

REPORT NUMBER: SPNCAP-KAR-14-004

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

**NISSAN MOTOR CO., LTD
2014 INFINITI Q50 3.7 PREMIUM 4-DOOR SEDAN**

NHTSA No: M20145201

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



NOVEMBER 26, 2013

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
OFFICE OF CRASHWORTHINESS STANDARDS
MAIL CODE: NVS-111
1200 NEW JERSEY AVE, SE, ROOM W43-410
WASHINGTON, D.C. 20590**

TECHNICAL REPORT DOCUMENTATION PAGE

1. Report No. SPNCAP-KAR-14-004		2. Government Accession No.		3. Recipient's Catalog No.																												
4. Title and Subtitle Final Report of New Car Assessment Program Side Impact Pole Testing of 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201				5. Report Date November 26, 2013																												
				6. Performing Organization Code KAR																												
7. Authors Mr. Steven D. Matsusaka, Engineering Department Supervisor, KARCO Mr. Frank Richardson, Program Manager, KARCO				8. Performing Organization Report No. TR-P33004-07-NC																												
9. Performing Organization Name and Address KARCO Engineering, LLC. 9270 Holly Rd. Adelanto, CA 92301				10. Work Unit No.																												
				11. Contract or Grant No. DTNH22-09-D-00122																												
12. Sponsoring Agency Name and Address U. S. Department of Transportation National Highway Traffic Safety Administration Office of Crashworthiness Standards (NVS-111) 1200 New Jersey Ave., SE, Room W43-410 Washington, D.C. 20590				13. Type of Report and Period Covered Final Test Report, November 12 - 26, 2013																												
				14. Sponsoring Agency Code NVS-111																												
15. Supplementary Notes																																
16. Abstract A 32.2 km/h (20 mph) 75 deg. oblique impact Side NCAP Test was conducted on the subject 2014 Infiniti Q50 3.7 Premium 4-door sedan in accordance with the specifications of the Office of Crashworthiness Standards Side NCAP Pole Laboratory Test Procedure for the generation of consumer information on vehicle side pole crash protection. The test was conducted at the KARCO Engineering, LLC. facility in Adelanto, California on November 12, 2013. The impact velocity was 31.85 km/h and the outside ambient temperature at the struck (driver's) side of the vehicle was 21.1 deg. C. The target vehicle's maximum post-test static crush was 479 mm located at level 3. The test vehicle's occupant performance data is as follows: <table border="1"> <thead> <tr> <th rowspan="2">Measurement Description</th> <th colspan="3">Driver ATD (ES-2re)</th> </tr> <tr> <th>Units</th> <th>Threshold</th> <th>Result</th> </tr> </thead> <tbody> <tr> <td>Head Injury Criteria (HIC₃₆)</td> <td></td> <td>1000</td> <td>190.4</td> </tr> <tr> <td>Resultant Lower Spine Acceleration</td> <td>g</td> <td>82</td> <td>36.3</td> </tr> <tr> <td>Total Pelvic Force (Sum of Acetabular and Iliac Forces)</td> <td>N</td> <td>5525</td> <td>2818</td> </tr> <tr> <td>Maximum Thoracic Rib Deflection</td> <td>mm</td> <td>38</td> <td>16</td> </tr> <tr> <td>Maximum Abdominal Rib Deflection</td> <td>mm</td> <td>45</td> <td>12</td> </tr> </tbody> </table> The two doors on the struck side of the vehicle did not separate from the body at the hinges or latches. The opposite doors did not open during the side impact event.						Measurement Description	Driver ATD (ES-2re)			Units	Threshold	Result	Head Injury Criteria (HIC ₃₆)		1000	190.4	Resultant Lower Spine Acceleration	g	82	36.3	Total Pelvic Force (Sum of Acetabular and Iliac Forces)	N	5525	2818	Maximum Thoracic Rib Deflection	mm	38	16	Maximum Abdominal Rib Deflection	mm	45	12
Measurement Description	Driver ATD (ES-2re)																															
	Units	Threshold	Result																													
Head Injury Criteria (HIC ₃₆)		1000	190.4																													
Resultant Lower Spine Acceleration	g	82	36.3																													
Total Pelvic Force (Sum of Acetabular and Iliac Forces)	N	5525	2818																													
Maximum Thoracic Rib Deflection	mm	38	16																													
Maximum Abdominal Rib Deflection	mm	45	12																													
17. Key Words New Car Assessment Program (NCAP) Side Impact Pole Part 572V SID-IIs				18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Admin. Technical Information Services Division, NP-411 1200 New Jersey Ave., SE Room W43-410 Washington, DC 20590 e-mail: tis@nhtsa.dot.gov FAX: 202-493-2833																												
19. Security Classification of this report UNCLASSIFIED		20. Security Classification of this page UNCLASSIFIED		21. No. of Pages 102																												
				22. Price																												

TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
1	Test Purpose and Procedure	1
2	Summary of Test Results	2
3	Occupant and Vehicle Information / Data Sheets	4
<u>Data Sheet</u>		<u>Page</u>
1	General Test and Vehicle Parameter Data	5
2	Seat, Seat Belt, Steering Wheel Adjustment and Fuel System Data	9
3	Dummy Longitudinal Clearance Dimensions	13
4	Dummy Lateral Clearance Dimensions	14
5	Camera and Instrumentation Data	15
6	Test Vehicle Accelerometer Locations	16
7	Rigid Pole Load Cell Data	17
8	Post-Test Observations	18
9	Test Vehicle Profile Measurements	20
10	Test Vehicle Exterior Crush Measurements	21
11	Vehicle Damage Profile Distances	24
12	FMVSS No. 301 Static Rollover Results	25
13	Dummy/Vehicle Temperature and Humidity Stabilization	26
<u>Appendix</u>		<u>Page</u>
A	Photographs	A
B	Vehicle and Dummy Response Data Plots	B
C	Dummy Configuration and Performance Verification Data	C
D	Test Equipment and Instrumentation Calibration Data	D

SECTION 1

TEST PURPOSE AND PROCEDURE

This side impact test is part of the MY 2014 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under contract number DTNH22-09-D-00122. The purpose of this test is to generate comparative side impact performance in a 2014 Infiniti Q50 3.7 Premium 4-door sedan. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Laboratory Test Procedure dated September 2013.

SECTION 2

SUMMARY OF TEST RESULTS

A rigid pole side impact test was conducted on a 2014 Infiniti Q50 3.7 Premium 4-door sedan. The subject vehicle was towed into the rigid pole at an angle of 75.7° and a velocity of 31.85 km/h. The test was conducted by KARCO Engineering, LLC. in Adelanto, California on November 12, 2013. Pre- and post-test photographs of the test vehicle and side impact dummy (SID-IIs) are included in Appendix A of this report.

One Part 572V (SID-IIs) dummy was placed in the driver designated seating position according to instructions specified in the OCWS Side NCAP Pole Laboratory Test Procedure, dated September 2013. Camera locations and other pertinent camera information are included in this report.

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

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

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

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

Measurement Description	Units	Passenger ATD (SID-IIs)	
		IARV	Result
Head Injury Criteria (HIC ₃₆)		1000	190.4
Lower Spine (T12) Resultant Acceleration	g	82	36
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	2818
Maximum Thoracic Rib Deflection	mm	38*	16
Maximum Abdominal Rib Deflection	mm	45*	12

*Proposed IARV

Supplemental restraint information is given below:

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

GENERAL COMMENTS

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

SECTION 3

OCCUPANT AND VEHICLE INFORMATION/DATA SHEETS

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13

CONVERSION FACTORS

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

DATA SHEET NO. 1

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
 Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA Number	M20145201
Model Year	2014
Make	Infiniti
Model	Q50 3.7 Premium
Body Style	4-Door Sedan
VIN	JN1BV7AP4EM673620
Body Color	Liquid Platinum
Odometer Reading (km / mi)	121 / 75
Engine Displacement (L)	3.7
Type / No. of Cylinders	V6
Engine Placement	Longitudinal
Transmission Type	Automatic
Transmission Speeds	7
Overdrive	Yes
Final Drive	Rear
Roof Rack	No
Sunroof / T-Top	Yes
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	No
Driver Front Airbag	Yes
Driver Curtain Airbag	Yes
Driver Head/Torso Airbag	No
Driver Torso Airbag	No
Driver Torso/Pelvis Airbag	Yes
Driver Pelvis Airbag	No
Driver Knee Airbag	No
Rear Pass. Curtain Airbag	Yes
Rear Pass. Head/Torso Airbag	No
Rear Pass. Torso Airbag	No
Rear Pass. Torso/Pelvis Airbag	No
Rear Pass. Pelvis Airbag	No
Driver Seat Belt Pretensioner	Yes
Rear Pass. Seat Belt Pretensioner	No
Driver Load Limiter	Yes
Rear Pass. Load Limiter	No
Other Safety Restraint	No

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

DATA FROM CERTIFICATION LABEL

Manufactured By	Nissan Motor Co., Ltd.
Date of Manufacture	Jun-13
Vehicle Type	Passenger Car

GVWR (kg)	2190
GAWR Front (kg)	1075
GAWR Rear (kg)	1125

VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total	
Designated Seating Capacity	2	3		5	
Capacity Weight (VCW) (kg)				408.0	A
DSC x 68.04 (kg)				340.2	B
Cargo Weight (RCLW) (kg)				67.8	A-B

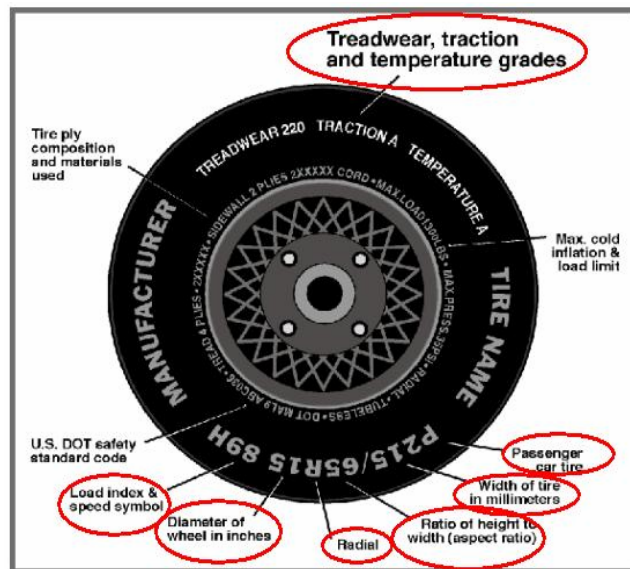
VEHICLE SEAT TYPE

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

DATA SHEET NO. 1 ... (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
 Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13



Measured Parameter	Front	Rear
Max. Tire Pressure (kpa)	350	350
Cold Pressure (kPa)	240	240
Recommended Tire Size	P225/55RF17	P225/55RF17
Tire Size on Vehicle	P225/55RF17	P225/55RF17
Tire Manufacturer	Bridgestone	Bridgestone
Tire Model	Potenza RE97AS	Potenza RE97AS
Treadware	400	400
Traction Grade	A	A
Temperature Grade	A	A
Tire Plies Sidewall	1 Rayon	1 Rayon
Tire Plies Body	1 Rayon, 2 Steel, 1 Aramid & Rayon	1 Rayon, 2 Steel, 1 Aramid & Rayon
Load Index/Speed Symbol	95V	95V
Tire Material	Rayon, Steel, Aramid	Rayon, Steel, Aramid
DOT Safety Code Left	EJUP CCM 2113	EJUP CCM 2113
DOT Safety Code Right	EJUP CCM 2113	EJUP CCM 2113

DATA SHEET NO. 1 ... (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
 Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13

TIRE PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kPa	240	240	240	240
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	466.5	362.5		474.0	414.0		477.0	419.5	
Right	kg	442.0	372.0		445.0	421.0		442.0	420.5	
Ratio	%	55.3%	44.7%	100.0%	52.4%	47.6%	100.0%	52.2%	47.8%	100.0%
Total	kg	908.5	734.5	1643.0	919.0	835.0	1754.0	919.0	840.0	1759.0

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total Delivered Weight (UVW)	kg	1643.0	A
Actual Weight of 1 P572 O ATD Used	kg	49.0	B
Rated Cargo/Luggage Wt (RCLW)	kg	67.8	C
Calculated Vehicle Target Wt (TVTW)	kg	1759.8	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)*	°	-0.3	0.1	0.1	Yes
Front Passenger Sill Angle (front-to-rear)*	°	-0.3	-0.2	0.0	Yes
Front Bumper-Line Angle (left-to-right)**	°	-0.1	-0.1	-0.1	Yes
Rear Bumper-Line Angle (left-to-right)**	°	0.6	0.6	0.5	Yes
Vehicle CG (Aft of Front Axle)	mm	1273	1355	1360	
Vehicle CG (Left (+)/Right (-) from Longitudinal Centerline)	mm	7	10	15	

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

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

DATA SHEET NO. 1 ... (CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Non-Struck Side Door Panels	5.0
Trunk Trim	5.0
Ballast / Equipment Added	71.4

Test Height Adjustable Setting (If Applicable)	
--	--

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

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
 Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13

SEAT POSITIONING

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

SCRL ANGLE RANGE

Seat	SCRL (°)		
	Max	Min	Mid
Driver Seat	9.1	0.0	4.5
Front Passenger Seat	8.7	0.0	4.3
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	551	Max	538	562	585
			Mid	504	528	551
			Min	470	494	517
Front Passenger Seat	4.3	567	Max	554	576	600
			Mid	521	543	567
			Min	487	511	535
Front Center Seat			Max			
			Mid			
			Min			
Struck Side Rear Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
			Mid	Fixed	Fixed	Fixed
			Min	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
			Mid	Fixed	Fixed	Fixed
			Min	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Max	Fixed	Fixed	Fixed
			Mid	Fixed	Fixed	Fixed
			Min	Fixed	Fixed	Fixed

DATA SHEET NO. 2 ... (CONTINUED)

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

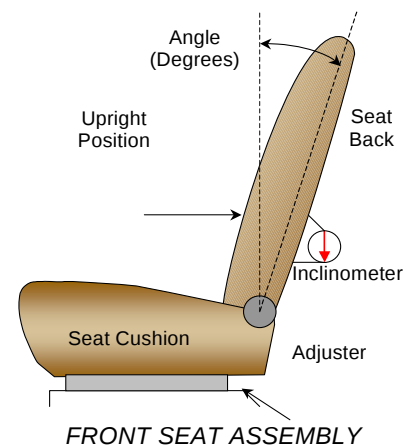
Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
 Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13

SEAT FORE/AFT POSITION

Seat	Total Fore/Aft Travel		Test Position From Forwardmost Position	
	mm	Detents*	mm	Detent*
Driver Seat	260		0	
Front Passenger Seat	258		0	
Front Center Seat				
Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed	Fixed

SEAT BACK ADJUSTMENT

The driver's seat back is positioned such that the dummy's head is level. The front center and front passenger's seat backs are positioned in a similar manner to the driver's seat. The struck side rear passenger seat back is positioned in accordance with the information provided by the manufacturer in Form 1 for the 5th percentile female dummy in a Side NCAP MDB Test. The rear center and non-struck side rear passenger's seat back is set to match the struck side rear seat back. Seat back angle is measured at the seat back.



Seat	Total Seat Back Angle Range		Test Position from Most Upright	
	Degrees	Detents*	Degree	Detent*
Driver Seat w/Seated Dummy	46.9		20.2	
Front Passenger Seat	47.2		20.2	
Front Center Seat				
Struck Side Rear Seat w/Seated Dummy	Fixed	Fixed	Fixed	Fixed
Non-Struck Side Rear Seat	Fixed	Fixed	Fixed	Fixed
Rear Center Seat	Fixed	Fixed	Fixed	Fixed

DATA SHEET NO. 2 ... (CONTINUED)

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

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13

SEAT BELT ANCHORAGE ADJUSTMENT

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

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

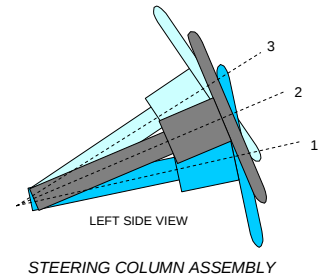
HEAD RESTRAINT ADJUSTMENT

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	5	Full Down

DATA SHEET NO. 2 ... (CONTINUED)**SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT AND FUEL SYSTEM DATA**Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door SedanNHTSA No. M20145201Test Program: NCAP Side Pole Impact TestTest Date: 11/12/13**STEERING COLUMN ADJUSTMENT**

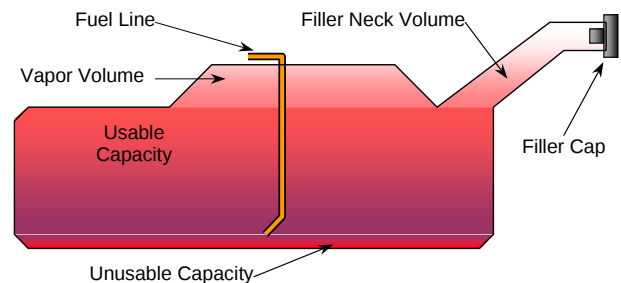
Steering wheel and column adjustments are made so that the steering wheel hub is at the center of the geometric locus it describes when it moves through its full range of motion.



	Degrees	Fore-Aft Position (mm)
Lowermost - Position 1	13.5	134
Geometric Center - Position 2	16.9	157
Uppermost - Position 3	20.3	180
Telescoping Steering Wheel Travel		46
Test Position	16.9	157

FUEL PUMP

The vehicle is equipped with an electric fuel pump. The fuel pump will pump fuel when the ignition key is in the "ON" position.



VEHICLE FUEL TANK ASSEMBLY

FUEL TANK CAPACITY

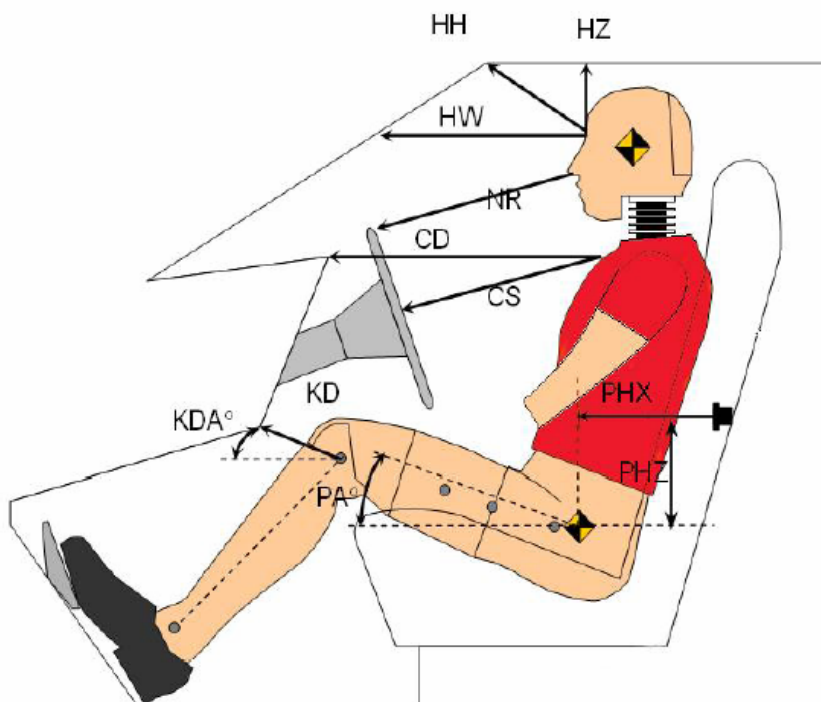
Description	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	75.70
Usable Capacity of "Optional Tank" (see Form No. 1)	
Usable Capacity of "Standard Tank" (see Owner's Manual)	
Usable Capacity of "Optional Tank" (see Owner's Manual)	
93% of Usable Capacity	70.40
Actual amount of Solvent Used in Test	70.40
1/3 of Usable Capacity	25.23

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

DATA SHEET NO. 3

DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
 Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13



Driver Code	Description	Driver	
		Length (mm)	Angle (°)
HH	Head to Header	208	
HW	Head to Windshield	484	
HZ	Head to Roof	143	
NR	Nose to Rim	194	
CD	Chest to Dash	395	
CS	Chest to Steering Wheel	145	
KD(L)/KDA(L)°	Left Knee to Dash	107	48.0
KD(R)/KDA(R)°	Right Knee to Dash	94	57.2
PAX°	Pelvic Tilt Angle (x-axis)		20.0
PAY°	Pelvic Tilt Angle (y-axis)		0.2
PHX	Hip Point to Striker (x-axis)	357	
PHZ	Hip Point to Striker (z-axis)	125	

DATA SHEET NO. 4

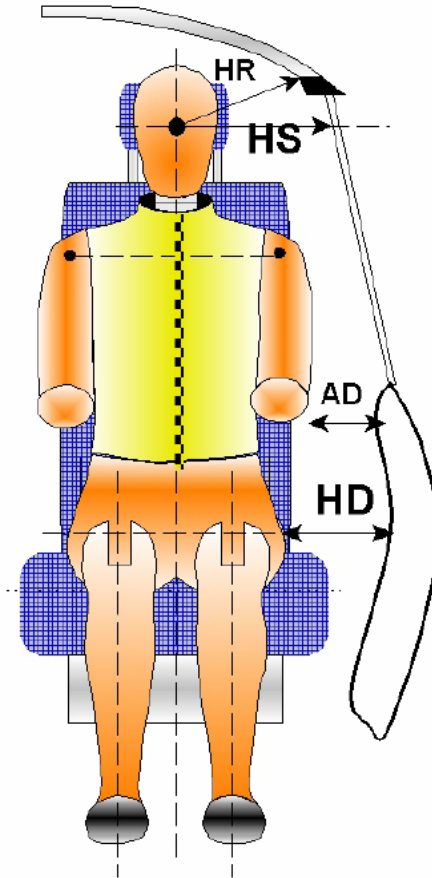
DUMMY LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan

NHTSA No. M20145201

Test Program: NCAP Side Pole Impact Test

Test Date: 11/12/13

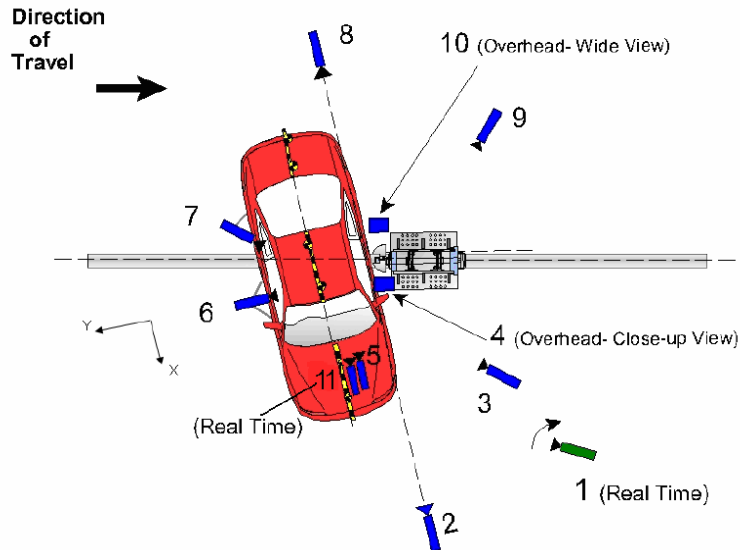


Code	Measurement Description	Units	Driver
HR	Head to Side Header	mm	213
HS	Head to Side Window	mm	363
AD	Arm to Door	mm	158
HD	Hip Point to Door	mm	211

DATA SHEET NO. 5

CAMERA AND INSTRUMENTATION DATA

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
 Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13



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

Camera No.	View	Coordinates (m)			Lens (mm)	Film Speed (fps)
		X*	Y*	Z*		
1	Real Time Pan View of Impact	8.89	46.57	-3.04		30
2	Front Ground Level - Impact View	8.34	-0.05	-0.93	24	1000
3	Impact Side 45° - Forward Pole View	4.10	-2.15	-1.15	8.5	1000
4	Overhead Close-Up View of Impact	0.00	0.00	-5.79	12.5	1000
5	On-Board - Dummy Front View	1.69	0.61	-1.30	35	1000
6	On-Board - Dummy Side View	-0.06	1.80	-1.10	14	1000
7	On-Board - Dummy Rear Oblique View	-0.97	1.67	-1.13	20	1000
8	Rear Ground Level - Impact View	-6.12	-6.23	-0.96	24	1000
9	Impact Side 45° - Rearward Pole View	-8.02	0.04	-1.01	35	1000
10	Overhead Wide View of Impact	-0.06	0.22	-5.79	14	1000
11	Real Time Dummy Front View	1.68	0.68	-1.31		30

*All measurements accurate to ± 6 mm

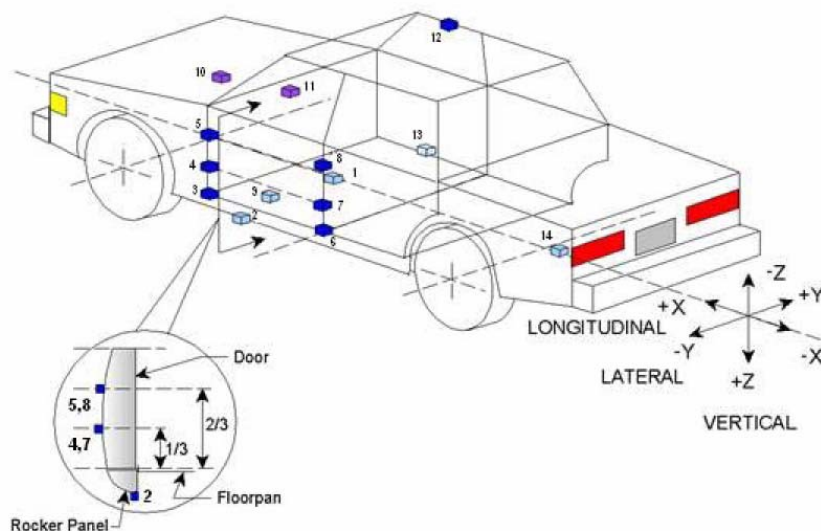
INSTRUMENTATION

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

DATA SHEET NO. 6

TEST VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
 Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13



Loc. No.	Sensor Description	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	7900	0	-169
2	Left Floor Sill	1165	-274	-68
3	A-Pillar Sill	1289	-289	-167
4	A-Pillar Low	1289	-289	-215
5	A-Pillar Mid	1289	-289	-337
6	B-Pillar Sill	880	-285	-140
7	B-Pillar Low	880	-285	-265
8	B-Pillar Mid	880	-285	-323
9	Driver Seat Track	1030	-223	-98
10	Engine Top	1645	30	-275
11	Firewall	1382	0	-265
12	Right Roof	887	185	-547
13	Right Floor Sill	843	296	-144
14	Rear Floorpan	330	0	-193

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

DATA SHEET NO. 7

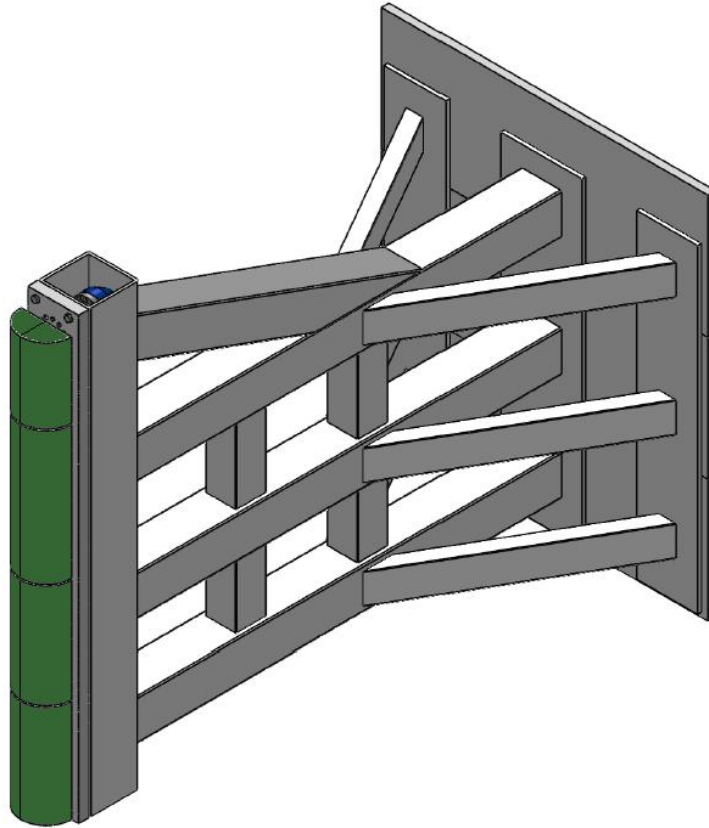
RIGID POLE LOAD CELL DATA

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan

NHTSA No. M20145201

Test Program: NCAP Side Pole Impact Test

Test Date: 11/12/13



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

DATA SHEET NO. 8**POST-TEST OBSERVATIONS**Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13**TEST DUMMY INFORMATION AND CONTACT POINTS**

Dummy Body Part	Driver SID-IIs Dummy
Face	Curtain Airbag, Left Arm
Top of Head	Curtain Airbag
Left Side of Head	Curtain Airbag
Back of Head	Curtain Airbag, Headrest
Left Shoulder	Torso/Pelvis Airbag, Door Panel
Upper Torso	Seat, Torso/Pelvis Airbag
Lower Torso	Seat, Torso/Pelvis Airbag
Left Hip	Seat, Torso/Pelvis Airbag
Left Knee	None

POST-TEST DOOR PERFORMANCE

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

POST-TEST SEAT PERFORMANCE

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

POST-TEST STRUCTURAL OBSERVATIONS

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

DATA SHEET NO. 8 ... (CONTINUED)**POST-TEST OBSERVATIONS**Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13**SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION**

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

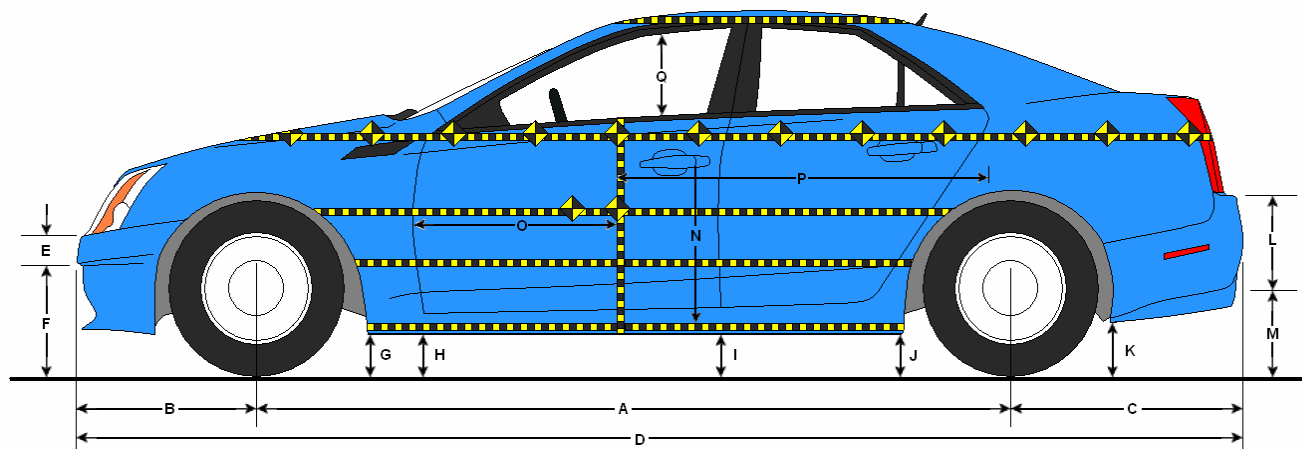
IMPACT POINT LOCATION DATA

Measured Parameter	Units	Tolerance	Value
Vertical Impact Reference Line (Aft of Front Axle)(Intended Impact Point)	mm		1252
Actual Impact Point (Aft of Front Axle)	mm		1249
Horizontal Offset (+ forward / - rearward)	mm	± 38 of Intended Impact Point	3
Angle Between Vehicle's Longitudinal Centerline and Line of Forward Motion	°	75 ± 3	75.7
Trap No. 1 Velocity (Primary)	km/h	31.4 to 33.0	31.85
Trap No. 2 Velocity (Redundant)	km/h	31.4 to 33.0	31.86

DATA SHEET NO. 9

TEST VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
 Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13



LEFT SIDE VIEW

All measurements in mm with tolerance of ± 3 mm

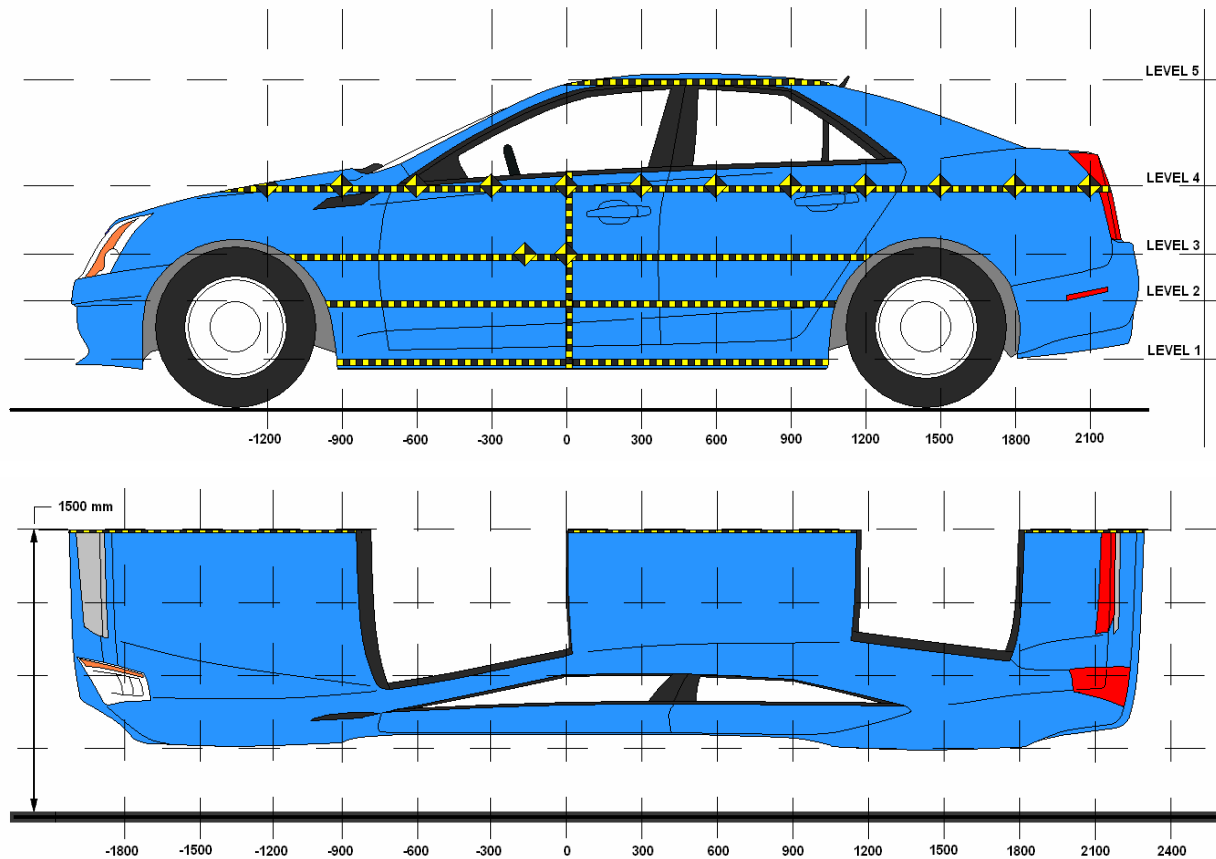
VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

Code	Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2847	2754	-93
B	Front Axle to FSOV	835	864	29
C	Rear Axle to RSOV	1093	1125	32
D	Total Length at Centerline	4774	4743	-31
E	Front Bumper Thickness	107	107	0
F	Front Bumper Bottom to Ground	352	396	44
G	Sill Height at Front Wheel Well	181	172	-9
H	Sill Height at Front Door Leading Edge	188	166	-22
I	Sill Height at B-Pillar	196	192	-4
J1	Sill Height at Rear Wheel Well	186	213	27
J2	Pinch Weld Height at Rear Wheel Well	188	203	15
K	Sill Height Aft of Rear Wheel Well	230	247	17
L	Rear Bumper Thickness	180	180	0
M	Rear Bumper Bottom to Ground	458	458	0
N	Sill Height to Bottom of Front Window Sill	614	634	20
O	Front Door Leading Edge to Impact CL	631	491	-140
P	Rear Door Trailing Edge to Impact CL	1572	1448	-124
Q	Front Window Opening	426	461	35
R	Right Side Length	3390	3415	25
S	Left Side Length	3391	3280	-111
T	Vehicle Width at B-Pillar	1793	1655	-138

DATA SHEET NO. 10

TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
 Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13



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

MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Description	Height Above Ground (mm)	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	251	432	0
2	Occupant H-Point	565	477	0
3	Mid-Door	643	479	0
4	Window Sill	911	450	150
5	Window Top	1397	181	300

DATA SHEET NO. 10 ... (CONTINUED)

TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
 Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13

EXTERIOR CRUSH MEASUREMENTS AT EACH LEVEL

	Pre-Test (mm)					Post-Test (mm)					Difference (mm)				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900		589	592	704			679	674	759			90	82	55	
-750	635	596	598	692		740	695	689	758		105	99	91	66	
-600	645	600	601	678		795	724	711	719		150	124	110	41	
-450	646	600	599	662		859	810	793	784		213	210	194	122	
-300	644	599	597	646		920	884	878	868		276	285	281	222	
-150	642	599	595	637		984	986	972	964		342	387	377	327	
0	640	598	594	629		1072	1075	1073	1072		432	477	479	443	
150	639	598	594	628		1060	1067	1072	1078		421	469	478	450	
300	639	599	595	630	947	956	950	955	976	1128	317	351	360	346	181
450	640	600	596	635	942	873	835	831	862	1093	233	235	235	227	151
600	641	602	598	640	938	817	793	787	823	1064	176	191	189	183	126
750	640	605	601	645	939	775	765	761	802	1041	135	160	160	157	102
900	635	605	602	648	945	734	736	735	780	1031	99	131	133	132	86
1050	623	598	597	646	962	689	700	704	752	1033	66	102	107	106	71
1200	608	586	588	640		645	658	665	722		37	72	77	82	
1350			581	638				641	696				60	58	
1500				637					671					34	
1650				645					700					55	
1800				658					700					42	
1950				675					707					32	
2100				694					725					31	
2250															
2400															
2550															
2700															
2850															

DATA SHEET NO. 10 ... (CONTINUED)

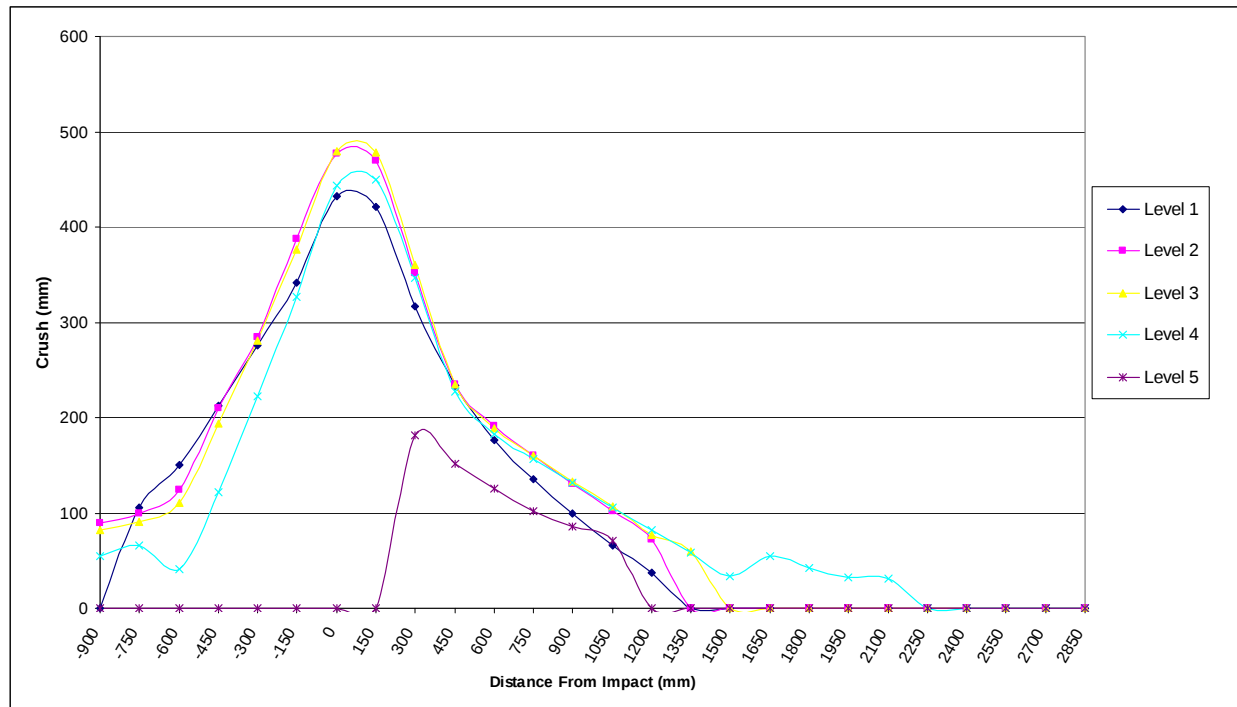
TEST VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan

NHTSA No. M20145201

Test Program: NCAP Side Pole Impact Test

Test Date: 11/12/13

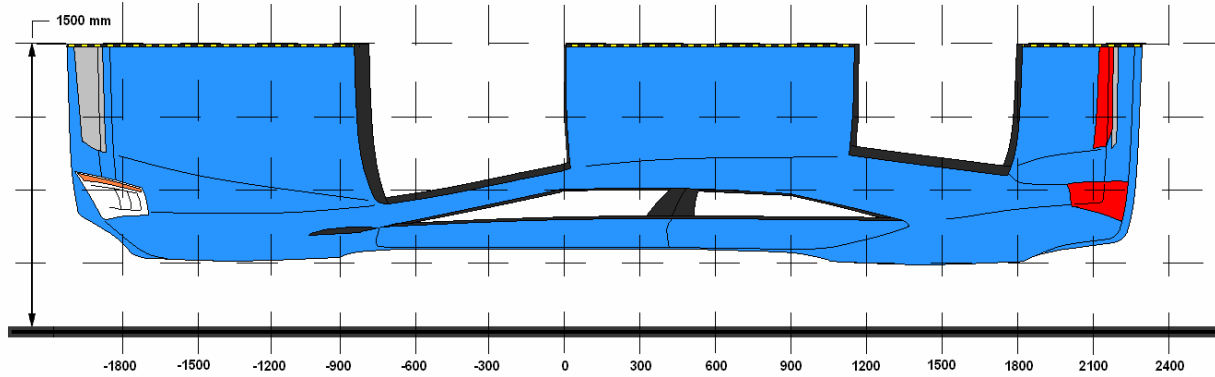


DATA SHEET NO. 11

VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201

Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13



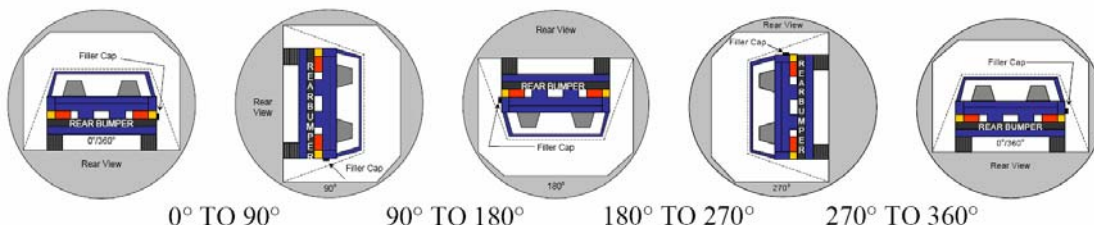
DPD	Distance From Impact Point (mm)	Level	Pre-Test (mm)	Post-Test (mm)	Crush (mm)
1	2100	4	694	725	31
2	1500	4	637	671	34
3	900	3	602	735	133
4	300	3	595	955	360
5	-300	2	599	884	285
6	-900	2	589	679	90

DATA SHEET NO. 12

FMVSS NO. 301 STATIC ROLLOVER RESULTS

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan NHTSA No. M20145201
 Test Program: NCAP Side Pole Impact Test Test Date: 11/12/13
 Temperature at Time of Impact: 21.1° C Test Time: 12:51 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°	81	300	381
90° To 180°	82	300	382
180° To 270°	77	300	377
270° To 360°	77	300	377

FMVSS 301 SPILLAGE TABLE

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

SOLVENT SPILLAGE LOCATION TABLE

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

DATA SHEET NO. 13

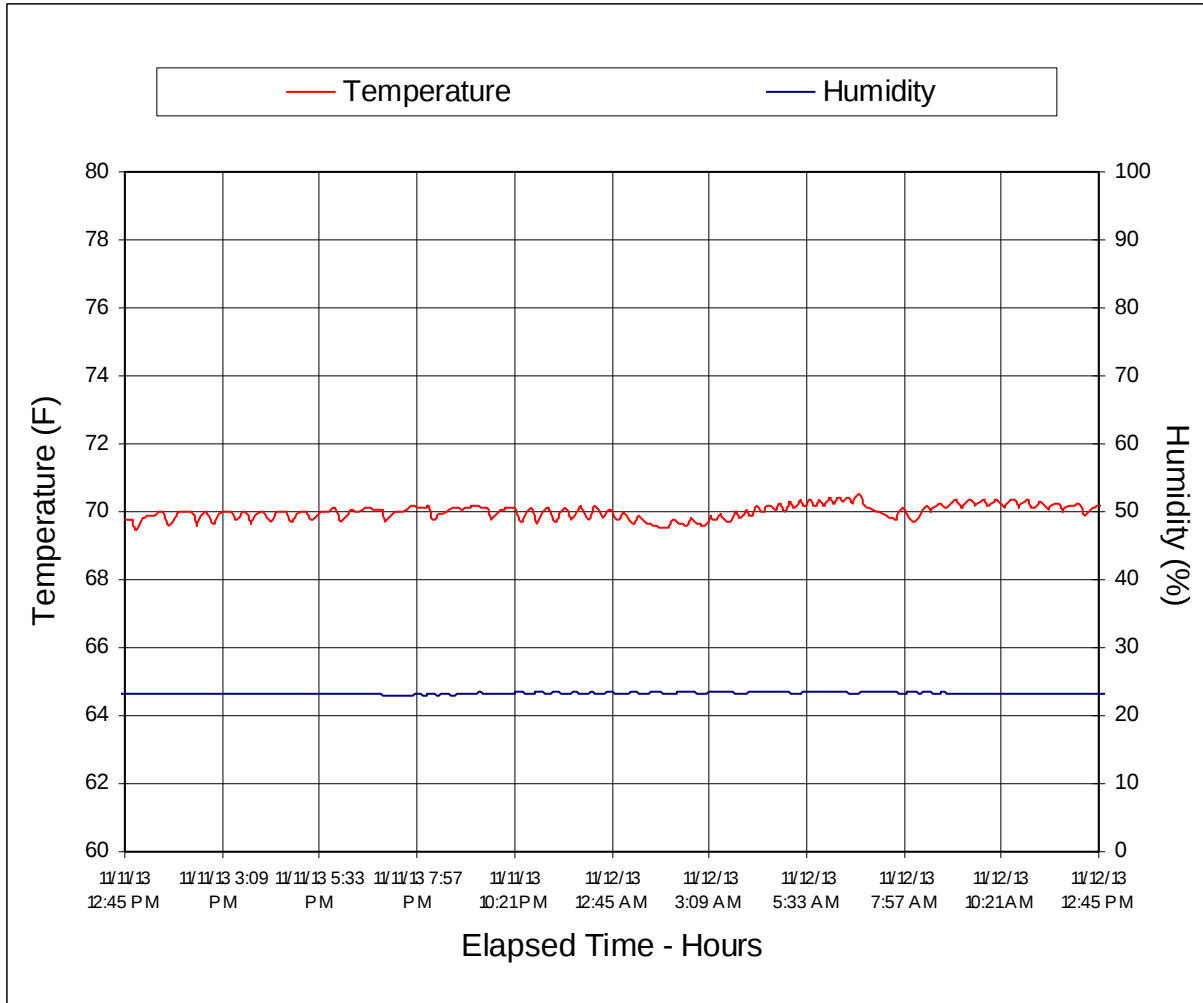
DUMMY/VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan

NHTSA No. M20145201

Test Program: NCAP Side Pole Impact Test

Test Date: 11/12/13



APPENDIX A
PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

Figure		Page
1	As Delivered Right Front 3-4 View of Test Vehicle	A-1
2	As Delivered Left Rear 3-4 View of Test Vehicle	A-1
3	Pre-Test Frontal View of Test Vehicle	A-2
4	Post-Test Frontal View of Test Vehicle	A-2
5	Pre-Test Left Front 3-4 View of Test Vehicle	A-3
6	Post-Test Left Front 3-4 View of Test Vehicle	A-3
7	Pre-Test Left Side View of Test Vehicle	A-4
8	Post-Test Left Side View of Test Vehicle	A-4
9	Pre-Test Left Rear 3-4 View of Test Vehicle	A-5
10	Post-Test Left Rear 3-4 View of Test Vehicle	A-5
11	Pre-Test Rear View of Test Vehicle	A-6
12	Post-Test Rear View of Test Vehicle	A-6
13	Pre-Test Right Side View of Test Vehicle	A-7
14	Post-Test Right Side View of Test Vehicle	A-7
15	Pre-Test Overhead View of Test Area	A-8
16	Post-Test Overhead View of Test Area	A-8
17	Pre-Test Left Side View of Pole Positioned Against Side of Test Vehicle	A-9
18	Pre-Test Right Side View of Pole Positioned Against Side of Test Vehicle	A-9
19	Pre-Test Close-Up View of Impact Point Target	A-10
20	Post-Test Close-Up View of Impact Point Target	A-10
21	Pre-Test Front Close-Up View of Dummy Head and Chest	A-11
22	Post-Test Front Close-Up View of Dummy	A-11
23	Pre-Test Left Side View of Dummy Showing Belt and Chalking	A-12
24	Pre-Test Left Side View of Dummy Shoulder and Door Top View	A-12
25	Post-Test Left Side View of Dummy Shoulder and Door Top View	A-13
26	Pre-Test Frontal View of Seat Back Prior to Dummy Positioning	A-13
27	Pre-Test Frontal View of Dummy Head and Shoulders in Relation to Head Restraint	A-14
28	Pre-Test Overhead View of Seat Pan Prior to Dummy Positioning	A-14
29	Pre-Test Overhead View of Dummy Thighs on Seat Pan	A-15
30	Pre-Test View of Dummy's Neck Showing Position of Adjustable Neck Bracket	A-15
31	Pre-Test View of Dummy's Head Showing Dummy's Head is Level	A-16
32	Pre-Test Placement of Dummy's Feet	A-16
33	Pre-Test View of Belt Anchorage for Dummy	A-17
34	Pre-Test Left Side View of Steering Wheel	A-17
35	Pre-Test View of Disengaged Parking Brake	A-18

TABLE OF PHOTOGRAPHS ... (CONTINUED)

Figure		Page
36	Pre-Test View of Parking Brake	A-18
37	Pre-Test Close-Up Left Side View of Driver Seat Track	A-19
38	Pre-Test Close-Up View of Driver Seat Back	A-19
39	Pre-Test Close-Up View of Driver Seat Back or Head Restraint	A-20
40	Pre-Test Driver Dummy and Door Clearance View	A-20
41	Post-Test Driver Dummy and Door Clearance View	A-21
42	Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment	A-21
43	Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment	A-22
44	Pre-Test Inner Door Panel View	A-22
45	Post-Test Inner Door Panel View Showing Dummy Contact Location	A-23
46	Post-Test Dummy Close-Up Head Contact with Vehicle Interior View	A-23
47	Post-Test Dummy Close-Up Head Contact with Side Airbag View	A-24
48	Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View	A-24
49	Post-Test Dummy Close-Up Torso Contact with Side Airbag View	A-25
50	Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View	A-25
51	Post-Test Dummy Close-Up Pelvis Contact with Side Airbag View	A-26
52	Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View	A-26
53	Pre-Test View of Fuel Filler Cap or Fuel Filler Neck	A-27
54	Post-Test View of Fuel Filler Cap or Fuel Filler Neck	A-27
55	Close-Up View of Vehicle's Certification Label	A-28
56	Close-Up View of Vehicle's Tire Information Placard or Label	A-28
57	Pre-Test Pole Barrier Front View	A-29
58	Post-Test Pole Barrier Front View	A-29
59	Pre-Test Pole Barrier Side View	A-30
60	Post-Test Pole Barrier Side View	A-30
61	Pre-Test Ballast View	A-31
62	Post-Test Primary and Redundant Speed Trap Read-Out	A-31
63	FMVSS No. 301 Rollover 0 Degrees	A-32
64	FMVSS No. 301 Rollover 90 Degrees	A-32
65	FMVSS No. 301 Rollover 180 Degrees	A-33
66	FMVSS No. 301 Rollover 270 Degrees	A-33
67	FMVSS No. 301 Rollover 360 Degrees	A-34
68	Impact Event	A-34
69	Monroney Label	A-35
70	Head Restraint Use and Adjustment Information from Vehicle Owner's Manual	A-35

*Photographs 3, 5 and 17 display an incorrect test date



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

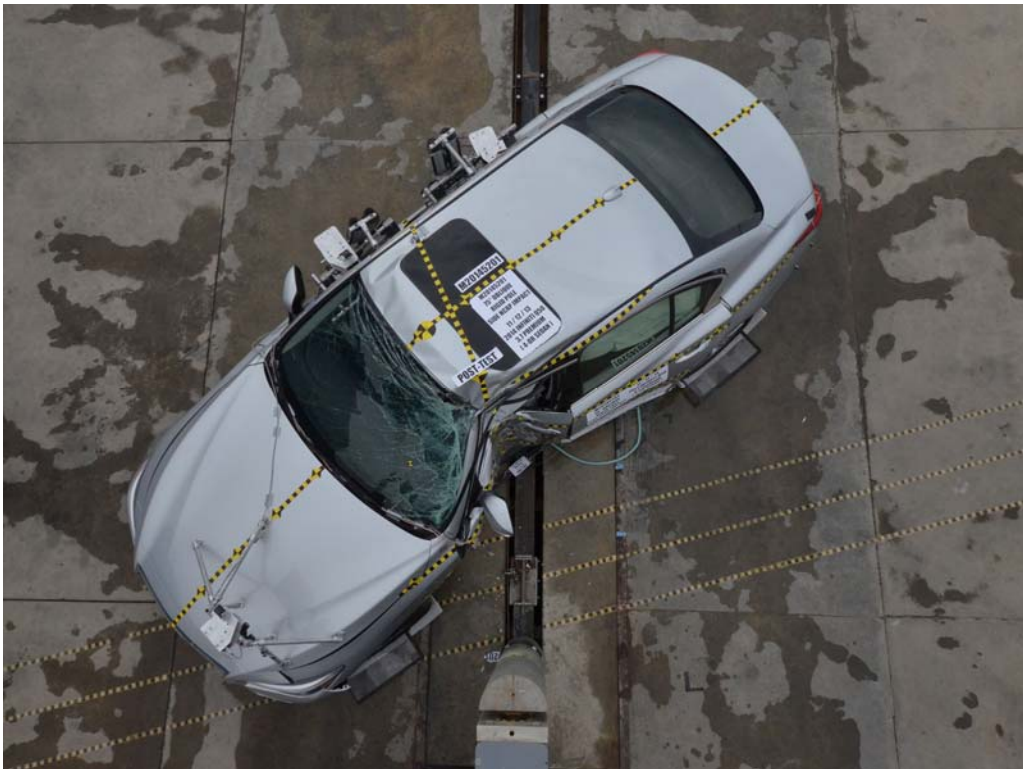


FIGURE 16. Post-Test Overhead View of Test Area



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



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



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



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



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

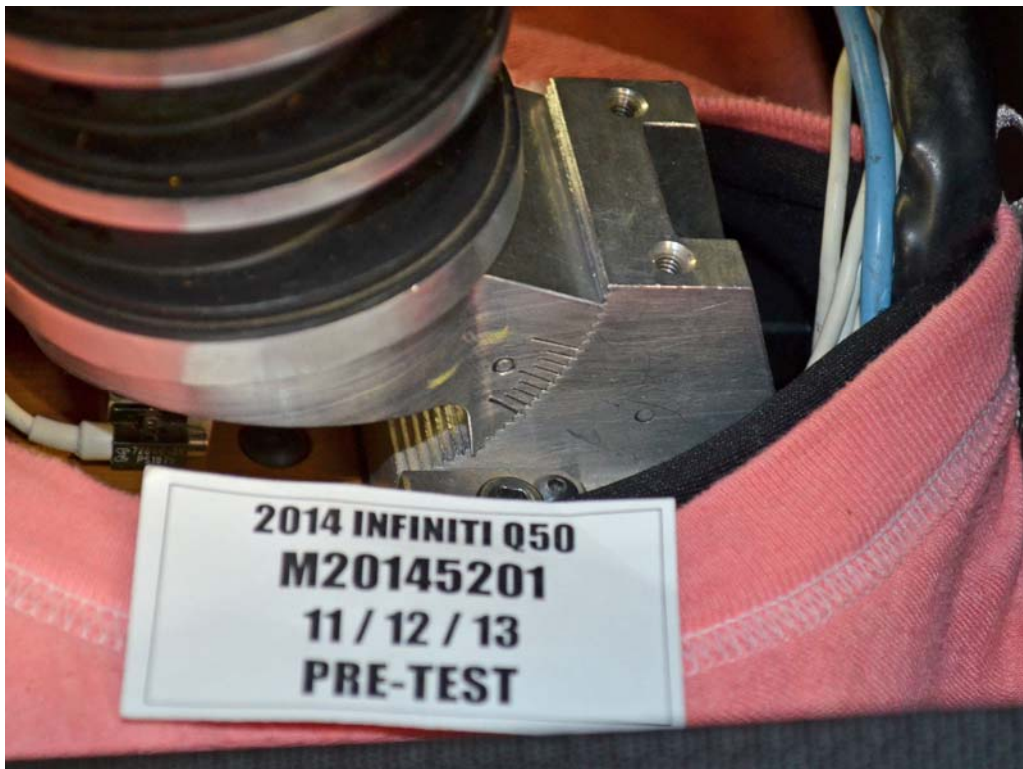


FIGURE 30. Pre-Test Left Side View of Dummy's Neck
Showing Position of Adjustable Neck Bracket



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

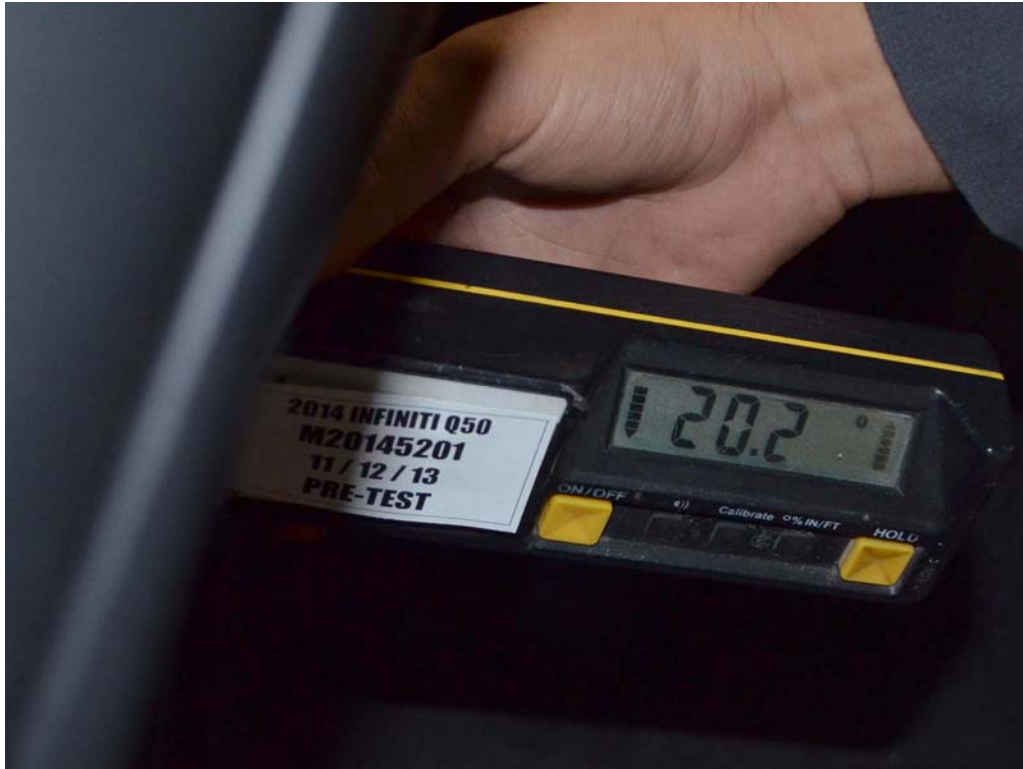


FIGURE 39. Pre-Test Close-Up View of Driver Seat Back or Head Restraint



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

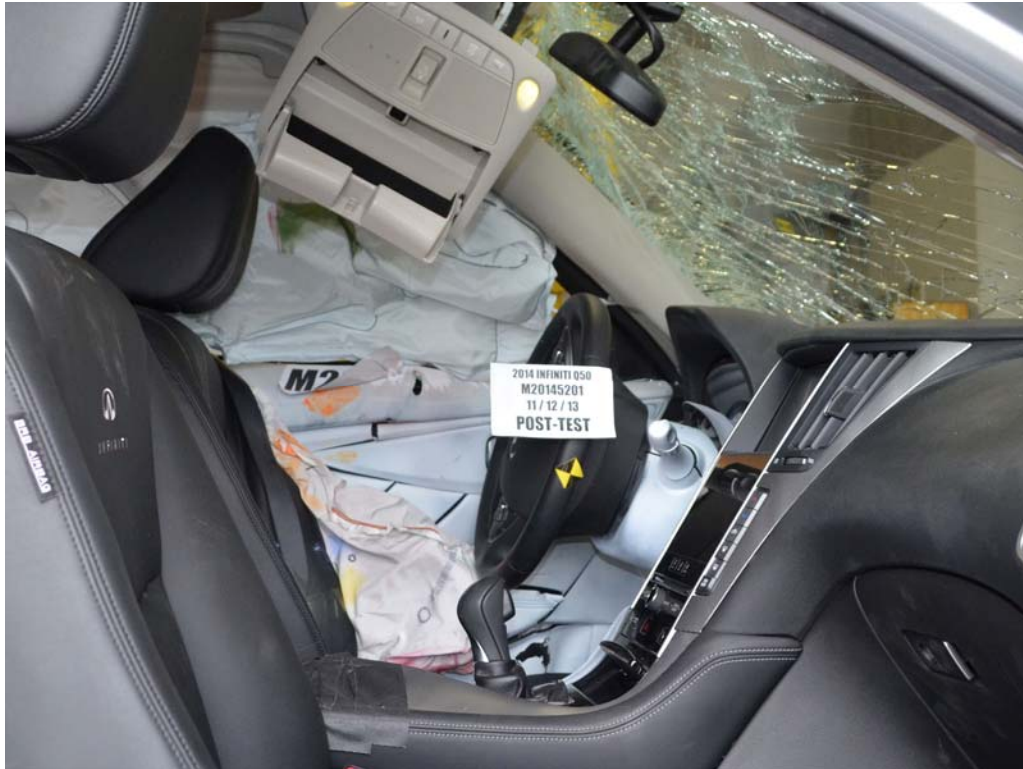


FIGURE 45. Post-Test Inner Door Panel View
Showing Dummy Contact Locations



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

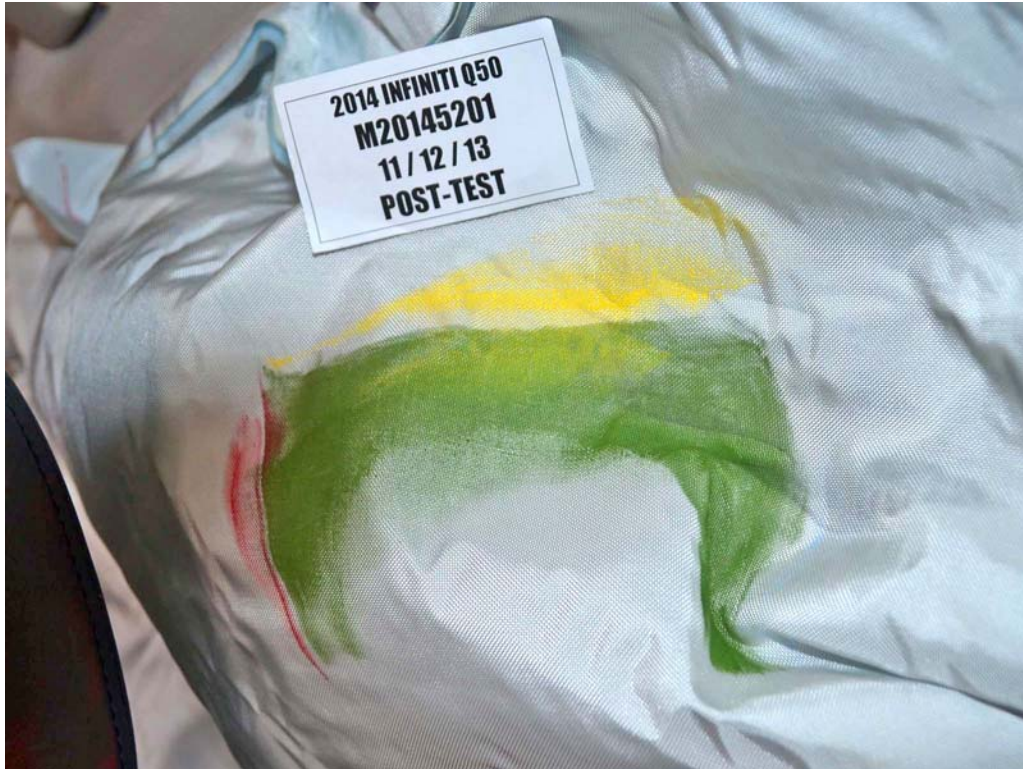


FIGURE 47. Post-Test Dummy Close-Up Head Contact With Side Airbag View



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

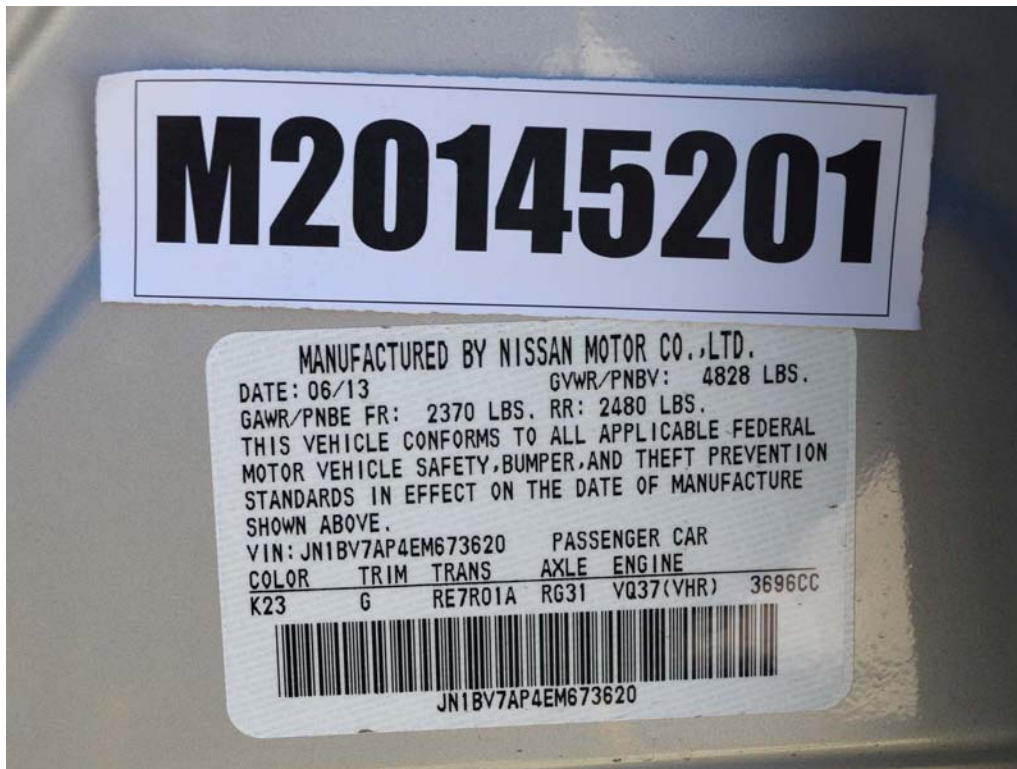


FIGURE 55. Close-Up View of Vehicle's Certification Label



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

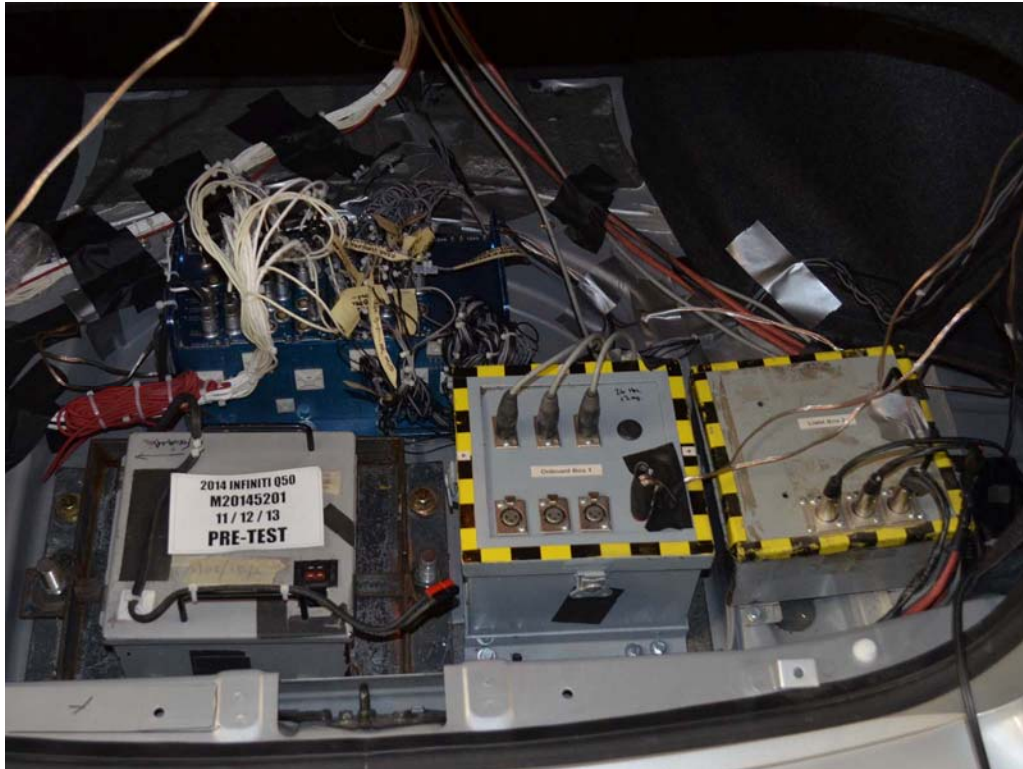


FIGURE 61. Pre-Test Ballast View



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



FIGURE 65. FMVSS No. 301 Static Rollover 180 Degrees



FIGURE 66. FMVSS No. 301 Static Rollover 270 Degrees



FIGURE 67. FMVSS No. 301 Static Rollover 360 Degrees



FIGURE 68. Impact Event

2014 Q50 3.7 PREMIUM

Standard Equipment Included at No Extra Charge

PERFORMANCE:
3.7-liter DOHC 24-valve V6 engine
328 horsepower
209 lb-ft torque
Rear-wheel drive
7-speed automatic transmission
Manual shift mode w/Downshift Rev Matching
Independent front and rear suspension
17-inch aluminum alloy wheels
P255/35R17 all-season run-flat tires
Zero-tilt aerodynamics control
Drive Mode Selector
Vehicle speed sensitive power steering
Active Trace Control

LUXURY:
Power sliding tinted glass moonroof with one-touch auto open/close
Automatic on/off LED headlights with daytime running lights
LED fog lights and turning lamps mounted in lower front fascia
LED rear brake lights and center high-mounted stoplight
Leatherette seating surfaces with embroidered Infiniti logo
Luxuriously crafted, ergonomically designed seats
Power heated front seats
Dual Zone Automatic Temperature Control
Koaume aluminum interior trim
Heated outside mirrors
LED turning signal lamp on outside mirrors
Tilt and telescopic steering wheel
Welcome lighting on front door handles
Front door touch unlock
Variable intermittent, speed sensitive wiper/washers
Chrome front grille
Front aluminum lock plates

TECHNOLOGY:
RearView Monitor
Infiniti iTouch™ Dual Display System with Infiniti Controller
Infiniti iTouch™ Apps
Push Button Ignition
Intelligent Key
Infiniti iCafé™ for storing climate, audio and driving preferences to each intelligent key
Bluetooth® Hands-free Phone System
Infiniti Studio on iVheadset by Bose® 14-Speaker Premium Audio System
Auto-Dimming Inside Mirror with HomeLink® Universal Transceiver
Two USB connection ports for iPod/iPhone and other compatible devices
Auxiliary audio input and video input
SiriusXM Satellite Radio™
Cruise control with steering wheel-mounted switches
Voice recognition for audio, Bluetooth® and vehicle information

SAFETY AND SECURITY:
Infiniti Advanced Air Bag System
Driver and Front Passenger seat-mounted side-impact supplemental air bags
Rear-mounted curtain side-impact supplemental air bags
3-point front seat belts with pretensioners and load limiters
Lower Anchors and Tethers for Children (LATCH)
Electronic Stability System (ABS)
Brake Assist
Vehicle Dynamic Control (VDC) with Traction Control System (TCS)
Tire-specific Pressure Monitoring System
Vehicle Security System
Infiniti Vehicle Immobilizer System

***3 months of SiriusXM service included; subscription sold separately; not available to buyers in AK or HI; some features not available in all markets.

**Optional equipment replaces standard equipment.

Manufacturer's Suggested Retail Base Price: \$39,550.00

Options Included by Manufacturer (ILLUMINATED KICK PLATES)** 400.00

DESTINATION CHARGES 905.00

Total* \$40,855.00

Fuel Economy and Environment

Fuel Economy

23 MPG
combined city/hwy

20 city
29 highway

4.3 gallons per 100 miles

You spend \$750 more in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost \$2,450

Fuel Economy & Greenhouse Gas Rating

1 **6** **10** **1** **5** **10**

fuel economy.gov

GOVERNMENT 5-STAR SAFETY RATINGS

Overall Vehicle Score To Be Rated

Frontal Crash Driver Passenger To Be Rated

Side Crash Front seat Rear seat To Be Rated

Rollover To Be Rated

DELIVERY

VEHICLE COLORS: EXT-LIGHT PLATINUM INT: GRAPHITE

FINAL ASSEMBLY POINT: LOS ANGELES

TRANSPORT METHOD: TRUCK

DEALER: BEECHOFF INFINITI
2198 TULLY RD
SAN JOSE CA
95122

VIN: JN1B77AP4EM7320
EMS: 50 STATE EMISSIONS
MDL: J01473920 J03-6
OPT: A-C05,11N62555206

20130705230248F75035

FIGURE 69. Monroney Label

HEAD RESTRAINTS/HEADRESTS

WARNING

Head restraint/headrest supplement the other vehicle safety systems. They may provide additional protection against injury in certain rear and side collisions. Adjust the head restraint/headrest properly as specified in this section. Check the adjustment after someone else uses the seat. Do not attach anything to the head restraint/headrest stalks or remove the head restraint/headrest. Do not use the seat if the head restraint/headrest has been removed. If the head restraint/headrest was removed, re-install and properly adjust the head restraint/headrest before an occupant uses the seating position. Failure to follow these instructions can reduce the effectiveness of the head restraint/headrest. This may increase the risk of serious injury or death in a collision.

The illustration shows the seating positions equipped with a head restraint/headrest.

- 1 indicates the seating position is equipped with a head restraint.
- 2 indicates the seating position is equipped with a headrest.
- 3 indicates the seating position is not equipped with a head restraint or headrest.

Your vehicle is equipped with a head restraint/headrest that may be integrated, adjustable or non-adjustable.

ADJUSTABLE HEAD RESTRAINT/HEADREST COMPONENTS

1. Removable head restraint/headrest

2. Multiple notches

3. Lock knob

4. Stalks

REMOVE

Use the following procedure to remove the head restraint/headrest.

1. Pull the head restraint/headrest up to the highest position.
2. Push and hold the lock knob.
3. Remove the head restraint/headrest from the seat.
4. Store the head restraint/headrest properly in a secure place so it is not loose in the vehicle.
5. Reinstall and properly adjust the head restraint/headrest before an occupant uses the seating position.

INSTALL

1. Align the head restraint/headrest stalks with the holes in the seat. Make sure that the head restraint/headrest is facing the correct direction. The stalk with the adjustment notch (1) must be installed in the hole with the lock knob (2).

ADJUST

For adjustable head restraint/headrest

Adjust the head restraint/headrest to the center level with the center of your ears. If your ear position is still higher than the recommended alignment, place the head restraint/headrest at the highest position.

For non-adjustable head restraint/headrest

Make sure the head restraint/headrest is positioned so the lock knob is engaged in the notch before riding in that designated seating position.

Raise

To raise the head restraint/headrest, pull it up. Make sure the head restraint/headrest is positioned so the lock knob is engaged in the notch before riding in that designated seating position.

Lower

To lower, push and hold the lock knob and push the head restraint/headrest down. Make sure the head restraint/headrest is positioned so the lock knob is engaged in the notch before riding in that designated seating position.

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

APPENDIX B
DUMMY RESPONSE DATA

TABLE OF DATA PLOTS

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

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

www.NHTSA.dot.gov

Additional Driver Dummy Instrumentation Data

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

Vehicle Instrumentation Data

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

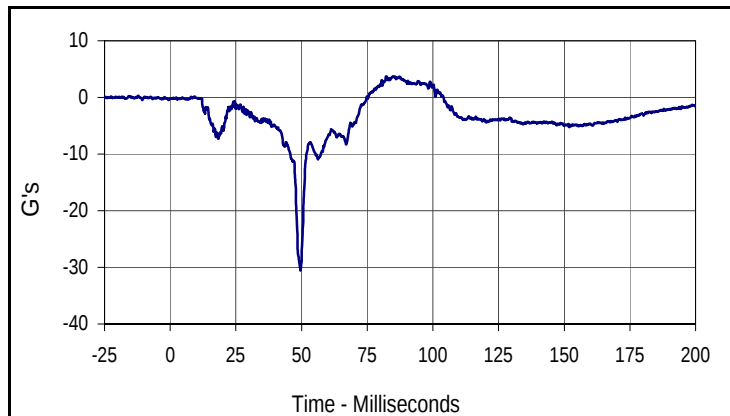
Left B-Pillar Sill Acceleration
Left Lower B-Pillar Acceleration (Y)
Left Mid B-Pillar Acceleration (Y)
Driver Seat Track at Dummy Hip Point Acceleration (Y)
Engine Top Acceleration (X)
Engine Top Acceleration (Y)
Firewall Center Acceleration (Y)
Right Roof at Vertical Impact Reference Line Acceleration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

Pole Instrumentation Data

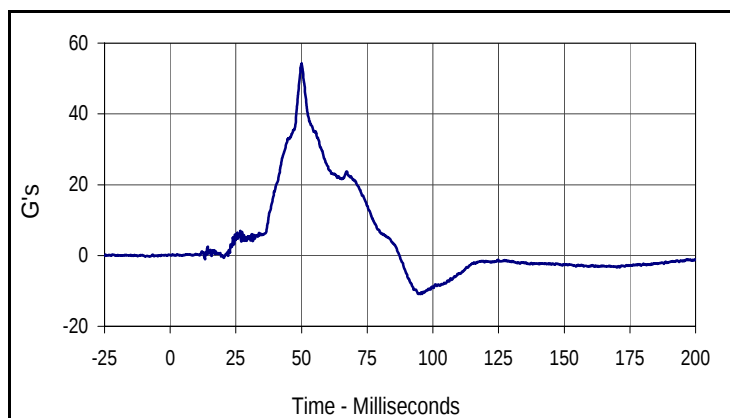
Load Cell Pole Barrier #1 Force (Y)
Load Cell Pole Barrier #2 Force (Y)
Load Cell Pole Barrier #3 Force (Y)
Load Cell Pole Barrier #4 Force (Y)
Load Cell Pole Barrier #5 Force (Y)
Load Cell Pole Barrier #6 Force (Y)
Load Cell Pole Barrier #7 Force (Y)
Load Cell Pole Barrier #8 Force (Y)

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan
 Test Program: 32 km/h (20 mph) Side Impact NCAP 75° Rigid Pole Test

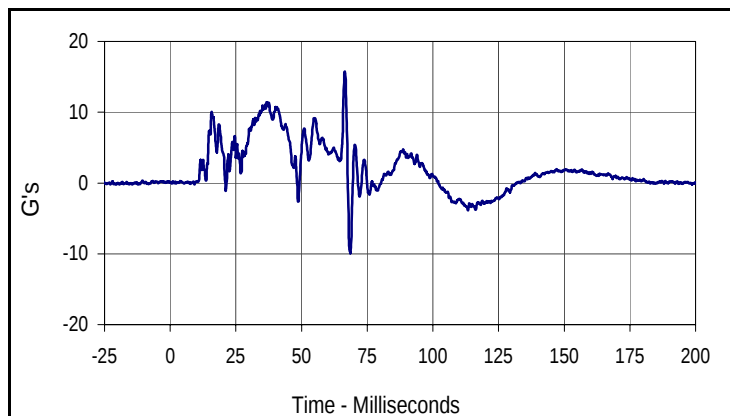
Test Date: 11/12/13
 NHTSA No.: M20145201



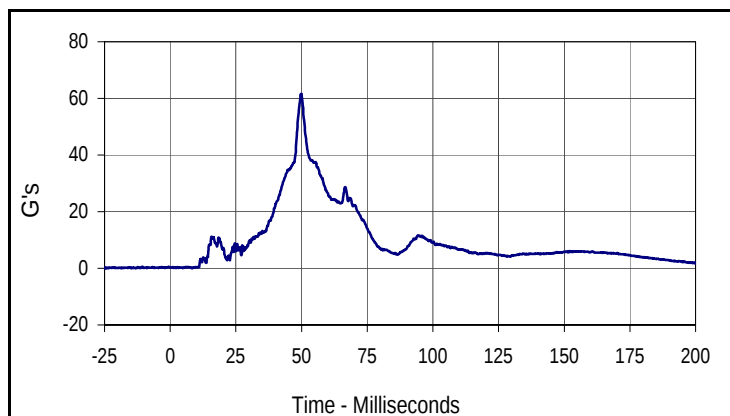
Curve Description			
Driver Head Acceleration X Primary			
Plot No.	Type	SAE Class	Units
001	FIL	1000	G's
Max	Time	Min	Time
3.7	84.8	-30.5	49.6



Curve Description			
Driver Head Acceleration Y Primary			
Plot No.	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
54.2	50.0	-10.9	95.1



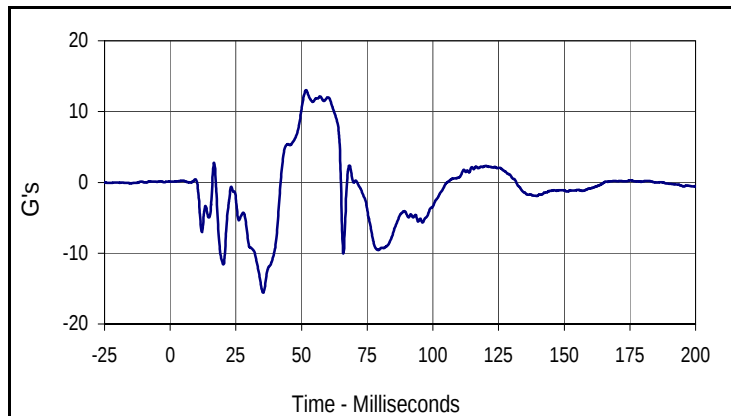
Curve Description			
Driver Head Acceleration Z Primary			
Plot No.	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
15.7	66.5	-9.9	68.6



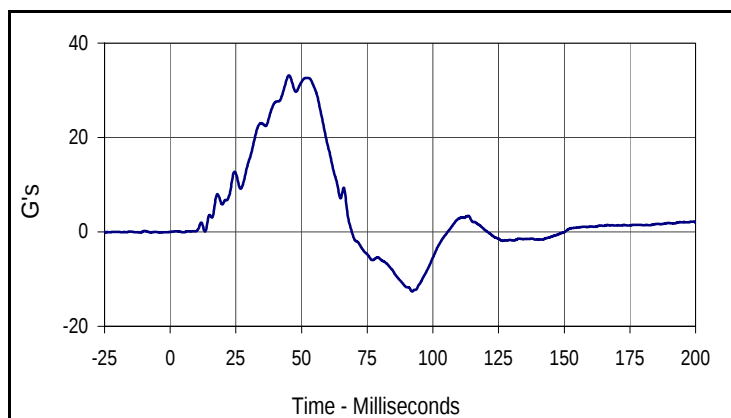
Curve Description			
Driver Head Acceleration Primary Res.			
Plot No.	Type	SAE Class	Units
004	RES	1000	G's
Max	Time	Min	Time
61.6	49.9	0.1	8.2

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan
 Test Program: 32 km/h (20 mph) Side Impact NCAP 75° Rigid Pole Test

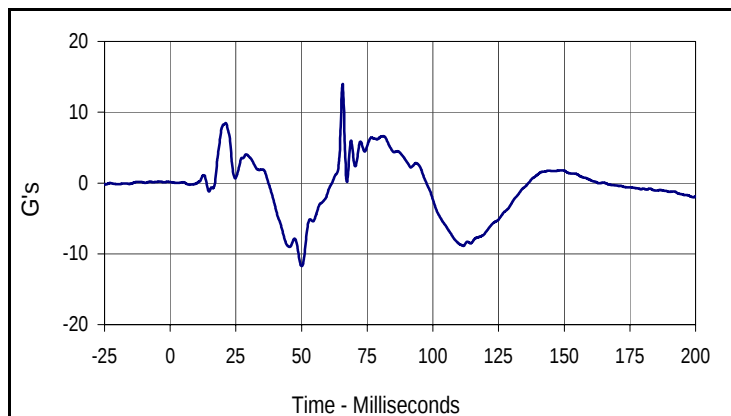
Test Date: 11/12/13
 NHTSA No.: M20145201



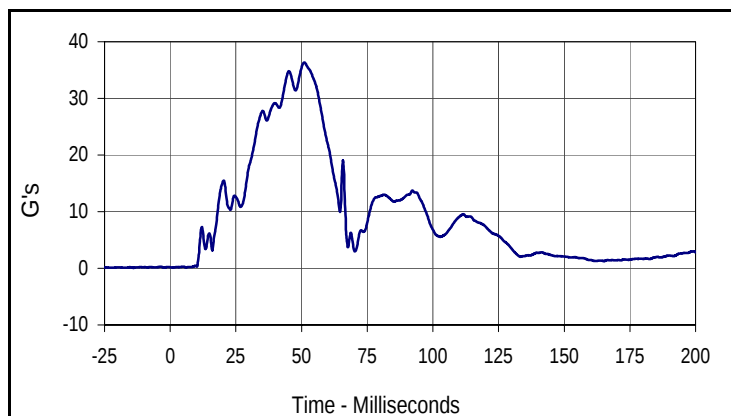
Curve Description			
Driver Lower Spine T12 Acceleration X			
Plot No.	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
13.0	51.7	-15.6	35.4



Curve Description			
Driver Lower Spine T12 Acceleration Y			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
33.2	45.2	-12.6	92.1



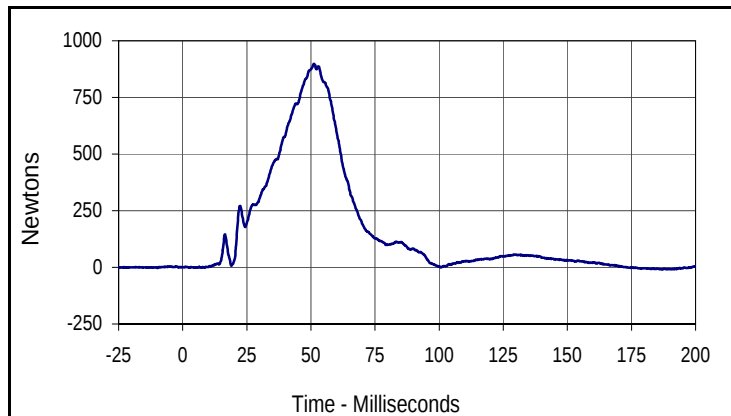
Curve Description			
Driver Lower Spine T12 Acceleration Z			
Plot No.	Type	SAE Class	Units
007	FIL	180	G's
Max	Time	Min	Time
14.0	65.6	-11.7	50.1



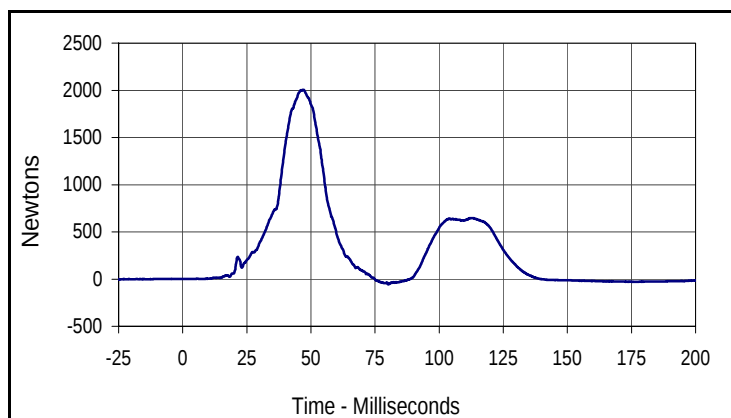
Curve Description			
Driver Lower Spine T12 Acceleration Res.			
Plot No.	Type	SAE Class	Units
008	RES	180	G's
Max	Time	Min	Time
36.3	51.0	0.1	5.9

Test Vehicle: 2014 Infiniti Q50 3.7 Premium 4-Door Sedan
 Test Program: 32 km/h (20 mph) Side Impact NCAP 75° Rigid Pole Test

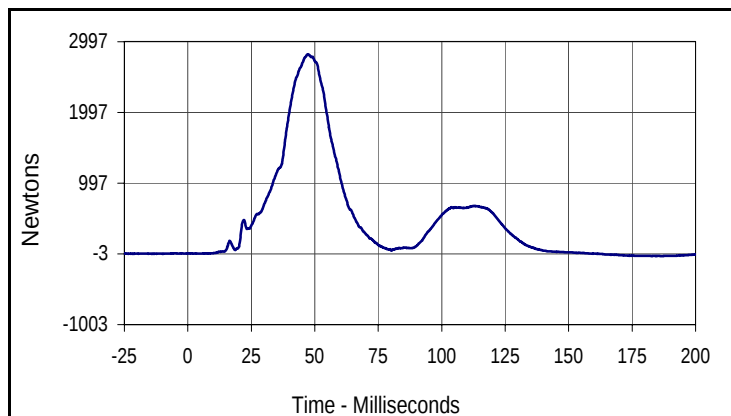
Test Date: 11/12/13
 NHTSA No.: M20145201



Curve Description			
Driver Iliac Wing Force on Impact Side Y			
Plot No.	Type	SAE Class	Units
009	FIL	600	Newtons
Max	Time	Min	Time
898.4	51.2	-9.6	187.1



Curve Description			
Driver Acetabulum Force on Impact Side Y			
Plot No.	Type	SAE Class	Units
010	FIL	600	Newtons
Max	Time	Min	Time
2006.1	47.0	-57.4	80.2



Curve Description			
Driver Total Pelvic Force on Impact Side Y			
Plot No.	Type	SAE Class	Units
011	SUM	600	Newtons
Max	Time	Min	Time
2817.8	47.4	-34.8	187.2

APPENDIX C
DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

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

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

Test Date: 11/4/13
 Test I.D.: N/A



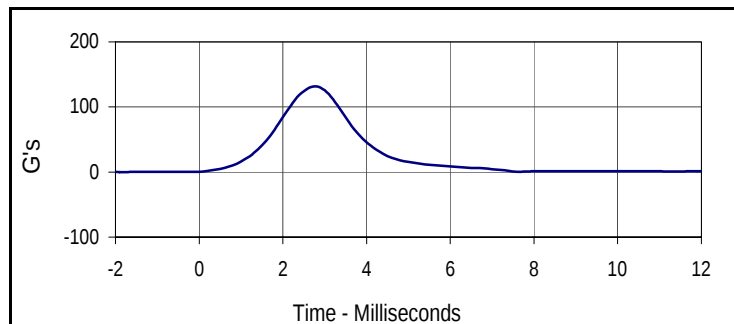
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.3	Pass
Laboratory Relative Humidity		%	10 to 70	32	Pass
A	Sitting Height	mm	772 - 788	780	Pass
B	Shoulder Pivot Height	mm	437 - 453	445	Pass
C	H-Point Height	mm	79 - 89	85	Pass
D	H-Point from Seatback	mm	141 - 151	145	Pass
E	Shoulder Pivot from Backline	mm	97 - 107	102	Pass
F	Thigh Clearance	mm	119 - 135	125	Pass
G	Head Breadth	mm	140 - 148	145	Pass
H	Head Back from Backline	mm	40 - 46	44	Pass
I	Head Depth	mm	178 - 188	184	Pass
J	Head Circumference	mm	541 - 551	545	Pass
K	Buttock to Knee Length	mm	514 - 540	527	Pass
L	Popliteal Height	mm	343 - 369	352	Pass
M	Knee Pivot to Floor Height	mm	392 - 409	401	Pass
N	Buttock Popliteal Length	mm	416 - 442	432	Pass
O	Chest Depth w/o Jacket	mm	195 - 211	202	Pass
P	Foot Length	mm	216 - 232	221	Pass
Q	Hip Breadth with Pelvic Plug	mm	313 - 323	315	Pass
R	Arm Length	mm	249 - 259	252	Pass
S	Knee Joint to Seatback	mm	477 - 493	481	Pass
V	Shoulder Width	mm	341 - 357	352	Pass
W	Foot Width	mm	78 - 94	86	Pass
Y	Chest Circumference with Jacket	mm	851 - 881	872	Pass
Z	Waist Circumference	mm	760 - 791	774	Pass
Overall Test Results					Pass

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

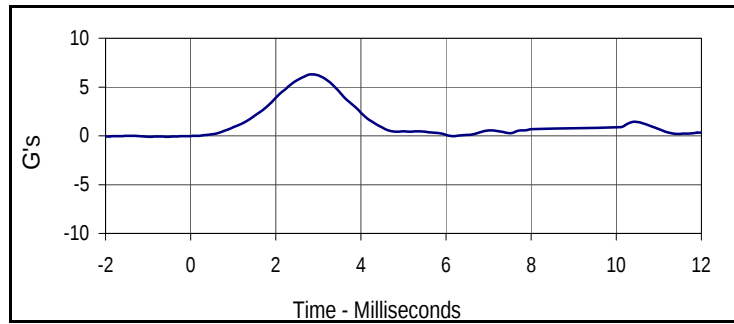
Test Date: 11/4/13
 Test I.D.: 299HD064



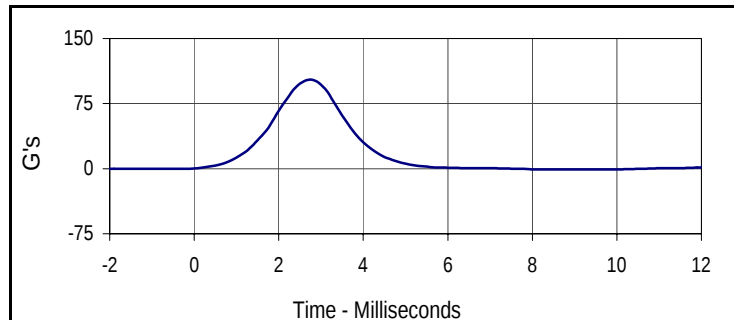
Tested Parameter		Units	Specification	Result	Pass/Fail
Head Assembly Soak Time		Minutes	≥240	425	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.4	Pass
	Min	°C		21.3	Pass
Humidity During Soak	Max	%	10.0 to 70.0	32.6	Pass
	Min	%		32.3	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.3	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	32.6	Pass
Peak Head Resultant Acceleration		G's	115 to 137	131.6	Pass
Peak Head X Acceleration		G's	<15	6.3	Pass
Is Acceleration Unimodal?		Yes/No	Yes	Yes	Pass
Oscillations After Main Pulse		%	<15	3.3	Pass
Overall Test Results					Pass



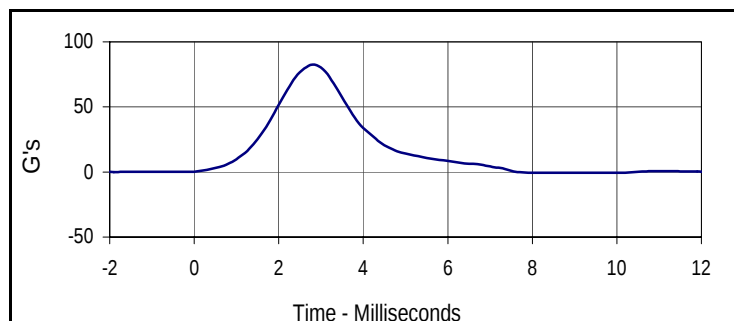
Curve Description			
Head Resultant			
Plot No.	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
131.6	2.8	0.1	-1.8



Curve Description			
Head X			
Plot No.	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
6.3	2.9	-0.1	-0.5



Curve Description			
Head Y			
Plot No.	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
102.3	2.7	-0.9	8.0



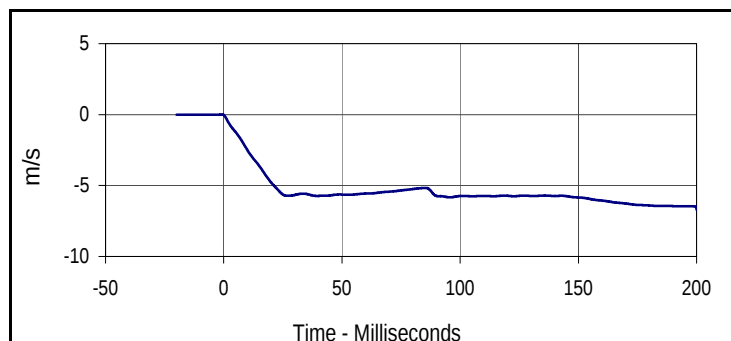
Curve Description			
Head Z			
Plot No.	Type	SAE Class	Units
004	FIL	1000	G's
Max	Time	Min	Time
82.6	2.8	-0.6	8.0

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

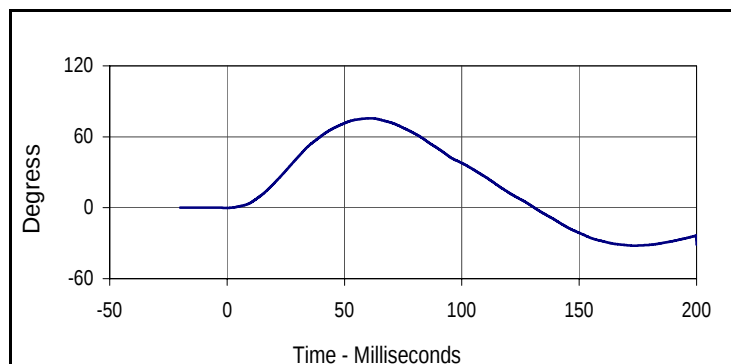
Test Date: 11/4/13
 Test I.D.: 299NB064



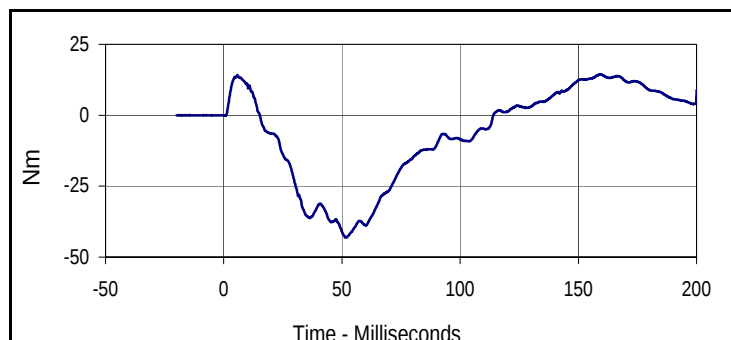
Tested Parameter	Units	Specification	Result	Pass/Fail
Neck Assembly Soak Time	Minutes	≥240	490	Pass
Temperature During Soak	Max	20.6 to 22.2	21.4	Pass
	Min		21.3	Pass
Humidity During Soak	Max	10.0 to 70.0	32.6	Pass
	Min		32.3	Pass
Laboratory Temperature During Test	°C	20.6 to 22.2	21.3	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	32.3	Pass
Pendulum Velocity	m/s	5.51 to 5.63	5.62	Pass
Pendulum Deceleration	10 msec	-2.20 to -2.80	-2.50	Pass
	15 msec	-3.30 to -4.10	-3.61	Pass
	20 msec	-4.40 to -5.40	-4.78	Pass
	25 msec	-5.40 to -6.10	-5.64	Pass
	25-100 msec	-5.50 to -6.20	-5.83	Pass
D-Plane Rotation	Max	71 to 81	75.7	Pass
	Time	50 to 70	61.1	Pass
Peak Occipital Condyle Moment	Nm	-36 to -44	-43.2	Pass
Decaying Moment Time to Cross 0 Nm	msec	102 to 126	114.1	Pass
Overall Test Results			Pass	



Curve Description			
Pendulum Velocity			
Plot No.	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
0.0	-0.9	-6.7	200.0



Curve Description			
Maximum Translation Rotation			
Plot No.	Type	SAE Class	Units
002	FIL	60	Degress
Max	Time	Min	Time
75.7	61.1	-32.1	173.4



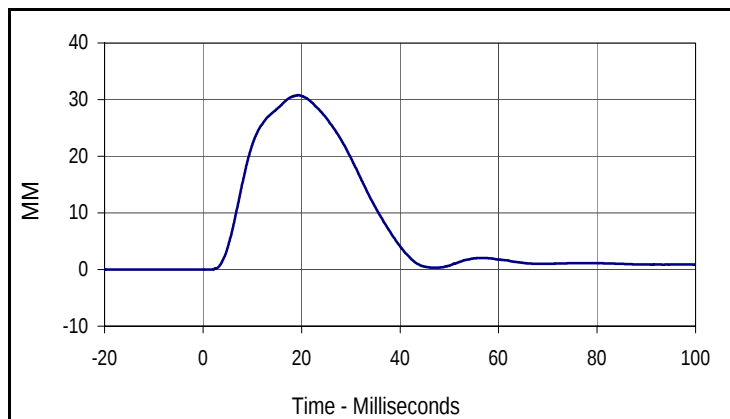
Curve Description			
Moment About Occipital Condyle			
Plot No.	Type	SAE Class	Units
003	FIL	600	Nm
Max	Time	Min	Time
14.4	159.6	-43.2	51.7

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

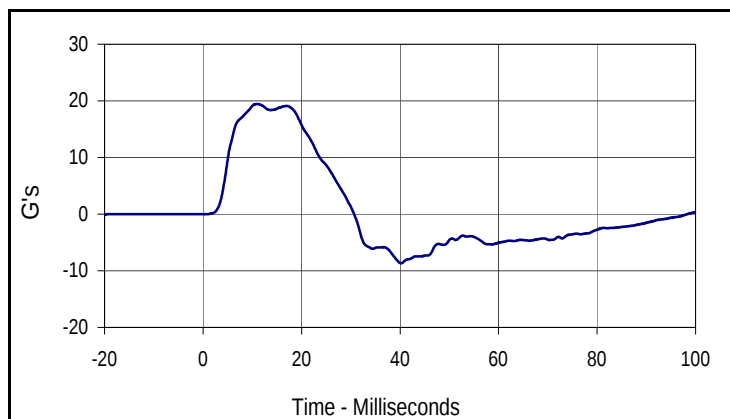
Test Date: 11/4/13
 Test I.D.: 299SH064



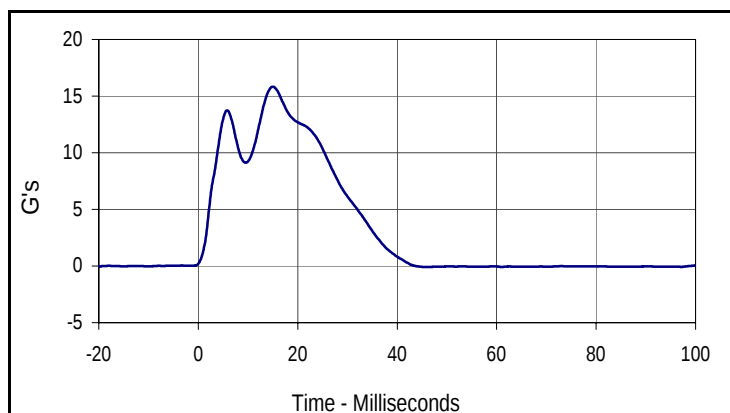
Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥180	565	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.4	Pass
	Min	°C		21.3	Pass
Humidity During Soak	Max	%	10.0 to 70.0	32.6	Pass
	Min	%		32.3	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.3	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	32.5	Pass
Impactor Velocity		m/s	4.20 to 4.40	4.30	Pass
Peak Shoulder Deflection		mm	28 to 37	30.8	Pass
Peak Lateral Spine Acceleration Y		G's	17 to 22	19.4	Pass
Peak Impactor Acceleration		G's	13 to 18	15.8	Pass
Overall Test Results				Pass	



Curve Description			
Shoulder Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
30.8	19.3	0.0	-12.9



Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
19.4	10.9	-8.7	40.2



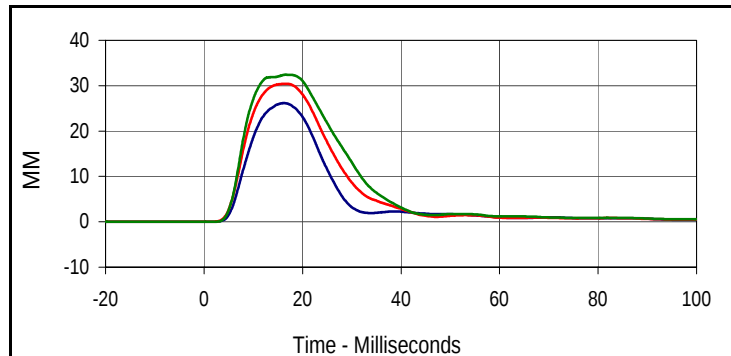
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
15.8	15.0	-0.1	45.7

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

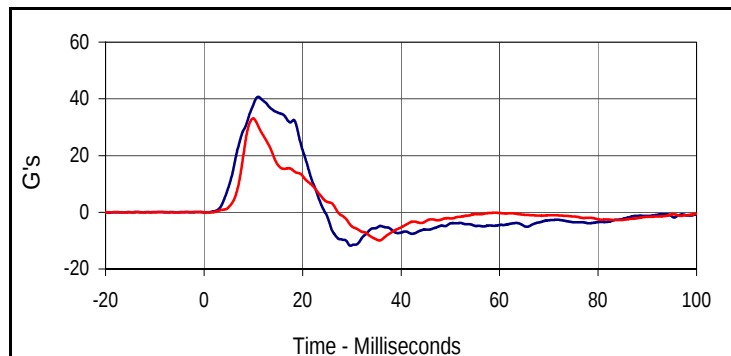
Test Date: 11/4/13
 Test I.D.: 299TWA064



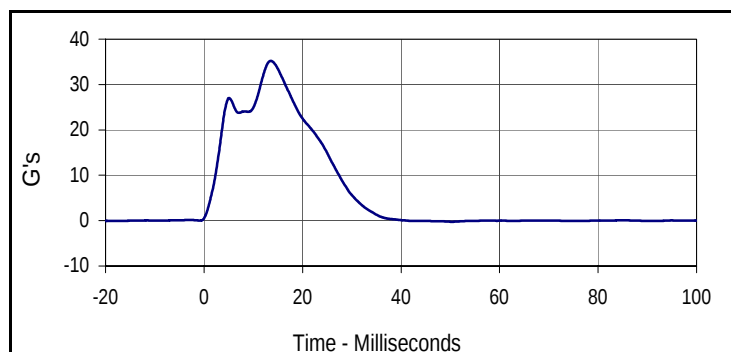
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	615	Pass
Temperature During Soak	Max	20.6 to 22.2	21.4	Pass
	Min		21.3	Pass
Humidity During Soak	Max	10.0 to 70.0	32.6	Pass
	Min		32.3	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.3	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	32.5	Pass
Impactor Velocity	m/s	6.6 to 6.8	6.73	Pass
Peak Shoulder Deflection	mm	31 to 40	34.2	Pass
Peak Upper Thorax Rib Deflection	mm	25 to 32	26.2	Pass
Peak Middle Thorax Rib Deflection	mm	30 to 36	30.4	Pass
Peak Lower Thorax Rib Deflection	mm	32 to 38	32.4	Pass
Peak Upper Spine Y Acceleration	G's	34 to 43	40.7	Pass
Peak Lower Spine Y Acceleration	G's	29 to 37	33.1	Pass
Peak Impactor Acceleration	G's	30 to 36	35.2	Pass
Overall Test Results			Pass	



Curve Description			
Upper Thorax Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
26.2	16.2	0.0	-19.2
Middle Thorax Deflection			
Max	Time	Min	Time
30.4	16.5	0.0	-16.9
Lower Thorax Deflection			
Max	Time	Min	Time
32.4	16.6	0.0	-18.5



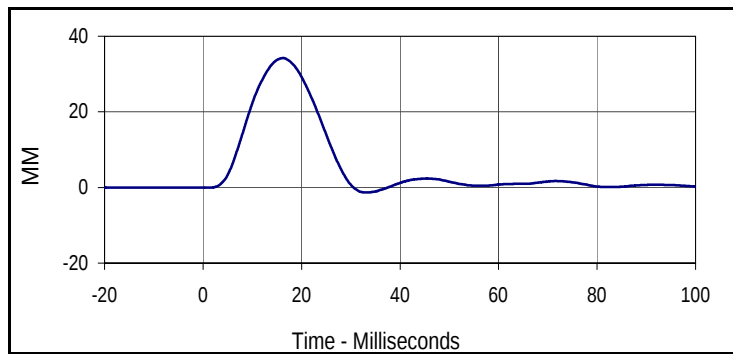
Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
40.7	11.0	-11.8	29.7
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
33.1	10.0	-9.9	35.6



Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
35.2	13.6	-0.2	50.4

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

Test Date: 11/4/13
 Test I.D.: 299TWA064



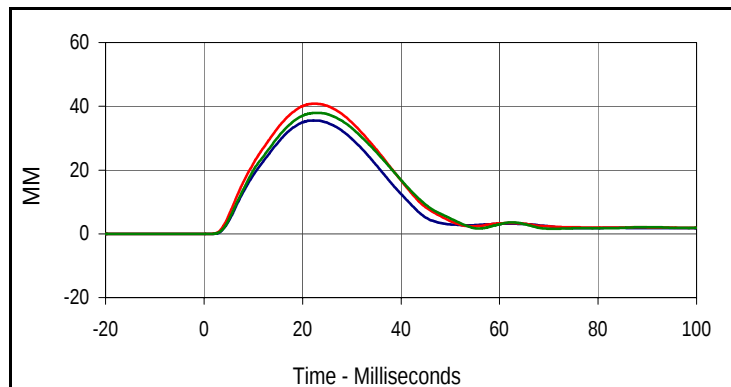
Curve Description			
Shoulder Deflection			
Plot No.	Type	SAE Class	Units
007	FIL	600	MM
Max	Time	Min	Time
34.2	16.3	-1.3	32.8

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

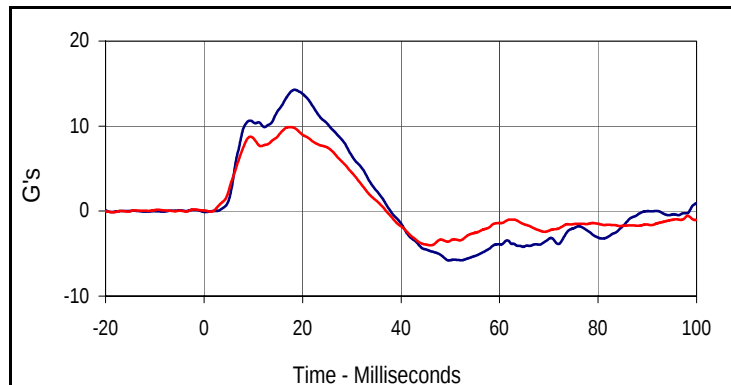
Test Date: 11/4/13
 Test I.D.: 299TWOA064



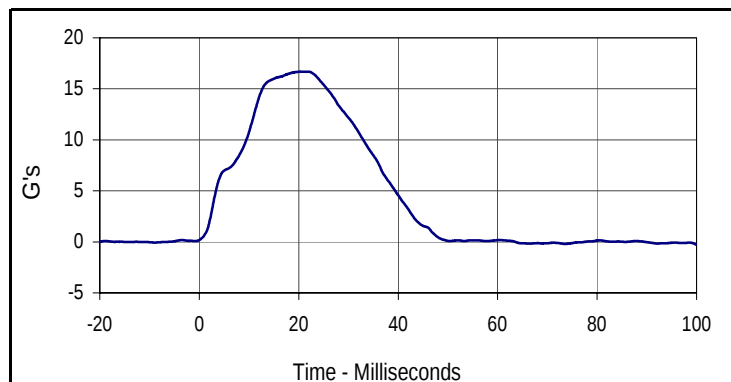
Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥180	670	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.4	Pass
	Min	°C		21.3	Pass
Humidity During Soak	Max	%	10.0 to 70.0	32.6	Pass
	Min	%		32.3	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.3	Pass
Laboratory Humidity During Test		%	10.0 to 70.0	32.6	Pass
Impactor Velocity		m/s	4.2 to 4.4	4.37	Pass
Peak Upper Thorax Rib Deflection		mm	32 to 40	35.6	Pass
Peak Middle Thorax Rib Deflection		mm	39 to 45	40.8	Pass
Peak Lower Thorax Rib Deflection		mm	35 to 43	37.9	Pass
Peak Upper Spine Y Acceleration		G's	13 to 17	14.3	Pass
Peak Lower Spine Y Acceleration		G's	7 to 11	9.9	Pass
Peak Impactor Acceleration		G's	14 to 18	16.7	Pass
Overall Test Results				Pass	



Curve Description			
Upper Thorax Deflection			
Plot No.	Type	SAE Class	Units
001	FIL	600	MM
Max	Time	Min	Time
35.6	22.2	0.0	-14.6
Middle Thorax Deflection			
Max	Time	Min	Time
40.8	22.5	0.0	-9.9
Lower Thorax Deflection			
Max	Time	Min	Time
37.9	22.9	0.0	-12.5



Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
14.3	18.4	-5.8	49.7
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
9.9	17.4	-4.0	46.0



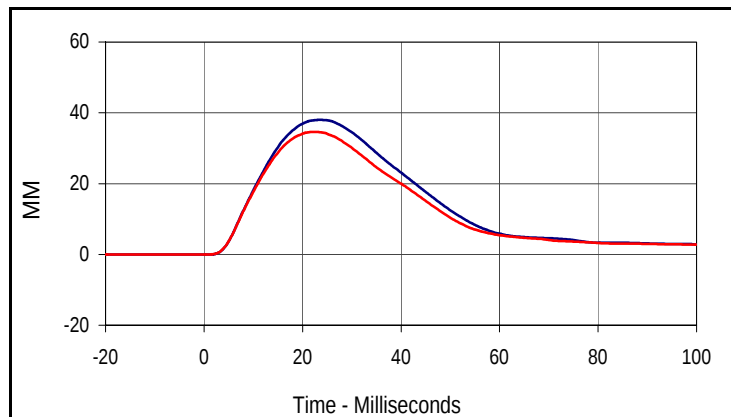
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
16.7	20.3	-0.3	99.9

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

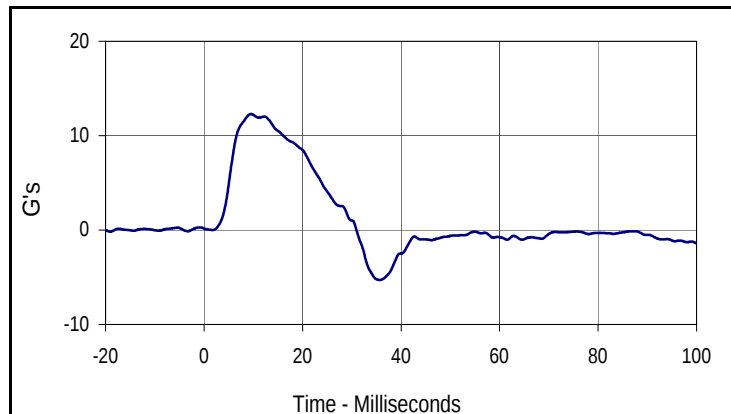
Test Date: 11/4/13
 Test I.D.: 299ABD064



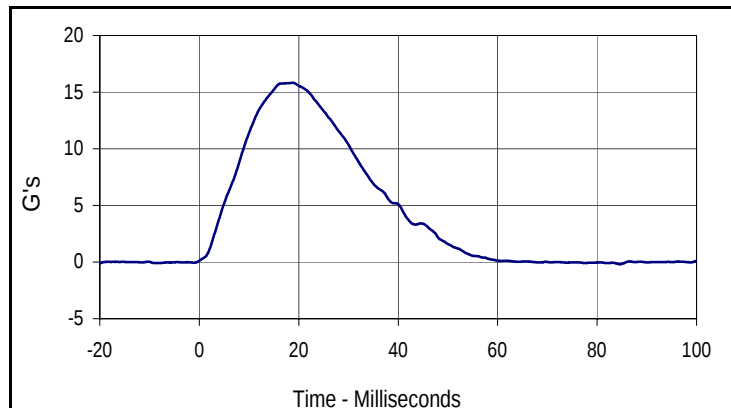
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	730	Pass
Temperature During Soak	Max	20.6 to 22.2	21.4	Pass
	Min		21.3	Pass
Humidity During Soak	Max	10.0 to 70.0	32.6	Pass
	Min		32.3	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.3	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	32.4	Pass
Impactor Velocity	m/s	4.2 to 4.4	4.34	Pass
Peak Upper Abdominal Rib Deflection	mm	36 to 47	38.0	Pass
Peak Lower Abdominal Rib Deflection	mm	33 to 44	34.6	Pass
Peak Lower Spine Y Acceleration	G's	9 to 14	12.3	Pass
Peak Impactor Acceleration	G's	12 to 16	15.8	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
38.0	23.8	0.0	-11.1
Curve Description			
Lower Abdominal Rib Deflection			
Plot No.	Type	SAE Class	Units
002	FIL	600	MM
Max	Time	Min	Time
34.6	22.4	0.0	-4.7

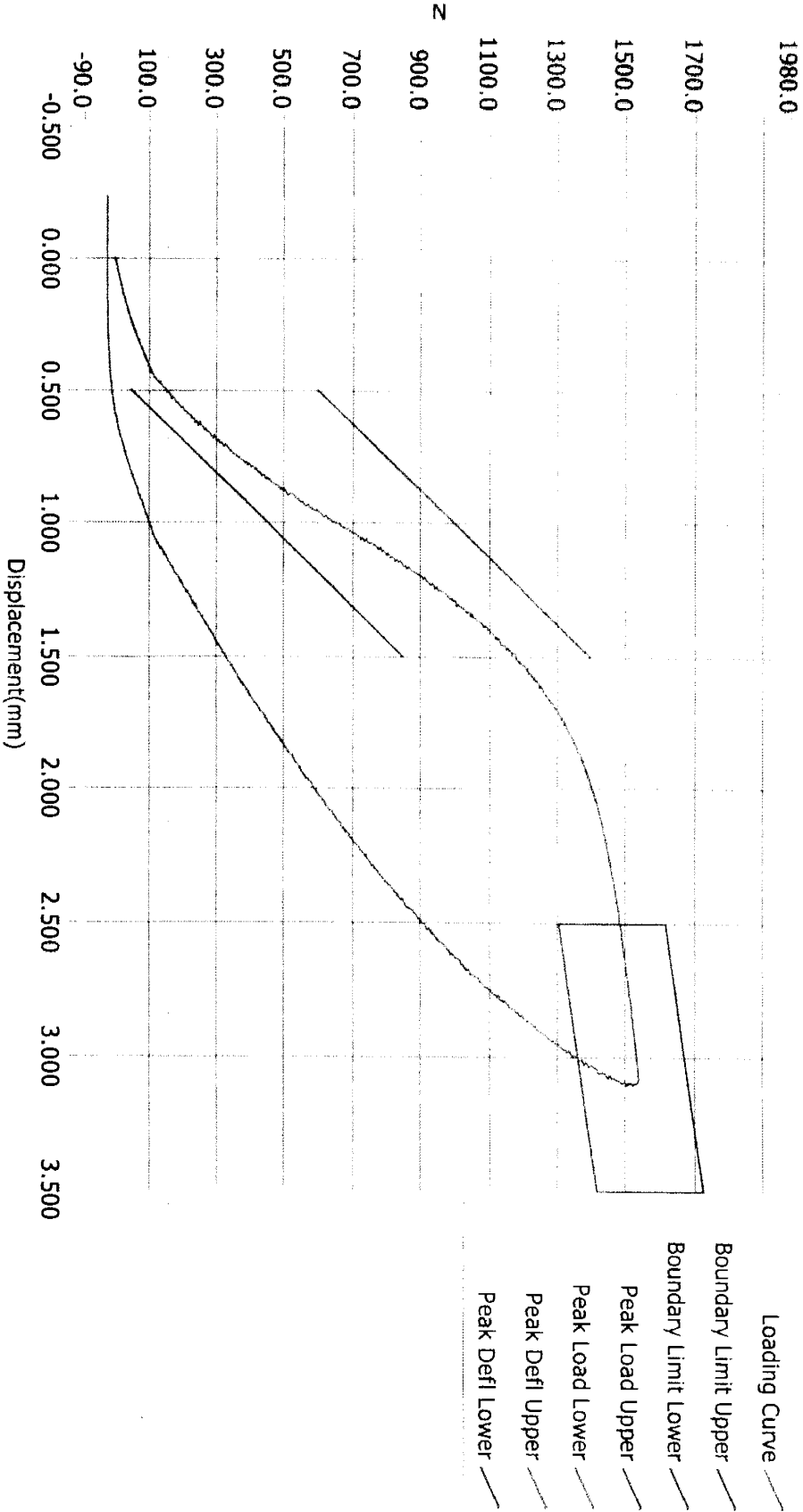


Curve Description			
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
12.3	9.6	-5.3	35.6



Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
15.8	18.8	-0.2	84.6

Resultant Data - SIDIIs Plug Compression



ATD Calibration Lab

Test ID	Part Serial Number	Test Date	Test Time
49011	12/7/2011	12:35 AM	
Cert ID	ATD Serial Number	ATD Type	
N/A	SIDIIs		

M20145201 PRE-TEST

Current Date : 12/7/2011

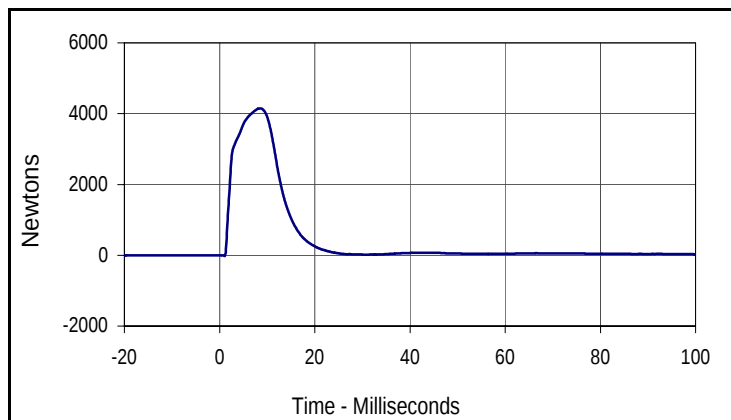
Current Time : 00:36:31

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

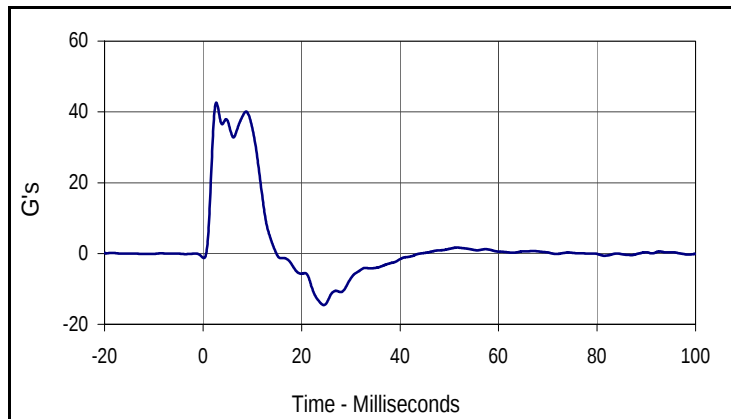
Test Date: 11/4/13
 Test I.D.: 299ACET064



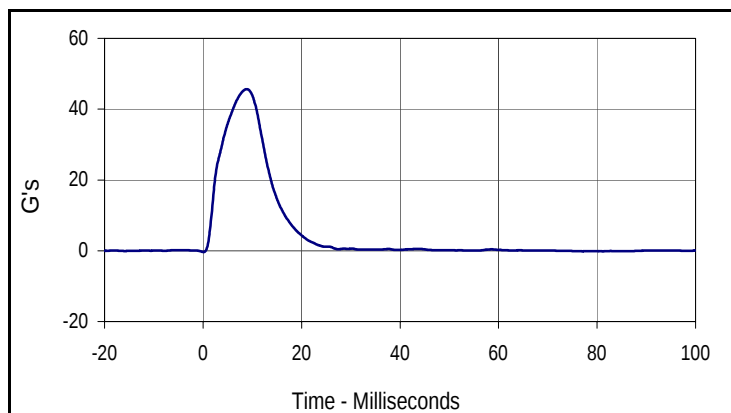
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	805	Pass
Temperature During Soak	Max	20.6 to 22.2	21.4	Pass
	Min		21.3	Pass
Humidity During Soak	Max	10.0 to 70.0	32.6	Pass
	Min		32.3	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.3	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	32.4	Pass
Impactor Velocity	m/s	6.6 to 6.8	6.72	Pass
Peak Acetabulum Force Y	Newtons	3600 to 4300	4151.4	Pass
Peak Pelvis Y Acceleration After 6 msec.	G's	34 to 42	40.1	Pass
Peak Impactor Acceleration	G's	38 to 47	45.7	Pass
Overall Test Results			Pass	



Curve Description			
Pelvis Acetabulum Force			
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
4151.4	8.5	-23.1	1.0



Curve Description			
Pelvis Y Acceleration			
Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
42.6	2.7	-14.6	24.5



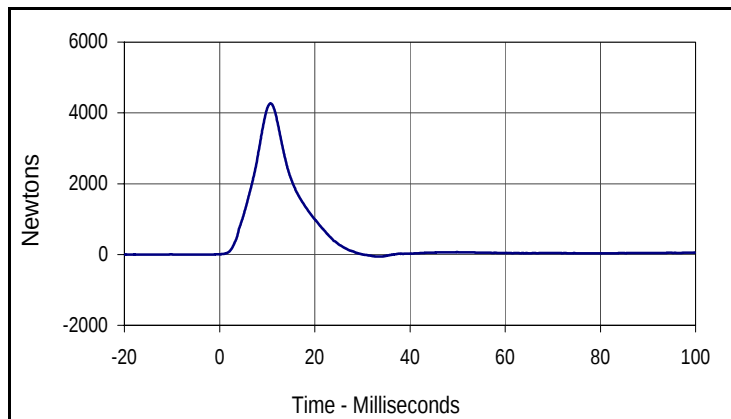
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
45.7	8.9	-0.4	0.1

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

Test Date: 11/4/13
 Test I.D.: 299PL064



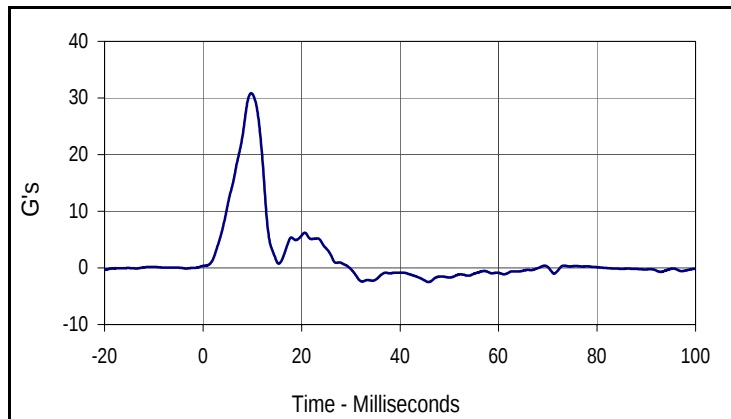
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	870	Pass
Temperature During Soak	Max	20.6 to 22.2	21.4	Pass
	Min		21.3	Pass
Humidity During Soak	Max	10.0 to 70.0	32.6	Pass
	Min		32.3	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.3	Pass
Laboratory Humidity During Test	%	10.0 to 70.0	32.4	Pass
Impactor Velocity	m/s	4.2 to 4.4	4.29	Pass
Peak Iliac Force	Newtons	4100 to 5100	4270.1	Pass
Peak Pelvis Y Acceleration	G's	28 to 39	30.8	Pass
Peak Impactor Acceleration	G's	36 to 45	37.8	Pass
Overall Test Results			Pass	



Curve Description

Pelvis Iliac Force

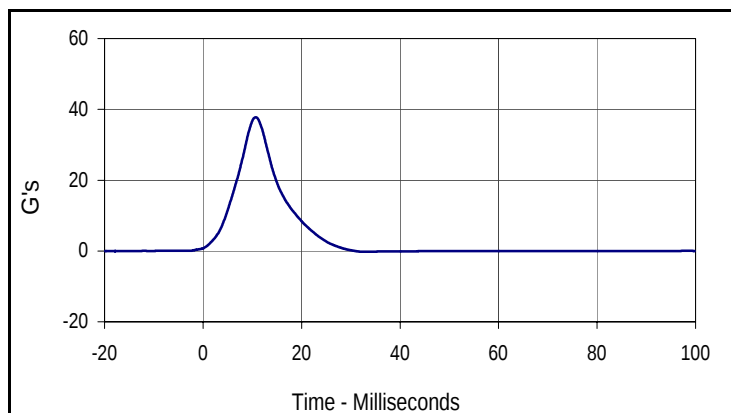
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
4270.1	10.7	-61.0	34.0



Curve Description

Pelvis Y Acceleration

Plot No.	Type	SAE Class	Units
002	FIL	180	G's
Max	Time	Min	Time
30.8	9.8	-2.5	45.8



Curve Description

Impactor Acceleration

Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
37.8	10.7	-0.2	32.5

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

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

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



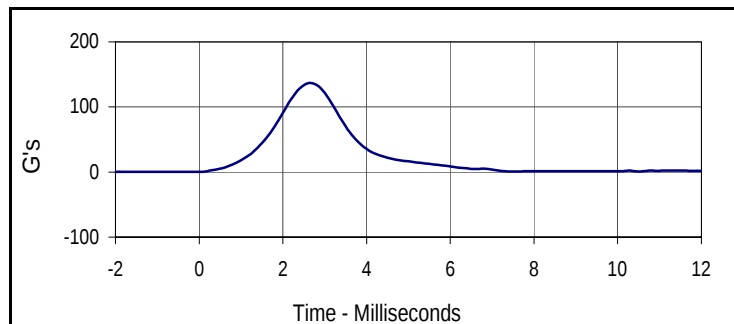
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.3	Pass
Laboratory Relative Humidity		%	10 to 70	34	Pass
A	Sitting Height	mm	772 - 788	780	Pass
B	Shoulder Pivot Height	mm	437 - 453	445	Pass
C	H-Point Height	mm	79 - 89	85	Pass
D	H-Point from Seatback	mm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

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

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



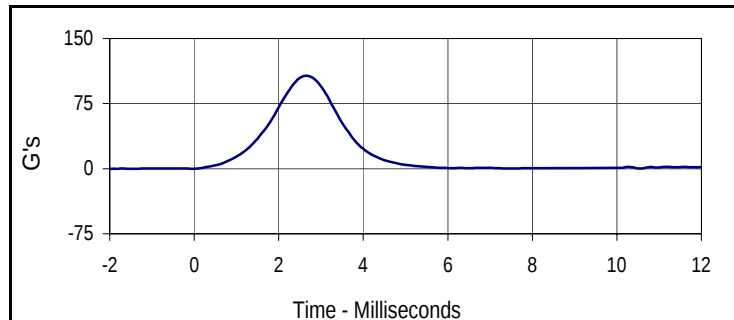
Tested Parameter		Units	Specification	Result	Pass/Fail
Head Assembly Soak Time		Minutes	≥240	265	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.5	Pass
	Min	°C		21.3	Pass
Humidity During Soak	Max	%	10.0 to 70.0	33.6	Pass
	Min	%		33.4	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.3	Pass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



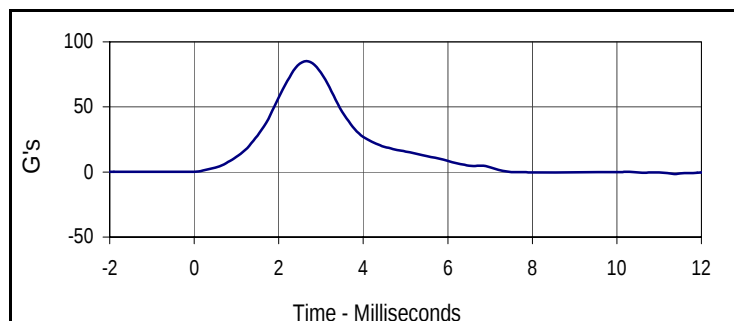
Curve Description			
Head Resultant			
Plot No.	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
136.7	2.7	0.1	-2.0



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



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



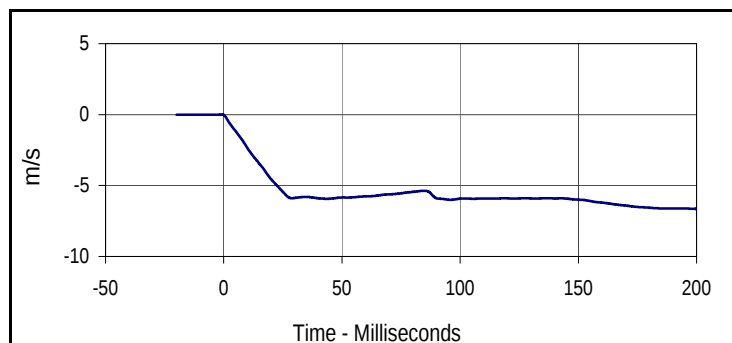
Curve Description			
Head Z			
Plot No.	Type	SAE Class	Units
004	FIL	1000	G's
Max	Time	Min	Time
85.0	2.7	-1.4	11.4

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

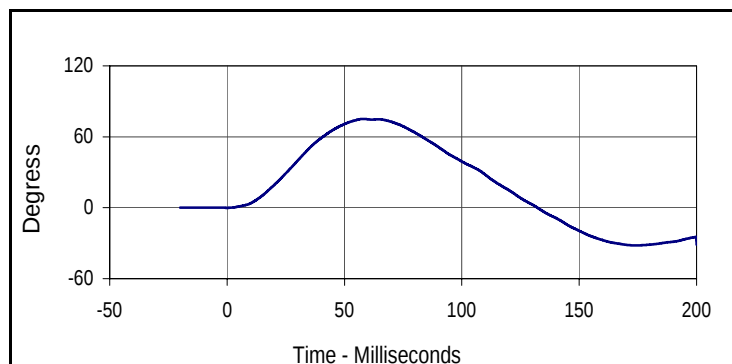
Test Date: 11/13/13
 Test I.D.: 299NB065



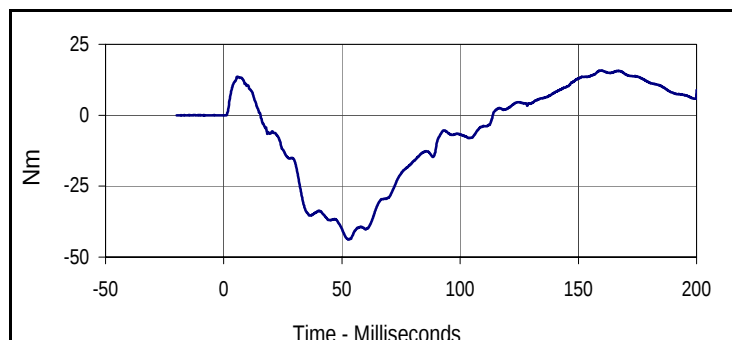
Tested Parameter	Units	Specification	Result	Pass/Fail
Neck Assembly Soak Time	Minutes	≥240	330	Pass
Temperature During Soak	Max	20.6 to 22.2	21.5	Pass
	Min		21.3	Pass
Humidity During Soak	Max	10.0 to 70.0	33.6	Pass
	Min		33.4	Pass
Laboratory Temperature During Test	°C	20.6 to 22.2	21.4	Pass
Laboratory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



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



Curve Description			
Maximum Translation Rotation			
Plot No.	Type	SAE Class	Units
002	FIL	60	Degress
Max	Time	Min	Time
75.2	58.0	-31.8	174.0



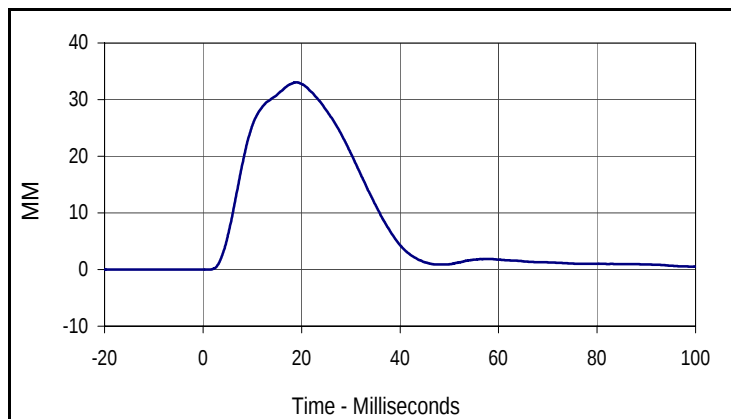
Curve Description			
Moment About Occipital Condyle			
Plot No.	Type	SAE Class	Units
003	FIL	600	Nm
Max	Time	Min	Time
15.7	159.5	-43.9	52.9

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

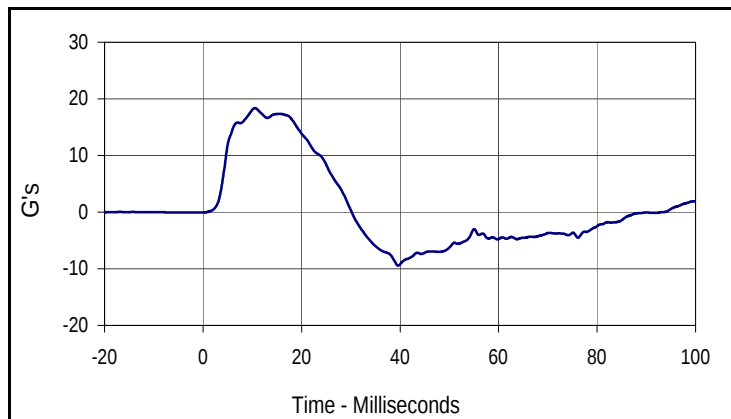
Test Date: 11/13/13
 Test I.D.: 299SH065



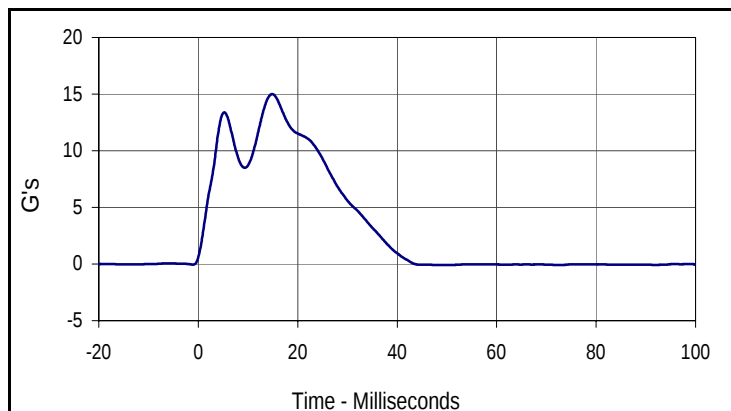
Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥180	405	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.5	Pass
	Min	°C		21.3	Pass
Humidity During Soak	Max	%	10.0 to 70.0	33.6	Pass
	Min	%		33.4	Pass
Laboratory Temperature During Test		°C	20.6 to 22.2	21.4	Pass
Laboratory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



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



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



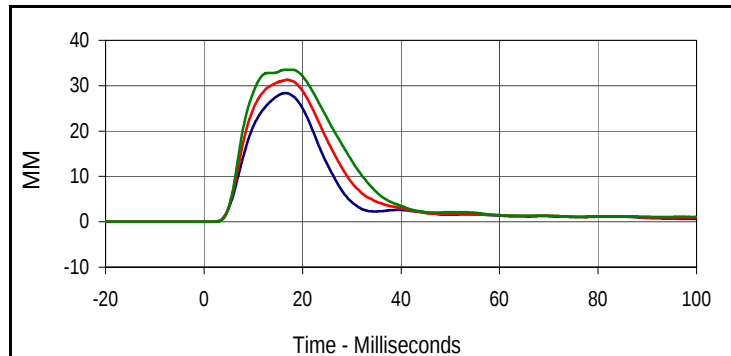
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
15.0	14.9	-0.1	48.1

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

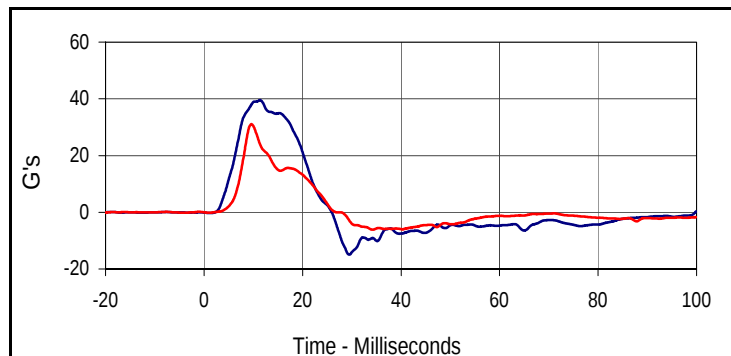
Test Date: 11/13/13
 Test I.D.: 299TWA065



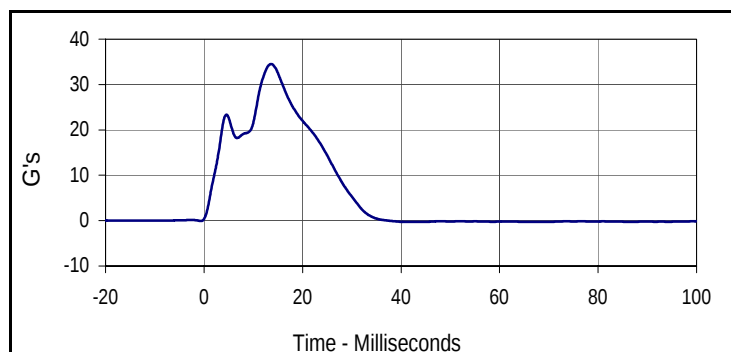
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	455	Pass
Temperature During Soak	Max	20.6 to 22.2	21.5	Pass
	Min		21.3	Pass
Humidity During Soak	Max	10.0 to 70.0	33.6	Pass
	Min		33.4	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.4	Pass
Laboratory Humidity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



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



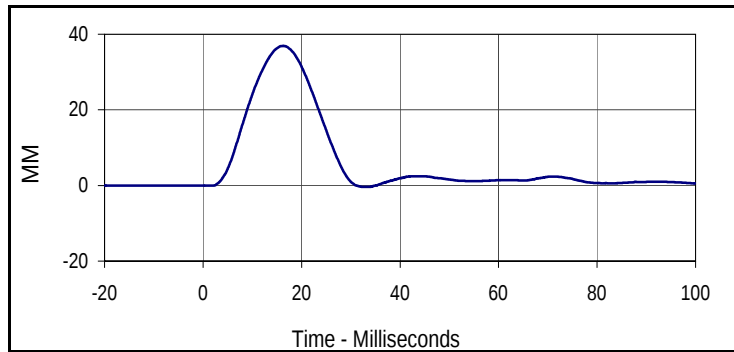
Curve Description			
Upper Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
004	FIL	180	G's
Max	Time	Min	Time
39.5	11.4	-15.0	29.5
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
005	FIL	180	G's
Max	Time	Min	Time
31.1	9.6	-6.1	34.2



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

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

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



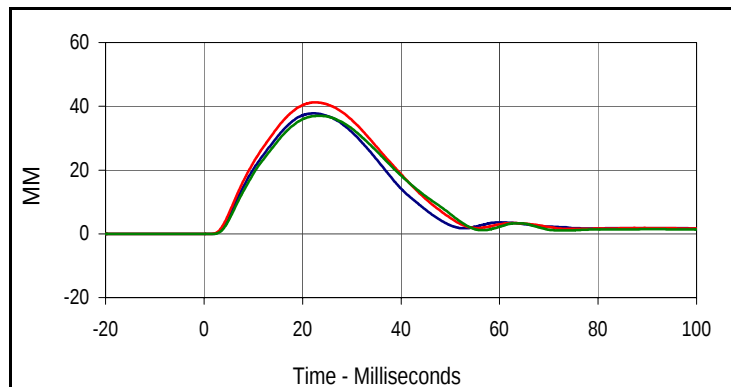
Curve Description			
Shoulder Deflection			
Plot No.	Type	SAE Class	Units
007	FIL	600	MM
Max	Time	Min	Time
36.9	16.3	-0.4	33.3

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

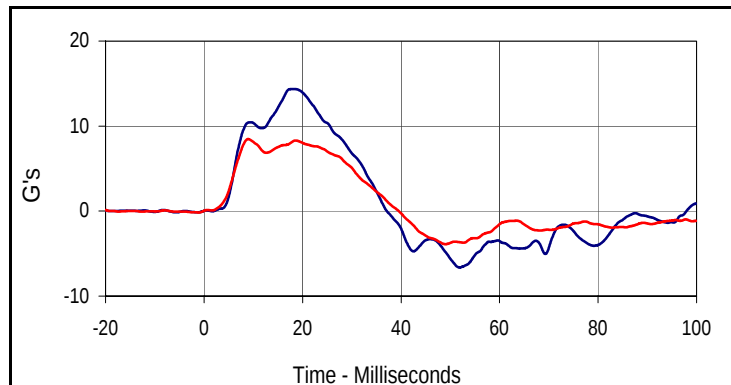
Test Date: 11/13/13
 Test I.D.: 299TWOA065



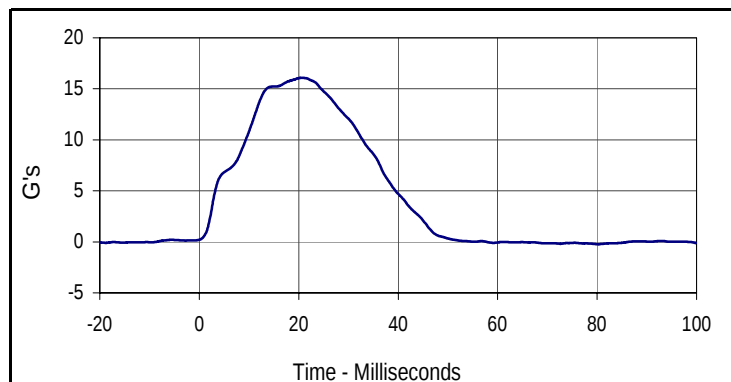
Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥180	510	Pass
Temperature During Soak	Max	°C	18.9 to 25.6	21.5	Pass
	Min	°C		21.3	Pass
Humidity During Soak	Max	%	10.0 to 70.0	33.6	Pass
	Min	%		33.4	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.4	Pass
Laboratory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



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



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



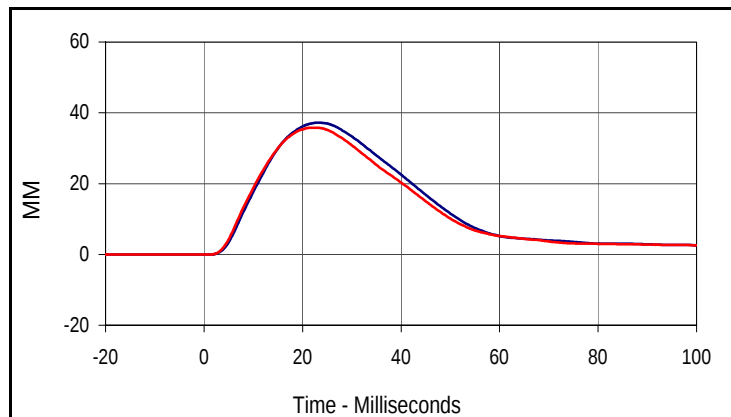
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
006	FIL	180	G's
Max	Time	Min	Time
16.1	20.7	-0.2	80.1

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

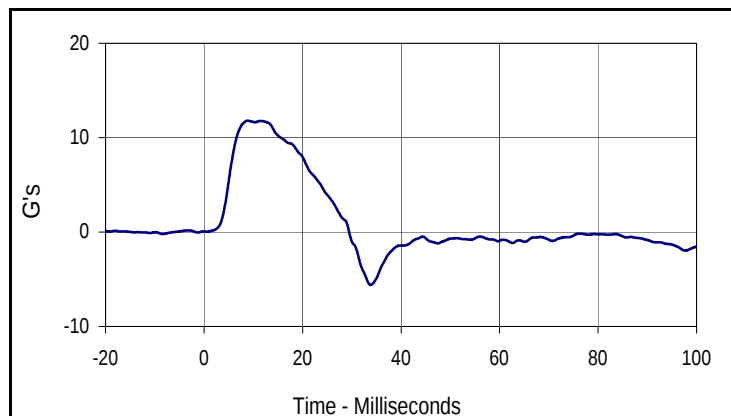
Test Date: 11/13/13
 Test I.D.: 299ABD065



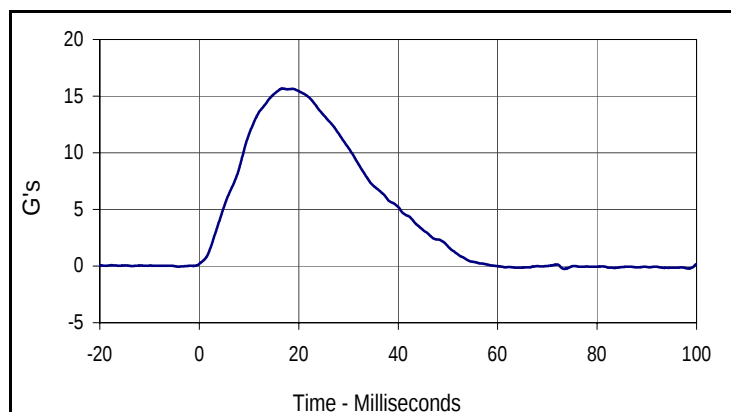
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	570	Pass
Temperature During Soak	Max °C	20.6 to 22.2	21.5	Pass
	Min °C		21.3	Pass
Humidity During Soak	Max %	10.0 to 70.0	33.6	Pass
	Min %		33.4	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.4	Pass
Laboratory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



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

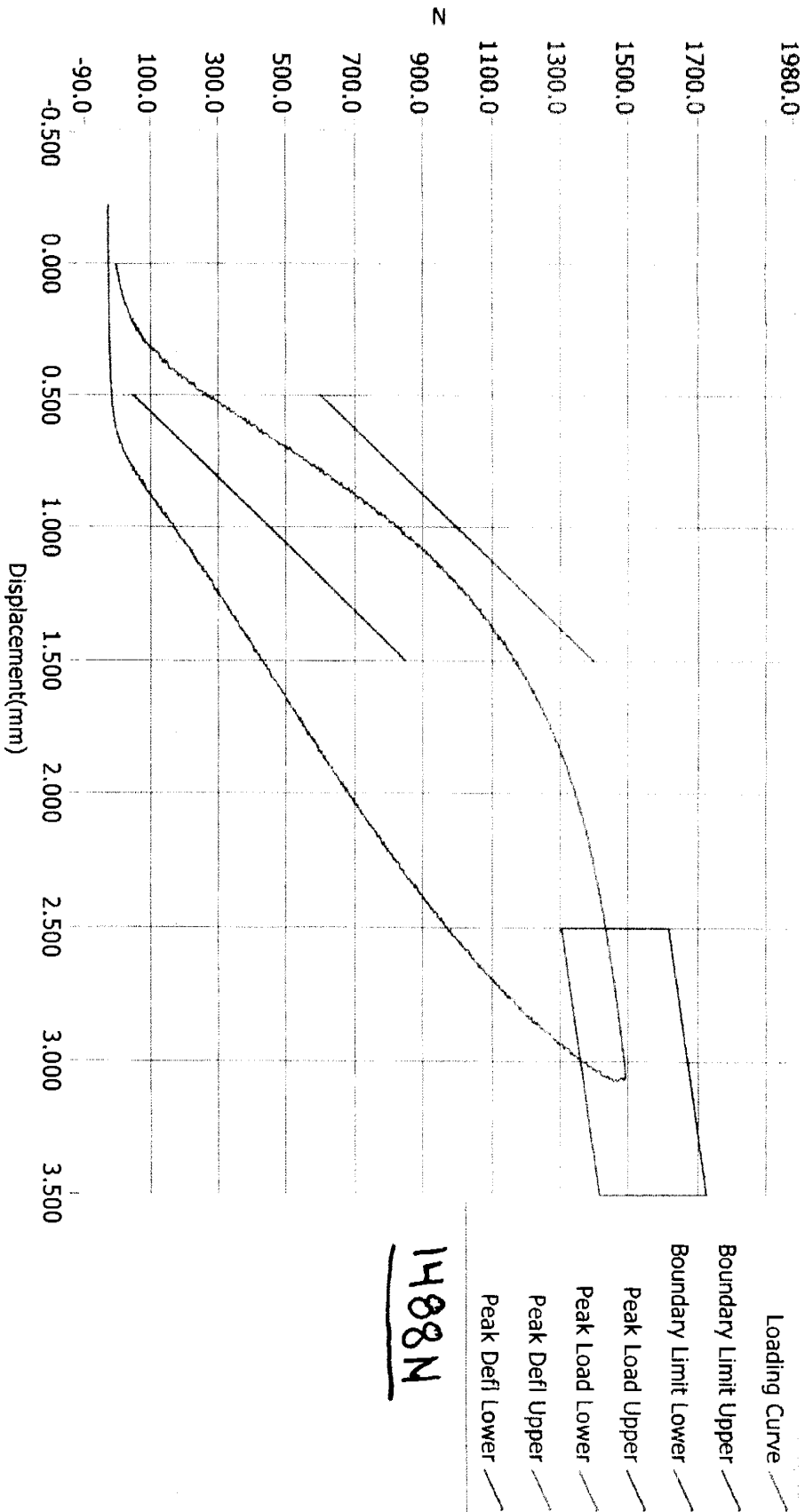


Curve Description			
Lower Spine Y Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
11.8	8.9	-5.6	33.8



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

Resultant Data - SIDIIs Plug Compression



1488N

ATD Calibration Lab

Test ID

Part Serial Number

Test Date

Test Time

63009

1/18/2013

9:26 PM

Cert ID

ATD Serial Number

ATD Type

N/A

SIDIIs

M20145201 POST-TEST

Current Date : 1/18/2013

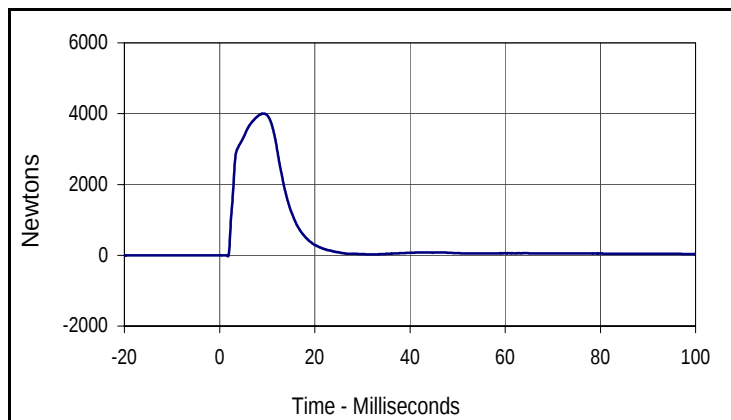
Current Time : 21:26:51

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

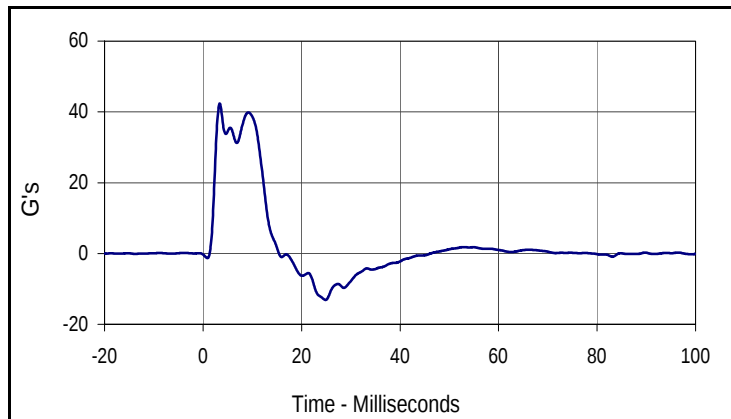
Test Date: 11/13/13
 Test I.D.: 299ACET065



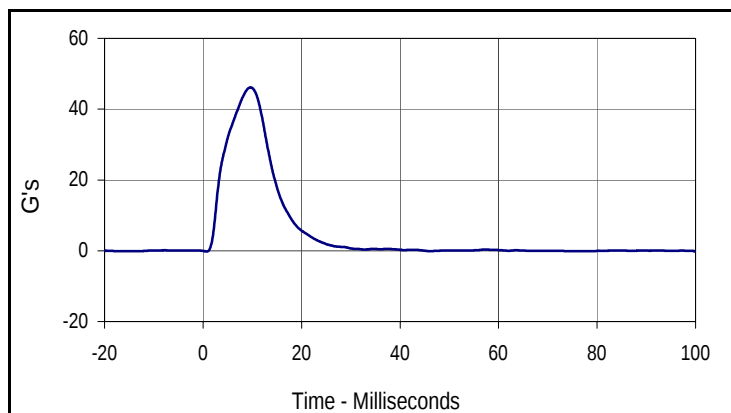
Tested Parameter	Units	Specification	Result	Pass/Fail
Dummy Soak Time	Minutes	≥180	645	Pass
Temperature During Soak	Max	20.6 to 22.2	21.5	Pass
	Min		21.3	Pass
Humidity During Soak	Max	10.0 to 70.0	33.6	Pass
	Min		33.4	Pass
Laboratory Temperature During Test	°C	18.9 to 25.6	21.4	Pass
Laboratory Humidity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



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



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



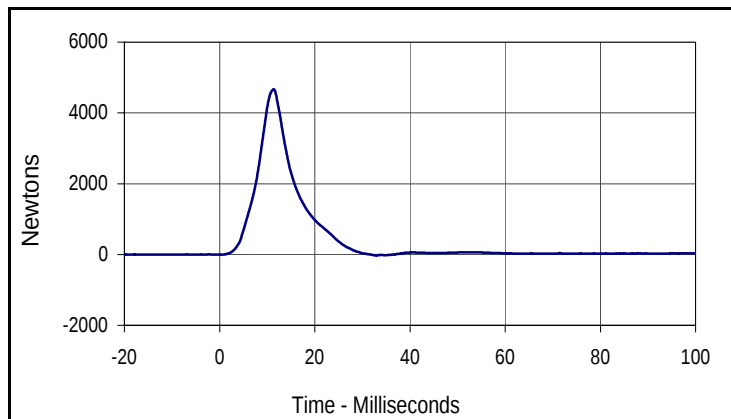
Curve Description			
Impactor Acceleration			
Plot No.	Type	SAE Class	Units
003	FIL	180	G's
Max	Time	Min	Time
46.1	9.6	-0.2	0.8

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

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



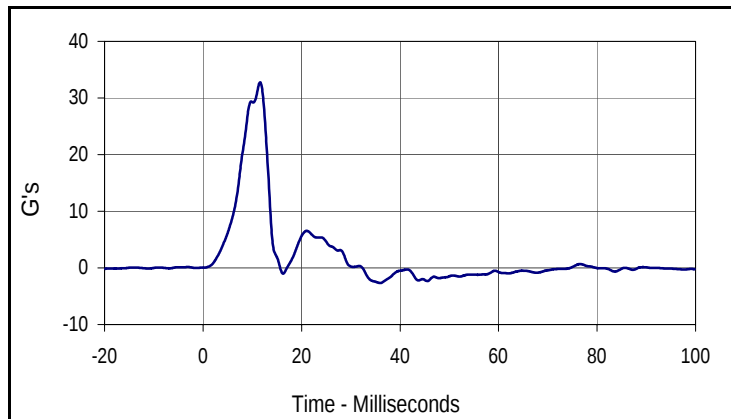
Tested Parameter		Units	Specification	Result	Pass/Fail
Dummy Soak Time		Minutes	≥180	710	Pass
Temperature During Soak	Max	°C	20.6 to 22.2	21.5	Pass
	Min	°C		21.3	Pass
Humidity During Soak	Max	%	10.0 to 70.0	33.6	Pass
	Min	%		33.4	Pass
Laboratory Temperature During Test		°C	18.9 to 25.6	21.4	Pass
Laboratory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



Curve Description

Pelvis Iliac Force

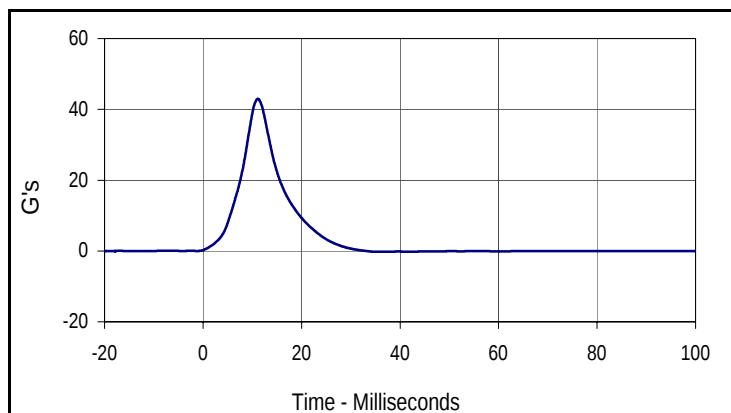
Plot No.	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
4667.6	11.4	-26.2	32.8



Curve Description

Pelvis Y Acceleration

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



Curve Description

Impactor Acceleration

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

APPENDIX D
TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION DATA

TABLE 1 – Dummy Instrumentation (SID-IIs)

				SID-IIs S/N 299		
				Serial Number	Manufacturer	Calibration
Head Accelerometers	Primary		X	P51926	Endevco	10/14/13
			Y	P51929	Endevco	10/14/13
			Z	P51934	Endevco	10/14/13
	Redundant		X	P68604	Endevco	10/14/13
			Y	P51931	Endevco	10/14/13
			Z	P51939	Endevco	10/14/13
Displacement Potentiometers	Shoulder		Y	1074	FTSS	10/15/13
	Thoracic Rib	Upper	Y	1143	FTSS	10/15/13
		Middle	Y	1160	FTSS	10/15/13
		Lower	Y	1213	FTSS	10/15/13
	Abdominal Rib	Upper	Y	1218	FTSS	10/15/13
		Lower	Y	1234	FTSS	10/15/13
Lower Spine Accelerometers (T12)			X	P63999	Endevco	10/15/13
			Y	P58872	Endevco	10/15/13
			Z	P58795	Endevco	10/15/13
Acetabulum Load Cell			Y	272	Denton	4/19/13
Iliac Wing Load Cell			Y	284	Denton	4/19/13
Pelvis Plug (Struck Side)				63449	FTSS	1/28/13
Pelvis Plug (Non-Struck Side)				47030	FTSS	10/15/11

TABLE 2 – Vehicle Instrumentation

Vehicle Instrumentation		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	Ketx5x	ICSensor	6/28/13
Vehicle Center of Gravity	Y	Ketx5y	ICSensor	6/28/13
Vehicle Center of Gravity	Z	Ketx5z	ICSensor	6/28/13
Left Floor Sill	Y	13726	Endevco	10/22/13
A-Pillar Sill	Y	13737	Endevco	10/22/13
A-Pillar Low	Y	13658	Endevco	10/29/13
A-Pillar Mid	Y	13713	Endevco	6/18/13
B-Pillar Sill	Y	13740	Endevco	10/22/13
B-Pillar Low	Y	13734	Endevco	10/22/13
B-Pillar Mid	Y	12499	Endevco	10/28/13
Driver Seat	Y	13732	Endevco	10/22/13
Engine Top	X	13316	Endevco	6/25/13
Engine Top	Y	13331	Endevco	6/26/13
Firewall	Y	13748	Endevco	11/1/13
Right Roof	Y	12493	Endevco	7/1/13
Right Floor Sill	Y	13744	Endevco	10/22/13
Rear Floorpan	X	13717	Endevco	6/17/13
Rear Floorpan	Y	12906	Endevco	10/2/13

TABLE 3 – Pole Instrumentation

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