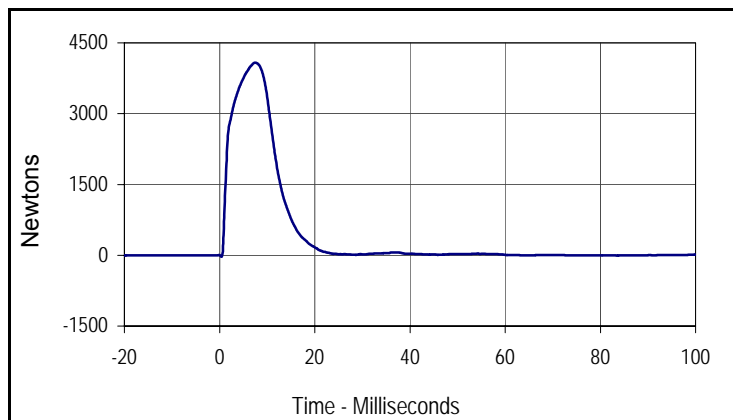
Current Time : 20:54:43

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

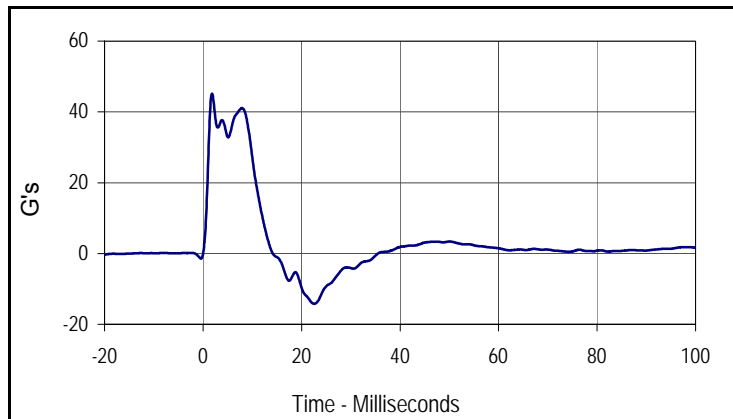
Test Date: 4/14/15  
 Test I.D.: 299ACET085



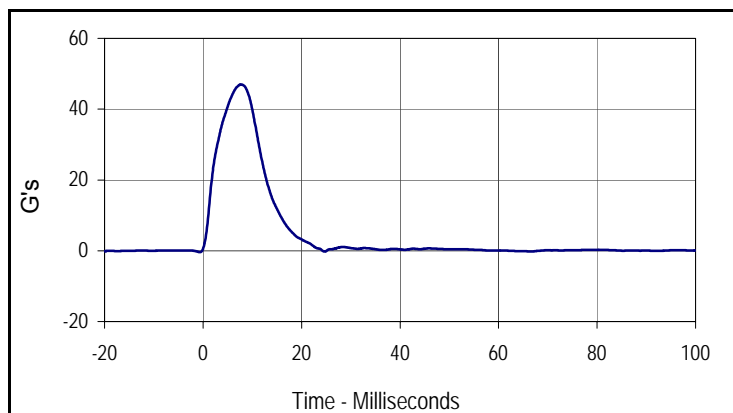
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	590	Pass
Temperature During Soak	Max	20.6 to 22.2	21.4	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	34.1	Pass
	Min		33.7	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.4	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	34.1	Pass
Impactor Velocity	m/s	6.6 to 6.8	6.61	Pass
Peak Acetabulum Force Y	Newtons	3600 to 4300	4081.0	Pass
Peak Pelvis Y Acceleration After 6 msec.	G's	34 to 42	41.1	Pass
Peak Impactor Acceleration	G's	38 to 47	47.0	Pass
Overall Test Results				Pass



Curve Description			
Pelvis Acetabulum Force			
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
4081.0	7.4	-26.7	0.4



Curve Description			
Pelvis Y Acceleration			
Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
45.2	1.8	-14.2	22.6



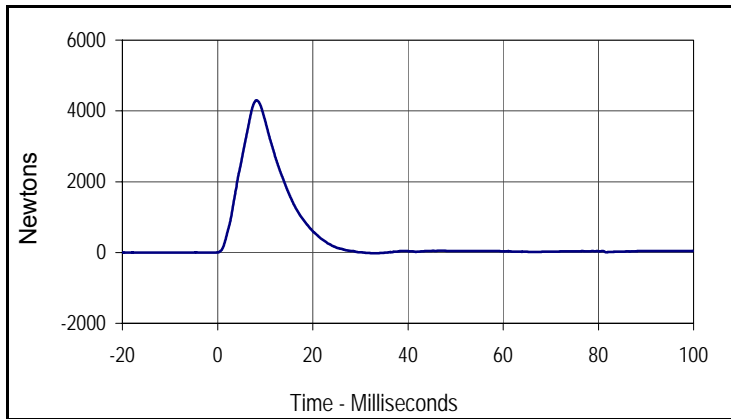
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
47.0	7.7	-0.4	-0.7

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

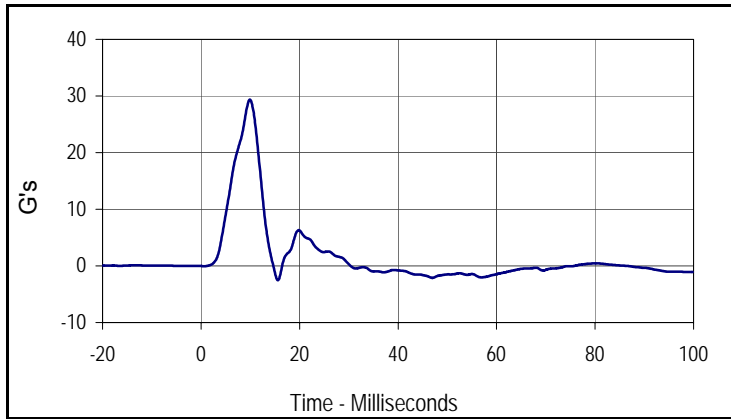
Test Date: 4/14/15  
 Test I.D.: 299PL085



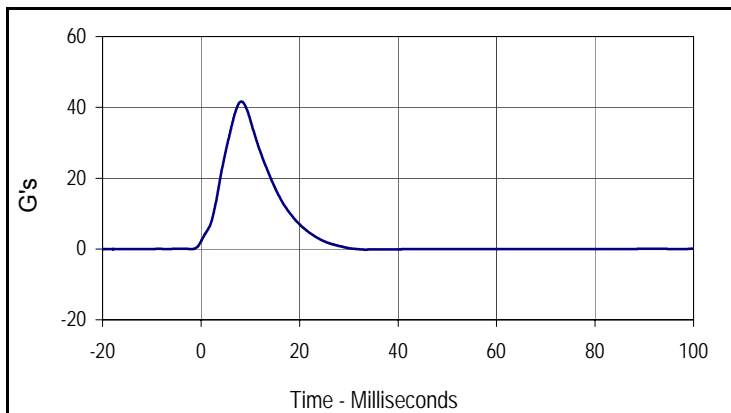
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	635	Pass
Temperature During Soak	Max	20.6 to 22.2	21.4	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	34.1	Pass
	Min		33.7	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.4	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	34.0	Pass
Impactor Velocity	m/s	4.2 to 4.4	4.28	Pass
Peak Iliac Force	Newtons	4100 to 5100	4298.3	Pass
Peak Pelvis Y Acceleration	G's	28 to 39	29.4	Pass
Peak Impactor Acceleration	G's	36 to 45	41.6	Pass
Overall Test Results				Pass



Curve Description			
Pelvis Iliac Force			
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
4298.3	8.2	-19.7	33.0



Curve Description			
Pelvis Y Acceleration			
Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
29.4	9.9	-2.5	15.6



Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
41.6	8.2	-0.2	33.4

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

Test Program: SID IIs External Measurements

Test Date: 4/2J/15



ATD Serial No.: 299

Test I.D.: N/A

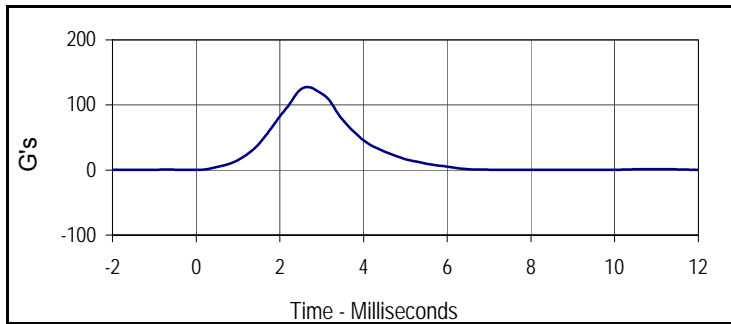
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.2	Pass
Laboratory Relative Humidity	%	10 to 70	21	Pass
A Sitting Height	mm	772 - 788	780	Pass
B Shoulder Pivot Height	mm	437 - 453	445	Pass
C H-Point Height	mm	79 - 89	85	Pass
D H-Point from Seatback	mm	141 - 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

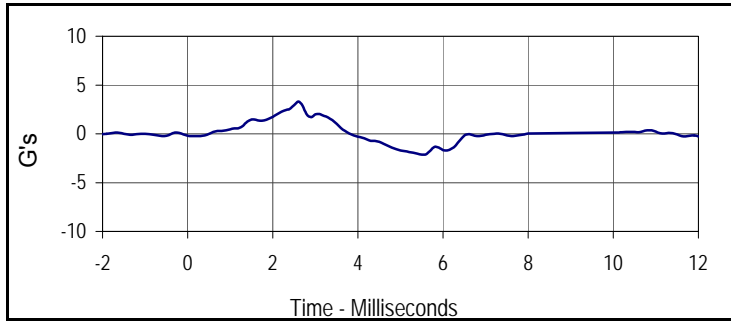
Test Date: 4/2J/15  
 Test I.D.: 299HD086



Tested Parameter	Units	Specification	Result	Pass/Fail
Head Assembly Soak Time	Minutes	≥240	362	Pass
Temperature During Soak	Max	18.9 to 25.6	21.6	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	21.7	Pass
	Min		21.1	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.6	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	21.1	Pass
Peak Head Resultant Acceleration	G's	115 to 137	127.2	Pass
Peak Head X Acceleration	G's	<15	3.3	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Oscillations After Main Pulse	%	<15	0.6	Pass
Overall Test Results				Pass



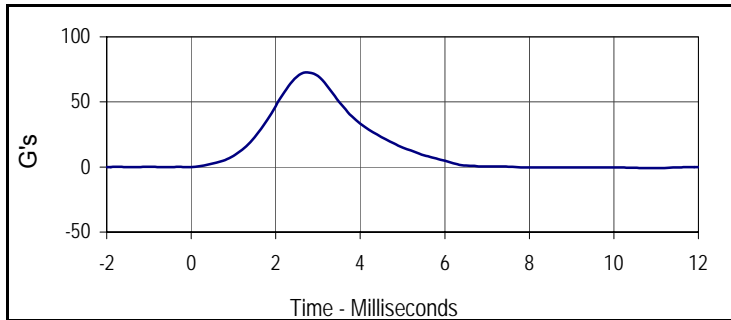
Curve Description			
Head Resultant			
Plot No.	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
127.2	2.6	0.0	-7.0



Curve Description			
Head X			
Plot No.	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
3.3	2.6	-2.1	5.5



Curve Description			
Head Y			
Plot No.	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
105.0	2.6	-0.5	6.9



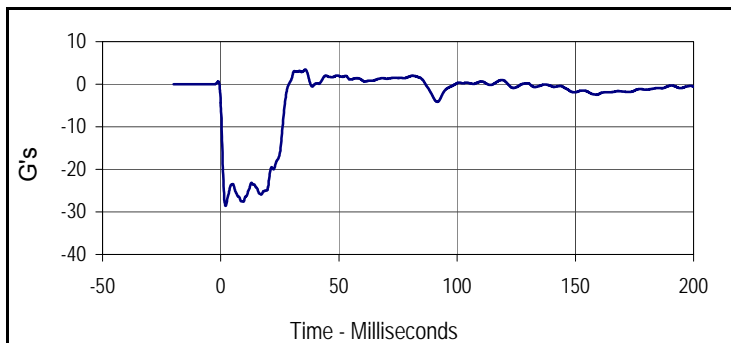
Curve Description			
Head Z			
Plot No.	Type	SAE Class	Units
004	FIL	1000	G's
Max	Time	Min	Time
72.6	2.7	-0.9	10.7

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

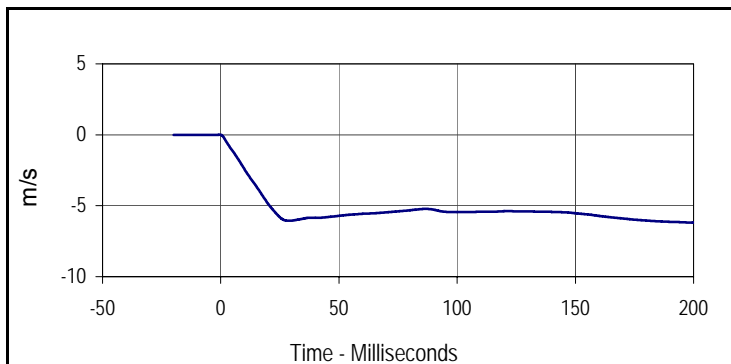
Test Date: 4/29/15  
 Test I.D.: 299NB086



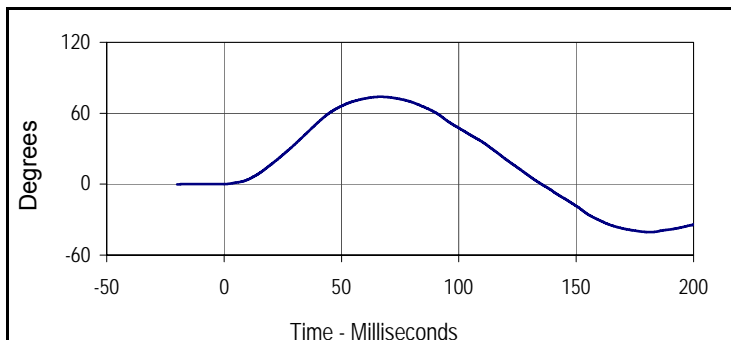
Tested Parameter	Units	Specification	Result	Pass/Fail	
Neck Assembly Soak Time	Minutes	≥240	407	Pass	
Temperature During Soak	Max	20.6 to 22.2	21.6	Pass	
	Min		21.2	Pass	
Humidity During Soak	Max	10.0 to 70.0	21.7	Pass	
	Min		21.1	Pass	
Laboratory Temperature During Test	°C	20.6 to 22.2	21.2	Pass	
Laboratory Humidity During Test	%	10.0 to 70.0	21.2	Pass	
Pendulum Velocity	m/s	5.51 to 5.63	5.61	Pass	
Pendulum Deceleration	10 msec	m/s	-2.20 to -2.80	-2.42	Pass
	15 msec	m/s	-3.30 to -4.10	-3.62	Pass
	20 msec	m/s	-4.40 to -5.40	-4.86	Pass
	25 msec	m/s	-5.40 to -6.10	-5.81	Pass
	25-100 msec	m/s	-5.50 to -6.20	-6.06	Pass
D-Plane Rotation	Max	Degrees	71 to 81	73.9	Pass
	Time	msec	50 to 70	66.7	Pass
Peak Occipital Condyle Moment	Nm	-36 to -44	-37.2	Pass	
Decaying Moment Time to Cross 0 Nm	msec	102 to 126	116.7	Pass	
Overall Test Results			Pass	Pass	



Curve Description			
Pendulum Deceleration			
Plot No.	Type	SAE Class	Units
001	FIL	180	G's
Max	Time	Min	Time
3.5	0.0	-28.6	0.0



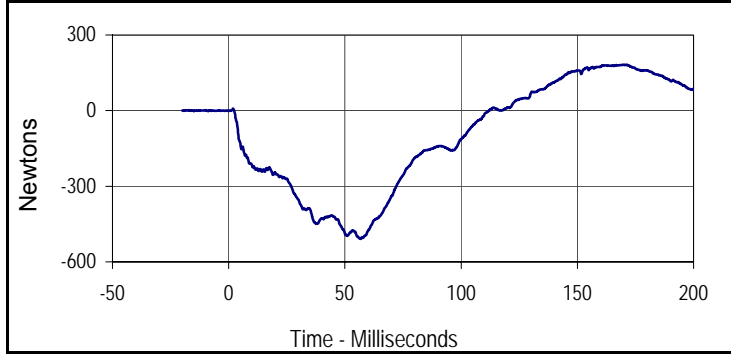
Curve Description			
Pendulum Velocity			
Plot No.	Type	SAE Class	Units
002	FIL	180	m/s
Max	Time	Min	Time
0.0	-0.6	-6.2	199.9



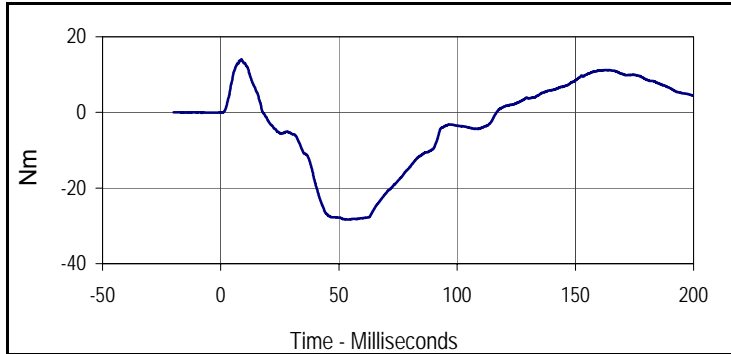
Curve Description			
D-Plane Rotation			
Plot No.	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
73.9	66.7	-40.6	181.5

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

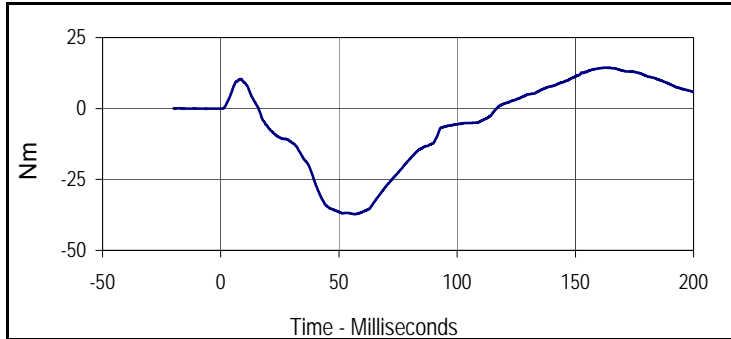
Test Date: 4/29/15  
 Test I.D.: 299NB086



Curve Description			
Neck Force Y			
Plot No.	Type	SAE Class	Units
004	FIL	600	Newtons
Max	Time	Min	Time
181.9	171.1	-509.2	56.7



Curve Description			
Neck Moment X			
Plot No.	Type	SAE Class	Units
005	FIL	600	Nm
Max	Time	Min	Time
14.1	8.7	-28.3	53.8



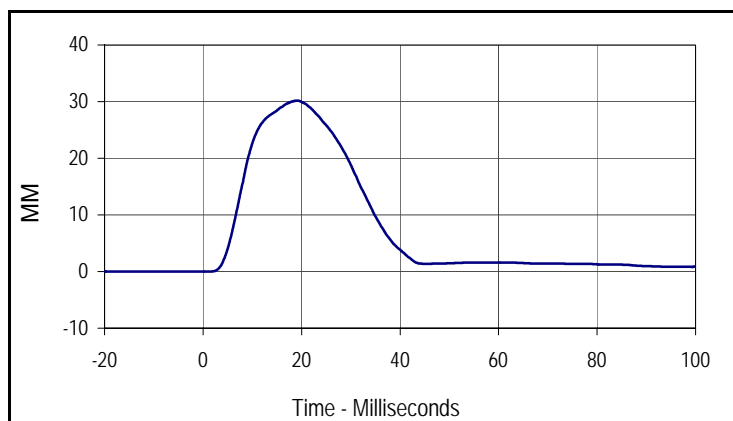
Curve Description			
Moment About Occipital Condyle			
Plot No.	Type	SAE Class	Units
006	FIL	600	Nm
Max	Time	Min	Time
14.4	162.4	-37.2	56.8

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

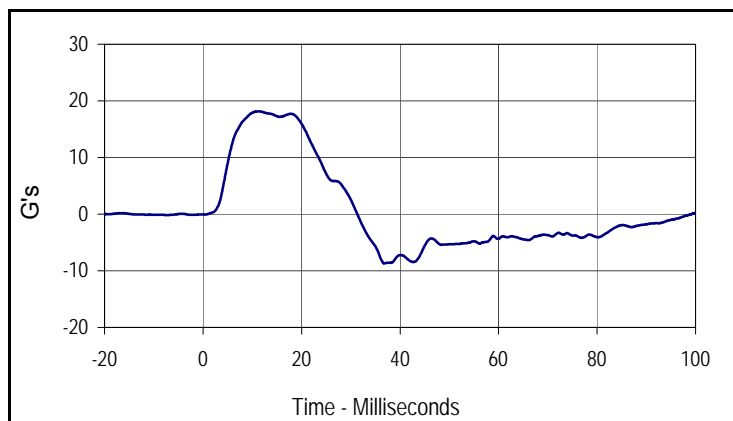
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 Test I.D.: 299SH086



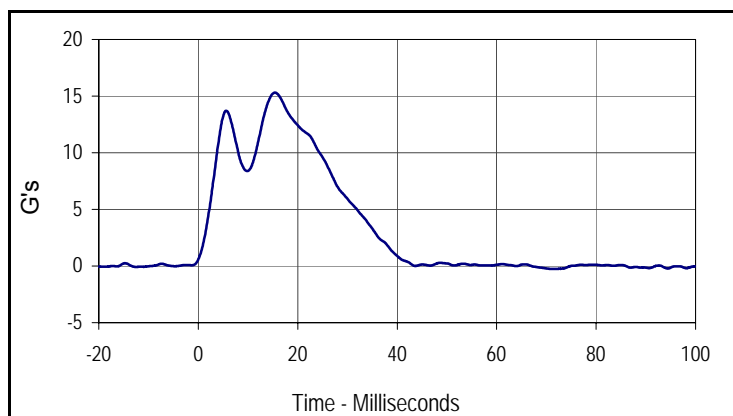
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	452	Pass
Temperature During Soak	Max	20.6 to 22.2	21.6	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	21.7	Pass
	Min		21.1	Pass
Laboratory Temperature During Test	°C	20.6 to 22.2	21.2	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	21.4	Pass
Impactor Velocity	m/s	4.20 to 4.40	4.39	Pass
Peak Shoulder Deflection	mm	28 to 37	30.2	Pass
Peak Lateral Spine Acceleration Y	G's	17 to 22	18.1	Pass
Peak Impactor Acceleration	G's	13 to 18	15.3	Pass
Overall Test Results			Pass	Pass



Curve Description			
Shoulder Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
30.2	19.1	0.0	-19.6



Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
18.1	11.2	-8.7	36.8



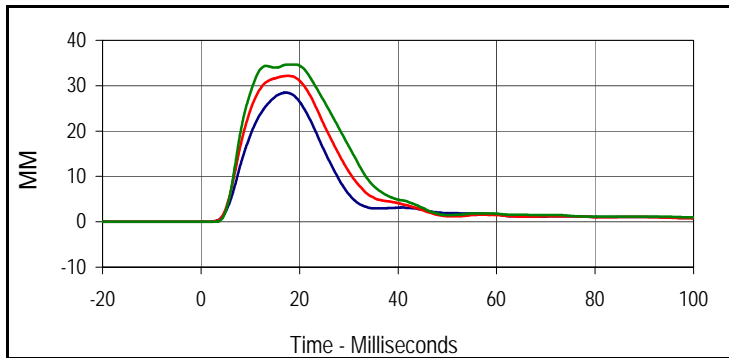
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
15.3	15.4	-0.3	71.7

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

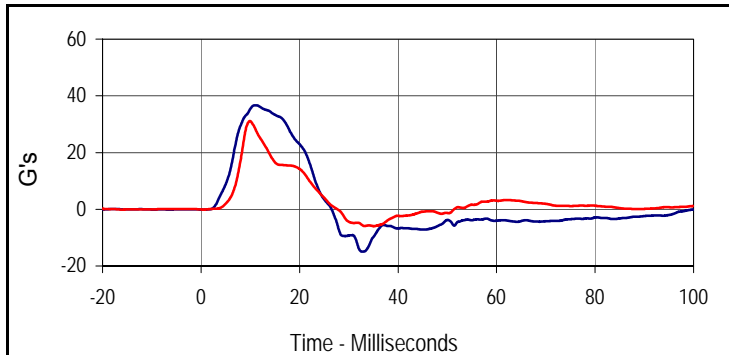
Test Date: 4/29/15  
 Test I.D.: 299TWA086



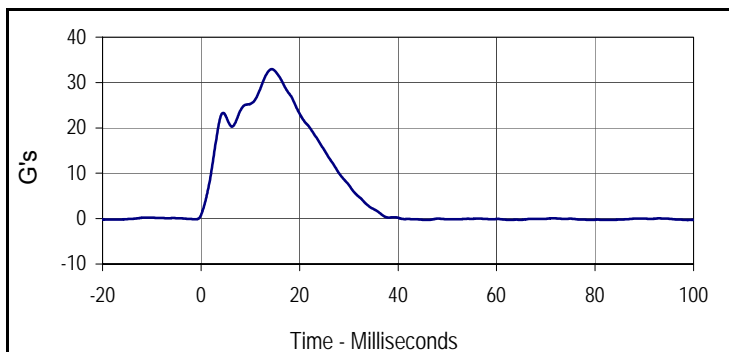
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	497	Pass
Temperature During Soak	Max	20.6 to 22.2	21.6	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	21.7	Pass
	Min		21.1	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	21.5	Pass
Impactor Velocity	m/s	6.6 to 6.8	6.73	Pass
Peak Shoulder Deflection	mm	31 to 40	35.8	Pass
Peak Upper Thorax Rib Deflection	mm	25 to 32	28.5	Pass
Peak Middle Thorax Rib Deflection	mm	30 to 36	32.2	Pass
Peak Lower Thorax Rib Deflection	mm	32 to 38	34.6	Pass
Peak Upper Spine Y Acceleration	G's	34 to 43	36.7	Pass
Peak Lower Spine Y Acceleration	G's	29 to 37	31.1	Pass
Peak Impactor Acceleration	G's	30 to 36	32.9	Pass
<b>Overall Test Results</b>				<b>Pass</b>



Curve Description			
<b>Upper Thorax Deflection</b>			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
28.5	17.2	0.0	-16.2
<b>Middle Thorax Deflection</b>			
Max	Time	Min	Time
32.2	17.7	0.0	-15.2
<b>Lower Thorax Deflection</b>			
Max	Time	Min	Time
34.6	17.5	0.0	-20.0



Curve Description			
<b>Upper Spine Y Acceleration</b>			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
36.7	11.2	-14.9	32.9
<b>Lower Spine Y Acceleration</b>			
Plot No.	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
31.1	9.9	-6.0	35.1



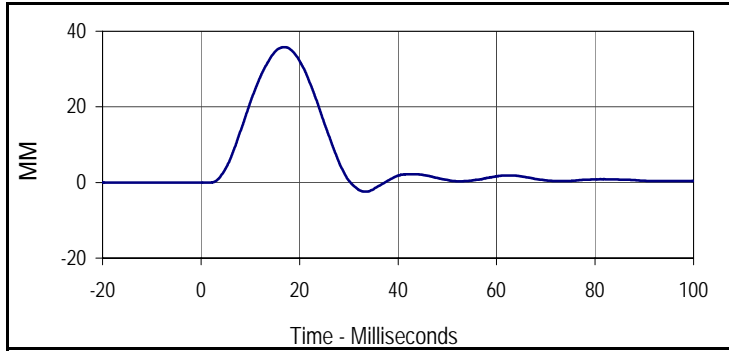
Curve Description			
<b>Impactor Acceleration</b>			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
32.9	14.3	-0.3	98.8

Test Program: SID IIs Thorax with Arm Impact Test

ATD Serial No.: 299

Test Date: 4/29/15

Test I.D.: 299TWA086



Curve Description			
Shoulder Deflection			
Plot No.	Type	SAE Class	Units
007	FIL	600	MM
Max	Time	Min	Time
35.8	16.9	-2.4	33.6

Test Program: SID IIs Thorax without Arm Impact Test

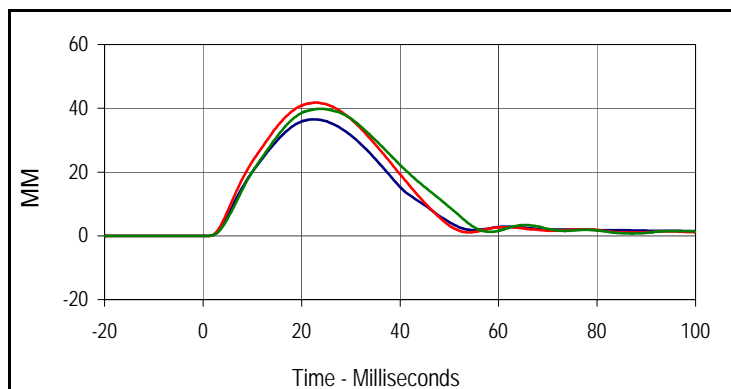
Test Date: 4/29/15



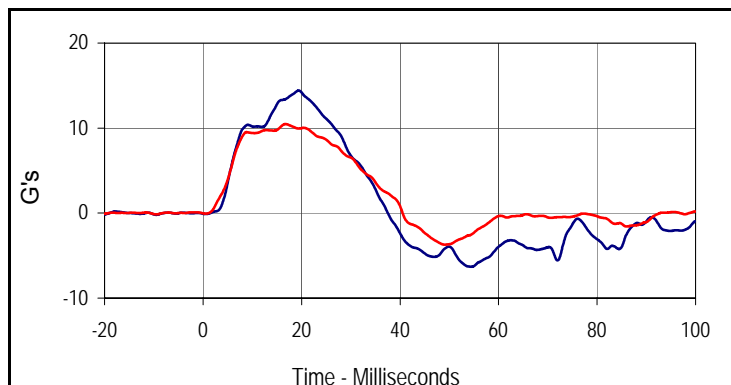
ATD Serial No.: 299

Test I.D.: 299TWOA086

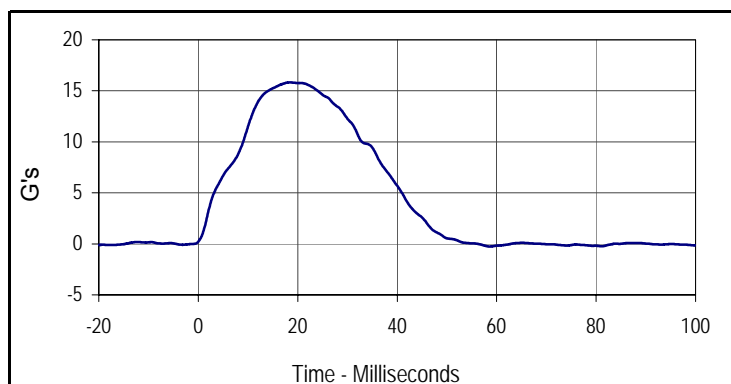
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	542	Pass
Temperature During Soak	Max	18.9 to 25.6	21.6	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	21.7	Pass
	Min		21.1	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	21.5	Pass
Impactor Velocity	m/s	4.2 to 4.4	4.32	Pass
Peak Upper Thorax Rib Deflection	mm	32 to 40	36.5	Pass
Peak Middle Thorax Rib Deflection	mm	39 to 45	41.8	Pass
Peak Lower Thorax Rib Deflection	mm	35 to 43	39.8	Pass
Peak Upper Spine Y Acceleration	G's	13 to 17	14.4	Pass
Peak Lower Spine Y Acceleration	G's	7 to 11	10.5	Pass
Peak Impactor Acceleration	G's	14 to 18	15.8	Pass
Overall Test Results				Pass



Curve Description			
Upper Thorax Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
36.5	22.5	0.0	-16.8
Middle Thorax Deflection			
Max	Time	Min	Time
41.8	22.9	-0.1	-16.6
Lower Thorax Deflection			
Max	Time	Min	Time
39.8	23.7	0.0	-19.0



Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
14.4	19.4	-6.3	54.5
Curve Description			
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
10.5	16.7	-3.7	49.0



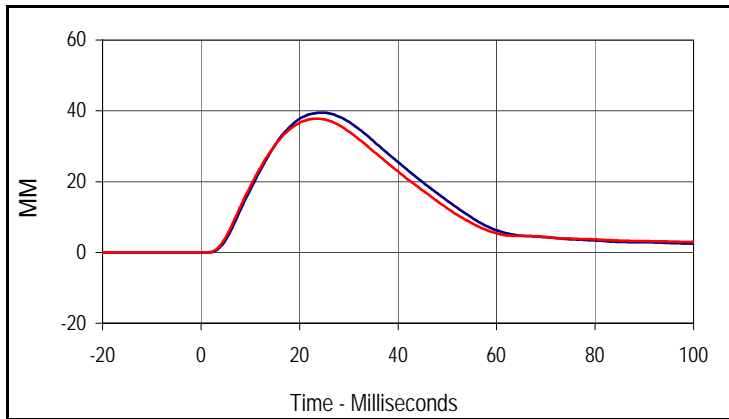
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
15.8	18.4	-0.3	58.6

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

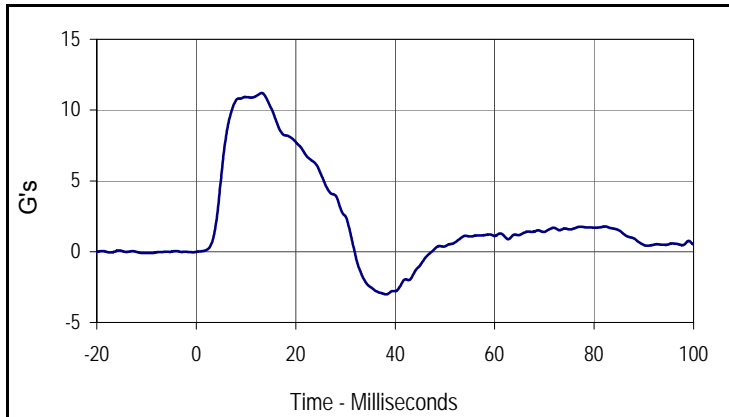
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 Test I.D.: 299ABD086



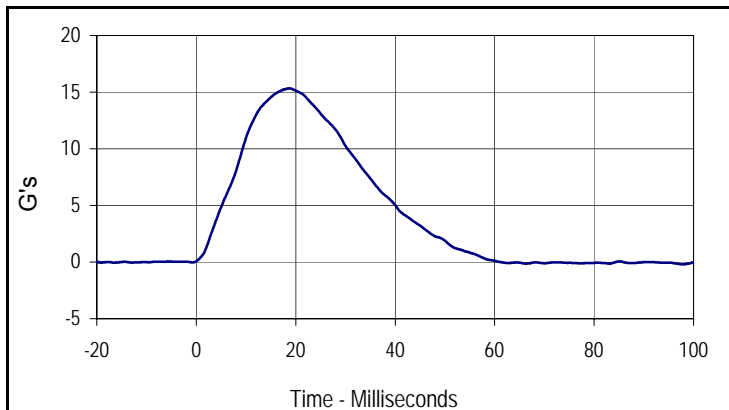
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	587	Pass
Temperature During Soak	Max	20.6 to 22.2	21.6	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	21.7	Pass
	Min		21.1	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.6	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	21.7	Pass
Impactor Velocity	m/s	4.2 to 4.4	4.36	Pass
Peak Upper Abdominal Rib Deflection	mm	36 to 47	39.5	Pass
Peak Lower Abdominal Rib Deflection	mm	33 to 44	37.7	Pass
Peak Lower Spine Y Acceleration	G's	9 to 14	11.2	Pass
Peak Impactor Acceleration	G's	12 to 16	15.3	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
39.5	24.4	0.0	-15.7
Curve Description			
Lower Abdominal Rib Deflection			
Plot No.	Type	SAE Class	Units
002	FIL	600	MM
Max	Time	Min	Time
37.7	23.2	0.0	-16.5

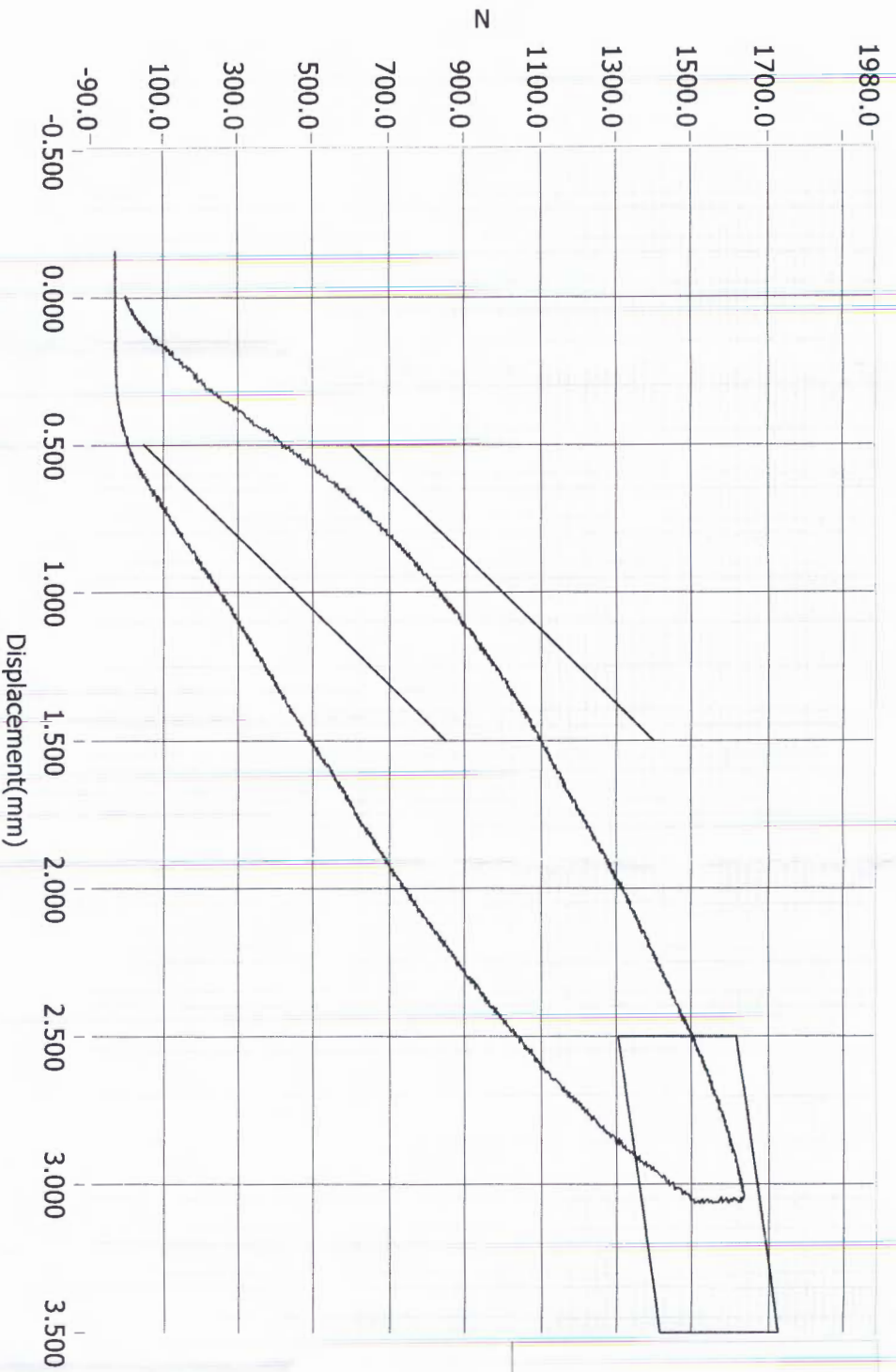


Curve Description			
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
11.2	13.2	-3.0	38.2



Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
15.3	18.7	-0.2	97.8

# Resultant Data - SIDIIs Plug Compression



- Loading Curve
- Boundary Limit Upper
- Boundary Limit Lower
- Peak Load Upper
- Peak Load Lower
- Peak Defl Upper
- Peak Defl Lower

1630N

## ATD Calibration Lab

M20150207 Post Test

Test ID	Part Serial Number	Test Date	Test Time
<u>Cert ID</u>	70730	12/12/2013	10:35 PM
	ATD Serial Number	ATD Type	
	N/A	SIDIIs	

Current Date : 12/12/2013

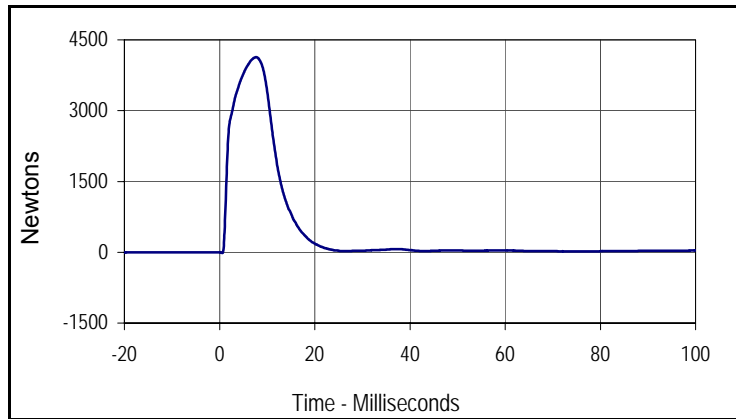
Current Time : 22:36:06

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

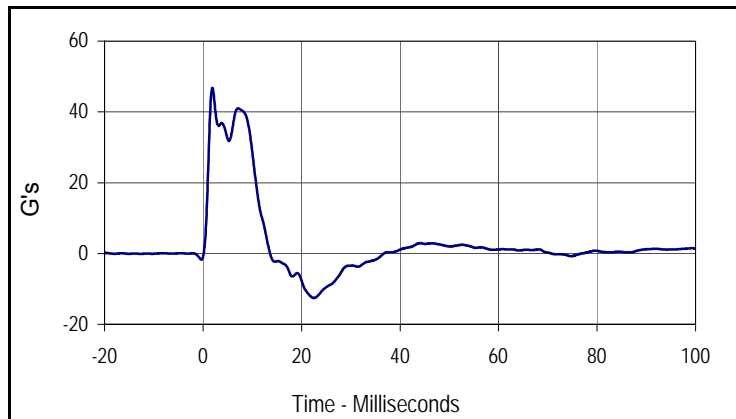
Test Date: 4/29/15  
 Test I.D.: 299ACET086



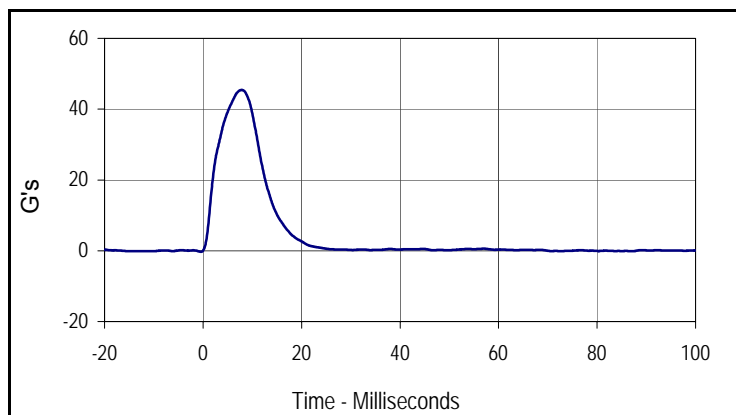
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	632	Pass
Temperature During Soak	Max	20.6 to 22.2	21.6	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	21.7	Pass
	Min		21.1	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	21.7	Pass
Impactor Velocity	m/s	6.6 to 6.8	6.69	Pass
Peak Acetabulum Force Y	Newtons	3600 to 4300	4133.1	Pass
Peak Pelvis Y Acceleration After 6 msec.	G's	34 to 42	41.0	Pass
Peak Impactor Acceleration	G's	38 to 47	45.4	Pass
Overall Test Results				Pass



Curve Description			
Pelvis Acetabulum Force			
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
4133.1	7.6	-18.3	0.6



Curve Description			
Pelvis Y Acceleration			
Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
46.8	1.9	-12.6	22.5



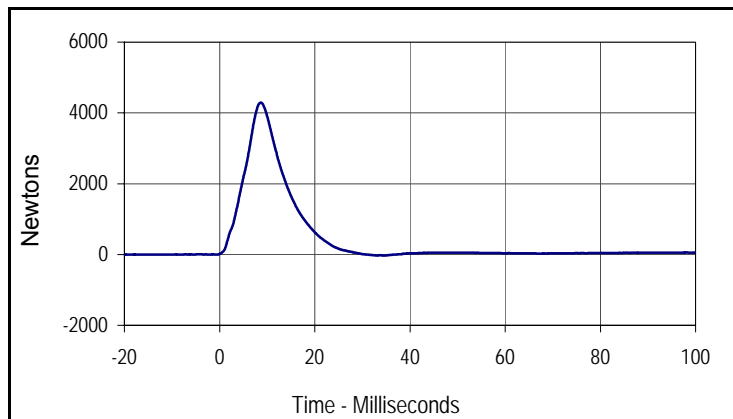
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
45.4	7.8	-0.3	-0.4

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

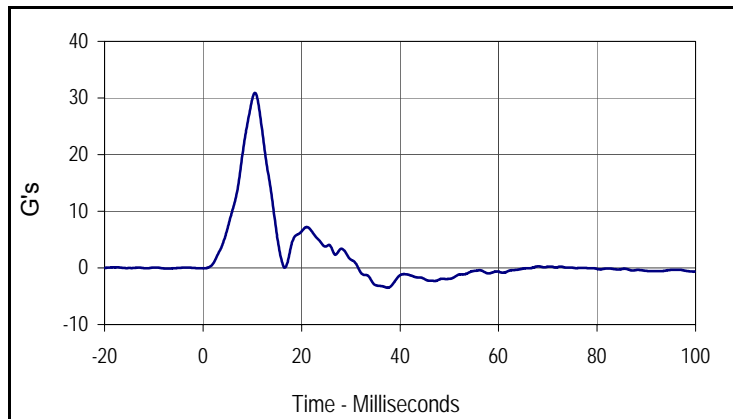
Test Date: 4/29/15  
 Test I.D.: 299PL086



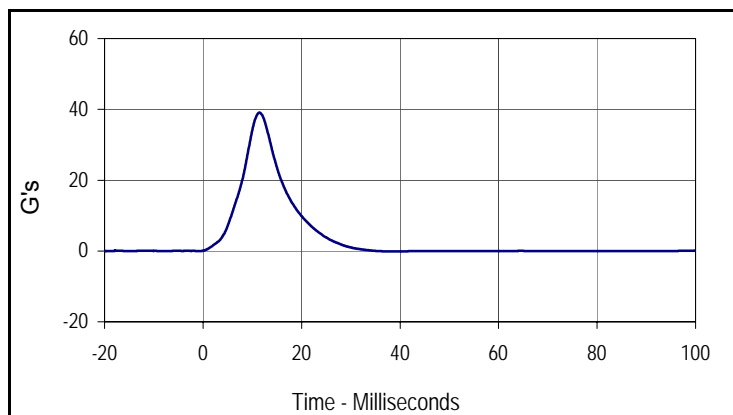
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	677	Pass
Temperature During Soak	Max	20.6 to 22.2	21.6	Pass
	Min		21.2	Pass
Humidity During Soak	Max	10.0 to 70.0	21.7	Pass
	Min		21.1	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.2	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	21.6	Pass
Impactor Velocity	m/s	4.2 to 4.4	4.32	Pass
Peak Iliac Force	Newtons	4100 to 5100	4291.8	Pass
Peak Pelvis Y Acceleration	G's	28 to 39	30.9	Pass
Peak Impactor Acceleration	G's	36 to 45	39.1	Pass
Overall Test Results				Pass



Curve Description			
Pelvis Iliac Force			
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
4291.8	8.7	-28.1	33.2



Curve Description			
Pelvis Y Acceleration			
Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
30.9	10.5	-3.5	37.5



Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
39.1	11.5	-0.1	37.3

**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	P58736	Endevco	4/3/15
			Y	P51929	Endevco	4/3/15
			Z	P51934	Endevco	4/3/15
	Redundant		X	P68604	Endevco	4/3/15
			Y	P51931	Endevco	4/3/15
			Z	P51939	Endevco	4/3/15
Displacement Potentiometers	Thoracic Rib	Upper	Y	1143	FTSS	4/6/15
		Middle	Y	1160	FTSS	4/6/15
		Lower	Y	1213	FTSS	4/6/15
	Abdominal Rib	Upper	Y	1218	FTSS	4/6/15
		Lower	Y	1234	FTSS	4/6/15
Lower Spine Accelerometers (T12)			X	04I20-Z04	Endevco	4/6/15
			Y	06A07-R08	Endevco	4/6/15
			Z	P58795	Endevco	4/6/15
Acetabulum Load Cell			Y	272	Denton	5/1/14
Iliac Wing Load Cell			Y	284	Denton	5/1/14
Pelvis Plug (Struck Side)				70742	FTSS	12/12/13
Pelvis Plug (Non-Struck Side)				70684	FTSS	12/12/13

**TABLE 2 – Vehicle Instrumentation**

Vehicle Instrumentation		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	A145437	MSI	3/20/15
Vehicle Center of Gravity	Y	A145525	MSI	3/20/15
Vehicle Center of Gravity	Z	A145477	MSI	3/20/15
Left Floor Sill	Y	A145449	MSI	3/21/15
A-Pillar Sill	Y	A148196	MSI	3/19/15
A-Pillar Low	Y	A147462	MSI	3/19/15
A-Pillar Mid	Y	A148242	MSI	3/19/15
B-Pillar Sill	Y	A145494	MSI	3/19/15
B-Pillar Low	Y	A145442	MSI	3/19/15
B-Pillar Mid	Y	A145937	MSI	3/21/15
Driver Seat	Y	A152858	MSI	3/20/15
Engine Top	X	A145984	MSI	3/21/15
Engine Top	Y	A145526	MSI	3/21/15
Firewall	Y	A148217	MSI	3/21/15
Right Roof	Y	A145992	MSI	3/21/15
Right Floor Sill	Y	A147479	MSI	3/21/15
Rear Floorpan	X	A145441	MSI	3/19/15
Rear Floorpan	Y	A147460	MSI	3/19/15

**TABLE 3 – Pole Instrumentation**

	Serial Number	Manufacturer	Calibration Date
Load Cell 1	131822A	Interface	3/30/15
Load Cell 2	132304A	Interface	3/30/15
Load Cell 3	19477	Interface	3/30/15
Load Cell 4	19325	Interface	3/30/15
Load Cell 5	131827A	Interface	3/30/15
Load Cell 6	132302A	Interface	3/30/15
Load Cell 7	19267	Interface	3/30/15
Load Cell 8	19321	Interface	3/30/15