

REPORT NUMBER TR-P27003-03-NC

**NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TEST**

**NISSAN MOTOR COMPANY LTD.
2007 NISSAN VERSA 1.8S
5-DOOR HATCHBACK**

NHTSA NUMBER: M75201

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AUGUST 16, 2006

FINAL REPORT

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16. Abstract A 55/28 km/h 90 deg. Moving Deformable Barrier Side Impact NCAP Test was conducted on the subject 2007 Nissan Versa 1.8S 5-Door Hatchback in accordance with the specifications of the Office of Crash Worthiness Standards Test Procedures for the generation of consumer information on vehicle side crash protection. The test was conducted at KARCO Engineering, LLC in Adelanto, California, on August 16, 2006. The impact velocity of the Moving Deformable Barrier was 61.6 km/h and the outside ambient temperature at the struck (driver's) side of the vehicle was 33.3 deg. C. The target vehicle's maximum post-test static crush was 268 mm located at level 2. The test vehicle's occupant performance data is as follows:			
Measurement Description	Driver SID/HIII	Pass. SID/HIII	
Left Upper Rib (LUR) G's	47.4	40.2	
Left Lower Rib (LLR) G's	46.3	47.3	
Lower Spine (T ₁₂) G's	44.5	49.8	
Thoracic Trauma Index (TTI) G's	46.0	49.0	
Pelvis (PEV) G's	80.0	53.0	
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SECTION 1

PURPOSE AND TEST PROCEDURE

1.1 PURPOSE

This Side Impact NCAP test is conducted as part of the FY' 2007 test program sponsored by the National Highway Traffic Safety Administration (NHTSA), under contract No. DTNH22-03-D-32005. The purpose of this test is to generate comparative side impact data on a 2007 Nissan Versa 1.8S 5-Door Hatchback manufactured by Nissan Motor Company Ltd.

1.2 TEST PROCEDURE

The side impact test was conducted in accordance with the current National Highway Traffic Safety Administration (NHTSA), Office of Crashworthiness Standards (OCS), laboratory test procedure NCAP Side Impact Testing, dated November 2002. The procedures for receiving, inspection, testing, and reporting of test results are described in the test procedures and are not repeated in this report.

SECTION 2

SUMMARY OF SIDE IMPACT TEST

2.1 SUMMARY OF SIDE IMPACT NCAP TEST

A model year 2007 Nissan Versa 1.8S 5-Door Hatchback was impacted on the left (driver's) side by a Moving Deformable Barrier (MDB) which was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 61.6 km/h. The specified impact velocity range is from 61.14 to 62.75 km/h. The test (target) vehicle was stationary and positioned 63° to the line of forward motion. The weight of the vehicle as tested was 1432 kg and the test weight of the MDB was 1361 kg. The test was conducted at KARCO Engineering, LLC in Adelanto, California, on August 16, 2006.

Two (2) real-time cameras and eleven (11) high-speed video cameras were used to document the impact event. Camera locations and pertinent camera information is documented in the data sheets. Pre- and post-test photographs of the vehicle and SID/HIIIs can be found in Appendix A. Two 50th percentile adult male Side Impact Dummies, Hybrid III (SID/HIIIs) were placed in the driver's and left rear passenger designated seating positions according to the test procedure. Each SID/HIII is instrumented with contact switches on the pelvis, thorax and six-axis neck load cells, and fourteen accelerometers in the following locations:

- Left Upper Rib (LUR) uni-axial accelerometer (Y-axis primary and redundant)
- Left Lower Rib (LLR) uni-axial accelerometer (Y-axis primary and redundant)
- Lower Thoracic Spine (T12) uni-axial accelerometer (Y-axis primary and redundant)
- Pelvic (PEV) section uni-axial accelerometer (Y-axis primary and redundant)
- Head Center of Gravity (CG) tri-axial accelerometers (X, Y, and Z axes primary and redundant)

SUPPLEMENTAL RESTRAINT INFORMATION

Restraint Type	Left Front Driver		Left Rear (Passenger)	
	Installed	Deployed	Installed	Deployed
Front Airbag	Yes	No	No	
Side Torso Airbag	Yes	Yes	No	
Head Airbag	No		No	
Curtain Airbag	Yes	Yes	Yes	Yes

SECTION 2...(CONTINUED)

The test vehicle was instrumented with twenty-one (21) structural accelerometers and the MDB was instrumented with five (5) accelerometers and one (1) contact switch on the right bumper to compare left side to right side bumper impact timing. All data channels were recorded with the fully self contained on-board Data Acquisition System (DAS). The data was digitally sampled at 10,000 samples per second and processed per Appendix V of the Test Procedure.

2.2 GENERAL COMMENTS

The driver and passenger doors remained closed during impact. The test vehicle sustained a maximum static crush of 268 mm at level 2, 900 mm rearward of the left vertical impact point. The driver SID/Hybrid III, Serial No. 274 and the passenger SID/Hybrid III, Serial No. 275 were calibrated prior to this test. The SID/Hybrid III injury criteria is summarized as follows:

Measurement	Units	Driver	Passenger
Thoracic Trauma Index (TTI)	G's	46.0	49.0
Peak Pelvic G's (PEV)	G's	80.0	53.0

Tests summaries and post-test observations are presented in Section 3. Appendix A contains the still photograph prints. Appendix B contains the driver and passenger SID/HIIIs, vehicle, and MDB response data traces. Appendix C contains the SID Configuration and performance verification data.

SECTION 3

OCCUPANT AND VEHICLE INFORMATION SHEETS

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback

NHTSA No.: M75201

Test Program: 55/28 km/h Side Impact NCAP

Test Date: 8/16/06

CONVERSION FACTORS USED IN THIS REPORT*

Quantity	Typical Application	Std Units	Metric Unit	Multiply By
Mass	Vehicle Weight	lb	kg	0.4536
Linear Velocity	Impact Velocity	mile/h	km/h	1.609
Length or Distance	Measurements	in	mm	25.4
Volume	Fuel Systems	gal	liter	3.785
Volume	Small Fluids	oz	mL	29.573
Pressure	Tire Pressures	lbf/in ²	kPa	7.0
Volume	Liquid	gal	liter	3.785
Temperature	General Use	°F	°C	$=(t_f - 32)/1.8$
Force	Dynamic Forces	lbf	N	4.448
Moment	Torque	lbf/ft	Nm	1.355

* Based on the Recommended Practice in SAE J916, May 85

DATA SHEET NO. 1

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback

NHTSA No.: M75201

Test Program: 55/28 km/h Side Impact NCAP

Test Date: 8/16/06

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M75201
Make	Nissan
Model	Versa 1.8S
Body Style	5-Door Hatchback
Vin No.	3N1BC13E67L357292
Color	Blue
Delivery Date	8/7/2006
Odometer (Miles)	22
Dealer	Victorville Nissan
Transmission	Manual
Final Drive	Front
Type/No. Cyl.	In-line 4
Engine Disp. (L)	1.8
Engine Placement	Transverse
Roof Rack	No
Sunroof/T-Top	No
Tinted Glass	Yes
Traction Control	No
Power Brakes	Yes
Front Disc	Yes
Rear Disc	No

Anti-Lock Brakes	No
All Wheel Drive	No
Power Steering	Yes
Driver Front Airbag	Yes
Driver Side Torso Airbag	Yes
Driver Side Head Airbag	No
Driver Curtain/Airbag	Yes
Rear Pass. Airbag	No
Rear Pass. Side Airbag	No
Rear Pass. Head Airbag	No
Rear Pass. Curtain/Airbag	Yes
Pre-Tensioners	Yes
Load Limiters	Yes
Bucket Seats	Yes
Air Cond.	Yes
AM/FM CD	Yes
Tilt Steering	Yes
Automatic Door Locks	No
Power Windows	Yes
Power Seats	No
Other	None

Does Owners Manual provide instructions to turn off automatic door locks.

N/A

DATA FROM CERTIFICATION LABEL

Manufactured By	Nissan Motor Company Ltd.
Date of Manufacture	Jul-06

GVWR (kg)	1710
GAWR Front (kg)	904
GAWR Rear (kg)	814

VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket	Bench	None	
Number of Occupants	2	3		5
Capacity Weight (VCW) (kg)				390
Cargo Weight (RCLW) (kg)				50

DATA SHEET NO. 1...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

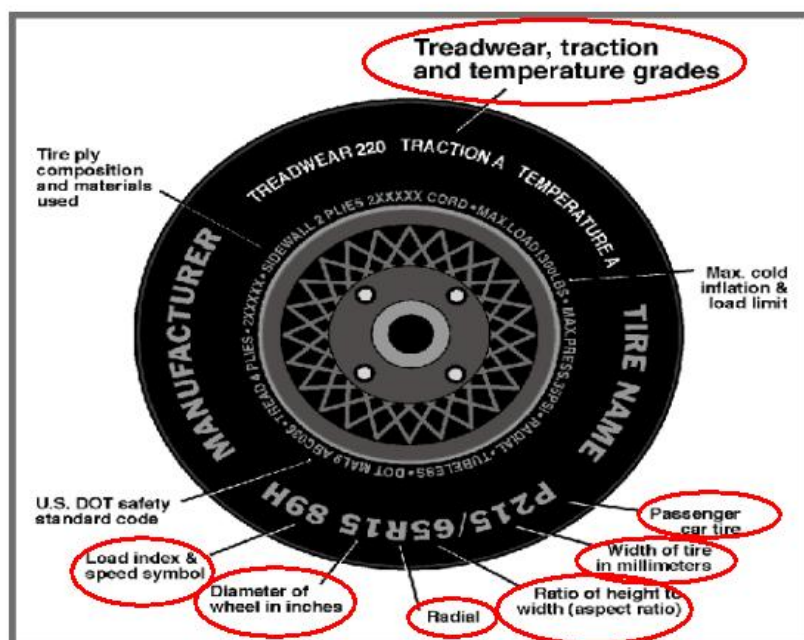
Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback

NHTSA No.: M75201

Test Program: 55/28 km/h Side Impact NCAP

Test Date: 8/16/06

Collect year, make, model, VIN, items circled in red, and tire manufacturer and tire name.



TIRE INFORMATION

Measured Parameter	Front	Rear
Max. Tire Pressure (kpa)	280	280
Cold Pressure (kpa)	230	230
Recommended Tire Size	P185/65R15	P185/65R15
Tire Size on Vehicle	P185/65R15	P185/65R15
Tire Manufacturer	Continental	Continental
Treadwear	400	400
Traction	AA	AA
Temperature Grades	A	A
Tire Plies Sidewall	1 Ply Polyester	1 Ply Polyester
Tire Plies Body	1 Polyester + 2 Steel + 1 Nylon	1 Polyester + 2 Steel + 1 Nylon
Load Index/Speed Symbol	86H	86H
Tire Material	Polyester + Steel + Nylon	Polyester + Steel + Nylon
DOT Safety Code Right	LLEP 3RN 1606	LLEP 3RN 1606
DOT Safety Code Left	LLEP 3RN 1606	LLEP 3RN 1606

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

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback

NHTSA No.: M75201

Test Program: 55/28 km/h Side Impact NCAP

Test Date: 8/16/06

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UWW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	375	242		425	302	
Right	kg	361	249		407	298	
Ratio	%	59.9	40.1		58.1	41.9	
Totals	kg	736	491	1227	832	600	1432

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UWW)	kg	1227
Weight of 2 P572 ATD's	kg	162
Rated Cargo/Luggage Wt. (RCLW)	kg	50
Calculated Vehicle Target Wt. (TVTW)	kg	1439

TEST VEHICLE ATTITUDE AND CG

	Units	LF	RF	LR	RR	CG (aft of front axle)
As Delivered	mm	705	715	705	707	1040
As Tested	mm	684	696	678	685	1086
Fully Loaded	mm	695	673	680	710	

GENERAL TEST VEHICLE DATA

Measurement Description	Units	Value
Test Vehicle Wheel Base	mm	2592
Total Vehicle Length at Left Side	mm	3030
Total Vehicle Length at Centerline	mm	4322
Total Vehicle Length at Right Side	mm	3030
Weight of Ballast In Cargo Area	kg	0
Amount of Stoddard Solvent in Fuel Tank	liters	42.69

TEST VEHICLE VERTICAL IMPACT LINE DATA

Measurement Description	Units	Value
Test Vehicle Wheel Base	mm	2592
Target Impact Point Aft of Front Axle	mm	356
Actual Impact Point Aft of Front Axle	mm	458

DATA SHEET NO. 1...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback
 Test Program: 55/28 km/h Side Impact NCAP

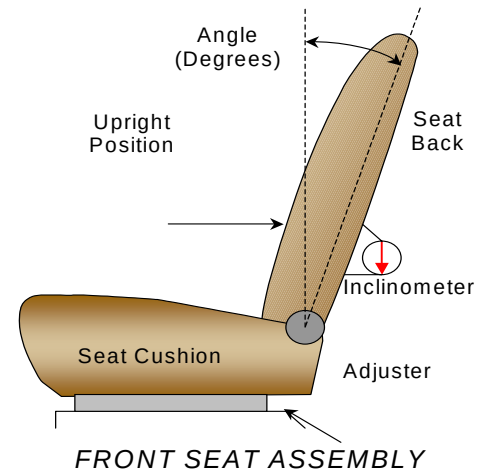
NHTSA No.: M75201
 Test Date: 8/16/06

NOMINAL DESIGN RIDING POSITION

The driver and passenger seat backs are positioned to the manufacturer's designated angle. The procedure is as follows: Seat back angle was measured at the headrest using a digital inclinometer.

SEAT BACK ANGLES

	Deg.
Driver Seat Back Angle	10.8 @ headrest
Rear Seat Back Angle	

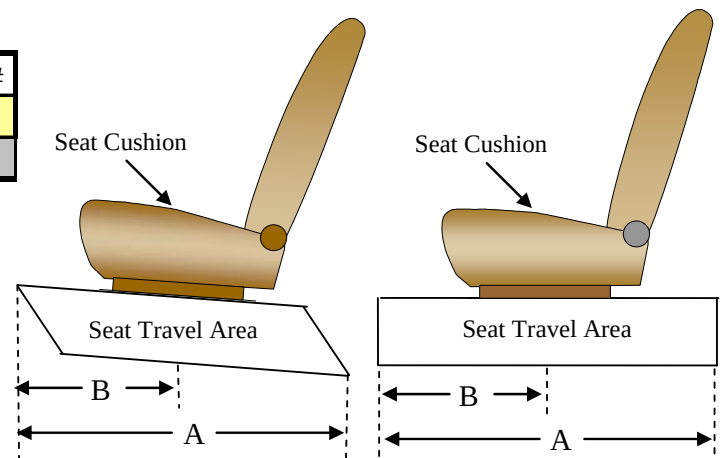


SEAT FORE/AFT POSITIONS

The total seat travel was measured from forward most position at the highest vertical seat height to rearmost position at the lowest vertical seat height. The seat was set at the longitudinal mid position with the vertical adjustment at the lowest position obtainable for the driver and passenger.

SEAT FORE/AFT POSITIONING

	Total Fore/Aft Travel	Placed in Position #
Driver Seat	25	13
Rear Seat		



SEAT BELT UPPER ANCHORAGE

Position number one (1) is the uppermost position

SEAT BELT UPPER ANCHORAGE

	Total # of Positions	Placed in Position #
Driver Seat	4	1
Rear Seat	Fixed	Fixed

DATA SHEET NO. 1...(CONTINUED)

GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback

NHTSA No.: M75201

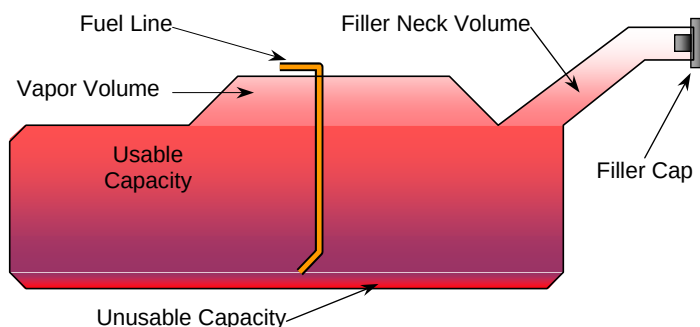
Test Program: 55/28 km/h Side Impact NCAP

Test Date: 8/16/06

FUEL TANK CAPACITY

	Liters
Usable Capacity of "Standard Tank"	44.97
Usable Capacity of "Optional" Tank	
Usable Capacity used for FMVSS 301	41.37 to 42.28
Actual Amount of Solvent used	42.69

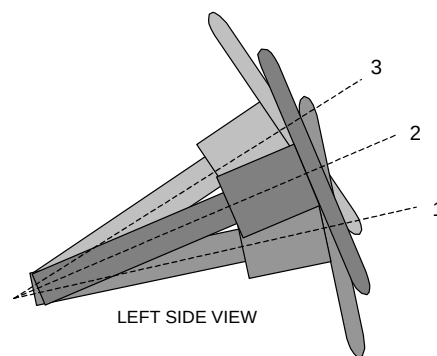
The test vehicle is equipped with an electric fuel pump. The fuel pump will operate for approximately three (3) seconds with the ignition in the "ON" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the right rear fender.



VEHICLE FUEL TANK ASSEMBLY

STEERING COLUMN ADJUSTMENT

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when moved through its full range of motion. An aluminum plate is placed across the rim of the steering wheel, an inclinometer is placed on the plate and the angle is measured.



STEERING COLUMN ASSEMBLY

STEERING COLUMN POSITIONS

	Degrees	Fore/Aft Position (mm)
Lowermost position No. 1	26.1	
Geometric center position No. 2	28.2	
Uppermost position No. 3	30.2	

DATA SHEET NO. 2**TEST VEHICLE SUMMARY OF RESULTS**

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback
 Test Program: 55/28 km/h Side Impact NCAP

NHTSA No.: M75201
 Test Date: 8/16/06

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UWW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	375	242		425	302	
Right	kg	361	249		407	298	
Ratio	%	59.9	40.1		58.1	41.9	
Totals	kg	736	491	1227	832	600	1432

MAXIMUM EXTERIOR STATIC CRUSH

Level	Measured Parameter	Units	Maximum Crush	Above Ground
Level 1	Sill Top Height	mm	59	213
Level 2	Occupant H-Point	mm	268	572
Level 3	Mid Door	mm	237	646
Level 4	Window Sill	mm	184	929
Level 5	Window top	mm	9	1461
N/A	Maximum Penetration	mm	268	

INSTRUMENTATION

Driver SID/Hybrid III Accelerometers	20
Passenger SID/Hybrid III Accelerometers	20
Vehicle Structure Accelerometers	21
MDB Accelerometers	5
Total No. of Contact Switches	5
Total	71

CAMERA COVERAGE

High Speed, Vehicle On-Board	3
High Speed, Off-Board	4
High Speed, MDB On-Board	3
Real Time, Panning	2
Total	12

DATA SHEET NO. 3**MOVING DEFORMABLE BARRIER (MDB) SUMMARY OF RESULTS**Test Vehicle: 2007 Nissan Versa 1.8S 5-Door HatchbackNHTSA No.: M75201Test Program: 55/28 km/h Side Impact NCAPTest Date: 8/16/06**MDB SPECIFICATIONS (mm)**

Measurement Description	Length
Overall Width of Framework Carriage	1252
Overall Length including Honeycomb Face	4115
Wheel Base of Framework Carriage	2590
C.G. location aft of Front Axle	1127

MDB WEIGHTS

	Units	Front Axle	Rear Axle	Total
Left	kg	384	308	
Right	kg	385	284	
Ratio	%	56.5	43.5	
Totals	kg	769	592	1361

SPEED AND IMPACT DATA

Measured Parameter	Units	Requirement	Value
Trap No. 1 Velocity (Primary)	km/h	61.1 to 62.7	61.60
Trap No. 2 Velocity (Redundant)	km/h	61.1 to 62.7	61.55
MDB CL to Target Vehicle CL	degrees	88.5 to 91.5	89.5

MAXIMUM STATIC CRUSH OF HONEYCOMB FACE (mm)

Vertical Location			From Centerline		Max. Crush
Row	Description	Height	Distance	Direction	
A	Center of Bumper	432	800	Left	639
B	Top of Bumper	533	800	Left	691
C	Mid Level	686	800	Left	696
D	Top of Stack	813	800	Left	757

MDB INSTRUMENTATION AND CAMERAS

Accelerometers	5
Contact Switches	1
High Speed Cameras	2

DATA SHEET NO. 4
POST-TEST OBSERVATIONS

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback
Test Program: 55/28 km/h Side Impact NCAP

NHTSA No.: M75201
Test Date: 8/16/06

TEST DUMMY INFORMATION AND CONTACT POINTS

Description	Front Seat SID/Hybrid III	Rear Seat SID/Hybrid III
Dummy Type / Serial No.	P572F, SID / No. 274	P572F, SID / No. 275
Head Contact	Curtain Airbag	Curtain Airbag & Side Header
Upper Torso Contact	Side Airbag	Door Panel
Lower Torso Contact	Side Airbag	Door Panel
Left Knee Contact	Door Panel	Door Panel
Right Knee Contact	None	None

POST-TEST DOOR OPENING AND SEAT TRACK INFORMATION

Description	Front	Rear
Left Side Door Opening	Door remained closed and latched, jammed	Door remained closed and latched, jammed
Right Side Door Opening	Remained closed and latched, operational	Remained closed and latched, operational
Seat Movement	None	None
Seat Back Failure	None	None

POST-TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	No separation
Sill Separation	Front & Rear passenger side sill separated
Windshield Damage	None
Window Damage	Front & Rear passenger side windows broke
Other Notable Effects	None

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

Restraint Type	Left Front (Driver) Occupant Location 01		Left Rear (Passenger) Occupant Location 04	
	Installed	Operation	Installed	Operation
Front Airbag	Yes	No	No	
Side Torso Airbag	Yes	Yes	No	
Head Airbag	No		No	
Curtain Airbag	Yes	Yes	Yes	Yes
Seat Belt Pretensioner	Yes		No	
Seat Belt Load Limiter	Yes		No	

MDB LEFT EDGE IMPACT POINT DATA

Measured Parameter	Units	Requirement	Value
Horizontal Offset	mm	+/- 50	+1 (above)
Vertical Offset	mm	+/- 20	+1 (right)

DATA SHEET NO. 5

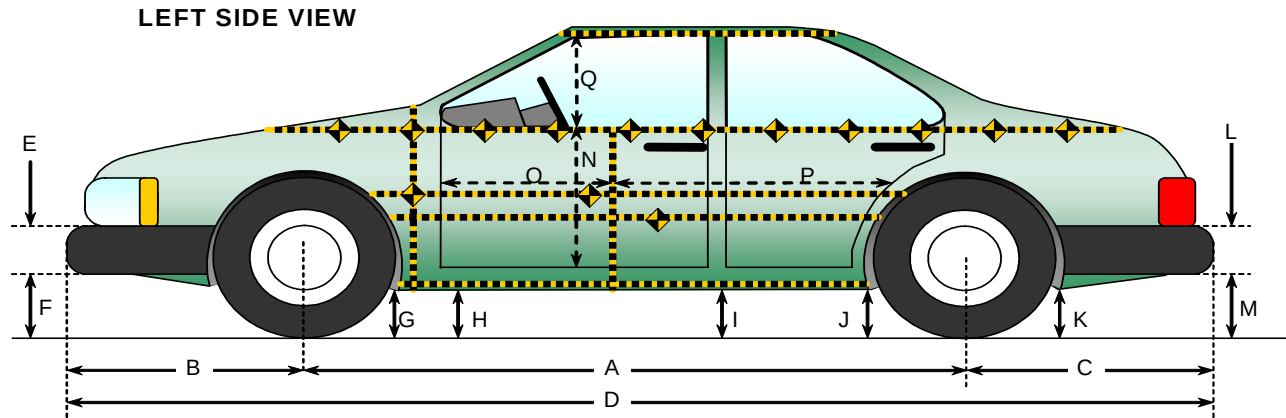
VEHICLE PRE-TEST AND POST-TEST MEASUREMENTS

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback

NHTSA No.: M75201

Test Program: 55/28 km/h Side Impact NCAP

Test Date: 8/16/06



VEHICLE PRE AND POST-TEST MEASUREMENT INFORMATION

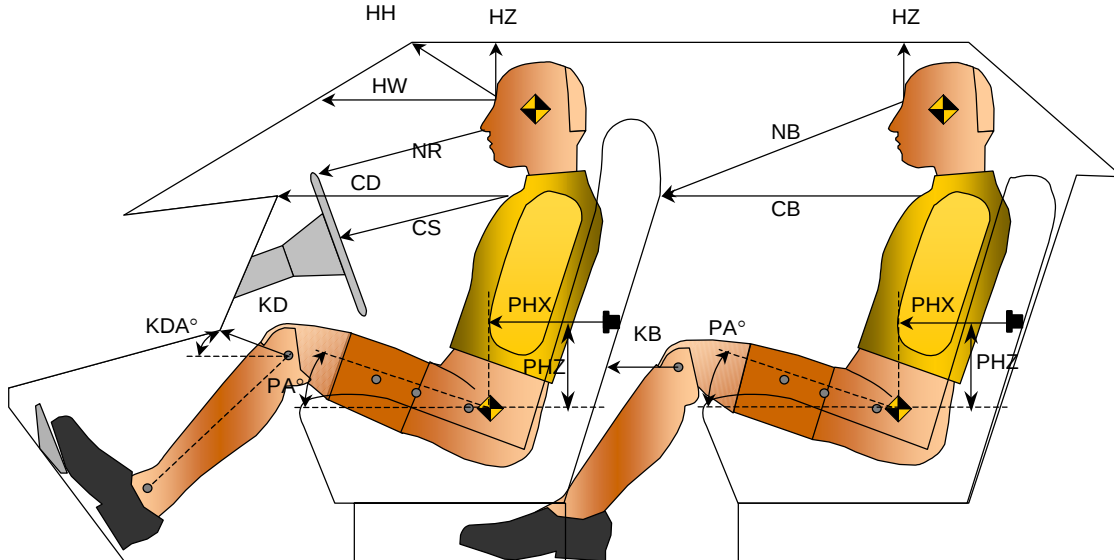
Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	2592	2590	-2
B	Front Axle to FSOV	900	889	-11
C	Rear Axle to RSOV	830	830	0
D	Total Length at Centerline	4322	4284	-38
E	Front Bumper Thickness	427	425	-2
F	Front Bumper Bottom to Ground	157	207	50
G	Sill Height at Front Wheel Well	168	224	56
H	Sill Height at Front Door Leading Edge	170	236	66
I	Sill Height at "B" Pillar	186	271	85
J1	Sill Height at Rear Wheel Well	174	234	60
J2	Pinch Weld Height at Rear Wheel Well	184	271	87
K	Sill Height aft of Rear Wheel Well	215	246	31
L	Rear Bumper Thickness	568	574	6
M	Rear Bumper Bottom to Ground	246	297	51
N	Sill Height to Window Bottom Sill	724	636	-88
O	Front Door Leading Edge to Impact CL	792	773	-19
P	Rear Door Trailing Edge to Impact CL	1260	1222	-38
Q	Front Window Opening	415	382	-33
R	Right Side Length	3030	3035	5
S	Left Side Length	3030	3005	-25
T	Vehicle Width at "B" Post	1684	1500	-184

DATA SHEET NO. 6

SID/HIII LONGITUDINAL CLEARANCE DIMENSIONS

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback
 Test Program: 55/28 km/h Side Impact NCAP

NHTSA No.: M75201
 Test Date: 8/16/06



LONGITUDINAL CLEARANCE DIMENSION INFORMATION

Driver Code	Pass. Code	Measurement Description	Driver		Passenger	
			Length(mm)	Angle	Length(mm)	Angle
HH		Head to Header	380	16.5		
HW		Head to Windshield	583	0.0		
HZ	HZ	Head to Roof	175	90.0	180	90.0
NR	NB	Nose to Rim/Nose to Seat Back	433	17.5	635	22.8
CD	CB	Chest to Dash or Seat Back	638	4.3	642	3.0
CS		Chest to Steering Wheel	335	17.8		
KDL	KBL	Left Knee to Dash or Seat Back	172	0.0	220	0.0
KDR	KBR	Right Knee to Dash or Seat Back	180		220	
PA	PA	Pelvic Angle		23.1		23.2
PHX	PHX	H-Point to Striker (X-Axis)	270		178	
PHZ	PHZ	H-Point to Striker (Z-Axis)	132		241	

DATA SHEET NO. 7

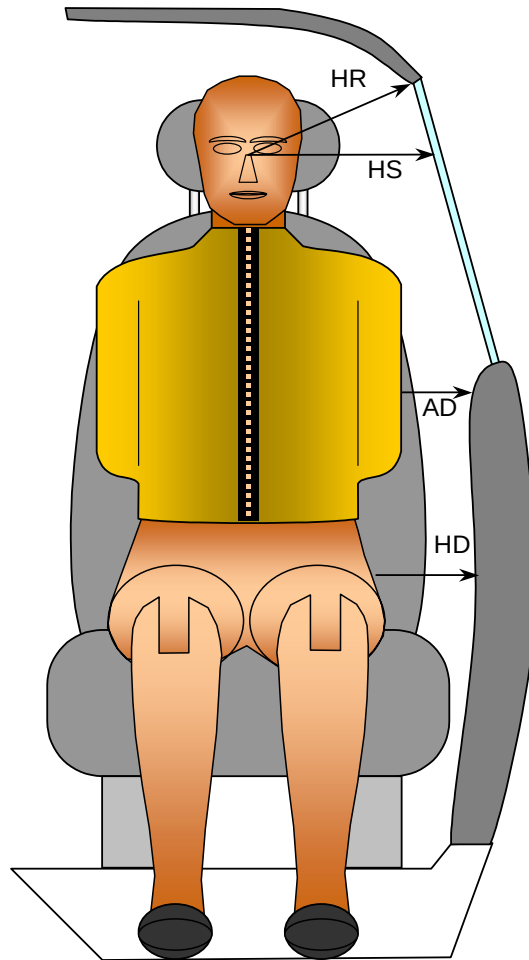
SID/IIII LATERAL CLEARANCE DIMENSIONS

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback

NHTSA No.: M75201

Test Program: 55/28 km/h Side Impact NCAP

Test Date: 8/16/06



FRONT VIEW OF DUMMY

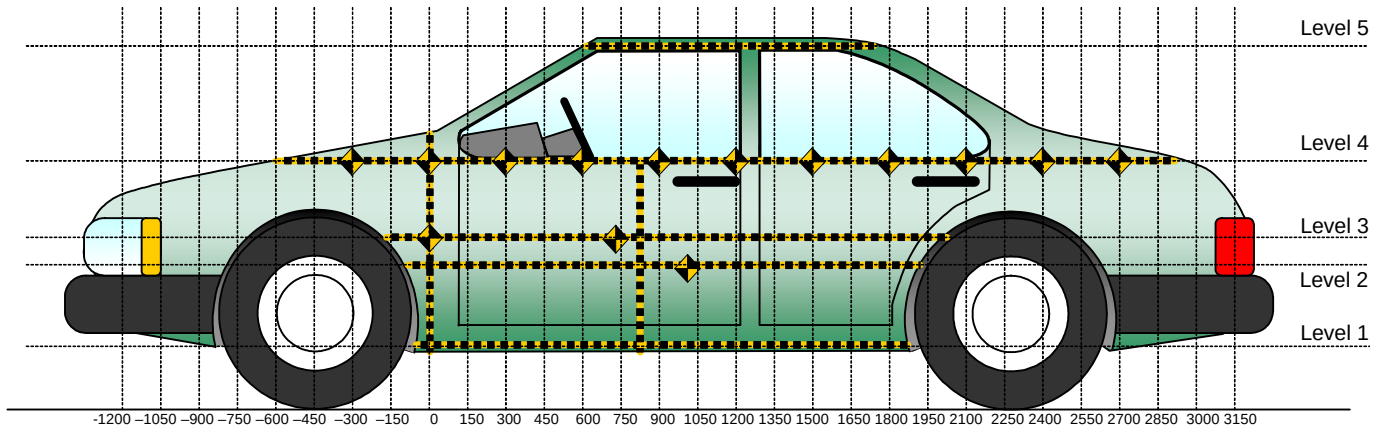
LATERAL CLEARANCE DIMENSION INFORMATION

Code	Measurement Description	Units	Driver	Passenger
HR	Head to Side Header	mm	283	268
HS	Head to Side Window	mm	335	320
AD	Arm to Door	mm	105	80
HD	H-Point to Door	mm	110	110

DATA SHEET NO. 8
VEHICLE SIDE MEASUREMENTS

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback
 Test Program: 55/28 km/h Side Impact NCAP

NHTSA No.: M75201
 Test Date: 8/16/06



All Measurements Shown in mm

LEFT SIDE VIEW

Level	Measurement Description	Height Above Ground
1	Sill Top	213
2	Occupant H-Point	572
3	Mid Door	646
4	Window Sill	929
5	Window Top	1461

DATA SHEET NO. 9
VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback
Test Program: 55/28 km/h Side Impact NCAP

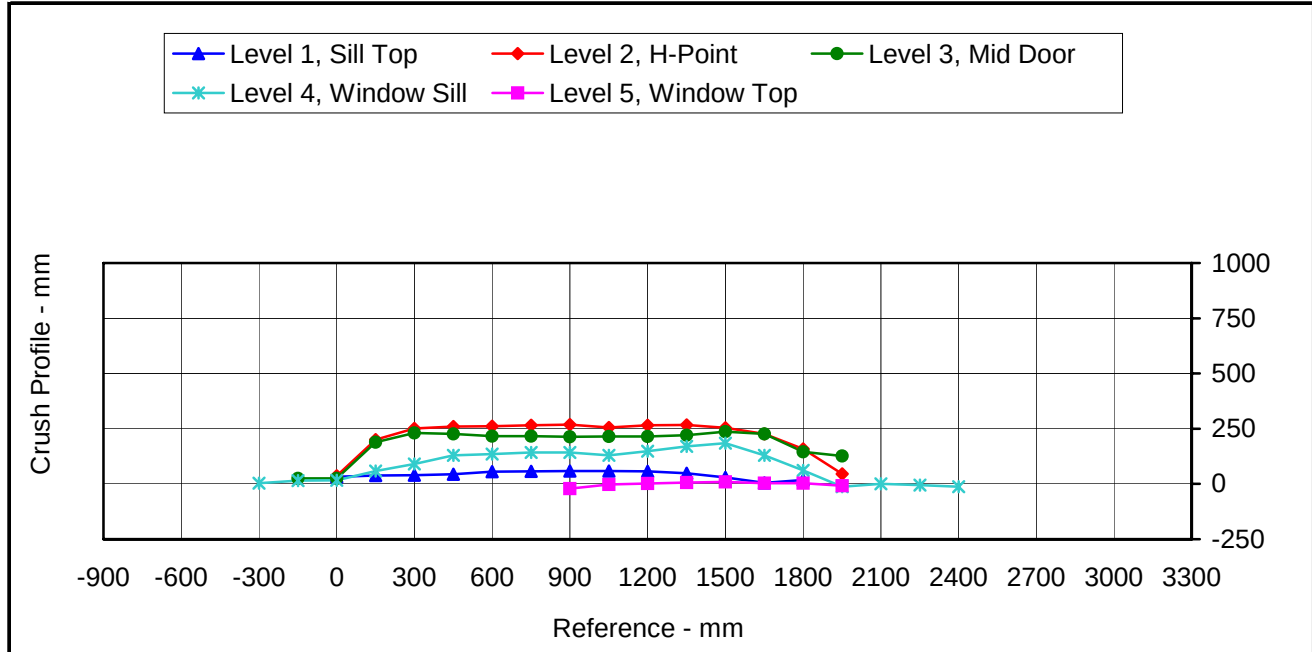
NHTSA No.: M75201
Test Date: 8/16/06

	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900															
-750															
-600				843					831					-12	
-450				811					786					-25	
-300				783					787					4	
-150			650	764				675	779				25	15	
0	676	651	658	736		709	688	683	753		33	37	25	17	
150	688	656	658	660		726	856	847	719		38	200	189	59	
300	691	656	656	726		730	907	887	816		39	251	231	90	
450	692	656	656	721		736	916	882	851		44	260	226	130	
600	690	655	656	716		746	916	873	851		56	261	217	135	
750	691	653	653	714		748	918	870	856		57	265	217	142	
900	691	653	656	710	922	749	921	870	852	901	58	268	214	142	-21
1050	692	653	656	710	908	751	909	871	839	906	59	256	215	129	-2
1200	692	654	656	708	906	749	919	871	856	908	57	265	215	148	2
1350	692	656	658	708	904	740	923	879	878	911	48	267	221	170	7
1500	693	657	661	708	901	722	911	898	892	910	29	254	237	184	9
1650	692	660	664	709	906	697	886	890	839	910	5	226	226	130	4
1800	683	658	666	711	908	701	816	811	772	911	18	158	145	61	3
1950	680	656	660	716	914	679	701	786	704	906	-1	45	126	-12	-8
2100			658	723				670	724				12	1	
2250				731					726					-5	
2400				738					726					-12	
2550															
2700															
2850															
3000															

DATA SHEET NO. 9...(CONTINUED)
VEHICLE EXTERIOR CRUSH PROFILES

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback
 Test Program: 55/28 km/h Side Impact NCAP

NHTSA No.: M75201
 Test Date: 8/16/06



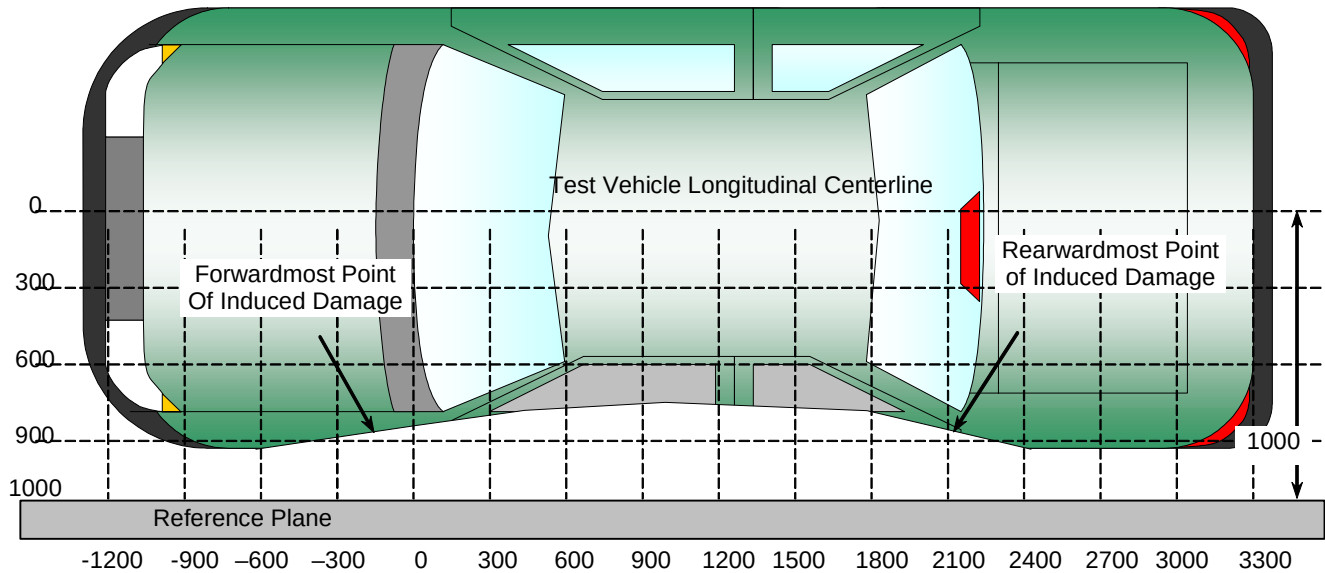
	Units	Level 1	Level 2	Level 3	Level 4	Level 5
Maximum Crush	mm	59	268	237	184	9
Distance from Impact	mm	1050	900	1500	1500	1500

DATA SHEET NO. 10

VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback
 Test Program: 55/28 km/h Side Impact NCAP

NHTSA No.: M75201
 Test Date: 8/16/06



All Dimensions Shown in millimeters

TOP VIEW

DAMAGE PROFILE DISTANCES

DPD	Distance From Impact Point in mm	Level	Pre-Test (mm)	Post-Test (mm)	Max. Static Crush (mm)
1	-600	4	843	831	-12
2	0	2	651	688	37
3	600	2	655	916	261
4	1200	2	654	919	265
5	1800	2	658	816	158
6	2400	4	738	726	-12

DATA SHEET NO. 11

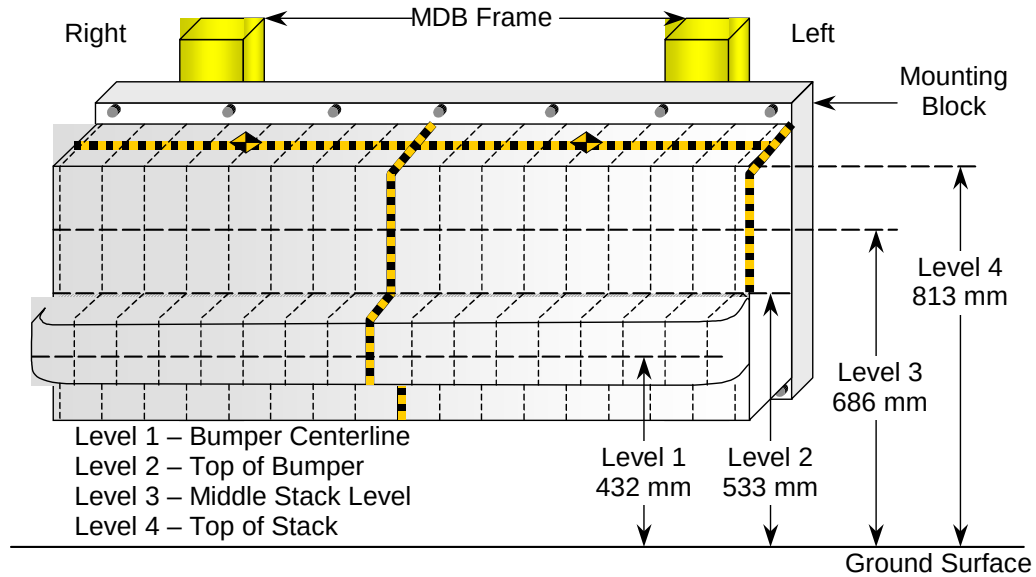
DEFORMABLE BARRIER HONEYCOMB FACE STATIC CRUSH

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback

NHTSA No.: M75201

Test Program: 55/28 km/h Side Impact NCAP

Test Date: 8/16/06



DEFORMABLE BARRIER STATIC CRUSH

Stack Level	Distance Right of Center								C/L	Distance Left of Center							
	800	700	600	500	400	300	200	100		100	200	300	400	500	600	700	800
1	631	601	590	582	585	576	564	551	541	541	542	546	554	568	583	608	639
2	676	666	665	658	646	646	648	641	639	642	648	651	651	654	659	671	691
3	671	641	646	638	636	649	655	642	636	631	631	633	636	637	642	654	696
4	709	650	626	626	638	666	691	675	659	648	641	646	646	652	671	716	757

All Dimensions in mm

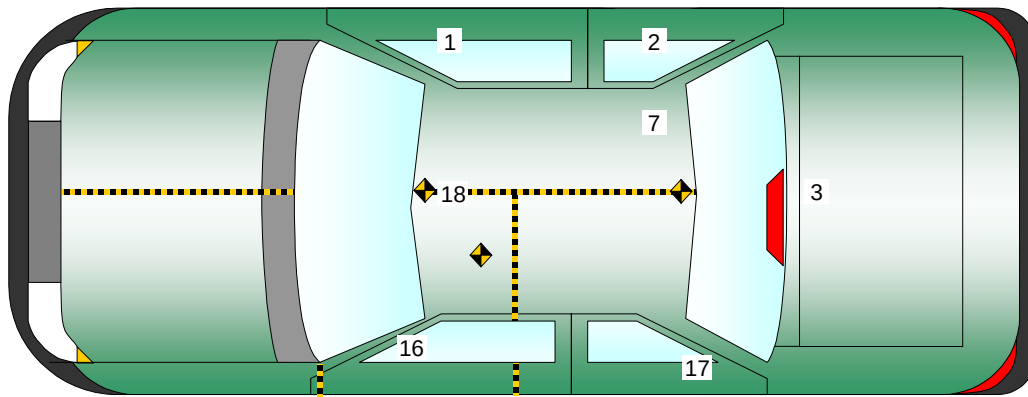
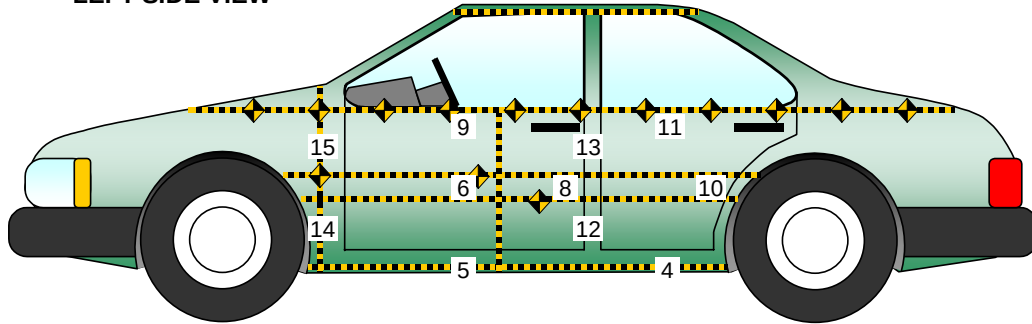
DATA SHEET NO. 12

VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback
 Test Program: 55/28 km/h Side Impact NCAP

NHTSA No.: M75201
 Test Date: 8/16/06

LEFT SIDE VIEW



No.	Location
1	Right Sill at Front Seat
2	Right Sill at Rear Seat
3	Rear Floorpan Above Axle
4	Left Sill at Rear Door
5	Left Sill at Front Door
6	Left Front Door Centerline
7	Right Rear Occupant Compartment
8	Left Front Door Mid-Rear
9	Left Front Door Upper Centerline

No.	Location
10	Left Rear Door Mid-Rear
11	Left Rear Door Upper Centerline
12	Left Lower B-Post
13	Left Middle B-Post
14	Left Lower A-Post
15	Left Middle A-Post
16	Front Seat Track
17	Rear Seat Track or Structure
18	Vehicle CG

DATA SHEET NO. 12...(CONTINUED)
VEHICLE ACCELEROMETER LOCATIONS

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback

NHTSA No.: M75201

Test Program: 55/28 km/h Side Impact NCAP

Test Date: 8/16/06

VEHICLE ACCELEROMETER PRE-TEST LOCATIONS

Loc. No.	Accelerometer Location	Measurements (mm)			
		X	Y	Z	
1	Right Sill at Front Seat	2886	686	361	
2	Right Sill at Rear Seat	1620	686	361	
3	Rear Floorpan Above Axle	723	360	445	
4	Left Sill at Rear Door	1632	-592	165	
5	Left Sill at Front Door	2123	-592	165	
6	Front Door Centerline				1
7	Rt. Rear Occ. Compartment	1620	520	225	
8	Front Door Mid-Rear				1
9	Front Door Upper Centerline				1
10	Rear Door Mid-Rear				1
11	Rear Door Upper Centerline				1
12	B-Post Lower	1826	-673	680	2
13	B-Post Middle	1826	-673	895	3
14	A-Post Lower	2912	-769	565	3
15	A-Post Middle	2912	-769	730	2
16	Front Seat Track	2372	-636	320	
17	Rear Seat Structure				1
18	Vehicle CG	2604	145	225	

Reference Planes: X=From Rear Surface of Vehicle, Y=Vehicle Centerline, Z=Ground Plane

- 1.) Not installed
- 2.) Channels failed at 30.0 msec
- 3.) Channels failed, no data

DATA SHEET NO. 13
MDB ACCELEROMETER LOCATIONS

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback

NHTSA No.: M75201

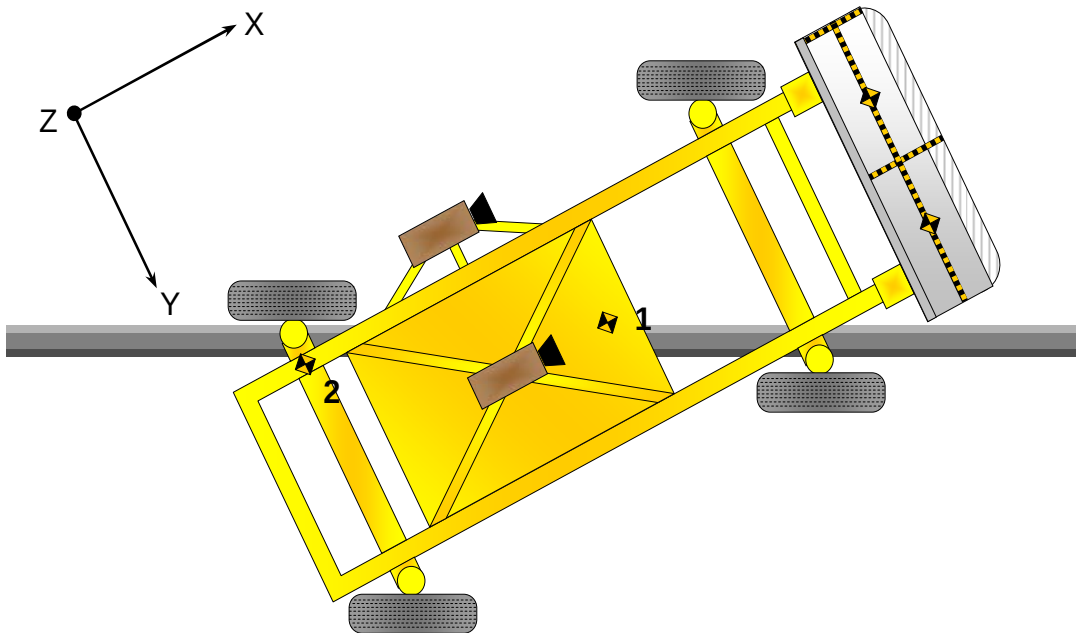
Test Program: 55/28 km/h Side Impact NCAP

Test Date: 8/16/06

MDB ACCELEROMETER LOCATIONS

Loc. No.	Accelerometer Locations	Measurements (mm)		
		X	Y	Z
1	MDB CG	-1195	0	430
2	MDB Rear	-2642	-593	608

Reference Points: X - MDB Front Axle
Y - MDB Centerline
Z - Ground Plane



DATA SHEET NO. 14

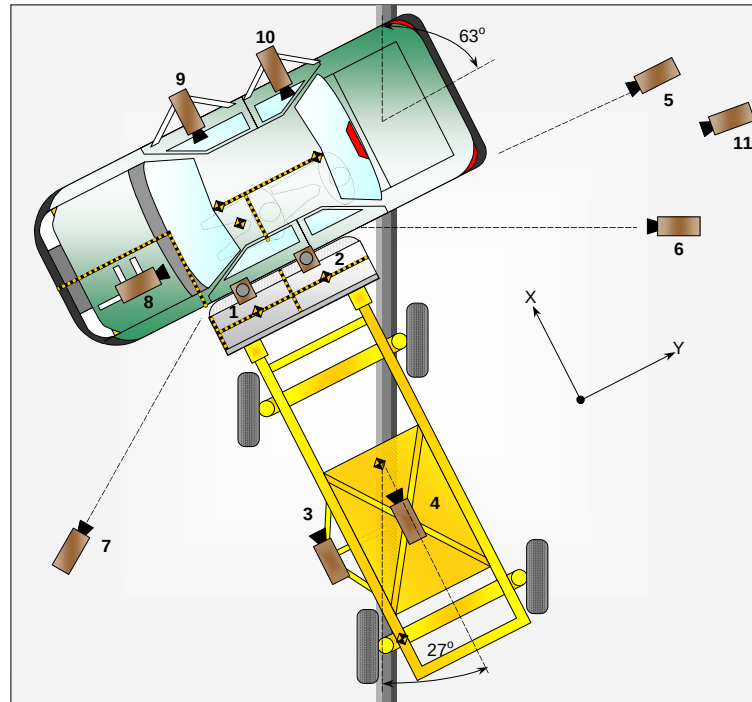
HIGH SPEED CAMERA LOCATIONS AND DATA

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback

NHTSA No.: M75201

Test Program: 55/28 km/h Side Impact NCAP

Test Date: 8/16/06



No.	Camera View	Location			Angle (Deg.)	Lens (mm)	Speed (fps)
		X	Y	Z			
DOC	REAL TIME DIGITAL	-7254	16851	-1798	-2	N/A	30
1	OVERHEAD OVERALL	Camera	Failure				
2	OVERHEAD CLOSE UP	Camera	Failure				
3	LEFT IMPACT POINT (MDB)	-2134	0	-1143	-7	25mm	1000
4	SIDE OVERALL (MDB)	-3912	838	-1829	-11	12mm	1000
5	REAR	248	14984	-1371	0	ZOOM	1000
6	LEFT REAR (MDB)	-2137	1302	-939	-4	25mm	1000
7	LEFT FRONT	Camera	Failure				
8	DRIVER FRONT (O.B.)	513	-232	-1151	-15	35mm	1000
9	DRIVER SIDE (O.B.)	1867	345	-1104	-2	20mm	1000
10	PASSENGER SIDE (O.B.)	1867	937	-1104	-2	20mm	1000
DOC	REAL TIME DIGITAL	257	15563	-1371	0	N/A	30
11	LEFT REAR	-7100	16459	-839	0	ZOOM	1000

All camera measurements were made relative to the point of impact.

DATA SHEET NO. 15

FMVSS 301 FUEL SYSTEM INTEGRITY POST-IMPACT DATA

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback

NHTSA No.: M75201

Test Program: 55/28 km/h Side Impact NCAP

Test Date: 8/16/06

Test Time: 12:43 PM

Temperature: 33.3 Deg. C.

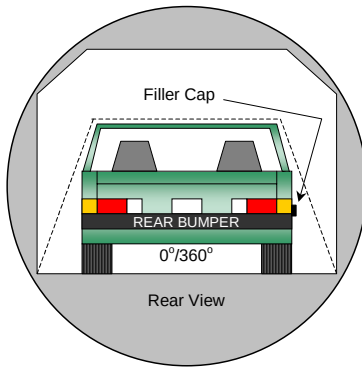
Stoddard Solvent Spillage Measurements

- A. From impact until vehicle motion ceases: 0.0 oz.
(Maximum Allowable = 1 ounce)
- B. For the 5 minute period after motion ceases: 0.0 oz.
(Maximum Allowable = 5 ounces)
- C. For the following 25 minutes: 0.0 oz.
(Maximum Allowable = 1 oz./minute)
- D. Spillage Details: No leakage occurred

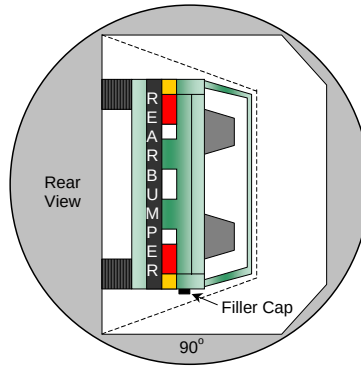
DATA SHEET NO. 16
FMVSS 301 STATIC ROLLOVER DATA

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback
Test Program: 55/28 km/h Side Impact NCAP

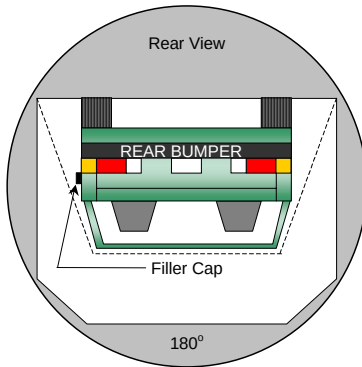
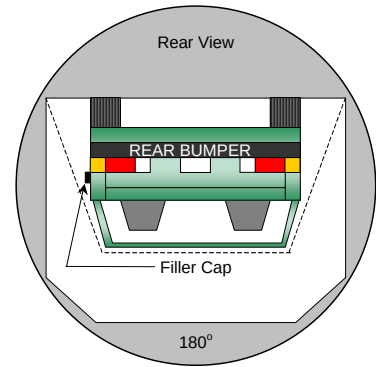
NHTSA No.: M75201
Test Date: 8/16/06



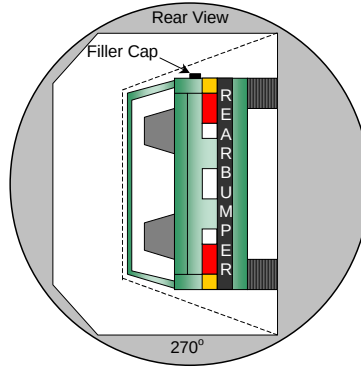
0° to 90°



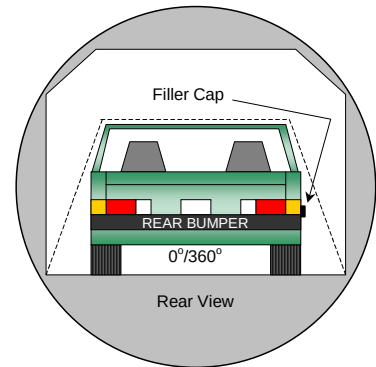
90° to 180°



180° to 270°



270° to 360°



1. The specified fixture rollover rate for each 90° of rotation is 60 to 120 seconds.
2. The position hold time at each position is 300 seconds (minimum).
3. Details of Stoddard Solvent spillage locations.
No solvent leakage occurred during static rollover testing.

DATA SHEET NO. 16...(CONTINUED)
FMVSS 301 STATIC ROLLOVER DATA SHEET

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback
 Test Program: 55/28 km/h Side Impact NCAP

NHTSA No.: M75201
 Test Date: 8/16/06

SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	82	300	382
90° to 180°	82	300	382
180° to 270°	80	300	380
270° to 360°	77	300	377

FMVSS 301 SPILLAGE TABLE REQUIREMENT (oz.)

First 5 Minutes	5.0
Sixth Minute	1.0
Seventh Minute	1.0
Eighth Minute	1.0

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

SOLVENT SPILLAGE LOCATION TABLE

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

APPENDIX A
PHOTOGRAPHS

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Figure A-1: Left Front $\frac{3}{4}$ View, as Received



Figure A-2: Right Rear $\frac{3}{4}$ View, as Received

MANUFACTURED BY NISSAN MOTOR CO., LTD.
DATE: 07/06. GVWR: 3770 LBS
GAWR FR: 1993 LBS GAWR RR: 1795 LBS

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR,
VEHICLE SAFETY, BUMPER AND THEFT PREVENTION STANDARDS
IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION.

VIN: 3N1BC13E67L357292 PASSENGER CAR.
COLOR TRIM TRANS AXLE ENGINE
B23 G RS6F94R GC39 MR18DE 1798 CC
MODEL: FDSALDY-EUA 42000



3N1BC13E67L357292

Figure A-3: Manufacturer's Label



TIRE AND LOADING INFORMATION
PNEU ET INFORMATION DE CHARGEMENT

SEATING CAPACITY NOMBRE DE PLACES	TOTAL TOTAL	5	FRONT AVANT	2
			REAR ARRIÈRE	3

The combined weight of occupants
and cargo should never exceed 390 kg or 860 lbs.

Le poids combiné d'occupants et de cargaison ne devrait
jamais excéder 390 kg ou 860 lbs.

TIRE PNEU	ORIGINAL SIZE TAILLE ORIGINAL	COLD TIRE PRESSURE PRESSION DES PNEUS FROIDS
FRONT AVANT	P185/65R15 86H	230kPa, 33PSI
REAR ARRIÈRE	P185/65R15 86H	230kPa, 33PSI
SPARE DE SECOURS	T125/70D15	420kPa, 60PSI

SEE OWNER'S MANUAL FOR ADDITIONAL INFORMATION.
POUR D'AUTRES DÉTAILS, SE REPORTER AU MANUEL DU CONDUCTEUR.

EM30A

Figure A-4: Tire Placard



Figure A-5: Pre-Test Front View



Figure A-6: Post-Test Front View



Figure A-7: Pre-Test Left Front $\frac{3}{4}$ View



Figure A-8: Post-Test Left Front $\frac{3}{4}$ View



Figure A-9: Pre-Test Left Side View



Figure A-10: Post-Test Left Side View



Figure A-11: Pre-Test Left Rear $\frac{3}{4}$ View



Figure A-12: Post-Test Left Rear $\frac{3}{4}$ View



Figure A-13: Pre-Test Rear View



Figure A-14: Post-Test Rear View



Figure A-15: Pre-Test Right Rear $\frac{3}{4}$ View



Figure A-16: Post-Test Right Rear $\frac{3}{4}$ View



Figure A-17: Pre-Test Right Side View



Figure A-18: Post-Test Right Side View



Figure A-19: Pre-Test Right Front $\frac{3}{4}$ View



Figure A-20: Post-Test Right Front $\frac{3}{4}$ View



Figure A-21: Pre-Test Overhead View



Figure A-22: Post-Test Overhead View



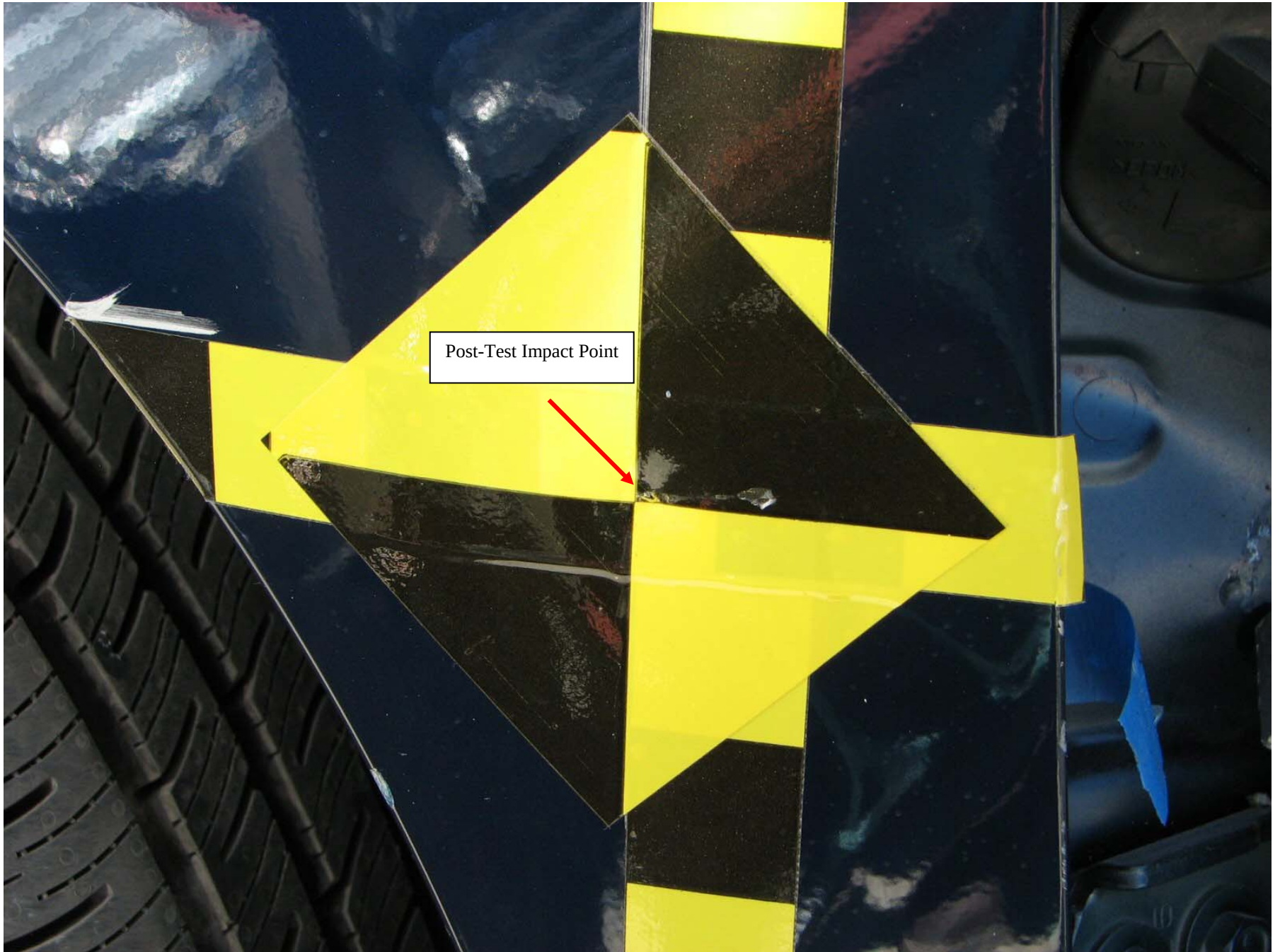
Figure A-23: Pre-Test Overhead Close-up View



Figure A-24: Post-Test Overhead Close-up View



Figure A-25: Pre-Test Left Impact Point



Post-Test Impact Point

Figure A-26: Post-Test Left Impact Point



Figure A-27: Pre-Test Front $\frac{3}{4}$ View of Left Side Door



Figure A-28: Post-Test Front $\frac{3}{4}$ View of Left Side Door



Figure A-29: Pre-Test Rear $\frac{3}{4}$ View of Left Side Door



Figure A-30: Post-Test Rear $\frac{3}{4}$ View of Left Side Door



Figure A-31: Pre-Test Left Front Door



Figure A-32: Post-Test Left Front Door



Figure A-33: Pre-Test Left Rear Door



Figure A-34: Post-Test Left Rear Door



Figure A-35: Pre-Test Driver Dummy (Door Open)

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Figure A-36: Pre-Test Driver Dummy (Through Window)



Figure A-37: Post-Test Driver Dummy (Through Window)

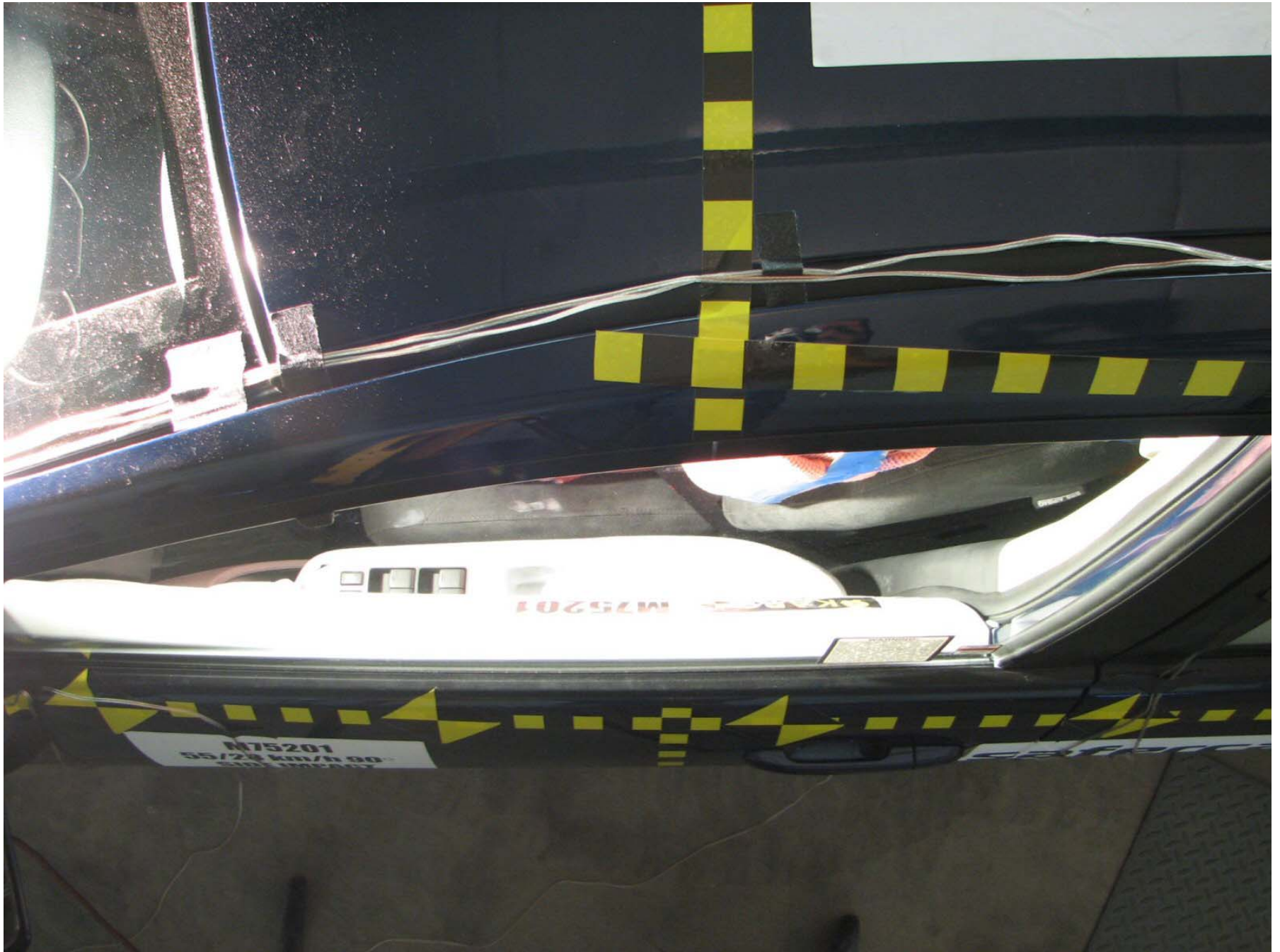


Figure A-38: Pre-Test Driver Dummy Clearance From Door



Figure A-39: Post-Test Driver Dummy Clearance From Door



Figure A-40: Pre-Test Driver Dummy Right Side View



Figure A-41: Post-Test Driver Dummy Right Side View



Figure A-42: Pre-Test Front Door Panel (Interior)



Figure A-43: Post-Test Front Door Panel (Interior)



Figure A-44: Pre-Test Passenger Dummy Left Side (Door Open)

This Space Left Blank Intentionally



Figure A-45: Pre-Test Passenger Dummy Left Side (Through Window)



Figure A-46: Post-Test Passenger Dummy Left Side (Through Window)



Figure A-47: Pre-Test Passenger Dummy Clearance From Door



Figure A-48: Post-Test Passenger Dummy Clearance From Door



Figure A-49: Pre-Test Passenger Dummy Right Side View



Figure A-50: Post-Test Passenger Dummy Right Side View



Figure A-51: Pre-Test Rear Door Panel (Interior)



Figure A-52: Post-Test Rear Door Panel (Interior)



Figure A-53: Pre-Test Front View of Deformable Barrier



Figure A-54: Post-Test Front View of Deformable Barrier

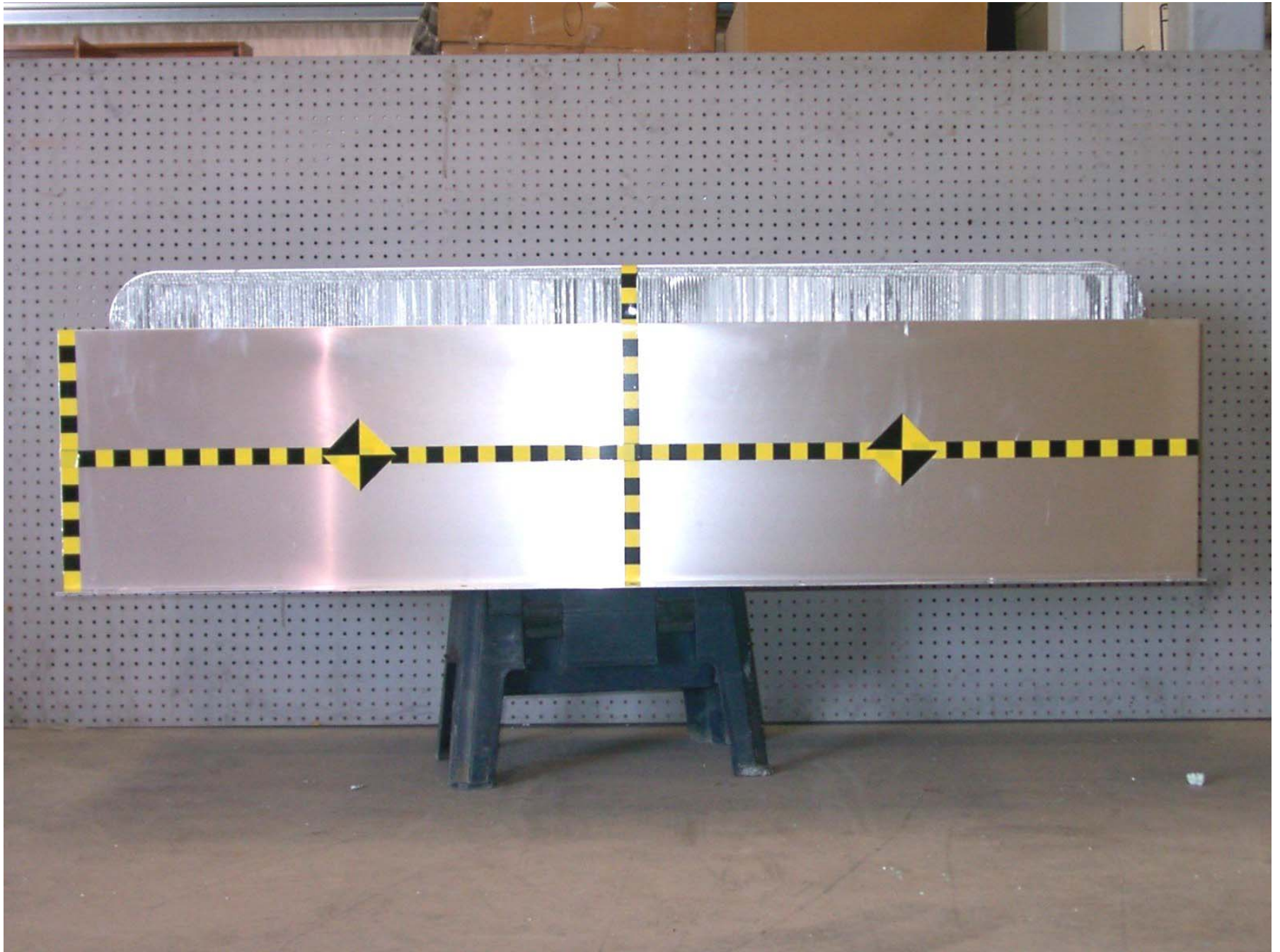


Figure A-55: Pre-Test Top View of Deformable Barrier

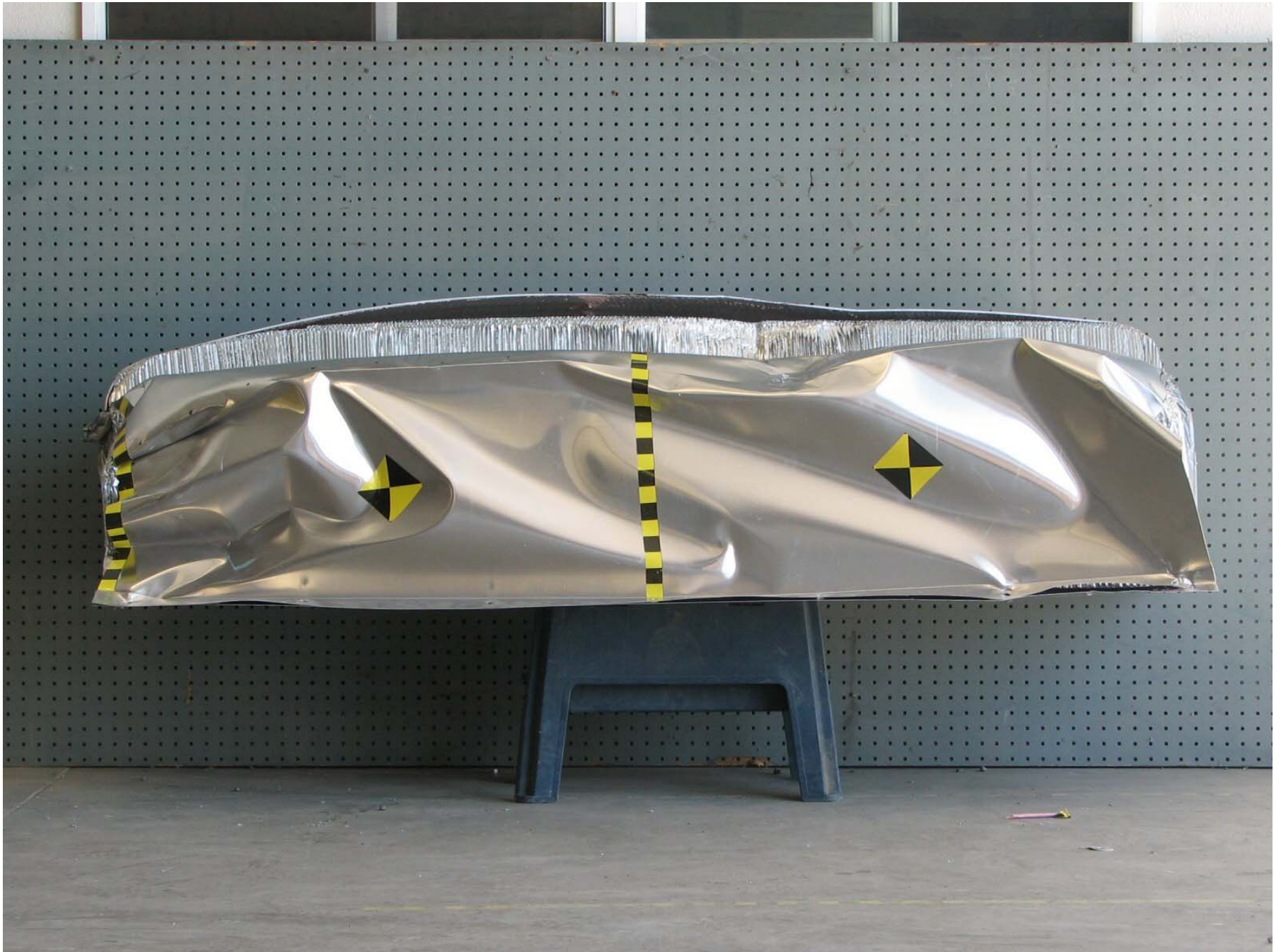


Figure A-56: Post-Test Top View of Deformable Barrier



Figure A-57: Pre-Test Right Side View of Deformable Barrier



Figure A-58: Post-Test Right Side View of Deformable Barrier



Figure A-59: Pre-Test Left Side View of Deformable Barrier



Figure A-60: Post-Test Left Side View of Deformable Barrier



Figure A-61: Vehicle on Rollover Device (0°)

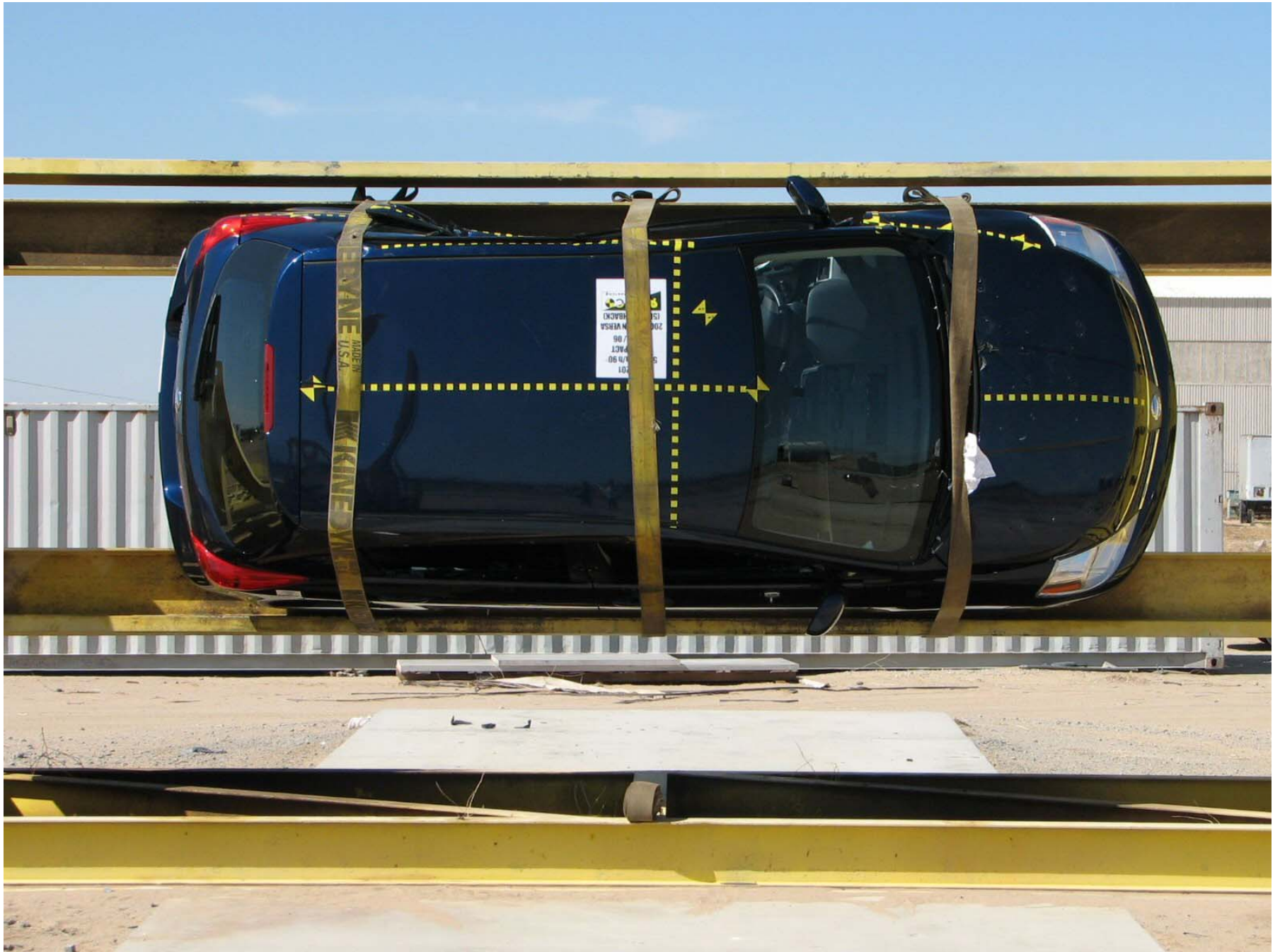


Figure A-62: Vehicle on Rollover Device (90°)



Figure A-63: Vehicle on Rollover Device (180°)



Figure A-64: Vehicle on Rollover Device (270°)

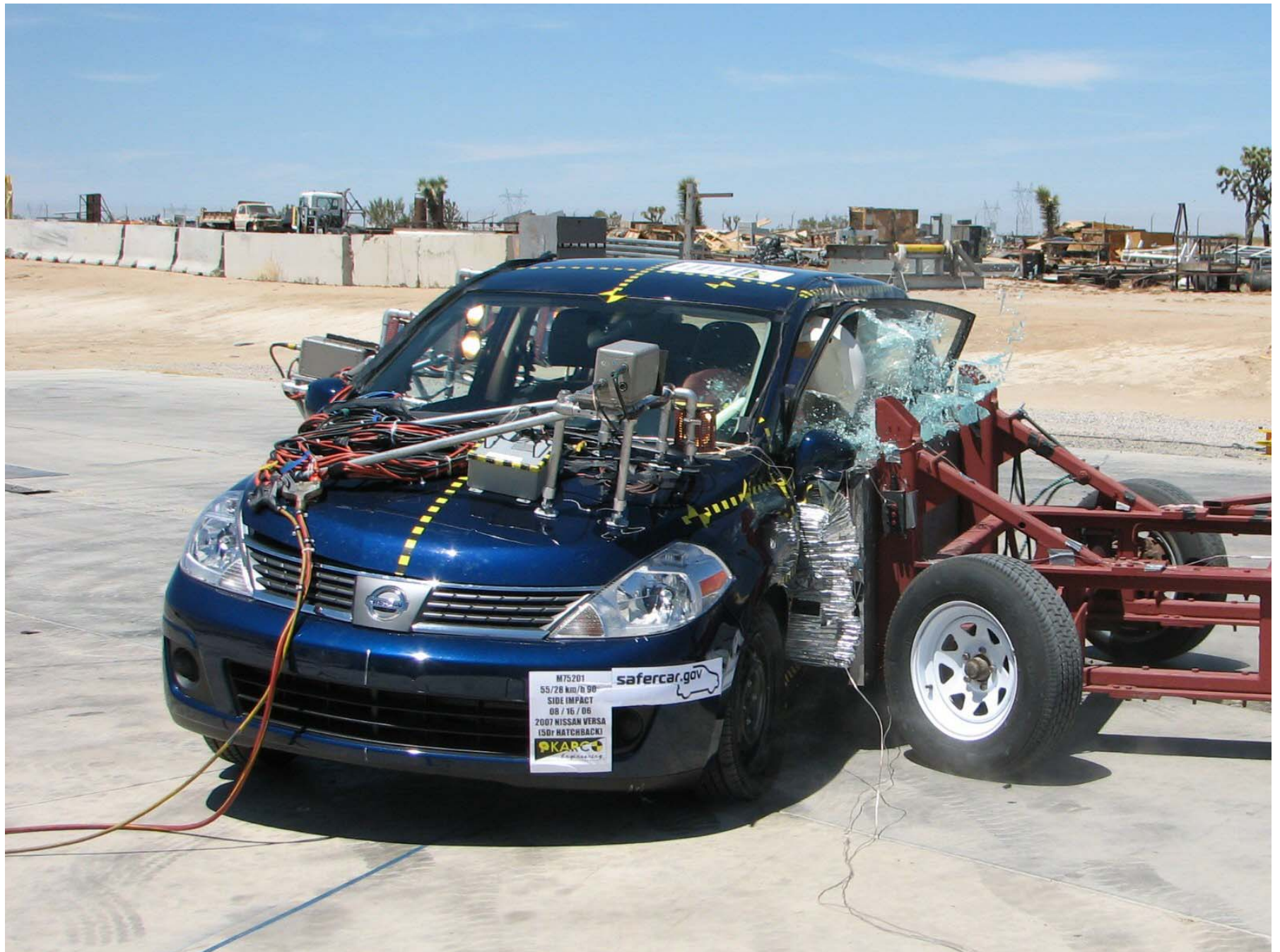


Figure A-65: Vehicle Impact

APPENDIX B
SID/HIII, VEHICLE AND MDB RESPONSE DATA

LIST OF DATA PLOTS

<u>Data Plot</u>	<u>Page</u>
B-1	Driver Upper Rib Primary Y
	Driver Lower Rib Primary Y
	Driver Lower Spine Primary Y
	Driver Pelvis Primary Y
B-2	Passenger Upper Rib Primary Y
	Passenger Lower Rib Primary Y
	Passenger Lower Spine Primary Y
	Passenger Pelvis Primary Y

The following additional data plots 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

LIST OF DATA PLOTS...(CONTINUED)

Driver Head X Primary
Driver Head Y Primary
Driver Head Z Primary
Driver Head Resultant Primary
Driver Head Primary X Velocity
Driver Head Primary Y Velocity
Driver Head Primary Z Velocity
Driver Head X Redundant
Driver Head Y Redundant
Driver Head Z Redundant
Driver Head Resultant Redundant
Driver Head Redundant X Velocity
Driver Head Redundant Y Velocity
Driver Head Redundant Z Velocity
Driver Upper Neck Force X
Driver Upper Neck Force Y
Driver Upper Neck Force Z
Driver Upper Neck Force Resultant
Driver Upper Neck Moment X
Driver Upper Neck Moment Y
Driver Upper Neck Moment Z
Driver Upper Neck Moment Resultant
Driver Upper Rib Primary Y Velocity
Driver Lower Rib Primary Y Velocity
Driver Lower Spine Primary Y Velocity
Driver Pelvis Primary Y Velocity
Driver Upper Rib Redundant Y
Driver Lower Rib Redundant Y
Driver Lower Spine Redundant Y
Driver Pelvis Redundant Y

LIST OF DATA PLOTS...(CONTINUED)

Driver Upper Rib Redundant Y Velocity
Driver Lower Rib Redundant Y Velocity
Driver Lower Spine Redundant Y Velocity
Driver Pelvis Redundant Y Velocity
Driver Thorax Contact
Driver Pelvis Contact
Passenger Head X Primary
Passenger Head Y Primary
Passenger Head Z Primary
Passenger Head Resultant Primary
Passenger Head Primary X Velocity
Passenger Head Primary Y Velocity
Passenger Head Primary Z Velocity
Passenger Head X Redundant
Passenger Head Y Redundant
Passenger Head Z Redundant
Passenger Head Resultant Redundant
Passenger Head Redundant X Velocity
Passenger Head Redundant Y Velocity
Passenger Head Redundant Z Velocity
Passenger Upper Neck Force X
Passenger Upper Neck Force Y
Passenger Upper Neck Force Z
Passenger Upper Neck Force Resultant
Passenger Upper Neck Moment X
Passenger Upper Neck Moment Y
Passenger Upper Neck Moment Z
Passenger Upper Neck Moment Resultant

LIST OF DATA PLOTS...(CONTINUED)

Passenger Upper Rib Primary Y Velocity
Passenger Lower Rib Primary Y Velocity
Passenger Lower Spine Primary Y Velocity
Passenger Pelvis Primary Y Velocity
Passenger Upper Rib Redundant Y
Passenger Lower Rib Redundant Y
Passenger Lower Spine Redundant Y
Passenger Pelvis Redundant Y
Passenger Upper Rib Redundant Y Velocity
Passenger Lower Rib Redundant Y Velocity
Passenger Lower Spine Redundant Y Velocity
Passenger Pelvis Redundant Y Velocity
Passenger Thorax Contact
Passenger Pelvis Contact
Vehicle Right Sill at Front Seat X
Vehicle Right Sill at Front Seat Y
Vehicle Right Sill at Front Seat Z
Vehicle Right Sill Front Seat Resultant
Vehicle Right Sill at Front Seat X Velocity
Vehicle Right Sill at Front Seat Y Velocity
Vehicle Right Sill at Front Seat Z Velocity
Vehicle Right Sill at Rear Seat X
Vehicle Right Sill at Rear Seat Y
Vehicle Right Sill at Rear Seat Z
Vehicle Right Sill Rear Seat Resultant
Vehicle Right Sill at Rear Seat X Velocity
Vehicle Right Sill at Rear Seat Y Velocity
Vehicle Right Sill at Rear Seat Z Velocity
Vehicle Rear Floor Above Axle X
Vehicle Rear Floor Above Axle Y
Vehicle Rear Floor Above Axle Z
Vehicle Rear Floor Above Axle Resultant
Vehicle Rear Floor Above Axle X Velocity
Vehicle Rear Floor Above Axle Y Velocity
Vehicle Rear Floor Above Axle Z Velocity

LIST OF DATA PLOTS...(CONTINUED)

Vehicle Left Sill at Rear Door Y
Vehicle Left Sill at Front Door Y
Vehicle Left Sill at Rear Door Y Velocity
Vehicle Left Sill at Front Door Y Velocity
Vehicle Left Front Door C/L Y
Vehicle Right Rear Occupant Compartment
Vehicle Left Front Door Mid Rear Y
Vehicle Left Front Door Upper CL Y
Vehicle Left Front Door CL Y Velocity
Vehicle Right Rear Occupant Compartment Y Velocity
Vehicle Left Front Door Mid Rear Y Velocity
Vehicle Left Rear Door Upper CL Y Velocity
Vehicle Left Rear Door Mid Rear Y
Vehicle Left Rear Door Upper C/L Y
Vehicle Left Rear Door Mid Rear Y Velocity
Vehicle Left Rear Door Upper CL Y Velocity
Vehicle B-Post Lower Y
Vehicle B-Post Middle Y
Vehicle B-Post Lower Y Velocity
Vehicle B-Post Middle Y Velocity
Vehicle A-Post Lower Y
Vehicle A-Post Middle Y
Vehicle A-Post Lower Y Velocity
Vehicle A-Post Middle Y Velocity
Vehicle Left Front Seat Track
Vehicle Rear Seat Structure
Vehicle Left Front Seat Track Y Velocity
Vehicle Rear Seat Structure Y Velocity
Vehicle CG X
Vehicle CG Y
Vehicle CG Z
Vehicle CG Resultant
Vehicle CG X Velocity
Vehicle CG Y Velocity
Vehicle CG Z Velocity

LIST OF DATA PLOTS...(CONTINUED)

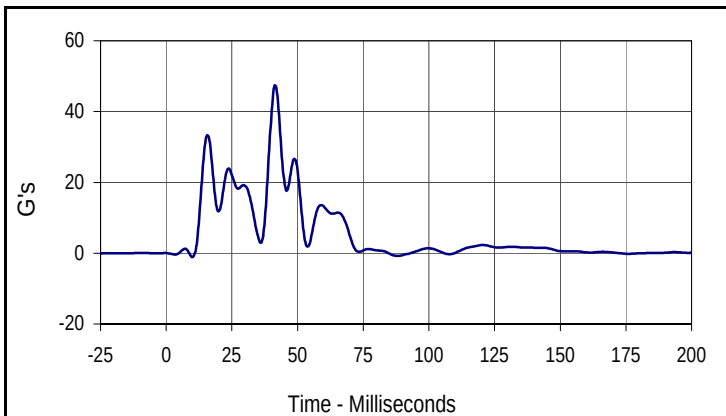
Driver Upper Rib Primary Y
Driver Lower Rib Primary Y
Driver Lower Spine Primary Y
Driver Pelvis Primary Y
Driver Upper Rib Redundant Y
Driver Lower Rib Redundant Y
Driver Lower Spine Redundant Y
Driver Pelvis Redundant Y
Passenger Upper Rib Primary Y
Passenger Lower Rib Primary Y
Passenger Lower Spine Primary Y
Passenger Pelvis Primary Y
Passenger Upper Rib Redundant Y
Passenger Lower Rib Redundant Y
Passenger Lower Spine Redundant Y
Passenger Pelvis Redundant Y
MDB CG X
MDB CG Y
MDB CG Z
MDB CG Resultant
MDB CG X Velocity
MDB CG Y Velocity
MDB CG Z Velocity
MDB Rear X
MDB Rear Y
MDB Rear X Velocity
MDB Rear Y Velocity
MDB Right Bumper Contact

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback

Test Program: 55/28 km/h Side Impact NCAP

Test Date: 8/16/06

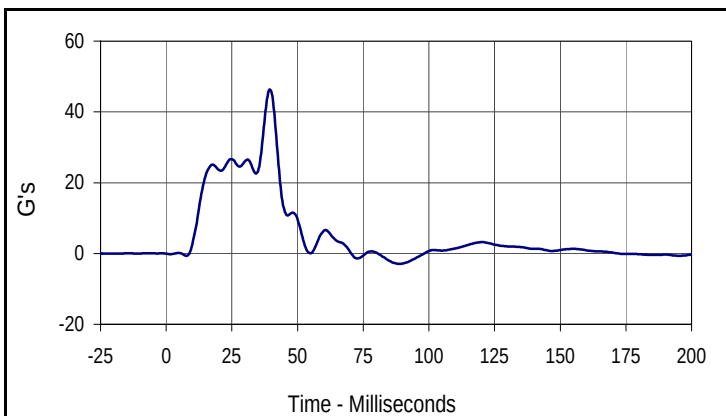
NHTSA No.: M75201



Curve Description

Driver Upper Rib Primary Y

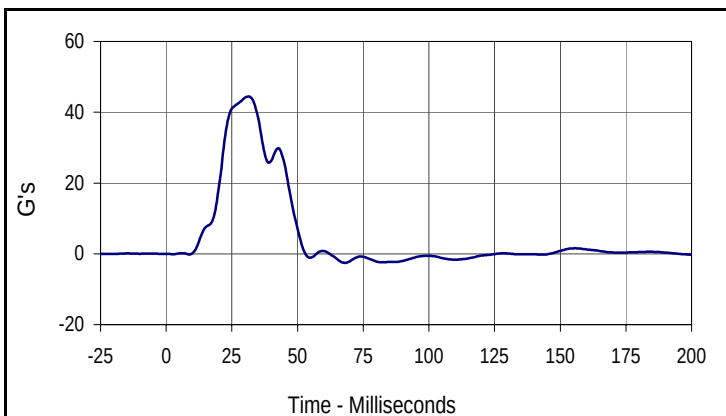
CURNO	Type	SAE Class	Units
001	FIR	FIR100	G's
Max	Time	Min	Time
47.4	41.3	-1.1	10.0



Curve Description

Driver Lower Rib Primary Y

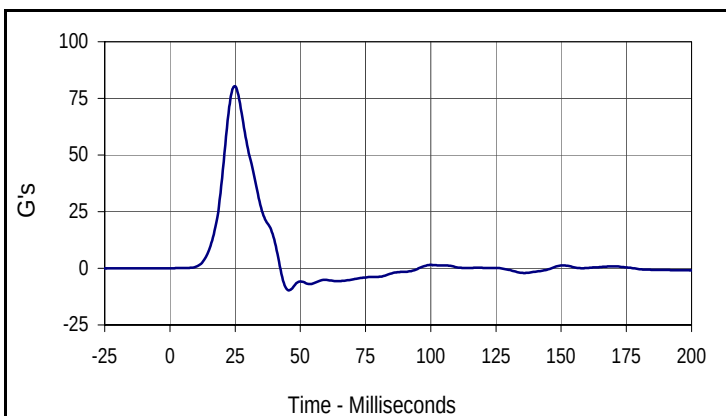
CURNO	Type	SAE Class	Units
002	FIR	FIR100	G's
Max	Time	Min	Time
46.3	39.4	-2.9	88.8



Curve Description

Driver Lower Spine Primary Y

CURNO	Type	SAE Class	Units
003	FIR	FIR100	G's
Max	Time	Min	Time
44.5	31.3	-2.5	68.1



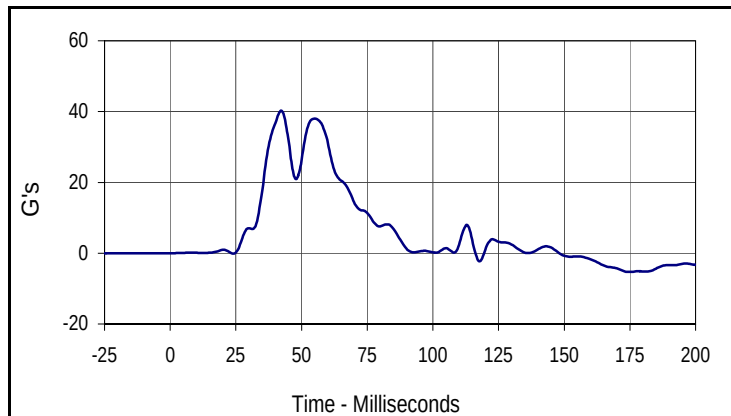
Curve Description

Driver Pelvis Primary Y

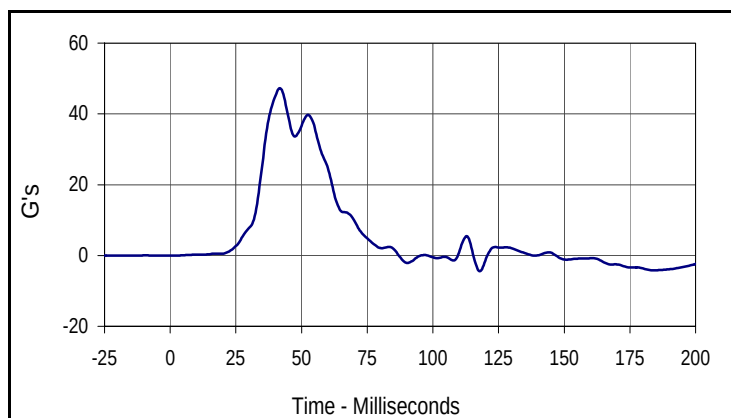
CURNO	Type	SAE Class	Units
004	FIR	FIR100	G's
Max	Time	Min	Time
80.3	25.0	-9.8	45.6

Test Vehicle: 2007 Nissan Versa 1.8S 5-Door Hatchback
 Test Program: 55/28 km/h Side Impact NCAP

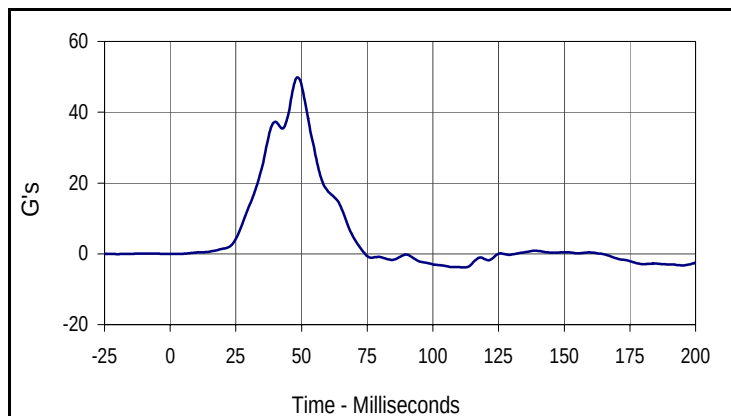
Test Date: 8/16/06
 NHTSA No.: M75201



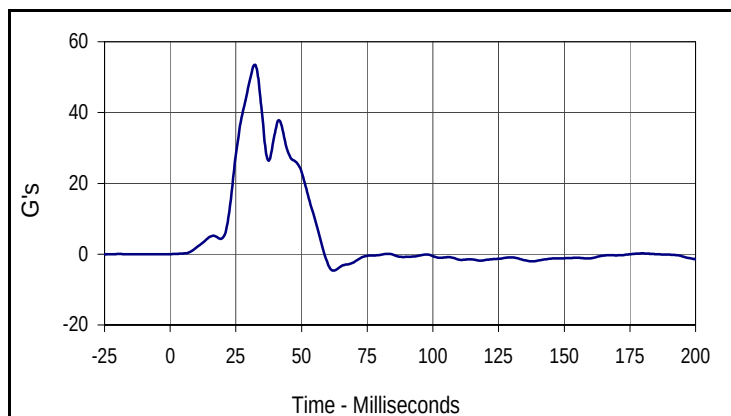
Curve Description			
Passenger Upper Rib Primary Y			
CURNO	Type	SAE Class	Units
005	FIR	FIR100	G's
Max	Time	Min	Time
40.2	42.5	-5.3	175.0



Curve Description			
Passenger Lower Rib Primary Y			
CURNO	Type	SAE Class	Units
006	FIR	FIR100	G's
Max	Time	Min	Time
47.3	41.9	-4.4	118.1



Curve Description			
Passenger Lower Spine Primary Y			
CURNO	Type	SAE Class	Units
007	FIR	FIR100	G's
Max	Time	Min	Time
49.8	48.8	-3.9	111.9



Curve Description			
Passenger Pelvis Primary Y			
CURNO	Type	SAE Class	Units
008	FIR	FIR100	G's
Max	Time	Min	Time
53.4	31.9	-4.6	62.5

APPENDIX C
SID/HIII CONFIGURATION AND PERFORMANCE VERIFICATION DATA

APPENDIX C
PRE-TEST SID / HIII CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Test Program: SID / HIII External Measurements
 ATD Serial No.: 274

Test Date: 8/15/06
 Test I.D.: N/A



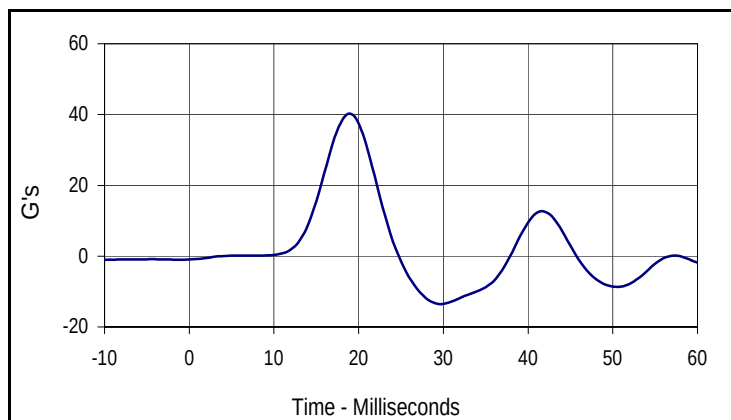
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
SH- Seated Height	mm	889 to 909	901	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	507	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	519	Pass
KV- Knee Pivot From Floor	mm	490 to 505	495	Pass
HW- Hip Width	mm	356 to 391	362	Pass
Overall Test Results				Pass

Test Program: SID / HIII Thorax Lateral Impact
 ATD Serial No.: 274

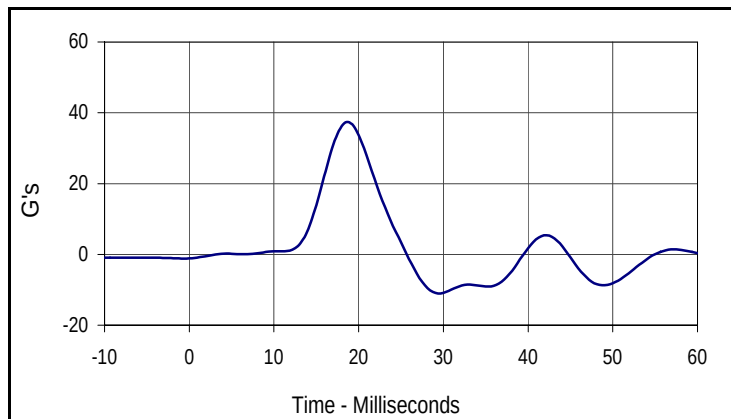
Test Date: 8/15/06
 Test I.D.: TH08N



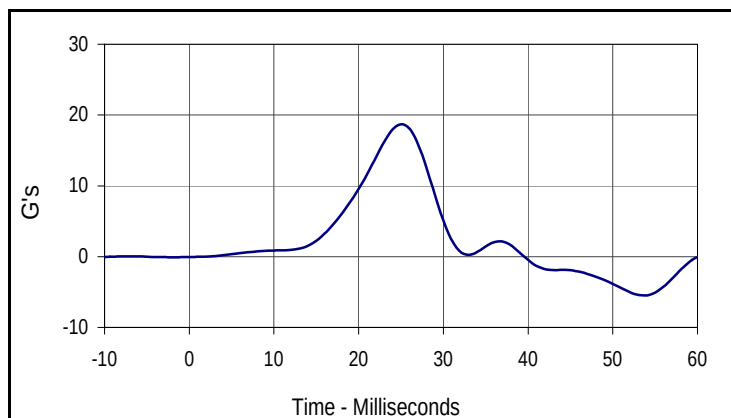
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.22	Pass
Upper Rib Acceleration	G's	37.0 to 46.0	40.2	Pass
Lower Rib Acceleration	G's	37.0 to 46.0	37.4	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	18.7	Pass
Overall Test Results			Pass	



Curve Description			
Upper Rib Primary			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
40.2	18.8	-13.5	29.4



Curve Description			
Lower Rib Primary			
CURNO	Type	SAE Class	Units
002	FIL	FIR100	G's
Max	Time	Min	Time
37.4	18.8	-11.0	29.4



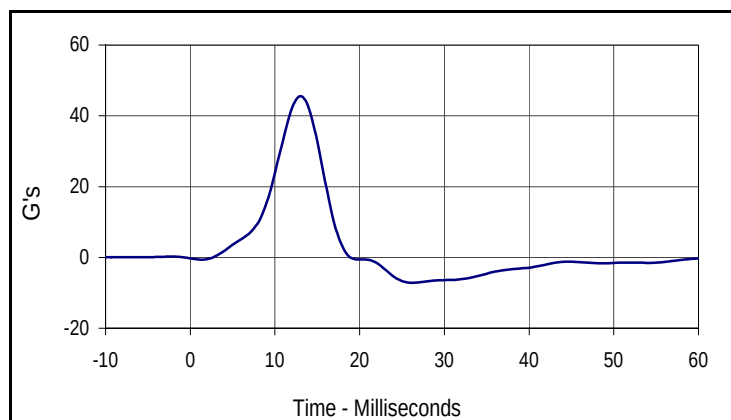
Curve Description			
Lower Spine Primary			
CURNO	Type	SAE Class	Units
003	FIL	FIR100	G's
Max	Time	Min	Time
18.7	25.0	-5.5	53.8

Test Program: SID / HIII Pelvis Lateral Impact
 ATD Serial No.: 274

Test Date: 8/15/06
 Test I.D.: PL08N



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.29	Pass
Peak Pelvis Acceleration	G's	40.0 to 60.0	45.5	Pass
Acceleration Time Above 20 G's	Msec.	3.0 to 7.0	6.88	Pass
Overall Test Results				Pass



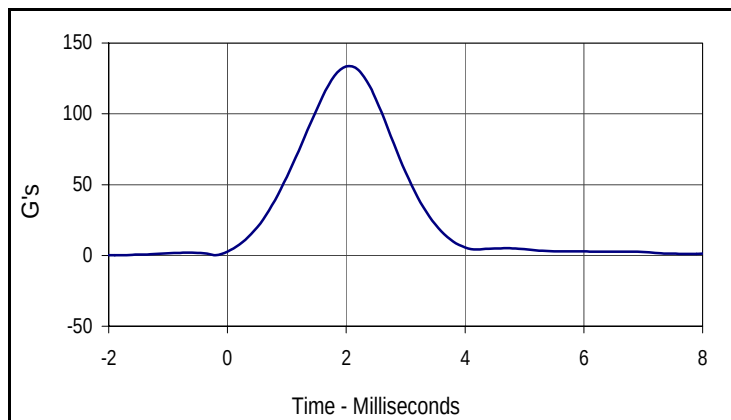
Curve Description			
Pelvis Primary Y			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
45.5	13.1	-7.2	26.3

Test Program: SID / HIII Head Drop Lateral Impact Test
 ATD Serial No.: 274

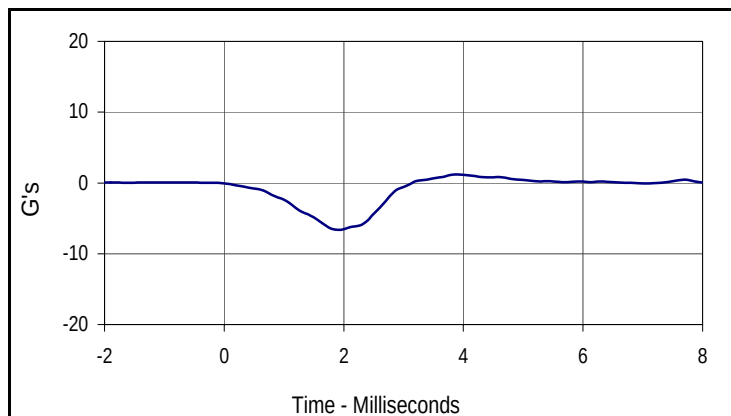
Test Date: 8/15/06
 Test I.D.: HD08N



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	120.0 to 150.0	133.6	Pass
Peak Longitudinal Acceleration	G's	≤15.0	6.6	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			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
133.6	2.0	0.1	-2.0



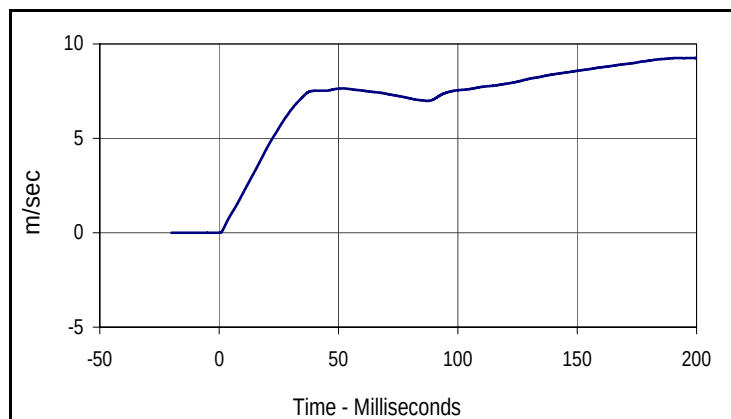
Curve Description			
Head X			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
1.2	3.9	-6.6	1.9

Test Program: SID / HIII Neck Pendulum Lateral Test
 ATD Serial No.: 274

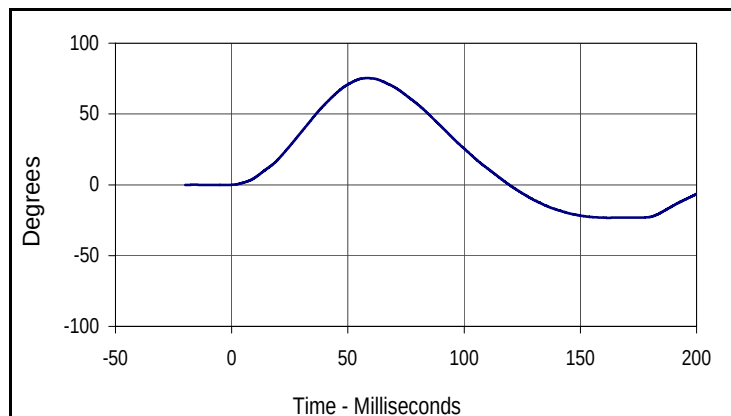
Test Date: 8/15/06
 Test I.D.: NB08N



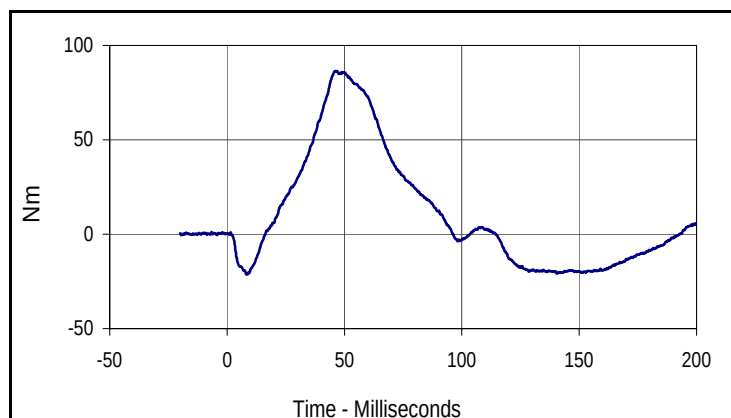
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/sec	6.89 to 7.13	7.10	Pass
Pendulum Deceleration	10 Msec.	m/sec	1.96 to 2.55	2.11	Pass
	20 Msec.	m/sec	4.12 to 5.10	4.48	Pass
	30 Msec.	m/sec	5.73 to 7.01	6.49	Pass
	40 to 70	m/sec	6.27 to 7.64	7.64	Pass
"D" Plane Rotation	Max	Degrees	66.0 to 82.0	75.3	Pass
Max Rotation Time After Peak Moment		Msec.	2.0 to 16.0	12.2	Pass
Rotation Time From Peak to Zero Angle		Msec.	58.0 to 67.0	61.1	Pass
Moment About Occipital Condyle		Nm	73.0 to 88.0	86.5	Pass
Positive Moment Decay, Time To 0 Nm		Msec.	49.0 to 64.0	50.2	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/sec
Max	Time	Min	Time
9.3	198.1	0.0	0.0



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
75.3	58.3	-23.3	162.0



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
86.5	46.1	-21.4	8.5

Test Program: SID / HIII External Measurements
 ATD Serial No.: 275

Test Date: 8/15/06
 Test I.D.: N/A



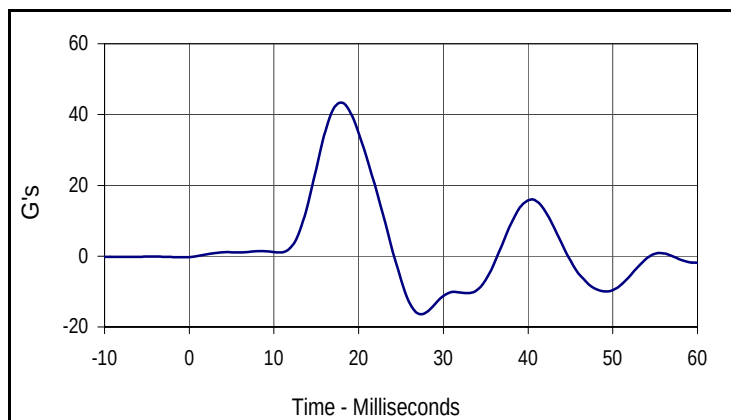
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
SH- Seated Height	mm	889 to 909	901	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	507	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	520	Pass
KV- Knee Pivot From Floor	mm	490 to 505	495	Pass
HW- Hip Width	mm	356 to 391	363	Pass
Overall Test Results				Pass

Test Program: SID / HIII Thorax Lateral Impact
 ATD Serial No.: 275

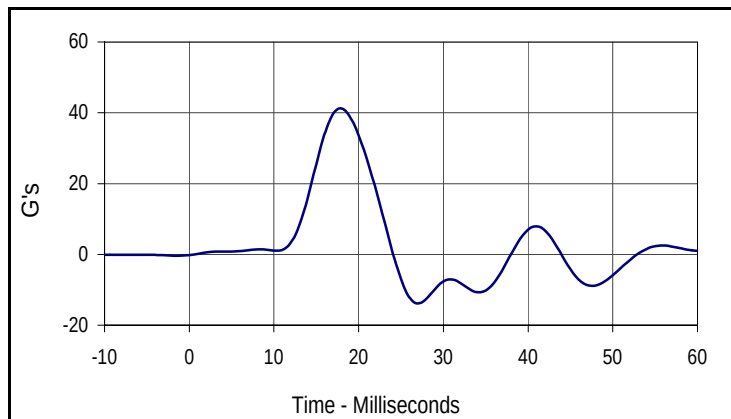
Test Date: 8/15/06
 Test I.D.: TH08P



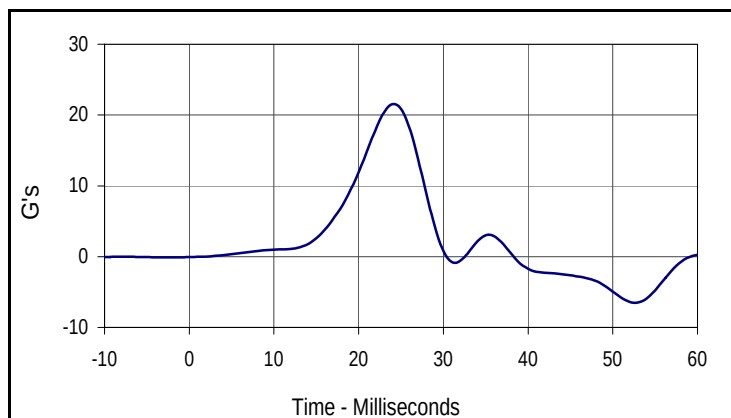
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.25	Pass
Upper Rib Acceleration	G's	37.0 to 46.0	43.3	Pass
Lower Rib Acceleration	G's	37.0 to 46.0	41.1	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	21.5	Pass
Overall Test Results			Pass	



Curve Description			
Upper Rib Primary			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
43.3	18.1	-16.4	27.5



Curve Description			
Lower Rib Primary			
CURNO	Type	SAE Class	Units
002	FIL	FIR100	G's
Max	Time	Min	Time
41.1	18.1	-13.9	26.9



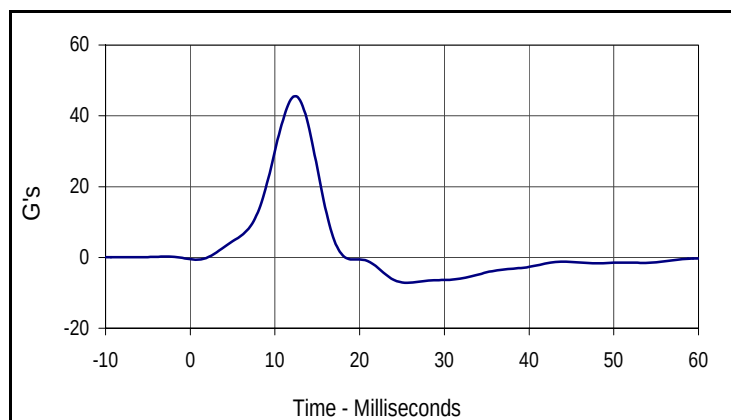
Curve Description			
Lower Spine Primary			
CURNO	Type	SAE Class	Units
003	FIL	FIR100	G's
Max	Time	Min	Time
21.5	24.4	-6.5	52.5

Test Program: SID / HIII Pelvis Lateral Impact
 ATD Serial No.: 275

Test Date: 8/15/06
 Test I.D.: PL08P



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.31	Pass
Peak Pelvis Acceleration	G's	40.0 to 60.0	45.5	Pass
Acceleration Time Above 20 G's	Msec.	3.0 to 7.0	6.25	Pass
Overall Test Results				Pass



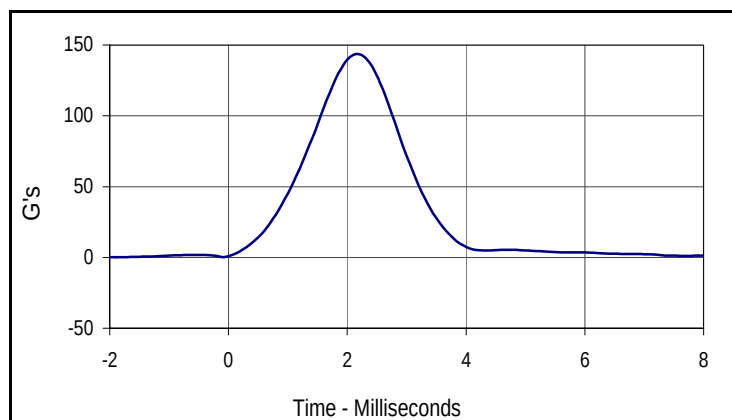
Curve Description			
Pelvis Primary Y			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
45.5	12.5	-7.2	25.6

Test Program: SID / HIII Head Drop Lateral Impact Test
 ATD Serial No.: 275

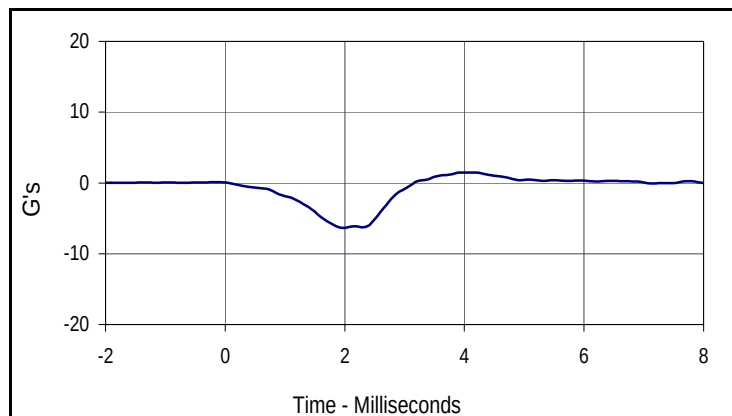
Test Date: 8/15/06
 Test I.D.: HD08L



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	120.0 to 150.0	143.5	Pass
Peak Longitudinal Acceleration	G's	≤15.0	6.3	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Oscillations After Main Pulse	%	<15	3.4	Pass
Overall Test Results			Pass	



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
143.5	2.2	0.1	-2.0



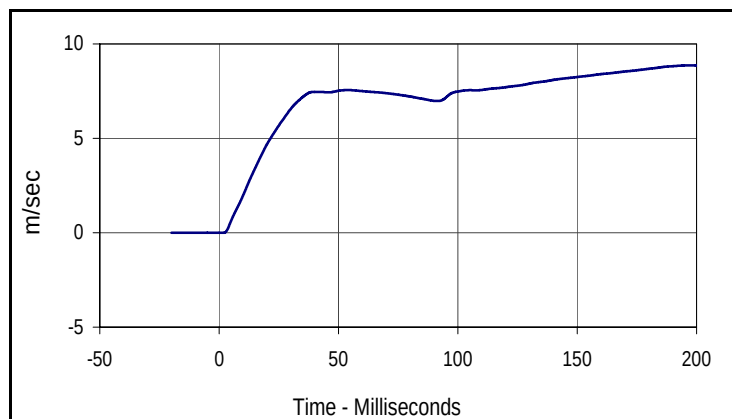
Curve Description			
Head X			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
1.5	4.0	-6.3	2.0

Test Program: SID / HIII Neck Pendulum Lateral Test
 ATD Serial No.: 275

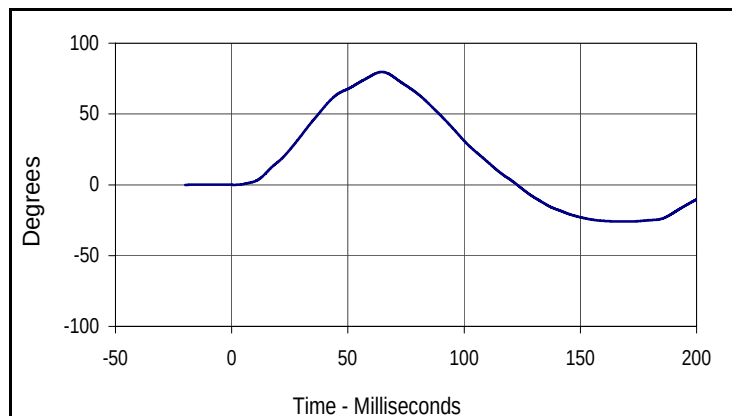
Test Date: 8/15/06
 Test I.D.: NB08L



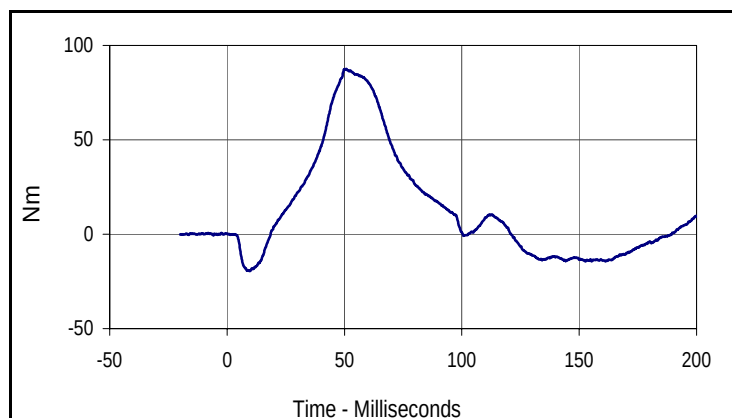
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/sec	6.89 to 7.13	6.95	Pass
Pendulum Deceleration	10 Msec.	m/sec	1.96 to 2.55	1.97	Pass
	20 Msec.	m/sec	4.12 to 5.10	4.68	Pass
	30 Msec.	m/sec	5.73 to 7.01	6.56	Pass
	40 to 70	m/sec	6.27 to 7.64	7.56	Pass
"D" Plane Rotation	Max	Degrees	66.0 to 82.0	79.7	Pass
Max Rotation Time After Peak Moment		Msec.	2.0 to 16.0	13.8	Pass
Rotation Time From Peak to Zero Angle		Msec.	58.0 to 67.0	58.2	Pass
Moment About Occipital Condyle		Nm	73.0 to 88.0	87.6	Pass
Positive Moment Decay, Time To 0 Nm		Msec.	49.0 to 64.0	49.7	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/sec
Max	Time	Min	Time
8.9	200.0	0.0	1.7



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
79.7	64.6	-25.8	165.7



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
87.6	50.8	-19.6	9.8

APPENDIX C
POST-TEST SID / HIII CONFIGURATION AND PERFORMANCE VERIFICATION DATA

Test Program: SID / HIII External Measurements
 ATD Serial No.: 274

Test Date: 8/16/06
 Test I.D.: N/A



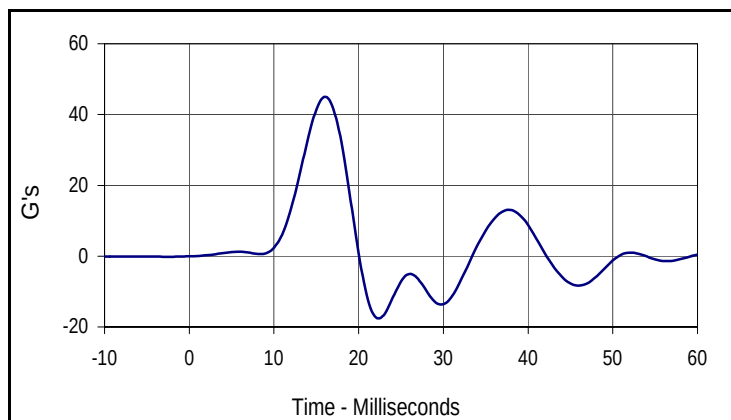
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
SH- Seated Height	mm	889 to 909	900	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	505	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	520	Pass
KV- Knee Pivot From Floor	mm	490 to 505	495	Pass
HW- Hip Width	mm	356 to 391	363	Pass
Overall Test Results				Pass

Test Program: SID / HIII Thorax Lateral Impact
 ATD Serial No.: 274

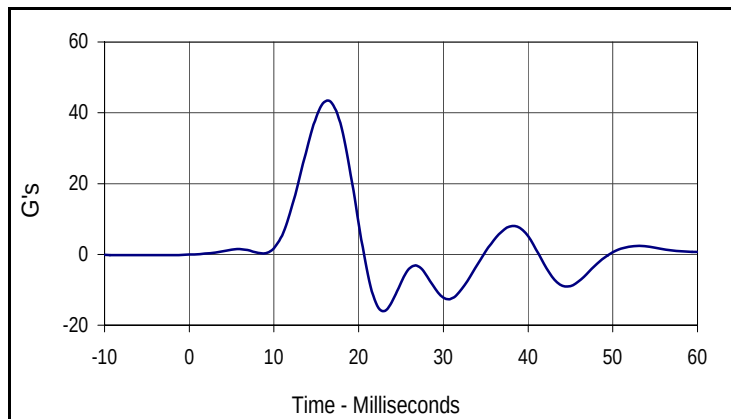
Test Date: 8/16/06
 Test I.D.: TH08M



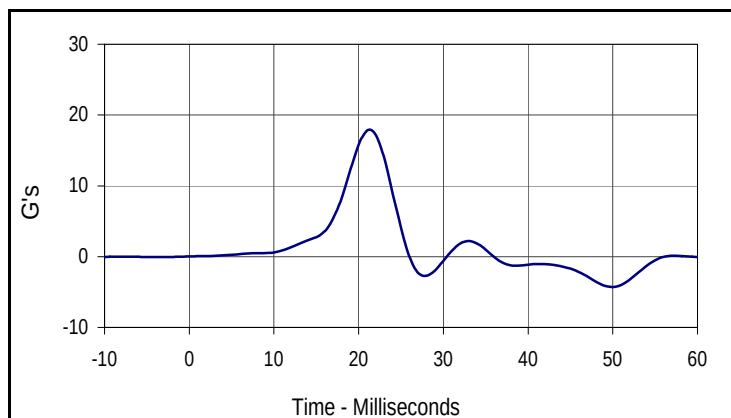
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.7	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.26	Pass
Upper Rib Acceleration	G's	37.0 to 46.0	44.9	Pass
Lower Rib Acceleration	G's	37.0 to 46.0	43.5	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	17.9	Pass
Overall Test Results			Pass	



Curve Description			
Upper Rib Primary			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
44.9	16.3	-17.6	22.5



Curve Description			
Lower Rib Primary			
CURNO	Type	SAE Class	Units
002	FIL	FIR100	G's
Max	Time	Min	Time
43.5	16.3	-15.9	23.1



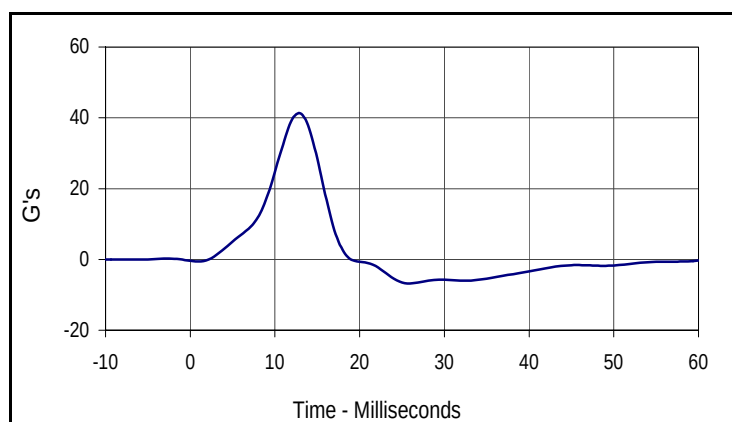
Curve Description			
Lower Spine Primary			
CURNO	Type	SAE Class	Units
003	FIL	FIR100	G's
Max	Time	Min	Time
17.9	21.3	-4.3	50.0

Test Program: SID / HIII Pelvis Lateral Impact
 ATD Serial No.: 274

Test Date: 8/16/06
 Test I.D.: PL08M



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.7	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.29	Pass
Peak Pelvis Acceleration	G's	40.0 to 60.0	41.1	Pass
Acceleration Time Above 20 G's	Msec.	3.0 to 7.0	6.88	Pass
Overall Test Results				Pass



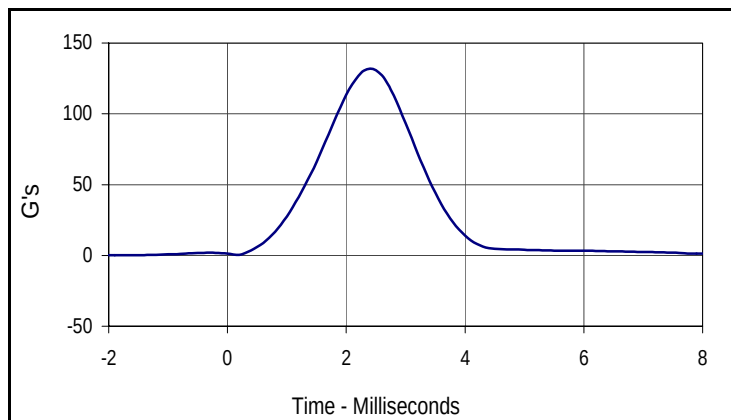
Curve Description			
Pelvis Primary Y			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
41.1	13.1	-6.8	25.6

Test Program: SID / HIII Head Drop Lateral Impact Test
 ATD Serial No.: 274

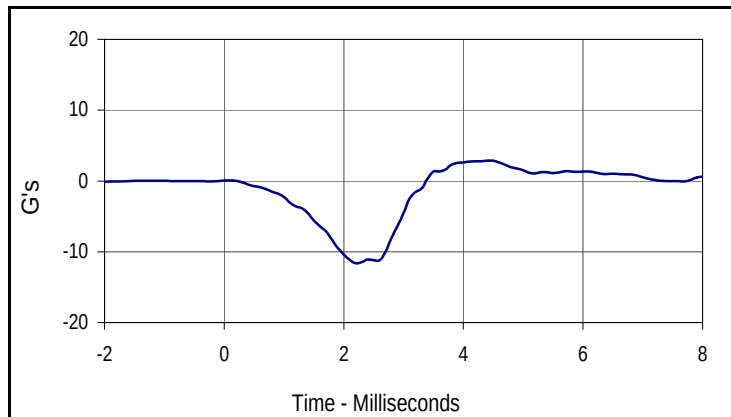
Test Date: 8/16/06
 Test I.D.: HD08P



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.7	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	120.0 to 150.0	131.9	Pass
Peak Longitudinal Acceleration	G's	≤15.0	11.6	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Oscillations After Main Pulse	%	<15	3.1	Pass
Overall Test Results			Pass	



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
131.9	2.4	0.1	-1.6



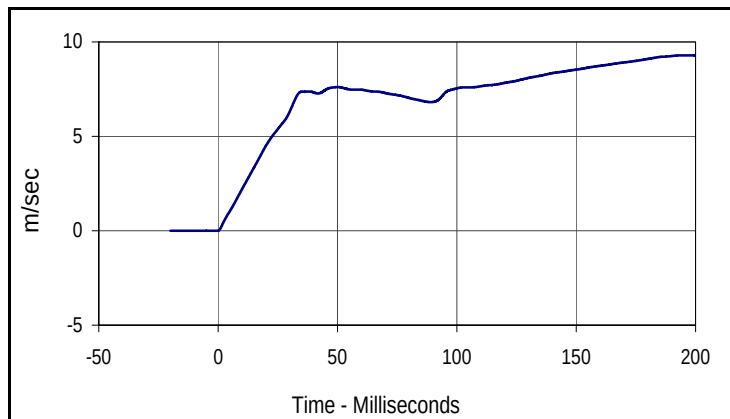
Curve Description			
Head X			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
2.9	4.4	-11.6	2.2

Test Program: SID / HIII Neck Pendulum Lateral Test
 ATD Serial No.: 274

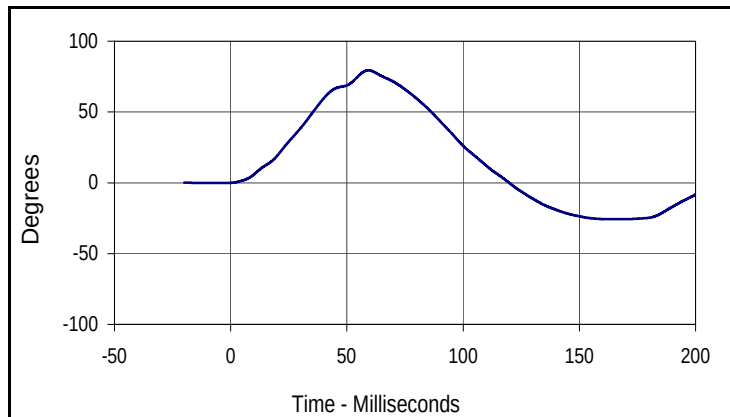
Test Date: 8/16/06
 Test I.D.: NB08T



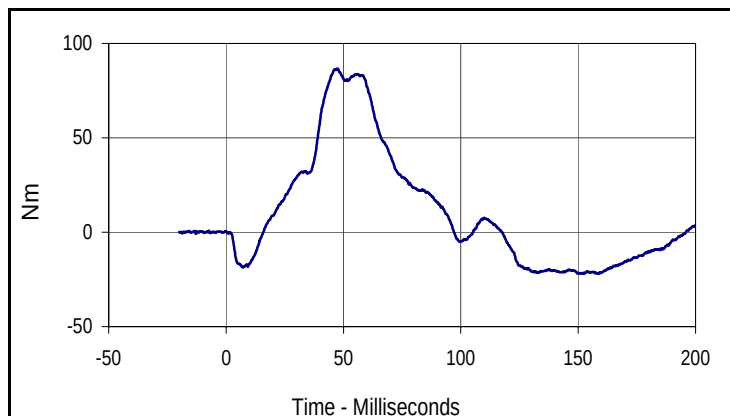
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.7	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/sec	6.89 to 7.13	6.92	Pass
Pendulum Deceleration	10 Msec.	m/sec	1.96 to 2.55	2.21	Pass
	20 Msec.	m/sec	4.12 to 5.10	4.50	Pass
	30 Msec.	m/sec	5.73 to 7.01	6.32	Pass
	40 to 70	m/sec	6.27 to 7.64	7.61	Pass
"D" Plane Rotation	Max	Degrees	66.0 to 82.0	79.4	Pass
Max Rotation Time After Peak Moment		Msec.	2.0 to 16.0	11.6	Pass
Rotation Time From Peak to Zero Angle		Msec.	58.0 to 67.0	60.6	Pass
Moment About Occipital Condyle		Nm	73.0 to 88.0	86.7	Pass
Positive Moment Decay, Time To 0 Nm		Msec.	49.0 to 64.0	49.6	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/sec
Max	Time	Min	Time
9.3	199.9	0.0	-0.5



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
79.4	59.2	-25.7	169.2



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
86.7	47.6	-22.0	152.6

Test Program: SID / HIII External Measurements
 ATD Serial No.: 275

Test Date: 8/16/06
 Test I.D.: N/A



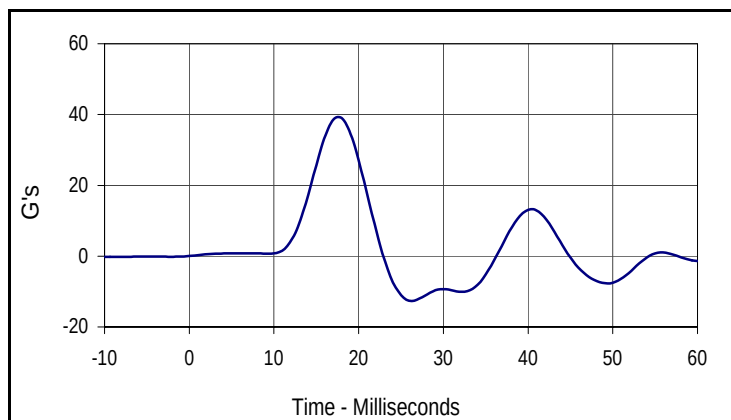
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
SH- Seated Height	mm	889 to 909	901	Pass
HP- Hip Point Height	mm	99 (reference)	99	Pass
RH- Rib Height	mm	502 to 520	506	Pass
KH- Knee Pivot From Back Line	mm	511 to 526	521	Pass
KV- Knee Pivot From Floor	mm	490 to 505	495	Pass
HW- Hip Width	mm	356 to 391	362	Pass
Overall Test Results				Pass

Test Program: SID / HIII Thorax Lateral Impact
 ATD Serial No.: 275

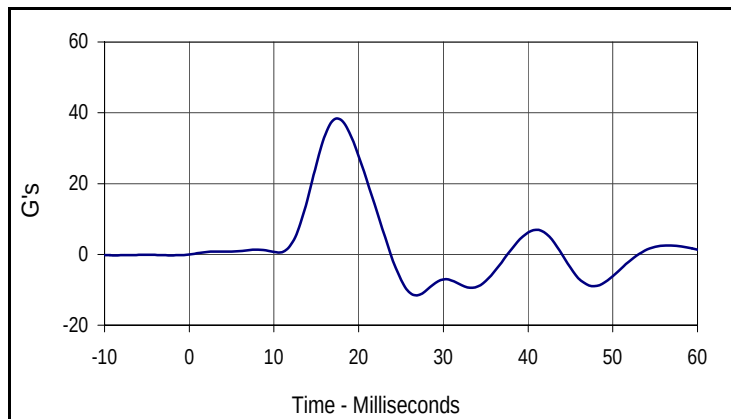
Test Date: 8/16/06
 Test I.D.: TH08Q



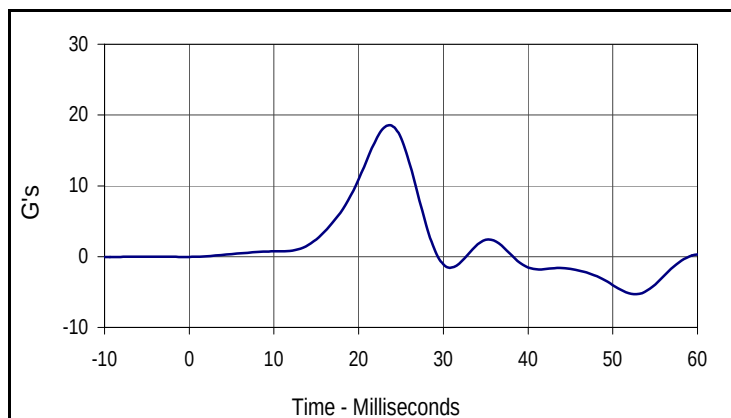
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.7	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.22	Pass
Upper Rib Acceleration	G's	37.0 to 46.0	39.3	Pass
Lower Rib Acceleration	G's	37.0 to 46.0	38.4	Pass
Thoracic Spine Acceleration	G's	15.0 to 22.0	18.6	Pass
Overall Test Results			Pass	



Curve Description			
Upper Rib Primary			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
39.3	17.5	-12.7	26.3



Curve Description			
Lower Rib Primary			
CURNO	Type	SAE Class	Units
002	FIL	FIR100	G's
Max	Time	Min	Time
38.4	17.5	-11.6	26.9



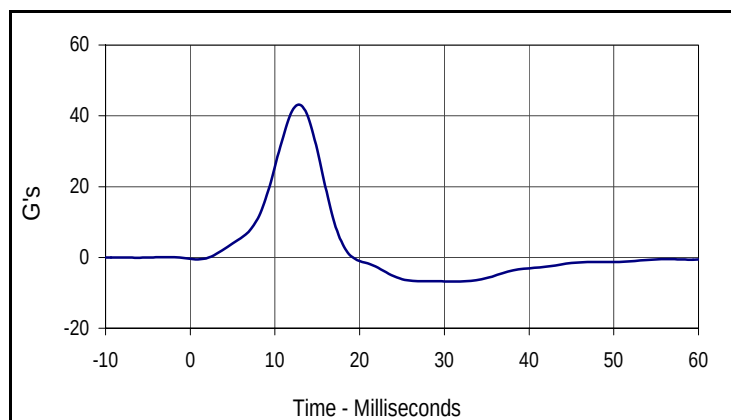
Curve Description			
Lower Spine Primary			
CURNO	Type	SAE Class	Units
003	FIL	FIR100	G's
Max	Time	Min	Time
18.6	23.8	-5.3	52.5

Test Program: SID / HIII Pelvis Lateral Impact
 ATD Serial No.: 275

Test Date: 8/16/06
 Test I.D.: PL08L



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.7	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	4.21 to 4.33	4.29	Pass
Peak Pelvis Acceleration	G's	40.0 to 60.0	42.9	Pass
Acceleration Time Above 20 G's	Msec.	3.0 to 7.0	6.88	Pass
Overall Test Results				Pass



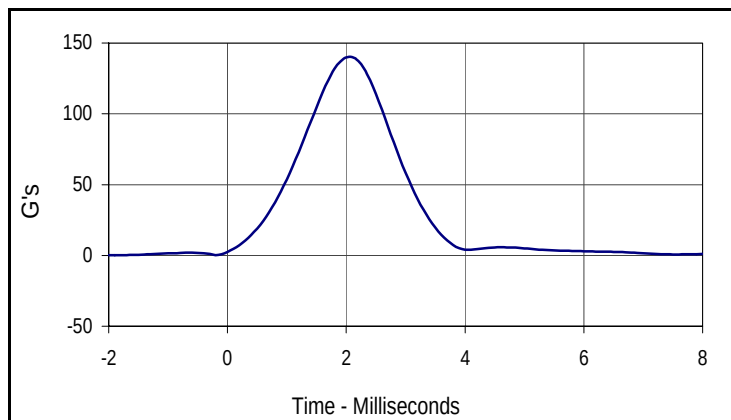
Curve Description			
Pelvis Primary Y			
CURNO	Type	SAE Class	Units
001	FIL	FIR100	G's
Max	Time	Min	Time
42.9	13.1	-6.8	31.3

Test Program: SID / HIII Head Drop Lateral Impact Test
 ATD Serial No.: 275

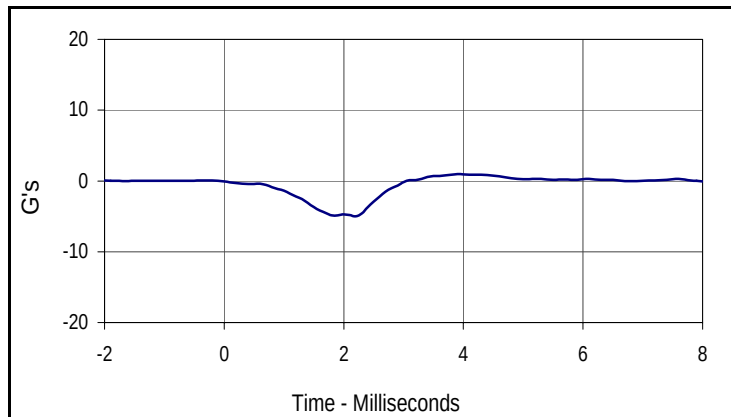
Test Date: 8/16/06
 Test I.D.: HD08L



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.7	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	120.0 to 150.0	140.0	Pass
Peak Longitudinal Acceleration	G's	≤15.0	5.0	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Oscillations After Main Pulse	%	<15	3.6	Pass
Overall Test Results			Pass	



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
140.0	2.1	0.1	-1.9



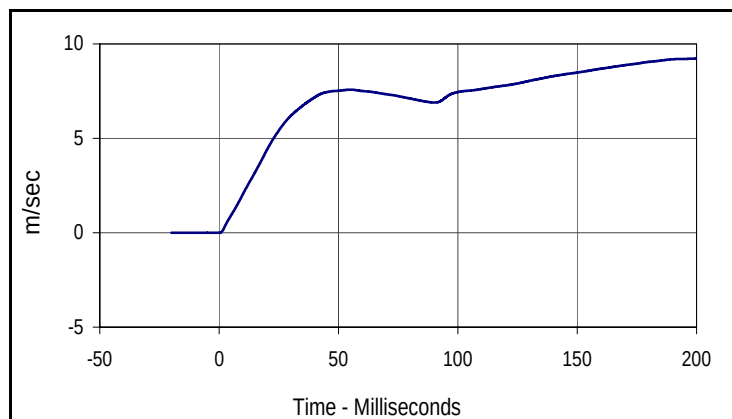
Curve Description			
Head X			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
1.0	3.9	-5.0	2.2

Test Program: SID / HIII Neck Pendulum Lateral Test
 ATD Serial No.: 275

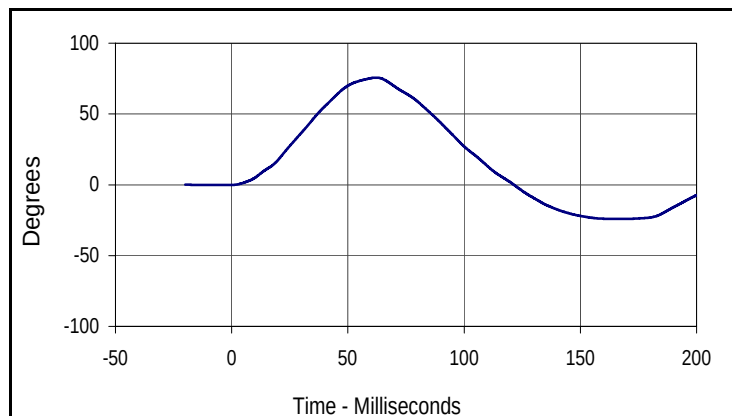
Test Date: 8/16/06
 Test I.D.: NB08Q



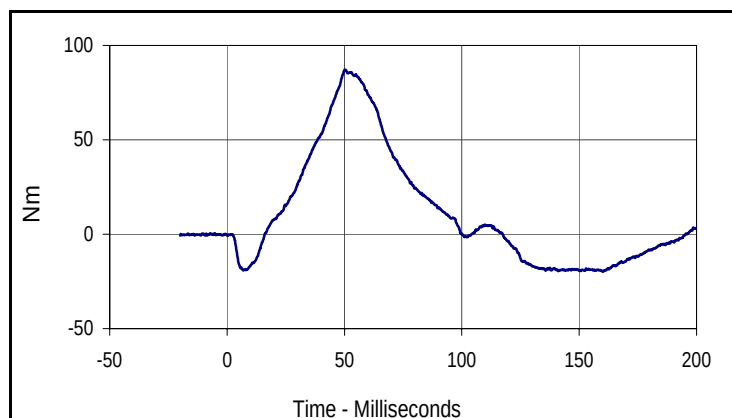
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.7	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/sec	6.89 to 7.13	6.94	Pass
Pendulum Deceleration	10 Msec.	m/sec	1.96 to 2.55	2.06	Pass
	20 Msec.	m/sec	4.12 to 5.10	4.39	Pass
	30 Msec.	m/sec	5.73 to 7.01	6.20	Pass
	40 to 70	m/sec	6.27 to 7.64	7.58	Pass
"D" Plane Rotation	Max	Degrees	66.0 to 82.0	75.7	Pass
Max Rotation Time After Peak Moment		Msec.	2.0 to 16.0	11.8	Pass
Rotation Time From Peak to Zero Angle		Msec.	58.0 to 67.0	59.2	Pass
Moment About Occipital Condyle		Nm	73.0 to 88.0	87.2	Pass
Positive Moment Decay, Time To 0 Nm		Msec.	49.0 to 64.0	49.8	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/sec
Max	Time	Min	Time
9.2	198.9	0.0	-0.1



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
75.7	62.2	-24.1	169.2



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
87.2	50.4	-19.8	160.0